

W.L. BLAKE & CO.

PORTLAND, MAINE

Catalogue G

**PLUMBING^{AND} STEAM
MATERIAL**

**RAILROAD, STEAMSHIP AND
MILL SUPPLIES**

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Catalogue G

W. L. BLAKE & CO.

HIGH-GRADE PLUMBING FIXTURES

Supplies for

Plumbers, Water Works,
Steam and Gas Fitters, Engineers and
Contractors, Mills, Railroads
and Steamships

Manufacturers of

Oils and Greases

Office and Factory:
79-85 Commercial St.

Machinery Warehouse:
Franklin St.

PORTLAND, MAINE

Hy-Tech Products

GENERAL INFORMATION

TERMS AND PRICES

The prices given in this catalogue, in nearly all cases, are list prices and are subject to discount. Owing to the constant fluctuation in prices, we do not issue a discount sheet but will be pleased at all times to quote prices on application. Our established policy is to maintain one price to our customers, based on a reasonable and legitimate margin of profit; so whether a special quotation is asked for or whether the order is sent to us open, you are assured the same equitable prices and fair treatment.

Our terms are 30 days net, 2% 10 days unless otherwise specified.

Prices subject to change without notice.

Contracts subject to strikes, accidents or other causes beyond our control.

Instructions as to route, etc., should accompany each order. Otherwise, the route is optional with us.

The carriers are responsible for goods lost or damaged in transit, and claim should be made against transportation company. But we are always willing to assist our customers in securing settlement for such damage or loss; and if expense bill with proper indorsement by agent as to damage or shortage, together with bill of lading, is promptly sent to us, we shall be glad to establish claim; but unless these papers are furnished we cannot do so.

Care should be taken in accepting shipments, and no receipt should be signed until it is ascertained that shipment is complete and that goods have not been damaged in transit.

SHIPPING

Heavy goods will be shipped by freight unless especially ordered by express. Please do not neglect to state how you wish us to ship.

RETURNING GOODS

If for any reason you should desire to return goods to us, please write us first, and do not ship any material back until you have received our reply and get our shipping directions and agreement for the return of same.

HOW TO RETURN GOODS

In cases where arrangements have been made for return, always notify us, mentioning each article, and state when (invoice date) and by whom purchased. Mark all goods with a tag bearing your name and address clearly. Use the same care in packing returned goods as we do in shipping to you. Always send us the bill of lading or express receipt covering the return shipment. Do not enclose letters of instruction with the goods. Send them separately. *This to protect you.*

Special orders for cut lengths of manila and wire rope, belting, pipe, etc., cannot be returned for credit if we have filled your order correctly. We, however, aim to treat our customers liberally in such cases. Write us first and we will advise you what to do.

ERRORS

We make them — Who does not? But we will cheerfully correct them if the fault is ours. Do not let an error pass unnoted. We want an early opportunity to make right any mistakes that may occur.

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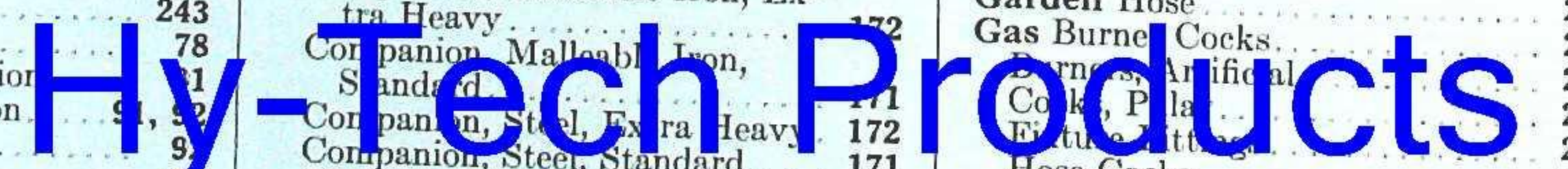
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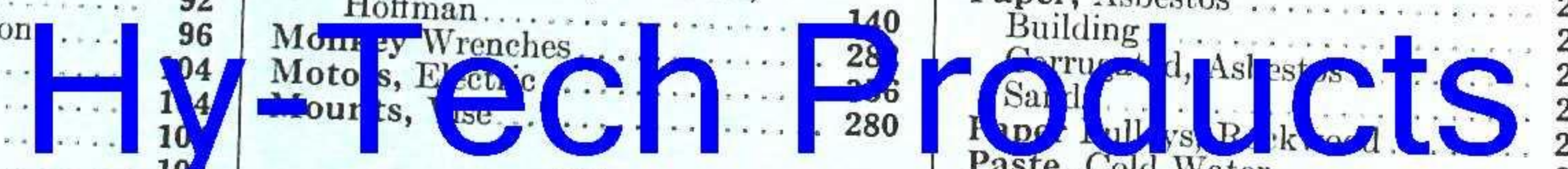


Table listing various plumbing and hardware items such as Reducing Pressure Regulators, Registers, and Sinks, with corresponding page numbers.

Table listing items under the letter 'S', including S Wrenches, Saddle Hubs, Saddles, Safety Chains, and various types of Sinks and Sumps.

Table listing items under the letter 'S' continued, including Shampoo and Lavatory Fittings, Shanks, Shaves, Shears, Sheet Lead, and various types of Sinks and Sumps.

Table listing items under the letter 'S' continued, including Slop Sinks, Smoke Connections, Smooth-On, Snaps, Snips, Snow Shovels, Soap Dishes, and various types of Sinks and Sumps.

Table listing items under the letter 'T', including Stocks and Dies, Tank Ball Rods, Taps, and various types of Tees and Tanks.

Table listing items under the letter 'T' continued, including Tees, Tanks, and various types of Tees and Tanks.

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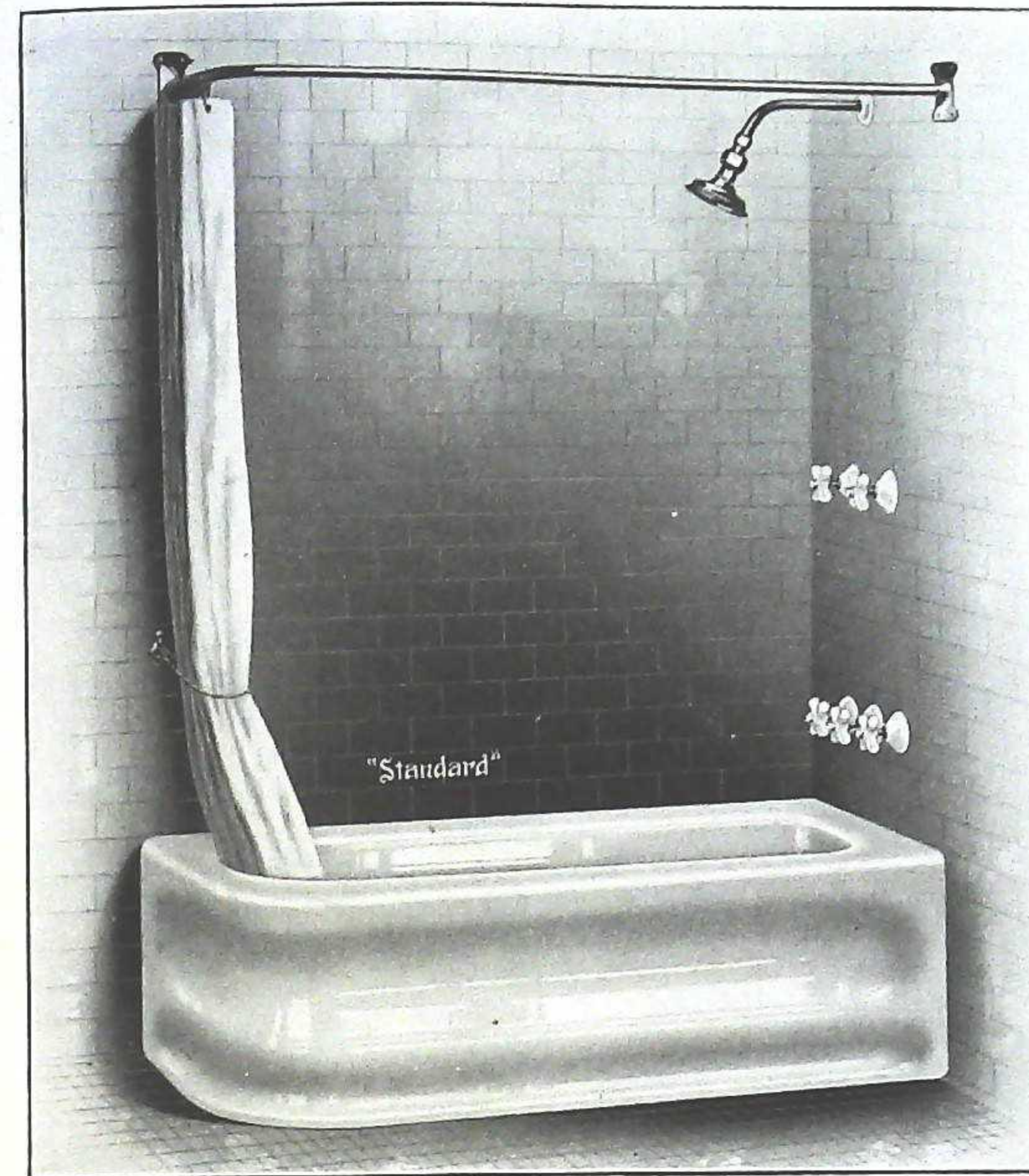


Fig. 11

Woodmere Enameled All Over One-piece Bath to tile in right corner, with 4½-inch rim and right end outlet, nickel-plated top nozzle concealed supply and standing drain fitting with ½-inch built-in compression valves, solid china cross handles, china indexes and china escutcheons, nickel-plated shower with cast brass head, ball joint, bent supply arm and ½-inch built-in compression shower valves with china cross handles, china indexes and china escutcheons, curtain rod, pins, duck curtain, holdback hook and chain.

Width of rim 4½ inches
 Width over all 33 inches
 Width from finished wall line 32¼ inches
 Height over all 18 inches
 Height from floor 17½ inches
 Depth inside 17 inches

Nominal Sizes	.....feet	5	5½
Length Over All	.....in.	63	69
" from Finished Wall Line	"	62¼	68¼
Approximate Shipping Wt., Tub			
Only	.....lbs.	625	680

When ordering, specify whether wanted for right or left corner.

Woodmere Enameled All Over One-piece Bath to tile in recess with 4½-inch rim and left end outlet, over rim supply and connected drain and overflow fitting with ½-inch built-in compression valves with china cross handles, china indexes and china escutcheons, nickel-plated over rim nozzle with china soap dish, nickel-plated shower with cast brass head, ball joint, bent supply arm and ½-inch built-in compression shower valves with china cross handles, china indexes and china escutcheons, curtain rod, pins, duck curtain, holdback hook and chain.

Width of rim 4½ inches
 Width over all 33 inches
 Width from finished wall line 32¼ inches
 Height over all 18 inches
 Height from floor 17½ inches
 Depth inside 17 inches

Nominal Sizes	.....feet	5	5½
Length Over All	.....inches	63	69
" Between Finished Wall Lines	.....inches	61½	67½
Approximate Shipping Weight, Tub			
Only	.....pounds	590	650

When ordering, specify whether wanted with right or left drain and fittings at end or back wall

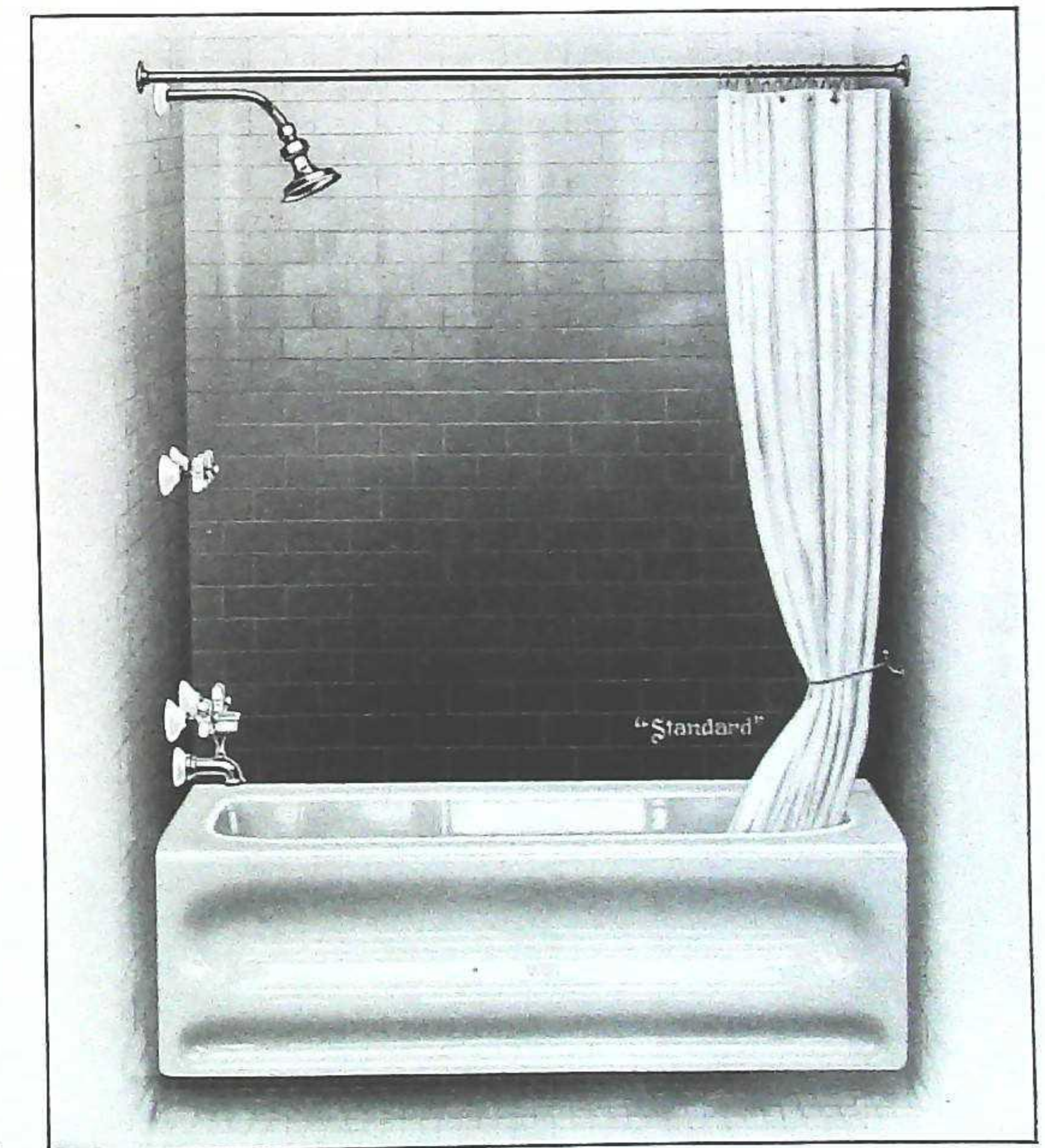


Fig. 12

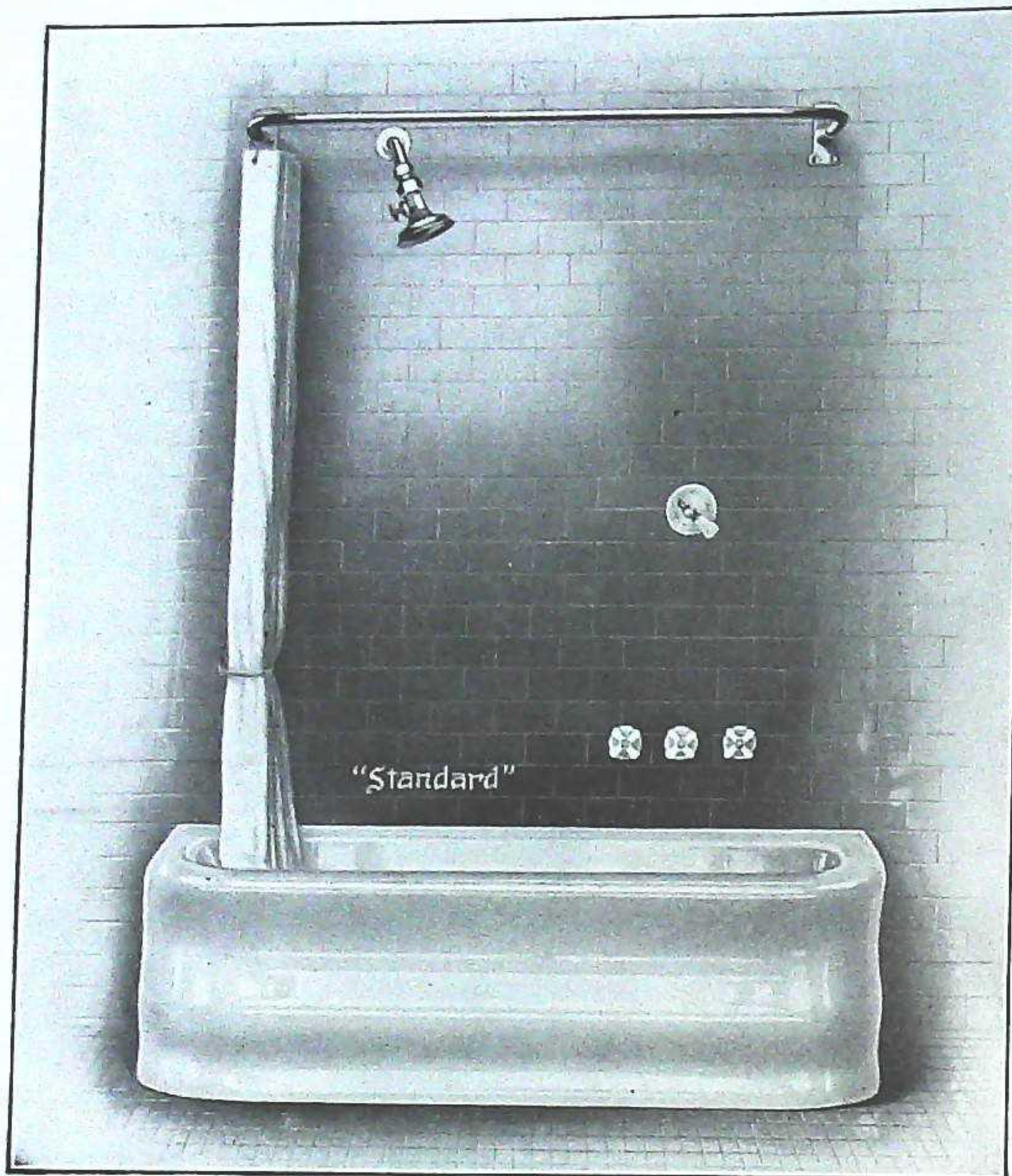


Fig. 21

Pembroke Enameled All Over One-piece Bath to tile into back wall, with 3 $\frac{3}{4}$ -inch rim and right end outlet, nickel-plated top nozzle concealed supply and standing drain fitting with $\frac{1}{2}$ -inch built-in compression valves, china cross handles, indexes and escutcheons, nickel plated shower with bent supply arm ball joint and cast brass head with volume regulator, $\frac{1}{2}$ -inch built-in mixing valve with china handle and dial, curtain rod pins, duck curtain, holdback and chain.

Width of rim 3 $\frac{3}{4}$ inches
 Width over all 30 inches
 Width from finished wall line 29 $\frac{1}{4}$ inches
 Height over all 18 inches
 Height from floor 17 $\frac{1}{2}$ inches
 Depth inside 17 inches

Nominal Sizes feet	5	5 $\frac{1}{2}$	6
Length Over All inches	61 $\frac{1}{4}$	67 $\frac{1}{4}$	73 $\frac{1}{4}$
Approx. Shipping Weight pounds	590	640	665

Pembroke Enameled All Over One-piece Bath to tile in back wall, with 3 $\frac{3}{4}$ -inch rim and left end outlet, nickel-plated top nozzle supply and standing drain fitting, $\frac{1}{2}$ -inch compression valves with china cross handles, china indexes and china knob and $\frac{1}{2}$ -inch nickel-plated supply pipes.

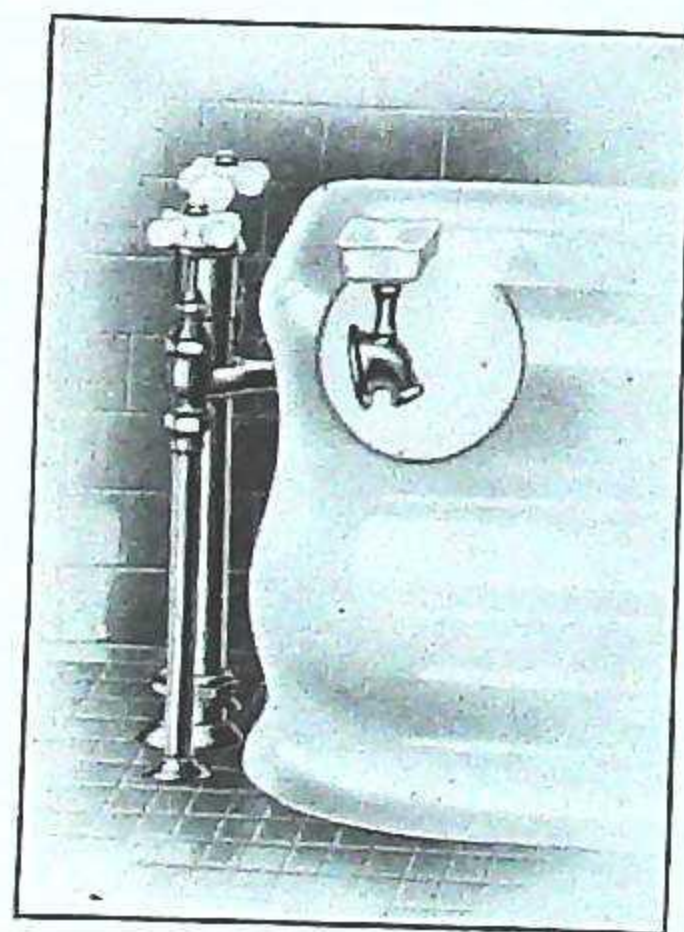


Fig. 23

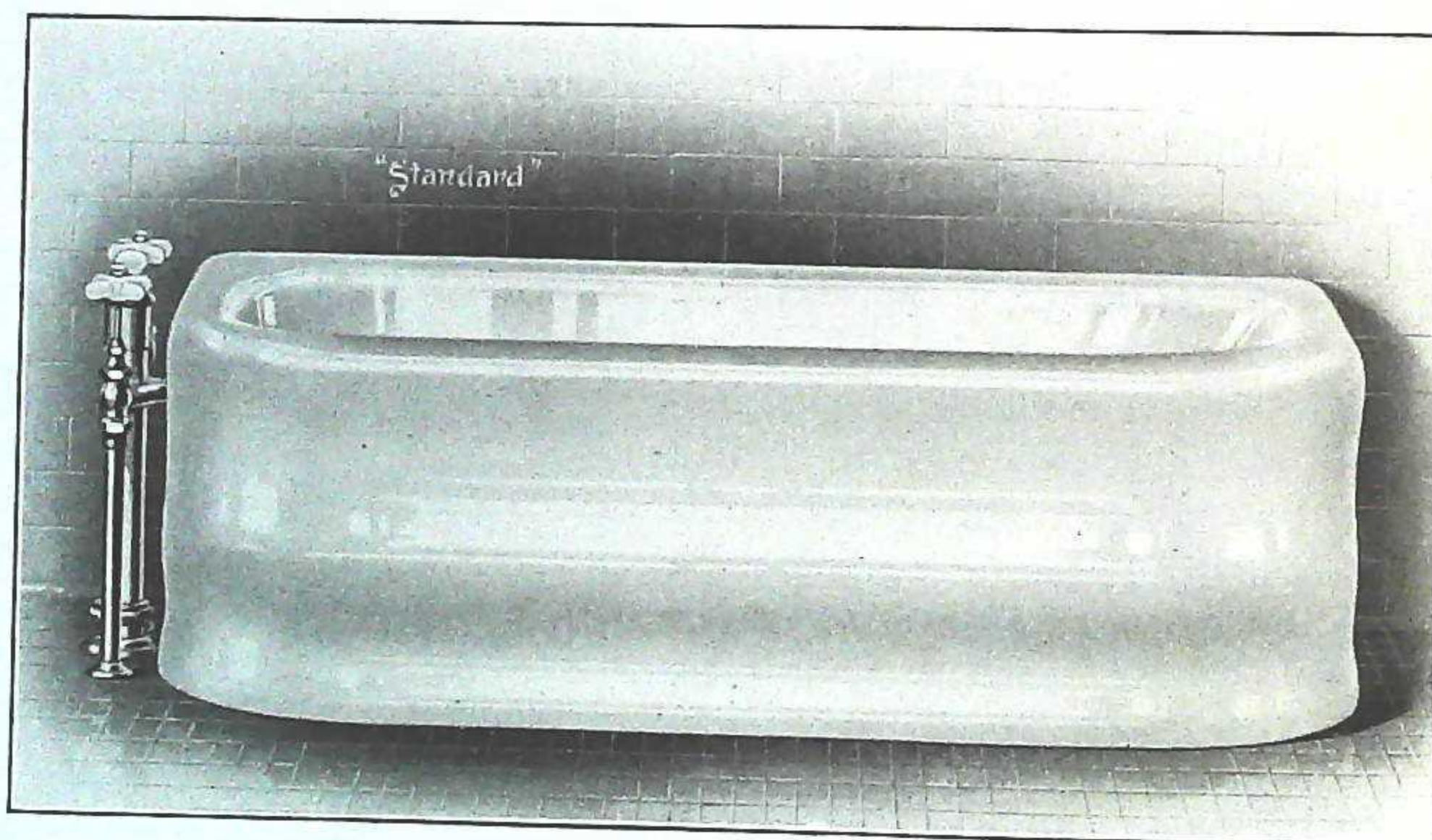


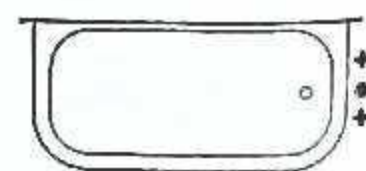
Fig. 22

Width of rim 3 $\frac{3}{4}$ inches
 Width over all 30 inches
 Width from finished wall line 29 $\frac{1}{4}$ inches
 Height over all 18 inches
 Height from floor 17 $\frac{1}{2}$ inches
 Depth inside 17 inches

Nominal Sizes feet	5	5 $\frac{1}{2}$	6
Length Over All inches	61 $\frac{1}{4}$	67 $\frac{1}{4}$	73 $\frac{1}{4}$
Approx. Shipping Weight pounds	590	640	665

This bath also can be furnished with $\frac{3}{4}$ -inch fitting and with removable china soap dish on nozzle.

When ordering specify whether wanted with waste and exposed at right or left end or with concealed fittings in back wall.



Fittings at Right End
 Fig. 24

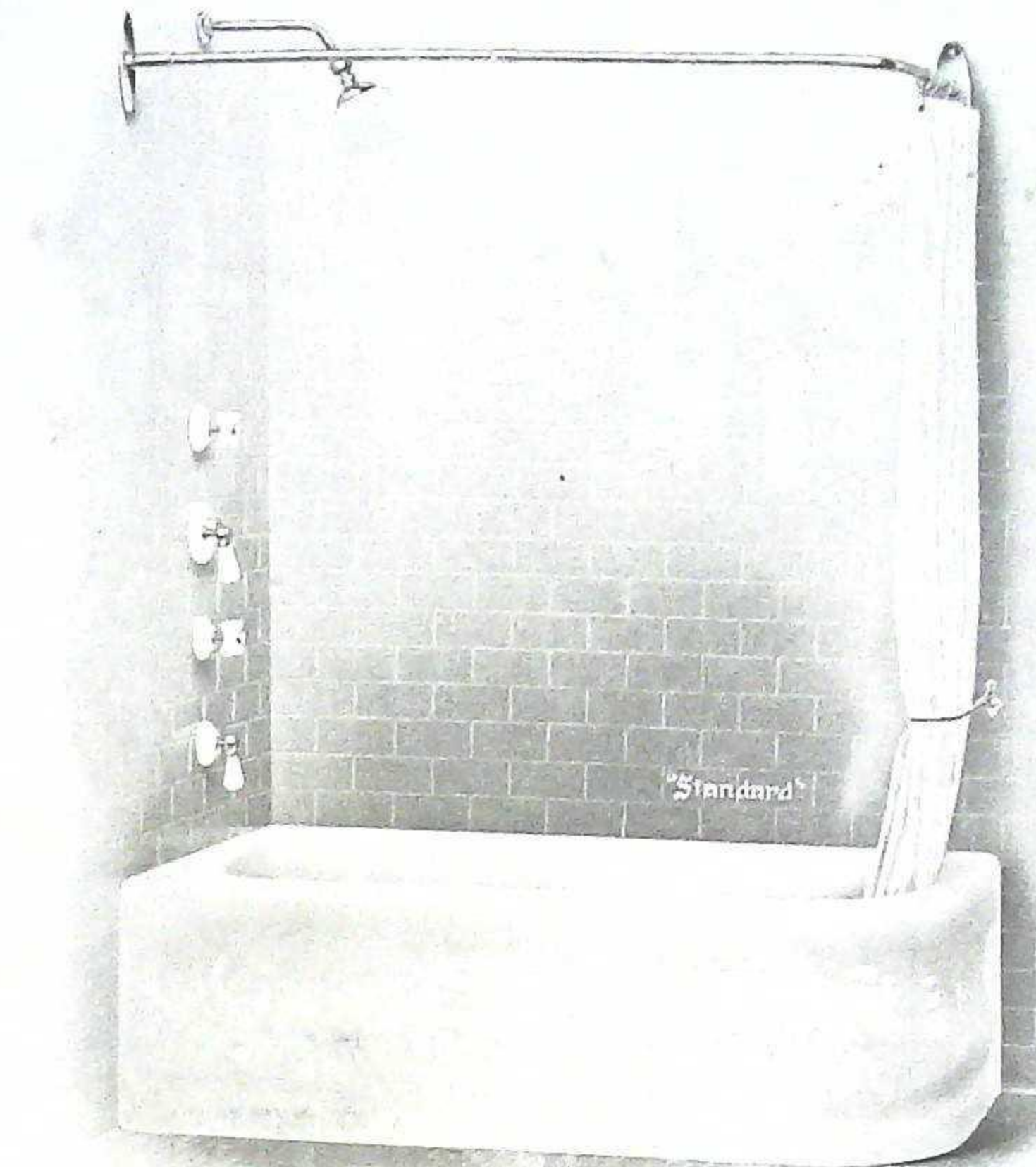


Fig. 31

Pembroke Enameled All Over One-piece Bath to tile into left-hand corner, 3 $\frac{3}{4}$ -inch rim, left-hand end outlet, concealed combination bath fitting and shower with $\frac{1}{2}$ -inch concealed mixing valve with china dial plate and china lever handle, nickel-plated top nozzle bath supply with $\frac{1}{2}$ -inch concealed bath valve and china handle, concealed standing waste with china lever handle, nickel-plated shower with ball joint needle head, bent supply arm and $\frac{1}{2}$ -inch concealed shower valve with china handle, nickel-plated curtain rod and duck curtain.

Dimensions

Width over all 30 inches
 Width of rim 3 $\frac{3}{4}$ inches
 Width from finished wall line 29 $\frac{1}{4}$ inches
 Height from bottom of bath to top of rim 18 inches
 Height from floor to top of rim 17 $\frac{1}{2}$ inches.
 Depth inside 17 inches

Nominal Sizes feet	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6
Length Over All inches	54	60	66	72
“ from Finished Wall Line inches	53 $\frac{1}{4}$	59 $\frac{1}{4}$	65 $\frac{1}{4}$	71 $\frac{1}{4}$
Approx. Shipping Weight, Tub only pounds	460	495	545	610

This tub can be furnished also to tile in right-hand corner and with $\frac{3}{4}$ -inch mixing and controlling valves.

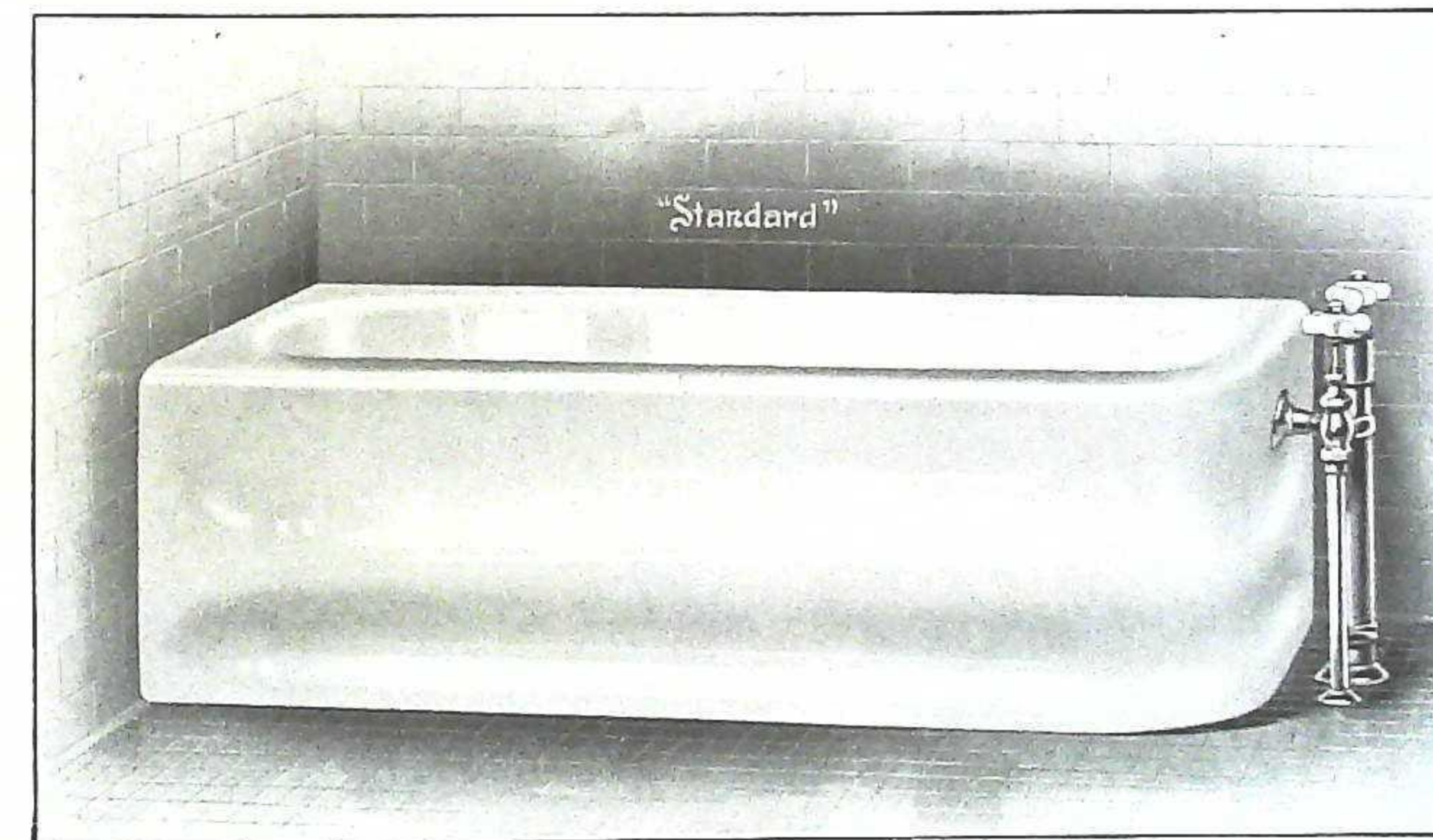


Fig. 32

Width of rim 3 $\frac{3}{4}$ inches
 Width over all 30 inches
 Width from finished wall line 29 $\frac{1}{4}$ inches
 Height over all 18 inches
 Height from floor 17 $\frac{1}{2}$ inches
 Depth inside 17 inches

Nominal Sizes feet	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6
Length Over All inches	54	60	66	72
“ from Finished Wall Line inches	53 $\frac{1}{4}$	59 $\frac{1}{4}$	65 $\frac{1}{4}$	71 $\frac{1}{4}$
Approx. Shipping Weight, Tub Only pounds	460	495	545	610

For Right Corner
 Fig. 33

This bath can be furnished with $\frac{3}{4}$ -inch fitting and with removable china soap dish on nozzle as shown at right.

When ordering specify whether wanted for right or left corner.

Pembroke Enameled All Over One-piece Bath to tile in left corner, with 3 $\frac{3}{4}$ -inch rim and right end outlet, nickel-plated top nozzle supply and standing drain fitting, $\frac{1}{2}$ -inch compression valves, china cross handles, china indexes and china knob and $\frac{1}{2}$ -inch nickel-plated supply pipes.

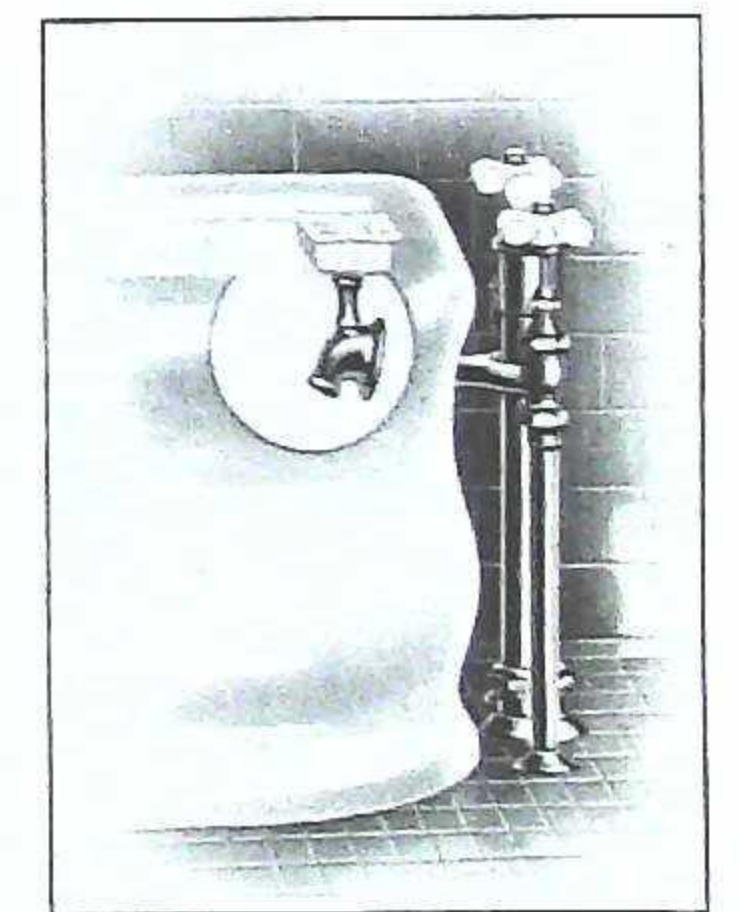


Fig. 34

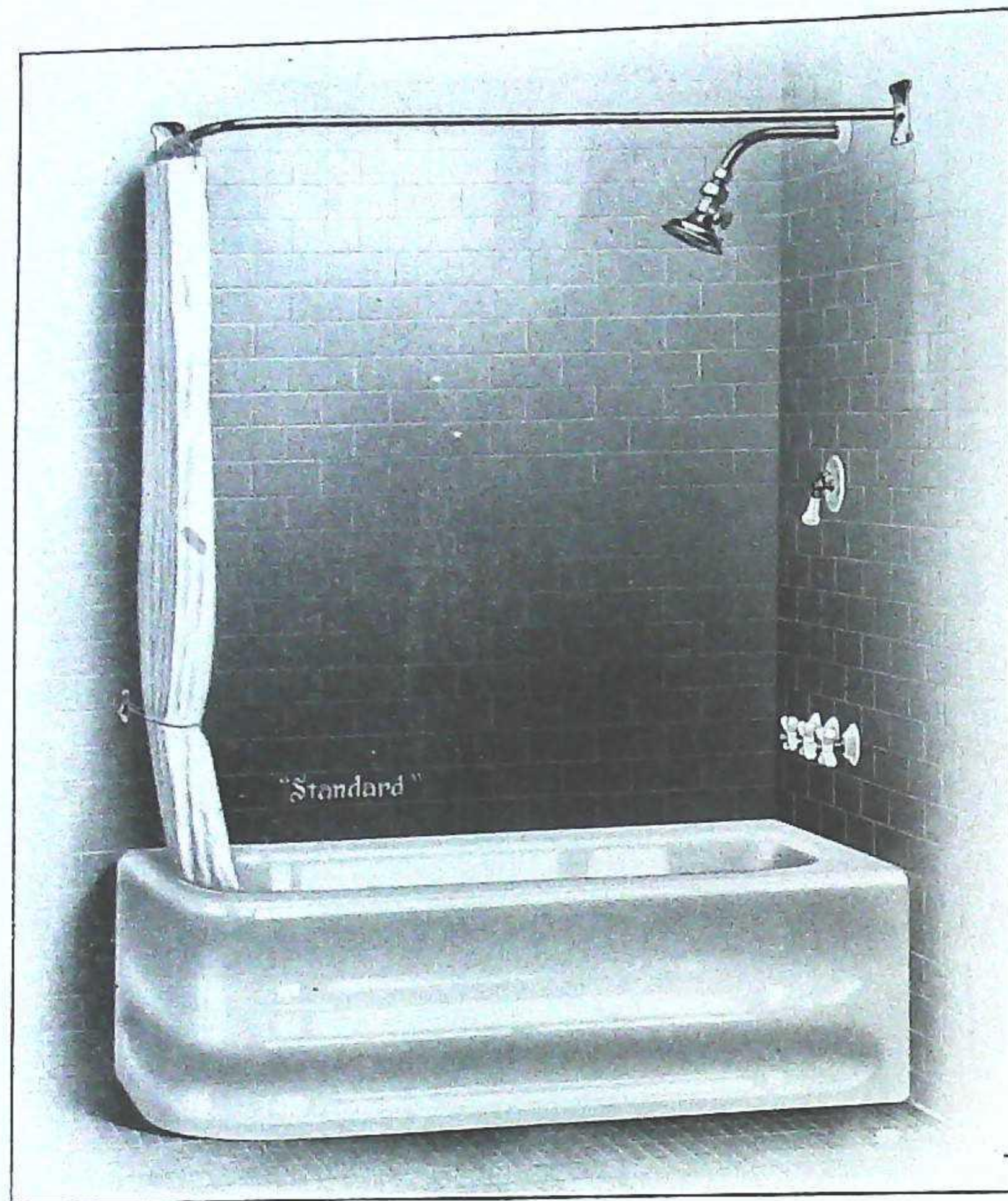


Fig. 41

Pembroke Enameled All Over One-piece Bath to tile in right corner, with 3 3/4-inch rim and right end-outlet, nickel-plated top nozzle concealed supply and standing drain fitting with 1/2-inch built-in compression valves, china cross handles, china indexes, and china escutcheons, nickel-plated shower with cast brass head with volume regulator, ball joint, bent supply arm and 1/2-inch built-in mixing valve with china handle and dial, curtain rod, pins, duck curtain, hold-back and chain.

Width of rim 3 3/4 inches
 Width over all 30 inches
 Width from finished wall line 29 1/4 inches
 Height over all 18 inches
 Height from floor 17 1/2 inches
 Depth inside 17 inches

Nominal Sizes	feet	4 1/2	5	5 1/2	6
Length Over All	inches	54	60	66	72
from Finished Wall Line	inches	53 1/4	59 1/4	65 1/4	71 1/4
Approx. Shipping Weight	pounds	460	495	545	610

When ordering specify whether wanted for right or left corner and with 1/2 or 3/4-inch mixing valve.

Pembroke Enameled All Over One-piece Bath to tile in recess, with 3 3/4-inch rim and left end outlet, nickel-plated over rim supply and connected drain and overflow fitting, with 1/2-inch built-in compression valves with china cross handles, china indexes, and china escutcheons.

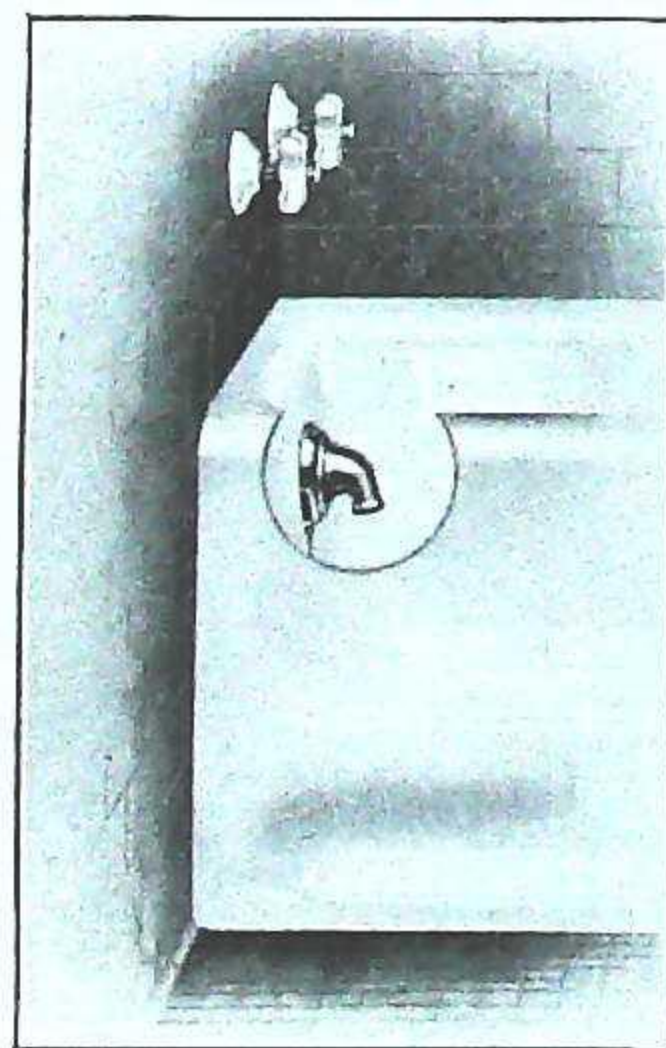


Fig. 43

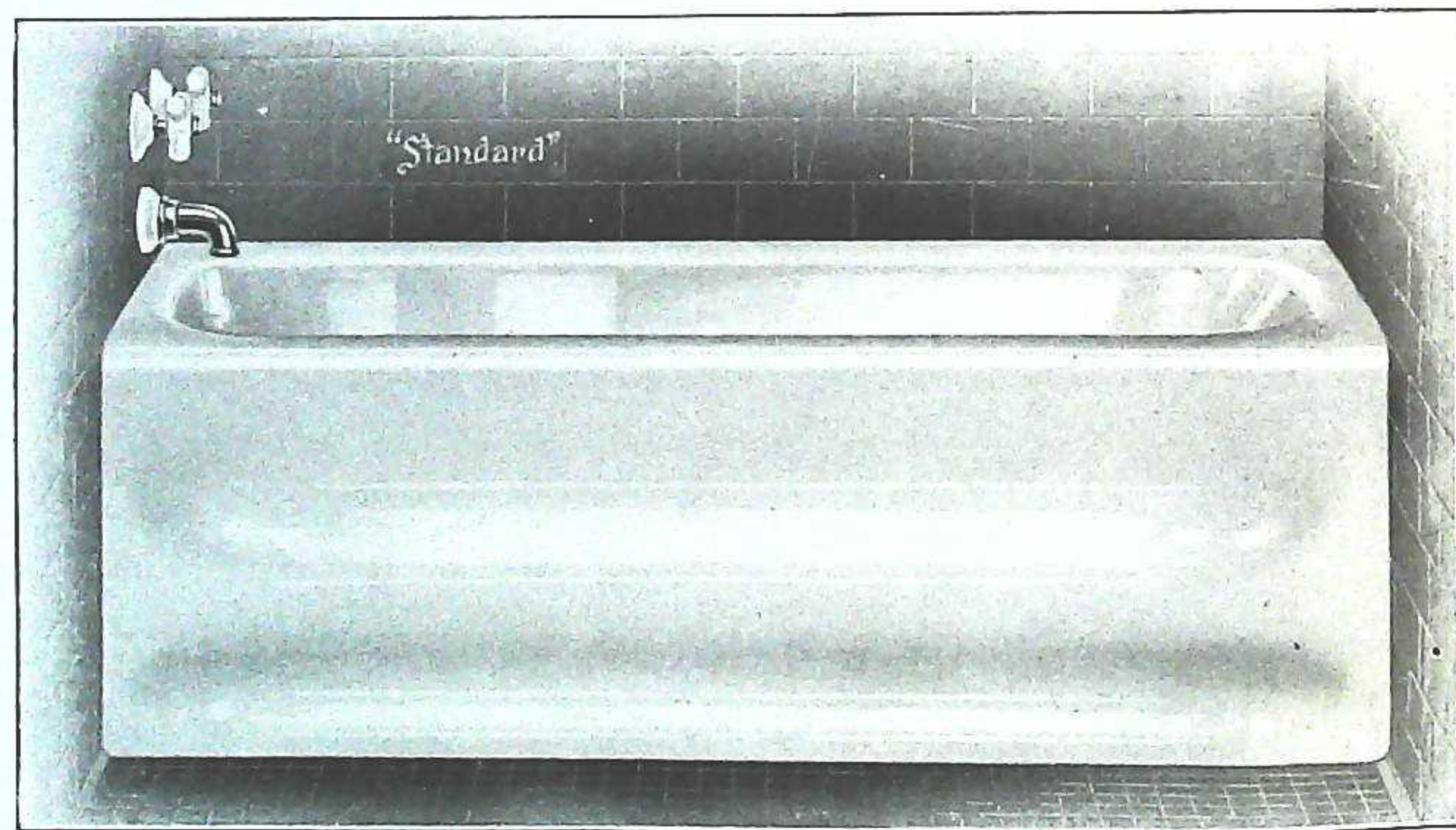


Fig. 42

Width of rim 3 3/4 inches
 Width over all 30 inches
 Width from finished wall line 29 1/4 inches
 Height over all 18 inches
 Height from floor 17 1/2 inches
 Depth inside 17 inches

Nominal Sizes	feet	4 1/2	5	5 1/2	6
Length Over All	inches	52 3/4	58 3/4	64 3/4	70 3/4
Between Finished Wall Lines	inches	51 1/4	57 1/4	63 1/4	69 1/4
Approximate Shipping Weight, Tub Only	pounds	435	455	505	580

This bath can be fitted with nickel-plated top nozzle supply and connected overflow and drain fitting with 1/2-inch built-in compression valves with china handles and china escutcheons and nozzle through overflow.

When ordering specify whether wanted with fittings at right or left end.



Fig. 44

Fittings and Waste at Right End

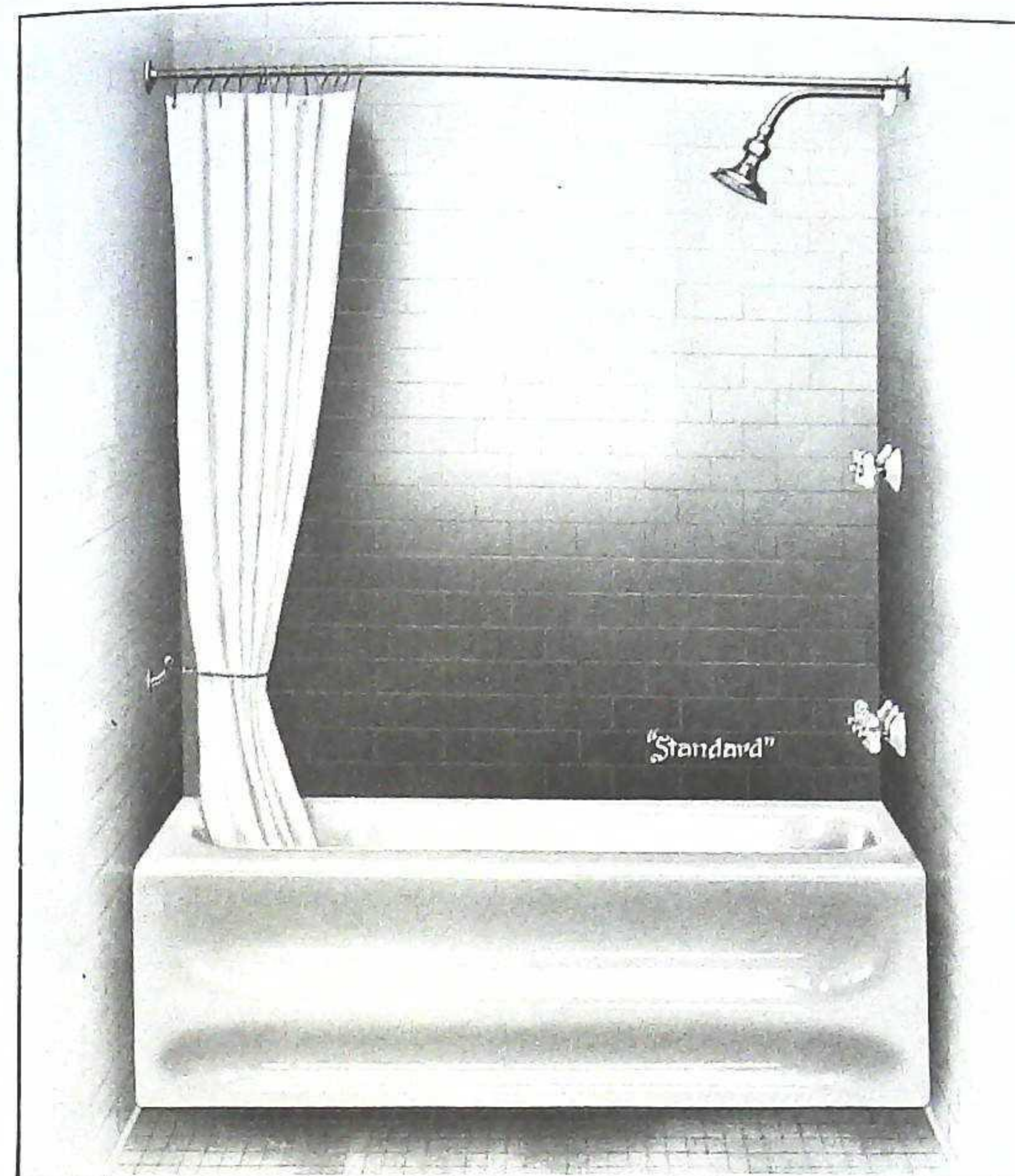


Fig. 51

Triwald Enameled All Over One-piece Bath to tile in recess, with 2 3/4-inch rim and front outlet, nickel-plated over rim nozzle supply and connected drain and overflow fitting in right wall, with 1/2-inch built-in compression valves with china cross handles, china indexes and china escutcheons, removable china soap dish on nozzle, nickel-plated shower with cast brass head, ball joint, bent supply arm and 1/2-inch built-in compression shower valves with china cross handles, china indexes and china escutcheons, curtain rod, pins, duck curtain, holdback hook and chain.

Width of rim 2 3/4 inches
 Width over all 29 inches
 Width from finished wall line 29 1/4 inches
 Height over all 18 inches
 Height from floor 17 1/2 inches
 Depth inside 17 inches

Nominal Sizes	feet	4 1/2	5	5 1/2	6
Length Over All	inches	52 3/4	58 3/4	64 3/4	70 3/4
Length Between Finished Wall Lines	inches	51 1/4	57 1/4	63 1/4	69 1/4
Approx. Shipping Weight, Tub Only	pounds	435	455	505	580

When ordering, specify whether wanted with right or left drain and fittings at end or back wall.

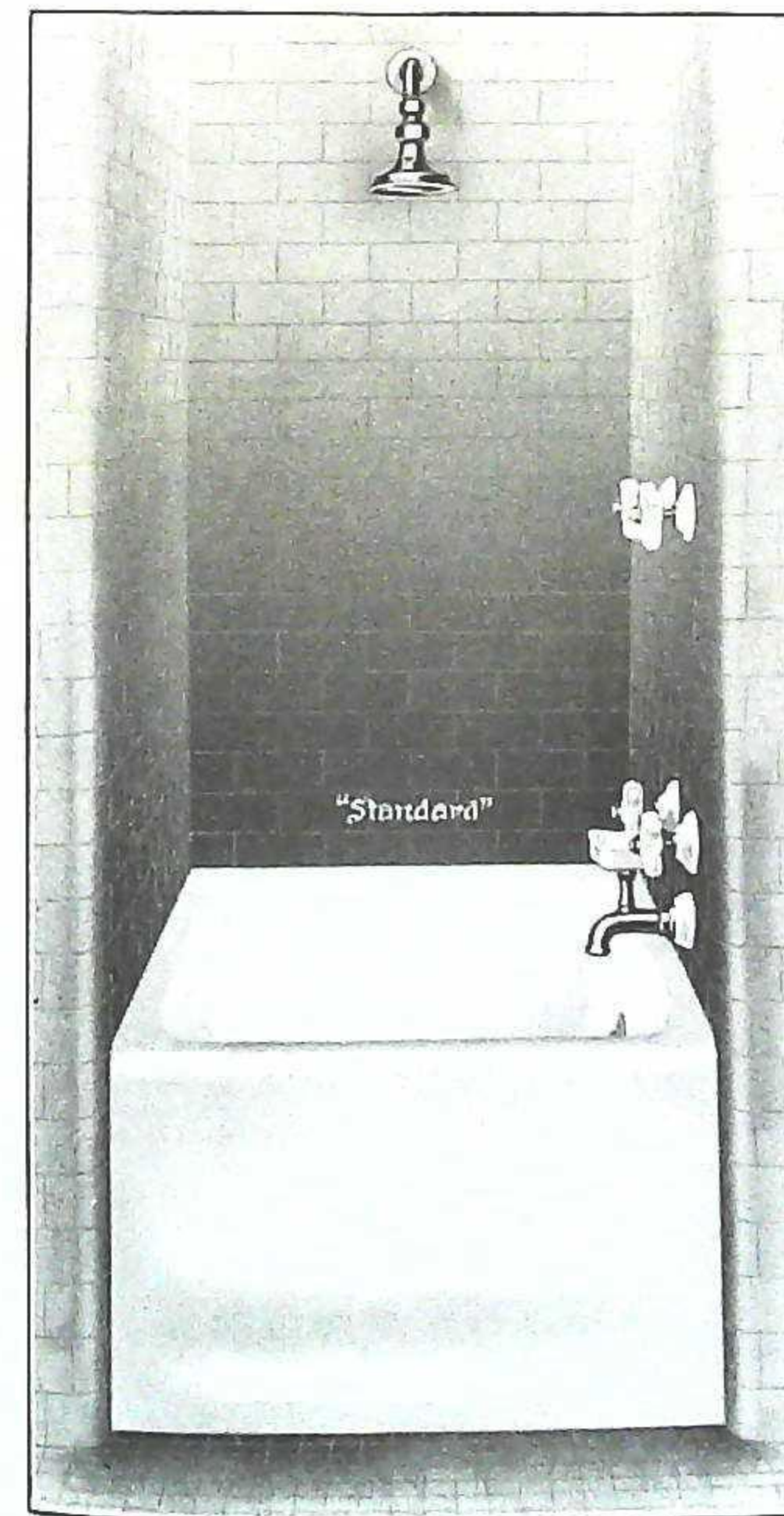


Fig. 52

Triwald Enameled All Over One-piece Bath to tile in recess with 2 3/4-inch rim and front outlet, nickel-plated over rim nozzle supply and connected drain and overflow fitting in right wall, with 1/2-inch built-in compression valves with china cross handles, china indexes and china escutcheons, removable china soap dish on nozzle, nickel-plated shower with cast brass head, ball joint, bent supply arm and 1/2-inch built-in compression shower valves with china cross handles, china indexes and china escutcheons, curtain rod, pins, duck curtain, holdback hook and chain.

Width of rim 2 3/4 inches
 Width over all 29 inches
 Width between finished wall line 27 1/2 inches
 Height over all 18 inches
 Height from floor 17 1/2 inches
 Depth inside 17 inches

Nominal Sizes	in.	44	48
Length Over All	"	44	48
Length from Finished Wall Line	in.	43 1/4	47 1/4
Approx. Ship. Weight	lbs.		

This bath can be furnished with nickel-plated over rim nozzle supply and connected drain and overflow fitting in left wall and without shower.

When ordering specify whether wanted with overflow opening and fittings at right or left side.

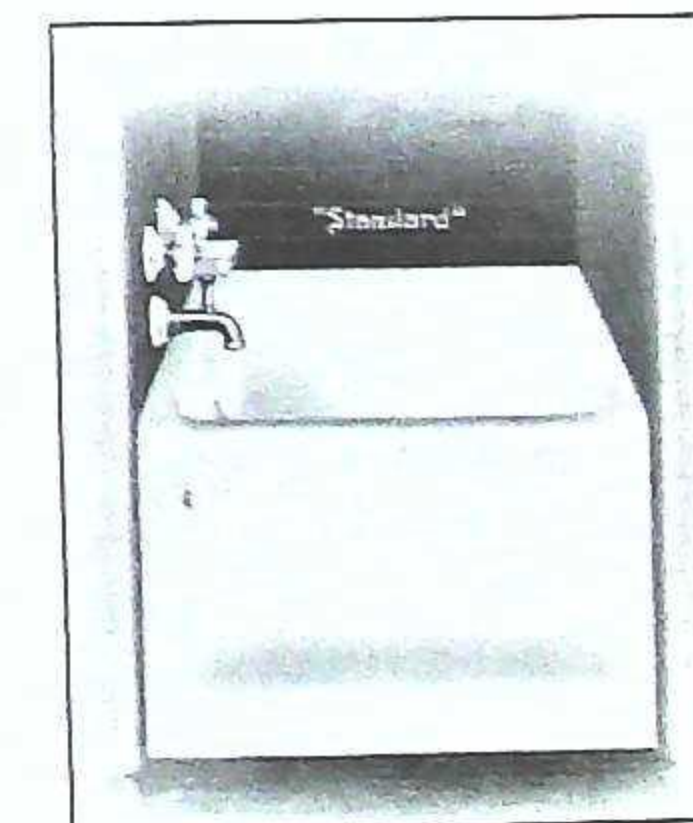


Fig. 53

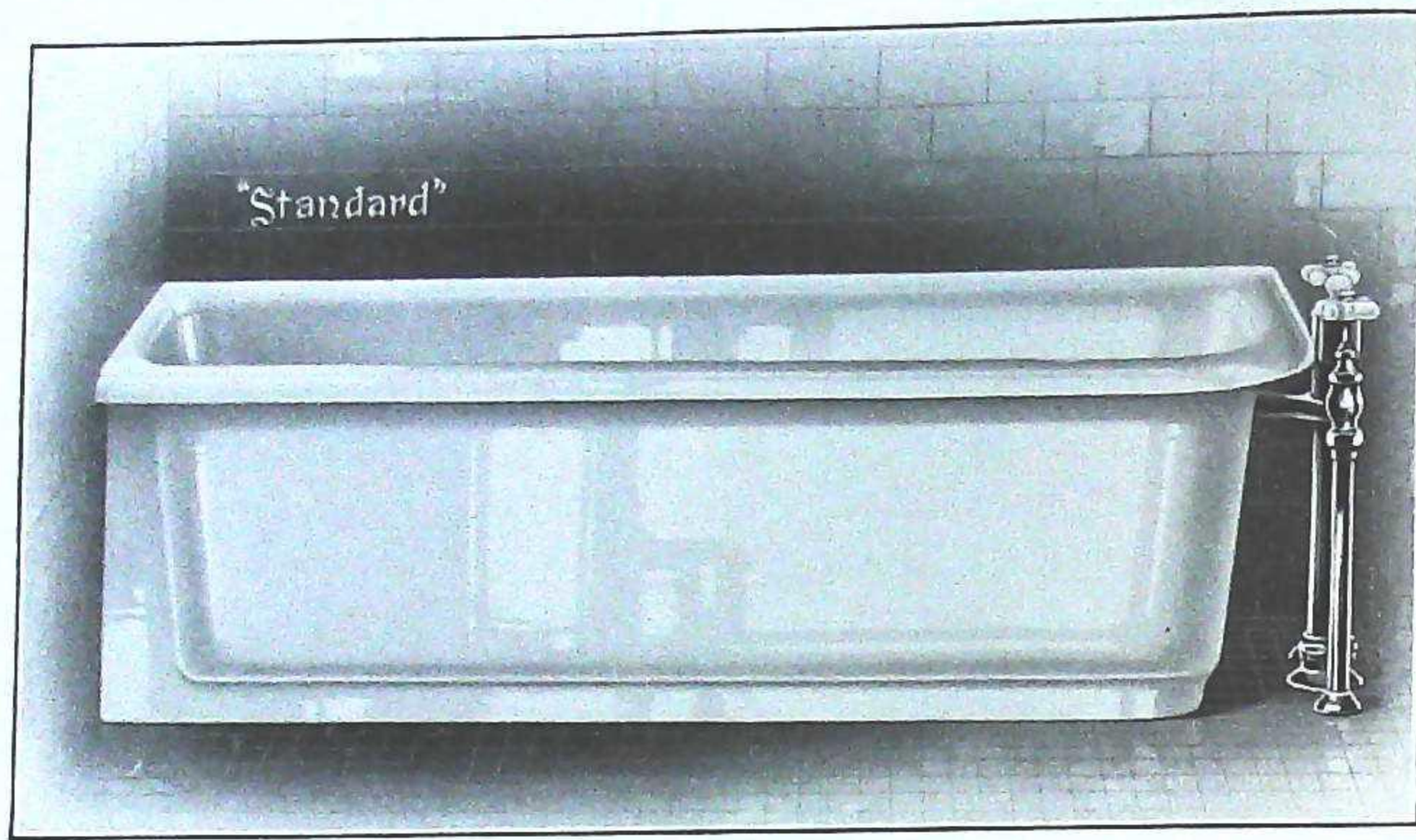


Fig. 61

Width of roll rim 3 inches
 Width over all 29 inches
 Width from finished wall line 28½ inches
 Height over all 18 inches
 Height from floor 17½ inches
 Depth inside 17 inches

<p>For Right Corner Fig. 62</p>	Nominal Sizes.....feet	4½	5	5½
	Length Over All.....inches	54½	60½	66½
	" from Finished Wall Line....."	54	60	66
	Approximate Shipping Weight.....pounds	325	365	380

This bath also can be furnished with removable china soap dish on supply nozzle.

When ordering specify whether wanted for right or left corner.

Conred Enameled Iron One-piece Low Pattern Bath to tile in left corner with 3-inch roll rim and right end outlet, nickel-plated top nozzle supply and standing drain fitting with ½-inch compression valves with china cross handles, china indexes, and china knob and ½-inch nickel-plated supply pipes.



Fig. 63

Conred Enameled Iron One-piece Low Pattern Bath to tile in left corner with 3-inch roll rim and left end outlet, nickel-plated quick compression double bath faucet with china lever top handles, 1⅜-inch concealed rough brass drain and overflow with chain and rubber stopper.

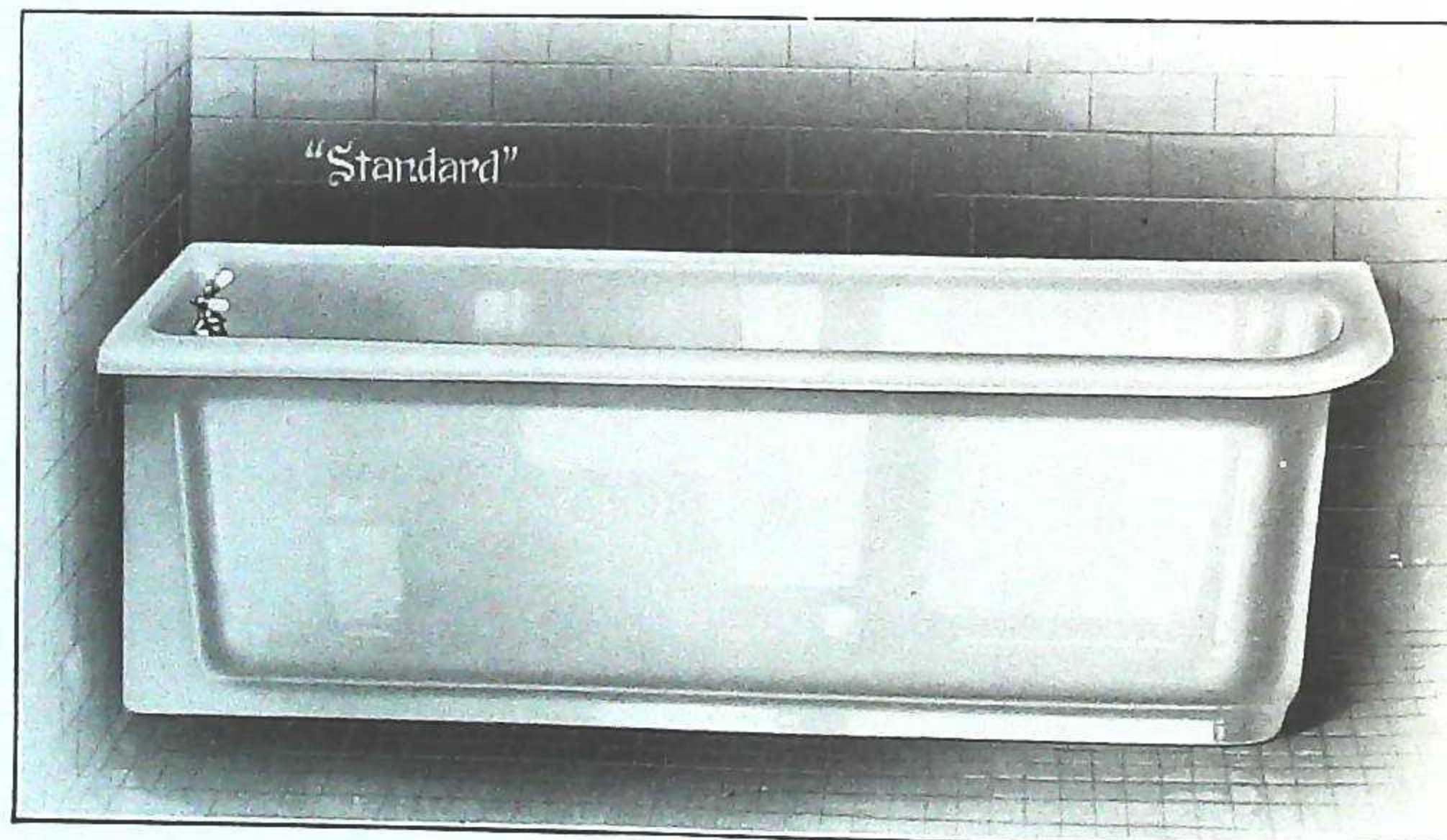


Fig. 64

Width of roll rim 3 inches
 Width over all 29 inches
 Width from finished wall line 28½ inches
 Height over all 18 inches
 Height from floor 17½ inches
 Depth inside 17 inches

<p>For Right Corner Fig. 66</p>	Nominal Sizes.....feet	4½	5	5½
	Length Over All.....inches	54½	60½	66½
	" from Finished Wall Line....."	54	60	66
	Approximate Shipping Weight.....pounds	325	365	380

This bath also can be furnished with nickel-plated over rim nozzle supply and 1⅜-inch connected drain and overflow fitting with ½-inch built-in compression valves with china cross handles, china indexes and china escutcheons.

When ordering, specify whether wanted for right or left corner.

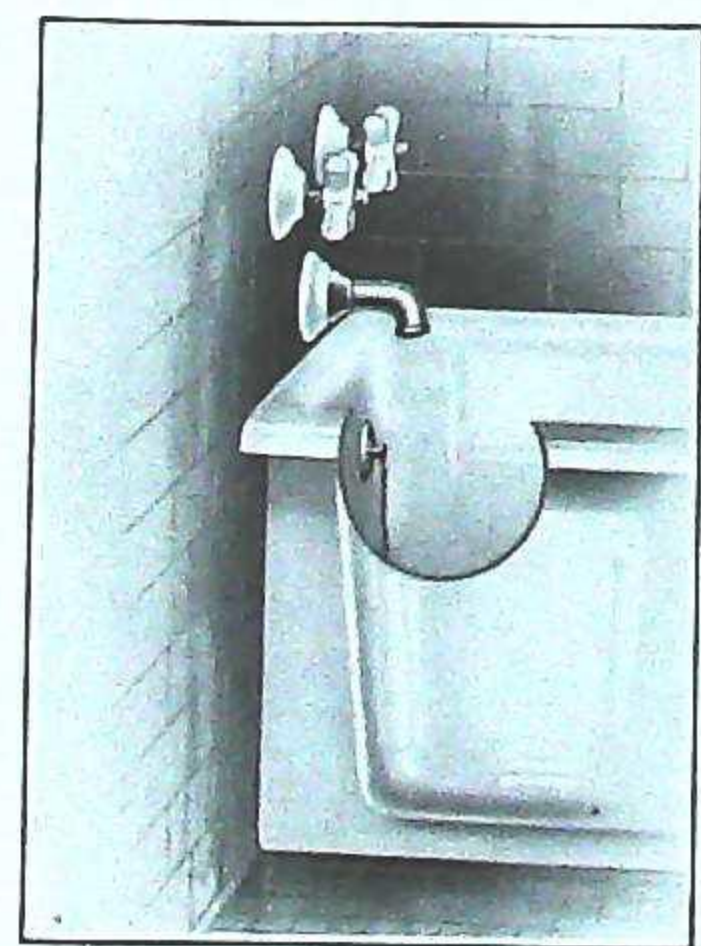


Fig. 65

Conred Enameled Iron One-piece Low Pattern Bath to tile in right corner, with 3-inch roll rim and left end outlet, nickel-plated quick compression double bath faucet with china lever top handles, ½-inch nickel-plated supply pipes, 1⅜-inch nickel-plated connected drain and overflow with chain and rubber stopper and removable china soap dish on wall.

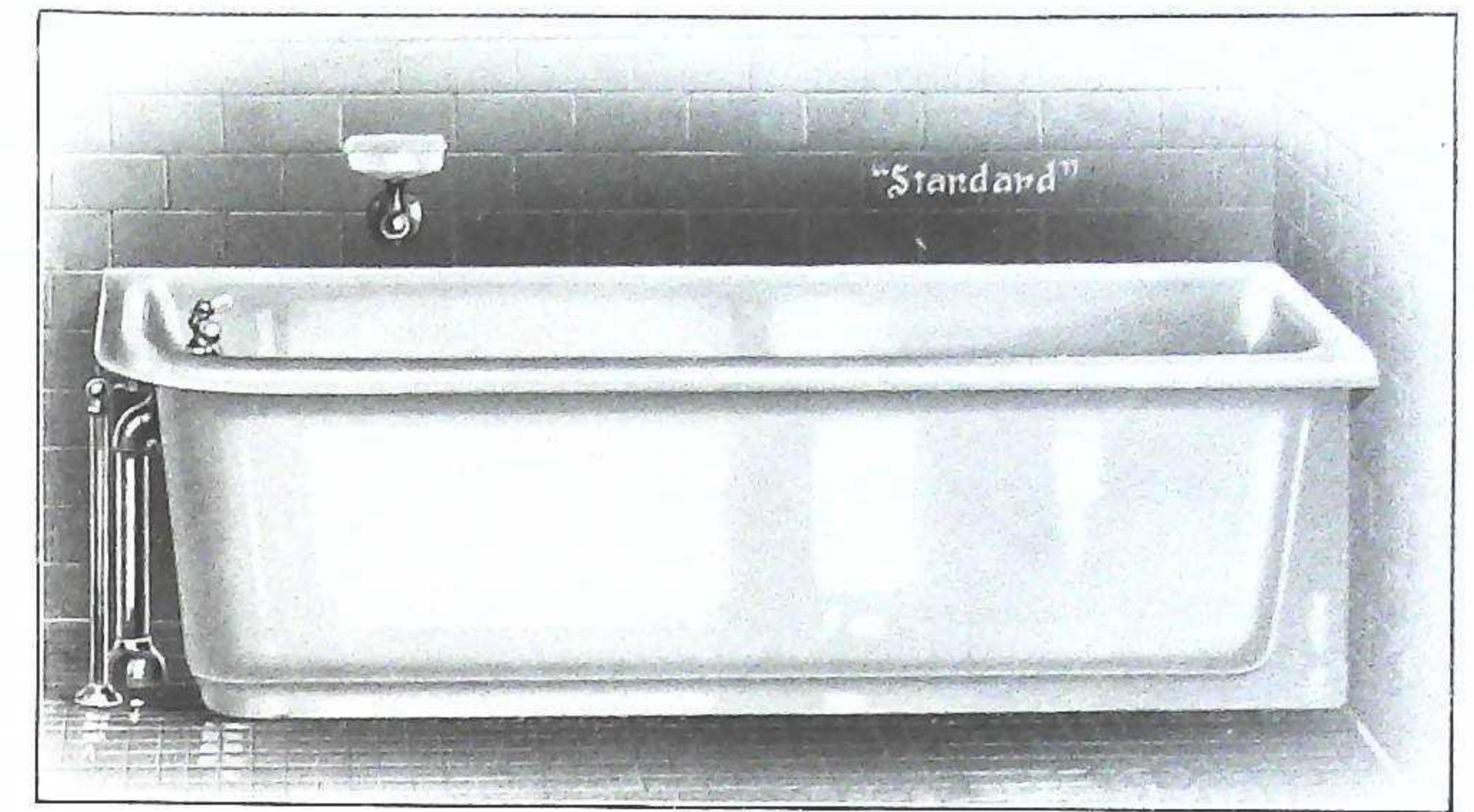


Fig. 71

Width of roll rim 3 inches
 Width over all 29 inches
 Width from finished wall line 28½ inches
 Height over all 18 inches
 Height from floor 17½ inches
 Depth inside 17 inches

<p>For Left Corner Fig. 73</p>	Nominal Sizes.....feet	4½	5	5½
	Length Over All.....inches	54½	60½	66½
	" from Finished Wall Line....."	54	60	66
	Approximate Shipping Weight.....pounds	325	365	380

This bath also can be fitted with nickel-plated quick-compression double bath faucet with china lever handles, ½-inch nickel-plated supply pipes, nickel-plated standing drain fitting with china knob.

When ordering specify whether wanted for left or right corner.

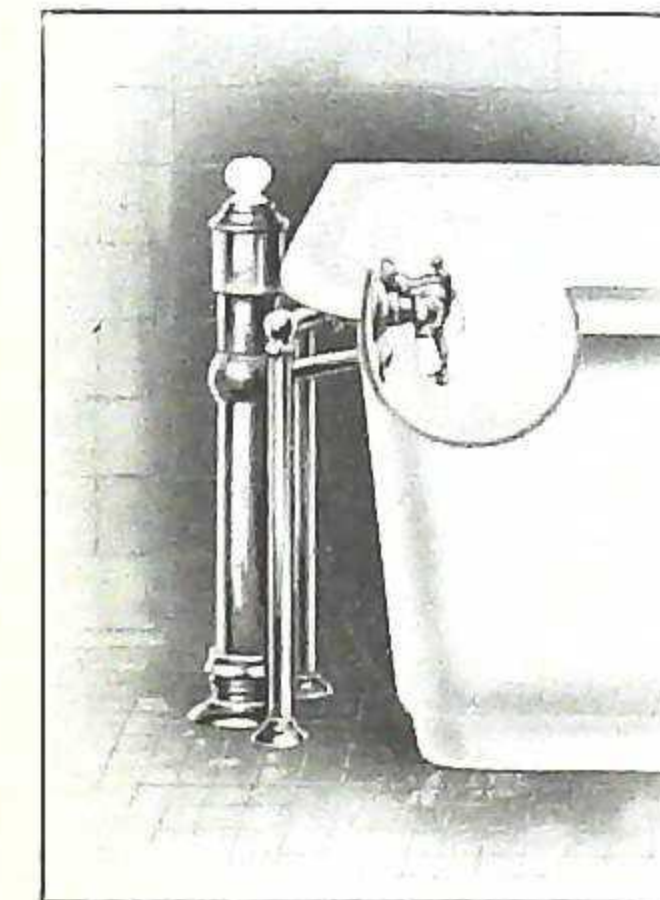


Fig. 72

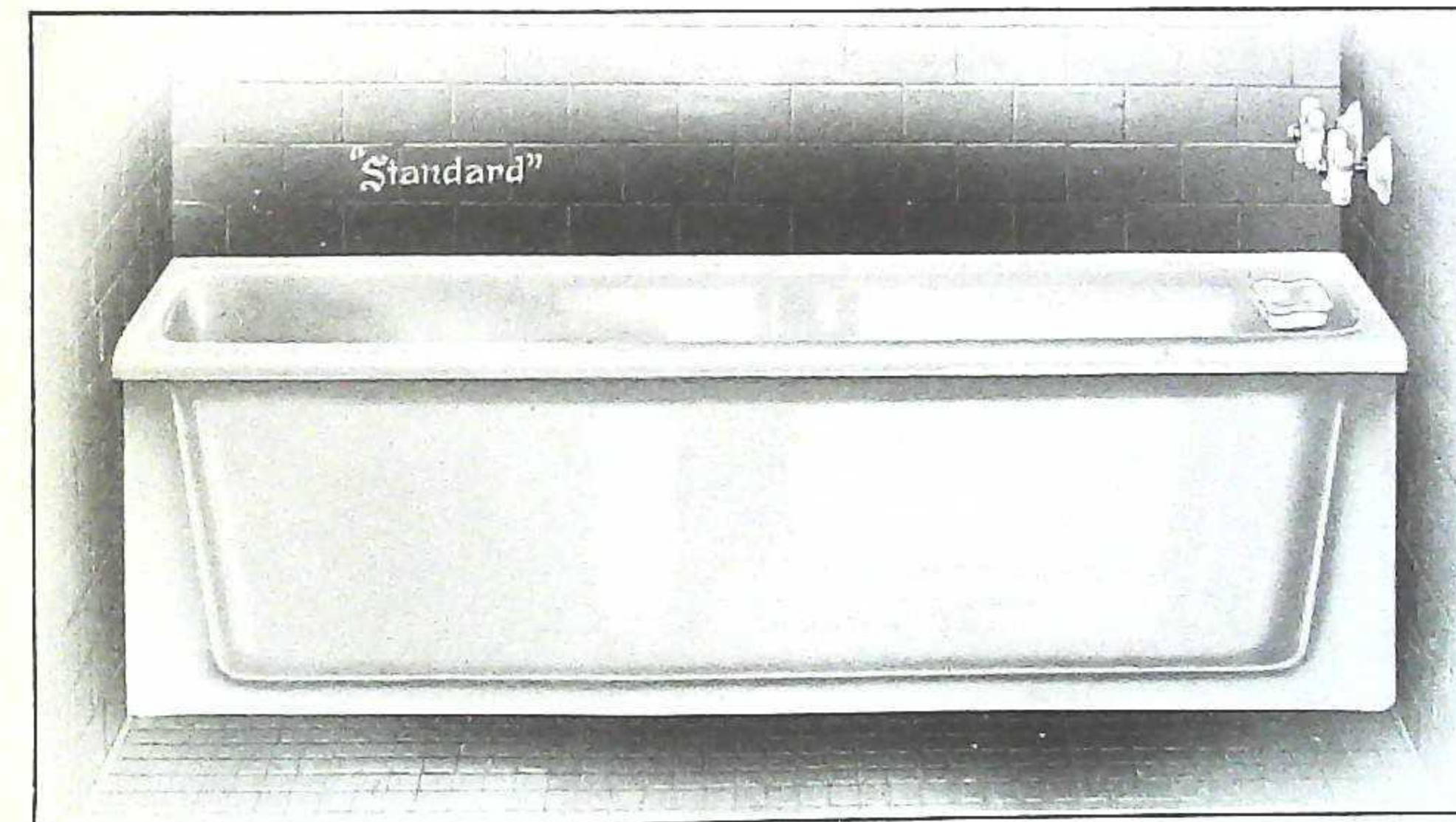


Fig. 74

Width of roll rim 3 inches
 Width over rim 29 inches
 Width from finished wall line 28½ inches
 Height over all 18 inches
 Height from floor 17½ inches
 Depth inside 17 inches

<p>Drain and Fittings at Left End Fig. 75</p>	Nominal Sizes.....feet	4½	5	5½
	Length Over All.....inches	53½	59½	65½
	" Between Finished Wall Lines....."	52½	58½	64½
	Approximate Shipping Weight, Tub Only, pounds	390	435	470

Furnished enameled inside only or enameled all over.

This bath also can be furnished with nickel-plated over rim nozzle supply and connected drain and overflow fitting with ½-inch built-in compression valves with china cross handles, china indexes and china escutcheon.

When ordering specify whether wanted with right or left end outlet and with fittings in end or back wall.

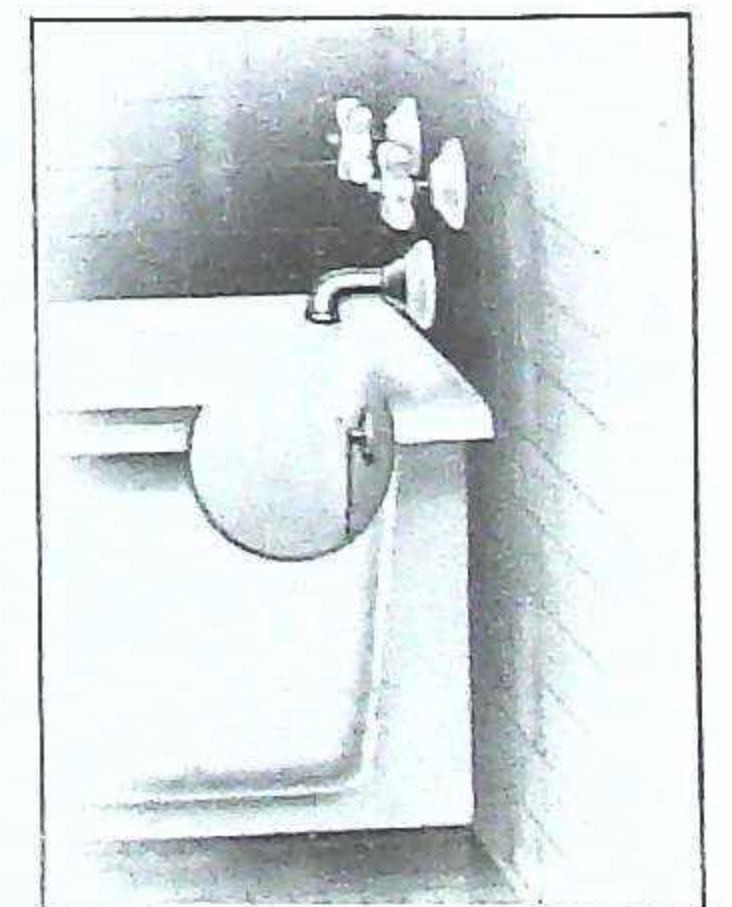


Fig. 76

Recona Enameled Iron One-piece Low Pattern Recess Bath with 3-inch roll rim and right end outlet, combination nickel-plated top nozzle supply through overflow and connected drain fitting with ½-inch built-in compression valves, china cross handles, china indexes and china escutcheons and removable china soap dish on nozzle.

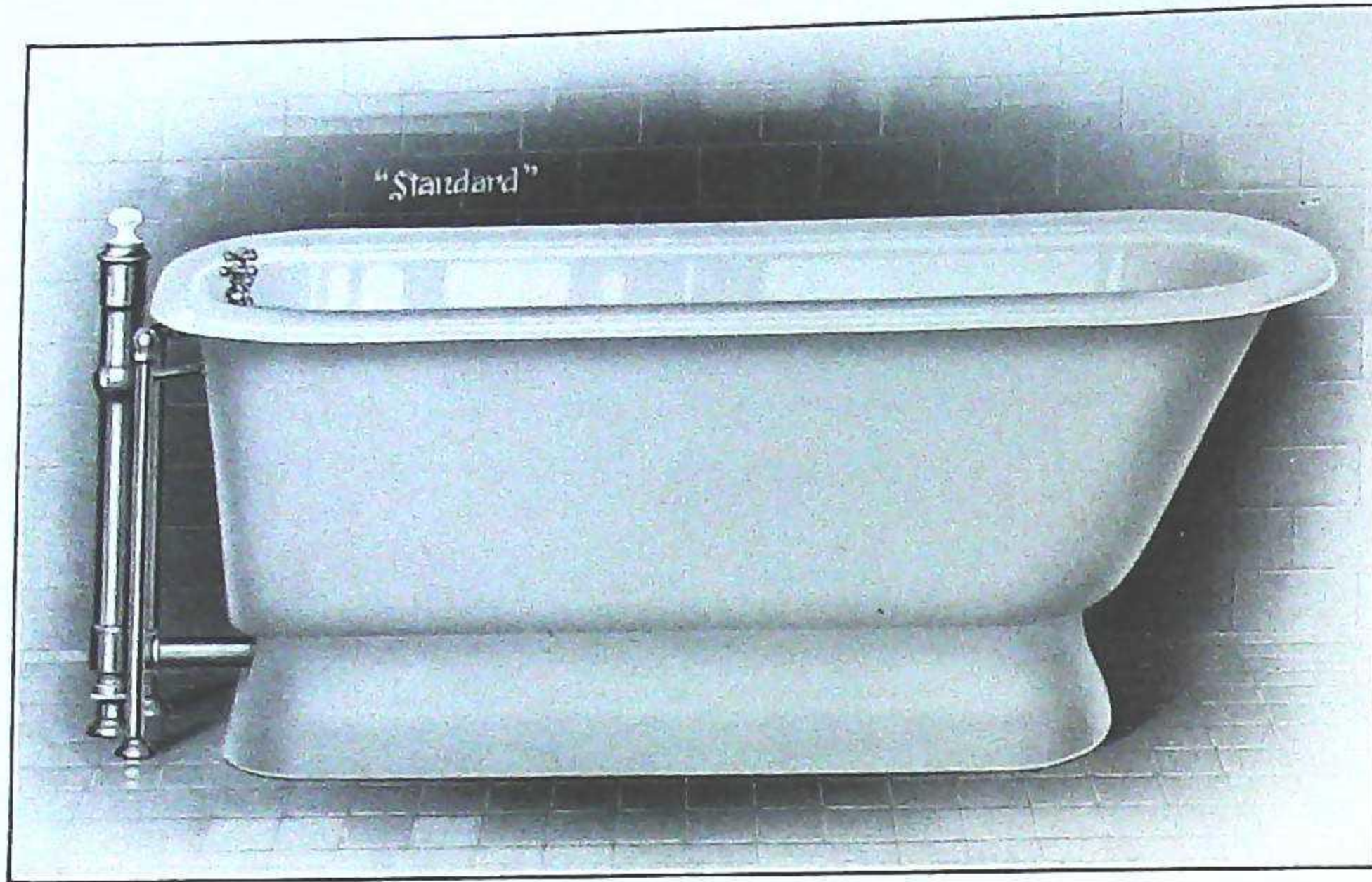


Fig. 81

Width of roll rim 3 inches Height to top of rim 22 1/2 inches
 Width over rim 30 inches Depth inside 17 inches

Nominal Sizes	feet	4	4 1/2	5	5 1/2	6
Length Over All	inches	48 1/4	54 1/4	60 1/4	66 1/4	72 1/4
Approximate Shipping Weight	pounds	270	300	340	375	425

This bath can be furnished with enameled base and Albadent white exterior finish.

This bath also can be furnished with nickel-plated double bath faucet with transfer valve, china lever handles, 24-inch nickel-plated gooseneck riser pipe with 4-inch cast brass head and adjustable ball joint.

Essex Enamelled Iron Bath on Base with 3-inch roll rim, exterior painted one coat, nickel-plated compression bath faucet with four-ball china indexed handles, 1/2-inch nickel-plated supply pipes, nickel-plated standing drain and overflow with china knob.

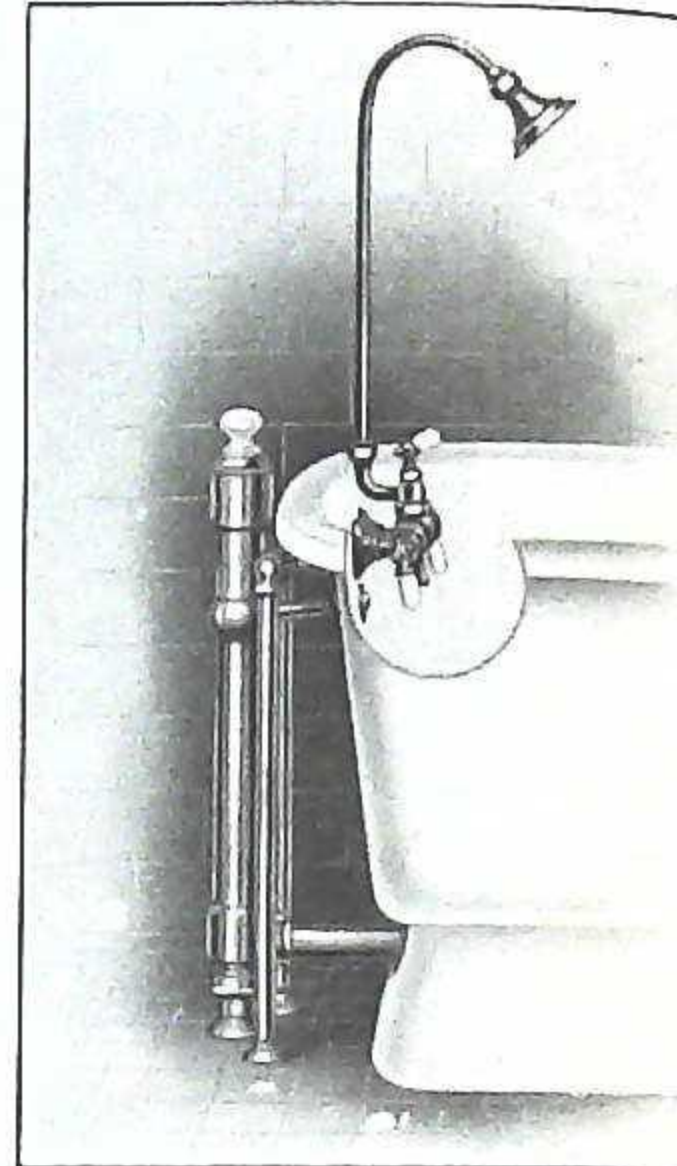


Fig. 82

Essex Enamelled Iron Flat Bottom Bath on claw feet, with 3-inch roll rim, exterior painted one coat, nickel-plated compression double bath faucet with four-ball china indexed handles, 1/2-inch nickel-plated supply pipes, nickel-plated connected drain and overflow with chain and rubber stopper.

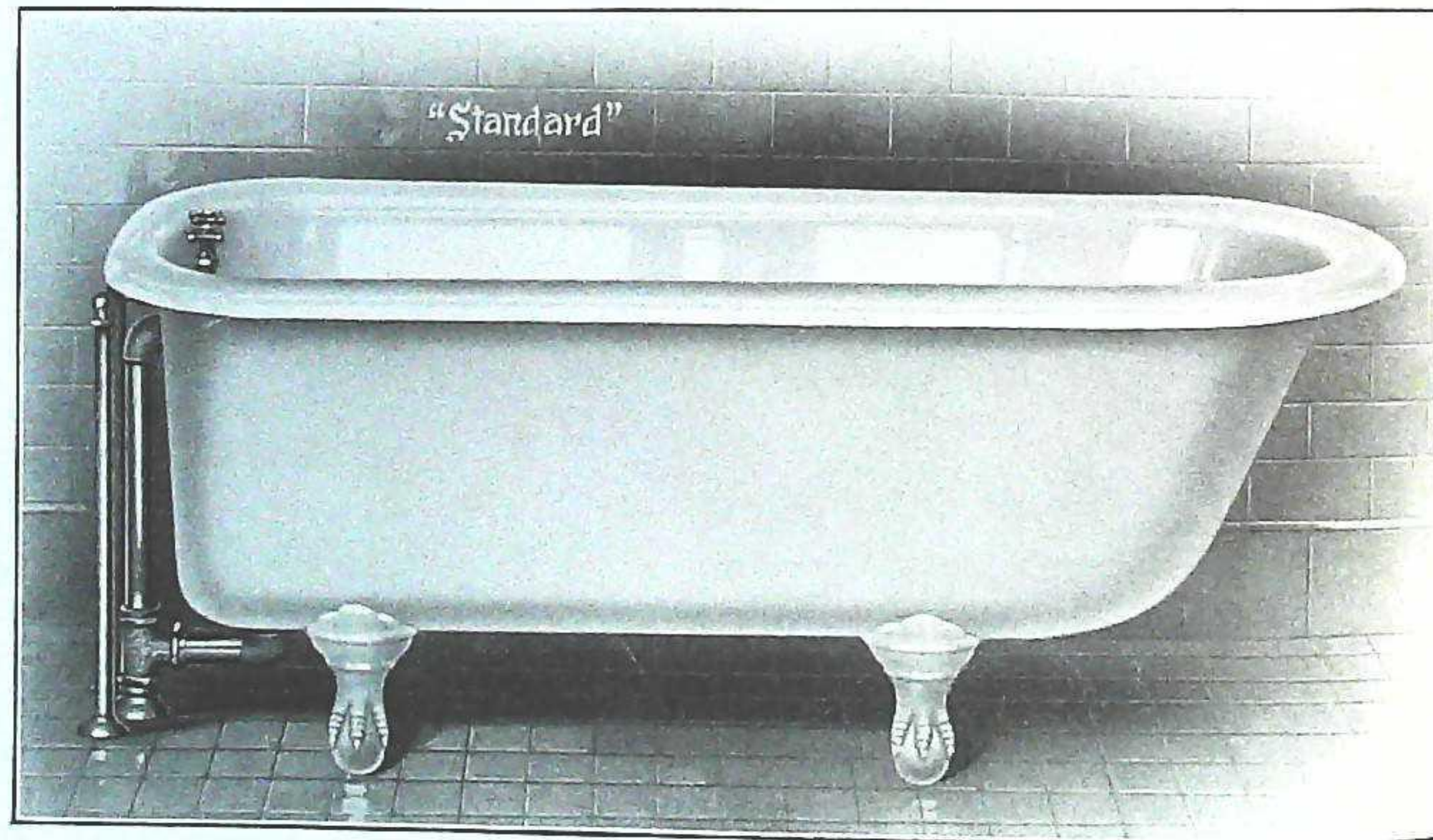


Fig. 83

Width of roll rim 3 inches Height to top of rim 22 1/2 inches
 Width over all 30 inches Depth inside 17 inches

Nominal Sizes	feet	4	4 1/2	5	5 1/2	6
Length Over All	inches	48 1/4	54 1/4	60 1/4	66 1/4	72 1/4
Approximate Shipping Weight	pounds	235	255	290	320	365

This bath can be furnished with Albadent white exterior finish.

This bath also can be furnished with nickel-plated double quick compression bath faucet with shower transfer valve, china lever handles, rubber hose, shower spray and wall hook.

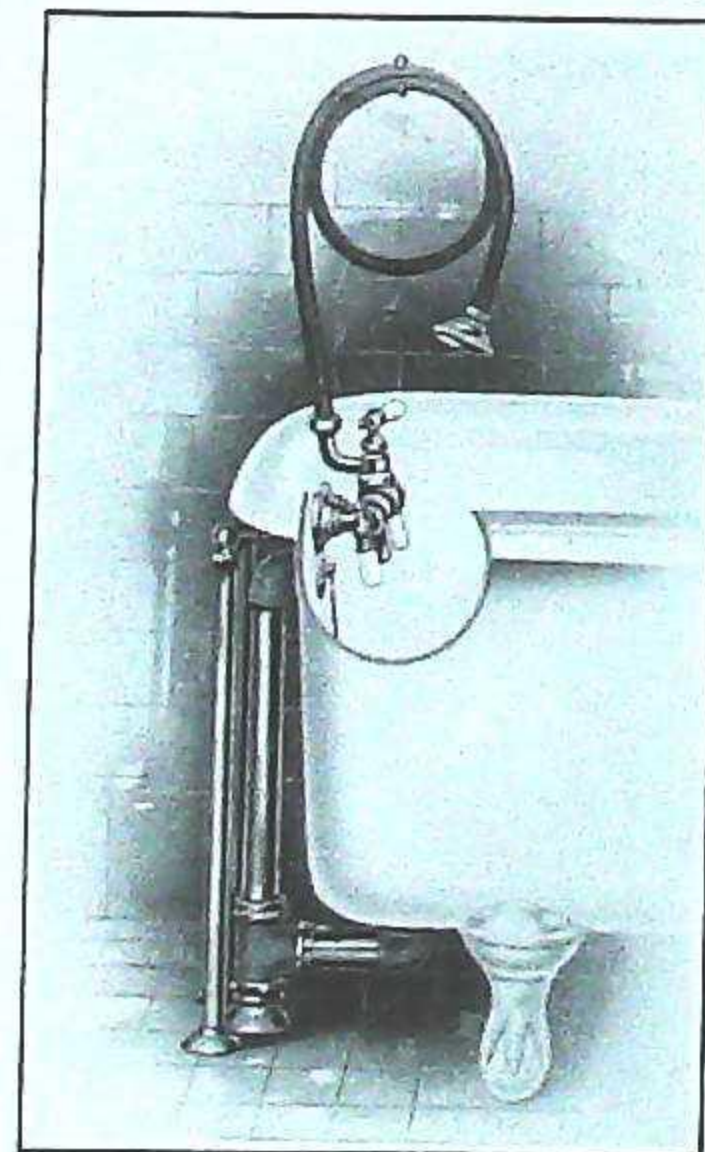


Fig. 84

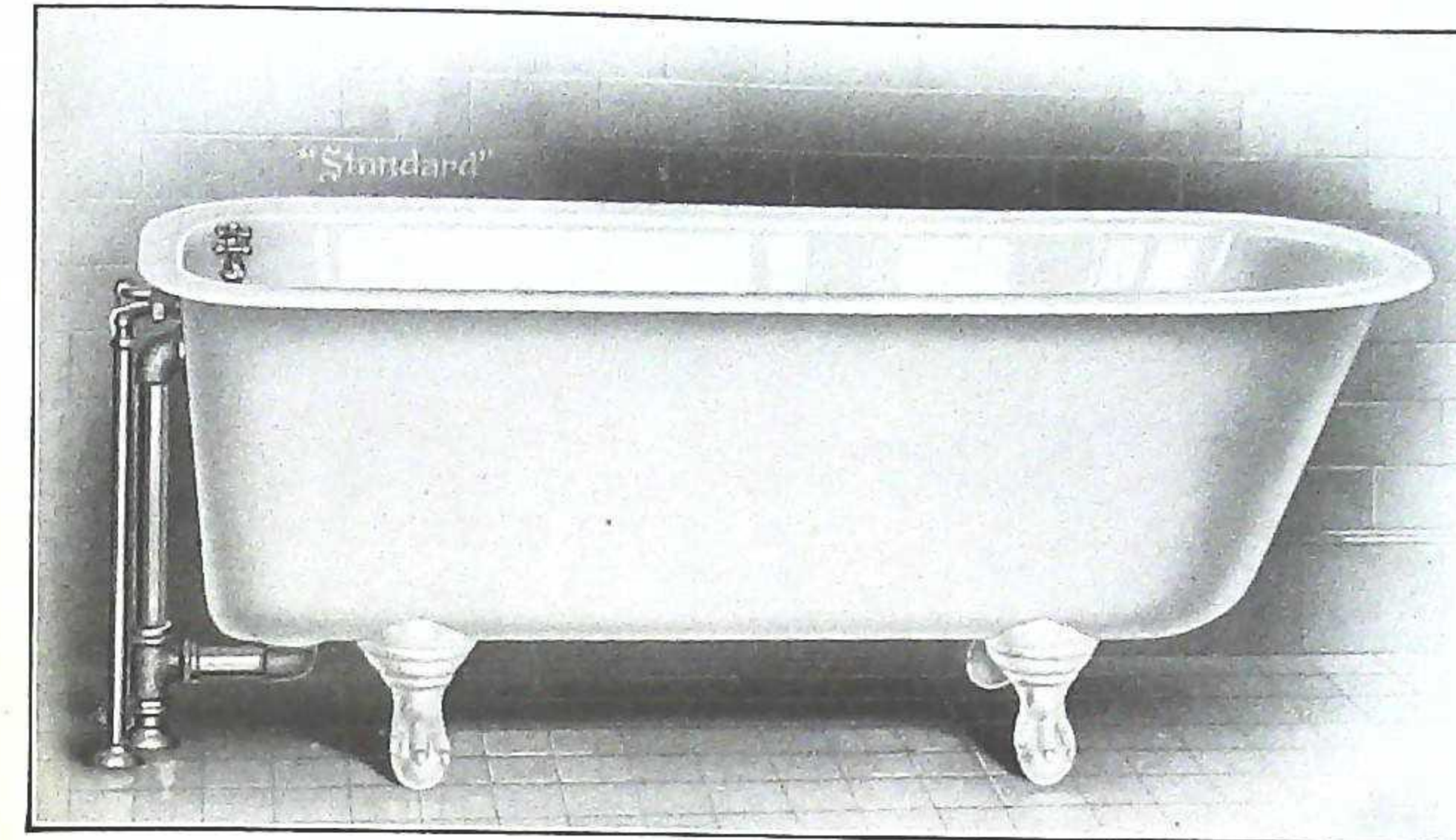


Fig. 91

Width of roll rim 2 1/4 inches Height to top of rim 22 1/2 inches
 Width over all 26 inches Depth inside 17 inches

Nominal Sizes	feet	4	4 1/2	5	5 1/2
Length Over All	inches	48	54	60	66
Approximate Shipping Weight	pounds	225	245	280	310

Can be furnished with Albadent White Exterior finish.

This bath also can be furnished with nickel-plated quick compression bath faucet with china lever handles and hose connection.

Knickerbocker Enamelled Iron Bath on claw feet, with 2 1/4-inch roll rim, exterior painted one coat, nickel-plated compression double bath faucet with 4-ball china indexed handles, nickel-plated 1/2-inch supply pipes, nickel-plated connected drain and overflow with chain and rubber stopper.

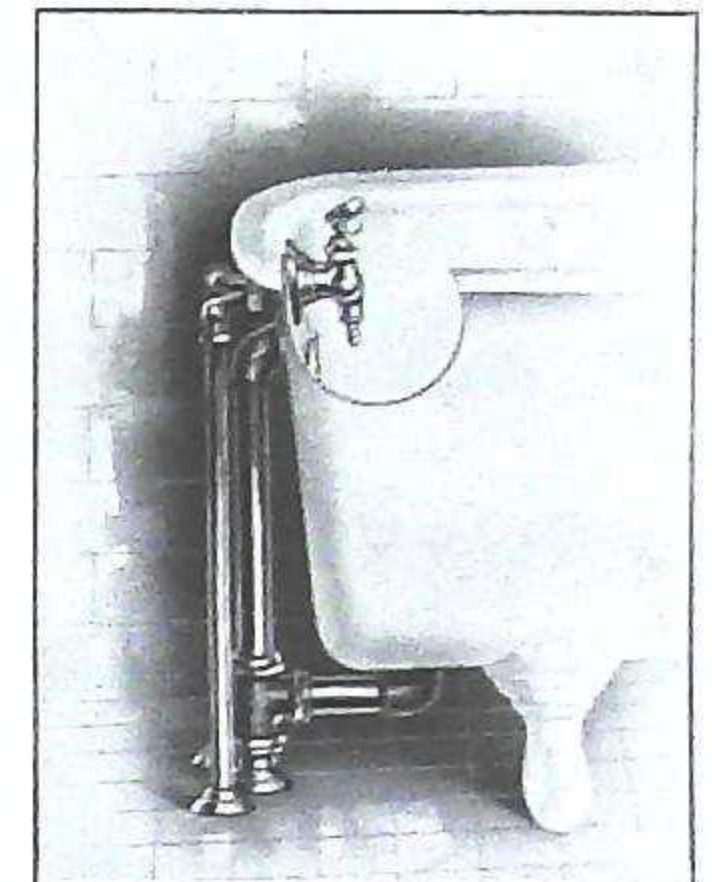


Fig. 92



Fig. 93

Combination Seat, Foot, and Child's Bath is an entirely new departure in the development of modern sanitary comforts.

For the usual purpose of bathing it is more convenient and comfortable than the ordinary bath tub, requiring less water and yet giving ample space.

In bathing the feet it is not necessary to remove all of the clothing, as sufficient water can be obtained in the foot bath without wetting the seat. The ledges on front and both sides enable one to massage or treat the feet conveniently, while the dimensions of the bath allow ample space for the feet when standing or sitting.

A children's bath has been an expensive luxury to be found only in the mansions of the rich. One is now presented in combination which is absolutely safe, most convenient and comfortable.

This bath is also much more adapted for the sick or invalid than the ordinary tub, affording a position without physical effort.

The bath is made in porcelain all exposed surfaces glazed and enameled iron with enamel exterior. The porcelain bath may be used in recess or corner or as a wall pattern bath. The enameled iron is made for recess only.

Style		Semi-Vitreous Porcelain	Enameled Iron
Length Over All	inches	44	44 1/2
" Inside	"	38	39 1/2
Width Over All	"	30	30
" Inside	"	24	24 1/2
Depth Outside at Seat	"	17	16
" Inside	"	15	15 1/2
Foot Receptor Inside	"	16x18	16x17
" Depth	"	9	9
Approximate Shipping Weight	pounds	725	370

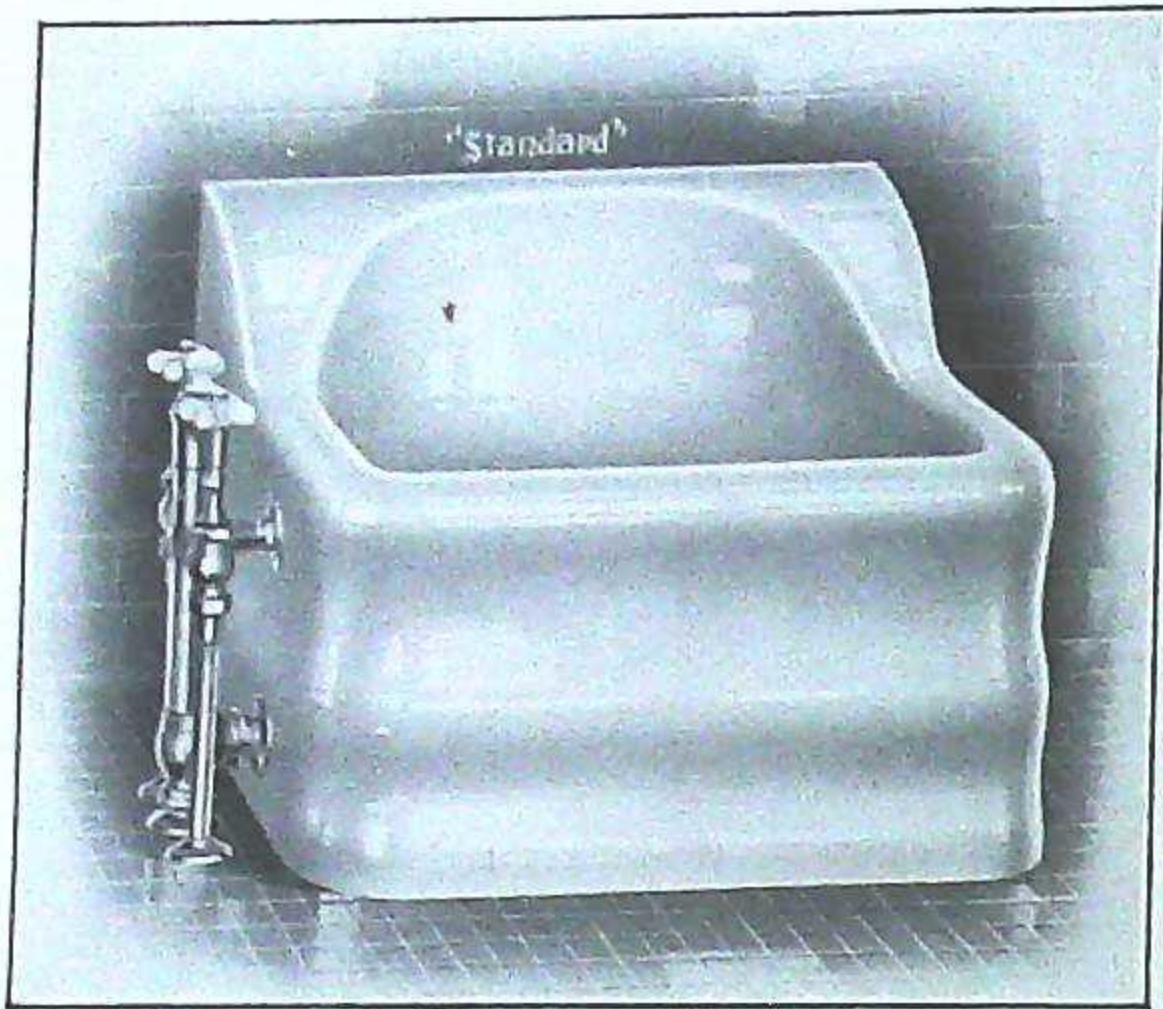


Fig. 101

Enameled All Over One-piece Iron Sitz Bath with 3-inch rim to tile in back wall, fitted with nickel-plated top bell supply and standing drain fitting, 1/2-inch compression valves with china cross handles and indexes, china knob on waste, and 1/2-inch nickel-plated supply pipes.

Front to back over all 31 inches
 Front to back wall 30 1/4 inches
 Width over rim 30 inches
 Height to top of rim at back 21 inches
 Height to top of rim at front 15 inches
 Depth inside at outlet 10 inches

Approximate Shipping Weight, Tub Onlypounds 470

Also furnished with fittings at right end. When ordering specify which is wanted.

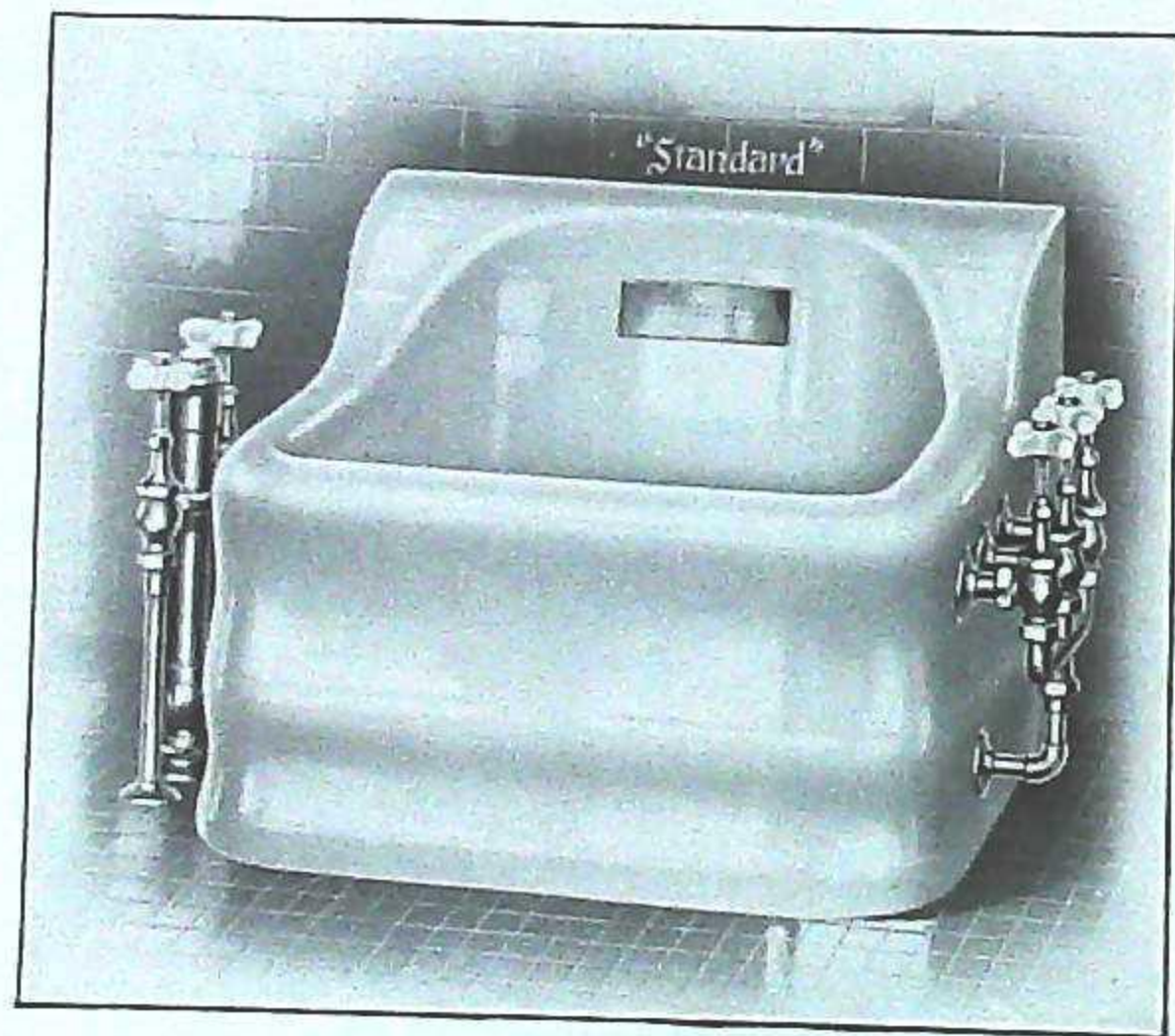


Fig. 102

Enameled All Over One-piece Iron Sitz Bath with 3-inch rim to tile in back wall, fitted with spinal spray and bidet, nickel-plated 5-valve top bell supply and standing drain fitting, compression valves with china cross handles, indexes and china knob on waste, and 1/2-inch nickel-plated supply pipes.

Front to back over all 31 inches
 Front to back wall 30 1/4 inches
 Width over rim 30 inches
 Height to top of rim at back 21 inches
 Height to top of rim at front 15 inches
 Depth inside at outlet 10 inches

Approximate Shipping Weightpounds 470

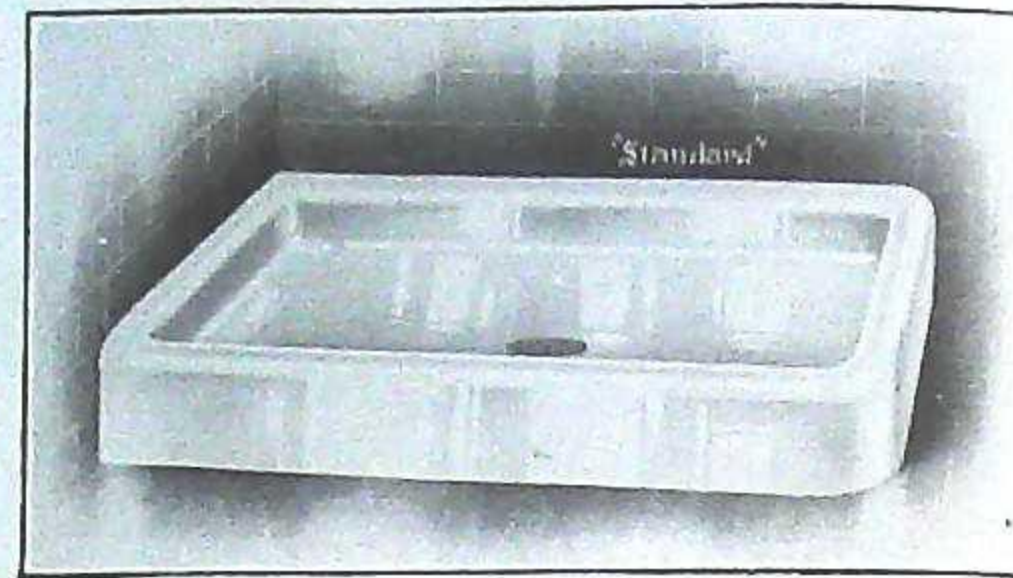


Fig. 103

Enameled Iron Corner Shower Receptor with apron to tile in walls, with nickel-plated strainer for 2-inch I. P.

Width of rim 2 inches Depth inside 3 1/4 inches

Size	inches	36x36	42x42
Face of Wall to Outer Edges	"	35 1/2	41 1/2
Approximate Shipping Weight	pounds	275	335

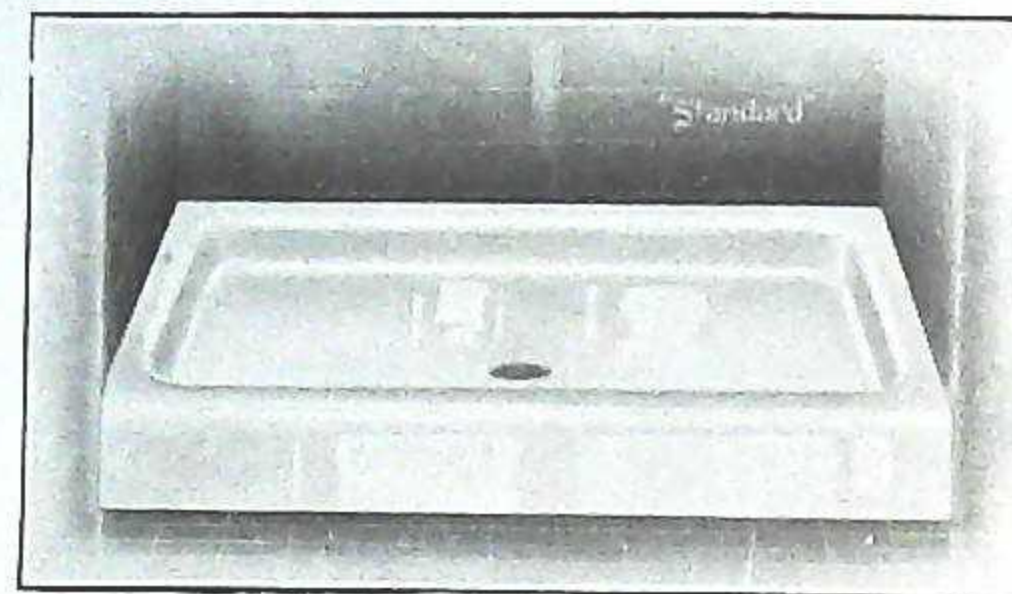


Fig. 104

Enameled Iron Recess Shower Receptor with apron to tile in walls and floor, with nickel-plated strainer for 2-inch I. P.

Width of rim 2 inches Depth inside 3 1/4 inches

Size	inches	36x36	42x42
Width Face to Face of Wall	"	35	41
Front to Face of Wall at Back	"	35 1/2	41 1/2
Approximate Shipping Weight	pounds	250	317

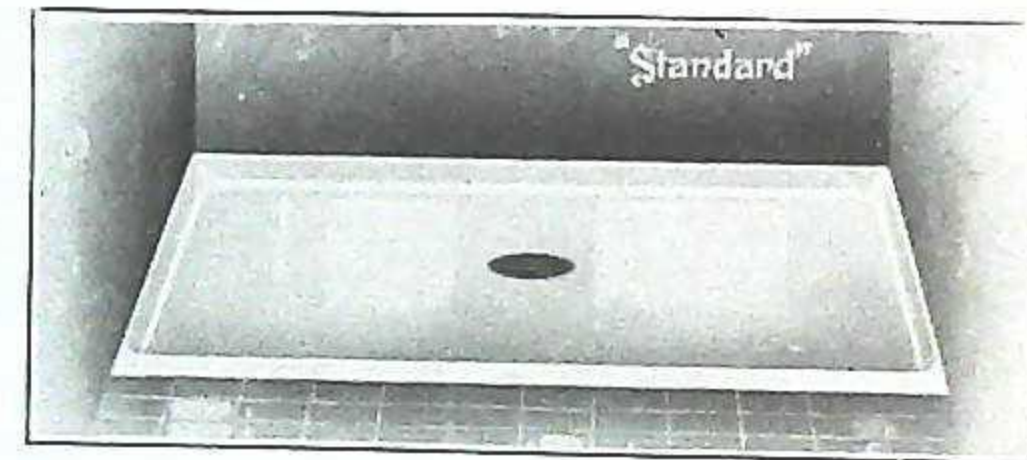


Fig. 105

Enameled Iron Recess Shower Receptor with nickel-plated strainer for 2-inch I. P. Flange sets level with floor. Can be furnished in right and left end sections.

Depth inside at outlet 2 3/4 inches

Size	inches	36x36	42x42
Width Face to Face of Wall	"	35 1/2	41 1/2
Front to Face of Wall at Back	"	35 3/4	41 3/4
Approximate Shipping Weight	pounds	250	335

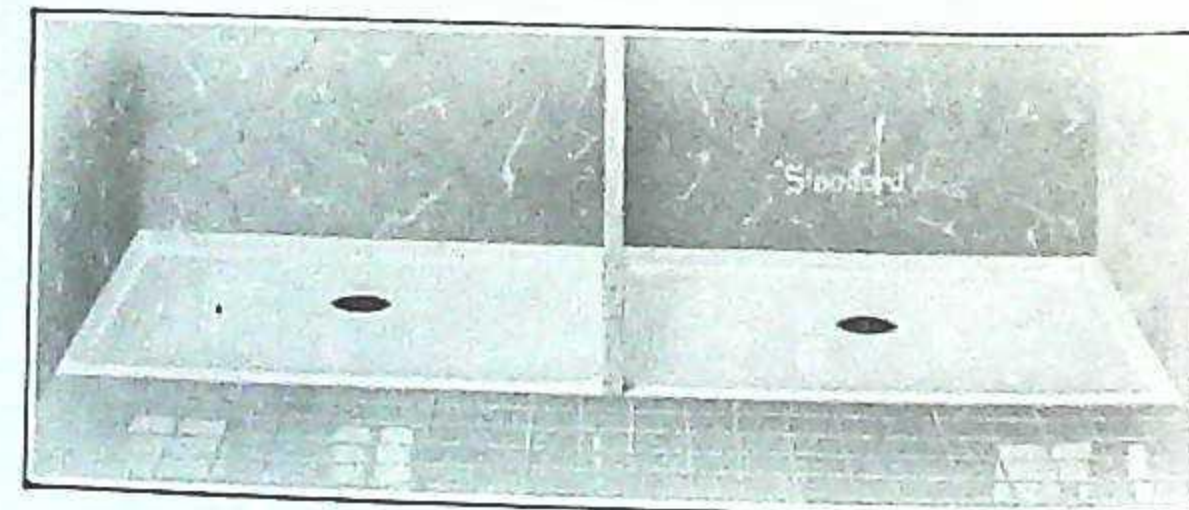


Fig. 106

Battery of Two Recessed Shower Receptors with nickel-plated strainers.

When receptor is to be used in batteries always state number in each battery so that proper sections will be furnished.

Special drawings will be furnished when receptors are furnished in batteries.

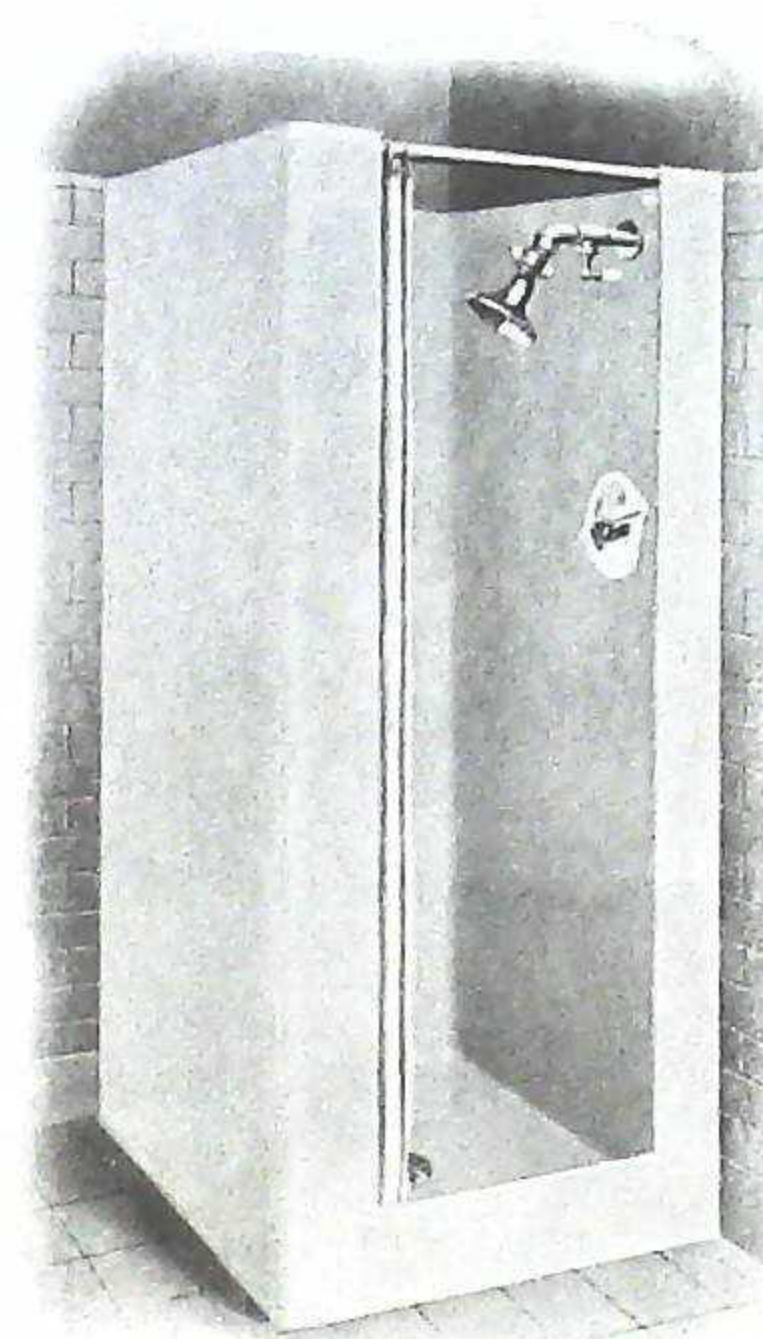


Fig. 111

Niedeecken Shower Stall Patented with special concealed type Niedeecken shower for 1/2-inch iron pipe, china dial and handle, nickel-plated shower arm with china handle, flow control valve and four-inch nickel-plated cast brass balljoint shower head, curtain rail, duck curtain and hooks, nickel-plated waste strainer for 2-inch lead or iron pipe.

Width	inches	30	32	36
Depth	"	32	32	36
Height	feet	6	6	6
Approximate Shipping Weight	pounds	350	375	425

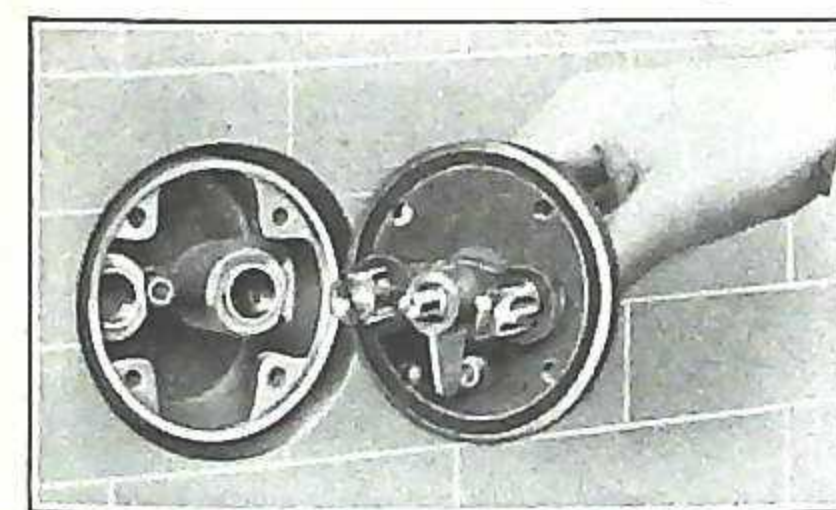
The increasing popularity of the shower bath and the desire to make possible a modern installation suitable for every requirement and reasonable in cost has resulted in the development of the Niedeecken Shower Stall.

The various types of shower stalls as used to date—tile, marble, glass and slate are not only prohibitive, due to cost, but frequently unsatisfactory on account of floor leakage. The metallic stall is low in cost, sanitary, light in weight, occupies the least space and is absolutely leak proof.

The walls of the stall are made of a continuous sheet of No. 10 gauge steel, which with the riser are welded to a dished bottom with waste outlet in center.

The shower is placed on side near front to enable bather to adjust water temperature before entering.

After installation is completed, the interior and exposed exterior and curtain rail should be finished in white or tinted enamel paint and the bottom in gray.



Showing Accessibility of Niedeecken Mixer

The working parts of the Niedeecken mixer can be readily replaced should it become necessary after years of use. In action the valve is such as to make changes in temperature gradual.

One of the most essential points is the non-scalding feature. Provision has been made in the valve whereby it is possible to set it to a predetermined maximum temperature, thus absolutely preventing scalding.

Loose key stops are recommended in the supply pipes, mainly as a matter of convenience when mixers need rewashing, which is advisable whenever valves do not shut off tightly without special effort.

When the mixer is used with a stop on the discharge side, it is necessary to use check valves in the supplies to prevent hot water from backing into cold water supply.

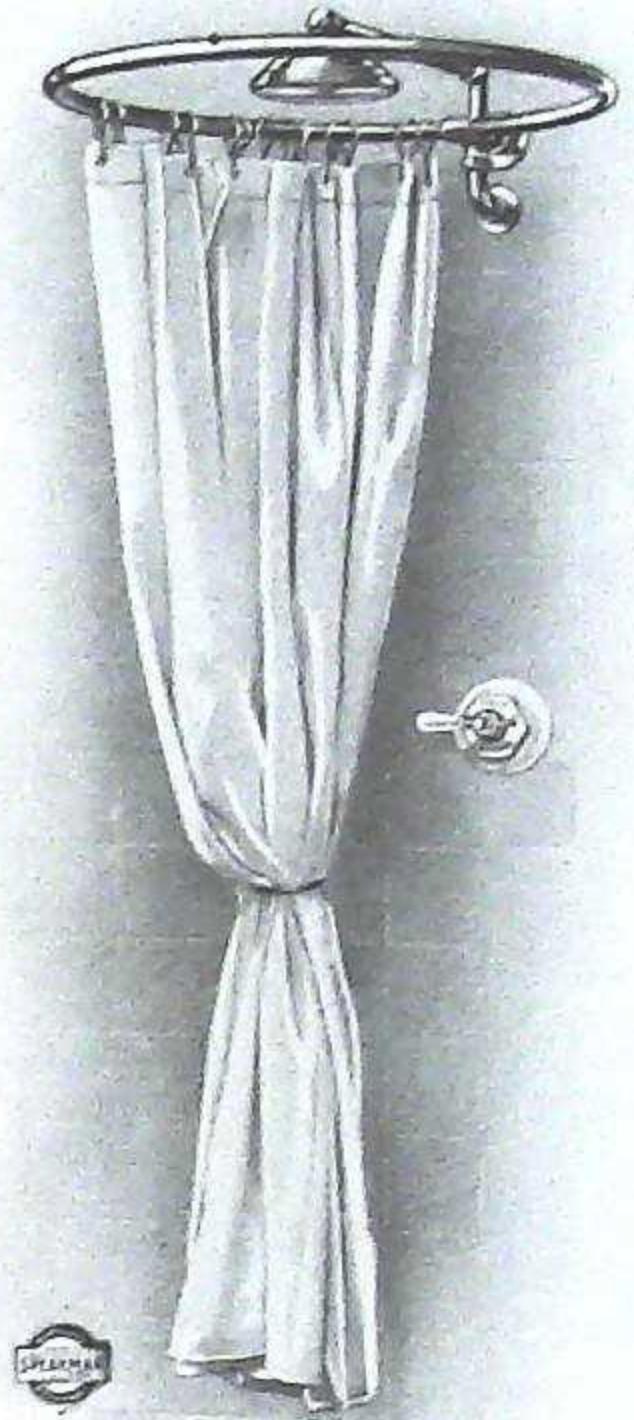


Fig. 112

Speakman Built-in Mixometer Shower, 1/2-inch size, with china wall plate and china handle, 6 1/2-inch nickel-plated shower head with nickel-plated supply arm to wall, 24x30-inch oval curtain ring, white duck curtain, curtain snaps and hook.
 Approximate Shipping Weightpounds 50
 Can be furnished with 24-inch diameter curtain ring.

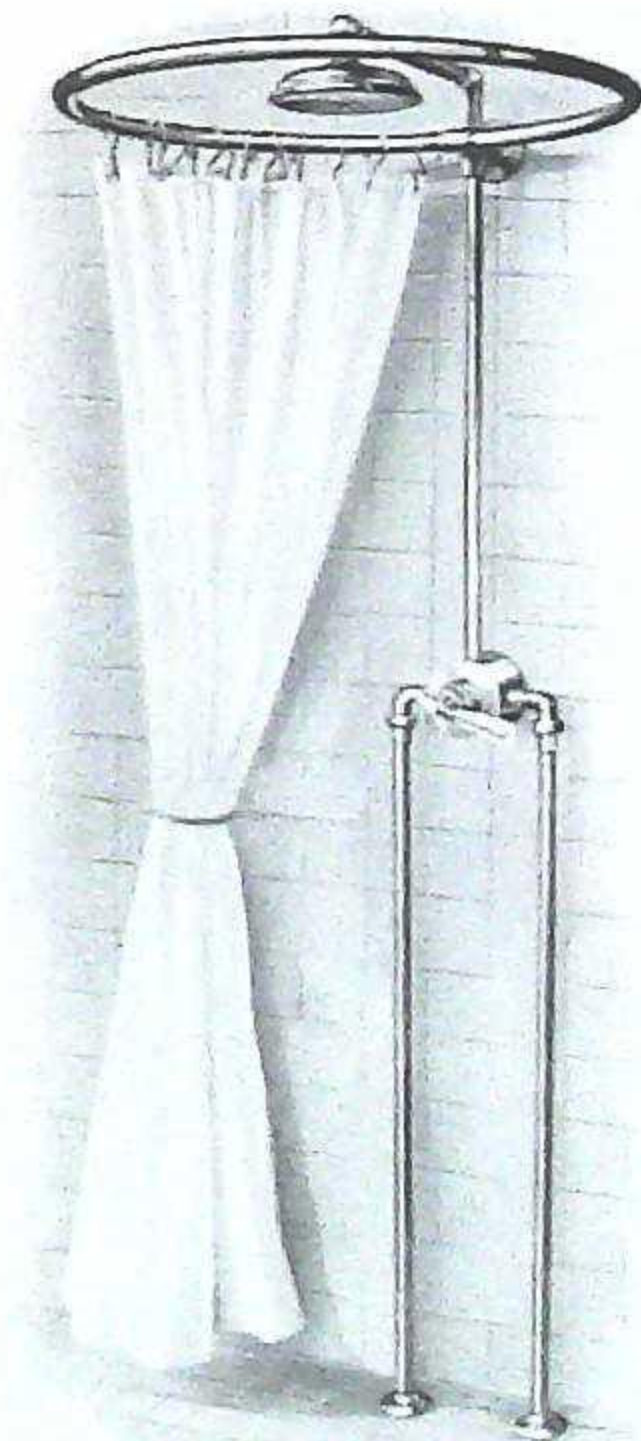


Fig. 113

Speakman Mixometer Shower with 6 1/2-inch shower head, supply pipes to floor, 24-inch curtain ring, white duck curtain, curtain snaps and hook.
 Approximate Shipping Weightpounds 50
 Made in 1/2 and 3/4-inch sizes.

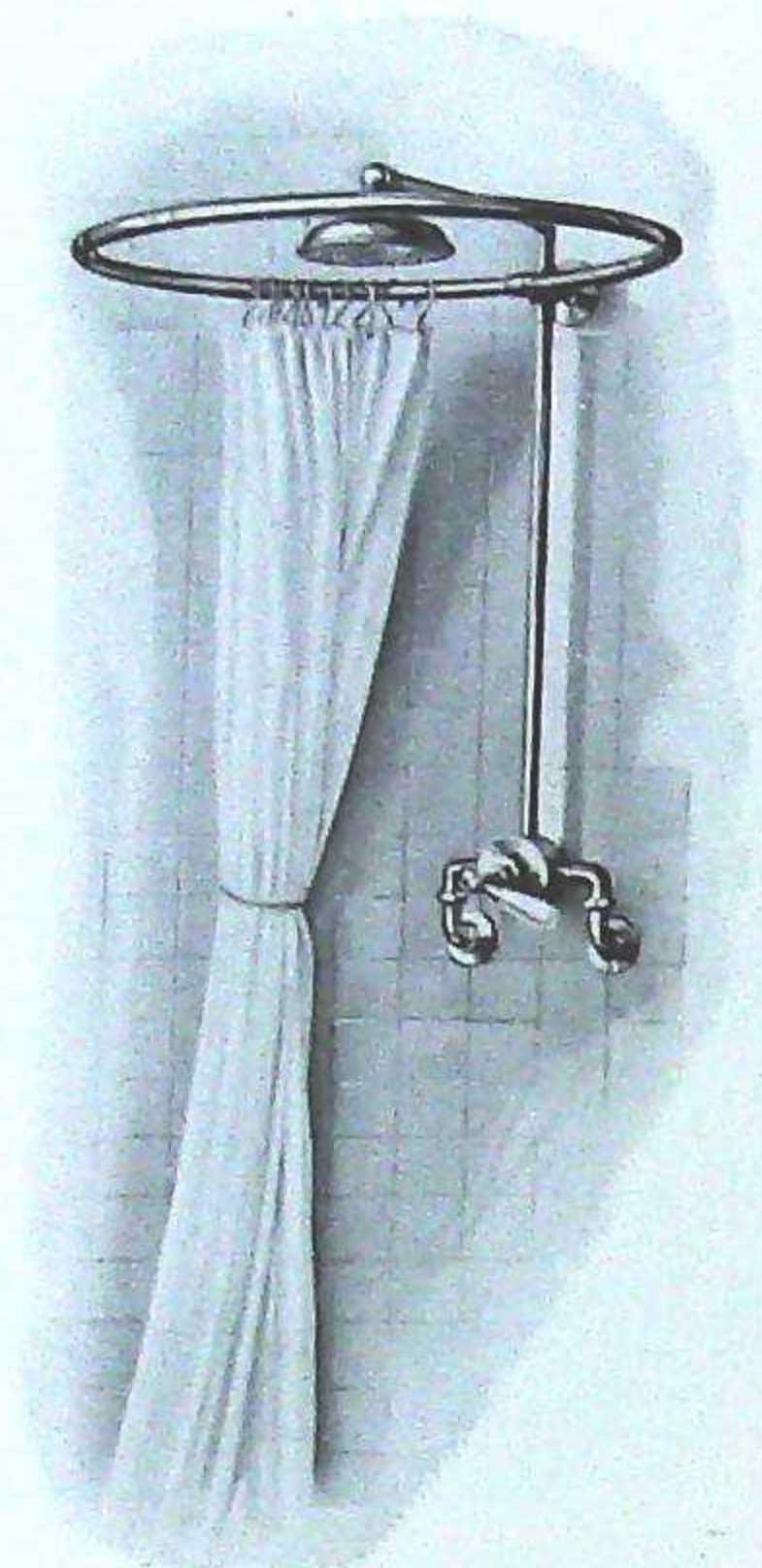


Fig. 121

Speakman Mixometer Shower with 6 1/2-inch shower head, supply pipes to wall with union couplings, 24-inch curtain ring, white duck curtain, curtain snaps and hook. Approximate Shipping Weight.....pounds 38 Made in 1/2 and 3/4-inch sizes.

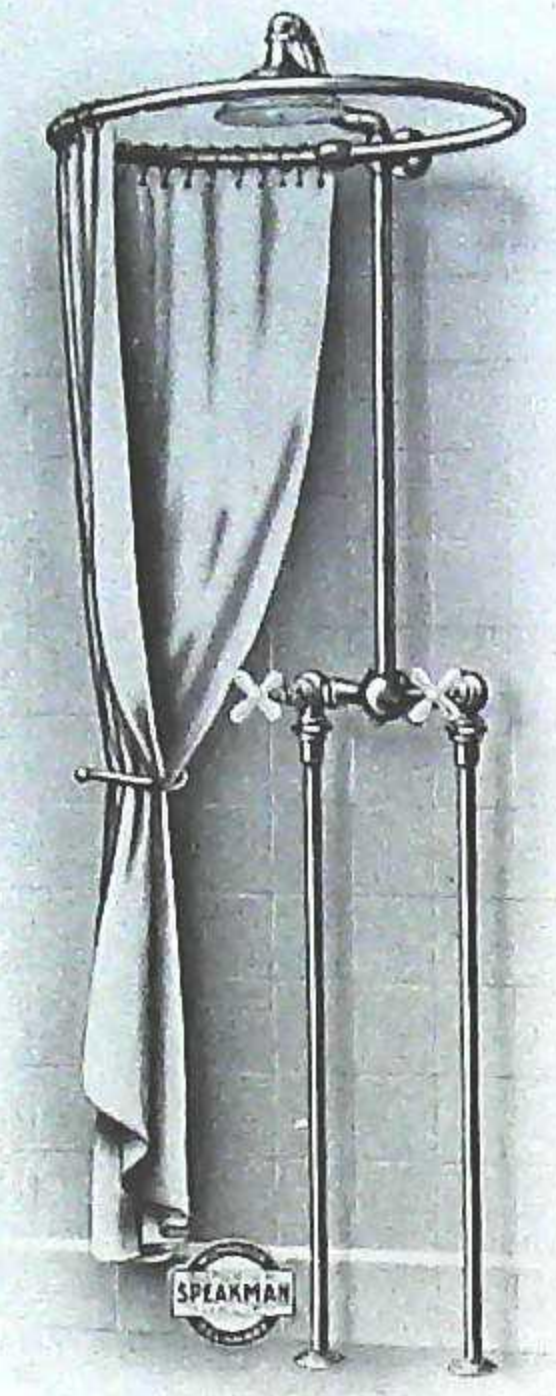


Fig. 123

Shower Bath with needle shower head, 24-inch curtain ring, 1/2-inch compression valves with solid china cross handles, white duck curtain and curtain hook, iron pipe size supply pipes to floor and heavy wall flange.

Approximate Shipping Weight.....pounds 47

Also furnished in 3/4-inch size.

Furnished with supplies to wall if desired.

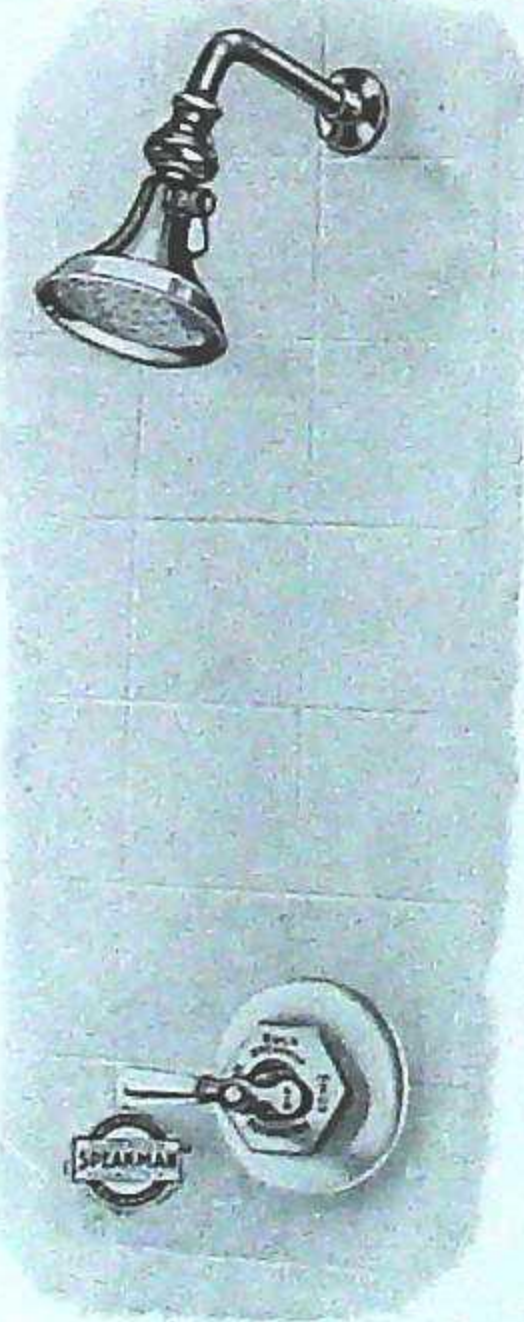


Fig. 122

Speakman Built-in Mixometer Shower, 1/2-inch size, with china wall plate, bent-arm discharge pipe with ball joint and 4-inch cast brass Anyforce head.

Designed to set in stall or at end of a built-in tub.

The Anyforce shower head enables the bather to regulate pressure from as strong as the shower will give to as mild as desired.

Approximate Shipping Weight, Carton.....pounds 12

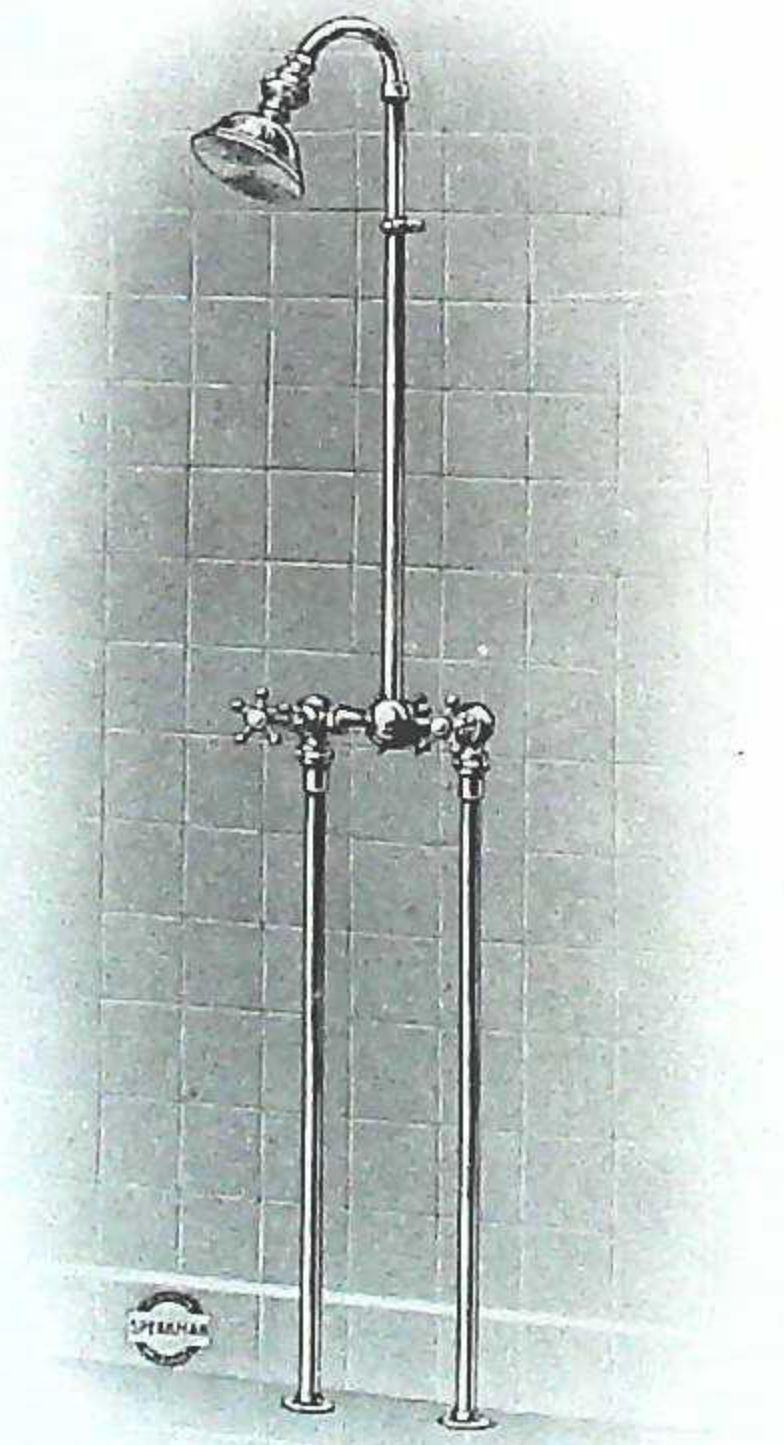


Fig. 124

Speakman Shower, with compression valves with five-ball china indexed handles, iron pipe supplies to floor, gooseneck discharge pipe with wall support, 4-inch cast brass shower head with removable face and adjustable ball joint.

Approximate Shipping Weight.....pounds 30

Made in 1/2 and 3/4-inch sizes.

Also furnished with shampoo.

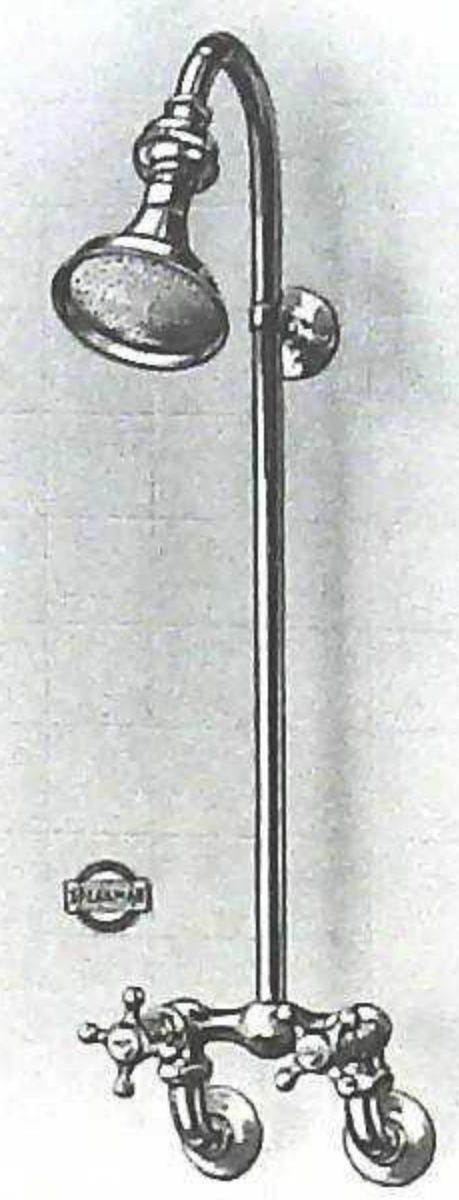


Fig. 131

Speakman Shower, 1/2-inch size, with 4-inch cast brass shower head with removable face and adjustable ball joint, gooseneck discharge pipe with wall support, compression valves with four-ball china indexed handles, and elbow couplings to wall.

Approximate Shipping Weight.....pounds 20

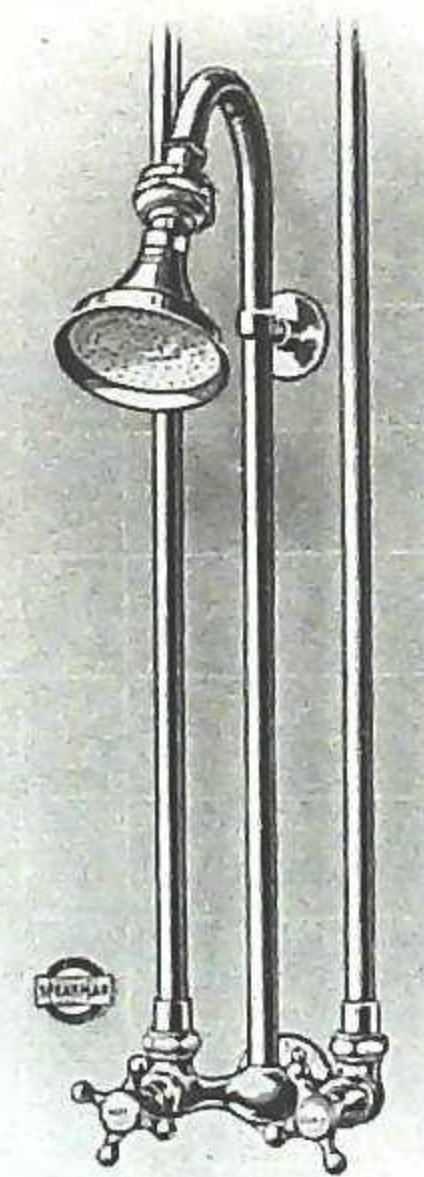


Fig. 132

Speakman Shower, 1/2-inch size, with 4-inch cast brass shower head with removable face and adjustable ball joint, gooseneck discharge pipe with wall support, compression valves with four-ball china indexed handles, union couplings and supplies from overhead.

Approximate Shipping Weight.....pounds 25

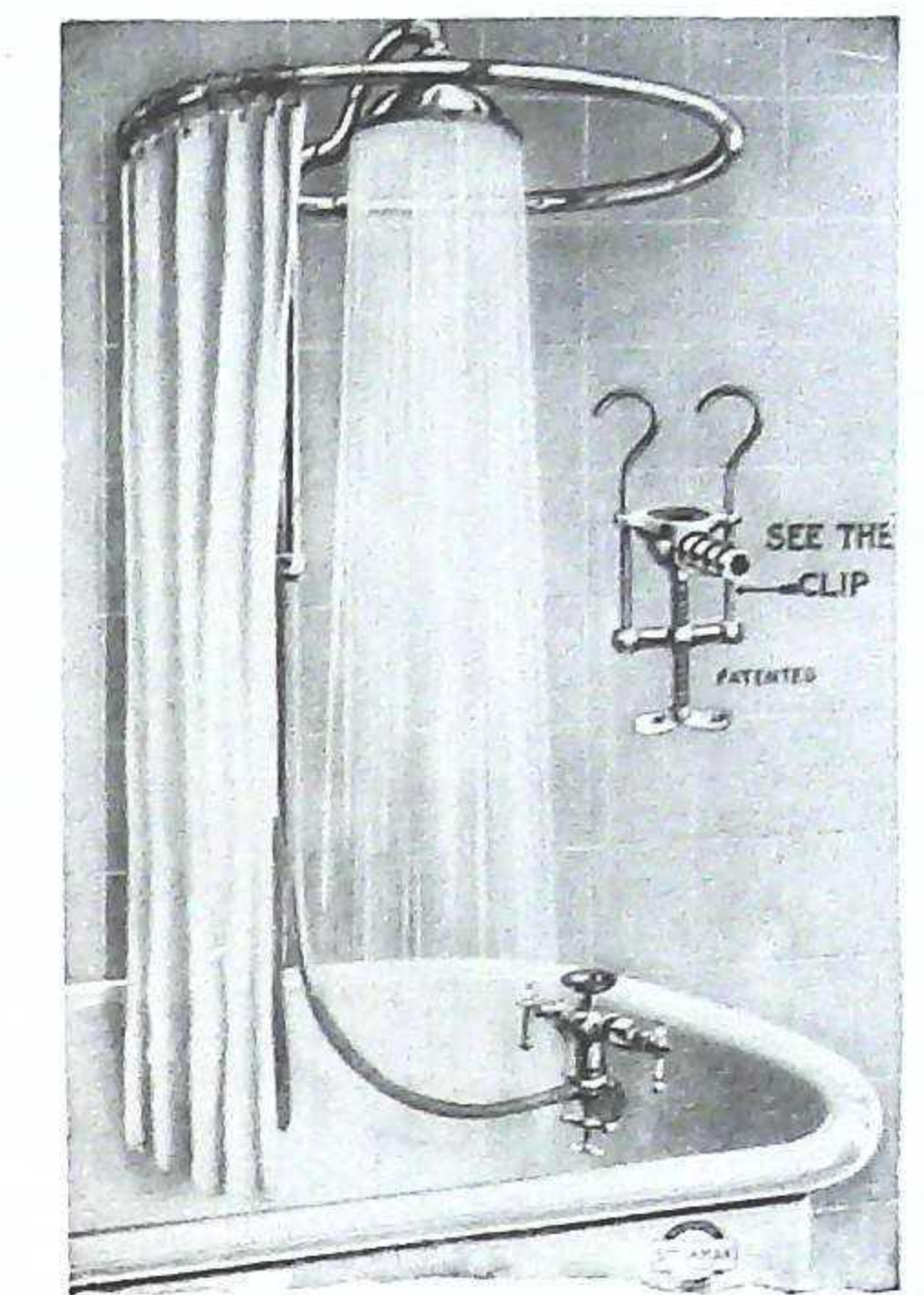


Fig. 133

Speakman Portable Shower with Clip Faucet Attachment, cloth insertion rubber hose, 6 1/2-in. shower head, 24-inch curtain ring, white duck curtain, curtain snaps and hook.

Approximate Shipping Weight.....pounds 15

The supply tubing is of seamless rubber with a woven core and is not affected by hot water. The faucet attachment will not blow off with water pressure nor deteriorate with use. It can be attached instantly.

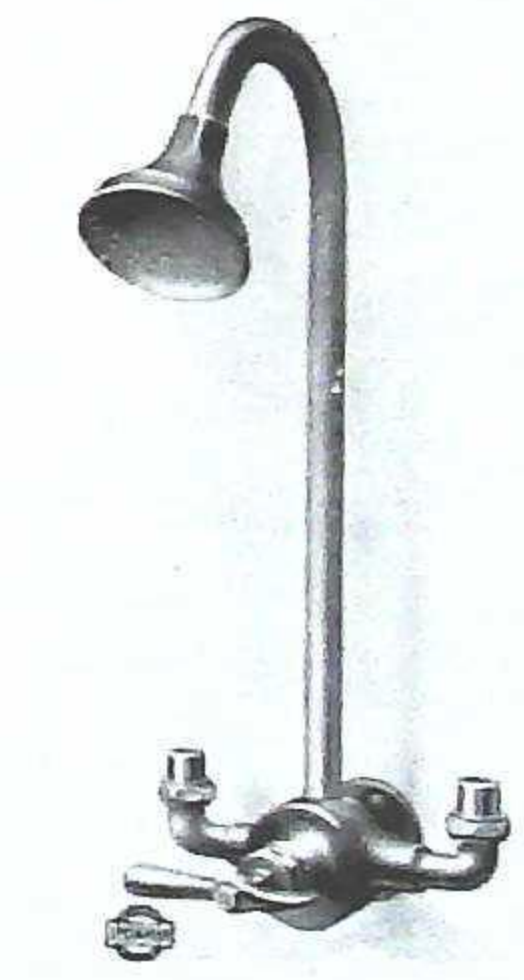


Fig. 134

Speakman Industrial Mixometer Shower, 1/2-inch size, with elbow couplings to take supplies from overhead, wall or floor, galvanized gooseneck discharge pipe, 4-inch cast brass shower head.

Approximate Shipping Weight.....pounds 25

The mixometer valve and head are regularly furnished in rough brass nickel-plated.

When installing this shower it is desirable to put controlling stops in the supplies so as to permit the volume of water to be reduced and thus economize in its use.

No. 700 Vitreous Shower Heads

These vitreous heads overcome the objectionable corroding common to the brass heads and require no polishing to keep clean. The 6 1/2-inch head only to be used at an angle when supplied by 3/4-inch pipe.



Fig. 143

Diam. Face Inches	N. P. Spuds Inches	Price Each
4 1/2	1/2	\$2.40
6 1/2	1/2	4.00

Speakman Cast Brass Anyforce Shower Heads

Under high pressure everyone cannot stand the sting from a shower head when it is turned on full. On the other hand, some people like the strong flow. For that reason it is desirable to provide means for easily controlling the pressure without changing the temperature of the shower.

By the patented Anyforce shower head the bather can regulate the pressure from as strong as the shower will give to as mild as desired, simply by turning the china lever handle.

The controlling feature is especially desirable in homes where the shower is used by the entire family.

The Anyforce shower head is sold only in connection with Speakman showers.

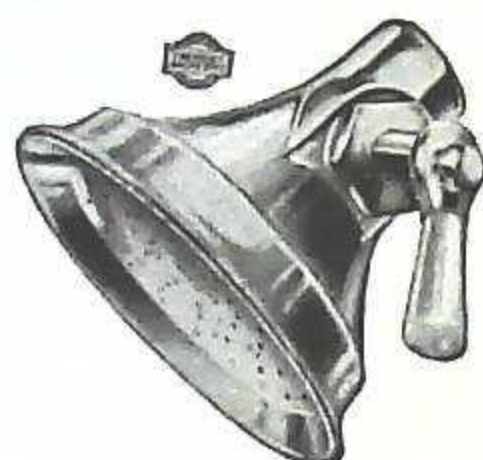


Fig. 144

Needle Shower Heads with Removable Face No. 1712

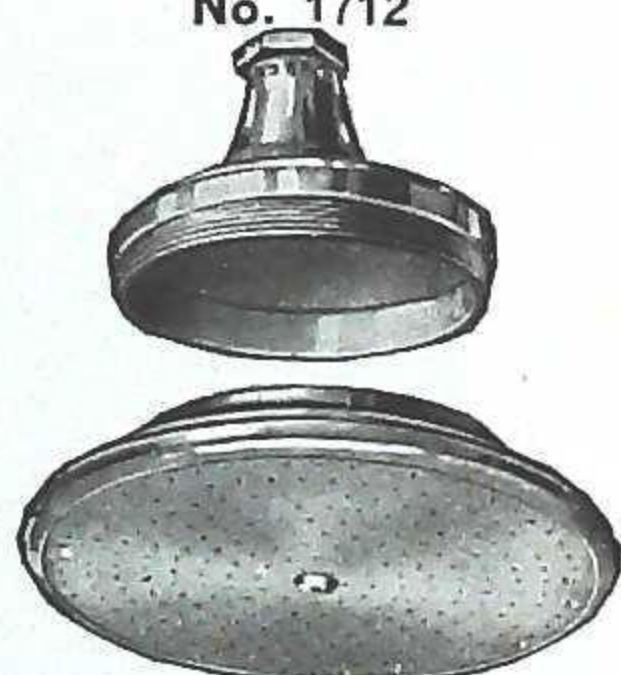


Fig. 145

Nickel-plated, with female iron pipe inlet.

Diameter	Inches	5	6 1/2	8
Size Inlet	"	1/2	1/2	3/4
Price	each	\$5.65	6.65	8.00

Cast Brass Shower Heads

With Removable Face No. 1702

Diam. Face In.	Inlet In.	PRICE, EACH	
		Nickel-plated	Rough Brass
4	1/2	\$2.50	\$1.75
5	1/2	3.25	2.50
6	1/2	4.50	3.75



Fig. 146

Needle Shower Heads No. 1710



Fig. 147

Diam. Face In.	Inlet In.	Price N. P. Each	Diam. Face In.	Inlet In.	Price N. P. Each
4	3/4	\$1.90	10	1	\$7.50
5	1/2	2.00	12	1	12.50
6 1/2	1/2	2.60	15	1	18.75
8	3/4	3.50	..	..	..



Fig. 141

Speakman Industrial Shower, 1/2-inch compression valves with indexed handles, union couplings to take supplies from overhead, galvanized gooseneck discharge pipe with 4-inch cast brass head, rough nickel-plated.

Approximate Shipping Weight.....pounds 15

The inlets are 5 inches from center to center and the valves should be placed 5 feet above the floor.

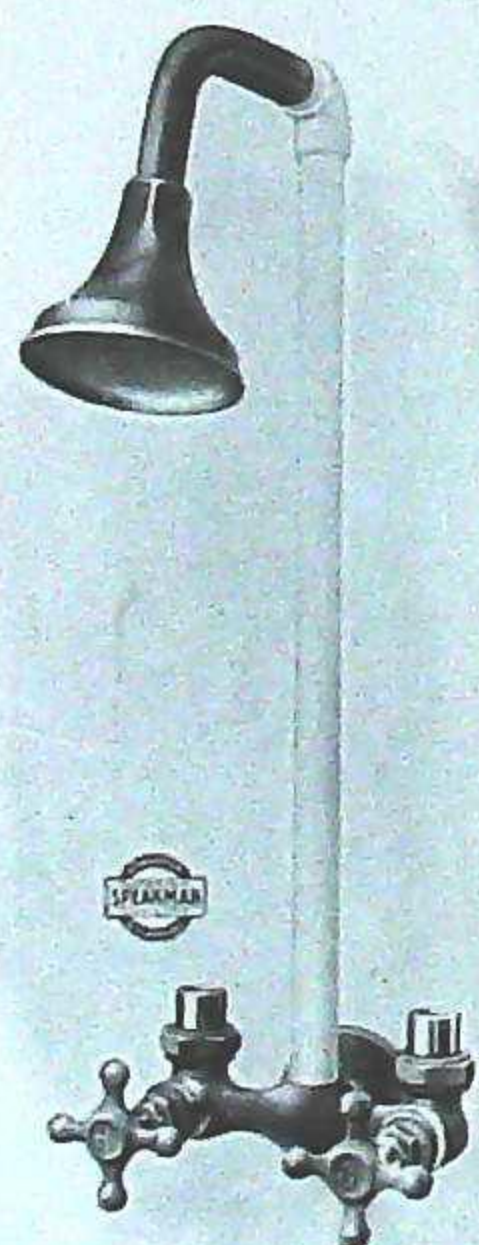


Fig. 142

Speakman Industrial Shower, with 1/2-inch compression valves with indexed handles, union couplings to take supplies from overhead, bent-arm discharge pipe, 4-inch cast brass head rough nickel-plated.

Approximate Shipping Weight.....pounds 15

The inlets are 5 inches from center to center and the valves should be placed 5 feet above the floor.

For installations where highly finished fixtures are desired these showers can be furnished in polished or nickel-plated finish.

Tubular Shower Heads No. 1714

Diam. Face In.	Inlet In.	Price Nickel-plated Each
8	1/2	\$5.50
10 1/2	3/4	7.75



Fig. 151

No. 1385 Shampoo Sprinklers With Rubber Ring

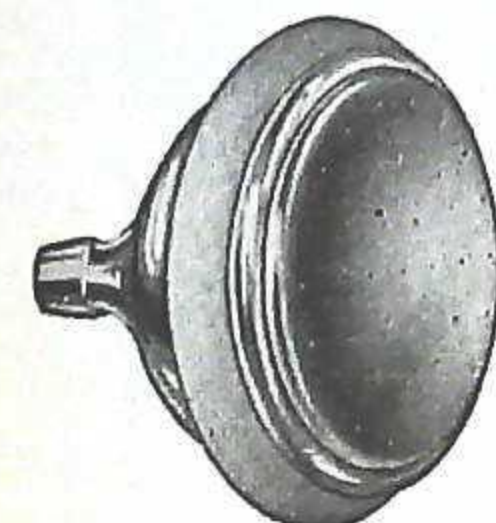


Fig. 152

Diam. Face inches	Price per Dozen
2 1/2	\$8.00
3	12.00
3 1/2	18.00

No. 1387 with Rubber Ring and Loose Shank

Diam. Face Inches	Price per Dozen
2 1/2	\$14.00
3	19.40
3 1/2	29.40

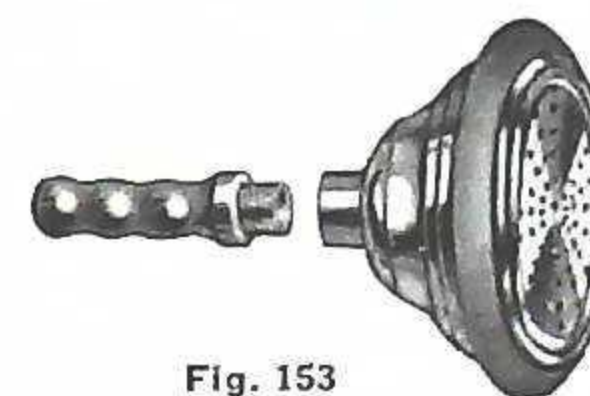


Fig. 153

No. 1403 Shampoo Sprays

Diameter of Face	inches	3	3 1/2	4
Price	each	\$3.50	5.00	6.50

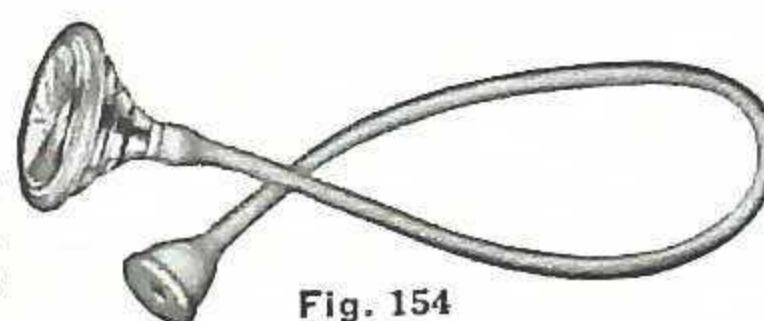


Fig. 154

Rubber bound shampoo sprinkler with 5-foot rubber tubing and single faucet connection.

Adjustable Ball Joints No. 1718

Nickel-plated brass adjustable ball joint for use on shower head.

Size	inches	1/2	3/4
Price	each	\$1.50	2.00



Fig. 155

No. 1741 Self-closing Shower Valves

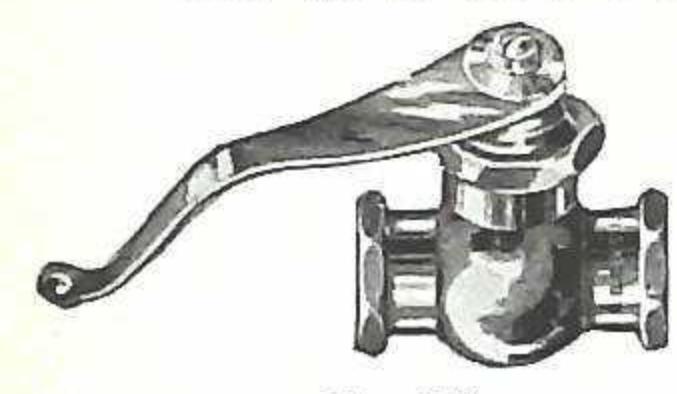


Fig. 156

Self-closing shower valve for vertical or horizontal pipe, with chain and pull.

Price, 1/2-inch	each	\$4.50
" 3/4 "	"	6.75

Shower Valves Built-in Globe Pattern

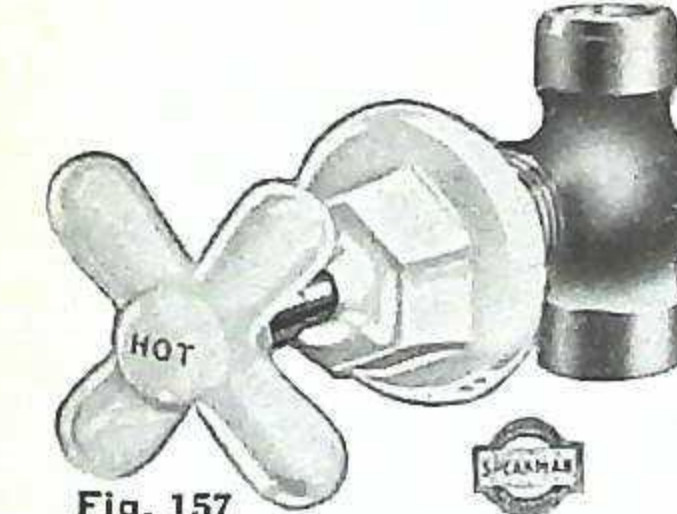


Fig. 157

Speakman High-seat built-in globe pattern compression shower valve with renewable seat china escutcheon and handle.

Price, 1/4-inch	each	\$7.00
" 3/4 "	"	9.00

Concealed Compression Shower Valves

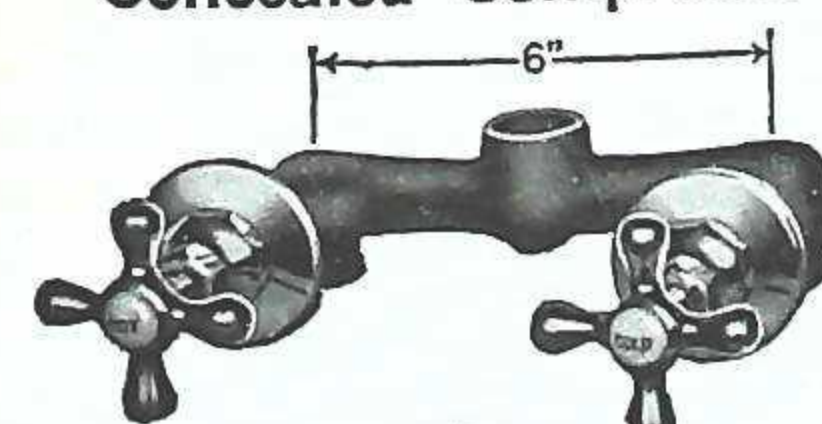


Fig. 158

Rough body brass shower valve with nickel-plated four-ball china index handles and nickel plated escutcheons.

Tapped for 1/2-inch iron pipe supply and riser pipe.

Price	each	\$7.50
-------	------	--------

White Duck Shower Curtains For Shower Stalls

No.	Fixture Size Ft.	CURTAIN, INCHES Width	Length	Price Each
1	2 1/2	36	72	\$5.40
2	3	42	72	6.40
3	3 1/2	48	..	7.20
4	4	54	..	8.00
For Recess Baths				
5	4 1/2	60	72	\$9.00
6	5	66	72	10.00
7	5 1/2	72	72	10.40
8	6	78	72	11.20
For Corner Baths				
9	4 1/2	84	72	\$12.00
10	5	90	72	13.20
11	5 1/2	96	72	14.00
12	6	102	72	15.00
13	42x27-inch	72	72	10.00
14	42x27-inch	96	72	14.00

Fig. 159

No. 1730 Straight Curtain Rods

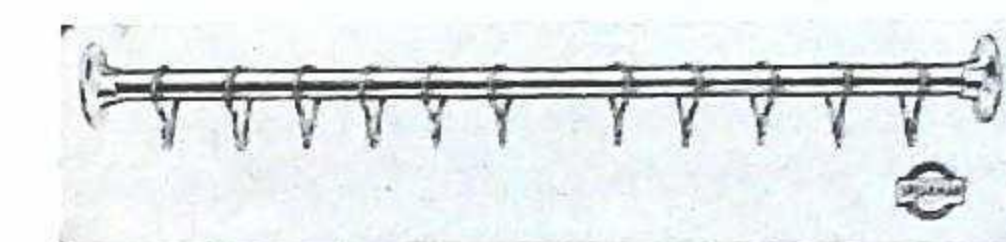


Fig. 159A

Price, 3 Feet Long, with Flanges and Snaps	each	\$5.50
" 6 " " " " " " " " " " " " " " " "	"	6.50

No. 1731 Corner Curtain Rods

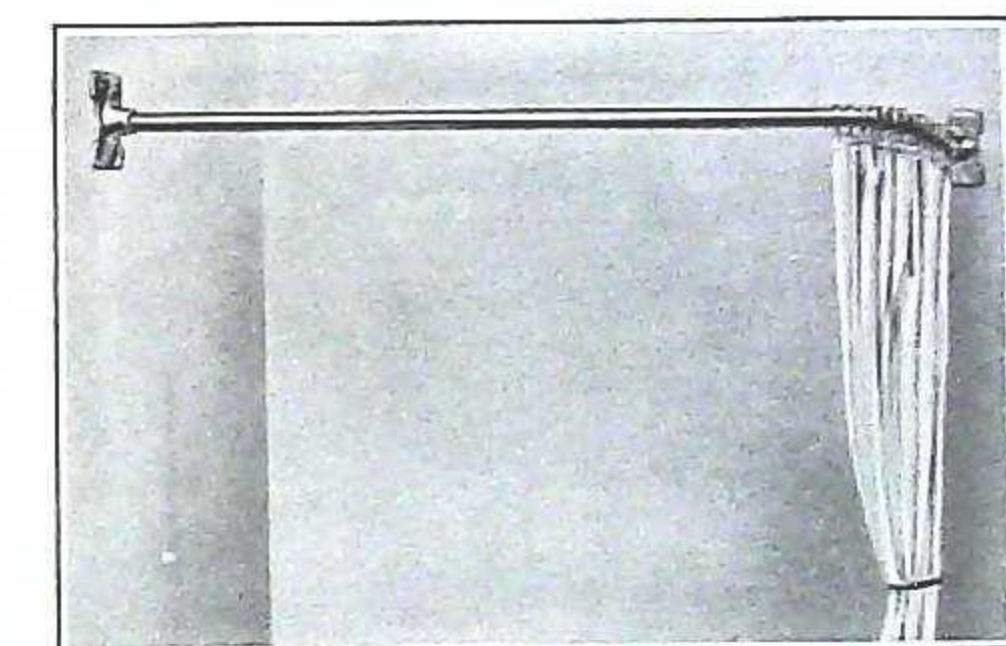


Fig. 159B

Price, 28x57 Inches	each	\$22.00
" 28x63 " " " " " " " " " " " " " " " "	"	24.00

No. 1736 Curtain Hooks



Fig. 159C

Price, N. P....per doz.	\$.80
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No. 1737 Curtain Snaps

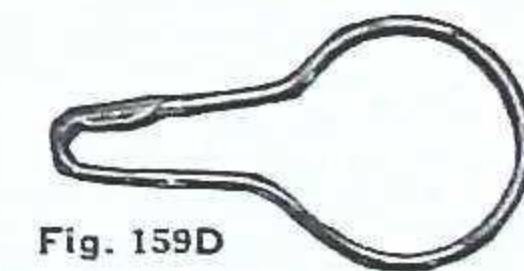


Fig. 159D

Price, N. P....per doz.	\$.80
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Curtain Hold Back Hooks



Fig. 159E

Nickel-plated cast shower curtain hold back hook with nickel-plated ball chain.

Price	each
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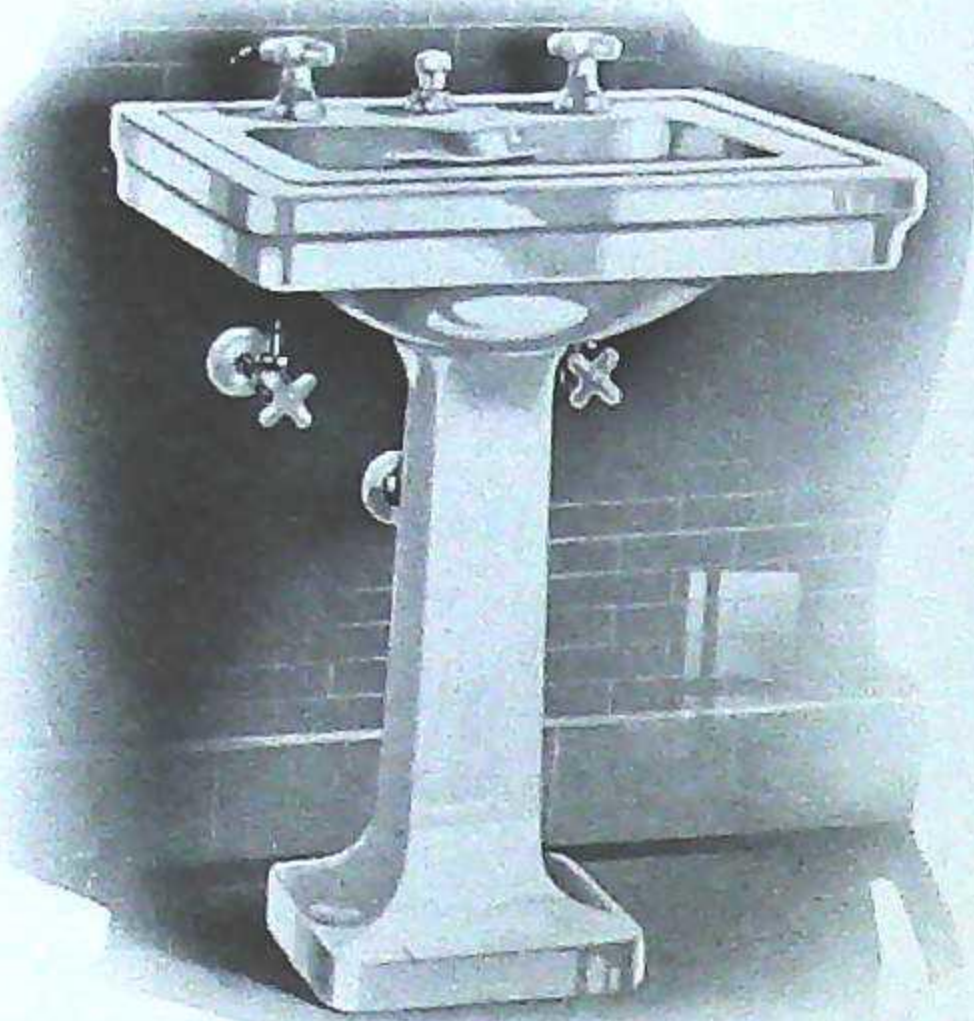


Fig. 161

Vitreous China Straight Front Lavatory with square basin, integral supply with hooded overflow and overflow cleansing feature, splash rim, vitreous china pedestal and wall supports, fitted with compression supply valves with solid china cross-arm handles, and escutcheons, pop-up waste fitting with solid china knob and escutcheon nickel-plated supply pipes to wall with china handle stops and china escutcheons and nickel-plated P trap with china escutcheon.

Slab 20x24 inches	Basin 12 x16½ inches
Slab 22x27 inches	Basin 13 x18 inches
Slab 24x30 inches	Basin 13½x18½ inches

Size.....inches	20x24	22x27	24x30
Approximate Shipping Weight.pounds	190	205	230

Roughing Measurements

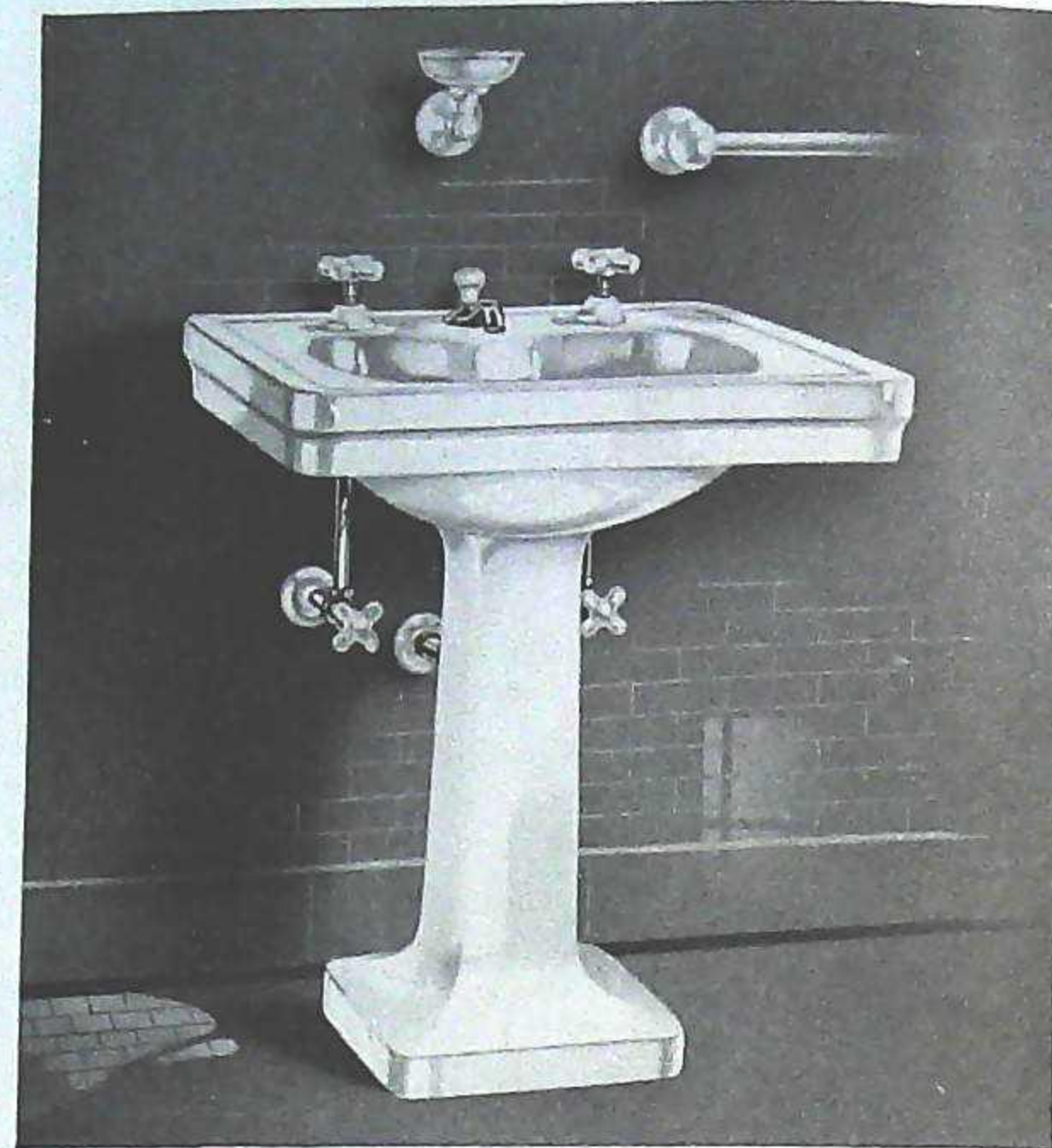


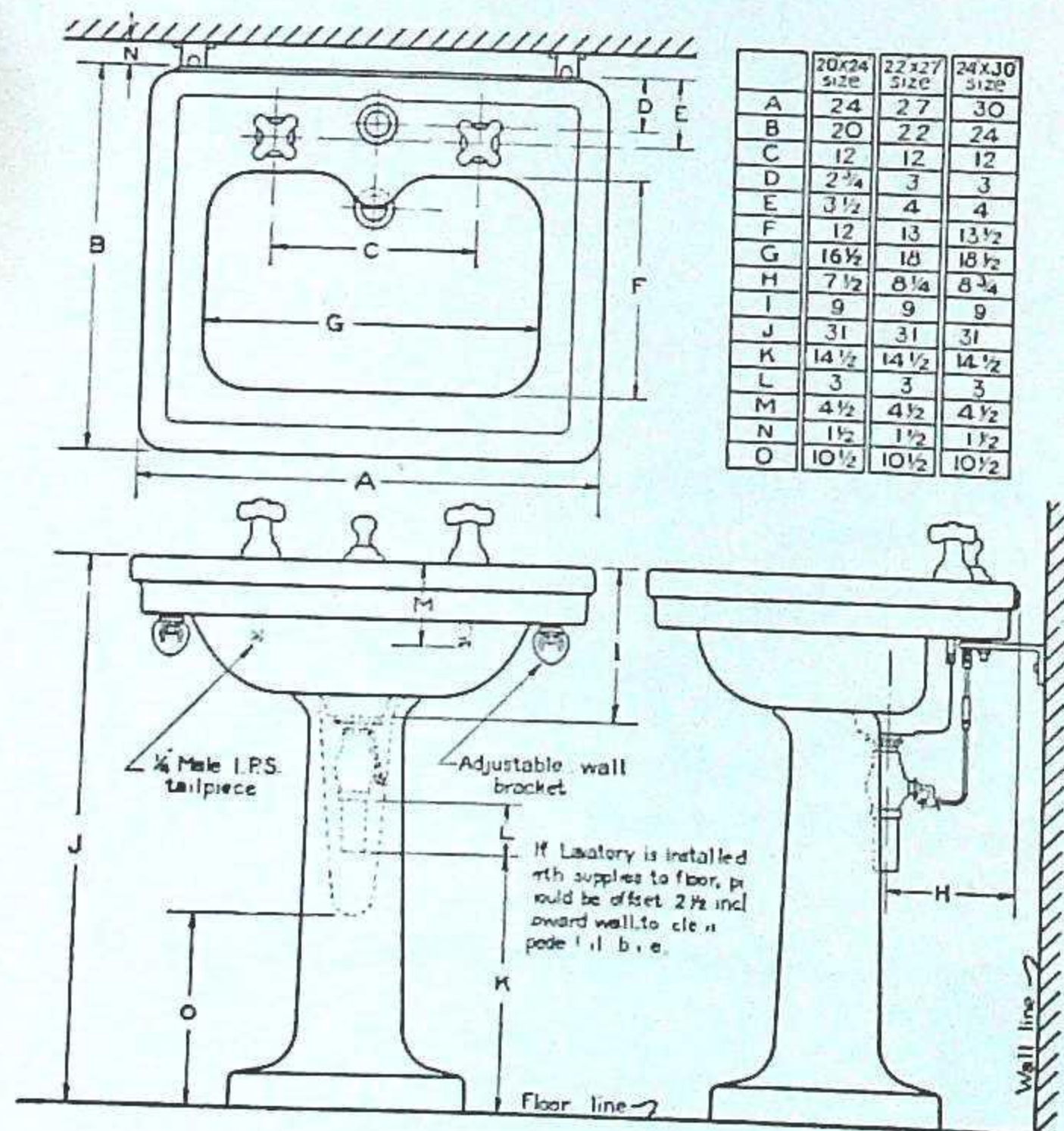
Fig. 162

Vitreous China Straight Front Lavatory with oval basin, hooded overflow, anti-splash rim, plain square pedestal, nickel-plated wall supports, nickel-plated supply and pop-up waste fitting with solid china handles and china escutcheons, 3/8-inch nickel-plated iron pipe size supplied to wall with china handle stops and china escutcheons, 1¼-inch nickel-plated P trap and china escutcheon.

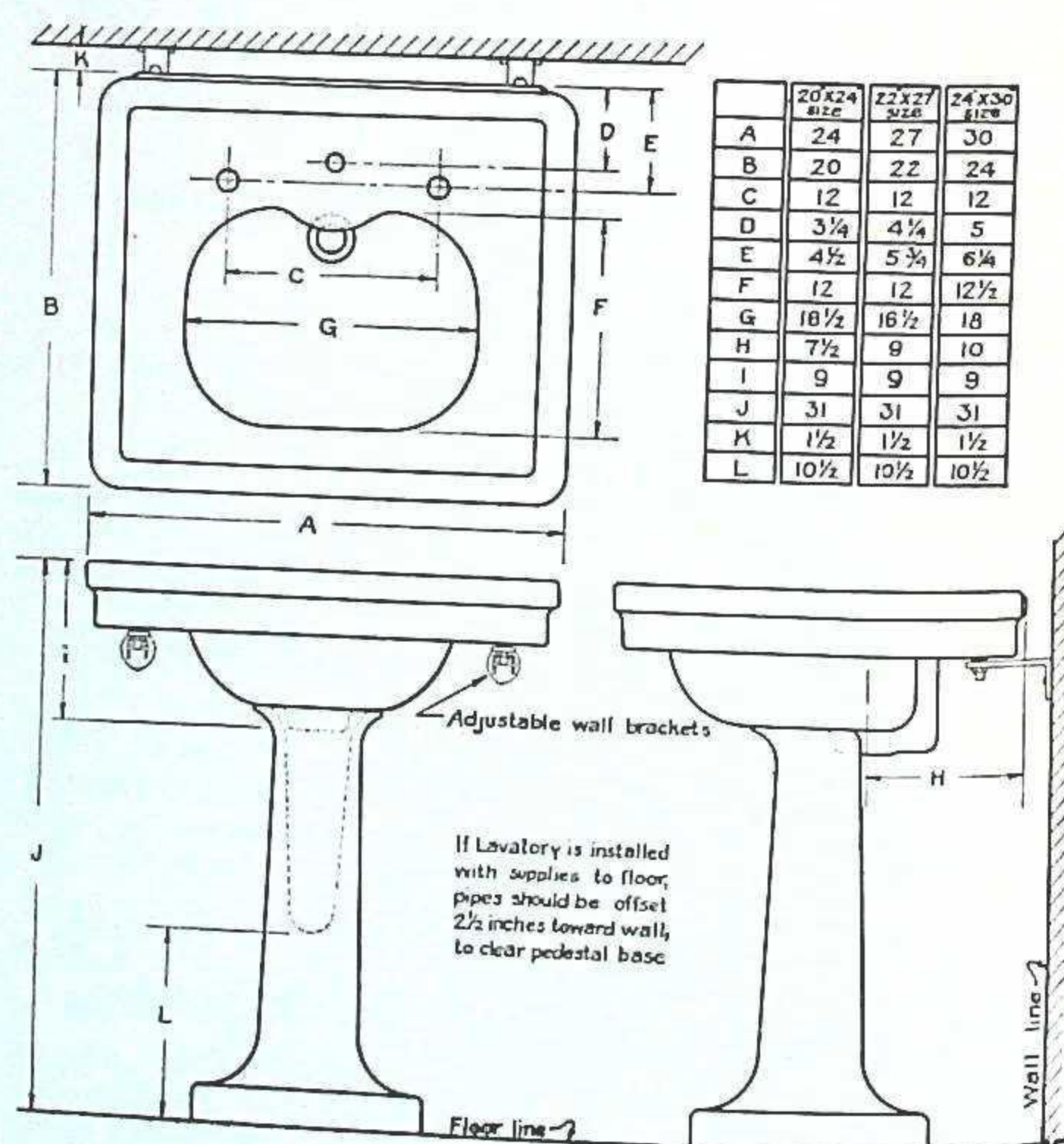
Slab 20x24 inches	Basin 12x16½ inches
Slab 22x27 inches	Basin 12x16½ inches
Slab 24x30 inches	Basin 12½x18 inches

Size.....inches	20x24	22x27	24x30
Approximate Shipping Weight..pounds	175	195	215

Roughing Measurements



Measurements may vary from ¼ to ½ inch.



Measurements may vary from ¼ to ½ inch.

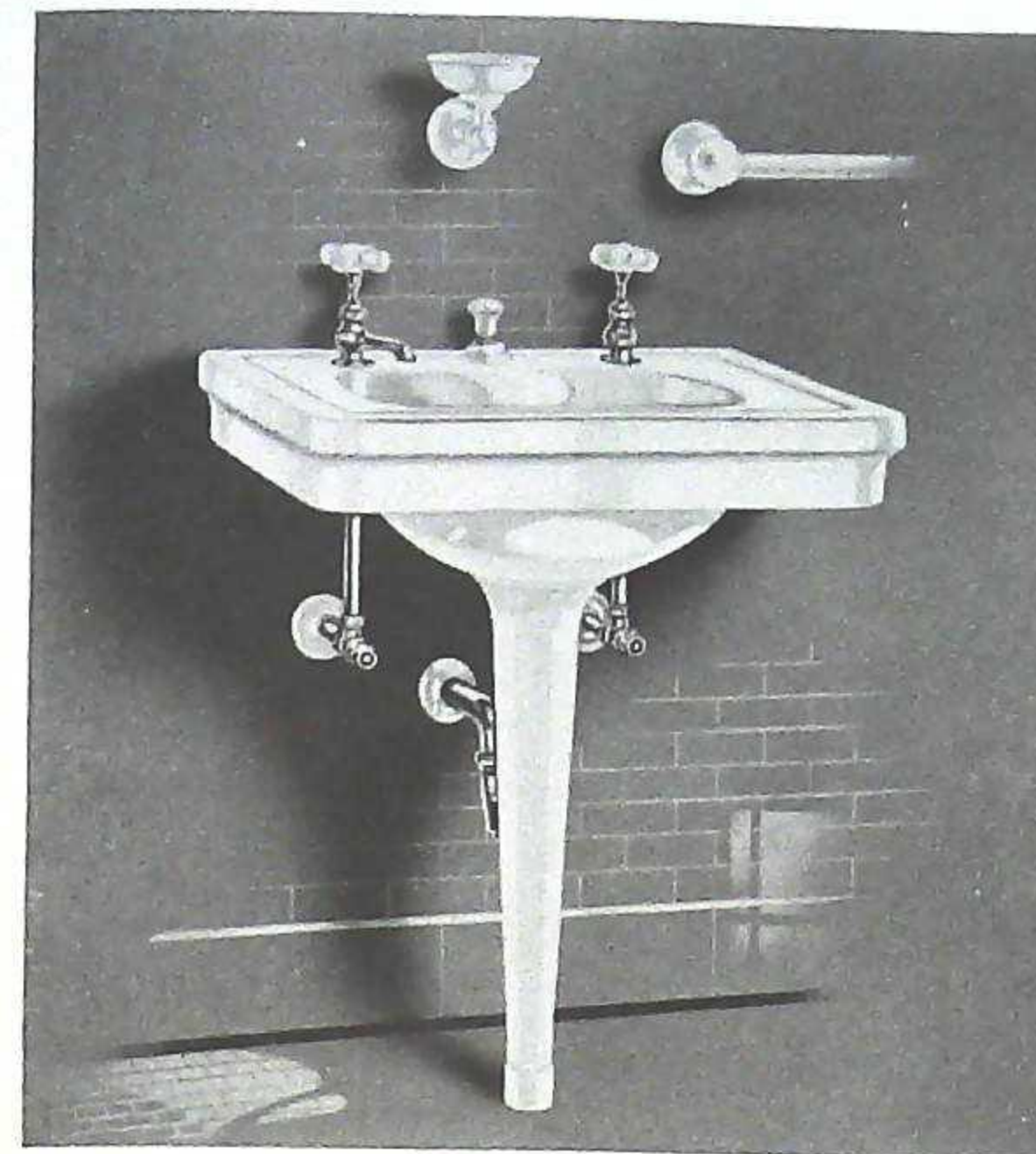


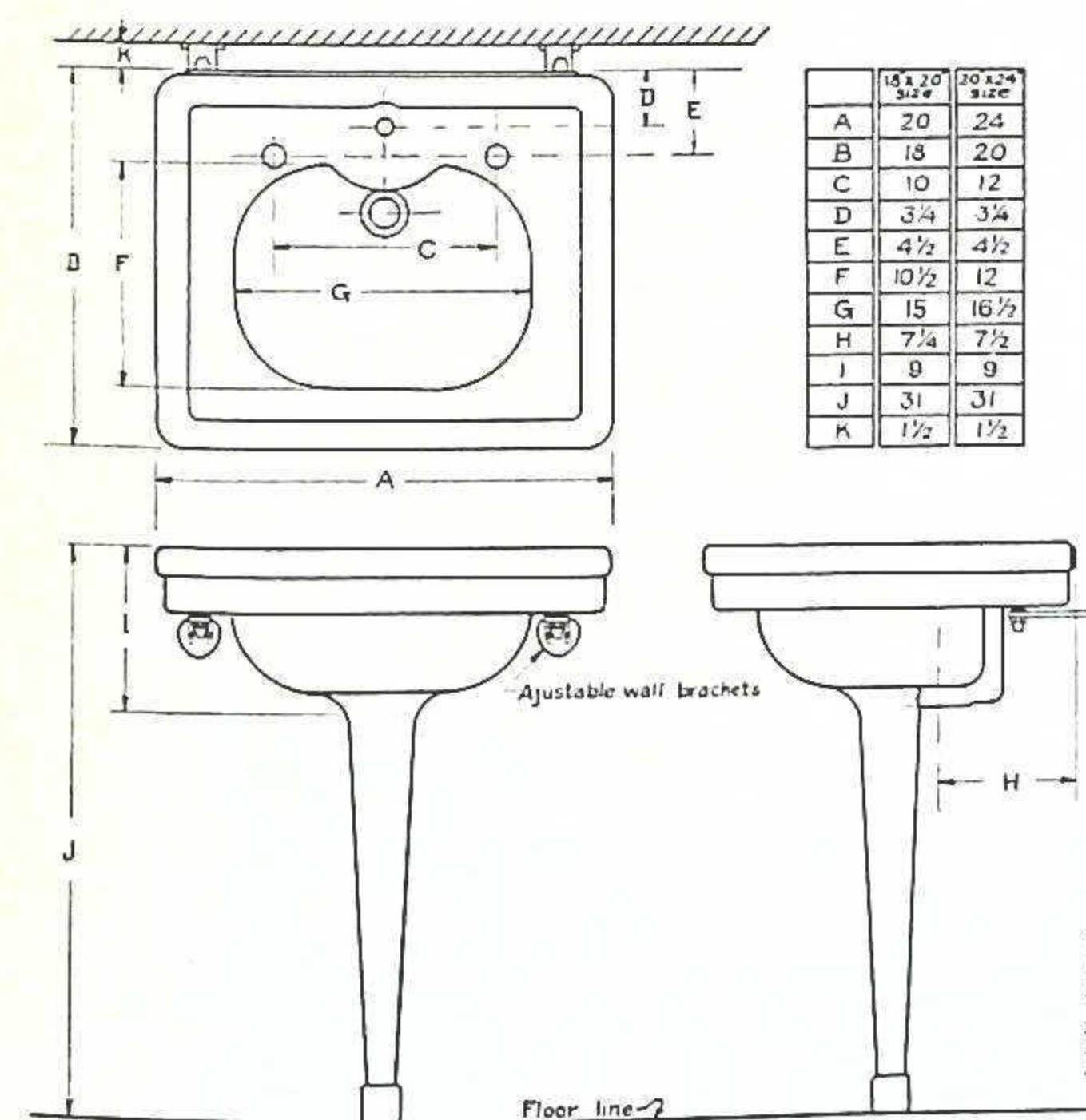
Fig. 171

Vitreous China Straight Front Lavatory with oval basin, hooded overflow and anti-splash rim, vitreous china leg with rod and wall brackets, nickel-plated compression faucets with china cross handles, pop-up waste with china knob and escutcheon, 3/8-inch nickel-plated supply pipes to wall with loose key stop valves, nickel-plated brass P trap and china wall escutcheons.

Slab 18x20 inches	Basin 10½x15 inches
Slab 20x24 inches	Basin 12 x16½ inches

Size.....inches	18x20	20x24
Approximate Shipping Weight.....pounds	110	135

Roughing Measurements



Measurements may vary from ¼ to ½ inch.

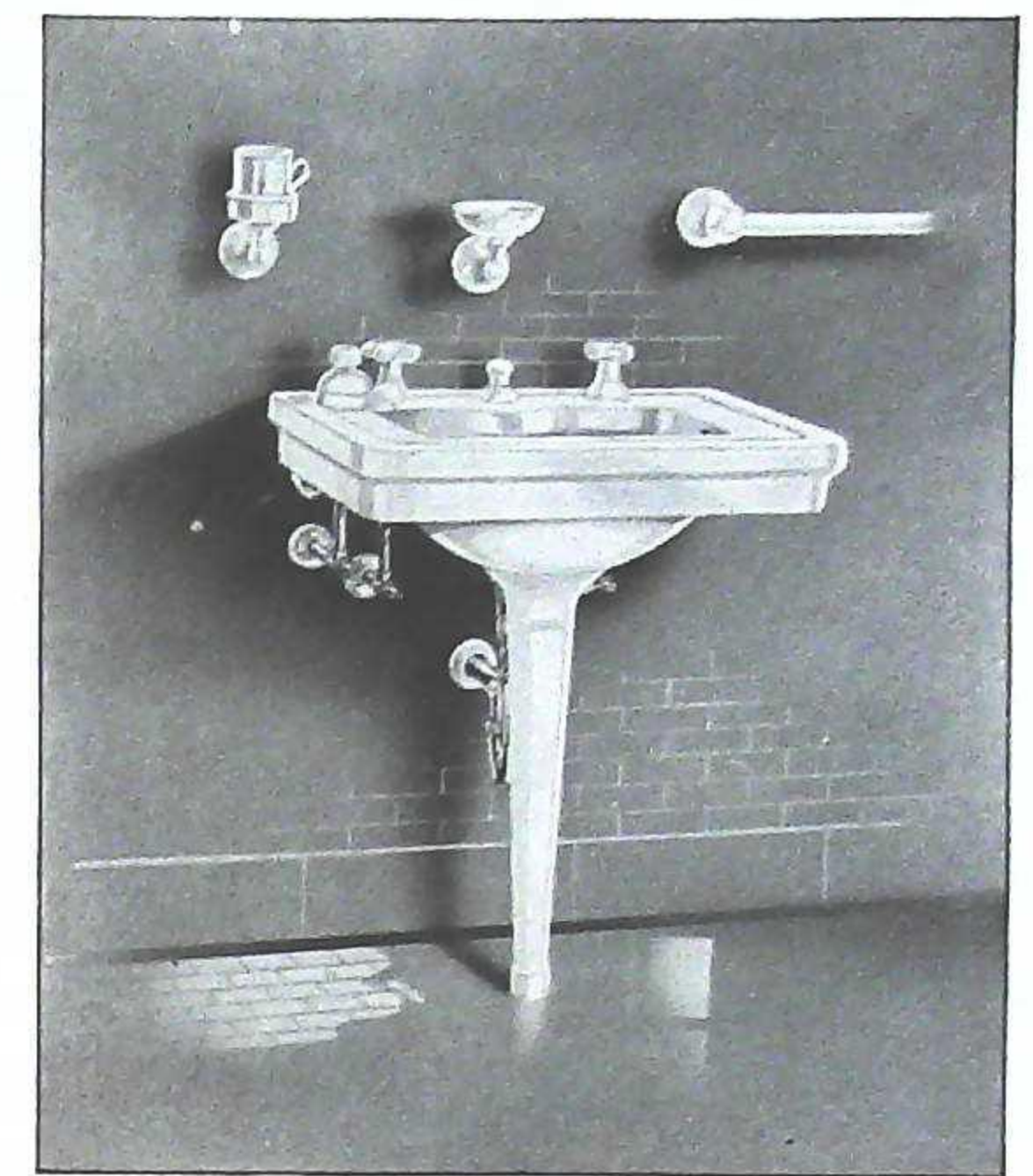


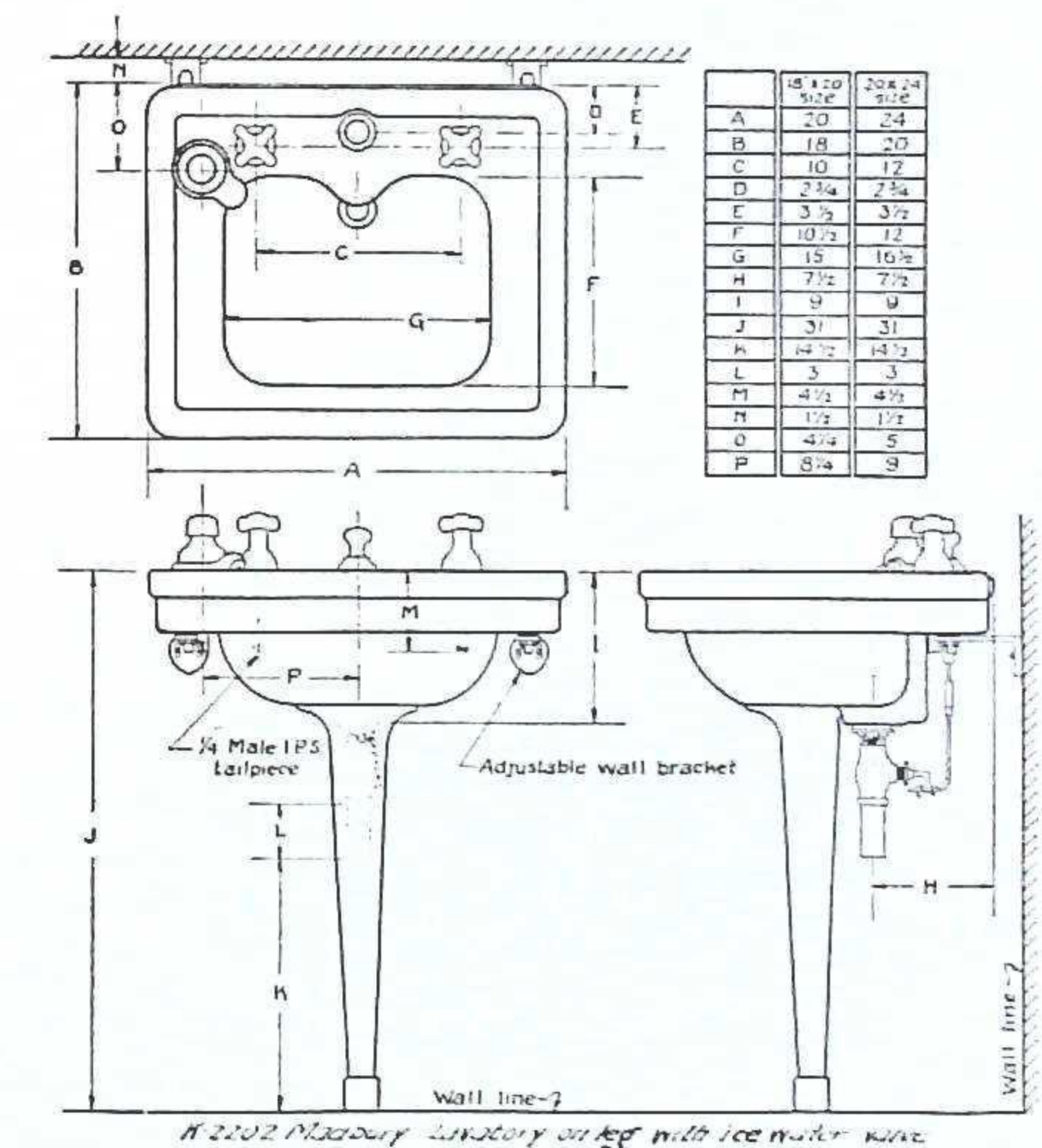
Fig. 172

Vitreous China Straight Front Lavatory with integral supply nozzle, cleansing overflow feature, square basin, hooded overflow, antisplash rim, vitreous china leg with rod and nickel-plated brass wall brackets, compression valves with china cross handles and escutcheons, all china self-closing push button ice water attachment, pop-up drain with all china knob and escutcheon, nickel-plated brass P trap with china escutcheon and 3/8-inch nickel-plated brass supply pipes to wall with loose key stops and china wall escutcheons.

Slab 18x20 inches	Basin 10½x15 inches
Slab 20x24 inches	Basin 12x16½ inches

Size.....inches	18x20	20x24
Approximate Shipping Weight.....pounds	133	156

Roughing Measurements



Measurements may vary from ¼ to ½ inch.

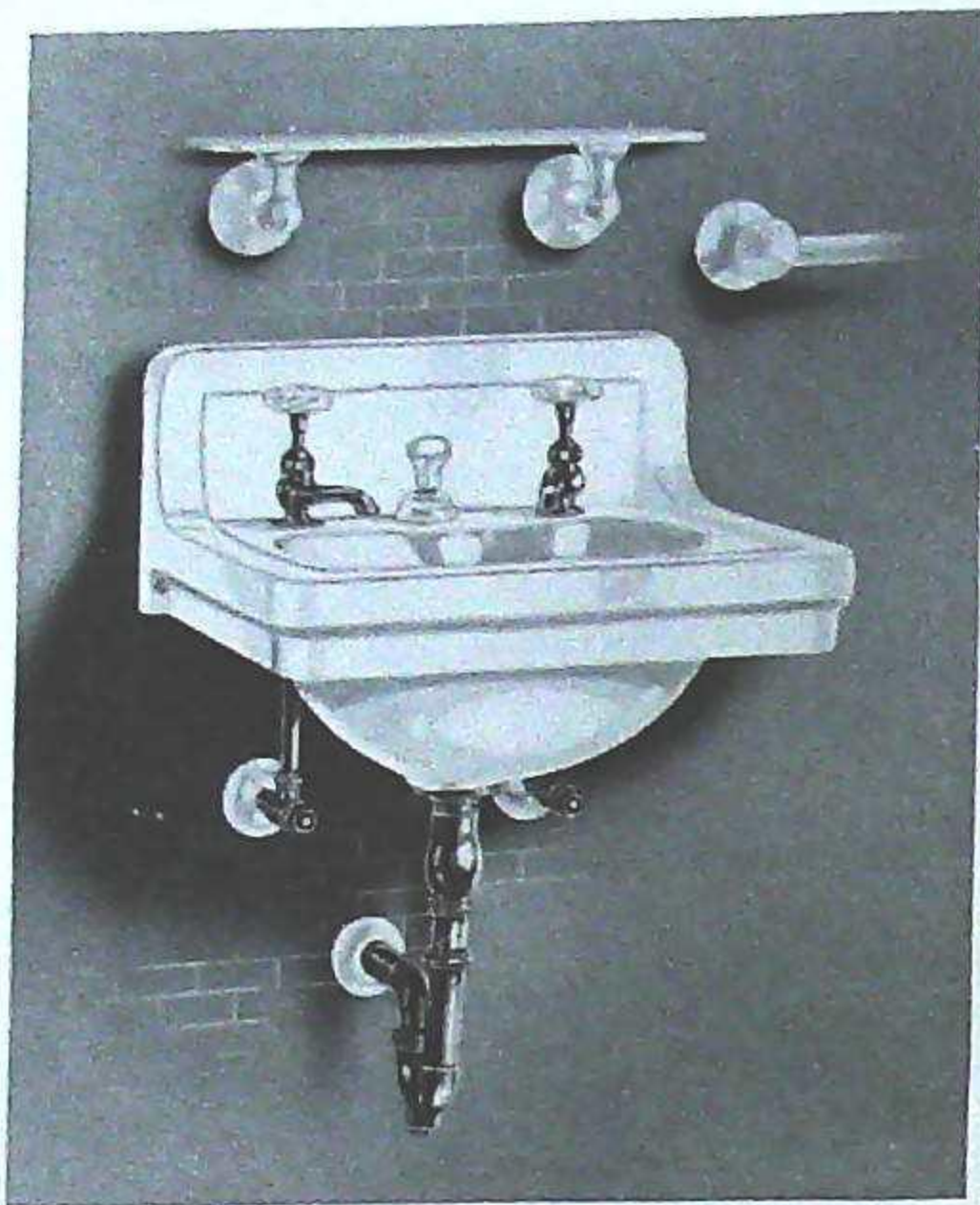


Fig. 181

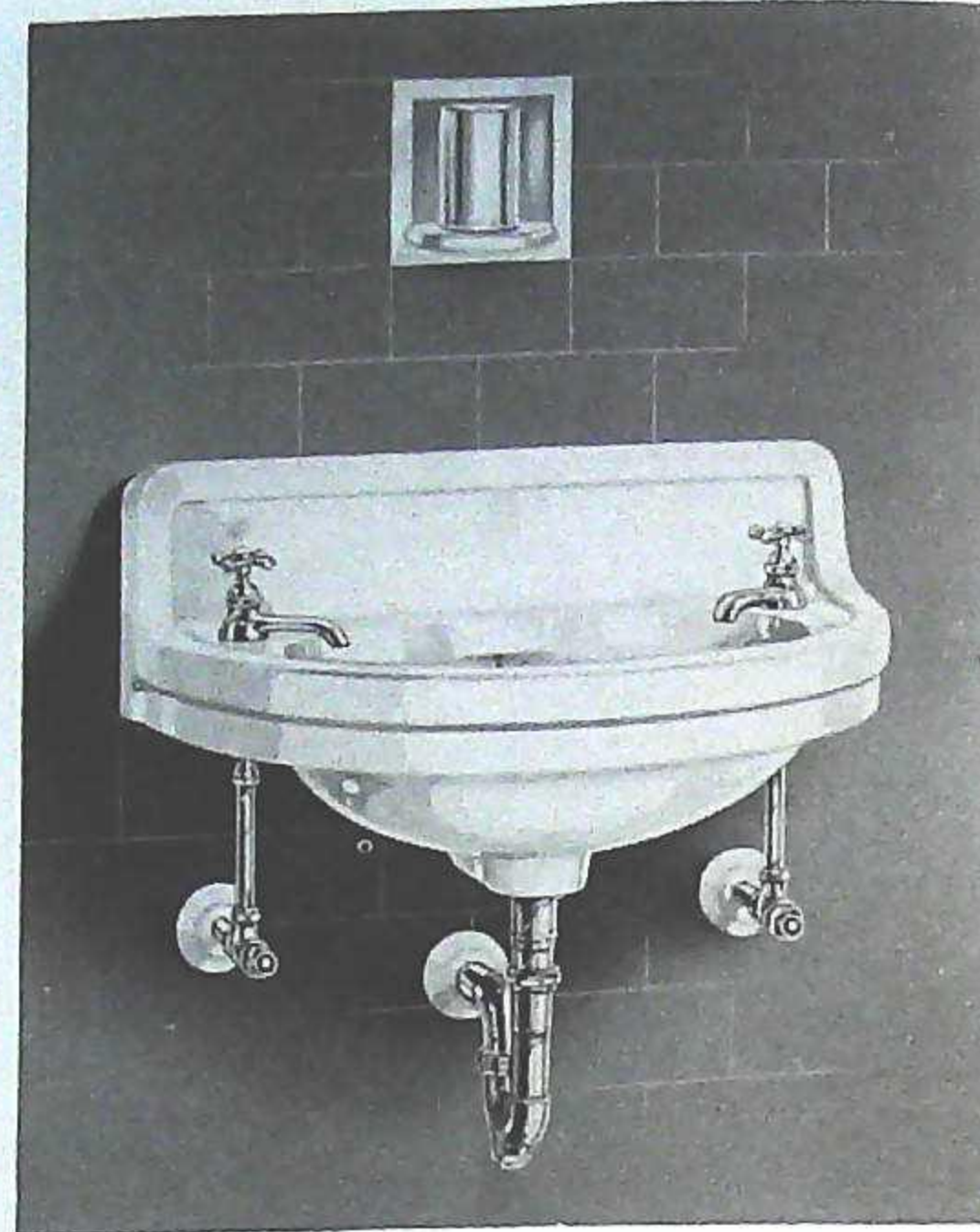


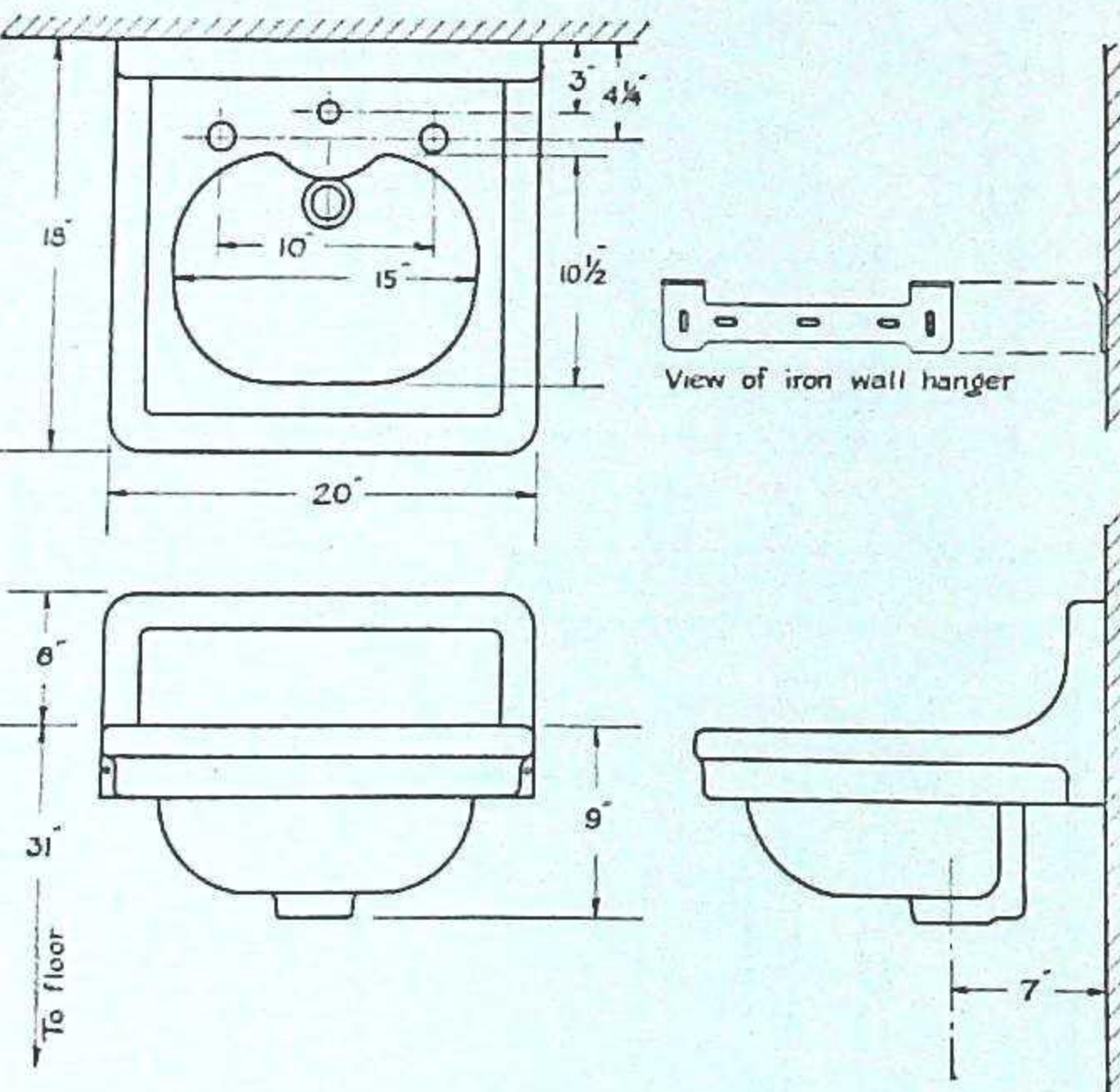
Fig. 182

Vitreous China Straight Front Lavatory with integral back, oval basin, hooded overflow, anti-splash rim and concealed hanger, nickel-plated compression faucets with china cross-arm handles, pop-up waste with china knob and escutcheon, 3/8-inch nickel-plated supply pipes to wall with loose key stop valves nickel-plated P trap and china wall escutcheons.

Slab 18x20 inches Basin 10 1/2 x 15 inches
Back 6 inches Depth basin 6 1/2 inches

Size inches 18x20
Approximate Shipping Weight pounds 108

Roughing Measurements



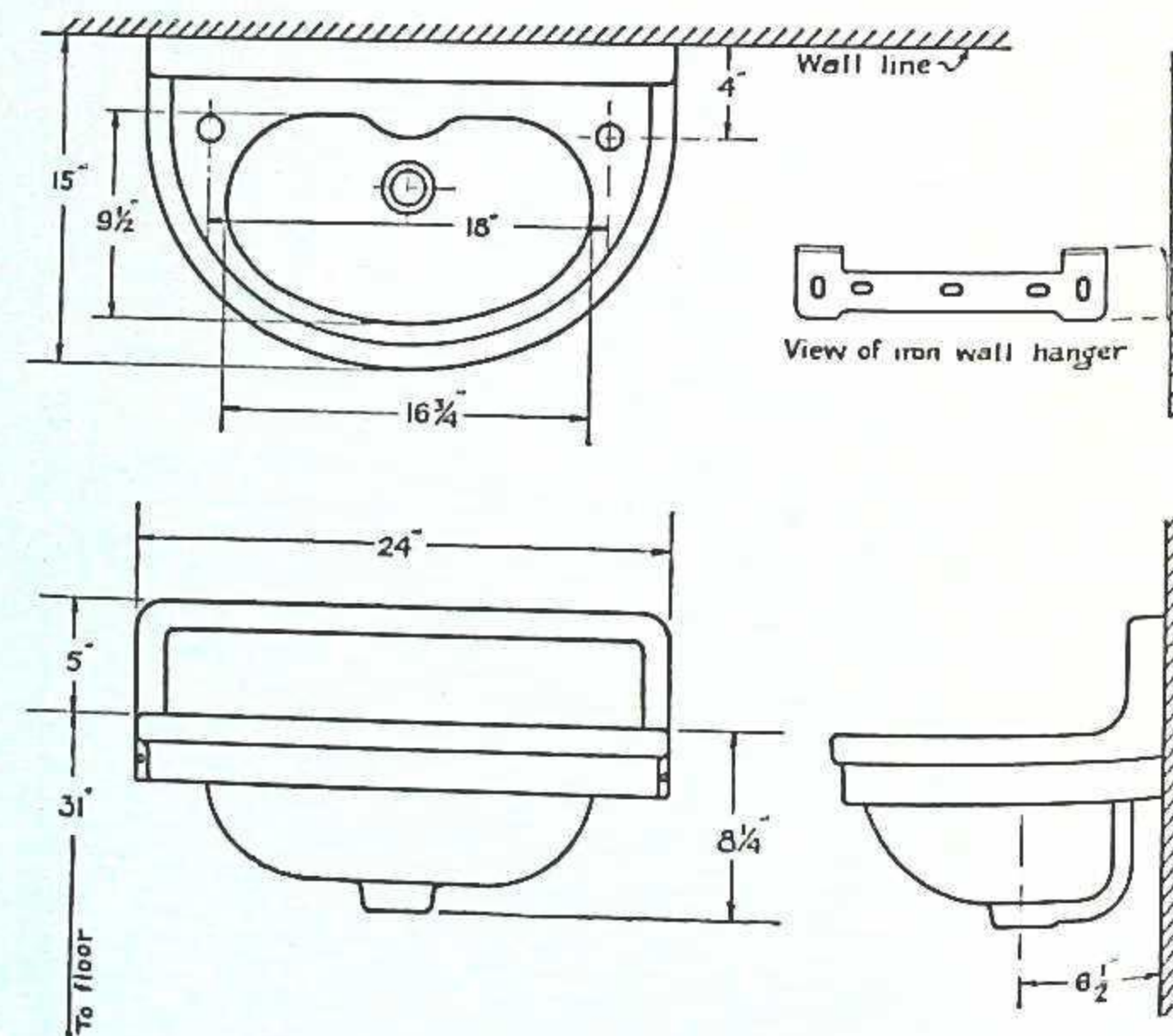
Measurements may vary from 1/4 to 1/2 inch.

Vitreous China Round Front Space-saving Lavatory with integral back, oval basin, hooded overflow, anti-splash rim and concealed hanger, nickel-plated compression faucets with 4-ball china index handles, 3/8-inch nickel-plated supply pipes to wall with loose key stop valves and china wall escutcheons, nickel-plated P trap with china escutcheon and nickel-plated P. O. plug with chain and rubber stopper.

Length of back 24 inches Wall to front 15 inches
Basin 9 1/2 x 15 inches Height of back 5 inches

Size inches 15x24
Approximate Shipping Weight pounds 93

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.

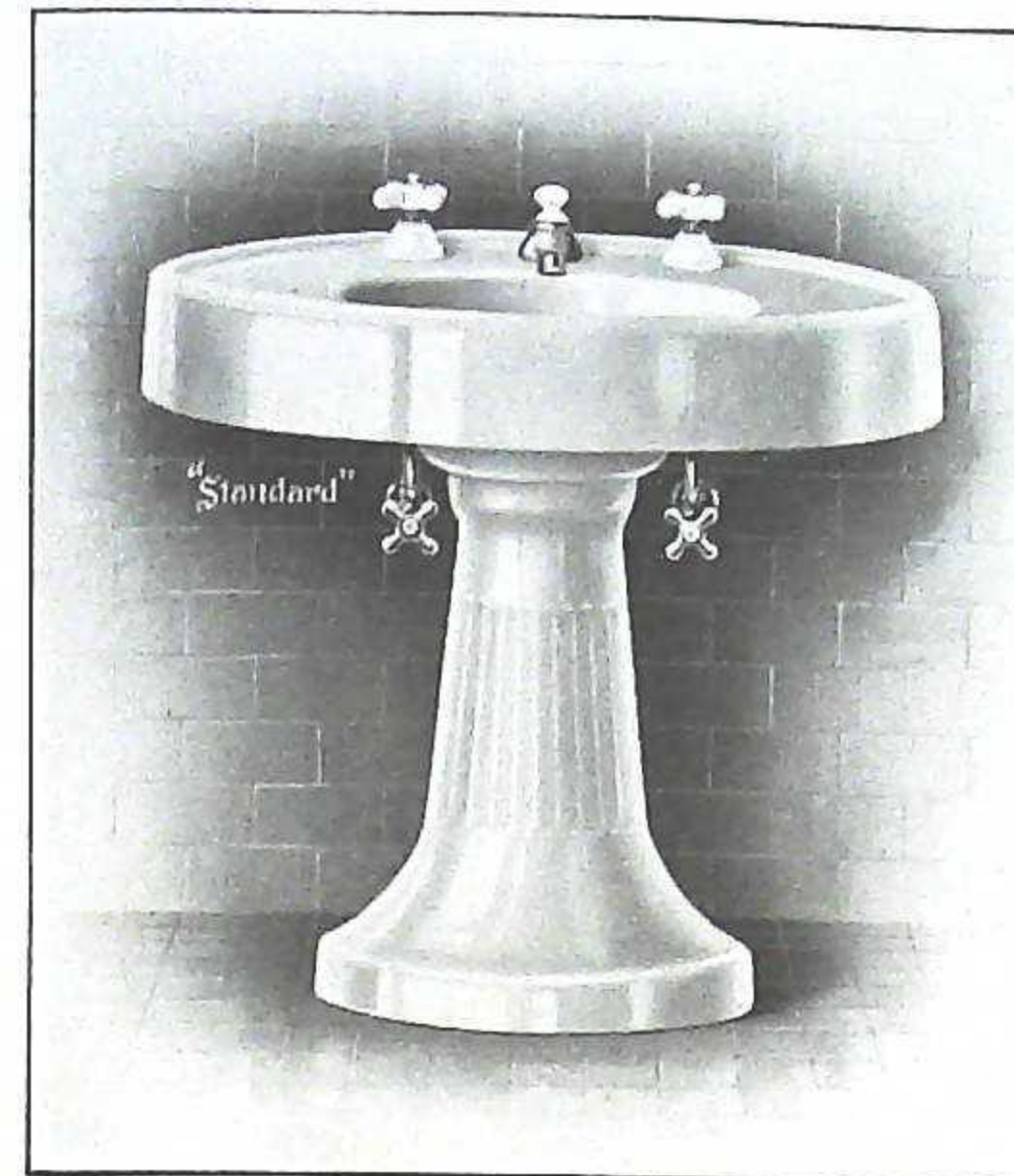


Fig. 191

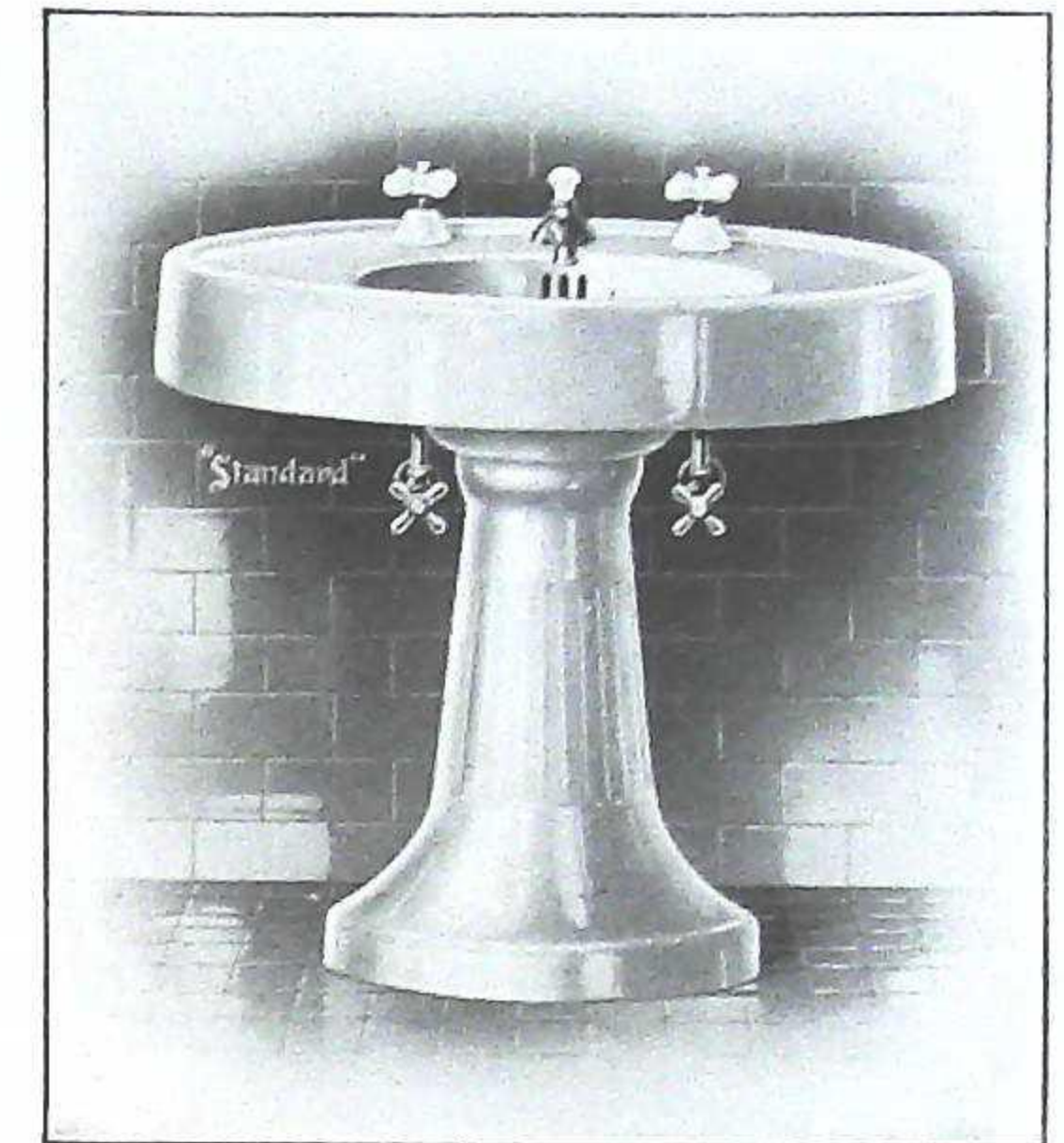


Fig. 194

Enameled Iron Pedestal Lavatory with rear outlet oval basin and apron, enameled iron fluted column pedestal, nickel-plated compression combination supply and standing drain fitting with china cross handles, china indexes china knob and escutcheons, nickel-plated supply pipes to wall, angle stops with four-ball china indexed handles, nickel-plated bag P trap.

Slab 18x27 inches Basin 11x15 inches
Slab 22x33 inches Basin 13x18 inches

Size inches 18x27 22x33
Approximate Shipping Weight, Less Fittings pounds 144 195

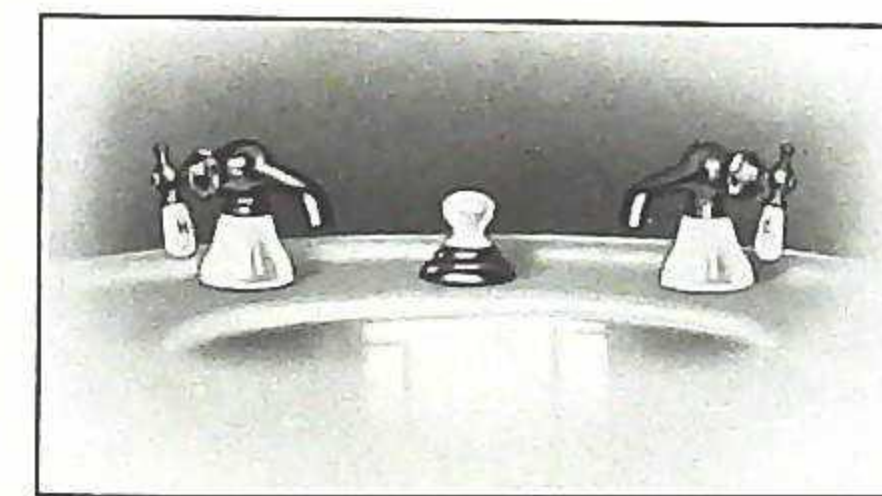


Fig. 192

These lavatories also can be furnished with nickel-plated quick compression pedestal faucets, with china base and china lever handle and nickel-plated standing drain with china knob.

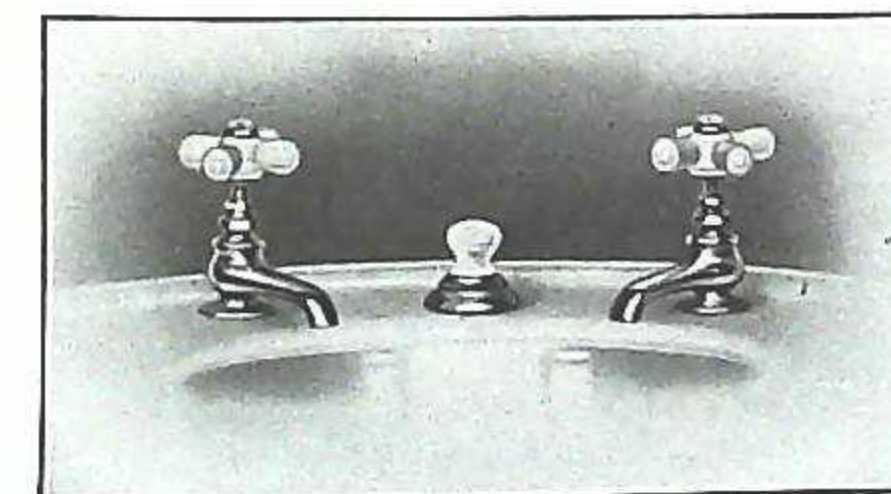


Fig. 193

These lavatories can be furnished with nickel-plated compression faucets with china cross handles and china indexes and nickel-plated standing drain with china knob.

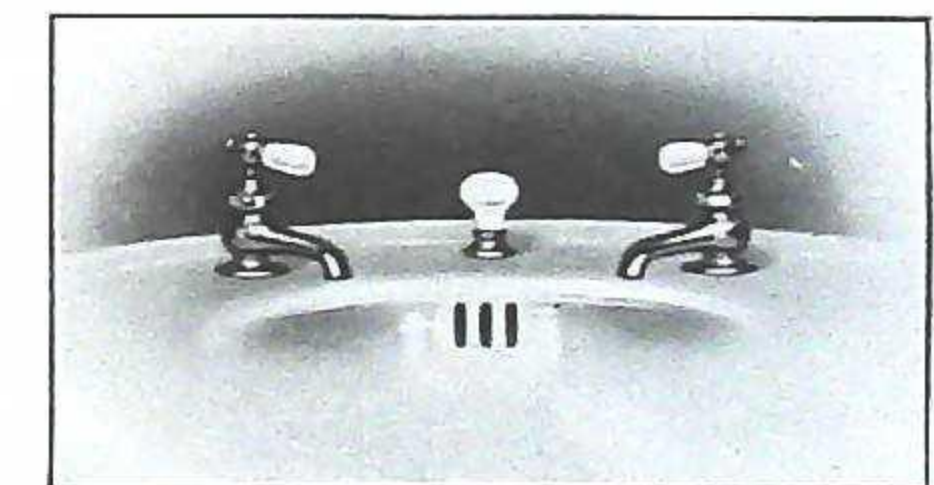


Fig. 195

These lavatories also can be furnished with nickel-plated quick compression faucets with china lever handles, indexed, and nickel-plated pop-up drain with china knob.

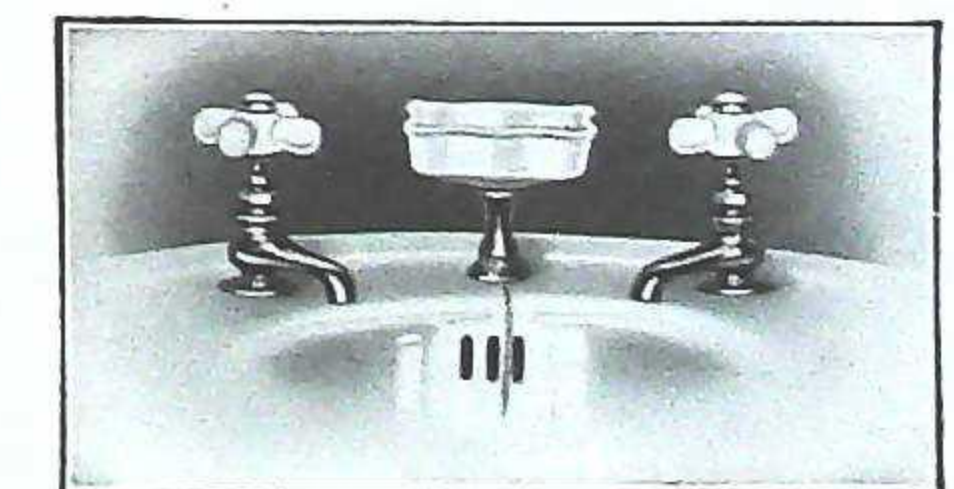


Fig. 196

These lavatories also can be furnished with nickel-plated, compression faucets with china handles and china indexes, removable china soap dish on nickel-plated pedestal, nickel-plated P. O. plug, chain and rubber stopper.

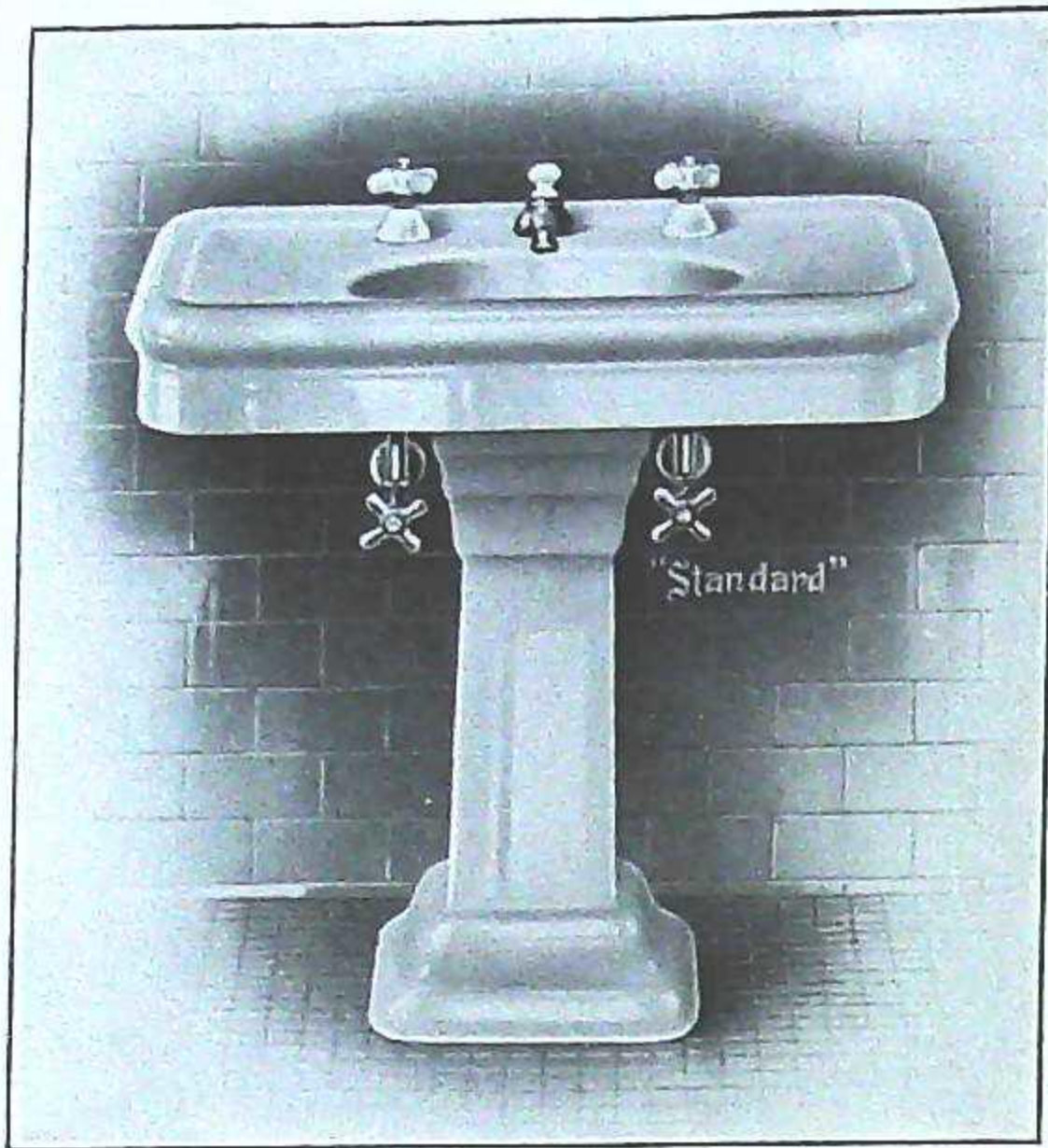


Fig. 201

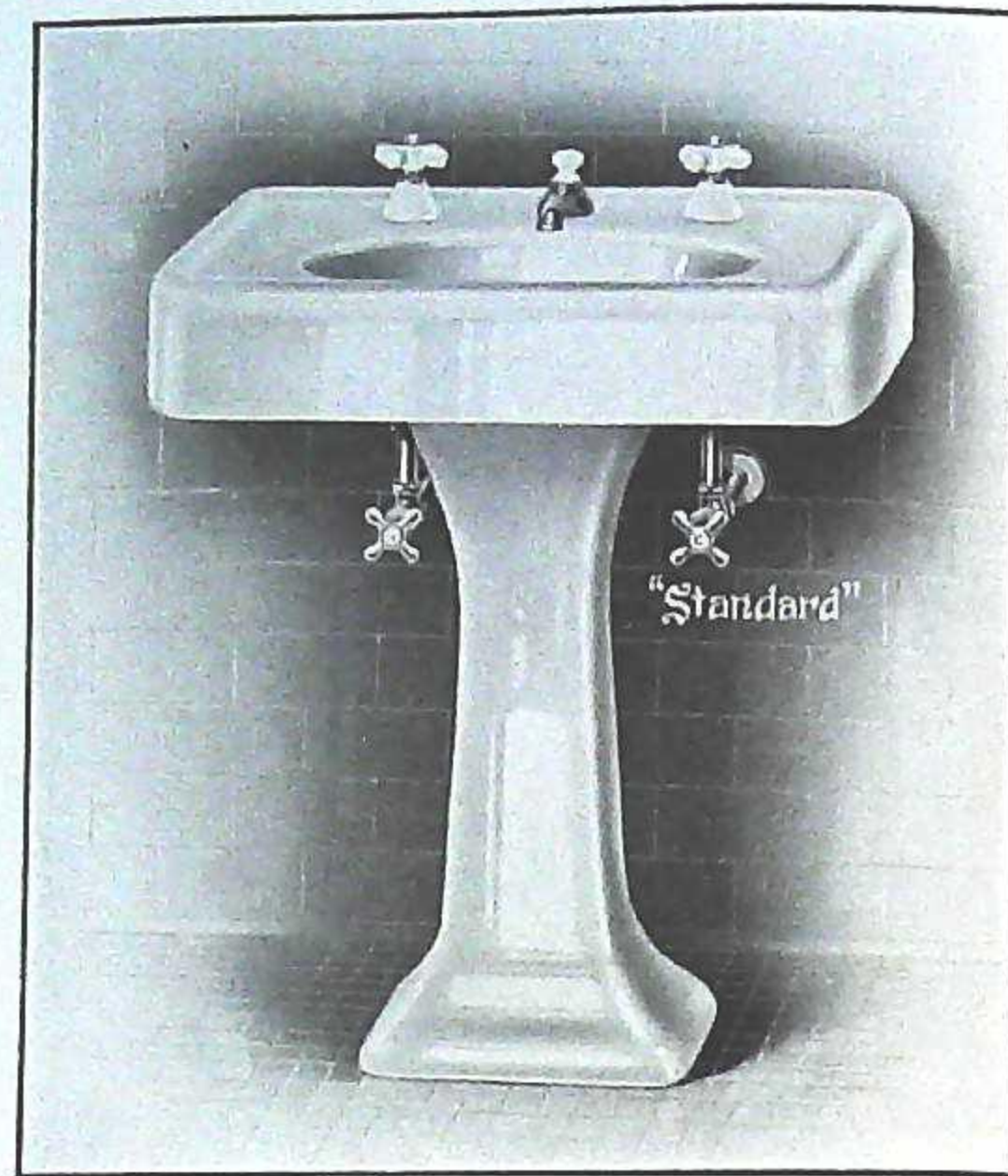


Fig. 204

Enameled Iron Pedestal Lavatory with rear outlet oval basin and apron, enameled iron square pedestal, nickel-plated compression combination supply and standing drain fitting with china cross handles, china indexes, china knob and escutcheons, nickel-plated supply pipes to wall, angle stops with four-ball china indexed handles, and nickel-plated bag P trap.

Slab 24x33 inches Basin 13x19 1/2 inches

Size.....inches 24x33
Approximate Shipping Weight.....pounds 262

Enameled Iron Pedestal Lavatory with rear outlet oval basin and apron, enameled iron pedestal, nickel-plated compression combination supply and standing drain fitting with china cross handles, indexes, china knob and escutcheons, nickel-plated supply pipes to wall, angle stops with four-ball china indexed handles and nickel-plated bag P trap.

Slab 20x24 inches Basin 11 x15 inches
Slab 22x27 inches Basin 12 1/2 x17 inches
Slab 22x30 inches Basin 12 1/2 x17 inches

Size.....in. 20x24 22x27 22x30
Approx. Ship. Wt.....lbs. 155 172 189

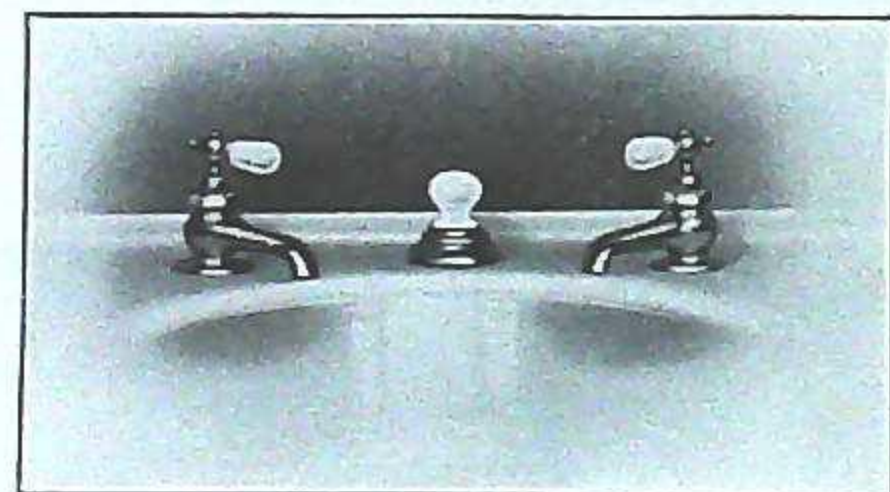


Fig. 202

These lavatories also can be furnished with nickel-plated compression faucets with china lever handles, indexed and nickel-plated standing drain with china knob.

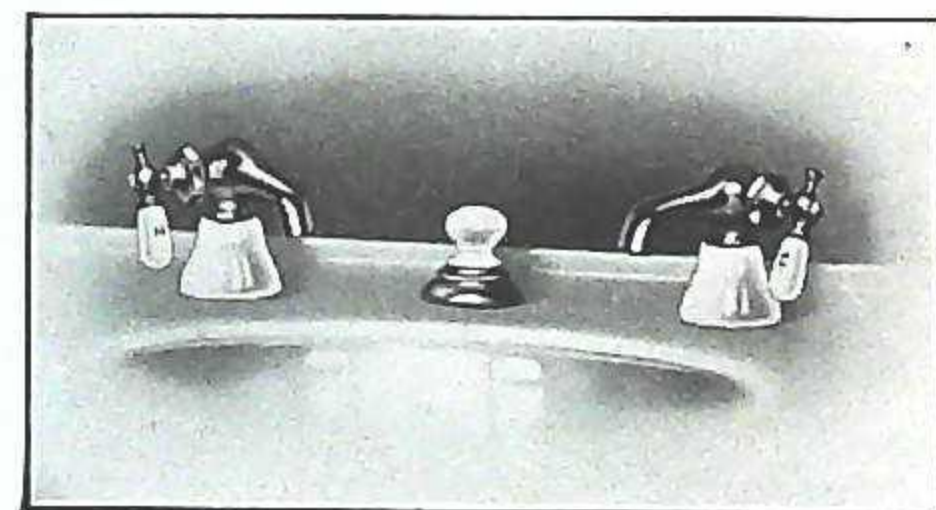


Fig. 205

These lavatories also can be furnished with nickel-plated quick compression faucets with china base and china handles indexed and nickel-plated standing drain with china knob.

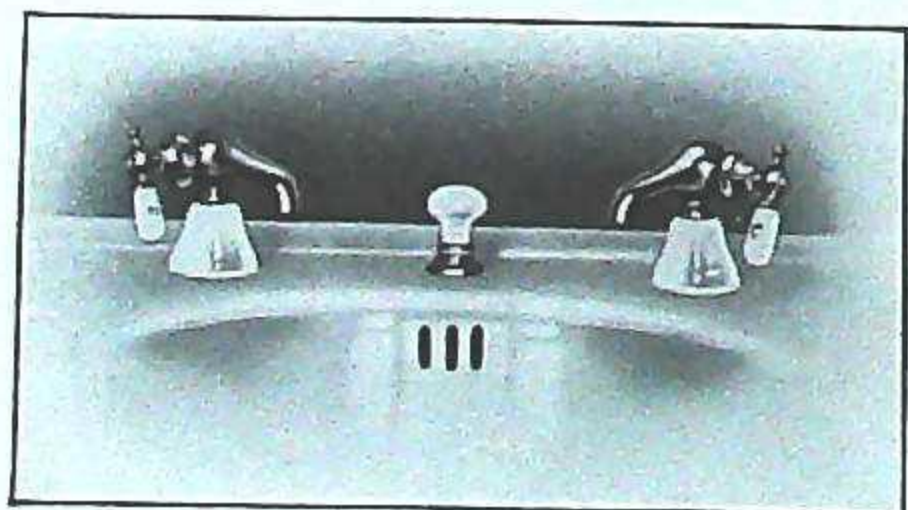


Fig. 203

These lavatories also can be furnished with nickel-plated quick compression pedestal faucets with china base and china lever handles, indexed, and nickel-plated pop-up drain with china knob.

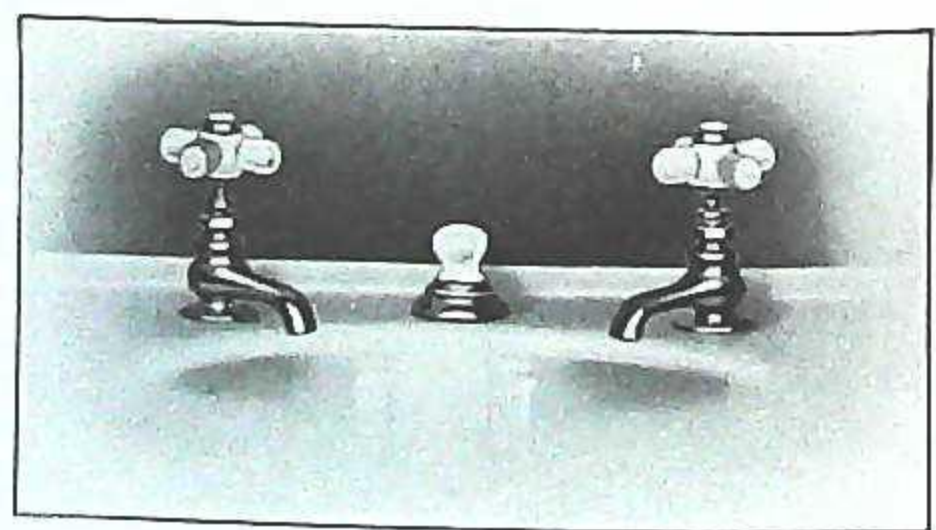


Fig. 206

These lavatories also can be furnished with nickel-plated Re-Nu compression faucets with china cross handles and indexes and nickel-plated standing drain with china knob.

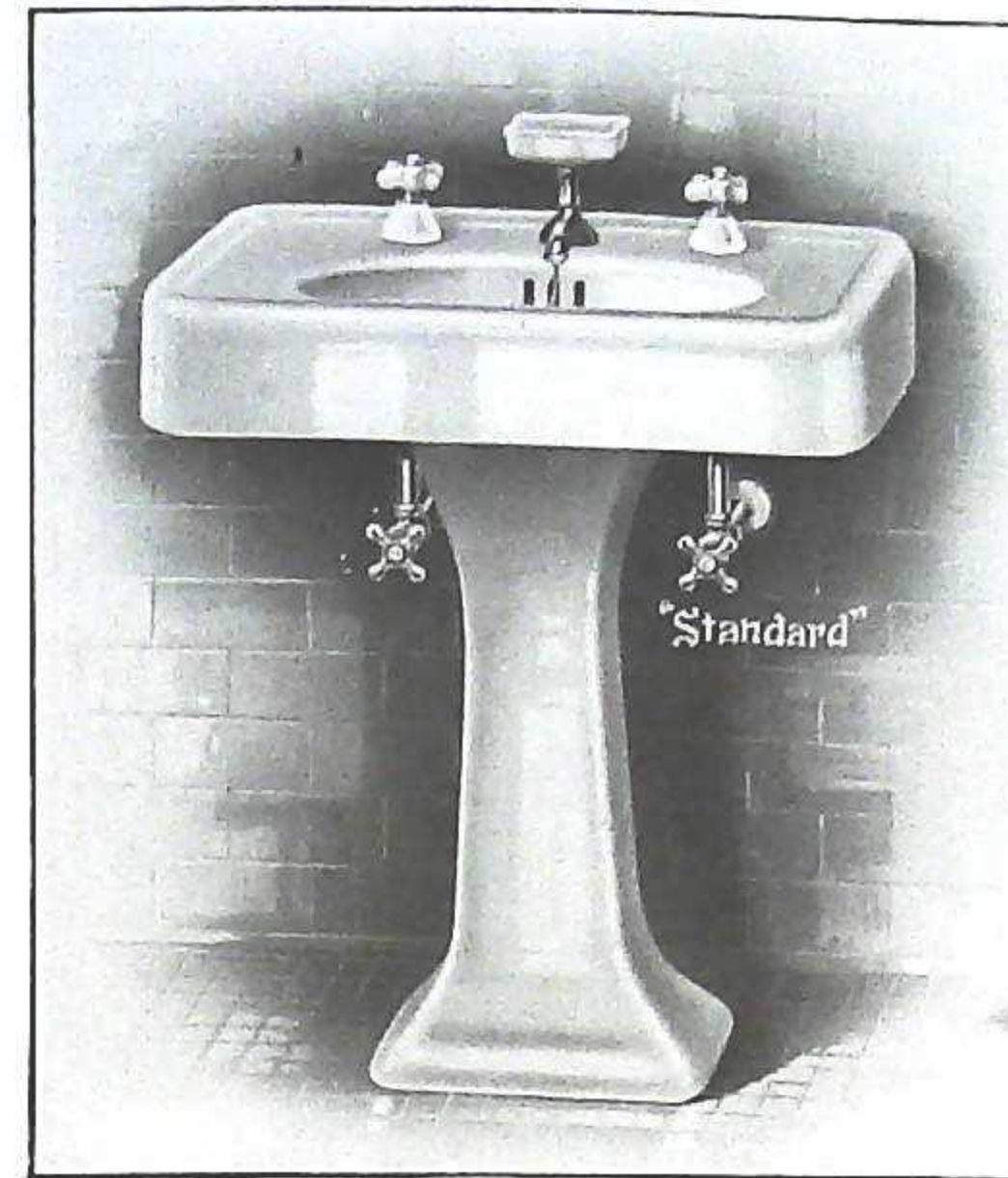


Fig. 211

Enameled Iron Pedestal Lavatory with rear outlet oval basin, patent overflow and apron, enameled iron pedestal, nickel-plated compression combination supply fitting with removable china pedestal soap dish, china cross handles, china indexes and china escutcheons, nickel-plated supply pipes to wall, angle stops with four-ball china indexed handles, nickel-plated P trap, P.O. plug, chain and rubber stopper.

Slab 20x24 inches Basin 11 x15 inches
Slab 22x27 inches Basin 12 1/2 x17 inches
Slab 22x30 inches Basin 12 1/2 x17 inches

Size.....inches 20x24 22x27 22x30
Approximate Shipping Weight.....lbs. 156 168 188

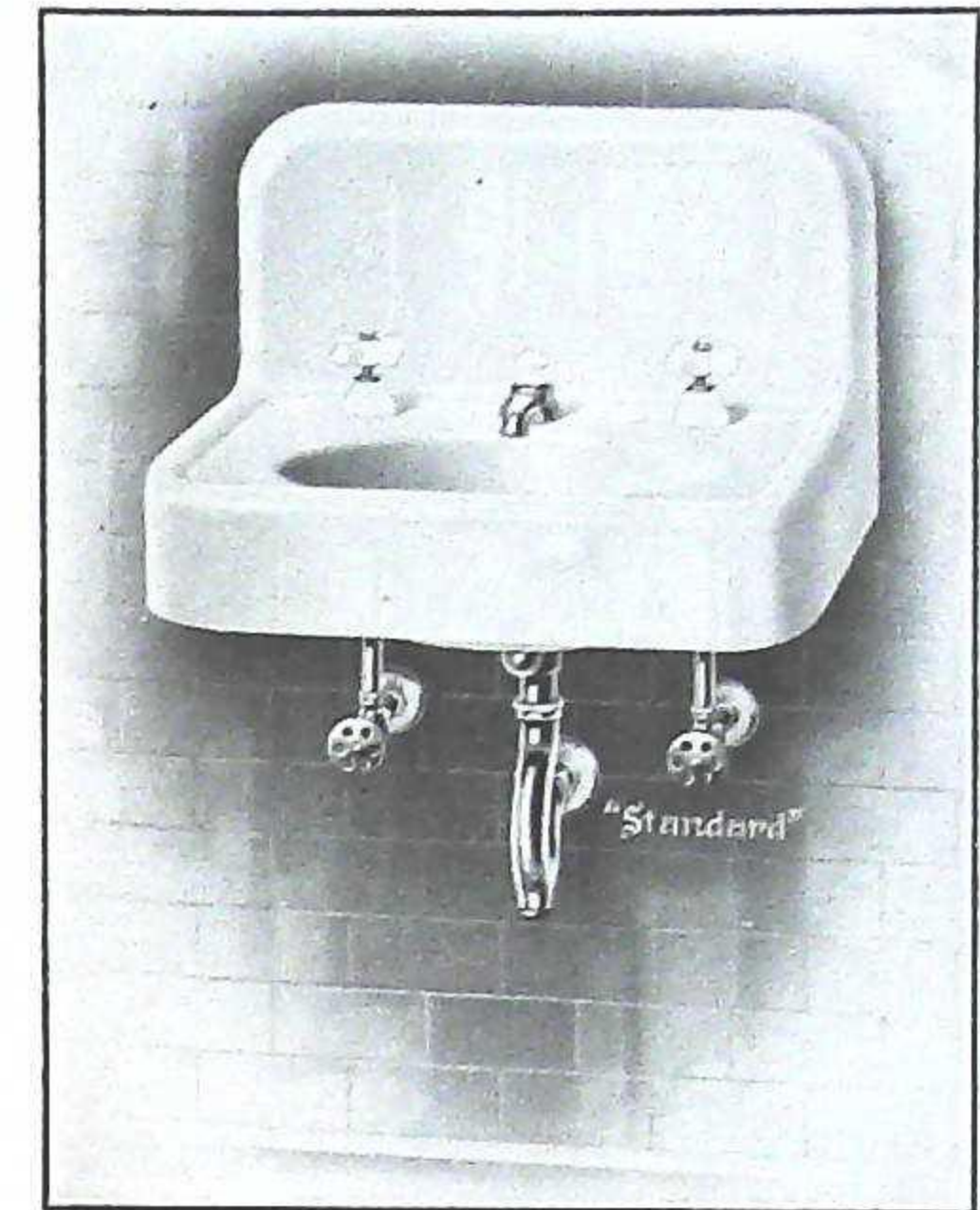


Fig. 214

Enameled Iron Straight Front Lavatory with rear outlet oval basin, back and apron, with concealed wall hanger, fitted with nickel-plated compression combination supply and standing drain fitting with china cross handles, indexes, china knob and escutcheons, nickel-plated supply pipes to wall, angle stops with wheel handles and nickel-plated bag P trap.

Slab 18x24 inches Basin 10 1/2 x16 inches Back 9 inches
Slab 20x24 inches Basin 12 x16 inches Back 12 inches
Slab 22x27 inches Basin 13 x17 inches Back 12 inches

Size.....in. 18x24 20x24 22x27
Approximate Shipping Weight.....lbs. 103 116 138

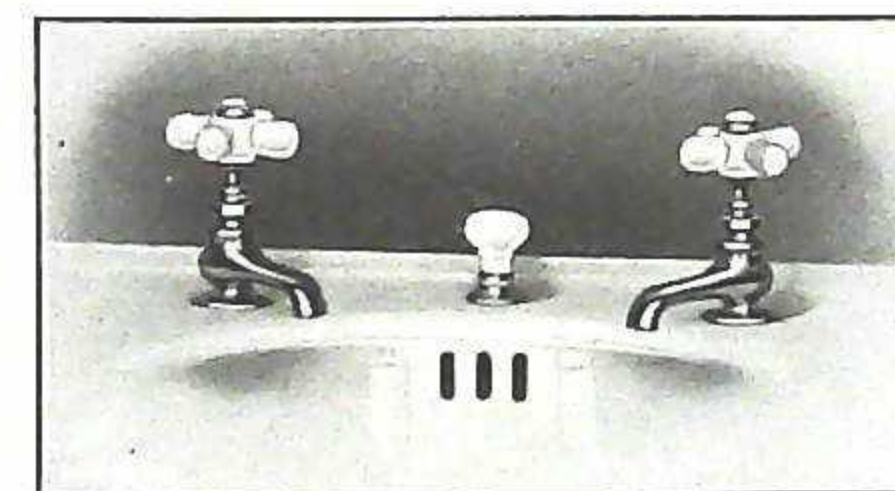


Fig. 212

These lavatories also can be furnished with nickel-plated compression faucets with china cross handles and china indexes and nickel-plated pop-up drain with china knob.

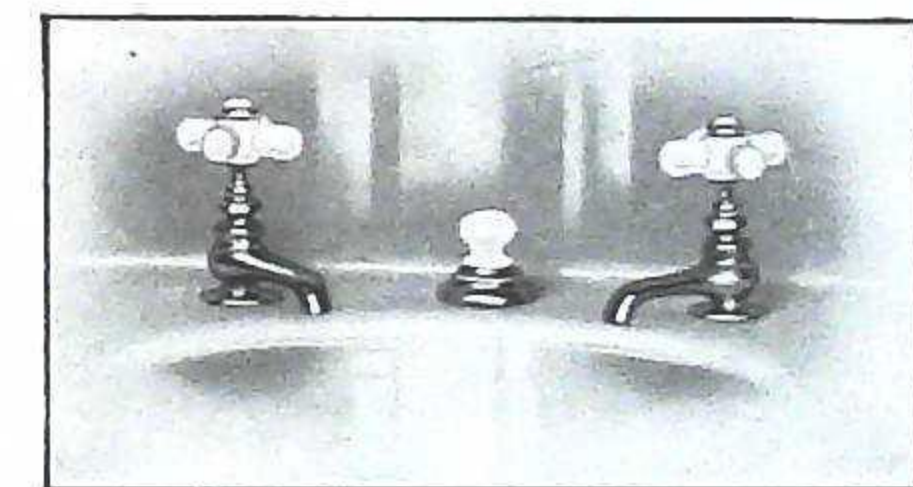


Fig. 215

These lavatories also can be furnished with nickel-plated compression basin faucets with china cross handles and china indexes and nickel-plated standing drain with china knob.

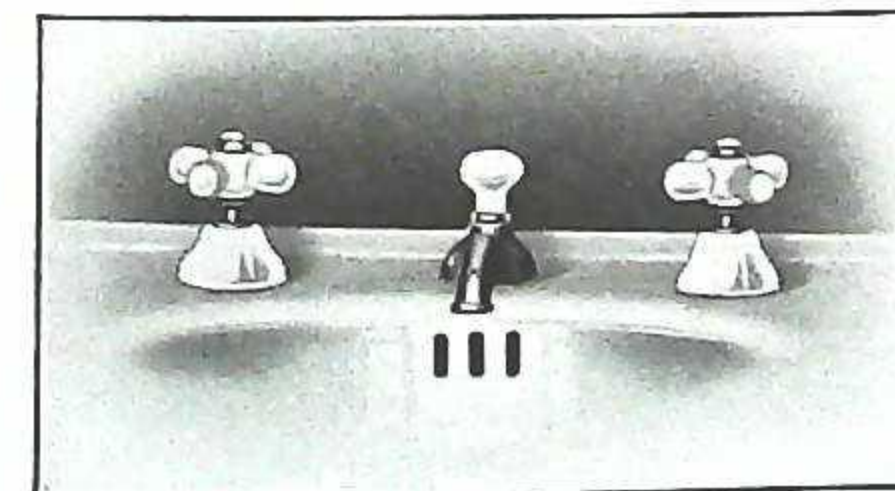


Fig. 213

These lavatories also can be furnished with nickel-plated compression combination supply and pop-up drain fitting with china cross handles, china indexes, china knob and escutcheons.

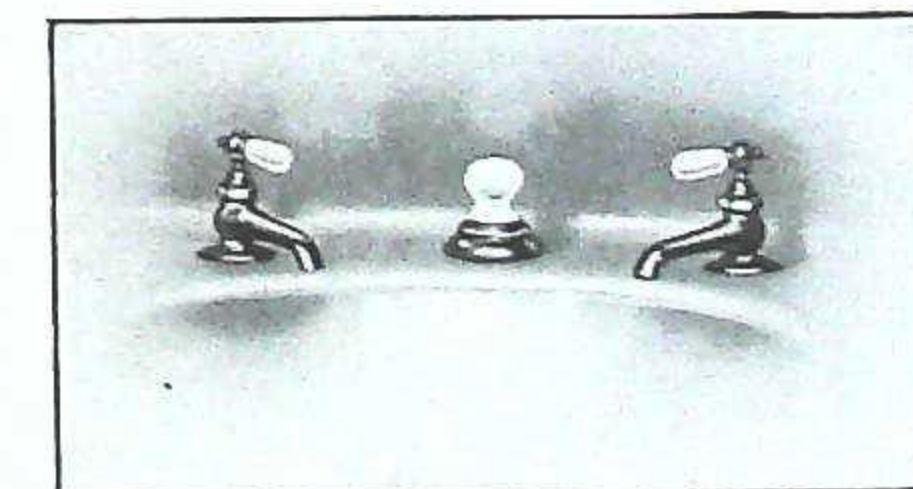


Fig. 216

These lavatories also can be furnished with nickel-plated quick compression faucets with china lever handles, indexed, and nickel-plated standing drain with china knob.

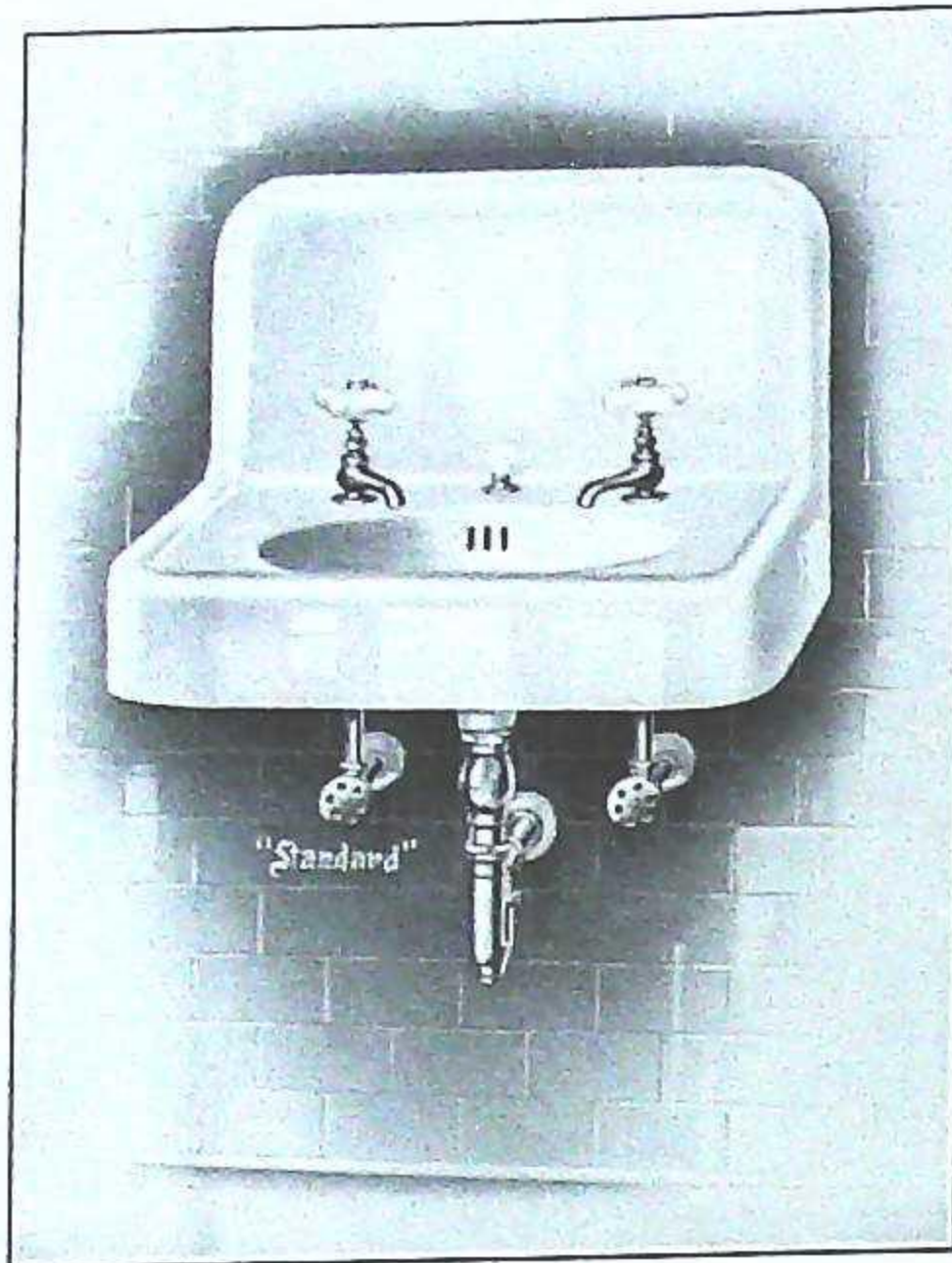


Fig. 221

Enameled Iron Straight Front Lavatory with rear outlet oval basin, patent overflow, back and apron, concealed wall hanger, nickel-plated compression faucets with china cross handles and china indexes, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated pop-up drain with china knob and nickel-plated P trap.

Slab 18x24 inches	Basin 10 $\frac{1}{2}$ x16 inches	Back 9 inches	
Slab 20x24 inches	Basin 12 x16 inches	Back 12 inches	
Slab 22x27 inches	Basin 13 x17 inches	Back 12 inches	
Size	inches 18x24	20x24	22x27
Approximate Shipping Weight, Less Fittings	pounds 107	118	147

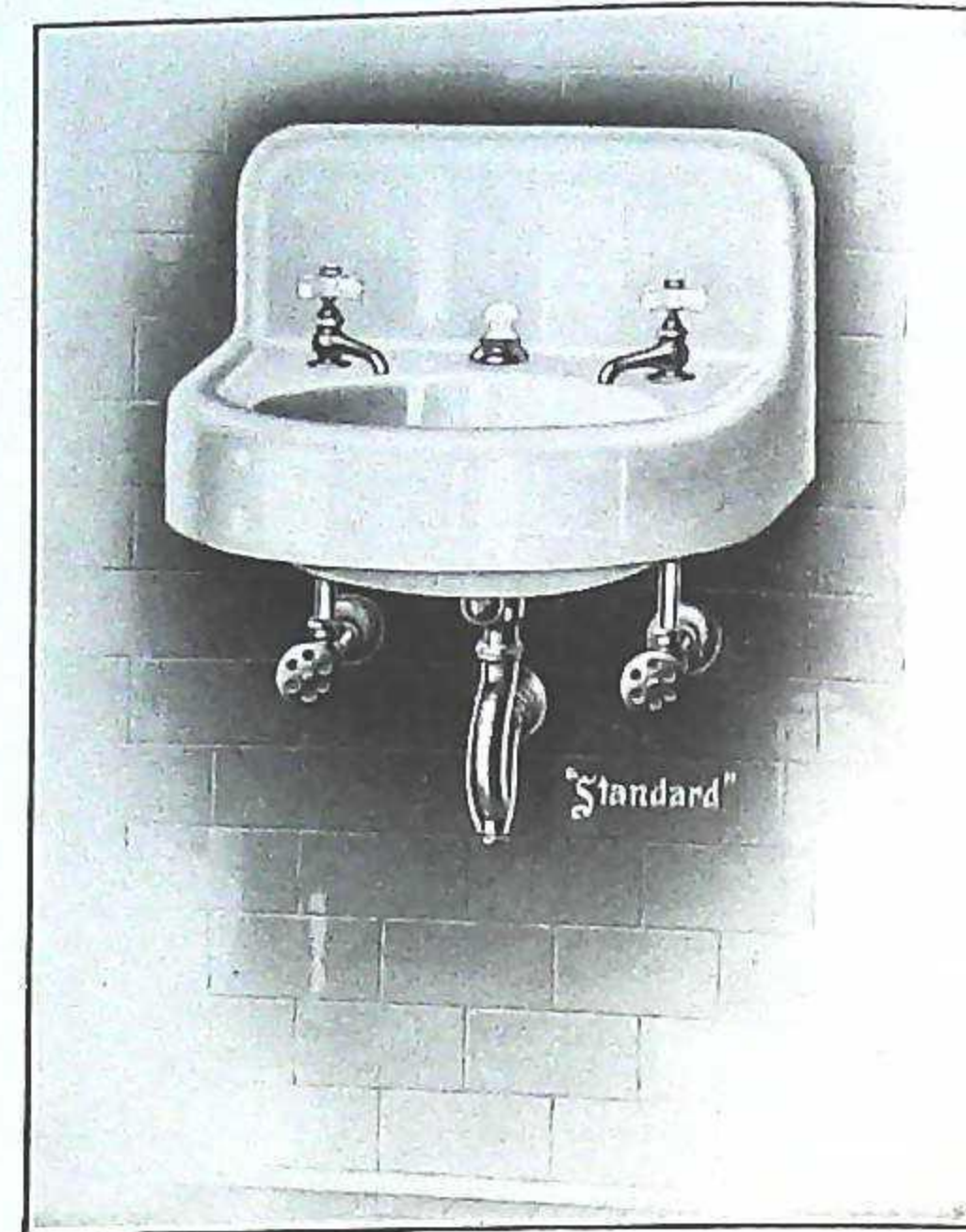


Fig. 223

Enameled Iron Round Front Lavatory with rear outlet oval basin, back and apron, concealed wall hanger, fitted with nickel-plated compression faucets with china cross handles and indexes, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated standing drain with china knob, nickel-plated bag P trap.

Slab 18x21 inches	Basin 10 $\frac{1}{2}$ x16 inches	Back 7 $\frac{1}{2}$ inches
Size	inches 18x21	
Approx. Ship. Wt.	pounds 85	

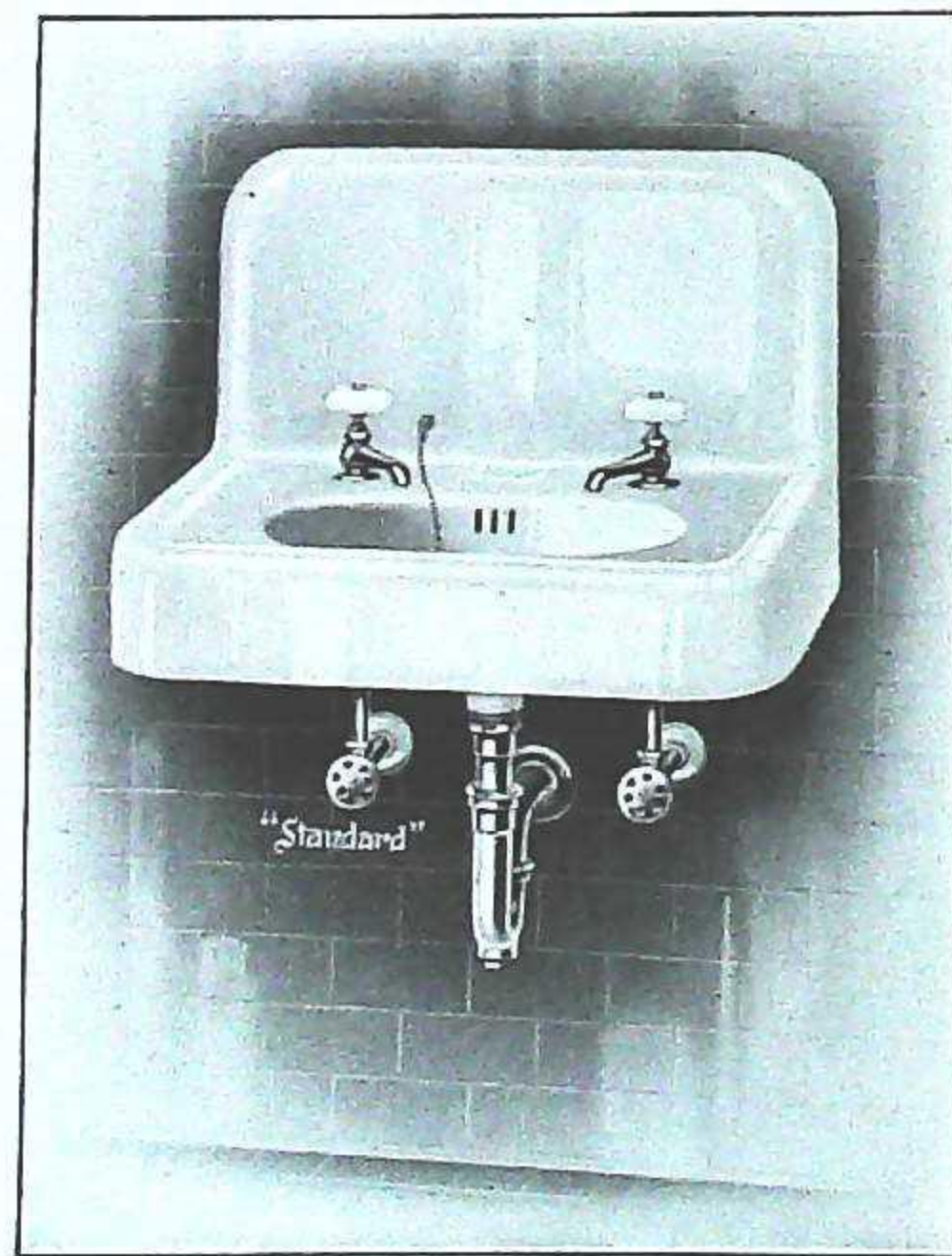


Fig. 222

Enameled Iron Straight Front Lavatory with oval basin, depressed soap dish, patent overflow, back and apron, concealed wall hanger, nickel-plated compression faucets with china cross handles and indexes, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated P trap, P.O. plug, chain stay, chain and rubber stopper.

Slab 17x21 inches	Basin 10 $\frac{1}{2}$ x15 inches	Back 8 inches
Slab 18x24 inches	Basin 10 $\frac{1}{2}$ x16 inches	Back 9 inches
Size	inches 17x21	18x24
Approximate Shipping Weight Less Fittings	pounds 89	107

The 17x21-inch size does not have soap dish in slab.

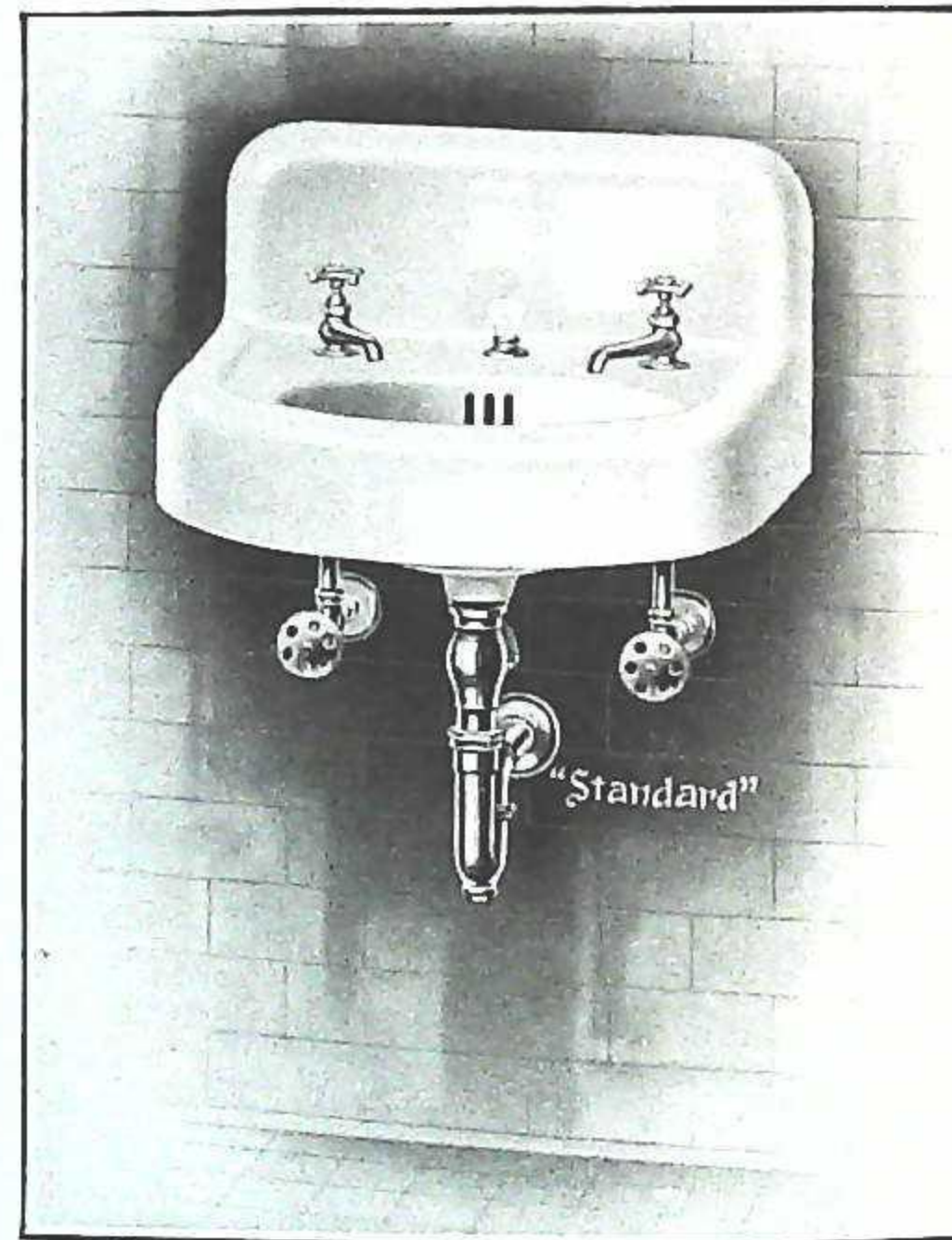


Fig. 224

Enameled Iron Round Front Lavatory with oval basin, rear outlet, patent overflow, back and apron, concealed wall hanger, nickel-plated compression faucets with four-ball china index handles, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated pop-up drain with china knob and nickel-plated P trap.

Slab 18x21 inches	Basin 10 $\frac{1}{2}$ x16 inches	Back 7 $\frac{1}{2}$ inches
Size	inches 18x21	
Approximate Shipping Weight, Less Fittings	lbs. 85	

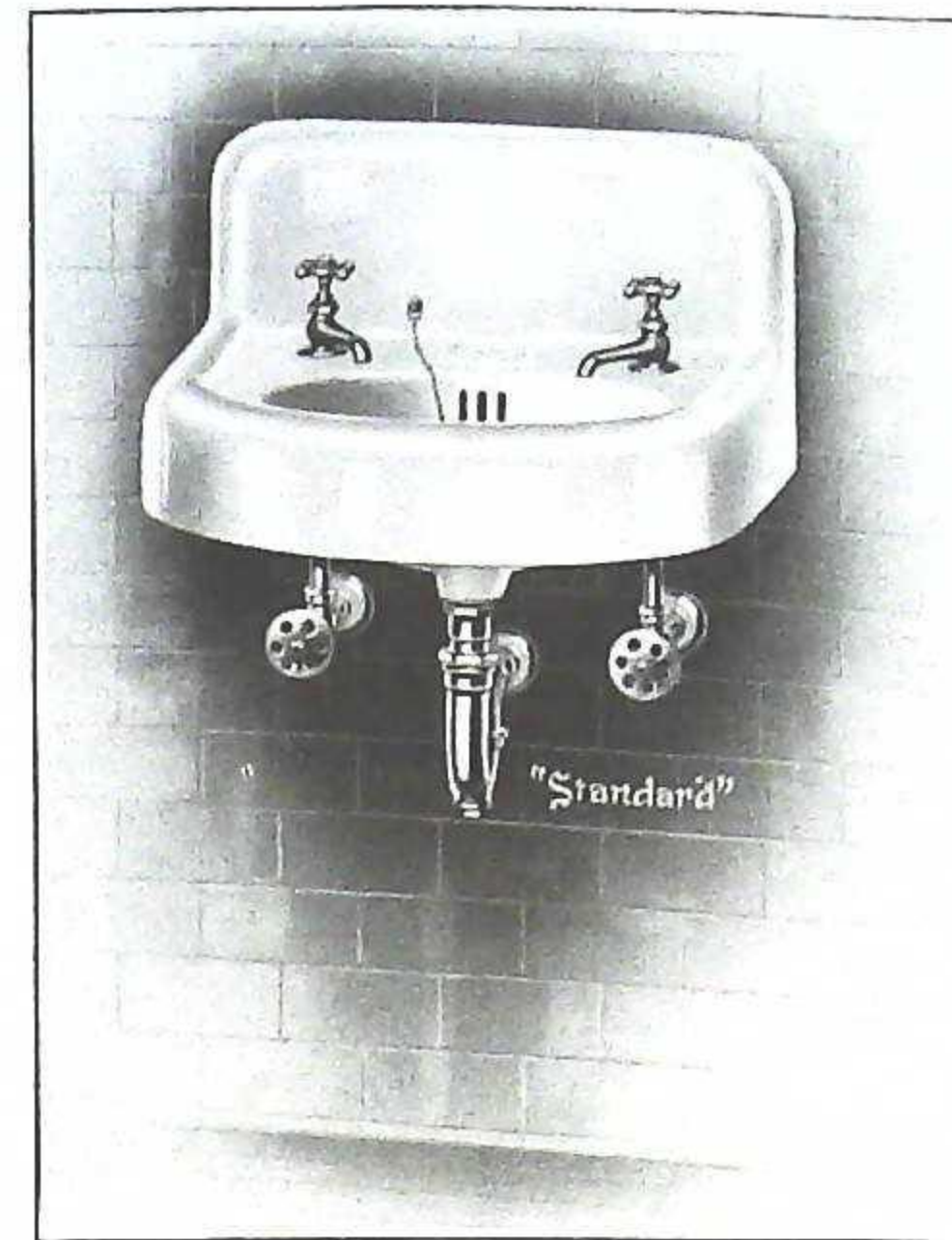


Fig. 231

Enameled Iron Round Front Lavatory with rear outlet oval basin, depressed soap dish, patent overflow, back and apron, concealed wall hanger, nickel-plated compression faucets with four-ball china index handles, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated P trap, P.O. plug, chain stay, chain and rubber stopper.

Slab 17x19 inches	Basin 10 $\frac{1}{2}$ x15 inches	Back 6 inches
Slab 18x21 inches	Basin 10 $\frac{1}{2}$ x16 inches	Back 7 $\frac{1}{2}$ inches
Size	inches 17x19	18x21
Approximate Shipping Weight, Less Fittings	pounds 77	88

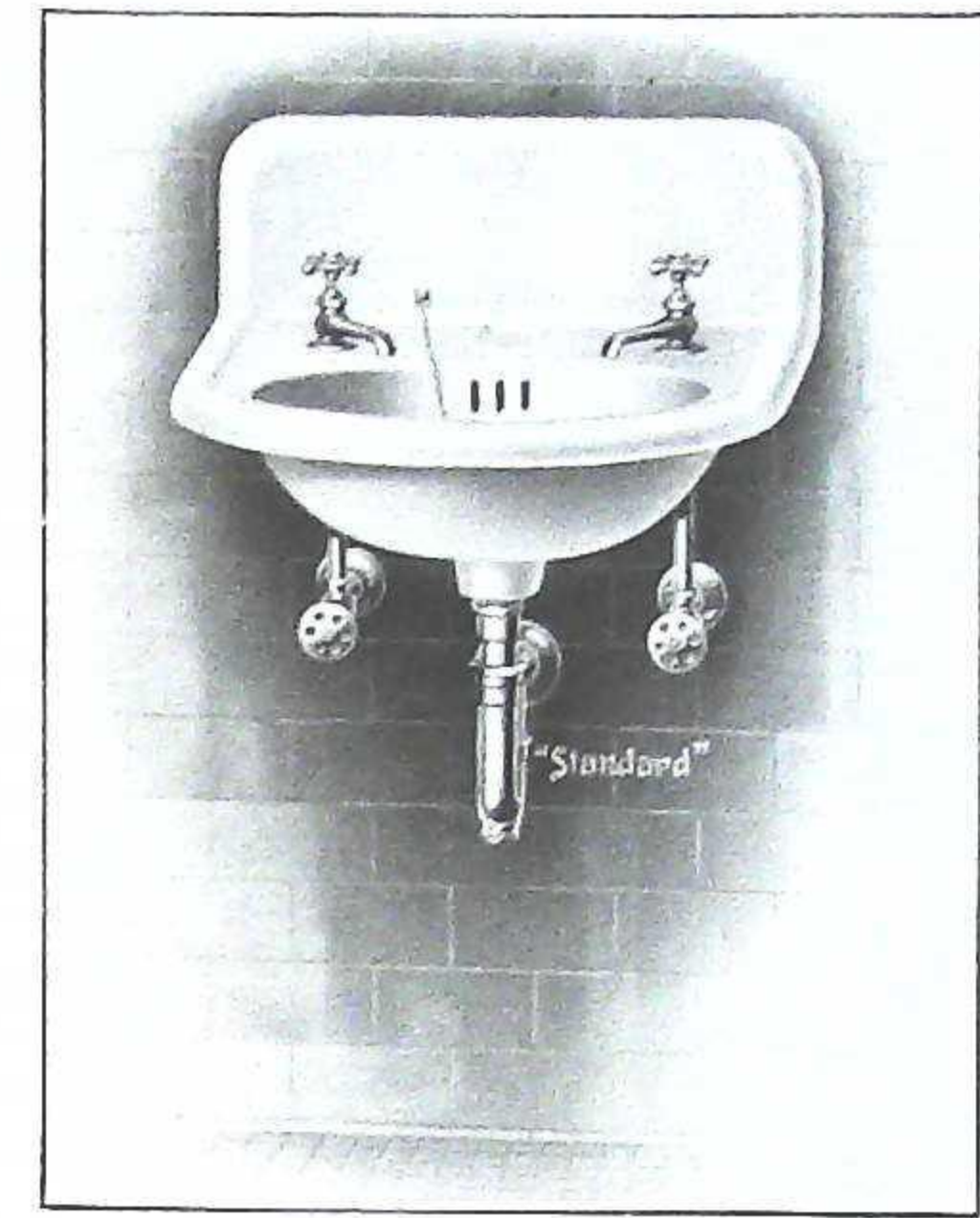


Fig. 233

Enameled Iron Round Front Lavatory with rear outlet oval basin, patent overflow, depressed soap dish and back, concealed wall hanger, nickel-plated compression faucets with four-ball china indexed handles, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated P trap, P. O. plug, chain stay, chain and rubber stopper.

Slab 17x19 inches	Basin 10 $\frac{1}{2}$ x15 inches	Back 6 inches
Slab 18x21 inches	Basin 10 $\frac{1}{2}$ x16 inches	Back 7 $\frac{1}{2}$ inches
Size	inches 17x19	18x21
Approximate Shipping Weight, Less Fittings	pounds 65	75

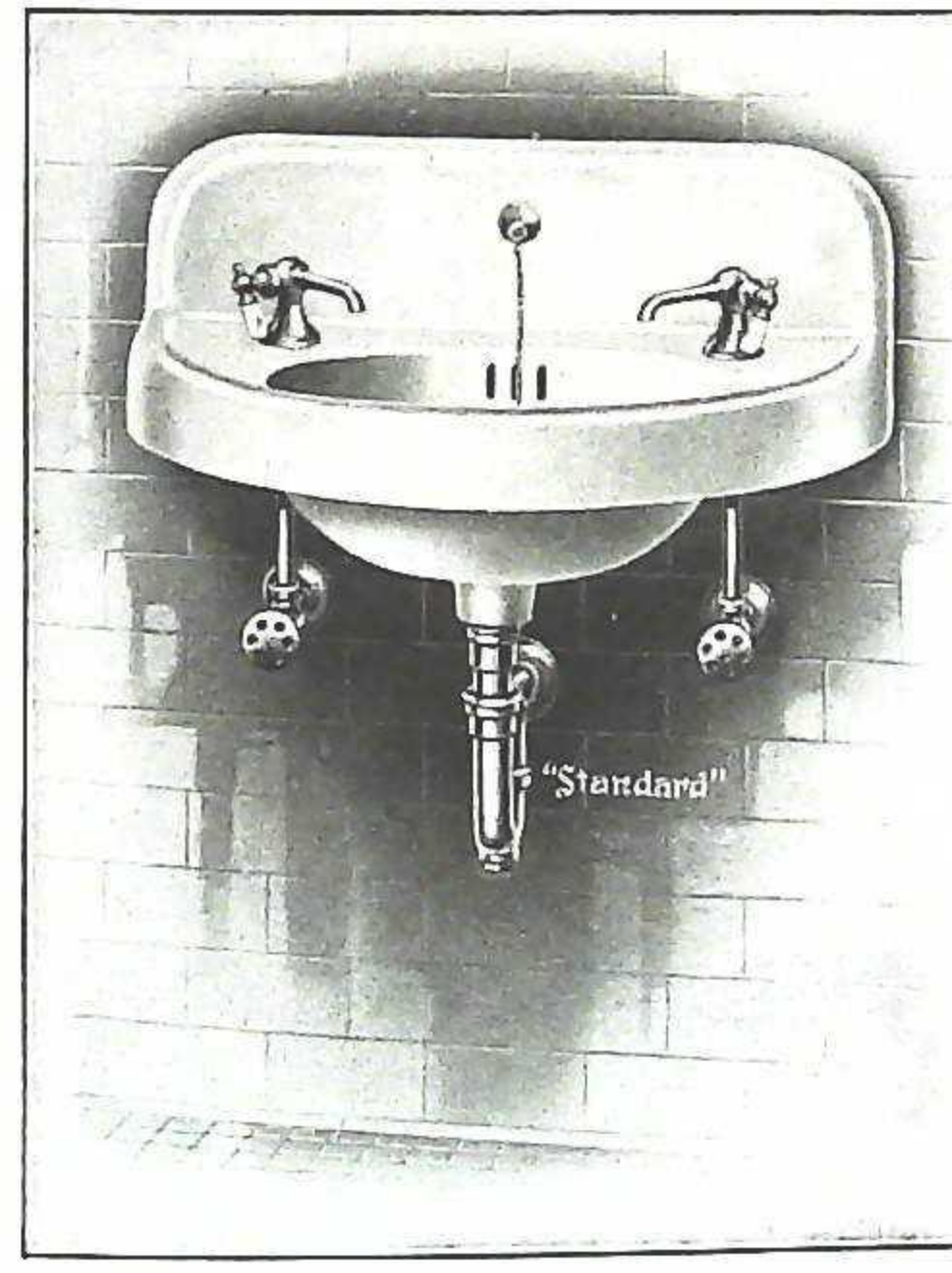


Fig. 232

Enameled Iron Round Front Lavatory with center outlet oval basin, patent overflow, back and apron, concealed wall hangers, nickel-plated quick compression faucets with china lever handles, indexed, nickel-plated supply pipe to wall, angle stops with wheel handles, nickel-plated P trap, P. O. plug, chain stay, chain and rubber stopper.

Slab 14x26 inches	Basin 10x16 inches	Back 6 inches
Size	inches 14x26	
Approximate Shipping Weight, Less Fittings	pounds 82	

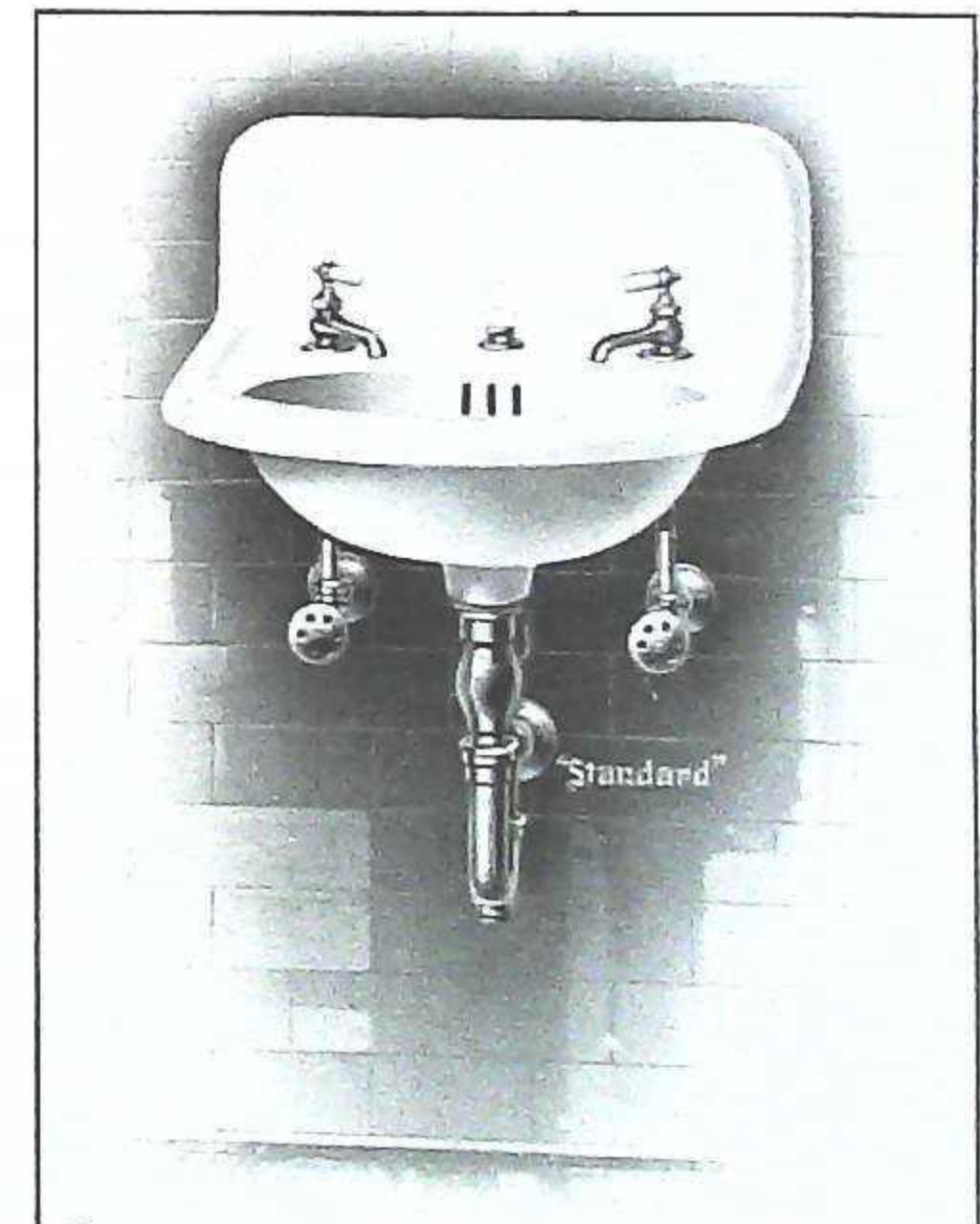


Fig. 234

Enameled Iron Round Front Lavatory with rear outlet oval basin, patent overflow and back, concealed wall hanger nickel-plated quick compression faucets with china lever handles, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated pop-up drain with china knob and nickel-plated P trap.

Slab 18x21 inches	Basin 10 $\frac{1}{2}$ x16 inches	Back 7 $\frac{1}{2}$ inches
Approximate Shipping Weight, Less Fittings	pounds 75	



Fig. 241

Enameled Iron Round Front Lavatory with center outlet round basin, patent overflow and back, concealed wall hanger, nickel-plated compression faucets with four-ball china indexed handles, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated P trap, P. O. plug, chain stay, chain and rubber stopper.

Slab 16x14 inches Basin 11 inches Back 5 inches

Size..... inches 16x14
Approximate Shipping Weight, Less Fittings... pounds 47



Fig. 243

Enameled Iron Corner Lavatory with rear outlet oval basin, back and apron, nickel-plated compression faucets with china cross handles and indexes, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated standing drain with china knob and nickel-plated bag P trap.

Slab on sides 16 inches Basin 10 1/2 x 15 inches Back 5 1/2 inches
Slab on sides 19 inches Basin 10 1/2 x 16 inches Back 7 1/4 inches

Size..... inches 16x16 19x19
App. Ship. Wt., Less Fittings... pounds 70 97

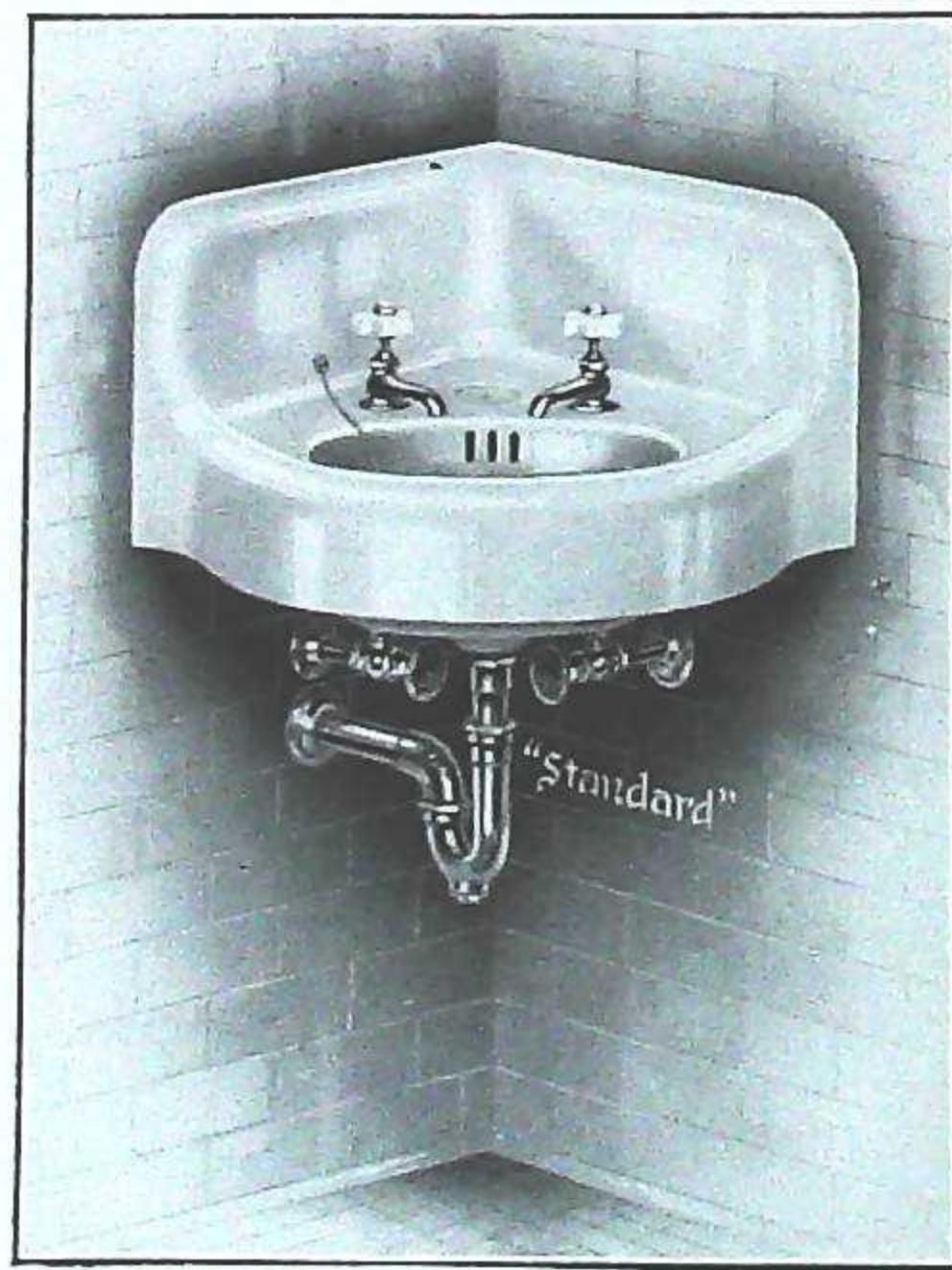


Fig. 242

Enameled Iron Corner Lavatory with rear outlet oval basin, patent overflow, depressed soap dish, back and apron, concealed wall hangers, nickel-plated compression faucets with china cross handles and indexes, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated P trap, P. O. plug, chain stay, chain and rubber stopper.

Slab on sides 16 inches Basin 10 1/2 x 15 inches Back 5 1/2 inches
Slab on sides 19 inches Basin 10 1/2 x 16 inches Back 7 1/4 inches

Size..... inches 16x16 19x19
Approx. Ship. Weight, Less Fittings... pounds 75 98

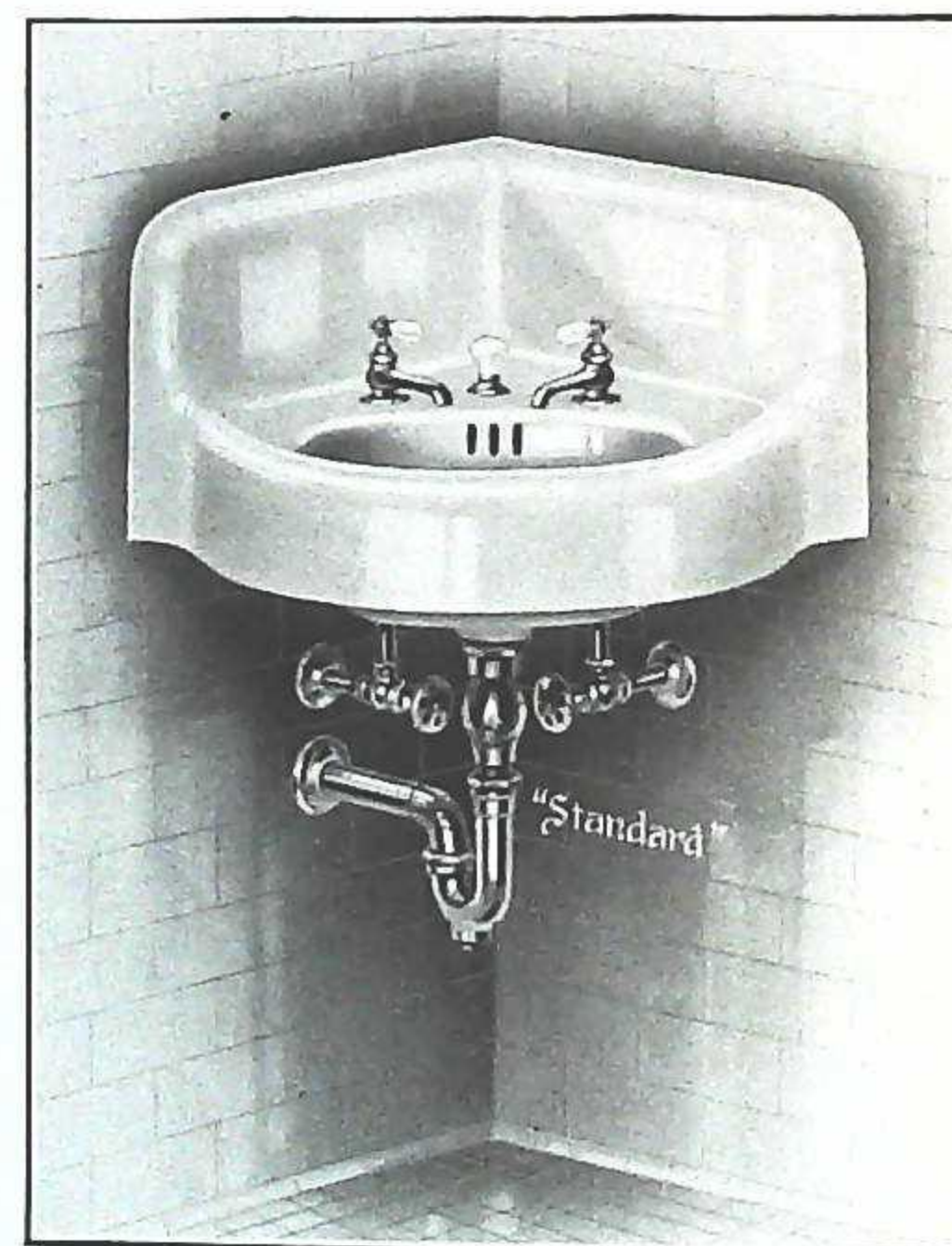


Fig. 244

Enameled Iron Corner Lavatory with rear outlet oval basin, patent overflow, back and apron, nickel-plated quick compression faucets with china lever handles, indexed, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated pop-up drain with china knob and nickel-plated P trap.

Slab on sides 16 inches Basin 10 1/2 x 15 inches Back 5 1/2 inches
Slab on sides 19 inches Basin 10 1/2 x 16 inches Back 7 1/4 inches

Size..... inches 16x16 19x19
Approx. Ship. Weight, Less Fittings... pounds 75 98

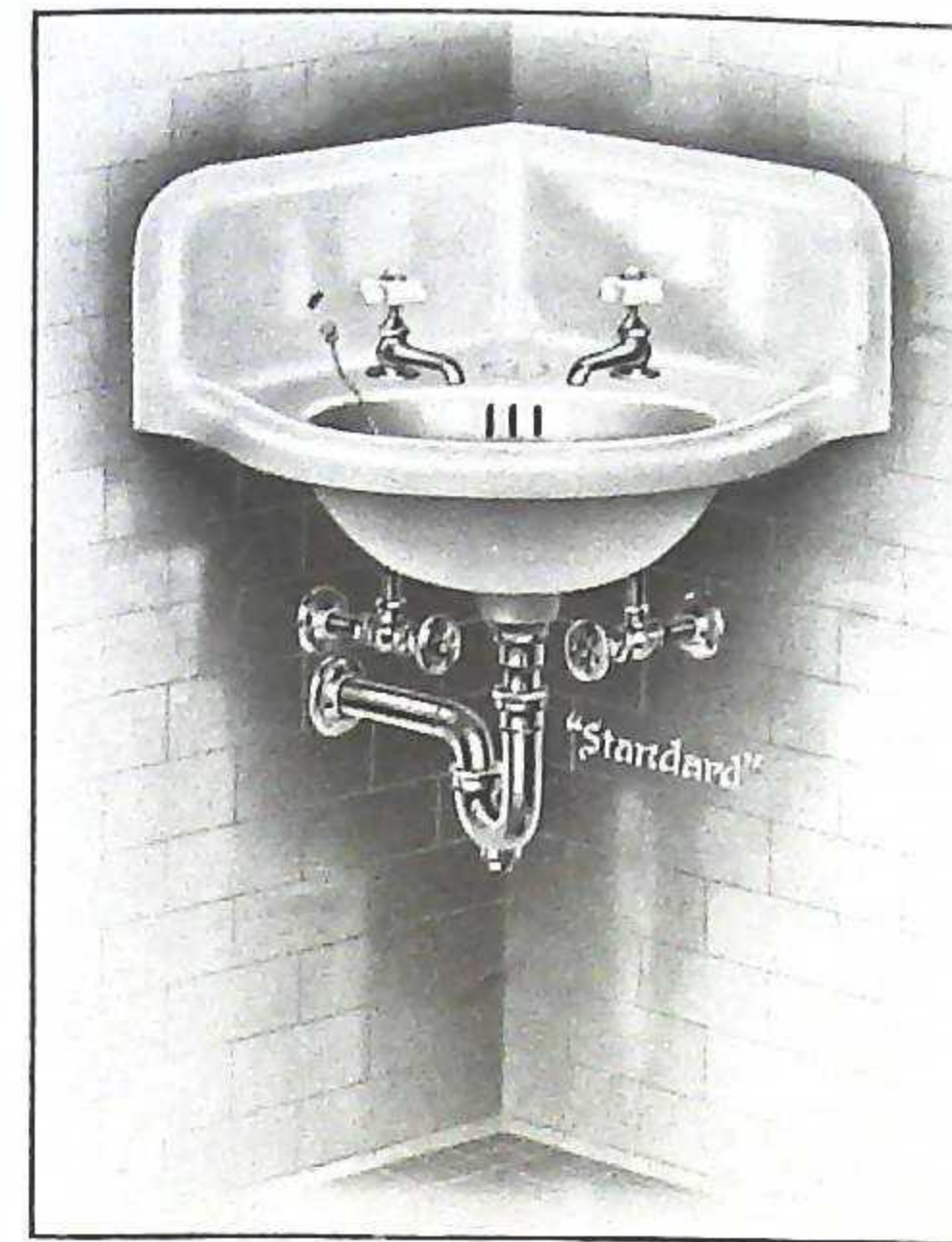


Fig. 251

Enameled Iron Round Front Corner Lavatory with rear outlet oval basin, patent overflow, depressed soap dish and back, concealed wall hangers, nickel-plated compression faucets with china cross handles and indexes, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated P trap, P. O. plug, chain stay, chain and rubber stopper.

Slab on sides 16 inches Basin 10 1/2 x 15 inches Back 5 1/2 inches
Slab on sides 19 inches Basin 10 1/2 x 16 inches Back 7 1/4 inches

Size..... inches 16x16 19x19
Approximate Shipping Weight, Less Fittings... pounds 71 88

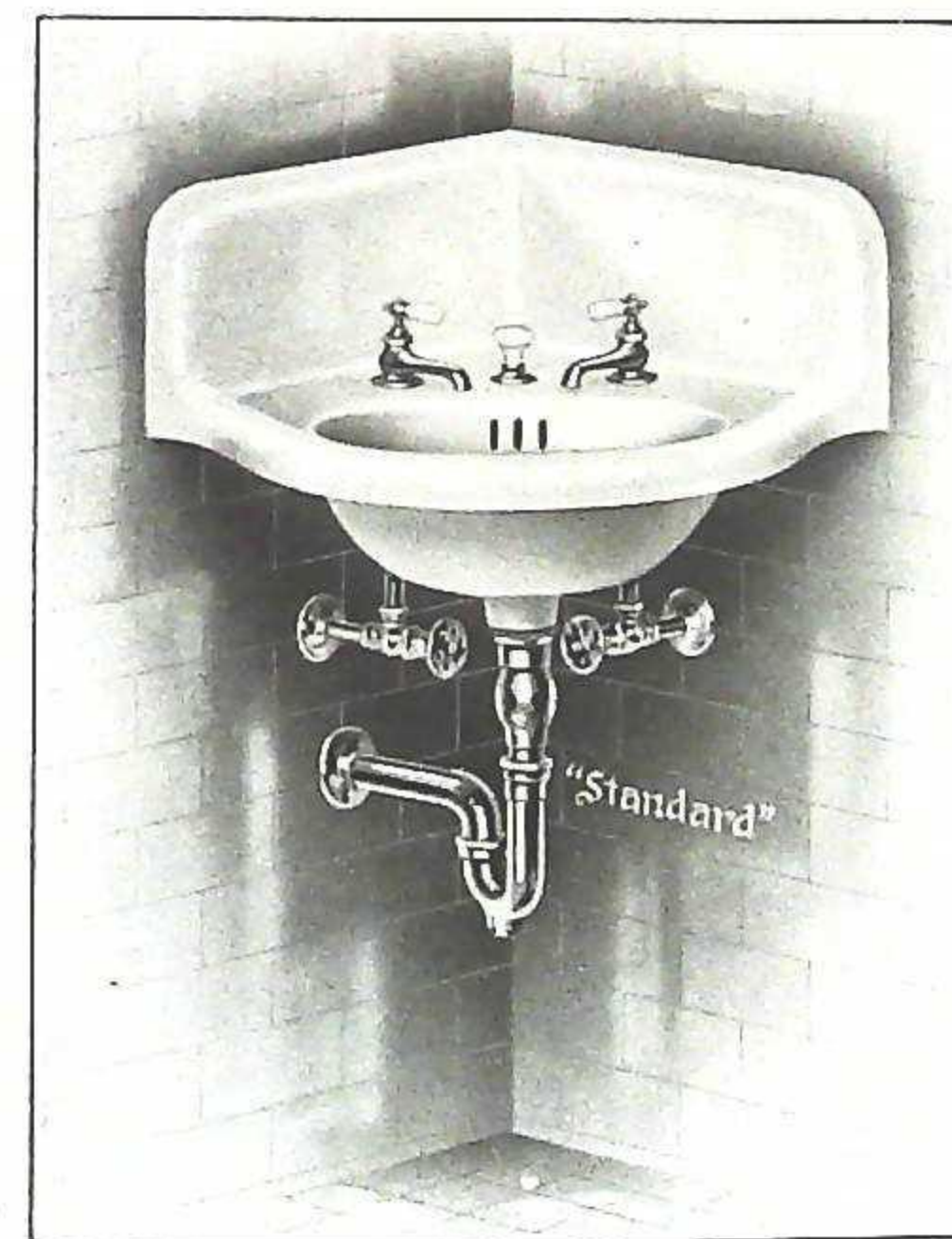


Fig. 252

Enameled Iron Round Front Corner Lavatory with rear outlet oval basin, patent overflow and back, concealed wall hangers, nickel-plated quick compression faucets with china lever handles, indexed, nickel-plated supply pipes to wall, angle stops with wheel handles, nickel-plated pop-up drain with china knob and nickel-plated P trap.

Slab on sides 19 inches Basin 10 1/2 x 16 inches Back 7 1/4 inches

Size..... inches 19x19
Approximate Shipping Weight, Less Fittings... pounds 88

Enameled Iron Prison Lavatory with rear outlet oval basin, patent overflow and drain outlet threaded for 1-inch iron pipe, nickel-plated Re-Nu self-closing faucet with adjustable flange and crown handle indexed.

Length 13 inches
Width 12 1/4 inches
Basin 9 1/2 x 11 1/2 inches
Back 4 inches

App. Ship. Wt. lbs. 45
Furnished enameled all over or enameled inside.

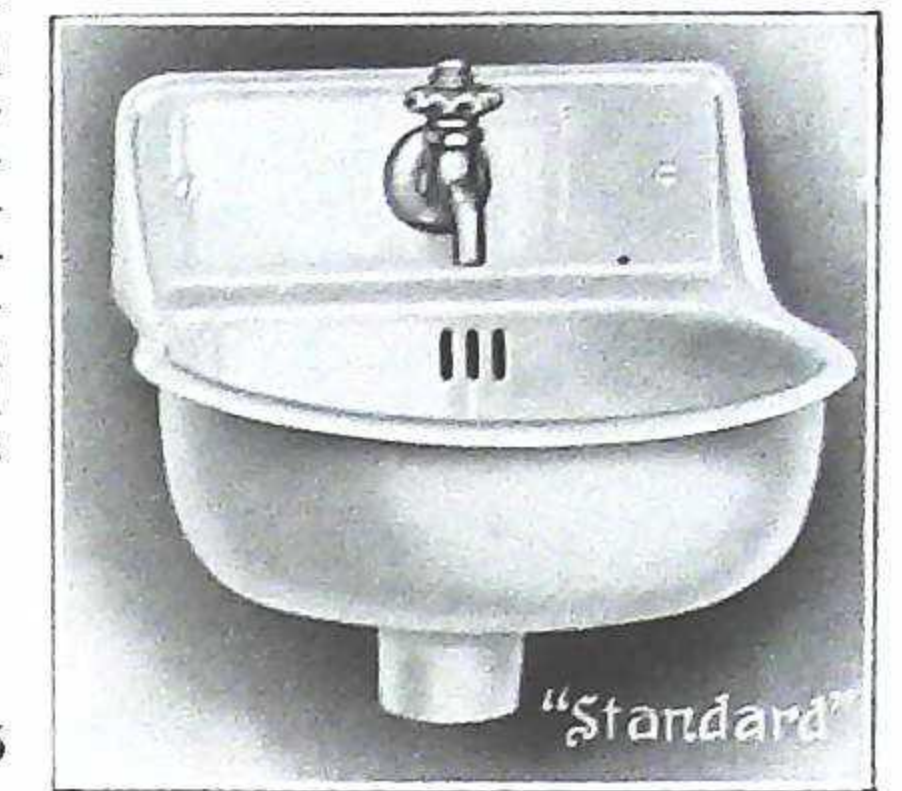


Fig. 253

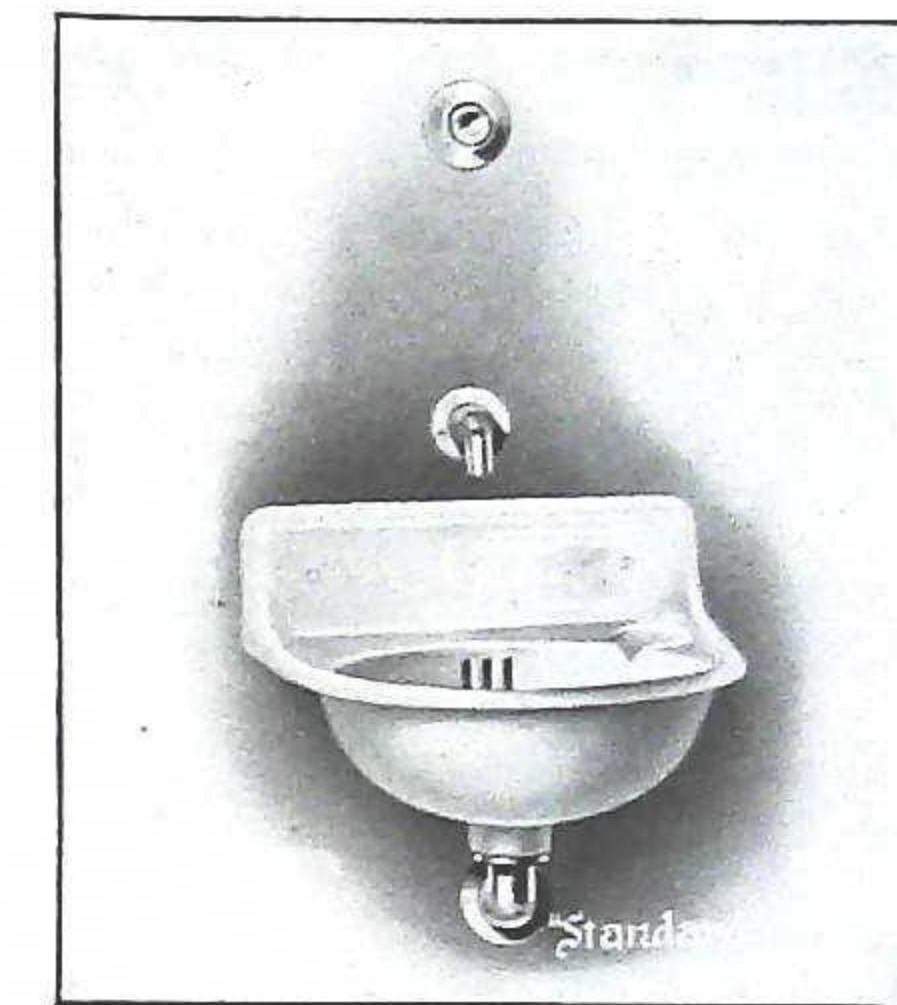


Fig. 254

Enameled Iron Prison Lavatory with rear outlet oval basin, patent overflow, back and soap dish, nickel-plated push button concealed self-closing supply valve and nickel-plated supply spout, nickel-plated drain elbow connection to wall, drain plug and stopper.

Size 12x15 inches Basin 9 1/2 x 12 inches
Back 4 inches

Size..... inches 12x15
Approx. Ship. Weight, with Fittings... pounds 46

Furnished enameled inside or enameled all over and with soap dish on right or left side.

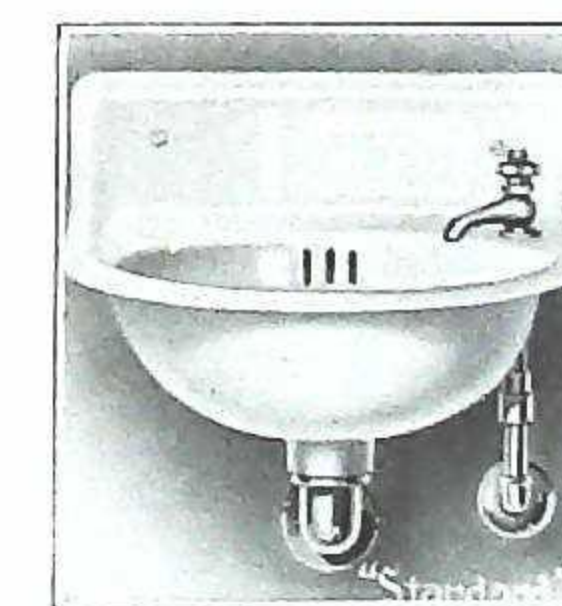


Fig. 255

Enameled Iron Prison Lavatory with rear outlet oval basin, back and soap dish on left side, nickel-plated self-closing faucet with crown handle, indexed, nickel-plated supply pipe to wall, nickel-plated drain elbow connection, drain plug and stopper.

Size 12x15 inches
Basin 9 1/2 x 12 inches
Back 4 inches

Size..... in. 12x15
App. Ship. Weight lbs. 35

Furnished enameled inside or enameled all over and with soap dish on right or left side.

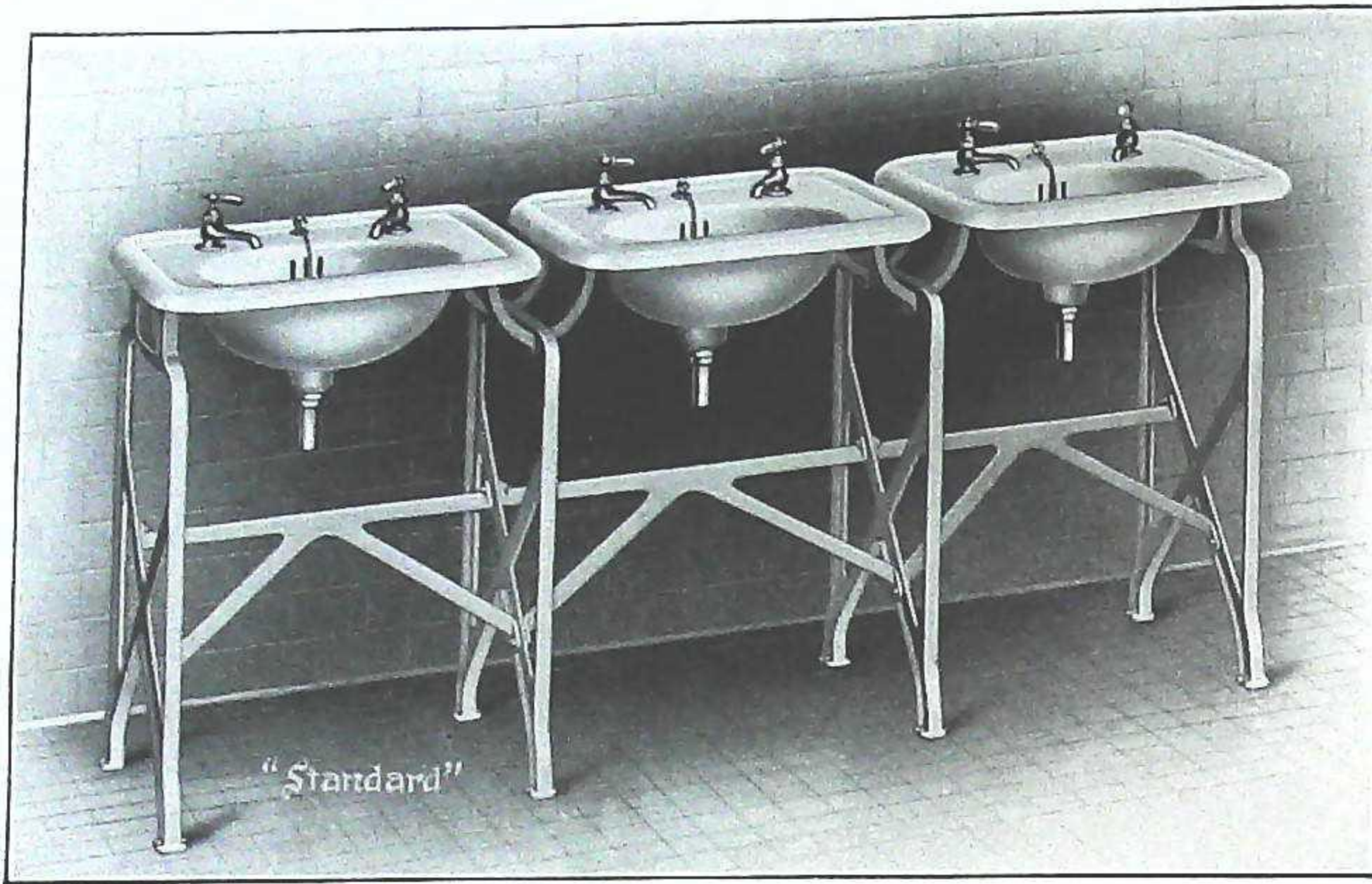


Fig. 261

**Single Battery of Enam-
eled Iron Straight Front
Roll Rim Lavatories** with
rear outlet oval basin and
patent overflow, painted floor
brackets, nickel-plated quick
compression faucets with
china lever handles, indexed,
and nickel-plated P. O. plug,
chain stay, chain and rubber
stopper.

Slab 16x20 inches
Slab 18x24 inches
Basin 10 1/2 x 14 inches
Basin 10 1/2 x 16 inches

Size.....inches 16x20 18x24
Approximate Shipping Weight, per Section Less Fittingspounds 111 127

These lavatories also can be furnished with nickel-plated self-closing faucets with four-arm china indexed cross handles and nickel-plated pop-up drain with china knob.

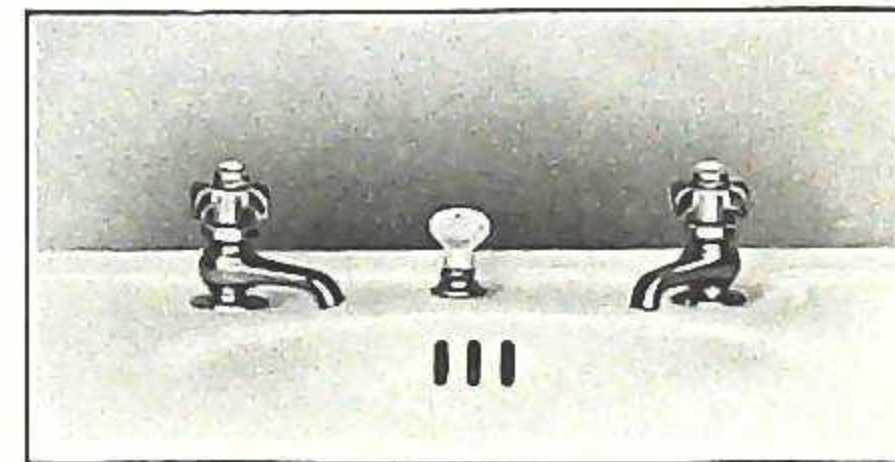


Fig. 262

**Double Battery of Enam-
eled Iron Straight Front
Roll Rim Lavatories** with
rear outlet oval basin and
patent overflow, painted floor
brackets, nickel-plated quick
compression faucets with china
lever handles, indexed, and
nickel-plated P. O. plugs,
chain stays, chains and rub-
ber stoppers.

Slab 16x20 inches
Basin 10 1/2 x 14 inches
Slab 18x24 inches
Basin 10 1/2 x 16 inches

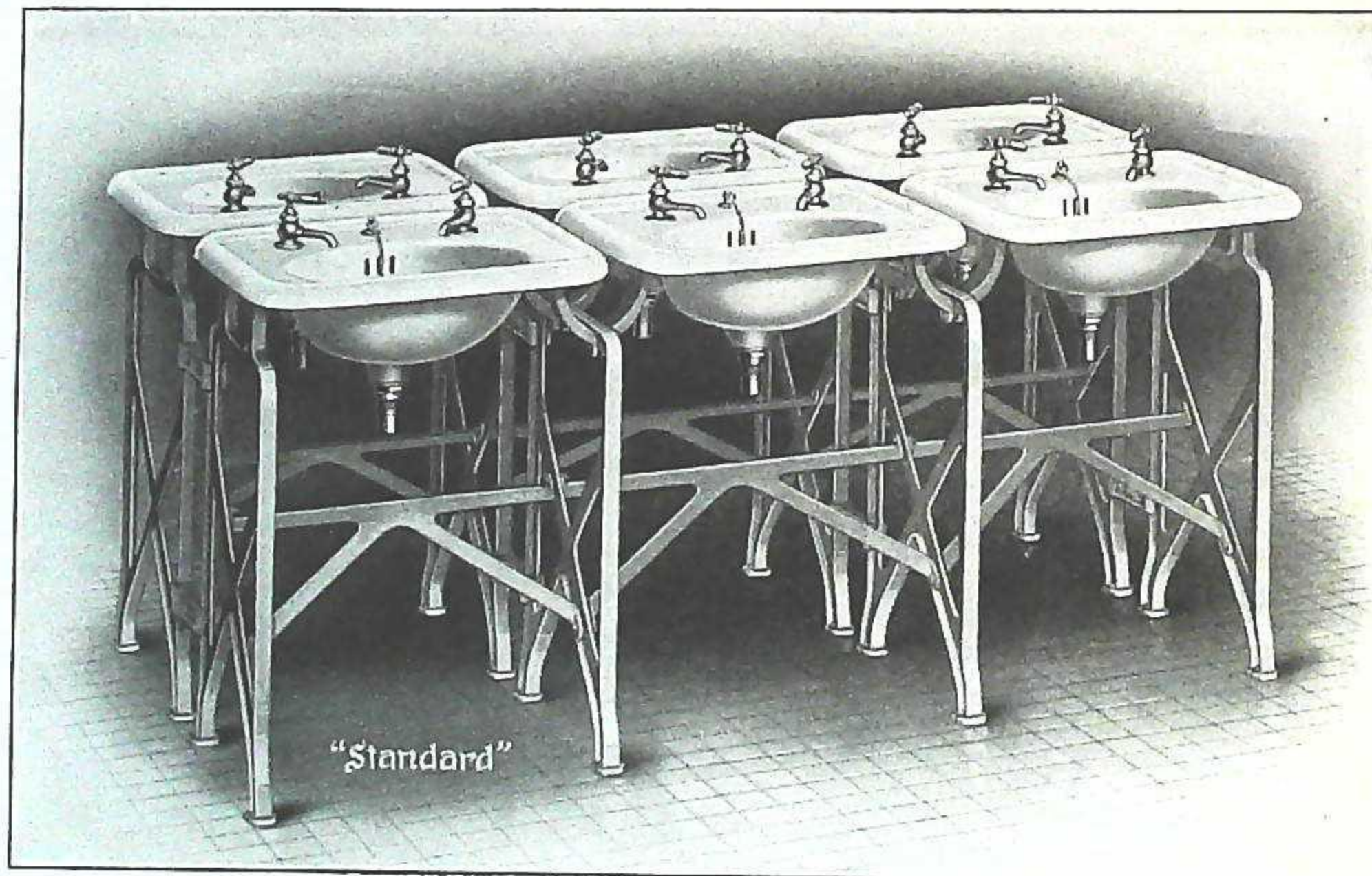


Fig. 263

Size.....inches 16x20 18x24
App. Ship. Weight, per Double Section, Less Fittings...pounds 226 256

The 18x24-inch size also can be fitted with nickel-plated self-closing faucets with four-arm china indexed cross handles and nickel-plated pop-up drain with china knob.

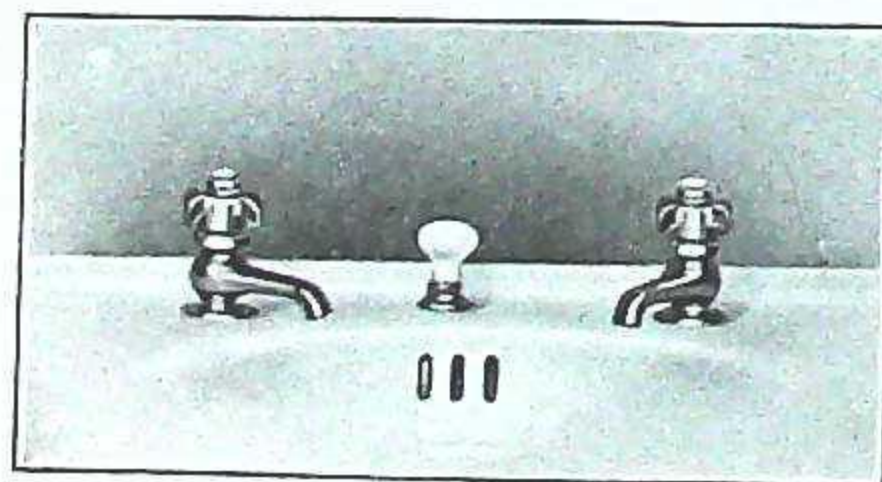


Fig. 264

**Single Battery of Enam-
eled Iron Straight Front
Apron Lavatories** with rear
outlet oval basin, and patent
overflow, painted floor brack-
ets, nickel-plated quick com-
pression faucets with china
lever handles, indexed and
nickel-plated P. O. plug,
chain stay, chain and rubber
stopper.

Slab 18x24 inches
Slab 20x24 inches
Basin 10 1/2 x 16 inches
Basin 12 x 15 inches

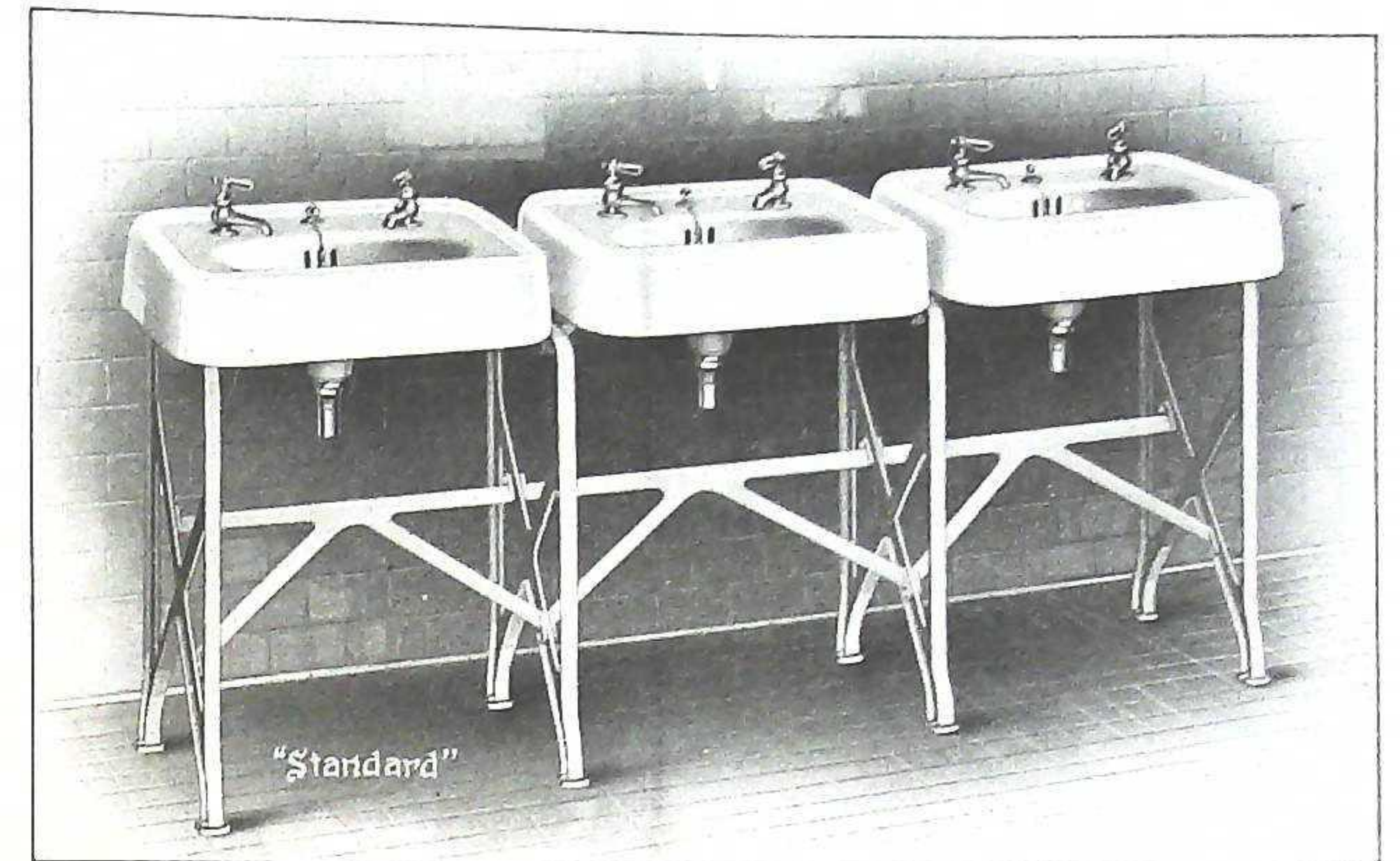


Fig. 271

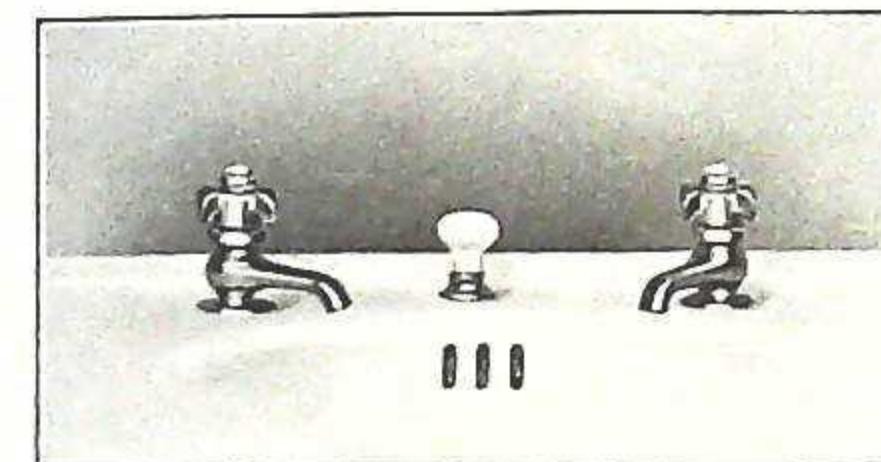


Fig. 272

Size.....inches 18x24 20x24
Approximate Shipping Weight, per Section Less Fittingspounds 165 168

These lavatories can also be furnished with nickel-plated, self-closing faucets with four-arm china indexed cross handles and nickel-plated pop-up drain with china knob.

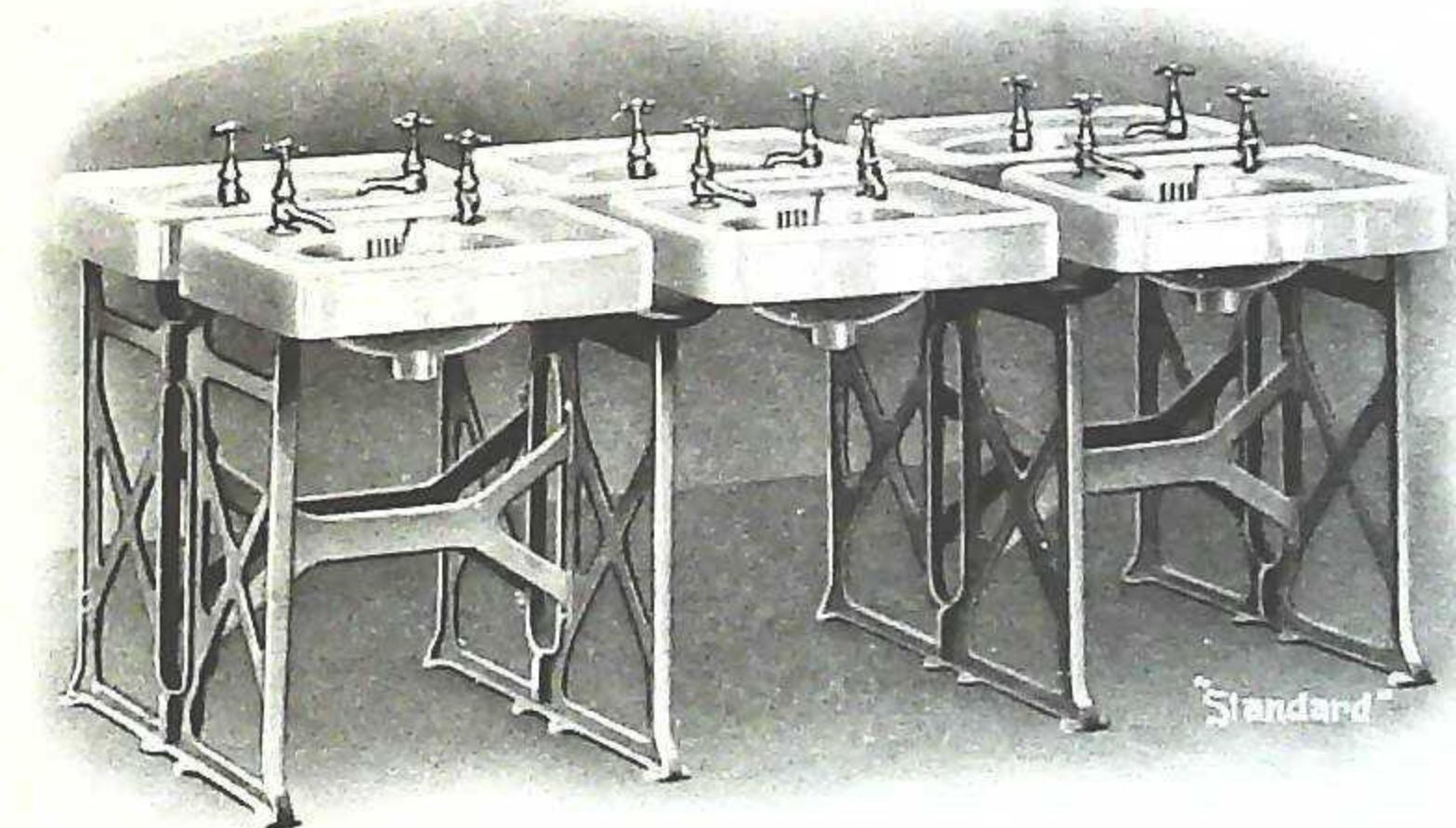


Fig. 273

Double Battery of Enameled Iron Straight Front Apron Lavatories with oval basin, patent overflow and rear outlet, painted floor brackets, nickel-plated compression faucets with four-ball china indexed handles, nickel-plated chain stay, chain and plug.

Slab 18x24 inches
Slab 20x24 inches
Slab 22x27 inches

Basin 10 1/2 x 16 inches
Basin 12 x 15 inches
Basin 13 x 17 inches

Size.....inches 18x24 20x24 22x27
Approximate Shipping Weight, each Double Section Less Fittings.....pounds 298 302 312

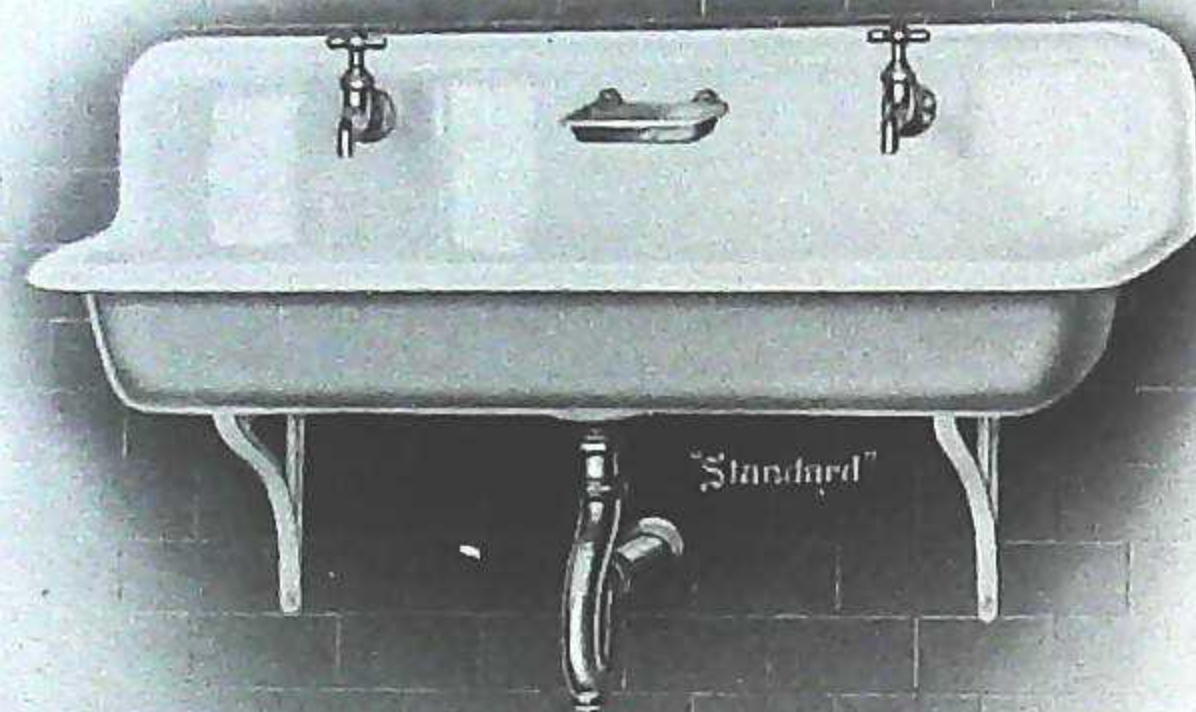


Fig. 281

Enameled Iron Roll Rim Wash Sink with integral back, concealed wall hangers and painted brackets, nickel-plated compression faucets, nickel-plated strainer, 1 1/2-inch nickel-plated bag trap and soap dish.

Width over rim 18 inches Width inside 13 1/4 inches Back 8 inches

Length	feet	3	4	5	6
Approximate Shipping Weight, Sink only	pounds	161	210	258	310

Regularly furnished with under side painted one coat.

Two bibbs are furnished with the 3 and 4-foot sinks, and three faucets with the 5 and 6-foot sinks.

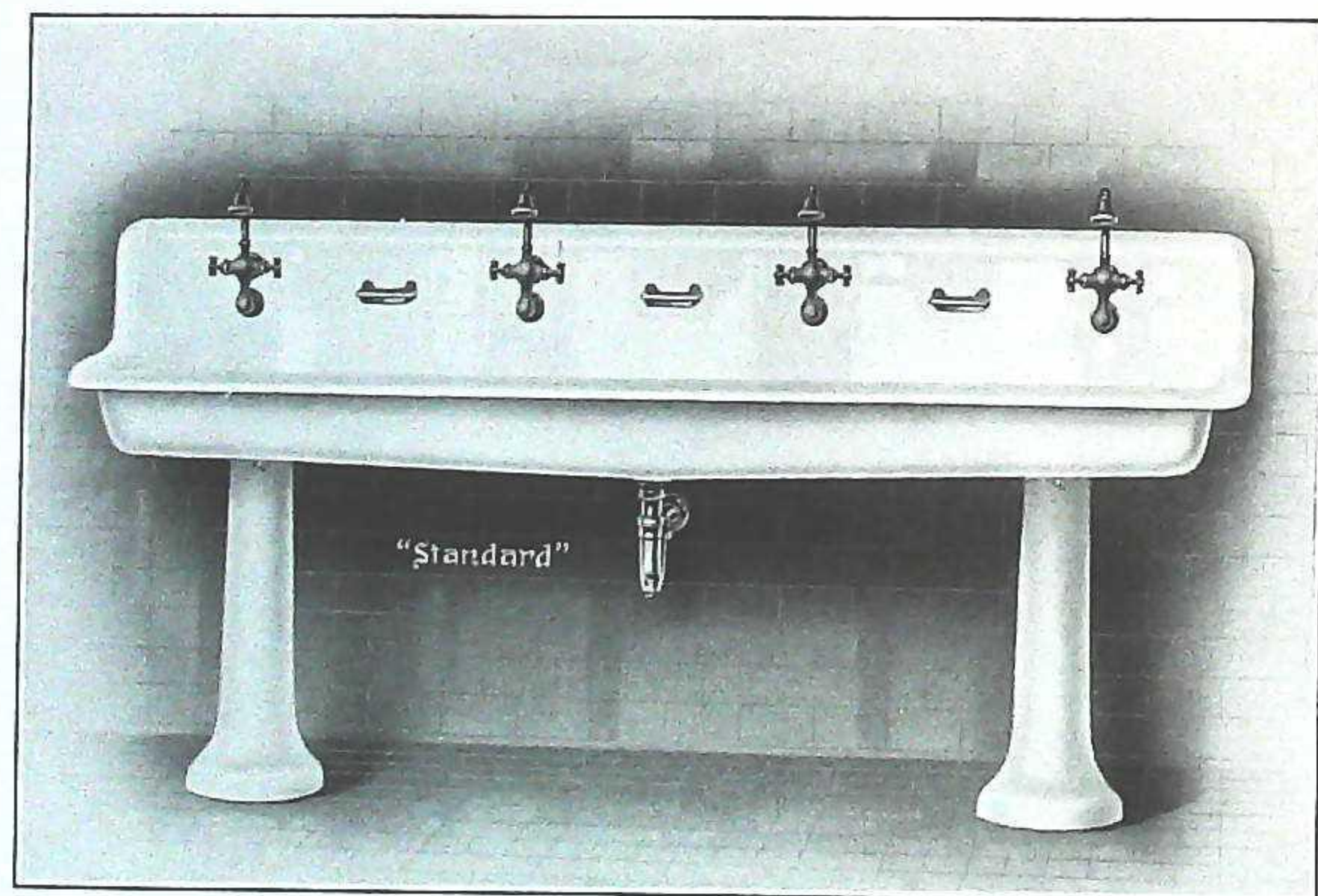


Fig. 282

Enameled Iron Roll Rim Wash Sink with integral back, center outlet, painted outside, on painted pedestals, nickel-plated combination double wash sink faucets with goosenecks and rose sprays, four-ball china index handles and shanks with set screw flanges, nickel-plated soap dishes, nickel-plated duplex strainer and nickel-plated P trap.

Width over all 22 inches Height of back 10 inches Height from floor to top of rim 34 inches

Length	feet	6	8
Number of Faucets		3	4
" " Soap Dishes		2	3
Approximate Shipping Weight	pounds	397	545

Can also be furnished with 2-inch iron trap.

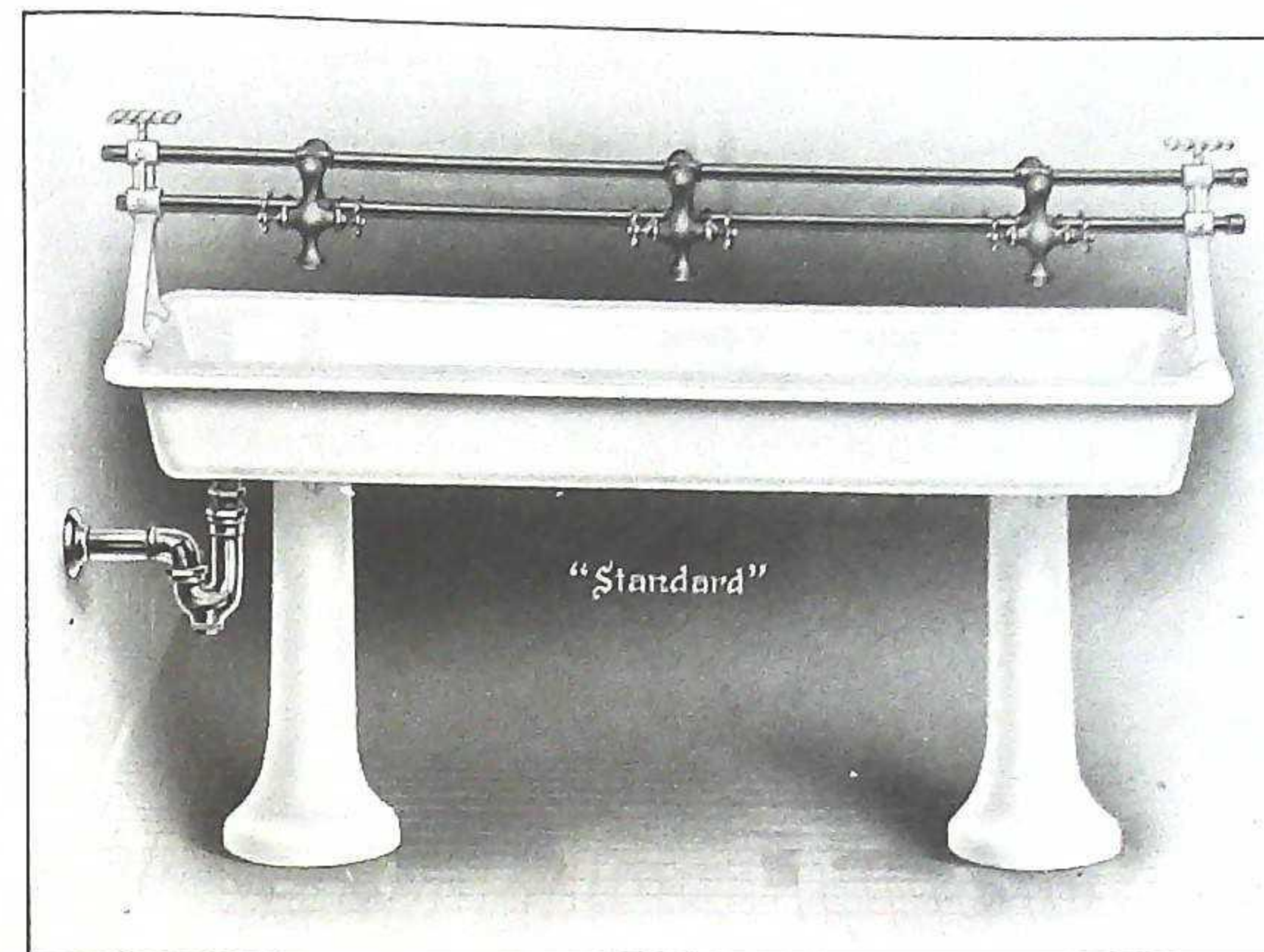


Fig. 291

Enameled Iron Roll Rim Wash Sink with end outlet, painted outside, on painted pedestals, painted pipe supports, rough brass supply pipes for hot and cold water over center of sink, nickel-plated compression double wash sink faucets and four-ball china indexed handles, nickel-plated soap dishes, nickel-plated duplex strainer and nickel-plated P trap.

Length	feet	4	5	6	8
Number of Faucets		4	6	6	8
Width Over All	inches	30	30	30	30
Height from Floor to Top of Rim	"	31	31	31	34
Approximate Shipping Weight	pounds	340	422	480	630

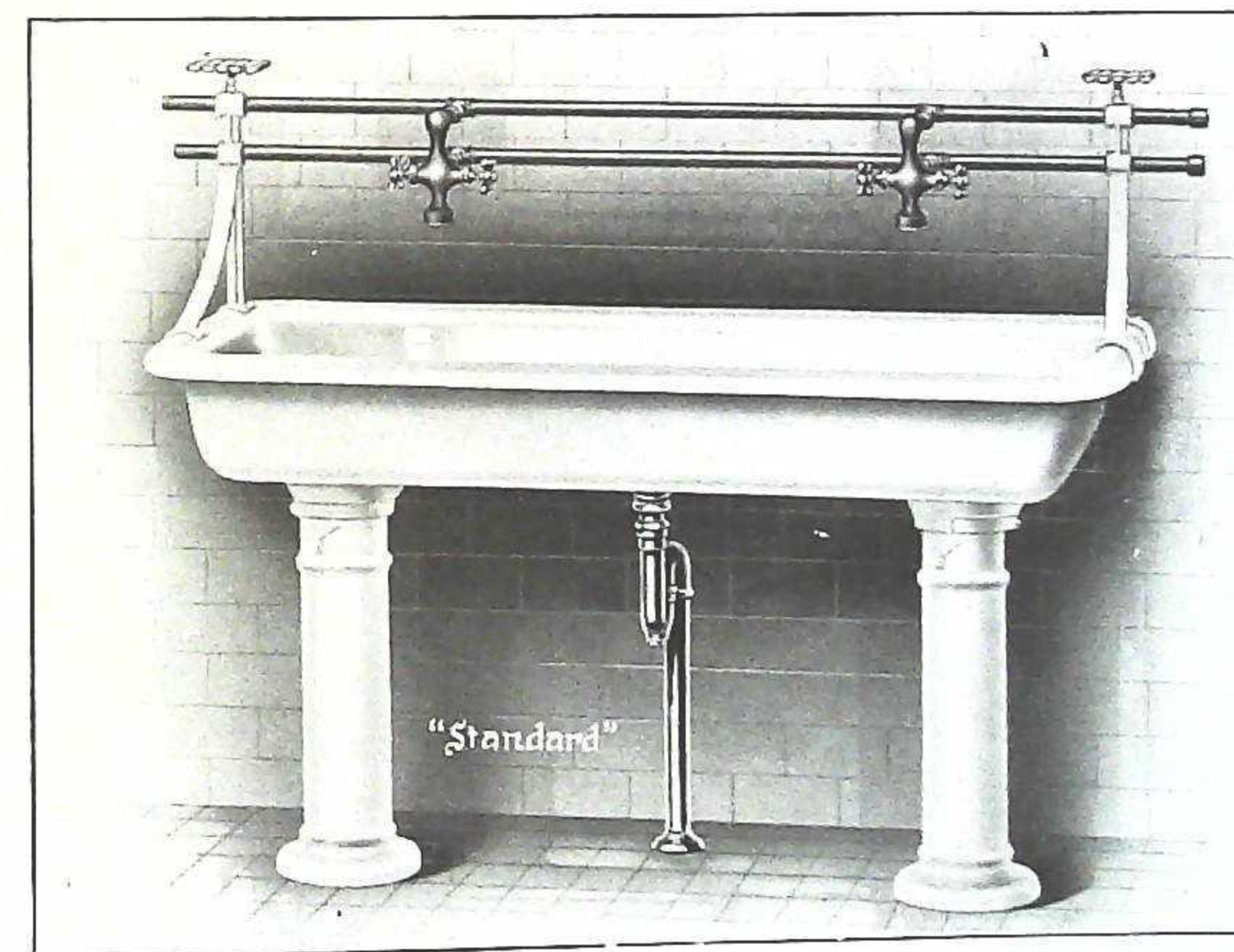


Fig. 292

Enameled Iron Roll Rim Wash Sink with center outlet, painted outside on painted pedestals, painted pipe supports over back of sink, brass supply pipes for hot and cold water over back of sink, nickel-plated compression double wash sink faucets with rose sprays and four-ball china indexed handles, nickel-plated soap dishes, nickel-plated duplex strainer and nickel-plated S trap.

Length	feet	3	4	5	6
Number of Faucets		2	2	3	3
Width Over All	inches	18	18	24	24
Height from Floor to Top of Rim	"	31	31	31	31
Approximate Shipping Weight	pounds	220	300	380	460

Can also be furnished 26 inches high when required.

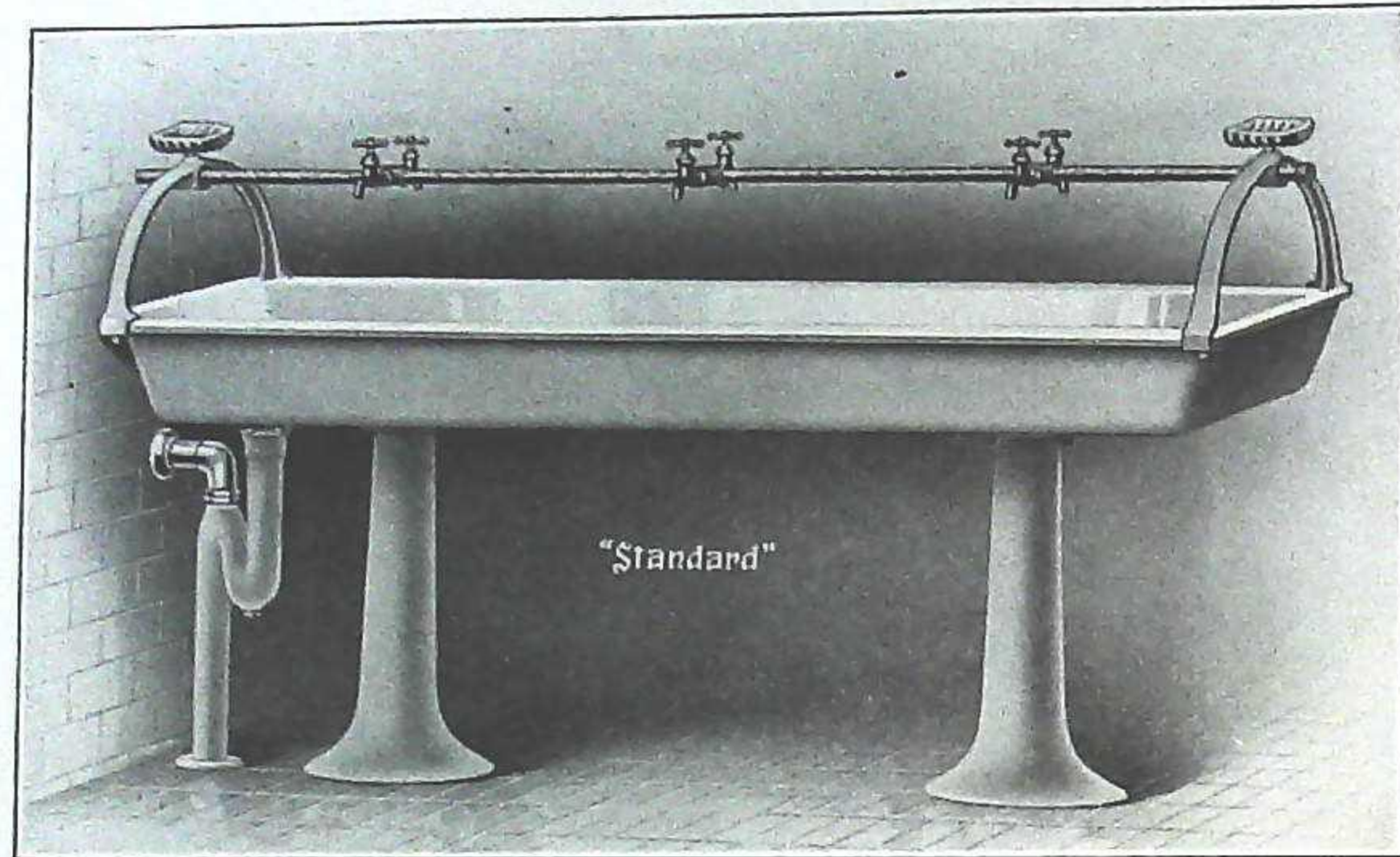


Fig. 301

Enameled Iron Flat Rim Wash Sink painted outside, on painted pedestals, painted pipe supports, galvanized supply pipe over center of sink, nickel-plated compression faucets with tee handles, nickel-plated soap dishes, nickel-plated flat open strainer, and painted iron S trap with brass vent.

Length.....	feet	4	5	6
Number of Faucets.....		4	6	6
Width Over All.....	inches	24	24	24
Height from Floor to Top of Rim.....	"	29	29	29
Approximate Shipping Weight, Enameled Inside.....	pounds	230	290	400

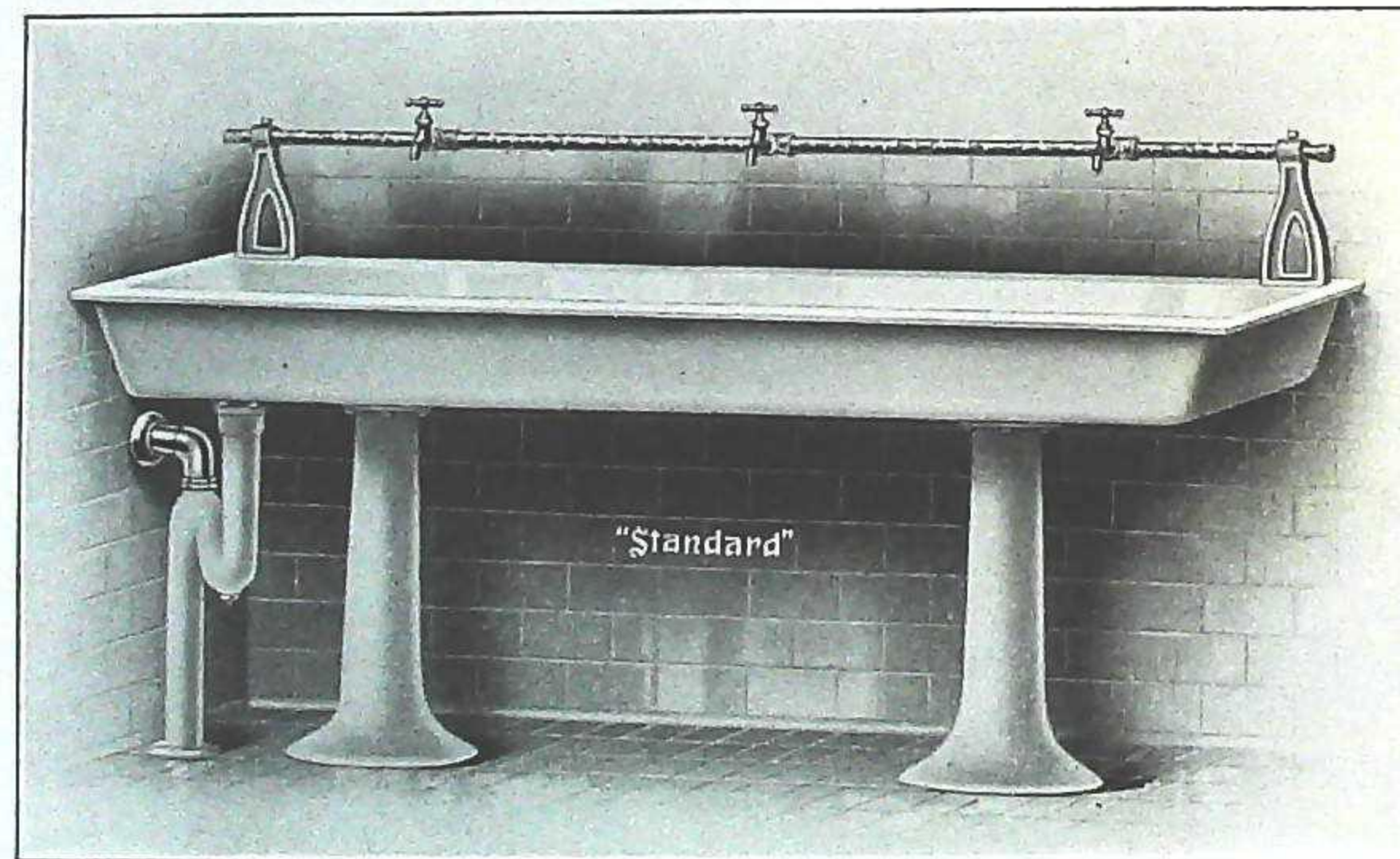


Fig. 302

Enameled Iron Flat Rim Wash Sink painted outside, on painted pedestals, painted pipe supports, galvanized supply pipes over back of sink, nickel-plated compression faucets with tee handles, nickel-plated flat open strainer and painted iron S trap with brass vent.

