ROYAL

GOODS GUARANTEED GOOD BY ALMOST A CENTURY'S EXPERIENCE EST'D 1834

WORLD

CATALOGUE

No. 45

T. McAVITY & SONS LIMITED

PLUMBING AND HEATING

HEAD OFFICES AND WORKS

ST JOHN N.B. CANADA

STORES AND OFFICES

MONTREAL AND WINNIPEG

SALES OFFICES

TORONTO, CALGARY, EDMONTON

VANCOUVER, LONDON ENG.

WORLD

ROYAL

No. 45 Catalogue

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McAVITY'S GUARANTEE

GOODS GUARANTEED GOOD BY A CENTURY'S EXPERIENCE ALMOST EST'D 1834

WORLD
McAVITY'S GUARANTEE

Plumbing Fixtures

AND

Heating

T. McAvity & Sons

ESTABLISHED 1834 LIMITED

Head Offices and Works:

ST. JOHN, N.B.

NO. 1 WAREHOUSE
Prince Wm and Brittain Sts,
ST. JOHN.

NO. 2 WAREHOUSE
No. 115 Water St.,
ST. JOHN.

NO. 3 WAREHOUSE
Nos. 74 to 76 Water Street,
ST. JOHN.

Vulcan Iron Works,
BROAD STREET, ST. JOHN.

Brass Works and Marine Dept.
Nos. 65 to 73 Water St., St. John.

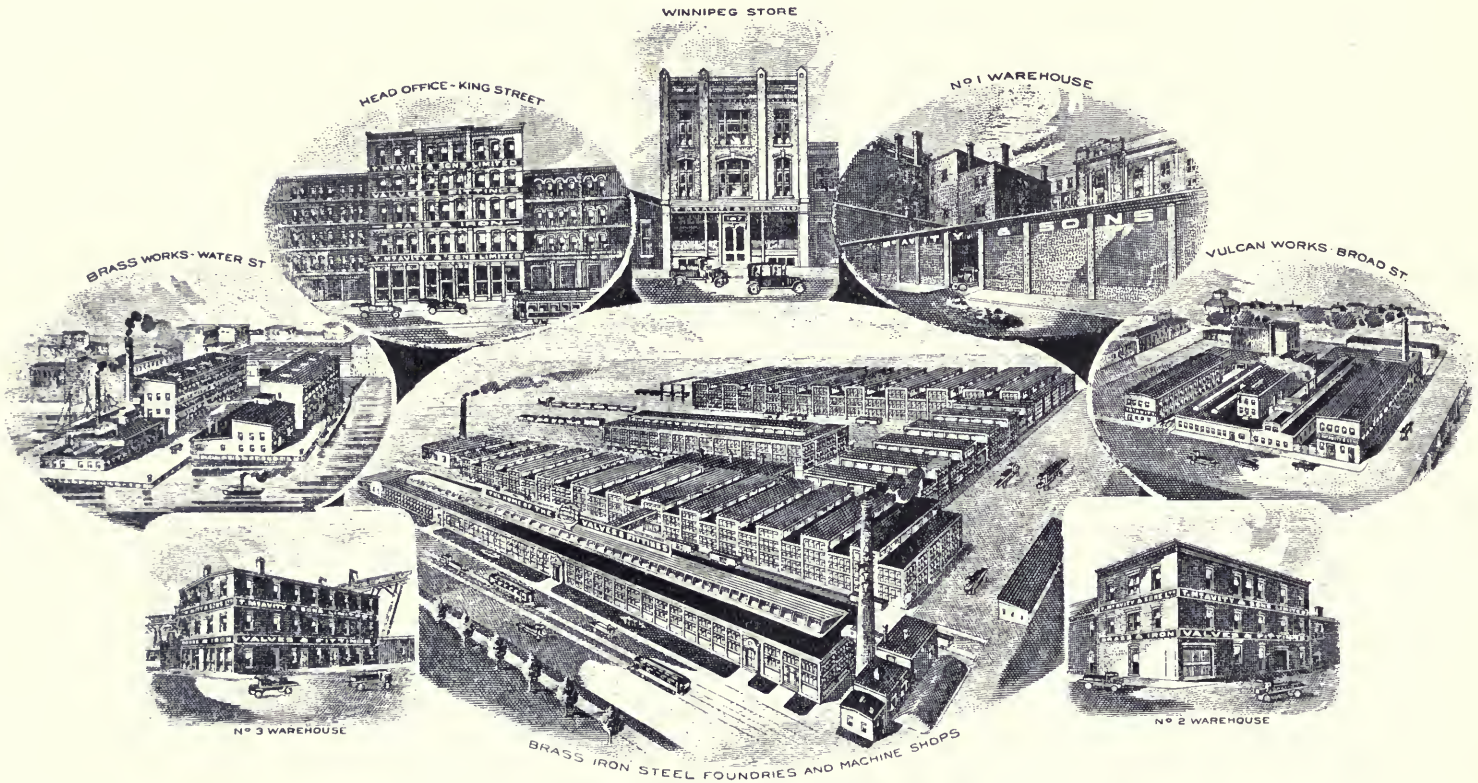
Main Machine Shops,
Brass, Iron and Steel Foundries, Etc.
ROTHESAY AVENUE, ST. JOHN.

Stores and Offices

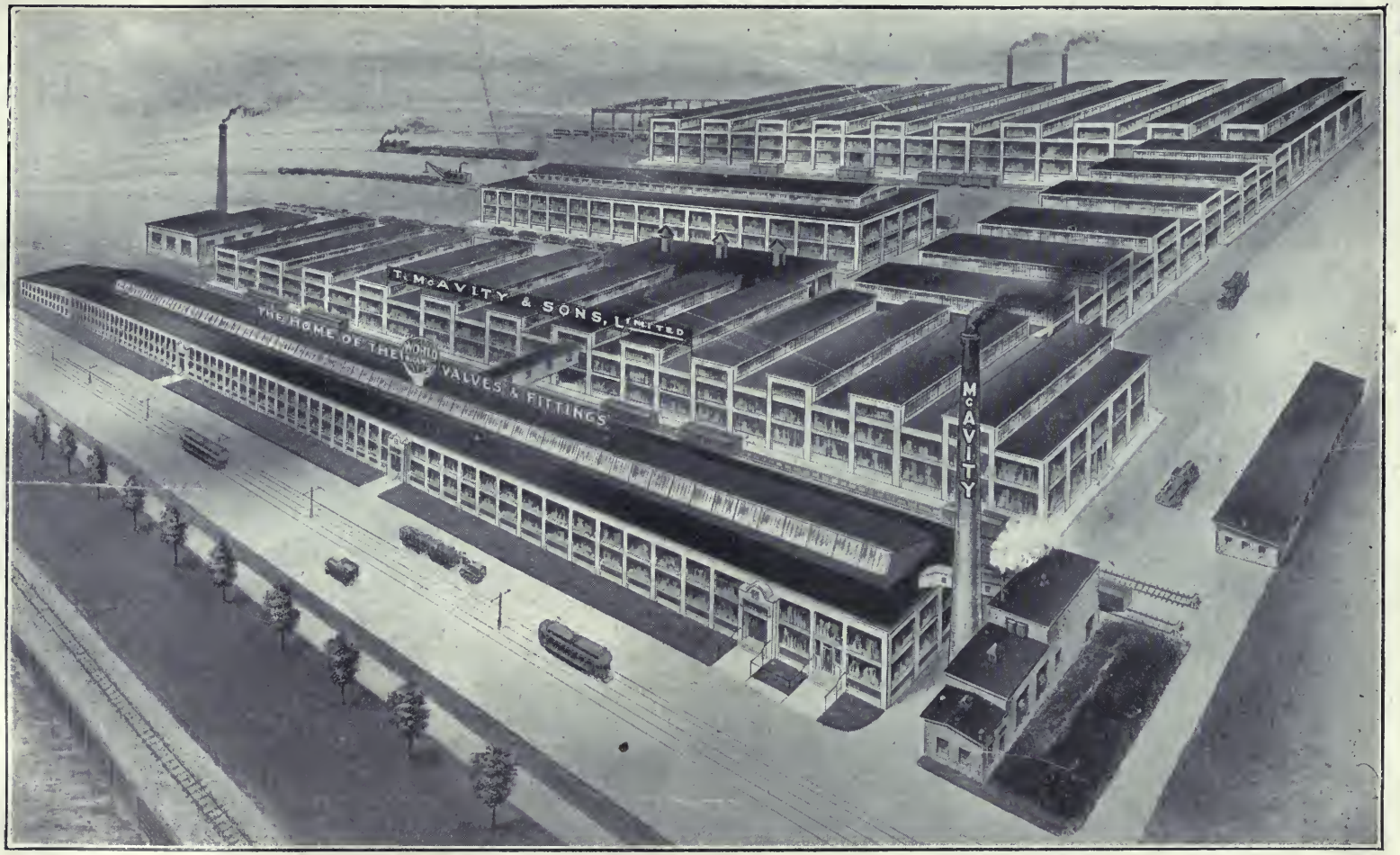
MONTREAL WINNIPEG

Sales Offices:

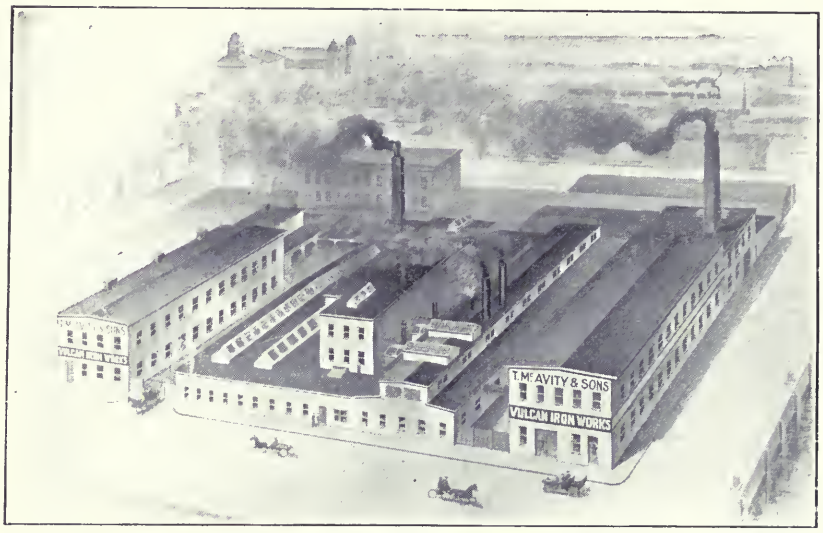
TORONTO, CALGARY, EDMONTON, HALIFAX,
VANCOUVER, Canada LONDON, England



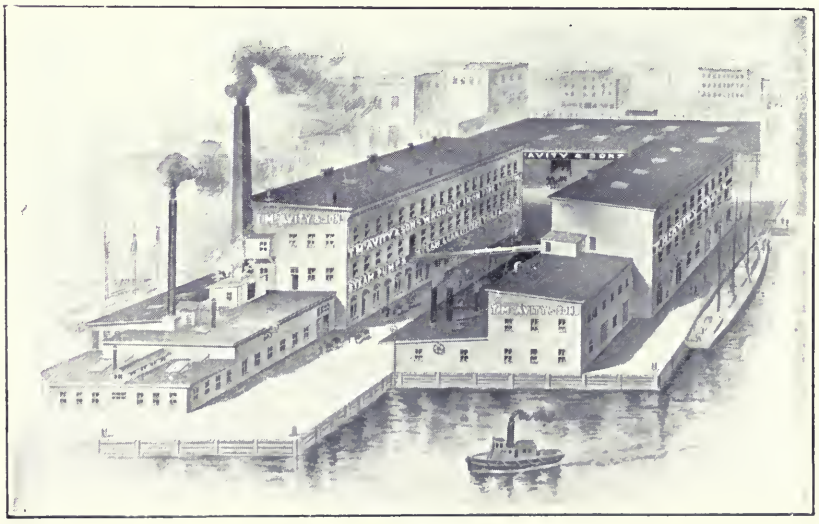
Birds eye View of the Manufacturing Plants, Warehouses, Stores and offices of T. McAvity & Sons, Limited.



McAvity's Rothesay Avenue, Brass, Iron, Steel Manufacturing Plant with its Eight Spur lines connecting with all Railways main lines and Harbour front of St. John City—the Canadian Atlantic Ocean terminal port.



Vulcan Iron Works, Broad Street, St. John



Brass Works (Locomotive and Marine Dept.,)
Nos. 65 to 73 Water St., St. John

Single purchase of Steel in our yard at Rothesay Avenue plant, for use in our Steel Foundries. This material is all of same analysis enabling us to make castings all of a high grade and guarantees uniformity of product.

THOMAS M'AVITY & CO.

Have received per Ships Hebe, from London, Clyde, Edward Thorne, and Ward, from Liverpool—

20 BALES and Cases Cotton and Woollen GOODS,
2 Bales Cloths, Sattinetts, &c. &c.
130 Casks and Cases Sheffield and Birmingham GOODS, comprising a general assortment of Ironmongery, Cutlery, Saws, Files, &c.
180 Casks fine Canada 10se Nails, 4d. to 60d.
80 Bags Spikes, from 4 to 12 inch,
5 Casks short link Chain, ¼ to ⅝ inch,
12 Smiths' Anvils; 100 ditto Vices,
4 Kegs patent Shot, assorted, B B to 10,
40 Dozen Spades and Shovels,
2 Casks miners' do; 20 boxes Tin Plates,
100 stone Iron Wire, assorted numbers,
1000 cast-Iron Pots and Camp Ovens,
200 Griddles and Spiders,
Register and half register Grates,
1 Doctor Arnott's Stove,
100 Kegs WHITE LEAD; 50 tins Paint OIL,
Casks Lampblack, Whiting, Yellow Ochre, Red Ochre, rotten Stone, Glue, Black Lead, Salt Petre, Alum, &c. &c.

☞ All the above Goods have been selected by the subscribers, in the best markets in England, and, will be sold wholesale or retail, at a small advance for prompt payment.

St. John, 19th May, 1838. (*Sentinel*)

FAC-SIMILE OF ONE OF THE EARLIEST ADVERTISEMENTS USED BY THE McAVITY FIRM. IT IS REPRODUCED HERE AS OF HISTORICAL INTEREST ONLY. THE FIRM DOES NOT NOW SELL DRY GOODS; BUT THE THOUSAND AND ONE THINGS IN THE HARDWARE, MILL, PLUMBING, STEAM-FITTING, CONTRACTING, AUTOMOBILE AND MOTOR-BOAT LINE TO BE FOUND IN THEIR ESTABLISHMENT, ATTEST TO THE PROGRESS MADE SINCE THEIR FIRST "AD" APPEARED.

FOREWORD

IN presenting this book we offer a catalogue which, in our belief, shows the most modern and sanitary Plumbing Fixtures on the market to-day.

We have been manufacturing and dealing in this line for many years, but mere age of a business house counts for little unless it keeps abreast of the times. These are the days of top speed, high tension and great responsibilities. Wide awake new methods are necessary to meet the demands of modern business. Hence we are constantly on the alert to produce goods in accordance with the most recent developments of sanitary and mechanical principles; those which combine efficiency, simplicity of operation and beauty of design.

If you use our products you are not only protected by an absolute guarantee as to quality, but safeguarded against trouble in the future as to securing duplicate fixtures or parts.

The buildings illustrated on the preceding pages give an idea of our capacity and show that we can carry through successfully contracts of any size.

We ask that our line of goods be given careful consideration and that you may feel free to call on us at any time for information, advice or other assistance we can render. It is a genuine pleasure to be of service to our patrons.

T. McAvity & Sons
ESTABLISHED 1834 LIMITED

INTRODUCTORY

IN order to simplify the catalogue, you will notice in every case that the first two numbers correspond to the page number on which these Plate Numbers are shown, for instance Plate 101 would be found on page 10 or Plate 743 will be found on page 74.

NOTE CAREFULLY Give definite instructions as to the route, packing, insurance, etc. When such instructions are omitted we will use our best judgement. Boxing charged at cost; cartage at lowest rates.

A thorough understanding will exclude any doubt as to the responsibility on shipper, carrier, and consignee, for loss of and damage to goods in transit;

" Our responsibility ceases as soon as goods are delivered in good order and condition at railroad depot or wharf and a receipt taken for them. If the carrier insists on our signing a release or other document having reference to their liability, before they receive the goods, of course we must comply, that will not, however, in any way affect the right of the party to whom they are consigned to recover damages for any carelessness or negligence on the part of the carrier."

As all our goods are carefully and well packed by experienced men and thoroughly inspected before leaving the warehouse as being in sound condition, we cannot, therefore, allow claims for breakage.

All prior lists and discounts applying on goods illustrated or listed herein are cancelled from this date.

Plate numbers have been changed; therefore, in order to avoid confusion, all old catalogues should be destroyed or laid aside.

Orders and inquiries should specify like numbers, do not use the words " same as last."

All prices and quotations, whether made direct or through our salesmen, are for prompt acceptance and subject to change without notice.

When prices are quoted specially " Freight Allowed " it only refers to shipments of 140 pounds or over.

All goods sold F. O. B. cars or steamer in this city unless otherwise stipulated.

All orders and contracts are taken contingent upon strikes, fires, accidents, and other causes beyond our control.

Orders entered upon our books cannot be countermanded except with our consent, and upon terms that will save us from loss.

Specifications for articles deviating from standard forms and sizes should be explicit, and when possible accompanied by blue print or sketch.

No goods should be returned without first consulting us and making arrangements as to the basis upon which they are to be taken back.

No charges for labor or expense required to repair defective goods, or occasioned by them, will be allowed. If the goods are defective, the measure of the damage is the price of the defective goods only.

Merchandise of any description sent to us for shipment with our goods will be entirely at the risk of the owner, and no claims for deficiencies will be allowed where goods are sent elsewhere to be packed.

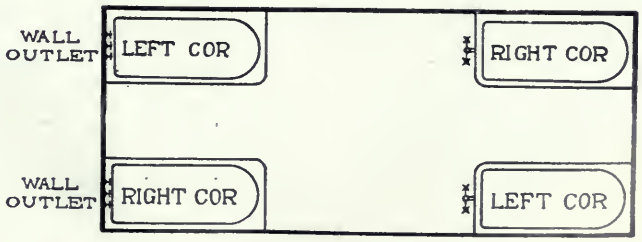
Claims for shortage, errors must be reported within ten days from receipt of goods.

Stenographic or clerical errors are subject to correction.

Monthly settlements unless otherwise agreed upon.

While we cannot guarantee the tables, rules and useful information in this catalogue to be absolutely correct, we have compiled same from the most reliable sources and taken care to have them free from errors.

Note—It is advisable to have customer definitely state in which corner of the room the Bath is to be placed; Delays and costly mistakes may be avoided by consulting chart, which clearly explains our method of determining the proper Fixture: (By placing the end of Tub in corner, and not by the location of Fittings). To secure the correct impression for the two lower Baths in illustration, invert the page:



"ROYAL" BATH ROOM

MODEL A

Showing Solid Porcelain Fixtures, of Latest Designs, Suitable for Large Bath Rooms.

An Attractive Feature is the Toilet Table and Lavatory Combination.

Plate 81 "Royal" Bath Room

"Royal" 5′ 6″ Solid Porcelain Bath, Complete, with Bell Supply and Waste Combination.

"Royal" Solid Porcelain Sitz Bath, Complete, with Bell Supply and Waste Combination.

"Royal" Solid Porcelain Bidet, with Combination Bell Supply.

"Royal Swan" Combination with Solid Vitreous China Tank ; Twin Syphon Bowl and White Pryalin Seat, with pressure Reducing Valve on Supply.

"Royal" White Enameled Mirror, 54″ x 30″.

"Royal" White Enameled Mirror, 30″ x 22″.

"Royal" Nickel Plated Shower, with Regulating Valve, and Rubber Curtain.

"Royal" Solid Porcelain Pedestal Lavatory.

" White Enameled Chair.

" White Enameled Stool.

" White Enameled Medicine Chest.

" Opal 5″ x 30″ Shelf.
" " 30″ Towel Bar
" " 18″ " "
" " Brass Basket.
" " Bath Sponge Holder.
" " Soap and Tumbler Holder.
" " Strop Hooks.
" " Tooth Brush Holder.

Approximate Price.....**$1,600.00**

"ROYAL" BATH ROOM

MODEL B

Showing Solid Porcelain Fixtures of Attractive Design.

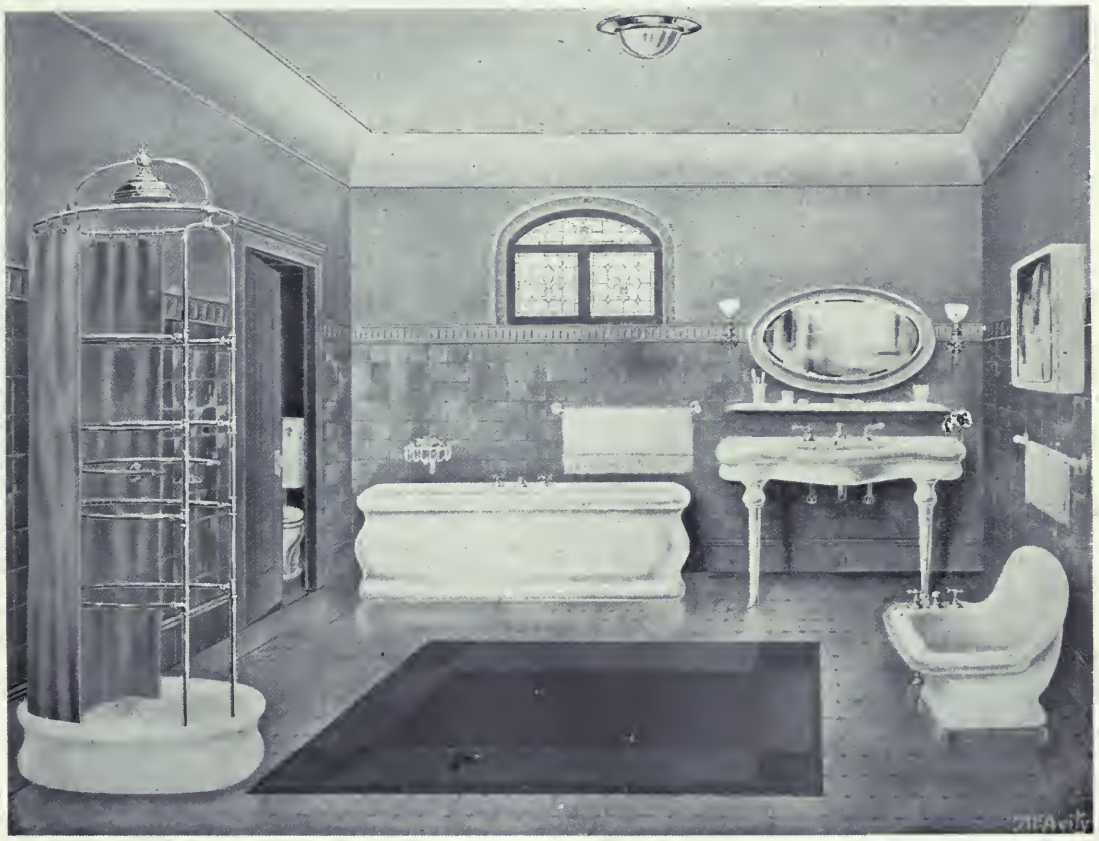


Plate 91 "Royal" Bath Room

"Royal" Solid Porcelain Bath, with Bell Supply and Waste Combination.

"Royal" Solid Porcelain Lavatory, with Combination Supply and Waste Fittings.

"Royal" Solid Porcelain Sitz Bath, with Bell Supply and Waste Combination.

"Royal" Dececo Combination, with White Pryalin Seat.

"Royal" Nickel Plated Needle Point Shower, with Solid Porcelain Receptor and Rubber Curtain.

"Royal" 30" x 24" White Enameled Medicine Chest, with Plate Glass Mirror.

"Royal" White Enameled Mirror, 36" x 24" Oval.

" 36" Opal Shelf.

" Bath Sponge Holder.
" 36" x 1¼" Opal Towel Bar.
" 24" x 1" " " "
" White Strop Hook.
" " Tooth Brush Holder.
" " Tumbler "
" " Soap "
" " Paper "

Approximate Price..... **$1,200.00**

"ROYAL" BATH ROOMS

MODEL C

"Royal" 5′ 6″ Enameled Iron Corner Bath, Complete with Bell Supply; Exposed or Concealed.
"Royal" Vitreous China Pedestal Lavatory, Complete.
"Royal" Enameled Iron Sitz Bath, with Bell Supply.
"Royal" Enameled Iron Foot Bath, with Bell Supply.
"Royal" Needle Point Shower, with Mixing Chamber; Hose and Spray Nozzle.
"Royal" Shower Receptor and Curtain, with Rod.
"Royal" Dececo White Combination, with White Pryalin Seat (No Nickel Parts Exposed).
White Enameled Bath Stool.
24″ Opal Shelf with Railing.
12″ Bar Towel Holder.
18″ x 30″ White Enameled Mirror.
30″ Opal Towel Bar.
24″ Opal Towel Bar.
All White Paper Holder.
All White Tumbler Holder.
All White Bath Soap and Sponge Holder.
All White Wall Soap Holder.
All White Tooth Brush Holder.
All White Strop Hook.
Approximate Price **$700.00**

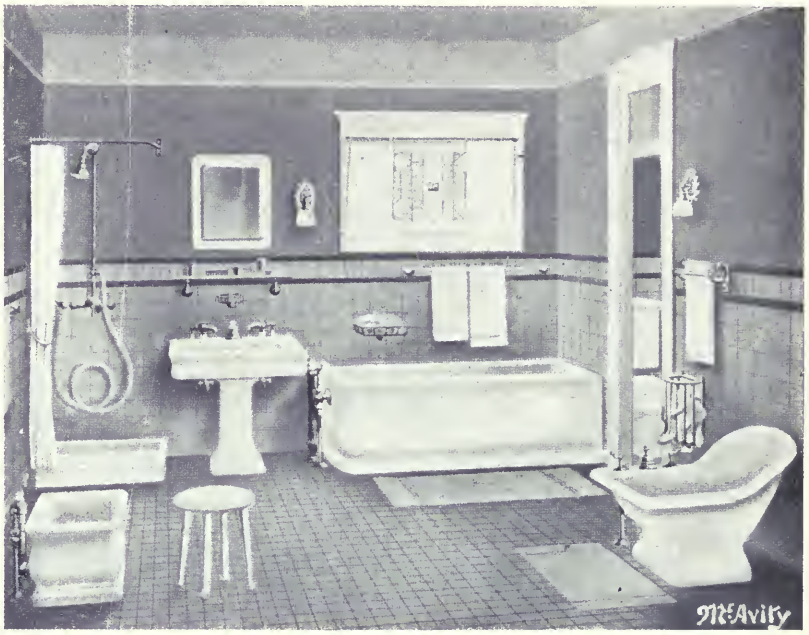


Plate 101 "Royal" Bath Room

MODEL D

Plate 102 "Royal" Bath Room

"Royal" 5′ 6″ Enameled Iron (all in one piece) Recess Bath, Complete with Bell Supply, Waste and Shower Combination.
"Royal Swan" Combination, with Syphon Jet Bowl; Vitreous China Tank and White Pryalin Seat; Pressure Reducing Valve on Supply.
"Royal" Vitreous China Pedestal Lavatory, Complete.
"Royal" Enameled Iron Foot Bath, with Bell Supply.
30″ Opal Towel Bar for Bath.
24″ Opal Towel Bar for Lavatory.
18″ Opal Towel Bar for Foot Bath.
30″ Opal Shelf.
18″ x 30″ White Enameled Mirror.
Paper Holder.
Bath Soap and Sponge Holder.
Wall Soap Holder.
Shower Rod and Curtain.
White Enameled Medicine Chest.
Tooth Brush Holder.
Approximate Price, **$400.00**

McAVITY'S "ROYAL" BATH ROOMS

MODEL E

Plate 111 "Royal" Bath Room

"Royal" 5′ 3″ Roll Rim Bath, on Base, with Bell Supply, Complete, as shown.

"Royal Swan" Combination, with Syphon Jet Bowl; Vitreous China Tank and White Pryalin Seat, with Stop Valve on Supply.

"Royal" Enameled Lavatory, 22″ x 27″, with Bi-Transit Waste, Complete, as shown.

"Royal" Enameled Iron Foot Bath, with Bell Supply.

30″ Opal Towel Bar for Bath.

24″ Opal Towel Bar for Bath.

Tumbler Holder.

Tooth Brush Holder.

Bath Soap and Sponge Holder.

Paper Holder.

16″ x 30″ White Enameled Mirror.

24″ Opal Shelf.

Approximate Price, **$300.00**

MODEL G

"Royal" 5′ 3″ Roll Rim Enameled Iron Bath, Complete, as shown.

"Royal Swan" Combination, with Syphon Action Bowl, White Pryalin Seat, and Stop on Supply.

"Royal" Vitreous China Lavatory, Complete.

"Royal" 18″ x 24″ White Enameled Mirror.

24″ x 5″ Opal Shelf.

30″ Opal Towel Bar.

3 Prong Nickel Plated Towel Rack.

Paper Holder.

Shower Hose and Spray, with Hook.

Tumbler Holder.

Bath Soap Holder.

Wall Soap Holder.

Tooth Brush Holder.

Hard Brush.

Nickel Plated Strop Hook.

Approximate Price, **$175.00**

Plate 112 "Royal" Bath Room

SOLID PORCELAIN BATHS

Plate 121 "Royal Arethusa"

McAvity's Solid Porcelain Corner Bath. Glazed all over; fitted with Nickel Plated. Top nozzle Supply and Waste Fittings as shown, with Solid China Handles on Compression Valves and Waste; Valves Tapped ¾″ I.P. Exposed parts Nickel Plated.

Dimensions;

Lengths as given over all	
Outside Width	30″
Inside Depth	19″
Height over all	21″

5′ 5′6″ 6′

Prices furnished on Application.

To Tile in Left Hand Corner as shown. Can be furnished for Right Hand if desired.

McAvity's Solid Porcelain Corner Bath on Base. Glazed all over; fitted with Bottom Bell Supply ; 2¼″ Waste Barrel with China Knob and 2″ O.D. Tail Piece; Fuller Valves with China Offset Handles and China Waste Knob Complete with ½″ I.P. Size Nickel Plated Supplies.

Dimensions:

Lengths as given over all	
Outside Width	30″
Inside Depth	19″
Height over all	21″

4′6″ 5′ 5′6″ 6′ 6′6″

Prices furnished on Application.

To Tile in Left Hand Corner as shown, can be furnished for Right Hand if desired.

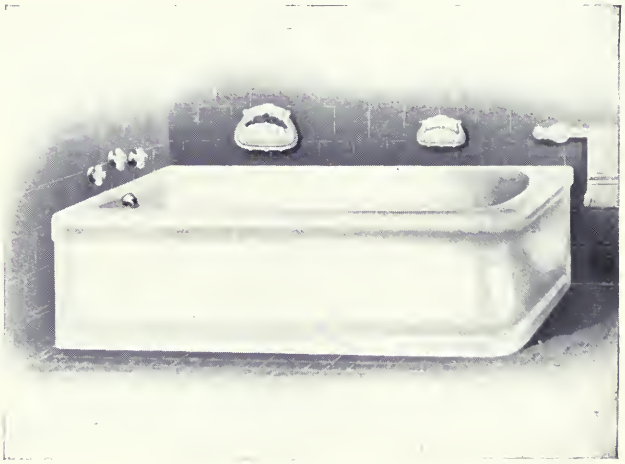


Plate 122 "Royal Argus"

Plate 123 "Royal Ariadne"

McAvity's Solid Porcelain Oval Bath. Glazed inside over Roll Rim and along Base; White Enamel Finish on outside; fitted with Stationary Gooseneck Supply with Shampoo Coupling 2¼″ Waste Barrel and 2″ O.D. Tail Piece, with China Waste Knob and Solid China Handles on Compression Valves; ½″ I.P. Size Nickel Plated Supply Pipes.

Dimensions;

Outside Width on 5½ Ft. Bath	34″
" " " 6 " "	36″
Height over all Floor to Top	21″
Inside Depth.....	19″

5′6″ 6′

Prices furnished on Application.

SOLID PORCELAIN BATHS

McAvity's Solid Porcelain Bath. Glazed inside over Roll Rim and along Base; White Enamel Finish on the Outside; fitted with Nickel Plated Top Bell Supply, 2¼″ Waste Barrel and 2″ O.D. Tail Piece; Solid China Handles on Compression Valves; China Knob on Waste; Complete with ½″ I.P. Size Nickel Plated Supply Pipes.

Dimensions: Lengths as given:

Outside Width.....30″
Inside Depth.....17″
Height over all.....21″
4′6″ 4′10″ 5′4″

Prices furnished on Application.

Plate 131 "Royal Apollo"

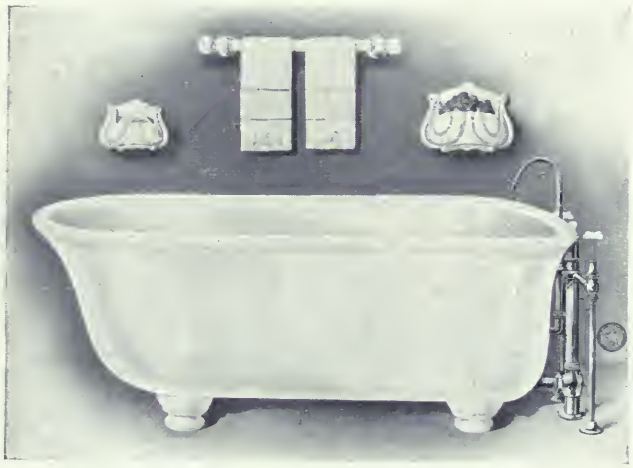


Plate 132 "Royal Aquitania"

McAvity's Solid Porcelain, Special Light Pattern Bath, set on four Glazed Porcelain Feet. Glazed Inside and over Rim; White Enamel Finish on Outside; fitted with Bottom Bell Swinging Gooseneck Supply with Shampoo Coupling over rim; 2¼″ Waste Barrel and 1½″ O.D. Tail Piece; China Waste Knob; Solid China Handles on Compression Valves; Complete with ½″ I.P. Size Nickel Plated Supply Pipes.

Dimensions — Outside Lengths as given:

Outside Width.....30″
Inside Depth.....18″
Outside Height.....24½″
4′6″ 4′10″ 5′4″

Prices furnished on Application

McAvity's Solid Porcelain Bath to Tile in Back and in Floor. Glazed Inside, over Roll Rim and along Base; White Enamel Finish Outside; fitted with Nickel Plated Bottom Bell Supply, 2¼″ Waste Barrel and 2″ O.D. Tail Piece; Fuller Valves; China Offset Handles; China Knob on Waste; Complete with ½″ I.P. Size Nickel Plated Supply Pipes.

Dimensions—Length over all as given:

Outside Width.....30″
Inside Depth.....19″
Height over all.....21″
5′0″ 5′6″

Prices furnished on Application.

Can be furnished for Left Waste as shown or Right if desired.

See Chart on Page 7.

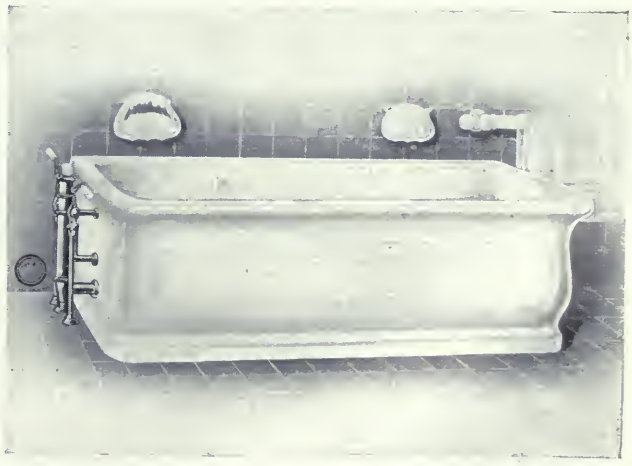


Plate 133 "Royal Arcady"

ENAMELED IRON BATHS

Plate 141 "Royal Cascapedia"

McAvity's Porcelain Enameled Cast Iron Recess Baths, with Centre Outlet, and 4" Roll Rim; fitted with Royal "Utopia" Bottom Bell Supply and Waste Combination, concealed in Wall; ¾" I.P. Size Brass Supplies; Compression Valves with Indexed China Cross Handles, and Indexed China Cross Handle Waste, with China Escutcheons.