Height floor to top of rim 29 inches

	feet	WIDTH, INCHES				
		20	24	24	36	
Length.....		5	6	4	5	6
Number of Faucets.....		3	3	2	3	3
Approximate Shipping Weight.....	pounds	241	300	220	270	380

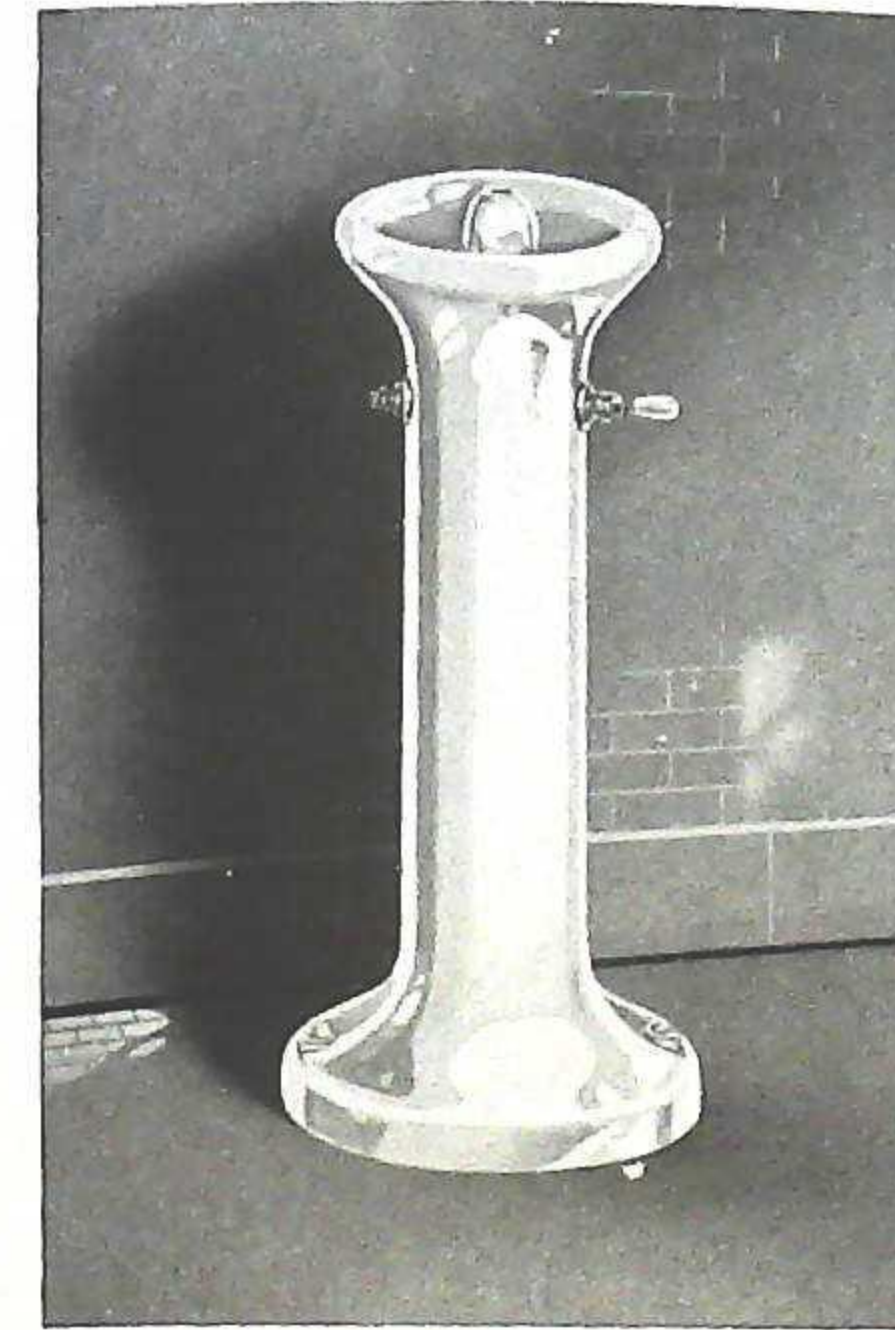


Fig. 311

White Vitreous China Pedestal Drinking Fountain with vitreous china bubbling cup, nickel-plated self closing control valve with china oscillating handle, nickel-plated loose key stop valve, 3/8-inch supply pipe and 1 1/4-inch waste pipe concealed in pedestal. Furnished with china bolt caps.

Height.....	inches	30
Approximate Shipping Weight.....	pounds	105

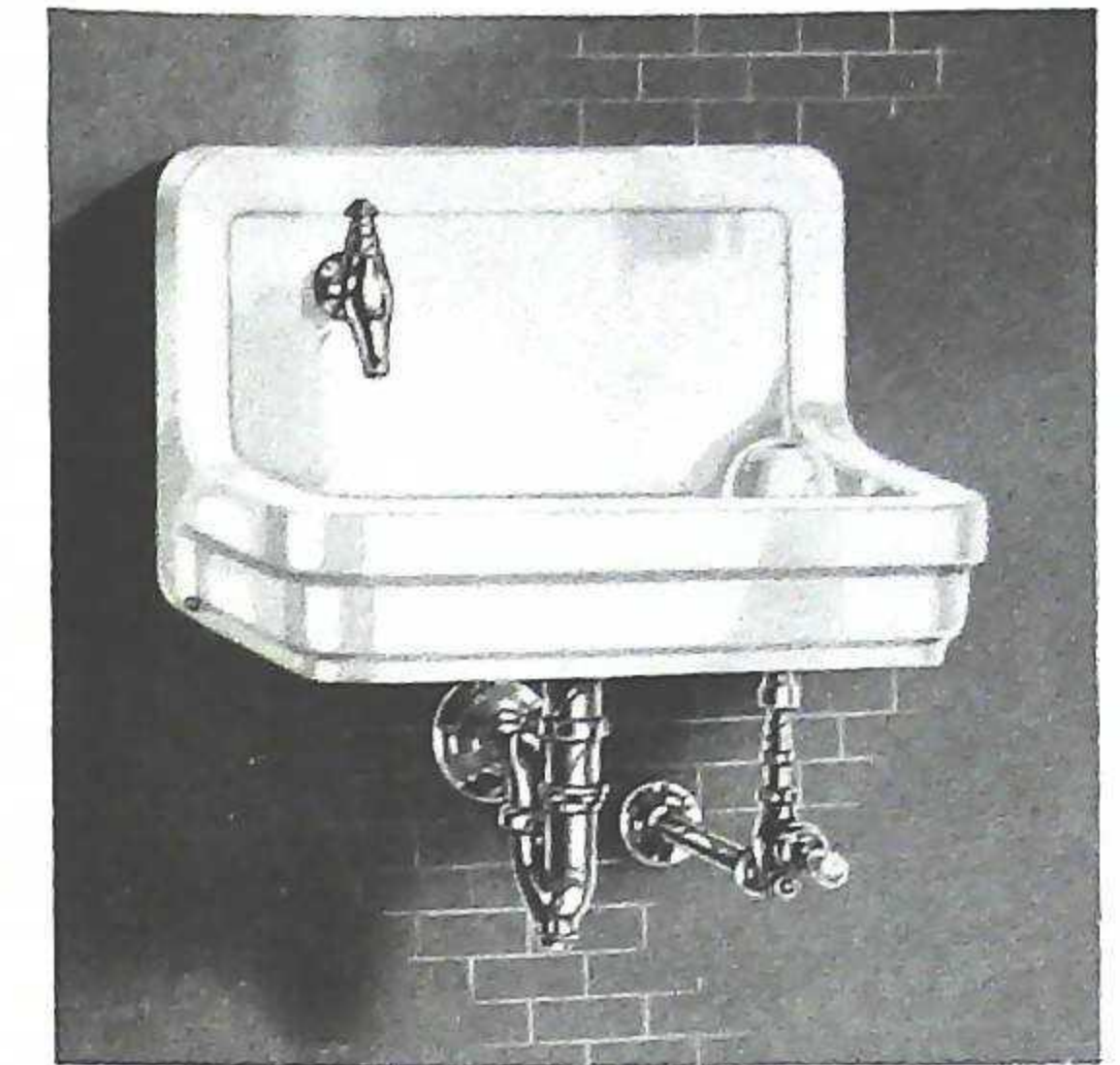


Fig. 313

Vitreous China Straight Front Wall Drinking Fountain with integral back, on concealed hangers, fitted with 3/8-inch nickel-plated brass self-closing push button faucet with controlling stop, china bubbling cup, 3/8-inch nickel-plated brass supply pipe, self-closing valve with china oscillating handle and loose key stop valve and 1 1/4-inch nickel-plated brass P trap to wall with nickel-plated escutcheon.

Length over all 18 inches
Width wall to front 12 3/4 inches
Height of back 7 1/4 inches

Approximate Shipping Weight.....	pounds	70
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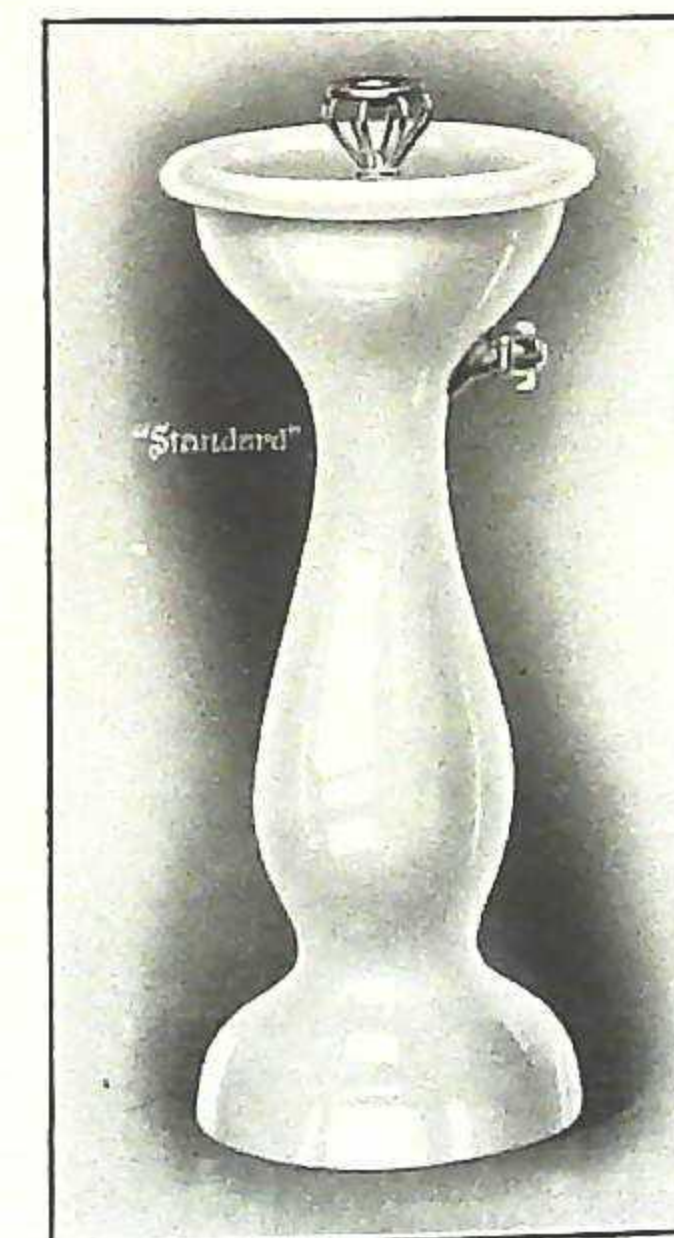


Fig. 312

Enameled Iron Pedestal Drinking Fountain with nickel-plated converging stream bubbler, loose key volume regulator and strainer base, with nickel-plated self-closing stop with four-arm handle through side of fountain, concealed galvanized supply and drain pipes to floor.

Height.....	inches	27	30	36
Approximate Shipping Weight.....	pounds	112	125	137

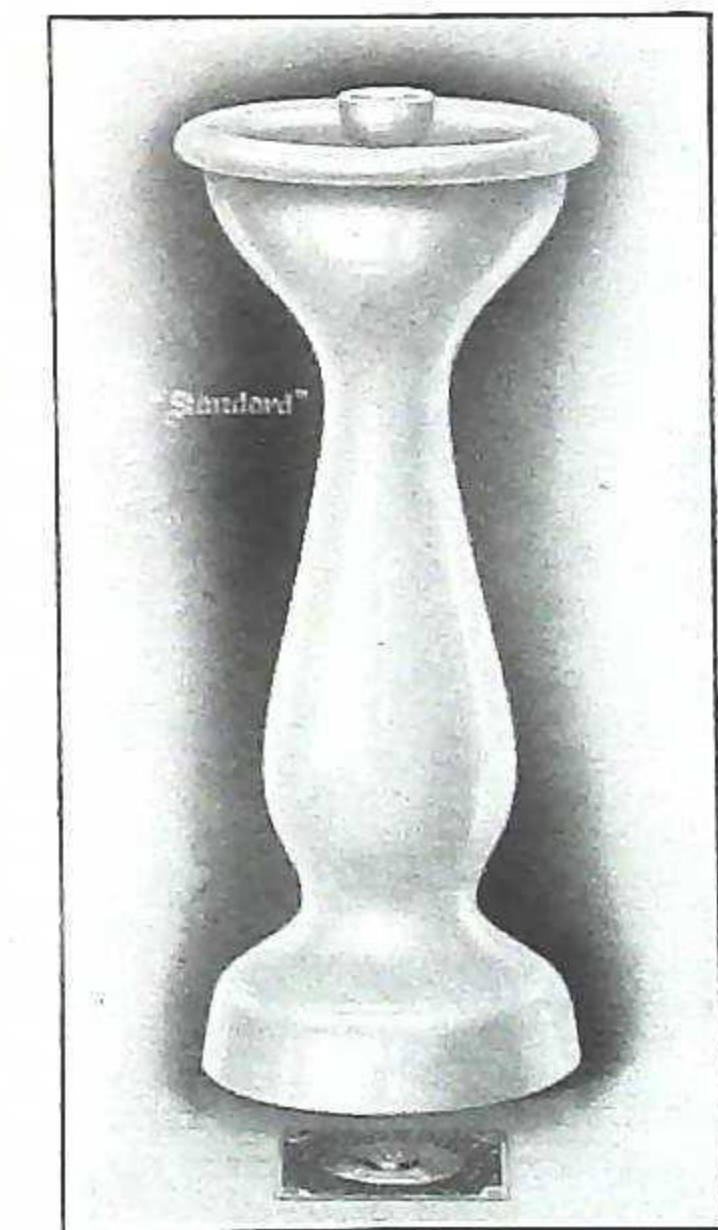


Fig. 314

Enameled Iron Pedestal Drinking Fountain with china guard bubbler, loose key volume regulator and strainer base, foot-operated self-closing valve in nickel-plated floor plate, and concealed galvanized supply and drain pipe to floor.

Height.....	inches	27	30	36
Approximate Shipping Weight.....	pounds	120	136	148

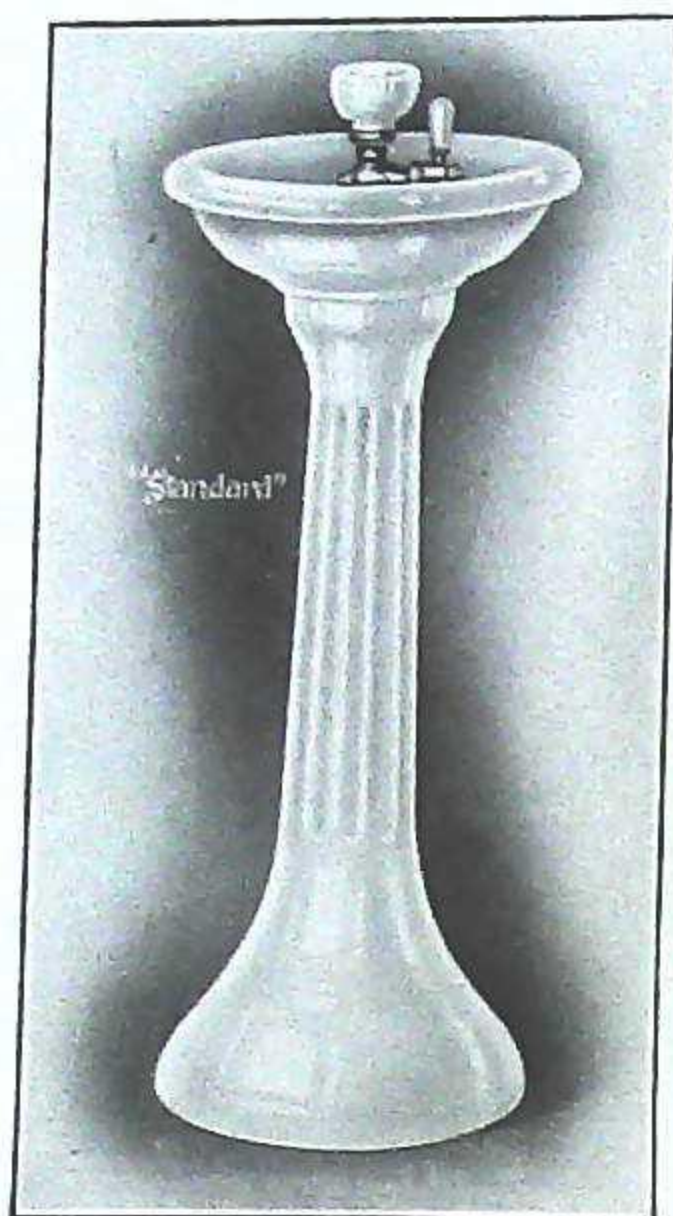


Fig. 321

Enameled Iron Fluted Pedestal Drinking Fountain with china guard bubbler, loose key volume regulator and nickel-plated self-closing valve with china lever handle and strainer base, concealed galvanized supply and drain pipes to floor.

This drinking fountain is furnished also with outside painted instead of enameled.

Height.....	inches	30	36
Approximate Shipping Weight.....	pounds	84	94

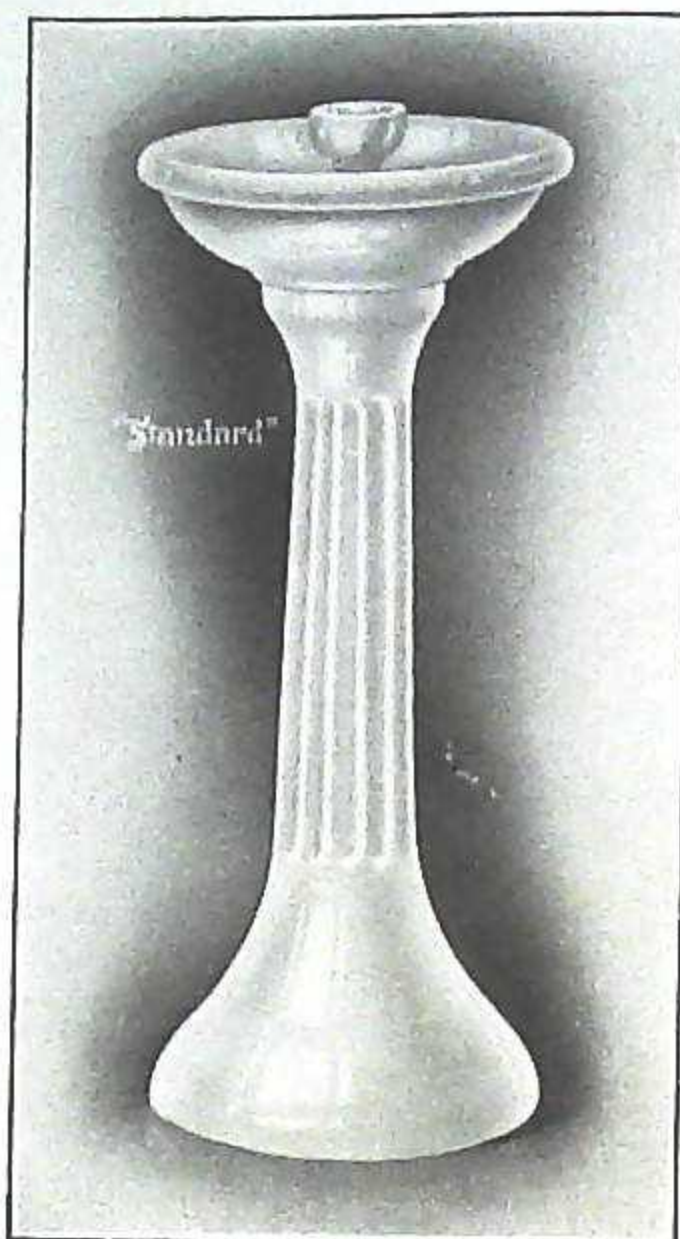


Fig. 323

Enameled Iron Fluted Pedestal Drinking Fountain with china guard bubbler, loose key volume regulator and strainer base, concealed galvanized supply and drain pipes to floor.

This drinking fountain is furnished also with outside painted instead of enameled.

Height.....	inches	30	36
Approximate Shipping Weight.....	pounds	86	95

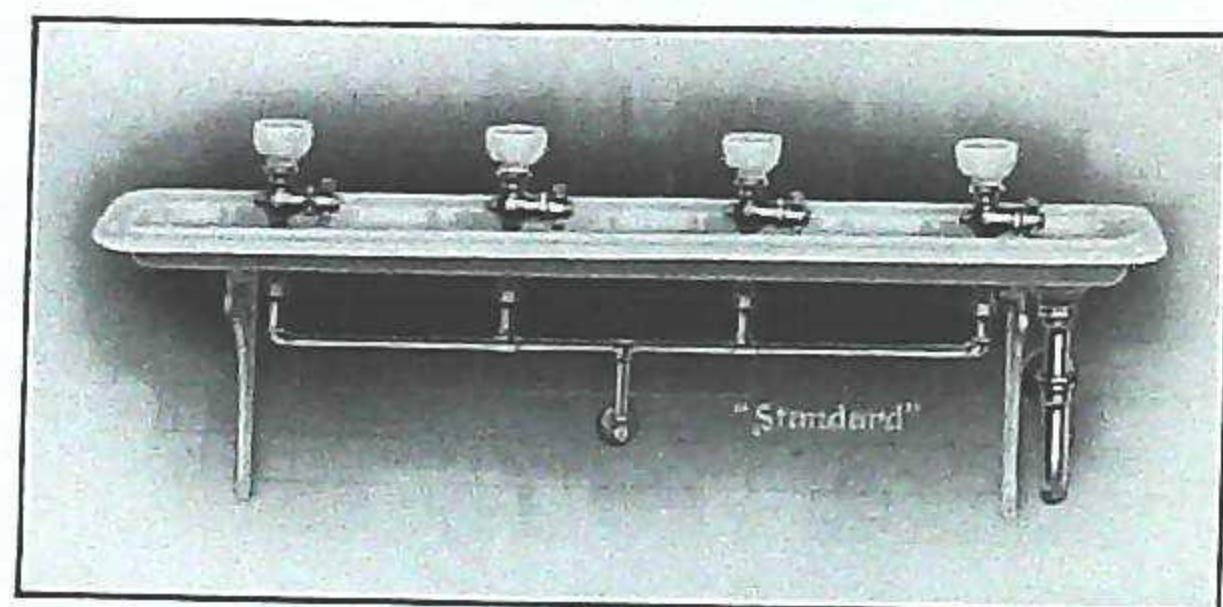


Fig. 322

Enameled Iron Drinking Fountain on painted brackets, fitted with china guard bubblers, loose key volume regulators and nickel-plated self-closing valves with four-arm brass handles, shanks and tail pieces, 3/8-inch nickel-plated supply pipe with loose key stop, nickel-plated strainer and 1 1/4-inch nickel-plated P trap.

Length.....	inches	30	42	54
Width of Trough.....	"	12	12	12
Number of Cups.....		2	3	4
Approximate Shipping Weight.....	pounds	90	102	108

Furnished enameled inside only.

Also can be furnished with continuous flow bubblers.

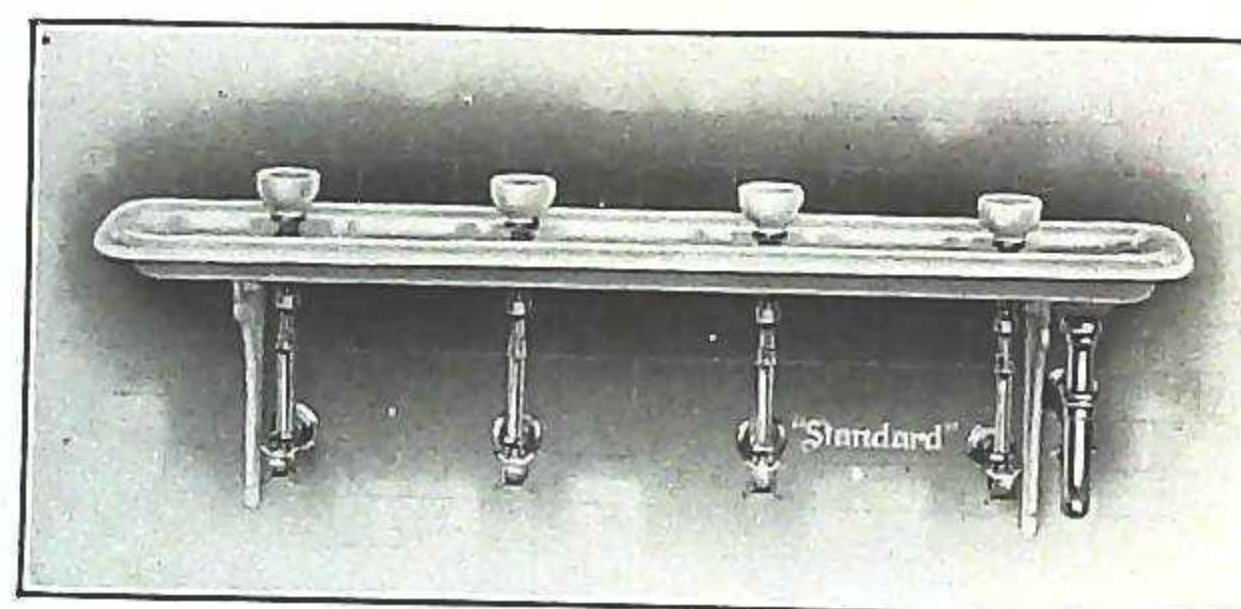


Fig. 324

Enameled Iron Drinking Fountain on painted brackets, china guard bubblers with loose key volume regulator, shanks and tail pieces, with nickel-plated self-closing valves with four-arm brass handles and 3/8-inch nickel-plated supply pipe, nickel-plated strainer and 1 1/4-inch nickel-plated P trap.

Length.....	inches	30	42	54
Width of Trough.....	"	12	12	12
Number of Cups.....		2	3	4
Approximate Shipping Weight.....	pounds	90	102	108

Furnished enameled inside only.

Also can be furnished with continuous flow bubblers.

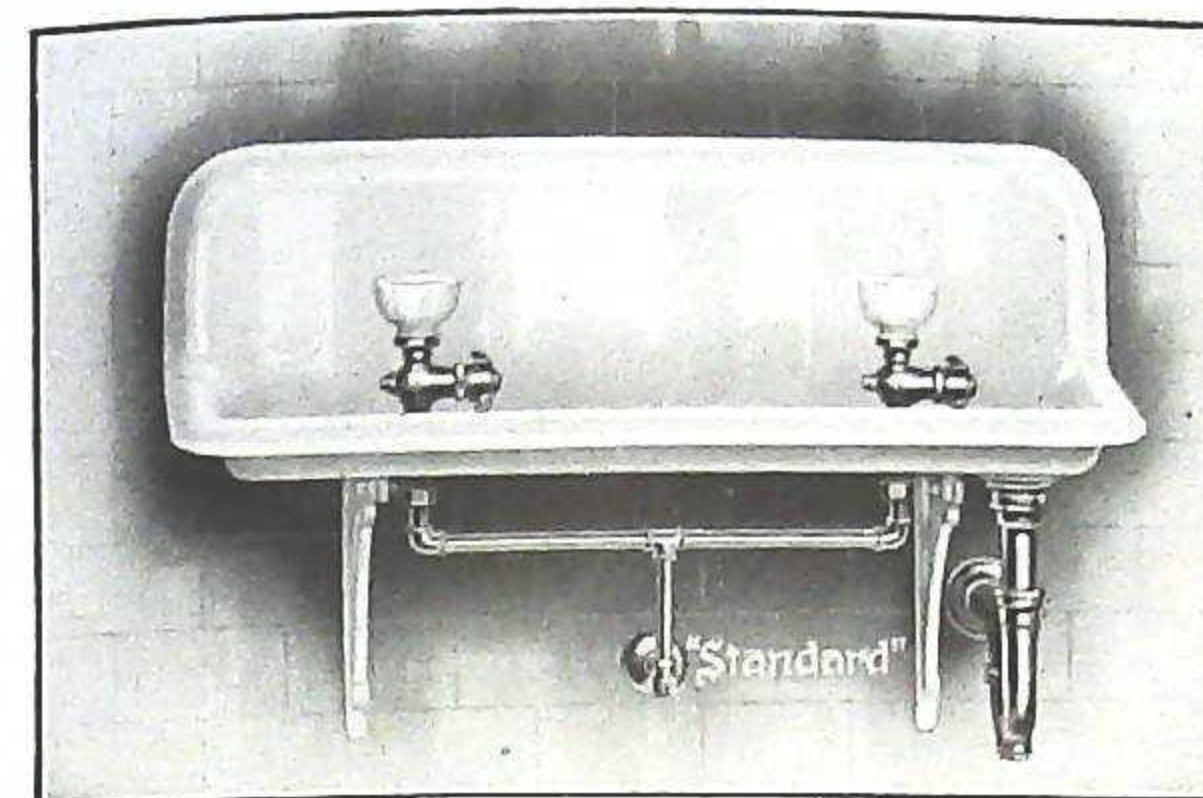


Fig. 331

Enameled Iron One-piece Drinking Fountain with back, on painted brackets, china guard bubblers with loose key volume regulators and nickel-plated self-closing valves, four-arm brass handles, shanks and tail pieces, 3/8-inch nickel-plated supply pipe with loose key stop, nickel-plated strainer and 1 1/4-inch nickel-plated P trap.

Width 14 inches Back 8 inches

Length.....	inches	36
Approximate Shipping Weight.....	pounds	139

Furnished enameled inside only.

Also can be furnished with continuous flow bubblers.

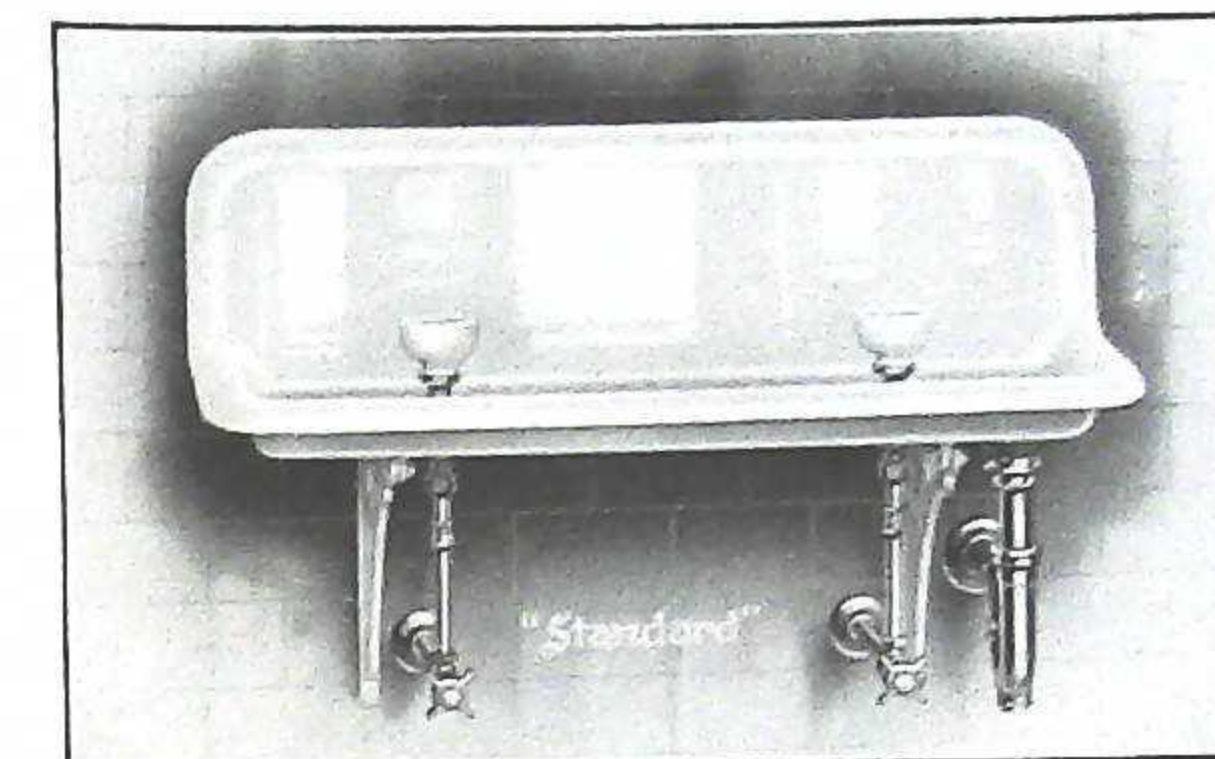


Fig. 333

Enameled Iron One-piece Drinking Fountain with back, on painted brackets, china guard bubblers with loose key volume regulators, shanks and tail pieces, with nickel-plated self-closing valves with four-arm brass handles, and 3/8-inch nickel-plated supply pipe, nickel-plated strainer and 1 1/4-inch nickel-plated P trap.

Width 14 inches Back 12 inches

Length.....	inches	36
Approximate Shipping Weight.....	pounds	139

Furnished enameled inside only.

Also can be furnished with continuous flow bubblers.

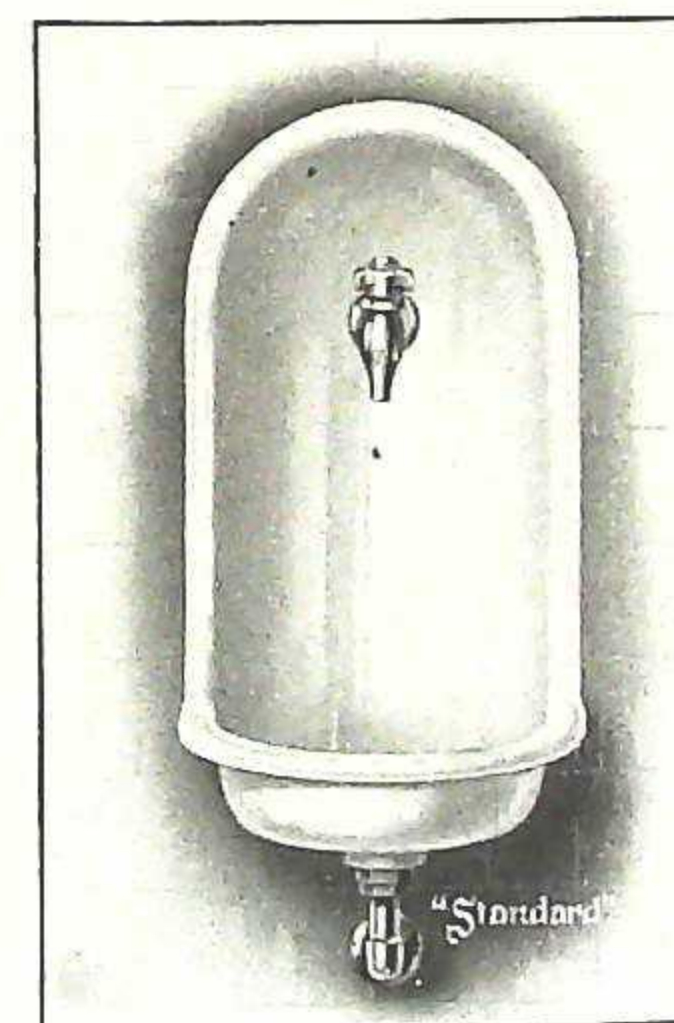


Fig. 332

Enameled Iron Alcove Recessed Drinking Fountain with nickel-plated 1/2-inch self-closing faucet with 4-arm droop ball bearing handle, nickel-plated strainer and elbow drain connection to wall.

Height 22 1/4 inches
Width 12 3/4 inches
Depth front to back 10 1/2 inches
Recess into wall 4 inches

Approximate Shipping Weight.....	pounds	59
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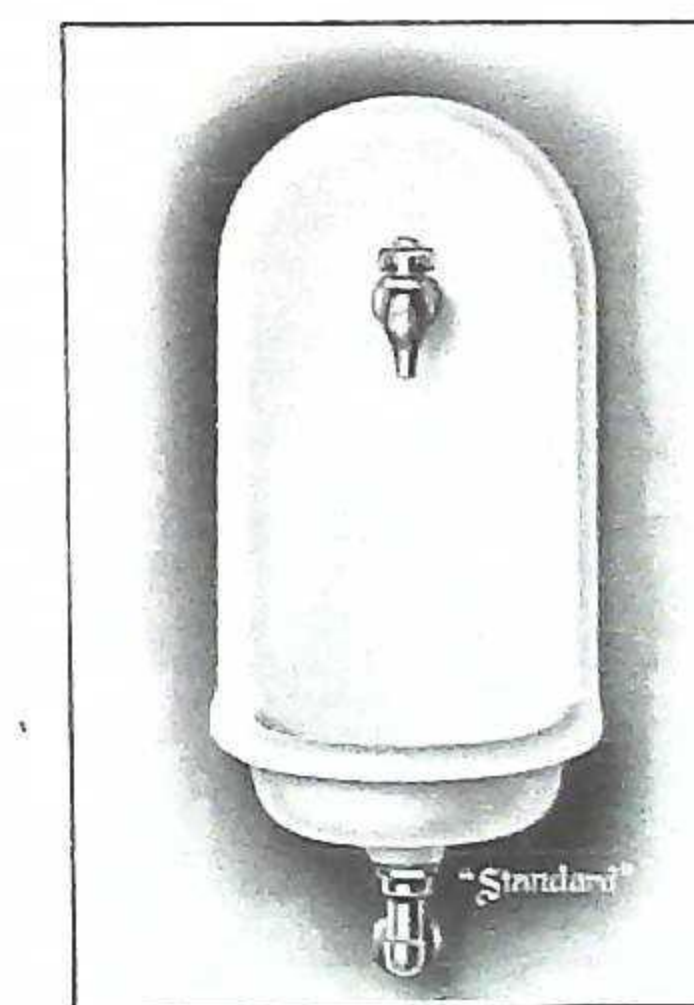


Fig. 334

Enameled Iron Flat Back Drinking Fountain with concealed wall hanger, nickel-plated 1/2-inch self-closing faucet with four-arm ball bearing handle, nickel-plated strainer and elbow drain connection to wall.

Height 22 inches
Width 12 1/2 inches
Depth front to back 9 inches

Approximate Shipping Weight.....	pounds	53
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Fig. 341

Enameled Iron Flat Back Drinking Fountain on concealed hanger, china guard bubbler with loose key volume regulator and strainer base, operated by china index push button, nickel-plated spout with loose key volume regulator and china index push button valve, 3/8-inch nickel-plated supply pipe and 1 1/4-inch nickel-plated adjustable P trap.

Height 16 3/4 inches
Width 12 1/4 inches
Front to back 15 inches

Furnished enameled inside only.
Approximate Shipping Weight.....pounds 75

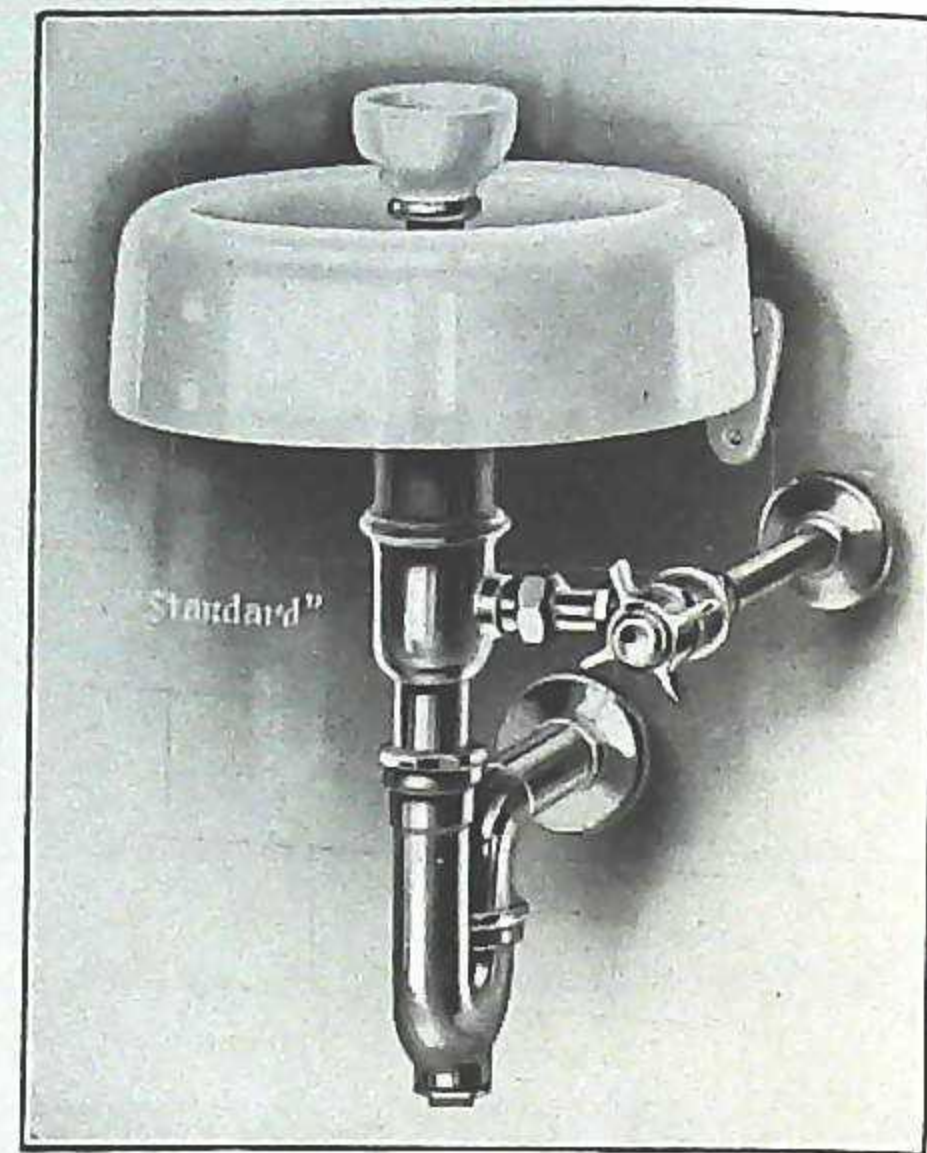


Fig. 344

Enameled Iron Wall Drinking Fountain on enameled wall brackets fitted with china guard bubbler, loose key volume regulator and strainer base, nickel-plated self-closing stop with four-arm brass handle, 3/8-in. nickel-plated supply pipe to wall, and 1 1/4-inch nickel-plated P trap.

Diameter of bowl 11 inches

Approximate Shipping Weight.....pounds 30

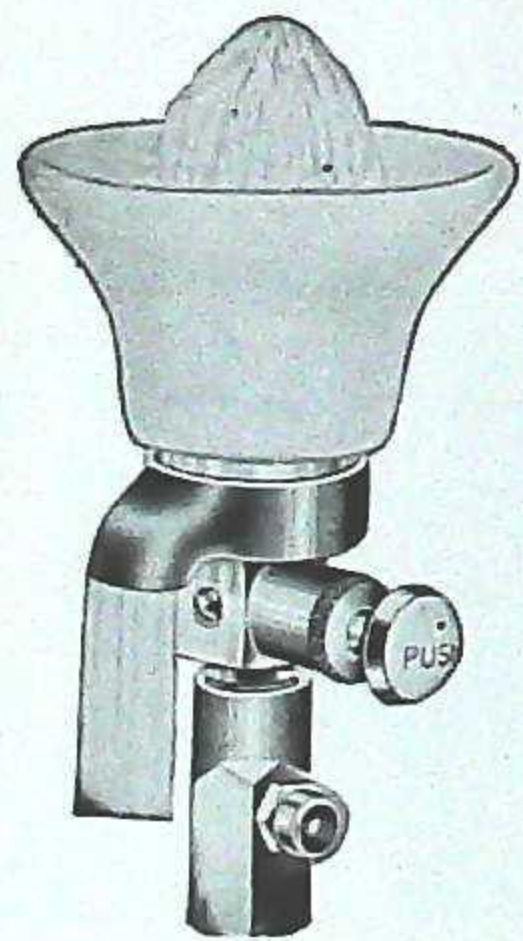


Fig. 342

Trenjer Drinking Fountain with porcelain or metal bowl, self-closing valve with push button on side, Loose Key Control Valve, vertical shank threaded for 1/2-inch iron pipe female.

Top of basin to end of shank 5 3/4 inches

Price, with Porcelain Cup.....each \$5.80
Price, with N. P. Cup. " 6.25

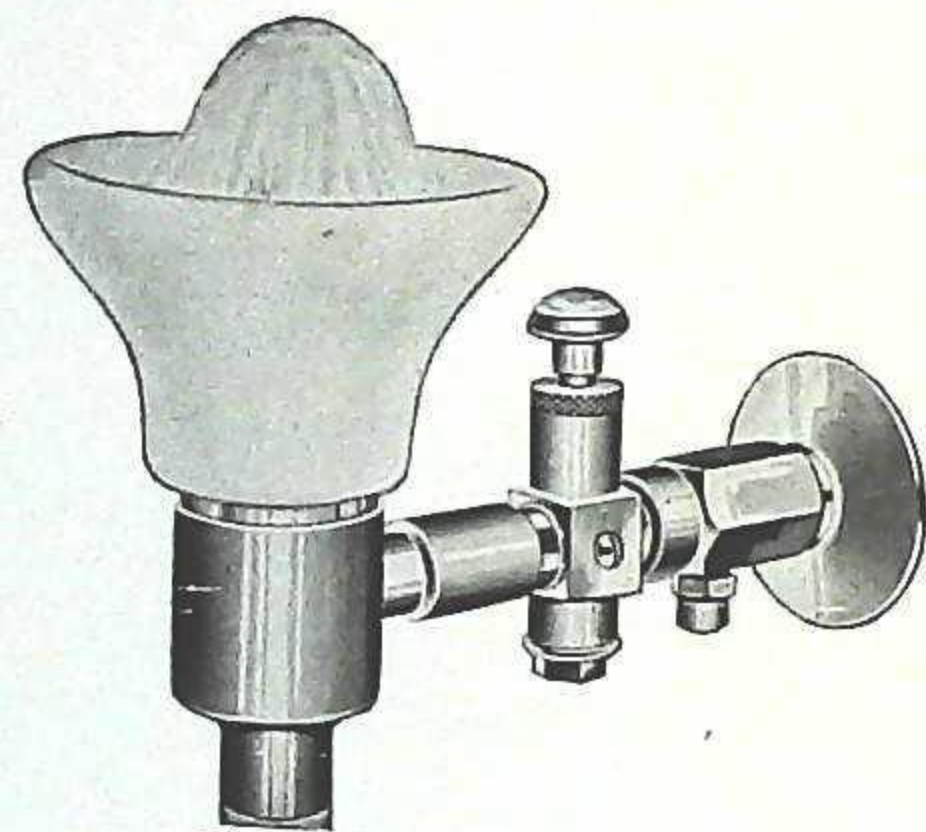


Fig. 343

Price, with Porcelain Cup.....each \$7.75
" " N. P. " " 8.10

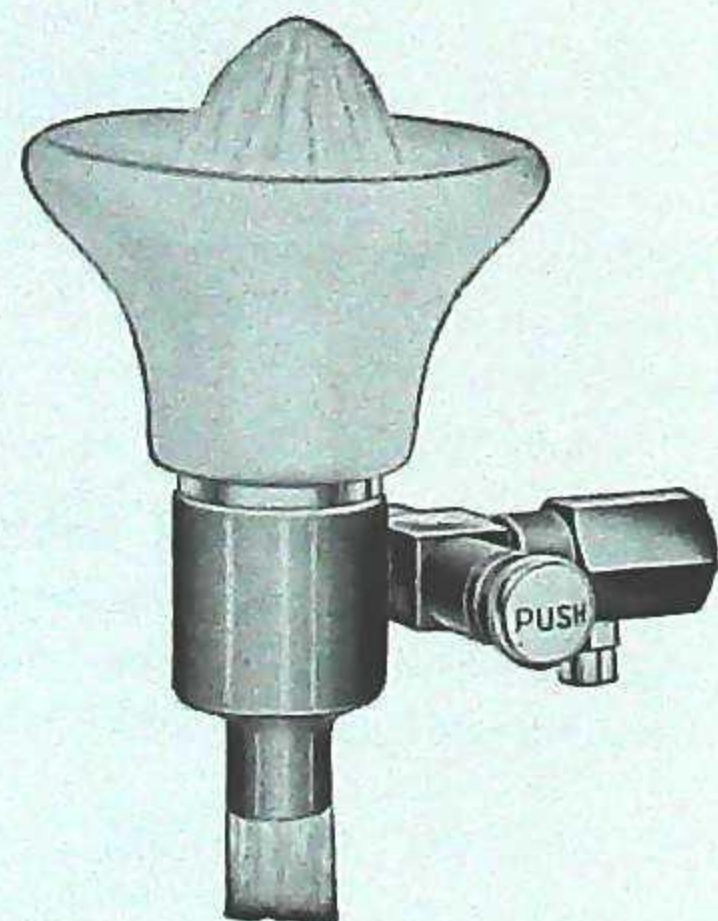


Fig. 343

Trenjer Drinking Fountain with porcelain or metal bowl, self-closing valve with push button on side, Loose Key Control Valve, shank to wall threaded for 1/2-inch iron pipe female.

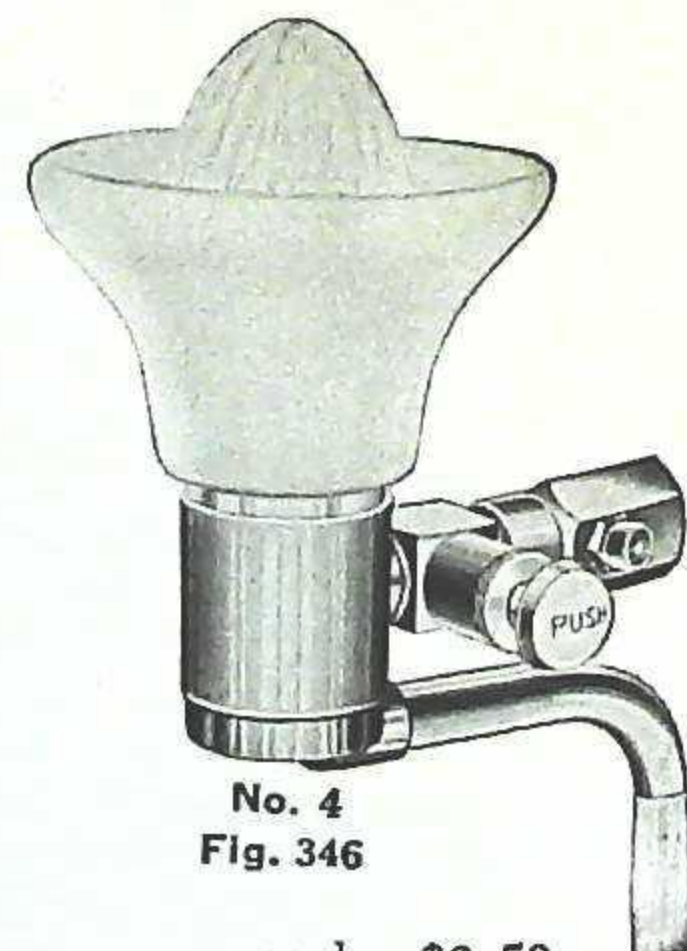
Center of bubbler to end of shank 3 3/4 inches

Price, with Porcelain Cup.....each \$5.80
Price, with N. P. Cup.....each 6.25

Trenjer Drinking Fountain with porcelain or metal bowl, self-closing valve with push button on side, Loose Key Control Valve, shank to wall threaded for 1/2-inch iron pipe female.

Center of bubbler to end of shank 3 3/4 inches

Price, with Porcelain Cup.....each \$6.50
" " N. P. " " 6.85



No. 4
Fig. 346

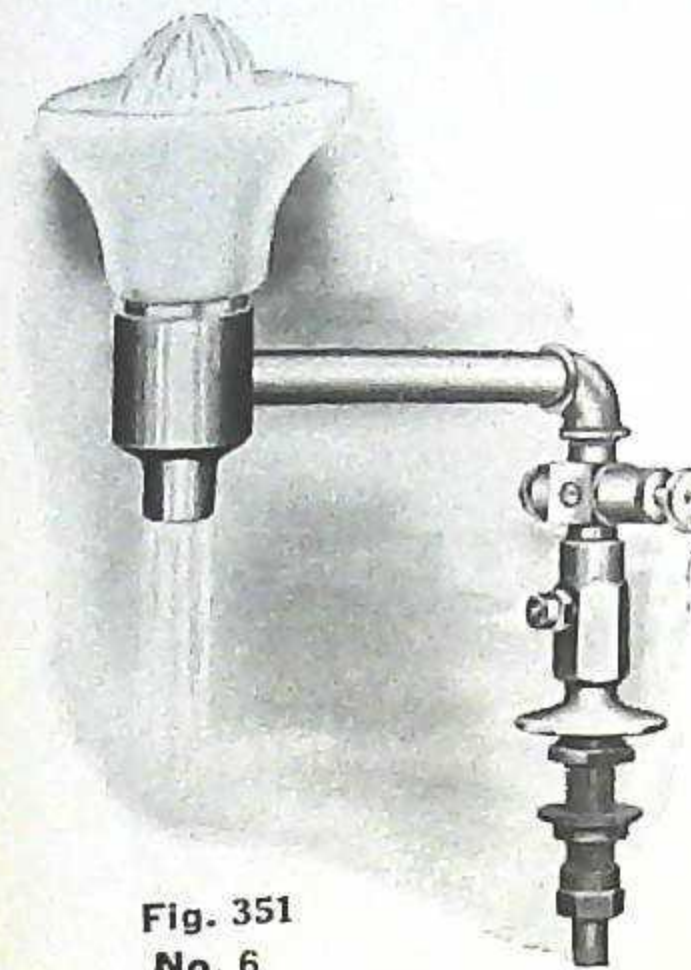
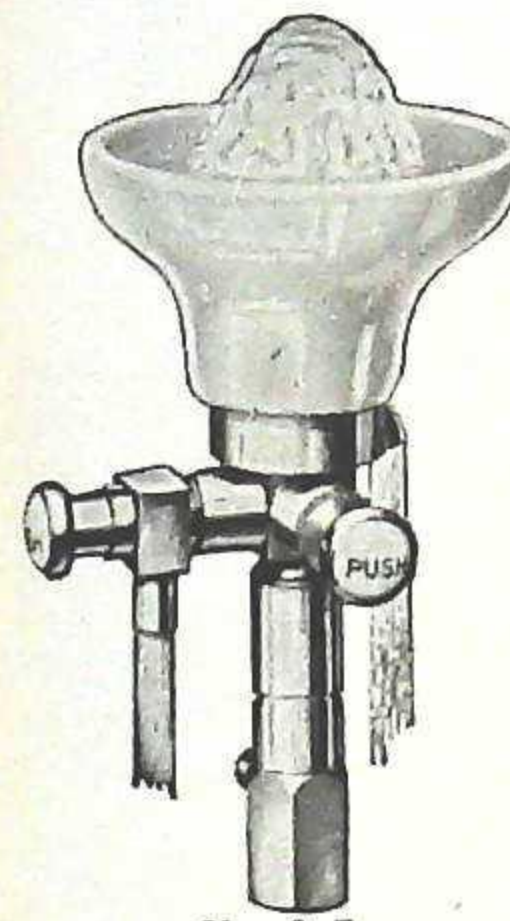


Fig. 351
No. 6

Trenjer Drinking Fountain with porcelain or metal bowl, push button self-closing controlling valve, nickel-plated supply pipe, and coupling threaded 1/4-inch iron pipe male.

This drinking fountain can be installed on basins or lavatories and will fit in regular hole for basin faucet.

Approximate Shipping Weight, pounds ..

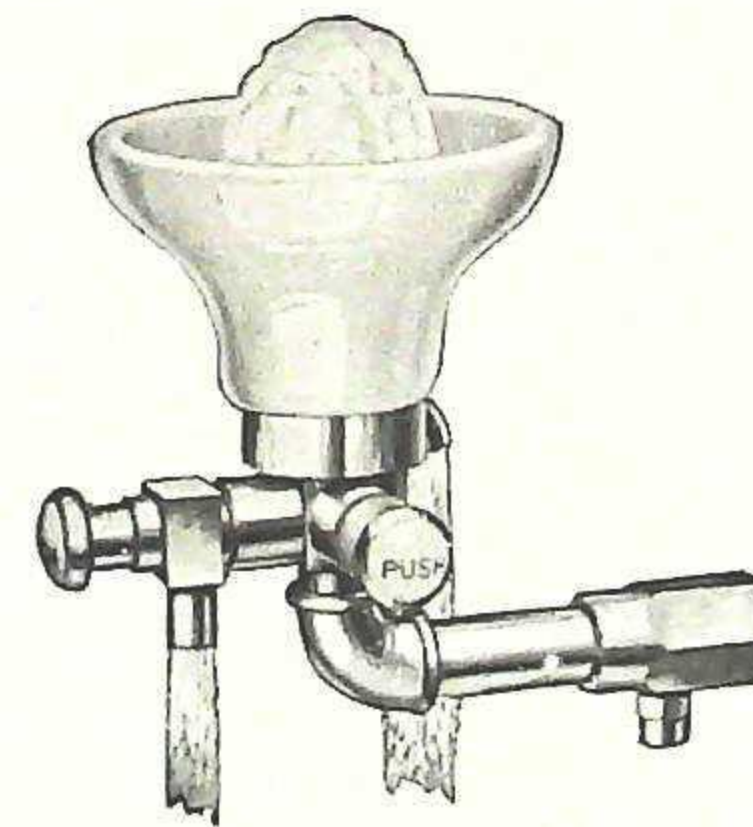


No. A-7
Fig. 352

Trenjer Drinking Fountain with porcelain or metal bowl, self-closing valve with push button on side, push button cup filler, loose key control valve, vertical shank, threaded 1/2-inch iron pipe female.

Top of bubbler to end of shank, 8 inches

Price, No. A-7 with Porcelain Cup.....each \$8.30
Price, No. A-7 with N. P. Cup.....each 8.65



No. A-8
Fig. 353

Trenjer Drinking Fountain with porcelain or metal bowl, self-closing valve with push button on side, push button cup filler, loose key control valve, shank to wall threaded 1/2-inch iron pipe female.

Center of bubbler to end of shank, 4 1/2 inches

Price, No. A-8 with Porcelain Cup.....each \$8.80
" " A-8 " N. P. " " 9.20



Fig. 354

No. C-10300 Bubbling Cups

Vitreous china cup XX with nickel-plated brass retainer with male thread for 1/4 or 3/8-inch iron pipe, or female thread for 1/4-inch iron pipe.

This bubbling cup is constructed to avoid squirting. It will not fill up as it drains through the bottom.

Price.....each \$3.50

No. C-10100 Drinking Fountain Bubblers



Fig. 355

Vitreous china nozzle with nickel-plated brass retainer with male thread for 1/4 or 3/8-inch iron pipe or female thread for 1/4-inch iron pipe.

Price, No. C-10100.....each \$1.75

Bubbling Cup Nozzles



Fig. 356

Nickel-plated brass ring nozzle with female thread for 1/4-inch iron pipe, or male thread for 1/4 or 3/8-inch iron pipe. This nozzle gives a perfect formation of water too large for user to cover with mouth.

Price.....each \$2.25

Water Coolers with Bubbler No. 800

This cooler is designed to connect to pressure lines. The drinking water does not come in contact with either the ice or the melted ice water, but is circulated through a brass coil which is tinned inside and outside. The cover, top and base are made of cast iron. The body, tank and coil guard are made of galvanized sheet iron. Insulation is cork in the side walls and cork board in the bottom and cover.

Bowl with side stream bubbler and automatic stream control.
Height of chamber 19 inches
Diameter outside 19 inches
Shipping weight.....pounds 155
Price.....each \$72.00

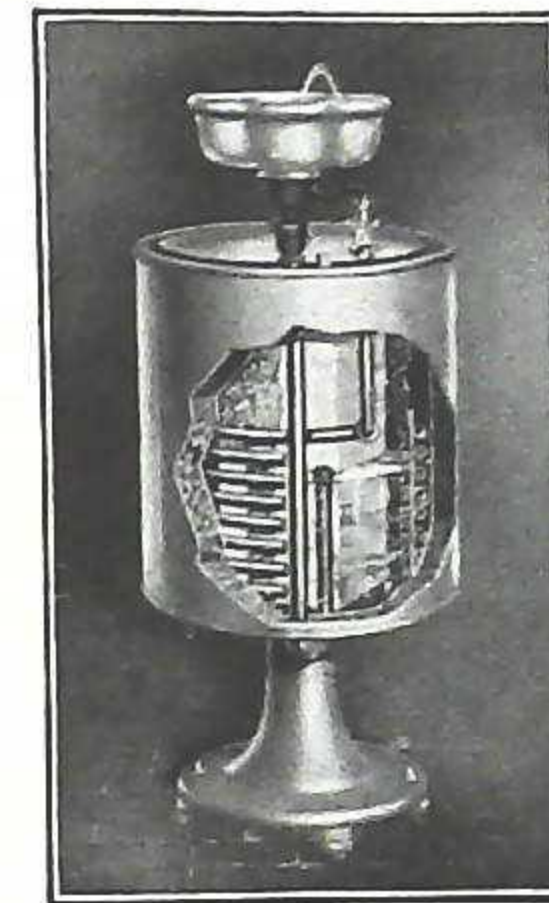


Fig. 357

No. 570 Halsey Taylor Combination Cooler and Drinking Fountains

Bowl cast iron, enameled all over, with N. P. brass strainer; brass outlet and supply connection mounted on cooler with cover top, and base made of cast iron. Body of tank coil guard made from galvanized sheet iron. Insulation: Re-granulated cork in side walls and pressed cork board in bottom and cover of cooler. Cooling coil 1/2-inch O. D. No. 20 gauge seamless brass tubing, tinned. Supply pipe with self-closing stop and volume regulator; 2-stream mound building projector.

Receptor	Hr. to Top, In.	Diam. In.	Wt. Lbs.	Price Each
7 1/2 x 10	32	40	14	165 \$65.00

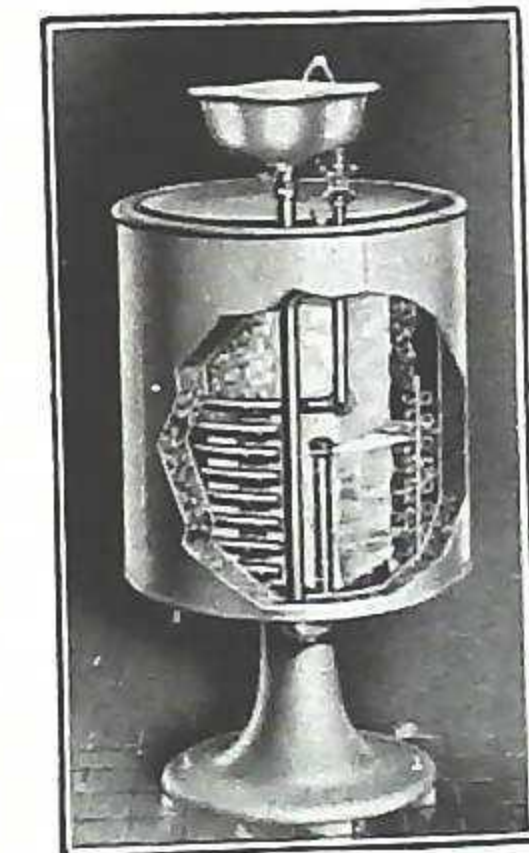


Fig. 358

No. 577 Cafeteria Water Coolers

For use in cafeterias, restaurants, etc., where it may be desired to serve water in glass or paper cups.

Has 15 1/2-inch diameter combination cast iron cover and catch basin with perforated nickel-plated brass drain plate. Catch basin is removed to replenish ice in cooler.

Equipped with 2 self-opening glass fillers. Finished in gray or white baked enamel.

Height of chamber, 19 inches; diameter outside, 19 inches.

Shipping Weight.....pounds 155
Price, No. 577.....each \$80.00

" " 576 with One Glass Filler Only.....each 70.00



Fig. 359

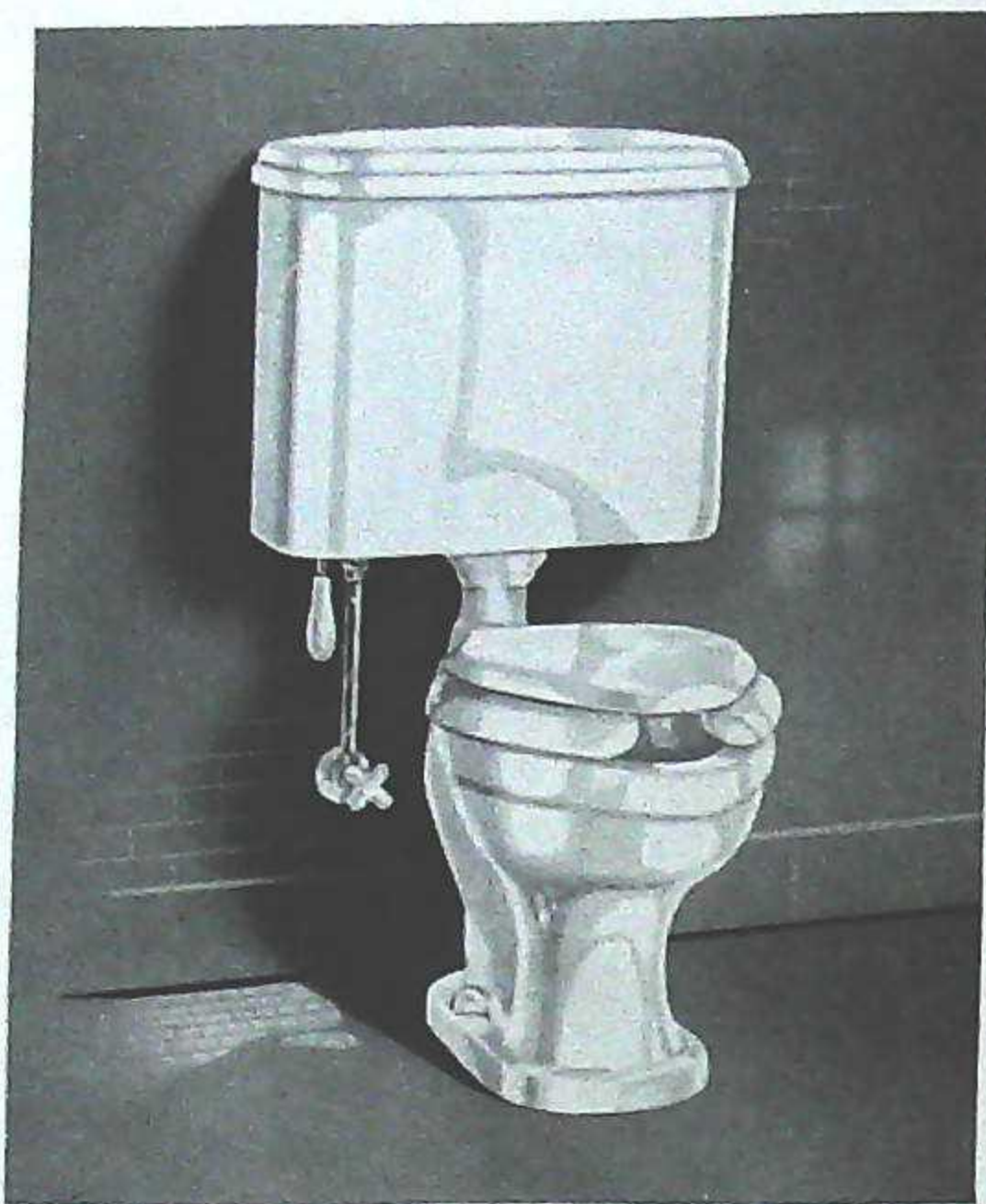
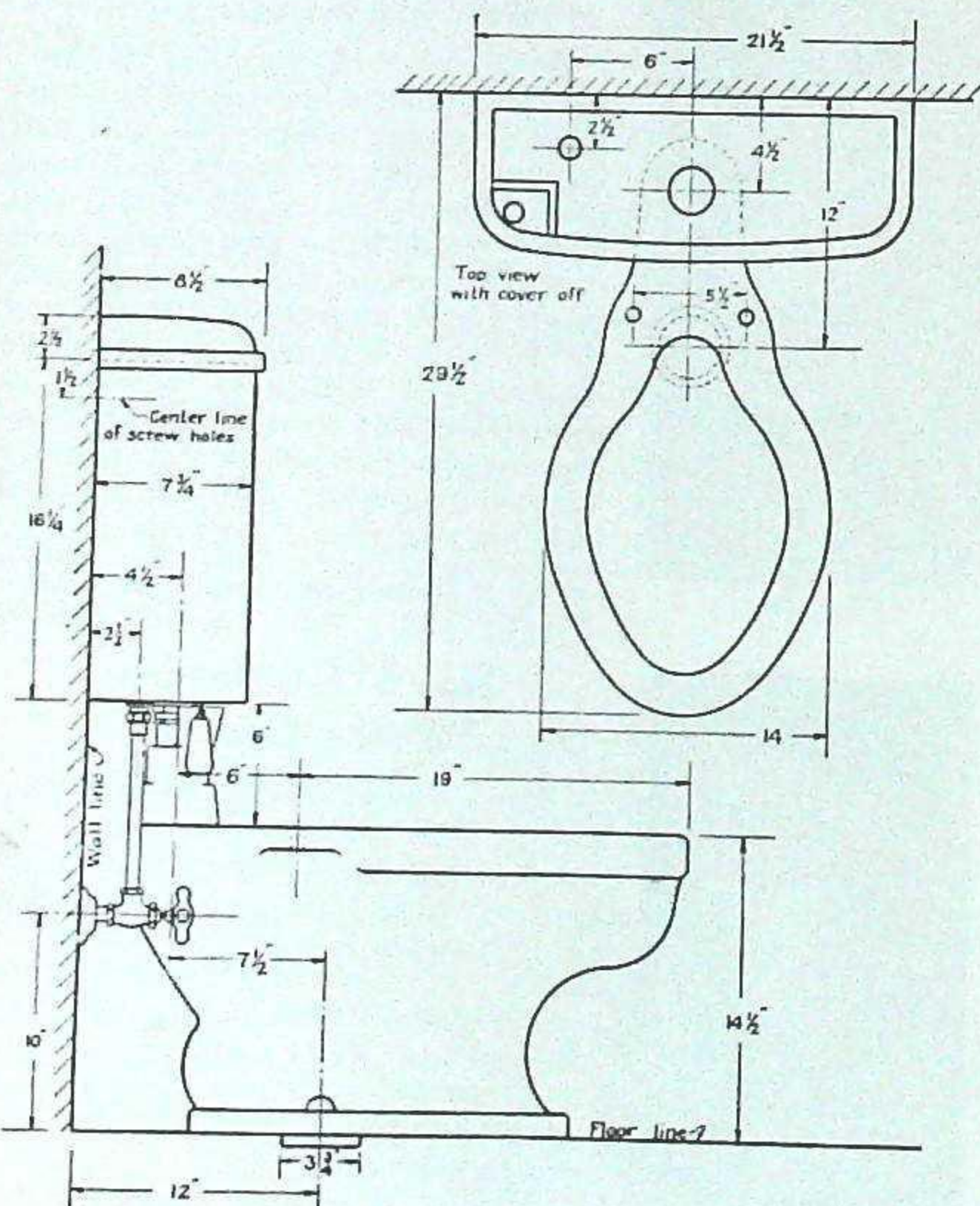


Fig. 361

Ariston-Madera Silent Syphon Jet Closet Combination with vitreous china silent action syphon jet bowl with extended front and cut-back rim, white celluloid covered open front and back seat with cover, and white seat posts, vitreous china straight front tank with rubber ball flush valve, china under-pull lever, high pressure float valve, nickel-plated supply pipe to wall with china handle stop and china escutcheon, nickel-plated brass flush connection, vitreous china flush pipe cover and china bolt caps.

Approximate Shipping Weight.....pounds 240
Also can be furnished with birch mahogany seat and without stop in supply pipe. Bowl 13 inches high if desired.

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.

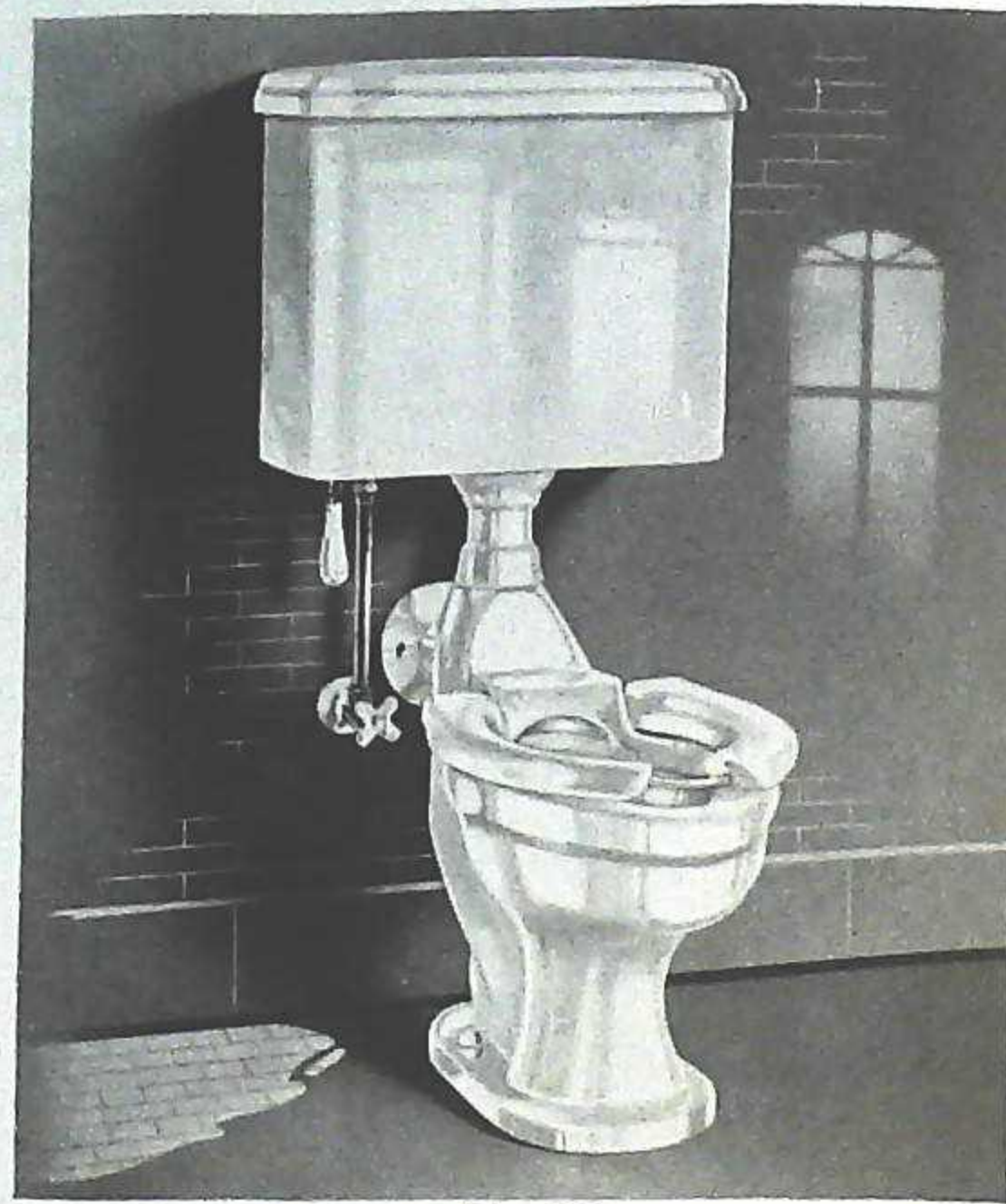
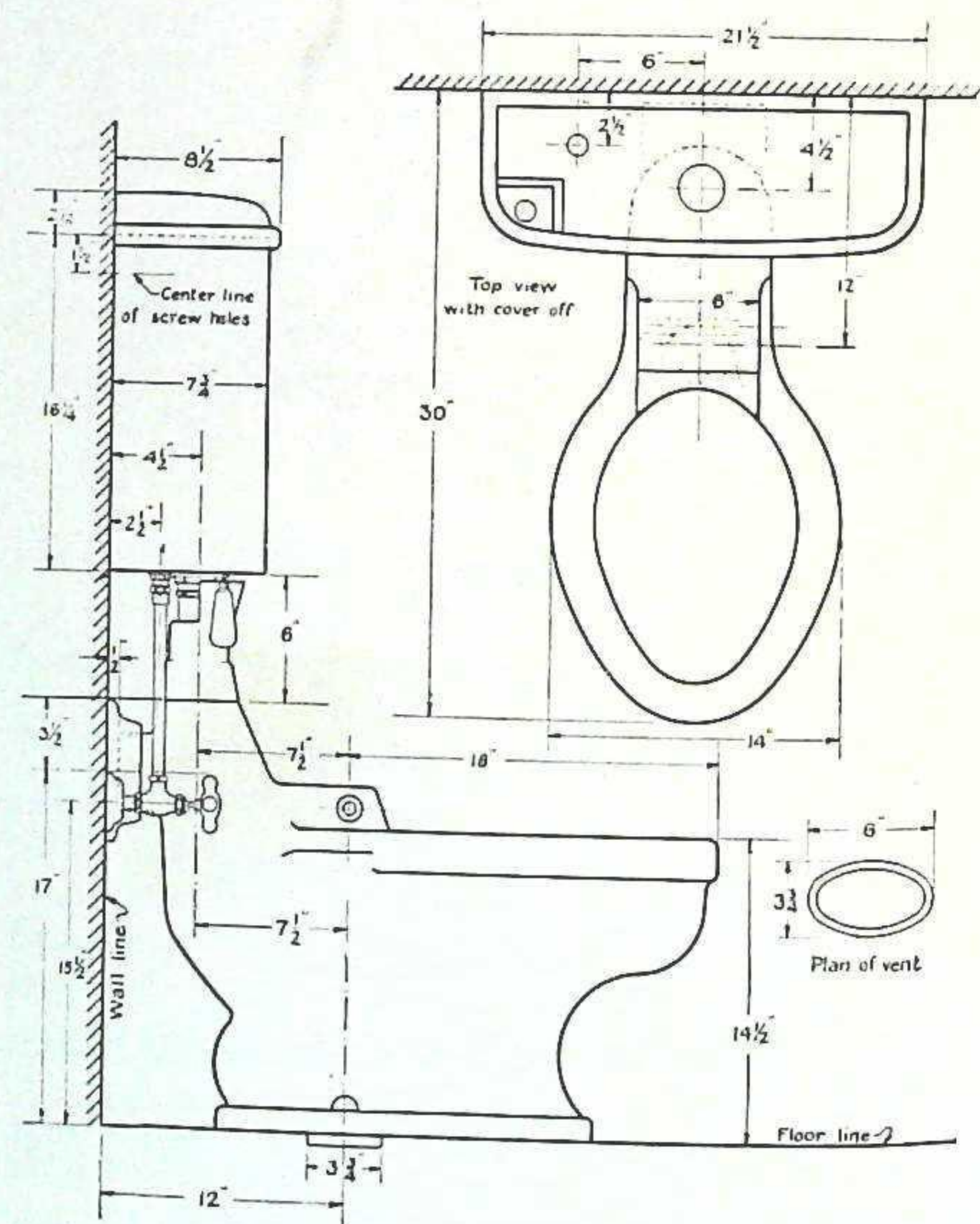


Fig. 362

Ariston-Madera Silent Syphon Jet Closet Combination with white vitreous china silent action syphon jet bowl with raised rear vent, extended front lip and cut-back rim, white celluloid covered open front and back, seat without cover, with concealed brass bar hinge, white vitreous china tank with rubber ball flush valve, under-pull lever with china handle, silent-acting float valve nickel-plated supply pipe to wall with china handle stop valve and china wall escutcheon, nickel-plated brass flush connection, vitreous china flush pipe cover and china bolt caps.

Approximate Shipping Weight.....pounds 238
Can be furnished with birch mahogany seat and without stop in supply pipe. Also bowl 13 inches high if desired.

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.

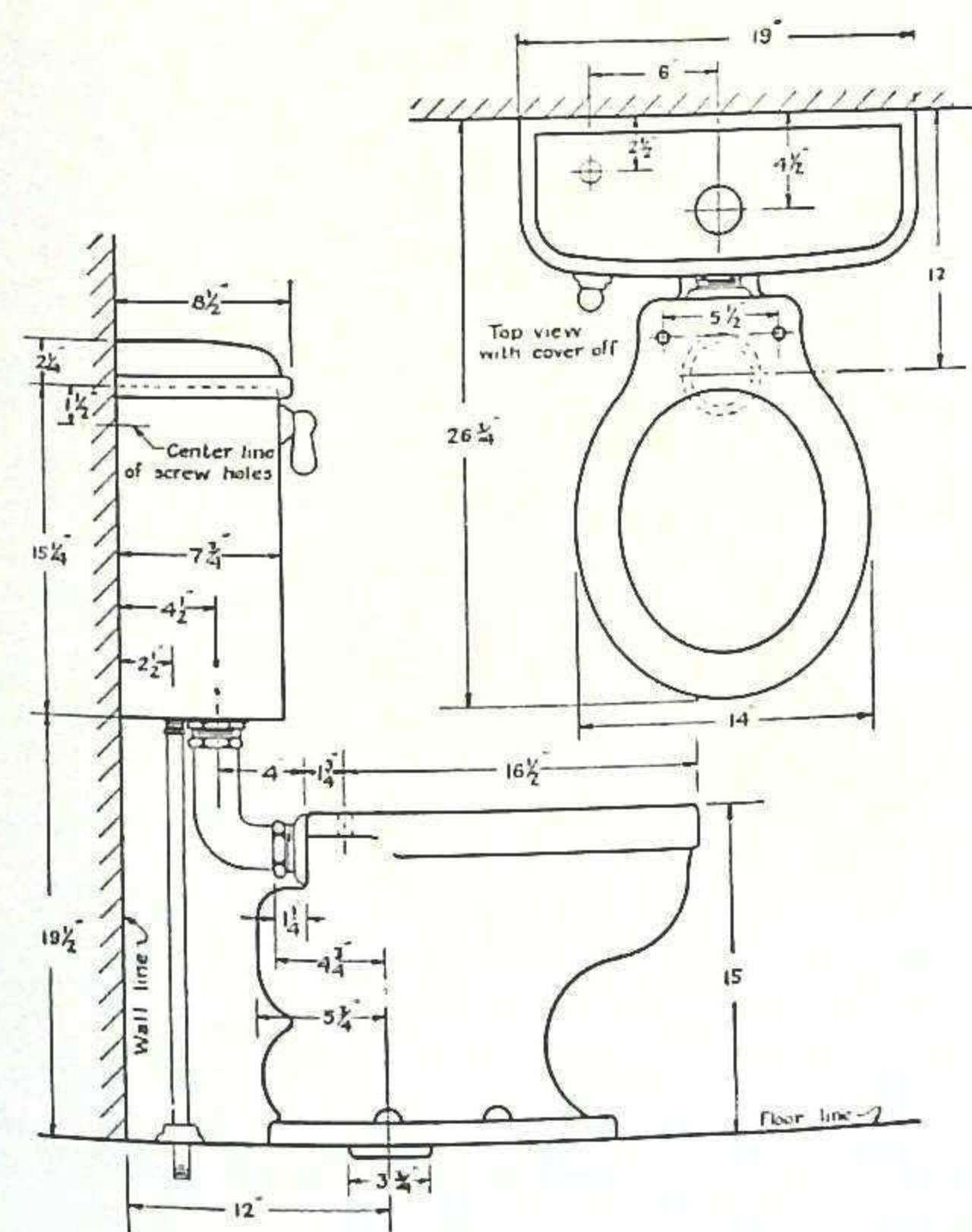


Fig. 371

Madison Reverse Trap Syphon Action Closet Combination with vitreous china reverse trap syphon action bowl with jet, back inlet supply with 2-inch brass spud, mahogany finished seat and cover with heavily nickel-plated brass bar hinge, white vitreous china tank with rubber ball flush valve, top-side lever with china handle, high pressure float valve nickel-plated supply pipe to floor with china floor escutcheon, nickel-plated brass flush connection and china bolt caps.

Approximate Shipping Weight.....pounds 166

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.

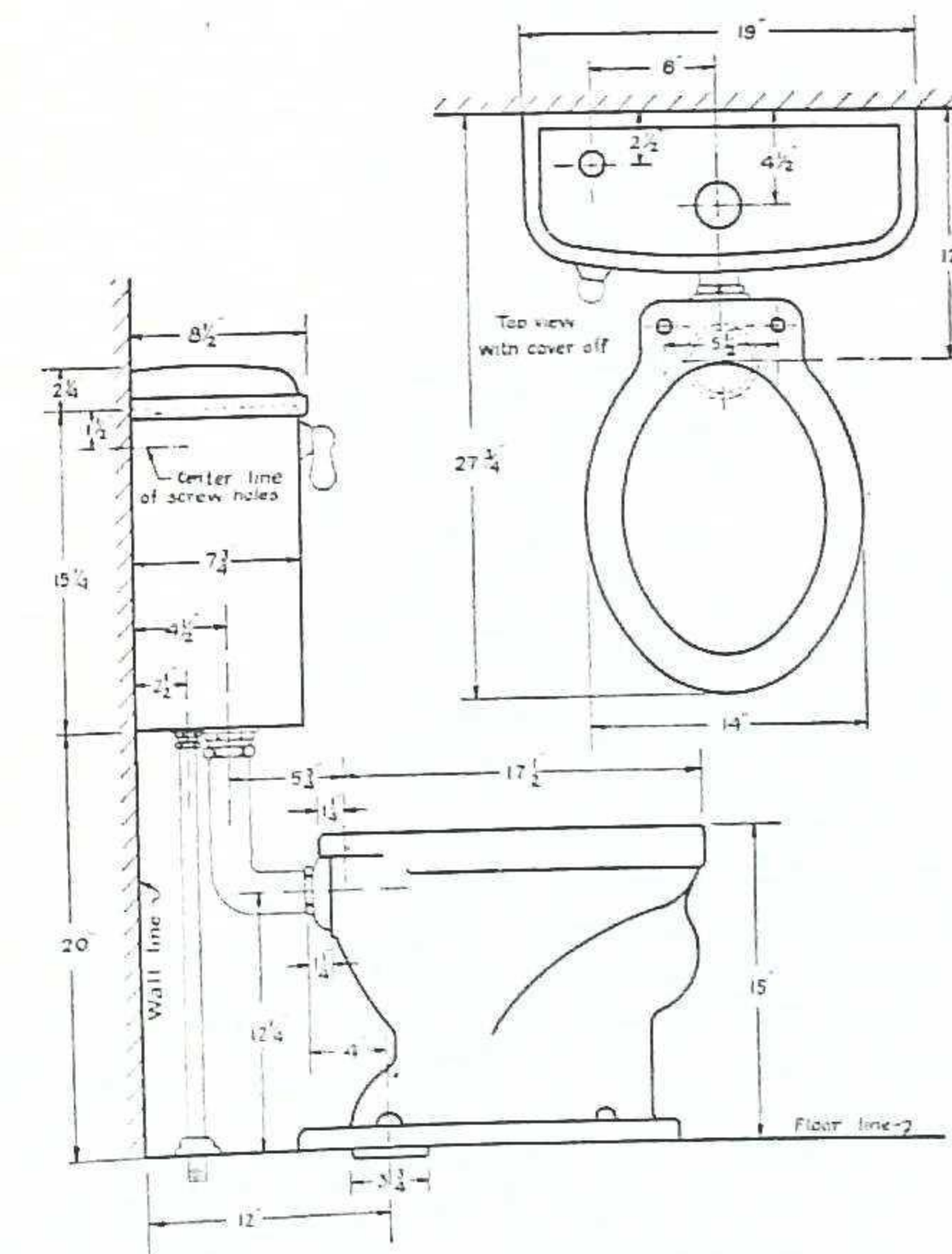


Fig. 372

Maderno Syphon Washdown Closet Combination with vitreous china syphon washdown bowl with jet and extended outlet, mahogany finish seat and cover with concealed post hinge, white vitreous china tank, rubber ball flush valve, top-side lever with china handle and escutcheon, high pressure float valve, nickel-plated brass supply pipe to floor with china floor escutcheon, nickel-plated brass flush connection and china bolt caps.

Approximate Shipping Weight.....pounds 160

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.



Fig. 381



Fig. 383



Fig. 391

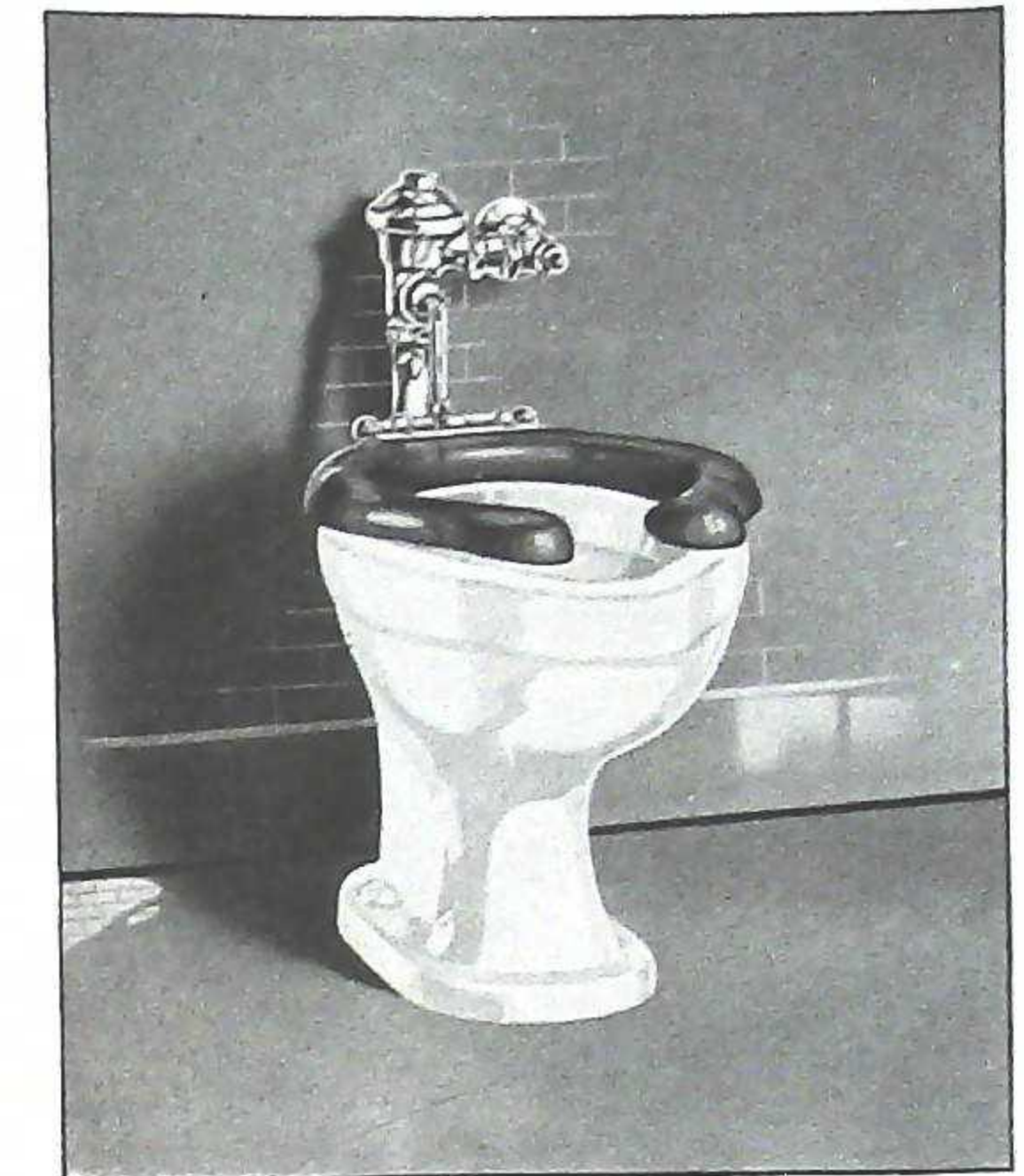


Fig. 392

Syphon Wash Down Closet Combination, vitreous china syphon action wash down bowl with mahogany finish seat and cover with nickel-plated offset hinges, vitreous china 5-gallon round corner tank with rubber ball flush valve, double action trip lever with china handle, elevated high pressure ball cock, 4x5-inch solderless copper float, nickel-plated elbow flush connection, 3/8-inch 11-gauge nickel-plated supply pipe, floor bolts and washers.

Approximate Shipping Weight.....pounds 120

Can be furnished with stop in supply pipe, 1 1/2-inch full saddle seat with bar hinge, or with golden oak seat furnished if desired.

Madero Washdown Closet Combination with vitreous china syphon washdown bowl with jet, extended floor outlet, back inlet, and 1 1/4 or 1 1/2-inch brass spud, mahogany finish open front seat without cover with concealed post hinge, nickel-plated Royal flush valve with loose key angle stop, china oscillating handle and china bolt caps.

Height, 15 inches; opening of bowl 11x14 1/2 inches; water surface, 7x7 1/2 inches; and 3-inch water seal.

Approximate Shipping Weight..... pounds 80

Ariston-Madera Silent Syphon Jet Closet Combination with vitreous china syphon jet bowl with side supply inlet, 1 1/4 or 1 1/2-inch brass spud, extended front lip and cut-back rim flushed all the way around, mahogany finished open front and back seat without cover, heavy nickel-plated brass bar hinge, nickel-plated Royal flush valve with loose key angle stop and china oscillating handle and china bolt caps.

Opening of bowl 10x16 inches Water surface 10x14 inches

Water seal 3 inches

Sanitary rim with 1/4-inch downward projection inside of bowl

Approximate Shipping Weight..... pounds 90

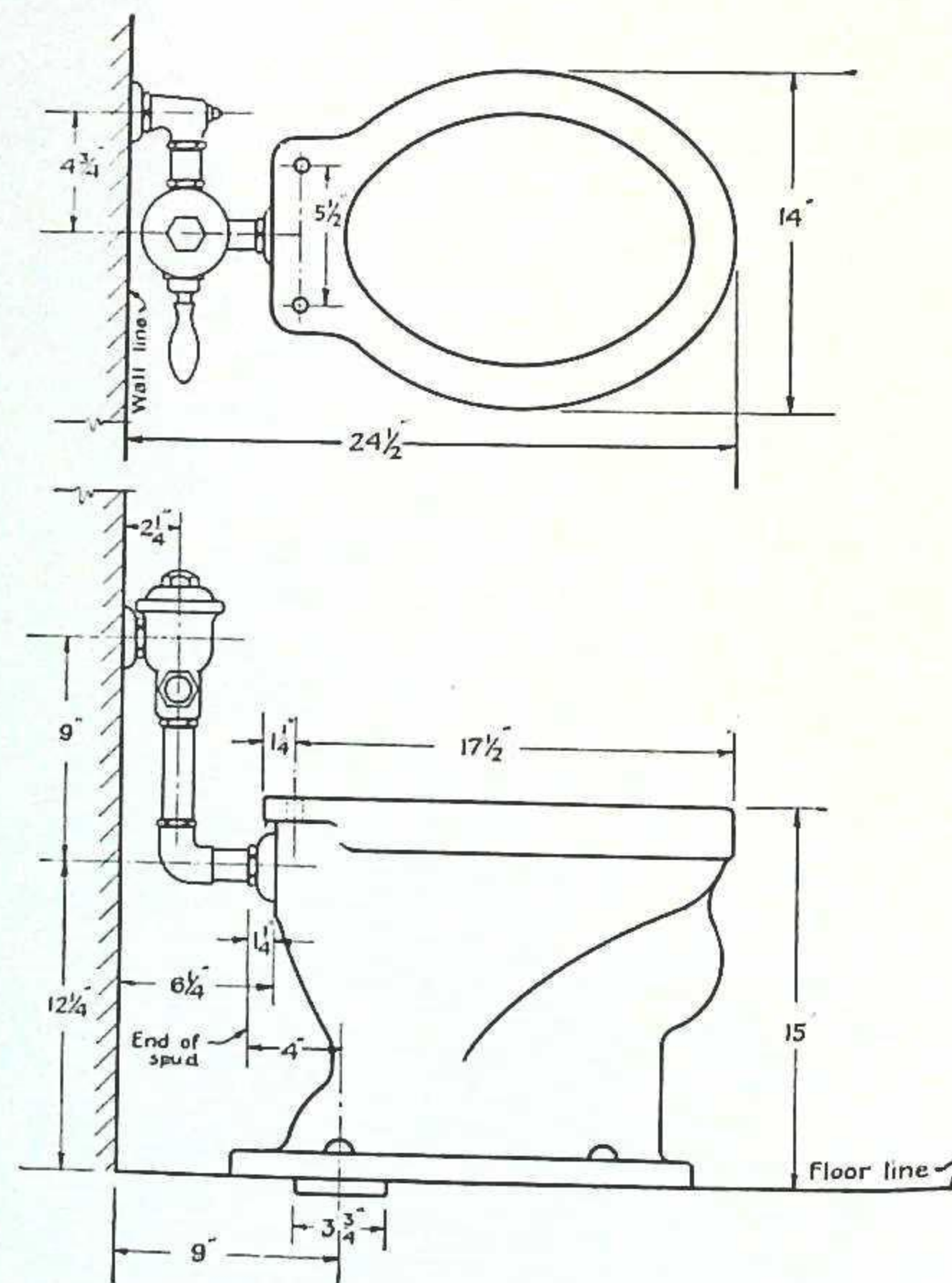
This closet also made 13 inches high.

Syphon Jet Closet Combination with vitreous china syphon jet bowl with extended front lip, floor outlet and top inlet, 1 1/4 or 1 1/2-inch brass spud, mahogany finish open front seat without cover with heavy nickel-plated brass bar hinge, nickel-plated seat action Royal flush valve with loose key angle stop and china bolt caps.

Height, 15 inches; opening of bowl, 11x15 inches; water surface, 10x13 inches; and 3-inch water seal.

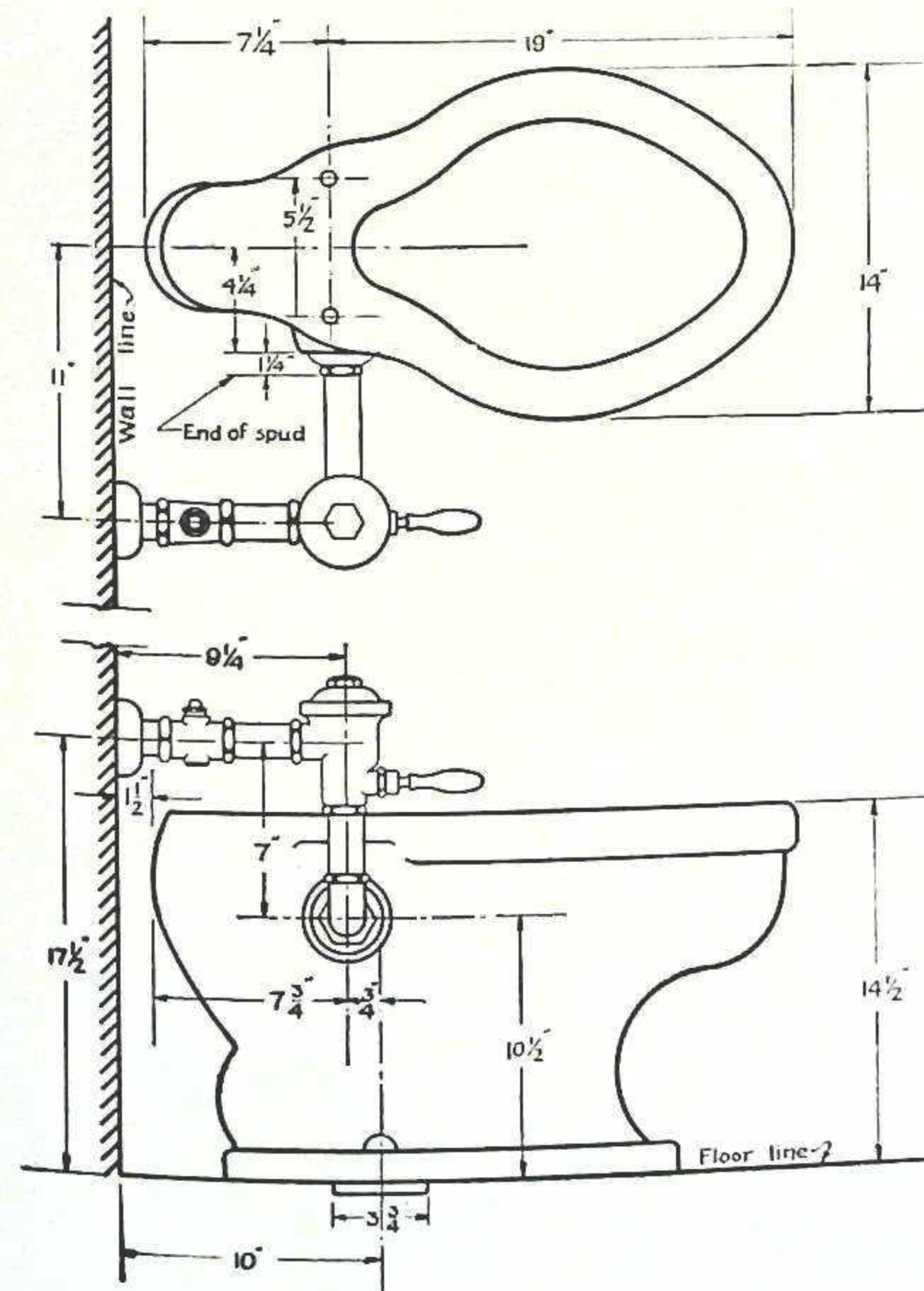
Approximate Shipping Weight..... pounds 92

Roughing Measurements



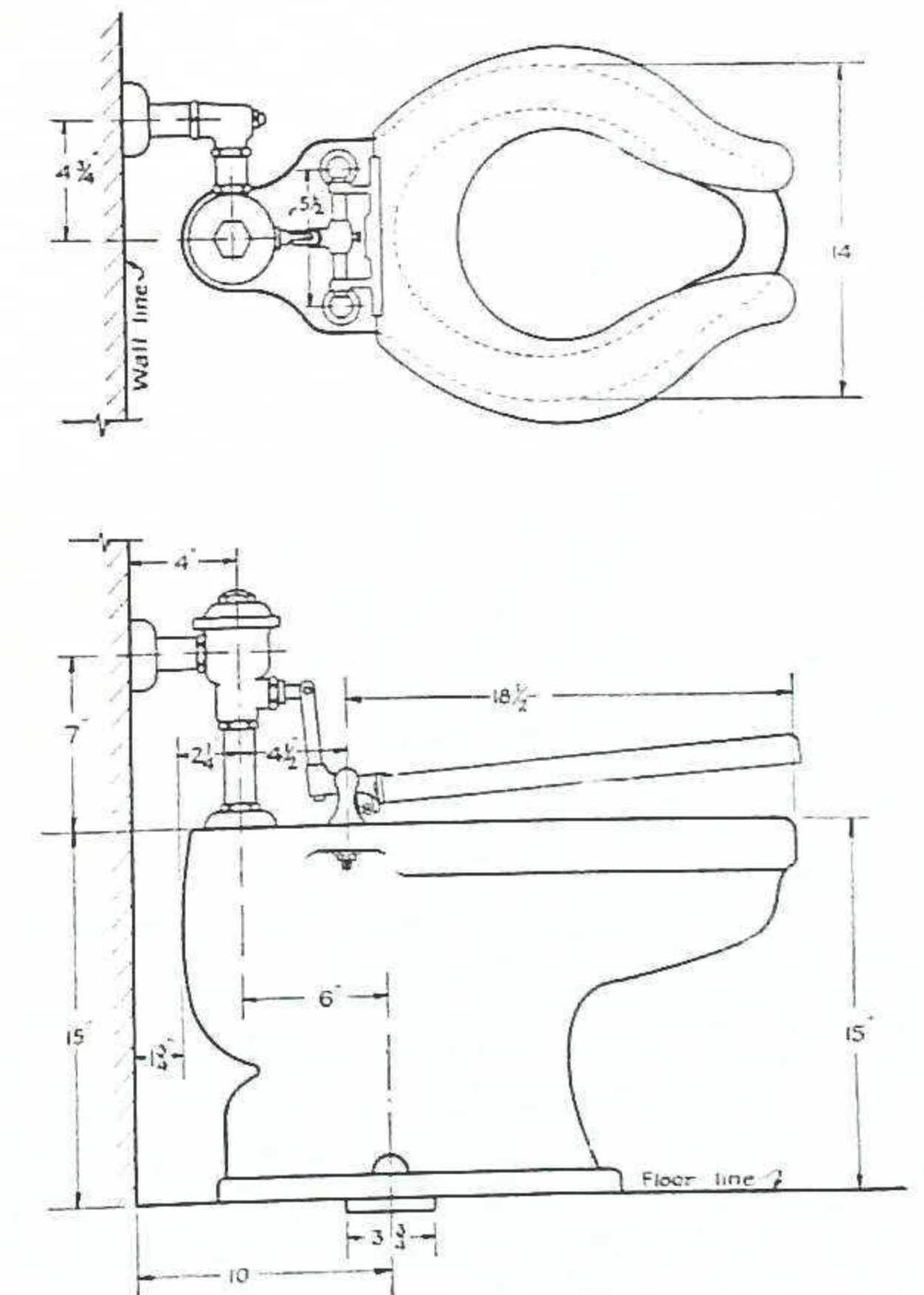
Measurement may vary from 1/4 to 1/2 inch.

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.



Fig. 382

Syphon Wash Down Closet Combination with vitreous china syphon wash down bowl, oak tank with copper lining and china handle trip lever, rubber ball flush valve, compound lever elevated high pressure ball cock, nickel-plated flush connection, 3/8-inch iron pipe size nickel-plated supply pipe and nickel-plated escutcheon, oak seat and cover with nickel-plated cast brass hinges, nickel-plated floor screws and washers.

Approximate Shipping Weight.....pounds 100

Can be furnished with stop in supply.

Repair Parts for Nos. 1, 2 and 5 Vogel Closets

No. 2 Vogel Automatic Enameled Iron Hopper Combination, enameled inside hopper with enameled roll flush rim and brass fan wash, hardwood seat, supply valve, 3/8-inch valve rod and casing.

This combination can be furnished with hopper enameled inside and outside, or with self-raising seat.

Combinations with hoppers having 4-inch outlets for caking into bell end of soil pipe can be furnished at same price. Flanged hoppers will be furnished unless otherwise ordered.

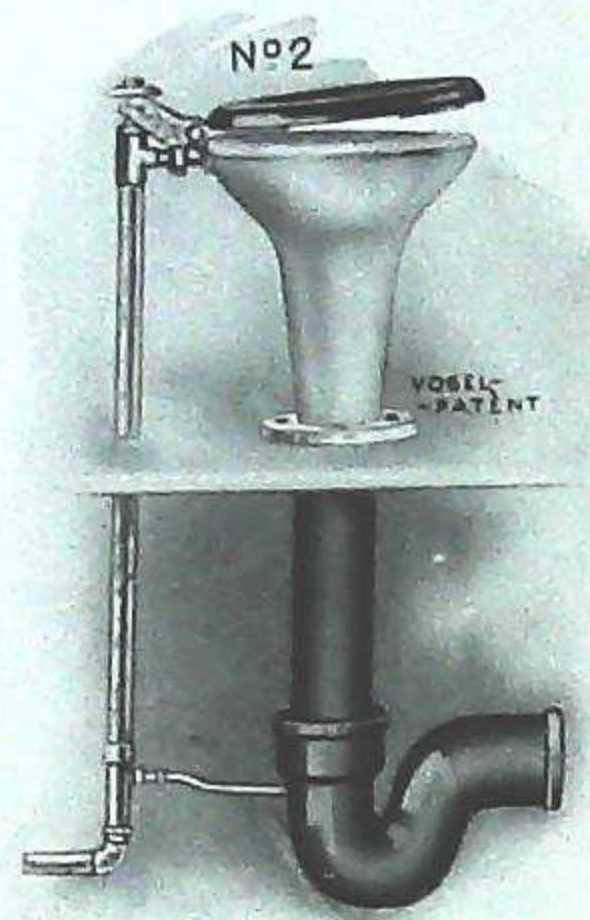


Fig. 401

This combination contains but one washer and flushes while in use, after which no water remains in the fixture or in the casing.

It is simple, strong and durable, and requires no pit. Quickly and economically installed, as the valve may be covered with earth as soon as connection with the water supply is made. The valve parts can be easily removed from above the floor.

The bowls have special design one-half roll enameled rims.

Approximate Shipping Weight.....pounds 50

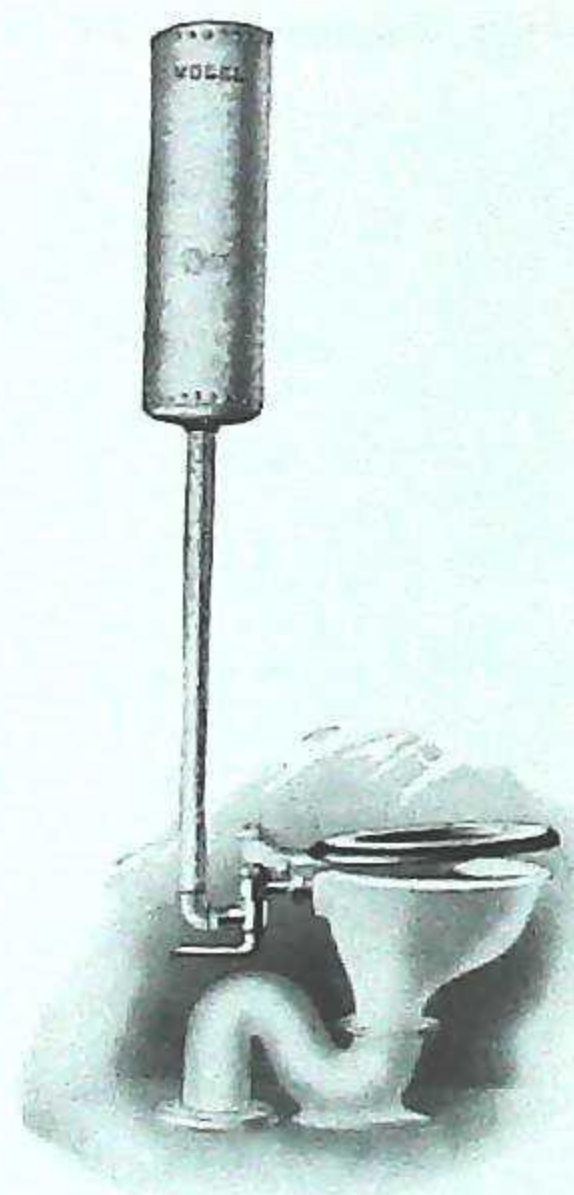


Fig. 402

No. 5 Vogel Automatic Enameled Iron Hopper Combination, enameled flushing rim hopper and S trap enameled inside, re-enforced hardwood seat, heavy brass flush valve, galvanized pressure tank, galvanized flush pipe and connections.

This combination can be furnished with hopper and S trap enameled inside and outside, with tall oval enameled hopper, with roll enameled rim fan wash hopper, with varnished oak seat, or with a self-raising seat.

This hopper combination fills the demand for a strong and durable automatic closet for inside factory use.

Approximate Shipping Weight.....pounds 100

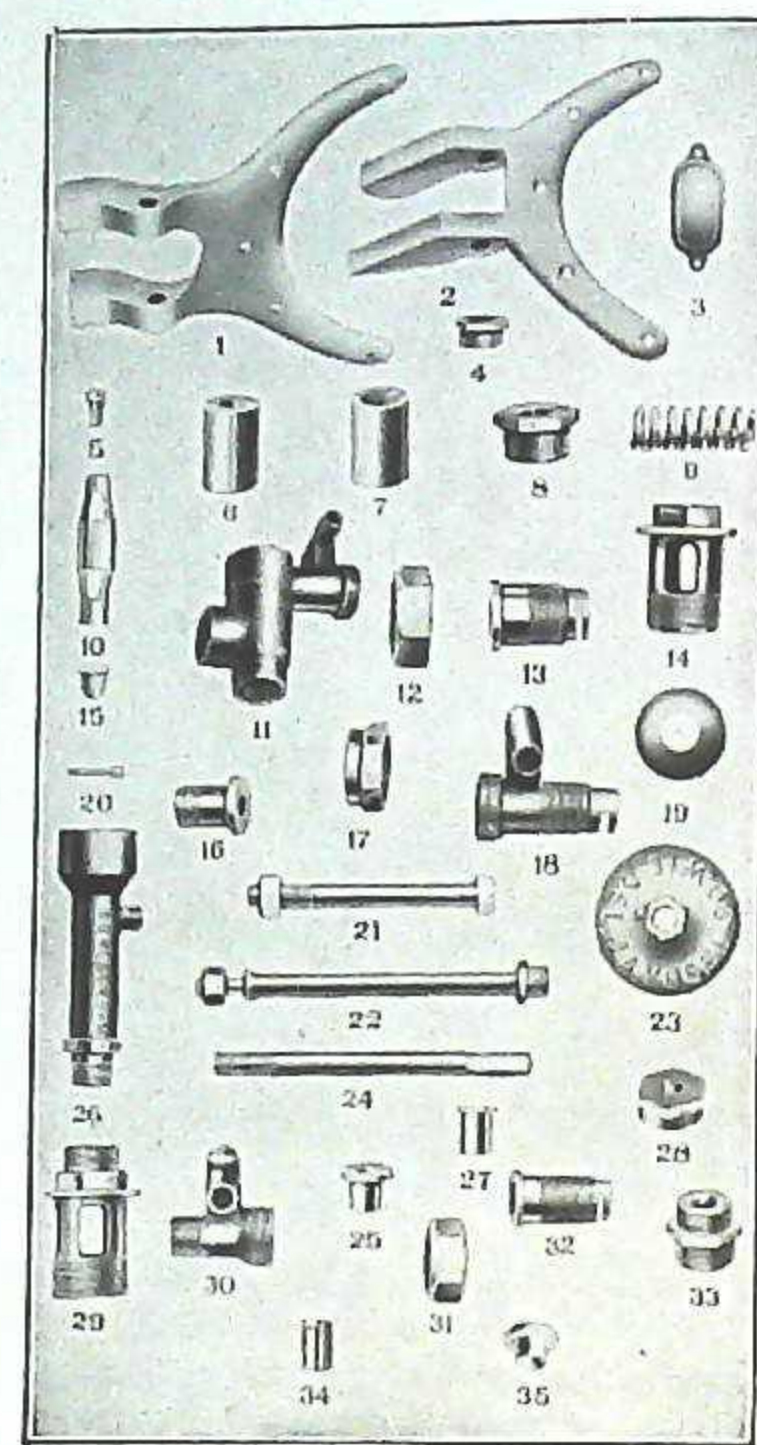


Fig. 403

- | No. | Name of Part |
|------|--|
| C-1 | Seat Casting for No. 1 and New Style No. 2. |
| B-2 | " " " " Old Style No. 2. |
| 3 | " Buffer. |
| 4 | Small Packing Nut for Nos. 1 and 2 Old Style. |
| 5 | Brass Screw (top of plunger) Nos. 1 and 2. |
| 6 | " Socket, tapped one end Nos. 1 and 2. |
| 7 | " " both ends for No. 2. |
| 8 | Large Packing Nut for No. 2 Old Style |
| 9 | Spring for Nos. 1, 2 and 5. |
| 10 | Small Plunger for Nos. 1 and 2. |
| 11-1 | Upper Flush Valve Body for No. 1. |
| 11-2 | " Valve Body for No. 2. |
| 11-5 | Large Flush Valve Body for No. 5. |
| 12 | " Coupling Nut for Nos. 1 and 5. |
| 13 | 1-inch Fan Wash Swivel for Nos. 1 and 5. |
| 14 | Flush Valve Plug for No. 1 Old Style. |
| 15 | 1/2-inch Plumbago Fuller Ball for Nos. 1, 2 and 5. |
| 16 | 1/2 " Brass Swivel, No. 2 Old Style. |
| 17 | Coupling Nut for Same, No. 2 Old Style. |
| 18 | Fan Wash, Hinge Fitting for No. 2 Old Style. |
| 19 | Flush Valve Packing for Nos. 1 and 5. |
| 20 | Brass Screw for Fuller Ball for Nos. 1, 2 and 5. |
| 21 | 1/2-inch Brass Seat Bolt for Nos. 1, 2 and 5. |
| 22 | Lead Waste Connection for Nos. 1 and 2. |
| 23 | Lifting Plate for Nos. 1, 2 and 5. |
| 24 | 1/2-inch Brass Lifting Rod for Nos. 1, 2 and 5. |
| 25 | Flanged Socket for No. 1. |
| 26 | Supply Valve Body for Nos. 1 and 2. |
| 27 | Spacer Sleeve for No. 1. |
| 28 | Packing Cap, New Style, Nos. 1 and 2. |
| 29 | Flush Valve Plug, New Style, Nos. 1 and 5. |
| 30 | Hinge Fitting, No. 2 New Style. |
| 31 | Coupling Nut for Same, No. 2 New Style. |
| 32 | 3/4-inch Fan Wash Swivel, No. 2 New Style. |
| 33 | Large Packing Nut, No. 2 New Style. |
| 34 | Guide Sleeve for No. 5. |
| 35 | Flanged Socket for No. 5. |

When ordering specify for Nos. 1, 2 or 5, and whether for No. 2 old style.



Fig. 411

Syphon Jet Closet Bowls

Plain Oval

Vitreous china plain oval syphon jet bowl for high or low tank.

Price each \$22.00

1 1/4, 1 1/2 and 2-inch spud furnished extra.



Fig. 415

Reverse Trap Syphon Jet Closet Bowls

Vitreous china reverse trap syphon wash down closet bowl with back supply for high or low tank.

Price each \$15.00
Add for Auxiliary Jet each 2.00

Spuds are extra.



Fig. 412

Vitreous China Syphon Jet Closet Bowls

Vitreous china syphon jet bowl with extended lip, for high or low tank.

Price....
...each \$26.00

Can be furnished in either 14-inch or in standard height.



Fig. 416

Syphon Washdown Closet Bowls

Vitreous china syphon action washdown closet bowl with back supply.

Price...each \$12.50

This bowl is furnished with either 1 1/4 or 2-inch supply.

Juvenile Syphon Jet Closet Bowls

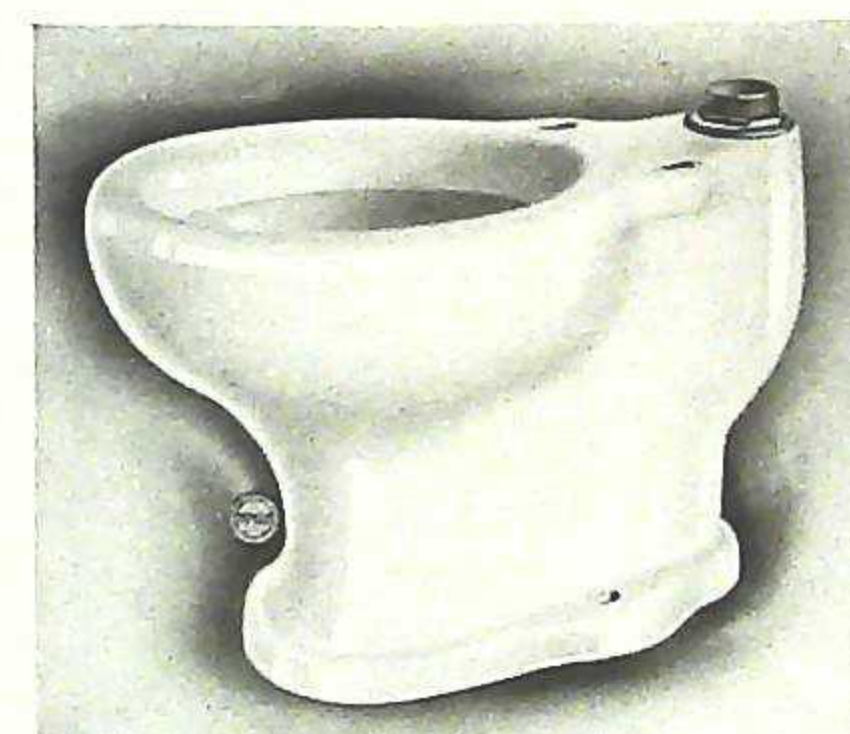


Fig. 413

Vitreous china syphon jet closet bowl for high or low tanks.

Height, 13 inches.

Price.....each \$23.75



Fig. 417

Syphon Washdown Closet Bowls

Vitreous china syphon washdown bowl with extended heel outlet, heavy oval base, back supply inlet and seat attachment.

Fitted with 1 1/4, 1 1/2 or 2-inch spud.

Price,.....each \$14.25

This bowl is used to meet close roughing-in.

Roughing-in measurement 10 inches.



Fig. 414

Syphon Jet Closet Bowls With Raised Rear Vent and Extended Lip

Vitreous china closet bowl with top inlet, extended lip and raised rear vent.

Price each \$46.95
Spuds and vent collar are extra.

Can be furnished without extended lip if desired.



Fig. 418

Juvenile Syphon Washdown Closet Bowls

Vitreous china syphon washdown closet bowl for high or low tank.

This special bowl is for installation in elementary school buildings. It is about 13 inches high but has the regular top to which any standard seat may be attached.

Price.....each \$13.75

Fitted with 1 1/4, 1 1/2 or 2-inch brass spud.

Philadelphia Pattern Hoppers
New Style Old Style



Fig. 421

Price, Enam. Inside, ea.
" " All Over. "



Fig. 422

Price, Enam. Inside, ea.
" " All Over. "

Enameled Iron Hoppers
Tall Oval—Flushing Rim
With Flat Rim

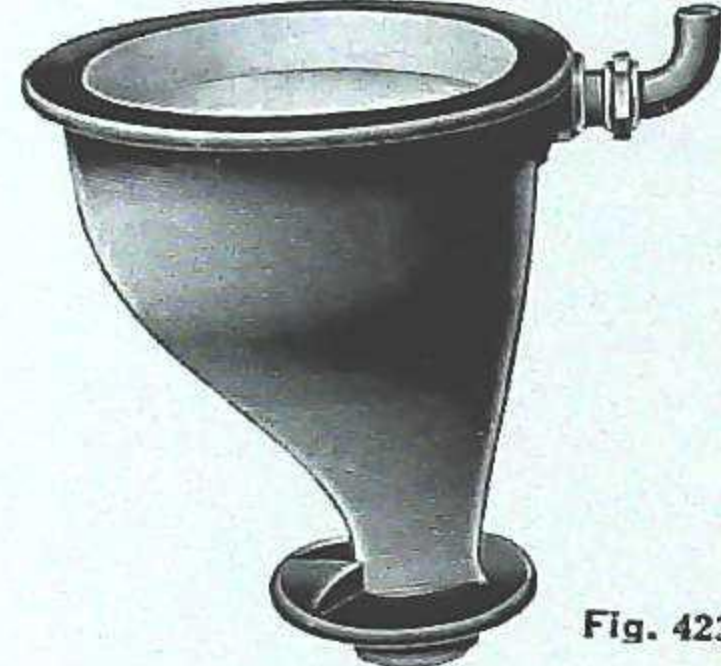


Fig. 423

Price, Enameled Inside, without Brass Coupling, each \$5.50
" " and Outside, " 9.00
Add for Wood Rim Seat, " 1.50

Enameled Iron Hoppers
Tall Round—Flushing Rim
With Wood Rim Seat



Fig. 424

Price, Enameled Inside, without Brass Coupling, each \$6.40
" " and Outside, " 9.90



Fig. 425

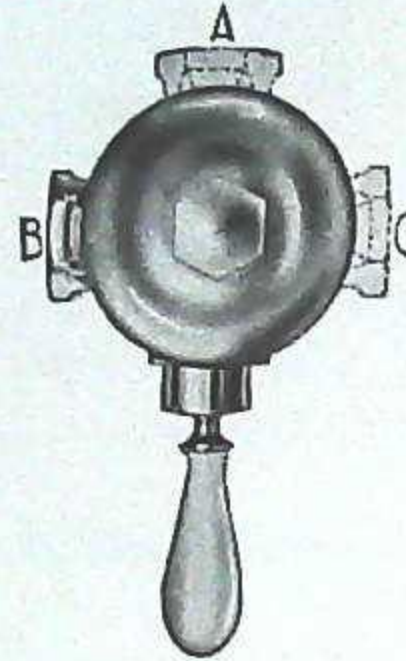
Enameled Iron Hoppers

Tall round flat rim hopper, enameled inside and painted outside, with flushing rim and flange, self-raising seat and counterweight, brass single or double acting valve.

Price, each \$12.00

Can be furnished with roll rim; also enameled inside and outside.

Royal Flush Valves



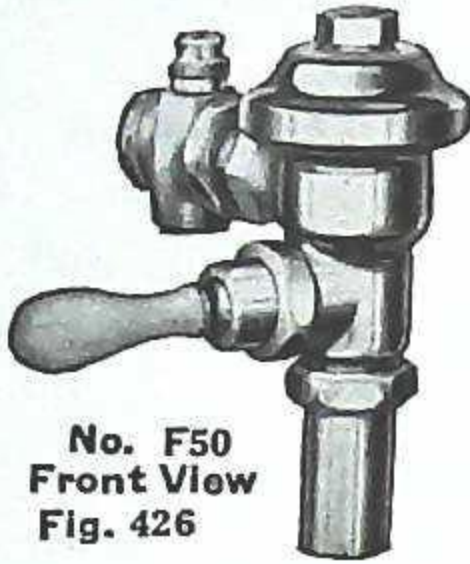
Top View

These are the only valves that flush the same amount of water at each operation regardless of whether handle or button is held or released, thus preventing either an excessive or insufficient flush.

They can be used on either direct or tank supply and do not require regulating for any variation in pressure between 5 and 100 pounds.

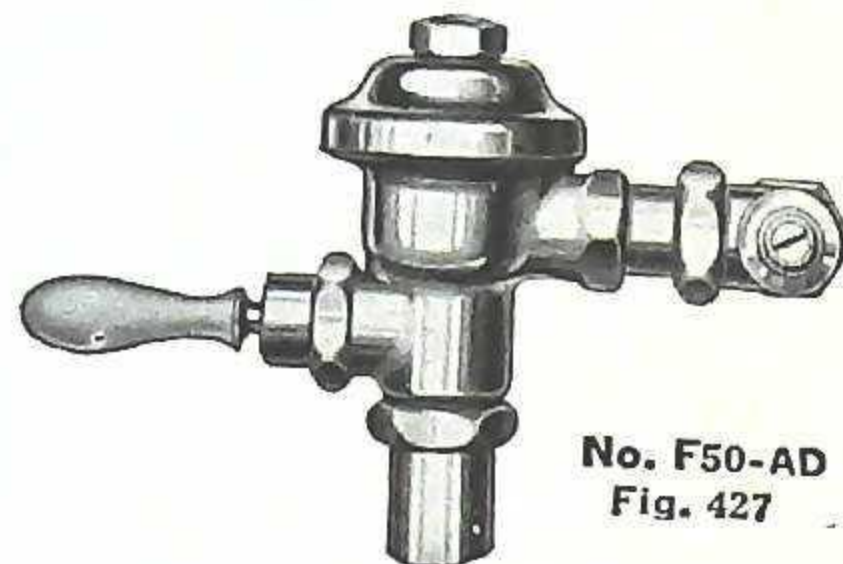
The oscillating handle is the best method of operating flush valves ever devised, as a slight movement in any direction causes the valve to flush.

The top view shows regular inlet at B, but the valve can be furnished with inlet at A or C when so ordered.



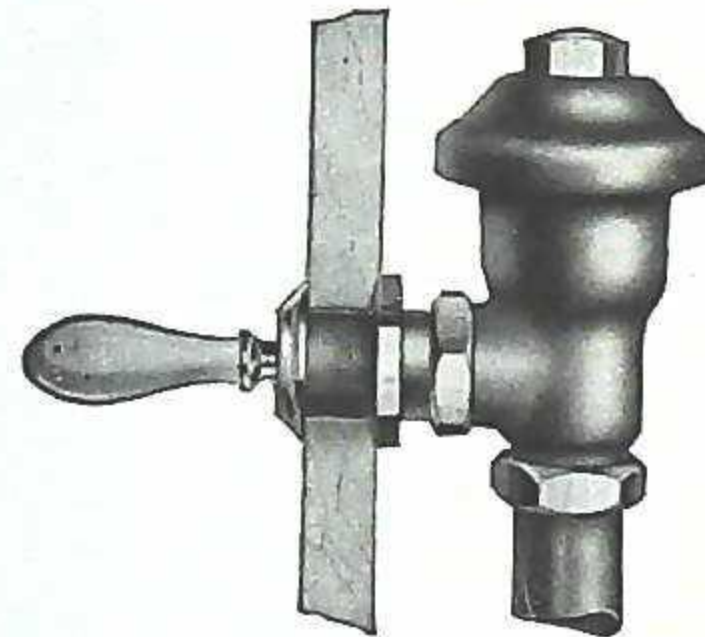
No. F50
Front View
Fig. 426

Price, No. F50, with China Handle and Straight Stop, ea. \$23.00



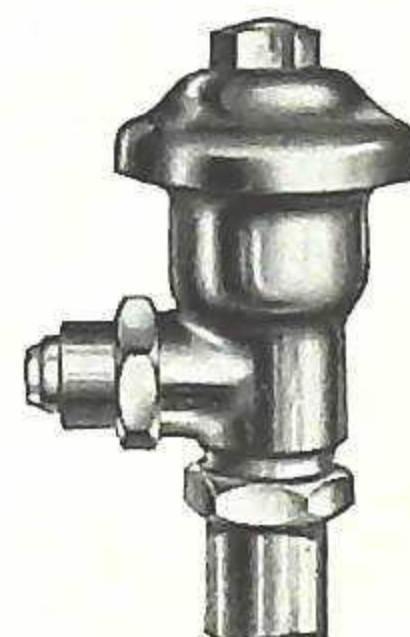
No. F50-AD
Fig. 427

Price, No. F50-AD, with China Handle and Angle Stop, ea. \$23.00



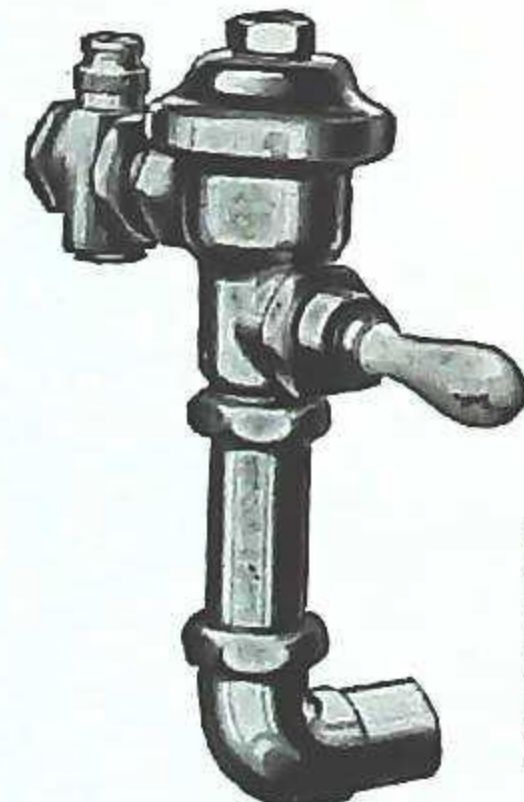
No. F55
Concealed Type
Fig. 428

Price, No. F55, with China Handle or Push Button and Straight Stop, ea. \$26.00



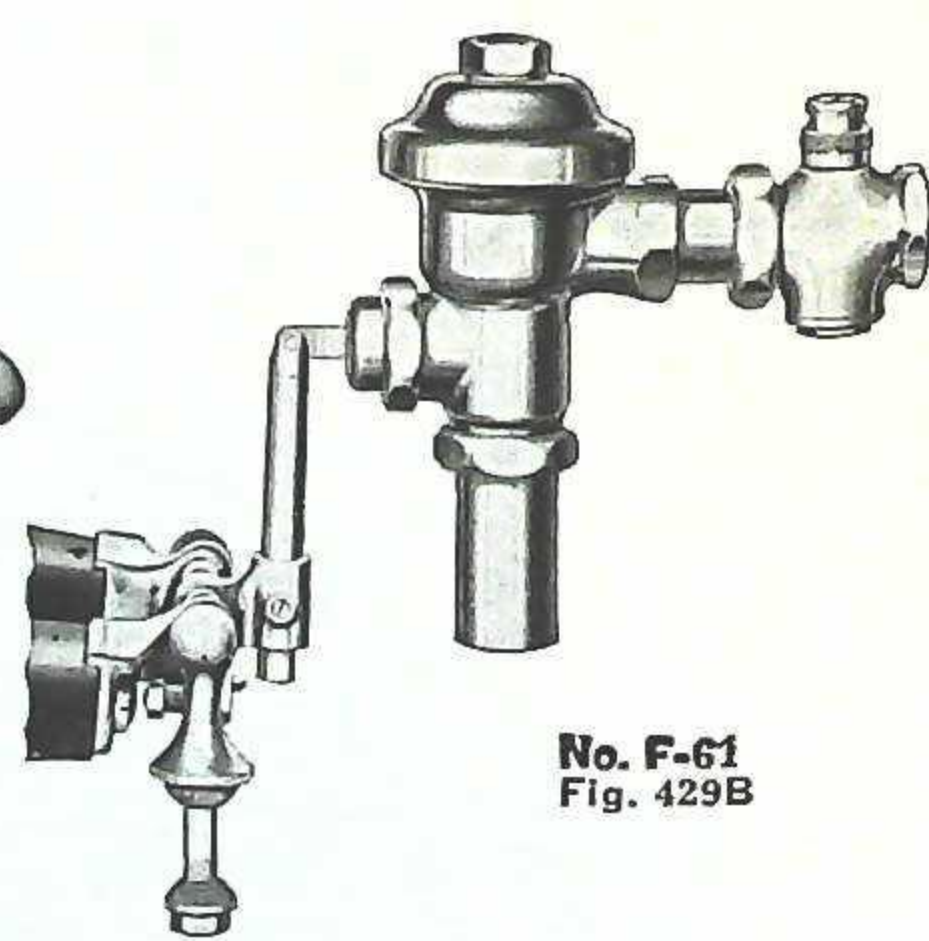
No. F52-CD
Side View
Fig. 429

Price, No. F52, with Push Button and Angle Stop and Outlet 21 In. Long, each \$24.50



No. F-53
Fig. 429A

Price, No. F53, with China Handle, and Straight Stop, and Elbow Flush Connection for Side Spud Bowl, each \$24.50



No. F-61
Fig. 429B

Price, No. F61, Seat Operated with Straight Stop and Open Front and Back Whalebonite Seat, each \$53.00

Vitreous China Closet Tanks

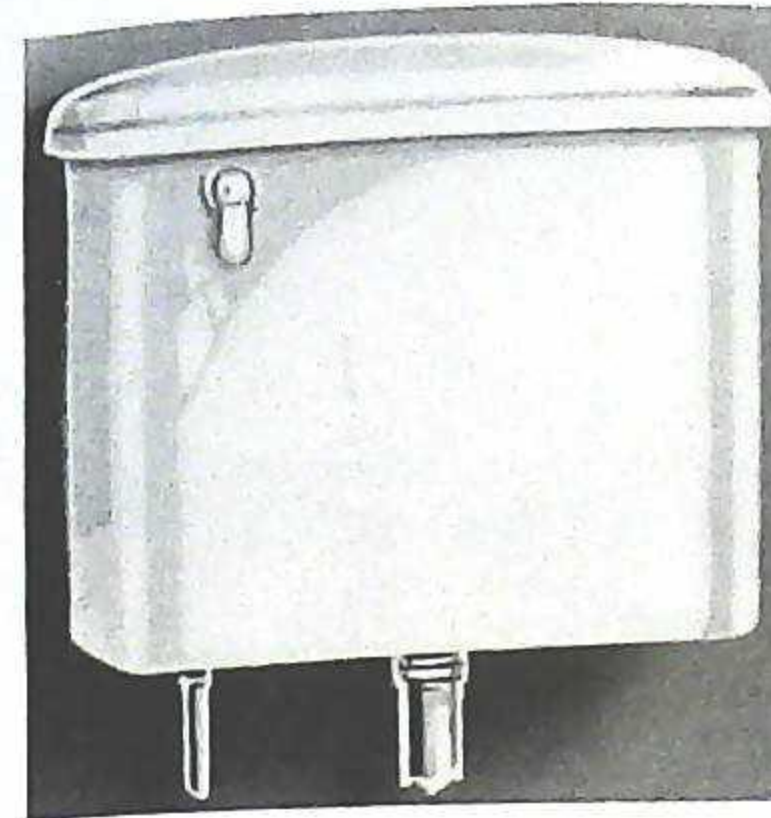


Fig. 431

Vitreous China Closet Tanks

Vitreous china straight front 6-gallon low closet tank with elevated float valve, rubber ball flush valve, top side lever with china handle, nickel-plated supply pipe and nickel-plated flush connection.

Price, each \$31.00

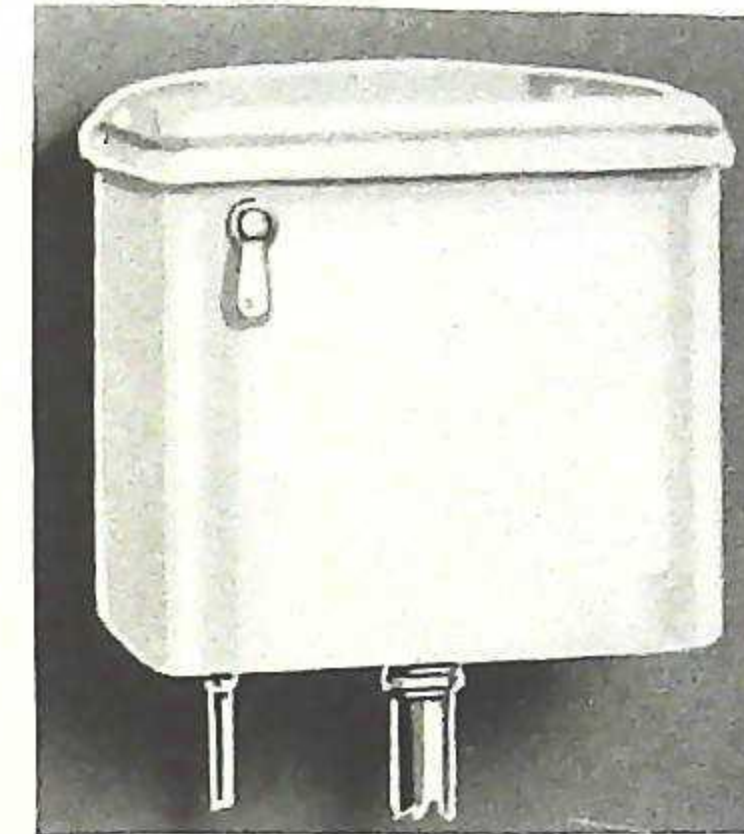


Fig. 432

Vitreous China Closet Tanks

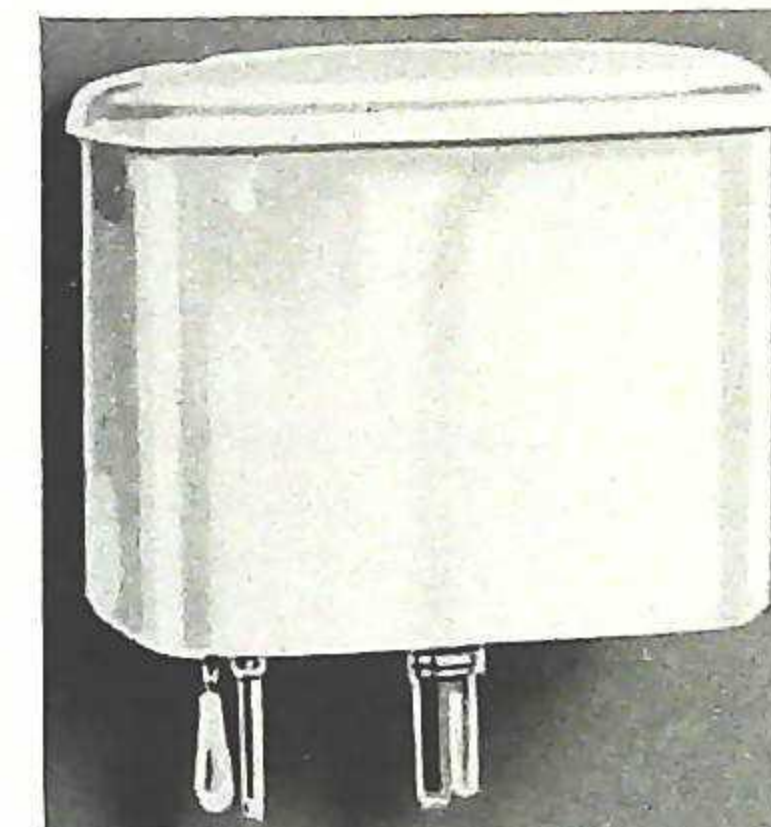


Fig. 433

Vitreous China High Tanks

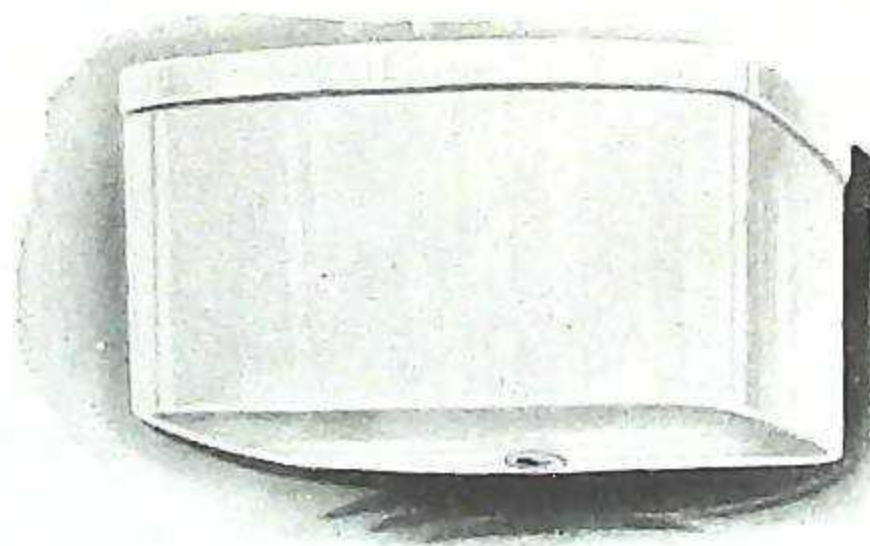


Fig. 434

Vitreous china straight front 8-gallon closet tank with silent acting elevated float valve, rubber ball extra heavy flush valve with large overflow, under-pull lever with china handle, nickel-plated supply pipe and nickel-plated flush connection.

Price, each \$34.00

Bellemeade two-fire vitreous china tank with T. S. Ball cock, chain and pull fittings.

Furnished with bottom supply fittings and automatic fittings at an extra charge.

Capacity	gallons	4	6	8
Size	inches	17 1/2 x 12	20 1/2 x 12	23 1/2 x 12
Price, as Described		\$29.15	\$32.25	\$36.95
" without Fittings		15.00	18.10	22.80

Enameled Iron Closet Tanks

Enameled iron round front low tank with china handle top lever, elevated high pressure float valve, rubber ball flush valve, nickel-plated supply pipe and flush connection.

6-gallon
Size, 21x17x8 inches.

Price, each \$30.00

8-gallon
Size, 22x18 1/4 x 8 inches.

Price, each \$32.00

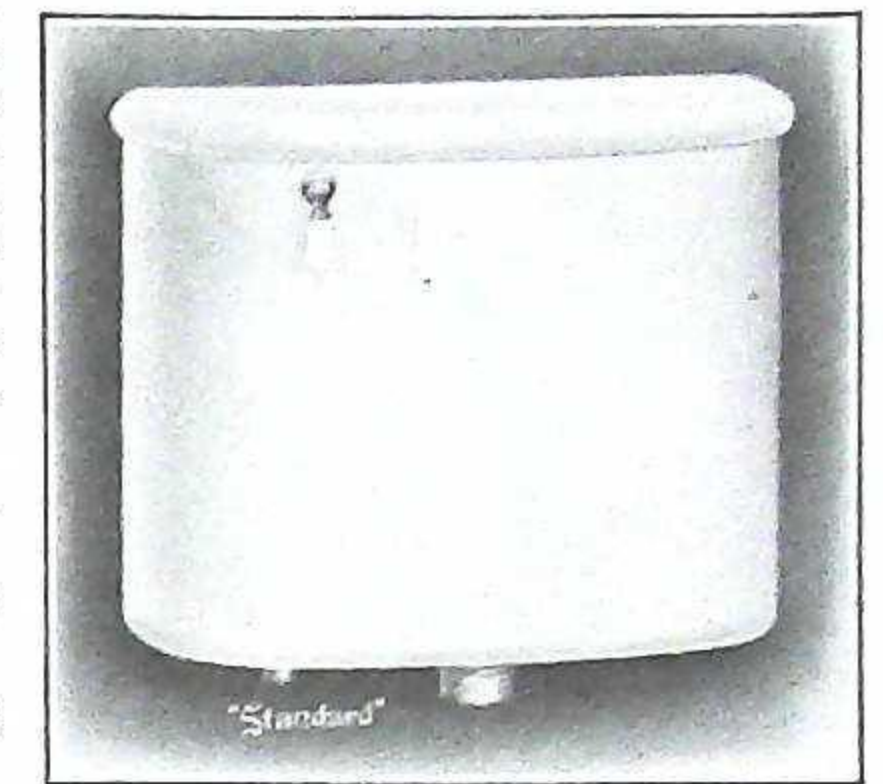


Fig. 435

Enameled Iron Closet Tanks

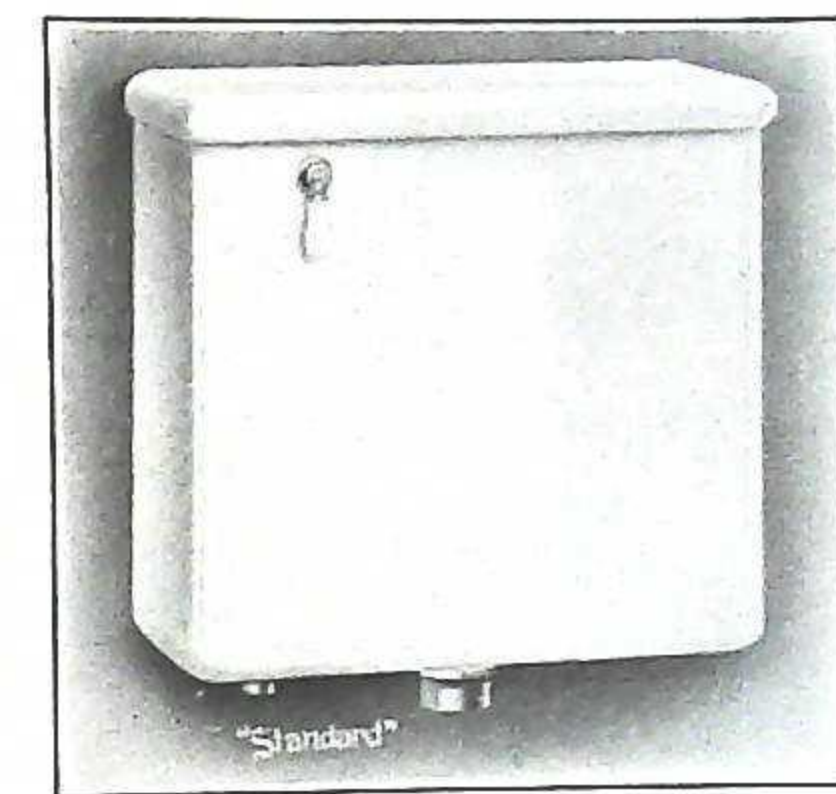


Fig. 436

Enameled iron straight front low tank with china handle top lever, elevated high pressure float valve, rubber ball flush valve, nickel-plated supply pipe and flush connection.

6-gallon
Size, 21x16 1/2 x 7 3/4 inches.

Price, each \$30.00

8-gallon
Size, 21x18 1/4 x 7 3/4 inches.

Price, each \$32.00

Enameled Iron High Tanks

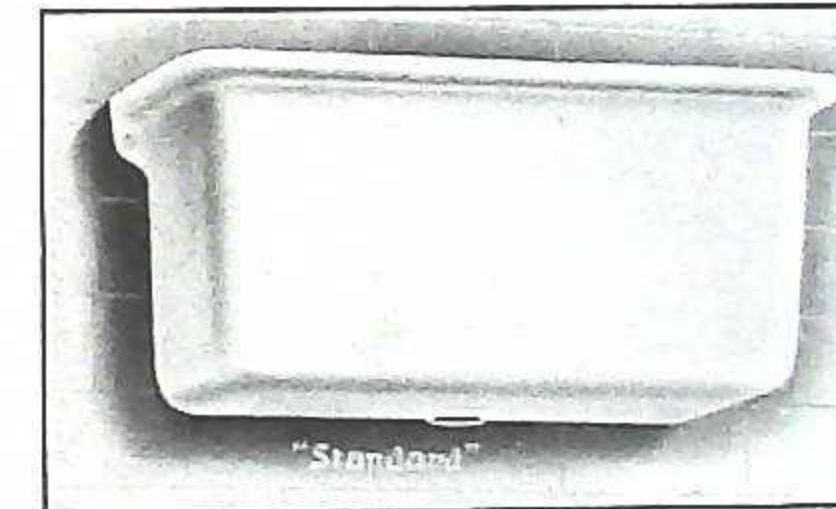


Fig. 437

Enameled iron high tank with top supply float valve and chain and pull fittings.

Can also be furnished for bottom supply without extra charge.

No.	1	2	3	4
Capacity	gal.	2 1/2	5	7 1/2
Size	in.	16 1/2 x 10 3/4	19 x 10 3/4	21 x 12 1/2
Price, Painted	ea.	\$12.20	\$13.25	\$15.60
" Enam. Inside	"	14.45	15.60	19.05
" All Over	"	16.20	17.35	21.35

If with automatic fittings deduct 55 cents.

Wood High Closet Tanks

Oak round cornered high closet tank with 8-ounce copper lining and varnish finish, high pressure ball cock, galvanized goose neck, flush valve, chain and pull.

Price, 5-gallon, each \$9.00

Price, 7-gallon, each 11.25

These tanks are furnished in natural, antique or golden oak.

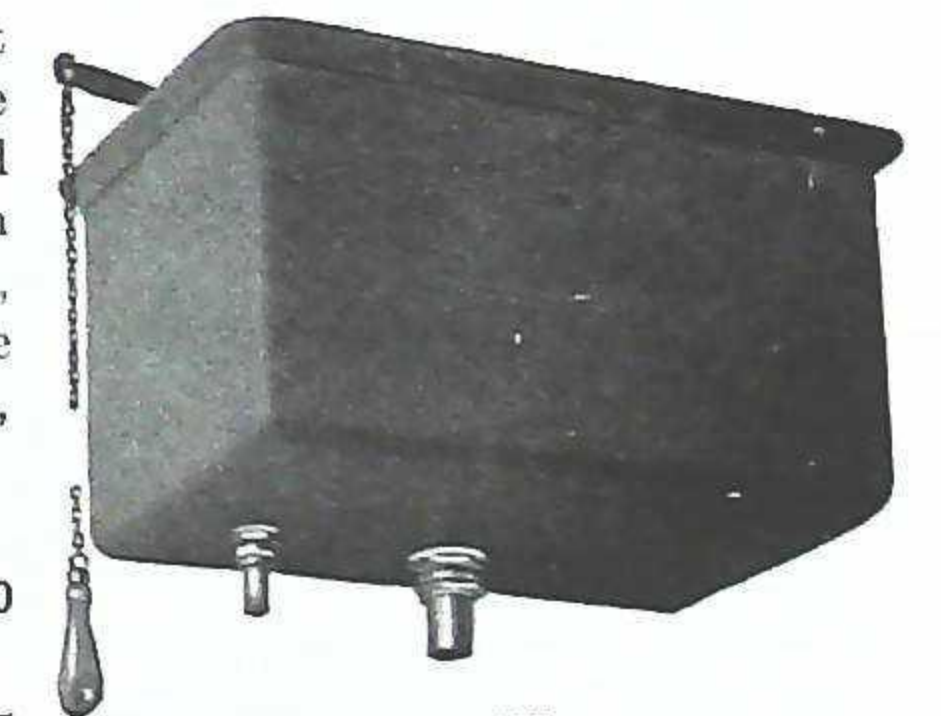


Fig. 438

No. 102 Sani-white Closet Seats



Fig. 441

Sani-white full saddle seat and cover with sanitary lip, all white including hinges, exposed metal eliminated.
Price, No. 102.....each \$22.77

No. 142 Sani-White Closet Seats

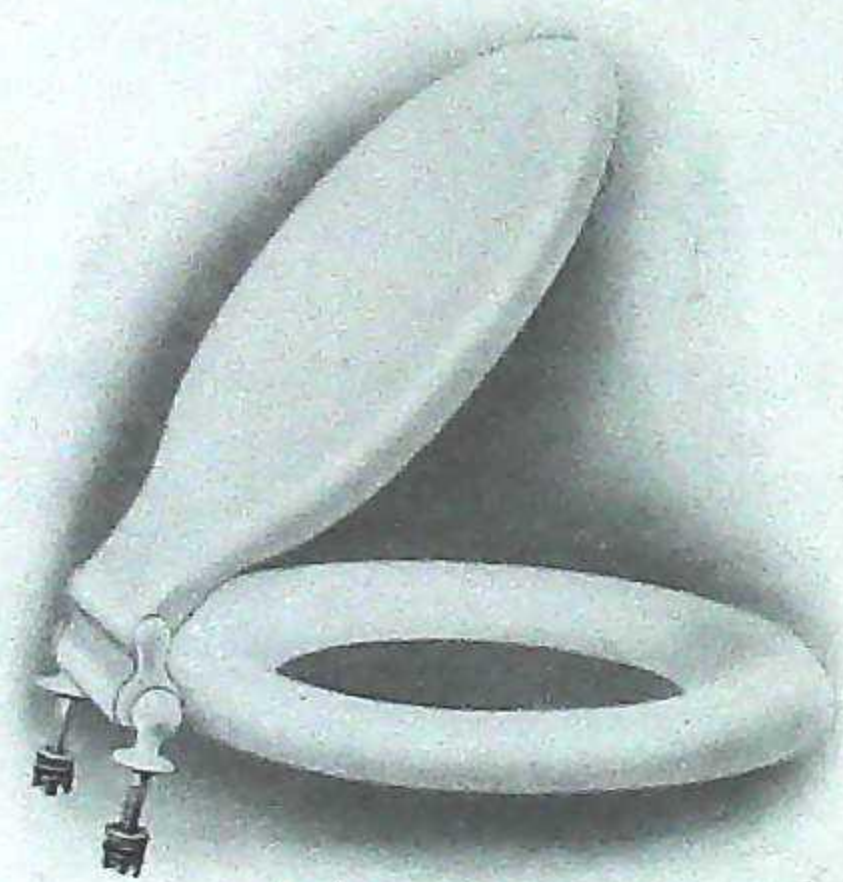


Fig. 442

All Sani-White plain pattern seat and cover with concealed hinge, white posts, and white rubber bumpers. No exposed metal.
Price, No. 142 with Cover..... \$16.67
" " 150 without Cover..... 13.11

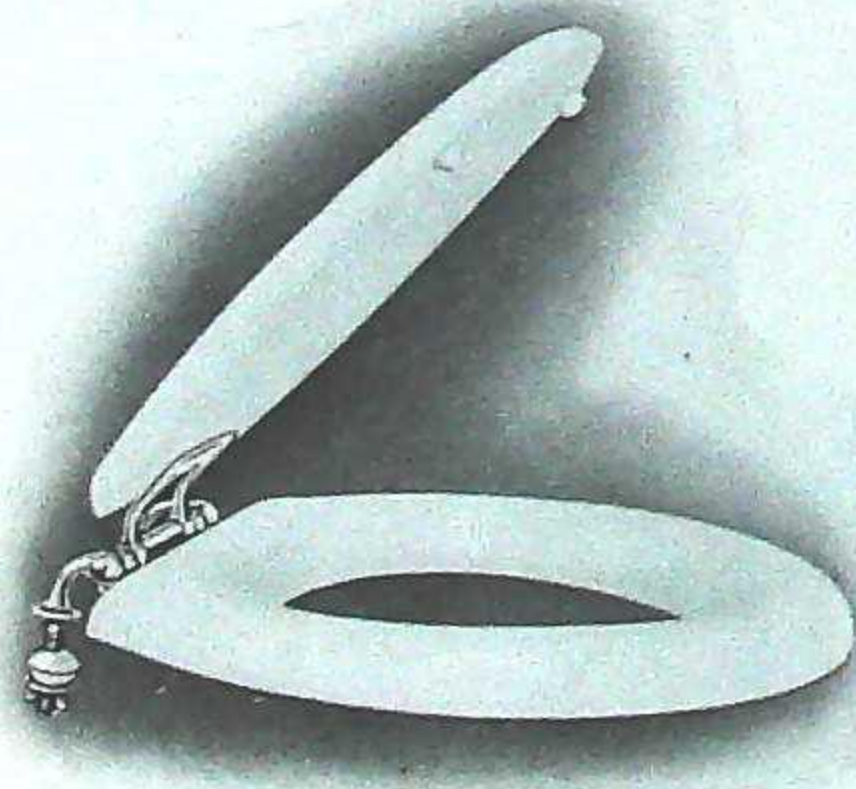


Fig. 443

No. 440 Sani-white Closet Seats

Sani-white plain square back seat and cover with nickel-plated heavy cast brass bar hinge and white cushion bar bumpers.
Price, No. 440 with Cover...each \$13.34
Price, No. 450 without Cover...each 10.00

No. 186 Sani-white Closet Seats

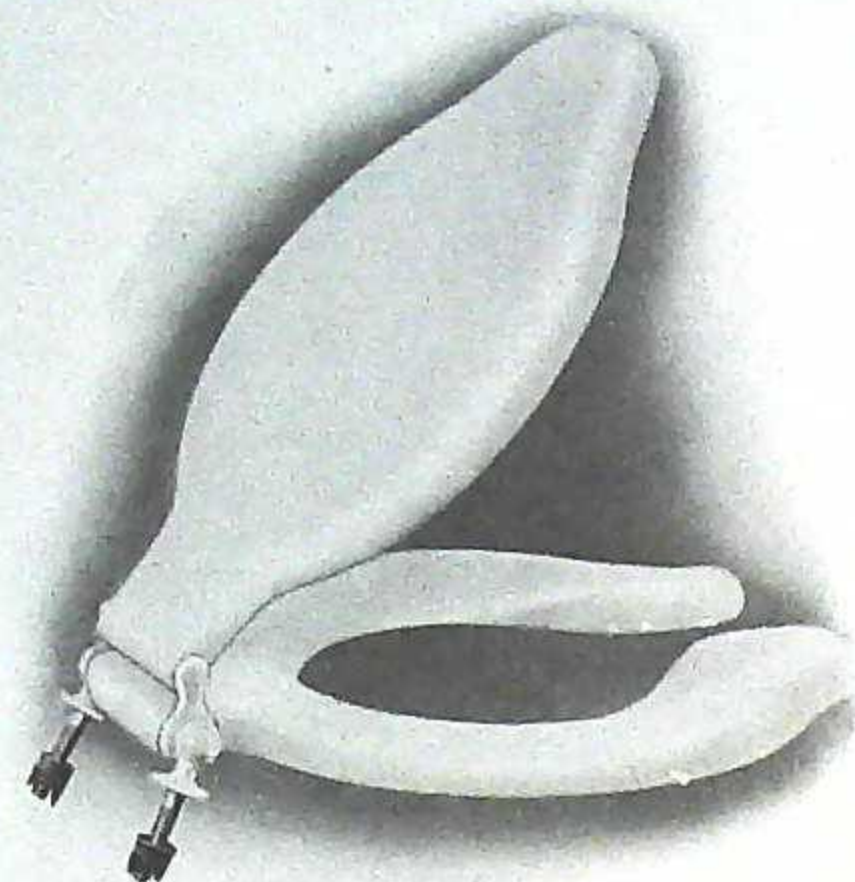


Fig. 444

Sani-white open front full saddle seat and cover for extended lip bowl, all white including hinges, exposed metal eliminated.
Price, No. 186.....each \$23.90

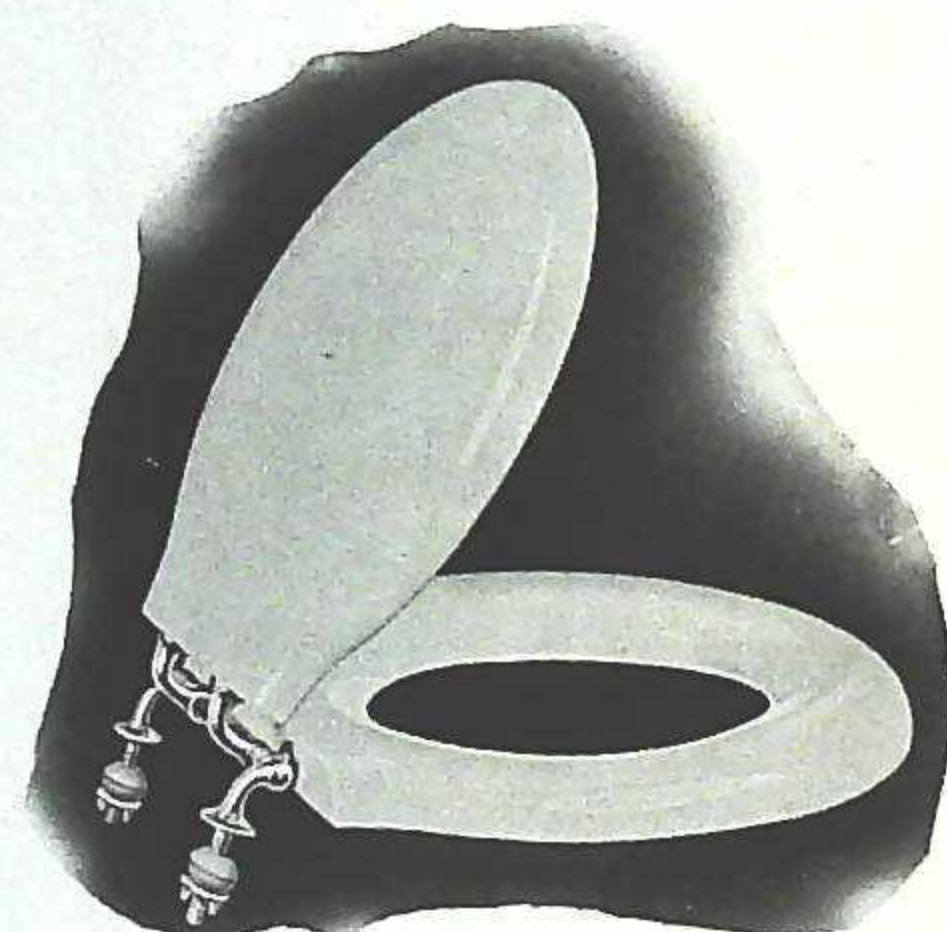


Fig. 445

No. 220 Sani-White Closet Seats

Sani-White plain square back seat with cover, nickel-plated cast brass screw-in bar hinge and white rubber bumpers.
Price, No. 220 with Cover.. \$14.44
Price, No. 230, without Cover. 11.00

No. 360 Sani-White Closet Seats

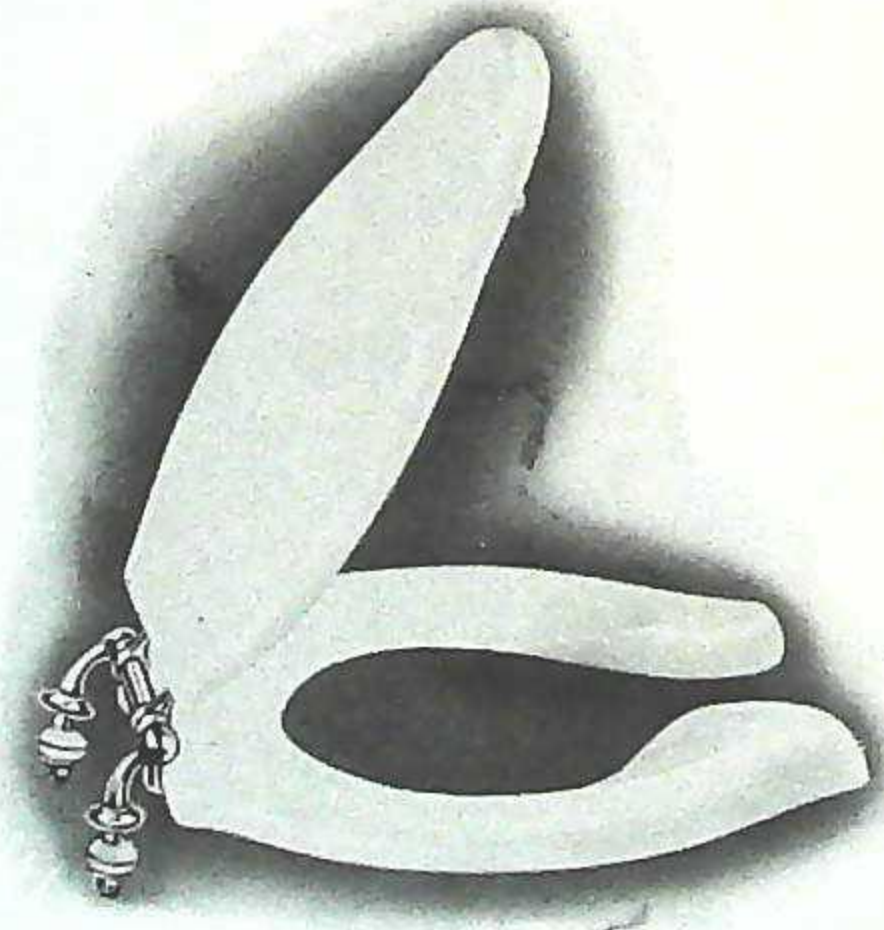


Fig. 446

Sani-White open front full saddle seat and cover for extended lip bowl, with nickel-plated heavy cast brass bar hinge and white cushion bar bumpers.
Price, No. 360 with Cover..... \$18.89
" " 370 without Cover..... 14.89

Whale-Bone-Ite Saddle Seats with Cover No. 16-91

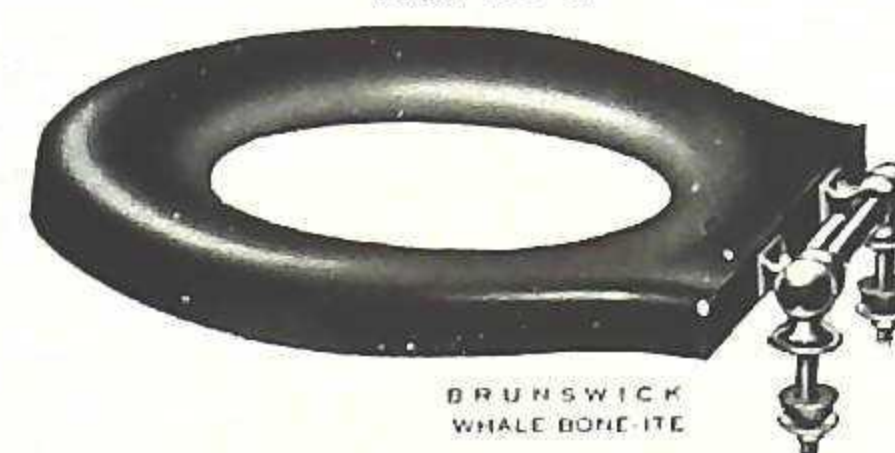


BRUNSWICK WHALE-BONE-ITE Fig. 451

Whale-Bone-Ite saddle seat with cover and nickel-plated bar hinge with straight seat posts, for all staple type bowls.
Price, Ebony Finish.....ea. \$25.80
Price, Mahogany Finish.....ea. 30.80

No. 16-9 without Cover
Price, Ebony Finish.....each \$14.70
" Mahogany Finish..... " 17.30

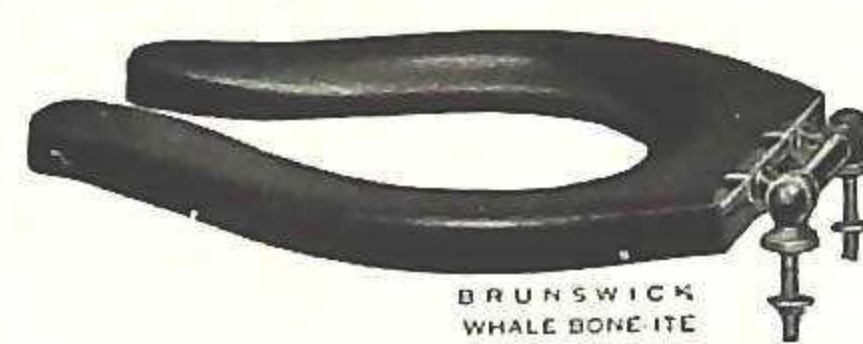
Whale-Bone-Ite Oval Seats without Cover No. 24-9



BRUNSWICK WHALE-BONE-ITE Fig. 452

Whale-Bone-Ite oval seat without cover with nickel-plated bar hinge and straight seat posts, for all staple bowls.
Price, Ebony Finish.....each \$13.50
" Mahogany Finish..... " 15.25
No. 24-91 with Cover
Price, Ebony Finish.....each \$24.50
" Mahogany Finish..... " 28.50

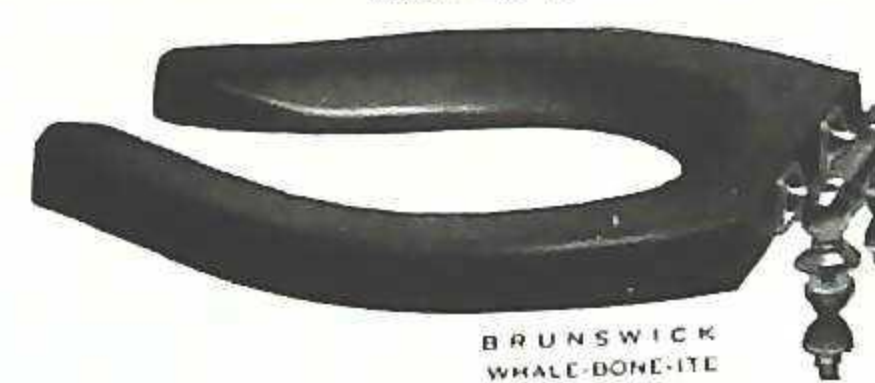
Whale-Bone-Ite Extended Open Front Closet Seats



BRUNSWICK WHALE-BONE-ITE Fig. 453

No. 21-9 without Cover
Whale-Bone-Ite extended open front seat without cover with nickel-plated bar hinge and straight seat posts. For all extended lip bowls.
Price, Ebony Finish.....each \$14.80
" Mahogany Finish..... " 18.30
No. 21-91 with Cover
Price, Ebony Finish.....each \$26.00
" Mahogany Finish..... " 30.00

Whale-Bone-Ite Open Front Seats without Cover No. 23-9



BRUNSWICK WHALE-BONE-ITE Fig. 454

Whale-Bone-Ite open front seat without cover with nickel-plated bar hinge and straight seat posts, for all staple bowls.
Price, Ebony Finish.....each \$14.00
" Mahogany Finish..... " 16.70
No. 23-91 with Cover
Price, Ebony Finish.....each \$25.00
" Mahogany Finish..... " 29.00

No. 700 Closet Seats



Fig. 455

Plain pattern seat and cover with No. 68 heavy nickel-plated cast brass bar hinge and cushion bar bumpers.
For regular bowl.
Price, No. 700, Mahogany Finish, Piano Polish..... \$6.55
" " 702, Natural or Golden Oak, Piano Polish.. 6.33

No. 710 Golden Oak Closet Seats



Fig. 456

Golden oak plain seat without cover with No. 66 heavy nickel-plated cast brass bar hinge and cushion bar bumpers, spiral grooved dowel reinforcement in both front and back of seat, rubbed and polished finish.
Price, No. 710..... \$5.67

No. 135 Never Split Closet Seats



Fig. 457

1 1/4-inch selected quarter sawed white oak saddle seat with cover and heavy cast brass offset bar hinges.
Price, No. 135 Natural, Antique or Golden Oak, Imitation Mahogany Piano Polish.... \$8.00

No. 177 Closet Seats



Fig. 458

1 1/2-inch selected quarter sawed oak seat with open front and square back, fitted with heavy cast brass hotel hinge.
Price, No. 177 Natural, Antique, or Golden Oak, Imitation Mahogany or Imitation Cherry, Rubbed Finish \$7.70

No. 20 Closet Seats

Full saddle 1 1/4-inch peg-locked, reinforced seat and cover, 3-coat varnish finish, with nickel-plated cast brass bar hinge.

No. 20 Saddle
 Price, Oak each \$7.70
 Price, Birch Mah. each 7.00
No. 2 Oval
 Price, Oak each \$7.25
 Price, Birch Mah. each 6.55
 If without Cover Deduct each .70



Fig. 461

No. 3 Closet Seats

Oval Shape
 1 1/4-inch double spiral dowel reinforced seat and cover with nickel-plated cast brass bar hinge. Three-coat varnish finish.

No. 3 Oval
 Price, Oak each \$7.50
 " Birch Mah. each 7.00
No. 30 Saddle
 Price, Oak each \$8.25
 " Birch Mah. each 7.75
 If without Cover each .70



Fig. 462

No. 12 Closet Seats

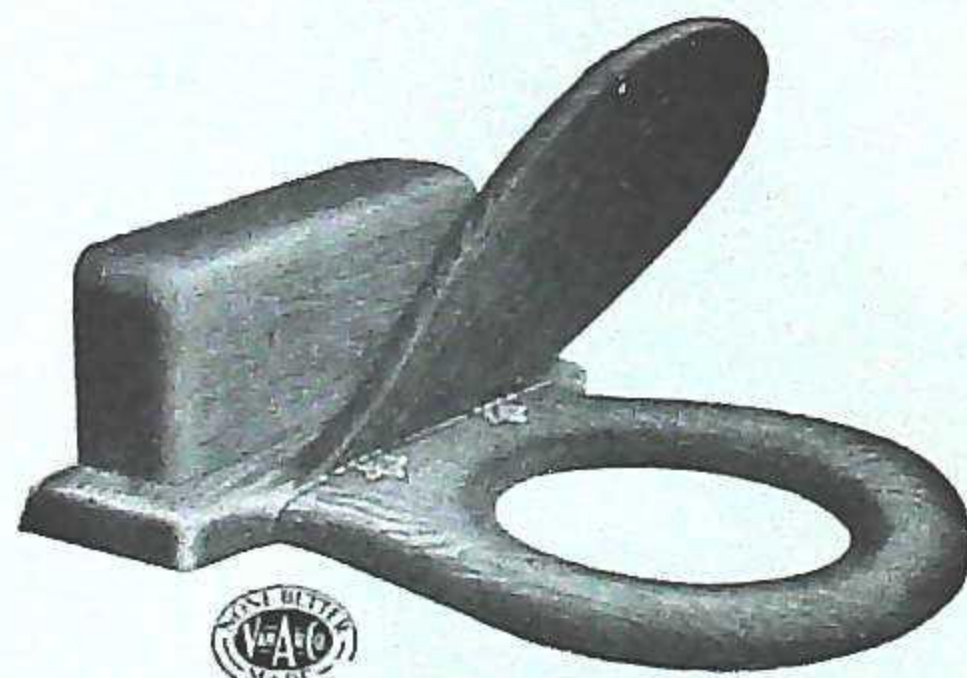


Fig. 463

No. 12, 1 1/4-inch oak pedestal seat and cover, with back strip and nickel-plated hinges, natural or golden oak.
 Price, with Cover \$3.60
 " without Cover 3.20

No. 176 Closet Seats

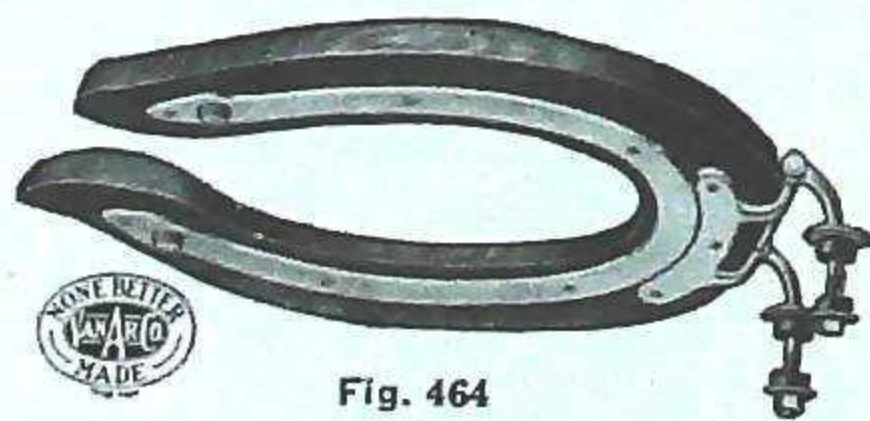


Fig. 464

Open front saddle seat with nickel-plated cast brass full reinforcing plate, rubber bumpers and nickel-plated cast brass bar hinge.

Price, No. 176 for Regular Bowl \$7.50
 " " 175 " " with Cover 8.00
 " " 178 " Extended Lip Bowl, less Cover 8.00
 " " 177 " " " with " 8.50

Roberts Indoor Chemical Closets



Fig. 465

The body of the closet, inside container pail, and ventilating pipe are made of galvanized steel. The outside of the closet and ventilating pipe are finished with a pure white enamel having a high gloss. The gold striping near the top and bottom of the body is just enough decoration to give a very pleasing appearance. There are small ventilating holes near the bottom to create a draft to carry any odor up the ventilating pipe. The top and bottom of the closet consist of iron castings in the shape of rings to give strength and durability to the outfit. The seat and cover are either of solid oak or birch mahogany and beautifully finished with a high polish. The cover is fastened with nickel-plated bar hinges.

With each closet is furnished sufficient chemical to last the average family about 6 months. There is also 6 lengths of 3-inch ventilating pipe 14 inches long, one elbow, one collar, one roll of paper, and paper holder. Complete directions are also included.

Price, Complete each \$14.95

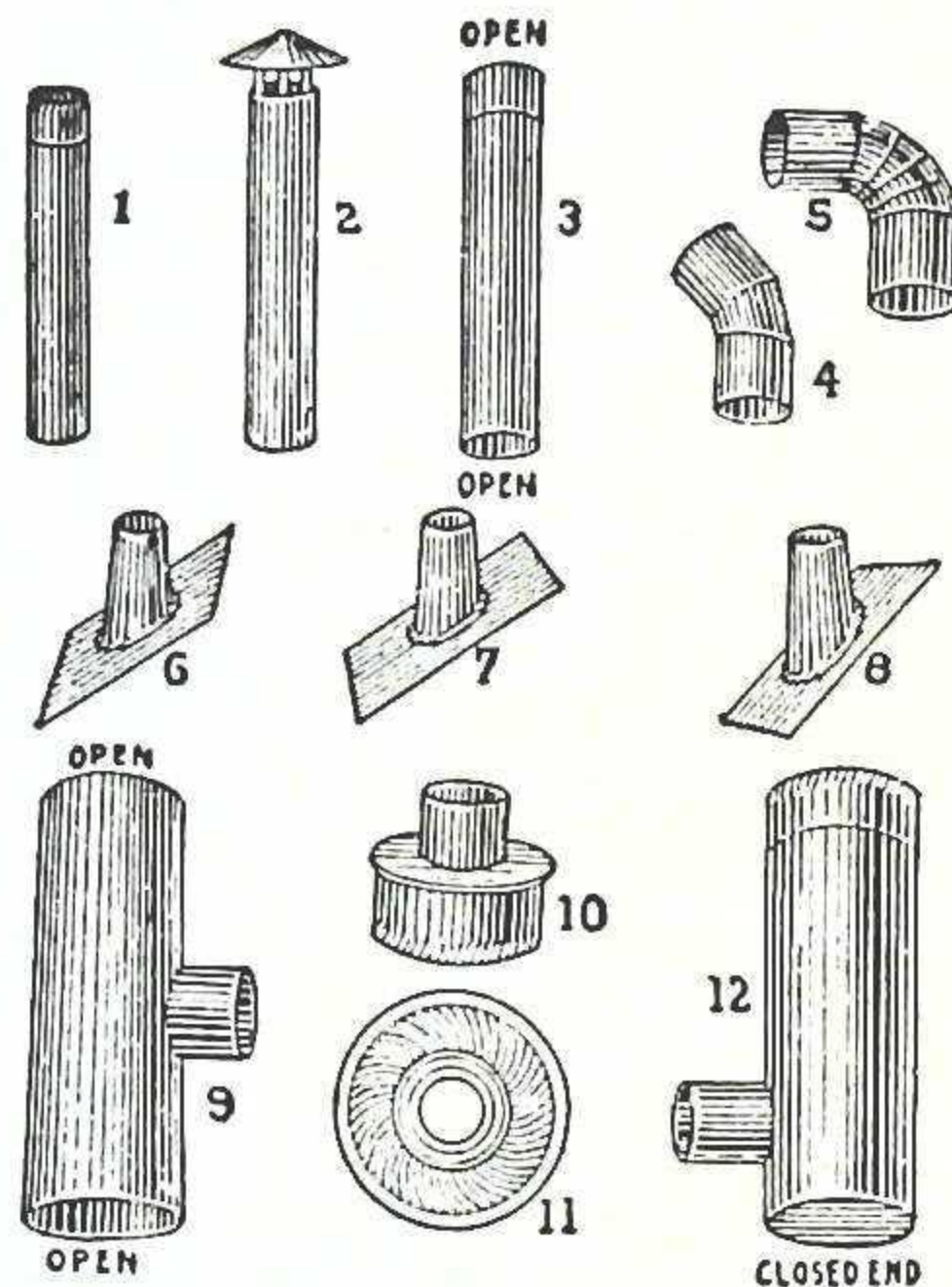


Fig. 466

This illustration shows a variety of attachments that will be helpful in setting up the closet in convenient places. As no two installations are alike, it will be necessary to measure the length of pipe and order anything extra that is needed.

The regular equipment is 7 lengths of enameled pipe, 14 inches long; 1 collar and chimney reducer from 6 to 3 inches, enameled. Extra attachments are sold at cost.

No.	Description	Price, Each
1-3	3-inch Enameled Pipe	\$.20
2-3	Galvanized Pipe with Cap	.40
3-3	" " " "	.25
4-45	Degree Elbow Galvanized	.40
5-90	" " Enameled	.40
6	Quarter Pitch, Roof Saddle	.50
7	Third " " "	.50
8	Half " " "	.50
9	6-inch to 3-inch T Pipe, Enameled	.50
10	6 " " 3 " Chimney Reducer	.40
11	3 " Collar	.20
12	6 " to 3-inch T Pipe, Galvanized	.50

Porcelain Urinal Stalls with Straight Front, six-gallon vitreous china tank on concealed bar hanger, operated by periodic discharge fitting with top supply, nickel-plated brass three-way flush connection, nickel-plated brass fan spreaders with slip nuts, nickel-plated brass outlet strainers and connections for either lead or wrought iron pipe and vitreous china strainers.

Dimensions

Height over all 41 3/4 inches
 Height from floor line 38 inches
 Wall to front of lip 15 inches

Width of Stall	18	24
Approximate Shipping Weight, each Stall	320	390
Approximate Shipping Weight, Tank and Fittings	110	110

Prices on porcelain urinals are for kiln-run ware. An extra charge is made for special selection.

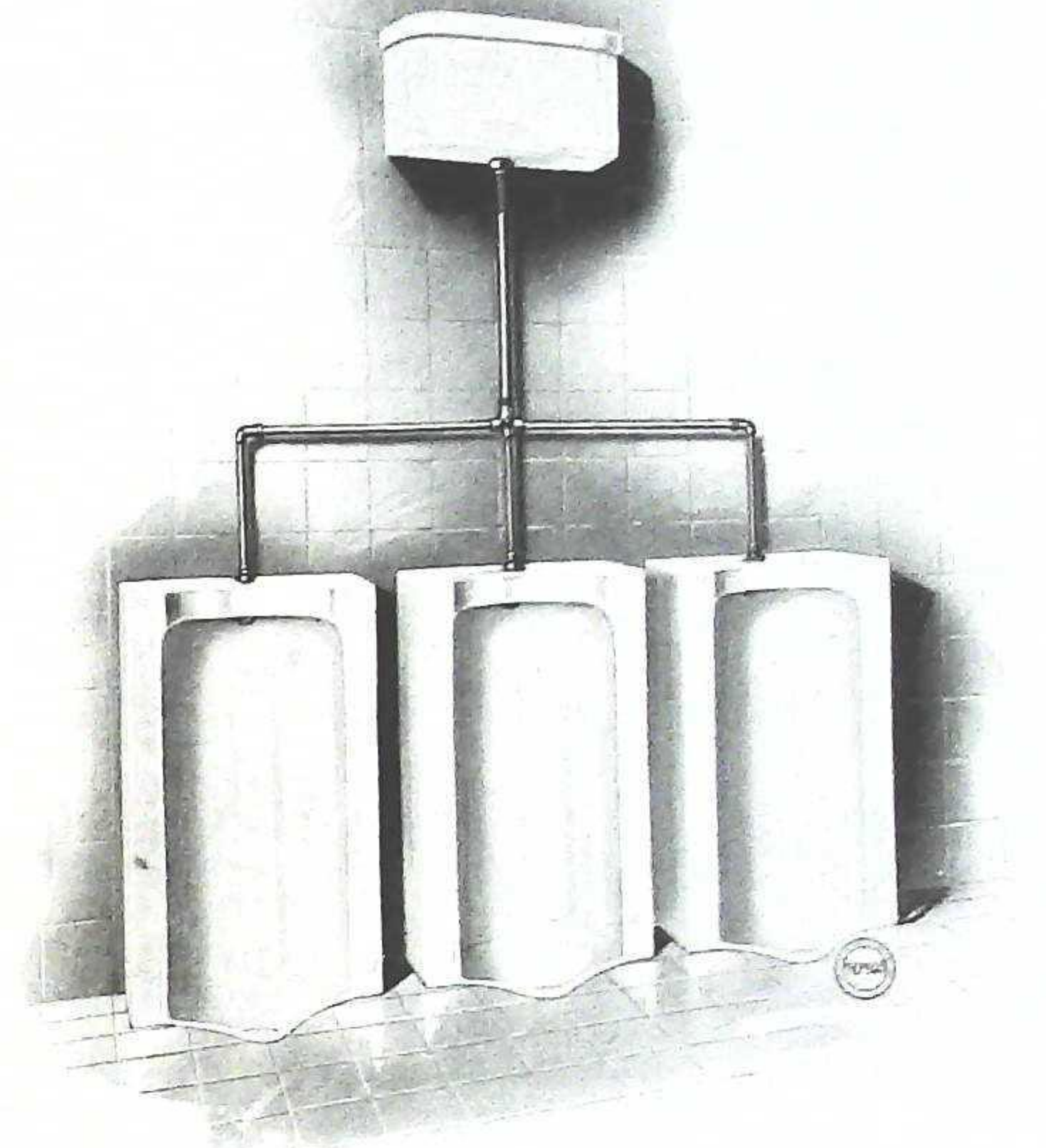


Fig. 471

Porcelain Urinal Stalls with Extended Shields, six-gallon vitreous china tank on concealed bar hanger operated by periodic discharge fitting with top supply, nickel-plated brass three-part flush connection, nickel-plated brass fan spreaders with slip nuts, nickel-plated brass outlet strainers and connection for either lead or iron pipe, and vitreous china strainers.

Dimensions

Height over all 41 3/4 inches
 Height from floor line 38 inches
 Wall to front of lip 15 inches

Width of Stall	18	24
Approximate Shipping Weight, each Stall	320	390
Approximate Shipping Weight, Tank and Fittings	110	110

These urinals may be fitted with pull tank, flush valves or with pedal-operating valves.

Prices on porcelain urinals are for kiln-run ware. An extra charge is made for special selection.

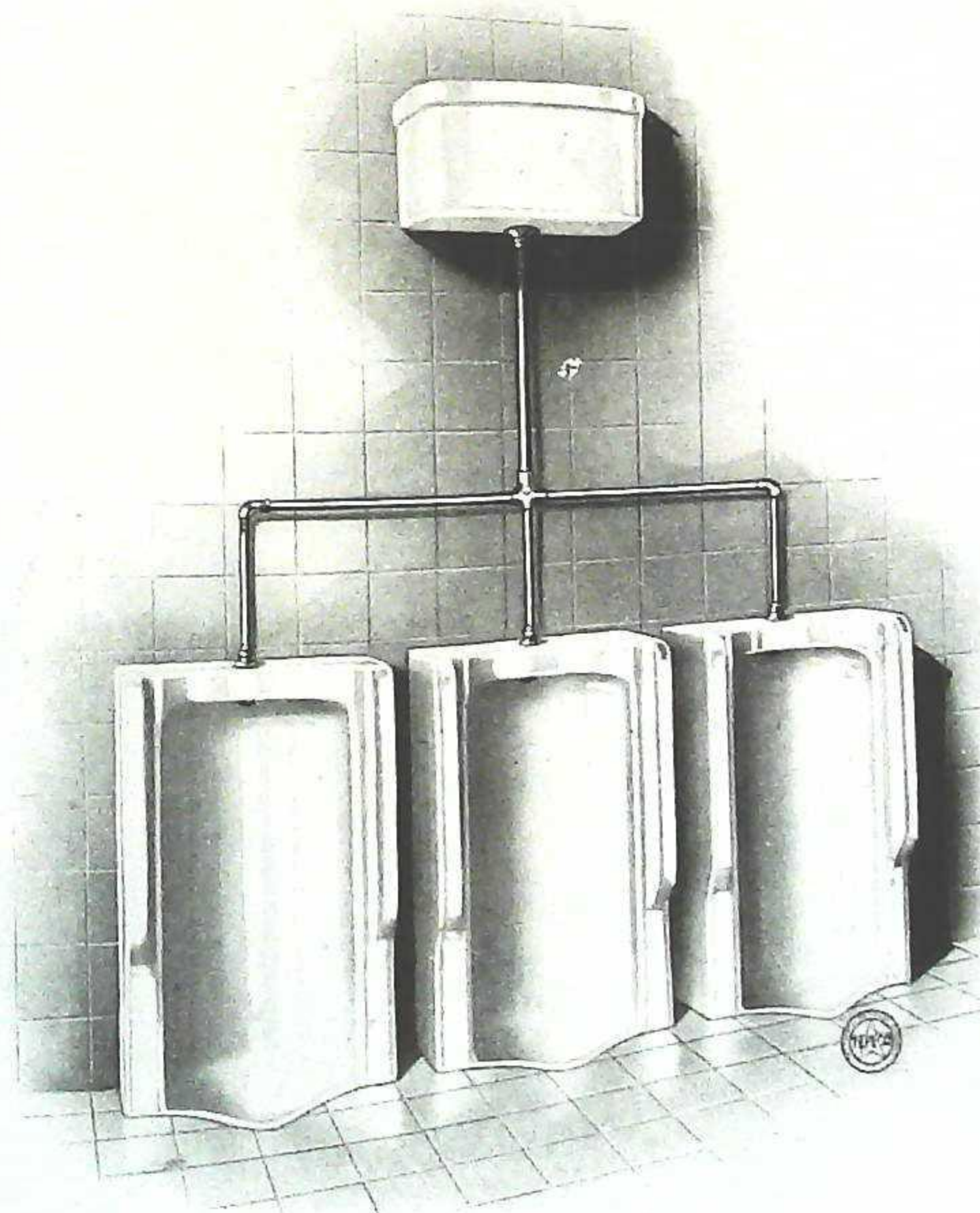


Fig. 472

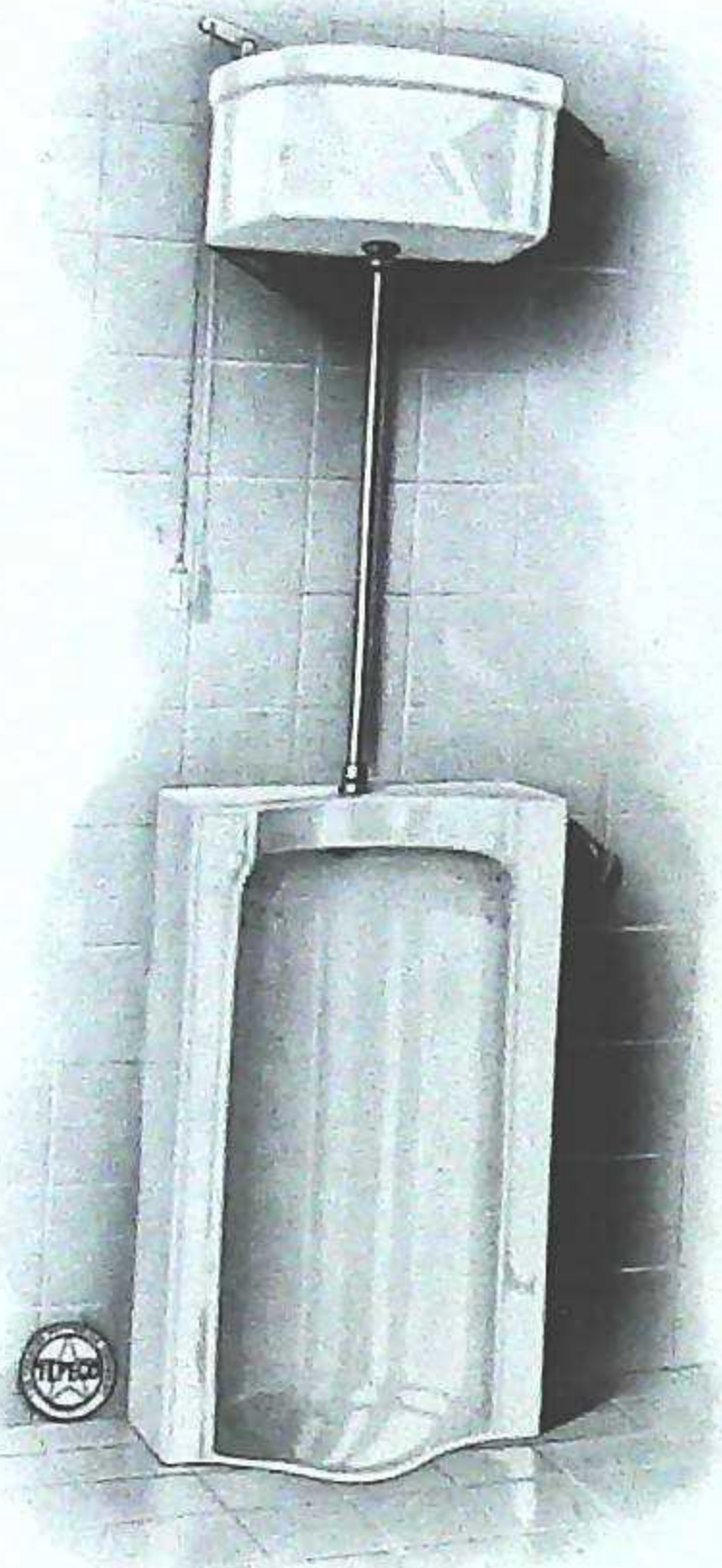


Fig. 481

Porcelain Straight Front Urinal Stall with vitreous china four-gallon round front tank on concealed bar hanger, pull handle discharge fittings with 3/8-inch iron pipe top supply, nickel-plated brass flush pipe, nickel-plated brass fan spreader with slip nut, nickel-plated outlet strainer and connection for either 2-inch lead or iron pipe, and vitreous china strainer.

Dimensions

Height overall 41 3/4 inches
 Height from floor line 38 inches
 Wall to front of lip 15 inches

Width of Stall	inches	18	24
Approximate Shipping Weight	pounds	320	390

Prices on porcelain urinals are based on kiln-run ware. An extra charge will be made for special selection.

Porcelain Extended Wing Front Urinal Stall with vitreous china four-gallon round front tank on concealed bar hanger, periodic discharge fitting, 3/8-inch iron pipe size top supply, nickel-plated brass flush pipe, nickel-plated brass fan spreader with slip nut, nickel-plated brass outlet strainer and connection for either 2-inch lead or iron pipe, and vitreous china strainer.

Dimensions

Height overall 41 3/4 inches
 Height from floor line 38 inches
 Wall to front of lip 15 inches

Width of Stall	inches	18	24
Approximate Shipping Weight, Urinal Only	pounds	320	390
“ “ “ Tank and Fittings	“	60	60

Prices on porcelain urinals are based on kiln-run ware. An extra charge will be made for special selection.



Fig. 482

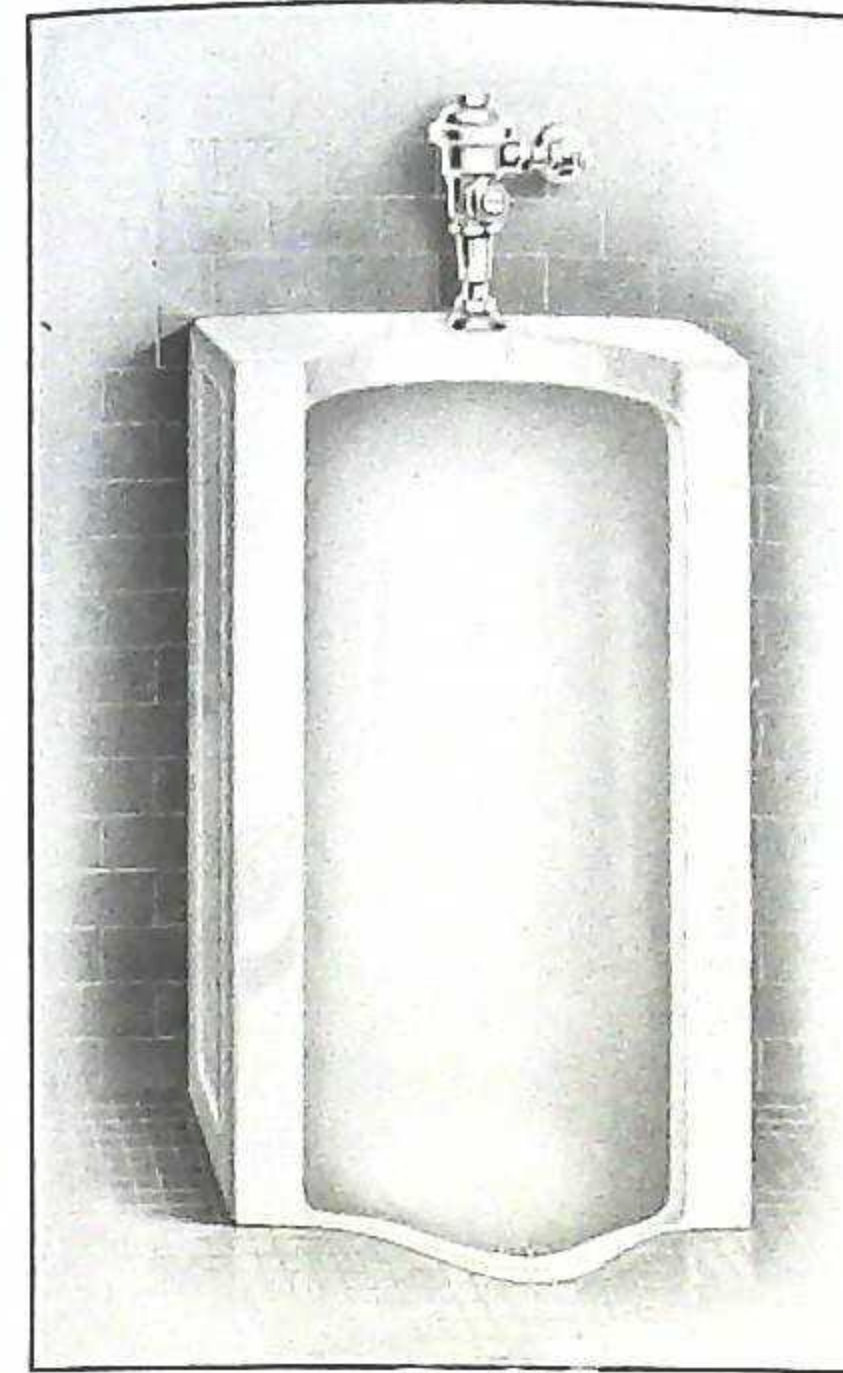


Fig. 491

Porcelain Straight Front Urinal Stall with integral drip receptor, fitted with nickel-plated bronze Royal flush valve with side inlet, china oscillating handle, 1/2-inch ground joint union angle stop, nickel-plated flush connection, nickel-plated bell spreader, nickel-plated brass outlet strainer for 3-inch drain connection.

Width	inches	18	24
Height Over All	“	46	48
“ from Floor	“	41	43
Wall to Front of Lip	“	16 1/2	18 1/4
Approximate Shipping Weight	pounds	285	400

Prices on porcelain urinal stalls are based on kiln-run ware. An extra charge is made for special selection.

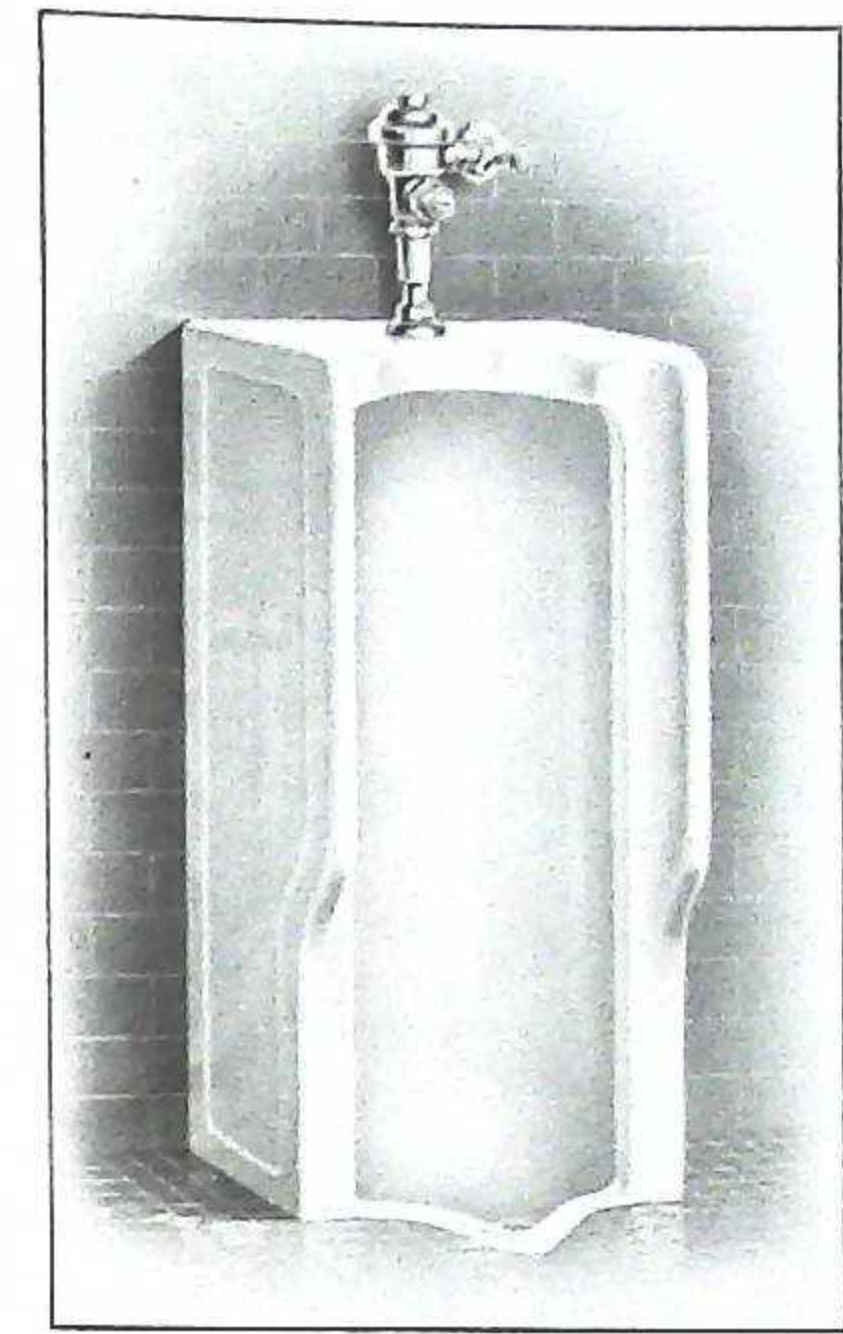


Fig. 493

Porcelain Urinal Stall with integral extension shield and drip receptor, fitted with nickel-plated bronze Royal flush valve with side inlet, china oscillating handle, 1/2-inch ground joint union angle stop, nickel-plated flush connection, nickel-plated bell spreader, nickel-plated brass outlet strainer for 3-inch drain connection.

Width	inches	18	24
Height Over All	“	46	48
“ from Floor	“	41	43
Wall to Front of Lip	“	16 1/2	18 1/4
Approximate Shipping Weight	pounds	335	445

Prices on porcelain urinal stalls are based on kiln-run ware. An extra charge is made for special selection.

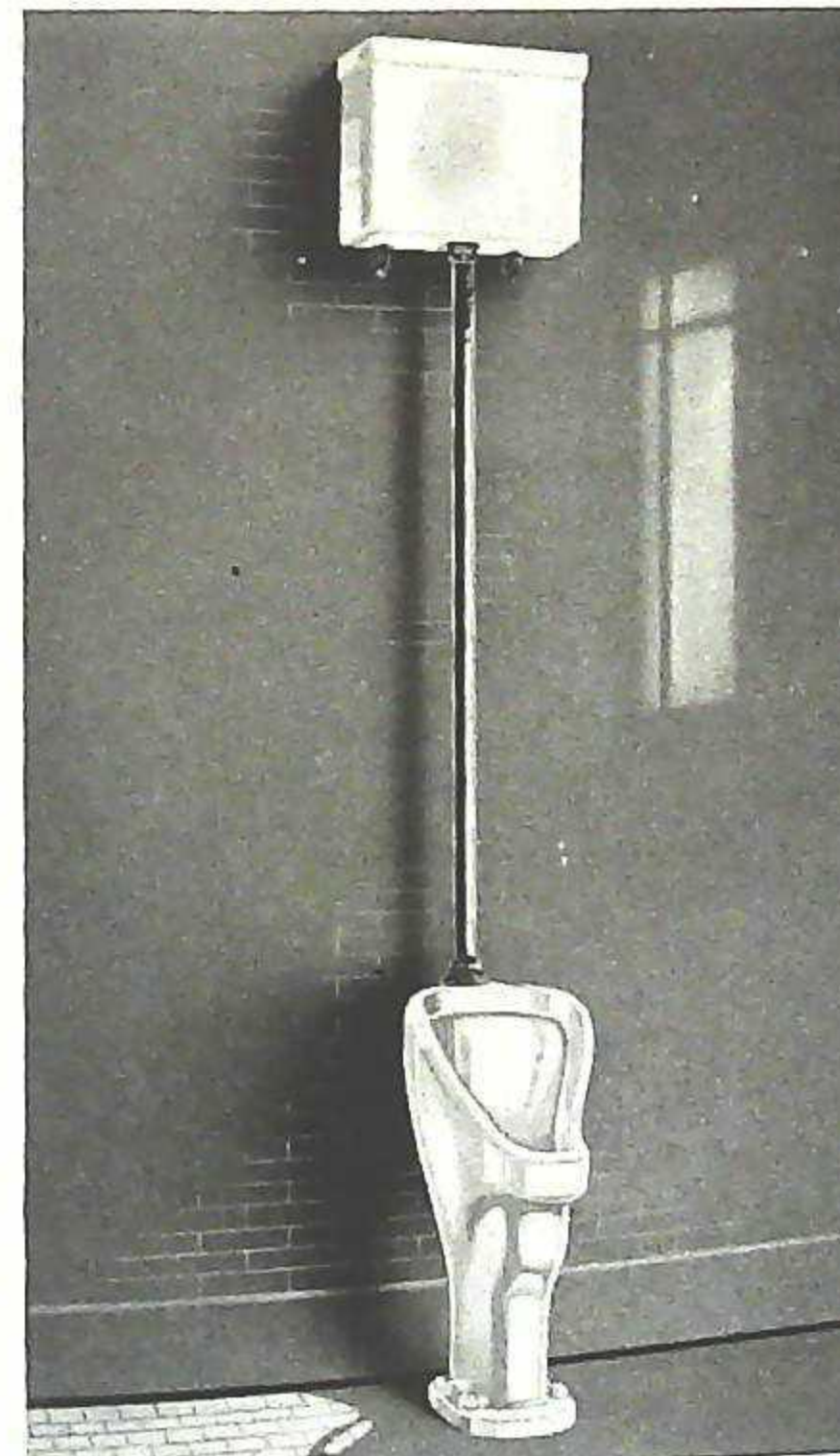


Fig. 492

White Vitreous China Juvenile Height Syphon Jet Pedestal Urinal with 1 1/4-inch brass spud top inlet, floor outlet, extended front lip and flushing rim, white vitreous china high tank, heavy brass control valve, automatic flush valve and N. P. tank supports, N. P. brass flush pipe and china bolt caps.

Opening of bowl 10x18 inches	Water seal 3 inches
Water surface 6 1/2 x 6 1/2 inches	
Approximate Shipping Weight, Complete	pounds 227



Fig. 494

Vitreous China Syphon Jet Pedestal Urinal with 1 1/4-inch top inlet, floor outlet, extended front lip and flushing rim, N.P. bronze royal flush valve with side inlet, china oscillating handle, 1-inch ground joint union angle stop, N.P. flush connection, marble partitions with N.P. standards and clamps.

Opening of bowl 10x18 inches	Water seal 3 inches
Water surface 6 1/2 x 6 1/2 inches	
Approximate Shipping Weight, Urinal Only	pounds 118

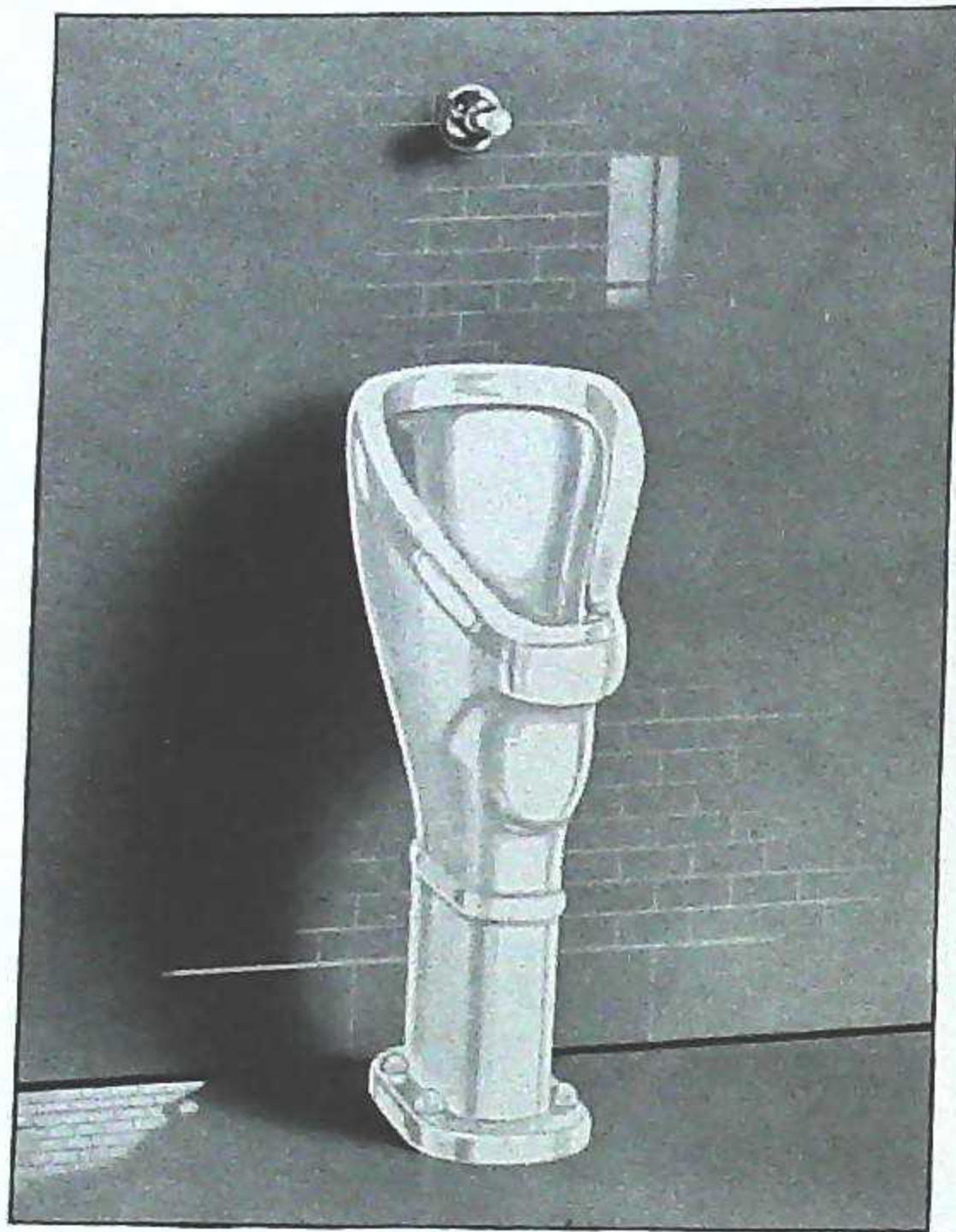


Fig. 501

Vitreous China Syphon Jet Pedestal Urinal with 1 1/4-inch back inlet, floor outlet, extended front lip and flushing rim and 1 1/4 or 1 1/2-inch brass spud, concealed bronze royal flush valve with china oscillating handle through wall and china bolt caps.

Opening of bowl 10x18 inches Water seal 3 inches
Water surface 6 1/2 x 6 1/2 inches

Approximate Shipping Weight, Urinal Only.....pounds 118

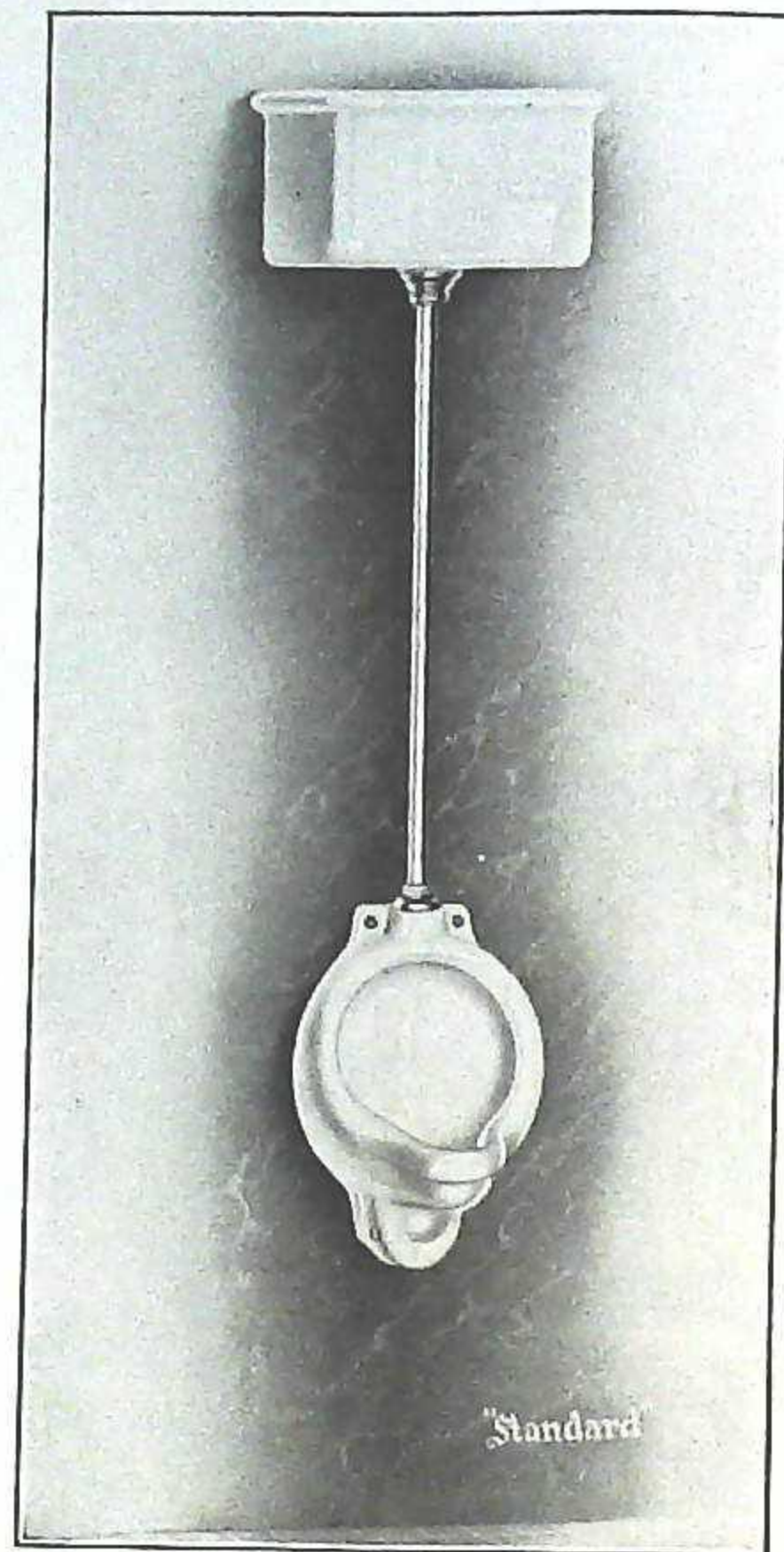


Fig. 502

Vitreous China Syphon Jet Wall Urinal, enameled iron tank with automatic fittings, nickel-plated flush pipe, brass inlet and outlet connections and wall bolts.
Approximate Shipping Weight.....pounds

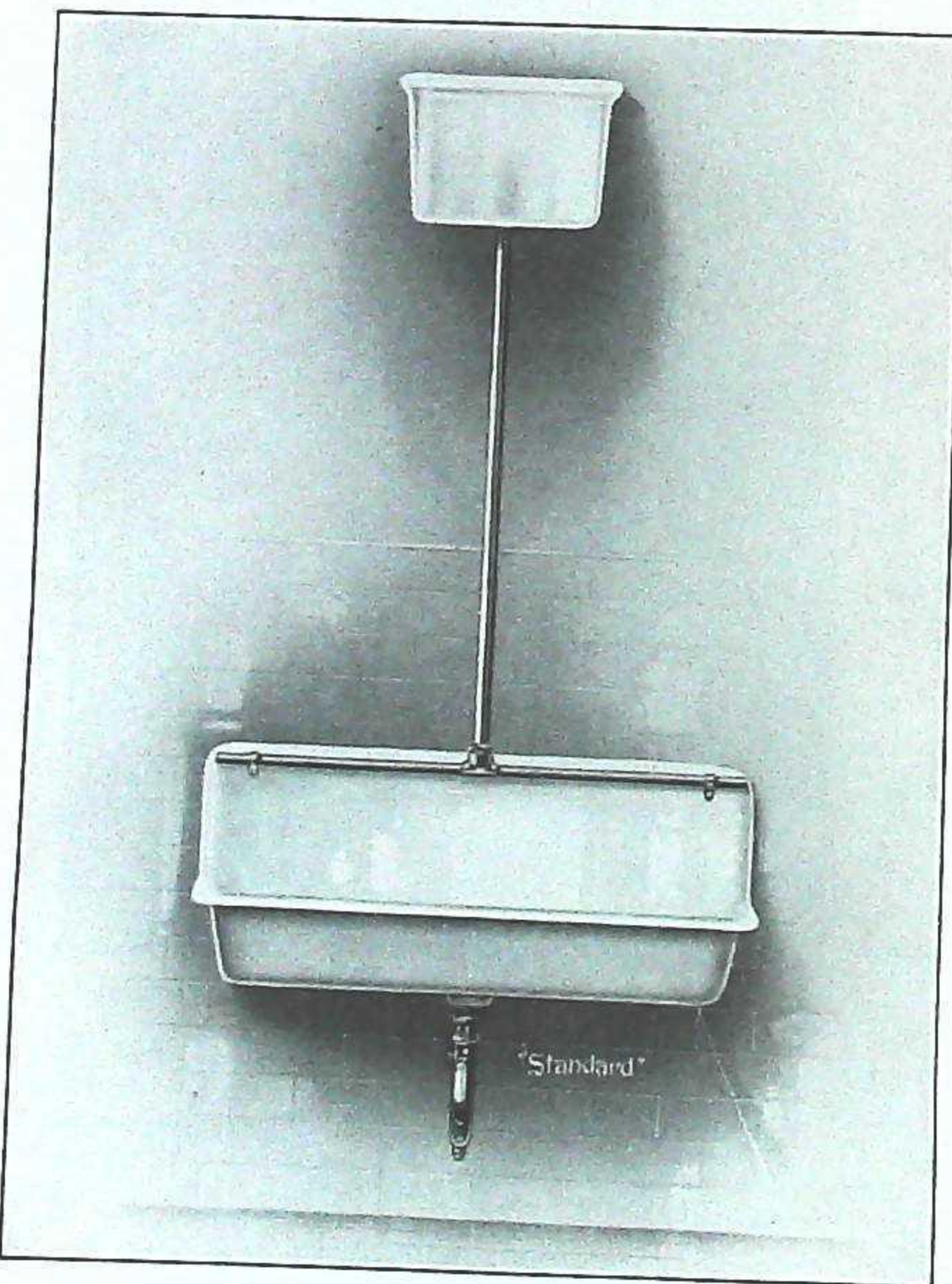


Fig. 503

Enameled Iron Roll Rim Urinal with integral back, concealed wall hangers, automatic enameled iron tank complete with brass fittings, nickel-plated brass flush pipe connected to perforated brass wash down pipe, brass beehive strainer, and nickel-plated bag trap.

Regularly furnished enameled inside and painted outside.

Furnished only with center outlet.

Length.....	feet	2	3	4
Approximate Shipping Weight.....	pounds	155	198	236

Length.....	feet	5	6	...
Approximate Shipping Weight.....	pounds	287	350	...

This urinal is furnished also without trap and with waste coupling for lead pipe if desired.

On this urinal the wash down pipe is fitted along back only, but if desired it may be fitted along back, ends and front.

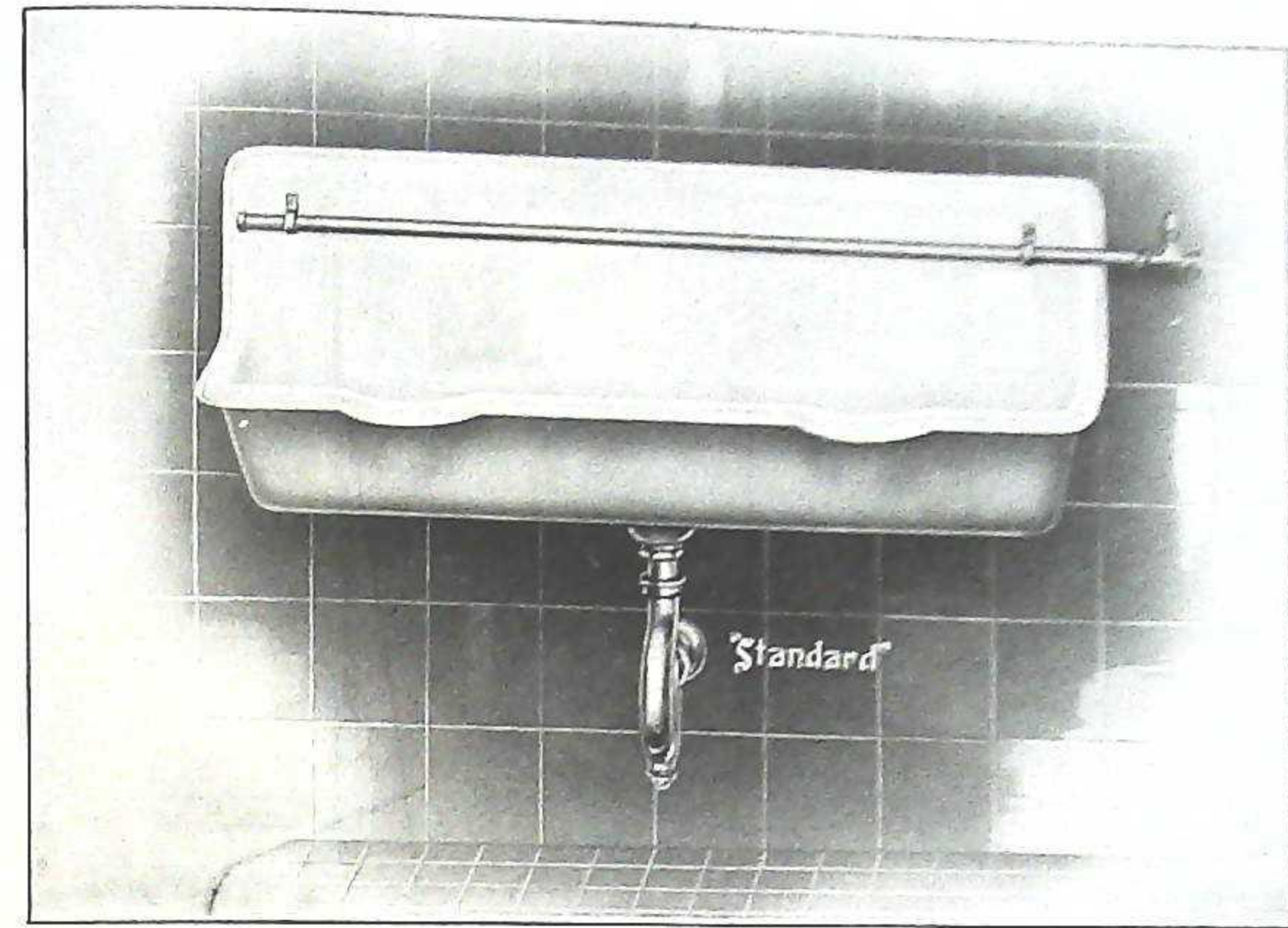


Fig. 511

Enameled Iron Roll Rim Lipped Urinal with integral back, concealed wall hangers, brass beehive strainer, polished brass perforated flush pipe, loose key stop, and nickel-plated bag trap.

Regularly furnished with enameled inside and painted outside.

Length.....	feet	2	3	4
Approximate Shipping Weight.....	pounds	97	134	177

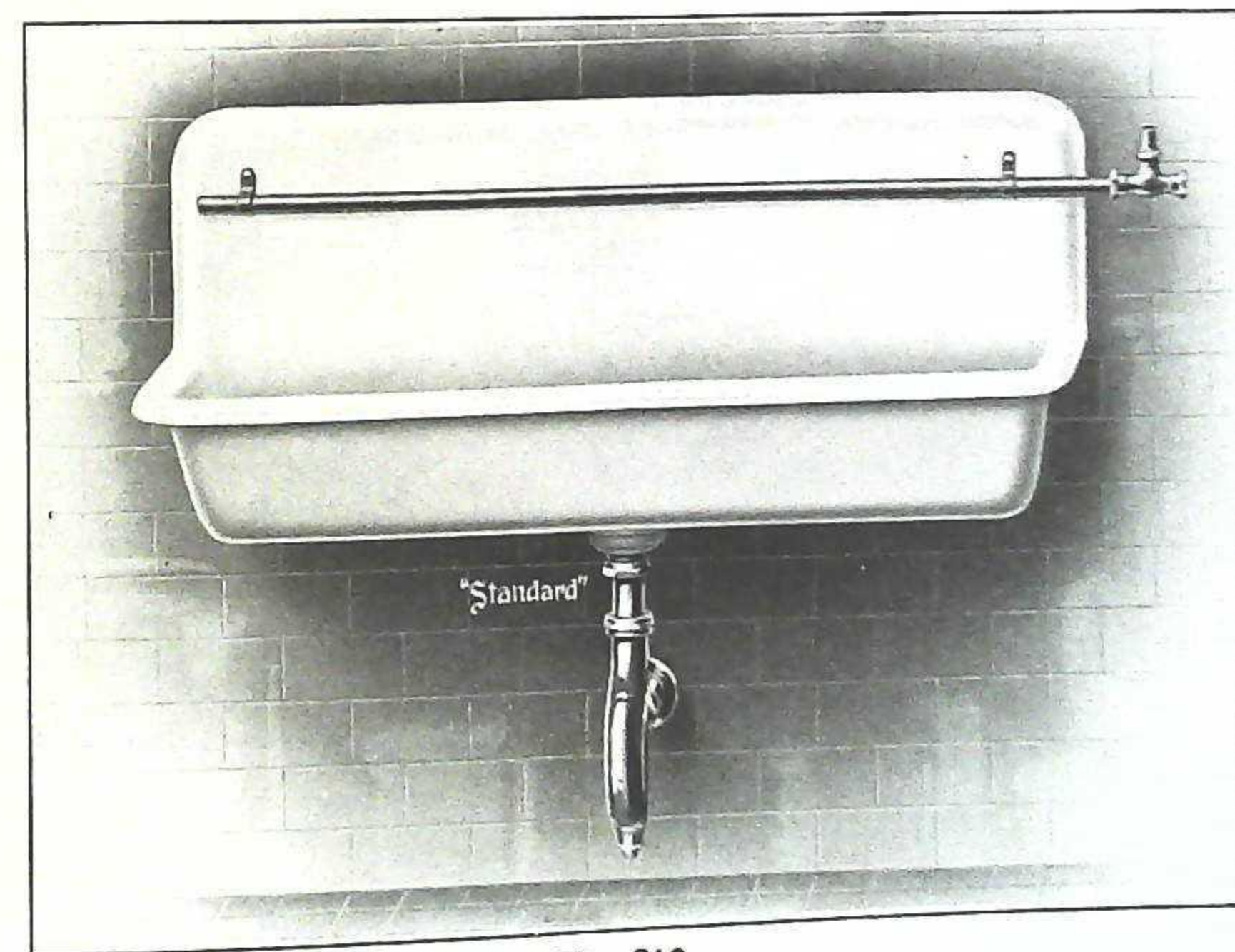


Fig. 512

Enameled Iron Roll Rim Urinal with integral back, concealed wall hangers, brass beehive strainer, polished brass perforated flush pipe, loose key stop and nickel-plated bag trap.

Regularly furnished enameled inside and painted outside.

Furnished only with center outlet.

Length.....	feet	2	3	4	5	6
Approximate Shipping Weight.....	pounds	89	125	164	219	261

This urinal is furnished also without trap and with waste coupling for lead pipe if desired.

On this urinal the wash down pipe is fitted along back only, but if desired it may be fitted along back, ends and front.

Brass Flush Pipes for Automatic Urinal Tanks

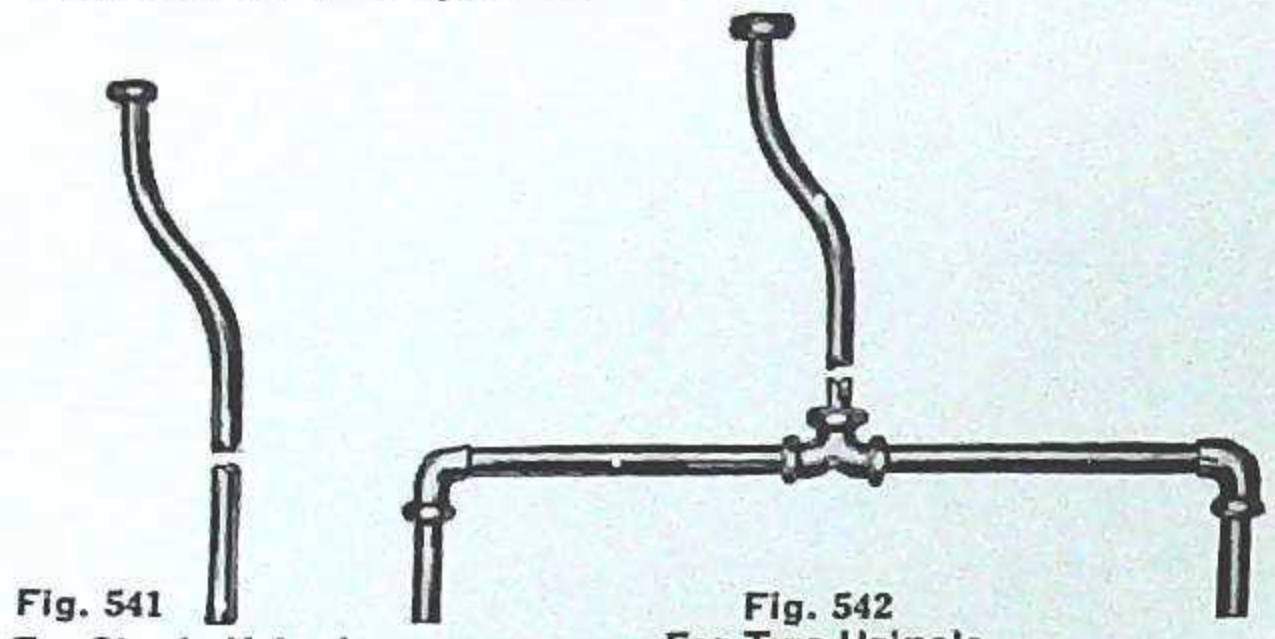
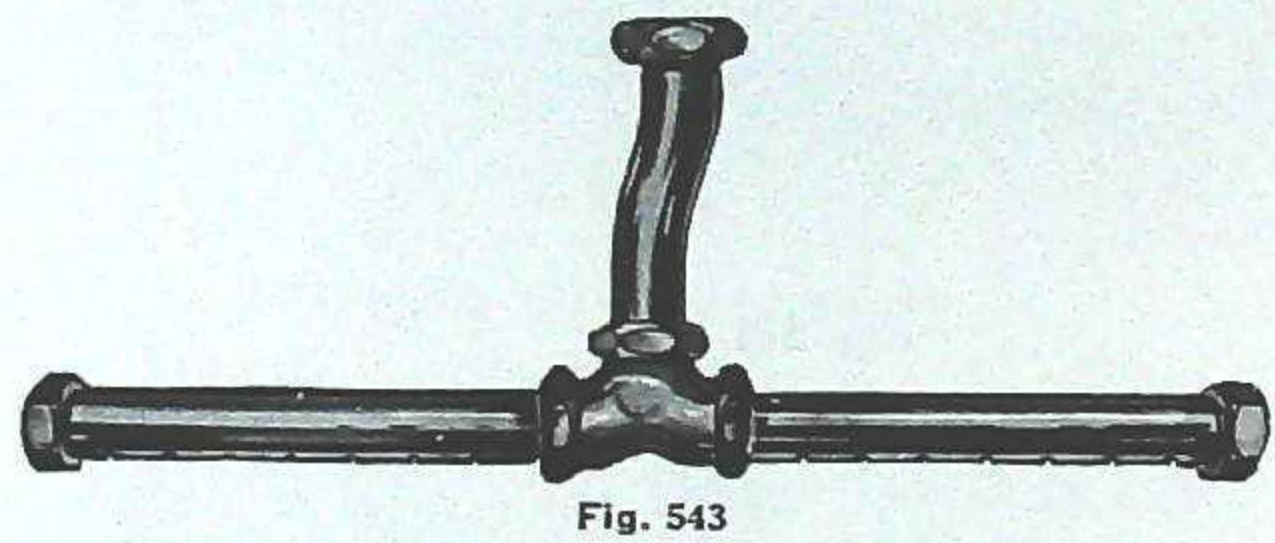


Fig. 541 For Single Urinal No. 5530
 Fig. 542 For Two Urinals No. 5533
 Price, for Single Urinal, Polished or N.P. each \$3.30
 " " Two Urinals " " " " " 11.50
 " " Three " " " " " 14.50
 " " Four " " " " " 19.00

Perforated Brass Flush Pipe with Pipe to Tank

No. 5520



Length.....feet 2 3 4 5 6
 Price, Polished or N. P. ea. \$9.80 10.40 11.00 11.60 12.20

Slip Joint Elbows

Size O. D. Inches
 3/4 x 3/4
 1 x 1

Price Fin. or N. P. Each
 \$.65
 .95



Fig. 544

No. 877 Slip Joint Tees



Fig. 545

Size O. D. Inches
 3/4 x 3/4
 1 x 1
 Price Fin. or N. P. Each
 \$1.35
 1.55

No. 871 Two-way Slip Joint Distributors



Fig. 546

Inlet O. D. Inches	Branch O. D. Inches	Price Fin. or N. P. Each
3/4	3/4	\$1.50
5/8	5/8	1.50
1	1	1.80
1 1/4	3/4	1.80
1 1/4	5/8	1.80
1 1/4	1	2.20

No. 873 Three-way Slip Joint Distributors



Fig. 547

Inlet O. D. Inches	Branch O. D. Inches	Price Fin. or N. P. Each
1 1/4	3/4	\$2.50
1 1/4	5/8	2.50
1 1/4	1	2.90

No. 818 Urinal Inlet Connections For Brass Spud Urinals



Fig. 548

Nickel-plated brass urinal inlet connection, tapped 1/2 or 3/4 inch female iron pipe and nickel-plated brass coupling nut to fit brass urinal spud.

Price.....each \$1.10

No. 5590 Urinal Flush Spreaders

Price, No. 5590, Nickel-plated Brass, with Slip Joint Nut for 3/4-inch O. D. Tube Supply.....each \$3.00



Fig. 549

Urinal Traps Nickel-plated Brass



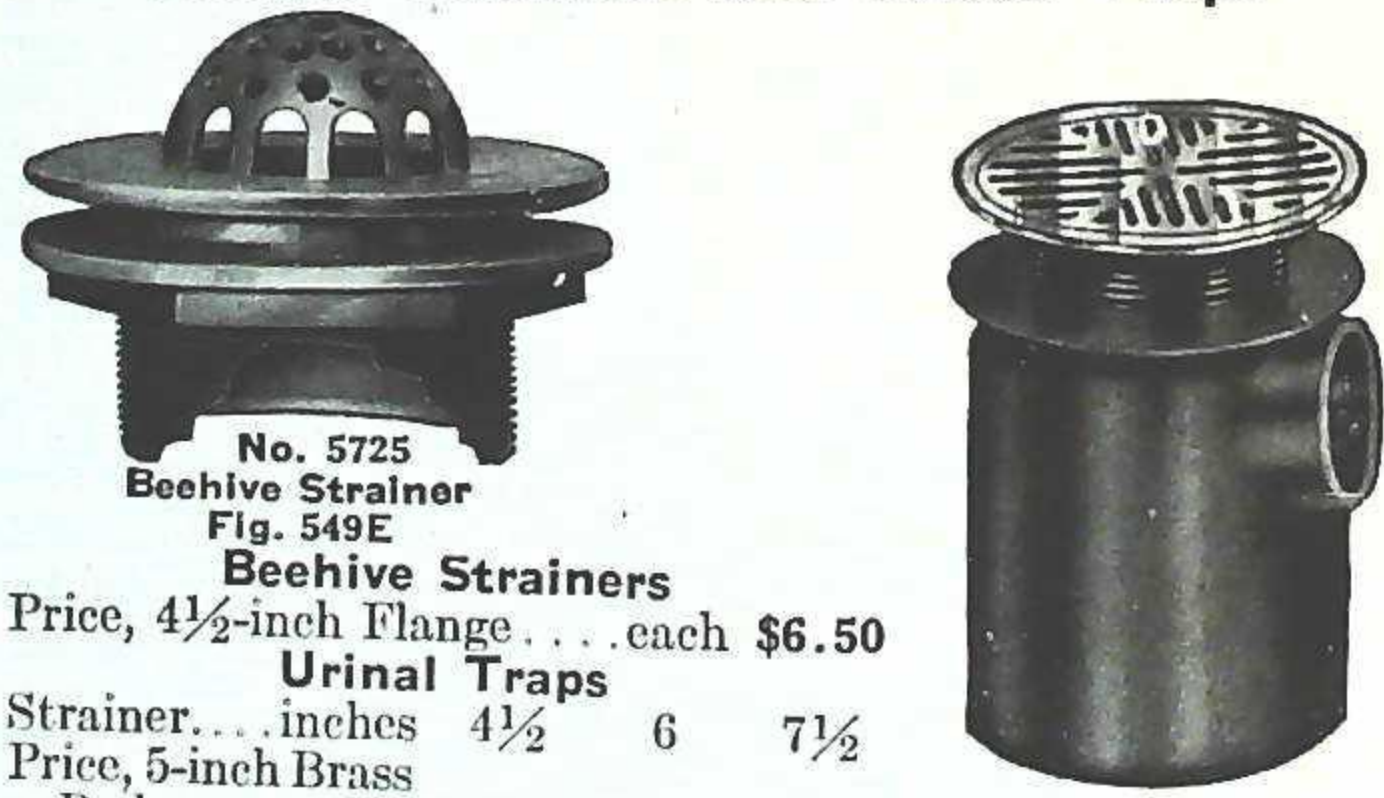
No. 1 Slip Joint Inlet Iron Pipe Outlet Fig. 549A
 Price, No. 1 with Slip Joint Inlet, 1 1/2-inch Iron Pipe Outlet, Nickel-plated.....each \$6.00
 Price, No. 2 with Ground Joint Tee, Nickel-plated..... 9.75

Urinal Stall Strainers



For Lead Pipe No. 1755, Fig. 549C
 Price, for Lead Pipe...each \$3.50
 Price, for Lead or Wrought Pipe...each 3.50
 Lead or Wrought Pipe No. 1759 Fig. 549D

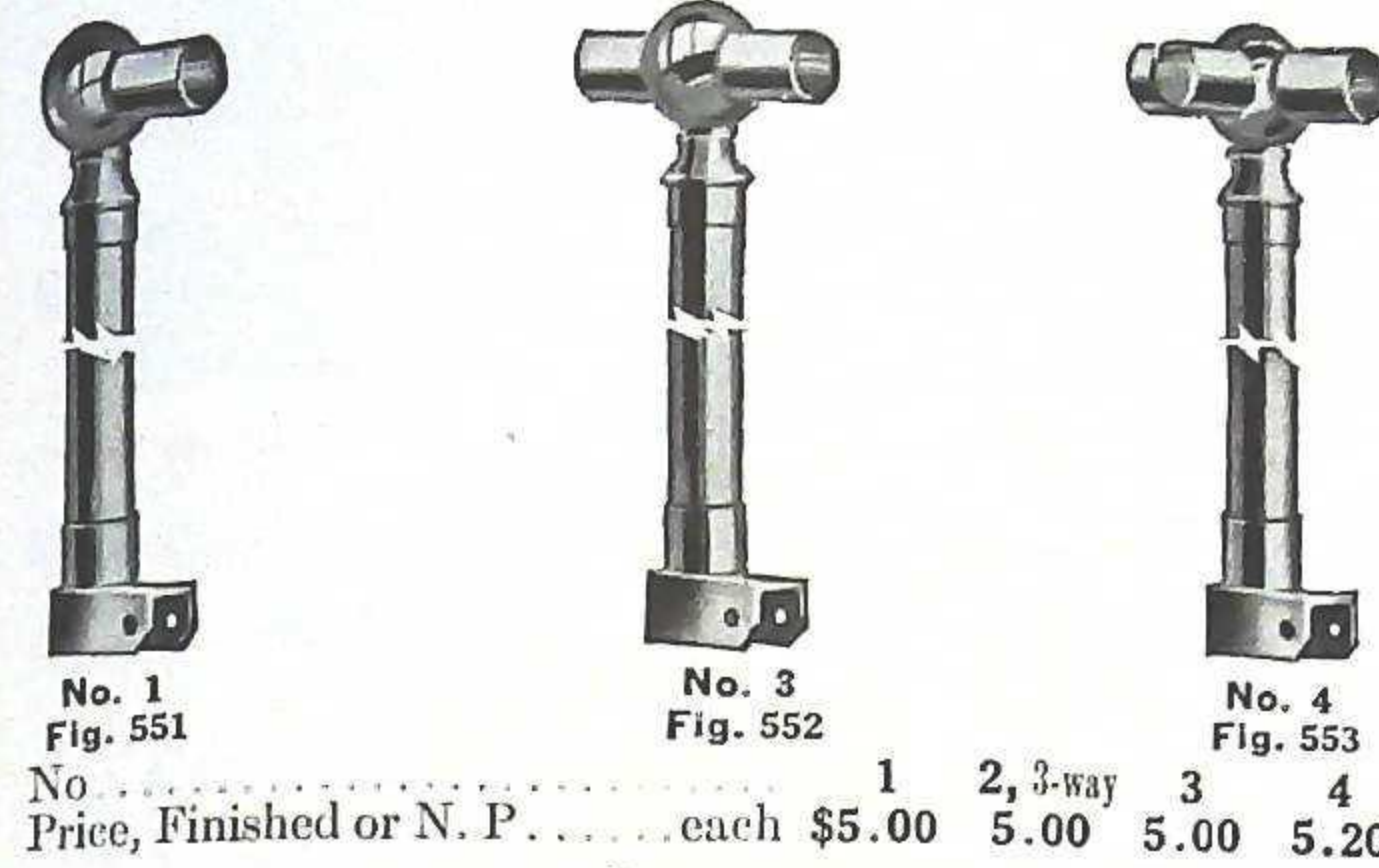
Beehive Strainers and Urinal Traps



No. 5725 Beehive Strainer Fig. 549E
 Price, 4 1/2-inch Flange...each \$6.50
 Beehive Strainers
 Urinal Traps
 Strainer...inches 4 1/2 6 7 1/2
 Price, 5-inch Brass Body...each \$19.00 \$21.50 \$22.50
 Price, 6-inch Iron Body....each 12.50 13.10 16.90

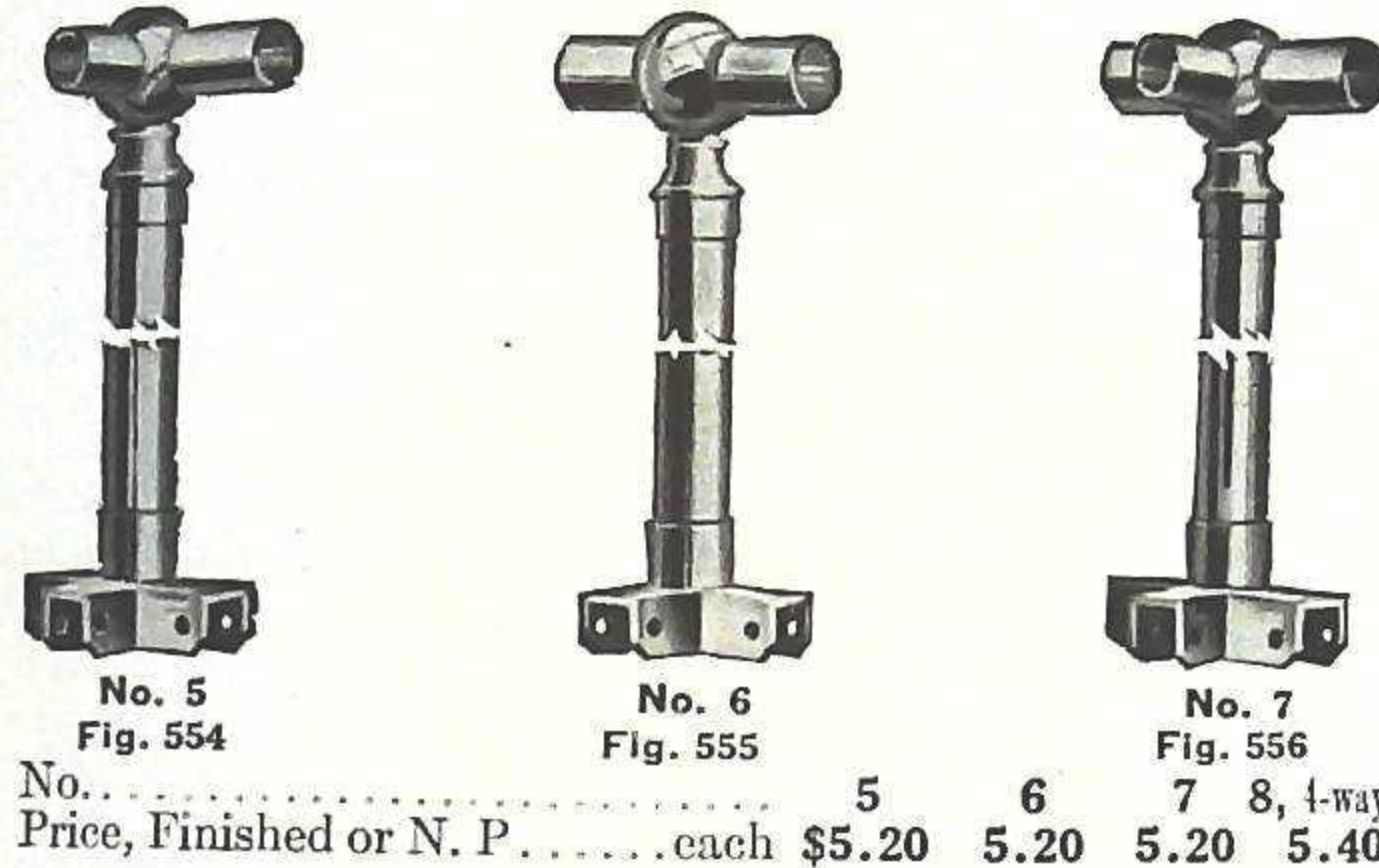
No. 5745 Urinal Trap Fig. 549F

Urinal and Closet Stall Trimmings Top Standards Ends



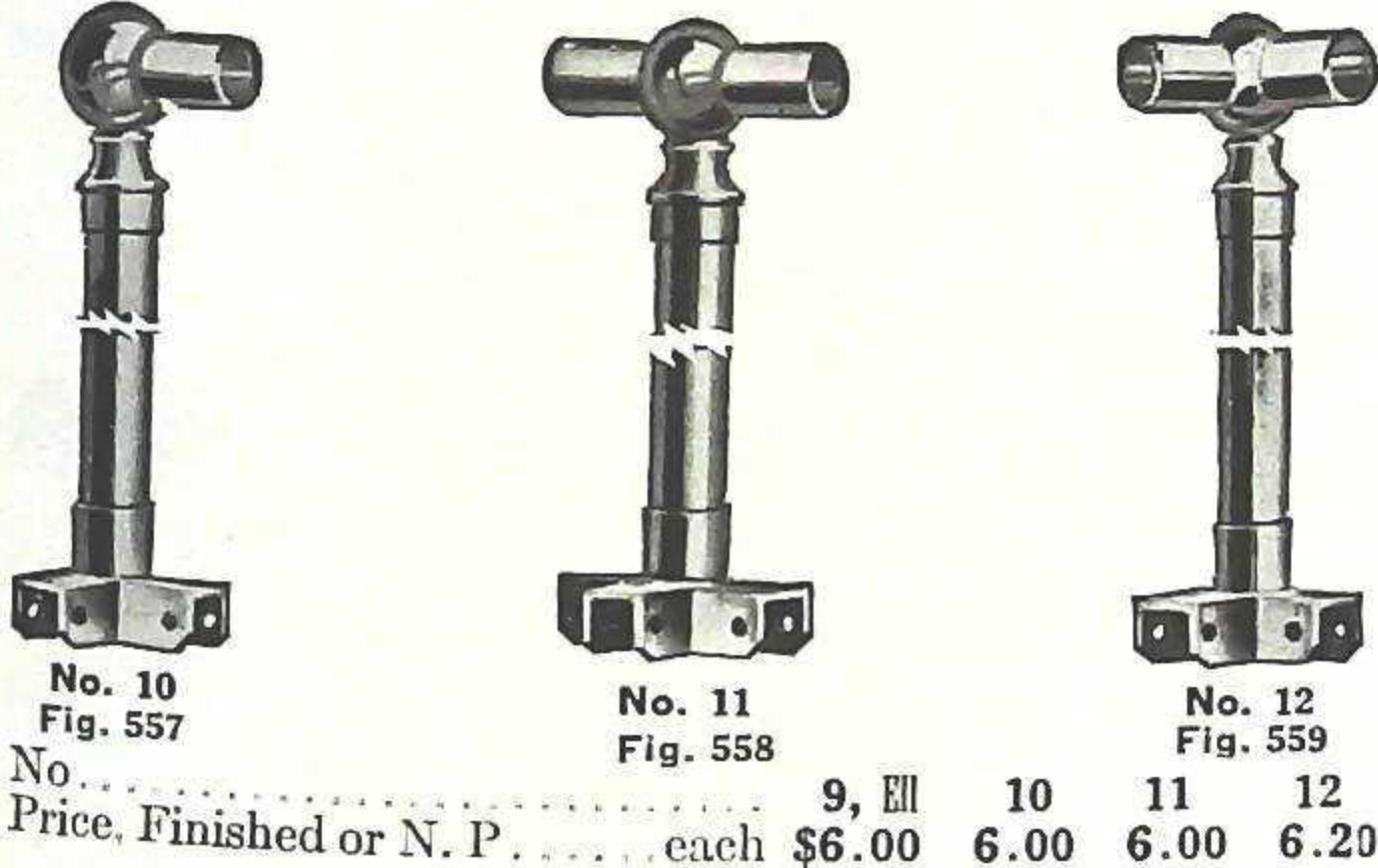
No. 1 Fig. 551
 No. 3 Fig. 552
 No. 4 Fig. 553
 No. 13 For End Fig. 559D
 No. 14 For Corner Fig. 559E
 No. 15 For Corner Fig. 559F
 Price, Finished or N. P.each \$5.00 5.00 5.00 5.20

Corners



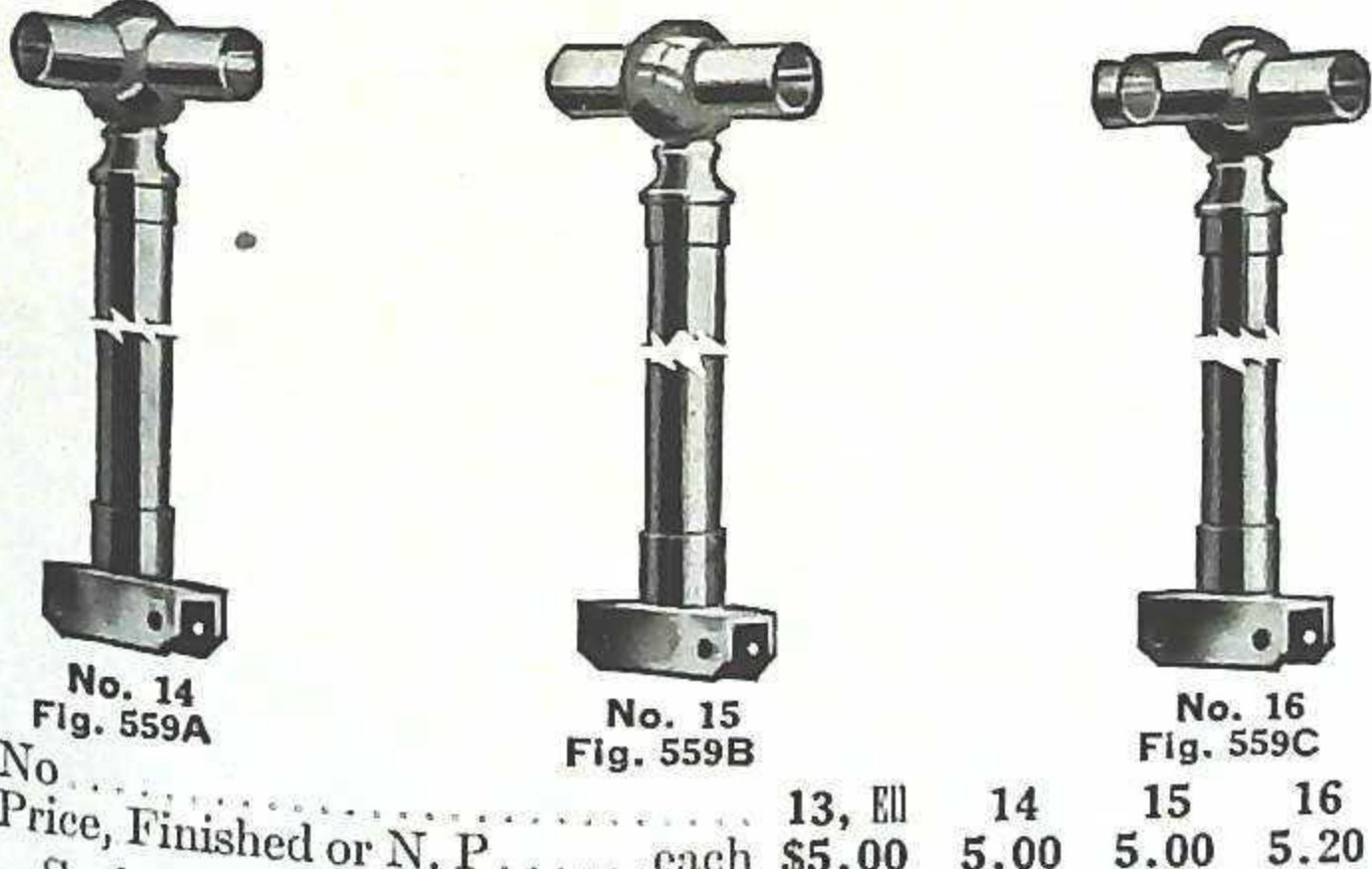
No. 5 Fig. 554
 No. 6 Fig. 555
 No. 7 Fig. 556
 Price, Finished or N. P.each \$5.20 5.20 5.20 5.40

Partitions



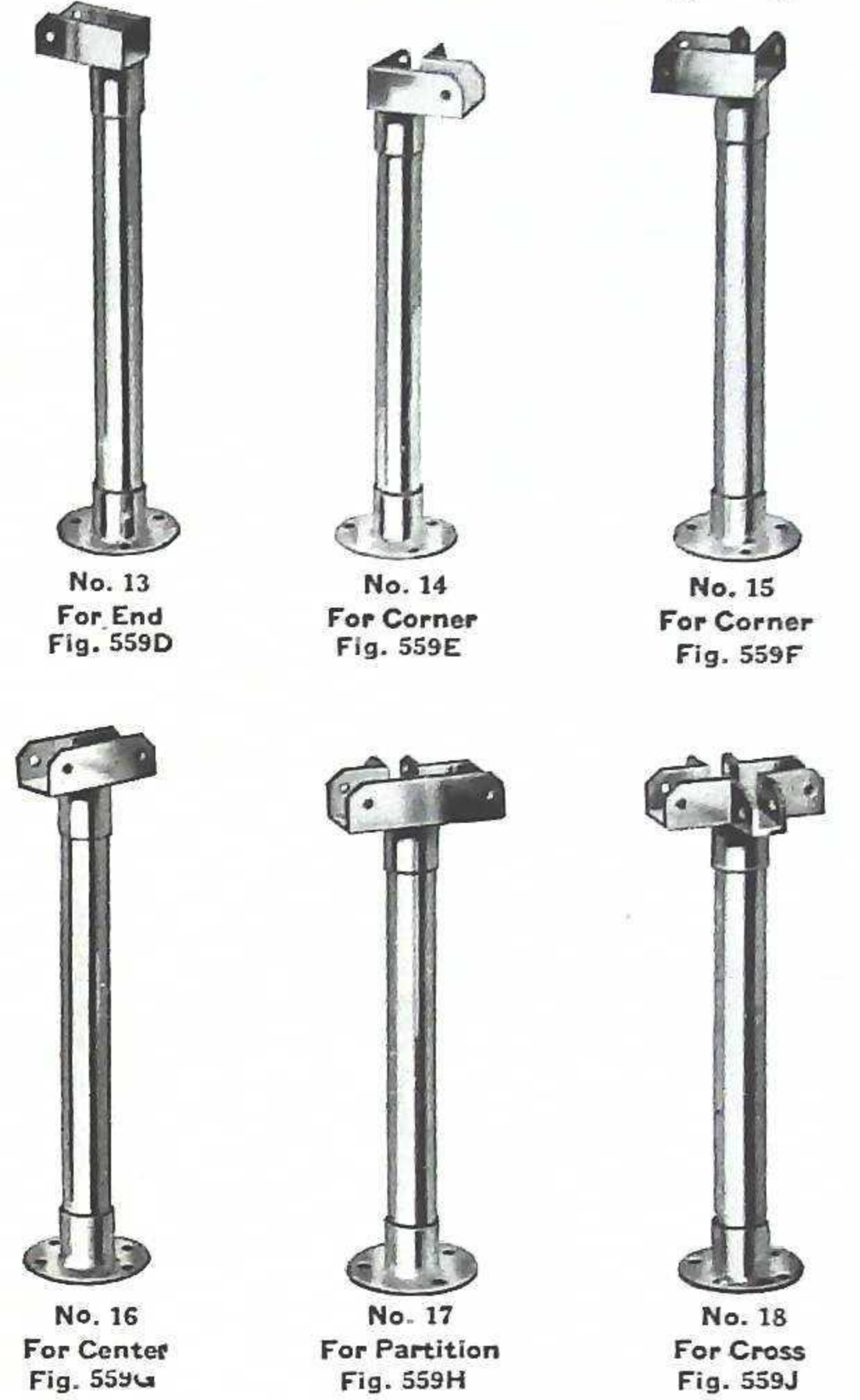
No. 10 Fig. 557
 No. 11 Fig. 558
 No. 12 Fig. 559
 Price, Finished or N. P.each \$6.00 6.00 6.00 6.20

Centers



No. 14 Fig. 559A
 No. 15 Fig. 559B
 No. 16 Fig. 559C
 Price, Finished or N. P.each \$5.00 5.00 5.00 5.20

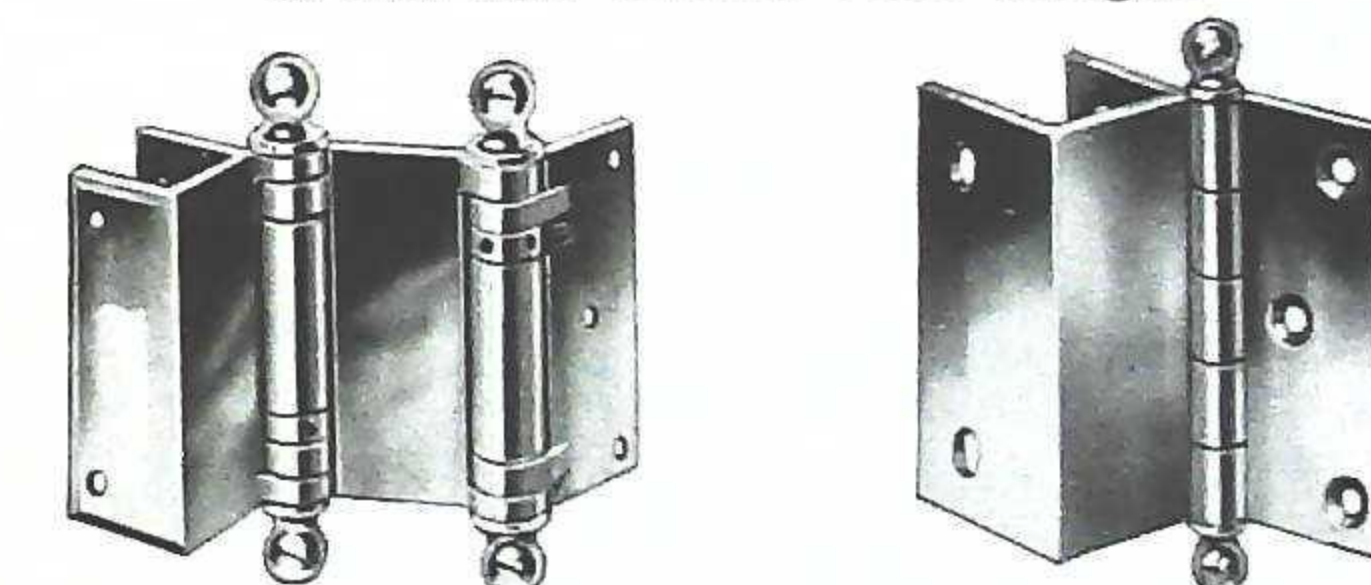
Urinal and Closet Stall Tubing Legs



These urinal and closet stall legs are made for 7/8, 1, 1 1/8 and 1 1/4-inch marble; height 12 inches from floor to bottom of marble; finished or nickel-plated.

Number..... 13 14 15 16 17 18
 Price.....each \$4.20 4.70 4.70 4.20 5.40 6.60
 When ordering give thickness of stile and partition.

Urinal and Closet Stall Hinges

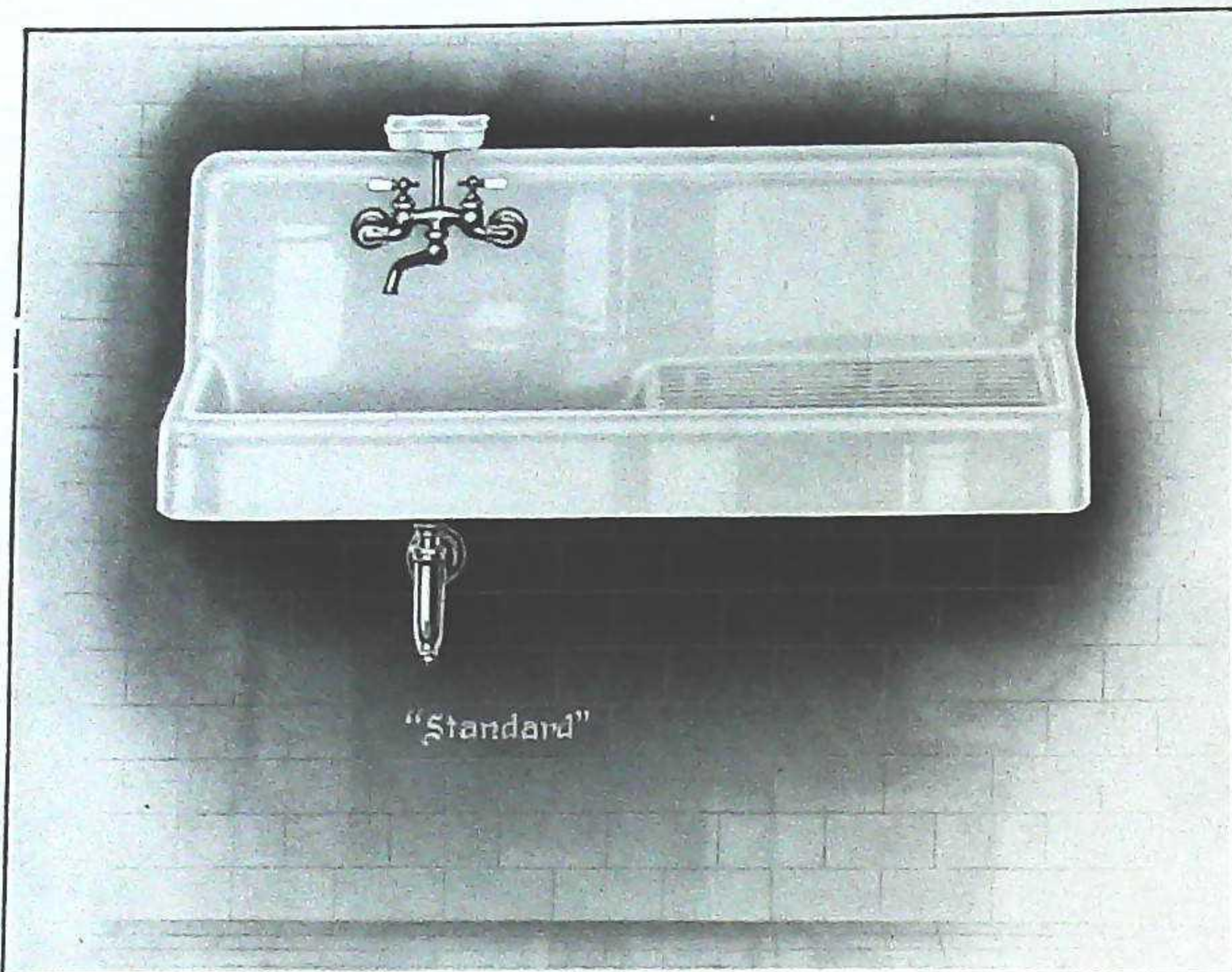


No. 19 Double Box with Steel Spring Fig. 559K
 No. 20 Single Box with Steel Spring Fig. 559L

Made in finished brass or nickel-plated.
 Price, Double Box, with Spring.....per pair \$19.60
 Price, Single Box, with Spring.....per pair 15.40
 Price, Single Box, without Spring.....per pair 12.80

No. 21 Single Box without Spring Fig. 559M

Sockets for above are made for 7/8, 1, 1 1/8 and 1 1/4-inch marble. Always state thickness of marble. Height of above, 12 inches from top of marble to center of top rail. Top rail branches take 1 1/8-inch O. D. railing.



Enameled Iron One-piece Apron Sink with back and right drain board, concealed wall hangers, nickel-plated quick compression combination swing spout faucet with china lever handles, indexed, and removable china soap dish, nickel-plated P trap, duplex strainer and coupling.

Also can be furnished with painted or enameled legs adjustable from 30 to 36 inches.

Depth inside 6 inches
Back 12 inches

Fig. 581

Size Inches	Sink Inches	Drain Board Inches	Apron Inches	Length Over All Inches	Width Over All Inches
20x42	20x22 1/4	20x20 1/4	5 1/2	42 1/2	20 1/4
20x52	20x28 1/4	20x24 1/4	5 1/2	52 1/2	20 1/4
22x60	22x34 1/4	22x26 1/4	6	60 1/2	22 1/4

Size inches
Approximate Shipping Weight, Less Fittings pounds

When ordering specify whether wanted with left or right drain board.



Enameled Iron One-piece Apron Sink with back, left end piece and right drain board, concealed wall hangers, nickel-plated quick Compression combination swing spout faucet with china lever handles, indexed, and removable china soap dish, nickel-plated P trap, duplex strainer and coupling.

Also can be furnished with painted or enameled legs adjustable from 30 to 36 inches.

Depth inside 6 inches
Back 12 inches

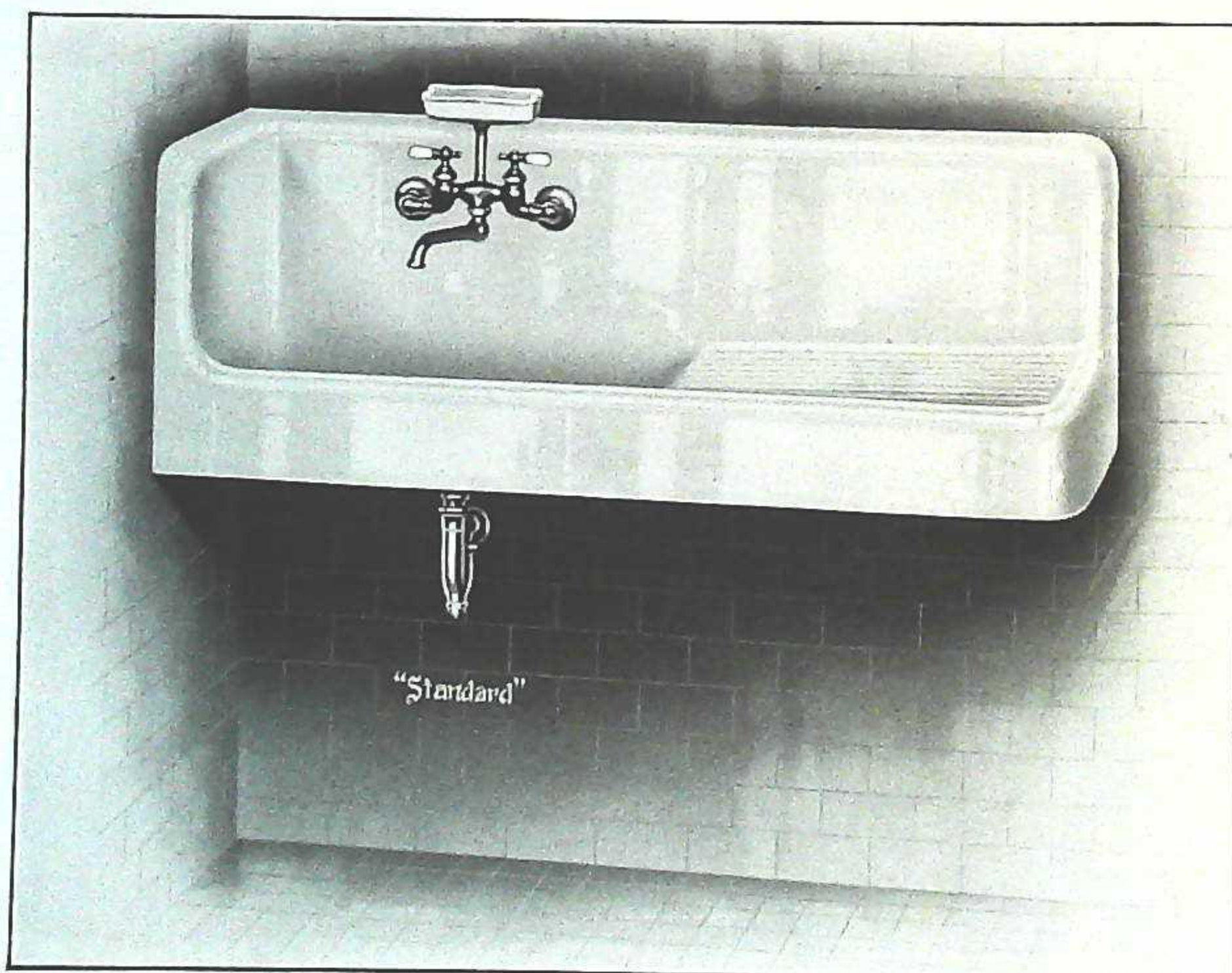
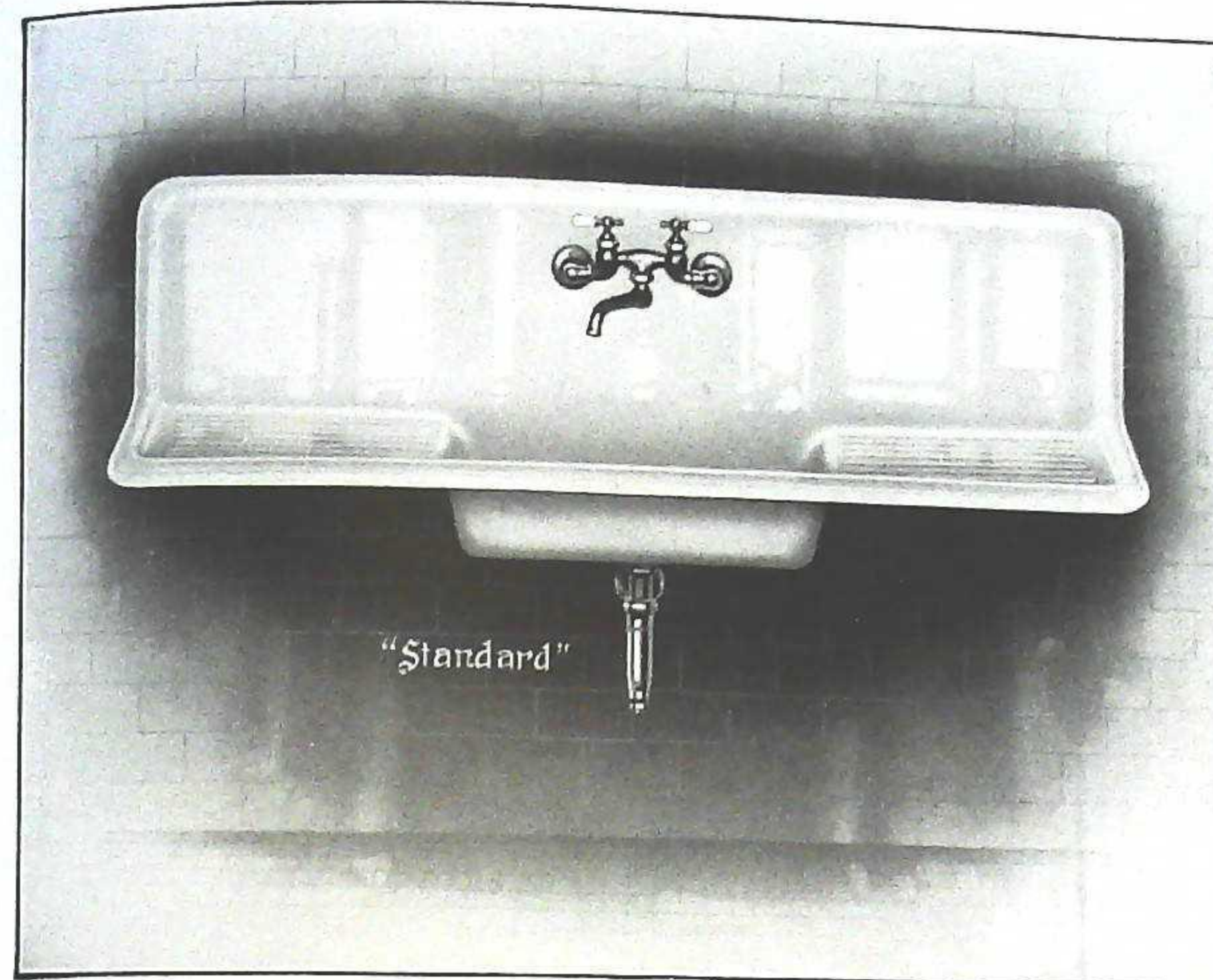


Fig. 583

Size Inches	Sink Inches	Drain Board Inches	Apron Inches	Length Over All Inches	Width Over All Inches
20x42	20x22	20x20 1/4	5 1/2	42 1/4	20 1/4
20x52	20x28	20x24 1/4	5 1/2	52 1/4	20 1/4
22x60	22x34	22x26 1/4	6	60 1/4	22 1/4

Size inches
Approximate Shipping Weight, Less Fittings pounds

When ordering specify whether wanted for left or right corner.



Enameled Iron One-piece Roll Rim Sink with back and right and left drain boards, concealed wall hangers, nickel-plated quick compression combination swing spout faucet with china lever handles, indexed, nickel-plated P trap, Duplex strainer and coupling.

Regularly furnished with underside painted white.

Also can be furnished with painted or enameled legs adjustable from 30 to 36 inches.

Depth inside 6 inches
Back 12 inches

Fig. 591

Size Inches	Sink Inches	Drain Boards Inches	Length Over All Inches
22x60	22x22	22x19	60

Size inches
Approximate Shipping Weight, Less Fittings pounds

Also can be furnished with nickel-plated concealed compression combination swing spout faucet with china cross handles, indexes, escutcheons and removable soap dish.

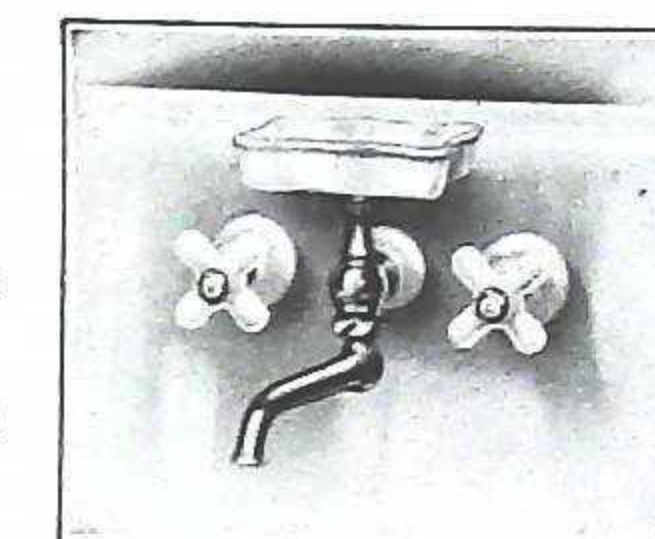


Fig. 592

Enameled Iron One-piece Roll Rim Sink with back and right drain board, concealed wall hangers, nickel-plated quick compression combination swing spout faucet with china lever handles, indexed, nickel-plated P trap, duplex strainer and coupling.

Regularly furnished with underside painted white.

Also can be furnished with painted or enameled legs adjustable from 30 to 36 inches.

Depth inside 6 inches
Back 12 inches

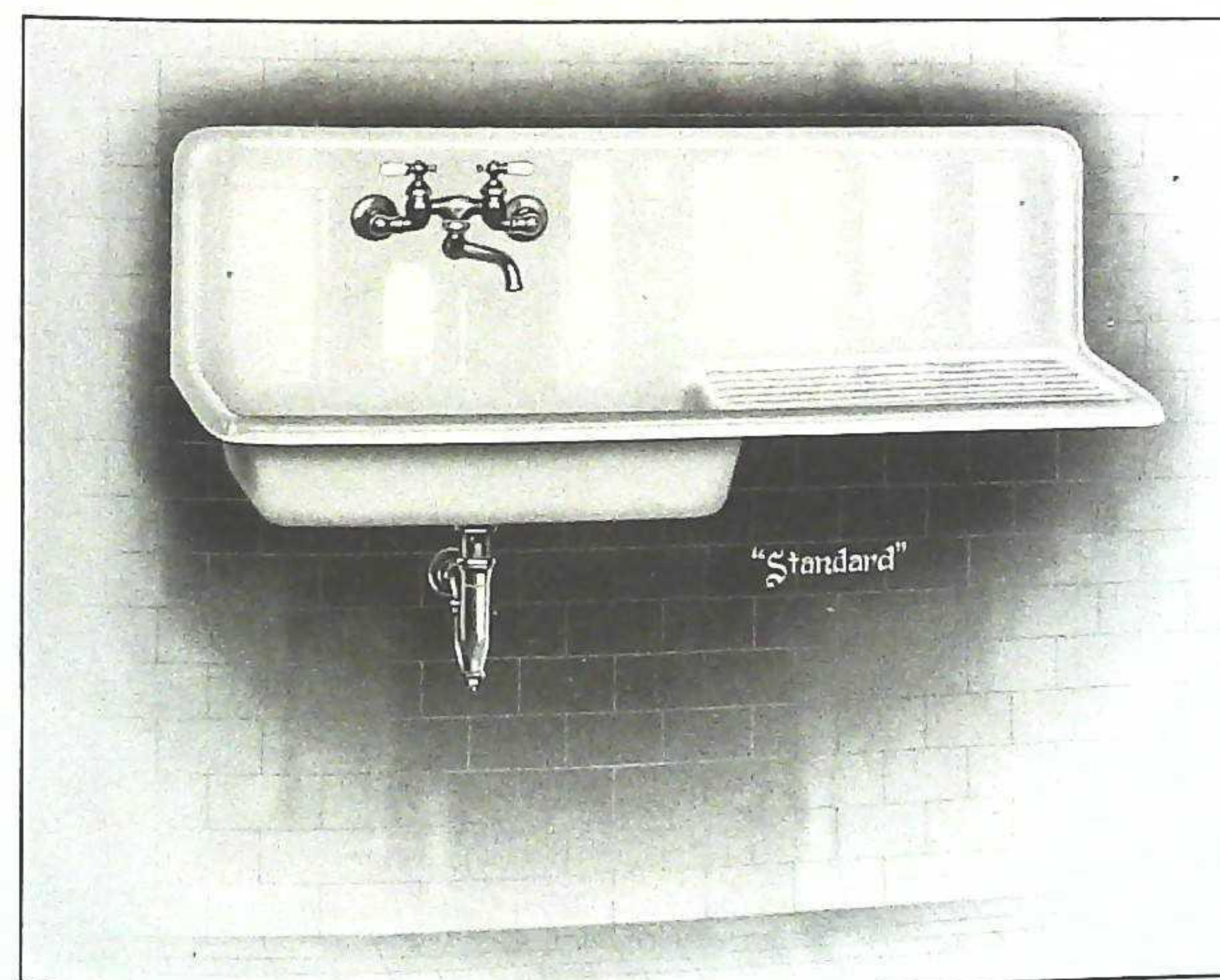


Fig. 593

Size	Sink In.	Drain Board In.	Length Over All In.	Width Over All In.
20x42	20x22	20x20	42	20
20x46	20x28	20x18	46	20
20x52	20x28	20x24	52	20
22x52	22x28	22x24	52	22
22x60	22x34	22x26	60	22

Size inches
Approximate Shipping Weight, Less Fittings pounds

When ordering specify whether wanted with left or right drain board.

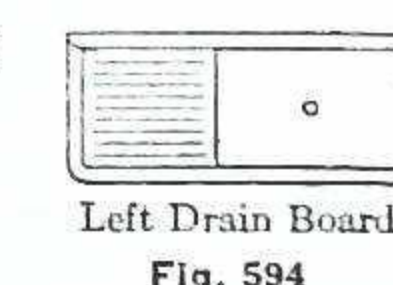


Fig. 594

Enameled Iron One-piece Roll Rim Sink with back, left end piece and right drain board, concealed wall hanger, nickel-plated quick compression combination swing spout faucet with china lever handles, indexed, nickel-plated P trap, duplex strainer and coupling.

Regularly furnished with underside painted white. Also can be furnished with painted or enameled legs adjustable from 30 to 36 inches.

Depth inside 6 inches
Back 12 inches

Size In.	Sink In.	Drain Board In.	Length Over All In.	Width Over All In.
20x46	20x28	20x18	46	20
20x52	20x28	20x24	52	20
22x52	22x28	22x24	52	22
22x60	22x34	22x26	60	22

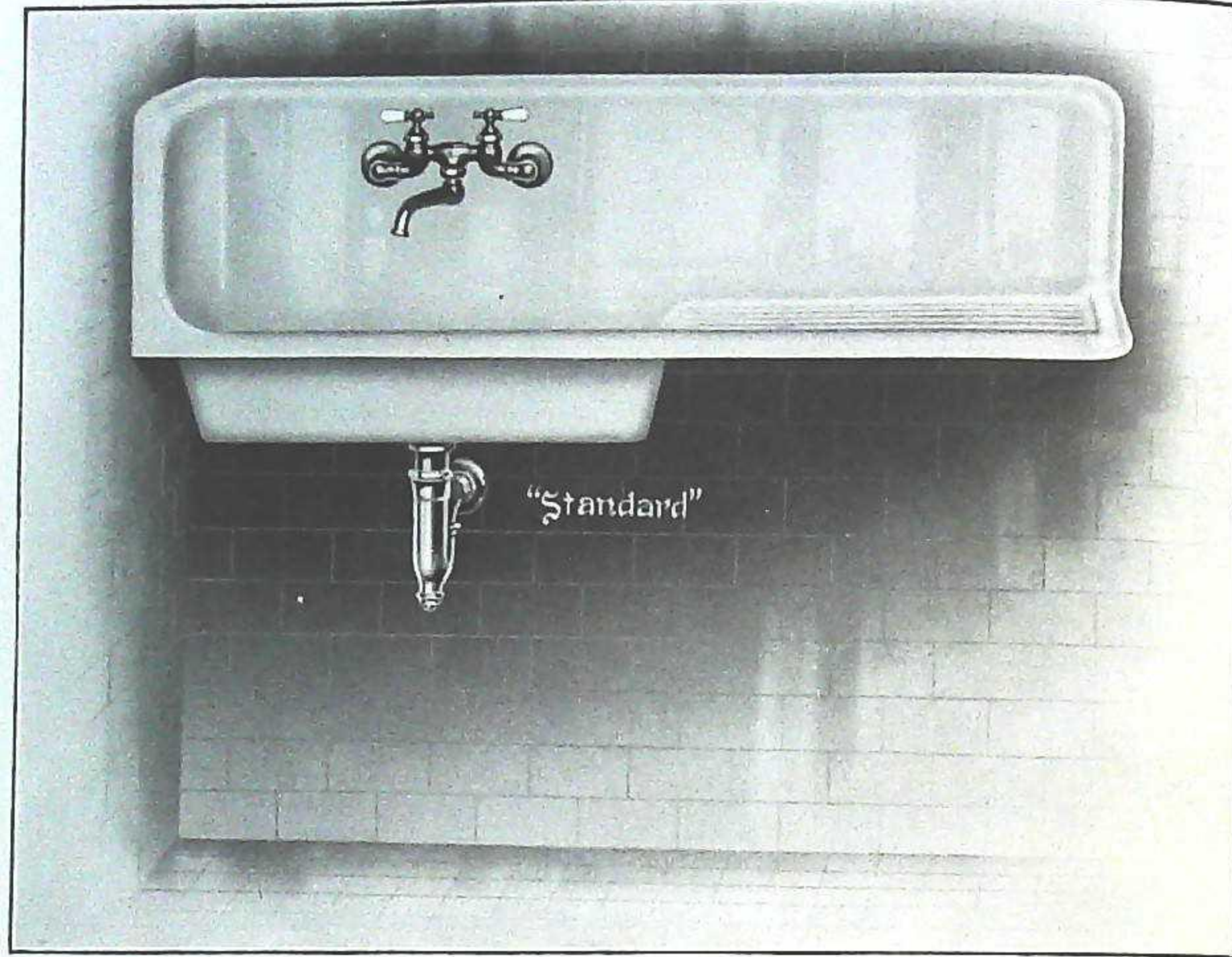
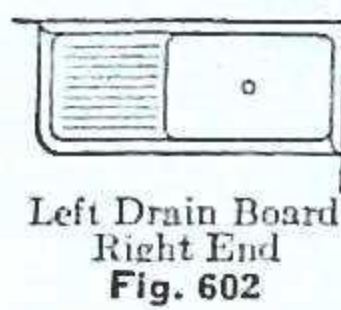


Fig. 601



Size	in.	20x46	20x52	22x52	22x60
Approximate Shipping Weight, Less Fittings	lbs.	213	220	254	304

When ordering specify whether wanted for left or right corner.



Fig. 603

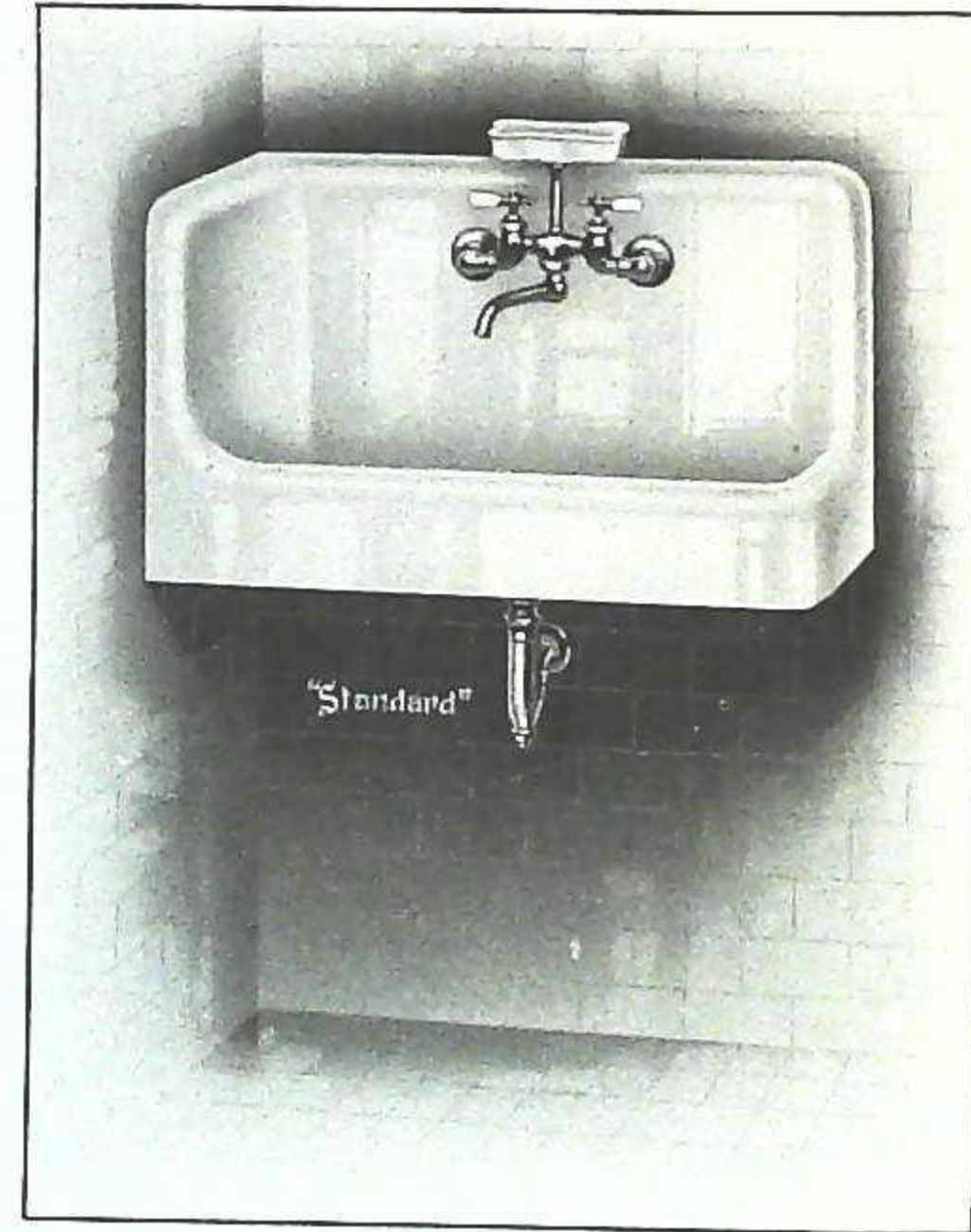


Fig. 604

Enameled Iron One-piece Apron Sink with back and left end piece, concealed wall hangers, nickel-plated quick compression combination swing spout faucet with china lever handles, indexed, and removable china soap dish, nickel-plated P trap, duplex strainer and coupling.

Size In.	Depth inside 6 inches	Back 12 inches	Apron 5 1/2 inches	Approximate Shipping Weight Less Fittings Pounds
18x30				170
20x30				185
20x36				202
18x30				219
20x30				210
20x36				236

Can be furnished with right end piece when specified.

Enameled Iron Flat Rim Sinks With Nickel-plated Duplex Strainer

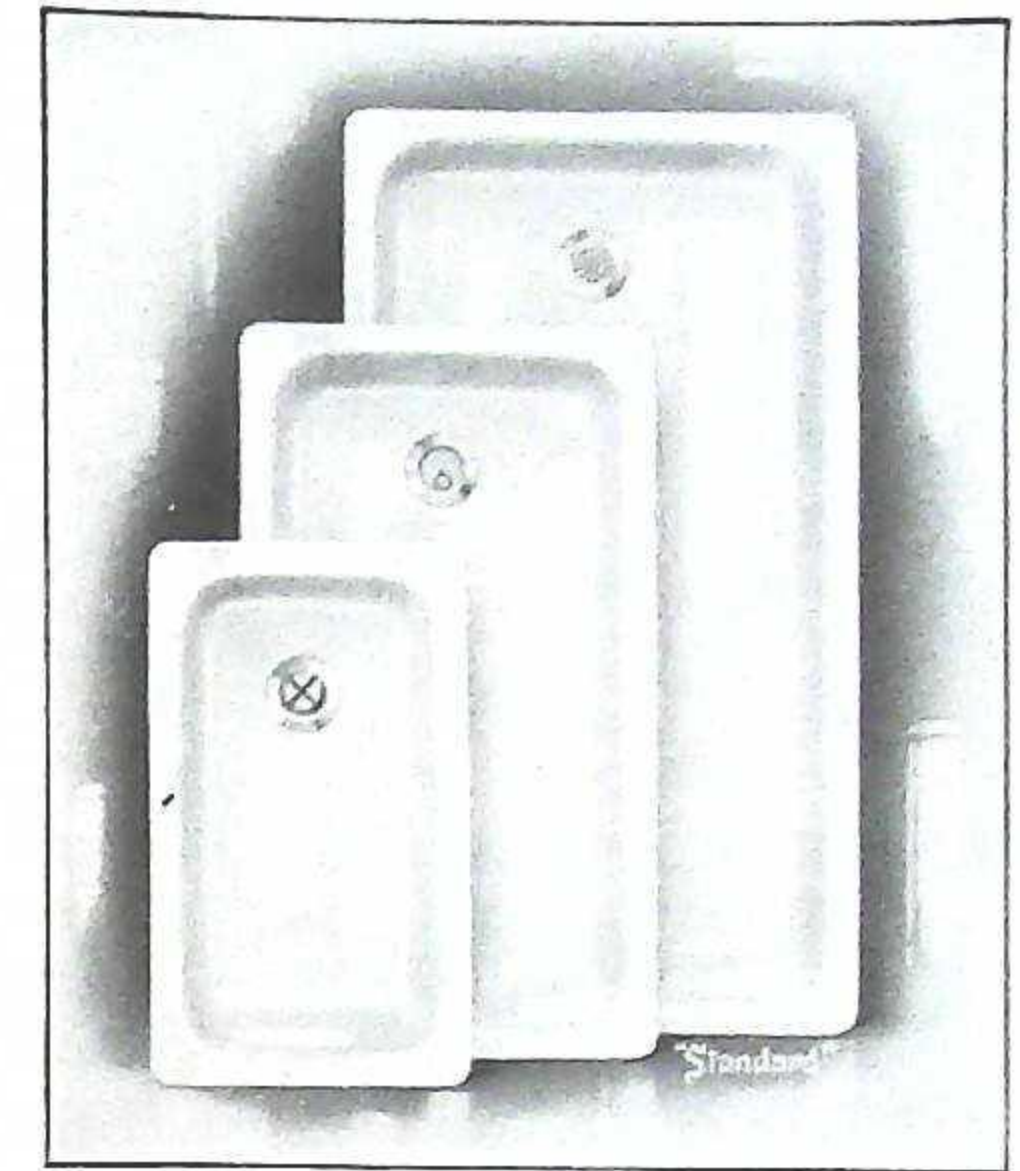


Fig. 613



Fig. 611

Enameled Iron One-piece Roll Rim Sink with back, concealed wall hanger, nickel-plated compression adjustable flange faucets, nickel-plated P trap and duplex strainer.

Depth inside 6 inches Height of back 12 inches

Size Inches	Approximate Shipping Weight Pounds	Size Inches	Approximate Shipping Weight Pounds
16x24	89	20x36	143
18x18	80	20x40	170
18x24	95	22x30	134
18x30	116	22x36	163
18x36	143	22x42	181
20x20	86	*20x24	130
20x24	102	*22x30	164
20x30	122	*22x36	186

*Depth inside, 8 inches.



Duplex Strainer Fig. 614

Size In.	Weight Pounds	Size In.	Weight Pounds
12x12	17	*18x36	66
12x18	25	20x24	46
14x20	28	20x30	57
16x24	36	*20x36	79
18x24	40	*22x36	84
18x30	54	.....	..

*Regularly packed one in a crate. Small sizes not so marked, regularly packed 3 in a crate. Weights apply to each sink.

No. 7010 Enameled Sink Backs For Flat Rim Sinks

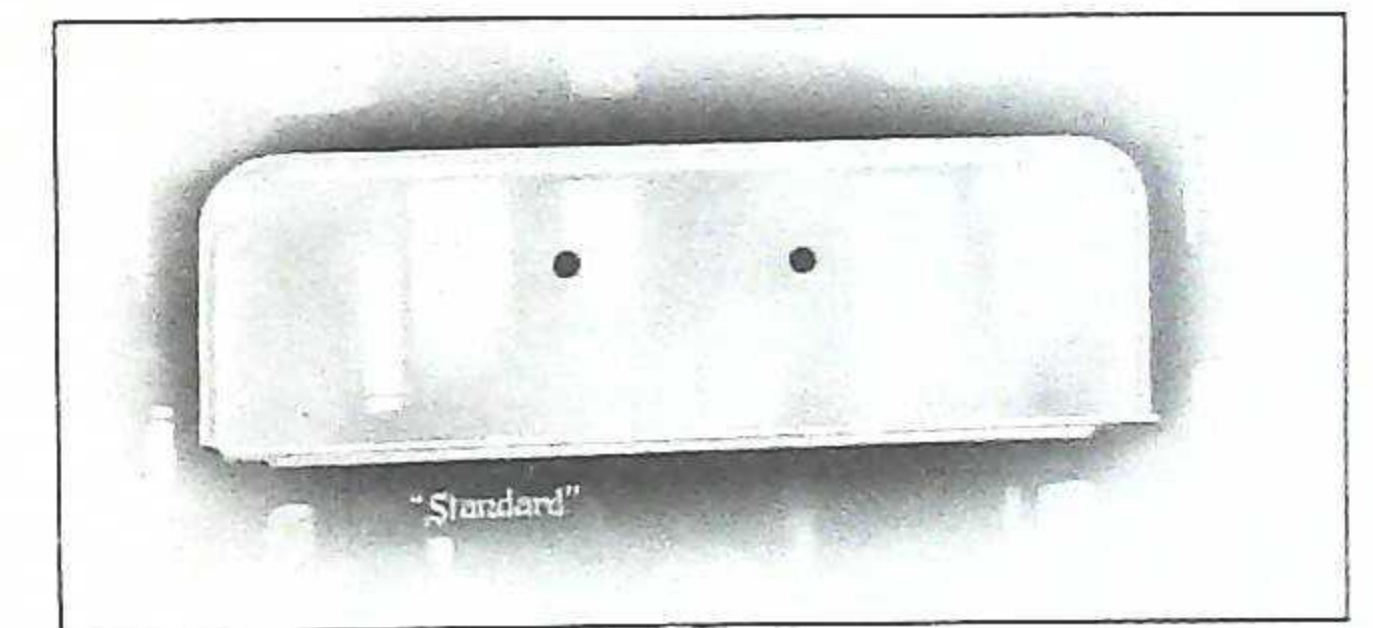


Fig. 615

Height 12 inches.	Length inches	18	20	24	30	36
Approx. Ship. Wt. Lbs.		22	26	30	35	45

Adjustable Sink Legs



Fig. 616

New Style Adjustable Sink Leg with 2 inches adjustment.

Sink can be adjusted 34 to 36 inches from the floor to top of rim.

Style A leg for under sinks and style B leg for under drain boards.

Price, Style A, Painted	each	\$1.80
" " A, Enameled	"	4.25
" " B, Painted	"	2.40
" " B, Enameled	"	4.85

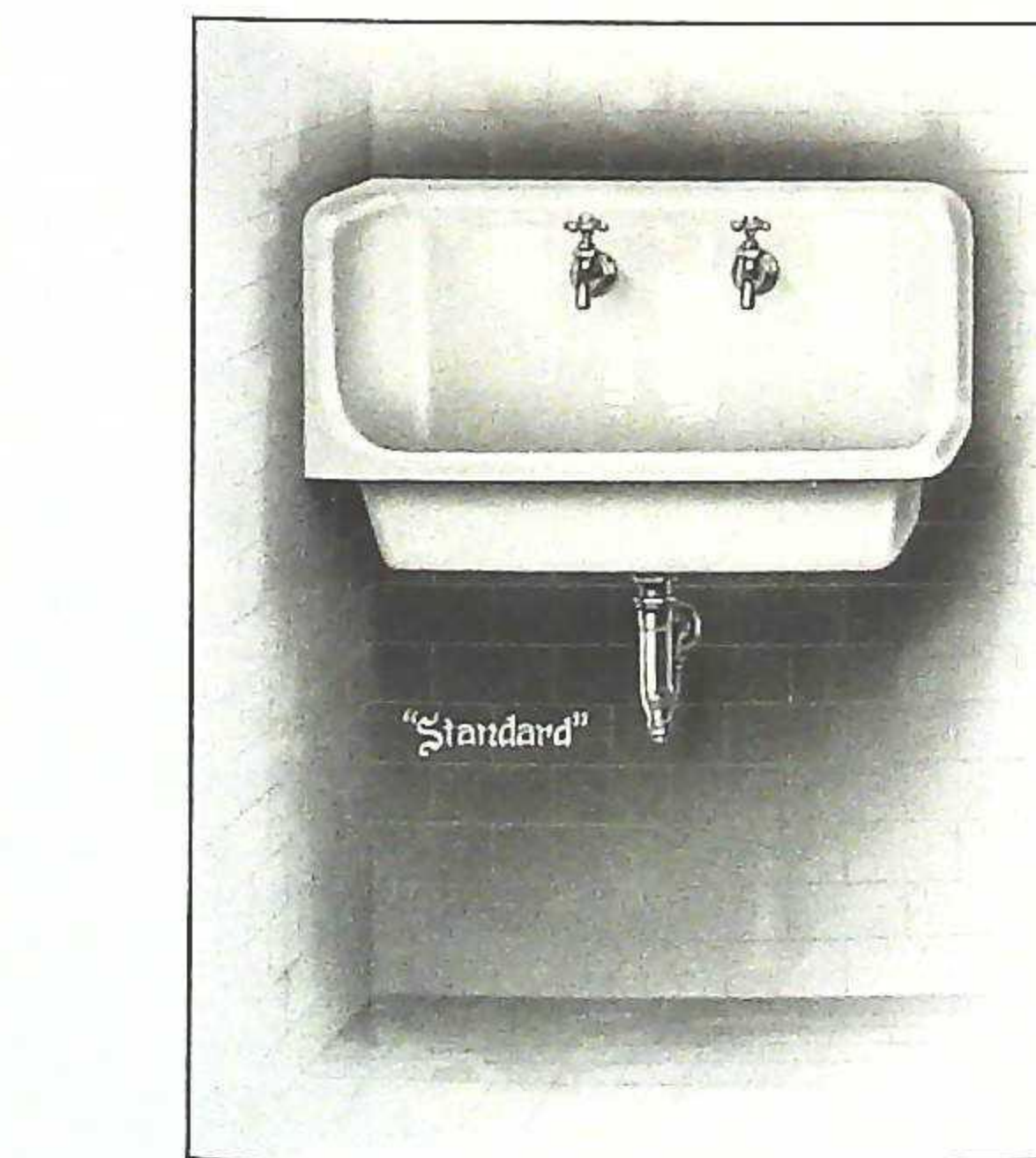


Fig. 612

Enameled Iron One-piece Roll Rim Sink with back and left end piece, concealed wall hangers, nickel-plated compression flanged faucets with four-ball china indexed handles, nickel-plated P trap and duplex strainer.

Size Inches	Approx. Shipping Wt., Lbs.	Size Inches	Approx. Shipping Wt., Lbs.	Size Inches	Approx. Shipping Wt., Lbs.
16x24	120	18x36	176	20x40	208
18x24	129	20x30	159	22x36	199
18x30	151	20x36	183	22x42	210

Also furnished with right end piece. Specify when ordering.

No. 6975 Enameled Iron Drain Boards
With Wall Support—For Roll Rim Sinks

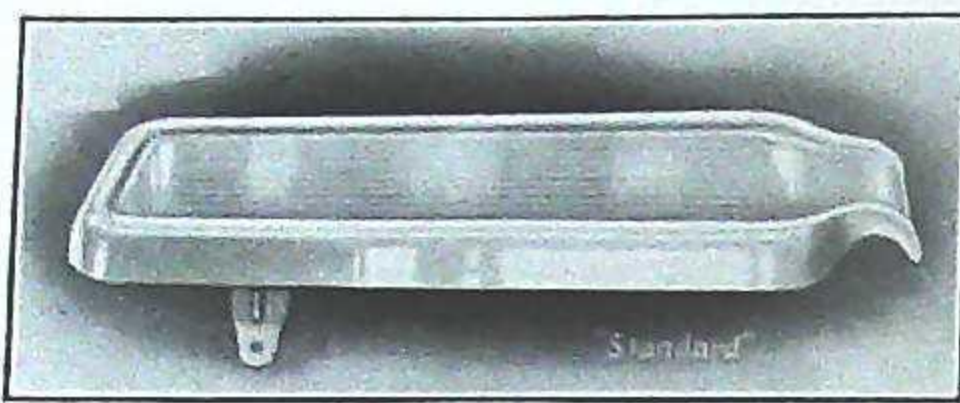


Fig. 621

Size In.	Approx. Ship. Wt. Pounds	Size In.	Approx. Ship. Wt. Pounds	Size In.	Approx. Ship. Wt. Pounds
16x18	38	20x24	55	18x24	51
20x18	48	18x18	42	22x24	61
16x24	48	22x18	50		

No. 6980 Hardwood Drain Boards
With Enameled End and Wall Support For Roll Rim Sinks



Fig. 622

Size In.	Approx. Ship. Wt. Pounds	Size In.	Approx. Ship. Wt. Pounds	Size In.	Approx. Ship. Wt. Pounds
16x18	30	16x30	42	18x24	34
20x18	35	20x30	45	22x24	39
16x24	40	18x18	30	18x30	36
20x24	41	22x18	31	22x30	42

No. 6982 Hardwood Drain Boards
With Wall Support—For Roll or Flat Rim Sinks



Fig. 623

Size In.	Approx. Ship. Wt. Pounds	Size In.	Approx. Ship. Wt. Pounds	Size In.	Approx. Ship. Wt. Pounds
18x18	26	22x24	35	20x30	41
18x36	43	18x22	29	22x36	52
22x18	27	20x24	37	18x30	32
18x20	27	22x30	38	20x36	48
20x18	31	18x24	30		

No. 7100 Hardwood Drain Boards

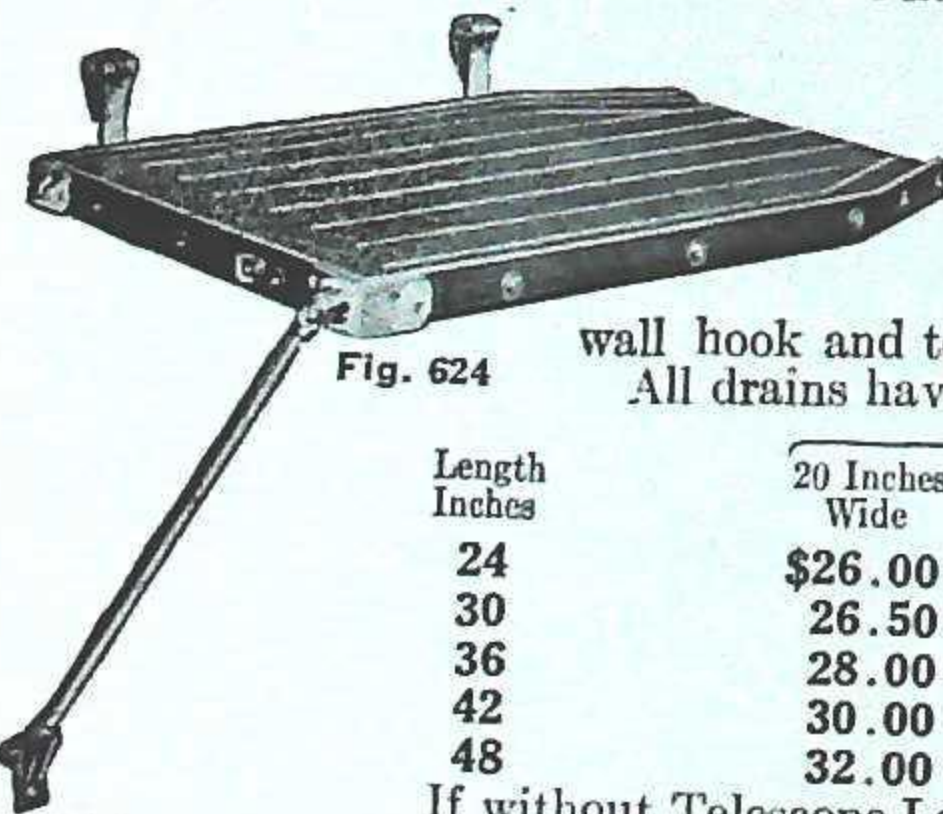


Fig. 624

Ash grooved folding drain board 1 1/2 inches thick, with nickel-plated brass hinges, wall hook and telescope leg. All drains have boiled oil finish.

Length Inches	Price, Each	24 Inches Wide
20 Inches		
24	\$26.00	\$27.00
30	26.50	28.00
36	28.00	30.00
42	30.00	32.00
48	32.00	34.00

If without Telescope Leg, deduct... 7.50

This drain board can be furnished in other lengths, and to fit sinks of any width.

No. 6990 Rubber Drainboard Mats
For Interchangeable Drainboards

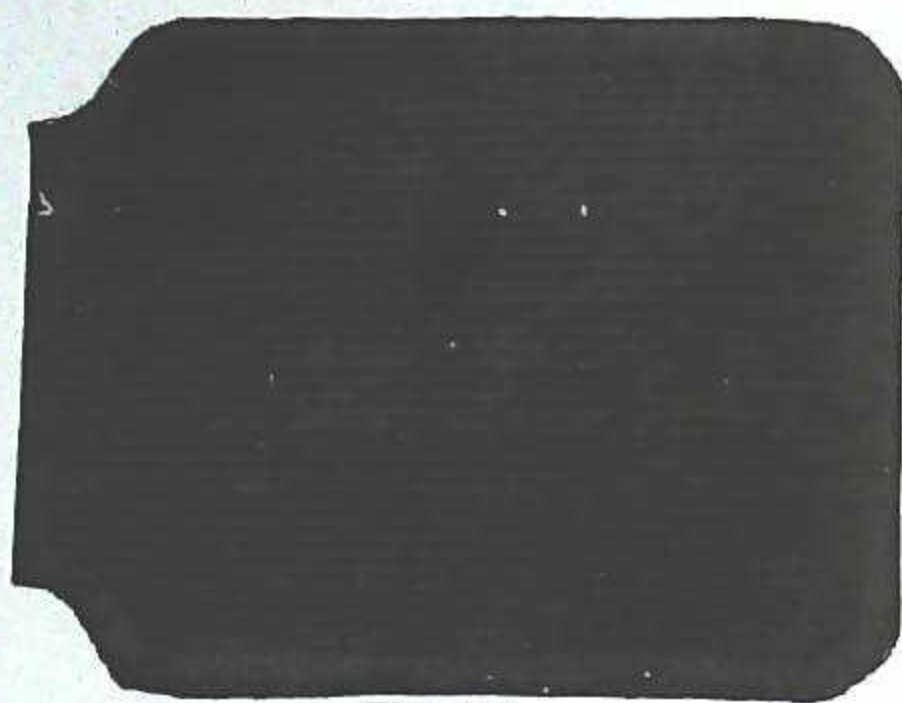


Fig. 625

For Drains Measuring in Width... in. 18 20 22
Price, for Drains 18 In. Long... each \$3.75 \$4.00 \$4.25
" " " 24 " " " 4.75 5.00 5.25

Hardwood Drain Board Mats

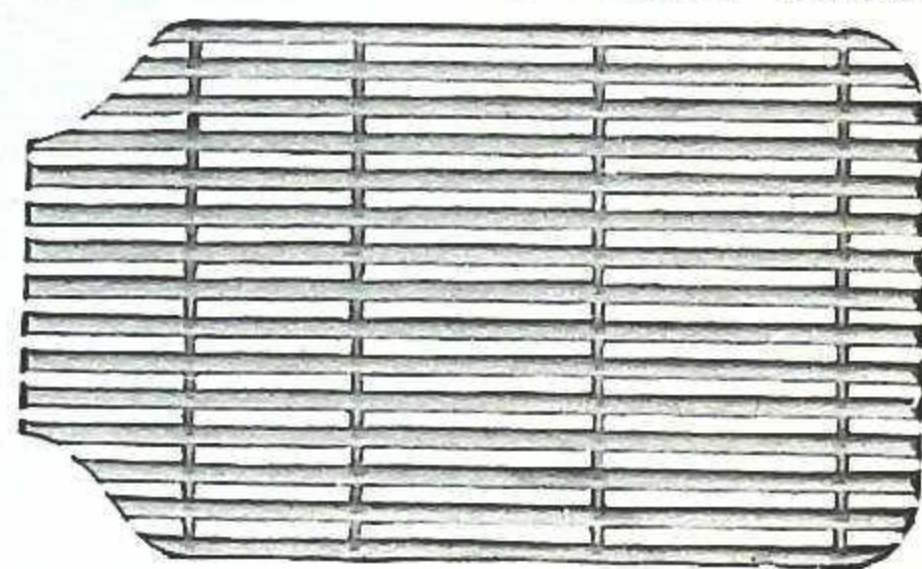


Fig. 626

For Drain Board Inches	Price per Dozen	For Drain Board Inches	Price per Dozen
18x18	\$12.60	18x24	\$16.00
20x18	14.00	20x24	18.00
22x18	15.50	22x24	19.50

Plain Sink Brackets

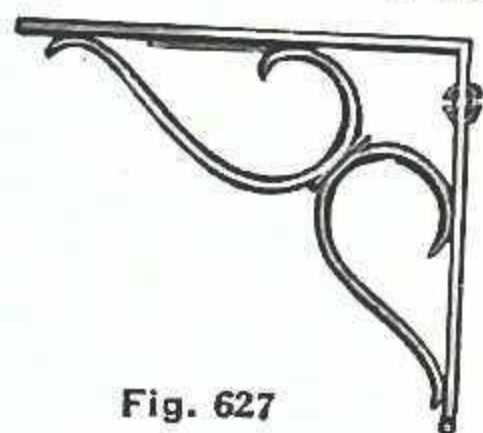


Fig. 627

No.	Width of Sinks In.	PRICE, EACH	
		Ptd.	Galv. and Enam.
1	14	\$.50	\$1.00
2	18	.50	1.00
3	24	.70	1.25

Adjustable Sink Brackets

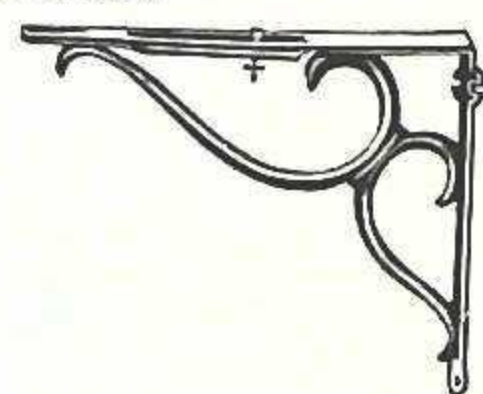


Fig. 628

No.	Width of Sinks In.	PRICE, EACH	
		Ptd.	Galv. and Enam.
1	14	\$.60	\$1.00
2	18	.75	1.25
3	24	1.25	2.00

Sanitary Sink Frames

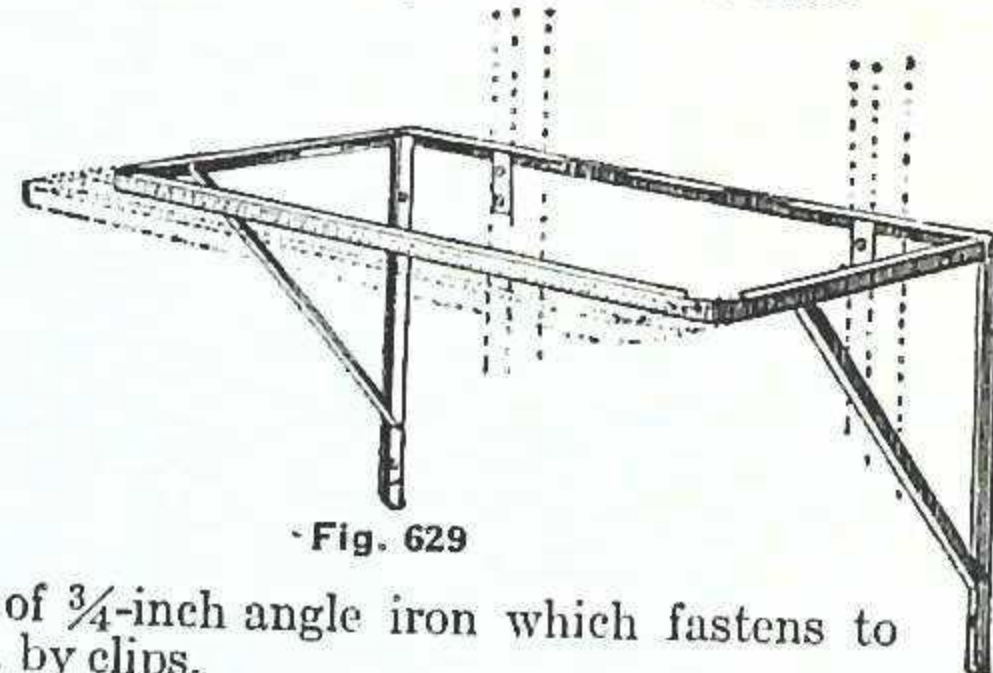


Fig. 629

Made of 3/4-inch angle iron which fastens to the wall by clips.

No.	Lgth. In.	Holds Sink Inches	Price Each	No.	Lgth. In.	Holds Sink Inches	Price Each
1	24	16x24 or 18x24	\$2.00	4	36	18x36 or 20x36	\$2.00
2	30	16x30 " 18x30	2.00	5	42	18x42 " 20x42	2.25
3	30	18x30 " 20x30	2.00	6	48	18x48 " 20x40	2.25

Redlon Adjustable Sink and Tray Legs

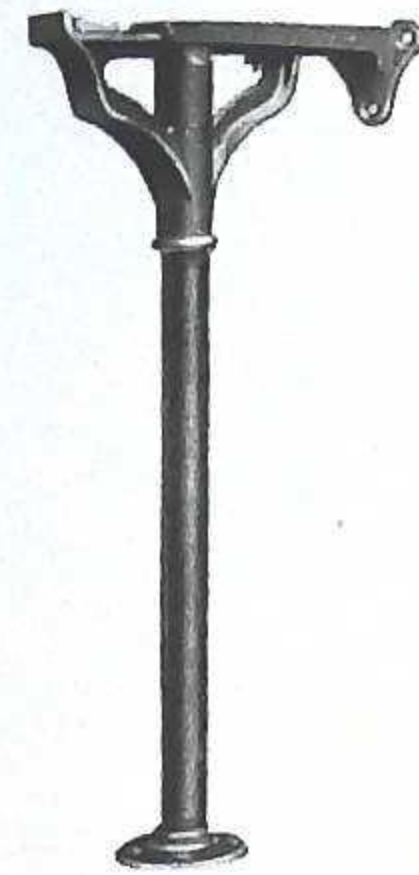


Fig. 631

Can be adjusted in width to fit tray or sink. Thread on leg is 3 inches long so that it can be made the height wanted.

The leg is made of heavy cast iron which makes it strong. There being no legs to cut and fit, makes it a time saver.

Specify whether wanted for sink or tray as the pipe standards on sink legs are 6 inches longer. Otherwise the same.

Packed one pair to a carton.

Price.....per pair \$7.00

Pump Shelf and Bracket

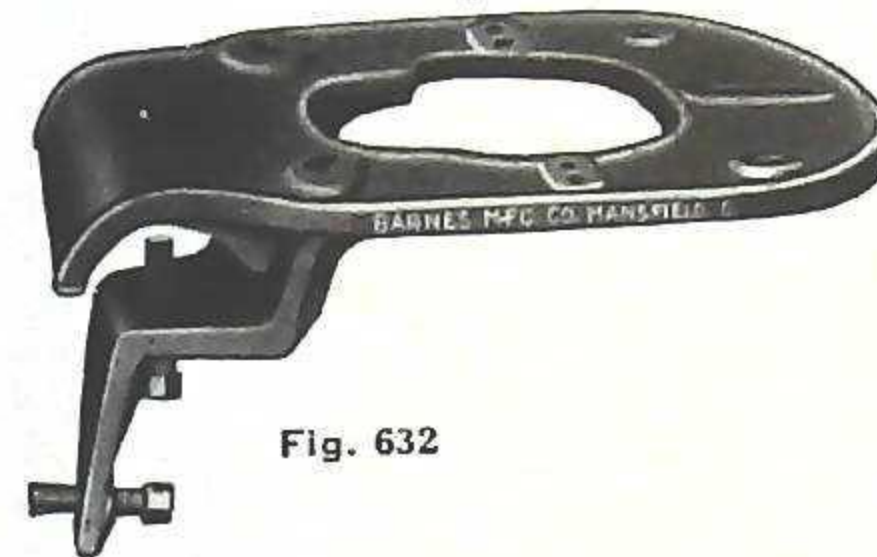


Fig. 632

Designed for attaching to flat or roll rim sinks for supporting a pump. Can be placed on either side and adjusted to any desired level. Has a bead around the outer and inner edges so all waste

water will drain into the sink. The numerous holes and slots in the shelf make it suitable for fitting different makes of pumps.

Royal Blue pumps take a bracket slightly different. Specify if for Royal Blue pump.

Price, Painted or Bronzed.....per doz. \$20.00
" White Enameled..... " 30.00

Sink Collars



No. 450 Fig. 633

No. 450 for Lead Pipe
Size In. Price, per Dozen Galv. Ptd.
1 1/4 \$1.50 \$2.00
1 1/2 1.50 2.00



No. 452 Fig. 634

No. 452 for Iron Pipe
Size.....inches 1 1 1/4 1 1/2 2
Price, Painted.....per doz. \$3.00 \$3.00 \$3.00 \$6.00
" Galvanized..... " 4.00 4.00 4.00 8.00

No. 4416 Sink Strainers with Plugs

Price, Painted.....per doz. \$3.50
" Enameled..... " 5.00
" Polished Brass..... " 7.00
" N. P. Brass..... " 8.00
" Ex. Bolts and Nuts..... " .50

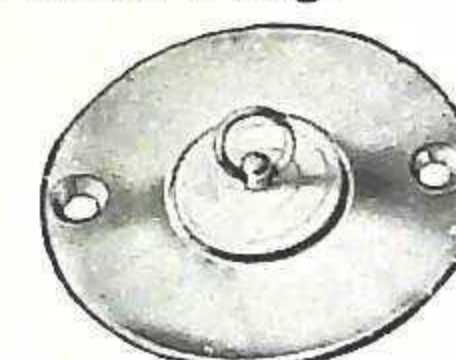


Fig. 635

No. 4415 Open Sink Strainers



Fig. 636

Price, Painted.....per doz. \$1.25
" Enameled..... " 2.25
" Polished Brass..... " 3.75
" N. P. Brass..... " 4.00
" Ex. Bolts and Nuts..... " .50

No. 4420 Sink Bolts



Long Fig. 637

PRICE, PER DOZEN
Iron Brass
Long, with Two Iron Nuts.... \$.35 \$.50
Short " One " Nut..... " .30 .40
Add for N. P. Heads..... " .20 .20



Short Fig. 638

Copper and White Metal Pantry Sinks

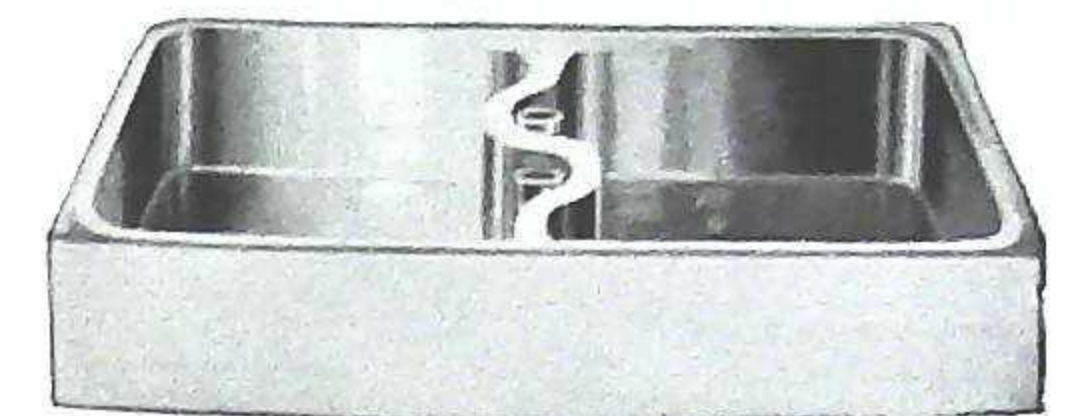


Fig. 639

Double pantry sink encased in plain wood box, with S dividing partition and 2 nickel-plated standing overflows, couplings and tail pieces, nickel-plated twin waste connection with 4 1/2-inch centers for 1 1/2-inch trap.

Size.....inches 18x40 22x44 16x48 24x48
Price, Copper, as Described.....each \$42.00 \$44.00 \$46.00 \$48.00
" White Metal, as Described..... " 67.00 72.00 77.00 81.00

Copper and White Metal Pantry Sinks

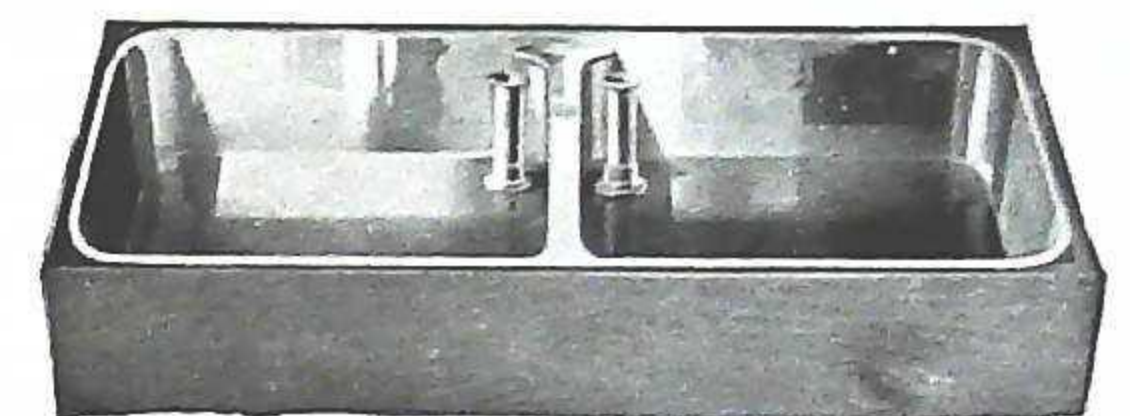


Fig. 639A

Double pantry sink encased in plain wood box, with straight dividing partition and 2 nickel-plated standing overflows, couplings and tail pieces, nickel-plated twin waste connection with 4 1/2-inch centers for 1 1/2-inch trap.

Size.....inches 18x40 22x44 16x48 24x48
Price, Copper, as Described.....each \$36.00 \$38.00 \$38.00 \$40.00
" White Metal, as Described..... " 60.00 65.00 70.00 75.00

Copper and White Metal Pantry Sinks

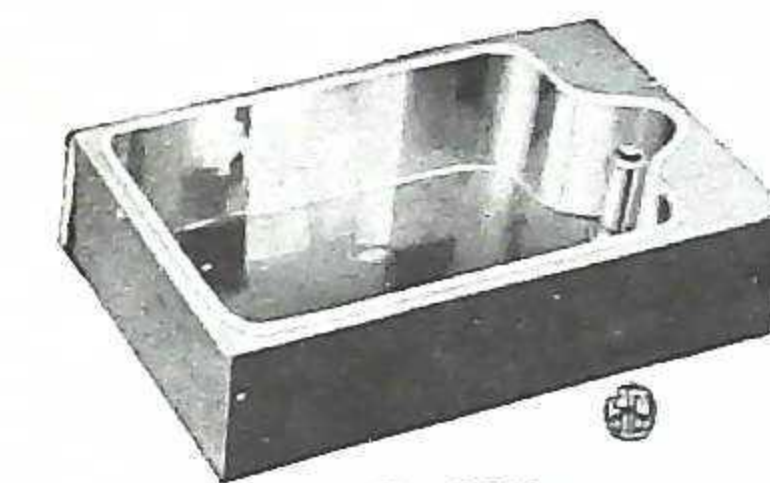


Fig. 639B

Recess pantry sink with standing overflow and drain.

Measurements do not include recess.

Prices include standing overflow.

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Copper	White Metal		Copper	White Metal
14x20	\$14.50	\$30.50	16x30	\$19.40	\$38.50
14x24	16.20	33.00	18x30	20.50	40.50
16x24	17.30	35.50	20x36	24.00	46.50

Copper and White Metal Pantry Sinks



Fig. 639C

Pantry sink with connected drain and overflow, encased in finished oak or plain wood box.

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Copper	White Metal		Copper	White Metal
12x18	\$6.00	\$11.00	14x24	\$8.70	\$16.20
12x20	6.50	12.00	16x24	9.80	18.30
14x16	6.00	13.00	16x30	11.90	21.40
14x20	7.60	14.10	18x30	13.00	24.00

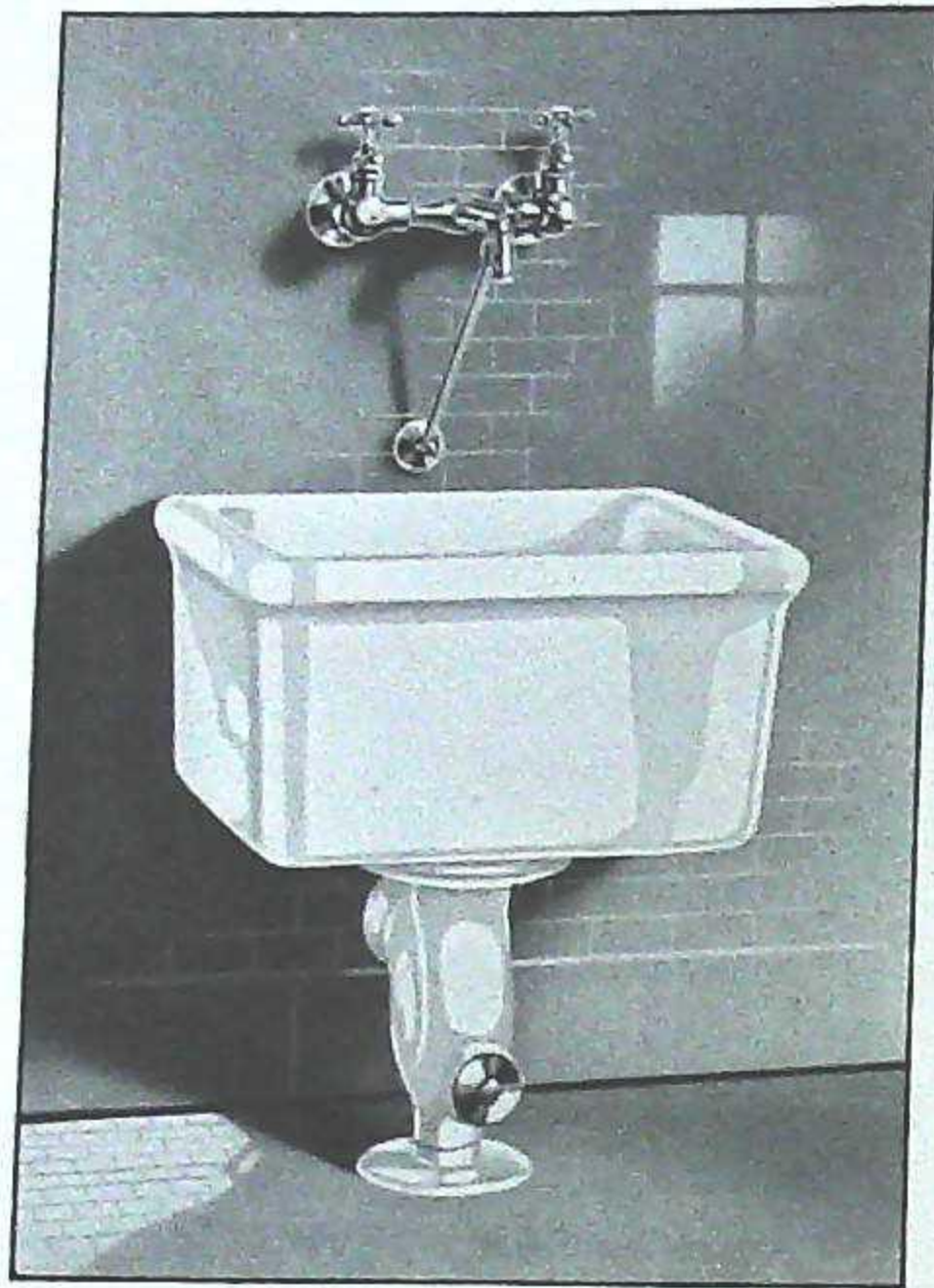


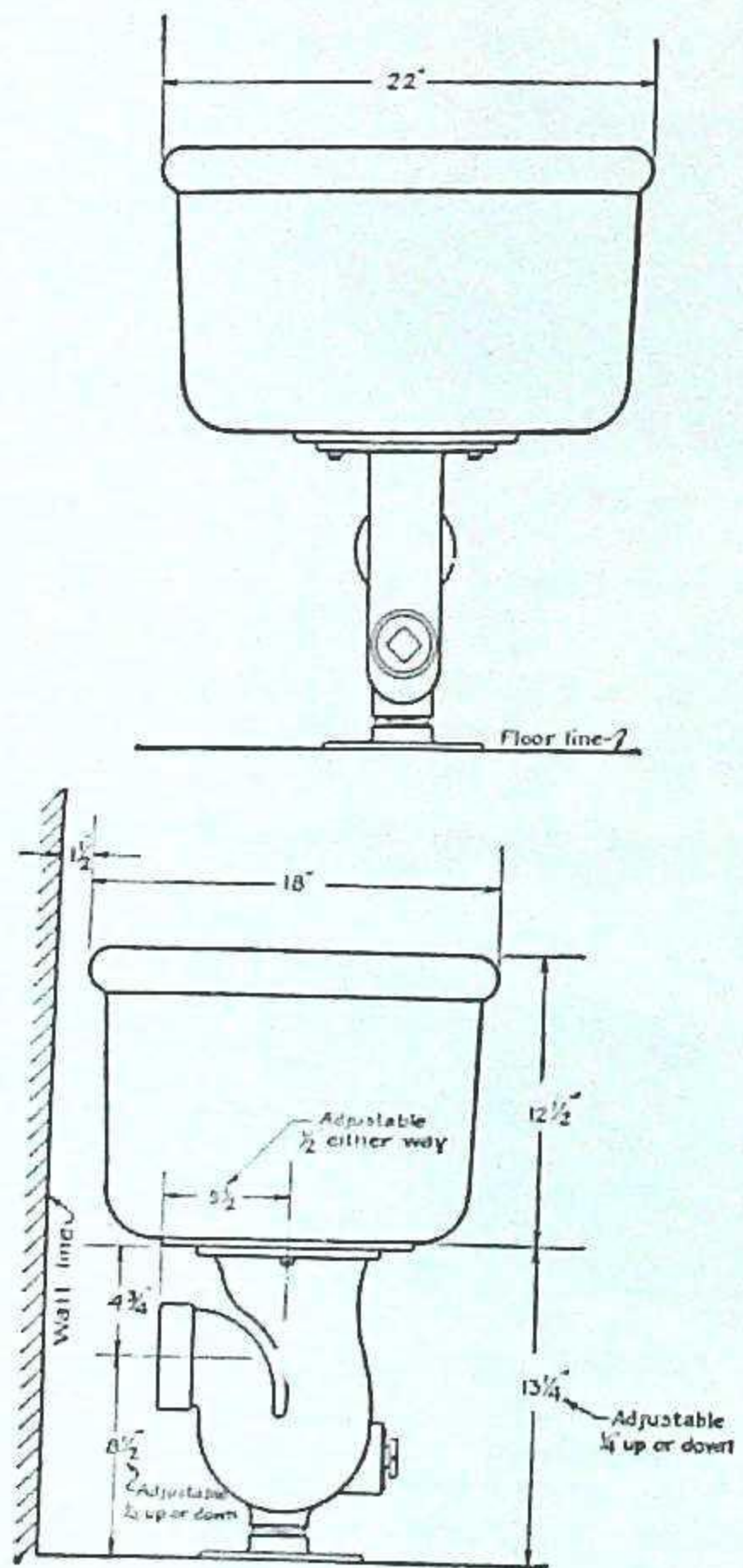
Fig. 641

Vitreous China All Roll Rim Slop Sink on enameled all over iron adjustable wall outlet trap standard with clean-out plug and nickel-plated outlet strainer, nickel-plated combination supply fitting with compression valves, 4-ball handles with china indexes, supply nozzle with pail hook and support.

Size 18x22 inches

Approximate Shipping Weight..... pounds 160

Roughing Measurements



Measurements may vary from 1/4 to 1/2 inch.

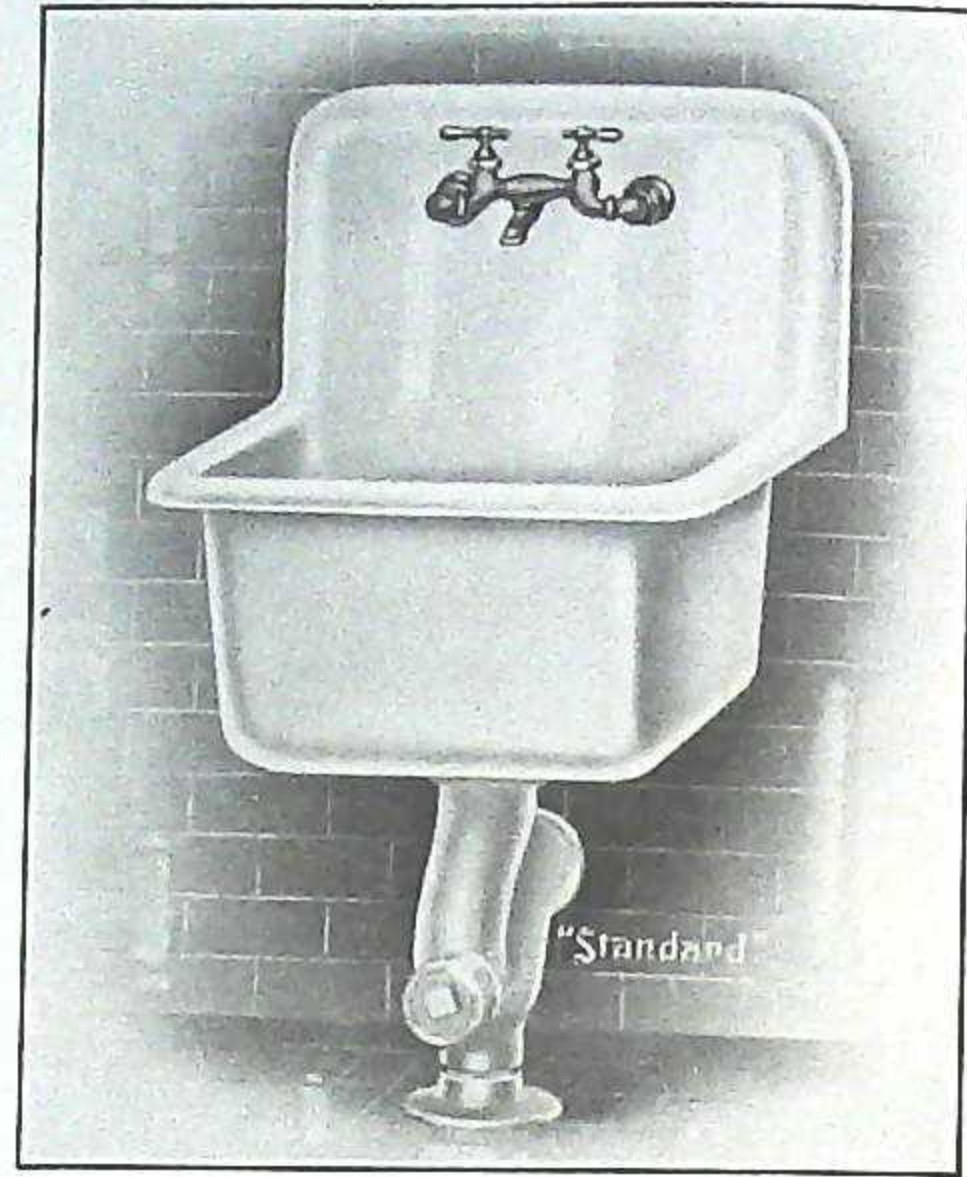


Fig. 642

Enameled Iron Roll Rim Slop Sink, with integral back, painted exterior, wall hanger, enameled inside adjustable P trap tapped for 3 inch iron pipe, with cleanout and nickel-plated strainer, rough nickel-plated compression combination supply fitting with short spout and polished nickel-plated lever handles, caps and flanges.

Back 12 inches

Size..... inches	16x20	18x22	20x22	20x24
Approximate Shipping Weight, Less Fittings..... pounds	142	157	167	175

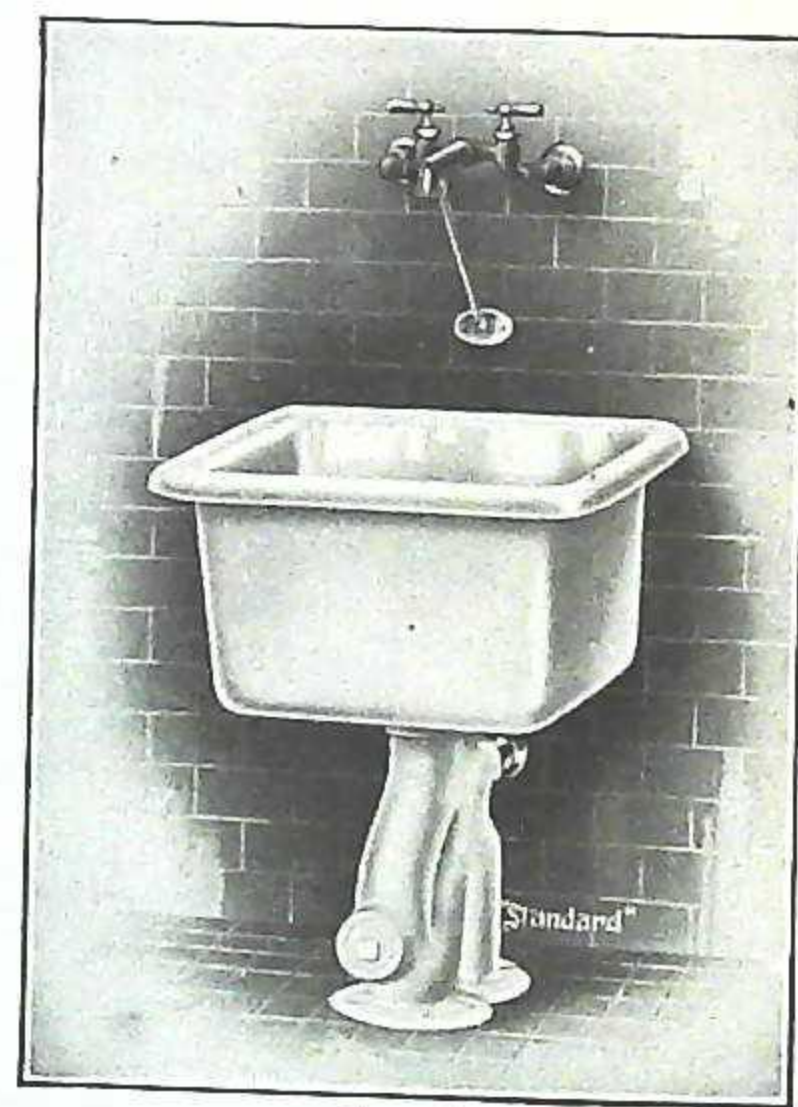


Fig. 643

Enameled Iron All Roll Rim Slop Sink, painted exterior, enameled inside S trap with cleanout, nickel-plated vent to wall and strainer, rough nickel-plated compression combination supply fitting, spout, pail hook and brace to wall and polished nickel-plated lever handles, caps and flanges.

Size..... inches	16x20	18x22	20x22	20x24	20x30
Approximate Shipping Weight..... pounds	111	123	131	142	165

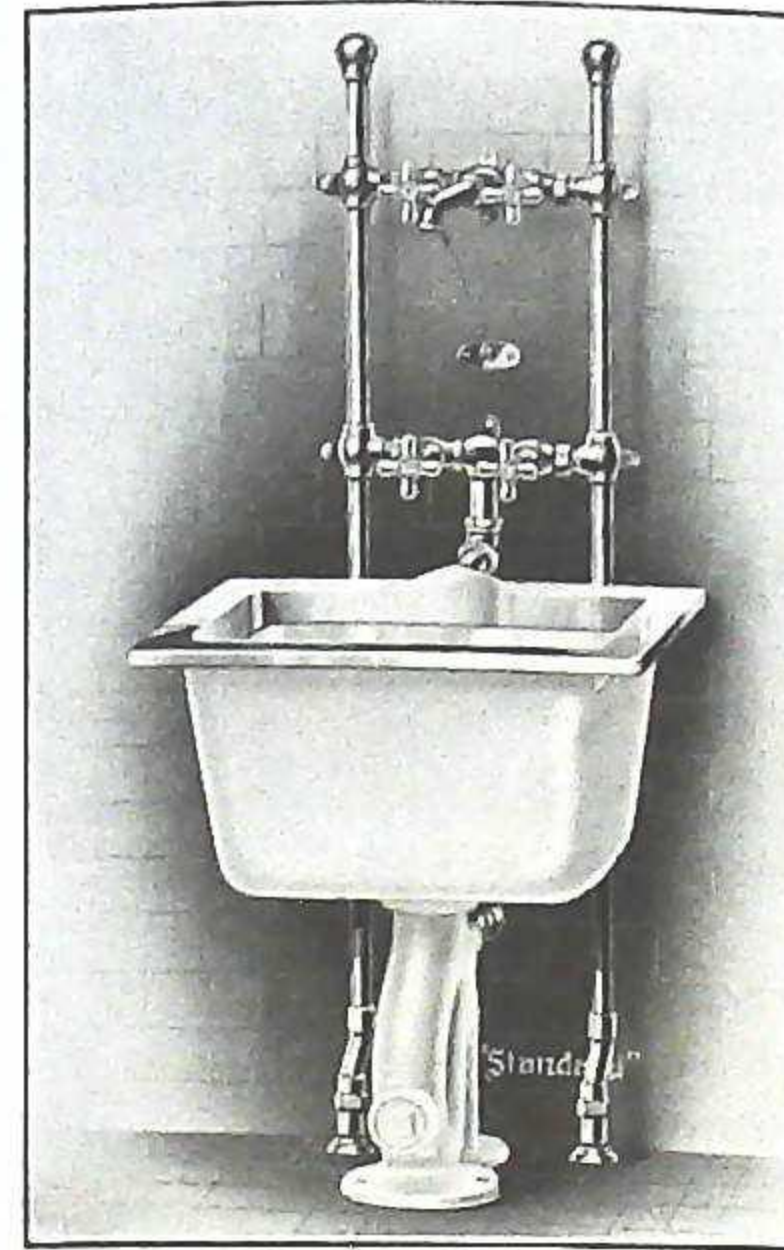


Fig. 651

Enameled Iron Slop Sink on enameled inside S trap standard for 3-inch soil pipe with nickel-plated vent, nickel-plated flushing rim, nickel-plated combination compression supply to rim, nickel-plated compression slop sink faucet with bucket hook and brace, china indexed handles, nickel-plated air chambers and supply pipes and nickel-plated strainer.

Sink and trap standard furnished with outside painted one coat.

Size..... in.	16x20	18x22	20x22	20x24
App. Ship. Wt. with Fittings..... lbs.	136	148	158	167
App. Ship. Wt. with Brass Rim Only. lbs.	111	123	133	142



Fig. 652

Size..... inches	3
Price, Enameled Inside..... each	\$10.40
" " " and Outside..... "	\$13.80

Can also be furnished with outlet tapped for 2-inch iron pipe.

Enameled Iron Slop Sink Traps

S trap with spigot end for soil pipe, cleanout plug, and 2-inch nickel-plated brass vent to wall.

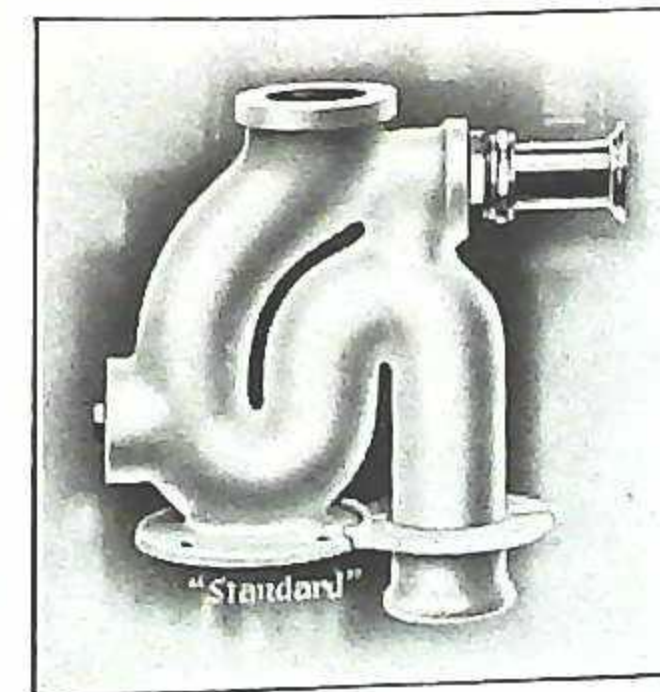


Fig. 653

Size..... inches	3
Price, Enameled Inside..... each	\$10.45
" " " and Outside..... "	\$13.80

Enameled Iron Slop Sinks and Waste Connections
Enameled Iron Slop Sinks



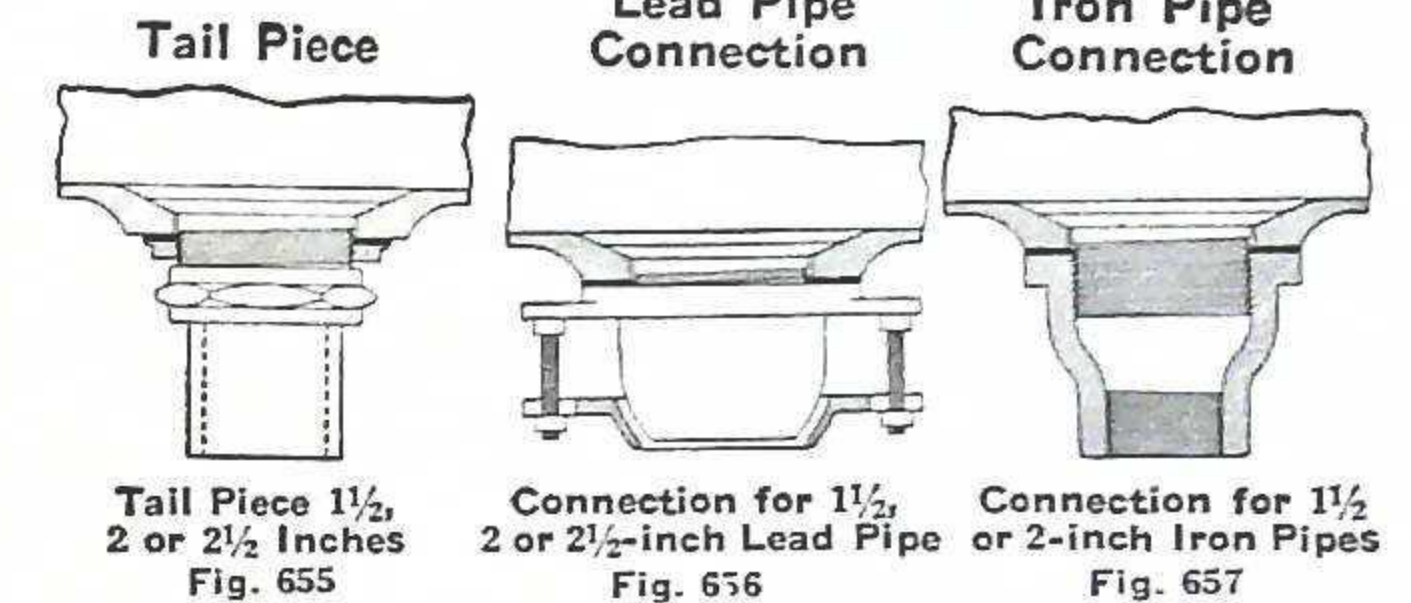
Fig. 654

Enameled iron flat rim slop sink, with round corners, 2-inch center outlet with nickel-plated strainer.

Size..... inches	16x16x10	20x14x12	20x16x12
Weight..... pounds	48	59	66
Size..... inches	22x20x12	24x18x12	24x20x12
Weight..... pounds	77	85	92
Size..... inches	30x20x12	36x20x12	48x20x12
Weight..... pounds	113	137	191

These slop sinks are also furnished with painted inside and outside.

Waste Connections



Enameled Iron Slop Sink Traps

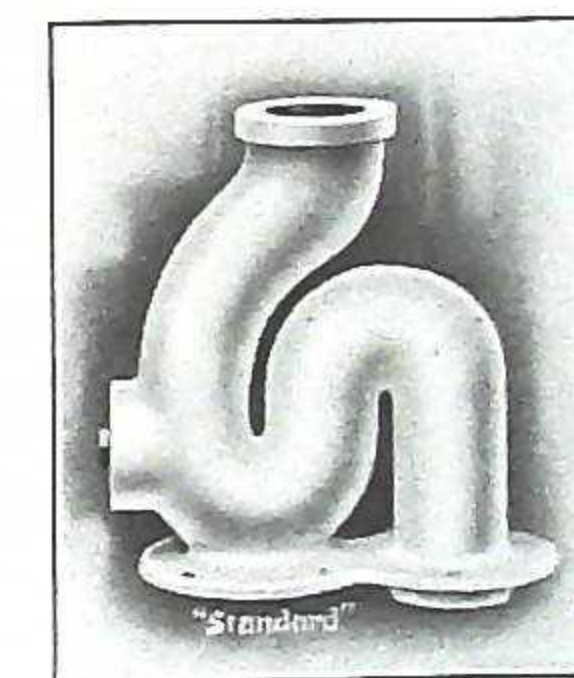


Fig. 658

Size..... inches	3
Price, Enameled Inside..... each	\$10.45
" " " All Over..... "	\$13.80

Enameled Iron Slop Sink Traps

S trap enameled inside, painted one coat outside with outlet for 3-inch lead pipe connection, with cleanout and 2-inch hub vent.

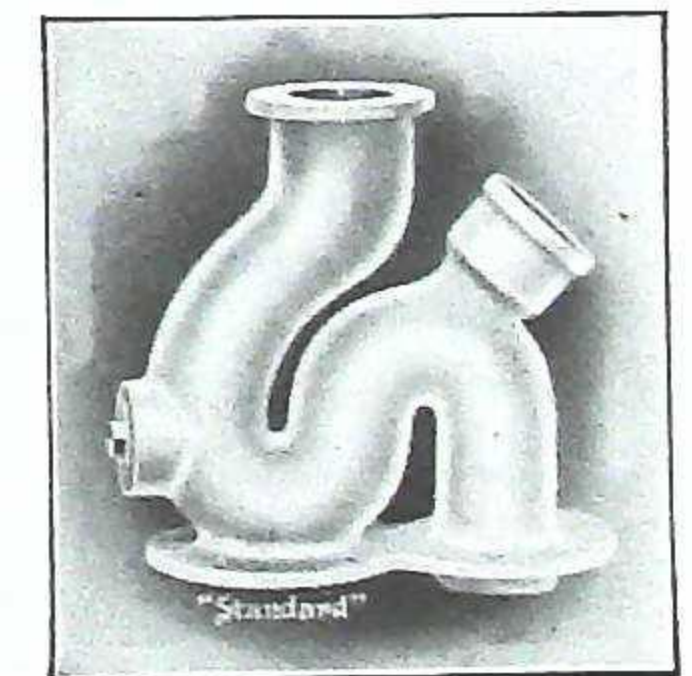


Fig. 659

Size..... inches	3
Price, Enameled Inside..... each	\$10.45
" " " All Over..... "	\$13.80

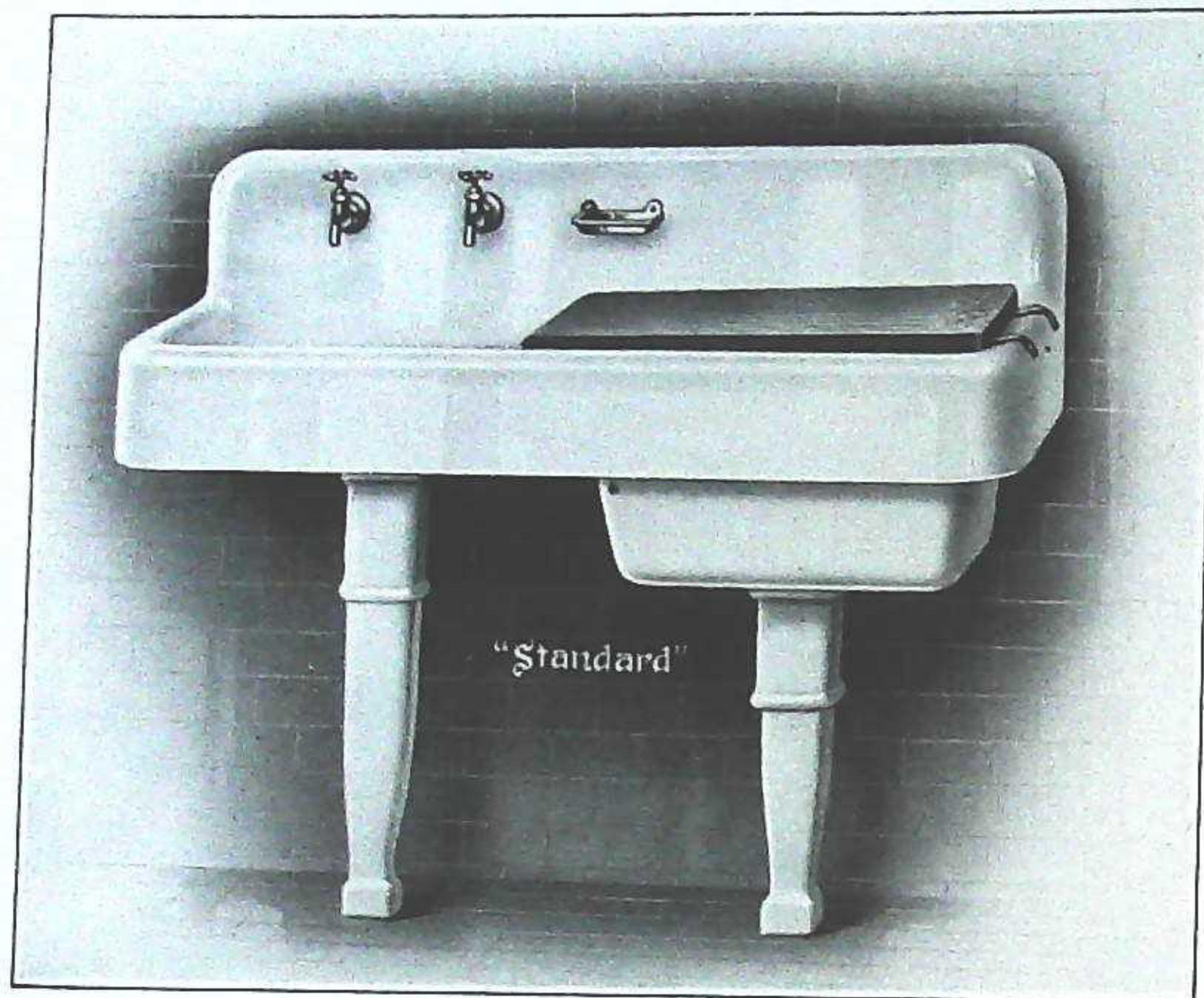
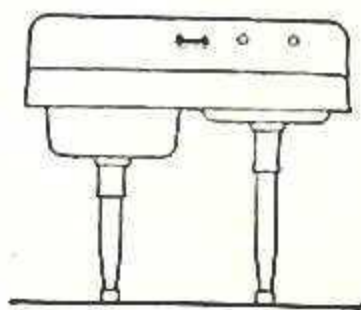


Fig. 661

Enameled Iron One-piece Apron Laundry Tray and Sink Combination with back and 6-inch apron, enameled iron adjustable legs, concealed wall hangers, removable ash drain board and tray cover and nickel-plated soap dish, nickel-plated flanged sink and tray faucets with four-ball china index handles and nickel-plated duplex strainer on sink, nickel-plated drain plug with rubber stopper on tray.

Width over all 23½ inches
Sink inside 21¾x19¼ inches
Depth of sink 8 inches
Tray inside 21¾x19¼ inches
Depth of tray 13¼ inches
Height from floor to top of rim adjustable 32 to 36 inches
Height of back 8 inches

Length Over All inches 50¾
Approximate Shipping Weight Less Fittings pounds 392



Sink at Right
Fig. 662

When ordering specify whether wanted with sink at left or right end.

Enameled Iron One-piece Roll Rim Laundry Tray and Sink Combination, with back, painted iron adjustable pedestal, concealed wall hangers, removable ash drain board and tray cover, nickel-plated soap dish, nickel-plated compression flanged sink and tray faucets with four-ball china index handles, nickel-plated duplex strainer on sink, nickel-plated drain plug and rubber stopper on tray.

Width over all 23½ inches
Sink inside 21¾x19¼ inches
Depth of sink 6 inches
Tray inside 21¾x19¼ inches
Depth of tray 13¼ inches
Height from floor to top of rim adjustable 30 to 33 inches
Height of back 8 inches

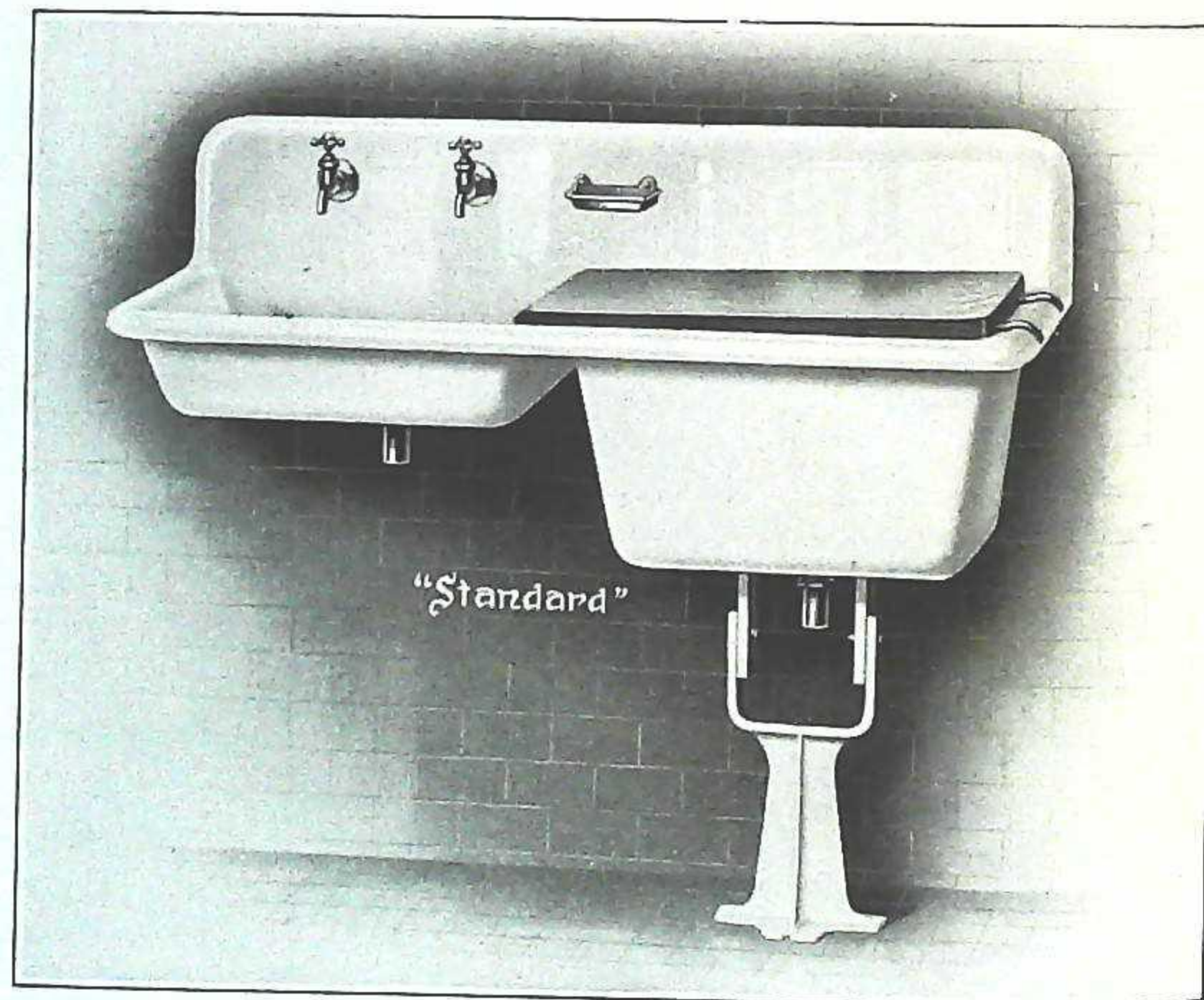
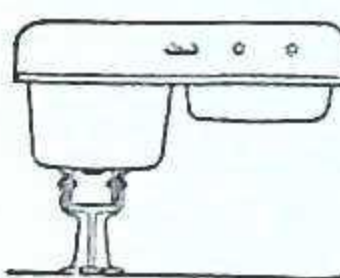


Fig. 663

Length Over All inches 50¼
Approximate Shipping Weight Less Fittings pounds 362

This combination is a useful fixture for apartments, small residences and cottages. When the laundry tray is not in use, the wood cover serves as a drain board for sink.

When ordering specify whether wanted with sink at left or right end



Sink at Right
Fig. 664

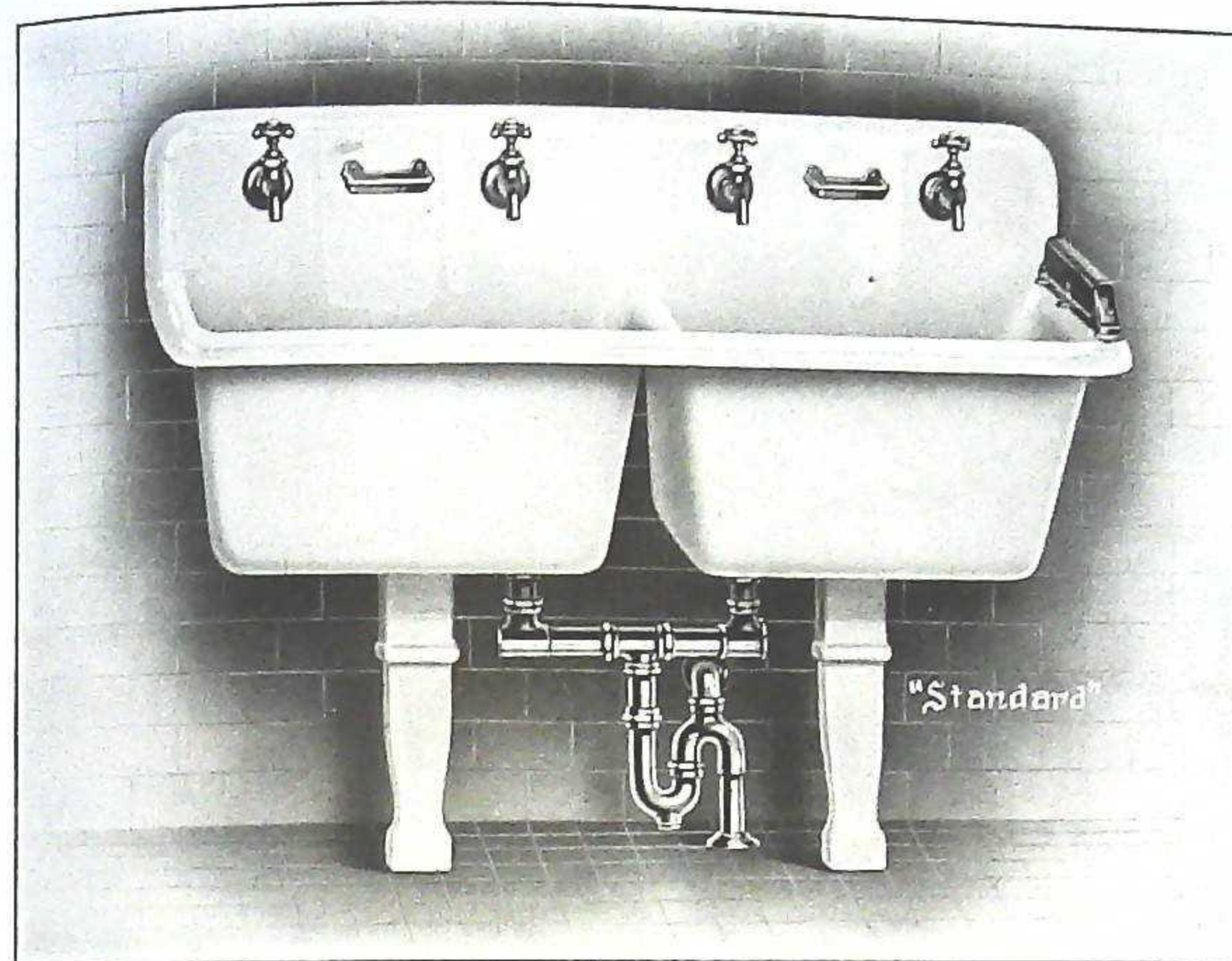


Fig. 671

Enameled Iron One-piece Roll Rim Two-section Laundry Tray with back, painted iron adjustable legs, nickel-plated soap dishes, hardwood wringer holder on right end, nickel-plated compression adjustable flanged faucets with four-ball china indexed handles, nickel-plated continuous drain, drain plugs and rubber stoppers, and nickel-plated vented S trap.

Regularly furnished painted one coat outside.

Width inside 21¾ inches
Width outside 25¾ inches
Height of back 8 inches
Length over all 53¾ inches
Length inside each section 23 inches
Height from floor to top of rim, adjustable 33 to 36 inches
Depth inside 14¼ inches

Approximate Shipping Weight, Less Fitting pounds 421

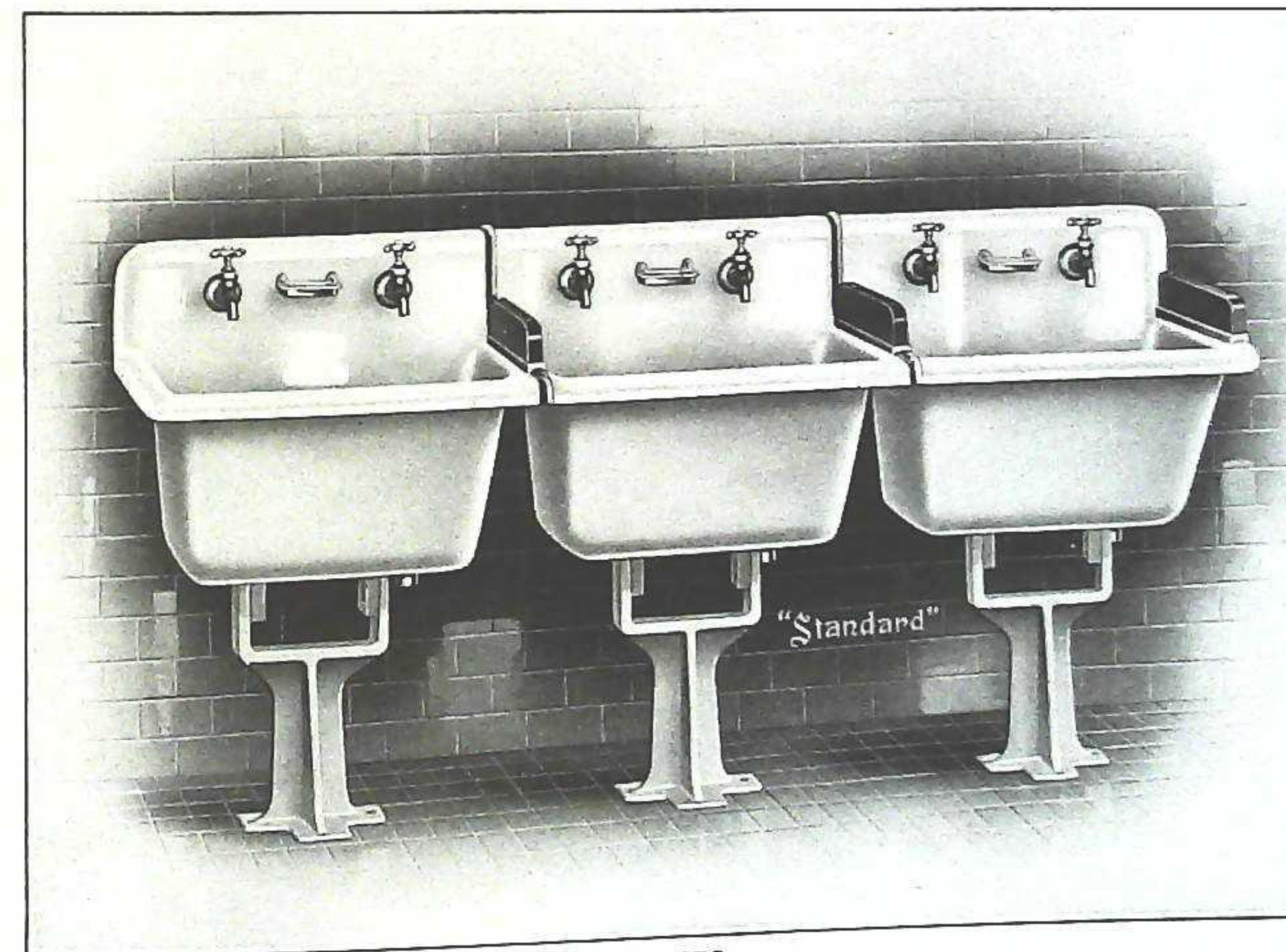


Fig. 672

Enameled Iron Roll Rim Laundry Trays with tray and back of each section in one piece, painted iron adjustable sanitary pedestals, nickel-plated soap dishes, nickel-plated union strips and hardwood wringer holders, nickel-plated compression adjustable flanged faucets with four-ball china indexed handles, drain plugs with rubber stoppers. Regularly furnished painted one coat outside.

Width inside 21¾ inches
Width outside 26 inches
Length inside each section 23 inches
Length over all three sections 83¼ inches
Height of back 8 inches
Height from floor to top of rim adjustable 31 to 34 inches
Depth inside 14¼ inches
Approximate Shipping Weight, Each Section pounds 210

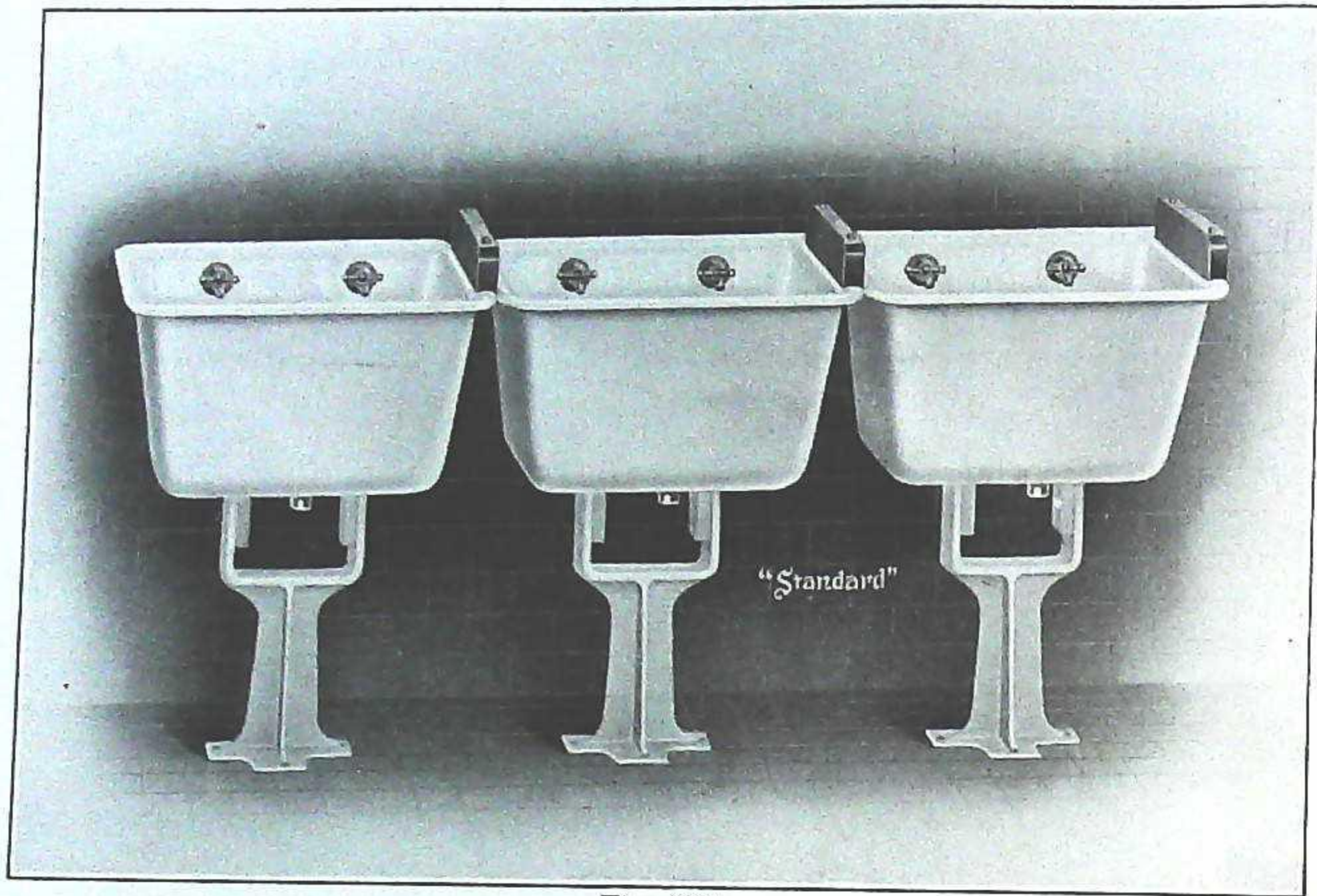


Fig. 681

Enameled Iron Flat Rim Laundry Trays on painted iron adjustable sanitary pedestals, hardwood wringer holders bolted to rim, nickel-plated compression stub pattern, flanged faucets with tee handles, drain plugs and rubber stoppers.
Regularly furnished painted one coat outside.

Width Inside.....inches	19	22
" Outside....."	22 ³ / ₄	25 ¹ / ₂
Length Inside, Each Section....."	21 ¹ / ₄	23
Height from Floor to Top of Rim....."	30 to 33	31 to 34
Length Over All Three Sections....."	72 ³ / ₈	76 ¹ / ₂
Depth Inside....."	13 ¹ / ₄	14 ¹ / ₄
Approximate Shipping Weight, Each Section.....pounds	135	142

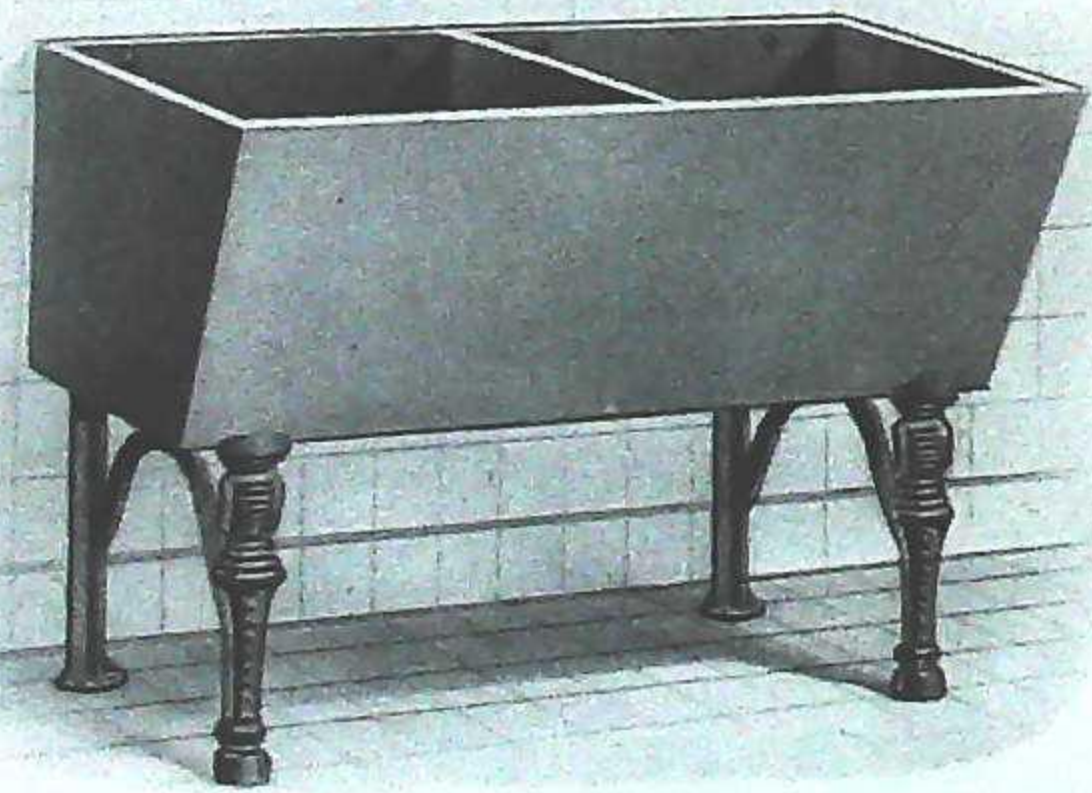


Fig. 682

Alberene Stone Laundry Tray without back, drilled for waste connection and faucets, supported on painted iron legs, fitted with finished brass waste plug and stoppers.

Dimensions
Width outside 24 inches
Depth outside 16 inches

1-part

Length.....inches	24	30	36
Approximate Shipping Weight.....pounds	239	265	325

2-part

Length.....inches	48	54	60
Approximate Shipping Weight.....pounds	455	484	530

3-part

Length.....inches	72	78	84	90	96
Approximate Shipping Weight.....pounds	665	710	790	815	840

This tray can be drilled for center, right or left-hand waste connection. Also furnished without faucet drillings if desired.
Faucets and waste connections are extra.

This tray can be furnished in 42, 44 and 46-inch lengths for use in small apartments.

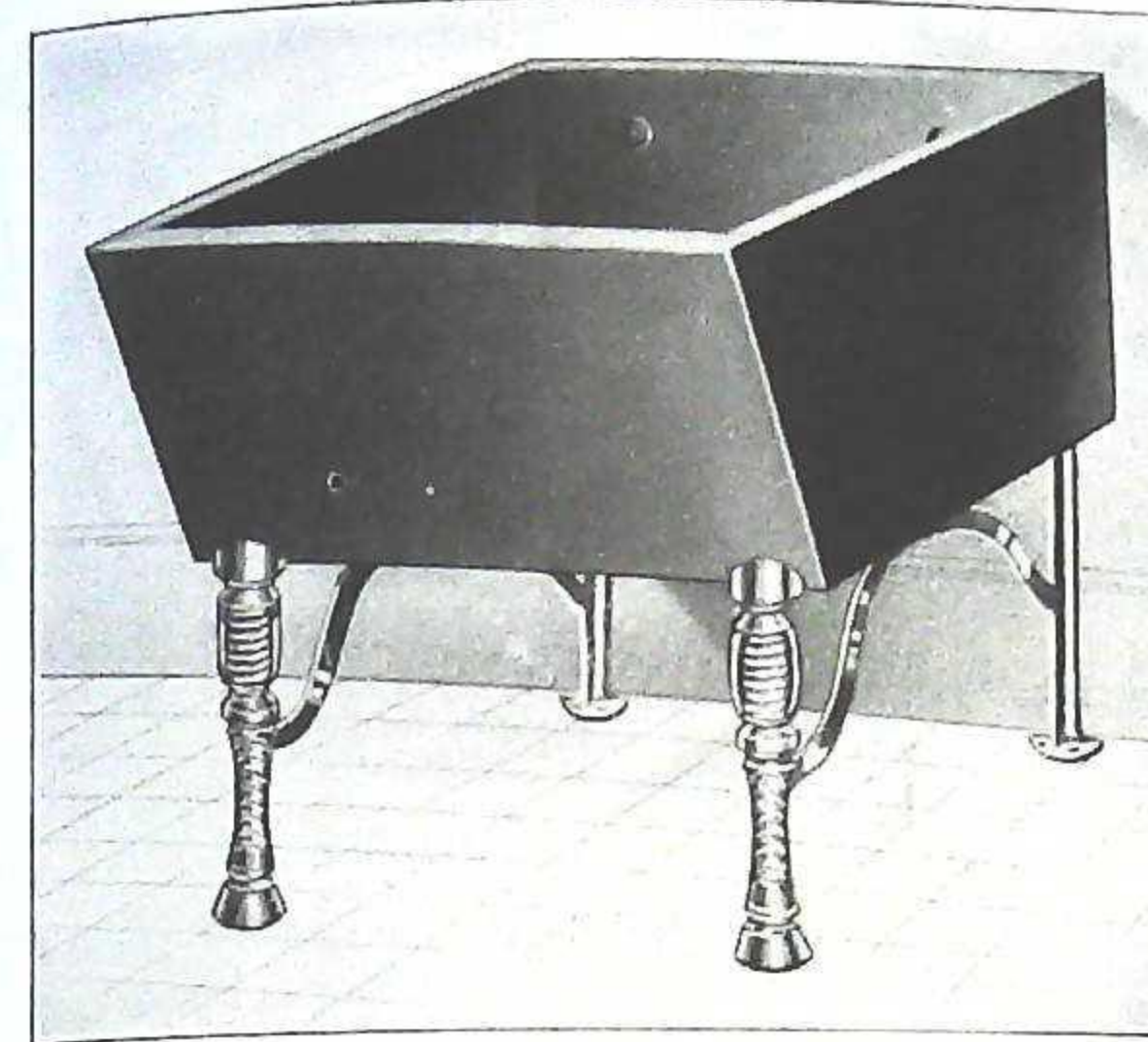


Fig. 691

Slate One-part Laundry Tray without back, supported on painted or galvanized legs, holes drilled for faucets unless otherwise ordered.

All measurements are outside. Thickness of slate, 1¹/₄ inches.

	Width 24 inches		
	Depth 14 inches		
Length.....inches	24	30	36
Approximate Shipping Weight pounds	270	340	400
Price, Tray Only.....	\$14.50	17.50	21.90

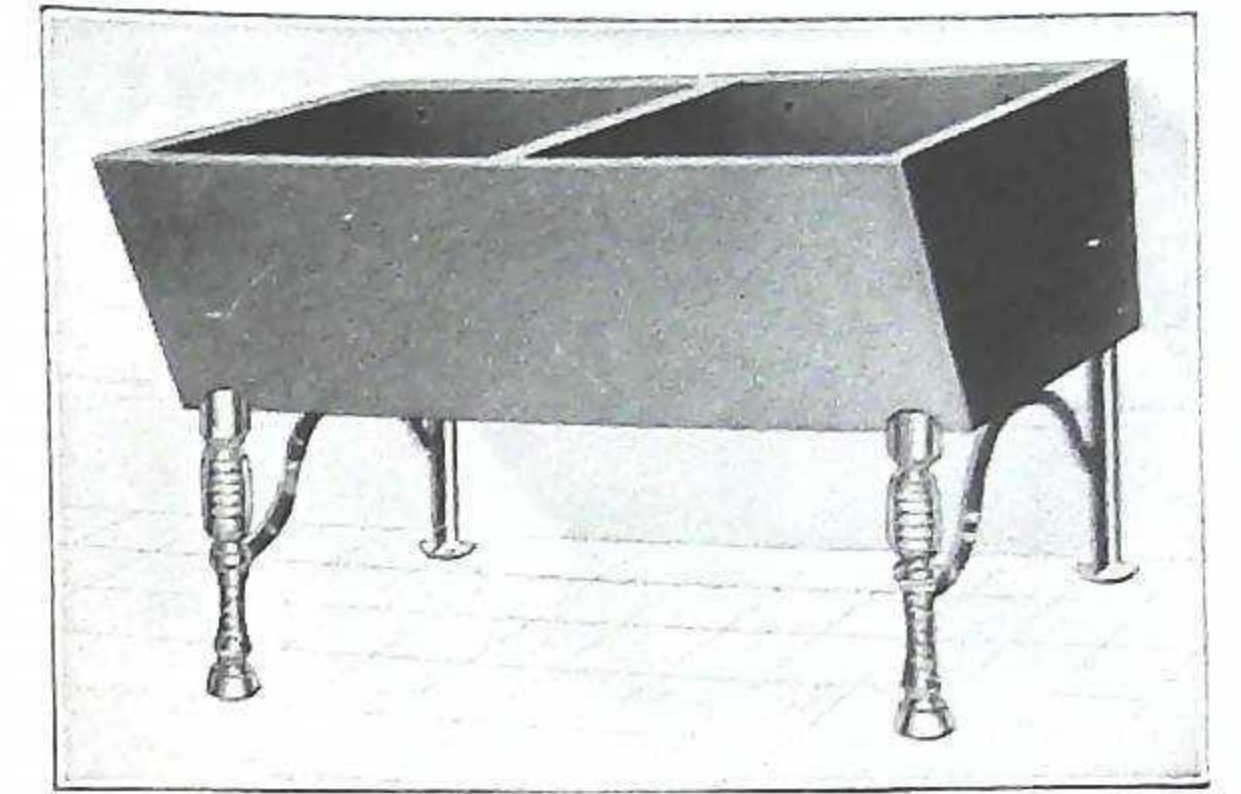


Fig. 693

Slate Two-part Laundry Tray without back, supported on painted or galvanized iron legs.

Holes drilled for faucets unless otherwise ordered.
Thickness of slate 1¹/₄ inches.
All measurements are outside.

	Width 24 inches		
	Depth 14 inches		
Length.....inches	48	54	60
Approximate Shipping Weight pounds	470	540	585
Price, Tray Only.....	\$26.00	29.00	32.00

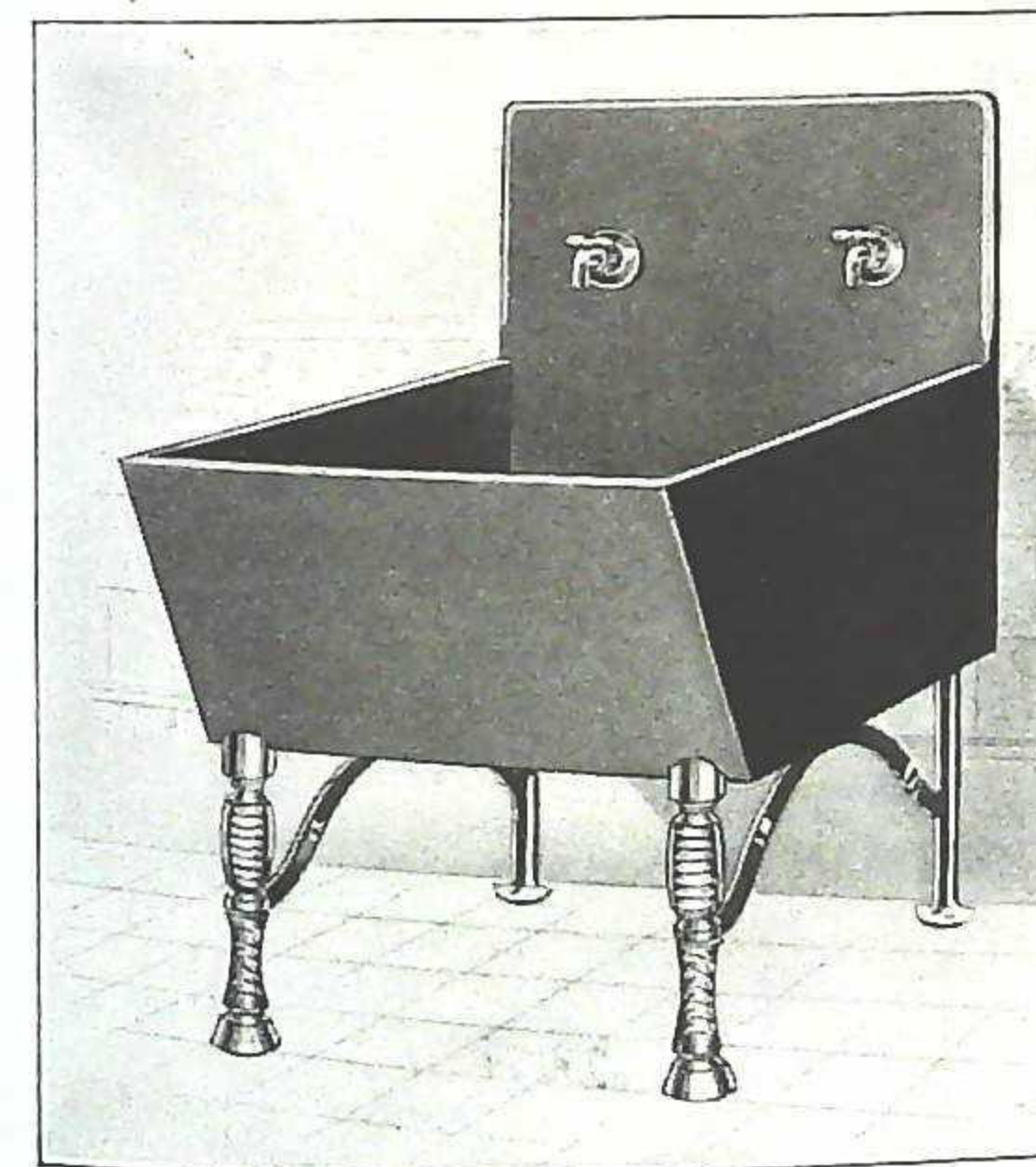


Fig. 692

Slate One-part Laundry Tray with 12-inch back, supported on painted or galvanized cast iron legs, holes drilled for faucets unless otherwise ordered.

All measurements are outside. Thickness of slate, 1¹/₄ inches.

	Width 24 inches		
	Depth 14 inches		
Length.....inches	24	30	36
Approximate Shipping Weight pounds	300	330	460
Price, Tray Only.....	\$16.50	19.50	23.00

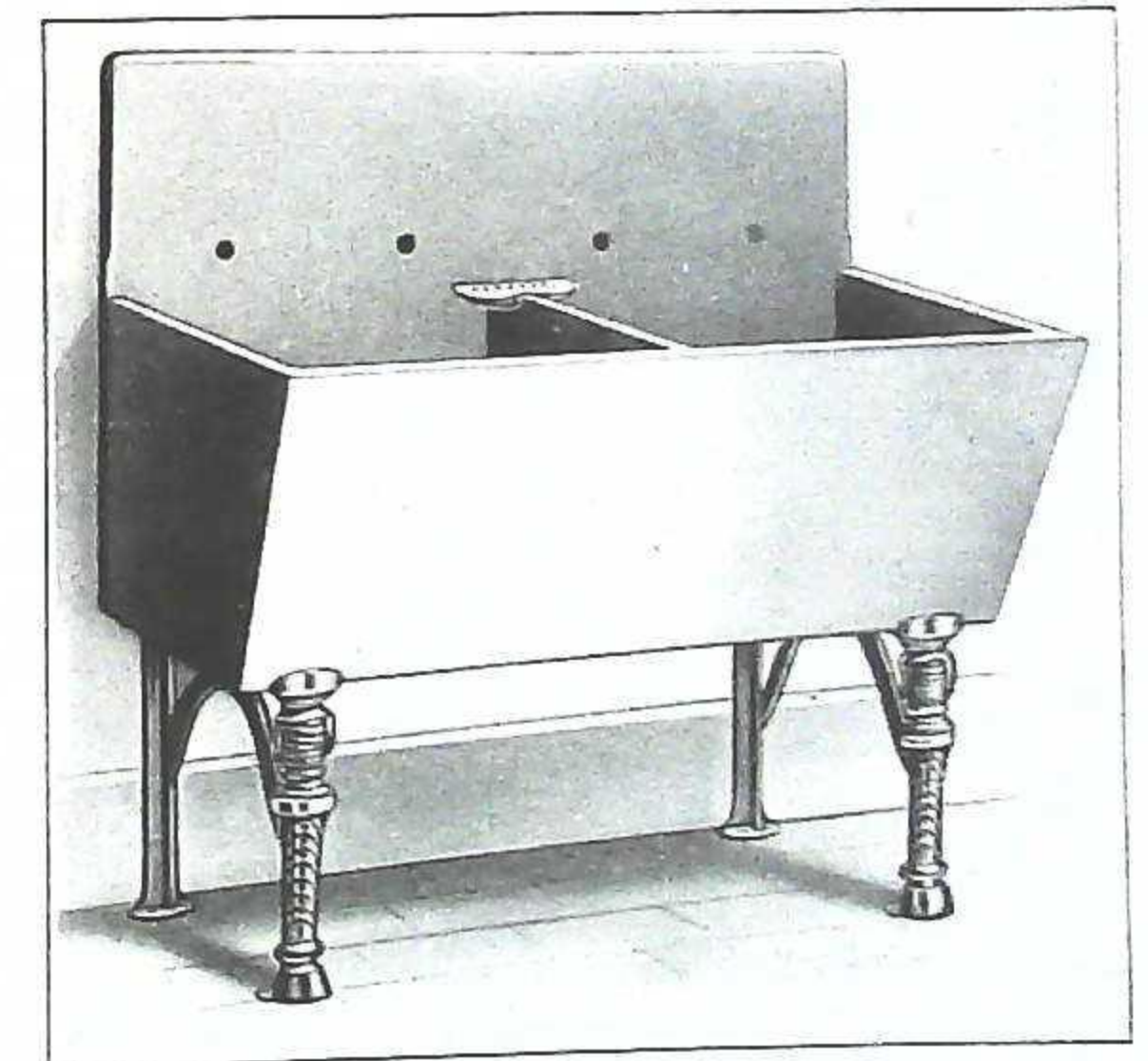


Fig. 694

Slate Two-part Laundry Tray with 12-inch back, supported on painted or galvanized cast iron legs.

Holes drilled for faucets unless otherwise ordered.
Thickness of slate, 1¹/₄ inches.
All measurements are outside.

	Width 24 inches		
	Depth 14 inches		
Length.....inches	48	54	60
Approximate Shipping Weight pounds	520	600	670
Price, Tray Only.....	\$30.00	33.00	36.00

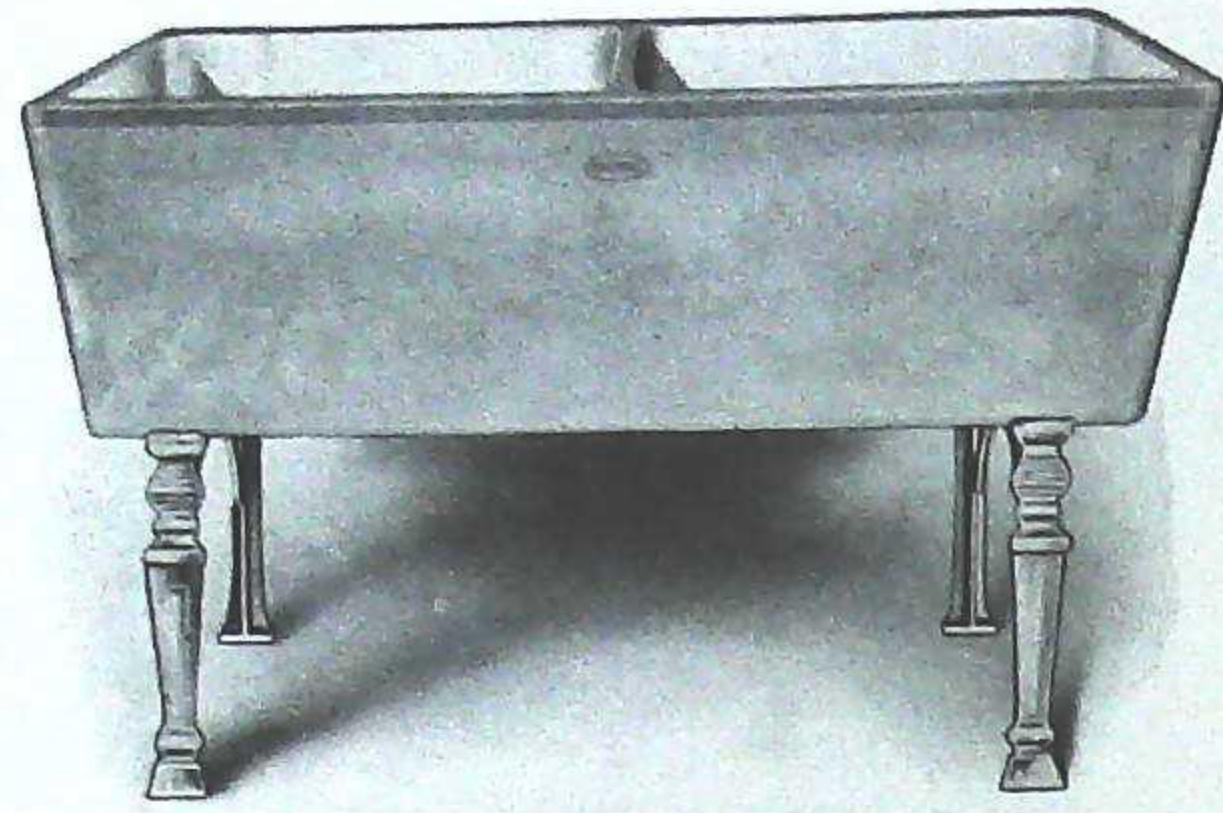


Fig. 701

Nustone Laundry Tray with heavy zinc rim anchored in, heavy cast iron legs and waste plugs.

Two and three part trays have twin waste and overflows. The corners on the inside are rounded, which leaves no place for filth to collect.

No. of Trays	Length Inches	Width Inches	Depth Inches	Approx. Shipping Weight Pounds
1	24	21	16	216
1	24	24	16	240
1	27	24	16	255
1	30	24	16	270
2	42	21	16	325
2	48	21	16	375
2	48	24	16	400
2	54	24	16	475
2	60	24	16	515
3	72	21	16	625
3	72	24	16	650
3	81	24	16	685
3	90	24	16	710

Weight does not include legs. Legs weigh 3 pounds each.

No. 184 Cast Iron Laundry Tray Legs

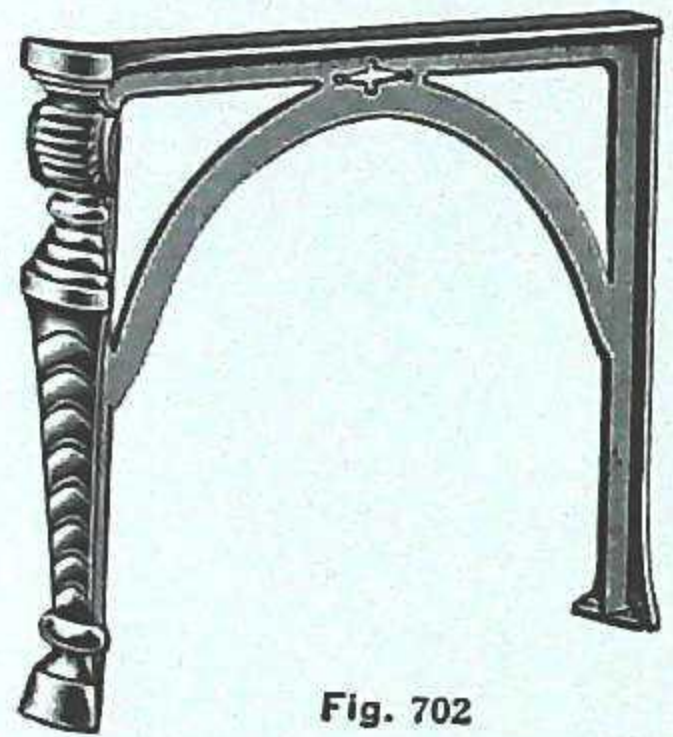


Fig. 702

Price, Painted Iron.....each \$.70
 " Galvanized Iron....." 1.40

No. 421 Extra Heavy Laundry Tray Legs



Fig. 703

The only safe leg to use on laundry trays. Is of cast iron heavily made, and on account of its construction cannot tip.

Height Inches	Width Inches	Width of Foot Inches	PRICE, EACH	
			Painted	Galv.
16 1/4	16 1/2	8	\$1.20	\$2.00
14 3/4	18	8	1.60	3.00

Steel Adjustable Laundry Tray Frames

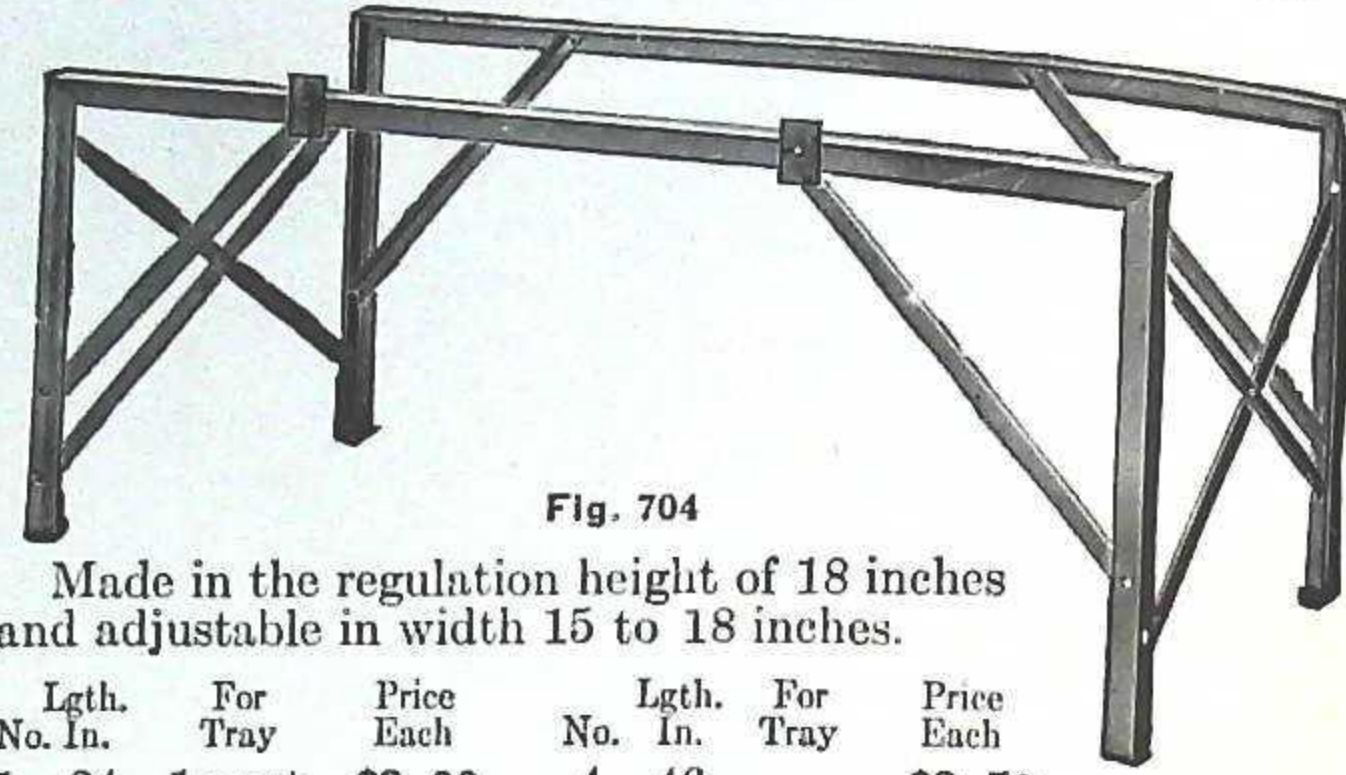


Fig. 704

Made in the regulation height of 18 inches and adjustable in width 15 to 18 inches.

No. In.	For Tray	Price Each	No. In.	For Tray	Price Each
1	24	1-part	4	46	2.50
2	40	2 "	5	52	2.75
3	64	3 "			

Continuous Wastes for Laundry Trays

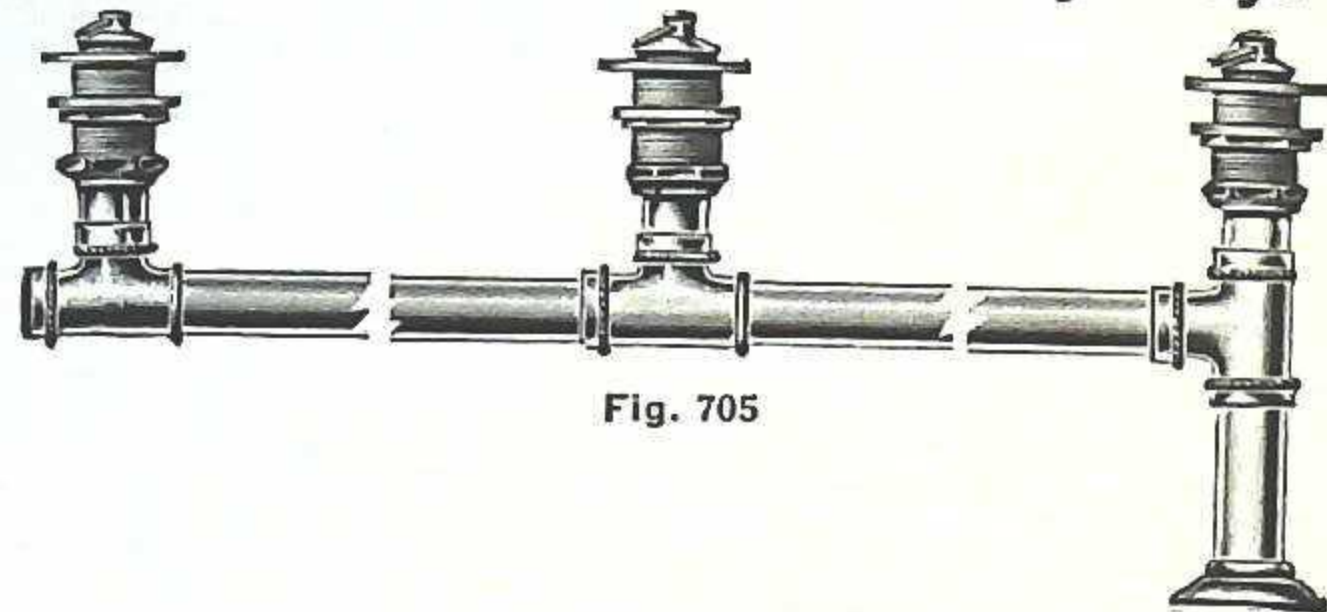


Fig. 705

Inlets not to exceed 27 1/2 inches center to center.

Size In.	No. Parts	PRICE, EACH		Size In.	No. Parts	PRICE, EACH	
		Rough Brass	Fin. or N.P.			Rough Brass	Fin. or N.P.
1 1/2	2	\$2.85	\$3.60	1 1/2	4	\$5.45	\$6.20
1 1/2	3	4.15	4.90				

Porcelain Enameled Wash Tray Covers

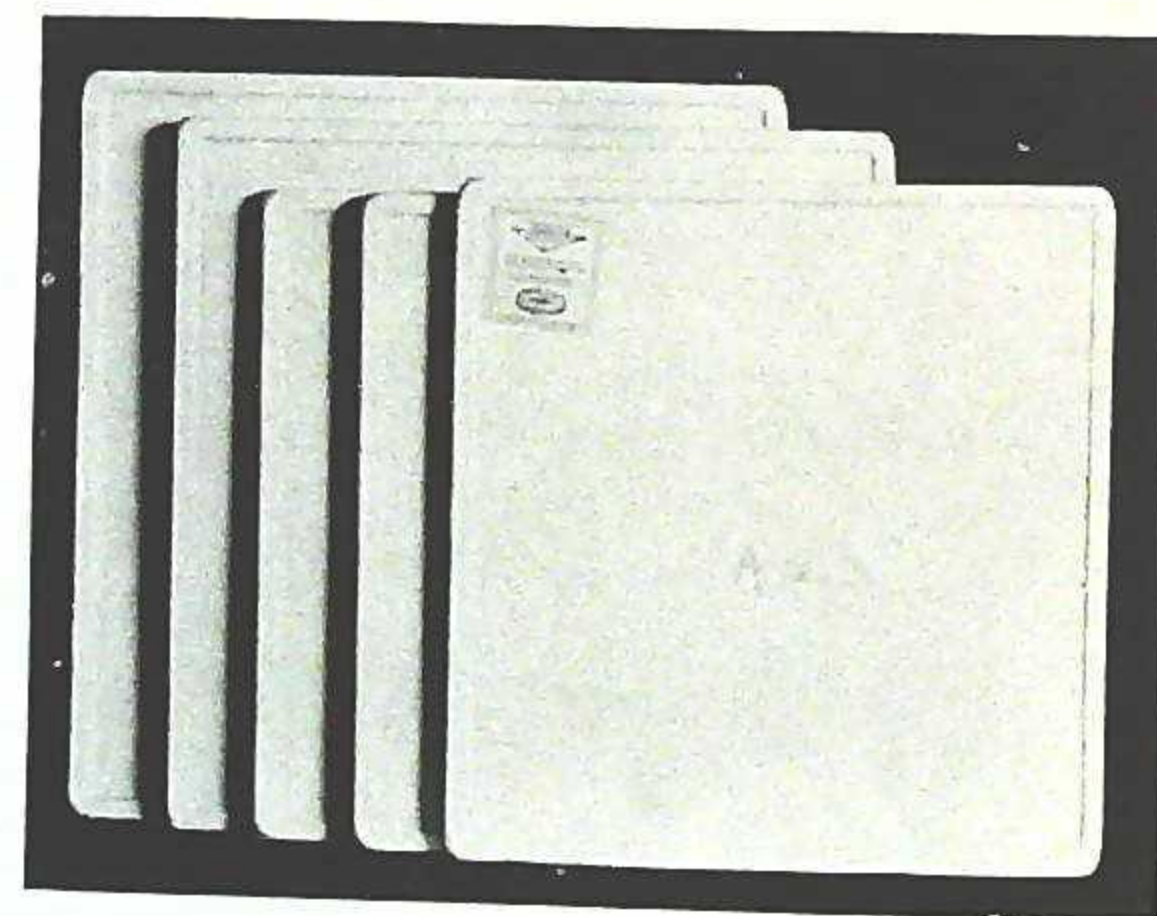


Fig. 706

These covers placed on a laundry tray converts it into a white sanitary table.

Enameled Wash Tray Covers can be easily installed. They are durable and will outlast an ordinary table. A damp cloth will keep them as clean as a china dish.

Style	1-part	2-part	3-part
Size	24x24	24x48	24x72
Price	.....	.....	.....

No. 182 Soap Dishes for Alberene Trays



Fig. 707

Price, Galvanized Iron.....each \$.65
 " Nickel-plated Spun Brass for Enamel Trays. " 1.00

No. 16020 Medicine Cabinets

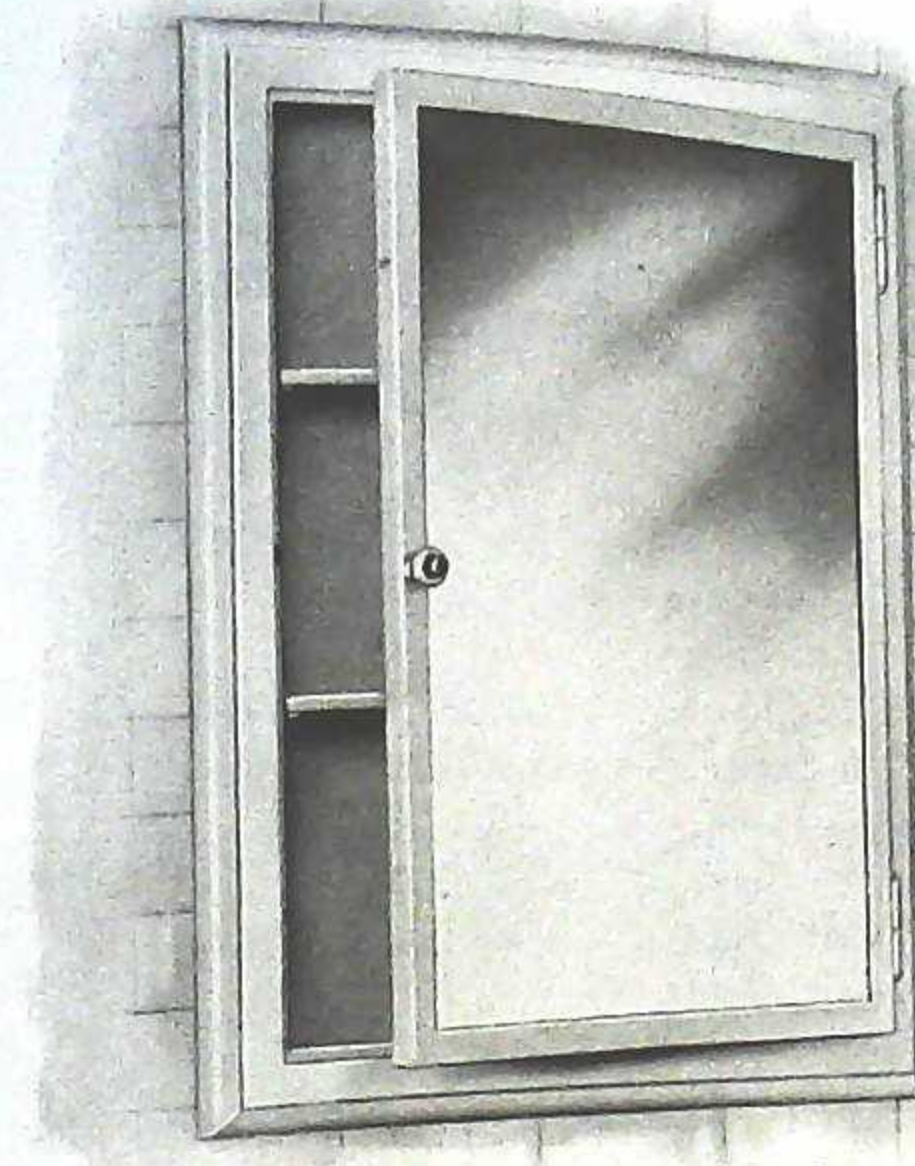


Fig. 711

Steel recess medicine cabinet, all white finish, two adjustable plate glass shelves, plate glass mirror, china knob with spring catch.

Extreme Flanges.....inches	21x27x4 3/8
Opening Required....."	17 1/4 x 23 1/4 x 3 3/8
Mirror....."	16x22
Price, No. 16020.....each	\$35.50

No. 6011 Medicine Cabinets

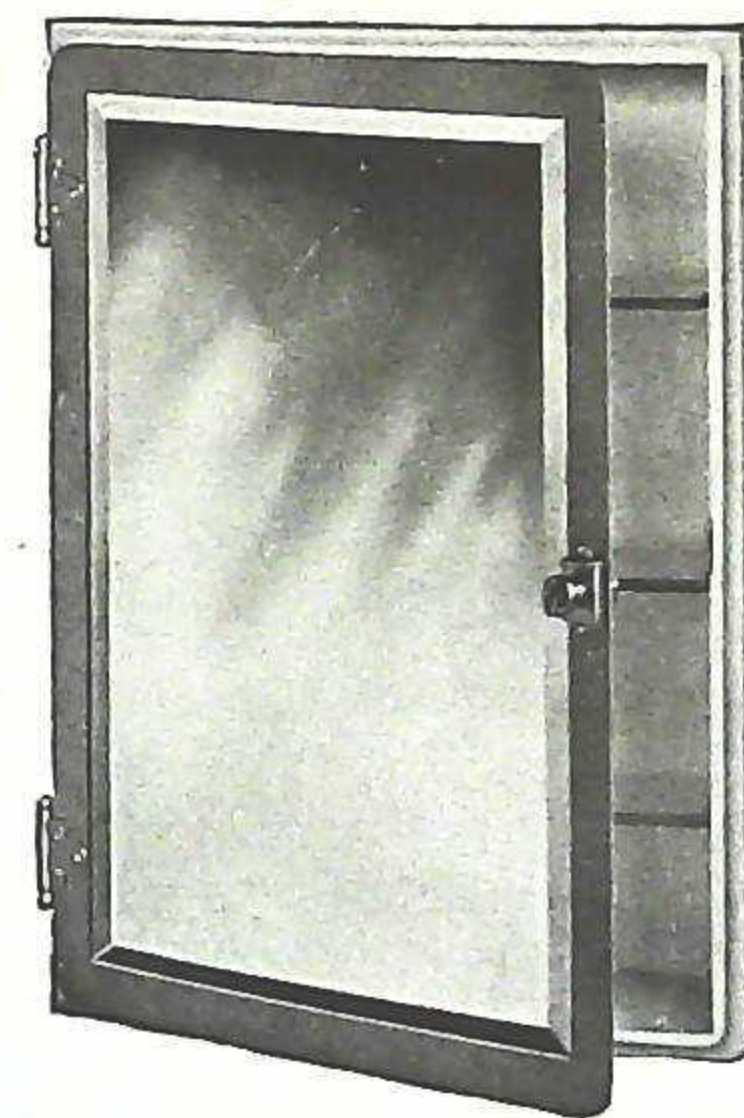


Fig. 712

Hardwood medicine cabinet, all white finish, veneered metal back, three adjustable plate glass shelves, bevelled plate glass mirror, nickel-plated trimmings.

Size.....inches	24 1/2 x 18 1/2
Depth....."	5
Mirror....."	16x22
Price, No. 6011.....each	\$50.00

No. 16040 Medicine Cabinets



Fig. 713

Steel medicine cabinet, all white finish, two adjustable plate glass shelves, plate glass mirror, china knob with spring catch.

Size.....inches	17x23
Depth....."	4 3/4
Mirror....."	14x20
Price, No. 16040.....each	\$32.50

No. 342 Wood Recess Medicine Cabinets

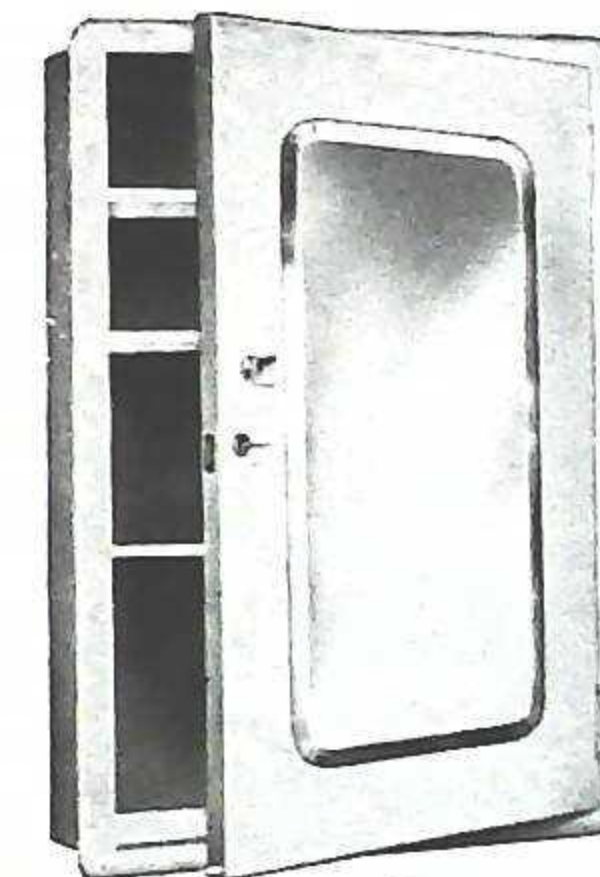


Fig. 714

With Sanoid Finish

Wood recess medicine cabinet with white sanoid finish, first quality French bevel glass mirror, three plate glass shelves, nickel-plated trimmings, lock and key.

Mirror Inches	Recess Inches	Price Each
18x12	23x17x4 5/8	\$30.00
20x14	25x19x4 5/8	35.00

Bath Room Stools

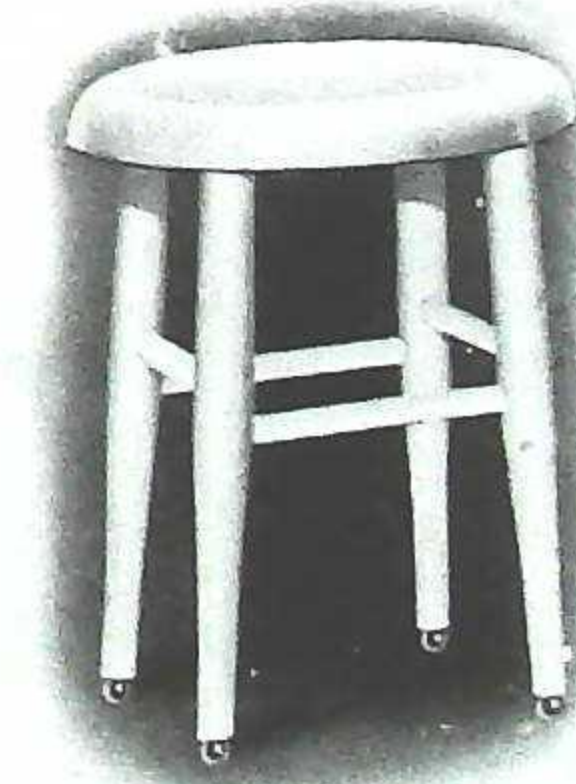


Fig. 715

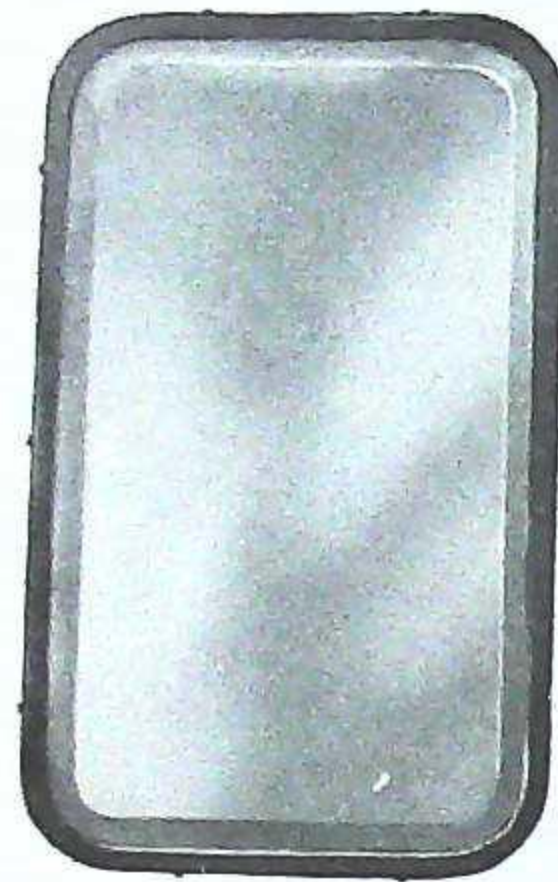
No. 2

Height.....inches 14 1/2
 Diameter of Seat.....inches 12

Price, No. 2, White Enamel Finish.....each \$11.00

Price, No. 22, Ivorite Finish.....each 22.00

No. 694 Oblong Mirrors



With Nickel-plated Brass Frame

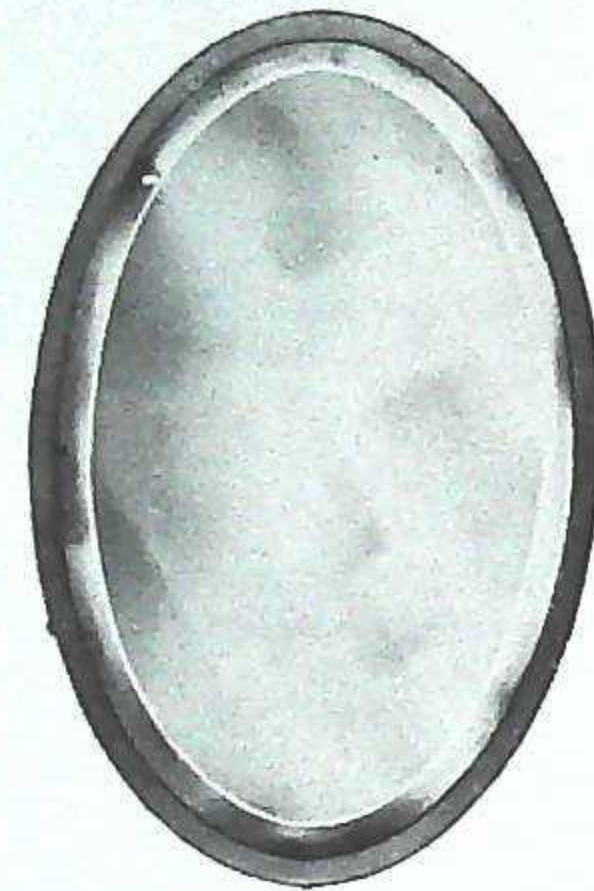
The finest quality French plate with 1/2-inch wide nickel-plated brass frame with metal backing and hanger hooks.

Size In.	Width Frame In.	Price Each
12x18	1/2	\$15.00
16x24	1/2	22.50
18x30	1/2	30.00

Fig. 721

No. 698 Oval Mirrors

With Nickel-plated Brass Frame



The finest quality French plate mirror with 1/2-inch wide nickel-plated brass frame with metal backing and hanger hooks.

Size In.	Width Frame In.	Price Each
12x18	1/2	\$15.00
16x24	1/2	22.50
18x30	1/2	30.00

Fig. 722

No. 710 Oblong Mirrors

With White Enamelled Wood Frame

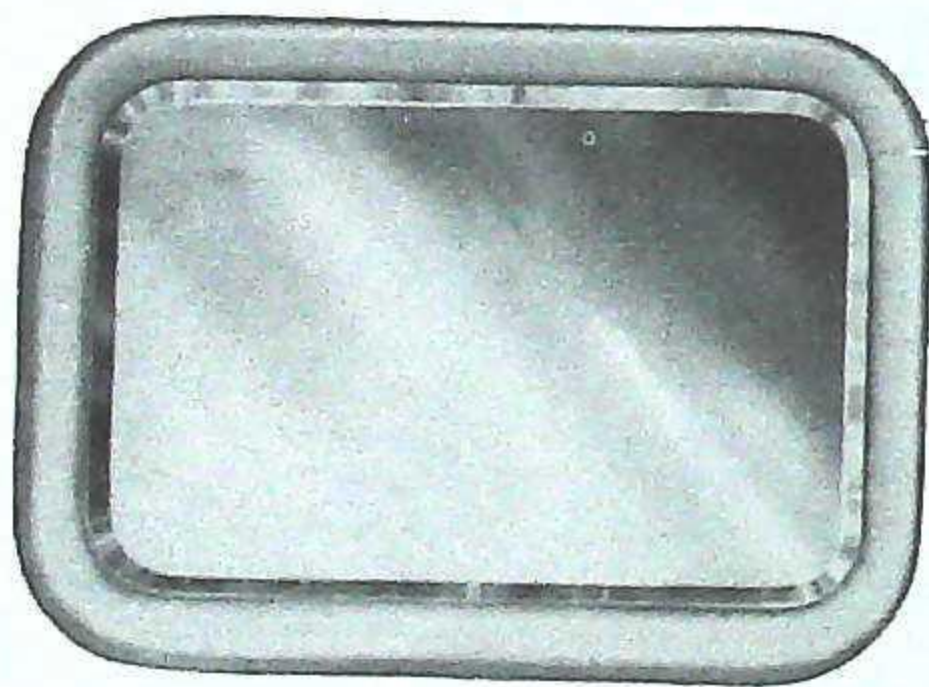


Fig. 723

No. 708 Oval Mirrors

With White Enamelled Wood Frame

Size In.	Width Frame In.	Price Each
12x18	1 1/2	\$12.40
14x20	1 1/2	15.15
16x20	1 1/2	16.50
16x24	1 1/2	20.00
18x24	1 1/2	21.00
18x30	1 1/2	23.50
18x36	2	27.00
20x30	2	24.75
24x30	2	28.70
28x36	2	50.00



Fig. 724

Unity China Recess Bath Room Accessories

No. 324 Square White Towel Bars
With 3x3-inch China Wall Flanges

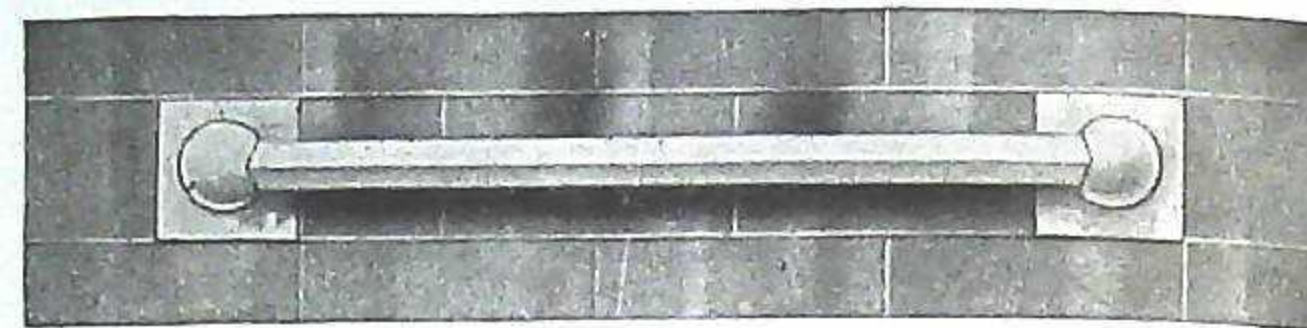


Fig. 725

3/8-inch white wood bar. Projects from face of wall, 4 inches.

Length, Center of Posts . . . inches	18	24	30	36
Price, No. 324 each	\$4.30	4.80	5.30	6.00

No. 325 Round White Towel Bars
With 3x3-inch China Wall Flanges

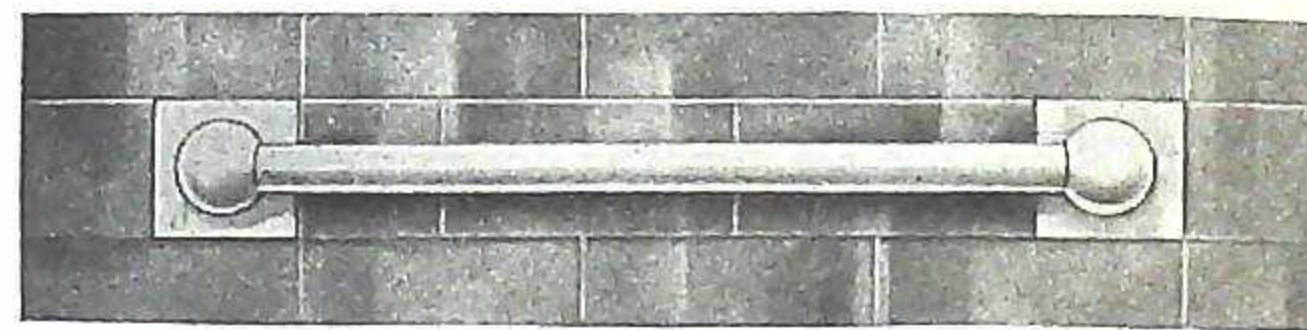


Fig. 726

1-inch white wood bar. Projects from wall 4 inches.

Length, Center of Posts . . . inches	18	24	30	36
Price, No. 325 each	\$4.30	4.80	5.30	6.00

No. 374 Square White Towel Bars
With 6x3-inch China Wall Flanges



Fig. 727

1/8-inch square white wood bar. Projects from wall 4 inches.

Length, Center of Posts . . . inches	18	24	30	36
Price, No. 374 each	\$5.30	5.80	6.30	7.00

No. 375 Round White Towel Bars
With 6x3-inch China Wall Flange



Fig. 728

1-inch white wood bar. Projects from wall, 4 inches.

Length, Center of Posts . . . inches	18	24	30	36
Price, No. 375 each	\$5.30	5.80	6.30	7.00

No. 390 Square White Towel Bars
With 2x3-inch Plug Type Wall Posts

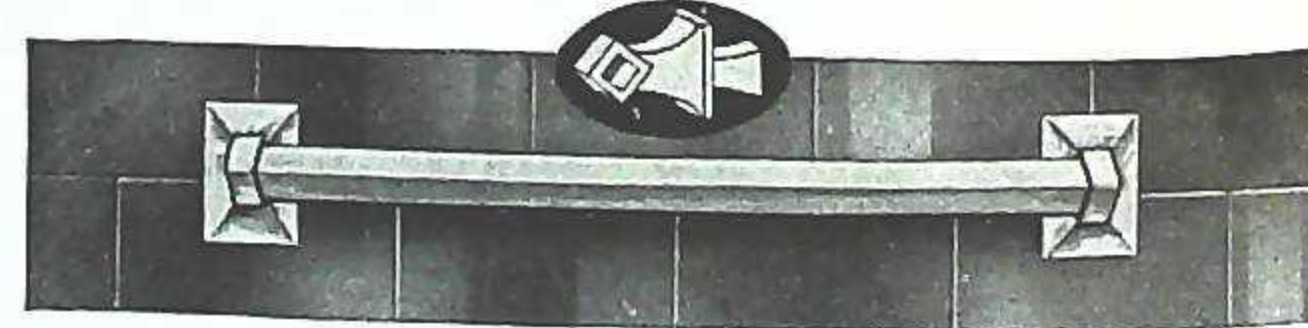


Fig. 729

3/8-inch white wood bar. Projects from wall 2 3/8 inches.

Length, Center of Posts . . . inches	18	24	30	36
Price, No. 390 each	\$4.30	4.80	5.30	6.00

Unity China Recess Bath Room Accessories
No. 334 Opal Glass Shelves



Fig. 731

Loose fitting opal shelf, 5 inches wide. Supported on one piece bracket. Flanges, 3x3 inches. Projection over all, 5 3/4 inches.



Side View of Bracket Fig. 732

Each shelf is packed in an individual carton for safety and convenience.

Length of Shelf inches	18	24	30	36
Price, No. 334, 5/16-inch Thick . . . each	\$5.10	5.80	6.70	8.00
" " 3348, 7/16 " " " " " "	5.90	6.80	8.10	9.60

No. 320 Tooth Brush Holders



Fig. 733

Size, 6x3 inches. Projects from wall, 1 7/8 inches. Weight boxed, 1 3/4 pounds.

Price, No. 320 . . . each \$2.50

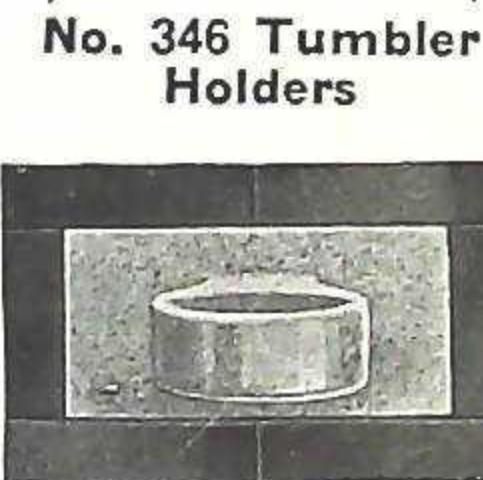


Fig. 735

Size 6x3 inches. Projects from wall, 3 3/8 inches. Weight boxed, 2 pounds, 1 ounce.

Price, No. 346 . . . each \$2.50



Fig. 737

Size, 6x3 inches. Projects from wall, 3 inches. Weight boxed, 2 pounds, 2 ounces.

Price, No. 365 . . . each \$2.50



Fig. 739

Size, 6x3 inches. Depth over all, 2 7/8 inches. Weight boxed, 2 pounds, 4 ounces.

Price, No. 366 . . . each \$2.80

No. 326 Hand Rails



Fig. 734

Size, 6x3 inches. Projects from wall, 2 inches. Weight boxed, 1 1/2 pounds.

Price, No. 326 . . . each \$2.20

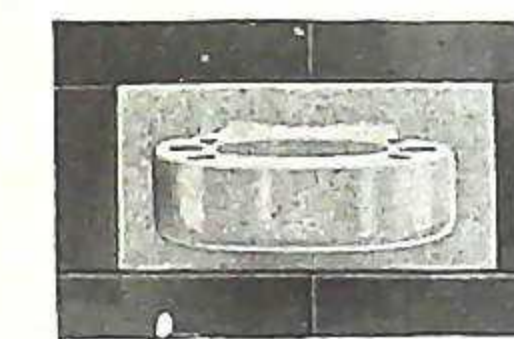


Fig. 736

Holds six brushes. Size, 6x3 inches. Projects from wall, 3 1/8 inches. Weight boxed, 2 pounds, 4 ounces.

Price, No. 356 . . . each \$3.00

No. 381 Razor Strop Hooks



Fig. 738

Size, 3x3 inches. Projects from wall, 1 3/4 inches. Weight boxed, 10 ounces.

Price, No. 381 . . . each \$1.50

No. 367 Soap Holders
With Non-draining Rim

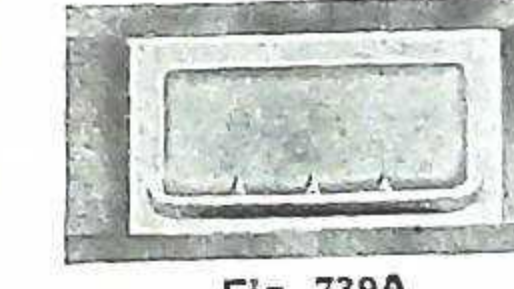


Fig. 739A

Size, 6x3 inches. Depth over all, 2 7/8 inches. Projects from wall, 1/4-inch. Weight boxed, 2 pounds, 5 ounces.

Price, No. 367 . . . each \$2.80

Unity China Recess Bath Room Accessories

No. 601 Soap Holders

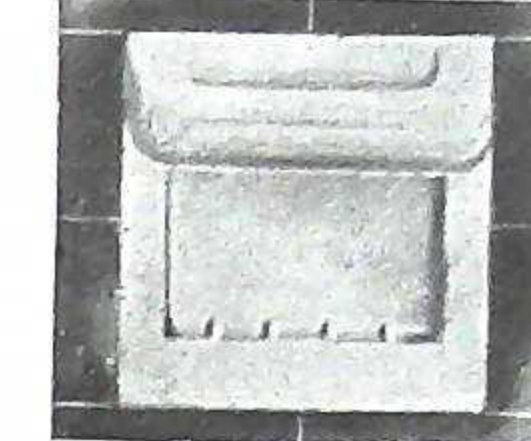


Fig. 739B

Size, 6x6 inches. Depth from face of wall, 2 5/8 inches. Projects from wall, 2 1/4 inches.

Price, No. 601 . . . each \$6.00

No. 602 Soap Holders

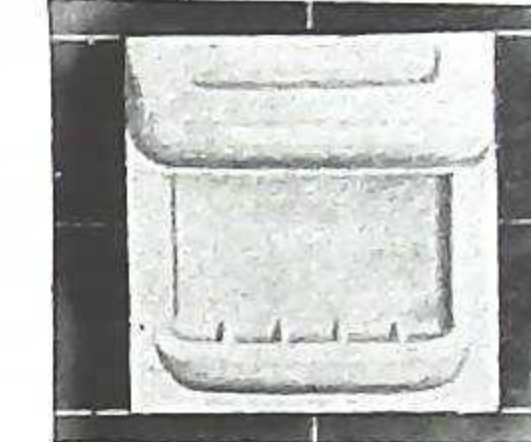


Fig. 739D

Size, 6x6 inches. Depth from face of wall, 2 5/8 inches. Projects from wall 2 1/4 inches.

Price, No. 602 . . . each \$6.00

No. 603 Soap Holders

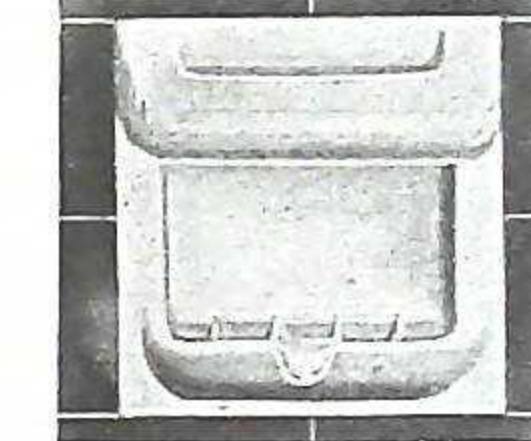


Fig. 739F

Size, 6x6 inches. Depth from face of wall 2 5/8 inches. Projects from wall 2 1/4 inches.

Price, No. 603 . . . each \$6.50

No. 611 Toilet Paper Holders

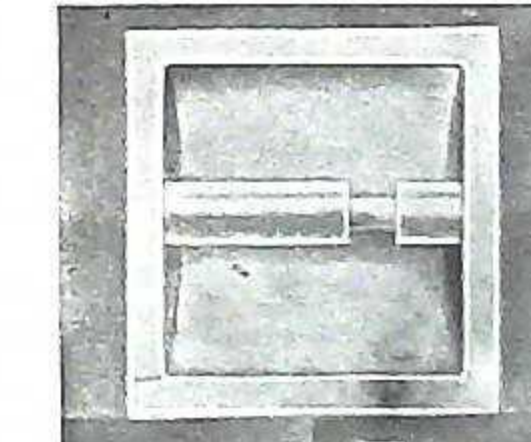


Fig. 739H

Size, 6x6 inches. Recessed into wall 3 3/8 inches.

Price, No. 611 . . . each \$4.50

No. 615 Tumbler Holders

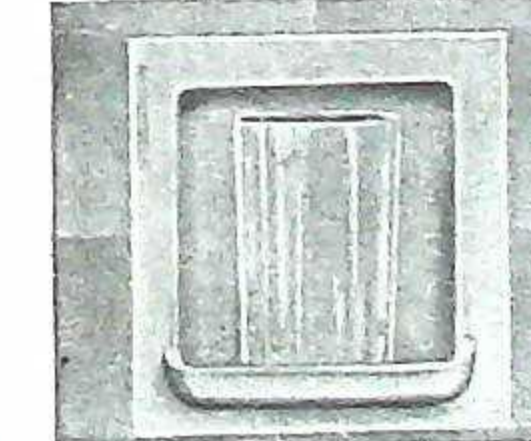


Fig. 739K

Size, 6x6 inches. Depth inside overall 3 1/4 inches. Recessed into wall 2 1/2 inches. Projects from wall 1 1/2 inches.

Price, No. 615 . . . each \$3.50

No. 606 Soap Holders

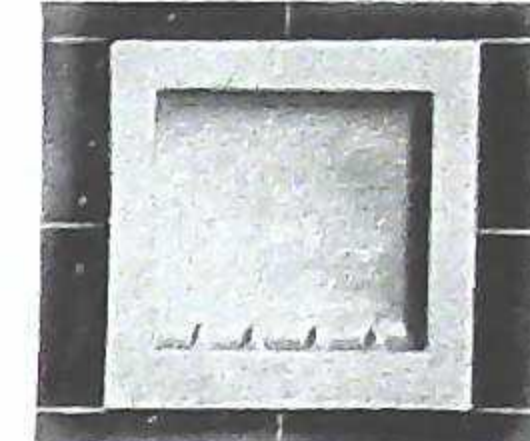


Fig. 739C

Size, 6x6 inches. Depth from face of wall, 2 5/8 inches.

Price, No. 606 . . . each \$3.50

No. 607 Soap Holders

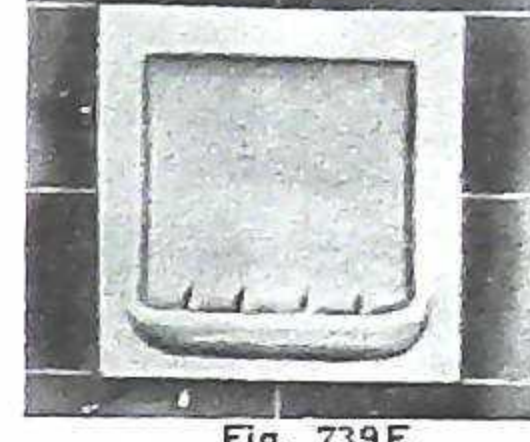


Fig. 739E

Size, 6x6 inches. Depth from face of wall 2 5/8 inches. Projects from wall 7/8 inch.

Price, No. 607 . . . each \$3.50

No. 608 Soap Holders

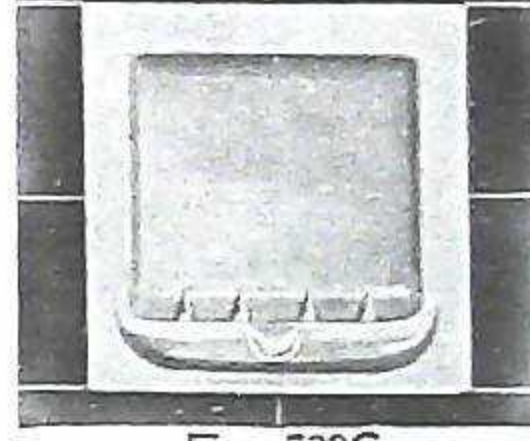


Fig. 739G

Size, 6x6 inches. Depth from face of wall 2 5/8 inches. Projects from wall 1 inch.

Price, No. 608 . . . each \$4.00

No. 612 Toilet Paper Holders with Hood

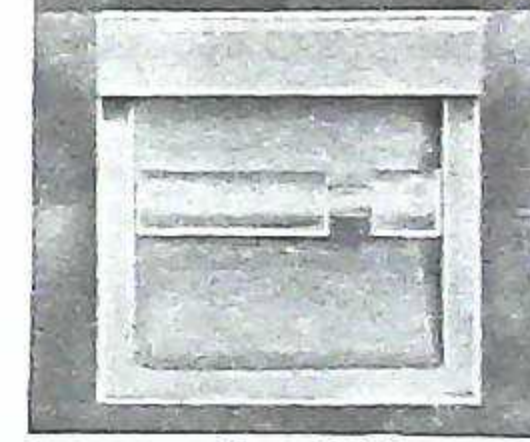


Fig. 739J

Size, 6x6 inches. Recessed into wall, 3 3/8 inches. Hood projects 2 1/4 inches.

Price, No. 612 . . . each \$5.80

No. 617 Sponge Holders

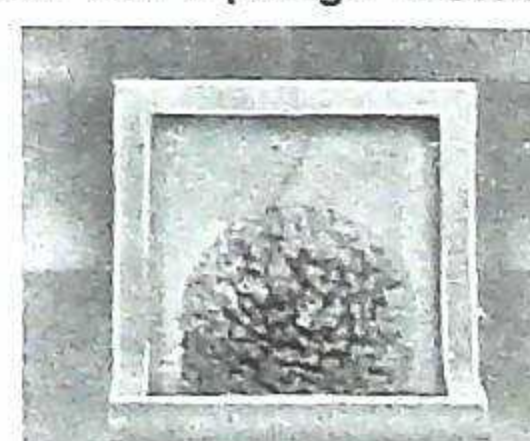


Fig. 739L

Size, 6x6 inches. Recessed into wall 3 3/8 inches. Projects from wall 2 1/4 inches.

Price, No. 617 . . . each \$5.50

Bath Room Furnishings
American Beauty

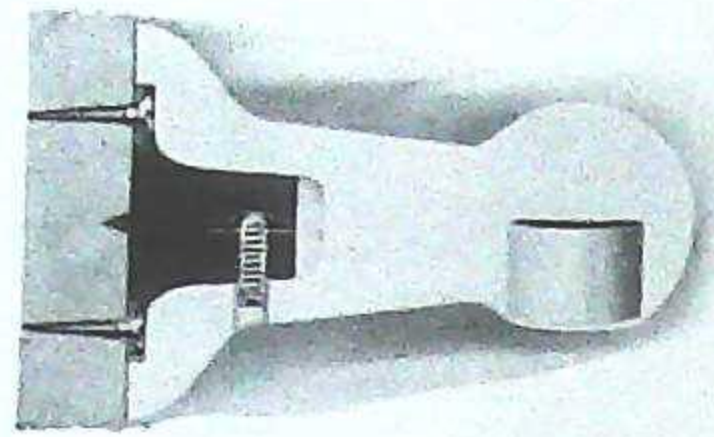


Fig. 741

Length.....inches 18 24 30 36
Price, 1-inch Diameter.....each \$3.60 4.25 4.80 5.50

No. 727, Opal Hand Rails with Vitreous China Ends

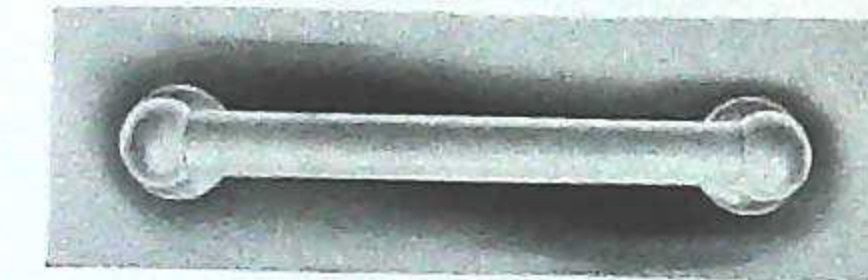


Fig. 742

Length.....inches 9 12 16
Price, 1 1/4-inch Diameter.....each \$3.60 4.25 4.90

No. 735, Opal Shelves with Vitreous China Brackets



Fig. 743

Length.....inches 18 24 30 36
Price, 1/2x6 Inches.....each \$5.00 5.70 6.40 7.10

No. 737, Combination Opal Shelves with Vitreous China Brackets



Fig. 744

White opal shelf, 3/8x6 inches, with 3/4-inch opal towel bar, tumbler and soap holders.

Length.....inches 18 24 30
Price.....each \$8.60 9.75 10.95

No. 741, Combination Opal Shelves with Vitreous China Brackets

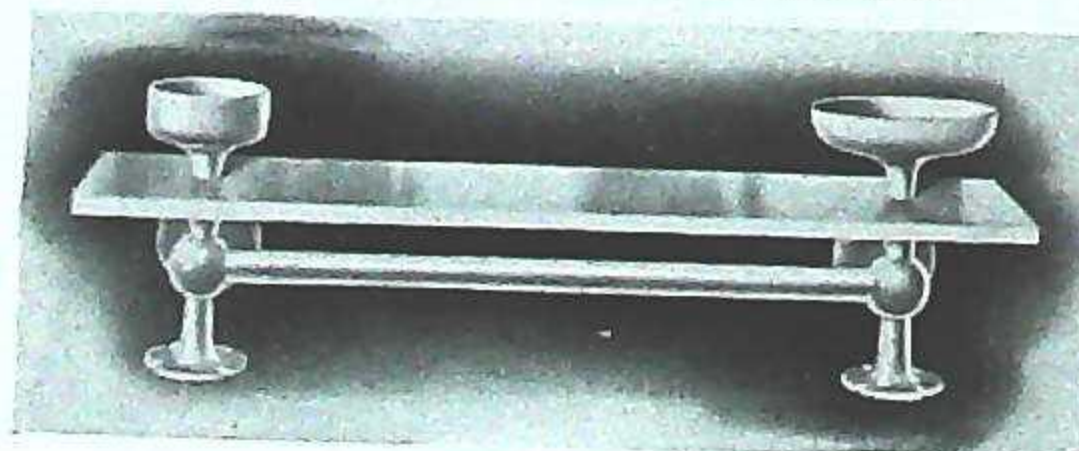


Fig. 745

White opal shelf, 3/8x6 inches, 3/4-inch opal towel bar, tumbler, soap and tooth brush holders.

Length.....inches 18 24 30
Price.....each \$9.60 10.75 11.90

Vitreous China Bath Room Furnishings
American Beauty

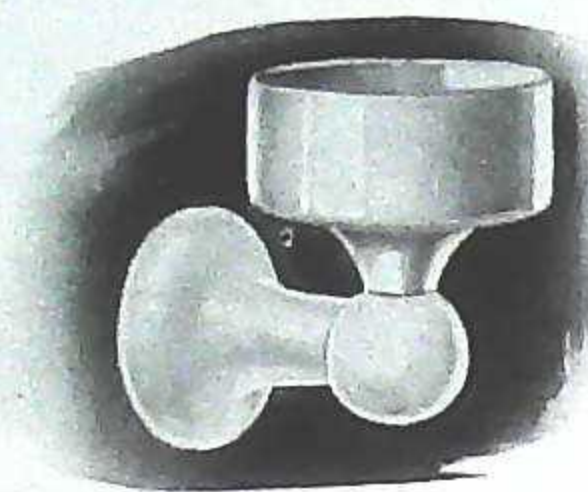


Fig. 746

No. 746, Tumblers

Diameter.....inches 2 1/2-2 3/4
Height..... " 4
Price, Straight or Bell Top.....each \$.50

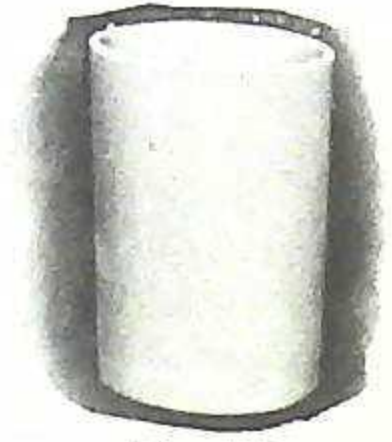


Fig. 747

No. 755, Tumbler and Tooth Brush Holder

Diam. of Bracket in. 2 1/2
Extreme Depth..... " 4 1/2
Height..... " 4 1/2
Price.....each \$1.85

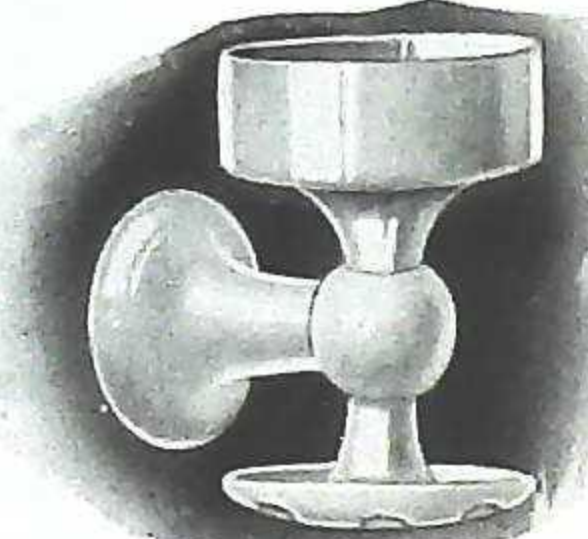


Fig. 748

No. 757, Tumbler and Tooth Brush Holder

The No. 757 fitting holds tumbler and four brushes.

Price.....each \$2.00

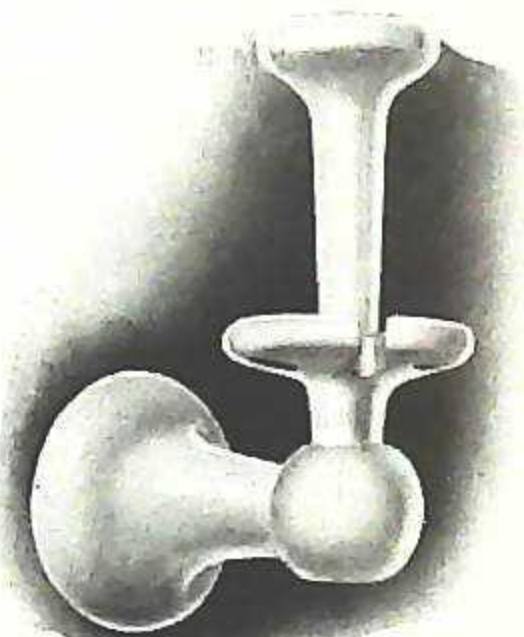


Fig. 749

No. 765, Soap Dishes

Diam. of Bracket, inches 2 1/2
Height..... " 4 3/4
Size of Cup..... " 5x3 1/2
Price.....each \$1.65



Fig. 749A

No. 767, Sponge Dishes

Depth.....inches 1 1/2
Size of Cup.....in. 5 1/2x3 3/4
Price.....each \$2.00



Fig. 749B

No. 775, Paper Holders

Holds standard roll of paper of 500 or 1000 sheets.
Diameter.....in. 2 1/2
Extreme Depth..... " 6
Price.....each \$1.10

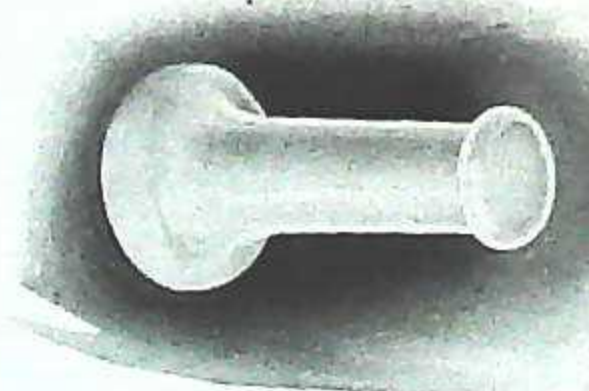


Fig. 749C

No. 785, Robe Hooks

Diameter.....inches 2 1/2
Extreme Depth..... " 3 1/2
Price.....each \$.60

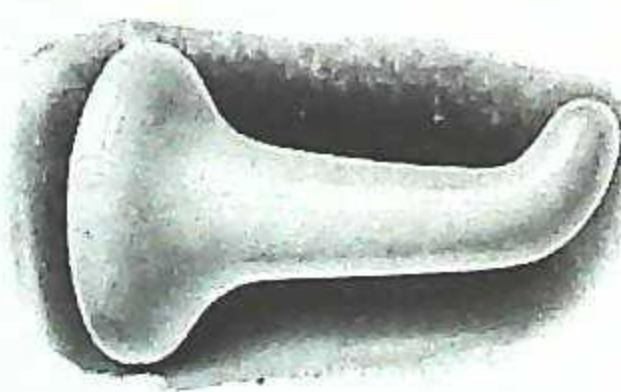


Fig. 749D

Glass Bathroom Shelves
With Nickel-plated Brass Brackets



Fig. 751

No. 5610 Shelf

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	CRYSTAL 3/8-in.	Opal 1/2-in.	Opal 3/4-in.		CRYSTAL 3/8-in.	Opal 1/2-in.	Opal 3/4-in.
5x18	\$4.50	.....	\$5.55	6x18	\$5.85	.....	\$7.25
5x20	4.60	\$7.60	5.95	6x20	6.00	\$9.50	7.60
5x24	4.90	8.00	6.80	6x24	6.50	10.25	8.15
5x27	5.20	8.55	7.10	6x27	6.90	11.20	8.75
5x30	5.45	9.10	7.45	6x30	7.40	12.15	9.30
5x33	.....	9.85	.....	6x33	.....	13.30	.....

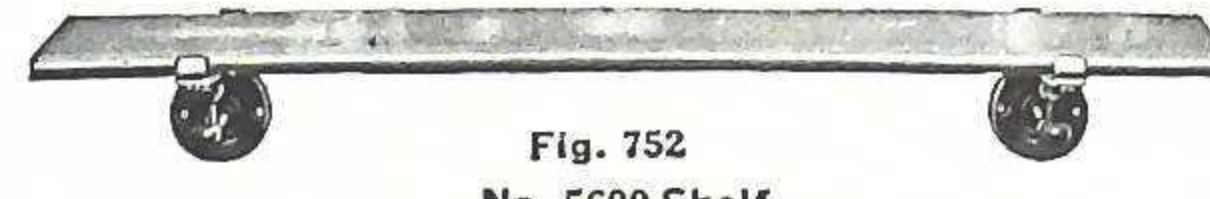


Fig. 752

No. 5600 Shelf

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	CRYSTAL 3/8-in.	Opal 1/2-in.	Opal 3/4-in.		CRYSTAL 3/8-in.	Opal 1/2-in.	Opal 3/4-in.
5x18	\$5.55	.....	\$6.65	6x18	\$6.45	.....	\$7.75
5x20	5.70	\$8.75	7.05	6x20	6.60	\$10.10	8.15
5x24	6.00	9.10	7.60	6x24	7.05	10.85	8.75
5x27	6.30	9.70	8.15	6x27	7.40	11.80	9.30
5x30	6.55	10.25	8.75	6x30	8.00	12.55	9.85
5x33	.....	11.10	.....	6x33	.....	13.65	.....



Fig. 753

No. 5605 Shelf

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	CRYSTAL 3/8-in.	Opal 1/2-in.	Opal 3/4-in.		CRYSTAL 3/8-in.	Opal 1/2-in.	Opal 3/4-in.
5x18	\$4.50	.....	\$5.55	6x18	\$5.35	.....	\$6.70
5x20	4.60	\$7.60	6.10	6x20	5.50	\$8.95	7.10
5x24	4.90	8.00	6.30	6x24	5.95	9.70	7.65
5x27	5.25	8.55	7.10	6x27	6.35	10.65	8.20
5x30	5.45	9.10	7.65	6x30	6.90	11.60	8.80
5x33	.....	9.85	.....	6x30	.....	12.70	.....

Nickel-plated Brass Brackets

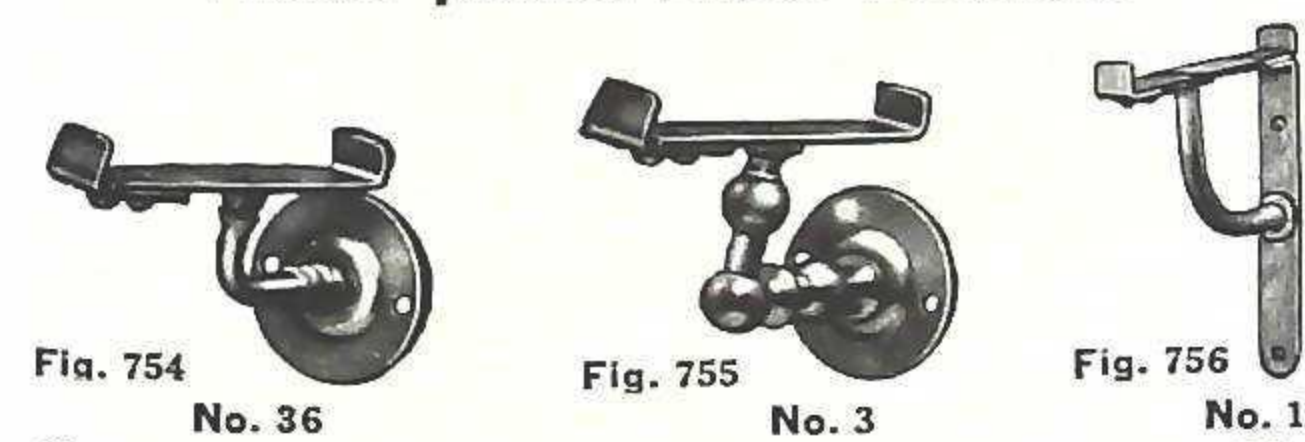


Fig. 754

No. 36

Fig. 755

No. 3

Fig. 756

No. 12

Glass shelves are securely clamped in the brackets and held about 3/8 of an inch from the wall, allowing the back edge to be cleaned. Glass shelves in contact with the wall are unsightly and unsanitary when dirt collects behind them. These brackets were patented July 17, 1906.

No. 125 Towel Bars
5/8-inch Bar—All White



Fig. 757

Length.....inches 18 24 30 36
Price, No. 125.....each \$3.45 3.80 4.70 5.95

No. 116 Towel Bars
1-inch Bar—All White

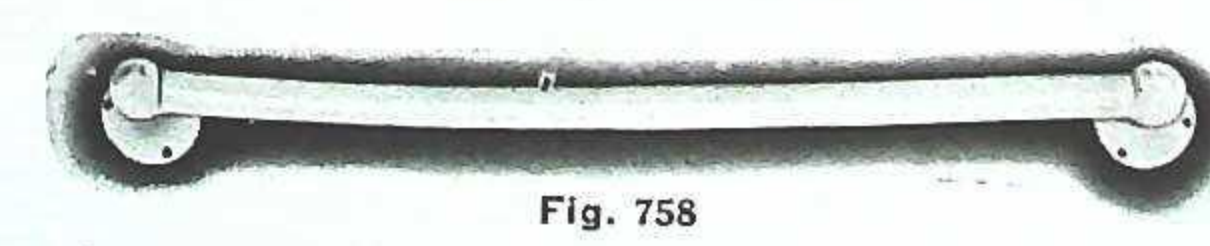


Fig. 758

Length.....inches 12 18 24 30 36
Price, No. 116.....each \$6.00 6.40 6.85 7.60 9.85

No. 119 Towel Bars
1 1/2-inch Bar—All White

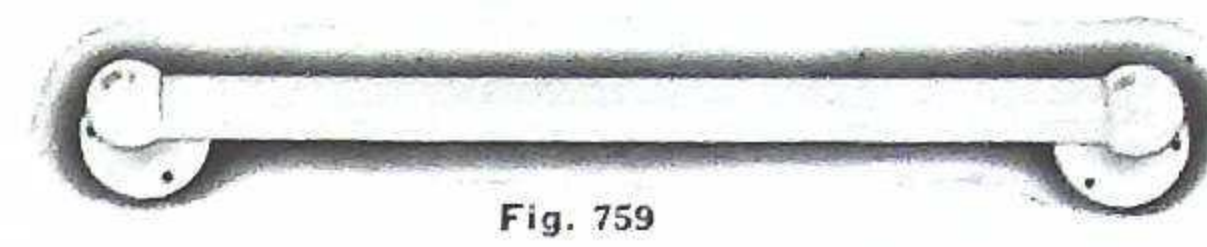


Fig. 759

Length.....inches 12 18 24 30 36
Price, No. 119.....each \$12.35 13.30 14.80 16.30 18.75

No. 29 Towel Bars
1-inch Bar—Nickel-plated Trimmings

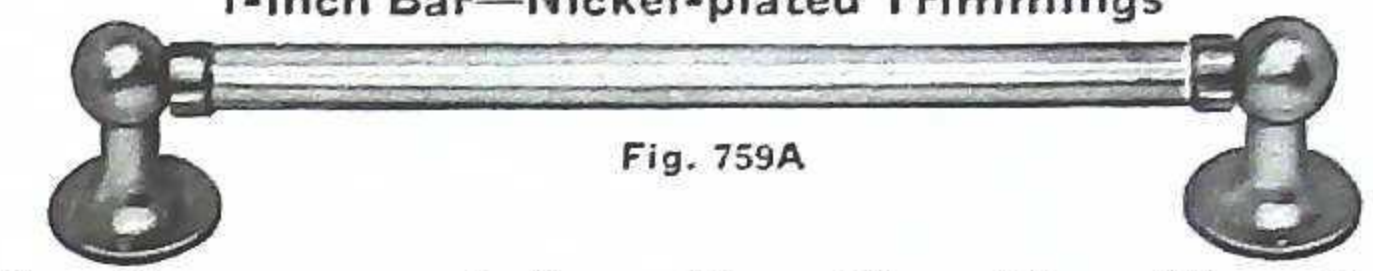


Fig. 759A

Length.....inches 18 20 24 30 36
Price, No. 29, Crystal.....each \$3.40 \$3.65 \$4.55 \$4.80 \$6.05
" " 29, Opal..... " 3.60 3.90 4.35 5.15 6.45

No. 31 Towel Bars

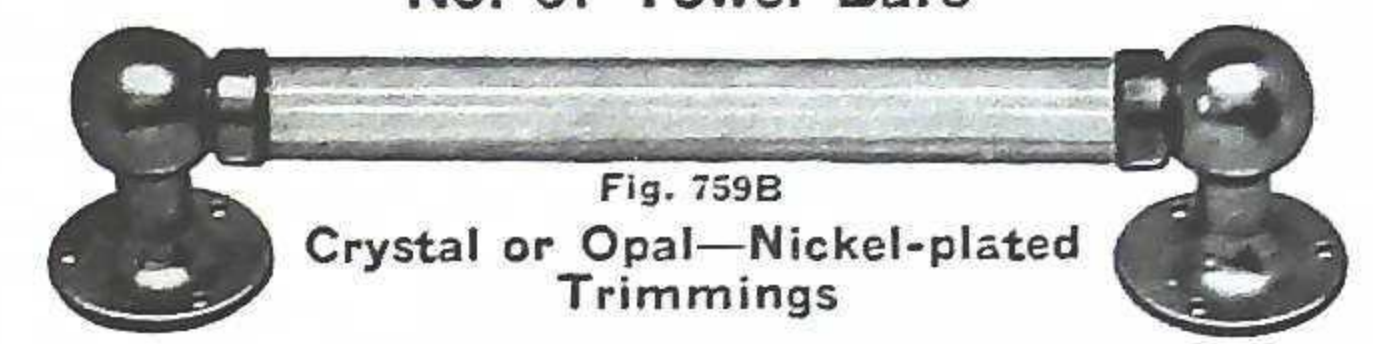


Fig. 759B

Crystal or Opal—Nickel-plated Trimmings

Length.....inches 12 18 24 30 36
Price, 1 1/2-inch.....each \$12.00 13.65 14.60 15.85 17.35

No. 28 Towel Bars
Crystal or Opal—Nickel-plated Trimmings

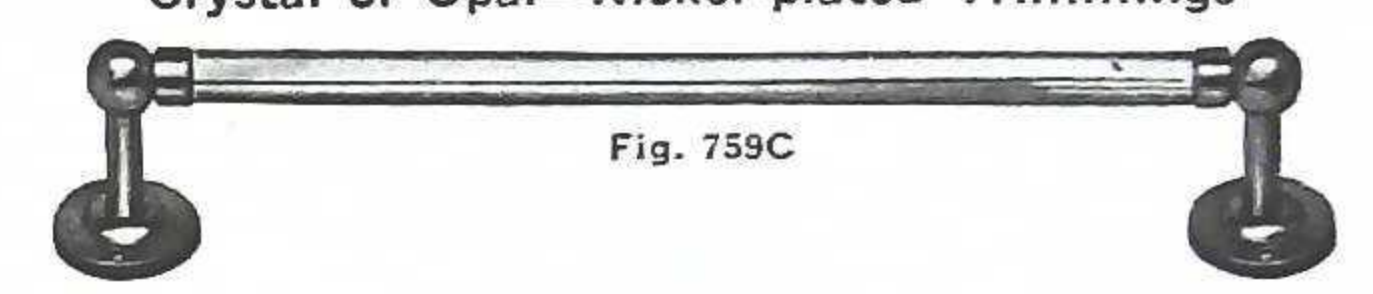


Fig. 759C

Length.....inches 18 24
Price, No. 28 3/8-inch.....each \$2.25 2.60

No. 14 Towel Bars
1/2-inch Bar—Nickel-plated Brass



Fig. 759D

Length.....inches 16 18 20 24 30 36
Price, No. 14.....each \$1.00 1.10 1.15 1.25 1.40 1.65

No. 25 Towel Bars
5/8-inch Bar—Nickel-plated Brass

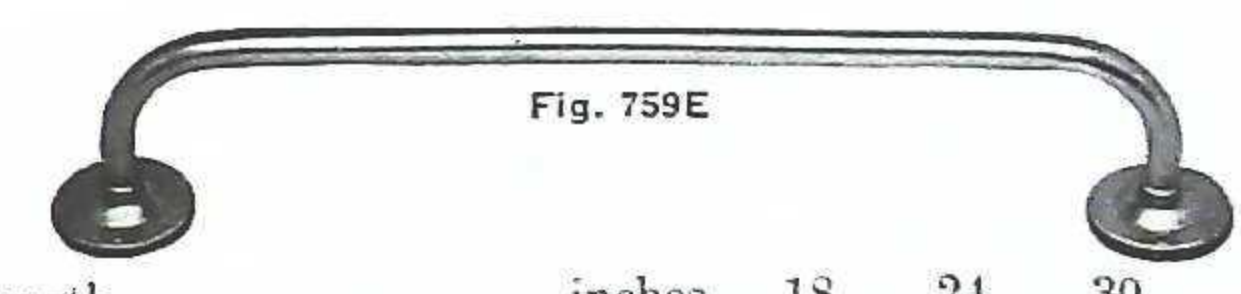


Fig. 759E

Length.....inches 18 24 30 36
Price, No. 25, Ex. Hy.....each \$1.95 2.35 2.80 3.15

No. 15 Towel Bars
Nickel-plated Brass

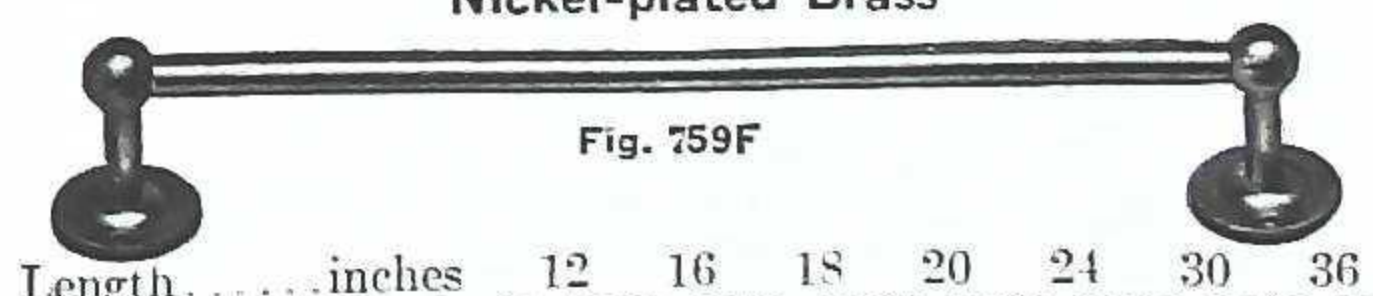


Fig. 759F

Length.....inches 12 16 18 20 24 30 36
Price, 1 1/2 Inch.....each \$1.75 \$1.80 \$1.95 \$2.05 \$2.15 \$2.35 \$2.70
" 1 "..... " 4.55..... 4.90..... 5.40 5.85 6.30

No. 46 Lock Roll Towel Bars
Nickel-plated Brass



Fig. 759G

Length.....inches 20
Price, No. 46, 1 inch, with Eagle Flat Keyed Lock.....each \$5.30

Combination Tumbler and
Tooth Brush Holders

No. 514
Tumbler and Tooth
Brush Holder



Fig. 761

Nickel-plated brass holder with polished glass tooth brush holder and decorated crystal tumbler.

Price, No. 514 each \$4.25

No. 5112
Tooth Brush
Holder with Top



Fig. 762

Nickel-plated brass holder and top with decorated crystal tumbler.

Price, No. 5112 each \$4.40

No. 5191 Tumbler Holders

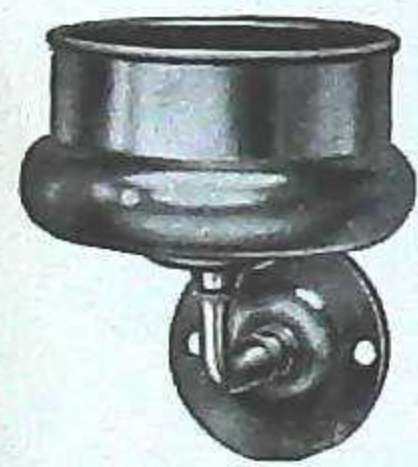


Fig. 763

Nickel-plated brass tumbler holder with cast brass wall flange.

Price, No. 5191 each \$2.75

No. 510 Tooth Brush
Holders

Price, No. 510 Nickel-plated Brass, with Polished Glass Holder each \$1.20

Price, No. 510 Nickel-plated Brass, with Opal Glass Holder each 1.40

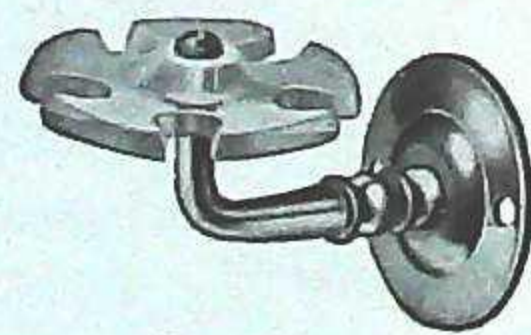


Fig. 764

No. 140 Soap Dishes



Fig. 765

All white soap dish with opal removable tray, 5³/₈x4³/₈ inches.

Price, No. 140 ... each \$3.50

No. 403 Soap Dishes

Nickel-plated brass soap dish with removable tray, 4³/₄x3⁵/₈ inches.

Price, No. 403 ... each \$2.10

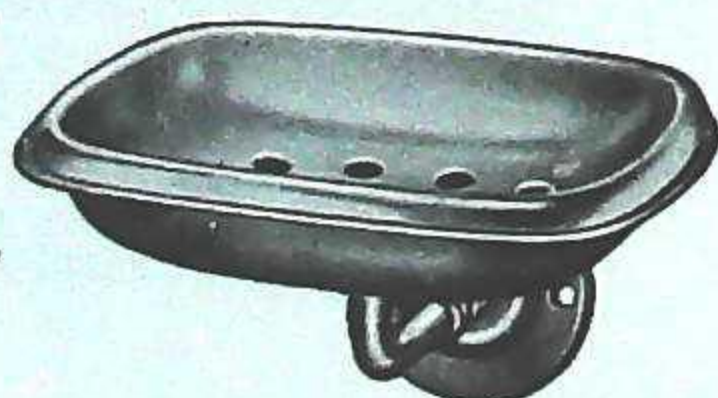


Fig. 766

No. 980 Removable China Soap Dishes



Fig. 767

Removable china soap dish, with nickel-plated pedestal and lock nut. For lavatory without back.

Price, No. 980, as Described each \$2.75
" " 981, with Beaded Chain " 3.30

Soap and Bath Brush Holders

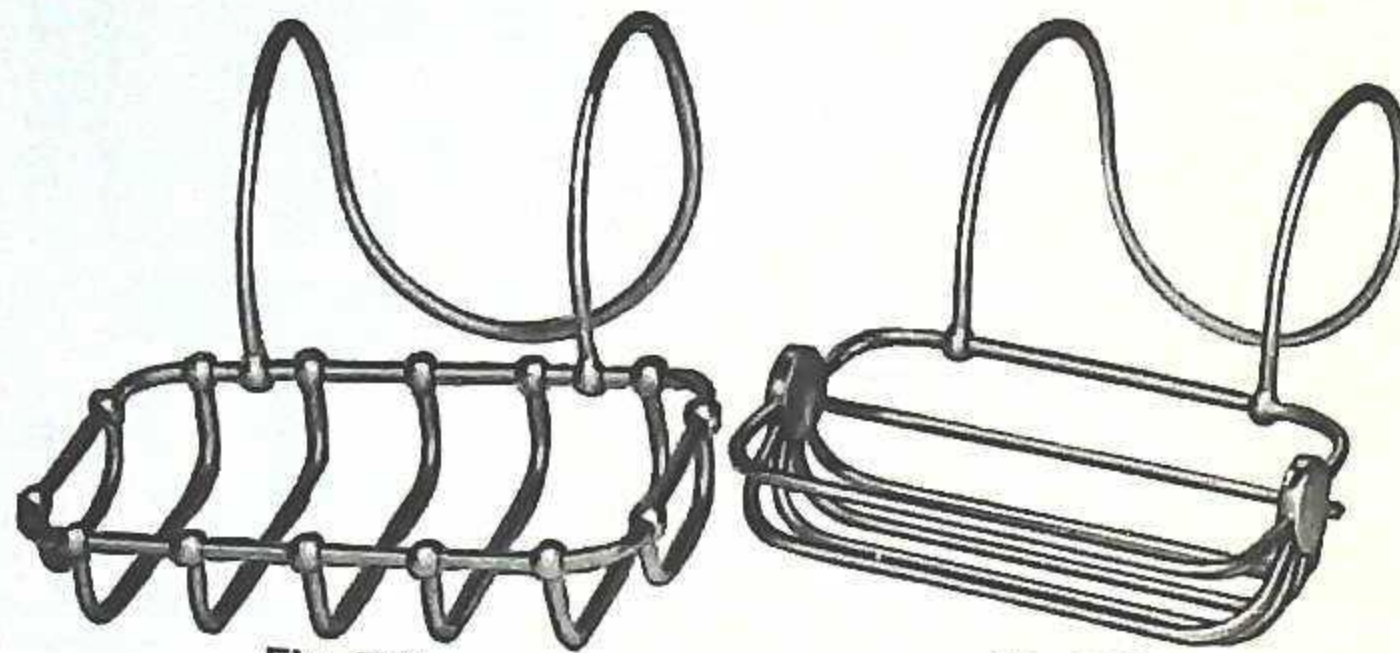


Fig. 768
No. 404

Fig. 769
No. 402

Price, No. 404, Bath Brush Holder, 6¹/₄x3⁷/₈x1¹/₄ Inches each \$2.70
Price, No. 402, Soap Holder " 2.40

No. 403 Soap Holders

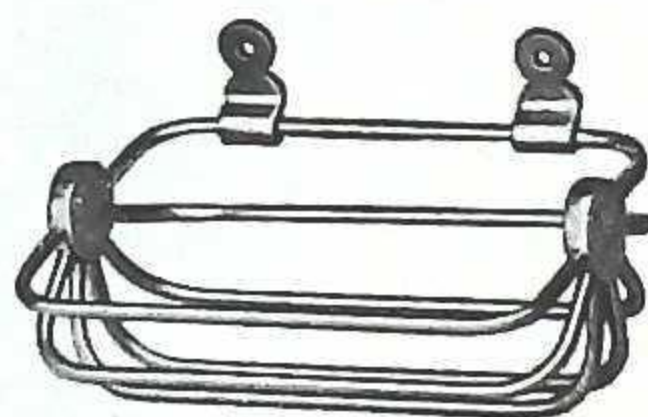


Fig. 769A

Nickel-plated soap holder.

Price, No. 403 ... each \$2.00

No. 481 Brush Holders

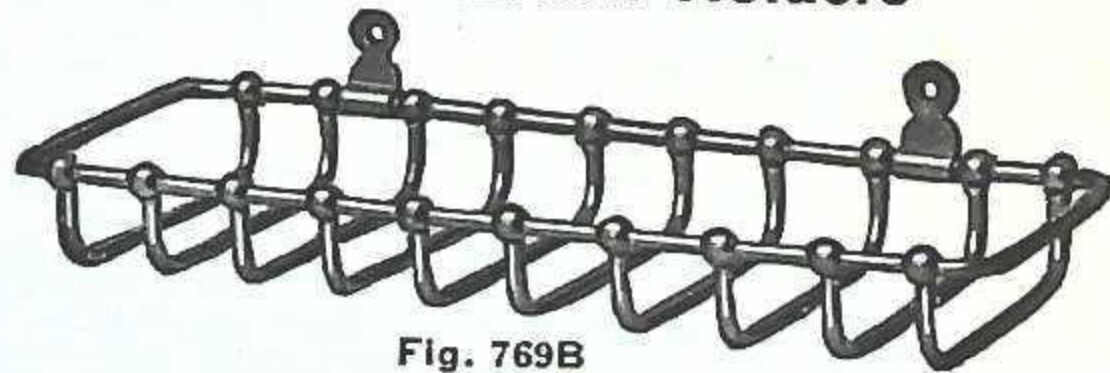


Fig. 769B

Price, Nickel-plated Brass, 10³/₄x4⁵/₈x1³/₈ In. each \$5.80

No. 1
Soap Dishes

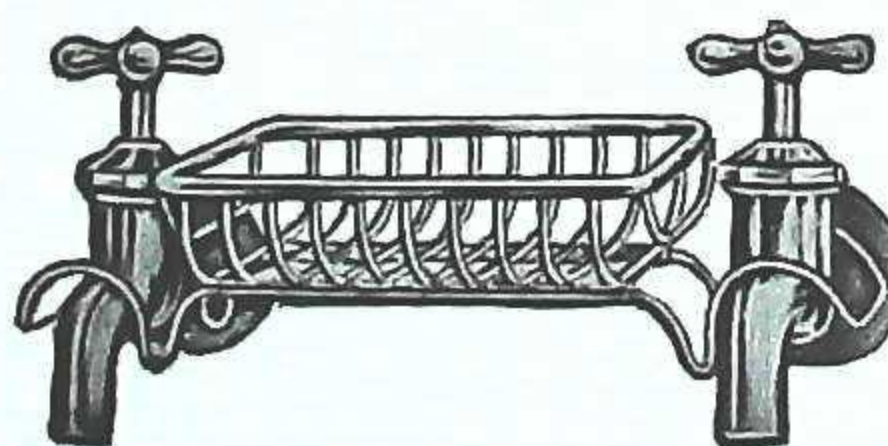


Fig. 769C

Adjustable for faucets up to 10 inches apart.

Price, Nickel-plated, 6x4¹/₂ In. ea. \$1.50
Price, Light Pattern, 6x3¹/₂ In. ea. \$1.00

Bath Tub Seats

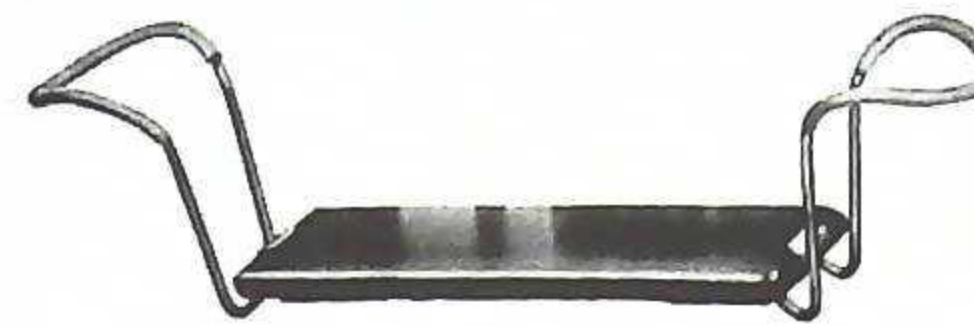


Fig. 771

Price, No. 1204 Oak, Piano Finish each \$2.80
" " 1206 Enamel, Rubbed Finish " 3.85

No. 3534 Robe Hooks



Fig. 772

Price, Nickel each \$.35
" White " .45

Robe Hooks

No. 3533

Price, No. 3533 N.P. ea. \$.75
" " 3533 White ea. .85

No. 3534

Price, No. 3534 N.P. ea. \$.35
" " 3534 White ea. .45



No. 3533
Fig. 773



No. 3534
Fig. 774

No. 3761 Toilet Paper Holders

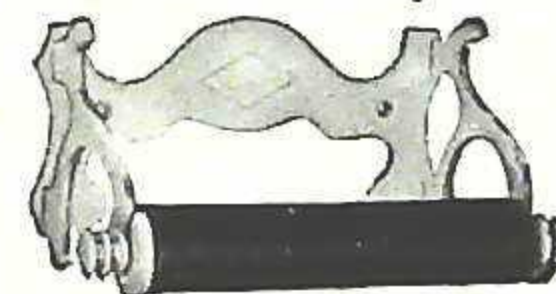


Fig. 775

Price, No. 3761 Nickel-plated each \$1.40
" " 3761 White Finish " 1.65

No. 3830 Toilet
Paper Holders

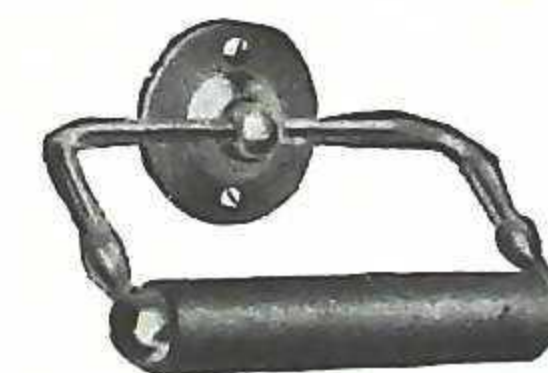


Fig. 776

Price, Nickel each \$1.00
" White " 1.25

No. 3574 Toilet
Paper Holders

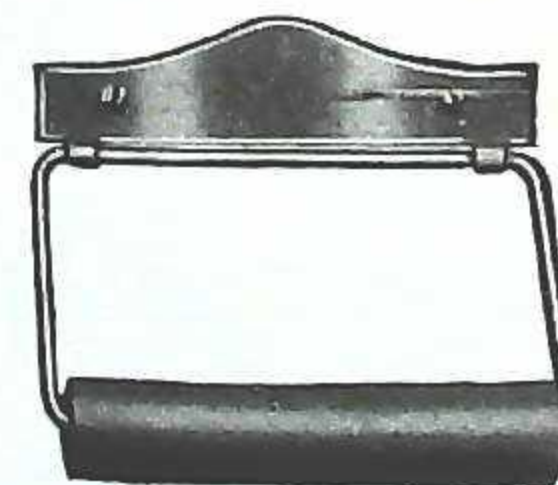


Fig. 777

Price, Nickel each \$.45
" White " .65

No. 5421 Paper Holders

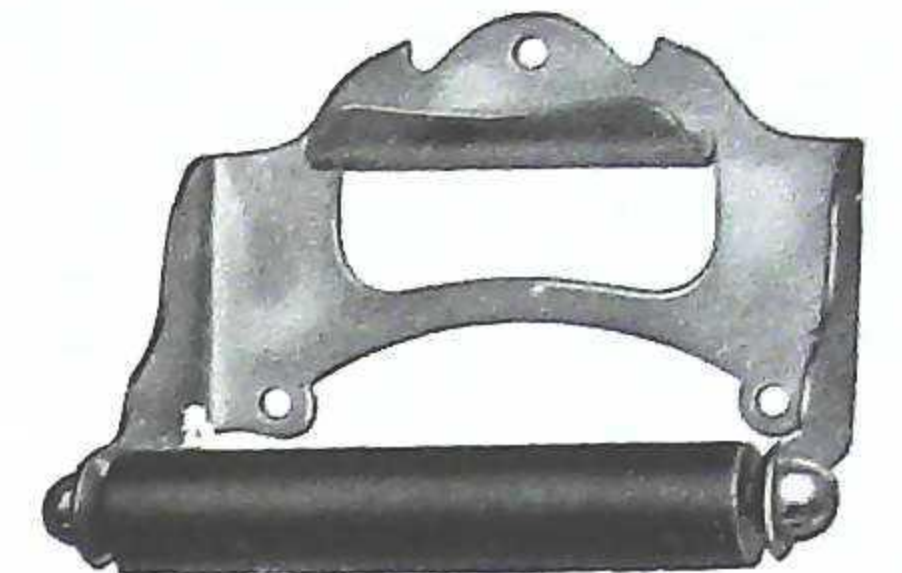


Fig. 778

Paper holder with black rubber enameled roll, nickel-plated brass spring bracket with ball sockets.

Price, No. 5421 each \$2.05

No. 5416 Paper Holders

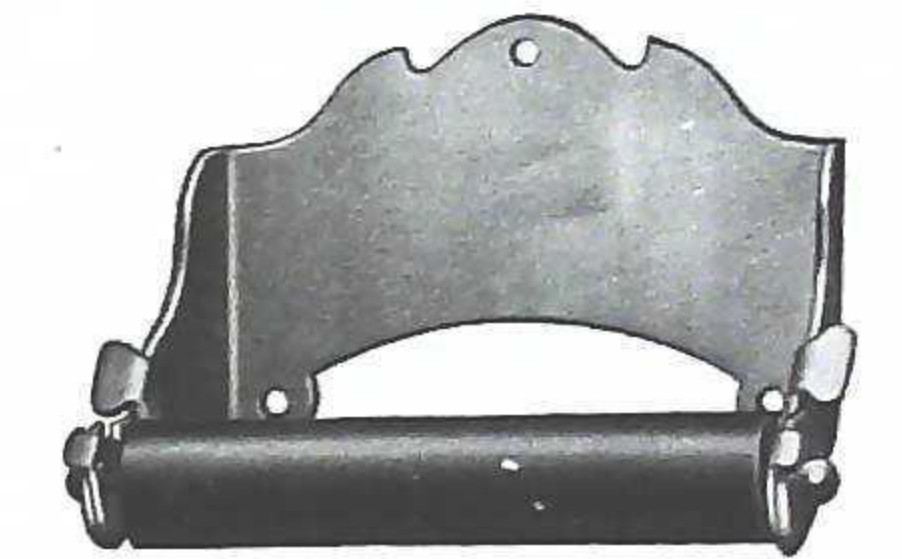


Fig. 779

Paper holder with black rubber enameled roll, nickel-plated brass ball end pintles and thumb lock catches.

Price, No. 5416 each \$1.85

Platform Scales

The Platform Scales here shown, placed in a bathroom or bedroom, offers every family the advantage of obtaining accurate weight without clothes as frequently as desired. It is convenient and easy to use, takes up but a small space and is handsomely finished to ornament any home. Above all, its fine accuracy and sensitiveness give weights that can be relied upon absolutely to be authentic.

The tall iron pillar is surmounted by a full capacity beam on a level with the the user's eye and free from any shadow, so as to be easily read. This beam has full 300 lbs. x 1/4 lb. capacity upon its bars, doing away with loose weights which may drop and break or injure floors and toes. The scale may be furnished with an accurate adjustable measuring rod for giving accurate height, graduated from 2 feet 6 inches to 6 feet 6 inches by 1/4 inches, for children as well as adults. Beam and measuring rod may be graduated to metric or other standards if desired. The finish is an elegant white enamel, with arrow-tip beam-sliding poises and measuring rod, all of polished nickel-plated brass. A rubber mat for platform furnished at additional price if desired.

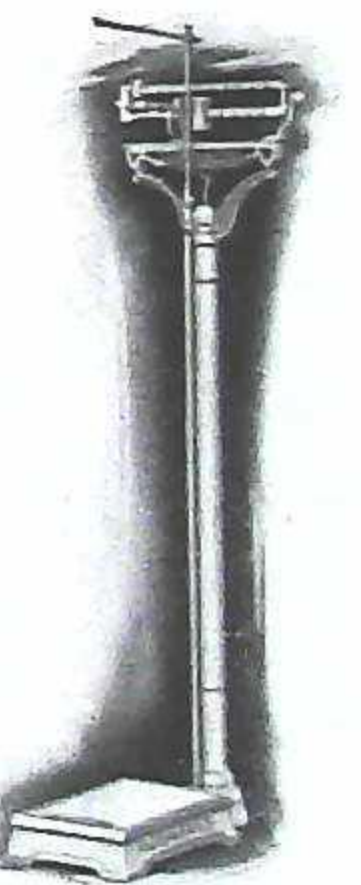


Fig. 779A

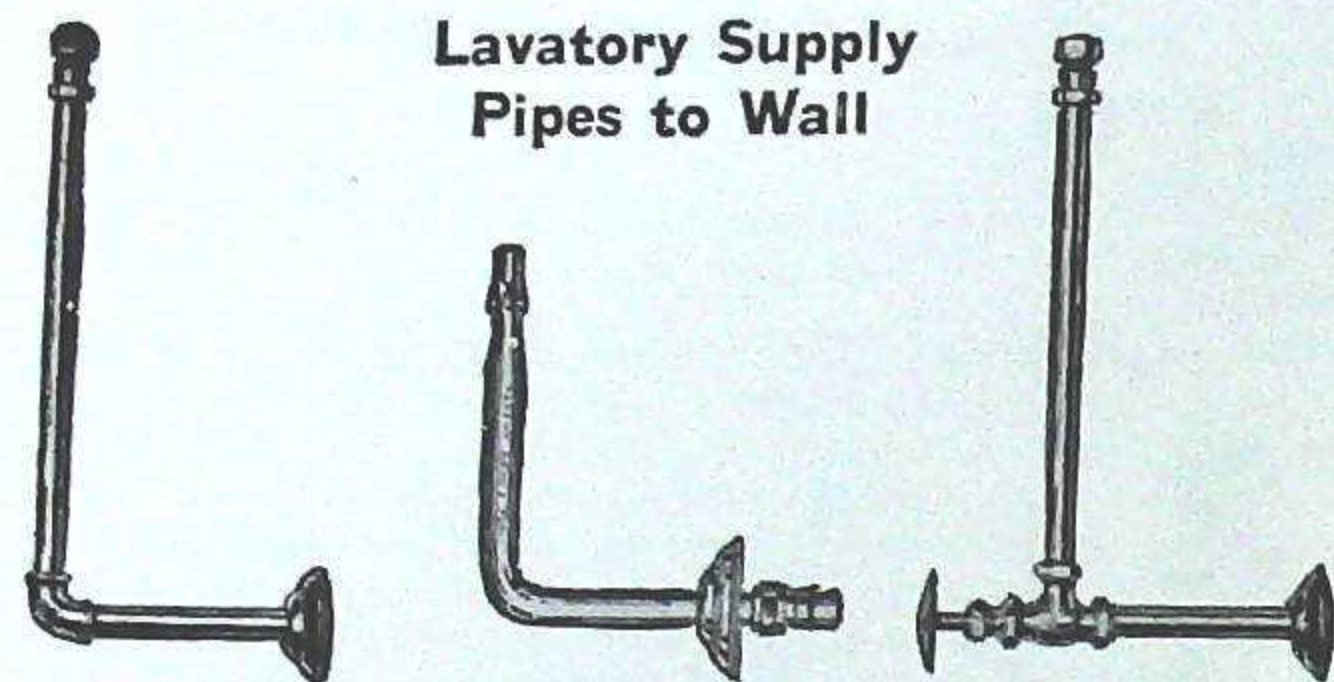
Beam graduations: upper bar, 50x1/4 pounds; lower bar, 250x50 pounds.

Measuring rod: 2 feet 6 inches to 6 feet 6 inches by 1/4 inches. Platform 10 1/2 inches x 14 inches.

Height, from floor to top of beam, 58 1/4 inches.

Price, without Measuring Rod No. 1263 each \$36.00
" with Measuring Rod. " 1265 " 48.00

Lavatory Supply Pipes to Wall



No. 33 Plain Fig. 801
 No. 31 Plain Annealed Fig. 802
 No. 35 with Stop Fig. 803
 Nickel-plated, 3/8-inch iron pipe size.
 Price, Plain..... per pair \$3.50
 " Annealed, 3/8-inch O.D., 1/2-inch S.J. " 3.00
 " with Wheel Handle Stop. " 7.50

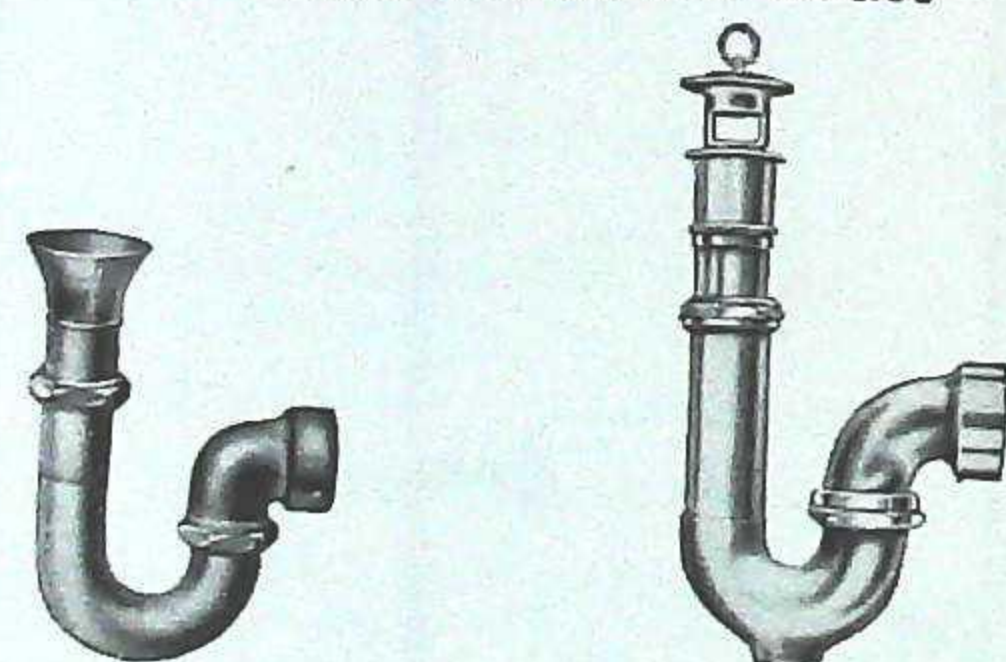
Brass Anti-syphon Traps



Type	Lgth. In.	1 1/4-INCH		1 1/2-INCH	
		No.	Price Each	No.	Price Each
S	20 1/2	12170	\$10.75	12199	\$12.50
S	25 1/2	12423	12.00	12467	14.00
P	11	12198	10.00	12200	11.75

Add for P. O. Plug..... 1.50

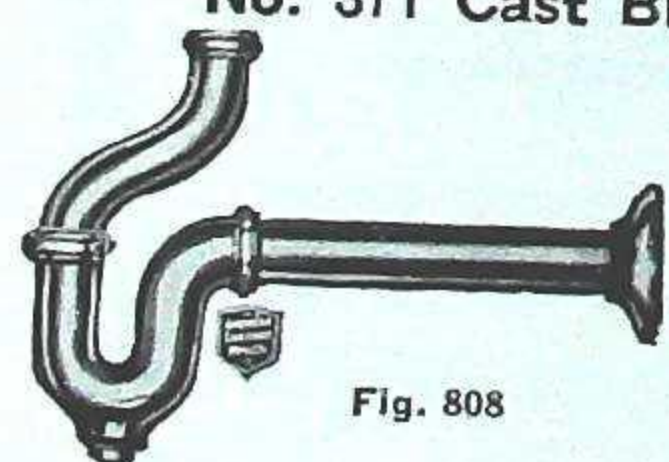
Brass P Traps With Tapped Female I. P. Outlet



No. 500 Bent Tube Fig. 806
 No. 386 Cast Brass Fig. 807
 Nickel-plated brass bent tube P trap with sink connection, union and cast brass elbow tapped female I. P.
 Size.....inches 1 1/4 1 1/2
 Price.....each \$2.40 \$2.85
 " without Sink Connection. " 1.95 2.40

Cast Brass with P. O. Plug
 Nickel-plated cast brass adjustable P trap with cleanout and P. O. plug, elbow tapped female I. P.
 Size.....inches 1 1/4 1 1/2
 Price.....each \$4.30 5.20

No. 371 Cast Brass Bag P Traps



Without P. O. Plug
 Size.....inches 1 1/4 1 1/2
 Gauge.....No. 17 17
 Price, N. P. ea. \$6.65 8.45

Cast Brass S Traps



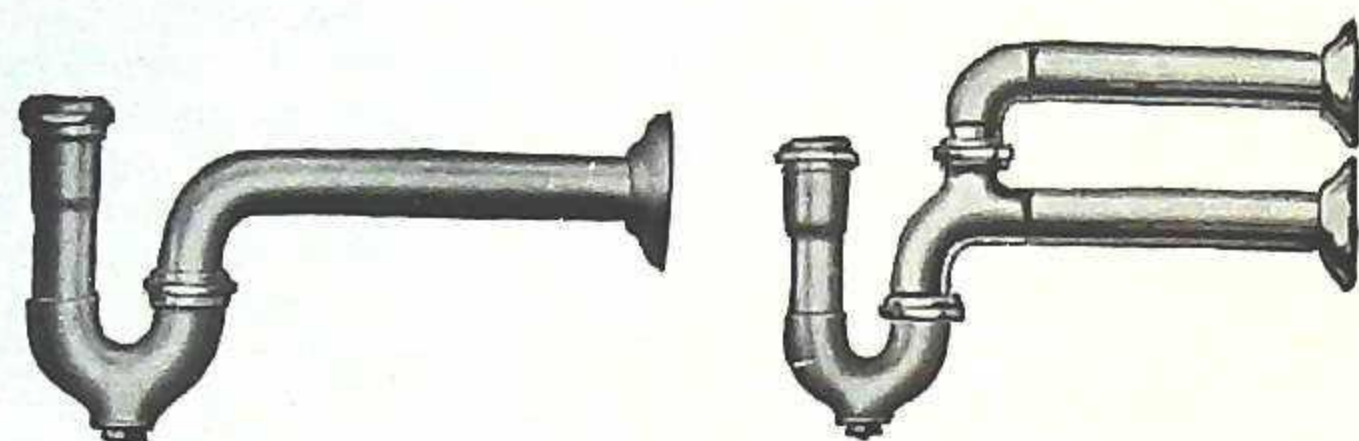
With Cleanout
 Furnished with slip joint coupling nut.

Size In.	PRICE, EACH	
	Plain N. P.	Vented N. P.
1 1/2	\$6.50	\$8.00

No. 80 Plain Fig. 809

No. 90 Vented Fig. 809A

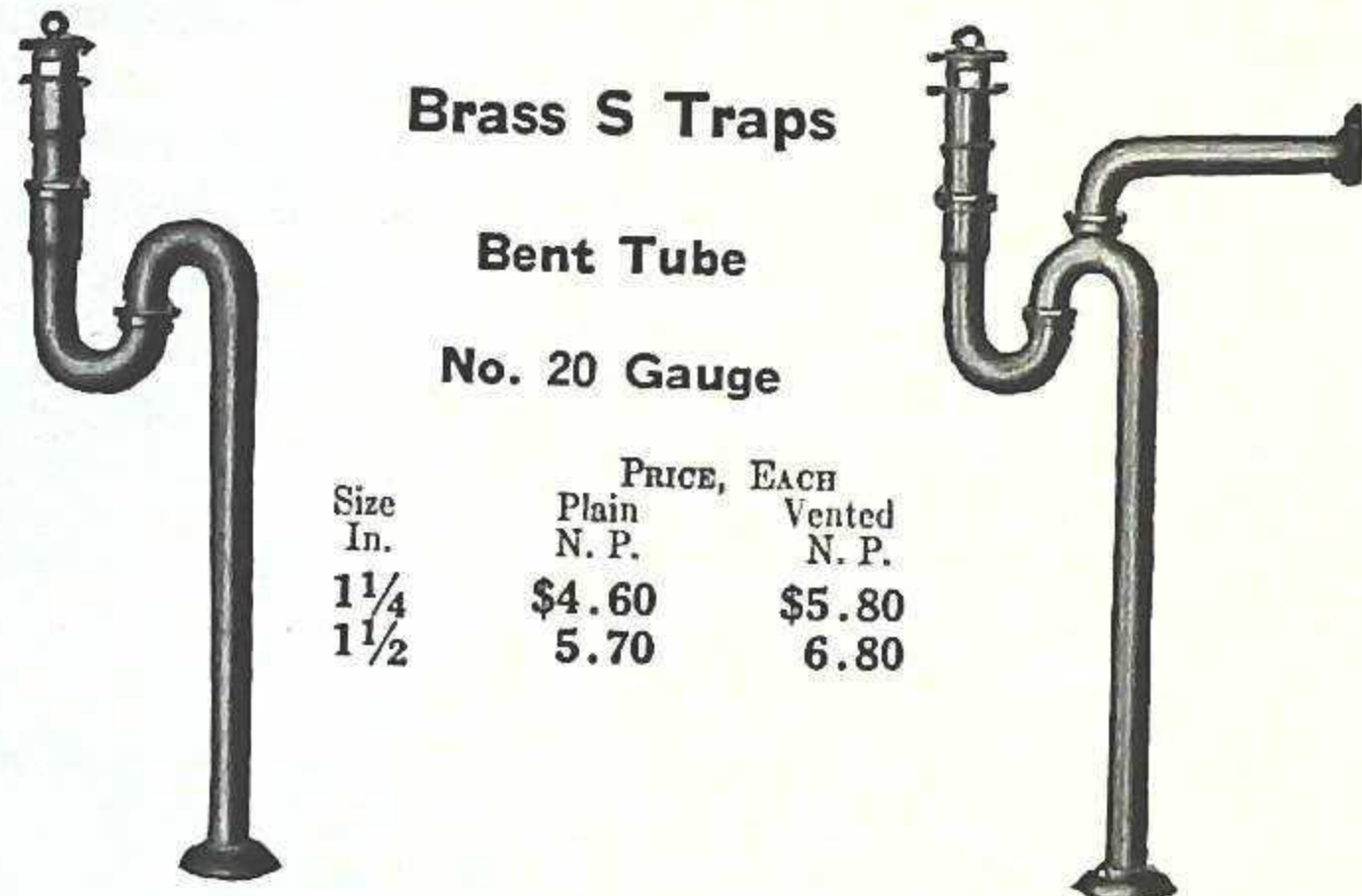
Cast Brass P Traps With Cleanout



No. 100 Fig. 809B
 No. 110 Fig. 809C
 Furnished with slip joint coupling nut.

Size Inches	PRICE, EACH	
	Plain N. P.	Vented N. P.
1 1/2	\$5.25	\$7.00

Brass S Traps



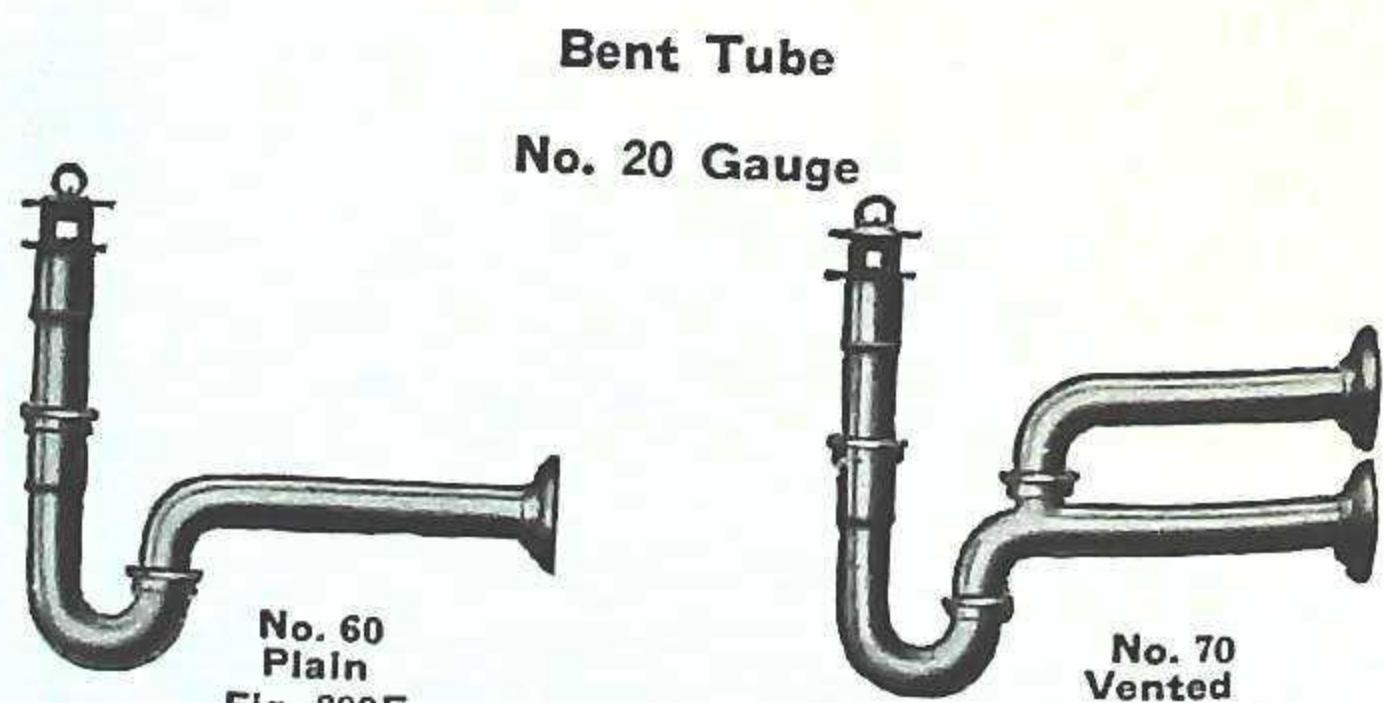
Bent Tube
 No. 20 Gauge

Size In.	PRICE, EACH	
	Plain N. P.	Vented N. P.
1 1/4	\$4.60	\$5.80
1 1/2	5.70	6.80

No. 40 Plain Fig. 809D

No. 50 Vented Fig. 809E

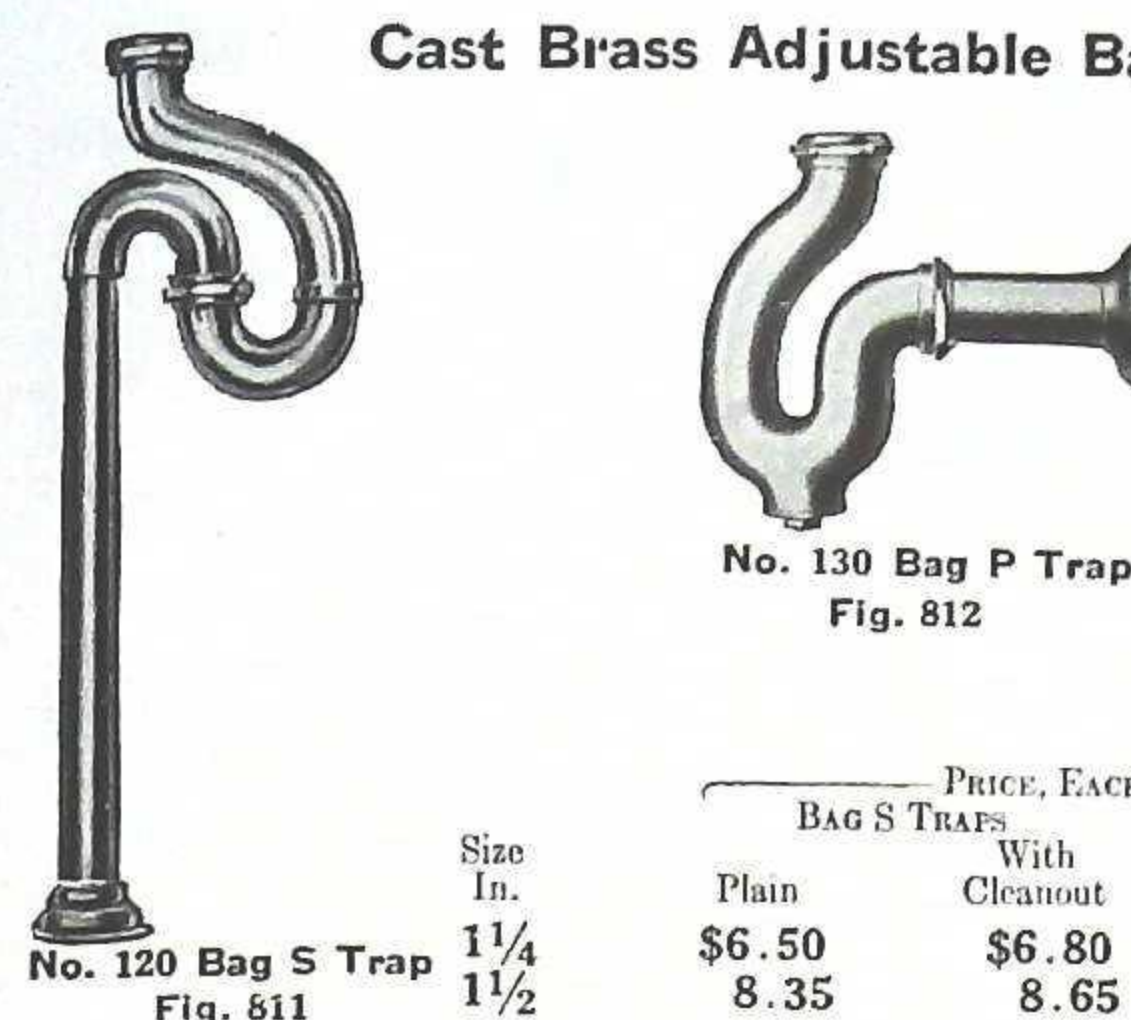
Brass P Traps



Bent Tube
 No. 20 Gauge

No. 60 Plain Fig. 809F
 No. 70 Vented Fig. 809G
 Size.....inches 1 1/4 1 1/2
 Price.....each \$3.80 4.60
 Size.....inches 1 1/4 1 1/2
 Price.....each \$5.50 6.30

Cast Brass Adjustable Bag Traps



No. 120 Bag S Trap Fig. 811

No. 130 Bag P Trap Fig. 812

Size In.	PRICE, EACH		
	BAG S TRAPS Plain	With Cleanout	BAG P TRAPS With Cleanout
1 1/4	\$6.50	\$6.80	\$5.80
1 1/2	8.35	8.65	7.45

No. 10479 New York Regulation Traps



Fig. 813

Type	PRICE, EACH	
	1 1/4-in.	1 1/2-in.
P
S

Add for P.O. Plug.....

Basin Wastes

With P. O. Plug



With Slip Joint Fig. 814



Plain Fig. 815

No. 946 Slip Joint

Size.....inches	1 1/4	1 1/2
Price.....each	\$3.00	3.50

No. 945 Plain

Size.....inches	1 1/4	1 1/2
Price.....each	\$2.50	3.00

Brass Extension Tubes

No. 2700, Tubes to Solder



Fig. 816

Size In.	Price Each	Size In.	Price Each
1 1/4 x 6	\$0.95	1 1/2 x 6	\$1.35

No. 3400, Tubes to Slip

Size In.	Price Each	Size In.	Price Each
1 1/4 x 6	\$1.50	1 1/2 x 6	\$1.70



Fig. 817

No. 4468 Slip Joint Sink Connections



Fig. 818

Diameter of Tube.....inches	1 1/4	1 1/2
" at Top..... " "	2	2
Length Over All..... " "	4	4
" Tube Part..... " "	3	3
Price, Nickel-plated.....each	\$0.90	.90

No. 25 Continuous Lavatory Wastes

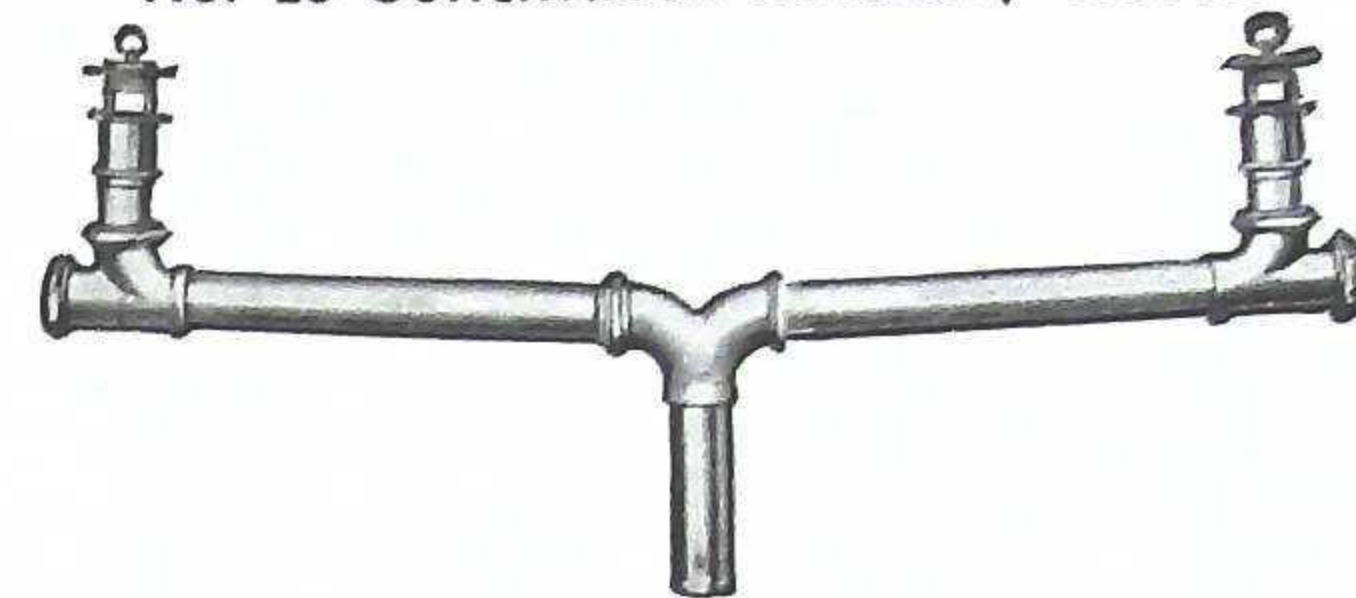


Fig. 819

For two basins, with outlet in center.
 Size.....inches 1 1/4 1 1/4 1 1/4 1 1/2 1 1/2 1 1/2
 Number of Inlets... 2 4 6 2 4 6
 Price, Rough...each \$5.70 \$11.40 \$14.90 \$7.90 \$15.25 \$24.50
 " Fin..... " 5.90 11.90 15.60 8.15 15.35 25.50
 " N. P.... " 6.10 12.40 18.30 8.40 15.60 26.50

No. 27 Continuous Lavatory Wastes



Fig. 819A

For three basins, with outlet in center.
 Size.....inches 1 1/4 1 1/4 1 1/4 1 1/2 1 1/2 1 1/2
 Number of Inlets... 3 5 7 3 5 7
 Price, Rough...each \$7.30 \$13.00 \$18.00 \$9.25 \$17.50 \$23.50
 " Fin..... " 7.65 13.50 19.00 9.75 18.50 24.75
 " N. P.... " 8.00 14.00 20.00 10.25 19.50 26.00

No. 26 Continuous Lavatory Wastes

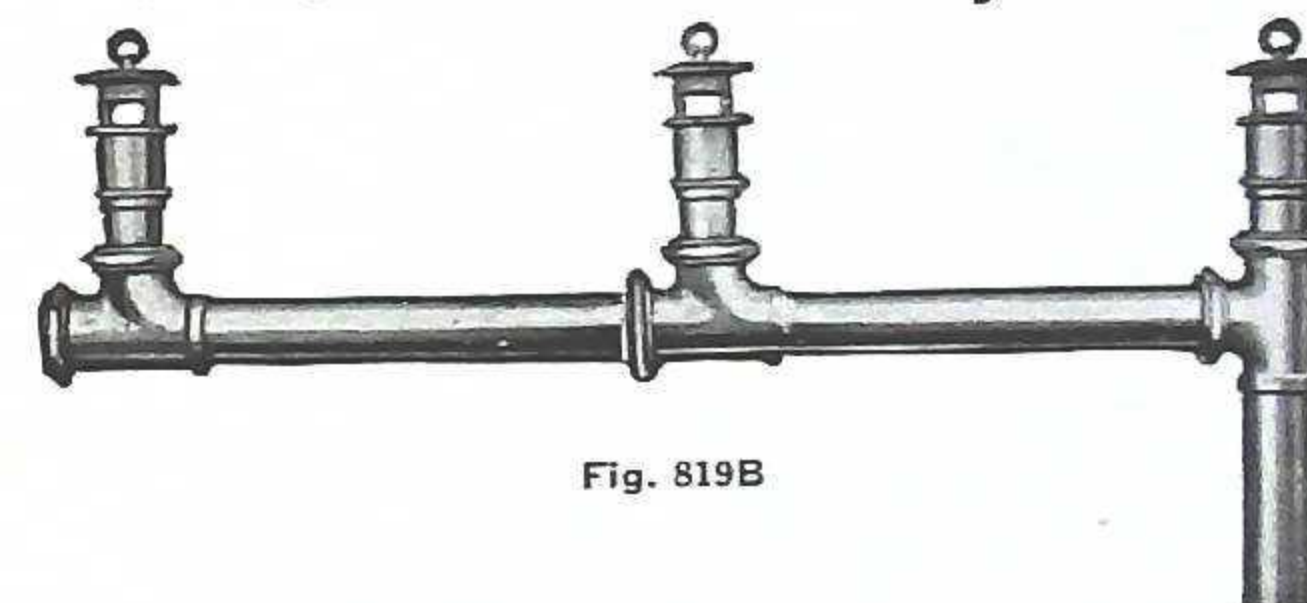


Fig. 819B

For three basins, with outlet on end.
 Size.....inches 1 1/4 1 1/4 1 1/4 1 1/2 1 1/2 1 1/2
 Number of Inlets... 2 3 4 3 4 5
 Price, Rough...each \$4.70 \$7.10 \$9.75 \$6.10 \$9.00 \$12.50
 " Fin..... " 4.85 7.40 10.50 6.30 9.50 13.25
 " N. P.... " 5.00 7.75 11.00 6.50 10.00 14.00

No. 28 Continuous Lavatory Wastes

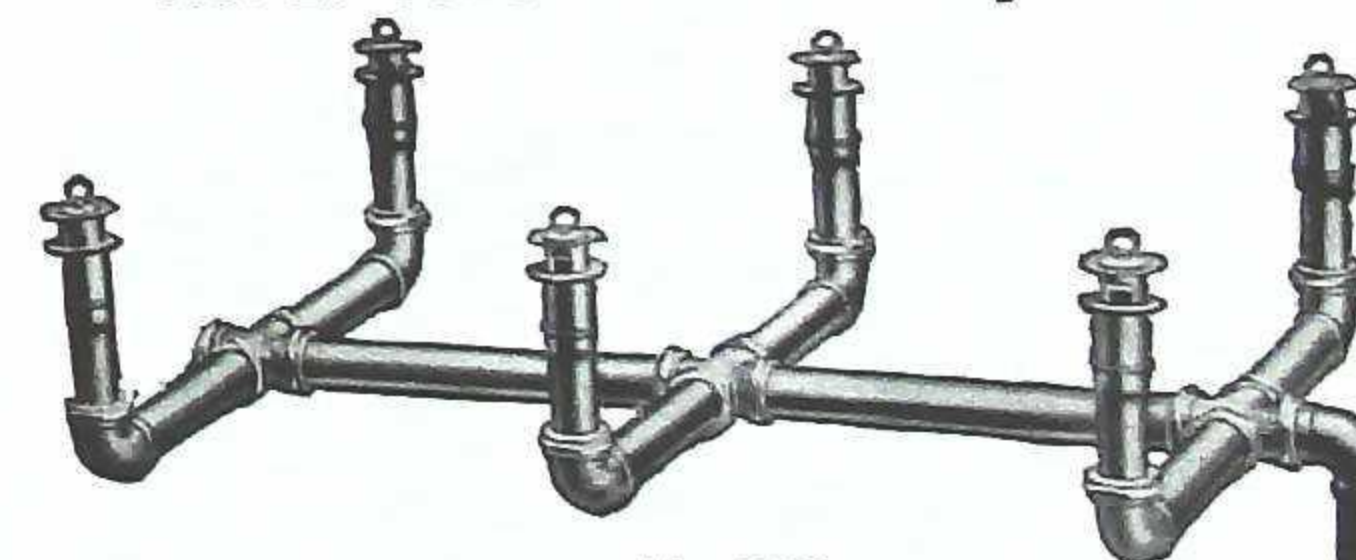


Fig. 819C

For lavatories in batteries, with outlet on end.
 Size.....inches 1 1/4 1 1/4 1 1/4 1 1/2 1 1/2 1 1/2
 Number of Inlets... 4 6 8 4 6 8
 Price, Rough...each \$13.80 \$18.00 \$22.80 \$18.00 \$22.50 \$27.00
 " Fin..... " 14.40 19.20 24.40 19.00 24.00 29.00
 " N. P.... " 15.00 20.50 26.00 20.00 25.50 31.00

Patent Overflow Basin Plugs

No. 863
With Slip Joint
Nickel-plated P. O. plug with slip joint and rubber stopper.
Price, 1 1/4-inch.....each \$5.50

No. 862
With Coupling and Lock Nut
Nickel-plated P. O. plug with coupling and rubber stopper.
Price, 1 1/4-inch.....each \$7.70
" without Overflow.....each .70




No. 460 Common Overflow Basin Plugs

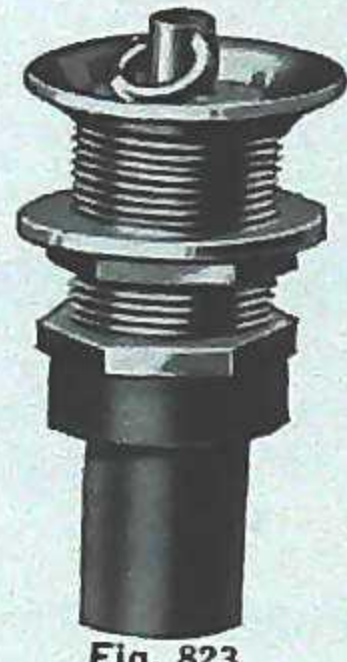


Fig. 823

O. D. Tail Piece In.	PRICE, PER DOZEN			
	METAL STOPPER		RUBBER STOPPER	
	Fin.	N. P.	Fin.	N. P.
1	\$7.80	\$9.00	\$9.36	\$10.80
1 1/4	10.80	12.00	12.96	14.40

No. 4219 Wash Tray Plugs



Fig. 824

For Lead Pipe

Size In.	Diam. Flange In.	PRICE, PER DOZEN			
		METAL STOPPER		RUBBER STOPPER	
		Fin.	N. P.	Fin.	N. P.
1	2 7/8	\$19.80	\$21.60	\$23.76	\$25.92
1 1/4	3	21.60	24.60	25.92	29.52
1 1/2	3 3/8	30.00	36.00	32.40	36.00
2	3 3/8	60.00	75.00	50.40	57.60

Plain Wash Tray Plugs

No. 4215

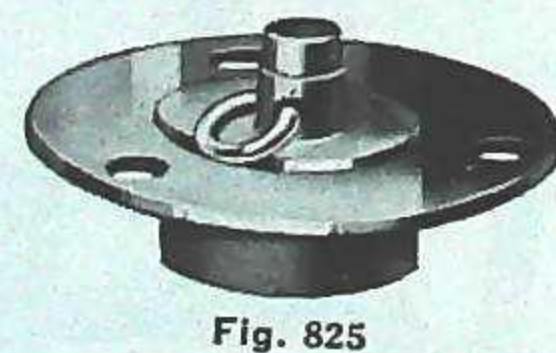


Fig. 825

Size In.	PRICE, PER DOZEN			
	METAL STOPPER		RUBBER STOPPER	
	Fin.	N. P.	Fin.	N. P.
1 1/4	\$6.00	\$7.80	\$7.20	\$9.36
1 1/2	7.20	9.00	8.64	10.80
2	10.80	13.80	12.96	16.56

No. 4214 Sink or Bath Plugs



Fig. 826

Size Inches	PRICE, PER DOZEN			
	METAL STOPPER		RUBBER STOPPER	
	Fin.	N. P.	Fin.	N. P.
1	\$2.40	\$3.00	\$2.88	\$3.60
1 1/4	3.00	3.60	3.60	4.32
1 1/2	4.20	4.80	5.04	5.76
2	8.40	9.60	10.08	11.52

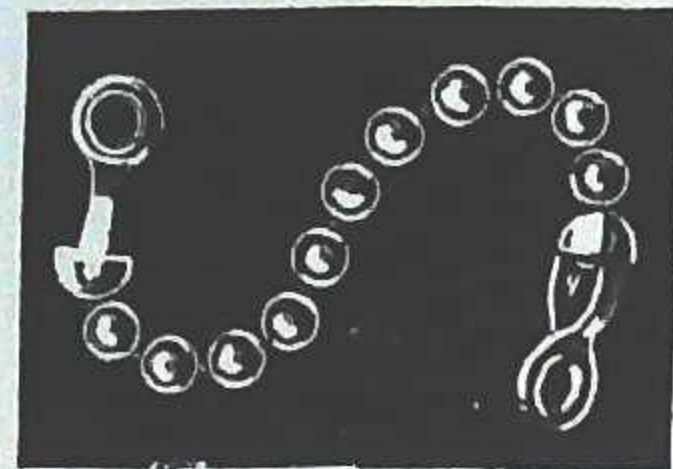


Fig. 827

Bead Chains

Solid nickel silver, with jump couplings.

	Length Inches per Doz.	Price
For Basin...	12	\$3.00
" Bath....	17	3.50
" Wash Tray..	11	3.50
" Closet...	48	12.50

Brass Plumbers' Link Chains with Snaps

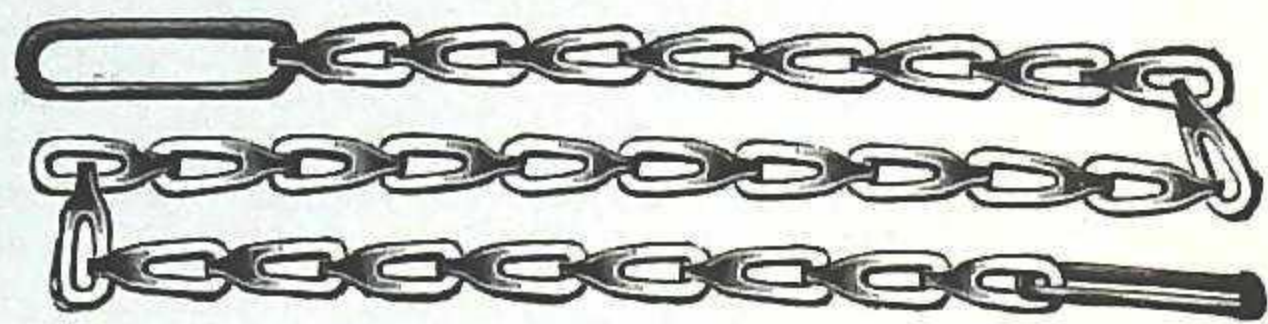


Fig. 828

No.	BASIN CHAINS		BATH CHAINS		TRAY CHAINS	
	Fin.	N. P.	Fin.	N. P.	Fin.	N. P.
00	\$1.00	\$1.05	\$1.40	\$1.47	\$1.15	\$1.21
0	1.20	1.25	1.65	1.72	1.35	1.41
1	1.40	1.45	2.00	2.07	1.60	1.66
2	.....	.....	2.45	2.52	1.95	2.01

Basin chains 16 1/2 inches long, bath chains 26 1/4 inches long, tray chains 19 3/4 inches long.

Plumbers' Brass Link Chains



No. 000 Fig. 829

No. 3 Fig. 829A

No.	Style of Chain	BOXES OF 12 YARDS		REELS OF 500 FEET	
		PRICE, PER BOX		PRICE, PER 100 FEET	
		Fin.	N. P.	Fin.	N. P.
000	Plumbers	\$1.25	\$1.30	\$3.50	\$3.60
00	"	1.45	1.50	4.00	4.10
0	"	1.80	1.85	5.00	5.10
1	"	2.25	2.30	6.25	6.35
2	"	2.90	3.00	8.00	8.20
3	Navy Link	3.60	3.70	10.00	10.20
4	"	4.15	4.25	11.50	11.70

Brass Split Links

No. 1 Small

No. 2 Large



Fig. 829R

PRICE, PER GROSS	
Fin.	N. P.
\$1.50	\$1.80



Fig. 829C

PRICE, PER GROSS	
Fin.	N. P.
\$1.75	\$2.05

Brass Eight Hooks



Fig. 829D

No.	PRICE, PER GROSS		No.	PRICE, PER GROSS	
	Fin.	N. P.		Fin.	N. P.
1/2	\$3.25	\$3.60	2	\$1.80	\$2.15
1 1/2 S	3.00	3.35	3	1.50	1.65
1 1/2	2.75	3.10	4	1.30	1.45
2 1/2	2.00	2.35	5	1.10	1.25
3 1/2	1.50	1.65	6	.90	1.05
1	2.25	2.60	7	.85	1.00

No. 12446 Chain Stays

Wrought shoulder under flange 3/8-inch diameter, centering shank in hole on lavatories drilled for Pop-up Basin Waste. Fits enameled iron or vitreous lavatories. Outside diameter of base 1 1/2 inches, length shank under base 1 3/4 inches. Shank threaded 9-28. Nut tapped 9-28.

Price, No. 12446.....per dozen \$4.20



Fig. 831

No. 2314A Columbia Chain Stays

For Enameled Iron Lavatories

Nickel-plated brass chain stay designed to fit the 1 1/8-inch waste drilling in slab of enameled iron lavatories.

Price.....each \$0.50



Fig. 832

No. 12478 Combination Cock Hole Covers and Chain Stays for Lavatories



Fig. 833

Made of cast brass, nickel-plated
Outside diameter of base 1 3/4 inches. Bolt 1 3/4 inches long under head, threaded 5/8-18.
Cast hexagon flanged nut tapped 5/8-18.
Price, No. 12478.....per dozen \$7.20

Cock Hole Covers

These are made in three sizes; for lavatory cock hole, for sink back cock hole and for overflow hole of bath tub.

Made of brass, polished and nickel-plated.
Price, for Lavatory.....per doz. \$4.20
" " Bath and Sink Back " 4.80
" " Tub Overflow..... " 10.80



Fig. 834

Slip Joint Couplings



No. 3877 Plain Fig. 835



No. 3878 Flanged Fig. 836

I. P. Thread Inches	Slip Joint Diameter Inches	PRICE, PER DOZEN	
		Plain	Flanged
3/8	3/8 to 9/16	\$0.55	\$0.85
3/8	5/8 " 11/16	.60	.90
1/2	3/8 " 9/16	.70	1.00
1/2	5/8 " 1 1/16	.75	1.05
1/2	3/4 " 7/8	.85	1.15
3/4	3/4 " 7/8	1.15	1.50
3/4	1 " 1 1/16	1.40	1.75

Supply Pipe Couplings



Fig. 837

Reducer
Size.....in. 3/8x1/4 1/2x1/4
Price, Fin.....per doz. \$2.40 \$3.60
" N. P. " 3.60 4.80

Slip Joint
Size, I. P.....in. 3/8 3/8 1/2 1/2
" Slip Joint " 3-9/16 3-11/16 3-13/16 3-15/16
Price, N. P.per doz. \$6.60 7.20 8.40 9.00

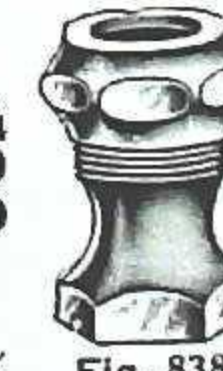


Fig. 838

Paragon Renewable Seat Float Valves

Price, No. 501 as Shown, with 3/8-inch Iron Pipe Connection and Lead Refill.....each \$3.00
Price, No. 502, Same as Above, Except with Long Threaded Shank.....each 3.15
Price, No. 503 as Shown, with 3/8-inch Iron Pipe Connection and Lead Refill Tube for Low Down Tank.....each \$2.40
Price, No. 504, Same as Above, Except with Long Threaded Shank.....each 2.55



No. 503 Fig. 839A

B. B. Ball Cocks

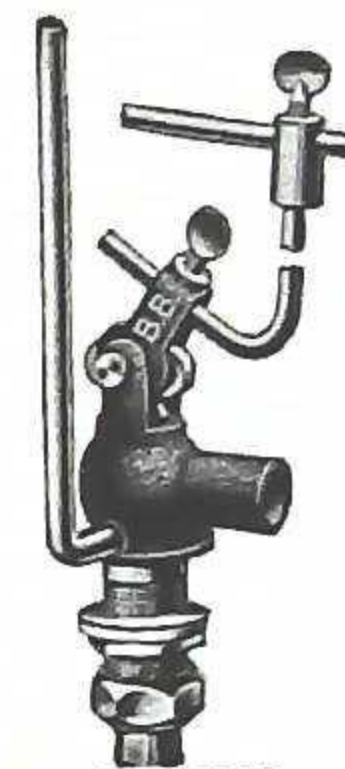


Fig. 839B For Low Tank Bottom Supply

Price, for Low Tank, with Bottom Supply.....each \$3.75

Price, for High Tank, with Bottom Supply.....each 2.25



Fig. 839C For High Tank Bottom Supply

M-VB Float Valves

No. 6 Float Valves

No. 6 elevated pattern, compound lever, composition seat washer, seat casting large and beveled, 1/2-inch hush tube. Plunger easily removed for repairs.

Price.....each \$2.20



No. 6 Fig. 839D

No. 17 Float Valves

No. 17 elevated pattern, compound lever, composition seat washer, seat casting large and beveled, 1-inch hush tube. Plunger easily removed for repairs.

Price.....each \$2.40



No. 17 Fig. 839E

No. 2 M-VB Float Valves

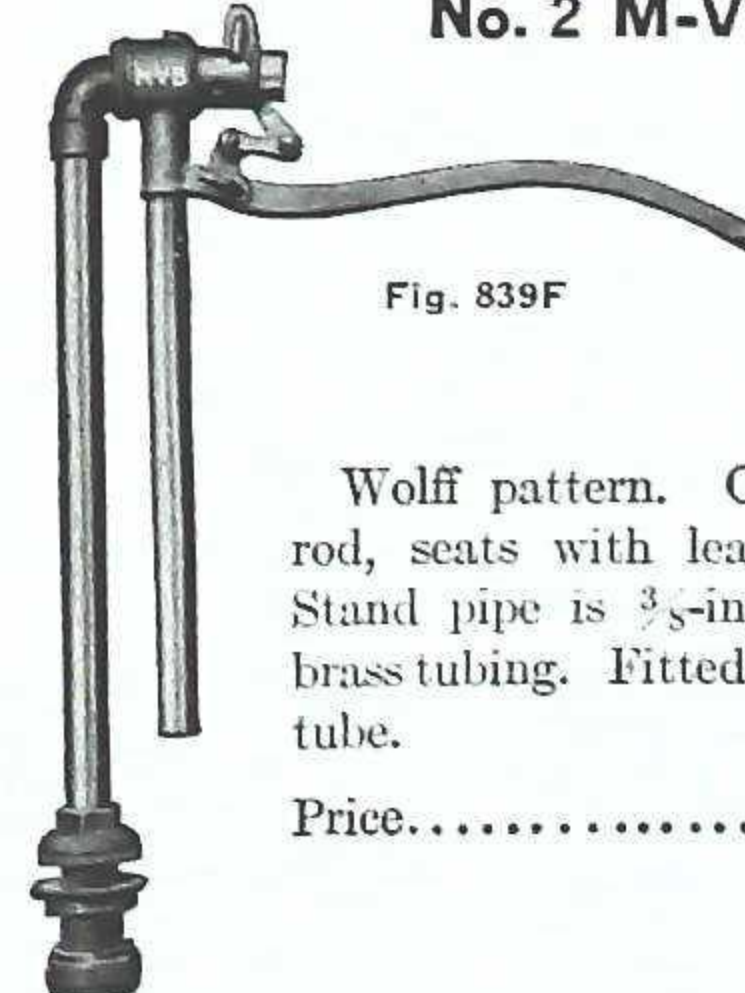


Fig. 839F

Wolf pattern. Compound lever, cast float rod, seats with leather washer above water. Stand pipe is 3/8-inch iron pipe size seamless brass tubing. Fitted with 5/8-inch, 20-gauge hush tube.

Price.....each \$2.70

No. 5 Dececo Float Valves



Fig. 841

Has a spiral passage making it noiseless on high pressure as well as on low. It can be furnished in a top supply for a high tank, a bottom supply for a high tank, a bottom supply for a low tank, an elevated pattern for a low tank, a concealed back supply for a low tank, or side supply for a high tank. It has removable seat of non-corrosive bronze, and one washer.

Price.....each \$3.00

Try-Me Ball Cocks



Fig. 842

Simple in construction, non-leakable, effective in operation, and adjustable to all conditions that surround the placing and replacing of cocks in domestic and public institutions.

Its desirable features are compounded leverage of the ball rod, magazine of rubber packings, revolving plunger, special metal for wearing parts, absence of sand pockets, adjustment to high or low pressure, regulation of water in tank by adjustment of float rod, removal of seats without use of tools, and use of same valve for top, bottom and end connections.

Can be used to replace any make of ball cock without disturbing the plumbing.

Price.....each \$3.00

High Pressure Ball Cocks With Top Supply for High Tanks



Fig. 843

Has removable brass seat and only one packing, the seat packing, and ground joint coupling.

Price...each \$2.00

Solderless Copper Floats

Price, 4x5 Inches, Oval.....each \$1.00
" 5 Inches, Round..... " 1.00

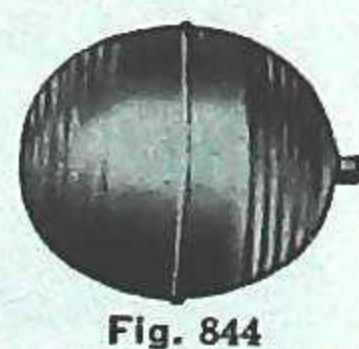


Fig. 844

Spun Copper Floats

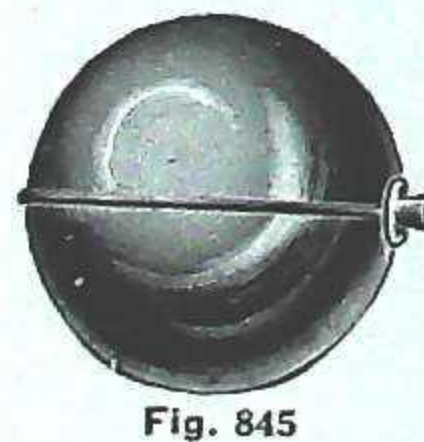


Fig. 845

Size Inches	Price per Dozen	Size Inches	Price per Dozen
5	\$8.00	9	\$50.00
6	12.00	10	80.00
7	18.00	12	120.00
8	30.00	..	.....

Gooseneck Syphons and Seats



No. 18 Fig. 846



No. 606 Fig. 847

No. 18 Gooseneck Syphons
Size.....inches 1 1/4 1 1/2
Price, Galvanized.....each \$2.00 2.50

No. 606 Gooseneck Syphon Seats
Size.....inches 1 1/4 1 1/2
Price, N. P. Brass.....each \$1.40 1.80

Tank Flush Valves

Nos. 1, 2 and 3 Cage Valves

Price, No. 1, 1 1/4-inch, Rough Nut and Tail Piece.....each \$1.80

Price, No. 2, 1 1/2-inch, Rough Nut and Tail Piece.....each 2.00

Price, No. 3, 1 3/4-inch, Rough Nut and Tail Piece.....each 2.60



Fig. 848 Nos. 1, 2 and 3



Fig. 849 Nos. 23 and 24

Nos. 23 and 24 Valves for Low Down Tank

Price, No. 23, 1-inch Overflow Tube.....each \$2.25

Price, No. 24, 1 1/4-inch Overflow Tube.....each 2.50

Tank Flush Valves

No. 16 Rubber Ball Flush Valves

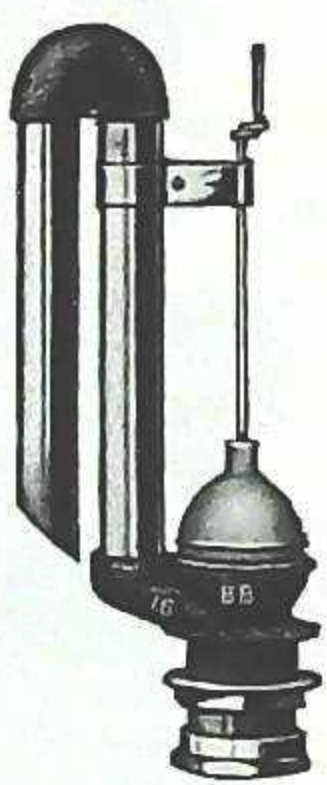


Fig. 849A No. 16

Price, No. 16, for 1 1/2-inch Flush Pipe ca. \$3.00

Nos. 25, 26 and 27 Improved Syphon Flush Valves

Price, No. 25, 1 1/4-inch, N. P. Nut, No Tail Piece.....each \$3.00

Price, No. 26, 1 1/2-inch, N. P. Nut, No Tail Piece.....each 3.60

Price, No. 27, 1 3/4-inch, N. P. Nut, No Tail Piece.....each 6.00

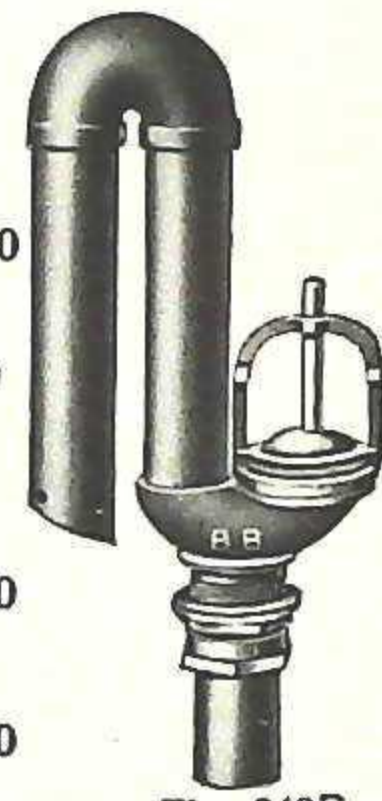


Fig. 849B Nos. 25, 26 and 27

No. 900 Monarch Flush Valves

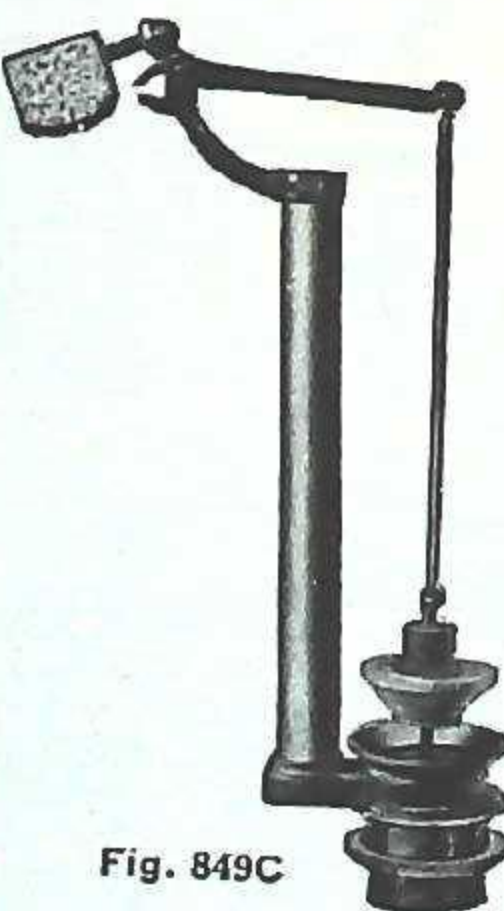


Fig. 849C

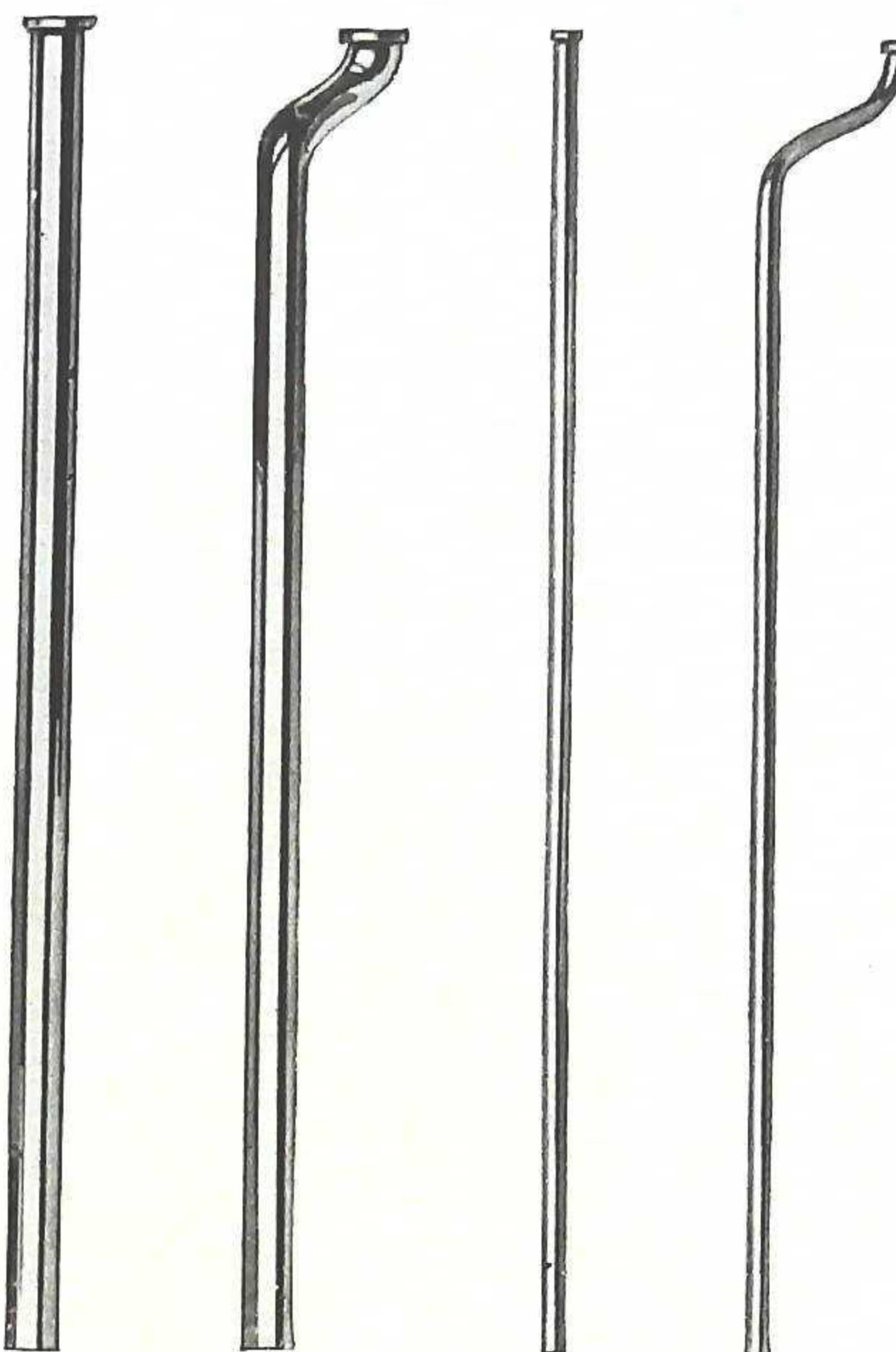
Monarch flush valve with heavy brass overflow and galvanized counter weight and solid rubber plunger.

Body made of red brass, overflow made of heavy gauge brass.

For low and high tanks.

Price No. 900.....each \$4.50

Water Closet Flush and Supply Pipes



No. 1084 Straight Flush Pipe Fig. 851

No. 1082 Offset Flush Pipe Fig. 852

No. 1085 Straight Supply Pipe Fig. 853

No. 1033 Offset Supply Pipe Fig. 854

In ordering flush and supply pipes send coupling nut from both flush and supply tank spuds, and state distance—when offset pipes are wanted—from center of flush and also supply spuds to back of tank.

Flush Pipes

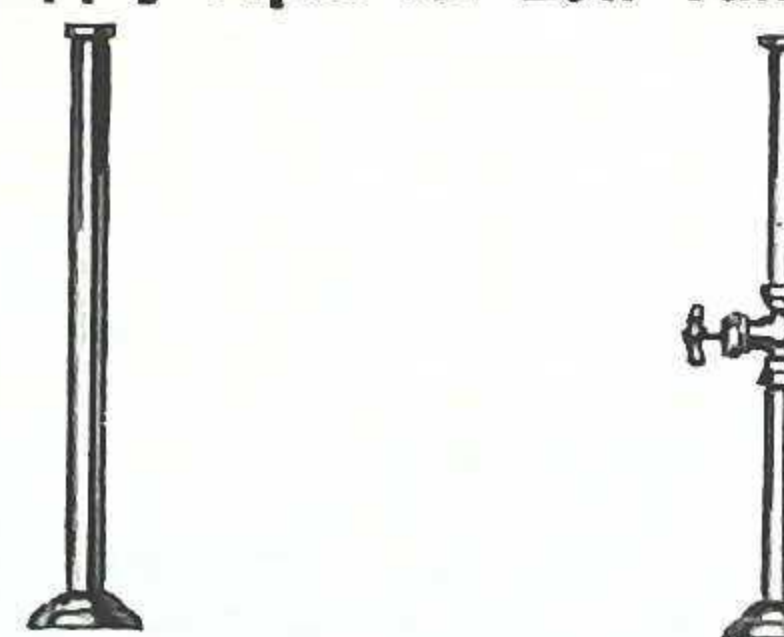
Gauge.....	number	20	20	20
Size.....inches		1 1/4	1 3/8	1 1/2
Price, N. P., Straight.....	each	\$4.60	4.60	4.80
" " Offset.....	"	4.60	5.00	5.20

Supply Pipes—7 Feet Long

Gauge.....	number	14	I.P.	I.P.
Size.....inches		3/2	3/8	1/2
Price, N. P., Straight.....	each	\$4.00	5.20	7.80
" " Offset.....	"	4.60	6.00	8.60

For pipes with a larger offset than 3 1/2 inches an extra charge will be made.

Supply Pipes for Low Tank

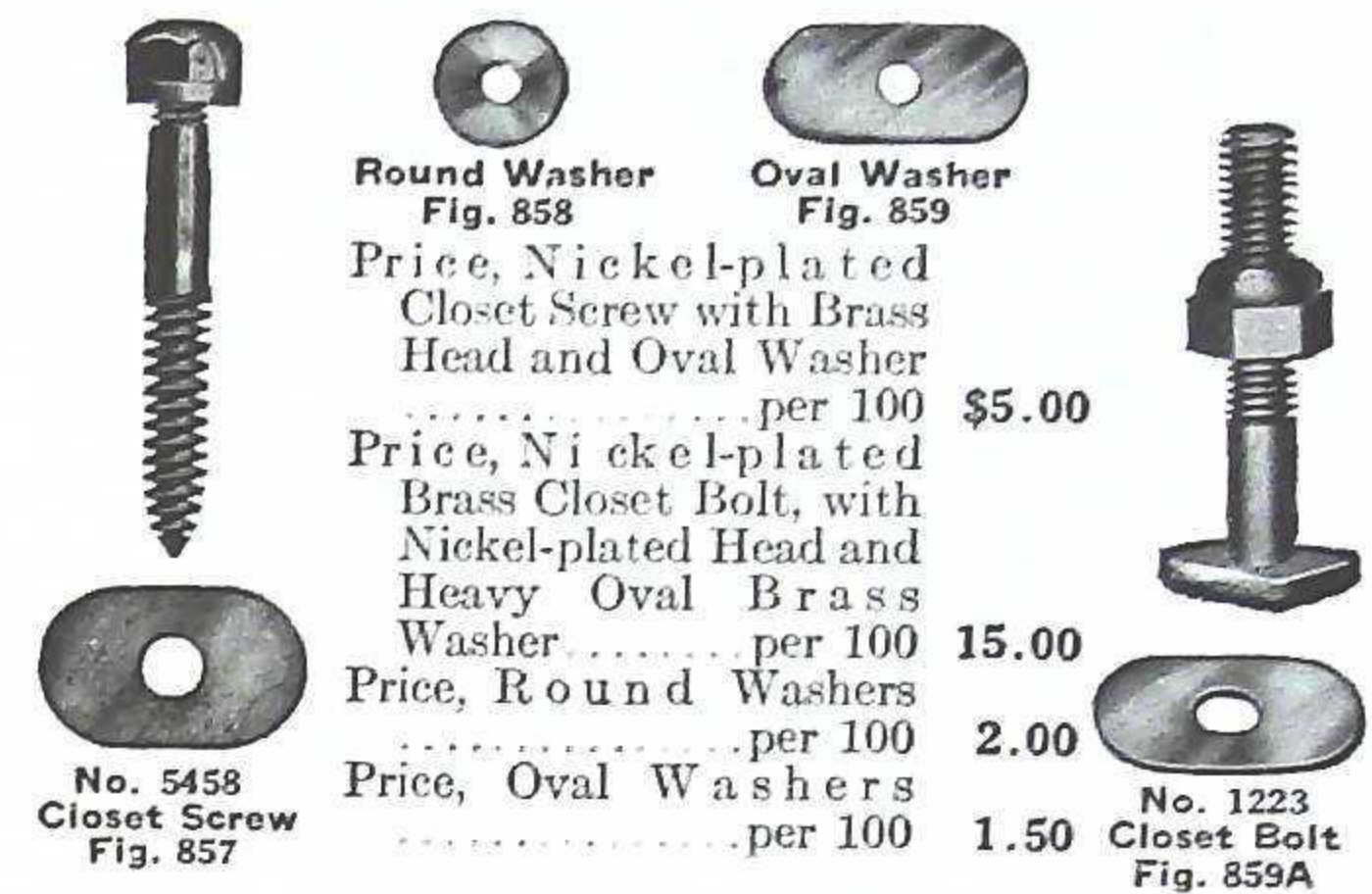


No. 1088 Plain Fig. 855

No. 1090 with Cock Fig. 856

Gauge.....	number	14	I.P.
Size.....inches		3/2	3/8
Price, N. P., Plain.....	each	\$2.00	\$2.50
" " with Cock.....	"	4.00	4.50

Closet Screws and Washers



Round Washer Fig. 858

Oval Washer Fig. 859

No. 5458 Closet Screw Fig. 857

No. 1223 Closet Bolt Fig. 859A

Price, Nickel-plated Closet Screw with Brass Head and Oval Washer.....per 100 \$5.00
Price, Nickel-plated Brass Closet Bolt, with Nickel-plated Head and Heavy Oval Brass Washer.....per 100 15.00
Price, Round Washers.....per 100 2.00
Price, Oval Washers.....per 100 1.50

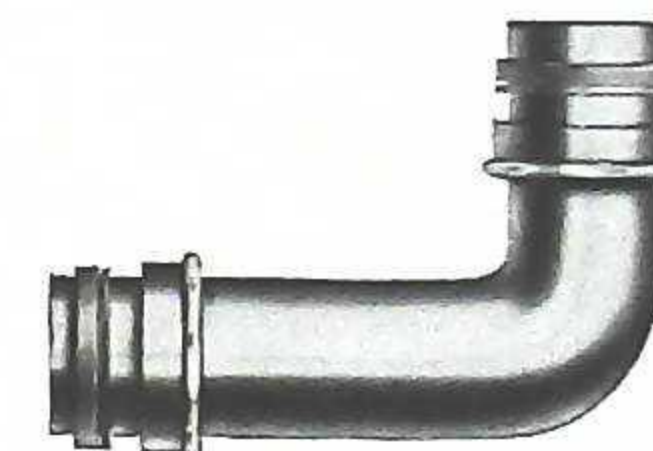


Fig. 859B

No. 787 Slip Joint Elbows For Low Tank

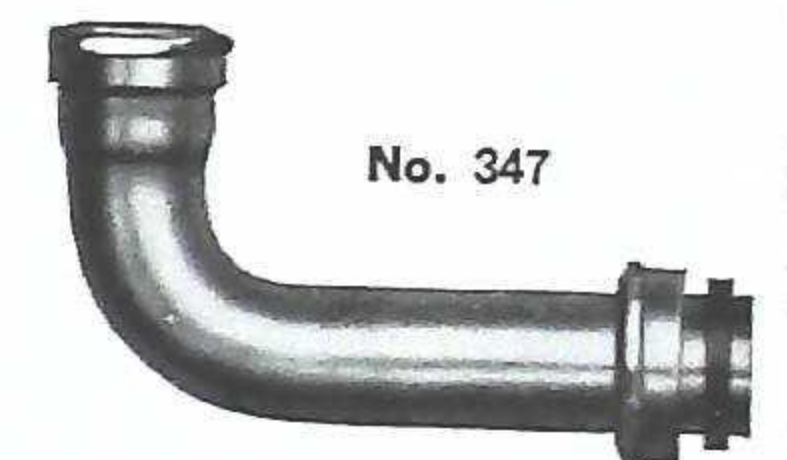
Nickel-plated, with two 2-inch iron pipe size cast nuts and rubber washers.

Size Inches	Price Each	Size Inches	Price Each
3 1/2 x 5	\$1.30	5 x 6	\$1.75
4 x 6	1.50	6 x 8	2.00

Slip Joint Elbows For High Tank

Nickel-plated, with 2-inch wrought brass nuts and rubber washers.

Size In.	Length In.	Price Each
1 1/4 x 1 1/4	6	\$.75
1 1/4 x 1 1/2	6	1.00
1 1/2 x 1 1/2	6	1.20



No. 347

Fig. 859C

Closet Flush Connections No. 885 Offset Connections



Offset Connection Fig. 859D

Nickel-plated, with two 2-inch iron pipe size nuts and rubber washers.

Size Inches	Price Each
1	\$1.30
1 1/2	1.50
2	1.70
2 1/2	1.90
3	2.10
3 1/2	2.30
4	2.50



Straight Connection Fig. 859E

No. 1497 Straight Connections

Nickel-plated, with two 2-inch iron pipe size nuts and rubber washers.
Price.....each \$.90

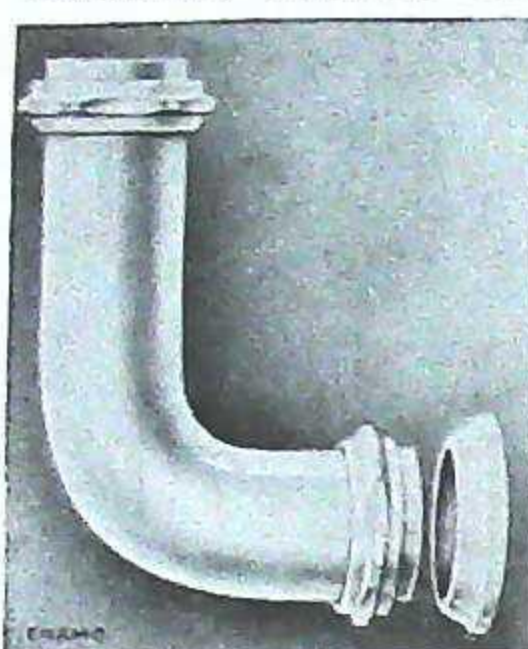
No. 483 Closet Spud Reducers



Fig. 859F

Price, 2x1 1/4-inch.....each \$1.00
" 2x1 1/2 "..... " 1.25

Enamo White Covered Closet Connections



Enamo White covered flush connection for low tank closets—brass tubing elbow—cast brass nuts—spun brass escutcheon—rubber slip joint washers. Packed 1 in a box.

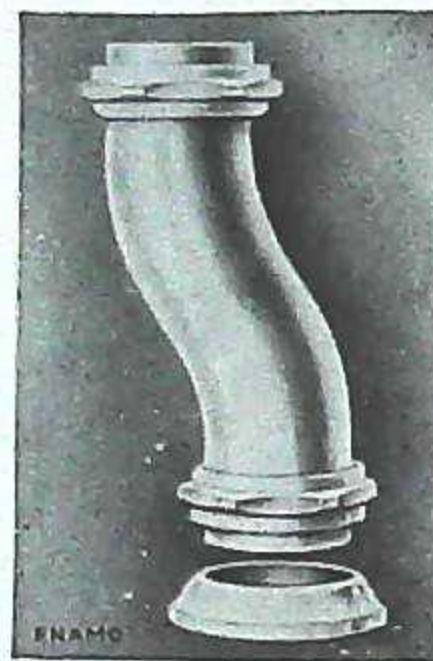
Enamo Elbow Connections

No.	Diam. In.	Size In.	Price Each
B-1000	2	3x5	\$1.90
B-1001	2	4x6	2.00
B-1002	2	5x7	2.20
B-1003	2	6x8	2.40

Elbow Connection Fig. 861

Enamo Offset Connections

No.	Diam. In.	Offset In.	Price Each
B-1005	2	1	\$2.00
B-1006	2	1 1/2	2.10
B-1007	2	2	2.20
B-1008	2	3	2.40



Offset Connection Fig. 862

Enamo Straight Connections

Price, No. B-1010, 2-in. diam., 6 in. long.....each \$1.60

Enamo Canopy Escutcheons

Price, No. B-1014.....each \$.10

Enamo Spud Nuts

Price, No. B-1012.....each \$.30

Vitreous China Flush Pipe Covers

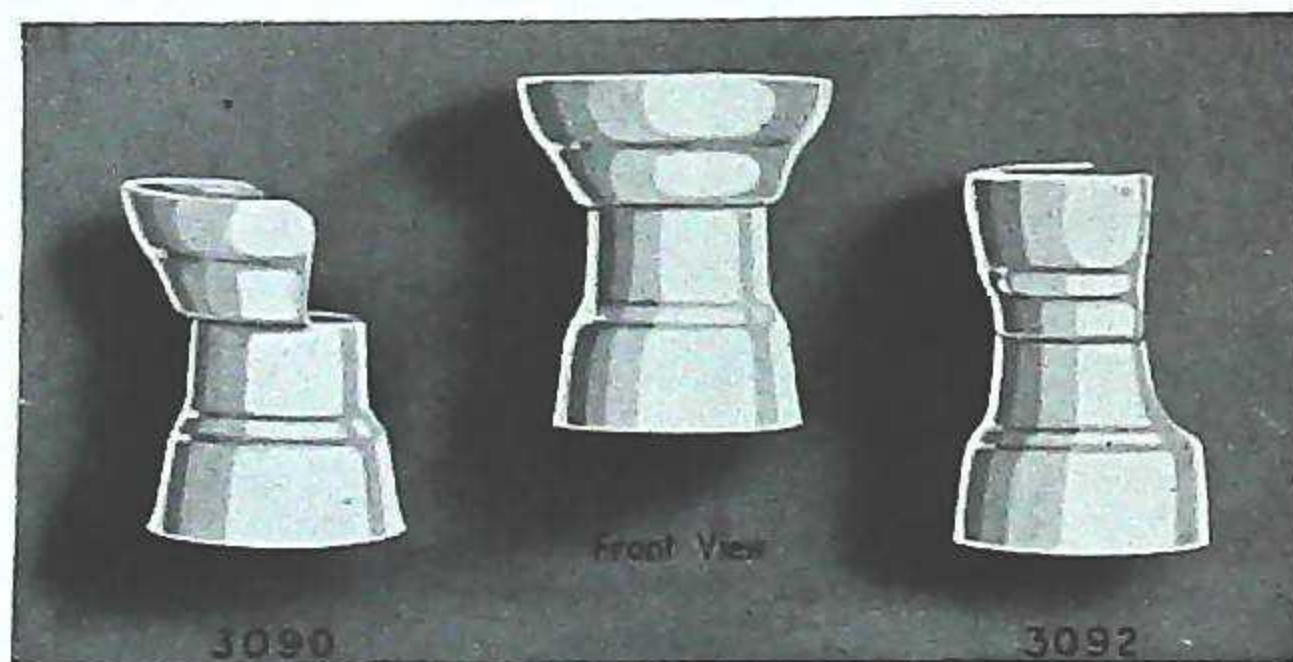


Fig. 863

Price, No. 3090, for Straight Connection.....each
" " 3092, " 1 1/2-inch Offset Connection.....

No. 4120 Vitreous China Bolt Caps

For Floor Screws

White vitreous china bolt caps to set over brass floor screws.

Price, No. 4120.....each \$.10



Fig. 864

Flush and Supply Pipe Holders

Supply



Fig. 865

Flush



Fig. 866

Size Inches	Price Each	Size Inches	Price Each
3/8 I.P.	1 1/4 O.D.	.....
1/2 I.P.	1 3/8 O.D.	.....
3/4 O.D.	1 1/2 O.D.	.....

No. 40 Lever for Low Tanks



Fig. 867

This lever is of the rotary type. It is of sturdy construction and equipped with china handle for use with enameled iron or vitreous china tanks.

Price, No. 40.....each

No. 6855 Closet Floor Flanges



Fig. 868

Plain cast brass, light pattern, with bolts and washers.
Outside Diameter.....inches 6 7/8
Inside " " " 4 1/4

Price.....each \$1.00
If wanted with Asbestos Molded Gasket, add.....each .25

Durham Floor Flanges No. 4940



Fig. 869

Extra heavy pattern, with female thread, bolts and washers. Made of iron.
Price.....each \$2.60
If wanted with Asbestos Molded Gasket, add.....each .25

Durham Floor Flanges No. 4943

Extra heavy pattern, with male thread, bolts and washers. Made of iron.
Price.....each \$2.40
If wanted with Asbestos Molded Gasket, add.....each .25

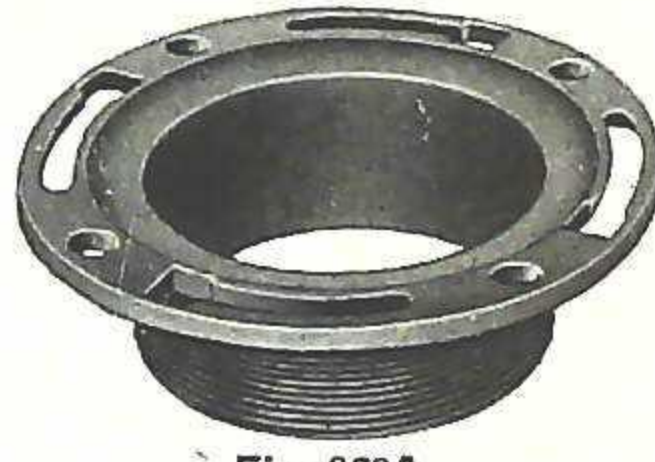


Fig. 869A

No. 711 Renton Floor Flanges

Floor flange for lead pipe, with bolts, washers and asbestos graphite gasket.

Price.....each \$1.50

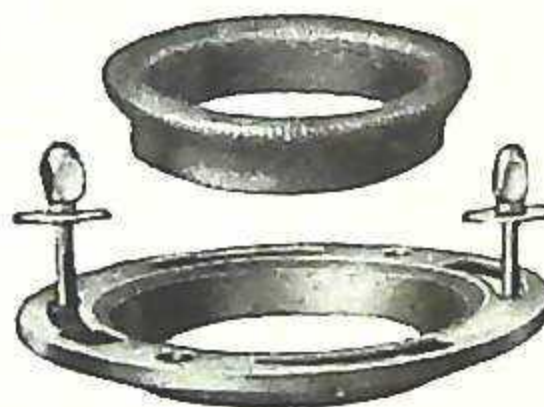


Fig. 869E

Closet Floor Flange Gaskets

No.	Outside Diameter Inches	Inside Diameter Inches	Price per Dozen
68	6	4	\$3.60
54	7	4 1/4	4.00
69	7 1/4	5 1/4	5.00



Fig. 869C

No. D69 Asbestos Closet Gaskets

This gasket has a feather edge, and is made up especially for use with closet bends.

Price, No. D69 per dozen \$9.00

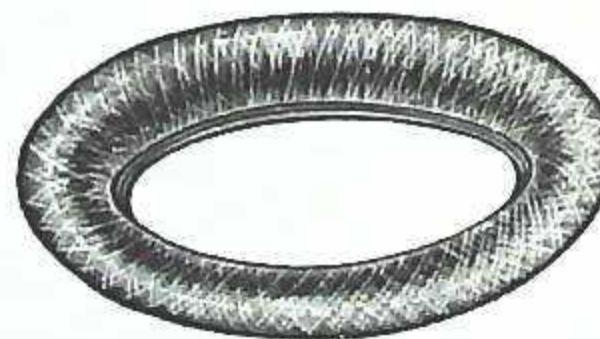


Fig. 869D

No. 100 Rubber Tank Balls

Size Inches	Price Each	Size Inches	Price Each
2	2 3/4	.....
2 1/2	3	.....
2 5/8



Fig. 871

No. 597 Regular Float Rods



Fig. 872

Length.....inches	6	7	9	10
Price.....per dozen	\$1.00	1.10	1.40	1.60

With one end threaded regular and float ball end with running thread for adjustment.

Length.....inches	6	8	10	12
Price.....per dozen	\$1.20	1.60	2.00	2.40

No. 72 Wires for Tank Balls

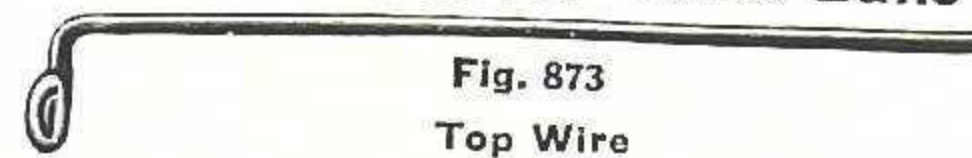


Fig. 873

Price.....per dozen \$1.90



Fig. 874

Price.....per dozen \$1.20

No. 12074 Adjustable Guides



Fig. 875

Size.....inches 1 1 1/8
Price, Nickel-plated Brass.....per dozen \$4.00 4.00

Brass Rods

Continuous Thread No. 30



Fig. 876

Brass 1/4-inch continuous thread rod made in any length. Specify length in ordering.
Price.....per foot \$.12

Vitreous China Round Vent Collar No. 3091



Fig. 877

This collar is made to fit a raised rear vent. It covers the unfinished hole cut in the wall and makes a neat installation.

Outside Diam.....inches 7 1/2
Inside " " " 4 1/2
Price.....each \$2.20

No. 838 Closet Slip Joint Nuts

Nickel-plated Brass



Fig. 878

Iron Pipe Size Inches	O. D. Tubing Size Inches	Price Each
1 1/4	1 1/4	\$0.50
1 1/2	1 1/2	.60
2	2	.80

Baker Vitreous China Escutcheons



Fig. 879

Sizes, Iron Pipe.....inches 3/8 1/2 3/4
Price.....per dozen \$3.00 3.00 3.60



Fig. 879A

Sizes, O. D. Tubing.....inches 1 1/4 1 3/8 1 1/2
Price.....per dozen \$4.80 4.80 4.80

No. 4170 Nickel-plated Brass Flanges

2 1/2-inch Diameter



Fig. 879B

Size I.P. Inches	Price per Dozen	O. D. Tubing Inches	Price per Dozen	O. D. Tubing Inches	Price per Dozen
1/4	\$.90	3/8	\$.90	9/16	\$.90
3/8	.90	7/16	.90	5/8	.90
1/2	.90	1/2	.90	3/4	.90

No. 120 Canopy Flanges



Fig. 879C

2 1/2-INCH DIAMETER HOLE, INCHES			3-INCH DIAMETER HOLE, INCHES		
I. P.	O. D.	O. D.	I. P.	I. P.	O. D.
1/4	3/8	9/16	1/2	1 1/4	1
3/8	7/16	5/8	3/4	1 1/2	1 1/4
1/2	1/2	3/4	1	1 1/2	1 1/2

Price, 2 1/2-inch.....per 100 \$3.00
" 3 " " " 4.50

No. 4180 Nickel-plated Brass Flanges

3-inch Diameter



Fig. 879D

Size I.P. Inches	Price per Dozen	O. D. Tubing Inches	Price per Dozen
3/4	\$1.25	1	\$1.25
1	1.25	1 1/4	1.25
1 1/4	1.40	1 1/2	1.25
1 1/2	1.50	.....	.....

Nickel-plated Brass Flanges

No. 12218 Extra Deep

Size I.P. Inches	Price per Dozen	O. D. Tubing Inches	Price per Dozen
3/8	\$1.40	9/16	\$1.40
1/2	1.40	.....	.....



Fig. 879E

Nickel-plated Brass Flanges

With Slip Joint Nut

Size Inches	Price per Dozen	Size Inches	Price per Dozen
1 1/4	\$3.00	1 1/2	\$3.60
1 3/8	3.60	2	6.00



Fig. 879F

No. 135 Nickel-plated Brass Canopy Flanges

With Set Screw



Fig. 879G

Size Hole In.	Diam. In.	Price Each	Size Hole In.	Diam. In.	Price Each
3/16	2 1/2	\$.33	1 1/4	3	\$.42
3/8	2 1/2	.33	1 3/8	3	.42
1/2	2 1/2	.33	1 1/2	3	.45
3/4	3	.36	.....	.....	.....

No. 3 Compression Double Bath Faucets
With Four-ball China Index Handles

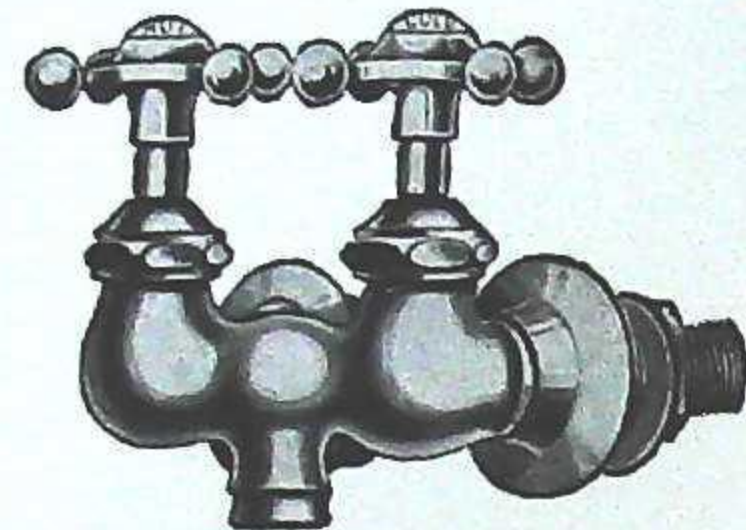


Fig. 901

Price, No. 3, Nickel-plated.....each \$6.80

Above price includes locknuts only. Supply couplings and hose spray couplings are extra.

No. 3831 Compression Double Bath Faucets
With Four-arm China Handles

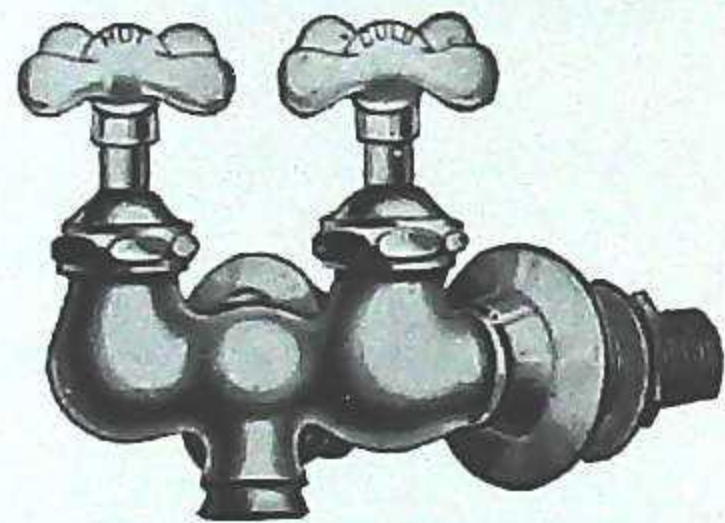


Fig. 902

Price, No. 3831 Nickel-plated.....each \$7.80

Above price includes locknuts only. Supply couplings and hose spray couplings are extra.

No. 5140 Compression Double Bath Faucets

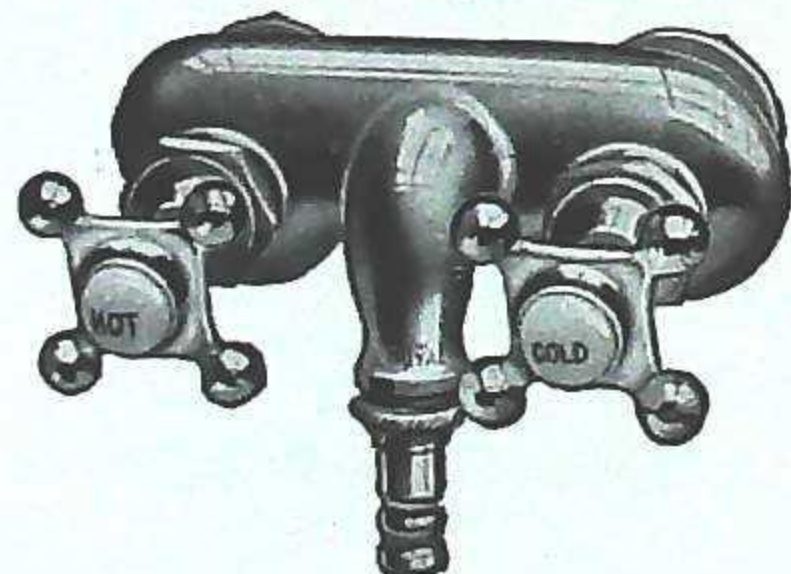


Fig. 903

Nickel-plated compression double bath faucet with 4-ball china indexed handles, hose connection and locknuts only.

Price, No. 5140, Polished and Nickel-plated.....each \$6.80

If with Stuffing Box, Add..... .80

" Less Hose Connection, Deduct..... .50

Quick Compression Double Bath Faucets
No. 54, with China Top Handles

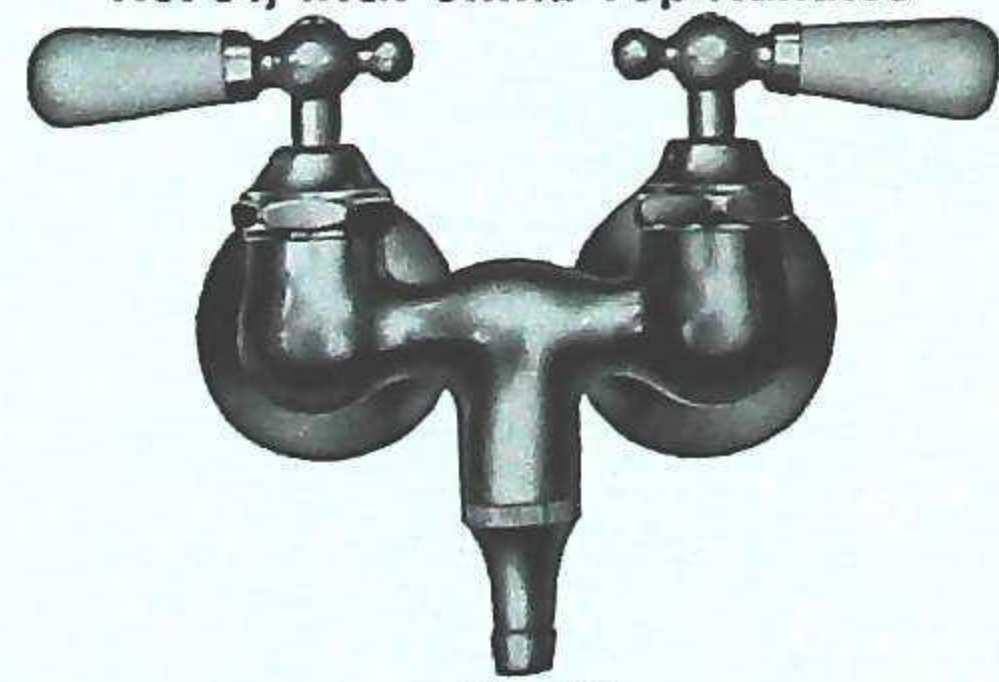


Fig. 904

Nickel-plated quick compression double bath faucet with china top lever handles, without couplings.

Price, No. 54.....each \$7.50

Quick Compression Double Bath Faucets

No. 53, without Jewel Cup



Fig. 905

Nickel-plated quick compression double bath faucet with china side lever handles, without couplings

Price, No. 53.....each \$9.50

No. 4700 Quatern Quick Compression Bath Faucets

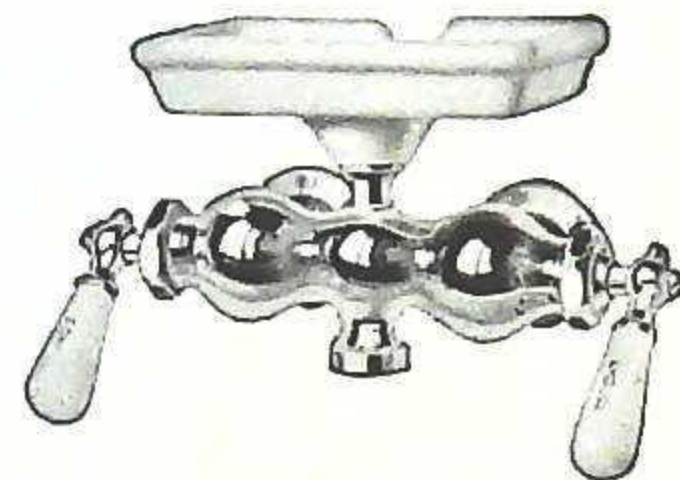


Fig. 906

Nickel-plated Quatern quick compression double bath faucet with side china index lever handles and china soap dishes. Connections for 3/4-inch iron pipe male. Couplings extra.

Price, No. 4700.....each \$10.00

No. C-4500 Quatern Quick Compression Double Bath Faucets
With China Top Handles



Fig. 907

Nickel-plated Quatern quick compression double bath faucet with china top handles and lock nuts only.

Price, No. C-4500.....each \$7.00

Add for Rough Nickel-plated Coupling Nuts..... .40

" " " 90° Male Elbows..... 1.50

" " Finished N. P. Female Ball Elbows..... 4.00

No. C-4600 Quatern Quick Compression Double Bath Faucets
With China Side Handles

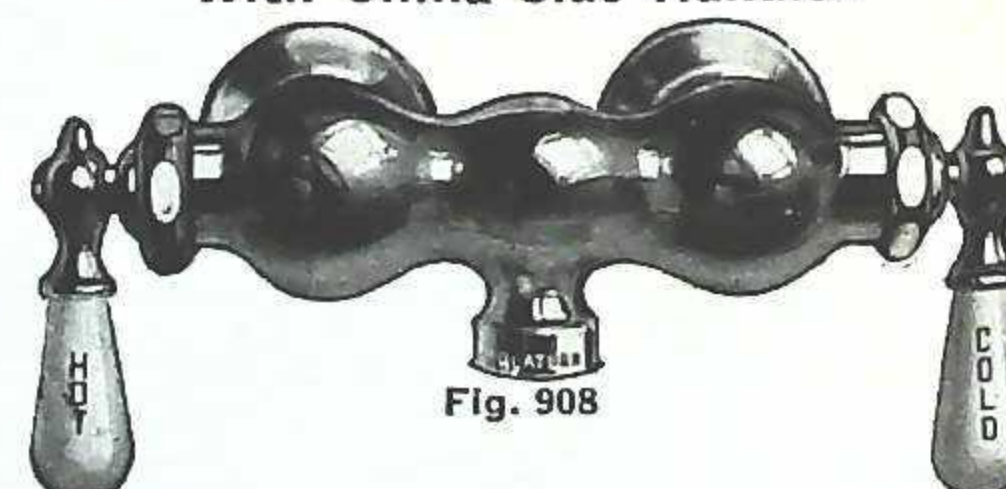


Fig. 908

Quatern quick compression work has a standardized interchangeable working unit which is the same in all quatern faucets. The seat of the faucet is renewable and there is no wear on the body. Quatern faucets close with the pressure—no danger of automatic opening.

Price, Nickel-plated with Locknuts only.....each \$7.50
Couplings extra.

No. 402 Compression Basin Faucets



Fig. 911

Nickel-plated compression basin faucet with four-arm solid china index handle.

Price, No. 402.....each \$4.10

No. 51 Compression Basin Faucets



Fig. 912

Nickel-plated compression basin faucet with four arm china handle and stuffing box.

Price, No. 51.....each \$4.45

No. 3611 Compression Basin Faucets
With Four-arm China Handles

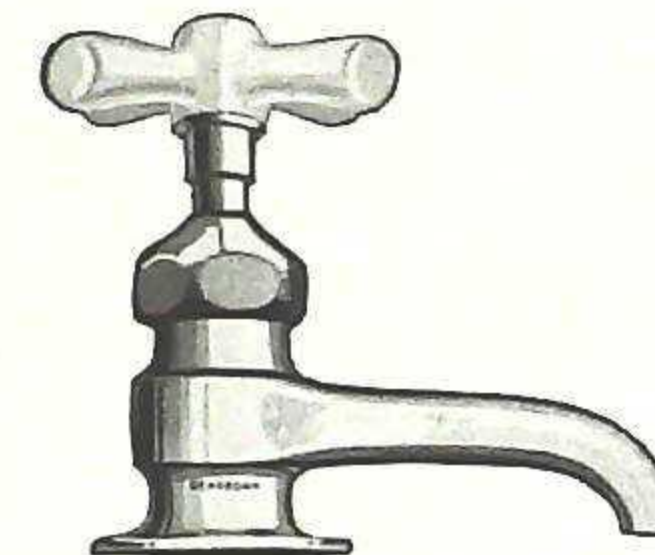


Fig. 913

Nickel-plated compression basin faucet with four-arm china handles, indexed.

Price, No. 3611.....each \$3.40

No. 3610 Compression Basin Faucets
With Four-ball China Index Handles

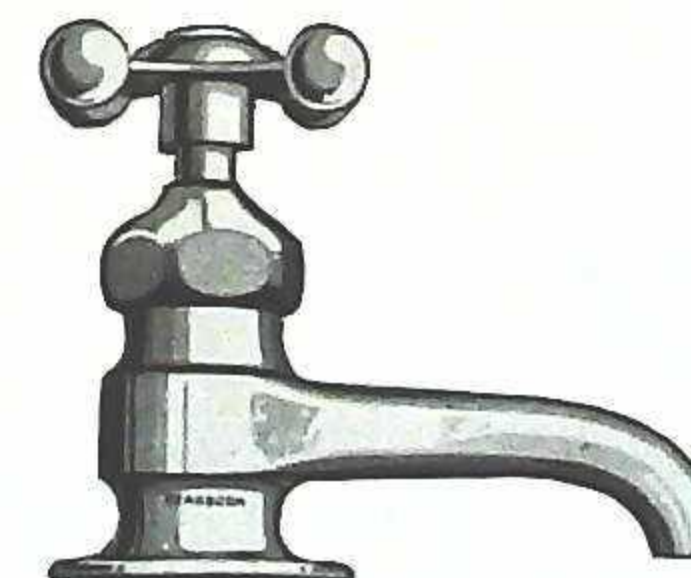


Fig. 914

Nickel-plated compression basin faucet with four-ball china index handle.

Price, No. 3610.....each \$2.90

No. 33-101 Compression Basin Faucets

Nickel-plated compression basin faucet with 4-ball china index handle.

Price, No. 33-101 each \$2.80



Fig. 915

No. 3623 Low Down Compression Basin Faucets



Fig. 916

Nickel-plated low down compression basin faucet with four ball china indexed handle.

Price.....each \$2.50

No. 7 Quick Compression Basin Faucets
With China Top Handle



Fig. 917

Nickel-plated quick compression basin faucet with indexed china top lever handle.

Price, No. 7.....each \$4.50

Quatern Quick Compression Basin Faucets



Fig. 918

Quatern quick compression basin faucet with china top handle.

Price.....each \$3.00

No. 5 Quick Compression Basin Faucets
With Side China Handle



Fig. 919

Nickel-plated quick compression basin faucet with nickel-plated base and indexed china side lever handle.

Price, No. 5.....each \$5.00

No. 3 Quick Compression Basin Faucets
With Side China Handle and China Base



Fig. 922

Nickel-plated quick compression basin faucet with china base and indexed china side lever handle.

Price, No. 3.....each \$8.00



Fig. 923

No. 2300 Quatern Quick Compression Lavatory Faucets

Nickel-plated combination quick compression lavatory faucet with indexed china lever handles.

It opens to full flow on one-eighth turn of the handle and comes to a stop at one-quarter turn. The tail piece is 4 inches from center to center.

Price.....each \$10.00

No. 31 Self-closing Basin Faucets
With 4-ball China Index Handle

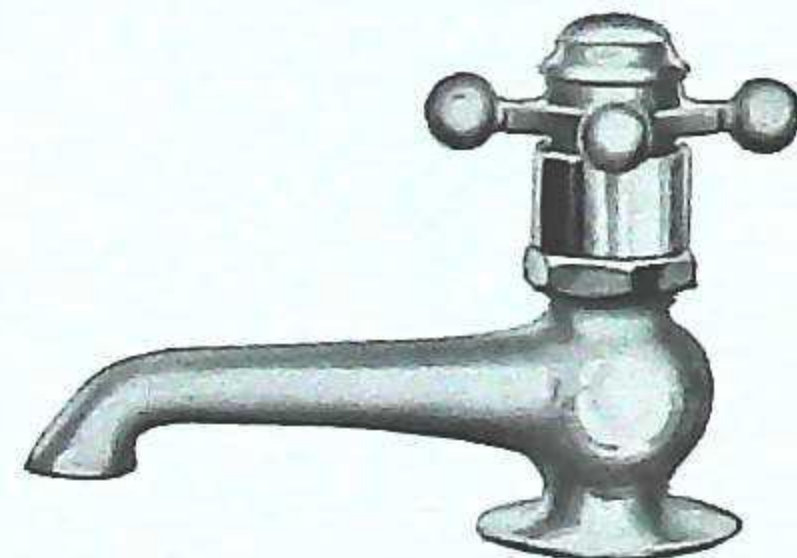


Fig. 924

Nickel-plated self-closing basin faucet with 4-ball china index handle.

Price, No. 31.....each \$3.70

No. 3698 Boston Self-closing Basin Faucets
With Brass Tee Handle



Fig. 925

Price, No. 3698.....each \$3.85

If with China Index Four-ball, Crown or Lever Handle, Add.....each .85

No. 4425 Compression Shampoo and Lavatory Fittings
With Five Valves

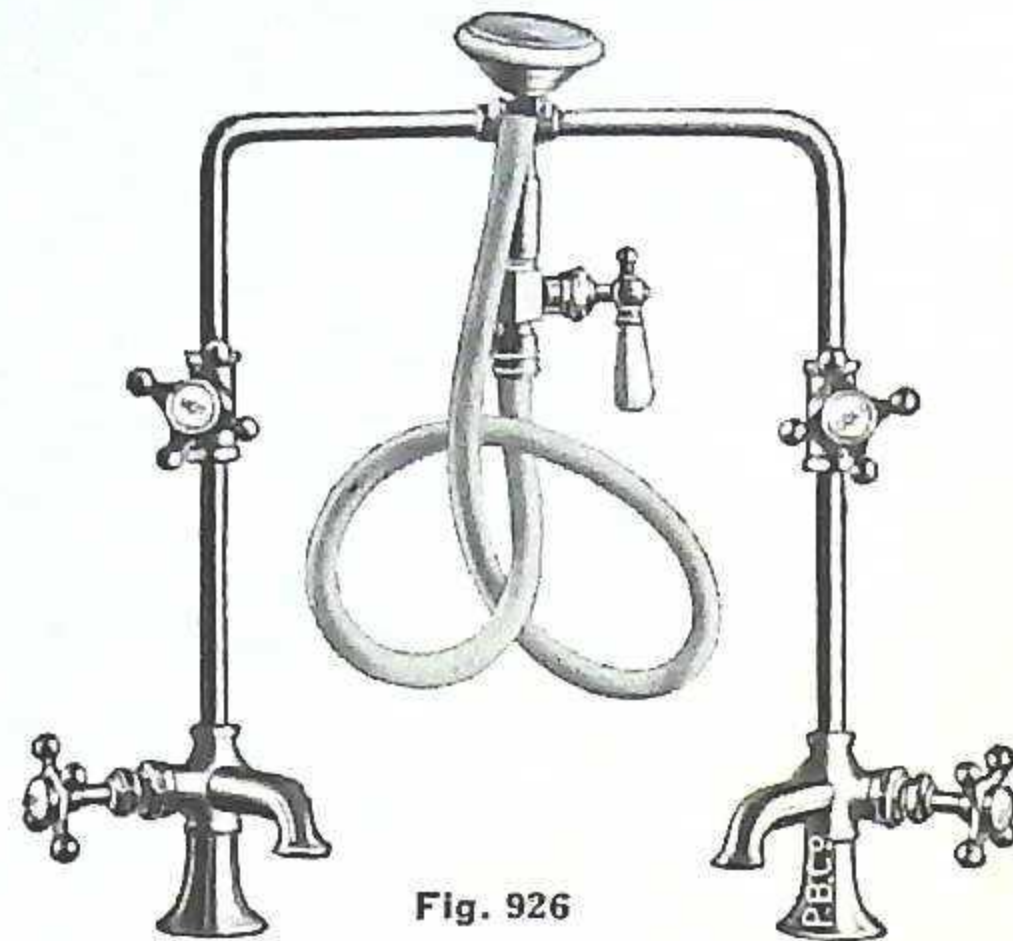


Fig. 926

Nickel-plated compression combination shampoo and lavatory fitting, with five valves and four-ball china indexed handles and Fuller shut-off stop with china lever handle, rubber bound shampoo sprinkler, rubber tubing and catch.

Price, No. 4425.....each \$37.00

No. 9 Combination Basin Supply Fittings

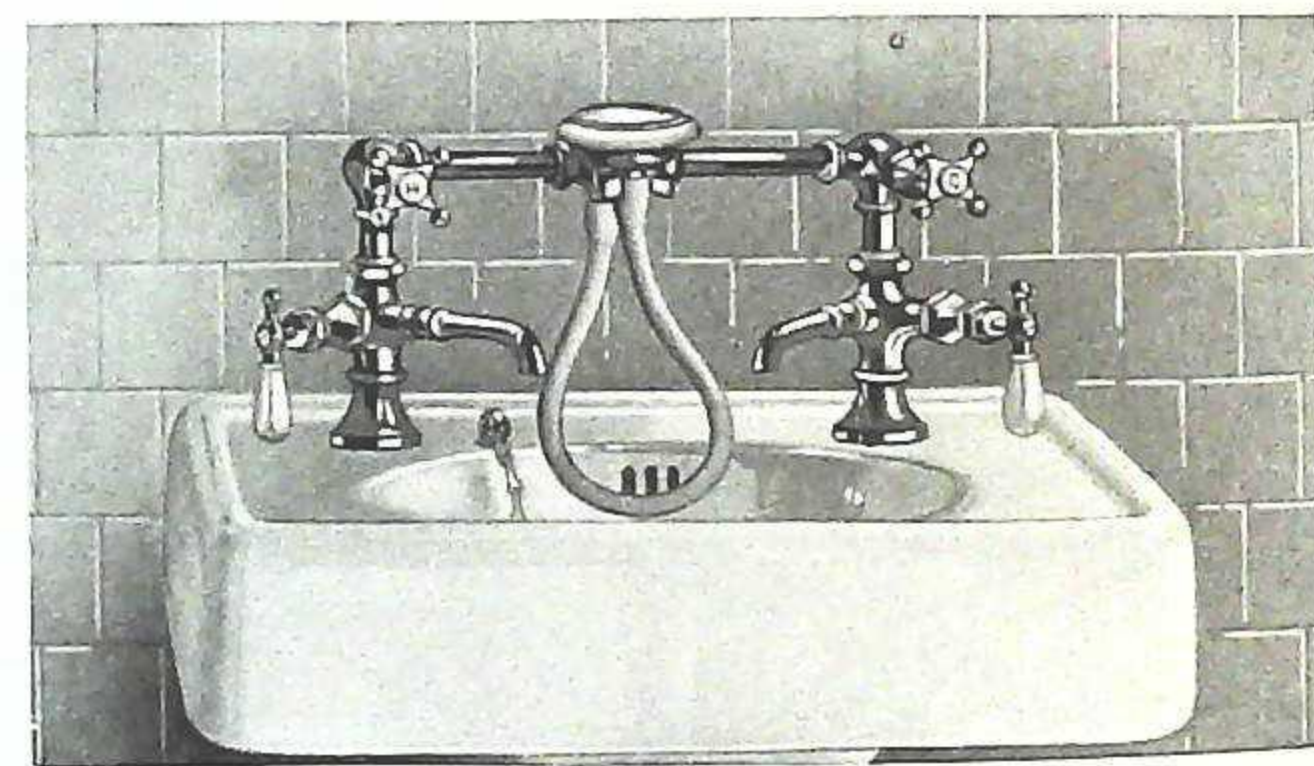


Fig. 927

Nickel-plated combination shampoo fitting with spray.

This style fixture is used extensively by beauty parlors and barber shops. It is well adapted for home use also.

Can be furnished with compression or quick compression lower faucets, any spread adjustment desired, with or without hose and spray.

Price, No. 9.....each \$18.00

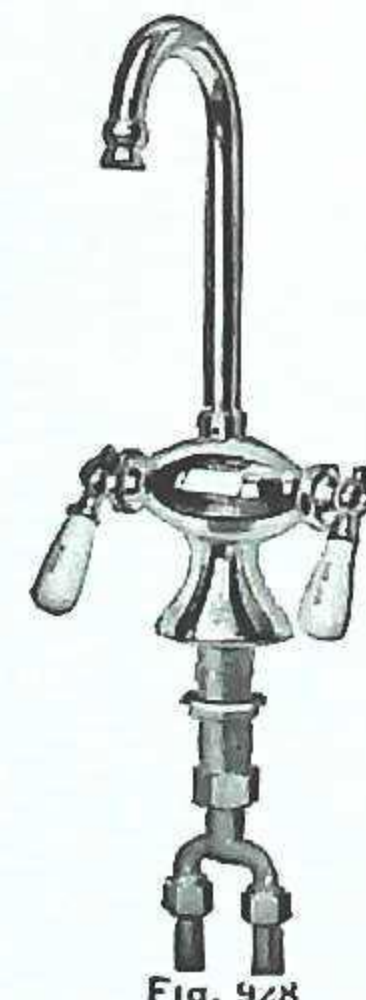


Fig. 928

No. 1900 Quatern Quick Compression Pantry Faucets

Nickel-plated Quatern quick compression double pantry faucet with goose neck spout and china index lever handles.

The tail piece is 4 inches from center to center.

Price, No. 1900.....each \$10.00

No. C-100 Quatern Classic Sink Faucets
Without Soap Dish

Quatern Classic sink faucet with china indexed handles and swing spout.

Connections 1/2 or 3/4-inch iron pipe female.



Fig. 931

Price, For Cock Holes 8-inch Center to Center each \$10.50

" " " " 10 " " " " " 11.00

" " " " 12 " " " " " 11.50

No. C-300 Quatern Classic Sink Faucets
With Soap Dish and Spray

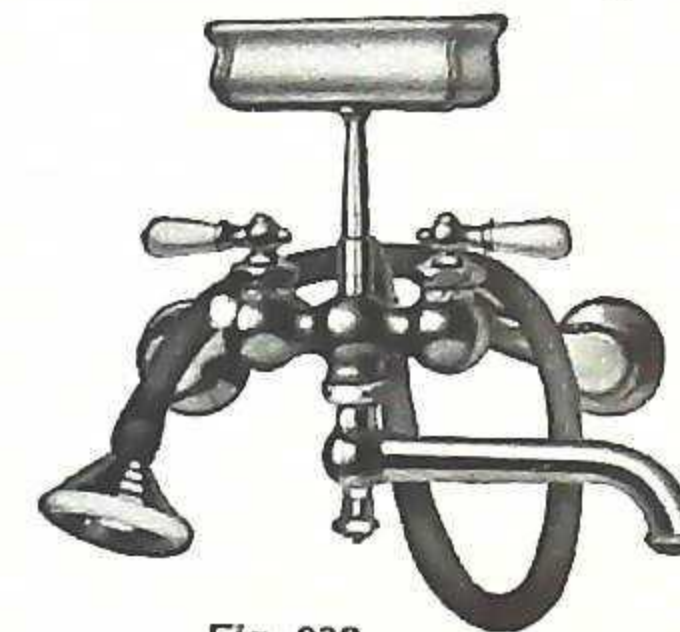


Fig. 932

Price, 4 to 8 3/8 Inches.....each \$20.00

" 4 " 10 3/8 " " " " " 20.50

" 4 " 12 3/8 " " " " " 21.00

Nickel-plated classic sink faucet with swinging spout, adjustable arms for 1/2 or 3/4-inch iron pipe female, china handles, china soap dish with drain, rubber tubing and spray.

Water is diverted from spout through spray by turning knob below spout.

No. C200 Quatern Classic Sink Faucets
With Soap Dish

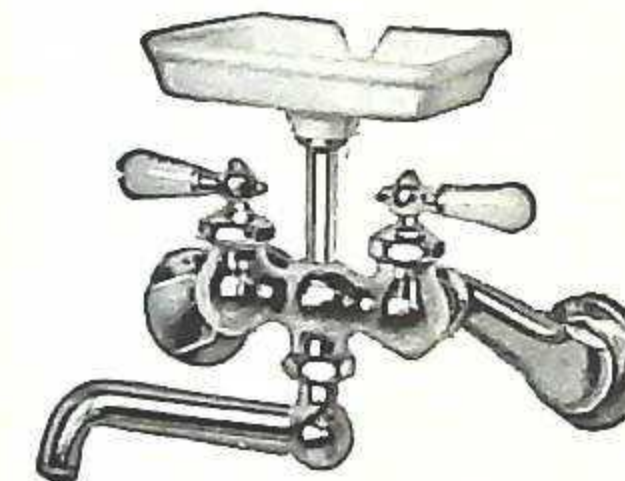


Fig. 933

Price, for Faucet Holes 8-inch Center to Center each \$13.00

" " " " 10 " " " " " 13.50

" " " " 12 " " " " " 14.00

Quatern Classic sink faucet with china soap dish, and china indexed handles and swing spout.

No. 1 Combination Sink Faucets

Nickel-plated quick compression sink faucet with swinging spout and china index handles, female flanged connection.

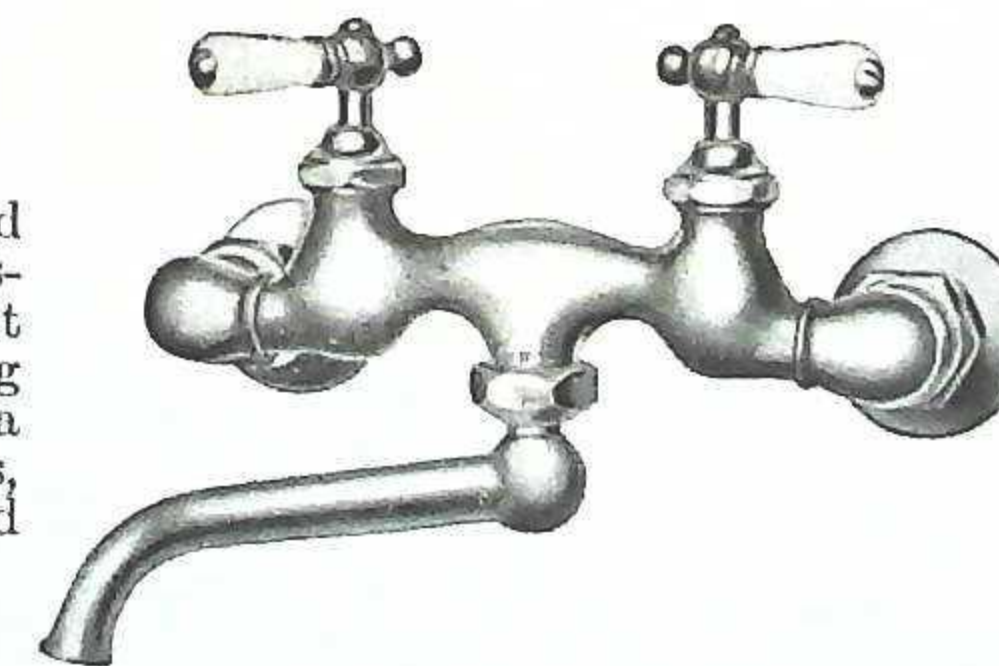


Fig. 934

Price, No. 1.....each \$13.00

Can also be furnished with adjustable male flange connection.

No. 3000 Compression Plain Faucets
For Iron Pipe



Fig. 935

Size.....inches	3/8	1/2	3/4	1	1 1/4
Price, Rough.....each	\$1.40	\$1.45	\$1.90	\$4.50	\$8.90
" Fin....."	1.55	1.65	2.10	5.00	9.50
" Nickel-plated....."	1.85	1.95	2.40	5.50	10.40
Add for S. Box....."	.40	.45	.90	1.55	
" China Indexed Handles.....each	.75	.70			

No. 3001 Compression Hose Faucets
For Iron Pipe



Fig. 936

Size.....inches	1/2	3/4	1	1 1/4
Price, Rough.....each	\$1.70	\$2.15	\$5.10	\$9.80
" Finished....."	1.90	2.35	5.60	10.40
" Nickel-plated....."	2.20	2.65	6.10	11.30
Add for Stuffing Box....."	.40	.45	.90	1.55
" China Ind. Hdles....."	.75	.70		

No. 3019 Compression Plain Faucets
Solid Male Flange, for Iron Pipe



Fig. 937

Size Inches	Price, Each		Add For		
	Finished	Nickel-plated	Stuffing Box	Four-ball China Indexed Handle	Full China Cross Handle
1/2	\$2.30	\$2.60	\$.40	\$.75	\$1.25
3/4	2.85	3.15	.45	.70	1.20

No. 3020 Compression Hose Faucets
Solid Male Flange, for Iron Pipe



Fig. 938

Size Inches	Price, Each		Add For		
	Finished	Nickel-plated	Stuffing Box	Four-ball China Indexed Handle	Full China Cross Handle
1/2	\$2.55	\$2.85	\$.40	\$.75	\$1.25
3/4	3.10	3.40	.45	.70	1.20

No. 3014 Compression Faucets
Solid Flange for Iron Pipe



Fig. 941

Size.....inches	1/2	3/4
Price, Female Flange, Finished.....each	\$2.15	\$2.70
" " Nickel-plated....."	2.45	3.00
" " Male Flange, Finished....."	2.30	2.85
" " " Nickel-plated....."	2.60	3.15
Add for Hose End....."	.25	.25
" " Stuffing Box....."	.40	.40

No. 3015 Compression Hose Faucets
Solid Female Flange, for Iron Pipe



Fig. 942

Size Inches	PRICE, EACH		ADD FOR		
	Finished	Nickel-plated	Stuffing Box	Four-ball China Indexed Handle	Full China Cross Handle
1/2	\$2.40	\$2.70	.40	.75	\$1.25
3/4	2.95	3.25	.45	.70	1.20

No. 3033 Compression Plain Faucets
With Adjustable Screw Flange for Iron Pipe

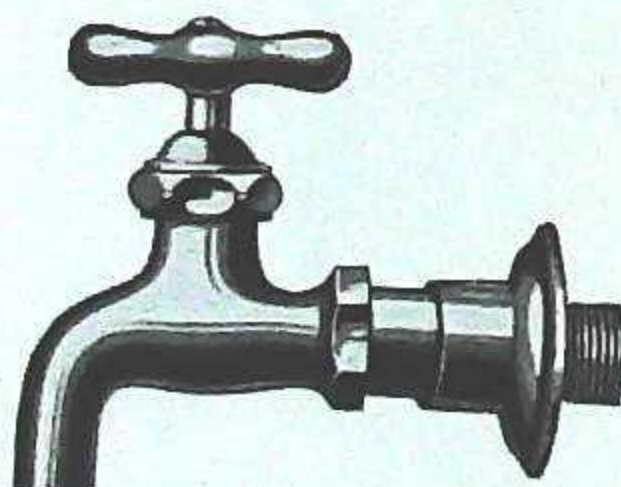


Fig. 943

Size.....inches	1/2	3/4
Price, Finished.....each	\$2.70	\$3.40
" " Nickel-plated....."	3.00	3.70
Add for Stuffing Box....."	.40	.45
" " China Indexed Handles....."	.75	.70

No. 3034 Compression Hose Faucets
With Adjustable Screw Flange for Iron Pipe

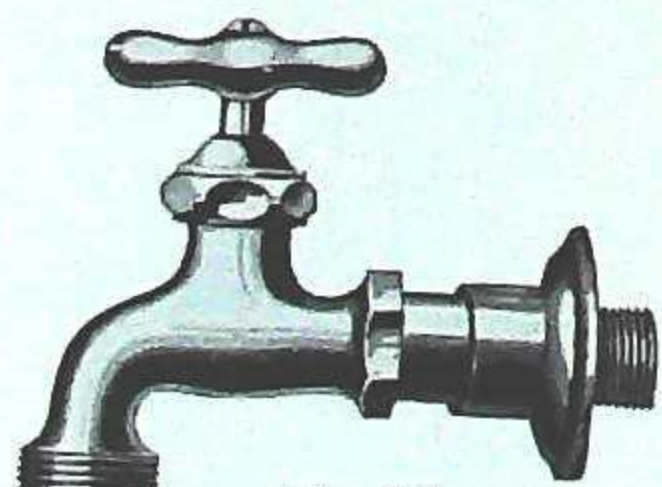


Fig. 944

Size.....inches	1/2	3/4
Price, Finished.....each	\$2.95	\$3.65
" " Nickel-plated....."	3.25	3.95
Add for Stuffing Box....."	.40	.45
" " China Indexed Handles....."	.75	.70

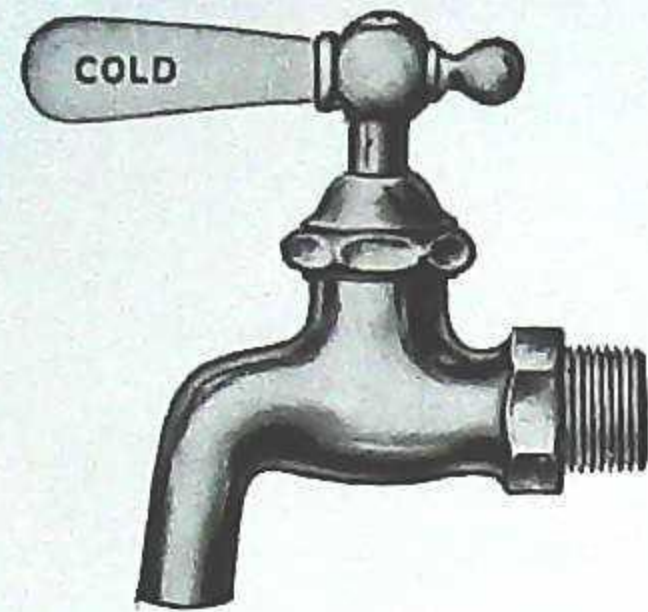


Fig. 945

Quick Compression Faucets
For Iron Pipe with China Handle

Size.....inches	1/2	3/4
Price, Plain Faucets, Finished.....each	\$2.30	\$2.75
" " " Nickel-plated....."	2.60	3.05
" " Hose " Finished....."	2.55	3.00
" " " Nickel-plated....."	2.85	3.30
If with Brass Handles deduct....."	.50	.50

No. 3121 Quick Compression Faucets
With Adjustable Extension Flange, for Iron Pipe

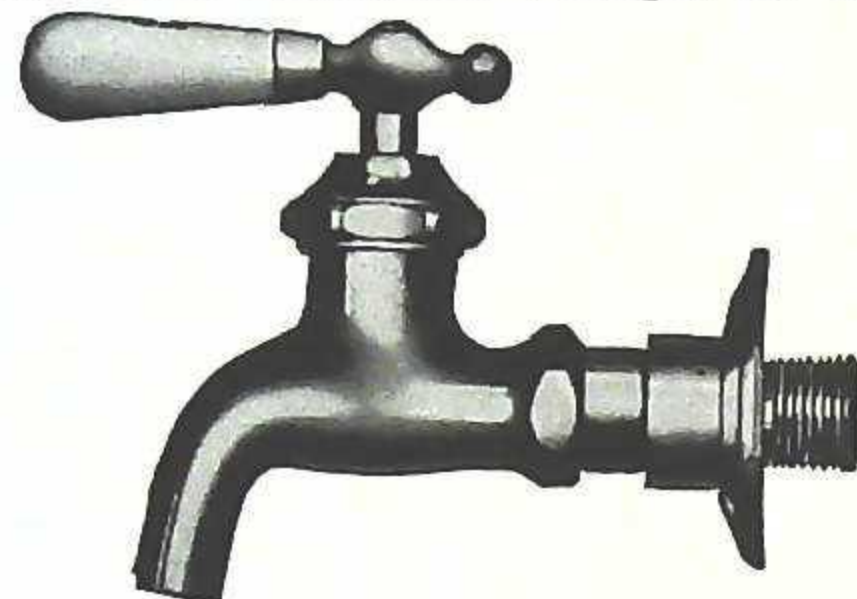


Fig. 946

Size In.	WITH CHINA HANDLE'S		WITH BRASS HANDLE'S		Add for Hose End
	Fin.	N. P.	Fin.	N. P.	
1/2	\$3.35	\$3.65	\$2.85	\$3.85	.25
3/4	4.05	4.35	3.55	3.15	.25

No. 3113 Quick Compression Faucets

With Solid Male Flange
and China Handle

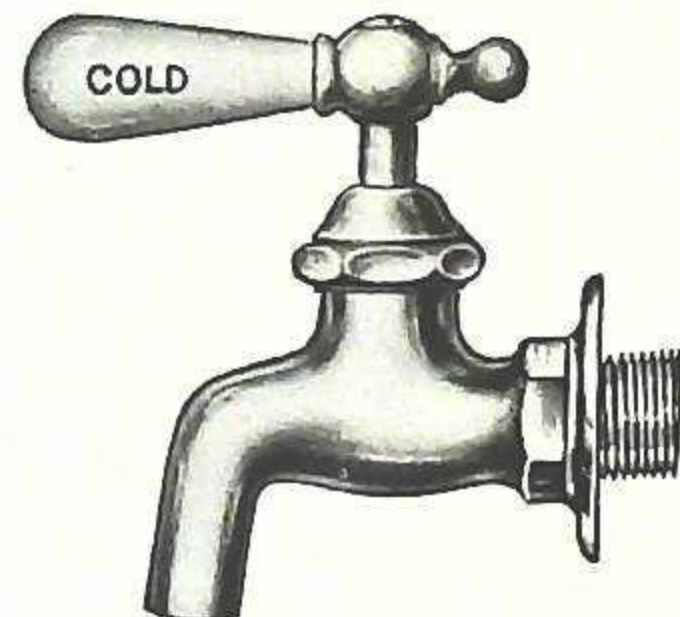


Fig. 947

Size.....inches	1/2	3/4
Price, Plain Bibbs, Finished.....each	\$2.95	\$3.50
" " " Nickel-plated....."	3.25	3.80
" " Hose " Finished....."	3.20	3.75
" " " Nickel-plated....."	3.50	4.05
If with Brass Handles, Deduct....."	.50	.50

Quick Compression Faucets

With Solid Female Flange
and China Handle

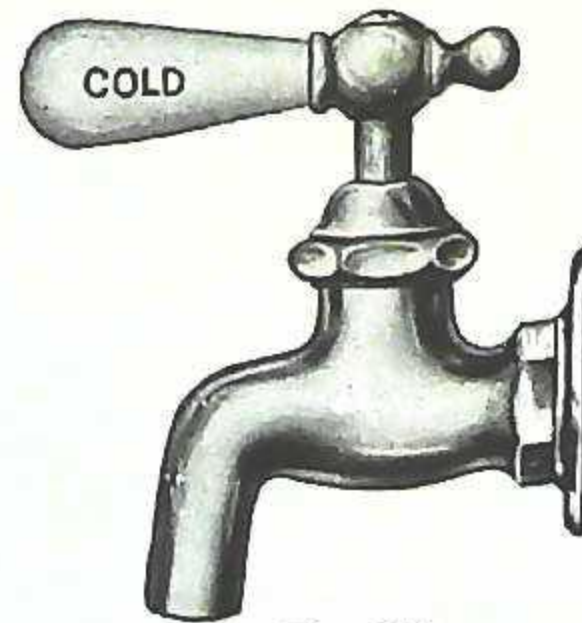


Fig. 948

Size.....inches	1/2	3/4
Price, Plain Bibbs, Finished.....each	\$2.80	\$3.35
" " " Nickel-plated....."	3.10	3.65
" " Hose " Finished....."	3.05	3.60
" " " Nickel-plated....."	3.35	3.90
If with Brass Handles, deduct....."	.50	.50

Self-closing Faucets
Crown Handle—For Iron Pipe



Fig. 951

Size.....inches	3/8	1/2	3/4
Price, Finished.....each	\$3.85	\$3.95	\$4.50
" " Nickel-plated....."	4.35	4.45	5.00
Add for Hose End....."	.25	.25	.25
" " China Index....."	.25	.25	.25

No. 2462-E Self-closing Faucets
Four Ball Handle—For Iron Pipe

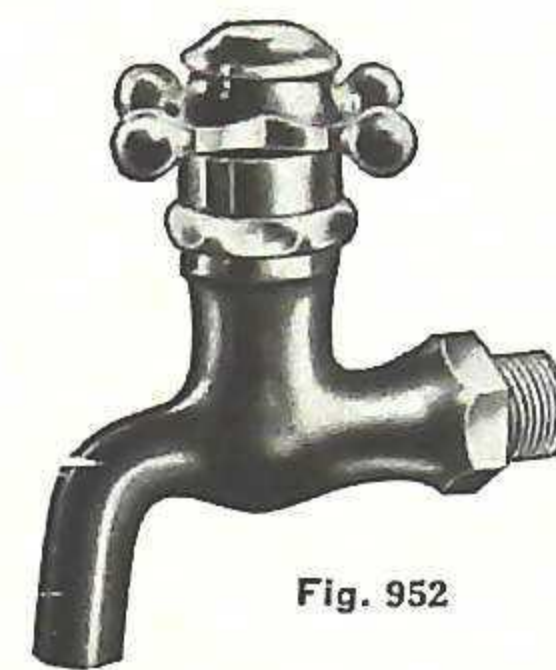


Fig. 952

Size.....inches	1/2	3/4
Price, Finished.....each	\$2.65	\$2.90
" " Nickel-plated....."	3.15	3.40

Boston Self-closing Faucets
With Adjustable Extension Flange
For Iron Pipe

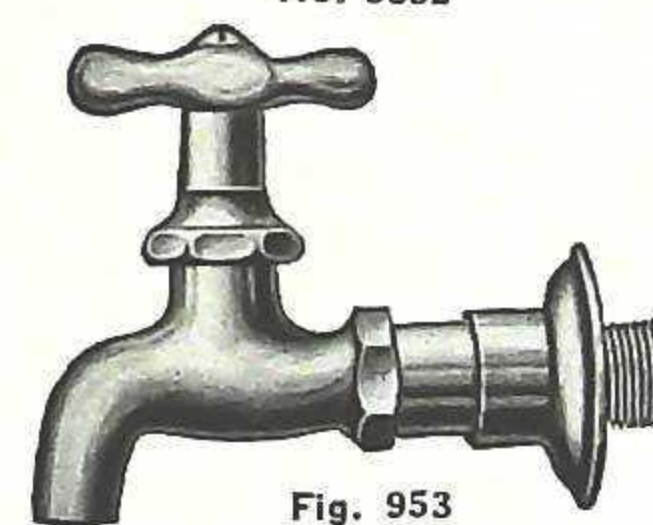


Fig. 953

Size.....inches	1/2	3/4
Price, Finished.....each	\$3.60	\$4.40
" " Nickel-plated....."	4.10	4.90

No. 3312 Boston Self-closing Faucets
For Iron Pipe

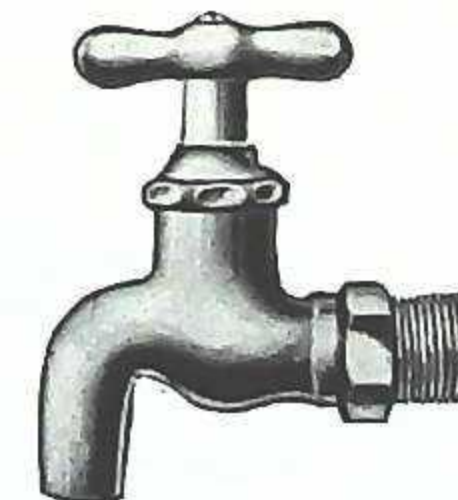


Fig. 954

Size.....inches	3/8	1/2	3/4
Price, No. 3312, Finished.....each	\$2.45	\$2.55	\$3.10
" " " Nickel-plated....."	2.95	3.05	3.60

Compression Lavatory Stops
With Stuffing Box



No. 3466 Straight
Fig. 955

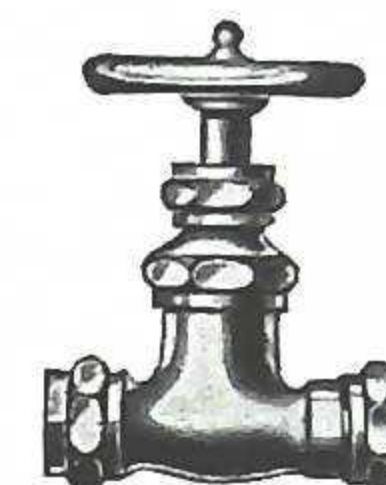
Size In.	PRICE, EACH		
	Wheel Handle	4-ball Ind. Handle	4-arm Ch. Handle
3/8	\$2.20	\$2.75	\$3.25
1/2	2.60	3.10	3.60



No. 3468 Angle
Fig. 956

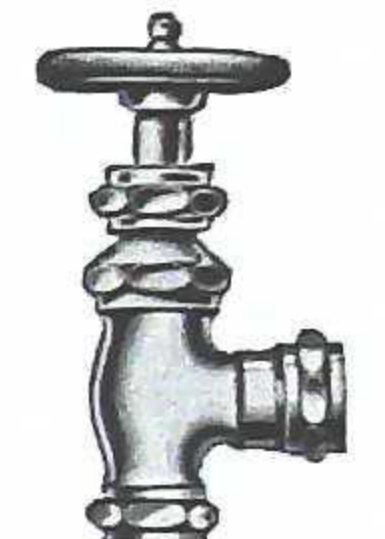
Size In.	PRICE, EACH		
	Wheel Handle	4-ball Ind. Handle	4-arm Ch. Handle
5/8	\$3.15	\$3.55	\$4.05
3/4	4.00	4.30	4.80

Compression Lavatory Stops
With Stuffing Box



No. 3472 Straight
Fig. 957

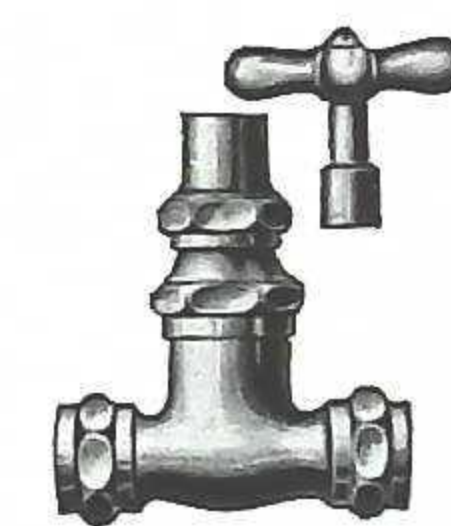
Size In.	PRICE, EACH		
	Wheel Handle	4-ball Ind. Handle	4-arm Ch. Handle
3/8	\$2.45	\$3.00	\$3.50
1/2	3.00	3.50	4.00



No. 3474 Angle
Fig. 958

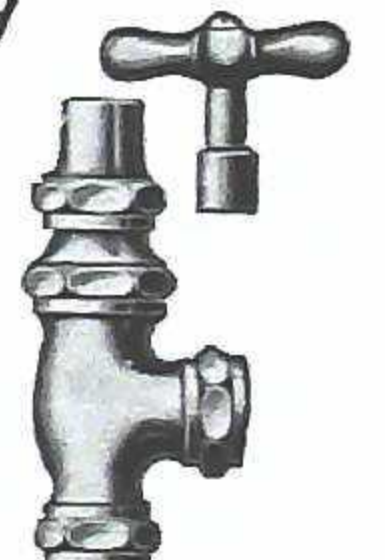
Size In.	PRICE, EACH		
	Wheel Handle	4-ball Ind. Handle	4-arm Ch. Handle
5/8	\$3.90	\$4.30	\$4.80
3/4	4.90	5.20	5.70

Compression Lavatory Stops



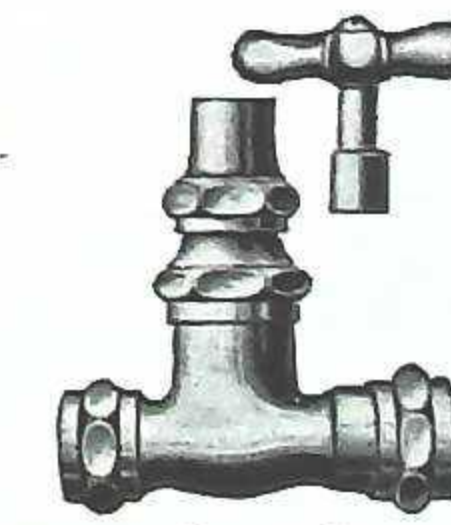
No. 3476
Straight
Fig. 959A

Size Inches	PRICE, EACH	
	Finished	Nickel-plated
3/8	\$2.10	\$2.40
1/2	2.50	2.80
5/8	3.05	3.35
3/4	3.85	4.20



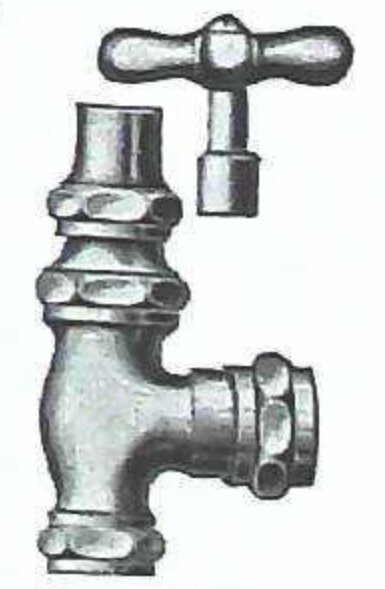
No. 3477
Angle
Fig. 959A

Compression Lavatory Stops



No. 3478
Straight
Fig. 959B

Size Inches	PRICE, EACH	
	Finished	Nickel-plated
3/8	\$2.35	\$2.65
1/2	2.90	3.20
5/8	3.80	4.10
3/4	4.75	5.10



No. 3479
Angle
Fig. 959C

Size Inches	PRICE, EACH	
	Finished	Nickel-plated
3/8	\$2.35	\$2.65
1/2	2.90	3.20
5/8	3.80	4.10
3/4	4.75	5.10

No. 4151-F Self-closing Stops

Made only in 1/2 inch size.

Style Handle	Price, Each	
	Finished	Nickel-plated
4-arm Plain	\$2.70	\$3.00
4 " Index	3.00	3.35
Tee Plain	2.55	2.90
" Index	2.90	3.25

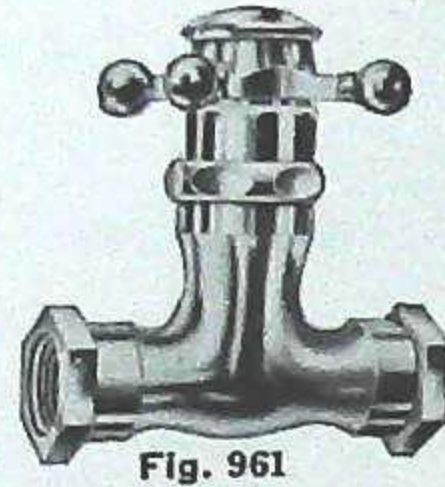


Fig. 961

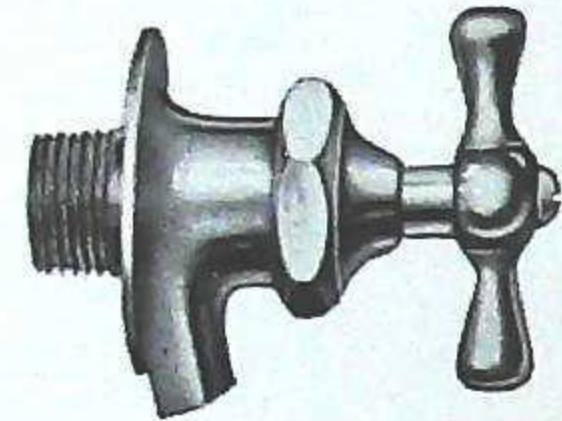


Fig. 962

No. 3084 Compression Stub Wash Tray Faucets

Flat spout, encased washers, solid flange, male.

Size Inches	Price, Each	
	Fin.	N. P.
1/2x1/2	\$1.55	\$1.85
1/2x3/4	1.75	2.05

Also furnished rough nickel-plated.

No. 3085 Compression Stub Wash Tray Faucets

Flat spout, encased washers, solid flange, female.

Size Inches	Price, Each	
	Fin.	N. P.
1/2x1/2	\$1.70	\$1.90
1/2x3/4	2.00	2.20

Also furnished rough nickel-plated.

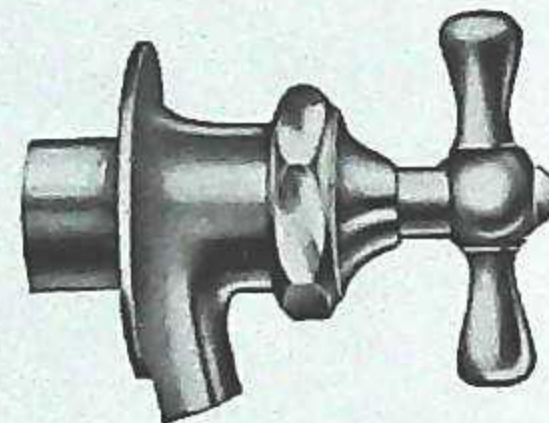


Fig. 963

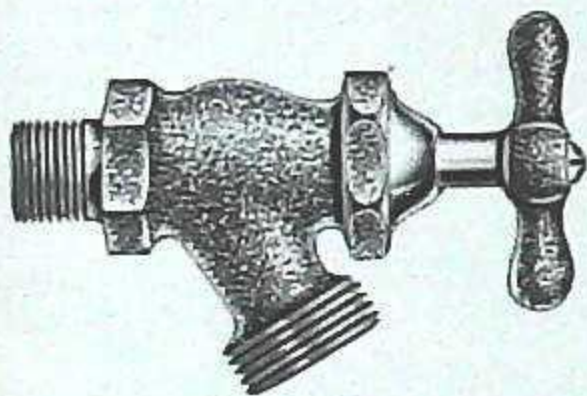


Fig. 964

No. 3571 Sediment Faucets

For Iron Pipe

Rough N. P. finish. 3/4-inch hose thread on nozzle.

Size Inches	Price, Each	
	Male	Female
1/2	\$1.45	\$1.60
3/4	1.90	2.05

No. 3572 Compression Sediment Faucets Iron Pipe Female

Size Inches	Price, Each	
	Rough Nickel-plated	Add for Loose Key Handles
1/2	\$1.60	\$.50
3/4	2.05	.50

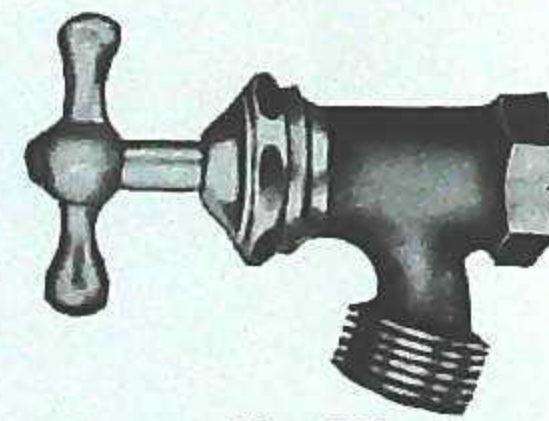


Fig. 965

No. 3561 Compression Lawn Faucets
Sizes 1/2 and 3/4-inch

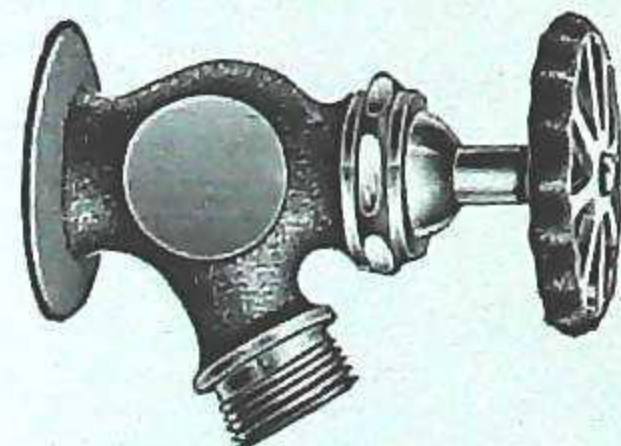


Fig. 966

Style	Price, Each		
	Rough N. P.	Finished	Nickel-plated
Iron Wheel	\$2.50	\$2.50	\$2.85
Brass "	2.90	2.90	3.25
T Handle	2.50	2.50	2.85
Loose Key	2.90	2.90	3.25

Haysco Compression Reversible Stop and Drains

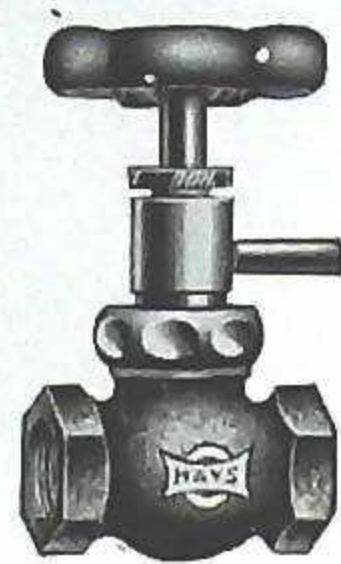


Fig. 967

Size In.	Price		Size In.	Price	
	Rough Each	Each		Rough Each	Each
1/2	\$2.70		3/4	\$3.90	
5/8	3.20		1	7.00	

No. 185E6 Compression Stop and Drains With Stuffing Box

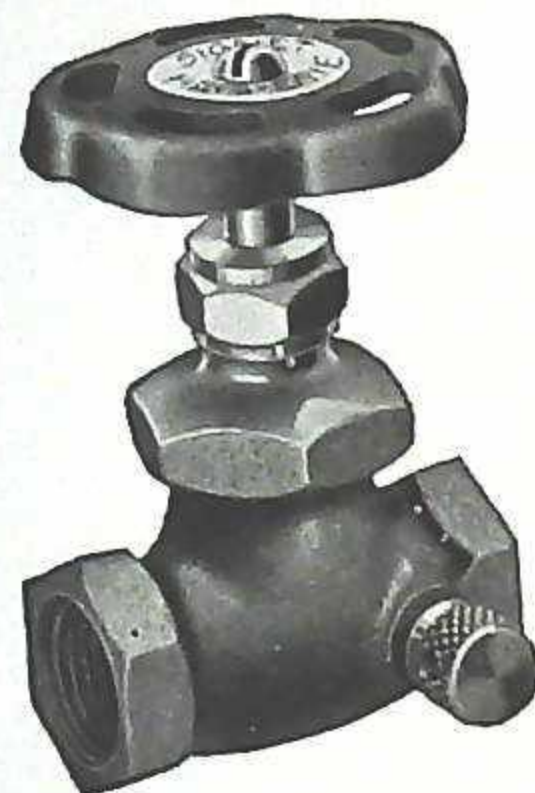


Fig. 968

Side cap waste control compression stop with waste. Bonnet with asbestos ring packing. Encased seat washers.

Furnished with 1 waste control and packed 3 right and 3 left in a carton.

Size In.	Price Each	Size In.	Price Each
1/2	\$2.45	3/4	\$3.65
5/8	2.95	1	6.40

No. 178E4 Combination Compression Lawn Faucets Key Wheel

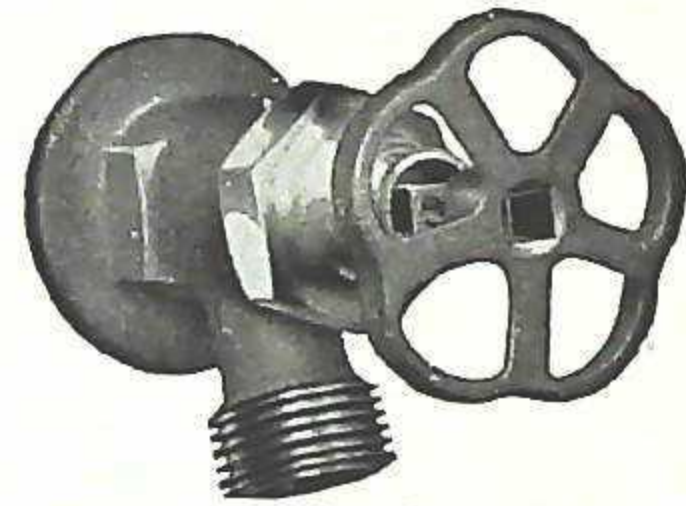


Fig. 969

By removing the screw the faucet is converted into a loose key lawn faucet.

Made rough body nickel-plated only.

Size	Price	Size	Price
1/2 inches each	\$2.90	3/4	2.90

No. 1783 Compression Sill Cocks Angle Pattern—Loose Key

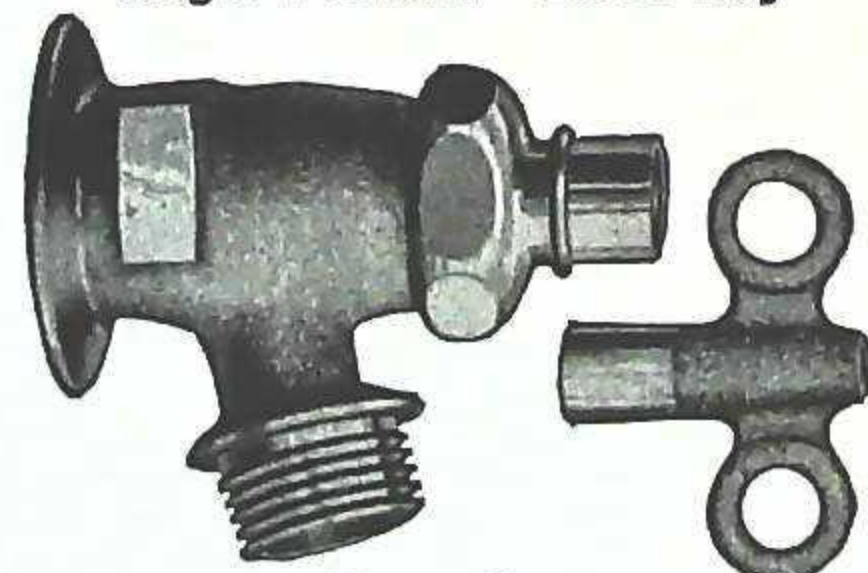


Fig. 969A

Furnished in rough nickel-plated only.

Size	Price, Loose Key	Price, Iron Wheel	Price, Brass
1/2 inches each	\$2.90	\$2.50	\$2.50
3/4	2.90	2.90	2.90

No. 3400 Ground Key Plain Faucets For Iron Pipe

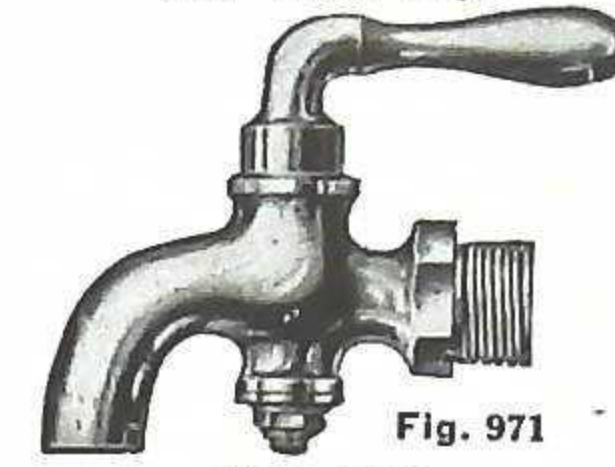


Fig. 971

Size Inches	Price, Each			Add for Hose End
	Rough	Fin.	N.P.	
3/8	\$1.70	\$2.10	\$2.50	
1/2	1.75	2.15	2.55	\$.25
3/4	2.45	2.95	3.45	.25
1	4.40	5.40	6.40	.60
1 1/4	7.45	8.95	10.45	.90
1 1/2	12.45	14.95	17.45	1.25
2	21.50	25.00	28.50	1.85

No. 3405 Ground Key Plain Faucets For Lead Pipe

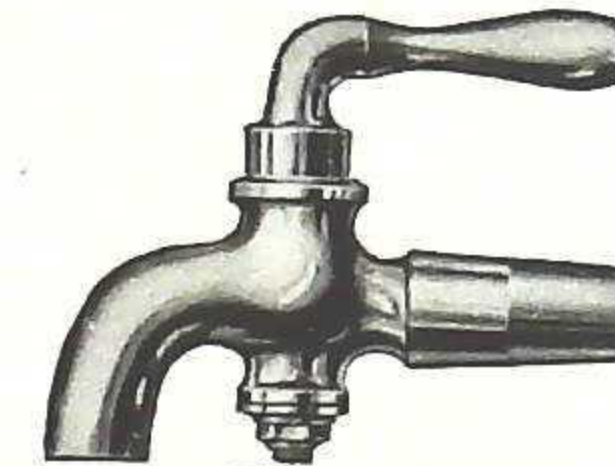


Fig. 972

Size	Price, Rough	Price, Finished	Price, Nickel-plated	Add for Hose End
3/8 inches each	\$1.80	2.20	2.60	.25
1/2 " "	1.85	2.25	2.65	.25
3/4 " "	2.60	3.10	3.60	.25
1 " "	3.60	4.10	4.60	.60

No. 3001 Lock Lever Plain Brass Faucets For Iron Pipe—With Shoulder



Fig. 973

Size	Price, Rough	Price, Finished
1/2 inches each	\$2.15	2.55
5/8 " "	2.90	3.40
3/4 " "	3.55	4.30
1 " "	5.10	6.10

No. 3004 Lock Lever Hose Faucets for Iron Pipe With Shoulder



Fig. 974

Size	Price, Rough	Price, Finished
1/2 inches each	\$2.40	2.80
5/8 " "	3.15	3.65
3/4 " "	3.80	4.55
1 " "	5.70	6.70

Patent Guard Flat Way Stops Ground Key for Iron Pipe Tee or Lever Handle



Fig. 975

Size In.	Price Each		Size In.	Price Each	
	1/2	3/4		1/2	3/4
1/2	\$1.75	\$7.45	1/2	\$1.80	\$7.60
3/8	2.45	12.45	5/8	2.50	12.70
5/8	3.00	21.50	3/4	3.05	22.00
1	4.40		1	4.50	

Patent Guard Round Way Stops Ground Key for Iron Pipe Tee or Lever Handle



Fig. 977

Size Inches	Price Each		Size Inches	Price Each	
	1/2	3/4		1/2	3/4
1/2	\$2.20	\$10.05	1/2	\$2.25	\$10.20
3/8	3.00	16.45	5/8	3.05	16.70
5/8	3.85	28.50	3/4	3.90	20.00
1	6.15		1	6.25	

Stops and Stop and Drains Lever Handle—Flat Way—For Iron Pipe



Fig. 979

Size In.	Price Each		Size In.	Price Each	
	1/2	3/4		1/2	3/4
3/8	\$1.70	\$4.40	3/8	\$1.75	\$4.50
1/2	1.75	7.45	1/2	1.80	7.60
5/8	1.45	12.45	5/8	2.50	12.70
3/4	3.00	21.50	3/4	3.05	22.00

Stops and Stop and Drains Lever Handle—Round Way—For Iron Pipe



Fig. 979B

Size In.	Price Each		Size In.	Price Each	
	1/2	3/4		1/2	3/4
1/2	\$2.20	\$10.05	1/2	\$2.25	\$10.20
3/8	3.00	16.45	5/8	3.05	16.70
5/8	3.85	28.50	3/4	3.90	29.00
1	6.15		1	6.25	



Fig. 979A

Size In.	Price Each		Size In.	Price Each	
	1/2	3/4		1/2	3/4
3/8	\$1.70	\$4.40	3/8	\$1.75	\$4.50
1/2	1.75	7.45	1/2	1.80	7.60
5/8	1.45	12.45	5/8	2.50	12.70
3/4	3.00	21.50	3/4	3.05	22.00

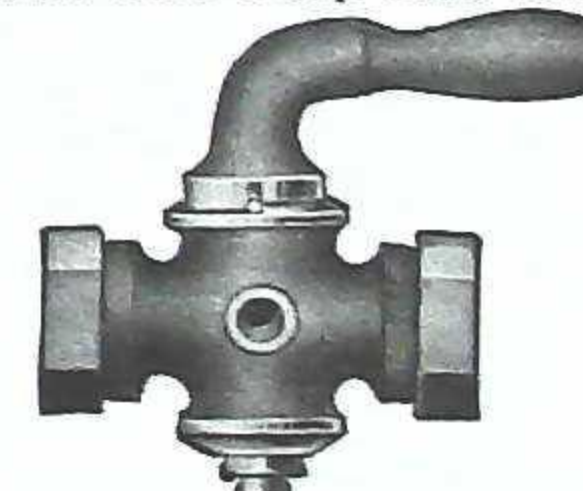


Fig. 979C

Stops and Stop and Drains
Tee Handle—Flat Way—For Iron Pipe
No. 3954 Stop No. 3955 Stop and Drain


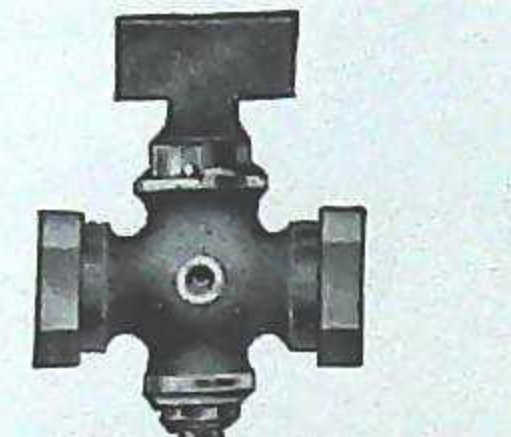



Fig. 981				Fig. 982			
Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
3/8	\$1.70	1	\$4.40	3/8	\$1.75	1	\$4.50
1/2	1.75	1 1/4	7.45	1/2	1.80	1 1/4	7.60
5/8	2.45	1 1/2	12.45	5/8	2.50	1 1/2	12.70
3/4	3.00	2	21.50	3/4	3.05	2	22.00

Stops and Stop and Drains
Tee Handle—Round Way—For Iron Pipe
No. 3982 Stop No. 3983 Stop and Drain


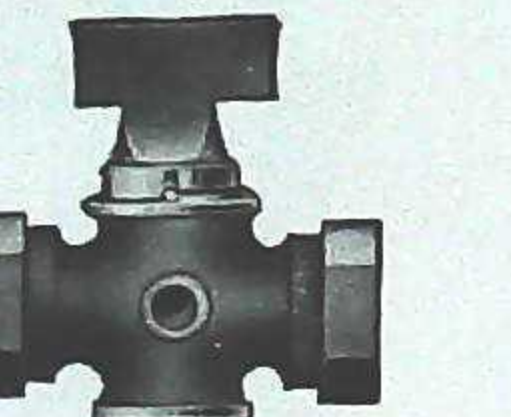





Fig. 983				Fig. 984			
Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$2.20	1 1/4	\$10.05	1/2	\$2.25	1 1/4	\$10.20
5/8	3.00	1 1/2	16.45	5/8	3.05	1 1/2	16.70
3/4	3.85	2	28.50	3/4	3.90	2	29.00
1	6.15	...	...	1	6.25	...	...


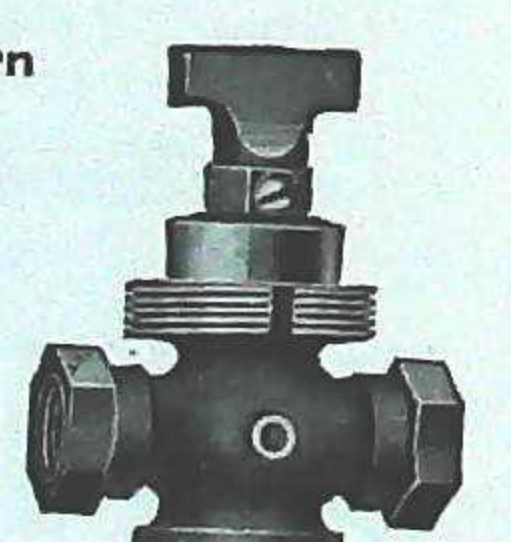
Inverted Key Curb Stops

Regular Pattern For Iron Pipe Tee or Socket Head, Round Way

Size in.	1/2	5/8	3/4	1	1 1/4	1 1/2	2
Stop each	\$2.95	\$3.80	\$4.90	\$7.40	\$12.05	\$19.45	\$33.00
" and Drain each	3.00	3.85	4.95	7.50	12.20	19.70	33.50

Inverted Key Curb Stops

Minneapolis Pattern for Iron Pipe Tee or Socket Head Round Way

Size in.	1/2	5/8	3/4	1	1 1/4	1 1/2	2
Stop each	\$3.35	\$4.25	\$5.40	\$8.05	\$13.05	\$20.95	\$35.50
" and Drain each	3.40	4.30	5.45	8.15	13.20	21.20	36.00

No. 4077 Service Connections



Consists of a piece of lead pipe 18 inches long with corporation cock, wiped on one end, brass soldering nipple on the other.

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	With Corp. Cock	Without Corp. Cock		With Corp. Cock	Without Corp. Cock
1/2	\$5.25	\$4.60	1 1/4	\$19.50	\$16.20
5/8	6.25	5.40	1 1/2	31.00	25.50
3/4	7.25	6.25	2	48.50	38.50
1	10.75	9.20	...	...	...

No. 4070 Corporation Stops
With Straight or Bent Coupling



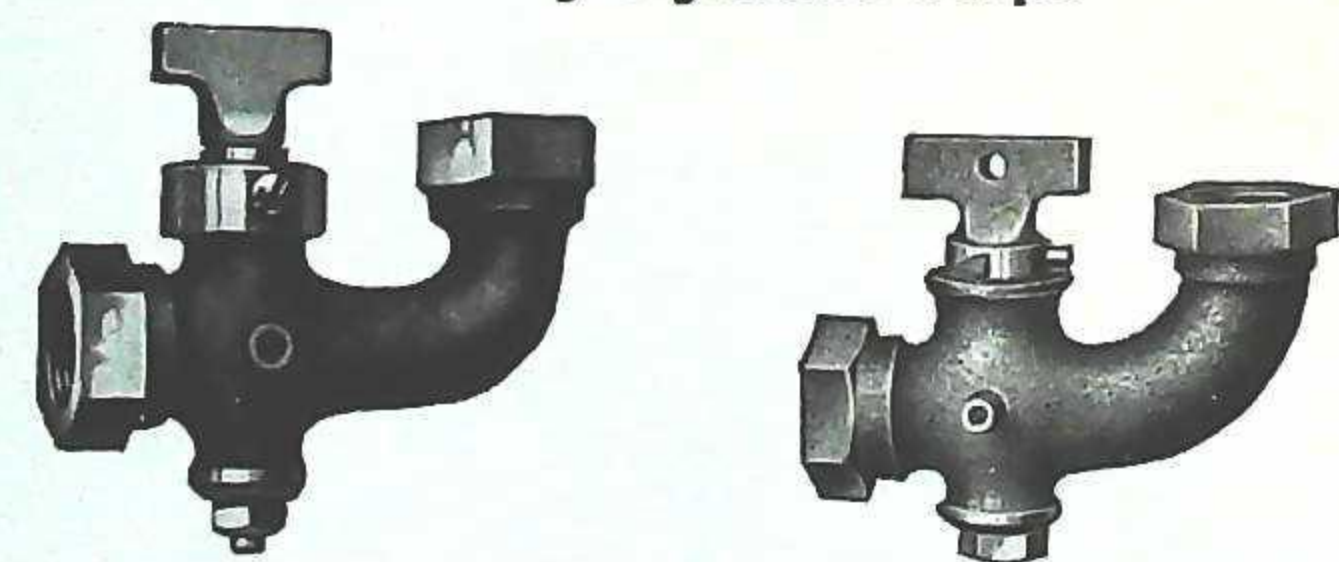
Size Inches	PRICE, EACH		Size Inches	Price Each As Shown
	As Shown	With Hexagon on Main End		
1/2	\$1.60	\$1.75	1 1/4	\$10.00
5/8	2.25	2.50	1 1/2	16.00
3/4	2.85	3.20	2	26.50
1	4.50	5.00	...	...

No. 4071 Corporation Stops
Screw Plug, without Coupling



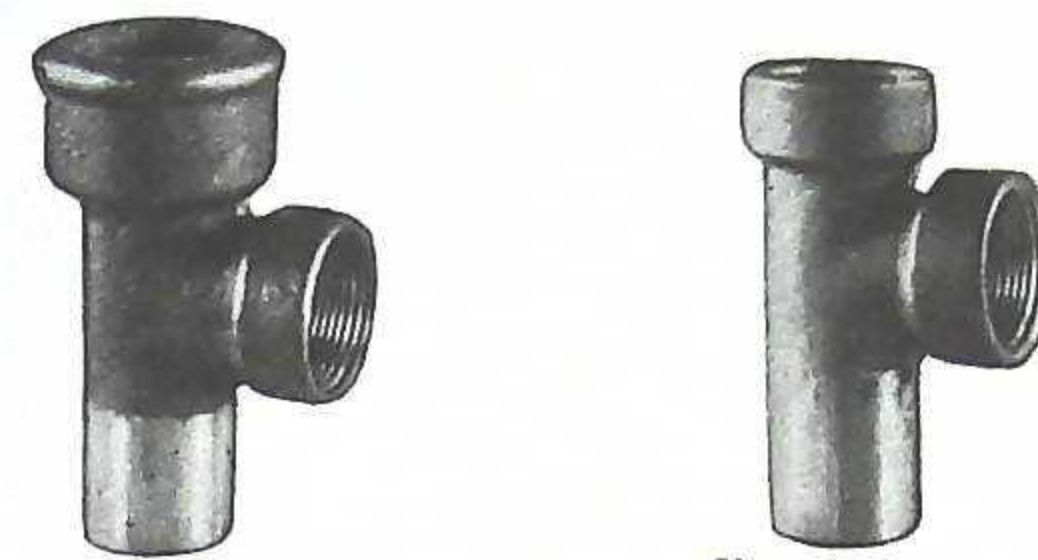
Size Inches	PRICE, EACH		Size Inches	Price Each as Shown
	As Shown	With Hexagon on Main End		
1/2	\$1.45	\$1.60	1 1/4	\$9.25
5/8	1.95	2.20	1 1/2	15.00
3/4	2.50	2.85	2	25.00
1	4.00	4.50	...	...

Flat Way Hydrant Stops



Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Patent Cap	Solid Head		Patent Cap	Solid Head
1/2	\$2.15	\$2.15	3/4	\$3.75	\$3.75
5/8	3.05	3.05	1	5.40	5.40

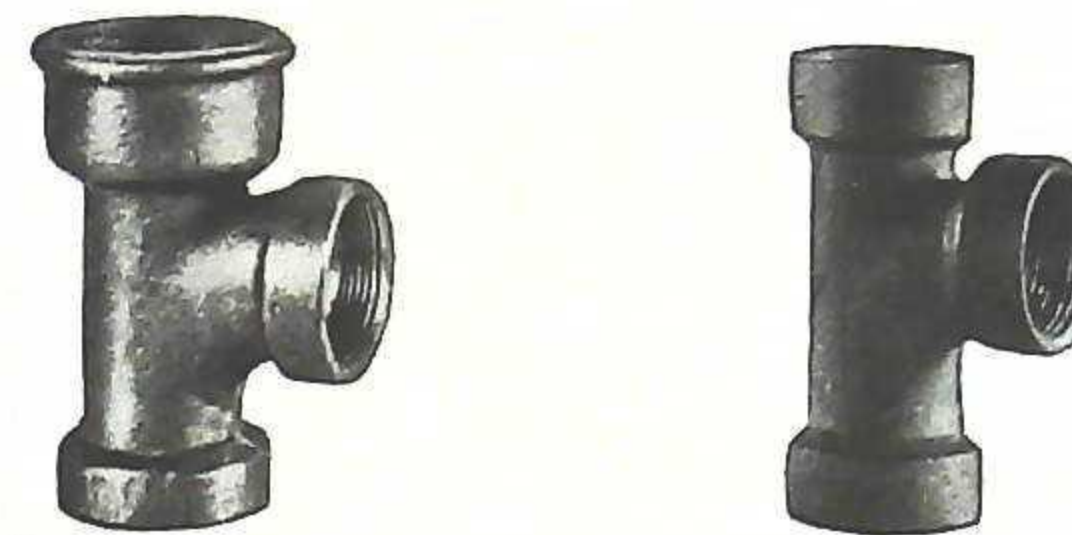
Brass Vent Tees



Nos. 124 and 126 Fig. 991
Nos. 124 and 126, I. P. inlet, hub vent and L. P. outlet.
Nos. 135 and 137 Fig. 992
Nos. 135 and 137, I. P. inlet, I. P. vent, L. P. outlet.

No.	124	126	135	137
Size inches	1 1/4	1 1/2	1 1/4	1 1/2
Price each	\$1.05	1.50	1.15	1.20

Brass Vent Tees



Nos. 153 and 154 Fig. 993
Nos. 153 and 154, I. P. inlet, hub vent and I. P. outlet.
Nos. 145 and 148 Fig. 994
Nos. 145 and 148 threaded all around for iron pipe.

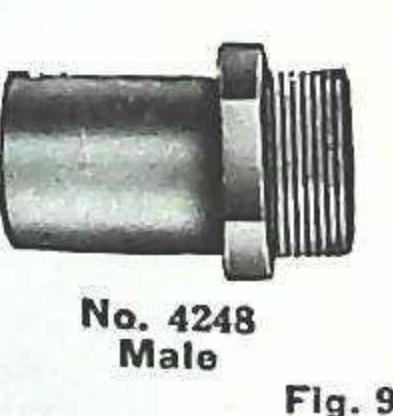
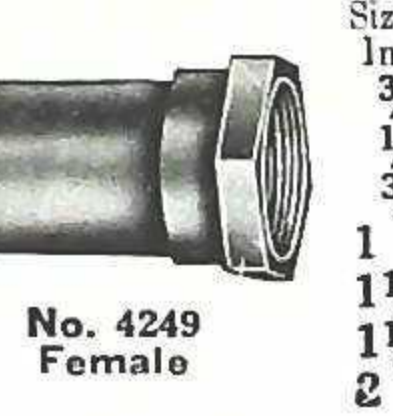
No.	153	154	145	148
Size inches	1 1/4	1 1/2	1 1/4	1 1/2
Price each	\$1.15	1.95	1.00	1.10

Nos. 140 and 142 Brass Vent Tees
Slip joint inlet, iron pipe vent and lead pipe outlet.




No.	140	142
Size inches	1 1/4	1 1/2
Price each	\$1.35	1.65

Soldering Nipples

Size In.	PRICE, PER DOZEN	
	Male	Female
3/8	\$3.60	\$3.60
1/2	4.20	4.20
3/4	6.00	6.00
1	8.40	8.40
1 1/4	10.80	10.80
1 1/2	15.00	15.00
2	21.00	21.00

Soldering Unions




Size In.	PRICE, PER DOZEN	
	Straight, No. 4250	Bent, No. 4251
3/8	\$4.80	\$7.20
1/2	6.00	8.40
3/4	7.80	9.60
1	10.20	12.00
1 1/4	13.20	16.20
1 1/2	15.00	22.80
2	21.00	30.00

Brass Ferrules





Size In.	PRICE, PER DOZEN			
	FOR STD. PIPE Std. Wt.	FOR STD. PIPE Heavy Wt.	FOR EX. HVY. PIPE Std. Wt.	FOR EX. HVY. PIPE Heavy Wt.
2	\$9.00	\$10.80	\$11.40	\$13.20
3	15.60	18.00	19.80	22.20
4	18.60	22.20	24.00	27.60
2x1 1/2	.....	9.00	.....	11.40

No. 4283 Brass Trap Screw Ferrules



Size In.	PRICE, PER DOZEN			
	FOR STANDARD PIPE Std. Wt.	FOR STANDARD PIPE Heavy Wt.	FOR EX. HEAVY PIPE Std. Wt.	FOR EX. HEAVY PIPE Heavy Wt.
2	\$14.40	\$16.20	\$16.80	\$18.60
3	24.00	26.40	28.20	30.60
4	31.20	34.80	36.00	40.20
5	.....	147.00	.....	156.00
6	.....	168.00	.....	177.00

Brass Y Ferrules



With Two Inlets Tapped for 1 1/2-inch Iron Pipe

Size.....	inches	4x8 3/4
Weight.....	ounces	65
Price.....	each	\$5.00


Blake Cleanouts with Iron Cover



No.	Size Inches	Price Each	No.	Size Inches	Price Each	No.	Size Inches	Price Each
J-1502	2	\$.50	J-1504	4	\$.85	J-1506	6	\$ 2.50
J-1503	3	.80	J-1505	5	1.70	.....	.....	.....

Iron Body Trap Screw Ferrules


No. 4285



Size In.	PRICE, PER DOZEN			
	FOR STANDARD PIPE Std. Wt.	FOR STANDARD PIPE Heavy Wt.	FOR EX. HEAVY PIPE Std. Wt.	FOR EX. HEAVY PIPE Heavy Wt.
2	\$10.80	\$11.40	\$12.00	\$12.60
3	16.80	18.00	19.20	20.40
4	21.00	21.60	22.20	22.80

Iron Body Trap Screw Ferrules

With Extra Heavy Brass Cover
Trap screw ferrule with extra heavy cover, and 1 1/2-inch hexagon nut 1 inch high.



No.	Size Inches	Price Each
199	2	\$.60
200	3	.80
201	4	1.00

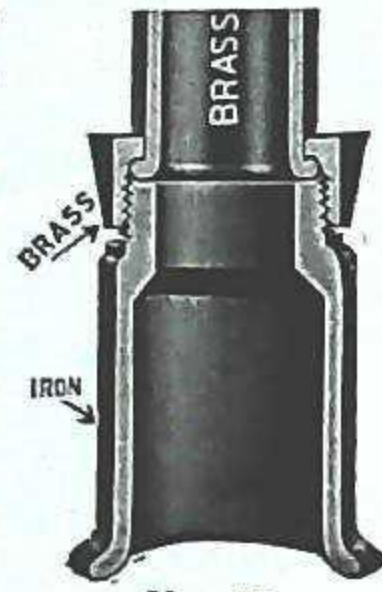
Nos. 31 and 31A Athol Union Ferrules



These ferrules are for connecting wrought pipe with 2-inch cast iron soil pipe.
 Size.....inches 2x1 1/4 2x1 1/2
 Price, No. 31, Straight, Iron Body with Brass Union.....each \$1.30 \$1.50
 Price, No. 31, Straight, All Brass.....each 1.70 1.90
 Price, No. 31A, 1/8-bend, Iron Body with Brass Union.....each 1.50 1.70
 Price, No. 31A, 1/8-bend, All Brass.....each 2.00 2.20

Nos. 32 and 32A Athol Union Ferrules

These ferrules are for connecting 2-inch cast iron soil pipe to lead pipe by soldering on to tail piece. They have a ground joint and require no packing.



Size.....inches 2x1 1/4-1 1/2 2x2
 Price, No. 32, Straight, Iron Body with Brass Union.....each \$1.00 \$1.50
 Price, No. 32, Straight, All Brass.....each 1.40 2.00
 Price, No. 32A, 1/8-bend, Iron Body with Brass Union.....each 1.20 1.70
 Price, No. 32A, 1/8-bend, All Brass.....each 1.80 2.40

Nos. 33 and 33A Athol Union Ferrules

These ferrules are for connecting 2-inch iron soil pipe to lead pipe without the use of solder.

Size.....inches 2x1 1/4 2x1 1/2
 Price, No. 33, Straight, Iron Body with Brass Union.....each \$.90 \$1.10
 Price, No. 33, Straight, All Brass.....each 1.30 1.50
 Price, No. 33A, 1/8-bend, Iron Body with Brass Union.....each 1.10 1.30
 Price, No. 33A, 1/8-bend, All Brass.....each 1.70 1.90

No. 34 Athol Union Couplings

These couplings are for connecting wrought iron pipe to lead pipe by soldering.

Size.....inches 1 1/4x1 1/4 1 1/2x1 1/2
 Price, No. 34, Iron Body with Brass Union.....each \$1.00 \$1.20
 Price, No. 34, All Brass.....each 1.40 1.60

No. 35 Athol Union Couplings

These couplings are for connecting wrought iron pipe with lead pipe without soldering.

Size.....inches 1 1/4x1 1/4 1 1/2x1 1/2
 Price, No. 35, Iron Body with Brass Union.....each \$.90 \$1.10
 Price, No. 35, All Brass.....each 1.30 1.50

No. 35A Athol Union Couplings

These couplings are for connecting lead pipe to any fitting having I. P. openings without solder.

Size.....inches 1 1/4x1 1/2 1 1/2x2 1 1/2x1 1/2 1 1/2x2
 Price, No. 35A, Iron Body with Brass Union.....each \$1.00 \$1.10 \$1.20 \$1.30
 Price, No. 35A, All Brass.....each 1.40 1.50 1.60 1.70

Cast Iron Long S Traps



No. 51, for Sink Collar Fig. 1007
 No. 52N, with Slip Joint Nut Fig. 1008
 Finish.....PAINTED GALV. OR ENAM. PTD.
 Size.....inches 1 1/4 1 1/2 1 1/4 1 1/2
 Price, with Sink Collar.....each \$1.50 \$2.00 \$2.25 \$2.90
 " " Slip Joint Nut....." 1.75 2.30 2.50 3.20
 " " I.P. Thread Inlet....." 1.50 2.00 2.25 2.90

Cast Iron P Traps

No. 4072, with Slip Joint Nut
 No. 66, with Male Thread Both Ends
 Size In. PRICE, EACH Paint- ed Galv. or Enam. Ptd. Size In. PRICE, EACH Paint- ed Galv. or Enam. Ptd.
 1 1/4 \$1.00 \$1.40 1 1/2 \$1.30 \$1.80
 1 1/4 \$.75 \$1.15 1 1/2 \$1.00 \$1.50

No. 65 Cast Iron P Traps

For Sink Collar
 Size.....inches 1 1/4 1 1/2
 Price, Painted.....each \$.75 \$1.00
 " Galv. or White Enamel Painted.....each 1.15 1.50
 Add for Top Cleanout Plug.....each .35 .35

No. 693 Sink Traps

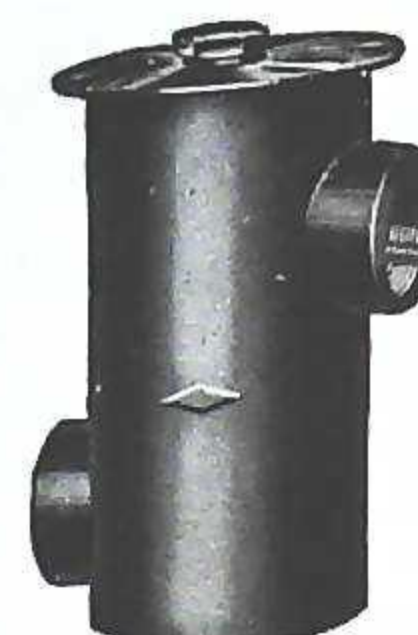
Tapped I. P. with cleanout.
 Size In. PRICE, EACH Painted Galv. Size In. PRICE, EACH Painted Galv.
 1 1/4 \$1.00 \$1.25 2 \$2.00 \$2.50
 1 1/2 1.25 1.50

No. 4148 Diamond Cast Iron Bottle Traps

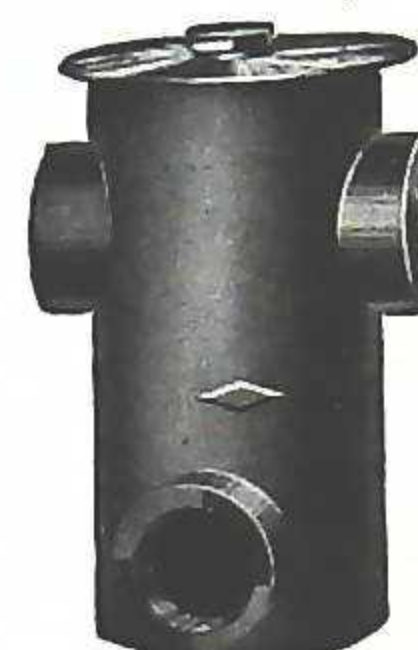
Slip Joint Inlet—Female Outlet
 This trap is made with brass clean-out screw and is threaded for iron pipe.
 Size.....inches 1 1/4 1 1/2
 Price, Painted.....each \$1.25 \$1.80
 " Galvanized....." 1.75 2.55
 " Painted White Enam....." 1.75 2.55

No. 4140 Diamond Cast Iron Bottle Traps

Female Both Ends
 This trap is made with brass clean-out screw and is threaded for iron pipe.
 Size.....inches 1 1/4 1 1/2
 Price, Painted.....each \$1.00 \$1.50
 " Galvanized....." 1.50 2.25
 " Painted White Enam....." 1.50 2.25



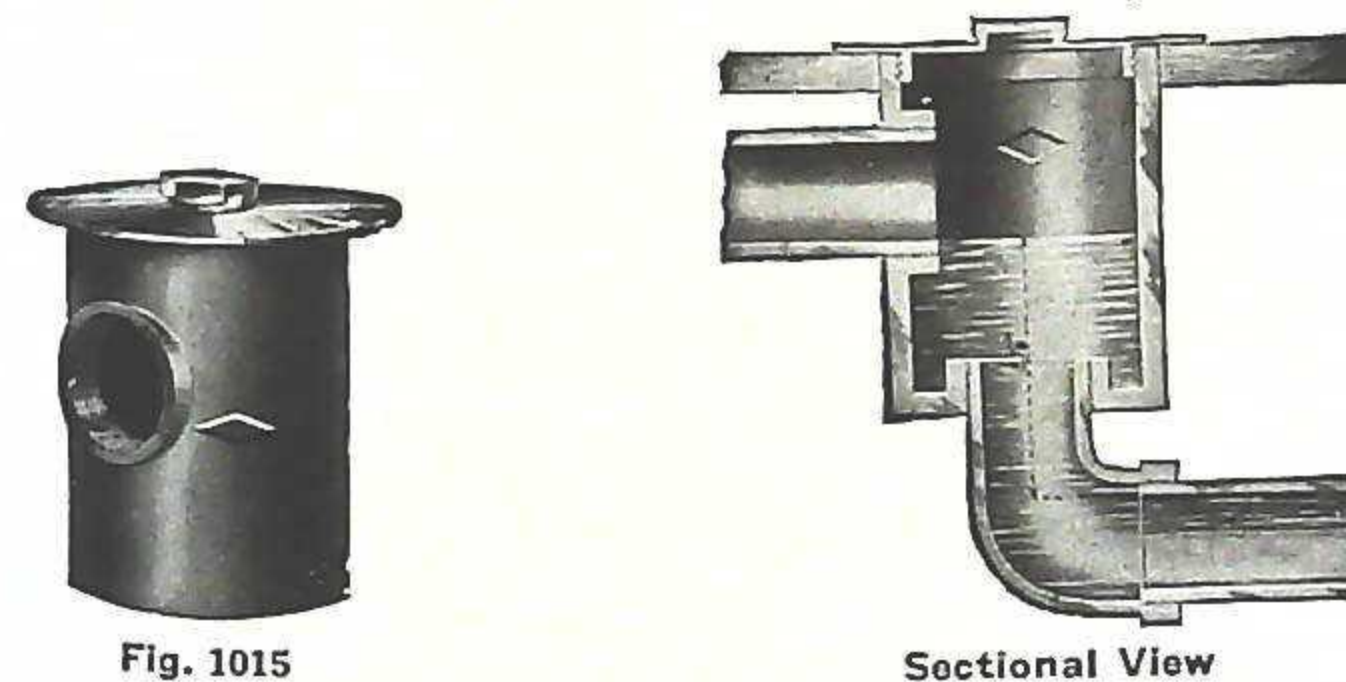
Cast Iron Drum Traps
 These traps are tapped regularly for 1 1/2-inch iron pipe but may be tapped for 2-inch iron pipe to order.
 No. 293 Fig. 1011
 Size.....inches 4x8 1/2 4x10
 Price, No. 293, Painted.....each \$2.50 \$2.75
 " " 293, Galvanized....." 3.50 4.00
 " " 294, Painted....." 2.50 2.75
 " " 294, Galvanized....." 3.50 4.00



Tapped regularly for 1 1/2-inch iron pipe, but may be tapped for 2-inch iron pipe to order.
 No. 295 Fig. 1013
 Size.....inches 4x8 1/2 4x10
 Price, No. 295, Painted.....each \$2.75 \$3.00
 " " 295, Galvanized....." 3.75 4.25
 " " 296, Painted....." 2.75 3.00
 " " 296, Galvanized....." 3.75 4.25

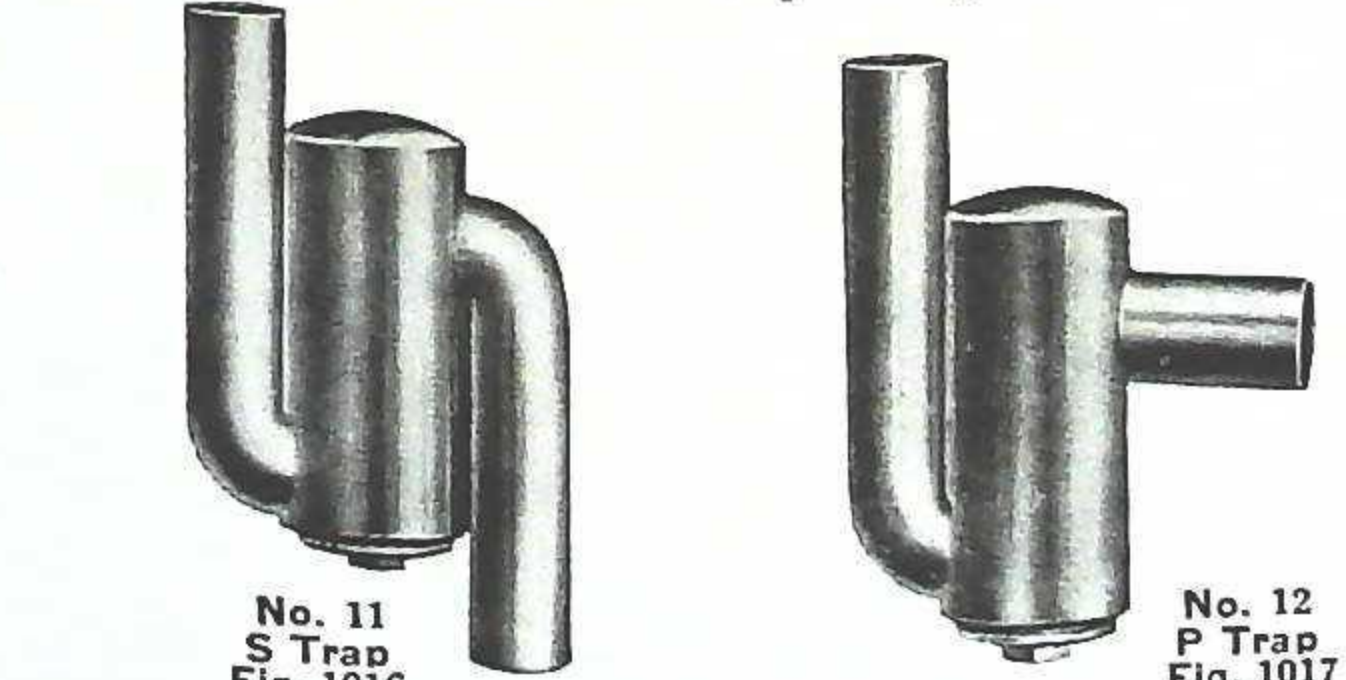


No. 297 Cast Iron Drum Traps



The position of this trap is adjustable.
 Outside diameter, 4 1/4 inches; height, 5 1/4 inches.
 Price, Plain.....each \$2.00
 " Painted....." 2.25
 " Galvanized....." 3.25

Clean Sweep Traps



No. 11 S Trap Fig. 1016
 No. 12 P Trap Fig. 1017
 PRICE, EA., WITHOUT VENT
 LEAD BRASS
 S P S P
 1 1/4 \$1.20 \$1.10 \$2.60 \$2.30
 1 1/2 1.55 1.35 3.60 3.30
 2 2.30 2.00

Enameled Iron Square Grease Traps

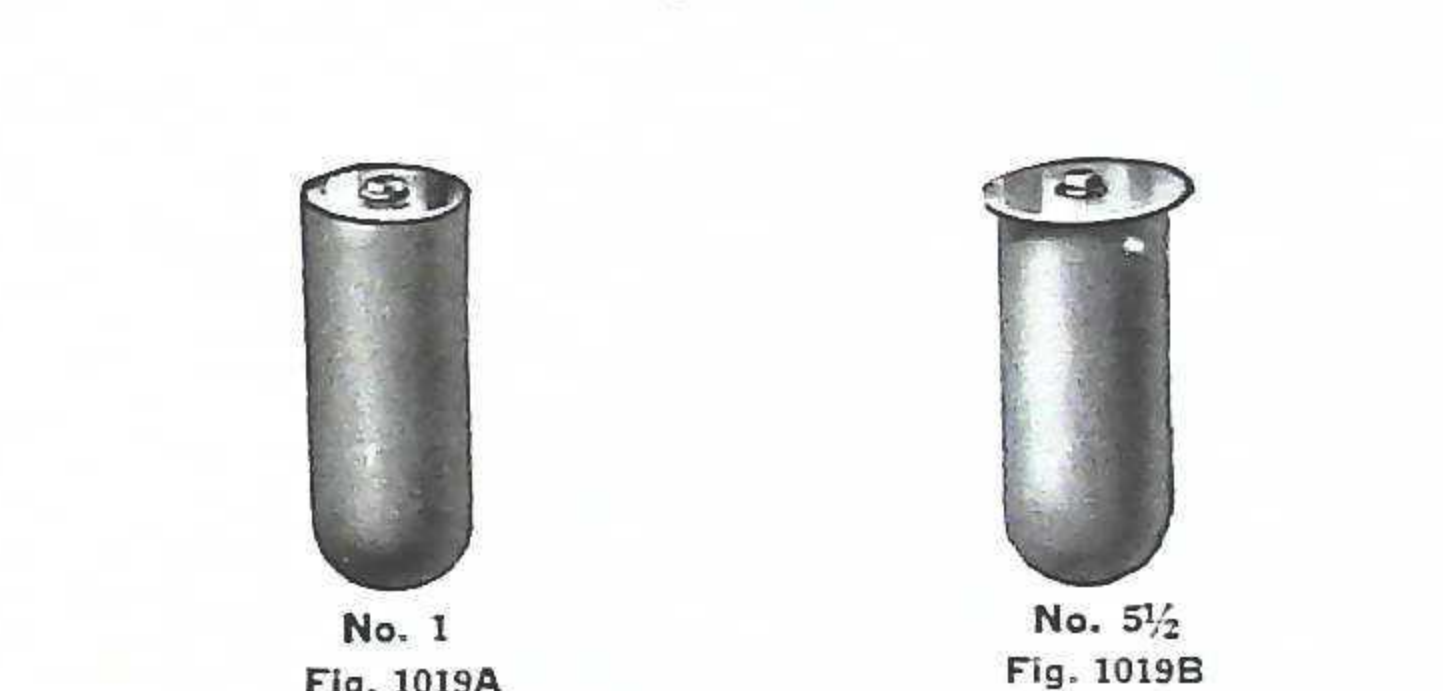
No. 7089
 Has removable top with swivel bolts and polished brass connections.
 Size, 10 1/4 x 10 1/4 x 10 1/4 inches.
 Connections.....inches 1 1/2 2
 Price, Enam- eled Inside.....each \$39.95 \$43.35
 Price, Enam- eled All Over.....each 48.00 51.45



Cast iron grease trap with brass hand-hole cover and removable top with swivel bolts.
 Diam. Height Opening
 Inches Inches Inches
 16 1/2 13 2 Soil
 16 1/2 13 2 I.P.
 16 1/2 14 1/2 4 Soil

For Soil Pipe For Iron Pipe
 Price, Painted All Over.....\$17.95 \$20.25
 " Enameled Inside.....28.25 30.60
 " " All Over.....41.60 43.90

Lead Drum Traps

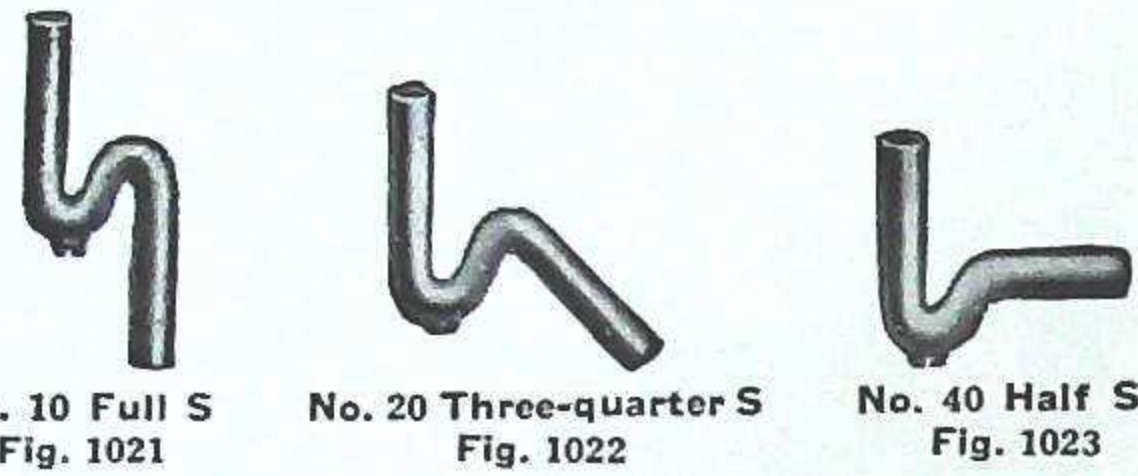


With Nickel-plated Trap Screw

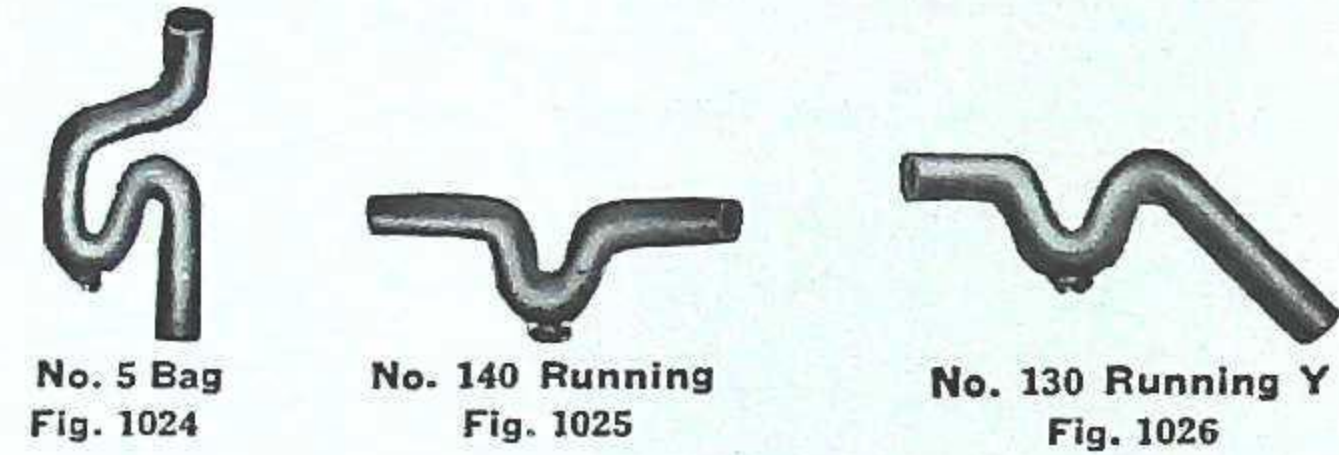
Number	Outside Diameter of Cap	Price, 4x 8 Inches, Standard Weight	1	5 1/2
	inches	each	\$2.10	\$2.35
" 4x 9	"	"	2.22	2.47
" 4x10	"	"	2.30	2.55
" 6x10	"	"	3.75	4.00
" 6x11	"	"	3.95	4.20
" 6x12	"	"	4.10	4.35
" 4x 8	Extra heavy	"	2.60	2.85
" 4x 9	"	"	2.70	2.95
" 4x10	"	"	2.83	3.08
" 6x10	"	"	4.35	4.60
" 6x11	"	"	4.55	4.80
" 6x12	"	"	4.80	5.05

When ordering a drum trap complete please state style of cap, whether brass or nickel-plated, length of body and diameter of body.

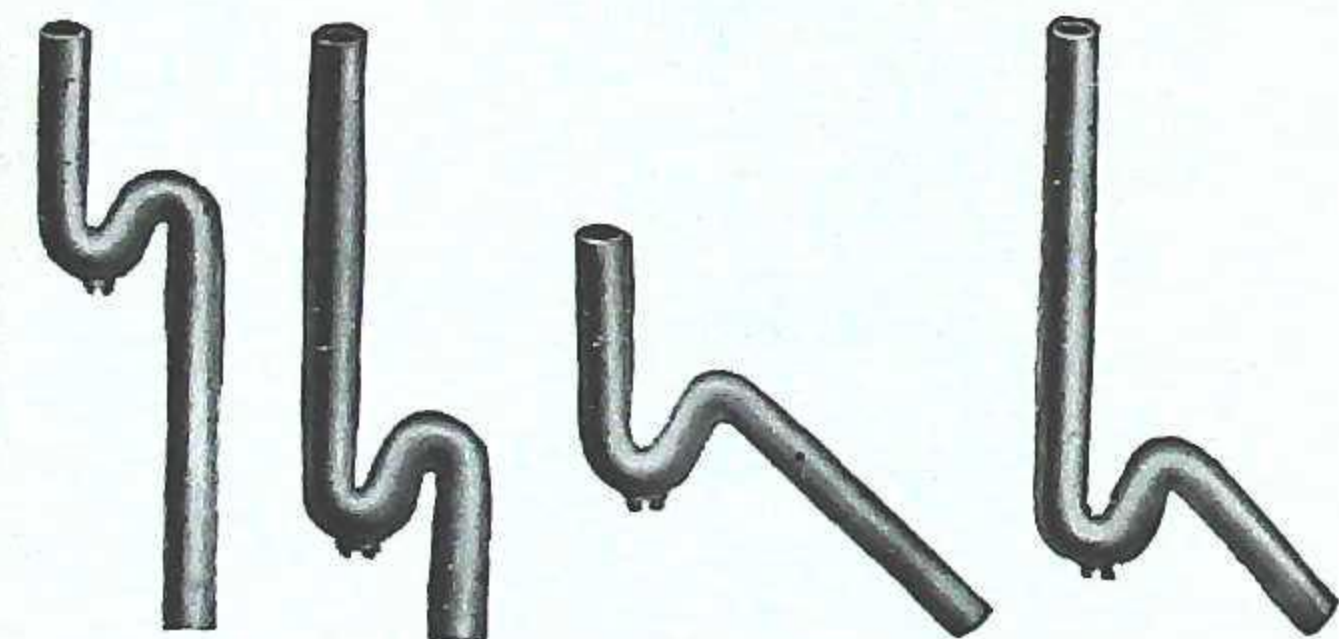
Lead Traps



Size In.	Wt. per Ft. Lbs.	Standard			Wt. per Ft. Lbs.	Extra Heavy		
		Full S	3/4 S	Half S		Full S	3/4 S	P
1 1/4	1 1/2	\$.58	\$.55	\$.51	2 1/2	\$.87	\$.81	\$.77
1 1/2	2 1/4	.90	.81	.75	3 1/2	1.25	1.15	1.09
2	3 1/4	1.38	1.30	1.20	4 1/2	1.85	1.73	1.57

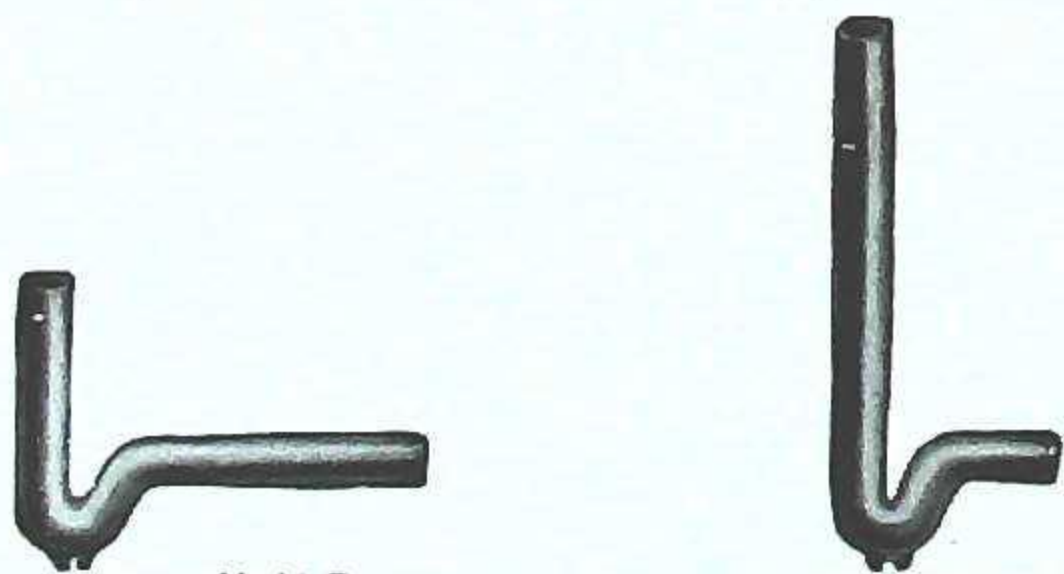


Size In.	Wt. per Ft. Lbs.	Standard			Wt. per Ft. Lbs.	Extra Heavy		
		Bag	Run.	Run Y		Bag	Run.	Run. Y
1 1/4	1 1/2	\$.68	\$.48	\$.52	2 1/2	\$ 1.06	\$.70	\$.74
1 1/2	2 1/4	1.08	.72	.76	3 1/2	1.54	1.03	1.09
2	3 1/4	1.73	1.13	1.34	4 1/2	2.33	1.46	1.61



No. 1 Full S Long Outlet Fig. 1027, No. 2 Full S Long Inlet Fig. 1028, No. 12 Three-quarter S Long Outlet Fig. 1029, No. 11 Three-quarter S Long Inlet Fig. 1029A

Size In.	Wt. per Ft. Lbs.	Standard		Wt. per Ft. Lbs.	Extra Heavy	
		Full S Long Inlet or Outlet	3/4 S Long Inlet or Outlet		Full S Long Inlet or Outlet	3/4 S Long Inlet or Outlet
1 1/4	1 1/2	\$.93	\$.85	2 1/2	\$ 1.44	\$ 1.28
1 1/2	2 1/4	1.36	1.19	3 1/2	1.95	1.72
2	3 1/4	2.00	1.76	4 1/2	2.69	2.33



No. 4 Half S Long Outlet Fig. 1029B, No. 3 Half S Long Inlet Fig. 1029C

Size In.	Wt. per Ft. Lbs.	Standard		Wt. per Ft. Lbs.	Extra Heavy	
		Half S Long Inlet or Outlet	Half S Long Inlet or Outlet		Half S Long Inlet or Outlet	Half S Long Inlet or Outlet
1 1/4	1 1/2	\$.76	\$ 1.09	2 1/2	\$ 1.14	\$ 1.67
1 1/2	2 1/4	1.02	1.58	3 1/2	1.50	2.24
2	3 1/4	1.55	2.34	4 1/2	2.02	3.11

Extension Lead Bends

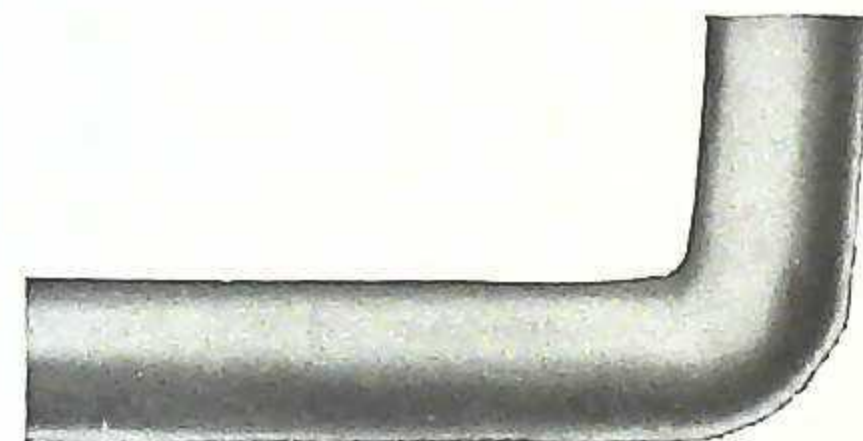
No. 4 Short Inlet Extension Bends



Fig. 1029D Standard

Size Inches	Weight per Foot Pounds	Inlet Diam. In. Center to End	PRICE, EACH				*Extra In.
			12-in. Outlet	15-in. CENTER TO END	18-in.	20-in.	
1 1/4	1 1/2	3 1/2	\$.40	\$.47	\$.55	\$.60	\$.03 1/4
1 1/2	2 1/4	4	.56	.67	.77	.84	.04 1/2
2	3 1/4	3 3/4	.79	.94	1.09	1.19	.06 1/4
3	5	4 1/4	1.39	1.65	1.90	2.07	.10 3/4
4	6	5 1/2	1.70	2.00	2.30	2.48	.12

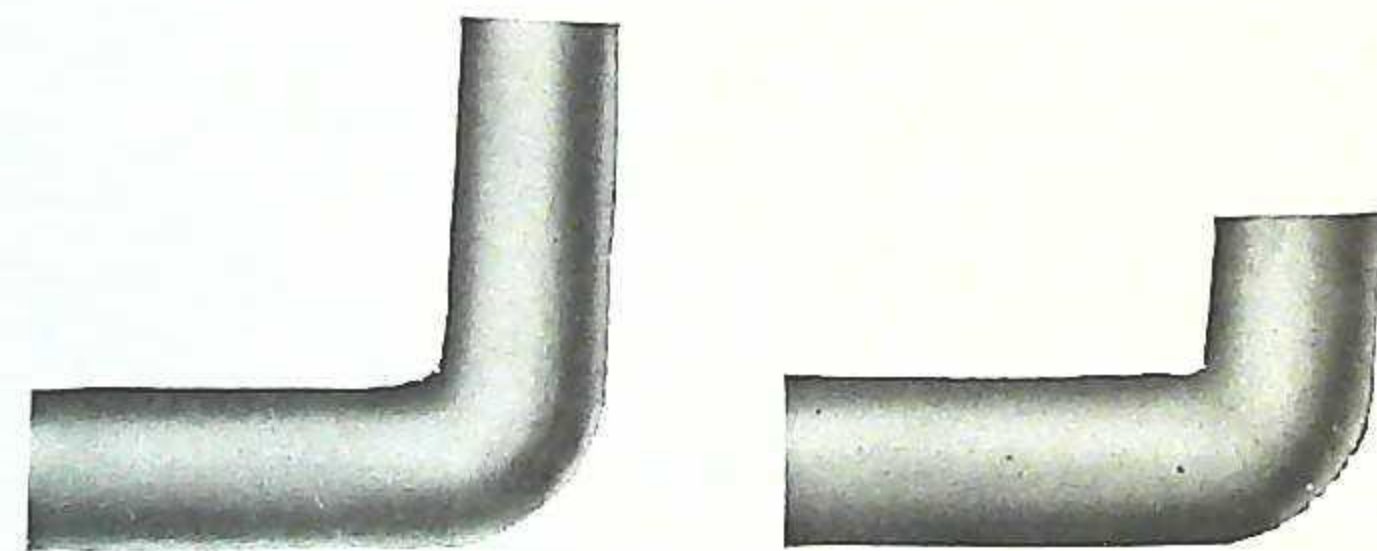
No. 3 Long Inlet Extension Bends



Size Inches	Weight per Foot Pounds	Inlet Diam. In. Center to End	PRICE, EACH				*Extra In.
			12-in. Outlet	15-in. CENTER TO END	18-in.	20-in.	
1 1/4	1 1/2	6	\$.46	\$.54	\$.62	\$.67	\$.03 1/4
1 1/2	2 1/4	7	.67	.77	.88	.95	.04 1/2
2	3 1/4	7 3/4	.99	1.14	1.29	1.39	.06 1/4
3	5	8 1/4	1.73	1.99	2.24	2.42	.10 3/4
4	6	10	2.15	2.44	2.73	2.92	.12

*Add per inch to list of nearest size for excess length.

Lead Bends



No. 1 Long Inlet Fig. 1029F, No. 2 Short Inlet Fig. 1029G

Size In.	Weight per Foot Pounds	Standard			SHORT INLET BENDS		
		LONG INLET BENDS DIMEN. IN. CENTER TO END	Price Each	Price Each	LONG INLET BENDS DIMEN. IN. CENTER TO END	Price Each	Price Each
1 1/4	1 1/2	6	\$.30	3 1/2	6	\$.25	
1 1/2	2 1/4	7	.50	4	7	.38	
2	3 1/4	7 3/4	.78	3 3/4	7 3/4	.57	
3	5	8 1/4	1.39	4 1/4	8 1/4	1.09	
4	6	10	1.95	5 1/2	10	1.50	

Size In.	Wt. per Ft. Lbs.	Standard		Wt. per Ft. Lbs.	Extra Heavy	
		Long Inlet or Outlet	Short Inlet or Outlet		Long Inlet or Outlet	Short Inlet or Outlet
1 1/4	1 1/2	\$.50	\$.34	2 1/2	\$.62	
1 1/2	2 1/4	.79	.62	3 1/2	.80	
2	3 1/4	1.05	.80	4 1/2	1.21	
3	5	1.60	1.21	5 1/2	1.84	
4	8	2.40	1.84			

No. 5 Combination Lead Bends and Ferrules

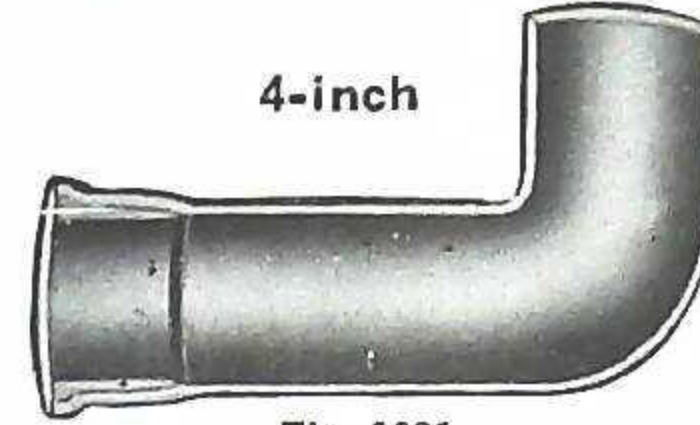


Fig. 1031

Lgth. In.	PRICE, EACH				Lgth. In.	PRICE, EACH			
	STANDARD Short Inlet	EX. HY. Long Inlet	STANDARD Short Inlet	EX. HY. Long Inlet		STANDARD Short Inlet	EX. HY. Long Inlet	STANDARD Short Inlet	EX. HY. Long Inlet
12	\$ 2.20	\$ 2.65	\$ 2.59	\$ 3.12	17	\$ 2.70	\$ 3.14	\$ 3.19	\$ 3.72
13	2.30	2.75	2.71	3.24	18	2.80	3.23	3.31	3.84
14	2.40	2.85	2.83	3.36	19	2.90	3.33	3.43	3.96
15	2.50	2.94	2.95	3.48	20	3.00	3.42	3.54	4.08
16	2.60	3.04	3.07	3.60					

The short inlet is 5 1/2 inches, the long 9 3/4 inches.

No. 8 Combination Lead Ferrules



Fig. 1032

Lgth. In.	Standard Weight				
	1 1/2-in. for 2-in. C.I. Pipe	1 1/2-in. for 2-in. C.I. Pipe	2-in. for 2-in. C.I. Pipe	3-in. for 3-in. C.I. Pipe	4-in. for 4-in. C.I. Pipe
4			\$.28	\$.42	\$.50
4 1/2			.36	.41	.46
5			.43	.46	.51
6			.51	.57	.60
8			.60	.67	.72
10			.67	.76	.85
12			.76	.80	.88
14			.80	.82	.92
16			.90	.92	1.02
18			1.00	.92	1.02
20			1.10	1.00	1.10
24			1.30	1.15	1.30
30			1.40	1.40	1.60
36			1.65	2.00	2.30

Extra Heavy Weight

4			\$.42	\$.55	\$.70
4 1/2			.38	.44	.49
5			.44	.49	.54
6			.52	.54	.61
8			.61	.67	.72
10			.72	.81	.88
12			.80	.93	1.00
14			1.15	1.10	1.23
16			1.30	1.23	1.36
18			1.45	1.36	1.49
20			1.60	1.49	1.63
24			1.90	1.75	1.97
30			2.20	2.33	2.45
36			2.60	2.90	3.16

No. 7 Combination Soldering Nipples

Lead and Brass Straight Combination Soldering Nipples



Fig. 1033

Size Inches	PRICE, EACH						
	LENGTH, INCHES						
4							
5							
6							
8							
10							
12							
14							

Lead Pipe



Fig. 1034 In Coils—Strawed



Fig. 1035 On Reels

3/8-inch Size

Western Std.	Eastern Std.	Outside Diam.	Weight per Foot Pounds	Av. Lgth. of Coil Feet
AQ	E	.49	8	140
XL	D	.52	9	124
L	C	.57	12	94
M	B	.61	1	70
S	A	.73	1	93
XS	AA	.75	2	70
XXS		.79	2	56

1/2-inch Size

AQ	E	.64	10	280
XL	D	.66	12	230
L	C	.70	1	175
M	B	.75	1	140
S	A	.85	1	100
AA		.89	2	87
XS	AA	.94	2	70
XXS	AAA	1.01	3	58
4 Lbs.		1.12	4	43

5/8-inch Size

AQ	E	.77	12	230
XL	D	.84	1	138
L	C	.92	1	98
M	B	.95	2	86
S		1.02	2	69
AA	AA	1.05	2	62
XS		1.08	3	57
XXS	AAA	1.15	3	49
4 Lbs.		1.19	4	43

3/4-inch Size

AQ	E	.91	1	171
XL	D	.97	1	114
L	C	1.04	2	85
M	B	1.07	2	76
S		1.16	3	57
XS	AA	1.23	3	49
XXS	AAA	1.26	4	43
5 Lbs.		1.35	5	34

1-inch Size

AQ	E	1.17	1	8
XL	D	1.23	1	84
L	C	1.27	2	67
M	B	1.35	3	52
S	A	1.43	4	42
XS	AA	1.49	4	35
XXS	AAA	1.56	5	28
7 Lbs.		1.66	7	21

1 1/4-inch Size

AQ	E	1.43	2	81
XL	D	1.49	2	67
L	C	1.53	3	56
M	B	1.58	3	47
S	A	1.66	4	38
XS	AA	1.77	6	28
XXS	AAA	1.83	6	21
9 Lbs.		1.89	9	15

Lead Pipe—Continued

1 1/2-inch Size		Out-side Diam.	Weight per Foot		Av. Lgth. of Coil Feet
Western Std.	Eastern Std.		Pounds	Ounces	
AQ	E	1.74	3	..	56
XL	D	1.77	3	..	48
L	C	1.82	4	..	42
M	B	1.89	5	..	64
S	A	1.93	6	..	53
XS	AA	2.05	7	..	42
XXS	AAA	2.13	9	..	35
11 Lbs.	....	2.19	11	..	29

2-inch Size		Out-side Diam.	Weight per Foot		Av. Lgth. of Coil Feet
Western Std.	Eastern Std.		Pounds	Ounces	
AQ	E	2.19	3	..	12
XL	D	2.23	4	..	12
L	C	2.28	5	..	12
M	B	2.41	7	..	43
S	A	2.46	8	..	38
XS	AA	2.52	9	..	34
XXS	AAA	2.61	10	..	29
15 Lbs.	...	2.83	15	..	20

4-inch Size		Out-side Diam.	Weight per Foot		Av. Lgth. of Coil Feet
Western Std.	Eastern Std.		Pounds	Ounces	
3/2-in. Wall D	D	4.18	6	..	12

Lead Tubing Caliber List

I. D. In.	O. D. In.	Nearest Fraction	Weight per Ft. Ounces	I. D. In.	O. D. In.	Nearest Fraction	Weight per Ft. Ounces
1/16	.125	1/8	3/8	3/16	.312	1/4	3 1/2
3/32	.125	1/8	2 3/4	3/16	.312	1/4	5
3/32	.187	3/16	1 1/2	3/16	.375	3/8	7
3/32	.250	1/4	1 1/4	3/16	.343	3/8	3 1/2
1/8	.218	1/4	2 1/4	1/4	.390	1/2	5 1/2
1/8	.250	1/4	3 1/2	1/4	.453	1/2	9
1/8	.312	1/4	4 1/2	1/4	.500	1/2	11 1/2
3/16	.250	1/4	2 1/4	...	...	...	...

Block Tin Pipe

I. D. In.	Weight per Ft. Ounces	I. D. In.	Weight per Ft. Ounces	I. D. In.	Weight per Ft. Ounces
1/4	3	7/16	4	1	15
1/4	5	1 1/2	4 1/2	1	18
5/16	4	1 1/2	5	1 1/4	11 1/4
5/16	6 1/2	1 1/2	6	1 1/4	11 1/2
3/8	4	1 1/2	8	1 1/2	2 1/2
3/8	5	5/8	8	1 1/2	2 1/2
3/8	6	5/8	10	2	2 1/2
3/8	8	3/4	10	2	3
3/8	10	3/4	12	...	...

Lead Wool



Fig. 1041

Lead wool is used in making caulked joints on cast iron pipe and in gas and water service.

Made in the form of a loosely twisted rope, of lead 5/8 inch in diameter, by a perfected mechanical process which facilitates handling.

Packed in 50-pound bags on mandrel, about 125 feet of rope, or on 100-pound reels, about 250 feet of rope.

Prices upon application.

Wire Solder

For high-grade work on tin plate, galvanized iron or sheet copper. It flows freely and evenly.

Put up on spools of approximately 50 pounds each.

Prices upon application.



Fig. 1042

Sheet Lead

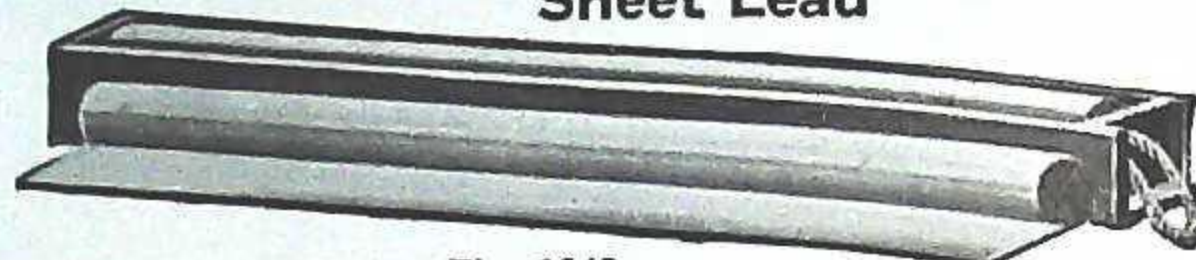
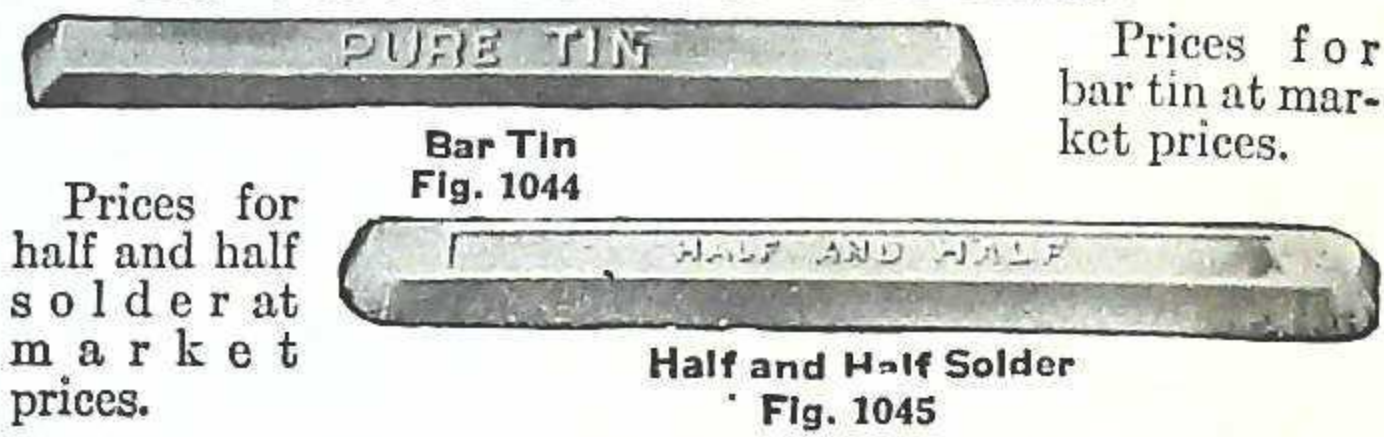


Fig. 1043

Weight per Square Foot Pounds	APPROXIMATE THICKNESS			AVERAGE SIZE OF SHEET		Average Weight per Roll Pounds
	Decimals Inches	Nearest Fraction Inches	Gauge Number	Width Ft. In.	Length Feet	
1 1/2	.0255	3/128	23	7-4	18	225
2	.0340	3/32	20	7-6	18	270
2 1/2	.0425	5/128	19	8-3	19	390
3	.0510	3/64	18	8-3	19	475
3 1/2	.0595	7/128	17	8-3	19	560
4	.0680	1/16	16	8-6	20	680
5	.0850	3/32	14	8-6	20	850
6	.1010	5/64	12	8-9	22	1050
7	.1180	3/16	11	8-9	22	1300
8	.1350	1/8	10	8-9	25	1600

Bar Tin and Half and Half Solder



Prices for half and half solder at market prices.

Prices for bar tin at market prices.

Wiping Solder



Fig. 1046

Prices for wiping solder at market prices.

Bar and Ingot Lead

Prices for ingot and bar lead at market prices.



Bar Lead Fig. 1048

Pig Lead



Fig. 1049

Prices for pig lead at market rates.

Pig Tin



Fig. 1049A

Prices for pig tin at market prices.

Cast Iron Soil Pipe

Five-foot Lengths



No. SP-1, Single Hub Fig. 1051



No. SP-2, Double Hub Fig. 1052

Size Inches	PRICE, PER FOOT			
	SINGLE HUB		DOUBLE HUB	
	Standard	Extra Heavy	Standard	Extra Heavy
2	\$.26	\$.40	\$.28	\$.42
3	.35	.62	.37	.65
4	.46	.84	.48	.88
5	.58	1.10	.62	1.14
6	.70	1.30	.74	1.36
7	1.40	2.20	1.60	2.40
8	1.40	2.20	1.60	2.40
10	2.40	3.60	2.60	3.80
12	3.00	4.40	3.20	4.60
15	5.60	8.00	5.80	8.40

Approximate Weight of Soil Pipe per Length

Size... inches	2	3	4	5	6	7	8	10	12	15
Standard... lbs.	18	26	35	45	55	75	85	115	165	225
Extra Hvy.. "	27 1/2	47 1/2	65	85	100	135	170	225	270	375

Approximate Weight of Soil Pipe Fittings

Style.....	STANDARD										
	Size... inches	2	3	4	5	6	8	10	12		
Quarter Bends, lbs.. ea.	4 1/2	7	10 1/2	13	16 1/2	33	54	58 1/2			
Sixth " " "	4	6 1/2	9	11 1/2	14	30	30	48			
Eighth " " "	3 1/2	6	8	10 1/2	13	24	38	42 1/2			
T Branches " " "	7	11	14 1/2	18 1/2	23	33	42	102			
San. T " " "	7 1/2	12	16	20	24	49	100				
Crosses " " "	9 1/2	14	19	23 1/2	28 1/2	40	70	100			
San. Crosses " " "	10 1/2	15 1/2	20 1/2	25 1/2	31 1/2	52					
Y Branches " " "	7 1/2	12	17	22	28	58	106	158			
Half Y Branches " " "	7	11	15	19	24						
Double Y " " "	10 1/2	16	22 1/2	30	36 1/2	77	121				
Double Hubs " " "	4	5 3/4	7 1/2	9	10 1/2	16	21	35			
S Traps " " "	8 1/2	14	21	28 1/2	37 1/2	94					
P " " "	7	12	17 1/2	24 1/2	31 1/2	80					
Rung Traps " " "	8 1/2	13 1/2	19 1/2	26	34	54					
Reducers " " "	4 1/2	6	7 1/2	9	8	21 1/2	28				

Style.....	EXTRA HEAVY										
	Size... inches	2	3	4	5	6	8	10	12		
Quarter Bends, lbs.. ea.	6 3/4	10 1/2	15	19	23 1/2	52	80	95			
Sixth " " "	6	9 1/2	13	16 1/2	20	44	50	90			
Eighth " " "	5 1/4	8 1/2	12 1/4	15 1/4	18 1/4	40	56	80			
T Branches " " "	10 1/4	15 1/4	21	26 1/2	32 1/2	60	75	166			
San. T " " "	11	16 1/2	22 1/2	28	34 1/2	80	135	210			
Crosses " " "	13 1/4	19 3/4	27	33 1/2	40 1/2	92	116	176			
San. Crosses " " "	14 1/2	22	29 1/2	36 1/2	44 1/2	79	161				
Y Branches " " "	11	17	24	31 1/2	39 1/2	91	136	218			
Half Y Branches " " "	10 1/4	15 1/4	21 1/2	27 1/2	34	90					
Double Y " " "	14 1/4	23	32	41 1/2	52	100	153	266			
Double Hubs " " "	5 3/4	8 1/2	10 3/4	12 1/2	14 1/2	30	35	45			
S Traps " " "	12	20	30	40 1/2	53 1/2	123					
P " " "	10 1/2	17 1/4	25 1/2	34 1/2	45	100					
Rung Traps " " "	11 3/4	19	27 1/2	37	48	110					
Reducers " " "	6 1/4	8 1/2	10 1/4	12 1/4	15	28 1/2	48				

To determine the right or left-hand inlet or outlet in bends, branches and offsets, place them with the hub facing toward you and with spigot lower than hub. On traps, place in regular position with the hub end nearest you.

Long quarter bends are measured from the inside of hub nearest spigot to end of spigot. Other bends are measured from end of spigot to nearest point on inside base of hub. Long T's, Y's, etc., are measured from the base of the hub on main to the end of spigot.

Cast Iron Soil Pipe Fittings

Quarter Bends

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.40	\$.55	8	\$4.00	\$5.00
3	.55	.70	10	5.90	6.50
4	.70	.85	12	8.65	10.80
5	1.05	1.25	15	16.80	21.00
6	1.30	1.55	..	..	..

No. SP-3 Fig. 1053

Fifth Bends

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.45	\$.60	8	\$4.00	\$5.00
3	.80	1.00	10	5.90	6.50
4	.80	1.00	12	8.65	10.80
5	1.05	1.25	15	16.80	21.00
6	1.30	1.55	..	..	..

No. SP-4 Fig. 1054

Sixth Bends

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.40	\$.45	8	\$4.00	\$5.00
3	.60	.75	10	5.90	6.50
4	.60	.75	12	8.65	10.80
5	1.05	1.25	15	16.80	21.00
6	1.30	1.55	..	..	..

No. SP-5 Fig. 1055

Eighth Bends

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.35	\$.40	8	\$4.00	\$5.00
3	.45	.55	10	5.90	6.50
4	.60	.75	12	8.65	10.80
5	.80	1.00	15	16.80	21.00
6	1.05	1.25	..	..	..

No. SP-6 Fig. 1056

Sixteenth Bends

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.35	\$.40	8	\$4.00	\$5.00
3	.50	.70	10	5.90	6.50
4	.60	.70	12	8.65	10.80
5	.80	1.00	15	16.80	21.00
6	1.00	1.25	..	..	..

No. SP-7 Fig. 1057

Double Hub Bends

Cast Iron Soil Pipe Fittings
Long Bends

No.	Size Inches	Length in Clear Inches	Price, Each	
			Standard	Extra Heavy
No. SP-14 Long Quarter Bends Fig. 1061	2	12	\$.90	\$ 1.10
	2	18	1.05	1.30
	2	24	1.50	1.85
	3	12	1.50	1.85
	3	18	1.85	2.30
No. SP-15 Long Sixth Bends Fig. 1062	3	24	2.25	2.75
	4	12	1.25	1.55
	4	18	1.50	1.85
	4	24	2.75	3.40
	4	30	3.85	4.80
	4	36	4.90	6.15
	5	12	3.70	4.60
	5	18	4.30	5.40
No. SP-16 Long Eighth Bends Fig. 1063	5	24	4.90	6.15
	5	36	5.25	6.55
	6	12	4.30	5.40
	6	18	5.00	6.15
	6	24	5.50	6.90
	8	18	7.50	10.00

Long Quarter Bends
No. SP-17 with 2-inch Low Heel Inlet

Size Inches	Length in Clear Inches	Price Each
4	18	\$2.50



Fig. 1064

Reilly Long Sweep Quarter Bends
No. SP-22

Size Inches	Price, Each	
	Standard	Extra Heavy
4	\$2.80	\$3.50
5	4.00	5.00
6	4.80	6.00
4x2	2.15	2.70
5x4	2.80	3.50




Fig. 1065

Reilly Long Sweep Quarter Bends
No. SP-23 with Foot Rest

Size Inches	Price, Each	
	Standard	Extra Heavy
4	\$3.80	\$4.50
5	5.25	6.25
6	6.30	7.50
4x2	3.15	3.70
5x4	4.05	4.75

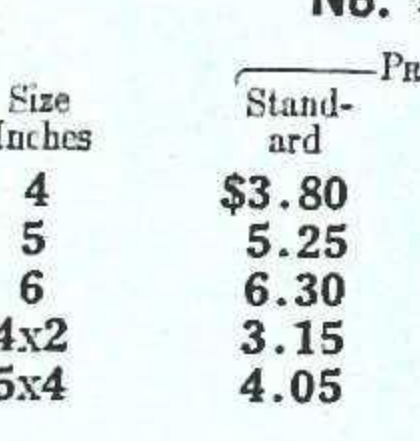


Fig. 1066

Sanitary Long Sweep Quarter Bends
No. SP-27

Size In.	Price, Each		Size In.	Price, Each	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.75	\$.90	6	\$2.75	\$3.40
3	.95	1.15	8	6.00	7.50
4	1.25	1.55	10	8.00	10.00
5	1.70	2.00	..	..	..



Fig. 1067


Sanitary Short Sweep Quarter Bends
No. SP-28

Size In.	Price, Each		Size In.	Price, Each	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.60	\$.75	6	\$2.50	\$3.10
3	.90	1.10	8	4.80	6.00
4	1.15	1.40	10	6.80	8.50
5	1.55	1.85	..	..	..



Fig. 1068


Cast Iron Soil Pipe Fittings
Double Quarter Bends



Size Inches	Price, Each	
	Standard	Extra Heavy
2x2	\$1.50	\$1.85
3x2	2.45	3.05
3x3	2.55	3.20
4x2	2.80	3.45
4x3	2.80	3.45
4x4	2.80	3.45

No. SP-40
Fig. 1069


Single Hub Return Bends



Size Inches	Price, Each	
	Standard	Extra Heavy
2	\$1.25	\$1.55
3	1.50	1.85
4	1.70	2.00
5	2.45	3.05
6	3.10	3.85
8	..	7.75

No. SP-41
Fig. 1069A



Double Hub Return Bends



Size Inches	Price, Each	
	Standard	Extra Heavy
2	\$1.35	\$1.70
3	1.60	2.00
4	1.75	2.20
5	2.75	3.40
6	3.40	4.25
8	..	8.25

No. SP-42
Fig. 1069B

T Branches

Size In	Price, Each		Size In	Price, Each		EXTRAS. ADD TO LIST, EACH
	Std.	Ex. Hy.		Std.	Ex. Hy.	
2x2	\$.55	\$.75	6x2	\$1.80	\$2.15	Right or Left Inlets
3x2	.75	.90	6x3	1.80	2.15	Trap Screws Incl.
3x3	.85	1.10	6x4	1.80	2.15	..
4x2	.85	1.10	6x5	2.00	2.45	..
4x3	1.00	1.25	6x6	2.00	2.45	..
4x4	1.15	1.40	8	6.00	9.00	..
5x2	1.20	1.45	10	10.80	15.10	..
5x3	1.25	1.55	12	15.10	19.40	..
5x4	1.40	1.70	15	33.60	42.00	..
5x5	1.65	2.00	..	..	..	..

No. SP-52, Plain
Fig. 1069C

No. SP-53
With Right-hand
Side Inlet
Fig. 1069D

When ordering specify whether wanted with right or left-hand side inlet.

Tapped T Branches

Size Inches	Thread Inches	Price, Each	
		Standard	Extra Heavy
2	1 1/4, 1 1/2, 2	\$.70	\$.85
3	1 1/4, 1 1/2, 2	.85	1.10
4	1 1/4, 1 1/2, 2	1.00	1.25
5	1 1/4, 1 1/2, 2	1.60	2.00
6	1 1/4, 1 1/2, 2	2.50	3.10



No. SP-54
Fig. 1069E

T Branches with Handhole and Cover
No. SP-55

Size Inches	Price, Each		Size Inches	Price, Each	
	Standard	Extra Heavy		Standard	Extra Heavy
2	\$1.05	\$1.25	5	\$2.45	\$3.05
3	1.70	2.15	6	3.70	4.60
4	1.85	2.30	8	5.00	7.50







Fig. 1069F

Cast Iron Soil Pipe Fittings
Long T Branches



Size In.	Length in Clear In.	Price, Each		Size In.	Length in Clear In.	Price, Each	
		Std.	Extra Heavy			Std.	Extra Heavy
2	12	\$1.20	\$1.50	4	24	\$4.10	\$5.05
2	18	2.00	2.45	4	30	4.65	5.85
2	24	2.25	2.75	4	36	5.35	6.60
2	30	2.45	3.05	5	18	4.20	5.25
2	36	2.70	3.35	5	24	4.95	6.15
3	12	1.45	1.80	5	30	5.70	7.10
3	18	2.60	3.25	5	36	6.60	8.15
3	24	3.10	3.85	6	18	4.90	6.15
3	30	3.55	4.45	6	24	5.80	7.25
3	36	4.05	5.05	6	30	6.80	8.45
4	12	2.80	3.50	6	36	7.70	9.55
4	18	3.50	4.30	..	..	..	..

Sanitary T Branches


Size In.	Price, Each		Size Inches	Price, Each		EXTRAS. ADD TO LIST, EACH
	Std.	Extra Heavy		Std.	Extra Heavy	
2x2	\$.55	\$.75	6x2	\$1.80	\$2.15	Right or Left Inlets
3x2	.75	.90	6x3	1.80	2.15	Trap Screws Incl.
3x3	.85	1.10	6x4	1.80	2.15	..
4x2	.85	1.10	6x5	2.00	2.45	..
4x3	1.00	1.25	6x6	2.00	2.45	..
4x4	1.15	1.40	7	7.00	9.80	..
5x2	1.20	1.45	8	6.00	9.00	..
5x3	1.25	1.55	10	10.80	15.10	..
5x4	1.40	1.70	12	15.10	19.40	..
5x5	1.65	2.00	15	33.60	42.00	..

No. SP-59
Plain
Fig. 1072

No. SP-60
With Right-hand
Side Inlet
Fig. 1073

When ordering specify whether wanted with right or left-hand side inlet.


Tapped Sanitary T Branches



Size Inches	Thread Inches	Price, Each	
		Standard	Extra Heavy
2	1 1/4, 1 1/2, 2	\$.75	\$.90
3	1 1/4, 1 1/2, 2	.95	1.10
4	1 1/4, 1 1/2, 2	1.25	1.55
5	1 1/4, 1 1/2, 2	1.85	2.30
6	1 1/4, 1 1/2, 2	2.95	3.70

No. SP-62
Fig. 1074


Special Reducing Sanitary
T Branches



Size Inches	Price, Each		Size Inches	Price, Each	
	Std.	Ex. Hy.		Std.	Ex. Hy.
3x2x3	\$2.50	\$3.15	5x4x5	\$3.80	\$4.75
4x2x4	3.00	3.70	6x4x4	4.45	5.55
4x3x4	2.95	3.70	6x4x5	4.60	5.75
5x4x4	3.80	4.75	6x4x6	4.60	5.75

No. SP-63
Fig. 1075


Tee Branches, All Hub Ends



Size Inches	Price, Each	
	Standard	Extra Heavy
2	\$2.25	\$2.75
3	3.45	4.30
4	4.65	5.85
5	5.65	7.05
6	7.35	9.20

No. SP-56
Fig. 1076



Cast Iron Soil Pipe Fittings
Long Sanitary T Branches



Size Inches	Length in Clear In.	Price, Each		Size Inches	Length in Clear In.	Price, Each	
		Std.	Extra Heavy			Std.	Extra Heavy
2	12	\$1.20	\$1.50	4	24	\$4.10	\$5.05
2	18	2.00	2.45	4	30	4.65	5.85
2	24	2.25	2.75	4	36	5.35	6.60
2	30	2.45	3.05	5	18	4.20	5.25
2	36	2.70	3.35	5	24	4.95	6.15
3	12	1.45	1.80	5	30	5.70	7.10
3	18	2.60	3.25	5	36	6.60	8.15
3	24	3.10	3.85	6	18	4.90	6.15
3	30	3.55	4.45	6	24	5.80	7.25
3	36	4.05	5.05	6	30	6.80	8.45
4	12	2.80	3.50	6	36	7.70	9.55
4	18	3.50	4.30	8	36	9.00	..

No. SP-64
Fig. 1077

Y and Half Y Branches






Size Inches	Price, Each		Size Inches	Price, Each	
	Standard	Extra Heavy		Standard	Extra Heavy
2x2	\$.55	\$.75	6x2	\$1.80	\$2.15
3x2	.75	.90	6x3	1.80	2.15
3x3	.85	1.10	6x4	1.80	2.15
4x2	.85	1.10	6x5	2.00	2.45
4x3	1.00	1.25	6x6	2.00	2.45
4x4	1.15	1.40	7	7.00	9.80
5x2	1.20	1.45	8	6.00	9.00
5x3	1.25	1.55	10	10.80	15.10
5x4	1.40	1.70	12	15.10	19.40
5x5	1.65	2.00	15	33.60	42.00

No. SP-73
Y Branch
Fig. 1078

No. SP-74
Half Y
Branch
Fig. 1079

Y and Half Y Branches with Side Inlet

Size Inlet Inches	Price, Each		Size Inlets	Price, Each	
	Standard	Extra Heavy		Standard	Extra Heavy

Cast Iron Soil Pipe Fittings
Long Y Branches



No. SP-78
Fig. 1081

Size In.	Length in Clear Inches	PRICE, EACH		Size In.	Length in Clear Inches	PRICE, EACH	
		Std.	Extra Heavy			Std.	Extra Heavy
2	12	\$1.20	\$1.50	4	24	\$4.10	\$5.05
2	18	2.00	2.45	4	30	4.65	5.85
2	24	2.25	2.75	4	36	5.35	6.60
2	30	2.45	3.05	5	18	4.20	5.25
2	36	2.70	3.35	5	24	4.95	6.15
3	12	1.45	1.80	5	30	5.70	7.10
3	18	2.60	3.25	5	36	6.60	8.15
3	24	3.10	3.85	6	18	4.90	6.15
3	30	3.55	4.45	6	24	5.80	7.25
3	36	4.05	5.05	6	30	6.80	8.45
4	12	2.80	3.50	6	36	7.70	9.55
4	18	3.50	4.30	..	..	..	..

Cast Iron Soil Pipe Fittings
Double Half Y Branches



No. SP-92
Plain
Fig. 1087

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size In.	PRICE, EACH		EXTRAS, ADD TO LIST, EACH
	Std.	Extra Heavy		Std.	Extra Heavy		Std.	Extra Heavy	
2x2	\$1.25	\$1.55	5x5	\$4.95	\$6.15	..	..	..	..
3x2	1.65	2.00	6x2	6.15	7.70	..	..	..	..
3x3	1.65	2.00	6x3	6.15	7.70	..	..	..	..
4x2	1.80	2.15	6x4	6.15	7.70	..	..	..	..
4x3	1.80	2.15	6x5	6.15	7.70	2	\$1.00	\$1.50	Brass Trap Screws Incl.
4x4	1.80	2.15	6x6	6.15	7.70	3	1.25	2.00	Inlet Inlets
5x2	4.95	6.15	8x8	9.00	13.50	4	1.50	2.50	..
5x3	4.95	6.15	10x10	16.20	22.65	5	2.00	3.00	..
5x4	4.95	6.15	12x10	22.70	29.15	6	2.50	3.50	..

Long Double Y Branches

Size Inches	PRICE, EACH	
	Standard	Ex. Hy.
2x2x12	\$1.60	\$2.00
2x2x18	2.75	3.45
2x2x24	3.00	3.75
4x2x18	4.25	5.30
4x2x24	4.85	6.05
4x4x18	4.65	5.80
4x4x24	5.25	6.55
4x4x30	5.90	7.35
4x4x36	6.50	8.10
5x4x18	5.40	6.75
5x4x24	6.10	7.65
5x4x30	6.90	8.60
5x4x36	7.70	9.65
6x4x18	6.10	7.65
6x4x24	7.00	8.75
6x4x30	7.95	9.95
6x4x36	8.85	11.05

No. SP-79 Special Reducing Y Branches

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
3x2x3	\$2.50	\$3.15	6x4x5	\$4.60	\$5.75
4x2x4	2.95	3.70	6x5x4	4.60	5.75
4x3x4	2.95	3.70	6x5x5	4.60	5.75
5x4x4	3.80	4.75	6x4x6	4.60	5.75
5x4x5	4.60	5.75	6x5x6	4.60	5.75
6x4x4	4.45	5.55	..	..	..

No. SP-79 Inverted Y Branches
Tapped for Iron Pipe

Thread, 1 1/4, 1 1/2 and 2 inches.

Size In.	PRICE, EACH		Size Inches	PRICE, EACH	
	Standard	Extra Heavy		Standard	Extra Heavy
2	\$1.40	\$1.70	5	\$2.80	\$3.50
3	2.00	2.45	6	3.40	4.25
4	2.20	2.75	..	..	..

Double Inverted Y Branches

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Standard	Ex. Hy.		Standard	Ex. Hy.
2x2	\$2.45	\$3.05	..	..	..
3x2	3.10	3.85	..	..	..
3x3	3.10	3.85	..	..	..
4x2	3.70	4.60	..	..	..
4x3	3.70	4.60	..	..	..
4x4	3.70	4.60	..	..	..

Double Y Branches

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Std.	Extra Heavy		Std.	Extra Heavy
2x2	\$1.05	\$1.30	5x4	\$3.70	\$4.60
3x2	1.70	2.15	5x5	3.70	4.60
3x3	1.70	2.15	6x2	5.55	6.90
4x2	1.70	2.15	6x3	5.55	6.90
4x3	1.70	2.15	6x4	5.55	6.90
4x4	1.70	2.15	6x5	5.55	6.90
5x2	3.70	4.60	6x6	5.55	6.90
5x3	3.70	4.60	..	..	..

Combination Y and Eighth Bends

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Std.	Extra Heavy		Std.	Extra Heavy
2x2	\$1.05	\$1.30	5x4	\$3.70	\$4.60
3x2	1.70	2.15	5x5	3.70	4.60
3x3	1.70	2.15	6x2	5.55	6.90
4x2	1.70	2.15	6x3	5.55	6.90
4x3	1.70	2.15	6x4	5.55	6.90
4x4	1.70	2.15	6x5	5.55	6.90
5x2	3.70	4.60	6x6	5.55	6.90
5x3	3.70	4.60	..	..	..

Size In.	PRICE, EACH		Size In.	PRICE, EACH		EXTRAS, ADD TO LIST, EACH
	Std.	Extra Heavy		Std.	Extra Heavy	
2x2	\$1.05	\$1.30	5x4	\$3.70	\$4.60	..
3x2	1.70	2.15	5x5	3.70	4.60	..
3x3	1.70	2.15	6x2	5.55	6.90	2 \$1.00 \$1.50
4x2	1.70	2.15	6x3	5.55	6.90	3 1.25 2.00
4x3	1.70	2.15	6x4	5.55	6.90	4 1.50 2.50
4x4	1.70	2.15	6x5	5.55	6.90	5 2.00 3.00
5x2	3.70	4.60	6x6	5.55	6.90	6 2.50 3.50

Crosses

Size Inches	Thread Inches	PRICE, EACH	
		Standard	Extra Heavy
2	1 1/4, 1 1/2, 2	\$1.15	\$1.40
3	1 1/4, 1 1/2, 2	1.25	1.55
4	1 1/4, 1 1/2, 2	1.40	1.70
5	1 1/4, 1 1/2, 2	2.25	2.80
6	1 1/4, 1 1/2, 2	3.45	4.30

Tapped for Iron Pipe

Size In.	PRICE, EACH	
	Standard	Extra Heavy
2	\$1.15	\$1.40
3	1.25	1.55
4	1.40	1.70
5	2.25	2.80
6	3.45	4.30

Cast Iron Soil Pipe Fittings
Upright Y Branches



No. SP-111
Fig. 1091

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size Inlet	EXTRAS, ADD TO LIST, EACH	
	Std.	Extra Heavy		Std.	Extra Heavy		I. P. Tappings	Hub Inlets
2x2	\$1.85	\$2.30	5x4	\$4.90	\$6.15	3/8-1	\$0.60	..
3x2	1.85	2.30	5x5	5.50	6.90	1 1/4, 1 1/2	1.25	..
3x3	1.85	2.30	6x2	4.90	6.15	2	1.25	\$1.00
4x2	1.85	2.30	6x3	4.90	6.15	2 1/2	1.50	..
4x3	3.10	3.85	6x4	5.50	6.90	3	1.50	1.25
4x4	3.10	3.85	6x5	6.15	7.70	4	..	1.50
5x2	3.70	4.60	6x6	7.35	9.20	5	..	2.00
5x3	4.35	5.40	..	..	..	6	..	2.50

Ventilating Branches

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Standard	Extra Heavy		Standard	Extra Heavy
2x2	\$0.90	\$1.10	5x4	\$4.35	\$5.40
3x2	1.15	1.40	5x5	4.35	5.40
3x3	1.15	1.40	6x2	6.15	7.70
4x2	1.15	1.40	6x3	6.15	7.70
4x3	1.40	1.85	6x4	6.15	7.70
4x4	1.40	1.85	6x5	6.15	7.70
5x2	4.35	5.40	6x6	6.15	7.70
5x3	4.35	5.40	..	..	..

Tapped Ventilating Branches

Size Inches	Thread Inches	PRICE, EACH	
		Standard	Extra Heavy
2	1 1/4, 1 1/2, 2	\$1.40	\$1.70
3	1 1/4, 1 1/2, 2	2.00	2.45
4	1 1/4, 1 1/2, 2	2.20	2.75
5	1 1/4, 1 1/2, 2	2.80	3.50
6	1 1/4, 1 1/2, 2	3.40	4.25

Crosses

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size Inlet	EXTRAS, ADD TO LIST, EACH	
	Std.	Extra Heavy		Std.	Extra Heavy		I. P. Tappings	Hub Inlets
2x2	\$1.25	\$1.55	5x5	\$4.95	\$6.15	2	\$1.00	..
3x2	1.65	2.00	6x2	6.15	7.70	3	1.25	..
3x3	1.65	2.00	6x3	6.15	7.70	4	1.50	..
4x2	1.80	2.15	6x4	6.15	7.70	5	2.00	..
4x3	1.80	2.15	6x5	6.15	7.70	6	2.50	..
4x4	1.80	2.15	6x6	6.15	7.70	..	..	..
5x2	4.95	6.15	8	9.00	13.50	..	..	..
5x3	4.95	6.15	10	16.20	22.65	..	..	..
5x4	4.95	6.15	12x10	22.70	29.15	..	..	..

Tapped Sanitary Crosses

Size Inches	Thread Inches	PRICE, EACH	
		Standard	Extra Heavy
2	1 1/4, 1 1/2, 2	\$1.25	\$1.55
3	1 1/4, 1 1/2, 2	1.50	1.85
4	1 1/4, 1 1/2, 2	1.75	2.15
5	1 1/4, 1 1/2, 2	2.75	3.40
6	1 1/4, 1 1/2, 2	4.10	5.10

Cast Iron Soil Pipe Fittings
Sanitary Crosses



No. SP-124
Plain
Fig. 1097



No. SP-125
With Side Inlet
Fig. 1098

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size Inlet	EXTRAS, ADD TO LIST, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.		I. P. Tappings	Hub Inlets
2x2	\$1.25	\$1.55	5x5	\$4.95	\$6.15	2	\$1.00	..
3x2	1.65	2.00	6x2	6.15	7.70	3	1.25	..
3x3	1.65	2.00	6x3	6.15	7.70	4	1.50	..
4x2	1.80	2.15	6x4	6.15	7.70	5	2.00	..
4x3	1.80	2.15	6x5	6.15	7.70	6	2.50	..
4x4	1.80	2.15	6x6	6.15	7.70	..	..	..
5x2	4.95	6.15	8	9.00	13.50	..	..	..
5x3	4.95	6.15	10	16.20	22.65	..	..	..
5x4	4.95	6.15	12x10	22.70	29.15	..	..	..

Offsets



No. SP-133 Plain Fig. 1099
No. SP-134 2-inch Vent Fig. 1099A
No. SP-135 2-inch Heel Inlet Fig. 1099B

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2x 2	\$0.60	\$0.75	4x20	\$2.60	\$4.30
2x 4	.60	.75	4x22	3.10	4.60
2x 6	.75	.90	4x24	3.70	5.05
2x 8	.75	.90	4x26	4.35	5.45
2x10	1.00	1.25	5x 2	2.45	3.05
2x12	1.15	1.40	5x 4	2.45	3.05
2x14	1.25	1.55	5x 6	2.65	3.40
2x16	1.35	1.70	5x 8	3.00	3.80
2x18					

**Cast Iron Soil Pipe Fittings
Increasing Offsets
To Offset 6 Inches**



No. SP-137 Hub and Spigot Fig. 1101			No. SP-138 Tapped for Iron Pipe Fig. 1102		
Size Inches	Price, Each Std.	Price, Each Ex. Hy.	Size Inches	Price, Each Std.	Price, Each Ex. Hy.
1 1/2 x 4	.....	\$2.10	4x5	\$3.00	.....
2 x 4	\$2.00	2.25	4x6	3.25	.....
3 x 4	2.80	.....	6x8	4.00	.....

Eighth Bend Offsets



No. SP-139
Fig. 1103

Size Inches	Price, Each Std.	Price, Each Ex. Hy.	Size Inches	Price, Each Std.	Price, Each Ex. Hy.
2x2	\$.60	\$.75	4x8	\$1.25	\$1.55
2x4	.60	.75	4x10	1.50	1.85
2x6	.75	.90	4x12	1.60	2.00
2x8	.75	.90	4x14	1.90	2.45
2x10	1.00	1.25	4x16	2.00	3.40
2x12	1.15	1.40	4x18	2.30	3.55
2x14	1.25	1.55	4x20	2.60	4.30
2x16	1.35	1.70	4x22	3.10	4.60
2x18	1.70	2.15	4x24	3.70	5.05
2x20	2.00	2.45	5x4	2.50	3.15
3x2	.95	1.15	5x6	2.85	3.55
3x4	1.00	1.25	5x8	3.15	3.95
3x6	1.10	1.40	5x10	3.35	4.20
3x8	1.25	1.55	5x12	3.70	4.65
3x10	1.50	1.85	5x14	5.25	6.55
3x12	1.60	2.00	6x4	3.45	4.30
3x14	1.90	2.30	6x6	3.45	4.30
3x16	2.10	2.60	6x8	3.80	4.75
3x18	2.30	2.90	6x10	4.50	5.60
3x20	2.75	3.40	6x12	5.10	6.35
4x2	1.00	1.25	6x14	6.40	8.00
4x4	1.00	1.25	6x16	6.90	8.60
4x6	1.10	1.40	.....	.....	.....

Double Hubs

Size In.	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2	\$.50	\$.60	6	\$1.85	\$2.45
3	.65	.90	8	2.50	3.50
4	.70	.90	10	3.90	4.85
5	1.25	1.55	.....	.....	.....

Single Hubs

Size In.	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2	\$.40	\$.45	6	\$1.15	\$1.55
3	.50	.75	8	2.50	3.50
4	.60	.75	10	3.80	4.85
5	1.00	1.25	12	5.40	9.20

Reducers

Size In.	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
3x2	\$.40	\$.45	6x3	\$.85	\$1.00
4x2	.40	.45	6x4	.85	1.00
4x3	.45	.55	6x5	.85	1.00
5x2	.60	.75	8x6	2.50	4.25
5x3	.60	.75	10x8	4.85	6.20
5x4	.60	.75	12x10	6.76	10.80
6x2	.60	.75	15x12	13.30	22.30

**Cast Iron Soil Pipe Fittings
Plugs**



No. SP-145
Fig. 1107

Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2	\$.25	\$.30	8	\$1.20	\$1.50
3	.40	.45	10	2.15	3.25
4	.45	.60	12	3.25	4.30
5	.60	.75	15	5.60	7.00
6	.75	.90	.....	.....	.....