Depth Inside.....17"

Height to Top of Rim from Floor.....17½"

Nominal Sizes	4½'	5'	5½'	6'
Bath Complete as Described.....	**$171.50**	**$171.50**	**$183.00**	**$193.50**
" only, less Fittings.....	**123.25**	**123.25**	**134.75**	**145.25**
Length over all of Bath.....Inches	57"	65"	69"	75"
" " " " between finished Wall Lines... "	55½"	61½"	67½"	73½"
Width " " " ..... "	33"	33"	33"	33"
" " " " from finished Wall Lines..... "	32¼"	32¼"	32¼"	32¼"
Approximate Weight (Boxed) less Fittings.....Lbs.	500	550	600	650

This Bath is cast in one piece, with straight inside Walls, has Wide Flat Bottom, Heavy Roll Rim, and Enameled all over, giving a massive appearance, is designed for setting in Tiled Walls, at back and both ends —When ordering please state clearly if fitting is wanted for Right or Left Hand or Centre—see Chart on Page 7.

McAvity's Porcelain Enameled Cast Iron Recess Bath, with Right Hand Outlet and 4" Roll Rim; fitted with Royal "Utopia" Bottom Bell Supply and Waste Combination; ¾" I.P. Size Brass Supplies concealed in Wall; Compression Valves, with Indexed China Cross Handles, and Indexed China Cross Handle Waste with China Escutcheons.

Depth Inside.....17"

Height to top of Rim from Floor.....17½"

Plate 142 "Royal Metapedia"

Nominal Sizes	4½'	5'	5½'	6'
Bath Complete as Described.....	**$156.00**	**$156.00**	**$166.50**	**$176.00**
" only, less Fittings.....	**112.00**	**112.00**	**122.50**	**132.00**
Length over all of Bath.....Inches	52¾"	58¾"	64¾"	70¾"
" " " " between finished Wall Lines.... "	51¼"	57¼"	63¼"	69¼"
Width " " " ..... "	30"	30"	30"	30"
" " " " from finished Wall Lines..... "	29¼"	29¼"	29¼"	29¼"
Approximate weight (Boxed) less Fittings.....Lbs.	430	470	510	580

This Bath is cast in one piece, with inside Walls Sloping to Round Bottom, with Wide Roll Rim and Enameled all over, is similar to **Plate 101**, but of less massive appearance, is also designed for setting in Tiled Walls at Back and Both Ends, and can be furnished with Fittings for Centre or Right or Left Hand.

ENAMELED IRON BATHS

McAvity's Porcelain Enameled Cast Iron Bath, for Tiling in Left Hand Corner, Cast in one piece, with 3″ Roll Rim and Painted one Coat White on Outside; fitted with Royal "Bristol" Top Bell Supply and Waste Combination; ¾″ I.P. Size Supplies, with Indexed four Arm Handles on Compression Valves and Indexed Knob on Waste.

Depth inside.....17″
Height to Top of Rim.....17½″

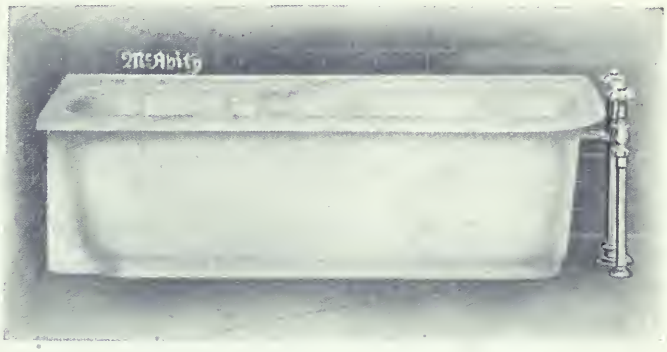


Plate 151 "Royal Tecumseh"

This bath is cast in one piece, of light construction. Regularly furnished, painted one coat White on Outside. Can also be furnished Enameled if desired. When ordering please state clearly if wanted for Right or Left Hand. See Chart on Page 7.

Nominal Sizes	4½′	5′	5½′	6′
Bath Complete as Described.....	....	$127.25	$137.75	.....
" only, less Fittings.....	.....	85.25	95.75	.....
Length over all of Bath.....Inches	54½″	60½″	66½″	72½″
" " " " from finished Wall Lines..... "	54″	60″	66″	72″
Width " " " ..... "	29″	29″	29″	29″
" " " " from finished Wall Lines..... "	28½″	28½″	28½″	28½″
Approximate Weight (Crated) less Fittings.....Lbs.	.....	460	490	.....

Plate 152 "Royal Transcona"

McAvity's Porcelain Enameled Cast Iron Recess Bath, with 3″ Roll Rim; fitted with "Royal Utopia" Bottom Bell Supply and Waste Combination; ¾″ I.P. Size Supplies concealed in Wall; Compression Valves with Indexed China Cross Handles, and Indexed China Cross Handle Waste with China Escutcheons.

Depth inside.....17″

Height to top of Rim to Floor..17½″

Nominal Sizes	4½″	5′	5½′	6′
Bath Complete as Described.....	.....	$129.50	$140.00	
" only, less Fittings.....	.....	85.25	95.75	.....
Length over all of Bath.....Inches	53½″	59½″	65½″	.....
" " " " between finished Wall Lines.... "	52½″	58½″	64½″	.....
Width " " " ..... "	29″	29″	29″	.....
" " " " from finished Wall Lines..... "	28½″	28½″	28½″	.....
Approximate weight (Crated) less Fittings.....Lbs.	450	460	490	

This Bath is cast in one piece and regularly furnished painted one coat White on Outside, is designed for setting in Tiled Wall at Back and Both Ends. When ordering please state clearly if fitting is wanted for Right or Left Hand. See Chart on Page 7.

ENAMELED IRON BATHS

Plate 161 "Royal Caledonia"

McAvity's Procelain Enameled Cast Iron Bath, for Tiling in Right Hand Corner, Cast in one piece and enameled all over, with 3¾" Roll Rim, Left Hand Outlet; fitted with "Royal Bristol" Top Bell Supply and Waste Combination; ¾" I. P. Size Brass Supplies; Compression Valves with Indexed China Cross Handles, and China Knob on Waste.

Depth Inside.....17"

Height to Top of Rim from Floor.....17½"

Nominal Sizes		4½'	5'	5½'
Bath Complete as Described		**$162.75**	**$162.75**	**$173.50**
" only, less Fittings		**118.75**	**118.75**	**129.50**
Length over all of Bath	Inches	54"	60"	66"
" " " " from finished Wall Lines	"	53¼"	59¼"	65¼"
Width " " "	"	30"	30"	30"
" " " " from finished Wall Lines	"	29¼"	29¼"	29¼"
Approximate weight (Boxed) less Fittings	Lbs.	510	530	560

This Bath is cast in one piece with Inside Walls Sloping to Round Bottom, with Wide Roll Rim, and Enameled all over, can also be furnished with Bottom Bell Supply or Concealed Fixtures as on **Plate 162.** When ordering please state clearly for which corner the Bath is required. See Chart on Page 7.

McAvity's Porcelain Enameled Cast Iron Bath, for Tiling in Left Hand Corner. Cast in one piece and Enameled all over, with 4" Roll Rim and Left Hand Outlet ; fitted with Royal " Utopia " Bottom Bell Supply and Waste Combination; ¾" I.P. Size Brass Supplies Concealed in Wall; Compression Valves with Indexed China Cross Handles, and Indexed China Cross Handle Waste, with China Escutcheons.

Depth Inside.....17"

Height to top of Rim from Floor.....17½"

Plate 162 "Royal Iroquois"

Nominal Sizes		4½"	5'	5½'
Bath Complete as Described		**$175.50**	**$180.00**	**$190.50**
" Bath only, less Fittings		**130.00**	**135.00**	**142.50**
Length over all of Bath	Inches	57"	63"	69"
" " " " from finished Wall Lines	"	56¼"	62¼"	68¼"
Width " " "	"	33"	33"	33"
" " " " from finished Wall Lines	"	32¼"	32¼"	32¼"
Approximate Weight less Fittings	Lbs.	675	750	825

This Bath is Cast in one piece with Straight Wall Lines, has wide Flat Bottom, Heavy Roll Rim and Enameled all over, is similar to **Plate 161,** but of more massive appearance. Is designed for setting in tiled Wall at Back and End. When ordering please state clearly if wanted for Right or Left Hand Corner. See Chart on Page 7.

ENAMELED IRON BATHS

McAvity's Porcelain Enameled Cast Iron Bath. Cast in one piece and Enameled all over, with 4″ Roll Rim; fitted with "Royal Utopia" Bottom Bell Supply and Waste Combination; ¾″ I.P. Size Brass Supplies. Concealed in Wall; Compression Valves with Indexed China Cross Handles, and Indexed China Cross Handle Waste, with China Escutcheons.

Depth Inside.....17″

Height Outside.....17½″

Plate 171 "Royal Algonquin"

Nominal Sizes	4½″	5′	5½′	6′
Bath Complete as Described.....	$157.50	$169.50	$179.00	$193.50
" less Fittings.....	114.00	126.00	136.00	150.00
Length over all of Bath..... Inches	55½″	61½″	67½″	73½″
Width " " " ..... "	30″	30″	30″	30″
" " " " from finished Wall Line..... "	29¼″	29¼″	29¼″	29¼″
Approximate weight, (Boxed) less Fittings.. ..... Lbs.	570	570	620	.....

This Bath is cast in one piece, and designed for setting in Tiled Wall at Back only.

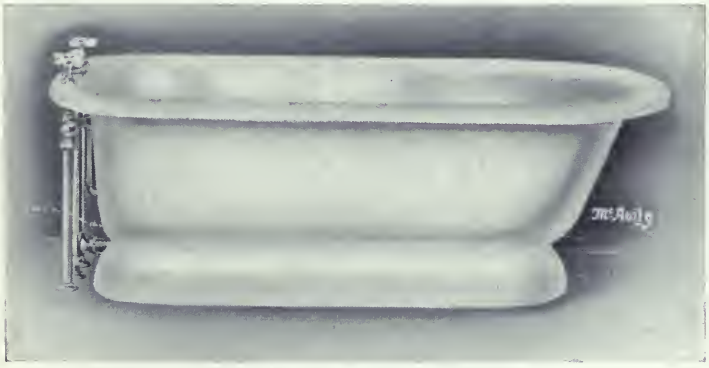


Plate 172 "Royal Pontiac"

McAvity's Porcelain Enameled Cast Iron Bath, on Base, with 4″ Roll Rim; fitted with Royal Bottom Bell Supply and Waste Combination; fitted through Rim; ¾″ I.P. Size Supplies, Compression Valves with Indexed China Cross Handles and China Knob on Waste.

Dimensions:

Width over Rim.....33″

Height to top of Rim.....22½″

Depth Inside at Outlet....17″

Bath furnished Drilled as ordered.

Nominal Sizes	5′	5½″	6′
Bath Complete as Described.....	$176.00	$183.00	$200.00
" only, Less Fittings.....	130.00	137.00	153.00
Length over Rim (Bath only).....	62½″	68¾″	74¾″
Approximate Weight, Boxed.....Lbs.	520	610	700

The above Bath can be Furnished with Lever Handle instead of China as shown.

ENAMELED IRON BATHS

Plate 181 "Royal Brunswick"

McAvity's Porcelain Enameled Iron Bath, with 4¾″ Roll Rim; fitted with Royal "Olympic" Bottom Bell Supply and Waste Fitting; ¾″ Supply Pipes, with unions at Floor; China Indexed Cross Handle Compression Valves, and China Knob on Waste; Nickel Plated 8″ Shower Head Combination, Shampoo with Rubber Hose and Sprinkler; China Indexed Cross Handle Controlling Valves; Ring and Duck Curtain.

Dimensions:

Width over Rim..... 34½″
Height to top of Rim... 24″
Depth Inside.....18½″

This bath as Illustrated and Described is furnished regularly with one coat white paint outside.

Nominal Sizes	5′	5½″	6′
Bath Complete as Described...	**$248.50**	**$258.25**	**$268.25**
Baths only, less Fittings.	**103.50**	**113.00**	**123.00**
Length over Rim (Bath only).....	63″	69″	75¼″
Approximate weight (Crated)Lbs,	440	490	535

McAvity's Porcelain Enameled Iron Bath, with 4″ Roll Rim; fitted with Special Bath and Shower Combination, with China Indexed Royal Bi-Transit Waste; Royal Fuller Design Bath Cock ¾″ Supply Pipes; China Indexed Controlling Valves; 8″ Needle Point Shower Head and Curtain Ring with Duck Curtain.

Dimensions:

Width over Rim.....33″
Height to Top of Rim.....22½″
Depth Inside at Outlet....17″

This Bath as Illustrated and described is furnished regularly with one coat white paint outside.

Nominal Sizes	5″	5½″	6″
Bath Complete as Described...	**$206.25**	**$211.50**	**$225.00**
Bath only, less Fittings.	**102.75**	**108.00**	**121.25**
Length over Rim (Bath only).....	62½″	68¾″	74¾″
Approximate Weight, (Crated) less Fittings.Lbs,	440	490	525

Plate 182 "Royal Acadia"

ENAMELED IRON BATHS

McAvity's Porcelain Enameled Cast Iron Bath, on Base, with 3″ Roll Rim and Extension on Fitting End for Waste; fitted with Royal Bottom Bell Supply and Waste Combination; ½″ I.P. Size Supplies; Compression Valves with six Ball China Indexed Handles and China Indexed Knob Waste.

Dimensions:
Width over Rim.....30″
" Inside.....24″
Depth Inside at Outlet.....17″
Height Outside.....22″

Plate 191 "Royal Lethbridge"

Nominal Sizes	4′	4½′	5′	5½′	6′
Bath Complete as Described.....	$130.00	$130.00	$130.00	$135.00	$142.00
" only, less Fittings.....	84.95	84.95	84.95	90.00	97.00
Length over rim (Bath only).....	.....	57½″	63½″	69½″	75½″
Approximate Weight, (Crated) less Fittings. .Lbs.	.....	440	495	560	630

McAvity's Porcelain Enameled Iron Bath, on Base, with 3″ Roll Rim; fitted with Royal "Olympic" Bottom Bell Supply and Waste Combination; ½″ I.P. Size Supplies Concealed in Wall; Compression Valves, with Indexed China Cross Handles and Indexed China Knob on Waste.

Dimensions:
Width Over Rim.....30″
Height to Top of Rim..22″
Depth Inside at Outlet.17″

Plate 192 "Royal Frontenac"

Nominal Sizes	4′	4½′	5′	5½′	6′
Bath Complete as Described.....Inches	$108.50	$108.50	$115.00	$122.75	$132.00
" only, less Fittings..... "	76.50	76.50	82.95	90.75	100.25
Length over Rim (Bath only)..... "	48″	54″	60″	66″	72″
Approximate Weight, (Crated) less Fittings.....Lbs.	.....	300	325	375	

McAvity's Porcelain Enameled Cast Iron Bath, on Base with 3″ Roll Rim; fitted with Royal Standing Waste; "Royal Presto" Quick Opening Bath Faucets, and Royal Nickel Plated ⅝″ O.D. Supplies.

Dimensions:
Width over Rim.....30″
" Inside.....24″
Depth.....17″
Height Outside.....22″
Overflow Hole.....2½″
Cock Hole.....1¼″
C to C.....3⅜″

Plate 193 "Royal Hurona"

Nominal Sizes	4′	4½′	5′	5½′	6′
Bath Complete as Described.....Inches	$81.15	$82.05	$82.95	$89.25	$105.00
" " " only, less Fittings..... "	57.15	58.05	58.95	65.25	81.00
Approximate Weight, (Crated) less Fittings.....Lbs.	275	300	325	375	460

The above Baths are of Wide Bottom Design and painted one coat of white paint outside.
For fittings see pages 136 - 140.

ENAMELED IRON BATHS

Plate 201 "Royal Sydney

McAvity's Porcelain Enameled Cast Iron Bath, on Base, with 3″ Roll Rim; fitted with Royal " OK " Compression Faucets; Nickel Plated, ⅝″ O.D. " Royal " Bent Supplies, and World Combined Waste and Overflow.

Dimensions:

Width Over Rim....30″
" Inside.....24″
Depth " .....17″
Height Outside.....22″
Overflow Hole.....2½″
Cock Hole.....1¼″
C to C.....3⅜″

Nominal Sizes	4′	4½′	5′	5½′	6′
Bath Complete as Described.....Inches	**$73.20**	**$74.10**	**$75.00**	**$81.30**	**$97.05**
" only, less Fittings..... "	**57.15**	**58.05**	**58.95**	**65.25**	**81.00**
Approximate Weight, (Crated) less Fittings.....Lbs.	275	300	325	375	460

McAvity's Porcelain Enameled Cast Iron Bath with 3″ Roll Rim, Wide Flat Bottom Design; fitted with "Royal" World Compression Bath Faucets; ⅝″ O.D. "Royal" Nickel Plated Bent Supplies and "World" Combined Waste and Overflow.

Dimensions:

Width over Rim 30″
" Inside 24″
Depth Inside 17″
Height to top of Rim 22½″

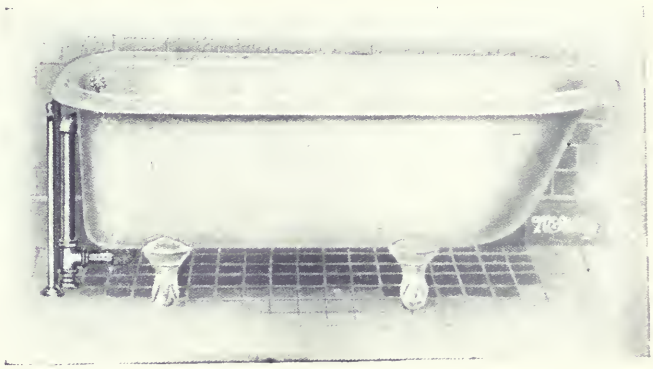


Plate 202 "Royal Moncton"

Nominal Length	4′	4½′	5′	5½′	6′
Bath Complete as Described.....	**$60.25**	**$60.25**	**$60.25**	**$65.65**	**$80.10**
" only, less Fittings.....	**48.15**	**48.15**	**48.15**	**53.55**	**68.00**
Approximate Weight, (Crated) less Fittings....	285	400	425	480	525

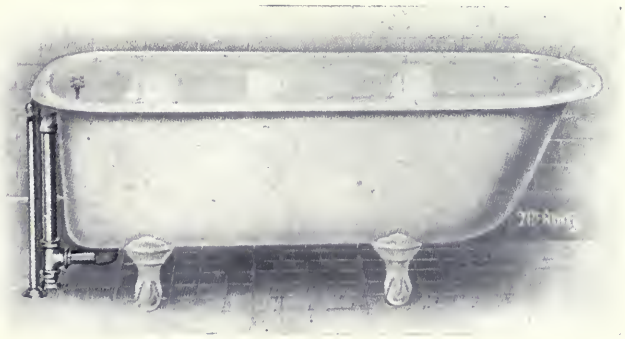


Plate 203 "Royal Charlotte"

McAvity's Porcelain Enameled Cast Iron Bath with 2½″ Roll Rim, Wide Flat Bottom Design; fitted with "Royal Presto" Quick Opening Bath Faucets; ⅝″ O.D. "Royal" Nickel Plated Bent Supplies and "World" Combined Waste and Overflow.

Dimensions:

Width over Rim 29″
" Inside 24″
Depth " 17″
Height to top of Rim 22½″

Nominal Length	4′	4½′	5′	5½′	6′
Bath Complete as Described.....	**$60.25**	**$60.25**	**$60.25**	**$65.65**	**$80.10**
" only, less Fittings.....	**48.15**	**48.15**	**48.15**	**53.55**	**68.00**
Approximate Weight, (Crated) less Fittings.....	275	300	325	350	400

The above Baths are of Wide Flat Bottom Design and painted one coat white paint outside.
For fittings see pages 136 - 140.

ENAMELED IRONS BATH

McAvity's Porcelain Enameled Cast Iron Bath, with 3″ Roll Rim; fitted with "Royal World" Compression Bath Faucets; ⅝″ O.D. Royal Nickel Plate Bent Supplies and World Combined Waste and Overflow.

Dimensions:

Width Over Rim.....29½″
" Inside.....23″
Depth " .....17″
Height to Top of Rim..22½″

Plate 211 "Royal Sussex"

Nominal Length	4′	4¼′	5′	5½′	6′
Bath Complete as Described.....	$60.25	$60.25	$60.25	$65.65	$80.10
" less Fittings.....	48.15	48.15	48.15	53.55	68.00
Approximate Weight, (Crated) less Fittings.....	285	300	350	375	425

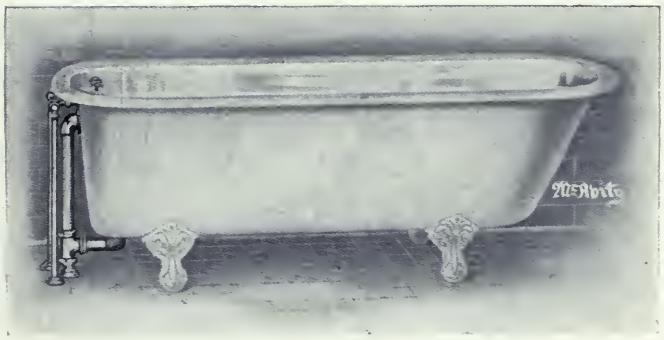


Plate 212 "Royal Annapolis"

McAvity's Porcelain Enameled Iron Bath, with 2½″ Roll Rim; fitted with Royal "OK" Compression Faucets; ⅝″ O.D. Nickel Plated "Royal" Bent Supplies and "World" Combined Waste and Overflow.

Dimensions:

Width Over Rim.....28″
" Inside.....22½″
Depth " .....17″
Height to Top of Rim...22½″

Nominal Length	4′	4½′	5′	5½′	6′
Bath Complete as Described.....	$60.25	$60.25	$60.25	$65.65	$80.10
" less Fittings.....	48.15	48.15	48.15	53.55	68.00
Approximate Weight, (Crated) less Fittings.....	275	300	325	350	410

McAvity's Porcelain Enameled Cast Iron Bath, with 1¾″ Roll Rim; fitted with Royal "OK" Compression Faucets; ⅝″ O.D. Nickel Plated "Royal" Bent Supplies and World Combined Waste and Overflow.

Dimensions:

Width Over Rim.....24½″
" Inside.....21″
Depth Inside.....17¼″
Height to Top of Rim...22″

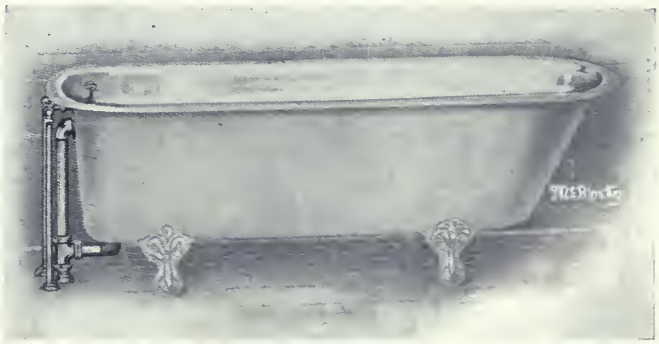


Plate 213 "Royal Newfoundland"

Nominal Length	4′	4½′	5′	5½′	6′
Bath Complete as Described.....	$68.25	$60.25	$60.25	$65.65	$80.10
" less Fittings.....	48.15	48.15	48.15	58.55	68.00
Approximate Weight, (Crated) less Fittings.....	250	290	315	340	375

Bath furnished regularly with 2½″ Overflow Hole, 1¼″ Cock Hole and 3⅜″ Centre to Centre and painted one coat outside. The above Baths are of Round Bottom Design.

For fittings see pages 136 - 140.

SOLID PORCELAIN FOOT AND SITZ BATHS

Plate 221 "Royal Europa"

McAvity's Solid Porcelain All-Roll Rim Foot Bath, on Base, Glazed Pure White Inside and Outside, Waste in centre through back: fitted with Top Bell Supply, with 2¼″ Waste Barrel and 2″ O.D. Tail Piece; Solid China Handles on Compression Valves; China Waste Knob; Complete with ½″ I.P. Size Nickel Plated Supply Pipes.

Dimensions:

Outside Length.....25″
" Width.....21″
Height over all.....14″

Prices Furnished on Application.

McAvity's Solid Porcelain All-Roll Rim Foot Bath, on Four Feet; Glazed Inside and Outside, Waste in centre of Bottom; fitted with Nickel Plated Top Bell Supply, with 2¼″ Waste Barrel and 1½″ O.D. Tail Piece; Solid China Handles on Compression Valves, and China Waste Knob; Complete with ½″ I.P. Size Nickel Plated Supply Pipes.

Dimensions:

Outside Length.....25″
" Width.....21″
Height over all.....17½″

Prices Furnished on Application.

Plate 222 "Royal Grampian"

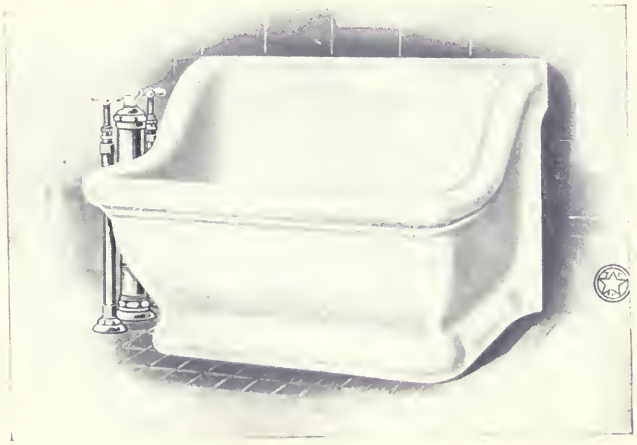


Plate 223 "Royal Olympus"

For fittings see pages 136 - 140.

McAvity's Solid Porcelain Seat Bath, on Base, to Tile in Wall: fitted with Nickel Plated Top Bell Supply, with 2¼″ Waste Barrel and 1½″ O.D. Tail Piece; Solid China Handles on Compression Valves and China Waste Knob; Complete with ½″ I.P. Size Nickel Plated Supply Pipes; Outlet is through bottom at centre. Supplies can be furnished on Right or Left as shown.

Dimensions:

Length Outside.....30″
Front to Back Outside.....27″
Floor to Top of Back.....21″
Height at Front.....15″

Prices Furnished on Application.

O. S.

ENAMELED IRON FOOT AND SITZ BATHS

McAvity's Porcelain Enameled Iron Foot Bath, on Ball Feet; fitted with "Royal" Bottom Bell Supply and Waste Fittings; ½" I.P. Size Supply Pipes; Fuller Design Valves; China Lever Handles, Indexed, and China Knob on Waste. Regularly Furnished Painted one Coat White, on Outside.

Dimensions:

	No. 1	No. 2
Width Over Rim	19½"	23"
Width of "	2¼"	2½"
Length over Rim	22¼"	25"
Height to Top of Rim	15½"	18"
Depth Inside at Outlet	10¾"	13½"
Bath Complete as Described	**$72.50**	**$76.00**
" only, less Fittings	**38.50**	**42.00**
Approximate Weight, less Fittings (Crated)	150 lbs.	175 lbs.

Plate 231 "Royal Cranbrook"

McAvity's Porcelain Enameled Iron Foot Bath, on Base, with Extension Rim for Fittings; fitted with "Royal" Bell Supply and Waste Combination of Compression Design; ½" I.P. Supply Pipes; China Indexed Six-Ball Handle Compression Valves, and China Indexed Waste Knob.
Regularly Furnished painted one coat White on Outside.

Plate 232 "Royal Digby"

Dimensions:

Width over Rim	23⅝"
" of "	2⅞"
Length over "	25⅜"
Height to Top of Rim	15¼"
Depth Inside at Outlet	10¾"
Width of Extension	4⅝"
Bath Complete as Described	**$80.50**
" only, less Fittings	**53.50**
Approximate Weight, less Fittings (Crated)	200 lbs.

McAvity's Porcelain Enameled Iron Sitz Bath, on Base, with extensions on Right and Left Hand Side for Fittings; fitted with "Royal" Bell Supply and Waste Fitting Combination of Compression Design; ½" I.P. Size Supply Pipes; China Indexed Cross Handle Compression Valves, and China Indexed Waste Knob. Regularly Furnished painted one coat White on Outside. Fittings can be furnished for Right Hand Side if ordered.

Dimensions:

Front to Back over Rim	31½"
Width over Rim	34"
" of Extensions	5"
" " Rim	3"
Height to Top of Rim at Back	23"
" " " " " " Front	15"
Depth Inside at Outlet	10"
Bath Complete as Described	**$151.00**
" only, less Fittings	**103.00**
Approximate Weight, (Crated) less Fittings	250 lbs.

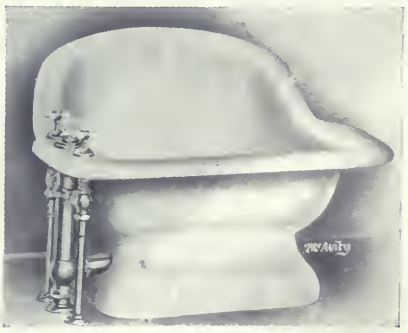


Plate 233 "Royal Laurentian"

For fittings see pages 136 - 140.

SOLID VITREOUS CHINA LAVATORIES

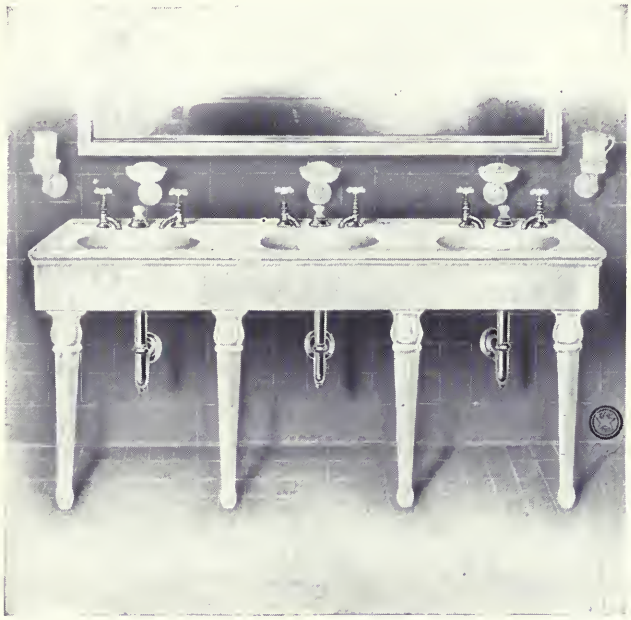


Plate 241 "Royal Evangeline"

McAvity's Solid Vitreous China Triple Bowl, Square Pattern All Roll Rim Lavatory, supported on Four Vitreous Pedestal Legs; fitted with "Royal Swan" Compression Faucets; Royal Bi-Transit Wastes; "Royal Angle" Stop Supply Pipes and 1¼″ Royal Nickel Plated "P" Traps, Less Vent.

Dimensions:

Length over all.....72″

Front to Back.....22″

Apron..... 8″

Bowls.....13 x 17 x 6½″

Prices Furnished on Application.

McAvity's Solid Vitreous China Lavatory, with All Roll Rim set upon Vitreous Pedestal Legs; fitted with Fuller Design Supply and Waste Combination; "Royal Angle" Stop Supplies and Royal 1¼″ Nickel Plated Trap to Wall.

Dimensions:

Lavatory...	26 x 22	30 x 22
Bowl..	13 x 17 x 6½″	13 x 17 x 6½″

Prices on Application.

Plate 242 "Royal Helena"

For fittings see pages 140 - 152.

O. S.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China Oval Design All-Roll Rim Pedestal Lavatory. Oval Bowl, with Integral China Spout and Mixing Chamber with Anti-Splash Rim, supported on Fluted Round Pedestal; fitted with "Royal" China Cross Handle Compression and China Cross Handle Pop-up Waste Combination, with China Escutcheons; "Royal Anglo" Supplies, with Indexed Stop Valves and 1¼" Royal Nickel Plated Trap to Wall.

Dimensions:

Height	30"
Lavatory	33 x 24"
Bowl	14 x 20 x 6¼"
Apron	4"

Plate 251 "Royal Kenora"

Note.—This Lavatory, embodying the Integral Spout and Mixing Chamber is sold only with Fittings Complete. Prices will be furnished on Application.

Plate 252 "Royal Elmira"

McAvity's Solid Vitreous China Square Design All-Roll Rim Pedestal Lavatory. Oval Bowl, with Integral China Spout and Mixing Chamber, with Anti-Splash Rim, supported on Fluted Square Pedestal; fitted with Royal China Lever Handle, Quick Opening Compression and China Cross Handle Pop-up Waste Combination; "Royal Anglo" Supplies, with Indexed Stop Valves and 1¼" Royal Nickel Plated Trap to Wall.

Dimensions:

Height	30"
Lavatory	30 x 24"
Bowl	14 x 20 x 6½"
Apron	4"

Note.—This Lavatory, embodying the Integral Spout and Mixing Chamber is sold only with Fittings Complete. Price will be furnished on Application.

For fittings see pages 140 - 152.

O. S.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China Serpentine Design All-Roll Rim Lavatory. Oval Bowl, with Integral Spout and Mixing Chamber, with Anti-Splash Rim, supported on plain Square Pedestal; fitted with "Royal" China Lever Handle Quick-Opening Compression and China Cross Handle Pop-up Waste Combination; "Royal Angle" Supplies, with Indexed Stop Valves and 1¼" Royal Nickel Plated Trap to Wall.

Dimensions:

	No. 1	No. 2
Height.....	30"	30"
Lavatory...	30 x 24"	33 x 24"
Bowl.....	14 x 20 x 6½"	14 x 20 x 6½"

Plate 261 "Royal Amphion"

Note.—This Lavatory, embodying the Integral Spout and Mixing Chamber is sold only with Fittings Complete. Prices will be furnished on Application.

McAvity's Solid Vitreous China Square Design Pedestal Lavatory, with Back, Square Bowl, and Anti-Splash Rim, supported on Plain Square Pedestal; fitted with "Royal Presto" Quick Opening, China Lever Compression Faucets; "Royal Crescent" Pull-up Waste; "Royal Angle" Supplies, with Indexed Stop Valves and 1¼ Royal Nickel Plated Trap to Wall.

Dimensions:

Height.....	30"
Lavatory.....	28½ x 22"
Bowl.....	21 x 14"
Back.....	6"
Centre to Centre of Supplies	10"
" of Waste to Wall....	7¾"
" " Supplies to Wall.	3¾"

Plate 262 "Royal Adonis"

Lavatory Complete as Described.....	$57.00
" only, less Fittings.....	35.25
Approximate Weight, (Crated) less Fittings.....	65 lbs.

For fittings see pages 140 - 152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China Square Design Pedestal Lavatory, with Oval Bowl, Integral Back and Anti-Splash Rim; supported on Round Pedestal China Leg; fitted with "Royal Swan" all China Indexed Handle Compression Faucets; "Royal Atlas" Bi-Transit Waste, with Indexed China Knob, 1¼" Royal Nickel Plated Trap; "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

	No. 1	No. 2
Height.....	30″	..
Lavatory.....	20 x 18″	24 x 21″
Height of Back	7″	7″

Plate 271 "Royal Belvedere"

	20 x 18″	24 x 21″
Lavatory Complete as Described.....	$76.00	$80.00
" only.....	45.00	50.00
Approximate Weight, (Crated) less Fittings.....	75 lbs.	85 lbs.