Sleeves

Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2	\$.60	\$.75	6	\$1.85	\$2.30
3	.75	.90	8	2.50	3.50
4	.75	.90	10	3.80	4.85
5	1.25	1.55	12	5.40	9.20

Thimbles

Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2	\$.60	\$.75	6	\$1.85	\$2.30
3	.75	.90	8	2.50	3.50
4	.75	.90	10	3.80	4.85
5	1.25	1.55	12	5.40	9.20

Vent Caps

Size Inches	Price, Each With Spigot	Price, Each With Set Screw	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2	\$.60	\$.60	6	\$1.85	\$2.30
3	.70	.65	8	2.50	3.50
4	.90	.80	10	3.80	4.85
5	1.85	1.25	12	5.40	9.20
6	2.00	1.55	.....	.....	.....

Fresh Air Inlets

Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
4	\$1.10	\$1.40
4x12	1.60	2.00

T Saddles and T Saddle Hubs

Size In.	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2x2	\$.75	\$.95	5x4	\$1.00	\$1.25
3x2	.80	1.00	5x5	1.00	1.25
3x3	.80	1.00	6x2	1.00	1.25
4x2	.80	1.00	6x3	1.00	1.25
4x3	.90	1.10	6x4	1.00	1.25
4x4	.90	1.10	6x5	1.05	1.30
5x2	.90	1.10	6x6	1.15	1.40
5x3	.95	1.15	.....	.....	.....

Y and Half Y Saddle Hubs

Size In.	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2x2	\$.80	\$1.00	5x4	\$1.05	\$1.30
3x2	.90	1.10	5x5	1.05	1.30
3x3	.90	1.10	6x2	1.15	1.40
4x2	.90	1.10	6x3	1.15	1.40
4x3	.95	1.15	6x4	1.15	1.40
4x4	.95	1.15	6x5	1.25	1.55
5x2	.95	1.15	6x6	1.25	1.55
5x3	1.00	1.25	.....	.....	.....

**Cast Iron Soil Pipe Fittings
Extension Pieces**



No. SP-163
Fig. 1111

Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy	Size Inches	Price, Each Stand- ard	Price, Each Extra Heavy
2x4	\$.60	\$.75	4x18	\$2.45	\$3.05
2x6	.60	.75	4x20	2.95	3.70
2x8	.75	.90	4x22	3.40	4.30
2x10	.90	1.10	4x24	3.70	4.60
2x12	1.00	1.25	5x4	1.85	2.30
2x14	1.15	1.40	5x6	1.85	2.30
2x16	1.25	1.55	5x8	2.10	2.60
2x18	1.40	1.70	5x10	2.30	2.90
2x20	1.50	1.85	5x12	2.45	3.05
2x22	2.00	2.45	5x14	2.70	3.40
2x24	2.50	3.05	5x16	2.95	3.70
3x4	1.00	1.25	5x18	3.20	4.00
3x6	1.00	1.25	5x20	3.70	4.60
3x8	1.10	1.40	5x22	4.20	5.25
3x10	1.25	1.55	5x24	4.70	5.85
3x12	1.50	1.85	6x4	2.45	3.05
3x14	1.75	2.15	6x6	2.45	3.05
3x16	1.95	2.45	6x8	2.70	3.40
3x18	2.20	2.75	6x10	2.95	3.70
3x20	2.45	3.05	6x12	3.20	4.00
3x22	2.75	3.40	6x14	3.45	4.30
3x24	2.95	3.70	6x16	3.90	4.90
4x4	1.25	1.55	6x18	4.45	5.55
4x6	1.25	1.55	6x20	4.90	6.15
4x8	1.40	1.70	6x22	5.50	6.90
4x10	1.50	1.85	6x24	6.15	7.70
4x12	1.70	2.00	6x30	7.85	9.80
4x14	1.85	2.30	6x36	8.00	10.00
4x16	2.15	2.60	.....	.....	.....

Increases

Size Inches	Price, Each Std.	Price, Each Ex. Hy.	Size Inches	Price, Each Std.	Price, Each Ex. Hy.
2x3	\$.90	\$1.10	1 1/4 x 2	\$.60	\$.75
2x4	.90	1.10	1 1/2 x 2	.60	.75
2x5	1.25	1.55	1 1/2 x 3	1.40	1.70
2x6	1.85	2.30	1 1/4 x 4	1.50	1.85
3x4	1.85	2.30	1 1/2 x 4	1.50	1.85
3x5	1.85	2.30	1 1/2 x 5	2.10	2.45
3x6	1.85	2.30	2 x 3	1.40	1.70
4x5	1.85	2.30	2 x 4	1.50	1.85
4x6	1.85	2.30	2 x 5	2.10	2.45
4x8	1.85	2.30	2 x 6	2.40	3.00
5x6	2.45	3.05	3 x 4	1.85	2.30
5x8	2.45	3.05	3 x 5	2.10	2.60
5x10	2.65	3.35	4 x 5	2.50	3.10
6x7	2.25	3.85	4 x 6	2.90	3.60
6x8	2.00	5.00	5 x 6	3.30	4.10
6x10	3.40	4.25	.....	.....	.....
8x10	4.35	7.00	.....	.....	.....
8x12	7.35	9.20	.....	.....	.....
10x12	9.20	11.50	.....	.....	.....

Short Tapped Increases

Size Inches	Price, Each Std.	Price, Each Ex. Hy.	Size Inches	Price, Each Std.	Price, Each Ex. Hy.
1 1/4 x 2	\$.75	\$.90	2x3	\$.90	\$1.10
1 1/2 x 2	.75	.90	2x4	1.00	1.25
1 1/4 x 4	1.00	1.25	3x4	1.40	1.75
1 1/2 x 3	.90	1.10	2x5	1.25	1.55
1 1/2 x 4	1.00	1.25	3x5	1.60	2.00
1 1/2 x 5	1.25	1.55	2x6	1.85	2.30

**Cast Iron Soil Pipe Fittings
Long Plain Increases for Calking**



No. SP-169
Fig. 1115

Size In.	Length In.	Price, Each Std.	Price, Each Ex. Hy.	Size In.	Length In.	Price, Each Std.	Price, Each Ex. Hy.
2x3	30	\$1.60	\$2.00	4x5	30	\$2.00	\$2.45
2x4	24	1.25	1.55	4x5	36	3.70	4.60
2x4	30	1.65	2.00	4x6	24	3.70	4.60
2x4	36	2.00	2.45	4x6	30	3.70	4.60
2x4	48	2.50	3.10	4x6	36	4.30	5.40
3x4	12	1.25	1.55	4x6	48	4.95	6.15
3x4	24	2.00	2.45	5x6	12	1.95	2.45
3x5	24	2.00	2.45	5x6	30	5.45	6.80
4x5	12	1.60	2.00	5x7	48	12.30	15.40
4x5	24	2.30	2.85	.....	.....	.....	.....

Long Tapped Increases



No. SP-170
Fig. 1116

Size Inches	Length Inches	I. P. Thread Inches	Price, Each Stand- ard	Price, Each Extra Heavy
1 1/2 x 4	24	1 1/2	\$2.25	\$2.75
2 x 4	24	2	2.25	2.75
2 x 4	30	2	2.40	3.00
2 x 4	36	2	2.60	3.25
2 x 4	48	2	3.00	3.75

Long Increases for Calking



No. SP-171
Tapped One Side
Fig. 1117

No. SP-172
Tapped Both Sides
Fig. 1118

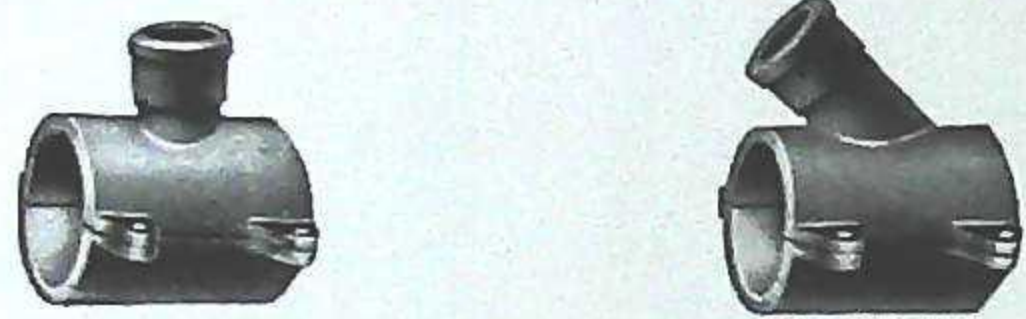
Cast Iron Soil Pipe Fittings

Plain Pipe Bands

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$0.90	\$1.10	5	\$1.35	\$1.70
3	1.00	1.25	6	1.60	2.00
4	1.15	1.40		.....	.....

No. SP-179
Fig. 1121

Pipe Bands with Inlet



No. SP-180
With T Branch
Fig. 1122

No. SP-181
With Y Branch
Fig. 1123

Size In.	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2x2	\$1.05	\$1.30	5x4	\$1.75	\$2.15
3x2	1.20	1.45	5x5	1.85	2.30
3x3	1.20	1.45	6x2	1.95	2.45
4x2	1.30	1.60	6x3	1.95	2.45
4x3	1.35	1.70	6x4	2.10	2.60
4x4	1.50	1.85	6x5	2.20	2.75
5x2	1.60	2.00	6x6	2.50	3.10
5x3	1.60	2.00	.....	.....	.....

Plain Pipe Rests Tapped Pipe Rests

Size In.	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2	\$.30	\$.40	4	\$.75	\$.90
3	.40	.45	5	1.15	1.45
4	.40	.45	6	1.75	2.25
5	.75	.90	8	2.25	3.25
6	.95	1.15	10	2.15	.....
8	1.75	2.25			
10	2.15	3.25			

No. SP-182
Fig. 1124

No. SP-183
Fig. 1125

Floor Plates

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Standard	Extra Heavy		Standard	Extra Heavy
2	\$.40	\$.50	5	\$.80	\$1.00
3	.60	.75	6	1.00	1.25
4	.75	.90	.....	.....	.....

No. SP-184
Fig. 1126

Trap Covers

Size In.	PRICE, EACH	
	Standard	Extra Heavy
2	\$.25	\$.30
3	.30	.35
4	.40	.50
5	.45	.55
6	.55	.65
8	.90	1.05
10	1.30	1.60

No. SP-185
Fig. 1127

Bar Strainers

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Price Each	Price Each		Price Each	Price Each
2	\$.10		5	\$.25	
3	.15		6	.30	
4	.20		.....	.....	.....

No. SP-186
Fig. 1128

Pipe Hooks

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Price Each	Price Each		Price Each	Price Each
2	\$.08		5	\$.16	
3	.11		6	.20	
4	.13		.....	.....	.....

No. SP-187
Fig. 1129

Plain S Traps

Size In.	PRICE, EACH	
	Std.	Ex. Hy.
2	\$.90	\$1.10
3	1.15	1.40
4	1.50	1.85
5	4.30	5.40
6	4.95	6.15
8	10.00	13.00

No. SP-188
Fig. 1129A

Plain P Traps

Size In.	PRICE, EACH	
	Std.	Ex. Hy.
2	\$.90	\$1.10
3	1.15	1.40
4	1.50	1.85
5	4.30	5.40
6	4.95	6.15
8	10.00	13.00



No. SP-190
Fig. 1129B

Long P Traps

Size Inches	PRICE, EACH	
	Standard	Extra Heavy
2x18	\$1.45	\$1.80
3x12	1.70	2.10
4x18	3.10	3.90
4x24	3.85	4.80
5x18	4.80	6.00

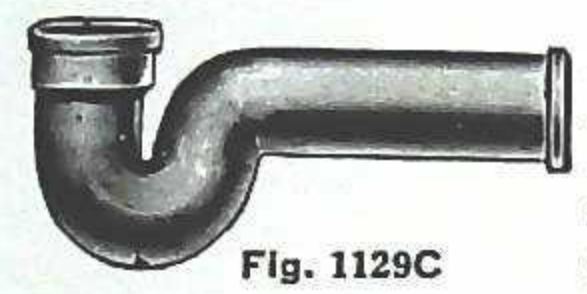


Fig. 1129C

Traps with Top Vent

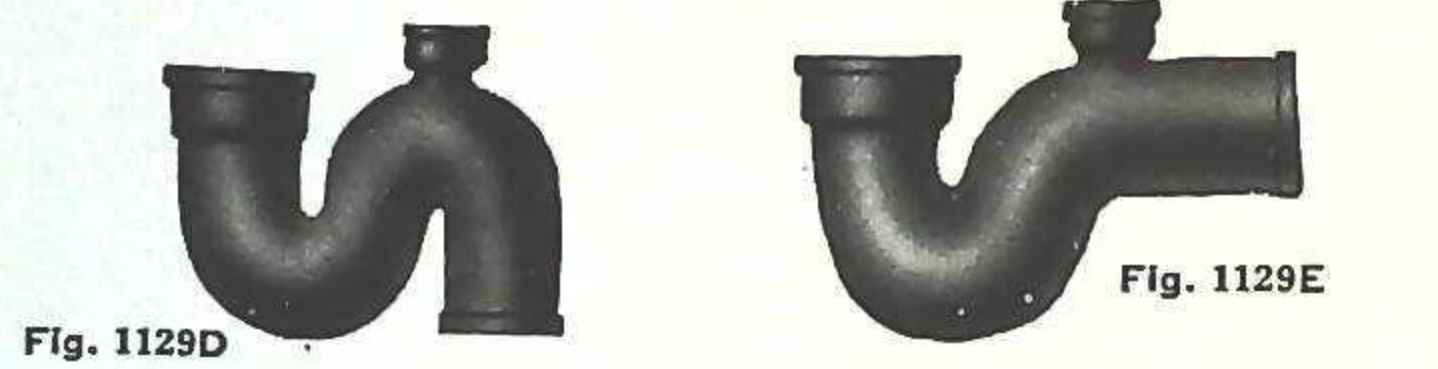


Fig. 1129D

Fig. 1129E

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2x2	\$1.20	\$1.50	5x4	\$4.00	\$5.00
3x2	1.35	1.70	5x5	4.00	5.00
3x3	1.35	1.70	6x2	4.80	6.00
4x2	2.20	2.75	6x3	4.80	6.00
4x3	2.20	2.75	6x4	4.80	6.00
4x4	2.20	2.75	6x5	4.80	6.00
5x2	4.00	5.00	6x6	4.80	6.00
5x3	4.00	5.00	.....	.....	.....

No. SP-191 S Trap

No. SP-193 P Trap

Three-quarter S Traps

With Top Vent



Fig. 1129F

No. SP-192

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2x2	\$1.20	\$1.50	5x4	\$4.00	\$5.00
3x2	1.35	1.70	5x5	4.00	5.00
3x3	1.35	1.70	6x2	4.80	6.00
4x2	2.20	2.75	6x3	4.80	6.00
4x3	2.20	2.75	6x4	4.80	6.00
4x4	2.20	2.75	6x5	4.80	6.00
5x2	4.00	5.00	6x6	4.80	6.00
5x3	4.00	5.00	.....	.....	.....

S Traps with Hand Hole and Cover

Size In.	PRICE, EACH	
	Std.	Ex. Hy.
2	\$1.25	\$1.55
3	1.85	2.30
4	2.50	3.10
5	4.95	6.15
6	5.55	6.90
8	10.75	13.75

No. SP-194
Fig. 1129G

P Traps with Hand Hole and Cover

Size In.	PRICE, EACH	
	Std.	Ex. Hy.
2	\$1.25	\$1.55
3	1.85	2.30
4	2.50	3.10
5	4.95	6.15
6	5.55	6.90
8	10.75	13.75



Fig. 1131

No. SP-196

Three-quarter S Traps With Handhole and Cover

Size In.	PRICE, EACH	
	Std.	Ex. Hy.
2	\$1.25	\$1.55
3	1.85	2.30
4	2.50	3.10
5	4.95	6.15
6	5.55	6.90
8	10.75	13.75



Fig. 1132

No. SP-195

Plain Running Traps

Size In.	PRICE, EACH	
	Std.	Ex. Hy.
2	\$.90	\$1.10
3	1.15	1.40
4	1.50	1.85
5	4.30	5.40
6	4.95	6.15
8	10.00	13.00



Fig. 1133

No. SP-209

Running Traps with Hand Hole and Cover

Size In.	PRICE, EACH	
	Std.	Ex. Hy.
2	\$1.25	\$1.55
3	1.85	2.30
4	2.50	3.10
5	4.95	6.15
6	5.55	6.90
8	10.75	13.75



Fig. 1134

No. SP-210

Cast Iron Soil Pipe Fittings Running Traps

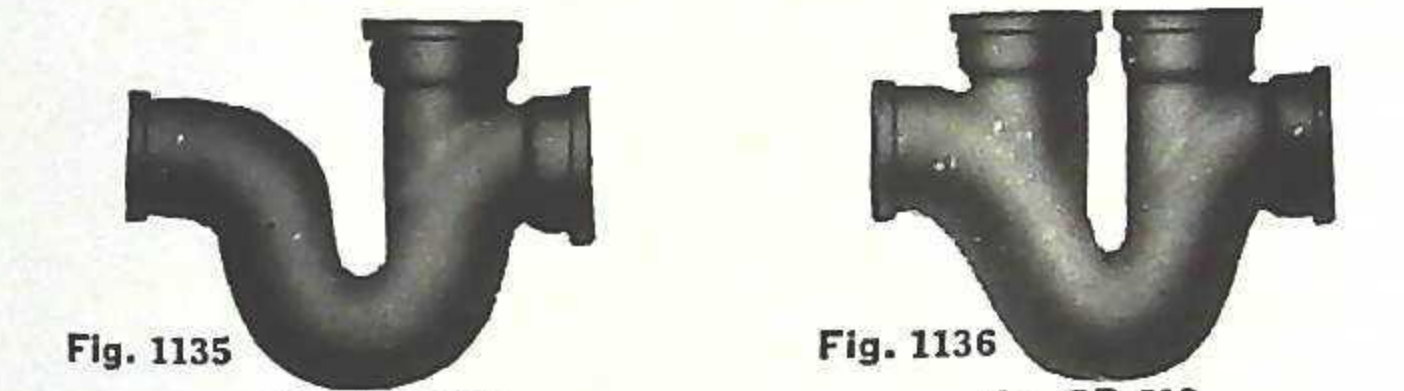


Fig. 1135

Fig. 1136

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Std.	Ex. Hy.		Std.	Ex. Hy.
2x2	\$1.20	\$1.50	2x2	\$1.60	\$2.00
3x2	1.35	1.70	3x2	1.80	2.25
3x3	1.35	1.70	3x3	1.80	2.25
4x2	2.20	2.75	4x2	2.60	3.25
4x3	2.20	2.75	4x3	2.60	3.25
4x4	2.20	2.75	4x4	2.60	3.25
5x2	4.00	5.00	5x2	4.80	6.00
5x3	4.00	5.00	5x3	4.80	6.00
5x4	4.00	5.00	5x4	4.80	6.00
5x5	4.00	5.00	5x5	4.80	6.00
6x2	4.80	6.00	6x2	5.60	7.00
6x3	4.80	6.00	6x3	5.60	7.00
6x4	4.80	6.00	6x4	5.60	7.00
6x5	4.80	6.00	6x5	5.60	7.00
6x6	4.80	6.00	6x6	5.60	7.00
8x4	11.60	14.50	8x4	12.80	16.00
8x6	12.00	15.00	8x6	14.00	17.00
8x8	12.00	15.00	8x8	14.00	17.00
10x6	19.45	25.90	10x6	21.60	28.10
10x8	23.00	29.00	10x8	29.35	36.70
12x6	29.35	36.70	12x6	31.10	38.90
15x6	67.00	84.00	15x15	.....	150.00
15x8	.....	130.00	.....	.....	.....

No. SP-211
With Hub Vent

No. SP-212
With Double Hub Vent

Blake Y Fittings



Style No 1
Fig. 1137

Style No. 2
Fig. 1138

With So-easy-to-remove Cover

Size	Price, Standard	Price, Extra Heavy
2 inches	\$3.50	\$6.50
4 inches	4.00	7.50

With Brass Screw Plug Cover

Size	Price, Standard	Price, Extra Heavy
2 inches	\$4.00	\$7.00
4 inches	5.00	8.00

Palmer Sewer Valves

With Hub

Size In.	Price Each	Size In.	Price Each
2	\$6.00	6	\$10.00
3	6.50	8	15.00
4	7.50	10	30.00
5	9.00	12	50.00



Fig. 1139

No. D-7 Palmer Sewer Valves

With Handhole and Cover

Size In.	Price Each	Size In.	Price Each
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Acme Self-adjusting Copper Roof Flanges

Made in one piece and fitted with a heavy reinforced lead collar.

No. 1 is adjustable from 5 to 45 degrees; No. 2 is adjustable from flat to 30 degrees.

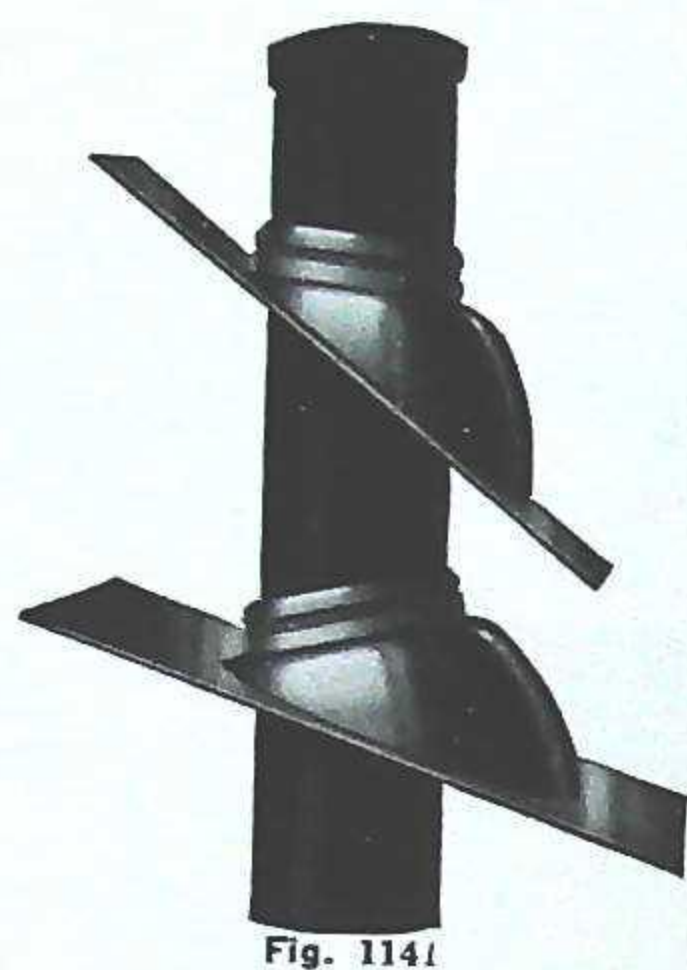


Fig. 1141

Size Inches	PRICE, EACH	
	Standard	Extra Heavy
2	\$2.00	\$2.00
3	2.00	2.00
4	2.00	2.00
5	2.40	2.50
6	2.60	2.70

Acme Swivel Type Copper Roof Flanges

No. 1 is adjustable from 15 to 45 degrees; No. 2 is adjustable from flat to 30 degrees.

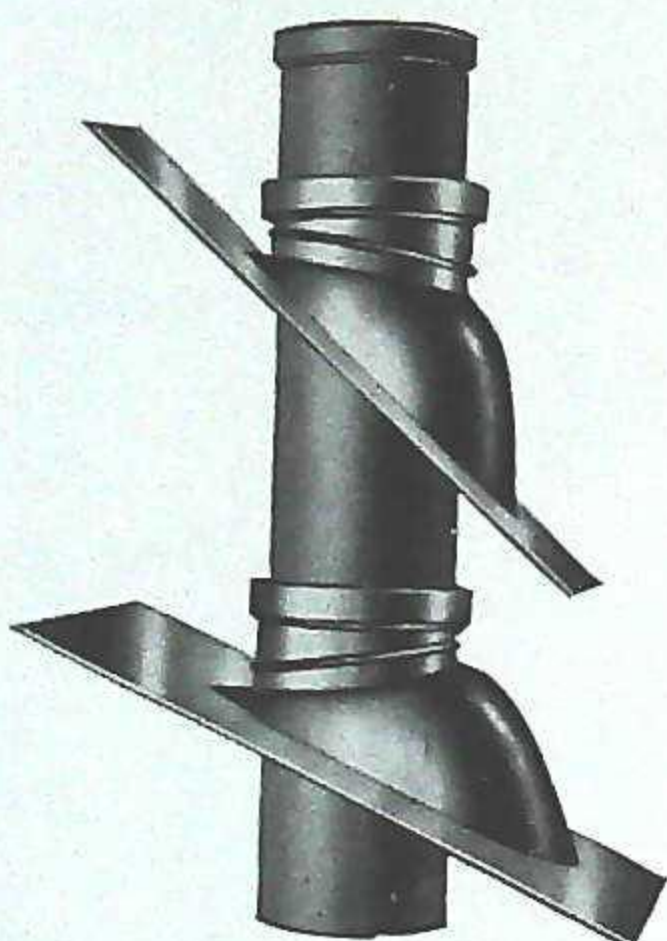


Fig. 1142

Size Inches	PRICE, EACH	
	Standard	Extra Heavy
2	\$1.75	\$1.75
3	1.92	1.92
4	2.00	2.00
5	2.83	2.83
6	5.00	5.00

Redlon Adjustable Roof Flanges

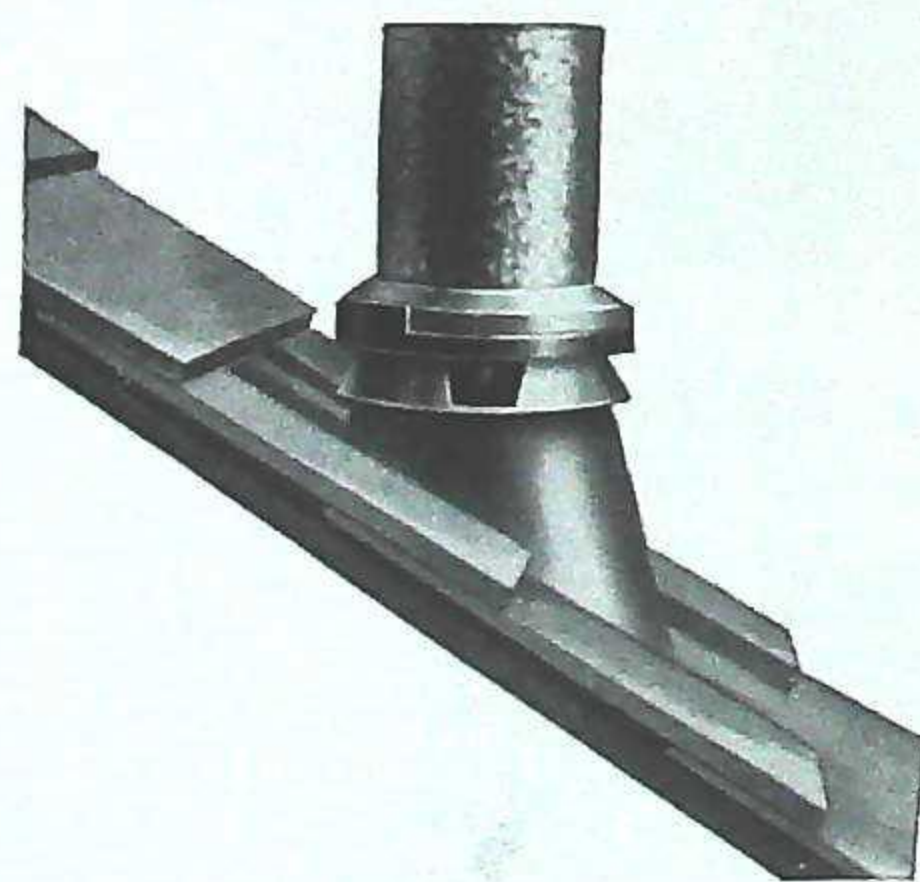


Fig. 1143

Made of heavy sheet copper. Has a soft lead ring for caulking against soil pipe. Makes a perfect joint.

Lower edge of lead caulking ring dresses back against copper after adjustment is made.

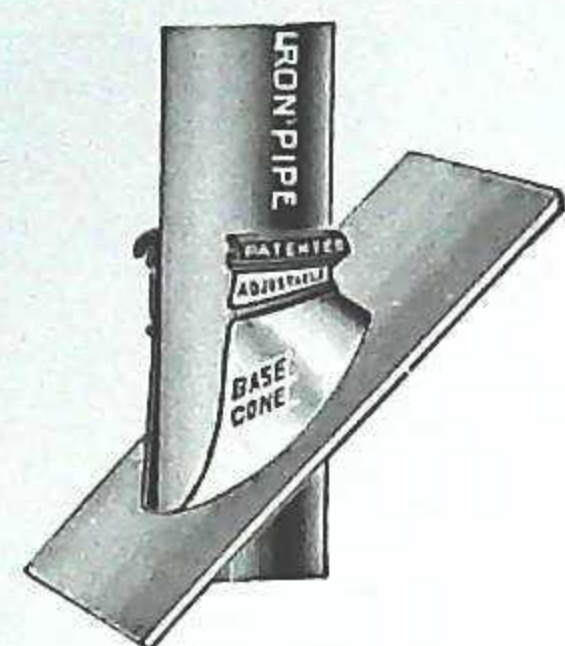
A rivet holds hub in place and will let it tip to fit the roof it is placed on.

Made in 2 angles; flat to 25 and 25 to 45 degrees.

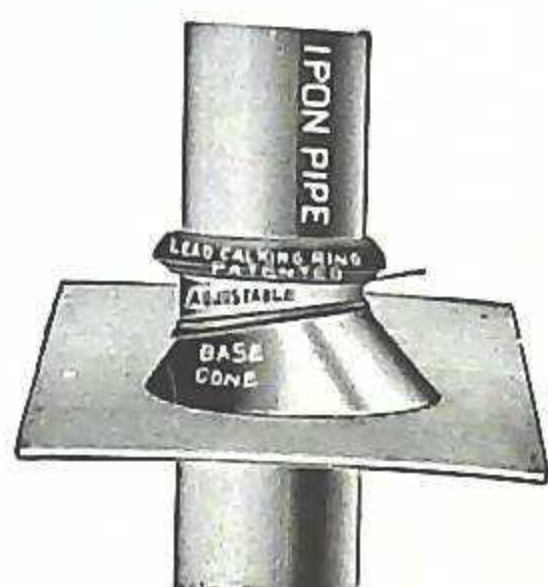
For standard and extra heavy soil pipe.

Size	.....inches	2	3	4
Price	.....each	\$4.00	4.00	4.00

Hessler Adjustable Roof Flashes



No. 1
Fig. 1144



No. 2
Fig. 1145

The Hessler Flange will flash extra heavy, standard or wrought iron pipe. The plumber can vary it to suit the different pitches of roofs. All joints are water tight.

Made of copper or of galvanized steel or zinc.

To use slip the flange over the vent pipe and bring down to the roof. Adjust the flange until the base lies perfectly flat on the roof. Then fasten securely. After this has been done use hammer to bead lead onto vent pipe. Then use calking iron to feather edge lead to fit pipe and you have a water-tight and lasting joint. Care should be taken in forming lead around pipe—always strike as near the base of lip as possible but never at extreme top.

The No. 1 adjusts from 1/2 to 1/4 pitch, and the No. 2 adjusts from 1/2 pitch to flat.

The 1 1/4 and 1 1/2-inch flange is a combination flange that will fit either size of pipe.

Size Inches	Price per Dozen	Size Inches	Price per Dozen
1 1/4-1 1/2	\$30.00	4	\$40.00
2	34.00	5	57.00
3	38.00	6	100.00

Type 1 Holt Roof Connections

For wood or concrete roof-deck. Has cast iron strainer, three guard cast iron gravel stop flange-ring, strainer attachment, 16-ounce copper flashing, No. 13 S. W. G. seamless copper pipe with roof lock fittings and expansion joint with spigot end or tapped for iron pipe.

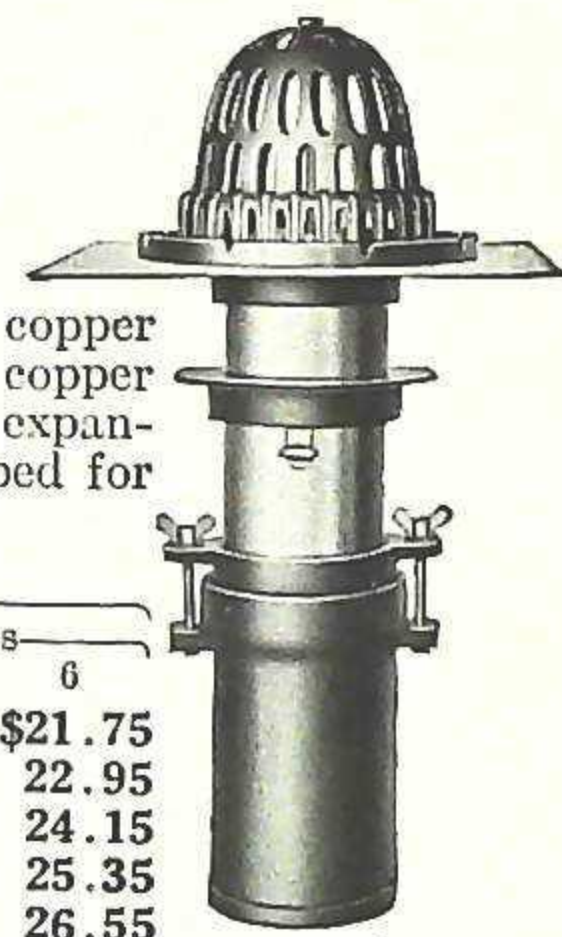


Fig. 1146

Roof Thickness Inches	Length Connection Inches	PRICE, EACH			
		FOR DRAIN PIPE, INCHES			
		3	4	5	6
1	10	\$14.00	\$15.00	\$18.25	\$21.75
1-3	12	14.60	15.70	19.15	22.95
3-5	14	15.20	16.40	20.05	24.15
5-7	16	15.80	17.10	20.95	25.35
7-9	18	16.40	17.80	21.85	26.55

These connections made in various styles.

Type 4 Holt Roof Connections

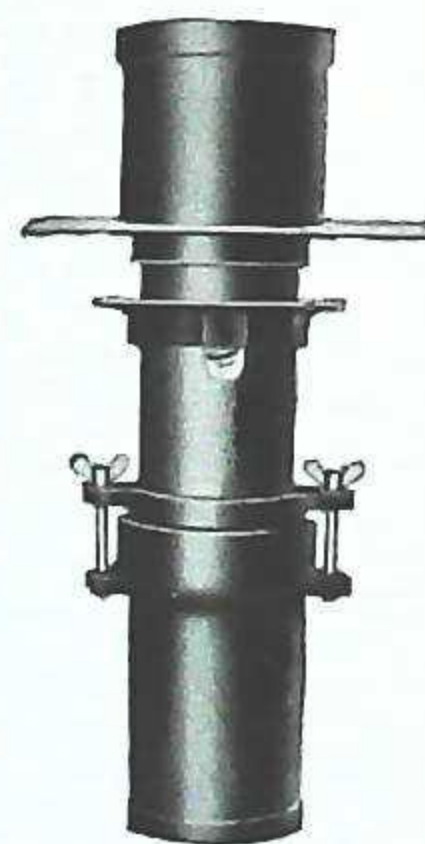


Fig. 1147

For flat deck roof.

Roof Thickness In.	Lgh. Conn. In.	PRICE, EACH			
		FOR DRAIN PIPE, INCHES			
		3	4	5	6
1	10	\$14.00	\$15.00	\$18.25	\$21.75
1-3	12	14.60	15.70	19.15	22.95
3-5	14	15.20	16.40	20.05	24.15
5-7	16	15.80	17.10	20.95	25.35
7-9	18	16.40	17.80	21.85	26.55

*Additional Length, Price per Inch
 \$.30 \$.35 \$.45 \$.60

*For roofs thicker than above, each additional inch of roof thickness requires an additional inch of length of connection.

Type 6-L Holt Roof Connections



Fig. 1151

For wood or concrete roof-deck. Has internal expansion joint, heavy cast iron casing with extending flange to support it on roof deck, 16-ounce copper flashing flange and cast iron globe strainer. Has brass locking dogs for roofs over 3 inches thick. For roof under 3 inches a sliding lock collar is furnished.

Calked lead joint is made between leader pipe and connection.

Size In.	Size Opening in Roof In.	Price Each	Add for Cast Brass or Aluminum Strainer	Size In.	Size Opening in Roof In.	Price Each	Add for Cast Brass or Aluminum Strainer
4	7 1/2	18.00	1.50	8	11 1/2	34.25	2.50
5	8 1/2	19.75	1.50				

Type 3 Holt Roof Connections

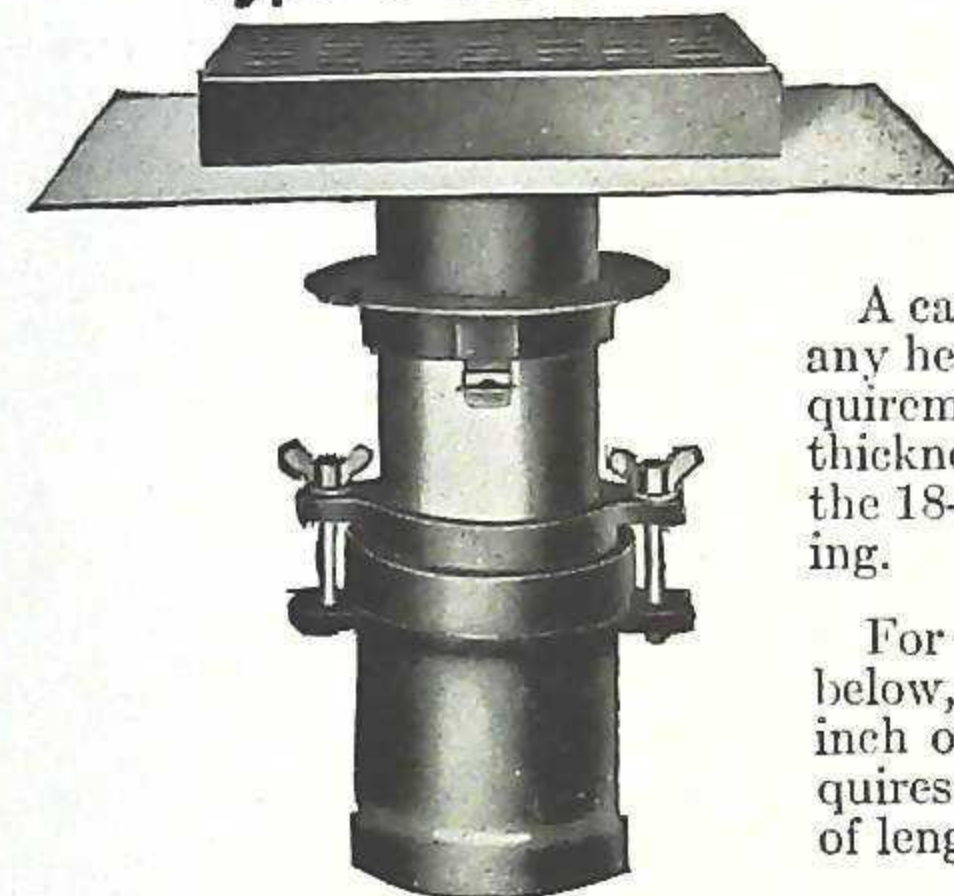


Fig. 1152

Used as a leader outlet on roofs covered with tile brick, inlaid slate, etc.

A cast-brass tile-stop of any height to meet the requirements of roof-tile thickness is attached to the 18-ounce copper flashing.

For roofs thicker than below, each additional inch of roof thickness requires an additional inch of length of connection.

Roof Thickness Inches	Length Connection Inches	PRICE, EACH			
		FOR DRAIN PIPE, INCHES			
		3	4	5	6
1	10	\$18.25	\$19.25	\$22.50	\$26.00
1-3	12	18.85	19.95	23.40	27.20
3-5	14	19.45	20.65	24.30	28.40
5-7	16	20.05	21.35	25.20	29.60
7-9	18	20.65	22.05	26.10	30.80
Price, Add'l Inches, each		.30	.35	.45	.60
Size, Roof Opening, inches		4	5	6	7

No. 400C Josam Roof Drains

For saw-tooth construction With Removable Sediment Cup and Strainer

In this drain the outlet is thrown to one side of the bearing construction, thereby eliminating offsetting of drain outlet.

Cast iron drain is equipped with a cast iron clamping ring which has the same surface contour as flange of drain. Ring is held in place by bolts securely tying flashing or roofing felts to body of drain.



Fig. 1153

Size Outlet Inches	PRICE, EACH	
	S. P. Ends	Threaded Ends
4	\$26.00	\$27.00
5	28.00	29.00
6	30.00	31.00

No. D54 Cast Iron Closet Bends With One 45° Tapping on Each Side And Adjustable Flange

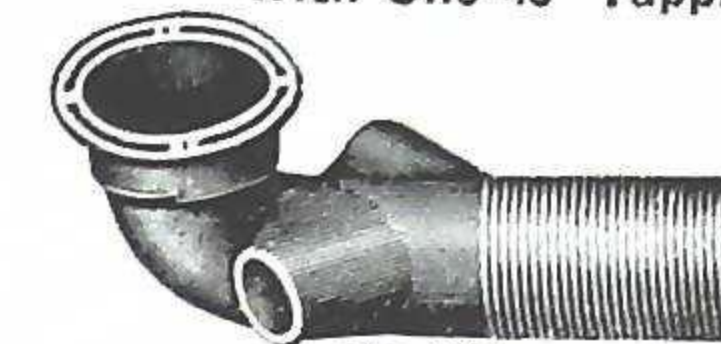


Fig. 1154

A 45° tapping on each side for 1 1/2 or 2-inch iron pipe.

Size Inches	Price Each
4x12	\$2.80
4x14	2.90
4x16	3.00

No. D50 Cast Iron Plain Closet Bends With Adjustable Flange



Fig. 1155

Size Inches	Price Each
4x12	\$2.40
4x14	2.50
4x16	2.60

No. D53 Cast Iron Closet Bends With Two Tappings on Both Sides With Adjustable Flange



Fig. 1156

Size Inches	Price Each
4x12	\$3.30
4x14	3.40
4x16	3.50

Two tappings on both sides for 1 1/2 or 2-inch iron pipe.

No. 100 Josam Double Drainage Floor or Shower Drains All Brass

An all brass drain designed for use in cement, tile terrazzo, mosaic, mastic or other composition floors.

For use in residences, hotels, schools, institutions and public buildings where lack of floor depth will not permit use of trap.



Fig. 1157

Made with either male or female threaded outlet.

No.	Strainer In.	Outlet In.	Price Each
100	2	2	\$6.50
101	2	2	7.00
102	3	3	8.00
103	4	3	9.50
104	5	4	11.00

No. 300 Josam Double Drainage Floor Drains Without Trap

Adapted for floors of marble, tile, cement, or any composition where the construction will not permit, or where it is not desirable to place trap in same. This drain outlet can be used and an independent trap placed wherever the construction will permit. It has a cast iron body and adjustable brass strainer. Strainers furnished concave, convex or flat.

Drain is furnished with either male or female threaded outlet. No. 300 301 302
 Strainer.....inches 4 5 6
 Outlet..... " 2 3 4
 Price.....each \$6.00 8.00 9.50



Fig. 1158

No. 3001 Josam Urinal Drains With Adjustable Double Eccentric Bushings

Has a particular advantage in meeting irregularities in receptors when they will not meet with roughed-in connections.

Outlet.....inches 2 3
 Price.....each \$9.00 10.00



Fig. 1159

No. 200 Josam Double Drainage Floor Drains



Fig. 1161

For concrete, tile, marble, or any composition floor, especially designed for showers, urinals and floors where construction requires a swinging joint being made necessary when obstructions are formed in the floor by reinforcing rods, beams, joists, etc.

No.	201	203	205
Strainer.....inches	4	5	6
Outlet....."	2	2	2
Price.....each	\$11.00	12.00	13.00

Soil pipe connectors are extra.

No. 200A Josam Double Drainage Trap and Drain U. S. Government Type

For shower, urinal and floor drains for concrete, tile, marble or any composition floors. Has brass strainer, and collar which screws into body of drain and is adjustable to suit floor level. If with flashing clamping device as shown, add \$1.00 to list.

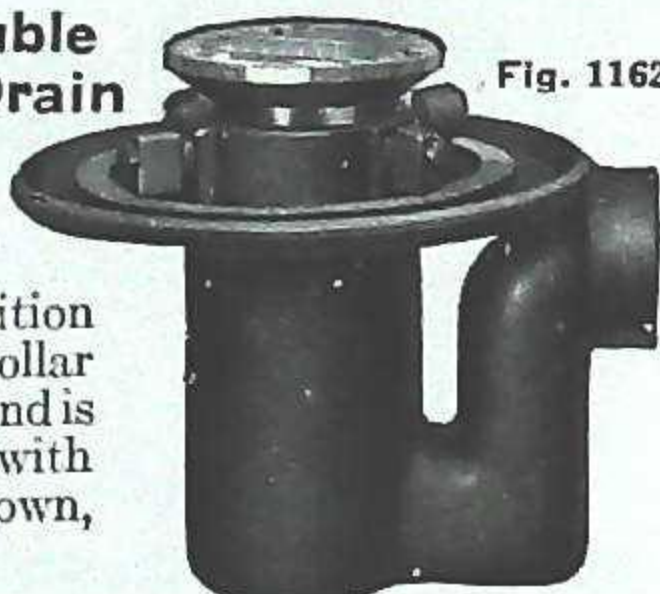


Fig. 1162

No.	200A	201A	202A	203A	204A	205A
Strainer.....inches	4	5	4	5	6	6
Outlet....."	1 1/2	1 1/2	2	2	1 1/2	2
Price.....each	\$10.50	12.00	12.00	12.00	12.50	13.00
No.	206A	207A	208A	209A	210A	
Strainer.....inches	5	6	6	7	8	
Outlet....."	3	3	4	4	4	
Price.....each	\$15.00	16.00	19.00	21.00	23.00	

No. 2003A Josam Double Drainage Trap and Drain

Shallow Type

A specially designed drain for shallow floors where construction will not permit installation of a deeper trap.

It has a cast iron body with brass strainer, polished or nickel-plated finish.

Provided with flashing ring and eccentric clamps.



Fig. 1163

No.	2003A	2008A
Strainer.....inches	6	6
Outlet, Hub or Screw....."	2	3
Price.....each	\$15.00	18.00

No. 500 Josam Double Drainage Floor Drains or Cesspools



Fig. 1164

This drain can be furnished all cast iron or of Duriron. Construction of grate eliminates possibility of tilting.

Especially recommended for use in basement areaways, scale and elevator pits, dairy, laundry or factory floors; also for swimming pools and promenade roofs or decks. Can be furnished galvanized or with brass top rim and grate at additional cost.

Made with female threaded outlet or slip caulked joint connection.

No.	Grate Inches	Outlet Inches	Price, Each	
			With Iron Grate	With Brass Grate, Rim
500	8	2, 3, 4	\$6.00	\$12.00
501	11	5, 6	9.00	18.00

Josam Double Drainage Roof Drains

Made of heavy cast iron for concrete roofs. Roofing felts are joined to drain with an improved type clamping ring which has four adjustable bronze clamping posts with brass set screws. An absolutely water tight connection is made between roofing felts and body of drain. This eliminates the use of flashing. The sediment cup and dome strainer are combined into one and can be removed for cleaning. Has standard female threaded outlet. Soil pipe connectors are extra. Galvanized, extra.



Fig. 1165

No.	400BS	401BS	402BS	404BS
Outlet.....inches	2, 3, 4	5	6	8
Price.....each	\$15.00	17.00	19.00	28.00

No. 400 Josam Double Drainage Roof Drains



Fig. 1166

Has removable combined strainer and sediment cup. Is designed for concrete roof.

It catches leakage which may occur between the drain and the construction. Tar, gravel and other sediment is caught in the strainer cup which is detachable. Tapped standard iron pipe thread.

All cast iron.

No.	Outlet In.	Price Each	No.	Outlet In.	Price Each
400	2, 3, 4	\$12.00	402	6	\$16.00
401	5	14.00	404	8	20.00

No. 354A Cast Iron Drains and Traps With Brass Strainer For Urinal, and Shower Stalls 6 Inches Deep

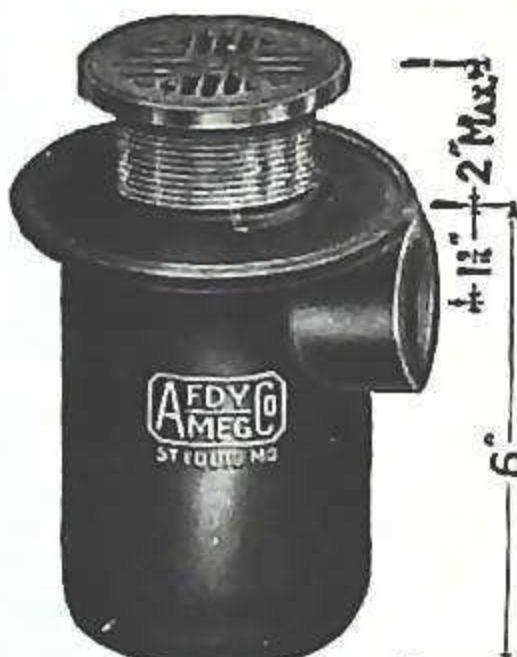


Fig. 1167

Will fit porcelain urinals and shower stall receptors having 4 1/2 inch diameter counter bore and 3 1/2 inch diameter outlet.

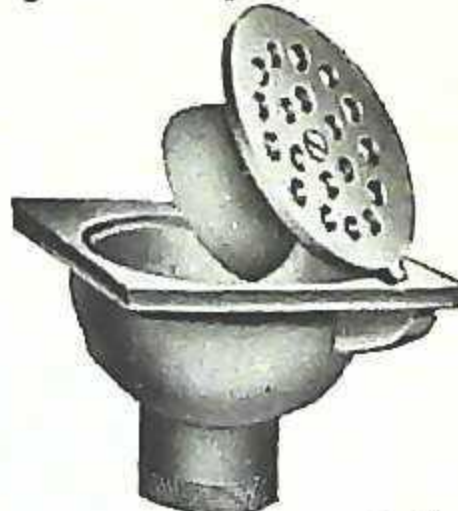
Strainer is nickel-plated.

Strainer In.	Ht. Body In.	Diam. Body In.	Outlet I. P. In.	Price Each
4 3/8	6	5	2	\$5.50

Cast Brass Bell Trap Cesspools



No. 208, Plain Fig. 1168



No. 210, Threaded Fig. 1169

Size Inches	Outlet Inches	Price, Each				No. 210 Threaded Outlet Add
		ALL BRASS		IRON BODY BRASS STRAINER AND TOP		
6x6	2	Pol. Top \$3.70	N.P. Top \$4.20	Pol. Top \$2.00	N.P. Top \$2.50	\$.20
9x9	3	6.50	7.50	3.50	4.50	.30
12x12	4	10.00	11.00	6.50	7.50	.40

No. 225A Cast Iron Cesspools with Bell Trap With Loose Strainer



Fig. 1171

Size In.	Outlet In.	Price, Each Std.	Ex. Hy.	Size In.	Outlet In.	Price, Each Std.	Ex. Hy.
4x4	1 1/4	\$.70		10x10	3	\$1.80	\$2.40
6x6	2	.80	\$1.15	10x10	4	1.80	2.40
8x8	2 3/4	1.45	1.80	12x12	3 3/8	2.40	3.30
9x9	3	1.60	1.90	13x13	3 3/8	2.90	4.00
9x9	4	1.60	1.90				

Can be furnished without bell trap; also galvanized.

No. 228A Cast Iron Cesspools with Bell Trap With Hinged Strainer

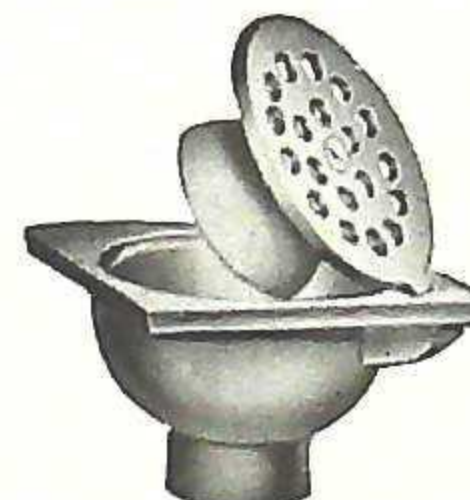


Fig. 1172

Size In.	Outlet, In. Std.	Ex. Hy.	Price, Each Std.	Ex. Hy.	Size In.	Outlet, In. Std.	Ex. Hy.	Price, Each Std.	Ex. Hy.
6x6	2	2	\$1.00	\$1.40	10x10	3	3	\$2.10	\$2.80
8x8	2 3/4	3	1.60	2.00	10x10	4	4	2.10	2.80
9x9	3	3	1.80	2.20	12x12	3 1/2	3 1/2	2.70	3.60
9x9	4	4	1.80	2.20	13x13	4	4 1/8	3.50	5.10

Can be furnished galvanized.

No. 148A Cast Iron Hydrant Cesspools

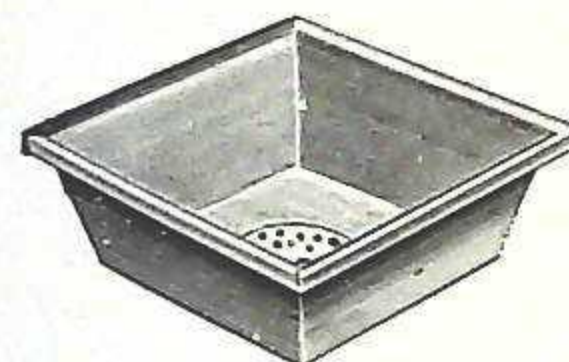


Fig. 1173

No.	Size Inches	Price Each
1	12x12x5 1/4	\$1.00
2	14x14x5 3/8	1.15
3	16x16x5 3/8	1.30
3 1/2	16x16x9	2.00

Outlet fitted for connection with 3 and 4-inch soil pipe.

No. 217 Hydrant Cesspools With Bell Trap

Size Inches	Price Each
12x12	\$1.60
14x14	1.90
16x16	2.30
18x18	2.60

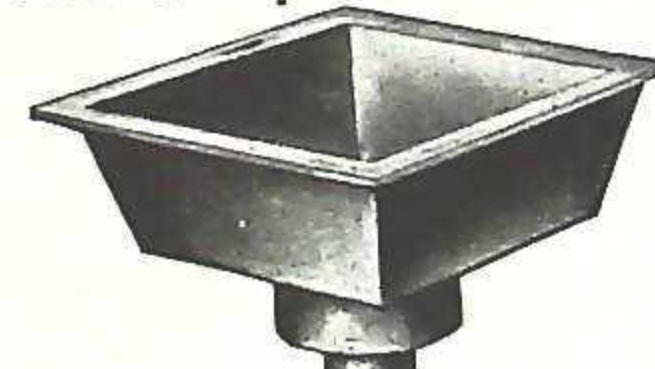


Fig. 1174

No. 150A Cast Iron Stable Cesspools With Heavy Double Grate

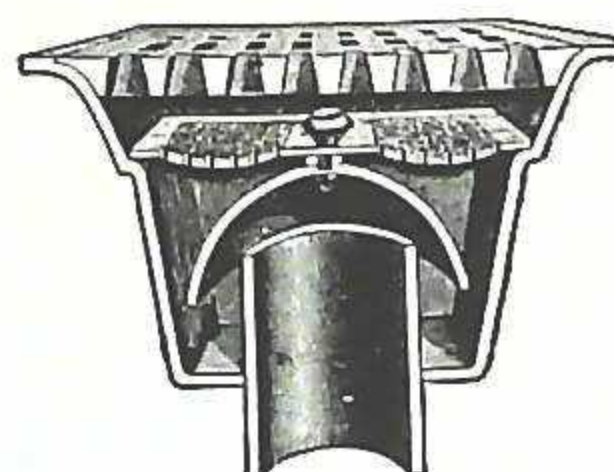


Fig. 1175

Size.....inches	12x12	16x16	16x16
Depth....."	8 3/8	8 1/2	8 3/8
Size Outlet....."	4 1/4	4	5
Price.....each	\$5.00	8.00	9.00

Sewer Traps With Bell Trap

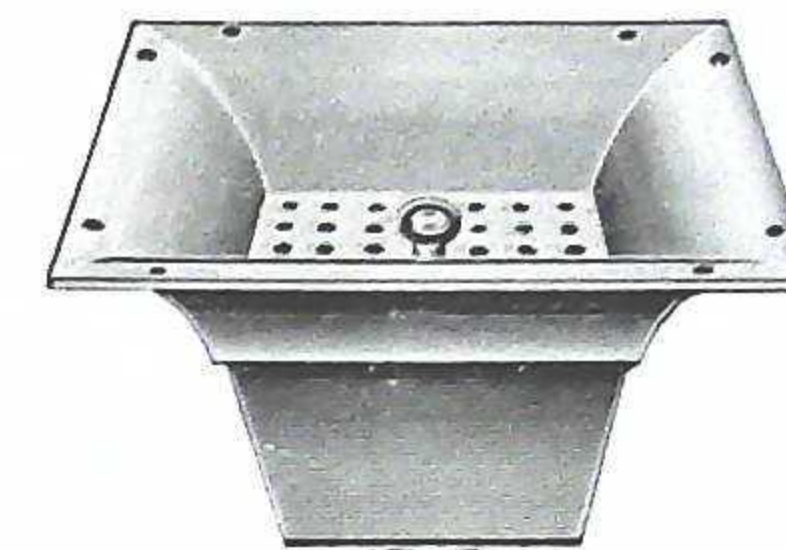


Fig. 1176

Size.....inches	16x16
Depth....."	10
Price.....each	\$2.50

No. 596 Penn Sand or Garage Traps

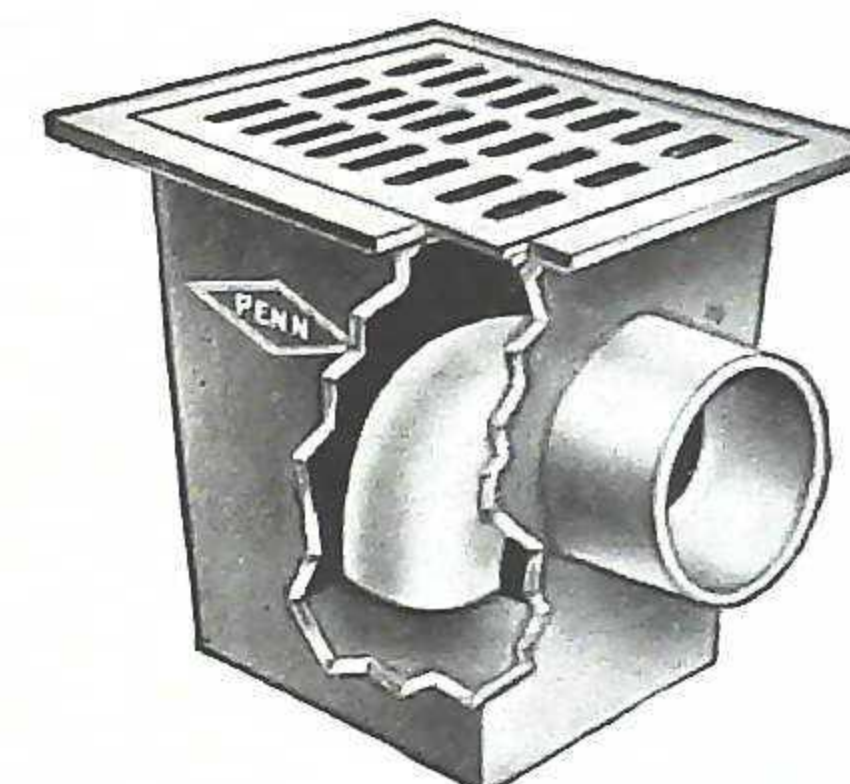


Fig. 1177

Price, No. 596.....each \$22.00

This trap prevents sand and other solid matter from entering the drainage system and allows liquid waste to drain freely.

Waste inlet slips into position, no bolts, can be easily lifted out. Hub end integral with trap.

Especially recommended for garages, stables, dairies, etc.

Size 12 1/2 x 14 x 13 inches deep.

No. J-1106 Blake Round Ice Box Drains

Has hinged cover. Tapped for 3/4, 1, 1 1/4 or 1 1/2-inch iron pipe. Measures 8 inches across top, 2 1/2 inches in total depth. Weight, 4 1/2 pounds. Black-dipped, for 1 1/4-inch I. P. furnished unless otherwise specified.



Fig. 1178

Style.....each	Black-dipped \$1.00	Aluminum-dipped 1.10	Galv. 1.55
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No. 225 Round Cesspool Plates

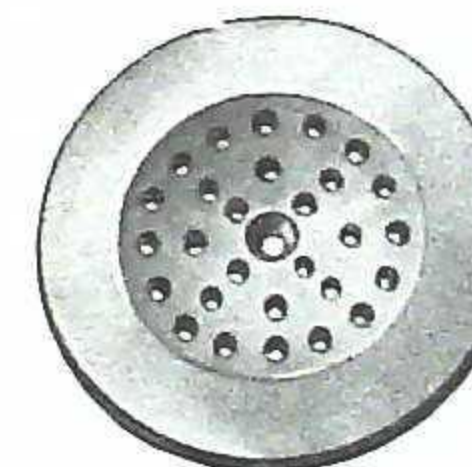


Fig. 1179

Size In.	Price, Each		Size In.	Price, Each	
	Reg.	With Bars		Reg.	With Bars
4	\$.20	\$.20	9	\$.70	\$.65
5	.25	.25	10	.80	.80
6	.30	.35	11	1.00	.90
7	.40	.45	12	1.20	1.10
8	.60	.55			

No. 226 Square Cesspool Plates

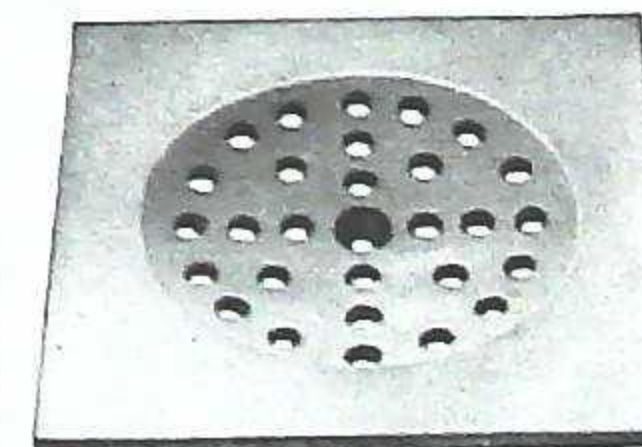


Fig. 1179A

Size Inches	Price Each	Size Inches	Price Each
4	\$.20	10	\$1.00
5	.25	11	1.30
6	.35	12	1.50
7	.45	14	1.85
8	.75	16	2.30
9	.85		

No. 3-64 Holyoke Water Heaters For Kerosene



Fig. 1201

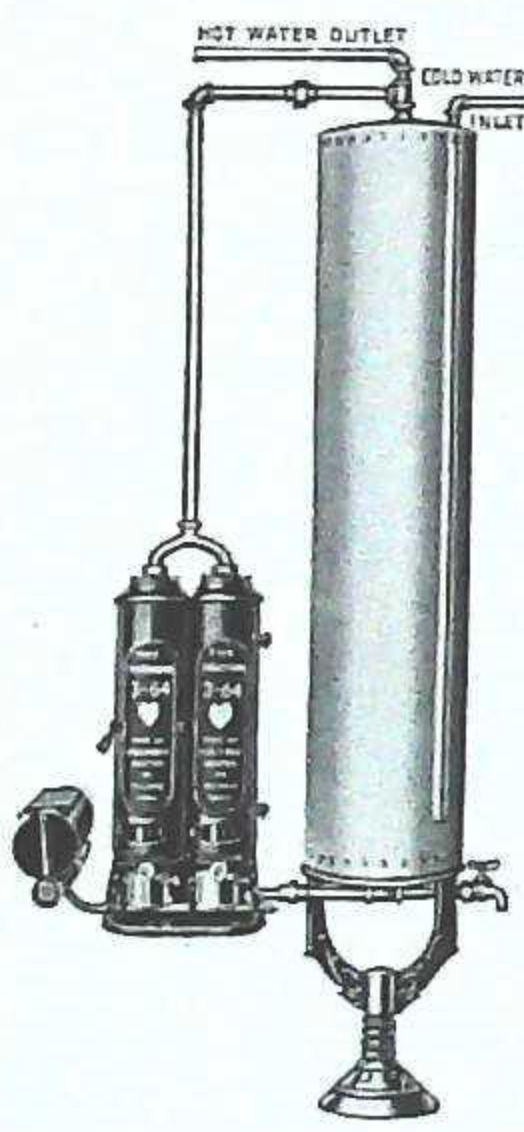
The shell of this heater is of cast iron, made in three parts-- front, back and cap. A cast iron plate supporting the burner is fitted to the base.

The coils are so constructed that the hot gases strike the heating surface many times before entering the vent, thus utilizing heat which would go to waste. They are easily cleaned with a small stiff brush.

The burner is of the improved perfection blue flame wick type, which can be regulated instantly and positively, and has a practically odorless combustion. It is attached to a removable cast iron plate which is supported by the back of the heater and held in place with a small screw. The burner can be easily removed from the body of the heater for cleaning purposes.

The heating surface of the twin heater consists of eight seamless copper coils, 1/2 inch in diameter and 8 feet long, all ends being brazed into bronze metal manifolds. The coils are tested under 250 pounds cold water pressure.

This illustration shows the proper method of connecting this heater to tank, using the Holyoke Twin Connection.



Installation

Cap. of Tank.....gal.	30-60
Size " Shell.....in.	6x12
" " Base....."	8x13
Height....."	28 1/4
Space Required....."	12x22
Approximate Shipping Wt.....lbs.	75
Price.....each	\$54.00
" Twin Connection, Only.....each	.....

No. 2-32 Holyoke Single Water Heaters For Kerosene

The single heater is constructed in the same manner as the double heater and contains 32 feet of heavy copper coils.

One gallon of kerosene oil will last in the single heater for about twelve hours of continuous burning.

Cap. of Tank.....gal.	20-40
Diam. of Shell.....in.	6
" " Base....."	8
Space Required....."	12x17
Height....."	28 1/4
Approximate Shipping Wt.....lbs.	55
Price.....each	\$30.00

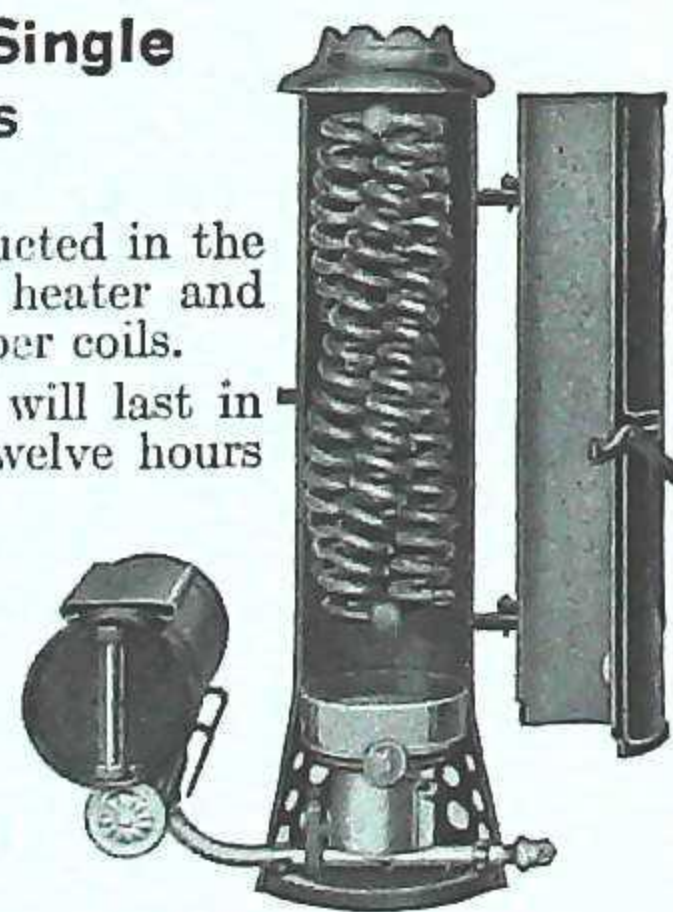


Fig. 1202

Brown & Bros. Seamless Copper Range Boilers

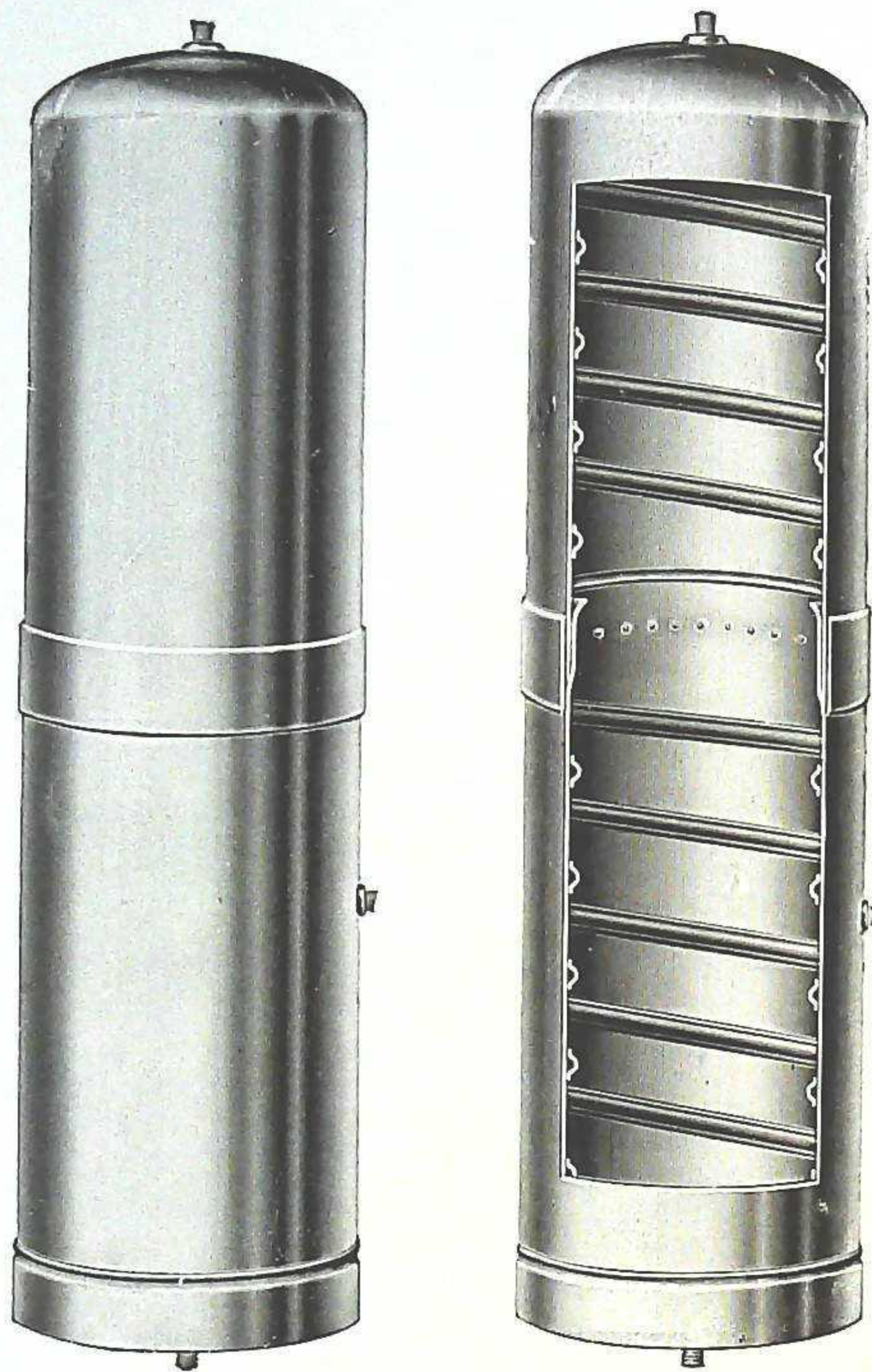


Fig. 1203

Can. Gallons	Diam. Inches	Height Inches	Price, Each		Boxing Net Extra
			Regular Pressure	Extra Heavy Pressure	
30	12	60	\$65.00	\$85.00	\$2.00
35	14	53	75.00	95.00	2.00
40	14	60	85.00	105.00	2.25
45	14	68	100.00	120.00	2.25
50	16	60	140.00	170.00	2.50
60	16	70	160.00	190.00	2.50
60	20	44	210.00	250.00	3.50
80	16	96	200.00	240.00	3.50
80	20	59	250.00	290.00	3.50
100	20	76	300.00	350.00	5.00
100	24	60	325.00	375.00	5.00
120	24	65 1/2	350.00	400.00	5.50
125	24	69	360.00	410.00	6.00
150	24	78 1/2	400.00	450.00	7.00
180	24	92 1/2	450.00	510.00	7.00
200	24	103	530.00	600.00	7.50
250	24	129	675.00	750.00	10.00
300	24	155	800.00	875.00	12.50

Made of the best quality copper, tinned on the inside. Regular pressure boilers tested to 200 pounds water pressure, extra heavy tested to 300 pounds water pressure.

These boilers should not be installed without a relief valve set at the lowest pressure consistent with operation.

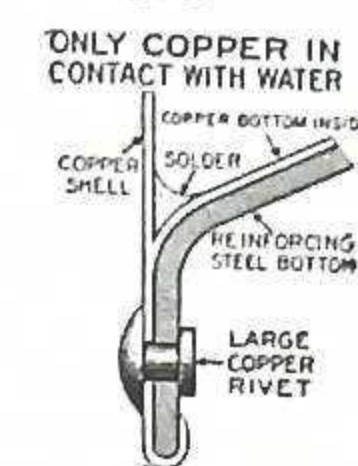
Boilers 12, 14 and 16 inches in diameter have 3/4-inch iron pipe size male couplings unless otherwise ordered, and 20 and 24-inch boilers have 1-inch iron pipe size couplings unless otherwise ordered.

All connections in excess of five are charged extra. Horizontal boilers smaller than 50 gallons, extra.

Riverside Massachusetts Regulation Copper Range Boilers



Fig. 1211



Sectional View Through Bottom of Riverside Copper Boiler

The Riverside copper range boiler is a full-size, full weight copper range boiler.

The shell is of extra heavy copper and will stand the test pressures without strain. The heads and bottoms are riveted with large machine-driven copper rivets. The concave copper bottom is reinforced with a heavy steel bottom. This adds strength to the boiler at the point where most copper boilers are very weak. There is no contact between the water and the steel bottom; the inner copper bottom prevents this. The line cut clearly illustrates this construction.

All inside surfaces are thoroughly tinned and shell is reinforced inside with copper rings, to make assurance doubly sure.

All boilers are furnished Hilowtap and the benefit of these 5 openings, when properly used, means quicker and more economical hot water service.

This boiler fills all requirements of the Massachusetts laws, and its sizes and capacities are standardized according to the recommendations adopted by all of the leading range boiler manufacturers and the department of Commerce at Washington, D. C.

Massachusetts Extra Heavy Regulation Range Boilers

200 Pounds Test—85 Pounds Working Pressure

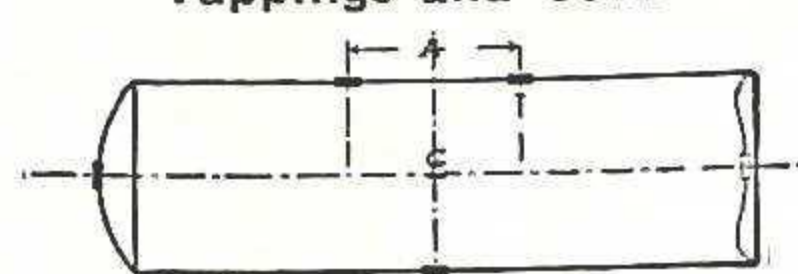
Size.....inches	12x60	14x60
Capacity.....gallons	30	40
Price.....each	.....	.....

Massachusetts Double Extra Heavy Range Boilers

300 Pounds Test—127 1/2 Pounds Working Pressure

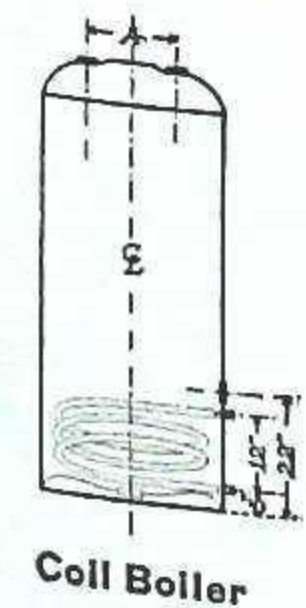
Size.....inches	12x60	14x60	16x60	18x60	20x60	22x60
Capacity.....gallons	30	40	52	66	82	100
Price.....each	.....	.....	.....	.....	.....	.....

Tappings and Coils



Horizontal Boiler

Horizontal boilers will be furnished with 5 openings with couplings, the openings being shown as per sketch above. All sizes.



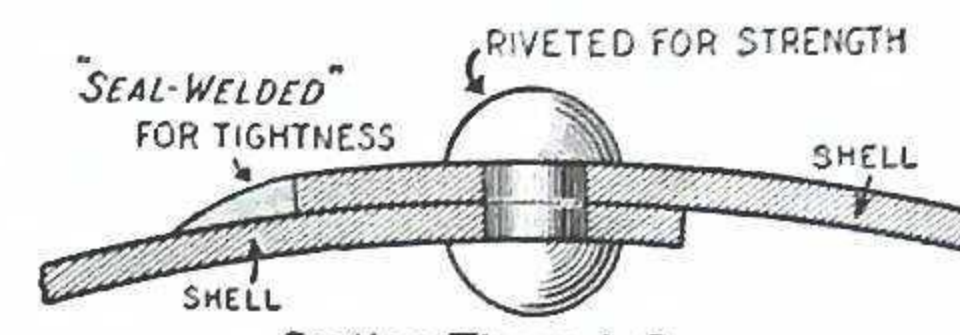
Coil Boiler

On boilers 12 and 14-inch diameter, 5 couplings 3/4-inch iron pipe size male are regularly furnished. Upon special request, couplings threaded 1/2-inch iron pipe size female or 3/4-inch fine thread female will be furnished. On boilers 16, 18, 20 and 22-inch diameter, 5 straight spuds 1-inch iron pipe size female will be furnished unless otherwise ordered.

Coil boilers will be furnished in vertical or horizontal patterns, according to sketches submitted, price to be quoted special. Cut shows regular vertical coil boiler.

All boilers are crated for shipment.

Riverside Hi-Grade Galvanized Range Boilers Riveted and Welded



Section Through Seam

Riverside Hi-Grade range boilers are made of blue annealed steel of high tensile strength. Head and bottom of heavy construction to stand up to high pressures. Riveted on all seams for maximum strength and seal-welded for absolute tightness at side and bottom seam.

Galvanized thoroughly inside and outside with pure zinc. This means long life to the boiler. Excessive hydrostatic tests before shipment.

Made in the following grades, all full size and capacity: Standard, guaranteed for 85 pounds working pressure; extra heavy, guaranteed for 150 pounds working pressure; Massachusetts regulation boilers, extra heavy, 200 pounds test, 85 pounds working pressure; double extra heavy Kopsteel, 300 pounds test, 127 1/2 pounds working pressure, guaranteed for six years.

Illustration shows 30-gallon boiler. This standardized boiler called Hilowtap furnished with five 1-inch tappings, two in head, one in bottom and two on side, one 6 inches down from the top of shell, the other 6 inches up from the bottom of the shell.

Kopsteel Boilers Double Extra Heavy

Guaranteed for 6 years. Working pressure 150 pounds. All riveted and welded at all seams. All sizes.



Vertical Fig. 1212



Horizontal Fig. 1213

Approx. Cap. Gals.	Diam. Inside of Shell In.	Approx. Length of Shell Feet	Price Each Std. or Ex. Hy.	Approx. Cap. Gal.	Diam. Inside of Shell In.	Approx. Length of Shell Ft.	Price Each Std. or Ex. Hy.
18	12	3	\$14.50	66	18	5	\$38.00
24	12	4	15.75	82	20	5	45.50
30	12	5	19.00	100	22	5	63.50
32	14	4	21.00	120	24	5	72.50
40	14	5	24.00	144	24	6	103.00
42	16	4	26.00	192	24	8	132.00
52	16	5	31.00	.....	.....	.....	.....

Tappings in excess of five are charged extra as below.
 Size.....inches 1 1 1/4 1 1/2 2 2 1/2 3 4
 Price.....each \$.25 .25 .25 .50 1.00 1.50 2.00

Coils may be furnished in any extra or double extra heavy boiler sizes in galvanized steel or copper. In ordering, the style, kind and length of coil should be specified. If this is not given, the amount of water to be heated and the working pressures of the steam should be specified. With this information, sufficient coil to do the work properly will be installed. Unless otherwise ordered, galvanized steel coils will be installed. Prices listed are for galvanized steel coils. Copper coils are double the prices listed.

Boiler.....in.	12	14	16	18	20	22	24
Price, Coils, each	\$10.50	12.00	16.00	18.00	21.00	25.00	30.00

Blake Tripod Range Boiler Stands



Fig. 1221

This stand requires no adjustment. Is reversible for 30 and 40-gallon boiler. Easily knocked down and formed into a handy package. Weight, 6 lbs. Prices upon application.

No. 1720 Ring Adjustable Boiler Stands

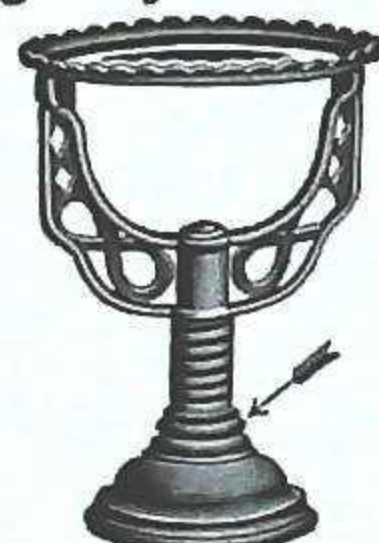


Fig. 1222

Size Ring In.	For Boiler Gal.	Price, Each		Size Ring In.	For Boiler Gal.	Price, Each	
		Plain	Galv.			Plain	Galv.
12	18-30	\$1.25	\$2.50	18	53-79	\$2.00	\$3.80
13	35	1.35	2.60	20	82-98	2.25	4.50
14	35-40	1.45	2.70	22	100-120	2.75	5.00
16	42-52	1.85	3.25	24	120-192	3.50	6.50

Boiler Rings

For Wrought Iron Pipe Legs



Fig. 1223

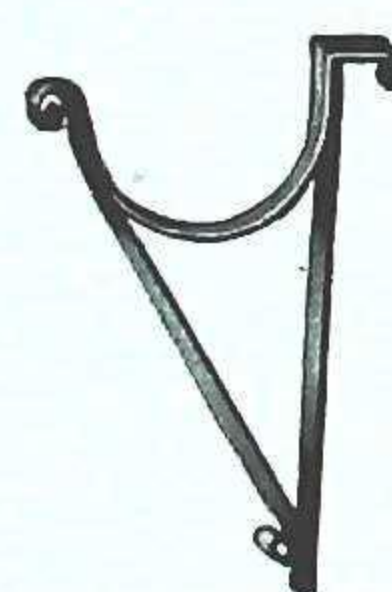
Size Inches	Price, Each			
	TAPPED		NOT TAPPED	
	Plain	Galv.	Plain	Galv.
12	\$1.25	\$2.50	\$.50	\$.75
14	1.40	2.70	.60	.90
16	1.75	3.25	.75	1.05
18	2.00	3.80	1.00	1.50
20	2.25	4.50	1.25	1.90

Wrought Iron Boiler Hangers and Brackets

For Horizontal Boilers



No. 1741 Hanger Fig. 1224



No. 1742 Ratchet Fig. 1225

Size In.	Price Per Pair	
	Hangers	Brackets
12	\$6.50	\$11.00
14	6.80	11.50
16	7.00	12.50
18	7.50	13.50
20	8.00	19.00
22	8.80	20.00
24	9.80	28.00

Keystone Range Boiler Jackets

Boiler Capacity Gallons	Height Feet	Diameter Inches	Price Each
18	3	12	\$6.40
24	4	12	7.00
24	3	14	6.75
30	5	12	7.80
32	4	14	7.45
36	6	12	8.20
36	4 1/2	14	8.10
40	5	14	8.50
42	4	16	8.10
48	6	14	8.85
52	5	16	9.25
63	6	16	9.60
66	5	18	9.75
79	6	18	10.25
82	5	20	9.90
88	6	20	11.70
100	5	22	10.80
120	6	22	12.85
120	5	24	11.70
144	6	24	13.60
168	7	24	15.60
192	8	24	18.20

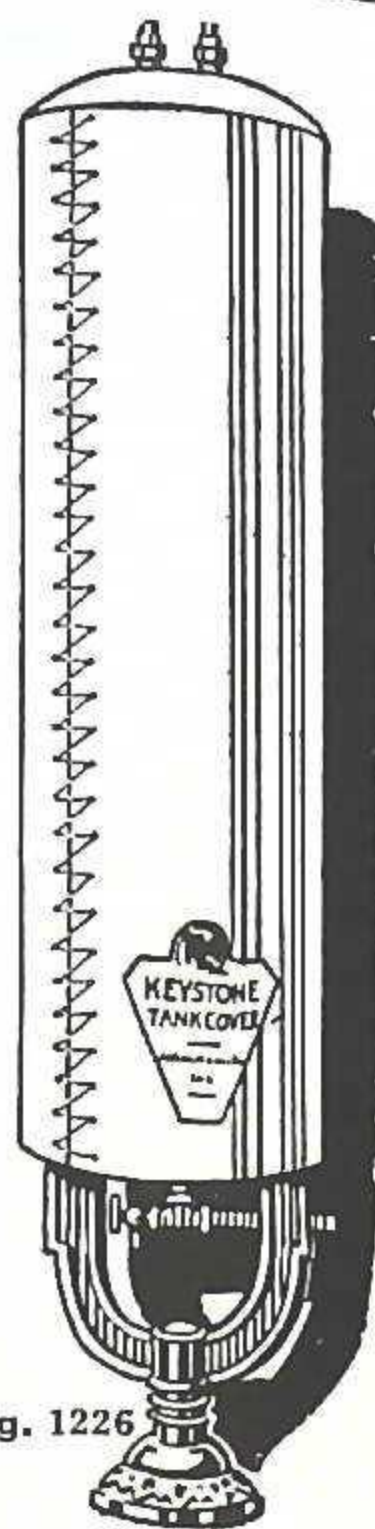


Fig. 1226

An uncovered range boiler keeps the room in which it is located too hot, particularly during the summer time. Windows are frequently opened which cools the room but wastes more fuel.

Excelso Water Heaters



Fig. 1227

The Excelso Water Heater can be easily connected to any new or old installation. Connected on the outside of steam or vapor boilers. Eliminates the fire pot coil and insures a constant supply of domestic hot water all during the heating season at an even temperature. *Heating water below water line of steam or vapor boiler temperature rises 100 degrees in three hours. †Heating water with live steam, temperature rises 100 degrees in three hours at 5 pounds pressure. ‡Formerly Nos. 16, 17 and 18.

No.	Length Jr. Inches	Diam. In.	Shell Openings Inches	Coil Openings Inches	Capacity, Gals. *Below Water Line †With Live Steam	Price Each
11	8 1/2	5	1	3/4	30 45	\$12.50
11	10 1/2	5	1	3/4	30 50	30.00
12	14	5	1	3/4	45 75	40.00
13	11 1/2	6 1/2	1 1/2	1	60 100	50.00
14	15	6 1/2	1 1/2	1	90 150	60.00
15	19 1/2	6 1/2	1 1/2	1	120 200	70.00
25	12 1/2	9	2	1 1/2	160 250	120.00
26	15	9	2	1 1/2	200 300	150.00
27	19	9	2	1 1/2	300 450	180.00
28	23 1/4	9	2	1 1/2	400 600	210.00

Robertshaw Thermostats

The Nos. 2A and 4A thermostats are for 30 to 40-gallon storage tanks and can be used on either natural or manufactured gas. For manufactured gas the No. 40 Type Snap-Action-Thermostat.

The No. 3 thermostat has a capacity of about three and one half times that of the 2A or 4A. Used on 30 to 40-gallon tanks where there is an extra large demand for hot water and is used in connection with a double or triple coil heater and larger tanks.

No.	Gas Con. In.	Tank Con. In.	Length Tube Inches	Price Each
2A	3/8	1	11 1/2	\$9.25
4A	1/2	1	11 1/2	10.25
3	1/2	1	11 1/2	13.00

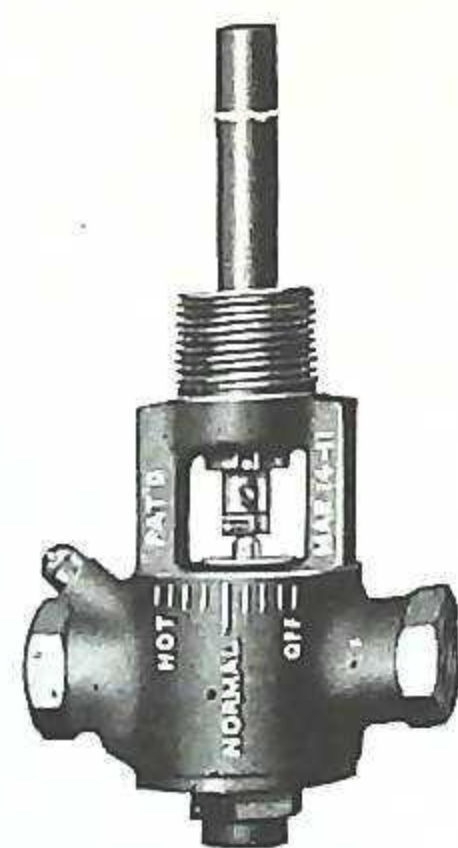
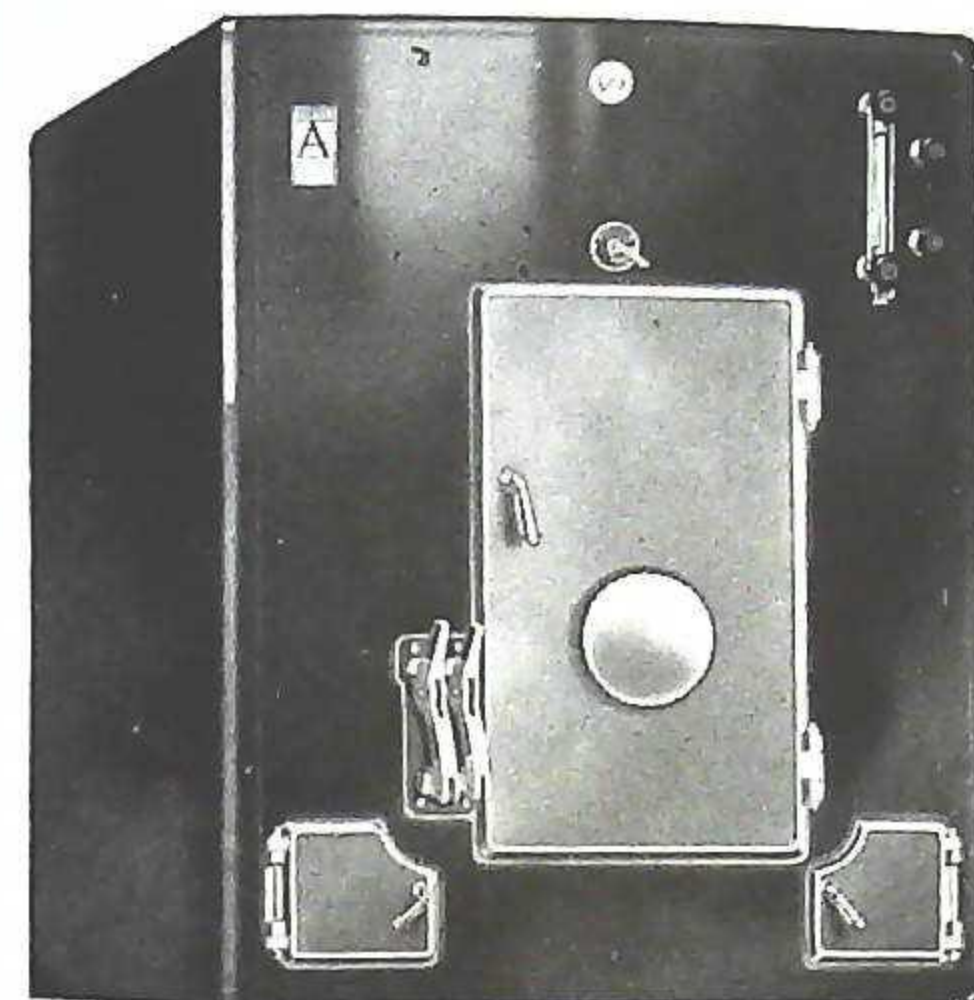


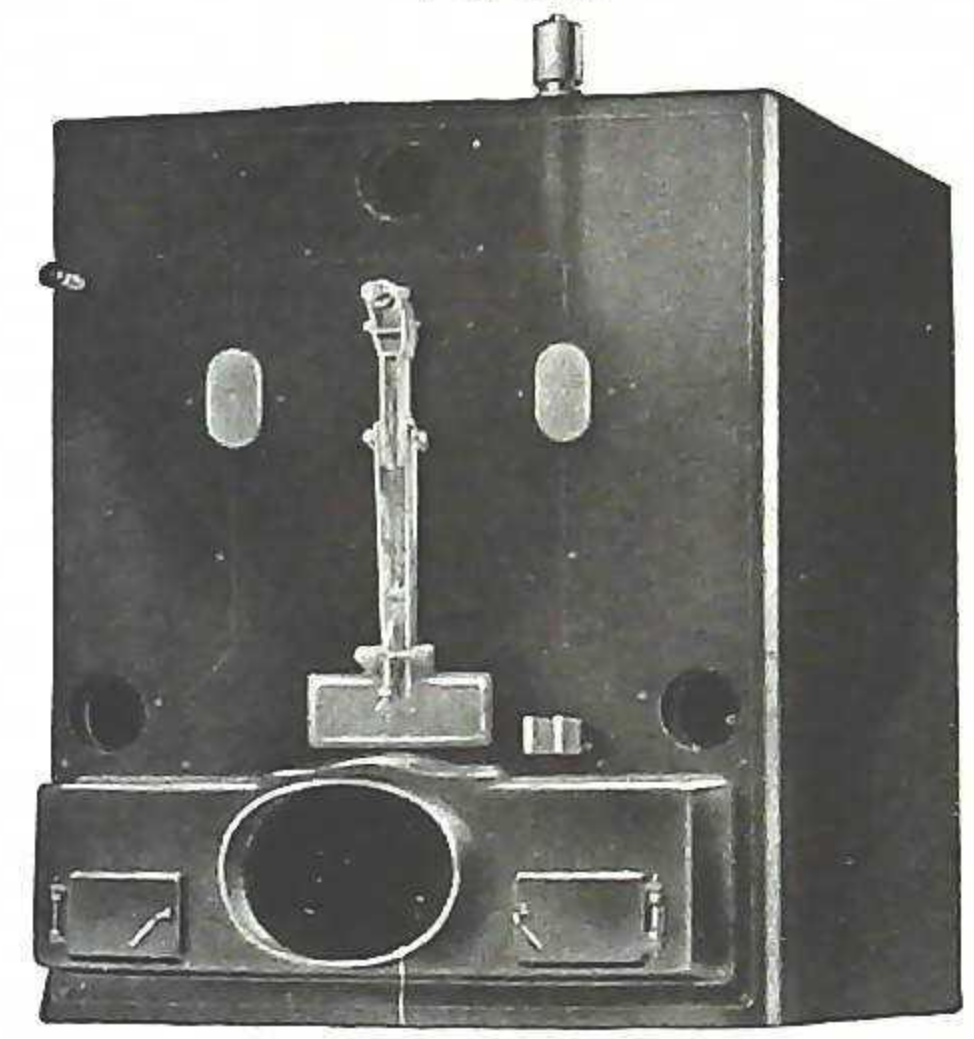
Fig. 1228

Ideal Type A Heat Machines

1924 Series
Steam Boiler Capacities—1000 to 6000 Square Foot
Water Boiler Capacities—1600 to 9600 Square Foot



Front View Showing Lock-safe Fire Door Fig. 1231



Rear View Showing Improved Automatic Heat Control Mechanism

The new 1924 Ideal Type A Heat Machine embodies all of the good points of its predecessors and adds to them many valuable features heretofore not found in any boiler.

The sections are cast in one piece and are connected with a push nipple at the top and at the bottom, both located on the center line of the boiler. The ashpit is completely water jacketed so that there is no possibility of air entering other than through the draft doors provided. This means that the fire is always under perfect control. Perfect control of combustion means fuel saving, uniform heating with ability to economically bank the fire at night without the wasteful old-time habit of opening the fire door.

Ideal Automatic Damper Regulator is fitted on the back section of the boiler and is controlled from the front by a rod which passes through cored openings in the sections.

The fire door, clinker door and ashpit door are all covered by a large second lock-safe door as illustrated. This improves the appearance of the boiler and insures that the fire will always be under control of the damper regulator as no air can pass to the fire either below or above the grates.

The Ideal Type A Heat Machine is encased in an improved asbestos lined metal jacket, the surface of which is japanned a glossy black. The plate work, including lock-safe door, cleanout doors and smokehood has a black porcelain enamel finish, impervious to rust and discoloration.

Ideal Type A Heat Machines

1924 Series
Steam Boiler Capacities—1000 to 6000 Square Foot
Water Boiler Capacities—1600 to 9600 Square Foot

No.	8-hour Rating Sq. Ft.	Grate Area Sq. Ft.	Fuel Capacity Pounds	Water Line In.	Total Length In.	CHIMNEY	
						Size In.	Ht. Ft.
S-2204-A	1000	2 76	245	50	26	12x12	35
S-2205-A	1250	3 68	328	50	32	12x16	35
S-2206-A	1500	4 60	411	50	38	12x16	35
S-2207-A	1750	5 52	494	50	44	12x16	40
S-2208-A	2000	6 44	577	50	50	12x16	45
S-2209-A	2250	7 36	660	50	56	12x16	45
S-3205-A	2500	6 22	660	56 3/4	36	16x16	40
S-3206-A	3000	7 77	825	56 3/4	43	16x16	40
S-3207-A	3500	9 32	990	56 3/4	50	16x20	40
S-3208-A	4000	10 87	1155	56 3/4	57	16x20	45
S-3209-A	4500	12 42	1320	56 3/4	64	20x20	45
S-3210-A	5000	13 97	1485	56 3/4	71	20x20	50
S-3211-A	5500	15 52	1650	56 3/4	78	20x20	50
S-3212-A	6000	17 07	1815	56 3/4	85	20x20	55

Steam boiler equipment consists of Ideal asbestos-lined metallic jacket, Arco automatic steam regulator, pop safety valve, steam gauges, water column and trimmings, tri-cocks, draw-off cock and firing tools.

No.	8-hour Rating Sq. Ft.	Grate Area Sq. Ft.	Fuel Capacity Pounds	Total Length In.	CHIMNEY	
					Size In.	Ht. Ft.
W-2204-A	1600	2 76	245	26	12x12	35
W-2205-A	2000	3 68	328	32	12x16	35
W-2206-A	2400	4 60	411	38	12x16	35
W-2207-A	2800	5 52	494	44	12x16	40
W-2208-A	3200	6 44	577	50	12x16	45
W-2209-A	3600	7 36	660	56	12x16	45
W-3205-A	4000	6 22	660	36	16x16	40
W-3206-A	4800	7 77	825	43	16x16	40
W-3207-A	5600	9 32	990	50	16x20	40
W-3208-A	6400	10 87	1155	57	16x20	45
W-3209-A	7200	12 42	1320	64	20x20	45
W-3210-A	8000	13 97	1485	71	20x20	50
W-3211-A	8800	15 52	1650	78	20x20	50
W-3212-A	9600	17 07	1815	85	20x20	55

Water boiler equipment consists of Ideal asbestos-lined metallic jacket, Arco automatic temperature regulator, thermometer, altitude gauge, draw-off cock and firing tools.

Boilers Nos. 2204 to 2209 have one 5-inch outlet and two 5-inch inlets; 12-inch round smoke pipe collar.

Boilers Nos. 3205 to 3212 have one 6-inch outlet and two 6-inch inlets; oval smoke pipe collar for 18-inch pipe.

No. of Boiler	2204 to 2209	3205 to 3212
Total Width of Boiler	41 1/2	57 1/2
Height of Boiler Exclusive of Safety Valve	61 1/4	69
Depth " Smokehood	8 1/4	10 1/4
Distance from Floor to Center Line of Smokehood	8 3/8	11 3/8
Equivalent Round Smoke Pipe Size	12	18
Distance from Floor to Center Line of Flow Tapping	56	63 1/8
Distance from Floor to Center Line of Return Tappings	19 3/4	23
Distance from Center Line of Each of Two Return Tappings	15 9/16	22 3/8
Distance from Center Line of Each of Two Openings for Coil in Firepot	9 1/8	13 3/8
Distance from Floor to Center Line of Above	41	47

Ideal Type A Heat Machines

1A Series

Steam Boiler Capacities—450 to 900 Square Feet
Water Boiler Capacities—750 to 1500 Square Feet

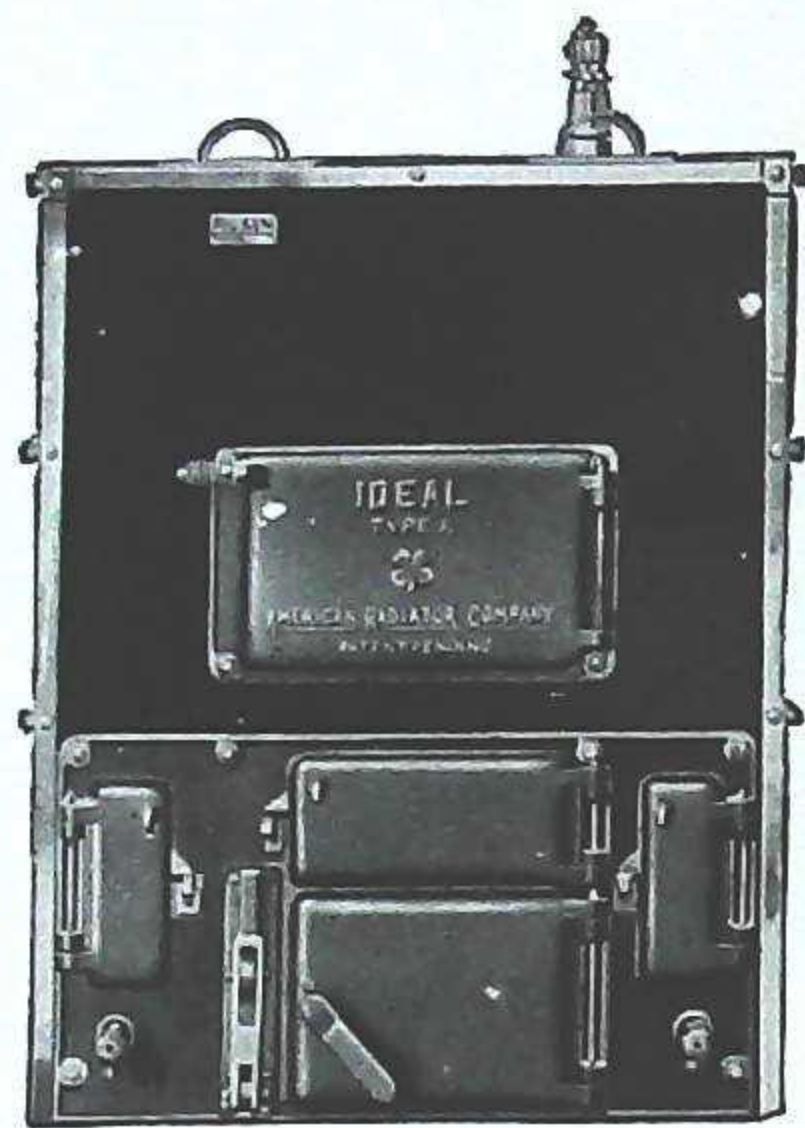


Fig. 1241

The Ideal type A Heat Machine of the 1A series is similar in principle and fire travel to those of larger capacities. This machine has low water lines and is particularly adapted for buildings with low cellars. It is covered with the asbestos lined Ideal metal jacket, held in place by heavily nickel-plated cover pieces and keys.

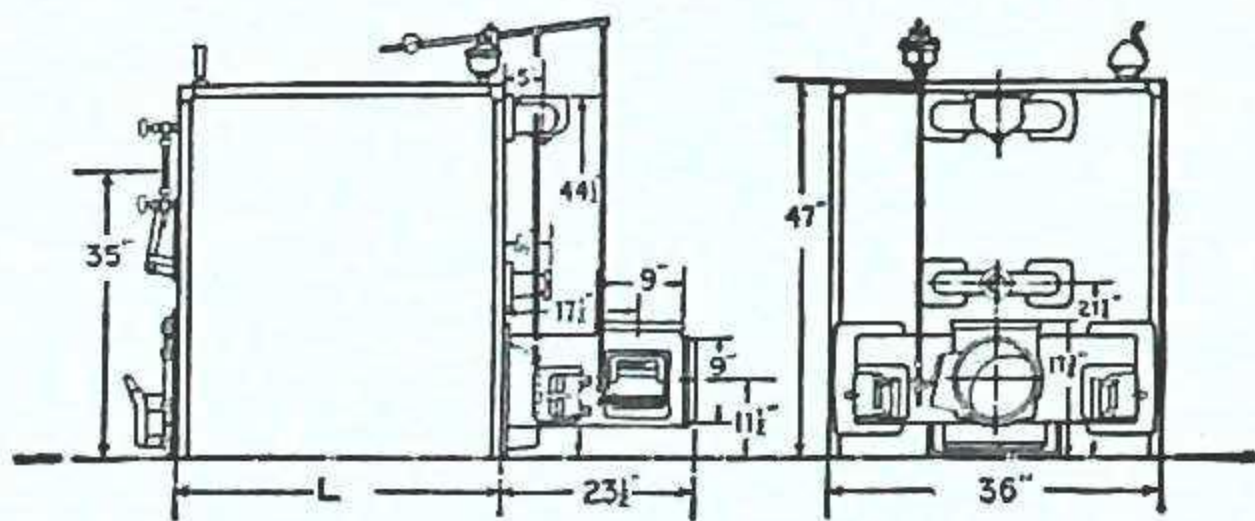
Steam

No.	Rating Sq. Ft.	Grate Area Sq. Ft.	Hard Coal Fuel Cap. Lbs.	Total Lgth. L In.	No. AND SIZE INCHES		CHIMNEY Size Sea Level In.	Ht. Ft.
					Outlet	Inlet		
1-A-4	450	1.9	126	22	1-4	1-2	8x12	30
1-A-5	600	2.5	168	27½	1-4	1-2	8x12	35
1-A-6	750	3.1	210	33	1-4	1-2	8x12	35
1-A-7	900	3.7	252	38½	1-4	1-2	8x12	40

Water

1-A-40	750	1.9	126	22	1-4	2-4	8x12	30
1-A-50	1000	2.5	168	27½	1-4	2-4	8x12	35
1-A-60	1250	3.1	210	33	1-4	2-4	8x12	35
1-A-70	1500	3.7	252	38½	1-4	2-4	8x12	40

Safety valve sizes accord with A. S. M. E. boiler code.



Fire door dimensions, 14½x9 inches.

Equipped with Ideal asbestos lined metal jacket. Two solid brass draw-off cocks and firing tools supplied with all boilers.

Steam boiler equipment consists of automatic damper regulator. Extra heavy water column and tri-cocks. Ideal steam gauge, 4½ inches.

23-inch Series Ideal Water Tube Boilers

Steam Boiler Capacities—600 to 1200 Square Feet
Water Boiler Capacities—975 to 1875 Square Feet

Steam



Fig. 1242

No.	Rating Steam Sq. Ft.	Grate Area Sq. Ft.	Fuel Cap. Lbs.	Total Lgth. In.	No. AND SIZE INCHES		Size Chimney In.	Height Chimney Ft.
					Outlets	Inlets		
S-2305	600	2.72	164	21	1-4	2-3	8x12	30
S-2306	750	3.36	203	25	1-4	2-3	8x12	35
S-2307	900	4.00	242	29	1-4	2-3	8x12	35
S-2308	1050	4.64	281	33	1-4	2-3	12x12	35
S-2309	1200	5.28	320	37	1-4	2-3	12x12	35

Safety valve sizes accord with A.S.M.E. boiler code.

Steam boiler equipment consists of steam gauge, water column and trimmings, Arco automatic damper regulator, pop safety valve and firing tools.

Water

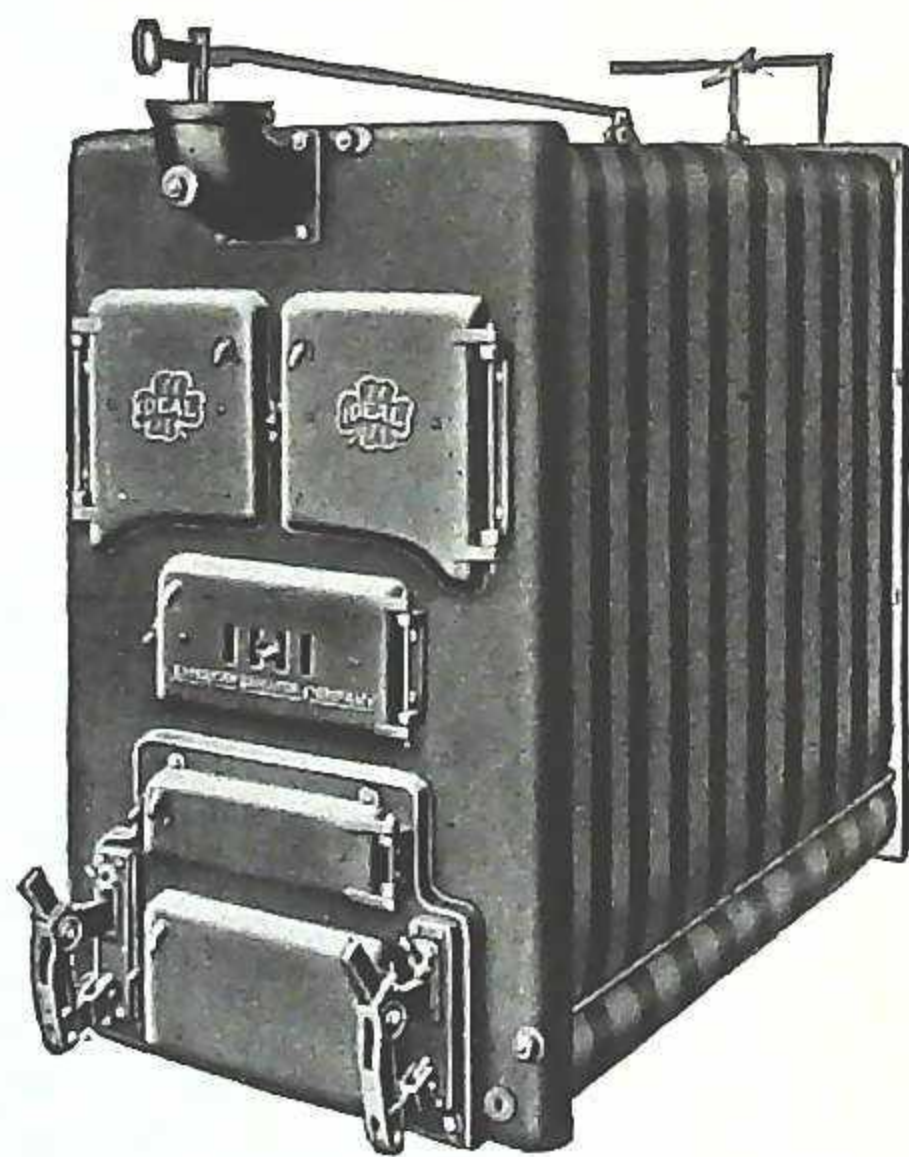


Fig. 1243

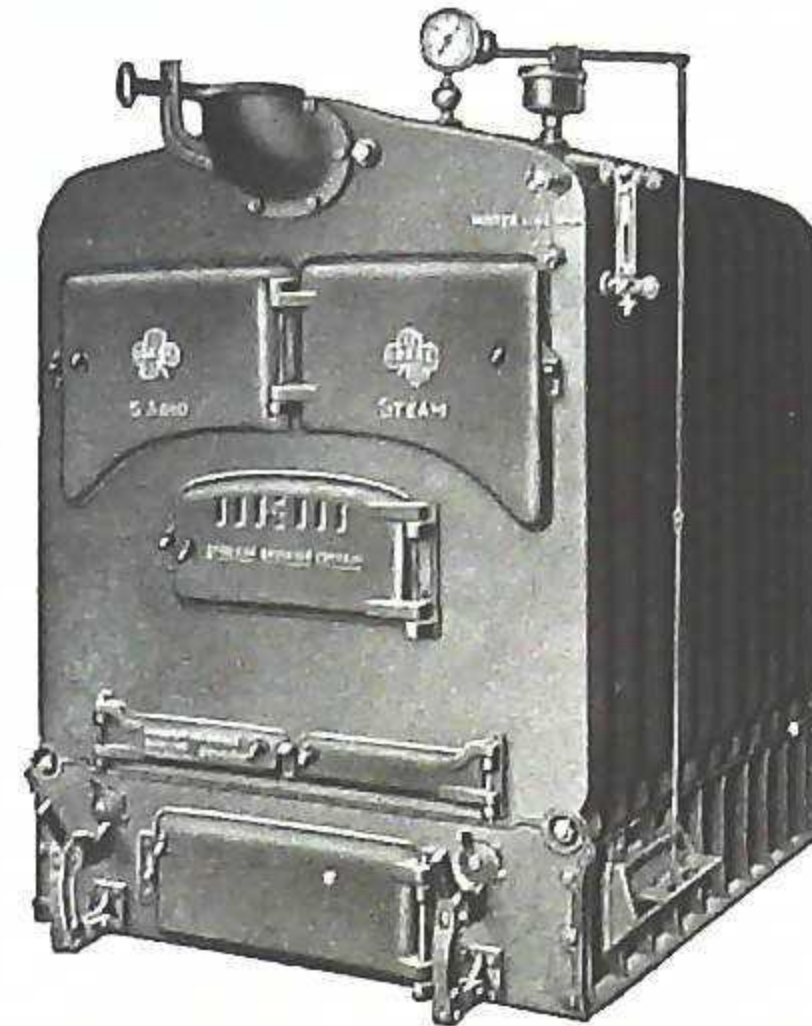
No.	Rating Water Sq. Ft.	Grate Area Sq. Ft.	Fuel Cap. Lbs.	Total Lgth. In.	No. AND SIZE INCHES		Size Chimney In.	Height Chimney Ft.
					Outlets	Inlets		
W-2305	975	2.72	164	21	1-4	2-3	8x12	30
W-2306	1200	3.36	203	25	1-4	2-3	8x12	35
W-2307	1425	4.00	242	29	1-4	2-3	8x12	35
W-2308	1650	4.64	281	33	1-4	2-3	12x12	35
W-2309	1875	5.28	320	37	1-4	2-3	12x12	35

Water boiler equipment consists of Ideal damper control and firing tools.

The 23-inch Series Ideal Water Tube Boiler is regularly supplied without jacket but will be furnished with Ideal asbestos lined metal jacket on special order.

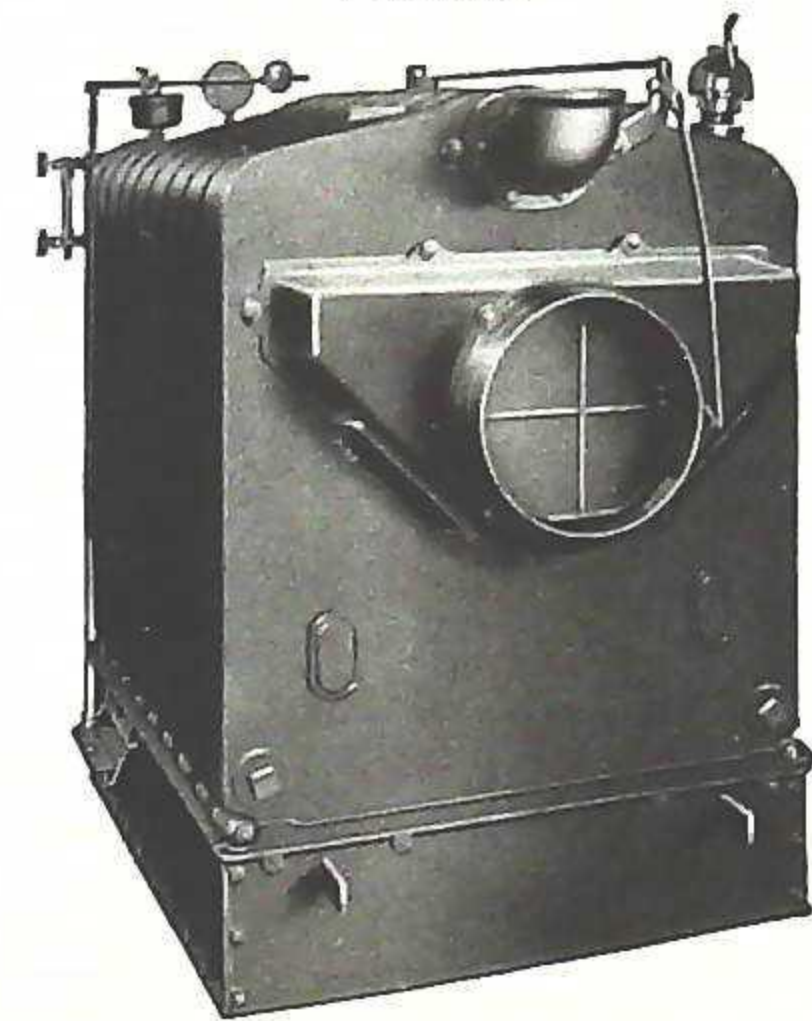
Ideal Water Tube Boilers

Steam Boiler Capacities—1600 to 17750 Square Feet
Water Boiler Capacities—2600 to 28500 Square Feet



Front View

Fig. 1251



Rear View

The New 1924 Ideal Water Tube Boiler possesses many points of superiority over all similar boilers and over its predecessors. Its grate area, fire-contact surface, flue proportions and gas travel are so balanced as to obtain the maximum heat from the fuel and to reduce to a minimum the influence of the human element as a factor in the economical operation of the boiler.

Soft coal is as successfully burned in this boiler as hard coal, although in cities having strict anti-smoke ordinances the Ideal Smokeless Boiler is recommended, a boiler especially designed to burn all soft coals smokelessly with unskilled attendants. The large amount of heating surface and long flue travel of the Ideal Water Tube Boiler make it pre-eminently the best boiler for oil and gas fuels.

The sections have contact surfaces so accurately ground and smooth that the sections of the assembled boiler fit snugly together iron to iron. Air leaks between sections are entirely eliminated. The unsatisfactory loose fitting section with its putty filled joint is no longer found in any Ideal Boiler.

Ideal Water Tube Boilers because of their sectional construction are easily installed in any old or new building. The largest section may be carried through a 30-inch doorway. No costly brick settings are required. Made of superior rust-proof cast iron and will last as long as the building in which it is installed.

Ideal Water Tube Boilers are exceptionally well suited for battery installations, a type so rapidly coming into favor with far-seeing engineers. Such installations are exceedingly flexible and economical in operation.

Ideal Water Tube Boilers

Steam Boiler Capacities—1600 to 17750 Square Feet
Water Boiler Capacities—2600 to 28500 Square Feet

Steam

No.	Rating Steam Sq. Ft.	Grate Area Sq. Ft.	Fuel Capac- ity Lbs.	Total Length In.	No. AND SIZE INCHES		CHIMNEY Size Sea Level In.	Ht. Ft.
					Outl.	Inlets		
S-2905	1600	4.84	347	30	1-5	2-4	12x16	35
S-2906	2000	6.05	435	36	1-5	2-4	12x16	40
S-2907	2400	7.26	523	42	1-5	2-4	16x16	40
S-2908	2800	8.47	611	48	1-5	2-4	16x16	45
S-2909	3200	9.68	699	54	2-5	2-4	16x20	50
S-2910	3600	10.89	787	60	2-5	2-4	16x20	55
S-2911	4000	12.10	875	66	2-5	2-4	20x20	60
S-3605	2500	6.00	540	30	1-6	2-4	16x16	45
S-3606	3150	7.50	684	36	1-6	2-4	16x20	45
S-3607	3800	9.00	828	42	2-6	2-4	16x20	50
S-3608	4450	10.50	972	48	2-6	2-4	20x20	50
S-3609	5100	12.00	1116	54	2-6	2-4	20x20	55
S-3610	5750	13.50	1260	60	2-6	2-4	20x20	55
S-3611	6400	15.00	1404	66	2-6	2-4	20x20	60
S-3612	7050	16.50	1548	72	2-6	2-4	20x24	60
S-3613	7700	18.00	1692	78	2-6	2-4	20x24	65
S-3614	8350	19.50	1836	84	2-6	2-4	20x24	70
S-3615	9000	21.00	1980	90	2-6	2-4	24x24	75
S-4806	7750	18.00	1475	57¾	2-6	4-4	24x24	65
S-4807	9000	21.00	1770	68½	3-6	4-4	24x24	70
S-4808	10250	25.20	2065	79¼	3-6	4-4	24x24	75
S-4809	11500	25.20	2065	90	3-6	4-4	24x28	80
S-4810	12750	28.80	2360	100¾	3-6	4-4	24x28	85
S-4811	14000	28.80	2360	111½	4-6	4-4	28x28	95
S-4812	15250	28.80	2360	122¼	4-6	4-4	28x28	100
S-4813	16500	32.40	2655	133	4-6	4-4	28x32	105
S-4814	17750	32.40	2655	143¾	4-6	4-4	28x32	110

Steam boiler equipment consists of steam gauge, water column and trimmings, Arco automatic damper regulator, pop safety valve and firing tools.

Water

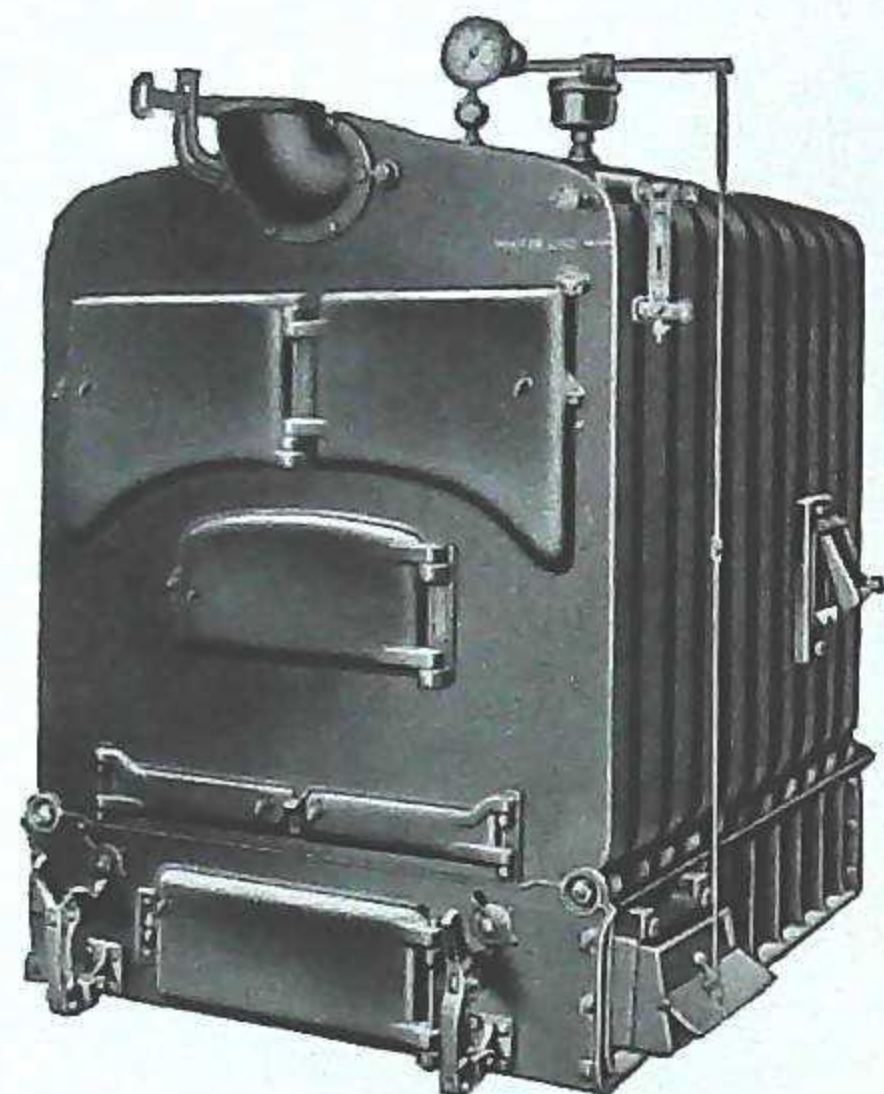
No.	Rating Water Sq. Ft.	Grate Area Sq. Ft.	Fuel Capac- ity Lbs.	Total Length In.	No. AND SIZE INCHES		CHIMNEY Size Sea Level In.	Ht. Ft.	
					Outl.	Inlets			
W-2905	2600	4.84	347	30	1-5	2-4	12x16	35	
W-2906	3250	6.05	435	36	1-5	2-4	12x16	40	
W-2907	3900	7.26	523	42	1-5	2-4	16x16	40	
W-2908	4550	8.47	611	48	1-5	2-4	16x16	45	
W-2909	5200	9.68	699	54	2-5	2-4	16x20	50	
W-2910	5850	10.89	787	60	2-5	2-4	16x20	55	
W-2911	6500	12.10	875	66	2-5	2-4	20x20	60	
W-3605	4000	6.00	540	30	1-6	2-4	16x16	45	
W-3606	5100	7.50	684	36	1-6	2-4	16x20	45	
W-3607	6200	9.00	828	42	2-6	2-3½	2-4	16x20	50
W-3608	7300	10.50	972	48	2-6	2-3½	2-4	20x20	50
W-3609	8400	12.00	1116	54	2-6	2-3½	2-4	20x20	55
W-3610	9500	13.50	1260	60	2-6	2-3½	2-4	20x20	55
W-3611	10600	15.00	1404	66	2-6	2-3½	2-4	20x20	60
W-3612	11700	16.50	1548	72	2-6	4-3½	2-4	20x24	60
W-3613	12800	18.00	1692	78	2-6	4-3½	2-4	20x24	65
W-3614	13900	19.50	1836	84	2-6	4-3½	2-4	20x24	70
W-3615	15000	21.00	1980	90	2-6	4-3½	2-4	24x24	75
W-4806	12500	18.00	1475	57¾	2-6	4-6	24x24	65	
W-4807	14500	21.00	1770	68½	3-6	4-6	24x24	70	
W-4808	16500	25.20	2065	79¼	3-6	4-6	24x24	75	
W-4809	18500	25.20	2065	90	3-6	4-6	24x28	80	
W-4810	20500	28.80	2360	100¾	3-6	4-6	24x28	85	
W-4811	22500	28.80	2360	111½	4-6	4-6	28x28	95	
W-4812	24500	28.80	2360	122¼	4-6	4-6	28x28	100	
W-4813	26500	32.40	2655	133	4-6	4-6	28x32	105	
W-4814	28500	32.40	2655	143¾	4-6	4-6	28x32	110	

Water boiler equipment consists of Ideal damper control and firing tools.

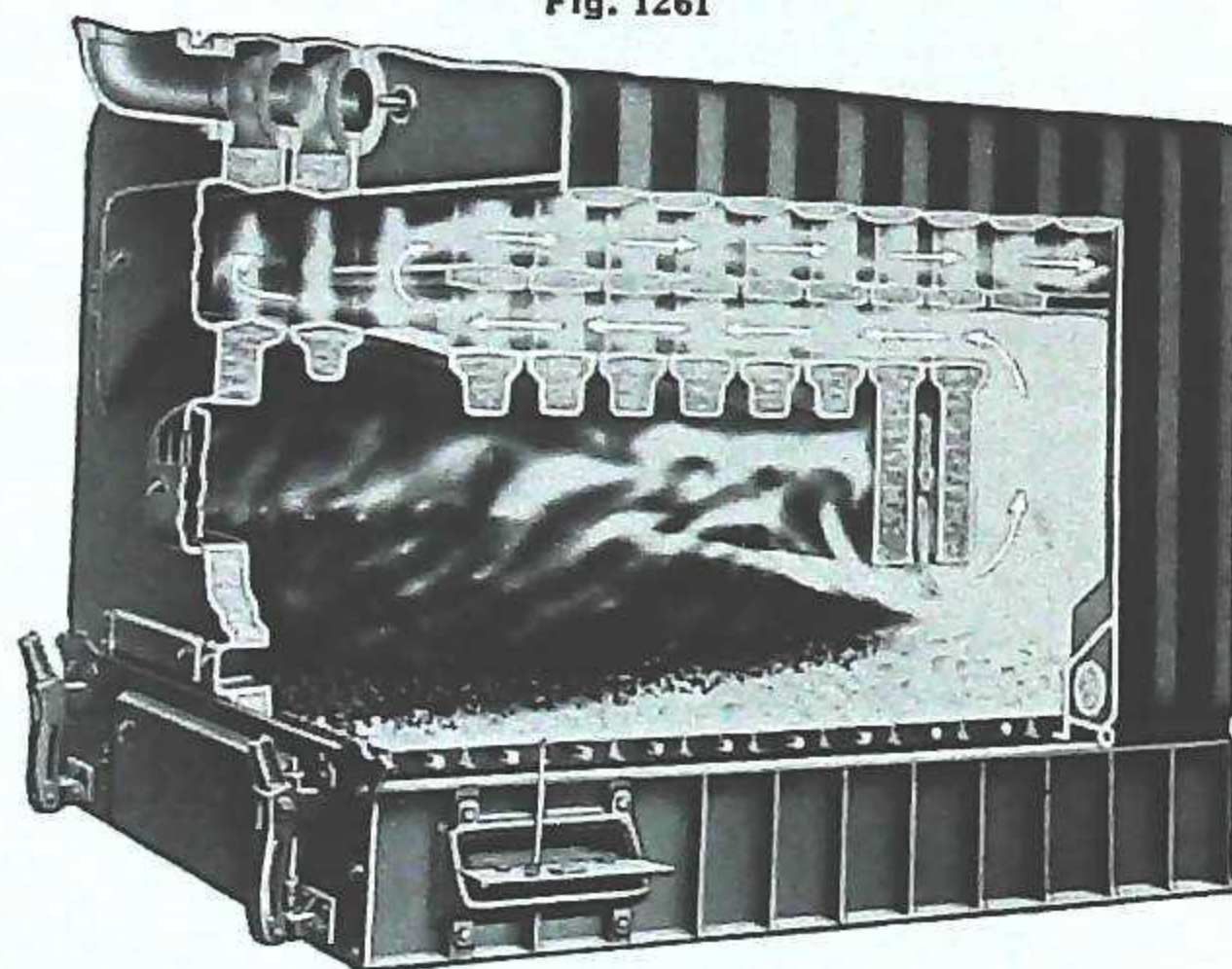
Ideal Smokeless Boilers

29, 36 and 48-inch

Steam Boiler Capacities—2000 to 17750 Square Feet
Water Boiler Capacities—3250 to 28500 Square Feet



Exterior View
Fig. 1261



Interior View

Ideal Smokeless Boilers conform with all known anti-smoke ordinances as they burn all grades of soft coal smokelessly.

The Ideal Smoke Oxidizer with which these boilers are equipped is simple in construction and will last as long as the boiler. There are no firebrick baffles, cast plates or pre-heating air devices necessary. The smokeless combustion is obtained in this device by the uniform admission of air over the glowing coal. This air is admitted through a water jacketed channel. The air mixes with the as yet unconsumed smoke and volatile gases as they pass below this air channel or oxidizer. Complete combustion takes place at this point and proceeds in an ample combustion chamber at the rear of boiler. The flaming gases thence pass upward into the flues, traveling first to the front of the boiler and then back through flue ways to the smoke pipe at rear.

This boiler with its Ideal Smoke Oxidizer averages from 10 to 25 per cent higher in efficiency than would a boiler not especially equipped to burn the rich-in-heat-value smoke.

Ideal Smokeless Boilers are made of cast iron and their sectional construction permits them to be carried through an ordinary 30-inch doorway.

Ideal Smokeless Boilers have their sections ground smooth in huge grinding machines so that the sections of the assembled boiler fit snugly together metal to metal. The use of boiler putty is unnecessary. Ideal Boilers are the only boilers regularly machined in this manner.

Ideal Smokeless Boilers

Steam Boiler Capacities—2000 to 17750 Square Feet
Water Boiler Capacities—3250 to 28500 Square Feet

No.	Rating Steam Sq. Ft.	Grate Area Sq. Ft.	Total Lgth. In.	No. AND SIZE, INCHES		CHIMNEY	
				Outlets	Inlets	Sea Level In.	Ht. Ft.
S-2906-S	2000	6 05	36	1-5	2-4	12x16	40
S-2907-S	2400	7 26	42	1-5	2-4	16x16	40
S-2908-S	2800	8 47	48	1-5	2-4	16x16	45
S-2909-S	3200	9 68	54	2-5	2-4	16x20	50
S-2910-S	3600	10 89	60	2-5	2-4	16x20	55
S-2911-S	4000	12 10	66	2-5	2-4	20x20	60
S-3607-S	3800	9 00	42	2-6	2-4	16x20	50
S-3608-S	4450	10 50	48	2-6	2-4	20x20	50
S-3609-S	5100	12 00	54	2-6	2-4	20x20	55
S-3610-S	5750	13 50	60	2-6	2-4	20x20	55
S-3611-S	6400	15 00	66	2-6	2-4	20x20	60
S-3612-S	7050	16 50	72	2-6	2-4	20x24	60
S-3613-S	7700	18 00	78	2-6	2-4	20x24	65
S-3614-S	8350	19 50	84	2-6	2-4	20x24	70
S-3615-S	9000	21 00	90	2-6	2-4	24x24	75
S-4807-S	9000	21 60	68 1/2	3-6	4-4	24x24	70
S-4808-S	10250	25 20	79 1/4	3-6	4-4	24x24	75
S-4809-S	11500	25 20	90	3-6	4-4	24x28	80
S-4810-S	12750	28 80	100 3/4	3-6	4-4	24x28	85
S-4811-S	14000	28 80	111 1/2	4-6	4-4	28x28	95
S-4812-S	15250	28 80	122 1/4	4-6	4-4	28x28	100
S-4813-S	16500	32 40	133	4-6	4-4	28x32	105
S-4814-S	17750	32 40	143 3/4	4-6	4-4	28x32	110

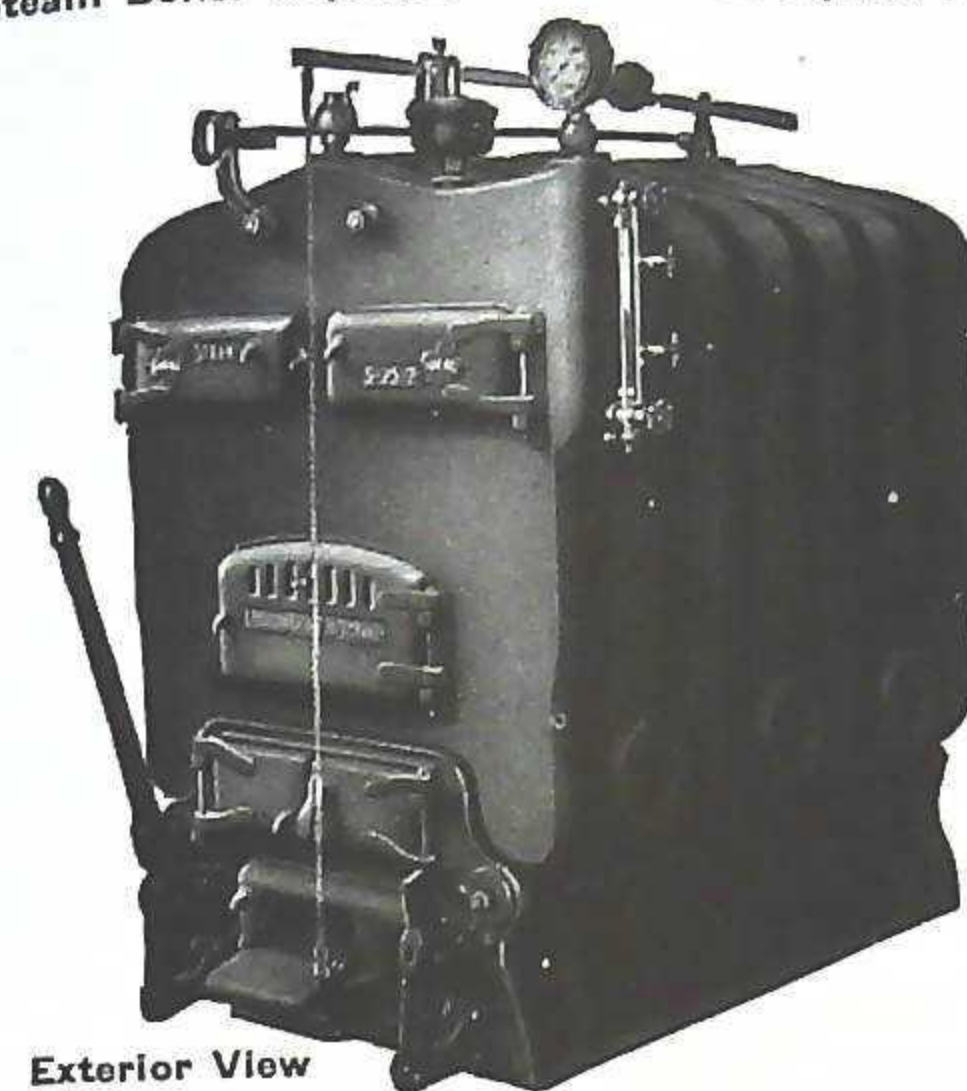
Steam boiler equipment consists of steam gauge, water column and trimmings, Arco automatic damper regulator, pop-safety valve and firing tools.

Water

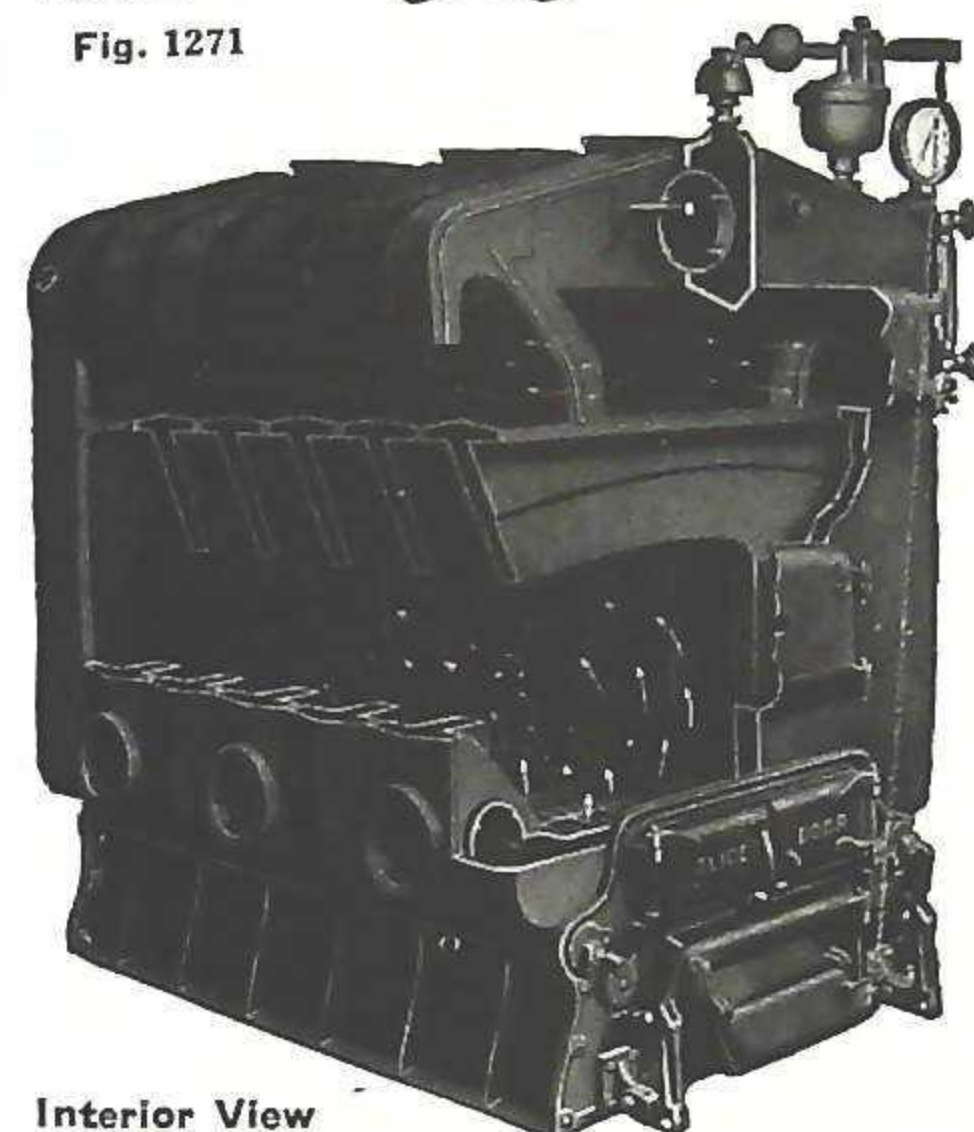
No.	Rating Water Sq. Ft.	Grate Area Sq. Ft.	Total Lgth. In.	No. AND SIZE, INCHES		CHIMNEY	
				Outlets	Inlets	Sea Level In.	Ht. Ft.
W-2906-S	3250	6 05	36	1-5	2-4	12x16	40
W-2907-S	3900	7 26	42	1-5	2-4	16x16	40
W-2908-S	4550	8 47	48	1-5	2-4	16x16	45
W-2909-S	5200	9 68	54	2-5	2-4	16x20	50
W-2910-S	5850	10 89	60	2-5	2-4	16x20	55
W-2911-S	6500	12 10	66	2-5	2-4	20x20	60
W-3607-S	6200	9 00	42	2-6	2-3 1/2	16x20	50
W-3608-S	7300	10 50	48	2-6	2-3 1/2	20x20	50
W-3609-S	8400	12 00	54	2-6	2-3 1/2	20x20	55
W-3610-S	9500	13 50	60	2-6	2-3 1/2	20x20	55
W-3611-S	10600	15 00	66	2-6	2-3 1/2	20x20	60
W-3612-S	11700	16 50	72	2-6	4-3 1/2	20x24	60
W-3613-S	12800	18 00	78	2-6	4-3 1/2	20x24	65
W-3614-S	13900	19 50	84	2-6	4-3 1/2	20x24	70
W-3615-S	15000	21 00	90	2-6	4-3 1/2	24x24	75
W-4807-S	14500	21 60	68 1/2	3-6	4-6	24x24	70
W-4808-S	16500	25 20	79 1/4	3-6	4-6	24x24	75
W-4809-S	18500	25 20	90	3-6	4-6	24x28	80
W-4810-S	20500	28 80	100 3/4	3-6	4-6	24x28	85
W-4811-S	22500	28 80	111 1/2	4-6	4-6	28x23	95
W-4812-S	24500	28 80	122 1/4	4-6	4-6	28x28	100
W-4813-S	26500	32 40	133	4-6	4-6	28x32	105
W-4814-S	28500	32 40	143 3/4	4-6	4-6	28x32	110

Water boiler equipment consists of Ideal damper control and firing tools.

Ideal Sectional Steam Boilers
Steam Boiler Capacities—600 to 2275 Square Feet



Exterior View
Fig. 1271



Interior View

No.	Sections	Total Length Inches	Grate Area Square Feet	No. and Size of Inlets Inches	No. and Size of Outlets Inches	Size Safety Valve Inches	8-hour Ratings Square Feet
S-19-5	5	51 3/4	3 32	4-3	2-3	1 1/4	600
S-19-6	6	58 3/8	4 15	4-3	2-3	1 1/2	750
S-19-7	7	65	4 98	6-3	3-3	1 1/2	900
S-22-5	5	53 1/4	4 08	4-4	2-4	1 1/2	800
S-22-6	6	60 1/4	5 10	4-4	2-4	2	1000
S-22-7	7	67 1/4	6 12	6-4	3-4	2	1200
S-25-5	5	59 1/4	5 44	4-4	2-4	2	1100
S-25-6	6	66 7/8	6 80	4-4	2-4	2	1350
S-25-7	7	74 1/2	8 16	6-4	3-4	2	1600
S-25-8	8	82 1/4	9 52	6-4	3-4	2 1/2	1850
S-28-5	5	60	6 24	4-4	2-4	2	1300
S-28-6	6	68	7 80	4-4	2-4	2	1625
S-28-7	7	76	9 36	6-4	3-4	2 1/2	1950
S-28-8	8	84	10 92	6-4	3-4	2 1/2	2275

Detail Measurements							
Series	19	22	25	28			
Height	inches	50	53	57 7/8	60 3/8		
Water Line	"	43 3/8	46 1/4	51	53 3/8		
Smoke Pipe	"	9	10	11	12		

Regular trimmings including safety valve are supplied with steam boiler at no additional charge.

Trimmings for Ideal Steam Boilers having the water column as part of the section consist of the following: Steam gauge, ball trap, safety valve, water gauge, upper water gauge cock, lower water gauge cock, two tri-cocks, Arco regulator, complete with lever and weight, jack chain or jointed rod.

When water column is a separate casting, in addition to above trimmings include water column casting, pipe and fittings connecting water column to boiler and pet cock.

Firing tools also furnished.

Ideal Sectional Water Boilers

Water Boiler Capacities—1000 to 3725 Square Feet



No. W-19-7
Fig. 1272



No. W-25-7
Fig. 1273

No.	Sections	Total Length Inches	Grate Area Square Feet	No. and Size of Inlets Inches	No. and Size of Outlets Inches	8-hour Ratings Square Feet
W-19-5	5	51 3/4	3 32	4-3	2-3	1000
W-19-6	6	58 3/8	4 15	4-3	2-3	1250
W-19-7	7	65	4 98	6-3	3-3	1500
W-22-5	5	53 1/4	4 08	4-4	2-4	1300
W-22-6	6	60 1/4	5 10	4-4	2-4	1650
W-22-7	7	67 1/4	6 12	6-4	3-4	2000
W-25-5	5	59 1/4	5 44	4-4	2-4	1825
W-25-6	6	66 7/8	6 80	4-4	2-4	2225
W-25-7	7	74 1/2	8 16	6-4	3-4	2650
W-25-8	8	82 1/4	9 52	6-4	3-4	3050
W-28-5	5	60	6 24	4-4	2-4	2150
W-28-6	6	68	7 80	4-4	2-4	2675
W-28-7	7	76	9 36	6-4	3-4	3200
W-28-8	8	84	10 92	6-4	3-4	3725

Detail Measurements

Series	19	22	25	28		
Height	inches	50	53	57 7/8	60 3/8	
Smoke Pipe	"	9	10	11	12	

All water boilers are furnished with firing tools without extra charge.

All Ideal Boilers are made in conformity with the A. S. M. E. Boiler code, which specifies a maximum allowable working pressure of 15 pounds per square inch for steam and 30 pounds per square inch for hot water heating.

Ideal Arco Round Steam Boilers
For Hard or Soft Coal, Gas and Oil Fuel
Steam Boiler Capacities—350 to 1700 Square Feet



Fig. 1281

The Ideal Arco Round Boiler has been again improved. Its direct, fire-contact heating surface, its steaming capacity and its fuel capacity have been largely increased. Its simple construction and excellent design; its superior steam capacity; its larger dome; its third nipple construction; its chainless rear draft control; the uniformity of its castings; its sturdier base and grate; the substantial character of its plate work—these and the numerous other individual features have established the service qualities of the boiler.

The boiler capacities listed below are established in accordance with the A.S.H. & V.E. Standard Formula for rating low pressure heating boilers.

Each boiler is guaranteed to develop its stated capacity when fired with hard coal of 13000 B.T.U. heat value.

No.	Height to Top Outlet In.	Nom. Diam. Grate In.	Height Water Line In.	*Size Outlet and Inlet In.	Chimney Size In.	Grate Area Sq. Ft.	Smoke Pipe Rating In.	8-hour Rating Sq. Ft.
S-1704	53 1/8	17	47	2 1/2	8x8	1.40	8	350
S-1724	54 1/8	17	48 1/2	2 1/2	8x8	1.40	8	400
S-1744	56 1/8	17	50	2 1/2	8x8	1.40	8	450
S-1904	52 1/2	19	45	2 1/2	8x8	1.88	8	500
S-1924	54	19	46 1/2	2 1/2	8x8	1.88	8	550
S-1944	55 1/2	19	48	2 1/2	8x8	1.88	8	600
S-2004	51 1/2	20	46	3	8x8	2.23	8	625
S-2024	53	20	47 1/2	3	8x8	2.23	8	675
S-2044	54 1/2	20	49	3	8x12	2.23	8	725
S-2204	54	22	47	3	8x12	2.62	9	775
S-2224	55 1/2	22	48 1/2	3	8x12	2.62	9	825
S-2244	57	22	50	3	8x12	2.62	9	875
S-2504	55 5/8	25	48	3 1/2	8x12	3.53	9	950
S-2524	57 1/8	25	49 1/2	3 1/2	8x12	3.53	9	1025
S-2544	58 5/8	25	51	3 1/2	8x12	3.53	9	1100
S-2804	57 5/8	28	49	4	8x12	4.36	10	1200
S-2824	59 1/8	28	50 1/2	4	12x12	4.36	10	1300
S-2844	60 5/8	28	52	4	12x12	4.36	10	1400
S-3104	59 3/4	31	51	4	12x12	5.30	10	1500
S-3124	61 1/4	31	52 1/2	4	12x12	5.30	10	1600
S-3144	62 3/4	31	54	4	12x12	5.30	10	1700
S-1705	57 5/8	17	51	2 1/2	8x8	1.40	8	400
S-1905	57	19	50	2 1/2	8x8	1.88	8	550
S-2005	56 1/8	20	51	3	8x8	2.23	8	675
S-2205	58 1/2	22	52	3	10x10	2.62	9	825
S-2505	60 1/4	25	53	3 1/2	10x10	3.53	9	1025
S-2805	62 5/8	28	54	4	12x12	4.36	10	1300
S-3105	65	31	56	4	12x12	5.30	10	1600
S-1706	62 1/4	17	56	2 1/2	8x8	1.40	8	450
S-1906	61 5/8	19	55	2 1/2	8x8	1.88	8	600
S-2006	60 3/4	20	55	3	10x10	2.23	8	725
S-2206	63 1/4	22	56	3	10x10	2.62	9	875
S-2506	65 3/8	25	58	3 1/2	10x10	3.53	9	1100
S-2806	67 3/8	28	59	4	12x12	4.36	10	1400
S-3106	70 3/8	31	62	4	12x12	5.30	10	1700

*Steam boilers have one outlet and two inlets, the same size.

Ideal Arco Round Water Boilers
For Hard or Soft Coal, Gas and Oil Fuel
Water Boiler Capacities—600 to 2825 Square Feet

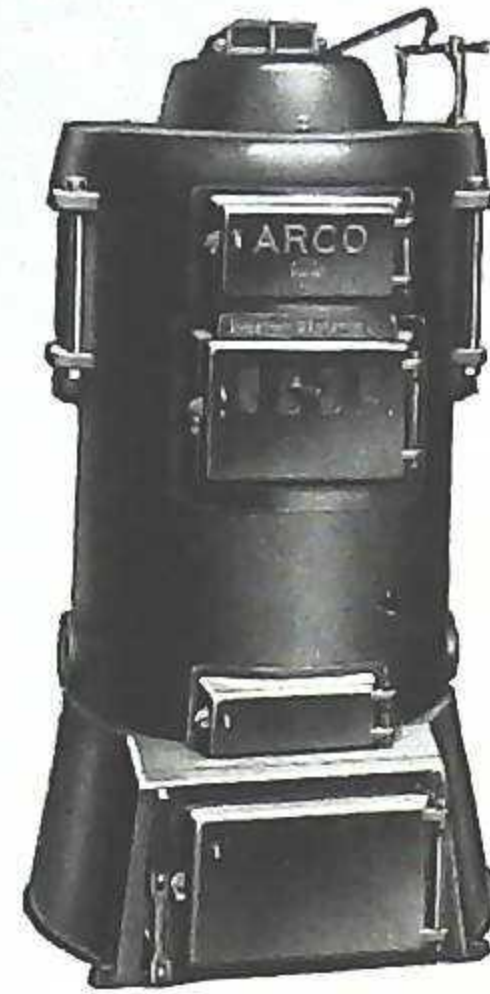


Fig. 1282

The Ideal Arco Round Boiler has been again improved. Its direct, fire-contact heating surface, its heating capacity and its fuel capacity have been largely increased. Its simple construction and excellent design; its superior heating capacity; its third nipple construction; its chainless rear draft control; the uniformity of its castings; its sturdier base and grate; the substantial character of its plate work—these and the numerous other individual features have established the service qualities of the boiler.

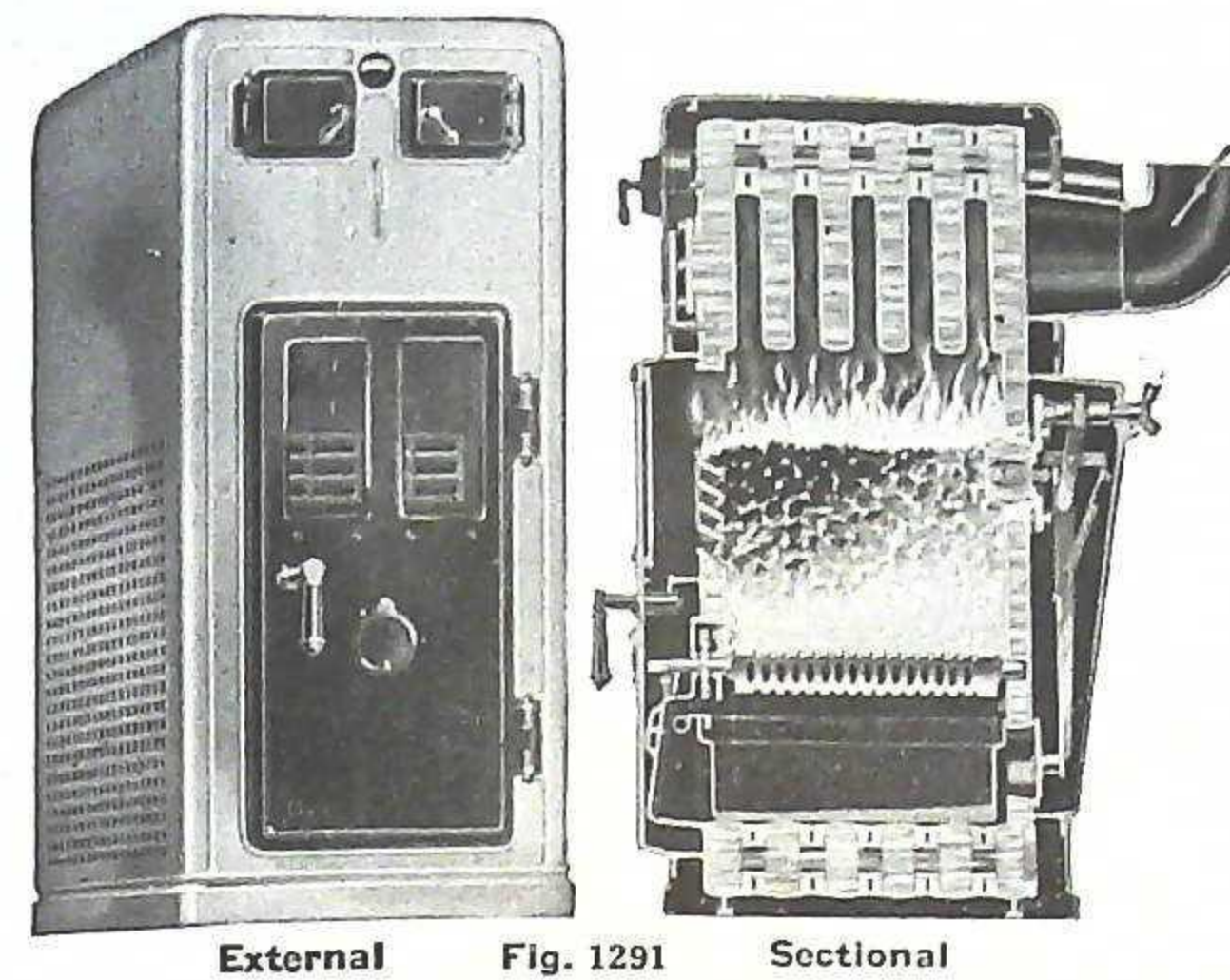
The boiler capacities given below are established in accordance with the A.S.H. & V.E. Standard Formula for rating low pressure heating boilers.

Each boiler is guaranteed to develop its stated capacity when fired with hard coal of 13000 B.T.U. heat value.

No.	Height to Top Outlet In.	Nom. Diam. Grate In.	*Size Outlet and Inlet In.	Chimney Size In.	Grate Area Sq. Ft.	Smoke Pipe Rating In.	8-hour Rating Sq. Ft.
W-1704	47 1/8	17	2 1/2	8x8	1.40	8	600
W-1724	48 5/8	17	2 1/2	8x8	1.40	8	675
W-1744	50 1/8	17	2 1/2	8x8	1.40	8	750
W-1904	45 7/8	19	2 1/2	8x8	1.88	8	850
W-1924	47 3/8	19	2 1/2	8x8	1.88	8	925
W-1944	48 7/8	19	2 1/2	8x8	1.88	8	1000
W-2004	45 1/2	20	3	8x8	2.23	8	1050
W-2024	47	20	3	8x8	2.23	8	1125
W-2044	48 1/2	20	3	8x12	2.23	8	1200
W-2204	47 7/8	22	3	8x12	2.62	9	1300
W-2224	49 3/8	22	3	8x12	2.62	9	1375
W-2244	50 7/8	22	3	8x12	2.62	9	1450
W-2504	48 3/4	25	3 1/2	8x12	3.53	9	1575
W-2524	50 1/4	25	3 1/2	8x12	3.53	9	1700
W-2544	51 3/4	25	3 1/2	8x12	3.53	9	1825
W-2804	50 3/4	28	4	8x12	4.36	10	1975
W-2824	52 1/4	28	4	12x12	4.36	10	2150
W-2844	53 3/4	28	4	12x12	4.36	10	2325
W-3104	53 1/8	31	4	12x12	5.30	10	2475
W-3124	54 5/8	31	4	12x12	5.30	10	2650
W-3144	56 1/8	31	4	12x12	5.30	10	2825
W-1705	51 5/8	17	2 1/2	8x8	1.40	8	675
W-1905	50 3/8	19	2 1/2	8x8	1.88	8	925
W-2005	50 1/8	20	3	8x8	2.23	8	1125
W-2205	52	22	3	10x10	2.62	9	1375
W-2505	53 1/2	25	3 1/2	10x10	3.53	9	1700
W-2805	55 3/4	28	4	12x12	4.36	10	2150
W-3105	58 1/4	31	4	12x12	5.30	10	2650
W-1706	56 1/4	17	2 1/2	8x8	1.40	8	750
W-1906	55	19	2 1/2	8x8	1.88	8	1000
W-2006	54 3/4	20	3	10x10	2.23	8	1200
W-2206	56 7/8	22	3	10x10	2.62	9	1450
W-2506	58 5/8	25	3 1/2	10x10	3.53	9	1825
W-2806	60 7/8	28	4	12x12	4.36	10	2325
W-3106	63 3/4	31	4	12x12	5.30	10	2825

*Water boilers have two outlets and two inlets, the same size.

Ideal-Arcola Parlor Heaters



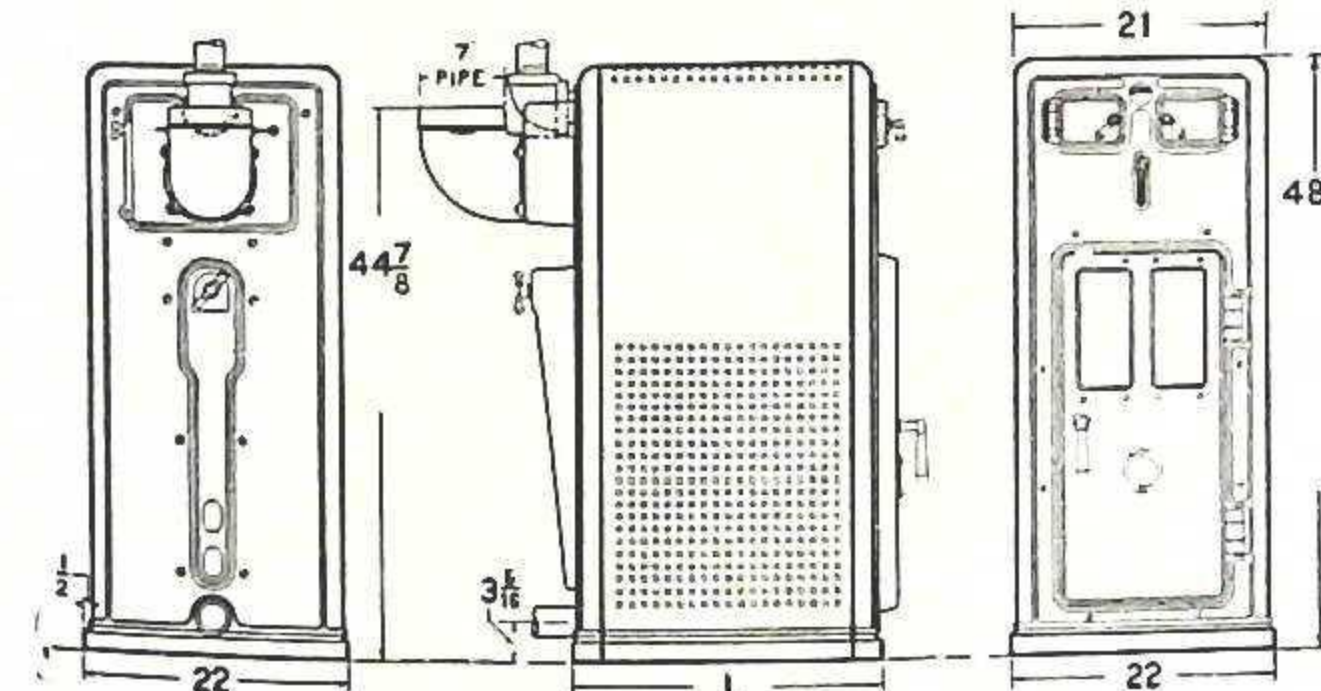
External Fig. 1291 Sectional



Fig. 1292

The Ideal-Arcola Parlor Heater has a French gray jacket and black doors. It is finished with vitreous enamel and is easily cleaned. Provided with an automatic heat regulator which maintains any desired temperature. Has a Lock-Safe Fire Door which eliminates waste of heat and saves coal by making it impossible to drive or retard the fire by the wasteful method of opening the ashpit or fire doors, and makes the heater clean and dust proof.

The combustion chamber is completely water surrounded and effectively eliminates fuel waste. Ashpan of galvanized sheet iron is balanced, fits snugly and is easily handled. The triangular grate operates on cog wheels thereby saving fuel and making them easy to shake. The special fire grate burns hard or soft coal or wood. Contact surfaces are machine ground. Sections are of cast iron. Has transparent Pyrex panels which will not flake and are easily cleaned.



No.	No. of Sections	Water Rating Sq. Ft.	Grate Area Sq. Ft.	Cap. Hard Coal Lbs.	Leth. L In.	Size Outlets and Inlets In.	Chimney Size Sea Level, In.	Ht. Chimney Ft.
40	4	375	.81	66	13 1/2	2 1/2	8x8	25
50	5	500	1.08	88	17	2 1/2	8x8	25
60	6	625	1.35	110	20 1/2	2 1/2	8x8	30
70	7	750	1.62	132	24	2 1/2	8x8	30

Ideal-Arcola Parlor Heating Outfits

Ideal-Arcola Parlor Heater consists of 38-inch high Peerless 3-column radiators as listed, expansion tank, drain valve and vent fitting.

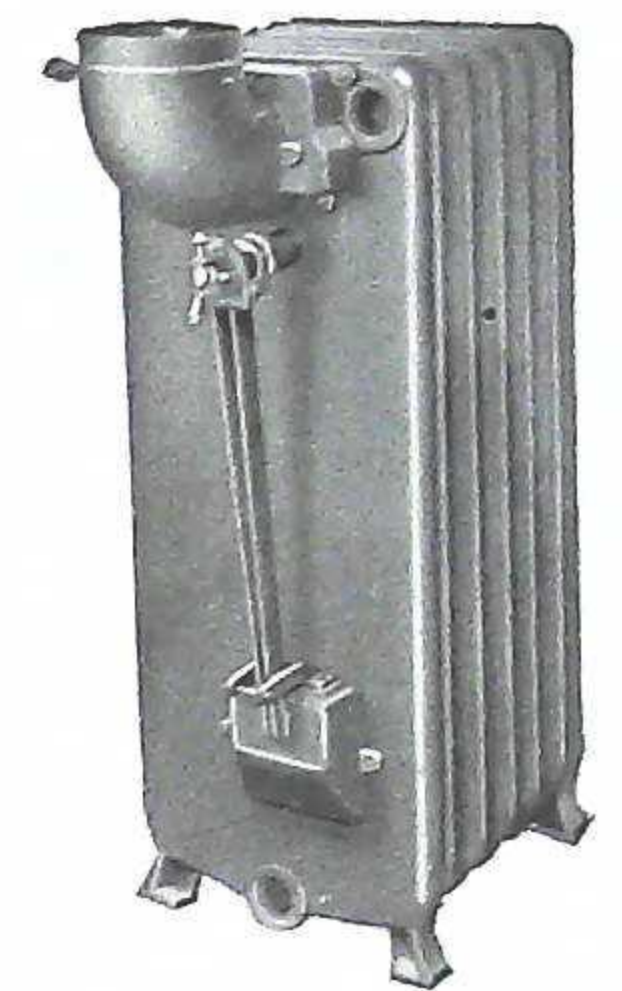
Outfit No.	No.	Radiation Sq. Ft.	Outfit No.	No.	Radiation Sq. Ft.
A-150-40	40	150	A-375-50	50	375
A-175-40	40	175	A-400-60	60	400
A-200-40	40	200	A-425-60	60	425
A-225-40	40	225	A-450-60	60	450
A-250-40	40	250	A-475-60	60	475
A-275-40	40	275	A-500-70	70	500
A-300-50	50	300	A-525-70	70	525
A-325-50	50	325	A-550-70	70	550
A-350-50	50	350	.....	..	...

Ideal-Arcola Heaters

PATENTED JANUARY 18, 1921. OTHER PATENT PENDING



Ideal-Arcola Heater



Ideal-Arcola Heat Regulator

Fig. 1293

The Ideal-Arcola Heater places comfort and fuel economy of hot water heating within the reach of owners of cellarless bungalows, small city and farm cottages, one-story stores and office buildings, small country school-houses, country resort cottages, small churches and chapels, garages, inter-urban street-car and railroad stations, weighing rooms, village fire houses, police stations, etc. It is neat and compact.

It is peculiarly adapted for use in those two and three-story flat buildings where each tenant prefers to run his own heating outfit to suit his family's needs or preference as to exact degree of warmth, or pocketbook; and without going to a cellar to attend the fire.

Similarly, it fits the needs of thousands of combination store and flat buildings, where the store-keeper and the family above each prefers or requires an independent heating outfit, and finds it difficult or inconvenient to go to the cellar or divide the use or care of cellar-set boilers or hot air furnaces.

It is unique, in that it serves both as boiler and radiator, distributing its heat to the room in which it is placed and yet developing a great enough quantity of heat from a small amount of coal to warm cozily several additional rooms. Its pleasing appearance and small size permit the Arcola to be placed in any room having chimney connection.

Although the Ideal-Arcola Heater is not regularly supplied with automatic regulation, it is designed so that an automatic heat regulating device may easily be added at any time.

The automatic heat regulator is placed at the rear of the Arcola. To obtain more or less heat it is necessary to turn the handle on its dial. The automatic mechanism then accurately maintains the desired heat output without further attention.

Oval smoke pipe connection will take 6 inches diameter smoke pipe. Flow pipe tapping, 2-2 inches. Return pipe tapping, 2 inches.

Heater is packed in a crate.

Ideal-Arcola Heaters

No.	No. of Sections	Rating Sq. Ft.	Fuel Capacity Pounds	Length L Inches	Radiating Surface of Heater and Expansion Tank, Sq. Ft.
4H	4	200	60	12	45
5H	5	300	80	15	50
6H	6	400	100	18	55
7H	7	500	120	21	60
8H	8	600	140	24	65

Ideal Hot Water Supply Boilers

Cast Iron



No. 02 Ideal Fig. 1301, No. 09 Ideal Fig. 1302, No. 10 Ideal Arco Fig. 1303

Maximum allowable working pressure, 80 pounds per square inch.

No.	Style of Grate	Diam. of Grate Inches	Grate Area Square Feet	No. and Size Outlets and Inlets Inches	Nominal Ratings Gallons per Hour	Price Each
01	Slide	10	.59	1-1 1/2	56	.....
02	"	10	.54	1-1 1/2	93	.....
03	"	10	.59	1-1 1/2	144	.....
04	Rocking	12	.80	3-1 1/2	192	.....
05	"	12	.80	3-1 1/2	210	.....
06	"	15	1.23	3-2	384	.....
07	"	15	1.23	3-2	426	.....
08	"	18	1.92	3-2	600	.....
09	"	18	1.92	3-2	660	.....
Arco 10	"	10	.54	1-1 1/2	81	.....
" 12	"	12	.80	1-1 1/2	148	.....
" 15	"	15	1.23	1-1 1/2	242	.....

No firing tools are furnished with above boilers. The ratings are based on gallons per hour per 25-degree rise on 8-hour firing period, with hard coal.

Union Laundry Stoves



Fig. 1304

1-inch flow.
1-inch return.
Smoke pipe, 6 inches.
Capacity, 60 gallons.
Top, 16 inches wide; 25 1/2 inches long; 17 inches square at floor; 21 1/4 inches high.
Grate, 10 inches.
Priceeach \$25.00

Hot Water Storage Tanks

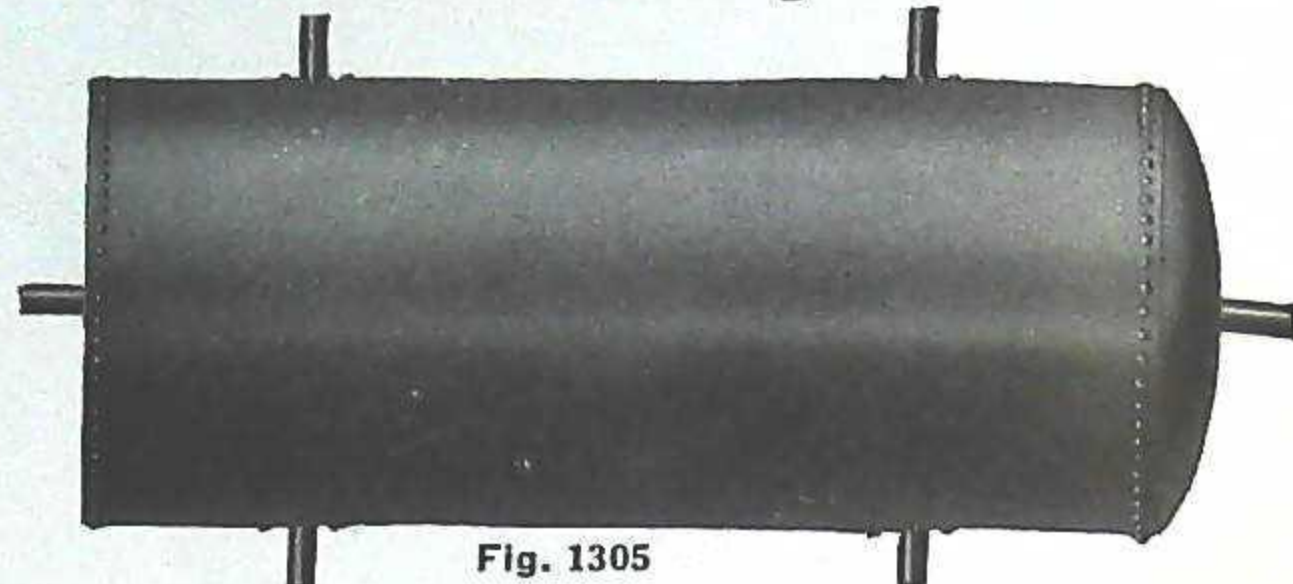


Fig. 1305

The longitudinal seams of these hot water storage tanks are riveted and brazed. In the brazing process the seam is riveted merely to hold the plates together and the copper brazing compound is sweated or flushed into the seam, forming a perfect bond between the plates.

The tanks are subjected to a severe air pressure test. No water enters them at any time prior to shipment, thus making them less liable to rust.

All standard storage tanks are tested to a hydrostatic pressure of 100 pounds to the square inch and are guaranteed for a working pressure of 65 pounds per square inch.

All extra heavy storage tanks are tested to a hydrostatic pressure of 150 pounds to the square inch, and are guaranteed for a working pressure of 100 pounds to the square inch.

Diam. Inches	Lgth. Feet	Approx. Cap. Gal.	Standard Tank Only	Price	Number and Size of Coil Pipes	Price	
						Black Coil	Galy. Coil
20	4	66	1 1/2	\$94.00	4 pipes 1 in.	\$29.00	\$35.00
20	5	85	1 1/2	104.00	4 " 1 " "	30.50	38.50
24	4	100	1 1/2	109.00	4 " 1 1/4 " "	35.50	42.00
24	5	120	1 1/2	123.00	4 " 1 1/4 " "	37.00	45.00
24	6	140	1 1/2	134.00	4 " 1 1/4 " "	38.50	48.00
30	4	150	2	143.00	4 " 1 1/4 " "	35.50	42.00
30	5	180	2	158.00	4 " 1 1/4 " "	37.00	45.00
30	6	220	2	173.00	4 " 1 1/4 " "	38.50	48.00
30	7	250	2	196.00	4 " 1 1/4 " "	40.00	51.00
30	8	295	2	211.00	4 " 1 1/4 " "	41.50	54.00
36	6	315	2	206.00	4 " 1 1/2 " "	51.00	62.00
36	7	365	2	241.00	4 " 1 1/2 " "	54.00	66.00
36	8	420	2	256.00	4 " 1 1/2 " "	57.50	70.00
36	10	525	2	293.00	4 " 1 1/2 " "	64.00	78.00
42	6	430	2	276.00	4 " 1 1/2 " "	51.00	62.00
42	7	500	2	310.00	4 " 1 1/2 " "	54.00	66.00
42	8	575	2	333.00	4 " 1 1/2 " "	57.50	70.00
42	10	720	2	375.00	4 " 1 1/2 " "	64.00	78.00
42	12	865	2	415.00	4 " 1 1/2 " "	70.50	85.00
42	14	1000	2	468.00	4 " 1 1/2 " "	77.00	93.00

Extra Heavy

24	5	120	\$137.00	4 pipes 1 1/4 in.	\$37.00	\$45.00
24	6	140	155.00	4 " 1 1/4 " "	38.50	48.00
30	5	180	182.00	4 " 1 1/4 " "	37.00	45.00
30	6	220	198.00	4 " 1 1/4 " "	38.50	48.00
30	7	250	224.00	4 " 1 1/4 " "	40.00	51.00
30	8	295	242.00	4 " 1 1/4 " "	41.50	54.00
36	6	315	264.00	4 " 1 1/2 " "	51.00	62.00
36	7	365	300.00	4 " 1 1/2 " "	54.00	66.00
36	8	420	328.00	4 " 1 1/2 " "	57.50	70.00
36	10	525	385.00	4 " 1 1/2 " "	64.00	78.00
42	6	430	345.00	4 " 1 1/2 " "	51.00	62.00
42	7	500	390.00	4 " 1 1/2 " "	54.00	66.00
42	8	575	420.00	4 " 1 1/2 " "	57.50	70.00
42	10	720	480.00	4 " 1 1/2 " "	64.00	78.00
42	12	865	540.00	4 " 1 1/2 " "	70.50	85.00
42	14	1000	614.00	4 " 1 1/2 " "	77.00	93.00
48	8	750	510.00	4 " 1 1/2 " "	57.50	70.00
48	10	940	580.00	4 " 1 1/2 " "	64.00	78.00
48	12	1130	650.00	4 " 1 1/2 " "	70.50	85.00
48	14	1300	715.00	4 " 1 1/2 " "	77.00	93.00
48	16	1500	800.00	4 " 1 1/2 " "	115.00	140.00
48	18	1700	870.00	4 " 1 1/2 " "	128.00	154.00

Furnished with or without coils as ordered.

Extras

Price, Manhole in Head	each	\$30.00
" " " Shell	"	45.00
" Handhole in Head	"	8.00
" " " Shell	"	8.00

Flanged Openings

Size.....in.	2	2 1/2	3	3 1/2	4	5	6
Price.....ea.	\$8.00	8.00	9.00	9.00	10.00	15.00	18.00

Mueller Automatic Hot Water Heating Systems

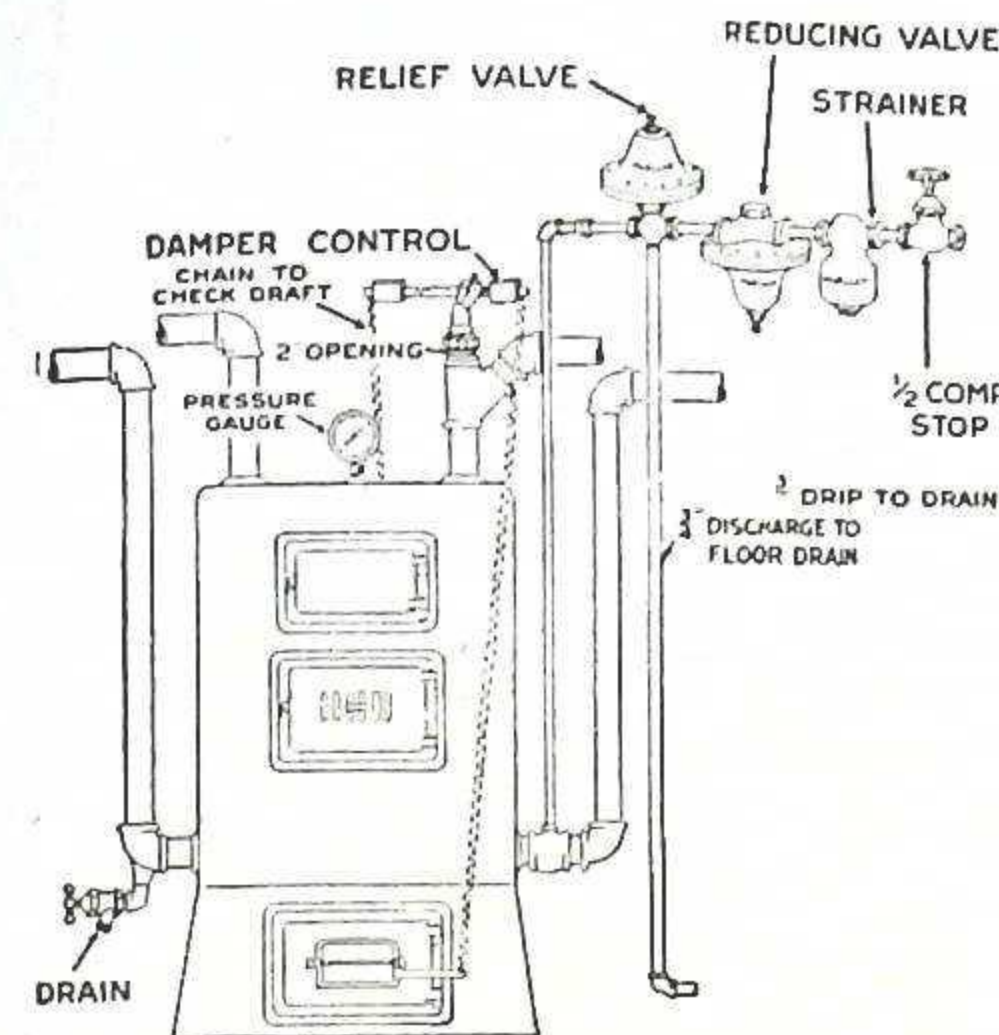


Fig. 1311

The original hot water heating plant depended for its circulation entirely on gravity and has at its highest point an open tank to provide for the expansion of the water in the system when heated. This tank was sometimes placed in the attic where there was the possibility of its freezing. Often it was installed in the bathroom or chamber, making an unsightly object in an otherwise pretty room.

The next step in advance was the closed or tank in the basement system, which speeded up the circulation by putting a pressure on the system but depended on an air cushion in the tank for its safety. It was satisfactory until the air leaked out of the tank or was absorbed by the water when the system became water logged and a dangerous pressure was developed.

To meet the demand for a pressure system that is free from danger, positive in circulation and easy to install, a water reducing valve and relief valve have been especially designed and perfected for this purpose. These valves have been combined with a damper control and when installed on a hot water plant make a most satisfactory system.

When the system is filled the reducing valve closes as soon as the pressure in the system reaches 10 lbs. As the water is heated the pressure increases in proportion to the increase in temperature of the water in the system. When a pressure of 25 lbs. is reached the relief valve operates allowing a few drops of water to escape. At this point the water has reached a temperature that is sufficient to heat the building and the damper regulator operates automatically checking the fire. As the temperature of the water decreases the pressure also decreases until it reaches 10 lbs. when the reducing valve automatically opens allowing just enough fresh water to enter the system to replace that which was discharged through the relief valve. It is a well known fact, admitted by all authorities on heating, that fresh water in a hot water heating plant promotes circulation. In the "Mueller System" just enough water is admitted daily to keep it fresh. The rate of circulation is also increased over that of the open tank due to the fact that a pressure of from ten to twenty-five pounds is on the system at all times. The absence of a tank of any kind in the system saves labor and material as well as doing away with the possibility of freezing or rusting out of tank.

Always leave the stop cock in supply pipe open and under no condition place a valve of any kind between the relief valve and the boiler. When filling system first close all air valves on the radiators and open supply cock and when the gauge shows 10 lbs. begin to let the air out of the radiators. The reducing valve will automatically fill the system as the air is discharged through the air valves.

Prices and further information upon application.

Thrush Hot Water Systems Automatically Regulated

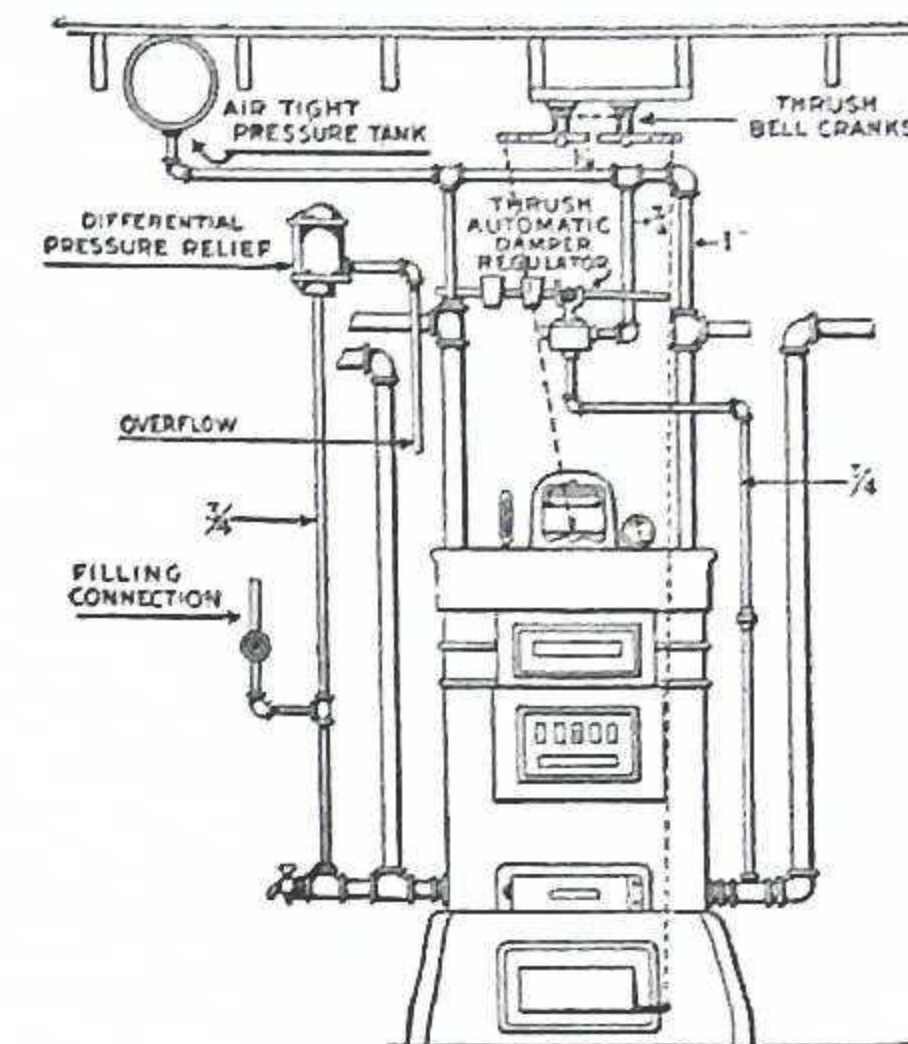


Fig. 1312

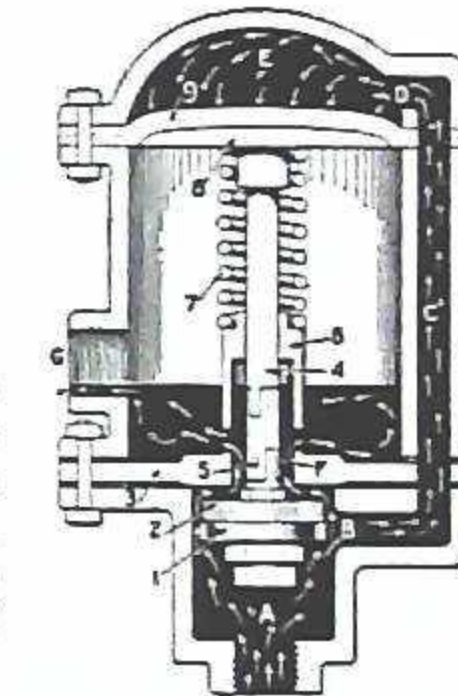
The Thrush Automatically Regulated Hot Water Heating System affords automatic draft regulation and rapid and efficient circulation without water-logged air tanks or freezing of expansion line.

The equipment consists of the Thrush Automatic Temperature Regulator, differential pressure relief, air-tight pressure tank, special altitude gauge and thermometer.

The water circulates in the regulator around the inner shell which contains the thermostats. The thermostats operate the lever with the changes of the water temperature. The regulator is complete within itself and enables the user to install it where most convenient for best and most direct connection to the dampers. For maintaining different water temperatures, simply adjust the weight on the lever. The thermostat is the multiple disc type consisting of 6 separate discs each working independently of the other.

The differential pressure relief is designed to relieve the excess pressure. It is assembled in a way that will not permit dirt or sediment to accumulate around the seat and will therefore always close tight against the leakage of water when the pressure in the system has been reduced to the working pressure for which the pressure relief is adjusted. It is set to open at approximately 26 pounds pressure. Special adjustment can be made at the factory to meet the requirements of high buildings when ordered.

Special altitude gauge and thermometer are furnished.



Relief Valve PATENTED

Equipment A

Includes Thrush Hot Water Heating System complete with Thrush Automatic Temperature Regulator, Differential Pressure Relief Valve, Air Tight Tank, Special Gauge and Thermometer.

Size No.	Radiation Square Feet	Price Each	Size No.	Radiation Square Feet	Price Each
0	Up to 350	\$52.00	2	Up to 1250	\$58.00
1	" " 750	54.00	3	" " 2000	64.00

Prices on larger jobs than shown upon application.

Equipment B

Includes Thrush Differential Pressure Relief Valve, Air Tight Pressure Tank, Special Gauge and Thermometer.

Size No.	Radiation Square Feet	Price Each	Size No.	Radiation Square Feet	Price Each
0	Up to 350	\$34.50	2	Up to 1250	\$40.50
1	" " 750	36.50	3	" " 2000	46.50

Cast Iron Radiators

For Steam or Water
Peerless—Single Column

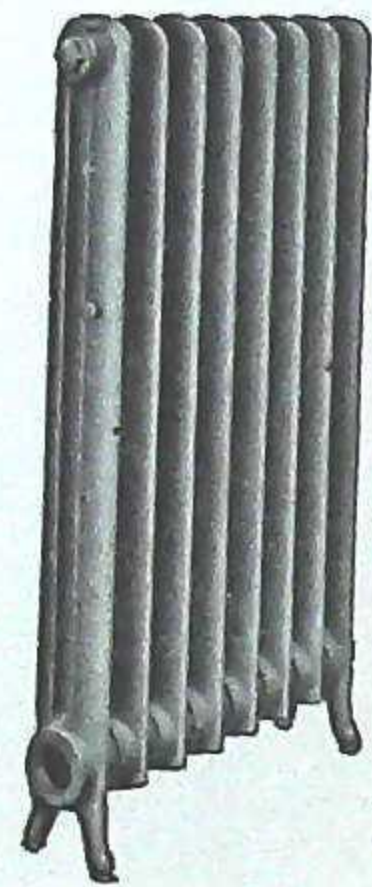


Fig. 1321

No. of Sections	*Length Inches	HEATING SURFACE, SQUARE FEET				
		38 In. High 3 Sq. Ft. per Section	32 In. High 2 1/2 Sq. Ft. per Section	26 In. High 2 Sq. Ft. per Section	23 In. High 1 3/4 Sq. Ft. per Section	20 In. High 1 1/2 Sq. Ft. per Section
2	5	6	5	4	3 1/2	3
3	7 1/2	9	7 1/2	6	5	4 1/2
4	10	12	10	8	6 2/3	6
5	12 1/2	15	12 1/2	10	8 1/3	7 1/2
6	15	18	15	12	10	9
7	17 1/2	21	17 1/2	14	11 2/3	10 1/2
8	20	24	20	16	13 1/3	12
9	22 1/2	27	22 1/2	18	15	13 1/2
10	25	30	25	20	16 2/3	15
11	27 1/2	33	27 1/2	22	18 1/3	16 1/2
12	30	36	30	24	20	18
13	32 1/2	39	32 1/2	26	21 2/3	19 1/2
14	35	42	35	28	23 1/3	21
15	37 1/2	45	37 1/2	30	25	22 1/2
16	40	48	40	32	26 2/3	24
17	42 1/2	51	42 1/2	34	28 1/3	25 1/2
18	45	54	45	36	30	27
19	47 1/2	57	47 1/2	38	31 2/3	28 1/2
20	50	60	50	40	33 1/3	30
21	52 1/2	63	52 1/2	42	35	31 1/2
22	55	66	55	44	36 2/3	33
23	57 1/2	69	57 1/2	46	38 1/3	34 1/2
24	60	72	60	48	40	36
25	62 1/2	75	62 1/2	50	41 2/3	37 1/2
26	65	78	65	52	43 1/3	39
27	67 1/2	81	67 1/2	54	45	40 1/2
28	70	84	70	56	46 2/3	42
29	72 1/2	87	72 1/2	58	48 1/3	43 1/2
30	75	90	75	60	50	45
31	77 1/2	93	77 1/2	62	51 2/3	46 1/2
32	80	96	80	64	53 1/3	48

*Each section 2 1/2 inches long. Add 1/2 inch to length of radiator for each bushing.

All air-valve tappings of direct radiators are regularly made 1/8-inch. Vapor tappings, top and bottom opposite ends; supply, 3/4-inch, return, 1/2-inch.

Unless otherwise ordered, all openings of direct radiators will have right-hand threads.

Distance from Floor to Center of Lower Tappings

Water supply and return, 4 1/2 inches. Single pipe, steam, 4 inches. Two-pipe steam, supply, 4 1/2 inches. Two-pipe steam, return, 4 inches.

TAPPINGS.—Water, 1 1/2 inches top and 2 inches bottom; steam, 2 inches at bottom only. Bushed as required.

CONNECTIONS.—Water, extra heavy 1 1/2-inch right and left-threaded nipples at top and bottom; steam, extra heavy 2-inch right and left-threaded nipples at bottom only.

Low DRIP HUBS.—One pipe steam, on supply leg-section; two pipe steam, on return leg-section.

Special catalogue and prices furnished upon request.

Cast Iron Radiators

For Steam or Water
Peerless—Two Column



Fig. 1322

No. of Sections	*Length Inches	HEATING SURFACE, SQUARE FEET				
		45 In. High 5 Sq. Ft. per Section	38 In. High 4 Sq. Ft. per Section	32 In. High 3 1/2 Sq. Ft. per Section	26 In. High 2 3/4 Sq. Ft. per Section	23 In. High 2 Sq. Ft. per Section
2	5	10	8	6 2/3	5 1/3	4 2/3
3	7 1/2	15	12	10	8	7
4	10	20	16	13 1/3	10 2/3	9 1/3
5	12 1/2	25	20	16 2/3	13 1/3	11 2/3
6	15	30	24	20	16	14
7	17 1/2	35	28	23 1/3	18 2/3	16 1/3
8	20	40	32	26 2/3	21 1/3	18 2/3
9	22 1/2	45	36	30	24	21
10	25	50	40	33 1/3	26 2/3	23 1/3
11	27 1/2	55	44	36 2/3	29 1/3	25 2/3
12	30	60	48	40	32	28
13	32 1/2	65	52	43 1/3	34 2/3	30 1/3
14	35	70	56	46 2/3	37 1/3	32 2/3
15	37 1/2	75	60	50	40	35
16	40	80	64	53 1/3	42 2/3	37 1/3
17	42 1/2	85	68	56 2/3	45 1/3	39 2/3
18	45	90	72	60	48	42
19	47 1/2	95	76	63 1/3	50 2/3	44 1/3
20	50	100	80	66 2/3	53 1/3	46 2/3
21	52 1/2	105	84	70	56	49
22	55	110	88	73 1/3	58 2/3	51 1/3
23	57 1/2	115	92	76 2/3	61 1/3	53 2/3
24	60	120	96	80	64	56
25	62 1/2	125	100	83 1/3	66 2/3	58 1/3
26	65	130	104	86 2/3	69 1/3	60 2/3
27	67 1/2	135	108	90	72	63
28	70	140	112	93 1/3	74 2/3	65 1/3
29	72 1/2	145	116	96 2/3	77 1/3	67 2/3
30	75	150	120	100	80	70
31	77 1/2	155	124	103 1/3	82 2/3	72 1/3
32	80	160	128	106 2/3	85 1/3	74 2/3

*Each section 2 1/2 inches long. Add 1/2 inch to length of radiator for each bushing.

All air-valve tappings of direct radiators are regularly made 1/8-inch. Vapor tappings, top and bottom opposite ends; supply, 3/4-inch, return, 1/2-inch.

Unless otherwise ordered, all openings of direct radiators will have right-hand threads.

Distance from Floor to Center of Lower Tappings

Water supply and return, 4 1/2 inches. Single pipe, steam, 4 inches. Two-pipe steam, supply, 4 1/2 inches. Two-pipe steam, return, 4 inches.

TAPPINGS.—Water, 1 1/2 inches top and 2 inches bottom. Steam—2 inches at bottom only. Bushed as required.

CONNECTIONS.—Water, extra-heavy 1 1/2-inch right and left-threaded nipples at top and bottom. Steam—extra heavy 2-inch right and left-threaded nipples at bottom.

Low DRIP HUBS.—One pipe steam—on supply leg-section. Two pipe steam—on return leg-section.

Cast Iron Radiators

For Steam and Water
Peerless—Three Column



Fig. 1331

No. of Sections	*Length Inches	HEATING SURFACE, SQUARE FEET				
		45 In. High 6 Sq. Ft. per Section	38 In. High 5 Sq. Ft. per Section	32 In. High 4 1/2 Sq. Ft. per Section	26 In. High 3 3/4 Sq. Ft. per Section	23 In. High 3 Sq. Ft. per Section
2	5	12	10	9	7 1/2	6
3	7 1/2	18	15	13 1/2	11 1/4	9
4	10	24	20	18	15	12
5	12 1/2	30	25	22 1/2	18 3/4	15
6	15	36	30	27	22 1/2	18
7	17 1/2	42	35	31 1/2	26 1/4	21
8	20	48	40	36	30	24
9	22 1/2	54	45	40 1/2	33 3/4	27
10	25	60	50	45	37 1/2	30
11	27 1/2	66	55	49 1/2	41 1/4	33
12	30	72	60	54	45	36
13	32 1/2	78	65	58 1/2	48 3/4	39
14	35	84	70	63	52 1/2	42
15	37 1/2	90	75	67 1/2	56 1/4	45
16	40	96	80	72	60	48
17	42 1/2	102	85	76 1/2	63 3/4	51
18	45	108	90	81	67 1/2	54
19	47 1/2	114	95	85 1/2	71 1/4	57
20	50	120	100	90	75	60
21	52 1/2	126	105	94 1/2	78 3/4	63
22	55	132	110	99	82 1/2	66
23	57 1/2	138	115	103 1/2	86 1/4	69
24	60	144	120	108	90	72
25	62 1/2	150	125	112 1/2	93 3/4	75
26	65	156	130	117	97 1/2	78
27	67 1/2	162	135	121 1/2	101 1/4	81
28	70	168	140	126	105	84
29	72 1/2	174	145	130 1/2	108 3/4	87
30	75	180	150	135	112 1/2	90
31	77 1/2	186	155	139 1/2	116 1/4	93
32	80	192	160	144	120	96

*Each section, 2 1/2 inches long. Add 1/2-inch to length of radiator for each bushing.

All air-valve tappings of direct radiators are regularly made 1/8-inch. Vapor tappings, top and bottom opposite ends; supply 3/4-inch, return 1/2-inch.

Unless otherwise ordered, all openings of direct radiators will have right-hand threads.

Distance from Floor to Center of Lower Tappings

Water supply and return, 4 1/2 inches. Single pipe, steam, 4 inches. Two-pipe steam, supply 4 1/2 inches. Two-pipe steam, return, 4 inches.

TAPPINGS.—Water—1 1/2 inches top and 2 inches bottom. Steam—2 inches at bottom only. Bushed as required.

CONNECTIONS.—Water—extra heavy 1 1/2-inch right and left threaded nipples at top and bottom. Steam—extra-heavy 2-inch right and left threaded nipples at bottom only.

Low DRIP HUBS.—One pipe steam—on supply leg-section. Two pipe steam—on return leg-section.

Cast Iron Radiators

For Steam and Water
Peerless—Four Column

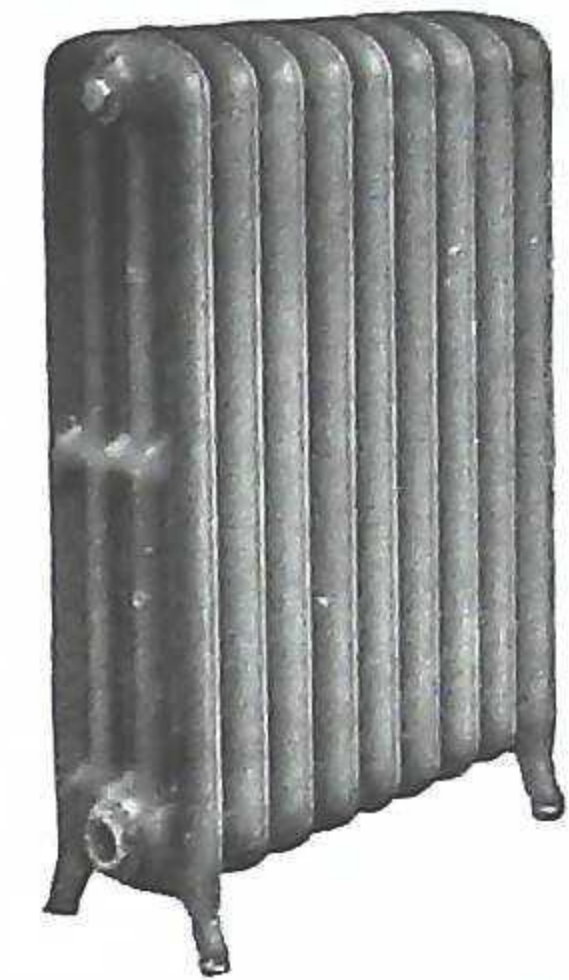


Fig. 1332

No. of Sections	*Length Inches	HEATING SURFACE, SQUARE FEET				
		45 In. High 10 Sq. Ft. per Section	38 In. High 8 Sq. Ft. per Section	32 In. High 6 1/2 Sq. Ft. per Section	26 In. High 5 Sq. Ft. per Section	23 In. High 4 Sq. Ft. per Section
2	6	20	16	13	10	8
3	9	30	24	19 1/2	15	12
4	12	40	32	26	20	16
5	15	50	40	32 1/2	25	20
6	18	60	48	39	30	24
7	21	70	56	45 1/2	35	28
8	24	80	64	52	40	32
9	27	90	72	58 1/2	45	36
10	30	100	80	65	50	40
11	33	110	88	71 1/2	55	44
12	36	120	96	78	60	48
13	39	130	104	84 1/2	65	52
14	42	140	112	91	70	56
15	45	150	120	97 1/2	75	60
16	48	160	128	104	80	64
17	51	170	136	110 1/2	85	68
18	54	180	144	117	90	72
19	57	190	152	123 1/2	95	76
20	60	200	160	130	100	80
21	63	210	168	136 1/2	105	84
22	66	220	176	143	110	88
23	69	230	184	149 1/2	115	92
24	72	240	192	156	120	96
25	75	250	200	162 1/2	125	100
26	78	260	208	169	130	104
27	81	270	216	175 1/2	135	108
28	84	280	224	182	140	112
29	87	290	232	188 1/2	145	116
30	90	300	240	195	150	120
31	93	310	248	201 1/2	155	124
32	96	320	256	208	160	128

Each section is 3 inches long. Add 1/2-inch to length of radiator for each bushing.

All air-valve tappings of direct radiators are regularly made 1/8-inch. Vapor tappings, top and bottom opposite ends; supply 3/4-inch, return 1/2-inch.

Unless otherwise ordered, all openings of direct radiators will have right-hand threads.

Distance from Floor to Center of Lower Tappings

Water supply and return 4 1/2 inches. Single pipe, steam, 4 1/2 inches. Two-pipe steam, supply, 4 1/2 inches. Two-pipe steam, return, 4 1/2 inches.

TAPPINGS.—2 inches at top and bottom. Bushed as required.

CONNECTIONS.—Both steam and water, extra heavy 2-inch right and left threaded nipples at top and bottom.

Corto Radiators

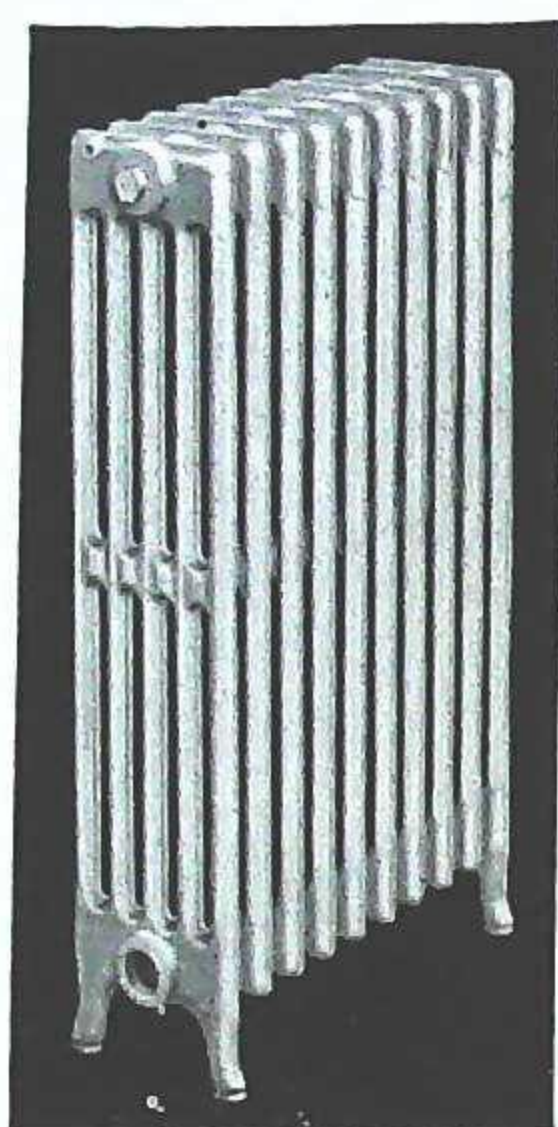


Fig. 1341

The series of columns that constitute this radiator make it unparalleled for resisting high internal pressures. The internal area of its tubes in relation to the heating surface has been reduced to about one-quarter of that now generally in use. Not only has this invention greatly increased the pressure-resisting ability of the Corto Radiator, but in reducing the internal area the water or steam contents are likewise decreased.

The water content of the Corto is equal to three-fourths of a pound per square foot of heating surface, or about one-half the water content of the average radiator; this assures quick and positive venting for all kinds of steam and vapor systems, while in water installations it provides a rapid circulation, causing the radiator to respond more quickly to the immediate heating needs.

Irrespective of height, a series of six sizes ranging from two to four and one-half feet of heating area have been produced, and the surface of each additional size will be increased by one-half square foot, thus abandoning the cumbersome method of increasing heating surface by irregular fractions.

Number of Sections	*Length Inches	HEATING SURFACE—SQUARE FEET					
		38-in. Height 4 1/2 Sq. Ft. per Sec.	34 1/2-in. Height 4 Sq. Ft. per Sec.	31-in. Height 3 1/2 Sq. Ft. per Sec.	27-in. Height 3 Sq. Ft. per Sec.	23-in. Height 2 1/2 Sq. Ft. per Sec.	19 1/2 in. Height 2 Sq. Ft. per Sec.
2	4	9	8	7	6	5	4
3	6	13 1/2	12	10 1/2	9	7 1/2	6
4	8	18	16	14	12	10	8
5	10	22 1/2	20	17 1/2	15	12 1/2	10
6	12	27	24	21	18	15	12
7	14	31 1/2	28	24 1/2	21	17 1/2	14
8	16	36	32	28	24	20	16
9	18	40 1/2	36	31 1/2	27	22 1/2	18
10	20	45	40	35	30	25	20
11	22	49 1/2	44	38 1/2	33	27 1/2	22
12	24	54	48	42	36	30	24
13	26	58 1/2	52	45 1/2	39	32 1/2	26
14	28	63	56	49	42	35	28
15	30	67 1/2	60	52 1/2	45	37 1/2	30
16	32	72	64	56	48	40	32
17	34	76 1/2	68	59 1/2	51	42 1/2	34
18	36	81	72	63	54	45	36
19	38	85 1/2	76	66 1/2	57	47 1/2	38
20	40	90	80	70	60	50	40
21	42	94 1/2	84	73 1/2	63	52 1/2	42
22	44	99	88	77	66	55	44
23	46	103 1/2	92	80 1/2	69	57 1/2	46
24	48	108	96	84	72	60	48
25	50	112 1/2	100	87 1/2	75	62 1/2	50

*Each section, 2 inches long. Add 1/2-inch to length of radiator for each bushing.

TAPPINGS.—1 1/2 inches top and bottom and bushed for water, and 2 inches at bottom only and bushed for steam.

CONNECTIONS.—Extra heavy right and left threaded nipples.

Peerless Cast Iron Window Radiators
Plain Pattern—Formerly Rococo
For Steam or Water

Add 1/2 inch to length for each bushing.

Each section is 12 1/2 inches wide.

The tappings are 2 inches at bottom, 1 1/2 inches at top.

The connections are for extra heavy right and left threaded nipples at top and bottom.

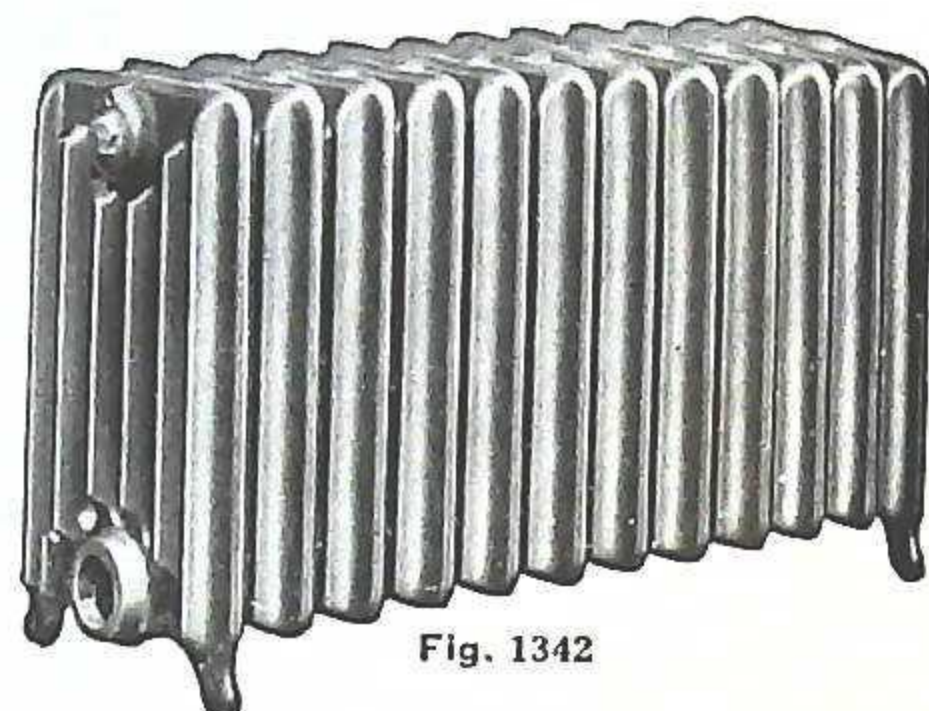


Fig. 1342

No. of Sections	Length 3 In. per Section	HEATING SURFACE, SQUARE FEET			
		20 In. High 5 Sq. Ft. per Section	18 In. High 4 1/2 Sq. Ft. per Section	16 In. High 3 3/4 Sq. Ft. per Section	14 In. High 3 Sq. Ft. per Section
2	6	10	9	7 1/2	6
3	9	15	13 1/2	11 1/4	9
4	12	20	18	15	12
5	15	25	22 1/2	18 3/4	15
6	18	30	27	22 1/2	18
7	21	35	31 1/2	26 1/4	21
8	24	40	36	30	24
9	27	45	40 1/2	33 3/4	27
10	30	50	45	37 1/2	30
11	33	55	49 1/2	41 1/4	33
12	36	60	54	45	36
13	39	65	58 1/2	48 3/4	39
14	42	70	63	52 1/2	42
15	45	75	67 1/2	56 1/4	45
16	48	80	72	60	48
17	51	85	76 1/2	63 3/4	51
18	54	90	81	67 1/2	54
19	57	95	85 1/2	71 1/4	57
20	60	100	90	75	60

Peerless Bathroom Radiators

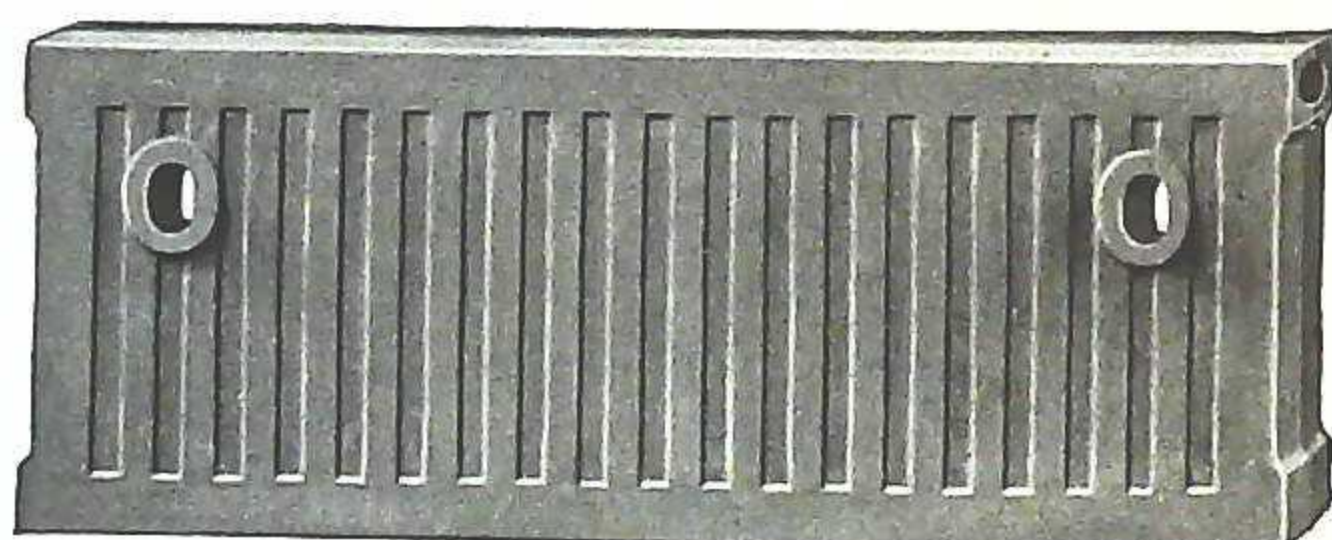
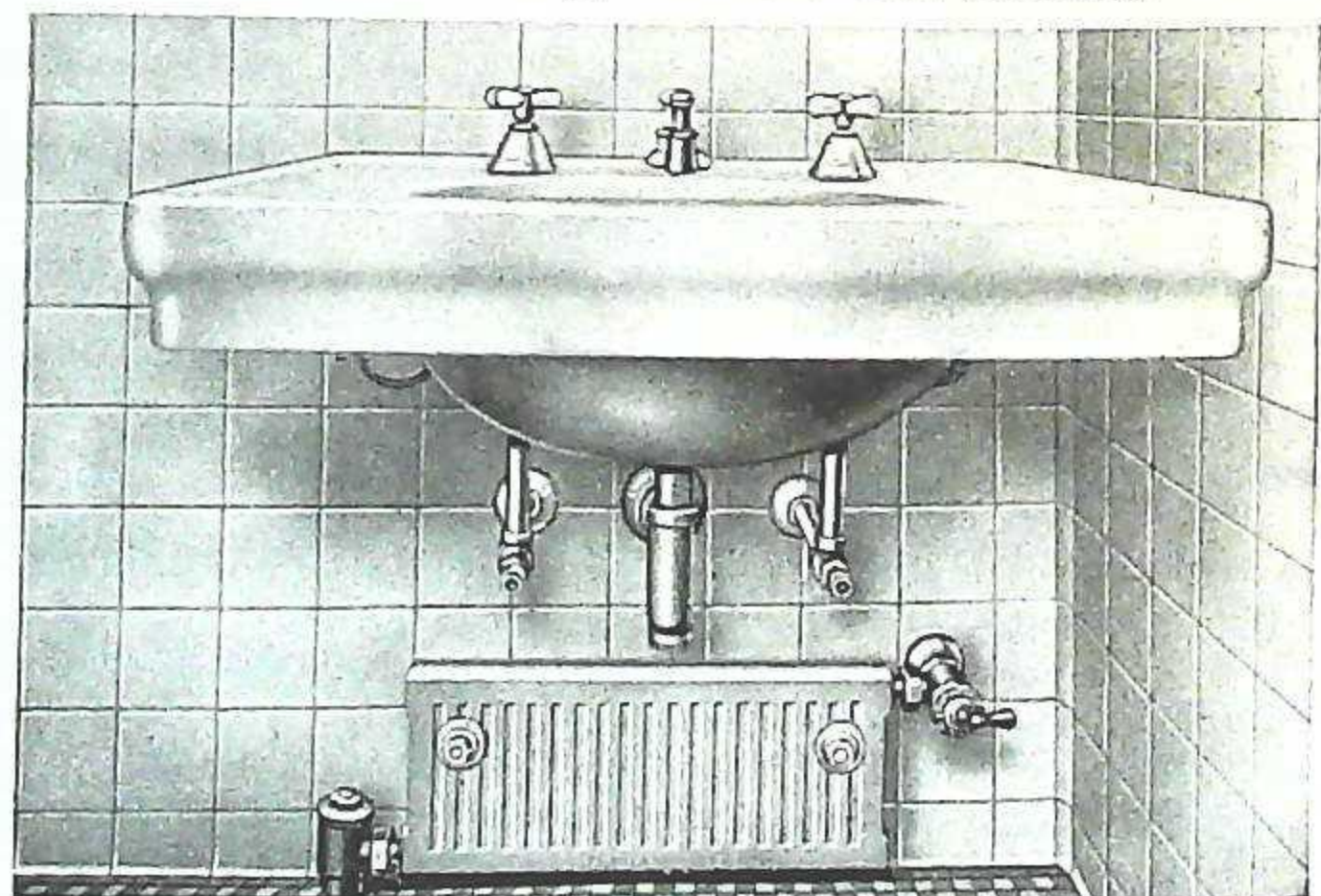


Fig. 1343

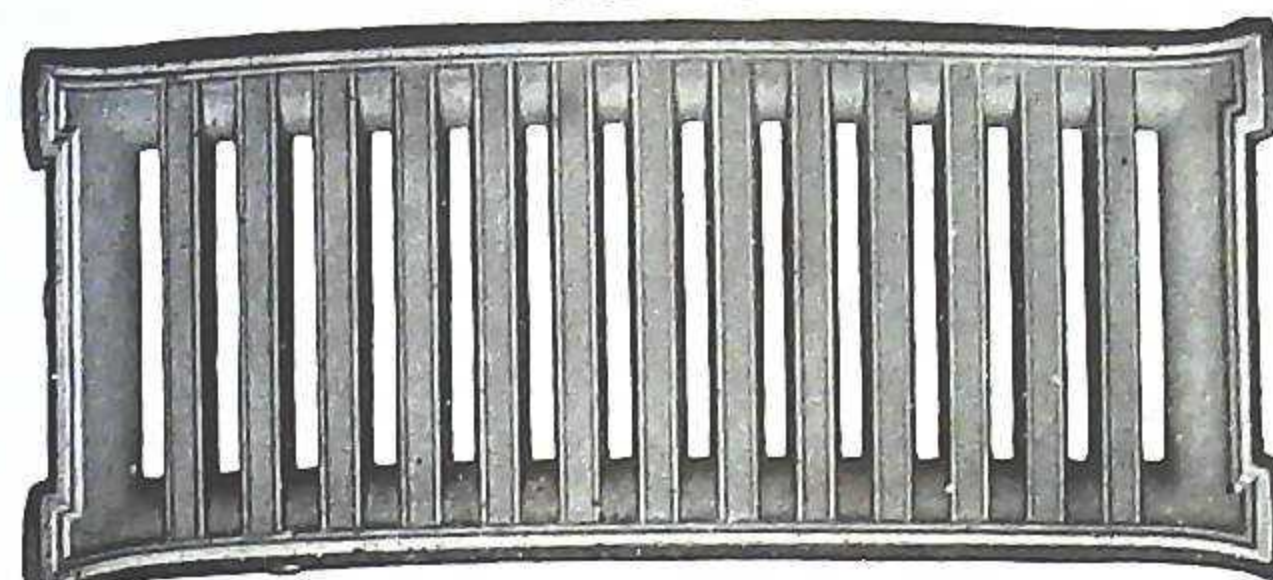
Designed especially for the warming of small bathrooms. Easily fastened to wall by lag screws or hooks. When harmoniously enameled its appearance is most pleasing.



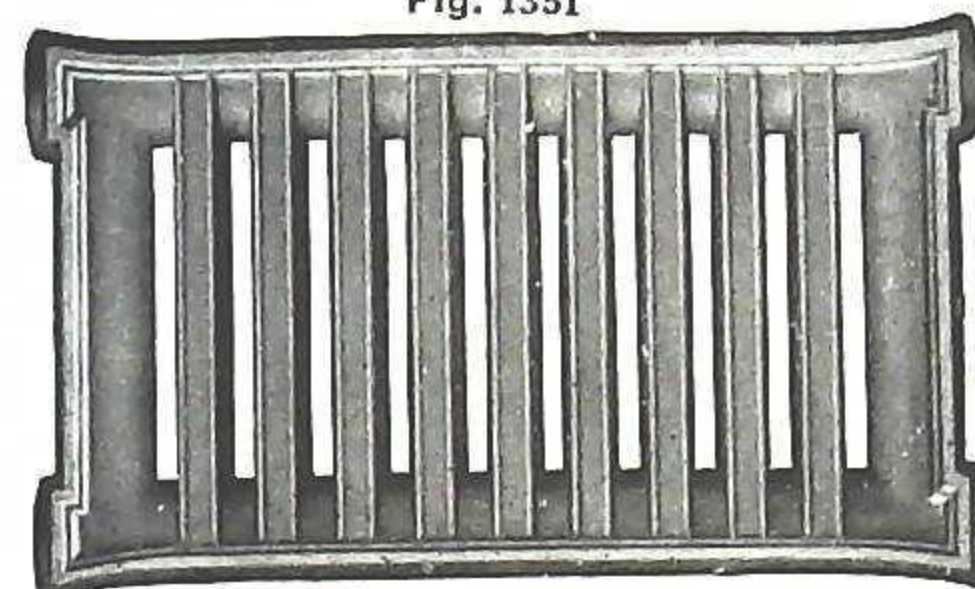
Heating surface, 3 1/2 square feet. Wall area, 1.15 square feet. Two 1/2-inch tappings. Weight, 21 pounds.

Price.....each.....

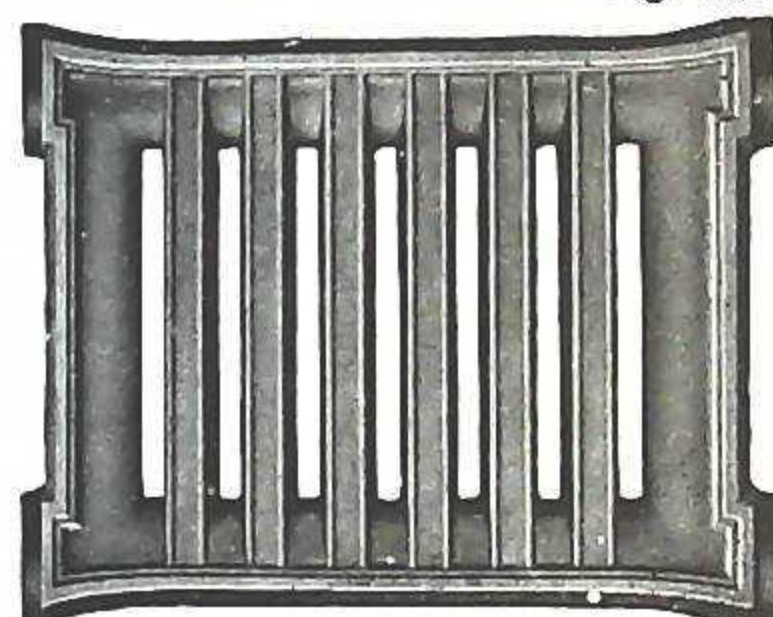
Cast Iron Wall Radiators
For Steam or Water
Peerless



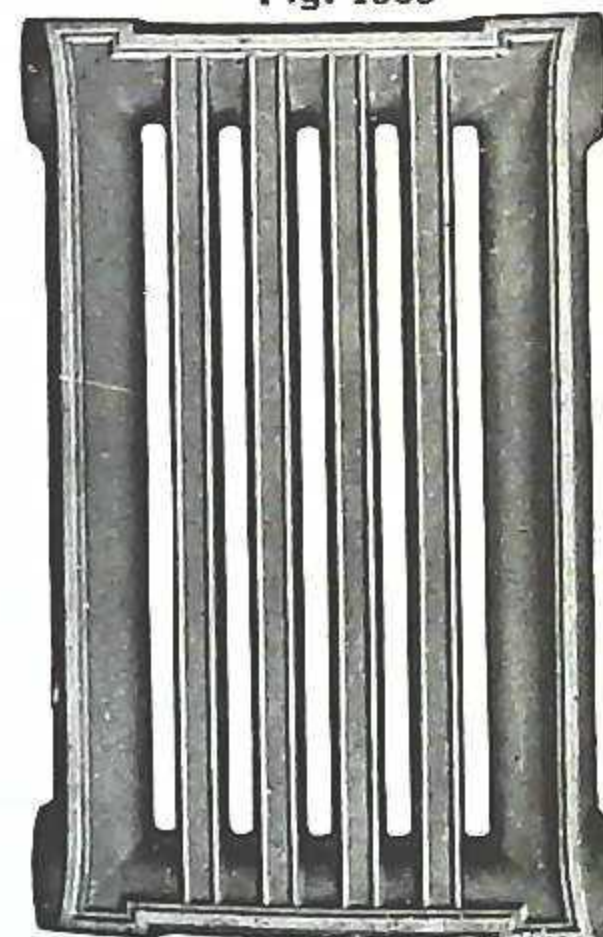
No. 9A
Fig. 1351



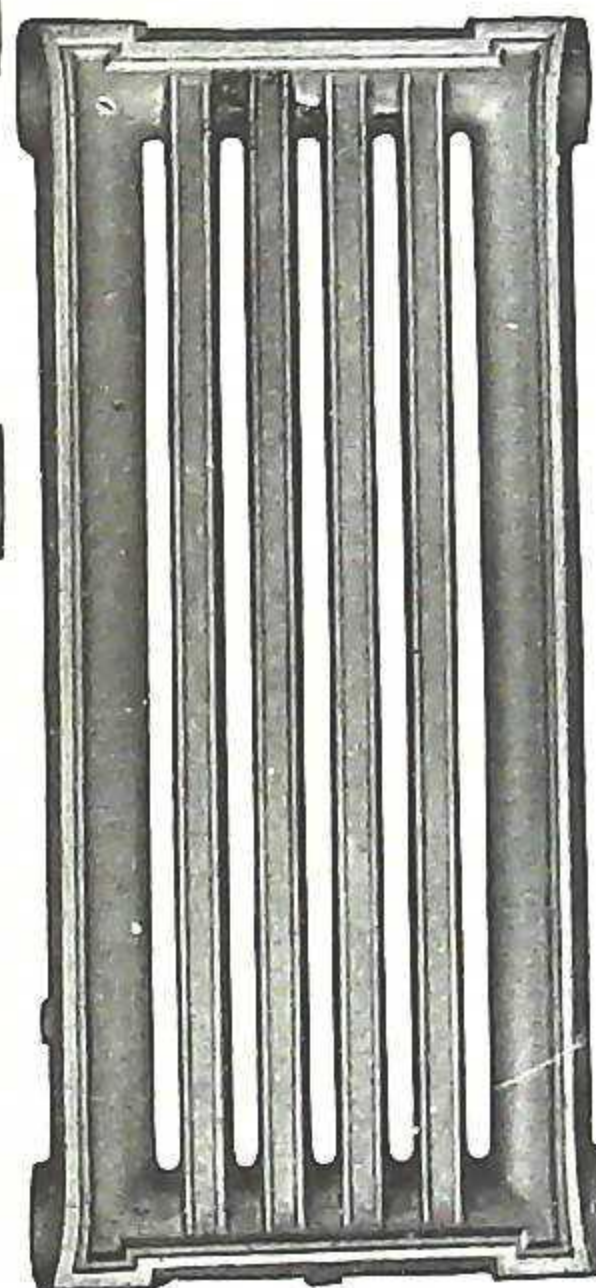
No. 7A
Fig. 1352



No. 5A
Fig. 1353



No. 7B
Fig. 1354



No. 9B
Fig. 1355

Sections 5A, 7A and 9A have bars running crosswise of the section and are regularly tapped 1 1/2 inches to be connected side by side. The sections are connected by 1 1/2-inch right and left-hand internal nipples. Tappings may be bushed if desired.

Special tappings at extra charge.

No.	Height Inches	Length or Width Inches	Thickness Inches	Thickness with Bracket Inches	Heating Surface Sq. Feet	Price per Sq. Ft.
5A	13 5/8	16 5/8	27/8	3 1/2	5	.....
7A	13 5/8	21 7/8	27/8	3 1/2	7	.....
7B	21 7/8	13 5/8	3 1/8	3 1/8	7	.....
9A	13 5/8	29 1/8	27/8	3 1/2	9	.....
9B	29 1/8	13 5/8	3 1/8	3 1/8	9	.....

Special catalogue and prices furnished upon application.

Wall Radiator Brackets

New Arco Adjustable

PATENTED

Has vertical adjustment of 2 inches. The outer face of the radiator sets 4 3/4 inches from the wall. The spools on the bottom bracket allow horizontal movement for expansion and contraction. The malleable iron finger of the top guides it and keeps it from tipping forward. Single spool bracket for one run of wall radiation. Double spool bracket for two runs of wall radiation.

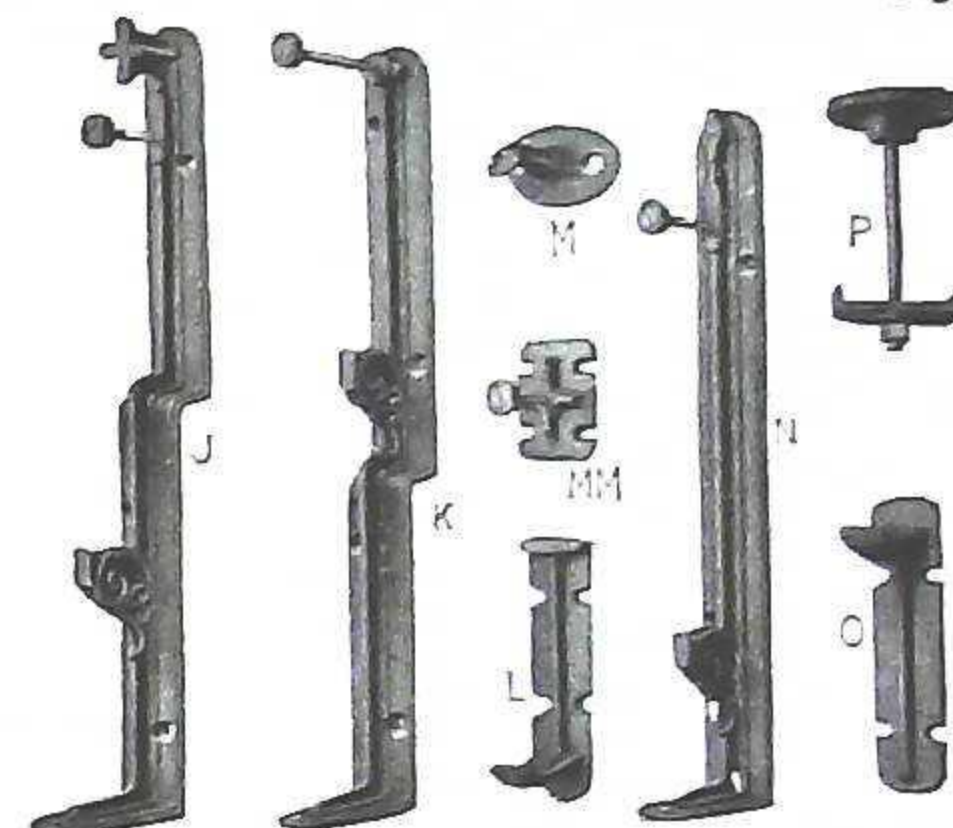


Single Spool Bracket
Fig. 1356



Double Spool Bracket
Fig. 1357

Price, for Single Spool Bracket..... \$2.50
Price, for Double Spool Bracket..... 4.50



Regular Pattern
Fig. 1358

J brackets fit over a 9 1/2-inch high baseboard for supporting wall radiators Nos. 7B and 9B. One 1/4-inch bolt and button furnished with each bracket.

K brackets to fit over baseboard for supporting wall radiators Nos. 5A, 7A and 9A. One 1/4-inch stove bolt and button furnished with each bracket.

Brackets L, O, MM and M are screwed to wall baseboard or wainscoting. L and O brackets are bottom supports for all sizes of wall radiators. MM and M brackets are top guides to hold radiator in place. L and MM brackets are concealed; O and M brackets are not. One MM or M bracket should be used with each L or O bracket. L, O and MM brackets are slotted for four, and the M bracket for two wood screws, one 1/4-inch stove bolt and button furnished with each MM bracket.

Bracket N is a straight right angle bracket, without offset, for supporting all sizes of wall radiators; height from floor to center of end tapping bosses, 5 1/2 inches. One 1/4-inch stove bolt and button with each N Bracket.

Ceiling bracket P is made of cast plate, 3 1/2-inch diameter and screwed to ceiling joists by four screws. The bolt furnished gives a distance of 2 1/2 inches to 5 inches from bottom of radiator to ceiling. Other length bolts furnished on special order.

NOTE.—In ordering buttons and stove bolts separately state for which bracket.

No.	Height from Floor to Center of Supply or Return End of Lowest Tapping	Price Each
J-1	9 1/2-in.	\$.80
J-2	7 1/2 "	.75
J-3	5 1/2 "	.70
K-1	16 " for 11 1/2-in. Baseboard	.88
K-2	14 " " 9 1/2 "	.84
K-3	12 " " 7 1/2 "	.80
K-4	10 " " 5 1/2 "	.75
K-5	8 " " 3 1/2 "	.72
K-6	6 " " 1 1/2 "	.68
L, M, MM, O		.20
N		.75
P	3 1/2 to 5 Ext.	.50

Cast Iron Pin Indirect Radiators

Sanitary School



Steam Section Fig. 1361



Water Section Fig. 1362

Length Inches	Height Inches	Height at Connection, Inches	Heating Surface per Section Square Feet	Price Sq. Ft.
36 1/8	13 7/8	15 1/4	20	...

When special tapping (2 inches or smaller) are at I or L, height at connecting point is 15 1/2 inches. When tapping is at J or K, length is 36 3/8 inches.

Width each section occupies in stack, 4 inches. If other distances between centers are desired we can furnish nipples giving a distance of 3 3/4, 4 1/4 or 4 1/2 inches from center to center of assembled sections.

These indirects are tapped 2 inches, right-hand on supply end and left-hand on the return, and can be bushed to such smaller size as is desired. When tappings are bushed smaller, the inside tappings in the bushings will be right-hand, unless otherwise ordered.

Connected with extra heavy 2-inch right and left-hand threaded nipples, having hexagon nut at center. Steam sections are always shipped separately. Water sections are shipped separately unless otherwise ordered; when ordered assembled they are shipped in stacks of 5 or 6 sections.

Sterling

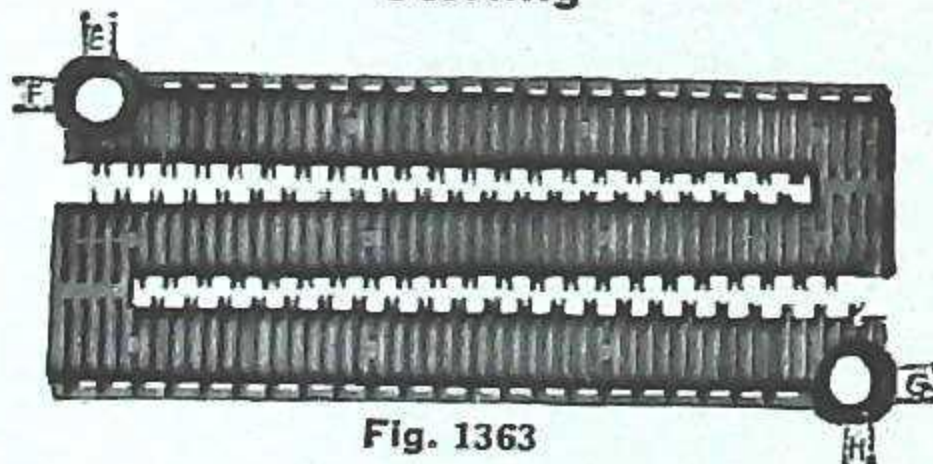


Fig. 1363

Length Inches	Height Inches	Heating Surface per Section Square Feet	Price Sq. Ft.
36 3/4	15 3/4	20	...

Width each section occupies in stack, 3 1/2 inches; or when specially ordered this can be increased to 3 3/4, 4, 4 1/4 or 4 1/2 inches, by using extra long nipples, to give additional air area between sections. Sections are shipped separately unless otherwise ordered; when ordered assembled they are shipped in stacks of 5 or 6 sections.

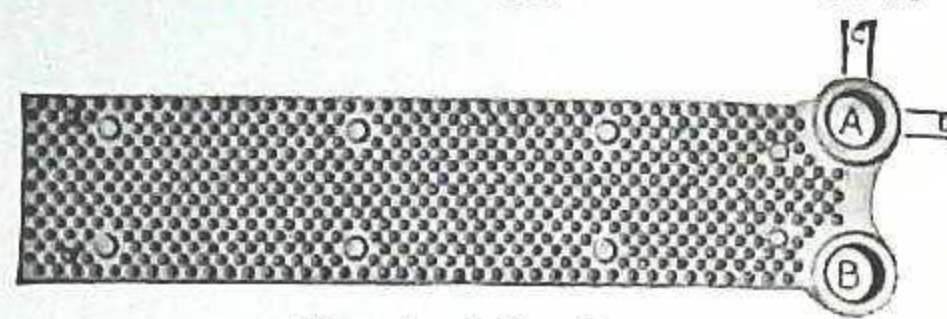
The nipples used for connecting sections are extra heavy 2-inch, right and left-hand threaded, with hexagon nut at the center. Unless otherwise ordered, Sterling Indirects are tapped 2 inches, right-hand on supply end and left-hand on return end, and can be bushed to any smaller size desired.

If location of tapping is desired other than regular, we can furnish special tappings as shown in above illustration at E, F, G, or H 2 inches or smaller.

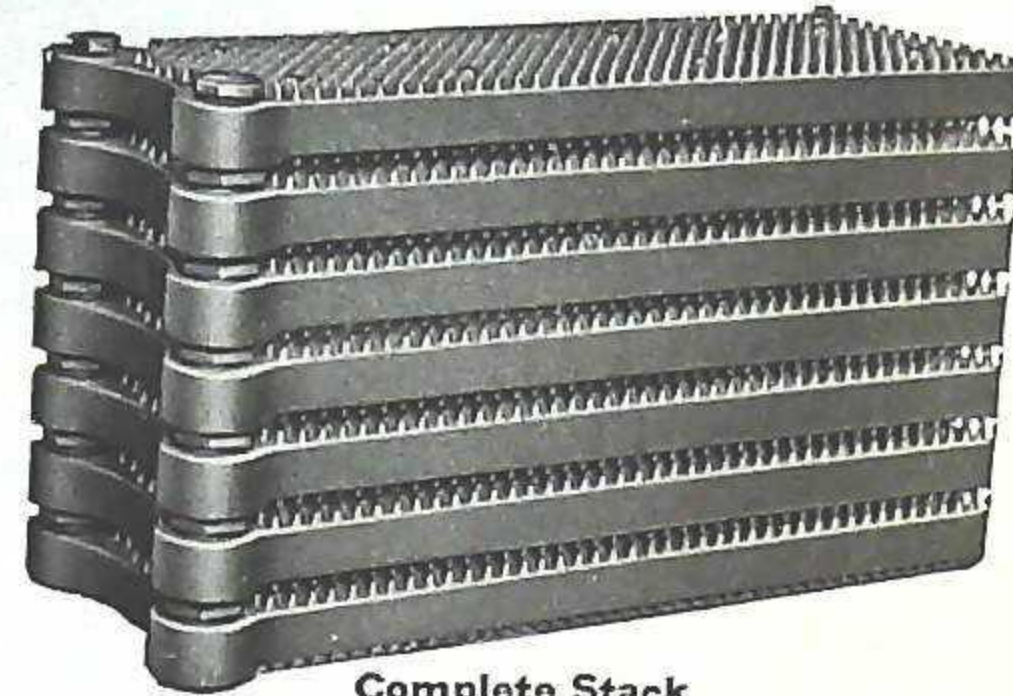
Cast Iron Pin Indirect Radiators

Steam or Water

With Threaded Nipple Connection



Standard Section Fig. 1364

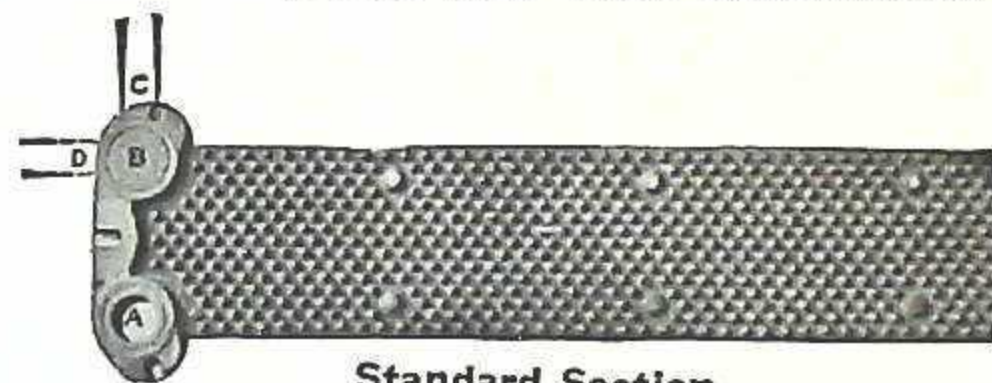


Complete Stack Fig. 1365

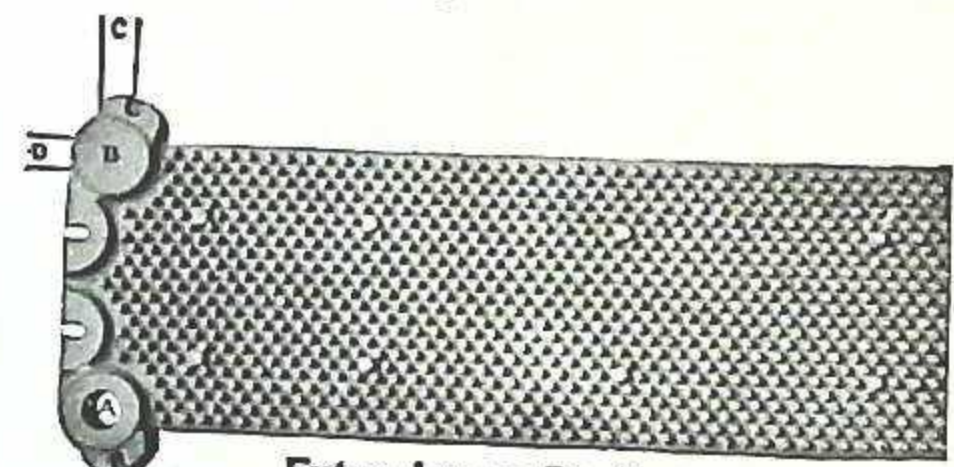
Openings will have 2-inch right-hand tapping on one side and 2-inch left-hand tappings on the other. Connected with extra heavy 2-inch right and left-hand threaded hexagon nipples. When tappings are bushed to smaller sizes, the inside tappings in bushings will be right-hand unless otherwise ordered.

If location of tapping is desired other than regular, we can furnish these radiators, when specially ordered, in the Extra Large size with special tappings at A, B, C, D, E and F, 2 inches or smaller; the Standard size can be tapped 2 inches or smaller at A and B or 1 1/4 inches or smaller at C, D, E and F.

With Flange and Bolt Connection



Standard Section Fig. 1366



Extra Large Section Fig. 1367

All openings will have 2-inch right-hand threads unless otherwise ordered.

If location of tappings is desired other than regular, as shown by A and B in illustration, we can furnish special tappings at C or F, 1 1/4 inches or smaller; D or E, 1 1/4 inches or smaller.

Tapped for air valve 3/8 inch.

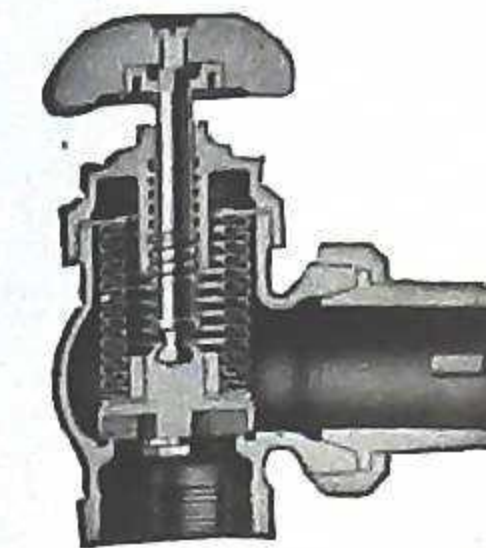
Dimensions and Ratings

Size	DIMENSIONS INCHES		HEIGHT AT CONNECTIONS INCHES		Width in Stack Inches	Heating Surface per Sec. Sq. Ft.	Price per Sq. Ft.
	Length	Height	Nipple Con.	Flange and Bolt			
Standard	36 1/4	7 1/2	9 3/8	11 1/2	2 3/4	10	\$.50
Extra Large	36 1/4	11 1/2	14	15 1/2	2 7/8	15	.50

Sections are shipped separately unless otherwise ordered; when ordered assembled are shipped in stacks of 5 or 6 sections.

Distance between centers can be increased 3, 3 1/4, 3 1/2 or 3 3/4 inches in the Standard size and 3 1/8, 3 3/8, 3 5/8 and 3 7/8 inches in the Extra Large size, if desired.

Ideal Packless Radiator Valves



Sectional



No. 850 Angle Fig. 1371

The Ideal Packless Radiator Valve is symmetrical in appearance, easy to operate, and has ample area within for the free flow of steam and water. A metallic bellows allows the raising and lowering of the stem but provides a flexible metal wall between the interior and exterior, thus making it steam, water or air tight. This prevents damage to floors, walls, and ceilings. There is no packing to wear out and cause leaks around the stem.



No. 851 R. H. Corner Fig. 1372



No. 852 L. H. Corner Fig. 1373

Equipped with new cool grip handle, hard rubber finish, which will not crack, break or become loose.

Especially adapted to vacuum heating. In satin finish, nickel trimmings. All with union and Jenkins Disc. Threads are right hand.

Size Inches	PRICE, EACH			
	No. 850 Angle	No. 851 R. H. Corner	No. 852 L. H. Corner	No. 860 Globe
1/2	\$5.50	\$6.00	\$6.00	\$5.50
3/4	5.50	6.00	6.00	5.50
1	6.75	7.25	7.25	6.75
1 1/4	7.75	8.50	8.50	7.75
1 1/2	9.50	10.50	10.50	9.50
2	13.75	15.00	15.00	13.75

On special order a circulating hole will be drilled for hot water heating. Lock and shield type can be furnished.

No. 868 Ideal Super-packless Fractional Radiator Valves

Bellows Type, Quick Opening—For Vapor

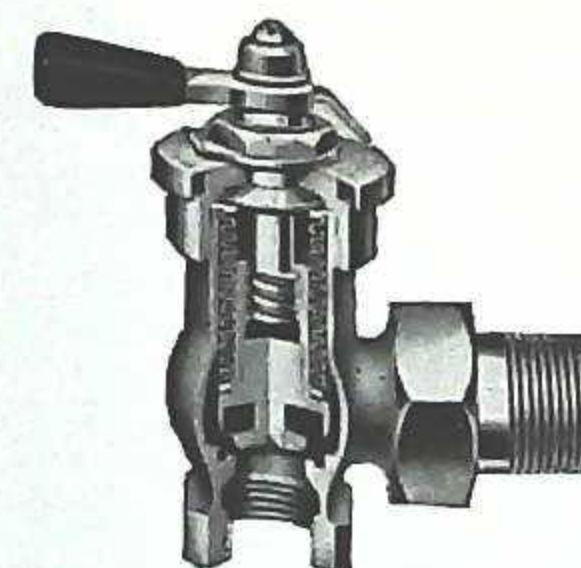


Fig. 1374

The moving parts of the valve are sealed in a strong and highly elastic bellows, which expands and contracts as the valve is opened or closed. Consequently steam or water is excluded from any contact with the working parts, thereby making leakage impossible.

When valve is installed by loosening a lock nut on the stem the stop can be rotated to such a point that the maximum opening of the valve may be limited to suit individual radiator.

Size	Price, No. 868
1/2 inches	\$5.50
3/4	5.50
1	6.75
1 1/4	7.75

Nos. 72 and 57 Detroit Radiator Valves For Steam, with Union and Composition Disc



Fig. 1375 No. 72, Angle



Fig. 1376 No. 57, Globe

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$3.70	1	\$5.10	1 1/2	\$8.40
3/4	4.30	1 1/4	6.40	2	13.60

Has non-breakable, non-heat conducting round handle, with a permanent black hard-rubber finish. Body is in satin finish with nickel trimmings. All threads right hand.

Nos. 32 and 37 Detroit Radiator Valves For Steam, with Union and Composition Disc

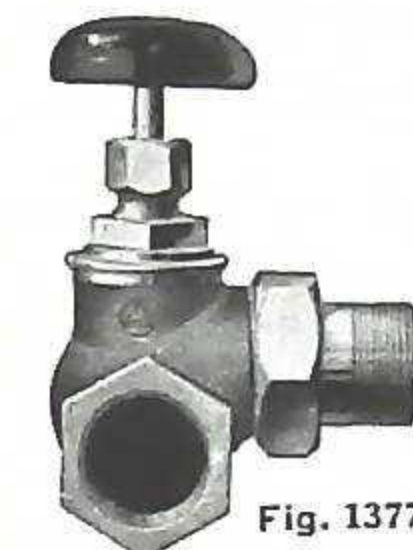


Fig. 1377 No. 32, R. H. Corner

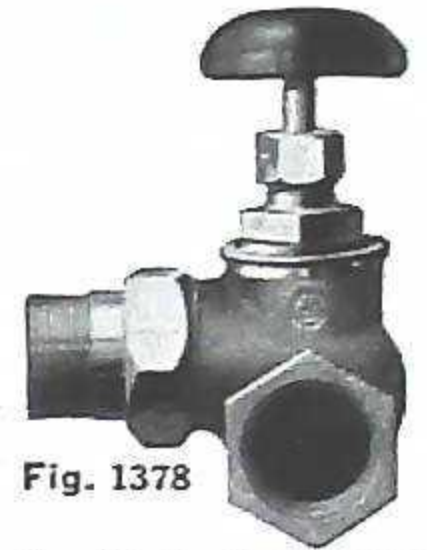


Fig. 1378 No. 37, L. H. Corner

Price, Each		Price, Each		Price, Each	
Size In.	R. H. Corner	Size In.	R. H. Corner	Size In.	R. H. Corner
1/2	\$4.10	1	\$5.60	1 1/2	\$9.25
3/4	4.75	1 1/4	7.05	2	15.00

Equipped with a new kind of non-breakable, non-heat conducting round handle, with a permanent black hard-rubber finish. Body is in satin finish with nickel trimmings. All threads right hand.

No. 101 Detroit Radiator Valves For Hot Water, with Union and Composition Disc Angle, Quick Opening

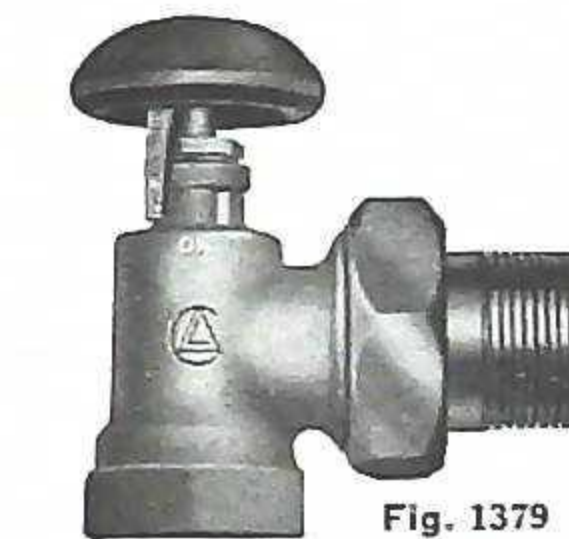


Fig. 1379

This valve works on the principle of a swinging plate. An elliptical plate, set at a 45-degree angle, is attached to the stem. By revolving the stem one-half turn to the left, the valve is opened, while one-half turn to the right closes it.

Attached to the underside of the handle is an indicator which makes it possible to see at a glance whether the valve is opened or closed.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$3.25	1	\$4.50	1 1/2	\$7.30
3/4	3.70	1 1/4	5.75	2	12.00

No. 373 Detroit Radiator Gate Valves For Steam or Hot Water, with Union

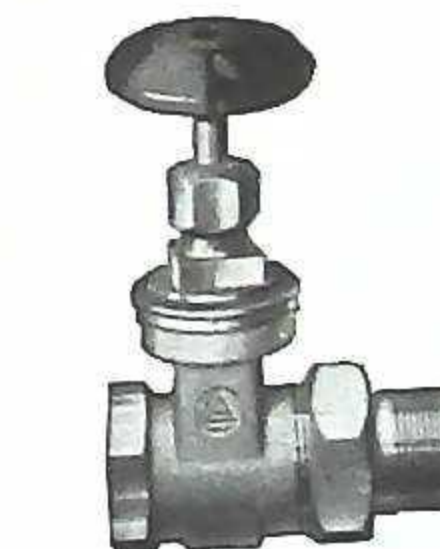


Fig. 1379A

Size In.	Price Each	Size In.	Price Each
1/2	\$3.65	1 1/4	\$6.60
3/4	4.25	1 1/2	9.00
1	5.20	2	12.80

No. 132 Detroit Union Elbows

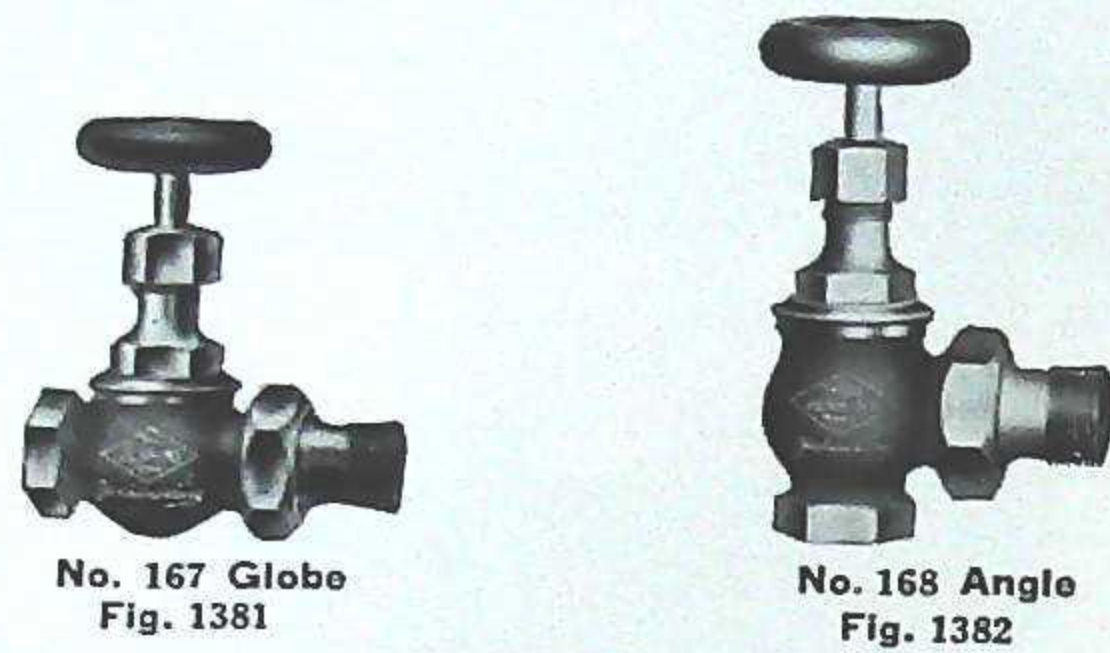
Size In.	Price Each	Size In.	Price Each
1/2	\$1.75	1 1/4	\$3.30
3/4	2.00	1 1/2	4.25
1	2.50	2	7.20



Fig. 1379B

Jenkins Radiator Valves

Bronze Metal, Jenkins Disc
With Male Union, Composition Wheel

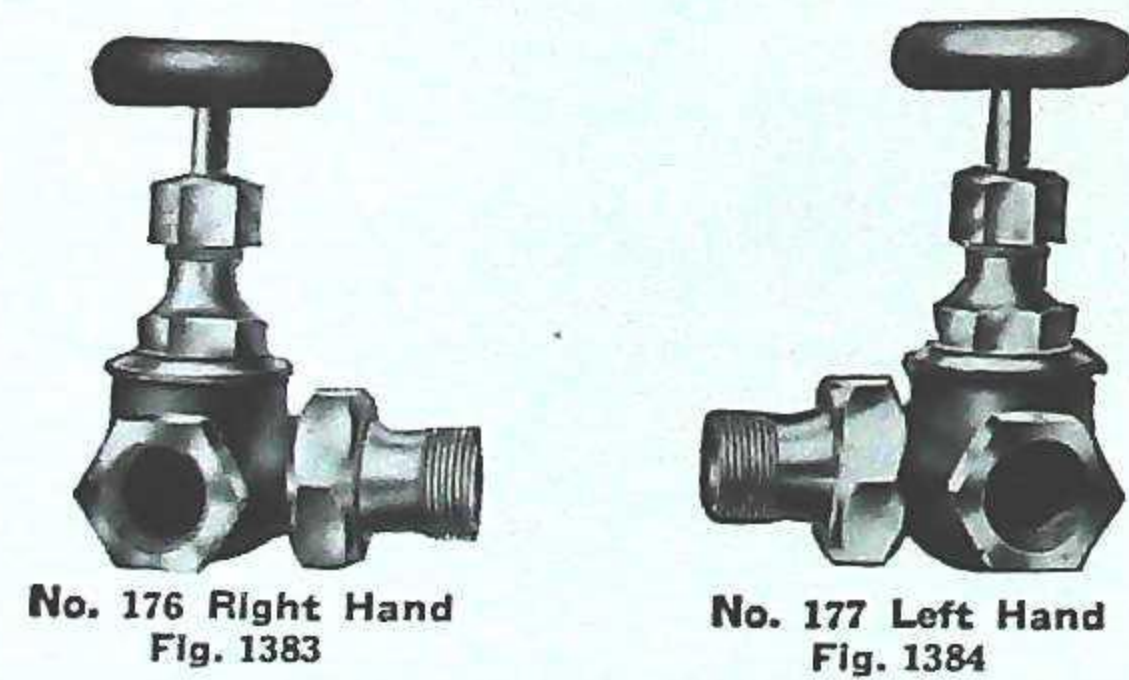


Regularly furnished with composition wheels but can be fitted with bronze or wire wheels or with lock shield at slight additional cost.

Size In.	Price, Each				
	Rough Body Finished All Trimings	Finished All Over	Rough Body N.P. Trimings	Rough Body N.P. All Over	Finished and N.P. All Over
3/8	\$2.60	\$3.00	\$2.90	\$3.00	\$3.45
1/2	2.75	3.20	3.05	3.15	3.60
3/4	3.50	4.00	3.80	3.90	4.40
1	4.30	4.80	4.60	4.70	5.20
1 1/4	5.85	6.40	6.15	6.25	6.80
1 1/2	7.75	8.75	8.05	8.15	9.15
2	12.60	13.85	12.90	13.00	14.25

Jenkins Corner-Radiator Valves

Bronze Metal, Jenkins Disc
With Union, Composition Wheel



Regularly furnished with composition wheels but can be fitted with bronze or wire wheels or with lock shield at slight additional cost.

Size In.	Price, Each				
	Rough Body Finished All Trimings	Finished All Over	Rough Body N. P. Trimings	Rough Body N. P. All Over	Finished and N. P. All Over
1/2	\$3.05	\$3.50	\$3.35	\$3.45	\$3.90
3/4	3.85	4.40	4.15	4.25	4.80
1	4.75	5.30	5.05	5.15	5.70
1 1/4	6.45	7.05	6.85	6.95	7.45
1 1/2	8.55	9.65	8.85	8.95	10.05
2	13.85	15.25	14.15	14.25	15.65

Detroit Multiport Radiator Valves

For vapor heating only. Fitted with composition disc which insures a tight shut-off on either vacuum heating or steam pressures up to 15 pounds.

This disc holder makes a close working fit in the calibration shell. Turning the handle from off to on raises disc from seat and allows steam to pass through port openings in the calibration shell.

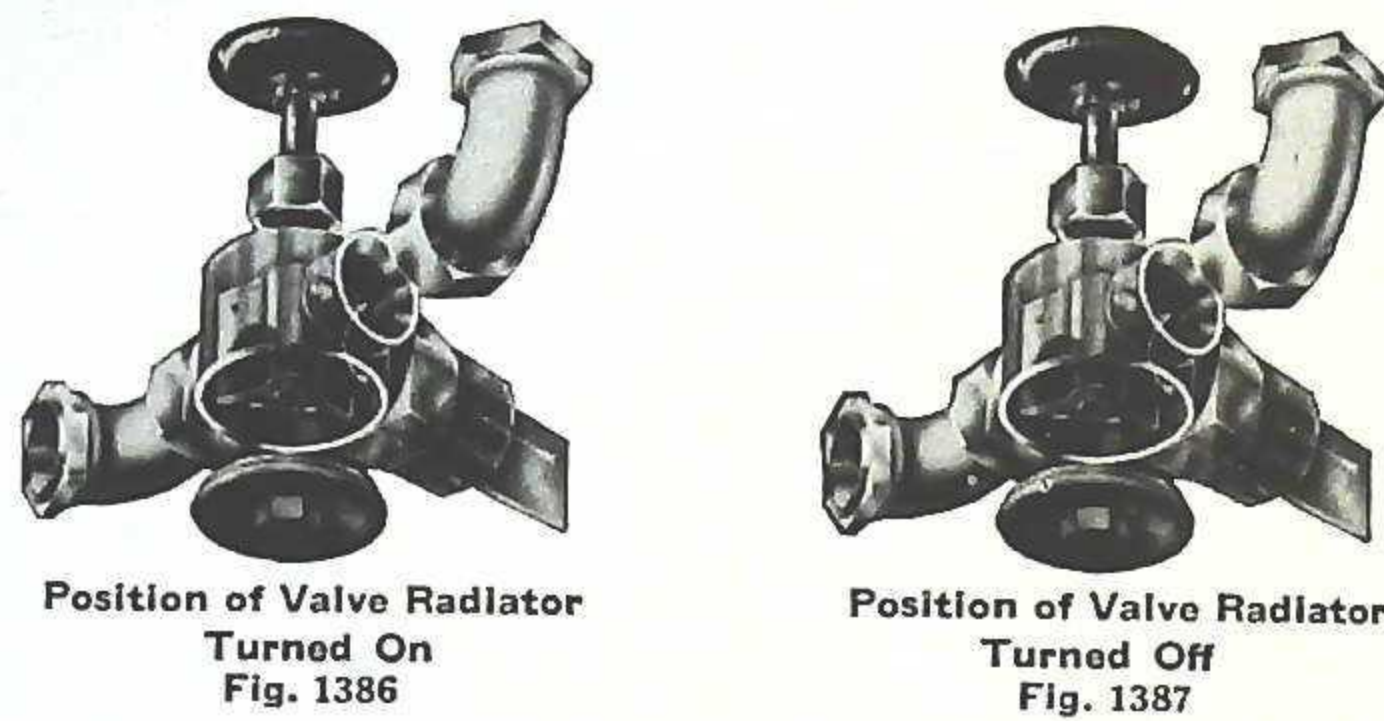
The adjustment to limit the maximum port opening is secured by setting a stop pin in the proper hole in the dial plate.

Rough body, with union, plated all over, with rubber handle.

Size.....inches 1/2 3/4 1 1 1/4
Price.....each \$3.70 4.30 5.10 6.40
Can be furnished with round wood mahogany finish handle.



Honeywell Unique Radiator Valves



Designed to be connected to only one end of a radiator. By its use it is only necessary to extend the risers through the floors to the valve elbows.

This avoids taking up flooring and cutting joists in order to extend return pipe to the other end of the radiator.

The valve has an adjustable elbow on each side, permitting connections to pipe from any direction. When attached to the radiator a thin piece of metal extends through the first radiator section. This diaphragm causes the water entering through one side to rise in the first section, circulate across the top, down through the other sections and out on other side of valve.

Size In.	Center of Spuds to End of Spud In.	Center to Center of Ells In.	Center of Spuds to Bottom of Ells, In.	Rad. Should be Tapped In.	Price Each
1/2	2 7/8	5 1/2	1 7/8	1 1/4	\$4.25
3/4	2 7/8	5 3/4	1 7/8	1 1/4	5.40
1	3	7	2	1 1/2	5.80
1 1/4	3 1/4	7 1/2	2 5/8	2	7.95

Lock and Shield Radiator Valves

Size Valve Inches	Price, Each		Size Valve Inches	Price, Each	
	N. P. Keys	N. P. Keys		N. P. Keys	N. P. Keys
1/2	.50	.50	1 1/4	.50	.50
3/4	.50	.50	1 1/2	.50	.50
1	.50	.50	2	.50	.50

Lock and shield equipment can be furnished with any regular pattern of radiator valves at additional charge.

Composition Valve Handles

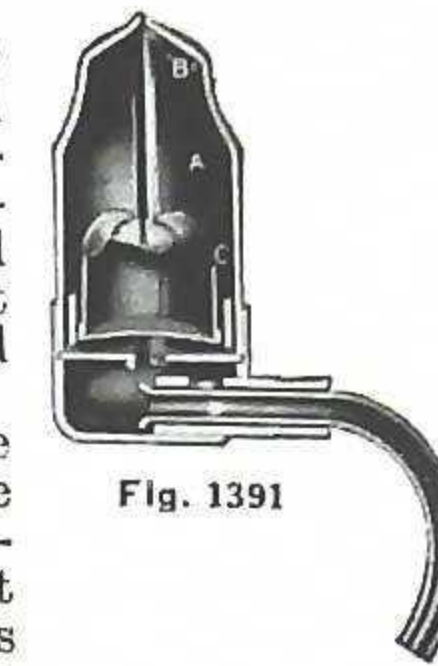
Size In.	Price, Each		Size In.	Price, Each	
	Handle Only	Screws Only		Handle Only	Screws Only
1/2	\$.16	\$.03	1 1/4	\$.16	\$.03
3/4	.16	.03	1 1/2	.16	.03
1	.16	.03	2	.16	.03



No. 500 Ideal Airid Siphon Valves

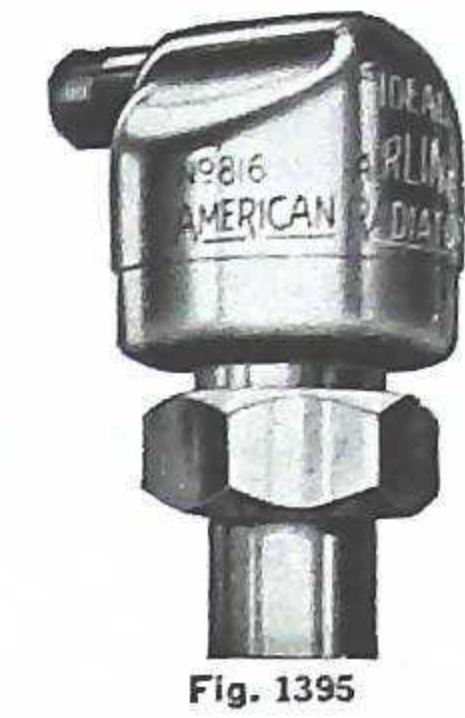
The valve operates thermostatically by the evaporation of a volatile liquid contained within the float forcing outward the diaphragm which forms the bottom of the float, raising the pin and instantly closing the valve. A slight cooling relieves the internal pressure and opens the valve.

Under flooded radiator conditions the valve vents without leak because the large separating chamber A allows separation of the air and water. The seat at B requires no guide for the pin, thus eliminating the water pocket around the seat which causes sputtering and leaking. Area C allows the valve to drain perfectly without a by-pass from the stem to the air space at the top of the shell.



Price, No. 500.....each \$1.60

Ideal Air Line Valves



For venting steam radiators where drip line, air line or vacuum air line is used.

The Ideal Air Line Valve operates on the same general principle as the Ideal Airid Valve. It is always open to the passage of air but closes tight when steam reaches it. Should water reach the valve, it remains open for passage of the water to the drip line. It insures a hot radiator but keeps the air line cold.

Non-adjustable—cannot be tampered with—made entirely of metal, sensitive in operation.

When steam reaches the valve it vaporizes a volatile liquid contained within the thermostatic member, creating a gas pressure and expanding outward the diaphragms which form the top and bottom of the member. This forces the pin to the seat closing the valve. When the valve cools the vapor condenses, relieving the pressure which opens the valve. It is either wide open or closed tight.

Nickel-plated—1/8-inch radiator connection; 1/4-inch female union on outlet.

Price.....each \$3.50

No. 815 Ideal Quick Vents

For venting mains, long runs of pipe, indirect stacks, drop risers, etc., where a large amount of air must be expelled quickly. Will benefit all low pressure steam jobs by venting entire piping system and thereby heating radiators quicker under less pressure. Operates by volatile liquid contained within expansive member which has diaphragm at top and bottom giving full movement of stem. No adjustment. All metal. Very sensitive. Will last indefinitely. Does not close against water.



Venting port, 3/8-inch diameter. Valve connection, 3/4-inch pipe thread. Can be furnished with 3/8-inch thread. Nickel finish. Shipping weight each, 1/2 pound.

Price, No. 815, 3/4 or 3/8-inch.....each \$3.00

Original Paul Air Line Valves

The Original Paul Valve operates automatically either with or without mechanical suction on the return air line. Has sealed adjustment.

When used instead of the ordinary automatic air valve, foul air may be piped to basement or sewer.

The sealed adjustment valve with spring seat and adjusting screw concealed in the union assures a tight sealed system and has contributed to the success and popularity of air line systems.

Extra large air passage permits air to be expelled from radiator rapidly. No resistance of steam by cold air bound radiators.

Furnished with regular standard connections of 1/8-inch to radiator and 1/4-inch union connection to return air line.

Price.....each \$1.25



Fig. 1393

No. 817 Ideal Vento Vents

For use on Vento Heaters and Blast Coils.

This valve is designed particularly for relieving air from Vento heaters, low pressure only. It has a large venting port—3/8-inch diameter. Operates by volatile liquid contained within expansive member of wide diameter with diaphragm at top and bottom. No adjustment. All metal. Does not close against water.

Connection to heater, 3/8-inch pipe size. Outlet fitted with 1/4-inch female union for air line. Can be set in any position. Nickel-plated. Shipping weight each, 1/3 pound.

Price, No. 817.....each \$4.00

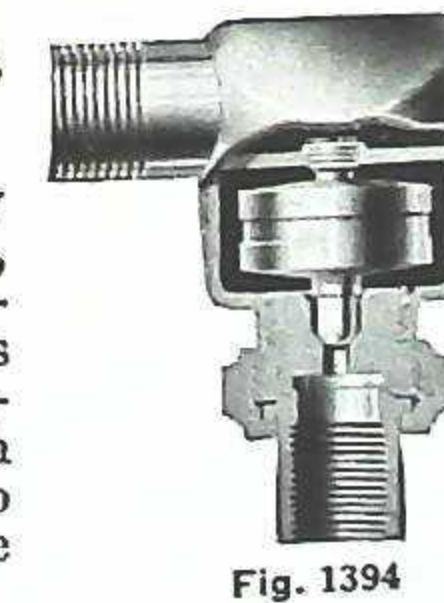


Fig. 1394

Wood Wheel Compression Air Valves

The valve is nicked inside as well as outside to prevent corrosion, and every valve examined before packing.

Threaded for 1/2-inch iron pipe.

Price, Nickel-plated.....each \$7.70

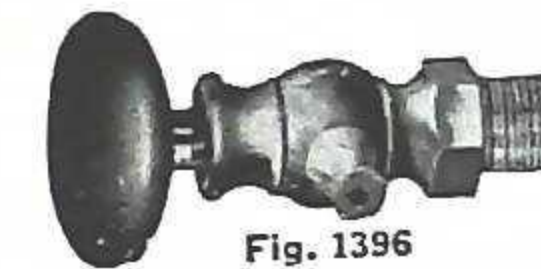


Fig. 1396

Loose Key Compression Air Valves

The Loose Key Compression Air Valve is nicked inside and out to prevent corrosion, and every valve is examined before packing.

Threaded 1/2-inch iron pipe.

Price, Nickel-plated each \$7.70

Key..... .10



Fig. 1397

Coin-operated Compression Air Valves

Price, Nickel-plated.....each \$3.30

No. 190 Jenkins Automatic Air Valves

In sizes 1/4 and 1/2-inch. Finished and nickel-plated. Price, No. 190.....per dozen \$7.50



Fig. 1398



Fig. 1399

No. 1 Hoffman Syphon Radiator Air Valves

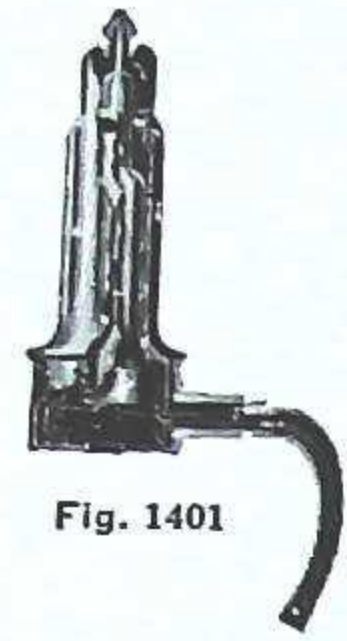


Fig. 1401

This valve is designed for low pressure gravity systems of the one pipe type. Through its use all air is vented from the radiator without loss of steam, maximum heating efficiency is assured and leakage from water-logged radiators prevented. After contact of water with valve the syphon drains all water from the valve and venting occurs without the slightest spit even if the radiator is under pressure.

Maximum guaranteed operating pressure, 15 pounds.

Has 1/8 inch radiator connection.

Price, No. 1.....each.....

No. 2 Hoffman Syphon Air and Vacuum Valves

The No. 2 Hoffman Syphon Air and Vacuum Valve is similar to the No. 1, but in addition, when the radiator is once freed from air, return of air through the vent port is prevented.

The basic principle used in the design of Hoffman Venting Valves is that of an all metal thermostatic member, with one or more flexible diaphragms, containing a volatile or heat sensitive fluid which causes valve action upon slight temperature changes.

Through its use an ordinary one pipe steam system may be changed into a vacuum type.

Maximum guaranteed operating pressure, 10 pounds.

Has 1/8 inch radiator connection.

Price, No. 2.....each.....

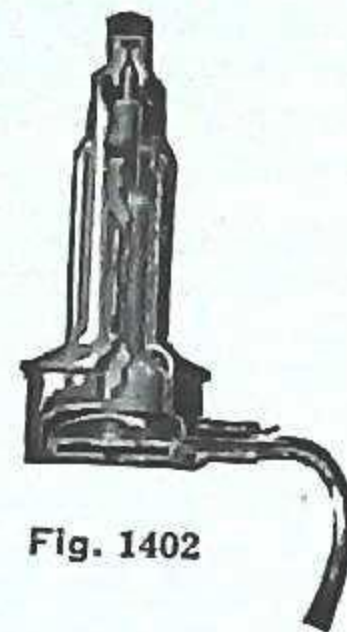
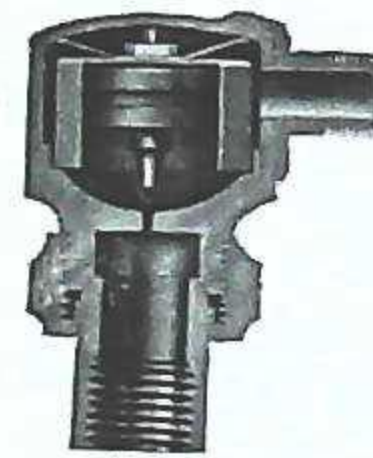


Fig. 1402

Hoffman Air Valves



No. 3
Fig. 1403

No. 3 Air Line Valves are sensitive in action and close the instant steam fills the radiator. No adjustment is necessary either before or after installation.

Maximum guaranteed operating pressure, 10 pounds. 1/8-inch radiator connection with 1/4-inch air line connection.

No. 4 Quick Vent Valves are for venting risers or return mains where water is not a factor. All air is vented through 1/8-inch vent port.

Maximum guaranteed operating pressure, 10 pounds. Standard connection 3/4-inch can be supplied with 1/4 inch.

Price, No. 3.....each.....

" " 4.....each.....



No. 4
Fig. 1404

Hoffman Quick Vent Air Valves



No. 5

The No. 5 is intended for venting return mains, direct stacks and for use under all conditions where water is present in the system. It vents all air, closes tightly against steam and prevents escape of water through vent port. For one pipe gravity systems.

No. 6 is similar to No. 5 and in addition prevents intake of air through the valve port. For small vapor-vacuum systems.

These valves have maximum guaranteed operating pressure of 10 pounds. Pipe connection, 3/8-inch. Vent port is, 3/16-inch; for 3 pounds and over use 1/16-inch port.

Price, No. 5.....each.....

" " 6.....each.....



No. 6
Fig. 1406

No. 7 Hoffman Adjustable Modulating Valves



Fig. 1407

For use in vapor or vapor vacuum systems. Its chief feature is the easy and accurate setting of the valve port to fit radiators of various sizes. Is made in one size, 3/4 inch only, having a range of adjustment up to 200 square feet of radiation.

Adjustment is simple; loosen locknut; turn valve handle until proper number of graduations are visible on the dial plate; then tighten locknut. The valve handle may then be set to admit sufficient steam to heat a quarter, half, three quarters or entire radiator.

Regularly supplied with lever handle. It can be furnished with wood wheel, lock shield, closed top, without extra charge.

Price, No. 7, with 3/4-inch Connections.....each.....

Nos. 8 and 9 Hoffman Return Line Valves

These valves or radiator traps relieve air and condensation from radiators in vapor or vapor vacuum systems without steamloss.

Installed in systems where steam is supplied through a reducing valve, proper trap operation is assured.

Maximum guaranteed operating pressure, 50 pounds.

The No. 8 valve is furnished in angle, straightway and right and left-hand offset patterns. Capacity is 200 square feet of direct cast iron radiation. Made in 1/2-inch size only.

The No. 9 valve is made in 3/4-inch angle pattern only, suitable for 600 square feet of direct cast iron radiation.

Price, No. 8.....each.....

" " 9.....each.....

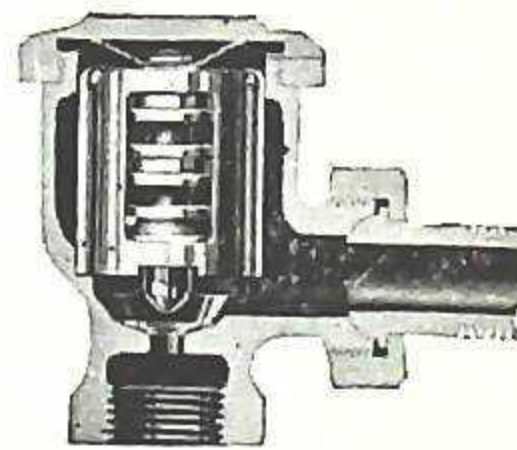


Fig. 1403

No. 10 Hoffman Vapor Valves

Intended for venting the return mains of large vapor systems or for any service where large capacity is required and steam, air or water must be properly handled.

The main or 3/4-inch port controlled by a large buoyant float has an auxiliary port 3/8-inch in diameter. The purpose of this double valve is to permit venting even though pressure is maintained after a surge of water recedes from the valve. An air-way equivalent to a 3/4-inch diameter valve port is maintained throughout the valve permitting venting with little resistance.

Maximum guaranteed operating pressure, 15 pounds. 3/4-inch pipe connection.

Price, No. 10.....each.....



Fig. 1409

No. 11 Hoffman Vapor Vacuum Valves

The No. 11 vapor vacuum valve is similar in construction to the No. 10 valve with the addition of a check valve on the vent port which prevents the return of air to the system through vent port.

It is widely used for venting the return mains of vapor-vacuum systems or where the return of air to the system after having been vented is not desirable.

Maximum guaranteed operating pressure, 15 pounds.

Has 3/4-inch connection.

Price, No. 11.....each.....



Fig. 1409A

Honeywell Heat Generators

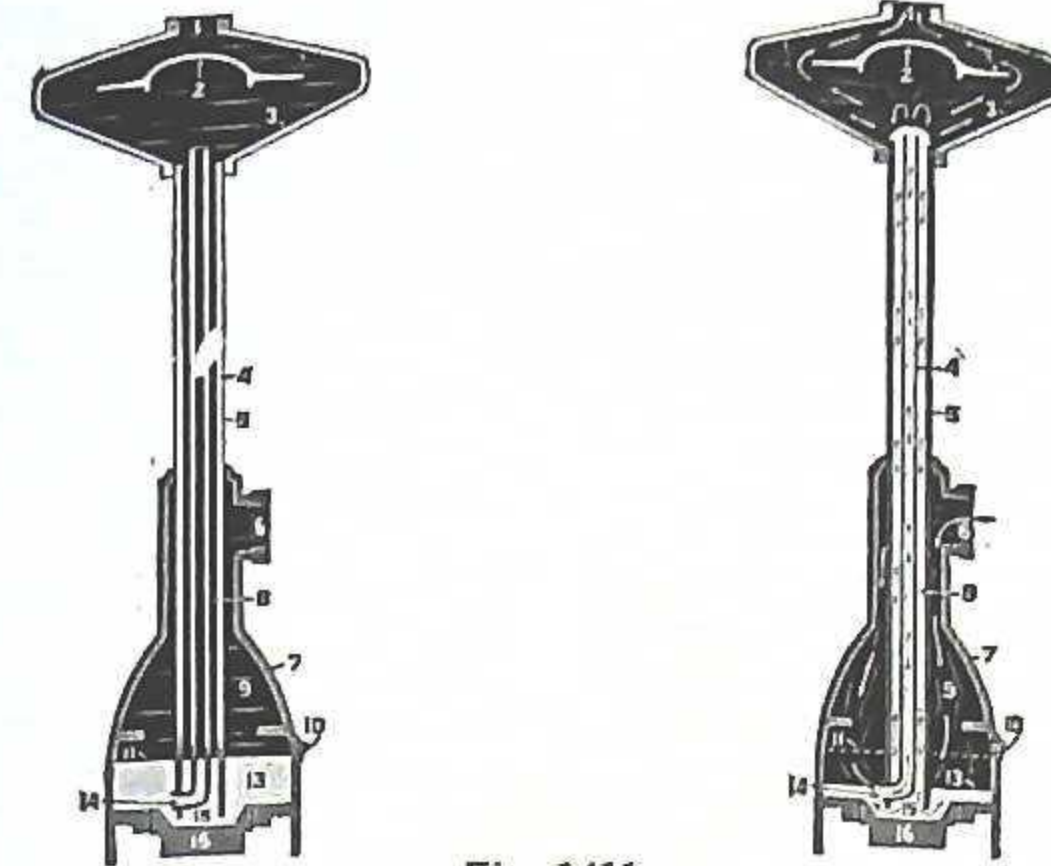


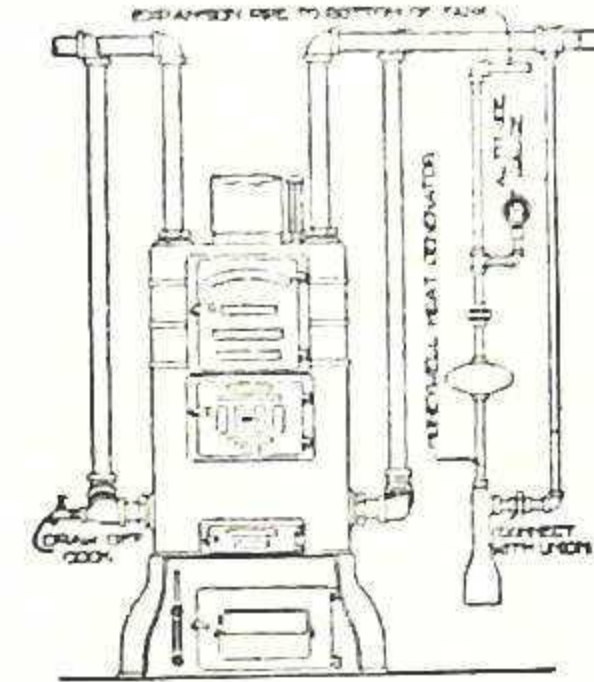
Fig. 1411

Position of Mercury and Water When Generator is Producing no Pressure

Position and Action of Mercury and Water When Generator is in Complete Operation Producing 10 Pounds Pressure

These generators are designed to meet the demand for a device to quicken the circulation in hot water heating jobs.

When connected to the expansion pipe of an ordinary gravity plant, this generator seals the circuit and permits the generation of a slight pressure up to 10 pounds, at which point it relieves itself through the operation of a mercury seal, eliminating any element of danger.



Showing Generator Attached to Hot Water Boiler

The pressure created by this generator will remedy any unsatisfactory job of hot water heating where the radiation is insufficient, the piping too small for gravity, the circulation sluggish, causing large fuel consumption, or where the water boils easily from quick firing, providing, of course, the boiler is large enough to supply the heat. It greatly improves jobs which contain long horizontal mains, or where the radiation is all on the first floor.

In new work it permits a reduction in radiation, and smaller piping as advocated in the Honeywell system, the system of low cost and high efficiency. It is positive and automatic, is sold under the strongest guarantee, will last a lifetime, and cannot get out of order.

No.	For Radiation Square Feet	Size Inlet Inches	Size Outlet Inches	Price Each
1	1200	3/4	1	\$25.00
2	2500	1	1	35.00
3	3500	1 1/4	1 1/4	50.00
4	10000	1 1/4	1 1/4	65.00

For bungalows, one-story, or flat roof buildings or for any buildings where it is difficult or unsightly to place the expansion tank of hot water heating plant above the radiators or where it is liable to freeze, a tank-in-basement method is desirable. A special Honeywell Heat Generator is built for the purpose, regularly manufactured in sizes 11, 12 and 13, with stand-pipes of different heights to properly take care of buildings having one, two and three stories and basement, and containing 2500 square feet or less of radiation. Details and description furnished upon application.

Honeywell Automatic Temperature Regulators



New Type D Electric Motor Fig. 1412

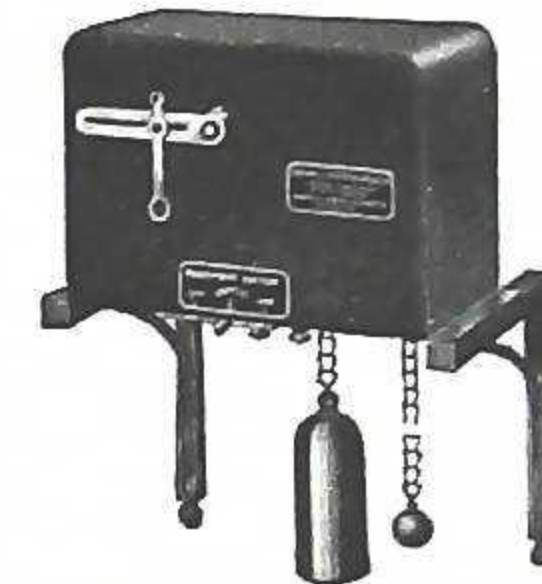
Spring Motor Fig. 1413

The new Honeywell Type D Electric Motor is the shaded pole type; simple, silent in operation and neat appearing. It has no armature, armature windings, commutator, brushes, brush holders, brush holder springs or brush holder bearings. The rotor is the only primary moving part.

Line voltage is taken into the motor and is automatically reduced to low voltage for the thermostatic circuit.

The spring motor is fitted with a spring of sufficient size to operate motor from 60 to 75 times on one winding. Two ordinary dry cells are required, or city lighting circuit reduced to 12 volts through special transformer, may be used to trip the motor. Easily wound from front and an indicator shows whether winding is needed.

In operation the gravity motor is similar to the spring motor, except that the motive power is supplied by a 10-pound weight. Gives 20 to 25 operations in the average basement to one weight adjustment.



Gravity Motor Fig. 1414



Type R, 15-20-day Chronom Thermostat Fig. 1415



Type 6 One-day Thermostat Fig. 1416



Type Q Plain Thermostat Fig. 1417

Type R has a jeweled balanced clock of improved mechanical construction, especially developed for thermostatic control. Good appearance and simple design. Clock will automatically lower temperature to any degree at night and automatically raise the temperature at any predetermined time in the morning. Necessary only to wind periodically. Type 6 one-day is a dependable instrument. Has morning and evening control feature but it is necessary to wind clock and set indicator back each evening, once every 24 hours and set indicator back each evening. Type Q plain pattern is like the other thermostats except it has no clock. Used where clock control is unnecessary. Indicator at all times is set by hand.

All are equipped with wall plate making it unnecessary to handle thermostat when connecting wires.

Type	Type Motor	Thermostat	Price Each	Type	Type Motor	Thermostat	Price Each
DQ	Electric	Plain	\$70.00	SR	Spring	15-20-day	\$65.00
D6	"	1-day	77.00	GQ	Gravity	Plain	38.00
DR	"	15-20-day	90.00	G6	"	1-day	45.00
SQ	Spring	Plain	45.00	GR	"	15-20-day	58.00
S6	"	1-day	52.00				

With each regulator all trimmings necessary for installation except batteries are furnished. It is best to secure batteries locally because of deterioration.

Byers Genuine Wrought Iron Pipe
For Gas, Steam, Water and Oil
Revised Jan. 1, 1923



Fig. 1461

Guarantee

All Byers Pipe is guaranteed to be made exclusively from Byers pig iron, which is refined by hand puddling, rolled into muck bar and finally converted into pipe skelp without the use of scrap in any of the processes of manufacture.

Every individual length of Byers Pipe is guaranteed to have passed rigid inspection and testing, and to be full weight with a variation of not more than 2½ per cent below card weight.

Identifications

All Byers Pipe has the name "Byers" and year of manufacture rolled in the iron, as shown in the illustration above, every few feet apart; 1¼ and 1½-inch pipe is made both butt-weld and lap-weld, and to distinguish one from the other, on the butt-weld pipe the letter "B" appears just after the date of manufacture and on the lap-weld the letter "L" appears.

Service of Byers Pipe

For over fifty years A. M. Byers Company has produced the one product—wrought iron pipe—in strict adherence to a standard of purity of material and honesty of manufacture established long before cheap pipe was known. The record of the company is on millions of feet of pipe, installed under varying conditions during half a century, and still enduring. No claims that A. M. Byers Company can make would offset this record if it were a poor one; and likewise no reasons that can be advanced for the superiority of Byers Pipe can be as convincing as the records of its long and satisfactory service.

Standard Weight Pipe—Black and Galvanized
Butt Weld

Size In.	DIAMETER, INCHES		Thick-ness In.	Threads per Inch	WEIGHT, PER FOOT POUNDS		Price per Foot
	Ex-ternal	In-ternal			Plain Ends	Threads and Couplings	
1/4	.540	.367	.086	18	.424	.425	\$.06
3/8	.675	.489	.093	18	.567	.568	.06
1/2	.840	.617	.111	14	.850	.852	.08½
3/4	1.050	.819	.115	14	1.130	1.134	.11½
1	1.315	1.043	.136	11½	1.678	1.684	.17
1¼	1.660	1.369	.145	11½	2.272	2.281	.23
1½	1.900	1.604	.148	11½	2.717	2.731	.27½
Lap Weld							
1¼	1.660	1.369	.145	11½	2.272	2.281	\$.23
1½	1.900	1.604	.148	11½	2.717	2.731	.27½
2	2.375	2.060	.158	11½	3.652	3.678	.37
2½	2.875	2.460	.208	8	5.793	5.819	.58½
3	3.500	3.059	.221	8	7.575	7.616	.76½
3½	4.000	3.538	.231	8	9.109	9.202	.92
4	4.500	4.016	.242	8	10.790	10.889	1.09
4½	5.000	4.496	.252	8	12.538	12.642	1.27
5	5.563	5.036	.263	8	14.617	14.810	1.48
6	6.625	6.053	.286	8	18.974	19.185	1.92
7	7.625	7.010	.307	8	23.544	23.769	2.38
8	8.625	8.059	.283	8	24.696	25.000	2.50
8	8.625	7.967	.329	8	28.554	28.809	2.88
9	9.625	8.927	.349	8	33.907	34.188	3.45
10	10.750	10.181	.284	8	31.201	32.000	3.20
10	10.750	10.124	.313	8	34.240	35.000	3.50
10	10.750	10.005	.372	8	40.483	41.132	4.12
11	11.750	10.985	.382	8	45.557	46.247	4.63
12	12.750	12.077	.336	8	43.773	45.000	4.50
12	12.750	11.985	.382	8	49.562	50.706	5.07

Permissible variation in weight is 2½ per cent below and 5 per cent above weights given.

Standard weight pipe is regularly furnished with threads and couplings and in random lengths, unless otherwise ordered. For cut lengths an extra charge will be made above random.

For coated—galvanized, asphalted, painted—pipe an extra charge will be made above black.

¼ to 1½ Inches B. W. Hydrostatic Test.....	pounds	750
1¼ to 9 Inches L. W. and 10 Inches—41 Pounds "	"	1000
Other 10, 11 and 12 Inches.....	"	750

National Pipe



Fig. 1462

Two important processes have been developed, one of which makes the smaller sizes, 4-inch and under, of National Pipe more resistant to corrosion, while the other makes all National Butt-weld Pipe free from welding-scale. To the trade these are known as the Spellerizing and Scale Free processes, respectively.

Spellerizing is a method of treating metal, which consists in subjecting the heated bloom to the action of rolls having regularly shaped projections on their working surface, then subjecting the bloom while still hot to the action of smooth faced rolls and repeating the operation, whereby the surface of the metal is worked so as to produce a uniformly dense texture better adapted to resist corrosion, especially in the form of pitting.

Inasmuch as the Spellerizing process is entirely mechanical and does not in any way depend upon skilled labor, beyond keeping up the machinery involved, uniform treatment is assured. This process is applicable to the smaller sizes of pipe; such as 4 inches and under, although it is possible in special cases to Spellerize pipe a few sizes larger than 4 inches. This process is especially desirable for the smaller sizes on account of the thinner walls. The larger sizes, owing to their thicker walls, do not require as much extra work of this character.

The Spellerizing process produces a fine-grained, uniform, dense texture which is better adapted to resist corrosion than ordinary pipe.

By subjecting National Butt-weld Pipe to the recently evolved scale-removing process, the mill-scale, or welding-scale, which has long been considered inevitable on butt-weld pipe, is removed, leaving the surfaces of the pipe smooth and clean and giving a full interior diameter, and an ideal surface for a uniform and close adherence of galvanizing or other protective coatings. Thus the working capacity and the durability of the pipe are appreciably increased.

The National Scale Free Pipe is now made by practically the same process as heretofore used in making regular National Butt-weld Pipe, the chief difference being that the pipe is passed through a series of rolls in addition to the sizing and straightening rolls the first stand of rolls in this series reduces the size of the pipe by literally crushing the pipe down. Since the mill-scale, or welding-scale, is brittle and somewhat harder than the metal at this stage of manufacture, this crushing or distorting of the pipe loosens the scale and it falls off, leaving a clean surface. The pipe then passes to other rolls of this series, where it is further reduced in size; after cooling, the loose scale is washed out with water or blown out by compressed air, no acid pickling bath being used. The crop ends are then removed, the pipe threaded, tested and inspected in the manner as was customary with all National Butt-weld Pipe.

Additional advantages to those mentioned above, include: Elimination of the wear and tear on valves and fittings formerly caused by loose scale; better adaptation to exposed installations due to the clean, smooth surfaces; reduced frictional resistance and a further reduction of any tendency to corrosion caused by scale dropping away and leaving exposed surfaces.

In order that consumers may know positively they are receiving National Tube Company Pipe the name National is rolled, at regular intervals, on every length of welded tubular products manufactured, except on sizes under ½-inch where this is not mechanically feasible: on these smaller sizes the name National appears on the metal tag attached to each bundle of pipe.

Steam, Gas and Water Pipe
Standard
Black and Galvanized



Fig. 1471

The permissible variation in weight is 5 per cent above and 5 per cent below.

Furnished with threads and couplings and in random lengths unless otherwise ordered.

Taper of threads is ¼-inch diameter per foot length for all sizes.

The weight per foot of pipe with threads and couplings is based on a length of 20 feet, including the coupling, but shipping lengths of small sizes will usually average less than 20 feet.

On sizes made in more than one weight, weight desired must be specified.

For pipe smoothed on the inside, known as reamed and drifted, an extra charge will be made above standard pipe.

For galvanized, or coated pipe, an extra charge will be made above black.

On orders calling for commercial sizes of pipe which are finished with threads and couplings, in sizes ½ to 12-inch, inclusive, and where orders specify quantity in linear feet, it is understood that random lengths fitted with threads both ends and coupling one end will be supplied and the measurement is charged from end to end, that is over all, including coupling.

If cut lengths of any sizes are ordered, instructions must appear on the face of the order whether plain ends, threads only or threads and couplings are required. The pipe proper is cut to the length specified for plain ends or threads only, and if cut lengths with threads and couplings are specified, the practice is the same with the exception that the couplings are charged separately whether they are shipped loose or screwed on the pipe.

Revised January 1, 1923

All Weights and Dimensions are Nominal

Size In.	DIAM., INCHES		Thick-ness Inches	WT. PER FT., LBS.		No. of Threaded Threads per Inch	Price per Foot
	External	Internal		Plain End	Coupled		
1/8	.405	.269	.068	.244	.245	27	\$.05½
1/4	.540	.364	.088	.424	.425	18	.06
3/8	.675	.493	.091	.567	.568	18	.06
1/2	.840	.622	.109	.850	.852	14	.08½
3/4	1.050	.824	.113	1.130	1.134	14	.11½
1	1.315	1.049	.133	1.678	1.684	11½	.17
1¼	1.660	1.380	.140	2.272	2.281	11½	.23
1½	1.900	1.610	.145	2.717	2.731	11½	.27½
2	2.375	2.067	.154	3.652	3.678	11½	.37
2½	2.875	2.469	.203	5.793	5.819	8	.58½
3	3.500	3.068	.216	7.575	7.616	8	.76½
3½	4.	3.548	.226	9.109	9.202	8	.92
4	4.500	4.026	.237	10.790	10.889	8	1.09
4½	5.	4.506	.247	12.538	12.642	8	1.27
5	5.563	5.047	.258	14.617	14.810	8	1.48
6	6.625	6.065	.280	18.974	19.185	8	1.92
7	7.625	7.023	.301	23.544	23.769	8	2.38
8	8.625	8.071	.277	24.696	25.	8	2.50
8	8.625	7.981	.322	28.554	28.809	8	2.88
9	9.625	8.941	.342	33.907	34.188	8	3.45
10	10.750	10.192	.279	31.201	32.	8	3.20
10	10.750	10.136	.307	34.240	35.	8	3.50
10	10.750	10.020	.365	40.483	41.132	8	4.12
11	11.750	11.	.375	45.557	46.247	8	4.63
12	12.750	12.090	.330	43.773	45.	8	4.50
12	12.750	12.	.375	49.562	50.706	8	5.07

Steam, Gas and Water Pipe
Extra Strong and Double Extra Strong
Black and Galvanized



Fig. 1472

Furnished with plain ends and in random lengths unless otherwise ordered.

Random length of extra strong and double extra strong pipe is considered to be 12 feet to 22 feet, we to have the privilege, however, of supplying not exceeding 5 per cent of total order in lengths from 6 to 12 feet.

For pipe fitted with threads only or with threads and couplings, an extra charge will be made above plain ends.

For cut lengths, an extra charge will be made above random.

For galvanized, or coated pipe, an extra charge will be made above black.

All Weights and Dimensions are Nominal

Revised Jan. 1, 1923

Extra Strong

Size In.	DIAM., INCHES		Thick-ness Inches	Weight per Foot Plain Ends Pounds	Price per Foot
	External	Internal			
1/8	.405	.215	.095	314	\$.12
1/4	.540	.302	.119	535	.07½
3/8	.675	.423	.126	738	.07½
1/2	.840	.546	.147	1.087	.11
3/4	1.050	.742	.154	1.473	.15
1	1.315	.957	.179	2.171	.22
1¼	1.660	1.278	.191	2.996	.30
1½	1.900	1.500	.200	3.631	.36½
2	2.375	1.939	.218	5.022	.50½
2½	2.875	2.323	.276	7.661	.77
3	3.500	2.900	.300	10.252	1.03
3½	4.	3.364	.318	12.505	1.25
4	4.500	3.826	.337	14.983	1.50
4½	5.	4.290	.355	17.611	1.80
5	5.563	4.813	.375	20.778	2.08
6	6.625	5.761	.432	28.573	2.86
7	7.625	6.625	.500	38.048	3.81
8	8.625	7.625	.500	43.388	4.34
9	9.625	8.625	.500	48.728	4.90
10	10.750	9.750	.500	54.735	5.48
11	11.750	10.750	.500	60.075	6.10
12	12.750	11.750	.500	65.415	6.55

The permissible variation in weight is 5 per cent above and 5 per cent below.

Double Extra Strong

Size In.	DIAM., INCHES		Thick-ness Inches	Weight per Foot Plain Ends Pounds	Price per Foot
	External	Internal			
1/2	.840	.252	.294	1.714	\$.32
3/4	1.050	.434	.308	2.440	.35
1	1.315	.599	.358	3.659	.37
1¼	1.660	.896	.382	5.214	.52½
1½	1.900	1.100	.400	6.408	.65
2	2.375	1.503	.436	9.029	.91
2½	2.875	1.771	.552	13.695	1.37
3	3.500	2.300	.600	18.583	1.86
3½	4.	2.728	.636	22.850	2.30
4	4.500	3.152	.674	27.541	2.76
4½	5.	3.580	.710	32.530	3.26
5	5.563	4.063	.750	38.552	3.86
6	6.625	4.897	.864	53.160	5.32
7	7.625	5.875	.875	63.079	6.35
8	8.625	6.875	.875	72.424	7.25

The permissible variation in weight is 10 per cent above and 10 per cent below.

Pipe Columns

From National Tube Company's National Pipe Standards
The tables give the safe loads in tons of 2000 pounds for standard and extra strong pipe, computed by the formulae of the New York and Chicago building laws.
According to these laws the allowable compressive stress per square inch for steel columns shall be determined by formula $S = 16000 - 70 L/R$, with a maximum allowable stress of 14000 pounds per square inch. Length of column is limited to 120 times least radius of gyration, except in case of struts for wind bracing, in which case the limit is 150 times the least radius of gyration.

S = allowable compressive stress for steel, pounds per square inch.
 L = length of column in inches.
 R = least radius of gyration in inches.
Maximum allowable compressive stress = 14000 pounds per square inch.



Fig. 1462

Length Feet	Standard Pipe Columns					
	2	2½	3	4	5	6
16	1.54	2.03	2.16	2.26	2.37	2.58
14	3.06	6.57	9.65	13.03	16.62	20.93
13	3.81	7.37	10.49	13.91	17.54	21.90
12	4.57	8.18	11.33	14.79	18.46	22.86
11	5.32	8.98	12.18	15.63	19.38	23.82
10	6.08	9.78	13.02	16.56	20.30	24.78
9	6.83	10.59	13.86	17.44	21.22	25.74
8	7.59	11.39	14.70	18.33	22.14	26.71
7	8.34	12.20	15.54	19.21	23.06	27.67
6	9.10	13.00	16.38	20.09	23.98	28.63
5	9.86	13.81	17.23	20.98	24.90	29.59

Length Feet	Extra Strong Pipe Columns					
	2	2½	3	4	5	6
16	3.01	3.22	3.42	3.65	3.75	3.75
14	39.69	50.38	61.93	76.21	87.62	97.05
13	40.81	51.58	63.21	77.57	89.02	98.45
12	41.94	52.78	64.49	78.93	90.42	99.85
11	43.06	53.99	65.76	80.29	91.82	101.24
10	44.18	55.19	67.04	81.65	93.22	102.05
9	45.30	56.39	68.31	83.01	93.81	102.05
8	46.43	57.59	69.59	83.36	93.81	102.05
7	47.55	58.79	69.82	83.36	93.81	102.05
6	48.48	58.79	69.82	83.36	93.81	102.05
5	48.48	58.79	69.82	83.36	93.81	102.05

Length Feet	Standard Pipe Columns					
	2	2½	3	4	5	6
16	2.18	2.76	3.00	3.18	3.37	3.55
14	3.69	8.52	12.87	17.71	22.95	29.35
13	4.71	9.64	14.06	18.96	24.27	30.75
12	5.74	10.75	15.24	20.22	25.59	32.15
11	6.76	11.87	16.42	21.47	26.91	33.54
10	7.79	12.98	17.60	22.72	28.23	34.94
9	8.81	14.09	18.79	23.98	29.55	36.33
8	9.83	15.21	19.97	25.23	30.88	37.73
7	10.86	16.32	21.15	26.48	32.20	39.12
6	11.88	17.44	22.33	27.74	33.52	40.52
5	12.91	18.55	23.52	28.99	34.84	41.92

Cast Iron Water Pipe

Bell and Spigot and Turned and Bored



Fig. 1482

Standard Thickness and Weights of Cast Iron Pipe

Nom. I. D. In.	Class A Gas		Class B Standard		Class C Medium Heavy		Class D Extra Heavy	
	Thick-ness In.	Wt. Lbs.	Thick-ness In.	Wt. Lbs.	Thick-ness In.	Wt. Lbs.	Thick-ness In.	Wt. Lbs.
3	.38	13.9	.42	15.4	.48	23.3	.52	25
4	.42	20	.45	21.7	.52	33.3	.55	38.3
6	.44	30.8	.48	33.3	.51	35.8	.55	38.3
8	.46	42.9	.51	47.5	.56	52.1	.60	55.8
10	.50	57.1	.57	63.8	.62	70.8	.68	76.7
12	.54	72.5	.62	82.1	.68	91.7	.75	100
14	.57	89.6	.66	102.5	.74	116.7	.82	129.2
16	.60	108.3	.70	125	.80	143.8	.89	158.3
18	.64	129.2	.75	150	.87	175	.96	191.7
20	.67	150	.80	175	.92	208.3	1.03	229.2
24	.76	204.2	.89	233.3	1.04	279.2	1.16	306.7
30	.88	291.7	1.03	333.3	1.20	400	1.37	450
36	.99	391.7	1.15	454.2	1.36	545.8	1.58	625
42	1.10	512.5	1.28	591.7	1.54	716.7	1.78	825
48	1.26	666.7	1.42	750	1.71	908.3	1.96	1050
54	1.35	800	1.55	933.3	1.90	1141.7	2.23	1341.7
60	1.39	916.7	1.67	1104.2	2.00	1341.7	2.38	1583.3
72	1.62	1283.4	1.95	1545.8	2.39	1904.2	2.75	2141.7
84	1.72	1633.4	2.22	2104.2	2.75	2604.2	3.12	2804.2

All lengths to lay 12 feet. All weights are approximate; those per foot include allowance for bell. All pipe is tested by water pressure. Turned and bored pipe made to order only.

Inquiries and orders should clearly indicate the approximate number of lengths or feet of pipe of each size and class required. Give the desired delivery point and time of shipment, with any particulars as to sizes required first, the service intended, etc. This will facilitate prompt attention and avoid delays.

Approximate Weights of Lead and Hemp Required for Joints

Pipe In.	Lead Wt. Lbs.	Hemp Wt. Lbs.	Pipe In.	Lead Wt. Lbs.	Hemp Wt. Lbs.	Pipe In.	Lead Wt. Lbs.	Hemp Wt. Lbs.
3	6	.18	16	30	.94	48	88.5	4.37
4	7.5	.21	18	33.8	1	54	97.6	6.25
6	10.25	.31	20	37	1.25	60	108.3	8.25
8	13.25	.44	24	44	1.50	72	128	12.50
10	16	.53	30	54.25	2.06	84	147	15.00
12	19	.61	36	64.75	3	108	176	18.75
14	22	.81	42	75.25	3.62	126	204.25	22.50

Flanged



Fig. 1483

Flanged cast iron pipe, sizes 3 to 48 inches, same thickness as standard pipe. Thickness of flange equals approximately 1½ times thickness of pipe, plus ½ inch. Pipe made in 12-foot lengths and faced ¼ inch short for gaskets.

Specials for Cast Iron Pipe



Fig. 1491

Size In.	Wt. Lbs.	Size In.	Wt. Lbs.
4	82	16	750
6	130	18	888
8	200	20	1070
10	278	24	1656
12	366	30	2836
14	504	36	4820

45° Eighth Bends

Size In.	Wt. Lbs.
4	66
6	105
8	150

22½° Sixteenth Bends

Size In.	Wt. Lbs.
4	66
6	105
8	150

Tees



Fig. 1493

Size, In.	Wt. Lbs.
4x4x4	128
6x6x6	200
8x8x8	294
10x10x10	395
12x12x12	493
14x14x14	593

Crosses



Fig. 1494

Size, In.	Wt. Lbs.
4x4x4x4	166
6x6x6x6	257
8x8x8x8	372
10x10x10x10	493
12x12x12x12	623
14x14x14x14	763

Plugs and Caps

Size In.	Wt. Lbs.
4	8
6	14
8	24
10	38
12	50

Size In.	Wt. Lbs.
4	15
6	15
8	15
10	18
12	18

Sleeves

Size In.	Wt. Lbs.
4	15
6	15
8	15
10	18
12	18

Special for Cast Iron Pipe



Fig. 1498

Size In.	Wt. Lbs.
4x4	103
6x6	181
8x8	291
10x10	431
12x12	632
14x14	985
16x16	1413
18x18	1737
20x20	2199
24x24	3599

Reducers

Size In.	Wt. Lbs.
6x4	97
8x6	143
10x8	198
12x10	261
14x12	321
16x14	381
18x16	441
20x18	501
24x24	638

Increases

Size In.	Wt. Lbs.
6x8	150
8x10	201
10x12	240
12x14	267

Split Tees

Size In.	Wt. Lbs.
3	60
4	103
6	115
8	165
10	245
12	275

Split Sleeves

Size In.	Wt. Lbs.
3	50
4	91
6	101
8	151
10	225
12	250

Flanges and Spigots

Size In.	Wt. Lbs.
3	16
4	16
6	16
8	16
10	16
12	16

Flanges and Bells

Size In.	Wt. Lbs.
3	16
4	16
6	16
8	16
10	16
12	16

Flanges

Size In.	Wt. Lbs.
3	10
4	15
6	20
8	32

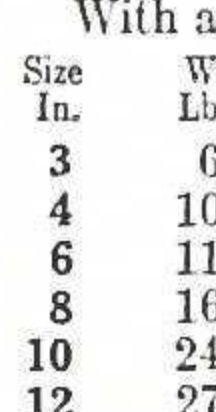


Fig. 1499A



Fig. 1499B



Fig. 1499C

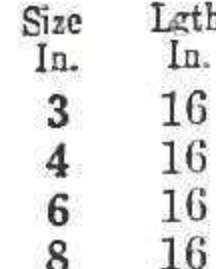


Fig. 1499D

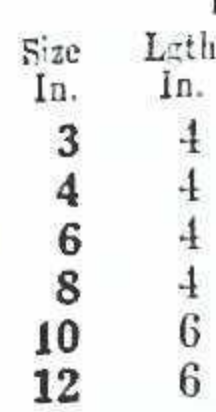


Fig. 1499E

Standard Lap Welded Boiler Tubes

All Weights and Dimensions are Nominal

Adopted April 1, 1921



Fig. 1501

Table with columns for Standard Thickness, Minimum External Birming-Diam., Ham Wire In., Gauge, Weight per Ft., and Price per Foot for One, Two, Three, and Four Extra Gauges.

Boiler tubes to special specifications, special prices upon application.

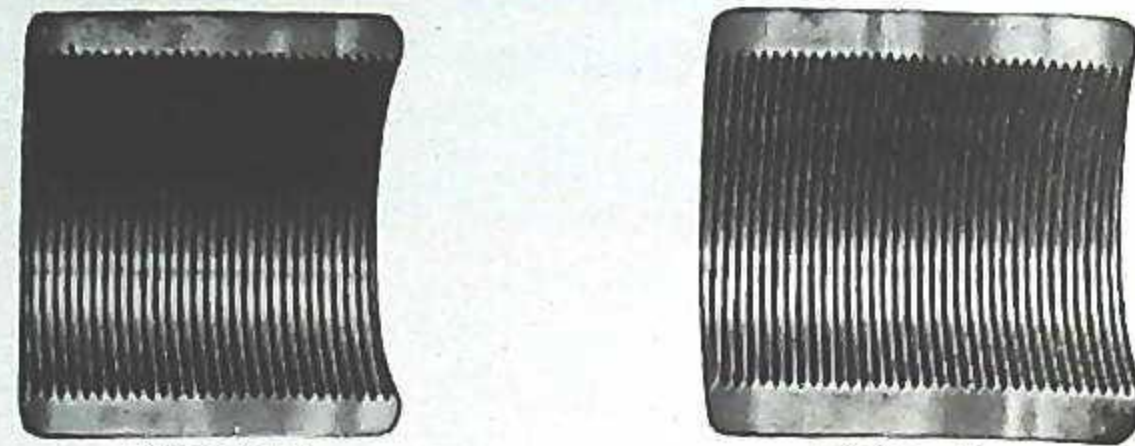
Tubes more than four gauges heavier than standard will be charged per pound.

Under the A. S. M. E. specifications to which all these merchant boiler tubes are manufactured, the gauge ordered is the lightest weight that may be shipped.

Weights of Extra Gauge Boiler Tubes

Table showing nominal weight per foot in pounds for various extra gauge boiler tubes (2 to 13 gauges).

Wrought Iron Couplings



Standard Fig. 1502

Extra Heavy Fig. 1503

Table for Standard Couplings with columns for Size Pipe Inches, Nominal O. D. Inches, Length Inches, and Price Each for R. H., Galv., and R. & L. Black.

Table for Extra Heavy Couplings with columns for Size Pipe Inches, Nominal O. D. Inches, Length Inches, and Price Each for R. H., Galv., and R. & L. Black.

Table for Hydraulic Recessed Couplings with columns for Size Pipe Inches, Nominal O. D. Inches, Length Inches, and Price Each for R. H., Galv., and R. & L. Black.

Wrought Iron Long Screws



Fig. 1504

special order and charged as cut pipe, with threads, couplings and locknuts extra.

Table for Wrought Iron Long Screws with columns for Size Pipe Inches, Standard Length Inches, Price Each for Black and Galv., and Price Each for R. & L. Black.

In ordering, specify length of thread wanted.

Wrought Nipples

Black Right-hand Nipples



Close Fig. 1511

Shoulder Fig. 1512

Table for Black Right-hand Nipples with columns for Size In., Length Inches, and Price Each for Close or Short and Long.

Extra Long Black Right-hand Nipples



Fig. 1513

Table for Extra Long Black Right-hand Nipples with columns for Size In., Length Inches, and Price Each for various lengths (4 to 12 inches).

Wrought Nipples

Black Right and Left-hand Nipples

Table for Black Right and Left-hand Nipples with columns for Size In., Length Inches, and Price Each for Close or Short and Long.

Extra Long Black Right and Left-hand Nipples

Table for Extra Long Black Right and Left-hand Nipples with columns for Size In., Length Inches, and Price Each for various lengths (4 to 12 inches).

Add 60 per cent to above prices for galvanized right and left nipples.

Galvanized Right-hand Nipples

Table for Galvanized Right-hand Nipples with columns for Size In., Length Inches, and Price Each for Close or Short and Long.

Extra Long Galvanized Right-hand Nipples

Table for Extra Long Galvanized Right-hand Nipples with columns for Size In., Length Inches, and Price Each for various lengths (4 to 12 inches).

Malleable Iron Fittings

Revised Classification and Price List

Effective September 15, 1919

Banded

Class	A	B	C
Price, Black.....per lb.	\$.46	\$.20	\$.13
" Galv....."	.58	.28	.20
Caps			
" R. H. Plain.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" R. H. Banded.....	1/8 to 3/4	1/4 to 3/4	1 to 6
" R. H. R. & L.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Crosses, Straight	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Reducing.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Elbows, Straight	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Reducing.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" R. & L.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" 45°.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Street, 90°.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" 45°.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Locknuts, Hexagon	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Reducers	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Return Bends, C. P.	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" " M. P.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" " O. P.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Tees, Straight	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Reducing.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Service, Straight.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Reducing.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Y's	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6

Plain

Class	A	B	C
Price, Black.....per lb.	\$.46	\$.23	\$.15
" Galv....."	.58	.33	.23
Caps			
" Female.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Male.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Loops, Male.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Female.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Elbows, Reducing	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" 60°.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Side Outlet.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Drop, Female.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Male and Female.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Long Drop.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Extension Pieces	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Reducers	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Tees, Reducing	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Drop, Female.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Male and Female.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
" Four-way.....	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Wall Plates	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Waste Nuts	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6
Y's	1/8 to 3/4	1/4 to 3/4	1 1/4 to 6

All fittings other than Standard take 25 per cent advance. Such fittings in Class C as have one or more openings smaller than 3/4-inch to be Class B.

For reducing malleable fittings, the smallest opening determines the classification.

The run of tees gives the sizes for the purpose of classification; the outlet being larger does not change it.

Right and left fittings not classified take one class higher than right hand.

90° Malleable Elbows



Fig. 1521

Size In.	RIGHT HAND		R. AND L.	
	Black	Galv.	Black	Galv.
1/8	\$.06	\$.08		
1/4	.07	.09	\$.09	\$.12
3/8	.08	.11	.11	.16
1/2	.10	.14	.13	.17
3/4	.15	.20	.17	.23
1	.22	.32	.25	.35
1 1/4	.25	.40	.30	.45
1 1/2	.35	.60	.40	.65
2	.50	.90	.65	1.00
2 1/2	.90	1.50		
3	1.50	2.60		
3 1/2	2.25	3.75		
4	3.00	5.00		
4 1/2	3.50	5.75		
5	4.00	6.50		
6	6.50	10.00		

45° Malleable Elbows



Fig. 1522

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	\$.08	\$.12	2 1/2	\$1.25	\$1.90
3/8	.10	.15	3	2.50	3.75
1/2	.12	.20	3 1/2	3.25	4.75
3/4	.18	.25	4	4.50	6.75
1	.26	.40	4 1/2	5.25	7.75
1 1/4	.36	.50	5	6.00	9.00
1 1/2	.54	.85	6	7.50	11.00
2	.82	1.35			

90° Malleable Street Elbows



Fig. 1523

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/8	\$.08	\$.10	2	\$.90	\$1.30
1/4	.10	.12	2 1/2	1.50	2.25
3/8	.12	.15	3	2.25	3.50
1/2	.15	.20	3 1/2	2.85	4.65
3/4	.20	.28	4	3.50	5.75
1	.25	.35	4 1/2	4.75	7.50
1 1/4	.40	.55	5	7.75	11.50
1 1/2	.55	.80	6		

45° Malleable Street Elbows



Fig. 1524

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	\$.12	\$.15	1 1/4	\$.40	\$.55
3/8	.12	.15	1 1/2	.55	.80
1/2	.12	.15	2	.90	1.30
3/4	.20	.28	3	2.25	3.50
1	.25	.35	4	3.50	5.75

Malleable Side Outlet Elbows



Fig. 1525

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
3/8	\$.08	\$.10			
1/2	.10	.15			
3/4	.18	.25			
1	.30	.45			
1 1/4	.45	.65			
1 1/2	.60	.90			
2	1.00	1.50			

Malleable Female Drop Elbows



Fig. 1526

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	\$.06	\$.09			
3/8	.08	.12			
1/2	.12	.20			
3/4	.20	.35			

Malleable Male and Female Drop Elbows



Fig. 1531

Size In.	PRICE, EACH	
	Black	Galv.
3/8	\$.08	\$.12
1/2	.12	.20

Malleable Crosses



Fig. 1537

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/8	\$.08	\$.11	1 1/4	\$4.40	\$6.60
1/4	.09	.12	1 1/2	.60	.90
3/8	.10	.14	2	1.00	1.50
1/2	.16	.25	2 1/2	1.75	2.75
3/4	.20	.29	3	3.00	4.50
1	.30	.45	3 1/2	3.25	5.25

Malleable Tees



Straight Fig. 1532



Reducing Fig. 1533

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.		Black	Galv.
1/8	\$.07	\$.09	1 1/4	\$.30	\$.50	4	\$3.40	\$5.75
1/4	.08	.10	1 1/2	.45	.70	4 1/2	4.25	7.00
3/8	.09	.13	2	.60	1.00	5	5.00	8.00
1/2	.11	.16	2 1/2	1.05	1.90	6	7.75	12.00
3/4	.15	.20	3	1.70	3.00			
1	.25	.38	3 1/2	2.50	4.25			



Fig. 1538

Malleable Y Bends

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
3/8	\$.35	\$.50	1 1/2	\$1.00	\$1.50
1/2	.40	.60	2	1.70	2.50
3/4	.50	.75	2 1/2	2.00	3.00
1	.60	.90	3	4.00	6.00
1 1/4	.80	1.25	4	5.50	8.25

Malleable Reducing Couplings

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	\$.05	\$.08	1 1/2	\$.28	\$.45
3/8	.06	.10	2	.45	.75
1/2	.07	.10	2 1/2	.70	1.05
3/4	.10	.15	3	1.00	1.65
1	.16	.25	3 1/2	1.50	2.40
1 1/4	.20	.35	4	1.85	3.05



Fig. 1539

Malleable Right Hand Couplings

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.		Black	Galv.
1/4	\$.03	\$.05	1	\$.14	\$.23	2 1/2	\$.60	\$.95
3/8	.05	.07	1 1/4	.20	.30	3	.90	1.40
1/2	.07	.10	1 1/2	.25	.40	3 1/2	1.25	1.90
3/4	.10	.17	2	.35	.55	4	1.75	2.75

Malleable Right and Left Hand Couplings

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.		Black	Galv.
1/4	\$.04	\$.06	1 1/4	\$.25	\$.35	1 1/4	\$.25	\$.35
3/8	.06	.09	1 1/2	.36	.55	1 1/2	.36	.55
1/2	.08	.10	2	.52	.75	2	.52	.75
3/4	.12	.17	2 1/2	.70	1.05	2 1/2	.70	1.05
1	.16	.25	3	1.00	1.50	3	1.00	1.50

Malleable Caps



Fig. 1539B

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/8	\$.03	\$.04	2	\$.32	\$.52

Malleable Shoulder Bushings

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/4	\$.04	\$.08	1 1/4	\$.07	\$.14
3/8	.04	.08	1 1/2	.09	.18
1/2	.04	.08	2	.14	.28
3/4	.05	.10	2 1/2	.21	.42
1	.06	.12	...	...	...

Malleable Faced Bushings

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
3/8	\$.08	\$.12	3 1/2	\$1.20	\$1.80
1/2	.09	.14	4	1.50	2.25
3/4	.11	.17	4 1/2	2.10	3.15
1	.13	.20	5	2.60	3.90
1 1/4	.17	.25	6	3.75	5.60
1 1/2	.22	.33	7	8.00	...
2	.32	.48	8	9.00	...
2 1/2	.48	.72	10	14.00	...
3	.70	1.05	12	20.00	...

Malleable Extension Pieces

Size Inches	Price, Each Black	Price, Each Galv.
3/8	\$.06	\$.09
1/2	.09	.13
3/4	.12	.18
1	.15	.23
1 1/4	.25	.38
1 1/2	.30	.45
2	.50	.75

Malleable Lock Nuts

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.02	...	1	\$.07	\$.10
1/4	.02	\$.03	1 1/4	.09	.14
3/8	.03	.04	1 1/2	.11	.20
1/2	.04	.05	2	.18	.30
3/4	.05	.07	...	...	...

Malleable Waste Nuts

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/4	\$.04	\$.08	1	\$.10	\$.20
3/8	.05	.10	1 1/4	.15	.30
1/2	.06	.12	1 1/2	.25	.50
3/4	.08	.16	...	...	...

Malleable Wall Plates

Size In.	Price Each	Size In.	Price Each
3/8	\$.12	3/4	\$.30
1/2	.16	...	...

Malleable Cross Overs

Size In.	Price, Each Black	Price, Each Galv.
1/2	\$.20	\$.25
3/4	.30	.40
1	.45	.60

Malleable Cross Overs With Back Outlet

Size In.	To Cross Pipe Inches	Price, Each Black	Price, Each Galv.
1/2	1/2	\$.23	\$.30
3/4	3/4	.38	.50
1	1	.55	.75

Malleable Iron Male Union Elbows

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/4	\$.43	\$.65	1 1/4	\$1.05	\$1.60
3/8	.45	.70	1 1/2	1.20	1.80
1/2	.48	.72	2	1.80	2.70
3/4	.62	.93	2 1/2	3.30	4.95
1	.72	1.08	...	...	...

Malleable Iron Female Union Elbows

Size Inches	Price, Each Black	Price, Each Galv.	Size Inches	Price, Each Black	Price, Each Galv.
1/4	\$.38	\$.57	1 1/4	\$.90	\$1.35
3/8	.40	.60	1 1/2	1.05	1.58
1/2	.42	.63	2	1.55	2.35
3/4	.54	.81	2 1/2	2.85	4.30
1	.63	.95	...	...	...

Malleable Iron Male Union Tees

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/4	\$.48	\$.72	1 1/4	\$1.10	\$1.65
3/8	.50	.75	1 1/2	1.30	1.95
1/2	.52	.78	2	1.95	2.95
3/4	.65	1.00	2 1/2	3.70	5.55
1	.80	1.20	...	...	...

Malleable Iron Female Union Tees

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/4	\$.40	\$.60	1 1/4	\$.95	\$1.45
3/8	.43	.65	1 1/2	1.15	1.75
1/2	.45	.68	2	1.70	2.55
3/4	.57	.86	2 1/2	3.20	4.80
1	.70	1.05	...	...	...

Malleable Iron Boiler Couplings

Size, Male and Female Inches	Price, Each Plain Galv.	Price, Each with Union Galv.
3/4 x 3/4 x 1	\$.40	\$.75
3/4 x 1/2 x 1	.40	.75
1/2 x 1/2 x 1	.40	.60

Malleable Iron Boiler Elbows With Union

Size, Male and Female Inches	Price, Each Plain Galv.	Price, Each With Union Galv.
3/4 x 3/4 x 1	\$.40	\$.75
3/4 x 1/2 x 1	.40	.75
1/2 x 1/2 x 1	.40	.60

Malleable Iron Circulating Boiler Tees

Size Inches	Price, Each With Union	Price, Each Without Union
3/4 x 1/2 x 1	\$.80	\$.50

Malleable Banded Offsets

Size Inches	Offset Inches	Length Inches	Price Each
3/4	1 1/2	3 1/4	\$.25
1	1 1/2	4	.40
1 1/4	2	5 3/8	.75

Malleable Iron Wash Tray Elbows

Size In.	Price, Each Black	Price, Each Galv.
1/2	\$.18	\$.20
3/4	.25	.30

Malleable Iron Wash Tray Tees

Size In.	Price, Galvanized Each Standard	Price, Galvanized Each Extra Long	Size In.	Price, Galvanized Each Standard	Price, Galvanized Each Extra Long
1/2	\$.20	\$.25	1/2 x 3/4	\$.30	\$.35
3/4	.30	.35	...	...	...

Standard Malleable Iron Unions

For 150 Pounds Steam Working Pressure

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.18	\$.27	1	\$.33	\$.50
1/4	.18	.27	1 1/4	.46	.70
3/8	.20	.30	1 1/2	.58	.90
1/2	.22	.33	2	.75	1.15
3/4	.27	.40	2 1/2	1.55	2.35

Dart Malleable Iron Unions

Tested to 1000 Pounds

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.30	\$.45	1	\$.80	\$1.20
1/4	.30	.45	1 1/4	1.20	1.80
3/8	.40	.60	1 1/2	1.60	2.40
1/2	.50	.75	2	2.00	3.00
3/4	.60	.90	2 1/2	3.20	4.80

New Walworth Kewanee Unions

3-inch and Smaller, 250 Pounds Steam Working Pressure; 3 1/2-inch and Larger, 200 Pounds



Has patented combination manganese bronze to steel ball joint, up to 3 inches, inclusive; brass to iron ball joint, 3 1/2 and 4 inches, with non-corrosive thread connection. Each union tested with extreme compressed air pressure under water. No gasket required.

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.30	\$.45	1	\$.80	\$1.20
1/4	.30	.45	1 1/4	1.20	1.80
3/8	.40	.60	1 1/2	1.60	2.40
1/2	.50	.75	2	2.00	3.00
3/4	.60	.90	2 1/2	3.20	4.80

Rhode Island Malleable Iron Unions

For 250 Pounds Working Pressure

For steam, water, gas and oil.

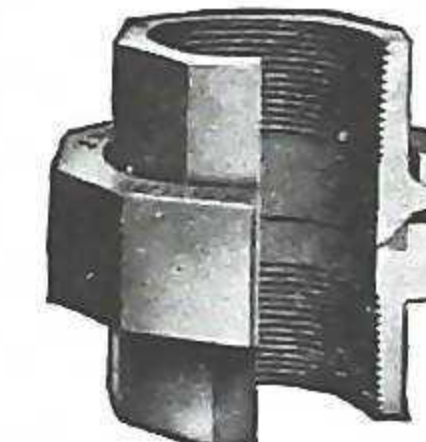
Made of the best grade of malleable iron, with bronze seat, octagon pipe ends and hexagon nut. No gasket required. Briggs standard taper pipe threads. The brass seat is secured in a manner which prevents it from becoming loose from the unequal expansion contraction of the two metals.



Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.30	\$.45	1	\$.80	\$1.20
1/4	.30	.45	1 1/4	1.20	1.80
3/8	.40	.60	1 1/2	1.60	2.40
1/2	.50	.75	2	2.00	3.00
3/4	.60	.90	2 1/2	3.20	4.80

Style A Jefferson Malleable Iron Unions

For 300 Pounds Steam Working Pressure



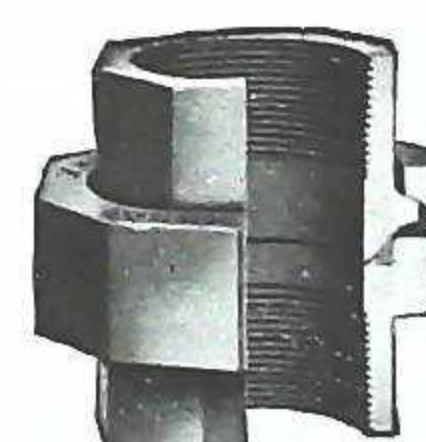
This union is made with malleable iron pipe ends which will not stretch. The nut threads are coarse enough to permit rapid adjustment, and are coated with graphite to lubricate them and prevent their corrosion. Thus the union may always be easily disconnected after being put in use.

Has octagonal ends and nut, and brass-to-iron joint.

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.30	\$.45	1	\$.80	\$1.20
1/4	.30	.45	1 1/4	1.20	1.80
3/8	.40	.60	1 1/2	1.60	2.40
1/2	.50	.75	2	2.00	3.00
3/4	.60	.90	2 1/2	3.20	4.80

Ground Joint Unions

For Steam Working Pressures: 3-inch and Smaller, 250 Pounds 3 1/2 and 4-inch, 200 Pounds



Malleable ends and octagon ring. The brass-to-iron seat eliminates the use of gaskets. New unions are not required when a joint is broken as the brass-to-iron seat makes it possible to use them again and again.

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.30	\$.45	1	\$.80	\$1.20
1/4	.30	.45	1 1/4	1.20	1.80
3/8	.40	.60	1 1/2	1.60	2.40
1/2	.50	.75	2	2.00	3.00
3/4	.60	.90	2 1/2	3.20	4.80



Standard Cast Iron Flange Unions

For 125 Pounds Steam Working Pressure
 Sizes 14-inch and larger are to be used with O. D. pipe of the same size.

Size In.	Diam. Flanges In.	No. Bolts	Price, Each Black	Price, Each Galv.
1/2	2 3/4	3	\$.40	\$.80
3/4	3 3/8	3	.46	.92
1	3 5/8	3	.52	1.04
1 1/4	4 1/8	4	.64	1.28
1 1/2	4 3/8	4	.78	1.56
2	5 1/8	4	1.00	2.00
2 1/2	5 3/8	4	1.25	2.50
3	6 5/8	4	1.50	3.00
3 1/2	7 1/4	4	1.80	3.60
4	7 3/4	5	2.10	4.20
4 1/2	8 3/8	5	2.70	5.40

Extra Heavy Cast Iron Flange Unions

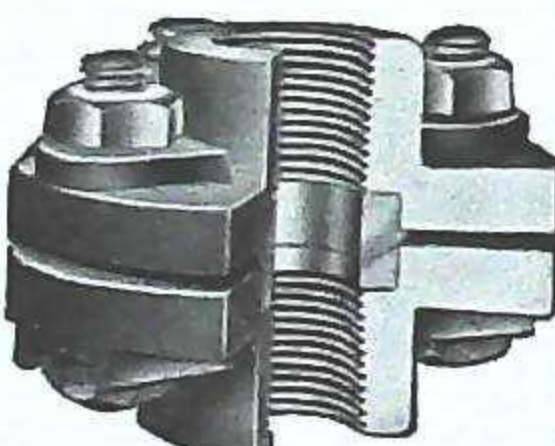
For 250 Pounds Saturated Steam Working Pressure



Fig. 1562

Size In.	Diam. Flanges In.	No. Bolts	Price Each
1/2	3 1/4	4	\$.70
3/4	3 3/4	4	.70
1	3 5/8	4	.80
1 1/4	4 1/8	4	1.00
1 1/2	4 5/8	4	1.15
2	5 3/8	5	1.50
2 1/2	6	5	1.90
3	6 3/4	6	2.25
3 1/2	7 1/2	6	2.70

Dart Flange Unions



Tested to 1000 Pounds Pressure

Strong, non-rusting and non-corrosive. No gasket required. Tight joints assured whether in or out of alignment. Made of cast iron equipped with bronze metal ground joint seats.

Prices for galvanized unions upon application.

Size In.	Plain Price Each	Size In.	Plain Price Each	Size In.	Plain Price Each	Size In.	Plain Price Each
1/2	\$.55	2	\$2.00	4 1/2	\$8.75	9	\$21.60
3/4	.60	2 1/2	3.20	5	10.00	10	28.80
1	.80	3	4.80	6	12.50	12	46.00
1 1/4	1.20	3 1/2	6.00	7	15.00	..	..
1 1/2	1.60	4	7.50	8	18.00	..	..

Malleable Iron Flange Unions

For 125 Pounds Steam Working Pressure



Fig. 1564

Malleable flange unions are always furnished faced and without gaskets.

Size In.	Diam. Flange In.	No. Bolts	Price, Each Black	Price, Each Galv.
1/2	3	3	\$1.40	\$2.80
3/4	3 3/8	4	1.60	3.20
1	3 5/8	4	2.00	4.00
1 1/4	4 1/8	4	2.50	5.00
1 1/2	4 3/8	4	3.00	6.00
2	5 1/8	4	3.50	7.00
2 1/2	5 3/8	4	4.40	8.80
3	6 1/8	4	..	..

Malleable Iron Railing Fittings

No. 1 Elbows



Fig. 1565

Size In.	Price Each	Size In.	Price Each
1/2	\$.15	1 1/2	\$.45
3/4	.18	2	.72
1	.20	2 1/2	1.60
1 1/4	.35	3	2.25

No. 2 Side Outlet Elbows

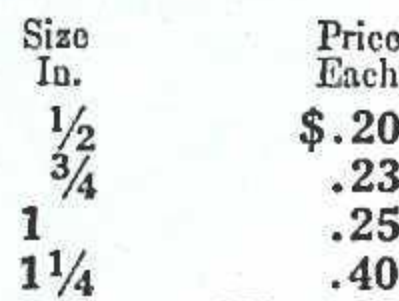


Fig. 1566

Size In.	Price Each	Size In.	Price Each
1/2	\$.20	1 1/2	\$.50
3/4	.23	2	.80
1	.25	2 1/2	1.75
1 1/4	.40	3	2.50

No. 3 Tees



Fig. 1567

Size In.	Price Each	Size In.	Price Each
1/2	\$.20	1 1/2	\$.50
3/4	.23	2	.75
1	.25	2 1/2	1.75
1 1/4	.40	3	2.50

No. 4 Side Outlet Tees

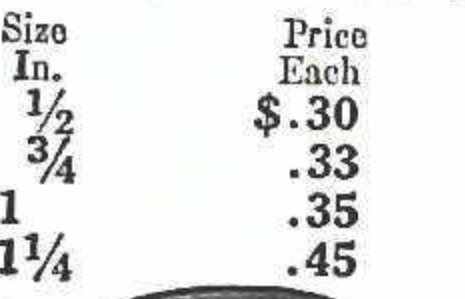


Fig. 1568

Size In.	Price Each	Size In.	Price Each
1/2	\$.30	1 1/2	\$.55
3/4	.33	2	.90
1	.35	2 1/2	1.90
1 1/4	.45	3	2.60

No. 5 Crosses



Fig. 1569

Size In.	Price Each	Size In.	Price Each
1/2	\$.30	1 1/2	\$.58
3/4	.33	2	1.00
1	.35	2 1/2	1.80
1 1/4	.45	3	2.60

No. 6 Side Outlet Crosses

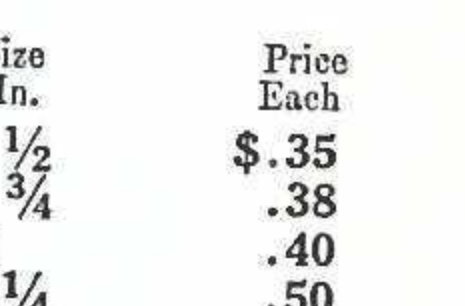


Fig. 1569A

Size In.	Price Each	Size In.	Price Each
1/2	\$.35	1 1/2	\$.65
3/4	.38	2	1.35
1	.40	2 1/2	2.00
1 1/4	.50	3	2.75

No. 7 Flanges



Fig. 1569B

Size In.	Price Each	Size In.	Price Each
1/2	\$.14	1 1/2	\$.28
3/4	.15	2	.30
1	.15	2 1/2	.50
1 1/4	.20	3	.75

No. 8 Square Floor Flanges

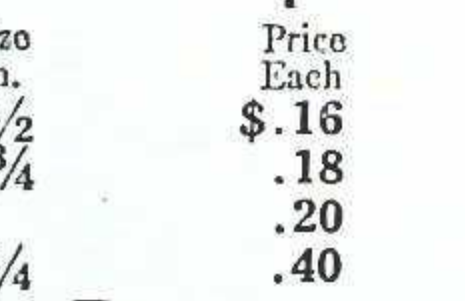


Fig. 1569C

Size In.	Price Each	Size In.	Price Each
1/2	\$.16	1 1/2	\$.50
3/4	.18	2	.90
1	.20	2 1/2	1.35
1 1/4	.40	3	2.50

No. 9 Male or Female Acorns



Fig. 1569D

Size In.	Price Each	Size In.	Price Each
1/2	\$.16	1 1/2	\$.35
3/4	.18	2	.90
1	.20	2 1/2	1.35
1 1/4	.25	3	2.00

In ordering railing fittings, describe kind wanted by number and size. Railing fittings will always be furnished with all openings tapped right-hand unless otherwise specified. Railing fittings tapped right and left or left-hand will be charged for at 15 per cent additional, net. For galvanized railing fittings, add 50 per cent to above list.

Malleable Iron and Brass Railing Fittings

Adjustable

Elbows



Fig. 1571

Size In.	PRICE, EACH	
	Polished Brass	Malleable Iron
1	\$2.75	\$1.10
1 1/4	3.15	1.25
1 1/2	4.25	1.70
2	5.65	2.25

Tees

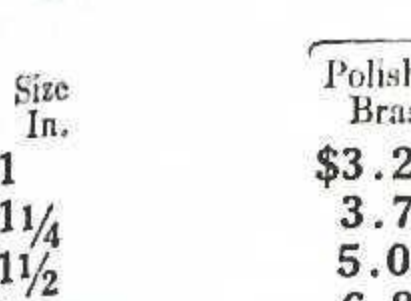


Fig. 1572

Size In.	PRICE, EACH	
	Polished Brass	Malleable Iron
1	\$3.25	\$1.20
1 1/4	3.75	1.50
1 1/2	5.00	2.00
2	6.25	2.50

Flanges

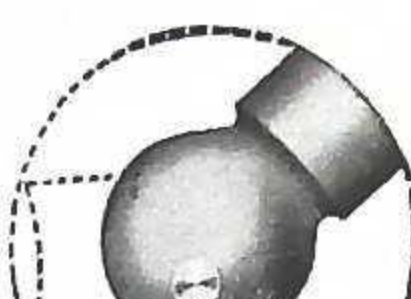


Fig. 1573

Size In.	PRICE, EACH	
	Polished Brass	Malleable Iron
1	\$1.50	..
1 1/4	1.75	..
1 1/2	1.95	..
2	2.50	..

Crosses

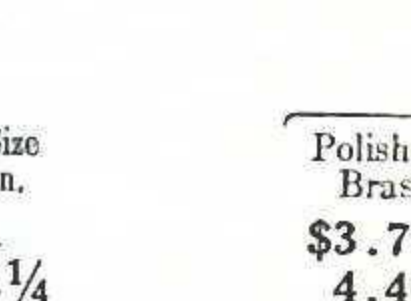


Fig. 1574

Size In.	PRICE, EACH	
	Polished Brass	Malleable Iron
1	\$3.75	\$1.50
1 1/4	4.40	1.75
1 1/2	5.90	2.35
2	6.90	2.75

Stair Tees

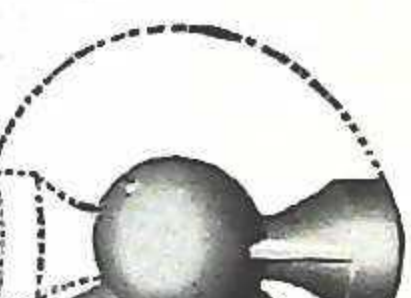


Fig. 1575

Size In.	PRICE, EACH	
	Polished Brass	Malleable Iron
1	\$3.25	\$1.30
1 1/4	4.00	1.60
1 1/2	5.40	2.15
2	6.25	2.50

Stair Crosses

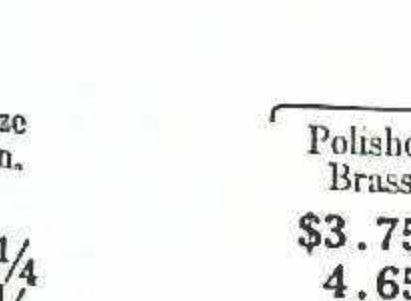


Fig. 1576

Size In.	PRICE, EACH	
	Polished Brass	Malleable Iron
1	\$3.75	\$1.50
1 1/4	4.65	1.85
1 1/2	6.25	2.50
2	6.90	2.75

Add 50 per cent for galvanized malleable fittings.

Polished brass, right and left and left-hand fittings, 25 per cent extra.

Malleable fittings furnished tapped right-hand; add 15 per cent when ordered otherwise.

By means of these fittings almost any angle may be obtained in railings for stairs and other places requiring deviation from horizontal or perpendicular lines, which would otherwise require special patterns to attain the same results

Malleable Iron Railing Fittings

No. 10, 45° Elbows



Fig. 1577

Size In.	Price Each	Size In.	Price Each
1	\$.30	2	\$.90
1 1/4	.45	2 1/2	2.15
1 1/2	.55	3	2.90

No. 11A, 45° Tees

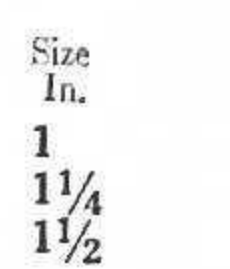


Fig. 1578

Size In.	Price Each	Size In.	Price Each
1	\$.40	2	\$.95
1 1/4	.50	2 1/2	2.50
1 1/2	.60	3	3.00

No. 12B, 45° Crosses



Fig. 1579

Size In.	Price Each	Size In.	Price Each
1	\$.45	2	\$1.15
1 1/4	.55	2 1/2	2.20
1 1/2	.70	3	2.75

No. 13 Stair Landing Ells

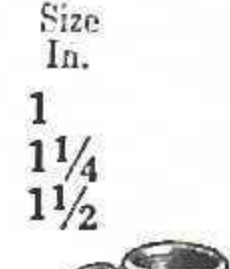


Fig. 1579A

Size In.	Price Each	Size In.	Price Each
1	\$.40	2	\$1.44
1 1/4	.70	2 1/2	2.00
1 1/2	.90	..	..

No. 14 Side Outlet Stair Landing Ells



Fig. 1579B

Size In.	Price Each	Size In.	Price Each
1	\$.50	2	\$1.60
1 1/4	.80	2 1/2	2.30
1 1/2	1.00	..	..

No. 15 Hand Rail and Stair Landing Tees

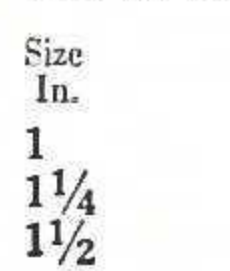


Fig. 1579C

Size In.	Price Each	Size In.	Price Each
1	\$.50	2	\$1.60
1 1/4	.80	2 1/2	2.40
1 1/2	1.00	..	..

No. 16 Side Outlet Hand Rail and Stair Landing Tees



Fig. 1579D

Size In.	Price Each	Size In.	Price Each
1	\$.70	2	\$1.80
1 1/4	.90	2 1/2	2.80
1 1/2	1.10	..	..

No. 17 Stair Landing Tees

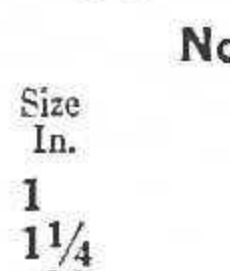


Fig. 1579E

Size In.	Price Each	Size In.	Price Each
1	\$.50	2	\$1.60
1 1/4	.80	2 1/2	2.40
1 1/2	1.00	..	..

No. 18 Hand Rail Crosses



Fig. 1579F

Size In.	Price Each	Size In.	Price Each
1	\$.70	2	\$1.80
1 1/4	.90	2 1/2	2.80
1 1/2	1.10	..	..

No. 19 Stair Landing Crosses

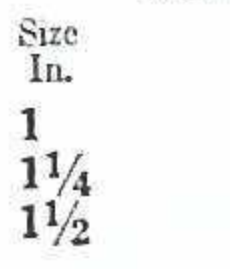


Fig. 1579G

Rough Brass Screwed Fittings

Malleable Iron Pattern, Iron Pipe Size

For 125 Pounds Steam Working Pressure



Price, Each

Table listing prices for Rough Brass Screwed Fittings (Elbows, Tees, Crosses, Bushings, Plugs, Caps, Locknuts, Reducers, Couplings, Return Bends, Y Bends, Unions) in various sizes (1/8 to 1 1/4 inches).

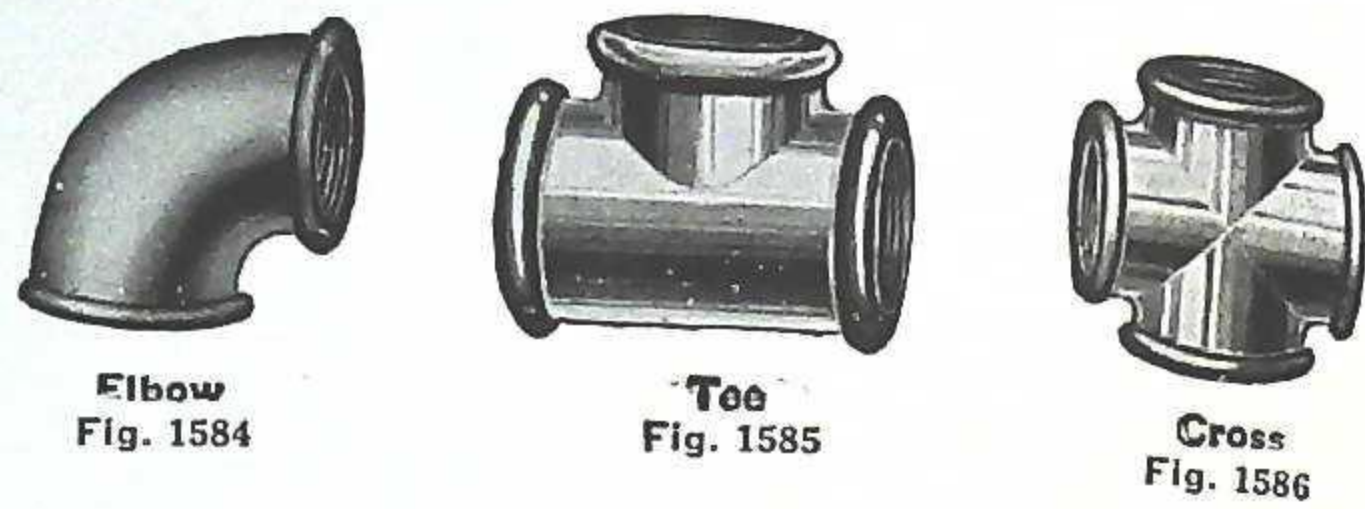
Right and Left Elbows and Right and Left Return Bends will be furnished at an advance of 25 per cent over above list prices.

Elbows, Tees, Crosses, Bushings and Reducers, reducing more than two sizes, will be furnished at an advance of 25 per cent over above reducing list prices.

Finished Brass Screwed Fittings

Malleable Iron Pattern, Iron Pipe Size

For 125 Pounds Steam Working Pressure



Price, Each

Table listing prices for Finished Brass Screwed Fittings (Elbows, Tees, Crosses, Bushings, Plugs, Caps, Locknuts, Reducers, Couplings, Return Bends, Y Bends, Unions) in various sizes (1/8 to 1 1/4 inches).

Right and Left Elbows, and Right and Left Return Bends will be furnished at an advance of 25 per cent over above list prices.

Elbows, Tees, Crosses, Bushings and Reducers, reducing more than two sizes, will be furnished at an advance of 25 per cent over above reducing list prices.

Nickel-plated Brass Screwed Fittings

Polished and Buffed

Malleable Iron Pattern, Iron Pipe Size

125 Pounds Steam Working Pressure

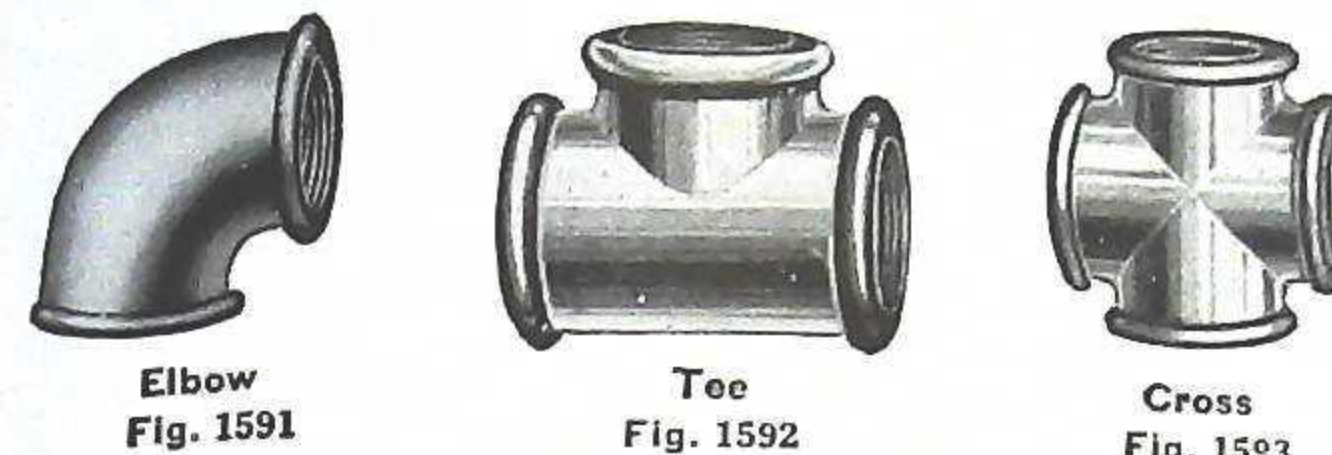


Table listing prices for Nickel-plated Brass Screwed Fittings (Elbows, Tees, Crosses, Bushings, Plugs, Solid Plugs, Countersunk Plugs, Caps, Lock-nuts, Reducers, Couplings, Return Bends, Y Bends) in various sizes (1/8 to 1 1/4 inches).

Table listing prices for Nickel-plated Brass Screwed Fittings (Elbows, Tees, Crosses, Bushings, Plugs, Solid Plugs, Countersunk Plugs, Caps, Lock-nuts, Reducers, Couplings, Return Bends, Y Bends) in various sizes (1 1/2 to 4 inches).

Right and left Elbows and Right and Left Return Bends will be furnished at an advance of 25 per cent over above list prices.

Elbows, Tees, Crosses, Bushings and Reducers, reducing more than two sizes will be furnished at an advance of 25 per cent over above reducing list prices.

Extra Heavy Brass Screwed Fittings

Cast Iron Pattern, Iron Pipe Size

For 250 Pounds Steam Working Pressure

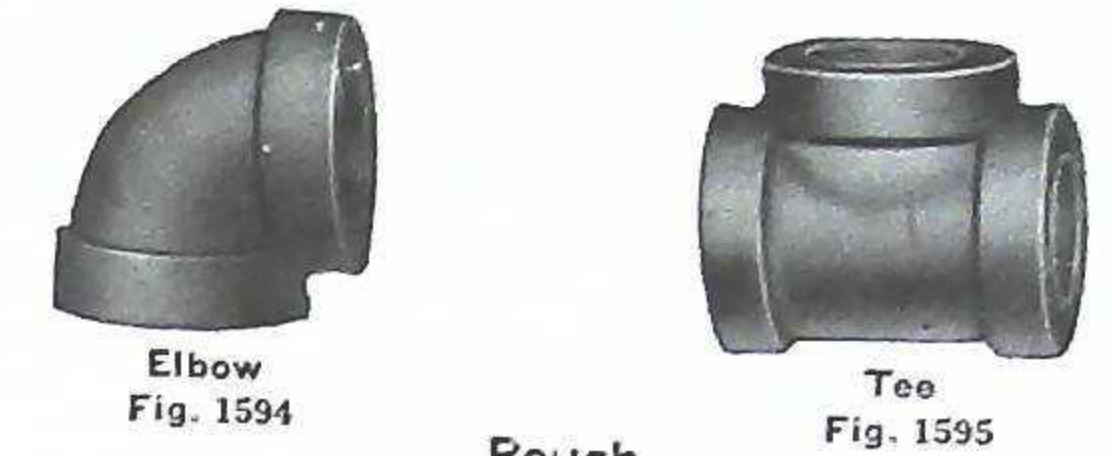


Table listing prices for Extra Heavy Brass Screwed Fittings (Elbows, Tees, Crosses, Couplings, Return Bends, Y Bends) in various sizes (1/4 to 1 1/4 inches).

Table listing prices for Extra Heavy Brass Screwed Fittings (Elbows, Tees, Crosses, Couplings, Return Bends, Y Bends) in various sizes (1 1/2 to 4 inches).

Brass Flange Unions For Steam Working Pressures Standard, 125 Pounds; Extra Heavy 250 Pounds



Table listing prices for Brass Flange Unions in various sizes (1/2 to 1 1/2 inches).

Brazed Brass, Bronze and Copper Tubing

Brown & Sharpe's Gauge



Fig. 1601
Adopted Sept. 15, 1919

Extras Over Base Price

Gauge No.	Decimal Inches	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
12	.0608								.01	Base
13	.0719								.01	"
14	.0640								\$.04	\$.02
15	.0570								\$.10	.04
16	.0508								.25	.10
17	.0452								.25	.10
18	.0403								.55	.25
19	.0358								.55	.25
20	.0319	\$1.07	.57	.27	.12	.06	.04	.02	\$.01	\$.01
21	.0284	1.09	.59	.29	.14	.08	.05	.03	.03	.03
22	.0253	1.11	.61	.31	.16	.10	.07	.05	.05	.05
23	.0225	1.13	.63	.33	.18	.12	.09	.07	.07	.07
24	.0201	1.17	.67	.37	.22	.16	.13	.11	.10	.10

Gauge No.	Decimal Inches	1/4	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
12	.0808	Base	Base	Base	Base	\$.02	\$.04	\$.05	\$.06	\$.06
13	.0719	"	"	"	"	.02	.04	.05	.06	.06
14	.0640	"	"	"	"	.02	.04	.05	.06	.06
15	.0570	"	"	"	"	.02	.04	.05	.06	.06
16	.0508	"	"	"	"	.02	.04	.05	.07	.07
17	.0452	"	"	"	"	.02	.04	.06	.08	.08
18	.0403	"	"	"	"	.02	.05	.07	.09	.09
19	.0358	"	"	"	"	.02	.06	.08	.10	.10
20	.0319	\$.01	\$.01	\$.01	\$.02	.04				
21	.0284	.03	.03	.03	.05					
22	.0253	.05	.05	.06	.08					
23	.0225	.07	.07	.08						
24	.0201	.10	.10	.11						

All tubing between gauges takes price of nearest gauge. Square and hexagon tubing, 6 cents advance over corresponding size and gauge of round tubing.

Rectangular tubing, 6 cents advance over corresponding size and gauge of round tubing, of narrower dimension.

Fancy pattern tubing, 8 cents advance over corresponding size and gauge of round tubing.

Extra fancy pattern tubing, 16 cents advance over corresponding size and gauge of round tubing.

Combination tubing, 25 cents advance.

For diameters of fractional parts of an inch, where no price is given, take the column to the left of where such size would appear if designated.

Brazed Tubing Cut to Uniform Specific Lengths

Length Inches	List Advance	Length Inches	List Advance	Length Inches	List Advance
1 to 2	\$.06	4 to 6	\$.03	12 to 96	No Charge
2 " 4	.04	6 " 12	.02	96 and Over	\$.01

Shorter than 1 inch special prices quoted upon application, not less than 6 cents advance.

Brazed tubing will be measured according to Brown & Sharpe's Gauge, unless otherwise specified, or the thickness of the stock mentioned in fractions or thousandths of an inch. Sizes given for the diameter will be considered outside measurement, and where specific lengths are not given it will be inferred that random lengths will be satisfactory. Unless otherwise specified, it will be inferred that tubing is wanted hard temper, but when wanted suitable for bending, we particularly request that we be so advised.

Brass and copper tubing is numbered according to Stubs' gauge.

Brass Nipples
Iron Pipe Size



Close
Fig. 1602



Long
Fig. 1603

Size Inches	PRICE, ROUGH, EACH				
	Close	1 1/2	2	2 1/2	3
1/8	\$.11	\$.13	\$.15	\$.17	\$.19
1/4	.13	.16	.19	.22	.25
3/8	.15	.19	.23	.27	.31
1/2	.23	.25	.30	.35	.40
3/4	.28		.35	.42	.49
1	.37		.44	.53	.62
1 1/4	.60			.75	.88
1 1/2	.70			.90	1.05
2	1.00			1.20	1.40
2 1/2	1.70				2.00
3	2.50				2.90
3 1/2	4.00				
4	4.75				
4 1/2	5.50				
5	8.50				
6	11.50				

Size Inches	PRICE, ROUGH, EACH				
	3 1/2	4	4 1/2	5	5 1/2
1/8	\$.21	\$.23	\$.25	\$.27	\$.29
1/4	.28	.31	.34	.37	.40
3/8	.35	.39	.43	.47	.51
1/2	.45	.50	.55	.60	.65
3/4	.56	.63	.70	.77	.84
1	.71	.80	.89	.98	1.07
1 1/4	1.01	1.14	1.27	1.40	1.53
1 1/2	1.20	1.35	1.50	1.65	1.80
2	1.60	1.80	2.00	2.20	2.40
2 1/2	2.30	2.60	2.90	3.20	3.50
3	3.30	3.70	4.10	4.50	4.90
3 1/2	5.40	6.00	6.60	7.20	7.80
4	6.15	6.85	7.55	8.25	8.95
4 1/2	7.20	8.05	8.90	9.75	10.60
5	10.60	11.65	12.70	13.75	14.80
6	14.10	15.40	16.70	18.00	

Polished brass nipples, longer than close, 25 per cent extra.

Nickel-plated nipples, 20 per cent extra over polished list.

Seamless Brass Tubing
Iron Pipe Size



Fig. 1604

Iron Pipe Size Inches	Approx. Weight per Foot Pounds	Price per Pound		Iron Pipe Size Inches	Approx. Weight per Foot Pounds	Price per Pound
		Price per Pound	Price per Pound			
1/8	.25	\$.10		2 1/2	5 75	Base
1/4	.43	.07		3	8 3	"
3/8	.62	.02		3 1/2	10 9	"
1/2	.9	.01		4	12 7	"
3/4	1 25	Base		4 1/2	13 9	\$.03
1	1 7	"		5	15 75	.06
1 1/4	2 5	"		6	18 31	.07
1 1/2	3	"		7	26 28	.09
2	4	"		8	29 88	.11

Stock lengths, 12 feet.

Cast Iron Screwed Fittings
Straight Elbows



Right-hand
Fig. 1611



Right and Left
Fig. 1612

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	\$.05	\$.10	3 1/2	\$1.05	\$2.10
3/8	.05	.10	4	1.20	2.40
1/2	.06	.12	4 1/2	1.75	3.50
3/4	.08	.16	5	2.00	4.00
1	.10 1/2	.21	6	2.75	5.50
1 1/4	.16	.32	7	4.70	9.40
1 1/2	.20	.40	8	6.75	13.50
2	.28	.56	9	9.00	18.00
2 1/2	.50	1.00	10	13.50	27.00
3	.75	1.50	12	20.00	40.00

Straight Pitched Elbows

Size In.	Price Black Each	Size In.	Price Black Each	Size In.	Price Black Each
1/2	\$.08	1 1/4	\$.20	2 1/2	\$.65
3/4	.10	1 1/2	.25	3	1.00
1	.13	2	.35	3 1/2	1.30



Fig. 1613

60° Elbows

Size In.	Price Black Each	Size In.	Price Black Each
1/2	\$.25	2 1/2	\$1.10
3/4	.30	3	1.65
1	.35	4	2.75
1 1/4	.45	5	5.00
1 1/2	.50	6	7.00
2	.60		

22 1/2° Elbows

Size In.	Price Black Each	Size In.	Price Black Each	Size In.	Price Black Each
1/2	\$.25	1 1/2	\$.50	4	\$2.75
3/4	.30	2	.60	5	5.00
1	.35	2 1/2	1.10	6	7.00
1 1/4	.45	3	1.65		

Reducing Elbows

Size In.	Price, Each	Size In.	Price, Each	Size In.	Price, Each
3/8	\$.06	3	\$.85	1 1/2	\$1.70
1/2	.07	3 1/2	1.20	2	2.40
3/4	.09	4	1.40	2 1/2	2.80
1	.12	4 1/2	2.00	3	4.00
1 1/4	.18	5	2.30	4	4.60
1 1/2	.23	6	3.15	5	6.30
2	.32	7	5.40	6	10.80
2 1/2	.60	8	7.75	8	15.50



Fig. 1615

45° Elbows

Size In.	Price, Each	Size In.	Price, Each	Size In.	Price, Each
1/2	\$.07	4	\$1.45	2 1/2	\$2.90
3/4	.10	4 1/2	2.20	3	4.40
1	.12	5	2.50	4	5.00
1 1/4	.19	6	3.45	5	6.90
1 1/2	.24	7	5.90	6	11.80
2	.34	8	8.50	7	17.00
2 1/2	.60	9	11.25	8	22.50
3	.90	10	17.00	9	34.00
3 1/2	1.25	12	25.00	10	50.00

Pitched Reducing Elbows

Size In.	Price Black Each	Size In.	Price Black Each	Size In.	Price Black Each
1/4	\$.10	1 1/2	\$.25	3	\$1.00
3/8	.13	2	.35	3 1/2	1.30
1 1/4	.20	2 1/2	.65		

Cast Iron Screwed Fittings
Straight Tees



Fig. 1616

Size In.	Price, Each	Size In.	Price, Each
1/4	\$.08	3 1/2	\$1.50
3/8	.08	4	1.75
1/2	.09	4 1/2	2.55
3/4	.12	5	3.00
1	.15	6	4.00
1 1/4	.23	7	6.80
1 1/2	.29	8	9.75
2	.41	9	13.00
2 1/2	.73	10	19.50
3	1.10	12	29.00

Reducing Tees



On Run
Fig. 1617



On Outlet
Fig. 1618

Size In.	Price, Each	Size In.	Price, Each
3/8	\$.09	4	\$2.00
1/2	.10	4 1/2	2.95
3/4	.14	5	3.50
1	.17	6	4.90
1 1/4	.27	7	

Cast Iron Screwed Fittings Reducers

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
4 1/2	\$1.85	\$3.70	8	\$6.75	\$13.50
5	2.00	4.00	9	8.35	16.70
6	2.70	5.40	10	10.00	20.00
7	5.35	10.70	12	15.00	30.00

Caps

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
4	\$.87	\$1.74	8	\$2.85	\$5.70
4 1/2	1.05	2.10	9	4.75	9.50
5	1.20	2.40	10	5.50	11.00
6	1.55	3.10	12	7.00	14.00
7	2.50	5.00	..	..	..

Bushings

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
3/8	\$.04	\$.08	4	\$.50	\$1.00
1/2	.04	.08	4 1/2	.75	1.50
3/4	.05	.10	5	.93	1.85
1	.06	.12	6	1.25	2.50
1 1/4	.07	.14	7	1.87	3.75
1 1/2	.09	.18	8	2.75	5.50
2	.14	.28	9	3.25	6.50
2 1/2	.21	.42	10	3.75	7.50
3	.30	.60	12	5.00	10.00
3 1/2	.40	.80	..	..	..

Plugs

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
1/8	\$.02	\$.04	3 1/2	\$.38	\$.76
1/4	.02	.04	4	.42	.84
3/8	.02	.04	4 1/2	.65	1.30
1/2	.02	.04	5	.88	1.75
3/4	.03	.06	6	1.20	2.40
1	.04	.08	7	1.85	3.70
1 1/4	.05	.10	8	2.75	5.50
1 1/2	.07	.14	9	3.25	6.50
2	.10	.20	10	3.75	7.50
2 1/2	.18	.36	12	5.00	10.00
3	.25	.50	..	..	..

Solid Plugs

Size In.	Black Price Each	Galv. Price Each	Size In.	Black Price Each	Galv. Price Each
1/4	\$.04	\$.08	1 1/4	\$.09	\$.18
3/8	.04	.08	1 1/2	.11	.22
1/2	.04	.08	2	.15	.30
3/4	.06	.12	2 1/2	.27	.54
1	.08	.16	3	.38	.76
1 1/4	.09	.18	3 1/2	.57	1.14
1 1/2	.11	.22	4	.63	1.26
2	.15	.30	4 1/2	1.00	2.00
2 1/2	.27	.54	5	1.35	2.70
3	.38	.76	6	1.80	3.60

Countersunk Plugs

Size In.	Black Price Each	Galv. Price Each	Size In.	Black Price Each	Galv. Price Each
1/4	\$.04	\$.08	1 1/4	\$.09	\$.18
3/8	.04	.08	1 1/2	.11	.22
1/2	.04	.08	2	.15	.30
3/4	.06	.12	2 1/2	.27	.54
1	.08	.16	3	.38	.76
1 1/4	.09	.18	3 1/2	.57	1.14
1 1/2	.11	.22	4	.63	1.26
2	.15	.30	4 1/2	1.00	2.00
2 1/2	.27	.54	5	1.35	2.70
3	.38	.76	6	1.80	3.60

Locknuts

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
2 1/2	\$.27	\$.54	6	\$1.30	\$2.60
3	.34	.68	7	1.70	3.40
3 1/2	.47	.94	8	2.35	4.70
4	.64	1.28	9	2.70	5.40
4 1/2	.85	1.70	10	3.00	6.00
5	.90	1.80	12	4.00	8.00

Cast Iron Screwed Fittings Close Pattern Return Bends



Fig. 1627

Close pattern return bends will not make up parallel coils, as the distance, center to center, of two adjacent bends is greater than the center to center of opening of a single bend.

Size In.	Center to Center In.	PRICE, EACH			
		RIGHT HAND Black	RIGHT HAND Galv.	Right and Left Black	Left Hand Black
1 1/2	1 1/4	\$.18	\$.36	\$.21	\$.21
3/4	1 1/2	.20	.40	.23	.23
1	1 3/4	.22	.44	.26	.26
1 1/4	2 1/4	.28	.56	.33	.33
1 1/2	2 1/2	.40	.80	.46	.46
2	3 1/4	.57	1.14	.66	.66
2 1/2	3 3/4	1.20	2.40	1.40	1.40
3	4 1/4	1.70	3.40	1.95	1.95
4	6	5.00	10.00	5.25	5.25

Close Pattern Pitched Return Bends

Size In.	Length Coil Feet	Price R. H. Each	Size In.	Length Coil Feet	Price R. H. Each
1	3	\$.26	1	6	\$.26
1	4	.26	1	8	.26
1	5	.26	1 1/4	4	.33

All right and left pitched return bends made to order; 1-inch bends for coils longer than 8 feet tapped straight. Pitched return bends have length of coil marked on them.

Open Pattern Return Bends



Fig. 1628

Size In.	Center to Center In.	PRICE, EACH			
		RIGHT HAND Black	RIGHT HAND Galv.	Right and Left Black	Right and Left Galv.
3/4	1 1/8	\$.26	\$.52	\$.30	\$.60
1	2 3/8	.30	.60	.35	.70
1 1/4	3	.40	.80	.46	.92
1 1/2	3 1/2	.55	1.10	.64	1.28

Return Bends with Back Outlet

Size In.	Center to Center In.	PRICE, EACH			
		RIGHT HAND Black	RIGHT HAND Galv.	Right and Left Black	Right and Left Galv.
3/4	1 7/8	\$.38	\$.76	\$.42	\$.84
1	2 1/4	.42	.84	.48	.96
1 1/4	2 3/4	.60	1.20	.70	1.40
1 1/2	2 1/2	.80	1.60	.95	1.90

Back outlet of R. & L. return bends is always tapped right hand.

Wide Pattern Return Bends



Fig. 1629

Size In.	Center to Center In.	PRICE, EACH			
		RIGHT HAND Black	RIGHT HAND Galv.	Right and Left Black	Right and Left Galv.
1	3	\$.45	\$.90	\$.60	1.20
1	4	.50	1.00	.65	1.30
1	5	.60	1.20	.75	1.50
1	6	.75	1.50	.90	1.80
1	8	1.00	2.00	1.20	2.40
1 1/4	4	1.00	2.00	1.20	2.40
1 1/4	6	1.25	2.50	1.50	3.00
1 1/2	4 1/8	1.30	2.60	1.60	3.20

Extra Heavy Cast Iron Fittings For 250 Pounds Steam Working Pressure



Fig. 1631

Elbows

Size In.	Price, Each Reducing Elbows	Size In.	Price, Each Reducing Elbows
1 1/2	\$2.25	4 1/2	\$4.25
3/4	.30	5	5.50
1	.35	6	8.00
1 1/4	.45	7	12.00
1 1/2	.60	8	17.00
2	.75	9	25.00
2 1/2	1.25	10	28.00
3	2.00	12	40.00
3 1/2	2.75	14	110.00
4	3.50	16	150.00

45° Elbows

Size In.	Price, Each	Size In.	Price, Each
1 1/2	\$.35	2 1/2	\$1.50
3/4	.40	3	2.50
1	.44	3 1/2	3.50
1 1/4	.55	4	4.50
1 1/2	.70	4 1/2	5.50
2	.90	5	6.75
		6	9.75
		7	14.50
		8	21.00
		9	31.00
		10	34.00
		12	48.00

Tees

Size In.	Price, Each Reduc. Tees	Size In.	Price, Each Reduc. Tees
1	\$.55	5	\$8.25
1 1/4	.70	6	12.00
1 1/2	.90	7	18.00
2	1.15	8	25.00
2 1/2	1.80	9	35.00
3	3.00	10	42.00
3 1/2	4.25	12	60.00
4	5.50	14	150.00
4 1/2	6.75	16	200.00

Crosses

Size In.	Price, Each Reduc. Crosses	Size In.	Price, Each Reduc. Crosses
1 1/2	\$.60	4	\$7.00
3/4	.65	4 1/2	8.50
1	.70	5	11.00
1 1/4	.90	6	16.00
1 1/2	1.20	7	24.00
2	1.50	8	34.00
2 1/2	2.50	9	48.00
3	4.00	10	56.00
3 1/2	5.50	12	80.00

Y Branches

Size In.	Price, Each Reduc. Y Branches	Size In.	Price, Each Reduc. Y Branches
1 1/2	\$.90	4	\$11.00
3/4	1.10	4 1/2	13.50
1	1.10	5	16.50
1 1/4	1.35	6	24.00
1 1/2	1.80	7	36.00
2	2.25	8	50.00
2 1/2	3.75	9	72.00
3	6.00	10	84.00
3 1/2	8.25	12	120.00

Reducers

Size In.	Price, Each	Size In.	Price, Each
1 1/2	\$.28	4 1/2	\$4.68
3/4	.33	5	6.00
1	.39	6	8.80
1 1/4	.50	7	13.20
1 1/2	.66	8	18.75

Plugs

Size In.	Price, Each	Size In.	Price, Each
1 1/2	\$.04	4 1/2	\$1.00
3/4	.06	5	1.35
1	.08	6	1.60
1 1/4	.09	7	2.80
1 1/2	.11	8	4.15

For galvanized extra heavy fittings, double above lists.

Cast Iron Long Sweep Fittings

For Working Pressures: 125 Pounds Steam; 150 Pounds Water



Fig. 1636

No. 1 Elbows

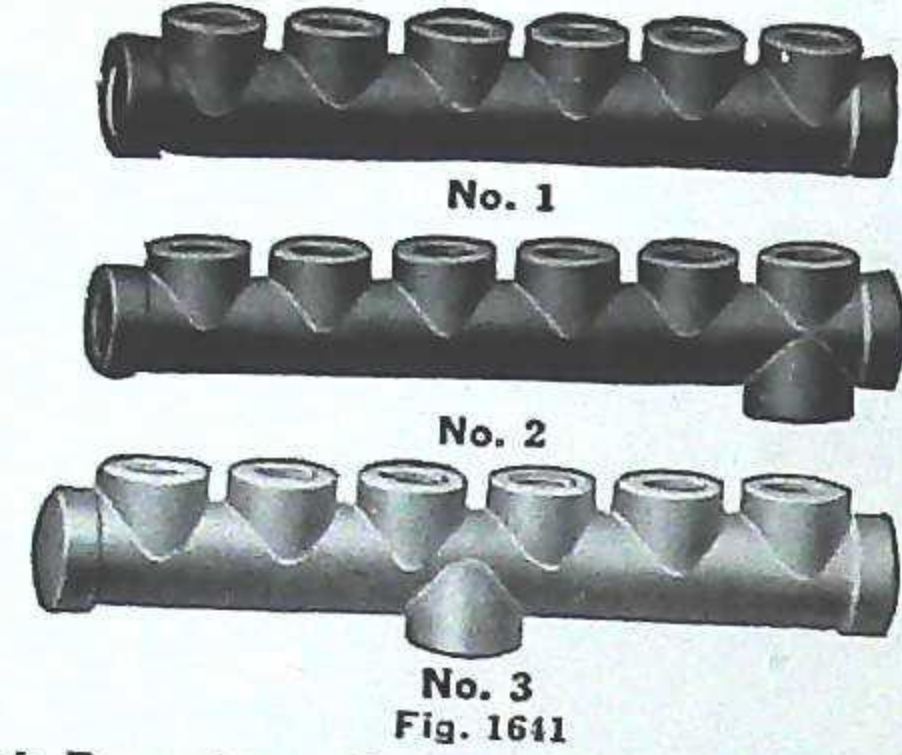
Size Inches	Black Price, Each	Size Inches	Black Price, Each
3/4	\$.26	4 1/2	\$5.50
1	.32	5	6.50
1 1/4	.40	6	8.75
1 1/2	.55	7	13.00
2	.80	8	17.00
2 1/2	1.20	9	25.50
3	2.25	10	30.00
3 1/2	3.25	12	40.00
4	3.50	..	..

For prices of reducing sizes, bushed in sand, add 50 per cent to those above. For galvanized fittings, double list given above.