McAvity's Solid Vitreous China, Square Design Pedestal Lavatory, with Oval Bowl, Anti-Splash Rim; supported on Round Pedestal China Leg; fitted with "Royal Swan" all China Indexed Handle Compression Faucets; 1¼" Royal Nickel Plated Trap, Waste Plug, Chain and Stopper; "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

Height.....	30″
Lavatory.....	24 x 22″
Bowl.....	13 x 17 x 6½″

Plate 272 "Royal Beatrice"

Lavatory Complete as Described.....	$70.00
" only.....	40.00
Approximate Weight, (Crated) less Fittings.....	65 lbs.

For fittings see pages 140 - 152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China Serpentine Design Pedestal Lavatory, with Oval Bowl, supported on Square Pedestal; fitted with Royal "B" China Indexed Compression Faucets; Royal Bi-Transit Waste with 1¼ Royal Nickel Plated Trap and ⅝" O.D. "Royal Anglo" Supplies, with China Indexed Stops.

Dimensions:

Height	30"
Lavatory	28 x 22"
Bowl	22 x 15"
Centre to Centre of Supplies	11"
" of Supplies to Wall	4¼"
" " Waste " "	10"

Plate 281 "Royal Empress"

Lavatory Complete as Described	**$65.00**
" only, less Fittings	**38.00**
Approximate Weight (Crated)	70 lbs.

McAvity's Solid Vitreous China Square Design Pedestal Lavatory, with Square Bowl, supported on Plain Square Pedestal; fitted with "Royal Presto" Quick Opening Faucets; Royal Bi-Transit Waste, with 1¼" Royal Nickel Plated Trap, and ⅝" O.D. "Royal Anglo" Supplies with China Indexed Stops.

Dimensions:

Height	30"
Lavatory	25 x 22"
Bowl	18 x 13"
Centre to Centre of Supplies	10"
" of Supplies to Wall	3¾"
" " Waste " "	7½"

Plate 282 "Royal Connaught"

Lavatory Complete as Described	**$60.00**
" only, less Fittings	**36.00**
Approximate Weight (Crated)	65 lbs.

The above Lavatories can also be furnished with Traps and Supplies to Floor.

For fittings see pages 140 - 152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China Oval Design Pedestal Lavatory, with Oval Bowl and Anti-Splash 4″ Roll Rim, supported on Fluted Round Pedestal; fitted with Royal "B" China Indexed Compression Faucets; "Royal Primer" Pull-up Waste, with 1¼″ Royal Nickel Plated Trap; ⅝″ O.D. "Royal Anglo" Supplies, with Indexed Stop Valves.

Dimensions:

Height	30″
Length	32″
Width	24″
Bowl	20 x 13½″

Roughing in Measurements:

Centre to Centre of Supplies	12″
" of Supplies to Wall	5″
" " Waste to Wall	9½″

Plate 291 "Royal Savoy"

Lavatory Complete as Described	$65.00
" only, less Fittings	38.00
Approximate Weight (Crated)	70 lbs

Plate 292 "Royal Cecil"

McAvity's Solid Vitreous China Oval Design Pedestal Lavatory, with Oval Bowl and Anti-Splash 4″ Roll Rim, supported on Plain Round Pedestal; fitted with Royal "OK" China Indexed Compression Faucets; Royal "Primer" Pull-up Waste, with Royal Nickel Plated Trap; ⅝″ O.D. "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

Height	30″
Length	30″
Width	22″
Bowl	21 x 14″

Roughing in Measurements:

Centre to Centre of Supplies	10¼″
" of Supplies to Wall	4¾″
" " Waste to Wall	9½″

Lavatory Complete as Described	$60.00
" only, less Fittings	36.00
Approximate Weight (Crated)	65 lbs.

The Above Lavatories can also be furnished with Traps and Supplies to Floor.
For fittings see pages 140 - 152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China, Square Design Pedestal Lavatory, with Back, Square Bowl and Anti-Splash Rim; supported on Round Pedestal Leg; fitted with China Indexed Lever Handle "Royal Presto" Quick Opening Compression Faucets; Indexed "Royal Crescent" Pull-up Waste, with 1¼" Royal Nickel Plated Trap, and ⅝" O.D. "Royal Angle" Supplies, with Indexed Stop Valves.

Dimensions:

Height	30"
Lavatory	24 x 20"
Bowl	18½ x 13"
Back	7"
Centre to Centre of Supplies	12"
" of Waste to Wall	8"
" " Cock Holes to Wall	3½"

Plate 301 "Royal Nymph"

Lavatory, Complete as Described	**$55.00**
" only, less Fittings	**33.00**
Approximate Weight	60 lbs.

McAvity's Solid Vitreous China, "D" Design Pedestal Lavatory, with Back, Round Bowl and Anti-Splash Rim, supported on Round Pedestal Leg; fitted with Four Arm China Indexed Royal "B" Compression Faucets; Indexed "Royal Crescent" Pull-up Waste, with 1¼" Royal Nickel Plated Trap and ⅝" O.D. "Royal Angle" Supplies.

Dimensions:

Height	30"
Lavatory	19 x 17"
Bowl	17"
Back	7"
Centre to Centre of Supplies	6½"
" of Waste to Wall	6½"
" "Cock Hole to Wall	3"

Plate 302 "Royal Vivien"

Lavatory Complete as Described	**$55.00**
" only, less Fittings	**33.00**
Approximate Weight (Crated)	60 lbs.

For fittings see pages 140 - 152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China, Oval Design Pedestal Lavatory, with Oval Bowl and Anti-Splash Rim, supported on Plain Square Pedestal; fitted with "Royal Swan" all China Indexed Handle Compression Faucets; Royal "Atlas" Bi-Transit Waste with China Indexed Knob; 1¼" Royal Nickel Plated Trap and ⅝" O.D. "Royal Anglo" Supplies, with Indexed Stop Valves.

Dimensions:

Height	30"
Lavatory	30" x 22"
Bowl	21" x 14"
Centre to Centre of Supplies	12"
" of Waste to Wall	13¼"
" " Supply to Wall	4½"
" " Waste to Pull-up	9⅛"

Plate 311 "Royal Minerva"

Lavatory Complete as Described	$57.00
" only, less Fittings	35.25
Approximate Weight, (Crated) Less Fittings	65 lbs.

Plate 312 "Royal Occidental"

McAvity's Solid Vitreous China Square Design Pedestal Lavatory, with Oval Bowl and Anti-Splash Rim, supported on Plain Square Pedestal fitted with "Royal Swan" all China Indexed Handle Compression Faucets; "Royal Atlas" Bi-Transit Waste with China Indexed Knob; 1¼" Royal Nickel Plated Trap; ⅝" O.D. "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

Height	30"
Lavatory	24½" x 20"
Bowl	17" x 13"
Centre to Centre of Supplies	12"
" of Waste to Wall	7"
" " Supply to Wall	5"
" " Waste to Centre of Pull-up	3½"

Lavatory Complete as Described	$55.00
" only, less Fittings	35.00
Approximate Weight, (Crated) less Fittings	60 lbs.

Note.—The above Lavatories are of the best English make and guaranteed to be non-crazing, and can, if desired, be furnished with Traps and Supplies to Floor.

For fittings see pages 140 - 152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China Serpentine Design Pedestal Lavatory, with Oval Bowl and Anti-Splash Rim, supported on Plain Square Pedestal; fitted with China Indexed Handle Royal "OK" Compression Faucets; "Royal Atlas" Bi-Transit Waste, with Indexed China Knob; 1¼" Royal Nickel Plated Trap, and ⅝" O.D. "Royal Anglo" Supplies, with Indexed Stop Valves.

Dimensions:

Height	30"
Lavatory	28" x 22"
Bowl	19" x 14"
Centre to Centre of Supplies	12"
" of Waste to Wall	7½"
" " Supplies to Wall	4½"
" " Waste to Pull-up	4⅛"

Plate 321 "Royal Medusa"

Lavatory Complete as Described	$57.00
" only, less Fittings	35.25
Approximate Weight, (Crated) less Fittings	65 lbs.

McAvity's Solid Vitreous China Square Design Pedestal Lavatory, with Oval Bowl and Anti-Splash Rim, supported on Plain Square Pedestal; fitted with Indexed Four-Arm Solid China "Royal Presto" Faucets, "Royal Atlas" Bi-Transit Waste, with Indexed China Knob, 1¼" Royal Nickel Plated Trap and ⅝" O.D. "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

Height	30"
Lavatory	26" x 22"
Bowl	17" x 14"
Centre to Centre of Supplies	12"
" of Waste to Wall	7"
" " Supplies to Wall	4¼"
" " Waste to Pull-up	4¼"

Plate 322 "Royal Clytie"

Lavatory Complete as Described	$57.00
" only, less Fittings	35.25
Approximate Weight, (Crated) Less Fittings	65 lbs.

The above Lavatories are of the best English make, and guaranteed to be non-crazing. and can, if desired, be furnished with Trap and Supplies to Floor.

For fittings see pages 140 - 152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China Square Design Pedestal Lavatory, with Back, Oval Bowl, and Anti-Splash Rim, supported on Plain Square Pedestal; fitted with China Lever "Royal Presto" Quick Opening Compression Faucets; "Royal Crescent" Pull-up Waste, with 1¼" Royal Nickel Plated "P" Trap; ⅝" O.D. "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

Height	30"
Lavatory	24½" x 20"
Bowl	17" x 12½"
Back	6"
Centre to Centre of Supplies	12"
" of Waste to Wall	7"
" " Supplies to Wall	4¾"

Plate 331 "Royal Laconia"

Lavatory Complete as Described	$55.00
" only, less Fittings	33.00
Approximate Weight, (Crated) less Fittings	60 lbs.

Plate 332 "Royal Carthage"

McAvity's Solid Vitreous China Square Design Pedestal Lavatory, Oval Bowl and Anti-Splash Rim, supported on Round Pedestal Leg; fitted with China Indexed Royal "B" Faucets; 1¼" Royal Nickel Plated "P" Trap Chain and Stopper; ⅝ O.D. "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

Height	30"
Lavatory	24½" x 20"
Bowl	17" x 12½"
Back	
Centre to Centre of Supplies	12"
" of Waste to Wall	4½"
" " Supplies to Wall	7"

Lavatory Complete as Described	$53.00
" only, less Fittings	30.00
Approximate Weight, (Crated) less Fittings	50 lbs.

The above Lavatories are of the best English make and guaranteed to be non-crazing, and can, if desired, be furnished with Traps and Supplies to Floor.

For fittings see pages 140–152.

SOLID VITREOUS CHINA LAVATORIES

Plate 341 "Royal Rose"

McAvity's Solid Vitreous China "D" Design Wall Lavatory, on Concealed Wall Hanger; fitted with China Indexed Four-Arm Handle, Royal "B" Faucets; "Royal Saxon" 1¼" Straight Waste, with Chain and Stopper, and Royal "OK" Supplies to Floor.

Dimensions:

Lavatory	21½" x 18"
Bowl	14" x 10½"
Height of Back	7"
Centre to Centre of Supplies	6¾"
" of Supplies to Wall	3"
" " Waste to Wall	6¾"
Lavatory Complete as Described	$26.00
" only, less Fittings	15.75
Approximate Weight, (Crated) less Fittings.	30 lbs.

McAvity's Solid Vitreous China Wall Lavatory Square Design, on concealed Cast Iron Wall Hanger; fitted with Indexed Four-Arm Solid China Handle, "Royal Swan" Compression Faucets: "Royal Saxon" 1¼" Straight Waste, with Chain and Stopper, and Royal "OK" Supplies to Floor.

Dimensions:

Lavatory	20" x 18"
Bowl	15" x 11"
Height of Back	7"
Centre to Centre of Supplies	10"
" of Supplies to Wall	4¼"
" " Waste to Wall	6¼"
Lavatory Complete as Described	$26.00
Lavatory only, less Fittings	15.75
Approximate Weight, (Crated) less Fittings	35 lbs.

Plate 342 "Royal Thistle"

McAvity's Solid Vitreous China "D" Design Corner Lavatory, on Concealed Brackets; fitted with China Indexed Four-Arm Handle Royal "OK" Faucets; "Royal Saxon" 1¼" Straight Waste, with Chain and Stopper, and Royal "OK" Supplies to Floor.

Dimensions:

Length of Side	17'
Bowl	14¼" x 11½"
Height of Back	6"
Centre to Centre of Supplies	6"
" of Supplies to Wall	3¼"
" " Waste to Wall	8"-7"
Lavatory Complete as Described	$26.00
" only, less Fittings	15.75

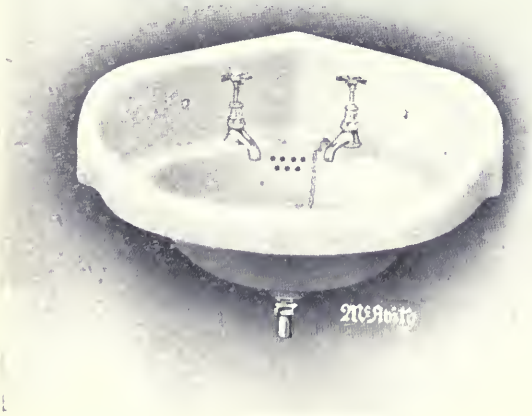


Plate 343 "Royal Shamrock"

Approximate Weight, (Crated) less Fittings..... 25 lbs.

The above Lavatories are of the best English make and guaranteed to be non-crazing. Can be furnished with Traps and Supplies to Wall if desired.

For fittings see pages 140–152.

SOLID VITREOUS CHINA LAVATORIES

McAvity's Solid Vitreous China "D" Design Wall Lavatory, on Concealed Cast Iron Wall-Hanger; fitted with China Indexed Four-Arm Handle Royal "OK" Compression Faucets; "Royal Saxon" 1¼" Straight Waste and Royal "OK" Supplies to Floor.

Dimensions:

Lavatory	19" x 17"
Bowl	15½" x 11"
Height of Back	6"
Depth of Apron	4"
Centre to Centre of Supplies	10"
" of Supplies to Wall	3"
" " Waste to Wall	7½"
Lavatory Complete as Described	**$26.00**
" only, less Fittings	**15.75**
Approximate Weight, (Crated) less Fittings	30 lbs.

Plate 351 "Royal Venus"

Plate 352 "Royal Montcalm"

McAvity's Solid Vitreous China "D" Design Wall Lavatory, on Concealed Cast Iron Wall Hanger; fitted with China Indexed Four-Arm Handle Royal "OK" Faucets; "Royal Saxon" 1¼" Straight Waste and Royal "OK" Supplies to Floor.

Dimensions:

Lavatory	21" x 19"
Bowl	14" x 10½"
Height of Back	8"
Centre to Centre of Supplies	9"
" of Supplies to Wall	3"
" " Waste to Wall	6¾"
Lavatory Complete as Described	**$26.00**
" only, less Fittings	**15.75**
Approximate Weight, (Crated) less Fittings	30 lbs.

McAvity's Solid Vitreous China Wall Lavatory, with China Head Screws to fasten to Wall; fitted with China Indexed Four-Arm Handle Royal "OK" Compression Faucets; "Royal Saxon" Straight Waste and Royal "OK" Supplies to Floor.

Dimensions:

Lavatory	21½" x 10½"
Bowl	12" x 8½"
Height of Back	2⅞"
Centre to Centre of Supplies	10"
" of Supply to Wall	1⅞"
" " Waste to Wall	5½"
Lavatory Complete as Described	**$26.00**
" only, less Fittings	**15.75**
Approximate Weight, less Fittings	26 lbs.

The above Lavatories are of the best English make and guaranteed to be non-crazing. Can be furnished with Traps and Supplies to Wall if desired.

For fittings see pages 140–152.

Plate 353 "Royal Chateau"

ENAMELED LAVATORIES

Plate 361 "Royal Ottawa"

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, Oval Bowl, with Rear Outlet and Apron in one piece, supported on Porcelain Enameled Fluted Column Pedestal; fitted with "Royal Avon" Indexed Fuller Design Combination Supply and Waste Fitting; ½" I.P. Size "Royal Anglo" Supplies and 1½" Nickel Plated "Royal" P. Trap.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
24"x33"	24"	33"	12½" x 17"	4⅜"

Nominal Size	24" x 33"
Complete as Described.....	**$116.00**
Lavatory only, less Fittings.....	**70.50**
Approximate Weight (Crated)...	300 lbs.

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, Oval Bowl with Centre Outlet and Apron, Cast in one piece, supported on Porcelain Enameled Fluted Pedestal; fitted with "Royal" Indexed, Fuller Design Faucets with China Base; ½" I.P. Size "Royal Anglo" Supplies, with Stop Valves, Royal Bi-Transit Waste and 1½" Nickel Plated "Royal" P. Trap.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
19"x28"	19¾"	27½"	10¼"x14½"	4⅜"
24"x33"	24"	33"	12⅛"x17"	4⅛"

Plate 362 "Royal Paris"

Nominal Sizes	19" x 28"	24" x 33"
Complete as Described.....	**$95.50**	**105.25**
Lavatory only, less Fittings.....	**59.60**	**70.35**
Approximate Weight (Crated).....	250 lbs.	300 lbs

The above Lavatories can also be furnished with "Royal Presto" or Royal "O.K." Faucets.
For fittings see pages 140-152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab and Heavy Square Rim, Square Bowl with Centre Outlet and Apron in One Piece, supported on Porcelain Enameled Square Pedestal and enameled all over; fitted with "Royal Swan" Solid China Handle Compression Faucets; "Royal" Bi-Transit Waste Fitting, with Indexed China Knob and 1½" "Royal" P. Trap; ½" I.P. Size "Royal Anglo" Supplies with Indexed Stops to Wall.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
25" x 35"	25¼"	35¼"	12" x 17"	4¾"

Nominal Size 25" x 35"

Lavatory Complete as Described..... **$140.00**
" only, less Fittings..... **107.00**
Approximate Weight,
(Crated) less Fittings..... 400 lbs.

Plate 371 "Royal London"

Plate 372 "Royal Glasgow"

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, Oval Bowl with Rear Outlet and Apron, in One Piece, supported on Square Pedestal and Enameled all over; fitted with "Royal Lorna" Compression Combination Supply and Waste Fitting, with China Index Handles on Faucets, and China Knob on Waste; ½" I.P. Size "Royal Anglo" Supplies with Indexed Stop Valves on Supplies and 1½" "Royal" P. Trap to Wall.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
24" x 33"	24¼"	33¼"	13¼" x 18½"	4½"

Nominal Size 24" x 33"

Lavatory Complete as Described..... **$107.50**
" only, less Fittings..... **70.35**
Approximate Weight, (Crated) less Fittings..... 260 lbs.

The above Lavatories can also be fitted Style "B", or "Royal O.K." Faucets.

For fittings see pages 140–152.

ENAMELED IRON LAVATORIES

Plate 381 "Royal Vimy"

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, D Shaped Bowl, with Rear Outlet and Apron in One Piece, supported on Porcelain Enameled Fluted Pedestal; fitted with " Royal " Fuller Design Faucets, with China Base and China Lever handles; ½" I.P. Size "Royal Anglo " Supplies, with China Indexed Stop Valves and "Royal" Bi-Transit Waste, with 1½" Bag Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 27"	19¾"	27¾"	11" x 15"	5"
22" x 33"	23"	33½"	13" x 18"	5¾"

Nominal Sizes	18" x 27"	22" x 23"
Lavatory Complete as Described	**$92.75**	**$103.50**
" only, less Fittings	**50.65**	**61.50**
Approximate Weight, (Crated) less Fittings ..... Lbs.	155	220

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, D Shaped Bowl, with Rear Outlet and Apron in One Piece, supported on Porcelain Enameled Fluted Pedestal; fitted with "Royal Avon " Fuller Design Combination Supply and Waste Fitting, with Indexed China Levers on Valves, and China Knob on Waste; ½" I.P. Size Supplies with Indexed Stop Valves, and 1½" Bag Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 27"	19¾"	27¾"	11" x 15"	4"
22" x 33"	23"	33½"	13" x 18"	5¾"

Nominal Sizes	18" x 27"	22" x 33"
Lavatory Complete as Described.	**$98.00**	**$109.00**
" only, less Fittings	**50.65**	**61.50**
Approximate Weight, (Crated) less Fittings. . Lbs.	155	220

Plate 382 "Royal Antwerp"

The above Lavatories can also be fitted with " Presto " or " OK " Faucets.

For fittings see pages 140–152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, Oval Bowl with Centre Outlet and Apron in One Piece, supported on Plain Square Enameled Pedestal; fitted with "Royal Swan" Compression Faucets, ½" I.P. Size "Royal Anglo" Supplies with Indexed Stop Valves; "Royal" Bi-Transit Waste with 1½" Royal P. Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20"	24¼"	11⅝"x 14¾"	4⅜"
22" x 27"	22¾"	27½"	12⅝"x 16⅝"	4⅝"
22" x 30"	22¾"	30¾"	13" x 18¾"	4⅝"

Plate 391 "Royal Manitoba"

Nominal Sizes	22" x 24"	22" x 27"	22" x 30"
Lavatory Complete as Described.....	**$74.00**	**$82.00**	**$87.00**
" only, less Fittings.....	**44.00**	**52.00**	**57.00**
Approximate Weight, (Crated) less Fittings.....Lbs.	**225**	**275**	**350**

Plate 392 "Royal York"

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with 3" Roll Rim, Round Bowl with Centre Outlet and Apron in One Piece, supported on Porcelain Enameled Plain Round Pedestal; fitted with "Royal Swan" Compression Faucets; "Royal" Bi-Transit Waste, With "Royal" 1½" P. Trap; ½" I.P. Size "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions:

Listed Size	Actual Diam.	Diam. Bowl	Depth of Apron
22"	22"	16"	5"

Nominal Size	22"
Lavatory Complete as Described....	**$85.00**
" only, less Fittings.....	**61.00**
Approximate Weight.....Lbs.	210

The above Lavatories can also be fitted with "Royal Presto" or "Royal OK" Faucets.

For fittings see pages 140–152.

ENAMELED IRON LAVATORIES

Plate 401 "Royal Quebec"

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Bowl with Rear Outlet, Back and Apron in One Piece, supported on two Enameled Pedestal Legs, and Concealed Wall Hangers; fitted with "Royal Chester" Combination Waste and Supply Fitting; 1½" I.P. Size "Royal Anglo" Supplies, with Indexed Stop Valves, and "Royal" Bag Trap to Wall.

Dimensions

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
24" x 33"	24"	33"	14½" x 19"	5"

Nominal Size	24" x 33"
Lavatory Complete as Described....	**$125.00**
" only, less Fittings.....	**75.75**
Height of Back.....	13½"
Approximate Weight, (Crated) less Fittings.....Lbs.	275

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Bowl with Centre Outlet in One Piece, supported on Porcelain Enameled Legs and Wall Supports, with under side Painted White; fitted with "Royal Chester" Compression Combination Supply and Waste Fitting; ½" I.P. Size Supplies with Indexed Stop Valves, and 1½" "Royal" Bag Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth Apron
20" x 24"	20"	24½"	12" x 15"	4¾"
20" x 26"	20"	26"	12" x 15"	4⅝"
22" x 27"	22½"	27½"	13" x 17"	4⅝"
22" x 30"	23"	30½"	13" x 19"	4½"

Plate 402 "Royal Montreal"

Nominal Sizes	20" x 24"	20" x 26"	22" x 27"	22" x 30"
Lavatory Complete as Described.....	**$90.00**	**$93.00**	**$99.00**	**$104.00**
" only, less Fittings.....	**41.00**	**44.00**	**50.00**	**55.00**
Approximate Weight, (Crated) less Fittings.Lbs.	160	165	200	205

The above Lavatories can also be fitted with "Royal Presto" or "Royal OK" Faucets.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, Oval Bowl with Centre Outlet and Apron in One Piece, supported on Porcelain Enameled Pedestal Leg, and Wall Supports; the under side of Bowl is painted White; fitted with "Royal Chester" Compression Combination Supply and Waste Fitting; ½" I.P. Size "Royal Anglo" Supplies with Indexed Stop Valves, and 1½" "Royal" P. Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20"	24½"	12" x 15"	4¾"
20" x 26"	20"	26"	12" x 15"	4⅝"
22" x 27"	22½"	27½"	13" x 17"	4⅝"
22" x 30"	23"	30½"	13" x 19"	4½"

Plate 411 "Royal Hamilton"

Nominal Sizes	20" x 24"	20" x 26"	22" x 27"	22" x 30"
Lavatory Complete as Described	**$85.95**	**$88.00**	**$94.00**	**$99.25**
" only, less Fittings	**39.50**	**41.50**	**47.50**	**52.80**
Approximate Weight, (Crated) less Fittings.Lbs.	135	145	175	185

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow and Apron in one Piece, supported on Enameled Pedestal Leg and Wall Supports, enameled all over; fitted with "Royal World" Compression Faucets; ½" I.P. Size "Royal Anglo" Supplies, with Indexed Stop Valves; 1½" Royal P. Trap to Wall with Chain and Stopper.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 27"	19¾"	27¾"	11" x 15"	4"

Plate 412 "Royal Saskatoon"

Nominal Size	18" x 27"
Lavatory Complete as Described	**$75.00**
" only, less Fittings	**47.50**
Approximate Weight, (Crated) less Fittings.....Lbs.	110

The above Lavatories can also be fitted with "Royal Presto" or "Royal OK" Faucets.

For fittings see pages 140–152.

ENAMELED IRON LAVATORIES

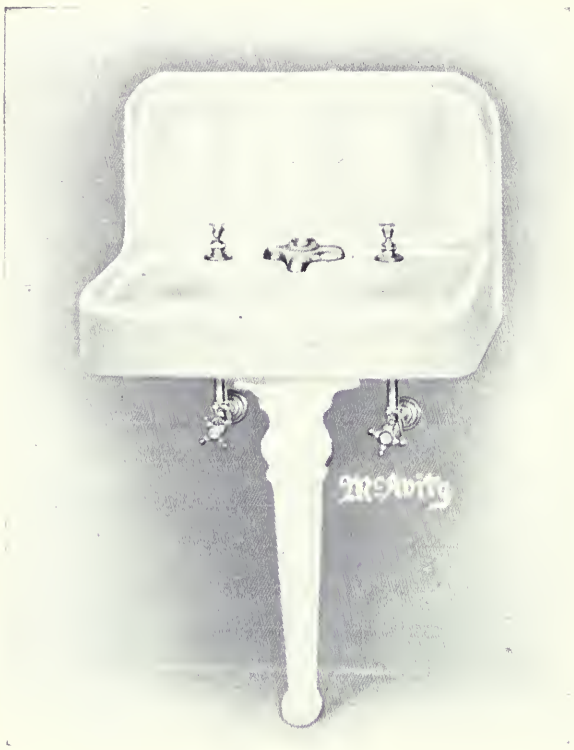


Plate 421 "Royal Alberta"

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Back and Apron in One Piece, supported on Enameled Pedestal Leg and Concealed Wall Hanger; fitted with "Royal World" Compression Faucets; ½" I.P. "Royal Angle" Size Supplies and "Royal" Bi-Transit Waste with 1½" "Royal" P. Trap to Wall.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 21"	18¼"	21"	10¼" x 14¼"	4¾"

Nominal Size	18" x 21"
Lavatory Complete as Described	**$48.50**
" only, less Fittings	**27.50**
Height of Back	8"
Approximate Weight, (Crated) less Fittings.Lbs.	135

The above Lavatories can also be fitted with "Royal Presto" or "Royal OK" Faucets.

For fittings see pages 140 - 152.

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Back and Apron in One Piece, supported on Porcelain Enameled Pedestal and Concealed Wall Hangers; fitted with "Royal Chester" Compression Combination Supply and Waste Fittings; ½" I.P. Size "Royal Anglo" Supplies with Indexed Stop Valves and "Royal" Bag Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20½"	24"	11½" x 16"	4⅞"
22" x 27"	22"	27"	12½" x 18"	5"

Nominal Sizes	20" x 24"	22" x 27"
Lavatory Complete as Described	**$86.00**	**$100.00**
" only, less Fittings	**38.00**	**52.00**
Height of Back	12"	12"
Approximate Weight, (Crated) less Fittings.....Lbs.	175	200

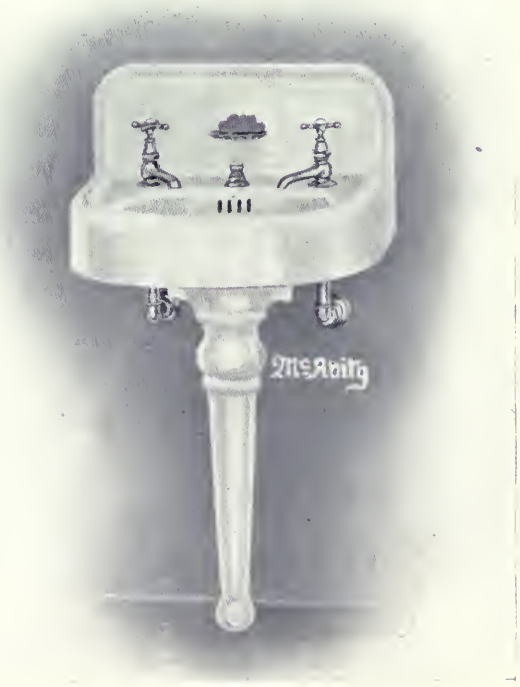


Plate 422 "Royal Keewatin"

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, with Slab, " D " Shaped Bowl with Rear Outlet, Back and Apron in One Piece, supported on Enameled Pedestal Leg and Concealed Wall Hangers; Nickel Plated Soap Holder; fitted with "Royal World" Faucets; "Royal" Bi-Transit Waste, with 1¼" "Royal" Trap to Wall, and ½" I.P. Supplies.

Dimensions:

Listed Size	Length on Side	Height of Back	Size of Bowl	Depth of Apron
19"	19"	8"	10½" x 15"	4¼"

Nominal Size	19"
Lavatory Complete as Described.....	**$57.00**
" only, less Fittings.....	**32.50**
Height of Back.....	8"
Approximate Weight, (Crated) less Fittings.Lbs.	145

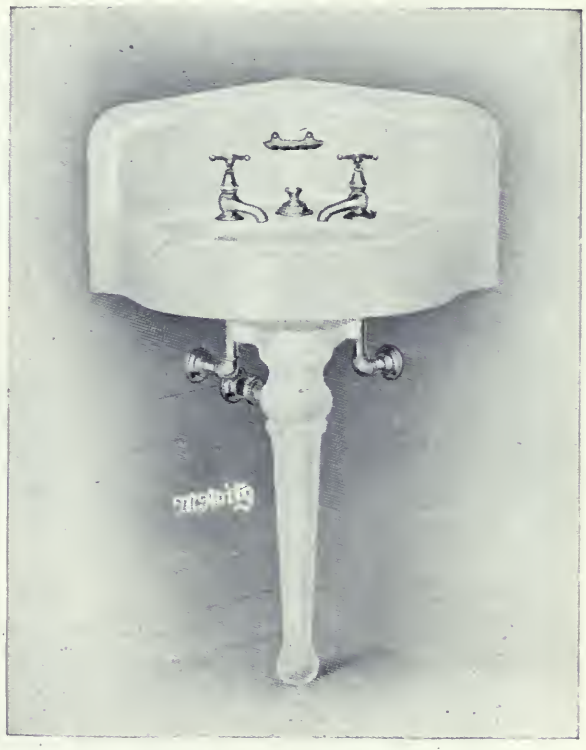


Plate 431 " Royal Ontario "

Plate 432 " Royal Saskatchewan "

McAvity's Porcelain Enameled Cast Iron Pedestal Lavatory, for Left Hand Corner, with Slab, Oval Bowl with Centre Outlet, Back, End and Apron in One Piece, supported on Enameled Pedestal Leg and Wall Supports; fitted with " Royal Chester " Compression Combination Supply and Waste Fittings; ½" I.P. Size "Royal Anglo" Supplies, with Indexed Stop Valves, and 1½" "Royal" P. Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20¼"	24¼"	12" x 15"	5"
22" x 27"	22"	27¼"	12" x 15"	5"

Nominal Sizes	20" x 24"	22" x 27"
Lavatory Complete as Described..	$85.00	**$111.00**
" only, less Fittings.....	**40.00**	**66.00**
Height of Back.....	12"	12"
Approximate Weight, (Crated) less Fittings..... Lbs.	205	245

For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Lavatory with Slab, "Kidney" Design Bowl with Rear Outlet, Back and Apron in One Piece; fitted with "Royal Neva" Fuller Design Combination Supply and Waste Fitting, with 1½" "Royal" Bag Trap to Wall; ½" I.P. Size "Royal Anglo" Supplies, with Indexed Stop Valves.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20½"	24½"	10¾" x 19"	5"
22" x 27"	22½"	27½"	10¾" x 19"	5"

Plate 441 "Royal Kitchener"

Nominal Sizes	20" x 24"	22" x 27"
Lavatory Complete as Described	**$84.00**	**$93.00**
" only, less Fittings	**36.00**	**45.00**
Height of Back	12½"	12½"
Approximate Weight, (Crated) less Fittings ... Lbs	145	170

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "Kidney" Design Bowl with Rear Outlet, Back and Apron in One Piece, supported on Concealed Wall Hangers; fitted with "Royal World" Compression Faucets; 1½" "Royal" Bag Trap, Plug and Stopper; ½" I.P. Size " Royal Anglo " Supplies with Indexed Stop Valves.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20½"	24½"	10¾" x 19"	5"
22" x 27"	22½"	27½"	10¾" x 19"	5"

Plate 442 "Royal Sherbrooke"

Nominal Sizes	20" x 24"	22" x 27"
Lavatory Complete as Described	**$59.25**	**$68.25**
" only, less Fittings	**36.00**	**45.00**
Height of Back	12½"	12½"
Approximate Weight, (Crated) less Fittings ... Lbs.	145	175

The above Lavatories can also be fitted with "Royal Presto" or "Royal OK" Faucets.

For fittings see pages 140 – 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Bowl with Centre Outlet, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal Chester" Compression Combination Supply and Waste Fitting; 1½" "Royal" Bag Trap; ½" I.P. Size "Royal Anglo" Supplies, with Indexed Stop Valves to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20½"	24¼"	12" x 15"	5⅛"
22" x 27"	22¼"	27"	12" x 15"	5"

Plate 451 "Royal George"

Nominal Sizes	20" x 24"	22" x 27"
Lavatory Complete as Described	**$76.50**	**$87.75**
" only, less Fittings	**28.50**	**39.75**
Height of Back	12"	12"
Approximate Weight, (Crated) less Fittings ....Lbs	150	170

Plate 452 "Royal Regina"

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Bowl with Centre Outlet, Overflow, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal World" Compression Faucets; ½" I.P. Size "Royal Anglo" Supplies, and "Royal" P. Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 24"	18¼"	24¼"	12" x 15"	4½"
20" x 24"	20¼"	24½"	12" x 15"	5"
22" x 27"	22¼"	27½"	12" x 15"	5"

Nominal Sizes	18" x 24"	20" x 24"	22" x 27"
Lavatory Complete as Described	**$40.00**	$45.00	$56.50
" only, less Fittings	**23.50**	28.50	**40.00**
Height of Back	10"	12"	12"
Approximate Weight, (Crated) less Fittings....Lbs.	135	150	170

The above Lavatories can also be furnished with "Royal Presto" or "OK" Faucets.

For fittings see pages 140 – 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Back and Apron in One Piece, supported on concealed Wall Hanger; fitted with "Royal Fuller" Design Faucets; ½" I.P. Size "Royal Anglo" Supplies, with Indexed Stop Valves; "Royal" Bi-Transit Waste, with 1½" "Royal" Bag Trap to Wall.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
22"x 27"	22"	27"	13" x 20"	5"

Plate 461 "Royal Edmonton"

Nominal Size	22" x 27"
Lavatory Complete as Described	**$70.00**
" only, less Fittings	**40.00**
Height of Back	12"
Approximate Weight, (Crated) less Fittings ..... Lbs.	170

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "D" Shaped Bowl, with Rear Outlet, Back and Apron in One Piece, supported on concealed Wall Hanger; fitted with "Royal Fuller" Design Faucets; "Royal" Bi-Transit Waste, with 1½" Bag Trap to Wall; ½" I.P. Size "Royal Anglo" Supplies with Indexed Stop Valves.

Dimensions

Listed Size	Actual Size	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20½"	24"	11½" x 16"	4⅞"

Plate 462 "Royal Victoria"

Nominal Size	20" x 24"
Lavatory Complete as Described	**$65.50**
" only, less Fittings	**25.50**
Height of Back	10"
Approximate Weight, (Crated) less Fittings ..... Lbs.	140

The above Lavatories can also be furnished with "Royal OK" or "World" Faucets.

For fittings see pages 140–152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Back and Apron in One Piece, supported on concealed Brackets; fitted with "Royal B" Compression Faucets; 5/8" O.D. "Royal Anglo" Supplies, with Indexed Stop Valves; "Royal" Bi-Transit Waste, with 1½" "Royal" P. Trap to Wall.

Dimensions

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20" x 24"	20½"	24"	11½" x 16"	4⅞"

Plate 471 "Royal Levis"

Nominal Size	20" x 24"
Lavatory Complete as Described	$51.50
" only, less Fittings	25.50
Height of Back	10"
Approximate Weight, (Crated) less Fittings ... Lbs.	140

Plate 472 "Royal Trenton"

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Back and Apron in One Piece, supported on concealed Hangers; fitted with "Royal Swan" Compression Faucets; 5/8" O.D. "Royal Anglo" Supplies with Indexed Stop Valves; 1¼" "Royal" P. Trap to Wall, with Chain and Stopper.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 24"	18"	23¾"	11" x 15¾"	4⅛"

Nominal Size	18" x 24"
Lavatory Complete as Described	$39.00
" only, less Fittings	23.25
Height of Back	9"
Approximate Weight, (Crated) less Fittings ... Lbs.	108

The above Lavatories can be furnished with "Royal OK" or "World" Faucets.

For fittings see pages 140 – 152.

ENAMELED IRON LAVATORIES

Plate 481 "Royal Brandon"

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Bowl with Centre Outlet, Overflow and Back in One Piece, supported on concealed Wall Hanger; fitted with "Royal B" Compression Faucets; "Royal Angle" Supplies to Wall, and 1¼" "Royal" P. Trap. with Chain and Stopper.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Height of Back
16" x 20"	16"	20"	11" x 14"	10"
18" x 20"	18¼"	20"	11" x 14"	10"
18" x 24"	18"	24"	12" x 15"	10"
20" x 24"	20¼"	24½"	12" x 15"	10"
22" x 27"	22"	26¾"	12" x 15"	12"

Nominal Sizes	16" x 20"	18" x 20"	18" x 24"	20" x 24"	22" x 27"
Lavatory Complete as Described	**$32.75**	**$33.75**	**$36.50**	**$39.50**	**$45.75**
" only, less Fittings	**17.75**	**18.50**	**21.25**	**24.00**	**30.45**
Approximate Weight, (Crated) less Fittings..Lbs.	90	100	110	120	140

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Shaped Bowl with Rear Outlet, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal Swan" Compression Faucets; "Royal Anglo" Supplies, with Indexed Stop Valves, and "Royal" P. Trap (no vent), with Chain and Stopper.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
19" x 24"	19"	24¼"	12" x 15"	5"

Can also be furnished with Bi-Transit Waste, if desired.

Plate 482 "Royal Sudbury"

Nominal Size	19" x 24"
Lavatory Complete as Described	**$39.00**
" only, less Fittings	**23.00**
Height of Back	10"
Approximate Weight, (Crated) less Fittings..Lbs.	100

The above Lavatories can also be furnished with "Royal B" or "OK" Faucets.

For fittings see pages 149–152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal OK" China Indexed Compression Faucets; ⅝" O.D. "Royal Angle" Supplies, and "Royal" P Trap with Chain and Stopper.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 21"	18"	21"	10" x 14"	4"

Plate 491 "Royal Portage"

Nominal Size	18" x 21"
Lavatory Complete as Described	$30.00
" only, less Fittings	17.25
Height of Back	9"
Approximate weight, (Crated) less Fittings ... Lbs.	80

Plate 492 "Royal Prairie"

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "D" Shaped Bowl with Centre Outlet, Overflow, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal B" China Indexed Faucets; "Royal Angle" Supplies, and "Royal" P. Trap, with Chain and Stopper.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 21"	18"	21"	10" x 14"	5"

Nominal Size	18" x 21"
Lavatory Complete as Described	$30.00
" only, less Fittings	17.25
Height of Back	9"
Approximate weight, (Crated) less Fittings ... Lbs.	80

The above Lavatory can also be furnished with "Royal Presto" or "OK" Faucets.
For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

Plate 501 "Royal Sault"

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow, Back and Apron in One Piece, supported on concealed Hangers; fitted with "OK" China Indexed Compression Faucets; "Royal Anglo" ⅝" O.D. Supplies; "Royal" P. Trap, with Chain and Stopper.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 21"	18¼"	21"	10¼" x 14½"	4¾"

Nominal Size	18" x 21"
Lavatory Complete as Described	$30.00
" only, less Fittings	17.25
Height of Back	8"
Approximate weight, (Crated) less Fittings ... Lbs.	105

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Bowl with Centre Outlet, Overflow, Back and Apron in One Piece, supported on concealed Hangers; fitted with "Royal OK" China Indexed Compression Faucets; "Royal Angle" ⅝ O.D. Supplies, and 1¼" "Royal" P. Trap, with Chain and Stopper

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Depth of Apron
17" x 19"	16¾"	19⅜"	11" x 14"	4⅛"

Plate 502 "Royal Banff"

Nominal Size	17" x 19"
Lavatory Complete as Described	$27.75
" only, less Fittings	15.00
Height of Back	6½"
Approximate weight, (Crated) less Fittings ... Lbs.	90

For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Oval Bowl with Centre Outlet, Overflow and Back in One Piece, supported on concealed Wall Hangers; fitted with "Royal" Fuller Design Faucets; ⅝" O.D. "Royal Angle" Supplies and 1¼" "Royal" Trap, with Chain and Stopper.

Plate 511 "Royal Yonge"

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Height of Back
16" x 19"	16¾"	19¼"	11" x 14"	6"

Nominal Size	16" x 19"
Lavatory Complete as Described	$27.00
" only, less Fittings	12.30
Approximate weight, (Crated) less Fittings ... Lbs.	70

Plate 512 "Royal Sackville"

McAvity's Porcelain Enameled Cast Iron Lavatory, with Slab, Round Bowl with Centre Outlet, Overflow and Back in One Piece, supported on concealed Hangers; fitted with "Royal OK" Faucets, with China Indexed Handles; ⅝" O.D. "Royal Angle" Supplies, 1¼" "Royal" P. Trap, with Chain and Stopper.

Dimensions:

Listed Size	Actual Width	Actual Length	Size of Bowl	Height of Back
14" x 16"	14¾"	16¼"	11"	5"

Nominal Size	14" x 16"
Lavatory Complete as Described	$23.50
" only, less Fittings	10.80
Approximate weight, (Crated) less Fittings ... Lbs.	55

The above Lavatories can also be fitted with "Royal World" or "B" Faucets.
For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, Round Bowl with Centre Outlet, Overflow and Back in one Piece, supported on concealed Wall Hangers; fitted with "Royal B" China Indexed Faucets; ⅝" O.D. "Royal Angle" Supplies and 1¼" "Royal" P. Trap with Chain and Stopper.

16½" Size has oval Bowl with centre outlet.

Dimensions:

Listed Sizes	Length on Sides	Size of Bowl	Height of Back
14"	14"	12"	6"
16½"	16½"	11 x 14"	6"

Plate 521 "Royal Maitland"

Nominal Sizes	14"	16½"
Lavatory Complete as Described	**$25.50**	**$27.45**
" only, less Fittings	**11.75**	**14.70**
Approximate weight, (Crated) less Fittings ... Lbs.	60	80

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow and Back in one Piece, supported on concealed Hangers; fitted with "Royal OK" China Indexed Faucets; ⅝" O.D. "Royal Angle" Supplies, 1¼" "Royal" P. Trap Chain and Stopper.

Dimensions:

Listed Size	Length on Side	Size of Bowl	Height of Back
20" x 20"	20"	10" x 14"	7"

Plate 522 "Roya l Arthur"

Nominal Size	20"
Lavatory Complete as Described	**$29.25**
" only, less Fittings	**15.50**
Approximate weight, (Crated) less Fittings ... Lbs.	80

The above Lavatories can also be furnished with Straight Waste instead of Trap as Illustrated.

For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow and Back in One Piece, supported on concealed Wall Hangers, underside painted White; fitted with "Royal OK" China Indexed Compression Faucets; ⅝" O.D. "Royal Angle "Supplies and 1¼" "Royal" P. Trap to Wall, with Chain and Stopper.

Plate 531 "Royal Bedford"

Dimensions:

Listed Size	Length on Side	Size of Bowl	Height of Back
19"	19"	10½" x 14½"	8"

Nominal Size	19"
Lavatory Complete as Described	$31.25
" only, less Fittings	19.25
Approximate weight, (Crated) less Fittings ....Lbs.	105

Plate 532 "Royal St. Andrews"

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, Oval Bowl with Rear Outlet, supported on concealed Hangers; fitted with "Royal" Fuller Design Faucets; ⅝" O.D. "Royal Angle" Supplies, and 1¼" "Royal" P. Trap to Wall, with Chain and Stopper,

Dimensions:

Listed Size	Length on Side	Size of Bowl	Height of Back	Depth of Apron
17"	16½"	10⅜" x 13¼"	7¼"	4"

Nominal Size	17"
Lavatory Complete as Described	$35.25
" only, less Fittings	19.50
Approximate weight, (Crated) less Fittings....Lbs.	95

The above Lavatories can also be fitted with "Royal Swan" or "B" Faucets.
For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal OK" China Indexed Faucets; 5/8" O.D. "Royal Angle" Supplies, and 1¼" "Royal" P. Trap with Chain and Stopper.

Dimensions:

Listed Size	Length on Side	Size of Bowl	Depth of Apron
17"	17"	10" x 14"	4"

Plate 541 "Royal Nanaimo"

Nominal Size	17"
Lavatory Complete as Described	**$35.50**
" only, less Fittings	**24.00**
" Height of Back	8"
Approximate weight, (Crated) less Fittings ... Lbs.	98

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal OK" China Indexed Compression Faucets; 5/8" O.D. "Royal Angle" Supplies; 1¼" "Royal" P , Trap with Chain and Stopper.

Dimensions:

Listed Size	Length on Side	Size of Bowl	Height of Back	Depth of Apron
17"	17"	10" x 14"	9"	5"

Plate 542 "Royal Cumberland"

Nominal Size	17"
Lavatory Complete as Described	**$35.50**
" only, less Fittings	**24.00**
Approximate weight, (Crated) less Fittings ... Lbs.	100

The above Lavatories can be supplied.

For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, "D" Shaped Bowl with Rear Outlet, Overflow, Back and Apron in One Piece, supported on concealed Wall Hangers; fitted with "Royal B" China Indexed Faucets; "Royal Atlas" Bi-Transit Waste, with China Indexed Knob; 1¼" "Royal" P. Trap; ⅝" O.D. "Royal Angle" Supplies.

Dimensions:

Listed Size	Length on Side	Size of Bowl	Depth of Apron
19"	19"	10½" x 15"	4¾"

Plate 551 "Royal Tobique"

Nominal Size	19"
Lavatory Complete as Described	**$45.25**
" only, less Fittings	**23.00**
Height of Back	8"
Approximate weight, (Crated) less Fittings ..... Lbs.	115

Plate 552 "Royal Bonaventure"

McAvity's Porcelain Enameled Cast Iron Corner Lavatory, with Slab, Oval Bowl with Centre Outlet, Overflow, Back and Apron in One Piece, supported on concealed Hangers; fitted with "Royal B" China Indexed Faucets; ⅝" O.D. "Royal Angle" Supplies, and "Royal" P. Trap, with Chain and Stopper.

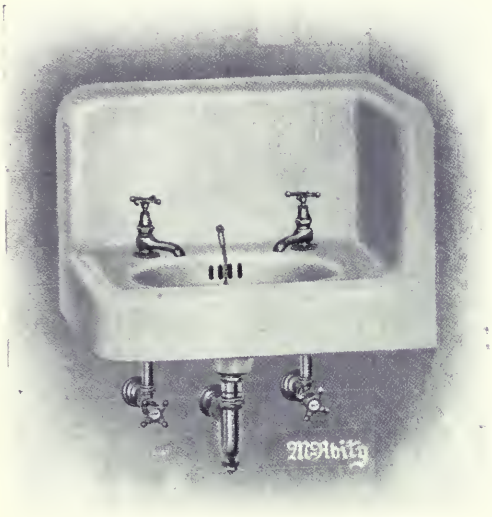
Dimensions:

Listed Size	Length on Side	Size of Bowl	Depth of Apron
19"	19"	10½" x 15"	4¾"

Nominal Size	19"
Lavatory Complete as Described	**$35.75**
" only, less Fittings	**23.00**
Height of Back	8"
Approximate weight, (Crated) less Fittings ..... Lbs.	115

For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES



McAvity's Porcelain Enameled Cast Iron Lavatory, for Right Hand Corner, with Slab, Oval Bowl with Rear Outlet, Overflow, Back, Right Hand End Piece and Apron in One Piece, supported on concealed Wall Hanger; fitted with "Royal OK" China Indexed Compression Faucets; "Royal Anglo" ½" I.P. Size Supplies, with China Indexed Stop Valves, Chain and Stopper; 1¼" "Royal" P, Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size Bowl	Depth of Apron
18" x 24"	18"	24"	11" x 15"	5"
20" x 24"	20⅛"	24½"	12" x 15"	5"
22" x 27"	22⅛"	27⅛"	13" x 15"	5"

Plate 561 "Royal Rideau"

Nominal Sizes	18" x 24"	20" x 24"	22" x 27"
Lavatory Complete as Described	**$49.00**	**$54.00**	**$69.50**
" only, less Fittings	**34.00**	**39.00**	**54.50**
Height of Back	10"	12"	12"
Approximate weight, (Crated) less Fittings ....Lbs.	165	175	215

McAvity's Porcelain Enameled Cast Iron Lavatory, for Left Hand Corner, with Slab, Oval Bowl with Rear Outlet, Back, Left Hand End Piece and Apron in One Piece, supported on concealed Hangers; fitted with "Royal B" China Indexed Compression Faucets; "Royal Atlas" Bi-Transit Waste with China Knob; ½" I.P. Size "Royal Anglo" Supplies, with China Indexed Compression Stop Valves and "Royal" P. Trap to Wall.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
18" x 24"	18"	24"	11" x 15"	5"
20" x 24"	20⅛"	24½"	12" s 15"	5"
22" x 27"	22⅛"	27⅛"	13" x 15"	5"

Plate 562 "Royal Simcoe"

Nominal Sizes	18" x 24"	20" x 24"	22" x 27"
Lavatory Complete as Described	**$56.50**	**$61.50**	**$77.00**
" only, less Fittings	**34.00**	**39.00**	**54.50**
Height of Back	10"	12"	12"
Approximate weight, (Crated) less Fitting ....Lbs.	165	175	215

The above Lavatories can be furnished either Right or Left.

For fittings see pages 140 - 152.

ENAMELED IRON LAVATORIES

McAvity's Porcelain Enameled Cast Iron Lavatory, for Right Hand Corner, with Slab, Oval Bowl with Centre Outlet, Overflow, Back and End in One Piece, supported on concealed Hangers; fitted with "Royal OK" China Indexed Faucets; "Royal Angle" Supplies; 1¼" "Royal" P. Trap, with Chain and Stopper.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Height of Back
16" x 20"	16½"	19½"	11" x 14"	10"
20" x 24"	20"	24"	12" x 15"	10"
22" x 27"	22¼"	27½"	12" x 15"	12"

Plate 571 "Royal Hull"

Nominal Sizes	16" x 20"	20" x 24"	22" x 27"
Lavatory Complete as Described	**$42.00**	**$45.50**	**$56.25**
" only, less Fittings	**27.00**	**30.50**	**41.25**
Approximate weight, (Crated) less Fittings ....Lbs.	120	155	200

Plate 572 "Royal Kingston"

For fittings see pages 140 - 152.

McAvity's Porcelain Enameled Cast Iron Recess Lavatory, with Slab, Oval Bowl with Centre Outlet, Back, End Pieces and Apron in One Piece, supported on concealed Hangers; fitted with "Royal Swan" Compression Faucets; "Royal" Bi-Transit Waste; 1½" "Royal" Bag Trap to Wall; ½" I.P. Size "Royal Anglo" Supplies, with Compression Stop Valve.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron
20½" x 26"	20½"	26"	12 "x 15"	5"
21" x 31"	21"	31"	13" x 17"	5⅛"

Nominal Sizes	20½" x 26"	21" x 31"
Lavatory Complete as Described	$77.00	**$87.00**
Lavatory only, less Fittings	40.00	**50.00**
Height of Back	8"	8"
Approximate weight, (Crated) less Fittings....Lbs.	160	175

ENAMELED IRON TWO-BOWL BARBER'S LAVATORIES

McAvity's Porcelain Enameled Iron Two-Bowl Barber's Lavatory, with Slab, Oval Bowls with Rear Outlets, Overflows, Back and Apron all in One Piece, supported on concealed Wall Hangers, and fitted with "Royal" Compression Double Shampoo Faucets, with Rubber Hose and Sprinkler; "Royal" Bi-Transit Waste, "Royal" Compression Faucets, Indexed, "Royal Anglo" Supplies, with Indexed Stop Valves and 1½" "Royal" P. Traps to Wall.

Dimensions:

Slabs.....	22" x 38"	Bowl.....	12" x 15"
Height of Back	12"	Depth of Apron	5"

Plate 581 "Royal Britannia"

For the Barber Shop where the Lavatories are to be placed against the wall, this fixture will be found very desirable. It is compact in size, and the basins are placed at an angle to the wall line, so that there is ample room for the barber and his customer at each bowl.

These Lavatories are also suitable for Toilet Rooms in which no more than two basins are required.

When furnished for this purpose the shampoo is omitted.

Prices will be furnished upon application.

The above Lavatory can also be furnished with Chain and Stopper, instead of Bi-Transit Waste.

McAvity's Porcelain Iron Barber's Lavatory, with Slab, Oval Bowls with Rear Outlets, Overflows and Outlets in One Piece, supported on Porcelain Enameled Round Fluted Pedestals, and fitted with Double Compression "Royal" Shampoo Faucets, with Rubber Hose and Sprinkler "Royal" Compression Faucets; Special "Royal" Supply and Waste Combination and 1½" "Royal" Reseal Traps.

Dimensions:

Slab.....27" x 45" Bowls.....13" x 19"
Depth of Apron, 5"

Plate 582 "Royal Invincible"

Prices will be furnished upon application.

For the modern Barber Shop, including those to be found in Hotels, Office Buildings and Clubs. This Lavatory combines attractive appearance with practical utility. Being placed away from wall it can be approached from all sides.

For fittings see pages 140 - 152.

ENAMELED IRON SECTIONAL LAVATORIES

McAvity's Porcelain Enameled Iron Four Section Lavatory, with Centre Outlet, Overflow and Back of each Section in One Piece, supported on concealed Wall Hangers; complete with Nickel Plated Union Strips; Soap Dishes, Waste Plugs and Rubber Stoppers; fitted with "Royal B" Compression Faucets; "Royal Anglo" Supplies and "Royal" Continuous Waste, with 1½" "Royal" S Trap (Vented).

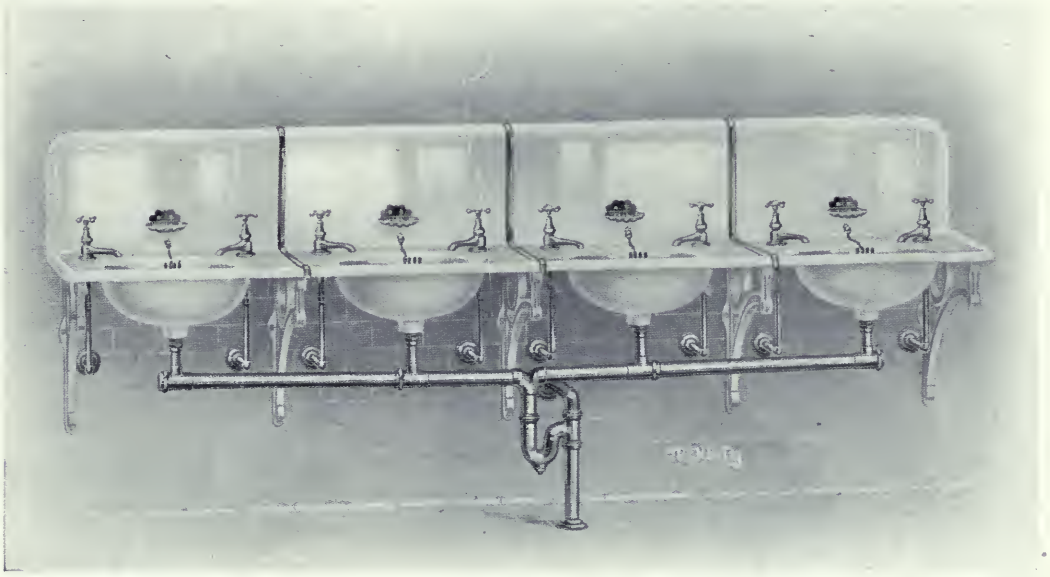


Plate 591 "Royal Yarmouth"

Nominal Sizes	16" x 20"	18" x 24"	20" x 24"	22" x 27"
Complete (Four Sections) as Described	**$145.00**	**$158.50**	**$167.50**	**$222.00**
Lavatories (four sections) only, (less Fittings)	**91.25**	**105.00**	**114.00**	**169.50**
Additional Sections Complete with Fittings	**37.00**	**39.60**	**41.85**	**56.00**
For Enameled all over, add for each Section	**3.50**	**3.75**	**4.00**	**4.75**
With Right or Left End Piece, add for each piece	**9.30**	**9.30**	**10.50**	**11.70**

McAvity's Porcelain Enameled Iron Three Section Lavatory, with Oval Bowl and Centre Outlet, Overflow, Back and Apron of each Section in One Piece, supported on concealed Wall Hangers and Porcelain Enameled Brackets; fitted with Nickel Plated Union Strips, Waste Plugs and Rubber Stoppers; fitted with "Royal OK." Faucets, with China Indexes; "Royal Angle" Supplies and "Royal" Nickel Plated Continuous Waste, with 1½" "Royal" S. Trap (Vented).

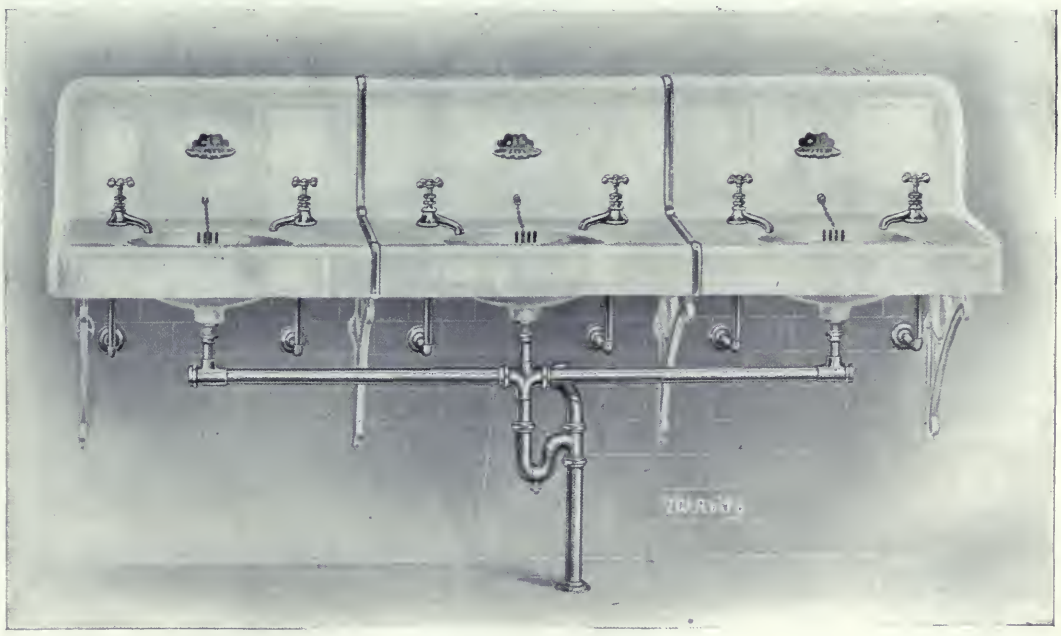


Plate 592 "Royal Dartmouth"

Nominal Sizes	16" x 20"	18" x 24"	20" x 24"	22" x 27"
Complete, Three Sections as Described	**$178.50**	**$190.00**	**$213.25**	**$248.00**
Lavatories, three sections only	**115.25**	**126.90**	**150.00**	**185.00**
Additional Sections, Complete with Fittings	**59.50**	**63.50**	**72.00**	**83.00**
For Enameled all over, add for each section	**3.50**	**3.75**	**4.00**	**4.75**
With Right or Left End Piece, add for each piece	**9.35**	**9.30**	**10.50**	**11.70**

For fittings see pages 140 - 152.

HOSPITAL LAVATORIES

Plate 601 "Royal St. James"

McAvity's Solid Porcelain Double Bowl Lavatory, for Hospitals and Clinics, Set on Two Porcelain Legs; fitted with 1½" Knee Action Waste Stirrup Handle and 1½" New York Regulation Trap to Wall; Knee-Action Supply Valve, Stirrup Handle Supply Pipes and Shut-Off Valves; Goose-Neck Spout. Fixtures are Brass with Heavy Nickel Plate.

Dimensions:

Lavatory	53" x 24"
Apron	6½"
Bowls	14" x 6" x 6½"

Prices furnished on application.

McAvity's Solid Vitreous China Square Pattern Clinic Lavatory, Set upon Two China Legs; fitted with 1½" Knee Action Waste with Stirrup Handle; 1½" New York Regulation Trap to Wall; Knee Action Supply Valve, Stirrup Handle Supply Pipes and Shut-Off Valve; Goose-Neck Spout with Removable Face Rose Spray. Fittings are of Brass with Heavy Nickel Plating.

Dimensions:

Length over all	36"
Front to Back	24"
Apron	4"
Bowl	13" x 17" x 6"
Trays	14½" x 6½" x 1½"

Prices furnished on application.

Plate 602 "Royal Tuscanus"

This Lavatory is made for use of surgeons or dentists and is in general use in Hospitals. Other fittings than those shown can be furnished on the above Lavatories.

For fittings see pages 140 - 152

HOSPITAL LAVATORIES

McAvity's Solid Vitreous China All Roll Rim Hospital Lavatory, Set upon Nickel Plated Brass Supports; fitted with Nickel Plated Brass Pedal Valve, with ½" I.P. Size Supplies; Low-Down Basin Spout and Brass Pedal Waste and Trap to Wall.

Dimensions:

Lavatory.....24" x 20"
Bowl.....12" x 16" x 6"
Apron..... 4"

Prices will be furnished upon application.

Note.—The above Lavatory can also be supplied with 12" Goose-Neck Spout and Stirrup Knee Action Fittings.

Plate 611 "Royal Tyerian"

Plate 612 "Royal Vancouver"

McAvity's Porcelain Enameled Iron Lavatory, with Slab, Oval Bowl with Centre Outlet, Overflow and Apron in One Piece, supported on Porcelain Enameled Legs; fitted with "Royal Trident" Combination Floor Plate, with Self-Closing Foot-Operated Hot and Cold Supplies, and Foot Operated Waste, with 1½" "Royal" Trap, as illustrated. The Valves are below floor. If desired the valve motion can be furnished above floor.

Dimensions:

Listed Sizes	Actual Width	Actual Length	Size of Bowl	Depth of Apron	Actual Weight Crated
20" x 24"	20"	24½"	12" x 15"	4¾"	130 lbs.
20" x 26"	20"	26"	12" x 15"	4⅝"	145 "
22" x 27"	22½"	27½"	13" x 17"	4⅝"	175 "
22" x 30"	23"	30½"	13" x 19"	4½"	180 "

Prices upon application.

For fittings see pages 140 - 152

SECTIONAL LAVATORIES

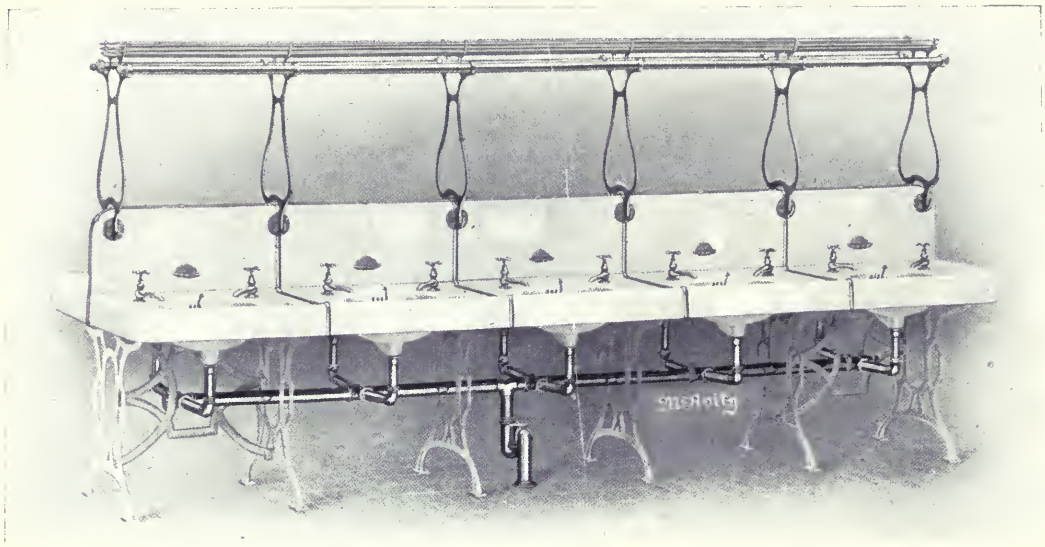


Plate 621 " Royal Collingwood "

McAvity's Porcelain Enameled Five Double-Section Lavatory, with Oval Bowl with Centre Outlet, Overflow and Outlet in One Piece, supported on Painted Stands; fitted with Nickel Plated Union Strips, Soap Holders, Towel Rack, Waste Plugs and Rubber Stoppers; "Royal OK" Compression Faucets; 1½" Nickel Plated Continuous Waste, with 1½" "Royal" Reseal Trap.

Dimensions:

Slabs	18" x 24"	Bowls	12" x 15"
"	22" x 27"	"	12" x 15"
Height of Back	12"	Depth of Apron	5"

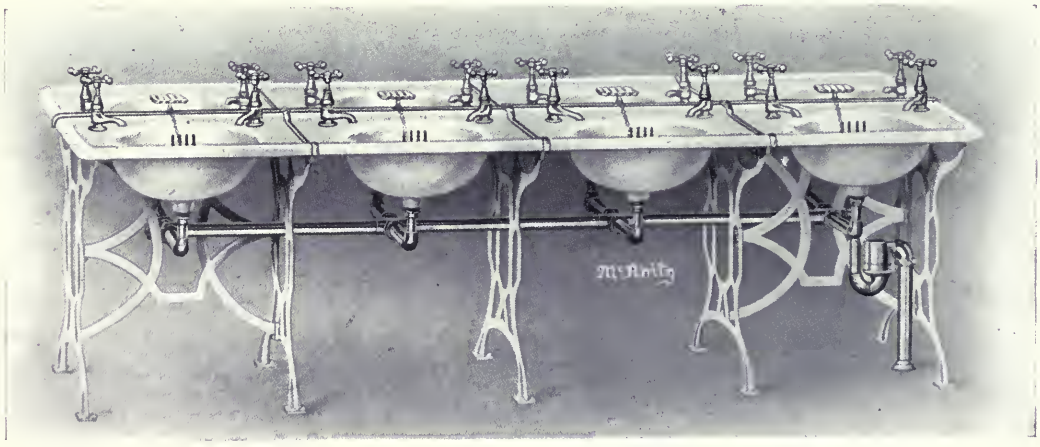


Plate 622 " Royal Welland "

McAvity's Porcelain Enameled Four Double-Section Lavatory, with Oval Bowl with Centre Outlet, supported on Painted Stands; fitted with Nickel Plated Union Strips, Soap Dishes, Waste Plugs, Stoppers, Chain and Chain Stays; Nickel Plated 1½" Continuous Waste with 1½" "Royal" Trap and "Royal" Self-Closing Faucets.

Dimensions:

Slabs	16" x 20"	Bowls	11" x 14"
"	18" x 24"	"	12" x 15"

Lavatories can be furnished in any number of Basins desired and can be fitted with Iron Pipe Waste and Trap.

Prices upon application.

For fittings see pages 140 - 152.

ENAMELED WASH SINKS

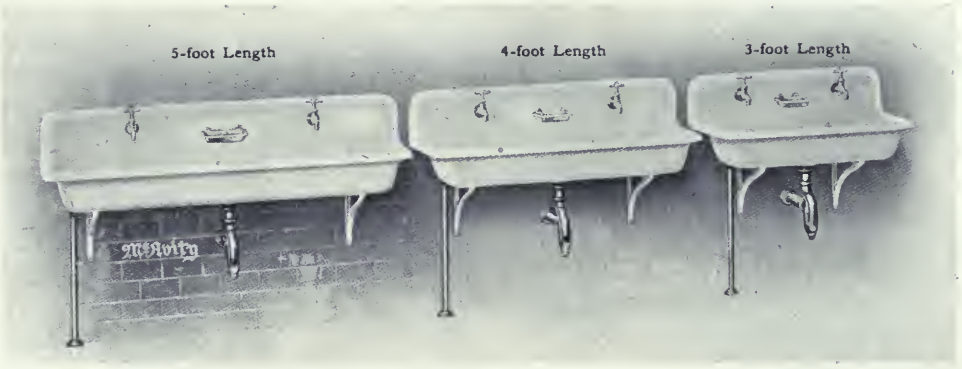


Plate 631 " Royal Brantford "

McAvity's Porcelain Enameled Roll Rim Wash Sinks with Integral Back, supported on Concealed Wall Hangers and Brackets, outside Painted White; fitted with "Royal" Self-Closing Faucets, Nickel Plated Standing Waste, Soap Dish and 1½" "Royal" Bag Trap with ½" Galvanized Iron Supply Pipe.

Dimensions:

Width over Rim.....18" Width Inside.....13¼" Height of Back.... 8"

	3′	4′	5′
Complete as Described.....	$65.00	$77.00	$89.00
Lavatory only, less fitting.....	47.75	59.60	71.70

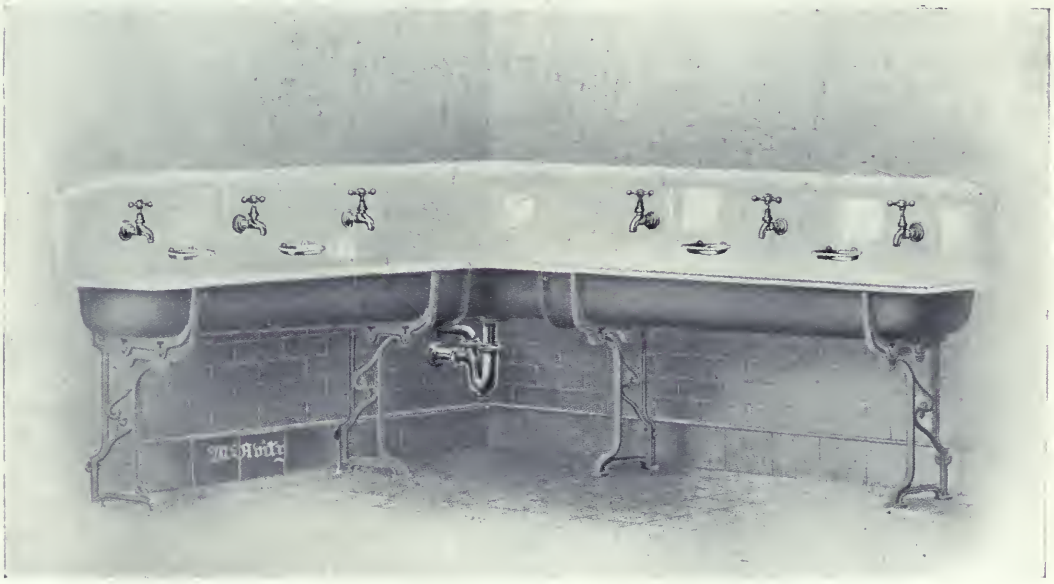


Plate 632 "Royal Oxford "

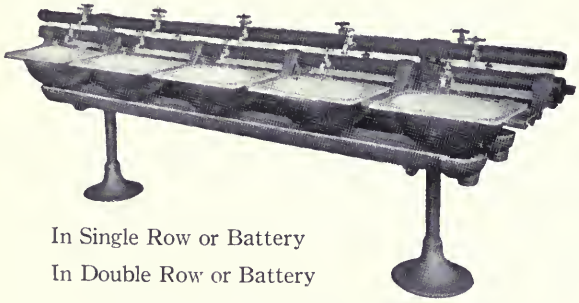
McAvity's Porcelain Enameled Roll Rim Wash Sink, with Separate Back, Supported on Adjustable Floor Brackets, underside Painted White; fitted with Nickel Plated Open Standing Waste, Soap Dishes, " Presto " Quick Opening Compression Faucets and 1½" "Royal" P. Trap with Vent.