No. 2 Elbows

Size Inches	Black Price, Each	Size Inches	Black Price, Each
1	\$.64	4 1/2	\$11.00
1 1/4	.80	5	13.00
1 1/2	1.10	6	17.50
2	1.60	7	26.00
2 1/2	2.40	8	34.00
3			

Cast Iron Branch Tees



No. 3
Fig. 1641

1-inch Branches—Center to Center, 2 1/2 Inches

No. of Branches	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
2	\$.90	\$.90	\$ 1.00	\$ 1.15	\$ 1.75			
3	1.05	1.05	1.15	1.35	2.05			
4	1.15	1.15	1.30	1.60	2.40	\$ 3.95		
5	1.35	1.35	1.45	1.85	2.75	4.40		
6	1.60	1.60	1.75	2.10	3.10	4.85		
7	1.90	1.90	2.20	2.45	3.50	5.50		
8	2.20	2.20	2.45	2.75	3.75	6.20		
9	2.65	2.65	2.90	3.40	4.30	7.85		
10	3.15	3.15	3.30	4.00	5.00	8.40		
11	3.75	3.75	4.50	4.80	5.50	9.05		
12	4.40	4.40	4.75	5.10	5.85	9.70		
13	5.00	5.00	5.50	6.00	6.30	10.35		
14	5.50	5.50	7.00	7.25		11.00		
15			7.50	7.75		11.75		
16			8.00	8.25		12.50		

1 1/4-inch Branches—Center to Center, 3 Inches

No. of Branches	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	\$ 1.30	\$ 1.30	\$ 1.50	\$ 1.95											
3	1.65	1.65	1.90	2.40											
4	2.00	2.00	2.40	2.85	\$ 4.30										
5	2.40	2.40	2.90	3.55	4.90										
6	2.80	2.80	3.30	3.95	5.40										
7	3.20	3.20	3.90	4.20	6.25										
8	3.60	3.60	4.50	4.95	7.10										
9	4.30	4.30	5.25	6.15	8.25										
10	4.80	4.80	5.85	6.85	9.20										
11	5.00	5.00	6.25	7.25	10.00										
12	5.25	5.25	6.50	7.65	10.85										
13	6.00	6.00	7.00	8.25	11.65										
14	6.75	6.75	7.75	9.00											
15	7.50	7.50	8.50	9.75											
16	8.50	8.50	9.50	10.75											

1 1/2-inch Branches—Center to Center, 3 1/2 Inches

No. of Branches	2	3	4	5	6	7	8	9	10	11	12	13
2	\$ 2.10	\$ 2.10	\$ 2.85	\$ 3.15								
3	2.70	2.70	3.45	3.80								
4	3.35	3.35	4.15	4.60								
5	4.00	4.00	5.00	5.50								
6	4.65	4.65	5.75	6.25								
7	5.25	5.25	6.50	7.25								
8	5.85	5.85	7.00	7.75								
9	6.50	6.50	8.25	9.00								
10	7.60	7.60	9.25	10.00								
11	8.00	8.00	9.75	10.75								
12	8.50	8.50	10.50	11.50								
13	9.50	9.50	11.50	12.75								

2-inch Branches—Center to Center, 4 1/2 Inches

No. of Branches	2	3	4	5	6	7	8	9	10	11	12	13
2	\$ 4.10	\$ 4.50	\$ 4.50	\$ 5.00	\$ 5.50							
3	5.25	5.75	5.75	6.25	6.75							
4	6.40	7.00	7.00	7.75	8.25							
5	7.65	8.50	8.50	9.25	9.75							
6	8.80	9.75	9.75	10.75	11.25							
7	10.60	11.75	11.75	13.00	13.50							
8	11.50	12.75	12.75	14.00	14.50							
9	12.25	13.50	13.50	15.00	15.50							
10	13.50	15.00	15.00	16.50	17.00							
11	14.25	15.75	15.75									
12	15.00	16.50	16.50									
13	16.00	17.50	17.50									

Back or side outlets charged as additional front outlets. In ordering state size of run required. Branch tees for circulation are tapped right hand—all openings. Branch tees for box coils are tapped left hand in branches and right hand in back or side outlet.

Common Cast Iron Flanges

Not Faced



Fig. 1642

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
3/4x4	\$.22	3 1/2x 9	\$1.15	7x13 1/2	\$2.80
3/4x5	.30	3 1/2x10	1.50	7x14	3.25
1 x5	.30	4 x 8	.90	7x15	4.00
1 x6	.42	4 x 8 1/2	1.00	8x13	2.80
1 1/4x4 1/2	.25	4 x 9	1.15	8x13 1/2	2.80
1 1/4x5	.30	4 x10	1.50	8x14	3.25
1 1/4x6	.40	4 1/2x 9	1.15	8x15	4.00
1 1/2x5	.30	4 1/2x 9 1/4	1.25	8x16	5.00
1 1/2x6	.40	4 1/2x10	1.50	9x15	4.00
2 x6	.42	4 1/2x11	1.75	9x16	5.00
2 x6 1/2	.50	5 x10	1.50	9x17	5.75
2 x7	.62	5 x11	1.75	10x16	5.00
2 x8	.90	5 x12	2.20	10x17	5.75
2 1/2x6	.42	5 x12 1/2	2.20	10x18	7.00
2 1/2x6 1/2	.50	6 x10	1.50	10x19	7.50
2 1/2x7	.62	6 x11	1.75	12x18	7.00
2 1/2x8	.90	6 x12	2.20	12x19	7.50
3 x6 1/2	.50	6 x12 1/2	2.20	14x20	8.50
3 x7	.62	6 x13	2.80	14x20	8.50
3 x7 1/2	.75	6 x13 1/2	2.80	14x21	9.50
3 x8	.90	6 x14	3.25	15x21	9.50
3 x9	1.15	7 x12	2.20	15x22 1/4	14.00
3 1/2x8	.90	7 x12 1/2	2.20	16x23 1/2	18.00
3 1/2x8 1/2	1.00	7 x13	2.80		

Sizes 14 inch and larger are to be used with O. D. pipe of same size.

Cast Iron Floor Flanges

Not Faced, Countersunk Holes for Screws



Fig. 1643

Size In.	Price Each	Size In.	Price Each
3/8x3	\$.10	1 1/4x4	\$.16
1/2x3 1/2	.15	1 1/2x4 1/2	.22
3/4x3 1/2	.15	2 x5 1/2	.35
1 x4	.16		

All floor flanges are drilled for screw.

Galvanized take double the list.

Cast Iron Circular Flanges



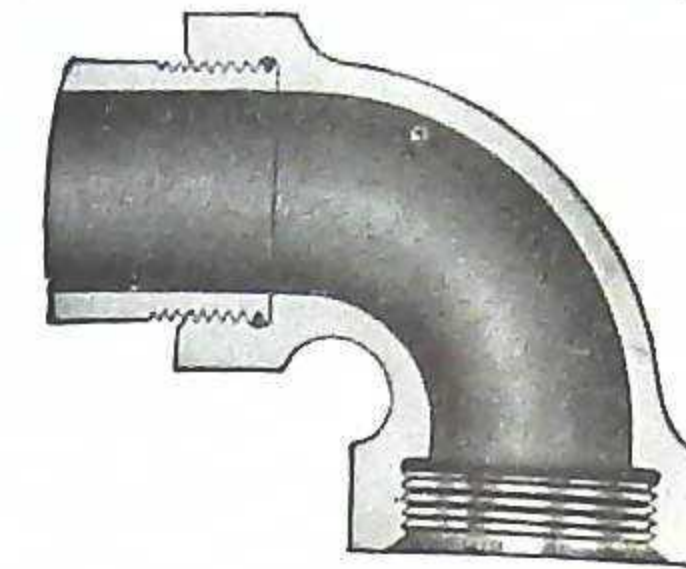
Fig. 1644

Pipe In.	Diam. Flange Inches	Pipe Inches	Diam. Flange Inches	Pipe Inches	Diam. Flange Inches
1 1/2	6	4	9	8	14
2	7	5	11	9	17
2 1/2	8	6	12	10	18
3	9	7	13	12	20

These flanges being made to order, it is always necessary to give the circle they are to fit.

Cast Iron Drainage Fittings

Screwed for Wrought Pipe



These fittings have an interior shoulder, and are made with same inside capacity as the inside diameter of the pipe, thus securing an unobstructed surface, allowing all solid matter to pass without choking the pipes.

Fittings are chamfered, thus preventing damage to the threads and permitting of an easy entrance of the pipe in making up joints. All fittings are regularly made of gray iron, of good quality and high tensile strength, and are thoroughly inspected.

90° Elbows



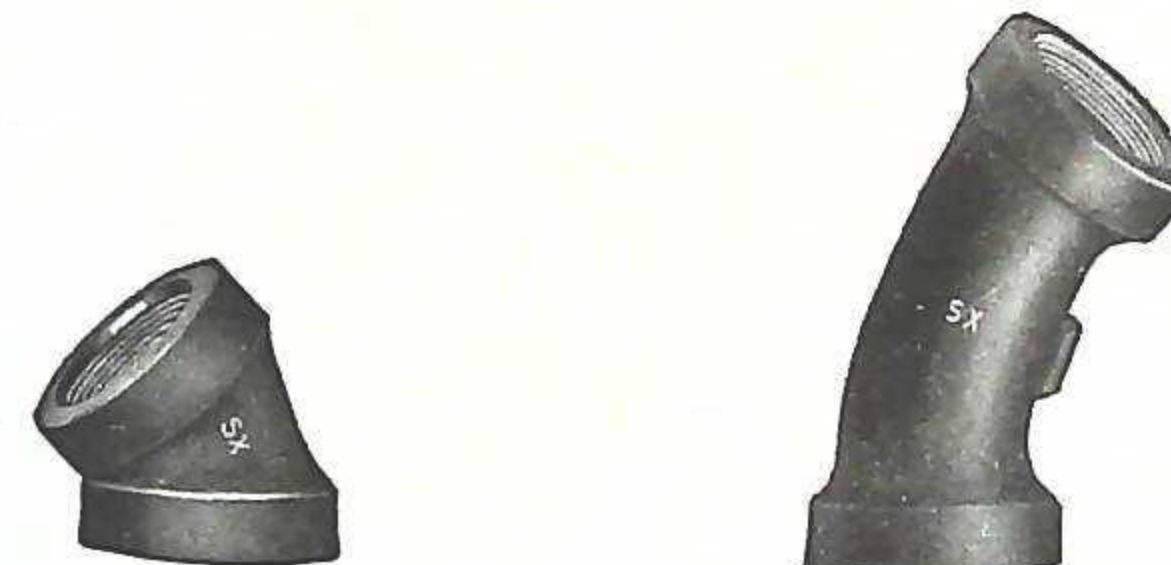
Short Turn
Fig. 1651

Long Turn
Fig. 1652

Size Inches	PRICE, EACH			
	SHORT TURN		LONG TURN	
	Black	Galv.	Black	Galv.
1 1/4	\$.30	\$.52	\$.35	\$.60
1 1/2	.38	.67	.42	.72
2	.57	1.00	.65	1.15
2 1/2	1.20	2.10	1.40	2.45
3	1.45	2.55	1.75	3.10
4	2.30	4.00	2.75	4.80
5	4.25	7.40	5.25	9.20
6	6.25	11.00	7.50	13.15
7	11.50	20.00	13.50	23.50
8	15.00	26.25	19.00	33.25
10	31.00	54.00	38.00	66.50
12	47.50	83.00	57.50	100.00

Outlet is tapped, pitched 1/4 inch to the foot.

45° Elbows



Short Turn
Fig. 1653

Long Turn
Fig. 1654

Size Inches	PRICE, EACH			
	SHORT TURN		LONG TURN	
	Black	Galv.	Black	Galv.
1 1/4	\$.30	\$.52	\$.35	\$.60
1 1/2	.38	.67	.42	.72
2	.57	1.00	.65	1.15
2 1/2	1.20	2.10	1.40	2.45
3	1.45	2.55	1.75	3.10
4	2.30	4.00	2.75	4.80
5	4.25	7.40	5.25	9.20
6	6.25	11.00	7.50	13.15
7	11.50	20.00	13.50	23.50
8	15.00	26.25	19.00	33.25
10	31.00	54.00	38.00	66.50
12	47.50	83.00	57.50	100.00

Cast Iron Drainage Fittings

Screwed for Wrought Pipe

22 1/2° and 11 1/4° Elbows



22 1/2° Elbow
Fig. 1655



11 1/4° Elbow
Fig. 1656

Size Inches	PRICE, EACH			
	22 1/2° ELBOW		11 1/4° ELBOW	
	Black	Galv.	Black	Galv.
1 1/4	\$.30	\$.52	\$.30	\$.52
1 1/2	.38	.67	.38	.67
2	.57	1.00	.57	1.00
2 1/2	1.20	2.10	1.20	2.10
3	1.45	2.55	1.45	2.55
4	2.30	4.00	2.30	4.00
5	4.25	7.40	4.25	7.40
6	6.25	11.00	6.25	11.00
7	11.50	20.00	11.50	20.00
8	15.00	26.25	15.00	26.25
10	31.00	54.00	31.00	54.00
12	47.50	83.00		

60° Elbows



Fig. 1657

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
5	\$ 4.25	\$ 7.40	5	\$ 4.25	\$ 7.40
6	6.25	11.00	6	6.25	11.00
7	11.50	20.00	7	11.50	20.00
8	15.00	26.25	8	15.00	26.25
10	31.00	54.00	10		

Cast Iron Drainage Fittings

Screwed for Wrought Pipe

90° Base Elbows with Cleanout and Soil Pipe Hub Connection



Fig. 1661

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
3x2	\$5.50	\$9.50	6x4	\$27.50	\$48.00
3	5.00	8.75	6x5	27.50	48.00
4x3	8.75	15.25	6	25.00	43.75
4	8.00	14.00	8x6	44.00	77.00
5x4	16.50	28.75	8	40.00	70.00
5	15.00	26.25	.....	.....	.....

Can be made with or without base and cleanout.

Tee Branches



Fig. 1662

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$.45	\$.80	5	\$6.00	\$10.50
1 1/2	.55	1.00	6	8.75	15.25
2	.80	1.40	7	16.00	28.00
2 1/2	1.50	2.50	8	21.00	37.00
3	2.00	3.50	10	43.00	75.00
4	3.25	5.70	12	60.00	100.00

Reducing Tee Branches



Fig. 1663

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
2 x 1 1/2	\$1.90	\$1.60	6x 5	\$9.60	\$16.75
2 1/2 x 1 1/2	1.65	2.75	7x 4	17.60	30.80
2 1/2 x 2	1.65	2.75	8x 4	23.00	40.70
3 x 1 1/2	2.20	3.85	8x 5	23.00	40.70
3 x 2	2.20	3.85	8x 6	23.00	40.70
4 x 2	3.60	6.30	8x 7	23.00	40.70
4 x 3	3.60	6.30	10x 5	47.30	82.50
5 x 2	6.60	11.55	10x 6	47.30	82.50
5 x 3	6.60	11.55	10x 7	47.30	82.50
5 x 4	6.60	11.55	10x 8	47.30	82.50
6 x 2	9.60	16.75	12x 8	65.00	110.00
6 x 3	9.60	16.75	12x 10	65.00	110.00
6 x 4	9.60	16.75	.....	.....	.....

The inlet of reducing tees, is tapped, pitched 1/4 inch to the foot.

The inlet on reducing fittings is always the smallest opening.

Cast Iron Drainage Fittings

Screwed for Wrought Pipe

Short TY Branches



Fig. 1664

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$.45	\$.80	5	\$6.50	\$11.35
1 1/2	.57	1.00	6	9.50	16.50
2	.85	1.50	7	17.50	30.50
2 1/2	1.80	3.15	8	23.00	40.00
3	2.20	3.85	10	47.00	82.00
4	3.50	6.15	.....	.....	.....

The inlet of TY's is tapped, pitched 1/4 inch to the foot.

Reducing Short TY Branches



Fig. 1665

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/2 x 1 1/4	\$.63	\$1.10	5x4	\$7.15	\$12.50
2 x 1 1/4	.95	1.65	6x2	10.50	18.50
2 x 1 1/2	.95	1.65	6x3	10.50	18.50
2 x 2 1/2	2.00	3.50	6x4	10.50	18.50
2 1/2 x 1 1/4	2.00	3.50	6x5	10.50	18.50
2 1/2 x 1 1/2	2.00	3.50	7x4	19.00	33.25
2 1/2 x 2	2.00	3.50	8x3	25.50	44.50
3 x 1 1/2	2.40	4.20	8x4	25.50	44.50
3 x 2	2.40	4.20	8x5	25.50	44.50
4 x 1 1/2	3.85	6.75	8x6	25.50	44.50
4 x 2	3.85	6.75	8x7	25.50	44.50
4 x 2 1/2	3.85	6.75	10x4	52.00	88.00
4 x 3	3.85	6.75	10x6	52.00	88.00
3 x 4	3.85	6.75	10x8	52.00	88.00
5 x 1 1/2	7.15	12.50	12x4	80.00	145.00
5 x 2	7.15	12.50	12x5	80.00	145.00
5 x 3	7.15	12.50	.....	.....	.....

The inlets on reducing fittings are always the smallest openings. Inlet tapped, pitched 1/4 inch to the foot.

Long TY Branches



Fig. 1666

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$.57	\$1.00	5	\$9.50	\$16.50
1 1/2	.70	1.22	6	20.00	35.00
2	1.10	1.95	7	30.00	52.50
2 1/2	2.40	4.20	8	40.00	70.00
3	3.35	5.85	10	55.00	90.00
4	6.00	10.50	12	80.00	140.00

Inlet is tapped, pitched 1/4 inch to the foot.

Cast Iron Drainage Fittings

Screwed for Wrought Pipe

Reducing Long TY Branches



Fig. 1671

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/2 x 1 1/4	\$.80	\$1.40	6x3	\$22.00	\$38.50
2 x 1 1/2	1.20	2.10	6x4	22.00	38.50
2 1/2 x 1 1/2	2.65	4.65	6x5	22.00	38.50
3 x 1 1/2	3.75	6.55	7x3	33.00	58.00
3 x 2	3.75	6.55	7x4	33.00	58.00
4 x 1 1/2	6.60	11.55	8x3	44.00	77.00
4 x 2	6.60	11.55	8x4	44.00	77.00
4 x 2 1/2	6.60	11.55	8x5	44.00	77.00
4 x 3	6.60	11.55	8x6	44.00	77.00
5 x 1 1/2	10.50	18.50	10x4	60.00	102.00
5 x 2	10.50	18.50	10x6	60.00	102.00
5 x 3	10.50	18.50	10x8	60.00	102.00
5 x 4	10.50	18.50	12x4	85.00	150.00
6 x 2	22.00	38.50	12x5	85.00	150.00

45° Y Branches



Fig. 1672

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$.52	\$.90	5	\$7.10	\$12.50
1 1/2	.65	1.15	6	10.50	18.50
2	.95	1.65	7	19.00	33.25
2 1/2	2.10	3.70	8	25.00	44.00
3	2.65	4.65	10	52.00	91.00
4	3.85	6.75	12	75.00	130.00

Reducing 45° Y Branches



Fig. 1673

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/2 x 1 1/4	\$.72	\$1.25	7x3	\$21.00	\$37.00
2 x 1 1/2	1.05	1.85	7x4	21.00	37.00
2 1/2 x 1 1/2	2.30	4.00	7x5	21.00	37.00
2 1/2 x 2	2.30	4.00	7x6	21.00	37.00
3 x 1 1/2	2.90	5.10	8x3	27.50	48.00
3 x 2	2.90	5.10	8x4	27.50	48.00
3 x 2 1/2	2.90	5.10	8x5	27.50	48.00
4 x 1 1/2	4.25	7.40	8x6	27.50	48.00
4 x 2	4.25	7.40	8x7	27.50	48.00
4 x 2 1/2	4.25	7.40	10x4	57.00	97.00
4 x 3	4.25	7.40	10x5	57.00	97.00
5 x 2	7.80	13.65	10x6	57.00	97.00
5 x 3	7.80	13.65	10x7	57.00	97.00
5 x 4	7.80	13.65	10x8	57.00	97.00
6 x 2	11.50	20.00	12x4	80.00	140.00
6 x 3	11.50	20.00	12x5	80.00	140.00
6 x 4	11.50	20.00	12x6	80.00	140.00
6 x 5	11.50	20.00	.....	.....	.....

The inlet on reducing fittings is always the smallest opening.

Cast Iron Drainage Fittings

Screwed for Wrought Pipe

Double 45° Y Branches



Fig. 1674

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$.90	\$1.60	5	\$10.75	\$18.80
1 1/2	1.00	1.75	6	16.00	28.00
2	1.45	2.55	7	28.50	50.00
2 1/2	3.25	5.70	8	38.00	66.50
3	4.00	7.00	10	78.00	137.00
4	5.75	10.00	.....	.....	.....

Reducing Double 45° Y Branches



Fig. 1675

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/2 x 1 1/4	\$1.10	\$1.90	6x5	\$17.50	\$30.50
2 x 1 1/2	1.60	2.80	7x4	31.50	54.00
2 1/2 x 1 1/2	3.60	6.30	7x5	31.50	54.00
2 1/2 x 2	3.60	6.30	7x6	31.50	54.00
3 x 1 1/2	4.40	7.70	8x3	42.00	72.00
3 x 2	4.40	7.70	8x4	42.00	72.00
4 x 2	6.35	11.00	8x5	42.00	72.00
4 x 3	6.35	11.00	8x6	42.00	72.00
5 x 2	11.75	20.50	8x7	42.00	72.00
5 x 3	11.75	20.50	10x4	86.00	146.00
5 x 4	11.75	20.50	10x5	86.00	146.00
6 x 2	17.50	30.50	10x6	86.00	146.00
6 x 3	17.50	30.50	10x7	86.00	146.00
6 x 4	17.50	30.50	10x8	86.00	146.00

60° Y Branches



Fig. 1676

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$.52	\$.90	4	\$3.85	\$6.75
1 1/2	.65	1.15	5	7.10	12.50
2	.95	1.65	6	10.50	18.50
2 1/2	2.10	3.70	8	25.00	44.00
3	2.65	4.65	.....	.....	.....

The inlet, or branch, of tees is tapped, pitched 1/4 inch to the foot.

Cast Iron Drainage Fittings

Screwed for Wrought Pipe

Reducing 60° Y Branches



Fig. 1631

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/2 x 1 1/4	\$.72	\$ 1.25	5 x 4	\$ 7.80	\$ 13.65
2 x 1 1/2	1.05	1.85	6 x 2	11.50	20.00
2 1/2 x 1 1/2	2.30	4.00	6 x 3	11.50	20.00
2 1/2 x 2	2.30	4.00	6 x 4	11.50	20.00
3 x 1 1/2	2.90	5.10	6 x 5	11.50	20.00
3 x 2	2.90	5.10	7 x 4	21.00	37.00
4 x 1 1/2	4.25	7.40	8 x 3	27.50	48.00
4 x 2	4.25	7.40	8 x 4	27.50	48.00
4 x 3	4.25	7.40	8 x 5	27.50	48.00
5 x 2	7.80	13.65	8 x 6	27.50	48.00
5 x 3	7.80	13.65	8 x 7	27.50	48.00

The inlet of reducing tees is tapped, pitched 1/4 inch to the foot. The inlets on reducing fittings are always the smallest openings.

Short Cross Branches



Fig. 1632

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$.70	\$ 1.22	5	\$ 9.50	\$ 16.50
1 1/2	.85	1.50	6	14.00	24.50
2	1.30	2.30	7	25.00	42.50
2 1/2	2.85	5.00	8	36.00	62.00
3	3.40	5.95	10	60.00	102.00
4	5.25	9.20	..	.....	.....

The inlets of crosses are tapped, pitched 1/4 inch to the foot.

Reducing Short Cross Branches



Fig. 1633

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
2 x 1 1/2	\$ 1.50	\$ 2.60	6 x 3	\$ 15.50	\$ 27.00
2 1/2 x 1 1/2	3.15	5.50	6 x 4	15.50	27.00
2 1/2 x 2	3.15	5.50	6 x 5	15.50	27.00
3 x 1 1/2	3.75	6.55	7 x 4	27.50	46.75
3 x 2	3.75	6.55	8 x 3	40.00	68.00
4 x 2	5.75	10.00	8 x 4	40.00	68.00
4 x 3	5.75	10.00	8 x 5	40.00	68.00
5 x 2	10.50	18.50	10 x 4	66.00	112.00
5 x 3	10.50	18.50	10 x 6	66.00	112.00
5 x 4	10.50	18.50	10 x 8	66.00	112.00
6 x 2	15.50	27.00	.....	.....	.....

The inlets of these fittings are tapped, pitched 1/4 inch to the foot. Inlet is the smallest opening.

Cast Iron Drainage Fittings

Screwed for Wrought Pipe

P Traps without Vent



Fig. 1634

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/2	\$ 1.55	\$ 2.70	3	\$ 2.00	\$ 3.50

The outlet of P traps is tapped, pitched 1/4 inch to the foot.

P Traps with Vent



Fig. 1685

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$ 1.55	\$ 2.70	5	\$ 21.50	\$ 37.50
1 1/2	1.70	3.00	6	32.50	57.00
2	2.20	3.85	7	40.00	70.00
3	5.00	8.75	8	55.00	95.00
4	10.00	17.50	10	100.00	175.00

Running Traps

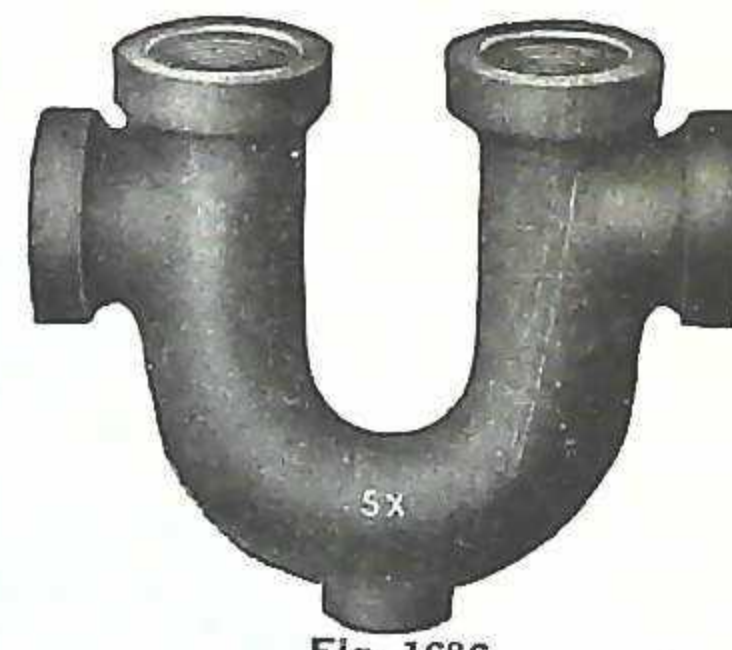


Fig. 1686

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	\$ 2.40	\$ 4.20	6	\$ 33.50	\$ 58.50
1 1/2	2.70	4.70	7	50.00	87.50
2	3.30	5.75	8	65.00	115.00
3	5.50	9.50	10	115.00	200.00
4	9.75	17.00	12	180.00	300.00
5	24.50	43.00	.....	.....	.....

The outlet of P traps, and the inlet and outlet of running traps are tapped, pitched 1/4 inch to the foot.

Cast Iron Flanged Fittings

Standard Cast Iron Flanged Fittings

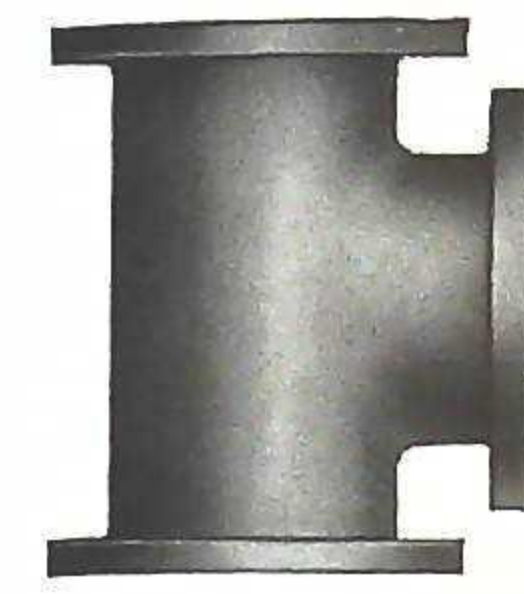
125 Pounds Steam Working Pressure



Elbow
Fig. 1691



45° Elbow
Fig. 1692



Tee
Fig. 1693



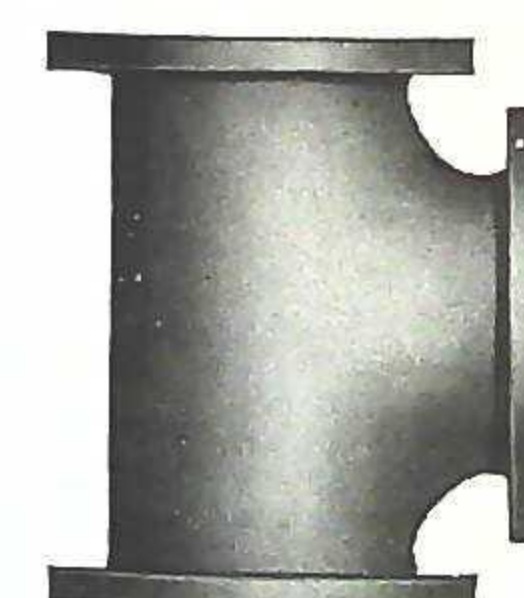
Reducing Tee
Fig. 1694



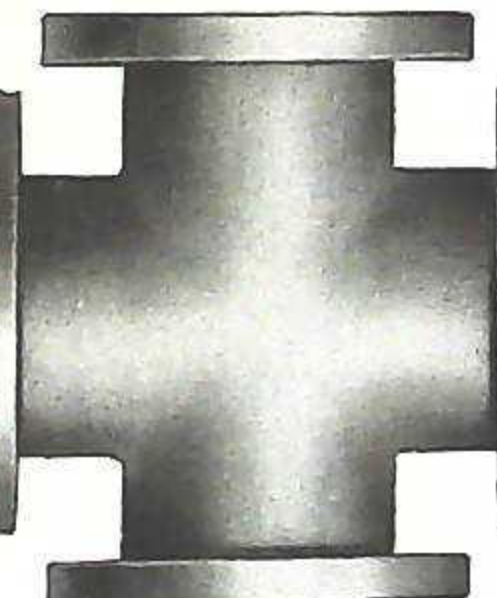
Single Sweep
Tee
Fig. 1695



Reducing Single
Sweep Tee
Fig. 1696



Double Sweep
Tee
Fig. 1697



Cross
Fig. 1698



Reducing Cross
Fig. 1699



Base Elbow
Fig. 1699A

Size In.	PRICE, EACH		Size Inches	PRICE, EACH	
	Faced Only	Faced and Drilled		Faced Only	Faced and Drilled
1 1/4	\$ 3.00	\$ 3.60	8	\$ 12.00	\$ 13.60
1 1/2	3.00	3.60	9	17.00	19.25
2	3.00	3.60	10	19.00	21.70
2 1/2	3.15	3.75	12	28.00	31.00
3	3.45	4.15	14	41.50	45.25
3 1/2	4.05	4.90	15	47.00	51.50
4	4.50	5.50	16	54.50	59.50
4 1/2	5.50	6.50	18	71.00	77.00
5	6.25	7.25	20	90.00	97.00
6	7.60	8.90	22	113.00	122.00
7	10.50	12.00	24	140.00	150.00

Size In.	PRICE, EACH		Size Inches	PRICE, EACH	
	Faced Only	Faced and Drilled		Faced Only	Faced and Drilled
1 1/4	\$ 3.30	\$ 3.90	8	\$ 12.60	\$ 14.20
1 1/2	3.30	3.90	9	17.75	20.00
2	3.30	3.90	10	20.00	22.70
2 1/2	3.50	4.10	12	29.50	32.50
3	3.80	4.50	14	41.50	45.25
3 1/2	4.50	5.35	15	47.00	51.50
4	5.00	6.00	16	54.50	59.50
4 1/2	6.00	7.00	18	71.00	77.00
5	6.90	7.90	20	90.00	97.00
6	8.35	9.65	22	113.00	122.00
7	11.00	12.50	24	140.00	150.00

Size In.	PRICE, EACH		Size Inches	PRICE, EACH	
	Faced Only	Faced and Drilled		Faced Only	Faced and Drilled
3	\$ 6.90	\$ 7.60	9	\$ 34.00	\$ 36.25
3 1/2	8.10	8.95	10	38.00	40.70
4	9.00	10.00	12	56.00	59.00
4 1/2	11.00	12.00	14	70.00	73.75
5	12.50	13.50	15	80.00	84.50
6	15.25	16.55	16	90.00	95.00
7	21.00	22.50	18	105.00	111.00
8	24.00	25.60	20	120.00	127.00

Flanged taper reducing elbows not listed made to order at special price.

Size In.	PRICE, EACH		Size Inches	PRICE, EACH	
	Faced Only	Faced and Drilled		Faced Only	Faced and Drilled
2	\$ 5.00	\$ 5.90	9	\$ 28.50	\$ 31.85
2 1/2	5.25	6.15	10	31.50	35.50
3	5.75	6.85	12	46.50	51.00
3 1/2	6.75	8.00	14	69.00	74.50
4	7.50	9.00	15	78.00	84.75
4 1/2	9.25	10.75	16	91.00	98.50
5	10.50	12.00	18	118.00	127.00
6	12.65	14.60	20	150.00	160.00
7	17.50	19.75	22	190.00	203.00
8	20.00	22.40	24	235.00	250.00

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	Faced Only	Faced and Drilled	Facing and Drilling Base Flanges		Faced Only	Faced and Drilled	Facing and Drilling Base Flanges
4	\$ 9.00	\$ 10.00	\$ 3.00	12	\$ 56.00	\$ 59.00	\$ 7.50
4 1/2	11.00	12.00	3.00	14	70.00	73.75	7.50
5	12.50	13.50	3.50	15	80.00	84.50	7.50
6	15.25	16.55	3.50	16	90.00	95.00	7.50
7	21.00	22.50	3.50	18	105.00	111.00	12.00
8	24.00	25.60	5.00	20	120.00	127.00	12.00
9	34.00	36.25	5.00	22	150.00	159.00	12.00
10	38.00	40.70	5.00	24	190.00	200.00	12.00

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Faced Only	Faced and Drilled		Faced Only	Faced and Drilled
3	\$ 6.90	\$ 7.60	8	\$ 24.00	\$ 25.60
3 1/2	8.10	8.95	10	38.00	40.70
4	9.00	10.00	12	56.00	59.00
5	12.50	13.50	14	70.00	73.75
6	15.25	16.55	15	80.00	84.50
7	21.00	22.50	16	90.00	95.00

All flanged fittings will always be furnished faced only unless otherwise ordered.

Standard Cast Iron Flanged Fittings

125 Pounds Steam Working Pressure

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Tee sizes from 1 1/4 to 7 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Reducing Tee sizes from 1 1/2 to 8 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Crosses and Laterals sizes from 1 1/4 to 7 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Reducing Crosses and Laterals sizes from 2 to 8 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Single and Double Sweep Tees sizes from 1 1/4 to 7 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Reducing Single and Double Sweep Tees sizes from 2 to 8 inches.

*Double sweep tees only. All square turn and sweep pattern tees and crosses have same dimensions. Single sweep tees not made with outlet larger than run. All flanged fittings will always be furnished faced only, unless otherwise ordered.

Extra Heavy Cast Iron Flanged Fittings

250 Pounds Steam Working Pressure

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include 90° Elbow sizes from 1 1/4 to 7 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include 45° Elbow sizes from 1 1/4 to 7 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Reducing Elbow sizes from 2 to 7 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Long Radius Elbow sizes from 2 to 7 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Base Elbow sizes from 4 to 8 inches.

Table with columns: Size In., Price, Each (Faced Only, Faced and Drilled), Size In., Price, Each (Faced Only, Faced and Drilled). Rows include Reducers sizes from 3 to 10 inches.

All flanged fittings will always be furnished faced only, unless otherwise ordered.

Extra Heavy Cast Iron Flanged Fittings

250 Pounds Steam Working Pressure

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Tee sizes from 1 1/4 to 7 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Reducing Tee sizes from 1 1/2 to 8 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Crosses and Laterals sizes from 1 1/4 to 7 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Reducing Crosses and Laterals sizes from 2 to 8 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Single and Double Sweep Tees sizes from 2 to 8 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Reducing Single and Double Sweep Tees sizes from 2 1/2 to 9 inches.

All square turn and sweep pattern tees and crosses have same dimensions. All flanged fittings will always be furnished faced only unless otherwise specified.

Standard Companion Flanges

125 Pounds Steam Working Pressure

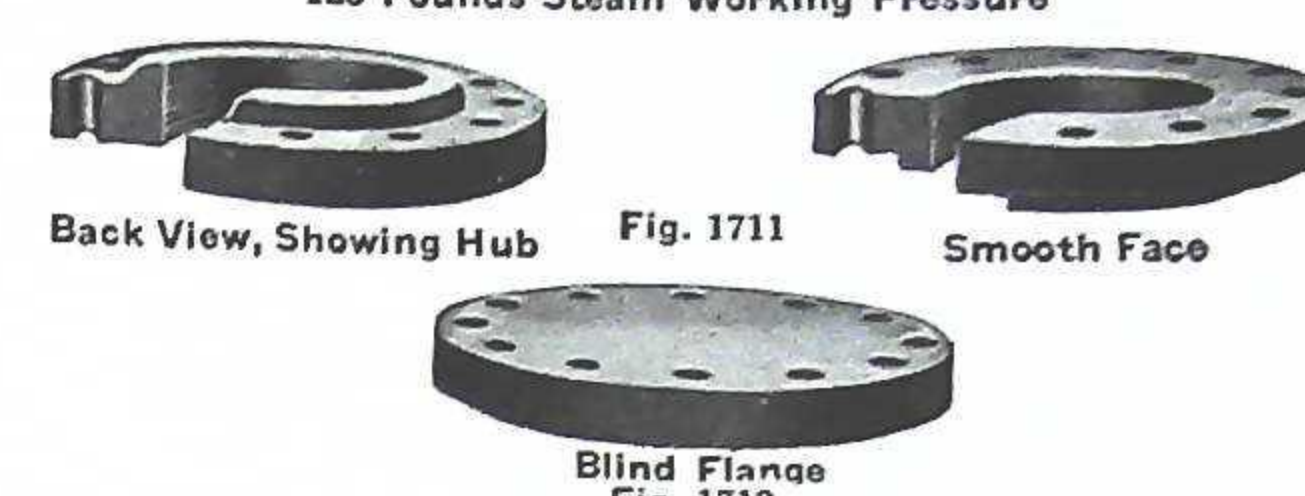


Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Cast Iron Flanges sizes from 1 x 4 to 7 x 12 1/2 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Malleable Iron Flanges sizes from 1 x 4 to 7 x 12 1/2 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Cast Steel Flanges sizes from 1 x 4 to 7 x 12 1/2 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Forged Steel Flanges sizes from 2 x 6 to 5 x 10 inches.

Table with columns: Size Inches, Price, Each (Faced Only, Faced and Drilled), Size Inches, Price, Each (Faced Only, Faced and Drilled). Rows include Cast Iron Blind Flanges sizes from 2 x 6 to 8 x 13 1/2 inches.

Semi-steel blind flanges, 25 per cent advance over cast iron. All blind flanges, 15-inch and larger are ribbed. All flanged fittings are always furnished faced only, unless otherwise ordered.

Standard Reducing Cast Iron Companion Flanges

For Standard Flanged Valves and Fittings

125 Pounds Steam Working Pressure



Fig. 1721

These flanges, used in connection with straight or reducing fittings, make it possible to fill orders for reduced sizes more promptly. Customers who desire fittings reduced in this manner will please specify, Reduce by Flanges if Necessary.

They will always be of the same thickness as the regular companion flanges of corresponding outside diameter, and drilled to the template corresponding to the outside diameter, unless otherwise ordered.

In ordering reducing companion flanges, always give the screwed or reduced size first, then the outside diameter of flange wanted; for instance, if a reducing flange is wanted to connect a 6-inch pipe to a 9-inch flanged valve or fitting having a 15-inch O. D. flange, order a 6x15-inch reducing flange. This will clearly avoid the confusion often caused by orders incorrectly calling for a 9x6 or 6x9-inch flange.

—PRICE, EACH—
Faced Only Faced and Drilled

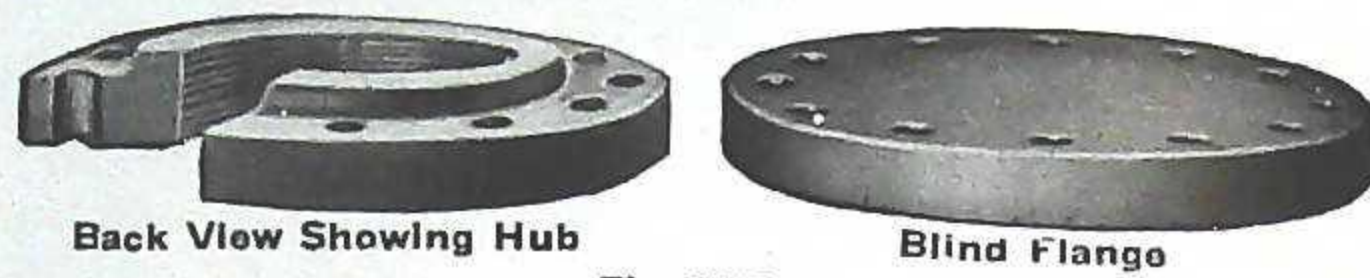
—PRICE, EACH—
Faced Only Faced and Drilled

Size In.	Faced Only	Faced and Drilled	Size In.	Faced Only	Faced and Drilled
1 1/4 x 6	\$1.30	\$1.55	6 x 12 1/2	\$4.40	\$5.00
1 1/2 x 6	1.30	1.55	6 x 13 1/2	5.10	5.80
1 1/2 x 7	1.45	1.70	6 x 15	6.35	7.15
1 1/2 x 7 1/2	1.55	1.85	6 x 16	7.45	8.45
2 x 7	1.45	1.70	6 x 19	10.75	11.90
2 x 7 1/2	1.55	1.85	7 x 13 1/2	5.10	5.80
2 x 8 1/2	2.00	2.35	7 x 15	6.35	7.15
2 x 9	2.20	2.65	7 x 16	7.45	8.45
2 x 10	2.65	3.10	7 x 19	10.75	11.90
2 x 11	3.30	3.80	8 x 15	6.35	7.15
2 x 13 1/2	5.10	5.80	8 x 16	7.45	8.45
2 1/2 x 7 1/2	1.55	1.85	8 x 19	10.75	11.90
2 1/2 x 8 1/2	2.00	2.35	8 x 21	15.00	16.35
2 1/2 x 9	2.20	2.65	8 x 22 1/4	19.00	20.70
2 1/2 x 9 1/4	2.40	2.85	9 x 16	7.45	8.45
2 1/2 x 10	2.65	3.10	9 x 19	10.75	11.90
2 1/2 x 11	3.30	3.80	9 x 21	15.00	16.35
2 1/2 x 13 1/2	5.10	5.80	10 x 19	10.75	11.90
2 1/2 x 16	7.45	8.45	10 x 21	15.00	16.35
3 x 8 1/2	2.00	2.35	10 x 22 1/4	19.00	20.70
3 x 9	2.20	2.65	10 x 23 1/2	22.00	23.80
3 x 9 1/4	2.40	2.85	12 x 21	15.00	16.35
3 x 10	2.65	3.10	12 x 22 1/4	19.00	20.70
3 x 11	3.30	3.80	12 x 23 1/2	22.00	23.80
3 x 13 1/2	5.10	5.80	12 x 25	26.50	28.50
3 x 16	7.45	8.45	14 x 22 1/4	19.00	20.70
3 1/2 x 9	2.20	2.65	14 x 23 1/2	22.00	23.80
3 1/2 x 9 1/4	2.40	2.85	14 x 25	26.50	28.50
3 1/2 x 10	2.65	3.10	14 x 27 1/2	31.00	33.50
3 1/2 x 11	3.30	3.80	14 x 32	44.00	47.50
3 1/2 x 16	7.45	8.45	15 x 23 1/2	22.00	23.80
4 x 9 1/4	2.40	2.85	15 x 25	26.50	28.50
4 x 10	2.65	3.10	15 x 27 1/2	31.00	33.50
4 x 11	3.30	3.80	15 x 29 1/2	36.00	39.00
4 x 12 1/2	4.40	5.00	16 x 25	26.50	28.50
4 x 13 1/2	5.10	5.80	16 x 27 1/2	31.00	33.50
4 x 16	7.45	8.45	16 x 29 1/2	36.00	39.00
4 1/2 x 10	2.65	3.10	16 x 32	44.00	47.50
4 1/2 x 11	3.30	3.80	18 x 27 1/2	31.00	33.50
4 1/2 x 12 1/2	4.40	5.00	18 x 29 1/2	36.00	39.00
5 x 11	3.30	3.80	18 x 32	44.00	47.50
5 x 12 1/2	4.40	5.00	20 x 29 1/2	36.00	39.00
5 x 13 1/2	5.10	5.80	20 x 32	44.00	47.50
5 x 16	7.45	8.45			

Companion flanges are always furnished faced only, unless otherwise specified.

Extra Heavy Companion Flanges

250 Pounds Steam Working Pressure



Back View Showing Hub

Blind Flange

Fig. 1722

Cast Iron Flanges

Size Inches	Price, Each Faced Only	Price, Each Faced and Drilled	Size Inches	Price, Each Faced Only	Price, Each Faced and Drilled
1 x 4 1/2	\$.95	\$1.30	8 x 15	\$5.10	\$6.15
1 1/4 x 5	1.00	1.35	9 x 16 1/4	6.30	7.50
1 1/2 x 6	1.10	1.45	10 x 17 1/2	7.40	8.90
2 x 6 1/2	1.25	1.60	12 x 20 1/2	10.75	12.50
2 1/2 x 7 1/2	1.40	1.75	14 x 23	15.00	17.00
3 x 8 1/4	1.60	2.05	15 x 24 1/2	19.00	21.50
3 1/2 x 9	2.00	2.55	16 x 25 1/2	22.25	25.00
4 x 10	2.25	2.95	18 x 28	26.00	29.00
4 1/2 x 10 1/2	2.40	3.10	20 x 30 1/2	31.00	35.00
5 x 11	2.65	3.35	22 x 33	36.00	41.00
6 x 12 1/2	3.30	4.05	24 x 36	45.00	50.00
7 x 14	4.40	5.30			

Malleable Iron Flanges

Double list of cast iron.

Size In.	Price, Each Faced Only	Price, Each Faced and Drilled	Size In.	Price, Each Faced Only	Price, Each Faced and Drilled
1 x 4 1/2	\$1.20	\$1.65	8 x 15	\$6.40	\$7.70
1 1/4 x 5	1.25	1.70	9 x 16 1/4	7.90	9.40
1 1/2 x 6	1.35	1.80	10 x 17 1/2	9.25	11.00
2 x 6 1/2	1.55	2.00	12 x 20 1/2	13.50	15.50
2 1/2 x 7 1/2	1.75	2.20	14 x 23	18.50	21.00
3 x 8 1/4	2.00	2.55	15 x 24 1/2	24.00	27.00
3 1/2 x 9	2.50	3.20	16 x 25 1/2	28.00	31.00
4 x 10	2.80	3.70	18 x 28	32.50	36.00
4 1/2 x 10 1/2	3.00	3.90	20 x 30 1/2	39.00	44.00
5 x 11	3.30	4.20	22 x 33	45.00	51.00
6 x 12 1/2	4.10	5.05	24 x 36	56.00	62.00
7 x 14	5.50	6.60			

Semi-steel Flanges

Size In.	Price, Each Faced Only	Price, Each Faced and Drilled	Size In.	Price, Each Faced Only	Price, Each Faced and Drilled
1 x 4 1/2	\$5.00	\$6.50	8 x 15	\$27.00	\$33.00
1 1/4 x 5	5.40	7.00	9 x 16 1/4	29.50	35.50
1 1/2 x 6	5.90	7.50	10 x 17 1/2	34.50	41.50
2 x 6 1/2	6.90	8.50	12 x 20 1/2	46.00	54.00
2 1/2 x 7 1/2	7.30	9.50	14 x 23	55.50	65.00
3 x 8 1/4	8.70	12.00	15 x 24 1/2	64.00	75.00
3 1/2 x 9	12.10	15.50	16 x 25 1/2	78.00	90.00
4 x 10	14.80	18.50	18 x 28	98.00	111.00
4 1/2 x 10 1/2	15.80	19.50	20 x 30 1/2	117.00	131.00
5 x 11	16.80	20.50	22 x 33	140.00	157.00
6 x 12 1/2	20.40	25.00	24 x 36	165.00	182.00
7 x 14	24.70	30.50			

Furnished with bolt holes spot faced, when ordered faced and drilled, at price given for faced and drilled.

Forged Steel Flanges

Size In.	Price, Each Faced Only	Price, Each Faced and Drilled	Size In.	Price, Each Faced Only	Price, Each Faced and Drilled
1 x 4 1/2	\$7.50	\$8.00	6 x 12 1/2	\$25.40	\$27.00
1 1/4 x 5	8.40	9.00	7 x 14	27.20	32.00
1 1/2 x 6	9.40	10.00	8 x 15	32.00	35.00
2 x 6 1/2	10.40	11.00	9 x 16 1/4	37.00	40.00
2 1/2 x 7 1/2	11.80	13.00	10 x 17 1/2	45.00	48.00
3 x 8 1/4	13.70	15.00	12 x 20 1/2	56.00	60.00
3 1/2 x 9	17.60	19.00	14 x 23	75.50	80.00
4 x 10	18.30	20.00	15 x 24 1/2	84.00	90.00
4 1/2 x 10 1/2	20.30	22.00	16 x 25 1/2	93.00	100.00
5 x 11	22.30	24.00			

Cast Iron Blind Flanges

Size In.	Price, Each Faced Only	Price, Each Faced and Drilled	Size In.	Price, Each Faced Only	Price, Each Faced and Drilled
1 1/2 x 6	\$1.65	\$2.00	9 x 16 1/4	\$9.50	\$10.70
2 x 6 1/2	1.90	2.25	10 x 17 1/2	11.00	12.50
2 1/2 x 7 1/2	2.10	2.45	12 x 20 1/2	16.00	17.75
3 x 8 1/4	2.40	2.85	14 x 23	22.50	24.50
3 1/2 x 9	3.00	3.55	15 x 24 1/2	28.50	31.00
4 x 10	3.35	4.05	16 x 25 1/2	33.50	36.25
4 1/2 x 10 1/2	3.60	4.30	18 x 28	39.00	42.00
5 x 11	4.00	4.70	20 x 30 1/2	46.00	50.00
6 x 12 1/2	5.00	5.75	22 x 33	54.00	59.00
7 x 14	6.60	7.50	24 x 36	67.00	72.00
8 x 15	7.65	8.70			

*Semi-steel Blind Flanges
Semi-steel flanges, 25 per cent advance over cast iron.
*All blind flanges, 10-inch and larger, are ribbed.
All flanged fittings are always furnished faced only, unless otherwise specified.

Extra Heavy Cast Iron Reducing Companion Flanges

For Extra Heavy Flanged Valves and Fittings

250 Pounds Steam Working Pressure



Fig. 1731

These flanges, used in connection with straight or reducing fittings, make it possible to fill orders more promptly. Customers who desire fittings reduced in this manner will please specify "Reduce by Flanges if Necessary."

These flanges will always be of the same thickness as the regular companion flanges of corresponding outside diameters, and drilled to the template corresponding to the outside diameter, unless otherwise ordered.

In ordering reducing companion flanges always give the screwed or reduced size first, then the outside diameter of flange wanted; for instance, if a reducing flange is wanted to connect a 6-inch pipe to a 9-inch flanged valve or fitting having a 16 1/4-inch O. D. flange, order a 6x16 1/4-inch reducing flange. This will clearly avoid the confusion often caused by orders incorrectly calling for a 9x6 or a 6x9-inch flange.

—PRICE, EACH—
Faced Only Faced and Drilled

—PRICE, EACH—
Faced Only Faced and Drilled

Size In.	Faced Only	Faced and Drilled	Size In.	Faced Only	Faced and Drilled
1 1/4 x 6	\$1.80	\$2.15	6 x 14	\$7.25	\$8.15
1 1/2 x 6 1/2	2.10	2.45	8 x 15	8.40	9.45
1 1/2 x 7 1/2	2.30	2.65	6 x 16 1/4	10.50	11.70
1 1/2 x 8 1/4	2.65	3.10	6 x 17 1/2	12.00	13.50
2 x 7 1/2	2.30	2.65	6 x 20 1/2	17.50	19.25
2 x 8 1/4	2.65	3.10	7 x 15	8.40	9.45
2 x 9	3.30	3.85	7 x 16 1/4	10.50	11.70
2 x 10	3.70	4.40	7 x 17 1/2	12.00	13.50
2 x 10 1/2	4.00	4.70	7 x 20 1/2	17.50	19.25
2 x 11	4.40	5.10	8 x 16 1/4	10.50	11.70
2 x 12 1/2	5.50	6.25	8 x 17 1/2	12.00	13.50
2 1/2 x 8 1/4	2.65	3.10	8 x 20 1/2	17.50	19.25
2 1/2 x 9	3.30	3.85	8 x 23	25.00	27.00
2 1/2 x 10	3.70	4.40	8 x 24 1/2	31.50	34.00
2 1/2 x 10 1/2	4.00	4.70	9 x 17 1/2	12.00	13.50
2 1/2 x 11	4.40	5.10	9 x 20 1/2	17.50	19.25
2 1/2 x 12 1/2	5.50	6.25	9 x 23	25.00	27.00
3 x 9	3.30	3.85	10 x 20 1/2	17.50	19.25
3 x 10	3.70	4.40	10 x 23	25.00	27.00
3 x 10 1/2	4.00	4.70	10 x 24 1/2	31.50	34.00
3 x 11	4.40	5.10	10 x 25 1/2	37.00	39.75
3 x 12 1/2	5.50	6.25	12 x 23	25.00	27.00
3 x 15	8.40	9.45	12 x 24 1/2	31.50	34.00
3 1/2 x 10	3.70	4.40	12 x 25 1/2	37.00	39.75
3 1/2 x 10 1/2	4.00	4.70	12 x 28	43.00	46.00
3 1/2 x 11	4.40	5.10	14 x 24 1/2	31.50	34.00
3 1/2 x 15	8.40	9.45	14 x 25 1/2	37.00	39.75
4 x 10 1/2	4.00	4.70	14 x 28	43.00	46.00
4 x 11	4.40	5.10	14 x 30 1/2	51.00	55.00
4 x 12 1/2	5.50	6.25	15 x 25 1/2	37.00	39.75
4 x 15	8.40	9.45	15 x 28	43.00	46.00
4 x 16 1/4	10.50	11.70	15 x 30 1/2	51.00	55.00
4 1/2 x 11	4.40	5.10	16 x 28	43.00	46.00
4 1/2 x 12 1/2	5.50	6.25	16 x 30 1/2	51.00	55.00
4 1/2 x 14	7.25	8.15	16 x 33	60.00	65.00
5 x 12 1/2	5.50	6.25	18 x 30 1/2	51.00	55.00

Templates and Prices for Drilling Extra Heavy Flanged Valves and Fittings

Sizes 1 to 48-inch, Inclusive



Fig. 1741

These drilling templates are in multiples of four, so that fittings may be made to face in any quarter, and bolt holes straddle the center line.

They can be drilled to any other template, if so desired.

Bolt holes are drilled 1/8 inch larger than nominal diameter of bolts.

PRICE, EACH, FOR DRILLING With Two Flanges Except Angle Valves

Size Inches	Diam. Flanges Inches	Thick-ness Flanges In.	Bolt Circle In.	No. of Bolts	Size of Bolts In.	Bolt Lengths In.	Angle Valves	Angle Valves	Cross Valves
1	4 1/2	1 1/8	3 1/4	4	1/2	2	.60	1.00	....
1 1/4	5	1 1/8	3 3/4	4	1/2	2 1/4	.60	1.00	....
1 1/2	6	1 1/8	4 1/2	4	5/8	2 1/2	.60	1.00	\$1.20
2	6 1/2	1 1/8	5	4	5/8	2 1/2	.75	1.25	1.50
2 1/2	7 1/2	1 1/8	5 7/8	4	3/4	3	.75	1.25	1.50
3	8 1/4	1 1/8	6 5/8	8	3/4	3 1/4	.75	1.25	1.50
3 1/2	9	1 3/8	7 1/4	8	3/4	3 1/4	1.00	1.50	2.00
4	10	1 1/4	7 7/8	8	3/4	3 1/2	1.25	1.75	2.50
4 1/2	10 1/2	1 5/8	8 1/2	8	3/4	3 1/2	1.50	2.00	3.00
5	11	1 3/8	9 1/4	8	3/4	3 3/4	1.50	2.00	3.00
6	12 1/2	1 7/8	10 5/8	12	3/4	3 3/4	1.75	2.50	3.50
7	14	1 1/2	11 7/8	12	7/8	4	2.25	3.00	4.50
8	15	1 5/8	13	12	7/8	4 1/4	2.25	3.00	4.50
9	16 1/4	1 3/4	14	12	1	4 3/4	2.50	3.50	5.00
10	17 1/2	1 7/8	15 1/4	16	1	5	2.50	3.50	5.00
12	20 1/2	2	17 3/4	16	1 1/8	5 1/4	3.50	5.00	7.00
14	23	2 1/8	20 1/4	20	1 1/8	5 1/2	4.00	6.00	8.00
15	24 1/2	2 3/8	21 1/2	20	1 1/4	5 3/4	4.50	6.50	9.00
16	25 1/2	2 1/4	22 1/2	20	1 1/4	6	5.00	7.00	....
18	28	2 3/8	24 3/4	24	1 1/4	6 1/4	6.00	....	....
20	30 1/2	2 1/2	27	24	1 3/8	6 1/2	7.50	....	....
22	33	2 5/8	29 1/4	24	1 1/2	7	9.00	....	....
24	36	2 3/4	32	24	1 5/8	7 1/2	10.00	....	....
26	38 1/4	2 5/8	34 1/2	28	1 5/8	7 3/4	....	....	....
28	40 3/4	2 5/8	37	28	1 5/8	8	....	....	....
30	43	3	39 1/4	28	1 3/4	8 1/4	12.00	....	....
32	45 1/4	3 1/8	41 1/2	28	1 7/8	8 1/2	....	....	....
34	47 1/2	3 1/4	43 1/2	28	1 7/8	9	....	....	....
36	50	3 3/8	46	32	1 7/8	9 1/4	....	....	....
38	52 1/4	3 5/8	48	32	1 7/8	9 1/4	....	....	....
40	54 1/2	3 3/4	50 1/4	36	1 7/8	9 1/2	....	....	....
42	57	3 1/2	52 3/4	36	1 7/8	9 3/4	....	....	....
44	59 1/4	3 3/4	55	36	2	10	....	....	....
46	61 1/2	3 7/8	57 1/4	40	2	10 1/4	....	....	....
48	65	4	60 3/4	40	2	10 1/2	....	....	....

Bolt holes are spot faced only when so ordered except cast steel, which are always furnished spot faced.

Water Pipe Clamps

Malleable Iron, with Wrought Iron Strap



Fig. 1742

No.	O.D. of Circle	Wrought Iron Pipe	O. D. of Casing	Size Cast Iron Pipe	Tapped for Wrought Iron Pipe Connections, Inches	Price Each
0	1 1/8	1 1/2	2	..	1/2 and 3/4	\$1.00
1	2 3/8	2	2 1/2	..	1/2 to 1	1.00
2	2 7/8	2 1/2	2 3/4 & 3	2	1/2 " 1 1/4	1.25
3	3 1/8	3	3 1/2	..	1/2 " 1	1.25
4	3 1/2	3	3 1/2	..	1 1/4 " 2	1.50
5	4	3 1/2	4	3	1/2 " 1	1.50
6	4	3 1/2	4	3	1 1/4 " 2	1.75
7	4 1/2	4	4 1/2	..	1/2 " 1 1/2	1.75
8	4 1/2	4	4 1/2	..	2	2.00
9	4 1/2	4	4 1/2	..	2 1/2 and 3	4.00
10	5	4 1/2	5	4	3/4 to 1 1/2	1.80
11	5	4 1/2	5	4	2	2.15
12	5	4 1/2	5	4	2 1/2 and 3	4.00
13	5 1/2	5	5 1/2	..	3/4 to 1 1/2	1.80
14	5 1/2	5	5 1/2	..	2	2.15
15	5 1/2	5	5 1/2	..	2 1/2 and 3	4.00
16	6	..	6	5	1/2 to 1 1/2	2.00
17	6	..	6	5	2	2.40
18	6	..	6	5	2 1/2 and 3	4.50
19	6 5/8	6	6 5/8	..	3/4 to 1 1/2	2.25
20	6 5/8	6	6 5/8	..	2	2.50
21	6 5/8	6	6 5/8	..	2 1/2 and 3	5.00
22	7	..	7	6	3/4 to 1 1/2	2.50
23	7	..	7	6	2	2.70
24	7	..	7	6	2 1/2 and 3	5.00
25	7 5/8	7	7 5/8	..	3/4 to 1 1/2	2.50
26	7 5/8	7	7 5/8	..	2	2.70
27	7 5/8	7	7 5/8	..	2 1/2 and 3	5.00
28	8	..	8	7	3/4 to 1 1/2	4.50
29	8	..	8	7	2	5.00
30	8	..	8	7	2 1/2 and 3	5.50
30 1/2	8 5/8	8	8 5/8	..	3/4 to 1 1/2	5.50
31	8 5/8	8	8 5/8	..	2 to 3	5.50
32	8 5/8	8	8 5/8	..	4	6.00
33	9 5/8	9	..	..	1 1/2 to 3	8.00
34	10	..	..	9	3/4 " 2	9.00
35	10 3/4	10	..	..	3/4 " 2	9.00
36	12 3/4	12	..	..	1/4 " 2	10.00

Always order water pipe clamps by number.

Steam Pipe Saddles

Malleable Iron, with Wrought Iron Straps for Wrought Pipe



Fig. 1743

Size Pipe Inches	Tapped for Pipe Inches	Price Each	Size Pipe Inches	Tapped for Pipe Inches	Price Each
1 1/2	1/2 and 3/4	\$.90	6	2 1/2 to 4	\$5.75
2	1/2 to 1 1/2	1.00	7	1 " 4	6.50
2 1/2	3/4 " 1 1/2	1.25	8	1 " 4	6.50
3	3/4 " 2	1.25	9	1 1/2 " 4	8.50
3 1/2	3/4 " 2	1.40	10	1 1/2 " 4	10.00
4	3/4 " 2	1.50	10	4 1/2 " 6	10.00
4 1/2	3/4 " 2	2.50	12	1 1/2 " 4	14.00
5	3/4 " 2	2.75	12	4 1/2 " 6	14.00
5	2 1/2 and 3	2.75	15	3 " 6	22.00
6	3/4 to 2	2.75	16	3 " 6	25.00

Skinner Pipe Joint Clamps

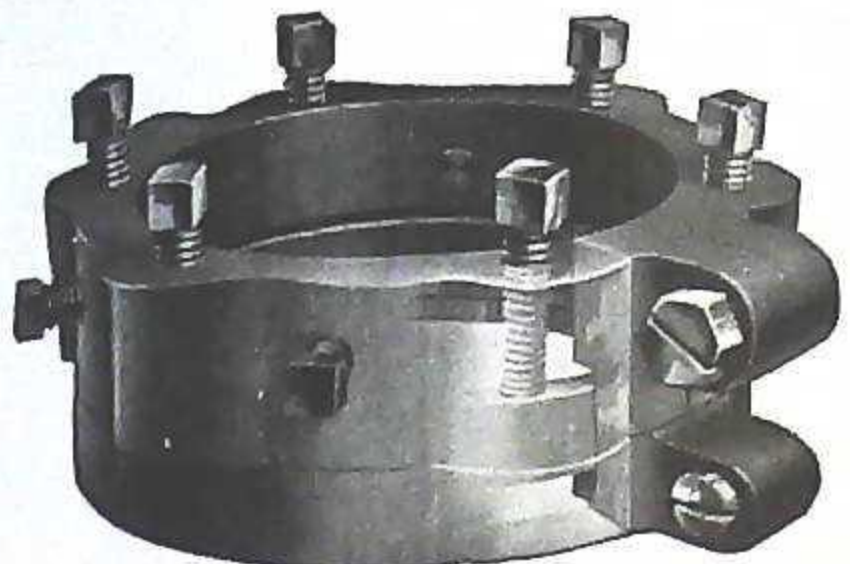
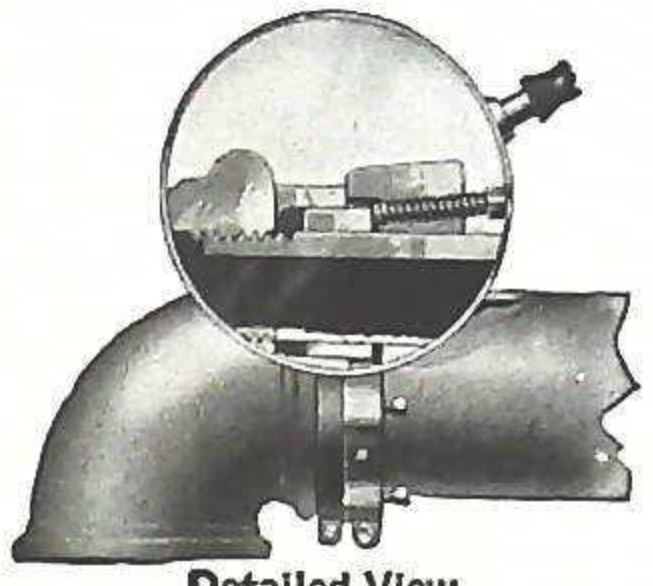


Fig. 1751

Repairs leaks where pipe is screwed into fitting. The entire thrust is against the packing and the lip on the gasket container ring guides the packing squarely into the threads.

Made of malleable iron, elastic enough to withstand the highest pressures. A positive permanent repair on steam, oil, gas, hot or cold water, air, ammonia or brine.

Painted to resist rust. Fitted with steel thrust screws. Made in halves held together by cap screws.



Detailed View

Size Pipe Inches	Price Each	Size Pipe Inches	Price Each	Size Pipe Inches	Price Each
1/2	\$1.50	3	\$4.50	8	\$13.00
3/4	1.50	3 1/2	5.25	9	15.75
1	1.50	4	6.00	10	18.75
1 1/4	1.90	4 1/2	6.75	12	22.50
1 1/2	2.25	5	7.50	14	31.50
2	3.00	6	9.00	15	33.75
2 1/2	3.75	7	10.50	16	36.00

Clamps 1/2 to 12-inch are for pipe measured inside diameter; 14-inch and larger, outside diameter.

Emergency Pipe Clamps

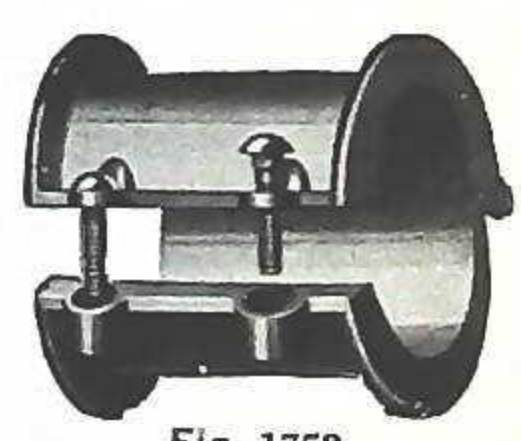


Fig. 1752

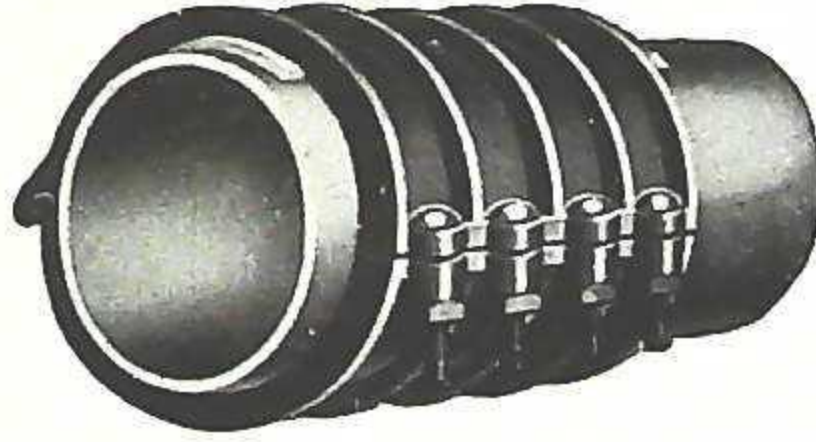
For repairing leaks in pipe lines, instantly, permanently. The emergency pipe clamp consists of a malleable iron cylinder, divided in halves, hinged full length along one side and fitted with tightening bolts on the other. A gasket completes the clamp.

When a leak appears, apply and tighten the clamp. The repair is permanent, and the pipe is stronger than it was in the first place. For a split, use a long strip of packing and two or more clamps butted together.

Emergency pipe clamps are painted to resist rust.

For the larger sizes of pipe, clamps are reinforced with heavy ribs, which insure security under any pressure.

Furnished complete with packing.

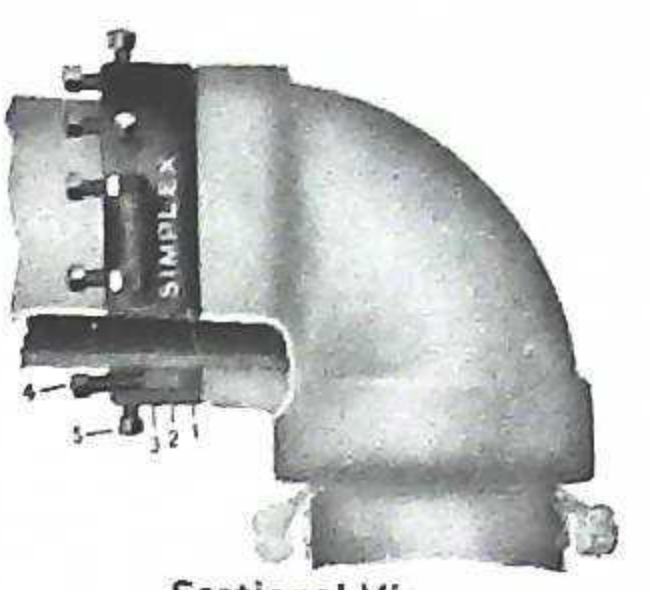


Extra Heavy, For Sizes Above 4 Inches

Fig. 1753

Size Pipe In.	Length Over All Inches	Price Each	Size Pipe Inches	Length Over All Inches	No. of Bolts	Price Each
1/2	3 1/4	\$.60	4 1/2	6 1/2	2	\$6.75
3/4	3 1/4	.68	5	7	3	7.50
1	3 1/2	.75	6	8	3	9.00
1 1/4	3 3/4	.90	7	9	3	10.50
1 1/2	4	1.05	8	9 1/2	3	12.00
2	4 1/4	1.20	9	10	3	13.50
2 1/2	4 1/2	1.50	10	11	4	15.00
3	5	1.88	12	12	4	18.00
3 1/2	5 1/2	2.25	..	..	..	..
4	6	3.00	..	..	..	..

Yarway Pipe Joint Clamps



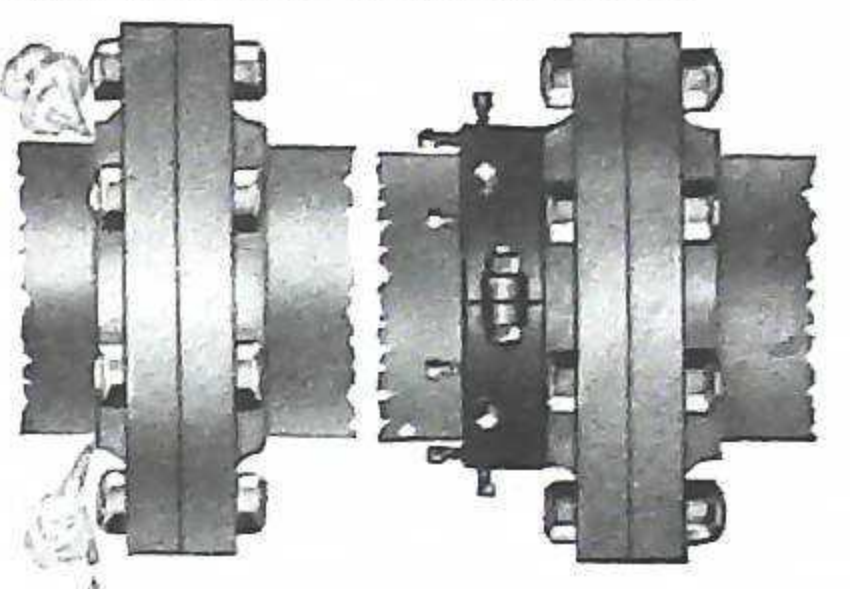
Sectional View Fig. 1754

The Yarway (formerly Simplex) Pipe Joint Clamp has square packing ring, which is forced against packing (1) by screws (4). Outside ring is bolted around pipe by bolts (6) and secured to the pipe by set screws (5), prevents slipping from leak when adjusting screws (4).

Clamps are made of malleable iron.

The packing used is made of rubber with lead insert.

The Yarway pipe joint clamp can be used over and over temporarily to stop leaks until it is convenient to renew the pipes. Or, if left on permanently, it keeps as tight a joint as could be obtained by any amount of repairs.



Before Application After Application

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$1.50	2 1/2	\$3.75	6	\$9.00	14	\$31.50	22	\$55.00
3/4	1.50	3	4.50	7	10.50	15	33.75	24	60.00
1	1.50	3 1/2	5.25	8	13.00	16	36.00	26	65.00
1 1/4	1.90	4	6.00	9	15.75	18	40.50	28	70.00
1 1/2	2.25	4 1/2	6.75	10	18.75	20	45.00	30	76.00
2	3.00	5	7.50	12	22.50	21	50.00	32	82.00

Skinner Collar Leak Clamps

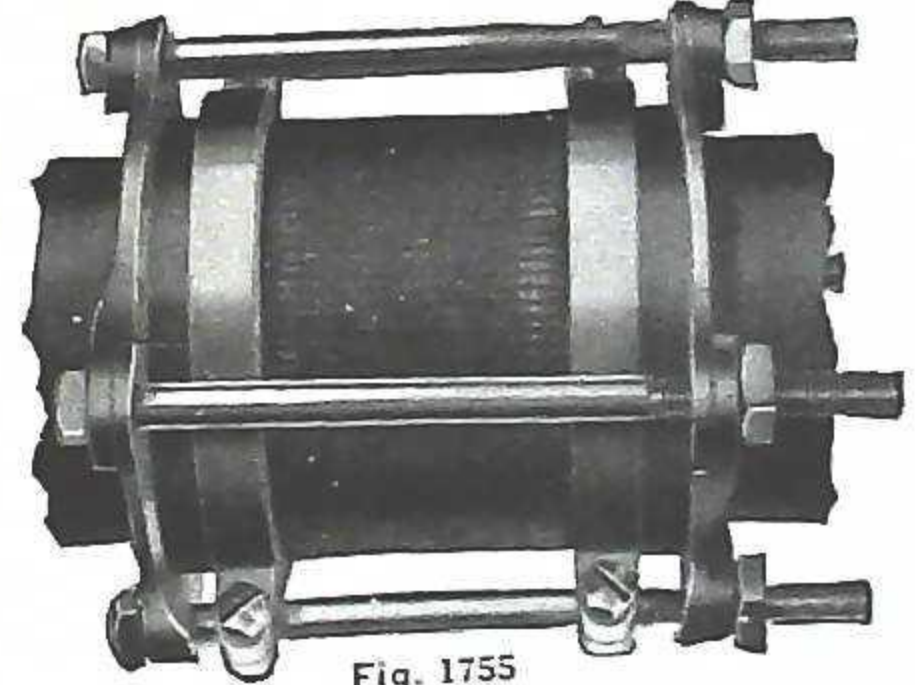


Fig. 1755

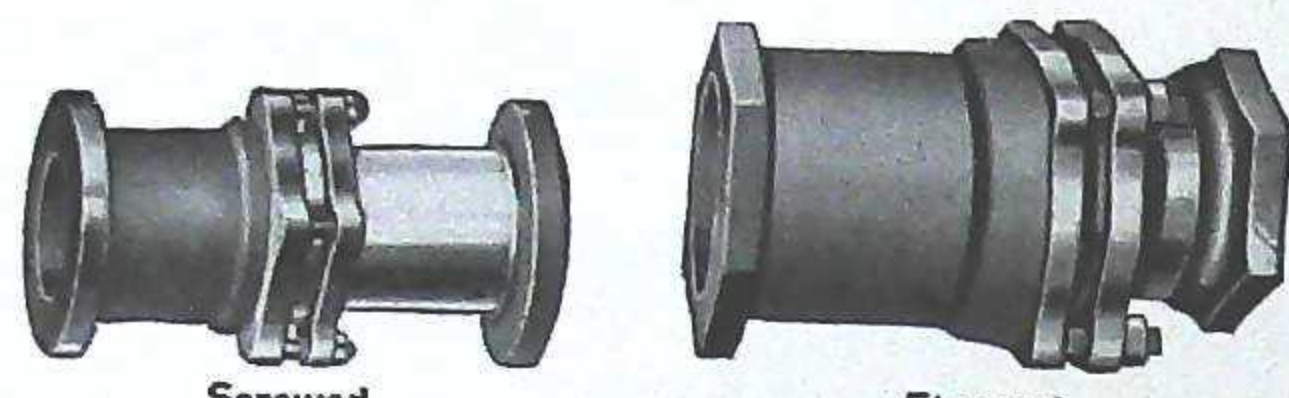
For stopping collar leaks permanently. Saves the cost of tearing out and renewing collars and coupling. This clamp works on the principle of a gland and stuffing box, forcing the gasket directly into the collar recesses, filling them completely and stopping leaks at their source, the threads. Made of malleable iron. Consists of four rings, two main rings which receive the pull of the bolts and two gasket container rings.

When bolts are tightened, compression is transmitted to gasket. The gaskets, being completely confined by gasket container ring, and guided by lips in inner side of these rings, go into recesses, stopping leak and making a permanent installation. As the recesses are filled with oil proof packing under pressure, ordinary contraction and expansion does not affect the clamp.

Lugs on main ring are heavily re-inforced. Lips on gasket container ring besides guiding packing into threads, positively prevent it from squeezing out between clamp and collar. The 2, 3, 4 and 6-inch sizes are packed three to a carton. The 8, 10 and 12-inch sizes are packed in single cartons. All clamps, complete with gaskets and bolts, and painted with special rust-proof lacquer.

Size In.	No. of Bolts	Weight Pounds	Price Each	Size In.	No. of Bolts	Weight Pounds	Price Each
2	4	3 1/2	\$2.20	8	6	24	\$8.20
3	4	6 1/4	3.20	10	8	30	10.80
4	4	8	3.80	12	8	36	13.50
6	6	15	5.40	..	..	..	..

**Expansion Joints
Brass Sleeves**



Screwed Fig. 1761 Flanged Fig. 1762

Size In.	Traverse In.	Price Each	Size In.	Traverse In.	Price Each	Size In.	Traverse In.	Price Each
2	2 1/2	\$7.00	4 1/2	3 1/2	\$30.00	9	7	\$110.00
2 1/2	2 1/2	8.00	5	4	38.00	10	7	160.00
3	2 3/4	10.00	6	5	45.00	12	8	225.00
3 1/2	3	14.00	7	6	70.00	..	..	..
4	3 1/4	18.00	8	7	100.00	..	..	..

Flanged, Standard Traverse

Size In.	Traverse In.	Diam. Flanges In.	Price Each	Size In.	Traverse In.	Diam. Flanges In.	Price Each
2	2 1/2	6	\$15.00	7	6	12 1/2	\$80.00
2 1/2	2 1/2	7	16.00	8	7	13 1/2	110.00
3	2 3/4	7 1/2	18.50	9	7	15	120.00
3 1/2	3	8 1/2	25.00	10	7	16	175.00
4	3 1/4	9	30.00	12	8	19	250.00
4 1/2	3 1/2	9 1/4	40.00	14	10	21	500.00
5	4	10	48.00	15	10	22 1/4	550.00
6	5	11	55.00	16	10	23 1/2	600.00

Expansion joints are not furnished packed unless so ordered, and then at a special price. If wanted packed specify kind of packing required.

Standard expansion joints will be made to order with base or side outlet. Prices upon application.

All-iron expansion joints made to order.

Moran Flexible Joints

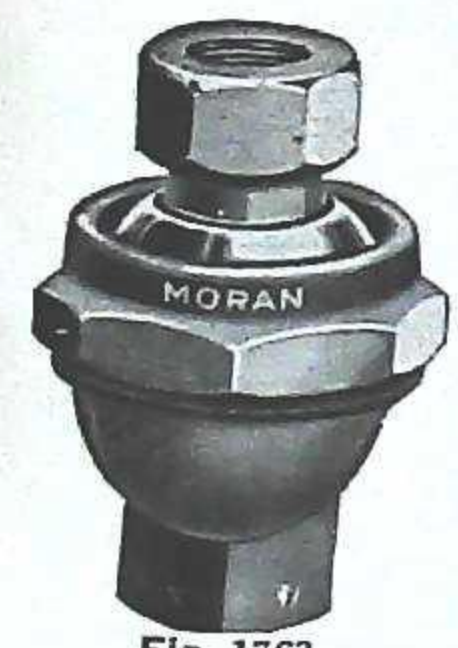


Fig. 1763

Size Inches	Price Each	Size Inches	Price Each
1/4	\$6.00	3	\$22.50
3/8	6.00	3 1/2	28.00
1/2	6.50	4	30.00
3/4	7.50	4 1/2	37.50
1	8.50	5	40.00
1 1/4	10.50	6	60.00
1 1/2	12.00	8	144.00
2	15.00	10	190.00
2 1/2	18.00	12	240.00

No. 2 Joints for Steam, Air or Gas

Size Inches	Price Each	Size Inches	Price Each
1/4	\$6.50	3	\$24.50
3/8	6.50	3 1/2	31.00
1/2	7.00	4	33.50
3/4	8.00	4 1/2	41.50
1	9.00	5	41.75
1 1/4	11.00	6	75.00
1 1/2	12.50	8	165.00
2	17.50	10	250.00
2 1/2	21.00	12	300.00



Fig. 1764

Size Inches	Price Each	Size Inches	Price Each
1/4	\$6.00	3	\$22.50
3/8	6.00	3 1/2	28.00
1/2	6.50	4	30.00
3/4	7.50	4 1/2	37.50
1	8.50	5	40.00
1 1/4	10.50	6	60.00
1 1/2	12.00	8	144.00
2	15.00	10	190.00
2 1/2	18.00	12	240.00

Fig. 1765

**Expansion Pipe Hangers
With Solid Ring and Ceiling Plate**

Prices do not include pipe from ceiling plate to ring.

Size In.	Tapped for I. P. In.	Complete	Rings	Plates	Buttons
1/2	1/4	\$.17	\$.08	\$.08	\$.06
3/4	3/8	.17	.08	.08	.06
1	3/8	.18	.12	.08	.06
1 1/4	3/8	.19	.15	.08	.06
1 1/2	3/8	.25	.20	.09	.07
2	3/8	.29	.25	.09	.07
2 1/2	1/2	.36	.30	.10	.08
3	1/2	.44	.40	.10	.08
3 1/2	1/2	.55	.50	.10	.08
4	1/2	.63	.60	.10	.08
4 1/2	1/2	.90	.80	.10	.08
5	3/4	1.12	1.00	.10	.08
6	3/4	1.35	1.25	.10	.08
7	3/4	1.80	1.70	.10	.08
8	3/4	2.25	2.15	.10	.08



Fig. 1766

No. 1 Hanna Ball Joint Hangers

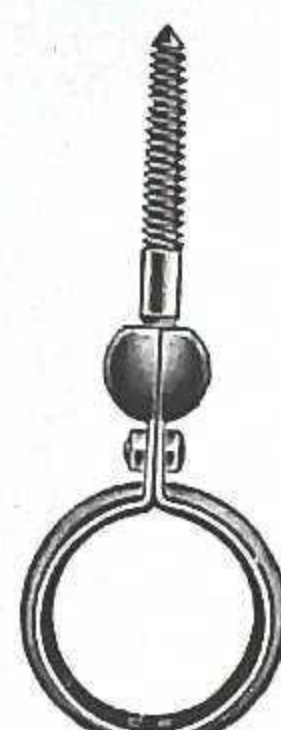


Fig. 1767

Lags are made to correspond with the sizes of standard pipe: 1/8, 1/4, 3/8, 1/2 and 3/4, and can be lengthened to any required distance with a coupling and a piece of pipe.

Made of malleable iron.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$.15	2 1/2	\$.30	7	\$1.20
3/4	.18	3	.35	8	1.40
1	.18	3 1/2	.50	10	1.80
1 1/4	.20	4	.60	12	2.10
1 1/2	.22	5	.70	..	..
2	.25	6	.90	..	..

No. 3 Hanna Ball Joint Hangers

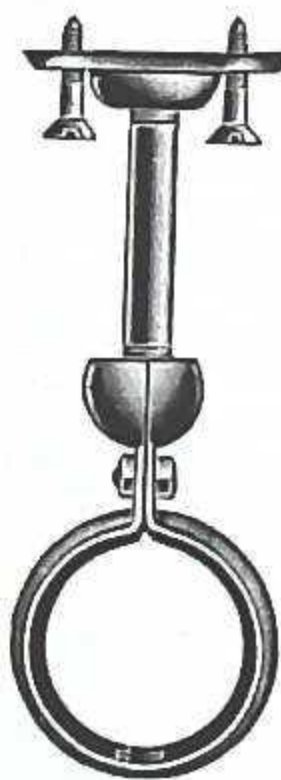


Fig. 1768

The nipples on the No. 3 Hangers are furnished five inches long, and are of the following sizes: 1/8, 1/4, 3/8, 1/2 and 3/4, and can be lengthened to any required distance with a coupling and a piece of pipe.

Made of malleable iron. Nickel-plated and polished hangers can also be furnished to specifications.

Size In.	Price Each	Size In.	Price Each
1/2	\$.30	3 1/2	\$.83
3/4	.33	4	.98
1	.33	5	1.17
1 1/4	.35	6	1.40
1 1/2	.37	7	1.70
2	.40	8	1.90
2 1/2	.55	10	2.20
3	.62	12	2.50

No. 2 Hanna Ball Joint Hangers

Nipples are not furnished but are of the following pipe sizes: 1/8, 1/4, 3/8, 1/2 and 3/4, and can be lengthened to any required distance with a coupling and a piece of pipe.

When ordering state width of iron beam.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$.55	2 1/2	\$.70	7	\$1.60
3/4	.58	3	.75	8	1.80
1	.58	3 1/2	.90	10	2.20
1 1/4	.60	4	1.00	12	2.50
1 1/2	.62	5	1.10	..	..
2	.65	6	1.30	..	..

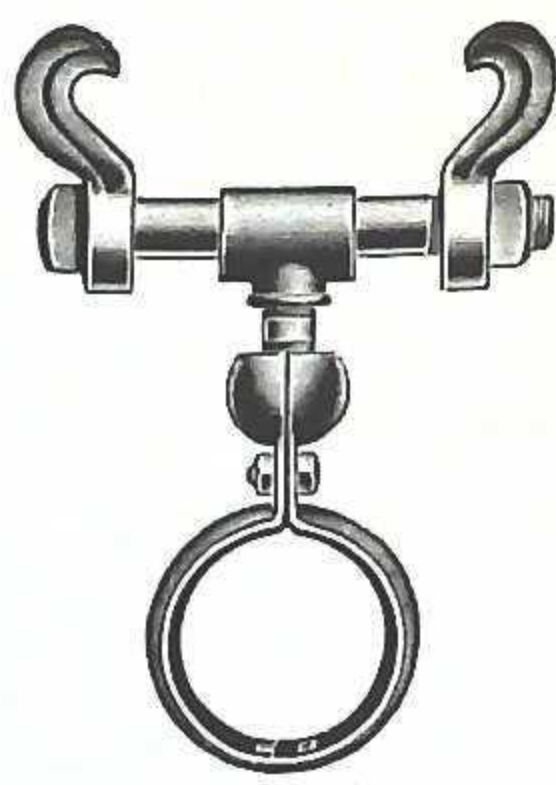


Fig. 1769

**No. 207 F & M Malleable Iron
Pipe Hangers**

With Adjustable Beam Clamp
This hanger is easily adjusted, strong, and allows for expansion.

Size Inches	Price Each	Size Inches	Price Each
3/8	\$.55	3 1/2	\$1.10
1/2	.58	4	1.20
3/4	.58	4 1/2	1.25
1	.60	5	1.35
1 1/4	.62	6	1.50
1 1/2	.65	7	1.80
2	.70	8	2.00
2 1/2	.95	10	2.40
3	..	..	..

Double the prices given above for galvanized hangers.

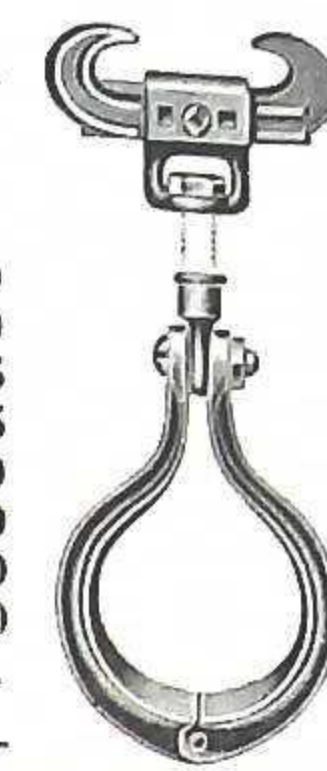


Fig. 1771

**No. 206 F & M Malleable Iron
Pipe Hangers**

With Gimlet Pointed Lag Screw

No. 206 Hanger allows for expansion. This hanger is strong and easily adjusted.

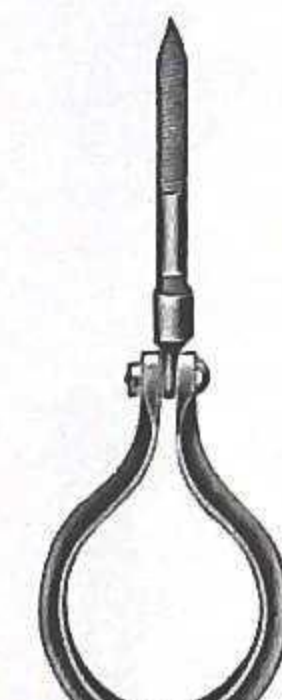


Fig. 1722

Size In.	Size Lag In.	Price Each	Size In.	Size Lag In.	Price Each
3/8	1/8	\$.15	3 1/2	3/8	\$.50
1/2	1/8	.15	4	3/8	.60
3/4	1/8	.18	4 1/2	3/8	.65
1	1/8	.18	5	1/2	.70
1 1/4	1/4	.20	6	1/2	.90
1 1/2	1/4	.22	7	1/2	1.20
2	1/4	.25	8	1/2	1.40
2 1/2	1/4	.30	10	1/2	1.80
3	1/4	.35	..	..	..

For galvanized hangers, double the above prices.

**No. 205 F & M Malleable Iron
Pipe Hangers**

The No. 205 Hanger is easily adjusted, strong and allows for expansion.

Size Inches	Price Each	Size Inches	Price Each
3/8	\$.10	3 1/2	\$.43
1/2	.10	4	.53
3/4	.12	4 1/2	.58
1	.12	5	.63
1 1/4	.14	6	.82
1 1/2	.16	7	1.12
2	.18	8	1.32
2 1/2	.22	10	1.72
3	.28	..	..

For galvanized hangers, double the above prices.



Fig. 1773

**F. & M. Steel Band Pipe Hangers
For Soil and Steam Pipes**

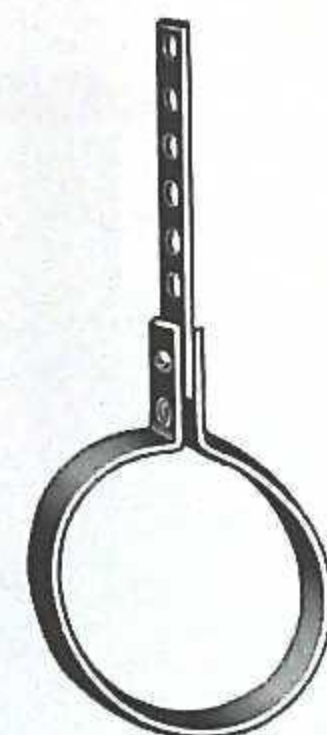


Fig. 1774

The bar furnished with this hanger is shipped in 5-foot length, and can easily be cut in length as required. This price is based on 6 inches to each hanger.

Size In.	Price, Each Plain	Price, Each Galv.	Size In.	Price, Each Plain	Price, Each Galv.
3/4	\$.16	\$.24	3 1/2	\$.32	\$.48
1	.18	.27	4	.34	.50
1 1/4	.20	.30	4 1/2	.36	.54
1 1/2	.22	.33	5	.38	.56
2	.24	.36	6	.42	.63
2 1/2	.26	.40	7	.65	.95
3	.28	.42	8	.90	1.35



Fig. 1775

**No. 234 Steel Band Pipe Hangers
For Soil or Steam Pipes**

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$.14	1 1/2	\$.20	3 1/2	\$.30	6	\$.40
3/4	.14	2	.22	4	.32	7	.63
1	.16	2 1/2	.24	4 1/2	.34	8	.89
1 1/4	.18	3	.26	5	.36	..	..

Extension Bars

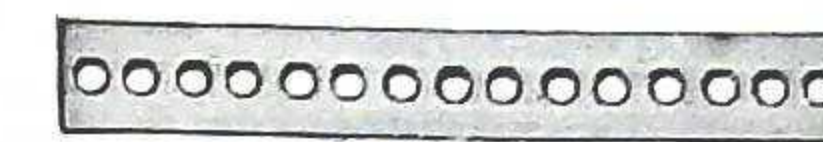


Fig. 1776

Bolt holes are 1/2 inch apart. Length of bars, 10 feet.

No.	For Pipe In.	Width Hanger Iron, In.	Price per Ft.	No.	For Pipe In.	Width Hanger Iron, In.	Price per Ft.
1	1/2 to 1 1/2	1/4	\$.08	4	7 to 8	1 1/4	\$.20
2	2 " 3	1	.09	5	9 " 12	1 1/2	.28
3	3 1/2 " 6	1 1/8	.10	..	..	..	..

Pipe Hanger Lag Screws

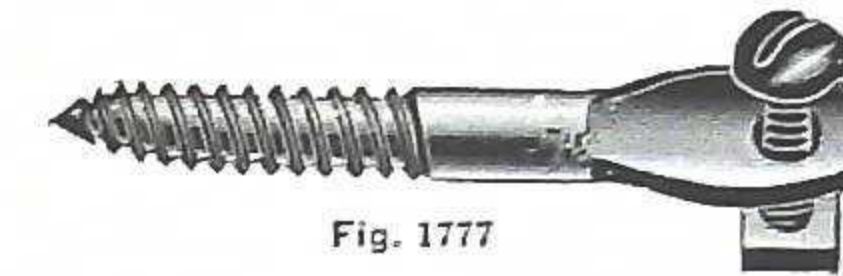


Fig. 1777

With Flattened Head

No.	For Pipe In.	With Bolt Price, Each	No.	For Pipe In.	With Bolt Price, Each
1	1/2 to 1 1/2	\$.10	4	7 to 8	\$.20
2	2 " 3	.12	5	8 " 12	.25
3	3 1/2 " 6	.14	..	..	..

With Threaded End

No.	Pipe Thread, In.	Price Each	No.	Pipe Thread, In.	Price Each
1	1/8	\$.10	3	3/8	\$.14
2	1/4	.12	4	1/2	.20

**Threaded Lag Screws
For Pipe Hanger**



Fig. 1778

No.	Upper End, I. P. Thread, Inches	Price Each
1	1/4	\$.12
2		



No. 131 Grinnell I-Beam Clamps
Malleable Iron

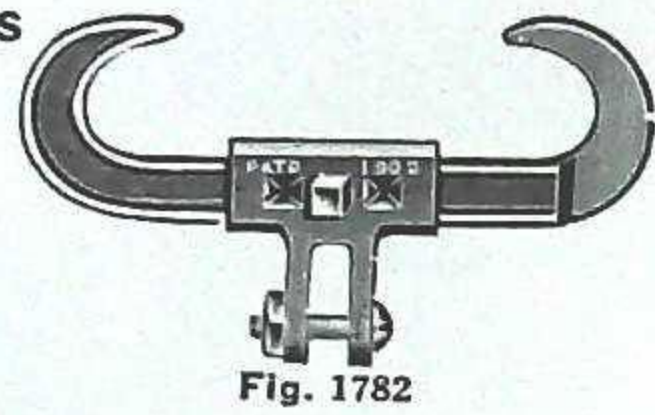
Can be used with socket or eye bolt. Made to fit I-Beams with flanges 2, 2 1/2, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2 or 6 inches.

Price, No. 131...each \$.40

No. 242 Adjustable Malleable Iron Beam Clamps

Designed especially for use with band hangers, but can be used with any hanger by adding socket. Will fit beams 3 to 7 inches.

Price, No. 242...each \$.40



Solid Ring Pipe Hangers



Size In.	PRICE, PER 100		Size In.	PRICE, PER 100	
	Blk.	Galv.		Blk.	Galv.
3/8	\$5.00	\$6.50	1 1/4	\$10.00	\$12.00
1/2	5.00	6.50	1 1/2	14.00	16.00
3/4	5.80	7.00	2	22.00	25.00
1	7.75	9.00	...	...	...

Split Ring Swivel Base Pipe Hangers



Size Inches	Price per 100 Galv.		Size Inches	Price per 100 Galv.	
	3/8	\$17.00		1 1/4	\$30.00
1/2	17.00	1 1/2	40.00		
3/4	20.00	2	50.00		
1	25.00	...	...	...	...

Split Ring Extension Pipe Hangers

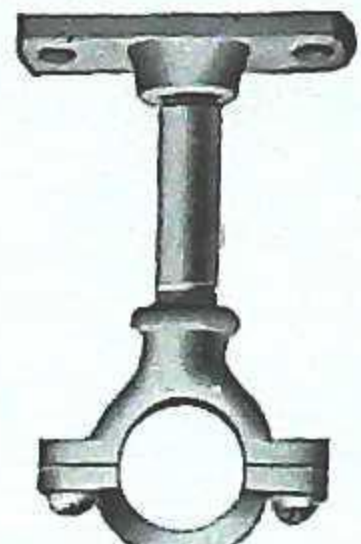


Fig. 1785

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	WITH NIPPLE	LESS NIPPLE		WITH NIPPLE	LESS NIPPLE
3/8	\$.22	\$.25	1 1/4	\$.35	\$.40
1/2	.22	.25	1 1/2	.40	.50
3/4	.27	.30	2	.50	.60
1	.32	.35	2 1/2	.70	.80

Tinned Pipe Straps

Size In.	Wt. per 100 Lbs.	Price per Lb.	Size In.	Wt. per 100 Lbs.	Price per Lb.
1/4	2	\$.30	1	7	\$.30
3/8	3	.30	1 1/4	8 1/2	.30
1/2	3 1/4	.30	1 1/2	9	.30
3/4	5	.30	2	11 1/4	.30



Fig. 1786

Gas Pipe Hooks

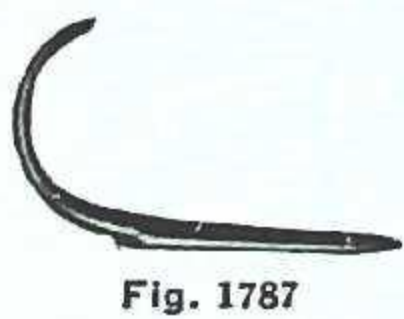


Fig. 1787

I. P. Size Inches	Price per 100	I. P. Size Inches	Price per 100
1/4	\$.45	1	\$1.00
3/8	.55	1 1/4	1.30
1/2	.65	1 1/2	1.60
3/4	.80	2	2.00



Fig. 1788

Cast Iron Hook Plates



Single Hook Fig. 1789

No. of Hooks	PRICE, EACH FOR PIPE, INCHES			
	1 1/4	1 1/2	1 3/4	2
1	\$.09	\$.10	\$.15	\$.22
2	.18	.21	.28	.43
3	.23	.27	.43	.65
4	.26	.32	.58	.90
5	.32	.41	.72	1.15
6	.38	.52	.88	1.35

Beam Hooks—Long Shanks

Size Inches	Price Each	Size Inches	Price Each
1/2	\$.13	1 1/2	\$.24
3/4	.15	2	.35
1	.18	2 1/2	.65
1 1/4	.22	3	.90



Fig. 1789A

Sectional Steel Hook Plates

This sectional steel hook plate is stronger, neater and easier to work than cast iron.

It will not break and is practically indestructible.

Furnished in long strips; as many hooks as desired can easily be cut off at the ribs shown.



Fig. 1789B

Ceiling Coil Hangers

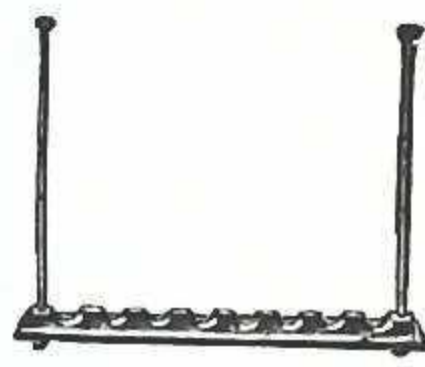


Fig. 1789C

Furnished without lag screws.

For Pipe	DIMENSIONS, INCHES		Length Over All
	C. to C. Pipe	Diam. Pipe Opening	
1	2 1/2	1 1/2	22
1 1/4	3	1 3/4	23 3/4
1 1/2	3 1/2	2	27 1/2

Prices upon application.

No. 2 Telescoping Fireproof Floor Sleeves

Made of galvanized sheet iron with neat cast iron flange on top and bottom. Easily adjusted to any permanent position within its range of length. Has no screws, slots, or springs to get out of order.



Fig. 1789D

Size Pipe In.	LENGTH, IN. Min. Max.	Price Each	Size Pipe In.	LENGTH, IN. Min. Max.	Price Each
3/4	14 24	\$1.05	3	14 24	\$2.50
1	14 24	1.20	3 1/2	14 24	3.00
1 1/4	14 24	1.35	4	14 24	3.75
1 1/2	14 24	1.50	5	14 24	4.50
2	14 24	1.80	6	14 24	5.25
2 1/2	14 24	2.10	8	14 24	6.75

No. 7 Combination Floor and Ceiling Plates



Fig. 1791

The halves are riveted together making a one-piece plate which will not come apart, and can be put on after the work is completed.

Springs take up contraction and allow for expansion of pipe.

Made in black and nickel-plated iron; also polished and nickel-plated brass.

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	Black	Nickel-plated	Cast Brass		Black	Nickel-plated	Cast Brass
3/8	\$.15	\$.26	\$1.00	1 1/2	\$.25	\$.38	\$1.80
1/2	.16	.27	1.00	2	.30	.45	2.00
3/4	.17	.28	1.20	2 1/2	.50	.65	2.50
1	.20	.32	1.30	3	.65	.80	3.00
1 1/4	.22	.35	1.60	...	...	...	...

No. 8 Cast Plumber's Floor and Ceiling Plates



Fig. 1792

This plate has inside elevation of one inch and is designed for use wherever a plate is required to cover a pipe sleeve or other fitting projecting from floor or ceiling.

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	N. P. Iron	Pol. Brass	N. P. Brass		N. P. Iron	Pol. Brass	N. P. Brass
3/8	\$.28	\$1.10	\$1.10	1 1/4	\$.40	\$1.80	\$1.80
1/2	.30	1.20	1.20	1 1/2	.45	2.00	2.00
3/4	.32	1.30	1.30	2	.50	2.20	2.20
1	.35	1.40	1.40	...	...	...	...

No. 10 Perfection Floor and Ceiling Plates



Fig. 1793



Open

Nickel-plated steel.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/4	\$.25	1	\$.32	2 1/2	\$.65	4 1/2	\$1.50
3/8	.26	1 1/4	.35	3	.80	5	1.75
1/2	.27	1 1/2	.38	3 1/2	1.00	6	2.00
3/4	.28	2	.45	4	1.25	...	...

Solid Ceiling Plates

Size In.	Price Each	Size In.	Price Each
1 1/2	\$.11	2 1/2	\$.36
3/4	.13	3	.50
1	.16	3 1/2	.55
1 1/4	.18	4	.68
1 1/2	.23	5	.95
2	.27	6	1.25



Fig. 1794

Floor Plates with Grooves

Cast iron. May be easily parted by a slight blow.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1 1/2	\$.06	1 1/4	\$.11	2 1/2	\$.24	4	\$.42
3/4	.06	1 1/2	.14	3	.30	5	.60
1	.08	2	.16	3 1/2	.35	6	.75



Fig. 1795

Brass Globe and Angle Valves

Brass Disc
For Steam Working Pressures: 3 Inch and Smaller, 125 Pounds
3 1/2 and 4 Inch, 100 Pounds



Globe, Screwed Fig. 1796



Angle, Screwed Fig. 1797

The construction of these valves is such that they may be packed when wide open, under pressure without steam escaping.

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	GLOBE AND ANGLE Screwed	Flanged		GLOBE AND ANGLE Screwed	Flanged
1/8	\$.72	...	1 1/2	\$3.50	\$10.50
1/4	.72	...	2	5.30	16.00
3/8	.77	\$4.00	2 1/2	10.00	23.00
1/2	1.00	4.50	3	14.40	35.00
3/4	1.26	5.00	3 1/2	26.50	50.00
1	1.80	6.75	4	36.00	70.00
1 1/4	2.52	8.50	...	...	...

Brass Cross Valves

Brass Disc
For Steam Working Pressures: 3 Inch and Smaller, 125 Pounds
3 1/2 and 4 Inch, 100 Pounds

The construction of these valves is such that they may be packed when wide open, under pressure without steam escaping.

This valve is well proportioned, of good height, and sufficiently strong to stand the steam working pressures, as given.



Screwed Fig. 1798

Size In.	Screwed Price Each	Size In.	Screwed Price Each
1/4	\$1.25	1 1/4	\$3.50
3/8	1.25	1 3/4	5.00
1/2	1.50	2	8.00
3/4	2.00	2 1/2	16.00
1	2.50	3	24.00

Brass Globe and Angle Needle Point Valves

For Oil Working Pressures: 1/2 Inch and Smaller, 200 Pounds
3/4 Inch and Larger, 125 Pounds



Globe Fig. 1799



Angle, with Union Fig. 1799A

These valves are used for regulating fuel oil feed.

Size In.	Size, Feed Opening In.	PRICE, EACH		
		Globe with Female Openings	Angle with Female Openings	Angle with Union
1/8	1/8	\$1.20	\$1.20	\$2.00
1/4	1/8	1.40	1.40	2.00
3/8	1/8	1.50	1.50	2.20
1/2	3/8	2.00	2.00	3.00
3/4	1/2	2.50	2.50	3.50

In ordering, state size of opening for feed; otherwise will furnish as above. Also, state whether globe or angle, and with female opening or with union.

Brass Check Valves

Brass Discs
For Steam Working Pressures: 3 Inch and Smaller, 125 Pounds;
3 1/2 and 4 Inch, 100 Pounds

Size In.	Price, Each		
	Screwed	Flanged	Screwed with Drip Cock
*1/8	\$.65	.....	.....
*1/4	.65	.....	.....
*3/8	.70	.....	.....
1/2	.90	.....	\$2.15
3/4	1.15	\$4.90	2.55
1	1.60	6.50	3.15
1 1/4	2.25	8.25	4.05
1 1/2	3.15	10.15	.....
2	4.75	15.50	.....
2 1/2	9.00	22.00	.....
3	13.00	33.50	.....
3 1/2	24.00	47.50	.....
	32.50	66.50	.....

Vertical

Size In.	Screwed Price Each	Size In.	Screwed Price Each
*1/8	\$.72	1 1/4	\$2.52
*1/4	.72	1 1/2	3.50
*3/8	.77	2	5.30
1/2	1.00	2 1/2	10.00
3/4	1.26	3	14.40
1	2.52	.....	.....

Angle

Size In.	Screwed Price Each	Size In.	Screwed Price Each
*1/8	\$.72	1 1/4	\$2.52
*1/4	.72	1 1/2	3.50
*3/8	.77	2	5.30
1/2	1.00	2 1/2	10.00
3/4	1.26	3	14.40
1	1.80	.....	.....

Brass Ball Check Valves

Horizontal
For 150 Pounds Steam Working Pressure

This ball check valve is of good weight and is sufficiently strong to stand the steam working pressure given. Has union bonnet and malleable iron union ring. This valve can be furnished with a drip cock, at an extra price, if so desired.

Size Inches	Price Each	Size Inches	Price Each
1/2	\$1.60	1	\$3.60
3/4	2.40	1 1/4	5.60

For smaller sizes, see horizontal list. Sizes 1 1/2 and 2-inch male to order.

Brass Swing Check Valves

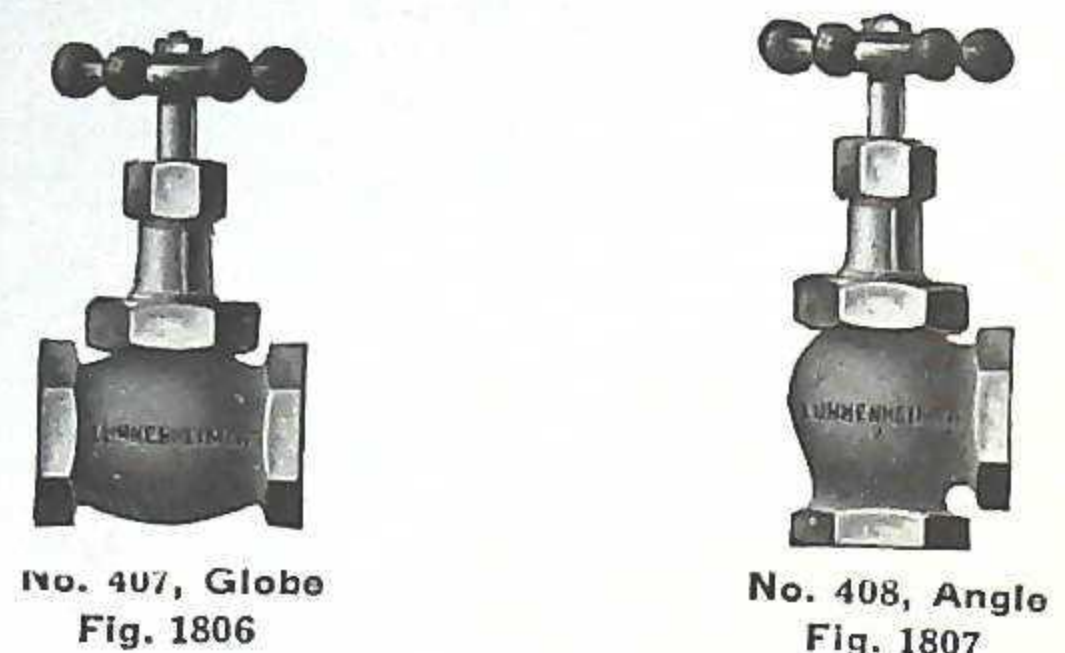
With Brass or Leather Disc
For Working Pressures: Brass Disc, 125 Pounds Steam; Leather Disc, 175 Pounds Water

Size In.	Screwed, Price, Each		Screwed, Price, Each	
	Brass Disc	Leather Disc	Brass Disc	Leather Disc
3/8	\$1.80	\$2.40	1 1/2	\$4.75
1/2	2.00	2.65	2	6.75
3/4	2.25	2.90	2 1/2	15.00
1	2.80	3.60	3	24.00
1 1/4	3.65	4.65	.....	.....

Valves for cold water preferably should have leather discs. For hot water or steam, brass discs should be used. Unless otherwise specified on order, swing check valves will be furnished with brass discs.

Lunkenheimer Bronze Globe and Angle Valves

Regrinding, Union Bonnet
For 200 Pounds Steam Working Pressure



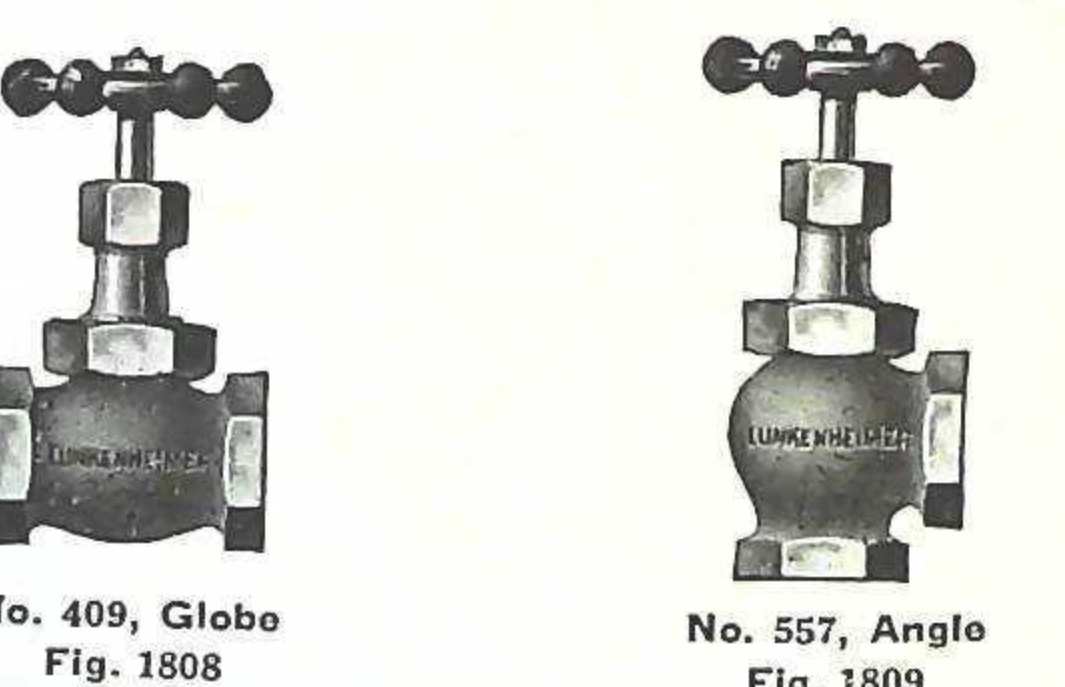
Seating surfaces are regrindable; disc and all other parts are renewable; stuffing box can be repacked when valves are under pressure and full open.

In the 1/2-inch and smaller sizes, disc and stem are integral; the stuffing box is provided with a gland follower in sizes 3/4-inch and larger, and a round slotted bonnet ring and plain rim handwheel instead of the hexagon ring and ball handwheel are furnished in sizes 2 1/2-inch and larger

Size Inches	Screwed, Price, Each		Size Inches	Screwed, Price, Each	
	No. 407 Globe	No. 408 Angle		No. 407 Globe	No. 408 Angle
1/8	\$.70	\$.70	1 1/2	\$3.90	\$3.90
1/4	.70	.70	2	6.20	6.20
3/8	.85	.85	2 1/2	12.00	12.00
1/2	1.15	1.15	3	16.50	16.50
3/4	1.45	1.45	3 1/2	30.00	30.00
1	2.00	2.00	4	40.00	40.00
1 1/4	2.80	2.80	.....	.....	.....

Lunkenheimer Bronze Globe and Angle Valves

Regrinding, Union Bonnet
For 300 Pounds Steam Working Pressure



Seating surfaces are regrindable; disc and all other parts are renewable; stuffing box can be repacked when valves are under pressure and full open.

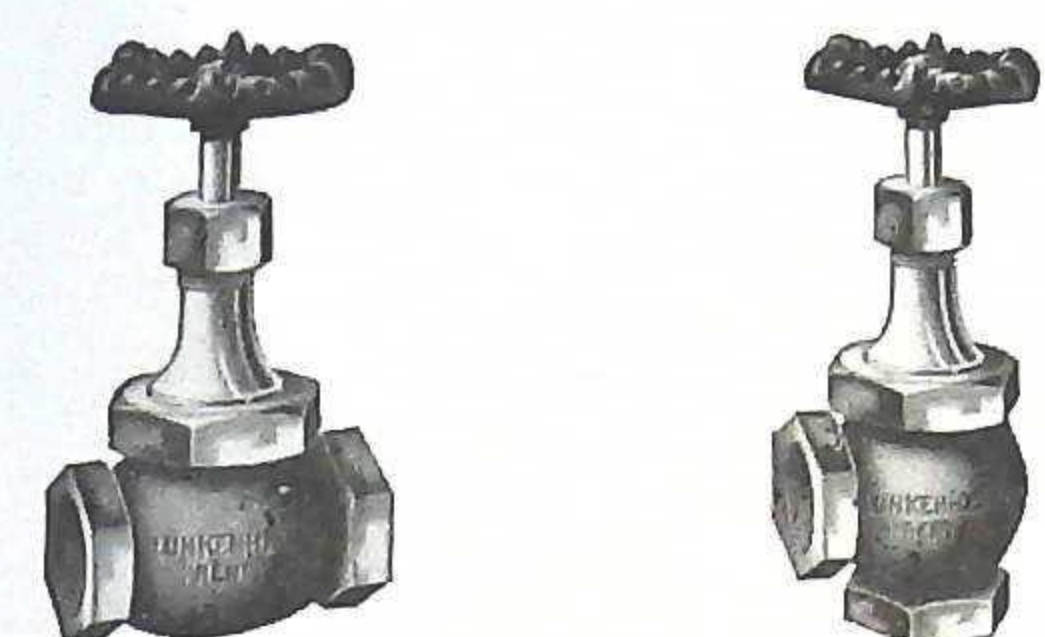
In the 1/2-inch and smaller sizes, disc and stem are integral; the stuffing box is provided with a gland follower in sizes 3/4-inch and larger, and a round slotted bonnet ring and plain rim handwheel instead of the hexagon ring and ball handwheel are furnished in sizes 2 1/2-inch and larger.

Size Inches	Screwed, Price, Each		Size Inches	Screwed, Price, Each	
	No. 409 Globe	No. 557 Angle		No. 409 Globe	No. 557 Angle
1/4	\$.90	\$.90	1 1/2	\$7.10	\$7.10
3/8	1.10	1.10	2	10.90	10.90
1/2	1.50	1.50	2 1/2	19.50	19.50
3/4	2.30	2.30	3	29.00	29.00
1	3.60	3.60	3 1/2	42.30	42.30
1 1/4	5.10	5.10	4	53.90	53.90

Lunkenheimer Renewo Bronze Globe and Angle Valves

Union Bonnet

For 200 Pounds Steam Working Pressure



Seating surfaces are regrindable; the Valve-nickel seat and disc and all other parts are renewable.

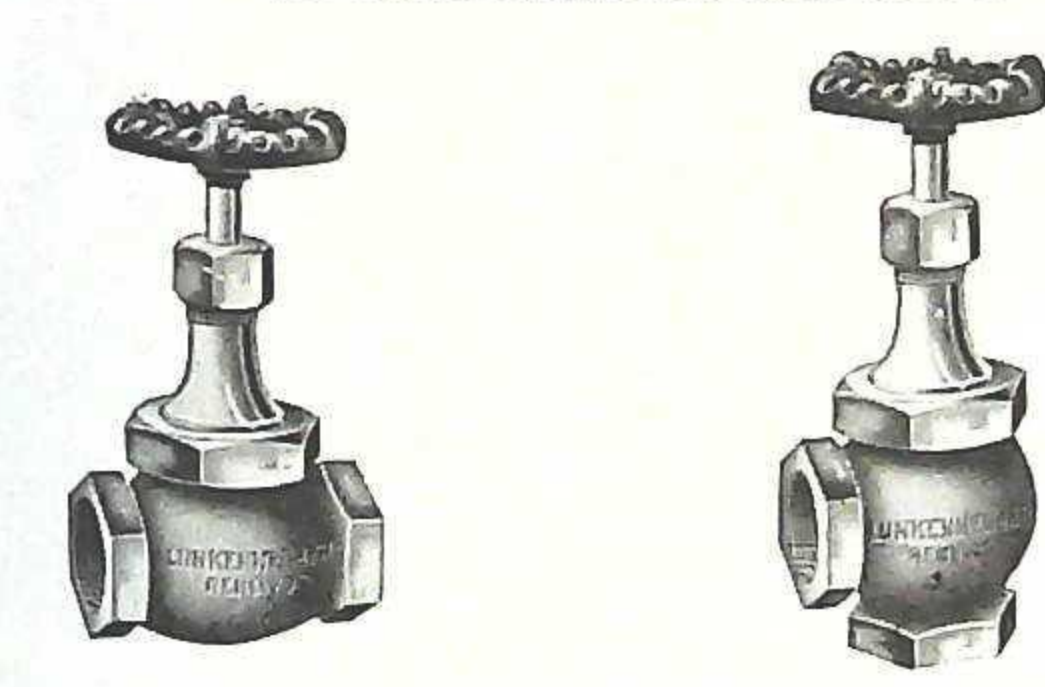
In the 1/2-inch and smaller sizes, the disc locknut is omitted, the back of the Valve-nickel swivel disc being burnished over the head of the stem; the stuffing box is provided with a gland follower in sizes 3/4-inch and larger; a slotted bonnet ring is furnished instead of the hexagon ring on sizes 2-inch and larger; self-cooling malleable iron handwheel is provided on sizes up to 2-inch, inclusive, larger sizes having plain rim handwheel.

Size Inches	Screwed, Price, Each		Size Inches	Screwed, Price, Each	
	No. 73 Globe	No. 72 Angle		No. 73 Globe	No. 72 Angle
1/4	\$1.10	\$1.10	1 1/4	\$4.00	\$4.00
3/8	1.25	1.25	1 1/2	5.50	5.50
1/2	1.60	1.60	2	8.75	8.75
3/4	2.20	2.20	2 1/2	15.75	15.75
1	2.80	2.80	3	22.00	22.00

Lunkenheimer Renewo Bronze Globe and Angle Valves

Union Bonnet

For 300 Pounds Steam Working Pressure



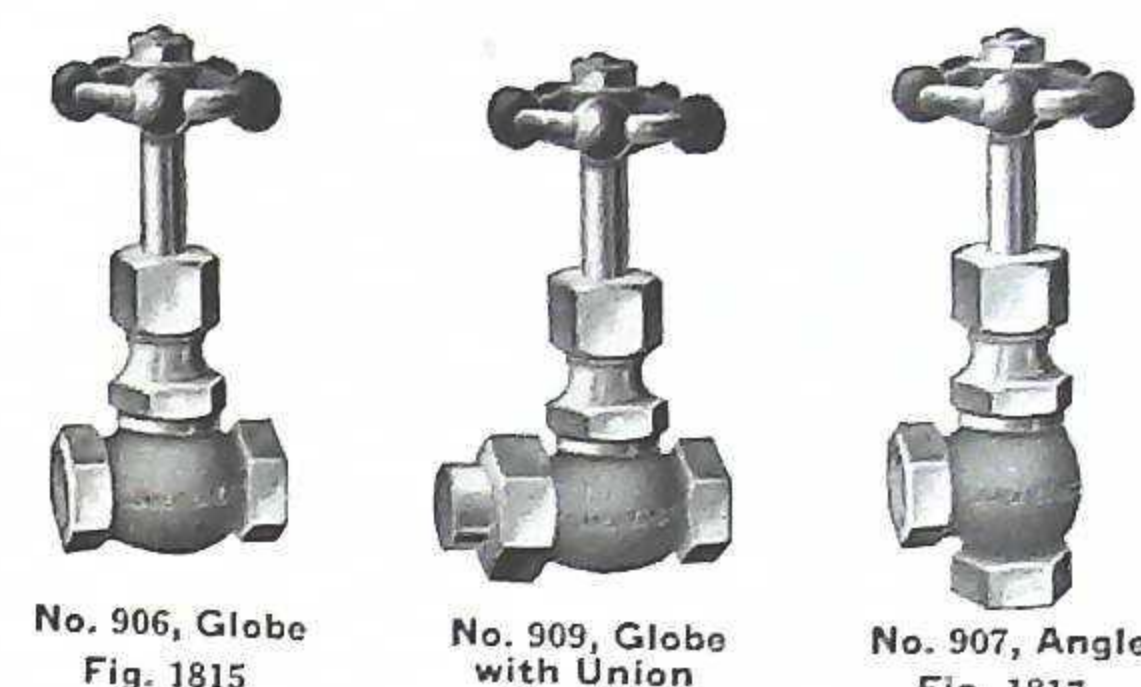
Seating surfaces are regrindable; the Valve-nickel seat and disc and all other parts are renewable.

In the 1/2-inch and smaller sizes, the disc locknut is omitted, the back of the Valve-nickel swivel disc being burnished over the head of the stem; the stuffing box is provided with a gland follower in sizes 3/4-inch and larger; a slotted bonnet ring is furnished instead of the hexagon ring on sizes 2-inch and larger; self-cooling malleable iron handwheel is provided on sizes up to 1 1/2-inch, inclusive, larger sizes having plain rim handwheel.

Size Inches	Screwed, Price, Each		Size Inches	Screwed, Price, Each	
	No. 16 Globe	No. 17 Angle		No. 16 Globe	No. 17 Angle
1/4	\$1.60	\$1.60	1 1/4	\$6.50	\$6.50
3/8	1.70	1.70	1 1/2	9.00	9.00
1/2	2.50	2.50	2	14.00	14.00
3/4	3.80	3.80	2 1/2	25.00	25.00
1	4.90	4.90	3	36.00	36.00

Lunkenheimer Bronze Needle Valves

Without Stuffing Box Gland Follower
Bronze or Steel Stem
For 200 Pounds Pressure



The Lunkenheimer standard for the included angle of the tapered seating face at end of stem is 30°. Valves with steel stem have smaller seat openings than valves with bronze stem and provide finer regulation. Diameters of seat openings are given below.

Bronze Stem, Rough Body

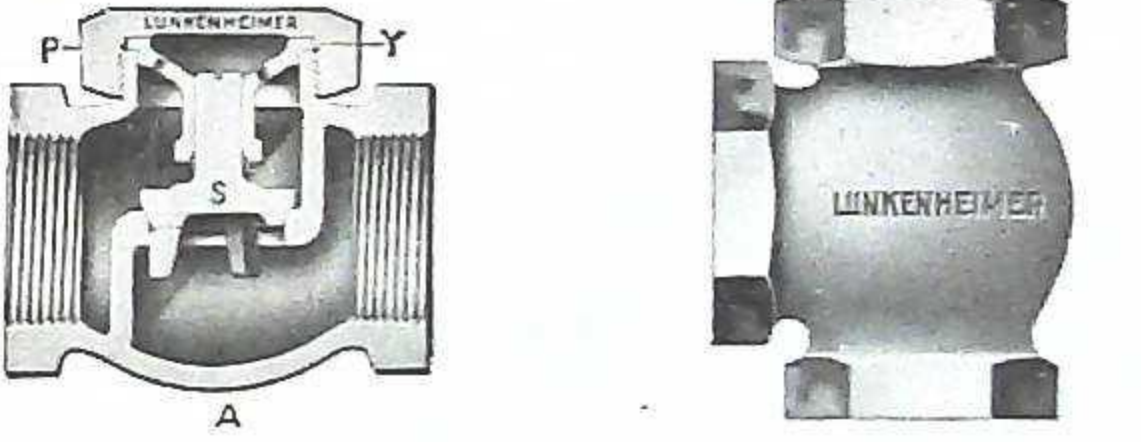
Size In.	Seat Openings In.	Price, Each			Price, Each	
		FEMALE ENDS No. 906 Globe	FEMALE ENDS No. 907 Angle	Cross No. 908	FEMALE UNION ON OUTLET No. 909 Globe	FEMALE UNION ON OUTLET No. 910 Angle
1/8	1/8	\$2.40	\$2.50	\$3.75	\$3.50	\$3.60
1/4	3/16	2.50	2.65	4.00	3.80	4.00
3/8	1/4	2.80	3.00	5.00	4.50	4.75
1/2	5/16	3.50	3.80	7.00	6.50	6.80

Steel Stem, Rough Body

Size In.	Seat Openings In.	Price, Each		Size In.	Seat Openings In.	Price, Each	
		FEMALE ENDS No. 906 Globe	FEMALE ENDS No. 907 Angle			FEMALE ENDS No. 906 Globe	FEMALE ENDS No. 907 Angle
1/8	3/16	\$2.60	\$2.70	3/8	3/8	\$3.25	\$3.50
1/4	1/8	2.75	2.90	1/2	1/2	4.00	4.40

Lunkenheimer Bronze Check Valves

Horizontal, Angle and Vertical
Regrinding, Screwed Cap
For 200 Pounds Steam Working Pressure



Seating surfaces are regrindable; all parts are renewable; areas throughout the body are in excess of that of the connecting pipe; the disc is well guided at both the top and bottom, insuring perfect seating.

On the 2 1/2-inch and larger sizes, a round slotted cap is provided instead of the hexagon cap shown.

Size Inches	Screwed, Price, Each		
	No. 414 Horizontal	No. 415 Angle	No. 418 Vertical
1/8	\$.50	\$.50	\$.50
1/4	.50	.50	.60
3/8	.60	.60	.85
1/2	.85	.85	1.15
3/4	1.15	1.15	1.55
1	1.55	1.55	2.30
1 1/4	2.30	2.30	3.25
1 1/2	3.25	3.25	5.20
2	5.20	5.20	10.00
2 1/2	10.00	10.00	14.00
3	14.00	14.00	19.75
3 1/2	19.75	19.75	30.75
4	30.75	30.75	.....

Lunkenheimer Bronze Check Valves

Horizontal, Angle and Vertical

Regrinding, Screwed Cap

For 300 Pounds Steam Working Pressure



No. 413, Horizontal
Fig. 1821



No. 621, Angle
Fig. 1822

Seating surfaces are regrindable; all parts are renewable; areas throughout the body are in excess of that of the connecting pipe; the disc is well guided at both the top and bottom, insuring perfect seating.

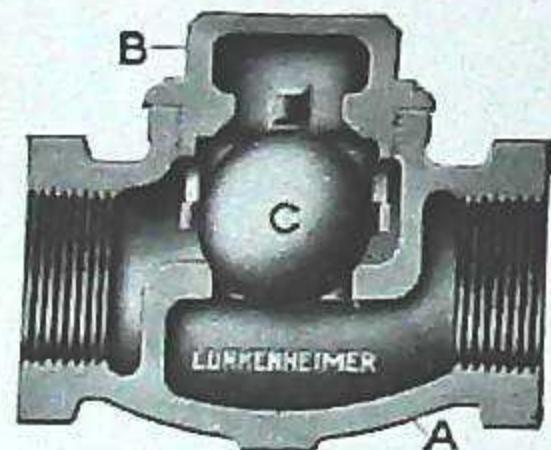
On the 2 1/2-inch and larger sizes, a round slotted cap is provided instead of the hexagon cap shown

Size Inches	SCREWED, PRICE, EACH		
	No. 413 Horizontal	No. 621 Angle	No. 622 Vertical
1/4	\$.90	\$.90	\$.90
3/8	1.00	1.00	1.00
1/2	1.20	1.20	1.20
3/4	1.70	1.70	1.70
1	2.80	2.80	2.80
1 1/4	3.90	3.90	3.90
1 1/2	5.50	5.50	5.50
2	8.90	8.90	8.90
2 1/2	16.20	16.20	16.20
3	24.30	24.30	24.30
3 1/2	35.40	35.40	35.40
4	45.20	45.20	45.20

Lunkenheimer Bronze Ball Check Valves

Horizontal, Angle and Vertical
Screwed Cap

For 200 Pounds Steam Working Pressure



No. 416 Horizontal
Fig. 1823



No. 739 Angle
Fig. 1824



No. 740 Vertical
Fig. 1825

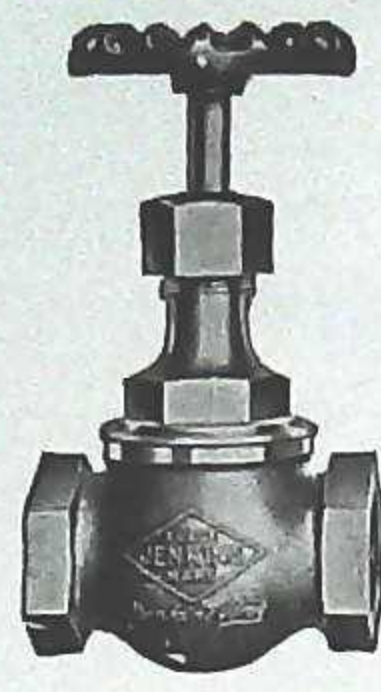
These valves embody features essential to successful operation under service conditions for which the ball type of check valve is suitable.

The non-ferrous metal balls are manufactured under the most modern method, each is specially gauged and the guide is designed to minimize wear.

Size Inches	SCREWED, PRICE, EACH		
	No. 416 Horizontal	No. 739 Angle	No. 740 Vertical
1/8	\$.85	\$.85	\$.85
1/4	.95	.95	.95
3/8	1.10	1.10	1.10
1/2	1.60	1.60	1.60
3/4	2.30	2.30	2.30
1	3.50	3.50	3.50
1 1/4	5.30	5.30	5.30
1 1/2	7.50	7.50	7.50
2	11.50	11.50	11.50
2 1/2	18.00	18.00	18.00
3	27.00	27.00	27.00

Jenkins Bronze Globe and Angle Valves

For 150 Pounds Steam Working Pressure, 250 Pounds Water



No. 106, Globe Screwed
Fig. 1826

Disc holder, made of bronze or other suitable metal and a removable disc made of a softer material, preferably the Jenkins composition disc which presents a slightly yielding surface to the valve seat, and is flexible enough to adapt itself to inequalities of seat.



No. 108, Angle Screwed
Fig. 1827

Size In.	Price Each	Size In.	Price Each
1/8	\$1.10	1 1/4	\$4.00
1/4	1.10	1 1/2	5.50
3/8	1.25	2	8.75
1/2	1.60	2 1/2	15.75
3/4	2.20	3	22.00
1	2.80	...	...

No. 110 Jenkins Bronze Cross Valves

For 150 Pounds Steam Working Pressure, 250 Pounds Water



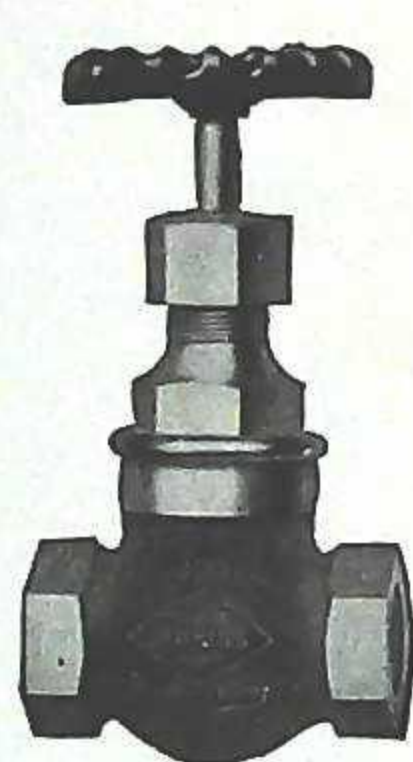
No. 110, Screwed
Fig. 1828

This valve contains a disc holder, made of bronze or other suitable metal, and a removable disc, made of a softer material, preferably the Jenkins Composition Disc.

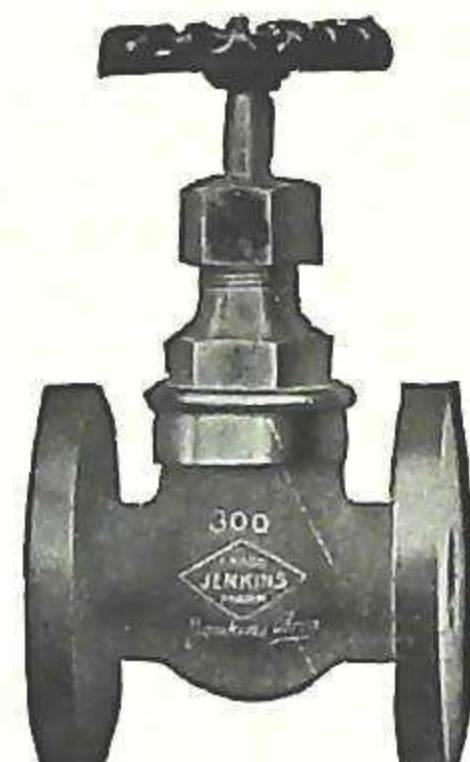
Size In.	Price Each	Size In.	Price Each
1/4	\$2.25	1 1/4	\$6.25
3/8	2.65	1 1/2	8.20
1/2	2.95	2	12.50
3/4	3.30	2 1/2	26.25
1	4.25	3	36.00

Jenkins Bronze Globe and Angle Valves

For 300 Pounds Steam Working Pressure, 500 Pounds Water



No. 128, Globe Screwed
Fig. 1829



No. 129, Globe Flanged
Fig. 1829A



No. 130, Angle Screwed
Fig. 1829B

These valves are well proportioned, handsomely finished, and have all the most improved features of construction necessary to meet the requirements of up-to-date practice.

The spindles, made of manganese bronze, are large and have powerful Acme Standard threads. The stuffing boxes are fitted with glands or followers, and are so arranged that they can be repacked when valves are wide open and under pressure. Seat rings are removable and can be reground or renewed when necessary.

PRICE, EACH		PRICE, EACH	
Size In.	No. 128, Globe No. 130, Angle Screwed	Size In.	No. 129, Globe No. 131, Angle Flanged
1/4	\$3.00	1 1/4	\$8.25
3/8	3.50	1 1/2	11.00
1/2	4.00	2	16.00
3/4	5.00	2 1/2	33.00
1	6.50	3	45.00

Jenkins Bronze Check Valves

Horizontal, Vertical and Angle

For 150 Pounds Steam Working Pressure



No. 117, Horizontal Screwed
Fig. 1831



No. 118, Angle Screwed
Fig. 1832



No. 119, Vertical Screwed
Fig. 1833

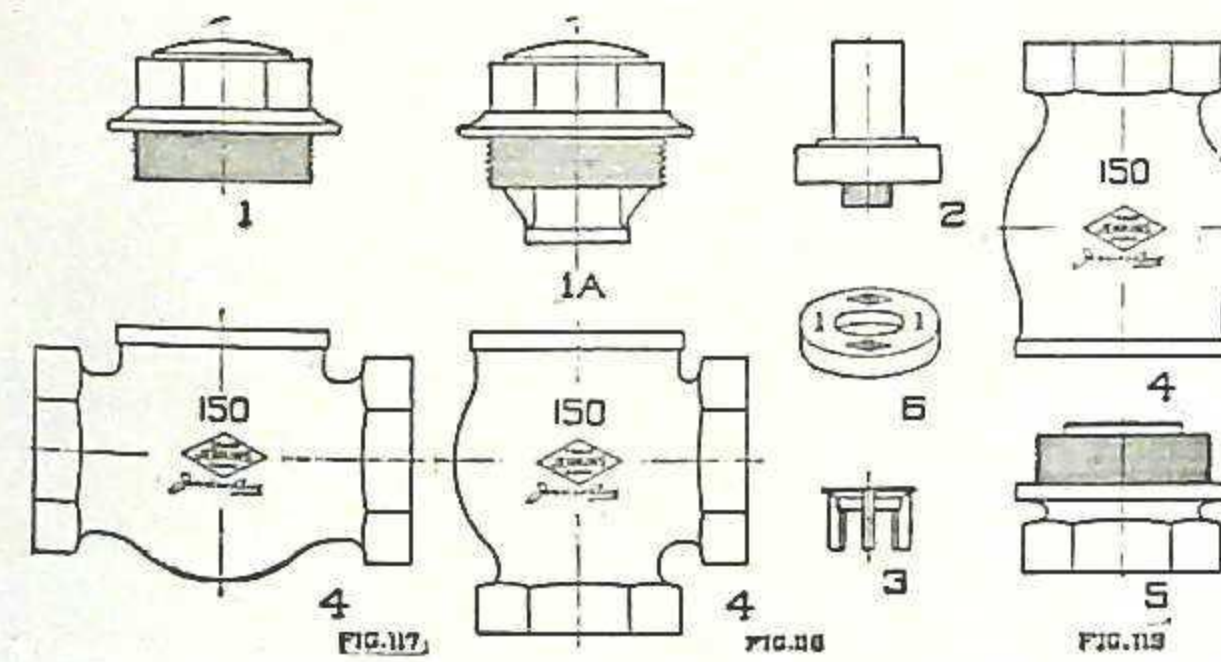
Tightness does not depend on regrinding, for instead of the common metal clapper, these valves contain an accurately guided brass disc holder and a renewable Jenkins Disc.

As regularly furnished, all check valves are fitted with a Jenkins No. 110 Disc which will soften slightly under the action of hot water. When ordered for cold water, air or gases, a slightly softer disc is supplied. The Jenkins Discs are specially compounded and will retain their toughness and resiliency indefinitely. When necessary to repair, valves can be made as good as new at small cost by removing cap and renewing disc.

Size In.	FACE TO FACE FLANGED, IN.		Center to Face Flanged In.	Diam. Flanges In.	PRICE, EACH	
	Horiz.	Vert.			No. 117, Horiz. No. 118, Angle No. 119, Vert. Screwed	No. 120, Horiz. No. 120A, Angle No. 120B, Vert. Flanged
1/8	2 1/8	2 1/8	1 1/8	2 1/2	\$1.10	.....
1/4	2 3/8	2 3/8	1 3/8	2 1/2	1.10	.....
3/8	3	3 1/8	2 1/8	2 1/2	1.20	.....
1/2	3 1/8	3 3/8	2 3/8	3	1.30	\$4.00
3/4	3 3/8	3 5/8	2 5/8	3 1/2	1.90	5.00
1	4	4 3/8	2 5/8	4	2.60	6.00
1 1/4	4 3/8	4 5/8	2 5/8	4 1/2	3.60	8.00
1 1/2	4 7/8	5 1/8	3 3/8	5	5.00	10.00
2	6	6 1/4	3 3/4	6	7.50	15.00
2 1/2	6 3/4	7 3/8	4 1/4	7	14.00	23.00
3	7 1/2	9 1/8	4 3/4	7 1/2	21.00	32.00

Repairs for Jenkins Bronze Check Valves

Horizontal, Angle and Vertical



Size Inches	PRICE, EACH					
	No. 1 Cap	No. 1A Cap	No. 2 Disc Holder	No. 3 Disc Nut	No. 5 Hub	No. 6 Disc
1/8	\$.40	\$.40	\$.15	\$.05	\$.40	\$.06
1/4	.50	.50	.30	.06	.50	.06
3/8	.50	.50	.30	.06	.50	.08
1/2	.50	.50	.30	.10	.50	.08
3/4	.70	.70	.40	.20	.70	.10
1	1.00	1.00	.50	.20	1.00	.12
1 1/4	1.20	1.20	.60	.35	1.20	.18
1 1/2	1.60	1.60	.80	.45	1.60	.24
2	2.30	2.30	1.00	.50	2.30	.36
2 1/2	4.00	4.00	2.35	.55	4.00	.48
3	5.30	5.30	3.90	1.10	5.30	.80

No. 352 Jenkins Bronze Swing Check Valves

For 150 Pounds Steam Working Pressure



No. 352, Screwed
Fig. 1835

Size Inches	Price Each	Size Inches	Price Each
1/4	\$1.20	1 1/4	\$3.60
3/8	1.20	1 1/2	5.00
1/2	1.30	2	7.50
3/4	1.90	2 1/2	14.00
1	2.60	3	21.00

Jenkins Bronze Swing Check Valves

For 300 Pounds Steam Working Pressure

Can be used in either horizontal or vertical position.



No. 260, Screwed
Fig. 1836

Size In.	PRICE, EACH	
	No. 260 Screwed	No. 262 Flanged
1/2	\$4.50	\$7.50
3/4	5.00	9.50
1	6.50	12.50
1 1/4	8.00	15.00
1 1/2	11.50	21.00
2	17.00	29.00
2 1/2	30.00	45.00
3	44.00	60.00

No. 657 Jenkins Bronze Horizontal Check Valves With Drip Cock

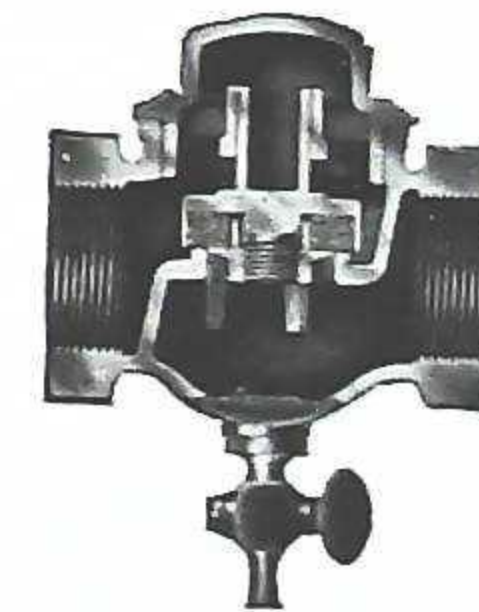


Fig. 1837

Size	Price, with Drip Cock	Price, Boss Only
1/2	\$2.60	2.25
3/4	3.30	2.90
1	4.25	3.75
1 1/4	5.50	5.00

No. 223 Jenkins Composition Discs

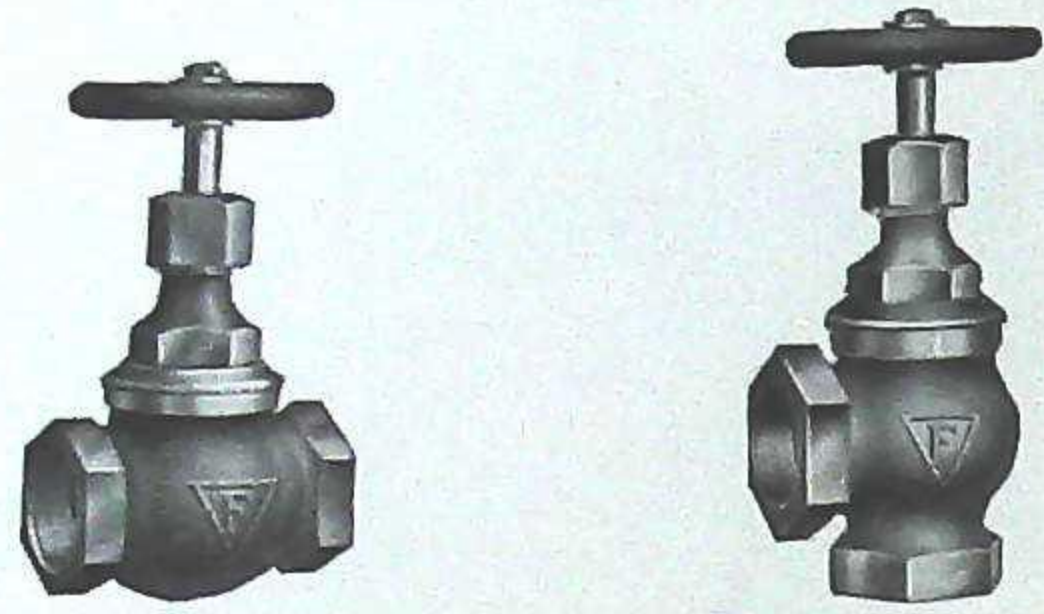
For 150 Pounds Steam Working Pressure



Fig. 1838

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/4	\$.06	2	\$.36	6	\$2.00	16	\$8.00
3/8	.08	2 1/2	.48	7	2.40	18	10.00
1/2	.08	3	.80	8	2.80	20	12.00
3/4	.10	3 1/2	1.00	9	3.60	22	15.00
1	.12	4	1.20	10	4.50	24	18.00
1 1/4	.18	4 1/2	1.40	12	5.00	..	..
1 1/2	.24	5	1.60	14	7.00	..	..

Fairbanks Bronze Globe and Angle Valves
Renewable Vulcabeston Ring Disc—Follower Gland
For 150 Pounds Steam Working Pressure; 175 Pounds Water



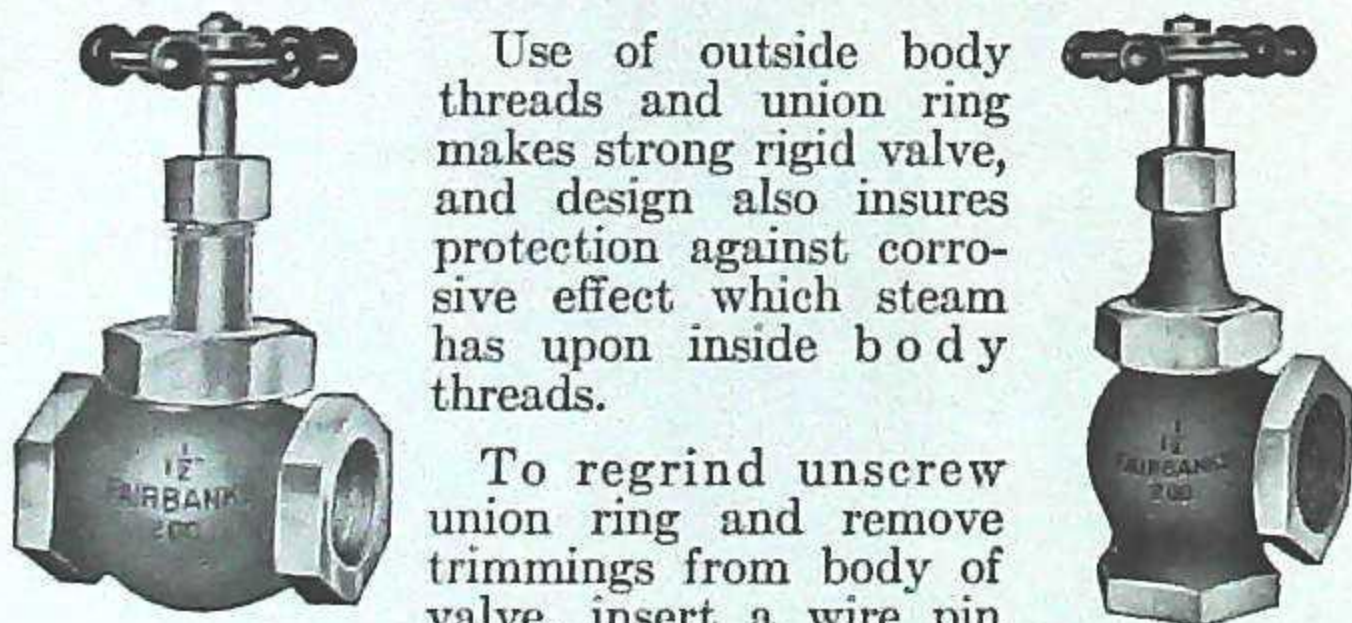
No. 01, Globe, Screwed Fig. 1841
No. 03, Angle, Screwed Fig. 1842

The stuffing box is packed with a specially moulded Vulcabeston ring, which is durable and cannot be blown or washed out. The packing ring is held in place by a follower gland, except in the 1/4 and 3/8-inch sizes.

Valves can be packed under pressure, when wide open.

Size Inches	Face to Face Flanged Inches	Center to Face Flanged Inches	Diam. Flanges Inches	PRICE, EACH	
				No. 01, Globe, Screwed	No. 02, Globe, Angle, Flanged
1/8	...	...	...	\$1.10	.....
1/4	...	...	...	1.25	.....
3/8	2 7/8	2 1/4	3	1.60	\$4.00
1/2	3 1/4	2 5/8	3 1/2	2.20	5.00
3/4	3 3/8	3	4	2.80	6.00
1	4 3/8	3 1/4	4 1/2	4.00	9.00
1 1/4	4 7/8	3 3/8	5	5.50	11.00
1 1/2	6	4 1/8	6	8.75	16.50
2	6 7/8	4 3/8	7	15.75	25.00
2 1/2	7 1/8	5 1/8	7 1/2	22.00	34.00

Fairbanks Bronze Globe and Angle Valves
Regrinding—Follower Gland
For 200 Pounds Steam Working Pressure



Globe, Screwed Fig. 1843
Angle, Screwed Fig. 1844

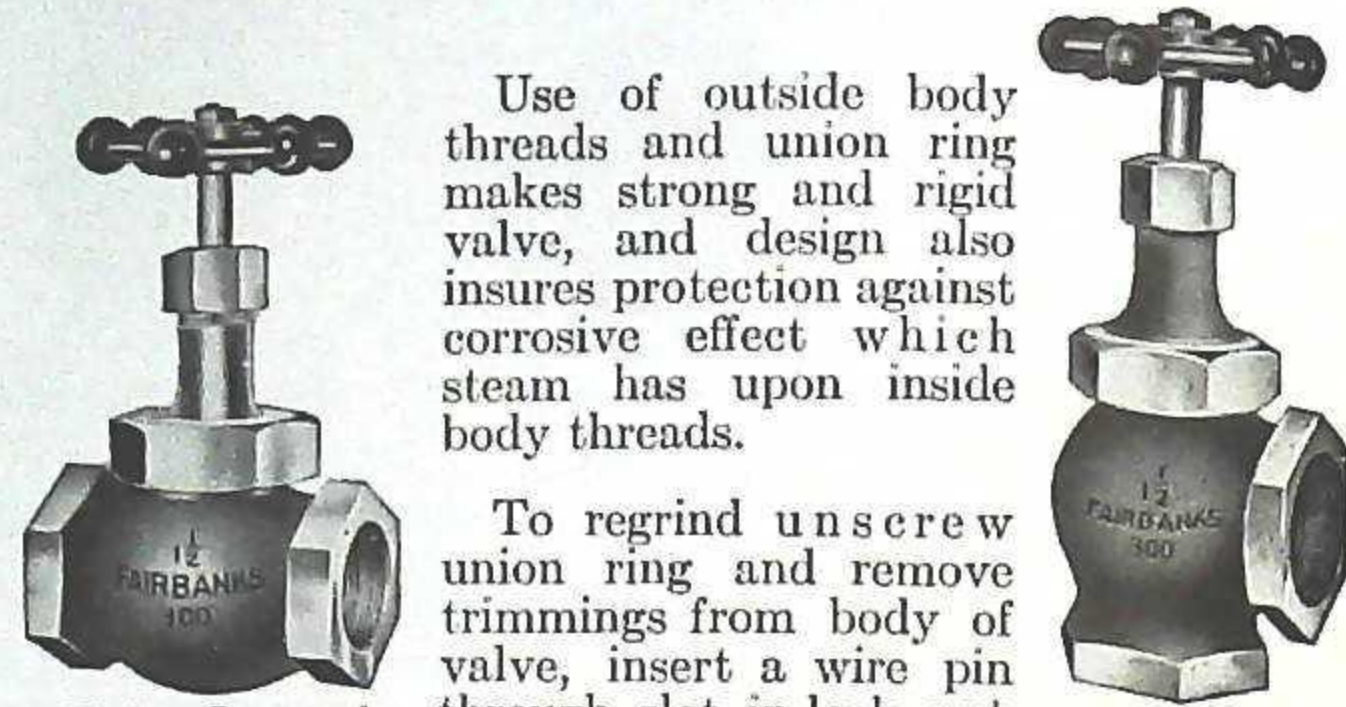
Use of outside body threads and union ring makes strong rigid valve, and design also insures protection against corrosive effect which steam has upon inside body threads.

To regrind unscrew union ring and remove trimmings from body of valve, insert a wire pin through slot in lock nut and hole in valve stem and, after placing upon disc a small quantity of powdered sand or glass mixed with oil, replace the trimmings. Leave union ring unscrewed so that hub may rotate in body of valve and act as a guide for stem during the process of regrinding.

Size Inches	Face to Face Flanged Inches	Center to Face Flanged Inches	Diameter Flanges Inches	PRICE, EACH	
				No. 029 Globe, Screwed	No. 030 Angle, Flanged
1/4	...	...	...	\$0.70	.....
3/8	2 7/8	1 3/4	2 1/2	.85	\$2.20
1/2	3 5/8	1 3/2	3	1.15	3.40
3/4	4 3/8	2 1/4	3 1/2	1.45	4.70
1	4 5/8	2 1/2	4	2.00	5.80
1 1/4	4 7/8	2 3/8	4 1/2	2.80	8.00
1 1/2	5 7/8	3 3/8	5	3.90	11.00
2	6 7/8	3 5/8	6	6.20	14.50
2 1/2	7 7/8	4 3/8	7	12.00	21.00
3	8 7/8	4 5/8	7 1/2	16.50	29.00

Valves made to meet the requirements of the United States Navy Department carry special prices.

Fairbanks Bronze Globe and Angle Valves
Regrinding—Follower Gland
For 300 Pounds Steam Working Pressure



Globe, Screwed Fig. 1845
Angle, Screwed Fig. 1846

Use of outside body threads and union ring makes strong and rigid valve, and design also insures protection against corrosive effect which steam has upon inside body threads.

To regrind unscrew union ring and remove trimmings from body of valve, insert a wire pin through slot in lock nut and hole in valve stem and after, placing upon disc a small quantity of powdered sand or glass mixed with oil, replace the trimmings. Leave union ring unscrewed so that hub may rotate in body of valve and act as a guide for stem during the process of regrinding.

Size Inches	Face to Face Flanged Inches	Center to Face Flanged Inches	Diameter Flanges Inches	PRICE, EACH	
				No. 034 Globe, Screwed	No. 035 Angle, Flanged
1/4	...	...	...	\$0.90	.....
3/8	3 1/4	2 3/4	3	1.10	.....
1/2	3 7/8	2 3/8	3 1/2	1.50	.....
3/4	4 1/2	2 1/2	4	2.30	.....
1	4 3/4	3	4 1/2	3.60	\$7.60
1 1/4	5 1/4	3 3/4	5	5.10	11.00
1 1/2	6 3/8	3 9/8	6	7.10	14.00
2	7 3/8	4 1/8	6 1/2	10.90	20.00
2 1/2	8 3/8	4 9/8	7 1/2	19.50	32.00
3	9 3/8	5 1/8	8 1/4	29.00	44.00

No. 0601 Fairbanks Bronze Swing Check Valves

Straightway Pattern, Bronze Disc
For 300 Pounds Hydraulic Test Pressure, 150 Pounds Steam Working Pressure, 175 Pounds Water Working Pressure



Fig. 1847

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/4	\$2.50	3/4	\$3.10	1 1/2	\$7.00	3	\$27.00
3/8	2.50	1	4.00	2	10.00	..	.....
1/2	2.75	1 1/4	5.50	2 1/2	19.00	..	.....

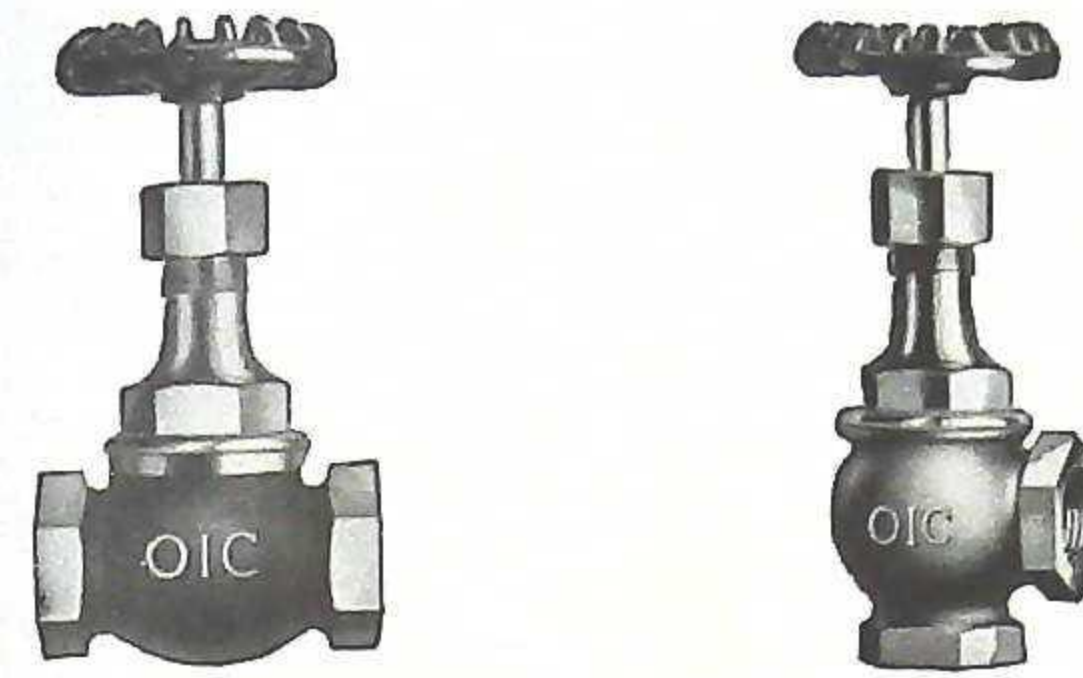
Fairbanks Valve Discs



No. 019 Fig. 1848
No. 021 Fig. 1849

No. 019 is a vulcabeston ring with brass holder.		No. 021 is a special metal ring with brass holder.	
Size Inches	Price, Each	Size Inches	Price, Each
1/8	\$0.21	1 1/4	\$0.38
1/4	.21	1 1/2	.51
3/8	.16	2	.70
1/2	.19	2 1/2	1.20
3/4	.23	3	1.61
1	.28	..	.....

O. I. C. Bronze Globe and Angle Valves
Composition Disc
For 200 Pounds Steam Working Pressure



Globe, Screwed Fig. 1851
Angle, Screwed Fig. 1852

These valves are made of a high-grade steam metal. The composition disc is made of a special compound especially adapted for use under severe service of all kinds, and does not become brittle and break, but will wear down until entirely worn out.

The valves can be packed while under pressure by screwing stem back as far as possible. For packing, a special molded split ring is used which fits stuffing box and spindle perfectly and requires little compression to hold steam tight. This ring is composed of braided asbestos thoroughly lubricated and coated with graphite, which prevents friction and wear upon the stem.

Size In.	Globe and Angle Screwed Price Each	Size In.	Globe and Angle Screwed Price Each	Size In.	Globe and Angle Screwed Price Each
1/8	\$1.10	3/4	\$2.20	2	\$8.75
1/4	1.10	1	2.80	2 1/2	15.75
3/8	1.25	1 1/4	4.00	3	22.00
1/2	1.60	1 1/2	5.50	...	.....

O. I. C. Bronze Cross Valves
Composition Disc
For 200 Pounds Steam Working Pressure



Screwed Fig. 1853

The composition disc used is made of a special compound especially adapted for use under severe service of all kinds, and does not become brittle and break, but will wear down until entirely worn out.

This valve can be packed while under pressure by screwing stem back as far as possible.

Size In.	Screwed Price Each	Size In.	Screwed Price Each
1/4	\$1.70	1 1/4	\$4.75
3/8	2.00	1 1/2	6.25
1/2	2.25	2	9.50
3/4	2.50	2 1/2	20.00
1	3.25	3	27.50

O. I. C. Bronze Check Valves
Horizontal and Angle

Composition Disc

For 200 Pounds Steam Working Pressure

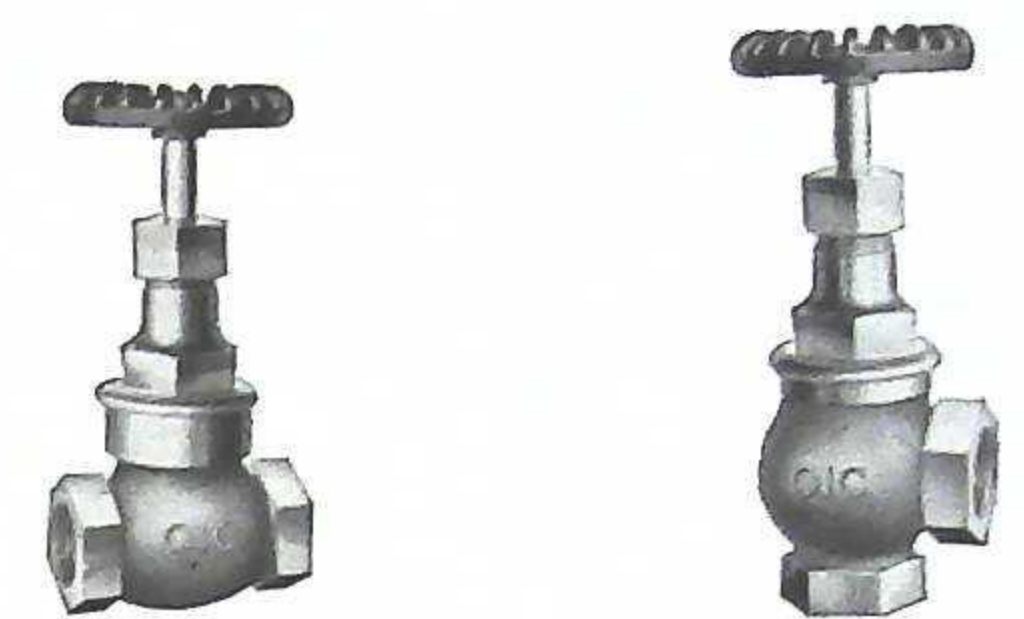
The composition disc is made of a special compound especially adapted for use under severe service of all kinds, and does not become brittle and break, but will wear down until entirely worn out.

Size In.	Horizontal and Angle Screwed Price Each	Size In.	Horizontal and Angle Screwed Price Each	Size In.	Horizontal and Angle Screwed Price Each
1/4	\$1.10	1	\$2.60	2 1/2	\$13.50
3/8	1.20	1 1/4	3.60	3	21.00
1/2	1.30	1 1/2	5.00	...	.....
3/4	1.90	2	7.50	...	.....



Horizontal, Screwed Fig. 1854

O.I.C. Brass Globe and Angle Valves
Renewable Disc and Seat
For 300 Pounds Steam Working Pressure



No. 300, Globe Fig. 1855
No. 301, Angle Fig. 1856

Valves with flat seat and renewable discs always furnished unless otherwise specified.

Size Inches	Face to Face Flanged Inches	Center to Face Flanged Inches	Diameter Flanges Inches	PRICE, EACH	
				Globe No. 300 Angle No. 301 Screwed	Globe No. 302 Angle No. 303 Flanged
3/8	...	...	...	\$3.50	.....
1/2	...	...	...	4.00	\$6.00
3/4	...	...	...	5.00	7.50
1	4 3/4	2 7/8	4 1/2	6.50	10.00
1 1/4	5 1/2	3 1/4	5	8.25	13.00
1 1/2	6 1/4	3 3/8	6	11.00	17.00
2	7 1/4	4 1/8	6 1/2	16.00	24.00
2 1/2	8 1/4	4 3/4	7 1/2	33.00	43.00
3	9 1/2	5 1/8	8 1/4	45.00	57.00

O.I.C. Needle Point Brass Globe and Angle Valves

For 200 Pounds Steam Working Pressure

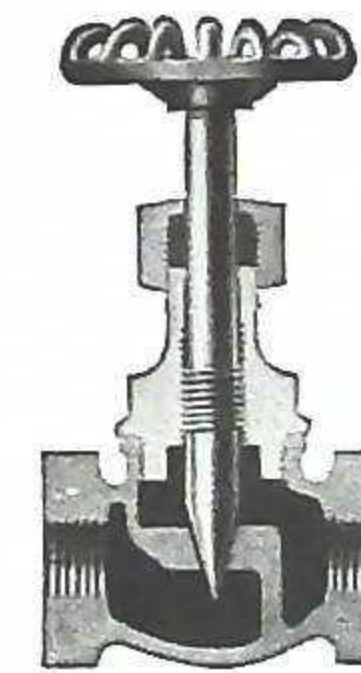


Fig. 1857

These valves are accurately made from high grade valve bronze and all parts are interchangeable and renewable. The long taper seat and fine pitch thread on stem afford a means of regulating or throttling to a fine degree and it is for this purpose that these valves are usually employed. Other sizes feed openings furnished.

Size In.	Feed Opening, In.	PRICE, EACH		
		Steel Stem	Globe	Angle with Union
1/8	1/8	\$1.20	\$1.20	\$2.00
1/4	3/8	1.40	1.40	2.00
3/8	1/2	1.50	1.50	2.20
1/2	5/8	2.00	2.00	3.00
3/4	7/8	2.50	2.50	3.50

O. I. C. Valve Discs

For Working Pressures: 300 Pounds Steam; 550° Fahrenheit; 1000 Pounds Hydraulic

Not affected by oils, acids or alkalis. Guaranteed to give results under the most exacting conditions, whether on high or low pressure.

Size In.	PRICE, EACH		Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Composition Disc	Steam Metal Disc		Composition Disc	Steam Metal Disc		Composition Disc	Steam Metal Disc
1/8	\$.06	...	1 1/2	\$.24	\$.30	5	\$1.60	\$2.30
1/4	.06	\$.14	2	.36	.34	6	2.00	2.60
3/8	.08	.14	2 1/2	.48	.60	7	2.40	3.70
1/2	.08	.16	3	.80	.85	8	2.80	4.00
3/4	.10	.20	3 1/2	1.00	1.35	10	4.50	5.60
1	.12	.22	4	1.20	1.60	12	5.00	7.30
1 1/4	.18	.28	4 1/2	1.40	2.00	...	.....	.....



Fig. 1858

Brass Gate Valves

Double Disc, Parallel Seats

For Steam Working Pressures: 3 Inch and Smaller, 125 Pounds;
3 1/2 Inch and Larger, 100 Pounds



May be repacked when under pressure.

Size In.	Screwed Price Each		PRICE, EACH	
	Size In.	Price Each	Screwed	Flanged
1/4	1/4	\$1.45	\$ 7.30	\$25.00
3/8	3/8	1.45	13.00	33.00
1/2	1/2	1.65	19.00	39.00
3/4	3/4	2.05	43.00	68.00
1	1	2.80	58.00	83.00
1 1/4	1 1/4	3.70	110.00	135.00
1 1/2	1 1/2	5.00	165.00	190.00

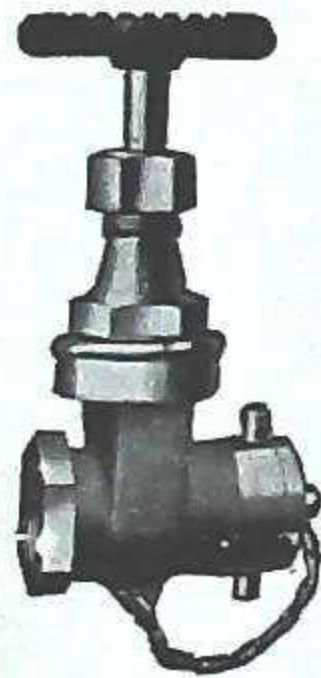
*Have flanged bonnet, and non-rising stem.

Screwed Fig. 1861

Brass Hose Gate Valves

Iron Wheel, Rough Body, Plain, Double Disc, Taper Seats, Rising Steam

For Working Pressures: Steam, 125 Pounds, Water, 175 Pounds



Size In.	PRICE, EACH		PRICE, EACH	
	With Cap and Chain	Without Cap and Chain	With Cap and Chain	Without Cap and Chain
1	\$5.10	\$3.35	\$12.60	\$9.00
1 1/4	6.70	4.70	20.00	15.00
1 1/2	8.85	6.25	29.50	22.00

Made to order only.

When ordering, always supply thread information to avoid delay.

Fig. 1862

No. 427 Lunkenheimer Bronze Gate Valves

Double Disc, Rising Stem Inside Screw, Screwed Bonnet

For 150 Pounds Steam Working Pressure



Ball and socket bearing between discs provides greatest degree of flexibility in seating engagement, insuring a tight valve. Discs are guided by ribs cast within body.

Stuffing box is repackable when valve is under pressure and full open. Sizes 1-inch and larger have gland in stuffing box.

All parts are renewable. Pressure can be taken from either end.

Size In.	No. 427 Screwed Price, Ea.		No. 427 Screwed Price, Ea.	
	Size In.	Price, Ea.	Size In.	Price, Ea.
1/4	1/4	\$1.10	2 1/2	\$14.00
3/8	3/8	1.10	3	20.00
1/2	1/2	1.30	...	...
3/4	3/4	1.90	...	...

Fig. 1863

No. 768 Lunkenheimer Bronze Gate Valves

Wedge Disc, Stationary Stem, Inside Screw Screwed Bonnet

For 200 Pounds Steam Working Pressure

This valve is of the wedge disc, double seated type, permitting pressure to be taken from either end.

The disc is well guided by ribs cast within the body.

A gland is provided in the stuffing box of the 3/4-inch and larger sizes.

Size In.	No. 768 Screwed Price Each		No. 768 Screwed Price Each	
	Size In.	Price Each	Size In.	Price Each
1/4	1	\$1.70	2 1/2	\$17.00
3/8	1 1/4	1.70	3	24.00
1/2	1 1/2	1.80	...	...
3/4	2	2.30	...	...



Fig. 1864

Jenkins Bronze Gate Valves

Inside Screw Stationary Spindle

For 125 Pounds Steam Working Pressure; 175 Pounds Water



This valve has gland stuffing box. Fitted with malleable iron, non-heat hand wheel.

Size In.	PRICE, EACH		No. 371 Flanged
	No. 370 Screwed	Price Each	
1/4	No. 370	\$1.45	.....
3/8	1.45	1.65	.....
1/2	2.05	2.80	.....
3/4	2.80	3.70	.....
1	3.70	5.00	.....
1 1/4	5.00	7.30	.....
1 1/2	7.30	13.00	.....
2	13.00	19.00	.....
2 1/2	19.00	.....	.....
3	.....	.....	.....

No. 370 Screwed Fig. 1865

Jenkins Bronze Gate Valves

Inside Screw, Stationary Spindle

For 175 Pounds Steam Working Pressure, 250 Pounds Water



Made of high grade bronze steam metal with spindles of manganese bronze. Gland stuffing box can be repacked when valve is wide open and under pressure. Regular valve has malleable iron non-heat hand wheel.

Size In.	PRICE, EACH		PRICE, EACH	
	No. 270 Screwed	No. 271 Flanged	No. 270 Screwed	No. 271 Flanged
1/4	\$2.35	.....	\$6.00	\$16.25
3/8	2.35	.....	8.00	21.50
1/2	2.75	.....	13.00	31.00
3/4	3.25	\$10.25	20.00	45.00
1	4.50	12.50	32.50	67.50

Fig. 1866

Jenkins Bronze Gate Valves

Inside Screw Stationary Spindle

For 250 Pounds Steam Working Pressure; 400 Pounds Water

The spindle of this valve is manganese bronze.

It is fitted with malleable iron, non-heat hand wheel.

Size In.	PRICE, EACH	
	No. 280 Screwed	No. 281 Flanged
1/2	\$5.00	.....
3/4	6.00	\$13.00
1	8.00	16.00
1 1/4	11.25	21.50
1 1/2	16.50	30.00
2	23.00	41.00
2 1/2	40.00	65.00
3	65.00	100.00

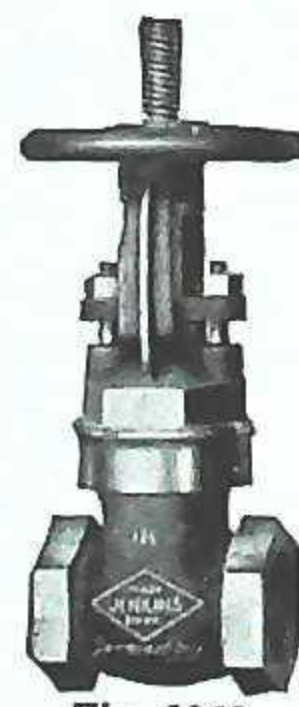


No. 280 Screwed Fig. 1867

Jenkins Bronze Gate Valves

Outside Screw and Yoke, Rising Spindle

Working Pressure: 125 Pounds Steam; 175 Pounds Water



The yoke is in one piece with the bonnet, and has gland stuffing box which can be repacked when valve is wide open.

Size In.	Face to Face Flanged Inches	Diam. Flanges Inches	PRICE, EACH	
			No. 368 Screwed	No. 369 Flanged
3/4	3 3/8	3 1/2	\$7.50	\$13.20
1	3 5/8	4	8.50	14.00
1 1/4	4 1/2	4 1/2	9.70	16.00
1 1/2	4 7/8	5	12.00	20.00
2	5 3/4	6	16.30	30.00
2 1/2	6 1/2	7	25.00	38.50
3	7 3/8	7 1/2	40.50	52.00

Fig. 1868 No. 368, Screwed

Jenkins Bronze Gate Valves

Outside Screw and Yoke, Rising Spindle

Working Pressure: 175 Pounds Steam; 250 Pounds Water

The wheel has an arrow on the hub to indicate the direction in which to turn to open or close.

Size In.	Face to Face Flanged Inches	Diam. Flanges Inches	PRICE, EACH	
			No. 275 Screwed	No. 276 Flanged
3/4	3 3/8	4	\$8.75	\$16.00
1	4 1/4	4 1/2	10.25	18.50
1 1/4	4 3/4	5	12.00	22.50
1 1/2	5 1/8	6	15.00	29.00
2	6	6 1/2	22.00	40.00
2 1/2	6 5/8	7 1/2	32.00	58.00
3	8 1/2	8 1/4	50.00	86.00



No. 275, Screwed Fig. 1871

Jenkins Bronze Gate Valves

Outside Screw and Yoke Rising Spindle

For 250 Pounds Steam Working Pressure; 400 Pounds Water Working Pressure

Size In.	Face to Face Flanged In.	Diam. Flanges In.	PRICE, EACH	
			No. 282 Serd.	No. 283 Flgd.
3/4	4 7/8	4	\$11.50	.....
1	5	4 1/2	13.75	\$21.00
1 1/4	5 1/2	5	17.25	27.00
1 1/2	6	6	23.50	35.50
2	7 1/8	6 1/2	32.00	48.00
2 1/2	8 1/8	7 1/2	52.00	76.00
3	9	8 1/4	74.50	111.00



No. 282, Screwed Fig. 1872

O. I. C. Brass Gate Valves

Rising Stem, Double Wedge Gate

For 125 Pounds Steam Working Pressure

This valve is designed for high grade plumbing and heating service, is well proportioned and of good weight. Thoroughly tested before leaving the factory. Can be repacked when wide open and under pressure.

Size In.	Screwed Price Each		Size In.	Screwed Price Each	
	Size In.	Price Each		Size In.	Price Each
1/4	1/4	\$1.45	1 1/4	\$3.70	
3/8	3/8	1.45	1 1/2	5.00	
1/2	1/2	1.65	2	7.30	
3/4	3/4	2.05	2 1/2	13.00	
1	1	2.80	3	19.00	

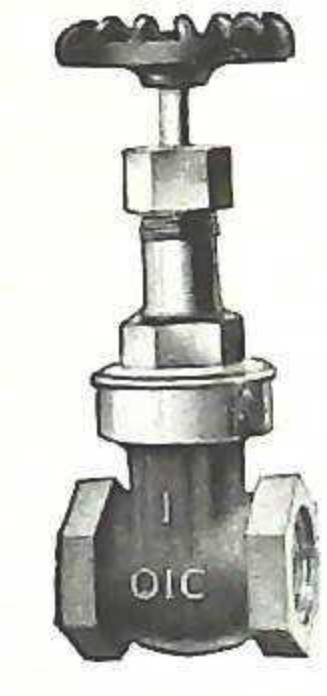


Fig. 1873

No. 0205 Fairbanks Bronze Gate Valves

Solid Wedge Pattern, with Gland

For 300 Pounds Hydraulic Test Pressure, 125 Pounds Steam Working Pressure, 150 Pounds Water Working Pressure



Fig. 1874

Size In.	No. 0205 Screwed Price Each		Size In.	No. 0205 Screwed Price Each	
	Size In.	Price Each		Size In.	Price Each
1/4	1/4	\$1.45	1 1/4	\$3.70	
3/8	3/8	1.45	1 1/2	5.00	
1/2	1/2	1.65	2	7.30	
3/4	3/4	2.05	2 1/2	13.00	
1	1	2.80	3	19.00	

Fairbanks Bronze Gate Valves

Solid Wedge Pattern, Renewable Bronze Seat Rings Cage Construction—Follower Gland

For 300 Pounds Hydraulic Test Pressure, 150 Pounds Steam Working Pressure, 175 Pounds Water Working Pressure



No. 0201, Stationary Spindle, Screwed Fig. 1875



No. 0203, Rising Spindle, Screwed Fig. 1876

Size In.	Face to Face Flanged In.	Diam. Flanges In.	PRICE, EACH			
			STATIONARY SPINDLE No. 0201 Screwed	STATIONARY SPINDLE No. 0202 Flanged	RISING SPINDLE No. 0203 Screwed	RISING SPINDLE No. 0204 Flanged
1/2	3 1/4	3	\$1.65	.....	\$4.25	.....
3/4	3 5/8	3 1/2	2.20	.....	5.00	.....
1	4 1/4	4	2.80	\$7.50	5.80	\$10.50
1 1/4	4 3/4	4 1/2	4.00	9.35	7.50	13.00
1 1/2	5 1/8	5	5.30	14.00	9.00	17.75
2	6	6	7.80	16.00	12.50	20.50
2 1/2	6 5/8	7	17.00	26.50	.....	.....
3	8 1/8	7 1/2	23.00	35.75	.....	.....

No. 0206 Fairbanks Bronze Gate Valves

Solid Wedge Pattern, with Gland

For 450 Pounds Hydraulic Test Pressure, 200 Pounds Steam Working Pressure, 250 Pounds Water Working Pressure

Size In.	No. 0206 Screwed Price Each		Size In.	No. 0206 Screwed Price Each	
	Size In.	Price Each		Size In.	Price Each
1/4	1/4	\$2.35	1	\$4.50	
3/8	3/8	2.35	1 1/4	6.00	
1/2	1/2	2.75	1 1/2	8.00	
3/4	3/4	3.25	2	13.00	



Fig. 1877

No. 0208 Fairbanks Bronze Gate Valves

Solid Wedge Pattern, with Gland

For 800 Pounds Hydraulic Test Pressure, 250 Pounds Steam Working Pressure, 350 Pounds Water Working Pressure



Fig. 1878

Size In.	No. 0208 Screwed Price Each		Size In.	No. 0208 Screwed Price Each	
	Size In.	Price Each		Size In.	Price Each
1/2	1/2	\$5.00	1 1/4	\$11.25	
3/4	3/4	6.00	1 1/2	16.50	
1	1	8.00	2	23.00	

Kennedy Bronze Gate Valves

Stationary Stem
For Working Pressures: 1/4 to 3-inch, 125 Pounds Steam, 150 Lbs. Water; 3 1/2-inch and Larger, 100 Pounds Steam, 125 Pounds Water



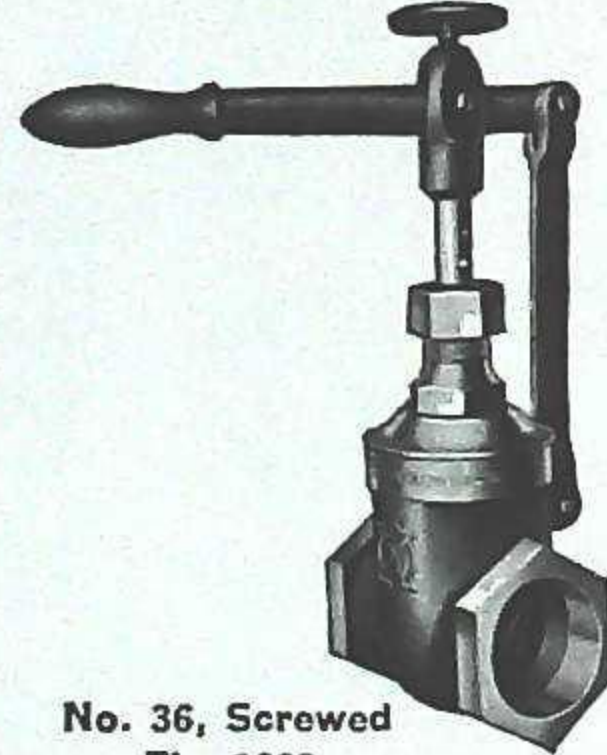
Size In.	Price, Each	
	*No. 27 Serd.	*No. 30 Flgd.
1/4	\$1.45	2 \$7.30 \$25.00
3/8	1.45	2 1/2 13.00 33.00
1/2	1.65	3 19.00 39.00
3/4	2.05	9.00 3 1/2 43.00 68.00
1	2.80	10.25 4 58.00 83.00
1 1/4	3.70	12.00 5 110.00 135.00
1 1/2	5.00	15.00 6 165.00 190.00

No. 27S Screwed Fig. 1881

Kennedy Bronze Gate Valves

Quick Opening, Sliding Stem and Lever, Solid Wedge Disc
For Working Pressures: 125 Pounds Steam; 150 Pounds Water

Operated by a single movement of lever. Disc can be locked in any position by wheel screw.



No. 36, Screwed Fig. 1882

Face to Face In.	Diam. Flanges In.	Diam. Flanged In.	Price, Each	
			No. 36 Screwed	No. 36B Flanged
1/2	2 1/2	3	\$3.50	.....
3/4	3	3 1/2	3.60	.....
1	3 1/4	4	4.80	\$12.50
1 1/4	3 3/2	4 1/2	6.20	14.50
1 1/2	4	5	8.50	18.50
2	4 3/4	6	11.80	29.50
2 1/2	5 1/2	7	20.25	40.00
3	6	7 1/2	30.00	50.00

No. 37 Kennedy Bronze Gate Valves

Stationary Stem, Solid Wedge Disc, with Gland
For Working Pressures; 200 Pounds Steam: 250 Pounds Water

Has a non-heating wheel. Operate equally well with either end to the pressure and their design completely eliminates side strain and excessive wear on or stripping of the stem or stem nut threads. There is no possibility of crushing or distortion under any pressure that the valve body will resist. Have a direct full opening of the nominal size of the pipe.



Screwed Fig. 1883

Size In.	No. 37 Serd. Price Each	Size In.	No. 37 Serd. Price Each	Size In.	No. 37 Serd. Price Each
1/2	\$2.75	1 1/4	\$6.00	2 1/2	\$20.00
3/4	3.25	1 1/2	8.00	3	32.50
1	4.50	2	13.00	.....	.....

Kennedy Bronze Gate Valves

Stationary Stem, Solid Wedge Disc, with Gland
For Working Pressures: 250 Pounds Steam; 300 Pounds Water



No. 40, Screwed Fig. 1884

Has a non-heating wheel.

Size In.	Face to Face In.	Diam. Flanges In.	Price, Each	
			No. 40 Screwed	No. 40B Flanged
3/8	...	3	\$4.00	.....
1/2	...	3 1/2	5.00	.....
3/4	...	4	6.00	.....
1	4 5/8	4 1/2	8.00	\$16.00
1 1/4	4 9/8	5	11.25	21.50
1 1/2	5 5/8	6	16.50	30.00
2	6 3/8	6 1/2	23.00	41.00
2 1/2	7 1/8	7 1/2	40.00	65.00
3	8 3/8	8 1/4	65.00	100.00

No. 430 Lunkenheimer Handy Bronze Gate Valves

For 75 Pounds Steam Working Pressure



Fig. 1885
No. 430 Screwed Price, Each

A quick opening valve for handling water, oils, lactic and other classes of liquids and low pressure steam.

The ball and socket bearing between the discs is the most flexible and practical wedging principle and prevents many unusual conditions from interfering with the functioning of the disc.

Size In.	No. 430 Screwed Price, Each	Size In.	No. 430 Screwed Price, Each	Size In.	No. 430 Screwed Price, Each
1/2	\$1.60	1 1/2	\$5.00	3 1/2	\$40.00
3/4	1.80	2	7.50	4	60.00
1	2.50	2 1/2	13.50	.....	.....
1 1/4	3.50	3	19.00	.....	.....

No. 431 Lunkenheimer Bronze Throttle Valves

Heavy Lever
For Steam Working Pressures: Up to 3 Inches, 175 Pounds

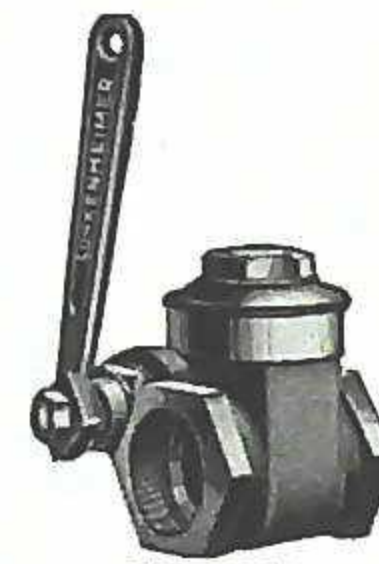


Fig. 1886

This valve was designed as a throttle for steam traction, hoisting and road engines, but the successful results obtained have encouraged a more extensive use.

The simple and practical ball and socket wedging principle of the disc construction provides positive seating of the discs under trying service conditions.

Size In.	No. 431, Serd. Price, Each	Size In.	No. 431, Serd. Price, Each
1/2	\$2.50	1 1/2	\$7.00
3/4	3.00	2	10.00
1	4.00	2 1/2	19.00
1 1/4	5.00	.....	.....

No. 432 Lunkenheimer Iron Body Throttle Valves

Heavy Lever, Bronze Mounted

For Steam Working Pressures: Up to 3 Inches, 175 Pounds; 3 1/2 and 4 Inches, 125 Pounds; 5 and 6 Inches, 100 Pounds

This simple and practical ball and socket wedging principle of the disc construction provides positive seating under trying service conditions.

Size In.	Face to Face In.	No. 432 Screwed Price, Each
2	5 1/2	\$8.50
2 1/2	6 3/8	16.00
3	6 1/4	20.00
3 1/2	6 3/4	25.00
4	7 1/4	30.00
5	8 1/2	35.00
6	9 1/4	40.00

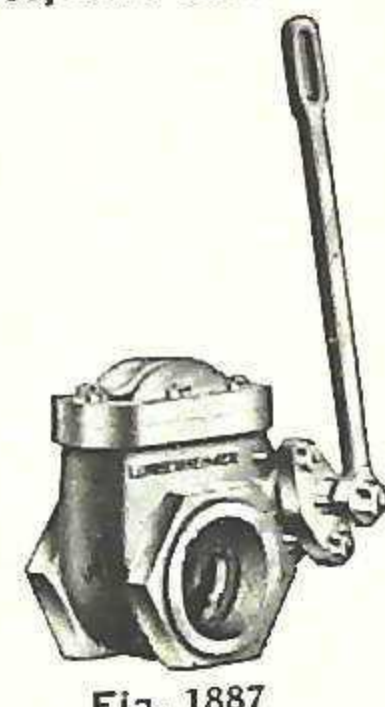


Fig. 1887

Brass Butterfly Valves

For 125 Pounds Steam Working Pressure

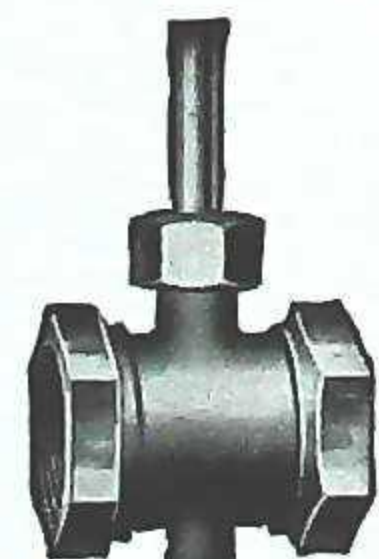


Fig. 1888

These valves are not intended to be steam tight.

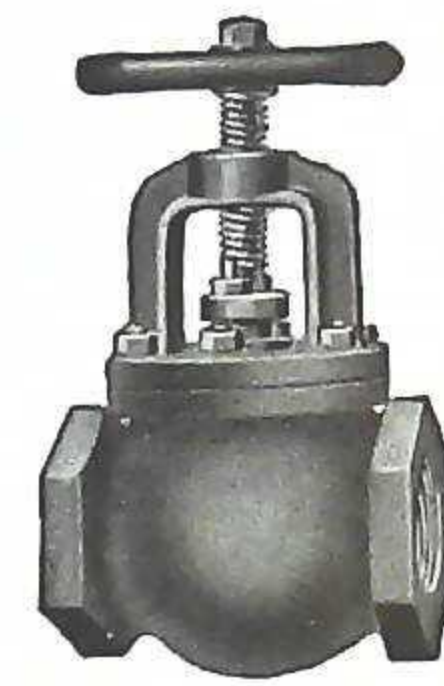
Size In.	Price Each	Size In.	Price Each
3/4	\$3.10	2	\$10.00
1	4.40	2 1/2	13.75
1 1/4	5.65	3	21.00
1 1/2	6.75	.....	.....

Always specify brass butterfly valves if brass is required, otherwise sizes 2 inch and larger will be furnished in iron body.

Iron Body Globe and Angle Valves

With Yoke—Brass Disc and Trimmings

For 125 Pounds Steam Working Pressure



Globe Screwed Fig. 1891



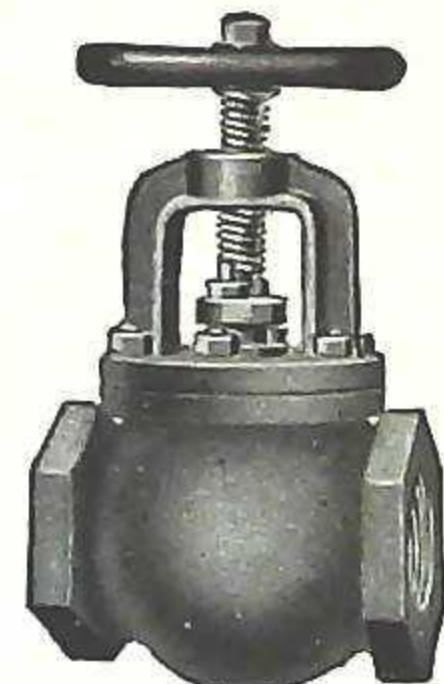
Angle, Screwed Fig. 1892

Size In.	FACE TO FACE INCHES		CENTER TO FACE INCHES		Diam. Flanges In.	PRICE, EACH	
	Screwed	Flanged	Screwed	Flanged		GLOBE AND ANGLE	Flanged
2	6 1/2	8	3 1/4	4	6	\$7.00	\$8.60
2 1/2	7	8 1/2	3 1/2	4 1/4	7	9.00	10.75
3	8	9 1/2	4	4 3/4	7 1/2	12.50	15.00
3 1/2	9	10 1/2	4 1/2	5 1/4	8 1/2	15.25	18.50
4	10	11 1/2	5	5 3/4	9	19.00	22.50
4 1/2	10 1/2	12	5 1/4	6	9 1/4	24.00	27.50
5	11 1/4	13	5 5/8	6 1/2	10	27.00	31.00
6	13	14	6 1/2	7	11	37.50	42.00
7	14 1/2	16	7 1/4	8	12 1/2	63.00	68.00
8	16	17	8	8 1/2	13 1/2	72.00	77.00
10	18 3/4	20	9 3/8	10	16	114.00	123.00
12	21 1/4	24	10 5/8	12	19	170.00	187.00
14	.....	28	.....	14	21	.....	350.00
16	.....	32	.....	16	23 1/2	.....	475.00

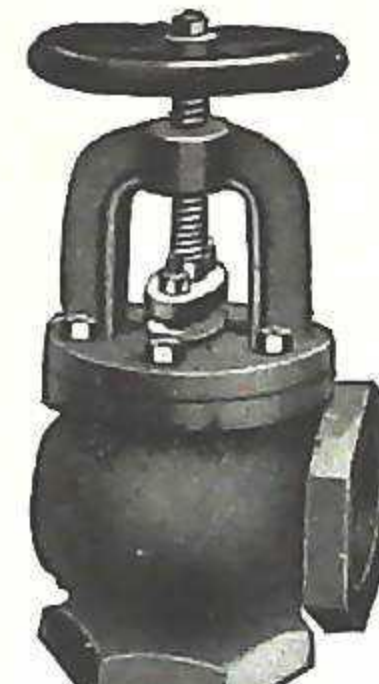
Iron Body Globe and Angle Valves

Composition Disc With Yoke, Brass Mounted

For 150 Pounds Steam Working Pressure



Globe, Screwed Fig. 1893



Angle, Screwed Fig. 1894

Size In.	FACE TO FACE INCHES		CENTER TO FACE INCHES		Diam. Flanges In.	PRICE, EACH	
	Screwed	Flanged	Screwed	Flanged		GLOBE AND ANGLE	Flanged
2 1/2	8	9 1/2	4	4 3/4	7	\$12.00	\$14.00
3	8 1/4	10	4 1/8	5	7 1/2	16.75	18.50
3 1/2	9 1/2	11	4 3/4	5 1/2	8 1/2	19.50	21.50
4	10 1/2	12	5 1/4	6	9	24.00	26.00
4 1/2	11 1/4	13	5 5/8	6 1/2	9 1/4	32.00	34.00
5	12 1/4	14	6 1/8	7	10	40.00	42.00
6	14	16	7	8	11	48.00	50.00
7	17	18	8 1/2	9	12 1/2	80.00	80.00
8	.....	19 1/2	.....	9 3/4	13 1/2	90.00	90.00
10	.....	24 1/4	.....	12 1/4	16	130.00	130.00
12	.....	27 1/2	.....	13 3/4	19	185.00	185.00

Kennedy Iron Body and All Iron Swing Check Valves



Bronze Faced, Leather Faced, or All Iron Disc

For Working Pressures: 15-inch and Smaller, 125 Pounds Steam, 150 Pounds Water; 16-inch and Larger, 100 Pounds Water; 16-inch and Larger, Ribbed, 150 Pounds Water

No. 105, Iron Body, Bronze Mounted, Screwed Fig. 1895

Size In.	FACE TO FACE INCHES		Diam. Flange In.	PRICE, EACH			
	Serd.	Flgd.		*No. 105 Iron Body All Iron Screwed	*No. 105A Iron All Iron Screwed	*No. 106 Iron Body All Iron Flanged	*No. 106A Iron All Iron Flanged
2	6 1/4	6	6	\$11.00	\$12.00	\$13.00	\$14.00
2 1/2	7 1/2	7 5/8	7	12.00	13.50	14.50	16.00
3	8 1/4	8	7 1/2	13.50	15.50	17.00	19.00
3 1/2	8 1/2	8 3/4	8 1/2	17.50	20.00	21.00	23.50
4	9 1/2	10 5/8	9	20.00	23.00	24.00	27.00
4 1/2	11 1/2	12	9 1/4	26.00	29.50	30.00	33.50
5	11 1/2	12	10	30.00	34.00	34.00	38.00
6	13 1/2	13 1/2	11	36.00	40.00	41.00	45.00
7	14 5/8	14 1/2	12 1/2	55.00	61.00	60.00	66.00
8	15 1/4	15 1/4	13 1/2	70.00	77.50	75.00	82.50
10	19	18 3/4	16	110.00	120.00	115.00	125.00
12	22 1/8	22 1/8	19	160.00	172.00	168.00	180.00
14	.....	24	21	.....	.....	.....	.....
15	.....	.....	.....	.....	.....	.....	.....
16	.....	26 1/2	23 1/2	.....	.....	.....	.....
18	.....	29	25	.....	.....	.....	.....
20	.....	32	27 1/2	.....	.....	.....	.....
24	.....	38	32	.....	.....	.....	.....

*Bronze mounted, bronze-faced disc. †All iron disc. ‡Leather-faced disc.

O.I.C. Iron Body Horizontal Check Valves

Renewable Disc, Brass Trimmings

For 150 Pounds Steam Working Pressure



Fig. 1896

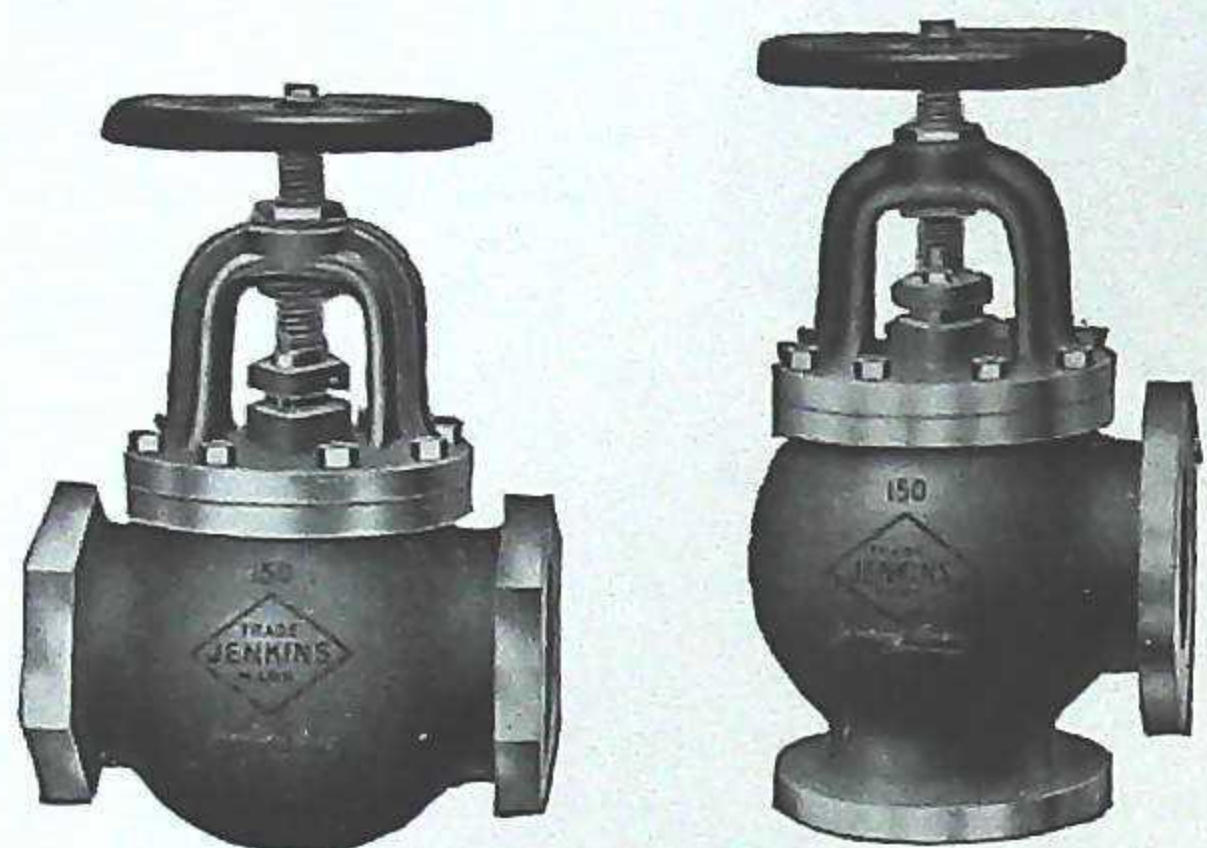
These valves are regularly fitted with O. I. C. red discs. When wanted for compressed air or cold water service O. I. C. cold water discs will be furnished.

Size In.	FACE TO FACE INCHES		Diameter Flanges In.	PRICE, EACH	
	Screwed	Flanged		Screwed	Flanged
2	6 1/2	7 1/8	6	\$8.00	\$10.00
2 1/2	7 5/8	8 1/2	7	11.00	13.00
3	9 1/2	9 3/4	7 1/2	14.00	16.50
3 1/2	.....	.....	.....	17.00	20.00
4	11 3/8	11 5/8	9	20.00	28.00
4 1/2	11 5/8	12 1/8	9 1/4	25.00	28.00
5	13 3/8	13 3/8	10	30.00	33.00
6	16	16	11	40.00	43.00
7	16 1/4	16 1/4	23 1/2	65.00	65.00
8	18 1/2	18 1/2	13 1/2	80.00	80.00

Jenkins Iron Body Globe and Angle Valves

With Yoke, Composition Mounted

For Working Pressures: 2 to 12 Inch, 150 Pounds Steam, 250 Pounds Water; 14 Inch and Above, 110 Pounds Steam, 125 Pounds Water



No. 141, Globe, Screwed Fig. 1901

No. 144, Angle, Flanged Fig. 1902

The yokes are wide, giving easy access to the stuffing-boxes, which can be packed under full pressure when the valves are wide open.

Regularly fitted with Jenkins Renewable Discs of hard Composition for steam service. When valves are specified for cold water or air service, they are fitted with Jenkins Discs of soft composition.

Size In.	FACE TO FACE INCHES		CENTER TO FACE INCHES		Diam. Flanges In.	PRICE, EACH	
	Screwed	Flanged	Screwed	Flanged		No. 141 Globe Angle	No. 142 Globe Angle
2	6 1/2	7 1/8	3 1/2	3 3/8	6	\$10.00	\$11.75
2 1/2	7 3/4	8	3 7/8	4 1/2	7	12.00	14.00
3	9 3/8	9 1/4	4 1/2	4 5/8	7 1/2	16.75	18.50
3 1/2	10	10	5	5 3/8	8 1/2	19.50	21.50
4	12	11 3/4	6	5 7/8	9	24.00	26.00
4 1/2	12 5/8	12 1/2	6 5/8	6 1/4	9 1/4	32.00	34.00
5	13 1/4	13 1/8	6 5/8	6 1/2	10	40.00	42.00
6	16	16	8	8	11	48.00	50.00
7	16 1/2	16 1/4	8 1/4	8	12 1/2	80.00	80.00
8	18 3/4	18 1/2	9 3/8	9 1/4	13 1/2	90.00	90.00
9	20	20	10	10	15	121.00	121.00
10	21 1/2	21 1/4	10 3/4	10 5/8	16	130.00	130.00
12	25 3/4	24 1/2	12 7/8	12 1/4	19	185.00	185.00

Jenkins Iron Body Cross Valves

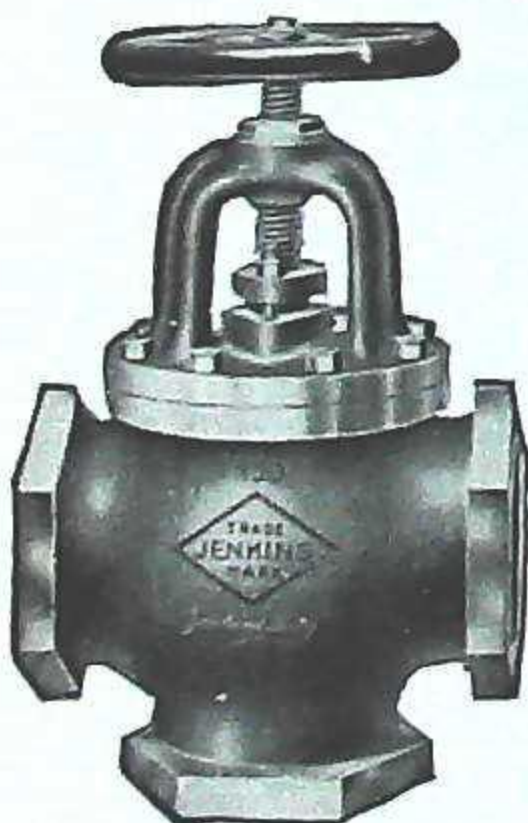
With Yoke, Composition Mounted

For Working Pressures: 2 to 12 Inch, 150 Pounds Steam, 250 Pounds Water; 14 Inch and Above, 100 Pounds Steam, 125 Pounds Water

The yokes are wide, giving easy access to the stuffing-boxes, which can be packed under full pressure when the valves are wide open.

Regularly fitted with Jenkins Renewable Discs of hard composition for steam service.

When valves are specified for cold water or air service, they are fitted with Jenkins Discs of soft composition.



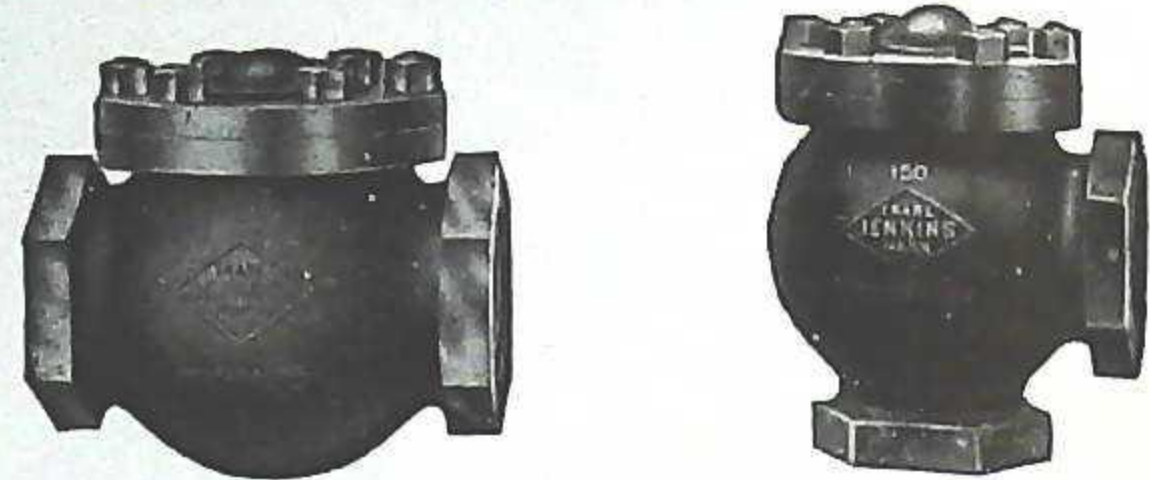
No. 145, Cross Screwed Fig. 1903

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	PRICE, EACH	
	Serd.	Flgd.		No. 145 Screwed	No. 146 Flanged
2 1/2	7 3/4	8	7	\$30.00	\$35.00
3	9 3/8	9 1/4	7 1/2	40.00	45.00
3 1/2	10	10	8 1/2	50.00	55.00
4	12	11 3/4	9	56.00	62.00
4 1/2	12 5/8	12 1/2	9 1/4	79.00	85.00
5	13 1/4	13 1/8	10	84.00	90.00
6	16	16	11	109.00	116.00
7	16 1/2	16 1/4	12 1/2	170.00	170.00
8	18 3/4	18 1/2	13 1/2	188.00	188.00

Jenkins Iron Body Check Valves

Horizontal, Angle and Vertical

For 150 Pounds Steam Working Pressure



No. 151, Horizontal, Screwed Fig. 1904

No. 152, Angle, Screwed Fig. 1905

Size In.	FACE TO FACE INCHES		CENTER TO FACE INCHES		Diam. Flange In.	PRICE, EACH	
	Screwed	Flanged	Screwed	Flanged		No. 151, Horiz. No. 152, Vert. Screwed	No. 153, Horiz. No. 153A, Angle No. 153B, Vert. Flanged
2	6 1/2	7 1/8	3 1/2	3 3/8	6	\$10.00	\$12.50
2 1/2	7 3/4	8	3 7/8	4 1/2	7	13.75	16.25
3	9 3/8	9 1/4	4 1/2	4 5/8	7 1/2	17.50	20.75
3 1/2	10	10	5	5 3/8	8 1/2	21.25	25.00
4	12	11 3/4	6	5 7/8	9	25.00	28.75
4 1/2	12 5/8	12 1/2	6 5/8	6 1/4	9 1/4	31.25	35.00
5	13 1/4	13 1/8	6 5/8	6 1/2	10	37.50	41.25
6	16	16	8	8	11	50.00	54.00
7	16 1/2	16 1/4	8 1/4	8	12 1/2	81.00	81.00
8	18 3/4	18 1/2	9 3/8	9 1/4	13 1/2	100.00	100.00



No. 266, Horizontal, Flanged Fig. 1906

Jenkins Iron Body Check Valves

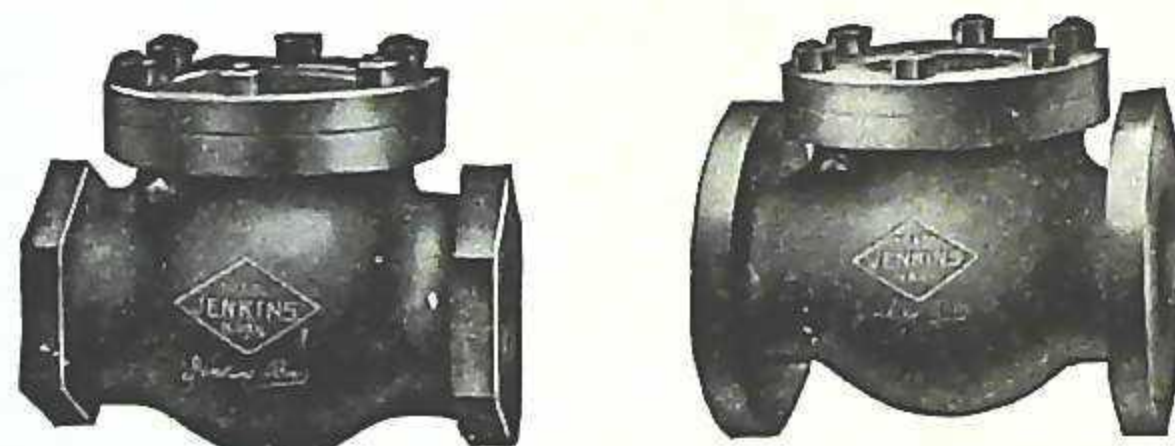
Horizontal and Angle

For 250 Pounds Steam Working Pressure

Size In.	FACE TO FACE, IN.		CTR. TO FACE IN.	Diam. Flanges In.	PRICE, EACH	
	Screwed	Flanged			No. 267, Horiz. No. 268, Angle	No. 266, Horiz. No. 268, Angle
2	7 3/4	9	3 7/8	4 1/2	\$28.00	\$30.00
2 1/2	9	10	4 1/2	5	31.00	35.00
3	10 1/4	11 3/4	5 1/8	5 7/8	39.00	42.00
3 1/2	11 1/2	12 1/2	5 3/4	6 1/4	48.00	51.00
4	12 3/4	13 3/4	6 3/8	6 7/8	62.00	66.00
4 1/2	14	14 1/2	7	7 1/4	70.00	73.00
5	15	15 1/2	7 1/2	7 3/4	84.00	88.00
6	17	17	8 1/2	8 1/2	118.00	122.00

Jenkins Iron Body Swing Check Valves

For 150 Pounds Steam Working Pressure



No. 294, Screwed Fig. 1907

No. 295, Flanged Fig. 1908

Can be used in horizontal or vertical position.

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	PRICE, EACH	
	Screwed	Flanged		No. 294 Screwed	No. 295 Flanged
2	6 1/2	7 3/8	6	\$22.00	\$26.00
2 1/2	7 3/4	8	7	22.00	26.00
3	9 3/8	9 3/8	7 1/2	25.00	30.00
3 1/2	10	10	8 1/2	32.00	37.00
4	12	11 3/4	9	37.00	43.00
5	14	13 1/2	10	54.00	60.00
6	15 1/2	15 1/2	11	63.00	71.00
7	16 1/2	16 1/4	12 1/2	96.00	104.00
8	19	19	13 1/2	122.00	130.00
10	22 1/4	22	16	189.00	197.00
12	....	24 1/2	19	....	370.00
14	....	30	21	....	693.00

O.I.C. Iron Body Gate Valves

Inside Screw, Stationary Stem, Brass Trimmings

For 125 Pounds Steam Working Pressure

These valves are of the solid wedge, double-seated type and are suitable for use on 125 pounds steam pressure or 175 pounds water pressure.

In the stem, seating surfaces and all parts not made of iron are of a special grade of bronze.

Wedge is of solid bronze in smaller sizes and of cast iron faced with bronze in larger sizes.

Can be packed when under pressure by opening until wedge is drawn against yoke or hub. Packed with a special molded split ring packing which fits stuffing box and spindle perfectly and thus requires little compression. This assures long life to the packing and reduces wear on the spindle to a minimum.



Screwed Fig. 1911

Size Inches	FACE TO FACE INCHES		Diameter Flanges Inches	PRICE, EACH	
	Screwed	Flanged		Screwed	Flanged
2	5 3/8	7	6	\$10.00	\$12.00
2 1/2	6	7 1/2	7	11.50	13.50
3	6 5/8	8	7 1/2	14.00	16.50
3 1/2	6 5/8	8 1/2	8 1/2	17.00	19.50
4	7	9	9	19.00	23.00
4 1/2	7 1/4	9 1/2	9 1/4	24.00	28.00
5	7 9/16	10	10	27.50	31.50
6	7 7/8	10 1/2	11	32.50	36.50
7	8 1/4	11	12 1/2	45.00	49.00
8	8 5/8	11 1/2	13 1/2	54.00	58.00
9	....	....	....	76.00	81.00
10	9 7/8	13	16	90.00	95.00
12	11 5/8	14	19	125.00	133.00
14	....	15	21	....	181.00
16	....	16	23 1/2	....	260.00

Fairbanks Iron Body Gate Valves

Quick Opening, Solid Wedge Pattern

For 300 Pounds Hydraulic Test Pressure, 125 Pounds Steam Working Pressure

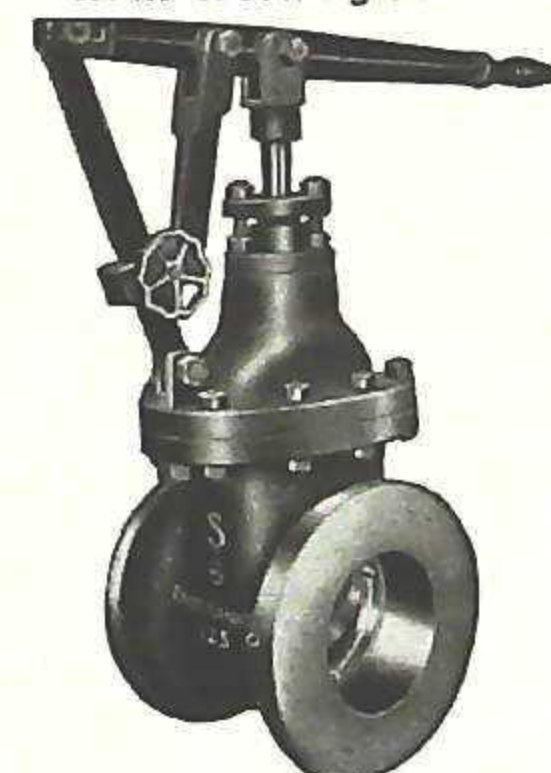


Fig. 1912

Guides in wedge and ribs in body are so finished and fitted as to insure true and easy movement, and to prevent wedge from touching seats in body, except at point of closing. Seats in body and faces of wedge are made of high grade bronze. The operating and locking device of this quick-opening valve is positive in action. It will hold the wedge and spindle in any desired position and cannot be jarred loose.

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	PRICE, EACH	
	Serd.	Flgd.		No. 0407 Screwed	No. 0408 Flanged
2	5 7/8	7	6	\$17.50	\$19.50
2 1/2	5 7/8	7 1/2	7	19.00	21.00
3	6 1/8	8	7 1/2	22.00	24.50
3 1/2	6 1/2	8 1/2	8 1/2	25.00	27.50
4	6 7/8	9	9	30.00	34.00
4 1/2	7 1/4	9 1/2	9 1/4	37.00	41.00
5	7 5/8	10	10	42.00	46.00
6	7 3/4	10 1/2	11	48.00	52.00
7	8 1/4	11	12 1/2	64.00	68.00
8	8 5/8	11 1/2	13 1/2	80.00	84.00

Fairbanks Iron Body Gate Valves

Solid Wedge Pattern, Inside Screw, Bronze Mounted

For 300 Pounds Hydraulic Test Pressure, 125 Pounds Steam Working Pressure, 150 Pounds Water Working Pressure



No. 0403, Flanged Fig. 1913

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	PRICE, EACH	
	Serd.	Flgd.		No. 0402 Screwed	No. 0403 Flanged
2	5 7/8	7	6	\$10.00	\$12.00
2 1/2	5 7/8	7 1/2	7	11.50	13.50
3	6 1/8	8	7 1/2	14.00	16.50
3 1/2	6 1/2	8 1/2	8 1/2	17.00	19.50
4	6 7/8	9	9	19.00	23.00
4 1/2	7 1/4	9 1/2	9 1/4	24.00	28.00
5	7 5/8	10	10	27.50	31.50
6	7 3/4	10 1/2	11	32.50	36.50
7	8 1/4	11	12 1/2	45.00	49.00
8	8 5/8	11 1/2	13 1/2	54.00	58.00
9	....	12	15	76.00	81.00
10	9 7/8	13	16	90.00	95.00
12	11 5/8	14	19	125.00	133.00
14	....	15	21	....	181.00
16	....	16	23 1/2	....	260.00
18	....	17	25	....	350.00
20	....	18	27 1/2	....	425.00
22	....	19	29 1/2	....	530.00
24	....	20	32	....	600.00

Fairbanks Iron Body Gate Valves

Solid Wedge Pattern, Outside Screw, Bronze Mounted

For 300 Pounds Hydraulic Pressure, 125 Pounds Steam Working Pressure, 150 Pounds Water Working Pressure

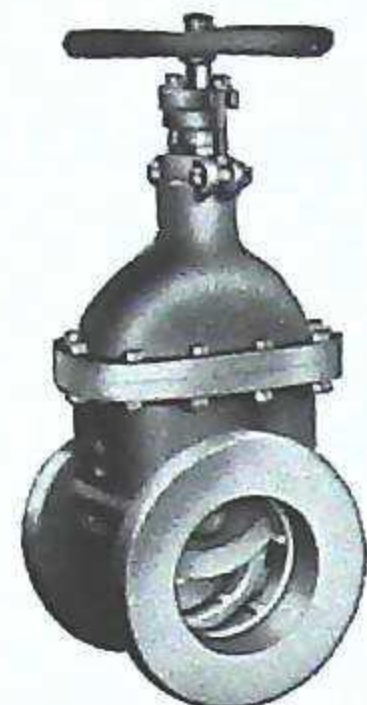


No. 0405, Flanged Fig. 1914

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	PRICE, EACH			
	Serd.	Flgd.		No. 0404 Steel Stem	No. 0404 Scnd. Bronze Stem	No. 0405 Steel Stem	No. 0405 Flgd. Bronze Stem
2	5 7/8	7	6	\$17.50	\$19.00	\$19.50	\$21.00
2 1/2	5 7/8	7 1/2	7	19.00	20.50	21.00	22.50
3	6 1/8	8	7 1/2	22.00	23.50	24.50	26.00
3 1/2	6 1/2	8 1/2	8 1/2	25.00	27.00	27.50	29.50
4	6 7/8	9	9	30.00	32.50	34.00	36.50
4 1/2	7 1/4	9 1/2	9 1/4	37.00	40.00	41.00	44.00
5	7 5/8	10	10	42.00	45.00	46.00	49.00
6	7 3/4	10 1/2	11	48.00	52.00	52.00	56.00
7	8 1/4	11	12 1/2	64.00	69.00	68.00	73.00
8	8 5/8	11 1/2	13 1/2	80.00	86.00	84.00	90.00
9	....	12	15	105.00	113.00	110.00	118.00
10	9 7/8	13	16	122.00	131.00	127.00	136.00
12	11 5/8	14	19	160.00	172.00	168.00	180.00
14	....	15	21	....	....	236.00	255.00
16	....	16	23 1/2	....	....	325.00	350.00
18	....	17	25	....	....	435.00	470.00
20	....	18	27 1/2	....	....	52	

Fairbanks Iron Body Gate Valves

Solid Wedge Pattern, Renewable Bronze Seat Rings, Bronze Mounted



For 350 Pounds Hydraulic Test Pressure
150 Pounds Steam Working Pressure
175 Pounds Water Working Pressure

Rising spindle, size 6-inch and smaller have yoke integral with bonnet.

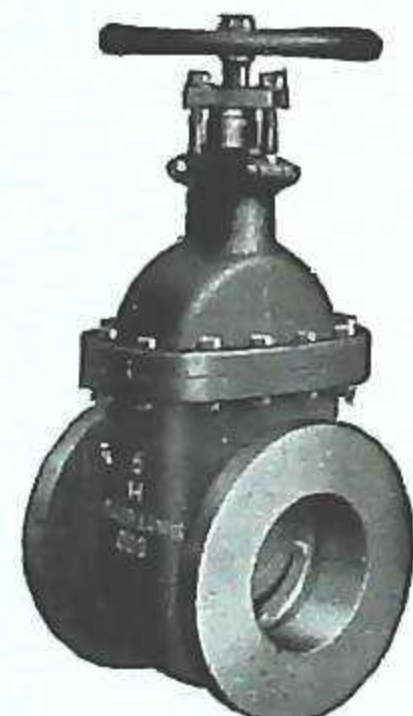
Flanged Fig. 1921

Size In.	FACE TO FACE INCHES		STATIONARY SPINDLE		BRONZE STEM		STEEL STEM	
	Serd.	Flgd.	No. 0301 Serd.	No. 0302 Flgd.	No. 0303 Serd.	No. 0304 Flgd.	No. 0303 Serd.	No. 0304 Flgd.
2	5 1/2	6 1/2	6		\$10.00	\$12.00	\$19.00	\$21.00
2 1/2	6	7 1/2	7		11.50	13.50	20.50	22.50
3	7 1/2	8 1/2	7 1/2		14.00	16.50	23.50	26.00
3 1/2	8	9	8 1/2		17.00	19.50	27.00	29.50
4	8 1/2	9 1/2	9		19.00	23.00	32.50	36.50
4 1/2	9	9 3/4	9 1/4		24.00	28.00	40.00	44.00
5	9 1/2	10 1/2	10		27.50	31.50	45.00	49.00
6	10	10 3/4	11		32.50	36.50	52.00	56.00
7	10 1/2	11 1/2	12 1/2		45.00	49.00	69.00	73.00
8	11 1/2	12 1/2	13 1/2		54.00	58.00	86.00	90.00
9	12 1/2	13 1/2	15		76.00	81.00	113.00	118.00
10	13 1/2	14 1/2	16		90.00	95.00	131.00	136.00
12	14 1/2	15 1/2	19		125.00	133.00	172.00	180.00
14	16	17 1/2	21		181.00	190.00	255.00	260.00
16	17 1/2	19 1/2	23 1/2		260.00	270.00	350.00	360.00

Fairbanks Iron Body Gate Valves

Solid Wedge Pattern, Renewable Bronze Seat Rings, Bronze Mounted

For 500 Pounds Hydraulic Test Pressure
200 Pounds Steam Working Pressure
250 Pounds Water Working Pressure

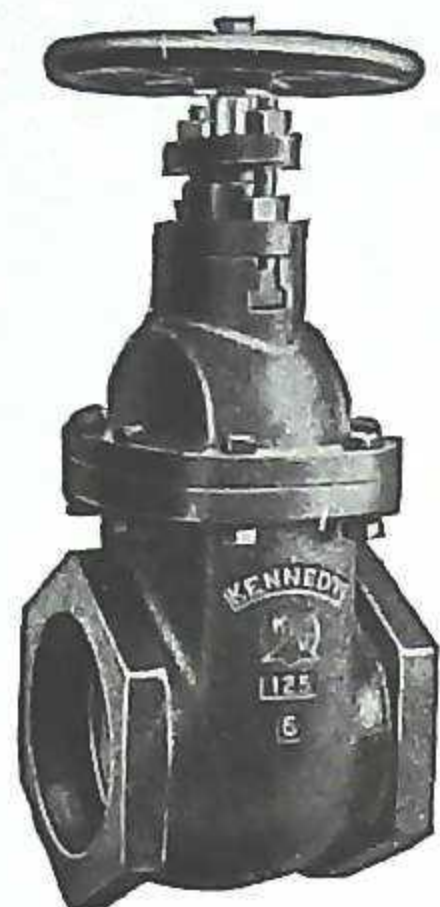


Flanged Fig. 1922

Size In.	FACE TO FACE INCHES		STATIONARY SPINDLE		BRONZE STEM		STEEL STEM	
	Serd.	Flgd.	No. 0305 Serd.	No. 0306 Flgd.	No. 0307 Serd.	No. 0308 Flgd.	No. 0307 Serd.	No. 0308 Flgd.
2	6 1/2	7 1/2	6 1/2		\$15.00	\$17.50	\$23.00	\$25.50
2 1/2	6 3/4	8	7 1/2		17.00	19.50	25.00	27.50
3	8	9 1/2	8 1/4		20.00	23.00	29.00	32.00
3 1/2	8 1/2	10	9		25.00	28.00	35.00	38.00
4	9 1/2	10 1/2	10		28.00	33.00	40.00	45.00
4 1/2	9 3/4	11	10 1/2		35.00	40.00	50.00	55.00
5	10	11 1/2	11		40.00	45.00	54.00	59.00
6	10 1/2	12	12 1/2		50.00	57.00	65.00	72.00
7	11 3/8	12 1/2	14		75.00	82.00	90.00	97.00
8	12 1/4	13 1/2	15		87.00	94.00	110.00	117.00
9	13	14	16 1/4		120.00	127.00	145.00	152.00
10	14	15	17 1/2		145.00	153.00	170.00	178.00
12	16	18	20 1/2		185.00	195.00	215.00	225.00
14	18	20	23		250.00	260.00	300.00	310.00
16	19 1/2	22 1/2	25 1/2		350.00	360.00	400.00	410.00
18	21	24	28		450.00	460.00	500.00	510.00

Kennedy Iron Body and All Iron Gate Valves
Inside Stationary Stem, Double Discs, Parallel Seats

For Working Pressures: 8-inch and Smaller, 125 Pounds Steam, 150 Pounds Water; 9 to 14-inch, 100 Pounds Steam, 125 Pounds Water; 16-inch and Larger, 100 Pounds Steam, 150 Pounds Water; 16-inch and Larger, Ribbed, 150 Pounds Water



No. 57, Iron Body Bronze Mounted, Screwed Fig. 1923

Size In.	FACE TO FACE INCHES		Diam. Flanges		PRICE, EACH	
	Serd.	Flgd.	In.	In.	No. 57 Iron Body No. 82 All Iron Screwed	No. 58 Iron Body No. 83 All Iron Flanged
1 1/2	4	5 1/2	5		\$10.00	\$12.00
2	5	6	6		10.00	12.00
2 1/2	6	6 3/8	7		11.50	13.50
3	6 1/4	7 3/4	7 1/2		14.00	16.50
3 1/2	6 3/4	7 7/8	8 1/2		17.00	19.50
4	7	8 5/8	9		19.00	23.00
4 1/2	7 5/8	8 5/8	9 1/4		24.00	28.00
5	8	9 1/2	10		27.50	31.50
6	8 5/8	10 1/8	11		32.50	36.50
7	10	11	12 1/2		45.00	49.00
8	10 1/4	11 1/4	13 1/2		54.00	58.00
9	10 7/8	11 7/8	15		76.00	81.00
10	11 1/2	12 5/8	16		90.00	95.00
12	13 1/4	13 1/2	19		125.00	133.00
14	14 1/2	14 3/4	21		181.00	190.00
15	15	16	18		220.00	230.00
16	14 3/4	16 1/2	23 1/2		260.00	270.00
18	15 1/2	17 1/2	25		350.00	360.00
20	16	18 1/2	27 1/2		425.00	440.00
22	17 1/4	19 1/2	29 1/2		530.00	550.00
24	17 3/4	20 1/2	32		600.00	620.00
30	23 1/2	28 3/4	38 3/4		1100.00	1150.00

With Gears

Size Inches	FLGD.—PRICE, EACH		Size Inches	FLGD.—PRICE, EACH	
	No. 58, IRON BODY	No. 83, ALL IRON		No. 58, IRON BODY	No. 83, ALL IRON
16	\$360.00	\$425.00	22	\$675.00	\$775.00
18	460.00	535.00	24	750.00	850.00
20	550.00	635.00	30	1400.00	1550.00

Kennedy Iron Body and All Iron Gate Valves

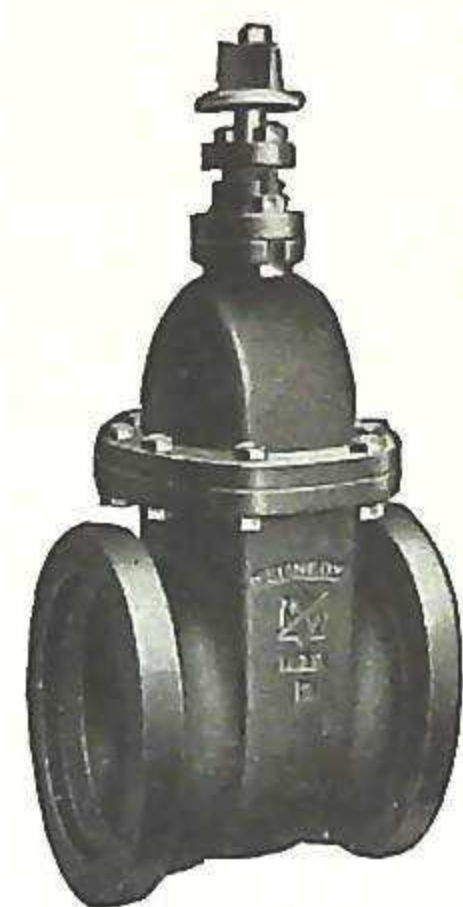
Inside Stationary Stem, Double Discs, Parallel Seats

For Water Working Pressures: 8-inch and Smaller, 150 Pounds; 9 to 14-inch, 125 Pounds; 16-inch and Larger, 100 Pounds; 16-inch and Larger, Ribbed, 150 Pounds

Size In.	End to End In.	Diam. Bell Sockets In.	BELL ENDS—PRICE, EACH	
			No. 59, IRON BODY	No. 84, ALL IRON
2	7 1/2	3 1/4	\$10.00	
3	9 1/2	4 9/16	14.00	
4	9 1/2	5 1/16	19.00	
6	10 1/2	7 7/16	32.50	
8	12 1/8	10	54.00	
10	13	12	90.00	
12	13 3/4	14 1/8	125.00	
14	14	16 3/8	173.00	
16	15 1/8	18 5/8	250.00	\$315.00
18	16 1/4	20 5/16	340.00	415.00
20	17 3/8	22 1/2	415.00	500.00
24	19	27 5/16	590.00	690.00
30	22 1/4	33 3/8	1075.00	1225.00

With Gears

Size In.	BELL ENDS—PRICE, EACH		Size In.	BELL ENDS—PRICE, EACH	
	No. 59, IRON BODY	No. 84, ALL IRON		No. 59, IRON BODY	No. 84, ALL IRON
16	\$350.00	\$415.00	24	\$740.00	\$840.00
18	450.00	525.00	30	1375.00	1525.00
20	540.00	625.00			



No. 59, Iron Body, Bronze Mounted, Bell Ends Fig. 1924

Kennedy Iron Body and All-iron Gate Valves

Double Disc, Parallel Seats

Outside Rising Stem and Yoke



No. 48 Flanged Fig. 1931

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	End to End Bell Ends In.	Diam. Bell Sockets In.	PRICE, EACH
	Serd.	Flgd.				
14	10 3/4	21	14 3/8	16 1/8	16 1/8	\$200.00
16	11 3/8	23 1/2	15 1/8	18 1/2	18 1/2	255.00
18	11 7/8	25	15 1/4	20 1/2	20 1/2	340.00
20	12 1/8	27 1/2	15 3/8	22 3/4	22 3/4	395.00
24	13	32	16	26 7/8	26 7/8	610.00
30	14 1/2	38 3/4	17	33	33	1125.00
36	16	46	17 1/2	39	39	1650.00
42	24	53	25	45 1/4	45 1/4	2150.00
48	26	59 1/2	26 3/4	51 3/8	51 3/8	3100.00

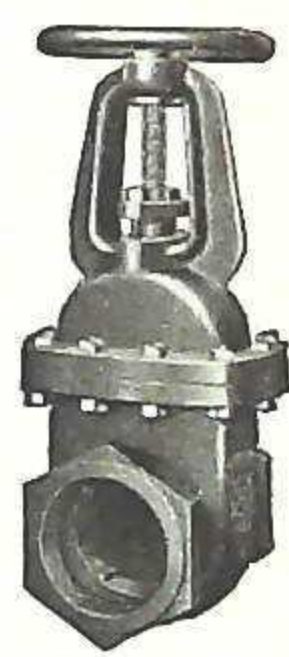
These valves can, if required, be furnished with single disc and seat face with quick-operating compound thread on stem or with chain wheel for operating.

No. 48 can be furnished with cleanout pockets if desired. When this valve is wanted, specify No. 47D.

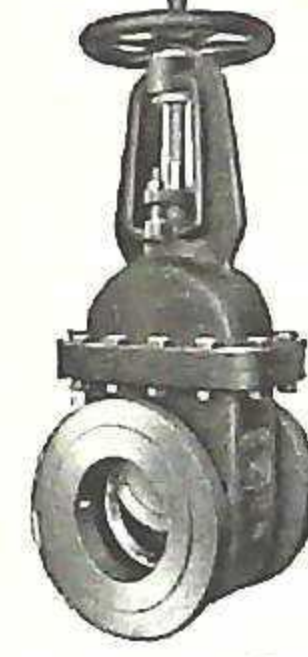
Kennedy Iron Body and All-iron Gate Valves

Double Discs, Taper Seats Outside Rising Stem and Yoke

For Working Pressures: 175 Pounds Steam, 200 Pounds Water



No. 752, Iron Body Bronze Mounted Screwed Fig. 1932



No. 75, Iron Body Bronze Mounted Flanged Fig. 1933

These valves have steel stems; bronze stems, extra.

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	Size By-pass In.	PRICE, EACH		
	Serd.	Flgd.			No. 752 Iron Body No. 754 All-iron Screwed	No. 75 Iron Body No. 755 All-iron Flanged	No. 75E or 755E with By-pass
2 1/2	6 3/8	9 1/8	7 1/2	...	\$25.00	\$27.50	
3	7 1/2	9 1/2	8 1/4	...	29.00	32.00	
3 1/2	8 3/8	10 1/2	9	...	35.00	38.00	
4	9 3/8	10 5/8	10	...	40.00	45.00	
4 1/2	9 3/4	11 3/4	10 1/2	...	50.00	55.00	
5	10 1/4	12 1/8	11	1/2	54.00	59.00	
6	11 3/8	13 1/4	12 1/2	1	65.00	72.00	\$100.00
7	12	13 1/4	14	1	90.00	97.00	125.00
8	12 1/2	13 1/4	15	1	110.00	117.00	148.00
10	13 7/8	14 3/8	17 1/2	1	170.00	178.00	210.00
12	14 3/4	15 3/4	20 1/2	1 1/2	215.00	225.00	260.00
14	17 1/2	23	23	1 1/2	340.00	390.00	

Dimensions of valves with by-pass upon application.

Kennedy Iron Body and All-iron Gate Valves

Double Discs, Parallel Seats Outside Rising Stem and Yoke

For Working Pressures: 8-inch and Smaller, 125 Pounds Steam, 150 Pounds Water; 9 to 14-inch, 100 Pounds Steam, 125 Pounds Water; 16-inch and Larger, 100 Pounds Steam, 150 Pounds Water; 16-inch and Larger, Ribbed, 150 Pounds Water



No. 60, Iron Body, Bronze Mounted, Screwed Fig. 1934



No. 61, Iron Body, Bronze Mounted, Flanged Fig. 1935

On valves 4-inch and smaller, the bonnet and yoke are cast in one piece. On valves 4 1/2-inch and larger, the bonnet and yoke are bolted together.

Size Inches	FACE TO FACE INCHES		Diameter Flanges Inches	End to End Bell Ends, Inches	Diam. Bell Sockets Inches	PRICE, EACH		
	Screwed	Flanged				No. 60 Iron Body No. 85 All-iron Screwed	No. 61 Iron Body No. 86 All-iron Flanged	No. 612 Iron Body No. 861 All-iron Bell Ends
1 1/2	4	5 1/2	5	7 1/8	3 1/4	\$17.50	\$19.50	\$19.00
2	5	6	6	7 1/2	3 1/2	17.50	19.50	19.00
2 1/2	6	6 3/4	6	7 1/2	3 1/2	19.00	21.00	20.50
3	6 1/4	7 3/4	7 1/2	9 1/2	4 1/2	22.00	24.50	23.50
3 1/2	6 3/4	7 7/8	8 1/2	9 1/2	4 1/2	25.00	27.50	27.00
4	7	8 5/8	9	9 1/2	5 1/2	30.00	34.00	32.50
4 1/2	7 5/8	8 5/8	9 1/4	9 1/2	5 1/2	37.00	41.00	40.00
5	8	9 1/2	10	10 1/2	6 1/2	42.00	46.00	45.00
6	8 5/8	10 1/8	11	10 1/2	7 1/2	48.00	52.00	52.00
7	10	11	12 1/2	11	8 1/2	64.00	68.00	69.00
8	10 1/4	11 1/4	13 1/2	12 1/2	9 1/2	80.00	84.00	86.00
9	10 7/8	11 7/8	15	12 1/2	10 1/2	105.00	110.00	113.00
10	11 1/2	12 5/8	16	13	11 1/2	122.00	127.00	131.00
12	13 1/4	13 1/2	19	13 3/4	14 1/2	16		

Kennedy Iron Body and All-iron Gate Valves

Double Discs, Taper Seats
Inside Stationary Stem

For Working Pressures: 175 Pounds Steam; 200 Pounds Water



No. 741, Iron Body Bronze Mounted Screwed Fig. 1941



No. 74, Iron Body Bronze Mounted Flanged Fig. 1942

Size In.	FACE TO FACE INCHES		Diam. Flanges In.	Size By-pass In.	PRICE, EACH		
	Serd.	Flgd.			No. 741 Iron Body No. 742 All-iron Screwed	No. 74 Iron Body No. 743 All-iron Flanged	No. 74E or 743E with By-pass
2 1/2	6 3/8	9 1/8	7 1/2	...	\$17.00	\$19.50	.....
3	7 1/2	9 1/2	8 1/4	...	20.00	23.00	.....
3 1/2	8 3/8	10 1/8	9	...	25.00	28.00	.....
4	9 3/8	10 5/8	10	...	28.00	33.00	.....
4 1/2	9 3/4	11 3/4	10 1/2	...	35.00	40.00	.....
5	10 1/4	12 1/8	11	1/2	40.00	45.00	.....
6	11 3/8	13 1/4	12 1/2	1	50.00	57.00	\$85.00
7	12	13 3/4	14	1	75.00	82.00	110.00
8	12 1/2	13 3/4	15	1	87.00	94.00	125.00
10	13 7/8	14 3/8	17 1/2	1	145.00	153.00	185.00
12	14 3/4	15 3/4	20 1/2	1 1/4	185.00	195.00	230.00
14	...	17 1/2	23	1 1/2	.....	300.00	340.00

Dimensions of valves with by-pass upon application.

Lunkenheimer Clip All Iron Gate Valves

Inside Screw, Rising Stem, Bolted Bonnet

For 100 Pounds Working Pressure

Designed for the handling of creosote, alkaline solutions, etc., such as attack brass or bronze alloys.

The steel clip which unites the body and bonnet enables quick and easy assembling and disassembling for cleansing and repairs and in addition provides strength and rigidity to the body.



No. 319, Screwed Fig. 1944

Size Inches	FACE TO FACE INCHES		Diam. Flanges Inches	PRICE, EACH	
	Screwed	Flanged		No. 319 Screwed	No. 318 Flanged
1/2	2	...	...	\$2.00	.....
3/4	2 5/16	...	...	2.35	.....
1	2 1/2	3 3/16	4	2.50	\$3.00
1 1/4	2 3/4	3 1/2	4 1/2	3.50	4.90
1 1/2	3 1/16	3 3/4	5	5.00	6.00
2	3 1/2	4	6	7.50	8.50
2 1/2	4	4 15/16	7	12.00	13.50
3	4 3/8	5 1/16	7 1/2	15.00	16.90
3 1/2	5	5 15/16	8 1/2	18.00	20.30
4	5 5/8	6 3/4	9	20.00	22.50
4 1/2	6 3/16	7 1/4	9 1/4	22.50	25.50
5	6 3/4	7 3/4	10	25.00	28.30
6	7 1/2	8 9/32	11	30.00	33.80

Kennedy Iron Body and All-iron Gate Valves

Double Disc, Parallel Seats
Inside Stationary Stem



No. 50 Flanged Fig. 1943

Working Pressures Flanged

No.	Iron Body Bronze Mounted	All Iron	WORKING PRESSURE POUNDS	
			Steam	Water
47	471	501	15	25
50	501	511	25	50
472	473	511	..	35
51	511	511	..	50

Bolt Ends

Size In.	Face to Face Flanged In.	Diam. Flanges In.	End to End Bell Ends In.	Diam. Bell Sockets In.	PRICE, EACH	
					Plain	With Gearing
14	10 3/4	21	14 3/8	16 1/8	\$165.00	.....
16	11 3/8	23 1/2	15 1/8	18 1/2	215.00	.....
18	11 1/8	25	15 1/4	20 1/2	300.00	.....
20	12 1/8	27 1/2	15 3/8	22 3/4	345.00	.....
24	13	32	16	26 7/8	540.00	\$665.00
30	14 1/2	38 3/4	17	33	1025.00	1250.00
36	16	46	17 1/2	39	1450.00	1750.00
42	24	53	25	45 1/4	1900.00	2250.00
48	26	59 1/2	26 3/4	51 5/8	2800.00	3200.00

These valves can be furnished with single disc and seat face if required and with or without back outlet.

No. 47 can be furnished with cleanout pockets if desired. When this valve is wanted, specify No. 47D.

Lunkenheimer Clip Iron Body Gate Valves

Wedge Disc, Rising Stem, Inside Screw, Bolted Bonnet

For 100 Pounds Steam Working Pressure



Fig. 1945 No. 600, Screwed

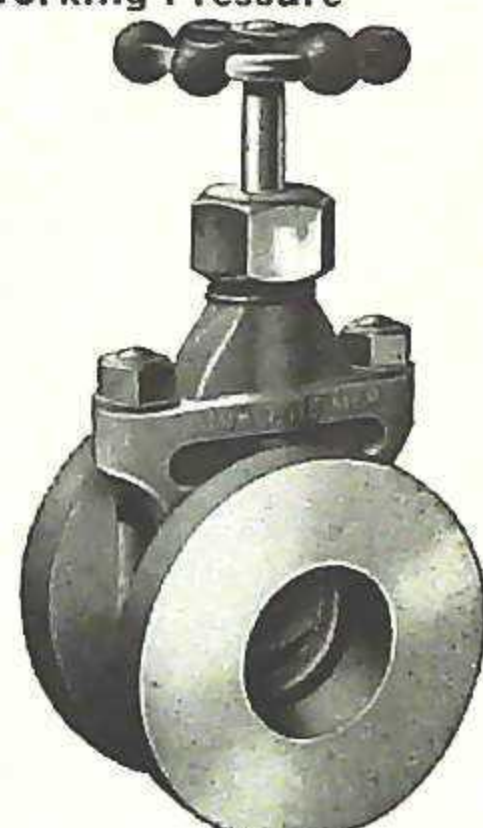


Fig. 1946 No. 638, Flanged

Double seated. All parts renewable. Stuffing box repackable when valve is full open and under pressure.

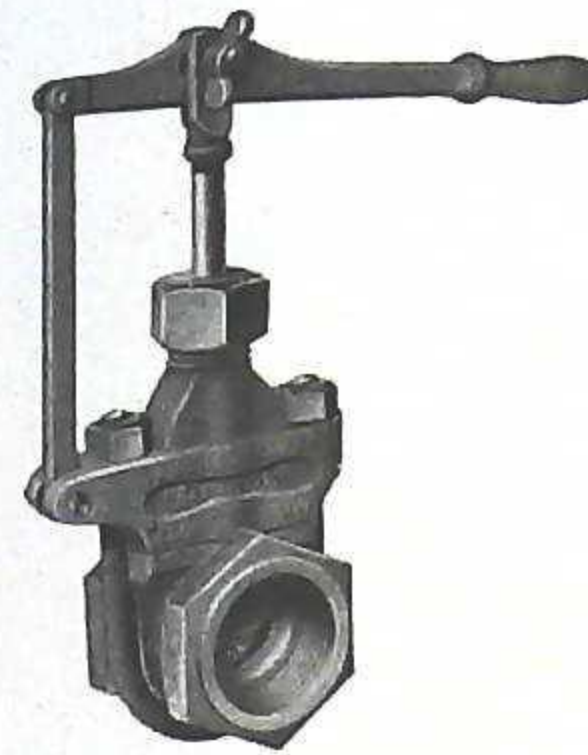
Clip Gate Valve is also procurable in the all-iron pattern for use in handling liquids which attack alloys of copper.

Size Inches	FACE TO FACE INCHES		Diameter Flanges Inches	PRICE, EACH	
	Screwed	Flanged		No. 600 Screwed	No. 638 Flanged
1/2	2	...	...	\$2.00	.....
3/4	2 5/16	...	...	2.35	.....
1	2 1/2	3 3/16	4	2.50	\$3.00
1 1/4	2 3/4	3 1/2	4 1/2	3.50	4.90
1 1/2	3 1/16	3 3/4	5	5.00	6.00
2	3 1/2	4	6	7.50	8.50
2 1/2	4	4 15/16	7	12.00	13.50
3	4 3/8	5 1/16	7 1/2	15.00	16.90
3 1/2	5	5 15/16	8 1/2	20.00	22.00
4	5 5/8	6 3/4	9	22.00	25.00
4 1/2	6 3/16	7 1/4	9 1/4	26.00	29.50
5	6 3/4	7 3/4	10	30.00	34.00
6	7 1/2	8 9/32	11	36.00	40.00

Lunkenheimer Clip All Iron Gate Valves

Quick Operating, Sliding Stem, Bolted Bonnet

For 50 Pounds Working Pressure



No. 321, Screwed Fig. 1951

Designed for the handling of creosote, alkaline solutions, etc., such as attack brass or bronze alloys.

The steel clip which unites the body and bonnet enables quick and easy assembling and disassembling for cleansing and repairs and in addition provides strength and rigidity to the body.

Size Inches	FACE TO FACE INCHES		Diam. Flanges Inches	PRICE, EACH	
	Screwed	Flanged		No. 321 Screwed	No. 320 Flanged
1/2	2	...	...	\$2.00	.....
3/4	2 5/16	...	...	2.35	.....
1	2 1/2	3 3/16	4	2.50	\$3.00
1 1/4	2 3/4	3 1/2	4 1/2	3.50	4.90
1 1/2	3 1/16	3 3/4	5	5.00	6.00
2	3 1/2	4	6	7.50	8.50
2 1/2	4	4 15/16	7	12.00	13.50
3	4 3/8	5 1/16	7 1/2	15.00	16.90
3 1/2	5	5 15/16	8 1/2	18.00	20.30
4	5 5/8	6 3/4	9	20.00	22.50
4 1/2	6 3/16	7 1/4	9 1/4	22.50	25.50
5	6 3/4	7 3/4	10	25.00	28.30
6	7 1/2	8 9/32	11	30.00	33.80

Lunkenheimer Clip Iron Body Gate Valves

Bronze Mounted, Quick Operating, Wedge Disc Bolted Bonnet

For 50 Pounds Steam Working Pressure

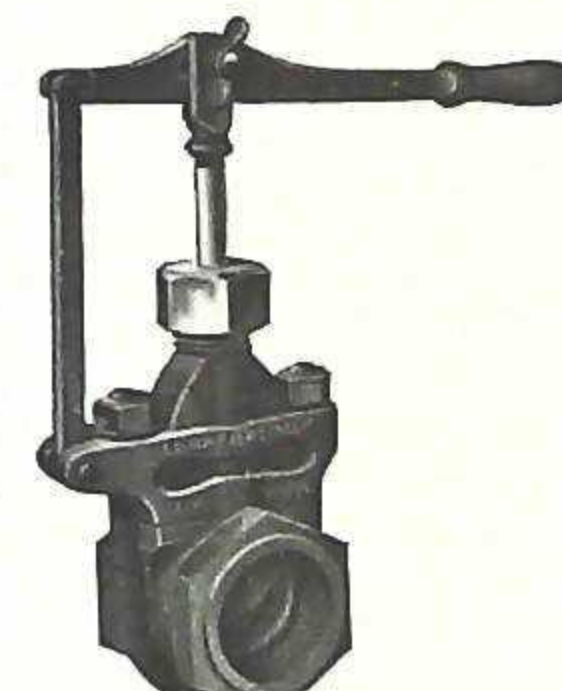


Fig. 1952 No. 639, Screwed

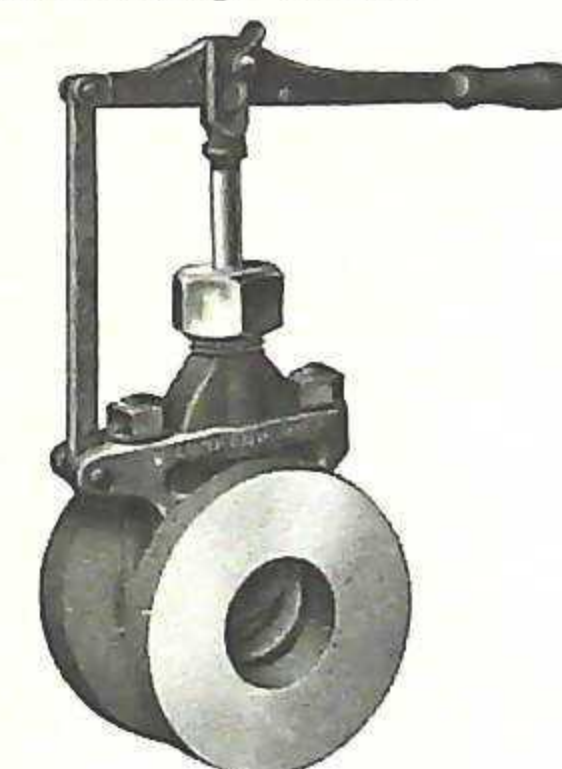


Fig. 1953 No. 640, Flanged

Double seated. Takes pressure from either end. All parts renewable. Stuffing box repackable when valve is full open and under pressure. Also procurable in the all-iron pattern for handling liquids which attack alloys of copper.

Size Inches	FACE TO FACE INCHES		Diameter Flanges Inches	PRICE, EACH	
	Screwed	Flanged		No. 639 Screwed	No. 640 Flanged
1/2	2	...	...	\$2.00	.....
3/4	2 5/16	...	...	2.35	.....
1	2 1/2	3 3/16	4	2.50	\$3.00
1 1/4	2 3/4	3 1/2	4 1/2	3.50	4.90
1 1/2	3 1/16	3 3/4	5	5.00	6.00
2	3 1/2	4	6	7.50	8.50
2 1/2	4	4 15/16	7	12.00	13.50
3	4 3/8	5 1/16	7 1/2	15.00	16.90
3 1/2	5	5 15/16	8 1/2	22.00	24.00
4	5 5/8	6 3/4	9	24.00	27.50
4 1/2	6 3/16	7 1/4	9 1/4	28.50	33.00
5	6 3/4	7 3/4	10	33.00	37.50
6	7 1/2	8 9/32	11	40.00	44.00

Iron Body Foot Valves and Strainers



Foot Valve Screwed Fig. 1954



Strainer Fig. 1955

Foot Valves, Screwed

I.P. Size In.	PRICE, EACH		I.P. Size In.	PRICE, EACH	
	Black	Galvanized		Black	Galvanized
3/4	\$1.15	\$1.75	3	\$3.90	\$5.75
1	1.30	2.00	3 1/2	5.60	8.50
1 1/4	1.40	2.10	4	7.30	11.00
1 1/2	1.90	2.85	5	11.25	16.75
2	2.40	3.60	6	14.75	22.00
2 1/2	3.30	5.00	8	41.00	62.00

Strainers

I.P. Size In.	PRICE, EACH		I.P. Size In.	PRICE, EACH	
	Black	Galvanized		Black	Galvanized
1 1/4	\$0.50	\$0.75	3 1/2	\$3.00	\$4.50
1 1/2	.75	1.00	4	3.75	6.00
2	1.00	1.50	5	4.75	7.00
2 1/2	1.50	2.00	6	6.50	10.00
3	2.00	3.00	8	15.00	20.00

No. 9030 Mueller Strainers

For Water, Steam, Air and Oil



Exterior Fig. 1956



Interior

The No. 9030 Strainer is a simple device. Even though water is filtered or a large strainer is used on the main there remains in the water fine particles of sand, gravel, pipe cuttings, etc., which if not intercepted may ruin the working parts of water meters, regulators, etc. This strainer placed ahead of water meters, regulators, etc., intercepts foreign substances and prolongs the life of the various fittings. As water enters strainer it strikes a baffle plate and sediment is deflected to lower chamber where it settles to bottom from where it can easily be removed.

Furnished with brass clean out plug up to and including 3/4-inch. Sizes from 1-inch up furnished with iron clean out plugs. The 1/4-inch size is of bronze; 3/8 to 3-inch, of galvanized iron; 4-inch size is iron, black japanned.

Size In.	Wt. Lbs.	Price Each	Size In.	Wt. Lbs.	Price Each
1/8	*8 1/2	.....	1 1/4	10	.....
1/4	*8 1/2	.....	1 1/2	13 1/2	.....
3/8	21 1/2	.....	2	20 1/4	.....
1/2	21 1/2	.....	2 1/2	30 1/2	.....
3/4	31 1/4	.....	3	47 1/2	.....
1	*6 1/2	.....	4	100	.....

*Ounces.

No. 65 R-K Reducing Pressure Regulators

Double Seated—Spring Type

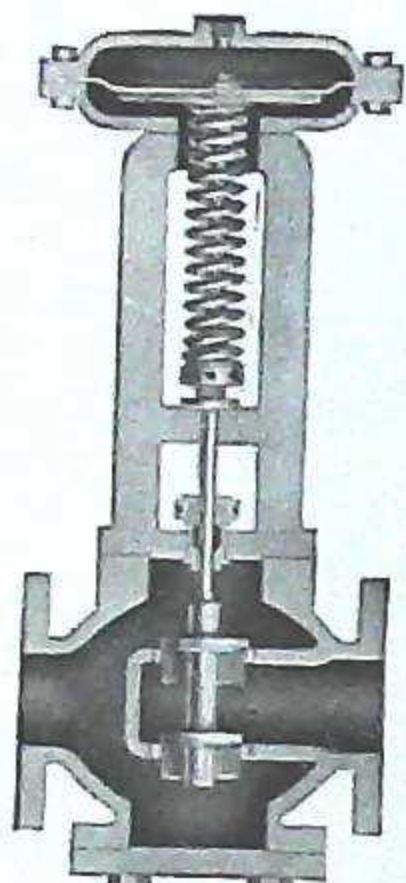


Fig. 1961

This regulator is designed for maintaining a high reduced pressure and will successfully reduce steam or air pressure as high as 200 pounds down to as low as 10 pounds pressure.

When a lower reduced pressure is required the lever and weight style is furnished.

This regulator is recommended for reducing steam to the cylinder of an engine where there is generally a fluctuating pressure or when reduced steam pressure is required for manufacturing purposes.

This regulator will work equally well in an inverted position.

When ordering state service, also the high and reduced pressure.

Valves with cast steel body and monel metal working parts, for superheated steam, can be furnished at special prices.

Sizes 1/2 to 2 inches inclusive are furnished with screwed ends, 2 1/2 inches and larger with flanged ends.

Prices given apply to valves suitable for 125 pounds pressure. For extra heavy valves add 15 per cent to prices

Size Inches	Shipping Weight Pounds	Price Each	Size Inches	Shipping Weight Pounds	Price Each
1/2	20	\$22.00	3	120	\$64.00
3/4	20	22.00	3 1/2	140	68.00
1	35	28.00	4	155	80.00
1 1/4	40	31.00	5	230	90.00
1 1/2	50	35.00	6	285	120.00
2	70	42.00	7	350	176.00
2 1/2	95	52.00	8	400	188.00

No. 67 R-K Reducing Pressure Regulators

Double Seated—Lever and Weight Type For Low Reduced Pressures

For use with low pressure or vacuum heating systems. Reduces steam from 200 pounds pressure to atmosphere or vacuum.

Sensitive in operation and on account of the large diaphragm it is recommended that on sizes of 2 1/2 inches and above that not more than 15 pounds pressure be carried on the reduced side.

May be installed in an inverted position.

Valves 1/2 to 2 inches inclusive have screwed ends; 2 1/2 inches and larger flanged ends. Valves with cast steel body and monel metal working parts for superheated steam furnished at special prices. Prices apply to valves for 125 pounds pressure; for extra heavy valves add 15 per cent.

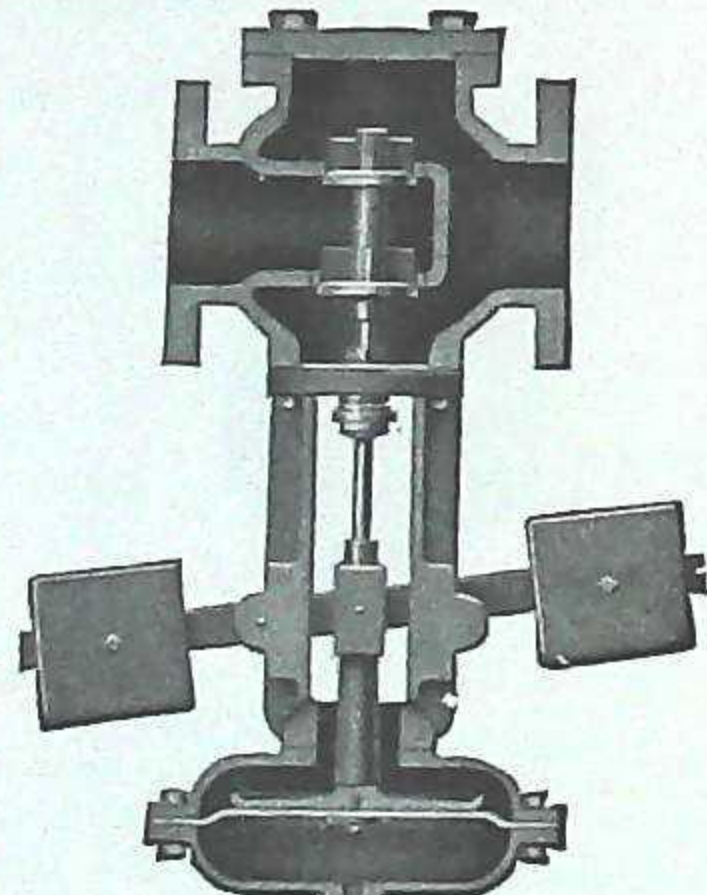


Fig. 1962

Size In.	End to End In.	Face to Face In.	Face to Face Ex. Hvy. In.	Con. to Ex-treme Top, In.	Con. to Ex-treme Bottom In.	Ship. Wt. Lbs.	Price Each
1/2	3 3/4	..	..	1 7/8	11	35	\$22.00
3/4	3 3/4	..	..	1 7/8	11	35	22.00
1	4 3/4	..	..	2 1/4	13 3/4	45	28.00
1 1/4	5 1/4	..	..	2 1/2	14	55	31.00
1 1/2	6 1/4	..	..	2 3/4	14 1/4	67	35.00
2	7 1/2	..	..	3 1/2	17	125	42.00
2 1/2	..	10	11	3 1/2	18	175	52.00
3	..	11	12	4	18	195	64.00
3 1/2	..	12	13	4 1/4	18 1/2	210	68.00
4	..	13	14	4 1/2	23	230	80.00
5	..	15	16	5 3/4	24	325	90.00
6	..	16	17	6	26 1/2	385	120.00

No. E5110 Mueller Single Seat Reducing and Regulating Valves

For Steam and Oil

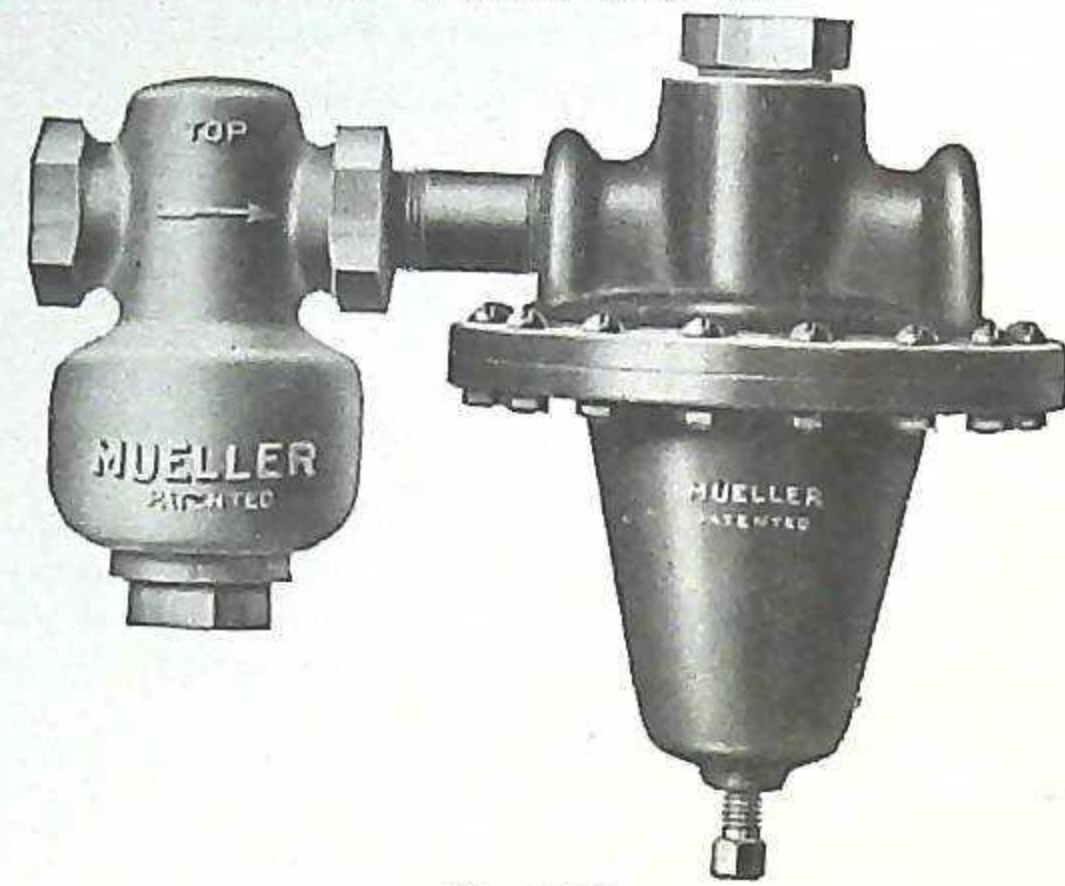


Fig. 1963

This valve is especially designed for use where large reductions are to be made and where slight variations in delivery pressure are permissible.

Standard valves have iron bodies, iron diaphragm chambers, phosphor bronze diaphragms and all interior working parts of bronze. Stock valves are suitable for initial pressure up to 200 pounds and delivery pressures up to 125 pounds. Wherever the initial or delivery pressure exceeds these amounts, valves will be made with bronze bodies.

Furnished complete with strainer as illustrated, unless otherwise specified.

Size In.	Ship. Wt. Lbs.	Price Each	Size In.	Ship. Wt. Lbs.	Price Each
1/4	7 1/4	\$9.60	1	17 1/4	\$17.30
3/8	10	10.00	1 1/4	25	28.50
1/2	12	10.00	1 1/2	31	39.20
3/4	16 1/2	10.75	2	43	56.90

Try-Me Pressure Regulators

For use on water, air or gas services where delivery pressure lower than initial pressure is desired or where delivery pressure must be constant. Each regulator reduces from 250 to 0 pounds. Made of bronze with rust resisting bolts. No diaphragm to break or crack. Gives maximum volume at given pressure. Will not creep. Can be used as emergency shut off.



Fig. 1964

Size In.	Price Each	Size In.	Price Each
1/4	\$7.50	1 1/4	\$15.00
3/8	7.50	1 1/2	18.00
1/2	7.50	2	29.00
3/4	10.00	2 1/2	40.00
1	12.00	..	..

No. 33 Mason Reducing Valves

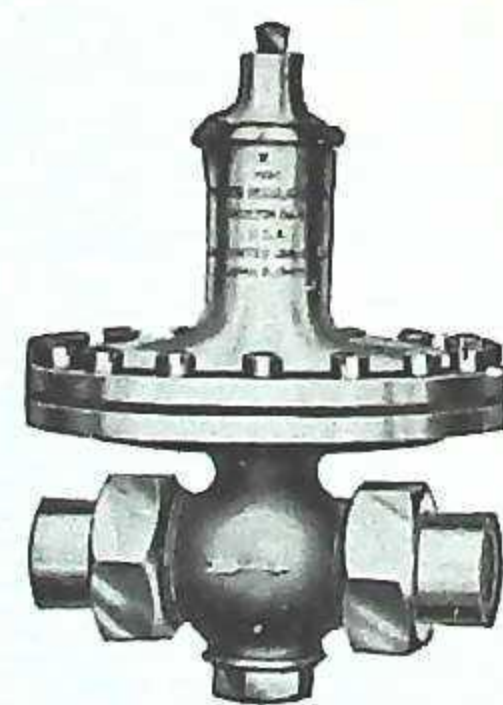


Fig. 1965

Suitable for reducing steam, air or gas pressures. The diaphragm used is of large area so that slight changes in the low pressure will open or close the main valve, permitting instant readjustment thereof to the proper position to supply the exact volume required to maintain the constant low pressure for which the valve is set.

Made of bronze, with 1/4, 1/2 and 3/4-inch union connections.

State pressures and conditions of service when ordering.

Size	Price, No. 33
1/4 inches	\$23.00
1/2 inches	25.00
3/4 inches	27.00

Mason All Bronze Standard Reducing Valves



Fig. 1971

For reduced pressures 5 pounds and above. Reduces and maintains an even pressure of steam or air regardless of the variation of the initial pressure, or of the volume of steam or air required.

It automatically reduces boiler pressure for steam heating systems of all types (vacuum systems included), central heating plants, engines, paper machines, slushers, dye kettles and wherever it is desirable to use a lower pressure than that on a boiler. Provided with dashpot.

Size Inches	Price Each	Size Inches	Price Each
1/2	\$32.00	1 1/4	\$55.00
3/4	32.00	1 1/2	75.00
1	44.00	2	96.00

Mason All Bronze Reducing Valves With Large Diaphragm Chambers

For reduced pressure under 5 pounds. The diaphragm having a large area to be acted upon by the reduced pressure, provides ample power to move auxiliary valve and also renders the action of the valve very sensitive to the slightest change of reduced pressure.

This valve will operate without any variation of reduced pressure whatever, and will work equally well on reduced pressures below the atmosphere.

Size Inches	Price Each	Size Inches	Price Each
1/2	\$44.00	1 1/4	\$65.00
3/4	44.00	1 1/2	85.00
1	54.00	2	106.00



Fig. 1972

Mason Iron Body Standard Reducing Valves

For reduced pressures 5 pounds and above. Maintains an even pressure of steam or air regardless of the variation of initial pressure or of the volume required. It automatically reduces boiler pressure for steam heating systems, engines, paper machines, dye kettles, etc.

Fitted with extra heavy iron body, flanged connections, bronze mounted; for initial pressures up to 180 pounds.

Size Inches	Price Each	Size Inches	Price Each
2 1/2	\$110.00	5	\$260.00
3	140.00	6	375.00
3 1/2	180.00	8	700.00
4	220.00	..	..



Fig. 1973

Mason Iron Body Reducing Valves With Large Diaphragm Chambers

For reducing pressures under 5 pounds. This valve with large diaphragm is very sensitive and is especially adapted to control steam to low pressure systems where close regulation is desired, as on heating systems, etc.

Fitted with extra heavy iron body, flanged; connections, bronze mounted; for initial pressures up to 180 pounds.

Size Inches	Price Each	Size Inches	Price Each
2 1/2	\$120.00	5	\$270.00
3	150.00	6	385.00
3 1/2	190.00	8	710.00
4	230.00	..	..

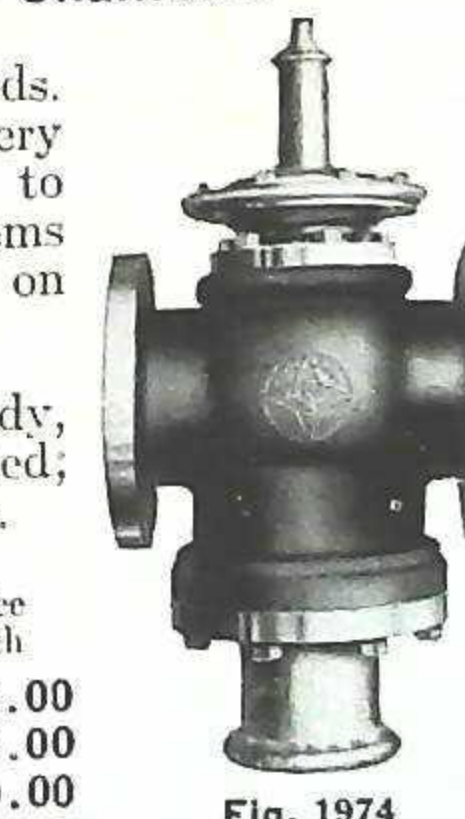


Fig. 1974

Mason All Bronze Balanced Valves With Valve Stem Guide

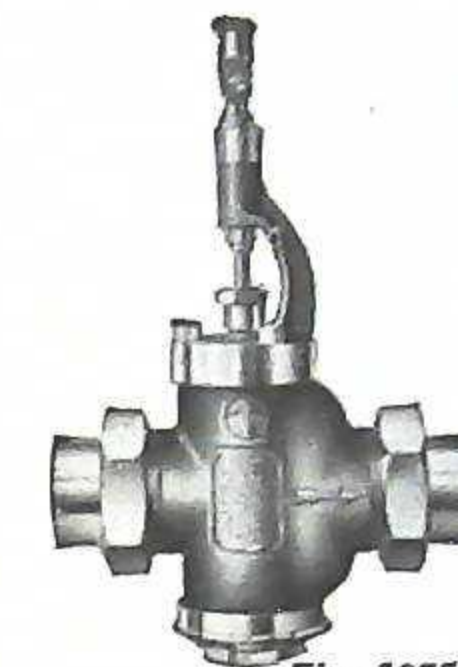


Fig. 1975

Double disc valve of extra heavy design. Made in either the piston type or with bevel seats.

The metal in all Mason Balanced Valves is so distributed that expansion does not interfere with the action of the valves.

All Mason Bronze Balanced Valves are fitted with union connections threaded for standard wrought iron pipe.

Fluid should flow through valve in direction indicated by arrow on side of valve body; but flow may pass through in opposite direction if desired.

Size Inches	Price Each	Size Inches	Price Each
1/2	\$18.00	1	\$24.00
3/4	20.00	1 1/4	29.00

Mason All Bronze Balanced Valves Yoke and Lever Type

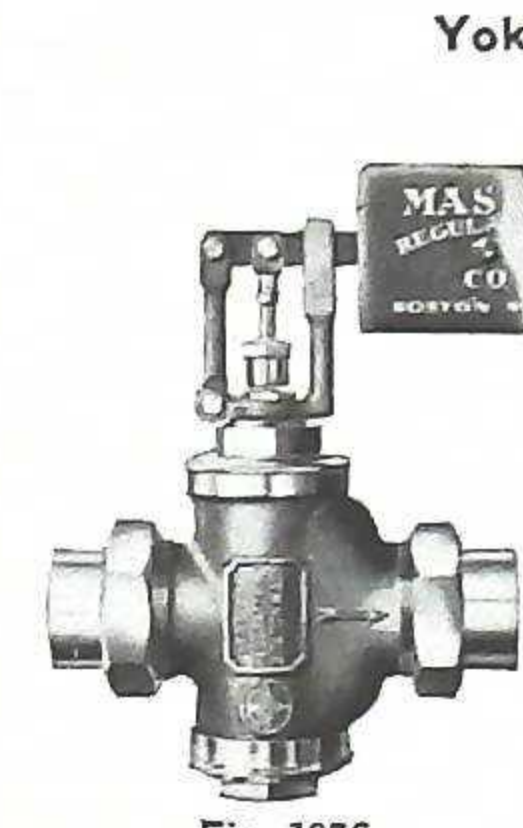


Fig. 1976

Made in either piston or bevel seated types. Used to control pumps, engines, and the like, by means of tank floats or cords to distant points, and also in connection with various devices for controlling the flow to water wheels, receivers, open heaters, and other similar devices. They are self closing by means of the weight. The length of the lever causes them to open slowly.

Size Inches	Price Each	Size Inches	Price Each
1/2	\$18.00	1 1/4	\$29.00
3/4	20.00	1 1/2	34.00
1	24.00	..	..

Mason Iron Body Balanced Valves With Valve Stem Guide

Valves are flanged extra heavy standard. Made in either piston or bevel seated types. Constructed of cast-iron with all internal wearing parts of bronze; the valve seats being practically unaffected by the difference in expansion between cast-iron and bronze.

Size Inches	Price Each	Size Inches	Price Each
2	\$44.00	5	\$205.00
2 1/2	60.00	6	280.00
3	85.00	8	520.00
3 1/2	100.00	10	840.00
4	125.00	12	1150.00
4 1/2	165.00	..	..



Fig. 1977

Mason Iron Body Balanced Valves Yoke and Lever Type

Valves are flanged extra heavy standard. Made in either piston or bevel seated types. Used to control pumps, engines, etc., by distant points, and also in connection with various devices for controlling the flow to water wheels, receivers, open heaters, and other similar devices. They are self closing by means of the weight.

Size Inches	Price Each	Size Inches	Price Each
2	\$44.00	5	\$205.00
2 1/2	60.00	6	280.00
3	85.00	8	520.00
3 1/2	100.00	10	840.00
4	125.00	12	1150.00
4 1/2	165.00	..	..

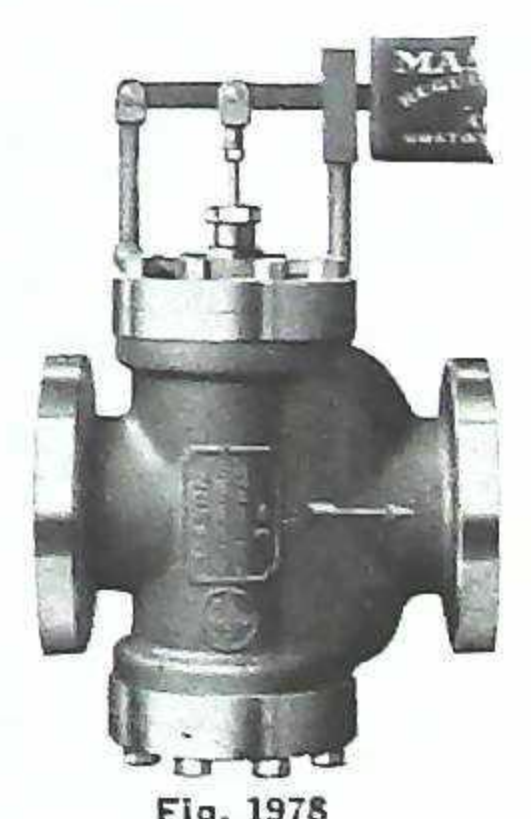


Fig. 1978

Mason Bronze Body Lever Style Reducing Valves

Designed for reducing steam or air pressures up to 300 pounds to low pressures from 0 to 25 pounds.

Its simple construction and operation recommend it for use on low pressure heating systems.

Furnished with union connections.

Size In.	Price Each	Size In.	Price Each
1/2	\$64.00	1 1/4	\$74.00
3/4	66.00	1 1/2	80.00
1	69.00		

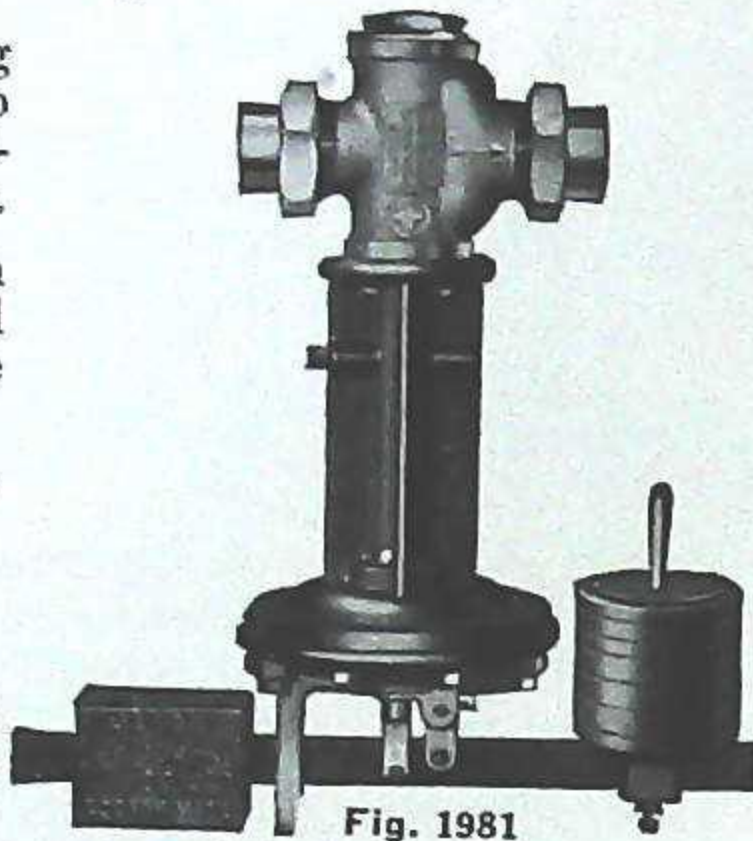


Fig. 1981

Mason All Bronze Differential Reducing Valves With Large Diaphragm Chamber

For reduced pressures from 0 to 15 pounds.

For use on vacuum systems of steam heating and wherever a large volume of steam is required at a low pressure from a high initial pressure. Sizes 3/4x1 1/2 and 1x2 inches have unions on both inlet and outlet. Sizes 1 1/4x2 1/2, 1 1/2x3, and 2x4 inches have unions on inlet end only, outlet being flanged.

Size In.	Price Each	Size In.	Price Each
3/4x1 1/2	\$54.00	1 1/2x3	\$106.00
1 x2	65.00	2 x4	120.00
1 1/4x2 1/2	85.00		



Fig. 1982

No. 55 Mason Bronze Body Steam Pump Pressure Regulators

Designed to control steam driven pumps operating on closed systems, such as are used in supplying domestic service or larger pressure systems for office and factory buildings, up to 150 pounds.

They have bronze bodies with union connections, and can be used on steam pressures as high as 250 pounds.

When ordering, the discharge pressure should be stated so that proper size of diaphragm and spring can be furnished.

Size Inches	Price Each	Size Inches	Price Each
1/2	\$45.00	1 1/4	\$55.00
3/4	47.00	1 1/2	61.00
1	50.00		



Fig. 1983

No. 55 Mason Iron Body Steam Pump Pressure Regulators

Designed to control steam driven pumps operating on closed systems, such as are used in supplying domestic service or larger pressure systems for office and factory buildings, up to 150 pounds.

These valves have cast iron body and internal working parts of bronze. They are suitable for steam pressures up to 250 pounds and for controlling discharge pressures as high as 150 pounds.

When ordering, the pressure should be stated so that proper size of diaphragm and spring can be furnished.

Size Inches	Price Each	Size Inches	Price Each
2	\$68.00	3	\$97.00
2 1/2	81.00	3 1/2	111.00

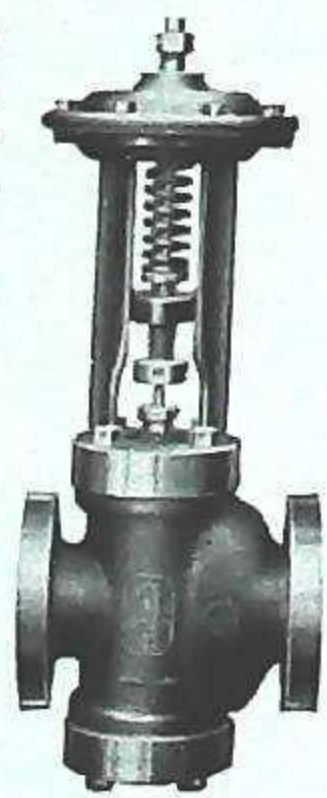


Fig. 1984

No. 2 Davis Iron Body Pressure Regulators

Piston Type

For 200 Pounds Initial Steam Pressure

This regulator is used to automatically reduce high steam pressure down to any desired service pressure. Having a balanced disc it maintains a steady reduced pressure regardless of high pressure fluctuations.

It is made like a pair of balance scales—pressure is balanced by counterweight. To change the delivery pressure simply change the weights. Dash pot and lever are supported by a swivel bracket and may be placed in any position on either side of the regulator. Service pressure determines the amount of counterweight that is necessary—always specify the pressure.

Valve has no springs, toggles, diaphragm, auxiliary valve, small ports or packing.

Standard regulators are constructed for steam. Valves of exactly the same outward appearance are constructed for air and water, but have the internal movable parts specially fitted for the service.

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	Standard Flanged	Standard Flanged	Extra Heavy Flanged		Standard Flanged	Standard Flanged	Extra Heavy Flanged
2	\$70.00	\$75.00	\$80.00	6	\$225.00	\$235.00	\$245.00
2 1/2	85.00	90.00	95.00	7	300.00	325.00	350.00
3	100.00	105.00	110.00	8	375.00	400.00	425.00
3 1/2	120.00	125.00	130.00	10	575.00	600.00	625.00
4	140.00	145.00	150.00	12	825.00	850.00	875.00
5	175.00	185.00	195.00	14	1025.00	1075.00	1125.00



Fig. 1985

Davis Float Valves

For 200 Pounds Working Pressure

The Davis Float Valve will automatically control the admission of water into an open tank or reservoir by rise and fall of water level. The inner valve has a hollow post. It is not connected to the stem, but is operated entirely by pressure. The stem, which is directly connected to the float by means of a lever forms an auxiliary valve that seats in the hollow post.

Pressure at valve must be great enough to lift actual weight of disc. About three pounds is required for valves less than 6 inches in size and about 5 pounds for larger sizes. When this pressure is not available, a valve with a balance disc that does not require any pressure to operate it can be furnished.

This valve has no leather cup packing. Inner valve is loosely fitted and cannot stick. Has a single seat with renewable composition disc. Orders should specify the operating pressure and state whether valves are for hot or cold water so proper kind of disc may be furnished.

Angle pattern furnished unless otherwise specified.

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	Standard Flanged	Standard Flanged	Extra Heavy Flanged		Standard Flanged	Standard Flanged	Extra Heavy Flanged
1/2	\$30.00			4	\$130.00	\$135.00	\$140.00
3/4	30.00			5		160.00	170.00
1	32.00			6		200.00	210.00
1 1/4	35.00			7		300.00	310.00
1 1/2	40.00	\$45.00		8		400.00	410.00
2	50.00	55.00		10		500.00	510.00
2 1/2	70.00	75.00		12		700.00	710.00
3	90.00	95.00		14		900.00	910.00

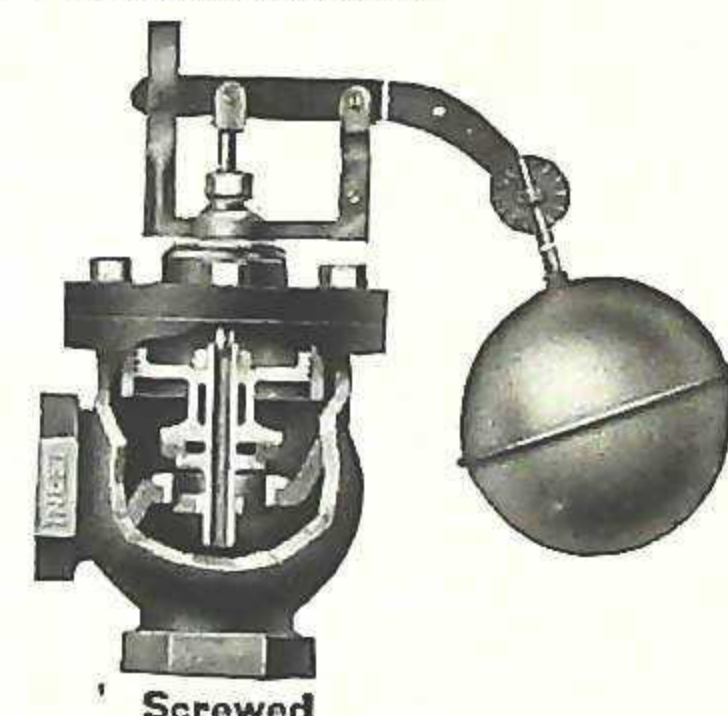
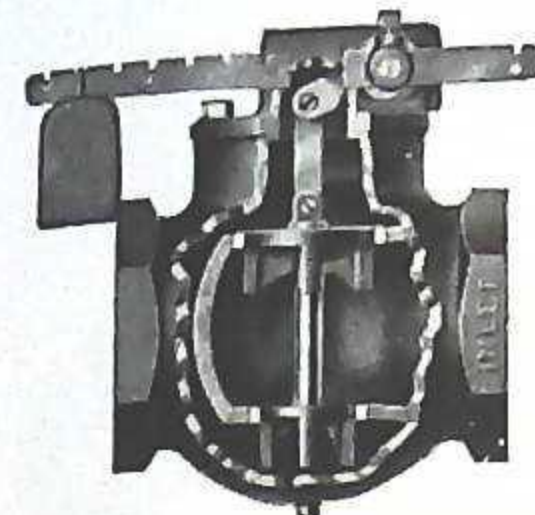


Fig. 1986

Davis Noiseless Back Pressure Valves

For 10 Pounds Exhaust Steam Pressure



Globe, Screwed Horizontal Position Fig. 1991

This valve has two port openings. One disc of the inner valve partially balances the other, which results in reducing the size of the counterweight necessary to maintain a given pressure.

Inner valve is of piston type. It slides on the seats when opening and closing. It is supported by a spring plate when closed and is entirely noiseless.

Under pressures higher than 10 pounds the leakage is noticeable and if objectionable valve should have level-seated discs, which can be supplied on special order.

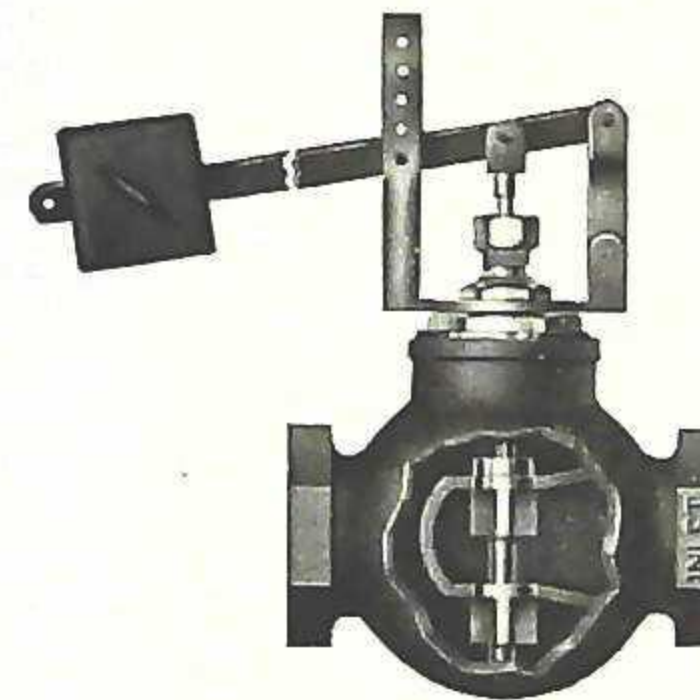
Valve will not stick when the parts expand after they become heated. The seats are brass bushing rings and the inner valve is cast iron.

The globe pattern valve may be used either horizontally or vertically. Angle valves, sizes six inches and larger, are made to order and are specially priced.

Size In.	FACE TO FACE, IN.		PRICE, EACH		Size In.	FACE TO FACE, IN.		PRICE, EACH	
	Screwed	Flanged	Screwed	Flanged		Screwed	Flanged	Screwed	Flanged
2	7 1/2	8 1/4	\$25.00	\$30.00	12	22	24	\$220.00	\$240.00
2 1/2	7 1/2	8 1/4	30.00	35.00	14	24 1/4	26	345.00	365.00
3	8 5/8	9 1/2	35.00	40.00	15	24	26	400.00	420.00
3 1/2	9 1/4	10	40.00	45.00	16	27 1/2	29	465.00	485.00
4	10 1/4	11	45.00	50.00	18	29 1/2	31	600.00	620.00
4 1/2	11	11 1/2	50.00	55.00	20	30 1/2	32	750.00	770.00
5	12	12 1/2	60.00	65.00	22	38	40	900.00	920.00
6	13 1/2	14 1/2	85.00	90.00	24	38	40	1050.00	1070.00
7		14 1/2		110.00	26	48	50	1200.00	1220.00
8		16 1/2		140.00	28	48	50	1400.00	1420.00
10		19		180.00	30	47	49	1600.00	1620.00

Davis Balanced Valves

For 200 Pounds Working Pressure



Screwed Fig. 1992

The Davis Balanced Valve has double parallel seats and piston disc. It is balanced as to internal pressure and must be operated by some force acting on the lever.

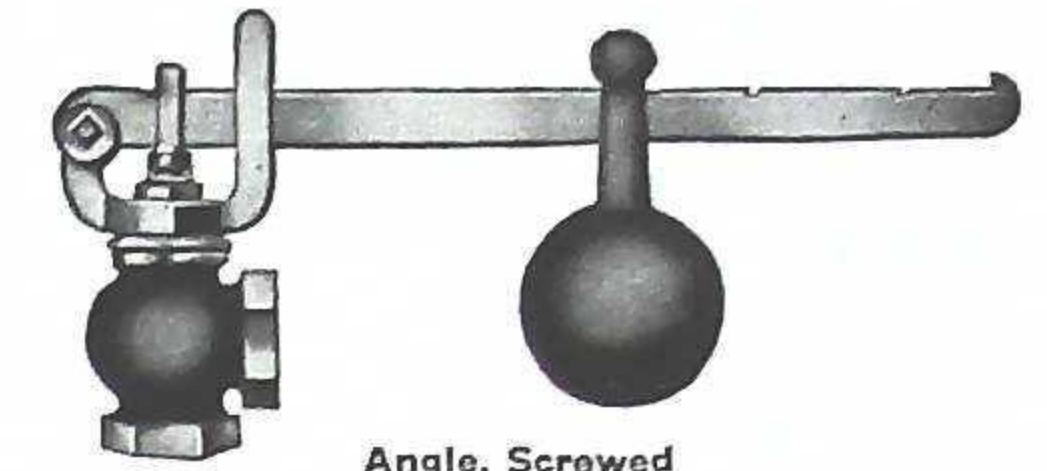
It is not a stop valve and should be used only where there is no objection to a slight leakage. It will handle steam, air, gas, water and other fluids. This valve is connected to the lever by a stem and yoke, the stem being guided by a stuffing box. Provision is made in the post which guides the lever for limiting the throw of the valve.

Valves 1 1/2-inch and smaller, brass; larger sizes have iron bodies, brass trimmed.

Size In.	PRICE, EACH			Size In.	PRICE, EACH		
	Standard Flanged	Standard Flanged	Extra Heavy Flanged		Standard Flanged	Standard Flanged	Extra Heavy Flanged
1/2	\$20.00			5	\$150.00	\$160.00	\$170.00
3/4	20.00			6	175.00	185.00	195.00
1	25.00			7	225.00	250.00	275.00
1 1/4	30.00			8	250.00	275.00	300.00
1 1/2	35.00			10	350.00	375.00	400.00
2	40.00	\$45.00	\$50.00	12	500.00	525.00	550.00
2 1/2	50.00	55.00	60.00	14	650.00	700.00	750.00
3	60.00	65.00	70.00	16	800.00	850.00	900.00
3 1/2	80.00	85.00	90.00	18	1000.00	1050.00	1100.00
4	100.00	105.00	110.00	20	1250.00	1300.00	1350.00

Globe, Angle and Cross Safety Valves

Brass Disc For 100 Pounds Steam Working Pressure



Angle, Screwed Fig. 1993 Brass Valves

The levers on these valves are graduated from 30 to 100 pounds. Can be furnished graduated under 30 pounds at special prices.

Size In.	Screwed		Size In.	Screwed		Size In.	Screwed	
	Price Each	Flanged		Price Each	Flanged		Price Each	Flanged
1/4	\$2.20		3/4	\$3.90		1 1/2	\$9.00	
3/8	2.50		1	4.70		2	12.50	
1/2	3.25		1 1/4	7.15		2 1/2	22.50	

Iron Body Valves

Sizes from 1 to 3-inch inclusive have brass swivel top; larger sizes have cast iron top and can be set at any 90° angle. The stem, disc and seat ring are made of brass.

Lever graduations from 30 to 100 pounds. These valves can be furnished with any other graduations not exceeding 100 pounds at a special price.

Size In.	Diam. Flange In.	PRICE, EACH		Size In.	Diam. Flange In.	PRICE, EACH	
		Screwed	Flanged			Screwed	Flanged
1	9	\$4.00		4	9	\$28.75	\$34.00
1 1/4	9 1/4	5.00		4 1/2	9 1/4	34.50	40.00
1 1/2	10	5.80		5	10	41.50	48.00
2	11	7.80	\$10.25	6	11	57.75	65.00
2 1/2	12	13.25	16.00	7	12 1/2	93.50	100.00
3	13 1/2	17.25	21.50	8	13 1/2	132.00	140.00
3 1/2	14 1/2	23.00	27.50				

Donnelly Pressure Relief Valves

For range-boilers and all closed plumbing and hot water systems. It will also relieve pressure, and air, when installed on any vessel or tank. Should be installed in a vertical position.

Constructed without any interior springs.

Can be adjusted at any required pressure from a fraction of a pound up.

When pressure becomes too great, valve operates automatically.

Size Inches	Price Each	Size Inches	Price Each
1/2 F. T.	\$4.00	3/4 I. P. S.	\$8.00
1/2 I. P. S.	4.00	1 I. P. S.	9.00



Fig. 1994

Stack Safety Relief Valves

A relief valve and hot water faucet combined. Being used as a faucet, it allows boiler pressure to reach the valve and keeps the seat clean. Cannot corrode or stick and can be used on all systems of hot water. In ordering state water pressure. When it operates from excessive pressure, it drips into a sink, saving separate drain connections. Made of best steam metal obtainable. Simple in construction and relieving pressure cannot be changed or adjusted when in use. Cannot water hammer.

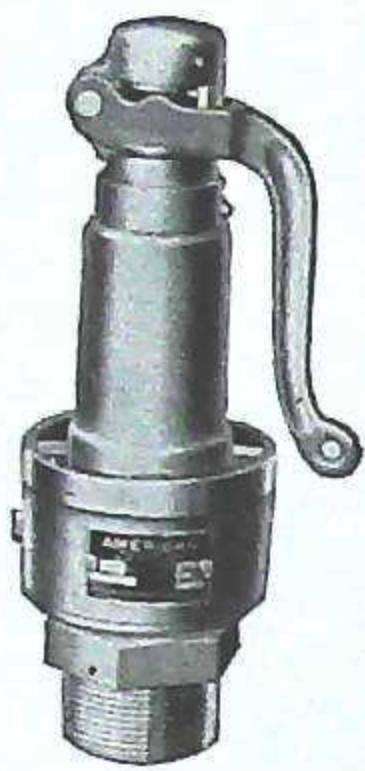


Fig. 1995

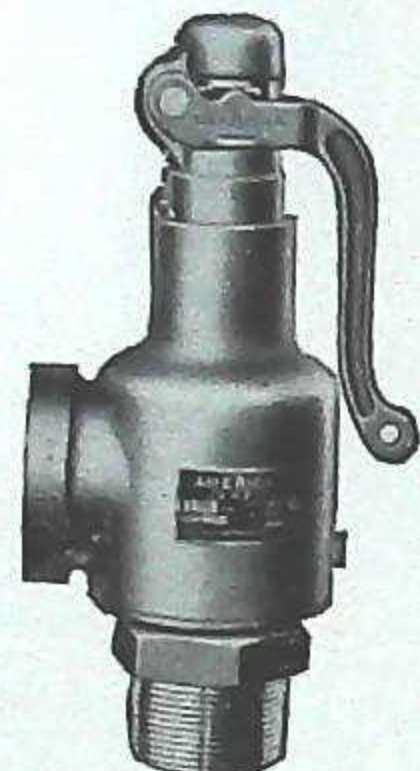
Size Inches	Thread	Style	Price Each
1/2	I. P.	Male	\$6.00
1/2	I. P.	Female Flanged	7.00
1/2	I. P.	Male Adj. Flgd.	8.50
3/4	Fine	Male	6.00

American Portable All Bronze Pop Safety Valves

Up to 300 Pounds Steam Working Pressure



Type 1445
Fig. 2001



Type 1451
Fig. 2002

Made to conform to requirements of A. S. M. E. and various other codes.

All threaded connections are standard iron pipe size threads. British standard pipe threads furnished without additional cost. Flanged base can be furnished at extra charge.

If desired that valve be arranged for lock and furnished with lock, add 10 per cent to prices.

SEMI-FINISHED—PRICE, EACH				SEMI-FINISHED—PRICE, EACH			
Size In.	Type 1445 Top Outlet	Type 1449 Muffled Side Outlet	Type 1451 Side Outlet	Size In.	Type 1445 Top Outlet	Type 1449 Muffled Side Outlet	Type 1451 Side Outlet
1/2	\$8.00	\$10.00	\$10.00	1 1/2	\$15.00	\$35.00	\$18.00
3/4	8.00	10.00	10.00	2	23.00	45.00	27.00
1	10.00	25.00	12.00	2 1/2	38.00	.....	43.00
1 1/4	12.00	30.00	15.00	3	.....	.....	72.00

Model JRT American Pop Safety Valves

For Fire Tube Boilers

For 250 Pounds Steam Working Pressure

Iron body, bronze mountings. Inlet flanges furnished extra heavy dimensions only and drilled (extra heavy dimensions) only when so ordered at extra cost.

When ordering always state set pressure.

No. 1414, screwed; No. 1416, flanged.

Size Inches	PRICE, EACH	
	Bronze Seat	Nickel Seat
2	\$35.00	\$40.00
2 1/2	42.00	48.00
3	50.00	57.00
3 1/2	68.00	75.00
4	75.00	87.00
4 1/2	100.00	115.00



No. 1414, Screwed
Fig. 2003

No. 1460 American House Heater Pop Safety Valves

Side Lever

For 30 Pounds Steam Working Pressure



Fig. 2004

The body and all working parts are bronze, with base of iron, thus reducing possibility of damage by use of heavy pipe wrenches in connecting.

Furnished to meet the requirements of A. S. M. E. and various other boiler codes. All threaded standard pipe thread at same price, if desired.

Size In.	Ht. In.	Price Each	Size In.	Ht. In.	Price Each
1/2	4	\$5.25	2	6 1/4	\$11.25
3/4	4 1/8	5.25	2 1/2	7 1/8	26.00
1	4 1/8	6.00	3	7 5/8	37.50
1 1/4	5	6.75	3 1/2	9 7/8	50.00
1 1/2	5 1/8	8.25	4	10 3/8	80.00

No. 1476 American Standard Bronze Water Relief Valves

For 250 Pounds Working Pressure

For use on tanks, pipe lines, etc., when large relieving capacity is not required. State pressure at which valve is to be set to relieve.

Male connection valves carried in stock; female connection on order, subject to slight delay in shipment.

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Semi-Fin.	Fin.		Semi-Fin.	Fin.
1/2	\$10.00	\$11.00	2	\$27.00	\$29.00
3/4	10.00	11.00	2 1/2	43.00	46.00
1	12.00	13.00	3	72.00	77.00
1 1/4	15.00	16.00	3 1/2	95.00	105.00
1 1/2	18.00	19.00	4	120.00	135.00



Fig. 2005

American Bronze Water Relief Valves

For 250 Pounds Working Pressure



No. 1487
Fig. 2006

No. 1487 is furnished with regulating wheel to increase or decrease the opening pressure.

No. 1485 is without wheel—the compression screw being covered with cap—thus making it fool-proof.

Supplied with female thread only.

When ordering, state pressure at which valve is to be set to relieve.



No. 1485
Fig. 2007

Valves are also made extra heavy for pressures up to 400 pounds.

Size In.	PRICE, EACH			
	Semi-fin.	Semi-fin. N.P.	Fin.	Fin. N.P.
1/2	\$10.00	\$11.00	\$11.00	\$12.00
3/4	10.00	11.00	11.00	12.00
1	12.00	13.00	13.00	14.00
1 1/4	15.00	17.00	16.00	18.00
1 1/2	18.00	21.00	19.00	22.00
2	27.00	30.00	29.00	32.00
2 1/2	43.00	47.00	46.00	50.00
*3	72.00	80.00	77.00	85.00
*3 1/2	95.00	105.00	105.00	115.00
*4	120.00	135.00	135.00	150.00

*Made with bolted bonnet.

No. 1496 American Underwriters' Iron Body Water Relief Valves

For 250 Pounds Working Pressure



Fig. 2008

Bronze mounted. Has been accepted by the Inspection Department of the Associated Factory Mutual Fire Insurance Companies for use on Standard Underwriter Fire Pumps, the sizes required under this particular service being 3, 3 1/2, 4 and 5 inches, and set at 100 pounds.

Always furnished with flanged inlet, which conforms to Underwriters' requirements.

Size In.	Price Each	Size In.	Price Each
3	\$65.00	4	\$100.00
3 1/2	85.00	5	150.00

Jenkins Bronze Y or Blow-off Valves

With Jenkins Disc and Renewable Seat Rings

For 150 Pounds Steam Working Pressure
250 Pounds Water Working Pressure



No. 124, Screwed
Fig. 2011



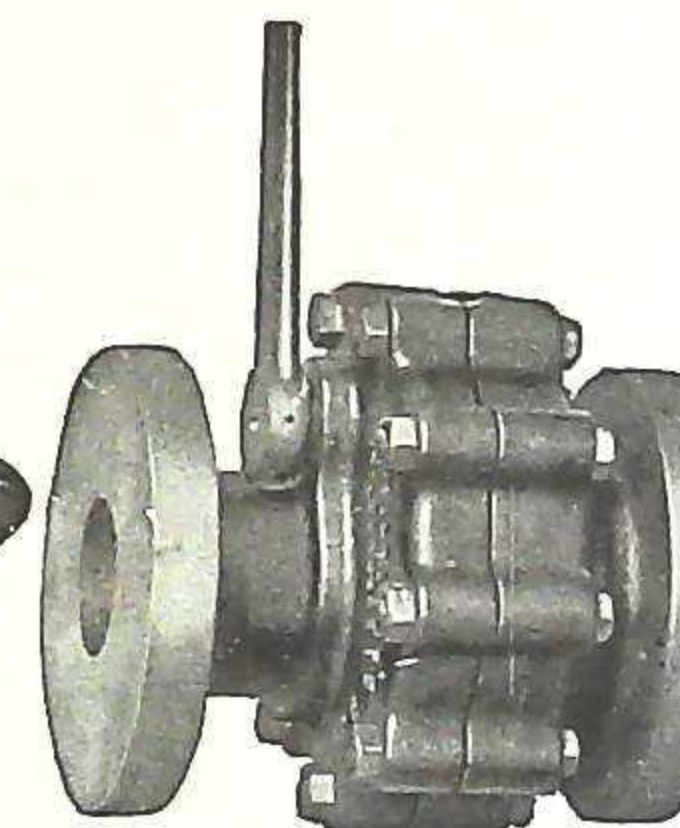
No. 125, Flanged
Fig. 2012

Size Inches	Face to Face Flanged Inches	Diameter Flanges Inches	PRICE, EACH	
			No. 124 Screwed	No. 125 Flanged
3/8	.....	3	\$3.00	.....
1/2	4 1/4	3	3.00	\$7.50
3/4	4 3/4	3 1/2	4.50	10.50
1	5 1/4	4	6.00	15.50
1 1/4	6	4 1/2	7.50	16.50
1 1/2	6 1/2	5	9.75	19.50
2	8 1/8	6	14.00	30.00
2 1/2	9	7	27.00	42.00
3	11	7 1/2	37.50	55.50

Everlasting Iron Body Blow-off Valves



Screwed
Fig. 2013



Flanged
Fig. 2014

Designed to give continual, uninterrupted service, being self-grinding and self-compensating at all points. Every valve is carefully inspected and tested; all valves for boiler and other high pressure service are worked under 250 pounds steam pressure before leaving the factory.

Size In.	PRICE, EACH			
	Screwed	Flanged	RACK AND PINION	
1/4 & 3/8	\$9.00	.....	Screwed	Flanged
1/2	9.00	.....	.....	.....
3/4	11.00	.....	.....	.....
1	11.00	\$15.00	.....	.....
1 1/4	16.00	19.00	.....	.....
1 1/2	22.00	26.00	.....	.....
2	25.00	30.00	\$34.50	\$39.00
2 1/2	32.00	39.00	40.00	48.00
3	44.00	50.00	54.00	60.00
4	60.00	70.00	71.00	81.00

Hoivalco Semi-steel Angle Blow-off Valves

Reversible—Regrindable—Renewable

For 250 Pounds Working Pressure



No. 50, Angle Flanged
Fig. 2015

The valve body is made of Homestead semi-steel, which is closely grained and extremely tough. Its tensile strength is 1 1/2 times greater than the average cast iron, and it stands a hydraulic test of 1000 pounds per square inch.

The valve seat and disc are made of a nickel alloy which is non-corrosive, and which will not cut easily. Both parts are tapered to an angle which will not permit any dirt or grit to find a lodging place.

The trimmings are made of steam bronze.

A special feature of this valve is the ease with which it can be reground, reversed or renewed. By loosening the four bolts holding the upper body to the lower one, the seat is exposed to full view.

When one side of the seat or disc becomes too badly worn to be repaired, either one or both of them can be reversed, thus producing a new valve.

Size In.	BACK TO FACE, OF INLET, IN.		PRICE, EACH	
	Screwed	Flanged	Screwed	Flanged
1 1/2	6 3/8	6 7/8	\$22.00	\$23.00
2	7 5/8	8	27.00	28.30
2 1/2	8 3/4	9	32.50	33.55
3	9 5/8	9 3/4	41.00	43.00

Flanged connections will be drilled in accordance with customer's requirements, at an additional charge.

Companion flanges, also valves with special sized flanges, can be furnished promptly. Prices upon request.

Hoivalco-Homestead Semi-steel Combination Blow-off Valves

Reversible—Regrindable—Renewable
For 250 Pounds Working Pressure

This double blow-off arrangement represents the accepted practice in many power plants, and meets the requirements of those states whose codes specify two valves on the blow-off line.

The valve body is made of Homestead semi-steel. This material is closely grained and extremely tough.

The valve seat and disc are made of a special alloy which is non-corrosive, and which will not cut easily. Both parts are tapered to an angle which will not permit any dirt or grit to find a lodging place.

This combination makes it possible, when necessary, to regrind, renew, or reverse the seat and disc of the Hoivalco Blow-off Valve while the boiler is under pressure.

Size In.	Back to Face, In.	Price Each	Size In.	Back to Face, In.	Price Each
1 1/2	12 1/8	\$35.00	2 1/2	18 3/8	\$59.00
2	16 5/8	44.00	3	20 3/8	85.00



No. 51
Fig. 2016

**Lunkenheimer Duro Iron Body
Blow-off Valves**
Outside Screw, Flanged Yoke Bonnet



No. 897, Flanged
Fig. 2021

For 250 Pounds
Steam Working Pressure

The Duro Valve is of the angle type, which not only permits an unobstructed flow opening through the valve greater than the nominal area of the connecting pipe, but also lends itself most readily to a seat and disc construction which affords maximum protection to these parts when blowing down, and causes effective cleansing of the seating surfaces immediately prior to valve closure. All parts are renewable.

Provided with stem of a special bronze composition mounted and guided in bronze bushings—and, unless otherwise ordered with a double faced, reversible disc having seating faces of Disc-alloy. Seat and seat ring bushing are made of bronze.

Size In.	CENTER TO FACE INCHES		DISC FACES, BRONZE SEAT AND SEAT BUSHING		WITH ALLOY		WITH SOLID	
	Serd.	Fgd.	In.	No. 896	No. 897	No. 896	No. 897	
1 1/4	2 5/8	3 3/8	5	\$10.70	\$12.00	\$13.20	\$14.50	
1 1/2	2 7/8	4	6	12.50	14.00	15.50	17.00	
2	4 1/8	4 5/8	6 1/2	16.00	18.00	19.50	21.50	
2 1/2	4 3/4	5 1/4	7 1/2	21.00	23.00	25.50	27.50	

Homestead Brass Straightway Valves
For 200 Pounds Working Pressure

Valves 2 inches and larger have bonnet bolted on. Price includes handle.



Screwed
Fig. 2022

Size In.	FACE TO FACE INCHES		Diam. Flanged, In.	PRICE, EACH	
	Serd.	Fgd.		Screwed	Flanged
1/8	1/8	1/8	1/2	\$3.80	.....
1/4	1/4	1/4	3/8	3.80	.....
3/8	3/8	3/8	1/2	4.00	.....
1/2	1/2	1/2	3/4	4.50	.....
3/4	3/4	3/4	1	5.35	.....
1	1	1	1 1/4	7.15	\$16.65
1 1/4	1 1/4	1 1/4	1 1/2	9.60	19.20
1 1/2	1 1/2	1 1/2	2	13.40	26.70
2	2	2	2 1/2	23.30	35.00
2 1/2	2 1/2	2 1/2	3	35.00	46.40
3	3	3	3 1/2	60.40	82.90
3 1/2	3 1/2	3 1/2	4	104.10	110.50
4	4	4	4 1/2	120.40	136.00
6	6	6	6 1/2	190.00	240.00

Homestead Brass Straightway Valves
For 500 Pounds Working Pressure

Sizes under 1 inch have screw bonnet and stuffing box. Price includes handle.

Size In.	FACE TO FACE INCHES		Diam. Flanged, In.	PRICE, EACH	
	Serd.	Fgd.		Screwed	Flanged
1/8	1/8	1/8	1/2	\$5.00	.....
1/4	1/4	1/4	3/8	5.00	.....
3/8	3/8	3/8	1/2	5.00	.....
1/2	1/2	1/2	3/4	7.30	.....
3/4	3/4	3/4	1	9.15	.....
1	1	1	1 1/4	11.70	\$23.30
1 1/4	1 1/4	1 1/4	1 1/2	16.60	25.00
1 1/2	1 1/2	1 1/2	2	21.30	29.00
2	2	2	2 1/2	31.60	45.00
2 1/2	2 1/2	2 1/2	3	50.00	70.00
3	3	3	3 1/2	95.30	116.60
4	4	4	4 1/2	160.20	193.30
5	5	5	5 1/2	183.30	226.60
6	6	6	6 1/2	233.30	288.10



Screwed
Fig. 2023



Screwed
Fig. 2024

**Homestead All Semi-steel
Straightway Valves**
Screwed

For 250 Pounds Working Pressure
Used on water, air, and steam lines, as well as for boiler blow-offs, etc.

Homestead semi-steel is extremely tough and very closely grained, and has a tensile strength one and one-half times greater than the average cast iron.

Prices are for valves complete, including handle.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$10.65	1 1/4	\$14.65	2 1/2	\$36.00	5	\$124.00
3/4	10.65	1 1/2	16.00	3	60.00	6	172.00
1	10.65	2	21.90	4	88.00	.....	.....

**Homestead All Semi-steel
Straightway Valves**
Flanged

For 250 Pounds Working Pressure

Used on water, air, and steam lines, as well as for boiler blow-offs, etc. Homestead semi-steel is extremely tough and very closely grained, and has a tensile strength one and one-half times greater than the average cast iron.

Prices are for valves complete, including handle.

Size In.	Diam. In.	Price Each	Size In.	Diam. In.	Price Each	Size In.	Diam. In.	Price Each
1	4 1/2	\$14.65	2	6 1/2	\$28.50	4	10	\$108.00
1 1/4	5	16.00	2 1/2	7 1/2	46.80	5	11	150.00
1 1/2	6	21.30	3	8 1/4	78.00	6	12 1/2	196.00

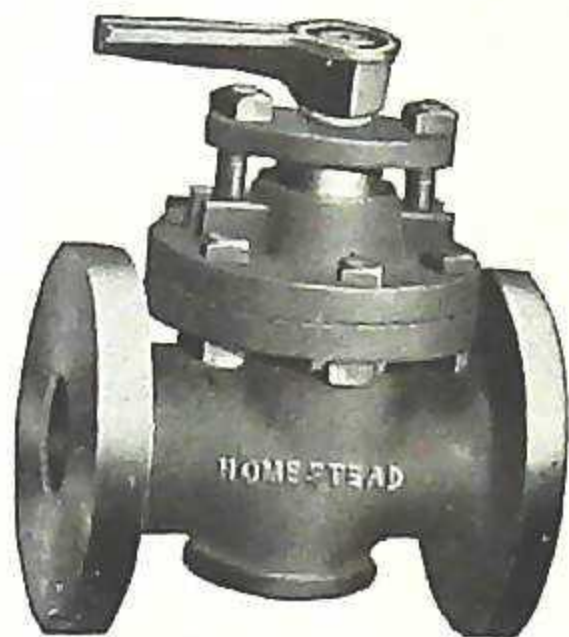


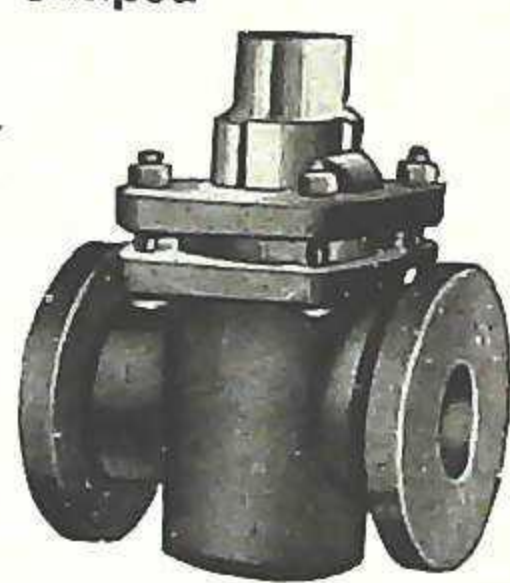
Fig. 2025

Asbestos Packed Iron Cocks
Grooved Packed—U-shaped



Screwed
Fig. 2026

For boiler blow-off, water column blow-off, also between check and boiler, and between water column and boiler. Successfully used for hydraulics, ammonia, gas, oil and air.



Flanged
Fig. 2027

Standard Pattern

For Steam Working Pressures: 1/2 to 2-inch, 125 Pounds; 2 1/2 to 6-inch, 100 Pounds

Size In.	FACE TO FACE INCHES		PRICE, EACH	Size In.	FACE TO FACE INCHES		PRICE, EACH
	Serd.	Fgd.			Serd.	Fgd.	
1/8	2 5/8	.....	\$1.60	2	6	7 1/8	\$7.00 \$7.00
1/4	2 5/8	.....	1.60	2 1/2	7	8 1/4	12.00 12.00
3/8	2 5/8	.....	1.60	3	8 1/8	9 1/4	18.00 18.00
1/2	3	.....	1.60	3 1/2	8 3/4	10 1/4	27.00 27.00
3/4	3 3/8	.....	2.10	4	9 1/2	11 1/2	30.00 30.00
1	4	5 1/2	2.50	5	11 1/2	13 3/4	45.00 45.00
1 1/4	4 5/8	5 3/4	3.50	6	14 3/4	16	60.00 60.00
1 1/2	5 3/8	5 7/8	4.75	.....	.....	.....	.....

Extra Heavy Pattern

For Steam Working Pressures: 1 to 2-inch, 250 Pounds; 2 1/2 to 4-inch, 250 Pounds

Size In.	FACE TO FACE INCHES		PRICE, EACH	Size In.	FACE TO FACE INCHES		PRICE, EACH
	Serd.	Fgd.			Serd.	Fgd.	
1/2	3 3/4	.....	\$2.40	2	6 7/8	8	\$10.00 \$10.00
3/4	4 1/8	.....	3.00	2 1/2	8 3/8	10	17.00 17.00
1	4 3/4	5 1/8	3.50	3	10 7/8	11 1/2	26.00 26.00
1 1/4	5 3/8	5 5/8	5.00	3 1/2	12	12 3/4	38.00 38.00
1 1/2	5 7/8	6 3/4	6.75	4	15	15	42.00 42.00

Standard Iron Cocks

Square and Flat Head

For 125 Pounds Steam Working Pressure



Square Head, Screwed
Fig. 2031



Flat Head, Screwed
Fig. 2032

Galvanized iron cock, add 50 per cent to lists below.

Size In.	SCREWED				FLANGED			
	All Iron	With Brass Washer	With Brass Plug	With Brass Plug and Washer	All Iron	With Brass Washer	With Brass Plug	With Brass Plug and Washer
3/8	\$0.85	\$0.95	\$1.25	\$1.35	.....	.....	.....	.....
1/2	.90	1.00	1.30	1.40	\$1.85	\$1.95	\$2.25	\$2.35
3/4	1.05	1.20	1.60	1.75	2.00	2.15	2.65	2.75
1	1.30	1.55	1.90	2.15	2.25	2.50	3.00	3.15
1 1/4	1.60	1.95	2.65	3.00	2.75	3.10	3.75	4.10
1 1/2	1.95	2.35	3.75	4.15	3.25	3.65	5.00	5.40
2	2.70	3.20	5.25	5.75	4.25	4.75	7.00	7.50
2 1/2	4.40	5.15	8.75	9.50	6.25	7.00	10.50	11.25
3	6.75	7.75	13.00	14.00	9.50	10.50	15.75	16.75
3 1/2	12.00	14.00	27.50	29.50	15.00	17.00	30.00	32.00
4	15.50	19.00	36.50	40.00	19.00	22.50	40.00	43.50
5	32.00	38.00	67.00	73.00	36.00	42.00	70.00	76.00
6	45.00	53.00	94.00	102.00	50.00	58.00	100.00	108.00
8	100.00	110.00	200.00	210.00	107.00	117.00	210.00	220.00

Standard Three-way Iron Cocks
Square Head

For 125 Pounds Steam Working Pressure

Size In.	PRICE, SCREWED, EACH			
	All Iron	With Brass Washer	With Brass Plug	With Brass Plug and Washer
1/2	\$1.50	\$1.60	\$1.90	\$2.00
3/4	1.65	1.80	2.20	2.35
1	1.80	2.05	2.40	2.65
1 1/4	2.05	2.40	3.10	3.45
1 1/2	2.65	3.05	4.50	4.90
2	3.65	4.15	6.25	6.75
2 1/2	5.35	6.10	9.75	10.50
3	7.50	8.50	13.75	14.75
3 1/2	14.00	16.00	30.00	32.00
4	19.00	22.50	40.00	43.50
5	36.50	42.50	71.50	77.50
6	52.00	60.00	100.00	108.00
8	110.00	120.00	210.00	220.00

Prices of flanged three-way cocks upon application.

Brass Steam Cocks

Flat and Square Head
For 100 Pounds Steam Working Pressure

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Flat Head	Sq. Head		Flat Head	Sq. Head
1/4	\$0.85	.....	1 1/4	3.70	3.95
3/8	1.00	.....	1 1/2	4.85	5.15
1/2	1.25	\$1.40	2	7.30	7.65
3/4	1.70	1.90	2 1/2	14.50	.....
1	2.35	2.55	3	22.50	.....
1 1/4	3.70	3.95	*3 1/2	38.50	.....
1 1/2	4.85	5.15	*4	50.00	.....

Flat Head
Fig. 2034

Square Head
Fig. 2035

*Furnished to order only at special prices. Square head furnished unless otherwise ordered.

Three-way Brass Steam Cocks
Square Head—With Check
For 100 Pounds Steam Working Pressure
With Extra Large Plug and Full Openings

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/4	\$1.80	1	\$3.75	2 1/2	\$18.75
3/8	2.10	1 1/4	5.75	3	26.00
1/2	2.50	1 1/2	7.15	.....	.....
3/4	3.00	2	11.00	.....	.....



Fig. 2036

Four-way Brass Steam Cocks
Square Head—With Check
For 100 Pounds Steam Working Pressure

These cocks are furnished to order only.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1/2	\$6.00	1	\$11.00	1 1/2	\$17.50
3/4	8.50	1 1/4	14.50	2	25.00

Brass Gas Service Stops
Flat, Square and Tee Head

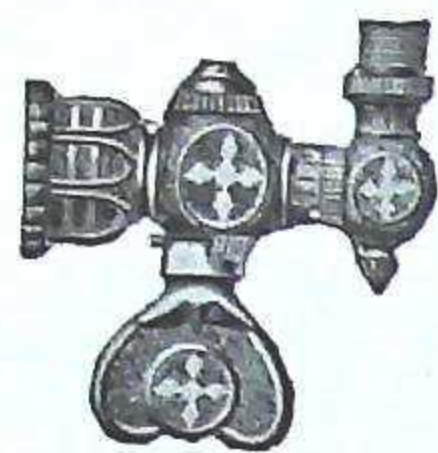


Flat Head
Fig. 2037



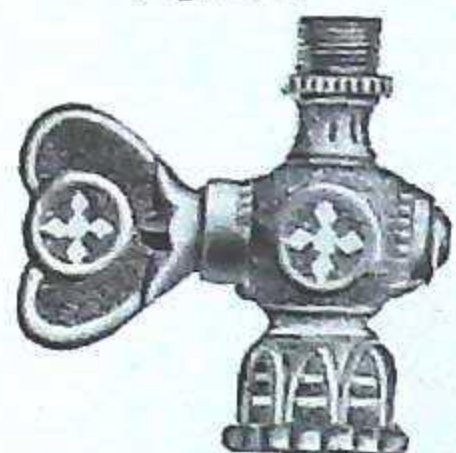
Square Head
Fig. 2038

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Flat Head	Square Head		Flat Head	Square Head
1/4	\$0.90	\$0.90	1	\$2.10	\$2.10
3/8	1.00	1.00	1 1/4	3.25	



EII Gas Burner Cocks			
Size Inches	Price per Dozen	Size Inches	Price per Dozen
1/2	\$6.20	1/8	\$4.25
3/8	5.20	3/8	8.25
1/4	4.55	..	....

Fig. 2041

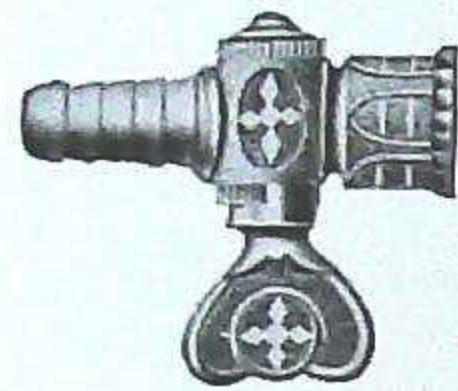


Pillar Gas Cocks

Female

Iron Pipe Connection Inches	Price per Dozen	Iron Pipe Connection Inches	Price per Dozen
1/2	\$5.25	1/4	\$4.25
3/8	4.55	1/8	3.90

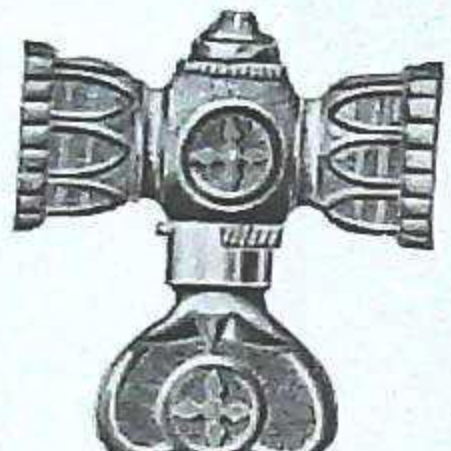
Fig. 2042



Gas Hose Cocks

I.P. Connection Inches	Price per Dozen	I.P. Connection Inches	Price per Dozen
3/4	\$8.00	1/4	\$4.55
1/2	5.25	1/8	4.25
3/8	4.90	..	....

Fig. 2043



Gas Stop Cocks

Drilled Gasway			
I.P. Connection Inches	Price per Dozen	I.P. Connection Inches	Price per Dozen
1/2 to 1/2	\$6.00	1/4 to 1/4	\$4.55
3/8 " 3/8	4.90	1/4 " 1/8	4.25
3/8 " 1/4	4.55	1/8 " 1/8	3.90
3/8 " 1/8	4.55	3/8 " 3/8	5.55

*Extra large cored gasway.

Independent Gas Cocks

For Rubber Hose

Iron Pipe Connection Inches	Price per Dozen	Iron Pipe Connection Inches	Price per Dozen
1/2	\$8.00	1/4	\$6.00
3/8	6.50	1/8	5.50

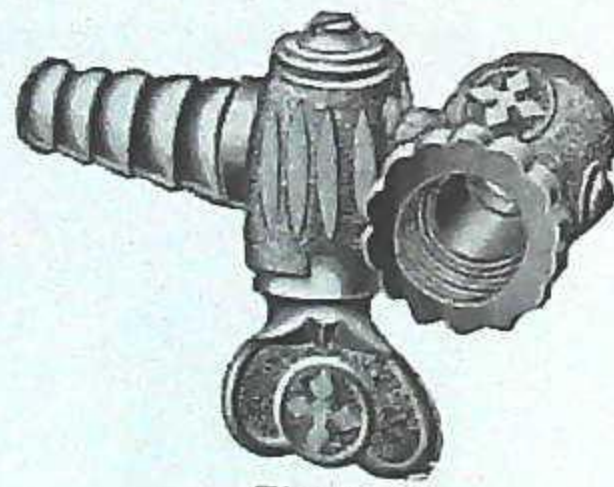
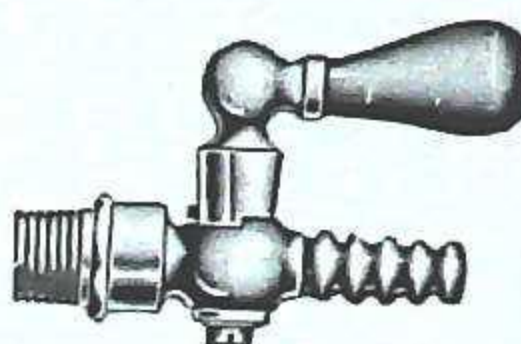


Fig. 2045

Wooden Handle Male Hose Cocks



I.P. Size Inches	Male or Female Price per Doz.	I.P. Size Inches	Male or Female Price per Doz.
1/8	\$5.00	3/8	\$6.00
1/4	5.50	1/2	6.50

Fig. 2046

Gas Fixture Fittings



Fig. 2047



Fig. 2048



Fig. 2049

Price, Brass Pillars	per gross	Price, Lava Tips	"	Price, Jumbo	"
	\$3.00		2.00		6.00

Novelty Gas Burners



Fig. 2049A

Price, Complete.....per dozen \$3.00

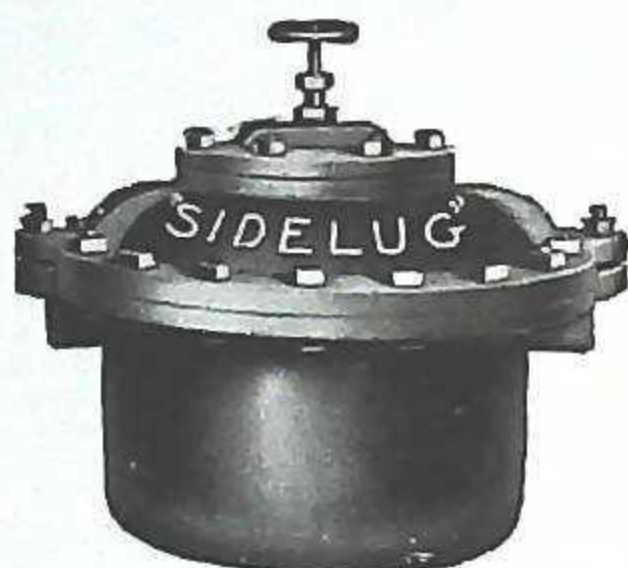
Nason Steam Traps



Class B Fig. 2049B



Class C Fig. 2049C



Sidelug Fig. 2049D

Class B is designed for low pressure service, not exceeding 20 pounds pressure. Class C is designed for medium service for pressures between 20 and 70 pounds.

The Sidelug Trap embodies the Nason principles, is heavier in construction, and in addition has extension lugs over the inlet and outlet ports to obviate the blowing out of gasket at these points. For pressures between 40 and 150 pounds.

No.	SIZE, INCHES			WEIGHT, LBS.
	Pipe Connections	Diam. Flange	HEIGHT Over Valve Over Cover	
1	1/2	10 3/4	11 8	40 47
2	3/4	14 1/4	14 10	80 92
3	1	15 3/4	16 1/4 12	113 125
4	1 1/4	19	18 1/2 14	176 212
5	1 1/2	24 1/4	23 1/2 15 1/2	336 343

No.	Discharge per Min. Pounds	CAPACITY		PRICE, EACH	
		Lin. Ft. 1-inch Pipe	Sq. Ft. Radiation	B and C	Sidelug
1	4 1/2	1500	500	\$26.50	\$32.00
2	6 1/2	3450	1150	56.50	62.00
3	10	5250	1750	72.50	78.00
4	15 1/2	7650	2550	108.50	120.00
5	23	12000	4000	211.50	220.00

Nason Steam Trap Repairs

In ordering repairs be particular to note both size and class of trap they are for. Top valve disc and spindle tip are detachable on No. 5 only. Center cover and center cover gasket are for Nos. 4 and 5 only. Specify working pressure used in traps.

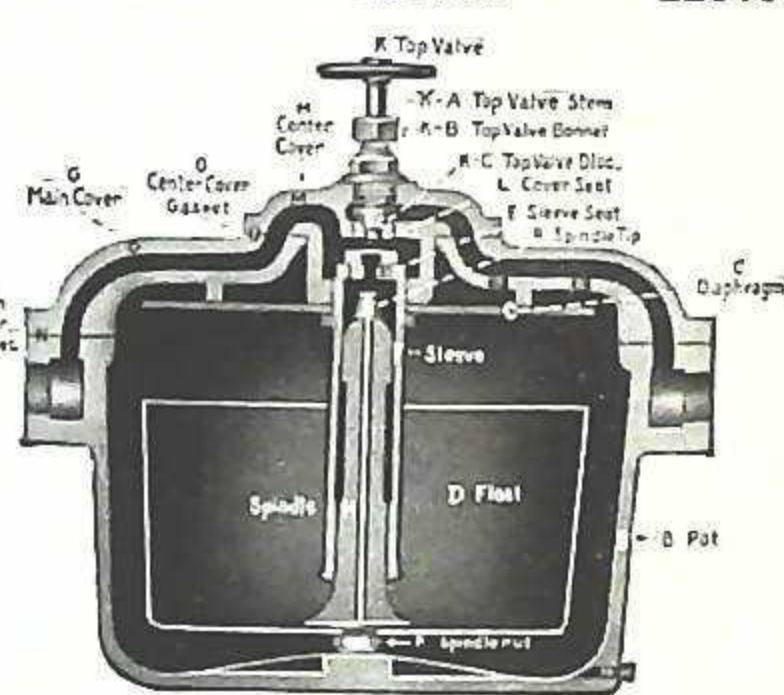


Fig. 2049E

No.	PRICE, EACH						
	Complete K	Stem Only KA	Bonnet Only KB	Disc KC	Cover Seat L	*Center Cover M	*Center Gasket O
1	\$2.00	\$1.00	\$.70	..	\$.80	..	\$.48
2	2.80	1.20	.80	..	.80	..	7.20
3	3.20	1.40	.90	..	1.20	..	10.00
4	4.00	1.40	.90	..	1.40	\$7.00	16.40
5	4.20	2.00	1.30	\$2.00	1.60	8.00	31.20

No.	PRICE, EACH						
	†Spindle Tip R	Spindle H	Sleeve F	Sleeve Seat E	Dia-phragm C	Float D	Pot B
1	..	\$2.00	\$2.40	\$.60	\$.60	\$1.60	\$6.00
2	..	2.80	3.20	.80	1.00	2.00	9.00
3	..	3.40	4.00	1.00	1.20	2.00	14.00
4	..	5.00	5.40	1.20	2.40	4.00	21.00
5	\$1.60	7.00	9.00	1.40	3.20	5.00	37.60

*For Nos. 4 and 5 only. †For No. 5 only.

Strong Steam Traps

Bucket Type

The only steam trap fitted with Anum-Metl valves and seats. These valves and seats are guaranteed to stay tight for one year or be replaced without charge.

Anum-Metl wears longer than other metal, being one of the toughest valve metals known.

Ball type valve and seat forms a perfect joint any way they come together. When open, the valve is wide open. There is no cutting down in trap capacity due to the end of the valve remaining in the discharge port.



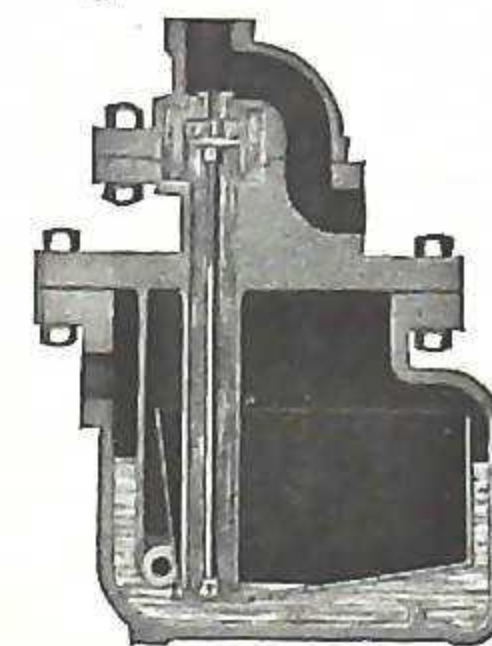
Exterior View Fig. 2051

Strong Steam Traps work intermittently. The trap is either wide open with the condensation rushing unobstructed from the trap or closed tight while the condensation is collecting in the trap.

This action develops a pumping action upon any water lying in pipe sags or pockets, also breaks up the drops of moisture clinging to the walls of the piping.

No piping to disconnect for valve inspection. Loosen three bolts, slip them from their respective slots and raise the cap.

As soon as sufficient water enters the trap, the bucket, being buoyant, floats and closes the valve and the trap is in operation. As the condensation increases, causing it to sink. The bucket being attached to the discharge valve, opens it and the trap begins to discharge, continuing to do so until the condensation is blown out of the body to the lowest edge of the bucket, when the water in the bucket is forced out until the bucket again becomes buoyant, rises and closes the valve.



Sectional View



Valve Construction valve.

Nos. 00 to 5 Series

Trap No.	Size Pipe Connections In.	Cap. Water per Hr. Lbs.	Cap Rad. Sq. Ft.	Capacity 1-in. Pipe Lin. Ft.	Ship. Wt. Lbs.	Price Each
00	3/8	1000	3000	9000	40	\$22.50
0	1/2	1500	4500	13500	75	27.50
1	3/4	2000	6000	18000	75	30.50
2	1	4500	13000	39000	115	40.00
3	1 1/4	6000	18000	54000	150	55.00
4	1 1/2	8000	24000	72000	210	75.00
5	2	15000	45000	135000	330	105.00

No. 30 Series

Trap No.	Size Pipe Connections In.	Cap. Water per Hr. Lbs.	Cap Rad. Sq. Ft.	Capacity 1-in. Pipe Lin. Ft.	Ship. Wt. Lbs.	Price Each
30	1/2	1000	3000	9000	40	\$22.50
31	3/4	1700	5100	15300	50	28.00
32	1	2100	6300	18900	75	34.00
33	1 1/4	4500	13000	39000	115	47.00
34	1 1/2	6000	18000	54000	150	60.00
35	2	8000	24000	72000	210	85.00
36	2 1/2	15000	45000	135000	330	120.00

They can be furnished at the same prices for different pressures, as follows:

Gravity Traps..... 10 lbs. or less
Low Pressure Traps..... 10 lbs. to 30 lbs.
Standard Pressure Traps..... 30 lbs. to 125 lbs.
High Pressure Traps..... 125 lbs. to 200 lbs.

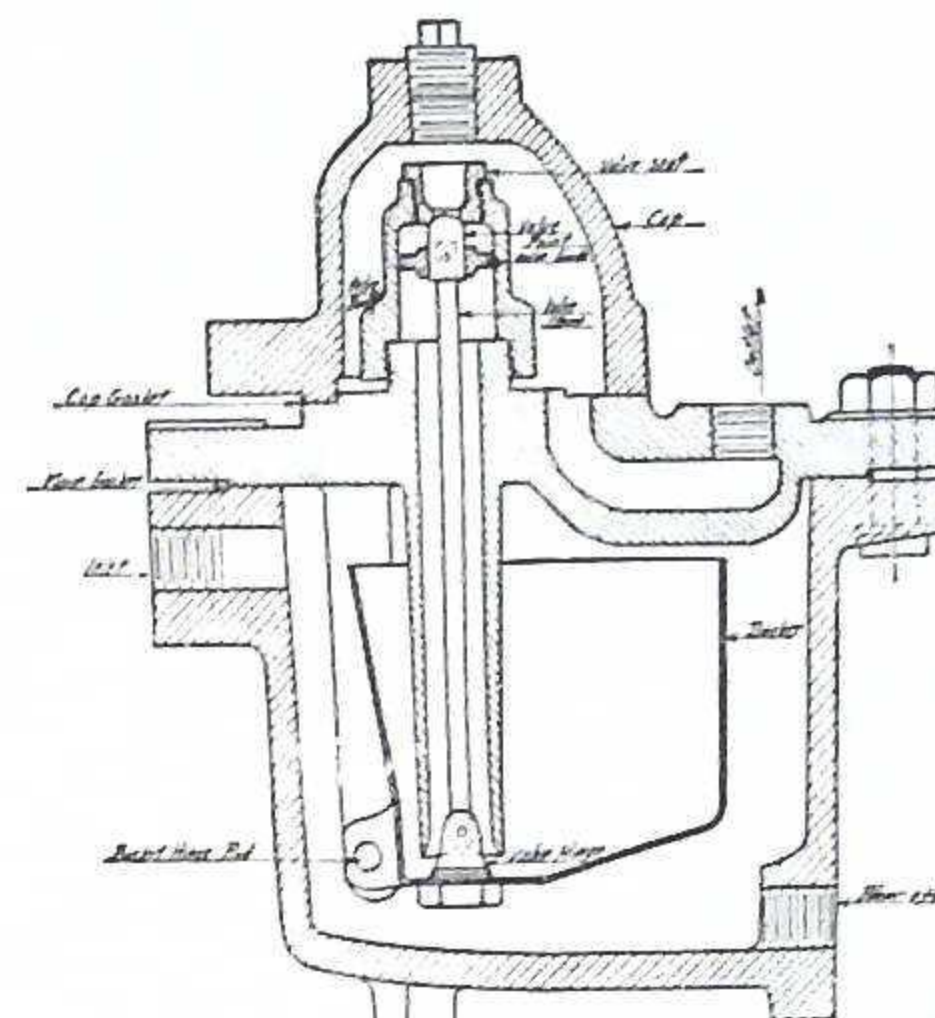
For drying lumber, greenhouses or moist goods, divide linear and square feet ratings by two. For brick kilns, laundries or wet goods, divide by three. For fan systems and blower coils, divide by five.

Unless otherwise specified, standard pressure traps will be shipped.

For pressures greater than 225 pounds, cast steel body traps will be furnished.

Prices upon application.

Repairs for Strong Steam Traps



No. 30 Trap Fig. 2052

In the manufacture of Strong Steam Traps great care is exercised to insure an exact duplication of each part to its original. Metal patterns are used for machine molding. The castings are machine cast from metallic patterns. The trap parts are held by special chucks and formed by special tools.

Description	PRICE, EACH			
	30 or 00	31	0, 1 or 32	2 or 33
Bodies	\$9.40	\$13.80	\$15.00	\$20.00
Bolt—Cap, Complete with Nuts and Washers	.25	.25	.25	.28
Bolts—Main Flange with Nuts and Washers	.25	.25	.25	.28
Buckets	2.95	3.10	3.40	4.50
Caps	2.10	2.40	2.80	3.50
Covers	9.00	11.25	11.85	14.35
Gaskets—Cap	.65	.70	.75	.85
" Main Flange	.40	.40	.45	.60
Guides—Valve	.40	.45	.45	.45
Hinges—Bucket Rod	.70	.75	.80	1.00
Seats—Valve any Pressure excepting Gravity	1.25	1.25	1.25	1.80
Seats—Valve, Gravity Pressure	1.25	1.25	3.00	4.00
Valves—any Pressure	1.25	1.25	1.25	1.80
Valve—Rods	1.10	1.20	1.30	1.50
" Bodies	2.50	2.80	3.00	3.60
" Hinges	.70	.75	.75	.80
Air Cocks—Regular	.40	.40	.40	.40
" Automatic	2.40	2.40	2.40	2.40

Description	PRICE, EACH		
	3 or 34	4 or 35	5 or 36
Bodies	\$28.00	\$40.00	\$62.00
Bolt—Cap, Complete with Nuts and Washers	.28	.28	.28
Bolts—Main Flange with Nuts and Washers	.28	.28	.28
Buckets	5.20	6.40	9.10
Caps	4.80	5.60	8.30
Covers	19.15	27.25	42.00
Gaskets—Cap	1.10	1.20	1.35
" Main Flange	.70	.90	1.20
Guides—Valve	.50	.65	.65
Hinges—Bucket Rod	1.25	1.40	1.60
Seats—Valve any Pressure excepting Gravity	1.80	2.25	2.25
Seats—Valve, Gravity Pressure	4.10	4.25	6.80
Valves—any Pressure	1.80	2.25	2.25
Valve—Rods	1.80	1.90	2.10
" Bodies	3.80	4.40	5.10
" Hinges	.90	1.00	1.10
Air Cocks—Regular	.40	.40	.40
" Automatic	2.40	2.40	2.40

Type E Sarco Radiator Traps

For vacuum, vapor and low pressure steam heating systems. The Sarco Radiator Trap, Type E, uses a spirally corrugated tube of large diameter, containing a volatile liquid.

The life of the expansion element is greater than that of flat diaphragm discs or annularly corrugated bellows, owing to the fact that the spiral corrugations distribute the valve movement over practically the whole tube instead of confining it to a given point. There is equal movement on each turn of the spiral. Trap will work on any degree of vacuum and on any steam pressure up to 20 pounds.

Inlet and Outlet.....inches 1/2 3/4
Priceeach \$6.00 8.00

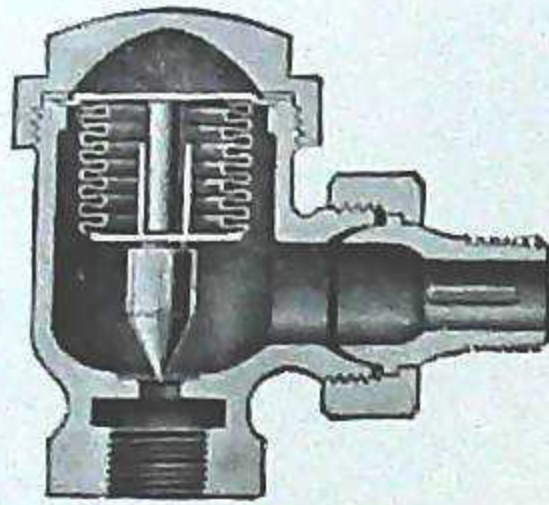


Fig. 2061

Sarco Low and High Pressure Steam Traps



Fig. 2062

The Sarco Low Pressure Steam Trap is used on pressures from 1 to 50 pounds, and the high pressure steam traps are used from 50 to 200 pounds.

It is so designed that the trap may be installed in any position without requiring supports and floor space.

Inlet and Outlet In.	Weight Pounds	Price, Each		Inlet and Outlet In.	Weight Pounds	Price, Each	
		Low Pressure	High Pressure			Low Pressure	High Pressure
3/8	1 3/8	\$6.00	\$7.75	1 1/4	11 1/2	\$24.15	\$28.50
1/2	1 3/8	6.00	7.75	1 1/2	18	30.00	34.50
1/2	2 1/4	7.75	10.35	2	29	38.70	48.30
3/4	2 3/8	9.45	12.00	2 1/2	44	51.75	60.00
1	3 1/4	11.25	12.00	3	49	60.00	75.00

Babbitt Adjustable Sprocket Rims

With Chain Guides

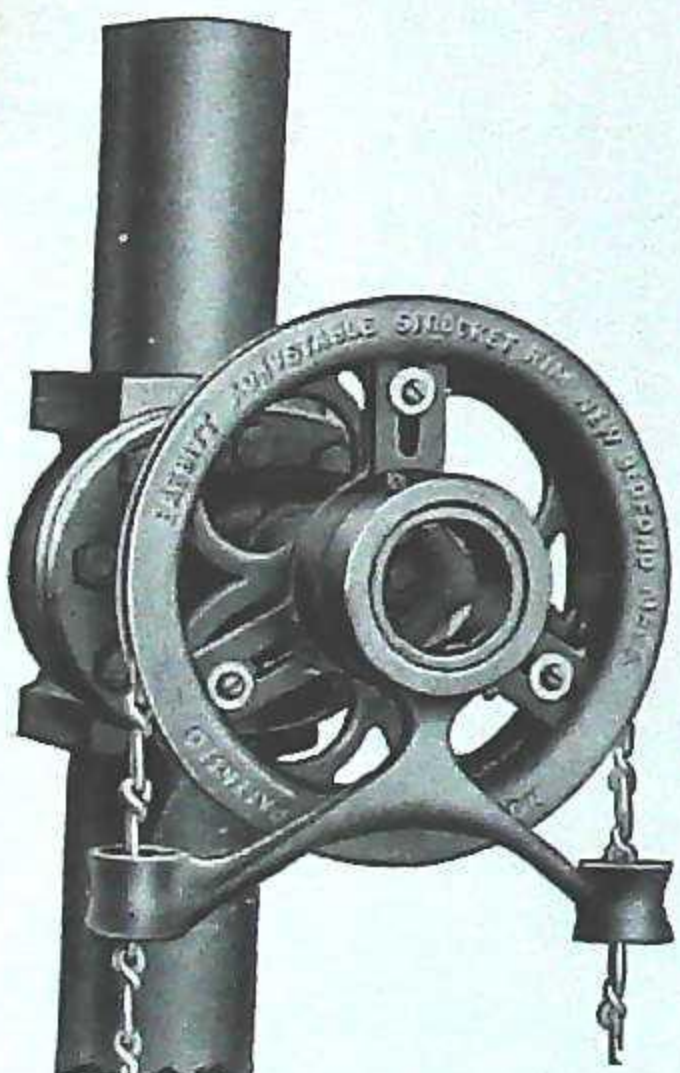


Fig. 2063

This rim is adjustable and may be quickly attached to any type of valve wheel whether used for controlling the flow of steam, gas, water, or other liquids, and does not interfere with the rising stem.

When ordering give diameter of valve wheel to be fitted and number of feet of chain required.

No.	Diameter Sprocket Wheel Inches	Will Fit Valve Wheels Diameter Inches	With Guide Price Each	Chain Price per Foot
0	4	2 to 3 3/4	\$2.40	\$.08
1	5 1/8	4 " 5 3/4	4.00	.10
1 1/2	7 1/2	5 3/4 " 7 3/4	5.20	.10
2	9	7 1/2 " 8 3/4	6.40	.10
2 1/2	12 1/2	9 " 12 1/4	8.80	.16
3	15 1/2	12 1/2 " 15 1/4	10.80	.16
3 1/2	19	15 1/2 " 18 3/4	15.20	.16
4	22	19 " 21 3/4	20.00	.24
4 1/2	26	22 " 25 3/4	28.00	.24
5	30	26 " 30	32.00	.24

National Feed Water Heaters

Inside Manifold Type

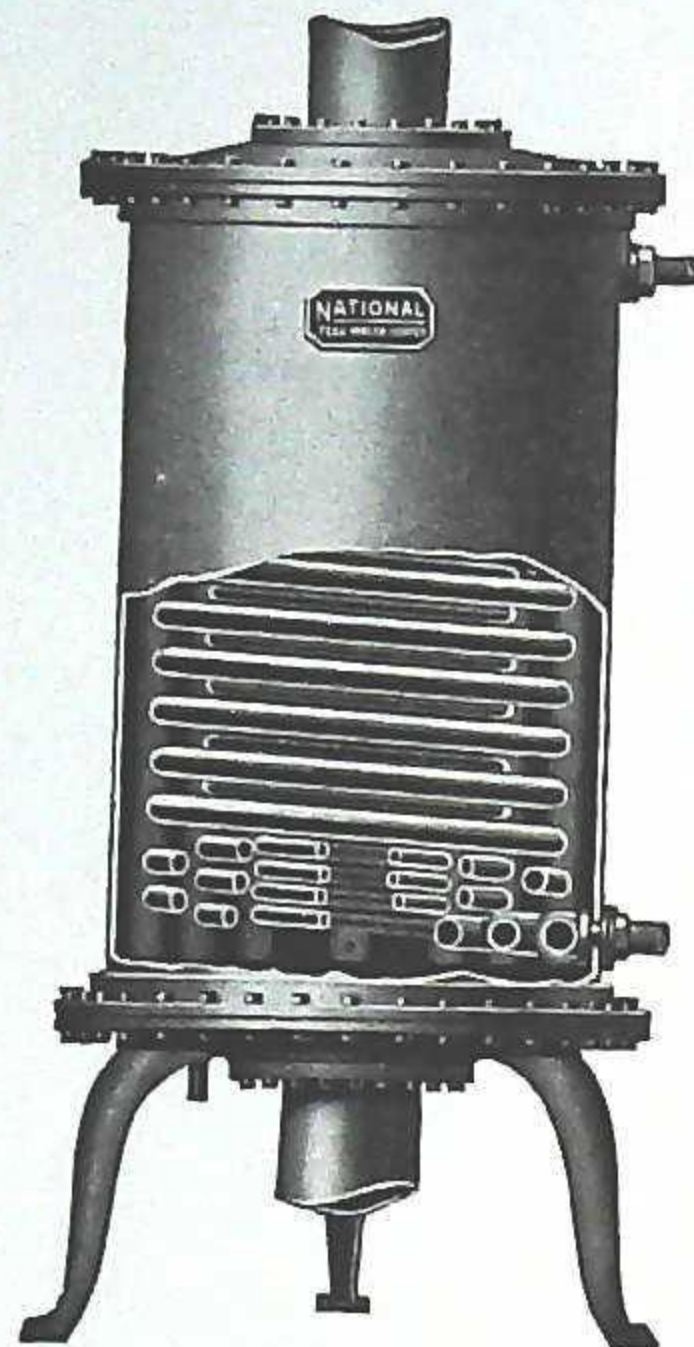


Fig. 2064

The inside manifold type feed water heater consists of a cast iron or steel shell containing one or more helical coils of seamless drawn copper tubing. Water is pumped through the coils, entering through one manifold, passing through the tubing. The heated water passes out through another manifold and is forced directly into the boilers. Exhaust steam enters the shell at one end, giving up heat to the water flowing through the tubing. The steam which is condensed in this process leaves at the bottom of the heater.

The shells for the small sizes are of cast iron, and for the large sizes of steel plate construction—all sizes are provided with heavy cast iron heads bolted on. Tubes are of commercially pure seamless drawn copper with brazed joints and ends brazed to bronze manifolds which have long threaded nipples extending through side of shell. All coils are rigidly secured to wrought iron supports with copper hangers. Coils are easily removed for repairs by removing the head and unscrewing the manifold nipples. All coils are tested tight under 600 pounds hydrostatic pressure, and shells, unless otherwise specified, to a pressure of 10 pounds.

Shells are safe for a working steam pressure of 10 pounds per square inch.

Coils are safe for working water pressure of 250 pounds per square inch.

No.	Normal H. P. Rating	Height Without Legs	Diam. In.	Height of Legs In.	Diam. Feed Pipe In.	Diam. Exhaust Pipe In.	Weight Pounds	Price Each
05	5	10 1/2	7	.....	1 1/2	2	30	.....
1	10	12	11	.....	1 1/2	2	60	.....
1 1/2	15	17	11	.....	1 1/2	2 1/2	70	.....
2	20	18	16	.....	3/4	2 1/2	175	.....
2 1/2	25	20	19	.....	1	3	260	.....
3	30	21 1/2	20	12 1/2	1	4	350	.....
4	40	23	20	12 1/2	1	4	370	.....
5	50	28 1/2	20	12 1/2	1	4	400	.....
6	60	33 1/2	20	12 1/2	1	4	450	.....
8	80	38 1/2	20	12 1/2	1	4	475	.....
10	100	40 1/2	22	14	1 1/4	5	750	.....
12	125	40 1/2	22	14	1 1/2	5	800	.....
15	150	45	26	15	1 1/2	8	1100	.....
20	200	55	26	15	2	8	1275	.....
25	250	61	26	15	2	8	1450	.....
30	300	69	26	15	2	8	1600	.....
40	400	70	36	18	2 1/2	10	2175	.....
50	500	84	36	18	2 1/2	10	2375	.....
60	600	79	42	22	3	12	3200	.....
70	700	83	42	22	3	12	3300	.....
80	800	88	42	22	3	12	3400	.....

Sizes Nos. 1 to 2 1/2 have exhaust inlet and outlet in top head.

Sizes Nos. 05, 3, and larger have exhaust inlet in bottom and outlet in top heads, unless ordered different.

Shells Nos. 05 to 30 are cast iron, 40 to 80 boiler plate.

Special location or size of exhaust connection furnished at additional cost.

Class A Gardner Standard Engine Governors

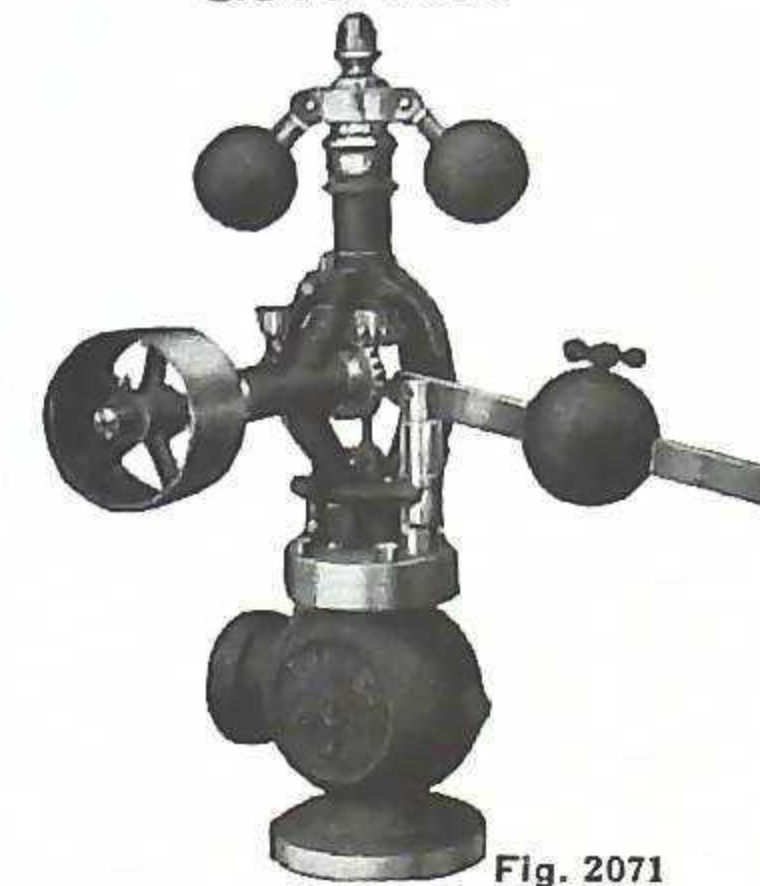


Fig. 2071

This governor is of the gravity action type, especially adapted for larger stationary engines. Speed is varied by position of a weight on the lever. Automatic safety stop is simple and reliable. Action is accomplished by permitting of a slight oscillation of the shaft bearing which is held centered by the belt pull. If belt breaks or slips off pulley the support of the fulcrum is forced back, allowing the fulcrum to drop, instantly closing the valve.

Size In.	Plain Price Each	Size Inches	Plain Price Each	Size Inches	Plain Price Each	Size Inches	Plain Price Each
1 1/4	\$33.00	3	\$80.00	5	\$175.00	9	\$466.00
1 1/2	40.00	3 1/2	97.00	6	220.00	10	546.00
2	48.00	4	120.00	7	306.00	..	.....
2 1/2	64.00	4 1/2	140.00	8	386.00	..	.....

Prices on sizes 13 to 16 inches, inclusive, on application.

As regularly furnished, 1 1/4-inch size has screwed side and base; 1 1/2 and 2-inch have screwed side and flanged base; larger sizes have flanged side and base. Other style valve chambers can be furnished.

Class A Gardner Spring Engine Governors

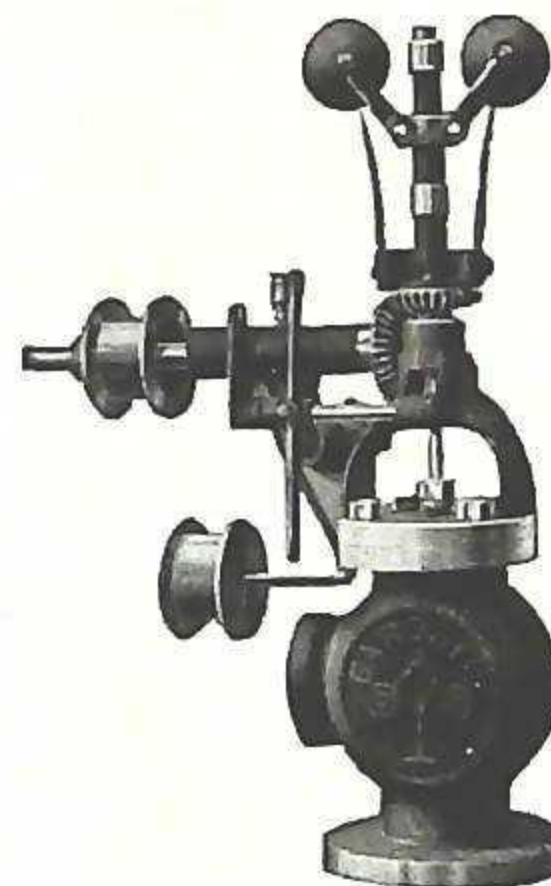


Fig. 2072

This governor is recommended for traction and high speed stationary engines. It is quick and sensitive in action and therefore capable of responding promptly to various changes in load.

As regularly furnished, sizes 1/2 to 1 1/4-inch inclusive have screwed side and base; 1/2 to 2-inch have screwed side and flanged base; larger sizes have flanged side and base. Other style valve chambers can be furnished.

Size In.	Plain Price Each	Size Inches	Plain Price Each	Size Inches	Plain Price Each
1/2	\$25.00	1 1/4	\$33.00	2 1/2	\$64.00
3/4	27.00	1 1/2	40.00	3	80.00
1	29.00	2	48.00	3 1/2	97.00

Further information on any style Gardner Governor will be furnished upon application.

Class B Gardner Wide Range Engine Governors

Class B governors are without automatic stops.

The speeding attachment permits an unusually wide range in engine speed without in the least affecting the regulation.

May be fitted with attachment so that speed of engine may be controlled from engineer's cab, or from any other location most convenient for the user. By the use of a rod this extension may be carried to any reasonable distance desired.

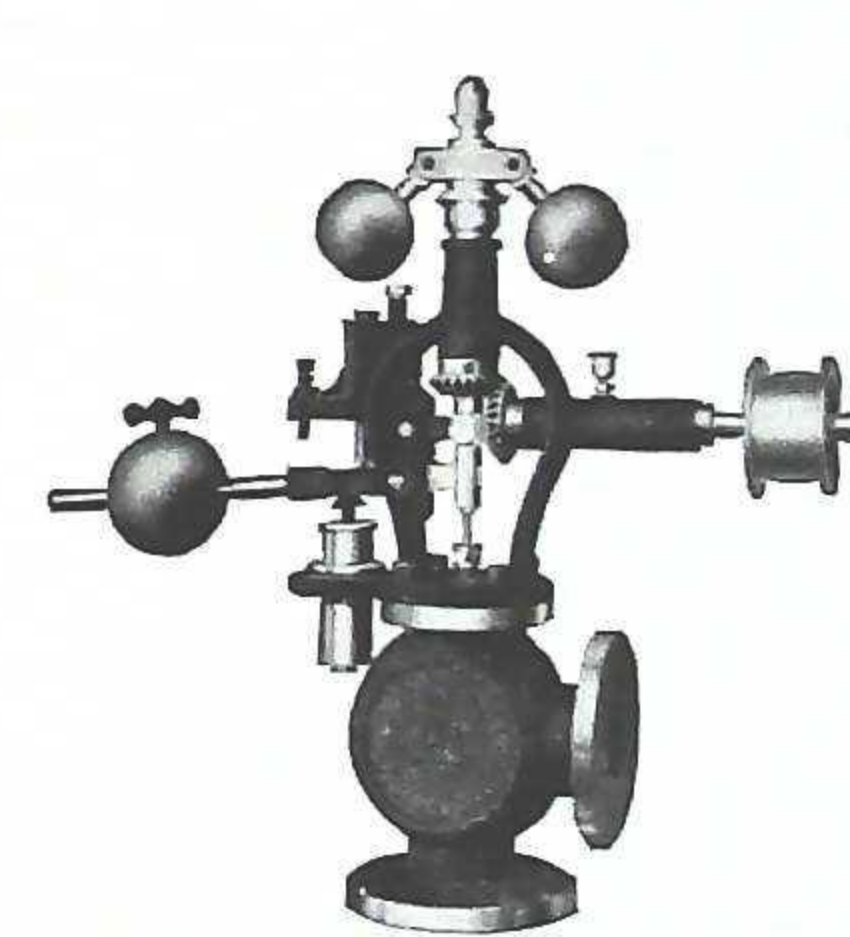
This extension, however, is furnished only on special order and at extra cost.

The design is neat, workmanship is accurate, and finish superior throughout. Governor is sensitive, rugged, and durable, and will give the best of satisfaction on all classes of engines, but it is particularly suited for those where a wide range in speeds is demanded.

Regularly adjusted to give a speed variation of 65 per cent. When service conditions are unusual, or where extremely close regulation is required, full information must be given so that governor can be properly adjusted before order is filled.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
3/4	\$23.00	2	\$40.00	4	\$102.00	7	\$260.00
1	25.00	2 1/2	54.00	4 1/2	120.00	..	.....
1 1/4	28.00	3	68.00	5	149.00	..	.....
1 1/2	34.00	3 1/2	83.00	6	187.00	..	.....

Gardner Speed and Pressure Regulators For Steam-actuated Air Compressors



Class A, with Automatic Stop Fig. 2074

Size In.	DIAM. INCHES		Diam. Pulley In.	SHP. R.P.M.	Wt. Lbs.	Price, Each	
	Base Flanges	Side Flanges				Class A	Class B
3/4	Serd.	Serd.	2	300	38	.....	\$42.50
1	"	"	2	300	40	.....	43.00
1 1/4	"	"	3	250	68	.....	43.50
1 1/2	5	"	3	250	75	72	\$54.00 46.50
2	6	"	5	200	130	125	66.00 55.00
2 1/2	7	7	5	200	150	145	82.00 67.00
3	7 1/2	7 1/2	5 1/2	170	200	195	92.00 78.00
3 1/2	8 1/2	8 1/2	5 1/2	170	215	210	107.00 92.00
4	9	9	6	160	325	320	132.00 111.00
4 1/2	9 1/4	9 1/4	6	160	335	325	154.00 132.00
5	10	10	7	150	480	460	193.00 164.00
6	11	11	7	150	530	510	242.00 206.00

Made in two styles. Class A, with automatic stop attachment and Class B, without. Both styles are furnished with a speeder through which an extreme variation of 25 per cent can be obtained.

Valve chambers can be furnished of any style. In ordering, state air pressure desired. Regulators can be provided for pressures from ten to one thousand pounds. When no instructions are given they are sent adjusted for 100 pounds.

Model N Metropolitan Automatic Injectors

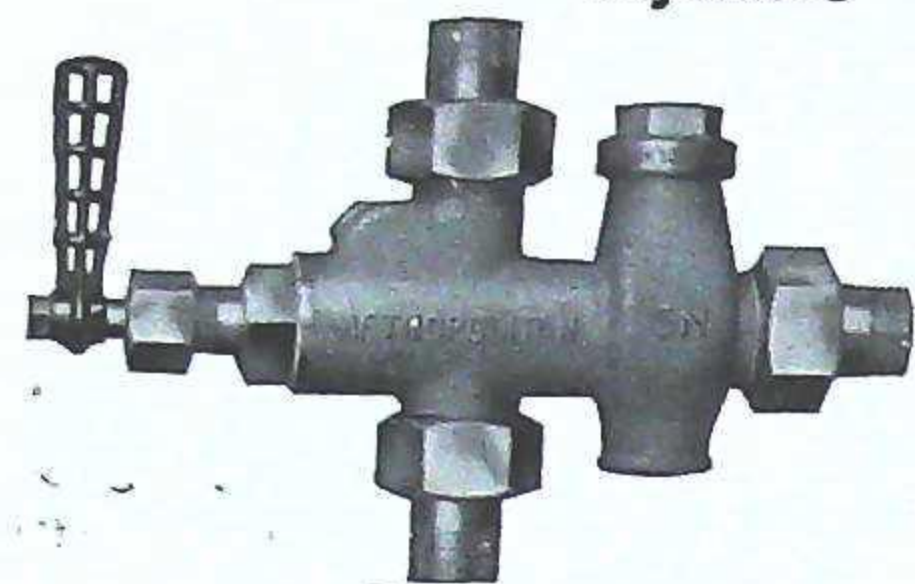


Fig. 2081

The Metropolitan Automatic Injector is operated entirely by one handle and does not require manipulation of globe valves in the steam and suction pipes. The tubes are removed by the use of an ordinary monkey wrench. The

overflow valve can easily be ground to its seat with an ordinary screwdriver.

With feed water at 72 degrees Fahr., will start on a 2-foot lift with 25 pounds steam pressure and works up to 150 pounds steam pressure. Starts on a 20-foot lift with 55 pounds steam pressure and works up to 85 pounds steam pressure.

Size No.	Size of All Pipe Connections Inches	Capacity with 80 Lbs. Sure, 2-foot Lift, Gallons per Hour	HORSEPOWER		Price Each
			Water Tube Boiler, Basis 7 1/2 Gals. Water per H. P.	Ordinary Tubular Boiler Basis 30 Lbs. Water per H. P.	
2	3/8	60	4 to 6	5 to 8	\$15.00
3	3/8	80	6 " 8	8 " 12	16.00
3 1/2	1/2	120	8 " 15	12 " 20	18.00
4	1/2	165	15 " 20	20 " 28	20.00
5	3/4	250	20 " 30	28 " 40	25.00
6	1	350	30 " 45	40 " 55	30.00
7	1 1/4	500	45 " 65	55 " 80	40.00
8	1 1/4	600	65 " 80	80 " 110	45.00
9	1 1/2	800	80 " 100	110 " 145	55.00
10	1 1/2	1000	100 " 130	145 " 180	60.00
11	1 1/2	1300	130 " 170	180 " 235	75.00
12	2	1750	170 " 230	235 " 300	90.00
13	2	2300	230 " 300	300 " 400	110.00
14	2 1/2	2850	300 " 375	400 " 500	125.00

A flat strainer is furnished with these injectors, sizes 2 to 10, inclusive. Ratings approximately 30 per cent below those based on actual capacities in gallons per hour.

Repair Parts

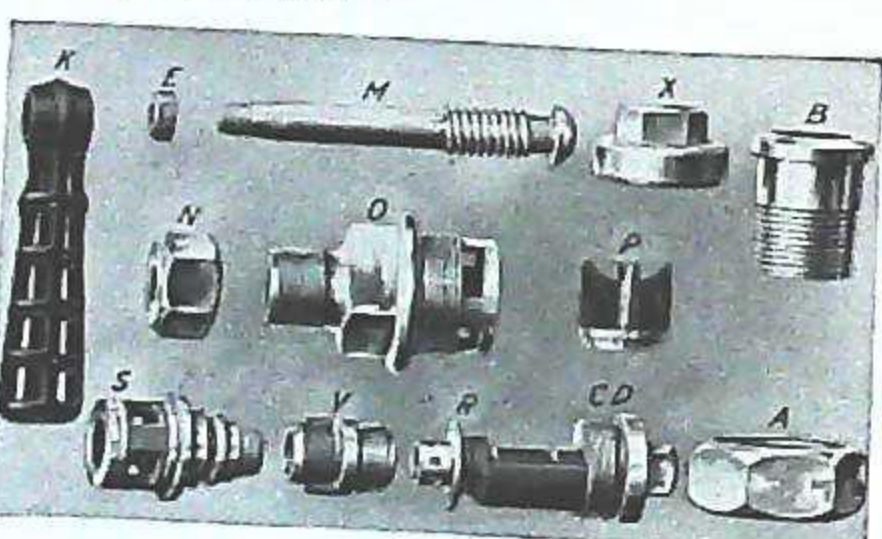


Fig. 2082

By unscrewing the steam plug O, the steam nozzle S is removed. The lifting tube V is screwed into the injector. The combining tube C-D is made square on the end so that it may be removed by an ordinary monkey wrench. Be careful that the ring R is not lost; also that it is on the tube in its proper position. Be sure that tube C-D is not stopped up and that the small slots and drill holes are clean.

PRICE, EACH

Size No.	S Steam Nozzle	V Lifting Valve	C D R Combining and Delivery Tube and Auxiliary Check	P Overflow Valve	O Steam Plug	M Steam Valve and Stem	N Packing Nut
2, 3	\$1.50	\$.60	\$1.75	\$.25	\$1.00	\$.40	\$.30
3 1/2, 4	1.70	.70	2.10	.50	1.25	.55	.40
5, 6	2.00	.90	2.75	.75	1.50	.75	.50
7, 8	2.50	1.25	3.50	1.00	2.25	1.10	.65
9, 10	3.75	1.85	4.50	1.25	3.50	1.75	.80
11, 12	5.00	3.00	6.50	1.75	5.00	2.50	1.00
13, 14	7.00	4.00	9.00	2.50	7.00	4.00	1.25

Size No.	K Steam Valve Handle	A Coupling Nut	B Tail-pipe	X Overflow Cap	E Nut for Stem	M Tube Wrenches
2, 3	\$.60	\$.60	\$.40	\$.50	\$.10	\$1.30
3 1/2, 4	.70	.80	.55	.75	.10	1.40
5, 6	.80	1.20	.80	1.00	.10	1.50
7, 8	1.00	1.65	1.20	1.25	.15	1.75
9, 10	1.20	2.40	1.70	1.75	.15	2.25
11, 12	1.40	3.20	2.40	2.25	.15	3.00
13, 14	1.60	5.00	3.40	3.00	.20	4.00

Model O Metropolitan Double Tube Injectors

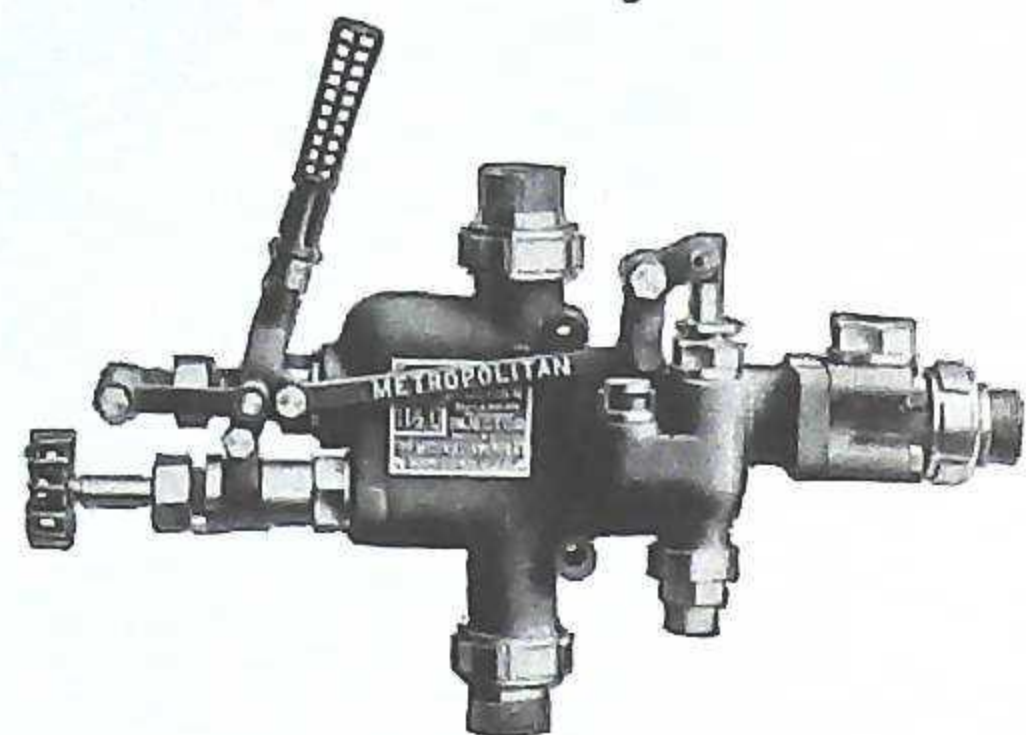


Fig. 2083

The Metropolitan Double Tube Injector, as its title indicates, contains a double set of nozzles and tubes, i.e., the forcing set, and the lifting set. There are two successive operations in the double tube injector, the lifting of the water by the lifting half of the apparatus, and the forcing of it into the boiler by the forcing half.

The fundamental advantage of this separate construction obtained with no other design, exists in the automatic regulation or governing of the water supply by the lifting tubes. The lifting part of the injector consists of a steam nozzle and a combining tube. Both steam nozzles receive full pressure when the injector is working, the lifting tube raising water and delivering it under pressure into the chamber of the forcing tube. The forcing tube receives this water from the lifting tube, and delivers it into the boiler. If the steam pressure in the boiler rises, there will be more steam, and at a higher temperature, passing through the forcing steam nozzle. The forcing steam will, therefore, require more water to properly condense it, but as the steam pressure rises, the lifting tube lifts and delivers more water to the forcing tube.

The result is that the lifting half of the apparatus, the nozzle and tube of which are designed to form a flexible type of ejector, delivers water to the forcing half exactly according to its needs, varying the quantity as the steam pressure increases or decreases.

A characteristic feature of the Metropolitan Double Tube Injector is its positively closed final overflow valve. This makes it impossible for any water to discharge at the overflow while the injector is in operation.

The peculiar form and the location of the final overflow valve eliminates sensitiveness in starting, even under unfavorable conditions, a disadvantage common to other makes of double tube injectors.

Excepting a few minor parts, the Metropolitan double tube injector is constructed of special bronze compositions, varied according to the duty required of them. The nozzles and tubes which are the parts most subject to wear, are remarkable for their hardness and will give exceptional service even when the water contains an excess of injurious substances. The lever handle, the zero type, which is more durable than the usual wooden handle, and will remain cool under all conditions.

Size No.	Size of All Pipe Connections Inches	Size of Overflow Pipe Inches	CAP. PER HOUR		HORSE POWER		Price Each
			With 100 Lbs. Pressure	With 175 Lbs. Pressure	For Ordinary Type of Engine and Boiler	On a Basis of 30 Pounds Evaporation per H. P. per Hour	
2 1/2	1 1/2	3/4	135	150	8 to 15	12 to 20	\$18.00
4 1/2	1 1/2	3/4	180	200	15 " 20	20 " 28	20.00
5 1/2	3/4	3/4	260	300	20 " 30	28 " 40	25.00
6 1/2	3/4	3/4	365	415	30 " 45	40 " 55	30.00
7 1/2	1	3/4	525	600	45 " 65	55 " 80	40.00
8 1/2	1	3/4	625	720	65 " 80	80 " 110	45.00
9 1/2	1 1/4	1	835	950	80 " 100	110 " 145	55.00
10 1/2	1 1/4	1	1040	1195	100 " 130	145 " 180	60.00
11 1/2	1 1/2	1 1/4	1350	1550	130 " 170	180 " 235	75.00
12 1/2	1 1/2	1 1/4	1800	2070	170 " 230	235 " 300	90.00
13 1/2	2	1 1/2	2350	2675	230 " 300	300 " 400	110.00
14 1/2	2	1 1/2	2900	3275	300 " 375	400 " 500	125.00
15 1/2	2 1/2	2	3600	3975	375 " 500	500 " 650	150.00
16 1/2	2 1/2	2	4300	4750	500 " 650	650 " 800	200.00
17 1/2	3	2 1/2	4900	5300	650 " 800	800 " 975	250.00
18 1/2	3	2 1/2	5500	6100	800 " 1000	975 " 1250	300.00

A flat strainer is furnished with sizes Nos. 2 1/2 to 10 1/2 inclusive.