Dimensions:

Width over Rim.....18" Width Inside.....14" Height of Back.....12"
Length of Inside Corner Section 4 feet or 2 feet from each corner.

Prices on application.

FACTORY LAVATORIES



In Single Row or Battery

In Double Row or Battery

Plate 641 "Royal Columbia"

McAvity's Porcelain Enameled Iron Individual Sanitary Wash-Bowls, an ideal system for Factories. The illustration shows Wash-Bowl Apparatus arranged for Hot and Cold Water in Double Batteries. The Basin is emptied by simply tilting into the Receptor beneath, which has Outlet at end.

Can be furnished in Single or Double Batteries in any number of Basins desired.

Further information and prices will be furnished on application.

McAvity's Porcelain Enameled Roll Rim Sectional Wash-Sink on Painted Iron Pedestal, with Painted Iron Pipe Supports, and ¾″ Brass Supply Pipes over Back of Sink; fitted with Open Standing Waste, Soap Dishes, ½″ Compression Bibbs and 1½″ "Royal Reseal" Trap with Vent. Sink furnished with underside painted one coat. Sinks can be furnished to measure up 26″ or 31″ from floor to Top of Rim.

Sinks can be furnished in widths, 18″, 24″ or 27″; and in lengths from 3 feet up to 60 feet.

Prices upon application

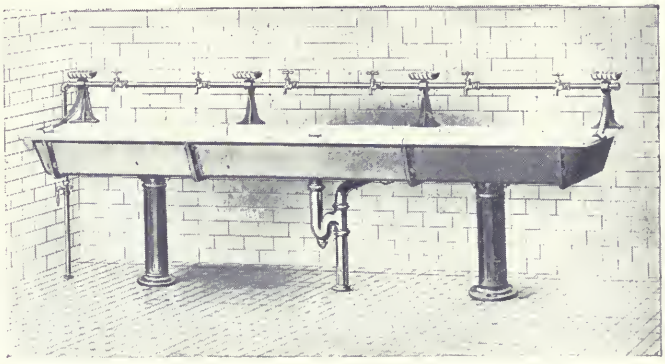


Plate 642 "Royal St. Laurent"

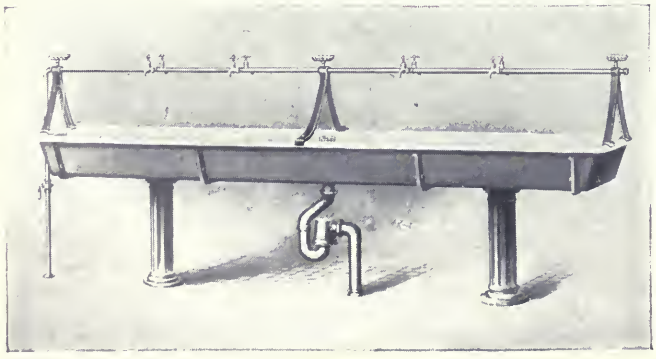


Plate 643 "Royal Albert"

McAvity's Porcelain Enameled Roll Rim Sectional Wash-Sink on Painted Pedestal, with Painted Pipe Supports and ¾″ Brass Supply Pipe over Centre of Sink; fitted with Nickel Plated Standing Waste, Soap Dishes, ½″ Compression Bibbs and 1½″ Reseal Trap, underside of Sink Painted One Coat. Sink can be furnished to measure 26″ or 31″ from floor to Top of Rim

Sinks can be furnished in width, 18″, 24″ and 27″ and in length from 3 feet up to 60 feet.

Prices upon application.

SHOWER BATHS

Note.—The Shower Bath is recognized as almost an essential. In many Hotels, the Shower is in greater demand than the regular fixture. Owing to the great variety of conditions under which it is possible to install Shower Baths, we must necessarily confine ourselves to showing only a few designs, to assist the Architect and Builder.

We will, however, be pleased to make suggestion and quote prices on Solid Porcelain, Enameled Iron, Slate or Marble Stalls and Brass Work for same.

Plate 651, Showing Supply and Waste Combination, with Shower, with "Royal" Mixing Valve, Ball Joint Needle Spray and China Wall Escutcheons concealed in Wall, and Curtain arrangement, for Bath of Regular Design.

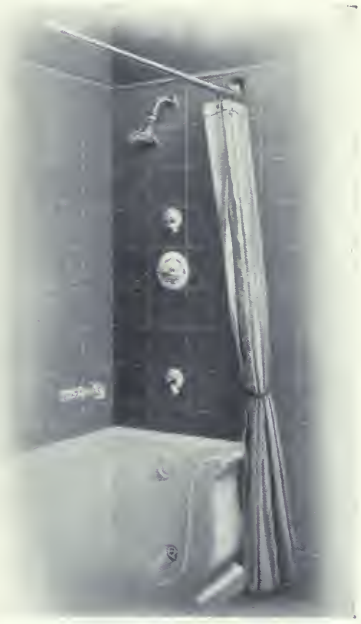


Plate 651 "Royal Troy"

Plate 652 " Royal Bloor "

McAvity's Concealed Wall Shower, with Mixing Valve Ball Joint, Needle Point Head, China Lever on Regulating Valve, with Removable Nickel Plated Escutcheon—to permit repacking of Valve. This Shower is designed to set in recess or Tiled Wall of Built in Tub, the Shower Head being on an angle to permit the bather to use it without wetting the head.

Supplies can also be furnished to Floor.

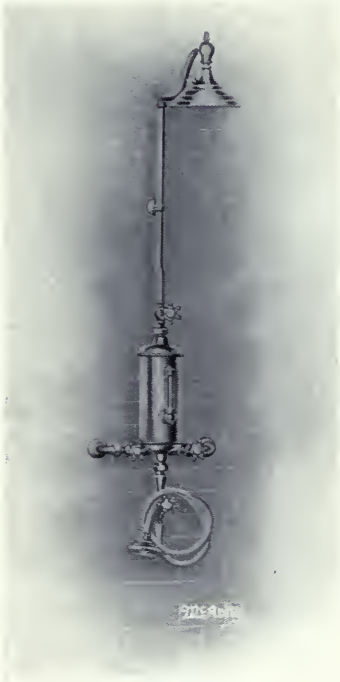


Plate 653 " Royal Thero "

McAvity's Nickel Plated Shower, with Needle Point Head; Shampoo, with Rubber Hose and Sprinkler, Mixing Chamber, with Thermometer; ½" I.P. Size Supplies to Wall, Check Valves, and Controlling Valves with Indexed Handles.
Price, Each..... **$72.00**
O. S.

ROYAL SOLID PORCELAIN SHOWERS

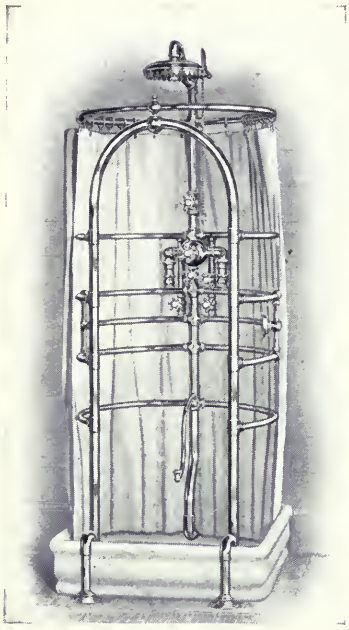


Plate 661" Royal Neptune "

661—McAvity's Solid Porcelain Square Shower Bath Receptor, with Combination Needle Spray, Descending Shower, Liver Spray, and Bidet Jet, Supplied through Temperature Valve. Descending Shower is controlled by Self-Closing Valve with Ring and Chain, with White Duck Curtain.

Sizes:
36" x 36" x 9" 42" x 42" x 9"

662—McAvity's Porcelain Corner Shower Receptor, with Nickel Plated Combination Needle Spray, Descending Shower and Bidet Jet, with White Duck Curtain.

Sizes, 28" and 34"

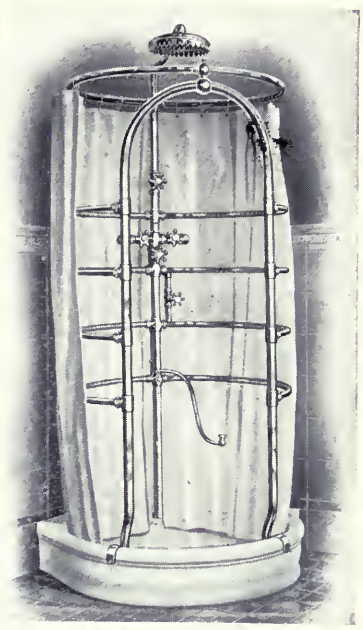


Plate 662 " Royal Dirigo "

Prices furnished upon application.

McAvity's Royal Nickel Plated Shower and Needle Bath, for Recess, Tiled Wall or Marble Slab Stalls, with "Royal" Mixing Valve, with ¾" I.P. Size Supplies to Wall, Strainer, Unions, Bidet, Hand Shampoo, Soap Holder. The Operating arrangement of this Shower is especially desirable as the Valve on side permits the proper temperature to be obtained before entering the Stall. To obtain the proper results with Needle Head Baths, the pressure should be at least 20 lbs. and Supplies amply large. Measurement of Shower and Marble, with prices, will be furnished on application.

Plate 663 "Royal Xanthus "

SHOWER BATHS

McAvity's Nickel Plated Needle Point Shower with Receptor; Needle Point Head; ½″ I.P. Size Supplies to Wall, with Check Valves; China Indexed Controlling Valves and White Duck Curtain on 30″ Ring.

Price, Complete with 36″ Receptor..... $161.00
" " " 42″ " 206.00

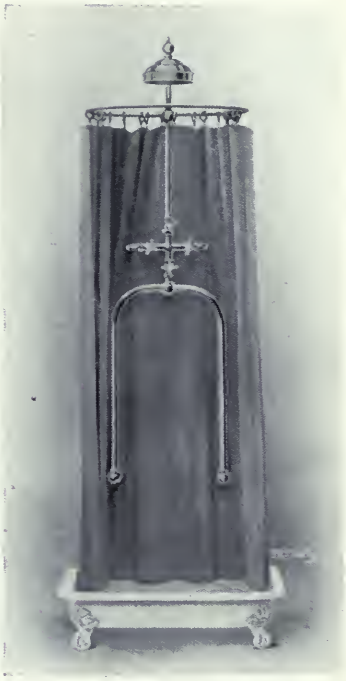


Plate 671 "Royal Rosedale"

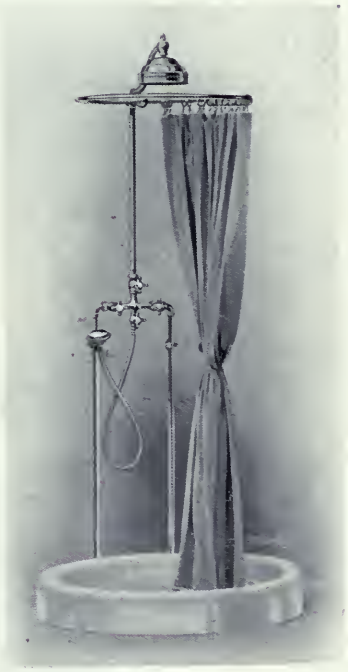


Plate 672 "Royal Cadillac"

McAvity's Nickel Plated Shower with Needle Point; Head Shampoo with Rubber Hose and Sprinkler; ½″ I.P. Size Supplies to Floor with Check Valves; China Indexed Controlling Valve; White Duck Curtain on 30″ Ring.

Complete with 42″ Receptor..... $163.00

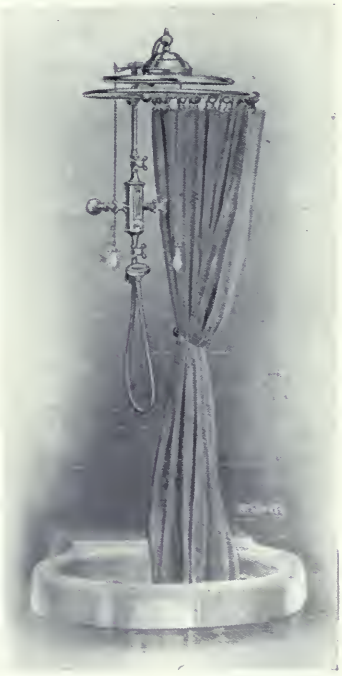


Plate 673 "Royal Florence"

McAvity's Nickel Plated Combination Head and Shoulder Shower; Self Closing Valves with Pull Chain; Mixing Valve with Thermometer; Shampoo with Rubber Hose and Sprinkler; ½″ I.P. Size Supplies to Floor with Check Valves; China Indexed controlling Valves; White Duck Curtain on 30″ Ring Complete with 42″ Receptor
Price..... $290.00

NICKEL PLATED SHOWERS

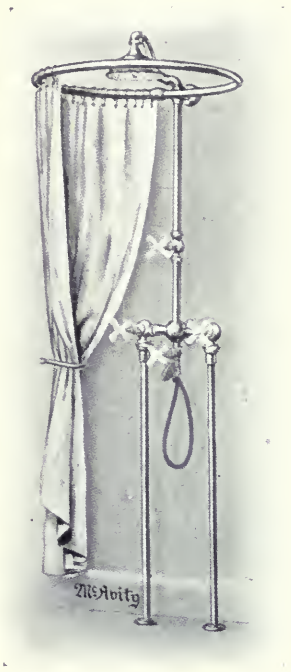


Plate 681 "Royal Athenia"

Plate 681

McAvity's Nickel Plated Shower with Shampoo Attachment; Solid China Indexed Handle Compression Valves; ¾″ and ½″ I.P. Size Supplies to Floor, 7″ Centre to Centre; 6″ Needle Point Head and White Duck Curtain on 24″ Ring.

	Price
½″ Supplies, ½″ Discharge..	**$82.30**
¾″ " ¾″ "	on applica.

Plate 682

McAvity's Nickle Plated Shower with Shampoo Attachment; Solid China Indexed Handle Compression Valves; ¾″ and ½″ I.P. Size to Wall; 6″ Needle Point Head and White Duck Curtain with 24″ Ring.

	Price
½″ Supplies, ½″ Discharge..	**$72.50**
¾″ " ¾″ "	on applica.

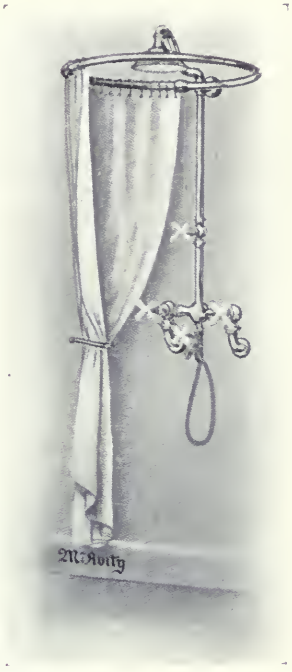


Plate 682, "Royal Niagara"

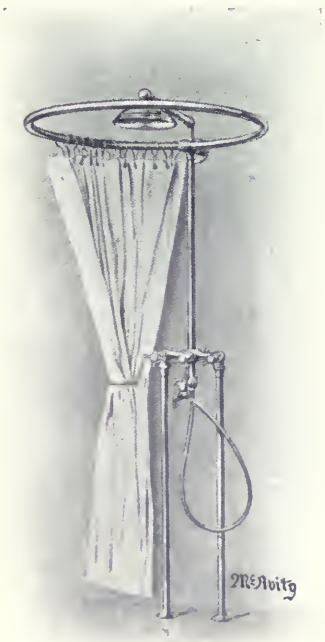


Plate 683 "Royal Grecian"

Plate 683

McAvity's Nickel Plated Shower with Shampoo Attachment; Indexed China Cross Handle Compression Valves; ¾″ and ½″ I.P. Size Supplies, 7″ Centres; 6″ Needle Point Head and White Duck Curtain on 24″ Ring.

	Price
½″ Supplies, ¼″ Discharge..	**$72.50**
¾″ " ¾″ "	on applica.

Plate 684

McAvity's Nickel Plated Shower with Solid China Indexed Handle Compression Valves; ¾″ and ½″ I.P. Size Supplies, 7″ Centre to Centre; 6″ Needle Point Head, White Duck Curtain on 24″ Ring.

	Price
½″ Supplies, ½″ Discharge...	**$71.50**
¾″ " ¾″ "	on applica.

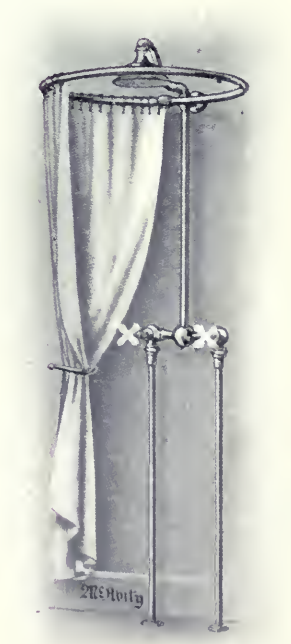


Plate 684 "Royal Crescent"

The above Showers can be also furnished with Shower Ring, 24″ x 30″, Oval.

WORLD McAVITY'S GUARANTEE

NICKEL PLATED SHOWERS

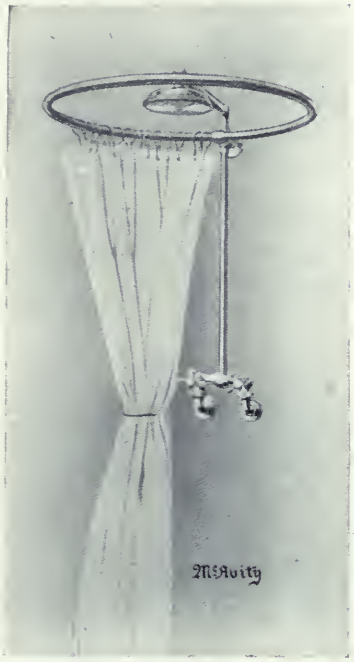


Plate 691 " Royal Argyle "

Plate 691

McAvity's Nickel Plated Shower with 6" Needle Point Head; China Indexed Cross Handle Compression Valves; ½" I.P. Size Supplies to Wall, 5" Centre to Centre; White Duck Curtain on 30" Ring.

Price, Complete as Described.... **$60.00**

Plate 692

McAvity's Needle Point Shower with Needle Point Head; Mixing Chamber; ½" I.P. Size Supplies to Wall, 8½" Centre to Centre; White Duck Curtain on 30" Ring.

Price, Complete as Described..... **$96.00**

Plate 692 " Royal Pacific "

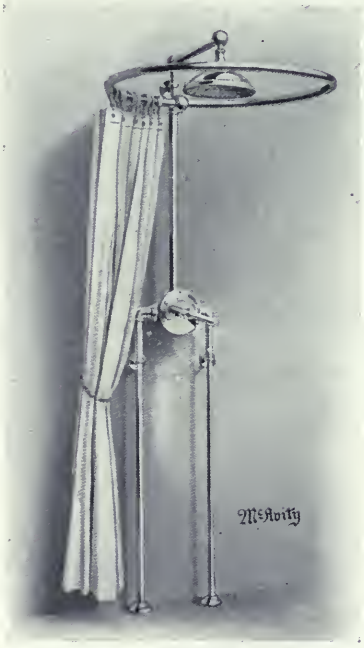


Plate 693 " Royal Atlantic "

Plate 693

McAvity's Nickel Plated Shower with mixing Chamber; 6" Needle Point Head; ½" I.P. Size Supplies to Floor, 8½" Centre to Centre; White Duck Curtain on 30" Ring.

Price, Complete as Described.....**$100.00**

Plate 694

McAvity's Nickel Plated Shower with Needle Point Head; Adjustable Ball Joint, Mixing Chamber, Thermometer, Shampoo, and Supplies to Floor.

Price, as Described.....**$96.00**

½" Supplies, ½" Discharge,
¾" Supplies, ¾" Discharge.

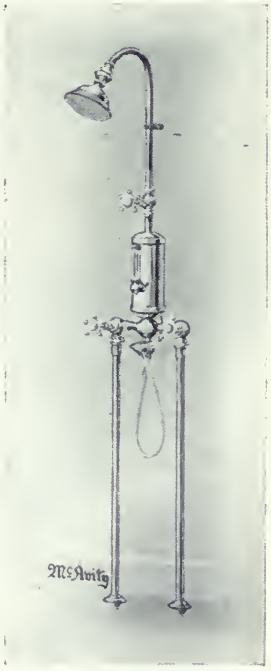


Plate 694 " Royal Ionian "

NICKEL PLATED SHOWERS AND RECEPTORS

Plate 701 " Royal Viking "

Price of Receptor only, on application.

McAvity's Solid Porcelain Round Shower Receptor, with Square Back; To Tile into Floor and against Wall, Glazed pure White Inside and Out; Outlet Drain in Centre, with Brass Strainer and Floor Flange.

Dimensions along Wall..... 36″
From Front to Wall..... 42″
Outside Diameter..... 42″
Inside Depth..... ..... 7½″

McAvity's Nickel Plated Shower with Needle Point Head; "Royal" Mixing Valve with China Lever; ½″ I.P. Size Supplies through Wall (or to Floor); White Duck Curtain on 24″ x 42″ Nickel Plated Brass Support. Curtain Support or Head can be supplied for any desired position. Prices upon application.

Plate 702 "Royal Waverley"

Plate 703 " Royal Odin "

McAvity's Solid Porcelain Roll Rim Corner Receptor, for Shower Bath; To Tile into Floor and Walls, Glazed pure White, Inside and Out; Outlet Drain in Centre, with Brass Outlet Strainer and Floor Flange.

Dimensions:

Extent along Side. .....28″–34″
From Corner to Front .43½″–50″
Inside Depth.. .....7½″–7½″

Price of Receptor only, on application.

ENAMELED IRON SHOWER RECEPTORS

Dimensions:

Size	42″ x 42″
Diameter Inside	36″
Depth at Outlet	4⅜″
" of Apron	5½″
Length at Back	36″
Approximate Weight (Boxed) Lbs.	300
Price, Receptor only	**$118.00**

Can also be furnished for Tiling in corner.

Plate 711 " Royal Eastern "

McAvity's Porcelain Enameled Cast Iron Shower Receptor, with Apron to Floor for setting in Tiled Floor, with Nickel Plated Strainer and Waste Connection.

Plate 712 " Royal Western "

Dimensions:

Size	38″ x 38″
Diameter Inside	32″
Depth at Outlet	6¼″
" of Apron	7″
Approximate Weight (Boxed).Lbs.	325
Price, Receptor only	**$118.00**

Can also be furnished Round Design.

McAvity's Porcelain Enameled Cast Iron Shower Receptor, with Apron to Floor, with Nickel Plated Strainer and Waste Connection.

Dimensions:

Sizes	36″ x 36″	42″ x 42″
Width of Rim	2″	2¼″
Depth at Outlet	6″	8″
Height to Top of Rim	9¾″	12″
Approximate Weight (Boxed).Lbs.	250	300
Price Receptor only	**$72.50**	**$118.00**

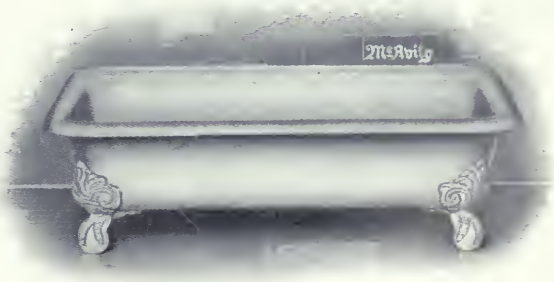


Plate 713 " Royal Northern "

McAvity's Porcelain Enameled Cast Iron Shower Receptor, on Feet with Nickel Plated Strainer and Waste Connection. Can also be furnished with Base if desired.

NICKEL PLATED SHOWERS

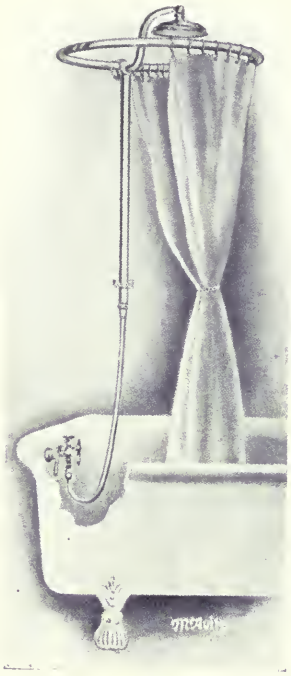


Plate 721 " Royal Hudson "

McAvity's Nickel Plated Portable Shower to connect to Bath Faucets; Needle Point Head; White Duck Curtain on 30" Ring, Hose and Connection.
Price..... $17.00

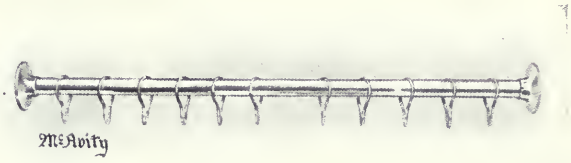


Plate 722 " Royal Charlemagne"

McAvity's Nickel Plated Curtain Rod with Flanges and Curtain Snaps.
Price, 3 ft. long, each..... $6.50
Add for each additional foot, 90 cts.

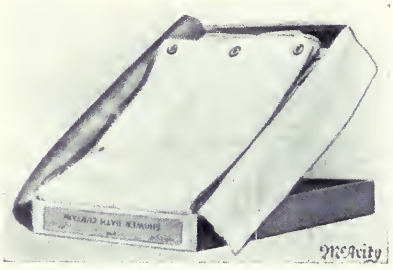


Plate 723 "Royal Hochelaga"

"Royal" Shower Curtains

Price, Special White Duck..$6.50

Rubber.. $10.00

McAvity's Nickel Plated Brass Shower Curtain Snaps.

Price, per Doz..... $1.50

Plate 724
"Royal Bon Ami"

McAvity's Nickel Plated "Royal" Needle Point Shower, for Cold Water; ½" I.P. Size Supply, with Self-Closing Stop Valve, with China Pull.

Price, each. $15.00

Plate 725 "Royal Alpha"

Plate 726 " Royal Kipawa "

McAvity's Nickel Plated Needle Point Shower Head with I.P. Thread Inlet.

Diameter.....	4"	5"	6½"	8"	10"
Size of Inlet..	⅜"	½"	½"	¾"	1"
Price, each.	$3.30	$3.72	$4.50	$5.10	$11.75

Plate 727 "Royal Stadacona"

McAvity's Nickel Plated Needle Point Shower Head with removable Face, with I. P. Thread Inlet.

Diameter.....	5"	6"	8"	10"
Size of Inlets...	½"	½"	¾"	1"
Price.....	$5.85	$6.85	$8.25	$15.50

SHOWER FIXTURES

Plate 731

McAvity's Floor Drain and Cesspool with Polished Rim and Hinged Strainer with Outlet I.P. Thread.

Size of Outlet.....	2″	3″	4″
Diameter of Top.....	8″	9″	13″
Prices.....	$16.50	$15.60	$41.00

Cesspool, with 2″ Outlet, all Brass..... $41.00

Larger Sizes have Cast Iron Body.

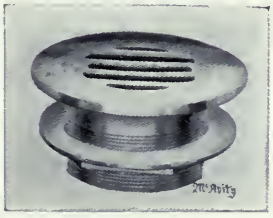


Plate 733

McAvity's Nickel Plated Strainer with 4½″ Diameter Top, and removable Grate; Inside Diameter, 2 7/16.

Price, each..... $4.60

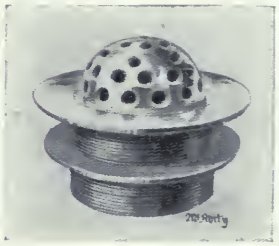


Plate 732

McAvity's Nickel Plated Raised Strainer with 4½ Diameter Flange and removable Trap; Inside Diameter of Outlet, 2 7/16″

Price on Application

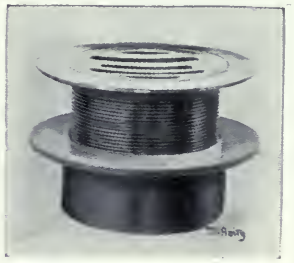


Plate 734

McAvity's Nickel Plated Strainer with 4½″ Diameter Top and Cup Flange; Inside Diameter of Outlet, 2 7/16.

Price, each..... $5.25

Note:—To Attach Strainer: It is first Nut-Locked to Floor Slab; then remove the Grate and connect the lead pipe to inside shoulder; this can be done from Top of Slab. Can also be connected to Iron Pipe by bringing up and caulking.

Horizontal

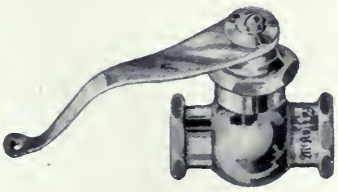


Plate 735

McAvity's Nickel Plated Horizontal Self-Closing Shower Valve, with Ring and Chain.

Price, each, ½″..... $7.00

" " ¾″..... 10.00

Vertical

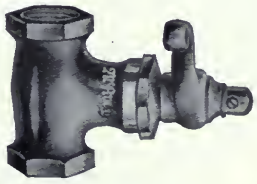


Plate 736

McAvity's Nickel Plated Vertical Self-Closing Shower Valve, with Ring and Chain.

Price, each, ½″..... $7.00

" " ¾″..... 10.25

DRINKING FOUNTAINS

Plate 741 "Royal Arctic"

Plate 741

McAvity's Vitreous China Pedestal Drinking Fountain with China Bubbling Cup and Nickel Plated Valve on Side.

Measurements:

Total Height	30½"
Diameter of Basin Overall	11¼"
Diameter of Base	14"
Price, Complete	**$30.00**

See Fitting on page 77

Plate 742

McAvity's Vitreous Drinking Fountain Bowl, on Bronzed Iron Pedestal.

Dimensions:

Bowl, Outside Diameter	13"
" Inside Diameter	10"
" " Depth	3¼"
Top of Spout to Floor	31"
Price, Complete with Fittings	**$68.40**

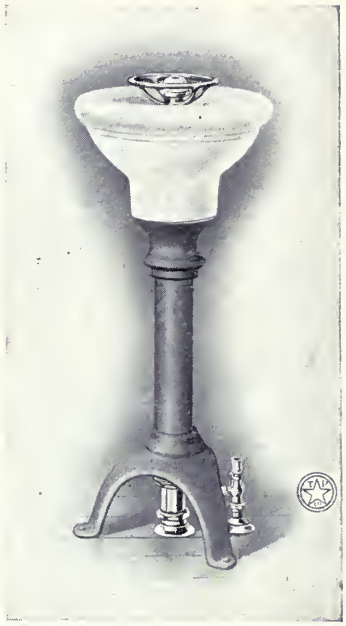


Plate 742 " Royal Elmora "

Plate 743 " Royal Romana "

Plate 743

McAvity's Vitreous China Pedestal Drinking Fountain with Supply and Outlet through Center of Pedestal.

Dimensions:

Height, Floor to Top	30"	36"
Outside Diameter of Bowl	11½"	11¾"
Inside Measurements	9" x 4"	11¼" x 4"
Diameter of Base	15"	18"

Plate 744

McAvity's China Drinking Fountain, 9½" diameter extra Heavy Vitreous China Bowl on Galvanized Iron Pedestal; 36" to Top of Bowl; Nickel Plated Cast Brass Bubbling Head; Galvanized Iron Supply Pipe to Floor, with Special Tee Connection.

Dimensions:

Total Height	36"
Diameter of Basin Overall	9½"
Height to Top of Bowl	30"
Price, each	**$15.00**

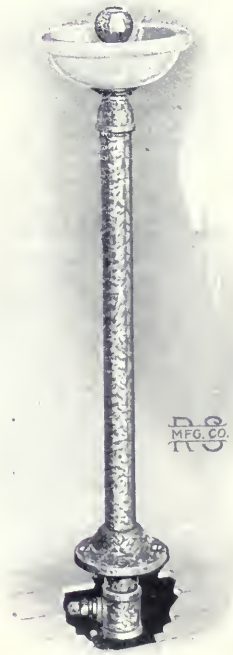


Plate 744 " Royal Victus "

DRINKING FOUNTAINS

McAvity's Porcelain Enameled Drinking Fountain, supported on Concealed Wall Hanger; fitted with Nickel Plated China bubbling Head with Push Button Self-Closing Control; Volume Regulator and Supply Pipe to Bubbler; Nickel Plated Push Button Self-Closing Stop with Spout, for use with Individual Drinking Cup, and Nickel Plated Trap.

Price, Complete as Described..... **$75.00**

Dimensions:

Length	18″
Front to Back	16″
Face of Back to Center of Bubbler	8½″
Height of Back	9¾″

Plate 751 " Royal Verte "

McAvity's Porcelain Enameled Drinking Fountain, supported on Concealed Wall Hanger; fitted with Nickel Plated Bubbler with China Cup and Loose Key Controlling Valve, operated by China Indexed Push Button Self-Closing Valve through Rim, with Nickel Plated Spout in Back with Loose Key Controlling Valve, operated by China Indexed Push Button Self-Closing Valve through Rim, with 1¼″ Nickel Plated "P" Trap.

Dimensions:

Back	10″
Width	18″
Depth, Front to Back	12″
Price, Complete as Described	**$86.50**

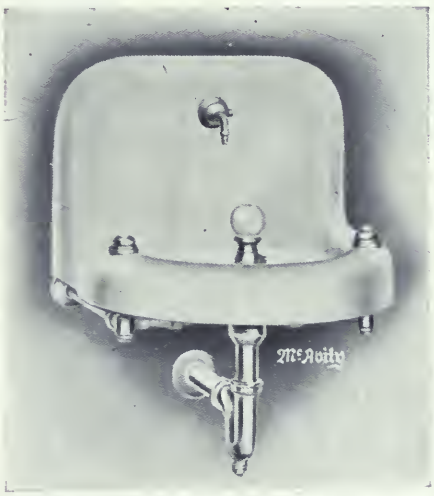


Plate 752 "Royal St. Agathe"

McAvity's Extra Heavy Vitreous China Bowl, on Heavy Galvanized Iron Bracket, with Nickel Plated Cast Brass Bubbling Head; Self-Closing Head; Self-Closing Stop; Galvanized Iron Supply Pipe, with Volume Regulator; Brass Waste to Wall; Brass Parts below Bowl; Rough Dip Nickel Finish to Match Galvanized Iron Bracket.

Price, Complete as Described..... **$22.00**

If bracket and Supply Pipe are of Brass instead of Galvanized Iron as shown, and all Brass parts are Polished and Nickel Plated, add $15.00.

Dimensions:

Diameter of Bowl	9½″
Wall to Center of Bowl	8″

Plate 753 "Royal Pembroke"

NICKEL PLATED CAST BRASS BUBBLING HEADS

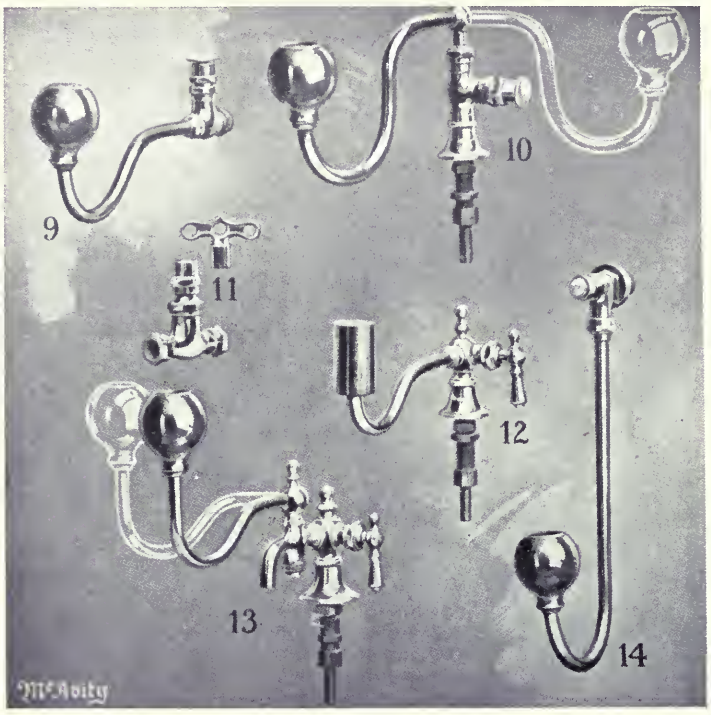


Plate 761

Figure 9.—Nickel Plated Cast Brass Bubbling Head, with Push Button; Self-Closing Stop.
Price, each..... **$8.50**

Figure 10. — Nickel Plated Cast. Brass Bubbling Head (Swinging Type), with Push Button; Self-Closing Basin Cock to Fit through Lavatory Top **$10.00**

Figure 11. — Nickel Plated Cast Brass Loose-Key Compression Stop. Can substitute this for any of the Self-Closing Stops shown. Price, each.. **$6.00**

Figure 12. — Nickel Plated Brass Light-Weight Stationary Bubbling Head, with Fuller Cock to Fit through Lavatory Top.
Price, each..... **$6.00**

Figure 13. — Nickel Plated cast brass bubbling head is (swinging type), with combination ground key and Fuller cock to fit through lavatory top. When Head is swung to one side, water will pass through Spout. When Head is Parallel with Spout, water will pass only through Bubbling Head.
Price, each..... **$10.50**

Figure 14.—Cast Brass stationary Bubbling Head, with Push Button; Self-Closing Stop having China Plate marked "Push."
Price, each..... **$8.50**

Figure 14 can be furnished with By-Pass, allowing water to run constantly—a desirable feature during warm weather. Extra for By-Pass, $1.00 each.

Give Horizontal and Vertical lengths in ordering Figure 14—Horizontal only for others.

In ordering please state Figure and Plate Numbers.

China Bubbling Heads

Figure 25.—China Bubbling Head, with Nickel Plated Self-Closing Valve and Volume Regulator.
Price, each..... **$8.15**

Figure 26.—China Bubbling Head.
Price, each..... **$8.00**

Figure 27.—China Bubbling Head with Volume Regulator.
Price, each..... **$4.00**

Figure 28.—China Bubbling Head, with Nickel Plated Brass Lever Handle, Self-Closing Stop.
Price, each..... **$8.15**

Figure 29.—China Bubbling Head, with Push Button, Self-Closing Stop.
Price, each..... **$10.50**

In ordering please state Figures and Plate numbers.

DRINKING FOUNTAINS

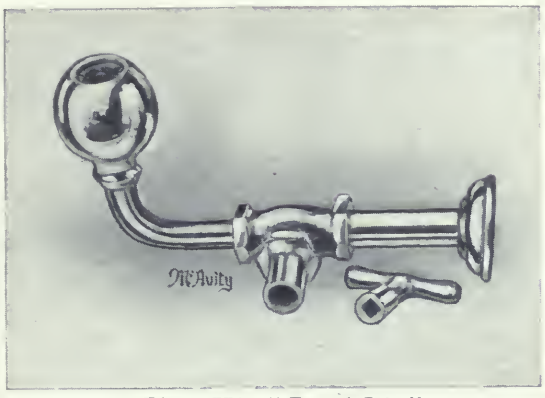


Plate 771 "Royal Iris"

McAvity's Nickel Plated Wall Bubbling Head, with Loose Key Compression Stop.

This fixture can be furnished any desired length from Wall.

Prices upon application.

Plate 772

Fitting for Porcelain Drinking Fountain

Sold with or without Bubble Head; Diameter of Flange 4½"; Extreme Opening between Flanges 2"; Inlet Tapped ½" I.P. Size; Outlet 1¼" Tubing.

Price, each, with Bubble Head..... $20.00
Price, each, without Bubble Head..... 18.00

KEITH DESIGN BUBBLING HEADS

Plate 773
Without Mouth Guard

Diameter of head 2". Height, 3". Threaded ¼" I. P. female.

B-42. Nickel Plated brass bubbler, with Nickel Plated brass U-shaped mouth Guard. **Each $14.00.**

B-40. Nickel Plated brass bubbler. **Each $12.00.**

The bubbling head will give a uniform height of stream **under all pressures,** as it contains an automatic pressure regulator. This a desirable feature where the main pressure varies greatly during the day, or where there are a number of bubbling heads placed on one line.

It is provided with a by-pass, which makes it impossible for the mischievously-inclined to squirt water from it.

Plate 774 shows U-shaped mouth guard attached to bubbling head. It is made specially for use in conjunction with these heads, and is attached in place of the lower locknut ring shown in Plate 773.

These heads may be substituted for any of those shown on complete fountains throughout this book, at additional expense.

Plate 774
With Mouth Guard

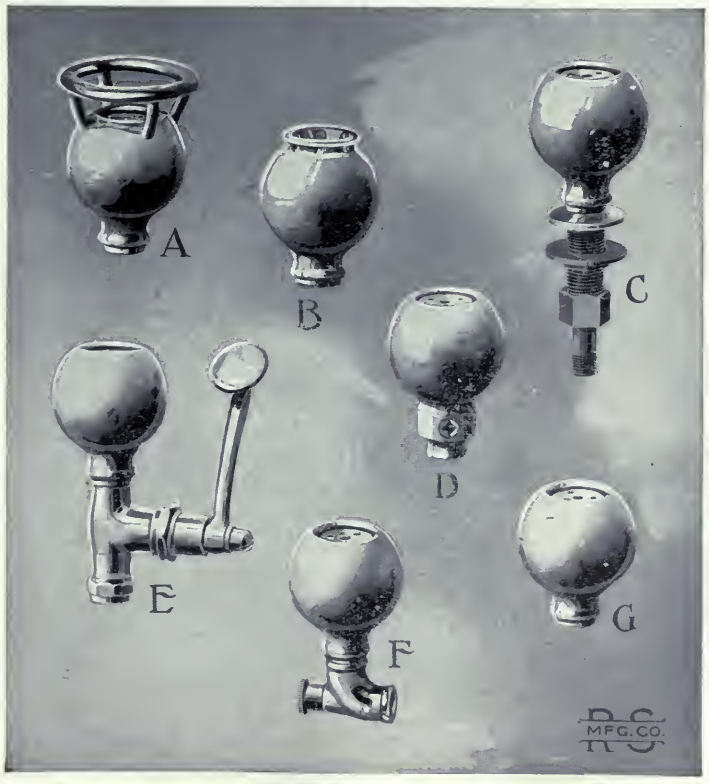


Plate 775

Plate A.—Nickel Plated Cast Brass Bubbling Head, with Mouth Guard.
Price, each..... $5.50

Plate C.—Nickel Plated Cast Brass Bubbling Head, with Flange Locknut and Tailpiece.
Price, each..... 5.50

Plate D.—Nickel Plated Cast Brass Bubbling Head, with Volume Regulator.
Price, each..... 4.70

Plate E.—Nickel Plated Cast Brass Bubbling Head, with Lever Handle Self-Closing Stop.
Price, each..... 7.50

Plate F.—Nickel Plated Cast Brass Bubbling Head, with volume regulator.
Price, each..... 6.00

Plate G.—Nickel Plated Cast Brass Bubbling Head.
Price, each..... 3.20

If Plate E is furnished with By-Pass, extra, $2.00 each.

These heads and all of similar Pattern throughout Catalog are made with waste hole, causing them to empty after using.

Above heads are furnished for ¼" Iron Pipe; ⅜" size to order.

SOLID PORCELAIN SINKS

Plate 781 " Royal Trojan "

McAvity's Solid Porcelain Kitchen Sink with Integral Back and Wooden Drain-Board, set upon Two Porcelain Legs; fitted with "Royal Presto" Nickel Plated Quick Opening Compression Faucets, with China Indexed Lever Handles; Nickel Plated Strainer and Nickel Plated 1½" P. Trap to Wall.

Sizes of Sinks

	24" x 22" x 7½"	30" x 22" x 7½"	36" x 24" x 7½"
Height of Back	9"	9"	9"

Drain-Board can be furnished 24" x 30" long for Right or Left. Prices upon application.

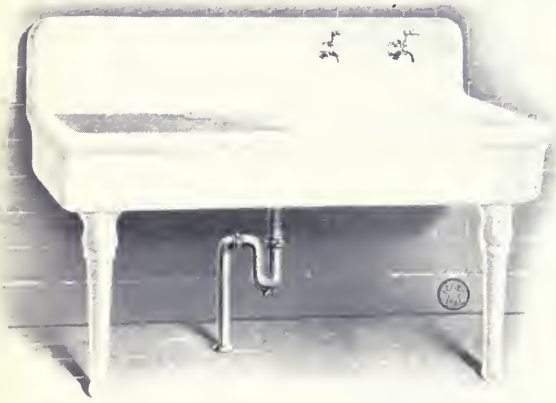


Plate 783 " Royal Dixie "

McAvity's Solid Porcelain Integral High Back Slop Sink on Porcelain Trap ; fitted with " Royal Presto " Adjustable Flange Sink Faucets.

Sizes	20" x 18"	22" x 20"	24" x 22"
Height	13"	13"	13"
Depth	12"	12"	12"

Prices upon application.

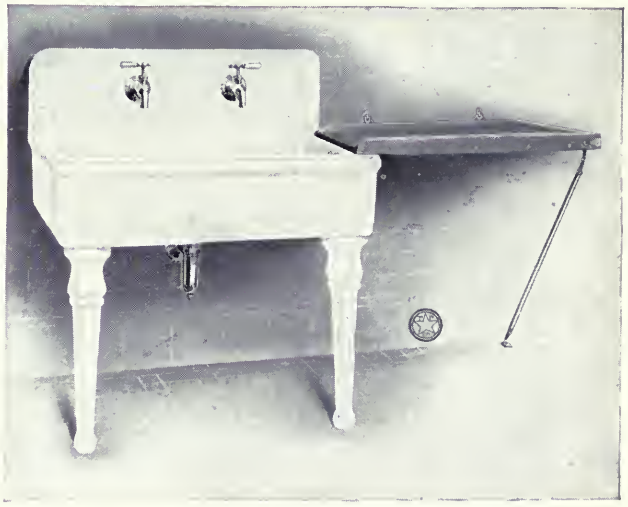


Plate 782 " Royal Dorval "

McAvity's Solid Porcelain Integral Back Sink with Porcelain Drain-Board for Rubber Mat, set on Two Porcelain Legs; fitted with " Royal Presto " Lever Handle Quick Opening Compression Faucets with Adjustable Flange; "Royal" Standing Waste and Overflow, with 1½" Nickel Plated Trap to Floor.

Dimensions:

Length over all	62"
Back	9"
Wall to Front	26½"

Prices upon application.

ENAMELED SLOP SINKS

McAvity's Porcelain Enameled Iron Roll Rim Slop Flat Wall Sink with 12″ Integral Back, supported on Full S Trap with Cleanout; fitted with "Royal Presto" Faucets with Adjustable Flanges; Air Chambers and Nickel Plated Strainer; Sink and Trap Painted One Coat White Outside.

Can also be furnished Enameled all over.

Sizes	16″x 20″	18″x 22″	20″x 22″	20″x 24″
Complete as Described.....	**$48.95**	**$54.10**	**$57.10**	**$60.10**
Sink only, Less Fittings.....	**40.35**	**45.50**	**48.50**	**51.50**

Plate 791 Royal "Nelson"

Plate 792 Royal "Enfield"

McAvity's Porcelain Enameled Iron Roll Rim Corner Slop Sink with 12″ Separate Back, supported on Full S Trap with Cleanout; fitted with "Royal Presto" Faucets with Adjustable Flanges; Air Chambers and Nickel Plated Strainer; Sink and Trap Painted One Coat White Outside.

Sizes	16″x 20″	20″x 22″
Complete as described.....	**$54.85**	**$64.65**
Sink only, Less Fittings.....	**45.25**	**55.05**
Slop Sink only, without back	**36.25**	**43.05**

ENAMELED SLOP SINKS

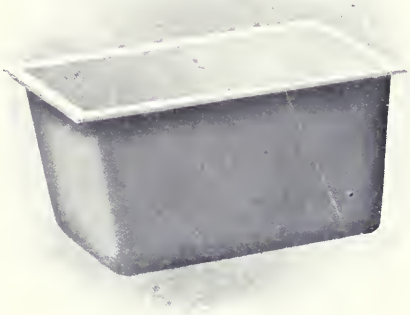


Plate 801 "Royal Como"

McAvity's Porcelain Enameled Flat Rim Slop Sinks with 2″ Centre Outlet and Nickel Plated Strainer.

Sizes Inches	Prices	Sizes, Inches	Prices
16 x 16 x 10	$11.30	24 x 20 x 12	$18.25
16 x 16 x 12	12.15	30 x 20 x 12	31.80
20 x 14 x 12	13.15	36 x 20 x 12	38.50
20 x 16 x 12	15.35	36 x 21 x 16	53.70
22 x 20 x 12	17.40	48 x 20 x 12	47.45
23 x 15 x 15	16.50	48 x 20 x 17	on applica.
24 x 18 x 12	16.50	72 x 20 x 12	"

McAvity's Porcelain Enameled Flat Rim Deep Sink (with Overflow) with Nickel Plated Strainer, Bolts and Couplings.

Dimensions:

18″ Wide, 30″ Long, 8″ Deep

Can be furnished with Plug and Stopper.

Price..... $17.25

Plate 802 " Royal Alma "

Plate 803 " Royal Elgin "

McAvity's Porcelain Enameled Flat Rim Deep Sink (No Overflow) Complete with Nickel Plated Strainer, Bolts and Couplings.

Dimensions:

18″ Wide, 30″ Long, 8″ Deep

Can be furnished with Plug and Stopper.

Price..... $13.20

McAvity's Porcelain Flat Rim Pantry Sink with End Recess, Glazed Inside, White, and can be furnished with or without Overflow.

Sizes.....	20″ x 14″	23″ x 16″	24″ x 17″
Depth.....	5″	6″	6″

Prices upon application

Plate 804 " Royal Senneville "

GREASE TRAPS

Plate 811 "Royal Devon"

McAvity's Porcelain Enameled Iron Grease Trap; fitted with 2" Polished Inlet, Outlet and Vent Connections with Removable Top and Swivel Bolts; Traps furnished regularly Outside Painted.

Dimensions:

Length 13", Width 10", Height 10".

Price.....$65.00

Plate 812 "Royal Derby"

McAvity's Porcelain Enameled Iron Grease Trap; fitted with 2" Polished Brass Inlet, Outlet, and Vent Connection, and Hand Hole Cover Trap is furnished regularly with Outside Painted White.

Diameter 14" Height 8½"

Price.....$70.00

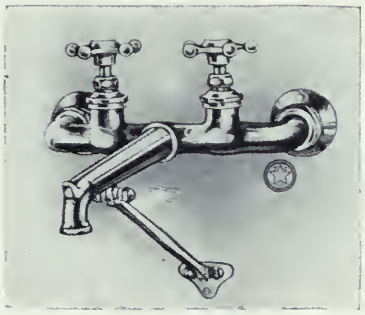


Plate 813 "Royal Beaupré"

McAvity's Compression Double Slop Sink Faucet with Bucket Hook and Wall Support.

Price.....$12.00

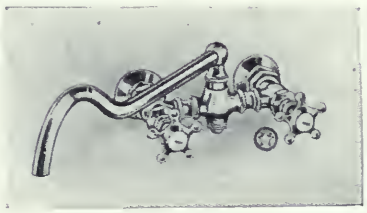


Plate 814 "Royal OK."

McAvity's Compression Double Sink or Laundry Tray Faucet with Long Swing Nozzel.

Price.....$10.00

Plate 815 "Royal Rothesay"

McAvity's Porcelain Enameled Cast Iron Culinary Table. A Necessity for the Efficient Kitchen. Here is an entirely new idea in Modern Kitchen furnishing — a Snow White, Durable, Sanitary Table without legs.

This Table is not a Plumbing Fixture, rather it is a Piece of Kitchen Furniture.

It is made of Porcelain Enameled Iron; the same Material used in our beautiful Kitchen Sinks and Built-in Baths. It Measures 45" in Length, 22" in Width and has a Back 10" high. It is made in One Piece without a crack, joint or crevice.

The Left Half is made Perfectly Level, While in the Right Half there is a Slight Depression, so that this part makes an ideal mixing place. The Table is fastened to the wall by very strong invisible Hangers by means of which the Table can be set at any desired height.

Price.....$40.00

ENAMELED SINKS

Plate 821. "Royal Westmount"

McAvity's Porcelain Enameled Cast Iron Sink Combination, with Sink, Apron, Back, and Right and Left Hand Drain-Boards in One Piece, supported on Concealed Wall Hangers and Porcelain Enameled Adjustable Legs; fitted with "Royal World" China Indexed, Adjustable Flanged Compression Faucets; Nickel Plated Strainer; Vulcan Air Chambers and "Royal" P 1½" (No Vent) Trap to Wall.

Dimensions:

Sizes	Sink	Drain-Boards
20" x 30" 22" x 32"	20¼" x 26¼" 22" x 28"	20¼" x 24" 22" x 25"

Back	Apron	Length Over All	Width Over All
12" 12"	5½" 6"	74¼" 78½"	20¼" 22"

Sizes.....	20" x 30"	22" x 32"
Sink Complete as Described	**$187.50**	**$200.00**
" only, less Fittings....	**172.50**	**185.00**

McAvity's Porcelain Enameled Cast Iron Right Hand Corner Sink Combination, with Sink, Apron, Back, End and Drain-Board, in One Piece, supported on Concealed Hangers, and Porcelain Enameled Adjustable Leg; fitted with "Royal World" China Indexed, Adjustable Flanged Faucets; Nickel Plated Strainer; Air Chambers, and "Royal" P 1½", (No Vent,) Trap to Wall.

Dimensions;

Sink	Drain-Board	Back	Apron	Length OverAll	Width Over All
20"x30"	20"x24"	12"	5½"	52½"	20¼"

Sink Complete as Described.....$128.25
" only, Less Fittings..... **113.50**

Can also be furnished for Left Hand Corner.

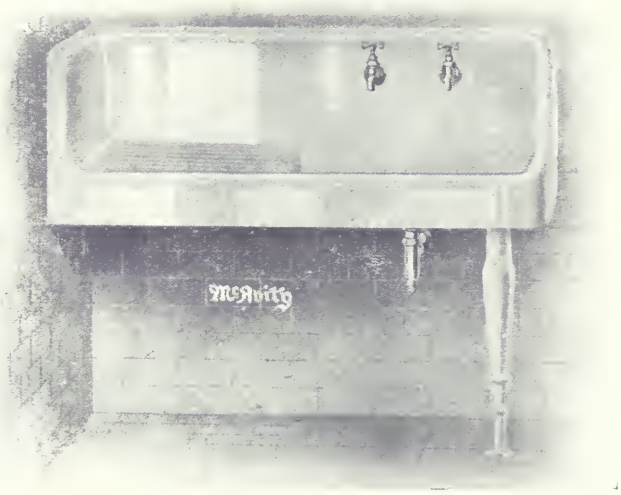


Plate 822 "Royal Outremont"

Plate 823 "Royal Bridgetown"

McAvity's Porcelain Enameled Cast Iron Sink Combination, with Sink, Apron, Back, and Drain-Board all in One Piece, supported on Concealed Wall Hangers and two Enameled Iron Adjustable Legs; fitted with "Royal World" China Indexed, Adjustable Flanged, Compression Faucets; Nickel Plated Strainer; Air Chambers, and 1½" "Royal" P Trap to Wall.

Dimensions:

Sink	Drain-Board	Back	Apron	Length Over All	Width Over All
20"x30"	20"x24"	12"	5½"	52½"	20¼"

Sink Complete as Described.....$129.00
" only, Less Fittings..... **113.75**

Can also be furnished with Drain-Board on Left Hand Side.

The Legs Regularly furnished allow Rim of Sink to be Adjusted from 30" to 36" from the Floor.

For Faucets and Traps see pages 160 - 170

ENAMELED IRON SINKS

McAvity's Porcelain Enameled Cast Iron Sink with Right and Left Hand Drain-Boards, without Apron, in One Piece, supported on Concealed Wall Hangers, and Two Painted Adjustable Legs; fitted with "Royal World" China Indexed, Adjustable Flanged Compression Faucets; Nickel Plated Strainer; Air Chambers, and 1½" "Royal" P (No Vent) Trap to Wall.

Dimensions:

Sizes	Sink	Drain-Boards
20" x 30" 22" x 36"	20¼" x 26¼" 22" x 23"	20¼" x 24" 22" x 23"

Back	Length Over All	Width Over All
12" 12"	74¼" 78"	20¼" 22"

Sink Complete as Described 20 x 30 . . . **$145**
" " " " **130**
" only, Less Fittings 20 x 36 . . . . . **150**
" " " " " **135**

Plate 831 "Royal Wellington"

Plate 832 "Royal Hyacinthe"

McAvity's Porcelain Enameled Cast Iron Sink, for Left Hand Corner, without Apron, cast in One Piece, supported on Concealed Wall Hanger and Adjustable Painted Leg; fitted with "Royal World" China Indexed, Adjustable Flanged Compression Faucets; Nickel Plated Strainer; Air Chambers, and 1½" "Royal" P (No Vent) Trap to Wall.

Dimensions:

Sink	Drain-Board	Back	Length over all	Width over all
20" x 30"	20" x 24"	12"	52½"	20¼"

Sink Complete as Described . . **$104.00**
" only, Less Fittings **89.00**

Can also be furnished for Right Hand Corner.

McAvity's Porcelain Enameled Cast Iron Sink, with Right Hand Drain-Board in One Piece, supported on Concealed Wall Hanger and Adjustable Painted Legs: fitted with "Royal World" China Indexed, Adjustable Flanged Compression Faucets; Nickel Plated Strainer; Air Chambers, and 1½" "Royal" P Trap to Wall.

Dimensions:

Sink	Drain-Board	Back	Length over all	Width over all
20" x 30"	20" x 25"	"12"	52½"	20¼"

Sink Complete as Described . . . **$94.50**
" only, less Fittings **79.50**

Can also be furnished with Drain-Board on Left Hand Side.

The Legs regularly furnished allow Rim of Sink to be adjusted from 30" to 32" from Floor.

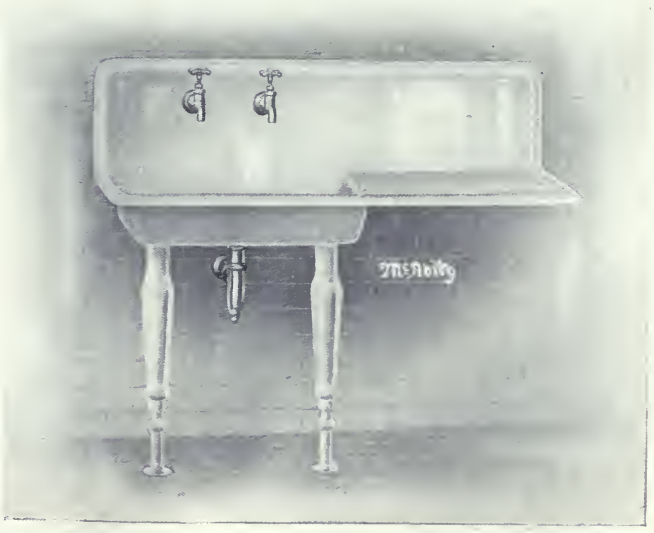


Plate 833 "Royal Lakeside"

For Faucets and Traps see pages 160-170.

ENAMELED CAST IRON SINKS

Plate 841 "Royal Perth"

McAvity's Porcelain Enameled Cast Iron Sink, with Apron and Back in One Piece, supported on Concealed Wall Hanger, and fitted with "Royal World" China Indexed Compression Faucets; Nickel Plated Strainer; Air Chambers, and 1½" "Royal" P Trap to Wall.

Dimensions:
Back, 12" Apron, 5½"

Sizes	18" x 30"	20" x 30"	20" x 36"
Sink Complete as Described	$58.80	$60.70	$66.90
" only, Less Fittings	43.50	45.45	51.50
Sizes	20" x 40"	22" x 36"	22" x 42"
Sink Complete as Described	$73.15	$72.50	$78.10
" only, less Fittings	57.90	57.30	62.85

McAvity's Porcelain Enameled Cast Iron Sink for Left Hand Corner, with Sink, Apron, Back and End cast in One Piece, supported on Concealed Wall Hanger; Enameled Adjustable Leg and fitted with "Royal World" China Indexed Compression Faucets; Nickel Plated Strainer; Air Chambers, and 1½" "Royal" P Trap to Wall.

Dimensions:
Back, 12" Apron, 5½"

Sizes	18" x 30"	20" x 30"	20" x 36"
Sink Complete as Described	$72.50	$76.30	$82.80
Sink only, less Fittings	60.40	63.20	69.70
Sizes	20" x 40"	22" x 36"	22" x 42"
Sink Complete as Described	$89.10	$89.10	$94.70
" only, less Fittings	76.00	76.00	81.60

Can also be furnished for Right Hand Corner or without Pedestal Leg.

Plate 842 "Royal Breton"

Plate 843 "Royal St. Louis"

McAvity's Porcelain Enameled Cast Iron Sink for Right Hand Corner, with Sink, Back and End, in One Piece, supported on Concealed Wall Hanger and Painted Adjustable Leg; fitted with "Royal World" China Indexed Compression Faucets; Nickel Plated Strainer; Air Chambers; and 1½" "Royal" P Trap to Wall.

Dimensions:
Back, 12"

Sizes	16" x 24"	18" x 24"	18" x 30"	18" x 36"
Sink Complete as Described	$49.50	$51.50	$53.65	$57.40
" only, less Fittings	36.35	38.40	40.50	44.75
Sizes	20" x 30"	20" x 36"	20" x 40"	22" x 36"	22" x 42"
Sink Complete as Described	$55.80	$60.10	$65.35	$65.25	$68.55
Sink only, less Fittings	42.65	46.95	52.20	50.10	55.50

For Faucets and Traps see pages 160 - 170.

ENAMELED IRON SINKS

McAvity's Porcelain Enameled Cast Iron Sink, with Integral Back, Separate High Back Drain-Boards, Underside Painted White, supported on Concealed Wall Hangers; fitted with "Royal World" Tee Handle Compression Faucets; Nickel Plated Strainer and 1½" "Royal" P Trap to Wall.

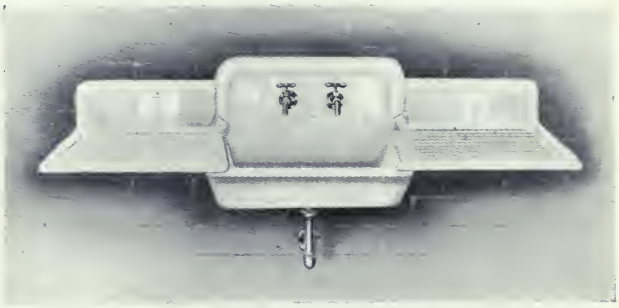


Plate 851 "Royal La Tour"

Sizes	18" x 30"	20" x 36"
Complete as Described	$70.50	$79.00
Sink and Drain-Board only	58.50	67.05

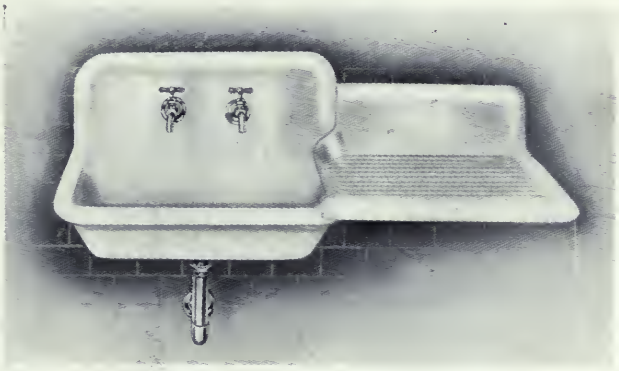


Plate 852 "Royal Truro"

McAvity's Porcelain Enameled Cast Iron Sink, with Integral Back and Separate Right Hand High Back Drain-Board, Underside Painted White, supported on Concealed Brackets; fitted with "Royal World" Tee Handle Compression Faucets; Nickel Plated Strainer, and 1½" "Royal" P Trap to Wall.

Sizes	18" x 30"	20"x 36"
Complete as Described	$52.50	$61.05
Sink and Drain-Board only	40.50	49.05

McAvity's Porcelain Enameled Cast Iron Sink, with Integral Back, Separate Interchangeable Drain-Board, without Back, Underside of Sink Painted White, supported on Concealed Wall Hangers; fitted with "Royal World" China Indexed Cross Handle Compression Faucets; Nickel Plated Strainer; and 1½" "Royal" P Trap to Wall.

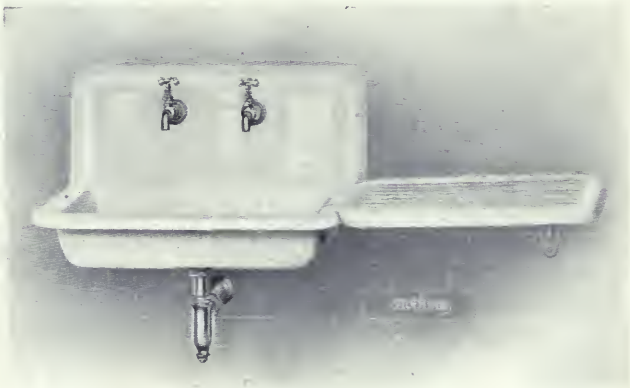


Plate 853 "Royal Campellton"

Sizes	16" x 24"	18" x 30"	20" x 36"
Complete as Described	$41.50	$47.75	$54.25
Sink and Drain Board	30.05	36.30	42.75

For Faucets and Traps see pages 160-170.

O.S.

ENAMELED CAST IRON SINKS

Plate 861 "Royal Dalhousie"

McAvity's Porcelain Enameled Cast Iron Sink, with Integral Back, supported on Concealed Wall Hanger, Outside Painted White; fitted with "Royal World" China Indexed Compression Faucets; Nickel Plated Strainer; Air Chambers and "Royal" P Trap to Wall.

Dimensions:

Centre to Centre of Supplies, 16"x24", 8"; Centre to Centre of Supplies, 18"x30", 10"; Centre of Outlet to Wall, all sizes, 6".

	Complete	Sink only		Complete	Sink only
16"x24"	$33.25	$18.00	20"x36"	$46.30	$31.05
18"x24"	33.70	18.45	20"x40"	51.00	34.85
18"x30"	37.80	22.50	22"x30"	44.50	29.30
20"x30"	39.50	24.30	22"x36"	49.05	33.80
18"x36"	44.50	29.30	22"x42"	53.20	37.95

McAvity's Porcelain Enameled Flat Rim Sink, Complete with Nickel Plated Strainer, Bolts and Couplings.

Sizes	Prices.
12"x18"	$7.20
14"x20"	8.90
16"x24"	9.70
18"x24"	10.45
18"x30"	10.05
18"x36"	14.65
20"x30"	11.20
20"x36"	16.05
20"x40"	21.40
22"x48"	27.45
24"x60"	72.90
20"x72"	101.75

Sinks can be furnished from 12"x12" to 24"x72.

Plate 862 Enameled Cast Iron Sinks

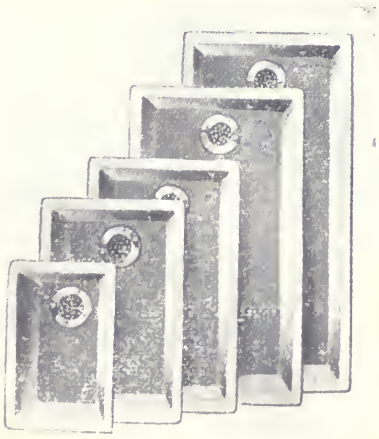


Plate 863 Cast Iron Sinks, not Enameled

Sizes	Prices	Sizes	Prices
12"x18"	$2.75	20"x30"	$3.25
14"x20"	3.00	20"x36"	5.50
16"x24"	3.45	20"x40"	6.50
18"x24"	4.00	22"x48"	....
18"x30"	4.50	24"x60"	....
18"x36"	5.15		

For all other Sizes, Prices will be Furnished on Application.

DRAIN-BOARDS

McAvity's Porcelain Enameled Roll Rim High Back Drain-Boards on Concealed Wall Hanger.

Made to fit size 18″ and 20″ Roll Rim Sink; Right and Left.

Price, 18″	$17.95
" 20″ (Height of Back 8″)	18.90

Plate 871 " Royal Bristol "

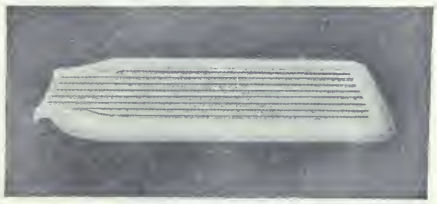


Plate 872 " Royal Parrsboro "

McAvity's Porcelain Enameled Drain-Boards on Brackets.

Made to fit sizes of 16″, 18″, and 20″ Flat Rim and Roll Rim Sinks.

Sizes	Price
16″ x 20″	$10.85
18″ x 24″	11.10
20″ x 24″	11.70

McAvity's Interchangeable Hardwood Drain-Boards with Porcelain Enameled End to fit over Roll Rim Sinks.

Width	18″	20″	22″
18″ Long	$6.25	$6.65	$7.50
24″ "	7.50	7.95	8.55
30″ "	9.35	9.80	10.55

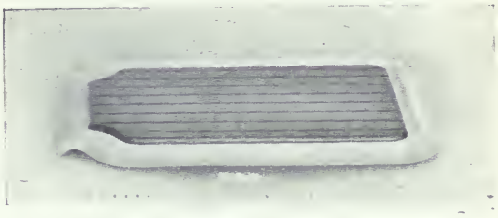


Plate 873 " Royal Linwood "

McAvity's Interchangeable Hardwood Drain-Board for Roll or Flat Rim Sink.

Width	Length	Price	Width	Length	Price
18″	18″	$4.35	20″	24″	$5.75
18″	20″	4.55	20″	30″	7.35
18″	22″	4.95	20″	36″	8.30
18″	24″	5.25	22″	18″	5.25
18″	30″	6.75	22″	24″	6.30
18″	36″	7.70	22″	30″	7.70
20″	18″	7.70	22″	36″	8.85

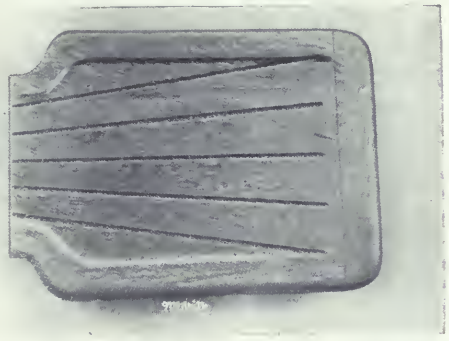


Plate 874 " Royal Rockwood "

McAvity's Corrugated Rubber Drain-Board Mat for Interchangeable Drain-Boards.