Garfield Double Jet Injectors

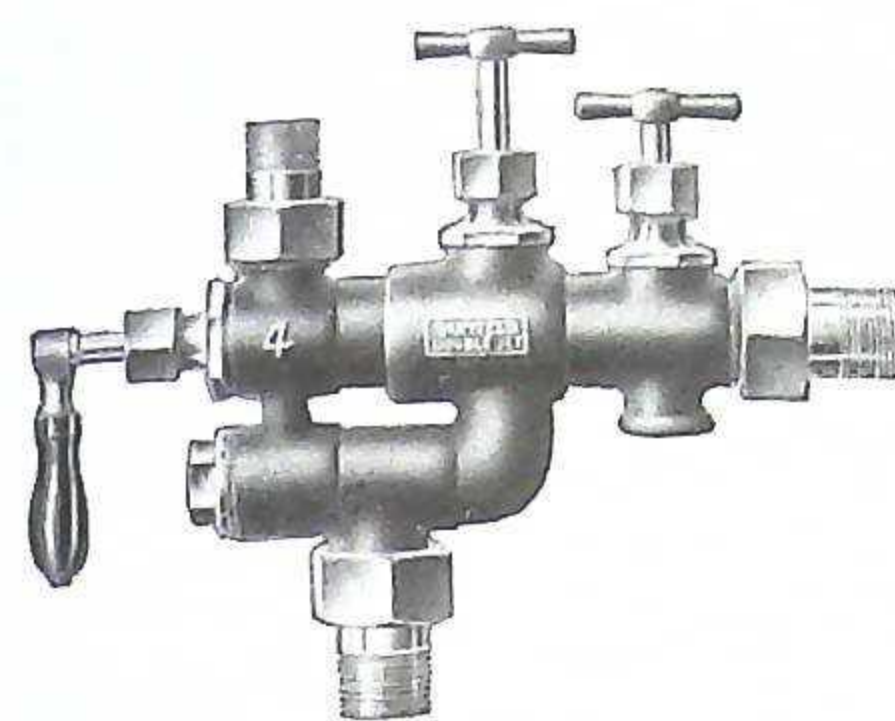


Fig. 2091

Injectors for boiler feeding are divided into 2 classes: Single tube open overflow injectors and double tube closed overflow injectors.

The advantages of the double tube class are that they work under a wider range of steam pressures, will give more satisfactory results when taking water from a long lift, will work hotter water and will deliver the water at a higher temperature than machines of the single type. The double tube is also self-adjusting, that is, it requires no regulation of the water supply for varying steam pressures.

The parts may be removed from the injector for cleaning while steam is on in the boiler without breaking pipe joints or removing machine from its connections.

In removing jets or tubes use wrench which accompanies injector.

No.	PIPE CONNECTION, IN.			Max. Cap. per Hour	STEAM PRESSURE 60 TO 100 LBS.		Price Each
	Steam	Supply	Delivery		H.P. Based on Ordinary Tubular Boiler	H.P. Based on Ordinary Tubular Boiler	
00	3/8	3/8	3/8	80	4 to 11	\$16.00	
0	3/8	1/2	1/2	135	10 " 19	18.00	
1	3/8	1/2	1/2	180	15 " 24	20.00	
2	1/2	3/4	3/4	260	18 " 34	25.00	
3	1/2	3/4	3/4	355	20 " 47	30.00	
4	3/4	1	1	475	40 " 64	40.00	
5	3/4	1	1	600	45 " 80	45.00	
6	1	1 1/4	1 1/4	800	55 " 106	55.00	
7	1	1 1/4	1 1/4	1000	75 " 134	60.00	
8	1 1/4	1 1/2	1 1/2	1400	100 " 181	75.00	
9	1 1/4	1 1/2	1 1/2	1900	115 " 254	90.00	
10	1 1/2	2	2	2400	150 " 320	110.00	
11	1 1/2	2	2	3000	190 " 400	125.00	
12	2	2 1/2	2 1/2	3600	275 " 480	150.00	
13	2	2 1/2	2 1/2	4200	375 " 560	180.00	
14	2	2 1/2	2 1/2	4500	400 " 600	200.00	

Garfield Ejectors

For raising water from deep wells, mines or pits, filling or emptying tanks, raising and transferring liquids, hot or cold, in tanneries, dye houses, etc.

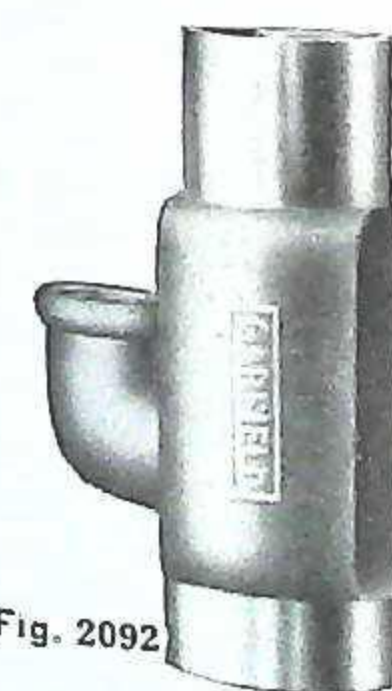


Fig. 2092

The capacities are secured from actual tests made on 6 foot lift and 20 foot elevation with 60 pounds of steam.

No.	Iron Pipe Connections, Inches	Suction	Delivery	Capacity Gals. per Hour	Diam. of Well Inches	With Strainer Price, Each
2	3/8	1	3/4	500	2 3/4	10.00
3	1/2	1 1/4	1	800	3	15.00
4	3/4	1 1/2	1 1/4	1300	3 1/2	20.00
5	1	2	1 1/2	2000	4 1/4	25.00
6	1 1/4	2 1/2	2	3000	5	35.00
7	1 1/2	3	2 1/2	5000	6	50.00
8	1 1/2	3	2 1/2	6500	6	60.00

Hancock Inspirators

Stationary Type

Works with high or low steam pressures on all lifts up to 25 feet, or when taking water under a head, with hot feed water as well as cold. One set of tubes lifts water and delivers it to second set, which in turn forces it into boiler.

Directions for Operation

To START:—Open the overflow valves, close forcing steam valve and open wide the starting valve in the steam line.

When water appears at the overflow, close the upper overflow valve, open forcing steam valve a quarter turn and close lower overflow valve.

To STOP:—Close starting valve in the steam pipe.



Fig. 2093

Size	PIPE CONNECTIONS INCHES Suction and Delivery	Over-Flow	Capacity with 60 Lbs. Steam Pressure Gallons per Hour	HORSEPOWER		Price Each
				For the Ordinary Type of Boiler and Engine	On a Basis of 30 Pounds Evaporation per H. P. per Hour	
7 1/2	3/8	1/4	60	4 to 6	5 to 8	\$16.00
8 3/4	3/8	1/2	90	6 " 8	8 " 15	18.00
10	3/8	1/2	120	8 " 15	15 " 25	20.00
12 1/2	1/2	3/4	220	15 " 30	25 " 35	25.00
15	1/2	3/4	300	30 " 40	35 " 60	30.00
17 1/2	3/4	1	420	40 " 60	60 " 75	40.00
20	3/4	1	540	60 " 75	75 " 100	45.00
22 1/2	1	1 1/4	720	75 " 90	100 " 130	55.00
25	1 1/4	1	900	90 " 120	130 " 175	60.00
30	1 1/4	1 1/4	1260	120 " 165	175 " 235	75.00
35	1 1/2	1 1/4	1740	165 " 230	235 " 300	90.00
40	1 1/2	2	2230	230 " 300	300 " 400	110.00
45	1 1/2	2	2820	300 " 375	400 " 500	125.00
50	2	2 1/2	3480	375 " 500	500 " 650	150.00
55	2	2 1/2	3650	500 " 600	650 " 700	175.00

A flat strainer is supplied with each of these inspirators, sizes 7 1/2 to 20, inclusive.

Penberthy Hydraulic Ejectors

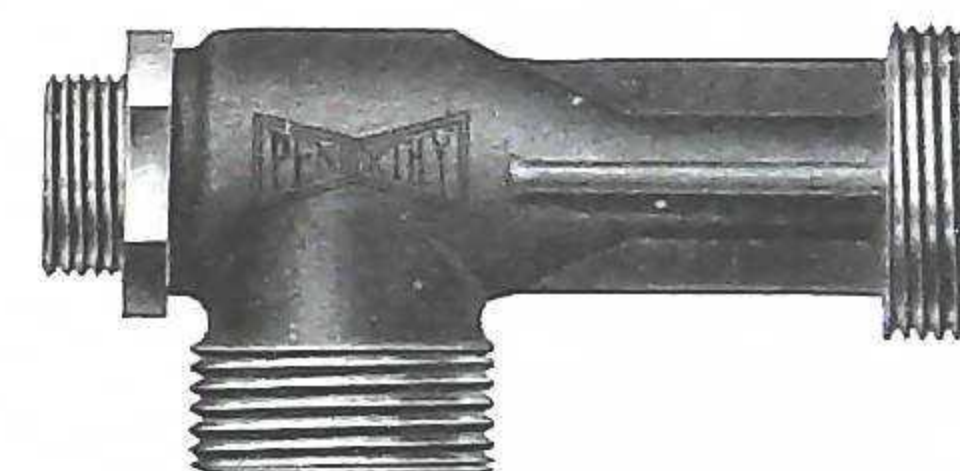


Fig. 2094

The demand for an ejector operated by water as a motive power, has necessitated the development of the ejector shown in the illustration above. It is designed to meet conditions where the water pressure operating the same is from 15 to 200 pounds and the elevation or discharge does not exceed 50 feet. All details are proportioned to give the highest efficiency under these conditions, with a minimum operating water consumption.

Water consumption varies according to pressure, capacity, and elevation. The water pressure controls the elevation, but it is safe to figure four pounds of pressure to every foot of elevation. The table below shows capacities under different pressures.

No.	Operating Size Inches	Size of Suction Inches	Size of Delivery Inches	Length In.	CAPACITY GALLONS PER HOUR		Price Each
					40 Lbs. Pressure	60-80 Lbs. Pressure	
62	3/8	3/4	3/4	5	500	750	\$10.00
63	1/2	1	1	6 3/4	900	1100	15.00
64	3/4	1 1/4	1 1/4	8	1500	2000	20.00
65	1	1 1/2	1 1/2	9	2100	3400	25.00
66	1 1/4	2	2	10 1/2	3000	4500	35.00
67	1 1/2	2 1/2	2 1/2	11 1/2	4200	6000	50.00
68	2	3	3	13 1/4	6000	9000	70.00

Capacities given are when ejector is working against a head of 10 feet, and include the operating water.

Hancock Ejectors



Fig. 2101

The most efficient steam pressure at which an ejector will operate is 60 pounds. At this pressure all sizes will lift water 25 feet, and elevate it 15 feet above ejector. For lifts greater than 40 feet, ejector should be placed as near the water as possible, thereby permitting greater power to be expended on forcing the water, and not on lifting it. Furthermore, under such conditions, one size larger pipe should be used on the delivery.

Steam pressures higher than 60 pounds should either be reduced to 60 pounds by a reducing valve or throttled down to 60 pounds by means of an ordinary globe valve. When necessary, ejectors with special nozzles for pressures over 60 pounds can be furnished at an extra cost.

Sizes 1, 2, 3 and 4 are made entirely of brass. Sizes 5, 6 and 7 have iron bodies and brass unions for steam and suction connections. Sizes 8, 9, 10 and 11 have iron bodies with brass unions for steam connection only. Sizes 5, 6, 7, 8, 9, 10 and 11 can be furnished to order, made entirely of brass. Special all iron ejectors also made to order.

To operate, open valve in steam pipe.

Capacities given are when lifting 4 feet and when elevating 4 feet, with cold feed water. Capacities of all ejectors decrease when lift is increased or temperature of feed water increased.

Size No.	SIZE PIPE CONNECTIONS, IN.		*Capacity per Hour Gallons	Price Each
	Steam	Suction and Delivery		
1	1/4	1/2	244	\$8.00
2	3/8	3/4	550	10.00
3	1/2	1	977	15.00
4	3/4	1 1/4	1525	20.00
5	1	1 1/2	2200	25.00
6	1 1/4	2	3900	35.00
7	1 1/2	2 1/2	6000	45.00
8	2	3	8800	55.00
9	2 1/2	4	15600	70.00
10	3	5	24300	110.00
11	3 1/2	6	35000	160.00

*Capacity at 60 pounds steam pressure.

Repair Parts

Nos. 1, 2, 3, 4, 5, 6 and 7 ejectors are furnished with coupling connection on suction end.

Ejector No.	PRICE, EACH				SECTION END	
	Steam Nozzle	Delivery Tube	Tail Pipe	Coupling Nut	Tail Pipe	Coupling Nut
1	\$.50	\$1.00	\$.60	\$1.00	\$.90	\$1.30
2	.80	1.45	.70	1.30	1.30	2.00
3	1.15	2.35	.90	1.30	2.00	2.60
4	1.60	3.75	1.30	2.00	2.90	4.00
5	5.00	4.30	1.30	2.00	4.00	5.30
6	6.00	7.60	2.00	2.60	5.75	7.50
7	7.00	11.00	2.90	4.00	8.00	11.00
8	9.00	15.00	4.00	5.30	.....	.....
9	12.00	20.00	5.75	7.50	.....	.....
10	18.00	35.00	8.00	11.00	.....	.....
11	30.00	60.00	8.00	11.00	.....	.....

Pressure Gauges

Single Spring

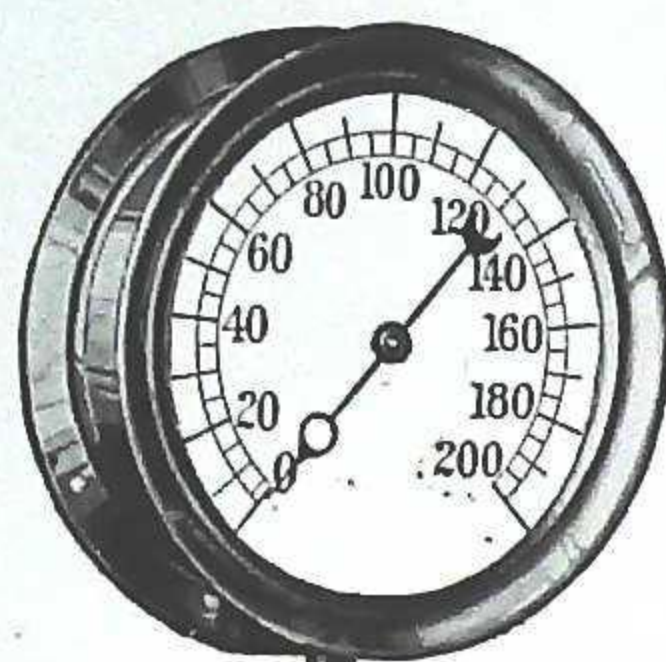


Fig. 2102

The standard type of gauge for steam, water, air, gas or any pressure medium which will not deteriorate brass.

For any standard graduation up to 500 pounds and at extra charge for higher pressures up to 1000 pounds.

Should be graduated to double the actual working pressure.

Unless otherwise specified, gauges will be furnished; sizes 2 and 2 1/2-inch with 1/8-inch male bottom connection; other sizes, 1/4-inch male bottom connection. No extra charge for back connection.

Prices include a T-handle cock for sizes 3 1/2 to 6-inch inclusive; a small union cock for sizes 6 3/4 to 10-inch, and a large union cock for sizes 12-inch and larger.

Size Dial In.	PRICE, EACH				DEEP CASE, O. G. OR OCT. RING	
	IRON CASE BRASS RING	IRON CASE N. P. RING	BRASS CASE	N. P. CASE	BRASS	N. P.
16	\$90.00	\$92.00	\$125.00	\$135.00		
12	50.00	51.50	75.00	79.00	\$80.00	\$84.00
10	32.00	33.00	40.00	43.00	44.00	47.00
8 1/2	22.00	22.75	30.00	32.50	33.50	36.00
6 3/4	16.00	16.60	20.00	22.00	23.00	25.00
6	13.00	13.50	16.00	17.50	18.50	20.00
5 1/2	10.00	10.25	12.00	13.25	13.75	15.00
5	8.00	8.20	11.00	12.00	12.50	13.50
4 1/2	8.00	8.20	10.00	11.00	11.50	12.50
3 1/2	7.00	7.18	9.00	9.75	10.25	11.00
3	6.00	6.15	8.00	8.60	9.25	9.75
2 1/2	6.00	6.15	8.00	8.60	9.25	9.75
2	6.00	6.15	8.00	8.60	9.25	9.75

Pressure Gauges

Double Spring

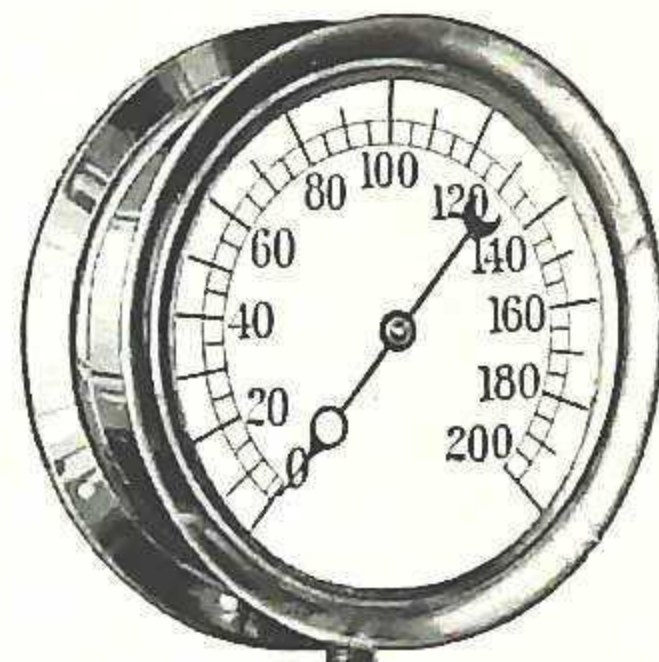


Fig. 2103

Especially designed and recommended for marine or portable work, or any service where there is excessive vibration or rapid fluctuation in pressures.

For any standard graduation up to 500 pounds and at extra charge for higher pressures up to 1000 pounds.

Should be graduated to double the actual working pressure.

Non-corrosive movement with cast hard bronze, extra wide, heavy machine cut gearing.

Sensitive, rigid, non-vibrating, non-freezing springs of solid drawn seamless tube.

One piece of solid drawn seamless tubing, hand rolled and shaped, passed through and held securely by the socket block, makes the non-freezing double springs. They are rigid, sensitive, uniform in dimension and travel, short, non-vibrating and self-draining.

Prices include a T-handle cock for sizes 4 1/2 to 6 inches inclusive; a small union cock for sizes 6 3/4 to 10 inches, and a large union cock for sizes 12 inch and larger.

Size Dial In.	PRICE, EACH				DEEP CASE, O. G. OR OCT. RING	
	IRON CASE BRASS RING	IRON CASE N. P. RING	BRASS CASE	N. P. CASE	BRASS	N. P.
16	\$105.00	\$107.00	\$140.00	\$150.00		
12	55.00	56.50	80.00	84.00	\$85.00	\$89.00
10	37.00	38.00	45.00	48.00	49.00	52.00
8 1/2	25.00	25.75	34.00	36.50	37.50	40.00
6 3/4	18.00	18.60	22.00	24.00	25.00	27.00
6	15.00	15.50	18.00	19.50	20.75	22.25
5 1/2	12.00	12.25	14.00	15.25	16.25	17.50
5	11.00	11.20	13.00	14.00	15.00	16.00
4 1/2	10.00	10.20	12.00	13.00	13.75	14.75

Compound Pressure and Vacuum Gauges

Single Spring

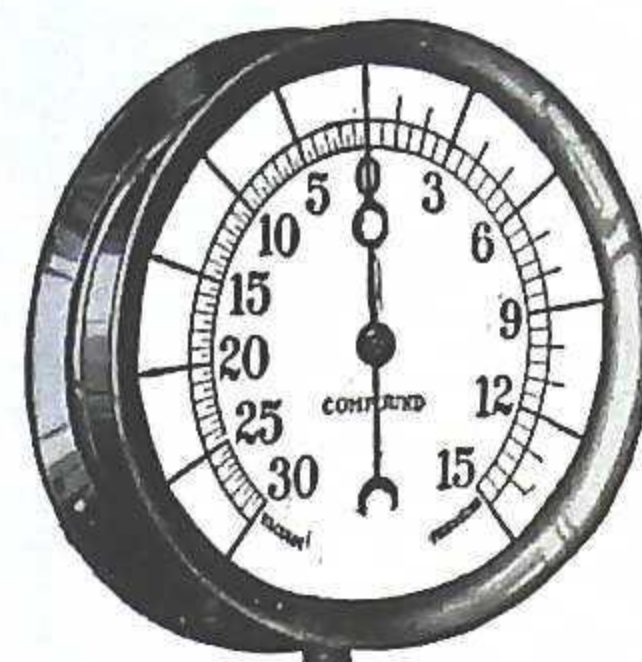


Fig. 2111

For use where either pressure or vacuum is to be indicated.

Standard graduation is 15 pounds pressure and 30 inches vacuum. Can be furnished for pressures up to 500 pounds.

Hand made spring of solid drawn seamless tube. Non-corrosive metal movement with machine cut gearing.

Unless otherwise specified, sizes 2 and 2 1/2-inch furnished with 1/8-inch male bottom connection; other sizes 1/4-inch male bottom connection. Back connection optional.

Prices include a T-handle cock for sizes 3 1/2 to 6 inches inclusive; a small union cock for sizes 6 3/4 to 10 inches, and a large union cock for 12 inches.

Size Dial In.	PRICE, EACH				DEEP CASE, O. G. OR OCT. RING	
	IRON CASE BRASS RING	IRON CASE N. P. RING	BRASS CASE	N. P. CASE	BRASS	N. P.
16	\$90.00	\$92.00	\$125.00	\$135.00		
12	50.00	51.50	75.00	79.00	\$80.00	\$84.00
10	32.00	33.00	40.00	43.00	44.00	47.00
8 1/2	22.00	22.75	30.00	32.50	33.50	36.00
6 3/4	16.00	16.60	20.00	22.00	23.00	25.00
6	13.00	13.50	16.00	17.50	18.50	20.00
5 1/2	10.00	10.25	12.00	13.25	13.75	15.00
5	8.00	8.20	11.00	12.00	12.50	13.50
4 1/2	8.00	8.20	10.00	11.00	11.50	12.50
3 1/2	7.00	7.18	9.00	9.75	10.25	11.00
3	6.00	6.15	8.00	8.60	9.25	9.75
2 1/2	6.00	6.15	8.00	8.60	9.25	9.75
2	6.00	6.15	8.00	8.60	9.25	9.75

Vacuum Gauges

Single Spring

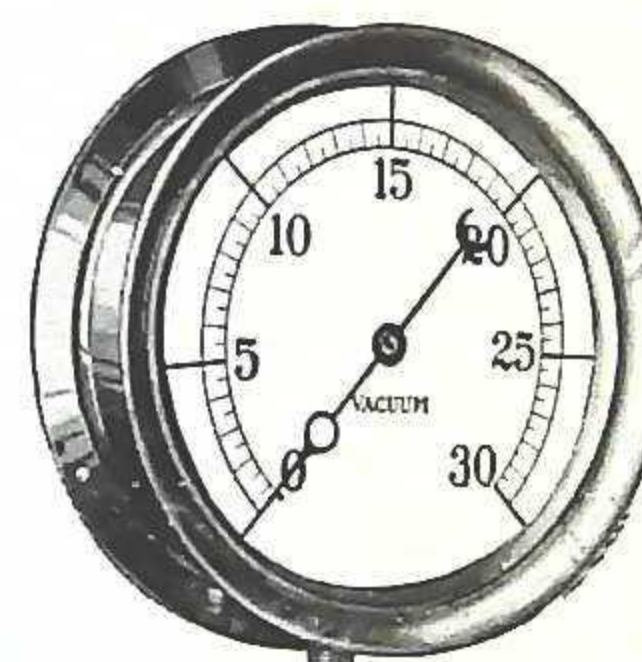


Fig. 2112

For the indication of vacuum.

These gauges are graduated from an open mercury column and are warranted to be perfectly accurate.

Hand-made spring of solid drawn seamless tube. Non-corrosive metal movement with machine cut uniform gearing. Carefully inspected, adjusted and tested. Guaranteed for long and continued accurate service.

Unless otherwise specified, gauges will be furnished, sizes 2 and 2 1/2-inch with 1/8-inch male bottom connection; other sizes, 1/4-inch male bottom connection. No extra charge for back connection.

Prices include a T-handle cock for sizes 3 1/2 to 6 inches inclusive; a small union cock for sizes 6 3/4 to 10 inches, and a large union cock for sizes 12-inch and larger.

Size Dial In.	PRICE, EACH				DEEP CASE, O. G. OR OCT. RING	
	IRON CASE BRASS RING	IRON CASE N. P. RING	BRASS CASE	N. P. CASE	BRASS	N. P.
16	\$90.00	\$92.00	\$125.00	\$135.00		
12	50.00	51.50	75.00	79.00	\$80.00	\$84.00
10	32.00	33.00	40.00	43.00	44.00	47.00
8 1/2	22.00	22.75	30.00	32.50	33.50	36.00
6 3/4	16.00	16.60	20.00	22.00	23.00	25.00
6	13.00	13.50	16.00	17.50	18.50	20.00
5 1/2	10.00	10.25	12.00	13.25	13.75	15.00
5	8.00	8.20	11.00	12.00	12.50	13.50
4 1/2	8.00	8.20	10.00	11.00	11.50	12.50
3 1/2	7.00	7.18	9.00	9.75	10.25	11.00
3	6.00	6.15	8.00	8.60	9.25	9.75
2 1/2	6.00	6.15	8.00	8.60	9.25	9.75
2	6.00	6.15	8.00	8.60	9.25	9.75

Altitude Gauges

Single Spring

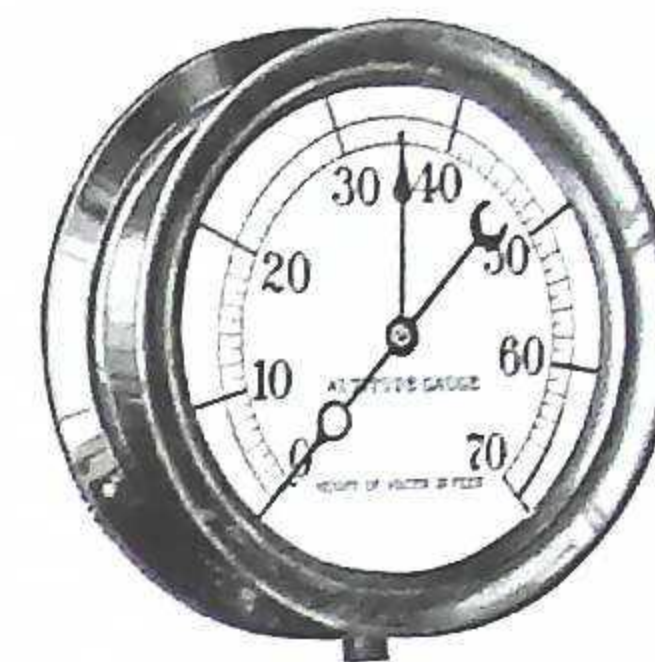


Fig. 2113

The black hand indicates the height of water. The red hand is independent from the gauge tube and set by the user at the proper altitude to be maintained.

Standard graduation is 70 feet. Can be furnished for any required altitude.

Should be graduated to double the maximum altitude to be registered.

Hand-made spring of solid drawn seamless tube. Non-corrosive metal movement with machine cut uniform gearing. Carefully inspected, adjusted and tested.

Unless otherwise specified, gauges will be furnished 1/4-inch male bottom connection. No extra charge for back connection. This instrument can be supplied with U. S. Navy specification case, interior and test.

Prices include a T-handle cock for sizes 3 1/2 to 6 inches inclusive; a small union cock for sizes 6 3/4 to 10 inches, and a large union cock for 12 inch.

Size Dial In.	PRICE, EACH				DEEP CASE, O. G. OR OCT. RING	
	IRON CASE BRASS RING	IRON CASE N. P. RING	BRASS CASE	N. P. CASE	BRASS	N. P.
16	\$90.00	\$92.00	\$125.00	\$135.00		
12	50.00	51.50	75.00	79.00	\$80.00	\$84.00
10	32.00	33.00	40.00	43.00	44.00	47.00
8 1/2	22.00	22.75	30.00	32.50	33.50	36.00
6 3/4	16.00	16.60	20.00	22.00	23.00	25.00
6	13.00	13.50	16.00	17.50	18.50	20.00
5 1/2	10.00	10.25	12.00	13.25	13.75	15.00
5	8.00	8.20	11.00	12.00	12.50	13.50
4 1/2	8.00	8.20	10.00	11.00	11.50	12.50
3 1/2	7.00	7.18	9.00	9.75	10.25	11.00
3	6.00	6.15	8.00	8.60	9.25	9.75
2 1/2	6.00	6.15	8.00	8.60	9.25	9.75
2	6.00	6.15	8.00	8.60	9.25	9.75

Combination Pressure and Altitude Gauges

Single Spring



Fig. 2114

The outer circle indicates the height of water column in feet. The inner circle indicates the corresponding pressure per square inch in pounds.

Specify the highest working pressure or number of feet to be recorded. Extra charge for pressure higher than 500 pounds and corresponding altitude.

Hand-made spring of solid drawn seamless tube. Non-corrosive metal movement with machine cut uniform gearing. Carefully inspected, adjusted and tested.

Unless otherwise specified, will be furnished with 1/4 inch male bottom connection. No extra charge for back connection. No syphon is required with this gauge.

Prices include a T-handle cock for sizes 3 1/2 to 6 inches inclusive; a small union cock for sizes 6 3/4 to 10 inches, and a large union cock for 12 inches.

Size Dial In.	PRICE, EACH				DEEP CASE, O. G. OR OCT. RING	
	IRON CASE BRASS RING	IRON CASE N. P. RING	BRASS CASE	N. P. CASE	BRASS	N. P.
16	\$90.00	\$92.00	\$125.00	\$135.00		
12	50.00	51.50	75.00	79.00	\$80.00	\$84.00
10	32.00	33.00	40.00	43.00	44.00	47.00
8 1/2	22.00	22.75	30.00	32.50	33.50	36.00
6 3/4	16.00	16.60	20.00	22.00	23.00	25.00
6	13.00	13.50	16.00	17.50	18.50	20.00
5 1/2	10.00	10.25	12.00	13.25	13.75	15.00
5	8.00	8.20	11.00	12.00	12.50	13.50
4 1/2	8.00	8.20	10.00	11.00	11.50	12.50
3 1/2	7.00	7.18	9.00	9.75	10.25	11.00
3	6.00	6.15	8.00	8.60	9.25	9.75
2 1/2	6.00	6.15	8.00	8.60	9.25	9.75
2	6.00	6.15	8.00	8.60	9.25	9.75

Eccentric Dial Pressure Gauges

Suitable for use with any pressure medium that will not attack or corrode brass. Working parts are non-corrosive; Bourdon tube has extra heavy wall thickness. Graduated to any standard pressure up to 500 pounds per square inch. Has standard 1/4-inch male connection. Cock included with 4 1/2 and 3 1/2-inch dial.



Fig. 2121

Size Dial In.	Price, Each		N. P. Case
	Steel Case	Brass Case	
4 1/2	\$8.00	\$10.00	\$11.00
3 1/2	7.00	9.00	9.75
2 1/2	6.00	8.00	8.60
2	6.00	8.00	8.60

Brass Steam Whistles

For 125 Pounds Steam Working Pressure



Without Valve Fig. 2122



With Valve Fig. 2123

Always order whistles by the diameter of bell and not by the size of pipe.

Diam. Bell In.	Length Bell In.	Size Pipe In.	Price, Each	
			Without Valve	With Valve
1	2 1/2	1/4	\$2.20	\$3.10
1 1/4	3	1/4	2.75	3.75
1 1/2	3 1/4	3/8	3.00	4.00
2	4	1/2	4.35	5.50
2 1/2	4 1/2	3/4	5.25	6.50
3	5	3/4	7.25	8.50
3 1/2	5 1/2	1	9.50	11.50
4	6 1/2	1 1/4	12.00	15.00
5	8	1 1/2	19.00	22.50
6	9 1/2	2	24.00	33.00
8	14	2 1/2	70.00	95.00

Brass whistles of a greater diameter or with a greater length of bell than listed above will be made to order at a special price.

Whistles for higher pressures made to order at an extra price.

Brass Whistle Valves

For 125 Pounds Steam Working Pressure



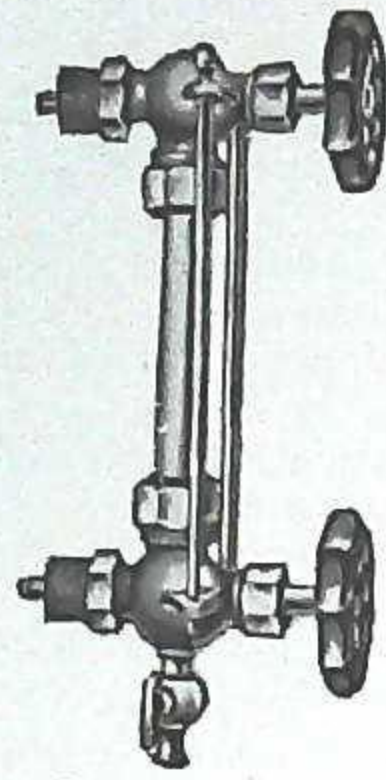
Fig. 2124

This brass whistle valve is strong and durable in construction and will give satisfactory service.

Size Inches	Price Each
3/8	\$2.00
1/2	2.50
3/4	3.00
1	3.50
1 1/4	5.00
1 1/2	6.00
2	9.00
2 1/2	18.00
3	27.00

Self-cleaning Water Gauges

With Iron Wheels



Bronzed Body Fig. 2125

Nos. 000, 1, and 1 1/2 have bronzed body. Nos. 00, 2, 4, 6 and 6 1/2 have polished bodies.

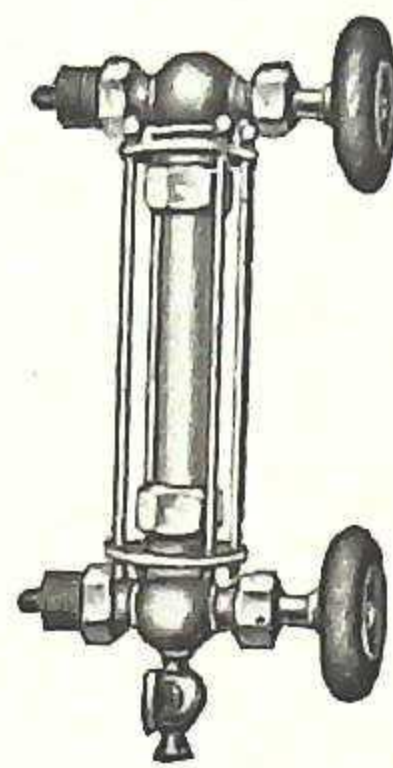
No.	Size Glass Inches	No. of Guards	Pipe Thread Inches	Price Each
000	5/8x10	2	3/8	\$2.75
00	5/8x10	2	3/8	3.25
1	5/8x12	2	1/2	3.00
1 1/2	3/4x16	2	3/4	4.50
2	5/8x12	2	1/2	3.75
4	5/8x12	4	1/2	4.50
6	3/4x16	4	3/4	5.50

Self-cleaning Water Gauges

With Wood Wheels

These gauges have polished bodies. Nos. 11, 12 13 and 14 are heavy pattern, have lever handle drip cocks. The others have T handle drip cocks.

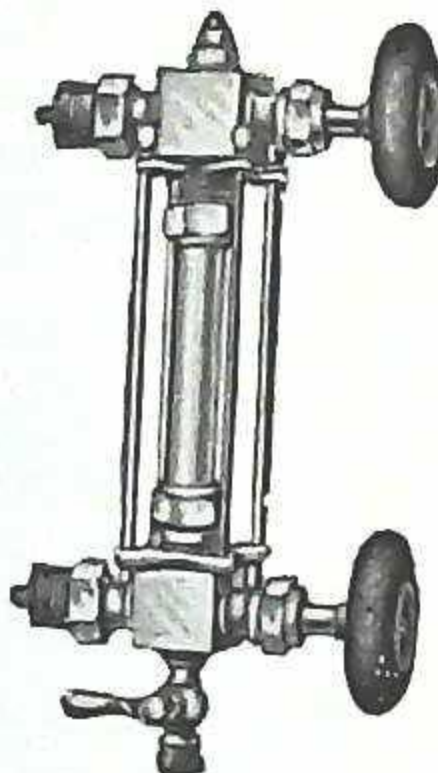
No.	Size Glass Inches	No. of Guards	Pipe Thread Inches	Price Each
0	5/8x10	2	3/8	\$3.75
3	5/8x12	2	1/2	4.25
5	5/8x12	4	1/2	5.00
7	3/4x16	4	3/4	6.25
7 1/2	3/4x16	2	3/4	5.50
11	5/8x12	2	1/2	10.00
12	5/8x12	4	1/2	12.00
13	3/4x16	2	3/4	13.00
14	3/4x16	4	3/4	15.00



Polished Body Fig. 2126

Self-cleaning Water Gauges

With Square Bodies



Four Guards Fig. 2127

These gauges have polished bodies. Nos. 8 and 8 1/2 have T handle drip cocks and iron handles. The others have lever handle drip cocks and wood handles. No. 10 is a heavy pattern.

No.	Size Glass Inches	No. of Guards	Pipe Thread Inches	Price Each
8	5/8x12	4	1/2	\$5.25
8 1/2	3/4x16	4	3/4	7.25
9	5/8x12	4	1/2	6.00
9 1/2	3/4x16	4	3/4	8.00
10	3/4x16	4	3/4	10.00

No. 0000 Expansion Tank Water Gauges

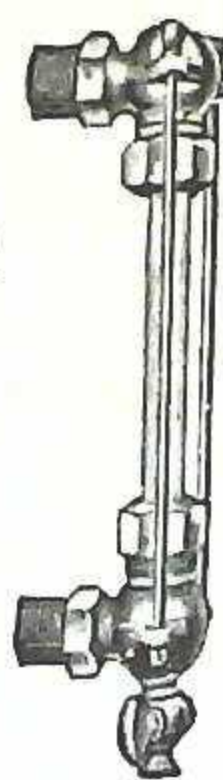
This gauge is used in connection with hot water systems. Standard finish is rough body with polished trimmings.

It is threaded for 1/2-inch iron pipe.

Has T handle drip cock.

The glass is protected by two guards. It is 5/8-inch by 12 inches.

Price, No. 0000 each \$2.60



Bronzed Fig. 2128

P. B. H. Quick Closing Water Gauges

Glass and brass guard rods included for gauge centres up to 18 inches, as well as brass safety chain sufficient to operate gauge 10 feet from floor.



Fig. 2131

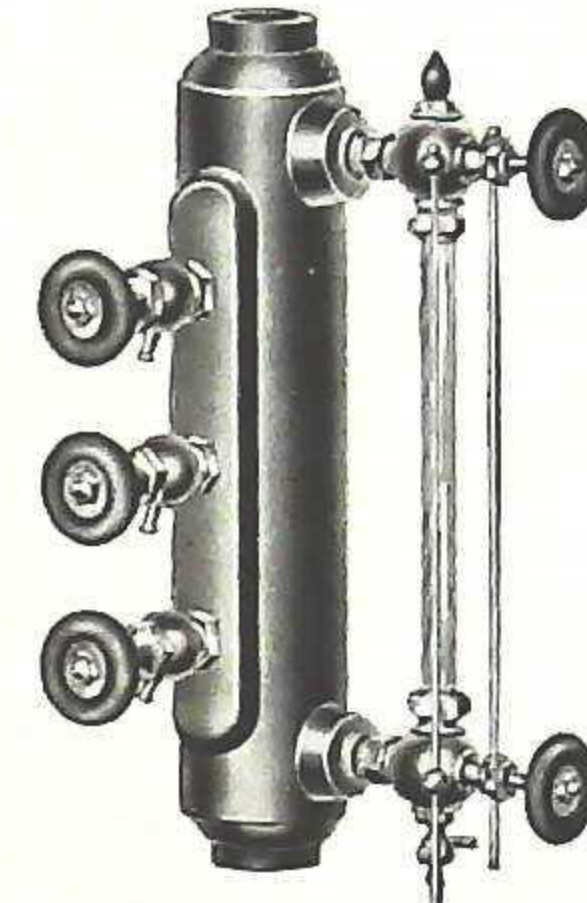
I.P. Thrd. in.	PRICE, EACH		
	Regular Heavy	EXTRA HEAVY SPECIAL For 500 Pounds Pressure	SPECIAL For Marine Service
1/2, 3/4	3/4	3/4	*4x1 1/2
Glass	3/4	3/4	3/4
Pol. Brass	\$12.00	\$19.00	\$34.00
Nickel-plated	14.00	21.00	36.00
Rough Brass	11.00	18.00	33.00

*Flange. Automatic attachment which shuts off both water and steam when gauge glass breaks, furnished at \$4.50 extra.

Water Columns



Column Only Fig. 2132

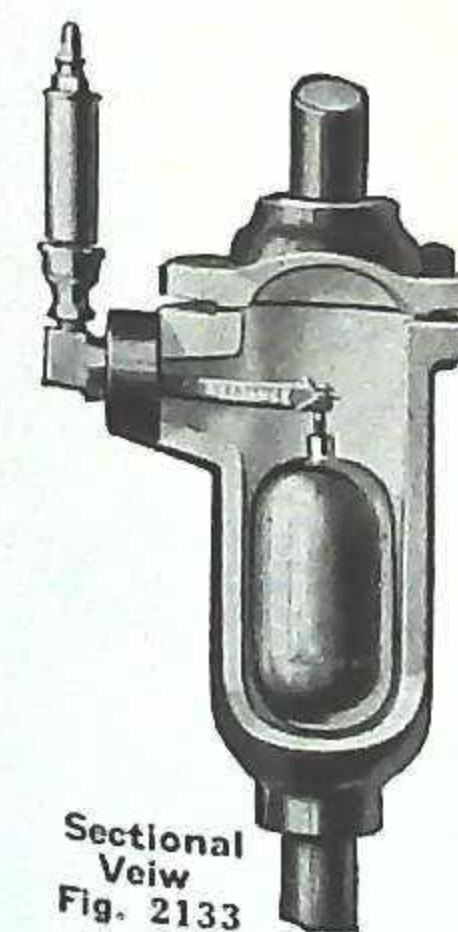


Column with Trimmings

Trimmings are never furnished unless especially ordered, in which case there is an extra charge. The usual trimmings consist of one water gauge set complete, three gauge cocks, one steam gauge and syphon, one globe valve, two bushings, and one nipple. Tappings are located so that water gauge columns may be used either on right or left side of boiler.

No.	Length Inches	Center to Gauge Connections Inches	TAPPED I. P. THREAD		Outside Diameter Inches	Body Only Price Each
			For Gauge Cocks	For Water Gauge		
1	15	10	1	3/8	2 5/8	\$2.75
2	17	12	1	1/2	3	4.00
3	20	15	1 1/4	1/2	3 5/8	6.00
4	24	18	1 1/4	3/4	4	8.00
5	26	20	1 1/4	3/4	4 3/4	12.00
6	28	20 1/4	1 1/4	3/4	5 1/2	16.00

Reliance Junior Safety Water Columns



Sectional View Fig. 2133

This small low water alarm was designed for use on small vertical boilers where the water gauges and gauge cocks are tapped in the boiler shell.

It is designed especially for tire repair shops, creameries, bakeries, laundries, saw mills, hoisting engines, heating plants, etc.

It costs little and is easily installed. A mark cast on the outside shows the water level at which the whistle blows.

On special order it can be made to signal for high water.

Size of steam and water connections, 1 inch. Size of blow off, 1 inch. Length over all, 10 1/4 inches.

Price each \$15.00

Reliance Combined High and Low Water Alarm Columns

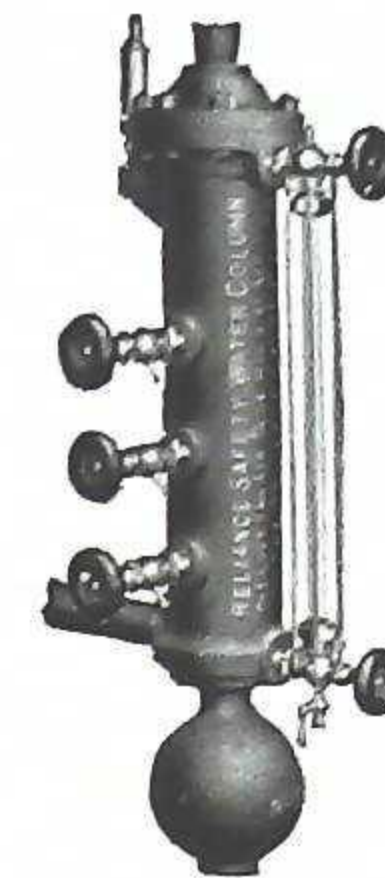
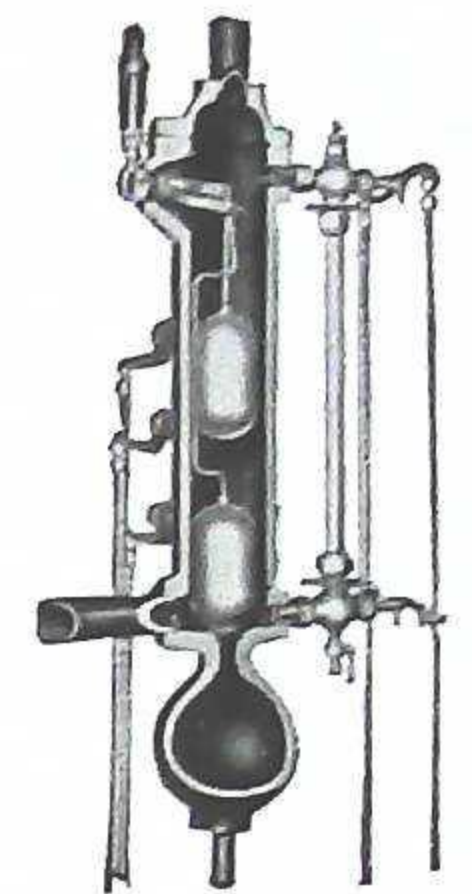


Fig. 2134



The Reliance Safety Water Column is a device which gives an unmistakable signal when the water level in a boiler rises or falls beyond certain predetermined points. It is made in sizes and types to fit any boiler. The signal may be given by a whistle, by two whistles, by an electric attachment or by combinations of these.

Column No.	Kind of Boiler	Steam and Water Conn. In.	Water Gauge Center to Center	Gauge Center to I. P. Center	Gauge Cock I. P. Size	Length Over All In.	Price Each
1	36-54-in.	1	13 1/2	1 1/2	3	23 1/4	\$28.00
5	54-72 "	1 1/4	18	3/4	4	29 1/2	30.00
7	Water T	1 1/2	21	3/4	6	36	35.00
9	" T	1 1/2	28	3/4	9	44	40.00
11	" T	1 1/2	32	3/4	12	48 1/4	\$42.50

Above prices for columns only; trimmings not included.

Reliance Low Water Alarm Columns

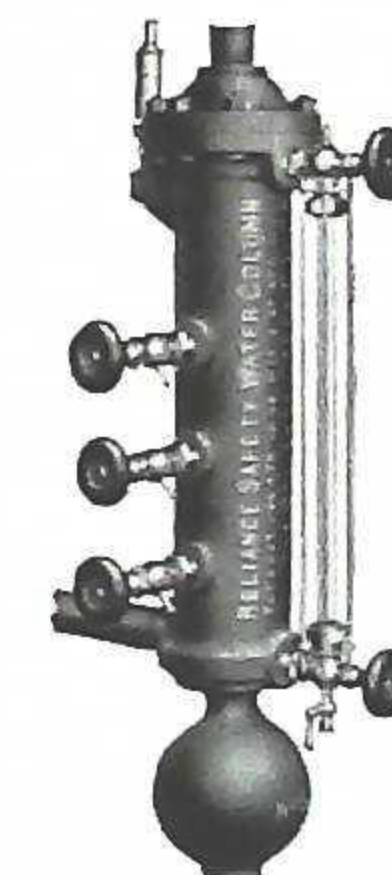
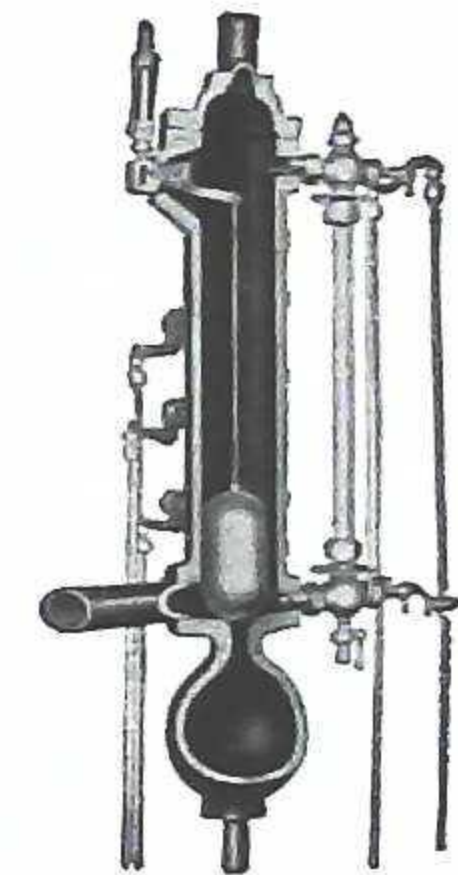


Fig. 2135 Wood Wheel Trimmings



Low Water Alarm Sectional View

The Reliance Safety Water Column is a device which gives an unmistakable signal when the water level in a boiler rises or falls beyond certain predetermined points. It consists of a semi-steel body casting containing the alarm mechanism. This is installed on the boiler in place of the plain column ordinarily furnished. It is made in sizes and types to fit any boiler. The signal may be given by a whistle, by two whistles, by an electric attachment, or by combinations of these.

These columns have a sediment chamber providing protection against the danger arising from sediment. The valves are also placed above the high water mark and are so constructed as to not become stopped up.

Column No.	Kind of Boiler	Steam and Water Conn. In.	Water Gauge Center to Center	Gauge Center to I. P. Center	Gauge Cock I. P. Size	Length Over All In.	Price Each
2	36-54-in.	1	13 1/2	1 1/2	3	23 1/4	\$25.00
6	54-72 "	1 1/4	18 3/4	3/4	4	28	28.00
7	Water T	1 1/2	21	3/4	6	36	35.00

Scotch Gauge Glasses

For 200 Pounds Steam Pressure



Lgth. In.	PRICE, PER DOZEN— EXTERNAL DIAMETER, INCHES					
	1/2	5/8	3/4	7/8	1	1 1/2
8	\$1.92	\$2.52	\$3.00	\$4.08	\$1.92	\$8.16
9	2.04	2.76	3.36	4.68	5.52	9.24
10	2.28	3.00	3.60	5.04	6.12	10.20
11	2.64	3.24	3.96	5.64	6.72	11.16
12	2.76	3.60	4.32	6.12	7.32	12.24
13	3.00	3.84	4.80	6.60	7.92	13.20
14	3.24	4.20	5.16	7.08	8.52	14.28
15	3.48	4.44	5.52	7.56	9.12	15.24
16	3.72	4.80	5.88	8.16	9.72	16.32
17	3.96	5.04	6.24	8.64	10.32	17.28
18	4.20	5.40	6.60	9.12	10.92	18.36
19	4.44	5.64	7.08	9.60	11.52	19.32
20	4.68	6.00	7.44	10.20	12.12	20.28
21	4.80	6.36	7.80	10.68	12.84	21.36
22	5.04	6.60	8.16	11.16	13.44	22.44
23	5.28	6.96	8.52	11.64	14.04	23.40
24	5.52	7.20	8.88	12.12	14.64	24.36
30	6.96	9.00	11.16	15.24	18.24	30.60
36	8.28	10.80	13.44	18.24	21.96	36.72
42	9.72	12.60	15.72	21.36	25.68	42.84
48	11.04	14.52	18.00	24.36	29.16	48.96
54	12.48	16.32	20.28	27.48	33.00	55.08
60	13.80	18.12	22.56	30.48	36.48	61.20
66	15.24	20.04	24.84	33.48	40.32	67.32
72	16.56	21.84	27.12	36.48	43.44	73.44

Lengths not regular are charged at price of next larger tubes of same diameter.

Libbey High Pressure Gauge Glasses

For 400 Pounds Steam Working Pressure



Fig. 2142

Libbey High Pressure Gauge Glasses are guaranteed to be uniform in size and to withstand steam pressures of 400 pounds, as well as sudden and radical changes in temperature.

Lgth. In.	PRICE, PER DOZEN— EXTERNAL DIAM., IN.			
	1/2	5/8	3/4	1
10	\$5.00	\$7.00	\$8.00	\$10.40
11	5.40	7.40	8.60	11.20
12	6.00	8.40	10.00	12.40
13	6.40	9.00	10.60	13.60
14	6.60	9.60	11.00	14.80
15	7.00	10.00	11.80	15.60
16	7.80	11.40	12.60	17.00
17	8.00	11.80	13.40	18.00
18	8.60	12.20	14.20	19.00
19	9.00	13.00	15.00	20.00
20	10.00	14.00	16.40	21.40
22	11.00	14.80	17.20	22.40
24	12.00	16.80	20.00	24.80
30	14.00	20.00	23.40	31.20
36	17.20	24.40	28.40	38.00
48	23.40	34.20	37.80	51.00
60	28.00	40.00	47.20	62.40
72	34.40	48.80	56.80	76.00

Special prices on lengths over 72 inches.

Coil Pipe Syphons



Fig. 2143

Furnished in iron, brass or nickel-plated.

Connections Size, Inches	Iron	Brass	N. P.
1/4x1/4	\$.25	\$1.00	\$1.50

Rubber Gauge Glass Washers



Fig. 2144
No. 2011
Square

Size In.	PRICE, PER DOZ.
1/2	\$.36
5/8	.54
3/4	.60



Fig. 2145
No. 689
Round



Fig. 2146

Gilbert's Self-packing Glass Protectors

Size	Price per box
1/2	\$.60
5/8	.60
3/4	.60
1	.60

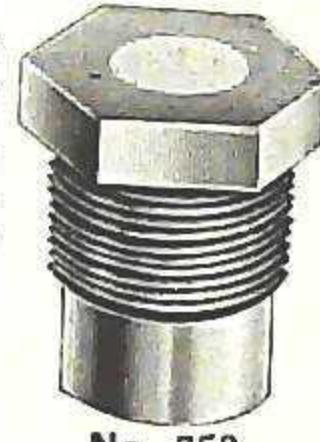
Sizes 1/2, 5/8 and 3/4-inch, packed one dozen in box. 1-inch size 1/2 dozen in a box.

Fusible Plugs



No. 750
Fig. 2147

No. 750 is made regular length and constructed for outside insertion. No. 751 is made regular length and constructed for inside insertion. No. 752 is made extra long (having an extension one inch beyond the thread) and constructed for outside insertion only. No. 753 is made extra long and constructed for inside insertion only.



No. 752
Fig. 2148

In ordering, always give style, number and size.

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Nos. 750, 751	Nos. 752, 753		Nos. 750, 751	Nos. 752, 753
3/8	\$.55	1.10	1	\$1.00	\$2.00
1/2	.60	\$1.20	1 1/4	1.50	3.00
3/4	.75	1.50	1 1/2	2.00	4.00

Favorite Gauge Glass Cutters

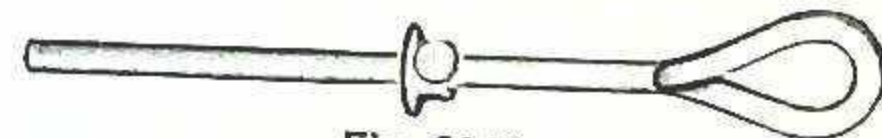


Fig. 2149

The trifling cost of a Favorite places it within the reach of everyone who has use for such a tool. This simple little instrument is surprisingly effective. It will cut a 1/2-inch glass. Price..... each \$2.00

Chesterton Gauge Glass Cutters

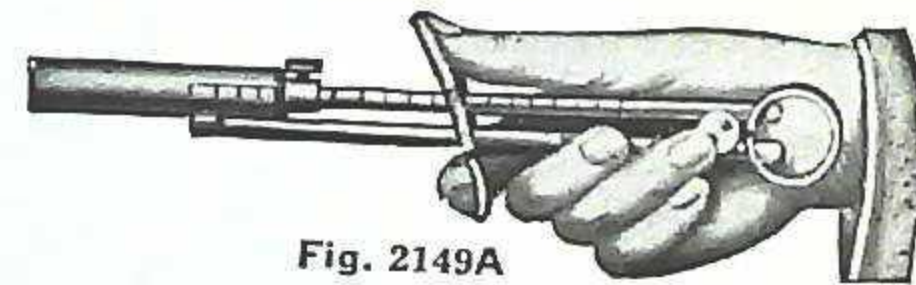


Fig. 2149A

Price, Nickel-plated.....each \$2.00

Wilkins Gauge Glass Cutters



Fig. 2149B

Cuts any length from 1/4 to 8 inches. Beam is graduated in eighths of an inch. Price each \$2.00

Compression Gauge Cocks with Stuffing Box

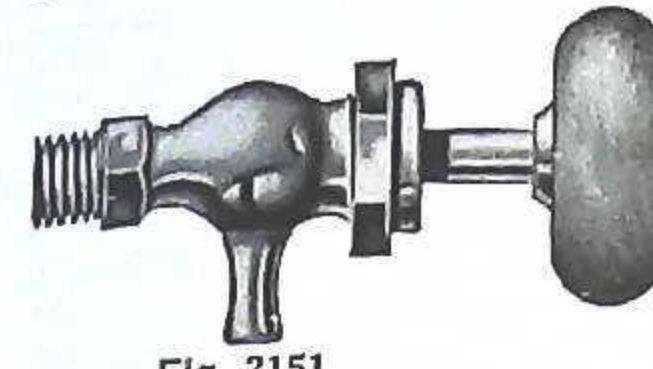


Fig. 2151

Size Inches	PRICE, EACH	
	Standard Pattern	Heavy Pattern
3/8	\$1.20	\$1.35
1/2	1.30	1.50
3/4	1.45	1.70

Mississippi Gauge Cocks

For 175 Pounds Steam Working Pressure



Fig. 2152

Size Inches	Price Each
1/2	1.20
3/4	1.80

Lunkenheimer Bronze Gauge Cocks

Regrinding For 250 Pounds Steam Working Pressure



Fig. 2153

A high-grade screw spindle gauge cock of substantial and durable construction. The valve is of the regrinding pattern, facilitating repair of the seating surfaces and insuring long life and the avoidance of troublesome renewals and costly shut-downs.

Size Pipe Thread In.	PRICE, EACH		Size Pipe Thread In.	PRICE, EACH	
	No. 466 Wood Wheel	No. 1176 Iron Wheel		No. 466 Wood Wheel	No. 1176 Iron Wheel
1/4	\$1.15	\$1.15	1/2	\$1.30	\$1.30
3/8	1.20	1.20	3/4	1.80	1.80

No. 475 Bronze Steam Gauge Cocks

Tee Handle, Beaded End Pattern Male and Female Ends

Suitable for the control of steam, air, and liquids.



Fig. 2154

Size.....inches	1/8	1/4	3/8
Price, No. 475 each	\$.75	.85	.95

No. 474 Bronze Steam Gauge Cocks

Tee Handle, Beaded End Pattern Female Ends

Suitable for the control of steam, air, and fluids.

Size.....inches	1/8	1/4	3/8
Price, No. 474.....each	\$.75	.85	.95

No. 1177 Bronze Steam Gauge Cocks

Lever Handle, Hexagon End Pattern Female Ends

Suitable for the control of steam, air, and liquids.

Size.....inches	1/8	1/4	3/8
Price, No. 1177.....each	\$1.00	1.10	1.20

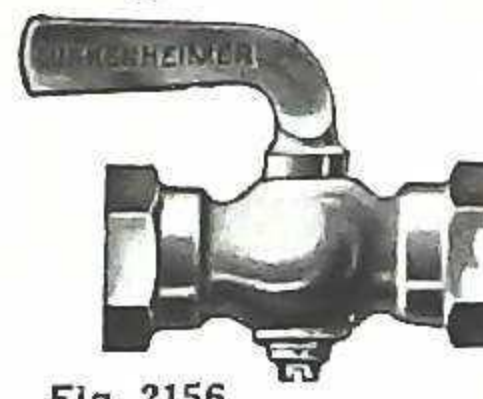


Fig. 2156

No. 1179 Bronze Steam Gauge Cocks

Lever Handle, Hexagon End Pattern Male and Female Ends

Suitable for the control of steam, air, and fluids.

Size.....inches	1/8	1/4	3/8
Price, No. 1179.....each	\$1.00	1.10	1.20

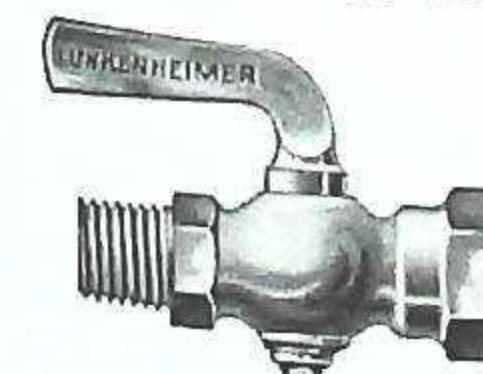


Fig. 2157

Tee Handle Air Cocks

Straight Nose



Fig. 2158

Size In.	Price Each	Size In.	Price Each
1/4	.45	3/4	.90
3/8	.50	1	1.25

Tee Handle Air Cocks Bibb Nose

Size Inches	Price Each	Size Inches	Price Each
1/8	\$.70	3/8	\$.90
1/4	.80	1/2	1.00

Can be furnished with threaded nose. Prices upon application.



Fig. 2159

Tee Handle Air Cocks Male Both Ends

Size In.	Price Each	Size In.	Price Each
1/8	\$.55	3/8	\$.75
1/4	.65	1/2	.90



Fig. 2159A

Tee Handle Air Cocks Female Both Ends



Fig. 2159B

Size Inches	Price Each	Size Inches	Price Each
1/4	.70	1/2	1.10

Lever Handle Air Cocks Straight Nose



Fig. 2159C

Size Inches	Price Each	Size Inches	Price Each
1/8	\$.55	1/2	\$.75
1/4	.60	3/4	1.15
3/8	.65	1	1.40

Size 3/8-inch and over have hexagon shank.

Lever Handle Air Cocks Bibb Nose

Size Inches	Price Each	Size Inches	Price Each
1/8	\$.85	3/8	\$1.05
1/4	.95	1/2	1.15

Can be furnished with threaded nose. Prices upon application.



Fig. 2159D

Lever Handle Air Cocks Male Both Ends

Size Inches	Price Each	Size Inches	Price Each
1/8	\$.70	3/8	\$.90
1/4	.80	1/2	1.05



Fig. 2159E

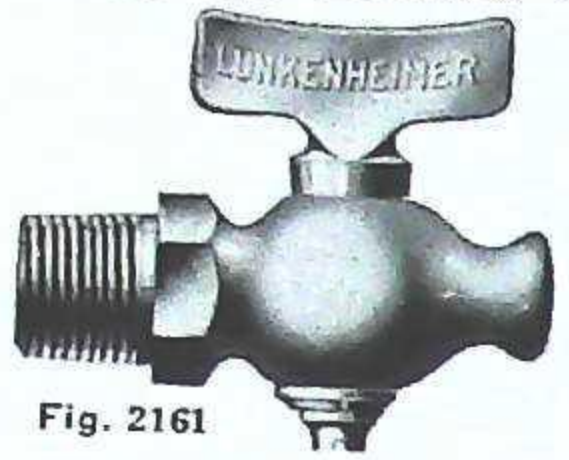
Lever Handle Air Cocks Female Both Ends

Size Inches	Price Each	Size Inches	Price Each
1/8	\$.80	3/8	\$1.00
1/4	.85	1/2	1.25



Fig. 2159F

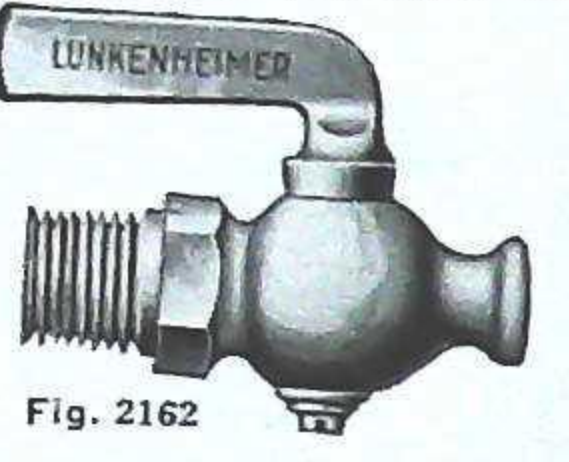
No. 476 Bronze Ground Key Drain Cocks
Tee Handle Male End



Suitable for drains or vents for apparatus using steam, air or fluids.

Size Inches	No. 476 Price, Ea.	Size Inches	No. 476 Price, Ea.
1/8	\$.45	3/8	\$.85
1/4	.60	1/2	1.20

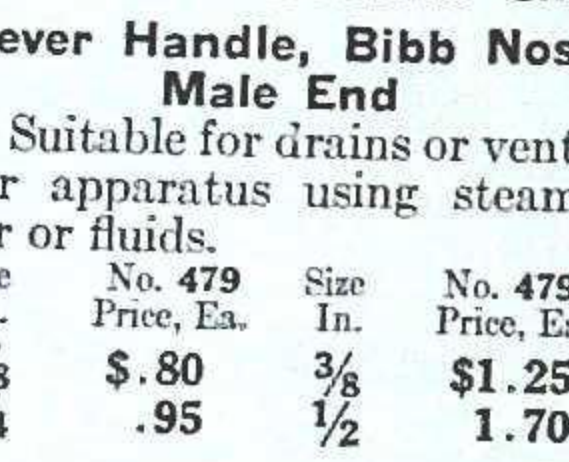
No. 980 Bronze Ground Key Drain Cocks
Lever Handle Male End



Suitable for drains or vents for apparatus using steam, air or fluids.

Size Inches	No. 980 Price, Ea.	Size Inches	No. 980 Price, Ea.
1/8	\$.55	3/8	\$.95
1/4	.70	1/2	1.30

No. 479 Bronze Ground Key Drain Cocks
Lever Handle, Bibb Nose Male End



Suitable for drains or vents for apparatus using steam, air or fluids.

Size In.	No. 479 Price, Ea.	Size In.	No. 479 Price, Ea.
1/8	\$.80	3/8	\$1.25
1/4	.95	1/2	1.70

No. 981 Bronze Ground Key Drain Cocks
Lever Handle Male Both Ends



Suitable for drains or vents for apparatus using steam, air or fluids.

Size In.	No. 981 Price, Ea.	Size In.	No. 981 Price, Ea.
1/8	\$.65	3/8	\$1.05
1/4	.80	1/2	1.50

Bronze Ground Key Cocks

Spring Key Type, All Finished, Male End

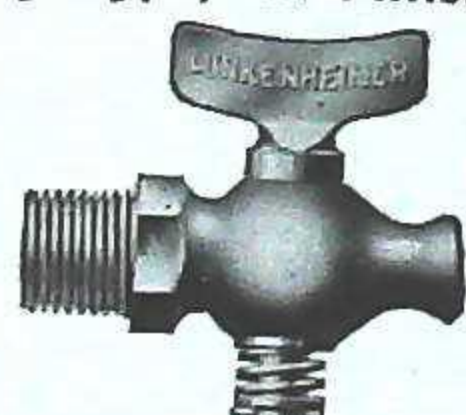


Fig. 2165
No. 177, Tee Handle

Adapted for air, gas, oils and other liquids.

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	No. 177 Tee Handle	No. 178 Lever Handle		No. 177 Tee Handle	No. 178 Lever Handle
1/8	\$.65	\$.70	3/8	\$1.00	\$1.15
1/4	.75	.90	1/2	1.30	1.55

No. 176 Bronze Ground Key Cocks

Spring Key Type, Lever Handle Male End, Bibb Nose

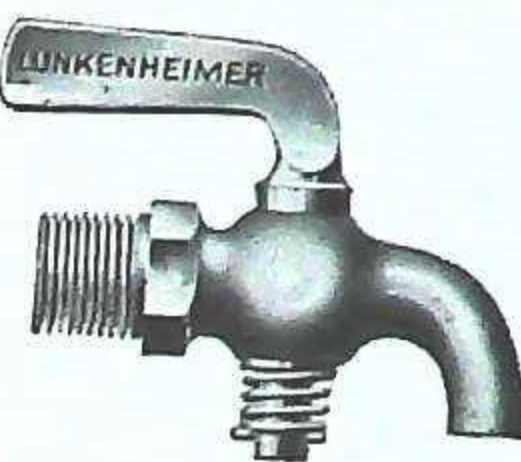


Fig. 2166

Size Inches	No. 176 Price, Ea.	Size Inches	No. 176 Price, Ea.
1/8	\$.90	3/8	\$1.50
1/4	1.00	1/2	1.90

No. 174 Bronze Ground Key Cocks
Spring Key Type, Lever Handle

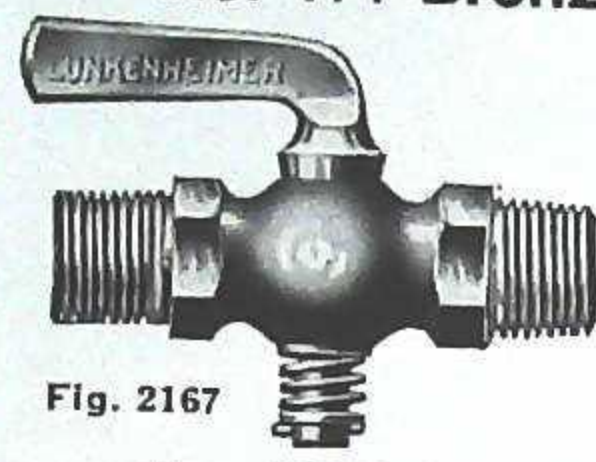


Fig. 2167

Male Both Ends
Adapted for air, gas, oils, and other liquids.

Size Inches	No. 174 Price, Ea.	Size Inches	No. 174 Price, Ea.
1/8	\$.85	3/8	\$1.50
1/4	1.10	1/2	2.00

No. 1038 Bronze Ground Key Cocks
Spring Key Type, Lever Handle Male and Female Ends

Adapted for air, gas, oils, and other liquids.

Size Inches	No. 1038 Price, Ea.	Size Inches	No. 1038 Price, Ea.
1/8	\$.90	3/8	\$1.55
1/4	1.15	1/2	2.10

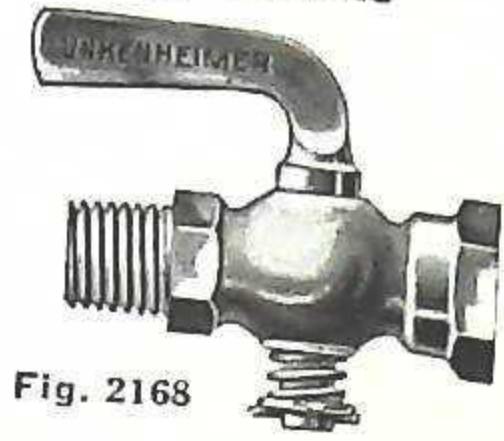


Fig. 2168

No. 63 Bronze Ground Key Gasoline Cocks
Spring Key Type, Lock Washer Rough Body, Lever Handle

Female pipe threaded ends.

Size in.	Price, No. 63, ea.
1/8	\$1.15
1/4	1.30

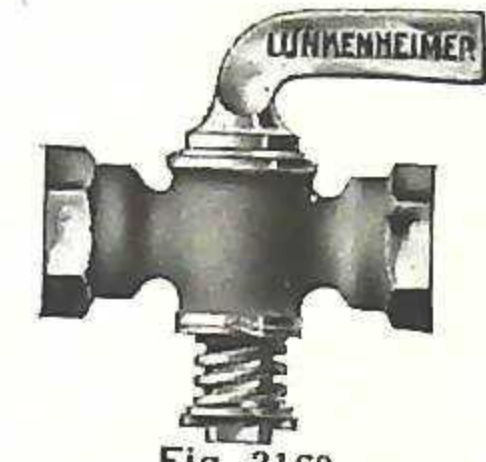


Fig. 2169

No. 1088 Bronze Ground Key Gasoline Cocks
Spring Key Type, Lock Washer Rough Body, Lever Handle
Male pipe threaded and S.A.E. Standard flared tubing union ends.

Size In.	1/4" Union	3/8" Union	1/2" Union
1/8	\$1.45	\$1.50	\$2.00
1/4	1.55	1.60	2.00

Lunkenheimer Bronze Gasoline Strainers
Horizontal Pattern

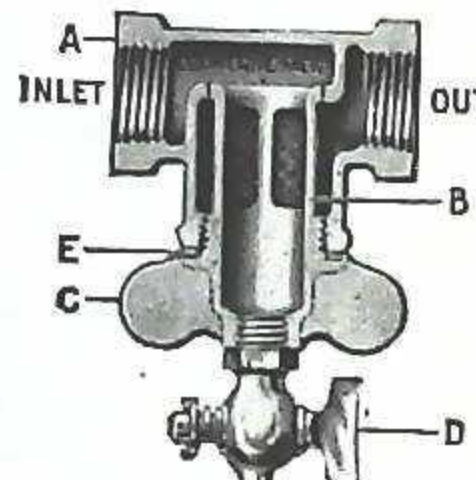


Fig. 2169B
No. 372, with Drain Cock

These strainers should be installed in the position illustrated so that the sediment and water may deposit in the cap pocket and to permit the complete removal of the accumulation.

The regular strainer cloth is of fine mesh for gasoline service and, being secured to a substantial cage (integral with the removable cap), will not collapse and may readily be cleaned.

Size in.	1/8	1/4	3/8	1/2
Price, No. 380, without Drain Cock, ea.	\$.90	\$1.00	\$1.20	\$1.55
Price, No. 372, with Drain Cock, ea.	1.45	1.55	1.80	2.20

Lunkenheimer Bronze Gasoline Strainers
Angle Pattern



Fig. 2169C
No. 347 without Drain Cock

These strainers should be installed in the position illustrated so that the sediment and water may deposit in the cap pocket and to permit the complete removal of the accumulation.

The regular strainer cloth is of fine mesh for gasoline service and, being secured to a substantial cage (integral with the removable cap), will not collapse and may readily be cleaned.

Size in.	1/8	1/4	3/8	1/2
Price, No. 347, without Drain Cock, ea.	\$.90	\$1.00	\$1.20	\$1.55
Price, No. 373, with Drain Cock, ea.	1.45	1.55	1.80	2.20

Detroit Improved Standard Single Connection Lubricators

For use on all kinds of reciprocating engines, steam engines, steam pumps, etc. where conditions do not permit the installation of a double connection lubricator.

Connected to the steam pipe either above or below the throttle or into the steam chest direct.

Finished in polished brass or nickel-plated.

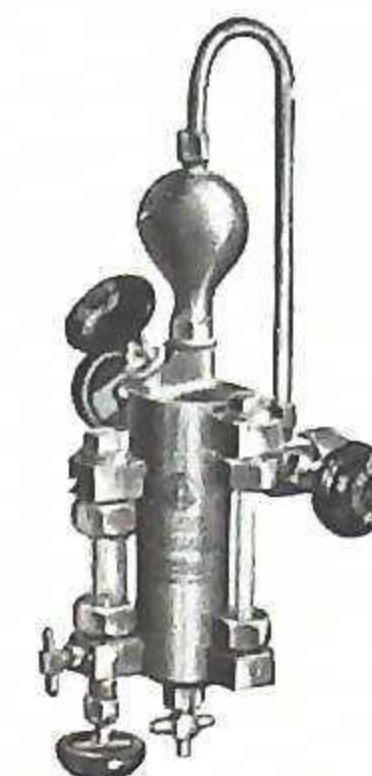


Fig. 2171

Capacity Pints	Pipe Thread on Support Arm Inches	Capacity Pints	Pipe Thread on Support Arm Inches
1/3	1/2	1	1/2
1/2	1/2	2	1/2

Prices upon application.

Detroit Improved Standard Double Connection Lubricators

For use on all kinds of reciprocating steam engines, steam pumps, etc.

Installed with both connections between the boiler and throttle.

Finished in polished brass or nickel-plated.

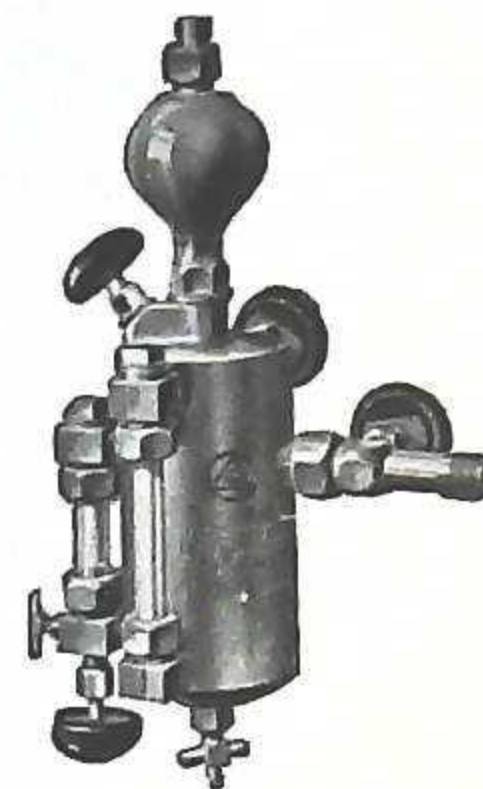


Fig. 2172

Capacity Pints	Pipe Thread on Support Arm Inches	Capacity Pints	Pipe Thread on Support Arm Inches
1/3	1/2	2	1/2
1/2	1/2	4	3/4
1	1/2	..	..

Prices upon application.

Detroit Zero Single Connection Lubricators

For the same service as the double connection and where the double connection cannot be installed.

Installed on either side of the throttle or into the steam chest direct by using an elbow and short vertical piece of pipe.

Finished with rough body and polished trimmings in brass.

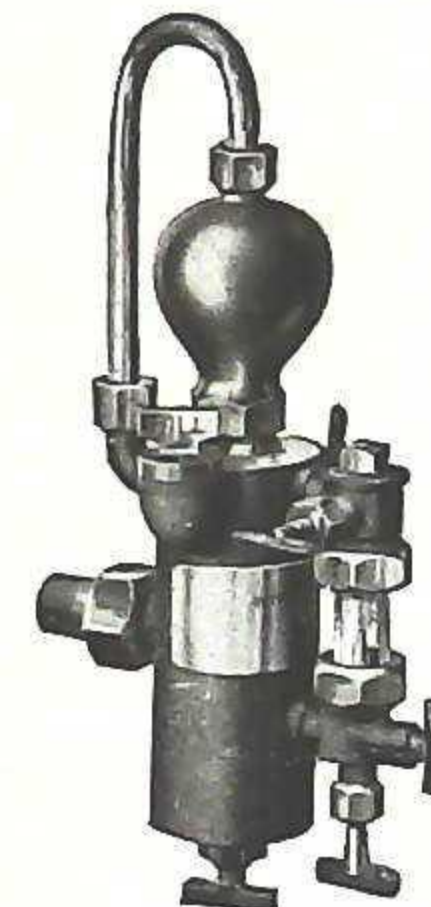


Fig. 2173

Capacity Pints	Pipe Thread on Support Arm Inches	Capacity Pints	Pipe Thread on Support Arm Inches
1/4	1/2	1	1/2
1/3	1/2	2	1/2
1/2	1/2	..	..

Prices upon application.

Detroit Zero Double Connection Lubricators

For use in out-door service, particularly in places subject to low temperatures, such as on traction engines, portable engines, etc.

Installed with both connections between the boiler and the throttle.

Finished with rough body and polished trimmings in brass.

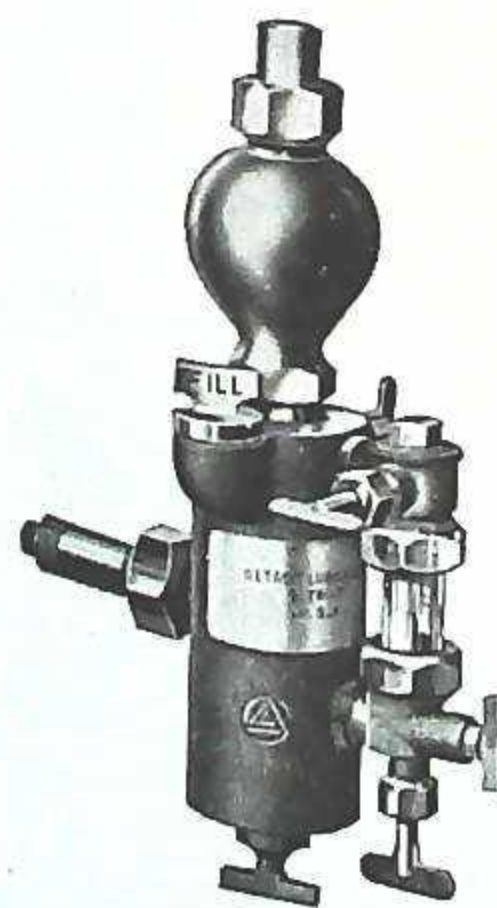


Fig. 2174

Capacity Pints	Pipe Thread on Support Arm Inches	Capacity Pints	Pipe Thread on Support Arm Inches
1/4	3/8	1	1/2
1/3	3/8	2	1/2
1/2	3/8	..	..

Prices upon application.

Detroit Zero Double Connection Lubricators

For use in outdoor service, particularly in places subject to low temperatures, such as on traction engines, portable engines, etc.

Installed with both connections between the boiler and the throttle.

Finished with rough body and polished trimmings in brass.

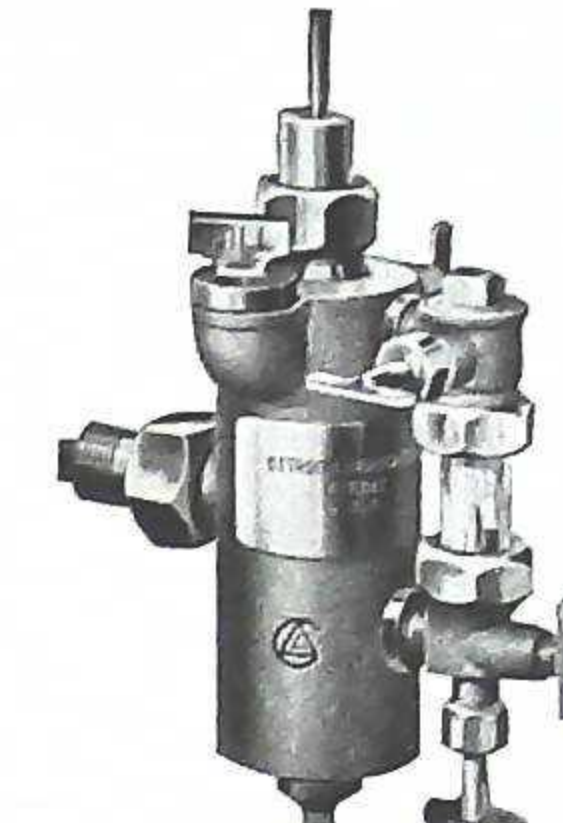


Fig. 2175

Capacity Pints	I.P. Thread on Support Arm Inches	Capacity Pints	I.P. Thread on Support Arm Inches
1/4	3/8	1	1/2
1/3	3/8	2	1/2
1/2	3/8	..	..

Prices upon application.

Model 60L Michigan Plain Engine Lubricators

Standard finish is polished brass with black composition handles.

This plain engine lubricator is neat and compact. Its neat design gives it a very pleasing appearance, and its compactness renders this lubricator sturdy and enables it to stand up well under severe usage.



Fig. 2176

No.	I.P. Thread, In.	Cap. Oz.	Diam. In.	Price Each
60L00	3/8	3/4	1	\$2.00
60L 0	3/8	1	1 1/4	2.20
60L 1	3/8	1 1/4	1 1/2	2.40
60L 2	3/8	1 1/2	1 3/4	2.60
60L 3	1/2	2 1/2	2	2.90
60L 4	1/2	4	2 1/4	3.25
60L 5	1/2	5	2 1/2	3.75
60L 5 1/2	1/2	8	2 3/4	4.25
60L 6	3/4	10	3	4.75

No. 1301 Lunkenheimer Paragon Lubricators

For gas, gasoline or oil engine cylinders. Glass body; cast bronze base and top. Equipped with sight feed. Finished bronze lubricator furnished unless otherwise specified.



Fig. 2177

Size No.	Cap. Oz.	I.P. Thread In.	Height Over All Inches	Fin. Bronze Price Each
1 1/2	1 1/2	1/2	5 1/2	\$4.75
2	2 1/2	3/8	6	5.25
3	4	3/8	6 1/4	5.75
4	5	3/8	7	6.50
5	10	1/2	7 3/4	9.00
6	18	1/2	8 3/4	12.00
8	32	3/4	10	25.00

Plain Brass Oil Cups



Fig. 2178

No.	Outside Diam. In.	I.P. Thread In.	Price Each	No.	Outside Diam. In.	I.P. Thread In.	Price Each
1	3/4	1/8	\$.30	6	1 3/4	3/8	\$1.25
2	7/8	1/8	.35	7	1 7/8	3/8	1.60
3	1	1/8	.40	8	2	3/8	1.75
4	1 1/4	1/4	.60	9	2 1/4	1/2	2.25
5	1 1/2	3/8	.90	..	..	..	..

Tee Handle Priming Cups



Fig. 2179

Diam. Cup In.	Pipe Shank In.	Short Pattern Price, Each	Long Pattern Price, Each
3/4	1/8	\$.65	\$.70
3/4	1/4	.75	..
7/8	1/8	..	.90
1 1/8	1/4	1.15	1.25

No. 1297 Lunkenheimer Pioneer Oil Cups

Recommended for use on stationary bearings. Equipped with needle valve feed control.



Size No.	Cap. Oz.	I. P. Thread In.	Height Over All Inches	Fin. Bronze Price Each
000	1/4	1/8	2 9/16	\$2.00
0	5/8	1/8	3 1/16	2.25
1	1	1/4	3 3/8	2.50
1 1/2	1 1/2	1/4	3 3/4	2.75
2	2 1/2	3/8	4 1/8	3.00
3	4	3/8	4 1/2	3.50
4	5	3/8	5	4.00
5	10	1/2	5 7/8	5.50
6	18	1/2	6 5/8	7.50
8	34	3/4	8 3/8	14.50

No. 1298 Lunkenheimer Royal Oil Cups

Recommended for use on stationary bearing. Equipped with needle valve feed control.



Size No.	Cap. Oz.	I. P. Thread In.	Height Over All Inches	Fin. Bronze Price Each
000	1/4	1/8	3 1/16	\$2.50
0	5/8	1/8	3 7/8	2.75
1	1	1/4	4 1/16	3.00
1 1/2	1 1/2	1/4	4 7/16	3.25
2	2 1/2	3/8	5	3.50
3	4	3/8	5 1/4	4.00
4	5	3/8	5 3/4	4.75
5	10	1/2	6 3/4	6.25
6	18	1/2	7 3/4	8.25
8	34	3/4	8 5/8	15.50

No. 1300 Lunkenheimer Sentinel Oil Cups

With Snap Lever Feed Control



Designed for use on stationary bearings.

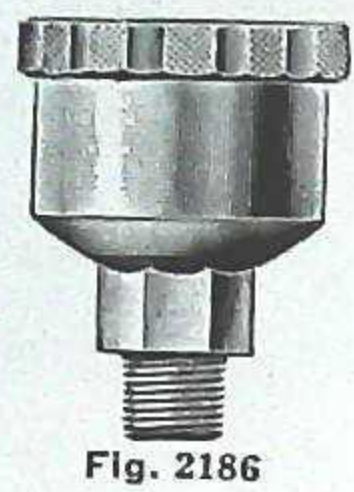
Size No.	Capacity Oil Ounces	I. P. Pipe Thread Inches	PRICE, EACH	
			Finished Bronze	Nickel-plated Bronze
0	5/8	1/8	\$3.00	\$3.65
1	1	1/4	3.25	4.00
1 1/2	1 1/2	1/4	3.50	4.30
2	2 1/2	3/8	3.75	4.65
3	4	3/8	4.25	5.25
4	5	3/8	5.00	6.15
5	10	1/2	6.75	8.15
6	18	1/2	8.75	10.55
8	34	3/4	16.00	19.00

Lunkenheimer Oil Cup Glasses and Washers

For lubricators, oil cups, oiling devices, etc. Glasses cylindrical in shape, clear, strong and uniform in size. Interchangeable with all styles of cups.



Size No.	O. D. In.	Ht. In.	No. 526 Glasses Price Each		No. 1062 Washers Price per Doz.	
			Price Each	Price per Doz.	Price Each	Price per Doz.
000	1 1/8	1	.40	.45	3	1.00
0	1 1/4	1 1/8	.50	.50	4	1.10
1	1 1/2	1 3/8	.70	.80	5	1.30
1 1/2	1 3/4	1 5/8	.80	1.00	6	1.90
2	2	1 7/8	.90	1.20	10	6.00



Economy Steel Grease Cups

This cup is light and neat but at the same time strong and rigid. The metal is dense and uniform; breakage and leakage due to spongy metal and sand holes are unknown. Breaking of the threaded shank is eliminated, an advantage over the cast cup.

No.	Inside Diam. In.	I. P. Thread In.	Cap. Oz.	Price, Each		
				Plain Steel	Blue Steel	Plain Ratchet
000	3/4	1/8	1/4	\$.60	\$.70	\$.90
00	1	1/8	1/2	.70	.90	1.02
0	1 1/4	1/8 or 1/4	2/3	.90	1.15	1.19
1	1 1/2	1/4	1	1.15	1.40	1.37
2	2	1/4 or 3/8	2	1.50	1.80	1.73
3	2 1/2	3/8 or 1/2	3 1/2	2.15	2.60	2.60
4	3	1/2	5	2.90	3.50	3.50

No. 513 Lunkenheimer Tiger Bronze Packed Base Grease Cups

Cap Screw Feed

A simple, compact, efficient cup of the plain compression type. The base construction includes a renewable leather washer, which insures an effective seal against leakage around the threads, even when feeding the lighter grades of grease.



Size No.	Cap. Oz.	I. P. Thread In.	O. D. In.	Ht. In.	Price, Each		
					Rough Bronze	Fin. Bronze	N. P. Bronze
000	1/8	1/8	7/8	1 1/16	\$.56	\$.70	\$.82
00	1/2	1/8	1 1/8	1 1/2	.74	.90	1.06
0	2/3	1/4	1 1/2	1 3/4	.96	1.15	1.36
1	1	1/4	1 5/8	1 7/8	1.28	1.50	1.80
2	2	3/8	2 1/8	2 3/8	1.76	2.15	2.60
3	3 1/2	1/2	2 1/2	2 3/4	3.20	3.30	3.40
4	5	1/2	3 1/8	2 3/4			

No. 510 Lunkenheimer Ideal Automatic Feed Grease Cups



An excellent cup for use on engine crank pins, journals, etc. It is provided with a leather packed plunger which is easily raised when cup requires recharging with grease. Spring and plunger are controlled by a thumb nut, which has an automatic lock arrangement.

Size No.	O. D. In.	Ht. In.	Thd. In.	Cap. Oz.	Price, Each	
					Fin. Bronze	N. P. Bronze
00	1 3/8	3 1/4	1/8	1/2	\$1.50	\$1.75
0	1 3/4	4 3/8	1/4	1	2.00	2.25
1	2	4 5/8	1/4	1 1/2	2.50	2.80
2	2 3/8	6 1/8	3/8	3	3.20	3.60
3	3 3/8	7 3/8	1/2	6	4.30	5.00
4	3 7/8	8 3/8	1/2	10	6.00	6.75
5	4 5/8	10 1/8	3/4	18	12.50	13.80

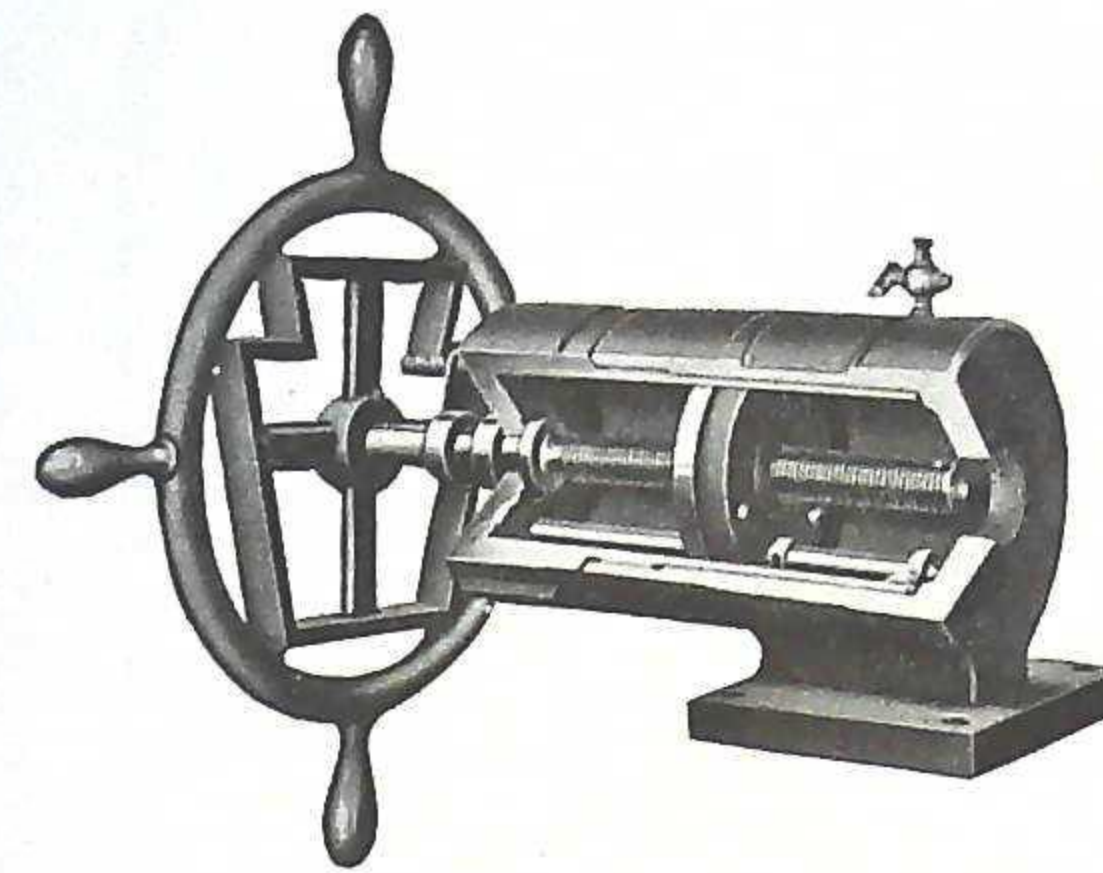
No. 669 Lunkenheimer Apollo Iron Grease Cups Automatic Feed

For service where the finish of the article is unimportant, such as on shaft bearings, pulleys, etc. It will feed in any position. The threaded shank consists of an extra heavy renewable pipe nipple inserted in base of cup.



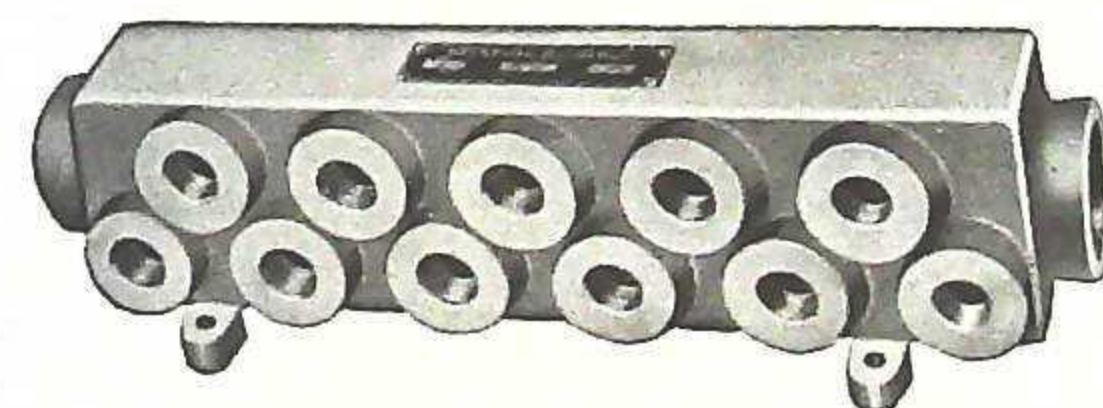
Size No.	Cap. Oz.	I. P. Thread In.	Ht. In.	Price Each
0	2/3	1/4	4 9/16	1.40
1	1 1/2	1/4	5	1.50
2	3	3/8	6 5/8	1.70
3	6	1/2	7 3/4	2.30
4	10	1/2	8 7/8	3.20

Keystone Manifold Safety System of Keystone Grease Lubrication



The Prime Mover Fig. 2191

The Keystone Manifold Safety System of Keystone Grease Lubrication presents a method of applying grease from one central point of safety to bearings located in inaccessible and hazardous places; it is a system by which an adequate pressure can be applied in forcing the grease through pipe lines. The system is adequate to discharge grease through lengths of header pipes and leads remotely located from the lubricator. It lends itself therefore to utilization on mechanical units such as ore bridges, open-hearth cranes, belt conveyors, steel mill machinery, cement mill machinery, rubber mill machinery and other miscellaneous machines, crushers, boring mills, presses, lathes, etc.



Manifold Fig. 2192

In fact, the system is applicable from the most colossal form of mechanical design to the smallest type. It will be readily appreciated what a great relief this system is proving to the operator whose duties it was to fill grease cups on bearings that of necessity were in dangerous, and dirty places.

No man will invite unnecessary hazardous work; therefore, the refilling and constant turning down of grease cups that are located in places difficult and dangerous of access is bound to be neglected.

This condition is entirely overcome by use of this system of lubrication.

Since the Keystone Manifold Safety System of Keystone Grease Lubrication makes it possible to apply the lubricant at one central safety distributing point and have it delivered from there to any one group of bearings at a considerable distance and the operator's interest is invited by a more pleasant working condition, it naturally follows that this improved method of lubrication will prolong life of the bearings through the more constant attention which they will receive.

The result will be in general, decreased operating cost, lessened depreciation to machinery and increased production.

Through the medium of the Lubricating Engineering Department all the knowledge of scientific lubrication gathered by engineers is at customer's disposal. A survey of the manufacturer's plant will establish the value of the Keystone Manifold Safety System of Keystone Grease Lubrication.

The results of such a survey will be far beyond any possible conception of operating economy which may now be entertained.

Prices and special bulletin upon application.

Model D Practical Sight-feed Oil Pumps

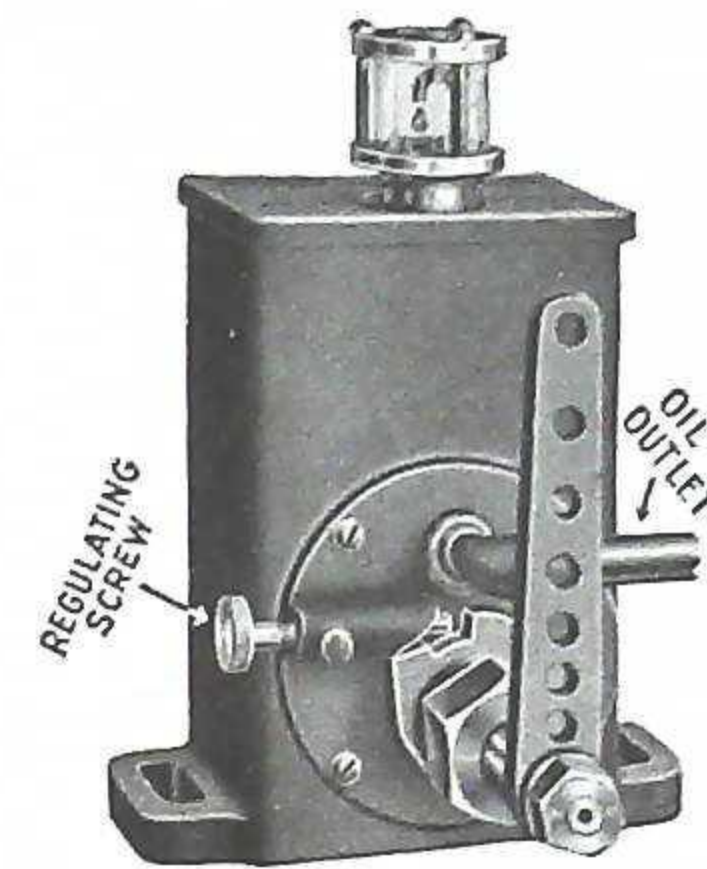


Fig. 2193

Takes the place of the common brass lubricator for oiling cylinders and valves of steam engines, steam pumps, air compressors, etc.

Supplies just the right amount of oil; starts, stops, speeds up and slows down with the engine, steam pump or other machine it may be used on, and feeds oil in proportion to speed.

The construction of this oil pump is simple and strong. There is nothing

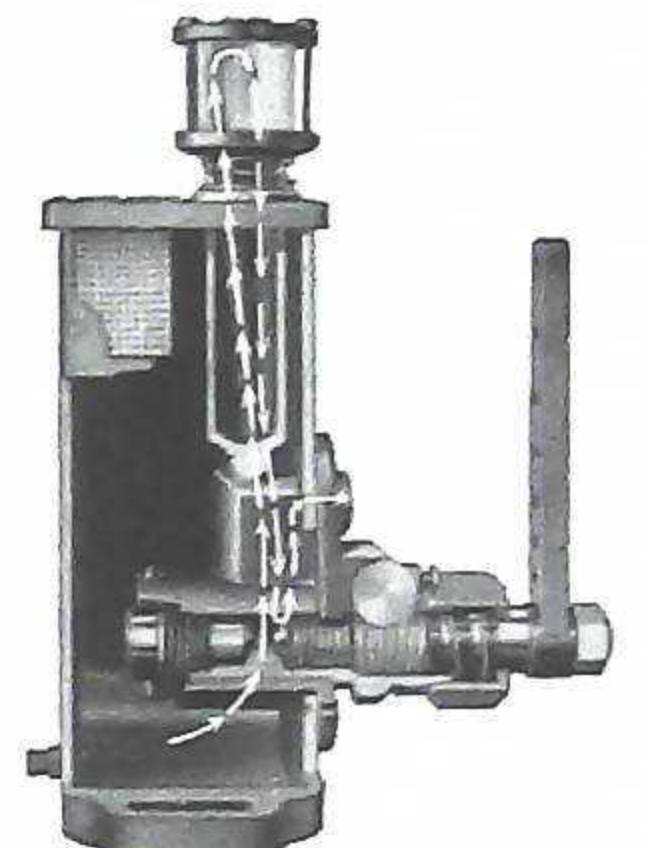
to go wrong. The pumping is done by two 1/2-inch screw plungers. There are no ratchet wheels or pawls to wear and cause trouble. No valve checks in the pump.

With each pump is included an adjustable driving rod and arm and special Kleen E-Z valve for the oil line.

Finished in black.

Capacity Quarts	Shipping Weight Pounds	Price Each
1	17	\$14.00
2	21	16.00

Nickel-plated, \$5.00 extra.



Sectional View

Noera Wide Mouth Copper Plated Steel Oilers

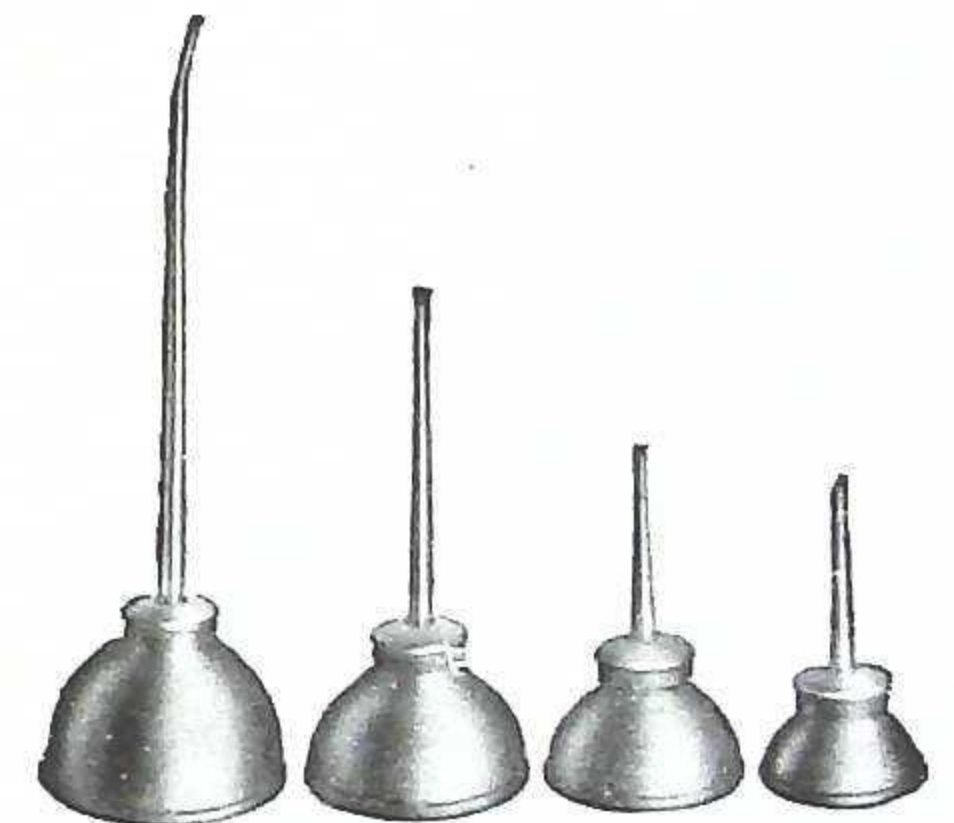


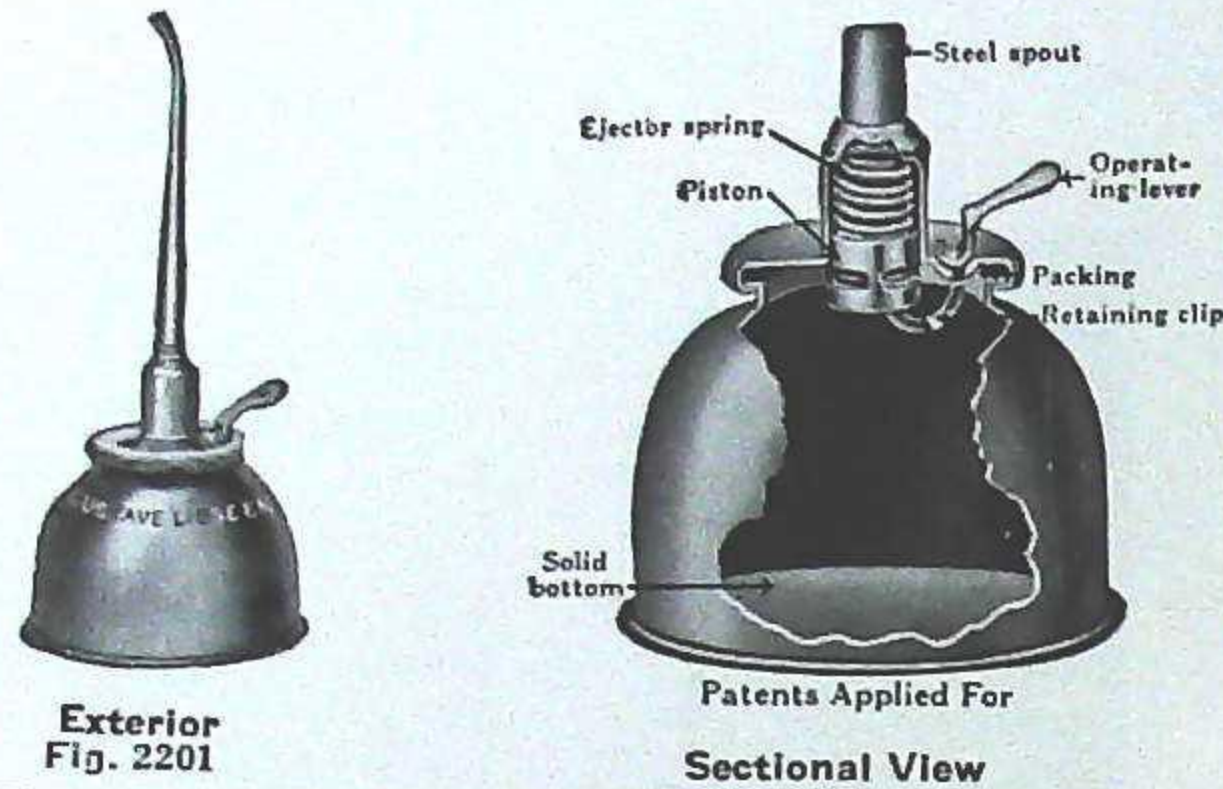
Fig. 2194

One-piece seamless steel domes, spring steel bottoms and rolled threads. Collar, cap, bottom and nozzle are assembled without solder, insuring solid joints. 1 1/4-inch opening for filling. Copper-plated inside and out.

Spouts are interchangeable. Packed in cartons of one dozen.

No.	Capacity Pints	Diameter Inches	Length Spout Inches	Weight Pounds	Price per Dozen
12	1/4	2 3/4	3	2 1/2	\$4.50
13	1/2	3 3/8	3	3	5.50
13A	1/2	3 3/8	5	3 1/4	6.00
14	1	3 3/8	9	3 1/2	6.50
14A	1 1/2	3 3/4	3	3 3/4	7.50
14AA	1 1/2	3 3/4	5	4	8.00
14B	1 1/2	3 3/4	9	4 1/4	8.50
15	1	4 1/4	3	4 1/4	9.25
15A	1	4 1/4	5	4 1/2	9.75
16	1	4 1/4	9	4 3/4	10.50

Lidseen Positive Force Feed Oilers



The Lidseen Positive Force Feed Oiler is operated by a lever which in turn actuates a plunger and spring in barrel at the base of spout. A slight pressure on lever releases a very small quantity of oil—the more pressure used the larger the quantity. This gives the operator absolute control of lubricants at all times. All mechanism is located in barrel at base of spout.

Can has large opening for filling. Curved flanges and locking members make the connection between can and spout tight and safe. With this oiler it is possible to oil in most difficult places as oil may be ejected overhead or downward.

Engineers', Machinists' and Millwrights' Oilers											
No.	Cap. Pts.	Diam. In.	Ht. In.	Lgth. In.	Price per Doz.	No.	Cap. Pts.	Diam. In.	Ht. In.	Lgth. In.	Price per Doz.
6	1/8	3 1/4	2	4	\$8.50	10	1/2	3 1/2	2 1/4	5 1/2	\$9.00
7	1/8	3 1/4	2	5 1/2	8.50	11	1/2	3 1/2	2 1/4	9 1/2	9.75
8	1/8	3 1/4	2	9 1/2	9.00	12	3/4	3 1/2	2 5/8	5 1/2	9.75
9	1/2	3 1/2	2 1/4	4	9.00	13	3/4	3 1/2	2 5/8	9 1/2	10.50
19	3/4	3 1/4	3	4	10.50	22	1	3 1/4	3 3/8	5 1/2	11.25
20	3/4	3 1/4	3	5 1/2	10.50	23	1	3 1/4	3 3/8	9 1/2	12.00
21	3/4	3 1/4	3	9 1/2	11.25						

Heavy Copper-plated											
Engineers', Machinists' and Millwrights' Oilers											
No.	Cap. Pts.	Diam. In.	Ht. In.	Lgth. In.	Price per Doz.	No.	Cap. Pts.	Diam. In.	Ht. In.	Lgth. In.	Price per Doz.
26	1 1/8	3 1/4	2	4	10.00	30	1 1/2	3 1/2	2 1/4	5 1/2	10.50
27	1 1/8	3 1/4	2	5 1/2	10.00	31	1 1/2	3 1/2	2 1/4	9 1/2	11.25
28	1 1/8	3 1/4	2	9 1/2	10.50	32	3/4	3 1/2	2 5/8	5 1/2	11.25
29	1 1/2	3 1/2	2 1/4	4	10.50	33	3/4	3 1/2	2 5/8	9 1/2	12.00
39	3/4	3 1/4	3	4	12.00	42	1	3 1/4	3 3/8	5 1/2	12.75
40	3/4	3 1/4	3	5 1/2	12.00	43	1	3 1/4	3 3/8	9 1/2	13.50
41	3/4	3 1/4	3	9 1/2	12.75						
50	1 1/2	3 1/2	2 1/4	5 1/2	18.00	51	1 1/2	3 1/2	2 1/4	9 1/2	19.00
62	1	3 1/4	3 3/8	5 1/2	22.00	63	1	3 1/4	3 3/8	9 1/2	23.00
100	2	4	5 1/2	12	20.00	102	2	4	5 1/2	23	25.00
101	2	4	5 1/2	18	22.50						

Spouts come half bent and half straight, unless otherwise ordered.

Steel Engineers' Fillers

Nickel-plated



This filler is made from heavy stock, nickel-plated inside and out, and is handsomely finished.

Packed six in a carton

No.	Capacity Quarts	Diameter Inches	Weight Pounds	Price per Dozen
N190	3/4	4 3/4	10 1/2	\$22.00
N200	1	5	11	30.00
N201	2	6	15 1/2	34.00

Noera Steel Railroad Oilers

Copper Plated

These oilers are made in two parts, drawn from .025 cold rolled steel, copper plated inside and out and highly polished.

Spout connections are made with a union, enabling the spout to be pointed any direction for convenience in use. Spouts are so made that they are interchangeable.

No.	Capacity Pints	Diameter Inches	Length Spout Inches	Price per Dozen
10	1	3 1/4	12	\$14.00
10 1/2	1 1/2	3 5/8	12	16.00
11	2	4 1/8	18	18.00

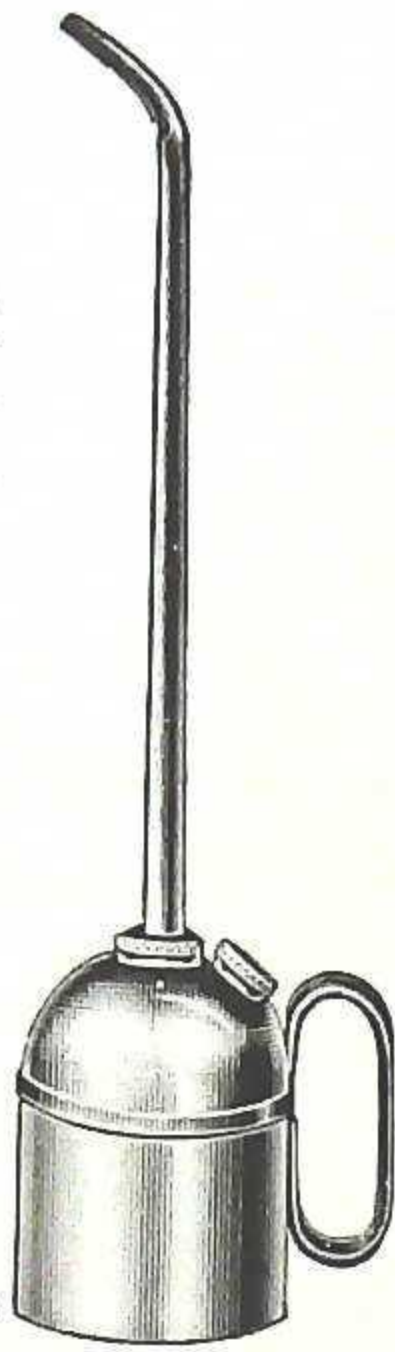


Fig. 2203

Noera Steel Railroad Oilers

Copper Plated

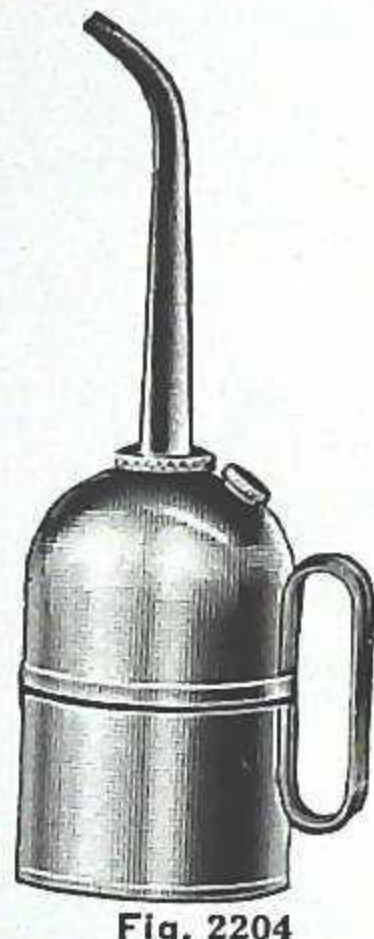


Fig. 2204

These oilers are made in two parts, drawn from .025 cold rolled steel, copper plated inside and out and highly polished.

Spout connections are made with a union, enabling the spout to be pointed any direction for convenience in use. Spouts are so made that they are interchangeable.

No.	Capacity Pints	Diameter Inches	Spout Length Inches	Price per Dozen
100	1	3 1/4	12	\$14.00
101	2	4 1/8	12	18.00
111	4	5	12	20.00

Indestructible Pump Oilers

Copper-plated Steel

Equipped with Howland Pump, body is drawn seamless in two parts from 20 gauge cold-rolled steel heavily electro copper plated. Made to order from 20-gauge brass or nickel-plated steel. Spouts have patented union connection and are interchangeable.

No.	Capacity Quarts	Diameter Inches	Spout Inches	Price per Doz.
1000	1 1/2	3 3/8	9	\$30.00
2000	3/4	3 3/4	12	40.00
3000	1	4 1/2	15	50.00
4000	2	5	18	60.00

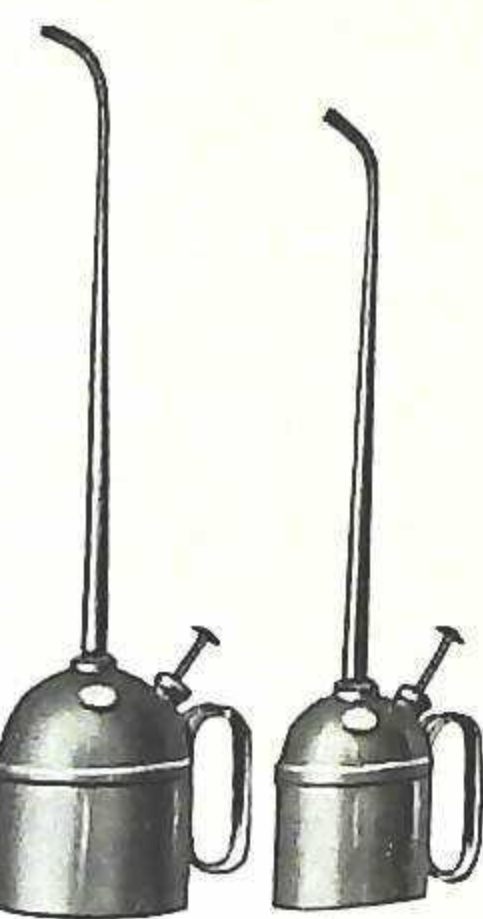


Fig. 2205

No. 4013 Noera Paragun Oil Syringe or Force Gun

An excellent priming gun for forcing gasoline into motor during cold weather. Barrel is brass, 1 1/4 x 8 inches long. Spout of steel, 5 inches long. Price, No. 4013, 5-ounce Capacity each \$.60



Fig. 2206

Welded Fuel Oil Storage Tanks



Fig. 2211

Tanks made with flat heads flanged inwardly and are made by welded construction throughout. Special prices are quoted for galvanized tanks.

The prices below cover black painted tanks having one 2-inch opening, and one 1/4-inch drain opening. No fittings of any description are included.

Size Inches	Capacity Gallons	Gauge	Approx. Weight Pounds	Price Each
24x 31	60	14	100	\$18.00
30x 36	110	14	150	28.00
30x 54	165	14	170	32.00
36x 50	220	14	215	40.00
36x 63	275	14	240	44.00
36x 88	385	14	325	62.00
42x 90	550	14	400	76.00
42x125	750	12	675	118.00
48x128	1000	12	840	147.00

A charge of \$1.00 per tank will be made for crating tanks for shipment if it is desired to protect them in that manner.

Prices quoted on sizes and capacities up to 1,000 gallons upon application.

Wood Jacketed Oil Cans

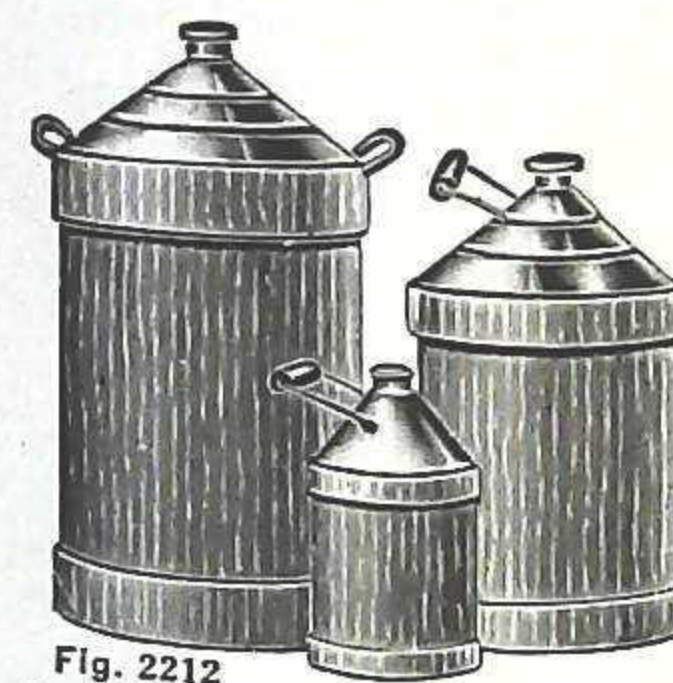


Fig. 2212

Top and bottom are strongly seamed to the body, and all seams are carefully soldered.

All sizes, from 1 to 10 gallons, have two hoops, leaving large space for stenciling. Wire bails with bail woods on all sizes except the 10 gallon, which has two iron side handles at the top. Bottoms are inset.

A strong, well-made can, adapted to all uses. Especially desirable for a returnable can.

Capacity	gallons	1	2	3	5	10
Price

Galvanized Oil Cans

With Spout



Fig. 2213

This galvanized oil can has a large spout and 1 1/2-inch screw cap.

It has banded top and bottom and plain stamped tin breast.

Capacity Gal.	Diam. In.	Case Lots Dozen	Case Wt. Lbs.	Price per Dozen
0	1	6 1/4	*1	15 1/2
02	2	8 1/4	1/2	16 1/2
03	3	9 1/4	1/4	13
05	5	10 1/2	1/4	17

*Carton.

Justrite Oily Waste Cans



Fig. 2214

Each can bears the labeled service of the National Board of Fire Underwriters and Factories Mutual Fire Insurance Companies.

Made of 24-gauge galvanized steel. Legs and handle made of 1/2-inch iron. Opens with foot, closes automatically. No springs to get out of order. The patented foot lever renders opening can so easy that it obviates all desire to block the cover open. Size given is exclusive of legs.

No.	Size Inches	Capacity Gallons	Price Each
1	11 3/4 x 13	6	\$4.00
2	12 1/2 x 14	8	4.50
3	13 1/2 x 15	10	5.00

Oily Waste and Rubbish Cans

This can complies with all the requirements of the Fire Underwriters. It is made from heavy galvanized sheet steel. Built to withstand hard factory usage. No solder is used.

Cover is self closing. Bottom is well ventilated, as it sets three inches above the floor, allowing free air circulation.

This can is built without legs.



Fig. 2215

No.	Diameter Inches	Height Inches	Price per Dozen
400	15	20	\$42.00
402	18	24	50.00
404	18	30	60.00

Heavy Galvanized Water Pails



Fig. 2216

This pail is made of heavy grade steel and well galvanized. It has riveted ears and heavy wire bail. The body of the pail is plain.

Packed in bundles of one dozen each.

No.	Cap. Qts.	Size In.	Wt. per Doz. Lbs.	Price per Doz.
1310	10	10 1/2 x 8 3/4	30	\$8.55
1312	12	11 x 10	35	9.20
1314	14	11 1/2 x 10 1/4	42	10.50
1316	16	11 1/2 x 10 3/8	46	11.85

Galvanized Fire Pails

Round Bottom



Fig. 2217

This round bottom fire pail made of steel, galvanized outside and inside and painted red outside.

The advantage of having fire pails fitted with round bottoms is that the pail must be stood in a special rack or hung up. This is a long step toward the prevention of having the pail used for other purposes.

In bundles of one dozen each.

No.	Cap. Qts.	Size Inches	Bundle Wt. Lbs.	Price per Dozen
310	10	9 3/4 x 10 1/2	18	\$8.60
312	12	10 1/2 x 10 3/4	22 1/2	9.10
314	14	11 x 12	25	9.90

Water Hose

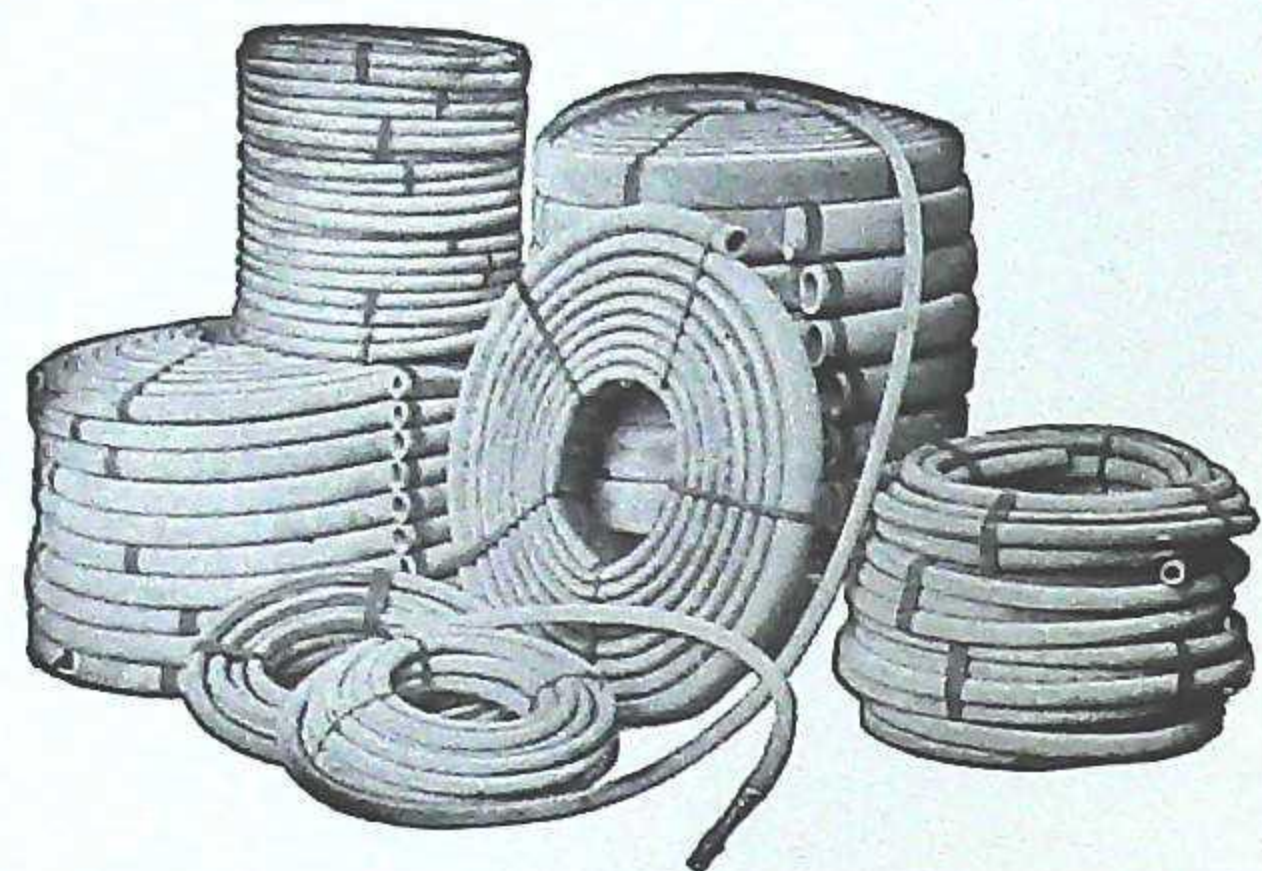


Fig. 2221

Two-ply hose, designed to conduct water under moderate pressure only. Sizes above 3-inch are mainly for tank hose; 3-ply hose, of medium strength, suitable for hydrants, garden and pump uses, street sprinkling, washing decks, etc.

Four-ply hose, recommended for all purposes where a particularly strong and reliable article is required.

Five and 6-ply hose, for use where great resistance to pressure or very severe service is required.

Internal Diam. In.	PRICE, PER FOOT				
	No. of PLYS				
	2	3	4	5	6
1/2	\$.20	\$.25	\$.30	\$.37	\$.45
3/4	.25	.30	.37	.46	.55
1	.33	.40	.50	.62	.75
1 1/4	.42	.50	.62	.77	.93
1 1/2	.50	.60	.75	.93	1.12
1 3/4	.58	.70	.87	1.08	1.30
2	.66	.80	1.00	1.25	1.50
2 1/4	.75	.90	1.12	1.40	1.68
2 1/2	.83	1.00	1.25	1.56	1.87
2 3/4	.92	1.10	1.37	1.71	2.05
3	.99	1.20	1.50	1.87	2.25
3 1/2	1.16	1.40	1.75	2.18	2.62
4	1.32	1.60	2.00	2.50	3.00
5	1.65	2.00	2.50	3.13	3.75
6	1.98	2.40	3.00	3.75	4.50
7	2.31	2.80	3.50	4.38	5.25
8	2.64	3.20	4.00	5.00	6.00
9	2.97	3.60	4.50	5.63	6.75
10	3.33	4.00	5.00	6.25	7.50

All intermediate sizes charged at the list price of the next larger size, thus: 1 1/8-inch is charged at 1 1/4-inch price, etc. Furnished regularly in 25 and 50-foot lengths.

Steam Hose

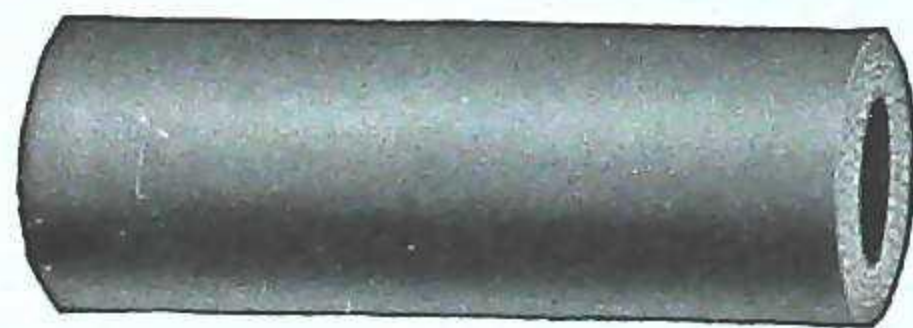


Fig. 2222

The fabric is strong and close woven.

The rubber tube and friction between plies are of a special heat resisting compound.

I. D. Inches	PRICE, PER FOOT					
	3-ply	4-ply	5-ply	6-ply	7-ply	8-ply
1/2	\$.47	\$.56	\$.70	\$.84	\$.98	\$1.12
3/4	.57	.71	.87	1.05	1.23	1.41
1	.70	.87	1.07	1.28	1.50	1.70
1 1/4	.85	1.04	1.30	1.56	1.82	2.08
1 1/2	1.02	1.25	1.56	1.87	2.18	2.50
1 3/4	1.18	1.45	1.81	2.17	2.53	2.90
2	1.34	1.66	2.07	2.49	2.90	3.32
2 1/4	1.50	1.87	2.33	2.80	3.27	3.74
2 1/2	1.66	2.08	2.60	3.12	3.64	4.16

Cotton Mill Hose Rubber Lined

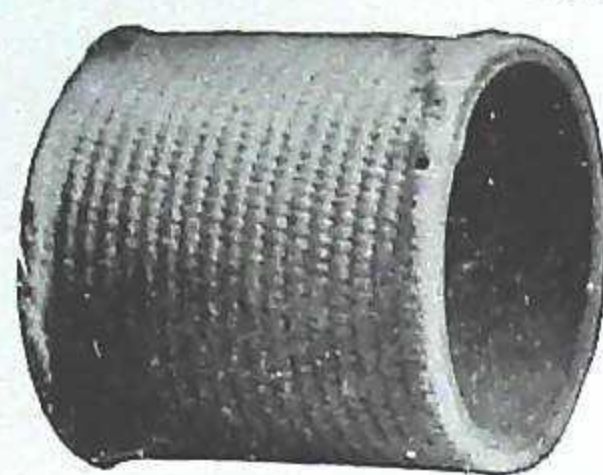


Fig. 2223

This is a reliable hose in every respect—strong, durable. It is light and pliable, reels closely, will not sweat nor leak.

It is, therefore, well adapted for protection against fire in factories, public buildings, etc.

Inside Diameter Inches	Price per Foot	Inside Diameter Inches	Price per Foot	Inside Diameter Inches	Price per Foot
1	\$.40	2	\$.65	3 1/2	\$1.50
1 1/4	.45	2 1/2	.80	4	2.00
1 1/2	.50	3	1.00	...	...

Double Jacket Cotton Fire Hose Rubber Lined

Double jacket fire hose is adapted for use in city fire departments and in any place where the pressure is heavy.

Size	..... inches	2	2 1/2
Price	..... per foot	.....	.....

Single Jacket Cotton Fire Hose Rubber Lined

Single jacket fire hose is intended for use in fire departments in towns and small cities, and in any place where there is a moderately heavy pressure.

Size	..... inches	2	2 1/2
Price	..... per foot	.....	.....

Underwriters' Cotton Fire Hose Rubber Lined

Guaranteed to conform to the specifications of the Associated Mutual Fire Insurance Association and the National Board of Fire Underwriters, for outdoor factory fire protection.

This hose is 2 5/8 inches in diameter and takes 2 1/2-inch couplings.

Price per foot
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Unlined Linen Fire Hose

Unlined linen fire hose is extensively used in mills, hotels, public buildings, etc., where it is necessary to keep hose constantly hung up in dry places to be used in case of fire.

When linen hose is used without a rubber lining, as is usually the case, there is nothing about it that will deteriorate with age to any great extent.

Unlined linen hose is woven as tight as possible to prevent leakage when water is first let into the hose. As soon as the hose is thoroughly wet the yarns swell and the hose becomes water-tight.

Size Inches	Price per Foot	Size Inches	Price per Foot	Size Inches	Price per Foot
3/4	\$.19	1 1/2	\$.31	...	...
1	.22	...	...	2 1/2	.46
1 1/4	.27	2	.40	...	...

Underwriters' Unlined Linen Fire Hose

Guaranteed to conform to the specifications of the Associated Mutual Fire Insurance Association and the National Board of Fire Underwriters, for indoor use.

Size Inches	Price per Foot	Size Inches	Price per Foot	Size Inches	Price per Foot
3/4	\$.25	1 1/2	\$.42	2 1/2	\$.66
1	.30	2	.54	...	...
1 1/4	.35	...	...	...	...

Rough Bore Suction Hose

Iron Wire Lined



Fig. 2231

Made to withstand an exterior collapsing tendency. Round or flat wire is spirally wound with sufficient space between the spiral to retain proper flexibility of the hose. The tube and walls are built up on the wire lining and the wire is imbedded in the tube.

I. D. In.	Price per Foot	I. D. In.	Price per Foot	I. D. In.	Price per Foot
3/4	\$.70	1 1/4	\$1.15	1 3/4	\$1.90
1	.90	1 1/2	1.50	2	2.30

Rough Bore Suction Hose

Wire Lined

Made to withstand an exterior collapsing tendency.

Round or flat wire is spirally wound with sufficient space between the spiral to retain proper flexibility of the hose.

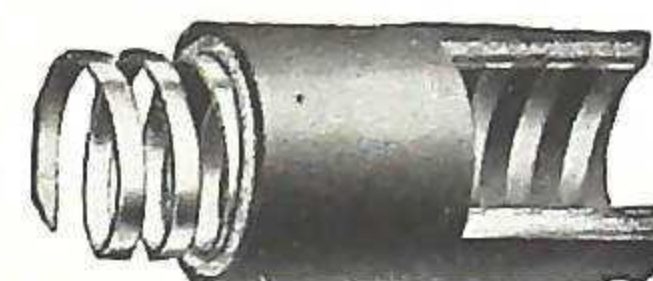


Fig. 2232

I. D. In.	Price per Foot	I. D. In.	Price per Foot	I. D. In.	Price per Foot	I. D. In.	Price per Foot
2 1/2	\$3.10	4 1/2	\$6.70	6 1/2	\$10.50	9	\$17.50
3	4.00	5	7.60	7	12.00	10	20.00
3 1/2	4.90	5 1/2	8.50	7 1/2	13.50	12	25.00
4	5.80	6	9.50	8	15.00	...	.....

Smooth Bore Suction Hose

Steel Wire Lined

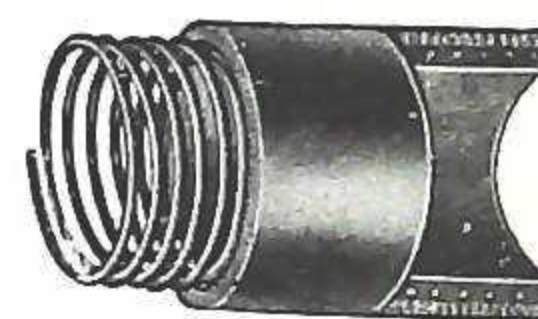


Fig. 2233

Made to withstand an exterior collapsing tendency instead of an internal bursting pressure. Wire lining or insertion is employed effectively.

Round or flat wire is spirally wound with sufficient space between the spiral to retain proper flexibility of the hose.

I. D. Inches	Price per Foot	I. D. Inches	Price per Foot	I. D. Inches	Price per Foot	I. D. Inches	Price per Foot
1	\$1.05	2 1/2	\$3.50	5	\$8.50	7 1/2	\$15.00
1 1/4	1.30	3	4.50	5 1/2	9.50	8	16.50
1 1/2	1.70	3 1/2	5.50	6	10.50	9	19.50
1 3/4	2.15	4	6.50	6 1/2	12.00	10	22.50
2	2.60	4 1/2	7.50	7	13.50	12	27.50

Agricultural Wire Lined Suction Hose With or without Woven Cotton Jacket

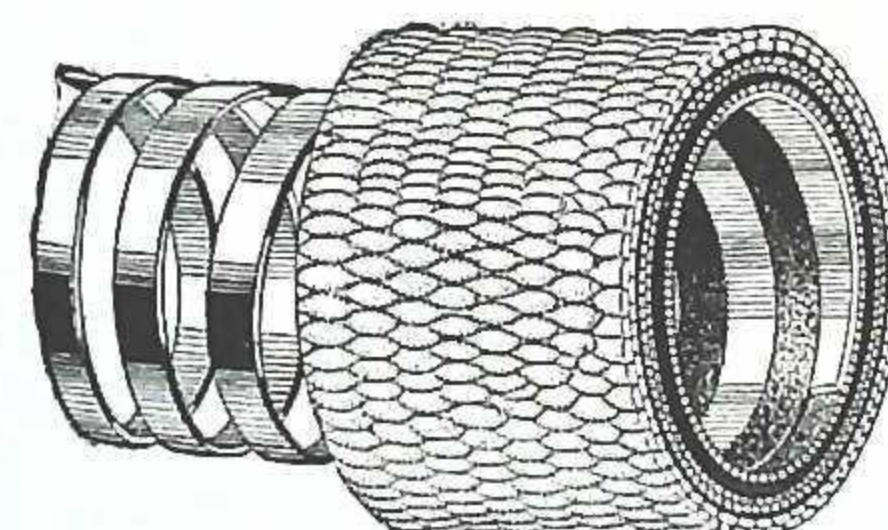


Fig. 2234

Especially designed for use in connection with thrasher outfits, although it is frequently used for irrigation purposes. The cotton jacket is treated with a preparation which makes it waterproof and prevents it from rotting. It also serves as a protection from the hard usage which an agricultural hose receives. Made in 2-inch size only, in 10, 15, 20 and 25-foot lengths, with enlarged ends for attaching to pump and strainer or 2-inch standard pipe.

Moulded Continuous Length Garden Hose

Uniform throughout, has no seams to open, and cannot separate between the plies.

It is lined with a heavy seamless tube of a tough durable compound.

Over this tube is braided two or more layers of twisted cotton yarn. Between each layer of yarn is a coating of strong rubber friction. Has a seamless cover of durable rubber. Cut to any desired length.

Size inches 1/2 5/8 3/4
Price per foot \$.26 .28 .30

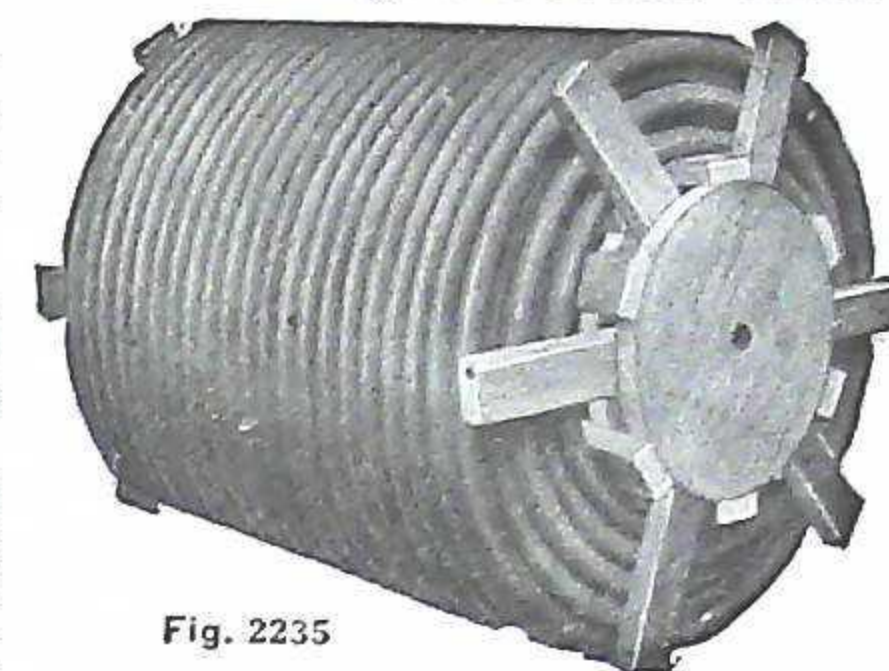


Fig. 2235

Rubber Tubing

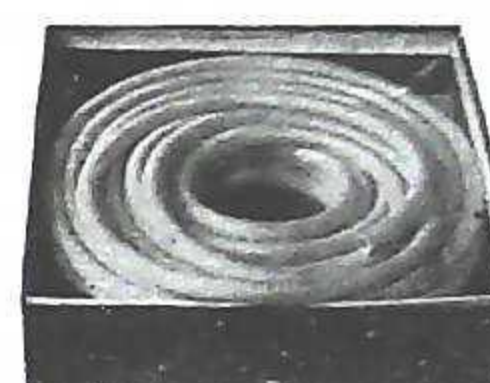


Fig. 2236

Size Inches	PRICE, PER FOOT		Size Inches	PRICE, PER FOOT	
	No. 1544 Pure Rubber	No. 1575 Cloth Insertion		No. 1544 Pure Rubber	No. 1575 Cloth Insertion
1/2	\$.08	\$.10	1/2	\$.25	\$.28
3/16	.12	.14	5/8	.30	.33
1/4	.16	.18	3/4	.35	.38
5/16	.18	.20	1	.45	.50
3/8	.23	.23	...	...	...

Hose Menders



Iron Fig. 2237



Brass Fig. 2238

Size Inches	PRICE, PER DOZ.		Size Inches	PRICE, PER DOZ.	
	Iron	Brass		Iron	Brass
1/2	\$.66	\$1.20	3/4	\$.78	\$1.20
5/8	.75	...	1	1.00	...

Spray Nozzles

A heavy spray nozzle giving full stream, spray and shut-off. Shut-off is positive, without possibility of a leak.



Fig. 2239

Price, 3/4-inch Brass	..... per dozen	\$10.50
" 3/4 " N. P.	..... "	11.50

Hose Pipes with Stopcock

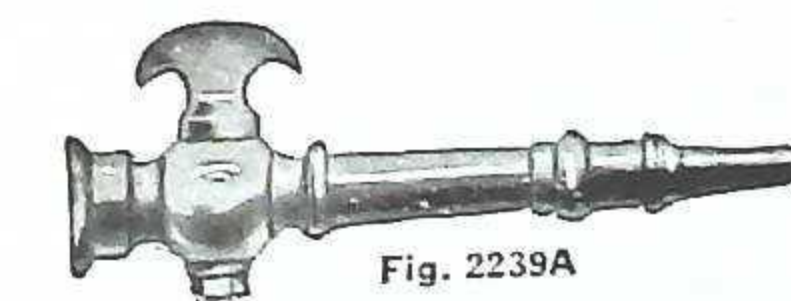


Fig. 2239A

Made of polished cast brass.

Table gives standard discharges on hose pipes and nozzles, and all orders are made up with this size. Discharges different from the above will be charged for extra.

Size In.	Lgth. In.	Discharge In.	Price per Dozen	Size In.	Lgth. In.	Discharge In.	Price per Dozen
3/4	6	1 1/4	\$11.00	1 1/4	12	3 3/8	\$40.00
3/4	8	1 1/4	13.00	1 1/2	12	3 3/8	55.00
3/4	12	1 1/4	18.00	2	12	5 3/8	80.00
1	8	1 1/2	15.00	2 1/2	12	7 3/8	145.00
1	12	1 1/2	20.00	2 1/2	12	7 3/8	145.00

Always supply thread information when ordering.

Plain Nozzles

Made of polished cast brass. Table gives standard discharges on nozzles. Discharges different from standard at extra charge.



Fig. 2241

Size In.	Lgth. In.	Discharge In.	Price per Dozen	Size In.	Lgth. In.	Discharge In.	Price per Dozen
3/4	3	1/4	\$4.00	1 1/2	10	1/2	\$20.00
3/4	6	1/4	7.00	1 1/2	12	1/2	22.00
3/4	8	1/4	8.00	2	6 3/4	9/16	26.00
1	4	5/16	5.00	2	12	9/16	34.00
1	8	5/16	9.50	2 1/2	7 1/2	5/8	37.40
1 1/4	4 3/4	3/8	12.00	2 1/2	12	1	55.00
1 1/4	10	3/8	15.00	2 1/2	15	1	65.00
1 1/4	12	3/8	18.00	2 1/2	18	1 1/8	80.00
1 1/2	5 3/4	7/16	18.00	2 1/2	22	1 1/8	92.00

Always supply thread information when ordering.

Hose Nozzles with Screw Tip



Fig. 2242

Polished cast brass. Table gives standard discharges. Extra charge on other discharges.

Size In.	Lgth. In.	Discharge In.	Price per Dozen	Size In.	Lgth. In.	Discharge In.	Price per Dozen
3/4	6	1/4	\$7.00	1 1/2	15	5/8	\$30.00
3/4	7 1/2	1/4	8.00	1 1/2	19	5/8	40.00
3/4	12	1/4	10.00	2	12	5/8	38.00
1	8 1/2	1/4	10.00	2	15	5/8	45.00
1	12 1/2	1/4	12.00	2	20	5/8	50.00
1 1/4	12	3/8	20.00	2 1/2	15	5/8	75.00
1 1/4	15	3/8	24.00	2 1/2	20	1	96.00
1 1/2	12	1/2	24.00	2 1/2	24	1	100.00
1 1/2	13	1/2	25.00	2 1/2	30	1	144.00

Always supply thread information when ordering.

Underwriters' Standard Play Pipes

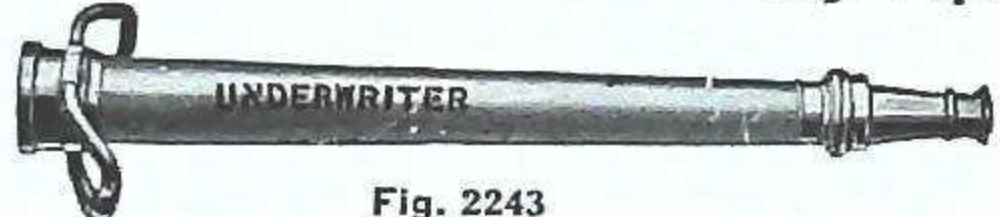


Fig. 2243

Wound and painted, metal swivel handle; constructed in accordance with the Underwriters' Specifications.

Price.....each \$14.00

Standard Expansion Ring Couplings

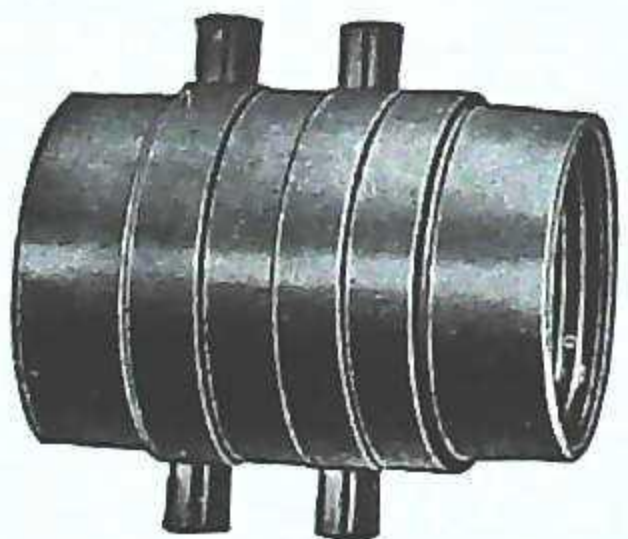


Fig. 2244

For unlined or light cotton rubber lined mill hose. Lighter in weight than the regular automatic coupling, but for mill protection and kindred uses they are satisfactory. Tail piece is expanded into the swivel. In ordering, state kind of hose to be used on and style of thread desired.

Size In.	PRICE, PER SET		Size In.	PRICE, PER SET	
	No. 1, for Unlined Linen Hose	No. 2, for Cotton Rubber Lined Hose		No. 1, for Unlined Linen Hose	No. 2, for Cotton Rubber Lined Hose
1	\$2.40	\$2.76	2	\$4.70	\$5.36
1 1/4	3.24	3.56	2 1/2	6.20	6.92
1 1/2	3.64	4.04	...	...	...

Common Hose Spanners



Fig. 2245

No. Size	S-1	S-2	S-3
1 1/2 inches	1 1/2	2	2 1/2

Prices upon application.

Galvanized Hose Clamps



Fig. 2246

Made of heavy sheet steel and galvanized by a superior process which effectually prevents rust within a reasonable length of time.

Strong and serviceable. Lugs engage vise jaws, making it an easy matter to tighten the clamp onto the hose.

For Water Hose

Size Hose In.	Hose Ply	Inside Diameter In.	Price per Dozen	Size Hose In.	Hose Ply	Inside Diameter In.	Price per Dozen
1/2	2	5/8	\$.38	1 1/2	3	2	\$1.62
1/2	3	3/4	.38	1 1/2	4	2 1/8	1.62
1/2	4	7/8	.38	1 3/4	3	2 1/4	1.88
1/2	5	15/16	.38	1 3/4	4	2 3/8	1.88
5/8	2 and 3	1 1/16	.42	2	3	2 1/2	2.16
5/8	4	1 3/16	.42	2	4	2 5/8	2.16
5/8	5	1 1/2	.42	2 1/4	3	2 3/4	2.96
5/8	6	1 5/8	.42	2 1/4	4	2 7/8	2.96
3/4	3	1 1/8	.42	2 1/2	3	3	3.78
3/4	4	1 3/8	.42	2 1/2	4	3 1/8	3.78
3/4	5	1 1/4	.42	2 3/4	3 and 4	3 1/4	4.60
1	3	1 3/8	.72	3	3	3 1/2	5.40
1	4	1 1/2	.72	3	4	3 5/8	5.40
1 1/4	3	1 1/2	1.34	*2	.....	3	3.78
1 1/4	4	1 3/4	1.34	.....	.....	.....	.....

*Suction hose.

For Steam Hose

Size In.	Hose Ply	Inside Diameter In.	Price per Dozen	Size In.	Hose Ply	Inside Diameter In.	Price per Dozen
1/2	4	1 1/16	\$.60	1 1/4	4	1 5/16	\$1.80
1/2	5	1 3/16	.60	1 1/4	5 and 6	2	1.80
1/2	6	1 5/16	.60	1 1/2	4	2 1/4	2.00
3/4	4	1 3/8	.90	1 1/2	5 and 6	2 3/8	2.00
3/4	5 and 6	1 1/2	.90	2	4	2 1/2	3.20
1	4	1 1/2	1.50	2	5 and 6	2 7/8	3.20
1	5 and 6	1 5/8	1.50	.....	.....	.....	.....

No. 80 Caldwell Hose Straps



Fig. 2247

Flexible brass wire straps, for minor repairs where the use of clamps is not essential. Applied with special pliers. Packed one gross in package.

No.	For Size Hose In.	Length Strap In.	Price per Gross	No.	For Size Hose In.	Length Strap In.	Price per Gross
2	1/2	3 3/8	\$3.20	20	1 1/2	7 1/8	\$15.96
4	1/2	3 3/4	3.52	22	1 3/4	7 1/2	18.16
6	3/4	4 1/8	3.80	24	1 3/4	8	18.16
8	3/4	4 1/2	4.00	26	2	8 1/2	20.72
10	1	5	5.00	28	2	9	20.72
12	1	5 3/8	5.28	30	2 1/4	9 1/2	23.32
14	1 1/4	6	12.96	32	2 1/4	10	23.32
16	1 1/4	6 3/8	12.96	34	2 1/2	10 1/2	25.92
18	1 1/2	6 3/4	15.96	36	2 1/2	11	25.92

No. 81 Caldwell Pliers

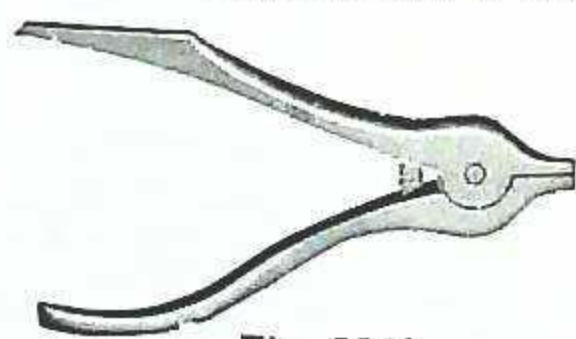


Fig. 2248

Designed especially for applying Caldwell Hose Straps. Made of cast iron. No. 1, 6 1/2 inches long, for 1/2, 3/4 and 1-inch hose. No. 2, for hose larger than 1 inch.

Price, No. 1.....per dozen \$3.50
" " 2....." " 6.00



Fig. 2251

Cast Brass Garden Hose Couplings

Size Inches	Price per Dozen
1/2*	\$2.40
3/4*	2.40
1	4.40

*Hose thread furnished unless otherwise ordered.

Water Hose Couplings

Size In.	Price per Doz.	Size In.	Price per Doz.
1/4	\$10.00	3	\$75.00
1/2	14.00	3 1/2	120.00
2	24.00	4	150.00
2 1/2	48.00	.....	.....

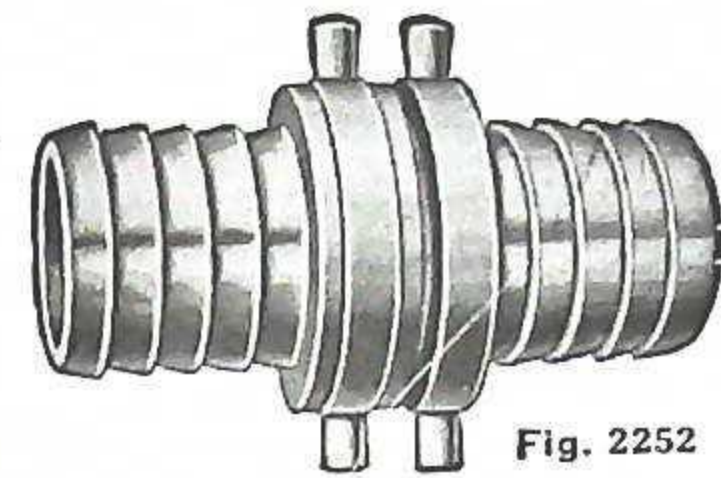


Fig. 2252



Fig. 2253

Steam Hose Couplings

Always furnished with iron pipe thread.

Size In.	Lgth. In.	Price per Doz.	Size In.	Lgth. In.	Price per Doz.
1/2	2 1/2	\$15.00	1	3 1/4	\$18.00
3/4	3	15.00	1 1/4	3 1/2	24.00
1	4	24.00	2	4 1/4	42.00

Wrought Brass Garden Hose Couplings

Size In.	Price per Doz.
1/2	\$2.40
3/4	2.40
1	4.40



Fig. 2254

Male Hose Nipples

Size Inches	Price per Doz.	Size Inches	Price per Doz.
1/2	\$3.50	1 1/2	\$10.00
3/4	3.50	2	14.00
1	5.00	2 1/2	28.00
1 1/4	9.00	.....	.....

Fig. 2255

Male and Female Hose Nipples

Size Inches	Price per Doz.	Size Inches	Price per Doz.
1/2	\$3.50	1 1/2	\$10.00
3/4	3.50	2	14.00
1	5.00	2 1/2	28.00
1 1/4	9.00	.....	.....



Fig. 2256

Hose Reducers and Bushings



Fig. 2257



Fig. 2258

Size Inches	Price per Doz.	Size Inches	Price per Doz.
3/4 x 1/2	\$6.50	1 1/2 x 1 1/4	\$12.00
1 x 1/2	6.50	2 x 3/4	13.00
1 x 3/4	6.50	2 x 1	14.00
1 1/4 x 3/4	8.00	2 x 1 1/4	16.00
1 1/4 x 1	10.00	2 x 1 1/2	18.00
1 1/2 x 3/4	11.50	2 1/2 x 3/4	20.00
1 1/2 x 1	11.50	2 1/2 x 1	22.00

Siamese Connections

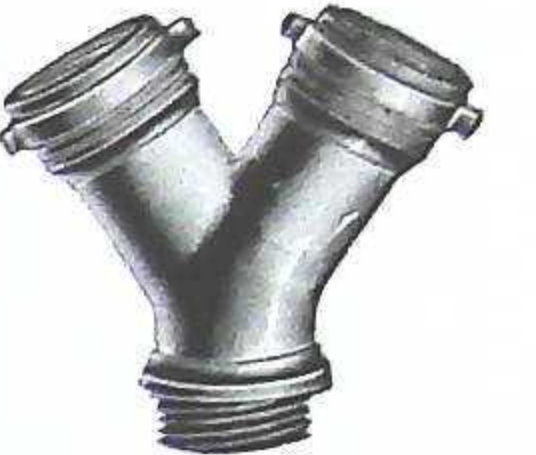
For fire department use only.

By the use of Siamese No. 27 one stream can be divided into two. No. 28 is used to combine two streams into one. Neither of these have interior valves and cannot be used for standpipe connections.



No. 27

Fig. 2259



No. 28

Fig. 2259A

Price, 1 1/2 x 1 1/2 x 2 1/2 Inches	each	Price, each
" 2 1/2 x 2 1/2 x 2 1/2 "	"	\$9.50
" 2 1/2 x 2 1/2 x 3 "	"	10.00
" 2 1/2 x 2 1/2 x 3 1/2 "	"	12.00
" 2 1/2 x 2 1/2 x 4 "	"	12.00

Add, extra for polishing. \$1.50 net each.

No. 26 Standpipe Siamese Connections With Single 45° Clapper Valve



Fig. 2259B

For use only at the base of an outside, exposed standpipe in connection with fire escape. Made with a single clapper valve so that one or both streams can be used. Rough finish.

Dimensions Inches	Price Each	Dimensions Inches	Price Each
2 1/2 x 2 1/2 x 2 1/2	\$10.00	2 1/2 x 2 1/2 x 6	\$18.00
2 1/2 x 2 1/2 x 3	10.00	3 x 3 x 3	18.00
2 1/2 x 2 1/2 x 4	10.00	3 x 3 x 3 1/2	18.00
2 1/2 x 2 1/2 x 5	13.00	3 x 3 x 4	18.00

Extra for polishing, \$2.80 each.

Brass Hose Strainers

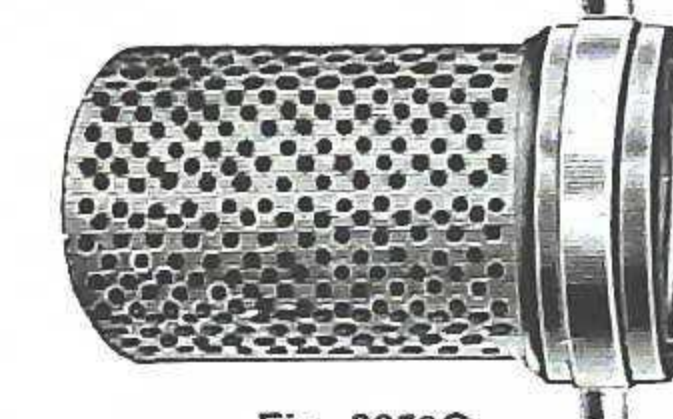


Fig. 2259C

Size In.	Price Each	Size In.	Price Each
1 1/2	\$7.50	4	\$19.00
2	7.50	4 1/2	25.00
2 1/2	8.50	5	31.00
3	10.00	6	46.00
3 1/2	15.00	.....	.....

No. 120 Brass Hose Caps

Chains not included in prices.



Fig. 2259D

Size Inches	Price per Doz.	Size Inches	Price per Doz.
3/4	\$4.00	2 1/2	\$24.00
1	6.00	3	.....
1 1/4	8.00	3 1/2	.....
1 1/2	10.00	4	.....
2	15.00	.....	.....

*Prices upon application.

No. 8 Reliable Overhead Vehicle Washers

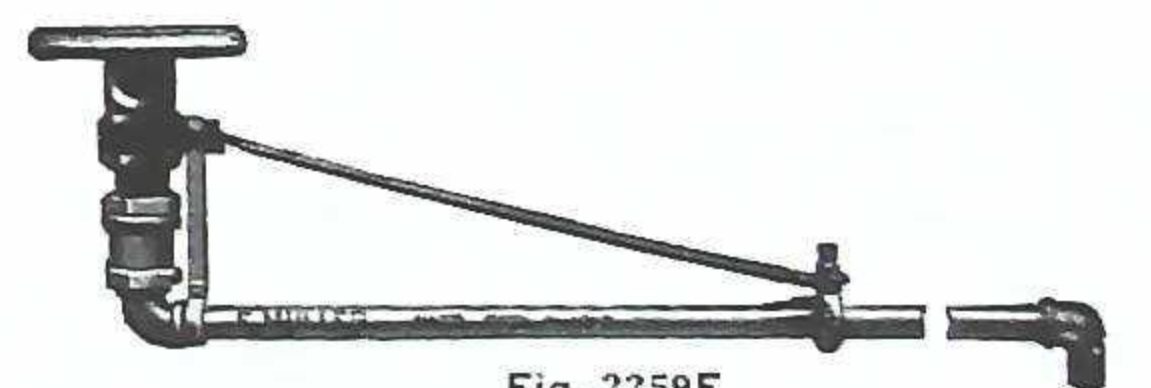


Fig. 2259E

This washer requires no overhead tracks. Hose arm is 5 1/2 feet long, 3/4 inch in diameter, with 3/4-inch brass hose nipple. Projection from ceiling, 9 inches. All bearings are of brass and babbitt metal.

Price, No. 8, Pipe and Fittings, Galv. Iron.....each \$14.00
" " " " Polished Brass or Bronze.....each 45.00
Price, No. 8, Pipe and Fittings, Nickel-plated Brass.....each 56.00

Style T Wirt's Hump Hose Racks

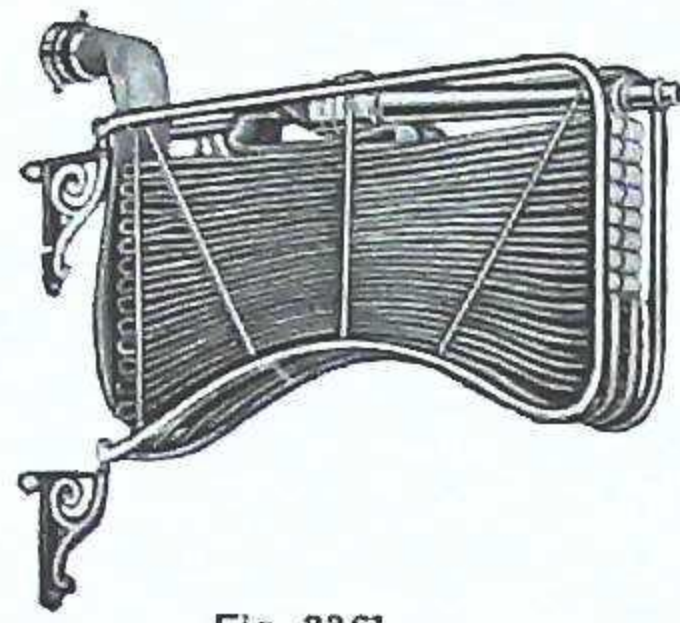


Fig. 2261

Made of steel tubing, steel rod and malleable iron. Designed with a hump in the bottom which takes the weight off the folds in the hose and permits them to lie loose and open. The end or front of the rack is partially enclosed. This basket formation holds the stack of hose in position when drawn off, preventing the stack from sliding out bodily and falling to the floor in a tangled mass, as is frequently the case with the old style end rack.

When ordering hose racks or reels, give size, kind and length of hose, and specify whether wall brackets or pipe clamps are wanted; if the pipe clamps, specify size.

No.	CAP. HOSE, FEET		Size of Hose Inches	Height Inches	Length Inches	Jap. Red Price Each
	Unlined Linen	Cotton Rubber-lined Mill				
A-0	50	...	1 1/4 or 1 1/2	16 3/8	25 1/4	\$5.00
A-0X	50	...	2	17 1/8	26 5/8	5.00
A-00	50	...	2 1/2	17 1/8	26 5/8	5.00
A-075	75	...	1 1/4 or 1 1/2	19 1/8	25 1/4	5.50
A-0X75	75	...	2	19 3/4	26 3/8	5.50
A-0075	75	...	2 1/2	19 3/4	26 3/8	5.50
A-1	100	25	1 1/4 or 1 1/2	21 1/8	27	6.00
A-1X	100	25	2	21 3/4	28 3/8	6.00
A-2	100	25	2 1/2	21 3/4	28 3/8	6.00
A-3	150	50	1 1/4 or 1 1/2	21 3/4	28 3/8	7.00
A-3X	150	50	2	28 3/4	32 1/8	7.00
A-4	150	50	2 1/2	28 3/4	32 1/8	7.00
A-5	200	100	1 1/4 or 1 1/2	40	38	7.50
A-5X	200	100	2	40	38	7.50
A-6	200	100	2 1/2	40	38	8.00

Style V Wirt's Wall Hose Reels

Made of steel tubing, steel rod and malleable iron castings. The tension axles are used so that the reel may be adjusted to run tight or loose as desired.

When ordering hose reels, give size, kind and length of hose, and specify whether wall brackets or pipe clamps are wanted; if the pipe clamps, specify size.

The prices given below cover brackets or pipe clamps up to 4-inch. Larger clamps extra.

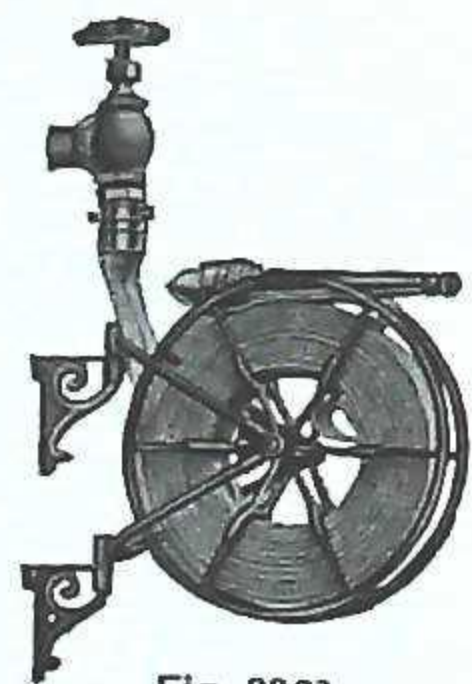


Fig. 2262

No.	CAPACITY HOSE, FEET		Size of Hose Inches	Height Inches	Length Inches	Vermilion Finish Price Each
	Unlined Linen	Cotton Rubber-lined Mill				
0	50	...	1 1/4 or 1 1/2	20 1/8	18 3/4	\$6.00
00	50	...	2	20 1/8	18 3/4	6.00
000	50	...	2 1/2	20 3/8	19	6.00
0 1/2	75	...	1 1/4 or 1 1/2	21 7/8	20 1/8	6.00
00 1/2	75	...	2	22 1/8	20 1/8	6.00
000 1/2	75	...	2 1/2	22 1/8	20 1/2	6.00
1	100	...	1 1/4 or 1 1/2	26 3/8	23	6.00
2 1/2	100	...	2	26 3/8	23	6.00
3 1/2	100	...	2 1/2	26 5/8	23	6.00
2	150	50	1 1/4 or 1 1/2	31 3/8	26 1/4	6.00
3	150	50	2	31 7/8	27	6.00
4	150	50	2 1/2	31 7/8	27	6.50
5 1/2	200	...	1 1/4 or 1 1/2	26 3/8	22 3/8	7.00
6 1/2	200	...	2	30 3/4	24 7/8	7.50
7 1/2	200	...	2 1/2	30 3/4	25 1/8	8.00
5	300	100	1 1/4 or 1 1/2	32	26 1/2	7.50
6	300	100	2	35 3/8	29 7/8	8.00
7	300	100	2 1/2	35 7/8	29 7/8	8.50
8	400	150	2 1/2	43 3/8	32 1/2	11.50
9	600	200	2 1/2	47 1/2	36	15.00

Wirt's Royal Pressed Steel Hose Racks

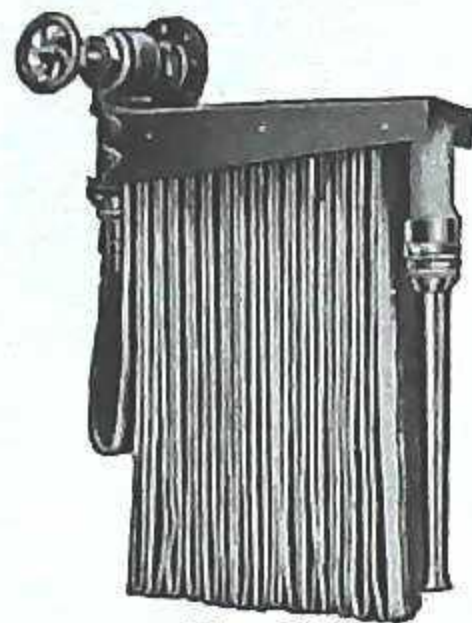


Fig. 2263

The Royal Rack is semi-automatic—that is, it can be operated by turning on the water before pulling off the hose. The water is held back at the fold of hose nearest to the valve, and does not come through until the hose is all withdrawn, making the rack also fool-proof, for should a valve be opened maliciously, the water will be held back until noticed.

The Royal Rack has a covered top which prevents dust and dirt from accumulating on the hose and rotting the linen fibres. The pins are rust-proof, and of such large diameter that the hose folds over them in natural bends without pinching. There is ample space between the pins, and the hose hangs in loose folds, permitting free ventilation and preventing mildew. These features increase the life of the hose.

The Royal Rack has pins which are permanently attached. They do not fall to the floor when the hose is removed, but remain hanging ready for the hose to be replaced.

A strong retaining spring, attached to the cover, grips the end fold firmly and prevents hose from being displaced or dropping to the floor if brushed against. No strings or cords are necessary to keep the hose on the rack.

Furnished in red finish and with wall bracket if not otherwise specified.

No.	Cap. Linen Hose Feet	Size Hose Inches	PRICE, EACH		
			Japanned Red on Steel	Gold, Copper or Aluminum Bronze on Steel	White Enamel on Steel
18X	25 to 75	1 1/4 or 1 1/2	\$5.00	\$5.00	\$6.00
18Y	25 " 75	2	5.00	5.00	6.00
18Z	25 " 75	2 1/2	5.00	5.00	6.00
19X	100 " 150	1 1/4 or 1 1/2	6.00	6.00	7.00
19Y	100 " 150	2	6.00	6.00	7.00
19Z	100 " 150	2 1/2	6.00	6.00	7.00

Prices of nickel or copper-plate on steel and solid brass polished or nickel-plated furnished upon application.

Wirt's Steel Hose Cabinets

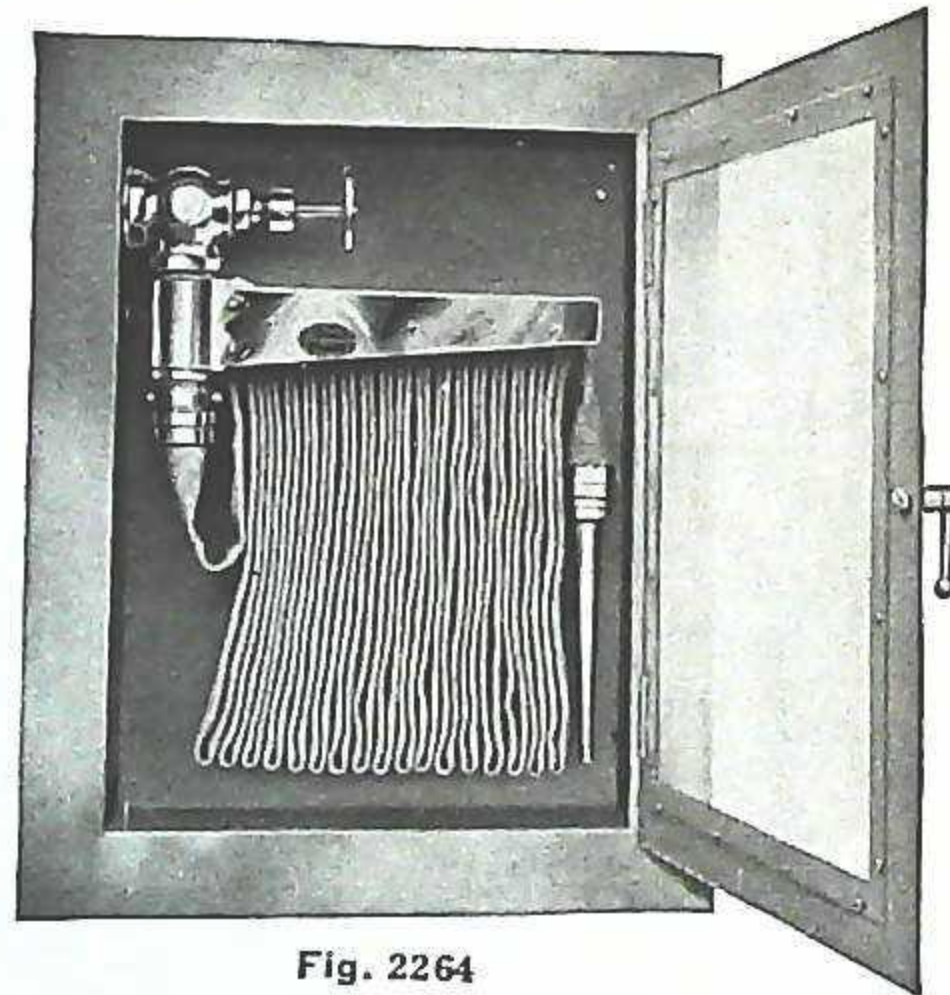


Fig. 2264

The trim and door of the cabinet are made from No. 12 gauge sheet steel. Door and trim are each cut from one piece of steel, so they have no seams or joints.

Doors are made to take glass and are equipped with removable beading so glass can be replaced.

For roughing in measurements, add 3/4 inch all around.

No.	Length Feet	CAPACITY LINEN HOSE		INSIDE DIM. IN.		
		Length Feet	Size Inches	Width	Height	Depth
7S	50	1 1/4, 1 1/2, 2, 2 1/2	21	27 1/2	7 1/2	
8S	75	1 1/4, 1 1/2, 2, 2 1/2	21	35 1/2	7 1/2	
9S	100	1 1/4, 1 1/2, 2, 2 1/2	28	33	7 1/2	

The following cabinets are furnished to take a 2 1/2 gallon extinguisher in addition to hose equipment:

No.	Length Feet	CAPACITY LINEN HOSE		INSIDE DIM. IN.		
		Length Feet	Size Inches	Width	Height	Depth
7RX	50	1 1/4, 1 1/2, 2, 2 1/2	27 1/2	29	8	
8RX	75	1 1/4, 1 1/2, 2, 2 1/2	35 1/2	29	8	
9RX	100	1 1/4, 1 1/2, 2, 2 1/2	33	36	8	

Prices upon application. Special sizes made to order—prices on request.

Guardene Fire Extinguishers

Non-slop Type

Made of cold rolled copper, heavily lined with non-corrosive metal. Each extinguisher is tested to 350 pounds per square inch. The actual working pressure is about 100 pounds. To operate, turn upside down. To stop, turn right side up. Provided with a special stopple and a baffle plate in the outlet, which prevent accidental mixing of the chemicals or leakage through the hose. Especially designed for use on moving vehicles. Labeled by the Underwriters' Laboratories and approved by the U. S. Steamboat Inspection Service.



Fig. 2271

Packed one in carton. Shipping weight, 22 1/2 pounds. Price, Polished Copper, Charged each ... " Nickel-plated, Charged ... " Extra Recharges ... per doz. \$9.00

Pyrene Fire Extinguishers

Approved and Labeled by the Underwriters' Laboratories



With Bracket Fig. 2272

Pyrene Fire Extinguishers are the safest and most efficient for electrical and all fires starting in oil, gasoline, shellac, paint or other highly inflammable substances. Water only spreads oil fires and is dangerous on electrical fires.

Employees need no instruction to use Pyrene.

Pyrene will not injure, stain or destroy anything, but will kill fire from any cause, instantly.

Will not freeze at 50° below zero.



In Metal Box Fig. 2273



Liquid Fig. 2274

Price, 1-quart with Bracket, Brass ... each \$12.00
Price, 1-quart with Bracket, Nickel-plated ... each 13.00
Price, Extra Bracket for 1-quart Extinguisher each 1.00
Price, 1 1/2-quart with Black Bracket, Brass ... each 15.00
Price, 1 1/2-quart with Black Bracket, N. P. ... each 16.00
Price, Extra Bracket for 1 1/2-qt. Extinguisher ea. 1.50
Price, Metal Box, Heavy Type ... " 4.00
" " " Light " " 3.00
" Liquid, 1-quart Can. ... " 1.80
" " 1 1/2-qt. Can. ea. \$2.70 1 gal. Can. ea. 7.20

Safandshur Fire Extinguishers



Fig. 2275

A metal hand extinguisher containing a chemical fluid, the basic element of which is carbon tetra-chloride. When this liquid comes into contact with fire, it is immediately transformed into a heavy, dry, cohering non-poisonous gas blanket, which surrounds the burning material, cuts off the air supply and extinguishes the fire.

Contains no moisture. Does not deteriorate nor lose its strength with age.

The liquid used is harmless to persons, also machinery or other delicate material. Curtains and upholstery will not be affected or injured by its application. There is no danger of freezing as liquid will withstand a temperature of 50 degrees below zero.

Price, Complete with Bracket ... each \$3.50

Cloth Insertion Sheet Packing

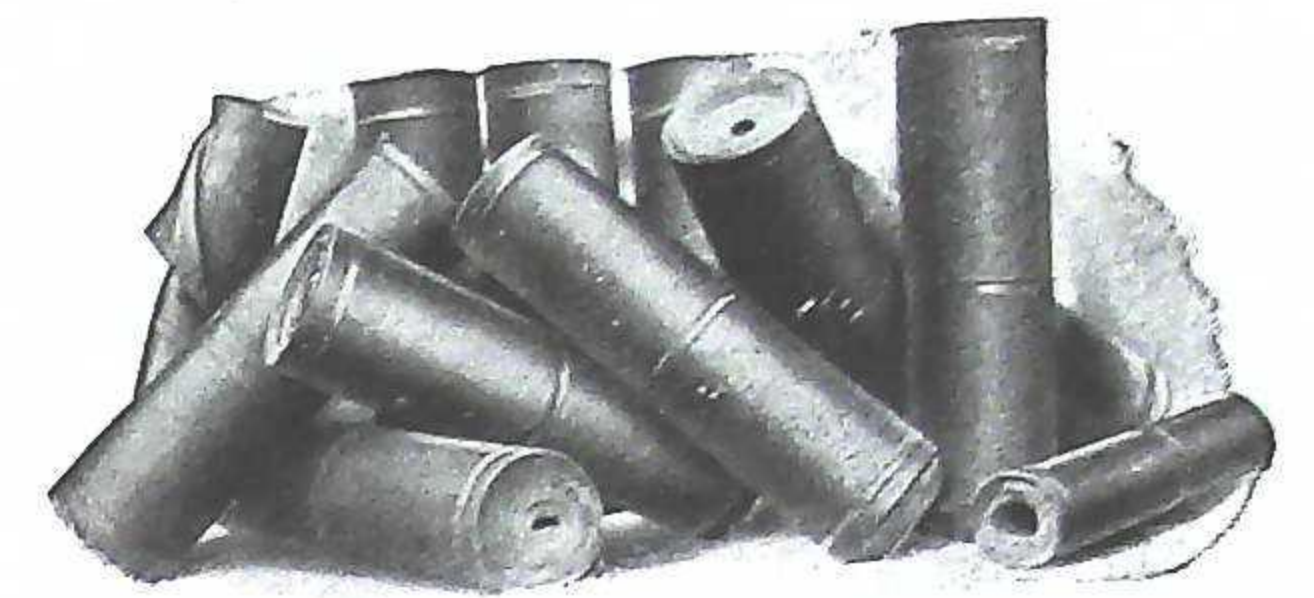


Fig. 2276

For cold water joints, weather strips, etc. Brands: Double Diamond, Style 33; Dundee, Style 23; Carbon, Style 34; Spider, Style 14.

Made with cloth insertion, cloth one side and cloth both sides, each layer of cloth counting as one ply. Furnished in 1/2 inch, 3/4 inch and 1 inch thick, one ply of sheeting to each 1/2 inch. In rolls 36 inches wide.

Greater widths supplied if desired. Black Wire Insertion Packing, Style 36, for use in joints where cloth insertion packings will not stand an excessive pressure.

Diaphragm sheet packing, Style 35, a serviceable packing for diaphragm and gas service. Made of high grade rubber on a specially woven fabric of great strength.

Thickness Inches	WEIGHT POUNDS PER SQUARE YARD			Styles Nos. 14, 23, 34, 35
	Style No. 33	Style No. 36	Style No. 35	
1/32	3 1/8	...	...	2 3/4
1/16	6 1/8	9 1/2	...	5 3/8
3/32	9 1/8	12 3/4	...	8 5/8
1/8	12 1/8	15 3/8	...	11
3/16	18 1/4	22 1/2	...	16 1/4
1/4	24 1/4	29 1/8	...	21 3/4

Price ... per pound ...

Pure Gum Sheet Packing



Fig. 2277

Pure gum sheet is made of the highest quality rubber compound.

In ordering, be sure to state exact service conditions so the proper grade will be sent.

Furnished in standard sheets 36 inches wide and 20 feet long. Sheets of special width at a slightly advanced cost.

Made in thicknesses of 1/32 to 1 inch, inclusive. Price ... per pound ...

U. S. Rainbow Sheet Packing

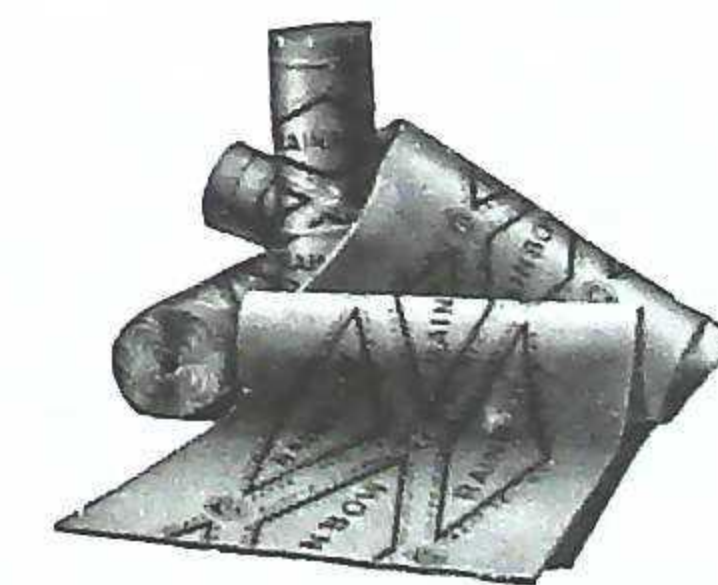


Fig. 2278

Will pack an air, steam, hot or cold water joint equally well and will not blow out under high pressure or temperature. It is a non-conductor. Particularly adapted to packing expansion or steam joints, as it does not burn or char.

It will make a tight joint however rough the surfaces to which it is applied may be. Furnished in standard rolls 36 inches wide, 1/32 to 1/4 inch in thickness, and weighing approximately 100 and 200 pounds. Price ... per pound \$1.00

Kearsarge Sheet Packing

For joints, whose surfaces are somewhat uneven and a soft sheet is, therefore, required. This packing is constructed of pure, long-fibered asbestos cloth made of tightly twisted yarn spun with brass wire to give additional strength and is impregnated with J-M heat-resisting compound.

Furnished in rolls 40 inches wide, weighing approximately 250 pounds each.

Made in thicknesses of $\frac{1}{32}$, $\frac{1}{16}$ and $\frac{1}{8}$ -inch.



Fig. 2281

Price.....per pound \$2.00

No. 60 Johns-Manville Service Sheet Packing

For packing parallel surfaces of flanges against steam (superheated and saturated), air, water, ammonia, oil, and various acidulated and alkaline or other chemical solutions.

Furnished in standard sheets 54x63 inches and 54x126 inches and in thicknesses of $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{1}{8}$ -inch. Also made $\frac{1}{8}$ and $\frac{3}{32}$ -inch thick, $\frac{1}{8}$ and $\frac{1}{16}$ -inch thicknesses also furnished in sheets 108x126 inches.

Fig. 2282

Thick- ness In.	WEIGHT, POUNDS—			Thick- ness In.	WEIGHT, POUNDS—		
	Square Yard	Square Foot	Square Inch		Square Yard	Square Foot	Square Inch
$\frac{1}{16}$	5.4	.6	.0041	$\frac{1}{64}$	1.4	.15	.001
$\frac{1}{32}$	2.7	.3	.002	...	...	...	...

Prices upon application.

Durabla Compressed Asbestos Fibre Sheet Packing

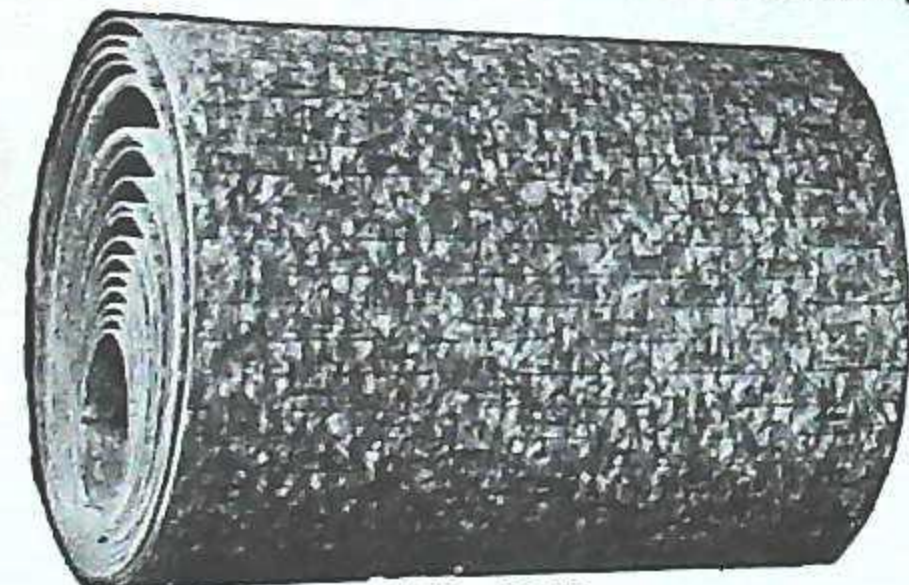


Fig. 2283

Thicknesses of $\frac{1}{64}$, $\frac{1}{32}$, $\frac{1}{16}$, $\frac{3}{32}$, and $\frac{1}{8}$ inch are made in sheets 36x144 inches or 48x144 inches. Thicknesses of $\frac{3}{16}$ and $\frac{1}{4}$ inch are made in sheets 36x72 inches. Thickness of $\frac{1}{16}$ inch weighs $5\frac{3}{8}$ pounds per square yard. Prices upon application.

Mobilene Sheet Packing

For packing gas and gasoline engines. This packing is made from a finely woven, pure asbestos fabric of great strength, with fine brass wires, interwoven, and impregnated with a special compound to withstand the high temperatures incident to this service.

Furnished in rolls 40 inches wide.

Price.....per pound \$1.50

Asbestos Red and Black Wire Inserted Sheet Packing



Fig. 2285

A high grade wire inserted asbestos sheet especially suitable for engines, boilers and pipes where the steam pressures are high, also for gas engines and superheated steam.

Constructed of long fibre asbestos spun around fine brass wire and treated with special water and heat resisting compound.

It is red on one side and graphited on the other. Furnished in 36-inch width and thicknesses, $\frac{3}{32}$ -inch and up.

Standard rolls weigh approximately 200 pounds.

Price.....per pound \$2.00

J-M Mogul Coil Packing

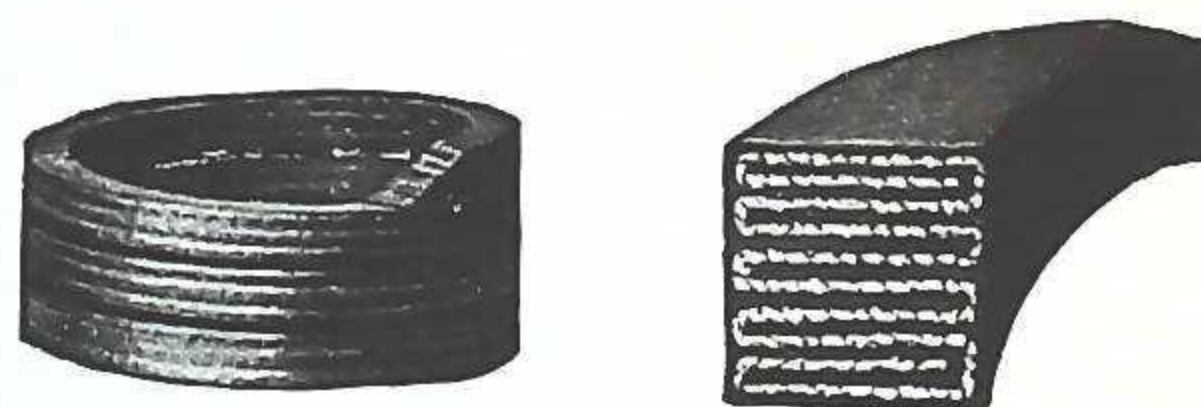


Fig. 2286

For packing rods, valve stems, etc., where space between rod stem or spindle and inside of stuffing-box is less than $\frac{3}{8}$ inch, or for packing conditions, such as for oils and chemicals, where no rubber is desired in the packing.

Made of long fibre asbestos yarn. Furnished in Coil Style only, on spools and reels—Twisted Style No. 193; Braided Style No. 222. Prices upon application.

J-M Universal Piston Packing



Universal Spiral Style No. 34 Fig. 2287

Cross Section to Show Construction

For packing the pistons of inside packed pumps against water, brine, air, oils and various chemicals, where packing space is $\frac{3}{8}$ inch or over.

Furnished in Coil Style No. 33; Spiral Style No. 34 and Ring Style No. 35.

Prices upon application.

Johns-Manville Kearsarge Rod Packing



Spiral Style No. 166 Fig. 2288

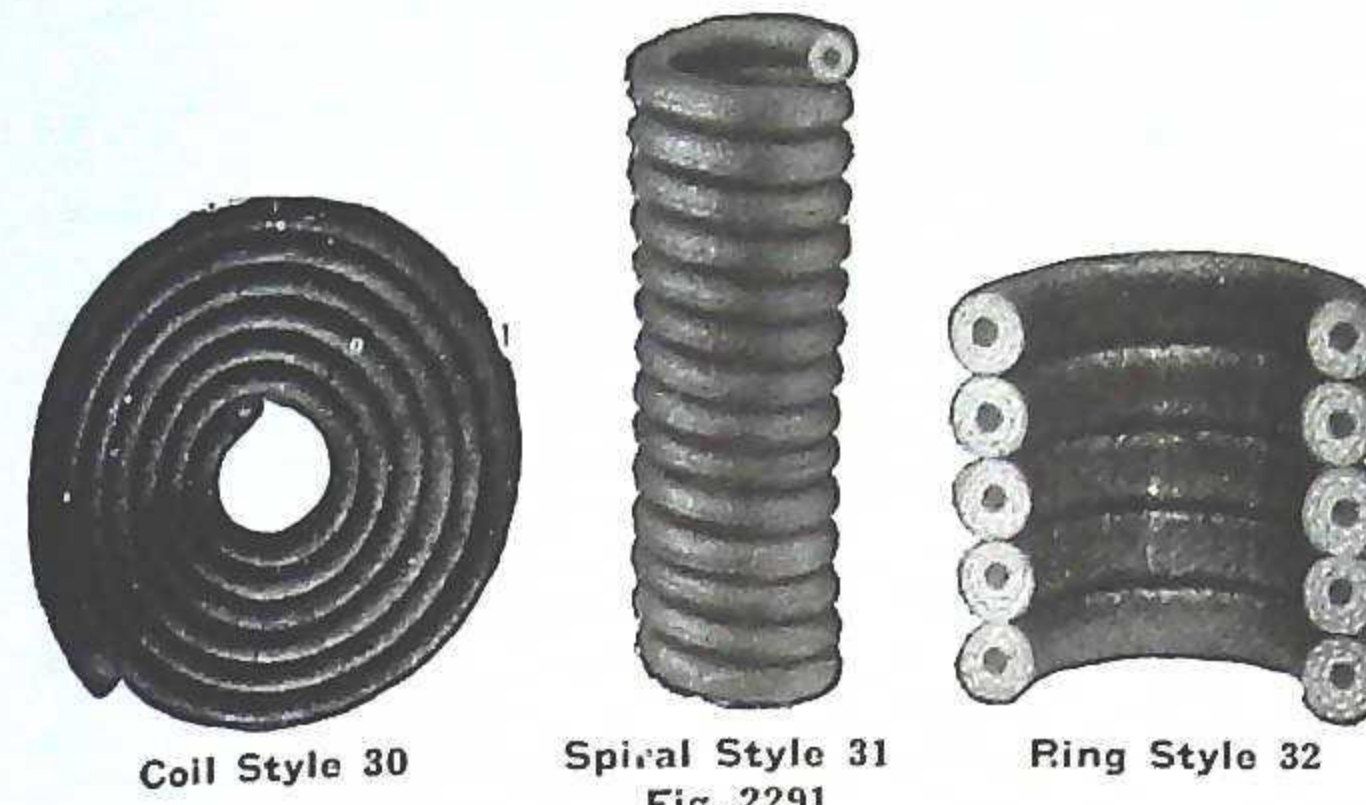
For packing rods where space between rods and inside of stuffing-box is $\frac{3}{8}$ inch or over.

The asbestos and other materials used and the construction make it suitable for steam or air at any temperature and pressure which eliminates the necessity of using several packings for various steam and air conditions.

Furnished in Ring Style No. 150 and Spiral Style No. 166. Without rubber expansion back in Ring Style No. 15 and Spiral Style No. 16.

Prices upon application.

J-M Universal Rod and Plunger Packing



Coil Style 30

Spiral Style 31 Fig. 2291

Ring Style 32

For packing rods and outside packed plungers where space between rod and box is $\frac{3}{8}$ inch or more—against steam, air, water and various fluids—specially adapted where a packing with a great amount of resiliency is required.

Made of asbestos and cotton fabrics, which have been treated with rubber cements, built up together and wrapped around a rubber core or cushion.

Furnished in Coil Style No. 30, Spiral Style No. 31, Ring Style No. 32.

Prices upon application.

Diagonal Expansion Packing



Regular Style Fig. 2292

Special Style Fig. 2293

Regular style, for steam pressures of 100 pounds and under. Special style for steam pressures over 100 pounds.

Both kinds are made in sizes beginning with $\frac{3}{8}$ of an inch and advancing by $\frac{1}{16}$ ths up to $1\frac{1}{4}$ inches, and from $1\frac{1}{4}$ inches advancing by $\frac{1}{8}$ ths up to 3 inches.

Price, Low Pressure.....per pound \$1.25
" High "....." 1.50

Plain Ring Piston Packing

Intended for piston and valve rods on all kinds of engines—stationary, blower, hoisting, traction, marine—and also pumps of all kinds.

Can be furnished in all standard sizes.

Price.....per pound \$1.20

Sectional Ring Piston Packing

Intended for rods out of center; cut rods and difficult places to keep tight. Can be used only when packing space is sufficient in width to cut in this manner.

Can be furnished in all standard sizes.

Price.....per pound \$1.20



Fig. 2295

Square Hydraulic Packing

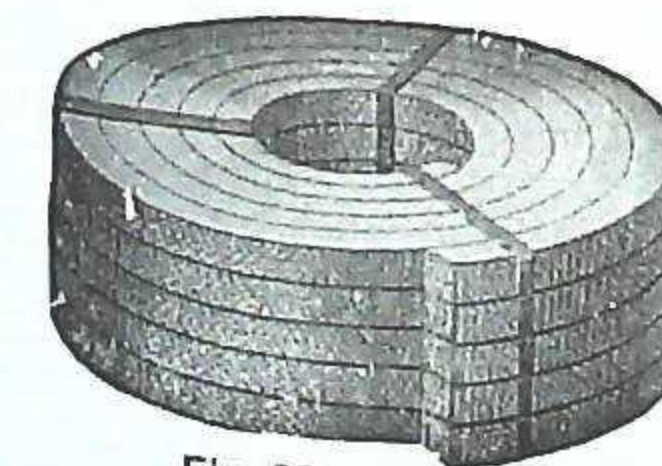


Fig. 2296

Made of special closely woven duck, with a high grade rubber friction. The duck is laid diagonally instead of at right angles.

For hot and cold water service. Price.....per pound

Square Flax Packing

Made of pure, long fibre flax, possessing great strength. Contains pure lubricants and is without hemp, jute, tow or any gritty substances.

Sizes, $\frac{1}{4}$ to 2 inches.

Price.....per pound



Fig. 2297

Asbestos Metallic Gaskets

Will stand any temperature and pressure of steam. May be re-used many times.

Price, Sizes, 2x3 to 7x9 Inches, Inclusive, $\frac{3}{8}$ Inch Thick.....per pound \$2.00

Price, Sizes 8x11 Inches and Larger, $\frac{1}{4}$ Inch Thick.....per pound 1.50

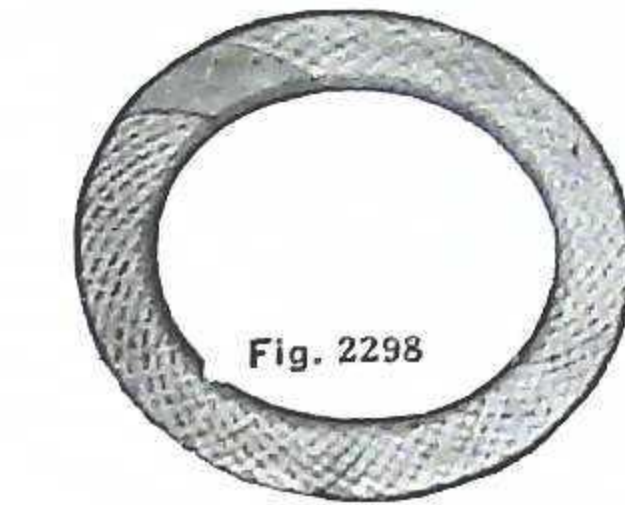


Fig. 2298

Red Tubular Gaskets

A round gasket in tubular form. Recommended for man hole and hand hole plates. Can also be used for flange gaskets by cutting to proper length.

Made in sizes $\frac{5}{8}$ inch up.

Price.....per pound



Fig. 2299

Cloth Insertion Rubber Gaskets



Fig. 2299A

Can be furnished with cloth on one or both sides. For water tube boilers, such as Heine and Geary, also hand holes, manholes, etc., of many makes of boilers.

In ordering specify round or oval, and the size of plate. When possible send template or sample.

Price.....per pound

Candle Wick

In Balls

Carefully manufactured of cotton specially selected for the purpose.

For packing small valve stems, etc. Furnished in $\frac{1}{8}$ and $\frac{1}{4}$ -pound balls.

Price.....per pound



Fig. 2299B

J-M Asbestos Wick Packing



Fig. 2299C

Made in the following five standard styles:

Style 4202, a wick made from several strands of asbestos twisted together, through the center of each strand of which is run a small cotton yarn for additional strength; style 4195, a single strand asbestos wick for ordinary requirements; style 199, a wick made from pure asbestos roving, in a single strand form; style 202, a pure wick made from asbestos roving by twisting together several strands and style 4199, a single strand wick made of pure asbestos. Furnished in $\frac{1}{2}$ and 1-pound balls.

Price.....per pound

Johns-Manville Refractory Cements

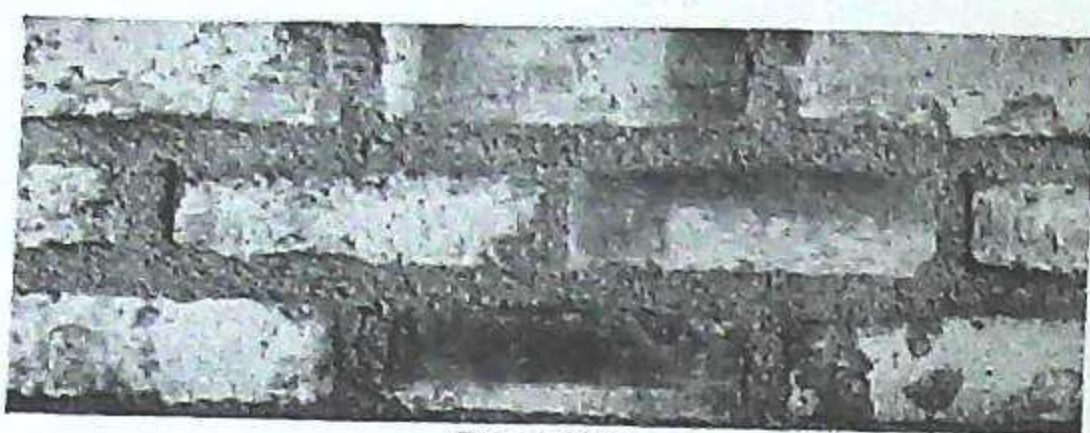


Fig. 2321

No. 26

Recommended for setting up fire bricks of boilers and furnaces. It may be used where temperatures range from 900 degrees F., where vitrification begins, to 2600 degrees F., the highest temperature it will withstand.

Has exceptional strength and bonding qualities. It is the proper cement to use for all general conditions except where temperatures exceed 2600 degrees F., or where special chemical or metallurgical conditions are to be met.

Packed in 100-pound paper lined bags and 400-pound barrels.

No. 31

This cement can be used for temperatures up to 3100 degrees F., its highest working temperature.

Packed in 100-pound paper lined bags and 400-pound barrels.

No. 32

Made for wash coating the face of brickwork exposed to flame and heat. It will withstand any temperature from 1250 degrees F., where vitrification begins, to 3100 degrees F., its highest working temperature.

Packed in 100-pound paper lined bags and 400-pound barrels.

Super-refractory Nos. 33 and 35

These cements have been developed to meet the exceptionally severe conditions resulting from improved methods of fuel burning, melting of metals, etc. The important quality of these cements is their ability to withstand the high temperatures with a comparatively small amount of shrinkage. The possibility of cracking under severe temperatures is thus reduced to the minimum. They are not affected by molten yellow metals such as brass, bronze, etc.

No. 33 should be used where temperatures range from 1000 degrees F., where vitrification begins, to 3300 degrees F., the highest temperature it will withstand.

No. 35 should be used where temperatures range from 1200 degrees F., where vitrification begins, to 3500 degrees F., the highest temperature it will withstand.

Nos. 33 and 35 are packed in 100-pound paper lined bags.

No. 30

No. 30 is especially recommended for general iron and steel metallurgical conditions such as blast furnaces, cupolas, reheating furnaces, one-piece linings for crucible furnaces, etc.

This cement begins to vitrify at 1850 degrees F. and is resistant to temperatures up to 3000 degrees F. Being a carbon base cement it will give best service in a reducing atmosphere.

Packed in 100-pound paper lined bags and 400-pound barrels.

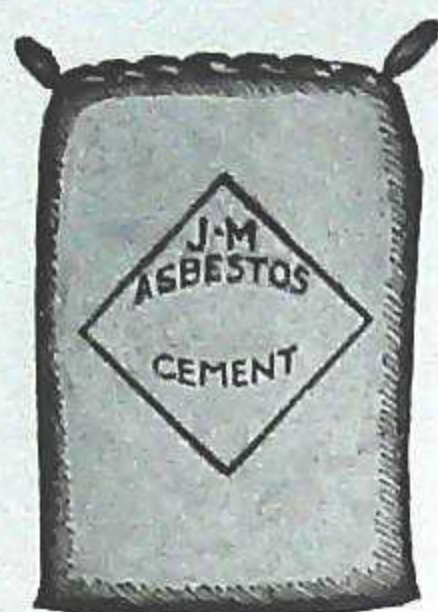


Fig. 2322

Johns-Manville Insulating Cements

No. 302

Made of asbestos fibre and binding materials that have high insulating values. Easy to mix and apply, and readily sticks to hot surfaces. Light in weight. Finishes with a hard, durable and attractive surface, and does not crack, break or peel off.

Packed in 100-pound bags.

No. 400

A combination of asbestos and other materials of high insulating value. For general use where efficiency, strength and durability are desired. Provides a smooth, durable finish. Packed in 100-pound bags.

No. 352

For general insulating work. Covering capacity, 18 square feet per 100-pound bag for each inch thickness. Prices upon application.

85% Magnesia Cement

The 85% Magnesia Cement is composed of approximately 85% carbonate of magnesia and 15% asbestos fibre. It is exceptionally light, and has a large covering capacity. It is recommended in all cases where the best insulation is desired.

Furnished in bags containing 60 pounds each, and has a covering capacity of approximately 30 square feet one inch thick, per bag.

Price.....per 60-pound bag \$7.50

Cold Water Paste

Convenient and practical. Put up in small bags or kegs and barrels.

Cheaper than other forms of paste. Can be mixed with either hot or cold water.

Price, 5-pound Bags.....per pound \$.20
 " 50 " Kegs....." .16
 " 200 " Barrels....." .14

Rutland Furnace Cement

Furnace cement is used for mounting furnaces, heaters and stoves, cementing the joints so as to make them gas tight. This cement is composed roughly of 2 classes of materials, binders and inert materials.

After firing, the binders and inert materials coalesce to form solid stone-like material, which is impervious to gas and is strongly cemented to the iron. It is not injured by freezing; will not harden in closed package. If used from drum and covered with water, it will keep indefinitely.

Price, 1-lb. Can, 36 or 60 per Case.....per pound \$.18
 " 5 " 12 per case....." .14

Rutland Stove Lining



Fig. 2324

Rutland stove lining is used for the patching or replacement of brick or cast iron linings.

It is sold in powder form, and is ready for use when mixed with water.

Should be thoroughly pounded into the stove when using; fuses at a comparatively low point, and becomes as hard as brick.

Made of high grade materials. No. 3 packed two or four dozen in a case; Nos. 6 and 10 packed one or two dozen in a case.

Price, No. 3 (2 1/2 Lbs.).....per dozen \$3.60
 " " 6 (5 ")....." 6.00
 " " 10 (9 ")....." 8.40
 " Barrels of 320 Lbs.....per pound .06

Dixon's Pipe Joint Compound

Dixon's Graphite Pipe Joint Compound is not a cement which hardens, but rather a true lubricant for the threads of pipe, bolts, nuts, turnbuckles, etc., making them easy to screw up and allowing them to be taken apart without damage or trouble. Also valuable on flanges, gaskets, boiler tube caps, gas retort doors, etc.

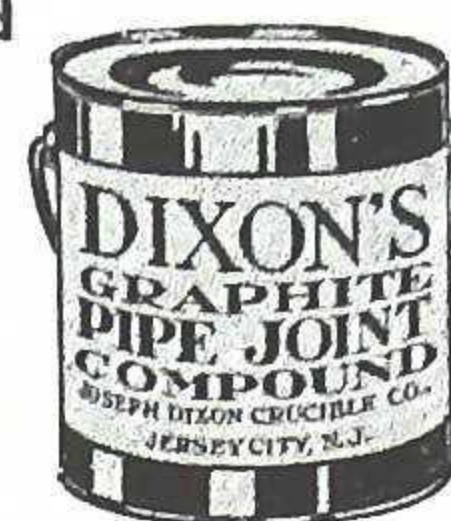


Fig. 2331

No.	Size Package Pounds	Style of Package	No. in Case	Price per Pound
693	1	Tin Can	36	\$.35
694	5	" Pail	10	.30
695	10	" "	6	.28
696	25	" Keg	..	.26
697	50	" "	..	.24
698	100	" "	..	.23
699	625	Barrel	..	.22

Nos. 1 and 2 Smooth-On Iron Cements



Fig. 2332

Nos. 1 and 2 Cements are put up in blue labeled cans and steel kegs. They come in powder form and are used by mixing with water to a stiff putty. No. 1 is quick hardening. No. 2 is slow hardening. These cements are used for repairing leaks or breaks in iron or steel castings, making tight seam or flanged joints on old or new work, and stopping leaks of steam, water, fire, oil or gas in boilers, furnaces, stoves, radiators, pipes, tanks, water jackets, etc. Used on iron, steel, brass, copper, aluminum, wood, etc.

BLUE LABELED CANS				STEEL KEGS			
Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.
7/16	\$.30	5	\$.44	25	\$.33	100	\$.29
1	.50	10	.39	50	.31	..	..

No. 3 Smooth-On Iron Cement

Put up in grey labeled cans. An elastic cement made and sold in paste form, ready for use. For making screw-thread joints. Also used for coating gaskets, painting boiler seams, etc. For boiler patch compound mix with Smooth-On No. 1.



Fig. 2333

Weight, Tins.....pounds 1 5 25
 Price.....per pound \$.50 .45 .34

No. 4 Smooth-On Iron Cement

Put up in cans and kegs. Sold in powder form for repairing blemishes, blowholes or defects, iron or steel castings. No. 4A is for fine grained castings; No. 4B for coarse.

YELLOW LABELED CANS				STEEL KEGS			
Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.
1	\$.40	4B	\$.30	25	\$.26	4B	\$.19
5	.30	4A	.21	50	.24	..	.18
10	.29	4B	.20	100	.23	..	.16

No. 5 Smooth-On Iron Cement

Put up in red labeled cans and steel kegs. This cement is used for making joints on bell and spigot cast soil and greenhouse pipes.

RED LABELED CANS				STEEL KEGS			
Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.	Wt. Lbs.	Price per Lb.
1	\$.30	25	\$.23	..	..	..	..
5	.25	50	.20	..	..	..	..
10	.24	100	.19	..	..	..	..

No. 6 Smooth-On Iron Cement

No. 6 Cement is put up in white labeled cans. This cement is in the form of a plastic putty and comes ready for use. Some uses of No. 6 are making tight joints on tin, wood, slate, or concrete; for resetting glass; making tight joints on structural iron work, vault lights, etc.

Weight, Tins.....pounds 1 5 10
 Price.....per pound \$.40 .30 .29

X Boiler Liquid



Fig. 2337

X Liquid is an absolute liquid. It has a chemical affinity for water. When it is poured into a leaking boiler, it instantly combines itself with the water in the boiler. In trickling out through the leak or crack, it is changed by the free atmospheric oxygen from a liquid to a solid, thus stopping the leak or crack. The surplus X in the boiler will automatically repair any new leaks which may develop.

This liquid prevents rusting because rust cannot form in the presence of the liquid. It also prevents scale formation.

Price, 1-quart Cans.....each \$6.00
 " 1/2-gallon Cans....." 10.00

Tasgon



Fig. 2338

A few drops of Tasgon will dissolve rust and loosen a very rusty nut, bolt, coupling, union bushing or connection of any kind.

It will not injure metal. No clipping or cutting.

No time is wasted and no parts are destroyed.

Cleans all rusty surfaces.

Size Can Prints	Description	Price per Can
1/4	With Nozzle Top	\$ 40
1	" Plain "	1.00
8	" " "	5.00

Dixon's Ticonderoga Flake Graphite



Fig. 2339

Dixon's Flake Graphite has many valuable applications as a lubricant for cylinders, valves and bearings, either alone or mixed with oils and greases. It is also indispensable to engineers and mechanics for coating gaskets and packing for pipe fitting, etc.

Dixon's Ticonderoga Flake Graphite is prepared in the coarser (or No. 1) flake, and the finer (or No. 2) size. Users of Dixon's Graphite will do well to keep both kinds on hand, as each has special advantages.

No.	Size of Package Pounds	Style of Package	No. of Cans in Case	Price per Case	Price Each	Price per Pound
632	1	Paper Cans.....	36	\$13.80	\$.45	..
633	5	Screw-top Tin Cans.....	10	18.50	2.00	..
634	10	" " " ".....	5	18.00	3.75	..
644	25	Boxes.....	..	..	8.75	..
645	50	" " " ".....	..	..	16.50	..
646	100	Kegs.....	..	..	..	\$ .32
646 1/2	200	" " " ".....	..	..	..	.31
647	400	Barrels.....	..	..	..	.30

No. 677 Dixon's Gear Lubricant



Fig. 2341

A grease of medium density that provides the bearings with a durable, lubricating film that prevents wear and reduces friction to a minimum. It flows over the gears like oil, yet clings to the teeth under load and when the gears are idle. Neither hot nor cold weather affects it.

A 3-wheeled barrel truck and a pump for dispensing the grease can be furnished.

Weight Pounds	Style of Container	No. in Case	Price per Lb.
1	Tin Cans	36	\$.50
5	" Pails	10	.45
10	" "	6	.43
25	" "		.42
50	Kegs		.36
100	" "		.32
200	Half Barrels, or Steel Drums		.31
400	Barrels		.30

Keystone Grease



Fig. 2342

Nos. 000, 00 and 0 Densities

Exceptionally viscous and tenacious, suitable for open slot boxes, and satisfactory for heavy bearing pressures. Can also be used in any hand compression cup. No. 0 is also suitable for some types of spring compression cups. In open wells, it should be applied so grease comes directly in contact with revolving shaft.

Nos. 1 and 2 Densities

For general hand compression cup use, for organ spring automatic grease cups, large ball and solid roller bearings, or wherever a solid grease is required.

Nos. 3 and 4 Densities

Semi-solid, expressly for Venango gravity feed grease cups, organ centrifugal cups, small motors having wick feed, gyratory rock crushers, elevator worm gears and slides, small ball bearings, Hyatt roller bearings, Morse and link belt silent chain drives.

No. 5 Density

For flour and feed mill rolls, especially those of ring oiling type. Also used for comb boxes of textile machinery.

No. 6 Light and Medium Densities

No. 6 medium is used for ring oiling bearings, except on electric motors. No. 6 light is used for electric motors, air compressors, pneumatic tools, and is satisfactory for cooling down hot boxes. Has a liquid density, pours like oil.

Keyso Densities

High heat resisting greases, furnished in several consistencies, some in brick form for use in open grease wells, where intense heat is encountered; other densities in bulk for hand compression and Venango gravity feed grease cups, enclosed gears, etc. Especially suitable for laundry machines, and wherever bearings operate under excessive heat.

Velox Gear Greases

Velox greases are furnished in several consistencies, suitable for open and enclosed gears.

Wool Yarn and Wool Yarn Elastic Greases

Wool yarn grease is suitable for top feed boxes. Comes saturated with any density of Keystone grease.

Wool yarn elastic grease is suitable for under-feed boxes, of the M. C. B. type.

Prices upon application.

Keystone Grease



Fig. 2343

No. 284 Gear Grease

Recommended for gears and is also suitable for use in pressure feed grease systems. It will cling to the gears at all times, eliminating noise and friction and when applied to a clean transmission or differential gear case will have a tendency to get lighter in color proving no deterioration of any kind or character.

One application of this gear grease to the transmission or differential gears should last from 10000 to 20000 miles or more. There are instances of far greater mileage from Keystone No. 284 than the figures given.

Keystone No. 284 Gear Grease will not thin or break down in the gear cases and will therefore not run out on to the brake bands and tires in the hardest service or the hottest weather, in fact, it will not break down to an oily state under 300 degrees. It will not harden in the gear cases at many degrees below zero, will always follow the gears and will not break nor channel.

Keystone Grease Pumps

The Keystone Pump is strictly a one-man pump, so simple in construction that anyone can operate it successfully. It is firmly attached to the top of the drum in a jiffy and is then ready for use. One complete upward and downward movement of the plunger delivers one pound of Keystone Grease into the differential or transmission case.

The drum and pump when mounted on a portable drum truck, which is a part of the drum outfit, can be easily moved about the garage, and the lubricant drawn, a pound at a time, as it is required. The exact amount needed is always delivered, there is no guess work, no waste when this pump is used. The grease remaining in the drum is kept entirely free from contamination by dust, dirt, or grit.

The Keystone Grease Pump is a labor saver, a conservator of grease that no garage can afford to be without. It is strongly built to withstand hard usage, and will by years of efficient service pay for itself over and over again.

The pump mounted on a drum is in itself a salesman and a mechanic. It shows the grease in a clean attractive way, and it delivers pure, clean grease right into the housing. Attached to any of the drums, 100 to 450-lb. sizes, it will enable the dealer, the garageman, or the service station to put sales on a more profitable basis and to eliminate an unpleasant form of sales effort. The exact amount specified is delivered right where it is wanted.

Prices upon application.

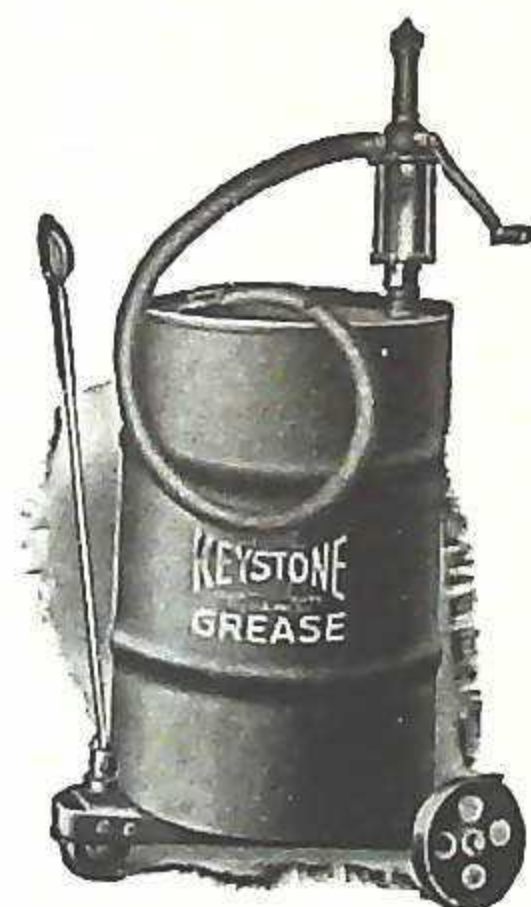
No. 281 Cup Grease

This is a solid grease suitable for use in grease cups, axle bearings, universal joints, in pressure feed grease systems and for lubricating any place where a heavy cup grease may be required.

Velox Gear Grease

Velox Gear Grease (Black) is manufactured in several densities. This grease is primarily for exposed and enclosed gear practice. The heavier densities are more suitable for exposed and high speed gears, the lighter densities for enclosed gears.

On large gears, where the lubricant is applied by hand, Nos. 00, 0 and 1 densities are used. Medium sized gears running in a gear case are lubricated with No. 3 or 4 densities. Small gears running at high speed and encased in gear cases are lubricated with densities Nos. 4, 5 or 6.



Keystone Grease Pump Attached to Drum Fig. 2344

Keystone Automobile Grease



Fig. 2351

Used to lubricate the transmissions and differentials of the Buick, Packard, Oakland, Paige, Jewett, Jordan and Hupmobile or wherever a liquid grease is required.

Heavy Duty Gear Grease

The density is a heavy fluid lubricant of a dark green color and is especially suited for the lubrication of motor bus and truck. It gives unusual service in heavy duty equipment, both chain and worm drive.

Universal Joint Grease

Its tenacious property enables it to most satisfactorily lubricate universal joints. It will remain in the joints and not work out or be thrown out by centrifugal force. It has a high melting point and is not affected by water. Also used for wheel bearings of motor buses and trucks.

Keystone Grease Lubricant is put up in the following sizes: 1 pound, 5 pound, 10 pound, 25 and 50 pound, also in steel drums of 100 pounds.

No. 600 grease, heavy.
No. 601 grease, medium.
No. 602 grease, heavy.
Nos. 603, 604, 604A, 605 are especially adaptable to transmissions and differentials.
Prices upon application.

Albany Grease

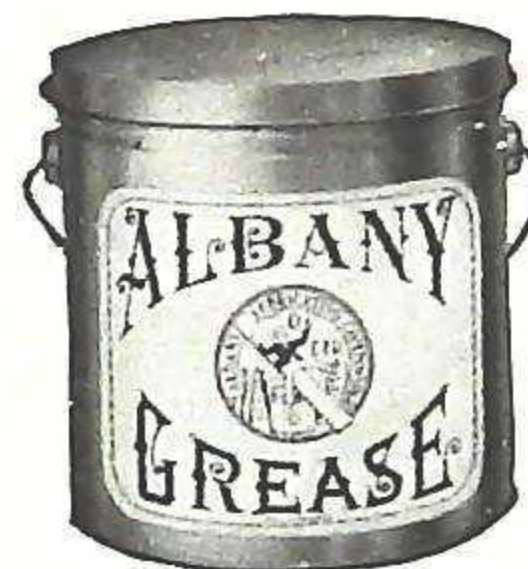


Fig. 2352

Albany Grease is all lubricant, no waste, and is made in seven different consistencies.

No. 0 is very soft, being used in extremely cold weather, and on exposed journals.

No. 1 is harder than No. 0, and is used on ordinary journals in cold weather, or on very cool running journals, also elevator slides.

No. 2 is harder than No. 1, and is known as winter grease, ordinarily used in moderately cool weather.

No. 3 is adapted for use on all stationary, marine and tug-boat engines; also shafting, dynamos, general electrical and high speed machinery in warm weather, and is known as summer grease.

Nos. X, XX and XXX are heavy bodied, higher melting point greases, which will lubricate journals with entire satisfaction, where temperatures are high. Never fails in severe cases to overcome all lubricating difficulties.

Style Package	1-lb. Cans	5, 10-lb. Cans	25, 50-lb. Cans
Price per pound	\$.45	.32	.28
Style Package	125-lb. Kegs	200-lb. Half Bbls.	400-lb. Bbls.
Price, per pound	\$.19	.18	.17

Key Graphite Paste

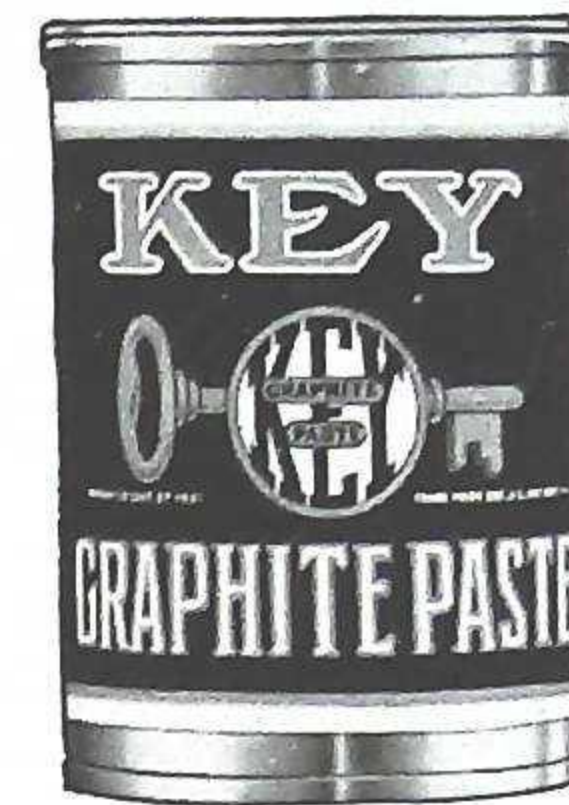


Fig. 2353

A graphite, acid resisting, non-corrosive, non-oxidizing expandable filler, containing no oil or grease. Requires water only for thinning. Used on steam, gasoline, kerosene, vapor, creosote, tar, ammonia, hot oil, hot vaseline, brine, air and acid lines.

Packed in one-pound cans (69 cans to case); three pound cans (24 cans to case); five-pound cans (12 cans to case); 10-pound cans (6 cans to case); 60-pound buckets; half barrels, weighing approximately 340 pounds; full barrels weighing approximately 700 pounds.

Price..... per pound

Putty



Size, Can 12 1/2 25

Price Each

Lard Oil

Price Each

Lard Oil



Size, Can 1 gallon

Price Each

Pure winter strained lard oil. Put up in wood-jacketed cans.

Fig. 2355

Size of Cans gallons 1 3 5
Price per gallon

Oils

For Railroads, Mills, Automobiles and General Use

Steam Refined Cylinder Oil

For high grade steam engines and power plants, requiring first-class lubrication and high viscosity and flush point.

Price..... per gallon

Gas Engine Cylinder Oil

Gas Engine Cylinder Oil is for automobile and gas engine use. No. 1 light, No. 2 medium, No. 3 heavy. It is free from carbon deposits and adapted for high temperature.

Price..... per gallon

No. 1 Red Engine Oil

No. 1 Red Engine Oil is a high grade engine oil for heavy duty marine type of engines and general mill use where a high grade lubricant is required.

Price..... per gallon

No. 1 Machine Oil

No. 1 machine oil is for general mill lubrication. It will not heat the bearings.

Price..... per gallon

Mineral Sperm Oil

Mineral Sperm Oil is a high grade burning oil for factory and general uses. Does not carbon.

Price..... per gallon

Extra Winter Strained Lard Oil

Price..... per gallon

Cutting Oil

For pipe cutting and threading.

Price..... per gallon

Bitumastic Solution

Bitumastic Solution is a brilliant black, quick-drying bituminous paint of great durability and effectiveness.

It forms an impervious film over metal or other surfaces, excluding the causes of corrosion and deterioration.

Bitumastic Solution resists high temperatures, without losing its lustrous finish and is, therefore, used for painting boiler fronts, breechings, stacks, pipes, etc.

It is weather and water proof and is therefore, an effective protection for metal roofs and buildings, for steel window sash, fire escapes, air washers, cooling towers, tanks, hydraulic machinery and structures.

It fills every pinhole and crack and presents a smooth impermeable surface, highly resisting the attack of chemical fumes. Against acid and alkaline conditions it is used in dye-houses, bleacheries, paper mills, tanneries, pickling rooms and chemical plants.

It is exceptionally long-lived. It does not dry out leaving a porous coating of pigment, but retains its integrity for a prolonged time.

Price, 1-gallon..... per gallon
 " 5 " Drums..... "

Bitumastic Colored Paints

The durable protection of refined bituminous paint is no longer confined to natural black color. Bitumastic Paints in red, gray, green and tan are made from the bituminous base, refined and colored by an exclusive process and offer an efficient protective coating for use where a color is preferred.

These are all-round paints for all-round work. They will do all that an oil paint can do and, in addition, much that no oil paint should be expected to do.

Bitumastic Colored Paints spread easily, dry quickly and form a tough elastic film of full body and attractive finish with a pleasing gloss.

Price, 1-gallon..... per gallon
 " 5 " Drums..... "

Bitumastic and Hermastic Enamels

Bitumastic and Hermastic Enamels are solids and must be melted in roofer's kettles or suitable tanks. While in this molten state they may be applied by brushing, dipping or pouring. They harden immediately, forming a tough, tenacious coating of any desired thickness.

This Enamel affords ideal protection for penstocks, water mains, head gates, steel dams, tanks, coal bunkers, etc.

It has been used on many of the largest engineering structures and leading engineers have long recognized Bitumastic and Hermastic coatings as the best for such protection.

As considerable experience and skill are required to apply these Enamels in a satisfactory manner, we recommend that the coatings be applied by the field organization of the manufacturers.

Approximate costs and further information upon request.

Hercules Drain Pipe Solvent

Will remove stoppages in drains, bath tubs, sinks, water closets, grease traps, etc. Destroys lint, cloth, hair, vegetable matter, etc., but not glass, metal and other similar substances.

Effective for thawing pipes, traps, etc.
 Price, 1-lb. Cans..... per doz. \$3.50
 " 2 " Cans..... " 6.40



Fig. 2361

Blue Seal Drain Pipe Solvent

A scientifically prepared chemical compound, a drain pipe solvent that is guaranteed to clear any drain pipe stoppage not caused by glass, metal or other solid substances.

It is added to water, making a hot, strong solution that works its way down to the stoppage and dissolves it. It quickly destroys accumulations of lint, cloth, hair, slime, grease, sponge, vegetable matter, etc.

Blue Seal Drain Pipe Solvent is also effective for thawing frozen drain pipes, stacks, flush tanks, traps, etc.

Put up in friction top cans. Will not injure the finest plumbing.

Price, 1-pound Cans..... each \$0.50
 " 2 " "..... " 1.00



Fig. 2362

Porcela Cleaning Compound

Made especially for cleaning bath tubs, washstands, sinks and bathroom tile. As it contains no grit or acid, it will not leave a sediment to stop up traps or waste pipes or injure the plumbing. It will not scratch the enamel or remove the luster.

Put up in 1/2 and 1 pound cans. Two dozen in a case.

Price..... per case \$3.60



Fig. 2363

Poraco

A chemical compound in powder form, a sanitary closet bowl cleaner.

Most water contains chemical properties and leaves a deposit on closet bowls, eventually making an unsightly stain which scrubbing and scouring will not remove.

It is perfectly sanitary and harmless.

Cleans without dipping the water out of the bowl or touching the bowl with the hands, and will not injure the bowl or connections.

Price..... per can \$0.25



Fig. 2364

Sani-Flush Closet Bowl Cleaner

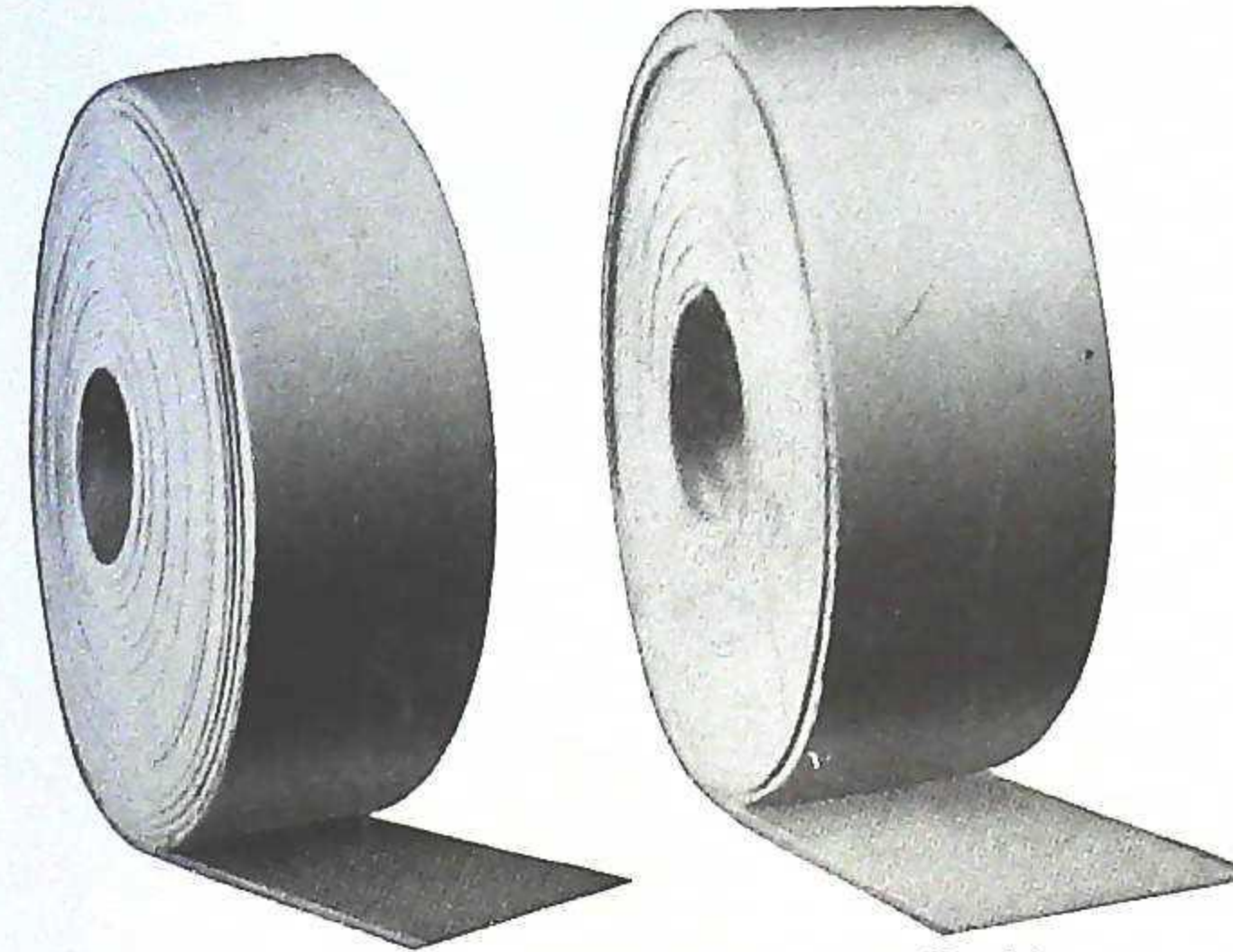
Sprinkle a little Sani-Flush in the closet bowl and follow directions on can; stains and incrustations will disappear leaving the bowl clean, white and odorless.

Price..... per dozen \$4.00



Fig. 2365

Oak Tanned Leather Belting



Width Inches	Single		Width Inches	Double	
	PRICE, PER Single	Foot Double		PRICE, PER Single	Foot Double
1/2	\$0.12	\$0.24	18	\$4.32	\$8.64
3/4	.18	.36	20	4.80	9.60
1	.24	.48	22	5.28	10.56
1 1/4	.30	.60	24	5.76	11.52
1 1/2	.36	.72	26	6.24	12.48
1 3/4	.42	.84	28	6.72	13.44
2	.48	.96	30	7.20	14.40
2 1/4	.54	1.08	32	7.68	15.36
2 1/2	.60	1.20	34	8.16	16.32
2 3/4	.66	1.32	36	8.64	17.28
3	.72	1.44	38	9.12	18.24
3 1/2	.84	1.68	40	9.60	19.20
4	.96	1.92	42	10.08	20.16
4 1/2	1.08	2.16	44	10.56	21.12
5	1.20	2.40	46	11.04	22.08
5 1/2	1.32	2.64	48	11.52	23.04
6	1.44	2.88	50	12.00	24.00
7	1.68	3.36	52	12.48	24.96
8	1.92	3.84	54	12.96	25.92
9	2.16	4.32	56	13.44	26.88
10	2.40	4.80	60	14.40	28.80
12	2.88	5.76	64	15.36	30.72
14	3.36	6.72	68	16.32	32.64
16	3.84	7.68	72	17.28	34.56

Solid Round Leather Belting



Fig. 2373

Size Inches	Style	Price per Foot	Size Inches	Style	Price per Foot
1/8	Heavy	\$0.07	5/16	Regular	\$0.21
3/16	"	.10	5/16	Heavy	.24
1/4	Regular	.14	3/8	Regular	.29
1/4	Heavy	.15 1/2	3/8	Heavy	.33
9/32	Regular	.17	1/2	Regular	.51

Patent Solid Round Leather Belting

Size In.	Price per Foot	Size In.	Price per Foot	Size In.	Price per Foot
3/8	\$0.50	5/8	\$1.15	1	\$2.70
7/16	.65	3/4	1.60	1 1/8	3.40
1/2	.80	7/8	2.10	1 1/4	4.15
				1 1/2	\$6.00

Braided or Twisted Round Leather Belting

Size	Price	Size	Price	Size	Price
3/8	\$0.27	5/8	\$0.48	7/8	\$0.80
1/2	.38	3/4	.60	1	.96

Condor Belting



Fig. 2374

The Condor is a high grade rubber belt. The binding compound contains a large percentage of rubber besides other essential ingredients.

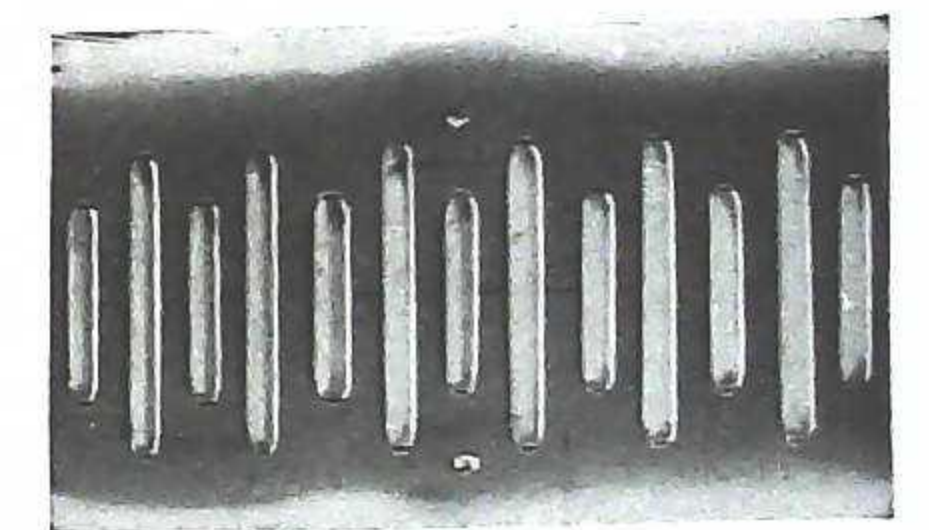
The fabric, the backbone of the belt, is impregnated with the compound by massive calenders which force the compound into the interstices, coating every thread and fibre. The belt is then folded and compressed under pressure; the stretch is permanently removed and the belt is vulcanized.

and united into an inseparable homogeneous mass. The unusually tough surface resists abrasion to a high degree.

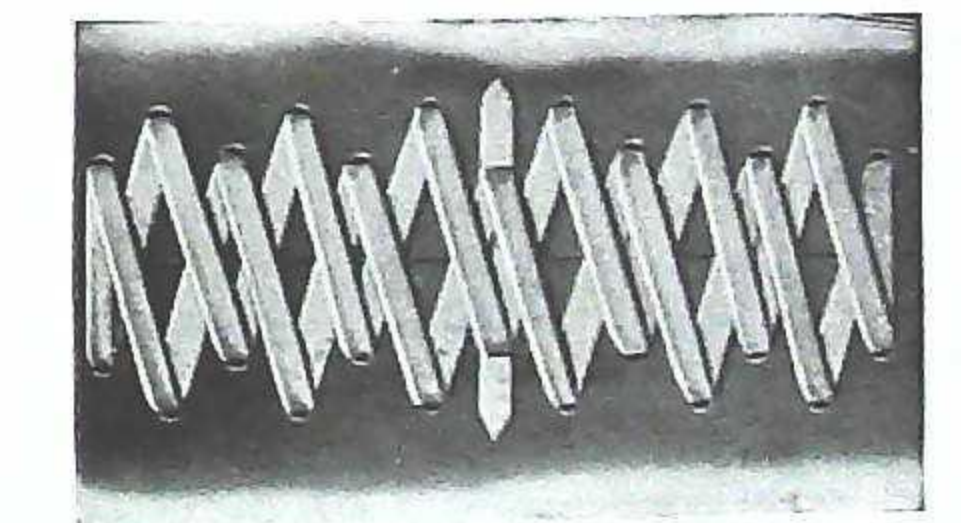
Price, per Foot—Effective July 1, 1918

Size, In.	2-ply	3-ply	4-ply	5-ply	6-ply	7-ply	8-ply
1 1/2	\$0.27	\$0.31	\$0.36	\$0.45	.....	.....	.....
1 3/4	.32	.36	.42	.53	.....	.....	.....
2	.34	.39	.46	.58	\$0.69	.....	.....
2 1/2	.42	.48	.56	.70	.84	.....	.....
3	.48	.55	.65	.81	.98	.....	.....
3 1/2	.57	.65	.76	.95	1.14	.....	.....
4	.61	.70	.82	1.03	1.23	\$1.44	.....
4 1/2	.....	.78	.92	1.15	1.38	1.61	.....
5	.....	.87	1.02	1.28	1.53	1.79	.....
6	.....	1.04	1.22	1.53	1.83	2.14	\$2.44
7	.....	1.22	1.43	1.79	2.15	2.50	2.86
8	.....	1.31	1.54	1.93	2.31	2.70	3.08
9	.....	.....	1.73	2.16	2.60	3.03	3.46
10	.....	.....	1.92	2.40	2.88	3.36	3.84

How to Lace Rubber Belts



Pulley Side
Fig. 2375



Opposite Side

Be particular to square the ends of the belt and cut the ends perfectly straight, so that when butted they will match exactly. Do not punch holes larger than necessary.

For narrow belts make one or two rows of holes in each end, and lace as per sketches above, taking care to have the holes punched in straight lines across the belt, and that the holes made in one end shall be opposite those made in the other end.

Balata Belting



Fig. 2381

The distinctive qualities that recommend this belt to the users are:

Freedom from shrinkage, resistance to stretch, great tractive power, solidity of texture, unequalled strength, great durability, perfect balance, flexibility and the fact that it is waterproof, weatherproof and chemical-proof.

Its flexibility permits a perfect troughing condition and being practically solid throughout, it gives a wearing surface of great strength down to the last ply.

Price List

Width In.	PRICE, PER FOOT					
	3-ply	4-ply	5-ply	6-ply	7-ply	8-ply
1	\$.18	\$.24	.....	.....	.....	.....
1 1/4	.23	.30	.....	.....	.....	.....
1 1/2	.27	.36	.....	.....	.....	.....
1 3/4	.32	.42	\$.53	.....	.....	.....
2	.36	.48	.60	.....	.....	.....
2 1/4	.41	.54	.68	.....	.....	.....
2 1/2	.45	.60	.75	.....	.....	.....
2 3/4	.50	.66	.83	.....	.....	.....
3	.54	.72	.90	.....	.....	.....
3 1/4	.59	.78	.98	.....	.....	.....
3 1/2	.63	.84	1.05	.....	.....	.....
3 3/4	.68	.90	1.13	.....	.....	.....
4	.72	.96	1.20	\$1.44	.....	.....
4 1/4	.77	1.02	1.28	1.53	.....	.....
4 1/2	.81	1.08	1.35	1.62	.....	.....
4 3/4	.86	1.14	1.43	1.71	.....	.....
5	.90	1.20	1.50	1.80	.....	.....
5 1/2	.99	1.32	1.65	1.98	.....	.....
6	1.08	1.44	1.80	2.16	.....	.....
6 1/2	1.17	1.56	1.95	2.34	.....	.....
7	1.26	1.68	2.10	2.52	\$2.94	\$3.36
7 1/2	1.35	1.80	2.25	2.70	3.15	3.60
8	1.44	1.92	2.40	2.88	3.36	3.84
9	1.62	2.16	2.70	3.24	3.78	4.32
10	1.80	2.40	3.00	3.60	4.20	4.80
11	1.98	2.64	3.30	3.96	4.62	5.28
12	2.16	2.88	3.60	4.32	5.04	5.76
13	2.34	3.12	3.90	4.68	5.46	6.24
14	2.52	3.36	4.20	5.04	5.88	6.72
15	2.70	3.60	4.50	5.40	6.30	7.20
16	2.88	3.84	4.80	5.76	6.72	7.68
17	3.06	4.08	5.10	6.12	7.14	8.16
18	3.24	4.32	5.40	6.48	7.56	8.64
19	3.42	4.56	5.70	6.84	7.98	9.12
20	3.60	4.80	6.00	7.20	8.40	9.60
21	3.78	5.04	6.30	7.56	8.82	10.08
22	3.96	5.28	6.60	7.92	9.24	10.56
23	4.14	5.52	6.90	8.28	9.66	11.04
24	4.32	5.76	7.20	8.64	10.08	11.52
25	4.50	6.00	7.50	9.00	10.50	12.00
26	4.68	6.24	7.80	9.36	10.92	12.48
28	5.04	6.72	8.40	10.08	11.76	13.44
30	5.40	7.20	9.00	10.80	12.60	14.40
32	5.76	7.68	9.60	11.52	13.44	15.36
34	6.12	8.16	10.20	12.24	14.28	16.32
36	6.48	8.64	10.80	12.96	15.12	17.28
38	6.84	9.12	11.40	13.68	15.96	18.24
40	7.20	9.60	12.00	14.40	16.80	19.20
42	7.56	10.08	12.60	15.12	17.64	20.16
44	7.92	10.56	13.20	15.84	18.48	21.12
46	8.28	11.04	13.80	16.56	19.32	22.08
48	8.64	11.52	14.40	17.28	20.16	23.04

Fabreka Belting

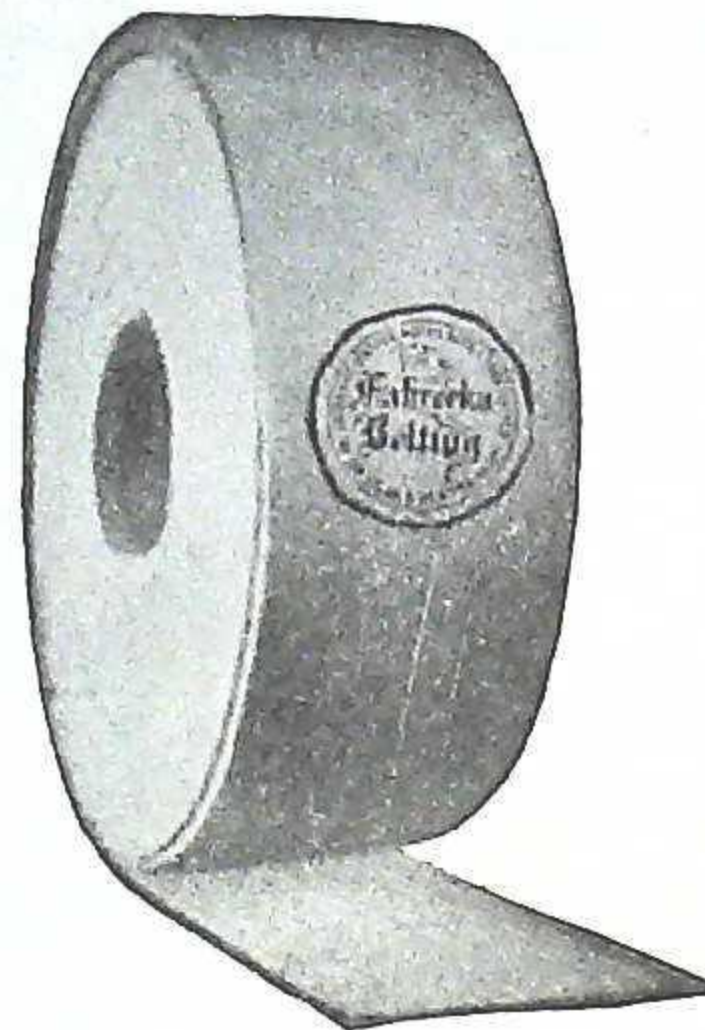


Fig. 2382

Fabreka Belting is a fabrication of layers of special, close-weave cotton fabric, united under enormous hydraulic pressure with a compound that actually gains in strength by standing or remaining in stock. Each layer is separate from every other layer with no wrapped or folded edge but the plies are welded so closely that one cannot count them accurately except under a glass. A single layer of Fabreka fabric has a tensile strength of 145 pounds per inch of width.

When thin layers of duck are combined under enormous pressure they form a belting with a condensed fabric comparable only to leather but unlike leather always uniform in quality. This combination makes a more pliable belt than leather and takes it out of the class of ordinary fabric belts since it can be used on the smallest pulleys.

The cementing compound in Fabreka is a special development superior to ordinary rubber compounds. Impregnated between the layers of duck the resulting product is water and weather-proof and resists heat as well as acids and their fumes to a remarkable degree.

Fabreka's reputation is due to the combination of dense fabric, great strength and pliability.

The unusual thinness and enormous tensile strength of the individual layers of duck is the reason that when a multiple number is used to build up a belt it results in the strongest belt for its thickness.

The thin duck layer construction without a wrapped edge means that Fabreka will not fray at the edge even when run with shifters.

The reason that Fabreka lasts long in dusty, gritty service, wearing down evenly and not breaking down when one ply wears through, is due to the independent ply construction and close weave.

The peculiar construction without a folded edge permits Fabreka belts to be salvaged when accidents occur or plant changes are necessary by cutting down from wide to narrower sizes by pulling against a straight-edged knife. True running qualities are not impaired nor is fraying possible when this is done.

Special sizes not listed take price of next larger size. Stock sizes, up to 30-inch; wider sizes listed and other weights made up to order.

Width Inches	PRICE, PER FOOT		Width Inches	PRICE, PER FOOT		Width Inches	PRICE, PER FOOT	
	Regular and Heavy Single	Light and Heavy Double		Regular and Heavy Single	Light and Heavy Double		Regular and Heavy Single	Light and Heavy Double
1/2	\$.12	.....	4	\$.96	\$1.92	18	\$4.32	\$8.64
3/4	.18	.....	4 1/2	1.08	2.16	20	4.80	9.60
1	.24	\$.48	5	1.20	2.40	22	5.28	10.56
1 1/4	.30	.....	5 1/2	1.32	2.64	24	5.76	11.52
1 1/2	.36	.72	6	1.44	2.88	26	6.24	12.48
1 3/4	.42	.....	7	1.68	3.36	28	6.72	13.44
2	.48	.96	8	1.92	3.84	30	7.20	14.40
2 1/4	.54	.....	9	2.16	4.32	32	7.68	15.36
2 1/2	.60	1.20	10	2.40	4.80	34	8.16	16.32
2 3/4	.66	1.32	12	2.88	5.76	36	8.64	17.28
3	.72	1.44	14	3.36	6.72	.....	.....	.....
3 1/2	.84	1.68	16	3.84	7.68	.....	.....	.....

Stitched Canvas Belting



Fig. 2391

This belting is made from the highest grade of cotton duck, manufactured by the most modern machinery; the fabric is designed with a view of producing the greatest strength.

The duck is folded and sewn by special devices and the belt is waterproofed by a composition of oils being forced through all the fibres and to further protect it, the surfaces are coated with a red paint.

Stitched canvas belting can be used for any purpose where transmission of power is required.

Owing to its waterproof construction, it is especially adapted to outdoor work as exposure to the weather and dampness will not affect it.

Width In.	PRICE, PER FOOT				
	4-ply	5-ply	6-ply	8-ply	10-ply
1	\$.20	.....	.....	.....	.....
1 1/2	.30	.....	.....	.....	.....
2	.39	\$.49	\$.59	.....	.....
2 1/2	.48	.60	.72	.....	.....
3	.57	.71	.86	.....	.....
3 1/2	.65	.81	.98	.....	.....
4	.74	.93	1.11	\$1.48	.....
4 1/2	.81	1.01	1.22	1.62	.....
5	.90	1.13	1.35	1.80	.....
6	1.05	1.31	1.58	2.10	.....
7	1.20	1.50	1.80	2.40	.....
8	1.35	1.69	2.03	2.70	.....
9	1.49	1.86	2.24	2.98	.....
10	1.62	2.03	2.43	3.24	.....
11	1.76	2.20	2.64	3.52	.....
12	2.05	2.57	3.08	4.10	\$5.13
13	2.15	2.69	3.23	4.30	5.37
14	2.31	2.90	3.47	4.62	5.78
15	2.48	3.09	3.72	4.96	6.20
16	2.64	3.30	3.96	5.28	6.60
18	2.97	3.72	4.46	5.94	7.43
20	3.30	4.13	4.95	6.60	8.25
22	3.63	4.55	5.45	7.26	9.08
24	3.96	4.95	5.94	7.92	9.90
26	4.68	5.85	7.02	9.36	11.70
28	5.04	6.30	7.56	10.08	12.60
30	5.40	6.75	8.10	10.80	13.50
32	5.76	7.20	8.64	11.52	14.40
34	6.12	7.65	9.18	12.24	15.30
36	6.48	8.10	9.72	12.96	16.20
38	7.41	9.27	11.12	14.82	18.53
40	7.80	9.75	11.70	15.60	19.50
42	8.19	10.25	12.29	16.38	20.48
44	8.58	10.73	12.87	17.16	21.45
46	8.97	11.22	13.46	17.94	22.43
48	9.36	11.70	14.04	18.72	23.40

Charge for making belts endless will be quoted upon application.

Solid Woven White Cotton Belting



Fig. 2392

Used for conveying service.

Has no plies to separate, no stitches to spoil its smooth even surface.

It runs without jar or wavering and is very pliable. It does not deteriorate with age unless exposed to the weather or dampness.

The surface is smooth and uniform, allowing perfect pulley contact.

This type of belting is especially suitable for elevators and conveyors and where properly protected from excessive moisture is the most economical belt available. It covers a wide range, handling all kinds of materials.

It is the ideal belt to withstand atmospheric heat, or handle warm materials, but is made of cotton and will burn if heated enough. However, it will last a long time under conditions that would destroy many other types of belting.

Use when possible, fasteners that will grip the lengthwise threads. If lacing is used, make holes with an awl. Do not use a punch.

Width Inches	PRICE, PER FOOT						
	2-ply	3-ply	4-ply	5-ply	6-ply	8-ply	10-ply
1	\$.08	\$.13	\$.18	\$.22	\$.25	\$.29	.....
1 1/4	.09	.14	.20	.25	.28	.33	.....
1 1/2	.10	.16	.22	.27	.32	.37	.....
1 3/4	.11	.17	.24	.30	.35	.41	.....
2	.13	.19	.26	.32	.39	.45	.....
2 1/4	.14	.21	.28	.34	.42	.49	.....
2 1/2	.15	.23	.30	.37	.45	.53	.....
2 3/4	.16	.24	.32	.39	.47	.55	.....
3	.18	.26	.34	.42	.52	.62	.....
3 1/4	.19	.27	.35	.43	.53	.63	.....
3 1/2	.20	.29	.38	.46	.56	.66	.....
3 3/4	.21	.30	.39	.48	.58	.68	.....
4	.23	.32	.42	.51	.61	.71	.....
4 1/4	.25	.36	.46	.56	.66	.76	.....
4 1/2	.26	.37	.47	.57	.67	.77	.....
4 3/4	.27	.38	.48	.58	.68	.78	.....
5	.28	.39	.50	.60	.70	.80	.....
5 1/2	.30	.42	.54	.64	.74	.84	.....
6	.32	.45	.58	.68	.78	.88	.....
6 1/2	.34	.48	.63	.74	.84	.94	.....
7	.36	.51	.68	.79	.89	.99	.....
8	.43	.59	.78	1.08	1.35	1.77	.....
9	.53	.73	.94	1.23	1.52	2.15	\$2.46
10	.60	.83	1.08	1.39	1.74	2.53	2.78
12	.68	.93	1.25	1.68	2.06	2.90	3.36
14	.79	1.07	1.45	1.94	2.42	3.30	3.90
16	.90	1.24	1.69	2.21	2.62	3.70	4.42
18	1.01	1.41	1.93	2.49	2.95	4.10	4.98
20	1.11	1.62	2.17	2.75	3.32	4.48	5.50
22	1.21	1.84	2.40	3.15	3.77	5.08	6.30
24	1.30	2.05	2.64	3.44	4.13	5.67	6.88
26	1.40	2.25	2.87	3.73	4.59	6.07	7.46
28	1.50	2.44	3.13	4.06	4.96	6.47	8.12
30	1.65	2.65	3.41	4.34	5.45	6.91	8.68
32	1.80	2.86	3.67	4.67	5.93	7.57	9.34
34	1.95	3.01	3.91	4.98	6.36	8.23	9.96
36	2.10	3.18	4.11	5.28	6.64	8.75	10.56
38	2.26	3.36	4.36	5.67	7.08	9.27	11.34
40	2.40	3.53	4.66	6.00	7.36	9.64	12.00
42	2.54	3.75	4.94	6.40	7.75	10.27	12.80
44	2.70	3.93	5.20	6.80	8.10	10.75	13.60
46	2.85	4.10	5.51	7.18	8.68	11.12	14.36
48	3.00	4.28	5.82	7.56	9.27	11.49	15.12

Rolls are from 400 to 500 feet. Special belts and tapes quoted for direct shipment.

Lace Leather in Sides



Fig. 2401

Price, Rawhide.....per sq. ft.
 " Tanned....." " " ..
 " Waterproof....." " " ..

Cocheco Rawhide Cut Laces

Packed in neatly labeled boxes, each containing 100 feet. Each lace put up in oil-proof envelope. Keeps lace clean and orderly.



Fig. 2403

Size In.	Price per 100 Feet
1/4	\$2.50
5/16	3.00
3/8	3.75
7/16	4.50
1/2	5.50
5/8	6.50
3/4	7.50

Cut Lacing



Fig. 2404

Put up in 100-foot bunches.

Width In.	Price per 100 Feet	Width In.	Price per 100 Feet	Width In.	Price per 100 Feet	Width In.	Price per 100 Feet
1/4	\$2.50	3/8	\$3.75	1/2	\$5.50	3/4	\$7.50
5/16	3.00	7/16	4.50	5/8	6.50		

Metallic Belt Lacing

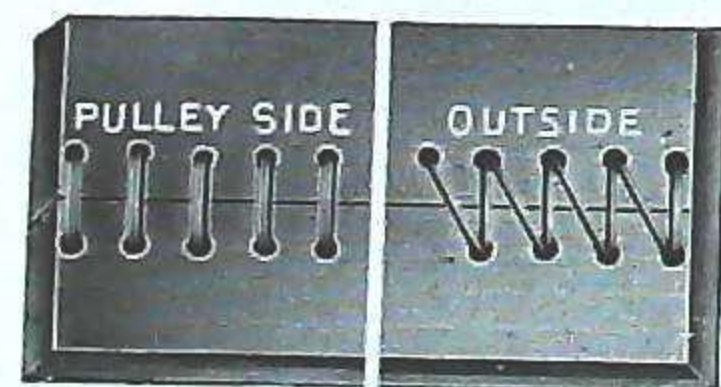


Fig. 2405

No.	For Belts	Width Belt Inches	Price per 100 Feet
0	Single	2 1/2 and under	\$2.00
1	"	3 to 5	2.00
2	"	6 " 12	2.00
2	Double	6 and under	2.00
3	"	6 " over	2.00

Round Belt Couplings

Size Belt In.	Price per Doz.	Size Belt In.	Price per Doz.	Size Belt In.	Price per Doz.
1/8	\$3.00	5/16	\$2.50	5/8	\$6.00
5/32	3.00	11/32	3.00	11/16	7.50
3/16	2.50	3/8	3.00	3/4	9.00
7/32	2.50	7/16	3.50	7/8	13.00
1/4	2.00	1/2	4.00	1	18.00
9/32	2.50	9/16	5.00	...	.....

Kerr's Wire Belt Lacing



Fig. 2406

Especially adapted for belts subjected to great strain or to those running at high speed over small pulleys. It neither crystallizes nor breaks, it neither stretches nor tears out lace-holes.

No. 00, for light single belts up to 1 inch.
 " 0, " single belts up to 3 inches.
 " 1, " " " 3 to 6 inches.
 " 2, " " " 6 " 12 " and double belts up to 6 inches.
 No. 3, for all double belts over 6 inches.

Price.....per 100 feet \$2.00

Oval Pointed Belt Hooks



Fig. 2407

*Size, inches.

No.	Price per 1000	No.	Price per 1000	No.	Price per 1000
15	\$2.00	9	\$4.00	3	\$16.00
14	2.40	8	5.00	2	20.00
13	2.60	7	6.00	1	30.00
12	2.80	6	8.50	*3	60.00
11	3.00	5	11.00	*3 1/2	70.00
10	3.50	4	14.00		

Belt Studs

No. 00 for heaviest leather or 5 or 6-ply rubber belt. No. 5 for thinnest sewing machine belts; intermediate sizes in proportion.

No. per 100	Price	No. per 100	Price	No. per 100	Price	No. per 100	Price
5	\$.70	3	\$.90	1	\$1.65	00	\$2.50
4	.80	2	1.25	0	2.00	..	.....



Fig. 2408

Clipper Open End Belt Cutters

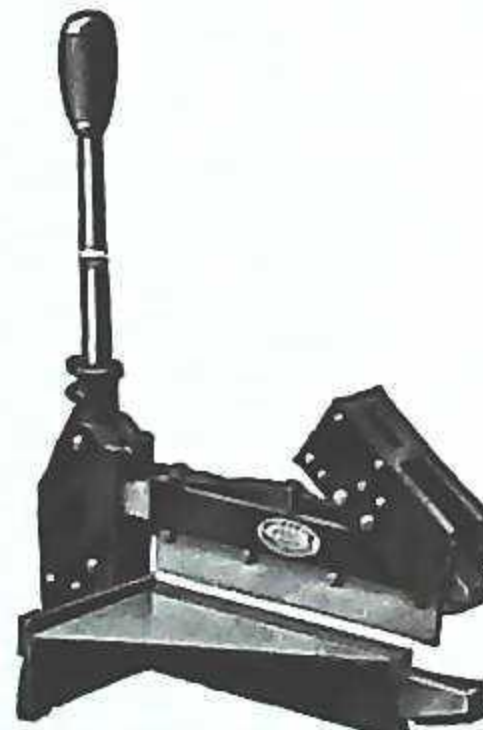


Fig. 2409

Weight, 9 pounds, 5 ounces.

Price.....each \$15.00

Clipper Belt Cutters

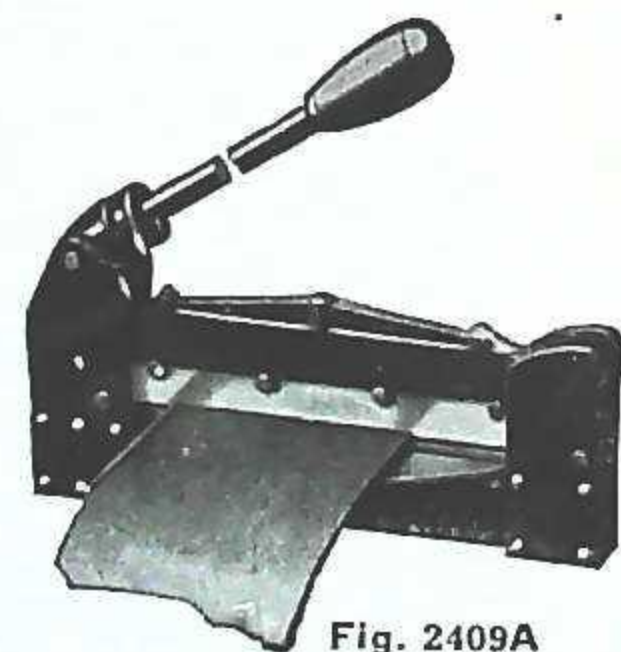


Fig. 2409A

Cuts and squares any make of belting or brake lining with metallic fibers up to 6 inches in width in one operation with a slight pressure on the handle. Weight, 9 pounds.

Price.....each \$12.00
 " Open End Model, for Cutting Belting from Roll....." 15.00

Clipper Belt Lacing Machines

Standard No. 3 Clipper Belt Lacers

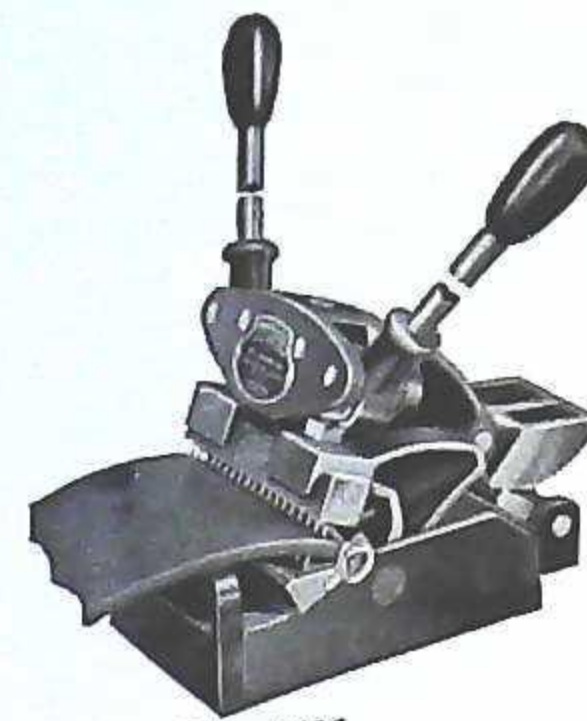


Fig. 2411

The No. 3 lacer weighs but 24 pounds, therefore can be carried to the belt and lacing made without removing the belt from the shaft.

Particularly adapted for belts up to six inches wide, but by repeating operation will lace wider belts.

No. 1 Lever Belt Lacer

For belts up to 2 inches in width and 3/8 inch in thickness. Especially adapted for use in textile establishments, watch and clock factories, garages, etc. Weight, 3 pounds.

Only No. 1 Clipper Belt Hooks can be used in Lever Belt Lacer No. 1.

Price, No. 1 Lacer.....each \$10.00
 Price, No. 1 Hooks.....per box .80

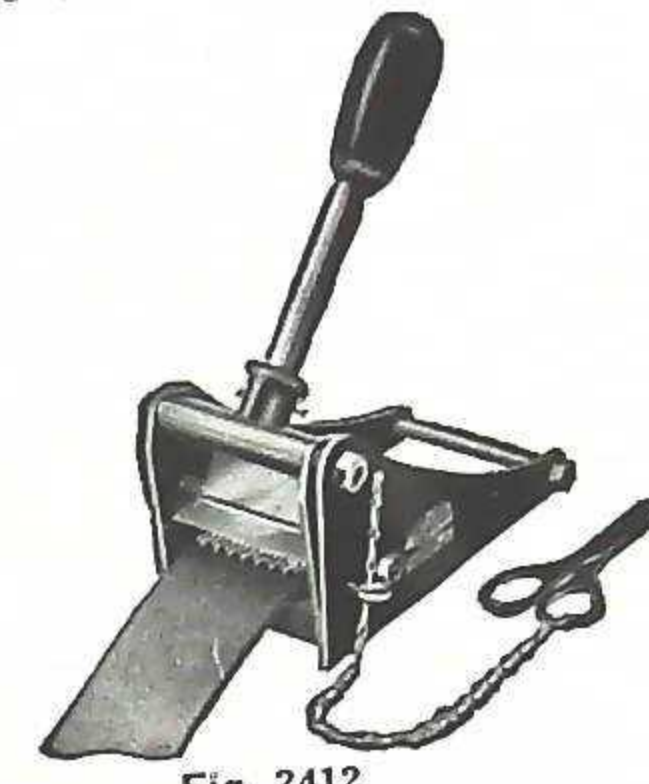


Fig. 2412

Clipper Vise Belt Lacers



Fig. 2413

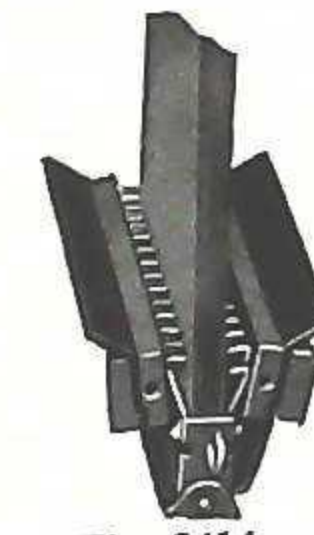


Fig. 2414

For use in any ordinary vise. No. 101 laces belts 3/8 inch thick to 2 inches wide; No. 0 laces belts up to 4 inches wide. Useful in tool rooms, garages, and small shops. Weight of No. 101, 3/4 pound; No. 0, 2 pounds.

Only No. 1 Clipper Belt Hooks can be used in No. 101 Belt Lacer.
 Price, No. 101 Lacer.....each \$2.50
 " " 1 Hooks.....per box .80
 " " 0 Lacer.....each 3.50
 " " 0 " Including One Box, Either Nos. 3 or 4 Carded Hooks.....each 4.35

The Clipper Joint

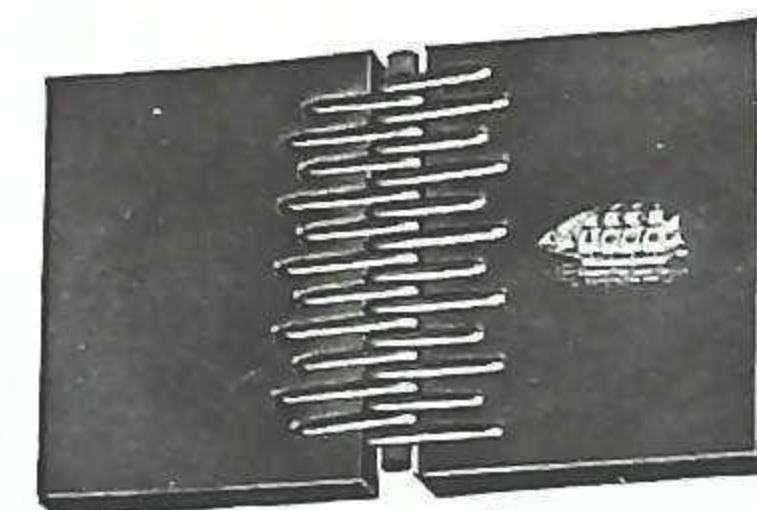


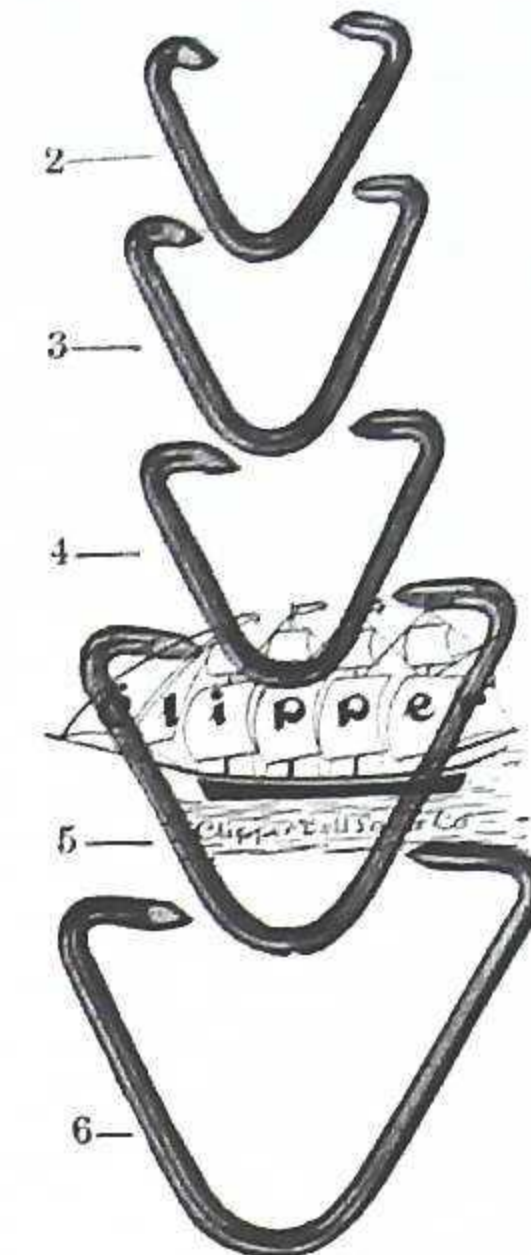
Fig. 2415

A smooth, flexible, durable joint that will not tear or pull out. Easily and rapidly applied.

Suitable for every kind of belting—leather, rubber, canvas, fabric, etc.—not exceeding 3/8 inch in thickness.

Clipper Belt Lacers are sold on 30 days' approval and guaranteed by the manufacturers, so long as genuine Clipper Belt Hooks are exclusively used in them.

Clipper Belt Lacing



Actual Size Fig. 2416

Clipper Belt Lacing makes an ideal hinge joint, far more flexible than the belt itself. The hooks are made from a special steel wire of an analysis that combines great tensile strength with rigidity and wearing qualities. Capable of standing a strain of over 400 pounds per square inch on single belt and more on double belts. These smooth, bright wire loops, bearing upon the connecting pin, make a joint not only pliable and strong, but safe.

Suitable for every kind of belting—leather, rubber, canvas, fabric, etc., not exceeding 3/8-inch in thickness.



Cross Section of Embedded Hook Before Joining



Joined

The secret of the success of Clipper Hooks lies in their design and the manner in which one hook is placed behind the other as shown in the illustration. While a powerful grip is thus secured, no belting fibres are cut or injured. The belt is not weakened at the joint.

Belt Hooks



Fig. 2417

Carded on paper for convenience in handling. The cards can be cut, without waste, to suit the width required for any belt. Each card holds 84 hooks.

Packed in boxes containing 12 cards (one size) and connecting pins—sufficient for lacing both ends of belt, total width 80 inches.

Selection of size is determined by the thickness of the belt.

No.	For	Price per Box
2	Thin Belts over Small Sized Pulley.....	\$0.80
3	" " " Medium ".....	.85
4	Belts not over 1/4-inch Thick.....	.85
5	" " " 3/8 ".....	1.00
6	" " " 1/2 ".....	1.35

Add \$1.00 for rust-proof hooks, per box; for Nos. 5 and 6 add \$1.25 per box.

Rawhide, Fibro and Special Pins



Fig. 2418

Twisted rawhide pins are for general requirements. Fibro (water-proof) pins are for use wherever there is moisture.

Specials are made of a specially treated friction resisting substance, will outwear any composition pins.

Packed in standard bundles containing 24 pins, 12 inches long.

Size No.	Diam. Inch	For	PRICE PER BUNDLE
			Fibro Rawhide Special
13	5/64	Very Thin Belts, Nos. 1, 2, and 3 Hooks.....	\$0.35 \$0.70 \$0.70
12	3/64	No. 4 Hooks.....	.35 .70 .70
11	5/64	" 5 ".....	.40 .80 .80
10	7/64	" 6 ".....	.45 .90 .90
9	9/64	" 6 ".....	.50 1.00 1.00
8	11/64	" 6 ".....	.60 1.20 1.20
7	13/64	Heavy Belts.....	.70 1.60 1.60
5	15/64	".....	.40 .75 .75

Assorted Sizes, Nos. 8-13.....

Detroit Belt Lacing and Closing Machines

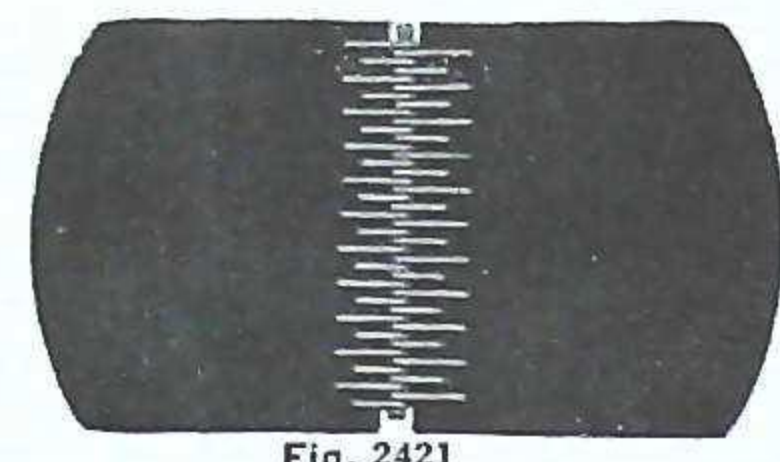
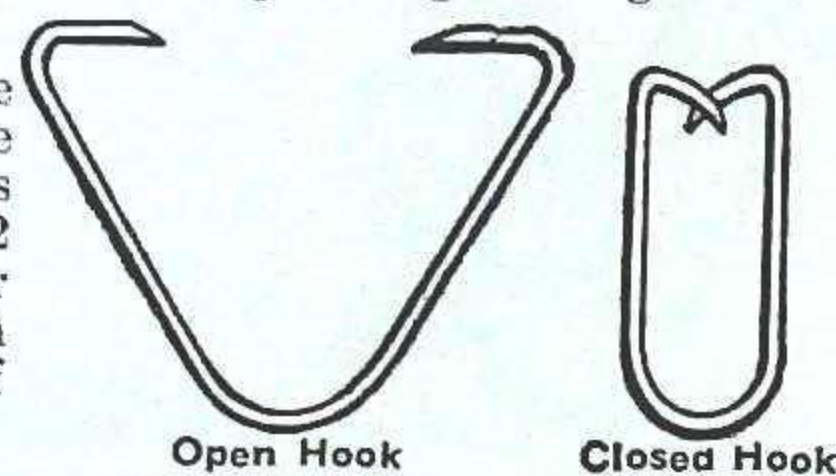


Fig. 2421

Detroit Belt Lacing shows the least reduction of belt strength, because it gives the least reduction of area possible consistent with tensile strength of joint.

Takes a perfectly staggered hold of belt by using a long hook, then a short hook. Each hook has an equal length of legs. Cannot pull out.

These belt lacers are put up 84 hooks to the section, full 12 inches long, and packed 12 sections in a box, or over 144 inches of lacing with six 12-inch lengths of Detroit-Bakelite pins.

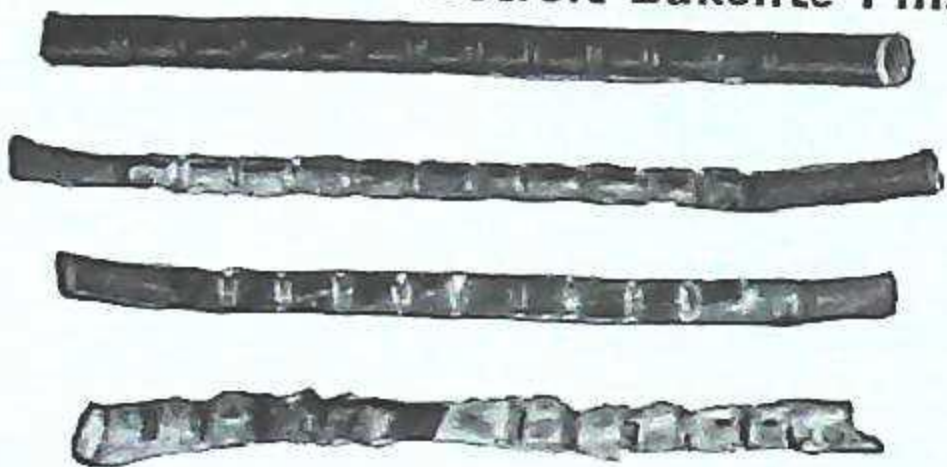


Open Hook Closed Hook

Twelve-inch strips cut without waste for any widths of belt. Detroit hooks, firmly mounted on rubberized paper, can be handled any number of times and cut with an ordinary knife without displacing a hook.

No.	For Kind of Belt	Price per Box	No.	For Kind of Belt	Price per Box
2	Very Light Single Belt	\$1.00	5	Light Double Belt	\$1.50
3	Light Single Belt	1.25	6	Heavy " "	1.75
4	Heavy " "	1.25	A	Asst'd 2, 3, 4, 5	1.50

Detroit-Bakelite Pins



A Bakelite Pin (Top) and 3 Rawhide Pins Tested Against It Fig. 2422

A great improvement over rawhide. A large percentage of belt lacing failures are due to the breaking of the rawhide pins. Detroit-Bakelite pins are water, oil and acid proof.

Will outwear from 3 to 8 rawhides. These pins are furnished with all Detroit Lace.

Extra Detroit-Bakelite Pins

Boxes contain 25 pins 12 inches long.

No.	Diam. Inches	Price per Box	No.	Diam. Inches	Price per Box
2	3/32	\$1.00	5	1/8	\$1.00
3	3/32	1.00	6	9/64	1.10
4	7/64	1.00	7	3/32	1.50

No. 6 Detroit Closing Machines

Built of high grade special steel and malleable iron.

The holder is removable for convenience in placing hooks.

Either handle operates the machine, leaving one hand free to hold the belt. Weight, 30 pounds. Price, No. 6

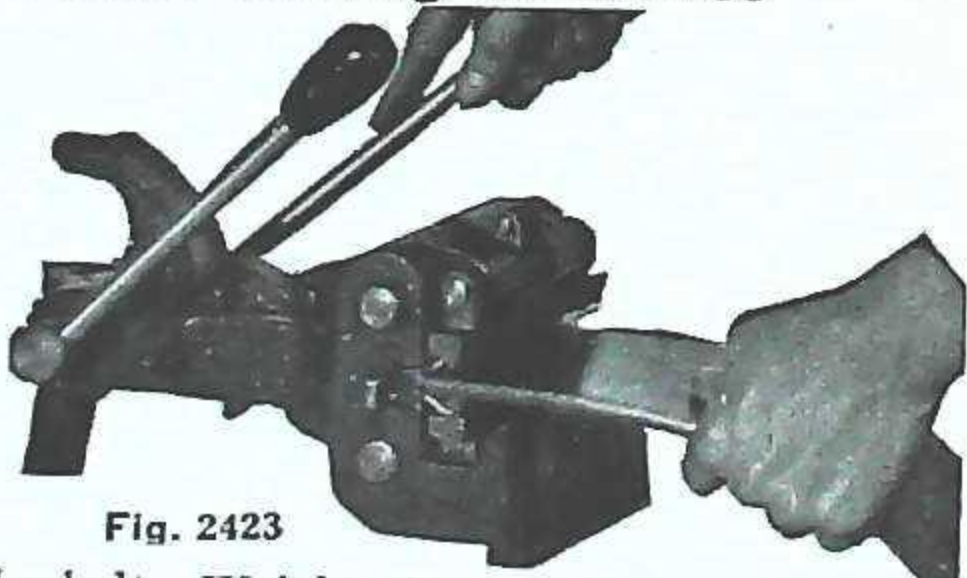


Fig. 2423

No. 4 Detroit Vise Tool

This tool is for use in an ordinary vise. A handy tool in any shop. It has enough spring to hold itself properly in place at all times.

It insures uniform work.

This tool is so constructed that the jaws always close evenly together.

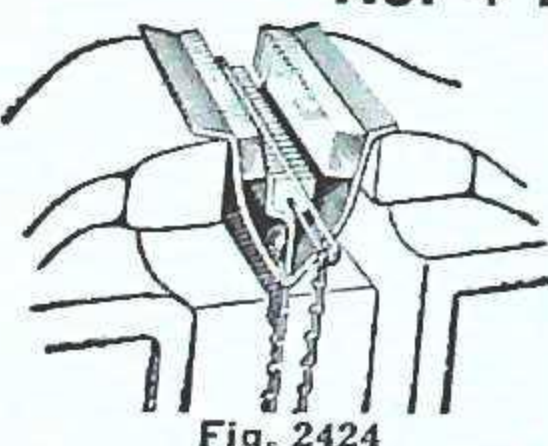


Fig. 2424

Will lace belts up to 4 inches in width.

Weight, 24 ounces.

Price, No. 4 each \$3.50
" with Assorted Box of Hooks " 5.00

Alligator Steel Belt Lacing

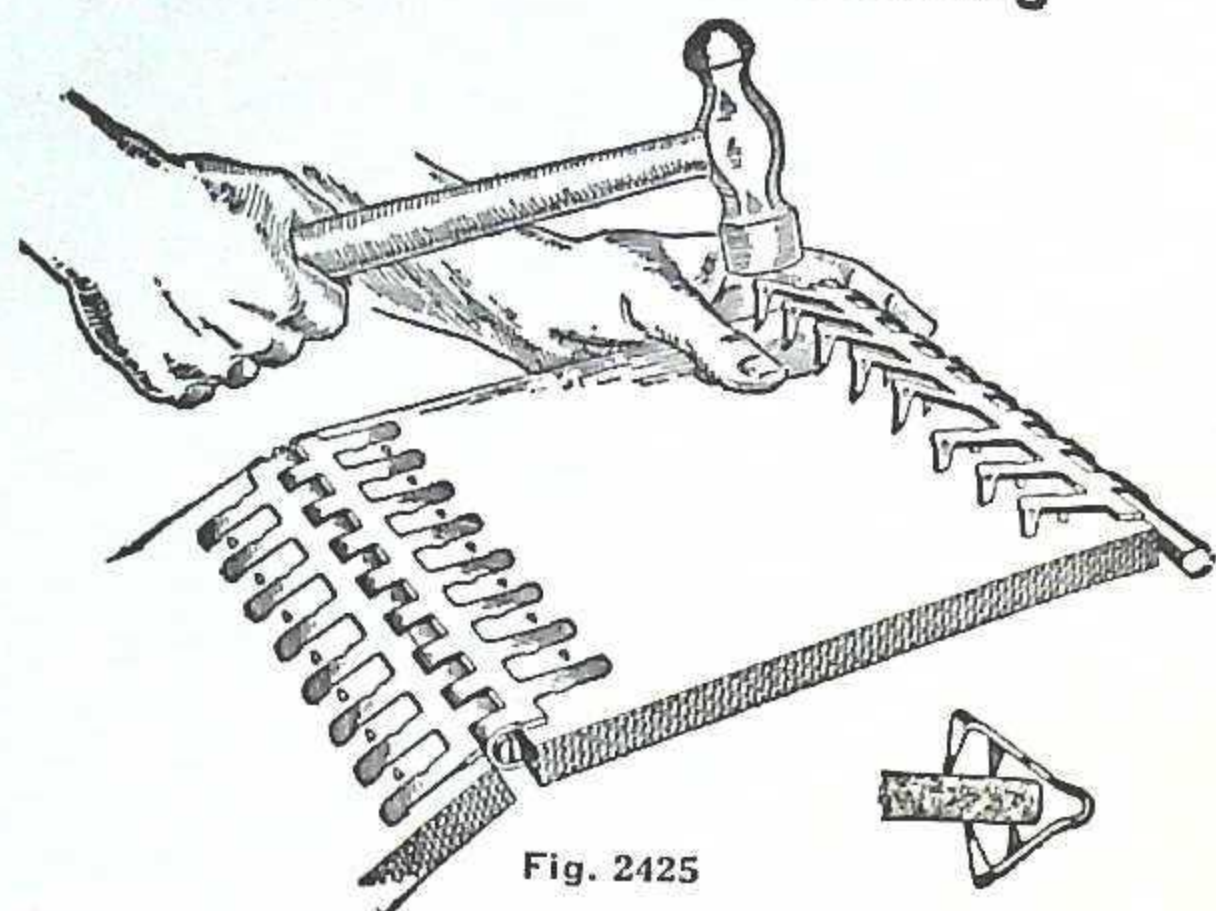


Fig. 2425

The Alligator Steel Belt Lacing is a smooth separable hinge joint of extreme strength which protects the ends of fabric belts and allows any belt to be used with an idler pulley.

In a working time of only three minutes the average belt can be laced with the Alligator Lacing. No special skill or training is needed. Any one can repair a break in almost no time at all. A hammer is all that is required.

Packed in boxes complete with gauge and hinge pins.

Lacing No.	Thickness of Belt Inches	Will Join in Width Inches	Length Section Inches	Price per Box
00	Up to 1/16	72	6	\$2.60
1	1/16	42	6	1.70
15	1/8	64	8	2.60
*S15	1/8	12	6	.55
20	3/32	60	12	2.60
F 25	3/32	48	8	2.50
G 25	3/32	96	12	5.00
*S25	3/32	12	6	.70
L 27	1/4	96	12	5.30
*S27	1/4	12	6	.75
M35	5/16	32	8	2.30
N 35	5/16	48	12	3.40
*S35	5/16	12	6	.95
U 45	3/8	48	12	4.50
W55	3/8	48	12	5.20
X 65	1/2	48	12	6.00
75	1/2	48	12	8.80

Sizes Nos. 75, 65 and 55 are packed only with sectional steel rocker hinge pins. Sizes Nos. 45, 35, 27, 25 and 20 are packed regularly with rocker hinge pins, but can be had with rawhide pins only if so specified. Sizes Nos. 15, 1 and 00 are packed only with rawhide hinge pins.

*These handy S packages are supplied to the dealer in cartons, each containing a single size; 10 of the small packages to the carton.

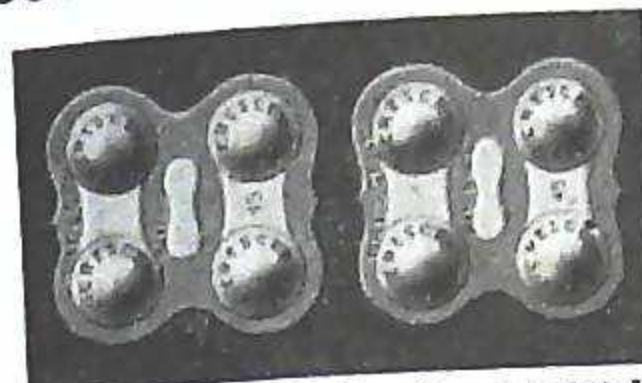
Extra Hinge Pins That Can Be Cut to Suit

Size Pin Inches	For Lacing No.	Length, Lacing, Inches	Price per Doz
No. 00	00	6	\$.40
1/16	1	6	.40
3/32	15	8	.60
1/8	20 and 25	8	.60
1/8	20 " 25	12	.90
9/64	27	12	1.00
3/32	35	8	.70
3/32	35	12	1.00
3/16	45	12	1.20

Fig. 2427

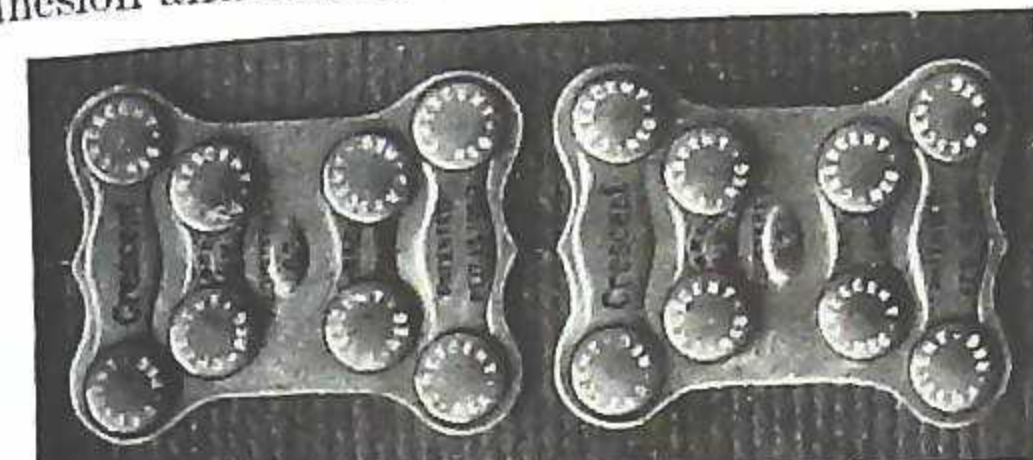
Size Pin Inches	For Lacing No.	Length, Lacing, Inches	Price per Doz
No. 25	20 and 25	12	\$.90
27	27	12	1.00
35	35	12	1.00
45	45	12	1.20
65	55 and 65	12	1.40
75	75	12	1.70

Crescent Belt Fastener Plates



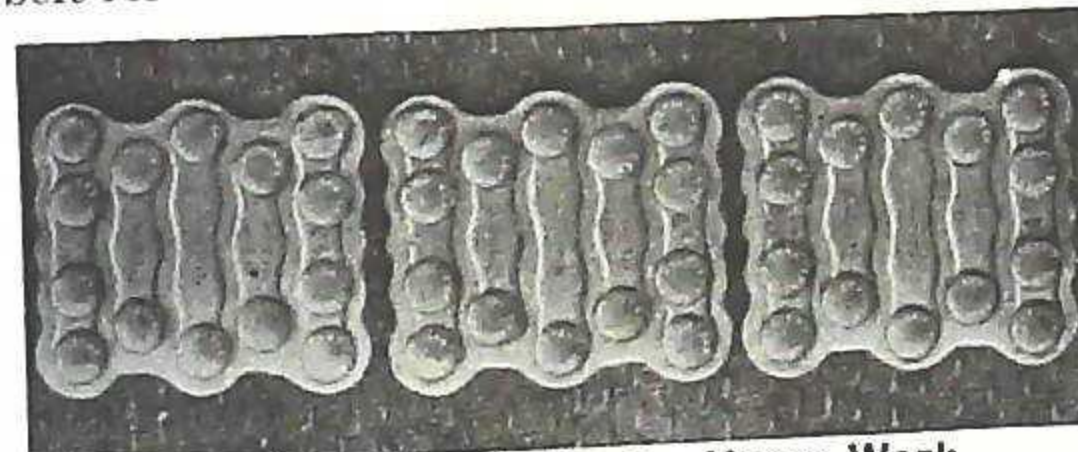
Crescent Short Grip, for Light Work Fig. 2431

The patented metallic Crescent Plates are re-enforced in construction and curved to fit the pulleys. The tight, snug hug of the Crescent joint on the pulleys gives uninterrupted, close adhesion and full transmission of all power.



Crescent Medium Grip, for General Work Fig. 2432

Crescent Plates are attached to belt with special self-piercing Crescent Rivets, which merely separate but do not cut the lengthwise, power-carrying belt fibers. Unlike lace leather, wire lace or other methods, Crescent Belt Fasteners do not remove any material, but preserve the full strength of the belt for the life of the belt.



Crescent Long Grip, for Heavy Work Fig. 2433

The illustrations show how the strain is equally distributed across the entire width of the belt, thus maintaining the maximum strength.

On the pulley side the finished joint is smooth, with the prongs of the Crescent Rivet imbedded firmly in the belt. No metal contacts with the pulley to wear or cause noise.

The illustrations above are considerably reduced and are not in proportionate sizes to each other.

Crescent Short Grip Plates for Light Work

Pulleys Three-inch Diameter or Larger

No.	For Belt Width, Inches	Price per Gross	No.	For Belt Width, Inches	Price per Gross
25	3/4-1	\$2.88	85	2 1/2	\$11.52
45	1 1/2	5.76	805	3	11.52
65	2	8.64	...	...	...

Crescent Medium Grip Plates for General Work

Pulleys Six-inch Diameter or Larger

No.	For Belt Width, Inches	Price per Gross	No.	For Belt Width, Inches	Price per Gross
67	1 1/2	\$8.64	107	3	\$14.40
607	2	8.64	127	3 1/2	17.28
87	2 1/2	11.52	147	4	20.16

Crescent Special Grip Plates for General Work

Pulleys Nine-inch Diameter or Larger

No.	For Belt Width, Inches	Price per Gross	No.	For Belt Width, Inches	Price per Gross
63	2	\$11.52	103	3	\$17.28
83	2 1/2	14.40	123	3 1/2	20.16

Crescent Long Grip Plates for Heavy Work

Pulleys Twelve-inch Diameter or Larger

No.	For Belt Width, Inches	Price per Gross	No.	For Belt Width, Inches	Price per Gross
109	2 1/2	\$17.28	1409	3 1/2	\$25.92
149	3	23.04	189	4	28.80

Crescent High Speed Plates for Light Work

Pulleys Two-inch Diameter or Larger

No.	For Belt Width, Inches	Price per Gross	No.	For Belt Width, Inches	Price per Gross
20	3/4-1	\$2.88	44	1 1/4	\$5.76
40	1	5.76	60	2	8.64
66	1 1/2-6	8.64	...	...	...

Crescent Jumbo Plates For Extra Heavy Work

Pulleys 24-inch Diameter or Larger

No.	For Belt Width, Inches	Price per Gross	No.	For Belt Width, Inches	Price per Gross
1011	2	\$23.04	2211	4	\$34.56
1611	3	28.80	...	...	...

For wider belts use two or more Crescent Plates of same grip.

Crescent Rivets for Attaching Crescent Plates

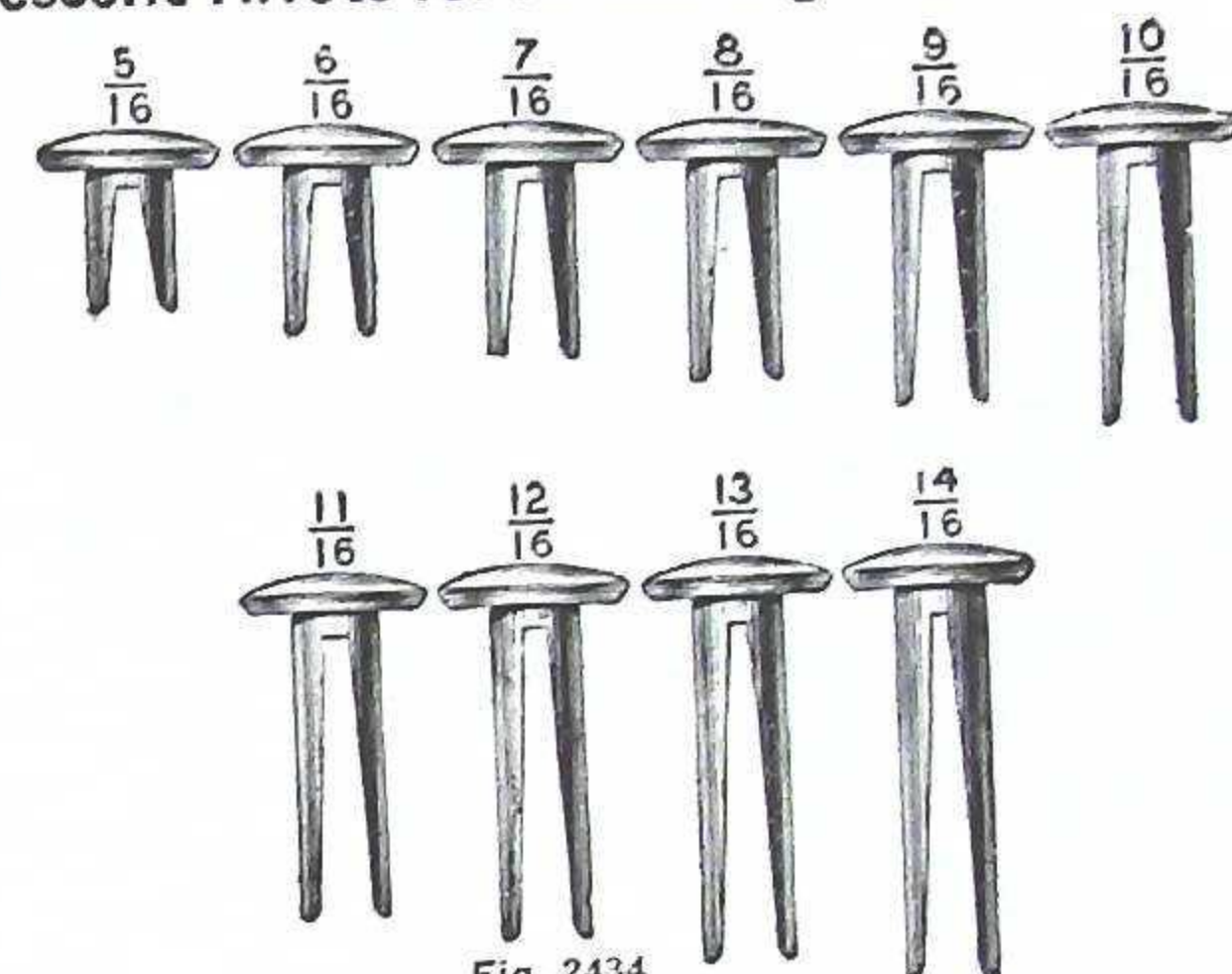


Fig. 2434

Large Shank Crescent Rivets, Actual Size

Double pronged, of special construction and special metal. Designed especially for attaching Crescent Plates. Crescent Rivets are self-piercing; require no punched holes; remove no material; do not weaken belt in any way. When clinched on pulley side the prongs of Crescent Rivets imbed themselves in the material so that no metal touches pulley.

Quantity Required to Attach One Gross Crescent Plates

No. of Plate	No. Gross Rivets	No. of Plate	No. Gross Rivets	No. of Plate	No. Gross Rivets
25	2	127	12	60	6
45	4	147	14	66	6
65	6	109	10	1011	10
85	8	149	14	1611	16
805	8	1409	14	2211	22
67	6	189	18	63	6
607	6	20	2	83	8
87	8	40	4	103	10
107	10	44	4	123	12

Large Shank Crescent Rivets for Attaching Short Grip, Medium Grip and Long Grip Crescent Plates

Length Inches	Thickness Belt Inches	Price per Gross	Length Inches	Thickness Belt Inches	Price per Gross
5/16	2/16	\$.70	10/16	7/16	\$.90
6/16	3/16	.70	11/16	8/16	1.00
7/16	4/16	.80	12/16	9/16	1.00
8/16	5/16	.80	13/16	10/16	1.10
9/16	6/16	.90	14/16	11/16	1.10

Use a size 3/16 inch longer than thickness of belt.

Small Shank Crescent Rivets for Attaching High Speed Crescent Plates

Length Inches	Thickness Belt Inches	Price per Gross	Length Inches	Thickness Belt Inches	Price per Gross
5/16	2/16	\$.50	8/16	5/16	\$.55
6/16	3/16	.50	9/16	6/16	.60
7/16	4/16	.55	10/16	7/16	.60

Use a size 3/16 inch longer than thickness of belt.

Crescent Jumbo Rivets for Attaching Crescent Jumbo Plates

Length Inches	Thickness Belt Inches	Price per Gross	Length Inches	Thickness Belt Inches	Price per Gross
10/16	5/16	\$1.25	14/16	9/16	\$1.55
11/16	6/16	1.40	15/16	10/16	1.70
12/16	7/16	1.40	16/16	11/16	1.70
13/16	8/16	1.55	18/16	12/16	1.85

Use a size 5/16 inch longer than thickness of belt.

No. 79 Crescent Rivet Extractors

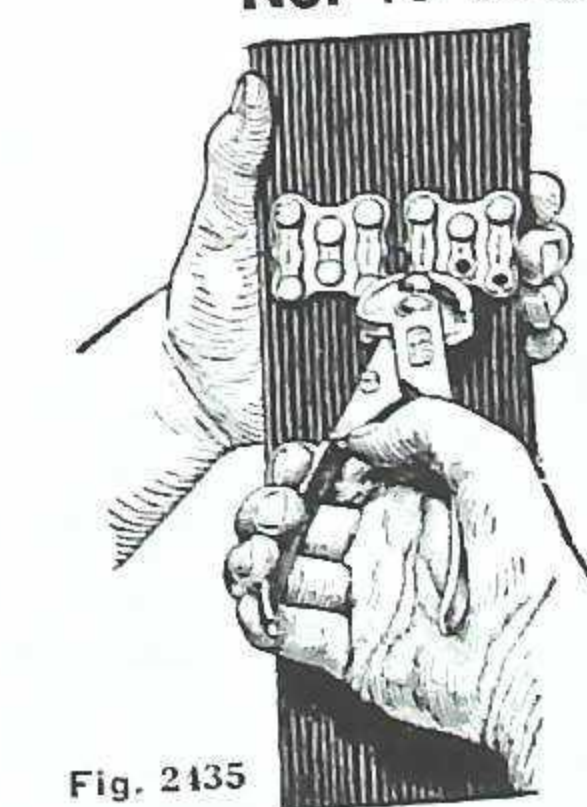


Fig. 2435

Crescent Rivets when used with Crescent Plates maintain the maximum strength of the belt at the joint. Disconnecting a belt for shortening or removing it is easily done by withdrawing the Crescent Rivets along one side of the joint only, using the Crescent Rivet Extractor. This is a specially designed tool with specially tempered nipping edges and jaws shaped to give a powerful fulcrum.

Length, 8 inches.

Weight, 13 ounces.

Price, No. 79 each \$1.00

Talcott's Clinching Belt Hooks

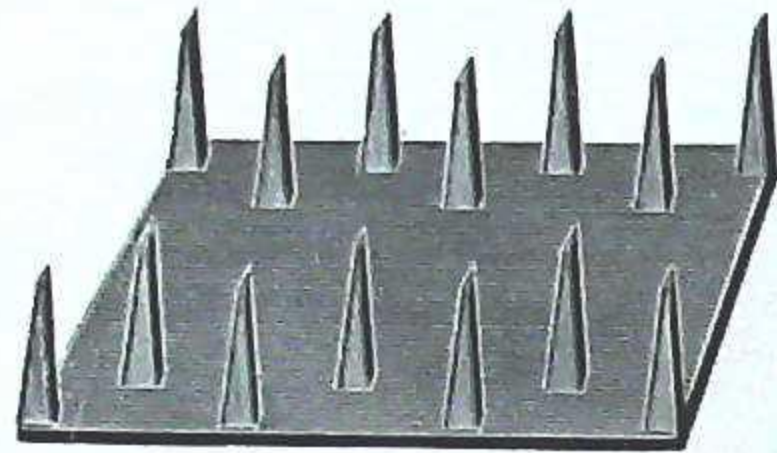


Fig. 2441

Nos. 31 to 43, 45 to 51, 53 to 56 and 45L to 51L are packed 100 in a package.
Nos. 57 to 59, 60 to 63 and 68 to 75 are packed 50 in a package.

For Single Leather Belts							
No.	For Belt In.	Price per 100	No.	For Belt In.	Price per 100	No.	For Belt In.
31	1 1/2	\$.75	34	1 1/2	\$1.50	38	2 1/2
31 1/2	3/4	.90	35	1 3/4	1.75	40	3
32	1	1.00	36	2	2.00	42	3 1/2
33	1 1/4	1.25	37	2 1/4	2.25	43	4

For Light Fabric Belts							
No.	For Belt In.	Price per 100	No.	For Belt In.	Price per 100	No.	For Belt In.
45	1 1/2	\$6.00	47	2 1/4	\$8.00	50	3 1/2
45 1/2	1 3/4	6.50	48	2 1/2	8.50	51	4
46	2	7.00	49	3	10.50		

For Medium Double Leather Belts							
No.	For Belt In.	Price per 100	No.	For Belt In.	Price per 100	No.	For Belt In.
53	1 1/2	\$3.50	56	2 1/2	\$5.00	59	4
54	2	4.00	57	3	6.00		
55	2 1/4	4.50	58	3 1/2	7.00		

For 4-ply Rubber or Fabric Belts							
No.	For Belt In.	Price per 100	No.	For Belt In.	Price per 100	No.	For Belt In.
45L	1 1/2	\$6.00	50L	3 1/2	\$14.00	62	3
46L	2	8.00	51L	4	16.00	63	4
48L	2 1/2	10.00	60	2	16.00		
49L	3	12.00	61	2 1/2	18.00		

For 5-ply and 6-ply Rubber or Fabric Belts							
No.	For Belt In.	Price per 100	No.	For Belt In.	Price per 100	No.	For Belt In.
68	2	\$16.00	70 1/2	3 1/2	\$24.00	74	3
69	2 1/2	18.00	71	4	26.00	74 1/2	3 1/2
70	3	22.00	72	2	18.00	75	4

Copper Rivets and Burrs

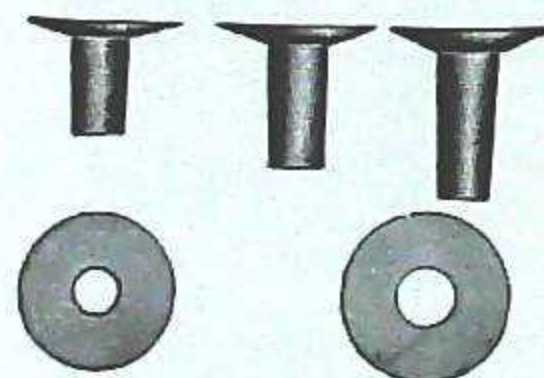


Fig. 2442

No.	PRICE, PER LB.		No.	PRICE, PER LB.	
	In 1 or 4 lb. Boxes	In 1/2 or 3/4 lb. Boxes		In 1 or 4 lb. Boxes	In 1/2 or 3/4 lb. Boxes
3 to 7	\$.49	\$.52	12	\$.58	\$.61
8	.50	.53	13	.60	.63
9	.52	.55	14	.65	.68
10	.54	.57	15	.70	.73
11	.56	.59	...	...	...

Stephenson Bar Belt Dressing



Fig. 2443

Clean to handle, easily applied, acts instantly, prevents slipping, and preserves belts.

Red Label Brand for leather belts; Green Label for rubber, canvas or Balata belts.

Put up in 1-pound bars, 12 to the box.

Size	Price per Box	Size	Price per Box	Size	Price per Box	Size	Price per Box
12 Lbs.	\$.50	50 Lbs.	\$.46	100 Lbs.	\$.44	200 Lbs.	\$.43
30 Lbs.	.48	72 Lbs.	.46	144 Lbs.	.43	300 Lbs.	.42

Round Belt Punches



Fig. 2444

Price, Nos.	1, 2, 3, 4, 5	per dozen	\$2.00
" " 6, 7, 8, 9	" " " " " "	" " " " " "	2.25
" " 10, 11, 12	" " " " " "	" " " " " "	3.25
" " 13, 14	" " " " " "	" " " " " "	6.00

Rivet Sets



Fig. 2445

No.	Size Hole Inches	For Iron Rivets Pounds	For Copper Rivets No.	Price per Dozen
00	5/16	14	..	\$18.00
0	3/8	10-12	5	18.00
1	1/2	8	6	15.00
2	3/4	6	7	15.00
3	9/16	4-5	8	12.00
4	1 1/8	2 1/2-3	9	12.00
5	1 1/4	2-3 1/4	10-11	7.20
6	1 1/2	1 1/4	12	7.20
7	1 3/4	1 1/8	13	6.00
8	1 7/8	10-12 oz.	14	6.00

Combination Belt Awl and Reamer

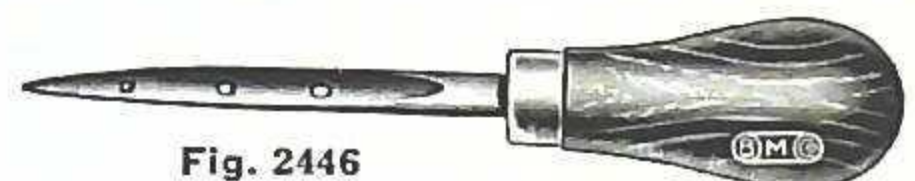


Fig. 2446

Blades forged of good tool steel, hardened and tempered, hollow ground, with four sharp edges, which serve as a reamer. For repairing belts, harness, etc.
Price..... each \$1.00

Combination Awls and Pliers



Fig. 2447

For use with belt studs.
Price..... each \$6.00

Rubber and Leather Belt Cutters



Fig. 2448

For use with belt studs.
Price, Cutters for Leather Belts..... each \$9.00
" " Rubber "..... each 1.25

LX Revolving Belt Punches

Price, Four Tube, Nos. 1, 3, 5 and 7... per doz. \$23.00

Price, Six Tube, Nos. 1, 2, 3, 4, 5 and 7... per doz. \$30.00

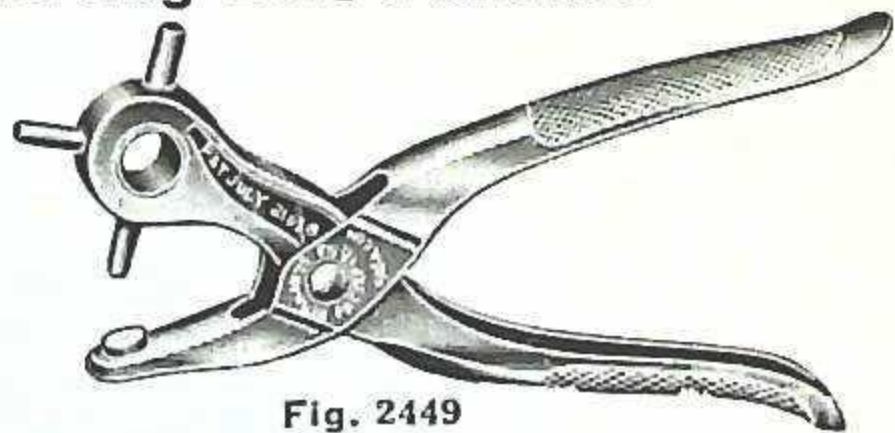


Fig. 2449

Johnson Washer Cutters

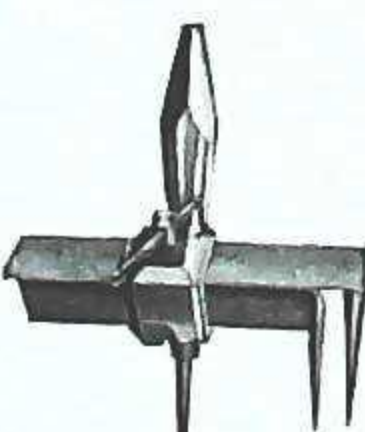


Fig. 2449A

No. 352 will cut washers 6 inches in diameter. No. 353 will cut washers 8 inches in diameter.

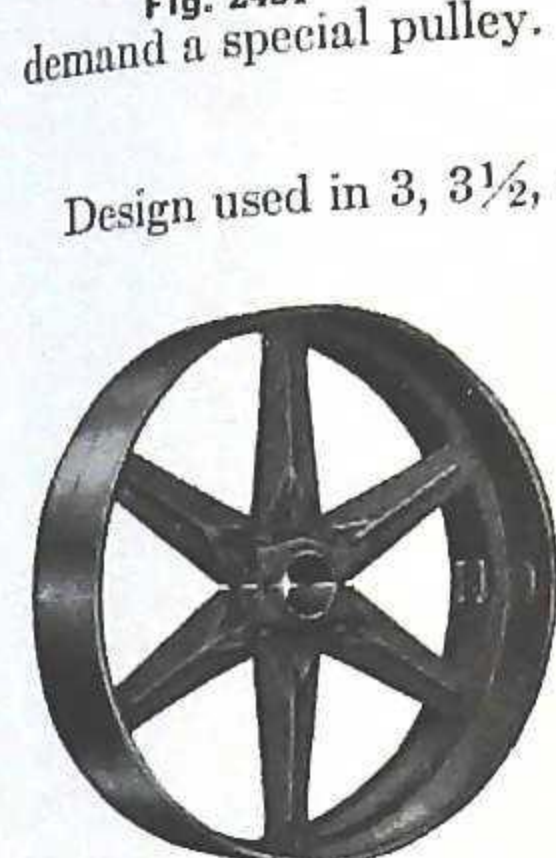
Packed six in a box.

Price, No. 352..... per dozen \$10.00
" " 353..... " 15.00

American Steel Split Pulleys



Small Diameter Pulley Fig. 2451



Heavy Pattern Six-arm Pulley Fig. 2453



Light Pattern Six-arm Pulley Fig. 2452



Large Double-arm Pulley Fig. 2454

The American Steel Split Pulley is designed so as to give maximum strength with minimum weight of material.

It consists of a light rim of 1-ply steel, made exceedingly stiff by interior flanges to which the arms are attached. The heavy rolled beads at the edges of the face likewise add materially to the strength of the rim. The arms—of patented construction—are flat, with their narrow edges cutting the atmosphere. They converge from near the extremities of the hub to the central flange of the rim, thus making an "A" frame of great strength.

These flat arms are corrugated to give them stiffness and strength. American Pulleys are safe at high speeds. They can be recommended for a peripheral speed of 110 feet per second. American Pulleys are guaranteed for double belt service. They are competent to perform any duty which does not demand a special pulley.

Small Diameter Pulleys

Design used in 3, 3 1/2, 4, 5 and 6-in. diameter.

These small pulleys are as perfect in their way as the larger American Pulleys. Furnished with either straight or crown faces.

Six-arm Pulleys

The lighter pattern is used on the smaller sizes and narrow faces; the heavier pattern on the larger sizes and wide faces.

Pulleys 44 to 120-inch diameter, inclusive, are regularly made with eight or more arms. The hub shell is solidly riveted to half an annular hub ring of angle section. The arms lap and are riveted through both laps to the annular hub ring.

Large Double Arm Pulleys

Especial attention is called to American Double and Triple Arm Pulleys which are supplied standard, as listed, where the width of face is considered too great for safety with single arms.

Note the turned-in flanges of the rim shown in illustration. These flanges, extending circumferentially round the inside of the rim, give a strength and rigidity impossible to attain in a rim made from a flat sheet of metal.

Where the duty is extreme and too severe for standard pulleys, special heavy duty pulleys may be supplied. Prices upon application.

DIAMETER	FACES												DIAMETER						
	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"		22"	24"	26"	28"	30"	32"	34"	36"
3"	NOT MADE AS A STANDARD												3"						
3 1/2"	NOT MADE AS A STANDARD												3 1/2"						
4"	NOT MADE AS A STANDARD												4"						
4 1/2"	NOT MADE AS A STANDARD												4 1/2"						
5"	NOT MADE AS A STANDARD												5"						
6"	NOT MADE AS A STANDARD												6"						
8"	NOT MADE AS A STANDARD												8"						
10"	NOT MADE AS A STANDARD												10"						
12"	NOT MADE AS A STANDARD												12"						
14"	NOT MADE AS A STANDARD												14"						
16"	NOT MADE AS A STANDARD												16"						
18"	NOT MADE AS A STANDARD												18"						
20"	NOT MADE AS A STANDARD												20"						
22"	NOT MADE AS A STANDARD												22"						
24"	NOT MADE AS A STANDARD												24"						
26"	NOT MADE AS A STANDARD												26"						
28"	NOT MADE AS A STANDARD												28"						
30"	NOT MADE AS A STANDARD												30"						
32"	NOT MADE AS A STANDARD												32"						
34"	NOT MADE AS A STANDARD												34"						
36"	NOT MADE AS A STANDARD												36"						
40"	NOT MADE AS A STANDARD												40"						
44"	NOT MADE AS A STANDARD												44"						
48"	NOT MADE AS A STANDARD												48"						
52"	NOT MADE AS A STANDARD												52"						
56"	NOT MADE AS A STANDARD												56"						
60"	NOT MADE AS A STANDARD												60"						
64"	NOT MADE AS A STANDARD												64"						
68"	NOT MADE AS A STANDARD												68"						
72"	NOT MADE AS A STANDARD												72"						
76"	NOT MADE AS A STANDARD												76"						
80"	NOT MADE AS A STANDARD												80"						
84"	NOT MADE AS A STANDARD												84"						
88"	NOT MADE AS A STANDARD												88"						
92"	NOT MADE AS A STANDARD												92"						
96"	NOT MADE AS A STANDARD												96"						
100"	NOT MADE AS A STANDARD												100"						
104"	NOT MADE AS A STANDARD												104"						
108"	NOT MADE AS A STANDARD												108"						
112"	NOT MADE AS A STANDARD												112"						
116"	NOT MADE AS A STANDARD												116"						
120"	NOT MADE AS A STANDARD												120"						

NOTE - IN ADDITION TO THE ABOVE, THE 3" AND 3 1/2" DIAMETER PULLEYS ARE MADE ON A 1 1/2" BORE, AND THE 4" AND 5" DIAMETER PULLEYS ARE MADE ON A 2" BORE.

American Steel Split Pulleys

American Steel Split Pulleys

Table with columns: Diam. In., Face In., Price Each. Rows include diameters 3, 3 1/2, 4, 5, 6, 7, 8, 9, 10, 11, 12.

Table with columns: Diam. In., Face In., Price Each. Rows include diameters 30, 40, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120.

American Steel Split Pulleys

American Steel Split Pulleys

Table with columns: Diam. In., Face In., Price Each. Rows include diameters 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120.

Table with columns: Diam. In., Face In., Price Each. Rows include diameters 90, 100, 110, 112, 114, 116, 118, 120.

List of Extras for Keyseating

Table with columns: Pulleys Inches, Face In., Price Each. Rows include diameters 3, 3 1/2, 4, 5, 6 to 24, Standard, 6 " 24 " Above 12.

*Each bushing. For intermediate sizes, not listed, prices upon application. For single and double flange pulleys, prices upon application.

American Steel Split Pulleys

Extras to Be Added to List Price For Bores Larger than Standard

For Pulleys Diam., In.	Face In.	When Made on Bore In.	Price Each	For Pulleys Diam., In.	Face In.	When Made on Bore In.	Price Each
12 to 24	Up to 12	4 7/8	\$2.92	36 to 48	Up to 16	8 1/2	\$13.15
12 " 24	Above 12	4 7/8	4.38	48 Above 16	8 1/2		17.51
25 " 30	4 to 8	4 7/8	3.65	50 " 60	Up to 16	6	5.84
32 " 36	4 " 6	4 7/8	3.65	50 " 60	Above 16	6	8.77
30 " 48	Up to 16	6	8.77	50 " 60	Up to 16	8 1/2	8.77
30 " 48	Above 16	6	13.15	50 " 60	Above 16	8 1/2	11.70

Pulleys 62 inches diameter, and above, made on 6 or 8 1/2 inch bore without extra charge.

To Find Horse Power Which an American Pulley Will Safely Transmit

Multiply the circumference of the pulley in ft., (C) by the number of revolutions per minute, (R) by the width of pulley face in inches, (W) by 125, and divide by 33,000. Thus:

$$\text{Horse Power} = \frac{C \times R \times W \times 125}{33,000}$$

In Ordering Pulleys

Specify diameter, face, bore or shaft size and whether crown or straight face.

If pulleys are ordered without either crown or straight face being specified, they will be supplied crown.

For non-shifting belts, crown faces are the best.

For tight and loose pulleys, crown faces are the best.

For shifting belts, straight faces should be used.

Actual Width of Pulleys Across Face

Diam. In.	FACES (NOMINAL WIDTH) INCHES										
	2	3	4	5	6	8	10	12	14	16	
3 and 3 1/2	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
4	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
5	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
6	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
7	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
8 and 9	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
10 " 11	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
12	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
13 to 16	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
17 " 19	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
20 " 23	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
24	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
25 to 28	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
30	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
32 to 34	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
36 " 42	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
44 " 48	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
50 " 72	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
74 " 88	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
90 " 112	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	
114 " 120	2 7/8	3 7/8	4 7/8	5 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	

Diam. In.	FACES (NOMINAL WIDTH) INCHES										
	18	20	22	24	26	28	30	32	34	36	
12	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
13 to 16	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
17 " 19	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
20 " 23	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
24	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
25 to 28	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
30	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
32 to 34	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
36 " 42	18 1/8	20 1/8	22 1/8	24 1/8	26 1/8	28 1/8	30 1/8	32 1/8	34 1/8	36 1/8	
44 " 48	19 1/8	21 1/8	23 1/8	25 1/8	27 1/8	29 1/8	31 1/8	33 1/8	35 1/8	37 1/8	
50 " 72	19 1/8	21 1/8	23 1/8	25 1/8	27 1/8	29 1/8	31 1/8	33 1/8	35 1/8	37 1/8	
74 " 88	19 1/8	21 1/8	23 1/8	25 1/8	27 1/8	29 1/8	31 1/8	33 1/8	35 1/8	37 1/8	
90 " 112	19 1/8	21 1/8	23 1/8	25 1/8	27 1/8	29 1/8	31 1/8	33 1/8	35 1/8	37 1/8	
114 " 120	19 1/8	21 1/8	23 1/8	25 1/8	27 1/8	29 1/8	31 1/8	33 1/8	35 1/8	37 1/8	

American Steel Split Pulley Bushings

Regular Split Bushings



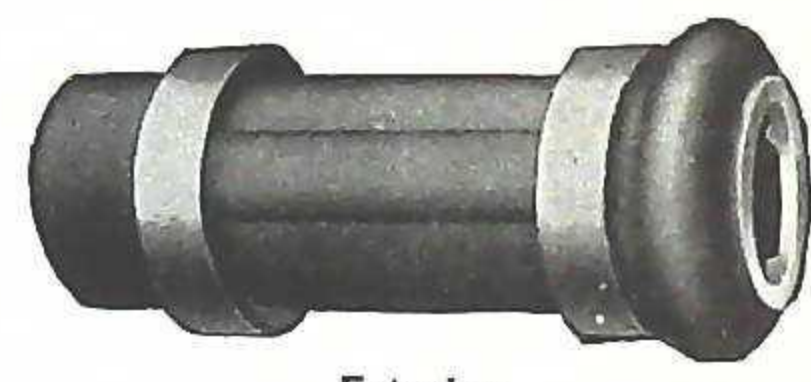
Fig. 2481

One regular split bushing is furnished with each pulley if necessary.

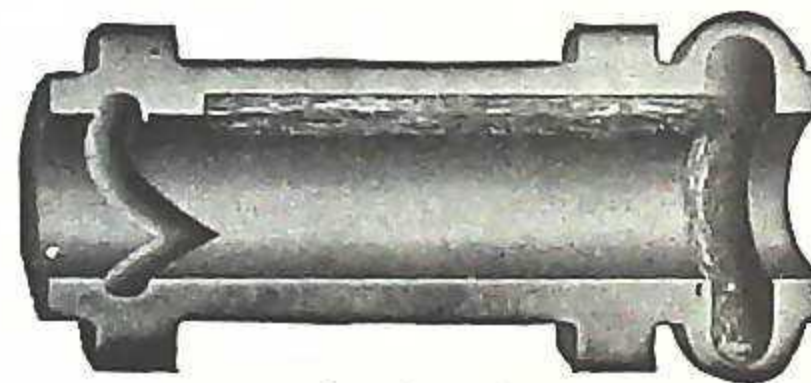
The following prices are for bushings when sold separately.

Price, Sizes up to and including 3 7/8-inch Outside Diameter by 4 1/2 or 5 1/2 Inches Long each \$1.12
 Price, Sizes above 3 7/8-inch Outside Diameter by 5 1/2 Inches Long each 2.00

Roberts' Patent Self-oiling Loose Bushings



Exterior Fig. 2482



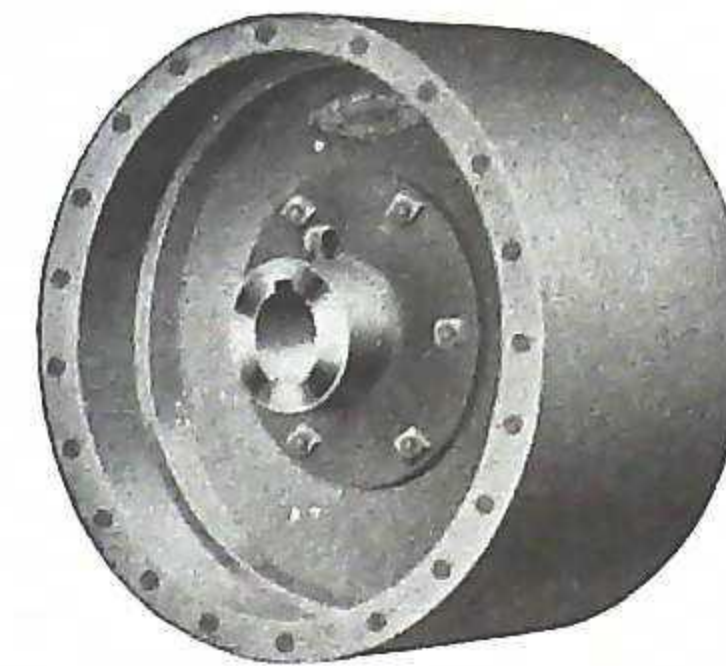
Sectional

By using Roberts' Self-oiling Loose Bushings, standard pulleys can readily be converted into loose pulleys. They are not furnished regularly and when ordered with pulleys, the following prices must be added to the pulley list.

Standard Outside Diameter of Bushing Corresponding to Bore of Pulleys Inches	Inside Bore of Bushings Inches	Length of Bushing without Oil Chamber Inches	For Pulley Face as Given in This Column	Price Each
1 7/8	1 1/2-1	2 1/2	2	\$1.75
1 7/8	1 1/2-1	2 1/2	3-4	2.00
2 1/2 Hub	1 1/2-1 1/2	3 1/2	3	2.25
2 1/2 Hub	1 1/2-1 1/2	3 1/2	4-5	2.50
1 5/8-3 1/2 Hub	1 1/2-1 1/2	4 9/16	5-6	3.40
2 7/8	1 1/2-2	3 3/4	3	2.75
2 7/8	1 1/2-2	4 5/8	4	3.10
2 7/8	1 1/2-2	4 5/8	5-6	3.40
2 7/8	1 1/2-2	4 7/8	4	3.10
2 7/8	1 1/2-2	5 7/8	5	3.65
2 7/8	1 1/2-2	6 7/8	6	5.10
2 7/8	1 1/2-2	8 7/8	8-10	6.00
3 7/8	1-2 3/4	4 7/8	4	3.60
3 7/8	1-2 3/4	5 7/8	5	4.75
3 7/8	1-2 3/4	6 7/8	6	5.90
4 1/2 and 5 1/2 Hub	1-2 3/4	8 7/8	8	6.70
4 1/2 and 5 1/2 Hub	1-2 3/4	8 7/8	10-12	8.30
4 1/2 and 5 1/2 Hub	1-2 3/4	8 7/8	6	6.80
4 1/2 and 5 1/2 Hub	1-2 3/4	9 1/8	8	8.50
6 1/2 and 8 1/2 Hub	1 1/4-3 1/2	9 1/8	10-12	9.60
6 1/2 and 8 1/2 Hub	1 1/4-3 1/2	9 1/8	14-16	9.60

*Collars are supplied to go between tight and loose pulleys.
 †Special collar, 1/8 inch wide.

Rockwood Paper Pulleys



Web Type Fig. 2491

Rockwood Paper Pulleys are for use on electric motors, generators, drop hammers, grinders, pulverizers, pumps and other belted machinery.

The use of these pulleys results directly in economy through the greater transmission of power.

The high coefficient of friction may be taken advantage of in any one of the following ways: reduced belt slippage, decreased belt tension, greater power transmission, lower cost of pulleys and belting.

The lighter tension on the belt reduces all strains, permitting lighter shafting, hangers, etc., and reduces consumption of oil and trouble resulting from hot bearings. There being minimum slippage of the belt, wear is decreased, and belt expense materially reduced.

Rockwood Paper Pulleys may be relied upon to transmit all the power a belt will carry without a tightener, the belt, not the pulley, being the limit.

As there are no shrinkage strains as in cast iron, or numerous pieces, as in wooden pulleys, they may be run at very high rates of speed with safety.

They are not injured by steam or atmospheric conditions, and are guaranteed to give entirely satisfactory service.

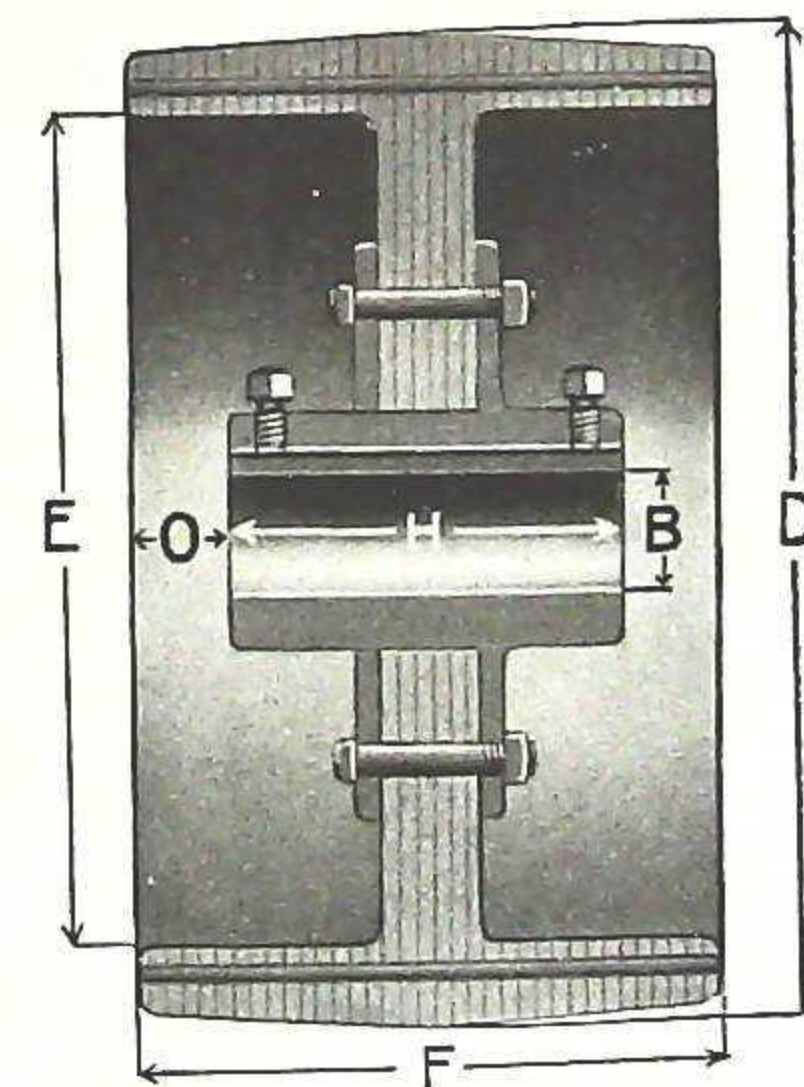


Diagram for Ordering

In ordering, give the following specifications: diameter (D), total width of face (F), width of belt, exact bore or shaft diameter (B), width and depth of keyway in pulley, length of pulley is to be used on a dynamo or motor, give dimension (H) for side of pulley next to bearing of machine. Also give kind of face, whether crown or straight and least allowable inside diameter of rim (E).

Paper pulleys are rounded at edges of rims and total width of face should exceed width of belt as follows: Up to 2 inches, plus 1/4 inch; 2 to 5 inches, plus 1/2 inch; 5 to 10 inches, plus 3/4 inch; 10 to 24 inches, plus 1 inch; 24 to 36 inches, plus 1 1/2 inches; above 36 inches, plus 2 inches.

If not otherwise specified, keyways are made straight and set screws placed over keyways.

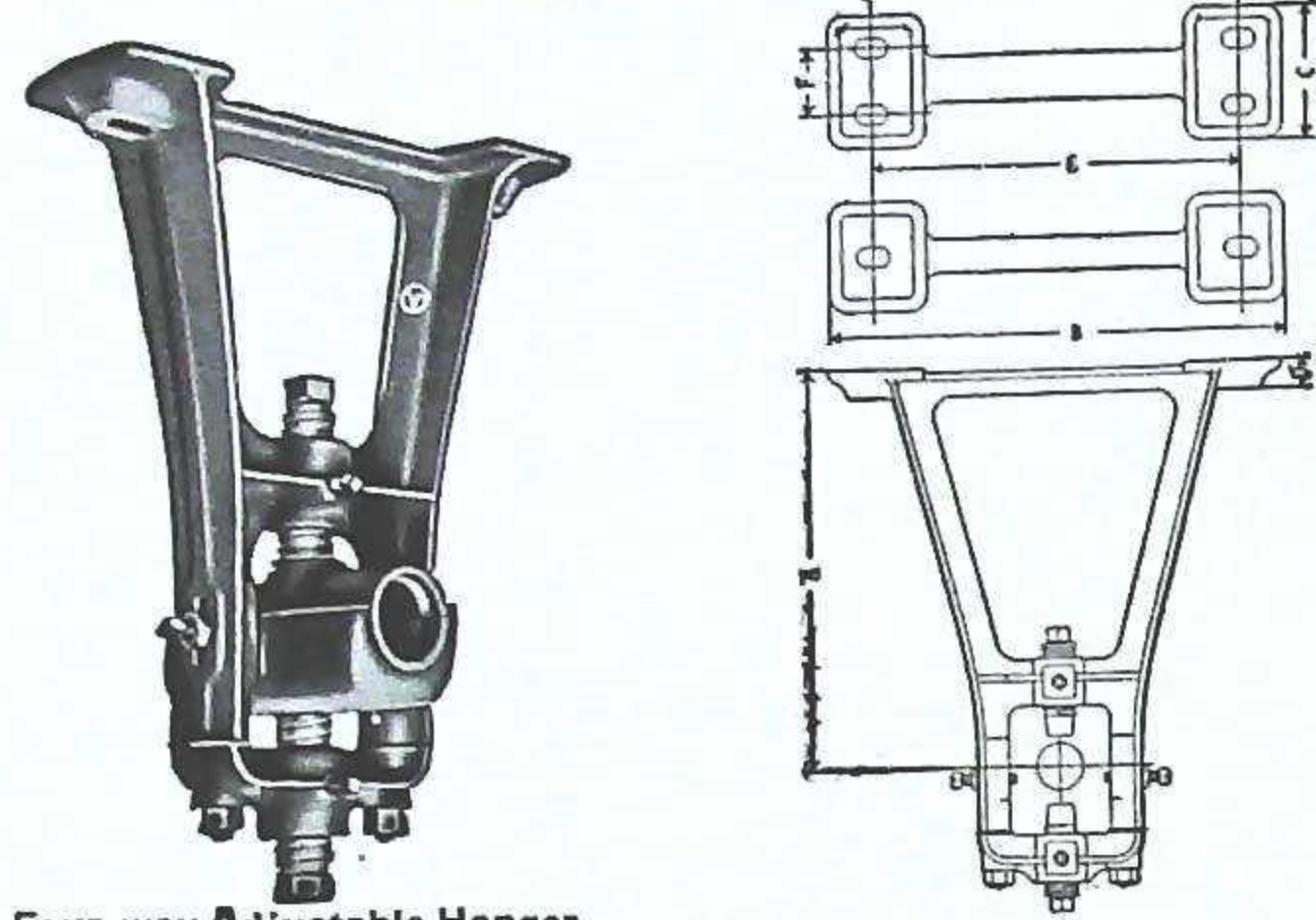
Special catalogue and prices upon application.

Rockwood Paper Pulleys

Standard Sizes

Diam. Inches	Face Inches	Width Belt Inches	Bore Inches	Diam. Inches	Face Inches	Width Belt Inches	Bore Inches	Price Double Belt Each	Diam. Inches	Face Inches	Width Belt Inches	Bore Inches	Price Double Belt Each
2	1 3/4	1 1/2	1 1/2	8	11	10	1 1/2	\$2.00	5	6	7	1 1/2	\$2.65
2	2 1/4	2	1 1/2	8	12	11	1 1/2	2.05	5	7	8	1 1/2	2.85
2	3 1/4	3	1 1/2	9	4 1/2	4	1 1/2	2.10	5	8	9	1 1/2	3.10
2 1/2	1 3/4	1 1/2	1 1/2	9	5 1/2	5	1 1/2	2.20	5	9	10	1 1/2	3.40
2 1/2	2 1/2	2	1 1/2	9	6 3/4	6	1 1/2	2.35	5	10	11	1 1/2	3.75
2 1/2	3 1/4	3	1 1/2	9	7 3/4	7	1 1/2	2.05	5 1/2	2	2	2.35	
2 1/2	4 1/4	4	1 1/2	9	8 3/4	8	1 1/2	2.10	5 1/2	3	3	2.40	
3	1 3/4	1 1/2	1 1/2	9	9 3/4	9	1 1/2	2.15	5 1/2	4	4	2.45	
3	2 1/4	2	1 1/2	9	10 3/4	10	1 1/2	2.25	5 1/2	5	5	2.55	
3	3 1/4	3	1 1/2	9	11 3/4	11	1 1/2	2.40	5 1/2	6	6	2.70	
3	4 1/4	4	1 1/2	9	12 3/4	12	1 1/2	2.10	5 1/2	7	7	2.90	
3	5 1/4	5	1 1/2	9	13 3/4	13	1 1/2	2.15	5 1/2	8	8	3.15	
3 1/2	1 3/4	1 1/2	1 1/2	10	4 1/2	4	1 1/2	2.20	5 1/2	9	9	3.45	
3 1/2	2 1/4	2	1 1/2	10	5 1/2	5	1 1/2	2.30	5 1/2	10	10	3.80	
3 1/2	3 1/4	3	1 1/2	10	6 3/4	6	1 1/2	2.45	5 1/2				

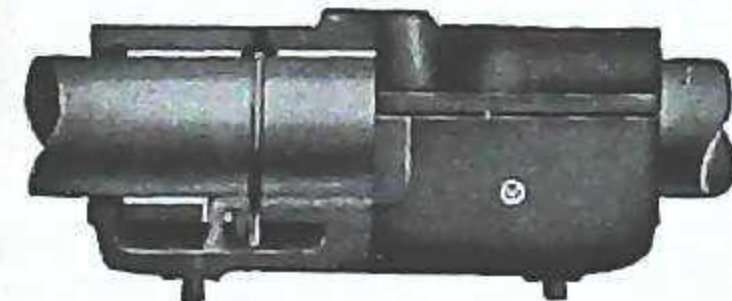
Hercules Duplex Adjustable Ball and Socket Hangers



Four-way Adjustable Hanger Fig. 2501

This hanger has two-inch vertical and one-half inch side adjustment. Length of bearings four diameters of shafts. The cut illustrates clearly the duplex or union system of oiling, a combination of centrifugal and capillary attraction, effected by tempered steel rings and woven cotton wick, guaranteeing thorough distribution of lubricant and precluding slightest possibility of dry bearings so long as any oil remains in the reservoir or oil chamber, one filling of which should admit of shaft running from six to twelve months.

On each end of bearing effective wipers are cast (springs and other portable and fragile devices eliminated) for scraping off and returning to reservoir any and all surplus oil, thereby preventing its following shaft and dropping on floors as is



Hercules Duplex Oiling Boxes

so frequently the case with spring wipers and similarly constructed devices.

A good grade of babbitt is used and, the box is run over special devices and then machine broached to guarantee a minimum friction bearing.

DIMENSIONS, INCHES									
Size Shaft In.	A Drop In.	Lgth. Boxes In.	Base B In.	E In.	F In.	BOLT HOLES	No.	Price Each	Size In.
13/16	7 to 9	5	12	8 5/8	...	...	2	\$4.60	7/16
13/16	10 " 12	5	13 5/8	10 3/8	...	...	2	5.00	7/16
13/16	13 " 15	5	15 1/4	11 3/4	...	...	2	5.40	7/16
13/16	16 " 18	5	16 7/8	13 3/8	...	...	2	5.90	7/16
17/16	7 " 9	6	13 1/4	9 1/2	...	...	2	5.20	5/8
17/16	10 " 12	6	14 3/8	10 5/8	...	...	2	5.60	5/8
17/16	13 " 15	6	15 1/2	11 5/8	...	...	2	6.20	5/8
17/16	16 " 18	6	16 5/8	13	...	...	2	6.70	5/8
17/16	19 " 21	6	17 7/8	14 3/8	...	...	2	7.40	5/8
17/16	23 " 25	6	22	18	2 1/2	4	4	8.25	5/8
11 1/16	7 " 9	7	13 1/4	9 1/2	...	...	2	5.70	5/8
11 1/16	10 " 12	7	14 3/8	10 5/8	...	...	2	6.00	5/8
11 1/16	13 " 15	7	15 1/2	11 5/8	...	...	2	6.70	5/8
11 1/16	16 " 18	7	16 5/8	13	...	...	2	7.20	5/8
11 1/16	19 " 21	7	17 7/8	14 3/8	...	...	2	7.90	5/8
11 1/16	23 " 25	7	22	18	2 1/2	4	4	8.75	5/8
11 1/16	7 " 9	8 1/4	14 5/8	10 5/8	...	...	2	7.25	5/8
11 1/16	10 " 12	8 1/4	16 3/8	12 3/8	...	...	2	7.75	5/8
11 1/16	13 " 15	8 1/4	17 3/8	13 3/8	...	...	2	8.35	5/8
11 1/16	16 " 18	8 1/4	18 3/8	14 3/8	...	...	2	9.00	5/8
11 1/16	19 " 21	8 1/4	19 3/8	15 3/8	...	...	2	9.75	5/8
11 1/16	23 " 25	8 1/4	22	18	3 1/4	4	4	10.50	5/8
11 1/16	28 " 30	8 1/4	30	25 3/4	3 1/4	4	4	13.50	5/8
23/16	7 " 9	9 1/4	14 5/8	10 5/8	...	...	2	8.25	5/8
23/16	10 " 12	9 1/4	16 3/8	12 3/8	...	...	2	8.75	5/8
23/16	13 " 15	9 1/4	17 3/8	13 3/8	...	...	2	9.35	5/8
23/16	16 " 18	9 1/4	18 3/8	14 3/8	...	...	2	10.00	5/8
23/16	19 " 21	9 1/4	19 3/8	15 3/8	...	...	2	10.75	5/8
23/16	23 " 25	9 1/4	22	18	3 1/4	4	4	11.50	5/8
23/16	28 " 30	9 1/4	30	25 3/4	3 1/4	4	4	14.50	5/8
27/16	7 " 9	10	16 5/8	12 3/8	...	...	2	10.20	3/4
27/16	10 " 12	10	17 7/8	13 3/8	...	...	2	11.00	3/4
27/16	13 " 15	10	19 1/8	14 3/8	...	...	2	12.00	3/4

Hercules Duplex Adjustable Ball and Socket Hangers

Continued									
Size Shaft In.	A Drop In.	Lgth. Boxes In.	Base B In.	E In.	F In.	BOLT HOLES	No.	Price Each	Size In.
27/16	16 to 18	10	20 3/8	15 7/8	...	...	2	\$13.00	3/4
27/16	19 " 21	10	21 5/8	17 1/8	...	...	2	14.00	3/4
27/16	23 " 25	10	26 5/8	22 1/4	3	4	4	15.50	3/4
27/16	28 " 30	10	30	25 1/2	3	4	4	18.50	3/4
27/16	34 " 36	10	34	29 1/2	3	4	4	22.00	3/4
21 1/16	7 " 9	11 1/8	16 5/8	12 3/8	...	...	2	11.45	3/4
21 1/16	10 " 12	11 1/8	17 7/8	13 7/8	...	...	2	12.25	3/4
21 1/16	13 " 15	11 1/8	19 1/8	14 7/8	...	...	2	13.25	3/4
21 1/16	16 " 18	11 1/8	20 3/8	15 7/8	...	...	2	14.25	3/4
21 1/16	19 " 21	11 1/8	21 5/8	17 1/8	...	...	2	15.25	3/4
21 1/16	23 " 25	11 1/8	26 5/8	22 1/4	3	4	4	16.75	3/4
21 1/16	28 " 30	11 1/8	30	25 1/2	3	4	4	19.75	3/4
21 1/16	34 " 36	11 1/8	34	29 1/2	3	4	4	23.25	3/4
21 5/16	7 " 9	12 1/4	18 3/8	13 3/8	...	...	2	14.50	7/8
21 5/16	10 " 12	12 1/4	19 9/16	14 3/4	...	...	2	15.50	7/8
21 5/16	13 " 15	12 1/4	20 7/8	15 7/8	...	...	2	17.00	7/8
21 5/16	16 " 18	12 1/4	22 1/8	17 1/8	...	...	2	18.50	7/8
21 5/16	19 " 21	12 1/4	23 1/4	18 3/8	...	...	2	20.00	7/8
21 5/16	23 " 25	12 1/4	28 5/8	23 3/8	3 1/4	4	4	21.50	7/8
21 5/16	28 " 30	12 1/4	31 5/8	26 7/8	3 1/4	4	4	25.00	7/8
21 5/16	34 " 36	12 1/4	36	31 1/8	3 1/4	4	4	29.00	7/8
33/16	7 " 9	13 1/4	18 3/8	13 3/8	...	...	2	16.00	7/8
33/16	10 " 12	13 1/4	19 9/16	14 3/4	...	...	2	17.00	7/8
33/16	13 " 15	13 1/4	20 7/8	15 7/8	...	...	2	18.50	7/8
33/16	16 " 18	13 1/4	22 1/8	17 1/8	...	...	2	20.00	7/8
33/16	19 " 21	13 1/4	23 1/4	18 3/8	...	...	2	21.50	7/8
33/16	23 " 25	13 1/4	28 5/8	23 3/8	3 1/4	4	4	23.00	7/8
33/16	28 " 30	13 1/4	31 5/8	26 7/8	3 1/4	4	4	26.50	7/8
33/16	34 " 36	13 1/4	36	31 1/8	3 1/4	4	4	30.50	7/8
37/16	10 " 12	14 1/4	21 1/2	16 1/4	...	...	2	22.50	7/8
37/16	13 " 15	14 1/4	22 1/2	17	...	...	2	23.50	7/8
37/16	16 " 18	14 1/4	23 1/2	18	...	...	2	25.50	7/8
37/16	19 " 21	14 1/4	24 1/2	19	...	...	2	27.00	7/8
37/16	23 " 25	14 1/4	29 1/2	24	...	...	2	29.50	7/8
37/16	28 " 30	14 1/4	32 1/2	27	...	...	2	33.00	7/8
37/16	34 " 36	14 1/4	36	30 1/2	...	...	2	37.00	7/8
31 1/16	10 " 12	15	21 1/2	16 3/4	...	...	2	24.50	7/8
31 1/16	13 " 15	15	22 1/2	17	...	...	2	25.50	7/8
31 1/16	16 " 18	15	23 1/2	18	...	...	2	27.50	7/8
31 1/16	19 " 21	15	24 1/2	19	...	...	2	29.00	7/8
31 1/16	23 " 25	15	29 1/2	24	...	...	2	31.50	7/8
31 1/16	28 " 30	15	32 1/2	27	...	...	2	35.00	7/8
31 1/16	34 " 36	15	36	30 1/2	...	...	2	39.00	7/8
31 5/16	10 " 12	16 1/4	23 1/2	17 1/2	...	...	2	29.00	7/8
31 5/16	13 " 15	16 1/4	24 1/2	18 1/2	...	...	2	31.00	7/8
31 5/16	16 " 18	16 1/4	25 1/2	19 1/2	...	...	2	33.00	7/8
31 5/16	19 " 21	16 1/4	26 1/2	20 1/2	...	...	2	35.50	7/8
31 5/16	23 " 25	16 1/4	30 1/4	24 1/4	...	...	2	38.50	7/8
31 5/16	28 " 30	16 1/4	33	27	...	...	2	42.00	7/8
31 5/16	34 " 36	16 1/4	36	30	...	...	2	47.00	7/8
43/16	10 " 12	17	23 1/2	17 1/2	...	...	2	31.00	7/8
43/16	13 " 15	17	24 1/2	18 1/2	...	...	2	33.00	7/8
43/16	16 " 18	17	25 1/2	19 1/2	...	...	2	35.00	7/8
43/16	19 " 21	17	26 1/2	20 1/2	...	...	2	37.50	7/8
43/16	23 " 25	17	30 1/4	24 1/4	...	...	2	40.50	7/8
43/16	28 " 30	17	33	27	...	...	2	44.00	7/8
43/16	34 " 36	17	36	30	...	...	2	49.00	7/8
47/16	10 " 12	18	26 3/4	20 1/2	...	...	2	40.00	7/8
47/16	13 " 15	18	28 1/4	22 1/4	...	...	2	43.00	7/8
47/16	16 " 18	18	30	23 3/4	...	...	2	46.00	7/8
47/16	19 " 21	18	31 1/2	25 3/8	...	...	2	49.00	7/8
47/16	23 " 25	18	33 1/2	27 1/2	...	...	2	54.00	7/8
47/16	28 " 30	18	36 1/2	30	...	...	2	60.00	7/8
47/16	34 " 36	18	39 1/2	33 1/4	...	...	2	70.00	7/8
41 1/16	10 " 12	19	27	21	...	...	2	43.00	7/8
41 1/16	13 " 15	19	28 1/4	22 1/4	...	...	2	46.00	7/8
41 1/16	16 " 18	19	30	23 3/4	...	...	2	49.00	7/8
41 1/16	19 " 21	19	31 1/2	25 3/8	...	...	2	52.00	7/8
41 1/16	23 " 25	19	33 3/4	27 1/2	...	...	2	57.00	7/8
41 1/16	28 " 30	19	36 1/2	30	...	...	2	63.00	7/8
41 1/16	34 " 36	19	39 1/2	33 1/4	...	...	2	73.00	7/8
41 5/16	10 " 12	20	27	21	...	...	2	45.00	7/8
41 5/16	13 " 15	20	28 1/4	22 1/4	...	...	2	48.00	7/8
41 5/16	16 " 18	20	30	23 3/4	...	...	2	51.00	7/8
41 5/16	19 " 21	20	31 1/2	25 3/8	...	...	2	54.00	7/8
41 5/16	23 " 25	20	33 3/4	27 1/2	...	...	2	59.00	7/8
41 5/16	28 " 30	20	36 1/2	30	...	...	2	65.00	7/8
41 5/16	34 " 36	20	39 1/2	33 1/4	...	...	2	75.00	7/8

Pioneer Safety Steel Drop Shaft Hangers With Ring Oiling Bearings

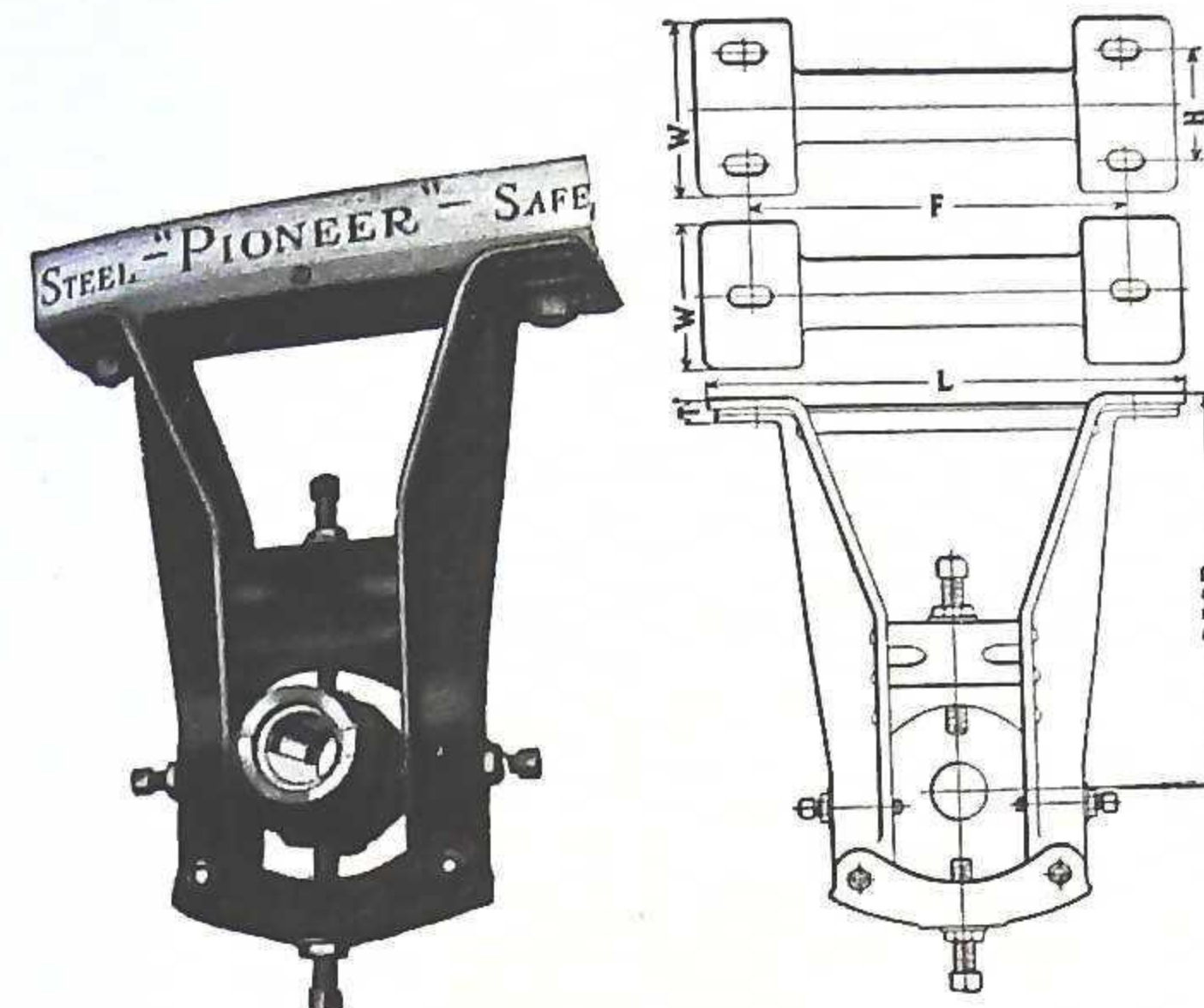


Fig. 2511

Size Shaft, In.	Drop Inches	DIMENSIONS, INCHES					Bolts No.	Size In.
		*F	*L	T	W	H		
15/16	5 1/2 to 6 1/4	10	12 5/8	7/16	5 1/4	...	2	5/8
15/16	7 " 9	10 1/4	12 1/2	7/16	5 1/4	...	2	5/8
15/16	10 " 12	12 1/2	15 1/4	1/2	5 1/2	...	2	5/8
15/16	14 " 16	14 1/8	16 3/4	1/2	5 1/2	...	2	5/8
15/16	18 " 20	17 3/8	20	1/2	5 1/2	3 1/16	4	1 1/2
13/16	5 1/2 " 6 1/4	10	12 5/8	7/16	5 1/4	...	2	5/8
13/16	7 " 9	10 1/4	12 1/2	7/16	5 1/4	...	2	5/8
13/16	10 " 12	12 1/2	15 1/4	1/2	5 1/2	...	2	5/8
13/16	14 " 16	14 1/8	16 3/4	1/2	5 1/2	...	2	5/8
13/16	18 " 20	17 3/8	20	1/2	5 1/2	3 1/16	4	1 1/2
17/16	5 1/2 " 6 1/4	10	12 5/8	7/16				

Pioneer Safety Steel Post and Wall Bracket Shaft Hangers

With Ring Oiling Bearings

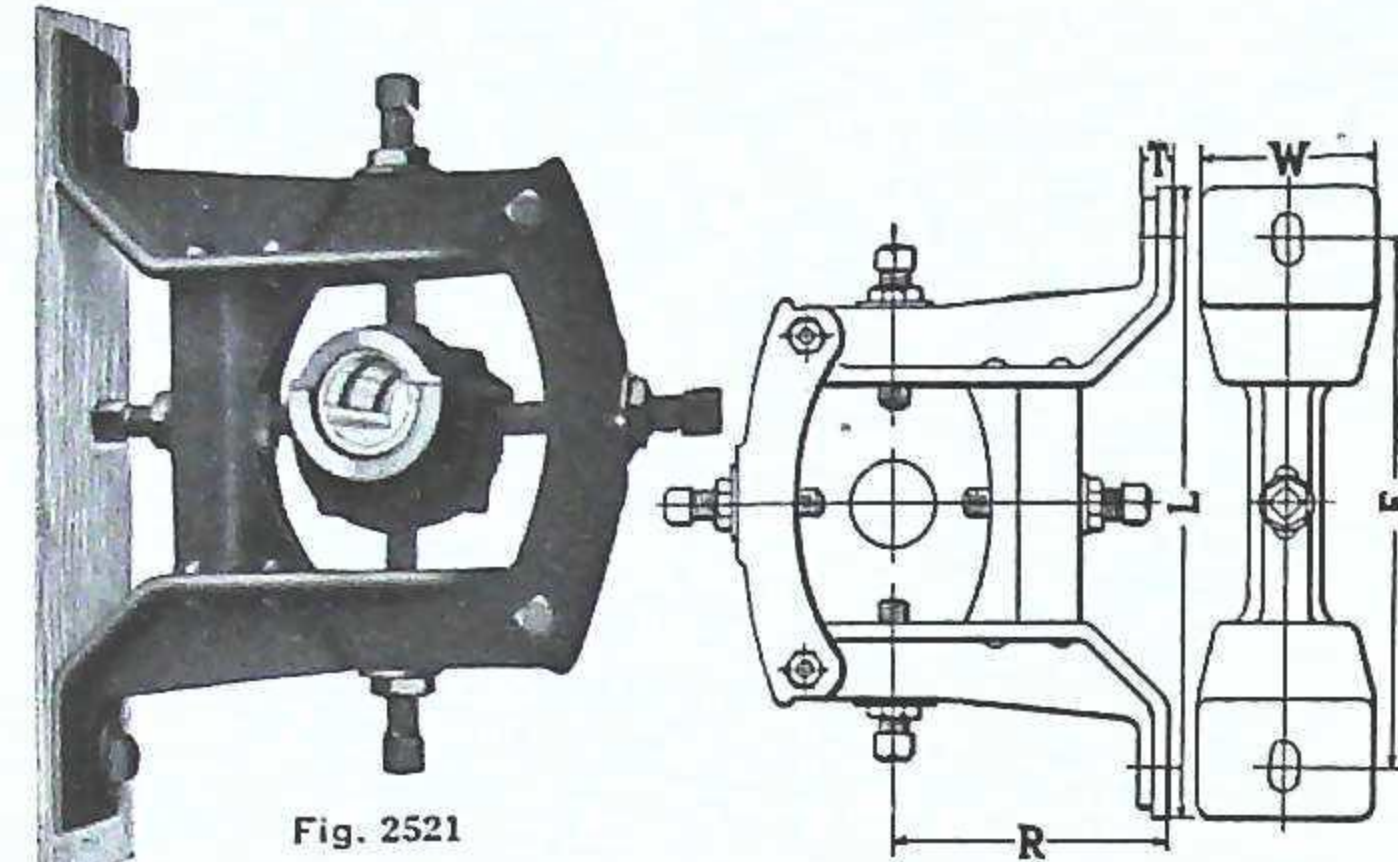


Fig. 2521

Size Shaft In.	Reach R	*F	*L	W	Thickness Base	No. Bolts	Price Each
15/16	6	10	12 5/8	5 1/4	7/16	2	\$5.00
13/16	6	10	12 5/8	5 1/4	7/16	2	5.00
17/16	6	10	12 5/8	5 1/4	7/16	2	5.30
11 1/16	6	10	12 5/8	5 1/4	7/16	2	6.10
11 5/16	6	10	12 5/8	5 1/4	7/16	2	6.95
23/16	6	11 3/8	14 3/8	5 1/2	5/8	2	9.35
27/16	6	11 3/8	14 3/8	5 1/2	5/8	2	10.65
21 1/16	6 1/4	11 3/8	14 3/8	5 1/2	5/8	2	12.75
21 5/16	8 1/2	13 1/8	16 1/4	6 1/2	5/8	2	15.50

Size Shaft In.	Reach R	*F	*L	W	Thickness Base	C. to C. Bolt Holes	No. Bolts	Price Each
15/16	8 1/2	10 1/4	12 1/2	5 1/4	7/16	...	2	\$5.50
11 1/2	12 1/2	15 1/4	18 1/2	6 1/2	1/2	...	2	5.90
15 1/2	14 1/8	16 3/4	20	7 1/2	1/2	...	2	6.90
19 1/2	17 3/8	20	24	8 1/2	1/2	3 1/16	4	8.00
13/16	8 1/2	10 1/4	12 1/2	5 1/4	7/16	...	2	5.50
11 1/2	12 1/2	15 1/4	18 1/2	6 1/2	1/2	...	2	5.90
15 1/2	14 1/8	16 3/4	20	7 1/2	1/2	...	2	6.90
19 1/2	17 3/8	20	24	8 1/2	1/2	3 1/16	4	8.00
17/16	8 1/2	10 1/4	12 1/2	5 1/4	7/16	...	2	5.80
11 1/2	12 1/2	15 1/4	18 1/2	6 1/2	1/2	...	2	6.20
15 1/2	14 1/8	16 3/4	20	7 1/2	1/2	...	2	7.20
19 1/2	17 3/8	20	24	8 1/2	1/2	3 1/16	4	8.30
11 1/16	8 1/2	10 1/4	12 1/2	5 1/4	7/16	...	2	6.60
11 1/2	12 1/2	15 1/4	18 1/2	6 1/2	1/2	...	2	7.00
15 1/2	14 1/8	16 3/4	20	7 1/2	1/2	...	2	8.00
19 1/2	17 3/8	20	24	8 1/2	1/2	3 1/16	4	9.10
11 5/16	8 1/2	11	13 1/4	5 1/4	7/16	...	2	7.95
11 1/2	13 1/4	16	19	6 1/2	1/2	...	2	8.35
15 1/2	14 1/8	17 1/2	21	7 1/2	1/2	...	2	9.10
19 1/2	18 1/8	20 3/4	24	8 1/2	1/2	3 1/16	4	10.45
23/16	8 1/2	11 1/4	14 1/8	5 1/4	7/16	...	2	9.85
11 1/2	13 3/8	16 1/2	20	6 1/2	1/2	...	2	10.40
15 1/2	15 1/8	18	22	7 1/2	1/2	...	2	11.50
19 1/2	17 3/8	21	24	8 1/2	1/2	4	4	12.45
23 1/2	20 3/8	23 5/8	27	9 1/2	1/2	4	4	14.70
27/16	8 1/2	12 1/4	15 1/8	5 1/2	7/16	...	2	11.65
11 1/2	14 3/8	17 1/2	20	6 1/2	5/8	...	2	11.95
15 1/2	16 1/8	19	22	7 1/2	5/8	...	2	13.80
19 1/2	19	22	24	8 1/2	5/8	4	4	14.75
23 1/2	21 3/8	24 5/8	27	9 1/2	5/8	4	4	17.00
27 1/2	23 3/8	26 5/8	30	10 1/2	5/8	4	4	19.10
21 1/16	8 1/2	12 1/4	15 1/8	5 1/2	7/16	...	2	13.75
11 1/2	14 3/8	17 1/2	20	6 1/2	5/8	...	2	14.05
15 1/2	16 1/8	19	22	7 1/2	5/8	...	2	15.90
19 1/2	19	22	24	8 1/2	5/8	4	4	16.85
23 1/2	21 3/8	24 5/8	27	9 1/2	5/8	4	4	19.10
21 5/16	11 1/2	15 3/8	19 1/8	7 1/2	3/4	...	2	17.50
15 1/2	17 1/8	20 1/8	24	8 1/2	3/4	...	2	20.00
19 1/2	20	24 1/8	27	9 1/2	3/4	4	4	22.50
23 1/2	23 1/4	26 5/8	30	10 1/2	3/4	4	4	24.50

*These dimensions may vary slightly from those given. Wick oiling bearings can be furnished if desired.

Pioneer Safety Steel Drop, Post Hanger and Wall Bracket Frames

Drop Hanger Frames

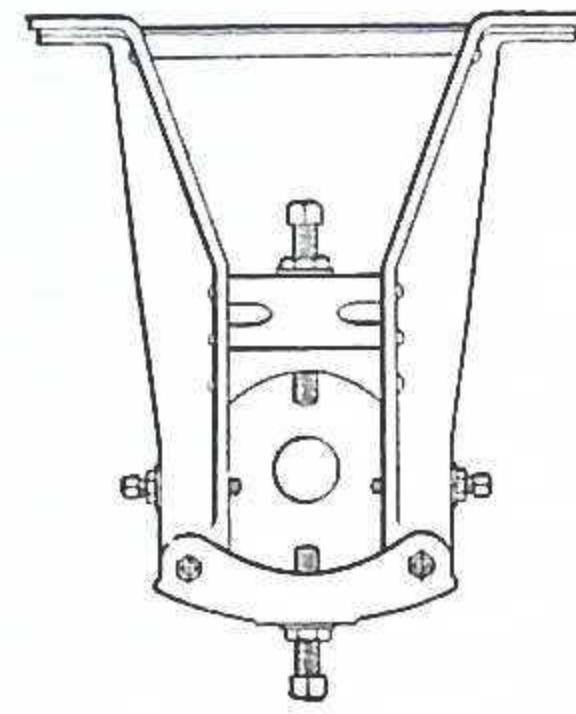


Fig. 2522

Size Shaft Inches	Drop Inches	Price Each	Size Shaft Inches	Drop Inches	Price Each
15/16	7 to 9	\$3.25	10 to 12	7 to 9	\$7.50
13/16	7 to 9	3.25	10 to 12	7 to 9	7.50
11 1/16	10 to 12	3.65	14 to 16	10 to 12	9.00
11 5/16	14 to 16	4.40	18 to 20	14 to 16	11.00
11 9/16	18 to 20	5.25	22 to 24	18 to 20	12.50
11 13/16	22 to 24	8.30	26 to 28	22 to 24	14.00
12 1/16	5 1/2 to 6 1/2	4.95	33/16	11 to 13	11.00
12 5/16	7 to 9	4.95	35/16	14 to 16	13.50
12 9/16	10 to 12	5.25	37/16	18 to 20	16.00
12 13/16	14 to 16	6.10	39/16	22 to 24	17.50
13 1/16	18 to 20	7.05	41/16	26 to 28	19.00
13 5/16	22 to 24	8.30	43/16	30 to 32	20.50

Post Hanger Frames

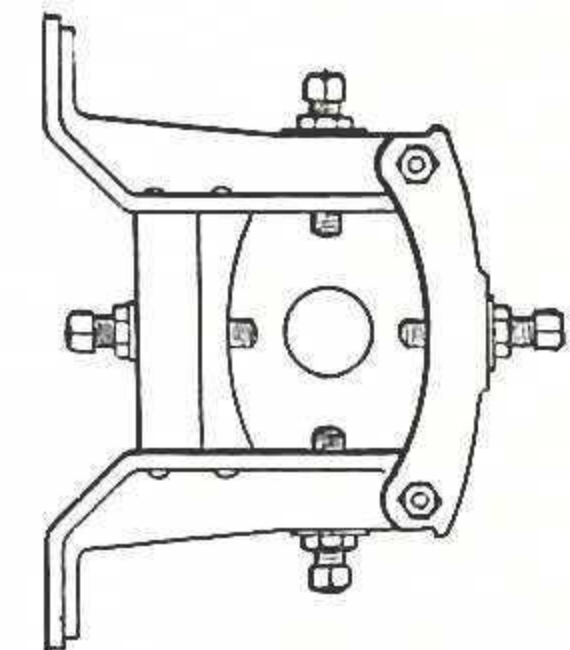


Fig. 2523

Size Shaft Inches	Reach Inches	Price Each	Size Shaft Inches	Reach Inches	Price Each
15/16	6	\$3.25	23/16	6	\$4.95
13/16	6	3.25	27/16	6	4.95
17/16	6	3.25	21 1/16	6 1/4	4.95
11 1/16	6	3.25	21 5/16	8 1/2	7.50
11 5/16	6	3.25	...	...	...

Wall Bracket Frames

Size Shaft Inches	Reach Inches	Price Each	Size Shaft Inches	Reach Inches	Price Each
15/16	8 1/2	\$3.75	23/16	19 1/2	\$8.05
13/16	11 1/2	4.15	23 1/2	23 1/2	10.30
17/16	15 1/2	5.15	27 1/2	27 1/2	12.55
11 1/16	19 1/2	6.25	31 1/2	31 1/2	14.80
11 5/16	23 1/2	7.35	35 1/2	35 1/2	17.05
11 9/16	27 1/2	8.45	39 1/2	39 1/2	19.30
11 13/16	31 1/2	9.55	43 1/2	43 1/2	21.55
12 1/16	35 1/2	10.65	47 1/2	47 1/2	23.80
12 5/16	39 1/2	11.75	51 1/2	51 1/2	26.05
12 9/16	43 1/2	12.85	55 1/2	55 1/2	28.30
12 13/16	47 1/2	13.95	59 1/2	59 1/2	30.55
13 1/16	51 1/2	15.05	63 1/2	63 1/2	32.80
13 5/16	55 1/2	16.15	67 1/2	67 1/2	35.05
13 9/16	59 1/2	17.25	71 1/2	71 1/2	37.30
13 13/16	63 1/2	18.35	75 1/2	75 1/2	39.55
14 1/16	67 1/2	19.45	79 1/2	79 1/2	41.80
14 5/16	71 1/2	20.55	83 1/2	83 1/2	44.05
14 9/16	75 1/2	21.65	87 1/2	87 1/2	46.30
14 13/16	79 1/2	22.75	91 1/2	91 1/2	48.55
15 1/16	83 1/2	23.85	95 1/2	95 1/2	50.80
15 5/16	87 1/2	24.95	99 1/2	99 1/2	53.05
15 9/16	91 1/2	26.05	103 1/2	103 1/2	55.30
15 13/16	95 1/2	27.15	107 1/2	107 1/2	57.55
16 1/16	99 1/2	28.25	111 1/2	111 1/2	59.80
16 5/16	103 1/2	29.35	115 1/2	115 1/2	62.05
16 9/16	107 1/2	30.45	119 1/2	119 1/2	64.30
16 13/16	111 1/2	31.55	123 1/2	123 1/2	66.55
17 1/16	115 1/2	32.65	127 1/2	127 1/2	68.80
17 5/16	119 1/2	33.75	131 1/2	131 1/2	71.05
17 9/16	123 1/2	34.85	135 1/2	135 1/2	73.30
17 13/16	127 1/2	35.95	139 1/2	139 1/2	75.55
18 1/16	131 1/2	37.05	143 1/2	143 1/2	77.80
18 5/16	135 1/2	38.15	147 1/2	147 1/2	80.05
18 9/16	139 1/2	39.25	151 1/2	151 1/2	82.30
18 13/16	143 1/2	40.35	155 1/2	155 1/2	84.55
19 1/16	147 1/2	41.45	159 1/2	159 1/2	86.80
19 5/16	151 1/2	42.55	163 1/2	163 1/2	89.05
19 9/16	155 1/2	43.65	167 1/2	167 1/2	91.30
19 13/16	159 1/2	44.75	171 1/2	171 1/2	93.55
20 1/16	163 1/2	45.85	175 1/2	175 1/2	95.80
20 5/16	167 1/2	46.95	179 1/2	179 1/2	98.05
20 9/16	171 1/2	48.05	183 1/2	183 1/2	100.30
20 13/16	175 1/2	49.15	187 1/2	187 1/2	102.55
21 1/16	179 1/2	50.25	191 1/2	191 1/2	104.80
21 5/16	183 1/2	51.35	195 1/2	195 1/2	107.05
21 9/16	187 1/2	52.45	199 1/2	199 1/2	109.30
21 13/16	191 1/2	53.55	203 1/2	203 1/2	111.55
22 1/16	195 1/2	54.65	207 1/2	207 1/2	113.80
22 5/16	199 1/2	55.75	211 1/2	211 1/2	116.05
22 9/16	203 1/2	56.85	215 1/2	215 1/2	118.30
22 13/16	207 1/2	57.95	219 1/2	219 1/2	120.55
23 1/16	211 1/2	59.05	223 1/2	223 1/2	122.80
23 5/16	215 1/2	60.15	227 1/2	227 1/2	125.05
23 9/16	219 1/2	61.25	231 1/2	231 1/2	127.30
23 13/16	223 1/2	62.35	235 1/2	235 1/2	129.55

Shifting Attachments for Universal Ring Oiling Hangers

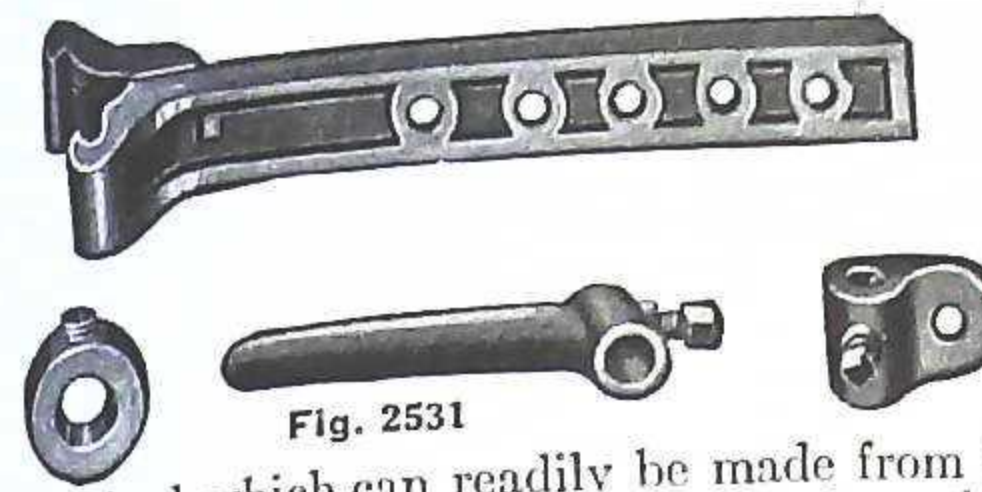


Fig. 2531

Shifting attachments for counter shafts consist of 2 arms, 2 fingers, 2 collars, 1 lever clamp. In addition, a shifting rod is required which can readily be made from 5/8-inch cold rolled steel. If furnished, an extra charge is made.

Size Shafting Inches	Complete Attachments	Price, Each Fixtures without Arms	Arms
15/16 to 1 1/2	\$5.50	\$2.50	\$1.25
1 9/16 " 2	5.50	2.50	1.50
2 3/16 " 3	6.50	3.00	1.75

Flat Boxes

Split and Reamed Babbitted Bearings

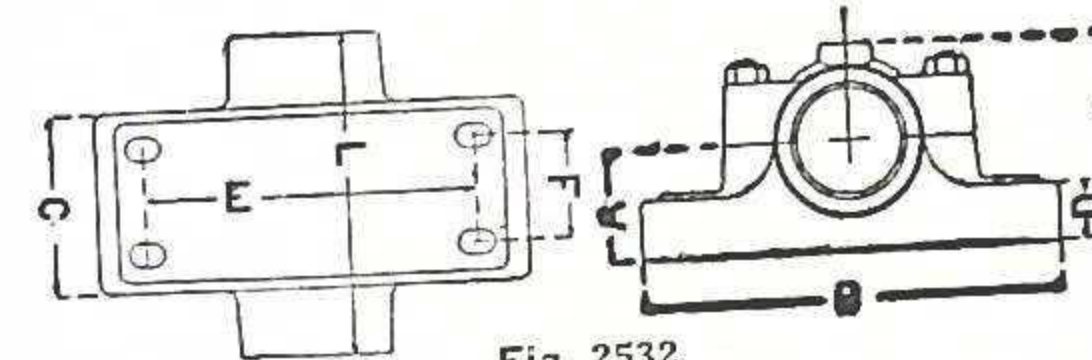
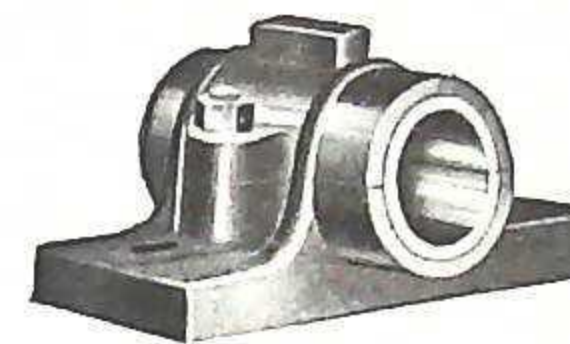


Fig. 2532

For light or medium service or for use on shaft where space is limited.

Slotted holes provide for lateral adjustment.

Size Shaft, In.	A	B	C	D	E	F	H	L	Price Each
3/4	5/8	4 1/2	1 1/4	1 1/2	3 3/8	...	1 1/2	2 1/8	\$1.00
7/8	5/8	4 1/2	1 1/4	1 1/2	3 3/8	...	1 1/2	2 1/8	1.00
15/16	3/4	5	1 3/8	1 5/8	3 3/4	...	1 3/4	2 1/2	1.10
1	3/4	5	1 3/8	1 5/8	3 3/4	...	1 3/4	2 1/2	1.20
1 1/8	7/8	5 1/2	1 5/8	1 3/4	4 1/4	...	2 1/4	2 7/8	1.20
1 1/4	1 1/8	6 1/8	1 5/8	1 3/4	4 1/4	...	2 1/4	2 7/8	1.30
1 1/2	1 1/8	6 1/8	1 5/8	1 3/4	4 1/4	...	2 1/4	2 7/8	1.30
1 5/8	1 1/8	6 1/8	1 5/8	1 3/4	4 1/4	...	2 1/4	2 7/8	1.60
1 7/8	1 1/8	6 1/8	1 5/8	1 3/4	4 1/4	...	2 1/4	2 7/8	2.20
2	1 1/8	6 1/8	1 5/8	1 3/4	4 1/4	...	2 1/4	2 7	

Vertical Shaft Bearings

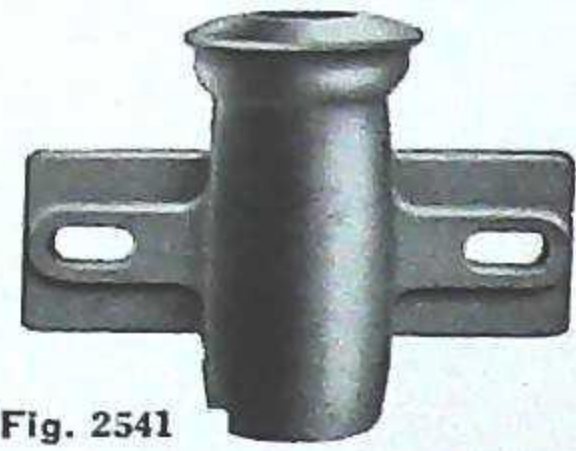


Fig. 2541

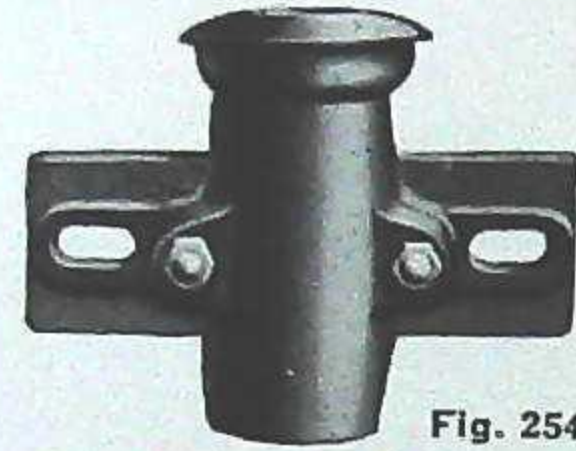


Fig. 2542

No. 28B, Solid			No. 25B, Split		
Size Inches	Plain Bore	Babbitt Lined	Size Inches	Plain Bore	Babbitt Lined
1 15/16	\$3.15	\$3.15	3 3/16	\$9.00	\$9.00
2 3/16	3.75	3.75	3 7/16	11.25	11.25
2 7/16	4.65	4.65	3 11/16	13.50	13.50
2 11/16	5.50	5.50	3 15/16	16.15	16.15
2 5/8	7.15	7.15			

No. 30E Adjustable Step Bearings

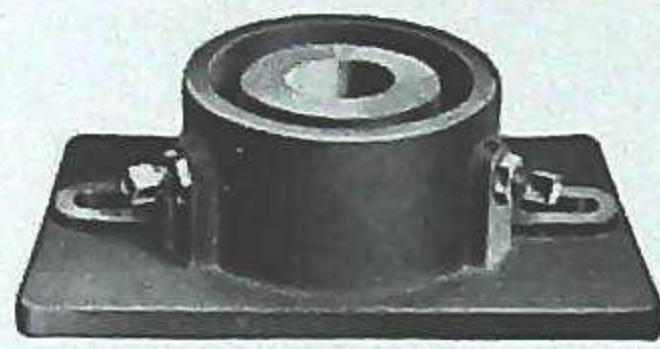


Fig. 2543

Large pocket around bushing for packing with oil and waste. Hardened steel disc fitted in bottom of bore.

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 15/16	\$9.20	2 11/16	\$16.00	3 7/16	\$26.20
2 3/16	11.00	2 5/8	20.00	3 11/16	29.90
2 7/16	13.00	3 3/16	22.80	3 5/8	36.00

Safety Set Collars



Solid Fig. 2544



Split Fig. 2545

Solid				Split			
Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 15/16	\$.62	1 11/16	\$1.20	2 5/8	\$2.03	3 15/16	\$3.60
1 1/8	.75	1 3/4	1.25	2 11/16	2.10	4 3/16	4.15
1 3/8	.80	1 7/8	1.34	2 3/4	2.17	4 7/16	4.70
1 1/4	.85	1 5/8	1.40	2 5/8	2.32	4 11/16	5.30
1 5/16	.90	1 5/16	1.40	2 5/8	2.40	4 5/16	5.90
1 3/8	.95	2	1.45	3	2.48	5 7/16	7.00
1 7/16	1.00	2 1/8	1.55	3 3/16	2.70	5 15/16	8.50
1 1/2	1.05	2 3/16	1.60	3 1/4	2.77	6 7/16	10.50
1 9/16	1.10	2 1/4	1.65	3 7/16	3.00	6 15/16	12.50
1 5/8	1.15	2 1/2	1.88	3 11/16	3.30		

Split

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 15/16	\$.93	1 11/16	\$1.80	2 5/8	\$3.05	3 15/16	\$5.40
1 1/8	1.13	1 3/4	1.87	2 11/16	3.15	4 3/16	6.22
1 3/8	1.20	1 7/8	2.03	2 3/4	3.25	4 7/16	7.05
1 1/4	1.27	1 5/8	2.10	2 5/8	3.48	4 11/16	7.95
1 5/16	1.35	2	2.17	3	3.72	4 5/16	8.85
1 3/8	1.43	2 1/8	2.32	3 3/16	4.05	5 7/16	10.50
1 7/16	1.50	2 3/16	2.40	3 1/4	4.15	5 15/16	13.00
1 1/2	1.57	2 1/4	2.57	3 7/16	4.50	6 7/16	16.00
1 9/16	1.65	2 5/16	2.70	3 11/16	4.62	6 15/16	18.00
1 5/8	1.72	2 3/4	2.82	3 15/16	4.95		

Clamp Compression Couplings

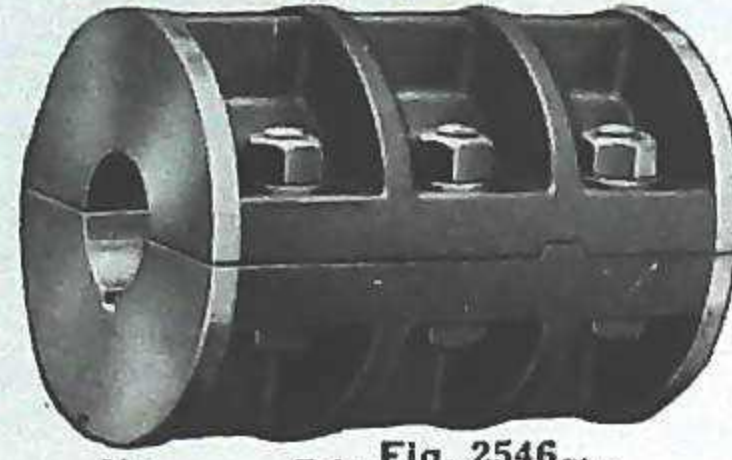


Fig. 2546

Ends are faced and end flanges turned. Fitted with keys. Bolts are protected by flanges.

For reducing couplings, add 20 per cent to list of largest size.

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 5/16, 1	\$4.50	2 15/16, 3	\$15.00	4 15/16, 5	\$48.00
1 3/16, 1 1/4	5.00	3 3/16, 3 1/4	19.00	5 3/16, 5 1/4	55.00
1 7/16, 1 1/2	6.00	3 7/16, 3 1/2	21.50	5 7/16, 5 1/2	60.00
1 11/16, 1 3/4	7.00	3 11/16, 3 3/4	24.50	5 11/16, 5 3/4	70.00
1 5/8, 2	8.50	3 5/8, 4	28.00	5 5/8, 6	75.00
2 3/16, 2 1/4	10.00	4 3/16, 4 1/4	33.00	6 7/16, 6 1/2	100.00
2 7/16, 2 1/2	11.00	4 7/16, 4 1/2	38.00	6 5/8, 7	125.00
2 11/16, 2 3/4	12.50	4 11/16, 4 3/4	43.00		

Standard Compression Couplings

Grips shaft securely and will not slip. Flanges extend beyond the heads of bolts thus making them safe. Care should be taken, in mounting, to see that bolts are drawn up evenly.

For reducing couplings, add 20 per cent to list of largest size.

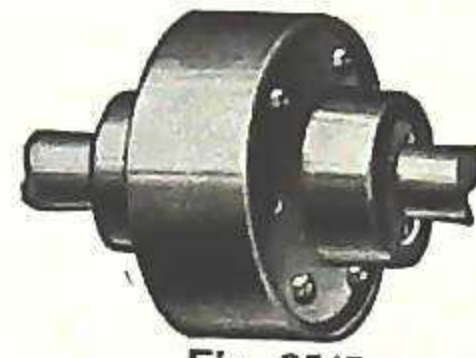


Fig. 2547

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 5/16, 1	\$4.25	2 11/16, 2 3/4	\$13.00	4 11/16, 4 3/4	\$83.00
1 3/16, 1 1/4	4.75	2 5/8, 3	16.00	4 5/8, 5	94.00
1 5/16, 1 1/2	5.00	3 3/16, 3 1/4	32.50	5 3/16, 5 1/4	102.50
1 7/16, 1 5/8	5.50	3 7/16, 3 1/2	39.25	5 7/16, 5 1/2	111.00
1 11/16, 1 3/4	6.25	3 11/16, 3 3/4	45.25	5 11/16, 5 3/4	120.50
1 5/8, 2	8.00	3 5/8, 4	51.25	5 5/8, 6	130.00
2 3/16, 2 1/4	9.00	4 3/16, 4 1/4	61.50		
2 7/16, 2 1/2	10.75	4 7/16, 4 1/2	71.75		

Flange or Plate Couplings

With Tight Fitting Bolts and Keys

These couplings are of good design, amply heavy to withstand severe service that may be imposed on them. Nuts and bolt heads are under flanges. For reducing couplings, add 20 per cent to list of largest size.

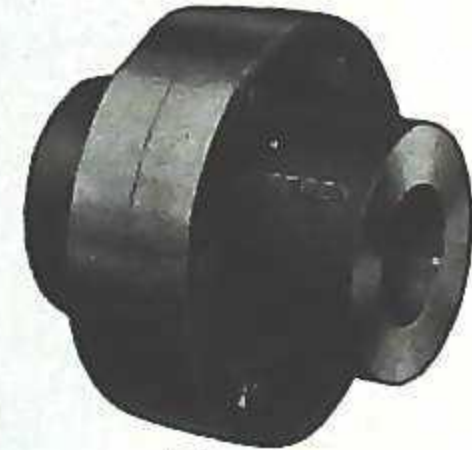


Fig. 2548

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 5/16, 1	\$7.50	2 15/16, 3	\$21.50	4 15/16, 5	\$75.00
1 3/16, 1 1/4	8.00	3 3/16, 3 1/4	26.00	5 3/16, 5 1/4	82.50
1 7/16, 1 1/2	9.00	3 7/16, 3 1/2	28.50	5 7/16, 5 1/2	88.00
1 11/16, 1 3/4	10.50	3 11/16, 3 3/4	33.50	5 11/16, 5 3/4	98.00
1 5/8, 2	11.50	3 5/8, 4	36.00	5 5/8, 6	103.00
2 3/16, 2 1/4	13.00	4 3/16, 4 1/4	49.00	6 7/16, 6 1/2	120.00
2 7/16, 2 1/2	14.50	4 7/16, 4 1/2	63.00	6 5/8, 7	140.00
2 11/16, 2 3/4	17.50	4 11/16, 4 3/4	68.00		

Jaw Clutch Couplings

Finished all over. Jaws are accurately planed to prevent backlash and to insure equal bearing pressure.

For reducing couplings of all styles, add 20 per cent to list of largest size.



Fig. 2549

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 5/16, 1	\$12.00	2 11/16, 2 3/4	\$22.00	4 15/16, 5	\$85.00
1 3/16, 1 1/4	13.00	2 5/8, 3	28.00	5 7/16, 5 1/4	100.00
1 7/16, 1 1/2	14.00	3 3/16, 3 1/4	34.00	5 5/8, 6	120.00
1 11/16, 1 3/4	15.00	3 7/16, 3 1/2	38.00	6 7/16, 6 1/2	145.00
1 5/8, 2	16.00	3 11/16, 3 3/4	45.00	6 5/8, 7	160.00
2 3/16, 2 1/4	17.00	3 5/8, 4	50.00		
2 7/16, 2 1/2	19.00	4 3/16, 4 1/2	65.00		

Stationary Mule Pulley Stands



Fig. 2551

Prices include guy rods with turnbuckles for tightening; also compression grease cups.

Width Belt Inches	Size Pulleys Inches	Std. Lgth. Shaft Feet	Price Each
3	12x 4	3 1/2	\$37.50
4	12x 5	4	42.50
5	12x 6	4	45.00
6	17x 7	4 1/2	52.00
7	15x 8	4 1/2	55.00
8	20x 9 1/2	5	65.00
9	20x10 1/2	5	68.00
10	24x11 1/2	5 1/2	100.00
12	30x13 1/2	5 1/2	140.00
14	30x15 1/2	6	155.00

Adjustable Mule Pulley Stands

Prices include guy rods with turnbuckles for tightening; also compression grease cups.

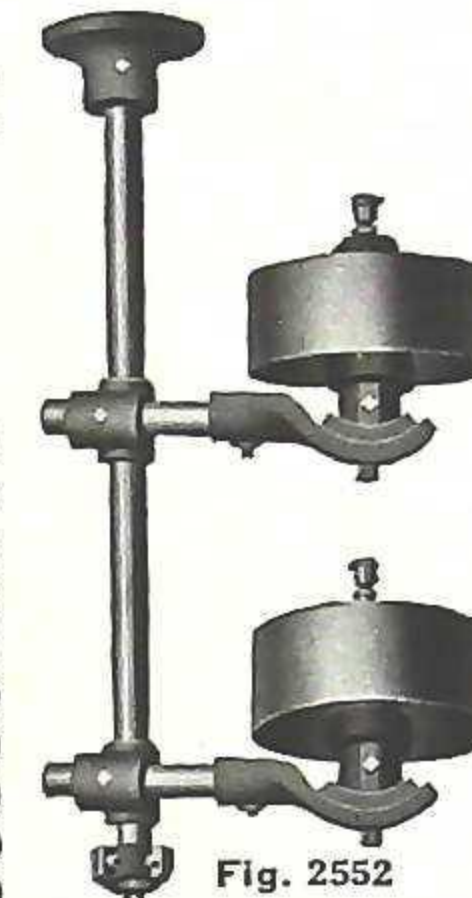


Fig. 2552

Width Belt Inches	Size Pulleys Inches	Std. Lgth. Shaft Feet	Price Each
3	12x 4	3 1/2	\$60.00
4	12x 5	4	67.50
5	12x 6	4 1/2	70.00
6	15x 7	5	90.00
7	15x 8	5	95.00
8	20x 9 1/2	5 1/2	100.00
9	20x10 1/2	5 1/2	135.00
10	24x11 1/2	6	147.00
12	30x13 1/2	6 1/2	200.00
14	30x15 1/2	7	215.00

Single Brace Binder Frames

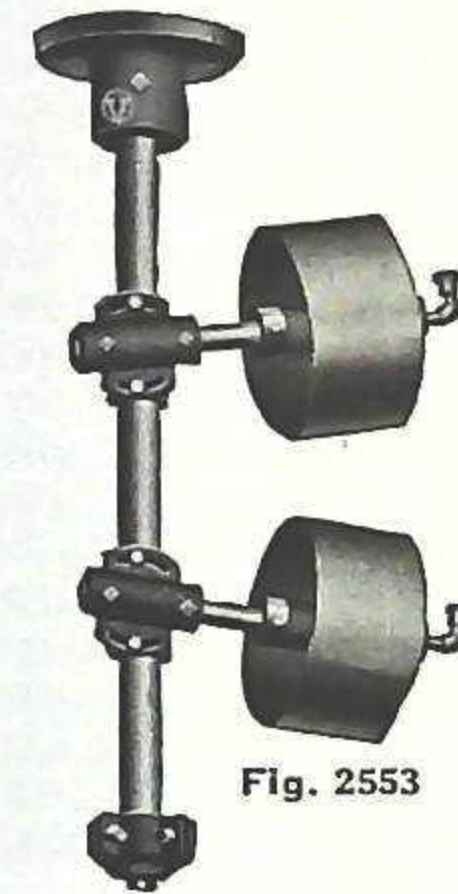


Fig. 2553

Prices include guy rods with turnbuckles for tightening; also compression grease cups.

Width Belt Inches	Size Pulleys Inches	Std. Lgth. Shaft Feet	Price Each
3	12x4	3 1/2	\$46.00
4	12x5	4	50.00
5	12x6	4	70.00
6	15x7	4 1/2	75.00

Double Brace Binder Frames

Prices include guy rods with turnbuckles for tightening; also compression grease cups.

Width Belt Inches	Size Pulleys Inches	Std. Lgth. Shaft Feet	Price Each
4	12x 5	4	\$75.00
5	12x 6	4	78.00
6	15x 7	4 1/2	81.00
7	15x 8	4 1/2	85.00
8	20x 9	5	125.00
10	20x12	5 1/2	130.00
12	20x14	5 1/2	135.00

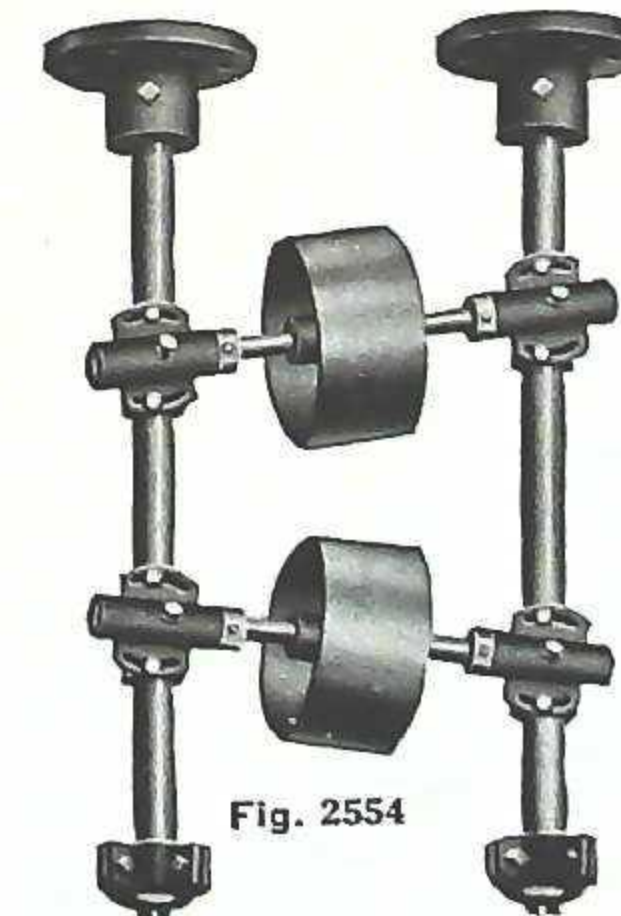


Fig. 2554

Almond Right Angle Transmission Couplings

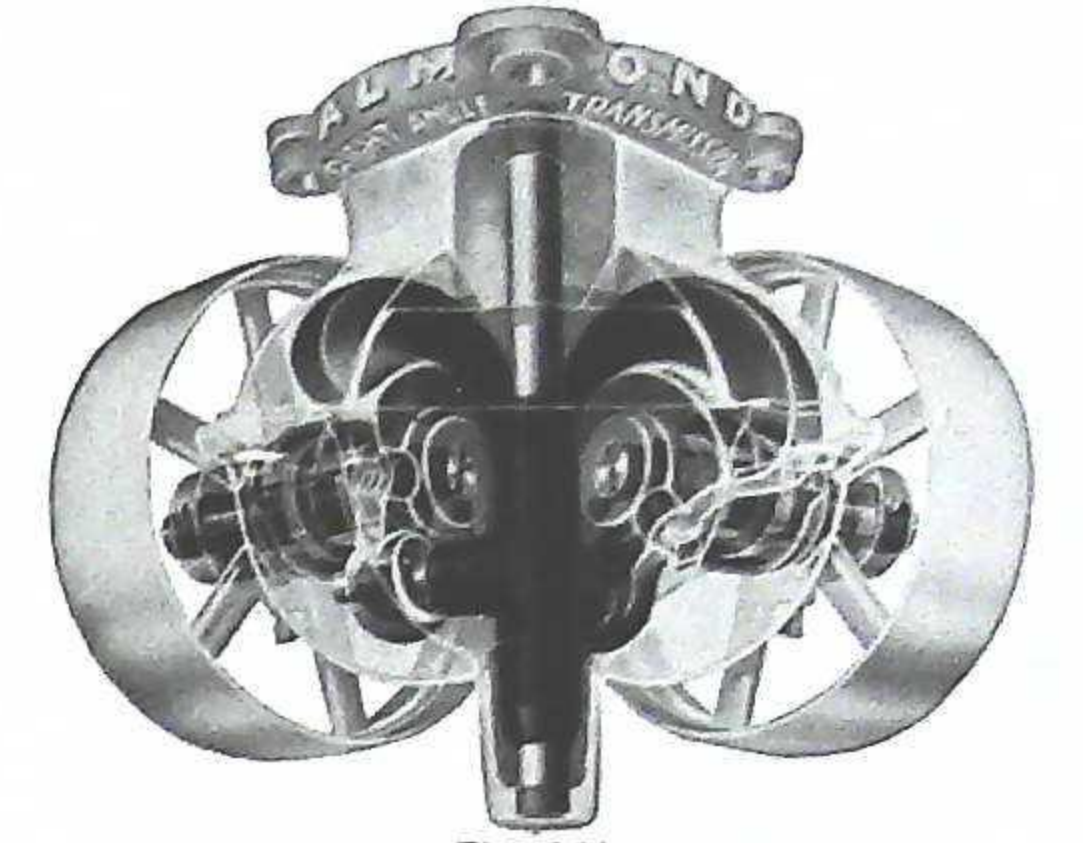
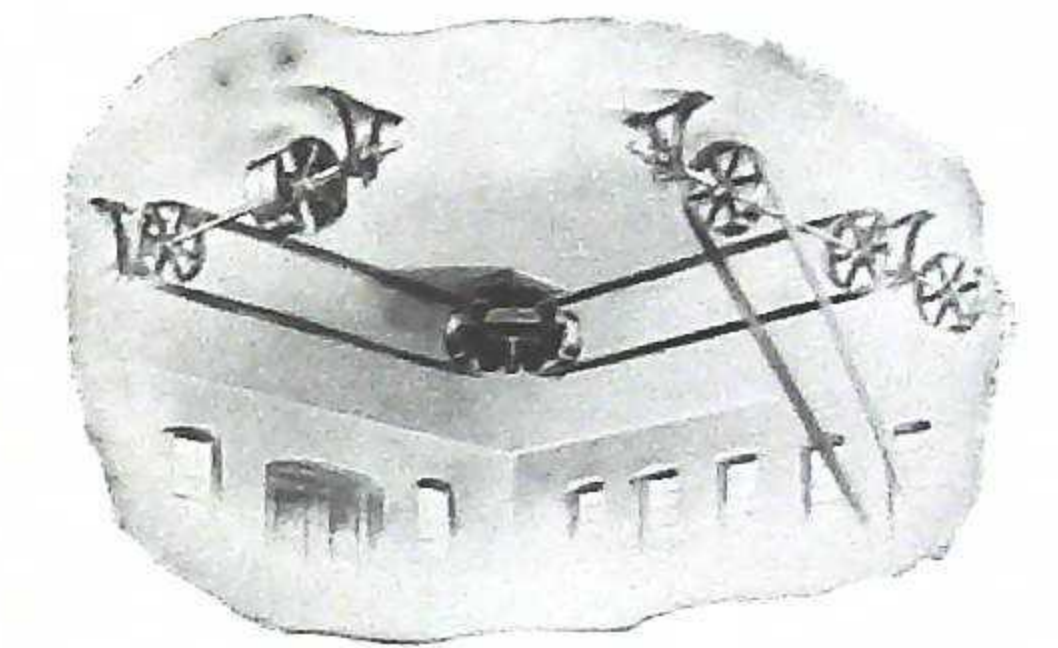


Fig. 2555

This coupling meets all requirements of right angle driving and is self-contained and noiseless.

The Almond Coupling does not throw oil and has friction loss much less than an ordinary countershaft. Motion is positive and there is no variation in angular velocity. The standard coupling has two pulleys of same size but different combinations can be furnished.



Driving at a Right Angle

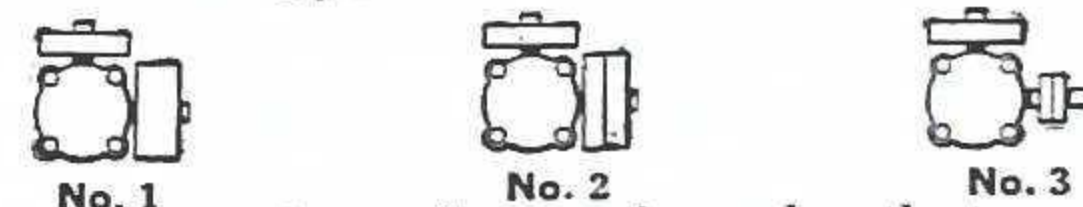
The coupling is guaranteed when such pulleys and speeds are used as those given below, but not if larger pulleys or increased speeds are used.

When the transmission is to be direct connected, the shaft is made to extend six inches outside of sleeve and compression coupling is supplied in place of pulley.

If only one side of transmission is to be direct connected, be sure to specify which side.

No.	Diam. Shaft Inches	Max. Speed R. P. M.	Size Pulleys Inches	H. P.	Price Each
1	1 3/8	500	12x4	5	\$80.00
2	1 7/8	400	16x6	10	125.00
3	1 5/8	350	20x9	20	250.00

Special Combinations



No. 1

No. 2

No. 3

No. 1.—A wide face pulley may be used on the transmission and a loose pulley on the machine.

No. 2.—A tight and loose pulley may be used on the transmission with wide face pulley on line shaft.

No. 3.—It can be adapted for direct connecting on end of shaft.



No. 4

No. 5

No. 6

No. 4.—Can be used direct connected with wide face pulley on the transmission and tight and loose pulley elsewhere.

No. 5.—It can be used direct connected at both ends but this application is not recommended owing to the necessity of absolutely perfect alignment and danger of overload.

No. 6.—It may be direct connected at one end with tight and loose pulley on the other quarter.

The belted up method of installation is recommended wherever possible.

Prices for special combinations will be furnished

Sprocket Wheels

Bored and Set-screwed or Key-seated

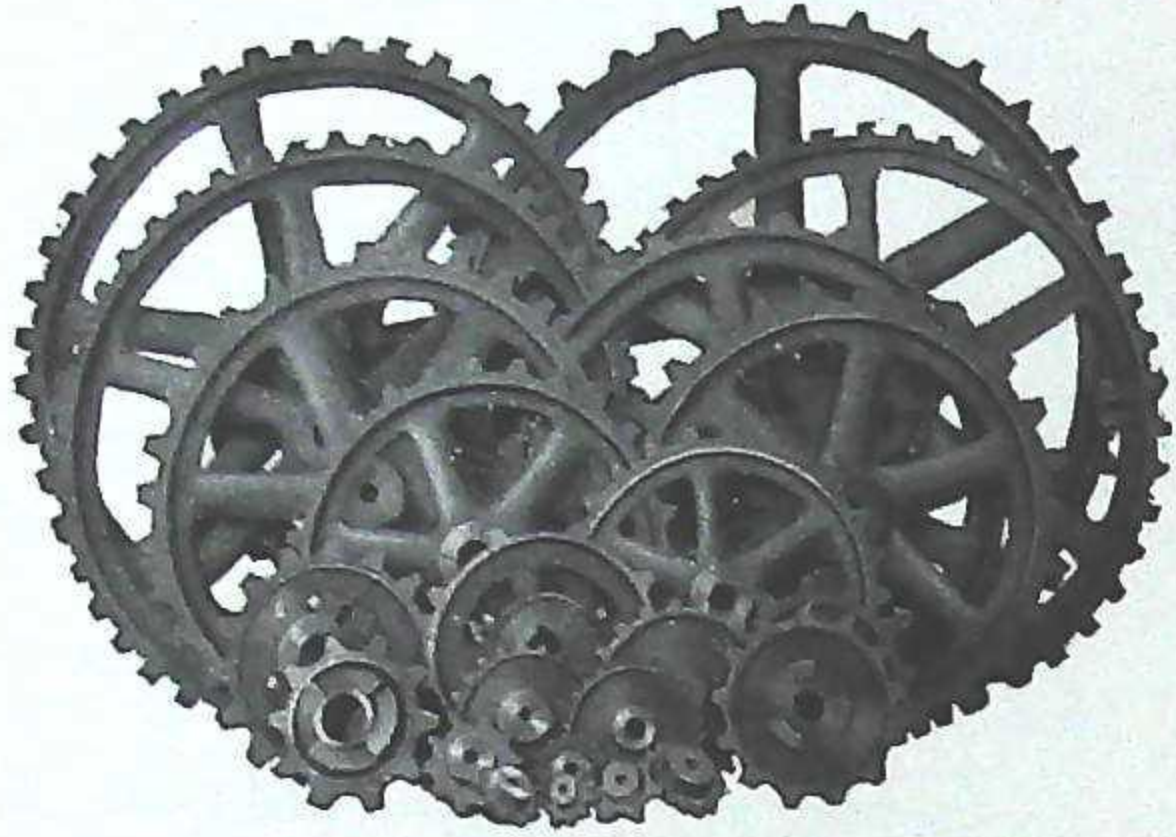


Fig. 2561

Nos. 25 and 31

No. 32—Cont.

Table listing sprocket wheel specifications for Nos. 25, 31, and 32. Columns include Pitch Diam. In., No. Teeth, Largest Bore In. at Regular Price, and Price Each.

Sprocket Wheels

Bored and Set-screwed or Key-Seated

Continued

Nos. 33 and 34—Cont.

No. 42

Table listing sprocket wheel specifications for Nos. 33, 34, and 42. Columns include Pitch Diam. In., No. Teeth, Largest Bore In. at Regular Price, and Price Each.

Nos. 35, 45 and 55

Table listing sprocket wheel specifications for Nos. 35, 45, and 55. Columns include Pitch Diam. In., No. Teeth, Largest Bore In. at Regular Price, and Price Each.

No. 51

Table listing sprocket wheel specifications for No. 51. Columns include Pitch Diam. In., No. Teeth, Largest Bore In. at Regular Price, and Price Each.

*Can be furnished with chilled rim.

Sprocket Wheels

Bored and Set-screwed or Key-seated

Continued

No. 52

Nos. 57, 67, 77—Continued

Table listing sprocket wheel specifications for Nos. 52, 57, 67, and 77. Columns include Pitch Diam. In., No. Teeth, Largest Bore In. at Regular Price, and Price Each.

Nos. 57, 67, 77

Table listing sprocket wheel specifications for Nos. 57, 67, and 77. Columns include Pitch Diam. In., No. Teeth, Largest Bore In. at Regular Price, and Price Each.

*Can be furnished with chilled rim.

Sprocket Wheels

Bored and Set-screwed or Key-seated

Continued

No. 62—Cont.

Nos. 75, 78, 88, 88 1/2 Cont.

Table listing sprocket wheel specifications for Nos. 62, 75, 78, 88, and 88 1/2. Columns include Pitch Diam. In., No. Teeth, Largest Bore In. at Regular Price, and Price Each.

*Can be furnished with chilled rim.

Sprocket Wheels

Bored and Set-screwed or Key-seated
Continued

Table with columns: Nos. 75, 78, 88, 88 1/2 - Cont., No. 95 - Cont., No. 83, No. 85, No. 103, No. 93. Includes pitch diam., teeth, largest bore, and price per wheel.

*Can be furnished with chilled rim.

Sprocket Wheels

Bored and Set-screwed or Key-seated
Concluded

Table with columns: No. 103 - Cont., No. 114 - Cont., No. 122, No. 124, Nos. 108 and 110, No. 114, No. 146. Includes pitch diam., teeth, largest bore, and price per wheel.

*Can be furnished with chilled rim.

Sprocket Wheels

The following charges are to be added to the regular wheel prices when something different from the standard is wanted.

Extra Charges for Larger Bores

In the following table, the extra charge for larger bores is based on furnishing hubs of larger diameter, but not greater length than standard, as the maximum lengths at regular prices. The larger diameter of hub will conform with the established standard for the sizes of shaft and wheel involved. If a still larger diameter is required an extra charge will be made based on the extra cost.

Table showing extra charges for larger bores. Columns include largest bore in. at regular price and various bore increments (1 1/16 to 2 5/16 inches) with corresponding charges.

Extra Charges for Split Wheels

Table showing extra charges for split wheels. Columns include pitch diam. in. and various bore increments (3 3/16 to 6 1/16 inches) with corresponding charges.

Rex Detachable Chain

Standard Sizes
Illustrations are Actual Size

No. 25

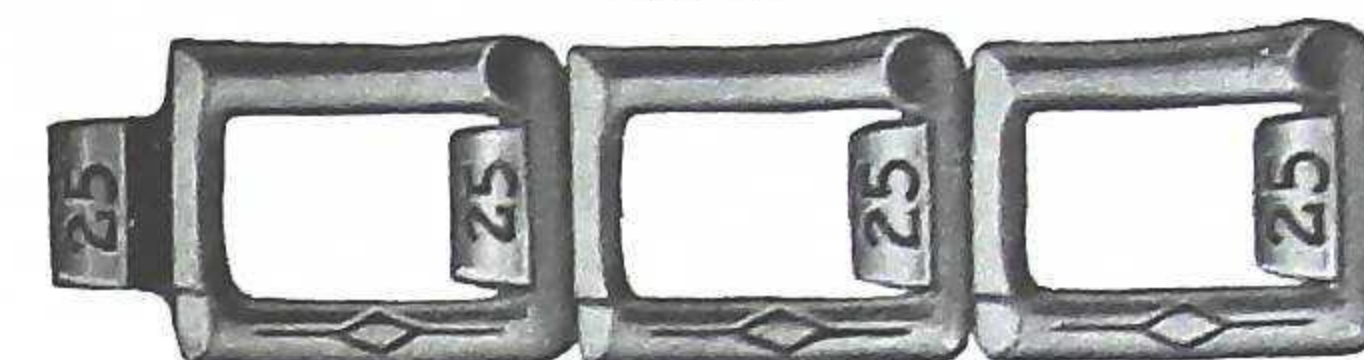


Fig. 2591

Approximately 133 links in 10 feet. Average ultimate strength, 700 pounds.

No. 34

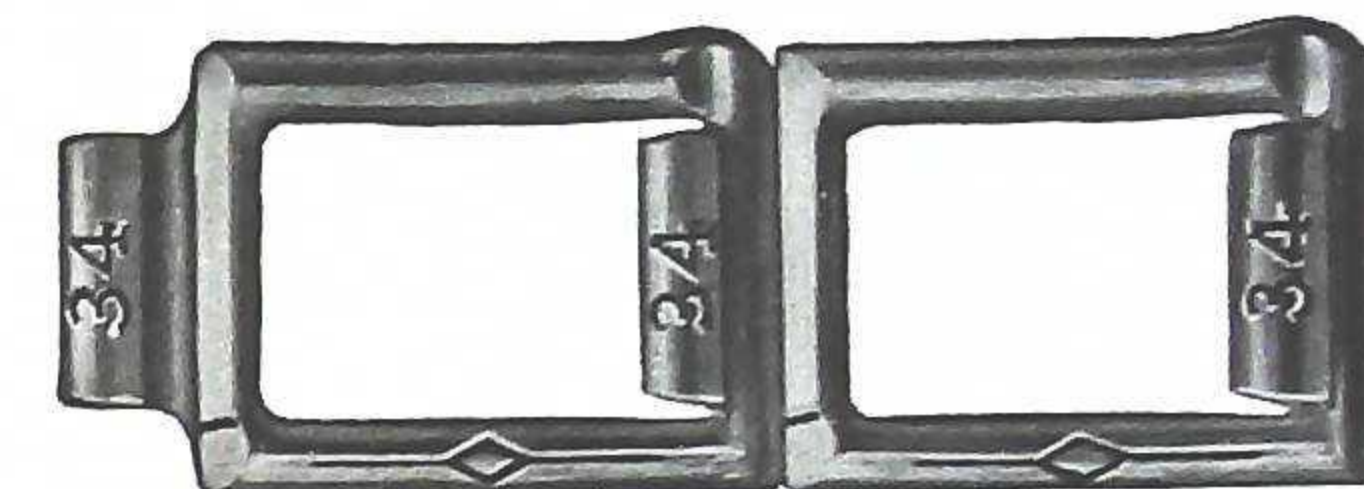


Fig. 2592

Approximately 86 links in 10 feet. Average ultimate strength, 1300 pounds.

No. 42

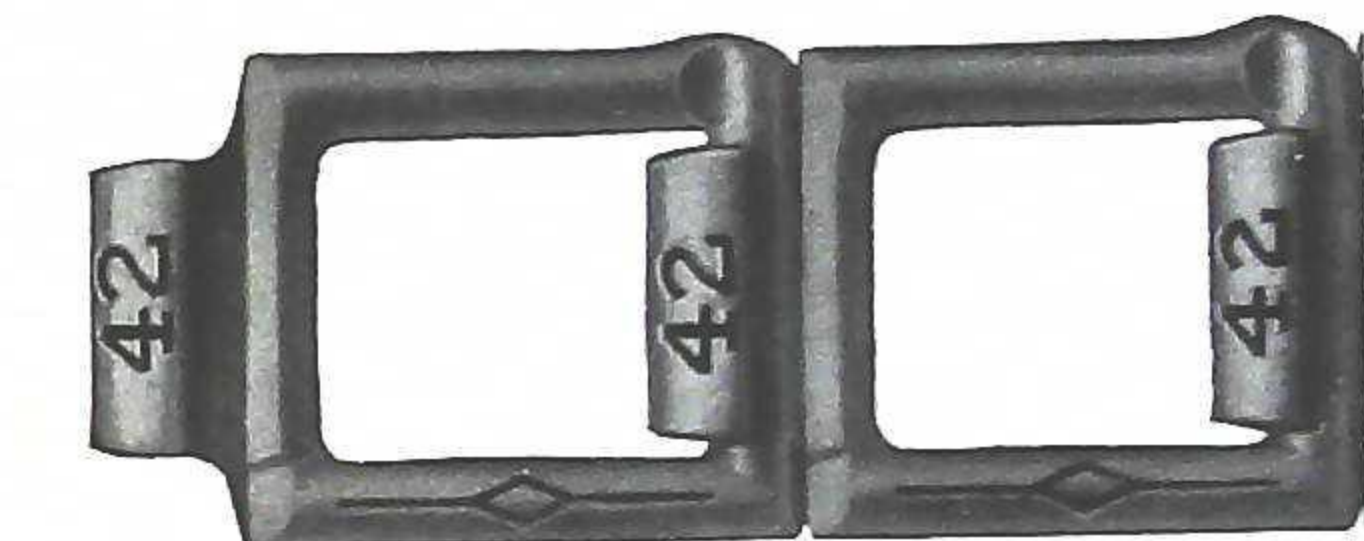


Fig. 2593

Approximately 88 links in 10 feet. Average ultimate strength, 1500 pounds.

No. 52

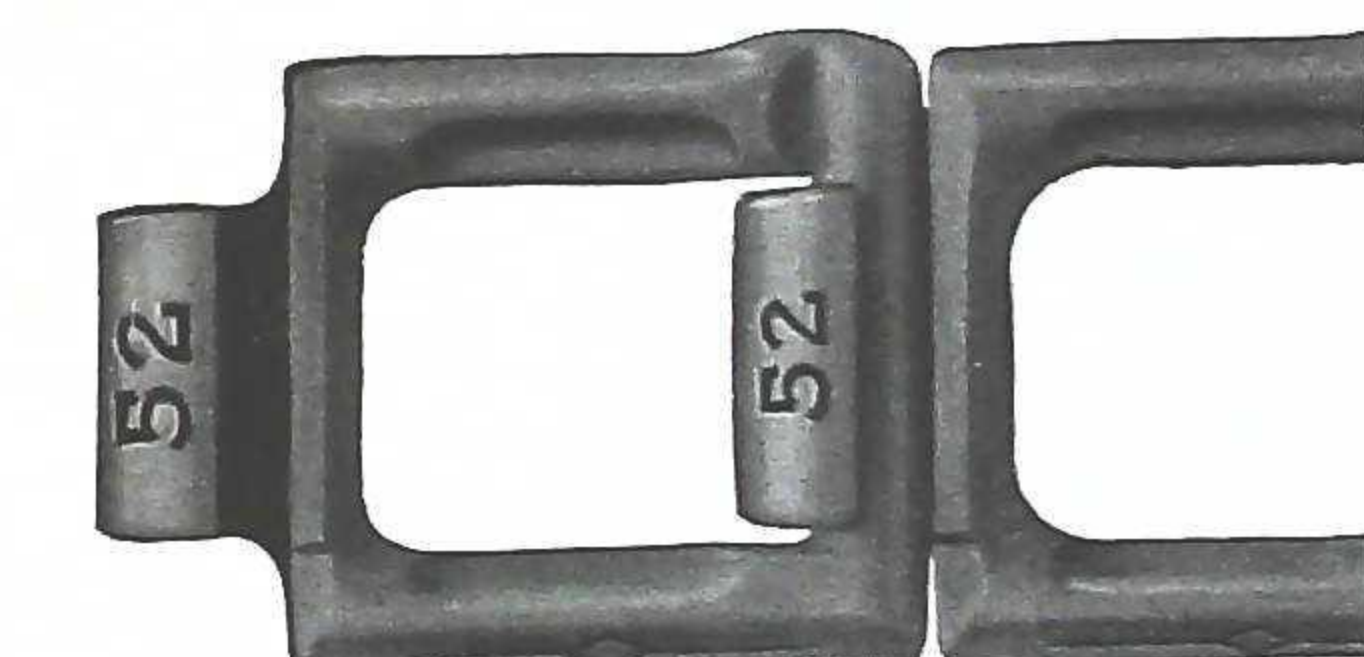


Fig. 2594

Approximately 80 links in 10 feet. Average ultimate strength, 2300 pounds.

No. 57

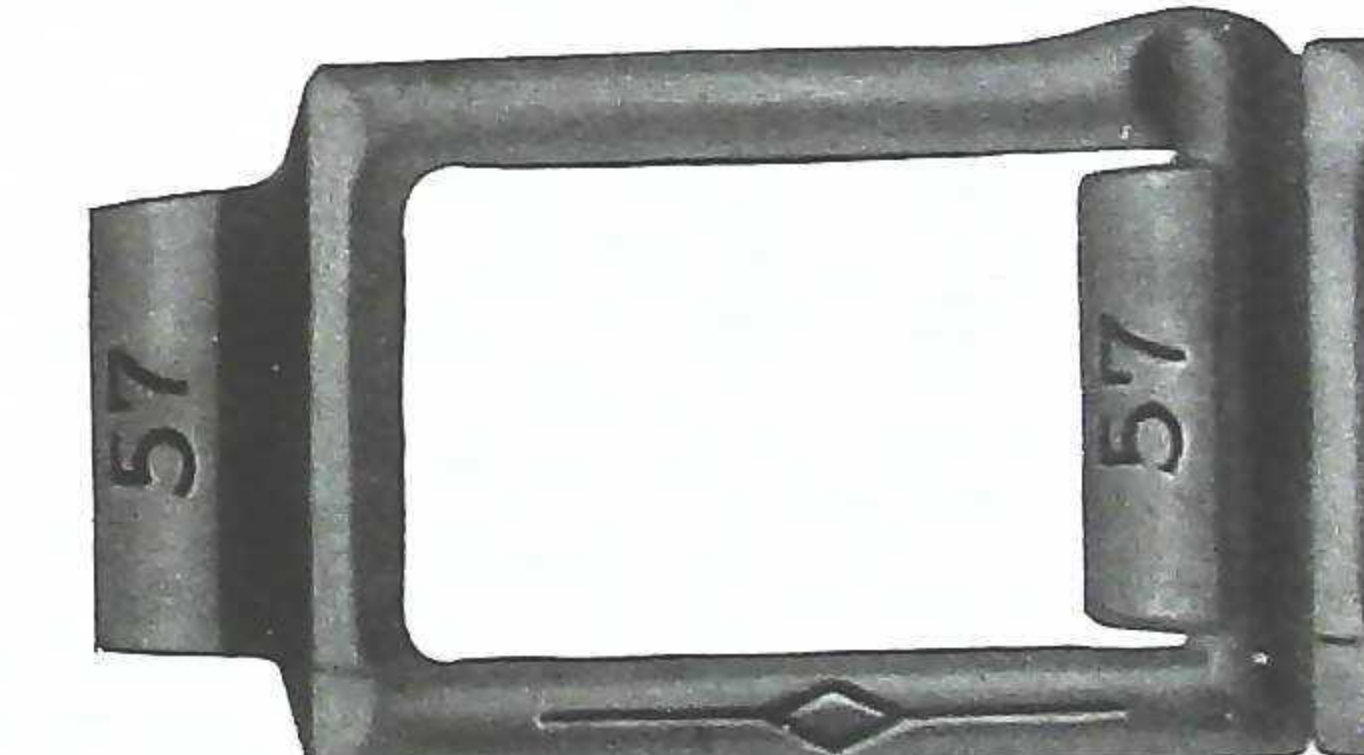


Fig. 2595

Approximately 50 links in 10 feet. Average ultimate strength, 2800 pounds.

Rex Detachable Chain

Standard Sizes

Table with columns: No., Approx. Links in 10 Feet, Avge. Pitch In., Avge. Ultimate Strength Pounds, AVERAGE Wt. LBS. PER 10 FEET Chain, Couplers, Plain Chain Belt Price per Ft., Couplers Price per Pair. Rows 25-124.

Made to Order Sizes

Table with columns: No., Approx. Links in 10 Feet, Avge. Pitch In., Avge. Ultimate Strength Pounds, AVERAGE Wt. LBS. PER 10 FEET Chain, Couplers, Plain Chain Belt Price per Ft., Couplers Price per Pair. Rows 23-122.

Rex Detachable Chain Belt Attachments

The standard sizes usually carried in stock for prompt shipment are indicated by heavy type.

Table with columns: No. 25, No. 31, No. 32, No. 33, No. 34, No. 34 1/2, No. 35, No. 37, No. 042, No. 42, No. 43-3 Bar, No. 44, No. 45. Includes attachment types like A-1, C-1, E-1, K-3, etc.

*Can be coupled together consecutively if desired. †Can be coupled right and left hand.

Rex Detachable Chain Belt Attachments

The standard sizes usually carried in stock for prompt shipment are indicated by heavy type.

Table with columns: No. 46, No. 47, No. 48, No. 51, No. 52, No. 55, No. 55 Keeper, No. 057, No. 57, No. 62, No. 66, No. 67, No. 75, No. 75 1/2. Includes attachment types like L-4, A-3, A-1, K-1, etc.

*Can be coupled together consecutively if desired. †Can be coupled right and left hand.

Rex Detachable Chain Attachments

The standard sizes usually carried in stock for prompt shipment are indicated by heavy type.

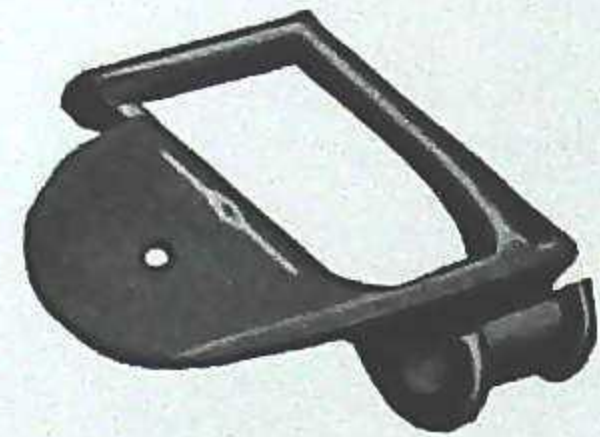
Table with columns: No. 77, No. 78, No. 83, No. 85, No. 88, No. 103, No. 108, No. 110, No. 114, No. 122, No. 124, No. 146, No. 1-A, No. 2-A, No. 5-A, No. SE-13. Includes attachment types like A-1, D-5, E-1, G-1, etc.

*Can be coupled together consecutively if desired. †Can be coupled right and left hand.

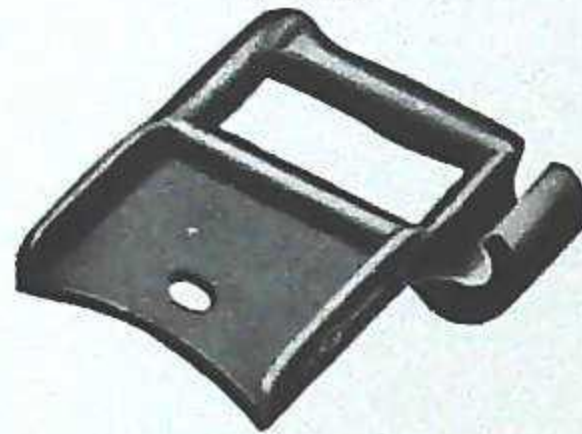
Rex Detachable Chain Attachments



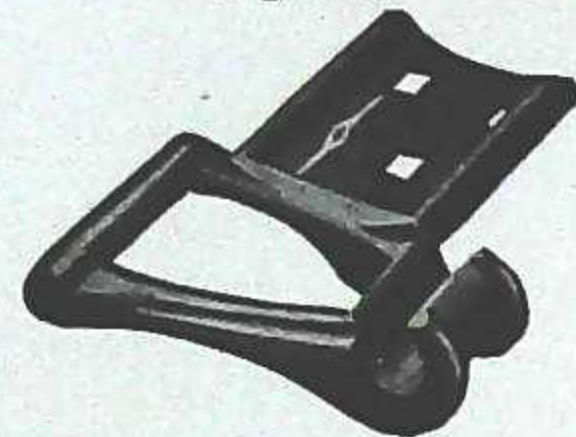
A1 (Left)
Fig. 2621



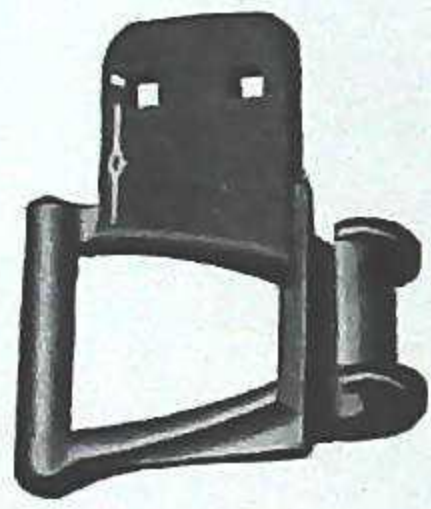
A1 (Right)
Fig. 2622



A2 (Right)
Fig. 2623



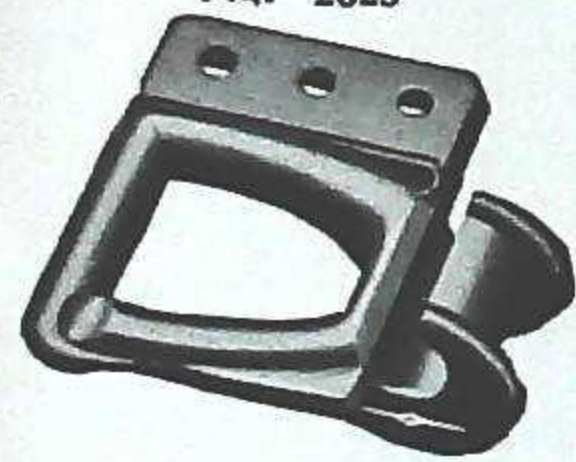
A3 (Left)
Nos. 78 and 88 shown
Other sizes similar to A2.
A3 1/2 similar to A3.
Fig. 2624



A4 (Left)
Fig. 2625



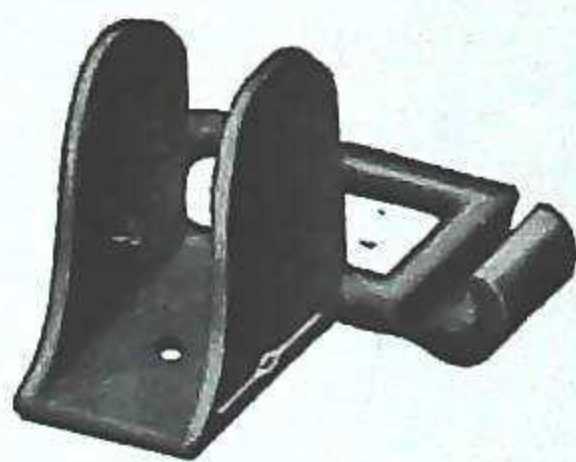
A7 (Right)
Fig. 2626



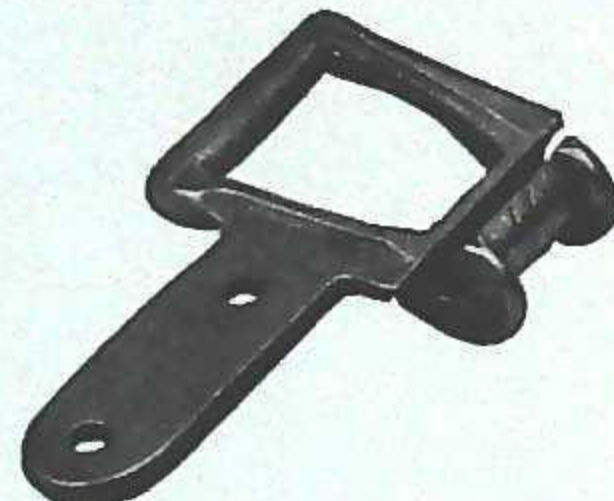
A11 (Left)
Nos. 103 and 114 shown.
Other sizes have two holes.
Fig. 2627



A12 (Left)
No. 45 has one hole.
Fig. 2628



A14 (Right)
Fig. 2629

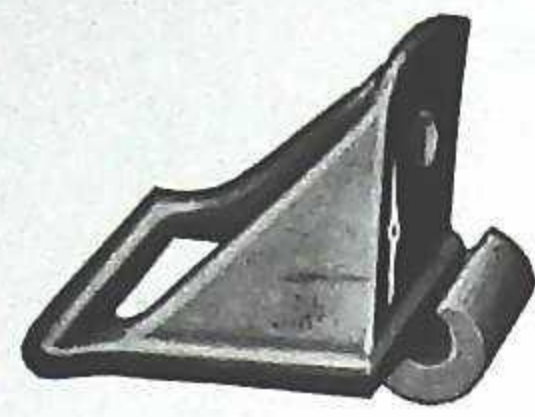


A113 (Right)
Fig. 2629A



Fig. 2629B
B14

Rex Detachable Chain Attachments



C1
Fig. 2629C



C2
Fig. 2629D



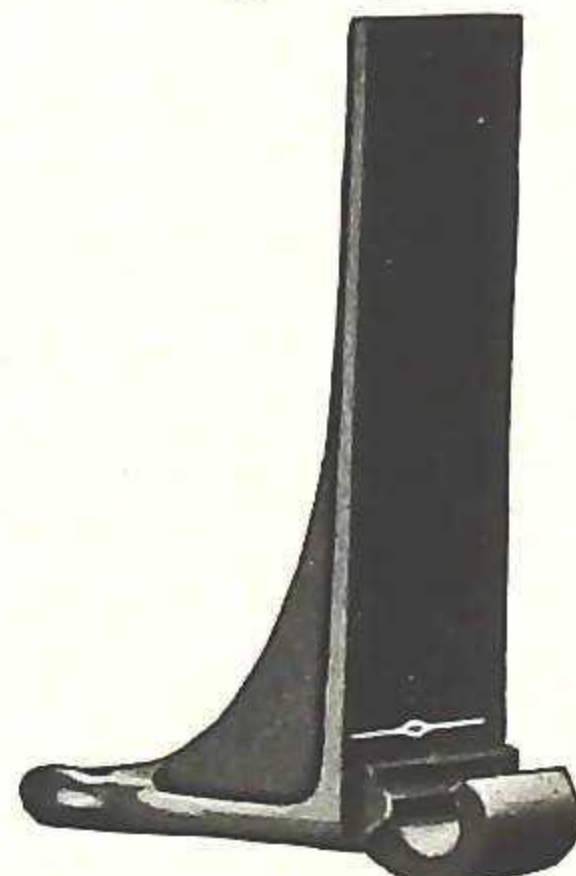
C8
Fig. 2629E



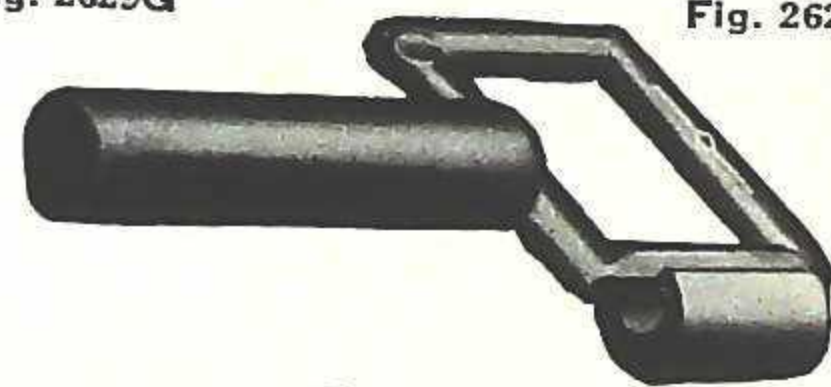
C15
Fig. 2629F



C22
Fig. 2629G



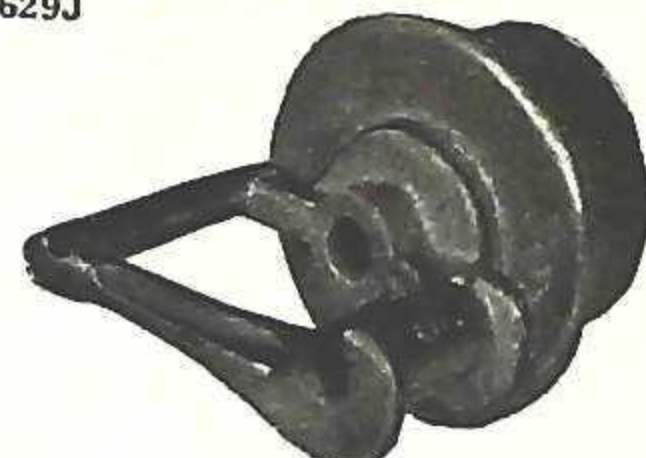
C28
Fig. 2629H



D3 (Right)
Fig. 2629J



D5 (Right)
Fig. 2629K



D5 With Roller (Left)
Fig. 2629L



Fig. 2629M
DD

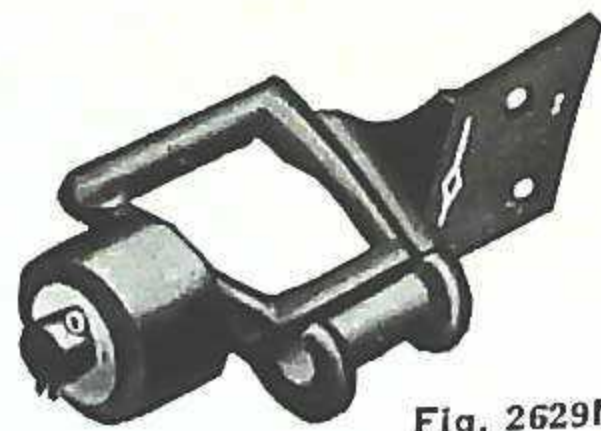


Fig. 2629N
DF14 (Left)

Rex Detachable Chain Attachments



DK (Left)
Fig. 2631



DK with Roller (Left)
Fig. 2632



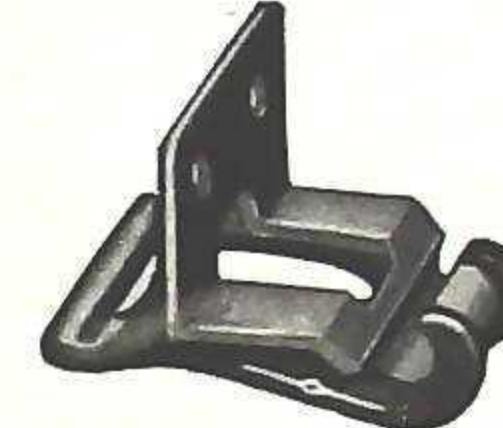
E1
Fig. 2633



E2
Fig. 2634



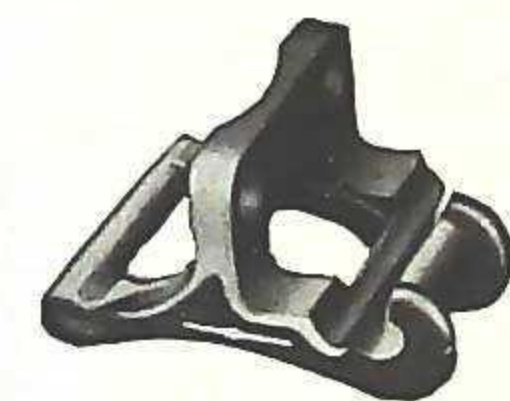
E12
Fig. 2635



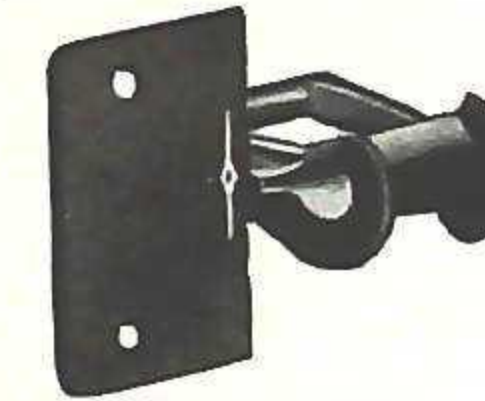
F2
Fig. 2636



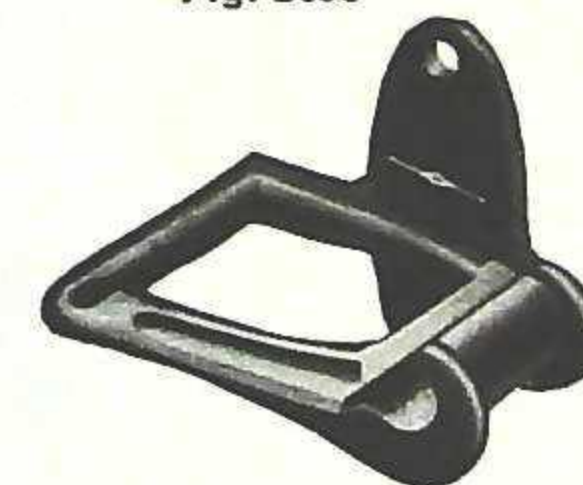
F2 on SE13
Fig. 2637



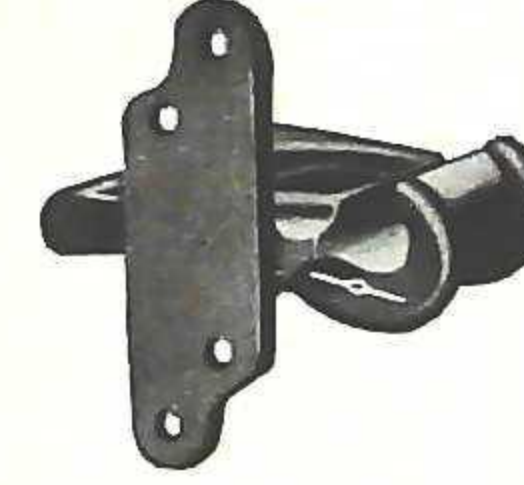
F8
Fig. 2638



F12 (Right)
Fig. 2639



G1 (Left)
Fig. 2639A



G6 (Right)
Fig. 2639B

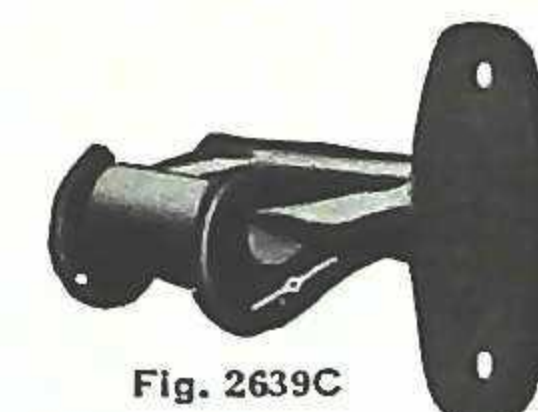


Fig. 2639C
G19 (Left)



Fig. 2639D
G26 Right

Rex Detachable Chain Attachments



G-27 (Left)
Fig. 2639E



H1
Fig. 2639F



H2
Fig. 2639G



1-15 1/2 (Left)
Fig. 2639H



K1
Fig. 2639J



1 Coupler
Fig. 2639K



K2
Fig. 2639L



K5
Fig. 2639M



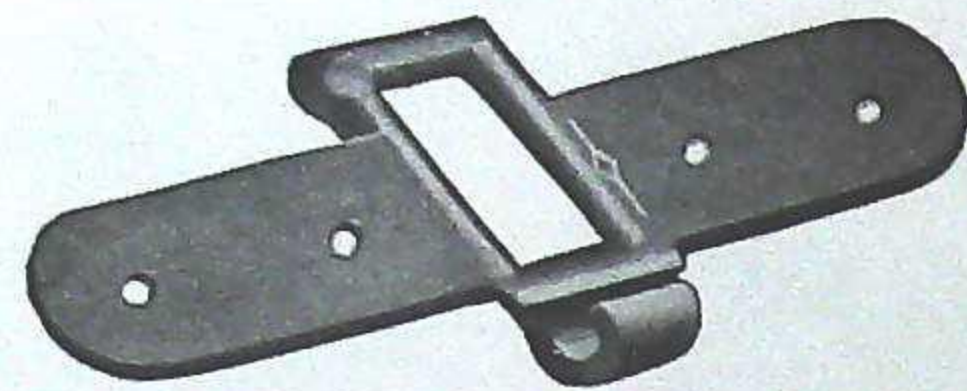
K3
Fig. 2639N



Fig. 2639P
K3 on 43-3 Bar

Rex Detachable Chain Attachments

Rex Detachable Chain Attachments



K6
Fig. 2641



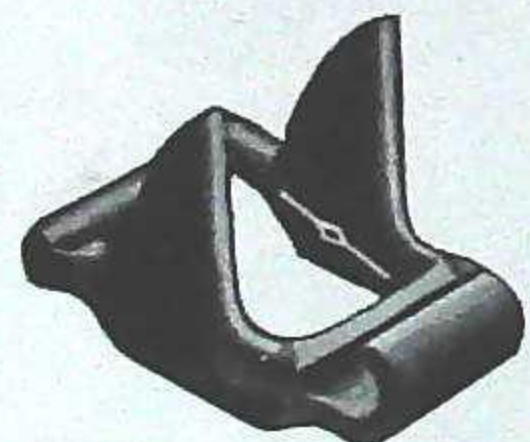
K40
Fig. 2642



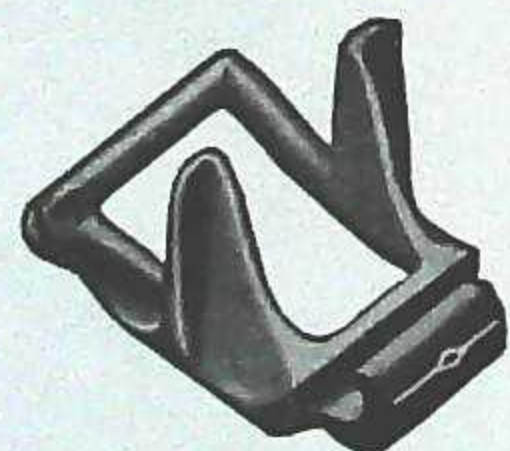
K45 1/2 and K91
Fig. 2643



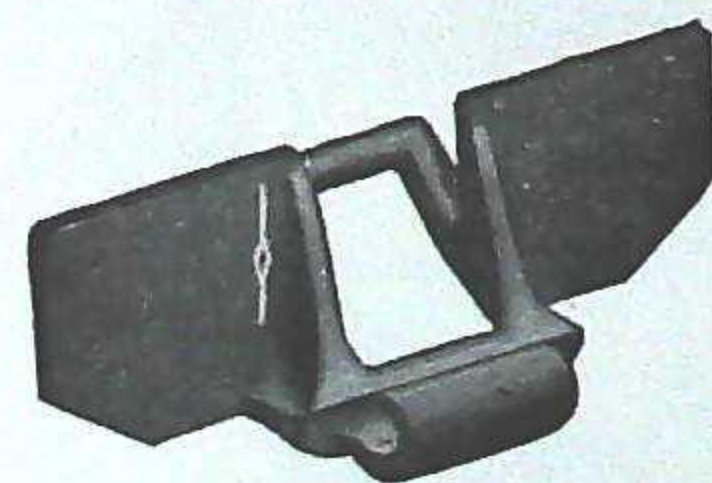
K50
Fig. 2644



L2
Fig. 2645



L3
Fig. 2646



L4
Fig. 2647

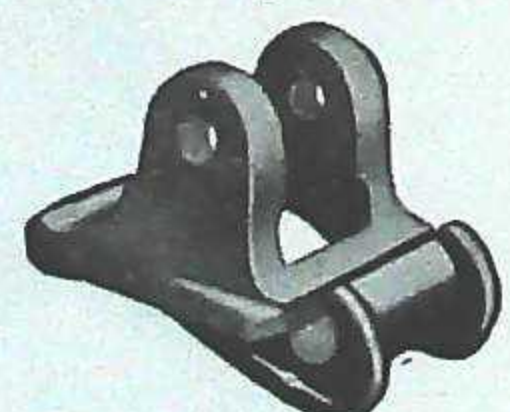


L23
Fig. 2648



Fig. 2649

M1



M3

Fig. 2649A



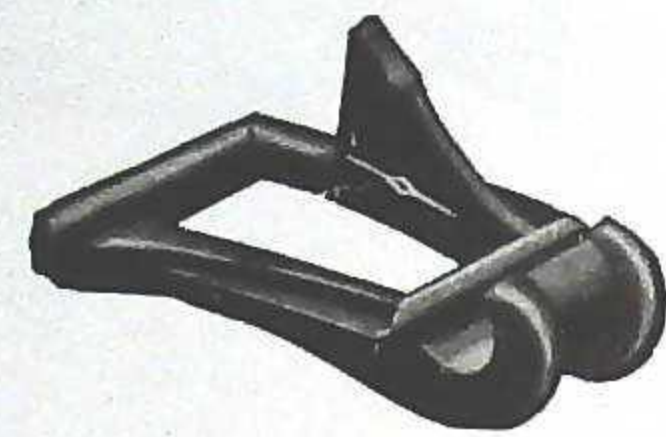
Fig. 2649J

S5



Fig. 2649K

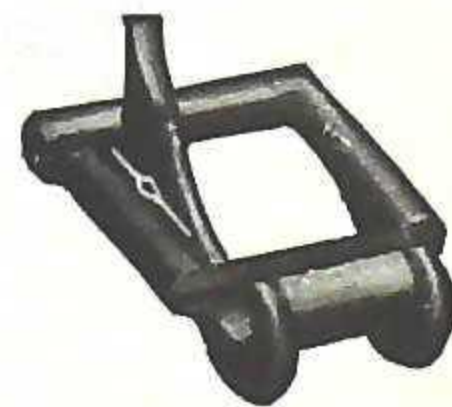
S10



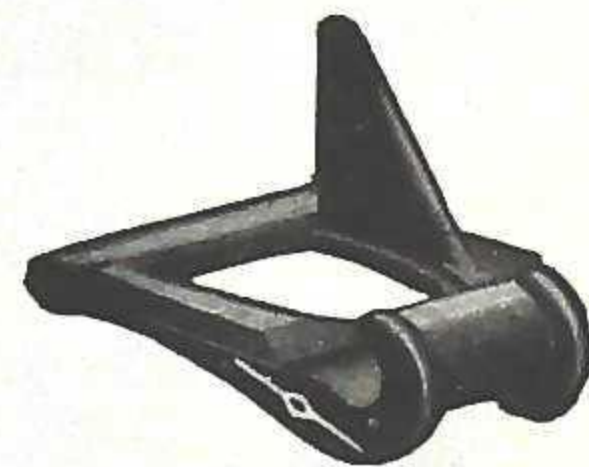
R1 (Left)
Fig. 2649B



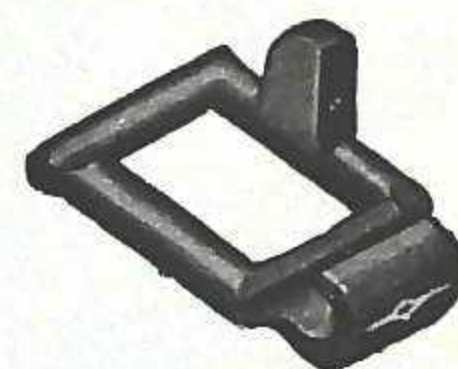
R2
Fig. 2649C



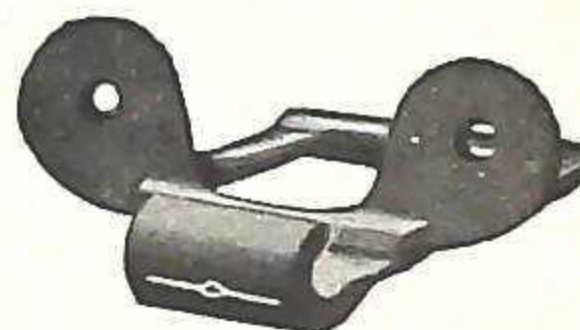
R3 (Right)
Fig. 2649D



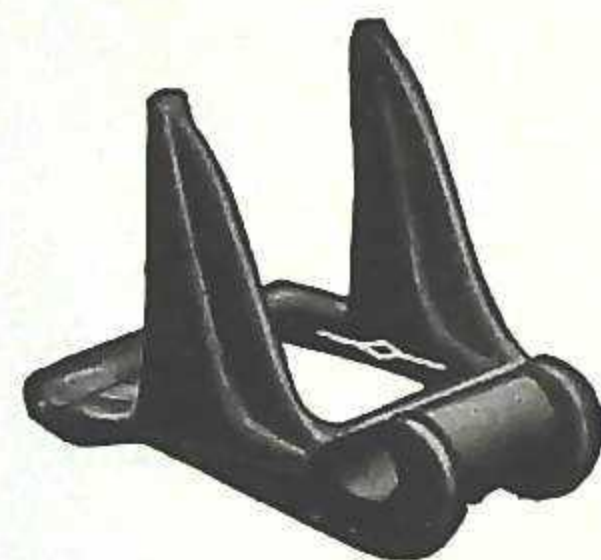
R8 (Left)
Fig. 2649E



R26 (Left)
Fig. 2649F



S1
Fig. 2649G



RR
Fig. 2649H

Light Take-up Boxes

Gears

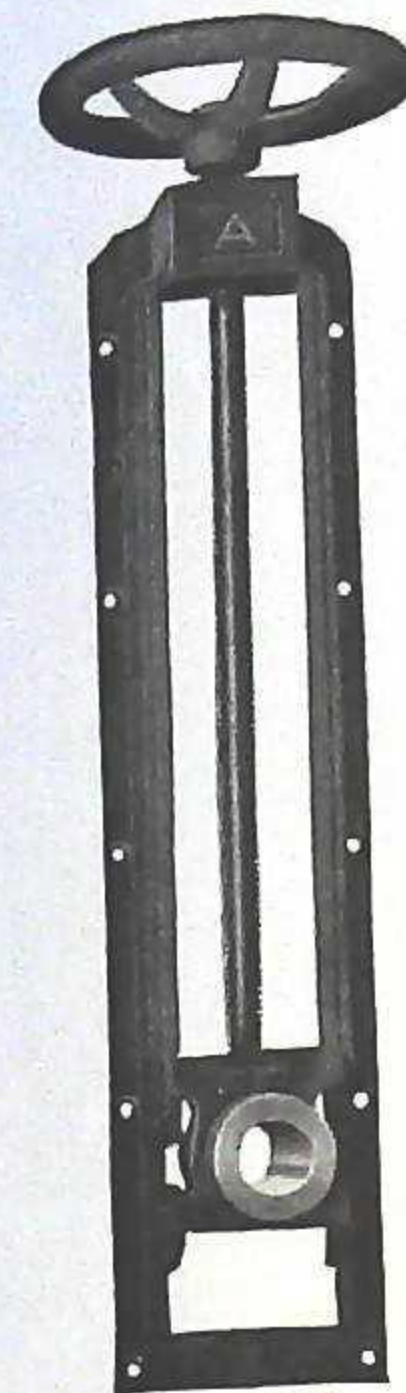


Fig. 2651
Style A



Fig. 2652
Style B

For use where it is necessary to take up slack in belts, as in elevators. Made to pull and push.

Size of Shaft Inches	PRICE, EACH ADJUSTMENT, IN.		Size of Shaft Inches	PRICE, EACH ADJUSTMENT, IN.	
	12	18		12	18
15/16	\$4.50	\$4.85	1 1/16	\$5.00	\$5.35
1 3/16	4.65	5.00	1 5/16	5.20	5.55
1 7/16	4.80	5.15	.....	.....	.....

Heavy Take-up Boxes

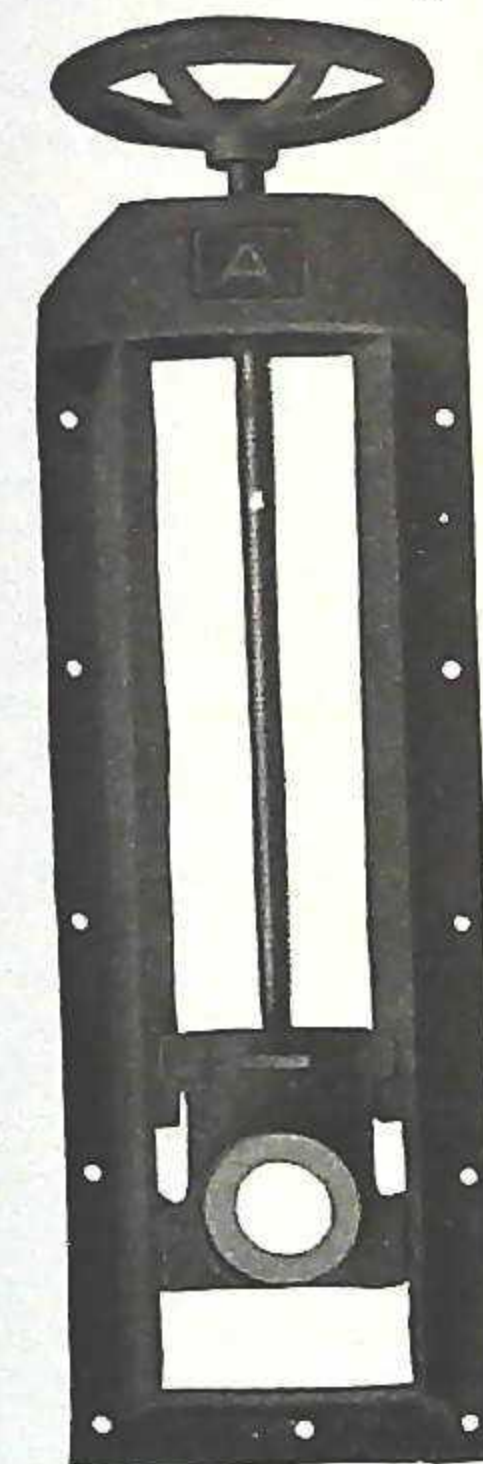


Fig. 2653
Style A

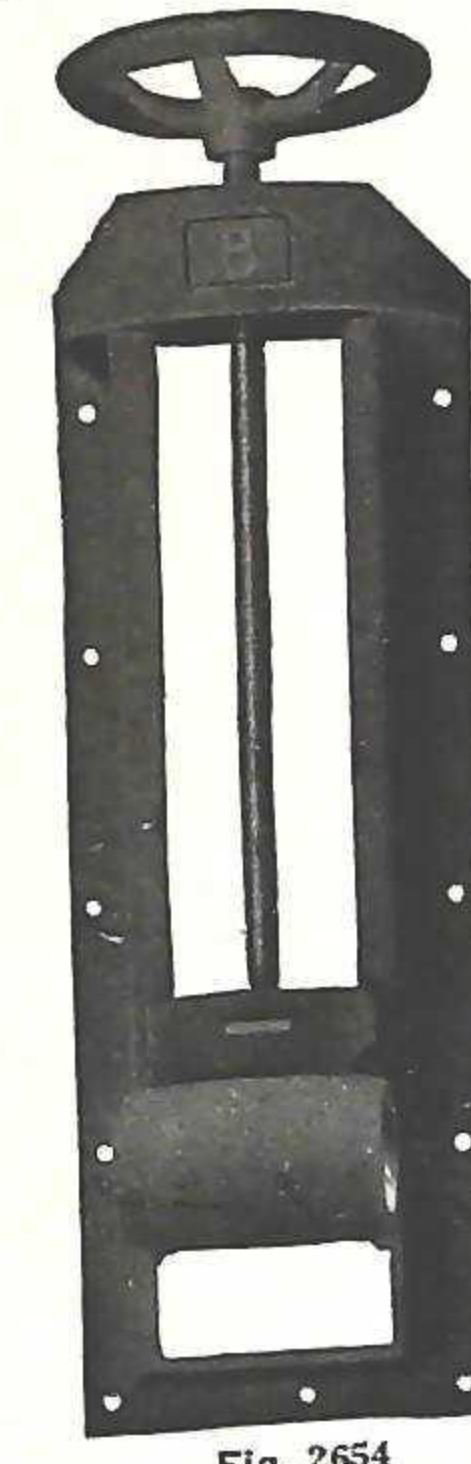


Fig. 2654
Style B

For use where it is necessary to take up slack in belts, as in elevators. Made to pull and push.

Size of Shaft Inches	PRICE, EACH ADJUSTMENT, IN.		Size of Shaft Inches	PRICE, EACH ADJUSTMENT, IN.	
	16	28		16	28
1 1/2	\$14.70	\$17.00	2 1/16	\$16.75	\$19.20
2 3/16	15.30	17.55	2 5/16	17.55	19.50
2 7/16	16.10	18.35	.....	.....	.....



Spur
Fig. 2655



Bevel
Fig. 2656

In ordering spur gears, be particular to state the number of teeth, pitch, face and bore of gear, also whether desired key-seated or set-screwed.

In ordering bevel gears, be particular to state the number of teeth, pitch, face and bore of both the wheel and the pinion.

Also state the backing or the projection of the hub back of the pitch line, and whether desired key-seated or set-screwed.

In ordering miter gears, be particular to state the number of teeth, pitch, face and bore.

Also state the backing of the projection of the hub back of the pitch line and whether desired key-seated or set-screwed.



Spur Mortise
Fig. 2657

All spur mortise gears are filled with a selected quality of hard maple cogs, and are trimmed on a modern gear cutter, insuring perfect shape.

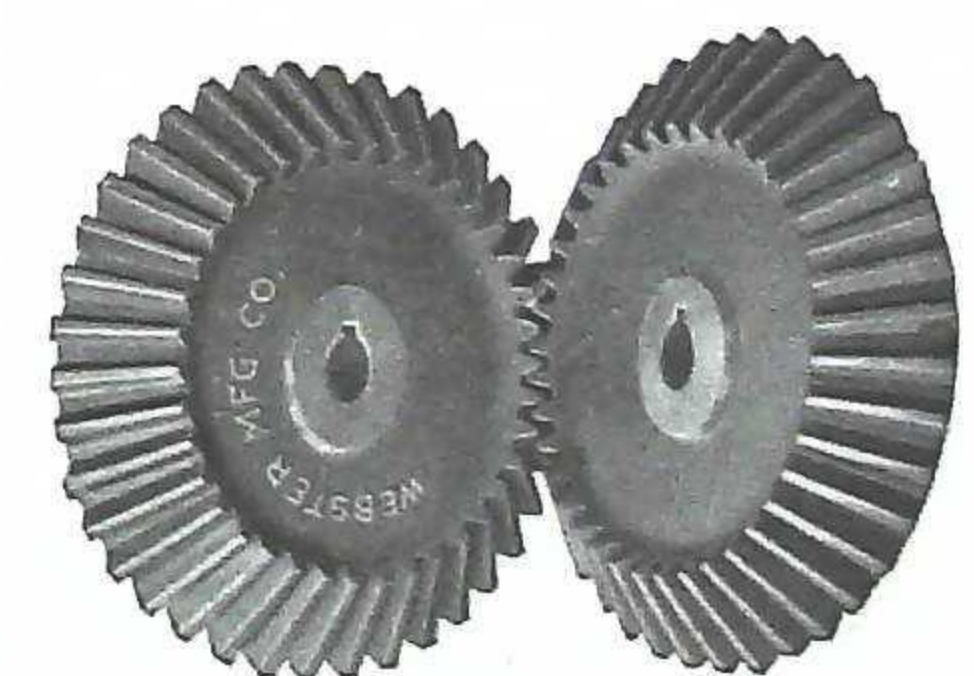
All bevel core wheels are made from approved patterns, and filled with the best hard maple cogs.

All pinions to run with the core wheels have dressed teeth and are made accurately.

Split gears of all types, which meet special requirements for offset hubs, jaw clutch hubs, shrouded pinions, etc., can also be supplied.



Bevel Mortise
Fig. 2658

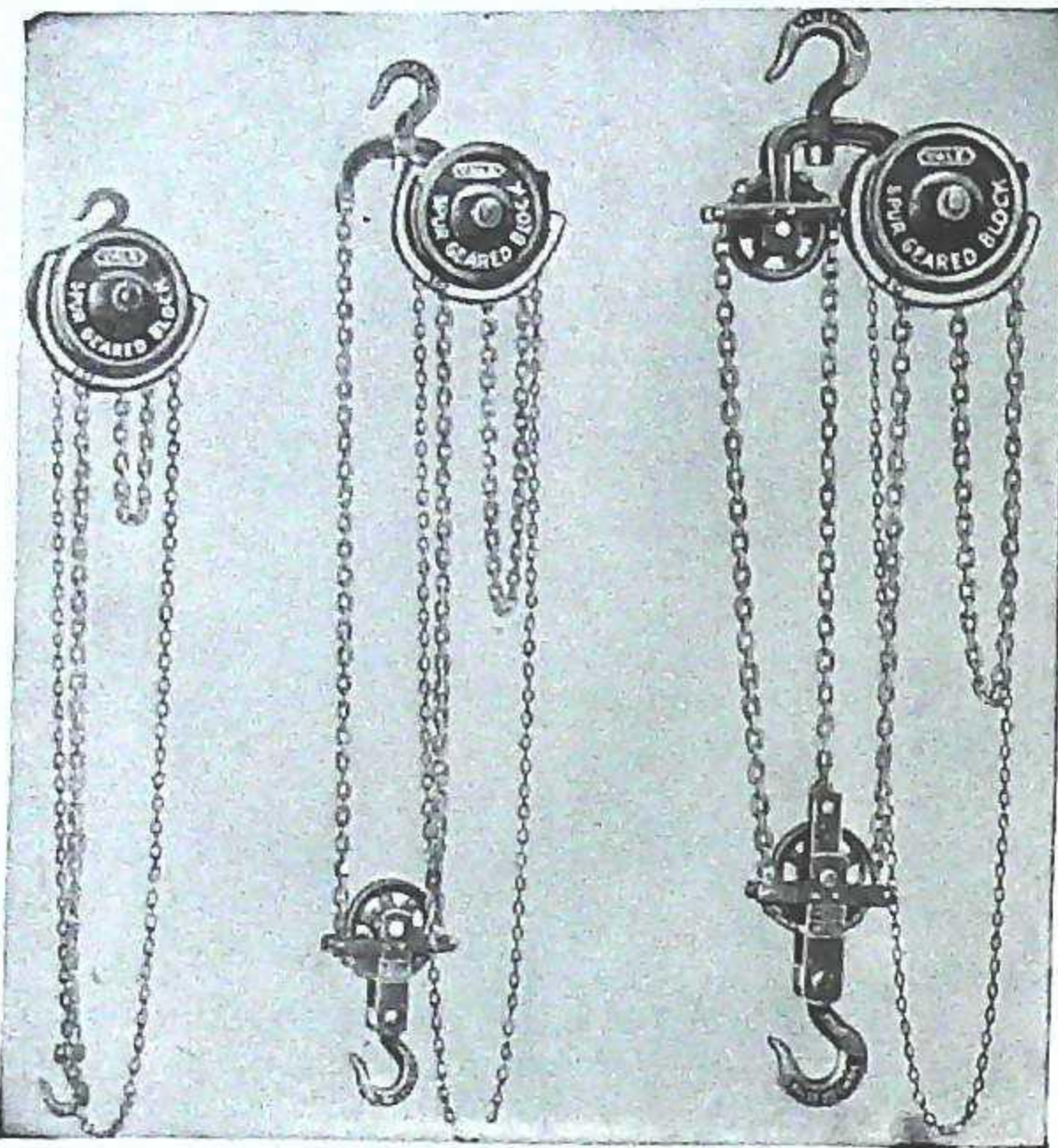


Miter
Fig. 2659

Also gears of cast steel, manganese steel, bronze, rawhide and other materials, with machine cut teeth, can be supplied.

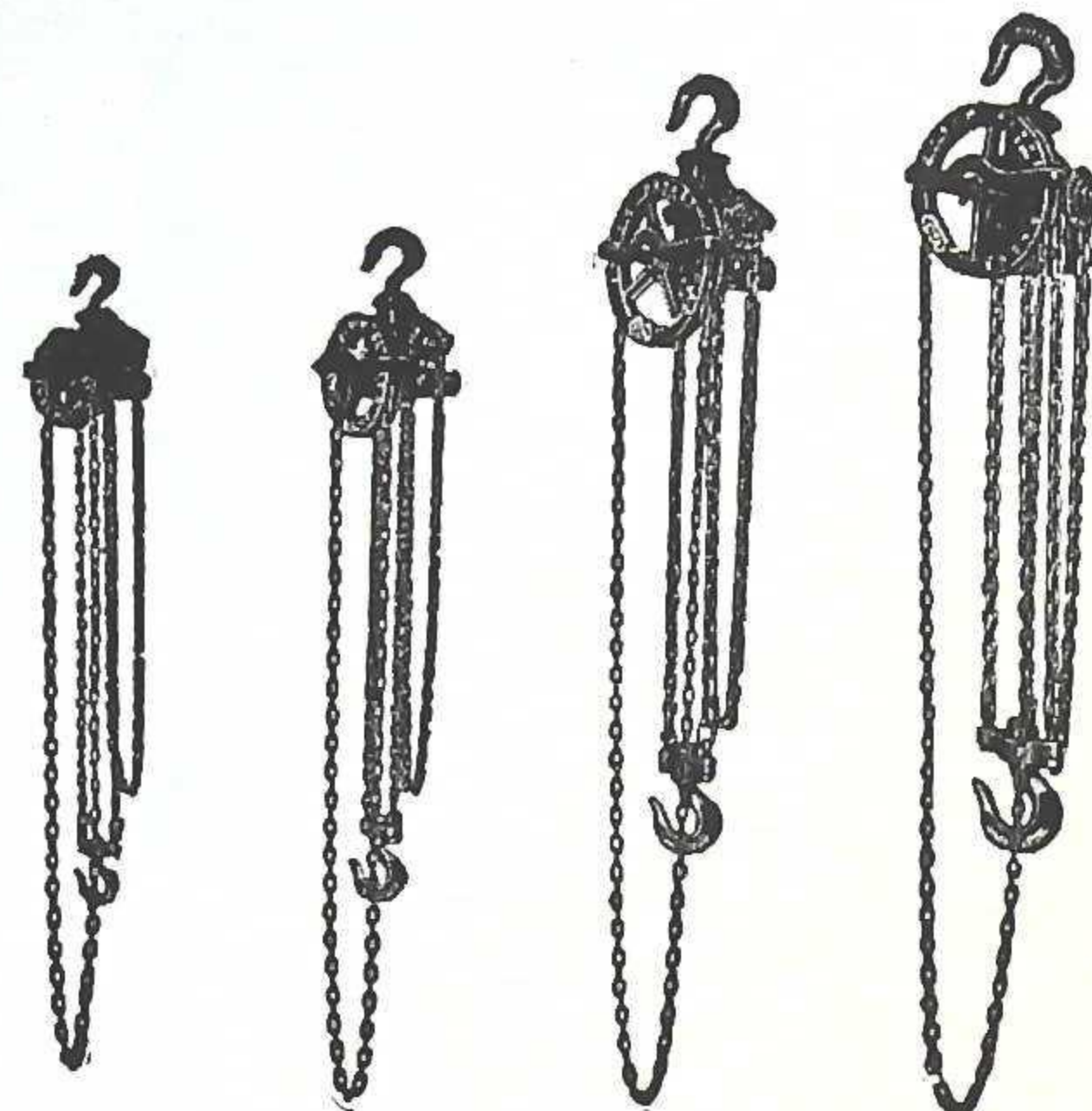
Prices upon application.

Yale Ball-bearing Spur-gear Chain Blocks
Triplex
1/4 to 20 Tons



1/4-Ton Fig. 2661, 3-4 Ton Fig. 2662, 5-10 Ton Fig. 2663

Yale Screw-gear Chain Blocks
Duplex
1/2 to 4 Tons



1-ton Fig. 2664, 2-ton Fig. 2665, 3-ton Fig. 2666, 4-ton Fig. 2667

The Yale Ball-bearing Spur-gear Block possesses the highest mechanical efficiency obtained in any chain block. Rugged, all steel suspension parts carry the load. It holds the load and will not lower it until the hand chain is pulled. This means safety to the user.

The Yale Ball-bearings on which the load sheave rotates reduce friction, where friction is greatest.

Every Yale Chain Block must pass a final test of 3360 pounds for each rated ton or 50 per cent overload in long tons.

Special steel chain is used to insure the greatest endurance and safety. The links are die formed and the weld is die-forged to secure perfect welding, which results in 100 per cent strength throughout the link. The complete chain is put through a special heat-treating process which toughens it and prolongs its life. Each foot of Yale steel load chain is subjected to a test load equal to three times its rated capacity.

Yale hooks are drop-forged from a special steel that allows them if severely overloaded to open slowly without fracture, thus giving visible warning of danger—the "safety valve" of each Yale Chain Block.

Rated Cap. Tons	*Std. Lift in Ft.	Test Load in Long Tons	Min. Distance Between Hooks In.	†CHAIN PULL Lbs.	Ship. Wt. Lbs.	Complete Lift Price Each	†Extra Lift Price per Foot
1/4	8	3/8	13	47	80	\$70.00	\$1.80
**1/2	8	3/4	13	57	80	70.00	1.80
1	8	1 1/2	16	77	117	90.00	1.90
1 1/2	8	2 1/4	18	103	164	120.00	2.00
2	9	3	21	112	250	140.00	2.10
3	10	4 1/2	32	107	260	180.00	3.00
4	10	6	37	116	358	220.00	3.20
5	12	7 1/2	45	102	484	280.00	4.30
10	12	15	54	132	702	480.00	6.50
16	12	24	62	127	1230	720.00	10.80
20	12	30	70	132	1680	850.00	13.00

Prices and particulars of 32 and 40-ton blocks on request.

*Figures denote height in feet which blocks with regular length of chain will lift above level on which operator stands.

†Figures denote the pull in pounds required to lift the full load, and the number of feet of hand chain which must be overhauled to lift the load one foot.

‡Extra lift per foot includes sufficient hand and load chain to increase the travel of the lower hook one foot.

**A 1/2-ton special Quick Speed Spur-gear Block can be furnished which is the same as the 1-ton regular with the exception that the gear ratio has been changed to double the speed at half load. Price is \$90.00 each.

The screw-gear is the popular type of double chain worm wheel or screw block. It is next best to the spur-gear, and its efficiency is 25 per cent higher than in most screw hoists. For portable use the screw-gear is light and powerful and takes up the least head room. For shifting about in general use the screw-gear is the handy block. With it one man can lift the heaviest loads. Where the higher speed of the spur-gear is not required the screw-gear block is the best chain block made. It is absolutely impossible for the load chains to slip, because the safety guides prevent it.

It is particularly adapted to horizontal work when pulling heavy loads on rollers or skids.

All Yale Chain Blocks receive a final test (50 per cent overload in long tons) and inspection before shipment.

The chain is the most expensive single part of the block and is subjected to more abuse and wear than any other part. Therefore, special steel chain is used to insure the greatest endurance and safety.

The links of the Yale Steel Chain are die forged to obtain accuracy and long wearing qualities. They are electrically welded on the side, with the heat generating in the center and traveling outward, resulting in a clean fusion of the metal with no impurities such as smoke, dirt and scale.

The weld is die-forged to secure perfect welding, which results in 100 per cent strength throughout the link. The complete chain is put through a special heat-treating process which toughens it and greatly prolongs its life. Each foot of Yale steel load chain is subjected to a test load equal to three times its rated capacity.

Rated Cap. Tons	*Std. Lift in Ft.	Test Load in Long Tons	Min. Distance Between Hooks In.	†CHAIN PULL Lbs.	Ship. Wt. Lbs.	Complete Lift Price Each	†Extra Lift Price per Foot
1/2	8	3/4	13	68	56	\$50.00	\$2.50
1	8	1 1/2	16	87	59	60.00	2.60
1 1/2	8	2 1/4	19	94	80	80.00	2.70
2	9	3	21	115	93	100.00	2.80
3	10	4 1/2	25	132	126	150.00	3.00
4	10	6	29	142	155	190.00	3.80

*Figures denote height in feet which blocks, with regular lengths of chain, will lift from level on which operator stands.

†Figures denote the pull in pounds required to lift the full load, and the number of feet of hand chain which must be overhauled to lift load one foot

Yale Differential Chain Blocks
1/4 to 2 Tons

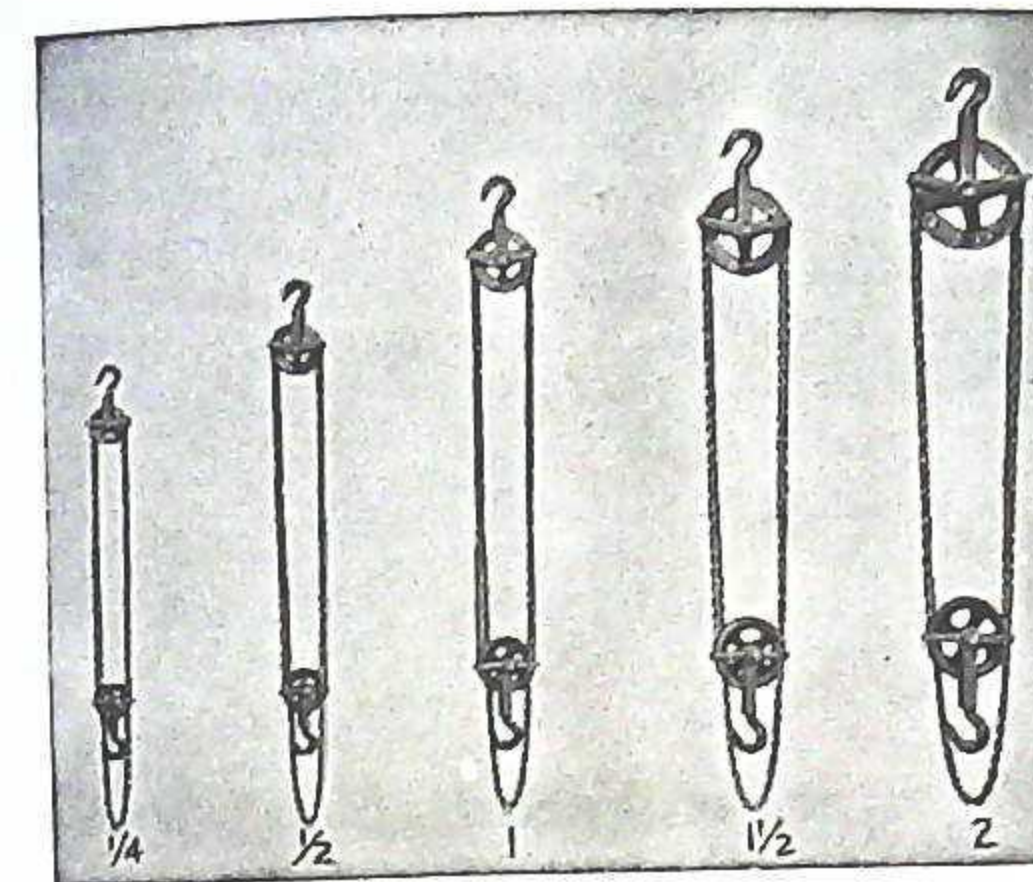


Fig. 2671

The Yale Differential Block is designed for service where comparatively light loads must be handled occasionally. The overhaul of hand chain compares with the Yale spur-gear block, but the hand chain pull is greater by 2 1/2 times. The block, however, is light and easily handled, and where men are readily available for emergency or infrequent work, it is desirable equipment. It holds the load and will not lower until the hand chain is pulled. Has few parts, and on account of its reliability and simplicity is especially adapted for use in garages and for all ordinary hoisting purposes where the higher power and durability of the Yale spur-gear and screw-gear blocks are not required.

Yale Differential Blocks have large sheaves with correctly formed pockets into which the Yale steel chain (used on all Yale chain blocks) meshes accurately without fouling or stretching of the chain. A poor-fitting chain quickly destroys its usefulness and safety.

The regular Yale drop-forged steel hooks are used on all Yale Differential Blocks.

This block possesses the excess capacity that is the distinctive feature of all Yale hoisting equipment. Protection of life and property is the first consideration in its construction.

Rated Cap. Tons	Std. Lift in Feet	Test Load in Long Tons	Min. Distance between Hooks In.	CHAIN PULL Lbs.	Ship. Wt. Lbs.	Complete Lift Price Each	Extra Lift Price per Foot
1/4	6	3/8	17	72	28	\$36.00	\$4.80
1/2	7	3/4	21	122	36	42.00	4.80
1	8	1 1/2	26	216	60	56.00	5.00
1 1/2	8 1/2	2 1/4	32	246	94	72.00	5.40
2	9	3	39	308	146	90.00	5.60

Parts

No.	Description	PRICE, EACH FOR HOIST, CAP., TONS
11	Top Yoke and Hook	\$5.00 \$6.00 \$8.50
12	" Sheave	6.25 8.00 12.00
13	Bottom Sheave	1.80 2.40 3.00
14	" Yoke and Hook	4.00 5.00 7.00
15	Top Sheave Pin	.80 1.00 1.00
16	Bottom Sheave Pin	.60 .80 .80
..	Regular Chain	26.40 31.20 37.50

No.	Description	PRICE, EACH FOR HOIST, CAP., TONS
11	Top Yoke and Hook	\$11.00 \$15.00
12	" Sheave	16.80 24.00
13	Bottom Sheave	3.80 5.00
14	" Yoke and Hook	9.00 12.00
15	Top Sheave Pin	1.20 1.20
16	Bottom Sheave Pin	1.00 1.00
..	Regular Chain	44.60 50.40

Yale Geared Steel Trolleys

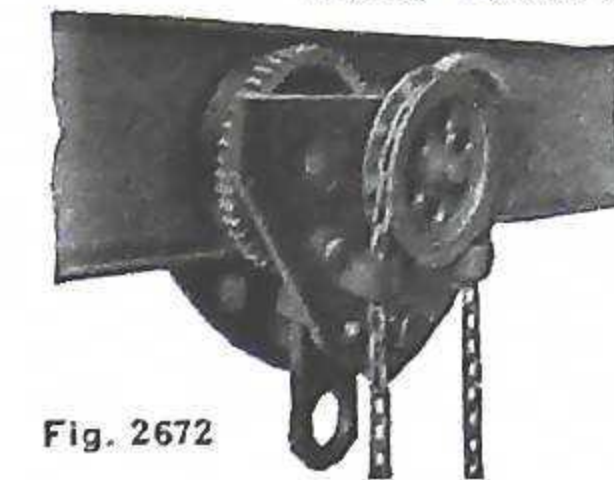


Fig. 2672

Equalizing pin allows trolley to be assembled at any point on I-beam or crane. Furnished with adjusting washers to fit on I-beam larger than standard, as shown in table.

To fit on larger sized I-beam \$4.00 extra.

Where heavy loads are carried on an overhead trolley or where there is normally a considerable distance between the load and the trolley, it will reduce the "pendulum effect" or swing, in starting and stopping the load.

Rated Cap. Tons	For I-BEAMS Std. In.	Max. In.	Smallest Radius for Curve Inches	Diameter of Tread of Wheel Inches	Std. Reach of Chain from Under Side of I-Beam Feet	Pull on Hand Chain to Move Pounds	Net Weight Pounds	Price Each
1	6	9	21	4 3/4	8 3/8	8	90	\$59.00
1 1/2	7	10	30	5 1/2	9	9	140	68.00
2	8	12	36	6 1/2	10 1/2	11	170	77.00
3	9	15	42	7 1/4	12 1/4	13	180	97.00
4	10	18	48	8 1/4	12 1/2	18	350	134.00
5	12	20	54	10	15 1/4	20	360	170.00
6	12	24	60	10	15 1/2	23	460	206.00
8	15	24	60	12	16 1/8	28	540	291.00
10	15	24	60	13	16 3/4	35	650	352.00
12	..	..	60	13	16 3/4	42	700	Upon Application
15	..	..	96	18	17 1/2	44	1400	Upon Application
20	..	..	120	18	18 3/8	49	1500	Upon Application

Yale Plain Steel Trolleys

Furnished with adjusting washers to fit on I-beam three sizes larger than standard. For trolleys to fit on larger sized I-beam than specified, \$4.00 extra.

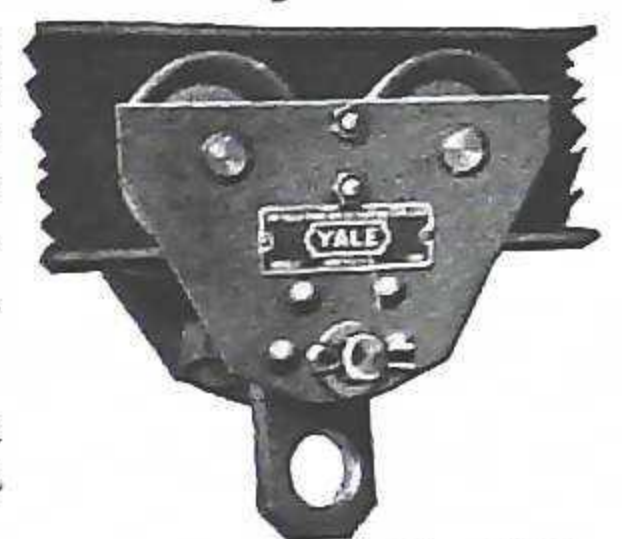


Fig. 2673

Three adjustments for headroom are also provided.

In any position, the chain block is free to swing through a complete circle.

Rated Cap. Tons	For I-BEAMS Std. In.	Max. In.	Greatest Distance Between Supports Feet	Smallest Radius for Curve Inches	Diameter of Tread of Wheel Inches	Direct Push to Start Fully Loaded Trolley Pounds	Net Weight Lbs.	Price Each
1/4	4	7	10	18	3	25	25	\$22.00
1/2	5	8	13	21	3 3/4	18	30	25.00
1	6	9	14	21	4 3/4	20	50	29.00
1 1/2	7	10	14	30	5 1/2	26	95	39.00
2	8	12	15	36	6 1/2	30	115	46.00
3	9	15	15	42	7 1/4	40	150	61.00
4	10	18	15	48	8 1/4	50	210	85.00
5	12	20	17	54	10	60	270	109.00
6	12	24	21	60	10	70	350	134.00
8	15	24	28	60	12	90	420	170.00
10	15	24	32	60	13	115	550	218.00
12	..	..	29	60	13	150	600	295.00
15	..	..	26	96	18	180	1100	485.00
20	..	..	21	120	18	260	1200	585.00

Yale Cast Iron Trolleys

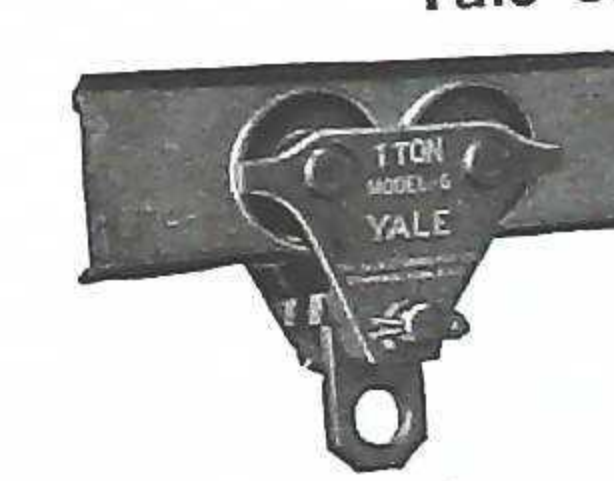


Fig. 2674

Equalizing pin allows them to be assembled for larger I beams.

Three sizes of adjusting washers are regularly furnished.

Trolleys to fit larger sized I-beams than specified, \$4.00 extra.

Where low headroom conditions have to be met, the chain block can be hooked directly over the equalizing pin.

Rated Cap. Tons	For I-BEAMS Standard Inches	Max. Inches	Smallest Radius Curve	Distance from I-beam to Lower Edge of Eye in Clevis, In.	WITH PLAIN BEARINGS Weight Pounds	Price Each
1	4	7	18	5 3/8	16	\$11.00
1 1/2	5	8	21	5 3/8	17	15.00
2	6	9	21	7	46	22.00
3	7	10	30	7 3/4	66	27.00
4	8	12	36	8 3/8	84	34.00

Bell Bottom Jack Screws



These jack screws have cast-iron stands, with forged head screws.

Diam. Screw Inches	Capacity Tons	Diam. Screw Inches	Capacity Tons
1 1/4	10	2 1/4	24
1 1/2	12	2 1/2	28
1 3/4	16	3	36
2	20	...	..

Fig. 2681

Diam. of Screw Inches	Height of Stand Inches	Height Over All Inches	Price Each	Diam. of Screw Inches	Height of Stand Inches	Height Over All Inches	Price Each
1 1/4	4	6 3/4	\$2.90	2	22	26	\$12.50
1 1/4	6	8 3/4	3.10	2 1/4	24	28	13.50
1 1/4	8	10 3/4	3.40	2 1/2	26	30	14.50
1 1/4	10	12 3/4	3.80	3	28	32	15.50
1 1/4	12	14 3/4	4.20	...	...	...	...

Levers will be sent only when ordered and will be charged for extra.

Bell Bottom Ratchet Jack Screws

Made with heavy cast iron stand and cap, steel screw and ratchet, malleable handle.



Fig. 2682

Diam. Screw Inches	Capacity Tons	Diam. Screw Inches	Capacity Tons
1 1/4	12	2 1/4	28
1 1/2	16	2 1/2	32
1 3/4	20	3	40
2	24	...	..

Diam. of Screw Inches	Height of Stand Inches	Height Over All Inches	Price Each	Diam. of Screw Inches	Height of Stand Inches	Height Over All Inches	Price Each
1 1/4	4	7 1/4	\$9.80	2	24	28	\$22.50
1 1/4	6	9 1/4	10.10	2 1/4	26	30	23.50
1 1/4	8	11 1/4	10.40	2 1/2	28	32	24.50
1 1/4	10	13 1/4	10.80	3	30	34	25.50
1 1/4	12	15 1/4	11.20	...	...	...	...

Levers will be sent only when ordered and will be charged for extra.

No. 1 Barrett Double Acting Trip Jacks

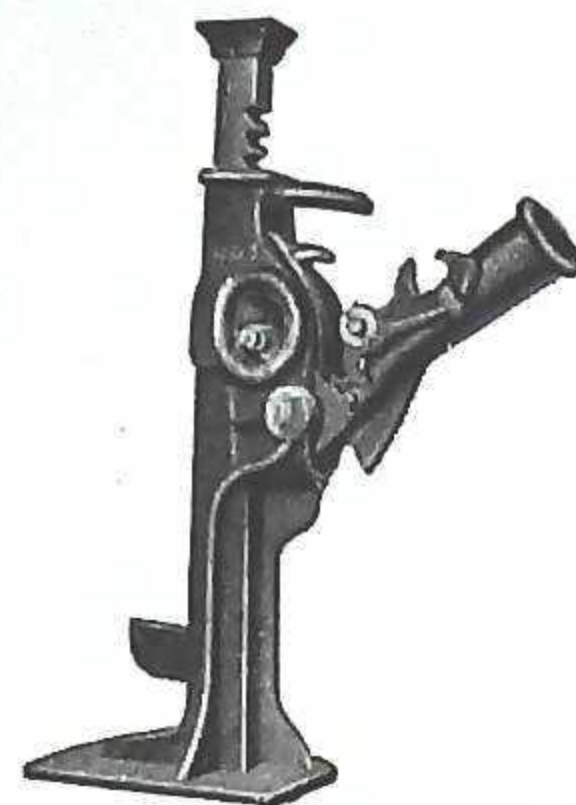


Fig. 2683

Furnished with cast steel socket lever. The leverage is compound and double acting. The load is instantly dropped from any elevation by means of the trip at the side of the socket lever. This jack is positive and quick in action. Furnished with either round socket lever and wooden operating handle, or square socket lever. Trip jacks are recommended for track work only.

No.	Cap. Tons	Ht. In.	Raise In.	Size Bar, In.
1	10	25 1/2	13 1/2	1 1/2 x 1 1/2

No. 2 Barrett Double Acting Automatic Lowering Jacks

Being double acting, the load is moved up or down a notch at each stroke on both upward and downward movements of lever. The direction is controlled by an eccentric at the side of the frame. The load cannot be suddenly dropped as with a trip jack. Operated at any angle. Furnished with wood operating handles.



Fig. 2684

No.	Ht. In.	Raise In.	Size Bar, In.
2	21	10	1 5/8 x 1 5/8

Barrett Single Acting Automatic Lowering Jacks

Moves load on downward stroke of lever only. Especially serviceable for bridge work.

Furnished with either round socket and wooden operating lever, or square socket, for use with lining bar or crow bar as operating lever.

No.	Cap. Tons	Ht. In.	Raise In.
518	10	22	12
519	15	28	17

No.	Cap. Tons	Ht. In.	Raise In.	Price Each
518	70	\$25.00	...	\$24.00
519	96	40.00	...	39.00

Barrett Single Acting Automatic Lowering Car Jacks

Used by industrial concerns, telephone and telegraph companies, steam railroads, mines, mills, contractors, truckmen, etc.

Combines safety of operation and low maintenance cost.

Fine-tooth rack and scientifically ribbed frame.

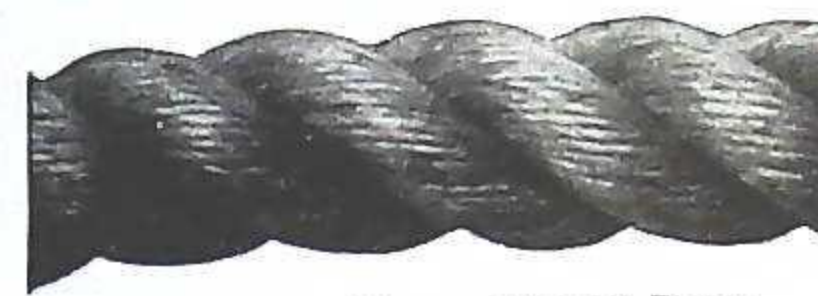
No.	Ht. In.	Cap. Tons	Raise In.	Size Rack In.	Wt. Lbs.	Price Each
539	22	15	11	2 1/2 x 1 3/4	78	\$40.00
550	16	5	8	1 1/2 x 1 1/4	32	16.00
551	21	5	13	1 1/2 x 1 1/4	40	18.00

*Furnished with 3-foot steel operating handle.



Fig. 2686

Plymouth Three-strand Manila Rope

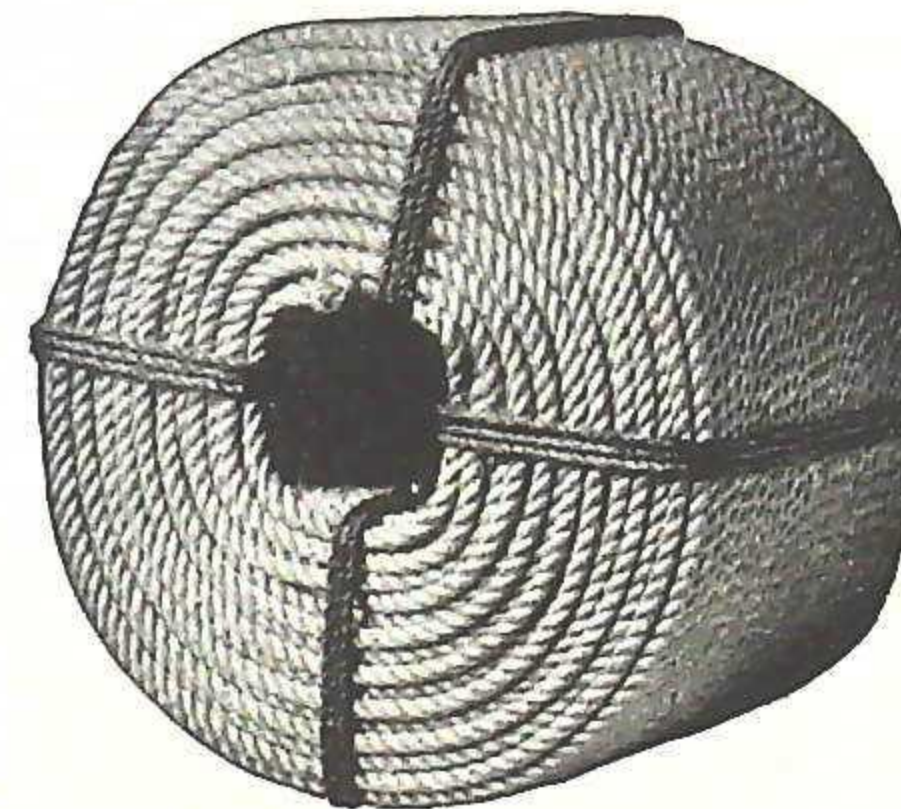


Section of Three-strand Rope



Cross Section of Rope

Recommended for all work not calling for goods of special construction, stock or lay. Furnished on all orders which specify simply manila or manila three-strand. If special goods are wanted, please say so; if in doubt, state the work for which the rope is wanted. Made from manila fiber of high quality. Has ample strength and durability for all general purposes. Ordinarily used in right-laid and untarred forms, but can be furnished left-laid or tarred when desired. The lay is the regular lay—soft enough for easy handling and splicing, yet firm enough to preserve the rope's shape.



Coil of Plymouth Manila Rope, Three-strand

Fig. 2691

The 3/8 and 3/4-inch sizes are 6 thread; 1-inch, 9 thread; 1 1/8-inch, 12 thread; and 1 3/8-inch, 15 thread.

Put up in full coils of 200 fathoms (1200 feet) and half coils of 100 fathoms (600 feet), except 6, 9 and 12-thread, which are put up in coils of 50 and 25 pounds.

Circumference Inches	Approx. Diam. Inches	Length of Standard Coil Feet	Weight of Standard Coil Pounds	Minimum Tensile Strength Pounds	Approx. Feet per Pound
9/16	3/16	3333	50	480	66 2/3
3/4	1/4	2750	50	620	55
1	5/16	1820	50	1000	36 1/3
1 1/8	3/8	1350	50	1275	27
1 1/4	7/16	1200	65	1750	18 1/2
1 3/8	1/2	1200	75	2100	16
1 1/2	9/16	1200	90	2450	13 1/3
1 3/4	5/8	1200	125	3150	9 1/2
2	3/4	1200	160	4000	7 1/2
2 1/4	7/8	1200	198	4900	6 1/4
2 1/2	15/16	1200	234	5900	5 1/4
2 3/4	1	1200	270	7000	4 3/4
3	1 1/16	1200	324	8200	3 2/3
3 1/4	1 1/8	1200	378	9500	3 1/6
3 1/2	1 1/4	1200	432	11000	2 3/4
3 3/4	1 3/8	1200	504	12500	2 1/2
4	1 1/2	1200	576	14200	2 1/4
4 1/4	1 5/8	1200	648	16000	1 3/4
4 1/2	1 3/4	1200	720	17500	1 2/3
4 3/4	1 7/8	1200	810	19500	1 1/2
5	2	1200	900	21500	1 1/3
5 1/2	2 1/8	1200	1080	25500	1 1/4
6	2 1/4	1200	1296	30000	1 1/3
6 1/2	2 3/8	1200	1512	34000	1 1/4
7	2 1/2	1200	1764	38500	1 1/4
7 1/2	2 5/8	1200	2016	43500	1 1/4
8	2 3/4	1200	2304	49000	1 1/4
8 1/2	2 7/8	1200	2590	55000	1 1/4
9	3	1200	2915	61000	1 1/4
9 1/2	3 1/8	1200	3240	67000	1 1/4
10	3 1/4	1200	3600	73000	1 1/4

Prices upon application.

Plymouth Four-strand Manila Rope



Cross Section Without Heart

Section of Four-strand Manila Rope

Cross Section With Heart

Recommended for more common forms of sheave work as on running rigging, contracting equipment, painters' falls, haying rigs, etc.

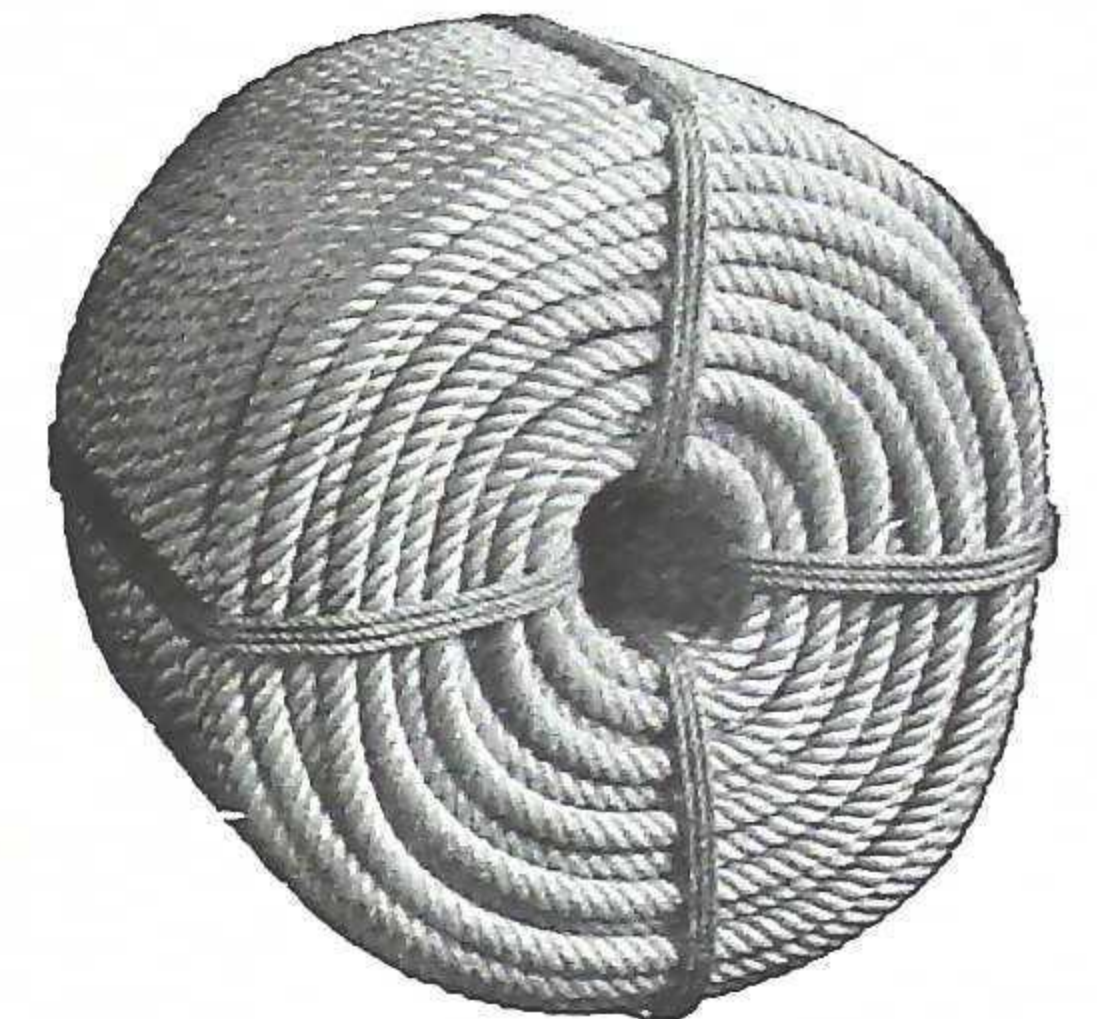
Can be had with or without a heart rope.

Made from manila fiber of excellent quality.

Laid somewhat harder than the three-strand. Strands in contact with each other over larger area, more circular in contour.

Wears rounder, runs more smoothly and lasts longer than three-strand on sheave work.

Difference in working strength between three- and four-strand not very marked; four-strand about 5 per cent heavier.



Coil of Plymouth Manila Rope, Four-strand with Heart

Fig. 2692

Particularly well adapted for hay carriers or loaders. Best sizes for this work: 3/4, 7/8, 1 and 1 1/8-inch diameter.

Tarred form, hard laid, without heart, furnished for ships' lanyards.

Standard length of coils sizes 1 1/4 to 3 1/4-inch circumference inclusive, 1200 feet; 3 1/2-inch circumference and larger, 1150 feet.

Circumference Inches	Approx. Diam. Inches	Length of Standard Coil Feet	Weight of Standard Coil Pounds	Minimum Tensile Strength Pounds	Max. Gross Weight per Foot of Rope Pounds
1 1/4	7/16	1200	63	1750	0525
1 1/2	1/2	1200	103	2450	0858
1 3/4	9/16	1200	136	3150	1133
2	5/8	1200	163	4000	1360
2 1/4	3/4	1200	197	4900	1642
2 1/2	7/8	1200	244	5900	2033
2 3/4	15/16	1200	287	7000	2391
3	1	1200	342	8200	285
3 1/4	1 1/16	1200	380	9500	3166
3 1/2	1 1/8	1150	444	11000	3860
3 3/4	1 1/4	1150	516	12500	4487
4	1 1/2	1150	588	14200	5113
4 1/4	1 5/8	1150	648	16000	5634
4 1/2	1 3/4	1150	726	17500	6313
4 3/4	1 7/8	1150	810	19500	7034
5	2	1150	900	21500	7826
5 1/2	2 1/8	1150	1080	25500	9391
6	2 1/4	1150	1296	30000	1 127
6 1/2	2 3/8	1150	1512	34000	1 314
7	2 1/2	1150	1764	38500	1 534
7 1/2	2 5/8	1150	2016	43500	1 753
8	2 3/4	1150	2304	49000	2 003
8 1/2	2 7/8	1150	2590	55000	2 252
9	3	1150	2915	61000	2 535
9 1/2	3 1/8	1150	3240	67000	2 817
10	3 1/4	1150	3600	73000	3 130

Prices upon application.

Plymouth Sisal Lathyrn

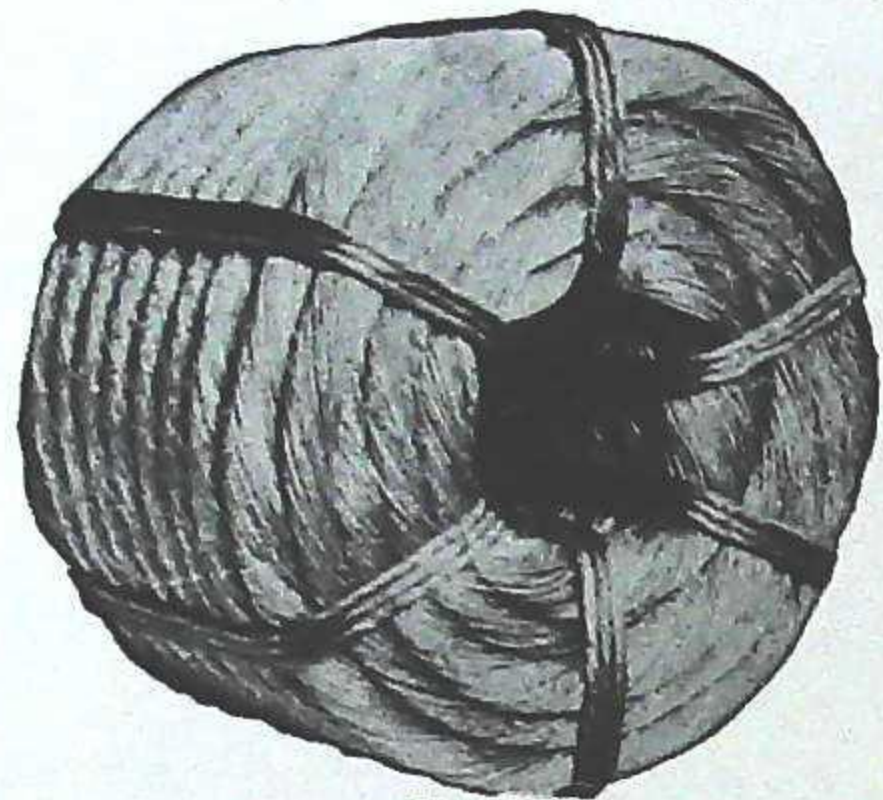


Fig. 2701

For tying up laths, shingles, kindling wood, cooperage stock, woodenware and other lumber products, corn fodder and bags of grain and cement. Used for many other similar purposes, for example in the Christmas tree and nursery trade. Made from best quality pure white sisal. Usually tarred to increase its weather-resisting power but can be furnished untarred if desired.

Description	No. Yarns to Strand	Pounds to Coil
Single B (Common)	110	50, 100, 200
" C (Medium)	25, 50	200, 400, 500
" CC (Kindling-wood Yarn)	130	50, 100, 200
" D (Fine)	25, 50	200, 400, 500
" DD (Extra Fine)	100, 200	50, 100, 200
Double (Corded)	50	100
Fine Double (Corded)	60	100
Two-thread (Fine)	42	100
" (Fine)	100	100

Prices upon application.

American Standard Wire Rope

Crucible Cast Steel Hoisting Rope

6 Strands—19 Wires to the Strand—1 Hemp Core



Fig. 2702

Diam. Inches	Circum. Inches	Approx. Wt. per Foot Pounds	Approx. Strength Tons of 2000 Lbs.	Working Load, Tons	Diameter of Drum or Sheave Advised Feet	Price per Foot
2 3/4	8 5/8	11.95	211.	42.2	11.	\$2.10
2 1/2	7 7/8	9.85	170.	34.	10.	1.75
2 1/4	7 1/8	8.	133.	26.6	9.	1.44
2	6 3/4	6.30	106.	21.2	8.	1.16
1 7/8	5 3/4	5.55	96.	19.	8.	1.02
1 3/4	5 1/2	4.85	85.	17.	7.	.90
1 5/8	5	4.15	72.	14.4	6.5	.77
1 1/2	4 3/4	3.55	64.	12.8	6.	.66
1 3/8	4 1/4	3.	56.	11.2	5.5	.56
1 1/4	4	2.45	47.	9.4	5.	.46
1 1/8	3 1/2	2.	38.	7.6	4.5	.38
1	3	1.58	30.	6.	4.	.31
7/8	2 3/4	1.20	23.	4.6	3.5	.24
3/4	2 1/4	.89	17.5	3.5	3.	.19
5/8	2	.62	12.5	2.5	2.5	.14
9/16	1 3/4	.50	10.	2.	2.25	.12
1/2	1 1/2	.39	8.4	1.68	2.	.11
7/16	1 1/4	.30	6.5	1.30	1.75	.10
3/8	1 1/8	.22	4.8	.96	1.50	.09 1/2
5/16	1	.15	3.1	.62	1.25	.09 1/4
1/4	3/4	.10	2.2	.44	1.	.09

Wire Rope

Iron and Cast Steel Tiller or Hand Rope

6 Strands—42 Wires to the Strand—7 Hemp Cores



Fig. 2703

Tiller and hand are terms applied to rope composed of six strands of 42 wires each, each strand being a little wire rope in itself. This rope has seven hemp cores, one large one in the center of the rope, and one little one in each of the six strands. It is an exceedingly flexible rope, and is capable of being bent around small sheaves. However, it will stand little abrasive wear on account of the fine wires of which it is composed.

Tiller or hand rope is used principally for signal pull purposes in mines and factories, and in connection with the operating or controlling device on passenger and freight elevators. It is also used to a limited extent for steering lines on yachts and motor boats.

Diam. Rope In.	Circumference In.	Approx. Wt. per Foot Lbs.	Diam. Sheave Advised In.	APPROX. BREAKING STRENGTH, LBS.		PRICE, PER FOOT	
				Iron	Cast Steel	Iron	Cast Steel
1	3	1.10	24	22000	35000	\$.33	\$.43
7/8	2 3/4	.84	21	15500	26000	.27	.36
3/4	2 1/4	.62	18	11000	18000	.22	.30
5/8	2	.43	15	7000	13500	.17	.24
1 1/2	1 3/4	.35	13 1/2	6300	11000	.14	.20
1 1/4	1 1/2	.28	12	5800	9000	.11 1/2	.17
1 3/8	1 1/4	.21	10 1/2	4000	6500	.10	.15
1 1/8	1 1/8	.16	9	3000	4800	.09	.14
7/8	1	.11	7 1/2	1900	3600	.08	.12 1/2
3/4	3/4	.07	6	1300	2500	.07 1/2	.11
5/8	3/4	.042	.....	750	1350	.07	.10

Galvanized Wire Rope

Iron Ships' Rigging or Guy Rope

6 Strands—7 or 12 Wires to the Strand—1 Hemp Core



Fig. 2704

Diam. Rope Inches	Circumference Inches	Approx. Weight per Foot	Approx. Strength Tons 2000 Lbs.	PRICE, PER FOOT	
				7	12
1 3/4	5 1/2	4.85	42	\$.44	\$.46
1 1/2	5 1/4	4.42	38	.41	.43
1 5/8	5	4.15	35	.38	.40
1 1/2	4 3/4	3.55	30	.35	.37
1 7/8	4 1/2	3.24	28	.31 1/2	.33 1/2
1 3/8	4 1/4	3	26	.28 1/2	.30 1/2
1 1/4	4	2.45	23	.25	.26 1/2
1 3/16	3 3/4	2.21	19	.22 1/2	.24
1 1/8	3 1/2	2	18	.19 1/2	.21
1 1/16	3 1/4	1.77	16.1	.17 1/2	.18 1/2
1	3	1.58	14.1	.15	.16
7/8	2 3/4	1.20	11.1	.13	.....
5/8	2 1/2	1.03	9.4	.11	.....
3/4	2 1/4	.89	7.8	.09	.....
5/8	2	.62	5.7	.08	.....
9/16	1 3/4	.50	4.46	.07	.....
1 1/2	1 1/2	.39	3.39	.06	.....
1 1/4	1 1/4	.30	2.35	.05	.....
1 3/8	1 1/8	.22	1.95	.04 1/2	.....
1 1/8	1	.15	1.42	.03 1/2	.....
7/8	7/8	.125	1.20	.03	.....
3/4	3/4	.09	.99	.02 1/2	.....
5/8	5/8	.063	.79	.02 1/4	.....
1/2	1/2	.04	.61	.02	.....

*Five strands.

Galvanized Oval Thimbles

Galvanized oval thimbles are heavily coated with zinc. For hawsers we furnish a special non-collapsible thimble at a special price.



Fig. 2711

Diam. Rope, In.	Price Each	Diam. Rope, In.	Price Each	EXTRA LARGE	
				Diam. Rope, In.	Price Each
2 1/2	\$2.08	1	\$.18	2	\$1.50
2 1/4	1.58	7/8	.14	1 7/8	1.25
2	1.10	3/4	.13	1 3/4	1.00
1 7/8	.95	5/8	.11	1 5/8	.75
1 3/4	.75	9/16	.10	1 1/2	.58
1 5/8	.65	1/2	.09	1 3/8	.44
1 1/2	.50	7/16	.08	1 1/4	.38
1 3/8	.42	3/8	.07	1 1/8	.33
1 1/4	.33	5/16	.06	1	.25
1 3/8	.28	1/4	.05	.....	.....

Wire Rope Clips

Clips are not recommended as permanent fastenings on hoisting rope. They are easily applied and taken off, requiring no special skill. The U-bolt should bear on the short end of the rope. Not fewer than two clips to be used and preferably four to six.



Fig. 2712

Diam. Rope In.	Price Each	Diam. Rope In.	Price Each	Diam. Rope In.	Price Each	Diam. Rope In.	Price Each
3	\$35.00	1 3/4	\$5.50	1 1/8	\$.95	1/2	\$.45
2 3/4	25.00	1 5/8	3.50	1	.85	7/16	.45
2 1/2	11.50	1 1/2	1.50	7/8	.75	3/8	.40
2 1/4	9.50	1 3/8	1.25	3/4	.65	5/16	.35
2	7.50	1 1/4	1.10	5/8	.55	1/4	.35

Closed Wire Rope Sockets



Fig. 2713

Size Socket and Diam. Rope Inches	Circumference of Rope Inches	PRICE, EACH		Size Socket and Diam. Rope Inches	Circumference of Rope Inches	PRICE, EACH	
		Loose	Fastened			Loose	Fastened
2 1/4	7 1/8	\$26.00	\$37.00	7/8	2 3/4	\$2.50	\$4.50
2	6 1/4	24.00	33.50	3/4	2 1/4	1.80	3.30
1 3/4	5 1/2	16.00	24.00	5/8	2	1.35	2.65
1 5/8	5	10.00	16.00	9/16	1 3/4	1.10	2.35
1 1/2	4 3/4	9.00	14.00	1/2	1 1/2	1.00	2.15
1 3/8	4 1/4	6.50	10.75	7/16	1 1/4	.80	1.95
1 1/4	4	6.00	9.50	3/8	1 1/8	.75	1.75
1 1/8	3 1/2	4.00	6.85	5/16	1	.65	1.55
1	3	3.50	5.75	1/4	3/4	.60	1.50

Open Wire Rope Sockets

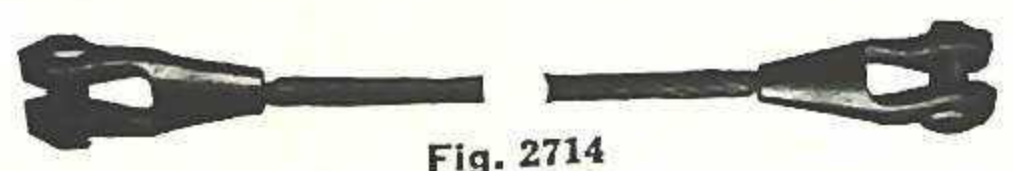


Fig. 2714

Size Socket and Diam. Rope Inches	Circumference of Rope Inches	PRICE, EACH		Size Socket and Diam. Rope Inches	Circumference of Rope Inches	PRICE, EACH	
		Loose	Fastened			Loose	Fastened
2 1/4	7 1/8	\$37.00	\$48.00	7/8	2 3/4	\$3.40	\$5.40
2	6 1/4	34.00	43.50	3/4	2 1/4	2.70	4.20
1 3/4	5 1/2	22.00	30.00	5/8	2	2.10	3.40
1 5/8	5	12.50	18.50	9/16	1 3/4	1.70	2.95
1 1/2	4 3/4	11.50	16.50	1/2	1 1/2	1.60	2.75
1 3/8	4 1/4	8.50	12.75	7/16	1 1/4	1.25	2.40
1 1/4	4	8.00	11.50	3/8	1 1/8	1.20	2.20
1 1/8	3 1/2	5.00	7.85	5/16	1	.90	1.80
1	3	4.50	6.75	1/4	3/4	.85	1.75

House Brooms

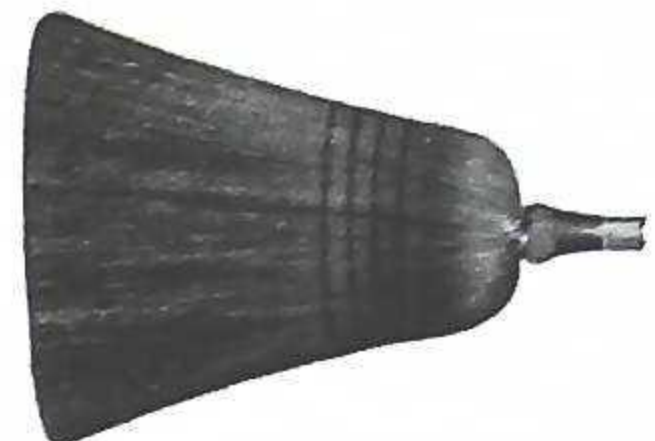


Fig. 2715

No. 6 Ladies' Favorite

Finest Illinois corn, carefully stemmed and sorted. Royal blue velvet finish. Has 4 seams of orange linen. Handle of smooth hard maple. Weight, per dozen, 26 pounds. Price, No. 6.....per dozen \$18.50

No. 6 Niagara

Finest Illinois corn, without stems. Purple velvet finish. Has 4 seams of orange linen. Handle of smooth hard maple. Weight, per dozen, 26 pounds. Price, No. 6.....per dozen \$17.50

No. 7 Seneca

Choice Illinois corn. Spiral wire finish. Has 5 seams of blue linen. Handle of hard wood. Weight, per dozen, 25 pounds. Price, No. 7.....per dozen \$15.00

No. 6 Little Jewel

Choice Illinois corn. Spiral wire finish. Has 4 seams of blue linen. Handle of hard wood. Weight, per dozen, 24 pounds. Price, No. 6.....per dozen \$12.50

Little Jewel Toy Brooms

Sound Illinois corn. Ring neck finish. Has 2 seams of red twine. Handle striped, colored and varnished. Weight, per dozen, 5 pounds. Price.....per dozen \$4.00

All the above brooms are packed one dozen to a bundle in cotton sacks.

Hamburg Mill Brooms

All Corn

Supplied with or without wire band, the wire band on a broom taking the place of the first tie. Extra charge for wire band. Last tie is extra heavy twine.



Fig. 2716

No.	No. per Ties	Wt. Lbs. per Doz.	Price per Doz.	No.	No. per Ties	Wt. Lbs. per Doz.	Price per Doz.
6	4	247	\$6.50	8XXXX	5	35	\$8.00
7	4	278	6.75	9XXXX	5	40	8.75
7XX	4	308	7.25	.....	.....	.....	.....

Corn and Rattan Mixed

Adapted to mill and railroad use. Mixed with round rattan, if desired. Extra charge is made to cover the additional cost of the round rattan. Supplied with or without wire bands, extra charge being made for wire band. Last tie is extra heavy twine.

No.	No. Ties	Wt. Lbs. per Doz.	Price per Doz.	No.	No. Ties	Wt. Lbs. per Doz.	Price per Doz.
7XX	4	30	\$7.25	9XXXX	5	40	\$8.75
8XXX	5	35	8.00	.....	.....	.....	.....

Split Bamboo and Corn Mixed

An unusually stiff split bamboo and corn mixed broom. It is especially adapted to rough work, and to mill and railroad use. Made with a metal top.

No.	No. Ties	Wt. Lbs. per Doz.	Price per Doz.	No.	No. Ties	Wt. Lbs. per Doz.	Price per Doz.
6	3	24	.....	8XXXX	3	35	.....
7XX	3	30	.....	9XXXX	3	40	.....

Conneaut D Handle Round Point Shovels

Plain Back, Socket Strap

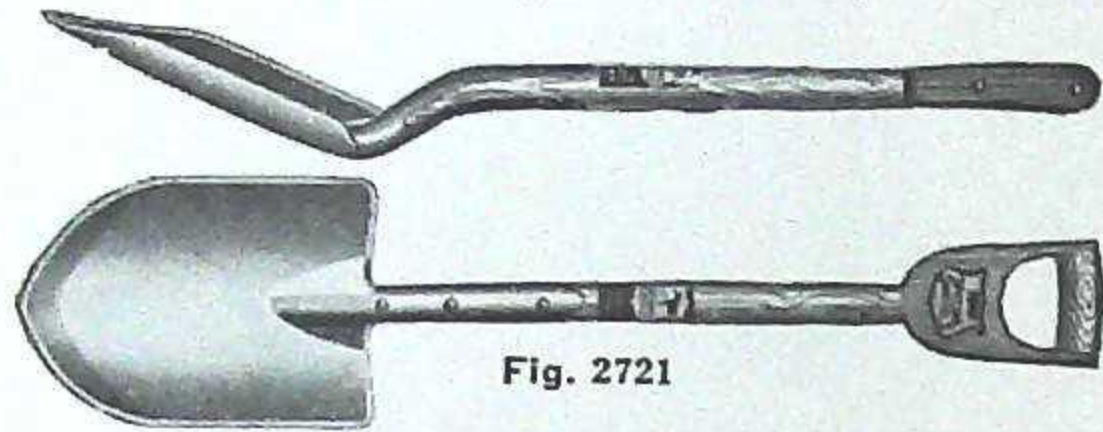


Fig. 2721

For handling ballast and crushed rock; also for sewer and excavating work.

No.	Size No.	Dimen. Blade Inches	Price per Dozen	No.	Size No.	Dimen. Blade Inches	Price per Dozen
215	2	10 x13	\$24.00	218	5	11 1/2 x14 1/2	\$25.50
216	3	10 1/2 x13 1/2	24.50	219	6	12 x15	26.00
217	4	11 x14	25.00	220	7	12 1/2 x15 1/2	26.50

Conneaut Long Handle Round Point Shovels

Plain Back, Socket Strap

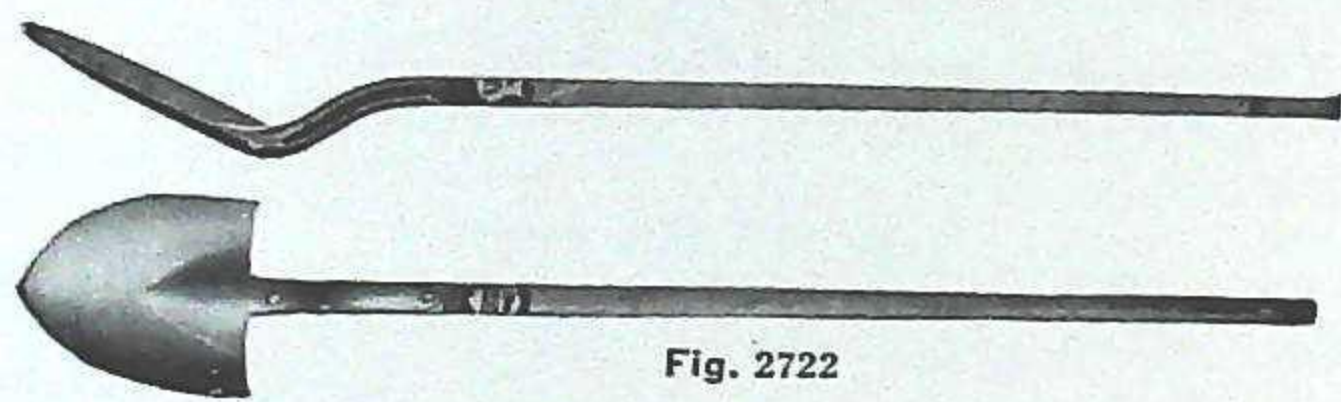


Fig. 2722

This shovel is specially made for spading and makes the use of a pick unnecessary. It is intended for use when the material is not picked down.

No.	Size No.	Dimen. Blade Inches	Price per Dozen	No.	Size No.	Dimen. Blade Inches	Price per Dozen
X111	2	10 x12	\$24.00	X114	5	11 1/2 x13 1/2	\$25.50
X112	3	10 1/2 x12 1/2	24.50	X115	6	12 x14	26.00
X113	4	11 x13	25.00	X116	7	12 1/2 x14 1/2	26.50

Conneaut Standard D or Long Handle Square Point Shovels

Hollow Back



Fig. 2723

D Handle	No.	Long Handle	Size No.	Dimensions Blade Inches	Price per Dozen
19	X19	2	10	x12	\$24.00
20	X20	3	10 1/2	x12 1/2	24.50
21	X21	4	11	x13	25.00
22	X22	5	11 1/2	x13 1/2	25.50
23	X23	6	12	x14	26.00
24	X24	7	12 1/2	x14 1/2	26.50

Conneaut Long Handle Square Point Shovels

Plain Back, Socket Strap

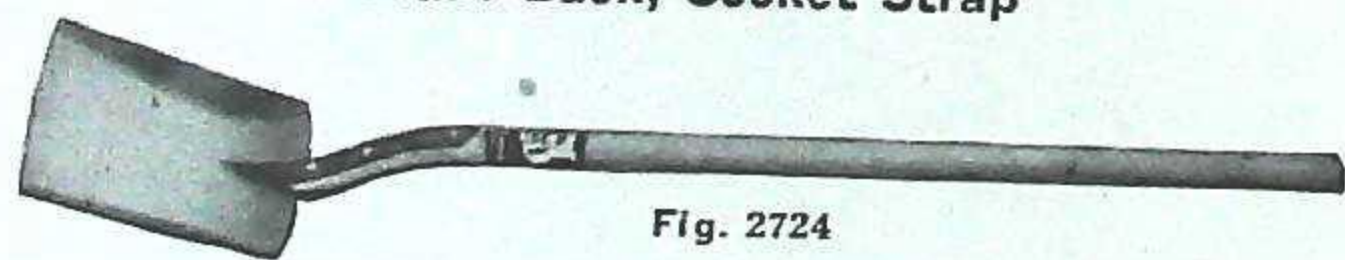


Fig. 2724

For sewer and clay digging. Also used in excavating. Blade is special analysis steel, hand pounded and tempered. Fourteen gauge is regular thickness but 12 or 13 gauge can be supplied on special order. Black finish.

No.	Size No.	Dimen. Blade Inches	Price per Dozen	No.	Size No.	Dimen. Blade Inches	Price per Dozen
X117	2	10 x12	\$24.00	X120	5	11 1/2 x13 1/2	\$25.50
X118	3	10 1/2 x12 1/2	24.50	X121	6	12 x14	26.00
X119	4	11 x13	25.00	X122	7	12 1/2 x14 1/2	26.50

Conneaut D Handle Square Point Railroad Shovels

Plain Back, Socket Strap

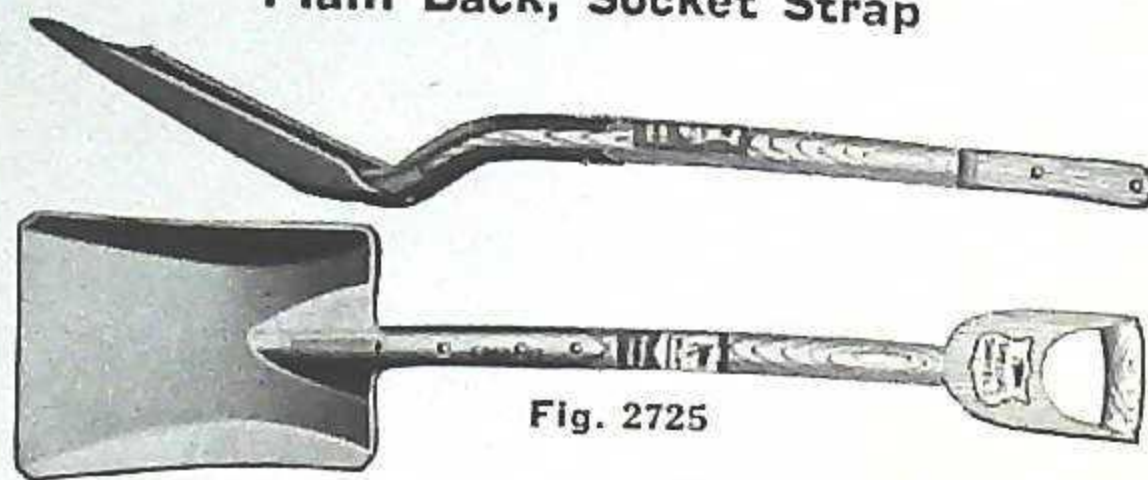


Fig. 2725

No.	Size No.	Dimen. Blade Inches	Price per Dozen	No.	Size No.	Dimen. Blade Inches	Price per Dozen
123	2	10 x12	\$24.00	126	5	11 1/2 x13 1/2	\$25.50
124	3	10 1/2 x12 1/2	24.50	127	6	12 x14	26.00
125	4	11 x13	25.00	128	7	12 1/2 x14 1/2	26.50

Conneaut Standard D or Long Handle Square Point Coal Shovels

Hollow Back



Fig. 2726

D Handle	No.	Long Handle	Size No.	Dimen. Blade Inches	Price per Dozen
68	X68	1	1	13 1/4 x14	\$24.00
69	X69	2	2	14 1/4 x14 1/2	24.50
70	X70	3	3	14 3/4 x15	25.00

Conneaut Special D or Long Handle Square Point Furnace or House Scoops

Hollow Back



Fig. 2727

Size No.	Dimensions Blade, In.	Wt., Lbs. per Doz.	LIST No. D Handle	LIST No. Long Handle	Price per Doz.
2	12 x15 1/2	70	K61	XK61	\$24.00
3	12 1/2 x16	76	K62	XK62	24.50
4	13 x16 1/2	80	K63	XK63	25.00
5	13 1/2 x17	83	K64	XK64	25.00
6	14 x17 1/2	86	K65	XK65	25.50

Conneaut Special Snow Shovels

D or Long Handle

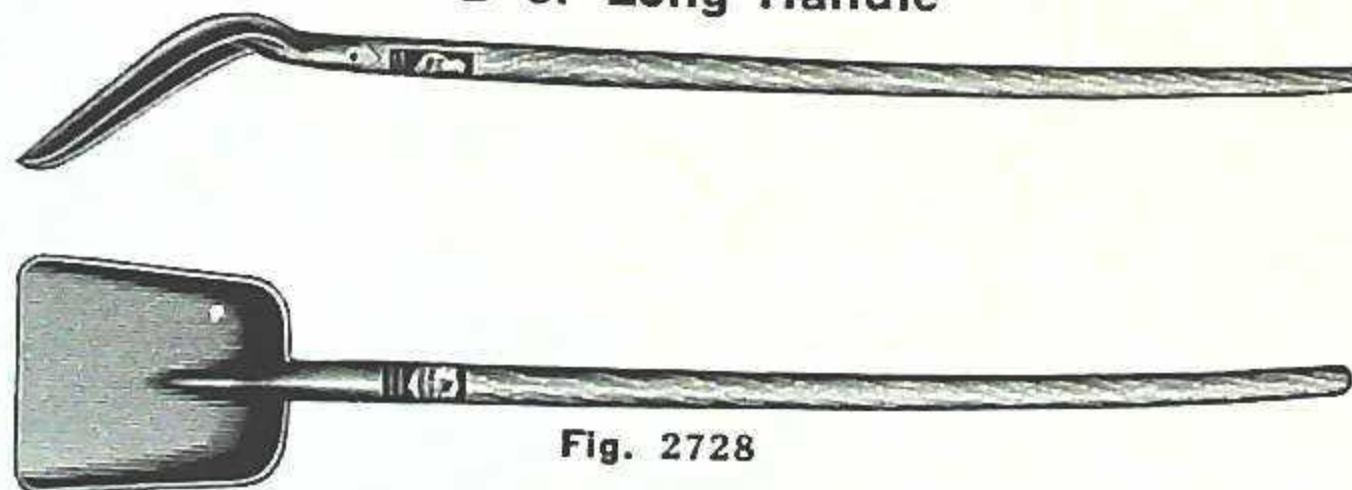


Fig. 2728

Used for street cleaning, also by farmers for barn and stable cleaning. Special steel blade. Black finish. Hollow back. Selected second growth Northern Ohio white ash handle. Split D or renewable D handle, either made in malleable iron or in pressed steel, if wanted.

No.	Long Hdle	D-Hdle.	BLADE, INCHES Width Length	Price per Dozen
74		75	11 1/2 x14	\$18.75

New Bufco Forges

This is a small blower of a new design with a gear ratio of 36 to 1, steel spur gears throughout, a 1-piece gear case, which is oil and dust tight, and a 5 1/2-inch straight blade fan in a 7 1/2-inch fan case.

Hearth is one-piece seamless pressed steel.

Fan is made of sheet steel and is powerful enough to furnish a strong blast with little effort. Blower is supported by steel pipe legs.



Fig. 2731

No. Forge	Diam. Hearth, In.	Kind of Hearth	Type of Hood	Shp. Wt. Lbs.	Price Each
061	18	Sheet Steel	Shield	70	\$10.00
061-H	18	" "	Half-hood	75	12.50
062	24	" "	Shield	100	14.25
062-H	24	" "	Half-hood	105	16.00
062-F	24	" "	Full "	110	18.25

Buffalo Rivet Forges



No. 210 Fig. 2732

Made with a one-piece deep-drawn steel hearth; stamped from a single steel plate. This is the best round hearth construction known; no seams to rust; far stronger than two-piece rolled type.

No. 200 blower with New Departure ball bearings is used. All sizes mounted on four heavy steel pipe legs.

No.	DIAMETER, IN. Fire Pan	IN. Fan Case	Shp. Wt. Lbs.	Price Each
210	18	12	110	\$30.00
212	24	12	125	33.00

Buffalo Sheet Steel Forges

Designed to meet the demand for a low-priced, reliable forge.

Blower has steel gear-case, with cast iron pear-shaped fan case. The fan is steel. Gear ratio is 36 to 1.

Supplied with round tuyere with clinker-breaking valve and ash gate.

Has seamless pressed steel hearth, mounted on four steel pipe legs, braced at the bottom.



Fig. 2733

No.	Fire Pan Inches	Diam. Fan Inches	Type of Hood	Shipping Wt. Pounds	Price Each
075	23x30	10	Windshield	150	\$22.50
075H	23x30	10	Half-hood	165	24.00

No. 230 Buffalo Contractors' Steel Forges

This forge has square one-piece pressed steel hearth.

A steel windshield is supplied as illustrated. Vulcan tuyere, and No. 200 silent blower with 14-inch fan are furnished. Blower has New Departure ball bearings and gear ratio of 47 1/2 to 1. It is used domestically by contractors, tank and boiler makers, etc.



Fig. 2734

No.	Fire Pan In.	Diam. Fan In.	Shipping Weight Pounds	Price Each
230	24x30x6	14	200	\$39.25

New Buffalo Boilermakers' Steel Forges

This new Buffalo Forge has a one piece pressed steel hearth, unbreakable, rust-resisting and light. Vulcan tuyere and No. 200 silent blower furnished. Gear ratio, 47 1/2 to 1.

No. 231 has steel windshield for outdoor work. No. 231-H has half-hood.



Fig. 2735

No.	Fire Pan Inches	Diam Fan Inches	Shp. Wt. Lbs.	Price Each
231	30x30	14	284	\$39.75
231-H	30x30	14	297	45.00

Buffalo Lever Forges



Fig. 2736

These forges have round cast iron hearths mounted on steel pipe legs.

Nos. 161 and 161-H have four legs, while the 162 series have three legs, and a larger hearth.

Forges are satisfactory for general agricultural work.

No.	DIAM. IN. Hearth	IN. Fan	Type of Hood	Shipping Weight Pounds	Price Each
161	18	8	Shield	70	\$10.50
161-H	18	8	Half-hood	75	12.00
162	22	9	Shield	100	12.00
162-H	22	9	Half-hood	105	13.25
162-F	22	9	Full-hood	110	14.75

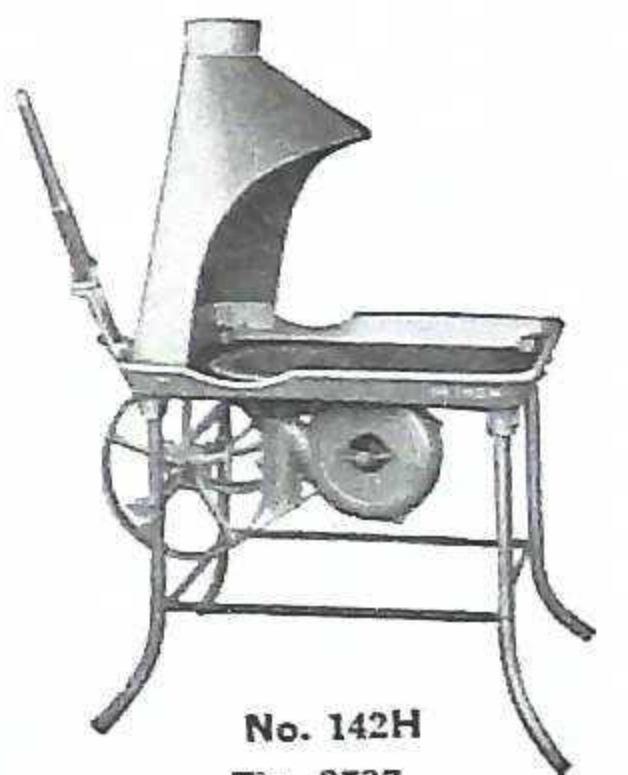
Buffalo Niagara Forges

No. 141-H has a heavy cast iron hearth, and a sheet steel half-hood. The blower is lever operated and has babitted bearings.

Has heavy steel pipe legs, well braced.

No. 141 is of same general construction except that it has windshield instead of hood.

No. 142 is similar to No. 141, but has a larger hearth.



No. 142H Fig. 2737

No.	Size Hearth Inches	Style of Hood	Diam. Fan Inches	Net Weight Pounds	Price Each
141	23x35	Shield	12 1/2	135	\$28.00
141-H	23x35	Half-hood	12 1/2	140	29.75
142	25x36	Shield	12 1/2	180	24.75
142-H	25x36	Half-hood	12 1/2	190	27.25

Buffalo Variable Speed Electric Blowers

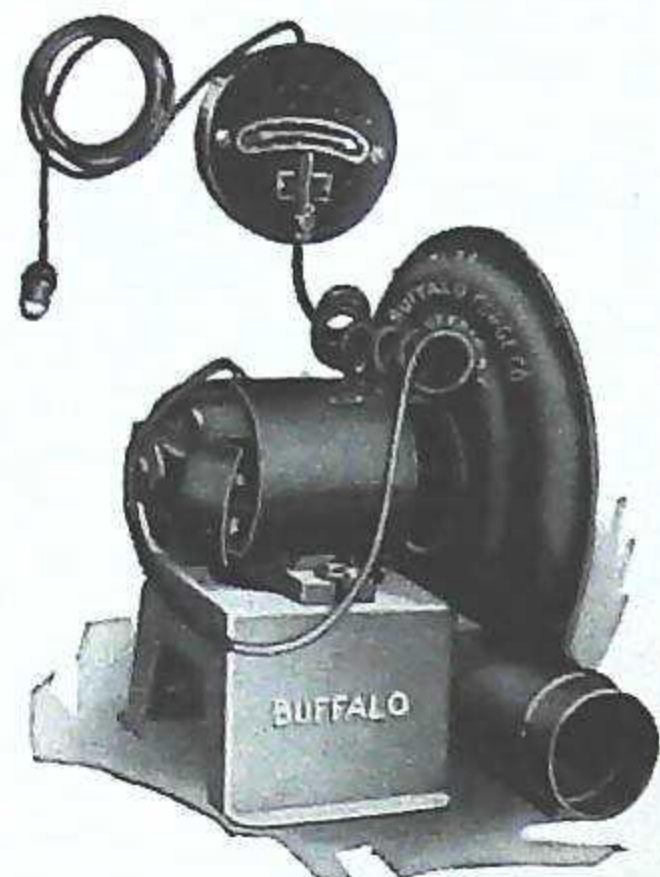


Fig. 2741

For blowing forge fires, small furnaces, organs, etc.

This outfit is equipped with specially designed Buffalo-Cutler-Hammer regulator which is fully enclosed. This is essential to safe operation.

The motor operates on either direct or alternating current, single phase, 24, 40, or 60 cycles. Ten feet of wire and a plug together with the regulator described above are furnished with this outfit.

When ordering, specify whether 110 or 220-volt regulator is wanted.

No.	No. of Fires	Speed R.P.M.	Height In.	Diam. Outlet In.	Weight Pounds	Price Each
2-E	1	2600	15	3	70	\$47.00
2-EH	1 Large or 2 Small	3000	15	3	85	60.00
3-E	3 Small	3400	15	4	100	75.00

Marvel One-fire Forge Blowers

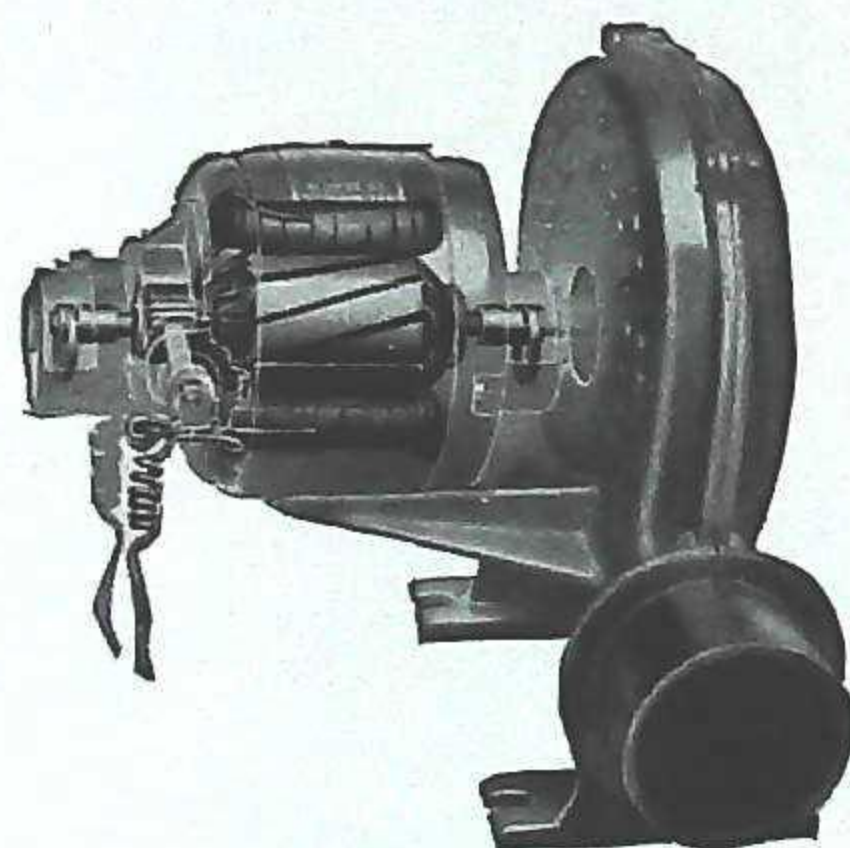


Fig. 2742

This is a one-fire variable speed Marvel Blower furnished with 110, 220 and 250-volt Universal Motor; 110, 220 and 250 volts; for 25, 40, 50 and 60 cycles single phase; or with 110-volt, 220-volt and 250-volt direct current motors as ordered; all with speed regulator.

Also furnished with 32-volt D. C. Motors. Where a motor must be 220 volts 60 cycles 3 phase, order either No. 0-R or 1-R Blower. with 3-inch blast gate which is included in price.

Illustration shows an X-ray view of the motor with its oil ring bearings. Furnished with 7-point, slate-top speed regulator and guard to prevent any possibility of shock.

Height of blower is 10 inches. Outside diameter of outlet, 3 inches. Weight, box, 44 pounds.

Price, Blower, for 110-volt	each	\$40.00
" " " 220 " " D.C.	"	42.00
" " " 32 " " D.C.	"	42.00
" No. 0-R Blower	"	50.00
" " 1-R "	"	50.00
" Extra, 13-foot Lamp Cord	"	1.50

Buffalo Slide Pattern Blast Gates

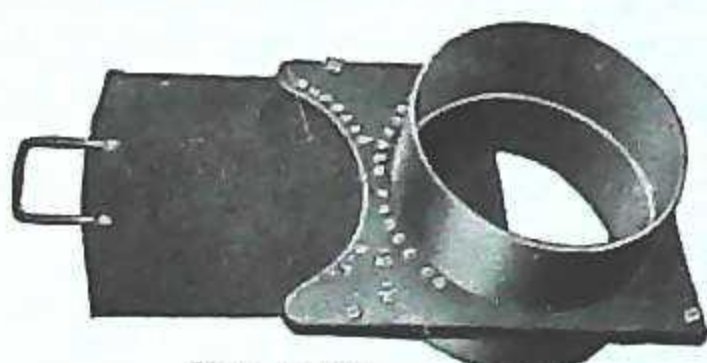


Fig. 2743

Sizes 2 to 24-inch have cast iron frame; larger sizes, angle iron and steelplate.

Prices upon application.

No. X.X. Hyro Metal Punches

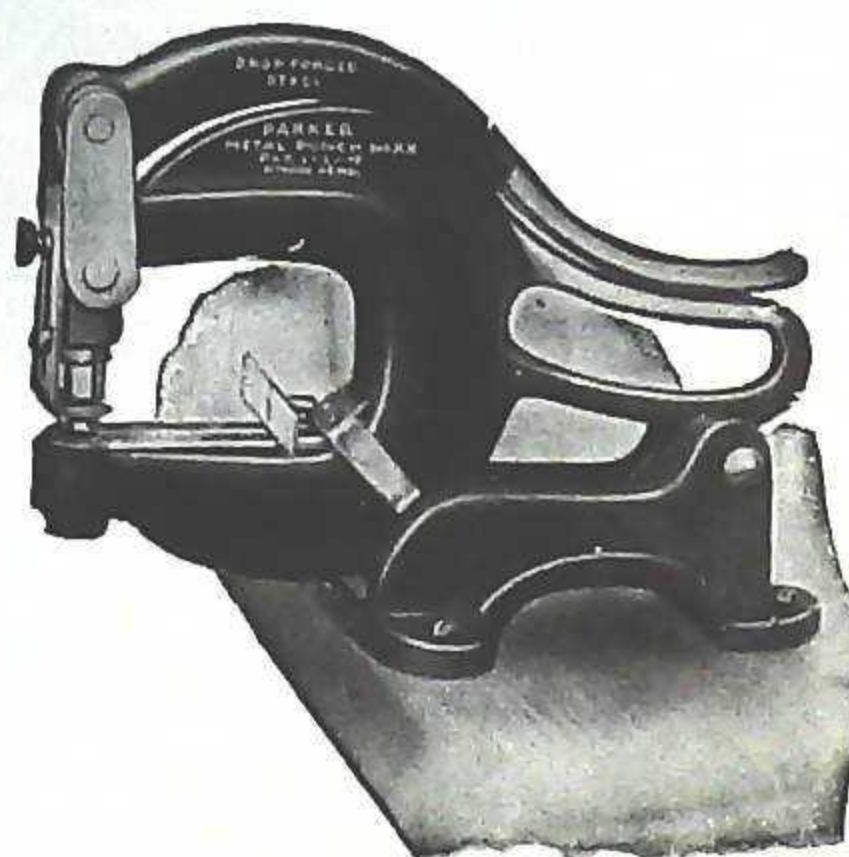


Fig. 2744

This punch is equipped with gauge, automatic stripper, bench stand, and a standard set of one punch and one die. It is especially suited for work having rolled or formed edges. It is made of drop forged steel, measures 9 inches over all, weighs 4 1/2 pounds, will punch a 1/2-inch hole in 20-gauge steel or its equivalent. Holes can be punched in the center of a 7-inch circle. Punches and dies in 14 standard sizes, 1/8, 3/32, 1/16, 1/4, 3/16, 5/16, 1/2, 3/8, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/2, 7, 7 1/2, 8, 8 1/2, 9, 9 1/2, 10, 10 1/2, 11, 11 1/2, 12, 12 1/2, 13, 13 1/2, 14, 14 1/2, 15, 15 1/2, 16, 16 1/2, 17, 17 1/2, 18, 18 1/2, 19, 19 1/2, 20, 20 1/2, 21, 21 1/2, 22, 22 1/2, 23, 23 1/2, 24, 24 1/2, 25, 25 1/2, 26, 26 1/2, 27, 27 1/2, 28, 28 1/2, 29, 29 1/2, 30, 30 1/2, 31, 31 1/2, 32, 32 1/2, 33, 33 1/2, 34, 34 1/2, 35, 35 1/2, 36, 36 1/2, 37, 37 1/2, 38, 38 1/2, 39, 39 1/2, 40, 40 1/2, 41, 41 1/2, 42, 42 1/2, 43, 43 1/2, 44, 44 1/2, 45, 45 1/2, 46, 46 1/2, 47, 47 1/2, 48, 48 1/2, 49, 49 1/2, 50, 50 1/2, 51, 51 1/2, 52, 52 1/2, 53, 53 1/2, 54, 54 1/2, 55, 55 1/2, 56, 56 1/2, 57, 57 1/2, 58, 58 1/2, 59, 59 1/2, 60, 60 1/2, 61, 61 1/2, 62, 62 1/2, 63, 63 1/2, 64, 64 1/2, 65, 65 1/2, 66, 66 1/2, 67, 67 1/2, 68, 68 1/2, 69, 69 1/2, 70, 70 1/2, 71, 71 1/2, 72, 72 1/2, 73, 73 1/2, 74, 74 1/2, 75, 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No. 1 Clizbe Standard Pattern Grinders



The No. 1 Machine is intended for light work and is built with split cast iron bearings. No provision is made for attaching tool rests. Wheel guards attach to bench or to top plate of column where column is furnished, and are of cast iron open face type.

No.	Wheel Size Inches	Length Spindle Inches	Diam. Spindle in Bearing Inches	Diam. Spindle on End Inches	Size Pulley Inches	Distance Between Wheels Inches	Spindle from Table Inches	Head Only Price Each
1	6x1	11	3/4	5/8	1 1/2 x 1 1/2	6	5	\$4.50

No. 2 Clizbe Standard Pattern Grinders

The No. 2 machine is built with babbitted bearings and is fitted with tool rests of knuckle-jointed type. Bearings are dust proof and are fitted with nickel-plated oil cups. Guards of cast iron open face type for use with this machine attach to top plate of column or to bench when column is not used.



No.	Wheel Size Inches	Length Spindle Inches	Diam. Spindle in Bearing Inches	Diam. Spindle on End Inches	Size Pulley Inches	Distance Between Wheels Inches	Spindle from Table Inches	Head Only Price Each
2	8x1 1/4	14	7/8	3/4	2 3/8 x 2	8	6 1/4	\$9.00

Clizbe Standard Pattern Grinders

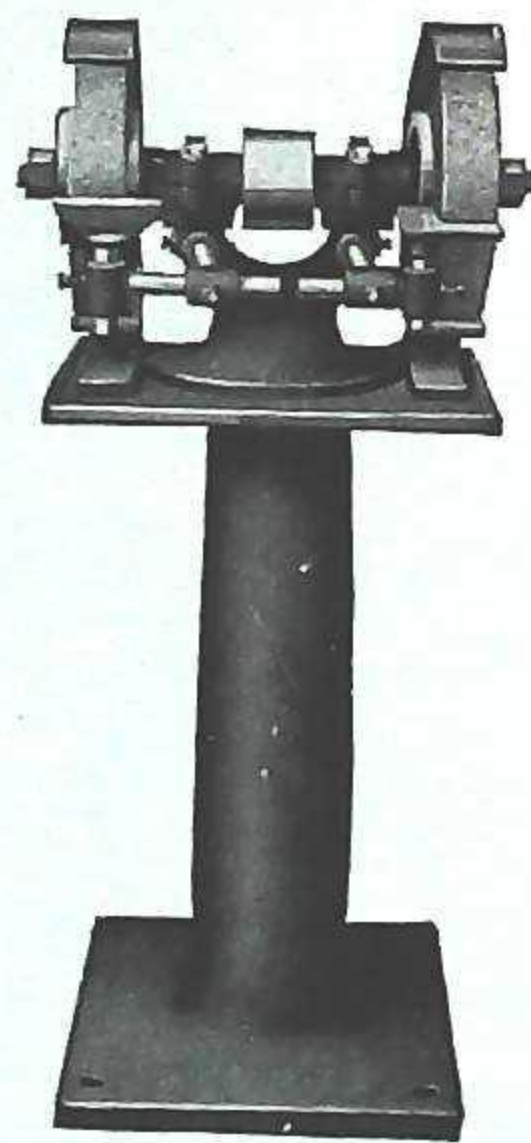
Nos. 3, 4 and 5 machines are exactly alike as to design and construction, the only difference being in the size.

All three of these machines have babbitted bearings and are fitted with wick-oiling arrangement as insurance against faulty lubrication.

Rests are of the knuckle-jointed type. Wheel guards attach to top plate of column or to bench where column is not used in connection with head.

No. 3 countershaft recommended for use with No. 3 machine and No. 4 countershaft for use with Nos. 4 and 5 machines.

The use of cast iron column is strongly recommended as being the most satisfactory method of mounting these machines especially for the larger sizes.



No. 3 Fig. 2763

No.	3	4	5
Wheel Size	10x1 1/2	12x2	14x2
Bore of Wheels	1	1	1 1/4
Distance Between Wheels	10	14 3/4	16
Height Table to Center of Spindle	7 1/2	8	8 1/4
Height of Column	31	28 1/2	27 1/2
Size of Pulley	3 1/2 x 2 5/8	4 1/4 x 3 1/2	4 3/4 x 4
Length of Spindle	18	24	27
Diameter of Spindle Bearing	1 1/8	1 1/8	1 5/8
Price, Head Only	\$15.30	\$21.15	\$27.00
Column Only	14.75	18.35	23.50
Countershaft	13.30	17.55	22.50
Wheel Guards	4.15	5.95	8.10

Queen Pattern Grinders



Fig. 2764

No.	400	500
Wheel Size	10x1 1/2	12x2
Length of Spindles	18 1/2	23
Diameter of Spindle in Bearing	7/8	1 1/8
Distance Between Collars	3/4	1
Size of Pulleys	2 3/4 x 2 1/4	2 3/4 x 2 1/2
Distance Between Wheels	12	15
Height Table to Center of Spindle	7 1/4	8 1/2
Height of Column	28 1/2	28 1/2
Shipping Weight of Head	42	76
Shipping Weight of Guards	25	35
Price, Complete	each 34.05	42.15
Head Only	11.70	19.80
Column Only	17.85	17.85
Wheel Guards Only	per pair 4.50	4.50

The Queen grinder is well constructed with all surplus weight eliminated and is regularly fitted with tight and loose pulleys, although it can be furnished with single pulley if so desired.

Bearings are well babbitted and fitted with nickel-plated oil cups. Tool rests, which are regular equipment, are adjustable. Wheel guards bolt to the main or head castings.

Column is well proportioned.

The wheel guards are made of cast iron.

The Queen Pattern Grinder is a lightweight, practical machine for general garage use.

Clizbe Imperial Wick Oiling Grinders

Single Pulley Type

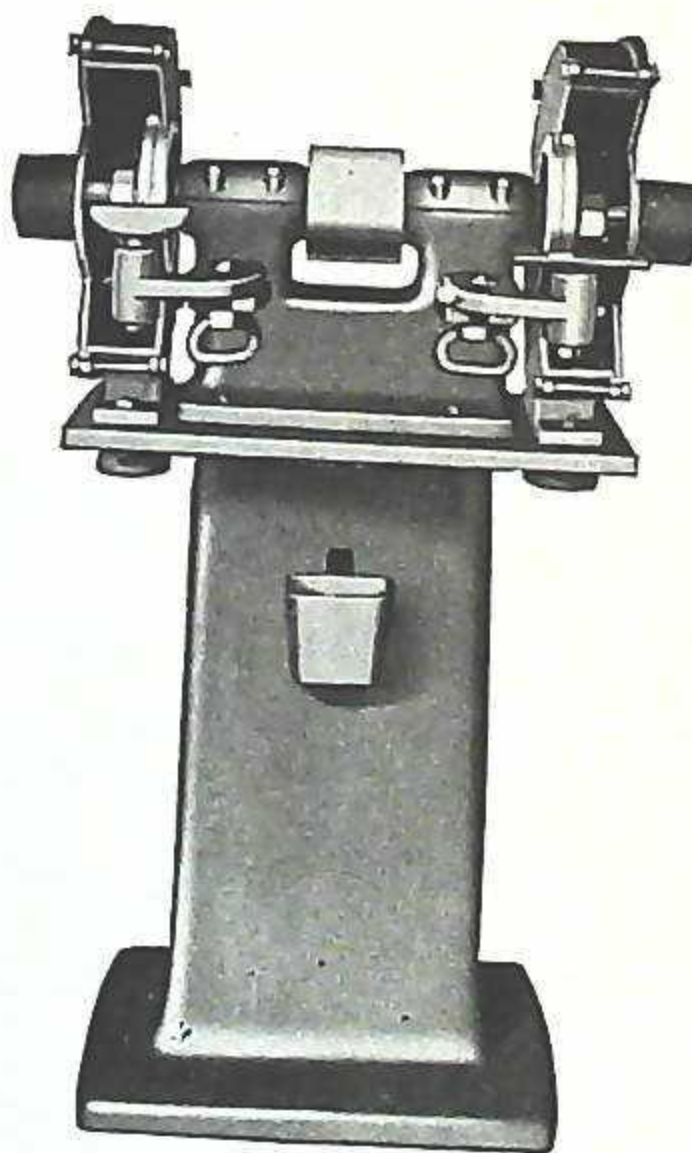


Fig. 2765

Machine No.	8	10	12
Size Wheel	8x1 1/2	10x2	12x2
Length Spindle	16	20 1/2	22 1/8
Diam. Spindle in Bearings	7/8	1 1/8	1 1/8
Bore of Wheels	3/4	1	1
Distance between Wheels	9 1/2	12	13
Ht., Table to Center of Spindle	6	7 3/8	8
Size Pulley	2 1/8 x 1 7/8	3 1/2 x 2 1/2	4x3
Price, Head Only	each \$12.60	\$18.90	\$25.20
Column Only	18.75	23.40	26.10
Guards	3.00	4.15	5.95
Countershaft Only	11.00	13.30	17.55
Complete	43.55	59.75	74.80

The bearings are unusually long and heavy for machines of these capacities and in addition to being well babbitted with good grade of metal are fitted with wick oiling arrangement, as insurance against faulty lubrication. Collars are practically half the diameter of the recommended wheel sizes.

Tool rests are easily adjusted or entirely removed.

The wheel guards furnished with bench grinders or with plain pedestal or box bed type of column attach to back of the head casting. Dust collecting guards attach to top plate of column.

Norton Grinding Wheels

Alundum—Crystolon

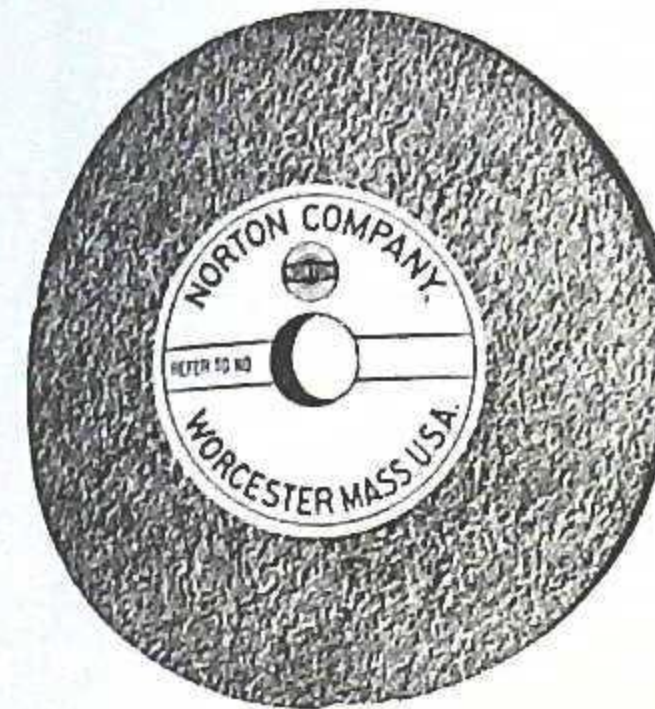


Fig. 2771

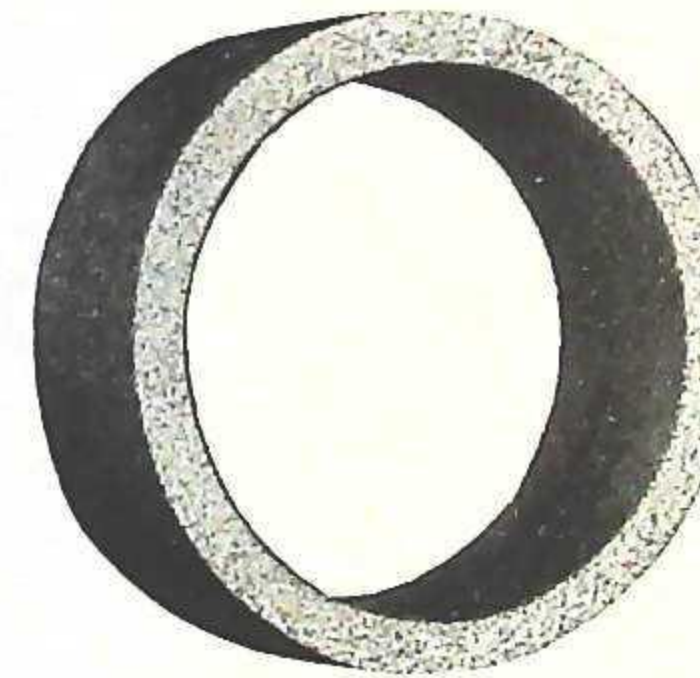
are used for certain kinds of tool and surface grinding also, where wheels larger than 36 inches are required. Elastic bonds are organic materials, principally shellac.

Elastic wheels are used for cutting off stock and where a good finish is desired as in ball race grinding. Rubber bonds are rubber mixed with minerals to produce by vulcanization a desired hardness and toughness. Rubber wheels are used on severe cutting-off and snagging operations.

Alundum abrasive is electrically fused alumina made from the soft, clay-like mineral, bauxite, obtained from the Norton mines in Arkansas. Alundum abrasives are essentially crystalline aluminum oxide, the principal constituent in the natural ruby, sapphire and corundum.

Crystolon abrasive is silicon carbide, made from pure silica sand and coke of the highest quality, to which is added a small quantity of sawdust to facilitate the reactions.

This mixture is heated in electric furnaces of special design. Crystolon abrasive is most efficient on cast iron and other materials of low tensile strength.



Cylinder Fig. 2773

Standard Shapes of Wheel Faces

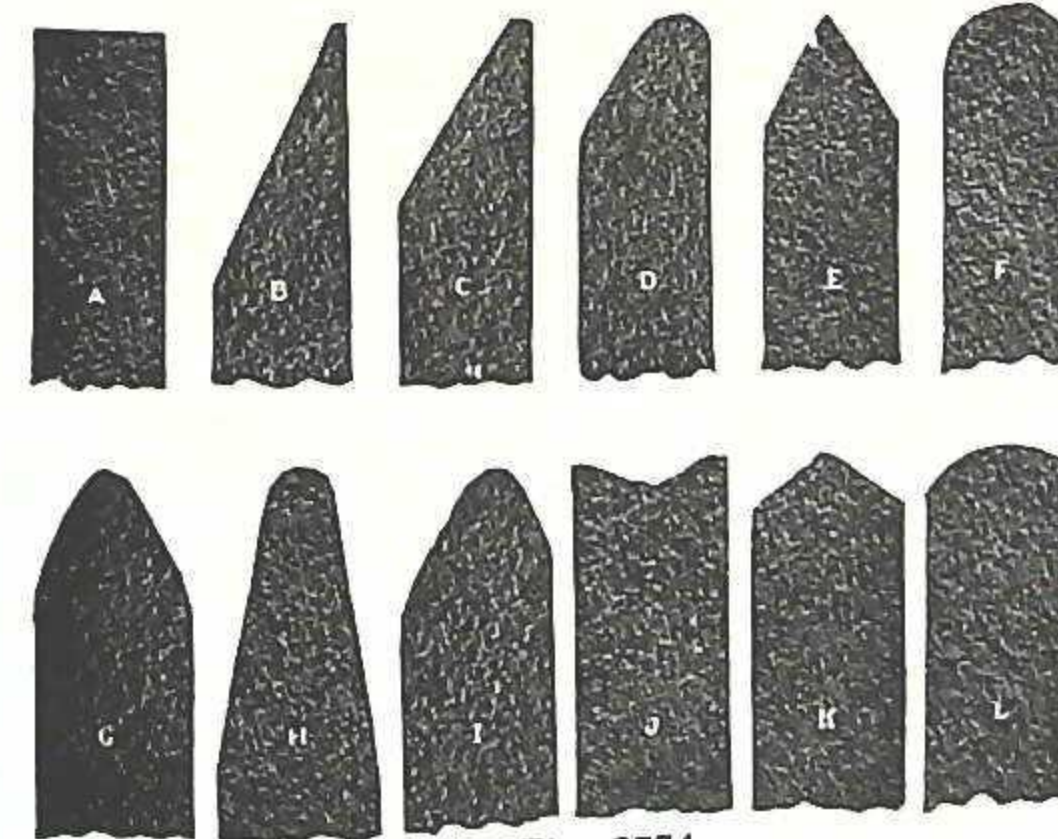


Fig. 2774

The different faces which are regularly furnished are specified by letters as illustrated above. When wheels are ordered with no particular face specified, straight or A face is furnished. If any special face or shape is required a dimensioned sketch should accompany the order.

Standard Grinding Wheels

Straight Wheels

Vitrified and Silicate

Thickness, In.	DIAMETER, INCHES					
	1	1 1/2	2	2 1/2	3	3 1/2
1/4	\$0.55	\$0.60	\$0.80	\$0.90	\$1.00	\$1.15
3/8	.65	.70	.90	1.05	1.15	1.30
1/2	.70	.80	1.00	1.15	1.25	1.45
5/8	.75	.85	1.10	1.25	1.40	1.60
3/4	.85	.95	1.20	1.35	1.50	1.70
7/8	.90	1.00	1.30	1.45	1.65	1.85
1	1.00	1.10	1.40	1.55	1.75	1.95
1 1/4	1.15	1.30	1.60	1.80	2.00	2.25
1 1/2	1.25	1.45	1.80	2.00	2.25	2.50
1 3/4	1.40	1.65	2.00	2.25	2.50	2.80
2	1.55	1.80	2.20	2.45	2.75	3.05
2 1/4	1.70	2.00	2.35	2.70	3.00	3.35
2 1/2	1.85	2.15	2.55	2.90	3.25	3.60
2 3/4	2.00	2.35	2.75	3.15	3.50	3.90
3	2.15	2.50	2.95	3.35	3.75	4.15
3 1/4	2.25	2.70	3.15	3.60	4.00	4.45
3 1/2	2.40	2.85	3.35	3.80	4.25	4.70
3 3/4	2.55	3.05	3.55	4.00	4.50	5.00
4	2.70	3.20	3.75	4.25	4.75	5.25

Thickness, In.	DIAMETER, INCHES					
	4 1/2	5	6	7	8	9
1/4	\$1.60	\$1.80	\$2.30	\$2.75	\$3.25	\$3.70
3/8	1.75	2.00	2.60	3.15	3.75	4.35
1/2	2.00	2.30	2.90	3.55	4.25	5.00
5/8	2.20	2.50	3.20	3.90	4.75	5.60
3/4	2.35	2.70	3.50	4.30	5.30	6.25
7/8	2.60	2.95	3.80	4.75	5.75	6.80
1	2.80	3.20	4.10	5.15	6.25	7.45
1 1/4	3.20	3.65	4.70	5.85	7.25	8.70
1 1/2	3.55	4.10	5.30	6.70	8.30	10.10
1 3/4	3.95	4.55	5.90	7.50	9.30	11.40
2	4.35	5.00	6.50	8.25	10.30	12.70
2 1/4	4.80	5.45	7.10	9.00	11.30	14.00
2 1/2	5.20	5.90	7.70	9.85	12.35	15.25
2 3/4	5.60	6.35	8.40	10.70	13.35	16.50
3	6.00	6.85	9.00	11.50	14.40	18.00
3 1/4	6.40	7.30	9.60	12.25	15.40	19.50
3 1/2	6.75	7.70	10.20	13.00	16.45	21.00
3 3/4	7.15	8.15	10.80	13.75	17.50	22.50
4	7.60	8.65	11.40	14.75	18.60	24.00

Thickness, In.	DIAMETER, INCHES					
	12	14	16	18	20	22
1/4	\$5.50					
3/8	6.20					
1/2	7.25	\$9.30				
5/8	8.25	10.80				
3/4	9.35	12.30	\$15.75			
7/8	10.40	13.80	17.75			
1	11.50	15.25	19.75	\$24.35		
1 1/4	13.75	18.25	23.75	29.40	\$36.10	\$44.45
1 1/2	15.75	21.20	27.70	34.50	42.00	51.60
1 3/4	17.85	24.20	31.70	39.50	47.85	58.75
2	20.00	27.15	35.70	44.50	53.75	65.90
2 1/4	22.35	30.35	39.60	49.20	59.40	73.00
2 1/2	24.75	33.60	43.55	53.90	65.00	80.00
2 3/4	27.25	36.85	47.45	58.55	70.70	87.00
3	29.50	40.00	51.35	63.25	76.40	94.00
3 1/4	31.90	43.30	55.25	68.00	82.00	101.00
3 1/2	34.25	46.50	59.20	72.65	87.70	108.00
3 3/4	36.50	49.75	63.10	77.30	93.35	115.10
4	39.00	53.00	67.00	82.00	99.00	122.10

Thickness, In.	DIAMETER, INCHES					
	26	28	30	32	34	36
1 1/4	\$60.00	\$69.00	\$78.00	\$107.00	\$123.00	\$142.00
1 1/2	70.00	83.00	92.00	124.00	143.00	164.00
1 3/4	80.00	97.00	107.00	141.00	162.00	185.00
2	90.00	111.00	121.00	158.00	182.00	207.00
2 1/4	101.00	123.00	135.00	175.00	201.00	229.00
2 1/2	111.00	136.00	149.00	192.00	221.00	248.00
2 3/4	122.00	148.00	164.00	210.00	240.00	266.00
3	133.00	160.00	178.00	225.00	256.00	285.00
3 1/4	143.00	171.00	192.00	240.00	273.00	303.00
3 1/2	154.00	183.00	206.00	255.00	289.00	322.00
3 3/4	165.00	194.00	221.00	270.00	305.00	340.00
4	176.00	205.00	235.00	280.00	315.00	350.00

Star Sand Paper
In Sheets—8 3/4 x 10 1/2 Inches



Fig. 2781

Grit No.	Reams in Bundle	Price per Ream	Grit No.	Reams in Bundle	Price per Ream
000 to 0	5	\$6.75	2 1/2	2	\$11.70
1/2	4	7.20	3	1 1/2	13.20
1	3 1/2	8.10	3 1/2	1	14.85
1 1/2	3	9.15	Assorted	3	9.15
2	2	10.35	...	...	.....

Emery Cloth
In Sheets—9x11 Inches



Fig. 2782

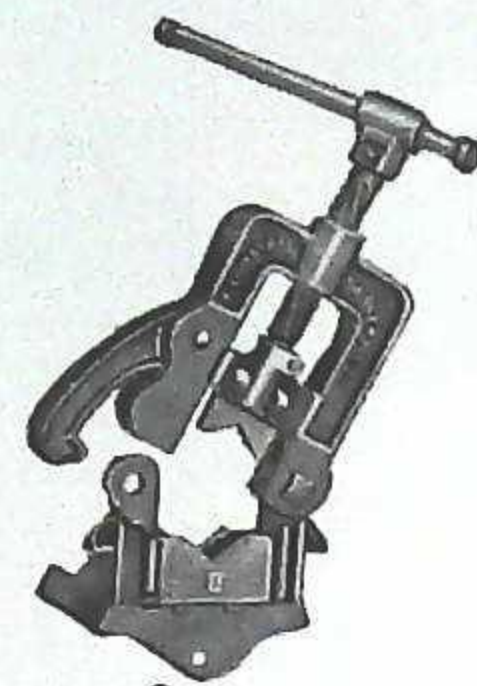
Combines great flexibility with strong adhesion of the grain. Is made flexible for hand use, and is on blue jeans or drills.

Grit No.	Reams per Bundle	Price per Ream	Grit No.	Reams per Bundle	Price per Ream
FF-300	...	\$30.00	2 -60	2	\$36.50
F-240	...	30.00	2 1/2-46	1 1/2	39.40
3/0-180	...	30.00	3 -36	1	42.50
2/0-150	2 1/2	30.00	3 1/2-24	1	46.00
0-120	2 1/2	30.00	4 -20	...	51.00
1/2-90	2 1/2	31.20	Assorted	...	33.25
1-80	2	32.75	Crocus	...	30.00
1 1/2-70	2	34.30	.....	.....	.....

Emery Cloth

In Rolls of 50 Yards

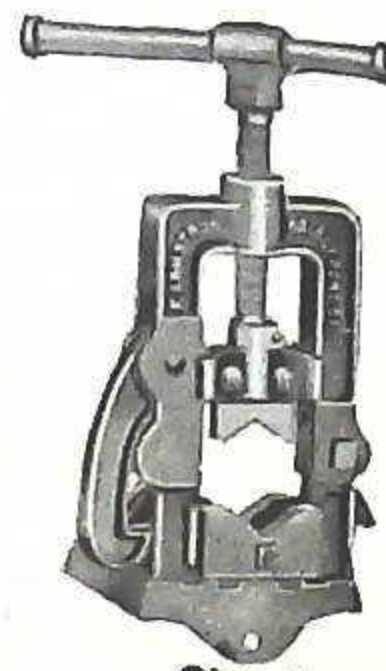
Width Inches	PRICE, EACH							
	3/0 to 0	1/2	1	1 1/2	2	2 1/2	3	3 1/2
3	\$4.10	\$4.30	\$4.55	\$4.90	\$5.10	\$5.50	\$6.00	\$6.50
3 1/2	4.75	4.95	5.25	5.65	6.00	6.50	7.00	7.60
4	5.35	5.65	6.00	6.40	6.80	7.35	7.95	8.60
5	6.65	7.00	7.40	7.95	8.45	9.15	9.85	10.70
6	7.90	8.30	8.85	9.45	10.10	10.90	11.75	12.75
7	9.15	9.65	10.25	11.00	11.70	12.65	13.65	14.85
8	10.40	10.90	11.65	12.50	13.35	14.40	15.60	16.90
9	11.65	12.25	13.05	14.00	14.95	16.15	17.50	18.95
10	12.95	13.60	14.50	15.55	16.60	17.95	19.40	21.05
12	15.45	16.20	17.30	18.60	19.85	21.45	23.20	25.20
14	18.00	18.90	20.20	21.65	23.10	25.00	27.05	29.35
15	19.25	20.30	21.60	23.20	24.75	26.75	28.90	31.40
16	20.55	21.60	23.00	24.70	26.40	28.50	30.85	33.50
18	23.05	24.25	25.85	27.75	29.65	32.05	34.65	37.60
20	25.60	26.90	28.70	30.80	32.90	35.60	38.50	41.80
24	30.60	32.20	34.35	36.90	39.40	42.60	46.15	50.05
27	32.15	33.85	36.10	38.80	41.50	44.90	48.60	52.80



Open Fig. 2783

Armstrong Hinged Pipe Vises

Made of high grade malleable iron; the jaws are tool steel properly hardened. Lugs are cast on both sides which allows the yoke to be reversed so that vises can be locked on either side.



Closed

No.	Holds Pipe Inches	Wt. Lbs.	Price Each	No.	Holds Pipe Inches	Wt. Lbs.	Price Each
Junior	1/8 to 1 1/4	3	\$2.50	1	1/8 to 2 1/2	16	\$6.00
X	1/8 " 2	6	4.00	2	1/2 " 4 1/2	30	12.50
0	1/8 " 2 1/2	11	5.00	3	1 " 6	35	23.50

Nye Little Wonder Pipe Vises

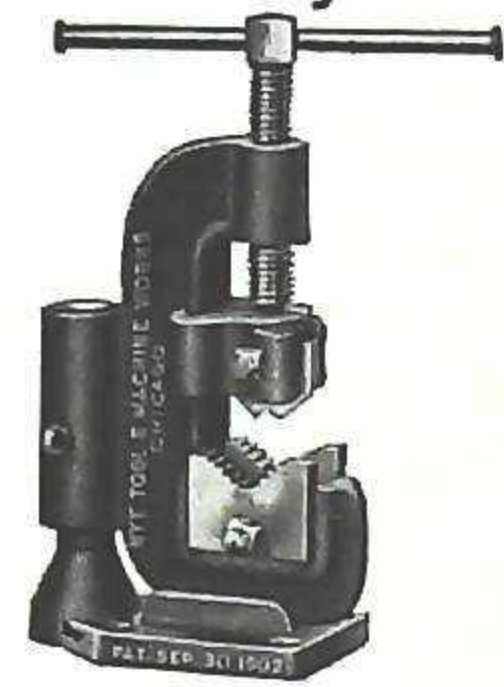


Fig. 2784

Made of a two-piece malleable casting. Vise base can be permanently fastened to a work-bench and the vise itself quickly detached, by removal of a cotter pin, and used as a pipe wrench.

The hollow sleeve on the back of the vise proper takes a 1/2-inch pipe, with which the vise is easily held when being used separate from its base. Holds pipe from 1/8 to 1-inch inclusive and weighs about 5 pounds.

Price	.....	each	\$5.00
"	Extra Upper Jaws	"	.40
"	" Lower " "	per pair	1.20
"	" Upper Jaw Clamps	"	.40

Nye Chain Pipe Vises

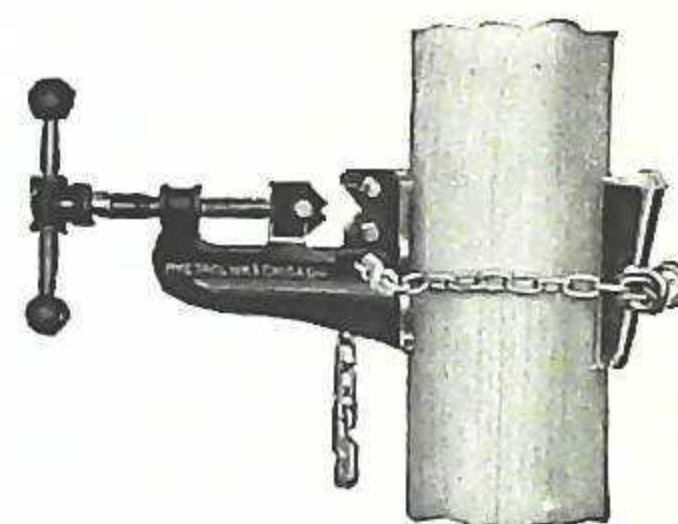


Fig. 2785

Can be used as a bench vise or attached to a post or tree. Takes pipe sizes 1/8 to 2 inch, including a 2-inch coupling.

The chain is steel, 40 inches long, and guaranteed to stand a strain of, 2000 pounds.

Price, Complete with Chain Attachment	.....	each	\$9.50
"	Extra Upper Jaws	.....	.50
"	" Lower " "	per pair	1.35
"	" Chain Attachment	.....	4.50
"	" Upper Jaw Clamps	per pair	.65

Nye Pocket Vises

A handy vise for handling repair work, for it can be carried in a coat pocket. It is just as effective as a vise several times its weight. It can be fastened securely with four ten-penny nails.

The angle iron frame and all parts of this vise are so strong they will last indefinitely.

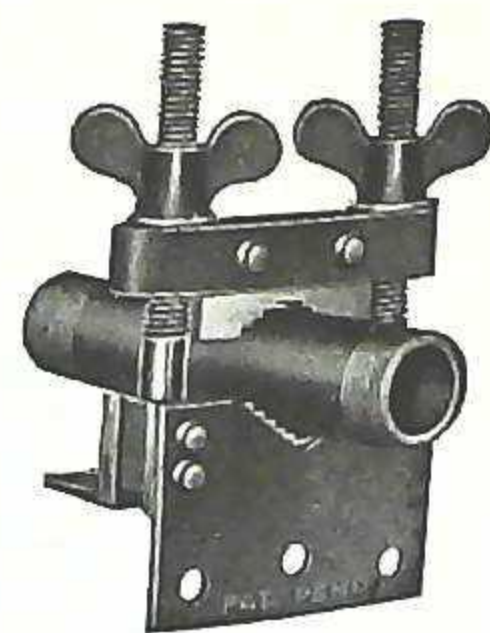


Fig. 2786

No.	Holds Pipe Inches	Weight Pounds	Price Each
1	1/8 to 1 1/4	1 1/2	\$4.50
2	1/8 " 2	2 1/2	6.00

No. 51 Reed Strap Vises
For Polished Pipe and Tubing

This vise does not require a separate bushing for each size.

Change for different sizes is made instantly with tightening screw.

Straps are of fine grade linen webbing and are subject to very little wear in use. Rosin or chalk should be used to prevent slipping.



Fig. 2791

No.	Holds Pipe Inches	STRAP, INCHES	Wt. Lbs.	Price, Each	Extra Strap
51	1/8 to 2	Length 17 Width 2 1/8	9 1/2	\$4.00	\$.75

Williams Vulcan Drop Forged Chain Pipe Vises

Unbreakable, compact, rapid in action and positive in grip.

It is made entirely of wrought steel with drop-forged jaws, saw tempered for file sharpening.

The different sizes are equally serviceable upon and suitable for fastening to bench or post.

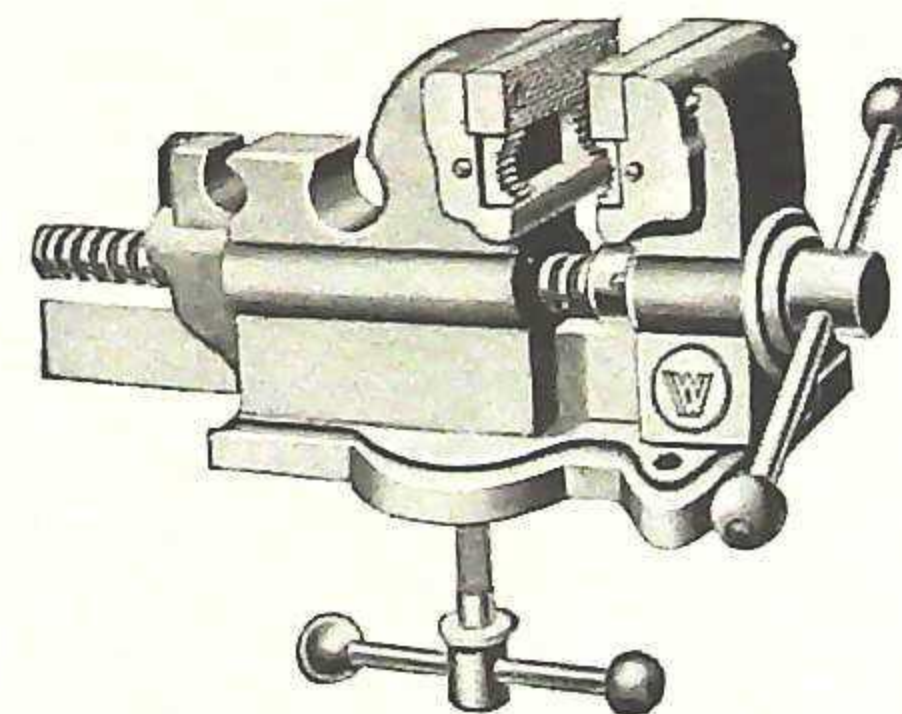


Fig. 2792

Cap. Pipe In.	Approx. Size In.	Approx. Wt. Lbs.	Price Complete Each	Jaws per Pr.	Chain with Screws	PRICE, EXTRA PARTS, EACH	Handle with Nuts	Nuts
1 1/8-2	4x5x6	4	\$7.00	\$3.00	\$2.50	\$.80	\$2.20	\$1.40
2 1/4-4	6x8x8	10	15.00	7.00	4.80	1.40	4.20	2.70
3 1/2-6	8x9x11	18	27.00	12.00	9.00	2.50	7.00	4.00
4 1/2-8	8x10x12	30	36.00	18.00	12.00	2.50	7.00	4.00

Vanderman Improved Patented Combination Pipe Vises

Three Combinations in One



No. 1 Fig. 2793

A combination pipe vise with large jaw surface for holding pipe, irregular surface work, or fittings; forms for bending work; form or anvil surface to hammer on; arrangements of pipe jaws permit of holding or cutting close work. Pipe jaws may be instantly removed, reversed or repaired. All parts are made interchangeable.

A combination pipe vise, to be useful and practical, must admit of each part of the combination being independent of the other. The combinations in this vise are independent of each other and do not conflict.

Strongly made, the sliding bar, screws, handles and jaws are of steel, and all the parts have been put to and have stood severe tests.

No.	Holds Pipe Inches	Bends Pipe Inches	Width Jaws Inches	Weight Pounds	Price Each
0	1/2 to 2 1/2	1	4	40	\$21.50
1	1/8 " 7	1 1/2	5	90	28.50
3	1/8 " 10	2	6	160	42.50

Prentiss Improved Combination Pipe Vises

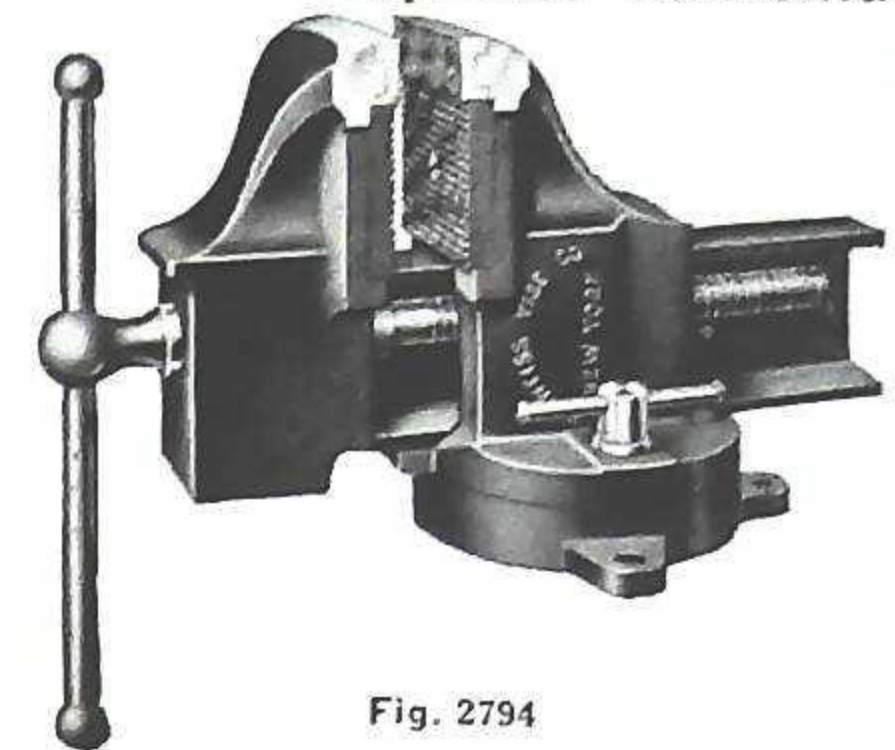


Fig. 2794

Vise has a wrought steel channel sliding bar.

Grip plates are made of best steel, carefully tempered and are deeply serrated at right angles.

Jaws are reversible and interchangeable, and are full width of vise.

No.	Jaws, In.	Opens In.	Wt. Lbs.	Price, Each
81	3 1/2	1 1/2 to 2 1/2	35	\$16.00
82	4 1/4	1 3/4 " 4	55	22.00
83	5	1 3/8 " 6	100	36.00

Prentiss Blake Combination Pipe Vises
Stationary Jaw, Swivel Base

Pipe jaws are made of high-grade steel and are reversible. Has patent detachable and interchangeable steel jaw faces.

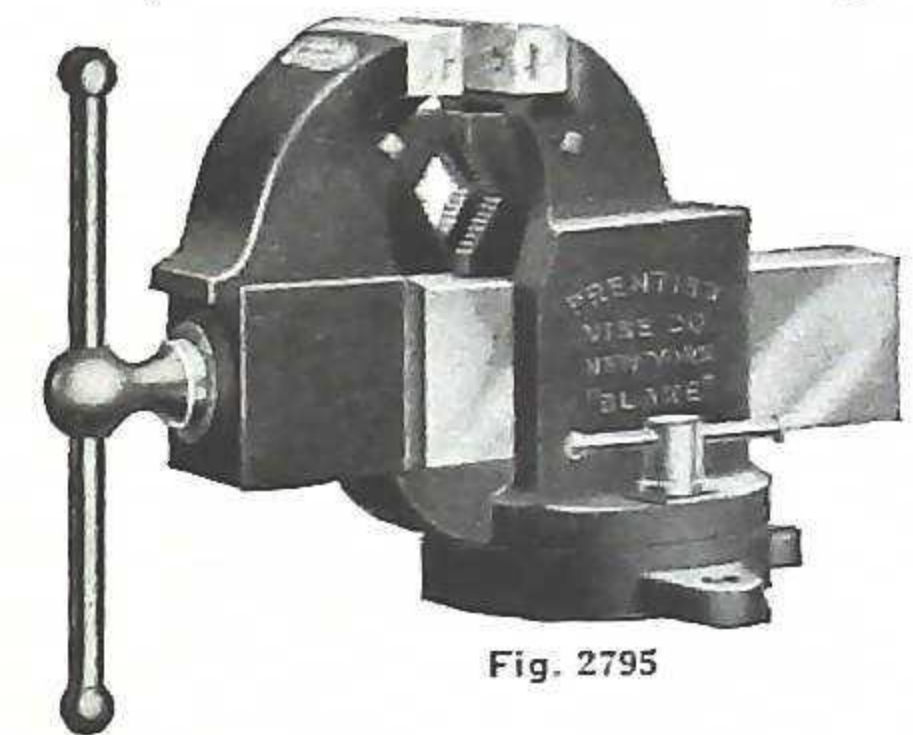


Fig. 2795

No.	Jaws In.	Holds Pipe In.	Wt. Lbs.	Price Each
180	2 1/2	1/4 to 1	15	\$10.00
180 1/2	3	1/8 " 1 1/2	22	12.00
181	3 1/2	1/8 " 2 1/2	55	16.00
182	4 1/4	1/8 " 3	80	22.00
182 1/2	5	1/8 " 4	120	32.00

Prentiss Blake Combination Pipe Vises
Stationary Jaw Swivel Base

Made with wrought steel sliding bar. This bar cannot break.

An extra nut for tightening swivel base is placed on left hand side of body.

Equipped with patent detachable steel jaw faces.

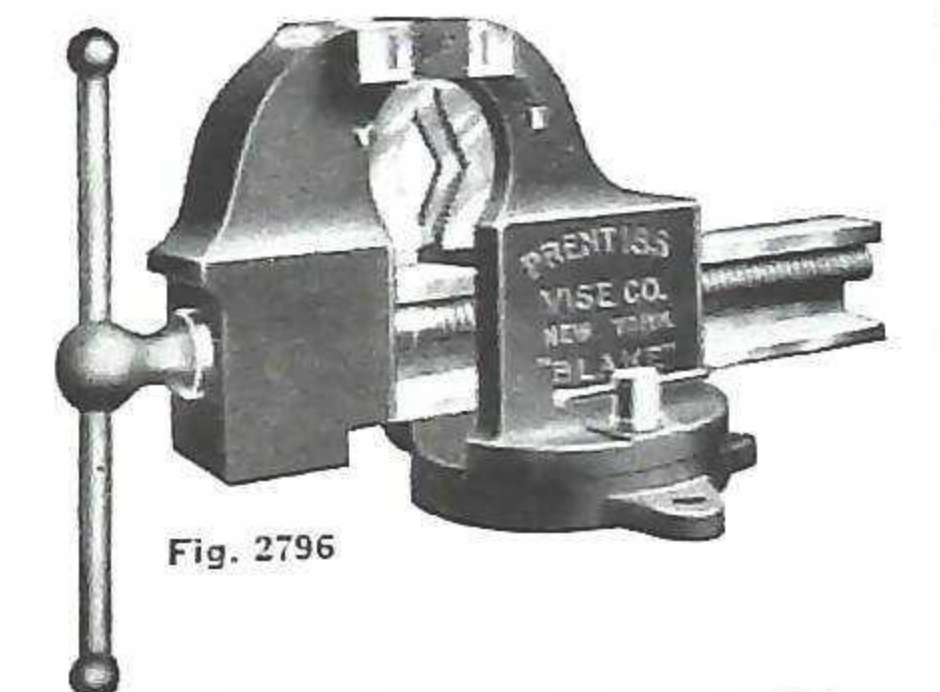


Fig. 2796

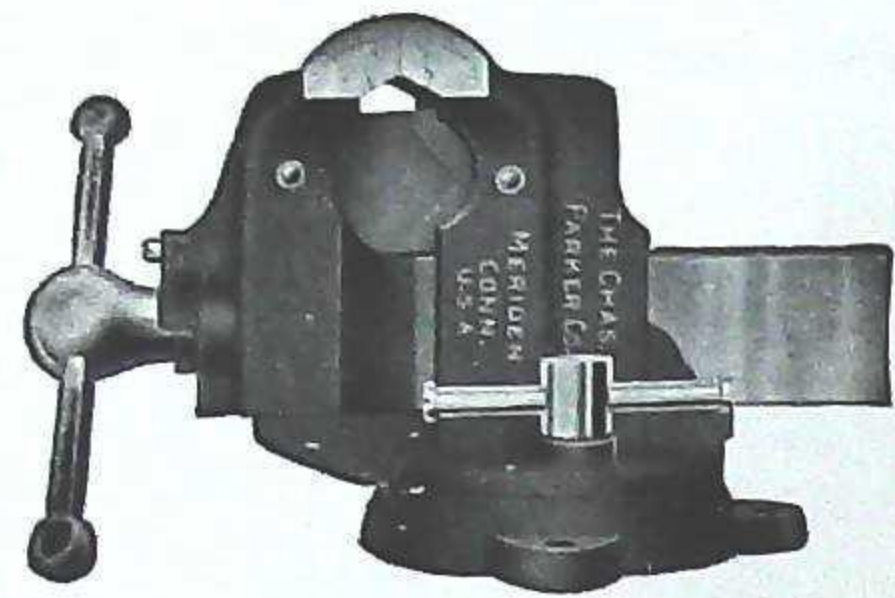
No.	Jaws Inches	Holds Pipe, In.	Weight Pounds	Price Each
183	6	1/8 to 6	185	\$45.00
185	7	1/8 " 8	240	60.00

Repair Parts for Prentiss Blake Combination Pipe Vises

Vise No.	Body	EXTRA PARTS, PRICE, EACH					
		Front or Sliding Jaw	Detachable Steel Jaw Face	Screw and Lever	Nut	Swivel Base	
180	\$4.50	\$4.50	\$1.00	\$1.75	\$.50	\$1.00	\$1.10
180 1/2	5.00	5.00	1.10	2.00	.60	1.50	1.25
181	6.00	6.00	1.30	2.50	.80	2.00	2.00
182	9.00	9.00	1.60	3.00	1.20	3.00	2.50
182 1/2	13.00	13.00	1.90	4.00	1.40	4.00	3.00

Repairs for Prentiss Blake Combination Pipe Vises

Vise No.	Body	PRICE, EACH					
		Front of Sliding Jaw	Detachable Steel Jaw Face	Screw and Lever	Nut	Swivel Base	
183	\$16.00	\$16.00	\$2.40	\$6.00	\$1.50	\$6.00	\$4.00
185	22.00	22.00	2.80	7.00	1.50	7.00	5.00



Parker Superior Combination Pipe Vises
Stationary Jaws Swivel Base

Front jaw is reversible, so that it may be turned end to end when worn.

Fig. 2801

No.	Width Jaw, In.	Jaws Open, In.	Holds Pipe Up to Inches	Weight Pounds	Price Each
87	3 1/2	3	2	47	\$16.00
88	4 1/2	5	3	71	22.00
288 1/2	5	6	4	118	32.00
289 1/2	6	9 1/2	6	185	45.00

Parker's Superior Machinists' Vises
Stationary Jaw, Swivel Base

Special Parker mixture castings; solid steel bar-slide strengthener; swivel base; renewable-milled to fit tool and pinned on steel jaws; saddle screw on outside of slide permitting a solid under portion of increased strength.

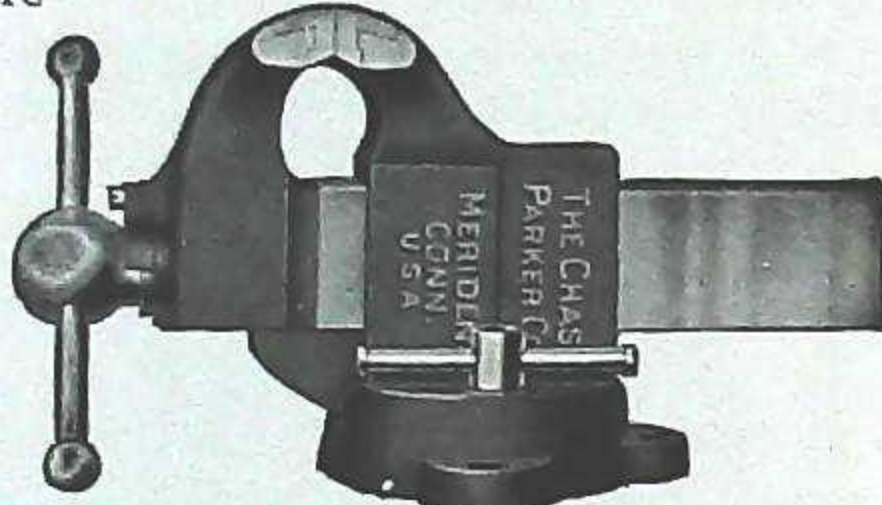


Fig. 2802

No.	Jaw Opens In.	Wt. Lbs.	Price Each	No.	Jaw Opens In.	Wt. Lbs.	Price Each
229X	3 3/4	4	\$15.00	269X	5 1/2	9	\$42.00
239X	3 3/4	6	17.00	279X	6 1/4	9 1/2	60.00
249X	4 1/4	7	21.00	279 1/2 X	7	10 1/2	70.00
259X	4 3/4	8	27.50	260X	8	13 3/4	105.00

Parker's Eclipse Machinists' Vises

Stationary Jaw Swivel Base

Grey iron castings. Renewable, milled and fitted tool steel faces. Extra size, strong cut-screw and nut. Saddle and saddle screw.

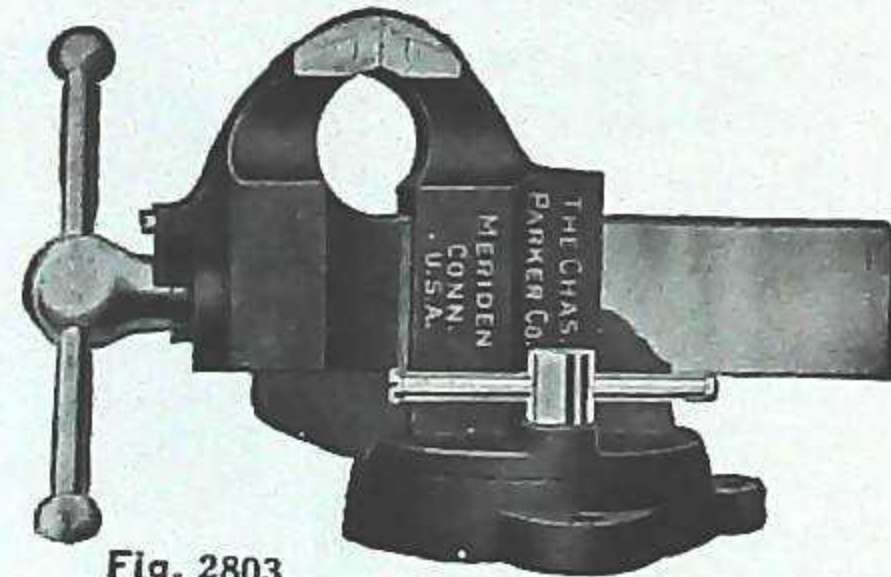


Fig. 2803

No.	Width Jaws, In.	Jaws Open, In.	Wt. Lbs.	Price Each	No.	Width Jaws, In.	Jaws Open, In.	Wt. Lbs.	Price Each
200	2	3 1/2	16	\$10.50	205	4 1/2	7	76	\$20.00
201	2 1/2	3 1/2	17	12.00	206	5	8	104	30.00
202	3	4 1/2	26	13.00	206 1/2	5 1/2	9	130	38.00
203	3 1/2	5 1/2	42	15.00	207	6	10 1/2	157	52.00
204	4	6 1/2	59	17.00	208	8	13 3/4	298	98.00

Vanderman Pipe Benders

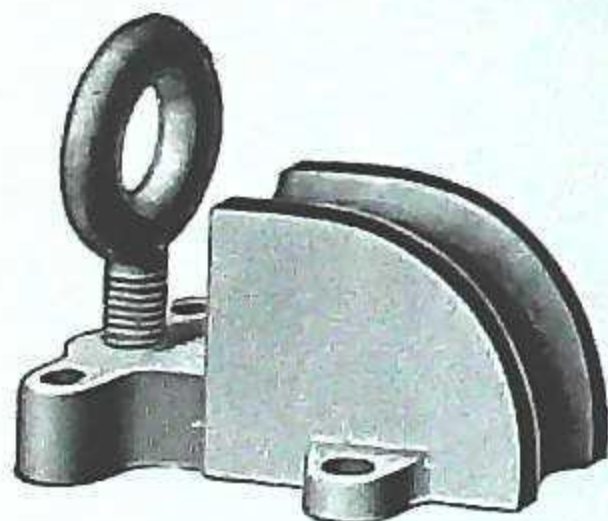


Fig. 2804

For straightening and bending pipe.

Has bolt holes so that bender can be readily attached to a bench or other substitute.

Made in two sizes. Has extension eye bolt so that pipe when bending is held close to make an accurate bend.

In making bends in light tubes or nickel-plated pipe a piece of sheet lead, rubber or leather placed on bender and eye bolt will prevent finished work from being marred.

No.	Takes Pipe Inches	Price Each	No.	Takes Pipe Inches	Price Each
1	1/8 to 1 1/4	\$5.00	2	1 to 2	\$6.50

Toledo Vise Mounts and Roller Supports



Fig. 2805

The Toledo Vise Mount is made in three sizes, all of which are portable.

The roller support shown in the illustration may be purchased or not, according to the individual's desire, although the roller support should be used with the vise mount, especially in the larger sizes. The vise mount and roller support can be connected by using a length of 3/4-inch pipe inserted through holes in both the vise mount and the roller support for that purpose.

Vise Mounts

No.	For Pipe Up to Inches	Ship. Wt. Pounds	Price Each
0	1	33	\$12.00
1	2 1/2	51	15.00
2	4 1/2	77	18.00

Roller Supports

Price, Weight 17 Pounds.....each \$5.00

Williams Vulcan Pipe Vise Mounts

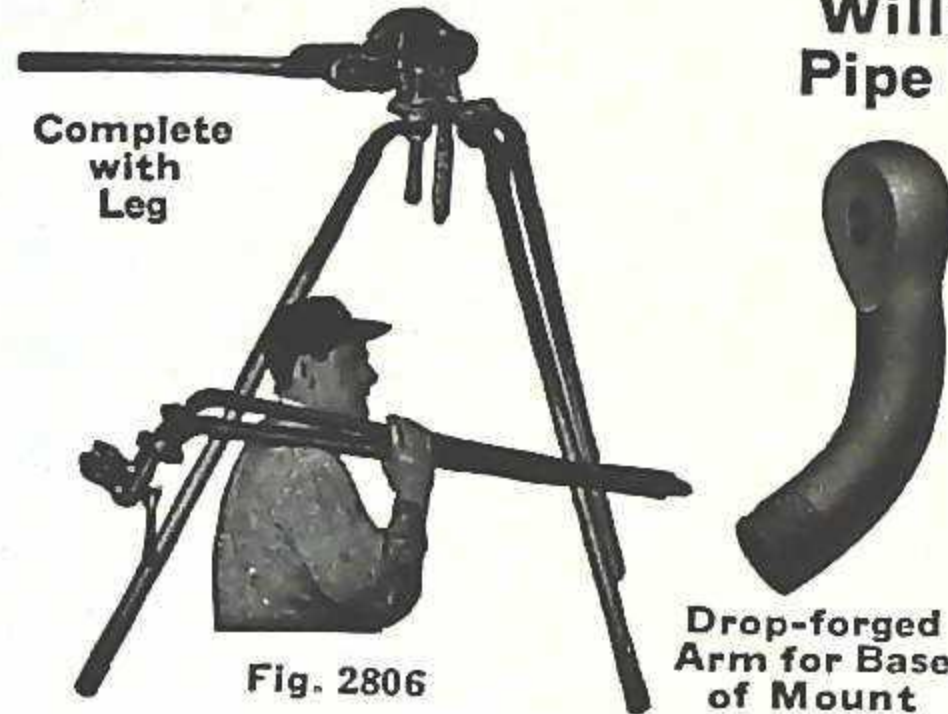


Fig. 2806

Positive in performance, firm and portable, it is recommended to all in the pipe working field. With or without legs, for use in combination with Nos. 1 and 2 Vulcan Pipe Vises.

No.	For Vulcan Vise No.	Weight Complete Pounds	Arms, Bolts and Nuts Only	Price Each	Complete with Legs
1	1	11	\$1.50	\$3.00	4.00
2	2	15 1/2	2.00		

Trimo Narrow Jaw Pipe Wrenches

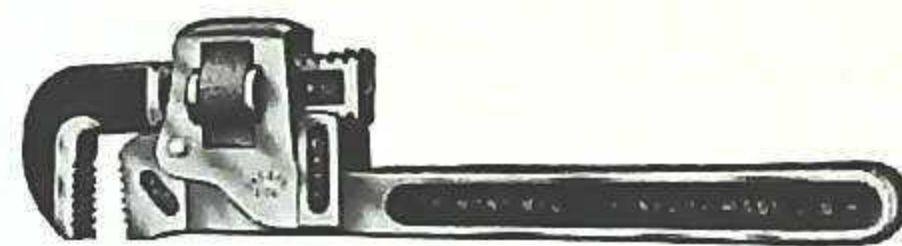


Fig. 2807

Has steel handle. Fine milled teeth. Jaws 3/16-inch thinner than regular wrenches. Made in three sizes, 6, 8 and 10-inch.

Opens Inches	Takes Pipe Inches	Price Each	Opens Inches	Takes Pipe Inches	Price Each
6	1/2	\$2.00	10	1	\$2.50
8	3/4	2.25			

Ideal Chain Wrenches

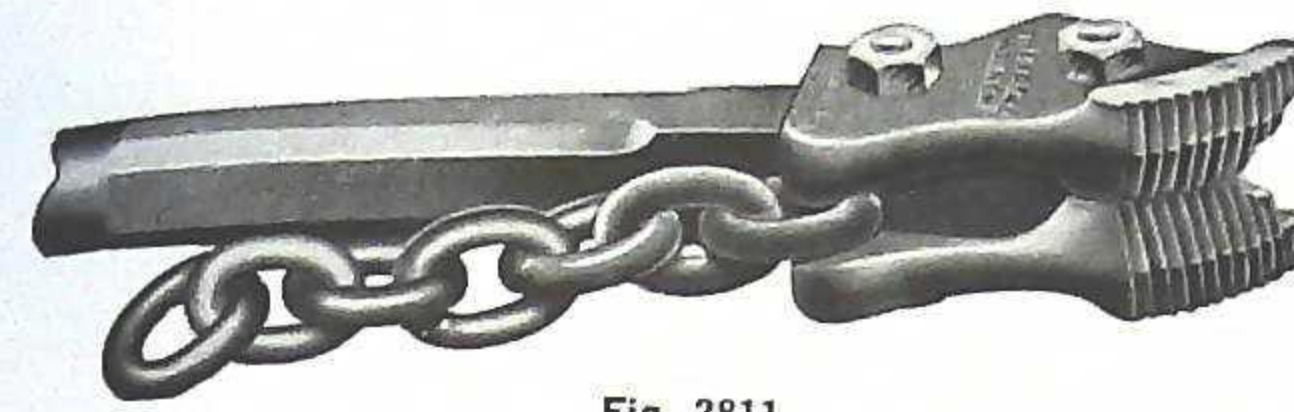


Fig. 2811

Jaws have two kinds of biting surfaces: Regular jaws for all straight surfaces, such as pipe, etc.; V shaped jaws, inside biting surface, for fittings, valves, flanges or castings of every description. Jaws, drop forged of high grade tool steel, easily tempered and sharpened.

Perfect chain lock never binds and holds chain firmly. All slack of chain taken up between chain support and front of jaws.

Chain is Norway iron, held by loose pin. Extra heavy round steel handle. Jaws can be fitted to any discarded wrench handle or bar. All parts interchangeable.

No.	Capacity Pipe	Size, Inches Fittings	Flange Link	Length Wrench Inches	Cable Chain Size x Length	Weight Wrench Pounds
2	1/2-3 1/2	1/2-3	1 to 4	27	3/8	20
3	1-5	1-4	2 " 6	38	1/2	30
4	2-8	2-6	2 " 8	49	5/8	35
5	2 1/2-12	2 1/2-10	4 1/2 " 12	61	3/4	50
5A	2 1/2-16	2 1/2-12	4 1/2 " 16	61	3/4	62
5B	2 1/2-20	2 1/2-14	4 1/2 " 24	61	3/4	74

Wrench with Cable Chain	Flange Link	Jaws with Bolts and Pins	Jaws Right or Left	Iron Chain	Norway Handles	Price Each	Price Each	Price Each	Price Each	Price Each	Price Each
No. 2	\$6.00	\$3.00	\$3.50	\$1.63	\$2.10	\$2.10	\$1.12	\$0.04	\$0.15		
No. 3	8.00	4.00	5.00	2.25	1.20	3.25	.17	.04	.20		
No. 4	11.00	5.00	6.50	2.93	1.70	4.75	.20	.05	.25		
No. 5	16.00	6.00	8.25	3.75	3.00	6.90	.25	.06	.30		
No. 5A	18.00	7.00	8.25	3.75	5.00	6.90	.25	.06	.30		
No. 5B	20.00	8.00	8.25	3.75	7.00	6.90	.25	.06	.30		

Williams Vulcan Drop-forged Chain Pipe Wrenches

1896 Pattern—Old Style



Fig. 2812

No.	Cap. Pipe In.	Extreme Lgth. In.	Wt. Lbs.	Complete Wrench Price Each	Extra Chain Price Each	Extra Jaws per Pair Price Each	Extra Handles Price Each
10	1 1/8 to 3/4	13 3/4	13 3/4	\$5.00	\$1.50	\$2.00	\$2.00
11	1 1/8 " 1 1/2	20	5 3/4	7.00	2.00	3.50	2.50
12	1 1/4 " 2 1/2	27	10	10.00	3.00	5.50	3.00
13	1 3/4 " 4	37	16	14.00	5.00	8.00	3.50
13 1/2	1 1/2 " 6	44 1/2	24	18.00	7.00	9.50	4.50
14	1 1/2 " 8	50 1/2	31	22.00	9.00	11.00	6.50
15	2 " 12	64 1/2	50	36.00	15.00	15.00	14.00
16	4 " 18	87	137	80.00	40.00	32.00	38.00

Williams Improved Vulcan Drop-forged Chain Pipe Wrenches

With Flat Link Chain



Fig. 2813

No.	Takes Pipe In.	Lgth. In.	Wt. Lbs.	Price, Complete, Each	Price, Extra Chains, Each	Price, Extra Jaws, per Pr.
30	1/8 to 3/4	13 3/4	13 3/4	\$5.00	\$1.50	\$2.00
31	1/8 " 1 1/2	20	5 3/4	7.00	2.00	3.50
32	1/4 " 2 1/2	27	10	10.00	3.00	5.50
33	3/4 " 4	37	16	14.00	5.00	8.00
33 1/2	1 1/2 " 6	44 1/2	24	18.00	7.00	9.50
34	1 1/2 " 8	50 1/2	31	22.00	9.00	11.00
35	2 " 12	64 1/2	50	36.00	15.00	15.00

Genuine Walworth Stillson Wrenches



Steel Handle Fig. 2814



Wood Handle Fig. 2815

Sizes 6 to 14-inch, wood handle, 10-inch and larger, steel handle unless otherwise specified.

Length Open, In.	Takes Pipe, In.	Price Each	Length Open, In.	Takes Pipe, In.	Price Each
6	1/8 to 1/2	\$2.00	18	1/4 to 2	\$5.00
8	1/8 " 3/4	2.25	24	1/4 " 2 1/2	7.25
10	1/8 " 1	2.50	36	1/4 " 3 1/2	13.50
14	1/4 " 1 1/2	3.50	48	1 " 5	20.00

Extra Parts

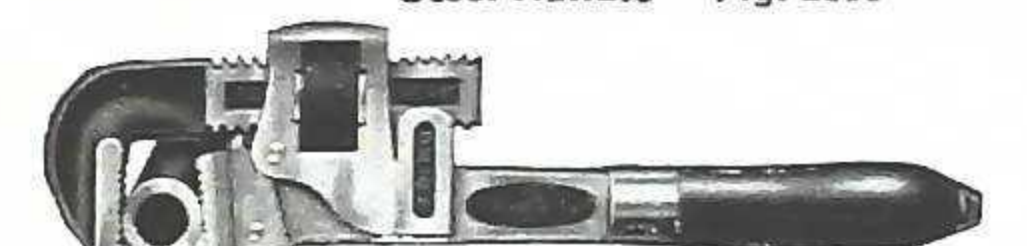


For Wrench In.	Bars with Springs	Jaws	Frames	Adjusting Nuts	Wood Handles	End Nuts	Frame Pins	Spring Rivets	Price Each
6	\$0.95	\$0.75	\$0.38	\$0.12	\$0.16	\$0.15	\$0.03	\$0.01	\$0.10
8	1.00	.80	.42	.15	.16	.15	.03	.01	.10
10	1.10	.85	.50	.20	.18	.20	.04	.02	.10
14	1.50	1.15	.60	.30	.25	.20	.04	.02	.10
18	2.25	1.75	.75	.35	...	...	.04	.02	.10
24	3.50	2.25	.95	.55	...	...	.04	.02	.11
36	7.00	4.35	1.70	1.10	...	...	.05	.02	.13
48	10.50	7.50	2.20	1.50	...	...	.05	.02	.13

Trimo Pipe Wrenches



Steel Handle Fig. 2816

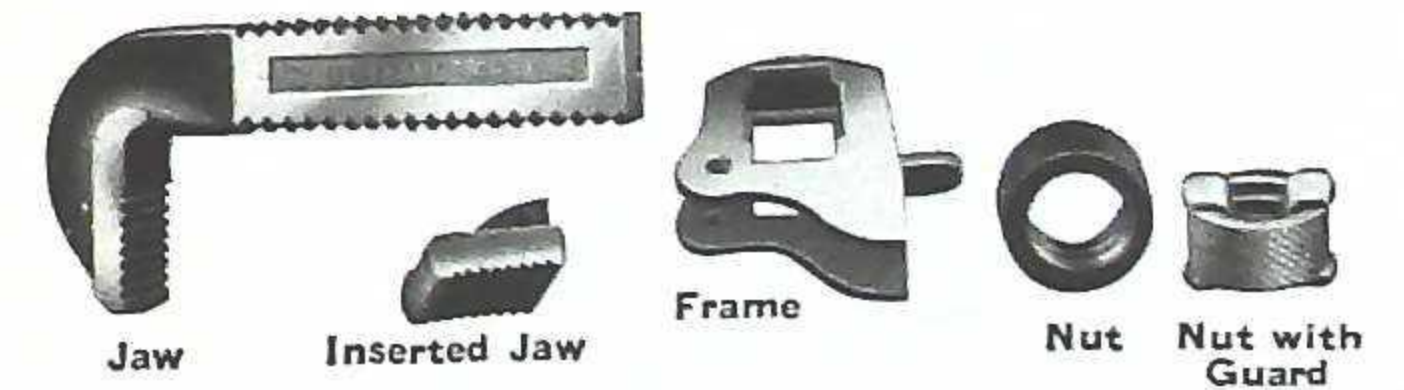


Wood Handle Fig. 2817

Made with wood handle in sizes 6, 8, 10 and 14-inch.

Length Open, In.	Takes Pipe, In.	Price Each	Length Open, In.	Takes Pipe, In.	Price Each
6	1/8 to 1/2	\$2.00	18	1/4 to 2	\$5.00
8	1/8 " 3/4	2.25	24	1/4 " 2 1/2	7.25
10	1/8 " 1	2.50	36	1/4 " 3 1/2	13.50
14	1/4 " 1 1/2	3.50	48	1 " 5	20.00

Extra Parts



For Wrenchable In.	Moveable Jaws	Nuts	Insert Jaws	Frames	Spring	Frame Pins	Jaw Pins	Wood Handles	Nut with Ferrule	Price per Pr.
6	\$0.75	\$0.12	\$0.35	\$0.40	\$0.03	\$0.03	\$0.03	\$0.95	\$0.16	\$1.15
8	.80	.15	.40	.45	.03	.03	.03	1.00	.16	.15
10	.85	.20	.50	.55	.03	.04	.04	1.10	.18	.20
14	1.15	.30	.60	.70	.03	.04	.04	1.50	.25	.30
18	1.75	.35	.70	.95	.04	.04	.04	2.25	...	.35
24	2.25	.55	.80	1.40	.04	.04	.04	3.50	...	.45
36	4.35	1.10	1.10	2.20	.04	.05	.05	7.00	...	.55
48	7.50	1.50	2.00	2.70	.04	.05	.05	10.50	...	.65

Parmalee Pipe Wrenches



Fig. 2821

Grips with equal pressure all around the pipe, which prevents crushing.

No.	Lgth. In.	Takes Pipe In.	PRICE, EACH		EXTRA GIRTHS	
			Complete	Without Girths	Size In.	Price Each
1 Sleeve Lock	10	3/8 to 1	\$9.00	\$3.50	3/8-1/2-3/4-1	\$1.75
1 Nut	10	3/8 " 1	8.50	2.75	3/8-1/2-3/4-1	1.75
2	20	1 " 2	15.00	6.00	1-1 1/2	2.50
3	20	2 " 3	17.00	7.00	1 1/2-2	3.00
4	37	3 and 4	52.00	21.00	2-2 1/2-3	4.00
					3 and 4	17.00

Warnock Triple Wear Strap Wrenches



Fig. 2822

For brass and nickel-plated pipe. Has imported linen strap which is double where wear is greatest.

Linen grip only contact with the pipe, so will not scratch. Curving nose will not crush the pipe.

When free from strain, swinging shackle gives double opening, making the Warnock the quick strap wrench.

A strongly made, practical wrench that will last indefinitely.

Length Inches	Takes Pipe Inches	PRICE, EACH	
		Pipe Complete	Extra Straps
12	1/8 to 2	\$2.50	\$.50
18	1 " 5	5.00	1.00

Reed Strap Wrenches



Fig. 2823

For screwing up all kinds of nickel-plated and polished pipe, tubing or shafting without marring.

When worn the straps can be changed end for end, thus prolonging the life of the wrench. The change from one position to the other may be made by simply altering the position of the strap in the slots in head without loosening any screws.

No.	Length Inches	Takes Pipe Inches	Price Complete Each	Extra Straps Each
12	12	1/8 to 2	\$1.50	\$.40
18	18	1 " 5	3.00	1.00

Agricultural or Standard Monkey Wrenches



Fig. 2824

Forged steel head, bar and shank, machine cut steel adjusting screw, with knurled head. One piece polished hardwood handle. Metal parts all smoothly finished in dull black. Packed 1/2 dozen in a package; 6, 8, 10 and 12-inch in cases of six dozen; 15-inch in cases of four dozen.

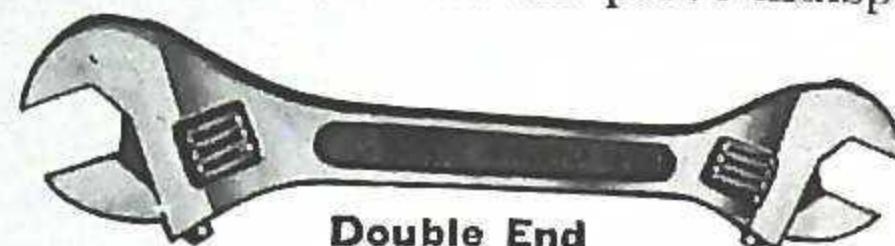
Length Inches	Jaws Open Inches	Weight per Case Pounds	Price per Dozen
6	3/8	60	\$10.00
8	1 3/16	100	12.00
10	1 3/4	145	14.00
12	1 3/4	185	18.00
15	2 1/8	185	24.00

Crescent Adjustable Wrenches

For use around automobiles, gas or gasoline engines, motor boats, machine shops, and in fact any place where a wrench is required that will take various sized nuts, the Crescent Wrench will prove indispensable.



Single End Fig. 2825



Double End Fig. 2826

Made of a special analysis carbon tool steel, hardened and toughened by special heat-treating process.

Length... inches	Single End					
	4	6	8	10	12	15
Capacity, " "	1/2	3/4	1 1/8	1 1/2	1 5/8	1 11/16
Price, Polished	4	6	8	10	12	15
...per dozen	\$7.80	7.80	9.60	12.00	18.00	27.00
					18.00	39.00

Length... inches	Double End					
	4 and 6	6 and 8	8 and 10	10 and 12	12 and 15	15 and 18
Capacity, " "	1/2 " 3/4	3/4 " 1 1/8	1 1/8 " 1 1/2	1 1/2 " 1 5/8	1 5/8 " 1 11/16	1 11/16 " 1 3/4
Price, Polished, per doz.	\$13.20	\$15.00	\$18.00	\$24.00		
" Nickeled, " "	16.20	19.20	22.80	31.80		

Repair parts for the regular single end wrench are interchangeable with the double.

Repair Parts



Length Inches	PRICE, EACH			
	No. 2 Jaw	No. 3 Thumbscrew	No. 4 Pin	No. 5 Spring
4	\$.25	\$.10	\$.05	\$.05
6	.25	.10	.05	.05
8	.30	.12	.05	.05
10	.40	.15	.05	.05
12	.60	.25	.10	.05
15	.85	.35	.10	.05
18	1.15	.55	.10	.05

Westcott Adjustable S Nut Wrenches



Fig. 2827

A convenient wrench for general use. Can be used in many places inaccessible to the monkey wrench. Made of first-class material. Strong and durable. Handle is of malleable iron; jaw, forged steel. Packed six in a box.

No.	Size In.	Opens In.	Wt. Lbs.	Price per Doz.	No.	Size In.	Opens In.	Wt. Lbs.	Price per Doz.
74	4	9/16	1	\$8.00	80	10	1 3/8	9 3/4	\$12.00
76	6	3/4	2 7/8	8.00	82	12	1 5/8	16 1/2	18.00
78	8	1	5 1/2	10.00	84	14	2	25 1/2	24.00

Nye Pipe Cutters



Fig. 2828

For use on extra heavy pipe.

Made of fine tool steel. Equipped with Nye knurled wheels, hardened and tempered in oil.

No.	Cap. Pipe Inches	PRICE, EACH			
		Complete	Extra Wheels	Extra Rollers	Extra Handles
1	1/8 to 1 1/4	\$3.75	\$.70	\$.24	\$.80

The bottom of No. 2 cutter frame is tapped for 1/2-inch pipe, allowing the use of an extra handle.

No.	Cap. Pipe Inches	PRICE, EACH			
		Complete	Extra Wheels	Extra Rollers	Extra Handles
2	1/2 to 2	\$5.75	\$.80	\$.50	\$1.10
					\$1.10

Barnes Type Pipe Cutters.



Nos. 1 to 2 Fig. 2831

Equipped with knife blade wheels, unless otherwise specified, without extra charge.

Three wheel style, suitable for use where cutter cannot be revolved entirely around pipe.

No.	Cuts Pipe Inches	Price Each	PRICE, PER DOZEN			Body	Slide and Wheel	Handle and Screw
			Wheels	Rollers	Pins			
1 B	1/8 to 1	\$4.50	\$3.00	\$1.00	\$1.75	\$.75	\$1.00	
2 B	1/2 " 2	6.00	3.60	1.00	2.60	1.00	1.25	
3 B	1 1/2 " 3	10.00	4.80	1.00	4.55	2.00	2.25	
4 B	2 1/2 " 4	20.00	6.00	2.00	9.50	4.50	4.50	
5 B	4 " 6	30.00	9.00	2.00	13.75	7.00	7.00	
6 B	6 " 8	40.00	9.00	2.00	20.00	8.50	9.25	
6 1/2 B	8 " 10	45.00	9.00	2.00	23.00	9.50	10.25	
7 B	9 " 12	50.00	9.00	2.00	25.00	11.25	11.50	

Saunders Type Pipe Cutters

Roller Style especially good where cutter can be revolved entirely around pipe. Cuts without leaving burr. Cutter has hardened tool steel facing in the swinging block at the point where the screw bears on it to prevent wear. It is extra strong at foot of sleeve handle.



Fig. 2832

No.	Cuts Pipe Inches	Price Each	PRICE, PER DOZEN			Blocks and Handles	Price Each
			Wheels	Rollers	Pins		
1S	1/8 to 1	\$3.00	\$2.88	\$2.88	\$1.20	\$1.25	\$1.00
2S	1 " 2	4.50	3.84	3.84	1.20	1.75	1.25
3S	2 " 3	11.00	7.20	6.00	1.80	2.75	1.75
4S	2 1/2 " 4	18.00	7.20	6.00	1.80	3.50	3.50
5S	4 " 6	28.00	7.20	7.20	1.80	4.00	5.00

Trimo Pipe Cutters



Fig. 2833

Made with one cutting wheel and two rolls or with three cutting wheels.

Has no thread in the frame or roll block. A small case-hardened nut adjusts handle screw which can be replaced when worn. Converted into a three-wheel cutter by substituting two wheels for the two rolls.

No.	Cuts Pipe In.	PRICE, EACH				
		Complete	Knife Edge Wheels	Knurled Edge Wheels	Rolls	Nuts without Screw Rod
1	1/8 to 1 1/4	\$4.50	\$.40	\$.60	\$.30	\$.35
2	1/4 " 2	6.00	.40	.60	.30	.35
3	1 " 3	10.00	.50	.90	.40	.50

Beaver Square End Pipe Cutters

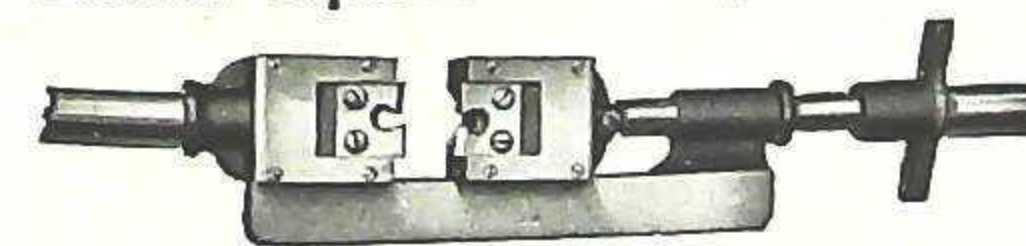


Fig. 2834

This pipe cutter cuts like a lathe tool, each turn removing a thin shaving until the pipe is severed. Leaves no burr to be reamed or filed, or to reduce the capacity of the pipe, and threading dies start easily and with less wear.

Rigid, simple and fool-proof in construction. The knives give hundreds of cuts on the hardest pipe, and are easily resharpened.

No.	Cap. Pipe In.	Price Each Complete	Knives Price per Set
5	1/2 " 2	20.00	1.50

Plumbers' Screw Plates

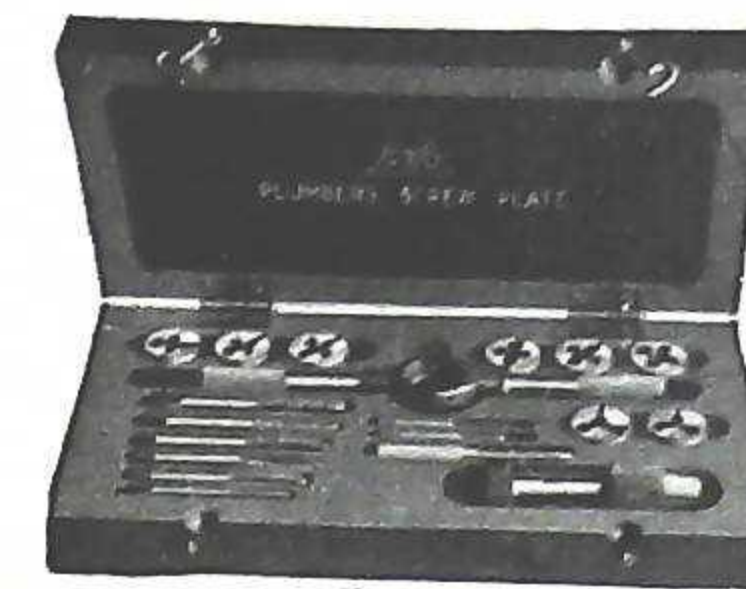


Fig. 2835

For threading flush ball stems, ball cock screws, rods and after fill tubes. With one stock, one adjustable tap wrench, screwdriver, right-hand tap and one 3/8-inch diameter die for each size. Length, 6 1/4 inches.

Price, No. P6, Sizes 6 ³² , 7 ³² , 8 ³² , 10 ³² , 10 ²⁴ , 1 1/4 ²⁰ , per set	\$9.00
" " P8, " 6 ³² , 7 ³² , 8 ³² , 9 ³² , 10 ³² , 10 ²⁴ , 12 ²⁴ , 1 1/4 ²⁰	11.00
Price, Stocks only	each 1.00
" Tap Wrench	".75
" Dies, 3/2-Inch Thick	".60
Taps	No. 6-9 10 12 1/4 inch
Price	each \$.35 .40 .45 .45

G T D Aluminum Stocks and Dies

With Little Giant Dies For Thin Metal Tubing



Fig. 2836

Made of aluminum with wooden handles and internal guides which support tubing and prevent crushing of tubing and marring of nicked pipe. American standard threads are standard; British standard can be furnished. Packed in plain box.

No.	Length Stock, In.	Cutting Sizes, In.	Weight Pounds	Price Each
276	20	*1, 1 1/8, 1 1/4, 1 3/8, 1 1/2	2 1/2	\$14.00
277	30	1 1/4, 2, 2 1/4	3	22.00

*Any three of sizes given. †Any two of sizes given.

G T D Tap Wrenches

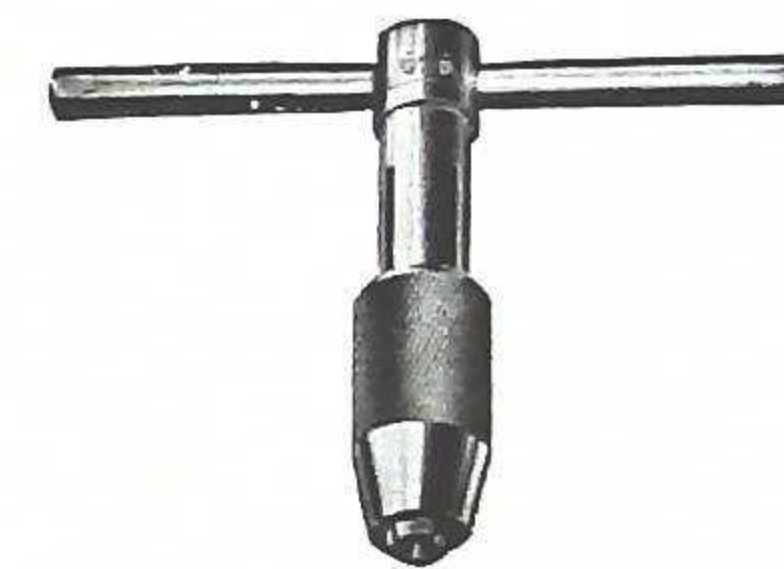


Fig. 2837

Has solid T-handles.

No.	Hand	CAPACITY, TAPS		Length Inches	Price Each
		Machine Screw	Pipe		
329	1/8 to 3/8	0 to 18	1/8	2 1/2	\$.50
333	1/2 " 1 1/2	12 " 30	1/8	3 3/8	1.00

G T D Tap and Reamer Wrenches



Fig. 2838

This wrench is carefully made. Jaws are of the best tool steel hardened and tempered. Handle knurled and body handsomely mottled.

No.	Hand	CAPACITY, TAPS		Length Inches	Price Each
		Machine Screw	Pipe		
00	1/8 to 3/8	0 to 13	1/8	5	\$1.75
0	1/8 " 1/4	0 " 18	1/8	7	2.00
4	1/8 " 3/8	0 " 24	1/8	9	3.00
5	3/16 " 1/2	10 " 30	1/8 to 1/4	11	3.50
6	1/4 " 3/4	14 " 30	1/8 " 3/8	15	4.00
7	3/8 " 1	15 " 30	1/8 " 3/4	19	5.00
7 1/2	3/8 " 1 1/4	22 " 30	1/4 " 3/4	31	6.50
8	3/4 " 1 1/2	.....	3/8 " 1	40	8.00

Duo Die Stocks for Pipe

Dies are adjustable and can be reversed in collet to cut a close thread.

Handles threaded with Briggs standard pipe thread, thus permitting easy repair if threads should become stripped.

Regularly furnished with one stock, two Little Giant pipe dies and two bushings. Briggs standard right hand taper threads furnished unless otherwise specified. Right and left hand pipe dies are furnished at the same price.

No.	Cutting Size, In.	Lgth. Stock Inches	Weight Pounds	Price Each
220A	1/2, 3/4	26	7 1/2	\$8.50
220B	3/4, 1	26	7 1/2	8.50



Fig. 2841

Trio Die Stocks for Pipe

Bushings can be removed to clear couplings for threading close nipples. Regularly furnished with one stock, three Little Giant Pipe Dies and three bushings.

Briggs standard right hand taper threads furnished unless otherwise specified. British (Whitworth) standard right hand taper threads furnished at regular prices. Right and left hand pipe dies are furnished at same list.

No.	Cutting Size, In.	Length Stock, In.	Weight Pounds	Price Each
200A	1/8, 1/4, 3/8	28	4 1/2	\$8.50
200B	1/4, 3/8, 1/2	28	4 1/2	8.50
210A	3/8, 1/2, 3/4	40	10	11.00
210B	1/2, 3/4, 1	40	10	11.00

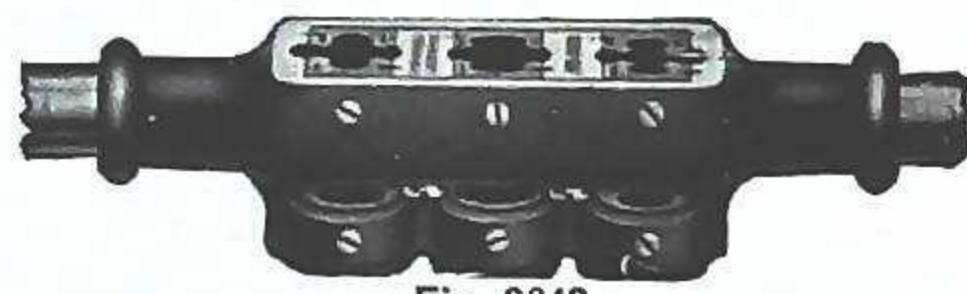
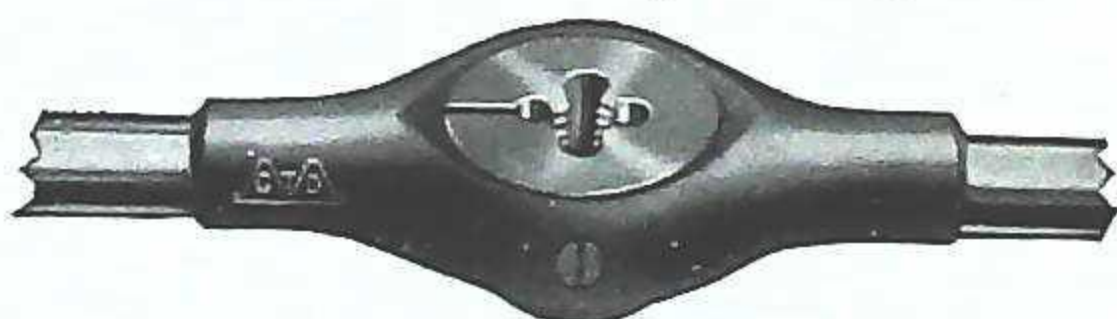


Fig. 2842

Pump Makers' Stocks with G T D Adjustable Round Split Dies



Single Die Stock Fig. 2843

Furnished only in V form of thread, 1/32 inch oversize. Single stock furnished with one O. K. adjustable die, adjusted ready for use. Guide is a part of stock. Each double stock is furnished with two O. K. adjustable dies, adjusted ready for use. The guide is a part of the stock.

Size No.	Style	Length Inches	Cutting Sizes, In.	Weight Ounces	Price Each
920	Double	14 1/2	3/8, 1/2, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2	25	\$4.50
921	Single	13 1/2	3/8, 1/2, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2	20	2.50
922	"	13 1/2	1/2, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2	20	2.50
923	"	13 1/2	1/2, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2	20	2.50

Repair Parts

Stocks

No.	Style	Price Each
920	Special Double	\$2.00
921	No. 1 1/2 OK Full Mounted	1.25
922	" 1 1/2 OK " "	1.25
923	" 1 1/2 OK " "	1.25

OK Adjustable Dies

For Stocks No.	Size In.	Diam. In.	Thickness In.	Price Each
920-921	3/8, 1/2, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2	1 1/4	1/2	\$1.25
920-922	1/2, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2	1 1/2	1/2	1.25
923	1/2, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2	1 1/2	1/2	1.25

Nye 2-way Solid Stocks

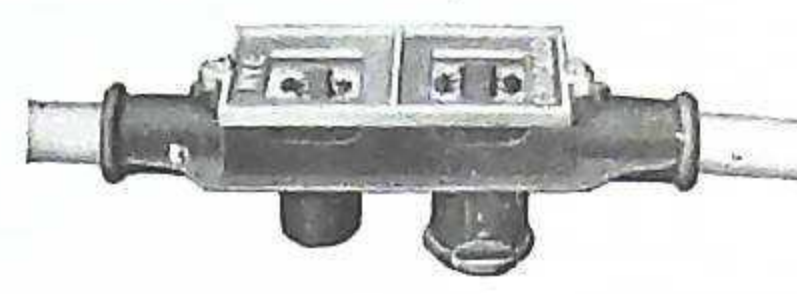


Fig. 2844

Recommended especially for electricians and where only 2 sizes of dies are needed.

Stock is bored out for 3/4 and 1 inch, but a combination of 3/4 inch and any other size can be had by using one extra bushing in any size desired.

Equipped with thumb screw so that bushings can be easily changed.

Price, each \$8.25

Nye Three-way Armstrong Pattern Die Stocks

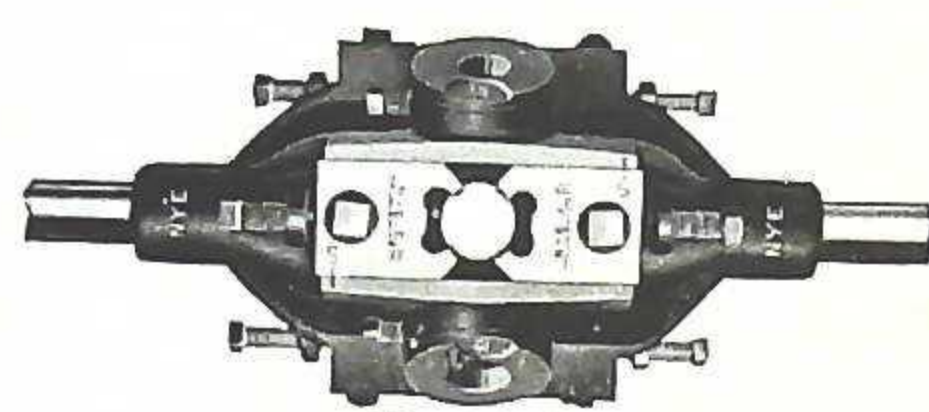


Fig. 2845

This one-piece casting holds 1/4, 3/8, 1/2, 3/4 or 1-inch Armstrong pattern dies and three separate bushings. Unless otherwise specified, however, only the 1/2, 3/4 and 1-inch dies and bushings will be furnished.

Price, Outfit, Complete	each	\$18.50
" Extra Dies	per pair	3.50
" " Handles	"	1.25
" " Set Screws	each	.15
" " Collar Screws	"	.30
" " Adjusting Screws	"	.25
" " Bushings	"	.40

Nye Three-way Junior Solid Stocks

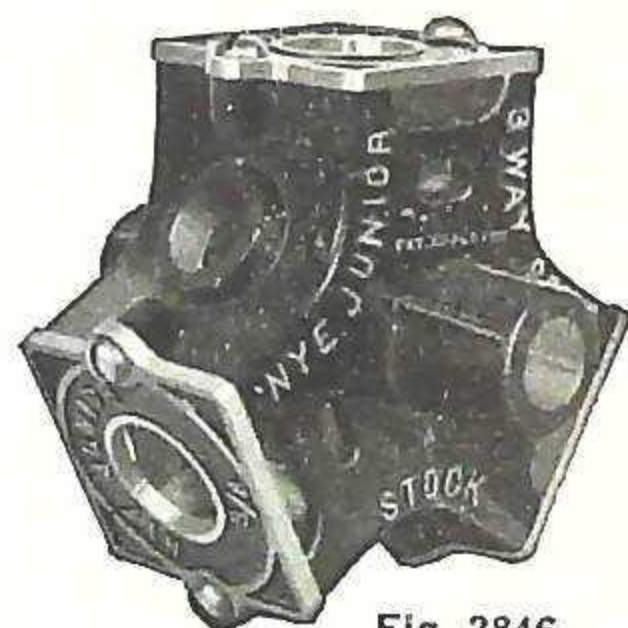


Fig. 2846

A small, light weight stock using solid dies. Has one stock, with extra dies, and threads many size pipe. The use of solid dies assures uniform threads without adjustment or fussing with loose segments.

Constructed of a one-piece certified malleable iron casting. Width across die ends, 2 1/2 inches; length, 4 3/4 inches.

Price, Stock Complete each \$13.90

Dies



Fig. 2847

Furnished either with skip or full tooth. Quick back-off. Chasers are made of high grade alloy steel carefully hardened and tempered in oil. Fully guaranteed.

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
3/4	\$2.75	3/8	\$2.75	1/8	\$2.75
1/2	2.75	1/4	2.75		

Nye Ever-Ready Solid Die Stocks



Fig. 2851

With Adjustable Guides

Adjustable bushings or guides open wide enough to clear a coupling and cut a close nipple. No separate bushings required. Stock has large openings for escapement of chips and oil, and is light weight.

No.	Dimensions Die, In.	Size, Dies Inches	Price, Each Complete	Price, Top Plate	Price, Extra Dies	Price, Guide Lugs
1	2 1/2 x 2 1/2 x 3/4	1/8 to 1	\$25.50	\$.60	\$3.00	\$1.00
2	4 x 4 x 7/8	1/4 " 1 " 2 1 1/4 " 2	22.50	.60	3.00	1.00
			31.50	1.00	5.00	1.20
			26.50	1.00	5.00	1.20

No. 25 Nye Die Stocks

Equipped with two sets of chasers, thread sizes from 1/8 to 1-inch inclusive, threaded on both ends for quick changes in stock. Chasers never work loose nor recede while in operation. After thread is cut chasers can be instantly released to avoid backing off over work.

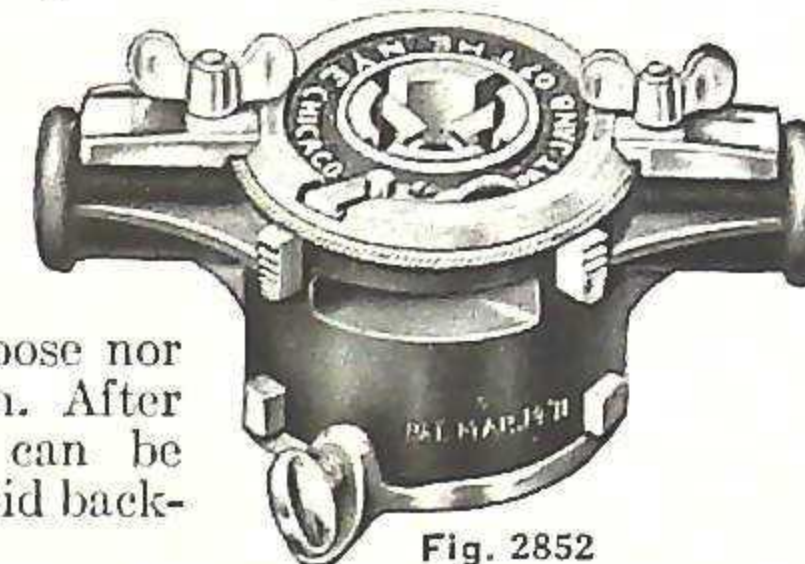


Fig. 2852

Stock is equipped with Universal adjustable bushing which will open to go over couplings. Can be used to cut a close nipple.

No.	Threads In	Price Each	WITH ONE SET OF CHASERS				WITH TWO SETS OF CHASERS			
			Threads	Price	Threads	Price	Threads	Price	Threads	Price
25	1/4 to 3/4	\$16.00	1/8 to 1	\$19.50	1/4 to 3/4	\$5.50	1/2 to 1	\$5.50	3/4 to 1	\$5.50

Extra guide lugs, \$1.00 per set of three.

Nye Ratchet Die Stocks

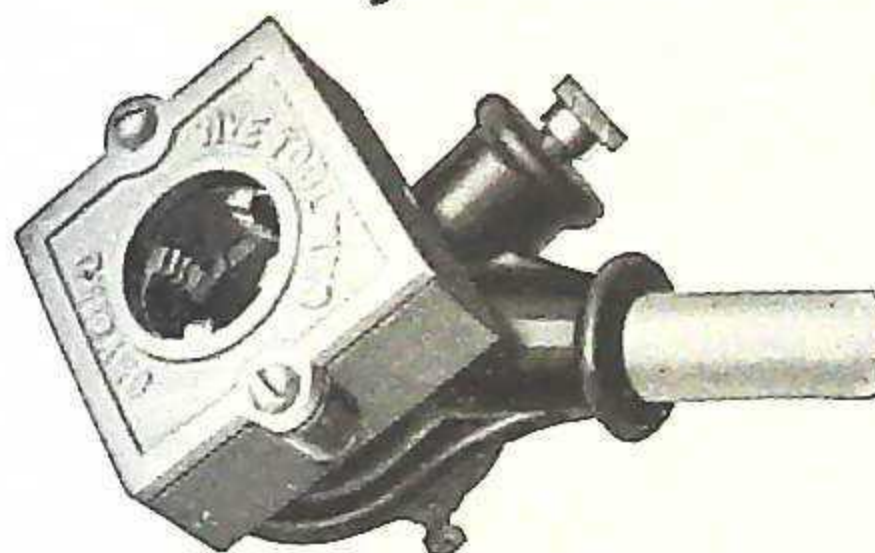


Fig. 2853

Working parts are completely enclosed. The compactness of this stock permits its use in close quarters. A complete set of bushings is furnished with each stock, but any ordinary bushing will fit.

By reversing the die in die box a thread can be cut on a pipe projecting 1 or 2 inches from the wall.

Completely equipped with Nye Dies and Bushings.

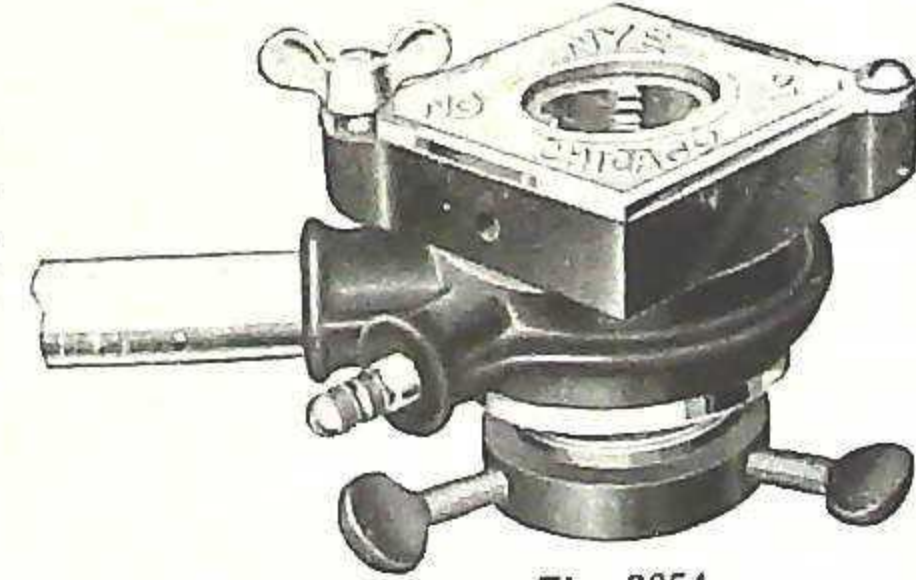


Fig. 2854

Price, Complete, with 4 Dies and Bushings 3/8 to 1 Inch, Inclusive	each	\$19.50
Price, Complete, with 6 Dies and Bushings 1/8 to 1 Inch, Inclusive	each	25.50
Price, Complete, with 5 Dies and Bushings, 1/2 to 1 1/2 Inch, Inclusive	each	34.00
Price, Complete, with 8 Dies and Bushings, 1/8 to 1 1/2 Inch, Inclusive	each	42.00
Price, Complete, with 4 Dies and Bushings, 1 to 2 Inch, Inclusive	each	32.50
Price, Complete, with 6 Dies and Bushings, 1/2 to 2 Inch, Inclusive	each	42.50

No. 00 Toledo Ratchet Pipe Threading Device

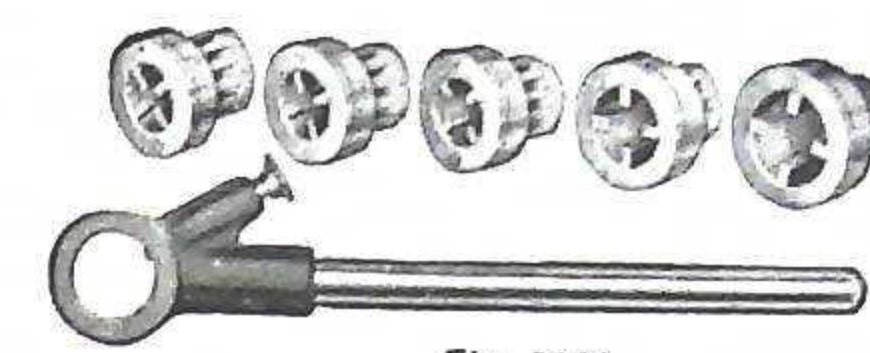


Fig. 2855

Threads pipe 1/8 to 3/4 inch.

This is a simple, handy pipe threader. Operates easily and produces true tapered threads. Dies changed instantly by pulling the pawl and dropping one die head out or another size in, ready for use. If the complete tool is not needed any combination can be made up.

No.	In Paste-board Carton Complete	Ratchet Only	Price, Each 1/4, 1/2, 3/4 inch Die Heads with Dies	Price, Each 1/2, 3/4 inch Die Heads with Dies	Dies per Set of 4 Segments
00	\$19.00	\$3.00	\$3.00	\$3.50	\$2.00

No. 0 Toledo Adjustable Pipe Threading Devices

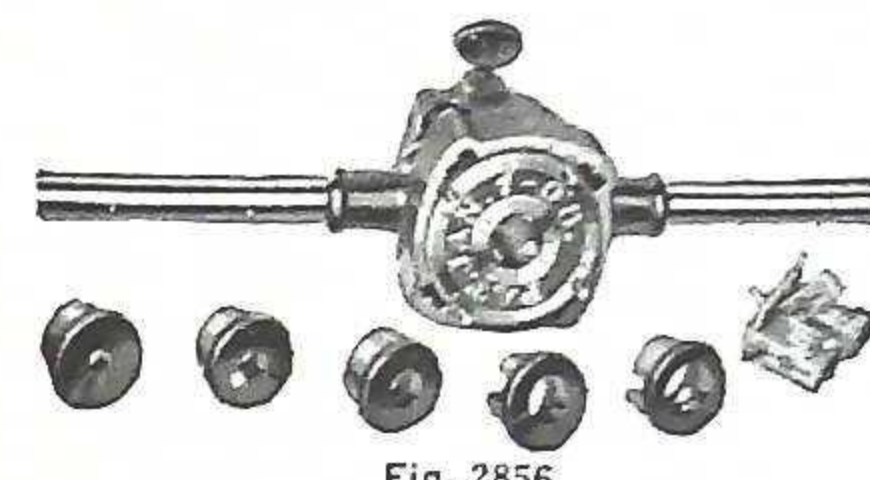


Fig. 2856

Threads 1/2 and 3/4-inch with one set of dies; 1/4 and 3/8-inch threads with another set, and 1/2-inch threads with another set. Uses the receding-die principle for threading 1/2 and 3/4-inch pipe, making it an easy operating tool.

Light and compact, being only 24 inches long from tip to tip of the handles.

No. of Sets of Dies to Stock	3
Price, No. 0, Complete	each \$16.00
" Dies per Set of Four Segments	2.50

No. 1 Toledo Adjustable Pipe Threading Devices

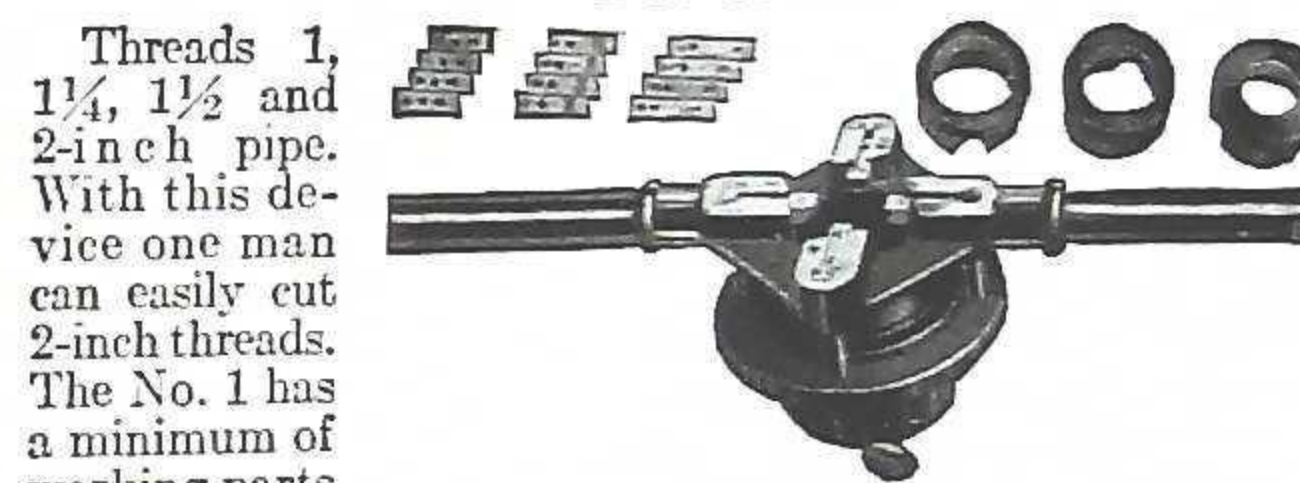


Fig. 2857

Threads 1, 1 1/4, 1 1/2 and 2-inch pipe. With this device one man can easily cut 2-inch threads. The No. 1 has a minimum of working parts and is exceedingly strong and durable. It is made both as a right-hand and a left-hand tool—neither will do both.

Right-hand is furnished unless otherwise specified.

No. of Sets of Dies to Stock	4
Price, No. 1, Complete	each \$24.00
" Dies per Set of Four Segments	2.50

No. 1 1/2R Toledo Adjustable Ratchet Pipe Threading Devices

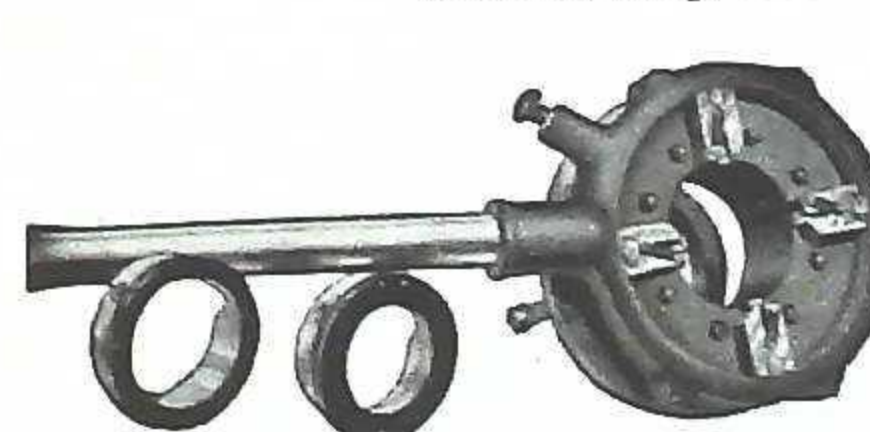


Fig. 2858

No. 1 1/2R is offered for those who do not thread pipe larger than 3 inches. Its capacity is limited to two sizes 2 1/2 and 3 inches—8 thread. Can be furnished for 2, 2 1/2 and 3-inch, 11 1/2-pitch threads for oil well tubing, when so ordered at same price.

No.	Threads Pipe Inches	No. of Sets of Dies to Stock	Price Complete Each	Price, Dies per Set of 4 Segments
1 1/2R	2 1/2, 3	*2	\$50.00	\$4.00

*For 8-thread tool; 11 1/2-thread tool has three sets.

No. 1A Toledo Adjustable Ratchet Pipe Threading Devices

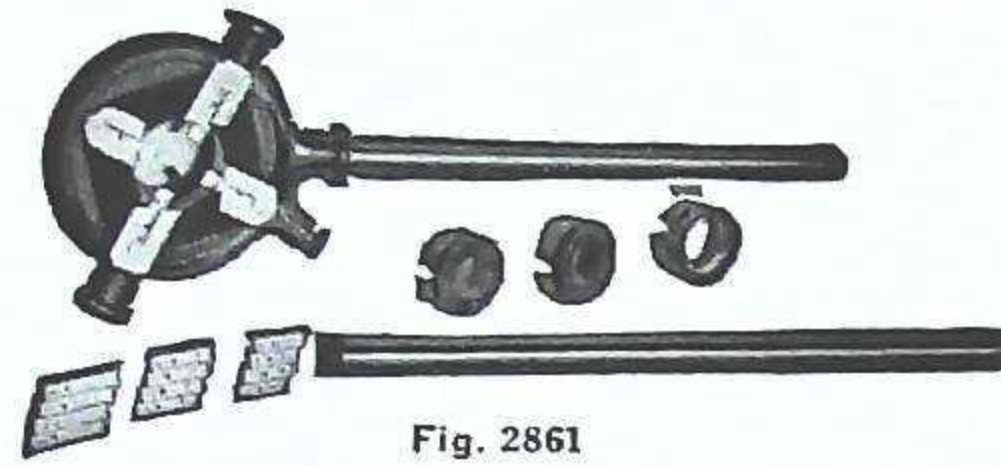


Fig. 2861

Threads 1, 1 1/4, 1 1/2, and 2-inch pipe; equipped with a ratchet. The No. 1A may be used with two handles as an ordinary die stock,

or with one handle inserted in the ratchet case. It is desirable for threading pipe down a trench, or against walls, between rafters, etc.

Right-hand is furnished unless otherwise specified.

No. of Sets of Dies to Stock.....	4
Price, No. 1A, Complete.....each	\$30.00
“ Dies, per Set of Four Segments.....	2.50

No. 2 Toledo Geared Adjustable Pipe Threading Devices

Threads 2 1/2 to 4-inch pipe. This tool is light, compact and easy to operate. It takes only a few minutes to cut a thread with it, and it can be put on a pipe in most any place or position.

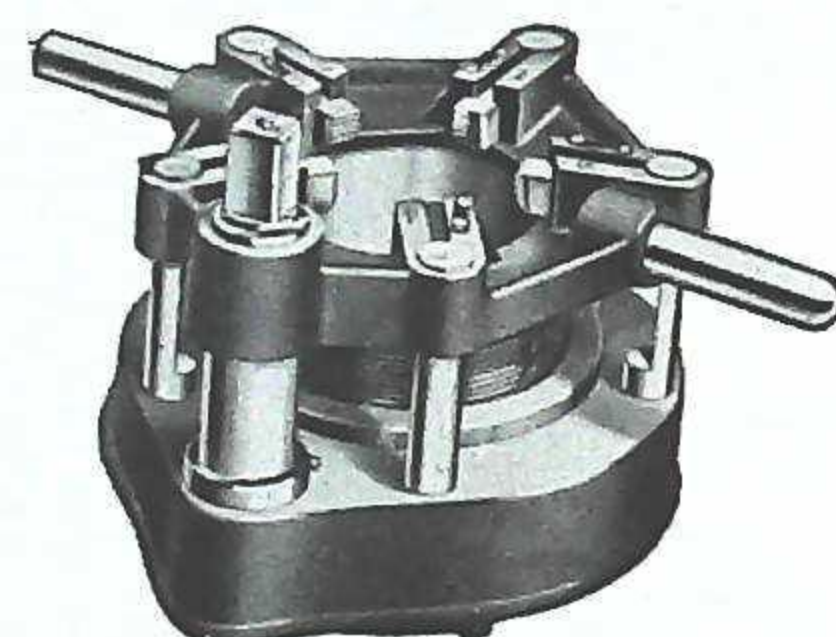


Fig. 2862

It is furnished complete with dies, ratchet and driving cross.

No. of Sets of Dies to Stock.....	4
Price, No. 2, Complete.....each	\$100.00
“ Dies, per Set of Five Segments.....	8.00

No. 2 1/2 Toledo Geared Adjustable Threading Devices

Capacity 4 1/2 to 6-inch pipe, inclusive. Furnished complete with ratchet handle and driving cross.

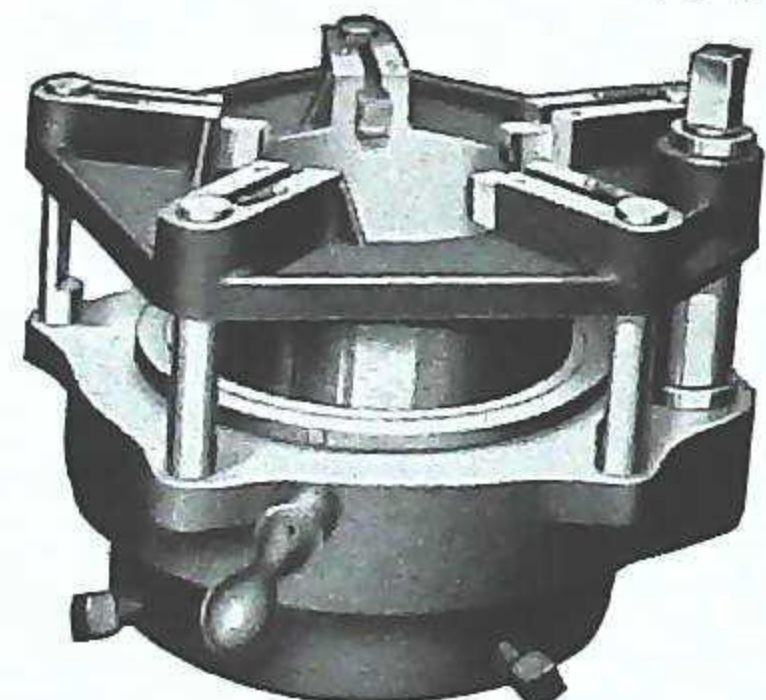


Fig. 2863

Uses separate set of dies for each size pipe and cuts perfect threads on either wrought iron or steel pipe.

Description	Price, Ea.
No. 2 1/2 Device, Complete....	\$200.00
One Complete Set Dies, 4 1/2 to 6 Inches....	36.00
One Set 4 1/2, 5 or 6-inch Dies....	12.00

No. 3 Toledo Geared Adjustable Pipe Threading Devices

Light, compact and easy in operation. Strictly portable. One man can easily and quickly cut an 8-inch thread with it. Complete with dies, ratchet and driving cross. Will thread pipe from 4 1/2 to 8-inch diameter; 5 sets of dies supplied. Extra dies of 5 segments can be supplied for \$12.00 each.

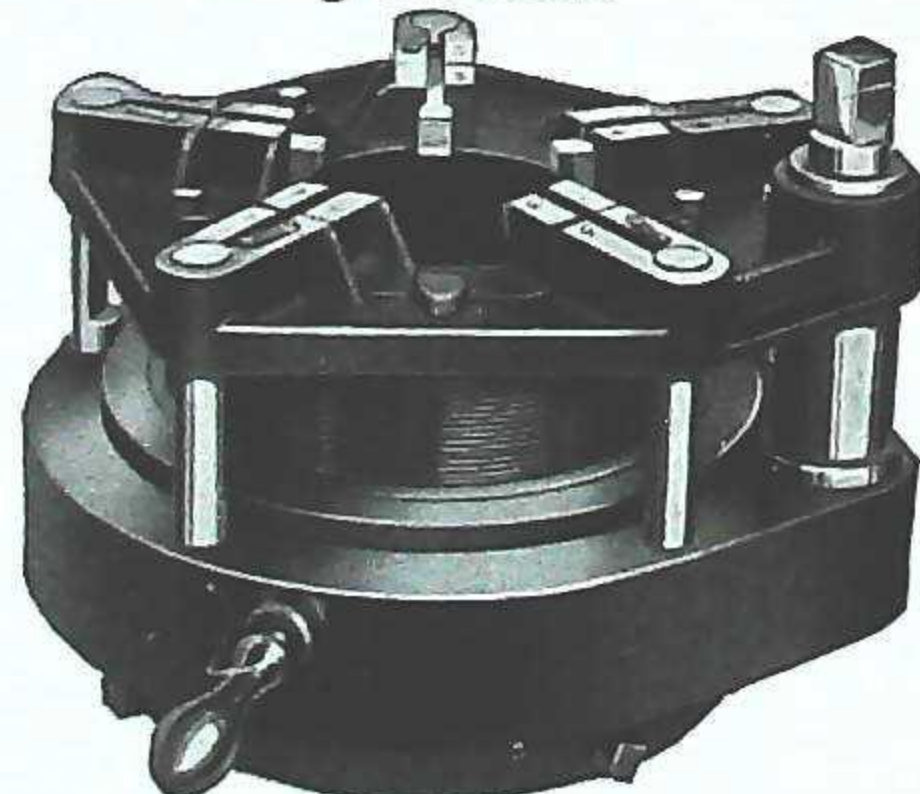


Fig. 2864

Price, No. 3, Complete.....each	\$300.00
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Toledo Three-way Pipe Threading Devices



Fig. 2865

A 3-way tool, light, small and easy to operate. It is made in two sizes, No. 30 and No. 31.

No. 30 threads 3/8, 1/2, and 3/4-inch and weighs 4 3/4 pounds.

No. 31 threads 1/2, 3/4, and 1 inch and weighs 7 pounds.

Each die head is on center thereby insuring a perfectly balanced tool. The dies are removable and can be reground when dull or replaced at a small expense.

Price, No. 30.....each	\$15.00
“ “ 31.....each	18.00

No. 10 Toledo Adjustable Pipe Threading Devices

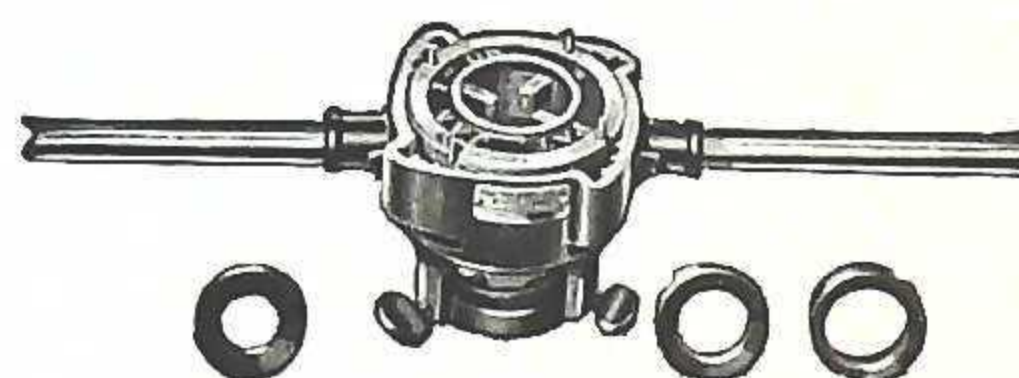


Fig. 2866

No. 10 threads the entire range of sizes from 1 to 2 inches with one set of dies.

Furnished complete with right-hand dies.

Left-hand dies can be used in this tool, and can be furnished on special order. It requires, however, a separate set of left-hand dies for each size pipe.

No.	Threads Pipe Inches	No. of Sets of Dies to Stock	Price Complete Each	Price, Dies per Set of 4 Segments
10	1 to 2	1	\$28.00	\$2.75

No. 10A Toledo Adjustable Ratchet Pipe Threading Devices

This tool threads the entire range of sizes from 1 to 2 inches with one set of dies and also has a ratchet attachment, making it desirable for use in restricted spaces.

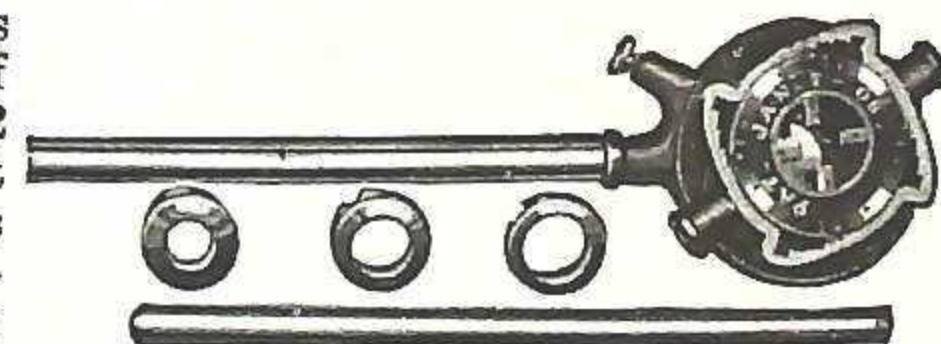


Fig. 2867

Left-hand dies can be used and can be furnished on special order. It requires, however, a separate set of left-hand dies for each size pipe.

No.	Threads Pipe Inches	No. of Sets of Dies to Stock	Price Complete Each	Price, Die per Set of 4 Segments
10A	1 to 2	1	\$34.00	\$2.75

No. 11 Toledo Ratchet Pipe Threading Device



Fig. 2868

Threads pipe 1/2, 3/4, 1 and 1 1/4 inches. It operates easily, has instant change of dies, and reaches the corner job where other tools would be useless. Produces perfectly tapered threads, on which fittings will make up absolutely tight.

No.	Price, Each		
	In Paste-board Carton Complete	Ratchet Handle Complete	Die Heads Complete with Dies
11	\$24.00	\$4.00	\$5.00

No. 25 Toledo Geared Adjustable Pipe Threading Devices

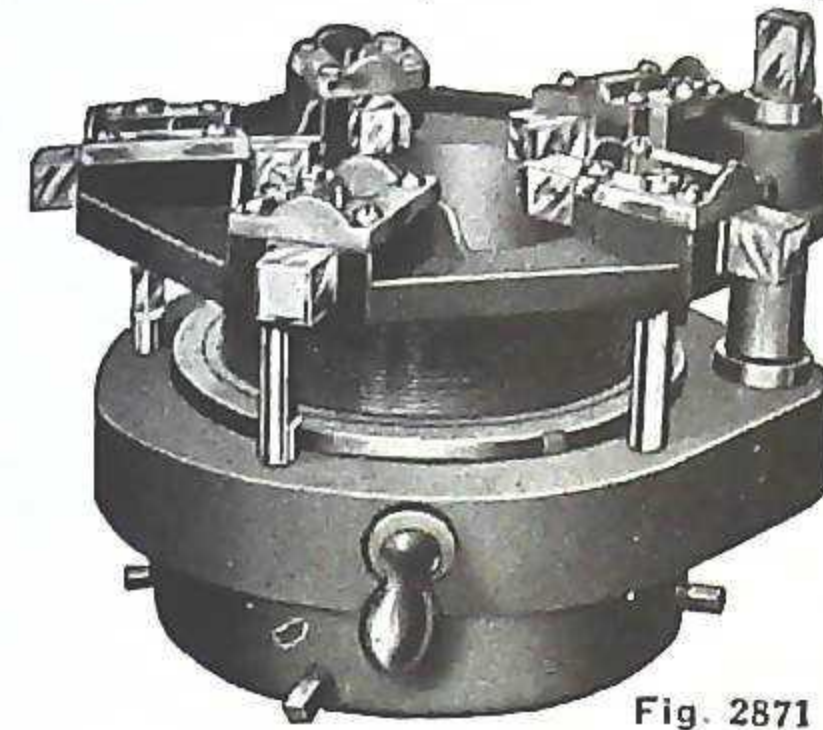


Fig. 2871

Threads 7 sizes of pipe, from 2 1/2 to 6 inches inclusive with 1 set of dies. Die segments are mounted on heavy steel holders, which are pushed backward or forward, thus accommodating the dies to the several sizes of pipe. Special long-barreled bushings are supplied to make possible the easy centering of tool on pipe. Extra set of dies, ratchet handle and driving cross are also furnished.

No.	Threads Pipe, In.	Price, Each	Ex. Dies. per Set
25	2 1/2 to 6	\$230.00	\$8.00

No. 4 Toledo Geared Adjustable Pipe Threading Devices

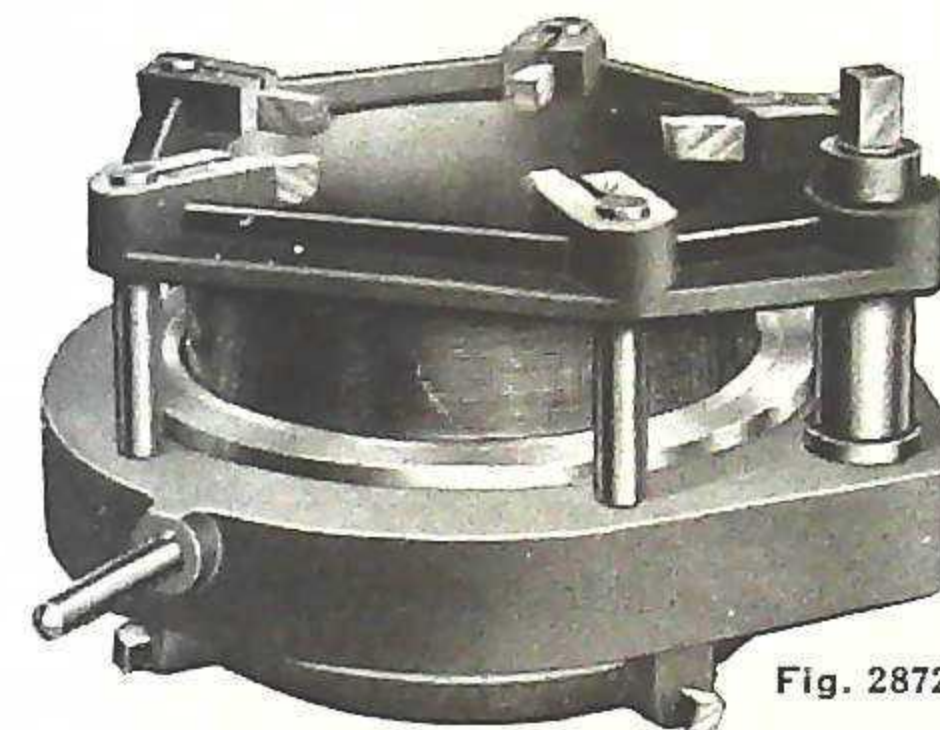


Fig. 2872

For use in all fields where it is desirable and necessary to cut threads on large size pipe. Can be taken to the pipe anywhere. Complete with dies, ratchet and driving cross. Will thread 9, 10 and 12-inch pipe. Three sets of dies to the stock.

Extra dies of 5 segments, \$20.00 each.	
Price, No. 4, Complete.....each	\$500.00

Toledo Junior Power Drives

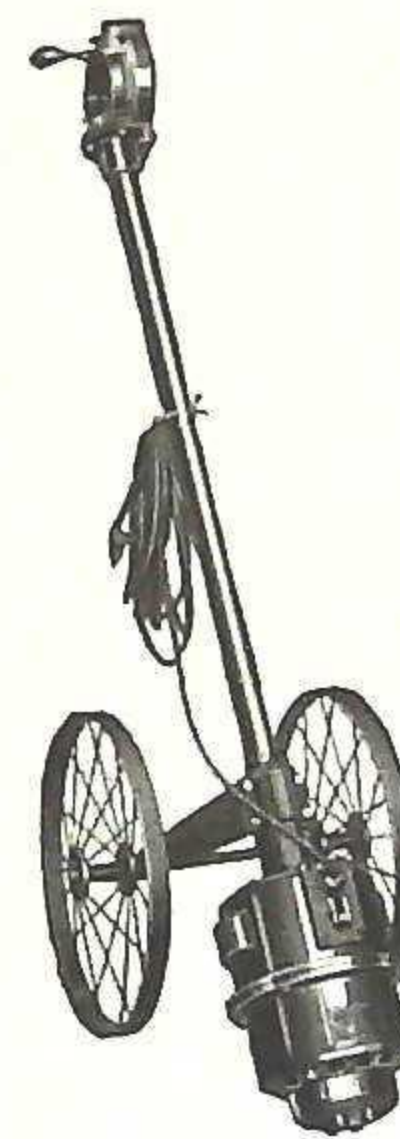


Fig. 2873

The Junior Drive is designed for operating Toledo threading and cutting tools from 4-inch down but will also operate the larger tools. The motor is started and stopped by a switch which is mounted on gear housing. It is not equipped with fuse plugs nor does it have the 2-speed transmission gearing. Is operated at 1 speed, driving head rotating at 21 r. p. m. The 1/2-horsepower, 110-volt motor can be furnished either for A.C. or D.C. current as ordered and can be plugged into the ordinary lamp socket. Equipped with 20 feet of flexible cable. Machine is approximately 6 feet long over all mounted on wheels 18 inches in diameter.

Shipping weight, 226 pounds.	
Price, with 1/2-horsepower, 110-volt Motor.... each	\$450.00

Toledo Power Drive

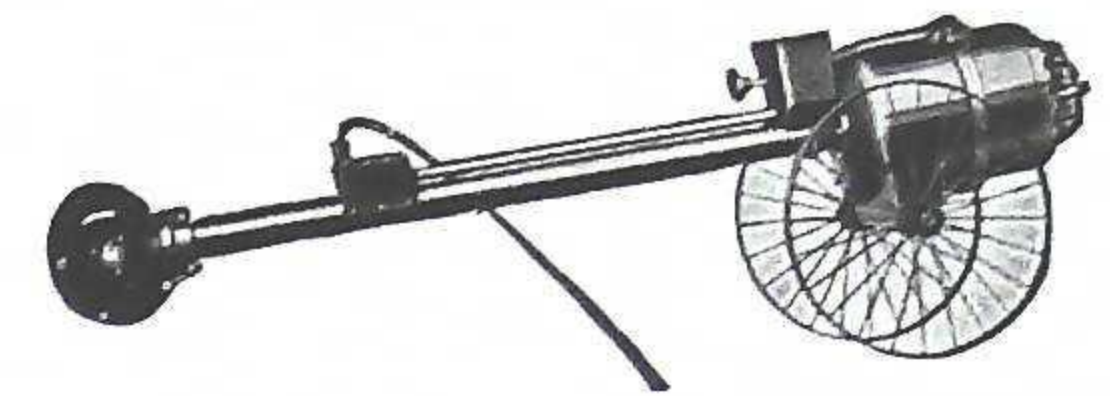


Fig. 2874

The Toledo Power Drive is a mechanism designed to operate Toledo hand pipe threading and cutting tools and other similar devices by electricity. It is approximately 6 feet long, over all; is mounted on wheels that are 18 inches in diameter; weight, from 230 to 260 pounds net, depending upon the type of motor used, the shipping weight being from 325 to 360 pounds. Equipment is portable and can be moved from place to place without any undue effort.



Motor on power drive is started and stopped by a switch mounted on the shaft housing, and the power is transmitted to the driving head through a two-speed transmission gearing controlled by a knob handle projecting through the fuse box. On slow speed the driving head rotates at 38 revolutions per minute and at high speed at 57 revolutions per minute.

This drive is primarily designed for operating the large sizes of Toledo tools, threading and cutting off pipe from 2 1/2 up to 12 inches. No change is necessary in the threading tool, the operating head of the power drive merely slipping on the pinion shank in place of the ratchet handle.

Threading 4-inch Pipe with a Toledo No. 2 Tool Operated by Power Drive

It is possible, however, to purchase a yoke casting and pair of short handles as the connecting means between the Toledo No. 1 and the Toledo Power Drive for threading 2-inch pipe and smaller sizes down to 1-inch.

The price varies, depending upon the type of motor required.

Price, with 50 or 60-cycle A. C. or with D. C. Motor..... each	\$600.00
Price, with 25, 30 or 40-cycle A. C. Motor.....	700.00
“ Special Attachment for No. 1 Tool.....	5.00

No. 100 Toledo P. D. Threading Devices

An attachment for use with the power drive. The equipment consists of a chuck that fits into the driving head of the power drive, and of a special threading apparatus that attaches to the chuck for threading pipe from 1 to 2-inch, inclusive.

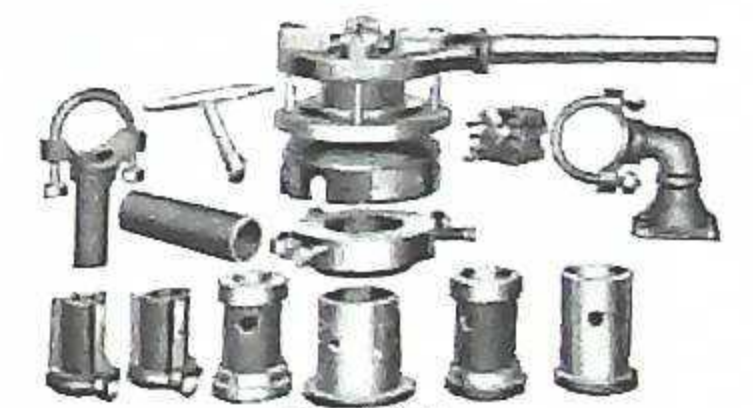


Fig. 2875

The chuck also makes possible the utilization of a Vesper Pipe Cutter for cutting off pipe from 1/2 to 2 inches, and the utilization of a No. 00 Toledo Threading Device, or any ordinary stock and die, for threading 1/2 and 3/4-inch pipe.

Price, No. 100.....each	\$60.00
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Nos. 1 and 2 Armstrong's Adjustable Pipe Stocks and Dies

No. 1



Fig. 2881

Price, 1/8 to 1/2-inch, Right Hand, with 4 Dies...ea. \$9.00
 " 1/8 to 1/2 " R. and L. Hand, with 8 Dies. " 14.00

Extra Parts

Price, Dies, Right or Left Hand.....each \$1.60
 " Bushings..... " .30
 " Stocks with Screws, Handle and Wrench.. " 3.25
 Unless otherwise specified, packed 1/8 to 1/2 inch, R. H.

No. 2

Price, 1/4 to 1-inch, Right Hand, with 5 Dies....ea. \$12.00
 " 1/4 to 1 " R. and L. Hand, with 10 Dies. " 20.00
 " 1/8 to 1 " Right Hand, with 6 Dies..... " 14.00
 " 1/8 to 1 " R. and L. Hand, with 12 Dies. " 22.00

Extra Parts

Price, Dies, Right or Left Hand.....each \$2.00
 " Bushings..... " .40
 " Stocks with Screws, Handle and Wrench.. " 4.00
 Unless otherwise specified, packed 1/4 to 1 inch, R. H.

No. 2 1/2 Armstrong's Adjustable Pipe Stocks and Dies

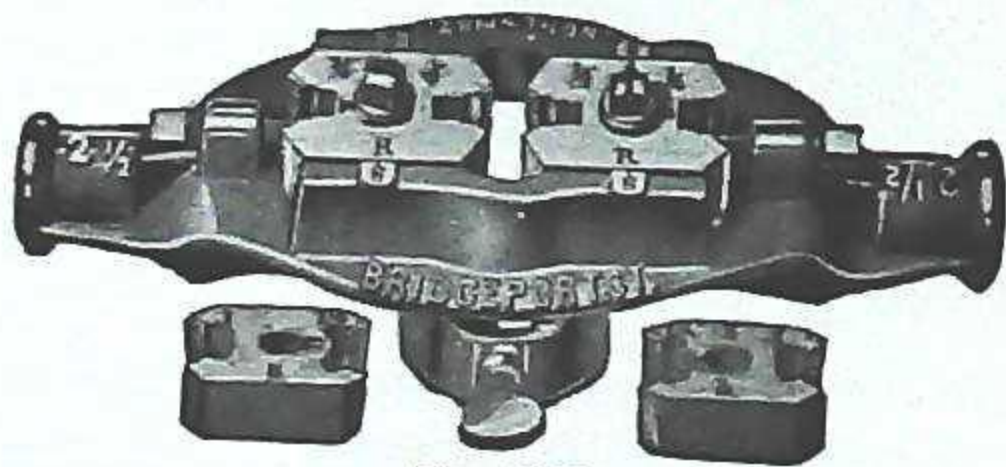


Fig. 2882

Price, 1/2 to 1 1/4-inch, Right Hand, with *2 Dies each \$14.00
 " 1/2 to 1 1/4 " R. and L. Hand, with 4 " " 21.00
 " 1/4 to 1 1/4 " Right Hand, with 4 " " 20.00
 " 1/4 to 1 1/4 " R. and L. Hand, with 8 " " 27.00

*Double end, 1/2x3/4 and 1x1 1/4 inch.
 †Two double end, 1/2x3/4 and 1x1 1/4, two single, 1/4 and 3/8-inch.

Extra Parts

Price, Double End Dies, Right or Left Hand....each \$3.50
 " Single End..... " 2.50
 " Bushings..... " .60
 " Stocks, with Screws, Handle and Wrench.. " 5.25
 Unless otherwise specified, packed 1/2 to 1 1/4 inches, R. H.

No. 3 Armstrong's Adjustable Pipe Stocks and Dies



Fig. 2883

Price, 1 1/4 to 2-inch Right Hand, with 3 Dies....ea. \$18.00
 " 1 1/4 to 2 " R. and L. Hand, with 6 Dies.. " 30.00
 " 1 to 2 " Right Hand, with 4 Dies " 21.00
 " 1 to 2 " R. and L. Hand, with 8 Dies.. " 37.00
 " 3/4 to 2 " Right Hand, with 5 Dies.... " 24.00
 " 3/4 to 2 " R. and L. Hand, with 10 Dies. " 44.00
 " 1/2 to 2 " Right Hand, with 6 Dies.... " 27.00
 " 1/2 to 2 " R. and L. Hand, with 12 Dies. " 51.00

Extra Parts

Price, Dies, Right or Left Hand.....each \$4.50
 " Bushings..... " .75
 " Stocks, with Screws, Handle and Wrench.. " 7.00
 Unless otherwise specified, packed 1 to 2 inches, R. H.

No. 3 Beaver Junior Ratchet Die Stocks



Fig. 2884

Consists of a ratchet handle holding separate heads for each size die. Ratchet mechanism entirely encased in head. Right or left hand as specified.

Threads Pipe.....inches	1/8 to 1	\$24.00
Price, No. 3, 1/8 to 1, Complete.....each		
" " 3, 1/4 " 1 " " " " "		21.00
" " 3, 3/8 " 1 " " " " "		18.00
" Extra Dies (4 Chasers) Any Size Range. " " "		2.50
" Die Heads, 1/8, 1/4 or 3/8-inch. " " "		3.00
" " " 1/2 or 3/4-inch. " " "		3.50
" " " 1-inch. " " "		4.00
" Ratchet Handle Only. " " "		4.00

No. 6 Beaverette Easy Working Die Stocks

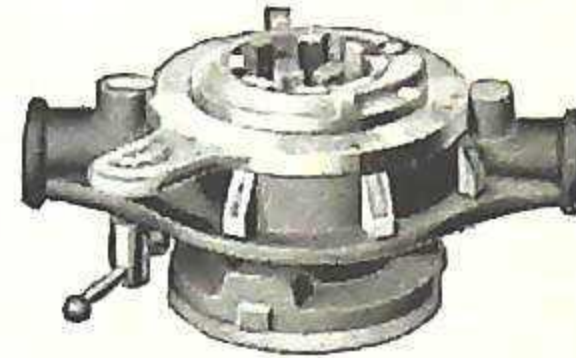


Fig. 2335

Threads all four sizes, 1/4 to 3/4-inch, without changing dies or bushings. A thread may be cut while changing dies in other tools. The two sets of dies covering the different thread pitches are held in one plate, instantly adjusted to any size by the single handle.

A universal centering device does away with loose bushings.

The No. 6 is a compact tool, complete without loose parts. Right or left hand, as specified.

Price, No. 6, Complete.....each \$15.00
 " Extra Dies, R. or L., 1/8 or 1/4 x 3/8 or 1/2 x 3/4 Inches.....per set 3.00

No. 25 Beaver Easy Working Die Stocks

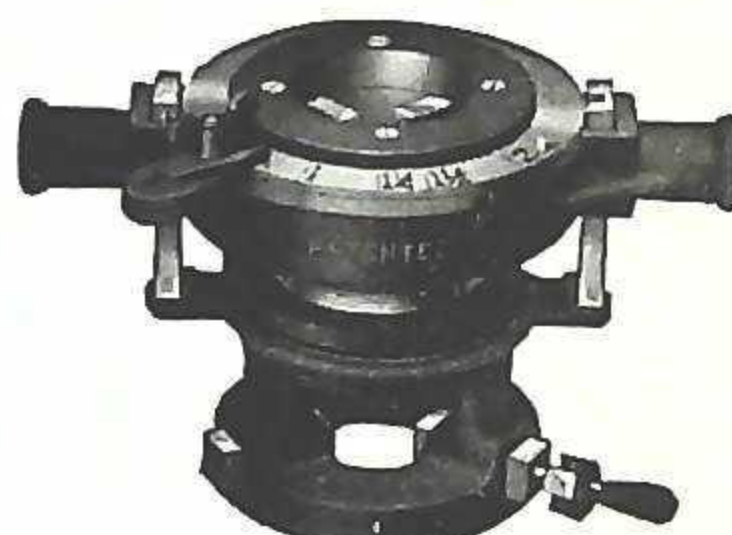


Fig. 2886

Threads all sizes 1, 1 1/4, 1 1/2 and 2-inch, or variations from standard, without changing dies. A universal chuck centers all sizes. No loose bushings.

Close nipples may be cut with this tool. Instantly adjusted—simply shift the handle to size and the tool is ready. It uses narrow receding dies that draw back with each turn, removing less and less metal, thus cutting a standard taper thread and easing the work as the thread is cut.

Price, No. 25, Complete.....each \$30.00
 " Extra Dies 1, 1 1/4, 1 1/2 and 2-inch, R. H. .per set 3.50

No. 26 Beaver Easy Working Ratchet Die Stocks

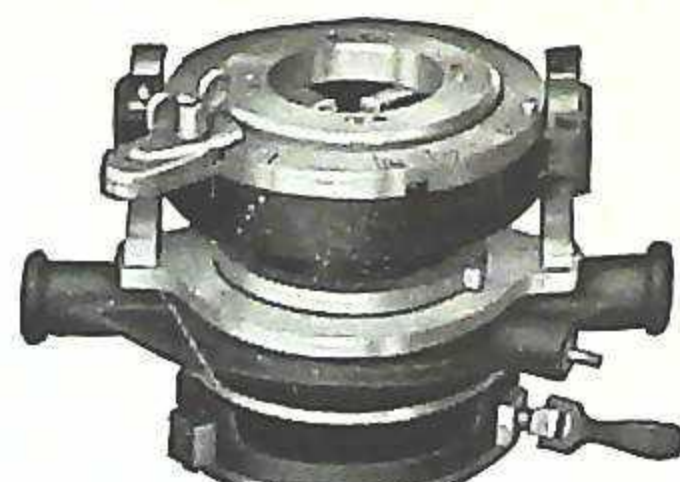


Fig. 2887

Threads all sizes, 1, 1 1/4, 1 1/2 and 2-inch, without changing dies. Provided with ratchet attachment for cutting in confined places, or can be used as a regular stock. Contains a universal chuck which means pipe is always straight, without grip screws or bushings to bother.

Uses detachable leader screw. The ideal tool for threading in confined places or at the bench.

Price, No. 26, Complete.....each \$35.00
 " Extra Dies, 1, 1 1/4, 1 1/2 and 2-inch, R. H. .per set 3.50

No. 41 Beaver Die Stocks

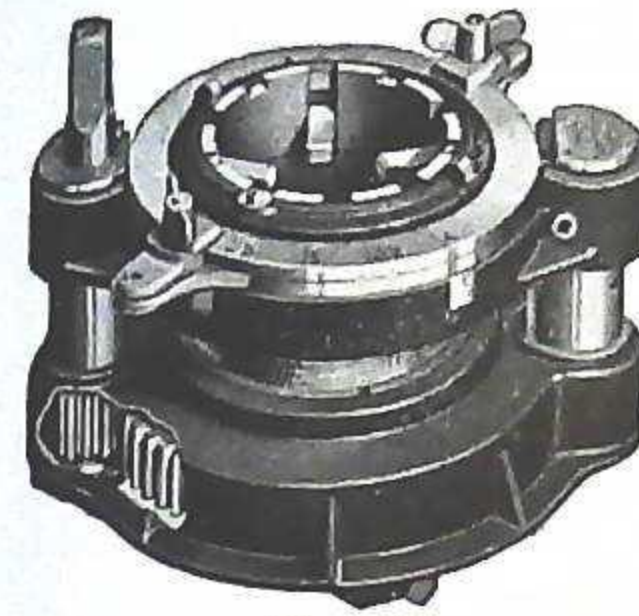


Fig. 2891

Threads sizes, 2 1/2, 3, 3 1/2 and 4-inch, or variations from standard without changing dies.

Gears are cut steel and covered which protects tool and operator. No dies to look for—they are all in the tool. Threads are easily cut on pipe in a ditch as well as at the bench. Bearings are bronze bushed. Driving pinion rigidly supported on both ends.

Has bushings and grip screws.

Threads Pipe.....inches 2 1/2 to 4
 Price, No. 41, Complete.....each \$110.00
 " Extra Dies, R.H.....per set 9.00

No. 61 Beaver Die Stocks

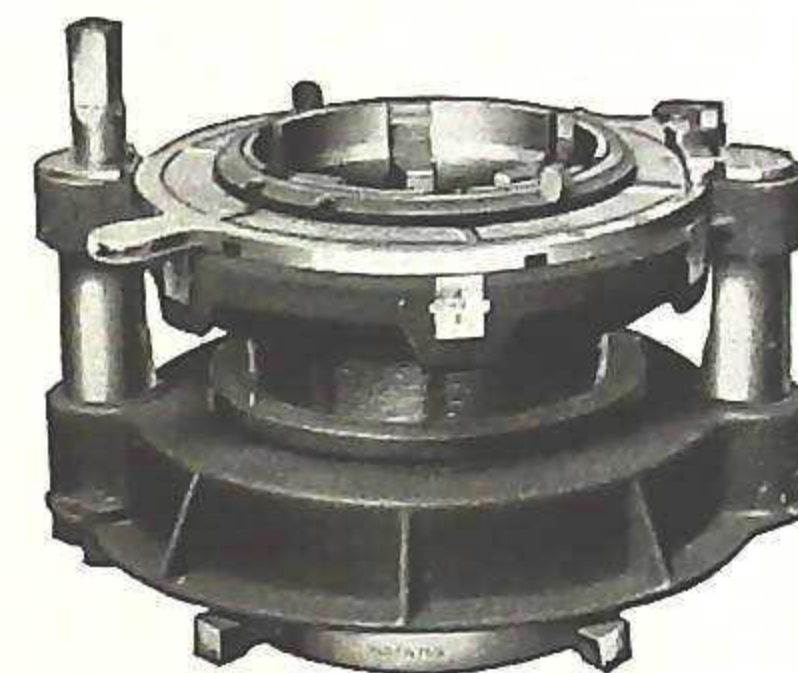


Fig. 2892

Two sets of dies are used to cover the unusually large range. One set cuts 2 1/2, 3 and 3 1/2-inch, and the other cuts 4, 4 1/2, 5 and 6-inch.

Can be used in a ditch or at the bench.

Bearings are bronze bushed. Driving pinion rigidly supported on both ends. Has bushings and grip screws.

Threads Pipe.....inches 2 1/2 to 6
 Price, No. 61, Complete.....each \$220.00
 " Extra Dies, R. H. (2 1/2 to 3 1/2), (4 to 6).per set 14.00

No. 80 Beaver Die Stocks

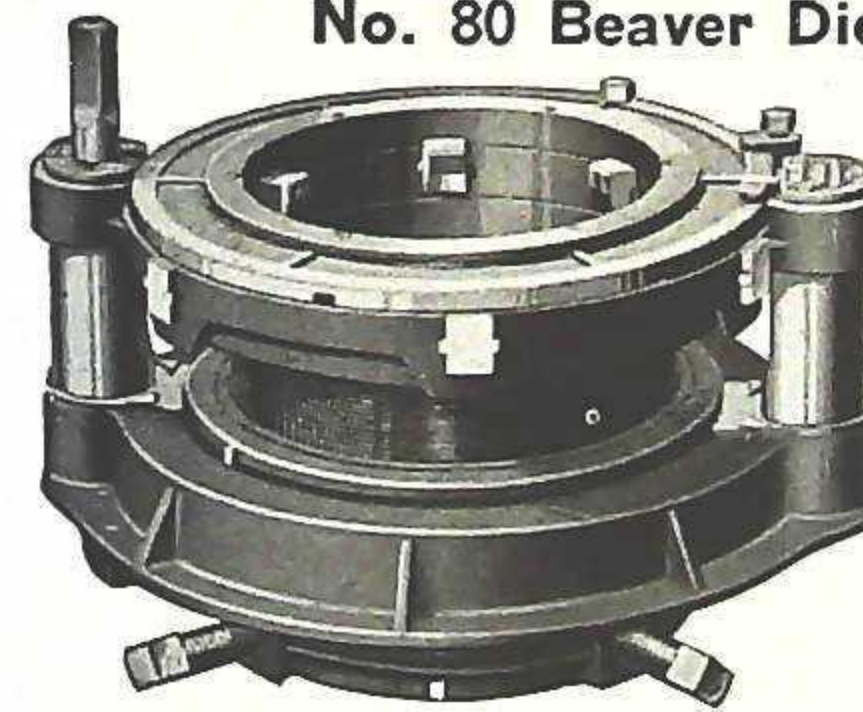


Fig. 2893

Uses two sets of dies; one set, 4 1/2 to 6, the other, 7 to 8 inches.

The dies are made with wings which hold them rigidly without interfering with the adjustment.

The main body of the tool is steel, all parts made interchangeable. All bearings are bronze bushed.

Threads Pipe.....inches 4 1/2 to 8
 Price, No. 80, Complete.....each \$300.00
 " Extra Dies, R.H. (4 1/2 to 6), (7 to 8)..per set 20.00

No. 90 Beaver Die Stocks

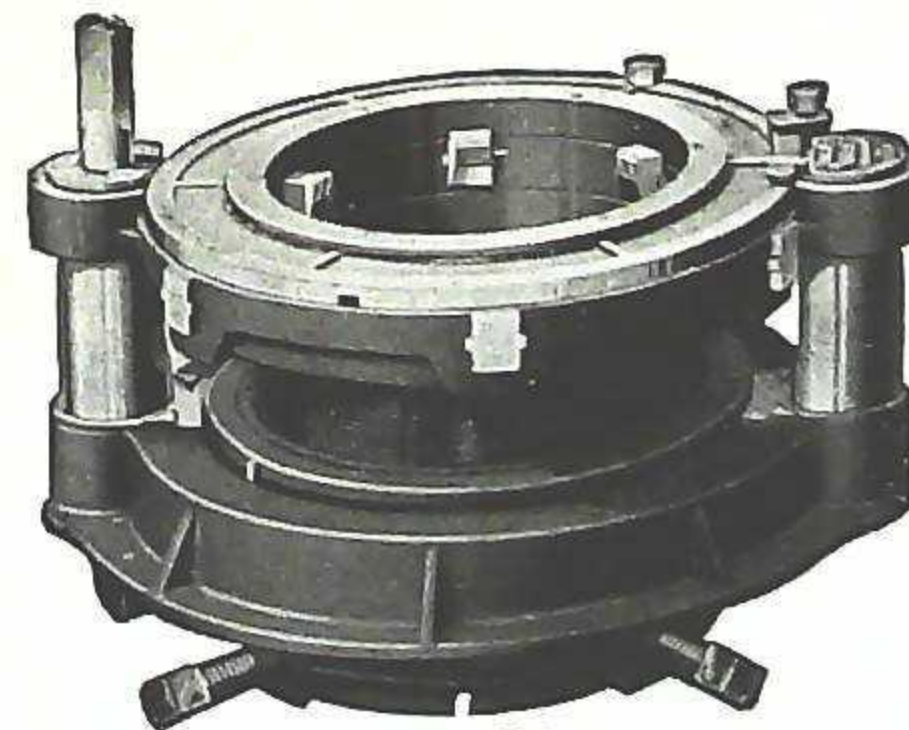


Fig. 2894

Dies are made with wings which hold them rigidly without interfering with the adjustment.

The main body of the tool is steel, and all parts are made interchangeable.

Uses two sets of dies, one set 9 to 10 inches, the other, 11 to 12 inches.

Threads Pipe.....inches 9 to 12
 Price, No. 90, Complete.....each \$500.00
 " Extra Dies, R. H. (9 to 10), (11 to 12) per set 30.00

Oster Receding Die Stocks

Plain and Ratchet Types



Plain Type Fig. 2895



Ratchet Type Fig. 2896

A new type of easy threading tool. Its dies are half usual width so that there will be only half the friction to overcome. Lead on dies is double taper, first few teeth do roughing and others finishing. These dies automatically expand as thread is being cut so that work becomes easier as thread progresses. Dies expanding produce proper taper for pipe threads. Lead screw used on both plain and ratchet types pulls dies onto thread without any effort of operator. This screw is protected by a chip shield which adds considerably to its life. When thread is finished leader screw is unwound. Back ends of dies are beveled or cut at an angle. Since this beveled end of die bears against a fixed post, by moving die sideways it is drawn in or out from center of tool. In this way tool is quickly adjusted to cut over or undersized threads. Rotate die head one way or other and dies automatically expand or contract sufficiently to permit a deep or shallow thread to be cut. One set of dies is furnished for each size of pipe. Nos. 42-C and 42-R-C have universal chuck; Nos. 42-B and 42-R-B have bushings and set screws.

No.	Type	Cap. In.	Shp. Wt. Lbs.	Price Each	Extra Dies per Set of Four	Extra Bushings Each
42-C	Plain	1 to 2	25	\$30.00	\$2.00	..50
42-B	"	1 " 2	25	25.00	2.00	\$.50
42-R-C	Ratchet	1 " 2	36	35.00	2.00	..
42-R-B	"	1 " 2	36	30.00	2.00	.50

Oster Bull Pup Die Stocks

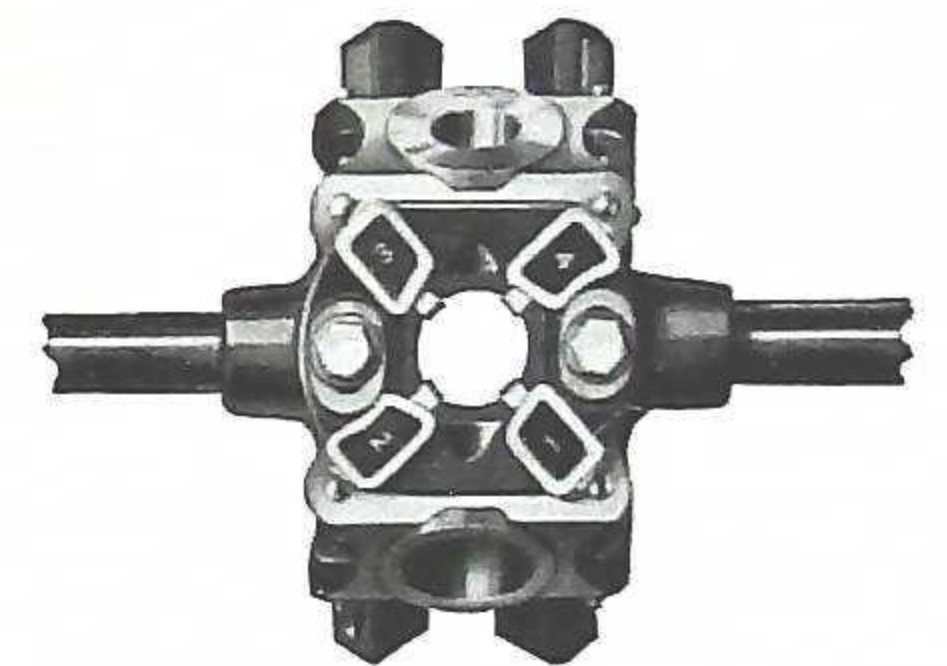


Fig. 2897

This Bull Pup threads all sizes in its range without change of dies or guides, or making any adjustments.

It will cut over, under or standard threads, close, shoulder or regular nipples and both crooked or long running threads. Dies for three sizes of pipe always ready for use.

Of light weight and perfect balance.

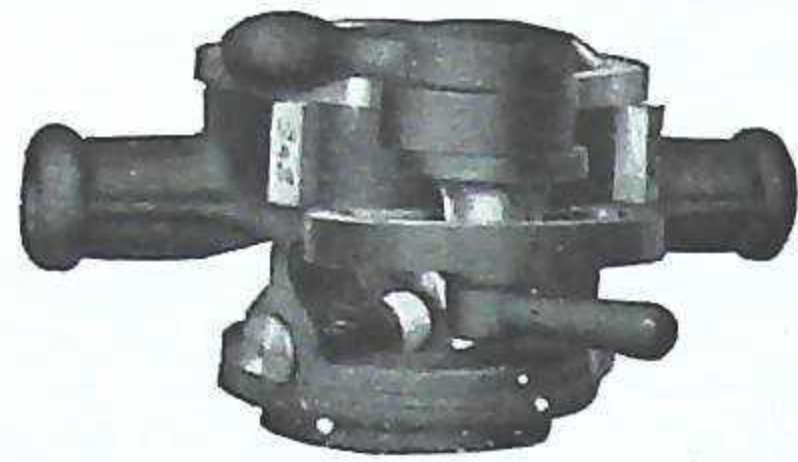
The smaller size, known as No. 11, threads 3/8, 1/2 and 3/4-inch pipe. The larger size, No. 11A, threads 1/2, 3/4 and 1-inch pipe, depending on which side is used.

Net weight of complete tool, 10 pounds.

Shipping weight parcel post, 12 pounds.

Price, Complete with Dies, Guides and Handles...each \$11.00
 " Extra Dies Right or Left Hand, 1/4, 3/8, 1/2, 3/4 or 1-inch.....each \$2.00
 Price, Extra Guides 1/4, 3/8, 1/2, 3/4 or 1-inch..... " .35

Oster Bulldog Die Stocks



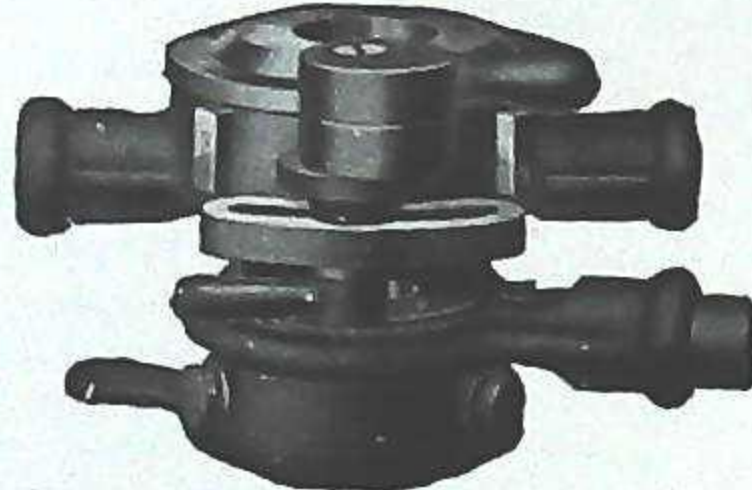
Regular Fig. 2901

This line of stocks has a positive setting arrangement without the use of any thumb-screws or friction devices of any kind. The dies are controlled by the lever handle on top.

By moving this handle to the right as far as it will go, the dies are set and held in place while cutting. One movement of the top lever handle will open or close the dies, no resetting or backing off threads. The tool is equipped with adjustable guides which do away with loose bushings.

Guides are held in any position without locking.

Prices include stock or die holder, complete set of right hand dies and set of tubular handles.



With Ratchet Fig. 2902

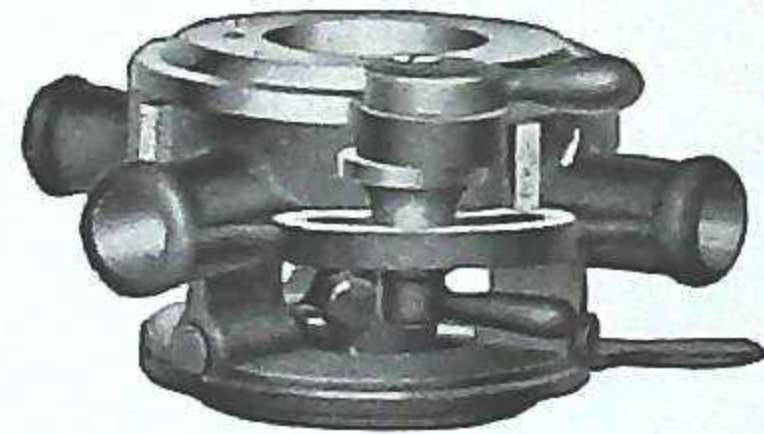
Regular Die Stocks

No.	Threads Pipe, Inches	Complete Price Each	Extra Dies Price per Set
101	1/8, 1/4 and 3/8, 1/2 and 3/4	\$13.00	\$2.50
102	1/4 and 3/8, 1/2 and 3/4, 1 and 1 1/4	17.00	3.00
103	1 and 1 1/4, 1 1/2 and 2	22.00	3.50
104	1 1/2 and 3/4, 1 and 1 1/4, 1 1/2 and 2	25.00	3.50
104 1/2	1/2 and 3/4, 1 and 1 1/4, 1 1/2 and 2	28.00	3.50

Die Stocks with Ratchet

102R	1/4 and 3/8, 1/2 and 3/4, 1 and 1 1/4	\$20.00	\$3.00
103R	1 and 1 1/4, 1 1/2 and 2	27.00	3.50
104R	1 1/2 and 3/4, 1 and 1 1/4, 1 1/2 and 2	30.00	3.50
104 1/2 R	1/2 and 3/4, 1 and 1 1/4, 1 1/2 and 2	33.00	3.50

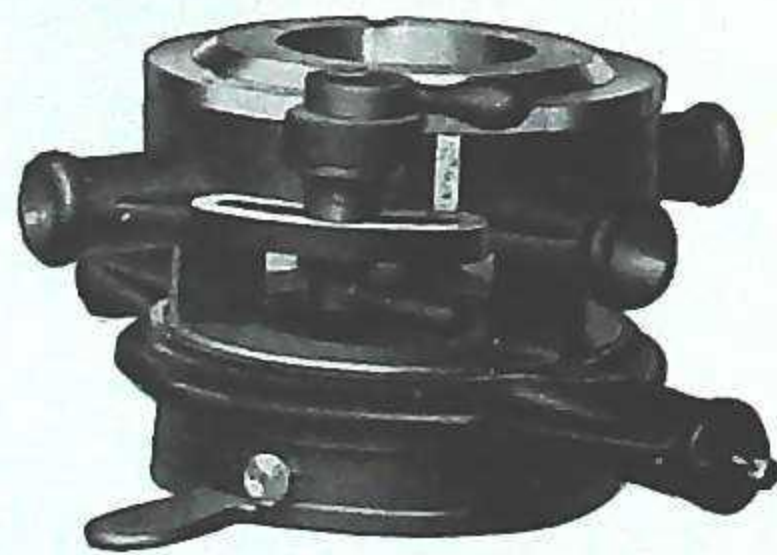
Oster Bull Dog Die Stocks



Regular Fig. 2903

The dies and guides are controlled by small lever handles. The guides will stay where set without locking.

The ratchet gear on Nos. 105R to 108 1/2 R is large and strong, and completely enclosed to exclude chips and dirt.



With Ratchet Fig. 2904

Regular Die Stocks

No.	Threads Pipe, Inches	Complete Price, Ea.	Extra Dies Price, per Set
105	1 1/2 to 2, 2 1/2 to 3	\$40.00	\$5.00
105 1/2	1 " 1 1/4, 1 1/2 " 2, 2 1/2 and 3	43.00	5.00
107	2 1/2 " 3, 3 1/2 " 4	55.00	6.00
107 1/2	1 1/2 " 2, 2 1/2 " 3, 3 1/4 and 4	58.50	6.00

Die Stocks with Ratchet

105 R	1 1/2 to 2, 2 1/2 to 3	\$50.00	\$5.00
105 1/2 R	1 " 1 1/4, 1 1/2 " 2, 2 1/2 and 3	53.00	5.00
107 R	2 1/2 " 3, 3 1/2 " 4	60.00	6.00
107 1/2 R	1 1/2 " 2, 2 1/2 " 3, 3 1/4 and 4	63.50	6.00
108 R	2 1/2 " 3, 3 1/2 " 4, 4 1/2 " 5	75.00	10.00
108 1/2 R	1 1/2 " 2, 2 1/2 " 3, 3 1/4, 4, 4 1/2 and 5	80.00	10.00

Oster Geared Die Stocks

Light Hand Machines with Ratchet



Fig. 2905

Geared and operated with a ratchet handle when threading large pipe, and with a crank handle for the smaller sizes. Complete with pipe vise, lever operating die head and tripod stand. Dies are adjustable for over or undersize. Same sizes of pipe can be repeated without resetting. Dies can be changed or set to sizes as quickly as in a hand stock. The guides on this machine will automatically center the pipe in the dies. The thread is started by means of a lever handle. No threaded leader screw is used and therefore, the machine can be equipped with special dies. The machine can be supplied without the tripod stand, as a bench machine.

The No. 16 cannot be supplied with left hand dies. The No. 15 and No. 17 can be supplied with left hand dies. The shortest piece that can be threaded without a nipple holder is 6 inches on No. 15 and 9 1/2 inches on No. 16 and No. 17.

No. 15 supplied with crank handle. Nos. 16 and 17 with crank and ratchet handles.

No.	Threads Pipe, inches	15	16	17
No. of Sets of Dies to cover Range.		1/4 to 2	2 1/2 to 4	2 1/2 to 6
Price, with Bench Bracket.		\$115.00	\$210.00	\$330.00
" Complete with Tripod.		125.00	225.00	350.00
" Extra Dies, per set of 4		6.00	8.00	10.00

No. 302A Oster Belt Driven Pipe Machines

From 1/4 to 2-inch Pipe

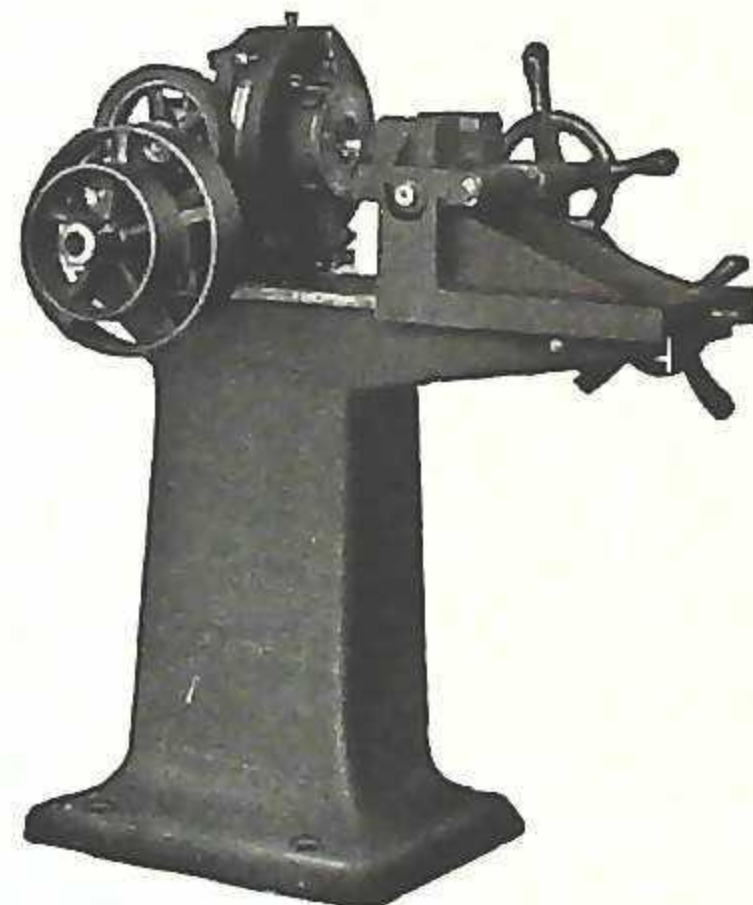


Fig. 2906

Furnished complete with countershaft, geared oil pump, automatic cut-off apparatus and die release, and four sets of right hand pipe dies: 1/4 and 3/8, 1/2 and 3/4, 1 and 1 1/4, 1 1/2 and 2.

Height of machine, 45 inches; length, 36 inches; width, 28 1/2 inches; height to center of dies, 38 1/2 inches; floor space of base, 22x19 inches. Cone pulleys have two steps, 8 and 12 inches, for 2 1/2-inch belt. Countershaft has tight and loose pulleys, 12 inches in diameter for 3-inch belt. Speed for countershaft, 140 revolutions per minute. Power for driving, 3/4 horse power engine or motor. Net weight, 800 pounds.

Can also furnish dies for threading seven sizes of bolts 1/2 to 1 1/4 inches.

Price, No. 302A, Complete each \$425.00
 " Extra Dies, Right or Left, per set of 4 6.00
 " Cutting-off Blades, each 1.00
 " Bolt Dies, per each size of bolt 6.00

No. 304A Oster Belt Driven Pipe Machines From 1 to 4-inch Pipe



Fig. 2911

Furnished complete with countershaft, geared oil pump, automatic cut-off apparatus, automatic die release, pipe rest stand and four sets right hand pipe dies: 1 and 1 1/4, 1 1/2 and 2, 2 1/2 and 3, 3 1/2 and 4.

Height of machine, 46 5/8 inches; length, 41 3/4 inches; width, 37 inches; height to center of dies, 38 1/2 inches; floor space of base, 24x20 inches. Cone pulleys have three steps, 8, 12 and 16 inches, for 3-inch belt. Countershaft has tight and loose pulleys, 14 inches in diameter for 3 1/2-inch belt. Speed of countershaft, 225 revolutions per minute. Power for driving, 1 1/2 horse power engine or motor. Net weight, 1464 pounds.

Can also furnish dies for threading ten sizes of bolts 3/4 to 1 5/8 inches.

Price, No. 304A, Complete	each	\$650.00
" Extra Dies, Right or Left, per set of 4		8.00
" Cutting-off Blades, each		1.25
" Bolt Dies, per each size of bolt		12.00
" Extra Vise Jaws for 1-inch Bolts and Under		15.00

No. 304B Oster Motor Driven Pipe Machines

From 1 to 4-inch Pipe

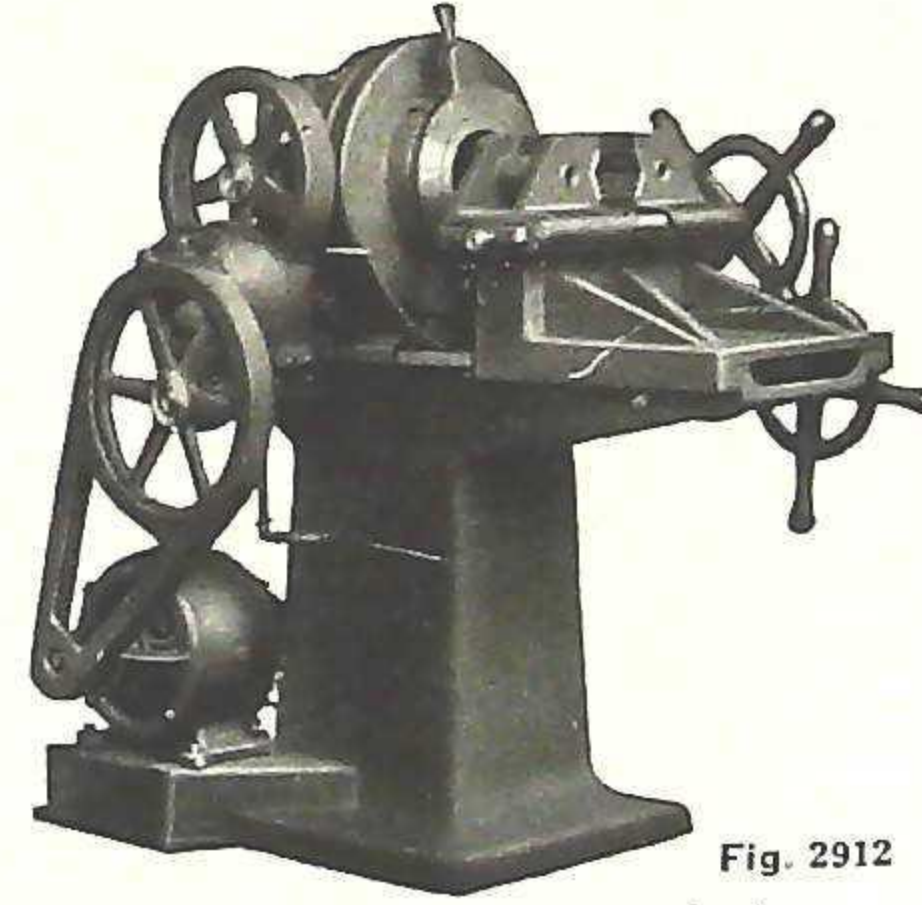


Fig. 2912

Special features of this machine are the lever operating die head and open type pipe vise, which make the machine a rapid producer.

Furnished complete with motor, geared oil pump, automatic cut-off apparatus, automatic die release, adjustable pipe rest stand, and four sets of right hand pipe dies: 1 and 1 1/4, 1 1/2 and 2, 2 1/2 and 3, 3 1/2 and 4. Machine is not supplied without motor.

Height of machine, 46 5/8 inches; length, 41 3/4 inches; width, 31 inches; height to center of dies, 38 1/2 inches; floor space of base, 24x32 inches. Motor speed, 1800 revolutions per minute; 1 1/2 horse power. Net weight, 1290 pounds.

Can also furnish dies for threading ten sizes of bolts 3/4 to 1 5/8 inches.

Price, No. 304B, Complete	each	\$950.00
" Extra Dies, Right or Left, per set of 4		8.00
" Cutting-off Blades, each		1.25
" Bolt Dies, R. or L., per each size of bolt		8.00
" Extra Vise Jaws for 1-inch Bolt or Under		15.00

Curtis Pipe Cutting and Threading Machines

With Opening and Adjustable Dies



Fig. 2913

These machines require but little power to operate, take up little floor space and are light in weight. Pipe bends may be threaded as easily as straight pipe. Machines are equipped with automatic oiling device and die release. Dies are interchangeable.

Curtis Hand Machines

Dies are adjustable to allow for variations of fittings. Special dies for any pitch or taper of thread, supplied if desired. Regular equipment consists of adjustable pipe rest, ratchet wrench, dies, cut-off tools and wrenches. Nos. 30, 42 and 58 are designed to stand on bench. Floor stand and high adjustable pipe rest, \$100.00 list price.

Combined Hand and Belt Driven Machines

Same as Curtis Hand Machine with countershaft and spur gears added. Equipped with standard countershaft, pipe rest, dies, cut-off tools and wrenches. For machines 6-inch and less, iron cabinet base and high adjustable pipe rest \$100.00 list extra. All machines above 6 inches include floor base.

Direct Connected Electric or Hand Machines

Similar to hand machine with die head rotated by electric motor. Base is provided with oil drip pan and reservoir into which the oil is strained, then pumped through system. Machines up to 6 inches designed to stand on bench. Floor base and adjustable pipe rest \$100.00 list extra. Machines larger than 6 inches include floor base. State motor requirements, whether A. C. or D. C. phase and cycle. All furnished with commercial motor, adjustable pipe rest, ratchet wrench for hand operation, dies, cut-off tools and necessary wrenches.

Hand Machines

No.	Range Inches	Bench or Floor Space Inches	Ht. Die In.	Speed R.P.M.	No. Dies per Set	Net Wt. Lbs.	Price Each
30	1/4-2 R.H.	14x14	17	4	3	180	\$170.00
37	1/2-3 R.H.	13x15	19	4	4	235	275.00
42	1-4 R.H.	17x18	22	4	4	350	370.00
58	1-6 R.H.	23x21	26	4	4	550	635.00
65	1 to 8 R.H.	27x24	30	4	4	1200	1200.00
69	2 1/2 to 12 R.H.	38x32	45	4	6	2400	2170.00
69-B	8 " 16 R.H.	45x32	52	4	* 2	3400	3000.00

Belt Driven Machines

70	1/4 to 2 R.H.	22x16	20	4	3	302	\$335.00
77	1/2 " 3 R.H.	17x27	23	4	4	428	440.00
84	1 " 4 R.H.	24x20	27	4	4	668	535.00
96	1 " 6 R.H.	36x23	31	4	4	1545	835.00
98-A	1 " 8 R.H.	39x28	56	4	4	2350	1785.00
108-A	2 1/2 to 12 R.H.	60x32	65	4	6	5150	3000.00
120	8 " 16 R.H.	60x36	82	4	* 2	4350	4500.00

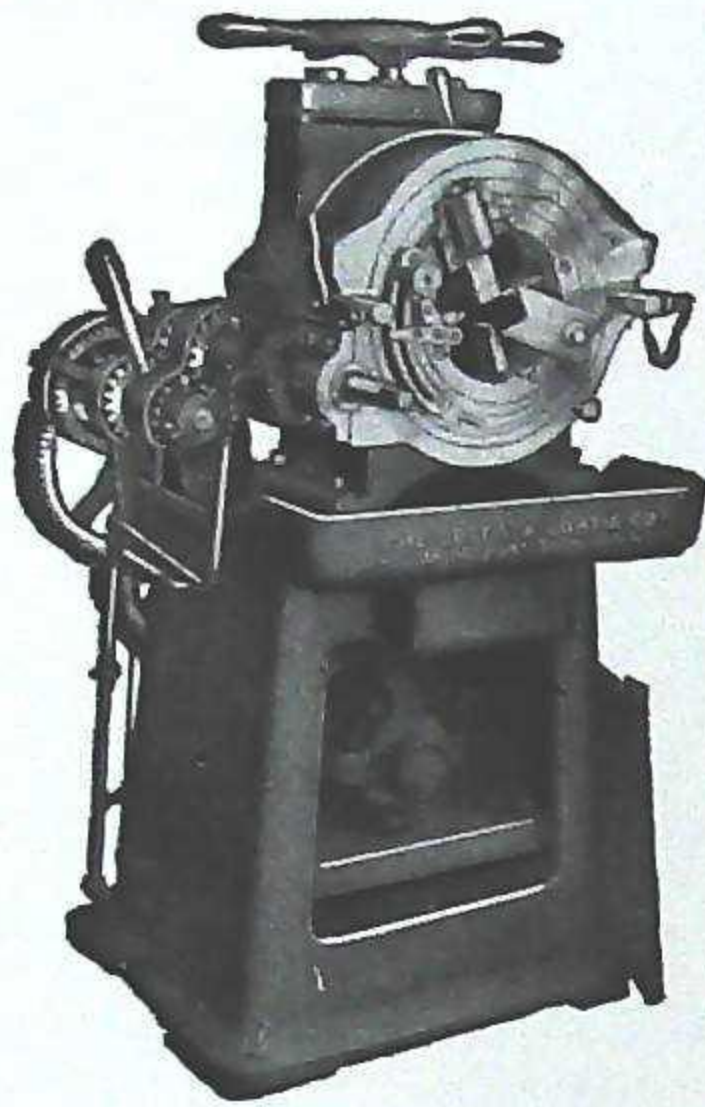
Direct Connected Electric Machines

430	1/4 to 2 R.H.	24x16	20	4	1800	1 3 3	\$725.00
437	1/2 " 3 R.H.	17x27	23	4	1800	2 4 4	880.00
442	1 " 4 R.H.	29x21	28	4	1800	2 4 4	680
258	1 " 6 R.H.	28x34	53	4	1800	3 4 3	1435
265	1 " 8 R.H.	38x38	58	4	1800	3 4 3	2400
269	2 1/2 to 12 R.H.	45x40	72	4	1800	5 6 3	4025
269-B	8 " 16 R.H.	52x48	86	4	1800	5 * 2	6000

*8 to 11 inches, 6; 12 to 16 inches, 12.
 Cut-off attachment and tools for No. 30 and No. 70, \$35.00 list extra.

Curtis Pipe Cutting and Threading Machines

Direct Connected, Motor Driven



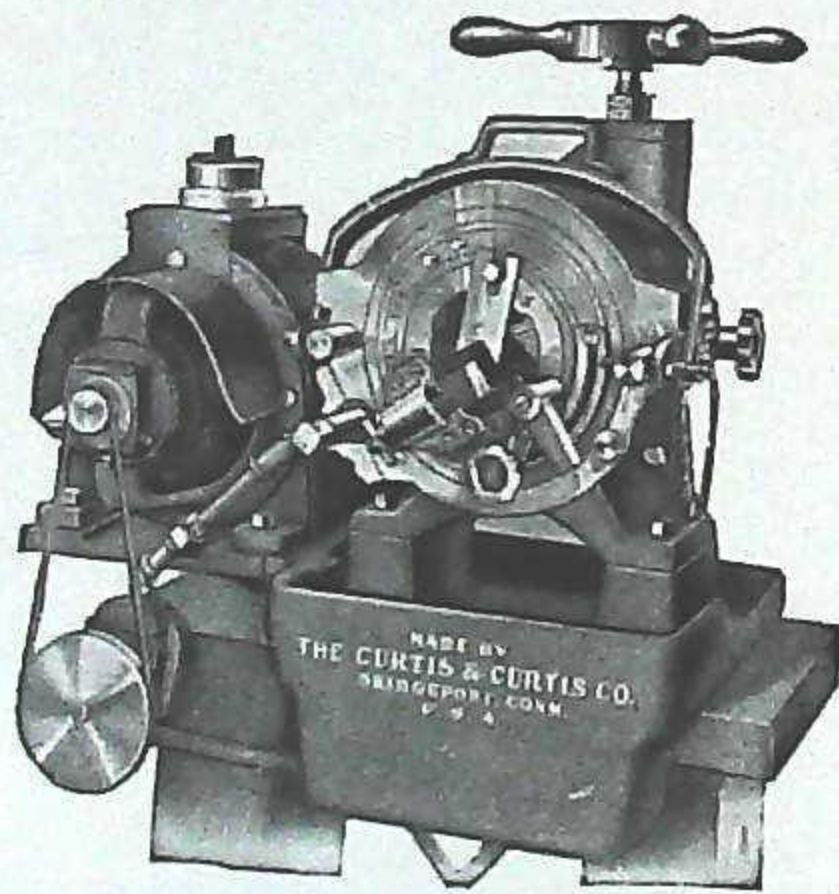
No. 258
Fig. 2921

These machines are of the most modern design throughout, being equipped with an automatic oiling system, wherein a large amount of oil is pumped directly within the head of the machine, lubricating it thoroughly, and then forced under pressure onto the work at points directly in front of each chaser.

A rotary oil pump delivers cutting oil to the dies and to the cut-off. The base is provided with a large drip pan and reservoir, into which the oil is strained and from which it is then pumped through the system. This system is fully automatic and no attention need be paid to it except to keep the reservoir supplied with oil.

The two and four-inch machines, having the motor mounted on a bracket, are extremely portable types. The larger machines having the motor enclosed in the floor base where it is thoroughly protected from oil chips or breakage.

These machines are also equipped with a new automatic release, and improved cut-off device.



No. 430
Fig. 2922

The chasers are made in exact accordance with the specifications of the National Tube Co., and are correct in design and manufacture for the threading of Bessemer Steel Pipe. Special dies for threading open hearth pipe will be supplied, if desired at regular prices. The dies are adjustable to variations in fittings and should one die of a set become lost or broken, it may be replaced at a small cost, thus avoiding the necessity of purchasing an entire new set.

Spur gears are used throughout the train, no bevel or worm gears being used. They are machine-cut from fibre, machine steel and case iron, to insure easy running, long life and quietness. Suitable gear guards are furnished to conform to the factory safety laws.

Each machine is furnished with all necessary equipment including dies and cut-off tools, countershaft for belt driven machines, ratchet wrenches for hand operation, pipe rest and wrenches.

No.	Range Inches	Approx. Net Weight Pounds	Price Each
*430	1/4 to 2, R.H.	425	\$725.00
*437	1/2 " 3, R.H.	469	880.00
*442	1 " 4, R.H.	680	975.00
*258	1 " 6, R.H.	1435	1585.00
265	1 " 8, R.H.	2400	2420.00
269	2 1/2 " 12, R.H.	4025	4000.00
269B	8 " 16, R.H.	6000	5200.00

*Bench Machines. Floor base and adjustable pipe rest \$100.00 extra. Machines of other sizes, or for single-phase or high-voltage current can be furnished. Prices upon application

No. 1530 Yankee Single Speed Ratchet Hand Drills

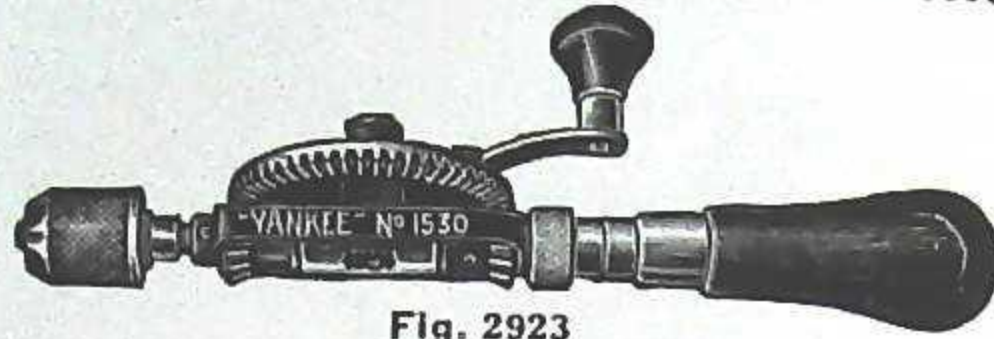


Fig. 2923

Malleable iron frame with dead black finish. Has right and left-hand and continuous ratchet movements. Entire handle detachable; is hollow for drills. Spindle is of steel. Gears with cut teeth; large gear, 3-inch diameter; small gear, 1/8-inch. The crank is 2 3/4 inches long. Handle is of polished hardwood, 4 inches long, 1 1/2-inch diameter. Chuck body is of steel, polished and nickel-plated. The three jaws are of tool steel. Chuck holds round shanks only up to 3/8-inch diameter. Extreme length, 10 1/2 inches. Weight, 1 1/4 pounds. Packed one in a box. Price, No. 1530.....each \$7.00

No. 540 Yankee Single Speed Ratchet Hand Drills

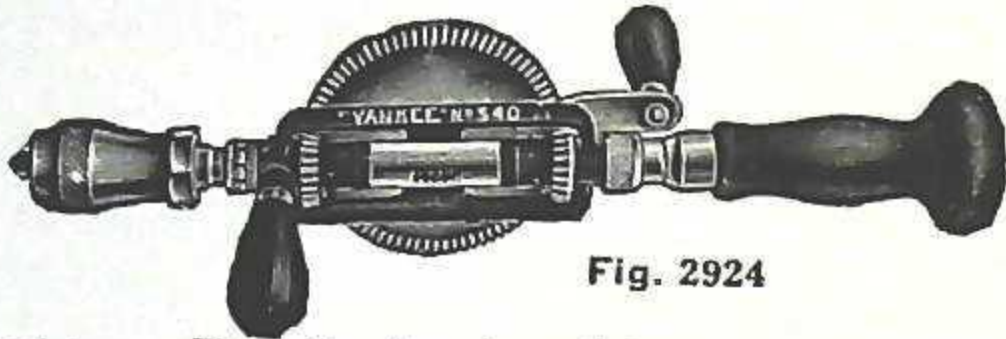


Fig. 2924

Frame is of malleable iron with dead black finish. Large gear, 4 1/2 inches, small gear, 1 1/2 inches in diameter. Handle is of polished hardwood, 4 1/2 inches long, 2 1/2 inches in diameter. Chuck body is malleable iron, polished and nickel-plated; length, 2 5/8 inches, with hexagon to use wrench in tightening large drills. Chuck jaws are drop forged steel. Chuck holds either round or square shank drills up to 3/8-inch. Crank is 4 inches long. Side handle has screwdriver bit to adjust screws in drill. Has right and left-hand and continuous ratchet movements. Extreme length, 16 1/2 inches. Weight, 3 1/2 pounds. Packed one in a box. Price, No. 540.....each \$11.00

No. 1540 Yankee Ratchet Hand Drills

Capacity, 0 to 3/8-inch round shank drills. Three-jaw chuck. Single speed. Steel spindle, adjustable ball bearings. Cut gears.

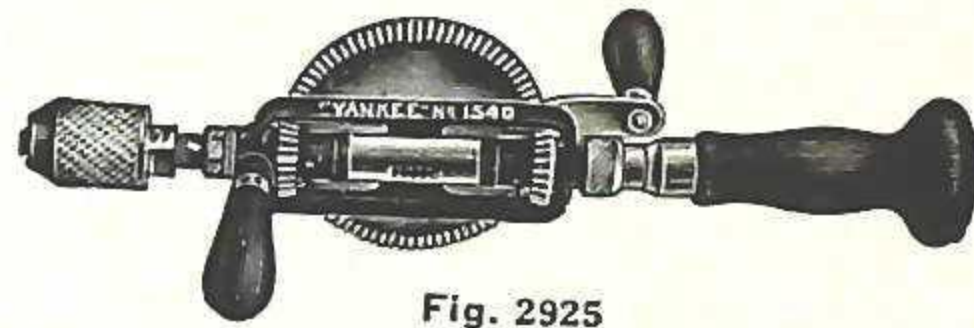


Fig. 2925

Black malleable iron frames; bright parts nickel-plated and polished. Side handle is screwdriver. Hand drill handle is detachable, hollow for drill container.

Has right and left hand and continuous ratchet movement.

Length, 16 inches.

Packed one in a box. Net weight, 3 3/8 pounds.

Price, No. 1540.....each \$11.00

No. 545 Yankee Double Speed Ratchet Hand Drills

Large gear, 4 1/2 inches; small gear, 1 1/2 inches in diameter. Handle is of polished hardwood, 4 1/2 inches long, 2 1/2-inch diameter.

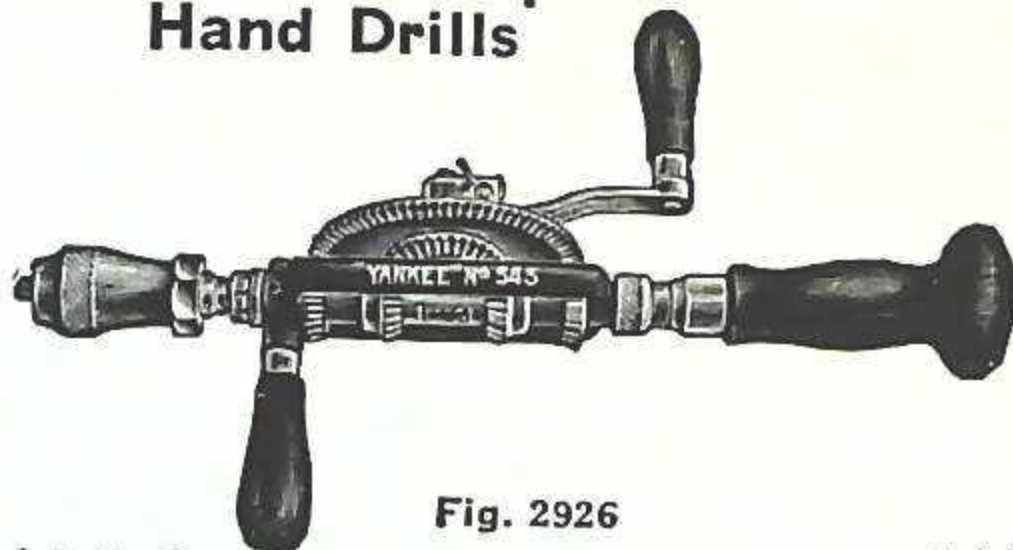


Fig. 2926

Chuck body is polished and nickel-plated; length 2 5/8 inches. Has right and left hand and continuous ratchet movements. Chuck holds either round or square shank drills up to 3/8-inch. Crank is 4 inches long. Side handle has screwdriver bit to adjust screws in drill. Adjustable ball-bearing on spindle. Extreme length, 16 1/2 inches. Weight, 4 1/4 pounds. Packed one in a box. Price, No. 545.....each \$13.40

Straight Shank Twist Drills

Jobbers' or Short Series

Carbon Steel High Speed Steel



Fig. 2931

Diam. Inches	Decimal Equivalent	Length Over All Inches	Length Twist Inches	PRICE, PER DOZEN	
				Carbon Steel	High Speed Steel
1/8	.0312	1 1/2	5/8	\$1.50	.....
3/16	.0469	1 3/4	7/8	1.55	.....
1/4	.0625	2 1/2	1 1/4	1.60	\$5.70
5/16	.0781	2 5/8	1 3/8	1.65	5.70
3/8	.0937	2 3/4	1 1/2	1.70	5.70
7/16	.1094	2 7/8	1 5/8	1.75	5.90
1/2	.1250	3	1 3/4	1.80	5.90
9/16	.1406	3 1/8	1 7/8	1.85	6.10
5/8	.1562	3 1/4	2	1.90	6.10
11/16	.1719	3 3/8	2 1/8	2.00	6.30
3/4	.1875	3 1/2	2 1/4	2.25	6.30
13/16	.2031	3 5/8	2 3/8	2.50	7.00
7/8	.2187	3 3/4	2 1/2	2.75	7.00
15/16	.2344	3 7/8	2 5/8	3.00	7.35
1	.2500	4	2 3/4	3.25	7.35
1 1/16	.2656	4 1/8	2 7/8	3.50	9.10
1 1/8	.2812	4 1/4	2 3/4	3.80	9.10
1 1/4	.2969	4 3/8	3 3/32	4.00	10.50
1 1/2	.3125	4 1/2	3 3/16	4.35	10.50
1 5/8	.3281	4 5/8	3 5/16	4.70	12.00
1 3/4	.3437	4 3/4	3 1/2	5.05	12.00
1 7/8	.3594	4 7/8	3 1/2	5.50	13.50
2	.3750	5	3 5/8	6.00	13.50
2 1/16	.3906	5 1/8	3 3/4	6.50	15.00
2 1/8	.4062	5 1/4	3 3/4	7.00	15.00
2 1/4	.4219	5 3/8	3 3/4	7.75	17.00
2 1/2	.4375	5 1/2	4 1/16	8.50	17.00
2 3/8	.4531	5 5/8	4 3/16	9.25	18.75
2 1/2	.4687	5 3/4	4 1/2	10.00	18.75
2 5/8	.4844	5 7/8	4 3/4	11.00	20.00
3	.5000	6	4 1/2	12.00	20.00

Straight Shank Twist Drills

Letter Sizes

Carbon Steel High Speed Steel



Fig. 2932

Size	Decimal Equivalent	Length Over All Inches	Length Twist Inches	PRICE, PER DOZEN	
				Carbon Steel	High Speed Steel
A	.2340	3 3/16	2 9/16	\$3.00	\$7.35
B	.2380	3 3/16	2 9/16	3.05	7.35
C	.2420	3 3/16	2 9/16	3.10	7.35
D	.2460	3 3/16	2 9/16	3.15	7.35
E	.2500	3 3/16	2 9/16	3.25	7.35
F	.2570	4 1/4	3	3.35	9.10
G	.2610	4 1/4	3	3.45	9.10
H	.2660	4 1/4	3	3.55	9.10
I	.2720	4 1/4	3	3.65	9.10
J	.2770	4 1/4	3	3.70	9.10
K	.2810	4 1/4	3	3.80	9.10
L	.2900	4 1/4	3	3.90	10.50
M	.2950	4 1/4	3	4.00	10.50
N	.3020	4 1/4	3	4.25	10.50
O	.3160	4 1/4	3	4.40	10.50
P	.3230	4 5/8	3 5/16	4.60	12.00
Q	.3320	4 3/4	3 7/16	4.75	12.00
R	.3390	4 3/4	3 7/16	5.00	12.00
S	.3480	4 3/4	3 7/16	5.15	13.50
T	.3580	4 7/8	3 1/2	5.30	13.50
U	.3680	5	3 5/8	5.50	13.50
V	.3770	5	3 5/8	6.00	15.00
W	.3860	5 1/8	3 5/8	6.50	15.00
X	.3970	5 1/4	3 5/8	7.00	15.00
Y	.4040	5 1/4	3 5/8	7.00	17.00
Z	.4130	5 3/8	3 3/4	7.25	17.00

Put up, sizes A to K, one dozen of a size, in envelopes. Put up, sizes L to Z, one-half dozen of a size, in envelopes.

Taper Shank Twist Drills

Carbon Steel High Speed Steel



Fig. 2933

Diam. Inches	Decimal Equivalent	Length Over All Inches	Taper Shank No.	Price, Each	
				Carbon Steel	High Speed Steel
1/8	.1250	5 1/4	1	\$.45	\$.90
9/16	.1406	5 3/8	1	.45	.90
5/32	.1562	5 3/8	1	.45	.90
11/64	.1719	5 3/4	1	.50	.90
3/16	.1875	5 3/4	1	.50	.90
13/64	.2031	6	1	.55	1.00
7/32	.2187	6	1	.55	1.00
15/64	.2344	6 1/8	1	.60	1.10
1/4	.2500	6 1/8	1	.60	1.10
17/64	.2656	6 1/4	1	.65	1.20
9/32	.2812	6 1/4	1	.65	1.20
19/64	.2969	6 3/8	1	.70	1.30
5/16	.3125	6 3/8	1	.70	1.30
21/64	.3281	6 3/4	1	.75	1.40
11/32	.3437	6 3/4	1	.75	1.40
23/64	.3594	6 3/4	1	.80	1.50
3/8	.3750	6 3/4	1	.80	1.50
25/64	.3906	7	1	.90	1.65
13/32	.4062	7	1	.90	1.65
27/64	.4219	7 1/4	1	1.00	1.75
7/16	.4375	7 1/4	1	1.00	1.75
29/64	.4531	7 1/2	1	1.10	1.90
15/32	.4687	7 1/2	1	1.10	1.90
31/64	.4844	7 3/4	1	1.20	2.00
1/2	.5000	7 3/4	1	1.20	2.00
33/64	.5156	8	1	1.30	2.15
17/32	.5312	8	1	1.30	2.15
35/64	.5469	8 1/4	1	1.40	2.25
9/16	.5625	8 1/4	1	1.40	2.25
37/64	.5781	8 1/2	2	1.50	2.40
19/32	.5937	8 1/2	2	1.50	2.40
39/64	.6094	8 3/4	2	1.60	2.50
5/8	.6250	8 3/4	2	1.60	2.50
41/64	.6406	9	2	1.70	2.75
21/32	.6562	9	2	1.80	3.00
43/64	.6719	9 1/4	2	1.80	3.00
11/16	.6875	9 1/4	2	1.90	3.25
45/64	.7031	9 1/2	2	1.90	3.25
23/32	.7187	9 1/2	2	2.00	3.50
47/64	.7344	9 3/4	2	2.00	3.50
3/4	.7500	9 3/4	2	2.10	3.75
49/64	.7656	9 7/8	2	2.10	3.75
25/32	.7812	10	2	2.20	4.00
51/64	.7969	10	2	2.20	4.00
13/16	.8125	10 1/4	2	2.40	4.40
53/64	.8281	10 1/4	2	2.40	4.40
27/32	.8437	10 1/2	2	2.60	4.75
55/64	.8594	10 1/2	2	2.60	4.75
7/16	.8750	10 1/2	2	2.80	5.15
57/64	.8906	10 3/8	2	2.80	5.15
29/32	.9062	10 3/4	3	3.00	5.50
59/64	.9219	10 3/4	3	3.00	5.50
15/16	.9375	10 3/4	3	3.25	5.90
61/64	.9531	10 3/8	3	3.25	5.90
31/32	.9687	10 7/8	3	3.50	6.25
63/64	.9844	11	3	3.50	6.25
1	1.0000	11	3	3.75	6.75
1 1/16	1.0156	11 1/8	3	3.75	6.75
1 1/8	1.0311	11 1/8	3	4.00	7.25
1 1/4	1.0469	11 1/4	3	4.00	7.25
1 1/2	1.0625	11 1/2	3	4.25	7.75
1 5/8	1.0781	11 1/2	3	4.25	7.75
1 3/4	1.0937	11 3/4	3	4.50	8.25
1 7/8	1.1094	11 3/4	3	4.50	8.25
1 5/4	1.1250	11 3/8	3	4.75	8.90
1 9/8	1.1406	11 3/8	3	4.75	8.90
1 11/8	1.1562	11 3/4	3	5.00	9.50
1 13/8	1.1719	11 3/4	3	5.00	9.50
1 15/8	1.1875	12	3	5.25	10.15
1 17/8	1.2031	12 1/8	3	5.25	10.15
1 19/8	1.2187	12 1/8	3	5.50	10.75
1 21/8	1.2344	12 1/4	3	5.50	10.75
1 23/8	1.2500	12 1/4	4	5.75	11.50
1 25/8	1.2656	12 1/4	4	5.75	11.50
1 27/8	1.2812	12 1/2	4	6.00	12.25
1 29/8	1.2969	12 1/2	4	6.00	12.25
1 31/8	1.3125	12 3/4	4	6.25	13.00
1 33/8	1.3281	12 3/4	4	6.25	13.00
1 35/8	1.3437	12 3/4	4	6.50	13.75
1 37/8	1.3594	12 3/4	4	6.50	13.75
1 39/8					

Straight Shank Twist Drills

Long Series

Carbon Steel

High Speed Steel



Fig. 2941

Diam. Inches	Decimal Equivalent	Length Over All Inches	Price, Each	
			Carbon Steel	High Speed Steel
1/8	.1250	5 1/4	\$.45	\$.90
9/64	.1406	5 3/8	.45	.90
5/32	.1562	5 3/8	.45	.90
11/64	.1719	5 3/8	.50	.90
3/16	.1875	5 3/8	.50	.90
13/64	.2031	5 3/8	.55	1.00
7/32	.2187	6	.55	1.00
15/64	.2344	6 1/8	.60	1.10
1/4	.2500	6 1/8	.60	1.10
17/64	.2656	6 1/8	.65	1.20
9/32	.2812	6 1/2	.65	1.20
19/64	.2969	6 3/8	.70	1.30
5/16	.3125	6 3/8	.70	1.30
21/64	.3281	6 3/8	.75	1.40
11/32	.3437	6 3/8	.75	1.40
23/64	.3594	6 3/8	.80	1.50
3/8	.3750	6 3/4	.80	1.50
25/64	.3906	7	.90	1.65
13/32	.4062	7	.90	1.65
27/64	.4219	7 1/4	1.00	1.75
7/16	.4375	7 1/4	1.00	1.75
29/64	.4531	7 1/2	1.10	1.90
15/32	.4687	7 1/2	1.10	1.90
31/64	.4844	7 3/4	1.20	2.00
1/2	.5000	7 3/4	1.20	2.00
33/64	.5156	8	1.30	2.15
17/32	.5312	8	1.30	2.15
35/64	.5469	8 1/4	1.40	2.25
9/16	.5625	8 1/4	1.40	2.25
37/64	.5781	8 1/2	1.50	2.40
19/32	.5937	8 1/2	1.50	2.40
39/64	.6094	8 3/4	1.60	2.50
5/8	.6250	8 3/4	1.60	2.50
41/64	.6406	9	1.70	2.75
21/32	.6562	9	1.70	2.75
43/64	.6719	9 1/4	1.80	3.00
17/16	.6875	9 1/4	1.80	3.00
45/64	.7031	9 1/2	1.90	3.25
23/32	.7187	9 1/2	1.90	3.25
47/64	.7344	9 3/4	2.00	3.50
3/4	.7500	9 3/4	2.00	3.50
49/64	.7656	9 3/8	2.10	3.75
25/32	.7812	9 3/8	2.10	3.75
51/64	.7969	10	2.20	4.00
13/16	.8125	10	2.20	4.00
53/64	.8281	10 1/4	2.40	4.40
27/32	.8437	10 1/4	2.40	4.40
55/64	.8594	10 1/2	2.60	4.75
7/8	.8750	10 1/2	2.60	4.75
57/64	.8906	10 3/8	2.80	5.15
29/32	.9062	10 3/8	2.80	5.15
59/64	.9219	10 3/4	3.00	5.50
15/16	.9375	10 3/4	3.00	5.50
61/64	.9531	10 3/2	3.25	5.90
31/32	.9687	10 3/2	3.25	5.90
63/64	.9844	11	3.50	6.25
1	1.0000	11	3.50	6.25
1 1/64	1.0156	11 1/8	3.75	6.75
1 1/32	1.0311	11 1/8	3.75	6.75
1 1/64	1.0469	11 1/4	4.00	7.25
1 1/16	1.0625	11 1/4	4.00	7.25
1 1/32	1.0781	11 1/2	4.25	7.75
1 1/64	1.0937	11 1/2	4.25	7.75
1 1/8	1.1094	11 3/4	4.50	8.25
1 1/16	1.1250	11 3/4	4.50	8.25
1 1/32	1.1406	11 3/8	4.75	8.90
1 1/64	1.1562	11 3/8	4.75	8.90
1 1/8	1.1719	12	5.00	9.50
1 1/16	1.1875	12	5.00	9.50
1 1/32	1.2031	12 1/4	5.25	10.15
1 1/64	1.2187	12 1/4	5.25	10.15
1 1/8	1.2344	12 1/2	5.50	10.75
1 1/16	1.2500	12 1/2	5.50	10.75
1 1/32	1.2656	12 3/4	5.75	11.50
1 1/64	1.2812	12 3/4	5.75	11.50
1 1/8	1.3125	13	6.00	12.25
1 1/16	1.3437	13	6.25	13.00
1 1/32	1.3750	13 1/4	6.50	13.75
1 1/8	1.4062	13 1/4	6.50	13.75
1 1/16	1.4375	13 1/2	7.00	14.65
1 1/32	1.4687	13 1/2	7.50	15.50
1 1/8	1.5000	14	8.00	16.40
1 1/16	1.5625	14 1/4	8.50	17.25
1 1/32	1.5937	14 1/4	8.50	17.25
1 1/8	1.6250	14 1/2	9.50	19.00
1 1/16	1.6875	14 3/4	10.50	21.00
1 1/32	1.7500	15	11.50	23.00
1 1/8	1.8125	15 1/4	12.50	25.00
1 1/16	1.8750	15 1/2	14.00	27.50
1 1/32	1.9375	16	15.50	30.00
1 1/8	2.0000	16 1/2	17.00	32.50
2	2.0000	18 1/2	18.50	35.00

Mueller Pipe End Reamers

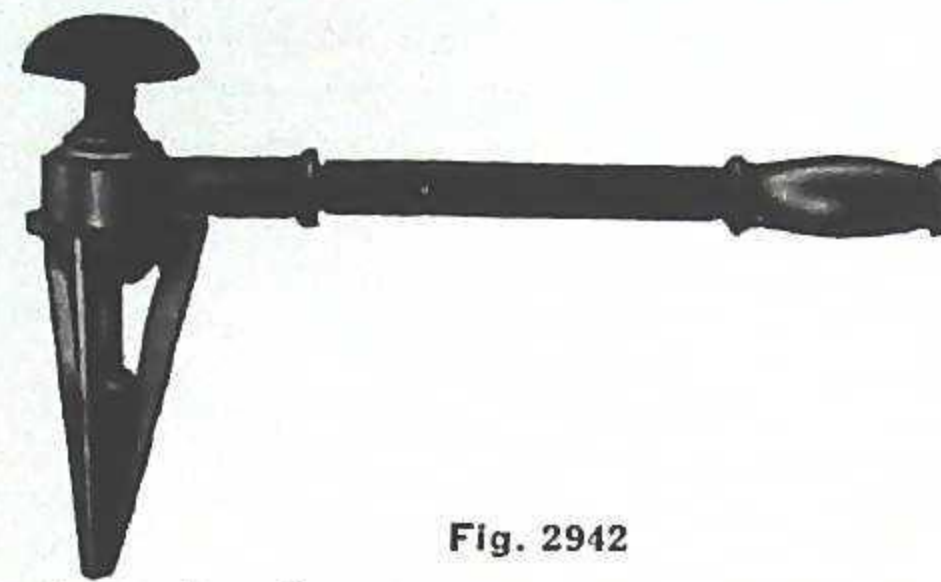


Fig. 2942

Pipe cutters leave a burr which reduces pipe area. The ends must be reamed after cutting if the full carrying capacity is to be retained. The ratchet is so constructed that the strain is divided into half a dozen bearings, greatly increasing the durability of the tool.