Width	18″	20″	22″
18″ Long	$3.95	$4.35	$4.80
24″ "	5.10	5.55	5.85

Plate 875 " Royal Cartier "

SINK FITTINGS

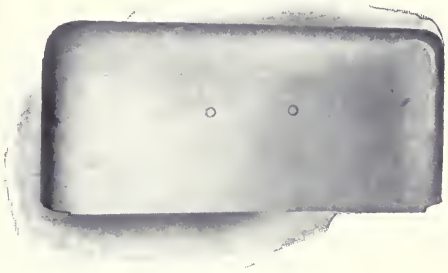


Plate 881

McAvity's Porcelain Enameled Sink Backs, with 1½″ Roll. Height 12″

Length	Price
20″	$4.80
24″	6.20
30″	7.50
36″	9.35

Plate 882

Cast Iron Sink Cups.

Price, per Doz..... $3.00

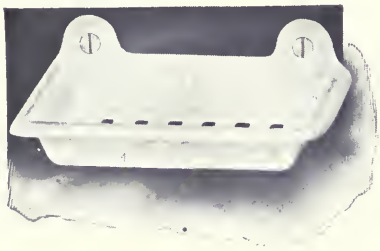


Plate 883

Nickel Plated Sink and Laundry Tray Soap Holders.

Price, per Doz..... $7.00

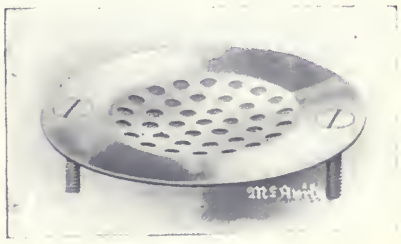


Plate 884

Nickel Plated Sink Strainers.

Price, per Doz..... $8.00

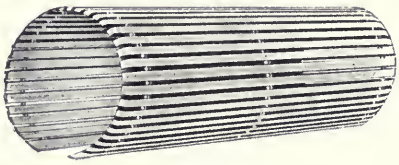


Plate 885

Wooden Sink Mats.

	24″	36″
Price, each.....	$3.00	$4.00

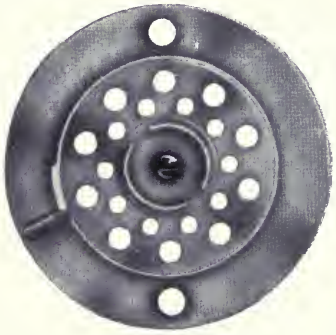
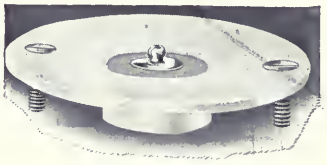


Plate 886

Nickel Plated Closing Sink Strainer

Price, per Doz..... $12.00



Enameled Iron Plug Stainer.

Price, each. $1.00

Plate 887

Cast Iron Sink Strainer.

Price, per Doz... $3.00

Plate 888

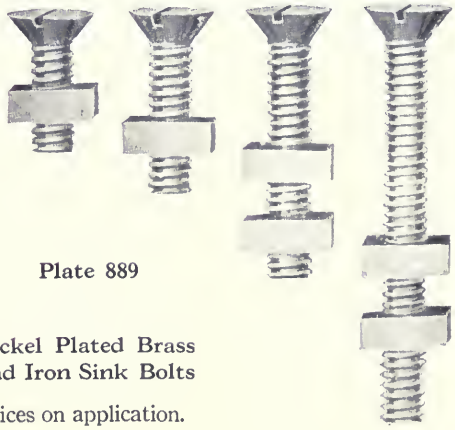


Plate 889

Nickel Plated Brass and Iron Sink Bolts

Prices on application.

SINK FITTINGS

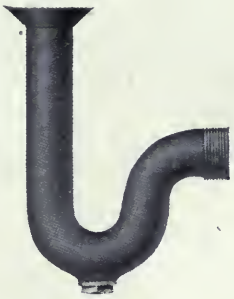


Plate 891

Cast Iron P. Trap. Threaded for 1¼″ and 1½″ Iron Pipe.

1¼″, each..... $2.50
1½″, " 3.00

Plate 892

Cast Iron Full S Sink. Trap. Threaded for 1¼″ and 1½″ Iron Pipe.

These Cast Iron Traps can also be furnished Threaded for Nickel Plated Slip Joint connection.

1¼″, each..... $2.50
1½″, " 3.00

Plate 893

Cast Iron Air Chambers

Tapped, ½″ x ½″, ¾″ x ½″, ¾″ x ¾″
Price, per Pair..... $2.65

Plate 894

Cast Iron Sink Cups for Iron Pipe. Threaded 1½″
Price, each..... $ .40

Plate 895

Cast Iron Sink Brackets
Price, per Pair..... $1.35

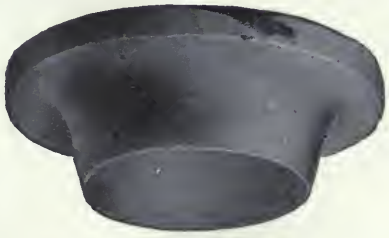


Plate 896

Rubber Sink Gasket
Price, per Doz..... $ .80

Plate 897

Rubber Suction Sink Stopper
Price, per Doz..... $3.00

SINK AND LAUNDRY TRAYS

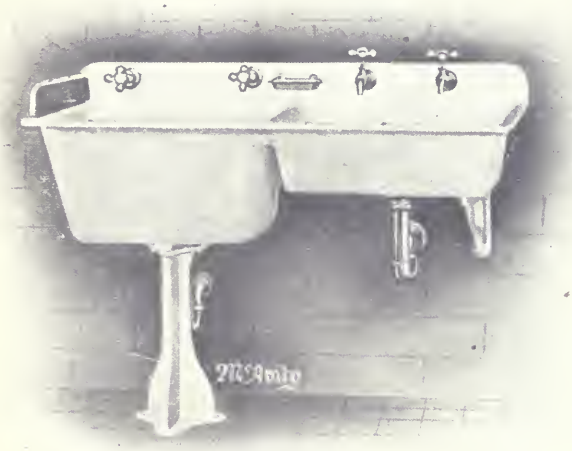


Plate 901 "Royal Fredericton"

McAvity's Porcelain Enameled Cast Iron Roll Rim Sink and Laundry Tray Combination In One Piece, with Nickel Plated Strainer, Waste Plug and Stopper, Outside Painted White, supported on Painted Pedestal, and Sink with Adjustable Pedestal Leg; Wooden Drain-Board, and Fitted with two Nickel Plated "Presto" Compression Sink Faucets with Adjustable Flanges, and two "OK" Stub Wash Tray Bibbs; two 1½" "Royal" P Traps to Wall.

Dimensions:

Length Over Rim	50"
Length Inside Tray	21¾"
Width Inside Tray	19¼"
Depth of Tray	13"
Width Over Rim	23½"
Length Inside Sink	21¾"
Width Inside Sink	19¼"
Height of Back	8"
Floor to Top of Rim	30"

Complete as described with Right Hand (As shown) or Left Hand Sink **$123.75**
Combination only, Less Fittings **104.25**
For Wringer Holder on end or Center of Tray, add **4.00**

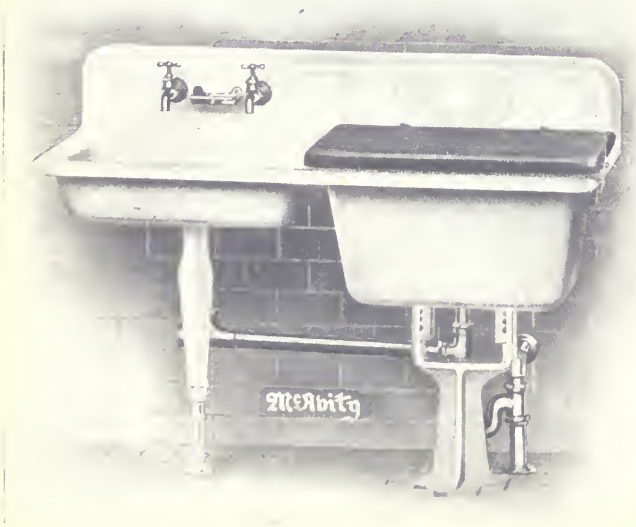


Plate 903 "Royal Beauport"

McAvity's Porcelain Enameled Cast Iron Flat Rim Sink and Laundry Tray Combination In One Piece, with Wringer Holder; Nickel Plated Soap Holder and Strainer; Waste Plug and Rubber Stopper; Outside Painted White, supported on Painted Cast Iron Pedestal and Wall Bracket; fitted with two World Sink Faucets and two "OK" Stub Faucets; Two Nickel Plated 1½" "Royal" P Traps to Wall.

Dimensions:

Length Over Rim	47"
Length Inside Tray	20¾"
Width Inside Tray	18"
Depth of Tray	13¼"
Width Over Rim	22"
Length Inside Sink	20¾"
Width Inside Sink	18"
Height of Back	4"
Floor to Top of Rim	32"

Complete as described with Right or Left Hand Sink **$66.50**
Combination only, Less Fittings **50.00**

Note.:—Wringer Holder can be supplied for end or centre of tray.

Plate 902 "Royal Batiscan"

McAvity's Porcelain Enameled Cast Iron Roll Rim Sink and Laundry Tray Combination in One Piece, with Nickel Plated Soap Holder and Strainer, Waste Plug and Stopper, Outside Painted White, supported on Painted Adjustable Pedestal with Adjustable Pedestal Leg for Sink. The Cover or Drain-Board raises on Hinges and Hooks against Wall; fitted with Two "World" Compression Faucets, with China Indexes; Two "OK" Stub Compression Faucets with China Indexes; Nickel Plated 1½" Continuous Waste with 1½" Full S Trap.

Dimensions:

Length Over Rim	50"
Length Inside Tray	21¾"
Width Inside Tray	19¼"
Depth of Tray	13¼"
Width Over Rim	25¼"
Length Inside Sink	21¾"
Width Inside Sink	19¼"
Height of Back	8"
Floor to Top of Rim	30"

Complete as described with Left Hand Sink (As shown) or Right Hand **$138.00**
Combination only with Drain-Board, Less Fitting **106.75**
For Wringer Holder on End or Centre of Tray, add **5.00**

ENAMELED LAUNDRY TRAYS

McAvity's Porcelain Enameled Cast Iron Flat Rim Laundry Tray, in One Piece, with Nickel Plated Soap Holders, Waste Plugs with Stoppers, Hardwood Wringer Holders on Centre and End of Tray, supported on Painted Pedestals; fitted with "OK" Stub Faucets, with Tee Handles; 1½" Nickel Plated Continuous Waste, with 1½" Vented "Royal" S Trap.

Dimensions:

Length over Rim.....46"
Width over Rim.....21"
Depth.....13"
Length Inside each Tray.....21"
Width Inside.....19"
Height of Back..... 4"
Floor to Top of Rim.....33"

Can also be furnished with Stands at extreme ends, instead of Pedestals as shown.

Complete as Described..... $73.40
Tray only, less Fittings..... 50.40

Plate 911 "Royal Woodstock"

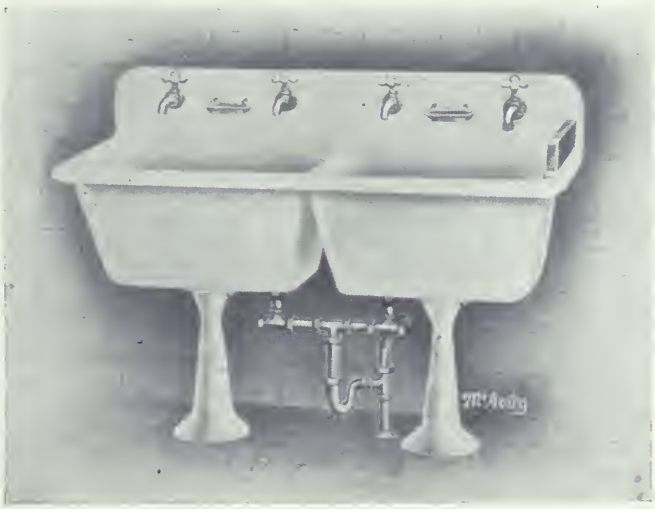


Plate 912 "Royal Campbellton"

McAvity's Porcelain Enameled Cast Iron Roll Rim Laundry Tray, with Nickel Plated Soap Holders, Waste Plugs and Stoppers, Wringer Holder, supported on Painted Cast Iron Pedestals; fitted with four "World" Compression Faucets, with Solid China Handles and Adjustable Flanges; 1½" Nickel Plated Continuous Waste with "Royal" 1½" Vented S Trap.

Dimensions:

Length over Rim.....53"
Width over Rim.....26"
Depth.....14"
Length Inside each Tray.....22⅜"
Width Inside.....21½"
Height of Back..... 8"
Floor to Top of Rim..... 31"
Complete as Described.....$127.00
Tray only, Less Fittings..... 90.85

McAvity's Porcelain Enameled Cast Iron Roll Rim Laundry Tray, in One Piece, with Nickel Plated Soap Holders, Plugs and Stoppers and Wringer Holder, supported on Painted Adjustable Pedestals; fitted with Four "World" Compression Faucets, with Operating Valve on side; "Royal" Continuous Nickel Plated Waste, with 1½" "Royal" S (Vented) Trap.

Dimensions:

Front to Back, Inside.....21¾"
" " Outside.....26"
Depth Inside.....14¼"
Length Inside, Each Section....23"
Length over all, Two Sections...53"
Height of Back..... 8"

Complete, as Described..... $133.00

Tray only, less Fittings..... 95.75

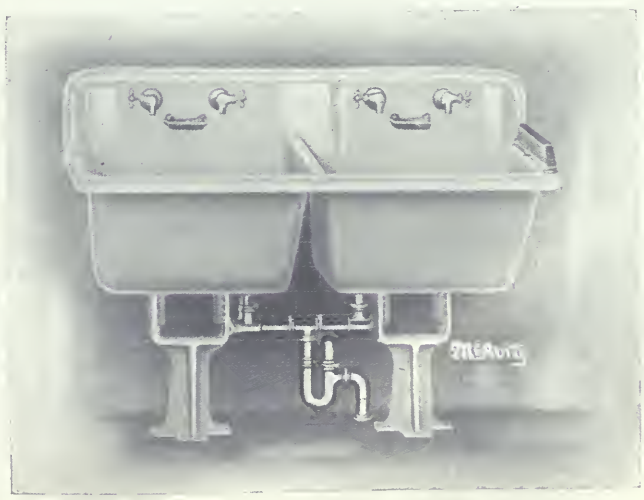


Plate 913 "Royal LaSalle"

ENAMELED LAUNDRY TRAYS

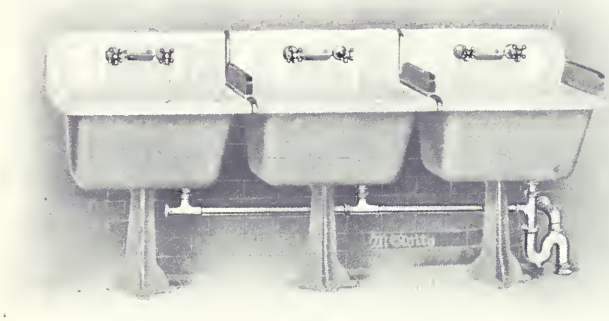


Plate 921 "Royal Maisonneuve"

McAvity's Porcelain Enameled Iron Roll Rim Laundry Tray, each Section having Integral Back, and united with heavy Nickel Plated Iron Strip which extends to Front to take Wringer Holder, supported on Painted Iron Pedestals, and equipped with Nickel Plated Soap Holder, Waste Plug and Stopper; fitted with "Royal OK" Faucets; "Royal" Continuous Waste, and 1½" Vented S Trap to Floor.

Dimensions:

Front to Back Inside	21¾"
" " Outside	26"
Depth Inside	14¼"
Length Inside each Section	23"
Height of Back	8"
Floor to Top of Rim	31¼"
Length over all Three Sections	83½"

Tray Complete as Described:

	Section 1	Section 2	Section 3
	$60.50	$100.00	$157.00
Tray only, less Fittings:	50.50	91.00	142.25

McAvity's Porcelain Enameled Iron Roll Rim Laundry Trays without Back. The Sections are united with Heavy Nickel Plated Iron Strip, which extends over the Rim to take the Wringer Holder, and are supported on Heavy Painted Cast Iron Pedestals; equipped with Nickel Plated Soap Holder, Waste Plug and Rubber Stoppers; fitted with "Royal OK" Compression Faucets; Nickel Plated 1½" Continuous Waste, and Vented 1½" "Royal" S Trap to Floor.

Dimensions:

Front to Back Inside	21¼"
" " Outside	26"
Depth Inside	14¼"
Length Inside each Section	23"
Floor to Top of Rim	31¼"
Length over all Three Sections	83"

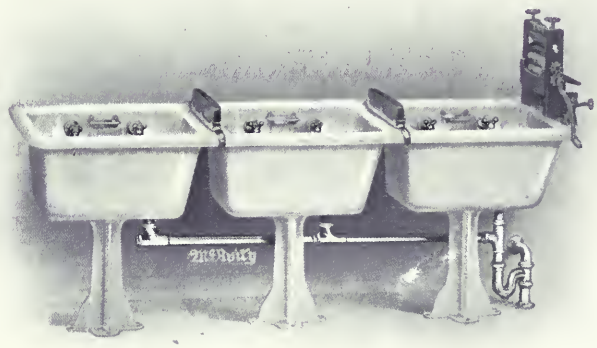


Plate 922 "Royal Carleton"

	Section 1	Section 2	Section 3
Complete as described	$56.00	$97.00	$143.50
Tray only, Less Fittings	43.00	75.85	113.50

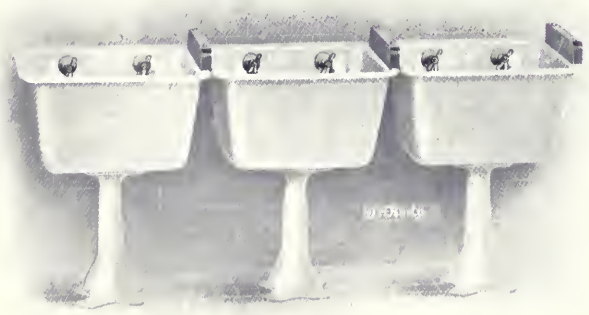


Plate 923 "Royal Newcastle"

McAvity's Porcelain Enameled Flat Rim Laundry Tray, with Wringer Holder Bolted directly through rim; fitted with "Royal OK" Faucets ; Nickel Plated Plugs and Rubber Stoppers.

Dimensions:

Front to Back Inside	19"
" " Outside	22"
Length over all, three sections	72½"
Depth inside	13¼"
Length inside each section	21¼"
Floor to Top of Rim	30¼"

	Section 1	Section 2	Section 3
Complete as described	$24.75	$49.50	$74.25
Tray only, Less Fittings	21.75	43.50	65.25

ENAMELED LAUNDRY TRAYS

McAvity's Porcelain Enameled Cast Iron Flat Rim Three Section Laundry Trays with Separate Backs, united with Heavy Nickel Plated Strips. The Strips extending to Front to take Wringer Holders. The Trays are supported on Heavy Cast Iron Adjustable Pedestals, and painted White Outside; equipped with Nickel Plated Soap Holders, Plugs and Stoppers; fitted with "World" Compression Faucets, with Operating Valves on Side; Nickel Plated Continuous Waste with 1½" "Royal" S Vented Trap.

Dimensions

Front to Back, Inside	21¾"
" " Outside	24¾"
Height of Back	12"
Depth Inside	14¼"
Length Inside Each Section	23"
Length over all Three Sections	78"

	Section 1	Section 2	Section 3
Complete as Described	$44.60	$95.00	$138.50
Tray only, less Fittings	32.60	69.75	106.85

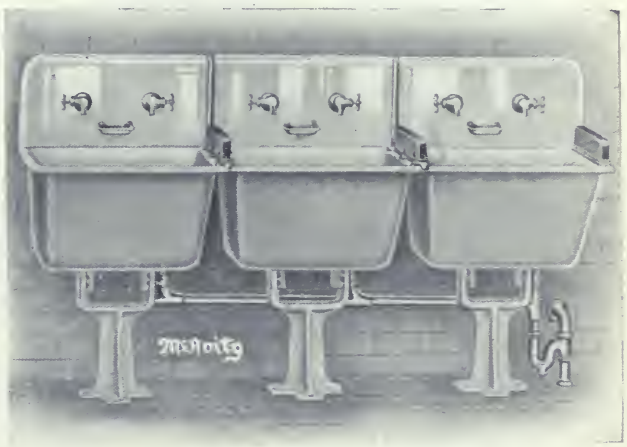


Plate 931 "Royal Kentville"

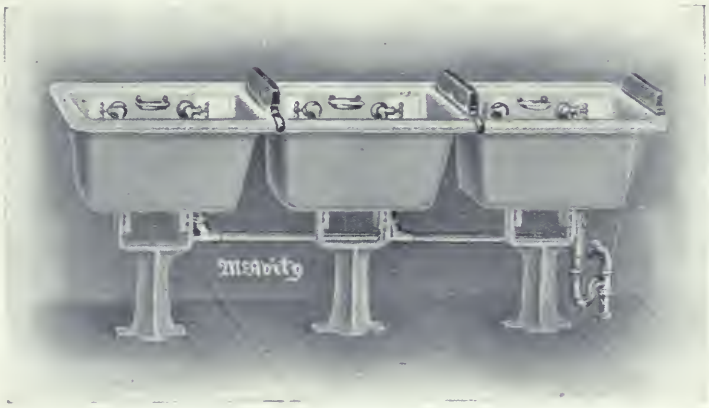


Plate 932 "Royal Rockland"

McAvity's Porcelain Enameled Cast Iron Flat Rim Three Section Laundry Trays without Backs, united with Heavy Nickel Plated Strips, with Wringer Holder attached. The Trays are supported on Heavy Adjustable Pedestals, and Painted White Outside; equipped with Nickel Plated Soap Holders, Plugs and Stoppers, and fitted with "World" Compression Faucets, with Operating Valve on Side; Nickel Plated Continuous Waste and 1½" "Royal" S Vented Trap.

Dimensions:

Front to Back, Inside	21¾"
" " Outside	24¾"
Depth Inside	14¼"
Length Inside each Section	23"
Length over all Three Sections	78"

	Section 1	Section 2	Section 3
Complete as Described	$37.35	$75.95	$107.60
Tray only, less Fittings	25.35	50.70	75.95

McAvity's Porcelain Enameled Two Section Laundry Tray cast in one piece, with Separate Back; supported on Painted Stands and Painted One Coat White on Outside; fitted with "Royal OK" Compression Faucets.

Complete as Described	$74.50
Tray only, less Fittings	66.30

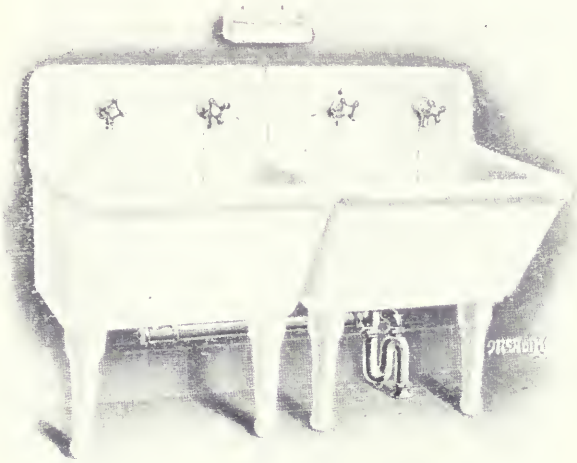
Dimensions:

Length over all	49½"
Height from Floor to Top of Rim	31"
Front to Back Outside	25½"
" " Inside	21"
Depth Inside	14½"

Can also be furnished without back if desired.

Plate 933 "Royal Gaspe"

LAUNDRY TRAYS



McAvity's Solid Porcelain Roll Rim Laundry Tray with Integral Backs; supported on Porcelain Legs; fitted with "Royal" Stub Compression Faucets, with China Indexed Handle; Nickel Plated Continuous Waste, with Vented 1½" "Royal" S Trap to Floor.

Sizes Outside..... 26" x 26" 29" x 26"
Depth Inside..... 14½"

Prices upon application.

Plate 941 "Royal Muskoka"

McAvity's Solid Porcelain Wide Flat Rim Laundry Trays, supported on Solid Porcelain Pedestals. Can be furnished in pure White or Buff.

Outside Length Over all....60"
" Width " ....30"
Inside Depth..... 15"

Prices upon application.

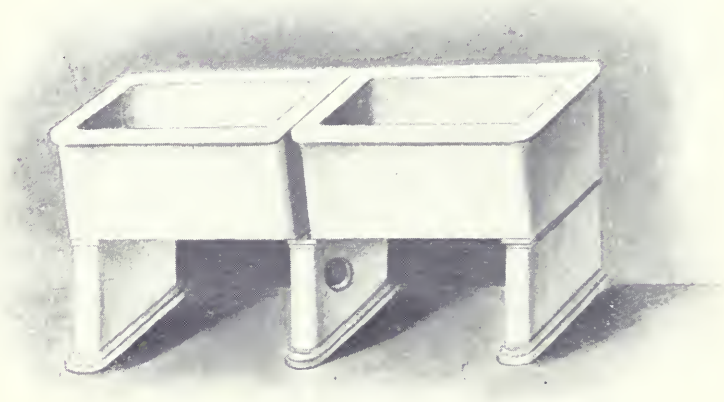
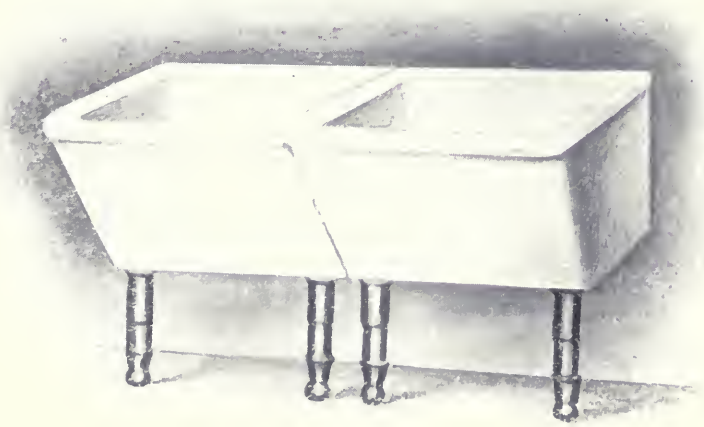


Plate 942 "Royal Colonial"



McAvity's Solid Porcelain Roll Rim Laundry Trays, supported on Painted Iron Pedestals. Can be furnished in pure White or Buff.

Outside Length Over all....60"
" Width " ...30"
Inside Depth " ...15"

Prices upon application.

Plate 943 "Royal Warwick"

LAUNDRY TRAYS

McAvity's Black Porcelain Enameled Laundry Trays with Separate Back, and Wash Board Cast in Tray, Two Wringer Holders; supported on Painted Iron Pedestals; fitted with "Royal Presto" Compression Quick-Opening Bibbs.

Dimensions:

Front to Back, Inside	19½"
" " Outside	22¼"
Length Inside	21½"
" Outside	24¼"
Height of Back	10"
" to Top of Rim	30¾"
Depth Inside at Outlet	13¼"

Price, 1 Section $30.00

Made in singles only, when two are required the back is furnished in one piece.

Plate 951 "Royal Hercules"

Plate 952 "Royal Stoneham"

McAvity's "Special" Cement Laundry Tray. This Tray has smooth finish, has clear Waste and Overflow of Internal Construction to Centre. Is protected by Metal Strip around top and mounted on Cast Iron Stands.

Depth Inside ..... 16"

Sizes	Single 24" x 24"	Double 24" x 48"
Tray with Stands	**$18.00**	**$22.00**
" without Stands, Deduct	**1.50**	**1.50**

Trays can also be furnished with Cement Pedestals.

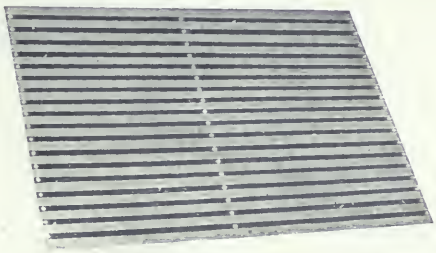


Plate 953
Wooden Landry Tray Mat

Size ..... 24" x 36"
Price, each $5.00

Plate 954
Laundry Tray Stands

Price, per Pair $3.50

AUTOMATIC CLOSETS

Plate 961. "Royal Autoven"

"Royal" Action A.

McAvity's, "Royal" Action Style A. Vitreous China Syphon Jet Bowl with raised Integral Vent; fitted with Nickel Plated "Royal" Seat Action Valve with Pipe to Wall; Piano Polished Oak Seat (No Cover) with Special Nickel Plated Hinges; Complete with Brass Floor Flange, Asbestos Gasket, Bolts, Washers and China Caps on Bolts.

Complete as described.....**$64.50**

For Nickel Plated Loose Key Shut off Valve, add..... **3.00**

For Rough Nickel Plated Gate Valve..... **7.00**

Golden Oak or imitation Mahogany Seats, may be furnished, no extra charge,

Plate 961. Is much in favor in Public Buildings, and can if desired be supplied with cast Iron or Porcelain Sanitary Floor Plated at additional charge.

"Royal" Action B.

McAvity's "Royal" Action Style B. Vitreous China Syphon Jet Bowl; fitted with Nickel Plated "Royal" Seat Action Valve with Pipe to Wall; Piano Polished Oak Seat (No Cover) with Special Hinges; Brass Floor Flange, Asbestos Gasket, Bolts, Washers, China Bolts Caps and Nickel Plated Escutcheon:

Complete as described.....**$50.00**

For Nickel Plated Loose Key Shutt off, add. **3.00**

For Rough Nickel Plated Gate Valve..... **7.00**

Golden Oak or imitation Mahogany Seats, may be furnished, no extra charge.

Plate 962. Is of neat, attractive design and a general favorite, can also be furnished with Sanitary Floor Plate, with additional charges.

Plate 962. "Royal Autosyph"

An Ideal School, Factory or Office Building Fixture. The Bowl is of heavy Vitreous China, and the valve in connection gives a small pre-flush when seat is depressed and when seat is released the large volume or flush is then secured. There is also a regulating screw on the side of the valve that is very sensitive. The smallest turn with a screw driver will make a very short or a very long flush. In other words, you can regulate the amount of water required by a very short turn of the regulating screw in either direction. These valves work best when under twenty or twenty-five pounds pressure but they will work satisfactorily under ten to fifty pounds pressure. When the pressure is more than fifty pounds it should be cut down materially by the loose key controlling valve which is part of the valve, otherwise the volume of water delivered to bowl will be so heavy that it will splash more or less, but by using the control valve this feature is eliminated.

AUTOMATIC CLOSETS

"Royal" Action C.

McAvity's "Royal" Action Style C. Vitreous China Syphon Action Wash-down Bowl with Nickel Plated "Royal" Seat Action Valve with pipe to Wall; Piano Polished Oak Seat (No Cover) with Special Nickel Plated Hinges; Complete with Brass Floor Flange, Asbestos Gasket, Bolts and Washers, China Bolt Caps, and Nickel Plated Escutcheon.

Complete as Described.....**$47.50**

For Nickel Plated Loose Key Shut off Valve, add..... **3.00**

For Rough Nickel Plated Gate Valve, add... **7.00**

Golden Oak or imitation Mahogany Seats, may be furnished, no extra charge.

Plate 971. Can be furnished with raised integral vent, or with extended Sanitary Lipped Front, and can be furnished with Floor Plate if desired.

Plate 971 "Royal Autoact"

Plate 972 "Royal Autova"

"Royal" Action D.

McAvity's "Royal" Action Style D. Heavy Vitreous China Syphon Action Wash-down Bowl with Nickel Plated "Royal" Seat Action Valve with Pipe to Wall; Piano Polished Oak Seat (No Cover) Nickel Plated Heavy Hinge; Complete with Brass Floor Flange, Asbestos Gasket, Bolts and Washers, China Bolts Caps, and Nickel Plated Escutcheon.

Complete as Described.....**$51.00**
For Nickel Plated Loose Key Shut off, add.. **3.00**
For Rough Nickel Plated Gate Valve, add... **7.00**

Golden Oak or imitation Mahogany Seats, may be furnished, no extra charge.

Plate 972. Is made with extra heavy Bowl, and is especially designed for Factories and Schools and can be furnished with Floor Plate, if desired, with additional charges.

PUSH BUTTON

LEVER

"KENNEY" FLUSHOMETER

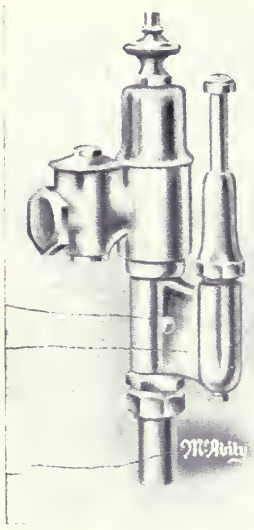


Plate 981

The Royal

T. McAVITY & SONS, LTD.

Licensed Manufacturers

Patented

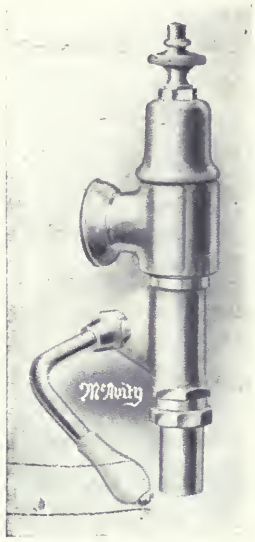


Plate 982

The above illustrations of Flushometers, Show designs with Lever Handle and Push Button with Integral Stop.

In operation, the "Kenney" Flushometer is very simple and positive in action. The raising of the lever handle first opens the relief valve, which allows the water to escape from the cylinder and permits the piston to rise to the top of the cylinder and a full flow of water to escape to the closet bowl, thus creating a perfect flush. This flush continues until the piston is forced down upon its seat by the water coming through the regulating screw. The length of flush is controlled by the speed with which the water pressure is formed on top of the piston by its passage through the slotted regulating screw. The regulating screw is operated from the top of the valve while the valve is under water pressure, so that the correct length of flush is given to each closet in a series. This means a great saving of water.

The " Kenney " Flushometer is designed for use with direct pressure or with tank systems and to work with ease and efficiency under any pressure, giving a quick flush of large volume at the start and finishing with a slow after flush of small volume.

Method of Operation

Pull the handle foreward for one second, let go and it will close of its own accord, slowly, against a high or low pressure.

The Flushometer should take from six to nine seconds to flush properly, as may be desired.

There are only two leather washers, one on the seat of the relief valve, and the other on the seat of the main valve, which valves can be unscrewed and new washers put on, if necessary. To do this, first unscrew the cap, then the valve cylinder, then the relief valve, which can be done without disconnecting any piping.

As the Flushometer has no springs or cup leathers, works automatically by gravity, is cushioned by the action of the water, the chance for wear or getting out of order is practically eliminated.

Be careful and see that White or Red Lead used in making joints does not get into the cylinder of the Flushometer. If this should occur, clean the outside of the cylinder, also main valve, to prevent adhesion or obstruction.

For Direct Pressure

The Flushometer No. 12 can be connected direct to the water supply without the use of any tank, column or chamber. In such cases the size of the water supply pipe from the building line to the Flushometer should be from 1¼" to 1½", according to distance and pressure. The service pipe from the street main to the building line should not be less than 1", and if the pressure is less than 25 pounds, should be 1½". The pressure at the highest Flushometer must be at least 10 pounds. If the service pipe is 1½", there should be two taps ⅝" each on the street main.

Four closets can be operated on a service such as above described. Where a greater number of closets are to be installed the size of the supply pipe should be increased.

For Tank Pressure

Place tank where convenient, but about 6' above the highest closet and run a pipe down to the various floors where the closets are to be located. A 1½" pipe is sufficient for from one to four closets. If there are more closets, run a 2" pipe down about 10' from the tank, and 1½" pipe for the rest. In all cases take out branches for inlets.

If the building is quite high, say ten stories or over, the two lower floors can be reduced to 1".

The size of the main supply line should not be governed by the size of inlet to the Flushometer.

Where the tank is from 6' to 12' above the closet, or where there is not more than six pounds pressure use the No. 11 Low Pressure Flushometer. 1½" inlet.

Where the tank is from 12' to 30' above the closet, or where the water pressure is from six to fifteen pounds, use the No. 12 High Pressure Flushometer, 1½" inlet.