Price, Small Ratchet Pattern, Reams Pipe 3/8 to 1 1/4 Inches.....each \$5.00
 Price, Large Ratchet Pattern, Reams Pipe 3/8 to 3 Inches.....each 7.50

No. 351 Pump Makers' Taps For Bit Braces



Fig. 2943

Size Inches	V Thread	Price Each	Size Inches	V Thread	Price Each
3/8	14	\$.55	1/2	12	\$.70
7/16	12	.60			

Combined Drill and Tap

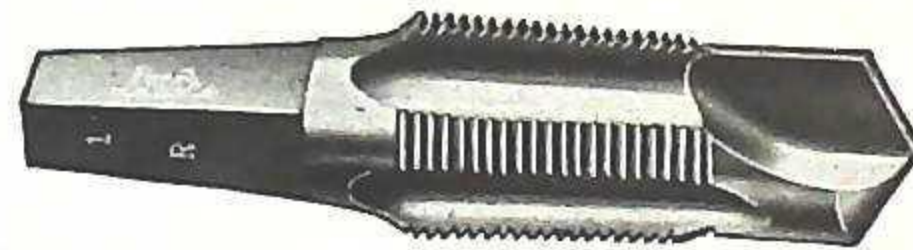


Fig. 2944

Diameter...inches	1/2	3/4	1	1 1/4	1 1/2	2
Price.....each	\$3.75	5.00	6.25	7.50	9.25	12.00

Pipe Taps

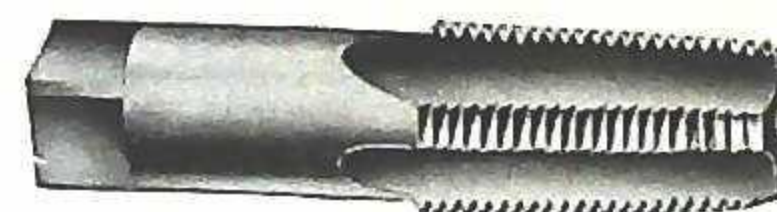


Fig. 2945

Briggs standard right hand taper threads are furnished unless otherwise specified.

Pipe Size In.	No. of Briggs Std. Threads to Inch	Length Thread Inches	Length Over All Inches	Price, Each	
				Carbon Steel	High Speed Steel
1/8	27	3/4	2 1/8	\$1.00	\$1.10
1/4	18	1 1/16	2 7/16	1.20	1.50
3/8	18	1 1/16	2 9/16	1.60	1.95
1/2	14	1 3/8	3 1/8	2.00	3.10
3/4	14	1 3/8	3 1/4	2.80	4.40
1	11 1/2	1 3/4	3 3/4	4.40	7.80
1 1/4	11 1/2	1 3/4	4	5.00	12.10
1 1/2	11 1/2	1 3/4	4 1/4	6.60	16.60
2	11 1/2	1 3/4	4 1/2	10.00	27.25

Pipe Reamers



Fig. 2946

Pipe Size Inches	Length Over All Inches	Price, Each	
		Carbon Steel	High Speed Steel
1/8	2 1/8	\$1.00	\$1.10
1/4	2 7/16	1.20	1.50
3/8	2 9/16	1.60	1.95
1/2	3 1/8	2.00	3.10
3/4	3 1/4	2.80	4.40
1	3 3/4	4.40	7.80
1 1/4	4	5.00	12.10
1 1/2	4 1/4	6.60	16.60
2	4 1/2	10.00	27.25

Mill Files



Fig. 2951

Sizes 3 to 10-inch inclusive are packed 12 in a box; 12-inch and larger, 6 in a box.

Length...inches	Bastard					
	3	4	5	6	7	8
Price...per doz.	\$3.00	3.00	3.20	3.50	3.90	4.30
Length...inches	9	10	12	14	16	18
Price...per doz.	\$4.90	5.60	7.50	10.70	14.70	20.20

Length...inches	Second Cut				
	4	5	6	7	8
Price...per doz.	\$3.50	3.80	4.00	4.60	4.90
Length...inches	9	10	12	14	16
Price...per doz.	\$5.80	6.40	8.60	12.20	16.80

Length...inches	Smooth				
	6	8	10	12	14
Price...per doz.	\$4.50	5.40	7.00	9.40	13.10
Length...in.	6	7	8	9	10
Price...per doz.	\$3.90	4.40	4.80	5.50	6.30

Length...in.	One Round Edge—Bastard				
	6	7	8	9	10
Price...per doz.	\$3.90	4.40	4.80	5.50	6.30
Length...inches	6 <td>7 <td>8 <td>9 <td>10</td> </td></td></td>	7 <td>8 <td>9 <td>10</td> </td></td>	8 <td>9 <td>10</td> </td>	9 <td>10</td>	10
Price...per doz.	\$4.50	5.20	5.50	6.50	7.20

Length...inches	Two Round Edges—Bastard				
	6	7	8	9	10
Price...per doz.	\$4.40	4.90	5.40	6.10	7.00
Length...inches	6 <td>7 <td>8 <td>9 <td>10</td> </td></td></td>	7 <td>8 <td>9 <td>10</td> </td></td>	8 <td>9 <td>10</td> </td>	9 <td>10</td>	10
Price...per doz.	\$5.00	6.10	8.00	10.80	

Length...inches	Blunt—Bastard				
	6	7	8	10	
Price...per doz.	\$3.90	4.30	4.90	6.70	
Length...inches	6 <td>7 <td>8 <td>10</td> <td></td> </td></td>	7 <td>8 <td>10</td> <td></td> </td>	8 <td>10</td> <td></td>	10	
Price...per doz.	\$4.60	4.90	5.80	7.80	

Length...inches	Blunt—Second Cut				
	6	7	8	10	
Price...per doz.	\$4.60	4.90	5.80	7.80	

Flat Files



Fig. 2952

Length...inches	Bastard				
	4	5	6	7	8
Price...per doz.	\$3.70	3.90	4.30	4.80	5.30
Length...inches	10	12	14	16	18
Price...per doz.	\$7.00	9.70	13.30	17.80	23.90

Length...inches	Second Cut				
	4	5	6	7	8
Price...per doz.	\$4.30	4.60	4.80	5.50	6.10
Length...inches	10	12	14	16	18
Price...per doz.	\$8.10	11.00	15.30	20.10	26.80

Length...inches	Smooth				
	4	5	6	7	8
Price...per doz.	\$4.70	4.90	5.30	6.10	6.60
Length...inches	10	12	14	16	18
Price...per doz.	\$8.70	12.10	16.70	22.30	29.20

Half-round Files



Fig. 2953

Length...inches	Bastard				
	4	5	6	7	8
Price...per doz.	\$4.80	5.40	6.10	7.00	7.50
Length...inches	10	12	14	16	18
Price...per doz.	\$9.10	11.80	15.50	20.60	27.50

Length...inches	Second Cut				
	4	5	6	7	8
Price...per doz.	\$5.60	6.10	6.70	7.70	8.30
Length...inches	10	12	14	16	18
Price...per doz.	\$10.10	13.00	17.00	22.50	29.90

Length...inches	Smooth				
	4	5	6	7	8
Price...per doz.	\$6.10	6.40	7.10	8.20	8.90
Length...inches	10	12	14	16	18
Price...per doz.	\$10.70	13.90	18.30		

Plumbers' Tools
Stub Calking Irons

Size, In.	Price Each
8 1/2 x 1 1/2	\$.50
8 1/2 x 5/8	.55
8 1/2 x 3/4	.60

Regular Calking Irons

Size, In.	Price Each
8 1/2 x 1 1/2	\$.50
8 1/2 x 5/8	.55
8 1/2 x 3/4	.60

Offset Calking Irons

Size, In.	Price, Each
8-in.	\$.90
5/8	.90
3/4	1.00

Yarning Irons

Size, In.	Price, Each	Size, In.	Price, Each	Size, In.	Price, Each
1/2 x 10	\$.50	5/8 x 10	\$.55	3/4 x 10	\$.65
1/2 x 15	.65	5/8 x 15	.65	3/4 x 15	.75

4-inch Yarning Irons

Size, In.	Price, Each
9 x 5/8	\$.55
9 x 3/4	.65

Spring Packing Irons

Size, In.	Price, Each
12	\$1.00
18	1.15

Cape Chisels

Size, In.	Price, Each
8 1/2 x 1 1/2	\$.75
8 1/2 x 5/8	.85
8 1/2 x 3/4	.85

Round Nose Chisels

Length, Inches	Price, Each
8 1/2	\$.85

Diamond Point Chisels

Length, Inches	Price, Each
8 1/2	\$.85

Picking Chisels

Length, Inches	Price, Each
8 1/2	\$.85

Cold Chisels

Steel	Length	Cut	Price, Each	Steel	Length	Cut	Price, Each
1/2	5 1/2	5/8	\$.40	7/8	8	1	\$.85
1/2	6	5/8	.40	1	8	1 1/8	1.10
3/4	7	7/8	.60	1	9	1 1/8	1.35
3/4	8	7/8	.65	...	...	...	...

Wood Chisels

Steel	Lgth	Cut	Price, Each
5/8	10	1	\$.85
3/4	11	1 1/2	1.05
3/4	12	2	1.15

Wood Gouges

Size, In.	Price, Each
10 1/2 x 1	\$1.90

Floor Chisels

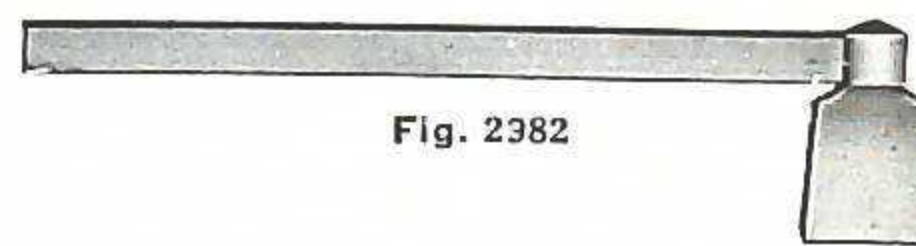
Size, In.	Length	Width	Price, Ea.	Size, In.	Length	Width	Price, Ea.	Size, In.	Length	Width	Price, Ea.
12	1 1/2		\$.75	15	2 1/2		\$1.60	16	3 1/2		\$1.95
15	2		1.00	15	3		1.70	16	4		2.00

Soldering Coppers
Pointed Pattern



Furnished in 1, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 7, 8, 10 and 12 pounds to the pair. When ordering state weight. Prices upon application.

Soldering Coppers
Swivel Hatchet Patterns



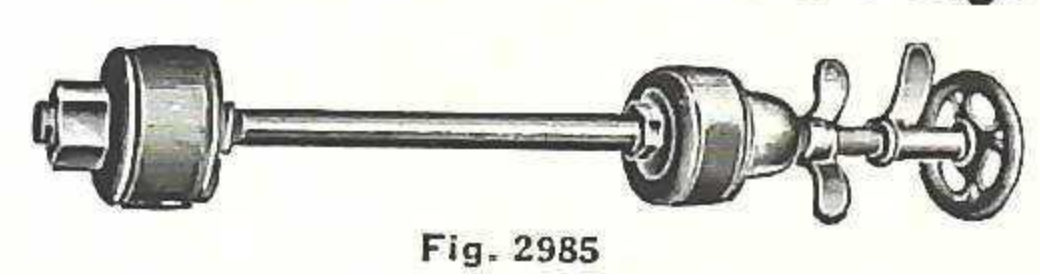
Weight, per pair pounds 3 4 5 6
Prices upon application.

Bending Springs and Pins

Size, In.	Price, Each
1 1/4	\$1.30
1 1/2	2.00
2	2.50

Size, In.	Price, Each
1 1/4	\$1.30
1 1/2	2.00
2	2.50

Climax Double Soil Test Plugs



The double plug is for two ends of sanitary tee or Y. Will make a perfect joint on standard or extra heavy pipe.

Size, In.	Price, Each	Size, In.	Price, Each	Size, In.	Price, Each	Size, In.	Price, Each
2	\$4.20	4	\$7.50	6	\$12.40	10	\$23.00
3	5.80	5	10.00	8	18.20	12	28.10

Extra Rubbers for Test Plugs

Size, In.	Price, Each	Size, In.	Price, Each	Size, In.	Price, Each	Size, In.	Price, Each
2	\$.25	4	\$.80	6	\$1.35	10	\$4.80
3	.50	5	1.10	8	2.70	12	7.60

Regular Soil Pipe Test Plugs

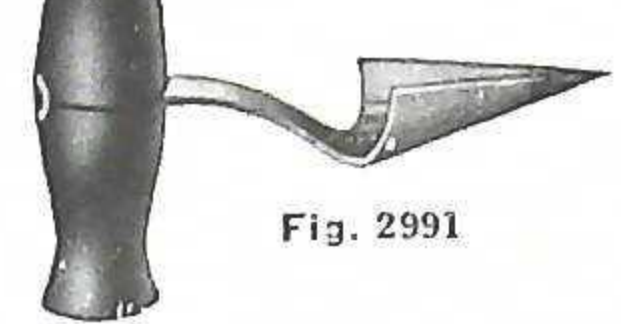
Size, In.	Price, Each	Size, In.	Price, Each	Size, In.	Price, Each	Size, In.	Price, Each
2	\$1.40	6	\$3.40				
3	1.80	8	5.90				
4	2.50	10	10.00				
5	2.90	12	21.50				

No. 11 Climax Test Plugs

Size, In.	Price, Each	Extra Rubbers, Price, Ea.
1 1/2	\$1.40	\$.25
2	1.40	.25
3	1.80	.50
3 1/2	2.50	.70
4	2.50	.80
5	2.90	1.10
6	3.40	1.35
7	4.70	1.90
8	5.90	2.70
9	8.00	4.50
10	10.00	4.80
12	21.50	7.60

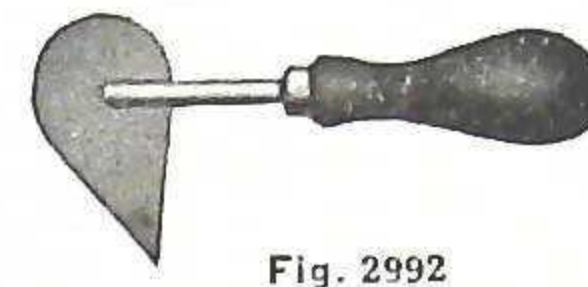
Price, Wrenches for Ratchet Nut Plugs each \$3.00

Tap Borers
No. 184
New York Pattern



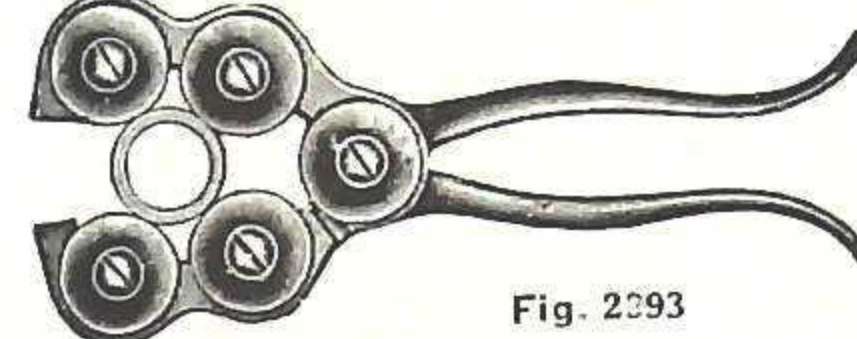
Price each \$.50

No. 164 Oval Shave Hooks



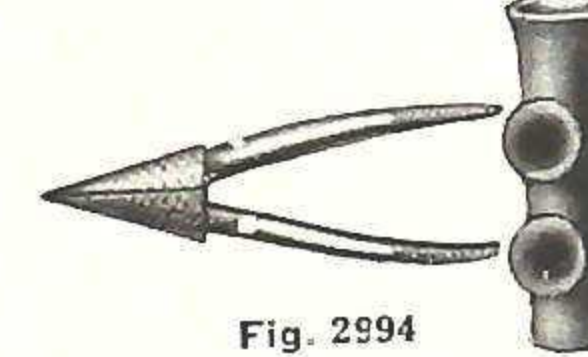
Price each \$.50

No. 132 Lead Pipe Cutters



Price, Nickel-plated each \$2.50
" Japanned " 2.00

No. 142 Lead Pipe Expanding Pliers



Price each \$2.00

No. 195 Turn Pins



Price, Size 1, 2 and 3 Dogwood each \$.50

No. 85 Drift Plugs



Price, 1, 1 1/4, 1 1/2 and 2-inch Dogwood each \$.45

No. 84 Dressers



Price, Dogwood each \$1.25
" Boxwood " 1.40
" Lignum-vitae " 1.60

Spun Brass Grease Boxes
No. 97



Size Small Medium Large
Price per dozen \$21.00 22.00 24.00

No. 20 Nye Wiping Cloths
16-ply Dry Herringbone Ticking

Size, inches	Price, per doz.	Size, inches	Price, per doz.
2x2	\$4.40	2 1/2 x 2 1/2	4.40
2x3	4.40	2 1/2 x 3	4.40
3x3	5.00	3 1/2 x 3 1/2	5.35
4x4	5.35	4x4	5.35

For 8-ply dry genuine English moleskin add to prices as follows: 4x4-inch, \$2.15; other sizes, \$2.00.

Coleman Flexible Closet Augers



A practical device for removing obstructions from water closets and drain pipes. It will go through any closet.

Leath. Coil Ft.	SHEARDED No.	Price Each	BLACK ENAM. No.	Price Each
3	C510	\$5.50	C516	\$4.00
6	C515	6.50	C517	5.00
9	.....	.....	C518	6.00
12	.....	.....	C519	8.00

Herculo Hydraulic Lift and Force Pumps



For removing obstructions in drains, toilets, etc. The Herculo Pump is adaptable to any standard plumbing fixture. Also has a standard 3/8-inch thread on the end of the inside of the pump to which a coupling may be attached and any size pipe may be readily blown out, removing all rust and dirt.

This pump is made of the best seamless polished brass, 23 inches long; two inches in diameter.

Price each \$12.50

Improved Force Cups



An improved high grade cup for general use. The ribbing, inside and out, carries the weight, leaving the wall thin, making a pliable cup. Corrugations on bottom give a perfect seal, greatly improving the sucking and force action. Smooth hardwood 30-inch handle, connected to cup by socket, and cannot become detached.

Price, 4 1/2-inch Black Rubber Cup and Handle	each
5 1/2	\$.65
4 1/2	1.00
4 1/2	.75
5 1/2	1.25

Improved Force Cups



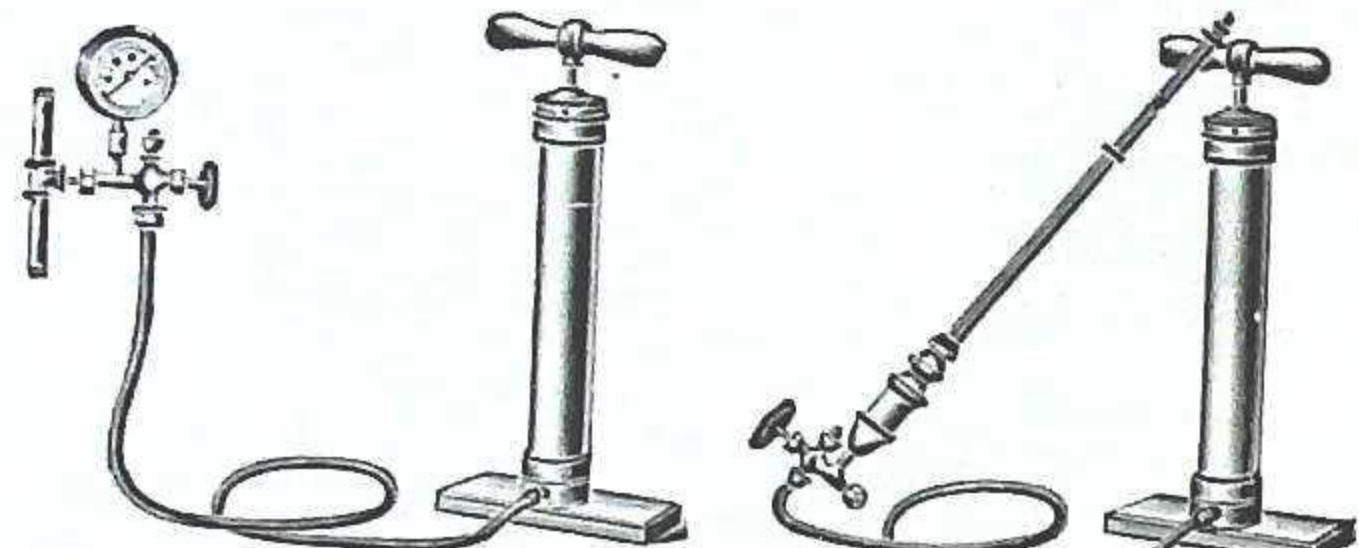
A special high grade red rubber force cup with a cast brass thimble, having internal screw threads vulcanized into neck of cup to attach to hollow metal handle, the opposite end of which is sealed, thereby greatly increasing the adhesive and sucking action. The handle is made of good heavy steel tubing, 18 inches long, with threaded brass bushings to insert into thimble in cup.

Price, 5 1/2-inch Cup with Handle each \$2.00
" 5 1/2 " " only " 1.50



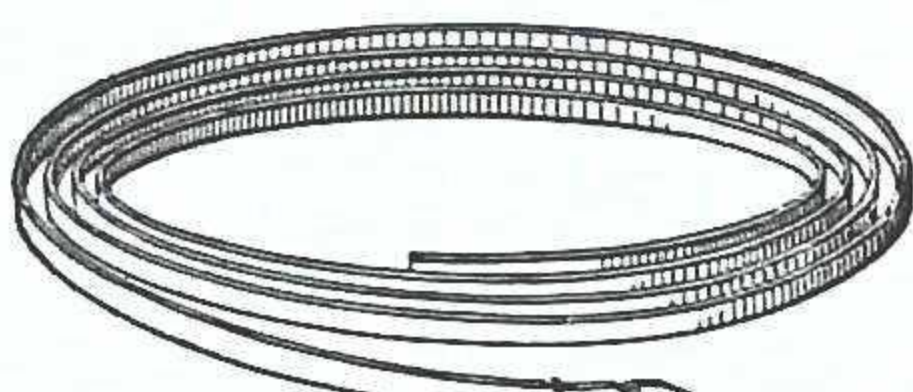
Regular plumbers' friend with cup of good rubber.
 Price, 4-inch Cup with 24 inch Handle.....each \$1.25
 " 6 " " 24 " " " 2.00

Gas Proving Pumps



With Spring Gauge Fig. 3002
 With Mercury Column Fig. 3003
 Price, Complete, with 6 Feet 3/8-inch Rubber Hose,
 Ether Cup and Gauge or Mercury Column.....each \$16.00
 Price, Mercury Column, with Ether Cup and Cook " 8.00
 " Pump and Hose, Only....." 8.00
 " Ether Cup and Cook....." 3.00

Steel Sewer Rods



Thickness Inches	Width Inches	APPROXIMATE WEIGHT, POUNDS			Price per Foot
		50 COIL, FEET	75	100	
1/16	1/2	10.65	\$.10
1/16	5/8	..	..	13.31
1/16	3/4	..	..	16.00
1/16	1	..	..	21.30
1/8	3/4	16	24	32.00	
1/8	1 1/4	27	40	54.00	
1/8	1 1/2	32	47	64.00	
1/8	1 3/4	..	..	..
1/8	2	..	..	..
1/8	2 1/4	..	..	..

Rapid Tap Plugs



Invaluable for every plumber, engineer, steam fitter and all repair men generally. It makes and taps its own hole.

Size Thd. In.	Price per Doz.	Size Thd. In.	Price per Doz.
1/4	\$3.25	7/16	\$4.00
5/16	3.50	1/2	4.00
3/8	3.50	9/16	4.25

Plumbers' Candles



Regular
 Price..... per pound ..
 " 20-pound Boxes each ..
 " 40 " " " ..

Genuine Tallow
 Price..... per pound ..
 " 20-pound Boxes each ..

Plumbers' Tool Bags

Plumbers' carpet tool bags with leather trimmings.

Price, No. 203.....each \$7.00

Price, No. 205 with Leather Sides.....each 10.00



Fig. 3007

No. 135 Solder Pots



Fig. 3008

Size... inches	4	5	6	7	8	9	10	12
Price..... each	\$.75	.90	1.15	1.50	1.90	2.25	3.00	5.25

No. 111 Ladles



Fig. 3009

Size.....inches	2 1/2	3	3 1/2	4	5	6
Capacity Lead...lbs.	1	2	3	4	8 1/2	18
Price.....each	\$.38	.45	.53	.60	.75	.90

Lead Melting Furnaces On Wheels, with Door

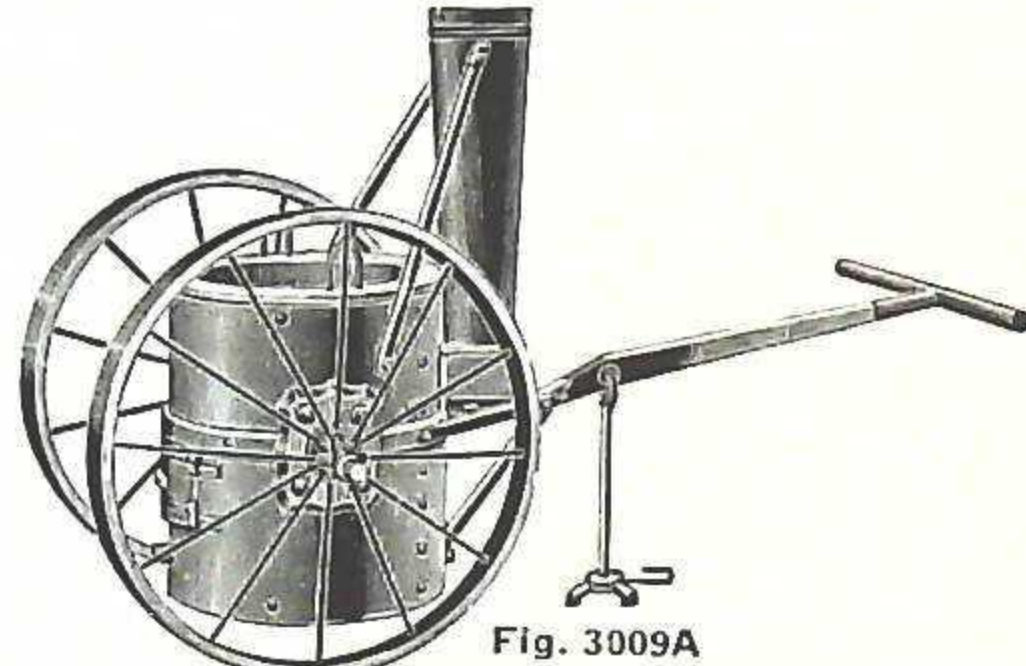


Fig. 3009A

No.	Diam. In.	Ht. In.	Pot In. Diam.	Depth	Capacity Lead, Lbs.	Shp. Wt. Lbs.	Price Each	Extra for Pot Rack
1	21 1/2	24	16 1/4	11	700	530	\$90.00	\$10.00
2	16	24	11 1/2	8	280	385	80.00	10.00

Lead Melting Furnaces

Mounted on legs. Equipped with door.
 Body is made of 3/16 inch boiler-plate and reinforced at the bottom with a heavy cast iron ring which gives the furnace great durability.



Fig. 3009B

No. 1
 Diameter, 21 1/2 inches; height, 24 inches; diameter of pot, 15 1/2 inches; depth of pot, 10 1/2 inches; capacity, lead, 600 pounds.
 Price, No. 1.....each \$60.00
 Extra for Smoke Stack, " 10.00

No. 2
 Diameter, 16 inches; height, 24 inches; diameter of pot, 11 1/2 inches; depth of pot, 8 inches; capacity, lead, 260 pounds.
 Price, No. 2.....each \$50.00
 Extra for Smoke Stack " 10.00

Vanderman's Asbestos Lead Joint Runners

It is adapted for soil, water or gas pipes, or a bell pipe of any description where a joint is poured with molten lead. Always ready, and not affected by heat or cold.

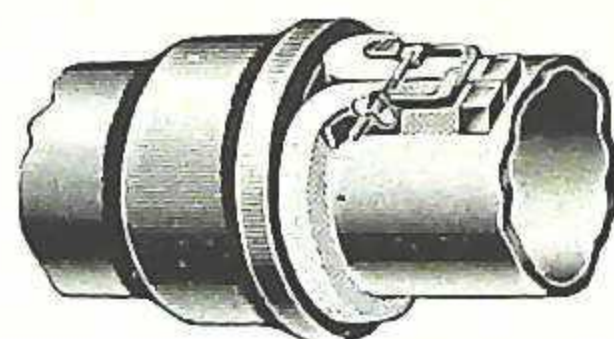


Fig. 3009C

No.	Size Inches	For Pipe Inches	Price Each
5	1 1/4	8, 10, 12	\$8.75
6	1 1/4	10, 12, 14	9.75
7	1 1/4	16, 18, 20	12.00
8	1 1/4	24	13.20
9	1 1/4	30	14.50
10	1 1/4	36	16.50
11	1 1/4	40	17.85
12	1 1/4	42	18.00
13	1 1/4	48	19.50

Magnolia Anti-friction Babbitt Metal



Fig. 3011

Moulded in ingots weighing about 5 1/2 pounds each. Packed in 28, 56, and 112-pound boxes.
 Price..... per pound

Genuine Babbitt



Fig. 3012

Made exactly to the genuine formula and recommended for the highest speed engine work.
 Price..... per pound

No. 1 Babbitt Metal



Fig. 3013

Price, No. 1..... per pound

No. 4 Babbitt Metal



Fig. 3014

Price, No. 4..... per pound \$25

Copaloy Babbitt Metal



Fig. 3015

A new metal meaning substantial saving to users of this material. Packed 28 and 56-pound boxes. Prices on request

Frictionless Babbitt Metal

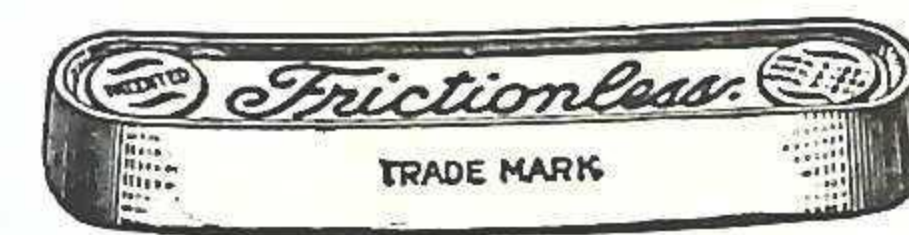


Fig. 3016

Made of highly refined materials. Lead base, soft and tough, largely self-lubricating. Packed in 28, 56 and 112-pound yellow boxes.
 Price,..... per pound

Lead Wool

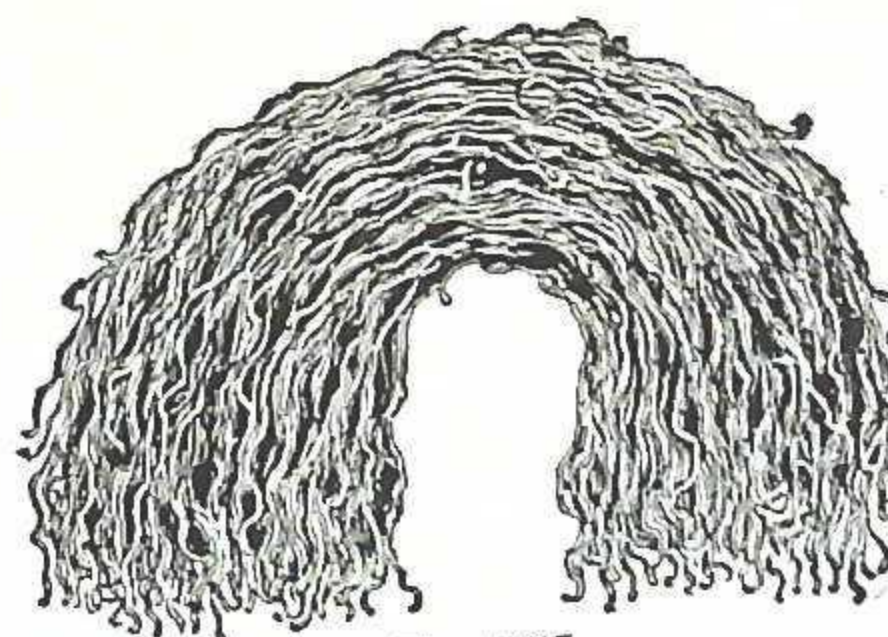


Fig. 3017

Lead wool is lead cut in fine fibres which are put into the joint in the same way as yarn. The lead is being calked from the yarn up, which gives tight, perfect joint that will never leak and yet is flexible. Packed in 100 pound sacks.
 Price..... per pound

No. 32 C & L Single Needle Torches For Gasoline



Fig. 3018

The tank is heavy gauge brass strongly reinforced on inside. Hook is removable. Has sturdy construction. Capacity, 1 quart. Weight each, 5 1/4 pounds.
 Price, No. 32.....each \$18.00

No. 130 C. & L. Torches For Gasoline Single Needle



Fig. 3019

Burner is of bronze metal and produces a steady blue flame. Has sharp pointed needle with metal wheel handle; removable hook on burner. Capacity, one quart. Shipping weight, 4 3/4 pounds.
 Price, No. 130.....each \$17.00

No. 210 C & L Double Needle Torches For Gasoline



Fig. 3019A

Ideal torch for cold and windy weather. The improved double needle burner generates from 200 to 300 degrees more heat. Hook is removable. Capacity, 1 pt. Weight each, 4 1/2 lbs.
 Price, No. 210.....each \$18.00

No. 208 C & L Torches For Gasoline Double Needle



Fig. 3019B

A powerful torch, strong and rigid. Burner hook is removable. Upper needle has a wire tip that cleans the orifice, lower needle regulates the flame. Capacity, one quart. Shipping weight, 5 1/2 pounds.
 Price, No. 208.....each \$19.00

No. 206 C & L Double Needle Torches For Gasoline



Fig. 3019C

Designed for extra heavy work requiring intense heat and burns perfectly in the wind and zero weather. Hook is removable. Capacity, 2 quarts. Shipping weight each, 7 3/4 pounds.
 Price, No. 206.....each \$30.00

No. 144 C & L Single Needle Torches For Gasoline



Fig. 3019D

Burner of bronze metal and has open type generator that injects the air which mixes with the gas producing a steady flame. Hook is removable. Capacity, 1 pint. Shipping weight each, 4 1/4 pounds.
 Price, No. 144.....each \$15.00

No. 146 C & L Single Needle Torches For Gasoline



Fig. 3019E

Burner of bronze metal and has open type generator that injects the air which mixes with the gas producing a steady flame. Hook is removable. Capacity, 1 pint. Shipping weight each, 3 3/4 pounds.
 Price, No. 146.....each \$14.00

No. 1 C & L Double Needle Fire Pots

For Gasoline

Fitted with patented double blunt needle burner having great generating power and gives satisfactory results under the most severe conditions of wind and weather.

A pair of large soldering coppers can be quickly heated and a 6-inch pot of metal melted at same time.

The tank is of heavy gauge seamless drawn steel, tinned inside and out which makes it rust-proof.

Capacity, 1 gallon.

Shipping weight each, 14 pounds.

Price, No. 1 each \$28.00

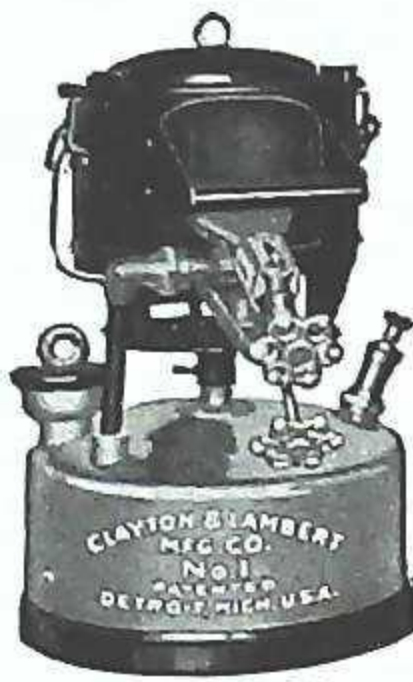


Fig. 3021

No. 80 C & L Fire Pots

Single Needle, for Low or High Test Gasoline

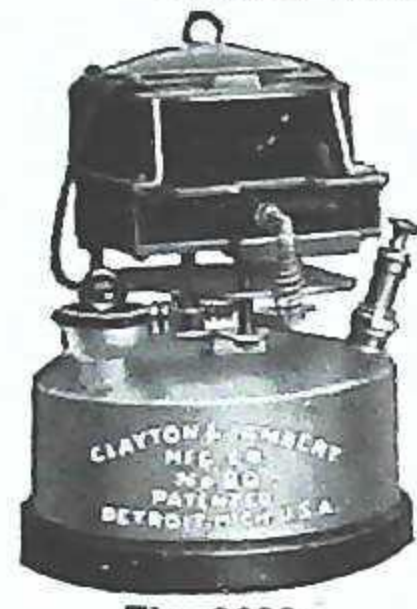


Fig. 3022

Produces an intensely hot noiseless blue flame. The super-heated gas which passes through many small holes of the burner plate tubes burns from both sides toward the centre. A sub flame permits turning the heating flame low between jobs. The top section is of cast iron and the tank drawn steel, reinforced, tinned inside and out, and fitted with patented cushion band at base making it leak proof and rust proof. The pump produces air pressure quickly and the

large funnel fitted with dust proof cap makes the tank easy to fill. A pair of coppers up to 12 pounds can be quickly heated and a 6-inch pot of metal melted at the same time.

Price, No. 80. each \$30.30

No. 12 C & L Coil Fire Pots

For Gasoline

Tank is made of heavy gauge seamless drawn steel, tinned inside and out, and fitted with cushion protection band at base of tank.

No. 12 fire pot has brass ears, elbows, and tees, air valve and bulb, large funnel, and filler plug with dust-proof cap, three-piece coil cup and top plate which enables the operator to remove top section by unscrewing three large nuts, exposing the burner and coil.

No coil cup lugs or small nuts to burn off.

Capacity, one gallon.

Price, No. 12. each \$20.20

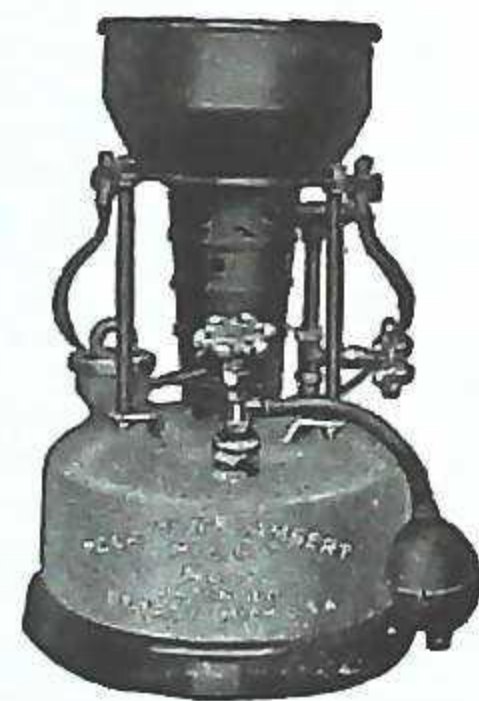


Fig. 3023

No. 22 C & L Fire Pots

For Gasoline



Fig. 3024

The tank is made of heavy gauge seamless drawn steel, tinned inside and out, and fitted with cushion protection band at base of tank.

It is supplied with brass ears, elbows, and tees, plunger pump on tank, large funnel, and filler plug with dust-proof cap and three-piece coil cup and top plate.

The three-piece coil cup and top plate enables the operator to remove top section by unscrewing three large nuts, exposing the burner and coil.

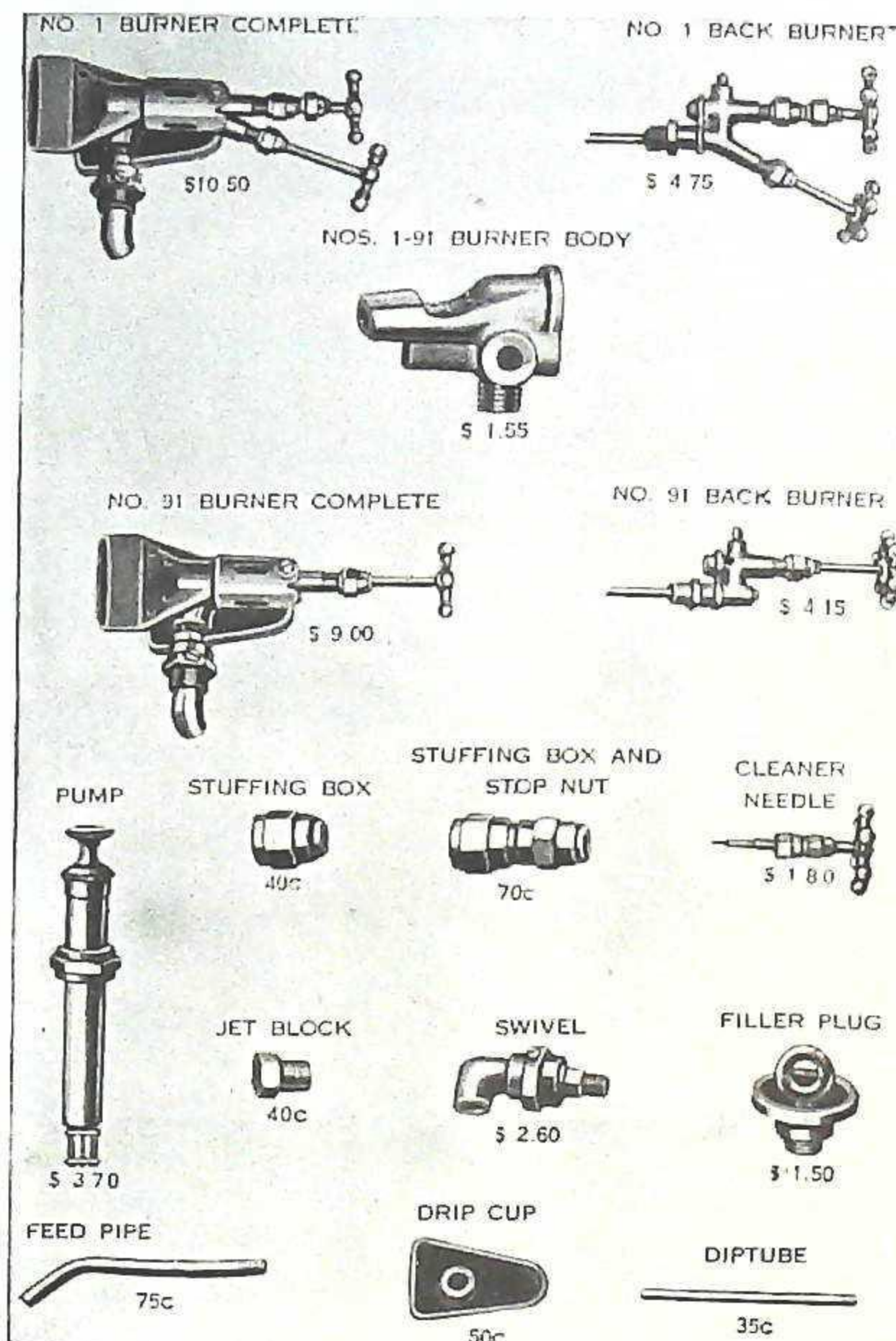
No coil cup lugs or small nuts to burn off.

Capacity, one gallon.

Price, No. 22. each \$15.00

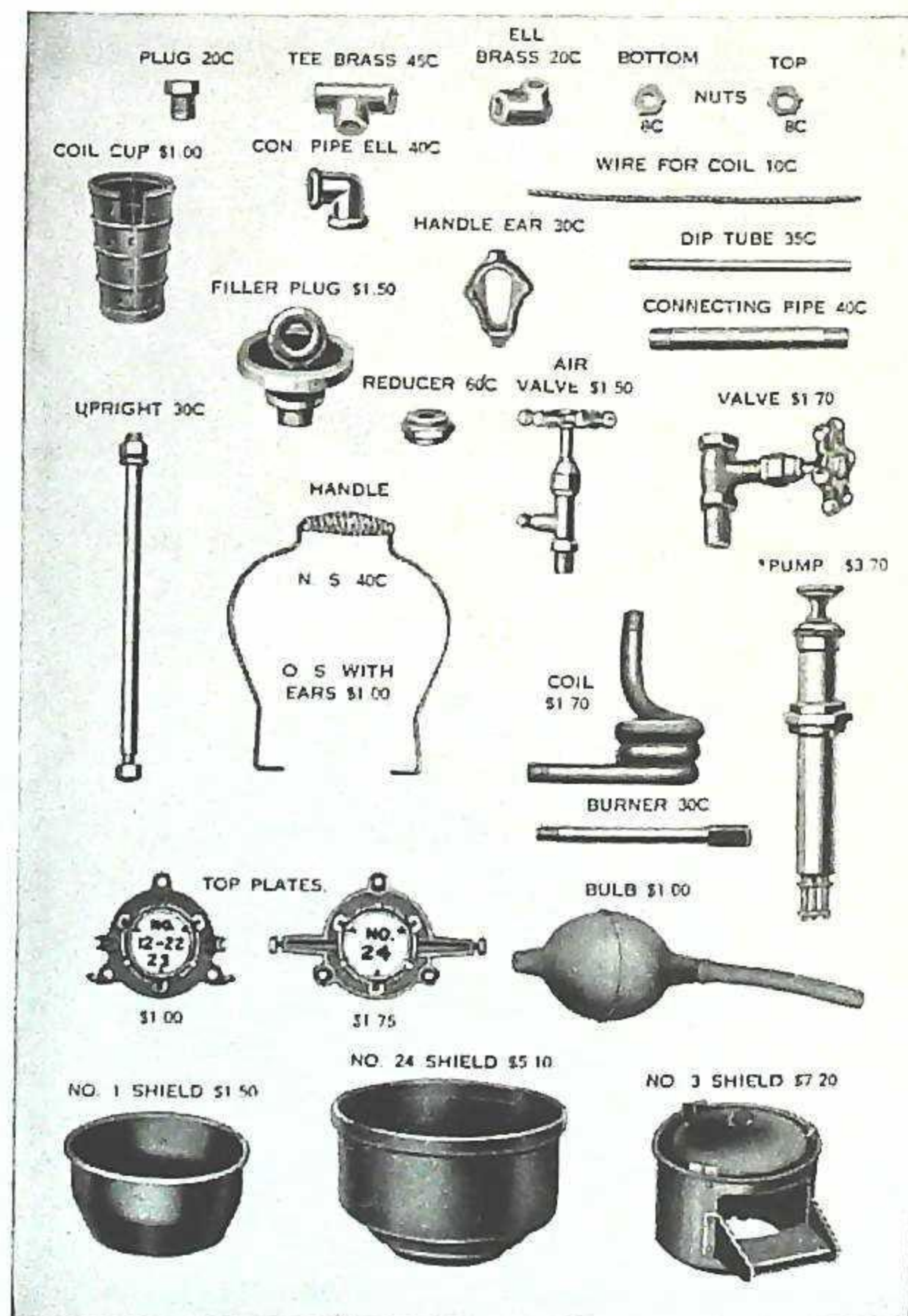
Repairs for C & L Fire Pots

Nos. 1 and 91, for Gasoline



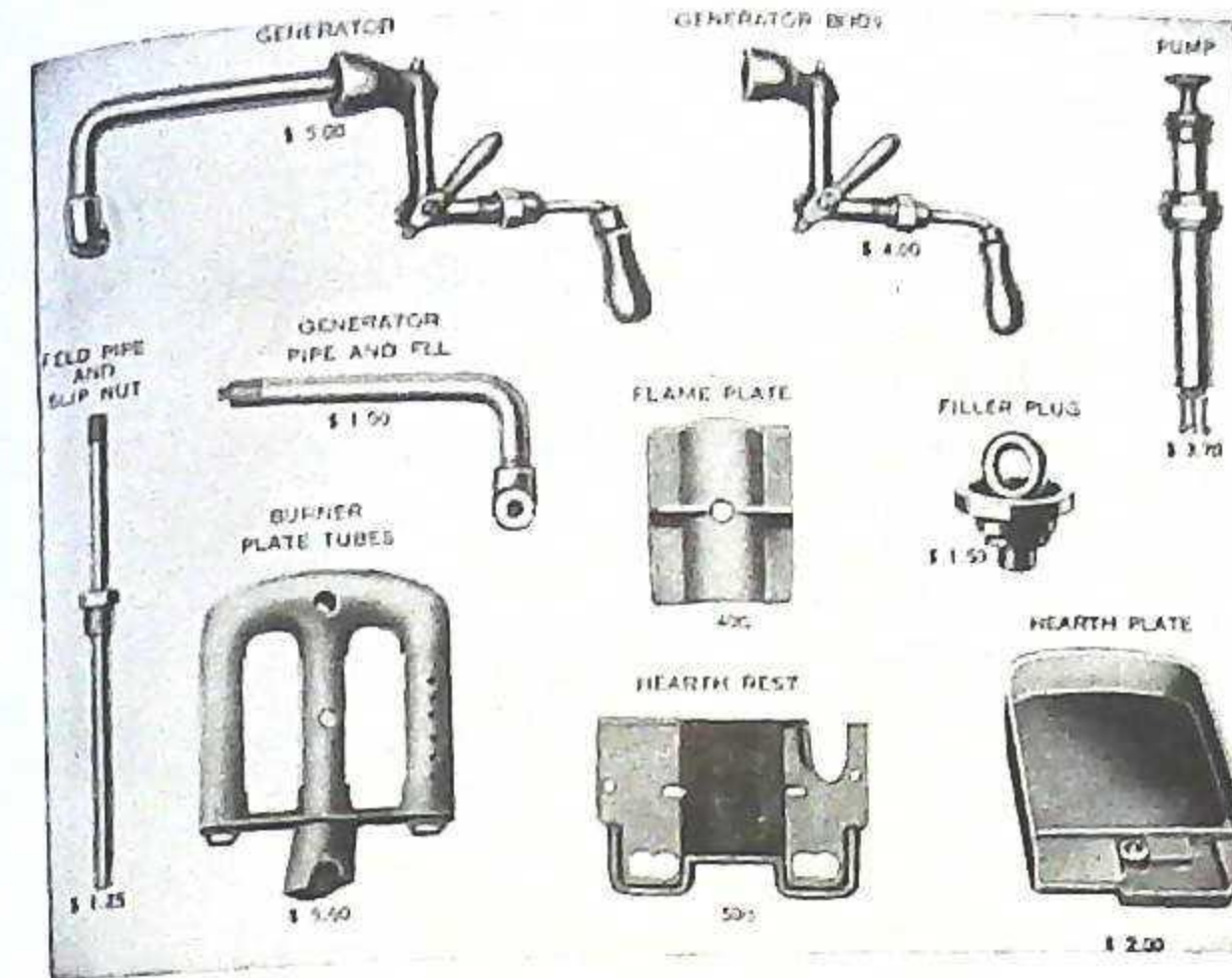
Repairs for C & L Fire Pots

Nos. 12, 22, 23 and 24, for Gasoline

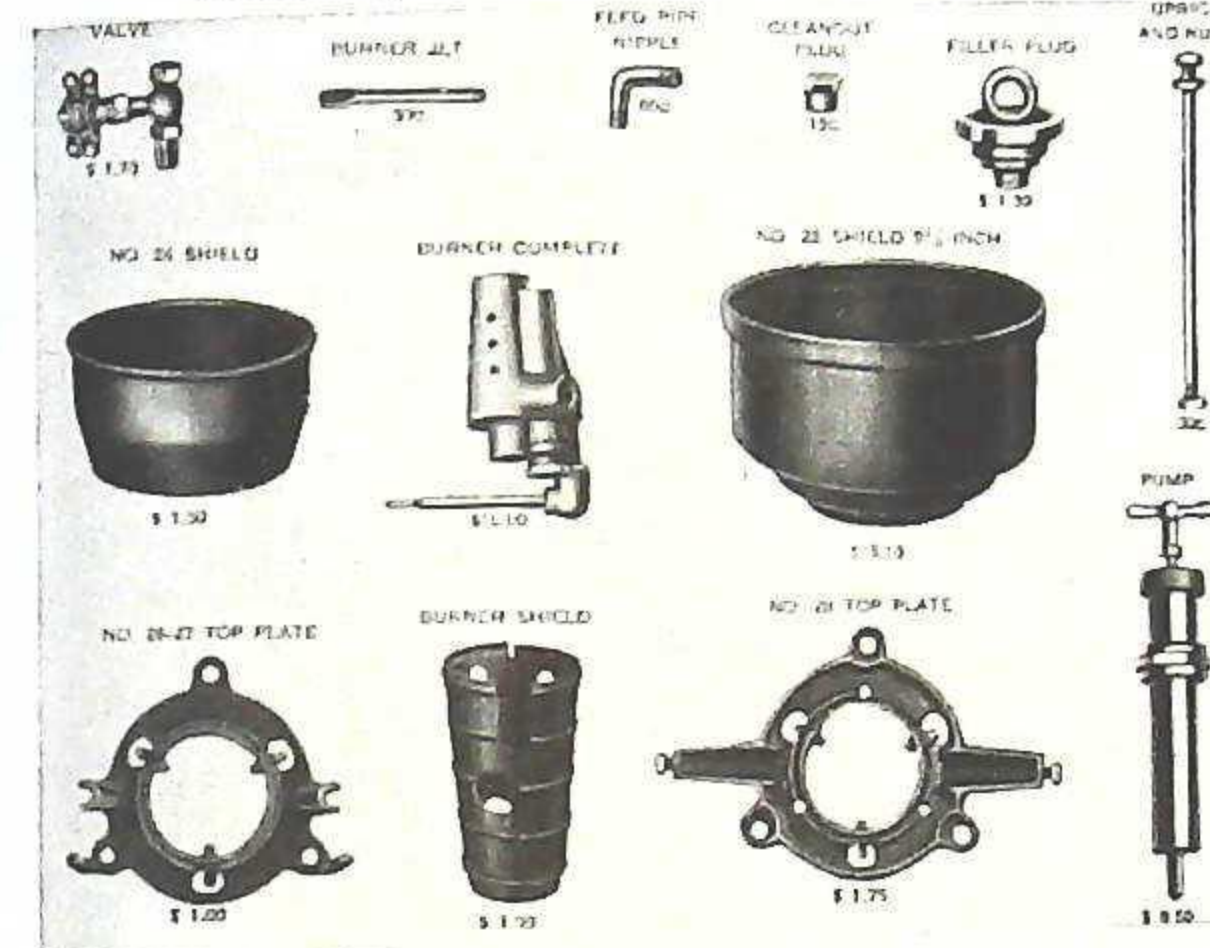


Repairs for C & L Fire Pots

No. 80, for Gasoline

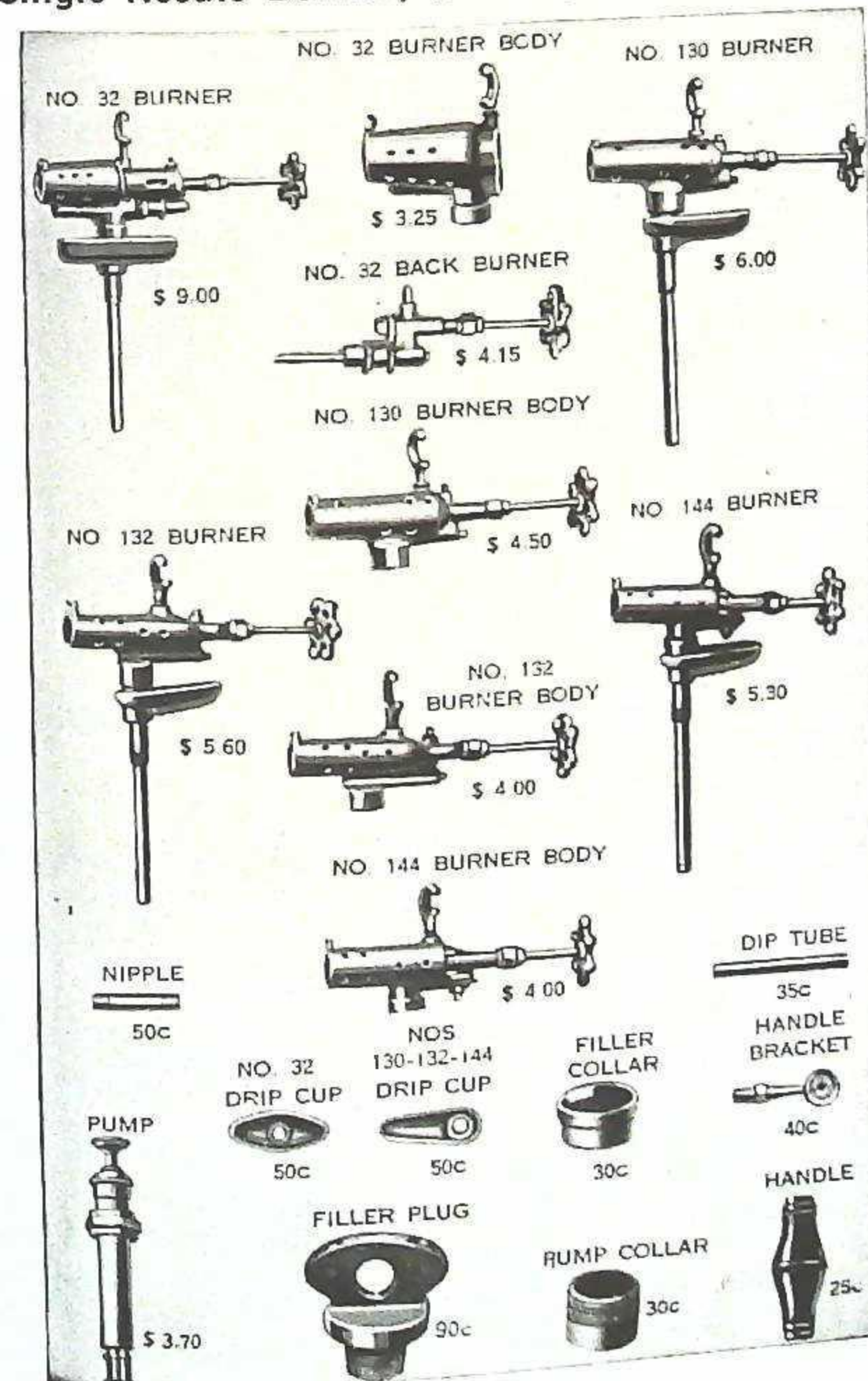


Nos. 26, 27 and 28, for Kerosene



Repair Parts for C & L Torches

Single Needle Burner, Nos. 32, 130, 132 and 144



No. 39 Dietz Standard Railroad Lanterns

For Signal Oil

Has solid metal bell bottom, removable globe and oil pot, outside wick raiser and globe guard. Tinned steel.

Height Over All inches 10
Volume of Light by Test c.p. 2
Size of Wick inches 1
Fount Capacity hours 24

*Regular Burner, Extra Special Ratchet, No. 1
Price, Frame only, with No. 1 Burner per dozen \$21.60

With White Globe

Price, with Heat Resisting Globe per dozen \$28.50
Price, with Lime Globe. 24.00

*For kerosene, with No. 1 Special Convex Burner, 3/8-inch wick only.



Fig. 3031

No. 2 Dietz D-lite Lanterns

Cold Blast—For Kerosene

Fitted with a D-Lite-Loe-Nob globe, having wide openings, into which the hand may be inserted with ease for cleaning. Has the new Dietz braced lift guide and reinforced tubes.

Height Over All in. 13 1/4
Volume of Light by Test c.p. 10
Size of Wick in. 1
Fount Capacity hrs. 20
Patented Steel Burner No. 262

With White Globes

Price, Bright Tin. per doz. \$20.00
" Brass Fount and Top " 28.00

With Ruby, Blue or Green Globes

Price, Bright Tin. per doz. \$23.10
" Brass Fount and Top " 31.10



Fig. 3032

No. 2 Dietz Large Fount Blizzard Lanterns

Cold Blast—For Kerosene

Has an enlarged fount, which holds kerosene for 35 hours continuous burning. Oil used, 150.

Bead reinforced tubes, a specially braced globe lift and Dietz Loe-Nob globe. Bright tin finish.

High candle power and long burning qualities make the Large Fount Blizzard popular.

Height Over All in. 15
Volume of Light by Test c.p. 10
Size of Wick in. 1
Fount Capacity hrs. 35

With White Globes

Price, No. 2 per doz. \$22.00

With Ruby, Blue or Green Globes

Price, No. 2 per doz. \$25.10



Fig. 3033

No. 2 Dietz Blizzard Lanterns

Cold Blast—For Kerosene

Cold blast. Oil used, 150° kerosene. Fitted with Dietz Blizzard-Fitzall Loe-Nob globes. Bright tin finish.

Height Over All in. 14 3/4
Volume of Light by Test c.p. 10
Size of Wick in. 1
Fount Capacity hrs. 20
Patented Steel Burners No. 1 262

With White Globes

Price, Bright Tin. per doz. \$20.00
" with Brass Fount and Top per doz. 28.00

With Ruby, Blue or Green Globes

Price, Bright Tin. per doz. \$23.10
" with Brass Fount and Top per doz. 31.10

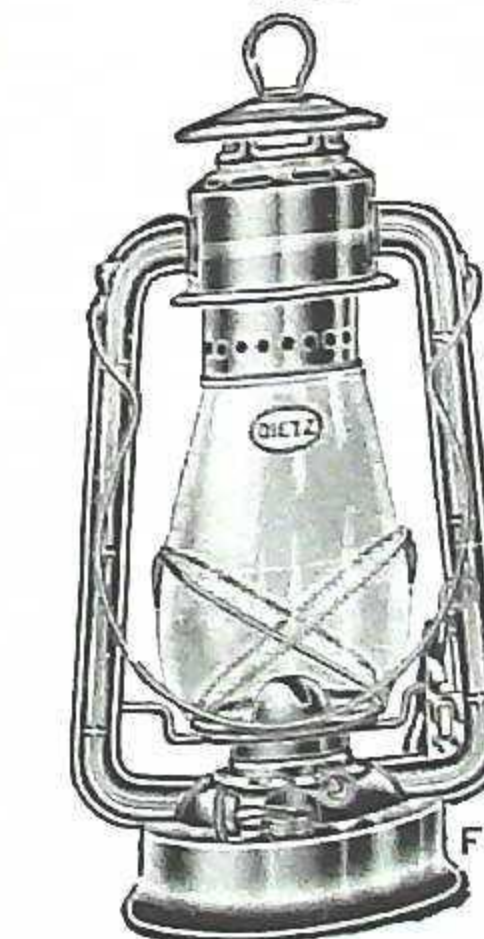


Fig. 3034

Steel Tool Chests



Made from 1/16-inch cold rolled sheet steel with malleable iron corner pieces and hard wood braces. Fitted with heavy wrought iron hinges and hasp, with cover so arranged as to be held open by support from the back of chest.

Each chest is furnished with a first-class brass lock and two keys and bolts to screw down cover at

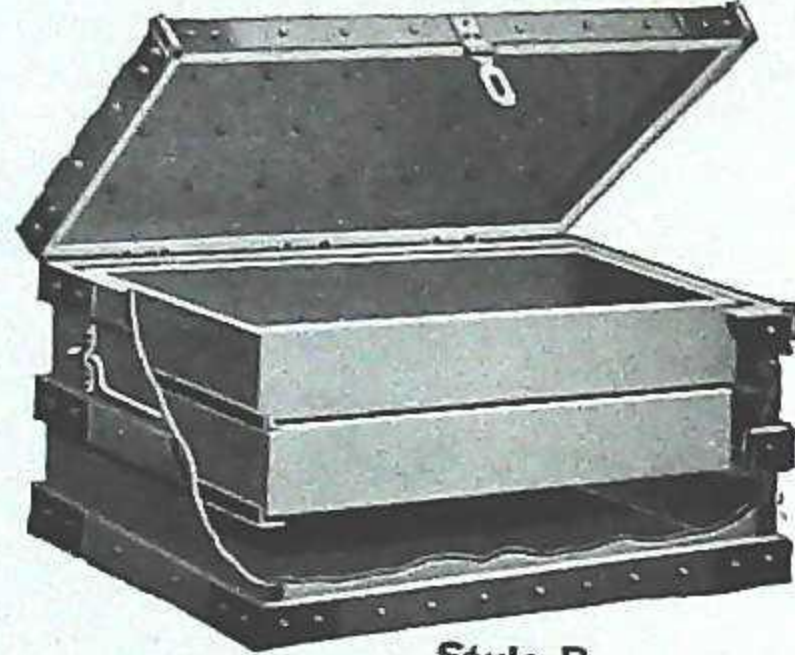
Style A
Fig. 3041

front corners. Numbers 3, 4, and 5 have handles on four sides.

Style A has either one or two drawers. Sent with one drawer unless specified with two.

Style B sent with two trays unless ordered with one.

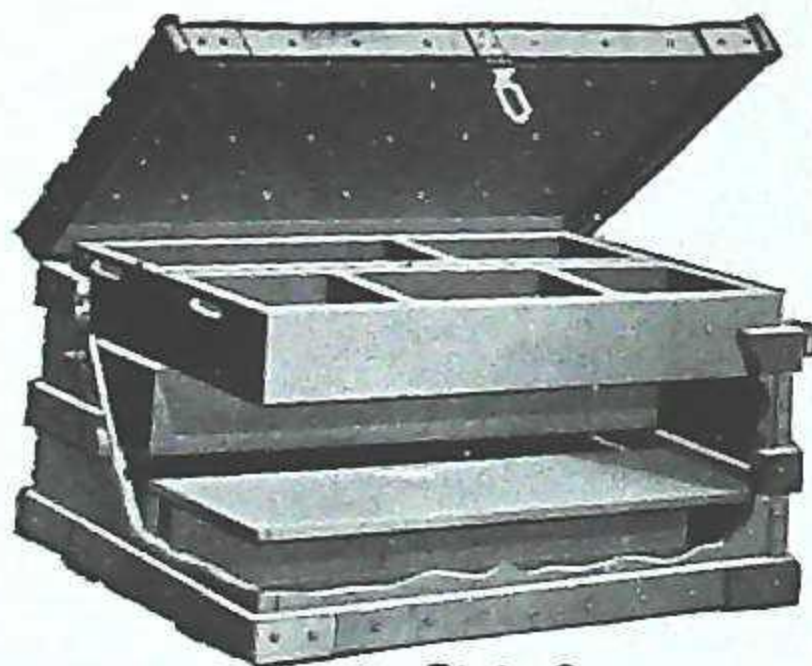
This chest is lighter and stronger than a wood chest.



Style B
Fig. 3042

No.	DIMENSIONS, INCHES			PRICE, EACH			
	Length	Width	Depth	Style A One Drawer	Style A Two Drawers	Style B One Drawer	Style B Two Drawers
1	24	12	11	\$26.00	\$30.00	\$27.00	\$32.00
2	30	15	14	35.50	39.00	38.00	42.00
3	36	17	16	39.00	42.00	43.00	47.00
4	42	20	19	45.50	47.00	48.00	52.00
5	48	22	20	51.00	55.00	53.00	58.00

Steel Tool Chests



Style C
Fig. 3043

Made from 1/16-inch cold rolled steel with malleable iron corner pieces and hard wood braces. Fitted with heavy wrought iron hinges and hasp, with cover so arranged as to be held open by support from the back of chest.

Furnished with a first-class brass lock and two keys, and bolts to screw down cover at front corners.

Style D is the same as shown in illustration. Style C has only one compartment.

Style C

No.	DIMENSIONS, INCHES			Price Each
	Length	Width	Depth	
0	24	12	11	\$22.50
1	30	12	11	26.00
2	36	12	11	31.00
3	42	12	11	36.00
4	48	12	11	41.50
5	54	12	11	45.00
6	60	12	11	50.00
7	66	12	11	54.00
8	72	12	11	58.00

Style D

No.	DIMENSIONS, INCHES			Price Each
	Length	Width	Depth	
1	24	12	11	\$33.00
2	30	15	14	44.00
3	36	17	16	48.00
4	42	20	19	54.00
5	48	22	20	60.00

Engineers' Favorite Flue Cleaners

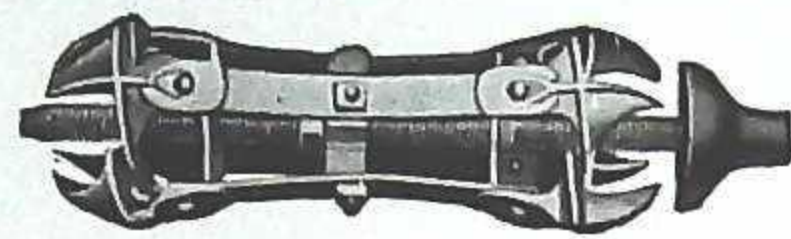


Fig. 3044

O. D. Tube In.	Price Each	O. D. Tube In.	Price Each
1 1/2	\$2.00	3	\$3.00
1 3/4	2.00	3 1/4	3.25
2	2.00	3 1/2	3.50
2 1/4	2.25	3 3/4	3.75
2 1/2	2.50	4	4.00
2 3/4	2.75	...	...

Ingalls Flue Cleaners

Size Inches	Price Each	Size Inches	Price Each
1 1/2	\$2.00	3	\$3.00
1 3/4	2.00	3 1/4	3.25
2	2.00	3 1/2	3.50
2 1/4	2.25	3 3/4	3.75
2 1/2	2.50	4	4.00
2 3/4	2.75	4 1/2	4.50

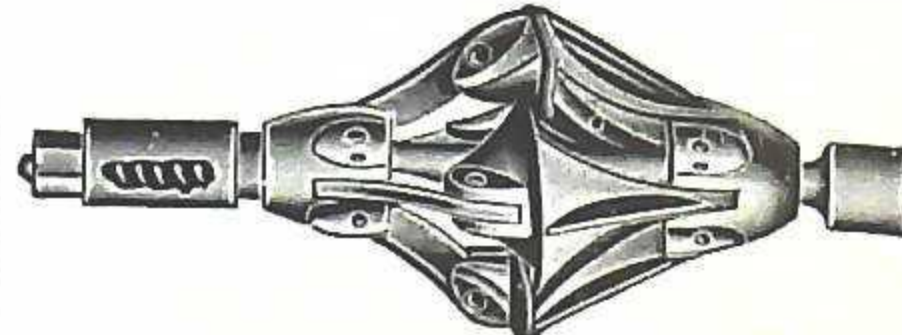


Fig. 3045

Ruggles Perfection Flue Cleaners



Fig. 3046

This cleaner is light, strong and simple, and the knives are so made that they are always sharp. Heads are steel drop forgings. Will clean welded flues

as nicely as old ones, and remove the scales from tube without cutting the metal. Cleans hot or cold flues without changing the temper. It has no screws nor rivets in its construction. Can be operated by a flexible handle, thus permitting its use in small fire rooms or where space is limited.

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
1 1/4-2	\$2.00	2 3/4	\$2.75	3 1/2	\$3.50	5	\$6.00
2 1/4	2.25	3	3.00	4	4.00	...	...
2 1/2	2.50	3 1/4	3.25	4 1/2	5.00	...	...

Criss Cross Tube Cleaners



Fig. 3047

Flexible and self-conforming.

It has a multitude of cutting edges placed at right angles to the surface of the tube. Requires no brush attachment.

For Tubes O. D. Inches	Price Each	For Tubes O. D. Inches	Price Each	For Tubes O. D. Inches	Price Each
1 1/4	\$2.00	2 1/2	\$2.50	3 3/4	\$3.75
1 1/2	2.00	2 3/4	2.75	4	4.00
1 3/4	2.00	3	3.00	4 1/2	4.50
2	2.00	3 1/4	3.25	5	5.00
2 1/4	2.25	3 1/2	3.50	6	6.00

Combination Flue Scrapers and Brushes

Brush can be renewed if scraper outlasts it.

Sizes: 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4 and 4 1/2 inch. Price per inch \$1.25 Minimum .2-inch size each \$2.50

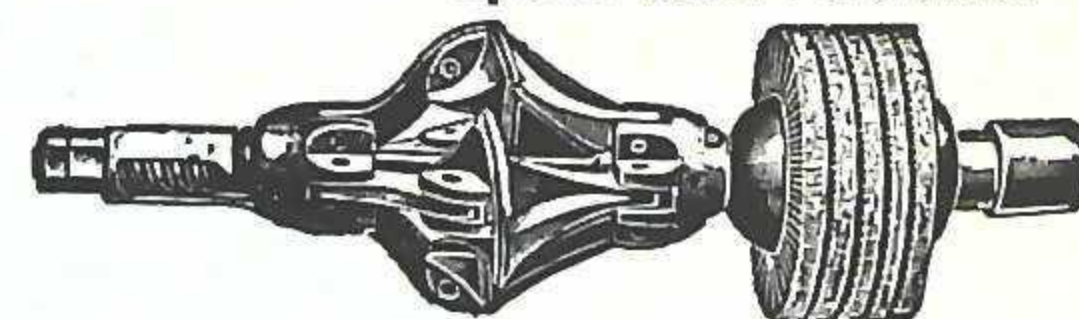


Fig. 3048

Pilley's Elliptical Scrapers



Fig. 3049

Fits tubes from 1 1/2 to 6 inches. Price per diam. in. \$1.00 Sizes smaller than 2 inches same price as 2-inch.

Cyclone Steam Flue Cleaners for Horizontal Boilers

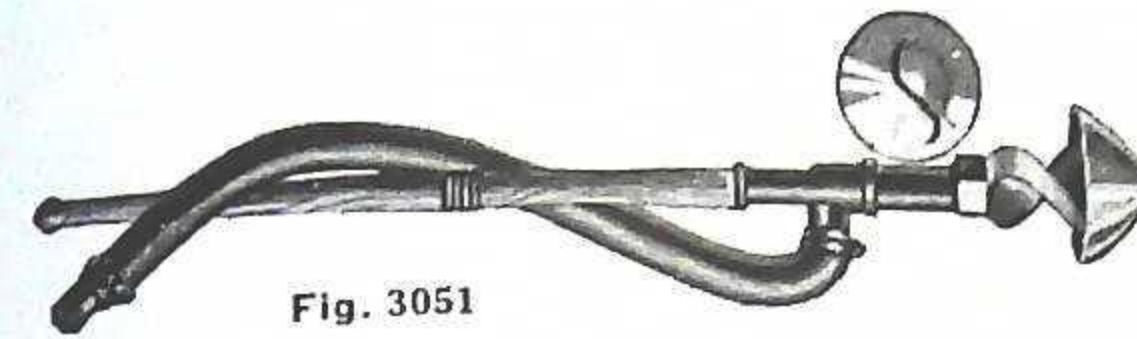


Fig. 3051

The Cyclone Steam Flue Cleaner is simple in construction and operation. Steam is taken from the dome of boiler through a steam pipe with globe valve, to which is attached the steam hose by a malleable coupling furnished with the cleaner.

When the steam is turned on, the operator sweeps off the face of the boiler and then directs the nozzle into the tubes. The dry column of steam under pressure of 70 to 150 pounds is presented to the tubes in a solid, unbroken, flat sheet with cyclonic motion, through their entire length, thereby removing all soot, scale or gums down to the iron.

The head of the steam nozzle is cast in steel with a mushroom shape, which excludes cold air and is provided with an auger shaped steam passage of the exact area of steam supply pipe and hose.

No.	Steam Hose Diam. In.	For Tubes Outside Diameter Inches	Price, Each			Steam Hose Price per Ft.
			Equipped but without Hose	Equipped 10-foot Hose Incl.	Extra Heads Only	
1	3/4	1 1/4 to 2 1/4	\$20.00	\$31.00	\$15.00	\$1.10
2	3/4	2 1/2 " 3 1/2	22.00	33.00	16.00	1.10
3	1	4 " 5	25.00	38.00	18.00	1.30

Spiral Tube Brushes



Fig. 3052

Made either of steel wire or whalebone. Sizes, 1 to 6 inches. Price per inch \$1.50

Round or Flat Wire Spiral Flue Brushes



Fig. 3053

Steel wire, single or double spiral. Length of brush, five inches. Furnished in any diameter from 1 to 6 inches.

Price per inch diameter \$1.00

Coil Brush and Scraper

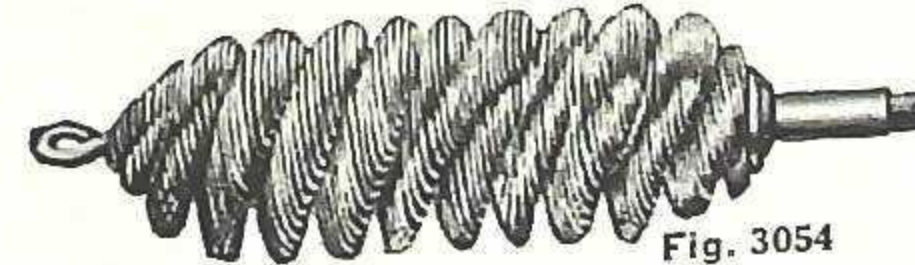


Fig. 3054

Made in all sizes from 1 1/4 to 4 inches. Price per diam. inch \$1.00 Sizes smaller than 2 inches same price as 2-inch.

Boiler and Heater Brushes

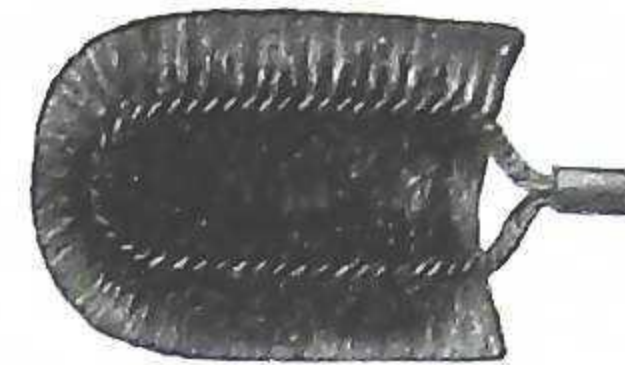
Rectangular

No.	Brush In.	Nipple In.	Price Each
1900	1 1/2 x 4	1 x 2 1/2	\$1.00
1901	2 1/2 x 6	1 x 2 1/2	1.50
1902	3 1/2 x 6	1 x 2 1/2	2.00



Fig. 3055

No. 1903 Boiler and Heater Brushes



Flat

Size of brush, 1 3/4 x 4 x 5 1/2 inches; nipple, 1 1/4 x 2 1/2 inches.

Fig. 3056

Price, No. 1903 each \$1.50

Boiler and Heater Brushes

Square



Fig. 3057

No.	Brush In.	Nipple In.	Price Each
1915	2 x 4 x 1 1/2	1 1/4 x 2 1/2	\$1.40
1916	3 x 5 x 1 1/2	1 1/4 x 2 1/2	1.70

No. 1928 Boiler and Heater Brushes



Square

No.	Description	Price, Each
1928	Square, 3 1/4 x 5 In., 1-in. Wires, 1/4 x 4 Nipple	\$1.50

Boiler and Heater Brushes

Oval

No.	Brush In.	Nipple In.	Price Each
1910	2 x 4 x 1 1/2	1 1/4 x 2 1/2	\$1.20
1911	3 x 5 x 1 1/2	1 1/4 x 2 1/2	1.50

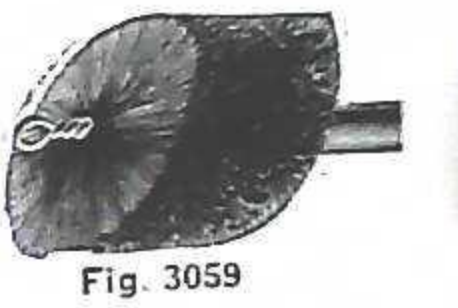


Fig. 3059

No. 150 Wiedeke Standard Sectional Tube Expanders



Fig. 3059A

This expander is made of good tool steel, tempered, and is for hand use only. When ordering sectional expanders, always state what size plate is wanted.

This expander is furnished with round pins and coil steel springs only.

For thrasher boilers having tube sheets 5/8, 11/8 or 3/4 inch thick, the 3/8-inch plate is generally required. For repair work where tube sheets are generally 7/8, 1 1/8 or 1/2 inch thick, the 1/2-inch plate is generally required and is considered standard.

Table shows the smallest inside diameter each expander passes into.

Size of Expander for O.D. Tubes, In.	Will Enter and Expand Tubes I.D. from, Inches	Approx. Weight Boxed Pounds	PRICE, EACH		
			Expander Complete	Extra Pins	Extra Coil Steel Springs
1	1 1/8	3	\$12.00	\$2.50	\$.40
1 1/4	1 1/4	3 1/2	12.00	2.50	.40
1 1/2	1 3/8	4	12.00	2.50	.40
1 3/4	1 1/2	4 1/2	12.00	2.50	.40
2	1 3/4	5	13.00	2.50	.40
2 1/4	1 5/8	5 1/2	15.00	3.00	.40
2 1/2	2	7	18.00	5.00	.75
2 3/4	2 1/8	8 1/2	22.00	5.00	.75
3	2 1/4	9 1/2	26.00	7.00	1.00
3 1/4	2 3/8	13 1/2	30.00	7.00	1.00
3 1/2	2 1/2	14	33.00	7.00	1.00
4	3 1/8	16			

Crescent Planers

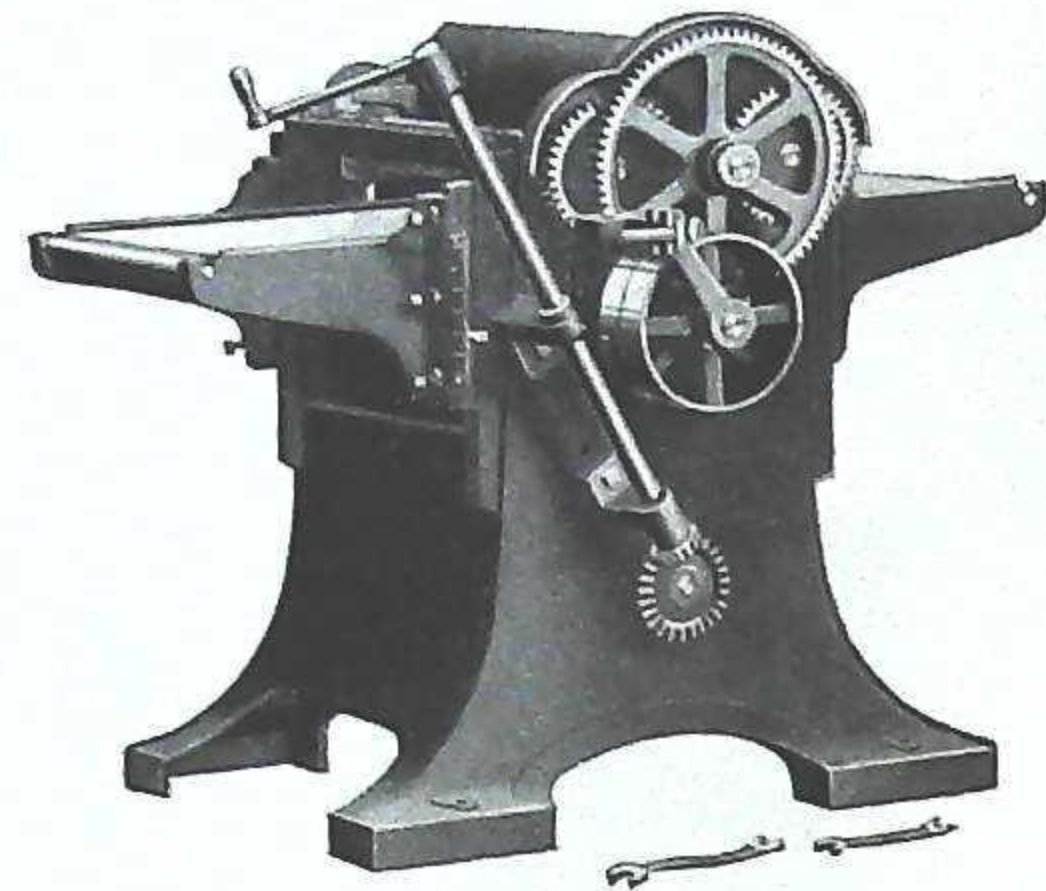


Fig. 3081

These two sizes of Crescent Planers are identical in design and detail, the only difference being the different widths. The machines are of compact design, occupying a small amount of floor space, yet they are so well made and carefully designed, that they answer the requirement of the average user.

The feed is driven from a pulley on the countershaft to a pair of tight and loose pulleys on the machine. A convenient belt shifter is provided on the machine for starting and stopping the feed. The rate of feed is 25 feet per minute.

The machine is not made with lower rolls driven, the upper rolls only being driven. The upper rolls are hung with springs. The front and rear rolls are 10 inches apart from center to center and are 2 3/8 inches in diameter, made of solid steel.

A guard rail is placed in front of the upper front roll to prevent accident to operator, when feeding short stock.

The countershaft may be belted in any direction to line shaft—above or below; to front or to rear.

The frame is cast in one piece, making it strong and stiff; it cannot get racked out of alignment.

The bed is gibbed direct to the body of the frame. An idler roller is placed at each end of the bed. The top of bed is planed off all over, having ledges at sides to hold the lumber within the limits of the knives.

The chip-breaker and pressure bar are placed as close to the knives as possible, so that extremely short stock may be worked.

The heads are milled from a solid bar of steel, of a proper grade of carbon, carefully balanced and with bearings ground absolutely true and smooth. All heads are square, with two knives.

The rolls are milled from solid bar steel, finished and machined all over, the upper in-feeding roll being corrugated, the others having face ground true and smooth.

The bearings for the head are cast solid with the frame and are entirely free from complication. They are filled with the best grade of high-speed babbit. The drive pulley is close up to the bearing, avoiding overhang.

The gears are machine-molded from cut patterns, faced off on side. The teeth are shaped and spaced accurately correct, and running at slow speed are therefore noiseless. All gears are amply covered with guards to prevent accident. Gear cases do not need to be removed for oiling.

Each machine is furnished with one countershaft having self-oiling loose pulley, one pair of two knives and two wrenches.

No.	118	124
Width and Thickness Will Plane	17 3/4 x 6	23 3/4 x 6
Length of Table	44	44
Width of Drive Belt	4	4
Diameter of Pulley on Head	4	4
Size of Tight and Loose Pulley	10x5	10x5
“ “ Drive-pulley on Countershaft	20x4	20x4
Speed of Countershaft	825	825
Giving Head a Speed of	4000	4000
Size of Bearings on Head	5x1 1/2	5x1 1/2
Width of Feed Belt	2	2
Floor Space, Exclusive of Countershaft	44x45	44x51
Horsepower Required	5 to 7	7 to 10
Shipping Weight	1250	1400

Prices upon application.

American Contractors' Portable Variety Woodworkers

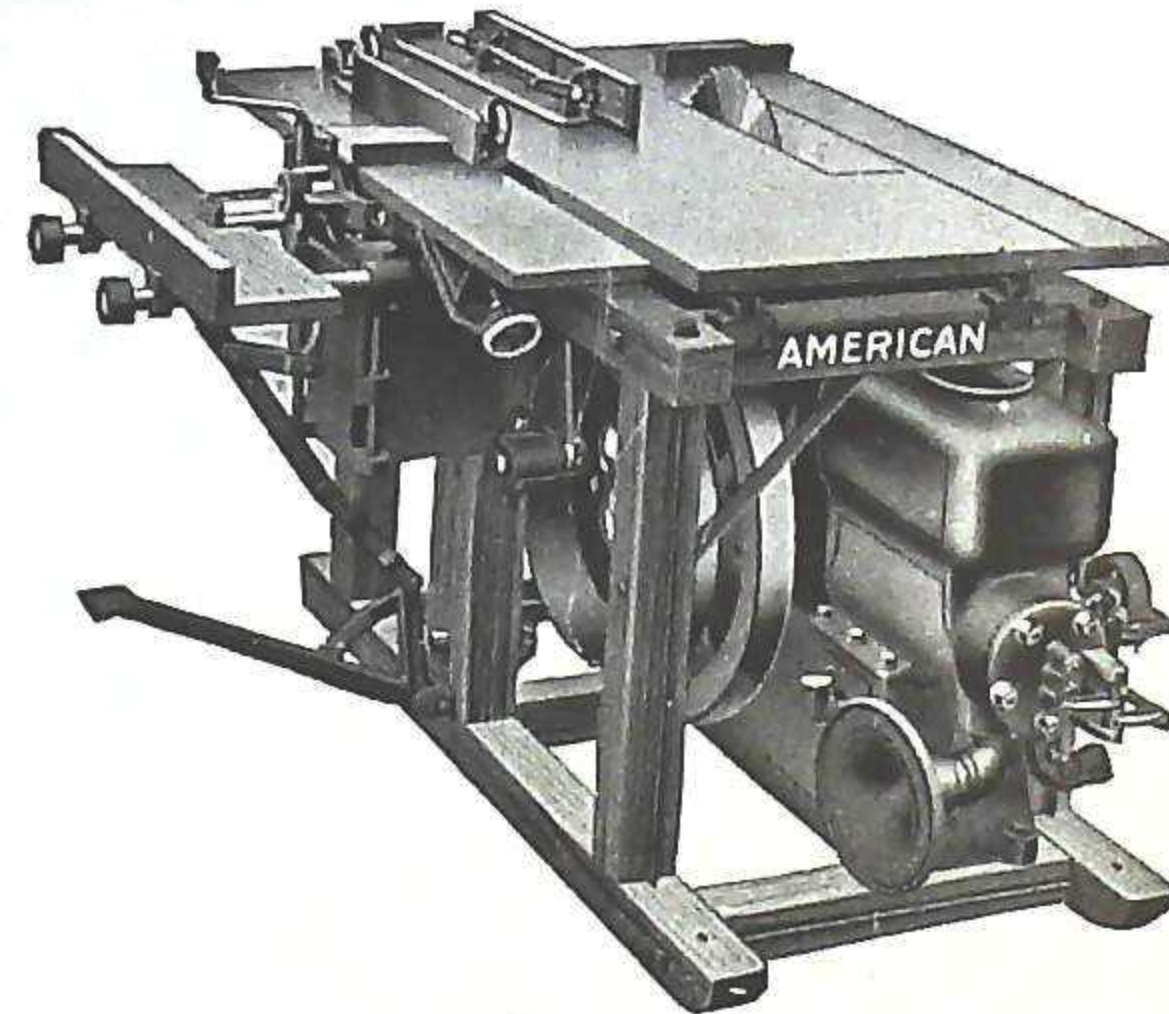


Fig. 3082

With 5 H. P. Engine Built In

Machine consists of a combined rip and cut-off saw bench, with boring attachment, hollow chisel mortiser and 8-inch jointer. Supplied with gasoline or kerosene engine mounted in the frame directly under the table or set back of machine on separate skids and belted direct to arbor. Can be furnished without power, and with or without countershaft as desired. Can also be furnished with electric motor if desired.

Frame is made of seasoned hardwood, and top is iron, 54x30 inches, accurately planed and strongly hinged to the rear of the frame. Readily raised and lowered by hand screw and firmly held in any position by side clamps. Is independent of the jointer tables and neither interferes with the other.

Adjustable ripping gauge is furnished, which has a tilting fence for bevel sawing. Has a rapid, fine adjustment and a locking device for securing it at any point. Opens back 15 inches from the saw.

Cut-off gauge slides in an accurately planed groove the entire length of the table, and can be set to cut squares, mitres, or any angle desired.

Jointer or planer is separate from top of machine, and always ready for use, without changes. Safety jointer head is of steel fitted with 8-inch knives and arranged to receive matcher bits or moulding cutters for working a large variety of shapes. Tables are 43 inches long and adjustable to any position. Adjustable fence is provided, which tilts to any bevel for chamfering, etc. Jointer head is removable to permit using sander drum under jointer tables.

The hollow chisel mortiser-boring attachment is one of the most valuable features of this machine. It will work mortising bits from 3/8 to 3/4 inch and cuts a clean, smooth mortise with square corners and accurate to size. The table has a vertical adjustment of 3 1/2 inches, and a travel of 4 inches in line with the spindle, and is provided with a foot treadle for feeding the work to the bit and a coil spring for the return motion. This attachment is used as a plain borer by simply removing the mortising chisel and substituting a regular power boring bit. When so used the table can be given a stroke of 6 inches in line with the spindle by changing the pin in the link under the table.

Scroll saw furnished when desired at an extra charge.

The engine is 5 horse power, of the four-cycle, water cooled type, and is furnished with usual equipment, including magneto.

The attachments furnished with each machine are: 6-inch emery wheel with arbor, 9-inch sander disc, two auger bits, two dado or grooving heads, one 14-inch cut-off saw, one 14-inch rip saw, two nosing bits, one 8-inch jointer head with knives, one sander drum and one 3/8-inch hollow mortising bit; also four scroll saw blades for the scroll saw attachment, when ordered. Fourteen-inch saw projects through table 4 inches.

Prices upon application.

Crescent Universal Woodworkers

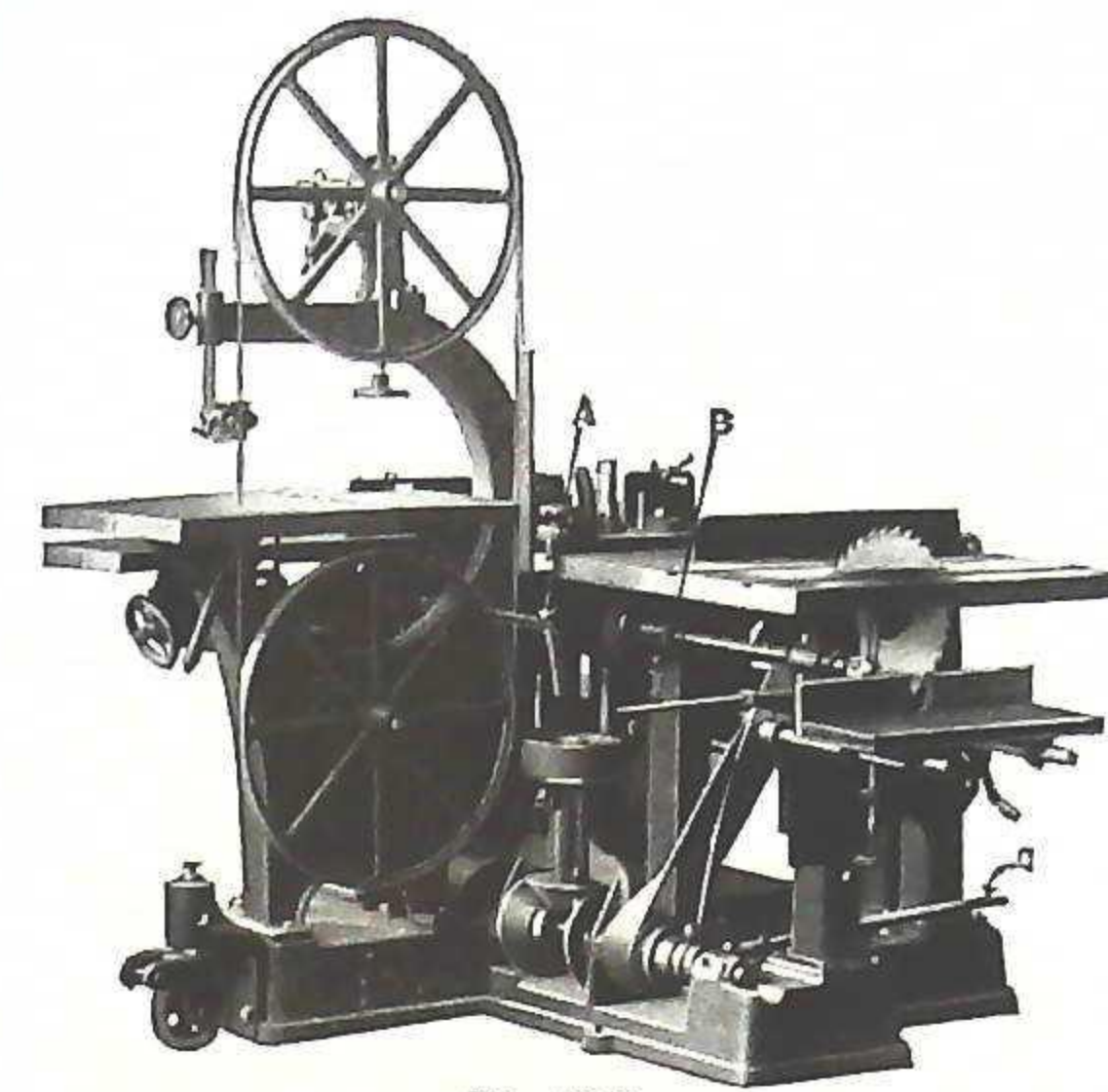


Fig. 3091

This machine is a combination of machines each independent of the other, arranged compactly and self-contained, so that all are driven by one main belt from the line-shaft. There are no separate countershafts, but the machine has two drive shafts, so located on the base of the machine as to be entirely out of the way, the separate machines being driven from these two drive shafts. Each machine is started and stopped independently with its own lever.

There are five units proper to the completed machine, a band-saw, a jointer, a shaper, a saw-table and a borer. The machine is not sold with any of these omitted, except the band-saw.

By means of the special attachments, the machine is adaptable as a re-saw, hand-feed molder, tenoner, panel-raiser, pole-rounder, disk-grinder, knife-grinder, plain grinder and hollow-chisel mortiser.

EQUIPMENT OF REGULAR MACHINES.—The jointer is equipped with a pair of (two) knives, one fence, one hold-down spring, one jointer guard and one wrench. The shaper is equipped with a pair of 2-inch straight knives, two guide pins, collars to fill the spindle, two throat collars, one wrench, one hold-down spring, one hold-over spring, one short fence and one pin to hold spindle. The saw table is equipped with one 12-inch rip saw, one ripping fence and one cut-off fence. The borer is equipped with a self-centering chuck and sliding table. The band-saw (if band-saw is included) is equipped with one Wright's Guide, one plain guide, one brazing clamp, one brazing tongs and one saw blade. Leather belting is included, for driving each of the machines from the drive shafts on the machine. The expense of installing and belting up a lot of countershafting is eliminated. The main drive belt from line shaft to main drive pulley on the machine is not included. When machine is ordered with motor, a suitable starter is included.

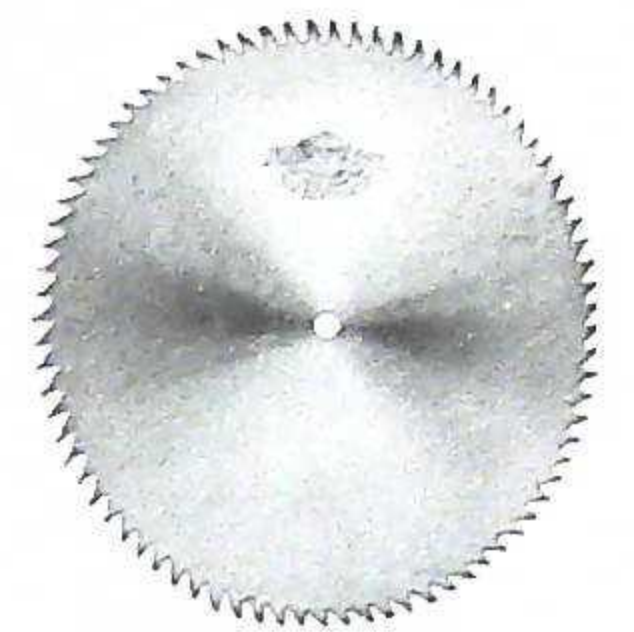
No.	Size of Jointer In.	Size of Band Saw In.	Floor Space Over All In.	Floor Space when Borer is Removed In.	Ht. Over All In.	Size of Main Drive Pulley In.	Speed of Pulley R.P.M.	Wt. Lbs. Each
51	8	26	75x80	75x63	78	10x6	1120	3200
52	8	32	83x80	83x63	87	10x6	1120	3300
53	8	None	68x80	68x63	42	10x6	1120	2900
54	12	26	75x86	75x68	78	10x6	1120	3325
55	12	32	83x86	83x68	87	10x6	1120	3425
56	12	None	68x86	68x68	42	10x6	1120	3025
57	16	26	75x90	75x73	78	10x6	1120	3450
58	16	32	83x90	83x73	87	10x6	1120	3550
59	16	None	69x90	68x73	42	10x6	1120	3150

Prices and full information on application.

Simonds Solid Tooth Circular Saws



Rip
Fig. 3092



Crosscut
Fig. 3093

All saws filed and set ready for use.

Diam. In.	Thickness Gauge	Size Hole In.	Price Each	Price Extra for Each Gauge Heavier	Price Beveling New Saw per Gauge
6	18	3/4	\$3.30	\$.07	\$.25
8	18	7/8	4.40	.10	.35
10	16	1	5.60	.20	.45
12	15	1	7.00	.30	.55
14	14	1 1/4	8.50	.40	.65
16	14	1 1/2	10.50	.50	.75
18	13	1 3/4	12.50	.60	.90
20	13	1 5/8	15.00	.75	1.05
22	12	1 5/8	17.50	.90	1.20
24	11	1 3/4	20.50	1.05	1.35
26	11	1 3/8	24.00	1.25	1.55
28	10	1 1/2	28.00	1.50	1.75
30	10	1 1/2	32.00	1.75	1.95
32	10	1 5/8	36.50	2.00	2.15
34	9	1 5/8	41.00	2.25	2.35
36	9	1 5/8	47.00	2.60	2.55
38	9	1 5/8	54.00	3.00	2.75
40	9	2	62.00	3.40	2.95
42	8	2	71.00	3.80	3.25
44	8	2	83.00	4.40	3.55
46	8	2	98.00	5.15	3.85
48	8	2	112.00	5.90	4.15
50	7	2	127.00	6.65	4.45
52	7	2	142.00	7.40	4.80
54	7	2	157.00	8.20	5.15
56	7	2	180.00	10.25	5.50
58	7	2	200.00	11.75	5.95
60	6	2	224.00	13.25	6.40
62	6	2	250.00	14.75	6.85
64	6	2	280.00	17.60	7.35
66	6	2	310.00	22.00	7.85
68	5	2	350.00	26.40	8.45
70	5	2	400.00	30.80	9.05
72	5	2	450.00	35.20	9.65
74	5	2	510.00	39.60	10.30
76	5	2	575.00	44.00	11.00
78	5	2	690.00	49.85	11.85
80	5	2	810.00	55.75	12.90
82	5	2	940.00	63.05	14.10
84	5	2	1075.00	70.40	15.40

All saws less than 6 inches in diameter take list of 6-inch saw.

All saws of odd diameters not listed take list of next larger size.

No extra charge for saws one gauge thicker than list. No extra charge for saws one to three gauges thinner than list; when more than three gauges thinner than list add 5 per cent for each gauge.

Saws 48 inches and under, and 62 inches and over, in diameter, more than two gauges thinner than list; not warranted. Saws 52 inches to 60 inches in diameter thinner than 10 gauge not warranted.

Saws 42 inches or less in diameter beveled one gauge without extra charge; 44 inches or larger beveled two gauges without extra charge.

Saws hollow or concave ground, add for each gauge hollow or concave ground, double the list for beveling.

Saws for cutting bone, horn or ivory, add 50 per cent to the above list. When these saws are hollow or bevel ground, the 50 per cent advance is to apply only on the list of a straight gauge saw, and not on the extras for hollow or bevel grinding.

No. 25 Hoe New Improved Chisel Tooth Circular Saws

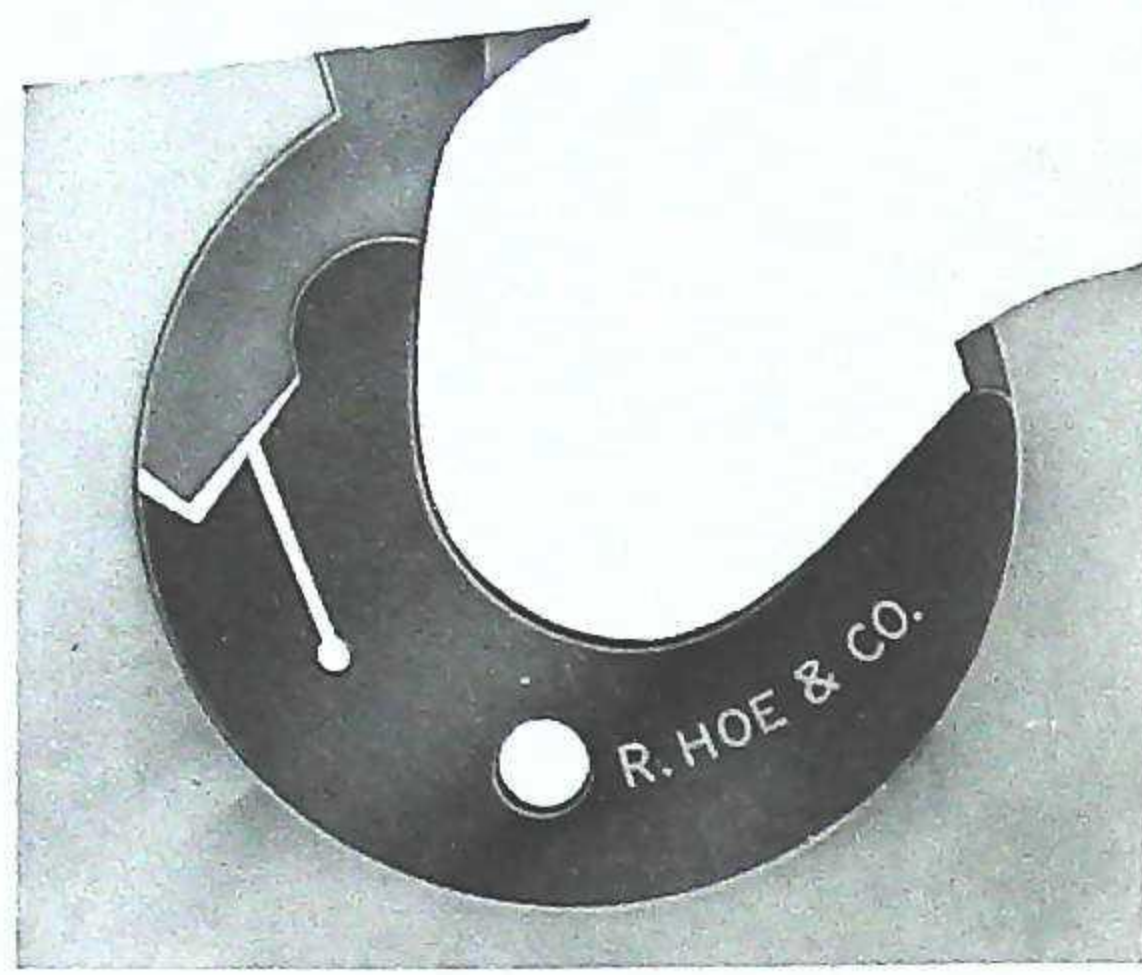


Fig. 3101

Designed especially for fast feeds. Good up to 40,000 feet per day.

The manner of locking bit in saw renders the bit itself rigid.

Backs of saws are made higher and strengthen rim of saw, at same time providing better bearing for bits.

The resting place on shoulder of saw for heel of bit is on a receding angle, so that part of strain in cutting is absorbed directly by shoulder of saw instead of falling entirely on head of shank. Head of shank, also, has been considerably enlarged and raised so as to grip bit at a point closer to the shoulder of saw, which further relieves shank of strain.

The throat of the bit is entirely rounded and the point tapered to a keener cutting edge, so that saw will cut easier. Bit is made heavier through throat, which gives it added strength.

One extra set of bits furnished with each saw.

Two extra shanks are supplied with saws up to 40 inches in diameter and three extra shanks with saws 42 inches in diameter and larger.

A wrench is included with each saw.

Diameter Inches	Gauge at Rim	Greatest No. of Teeth that Can be Put in Saw	PRICE, EACH		
			Complete Saw	Extra Bits	Extra Shanks
10	12	10	\$27.00	\$.44	\$.44
12	11	12	32.00	.05	.44
14	10	14	37.00	.05	.44
16	10	16	43.00	.05	.44
18	10	20	49.00	.05	.44
20	9	22	55.00	.05	.44
22	9	24	61.00	.05	.44
24	9	26	68.00	.05	.44
26	9	28	75.00	.05	.44
28	9	30	82.00	.05	.44
30	9	32	90.00	.05	.44
32	8	34	100.00	.05	.44
34	8	36	110.00	.05	.44
36	8	38	120.00	.05	.44
38	8	42	130.00	.05	.44
40	8	44	140.00	.05	.44
42	8	46	150.00	.05	.44
44	8	50	165.00	.05	.44
46	8	52	180.00	.05	.44
48	8	54	200.00	.05	.44
50	8	56	220.00	.05	.44
52	7	60	245.00	.05	.44
54	7	62	275.00	.05	.44
56	7	64	310.00	.05	.44
58	7	66	340.00	.05	.44
60	7	70	375.00	.05	.44
62	6	74	420.00	.05	.44
64	6	76	470.00	.05	.44
66	6	78	520.00	.05	.44
68	6	80	575.00	.05	.44
70	6	82	630.00	.05	.44
72	6	84	685.00	.05	.44

No. 22 Simonds Crescent Ground Crosscut Saws

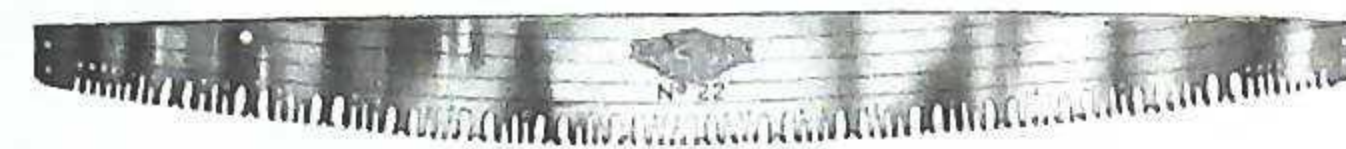


Fig. 3102

A lance tooth saw with four cutting teeth to each raker tooth. Crescent ground, preventing binding in the kerf, making this saw unusually easy and fast cutting. It is 15-gauge on the tooth edge and 20-gauge on the back in lengths under 6-foot. Lengths 6-foot and over, 14-gauge on the tooth edge and 20-gauge on the back.

Length Feet	Weight Pounds	Price Each	Length Feet	Weight Pounds	Price Each
4	3 1/4	\$8.40	6 1/2	8 1/2	\$16.20
4 1/2	4 1/4	9.60	7	9 1/2	18.40
5	5 1/4	10.80	7 1/2	10 1/2	21.00
5 1/2	6 1/2	12.00	8	11 1/2	23.60
6	7 1/2	14.00	...	...	...

No. 216 Simonds Bay State Hollow Back Cross-cut Saws



Fig. 3103

Length Feet	Price Each	Length Feet	Price Each	Length Feet	Price Each
4	\$2.00	5 1/2	\$2.80	7	\$3.60
4 1/2	2.30	6	3.00	7 1/2	...
5	2.50	6 1/2	3.30	8	...

Bay State Hollow Back Crosscut Saws



Fig. 3104

Length feet	4	4 1/2	5	5 1/2	6	6 1/2	7
Weight, Pounds, each	2 3/4	3 1/4	3 3/4	4 1/4	4 3/4	5 1/4	5 3/4
Price, No. 214 . . .	\$4.30	4.80	5.40	5.90	6.50	7.00	7.60

No. 207 Simonds Bay State Crosscut Saws



Fig. 3105

No. 207, 14 x 18 gauge; No. 207A, 14 x 16 gauge.

Length Feet	Weight Pounds	PRICE, EACH		Length Feet	Weight Pounds	PRICE, EACH	
		No. 207	207A			No. 207	207A
4	3 1/4	\$4.40	\$4.00	6	7 1/2	\$6.60	\$5.90
4 1/2	4 1/4	4.95	4.40	6 1/2	8 1/2	7.20	6.45
5	5 1/4	5.55	4.95	7	9 1/2	7.70	6.90
5 1/2	6 1/4	6.00	5.50	...	...	...	...

No. 22 Simonds Crosscut Saw Handles

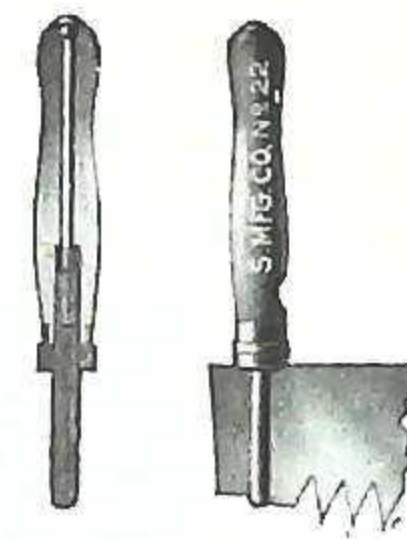


Fig. 3106

Made of seasoned hardwood with extra steel bolt running down from top of handle to screw into ferrule of heavy steel loop.

Weight per case of 100 pairs, 199 pounds.

Price, No. 22 per 100 pairs \$174.80

Simonds Wide Band Saws

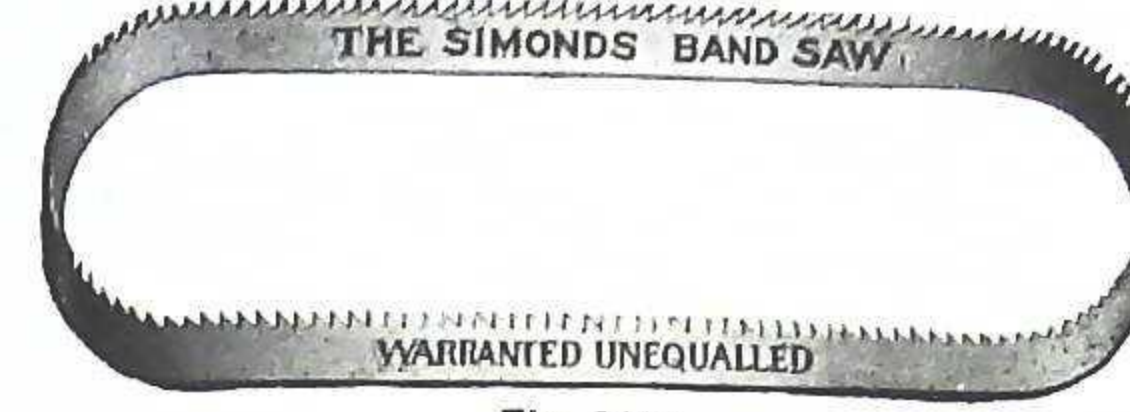


Fig. 3111

As this saw is ground with practically no variation in gauge throughout the entire length of the saw, filers and mechanics will readily appreciate that with this accuracy of manufacture the saw can be kept in such condition that the strain will be divided equally throughout the saw, and consequently add life and durability.

Width In.	Regular Gauge	Price Foot	Width In.	Regular Gauge	Price Foot
2	18 to 20	\$1.00	9	14 to 16	\$4.30
2 1/2	18 " 20	1.20	10	14 " 16	4.80
3	18 " 20	1.40	11	14 " 16	5.40
3 1/2	18 " 20	1.60	12	13 " 15	6.00
4	17 " 19	2.00	13	13 " 15	7.20
4 1/2	17 " 19	2.20	14	13 " 15	8.40
5	17 " 19	2.40	15	12 " 14	10.20
5 1/2	17 " 19	2.70	16	12 " 14	12.00
6	17 " 19	3.00	17	12 " 14	16.80
7	16 " 18	3.40	18	12 " 14	21.60
8	14 " 16	3.80	...	...	...

Saws of odd widths, not listed, take next wider size listed. For saws of heavier gauge than listed add 5 per cent to list for each gauge heavier.

No extra charge for saws one or two gauges thinner than list; when more than two gauges thinner, add 5 per cent to list for each gauge.

DOUBLE EDGE BAND SAWS.—List price per foot, all widths, advance 10 per cent over list prices of single edge saws as above.

TOOTHED BLANKS.—Same price as finished saws.

BAND SAW BLANKS.—Bright, of any width, furnished to order, but not warranted.

Simonds Narrow Band Saws

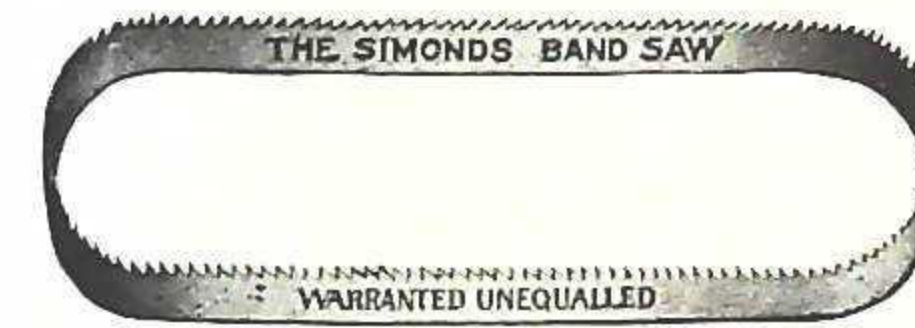


Fig. 3112

Special alloy steel, made especially for toughness. Tension can be rolled into the saw. Narrow band saws are furnished set and filed, but not brazed.

Width In.	Gauge	No. Teeth to Inch	Price per Foot	Width In.	Gauge	No. Teeth to Inch	Price per Foot
1/8	23	6	\$.13	7/8	20	3	\$.20
3/16	22	6	.13	1	20	3	.22
1/4	21	5	.13	1 1/8	20	2	.24
3/8	21	4	.14	1 1/4	20	2	.26
1/2	21	4	.15	1 3/8	20	2	.28
5/8	21	3	.16	1 1/2	20	2	.32
3/4	21	3	.18	1 3/4	20	2	.38

If not filed and set, deduct 4 cents per foot.

Simonds Swages



No. 1



No. 2



No. 3

Fig. 3113

Price, No. 1, for Saws 10 Gauge and Heavier . . . each \$5.50
 " " 2 " " 11 " " Lighter . . . " 4.50
 " " 3 " 4.50
 Special, for Wide Band Saws " 4.50

No. 1 Morrill Saw Sets

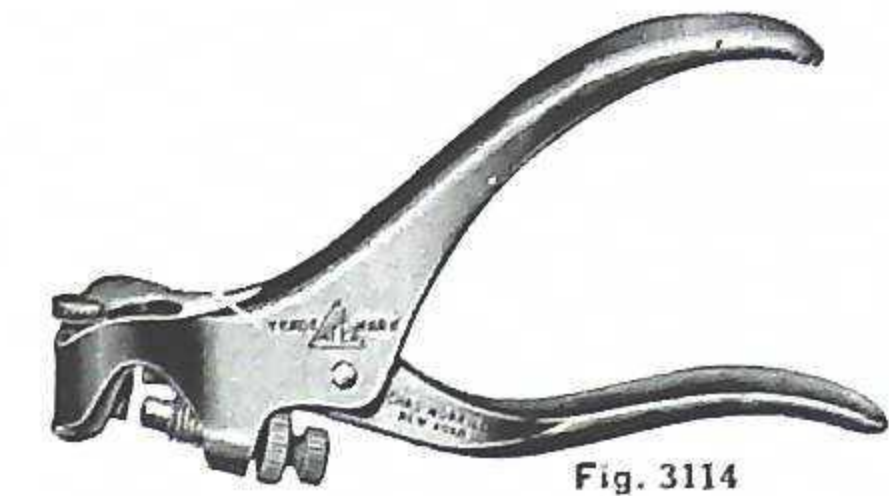


Fig. 3114

For hand, band, jig and butcher saws 1/2 inch or over in width, not over 16 gauge. Price, Pol. per dozen \$24.00

No. 3 Morrill Saw Sets

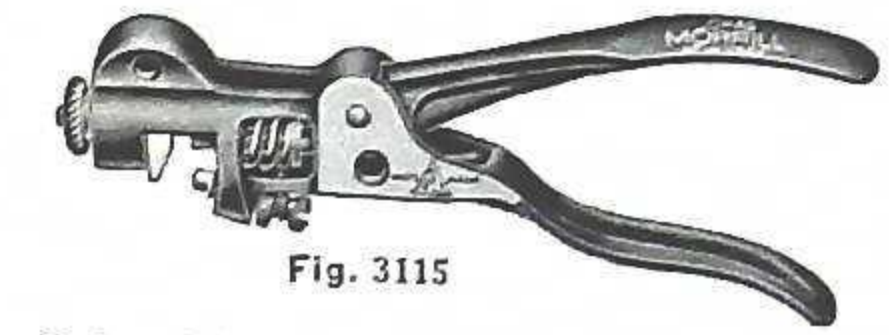


Fig. 3115

Price, No. 3, Shipping Weight, 16 Lbs. . . . per dozen \$33.00

Has sliding anvil and pointed plunger for crosscut and circular saws, single tooth, 14 to 20 gauge. Packed six in box.

Morrill Special Saw Sets

For hand, band, jig, butcher and fret saws 1/2 inch or over in width, not over 16 gauge. Price, Polish-ed, p doz. \$24.00 Price, Cast Finished per dozen 22.50

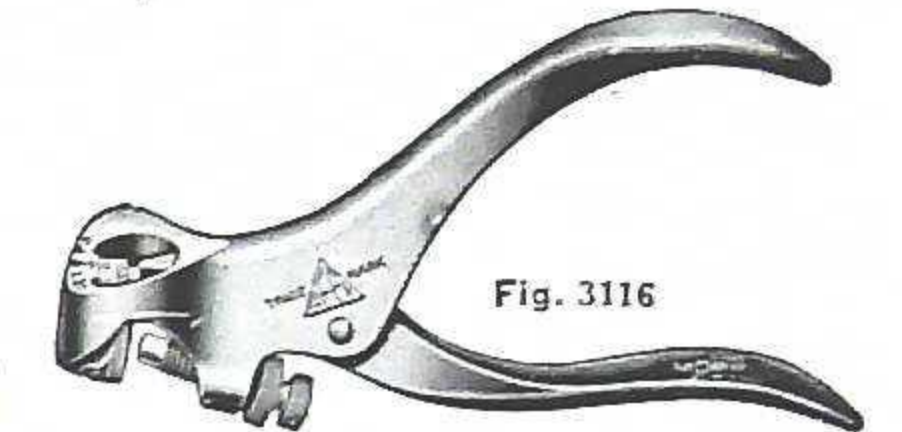


Fig. 3116

No. 100 Sargent Saw Vises



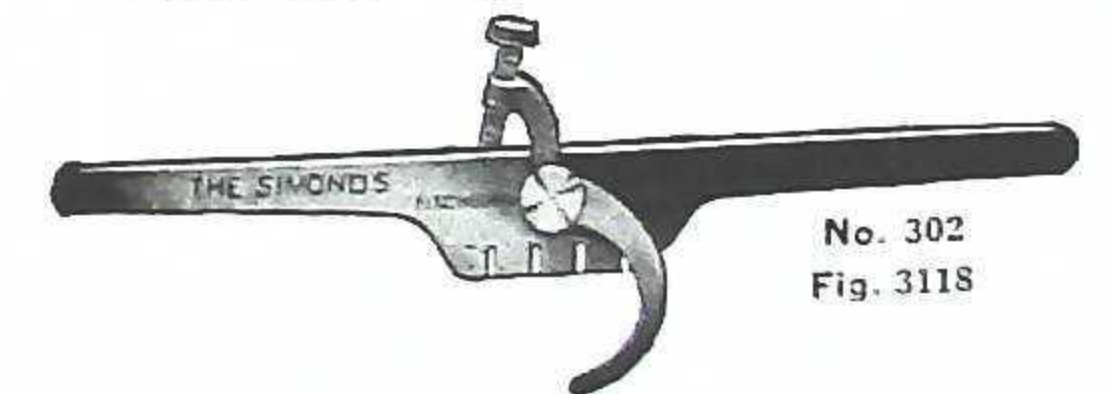
Fig. 3117

Has 9 1/2-inch jaws, polished face and is 8 inches high.

Packed 60 to a barrel.

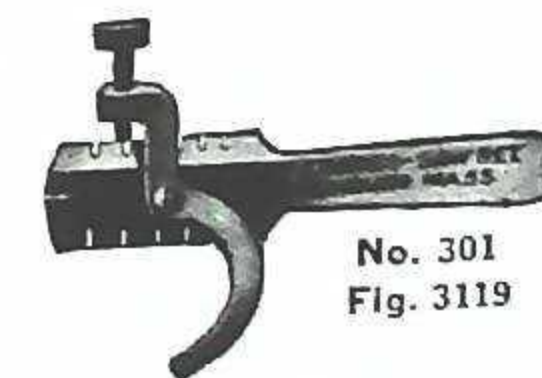
Price, No. 100, Japanned each \$1.20

Simonds Adjustable Saw Sets



No. 302

Fig. 3118



No. 301

Fig. 3119

Made in three sizes and provided with an adjustable gauge, which regulates the set and gives absolute uniformity. No. 301 has one handle, and is for small circular and band saws, 14 to 19 gauge in thickness. No. 302 is for medium and large saws. Price, No. 301 each \$4.25 " " 302 " 6.50

Machine Knives

Planer and Barking Knives with Straight Edges and all Ordinary Straight Knives of Same Finish not Otherwise Provided For

3/8-Inch Thick or Less

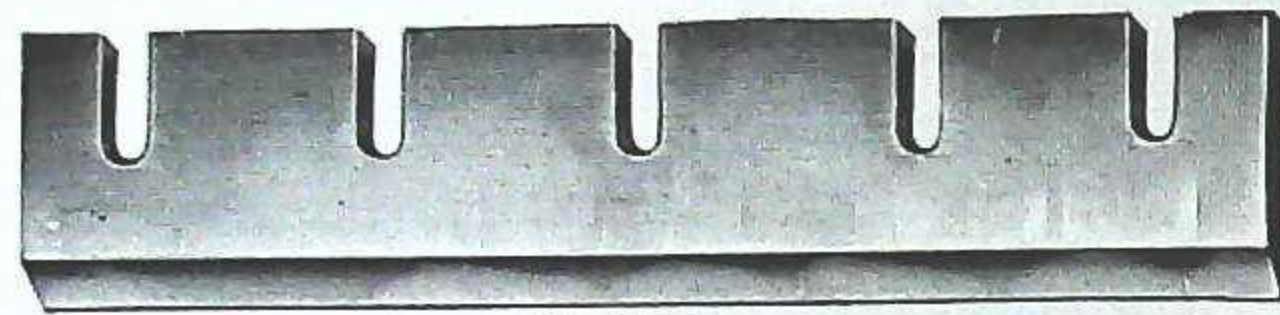


Fig. 3121

Width, Inches	PRICE, PER INCH—LENGTH, INCHES							
	Over 11 to 31 Long	Over 40 to 50	Over 50 to 60	Over 60 to 70	Over 70 to 80	Over 80 to 90	Over 90 to 100	Over 100
4 or Less	\$.42	\$.48	\$.56	\$.64	\$.78	\$.92	\$1.06	\$1.20
Over 4 to 4 1/2	.48	.56						
Over 4 1/2 to 5	.56							
Over 5 to 5 1/2	.64							
Over 5 1/2 to 6	.72							
Over 6 to 6 1/2	.80							
Over 6 1/2 to 7	.90							
Over 7 to 7 1/2	.98							
Over 7 1/2 to 8	1.06							
Over 8 to 8 1/2	1.18							
Over 8 1/2 to 9	1.32							
Over 9 to 9 1/2	1.46							
Over 9 1/2 to 10	1.60							
Over 10 to 10 1/2	1.74							
Over 10 1/2 to 11	1.88							
Over 11 to 11 1/2	2.02							
Over 11 1/2 to 12	2.16							

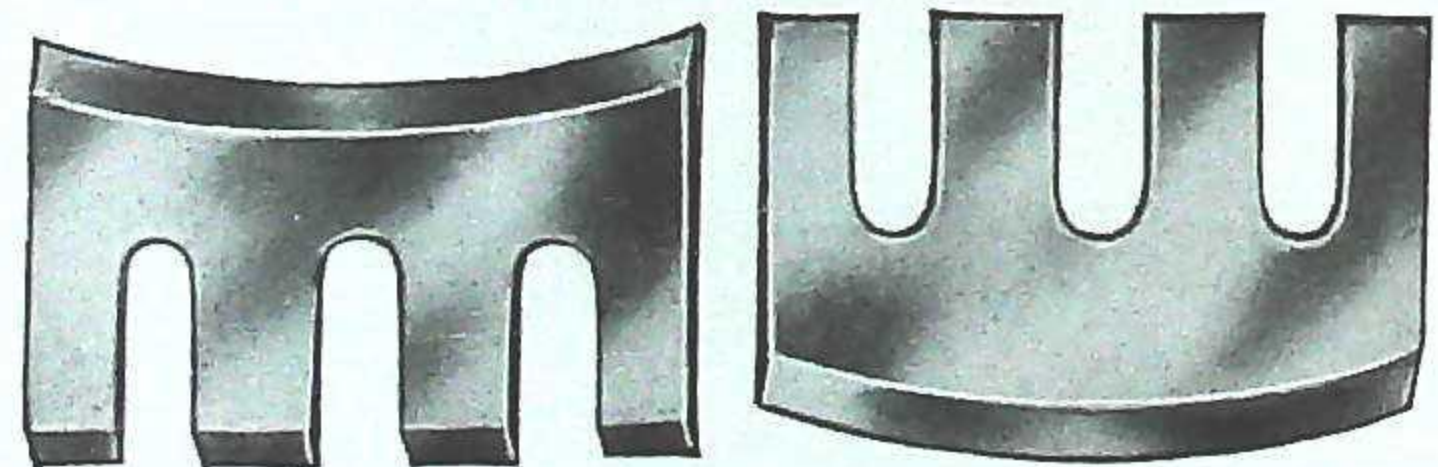
Straight Knives

11 Inches Long or Less, 3/8 Inch Thick or Less

Price, 2 In. Long or Less, 4 In. Wide or Less... each \$2.00
 " Over 2 to 4 In. Long, 4 In. Wide or Less... " 2.40
 " " 4 " 6 " " 4 " " " " " " 3.00
 " " 6 " 11 " " 4 " " " " " " " .48

If over 4 inches wide, increase 1/8 for each additional inch or fraction thereof. Add 50 per cent for knives plated all over one face. Advance for extra thickness. Counterbored slots, add 10 per cent. Beveled ends add 30 cents per knife to list.

Flat Knives



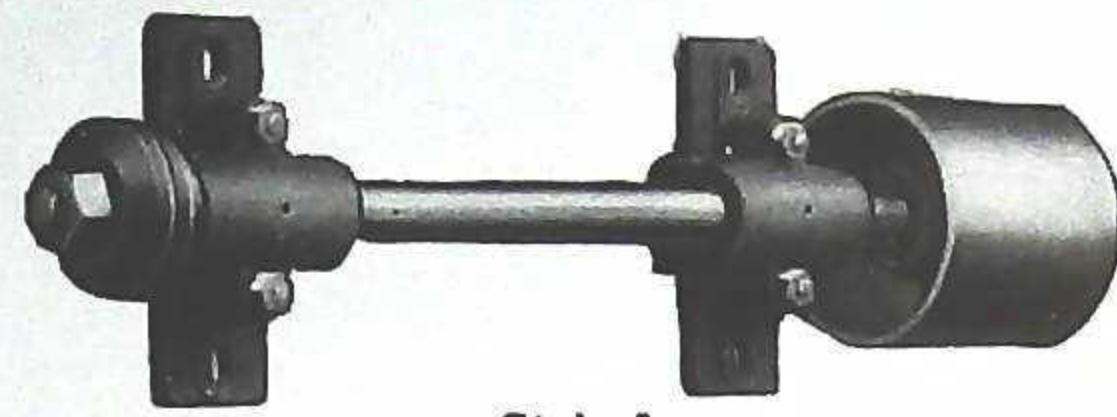
Outside Planer Knife Fig. 3122

Inside Planer Knife Fig. 3123

All flat knives (3/8 inch thick or less) with irregular edges (not moulding knives) add 50 per cent to list of straight knives. This covers knives not otherwise provided for, with slightly convex, concave, angular or irregular edges, such as stave planer, flat toner, chair bottom and all similar knives which can be ground on an ordinary grindstone. Figure by widest part of knife.

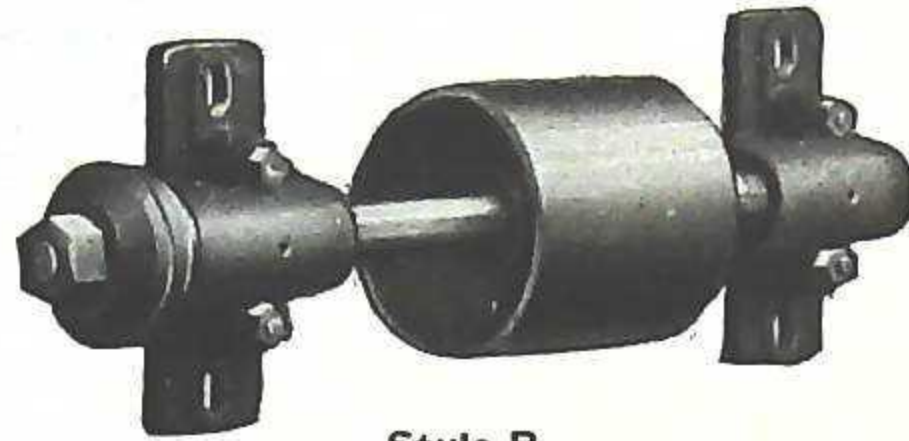
Advance for extra thickness. Counterbored slots add 10 per cent. Beveled ends add 30 cents per knife.

American Saw Mandrels



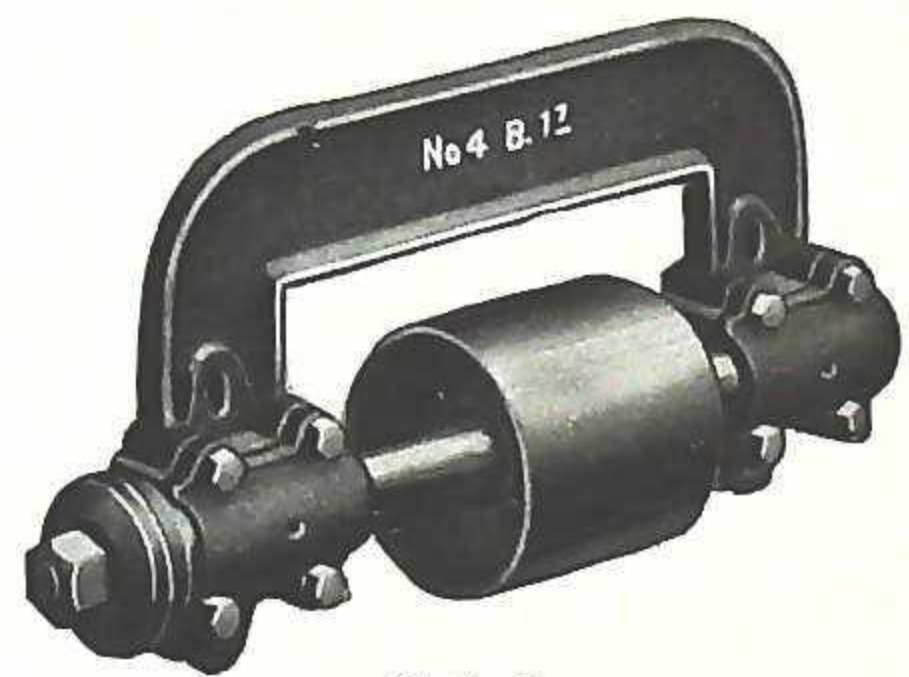
Style A Fig. 3124

Made of best grade of steel with self-oiling, babbitted bearings, fitted in the most careful manner and will run true and cool.



Style B Fig. 3125

All standard mandrels are made with pulley to the right of the collars and with left-hand threads.



Style D Fig. 3126

Can be furnished with right-hand threads when desired.

No.	Length Overall In.	Diam. Shaft In.	SIZE PULLEY INCHES		Fits Saw Hole In.	Price Each
			Diam.	Face		
1	19	1 1/8	3	4	1	\$9.00
2	24	1 3/16	4	4 1/2	1 1/8	11.40
3	26	1 5/16	5	5	1 1/4	13.40
4	30	1 7/16	6	6	1 1/4	16.80
5	36	1 11/16	6	8	1 1/2	21.00
6	36	1 15/16	8	8	1 5/8	23.00
7	48	1 15/16	8	10	1 5/8	25.00
8	36	2 3/16	10	10	2	27.50
9	48	2 3/16	12	10	2	32.00

No.	Length Overall In.	Diam. Shaft In.	SIZE PULLEY INCHES		Fits Saw Hole In.	Price Each
			Diam.	Face		
1	16	1 1/8	3	4	1	\$8.50
2	20	1 3/16	4	4 1/2	1 1/8	10.50
3	22	1 5/16	5	5	1 1/4	12.50
4	26	1 7/16	6	6	1 1/4	15.80
5	30	1 11/16	6	8	1 1/2	20.00
6	36	1 15/16	8	8	1 5/8	23.00
7	48	1 15/16	8	10	1 5/8	25.00
8	36	2 3/16	10	10	2	27.50
9	48	2 3/16	12	10	2	32.00

No.	Length Overall In.	Diam. Shaft In.	SIZE PULLEY INCHES		Fits Saw Hole In.	Price Each
			Diam.	Face		
1	19 1/2	1 1/8	3	4	1	\$13.00
2	21 1/2	1 3/16	4	4 1/2	1 1/8	14.70
3	23 1/2	1 5/16	5	5	1 1/4	16.80
4	25 1/2	1 7/16	6	6	1 1/4	19.00
5	28 1/4	1 11/16	6	8	1 1/2	23.00
6	28 1/4	1 15/16	8	8	1 5/8	26.40
8	36	2 3/16	10	10	2	39.50

Wrought Steel Class Cant Hooks

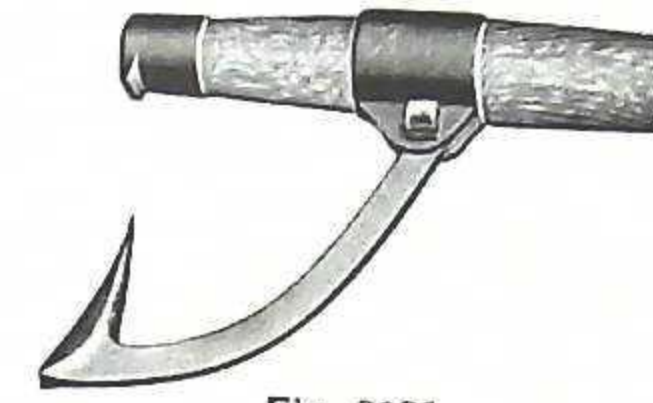


Fig. 3131

With duck bill, round or diamond head hooks, short toe ring. Furnished with duck bill hooks.

With Select Rock Maple Handles

No.	Diam. In.	Length Handles Feet	Price per Dozen	No.	Diam. In.	Length Handles Feet	Price per Dozen
481	2 1/4	3	\$29.30	268	2 3/4	5 1/2	\$35.20
482	...	3 1/2	29.90	269	...	4 1/2	38.10
483	...	4	31.80	270	...	5	39.10
484	...	4 1/2	32.80	271	...	5 1/2	40.10
485	...	5	33.70	272	...	6	41.10
486	2 1/2	3 1/2	30.40	274	3	5	47.90
487	...	4	32.30	275	...	5 1/2	48.90
266	...	4 1/2	33.20	276	...	6	49.90
267	...	5	34.20	...	...	...	...

With Select Hickory Handles

No.	Diam. In.	Length Handles Feet	Price per Dozen	No.	Diam. In.	Length Handles Feet	Price per Dozen
665	2 1/4	3	\$32.00	279	...	5 1/2	\$42.00
666	...	3 1/2	32.80	280	2 3/4	4 1/2	43.00
667	...	4	35.70	281	...	5	46.00
668	...	4 1/2	37.20	282	...	5 1/2	49.80
669	...	5	38.20	283	...	6	53.50
670	2 1/2	3 1/2	33.30	285	3	5	51.80
671	...	4	37.00	286	...	5 1/2	56.00
277	...	4 1/2	38.00	287	...	6	60.00
278	...	5	40.00	...	...	...	...

Hickory Cant Hook and Peavey Handles



Fig. 3132

These hickory handles are carefully turned from selected timber, and nicely sanded, highly polished, finished with lacquer or linseed oil if preferred. Put up in bundles of one half dozen each.

No.	Diam. In.	Lgth. Ft.	Price per Doz.	No.	Diam. In.	Lgth. Ft.	Price per Doz.
974	2 1/4	3	\$7.40	753	2 1/2	5 1/2	\$15.40
850	2 1/4	3 1/2	8.60	754	2 1/2	6	16.50
851	2 1/4	4	10.80	755	2 3/4	4 1/2	14.70
975	2 1/4	4 1/2	11.90	756	2 3/4	5	16.20
986	2 1/4	5	13.20	757	2 3/4	5 1/2	18.40
976	2 1/2	3	7.50	758	2 3/4	6	20.60
977	2 1/2	3 1/2	8.70	759	3	5	18.80
750	2 1/2	4	11.20	760	3	5 1/2	21.70
751	2 1/2	4 1/2	12.50	761	3	6	24.00
752	2 1/2	5	14.00	...	...	...	...

Dixon's Lumber Crayons



Fig. 3133

Size, 4 1/2 x 1/2 in. Hexagonal shape. Packed, 12 in a box.

No.	Grade	Color	Price per Gross	No.	Grade	Color	Price per Gross
361	Regular	Black	\$8.00	520	Regular	Red	\$14.40
365	Soft	"	8.00	521	"	Blue	14.40
365 1/2	Very Soft	"	8.00	521 1/2	Soft	"	14.40
494	Regular Carbon	"	14.40	522	Regular	Green	14.40
496	"	Yellow	14.40	523	"	White	14.40
497	"	Terra Cotta	14.40	...	...	...	...

Machine Bolts
Square Heads, Square Nuts and Finished Points



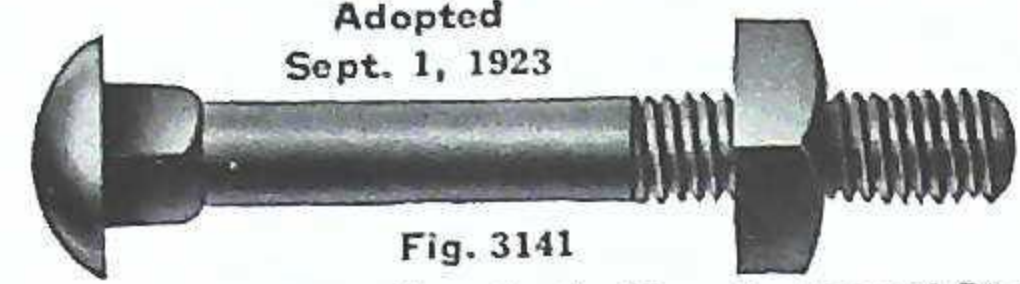
Fig. 3134

Price, per Hundred—Manufacturers' Standard List

Length Inches	DIAMETER, INCHES					
	1/4	5/16	3/8	7/16	1/2	5/8 and 3/4
1 1/2	\$1.70	\$2.00	\$2.40	\$3.00	\$3.70	\$5.50
2	1.80	2.15	2.60	3.25	4.00	5.90
2 1/2	1.90	2.30	2.80	3.50	4.30	6.30
3	2.00	2.45	3.00	3.75	4.60	6.70
3 1/2	2.10	2.60	3.20	4.00	4.90	7.10
4	2.20	2.75	3.40	4.25	5.20	7.50
4 1/2	2.30	2.90	3.60	4.50	5.50	7.90
5	2.40	3.05	3.80	4.75	5.80	8.30
5 1/2	2.50	3.20	4.00	5.00	6.10	8.70
6	2.60	3.35	4.20	5.25	6.40	9.10
6 1/2	3.70	4.50	5.40	6.50	7.70	9.50
7	3.80	4.65	5.60	6.75	8.00	9.90
7 1/2	3.90	4.80	5.80	7.00	8.30	10.30
8	4.00	4.95	6.00	7.25	8.60	10.70
9	4.20	5.25	6.40	7.75	9.20	11.50
10	4.40	5.55	6.80	8.25	9.80	12.30
11	4.60	5.85	7.20	8.75	10.40	13.10
12	4.80	6.15	7.60	9.25	11.00	13.90
13	...	...	8.00	9.75	11.60	14.70
14	...	...	8.40	10.25	12.20	15.50
15	...	...	8.80	10.75	12.80	16.30
16	...	...	9.20	11.25	13.40	17.10
17	...	...	9.60	11.75	14.00	17.90
18	...	...	10.00	12.25	14.60	18.70
19	...	...	10.40	12.75	15.20	19.50
20	...	...	10.80	13.25	15.80	20.30
21	...	...	...	...	16.40	21.10
22	...	...	...	...	17.00	21.90
23	...	...	...	...	17.60	22.70
24	...	...	...	...	18.20	23.50
25	...	...	...	...	18.80	24.30

Length Inches	DIAMETER, INCHES				
	3/4	7/8	1	1 1/8	1 1/4
1 1/2	\$7.70	\$10.50	\$15.10	\$22.50	\$30.00
2	8.25	11.20	16.00	23.70	31.50
2 1/2	8.80	11.90	16.90	24.90	33.00
3	9.35	12.60	17.80	26.10	34.50
3 1/2	9.90	13.30	18.70	27.30	36.00
4	10.45	14.00	19.60	28.50	37.50
4 1/2	11.00	14.70	20.50	29.70	

Common Carriage Bolts



Short full square under head; forged square nut; finished point.

Adopted Sept. 1, 1923

Price, per Hundred—Manufacturers' Standard List

Length Inches	DIAMETER, INCHES						
	1/16 and 1/4	3/16	1/2	3/8	1/2	5/8 and 3/4	3/4
1 1/2	\$1.00	\$1.40	\$1.90	\$2.50	....	....	....
2	1.10	1.55	2.10	2.75	....	....	....
2 1/2	1.20	1.70	2.30	3.00	\$3.25	\$6.00	\$9.80
3	1.30	1.85	2.50	3.25	3.55	6.40	10.30
3 1/2	1.40	2.00	2.70	3.50	3.85	6.80	10.80
4	1.50	2.15	2.90	3.75	4.15	7.20	11.30
4 1/2	1.60	2.30	3.10	4.00	4.45	7.60	11.80
5	1.70	2.45	3.30	4.25	4.75	8.00	12.30
5 1/2	1.80	2.60	3.50	4.50	5.05	8.40	12.80
6	1.90	2.75	3.70	4.75	5.35	8.80	13.30
6 1/2	2.00	2.90	3.90	5.00	5.65	9.20	13.80
7	2.10	3.05	4.10	5.25	5.95	9.60	14.30
7 1/2	2.20	3.20	4.30	5.50	6.25	10.00	14.80
8	2.30	3.35	4.50	5.75	6.55	10.40	15.30
8 1/2	2.40	3.50	4.70	6.00	6.85	10.80	15.80
9	2.50	3.65	4.90	6.25	7.15	11.20	16.30
9 1/2	2.60	3.80	5.10	6.50	7.45	11.60	16.80
10	2.70	3.95	5.30	6.75	7.75	12.00	17.30
11	2.80	4.10	5.50	7.00	8.05	12.40	17.80
12	2.90	4.25	5.70	7.25	8.35	12.80	18.30
13	3.00	4.40	5.90	7.50	8.65	13.20	18.80
14	3.10	4.55	6.10	7.75	8.95	13.60	19.30
15	3.20	4.70	6.30	8.00	9.25	14.00	19.80
16	3.30	4.85	6.50	8.25	9.55	14.40	20.30
17	3.40	5.00	6.70	8.50	9.85	14.80	20.80
18	3.50	5.15	6.90	8.75	10.15	15.20	21.30
19	3.60	5.30	7.10	9.00	10.45	15.60	21.80
20	3.70	5.45	7.30	9.25	10.75	16.00	22.30

Add 15 per cent extra for hexagon nut. Intermediate lengths take next higher list. Larger diameters than 3/4 inch take machine bolt list.

Philadelphia Eagle Carriage Bolts



Fig. 3142

Price, per Hundred

Length Inches	DIAMETER, INCHES						
	1/16 and 1/4	3/16	1/2	3/8	1/2	5/8 and 3/4	3/4
1	\$3.00	\$4.00	\$5.40	\$7.30	\$9.50	....	....
1 1/4	3.10	4.00	5.40	7.30	9.50	....	....
1 1/2	3.20	4.00	5.40	7.30	9.50	....	....
1 3/4	3.30	4.00	5.40	7.50	9.80	....	....
2	3.40	4.10	5.40	7.70	10.10	\$16.75	....
2 1/4	3.50	4.20	5.60	7.90	10.35	17.25	....
2 1/2	3.60	4.40	5.80	8.15	10.65	17.75	....
2 3/4	3.70	4.50	6.00	8.35	10.90	18.25	....
3	3.80	4.70	6.20	8.55	11.20	18.75	\$21.50
3 1/4	3.90	4.90	6.50	8.75	11.50	19.25	22.35
3 1/2	4.00	5.00	6.70	8.95	11.75	19.75	23.25
3 3/4	4.10	5.20	6.90	9.15	12.00	20.25	24.50
4	4.20	5.30	7.10	9.40	12.30	20.75	25.00
4 1/4	4.35	5.50	7.30	9.60	12.60	21.25	26.85
4 1/2	4.50	5.70	7.50	9.80	12.90	21.75	27.80
4 3/4	4.65	5.85	7.70	10.00	13.15	22.25	28.30
5	4.80	6.00	7.90	10.25	13.45	22.75	28.75
5 1/2	5.10	6.30	8.40	10.65	14.00	23.75	30.50
6	5.40	6.60	8.80	11.05	14.55	24.75	32.50
6 1/2	5.70	7.00	9.30	11.50	15.10	25.75	33.50
7	6.00	7.30	9.70	11.85	15.70	26.75	36.25
7 1/2	6.30	7.60	10.10	12.35	16.25	27.75	38.00
8	6.60	7.90	10.50	12.75	16.80	28.75	40.00
8 1/2	6.90	8.20	10.90	13.15	17.35	29.75	42.00
9	7.20	8.50	11.40	13.60	17.90	30.75	43.75
9 1/2	7.50	8.80	11.90	14.00	18.50	31.75	45.75
10	7.80	9.10	12.40	14.45	19.00	32.75	47.50
10 1/2	8.10	9.40	12.90	14.85	19.60	33.75	49.30
11	8.40	9.70	13.40	15.25	20.15	34.75	51.25
11 1/2	8.70	10.00	13.90	15.70	20.70	35.75	53.00
12	9.00	10.30	14.40	16.15	21.30	36.75	55.00

Stove Bolts



Fig. 3143 Flat Head

Bolts up to and including 2-inch are threaded to head.



Fig. 3144 Round Head

Price per Hundred—Manufacturers' Standard List of Nov. 1, 1923

Length Inches	DIAMETER, INCHES			
	5/32	3/16	1/4	5/16
3/8	\$.85	\$.85	1.20	1.75
1/2	.85	.85	1.20	1.75
5/8	.85	.85	1.20	1.75
3/4	.85	.85	1.20	1.75
7/8	.90	.90	1.25	1.80
1	.90	.90	1.30	1.85
1 1/8	.95	.95	1.35	1.90
1 1/4	1.00	1.00	1.40	1.95
1 1/2	1.05	1.05	1.45	2.00
1 3/4	1.10	1.10	1.50	2.05
2	1.20	1.20	1.60	2.25
2 1/4	1.30	1.30	1.70	2.45
2 1/2	1.40	1.40	1.80	2.65
2 3/4	1.50	1.50	1.90	2.85
3	1.60	1.60	2.00	3.05
3 1/2	1.70	1.70	2.10	3.25
4	1.80	1.80	2.20	3.45
4 1/2	1.90	1.90	2.30	3.65
5	2.00	2.00	2.40	3.85
5 1/2	2.10	2.10	2.50	4.05
6	2.20	2.20	2.60	4.25

Common Tire Bolts



Fig. 3145

Adopted Dec. 28, 1899

Price, per Hundred

Length Inches	DIAMETER, INCHES			
	5/8	3/4	1	1 1/4
1	\$.60	\$.60	\$.95	\$1.40
1 1/4	.60	.60	.95	1.40
1 1/2	.60	.60	.95	1.40
1 3/4	.65	.65	1.00	1.40
2	.70	.70	1.05	1.47
2 1/4	.75	.75	1.10	1.54
2 1/2	.80	.80	1.15	1.61
2 3/4	.85	.85	1.20	1.68
3	.90	.90	1.25	1.75
3 1/4	.95	.95	1.30	1.82
3 1/2	1.00	1.00	1.35	1.89
3 3/4	1.05	1.05	1.40	1.96
4	1.10	1.10	1.45	2.03
4 1/4	1.15	1.15	1.50	2.10
4 1/2	1.20	1.20	1.55	2.17
4 3/4	1.25	1.25	1.60	2.24
5	1.30	1.30	1.65	2.31
5 1/4	1.35	1.35	1.70	2.38
5 1/2	1.40	1.40	1.75	2.45
5 3/4	1.45	1.45	1.80	2.52
6	1.50	1.50	1.85	2.59

Hexagon nuts, 15 per cent extra. For larger diameters, use plow bolt list.

Square Head Coach and Lag Screws



Fig. 3151

Adopted Sept. 1, 1923

Price per Hundred—Manufacturers' Standard List

Length Inches	DIAMETER, INCHES						
	1/4 and 5/16	3/8	1/2	5/8	3/4	7/8	1
1 1/2	\$2.25	\$2.70	\$3.15	\$3.75	....	....	....
2	2.45	3.00	3.50	4.15	\$6.00	....	....
2 1/2	2.65	3.30	3.85	4.55	6.50	\$9.20	....
3	2.85	3.60	4.20	4.95	7.00	9.90	\$15.00
3 1/2	3.05	3.90	4.55	5.35	7.50	10.60	\$22.00
4	3.25	4.20	4.90	5.75	8.00	11.30	23.30
4 1/2	3.45	4.50	5.25	6.15	8.50	12.00	24.60
5	3.65	4.80	5.60	6.55	9.00	12.70	25.90
5 1/2	3.85	5.10	5.95	6.95	9.50	13.40	27.20
6	4.05	5.40	6.30	7.35	10.00	14.10	28.50
6 1/2	4.25	5.70	6.65	7.75	10.50	14.80	29.80
7	4.45	6.00	7.00	8.15	11.00	15.50	31.10
7 1/2	4.65	6.30	7.35	8.55	11.50	16.20	32.40
8	4.85	6.60	7.65	8.95	12.00	16.90	33.70
9	5.05	6.90	7.95	9.35	12.50	17.60	35.00
10	5.25	7.20	8.25	9.75	13.00	18.30	36.30
11	5.45	7.50	8.55	10.15	13.50	19.00	37.60
12	5.65	7.80	8.85	10.55	14.00	19.70	38.90
13	5.85	8.10	9.15	10.95	14.50	20.40	40.20
14	6.05	8.40	9.45	11.35	15.00	21.10	41.50
15	6.25	8.70	9.75	11.75	15.50	21.80	42.80
16	6.45	9.00	10.05	12.15	16.00	22.50	44.10

Add for Each In. .40 .52 .64 .72 1.00 1.40 2.00 2.60

Hexagon heads, 10 per cent extra.

Tee heads 50 per cent extra.

Skein screws, list price, same as lag screws.

Length of threads approximately three-fifths of length of screws.

Hanger Screws



Fig. 3152

List May 21, 1932

Price, per Hundred

Length Inches	DIAMETER, INCHES			
	1/4	5/16	3/8	1/2
2	\$3.00	\$3.60	\$4.24	\$5.06
2 1/2	3.19	3.83	4.54	5.44
3	3.38	4.05	4.84	5.81
3 1/2	3.57	4.28	5.14	6.19
4	3.75	4.50	5.44	6.56
4 1/2	3.94	4.73	5.74	6.94
5	4.13	4.95	6.04	7.31
5 1/2	4.32	5.18	6.34	7.69
6	4.50	5.40	6.64	8.06
6 1/2	4.69	5.62	6.94	8.43
7	4.88	5.84	7.24	8.80
7 1/2	5.07	6.06	7.54	9.17
8	5.26	6.28	7.84	9.55
9	5.45	6.50	8.14	9.92
10	5.64	6.72	8.44	10.30
11	5.83	6.94	8.74	10.68
12	6.02	7.16	9.04	11.06

Square and Hexagon Cold Punched Nuts

Chamfered and Trimmed, with Reamed Holes



Square Nut Fig. 3153



Hexagon Nut Fig. 3154

U. S. Standard List

Adopted Sept. 1, 1923

Size Bolt In.	Width In.	Thick-ness In.	Hole In.	IN 200-POUND KEGS—Price, per Pound			
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Wrought Iron Washers

Adopted Jan. 20, 1910



Fig. 3161

U. S. Standard Sizes

Size Bolt In.	Out-side Diam. In.	Size Hole In.	Thickness Wire Gauge No.	No. in 100 Pounds	Weight per 1000 Pieces Pounds	Price in 200-lb. Kegs per Lb.
3/16	9/16	1/4	18	39400	2.53	\$.14
1/4	3/4	5/16	16	15600	6.4	.122
5/16	7/8	3/8	16	11250	8.8	.114
3/8	1	7/8	14	6800	14.7	.105
7/16	1 1/4	1 1/2	14	4300	21.	.098
1/2	1 3/8	1 1/2	12	2600	38.4	.094
9/16	1 1/2	1 3/4	12	2250	44.4	.093
5/8	1 3/4	1 3/4	10	1300	77.	.092
3/4	2	1 7/8	9	900	111.	.091
7/8	2 1/4	1 7/8	8	782	153.	.09
1	2 1/2	1 7/8	8	568	176.	.09
1 1/8	2 3/4	1 7/8	8	473	211.	.09
1 1/4	3	1 3/4	8	364	261.	.092
1 3/8	3 1/4	1 3/4	7	275	364.	.092
1 1/2	3 3/4	1 3/4	7	256	390.	.092
1 5/8	3 3/4	1 3/4	7	220	454.	.095
1 3/4	4	1 7/8	7	197	508.	.095
1 7/8	4 1/4	2	7	174	575.	.095
2	4 1/2	2 1/8	7	160	625.	.095
2 1/4	4 3/4	2 1/8	5	122	820.	.105
2 1/2	5	2 3/8	4	106	943.	.105

Net Extras

Extra for 100-pound Kegs	per 100 pounds	\$.25
" " 50 to 100-pound Boxes	" 100 "	.35
" " 25 " 50-pound Boxes	" 100 "	.50
" " 5-pound Boxes	" 100 "	1.50
" " 1 " "	" 100 "	2.00

Railroad Track Spikes



Fig. 3162

Approximate Number of Railroad Spikes to 200-pound Keg

Size Under Head Inches	TIES 2 FEET BETWEEN CENTERS		TIES 2 FEET BETWEEN CENTERS				
	Approx. Number per Keg	4 SPIKES PER TIE MAKES PER MILE POUNDS	Approx. Number per Keg	4 SPIKES PER TIE MAKES PER MILE POUNDS			
5 x 1/2	460	4592	22.96	2 1/2 x 3/8	1600	1320	6.60
4 1/2 x 1/2	528	4000	20.00	2 1/4 x 3/8	1750	1206	6.03
4 x 1/2	592	3568	17.84	2 x 3/8	1902	1112	5.56
3 1/2 x 1/2	660	3200	16.00	4 x 5/16	1630	1308	6.54
3 x 1/2	732	2886	14.43	3 1/2 x 5/16	1810	1168	5.84
2 1/2 x 1/2	814	2596	12.98	3 x 5/16	2066	1024	5.12
5 x 7/16	664	3178	15.89	2 1/2 x 5/16	2380	888	4.44
4 1/2 x 7/16	712	2966	14.83	2 1/4 x 5/16	2760	766	3.83
4 x 7/16	764	2766	13.83	2 x 5/16	2912	726	3.63
3 1/2 x 7/16	854	2474	12.37	1 1/2 x 5/16	4200	504	2.52
3 x 7/16	1032	2048	10.24	3 x 1/4	3266	646	3.23
2 1/2 x 7/16	1210	1746	8.73	2 1/2 x 1/4	4120	512	2.56
5 x 3/8	908	2326	11.63	2 1/4 x 1/4	4600	460	2.30
4 1/2 x 3/8	1000	2112	10.56	2 x 1/4	4778	442	2.21
4 x 3/8	1092	1934	9.67	1 1/2 x 1/4	6000	352	1.76
3 1/2 x 3/8	1200	1760	8.80	1 1/4 x 1/4	7920	266	1.33
3 x 3/8	1342	1574	7.87				

Extras Over Base Price—Effective July 1, 1924

Size In.	Per 100 Lbs.	Size In.	Per 100 Lbs.	Size In.	Per 100 Lbs.
1/4 x 1 1/4	\$2.50	3/8 x 2	\$1.25	1/2 x 2 1/2	\$.65
1/4 x 1 1/2	2.25	3/8 x 2 1/2	1.15	1/2 x 3 to 3 1/2	.50
1/4 x 2 to 2 1/2	2.00	3/8 x 3 to 4 1/2	.90	1/2 x 4 " 5	.25
1/4 x 3	1.85	7/16 x 3	.75	3/16 x 5 1/2	Base
5/16 x 2 to 4	1.70	7/16 x 3 1/2 to 4 1/2	.65	and Larger	

Reversed points 1/4 cent per pound extra. Other than regular sizes shown furnished at extra charge. Packed in kegs of 200 pounds.

Allen Safety Set Screws



Fig. 3163

Price, per Hundred

Length Over All Inches	DIAMETER, INCHES					
	1/4	5/16	3/8	7/16	1/2	5/8
	U.S.S. AND V THREADS PER INCH					
20	18	16	14	12-13	12	11
S.A.E. THREADS PER INCH						
28	24	24	20	20	18	18
WHITWORTH THREADS PER INCH						
20	18	16	14	12	12	11
1/4	\$5.00	\$5.50	\$6.50	\$8.50		
5/16	5.00	5.00	6.25	8.00	\$9.25	
3/8	5.00	5.00	5.00	7.50	8.75	\$12.00
7/16	5.00	5.00	5.00	6.00	8.75	11.00
1/2	5.50	5.60	5.00	6.00	7.00	10.00
9/16	5.50	5.60	6.95	7.00	8.00	12.50
5/8	5.50	5.60	6.95	7.00	7.00	10.00
3/4	6.00	6.20	7.65	8.30	9.65	11.10
7/8	6.00	6.20	7.65	8.30	9.65	11.10
1	6.50	6.80	8.35	9.10	10.55	12.20
1 1/8	6.50	7.40	8.35	9.10	10.55	12.20
1 1/4	7.00	8.00	9.05	9.90	11.45	13.30
1 3/8	7.50	8.00	9.75	10.70	12.35	14.40
1 1/2	7.50	8.00	9.75	10.70	12.35	14.40
1 5/8	8.00	8.60	10.45	11.50	13.25	15.50
1 3/4	8.00	8.60	10.45	11.50	13.25	15.50
2	8.50	9.20	11.15	12.30	14.15	16.60
2 1/4	9.00	9.80	11.85	13.10	15.05	17.70
2 1/2	9.50	10.40	12.55	13.90	15.95	18.80
2 3/4	10.00	11.00	13.25	14.70	16.85	19.90
3	10.50	11.60	13.95	15.50	17.75	21.00
3 1/4	11.00	12.20	14.65	16.30	18.65	22.10
3 1/2	11.50	12.80	15.35	17.10	19.55	23.20
3 3/4	12.00	13.40	16.05	17.90	20.45	24.30
4	12.50	14.00	16.75	18.70	21.35	25.40

Wrenches
ea. \$.03 .04 .05 .06 .07 .07 .08

†U. S. standard, 13 threads; V standard, 12 threads.

Length Over All Inches	DIAMETER, INCHES					
	1/4	3/8	1/2	3/4	1	1 1/8
	U.S.S. AND V THREADS PER INCH					
11	10	10	9	9	8	7
S.A.E. THREADS PER INCH						
16	16	14	14	11	12	
WHITWORTH THREADS PER INCH						
11	10	10	9	8	7	
1/2	\$15.00	\$15.00				
9/16	15.00	15.00				
5/8	15.00	15.00				
3/4	12.00	12.00	\$20.00	\$20.00	\$25.00	\$25.00
7/8	13.00	13.00	15.00	15.00	25.00	25.00
1	12.00	12.00	15.00	15.00	20.00	20.00
1 1/8	16.50	16.50	18.00	18.00	25.00	35.00
1 1/4	18.00	18.00	20.00	20.00	22.00	36.65
1 3/8	19.50	19.50	23.55	23.55	31.75	38.30
1 1/2	19.50	19.50	25.55	25.55	31.75	39.95
1 5/8	21.00	21.00	27.25	27.25	34.00	41.60
1 3/4	21.00	21.00	27.25	27.25	35.00	42.25
2	22.50	22.50	28.95	28.95	36.25	45.55
2 1/4	24.00	24.00	30.60	30.60	38.50	48.85
2 1/2	25.00	25.00	32.35	32.35	40.75	52.15
2 3/4	27.00	27.00	34.05	34.05	43.00	55.45
3	28.50	28.50	35.75	35.75	45.25	58.75
3 1/4	30.00	30.00	37.45	37.45	47.50	62.05
3 1/2	31.50	31.50	39.15	39.15	49.75	65.35
3 3/4	33.00	33.00	40.85	40.85	52.00	68.65
4	34.50	34.50	42.55	42.55	54.25	71.95

Wrenches
ea. \$.08 .10 .10 .12 .12 .15 .15

Hexagon Head Cap Screws

U. S. Standard Thread



Fig. 3171

Effective Feb. 1, 1924

Price, per Hundred

Diam. Screw . . in.	1/4	5/16	3/8	7/16	1/2	9/16
" Hex. Head "	7/16	1/2	9/16	5/8	3/4	9/16
Threads to Inch . .	20	18	16	14	13	12
1 3/4	\$4.35	\$4.85	\$5.80	\$7.50	\$9.55	
7/8	4.55	5.00	6.00	7.70	9.75	
1	4.70	5.25	6.20	7.90	9.95	\$15.85
1 1/4	5.10	5.60	6.70	8.50	10.80	16.10
1 1/2	5.45	6.00	7.15	9.10	11.50	16.35
1 3/4	5.90	6.55	7.85	9.75	12.35	17.50
2	6.35	7.15	8.50	10.45	13.15	18.55
2 1/4	6.80	7.75	9.15	11.20	14.05	19.80
2 1/2	7.20	8.35	9.80	11.95	15.00	20.85
2 3/4	7.60	8.90	10.50	12.65	15.90	22.30
3	8.05	9.50	11.15	13.40	17.00	23.80
3 1/4				14.15	18.20	24.95
3 1/2				14.90	19.30	26.20
3 3/4				15.65	20.55	27.40
4				16.35	21.80	28.60

Diam. Screw . . in.	5/8	3/4	7/8	1	1 1/8	1 1/4
" Hex. Head "	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2
Threads to Inch . .	11	10	9	8	7	7
1	\$16.40					
1 1/4	16.65	\$26.55				
1 1/2	16.90	26.85	\$41.50			
1 3/4	18.10	27.15	41.90	\$60.15		
2	19.15	27.45	42.30	60.65	\$81.70	\$110.45
2 1/4	20.40	29.00	45.40	62.90	85.20	115.00
2 1/2	21.30	30.55	48.40	65.35	88.25	119.10
2 3/4	23.00	32.10	51.50	67.60	91.00	123.20
3	24.55	33.70	54.30	69.90	94.50	127.80
3 1/4	25.70	35.80	56.60	73.60	99.40	134.60
3 1/2	26.90	38.00	58.65	77.20	104.35	140.70
3 3/4	28.10	40.20	60.65	80.85	109.25	147.50
4	29.20	42.25	62.85	84.60	114.20	154.25
4 1/4	30.40	45.85	67.35	88.00	118.85	160.40
4 1/2	31.65	49.40	72.00	91.20	123.10	166.00
4 3/4		52.95	76.60	94.40	127.75	172.20
5			81.20	97.80	132.10	179.00

U. S. standard threads will be furnished unless otherwise specified.

On all screws one inch and less in diameter, and four inches and less in length, threads are cut 3/4 of the length of the body. Beyond four inches in length threads are cut 1/2 length of the body.

Cap screws with heads, diameters or threads other than listed are special and made to order.

Special price on black heads, extra finished heads and case hardened screws.

Fillister and Flat Fillister Head Cap Screws



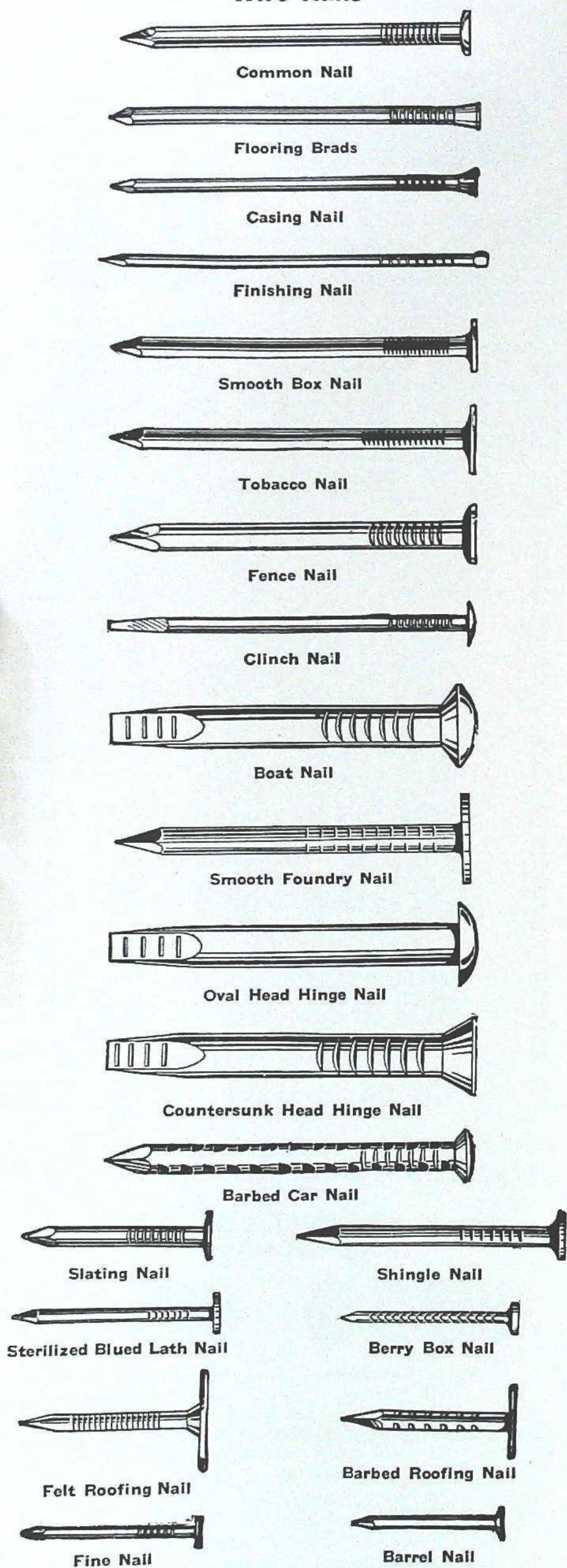
Fig. 3172
Fillister Head



Fig. 3173
Flat Fillister Head

Effective Feb. 1, 1924

Wire Nails



Standard Wire Nail Card
Extras on Standard Wire Nails in Kegs

Common Wire Nails		Shingle Nails		Clinch Nails		Barbed Car Nails	
Size	Extra per 100 Pounds	Size	Extra per 100 Pounds	Size	Extra per 100 Pounds	Size	EXTRA PER 100 Lbs. Light Heavy
2d	\$1.45	3d	\$.90	6d	\$.75	4d	\$.95 \$.80
3d	1.15	3 1/2 d	.75	7d	.70	5d	.75 .70
4d	.80	4d	.70	8d	.55	6d	.70 .65
5d	.75	Smooth Box Nails		9d	.55	7d	.60 .60
6d	.60	2d	1.65	10d	.45	8d	.50 .50
7d	.55	3d	1.30	12d	.40	9d	.50 .50
8d	.30	4d	1.05	16d	.35	10d	.45 .45
9d	.30	5d	1.00	20d	.30	12d	.40 .35
10d	.20	6d	.70	Clout Nails		16d	.35 .30
12d	.15	7d	.65	Bright		20d-60d	.25 .25
16d	.10	8d	.45	3/4-in.	2.15	Barbed Car Nails	
20d-60d Base		9d	.45	7/8 "	1.90	Annealed	
Casing Nails		10d	.30	1 "	1.65	4d	1.20 1.05
2d	1.70	12d	.25	1 1/8 "	1.50	5d	1.00 .95
3d	1.35	16d	.15	1 1/4 "	1.20	6d	.95 .90
4d	1.10	20d-40d	.05	1 1/2 "	1.10	7d	.85 .85
5d	1.05	Slating Nails		1 3/8 "	.85	8d	.75 .75
6d	.75	2d	1.20	1 1/2 "	1.10	9d	.75 .75
7d	.70	3d	.95	Annealed		10d	.70 .70
8d	.50	4d	.85	3/4-in.	2.40	12d	.65 .60
9d	.50	5d	.75	7/8 "	2.15	16d	.60 .55
10d	.35	6d	.65	1 "	1.90	20d-60d	.50 .50
12d	.30	Finishing Nails		1 1/8 "	1.75	Hinge Nails	
16d	.20	2d	2.00	1 1/4 "	1.45	Bright	
20d-40d	.10	3d	1.55	1 3/8 "	1.35	4d	1.00 .95
Barbed Car Nail		4d	1.25	1 1/2 "	1.10	6d	.90 .85
Slating Nail		5d	.50	Sterilized		8d	.75 .70
Shingle Nail		6d	.45	Blued		10d	.65 .65
Sterilized Blued Lath Nail		7d	.35	Lath Nails		12d	.60 .60
Berry Box Nail		8d	.25	2d	2.45	16d	.55 .55
Felt Roofing Nail		9d	.25	3d	1.85	20d	.50 .50
Barbed Roofing Nail		10d	.25	4d	1.45	Hinge Nails	
Fine Nail		12d	.20	5d	1.10	Annealed	
Barrel Nail		16d	.15	Barrel Nails		4d	1.25 1.20
		20d-60d	.05	5/8-in.	2.25	6d	1.15 1.10
				3/4 "	1.90	8d	1.00 .95
				7/8 "	1.55	10d	.90 .90
				1 "	1.45	12d	.85 .85
				1 1/8 "	1.35	16d	.80 .80
				1 1/4 "	1.15	20d	.75 .75
				1 3/8 "	.85	Hinge Nails	
				1 1/2 "	.80	Annealed	
				Barbed Dowel Pins		4d	1.25 1.20
				No. 8 Gauge		6d	1.15 1.10
				5/8-in.		8d	1.00 .95
				3/4 "		10d	.90 .90
				7/8 "		12d	.85 .85
				1 "		16d	.80 .80
				1 1/8 "		20d	.75 .75
				1 1/4 "		Hinge Nails	
				1 3/8 "		Annealed	
				1 1/2 "		4d	1.25 1.20
				1 3/4 "		6d	1.15 1.10
				2 "		8d	1.00 .95
				2 1/4 "		10d	.90 .90
				2 1/2 "		12d	.85 .85
				2 3/4 "		16d	.80 .80
				3 "		20d	.75 .75
				3 1/4 "		Hinge Nails	
				3 1/2 "		Annealed	
				3 3/4 "		4d	1.25 1.20
				4 "		6d	1.15 1.10
				4 1/4 "		8d	1.00 .95
				4 1/2 "		10d	.90 .90
				4 3/4 "		12d	.85 .85
				5 "		16d	.80 .80
				5 1/4 "		20d	.75 .75
				5 1/2 "		Hinge Nails	
				5 3/4 "		Annealed	
				6 "		4d	1.25 1.20
				6 1/4 "		6d	1.15 1.10
				6 1/2 "		8d	1.00 .95
				6 3/4 "		10d	.90 .90
				7 "		12d	.85 .85
				7 1/4 "		16d	.80 .80
				7 1/2 "		20d	.75 .75
				7 3/4 "		Hinge Nails	
				8 "		Annealed	
				8 1/4 "		4d	1.25 1.20
				8 1/2 "		6d	1.15 1.10
				8 3/4 "		8d	1.00 .95
				9 "		10d	.90 .90
				9 1/4 "		12d	.85 .85
				9 1/2 "		16d	.80 .80
				9 3/4 "		20d	.75 .75
				10 "		Hinge Nails	
				10 1/4 "		Annealed	
				10 1/2 "		4d	1.25 1.20
				10 3/4 "		6d	1.15 1.10
				11 "		8d	1.00 .95
				11 1/4 "		10d	.90 .90
				11 1/2 "		12d	.85 .85
				11 3/4 "		16d	.80 .80
				12 "		20d	.75 .75
				12 1/4 "		Hinge Nails	
				12 1/2 "		Annealed	
				12 3/4 "		4d	1.25 1.20
				13 "		6d	1.15 1.10
				13 1/4 "		8d	1.00 .95
				13 1/2 "		10d	.90 .90
				13 3/4 "		12d	.85 .85
				14 "		16d	.80 .80
				14 1/4 "		20d	.75 .75
				14 1/2 "		Hinge Nails	
				14 3/4 "		Annealed	
				15 "		4d	1.25 1.20
				15 1/4 "		6d	1.15 1.10
				15 1/2 "		8d	1.00 .95
				15 3/4 "		10d	.90 .90
				16 "		12d	.85 .85
				16 1/4 "		16d	.80 .80
				16 1/2 "		20d	.75 .75
				16 3/4 "		Hinge Nails	
				17 "		Annealed	
				17 1/4 "		4d	1.25 1.20
				17 1/2 "		6d	1.15 1.10
				17 3/4 "		8d	1.00 .95
				18 "		10d	.90 .90
				18 1/4 "		12d	.85 .85
				18 1/2 "		16d	.80 .80
				18 3/4 "		20d	.75 .75
				19 "		Hinge Nails	
				19 1/4 "		Annealed	
				19 1/2 "		4d	1.25 1.20
				19 3/4 "		6d	1.15 1.10
				20 "		8d	1.00 .95
				20 1/4 "		10d	.90 .90
				20 1/2 "		12d	.85 .85
				20 3/4 "		16d	.80 .80
				21 "		20d	.75 .75
				21 1/4 "		Hinge Nails	
				21 1/2 "		Annealed	
				21 3/4 "		4d	1.25 1.20
				22 "		6d	1.15 1.10
				22 1/4 "		8d	1.00 .95
				22 1/2 "		10d	.90 .90
				22 3/4 "		12d	.85 .85
				23 "		16d	.80 .80
				23 1/4 "		20d	.75 .75
				23 1/2 "		Hinge Nails	
				23 3/4 "		Annealed	
				24 "		4d	1.25 1.20
				24 1/4 "		6d	1.15 1.10
				24 1/2 "		8d	1.00 .95
				24 3/4 "		10d	.90 .90
				25 "		12d	.85 .85
				25 1/4 "		16d	.80 .80
				25 1/2 "		20d	.75 .75
				25 3/4 "		Hinge Nails	
				26 "		Annealed	
				26 1/4 "		4d	1.25 1.20
				26 1/2 "		6d	1.15 1.10
				26 3/4 "		8d	1.00 .95
				27 "		10d	.90 .90
				27 1/4 "		12d	.85 .85
				27 1/2 "		16d	.80 .80
				27 3/4 "		20d	.75 .75
				28 "		Hinge Nails	
				28 1/4 "		Annealed	
				28 1/2 "		4d	1.25 1.20
				28 3/4 "		6d	1.15 1.10
				29 "		8d	1.00 .95
				29 1/4 "		10d	.90 .90
				29 1/2 "		12d	.85 .85
				29 3/4 "		16d	.80 .80
				30 "		20d	.75 .75

*Extra fine. †Light.
Special Extras on Standard Wire Nails
 Annealed nails, 25 cents per 100 pounds extra.
 Blued nails, 25 cents per 100 pounds extra.
 Barbing nails, 25 cents per 100 pounds extra (except as provided for above).
 Special heads, 15 cents per 100 pounds extra.
 Special points, 15 cents per 100 pounds extra.
 Galvanizing all standard nails, at special prices.

For prices of all nails, see Standard Nail Card.

Bar Iron
National Iron Classification
Effective Sept. 1, 1923
Extras per 100 Pounds
Rounds and Squares

1 to 1 7/8 In	Base
2 " 2 7/8 "	\$.20
3 " 3 1/2 "	.50
3 5/8 " 4 "	.80
4 1/8 " 4 1/2 "	1.00
4 5/8 " 5 "	1.30
5 1/8 " 6 "	1.80
6 1/8 " 6 1/2 "	2.20
6 5/8 " 7 1/4 "	2.50
7 1/8 " 7 1/2 "	.05
7 5/8 " 8 "	.10
8 1/8 " 8 1/2 "	.15
8 5/8 " 9 "	.20
9 1/8 " 9 1/2 "	.30
9 5/8 " 10 "	.40
10 1/8 " 10 1/2 "	.55
10 5/8 " 11 "	.70
11 1/8 " 11 1/2 "	.85
11 5/8 " 12 "	1.00
12 1/8 " 12 1/2 "	1.25
12 5/8 " 13 "	1.50
13 1/8 " 13 1/2 "	2.00

Ovals		
3/4 to 2 1/2 x 3/8 and Over		\$.30
3/4 " 2 1/2 x 1/4 to 5/16 "		.40
3/4 " 2 1/2 x 3/16 " 3/16 "		.70
3/4 " 1 1/2 x 3/16 and Over		.50
5/8 " 1 1/2 x 1/4 to 1/4 "		.70
5/8 " 1 1/2 x 3/16 " 3/16 "		1.00
1 1/2 " 9/16 x 1/4 and Over		1.00
1 1/2 " 9/16 x 3/8 to 3/16 "		1.30
1 1/2 " 9/16 x 1/2 to 3/16 "		1.60
3 3/8 " 7/8 x 3/16 and Over		1.60
3 3/8 " 7/8 x 1/2 to 5/2 "		2.00
3 3/8 " 7/8 x 3/2 "		2.40

Standard Steel Classifications

Extras per 100 Pounds—Adopted July 1, 1923

Table with columns for size, shape (Rounds and Squares, Hexagons, Half Rounds—Solid), and price. Includes items like 3/4 to 3 1/16 In. Base \$1.10.

Table with columns for size, shape (Bands, Flats), and price. Includes items like 17/16 to 6 In. x Nos. 7, 8, 9 and 3/8 In. Base \$0.05.

Table with columns for width, thickness, and price. Includes items like 3/8 to 1 1/2 In. \$1.40.

Table with columns for size, shape (Ovals, Half Ovals), and price. Includes items like 3/4 to 2 1/2 In. x 3/8 In. and Thicker \$0.30.

Standard Steel Classifications

Adopted Oct. 1, 1920

Extras per 100 Pounds

Table with columns for size, shape (Round and Square Spring Steel, Flat Spring Steel), and price. Includes items like 5/8 to 1 1/2 In. Base \$1.00.

Free Cutting Steel. Extra for Free Cutting Quality \$0.15. Size Same as for Mild Steel Bars.

Table with columns for size, shape (Cutting to Specified Lengths, Machine Cutting Rounds and Squares), and price. Includes items like Lengths Over 48 Inches \$0.20.

Table with columns for size, shape (Carbon Extras), and price. Includes items like If Specified Up to 20 Per Cent. Base \$0.05.

Forging Bars (Special Discard). Extras on forging bars recommended by the Committee on Steel and Steel Products of the American Iron and Steel Institute, December 22, 1917.

Steel Tires. Iron Finish, 1 1/2 x 1/2 In. and Heavier. Base \$0.15.

Table with columns for size, shape (Additional Extras), and price. Includes items like 1 x 1/2 In. and Heavier \$0.10.

Toe Calk Steel. For intermediate sizes, next higher extra to be charged. Sizes not shown are subject to special arrangement.

Table with columns for size, shape (Toe Calk Steel), and price. Includes items like 1/2, 3/8, 5/8, 3/4, 7/8, 1 x 3/8 In. Base \$0.75.

Quantity Differentials. All specifications for less than 2000 pounds of a size will be subject to the following extras, the total weight for a size ordered to determine the extra, regardless of length and exact quantity actually shipped.

Standard Steel Classification

Extras per 100 Pounds

Steel Structural Shapes

Adopted July 15, 1919

3 In. and Over

Table with columns for size, shape (Standard Structural Beams and Channels, Zees, Standard Structural Beams, Carnegie H-beams, Bethlehem Sections, Angles, Tees, Bulb Angles), and price. Includes items like Standard Structural Beams and Channels, 3 In. to 15 In., Inclusive. Base \$1.00.

*Refer to Office. No charge for cutting to lengths 3 ft. and over, subject to the following tolerances:

Table with columns for size, shape (Beams and Channels, Angles, Tees, Zees and Other Shapes, Cold Sawing Length, Material Subject to Navy Department Inspection), and price. Includes items like Beams and Channels 3/8 In. Over 3/8 In. Under 3/8 In. \$0.10.

Channels—Bar Sizes. Adopted July 16, 1923

Table with columns for size, shape (Channels—Bar Sizes), and price. Includes items like 1 1/2 In. and Wider, but Under 3 x 3/8 In. and Over \$0.25.

Equal Leg Angles—Bar Sizes. 1 1/2 x 1 1/2 In. and Wider, but Under 3 x 3/8 In. and Over \$0.25.

Table with columns for size, shape (Equal Leg Angles—Bar Sizes), and price. Includes items like 1 1/2 x 1 1/2 In. and Wider, but Under 3 x 3/8 In. and Over \$0.25.

Unequal Leg Angles—Bar Sizes. 3 x 2 1/2 and 3 x 2 by Less than 1/4 In. Thick \$0.35.

Tees—Bar Sizes. 1 1/2 x 1 1/2 In. and Wider, but Under 3 x 3/8 In. and Over \$0.30.

Quantity Differentials. All specifications for less than 2000 pounds of a size will be subject to the following extras, the total weight for a size ordered to determine the extra, regardless of length and exact quantity actually shipped.

Table with columns for size, shape (Quantity Differentials), and price. Includes items like Less Than 2000 Pounds but Not Less Than 1000 Pounds \$0.20.

Cold Rolled Steel

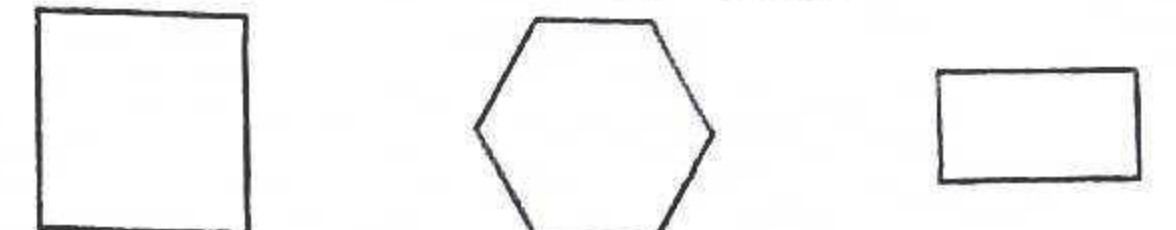


Table with columns for size, shape (Squares and Hexagons, Flats), and price. Includes items like Square Fig. 3231, Hexagon Fig. 3232, Flat Fig. 3233.

Table with columns for thickness, width, and price. Includes items like 1/8 and 5/32 \$8.50.

Extras for Odd and Intermediate Sizes. The following sizes in rounds, hexagons and squares shall be considered standard.

All odd and intermediate sizes (excepting those allowing a tolerance of .008 inch and such specifications shall be for not less than 2000 pounds of a size), not less than 25 cents per 100 pounds net extra, in addition to the usual extras for accuracy, etc.

All specified diameters exceeding standard sizes by more than .001 inch are considered odd and subject to the above extra.

Extras for Long and Short Lengths. Lengths Longer than 24 Feet and Less than 30 Feet per 100 pounds net \$0.50.

Table with columns for size, shape (Extras for Long and Short Lengths), and price. Includes items like 3 to 5 1/2 \$1.50.

Quantity Differentials. All specifications for less than 2000 pounds of a size will be subject to the following extras, the total weight of a size ordered to determine the extra regardless of length and regardless of the exact quantity actually shipped.

Extras for Special and High Carbon Open Hearth Steels. Specified Analysis, Carbon 30% and Less per 100 pounds net \$0.25.

Extras for Accuracy. For Accuracy from Exact Size to .0015-inch Under Sizes 3 inch Diameter and Smaller per 100 pounds net \$0.25.

For Accuracy from Exact Size to .001-inch or Under, or from Exact Size to Not More than .001-inch Diameter and Smaller Either Way, Sizes 2 1/2-inch Diameter and Smaller per 100 pounds net \$0.50.

For Accuracy within .0005-inch Either Way and from Exact Size to .001-inch Over Size, Sizes 2-inch Diameter and Smaller (Standard Sizes Only) per 100 pounds net \$1.00.

Cumberland Standard Classification of Extras

On Cumberland Ground Shafting, Also Cold Drawn Steel Rounds, 1 1/16 Inch and Smaller, Flats, Squares and Hexagons Net Extras for Size Adopted March 10, 1924

Size Inches	Extra per 100 Lbs.	Size Inches	Extra per 100 Lbs.	Size Inches	Extra per 100 Lbs.
1/8 to 5/32	\$3.00	1 1/16 to 3/4	\$4.40	3 15/16 to 4 3/8	\$8.00
3/16 " 7/32	2.00	1 3/16 " 1 1/16	.30	4 7/16 " 4 7/8	1.00
1/4 " 1/2	1.25	1 1/8 " 1 7/16	.25	4 15/16 " 5 3/8	1.25
5/16 " 3/8	1.00	1 1/2 " 2 1/16	.15	5 7/16 " 5 7/8	1.75
7/16 to 9/16	.70	2 1/4 " 2 7/8	Base	5 15/16 " 6 3/8	2.25
5/8	.55	2 5/8 " 3 3/8	.30	6 7/16 " 7	3.00
		3 7/16 " 3 7/8	.50		

Squares and Hexagons

Size Inches	Extra per 100 Lbs.	Size Inches	Extra per 100 Lbs.	Size Inches	Extra per 100 Lbs.
1/8 to 5/32	\$5.00	9/16	\$1.00	2 1/16 to 2 7/16	\$1.25
3/16 " 7/32	4.00	5/8	.85	2 1/2 " 3	1.50
1/4 " 5/16	2.50	1 1/16 to 1 3/16	.75	3 1/16 " 4	2.00
3/8 " 7/16	1.75	7/8 " 1 5/16	.70		
1/2	1.15	1 3/8 " 2	.90		

Flats

Thickness Inches	Width Inches	Extra per 100 Lbs.	Width Inches	Extra per 100 Lbs.	Width Inches	Extra per 100 Lbs.
1/8 and 5/32	3/4	\$8.50	1/2	\$6.50	1 1/2	\$3.50
3/16 to 5/16	5/8	7.75	3/4	5.75	2 1/2	3.00
3/8 " 7/16	7/8	4.75	1	4.25	3	2.50
1/2 " 9/16	1 1/8	3.25	1 1/4	2.75	3 1/2	2.50
5/8 " 1 1/16	1 3/8	2.75	1 1/2	1.50	4	2.50
3/4 " 1 5/16	1 5/8	1.50	1 3/4	1.50	4 1/2	2.50
1 " 1 7/16	1 7/8	1.50	2	1.50	5	2.50
1 1/2 " 1 11/16	2	1.50	2 1/4	1.50	5 1/2	2.50
1 3/4 " 1 15/16	2 1/4	1.50	2 3/4	1.50	6	2.50
2 " 2 1/16	2 3/4	1.50	3	1.50	6 1/2	2.50

Miscellaneous Net Extras
Extra for Odd and Intermediate Sizes

The following sizes in Rounds, Hexagons and Squares shall be considered standard:

- By 64ths to 1 inch, inclusive;
- By 32nds, 1 1/32 to 1 1/2 inches, inclusive;
- By 16ths, 2 inches to maker's limit.

All odd and intermediate sizes excepting those allowing a total tolerance of .008 inch and such specifications shall be for not less than 2000 pounds of a size, not less than 25 cents per 100 pounds net extra, in addition to the usual extras for accuracy, etc. All specified diameters exceeding standard sizes by more than .001 inch are considered odd and subject to the above extra.

Extras for Chamfering
For Automatic Screw Machine use only.

Size Inches	Per 100 Lbs. Rounds	Per 100 Lbs. Hex. Sq.	Size Inches	Per 100 Lbs. Rounds	Per 100 Lbs. Hex. Sq.
7/16 to 5/8	\$.13	\$.15	1 to 2	\$.065	\$.115
1 1/16 " 1 5/16	.10	.13	2 1/16 and Larger	.04	.10

These extras apply on lengths 10 feet and longer and one end of bar only. If both ends of bars are chamfered these extras are doubled. For sizes smaller than 7/16 inch and bars shorter than 10 feet, special prices will be quoted. Special prices will also be quoted on chamfering for other than automatic screw machine use.

Extras for Boxing and Burlapping

Boxing (Minimum 75 Cents), Domestic Shipment	per 100 lbs. \$.50
Boxing (Minimum \$1.00), Export Shipment	per 100 lbs. .75
Burlapping (Minimum 25 Cents), Full Length	per 100 lbs. .25
Burlapping (Minimum 25 Cents), as Required by Railroads	per 100 lbs. .15

The railroads require all shippers to burlap, both ends and middle, all less than carload shipments weighing less than 24000 pounds.

Cumberland Standard Classification of Extras

On Cumberland Ground Shafting, Also Cold Drawn Steel Rounds, 1 1/16 Inch and Smaller, Flats, Squares and Hexagons Miscellaneous Net Extras, Continued Adopted March 10, 1924

1.—For accuracy from exact size to .0015 inch under, or from exact size to .0015 inch under to .001 inch over, sizes 3-inch diameter and smaller, (standard, odd and intermediate sizes)..... per 100 lbs. \$.25

For this accuracy sizes larger than 3 inches special prices will be quoted.

2.—For accuracy from exact size to .001 inch under, or from exact size to not more than .001 inch either way, sizes 2 1/2 inches diameter and smaller (standard sizes only)..... per 100 lbs. \$.50

For this accuracy sizes larger than 2 1/2 inches special prices will be quoted.

3.—For accuracy within .0005 inch either way and from exact to .001 inch over size, sizes 2 inches diameter and smaller, (standard sizes only)..... per 100 lbs. \$1.00

For this accuracy sizes larger than 2 inches special prices will be quoted.

4.—For accuracy .001 either way or from exact size to .001 inch over, or from exact size to .001 inch under, sizes 2 inches diameter and smaller, odd and intermediate sizes only..... per 100 lbs. \$1.00

For this accuracy, sizes larger than 2 inches special prices will be quoted.

5.—The above Extras for Accuracy apply to Rounds only and in commercial grades .30 per cent Carbon and less. Rounds .31 per cent Carbon and over, also Squares, Hexagons and Flats in low carbon commercial grades are subject to double extras according to the accuracy limits specified.

Piston Rod Steel
Uniformity to size and carefully selected surface finish, in addition to usual extras for accuracy, short and long lengths..... per 100 lbs. \$.50

Roller Bearing Steel
Extra..... per 100 lbs. \$1.00

Extras for Special and High Carbon Open Hearth Steels
Specified Analysis, Carbon .30 Per Cent and Less..... per 100 lbs. \$.25
Specified Analysis, Carbon .31 Per Cent to .50 Per Cent..... per 100 lbs. .50
These extras apply on all specified analysis in Open Hearth Steels within the Carbon ranges noted, excepting standard Open Hearth Screw Stock.

Quantity Differentials
All specifications for less than 2000 pounds of a size will be subject to the following extras, the total weight of a size ordered to determine the extras regardless of length and the exact quantity actually shipped:
1000 to 1999 Pounds..... per 100 lbs. \$.20
Less than 1000 Pounds..... " 100 " .50

Extras for Long and Short Lengths

Size Inches	Rounds	Squares	Hexagons	Flats
3 to 5 15/16	\$1.50	\$1.50	\$1.50	\$3.00
6 " 11 5/16	.75	.75	.75	1.50
12 " 23 5/16	.45	.60	.45	.75
24 " 59 15/16	.30	.30	.30	.40

Extra Lengths Longer than 24 Feet and Less than 30 Feet..... per 100 lbs. \$.50
Extra, 30 Feet and Less than 35 Feet..... " 100 " 1.00
" 35 " " " 40 " " " 1.50
" 40 " " " 45 " " " 2.00
" 45 " " Longer..... " 100 " 2.50
Extras for longer lengths apply on Rounds, Squares, Hexagons and Flats.

Armco Ingot Iron Blue Annealed Sheets



Fig. 3251

Ordinarily hot rolled jobbing sheets are too stiff to be used for certain purposes where the sheet is subjected to severe strains. The process of softening these sheets, called blue annealing, occurs in a gas furnace through which the sheets pass after leaving the finishing mill. In this furnace they are kept at a moderate heat for a short time and allowed to cool slowly, which effectually removes the stiffness and produces a soft ductile plate.

Blue annealed Armco Ingot Iron is a high grade material to use where resistance to corrosion is a factor. Armco Ingot Iron resists rust and in addition has good working qualities. It is especially adapted to the manufacture of water and oil tanks, range boilers, gas containers, electrical switch boxes, mine cars, grave vaults, etc.

Gauge No.	Size Inches	Approximate Weight Pounds per Sheet	Gauge No.	Size Inches	Approx. Weight Pounds per Sheet
16	30x 96	51	14	48x120	128
16	36x120	77	12	48x120	179
16	48x120	102	12	60x144	268
16	48x144	123	10	48x120	230
14	30x 96	64	10	60x144	345
14	36x120	96			

Prices upon application.

Armco Ingot Iron Galvanized Sheets

Ingot iron galvanized sheets find their chief use where rust-resistance is essential. Because the impurities responsible for the battery action causing rust have been practically eliminated, Armco Ingot Iron is long lasting. Furthermore it takes and holds under working conditions, a purer zinc coating than the coating on steel, and this purer zinc coating still further aids the durable iron in resisting corrosion.

Used extensively in the manufacture of culverts, flumes, washing machines, refrigerators, roofing, siding and formed factory products.

Ingot iron galvanized sheets can be furnished in all gauges from No. 8 to No. 28, inclusive, up to 48 inches in width and 144 inches in length.

Prices upon application.

Roll and Sheet Brass

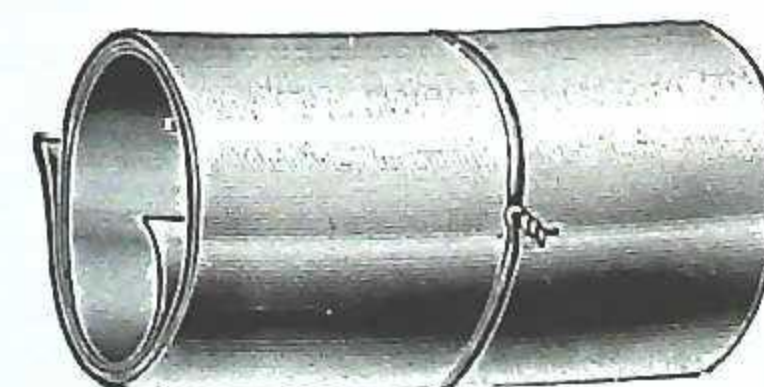


Fig. 3253

We are prepared to furnish roll and sheet brass in any size sheet desired.

Prices upon application.

Armco Ingot Iron Galvanized Corrugated Sheets

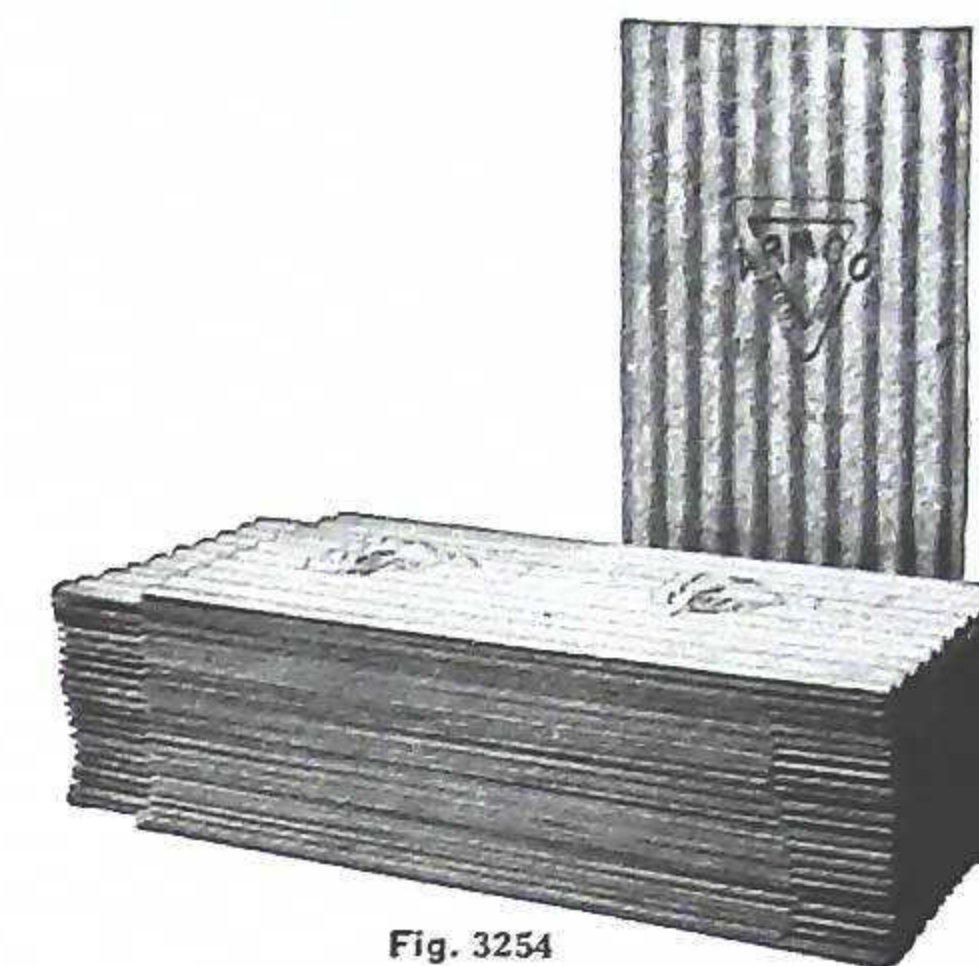


Fig. 3254

Armco Ingot Iron Corrugated Sheets not only impart great strength to the building to which they are applied, but are unequalled in rust resisting quality.

For roofing, sheets 27 1/2 inches wide after corrugating are recommended. This size allows 1 1/2 corrugations for lap. For siding, ceiling, arches and awnings, sheets 26 inches wide after corrugating are recommended allowing one corrugation for laps.

It requires about one-half pound of nails and one-quarter pound of lead washers to properly lay one square of corrugated roofing.

Roofing and siding sheets carried in stock in 26, 24, 22 and 20-gauge, in foot lengths from 5 to 10 ft., 2 1/2-in. corrugation. Other widths, lengths and corrugations furnished to order.

Prices upon application.

Armco Ingot Iron Polished Sheets

Armco Ingot Iron polished sheets have a uniform blue color with a smooth velvety surface and a dense, firm oxide which permits rough handling and bending. These sheets are re-squared to size and oiled. They can be stretcher leveled when necessary.

Ingot Iron polished sheets are uniform in color across the width and length of the sheet, free from buckles, and possess remarkable working qualities.

These sheets are used to a great extent in the manufacture of stoves, bake pans, locomotive jackets and engine lagging. For each of these purposes the corrosion resistance of Ingot Iron makes it an ideal material.

Sizes not shown can be quoted on and shipped direct from the mill.

Gauge Number	Size Inches	Approx. Weight Pounds per Sheet	Gauge Number	Size Inches	Approx. Weight Pounds per Sheet
26	30x96	15	22	30x96	25
24	30x96	20	20	30x96	30

Prices upon application

Armco Ingot Iron Black Sheets

Extensively used for stove pipe, heaters, stoves and in work not requiring polished surface. Has lasting qualities.

Gauge Number	Size Inches	Number Sheets to Bundle	Wt. Lbs. per Sheet	Wt. Lbs. per Bundle
26	30x96	10	15	150
24	30x96	7	20	140
22	30x96	6	25	150
20	30x96	5	30	150
18	30x96	4	40	160

Bundling Table for Galvanized Sheets

Bundling Table for Galvanized Sheets

Gauge No.	Wt., Oz., per Sq. Ft.	10		11	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	69.37	2	61.87	3
26x 72	13	75.16	2	67.03	2
28x 72	14	80.94	2	72.19	2
30x 72	15	86.72	2	77.34	2
36x 72	18	104.06	2	92.81	2
24x 84	14	80.94	2	72.19	2
26x 84	15 16	87.64	2	78.17	2
28x 84	16 33	94.41	2	84.20	2
30x 84	17 50	101.17	2	90.23	2
36x 84	21	121.41	2	108.28	2
24x 96	16	92.50	2	82.50	2
26x 96	17 33	100.19	2	89.36	2
28x 96	18 66	107.88	2	96.22	2
30x 96	20	115.62	2	103.12	2
36x 96	24	138.75	2	123.75	2
24x120	20	115.62	2	103.12	2
26x120	21 66	125.22	2	111.68	2
28x120	23 33	124.88	2	120.30	2
30x120	25	144.53	2	128.91	2
36x120	30	173.44	2	154.69	2

Continued

Gauge No.	Wt., Oz., per Sq. Ft.	16		17	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	31.87	5	28.87	5
26x 72	13	34.53	4	31.28	5
28x 72	14	37.19	4	33.69	5
30x 72	15	39.84	4	36.09	4
36x 72	18	47.81	3	43.31	4
24x 84	14	37.19	4	33.69	5
26x 84	15 16	40.27	4	36.48	4
28x 84	16 33	43.38	4	39.29	4
30x 84	17 50	46.48	3	42.11	4
36x 84	21	55.78	3	50.53	3
24x 96	16	42.50	4	38.50	4
26x 96	17 33	46.03	3	41.70	4
28x 96	18 66	49.57	3	44.90	4
30x 96	20	53.12	3	48.12	3
36x 96	24	63.75	2	57.75	3
24x120	20	53.12	3	48.12	3
26x120	21 66	57.53	3	52.12	3
28x120	23 33	61.97	3	56.14	3
30x120	25	66.41	2	60.16	3
36x120	30	79.69	2	72.19	2

Gauge No.	Wt., Oz., per Sq. Ft.	12		13	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	54.37	3	46.87	3
26x 72	13	58.91	3	50.78	3
28x 72	14	63.44	2	54.69	3
30x 72	15	67.97	2	58.59	3
36x 72	18	81.56	2	70.31	2
24x 84	14	63.44	2	54.69	3
26x 84	15 16	68.69	2	59.22	3
28x 84	16 33	74.00	2	63.79	3
30x 84	17 50	79.30	2	68.36	2
36x 84	21	95.16	2	82.03	2
24x 96	16	72.50	2	62.50	2
26x 96	17 33	78.53	2	67.70	2
28x 96	18 66	84.55	2	72.89	2
30x 96	20	90.62	2	78.12	2
36x 96	24	108.75	2	93.75	2
24x120	20	90.62	2	78.12	2
26x120	21 66	98.15	2	84.61	2
28x120	23 33	105.71	2	91.13	2
30x120	25	113.28	2	97.66	2
36x120	30	135.94	2	117.19	2

Continued

Gauge No.	Wt., Oz., per Sq. Ft.	18		19	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	25.87	6	22.87	7
26x 72	13	28.03	5	24.78	6
28x 72	14	30.19	5	26.69	6
30x 72	15	32.34	5	28.59	5
36x 72	18	38.81	4	34.31	4
24x 84	14	30.19	5	26.69	6
26x 84	15 16	32.69	5	28.90	5
28x 84	16 33	35.21	4	31.13	5
30x 84	17 50	37.73	4	33.36	5
36x 84	21	45.28	3	40.03	4
24x 96	16	34.50	4	30.50	5
26x 96	17 33	37.37	4	33.04	5
28x 96	18 66	40.24	4	35.57	4
30x 96	20	43.12	4	38.12	4
36x 96	24	51.75	3	45.75	3
24x120	20	43.12	3	38.12	4
26x120	21 66	46.70	3	41.29	4
28x120	23 33	50.31	3	44.47	3
30x120	25	53.91	3	47.66	3
36x120	30	64.69	2	57.19	3

Gauge No.	Wt., Oz., per Sq. Ft.	14		15	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	39.37	4	35.62	4
26x 72	13	42.66	4	38.59	4
28x 72	14	45.94	3	41.56	4
30x 72	15	49.22	3	44.53	3
36x 72	18	59.06	3	53.44	3
24x 84	14	45.94	3	41.56	4
26x 84	15 16	49.74	3	45.01	3
28x 84	16 33	53.58	3	48.48	3
30x 84	17 50	57.42	3	51.95	3
36x 84	21	68.91	2	62.34	2
24x 96	16	52.50	3	47.50	3
26x 96	17 33	56.86	3	51.45	3
28x 96	18 66	61.23	3	55.40	3
30x 96	20	65.62	2	59.37	3
36x 96	24	73.75	2	71.25	2
24x120	20	65.62	2	59.37	3
26x120	21 66	71.07	2	64.30	2
28x120	23 33	76.55	2	69.26	2
30x120	25	82.03	2	74.22	2
36x120	30	98.44	2	89.06	2

Continued

Gauge No.	Wt., Oz., per Sq. Ft.	20		21	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	19.87	8	18.37	8
26x 72	13	21.53	7	19.91	8
28x 72	14	23.19	7	21.44	7
30x 72	15	24.84	6	22.97	7
36x 72	18	29.81	5	27.56	6
24x 84	14	23.19	7	21.44	7
26x 84	15 16	25.11	6	23.21	7
28x 84	16 33	27.05	5	25.01	6
30x 84	17 50	28.98	5	26.80	6
36x 84	21	34.78	4	32.16	5
24x 96	16	26.50	6	24.50	6
26x 96	17 33	28.70	5	26.54	6
28x 96	18 66	30.91	5	28.57	5
30x 96	20	33.12	5	30.62	5
36x 96	24	39.75	4	36.75	4
24x120	20	33.12	5	30.62	5
26x120	21 66	35.87	4	33.17	5
28x120	23 33	38.64	4	35.72	4
30x120	25	41.41	4	38.28	4
36x120	30	49.69	3	45.94	3

Bundling Table for Galvanized Sheets

Continued

Gauge No.	Wt., Oz., per Sq. Ft.	22		23	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	16.87	9	15.37	10
26x 72	13	18.28	8	16.66	9
28x 72	14	19.69	8	17.94	8
30x 72	15	21.09	7	19.22	8
36x 72	18	25.31	6	23.06	7
24x 84	14	19.69	8	17.94	8
26x 84	15 16	21.32	7	19.42	8
28x 84	16 33	22.96	7	20.92	7
30x 84	17 50	24.61	6	22.42	7
36x 84	21	29.53	5	26.91	6
24x 96	16	22.50	7	20.50	7
26x 96	17 33	24.37	6	22.20	7
28x 96	18 66	26.24	6	23.91	6
30x 96	20	28.12	5	25.62	6
36x 96	24	33.75	5	30.75	5
24x120	20	28.12	5	25.62	6
26x120	21 66	30.46	5	27.75	6
28x120	23 33	32.81	5	29.89	5
30x120	25	35.16	4	32.03	5
36x120	30	42.19	4	38.44	4

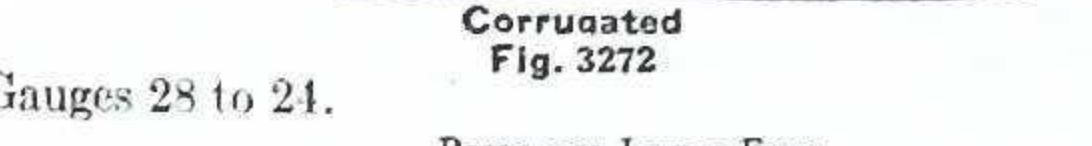
Gauge No.	Wt., Oz., per Sq. Ft.	24		25	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	13.87	11	12.37	12
26x 72	13	15.03	10	13.41	11
28x 72	14	16.19	9	14.44	11
30x 72	15	17.34	9	15.47	10
36x 72	18	20.81	7	18.56	8
24x 84	14	16.19	9	14.44	11
26x 84	15 16	17.53	8	15.63	10
28x 84	16 33	18.88	8	16.84	9
30x 84	17 50	20.23	7	18.05	8
36x 84	21	24.28	6	21.66	7
24x 96	16	18.50	8	16.50	9
26x 96	17 33	20.04	8	17.87	8
28x 96	18 66	21.58	7	19.24	8
30x 96	20	23.12	7	20.62	7
36x 96	24	27.75	6	24.75	6
24x120	20	23.12	7	20.62	7
26x120	21 66	25.04	6	22.34	7
28x120	23 33	26.98	6	24.06	6
30x120	25	28.91	5	25.78	6
36x120	30	34.69	5	30.94	5

Gauge No.	Wt., Oz., per Sq. Ft.	26		27	
		Weight of Sheet Pounds	No. of Sheets	Weight of Sheet Pounds	No. of Sheets
24x 72	12	10.87	14	10.12	15
26x 72	13	11.78	13	10.97	14
28x 72	14	12.69	12	11.81	13
30x 72	15	13.59	11	12.66	12
36x 72	18	16.31	9	15.19	10
24x 84	14	12.69	12	11.81	13
26x 84	15 16	13.74	11	12.79	12
28x 84	16 33	14.80	10	13.78	11
30x 84	17 50	15.86	10	14.77	10
36x 84	21	19.03	8	17.72	9
24x 96	16	14.50	10	13.50	11
26x 96	17 33	15.71	10	14.62	10
28x 96	18 66	16.91	9	15.74	10
30x 96	20	18.12	8	16.87	9
36x 96	24	21.75	7	20.25	8
24x120	20	18.12	8	16.87	9
26x120	21 66	19.63	8	18.28	8
28x120	23 33	21.14	7	19.68	8
30x120	25	22.66	7	21.09	7
36x120	30	27.19	6	25.31	6

Round Conductor Pipe



Plain Fig. 3271

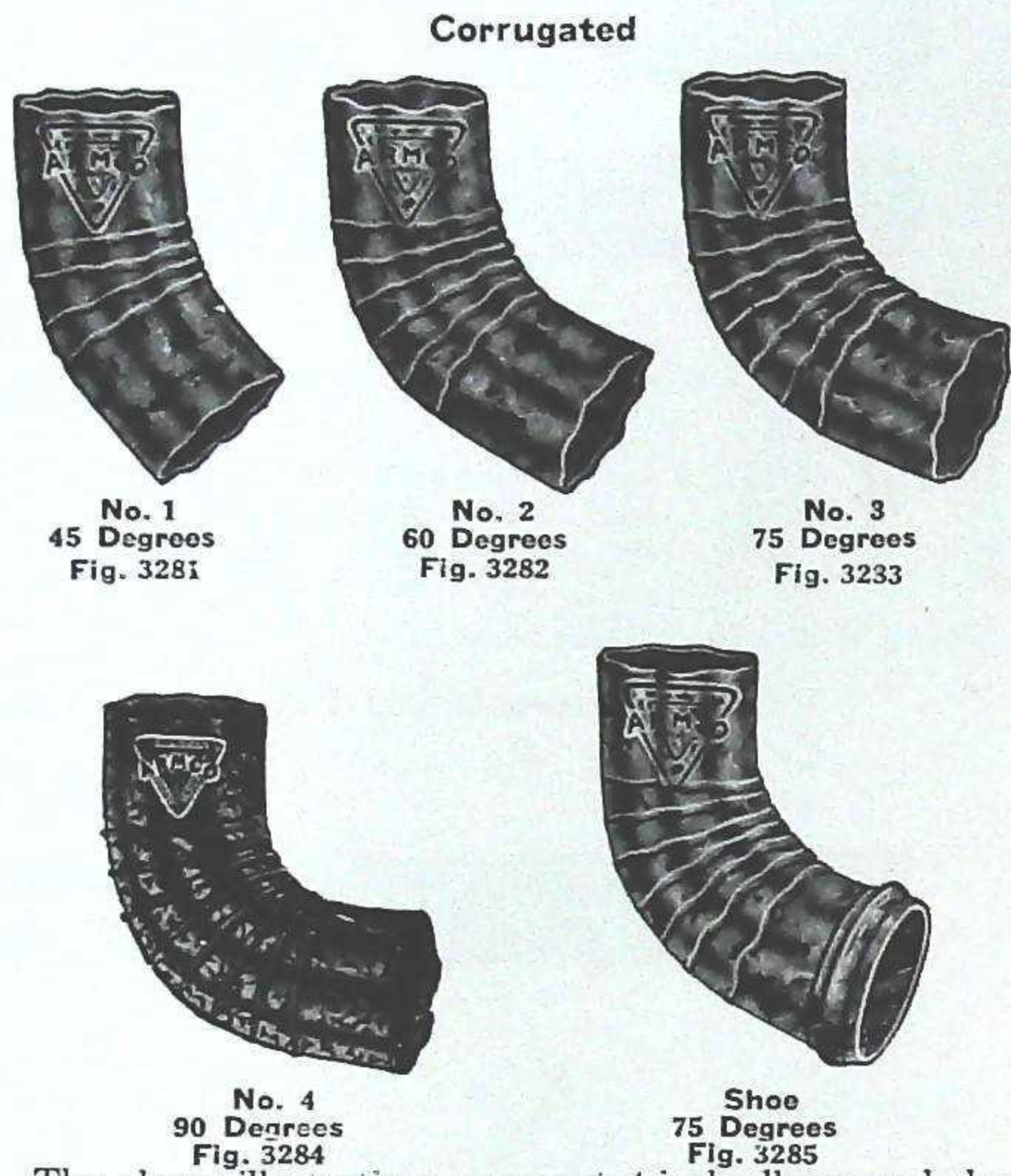


Corrugated Fig. 3272

Gauges 28 to 24.

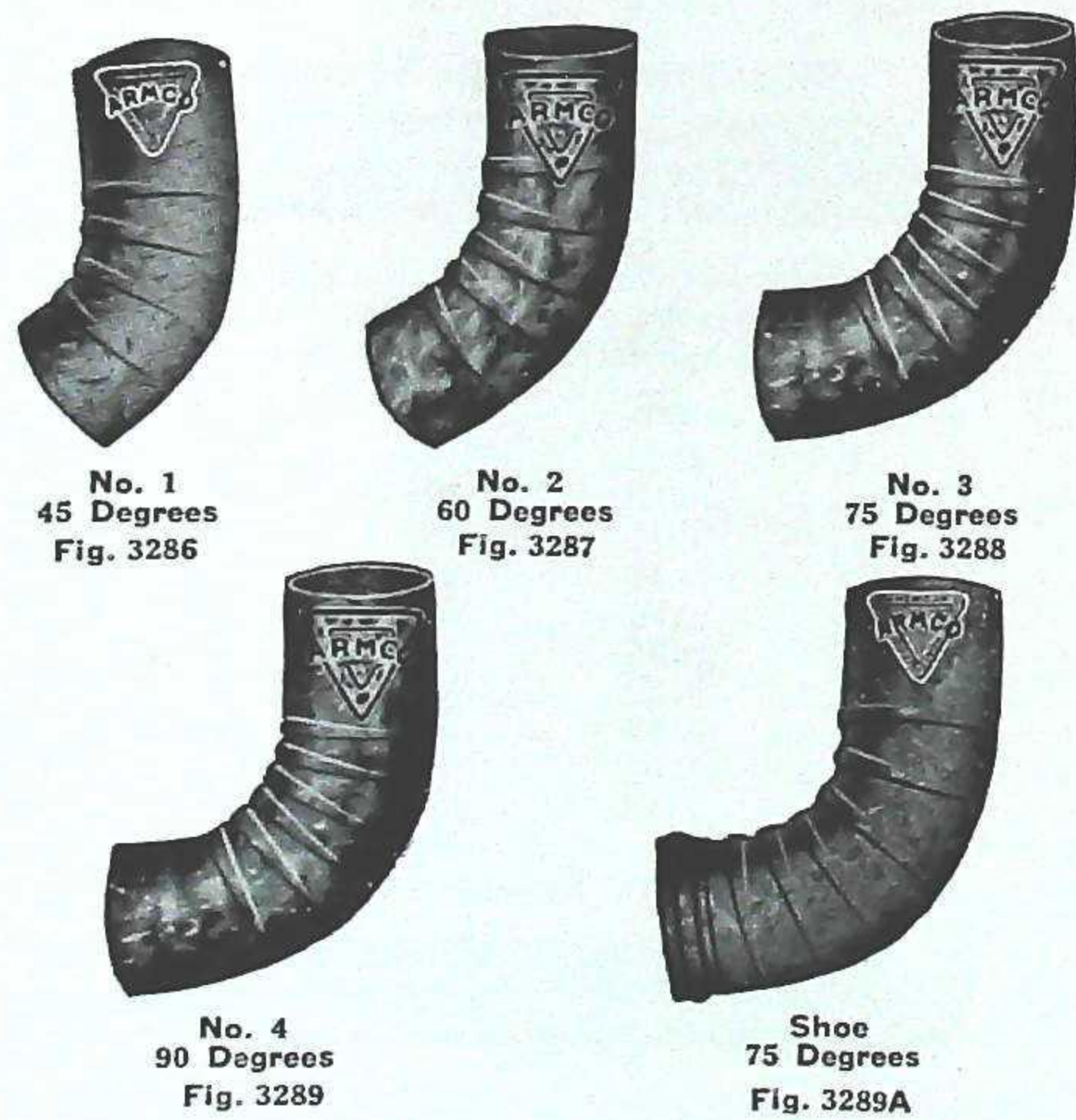
Gauge No.	PRICE, PER LINEAL FOOT					
	1 1/2	2	2 1/2	3	4	5
29	\$.11	\$.13				

Plain and Corrugated Elbows and Shoes



The above illustrations represent 4-inch elbows and shoe and show the exact number of crimps in each number of that size.

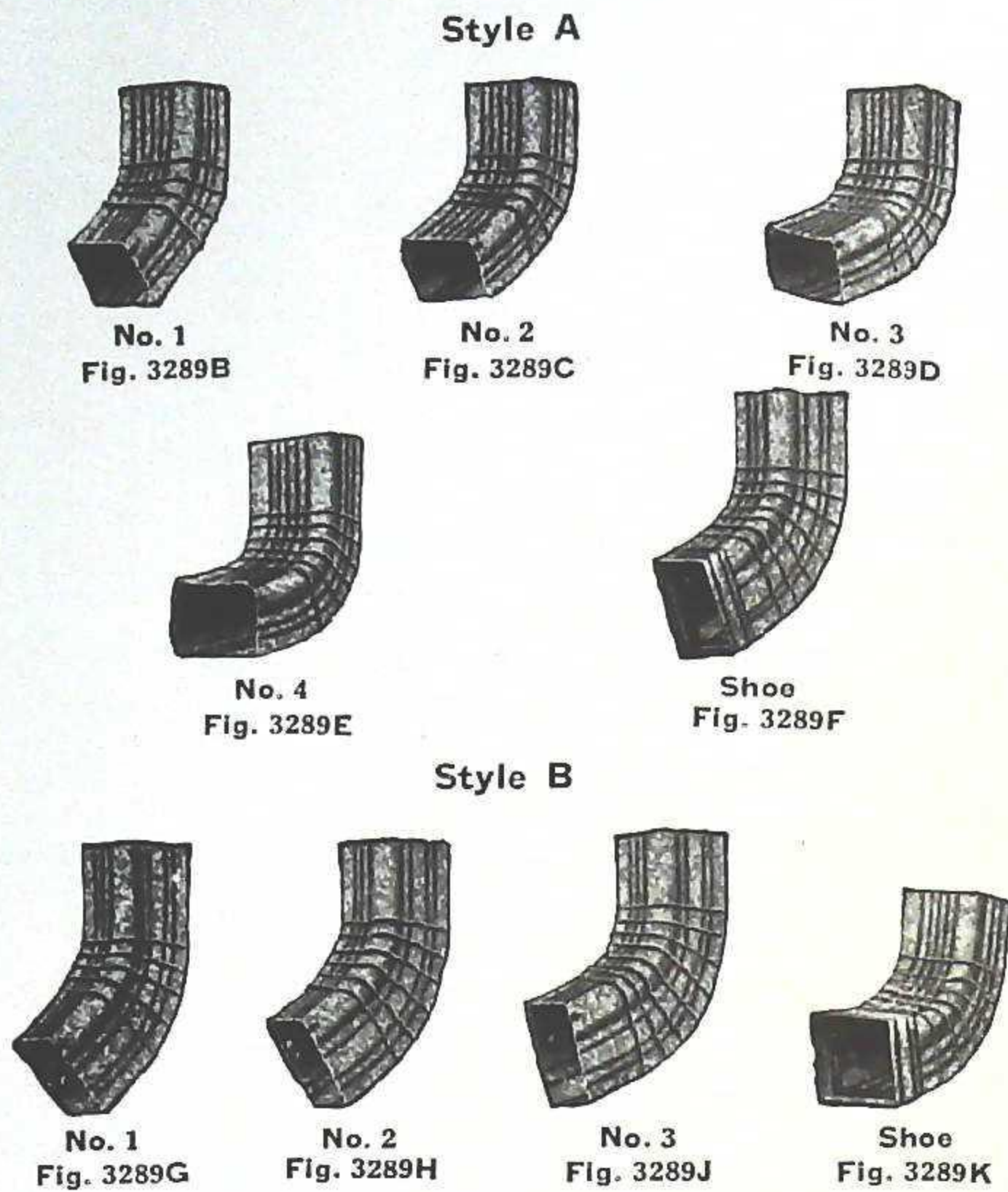
Plain



The above illustrations show exact number of crimps in 3-inch elbows.

Size In.	PRICE, EACH							
	GALVANIZED INGOT IRON		GALVANIZED STEEL		14-oz. COPPER		16-oz. COPPER	
	El-bows	Shoes	El-bows	Shoes	Elbows No. 0 and No. 4	Shoes No. 3 and No. 4	Elbows No. 0 and No. 4	Shoes No. 3 and No. 4
2	\$.40	\$.50	\$.30	\$.40	\$.70	\$.75	\$.75	\$.85
2 1/2	.48	.60	.36	.48	.90	1.00	1.00	1.10
3	.48	.60	.36	.48	.90	1.00	1.00	1.10
4	.75	.90	.60	.75	1.35	1.50	1.50	1.65
5	1.45	1.65	1.25	1.50	2.00	2.25	2.25	2.50
6	1.75	2.00	1.50	1.80	2.85	3.15	3.15	3.50

Elbows and Shoes



Styles A and B

Terne coated steel, galvanized. Ten-pound Terne coated steel; 40 pounds Terne coated steel.

Size In.	PRICE, PER DOZEN		Size In.	PRICE, PER DOZEN	
	Elbows	Shoes		Elbows	Shoes
2	\$4.80	\$6.00	4	\$7.80	\$9.60
3	6.00	7.20	5	12.00	15.00

Terne coated galvanized Portsmouth iron; 10-pound and 40-pound Terne coated Portsmouth iron.

Size In.	PRICE, PER DOZEN		Size In.	PRICE, PER DOZEN	
	Elbows	Shoes		Elbows	Shoes
2	\$7.20	\$9.00	4	\$10.80	\$13.20
3	8.40	10.20	5	16.20	19.20

Cold rolled copper.

Size In.	PRICE, PER DOZEN			
	14 OUNCE		16 OUNCE	
	Elbows	Shoes	Elbows	Shoes
2	\$10.20	\$10.80	\$10.80	\$12.60
3	13.20	14.40	14.40	16.20
4	19.20	21.60	21.60	24.00
5	28.80	33.00	33.00	36.00

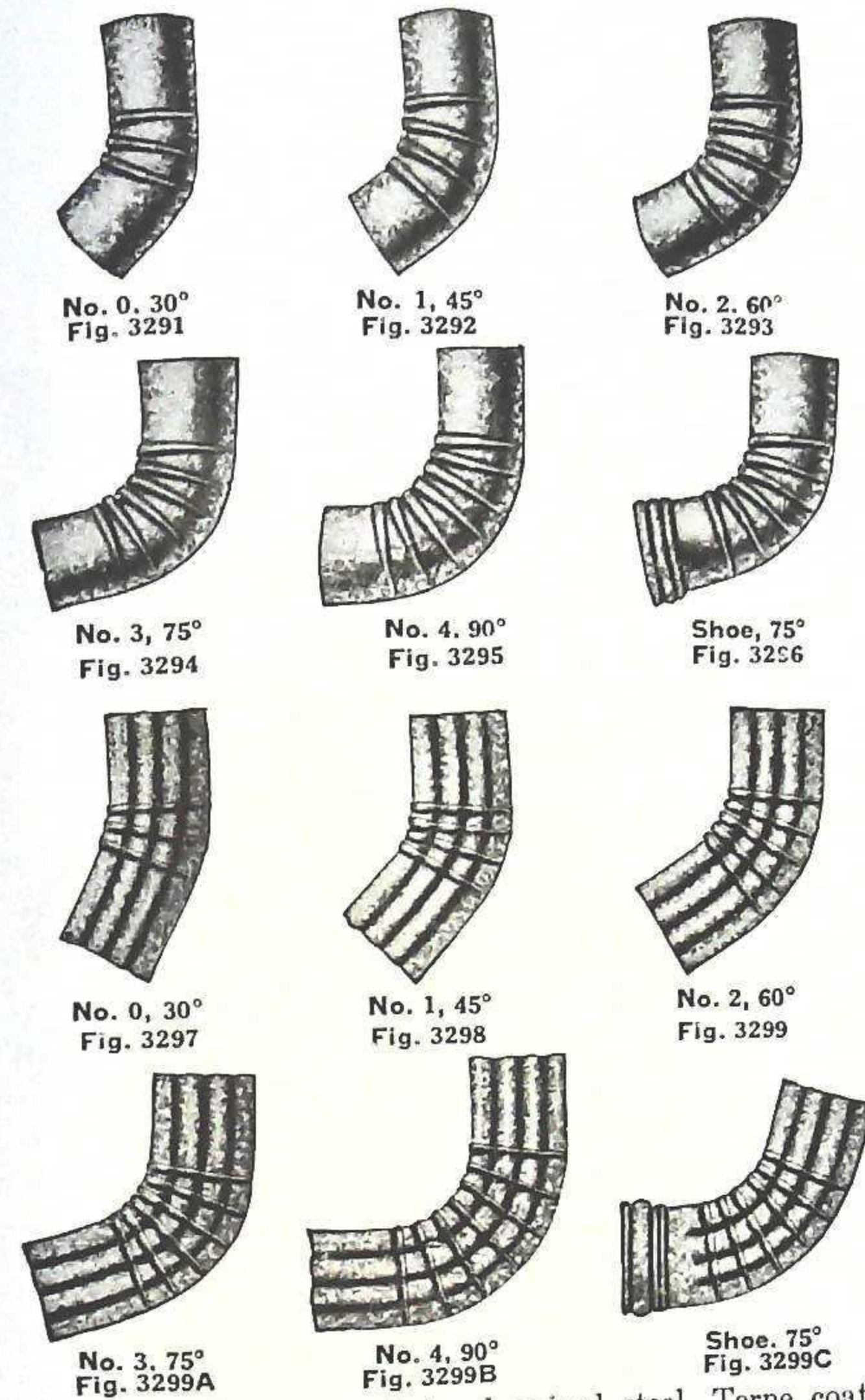
Adjustable Elbows for Conductor Pipe



Made in galvanized steel, Portsmouth iron or Terne.

Size Inches	Price per Dozen	Size Inches	Price per Dozen	Size Inches	Price per Dozen
2	2.40	4	4.80	6	8.40
2 1/2	3.00	4 1/2	5.40	7	10.20
3	3.60	5	6.60		

Round Elbows and Shoes



Made from Terne coated galvanized steel, Terne coated Portsmouth iron and 10 and 40-pound Terne steel in plain round, and round corrugated, in all sizes 2 to 6-inch inclusive in round, and 2 to 5-inch inclusive in square. In angles Nos. 0, 1, 2, 3 and 4.

These elbows and shoes are made in one piece with locked seams. The crimps are on the seam side of the elbow, leaving the back smooth. Ends are crimped to fit standard diameters of pipe and require neither clipping nor soldering to insure fit and holding of position. They are made from full weight IX Terne coated metal hand dipped after being formed.

Terne coated steel, galvanized. Ten-pound Terne coated steel; 40-pound Terne coated steel.

Size In.	PRICE, PER DOZEN		Size In.	PRICE, PER DOZEN	
	Elbows	Shoes		Elbows	Shoes
2	\$3.60	\$4.80	5	\$15.00	\$18.00
2 1/2-3	4.32	5.76	6	18.00	21.60
3 1/2-4	7.20	9.00			

Terne coated galvanized Portsmouth iron; 10-pound and 40-pound Terne coated Portsmouth iron.

Size In.	PRICE, PER DOZEN		Size In.	PRICE, PER DOZEN	
	Elbows	Shoes		Elbows	Shoes
2	\$4.80	\$6.00	5	\$17.40	\$19.80
2 1/2-3	5.76	7.20	6	21.00	24.00
3 1/2-4	9.00	10.80			

Cold rolled copper.

Size In.	PRICE, EACH			
	14-OUNCE		16-OUNCE	
	Elbows	Shoes	Elbows	Shoes
2	\$.70	\$.75	\$.75	\$.85
2 1/2-3	.90	1.00	1.00	1.10
3 1/2-4	1.35	1.50	1.50	1.65
5	2.00	2.25	2.25	2.50
6	2.85	3.15	3.15	3.50

Galvanized Eaves Trough Mitres

Made of Armeo Ingot Iron sheets. Gauges 28 to 24. When ordering, state whether right or left hand is wanted, and whether for inner or outer corner, otherwise half rights and half lefts and half inner and half outer will be shipped.



Inside Corner Mitre Fig. 3299D

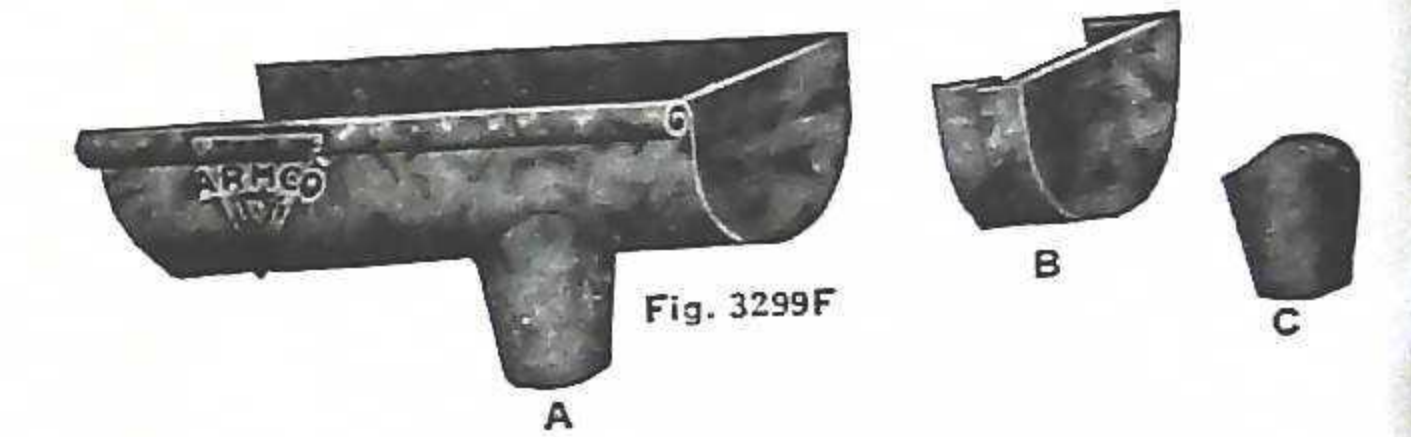
Size In.	PRICE, LINEAL FOOT	
	GAUGE No. 26	24
3 1/2	\$4.25	\$5.00
4	4.50	5.25
4 1/2	5.00	5.75
5	5.00	5.75
6	6.00	7.00
7	7.50	9.00
8	9.00	10.50



Outside Corner Mitre Fig. 3299E

Size In.	PRICE, PER LINEAL FOOT					
	LAP JOINT		SLIP JOINT		SLIP JOINT	
	26	24	26	24	26	24
3 1/2	\$4.25	\$5.00	\$5.75	\$5.25	\$6.00	\$6.75
4	4.50	5.25	6.50	5.50	6.25	7.50
4 1/2	5.00	5.75	7.50	6.00	6.75	8.50
5	5.00	5.75	7.50	6.00	6.75	8.50
6	6.00	7.00	8.50	7.00	8.00	9.50
7	7.50	9.00	10.00	8.50	10.00	11.00
8	9.00	10.50	12.00	10.00	11.50	13.00

Gutter End Sections, Slip Ends and Tubes



A shows a section of eave trough with tube and end soldered in it. Twelve-inch section furnished in lap joint.

B shows slip joint end-piece. Can be used either right or left.

C shows a tube or outlet.

Made of galvanized Armeo Ingot iron sheets.

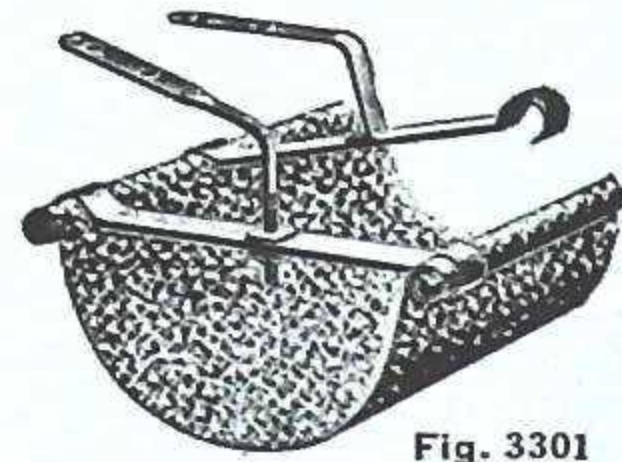
Gauges 28 to 24.

In ordering drops, state for what size eaves trough they are wanted.

Extra for double bead gutter ends, 26 and 24-gauge, 50 cents dozen.

Size In.	PRICE, PER DOZEN					
	Gauge 28 S. B.	Gauge 28 D. B.	Gauge 26 S. B.	Gauge 24 S. B.	Ends Caps	Drops or Outlets
2						\$.60
2 1/2						.75
3	\$2.80	\$3.30	\$3.30	\$4.30	\$.95	.80
3 1/2	2.80	3.30	3.60	4.60	1.10	.85
4	3.10	3.60	3.60	4.95	1.20	.95
4 1/2	3.45	3.95	3.95	4.95	1.20	.95
5	3.45	3.95	3.95	4.95	1.45	1.20
6	4.15	4.65	4.65	5.65	1.70	
7	4.70	5.20	5.20	6.20	2.10	
8	5.25	5.75	5.75	6.75		

Steel Eaves Trough Hangers
With Galvanized Cross Bars

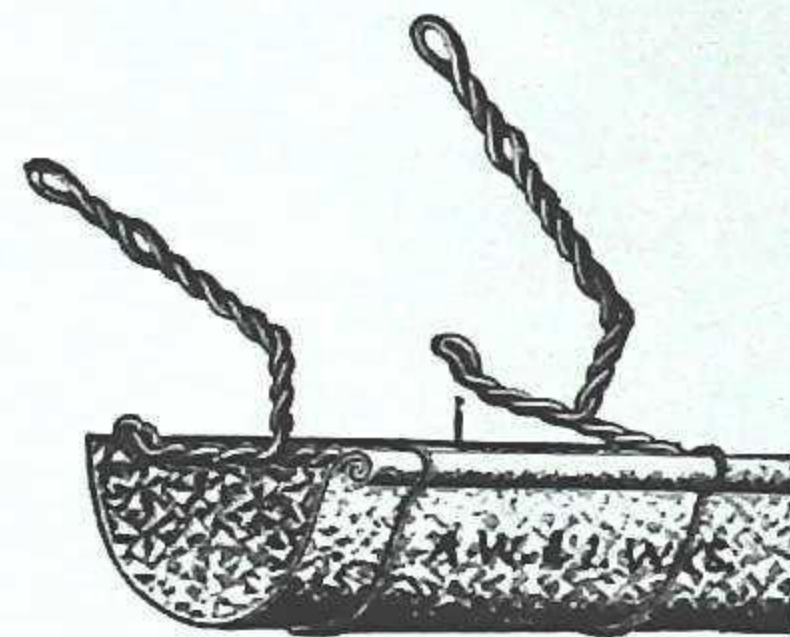


Hangers are furnished with rods and nuts, unless otherwise specified.

The prices given are for single bead; for double bead add 30 cents per gross.

Size In.	PRICE, PER GROSS		Size In.	PRICE, PER GROSS	
	With Rods and Nuts	Straps Riveted on Cross Bars		With Rods and Nuts	Straps Riveted on Cross Bars
3	\$7.50	\$7.00	5	\$9.00	\$8.00
3 1/2	8.00	7.00	6	10.00	9.00
4	8.50	7.50	7	12.00	11.00
4 1/2	8.70	7.70	8	16.00	15.00

Berloy Triple Twisted Cross Bar Wire Hangers



Size In.	Ship. Wt. Lbs.	PRICE PER GROSS	
		Sgl. Bead	Dbl. Bead
3 1/2	24	\$2.75	\$3.00
4	25	2.75	3.00
5	27	3.00	3.25
6	30	3.50	3.75
7	34	4.00	4.25
8	40	4.50	4.75

Fig. 3302

Packed one gross in a box.

Globe Ventilators



Fig. 3303

A valuable aid in curing smoky chimneys and quickening drafts in sluggish flues.

Useful in ventilating schools, churches, theatres, barns, factories, power houses, etc.

Made of Keystone copper steel, Toncan metal, Armeo iron, copper, and with glass top when desired. Made of substantial gauges of the best quality materials.

Diam. Pipe In.	Outside Diam. In.	Height In.	Price Each	Diam. Pipe In.	Outside Diam. In.	Height In.	Price Each
3	6 3/4	5 3/4	\$1.50	18	32	21	\$27.00
4	7 3/4	6 1/2	1.75	20	36 1/2	23	33.00
5	10	7 1/2	2.50	24	43 1/2	29	40.00
6	11 1/4	9	3.40	30	50 1/2	35	65.00
7	12 1/2	10	4.00	36	68	50	120.00
8	14	11	4.65	40	74	57	180.00
10	17	12	5.75	42	78	59	190.00
12	18 3/4	13	6.75	48	84	64	240.00
14	25	17	13.00	54	92	67	300.00
15	26	18	16.00	60	99	70	360.00
16	27 1/2	19	20.00	72	111	80	480.00

Wrought Iron Sickle Hooks

Galvanized



Fig. 3304

Wood Drive

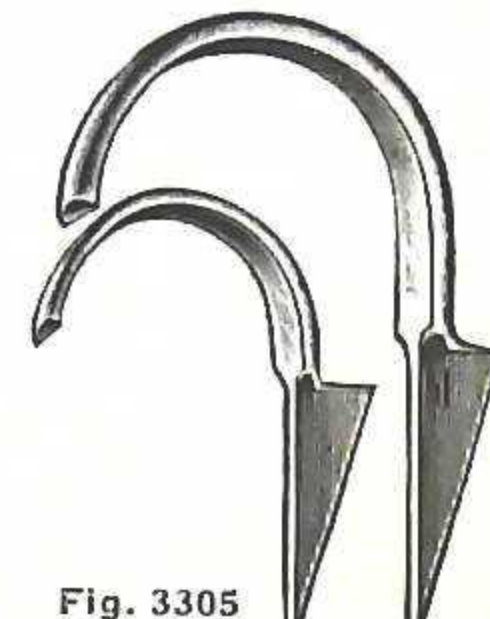


Fig. 3305

Brick Drive

Size In.	Price per 100
2	\$7.00
3	8.00
4	12.00
5	15.00
6	18.00
7	30.00
8	36.00

Berloy Plain Sickle Conductor Pipe Hooks

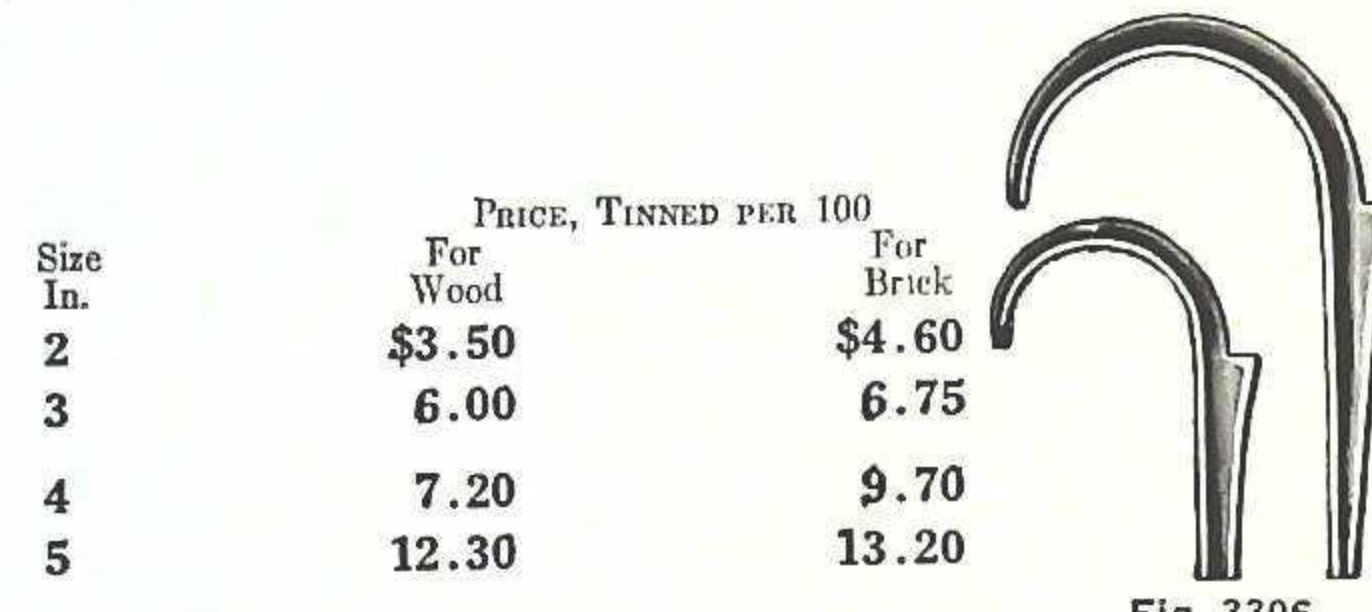
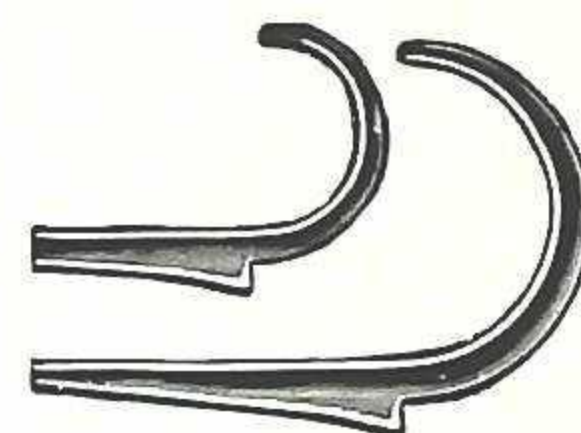


Fig. 3306

Size In.	PRICE, TINNED PER 100	
	For Wood	For Brick
2	\$3.50	\$4.60
3	6.00	6.75
4	7.20	9.70
5	12.30	13.20
6	16.40	18.50
8	.....	33.50

Plain Sickle Hooks



Brick Hook Fig. 3307

Malleable tinned.

Size Inches	PRICE, PER 100		Size Inches	PRICE, PER 100	
	For Wood	For Brick		For Wood	For Brick
2	\$3.50	\$4.60	5	\$12.40	\$13.20
3	6.00	6.75	6	16.40	18.50
4	7.20	9.70	..	.....	.....

Flashing Hooks

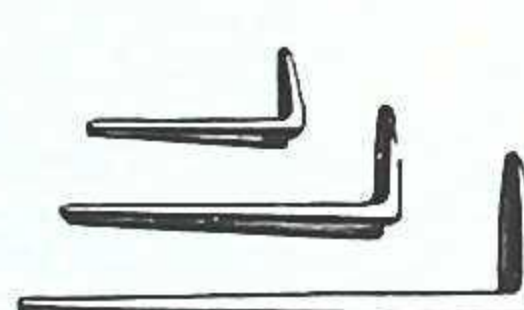


Fig. 3308

Size In.	Price per 100	Black	Tinned
1 1/2	\$0.80		\$0.95
2 1/2	1.30		1.60
3 1/2	1.90		2.40
5 1/2	4.00		5.00
7 1/2	6.60		8.25

Berloy Conductor Pipe Strainers



Fig. 3309

Size Inches	Price per Dozen	Size Inches	Price per Dozen
2	\$1.50	5	\$5.00
3	2.00	6	6.00
4	3.00	..	.....

Round Wired Hooks Tinned

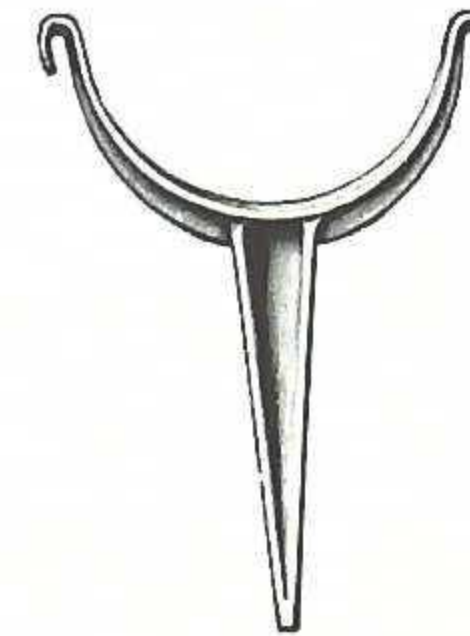


Fig. 3311

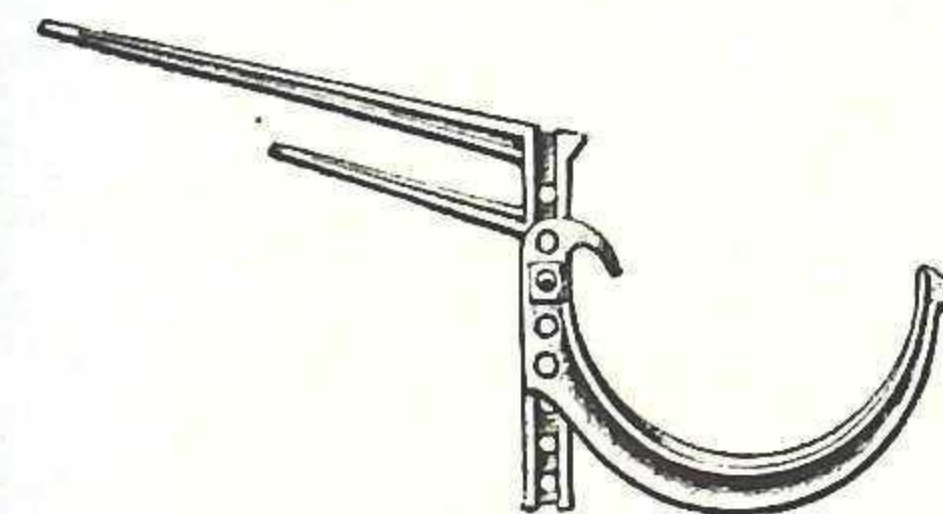
Size In.	*Price per 100	Size In.	*Price per 100
3	\$5.30	4	\$8.10

*For wood.

B. B. Gutter Hangers

Penn Circles

For Double Bead Gutters



With No. 13 Shank Fig. 3312

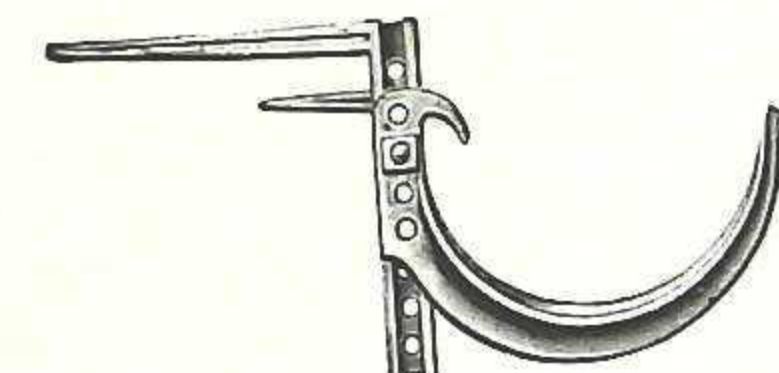
With Bolts and Straps

Size In.	PRICE, PER 100		Size In.	PRICE, PER 100	
	Black	Tinned		Black	Tinned
3 1/2	\$6.25	\$7.30	6	\$9.45	\$11.80
4	6.60	8.25	7	14.00	17.50
4 1/2	7.25	9.10	8	16.20	20.25
5	7.90	9.90	..	.....	.....

Always state kind and size of circles wanted, also if tinned or black. Black always sent when kind is not specified.

B. B. Gutter Hangers

Gem Circles For Single Bead Gutters



With No. 7 Shank Fig. 3313

With Bolts and Straps

No. 7 is made to drive from 3 to 4 inches square in the cornice. The lower prong forms a brace for the upper, and makes it strong and firm.

Additional bolts and straps are charged extra. Always state kind and size of circles wanted, also if tinned or black.

Black always sent when kind is not specified.

Size Inches	PRICE, PER 100		Size Inches	PRICE, PER 100	
	Black	Tinned		Black	Tinned
3 1/2	\$5.55	\$6.95	5	\$7.15	\$8.95
3 3/4	5.80	7.25	6	9.45	11.80
4	5.85	7.30	7	13.60	17.00
4 1/2	6.95	8.70	8	15.50	19.40

Shanks for B. B. Gutter Hangers

No.	Complete		PRICE, PER 100		Plate Only Tinned	Stem Only Tinned
	Plain Black	Tinned	Plate Only Black	Stem Only Black		
1	\$13.00	\$16.25	\$7.50	\$5.50	\$9.40	\$6.90
2	10.40	13.00	4.90	5.50	6.15	6.90
3	11.50	14.40	6.00	5.50	7.50	6.90
4	12.00	15.00	6.50	5.50	8.15	6.85
5	10.00	12.50	4.50	5.50	5.65	6.90
*6	9.50	11.90	.....	.....	.....	.....
†6	11.00	13.75	.....	.....	.....	.....
*7	5.40	6.75	.....	.....	.....	.....
†7	7.40	9.25	.....	.....	.....	.....
*8	7.70	9.65	.....	.....	.....	.....
†8	8.90	11.10	.....	.....	.....	.....
*9	5.50	6.90	.....	.....	.....	.....
†9	8.00	10.00	.....	.....	.....	.....
*10	7.50	9.40	.....	.....	.....	.....
†10	9.50	11.90	.....	.....	.....	.....
*11	7.30	9.10	.....	.....	.....	.....
†11	9.00	11.25	.....	.....	.....	.....
*12	8.90	11.15	.....	.....	.....	.....
†12	10.25	12.80	.....	.....	.....	.....
13	8.10	10.15	.....	.....	.....	.....
*15	8.90	11.15	.....	.....	.....	.....
†15	10.25	12.80	.....	.....	.....	.....
16	12.90	16.15	7.40	5.50	9.25	6.90
17	13.70	17.15	8.00	5.70	10.00	7.15
19	15.50	19.40	8.00	7.50	10.00	9.40
20	9.50	11.90	3.80	5.70	4.75	7.15
*25	8.90	11.15	.....	.....	.....	.....
†25	10.25	12.80	.....	.....	.....	.....

Extension Shanks 5.70 7.15
*Assorted lengths.
†All long.

State number of shank wanted. Specify tinned shanks. Black always sent when kind is not stated. Special catalogue furnished upon request.

Round Corrugated Hinged Hooks

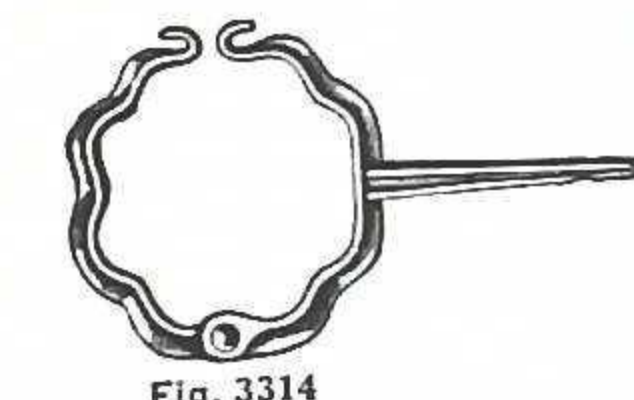


Fig. 3314

Size In.	TINNED, PRICE PER 100	
	Short Wood Drive	Long Wood Drive
2	\$7.85	\$8.65
3	10.35	11.40
4	14.50	17.50
5	.....	20.75
6	.....	28.50

Plain Round Hinged Hooks

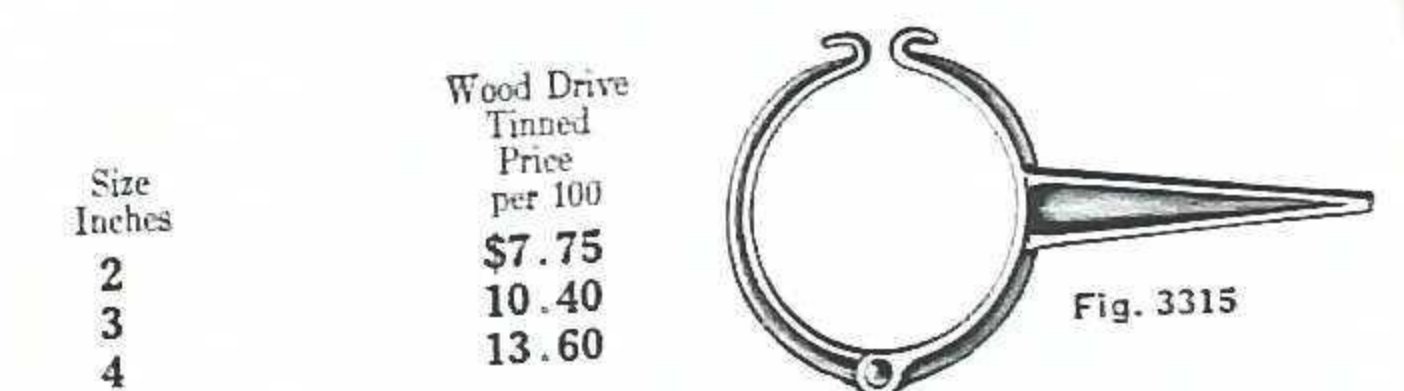


Fig. 3315

Size Inches	Wood Drive Tinned Price per 100
2	\$7.75
3	10.40
4	13.60

Squared Wired Hooks Tinned

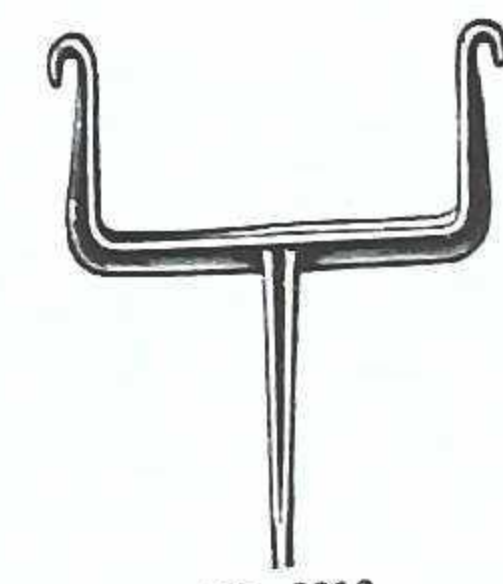


Fig. 3316

Size In.	PRICE, PER 100		Size In.	PRICE, PER 100	
	For Wood	For Brick		For Wood	For Brick
3	\$6.80	\$8.80	5	.....	\$12.20
4	8.50	10.80	6	.....	16.80

Prepared Roofing



Fig. 3321

A smooth-surfaced roofing with an exceptionally heavy weather coating. Made in light, medium and heavy. Medium is generally used. Heavy is best for large roofs exposed to unusual weather conditions.

Is 36 inches wide and roll contains 108 square feet, sufficient to cover 100 square feet.

A sufficient quantity of large headed nails and cement is included with roll.

Weight	Approx. Wt. Lbs. per Roll	Price per Roll
Light	35	.....
Medium	45	.....
Heavy	55	.....

Tarred Roofing Felt

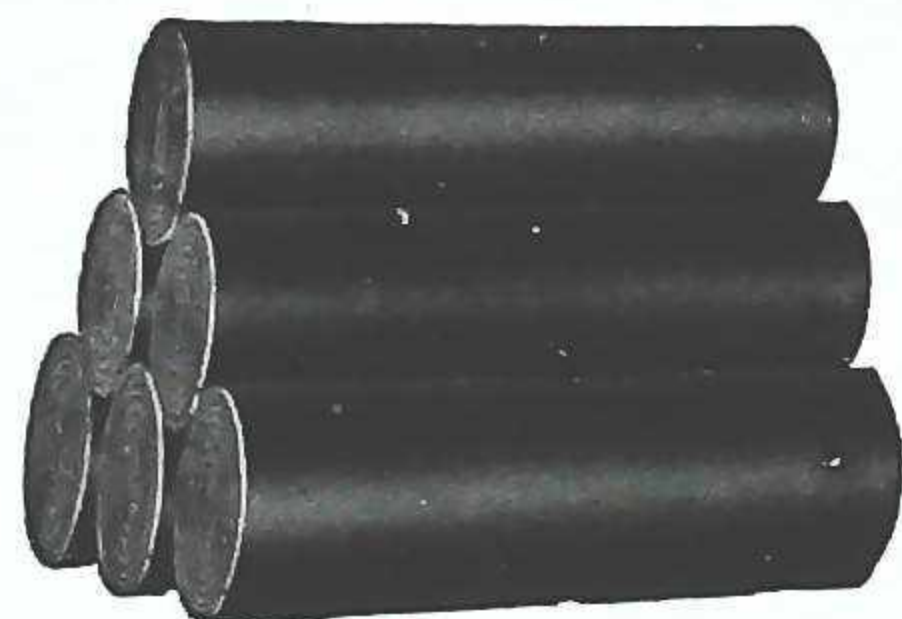


Fig. 3322

No. 1 weighs about 20 pounds per square; No. 2, 15 pounds.

Price, No. 2..... per square

Deadening Felt

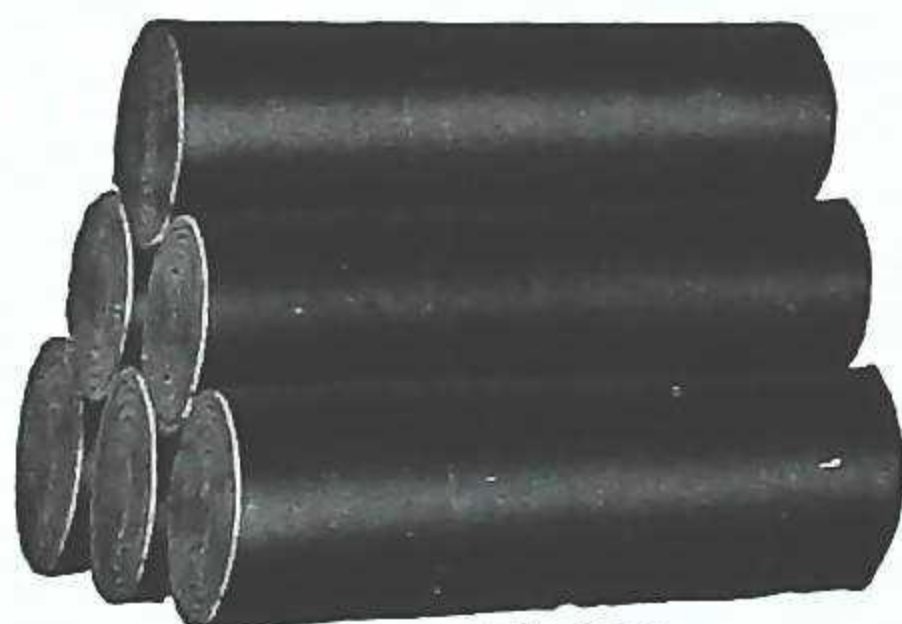


Fig. 3323

Used between the sub-floors and the finished floors of dwelling houses, apartment houses, etc. Put up 1, 1½ and 2 pounds to the square yard, 50 square yards to the roll.

This material is efficient. Prices upon application.

Plain Ridge Rolls

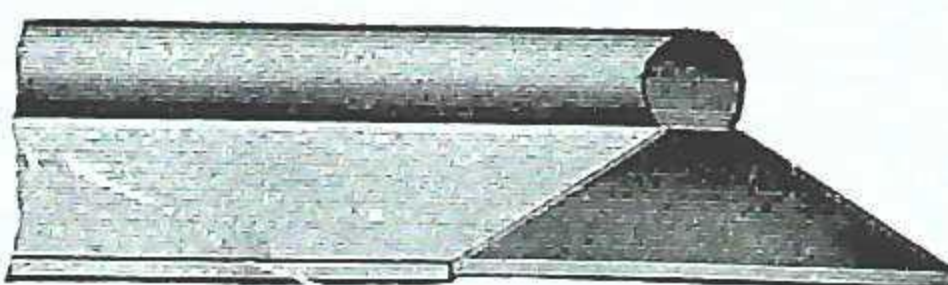


Fig. 3324

Made from black, painted or galvanized sheets, No. 16 gauge and lighter, in any length up to 10 feet. Standard length 8 feet; standard girt 12 inches with 2½-inch diameter roll; proportional girt for other rolls of 1¼ to 3 inches diameter.

Prices upon application.

Blako Green Surfaced Asphalt Roofing

Made with green surfaced finish which is fadeless. Not recommended for use on a roof having a pitch of less than 3 inches to foot.

In rolls 36 in. in width containing 108 sq. ft., sufficient for covering 100 sq. ft. of roof surface with full allowance for 2-inch laps. Nails and lap cement furnished. Weight, 85 pounds.

Price..... per roll



Fig. 3325

Blako Green Surfaced Asphalt Shingles



Fig. 3326

Made with green surfaced finish. They are cut 8 inches wide by 12¾ inches long and laid 4 inches to the weather.

Not recommended for use on a roof having a pitch of less than 4 inches to the foot. They require no painting,

are fire resisting, weatherproof and non-conductors of heat and cold. Packed ¼ square to package which contains 106 shingles, sufficient for covering 25 square feet of roof surface. Approximate shipping weight, 240 pounds per square.

Price..... per square

Corrugated Iron Roofing



Fig. 3327

2½-inch Corrugations

To find the quantity of roofing or siding required, multiply the length by the width of each space or surface to be covered. The result is surface measurement to which should be added sufficient to cover end and side laps. In gable measurement, multiply the width by the height and take one-half of the result which will give surface measurement, then add for the laps 12 to 15 per cent for siding, and 18 to 22 per cent for roofing.

Allow for projections if for roofing. If for ceiling, state exact distance between bottoms of fillets of I beams if of steel, also lengths and number of spaces to be covered. For curved sheets, always state whether to be used for roofing or ceiling.

1¼-inch Corrugations

Made from black, painted or galvanized sheets, No. 20 gauge and lighter. Standard full width, 26 inches. Standard covering width, 24 inches, when lapped 1½ corrugations. Standard lengths of 5, 6, 7, 8, 9 and 10 feet. Maximum length, 12 feet. Standard depth of corrugation, ¼ inch

2½-inch Corrugations

Made from black, painted or galvanized sheets, No. 10 gauge and lighter. Standard full width, 26 and 27½ inches. Standard covering width, 24 inches when lapped 1 and 1½ corrugations, respectively. Standard lengths, 5, 6, 7, 8, 9 and 10 feet. Maximum length, 12 feet. Heavier than No. 12 gauge, not longer than 10 feet. Standard depth of corrugation, approximately ½ inch.

Prices upon application.

Style B T & B Cast Iron Borders

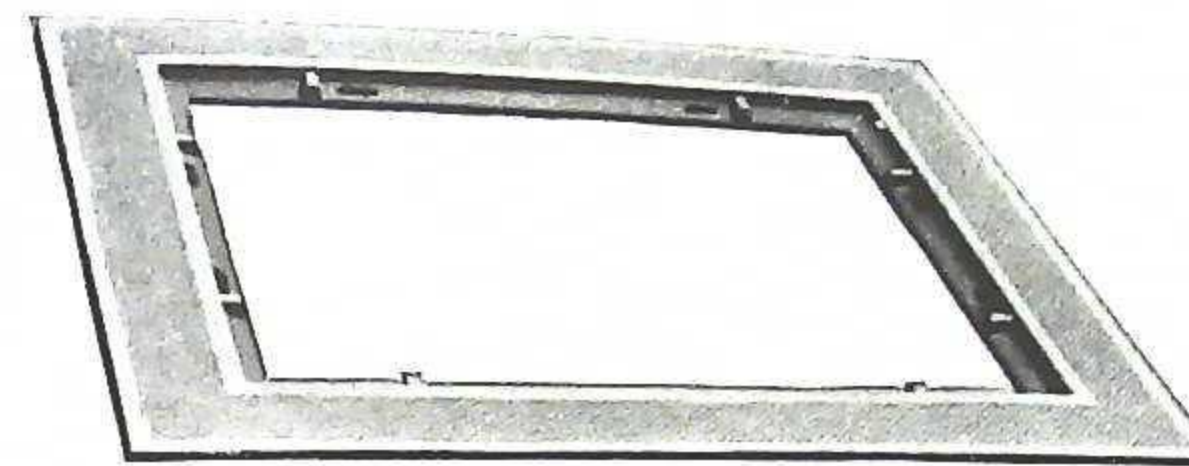


Fig. 3331

Can be furnished flat on the back without rib, as Style BR.

Size Opening Inches	Floor Opening Inches	Price, Each		
		Black	Oxidized Copper	Dull Brass or Nickel-plated
6x 8	9 9/16x11 9/16	\$1.15	\$2.40	\$3.00
6x10	9 9/16x13 9/16	1.20	2.60	3.60
7x10	10 9/16x13 9/16	1.25	2.70	3.80
8x 8	11 7/8x11 7/8	1.20	2.60	3.65
8x10	11 7/8x13 7/8	1.25	2.75	3.90
8x12	11 7/8x15 7/8	1.50	3.25	4.40
9x12	13 1/8x16 1/8	1.65	3.55	5.00
9x14	13 1/8x18 1/8	2.15	4.25	5.95
10x10	14 3/8x14 3/8	1.70	3.70	5.20
10x12	14 3/8x16 3/8	1.75	3.75	5.35
10x14	14 3/8x18 3/8	2.20	4.30	6.00
10x16	14 3/8x20 3/8	2.95	5.30	7.20
12x14	16 7/8x18 7/8	2.80	5.35	7.35
12x15	16 7/8x19 7/8	2.90	5.40	7.60
12x16	16 7/8x20 7/8	3.50	6.15	8.25
14x16	18 5/8x20 5/8	4.30	7.30	11.00
14x18	18 5/8x22 5/8	4.50	7.50	12.15
14x20	18 5/8x24 5/8	4.80	8.50	12.75
14x22	18 5/8x26 5/8	5.00	9.00	13.50
16x20	20 7/8x24 7/8	6.10	10.30	14.00
16x24	20 7/8x28 7/8	7.00	12.00	17.10
18x36	22 5/8x40 5/8	17.25	26.00	28.00
20x24	25 1/8x29 1/8	8.60	14.80	21.70
20x26	25 1/8x31 1/8	9.50	17.50	22.00
20x30	25 1/8x35 1/8	13.50	23.50	26.00
20x36	25 1/8x41 1/8	18.50	28.50	31.50
24x30	29 1/8x35 1/8	17.25	28.25	32.00
24x36	29 1/8x41 1/8	22.00	34.25	36.50
30x30	35 1/8x35 1/8	21.50	34.00	41.00
30x36	35 1/8x41 1/8	28.50	41.00	48.00

Style OO T & B Round Registers For Floor, Wall or Ceiling

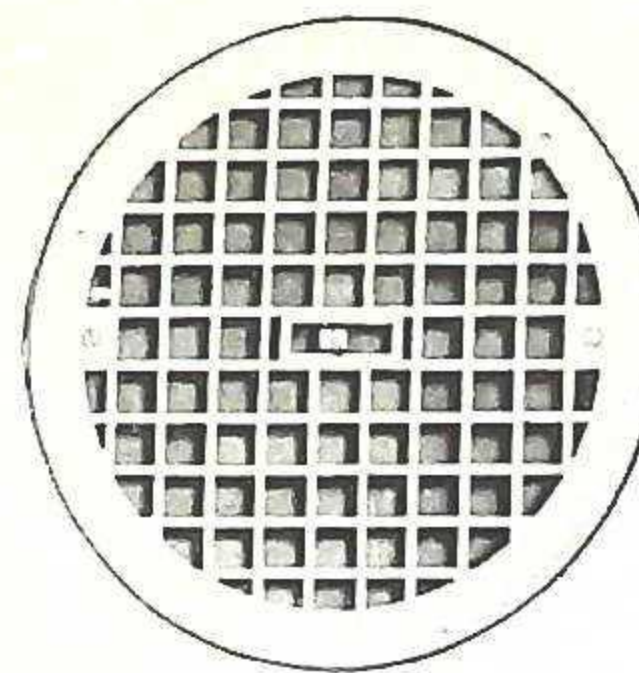
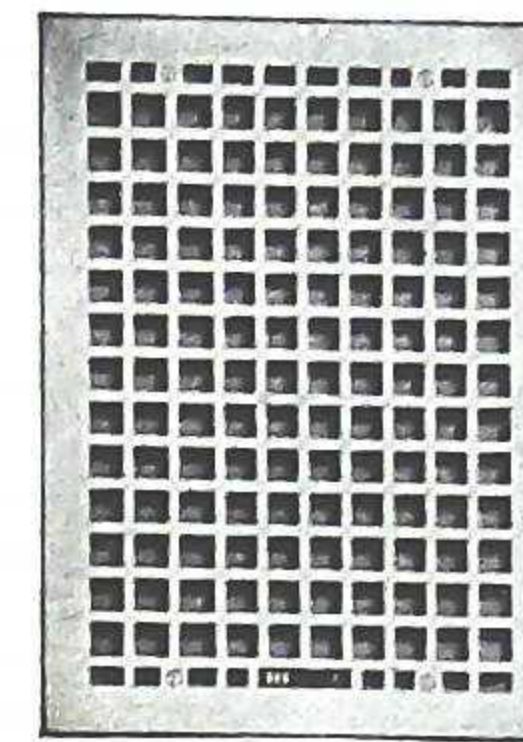


Fig. 3332

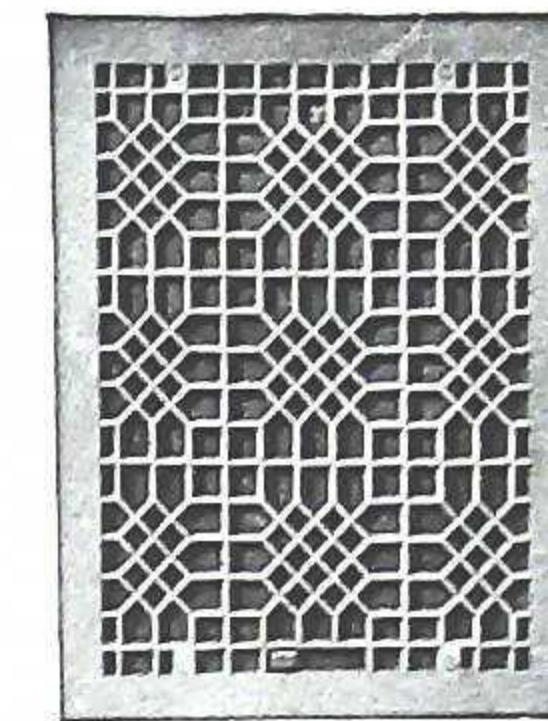
Cast iron, plain lattice.

Size Opening In. Reg.	Price, Each				Dull Brass or Nickel Plate Reg. Face	
	Black Japan Face	White Japan Face	Oxidized Reg.	Copper Face	Reg.	Face
6	\$1.50	\$.90	\$1.15	\$1.80	\$2.70	\$2.10
7	1.55	1.00	1.20	1.90	2.90	2.35
8	1.60	1.05	1.20	1.95	3.00	2.45
9	2.00	1.40	1.60	2.40	3.90	3.30
10	2.35	1.65	1.70	2.85	4.35	3.65
12	4.00	2.70	2.70	4.80	6.35	5.05
14	7.90	4.05	4.05	9.45	11.00	7.15
16	11.00	5.10	5.10	12.20	15.00	9.10
18	18.50	7.20	7.20	20.35	23.75	12.45
20	19.75	8.00	8.00	21.75	24.75	13.00
24	30.00	12.00	12.00	33.00	40.00	22.00
28	44.00	19.00	19.00	48.40	57.50	32.50
30	49.00	21.50	21.50	53.90	65.00	37.00
36	80.00	35.00	29.50	88.00	105.00	60.00

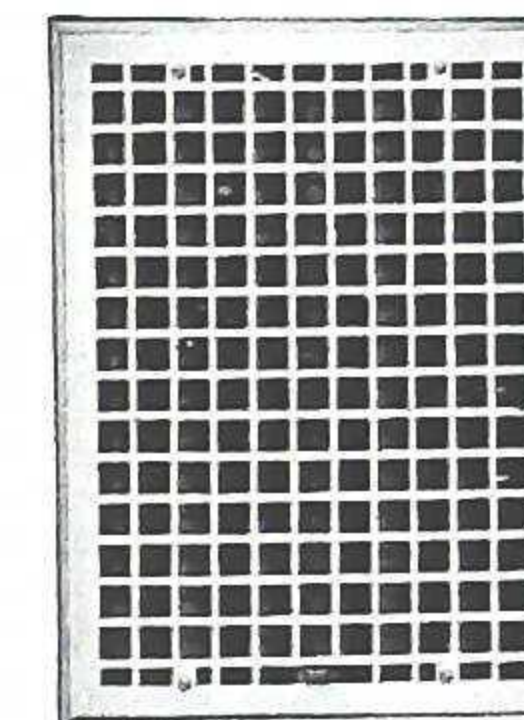
T & B Floor, Wall and Ceiling Registers and Register Faces



Style 60 Plain Lattice, Ferrosteel Fig. 3333

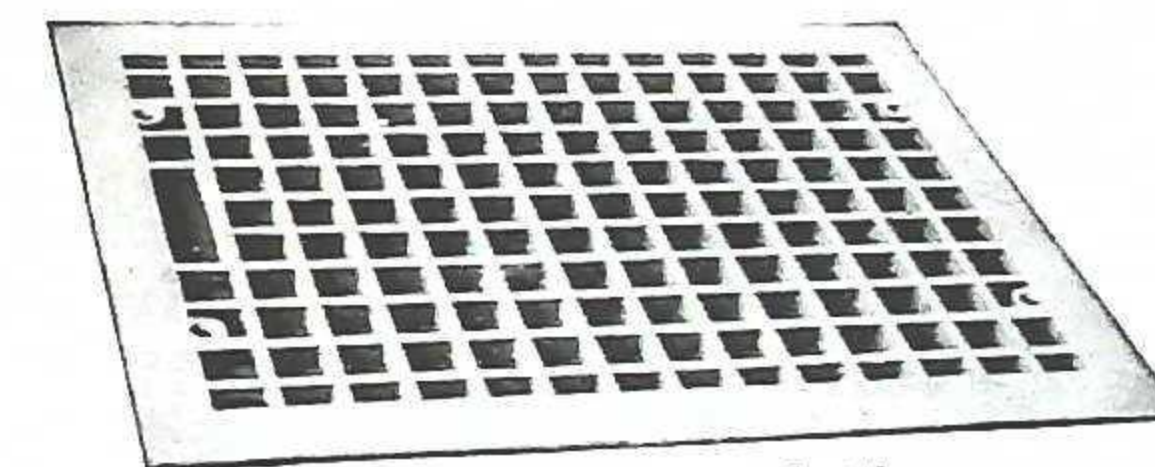


Style 50 Indian Lattice, Ferrosteel (To Order Only) Fig. 3334



Style 70, Plain Lattice All Steel Fig. 3335

T & B Cold Air Register Faces



Style 6 Cast Iron Plain Lattice Fig. 3336

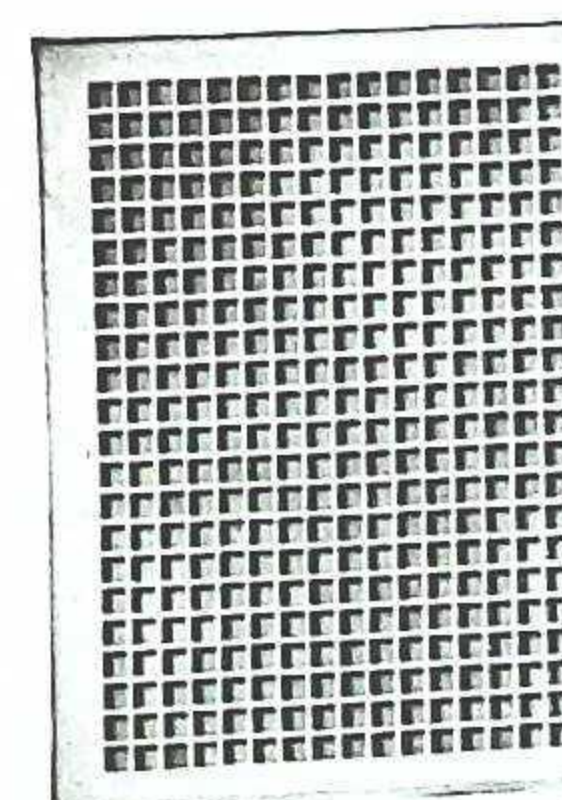
Can also be furnished in Cast Iron Indian Lattice Style 5, to order.

Style 7 and Style L are furnished with offset edges which make close fit to floor without cutting rabbet. Furnished with strengthening bars in all faces, 12 inches wide and wider.

In ordering register specify: Style Size Finish

Thus— 60 9x12 Black
All cast registers are also furnished in plain lattice and Indian lattice designs with the old reliable vertical wheel movement. All cast registers, plain lattice, are Style 20. Prices cover registers in Styles 20, 30, 50, 60, 70, and register faces in Styles 5, 6, 7, and L.

Style 20 and Style 5 are made to order only.



Style 7, Steel Plain Lattice, No Bars
Style L, Steel Plain Lattice, With Bars Fig. 3337

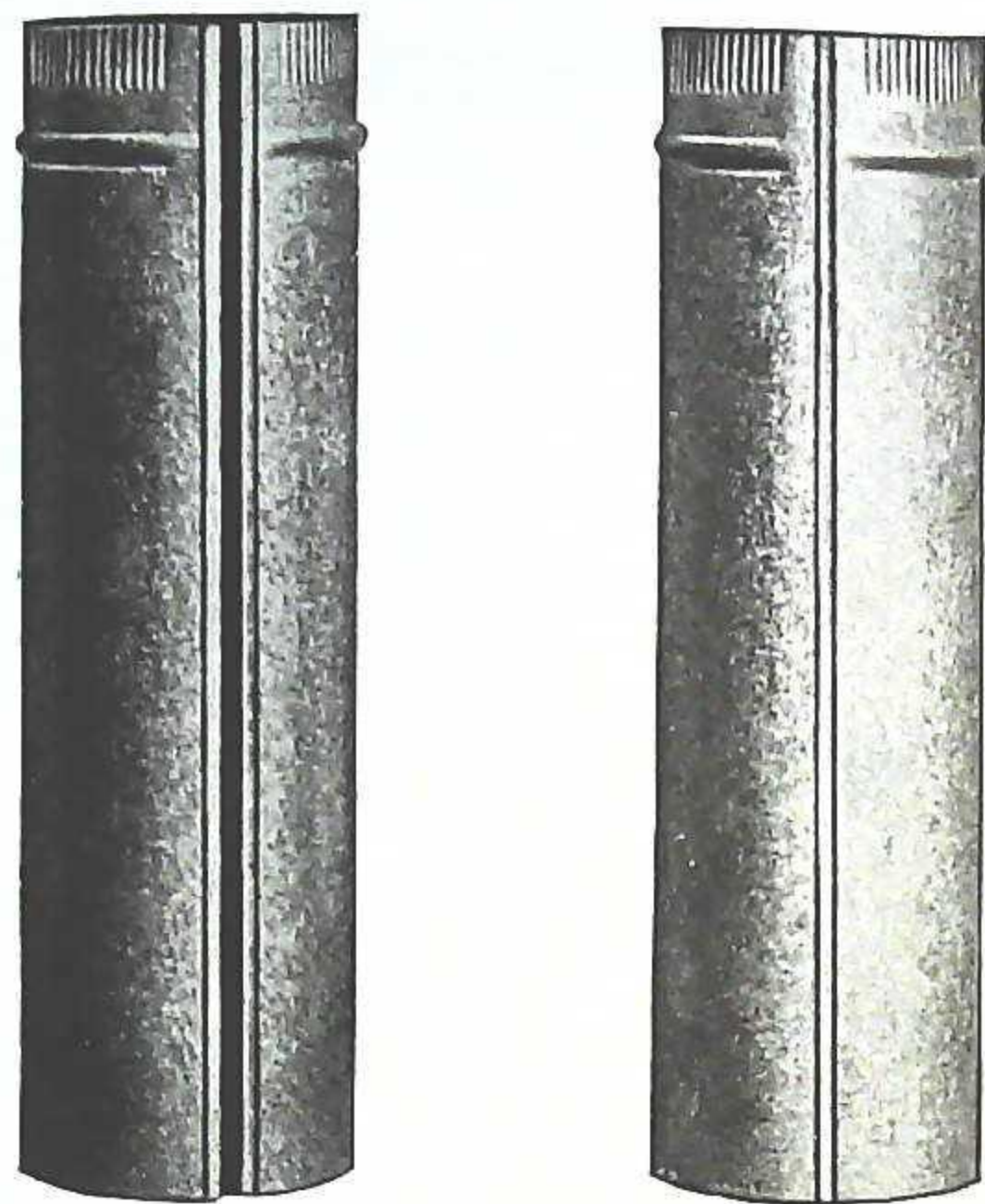
T & B Floor, Wall and Ceiling Registers and Register Faces

Steel, Semi-steel and Cast Steel

Size Opening In.	WHITE JAPAN AND THE TANBO FINISHES		BLACK JAPAN		OXIDIZED COPPER		DULL BRASS OR NICKEL	
	Register	Register Face	Register	Register Face	Register	Register Face	Register	Register Face
4x6	\$1.70	\$.85	\$1.40	\$.55	\$2.00	\$1.15	\$2.20	\$1.35
4x8	1.80	.90	1.50	.60	2.20	1.30	2.40	1.50
4x12	2.20	1.35	1.80	.95	2.80	2.15	3.10	2.45
6x6	1.80	1.20	1.50	.90	2.70	2.10	3.00	2.40
6x8	1.85	1.30	1.55	1.00	2.80	2.25	3.10	2.50
6x10	1.95	1.40	1.60	1.05	3.00	2.45	3.50	2.95
6x12	2.25	1.60	1.85	1.25	3.50	2.90	4.20	3.60
6x14	3.45	2.10	2.85	1.65	4.95	3.75	5.75	4.50
6x24	9.60	5.30	8.00	3.70	12.00	7.00	13.30	8.30
7x7	1.90	1.35	1.55	1.00	2.90	2.35	3.50	2.95
7x10	2.00	1.40	1.65	1.10	3.10	2.55	3.80	3.25
8x8	1.95	1.40	1.60	1.05	3.00	2.45	3.70	3.15
8x10	2.00	1.45	1.65	1.10	3.15	2.60	3.85	3.30
8x12	2.30	1.70	1.90	1.30	3.65	3.05	4.40	3.75
8x14	3.60	2.60	3.00	2.00	5.10	3.95	6.20	5.10
8x18	7.90	4.80	6.60	3.50	9.40	6.00	10.70	7.30
9x9	2.40	1.80	2.00	1.40	3.90	3.30	4.90	4.30
9x12	2.55	1.90	2.10	1.45	4.00	3.35	5.10	4.45
9x14	3.70	2.75	3.10	2.15	5.20	4.25	6.50	5.50
10x10	2.85	2.15	2.35	1.65	4.35	3.65	5.35	4.65
10x12	2.90	2.20	2.40	1.70	4.40	3.70	5.50	4.80
10x14	3.80	2.85	3.15	2.20	5.25	4.30	6.55	5.60
10x16	5.85	3.95	4.85	2.95	7.20	5.30	8.60	6.70
10x18	8.05	5.05	6.70	3.70	9.45	6.45	11.00	8.00
10x20	10.50	5.75	8.90	4.35	12.00	7.50	13.80	9.30
10x30	21.45	9.95	19.50	8.00	25.50	14.00	28.00	16.75
12x12	4.80	3.50	4.00	2.70	6.35	5.05	7.90	6.60
12x14	5.25	3.65	4.35	2.80	6.85	5.35	8.25	6.75
12x15	5.40	3.80	4.50	2.90	7.00	5.40	8.50	6.90
12x16	6.70	4.60	5.60	3.50	8.25	6.15	9.75	7.65
12x17	7.60	5.05	6.35	3.80	9.00	6.45	10.60	8.05
12x18	8.15	5.25	6.80	3.90	9.55	6.65	11.25	8.35
12x19	9.00	5.50	7.50	4.00	10.35	6.85	12.25	8.75
12x20	10.80	6.30	9.00	4.50	12.20	7.60	14.10	9.50
12x24	13.50	6.75	12.25	5.50	16.30	9.55	18.60	12.10
12x30	22.00	10.20	20.00	8.20	26.00	14.20	29.00	18.00
12x36	29.40	12.90	26.75	10.25	33.75	17.75	36.25	23.25
14x14	9.45	5.60	7.90	4.05	11.00	7.15	14.30	9.60
14x16	10.20	6.00	8.50	4.30	11.50	7.30	16.50	11.00
14x18	10.80	6.30	9.00	4.50	12.00	7.50	18.50	12.00
14x20	11.25	6.40	9.50	4.60	13.00	8.50	20.50	13.00
14x22	12.00	6.50	10.50	5.00	14.50	9.00	22.50	14.50
14x24	16.40	8.40	14.90	6.90	19.50	11.50	26.00	16.50
14x30	30.25	13.20	27.50	10.75	33.00	18.00	37.50	25.00
16x16	12.20	6.20	11.00	5.10	15.00	9.10	19.75	12.80
16x18	13.20	6.50	12.00	5.30	16.20	9.50	22.25	14.25
16x20	13.60	7.35	12.35	6.10	16.55	10.30	24.60	16.00
16x22	16.20	8.15	14.75	6.70	19.50	11.50	28.00	18.00
16x24	16.50	8.50	15.00	7.00	20.00	12.00	29.60	19.25
16x28	27.05	12.45	24.60	10.00	30.80	16.20	35.00	22.75
16x30	30.70	13.80	27.90	11.00	35.00	18.25	37.50	25.00
16x36	39.60	19.60	36.00	16.00	45.00	25.00	50.00	33.00
18x18	20.35	9.05	18.50	7.20	23.75	12.45	26.00	16.50
18x20	21.45	9.55	19.50	7.60	24.75	12.85	29.00	18.00
18x21	22.55	9.80	20.50	7.75	26.00	13.25	30.00	19.00
18x22	23.00	10.00	21.00	8.00	26.70	14.00	32.50	21.00
18x24	23.65	10.50	21.50	8.35	27.75	14.60	34.25	22.50
18x30	34.35	16.35	31.25	13.25	38.00	21.00	43.00	28.50
18x36	41.80	21.05	38.00	17.25	48.50	28.10	54.00	36.00
20x20	21.75	10.00	19.75	8.00	24.75	13.00	32.40	21.20
20x22	23.75	10.55	21.60	8.40	27.60	14.40	35.70	23.50
20x24	24.20	10.80	22.00	8.60	28.20	14.80	39.00	25.00
20x26	25.85	11.85	23.50	9.50	32.00	17.50	42.00	27.50
20x30	36.85	16.85	33.50	13.50	43.00	23.50	49.00	32.50
20x36	47.30	22.80	43.00	18.50	54.00	29.50	59.00	39.00
21x29	31.90	14.50	29.00	11.60	40.50	22.20	52.00	34.00
22x22	31.35	14.25	28.50	11.40	36.50	19.40	41.00	27.00
22x24	32.45	14.75	29.50	11.80	37.90	20.20	44.00	29.00
22x30	39.60	19.60	36.00	16.00	46.50	26.50	55.00	36.50
24x24	33.00	15.00	30.00	12.00	40.00	22.00	49.00	32.50
24x27	37.35	17.40	33.95	14.00	45.00	25.00	56.00	37.00

Prices on other sizes not listed above upon application.

Nested Galvanized Iron Pipe



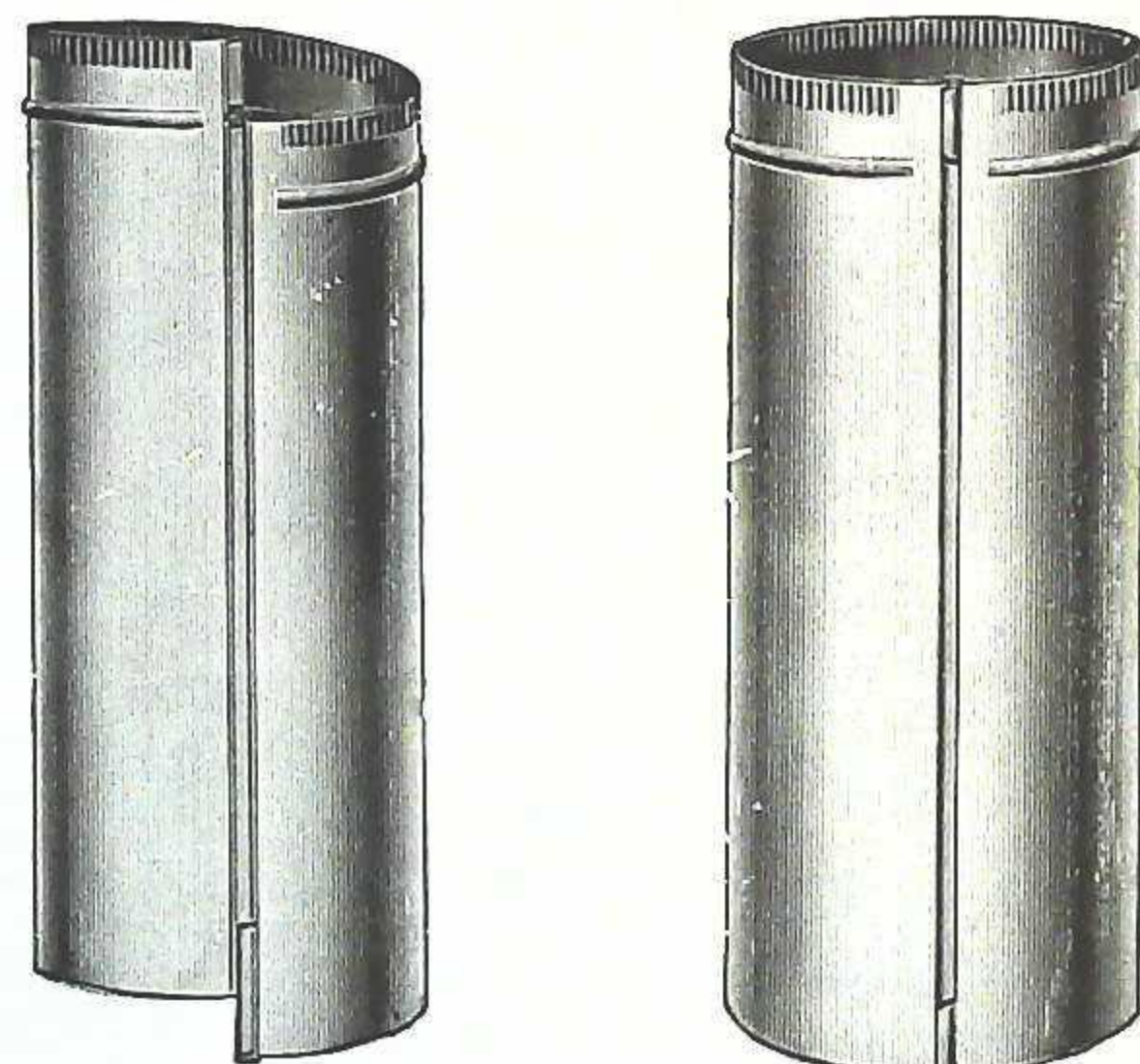
Pipe Open

Pipe Locked
Fig. 3341

For smoke pipe and cold air, 6 to 36-inch joints inclusive. Pipe is made with heavy shoulder, holding joint in place.

Size In.	PRICE, PER FOOT		Size In.	PRICE, PER FOOT		Size In.	Price per Foot 26 Gauge
	26 Gauge	24 Gauge		26 Gauge	24 Gauge		
6	\$.33	\$.42	12	\$.58	\$.76	22	\$1.35
7	.36	.45	14	.63	.80	24	1.62
8	.38	.49	16	.72	.87	26	1.89
9	.40	.53	18	.90	...	28	2.16
10	.44	.58	20	1.08	...	30	2.43

Nested Round Tin Furnace Pipe



Pipe Open

Pipe Locked
Fig. 3342

The pipe requires 1/2 the space of ordinary pipe; needs no heavy crates; saves on freight; saves in cartage and storage room; saves in labor, as it goes together without tools of any kind and can be installed quickly.

Size Inches	PRICE, PER FOOT		Size Inches	PRICE, PER FOOT	
	I. C. Tin	I. X. Tin		I. C. Tin	I. X. Tin
8	\$.30	\$.36	12	\$.41	\$.48
9	.32	.37	14	...	.63
10	.36	.41	...	...	...

One-piece Stove Pipe Elbows



Fig. 3351

Made of No. 28-gauge iron, corrugated.

Diam. Inches	Price per Doz.	Diam. Inches	Price per Doz.	Diam. Inches	Price per Doz.
4	...	5	...	6	...
4 1/2	...	5 1/2	...	7	...

Eagle Stove Pipe Elbows

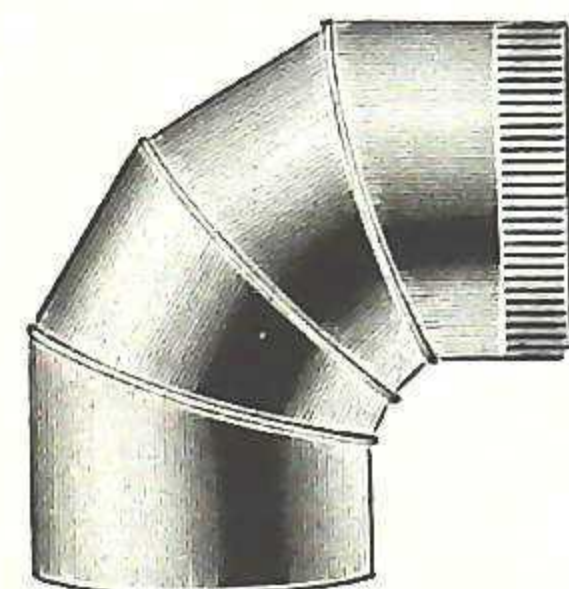


Fig. 3352

Made of stove pipe stock.

Diam. Inches	Price per Doz.	Diam. Inches	Price per Doz.	Diam. Inches	Price per Doz.
4	...	5	...	6	...
4 1/2	...	5 1/2	...	7	...

Five-piece Adjustable Stove Pipe Elbows

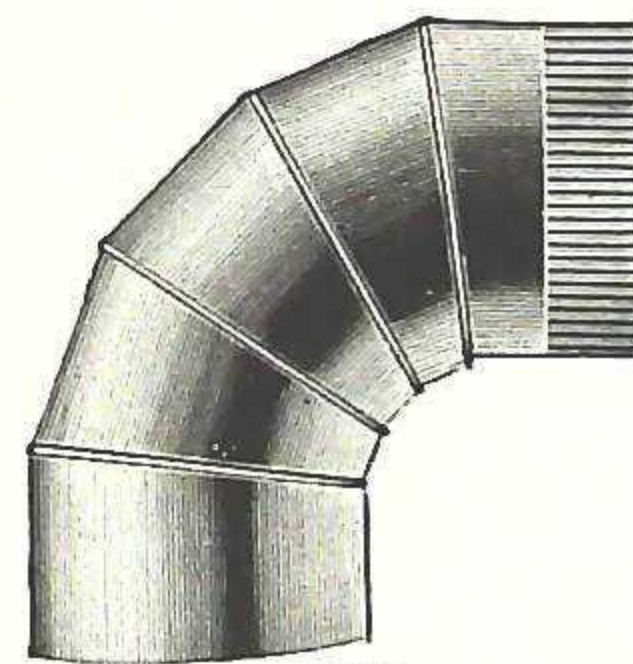
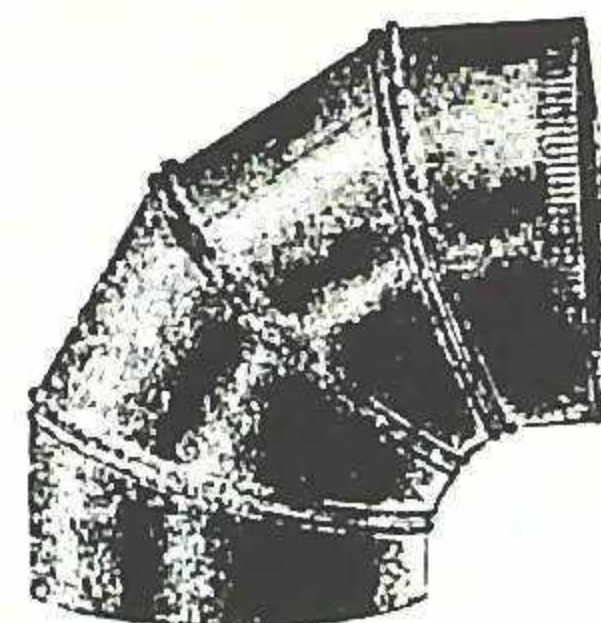


Fig. 3353

Made of cleaned iron.

Diam. Inches	Price per Doz.	Diam. Inches	Price per Doz.	Diam. Inches	Price per Doz.
3	...	4 1/2	...	7	...
4	...	5	...	6	...

4-piece Tin Adjustable Elbows



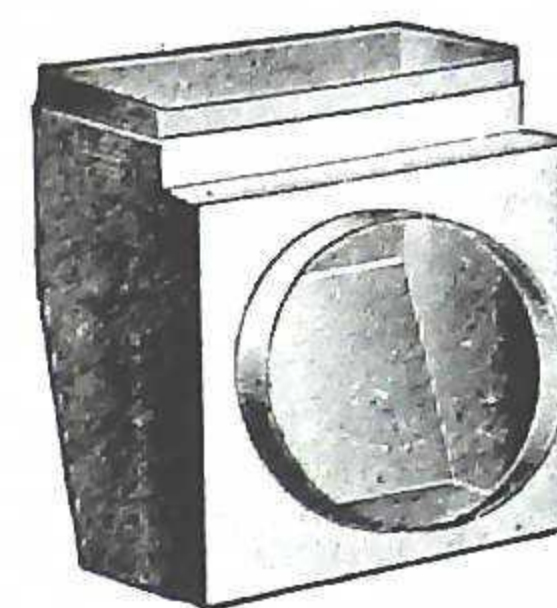
90-degree Angle
Fig. 3354



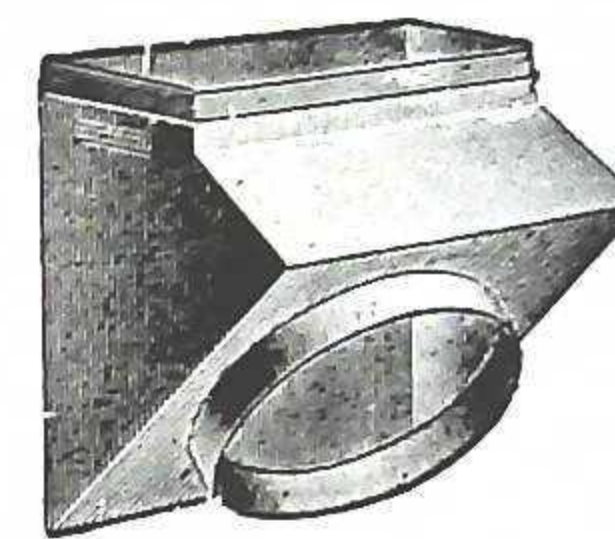
From Angle to Straight

Size	Price, I. C. Tin	Price, I. X. Tin	Price, I. C. Tin	Price, I. X. Tin
8 inches	\$.46	\$.50	\$.60	\$.74
9	.58	.64	.76	1.00
10	...	...	...	...
12	...	...	...	...
14	...	...	...	...

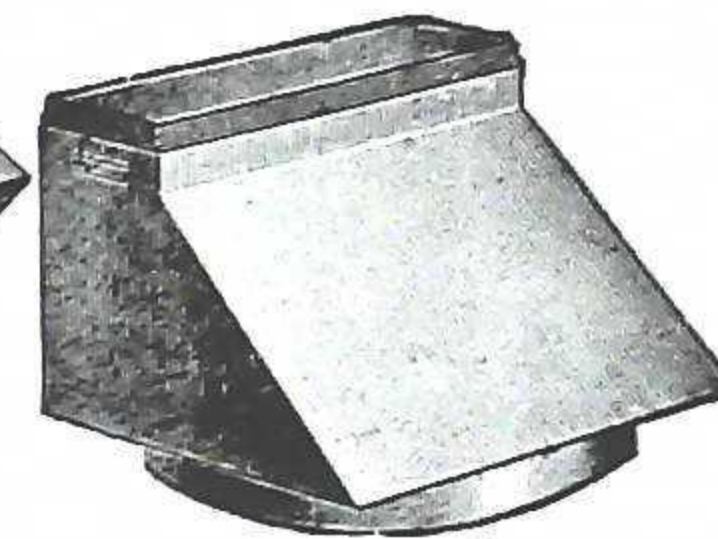
Transition Boots



Style A
Fig. 3355



Style B
Fig. 3356



Style C
Fig. 3357

In ordering transition boots, specify size of collar.

Size Inches	PRICE, EACH		
	A	B	C
3 1/2 x 10	\$.70	\$.70	\$.70
3 1/2 x 12	.80	.80	.80
3 1/2 x 14	.90	.90	.90

Single Floor Register Boxes

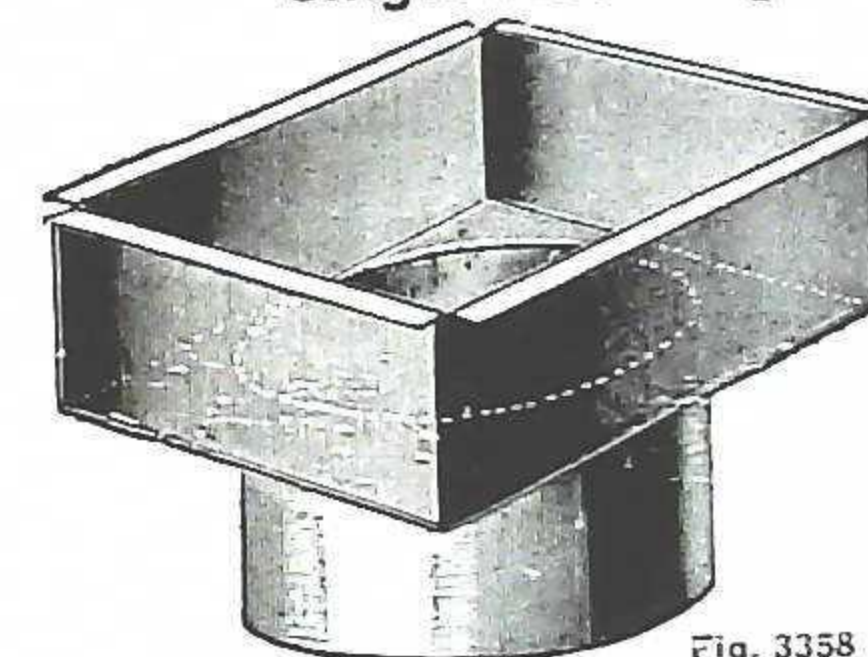


Fig. 3358

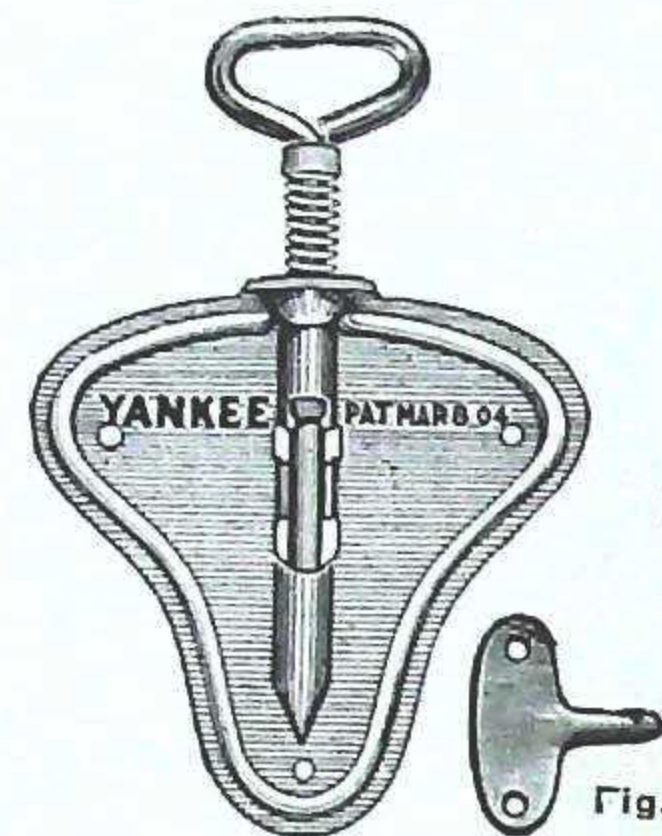
In ordering state if register boxes are to fit borders. Otherwise they will be shipped to fit register.

Prices given are for boxes with 4-inch collars. For 6-inch collars add 20 per cent. Prices on IC Single First Floor Boxes, 4

inches deep without collar same as with collar.

Size Inches	Diameter of Collar Inches	PRICE, EACH			
		SINGLE FIRST FLOOR BOXES 4 INCHES DEEP WITH COLLAR IC	SINGLE FIRST FLOOR BOXES 6 INCHES DEEP WITH COLLAR IC	Galv. Collar	2nd Floor Single Boxes 10 In. Deep
8x10	8	\$.60	...	...	\$.60
8x12	8	.64	...	...	.64
8x14	8	.64	...	...	.64
9x12	8 and 9	.72	\$.90	...	.72
10x12	9 " 10	.80	1.00	...	.80
10x14	9 " 10	.80	1.00	...	.86
12x14	12	.96	1.20	\$.96	1.20
12x15	12	.96	1.20	.96	1.50
12x17	12	1.04	1.30	1.04	1.60
12x19	12	1.12	1.40	1.12	1.70
14x16	14	...	1.60	...	1.80
14x18	14	...	1.60	...	1.80
14x20	14	...	1.60	...	2.00
14x22	14	...	2.00	...	2.20
16x20	16	...	2.20	...	2.40
16x24	16	...	2.20	...	2.60
18x24	18	...	2.50	...	3.00
20x24	20	...	3.00	...	3.60
20x26	20	...	3.60	...	4.00

Yankee Damper Clips



Rivet

Clips are made from extra heavy steel.

Rod and handle is in one piece, made from 1/4-inch rod.

Price, Clips . . . per dozen **\$1.30**
" Tail Pieces " **.30**

Fig. 3361

Stove Pipe Safety Thimbles

McGuire Pattern

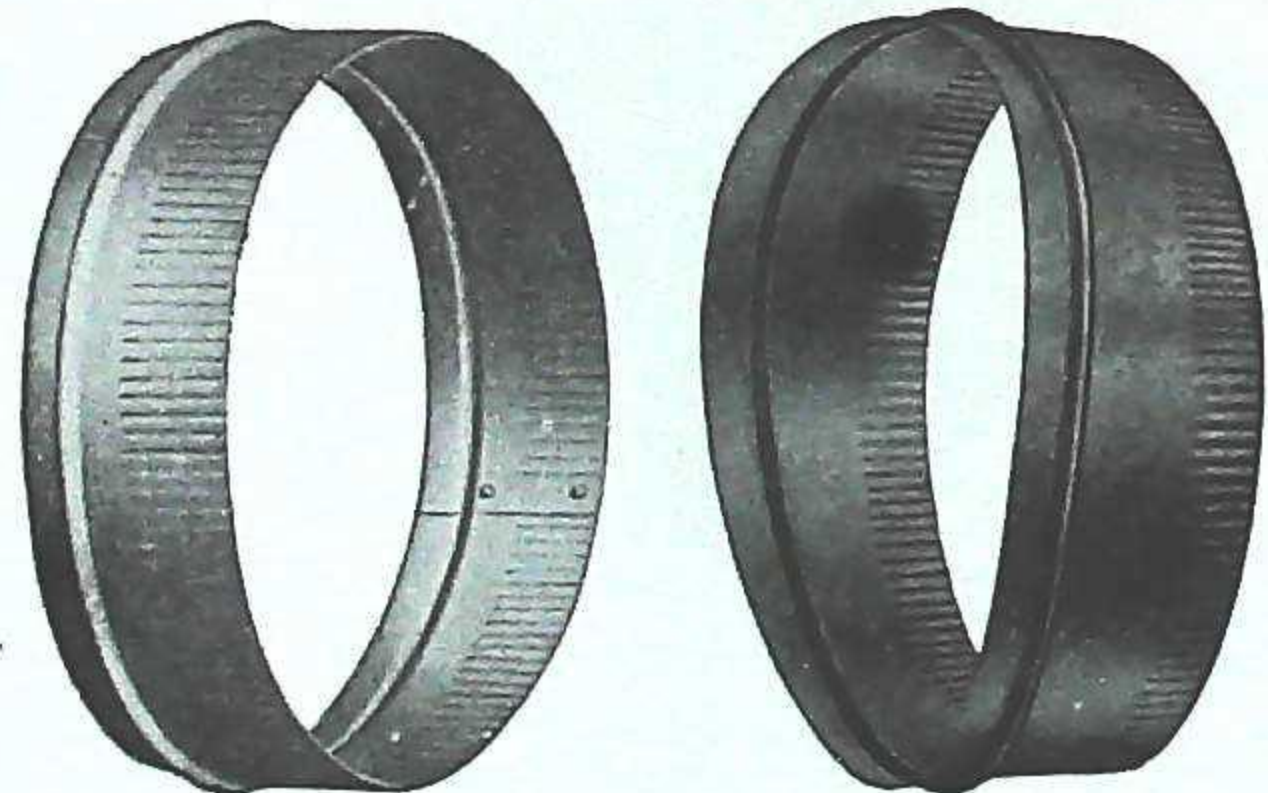
The head is made of No. 22 soft steel. Packed six in a crate.



Fig. 3362

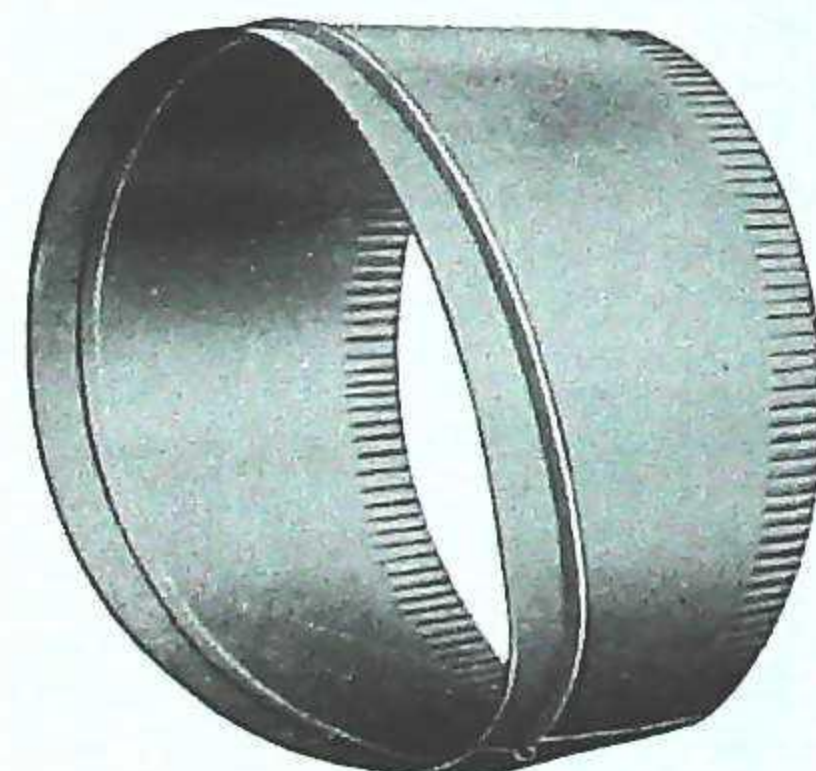
No.	Size Inches	Extension Inches	Price per Dozen
32B	3	4 to 8	\$9.00
33B	3	6 " 12	10.00
42B	4	4 " 8	9.00
43B	4	6 " 12	10.00
52B	5	4 " 8	10.00
53B	5	6 " 12	11.00
62B	6	4 " 8	11.00
63B	6	6 " 12	12.00
72B	7	4 " 8	13.00
73B	7	6 " 12	14.00
82B	8	4 " 8	16.00
83B	8	6 " 12	17.00

Galvanized Casing Collars



Style A Fig. 3363

Style B Fig. 3364

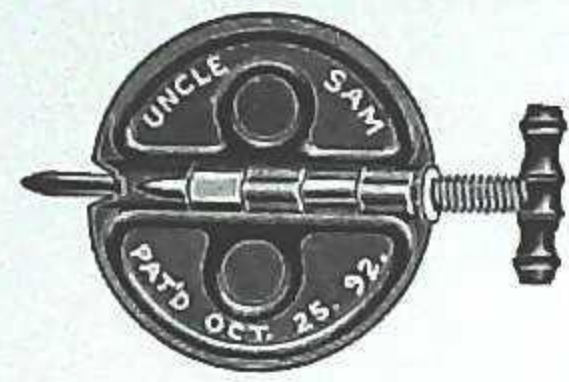


Style C Fig. 3365

Size In.	PRICE, EACH		
	A	B	C
7	\$.20	\$.32	\$.40
8	.24	.32	.40
9	.28	.36	.46
10	.30	.40	.50
12	.36	.48	.60
14	.46	.60	.74
16	.60	.80	1.00
18	.76	1.00	1.26
20	.90	1.20	1.80
22	1.20	2.00	...
24	1.40	2.40	...
26	1.60	2.80	...
28	1.80	3.40	...
30	2.00	3.80	...

U. S. Dampers

Damper is light, strong and durable.



Heater Pipe Fig. 3366

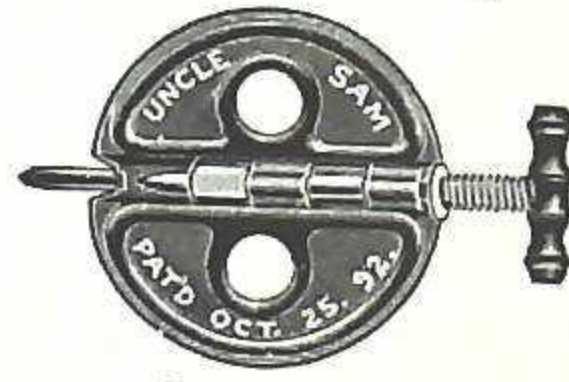
Has a corrugated plate, continuous loop, forged steel, pointed stem, positive lock, enameled wood handles.

Has no pins or rivets to loosen and drop out.

Note method of corrugating and looping to prevent warping and to strengthen plate.

Handle is rigidly clamped to stem. Sharply pointed steel stem, easily driven through pipe, notched to engage edge of plate. Held in place by spring, and carefully fitted to loop to prevent turning.

Plate stamped from pickled steel of uniform quality.



Smoke Pipe Fig. 3367

Size Inches	Approx. Gross per Bbl.	Price per Dozen	Size Inches	Approx. Gross per Bbl.	Price per Dozen
3	12	\$.85	9	3 1/2	\$2.60
4	10	.85	10	3	2.80
4 1/2	9	.85	10 1/2	2 1/2	3.05
5	7	1.00	11	2 1/2	3.30
5 1/2	6 1/2	1.10	12	2	3.50
6	6	1.15	12 1/2	2	3.75
7	5	1.60	14	2	5.00
8	4	2.20	15	2	6.00
8 1/2	4	2.45	..	..	..

Griswold American Stove Pipe Dampers

Dampers from four to twelve inches inclusive are made with reversible plates. This feature provides for spindle being inserted from either side. Spindle made in one piece of solid steel, with sharp point that will pierce any stove pipe. Hump on spindle insures positive lock.

Furnished with wood handles when so ordered.

Size In.	Packed in Bbls., Doz.	Wt., Lbs. per Bbl.	Price per Doz.	Size In.	Packed in Bbls., Doz.	Wt., Lbs. per Bbl.	Price per Doz.
3	100	335	\$2.60	7	34	465	\$5.00
4	60	305	2.80	8	25	445	8.00
4 1/2	60	330	3.00	9	18	435	12.00
5	50	345	3.00	10	15	445	15.00
5 1/2	50	415	3.30	11	12	460	16.50
6	48	415	3.50	12	10	460	18.00

No. 30 Flue Stoppers

Lacquered. Rope pattern. Has fancy pictures.

Rigid wire fastener on back.

No.	Size Inches	Case Lots Doz.	Case Weight Pounds	Price per Gross
30	8 1/4	24	70	\$15.50



Fig. 3369A

Stove Pipe Collars

Gold lacquered. Has rope pattern; wide flange.

No.	Size Inches	Case Lots Doz.	Case Weight Pounds	Price per Gross
25	5x8 1/4	24	35	\$8.25
26	6x9 1/4	24	47	8.65

Pexto Samson Snips

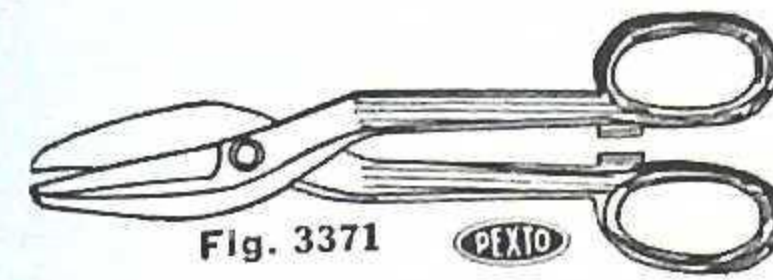


Fig. 3371

Blued or japanned handles and polished heads. Blued handles furnished unless otherwise specified.

Left Hand Cut, Straight Pattern

No.	Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each	No.	Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each
46	24	4 1/2	15 3/4	\$3.00	50	28	2 1/2	11 3/4	\$1.60
47	25	4	14 1/2	2.50	51	28	2 1/4	10 1/2	1.20
48	26	3 1/2	14	2.00	52	28	2	8 1/2	1.00
49	27	3	12 3/4	1.75	53	28	1 3/4	8	.90

Left Hand Cut, Circular Pattern

Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each	Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each		
C46	24	4 1/2	15 3/4	\$4.00	C50	28	2 1/2	11	\$2.50
C47	25	4	14 1/2	3.50	C51	28	2 1/4	10 1/2	2.00
C48	26	3 1/2	14	3.00	C52	28	2	8 1/2	1.75
C49	27	3	12 3/4	2.75	C53	28	1 3/4	8	1.65

Pexto Tinner's Bench Shears

Has black handles and polished heads.

Has right hand cut with lower blade on right side.



Fig. 3372

No.	Cuts Iron No.	Length Cut Inches	Length Over All Inches	Price Each
00	18	11 1/2	46	\$35.50
0	18	10 1/2	42 1/2	32.50
1	18	9	39	22.70
2	19	8 3/4	37	20.50
4	20	7 3/8	30	16.80
5	21	6 1/4	27	15.90
6	22	5 1/4	25	13.30
Elbow 31	18	4	26	15.10
" 32	16	6	39	28.40
" 33	14	7 1/2	46	39.90

Pexto Hercules Combination Snips

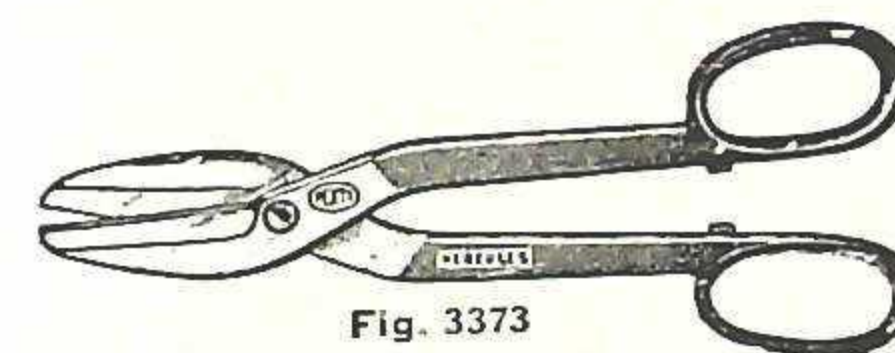


Fig. 3373

Blued or japanned handles, polished head. Blued handles furnished unless otherwise specified. Has beveled blades.

Left Hand Cut, Straight Pattern

No.	Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each	No.	Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each
146	24	4 1/2	15 1/2	\$3.50	149	27	3	12 1/2	\$2.25
147	25	4	14 1/2	3.00	150	28	2 1/2	11 1/2	2.00
148	26	3 1/2	13 1/2	2.50	...	...	...	...	...

Left Hand Cut, Circular Pattern

Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each	Cuts Iron No.	Lgth. Cut In.	Lgth. Over All In.	Price Each		
C147	25	4	14 1/2	\$4.00	C149	27	3	12 3/4	\$3.25
C148	26	3 1/2	14	3.50	...	...	...	...	...

No. 59 Pexto Hand Slitting Shears

Blued handles, polished head.

Cuts No. 24 iron; length cut, 3 inches; length over all, 13 1/2 inches.

Price, No. 59 each **\$5.80**

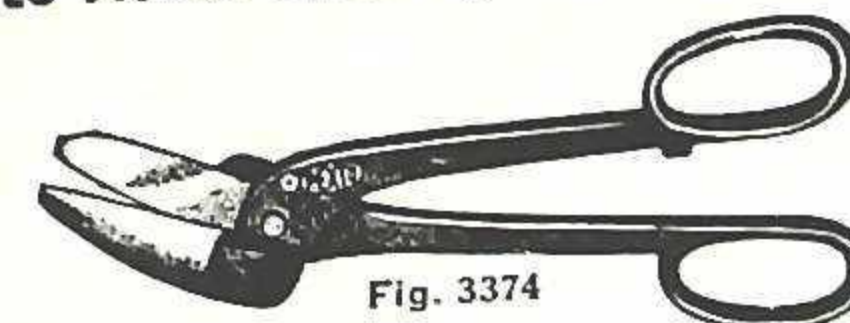


Fig. 3374

Pexto Double Cutting Shears



Fig. 3375

Black handles, polished head. No. 02 has no crimping attachment. No. 22 is pocket size, without crimping attachment.

No.	Length Over All	Price Each	No.	Length Over All	Price Each
2A	12 3/4	\$4.50	02A	12 3/4	4.17
22	8 1/2	3.40	...	...	...

No. 253 Pexto Slitting Shears

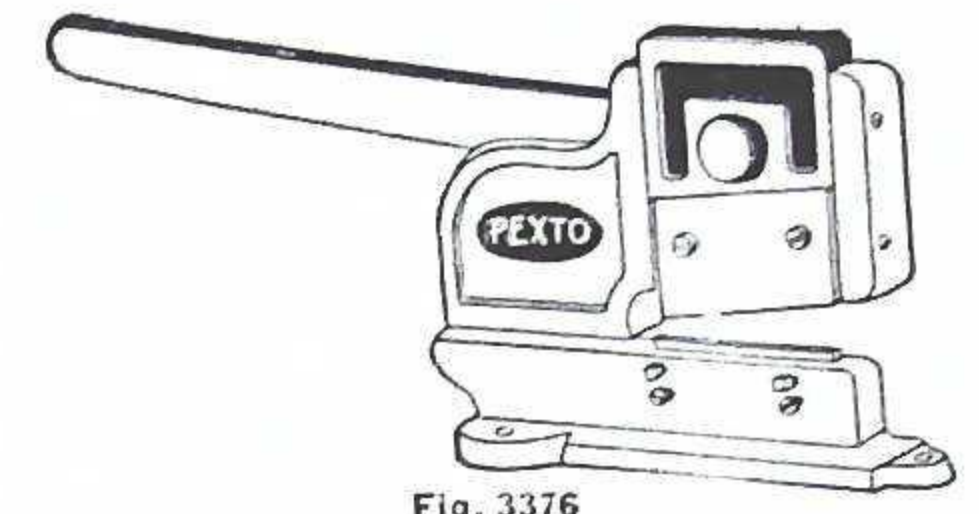


Fig. 3376

Capacity, iron or steel 3/2-inch and lighter. A handy machine around the shop, on account of its lightness.

Length Blade In.	Length Bed In.	Height Be'l In.	Length Over All In.	Weight Lbs.	Price Each
3 1/2	10 1/2	6 1/2	18	17	\$13.20

No. 248 Pexto Slitting Shears



Fig. 3377

Capacity, 18 gauge iron and lighter. A practical shear for range manufacturers and for general use in car shops, automobile plants and other shops where a variety of straight and irregular cutting is done.

It will do the work of bench shears, over which it has the following advantages: Length of cut is longer to the same movement of the hand; same pressure of hand will cut thicker stock; cuts with the same ease at all points of the cut, while ordinary bench shears cut harder near the point than near the bolt. Lower blade is stationary.

Length Cutting Blades Inches	DEPTH CUTTING HEAD, INCHES To Gauge	CUTTING To Frame	Size Table Inches	Approx. Ship. Weight Pounds	Price Each
6 1/2	9 1/2	10	12x15 1/2	165	\$71.50

No. 298 Pexto Ring and Circular Shears

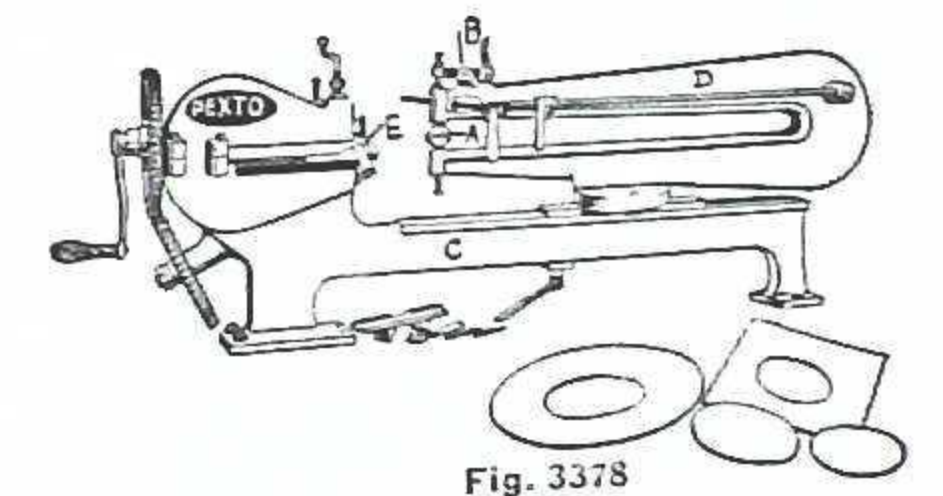


Fig. 3378

Capacity, No. 20 gauge iron and lighter. This improved pattern makes an efficient and useful bench ring and circular shears, for cutting circles or internal rings and irregular curves. In circular cutting, blanks are clamped between rubber covered discs A, by means of a quick-acting eccentric lever device, B, adjustable for exerting uniform pressure to prevent work slipping. This method permits clamping and removing blanks with rapidity. Bed C, on which tail piece D, slides, is graduated in inches and fractions of inches for quick setting of tail piece D for size circle to be cut. Angular position of cutters E allows for clean cutting on inside and outside of circle. Will cut rings as small as 3 1/4 inches inside diameter and as large as 22 inches outside diameter.

DIAM. IN. CLAMPING DISCS	DEPTH CUTTING HEAD, IN. To Gauge	CUTTING To Frame	Depth Circle from Square Arm In.	Will Circle from Square Blanks, In.	Approx. Ship. Wt. Lbs.	Price Each
1 5/8	2 1/4	9 1/8	10	16 1/4	3 1/4 to 22	195 \$77.00

Pexto Arrow Bar Folders

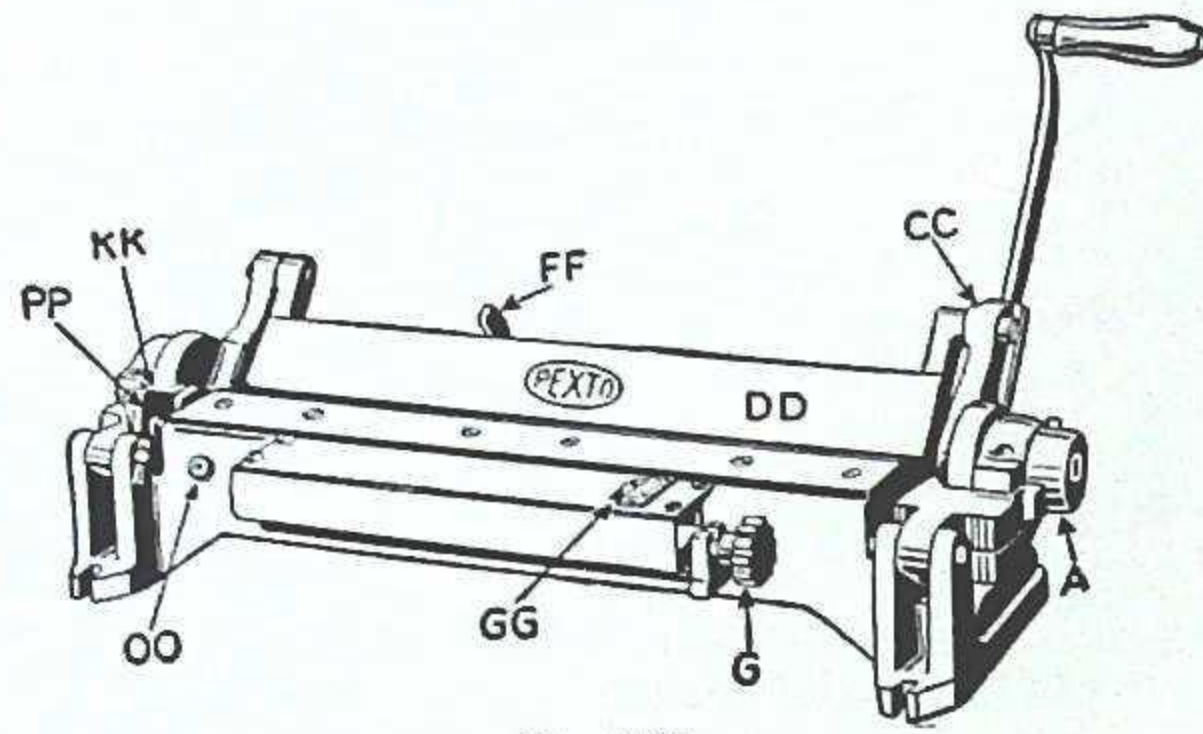


Fig. 3381

This machine is intended for forming the edges of sheet metal at various angles. Will produce closed locks as well as open or round locks for inserting a wire in the flatsheet. Gauge (GG) is adjustable, moved by a screw and is adjusted by turning gauge knob (G). The width to which the gauge is adjusted is indicated on a graduated brass plate, and after set is firmly secured through lock screw (OO). Gauge is so designed that it cannot twist insuring accurate lock forming. Adjustable stop (A) is provided to permit the forming of any desired angle, in addition to regular square and bevel stops (KK-PP). A gripping jaw clamps the material securely while the bending takes place, guaranteeing the forming of square joints or angles, narrow or wide locks of uniform widths the entire lengths.

CAPACITY.— $\frac{3}{16}$ -inch locks on No. 22 gauge iron and lighter; $\frac{1}{8}$ -inch locks on No. 24 gauge iron and lighter; $\frac{3}{32}$ -inch locks on No. XX tin.

No.	62	63
Length for Sheets	20	30
Width, inches	1/8 to 1	1/8 to 1
Will Form Closed and Open Locks	1/4	1/4
Open Locks to Receive Wire Up to	1/4	1/4
Approximate Shipping Weight	140	220
Price	\$60.50	71.50

Pexto Wrights Pipe Folders

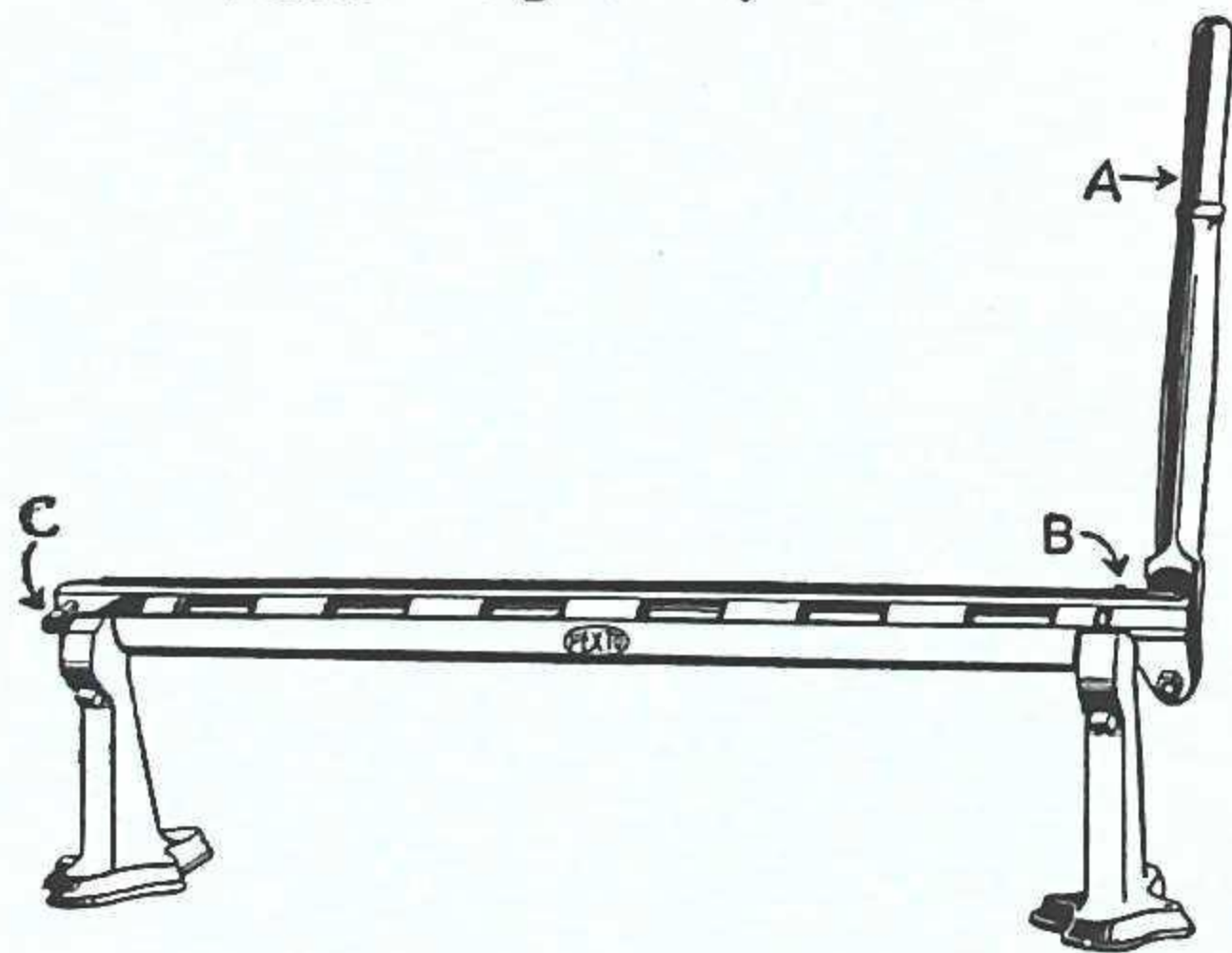


Fig. 3382

This folder will fold the edges of sheets formed in cylindrical shape. It will prove a desirable machine for edging sheets while in the flat as well.

Gauge is adjustable for forming 2 sizes of locks, viz.: $\frac{1}{4}$ and $\frac{3}{8}$ inches. Using strips of No. 22 gauge soft steel cut of correct width and placed under lip of folding blade locks $\frac{1}{2}$ and $\frac{3}{8}$ can be formed. For forming $\frac{1}{4}$ and $\frac{3}{8}$ -inch locks the following directions should be observed.

For locks $\frac{1}{4}$ -inch throw lever (A) to left as far as it will go. Turn thumb screw (B) in. Turn screw (C) out.

For locks $\frac{3}{8}$ -inch throw lever (A) to left. Turn thumb screw (C) in and turn thumb screw (B) out.

CAPACITY.—No. 24 gauge iron and lighter.

No.	1
Length for Sheets	30
Width, inches	1/4 and 3/8
Will Form Locks	80
Approximate Shipping Weight	80
Price	.....

Buffalo Pattern Service Boxes With 2 1/2-inch Shaft



Fig. 3383

No.	Extension Inches	Price Each
88	12	\$1.00
89-A	12 to 20	1.25
90-B	18 " 26	1.35
91-C	21 " 33	1.55
92-C	24 " 38	1.65
92-D	24 " 42	1.85
93-D	36 " 48	2.00
93-E	36 " 54	2.15
94-D	42 " 57	2.20
94-E	42 " 60	2.30
95-E	48 " 66	2.45
95-G	48 " 84	2.95
100-E	54 " 72	2.65
100-F	54 " 78	2.80
100-G	54 " 90	3.15

Extension Section For 2 1/2-inch Service Boxes

No.	Increases Length Inches	Price Each	No.	Increases Length Inches	Price Each
151	9 1/2	\$.60	153	28	\$.95
152	16 1/2	.75	154	33	1.05

Covers, Bolts and Keys



Covers Fig. 3384



Bolt and Key Fig. 3385



Extension Section Fig. 3386

Price, Keys	each	\$.17
" Extra Covers	.....	.15
" Brass Bolts	.....	.10

Buffalo Pattern Service Boxes

3-inch Shaft—Old Style



Complete Fig. 3387



Extension Section Fig. 3388



Upper Section Fig. 3389



Base Fig. 3389A



Large Bell Base Fig. 3389B

No.	Extension Inches	Complete	PRICE, EACH			Add for Large Bell Base Each	
			Upper Section or Base	EXTENSION SECTION LENGTH, INCHES	20		24	30
0	10 Station	\$1.10	.....	\$.90	\$1.00	\$1.15	\$.60
1	13 to 21 1/2	1.55	.....	.90	1.00	1.15	.60
1 1/2	18 " 28	1.95	.....	.90	1.00	1.15	.60
2	24 " 39	2.20	.....	.90	1.00	1.15	.60
3	32 " 48	2.60	.....	.90	1.00	1.15	.60
4	34 " 58	2.85	.....	.90	1.00	1.15	.60
5	42 " 66	2.95	.....	.90	1.00	1.15	.60
7	48 " 72	3.30	.....	.90	1.00	1.15	.60

Covers, Bolts and Keys



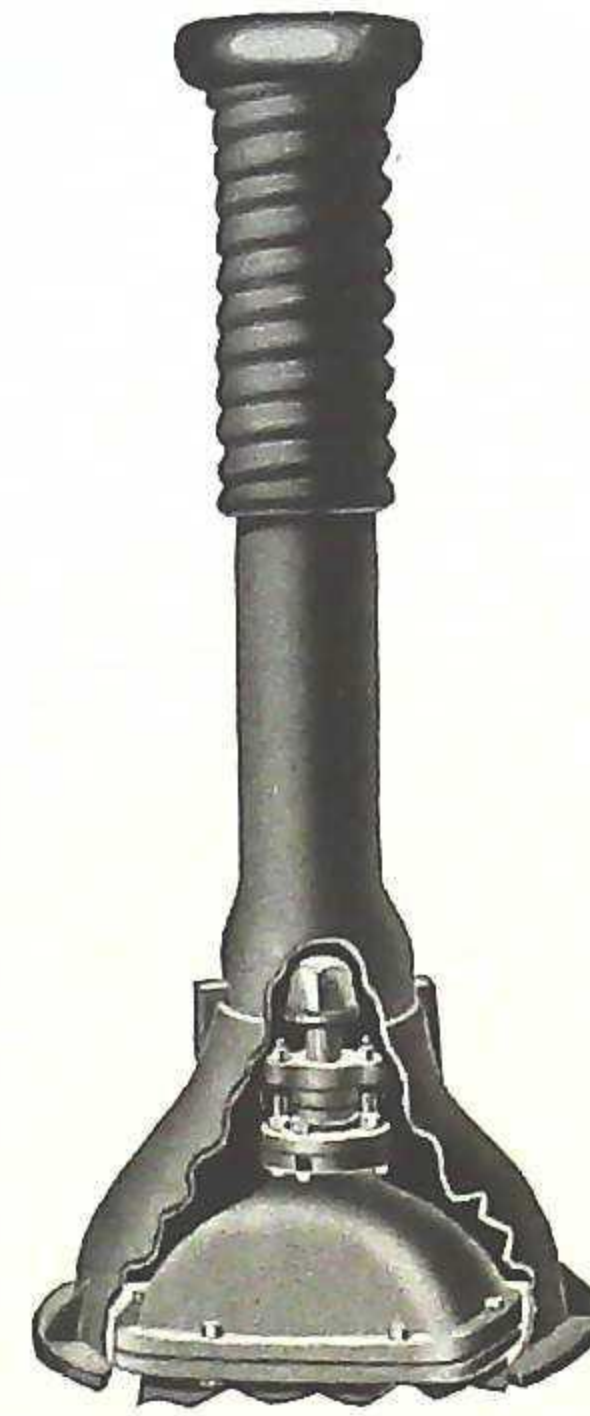
Covers Fig. 3389C



Bolt and Key Fig. 3389D

Price, Keys	each	\$.17
" Extra Covers	.....	.20
Price, Brass Bolts	.....	.10

Valve Boxes and Parts



Valve Box Fitted to No. 6 Base Fig. 3391



No. 68 Regular Cover Marked Gas



No. 69 Regular Cover Marked Water



No. 255 Flanged Cover



Lock Cover

Valve Boxes, 5 1/4-inch Shaft, No. 6 Base

This screw type adjustable valve box is for use with water and gas valves and is interchangeable with all styles of bases.

Covers marked "Water" will be furnished unless otherwise specified.

Size	Extension Length Inches	Price Each	Size	Extension Length Inches	Price Each
AAA	*17	6.00	CC	48-60	\$9.00
AA	22-28	7.25	D	42-66	9.45
A	28-40	7.55	E	48-72	10.20
B	36-48	8.20	F	60-84	10.95
C	42-54	8.55	G	72-96	11.90

*Stationary length.

Above prices are for boxes complete with No. 6 base, which is for valves 8 inches and smaller. When furnished with other size bases, prices are reduced or increased in accordance with the following:

Base No.	Shape of Base	Fits Valve Maximum Size Inches	Add to Above Price	Deduct from Above Price
4	Round	4 or Smaller	.....	\$.25
140	Dome	Up to 24	.....	.....
8	Round	10 or Smaller	\$.50	.....
16	"	12 or 16	3.50	.....
16-24	"	12 " 16	5.00	.....
160	Oval	16 or Smaller	.50	.....
162	"	20 " "	3.00	.....

†Same as with No. 6.

Covers for Valve Boxes

Price, Regular and Flanged	.....	each	.....
" Lock	.....	"	.....



Fig. 3392

Extension Sections

No.	Increasing Length of Box Inches	Size Inches	Price Each
58	14	5 1/4	\$1.75

Sliding-type Adjustable Valve Boxes



Fig. 3393

Is in two sections. Has 5 1/4-inch shaft.

Standard size in every respect, made to meet the demand for a box to cover the stuffing box of valve only, and to slide instead of screw, the upper section telescoping the lower section. The bell end of the lower section measuring 8 3/8 inches diameter, 9 inches high, is sufficiently large to fit over the stuffing box of valves up to 10 inches in size.

Same size and style covers used on our regular screw type box, are applicable to this box; they can be lettered, water or gas, or any initials desired.

The flange on bottom end of upper section furnishes the bearing for that section and, consequently, all weight or jolting resulting from street traffic, rests there and does not reach valve. It also is the means by which the box can be adjusted as to length.

Size	Extension Feet	Price Each	Size	Extension Feet	Price Each
5562-S	2 to 3	\$5.55	5662-S	2 1/2 to 4	\$6.70
5564-S	3 " 4	6.40	5664-S	3 " 5	7.50

Round Head Roadway Boxes With Lock Cover and Open Base



Fig. 3394

Can furnish with either plug or lock cover as illustrated. This box can be used in the street and is designed to cover large stops or small valves up to and including 3-inch size.

Covers marked WATER, unless otherwise specified.

With Open Base 4 1/4-inch Shaft

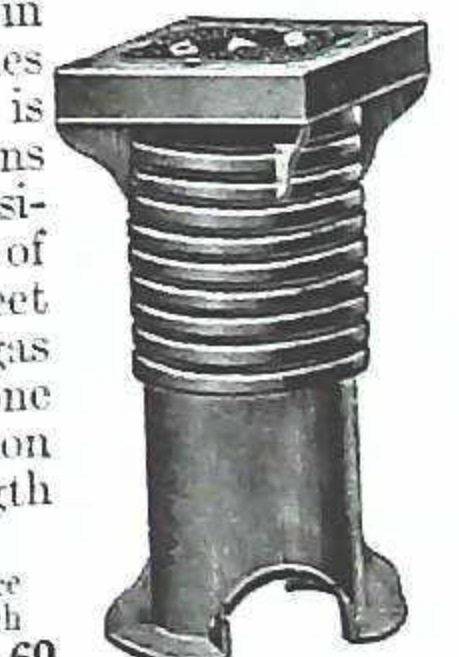
No.	Extension Inches	Price Each
141Q	18-24	\$3.75
142Q	27-34	4.15
142R	27-42	4.85
143R	34-48	5.15
144R	39-54	5.30
145R	46-60	5.70

Extension Sections

No.	Increases Length of Box Inches	Price Each
49	18	\$1.55

Extension Test Valve Boxes

Valuable auxiliary in street work. It is 12 inches inside diameter, and is formed of two sections which screw together. Easily adjusted to depth of trench, to conform to street grade. Largely used by gas companies. By use of one or more of the extension sections, any desired length of box may be obtained.



Extension Test Valve Box Fig. 3395



Extension Section Fig. 3396

Price, No. 100, 12-inch Extension, each \$3.50
Covers lettered will be lettered gas, test valve, etc., as desired.

Myers Brass Cylinder Pitcher Pumps

A brass cylinder pitcher pump, built in a reliable manner. The cylinder is of seamless drawn brass.

Has patent glass valve seat, rubber fibre check and revolving top.

Drop valve arrangement to prevent water from freezing.

The base is a new and novel design, and is attached to the cylinder by means of three heavy bolts.

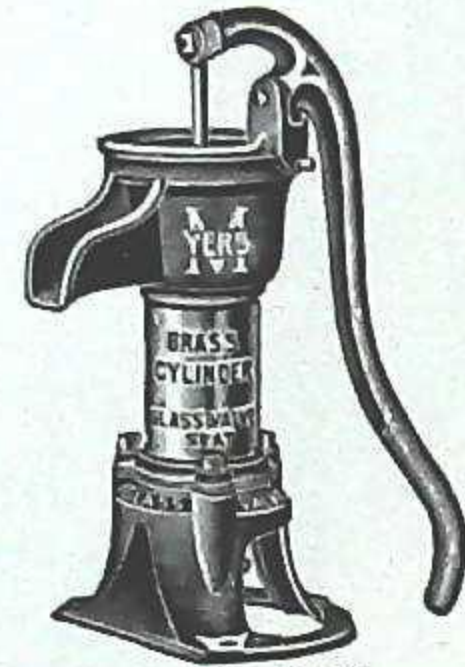


Fig. 3401

No.	Cyl-inder In-ches	Size Pipe In-ches	Shipping Weight Pounds	Price Each
220	3	1 1/4	22	\$6.00
222	3 1/2	1 1/2	24	7.25

Myers Long Stroke Cog Gear Double Acting House Force Pumps

Adapted to forcing water to an elevation or into a tank. A reversible handle can be located at any angle either right or left hand or straight away from the pump as desired.

Heavy seamless brass upper and lower cylinders, with patented glass valve seat, fibre rubber check valve and expansion plunger bucket.

The cock spout and plain spout are interchangeable on the same pump.

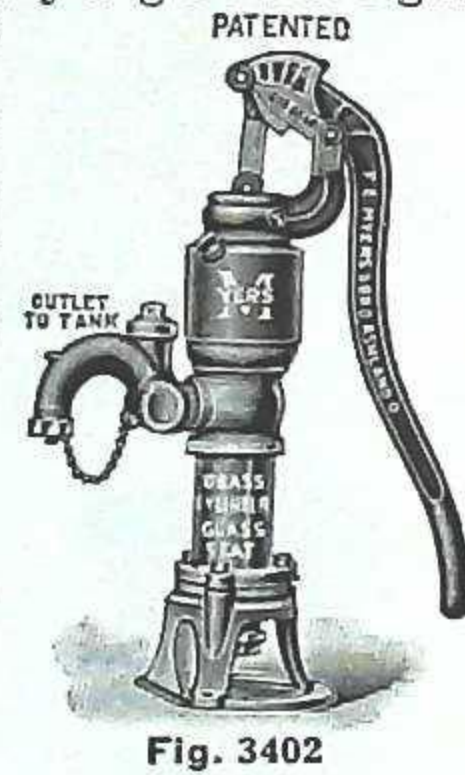


Fig. 3402

No.	Type Spout	Lower Cylinder In.	Suction Pipe In.	Price Each
R251	Plain	3	1 1/4	\$9.00
R251CS	Cock	3	1 1/4	10.00
R253	Plain	3 1/2	1 1/2	10.50
R253CS	Cock	3 1/2	1 1/2	11.50

Myers Single Acting House Force Pumps

This single acting house force pump is made with either plain or cock spout.

The spouts are interchangeable on the same pump.

The cylinder is brass.

The pump is fitted with patent glass valve seat.

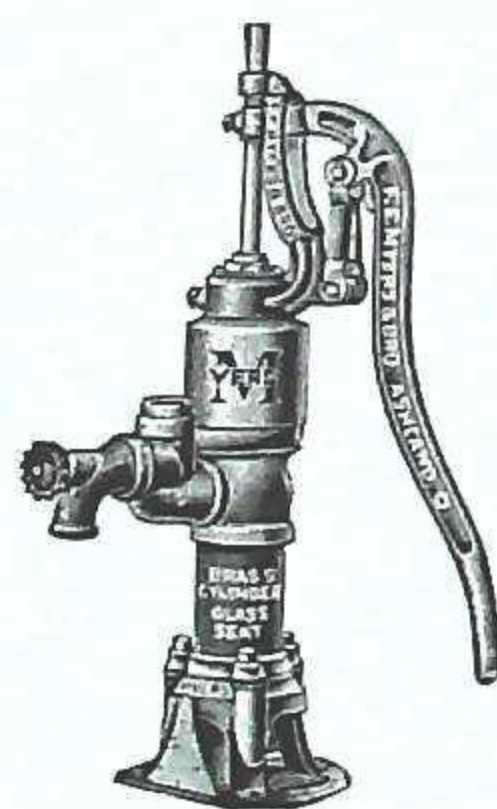


Fig. 3403

With Cock Spout

No.	Cyl-inder In.	Ship. Wt. Lbs.	Price, Each With Plain Spout	With Cock Spout
252	3	34	\$9.00	\$10.00
254	3 1/2	37	10.50	11.50

No. 416 Myers Long Stroke Pitcher Pumps

Fitted with plain brass valve seat, tapped for 1 1/4-inch pipe. Has 3-inch cylinder, bored and highly polished. Large capacity. Has 5-inch stroke.

Handle adjustable to any angle desired.

Arranged to drop the water to prevent freezing.

Shipping weight, 25 pounds.

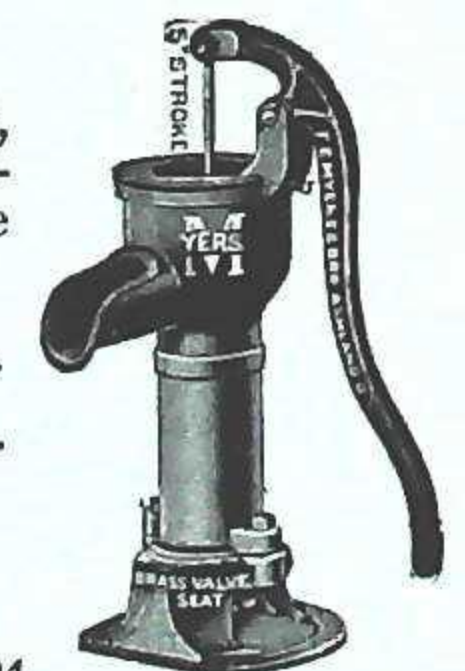


Fig. 3404

Price, No. 416.....each \$4.00

Myers Cog Gear Lift Pumps

With Adjustable Base and Reversible Spout

The new lift pump with rolling motion gear handle. This style handle is especially adapted to deep well work, owing to the advantage of the superior leverage, with short fulcrum and long handle. The spout is attached to the pump head by means of a bolted flange union, making it reversible. The base is adjustable and can be located at any point desired. Anti-freezing. 4-foot set length.

The pump rod is held by a set screw. This permits the adjustment of rod and plunger, after which the rod can be cut off. This does away with the careful fitting of rod before putting pump together.



Fig. 3405

No.	Diam. Cyl. In.	Tapped for Pipe In.	Cap. per Hour Gal.	Price Each
R1050	*2 1/2	1 1/4	306	\$11.00
R1051	*2 1/2	1 1/4	306	11.50
R1052	*3	1 1/4	440	11.50
R1053	§3	1 1/4	440	12.00
R1054	*3 1/2	1 1/2	600	13.00
R1056	†3	1 1/4	440	9.50
R1057	‡3 1/2	1 1/2	600	10.50
R1058	†3	1 1/4	440	9.00
R1059	‡3 1/2	1 1/2	600	10.00

*Brass lined cylinder with glass seat.
 †Polished iron cylinder with glass seat.
 ‡Polished iron cylinder with plain brass seat.
 §Brass cylinder with glass seat.

Myers Cog Gear Single Acting Force Pumps

With Adjustable Base and Reversible Spout

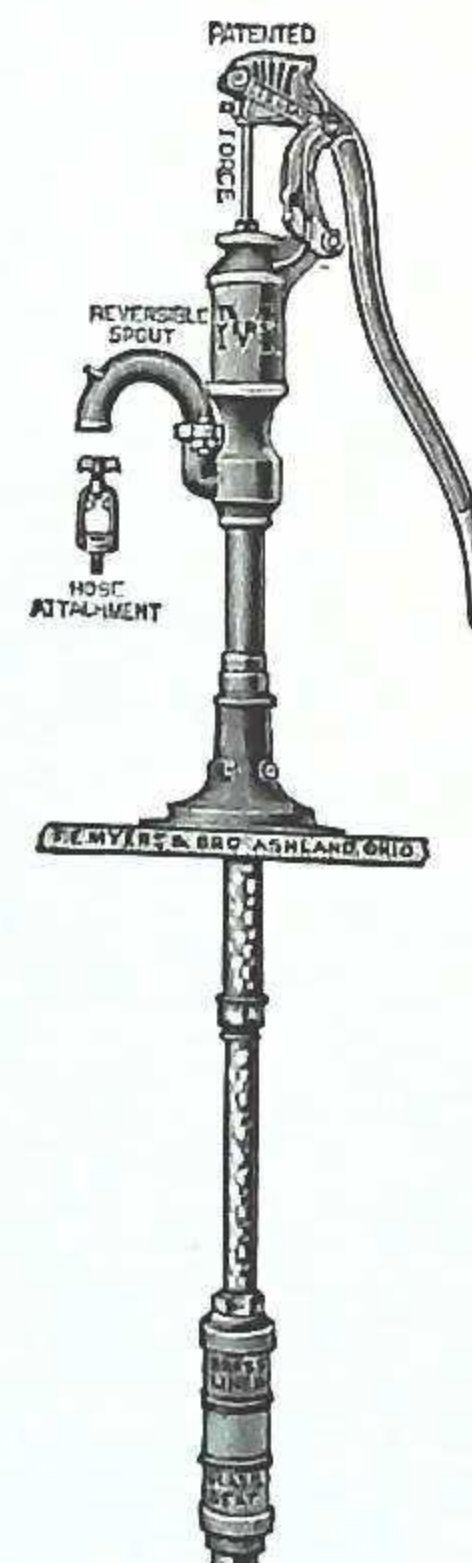
4-foot Set Length

The handle allows the piston to move in a direct line without swaying from side to side, as is necessary with the ordinary handle. This extra leverage adapts the pump to deep wells.

The spout is attached to the pump head by means of bolted flanged union, making it reversible.

The water flows from the spout in a smooth, even stream. The pump is anti-freezing.

The pump rod is held by set screw. This permits the adjustment of rod and plunger after which the rod can be cut off. This does away with the careful fitting of rod before putting pump together.



No. R1072 Fig. 3406

With Brass Lined Cylinder

No.	Size Cyl. In.	Kind of Seat	For Pipe In-ches	Cap. per Hr. Gal.	Price Each
R1070	2 1/2	Glass	1 1/4	306	\$12.50
R1072	3	"	1 1/4	440	13.00
R1074	3 1/2	"	1 1/2	600	14.50

With Polished Iron Cylinder

No.	Size Cyl. In.	Kind of Seat	For Pipe In-ches	Cap. per Hr. Gal.	Price Each
R1076	3	Glass	1 1/4	440	\$11.00
R1077	3 1/2	"	1 1/2	600	12.00
R1078	3	Brass	1 1/4	440	10.50
R1079	3 1/2	"	1 1/2	600	12.50

With Brass Cylinder

No.	Size Cyl. In.	Kind of Seat	For Pipe In-ches	Cap. per Hr. Gal.	Price Each
R1071	2 1/2	Glass	1 1/4	306	\$13.50
R1073	3	"	1 1/4	440	13.50

Myers Cog Gear Branch Pipe 3-way Single-acting Force Pumps

Fitted with Stuffing Box or Plunger Tube

10-inch Stroke for Windmill and 7-inch Stroke for Hand Use For Tubular or Open Wells

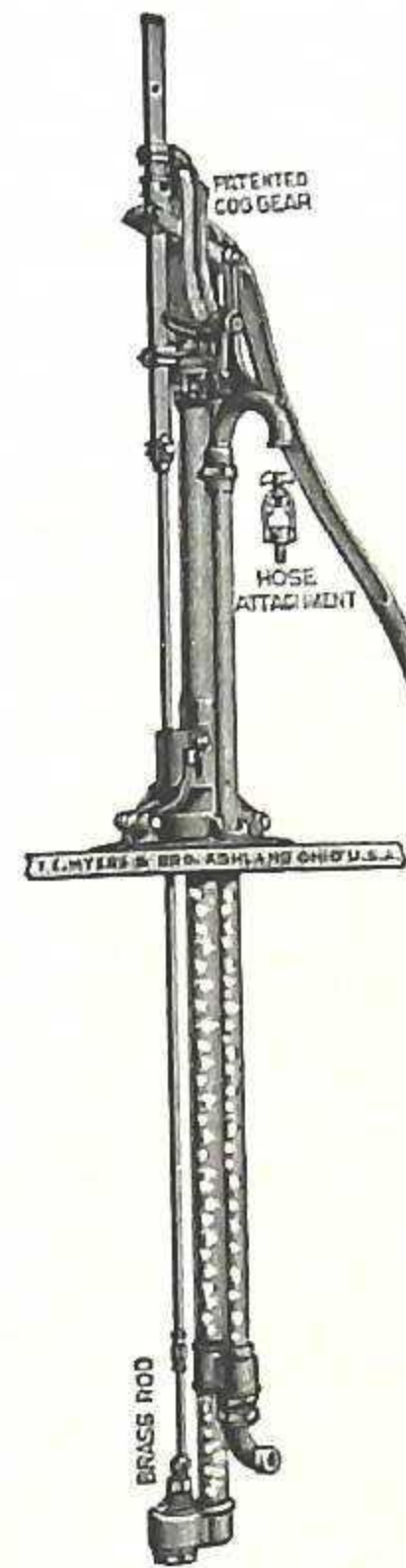


Fig. 3411

Anti-freezing. Steel coupling, 1/2x3/8-inch rod by 3/4-inch pipe, regular.

Fitted with cog gear handle for windmill and hand use. Rolling motion cog gear increases leverage 33 1/3 per cent. This special leverage adapts pump to very deep wells. Pump is fitted with regular 3-way. Has large brass rod and stuffing box or 1 1/4-inch plunger tube. Bottom tapped for 1 1/4, 1 1/2, 2 or 2 1/2-inch pipe; state which is wanted. Always fitted with 1 1/4-inch unless other size is specified.

Made with galvanized pipe only. Fitted with stuffing box or plunger tube; 10-inch stroke for windmill and 7-inch stroke for hand use.

Four-foot set length.

With Stuffing Box

Price, No. R225, Tapped for 1 1/4-inch Pipe.....each \$16.50

With 1 1/4-inch Brass Plunger Tube

Price, No. R227, without Lower Cylinder, Tapped for 1 1/4-inch Pipe.....each \$16.50

Price, No. R228, with 2 1/2 or 3x16-inch Brass Cylinder, State Which.....each 24.00

Nos. R226 and R228 when furnished with brass lined cylinder instead of brass cylinder, deduct 50 cents from price.

Myers Cog Gear Branch Pipe Double-acting Force Pumps For Deep Wells

6-inch Stroke for Hand Use 8-inch Stroke for Windmills

The upper cylinder is seamless drawn brass, fitted with a Myers expansion plunger bucket. The lower cylinder is brass lined iron, fitted with a Myers improved patent glass valve seat.

The special advantage of the cog gear handle is that it increases the leverage 33 1/3 per cent, adapting the pump to deep wells or for forcing water to an elevation.

The piston rod moves perpendicularly. Cog gear has a rolling motion which reduces the friction to the minimum.

Furnished with hose attachment and strainer.

For Wells, 10 to 150 Ft. Deep

No.	Capac-ity Gals. per Hr.	Size Well In.	Lower Cyl-inder In.	Tapped for Pipe In.	Wt. Lbs.	Price Each
R4	306	5 5/8	2 1/2	1 1/4	78	\$17.00
R5	440	5 5/8	3	1 1/4	79	\$17.00
R6	600	6 1/2	3 1/2	1 1/2	83	\$19.00
R7	780	6 1/2	4	2	93	\$22.00

For Wells, 10 to 70 Ft. Deep

For Wells, 10 to 50 Ft. Deep

For Wells, 10 to 30 Ft. Deep

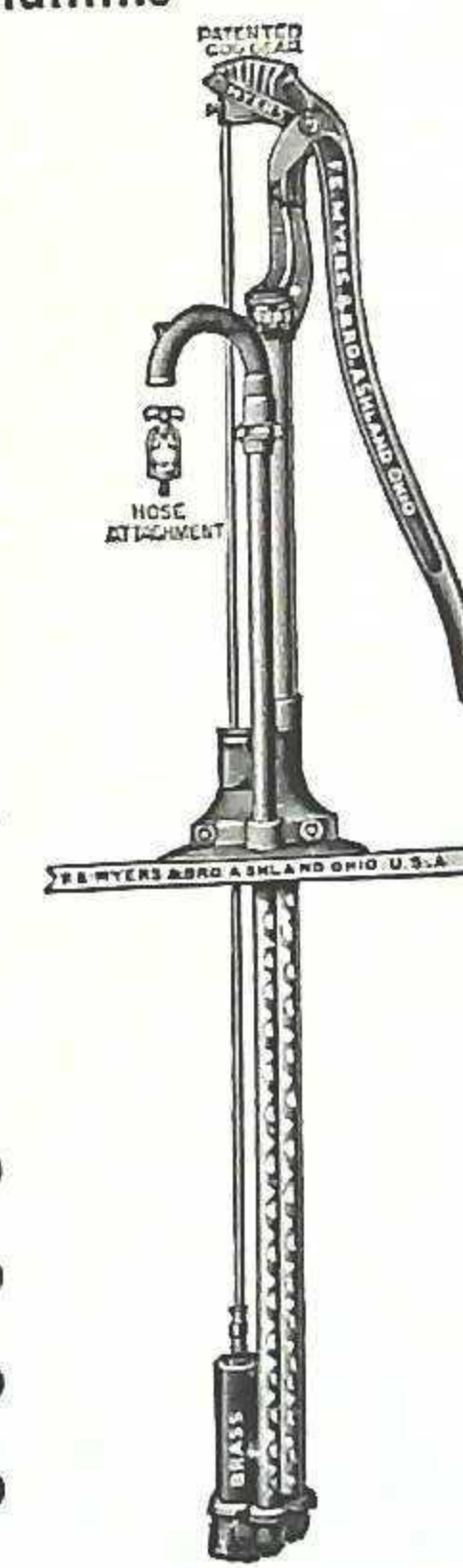


Fig. 3412

For windmill head, add to price, \$2.00.
 For 3-way cock, add to price, \$4.00.
 For windmill head and 3-way cock, add to price, \$6.00.

Improved Pump Cylinders



Brass Lined Fig. 3413

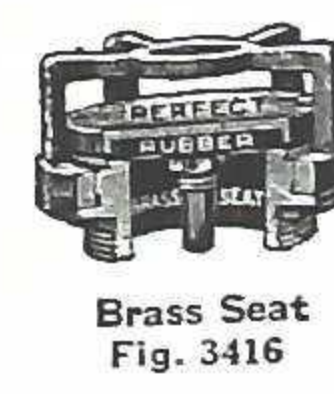


Polished Iron Fig. 3414

Diam. In-ches	Length In-ches	Size Pipe In-ches	Price, Each	
			Glass Seat	Perfect Brass Seat
2 1/2	10	1 1/4	\$5.00	\$5.00
3	10	1 1/4	5.50	5.50
3 1/2	10	1 1/2	7.00	7.00
4	10	2	9.50	9.50
2	12	1 1/4	.....	5.00
2 1/2	12	1 1/4	5.50	5.50
3	12	1 1/4	6.00	6.00
3 1/2	12	1 1/2	7.75	7.75
4	12	2	10.50	10.50
4 1/2	12	2	14.00	14.00
5	12	2 1/2	.....	21.00
6	12	3	.....	31.00
2	14	1 1/4	.....	5.75
2 1/2	14	1 1/4	6.25	6.25
3	14	1 1/4	6.75	6.75
3 1/2	14	1 1/2	8.75	8.75
4	14	2	12.00	12.00
4 1/2	14	2	16.50	16.50
6	14	3	.....	35.00
2	16	1 1/4	.....	6.25
2 1/2	16	1 1/4	6.75	6.75
3	16	1 1/4	7.25	7.25
3 1/2	16	1 1/2	9.50	9.50
4	16	2	13.00	13.00
4 1/2	16	2	18.00	18.00
5	16	2 1/2	.....	26.00
6	16	3	.....	38.00
2 1/2	18	1 1/4	7.25	7.25
3	18	1 1/4	7.75	7.75
3 1/2	18	1 1/2	10.25	10.25
4	18	2	14.00	14.00
4 1/2	18	2	19.50	19.50
5	18	2 1/2	.....	28.00
6	18	3	.....	41.00



Glass Seat Fig. 3415



Brass Seat Fig. 3416

All cylinders 10 and 12 inches long have a single leather plunger. Cylinders with a double leather plunger, length of stroke 1 inch shorter than above. Extra charge for different tapping, five cents net for each 3/4 inch.

Brass lined cylinders furnished with brass cage and valve and glass seat unless otherwise ordered. Polished iron cylinders furnished with brass seat.