Where the tank is from 30' to 100' above the closet, or where the water pressure is from fifteen to fifty pounds, use the No. 12½ Flushometer, 1" inlet.

Where the tank is more than 100' above the closet, or where the water pressure is more than fifty pounds, use the No. 12¾" inlet.

No. 16 Flushometer for use on Urinals. Low pressure, under 20 pounds. Inlet 1".

No. 16½ Flushometer for use on urinals. High pressure, over 20 pounds. Inlet ¾".

Tank Capacity: Where possible, the tank should have a capacity of six gallons to the closet. In large installments rigid adherence to this rule is not necessary, as six gallons to the closet provides for two flushes, one immediately following the other of each and every closet. As it is highly improbable that all closets would be used simultaneously, the rule can be modified to suit each individual.

KENNEY FLUSHOMETERS

Plate 991 "Royal Inverness"

T. McAvity & Sons, Ltd
Licensed
Manufacturers.

Patented

Plate 992 "Royal Nicolet"

McAvity's Heavy Vitreous China Syphon Jet Bowl with Extended Lip and rear; fitted with Kenney Flushometer; Special Oak Reinforced Sanitary Seat; Brass Floor Flange; Gasket, Bolts and China Caps.

Complete as Described..... $78.50
If with Nickel Plated Shut-Off Valve, add $7.00.

McAvity's Vitreous China Syphon Twin Jet Bowl; fitted with Kenney Flushometer; White Pryalin Seat with Nickel Plated Bar Hinge, Brass Floor Flange; Gasket, Bolts and China Bolt Caps.

Complete as Described..... $54.50
If with Nickel Plated Shut-Off Valve, add $7.00.

DIRECTIONS FOR ORDERING FLUSHOMETERS

No. 11. —Low Pressure for use where pressure is not more than six pounds, or where the tank is from 6′ to 12′ above the closet. Inlet 1½″.

No. 12. —High Pressure for use where pressure is from six to fifteen pounds, or where the tank is from 12′ to 30′ above the closet. Inlet 1¼″.

No. 12½.—High Pressure for use where pressure is from fifteen to fifty pounds, or where the tank is from 30′ to 100′ above the closet. Inlet 1″.

No. 12¾.—High Pressure for use where the tank is more than 100′ above the closet, or where the water pressure is more than fifty pounds. Inlet 1″.

No. 13. —Low Pressure. This Flushometer has a ¾″ Nipple inserted below the valve seat, to which the overflow from the tank can be attached, overflowing through the closet. Inlet 1½″.

No. 14½.—High Pressure. Marine and salt water use. Inlet 1¼″.

No. 15. —Low Pressure The Flushometer combination is used only in connection with a tank. The overflow is concealed in the flush-pipe and discharges through the closet.

No. 16. —For use on urinals. Low Pressure, under 20 pounds. Is smaller than the Fushometer used for the water-closet service. Inlet 1″.

No. 16½.—For use on urinals. High Pressure, over 20 pounds pressure. Inlet ¾″.

No. 17. —Low Pressure. For use where it is desirable to conceal Flushometer, as shown on page 119. Inlet 1½″.

No. 17½—High Pressure. For same use as No. 17. Inlet 1¾″.

No. 18. —Low Pressure. For use in asylums and public institutions

No. 18½.—High Pressure. For same as No. 18. Inlet 1¼″.

THE "ROYAL" COMBINATIONS

Plate 1001 "Royal Weyburn"

McAvity's "Royal" Twin Syphon Jet Bowl; fitted with Paragon Automatic Flushing Valve; Oak St. John Seat, with Nickel Plated Post Hinges; Brass Floor Flange; Gasket and Bolts.

Complete as Described..... $60.00

Bidet as shown with Integral China Ledge; fitted with Nickle Plated Brass ¼" O.D. Bi-Transit Waste and Overflow, with China Knob; Nickel Plated Brass Compression Valves, with China Indexed Handles with Unions and ⅜" I.P.S. Supply Pipes to floor, with Controlling Valve to Regulate Bidet Jet.

Plate 1002 "Royal Omara"

McAvity's Vitreous China Bidet Closet.—No modern bathroom can be considered complete without this most convenient and useful sanitary fixture. Water may be retained in the bowl or pan by simply closing the Waste, When using the Bidet "Jet" or "Douche" only, the Waste is opened and the water allowed to run off as fast as it is supplied.

Note.—This fixture is furnished with Nickel Plated Brass Spray Head, but is fitted with hose nipple so that ordinary syringe points can be used instead of spray if desired.

Complete as Described..... $75.00

THE "ROYAL" COMBINATIONS

On the preceeding and following pages, we show a line of Closet Combinations of complete and comprehensive variety, suitable for all kinds of buildings.

In each Fixture, whether High or Low-Down Combination, or Valve Supply, will be found, design and workmanship of the highest order, which cannot fail to impress all who may be interested in reliable plumbing.

A valuable feature of the "Royal" Combinations is that all our fittings are standardized and interchangable, and should any part become broken, it can be replaced at short notice, ordering by number the part desired, as illustrated on following pages.

To those interested in Automatic Closets, we would suggest consideration of our **O8 Automatic Combination** Plate 1032, Page 103 which has some special features of its own.

The "O8" is entirely automatic in action. The Valve being Tripped by a strong but simple device on releasing the seat. Should however, any part become broken the combination can be operated as any ordinary fixture, by pressing the push button on side.

As the seat is always in an upright position, the bowl can also be used as an urinal.

These combined features have made the "O8" most satisfactory for schools and other Public Buildings.

T. McAVITY & SONS, LTD.

THE "ROYAL" COMBINATIONS

Plate 1011 "Royal Zenith"

McAvity's "Zenith" Combination comprises solid Vitreous China Tank; Valve operated by Side China Lever; "Royal" Leader Twin Syphon Jet Bowl, with extended Lip and Back; "Royal" Sanitary Reinforced Oak Seat; Stop Valve on supply.

Complete as Described..... $125.00

Plate 1012 "Royal Dececo"

McAvity's "Dececo" White Combination, with Twin Syphon Jet Bowl; solid Vitreous China Tank with Side Lever, and White Pryalin Seat. An attractive feature of the Dececo is that no nickel parts are exposed, thereby eliminating all polishing, it has all the qualities a high grade fixture should have, neat in design, sanitary, durable and noiseless. The Dececo as illustrated is supplied through Wall, but can be furnished to supply through floor.

Complete as Described..... $125.00

Plate 1013 "Royal Swan"

McAvity's "Swan" Combination, with "Royal" Twin Syphon Jet Bowl; Vitreous China Tank with China Side Lever Flush; fitted with No. 1909 Model Elevated Ball Cock; Post Hinge; White Pryalin Seat; Nickel Plated Brass Offset Connection; and Nickel Plated Annealed Pressure Reducing Valve on Supply Pipe which renders the Tank Noiseless. With Proper care this Combination should last a lifetime.

Combination complete as Described..... $60.00
If with Floor Flange, Gasket and Bolts, add $1.50.
(Roughing-in measurements adjustable from 15" to 18".

Plate 1014 "Royal Argo"

McAvity's "Argo" Combination, with Vitreous China "Royal" Syphon Action Wash Down Bowl; Vitreous China Tank, with China Side Lever Flush; fitted with No. 1909 Model Elevated Ball Cock; Post Hinge; White Pryalin Seat; Nickel Plated Flush Elbow and Nickel Plated Annealed Brass Supply with Stop Valve.

Combination complete as Described..... $55.00
If with Floor Flange, Gasket and Bolts, add $1.50.
If with Pressure Reducing Valve on Supply, add $1.50.
(Bowls Rough-in at 14".)

Patented

THE "ROYAL" COMBINATIONS

Patented

Plate 1021 "Royal Rockcliff"

McAvity's "Royal" Combination, comprising "Royal Sypho" Twin Syphon Jet Bowl; Vitreous China Tank with China Side Lever Flush; fitted with 1909 Model Ball Cock; Post Hinge; St. John Oak Seat; Nickel Plated One-Piece Offset Connection and Nickel Plated Annealed Brass Supply Pipe with Stop Valve.

Combination Complete as Described..... $50.00
If with Floor Flange, Gasket and Bolts, add..... 1.50
If Pressure Reducing Valve on Supply, add..... 1.50

(Roughing-in Measurements Adjustable from 16″ to 18″).

Plate 1022 "Royal Berwick"

McAvity's "Royal" Combination, comprising "Royal Sypho" Twin Syphon Jet Bowl; Quartered Oak Tank, with China Side Lever; fitted with No. 1 Bottom Supply Cock; St. John Oak Seat; Nickel Plated Adjustable Flush Connection; Nickel Plated Annealed Brass Supply Pipe.

Complete as Described..... $48.50
If fitted with 1909 Model Ball Cock, add.. 1.00
If required with Floor Flange, Gasket and Bolts, add..... 1.50

A Combination made as noiseless as possible, without sacrificing efficiency.

(Roughing-in Measurements adjustable from 16″ to 18″).

Patented

Plate 1023 "Royal Oshawa"

McAvity's "Royal" Combination, with Vitreous China "Royal" Syphon Action Wash-Down Bowl; Vitreous China Tank, with China Side Lever Flush; fitted with 1909 Model Elevated Ball Cock; Post Hinge; St. John Seat; Nickel Plated Flush Elbow, and Nickel Plated Annealed Brass Supply Pipe with Stop Valve.

Combination Complete as Described..... $45.00
If with Floor Flange, Gasket and Bolts, add 1.50
If Pressure Reducing Valve on Supply, add 1.50

Bowl Rough-in at 14″)

Plate 1024 "Royal 10"

McAvity's "Royal" Combination with Vitreous China "Royal" Syphon Action Wash-Down Bowl; Golden Oak Finish Tank; fitted with No. 1 Bottom Supply Ball Cock with China Lever; St. John Seat, with Extra Heavy Nickel Plated Cast Brass Post Hinges, made from good tough metal; Nickel Plated Brass Flush Elbow, and Nickel Plated Annealed Brass Supply Pipe.

Complete as Described..... $40.00
If with Windsor Seat, deduct..... 1.00
For Floor Flange and Rubber, add..... 1.00

Bowls to Rough-in at 14″. A practically noiseless Combination.

THE "ROYAL" COMBINATIONS

05

Plate 1031 "Royal 05"

McAvity's "Royal" Combination with Royal Twin Syphon Jet Vitreous Bowl; Quartered Golden Oak Tank fitted with No. 1 Bottom Supply Ball Cock; Nickel Plated Brass Push Button with Pearl Top; St. John Seat; Nickel Plated Brass Slip-Joint Elbow and Nickel Plated Annealed Brass Supply Pipe.

Complete, Quartered Golden Oak, as Described.....	**$48.50**
If fitted with 1909 Elevated Ball Cock, add.....	**1.00**
Stop Valve on Supply Pipe, if required, add.....	**1.00**
If required with Floor Flange, Gasket and Bolts, add..	**1.50**

Roughing-in measurements adjustable from 16" to 18" A combination made as noiseless as possible without sacrificing efficiency.

Patented

08

Plate 1032 "Royal Automatic"

McAvity's "Royal" Combination with Royal Syphon Action Vitreous Washdown Bowl; Golden Oak Finish Tank, lined with 16 oz. Copper; fitted with 1909 Model Elevated Ball Cock, and equipped with Nickel Plated Push Button with Pearl Top in addition to Improved Seat Operating Device; Plain Oval Self-raising Seat; Nickel Plated Brass Flush Elbow; Annealed Brass Supply Pipe with Stop Valve; Cast Brass Floor Flange; Rubber Gasket and Nickel Plated Bolts.

Complete, Golden Oak Finish, as Described.....	**$48.00**

Roughing-in measurements adjustable from 12" to 14" As Seat rests against the Tank when not in use, this combination can readily be used as a urinal. A practically noiseless combination.

Plate 1033 "Royal O.K."

McAvity's "Royal" Combination with Royal Syphon Action Vitreous Washdown Bowl; Golden Oak Finish Tank; fitted with No. 1 Bottom Supply Ball Cock; Nickel Plated Brass Push Button with Pearl Top; Windsor Seat; Nickel Plated Brass Flush Elbow and Nickel Plated Annealed Brass Supply Pipe. Light Oak Finish can be furnished if required. A practically noiseless combination.

Complete, Golden Oak Finish, as Described.....	**$40.00**
If fitted with 1909 Model Elevated Ball Cock, add...	**1.00**
If fitted with St. John Seat, add.....	**1.00**
Stop Valve on Supply Pipe, if required, add.....	**1.00**
If required with Floor Flange, Gasket and Bolts, add.	**1.50**

Bowls to rough-in at 14". This combination can also be furnished with St. John Post Hinge Seat.

Patented

Plate 1034 "Royal AI"

McAvity's "Royal" Combination with Royal Syphon Action Vitreous Washdown Bowl; Golden or Antique Oak Finish Tank; fitted with No. I. Bottom Supply Ball Cock: Nickel Plated Brass Centre Push with Porcelain Top; Windsor Seat; Nickel Plated Brass Flush Elbow, and Nickel Plated Annealed Brass Supply Pipe. This combination is as noiseless as any manufactured.

Combination Complete as Described.....	**$40.00**
If fitted with 1909 Model Elevated Ball Cock, add....	**1.00**
If fitted with St. John Seat, add.....	**1.00**
Stop Valve, on Supply Pipe, if required, add.....	**1.00**
If with Floor Flange, Gasket and Bolts, add.....	**1.50**

Bowls to Rough-in at 14". This combination can also be furnished with St. John Post Seat.

"ROYAL" LOW-DOWN TANKS

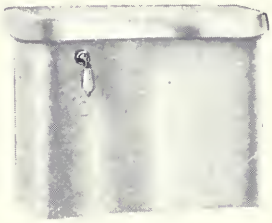


Plate 1041 "Royal Swan"

Patented

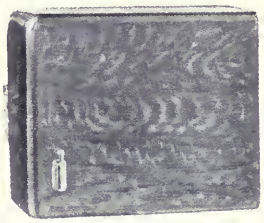


Plate 1042 "Royal 05"

McAvity's Solid Vitreous China Tank; fitted with "1909" Elevated High Pressure Ball Cock; "Royal" Flushing Valve Operated with China Side Lever.

Complete with Inside Fittings..... $22.00
Tank only, less all Fittings..... 16.00

McAvity's 05 Tank is finished Quartered Golden Oak, with Piano Polish; fitted with No. 1 Bottom Supply High Pressure Ball Cock. "Royal" Valve is operated by Nickel Plated Side Push Button, with Pearl Top, or can be furnished with Side Lever.

Complete with Inside Fittings..... $20.00
Tank only with Lining..... 16.00

Plate 1043 "Royal 10"

Patented

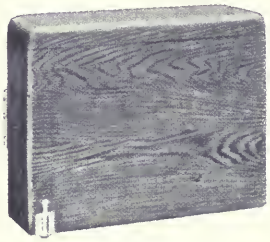


Plate 1044 "Royal OK"

McAvity's "O. 10" Tank is finished Golden Oak and Highly Polished; fitted with No. 1 Bottom Supply High Pressure Ball Cock; "Royal" Valve Operated by China Side Lever.

Complete with Inside Fittings..... $16.00
Tank only, with Lining..... 12.00

McAvity's "OK" Tank is similar to No. 10, except that Valve is operated by Side Push Button.

Complete with Inside Fittings..... $16.00
Tank only, with Lining..... 12.00

Plate 1045 "Royal A1"

McAvity's A1 Tank is similar to No. 10 and OK, except that valve is operated by Top Centre Push.

Complete with Inside Fittings..... $16.00
Tank only with Lining..... 12.00

All our Tanks are made of well seasoned wood, the lining is of 10 oz. body, with 12 oz. bottom, thus insuring added strength where most necessary. The seams are double locked, and well soldered, and the whole is given a thorough coating of a special preservative paint before being fitted up. Every Tank is tested, and can be furnished in Golden Oak or Dark Oak, and Antique or Light Oak. The Tank is fastened to Wall by means of a wooden strip inserted in back.

"ROYAL" CLOSET SEATS

Plate 1051 "Royal Swan"

The above Seat is made in six pieces, 1¼" thick, well put together and beautifully finished in white enamel.

Fitted with St. John Post Seat Hinges.
Price, each..... $8.00

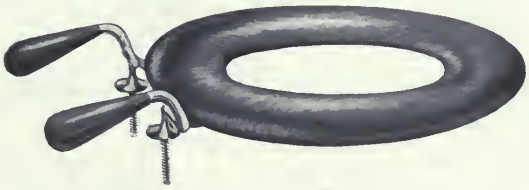


Plate 1053 "Royal Oakland"
Self-Raising Seat

Made from Selected Oak, 1¼" thick. A good seat where Closet is used as a Urinal.
Price, each..... $6.50

Plate 1054 "Royal Sanitary"

Made from selected Quartered Oak Stock, 1¼" thick highly finished, so put together that it will not warp, fitted with heavy Cast Brass Nickel Plated. Post Hinges on Long Bar
Price, each..... $4.50

Plate 1056 "Royal Richelieu"

Made with Dove-tailed Joints; fitted with Brass Hinges.
Price, each..... $2.50

Plate 1052 "Royal Pryalin"
Price, each..... $13.50

This seat is covered with pryalin, a pure white substance which is applied in sheet form by a patent process. It is not an enamel coating and will not crack, chip, or turn yellow with time. It is impervious to natural heat or cold and is a non-conductor which makes it very agreeable in either hot or cold weather. A non-porous surface that can be easily cleaned with soap and water, is a feature which should insure its use in home, school, hospital, public building or any edifice where a purely sanitary condition should always be preserved.

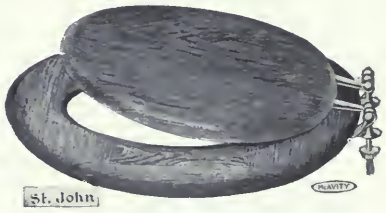


Plate 1055 "Royal St. John"
"St. John Seat"

This is a Six-piece Seat, made from selected Oak, 1¼" thick, well put together; fitted with Heavy Solid Brass Post Hinges.

For durability, the seat shown above is the best low priced seat of this pattern on the market. A seat to stand the test of time. Furnished with our "Royal" low Tank Combinations, unless otherwise specified.
Price, each..... $4.50

Plate 1057 "Royal Windsor"

Made with Dove-tailed Joints— cannot split; fitted with Brass Hinges and Screws, thus eliminating rust.
Price, each..... $3.00

ELEVATED BALL COCK FOR LOW TANKS

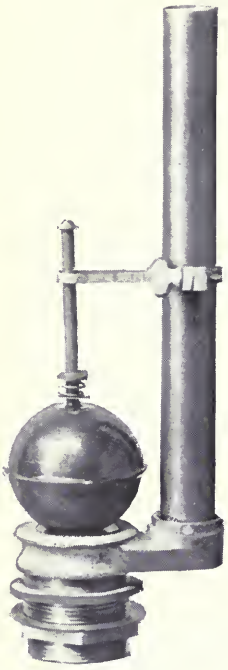


Plate 1061

Part C

"Royal" Tank Valve complete with 1¼" O.D. Brass Overflow Tube, and Valve, made with Heavy Cast Composition Body; Copper Ball with Rubber Diaphragm.

Price, each..... $3.00

Plate 1062

Part B

Simple in construction. Suitable for High or Low Pressure, and Practically Noiseless.

Can be taken apart easily without having to remove Ball Cock itself.

Both the Supply and Hush Tubes are made of Seamless Annealed Brass Tubing.

"1909" Ball Cock Complete Rod and 5" Copper Ball.

Each..... $3.50

The "Royal" Valve Float

New Style, Part I

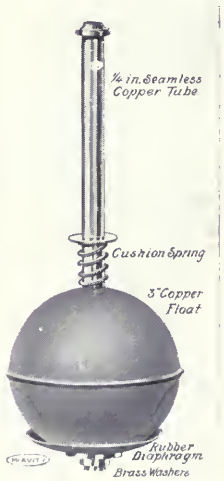


Plate 1063

No. 1

No. 1 Valve as now supplied with our combinations.

Price, each..... $1.15

The success of this float is due principally to its simplicity, and the fact that the ball being made of copper does not flatten and give out, as rubber bulbs do.

We have known cases where these floats have been in use ten years and in as good condition as when put in.

Old Style, Part J

Plate 1064

No. 2

No. 2 as used in our Combinations, previous to 1910, and supplied for repairs only.

Price, each..... $1.15

Part A

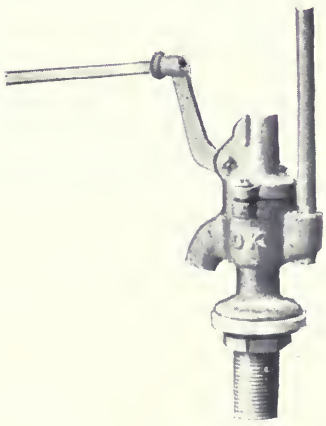


Plate 1065

"Royal" Low Down Ball Cock as supplied in our Combinations (except) where Elevated Ball Cock is specified.

Complete with Refill Tube and Copper Ball.. $2.85

Complete with Refill Tube less Copper Ball.. $2.25

"ROYAL" COMBINATION FITTINGS

Part G

Plate 1071
1¼" Brass Overflow Tube
Price, each..... $ .35

Part K

Plate 1072
Valve Diaphragm, made of Pure Rubber
Price, per Doz..... $1.20

Part F

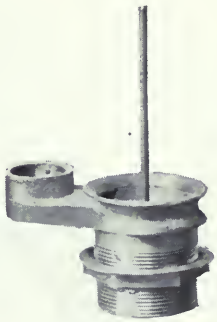


Plate 1073
Valve Body
Price, each..... $1.25

Part H

Plate 1074
Bracket Guide
Price, each..... $ .35

Part O

Plate 1075
Short Tail and Coupling Nut
Price, each..... $ .35

Part L

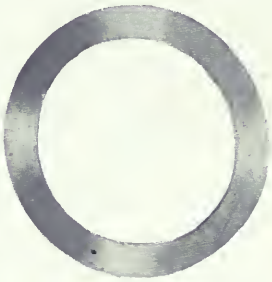


Plate 1076
Rubber Gasket for Valve Body
Price, per Doz..... $ .90

Part N

Plate 1077
Solid Rubber Plug for Part "A" and Part "B" Ball Cocks.
Price, per Doz..... $1.50

Part M

Plate 1078
Rubber Gasket for Ball Cock.
Price, per Doz..... $ .60

Part D

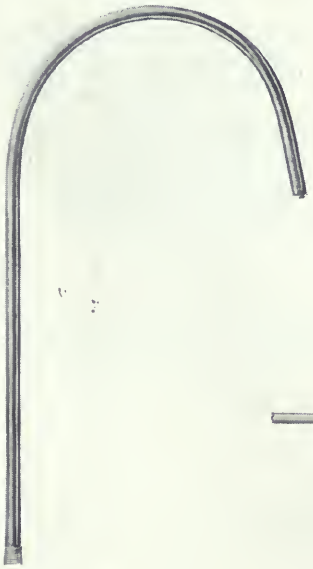


Plate 1079
Brass Refill Tube for Part A Ball Cock.
Price, each..... $ .25

Part C

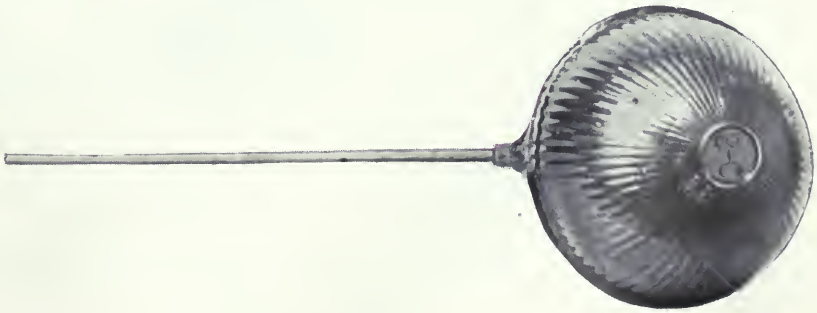


Plate 10710
5" Soldered Copper Ball for Royal Combination.
Ball with Rod..... $1.00
" Less " ..... each .60

SUPPLY PIPES FOR LOW TANKS

Nickel Plated on Annealed Brass

Without Stop Valve. With Stop Valve.

"Royal" Supply Pipes, Nickel Plated, 5/8" Outside Diameter, Can also be furnished Angle, with or without Stops.

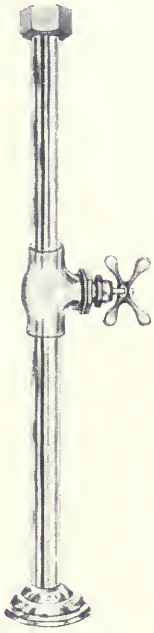


Plate 1081 **Plate 1082**

Straight without Stops, per pair.....	$2.80
Angle " " " "	3.00
Straight with " " "	3.50
Angle " " " "	3.50

"Royal" Low-Down Tank Lining

Plate 1083

The "Royal" Lining is made of Heavy Copper, which is carefully inspected. The seams are double locked, and tested. then soldered. It is then coated with a special preservative paint before placing in body. Made in two weights of Copper only, 12 oz. and 16 oz.

Price, 12 oz., each.....	$4.50
" 16 oz. "	5.50

Brass Closet Spud for "Royal" Bowls

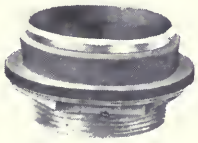


Plate 1084

These Spuds can be used with either Twin Syphon Jet or Washdown Bowls

Price, with Rubber $1.00

Closet Spud Rubber

Plate 1085

Per Doz..... $1.00

Rubber Gasket for Seat Hinges.

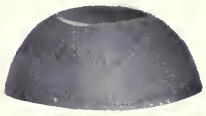


Plate 1088

Per Doz..... $ .30

"Windsor" Seat Hinges as furnished with all Windsor Seats

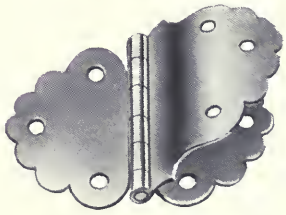


Plate 1086

Made of Polished Brass, heavily Nickel Plated and well finished. Windsor Seat Hinges.

Per Pair..... $ .75

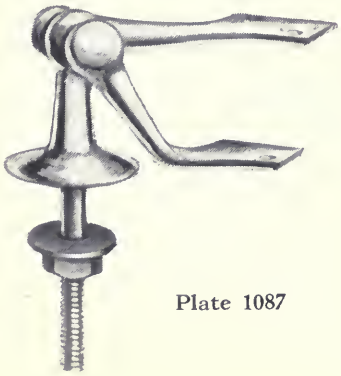


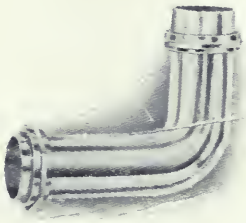
Plate 1087

" St. John " Seat Post Hinges

Made of good, tough Cast Bronze Metal, heavily Nickel Plated and well finished.

Per Pair..... $2.25

"ROYAL" COMBINATION FITTINGS



Nickel Plated Brass Flush Connection for Syphon Action Wash-down Closet.
Sizes:
4" x 5" x 2" Diameter
6½" x 5½" x 2" Diameter

Plate 1091

2" Brass, Nickel Plated Flush Elbows
4" x 5", each..... $2.50
5½" x 6½", each..... 2.75

Polished Nickel Plated Brass Offset Slip-Joint Connection

Size: 3" x 6" x 2" Diameter.

Each..... $3.00

Plate 1093

Brass Floor Flange Bolt with Nickel Plated Open Top Head

Plate 1095

With Nickel Plated Flanges, per Doz. $1.20

Seat Long Bumpers

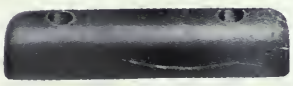


Plate 1097
Per Doz.... $1.20

Screw Bumpers

Plate 1098

Tack Bumpers

2 3 3A

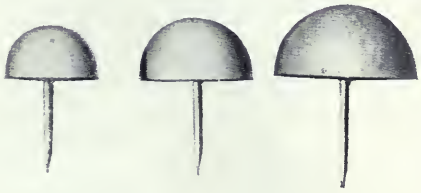


Plate 10910 (Cuts Actual Size)

Screw Bumpers Per Doz..... $ .75
Tack Bumpers, No. 2 " ..... .60
" " No. 3 " ..... .60
" " No. 3A " ..... .60

Nickel Plated Slip Joint Connection for Twin Syphon Jet Closet.

Size 6" to 7½" x 7" x 2" Diameter

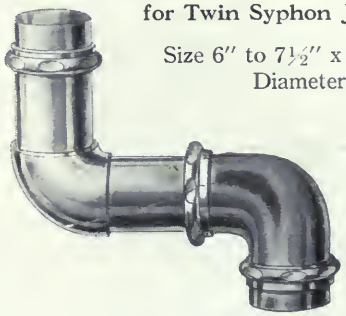


Plate 1092

2" Slip-Joint Elbows, Nickel Plated Brass, Adjustable 6 to 7½" x 3½".... each $3.50

Note: --- This Elbow can be adjusted to allow for any variation in Roughing-in Closet.

Rubber Gasket for Closet Floor Flange

Plate 1094

These Gaskets make a perfect seat between the metal plate and earthenware Bowl.

Rubber Gaskets, each..... $ .40

Cast Brass Closet Floor Flange

Plate 1096

Floor Flange only (no bolts), Each..... $ 75

Brass Closet Screw with Nickel Pated Loose Head

Plate 1099

With Flanges, per Doz..... $1.20

Closet Screw Washer, Nickel Plated Brass

Plate 10911

Per Doz..... $ .30

"ROYAL" HIGH COMBINATIONS

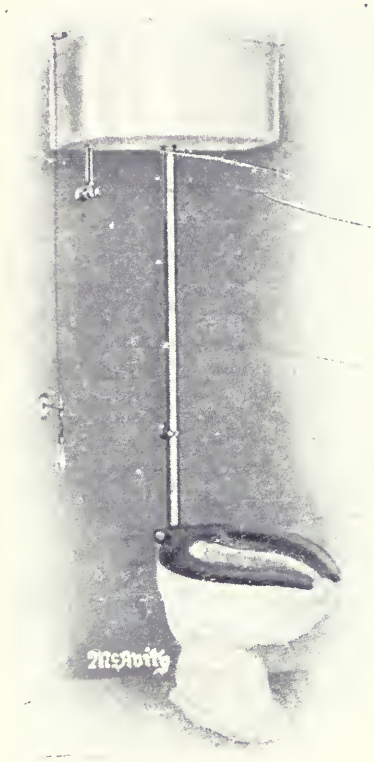


Plate 1101 "Royal Ajax"

McAvity's Heavy Vitreous Extended Front and Rear Syphon Jet Closet, Special Sanitary mahogany Piano Polish Seat, with Nickel Plated Brass Reinforcing Plate and Concealed Bar Hinges; Vitreous High Tank with Concealed Hanger; Nickel Plated Chain, Pull and Guide; 1½″ Nickel Plated Flush Pipe and Holder with Rubber Bumper; Nickel Plated iron Pipe size Brass Supply Pipe to Wall with Loose Key Stop Valve; Brass Floor Flange, Bolts and China Bolt Caps.

Complete as Described..... $75.00

McAvity's Heavy Vitreous Extended Front and Rear Syphon Jet Closet, with raised Front Lip, Special (Sanitary) Quartered Oak, Oil Rubbed Seat, with Nickel Plated Brass Reinforcing Plate and Concealed Bar Hinges; Quartered Oak, Oil Rubbed Bentwood High Tank, with Concealed Hanger; Nickel Plated Chain, Pull and Guide; 1½″ Nickel Plated Flush Pipe and Holder with Rubber Bumper; Nickel Plated Iron Pipe Size Brass Supply Pipe to Wall with Loose Key Stop Valve; Brass Floor Flange, Bolts and China Bolt Caps.

Complete as Described..... $70.00

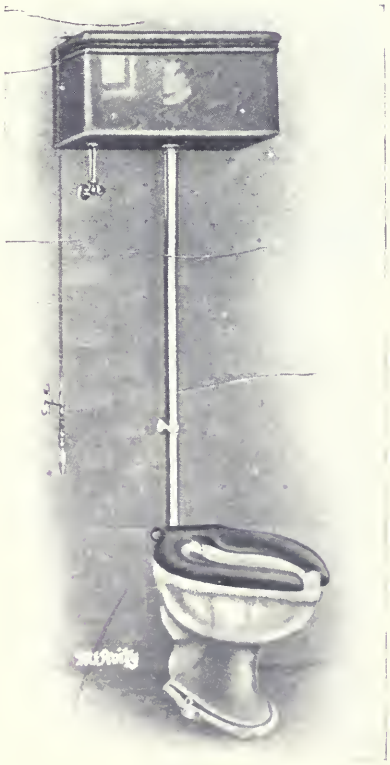


Plate 1102 "Royal Avernus"

"ROYAL" HIGH COMBINATIONS

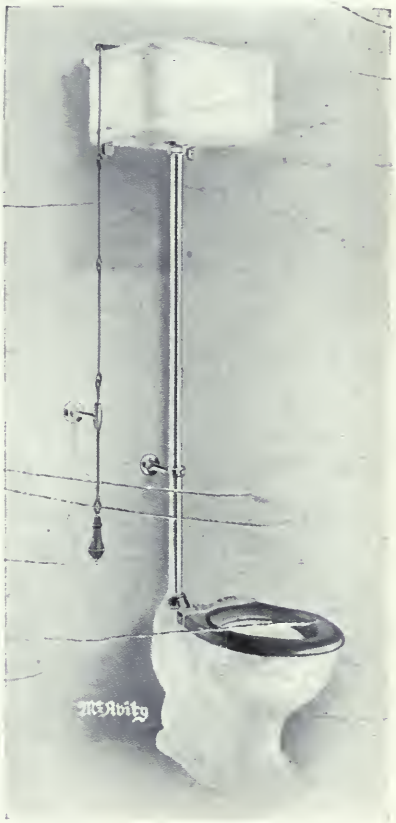


Plate 1111 "Royal Durban"

McAvity's High Combination, with Solid Vitreous China 10 Gallon Tank; 1½" Nickel Plated Brass Flush Pipe; Chain with China Pull, and Wall Guide; Vitreous China Twin Syphon Bowl with Special Reinforced Seat; Floor Flange with Bolts and Rubber Gasket.

Complete as Described..... $65.00

Plate 1112 "Royal Dunbar"

McAvity's High Combination, with Round Corner Golden Oak 10 Gallon Tank, with 16 oz. Copper Lining; Chain with China Pull; 1½" Nickel Plated Flush Pipe; "Royal" Twin Syphon Bowl, with St. John Post Hinge Seat, Floor Flange, Bolts and Gasket.

Complete as Described..... $55.00

"ROYAL" HIGH COMBINATIONS

Plate 1121 "Royal Pioneer"

McAvity's High Combination, with Solid Vitreous China Tank, with Syphon Valve, and High Pressure Ball Cock; Nickel Plated Brass Guide, with Chain and China Pull; 1¼" Nickel Plated Flush Pipe; "Royal" Vitreous China Syphon Action Wash-down Bowl, with Floor Flange Bolts and Gasket.

Complete as Described..... $45.00

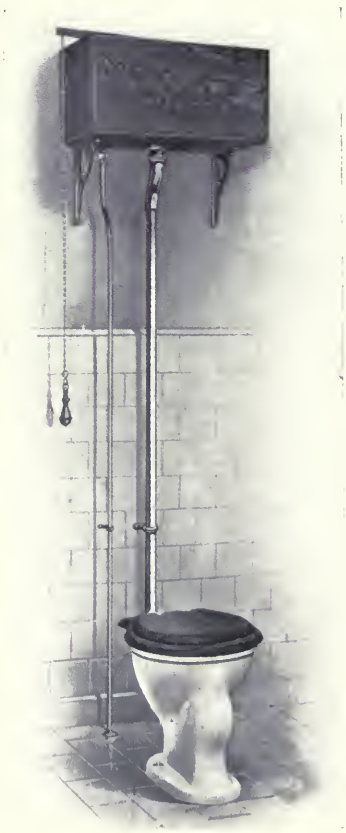


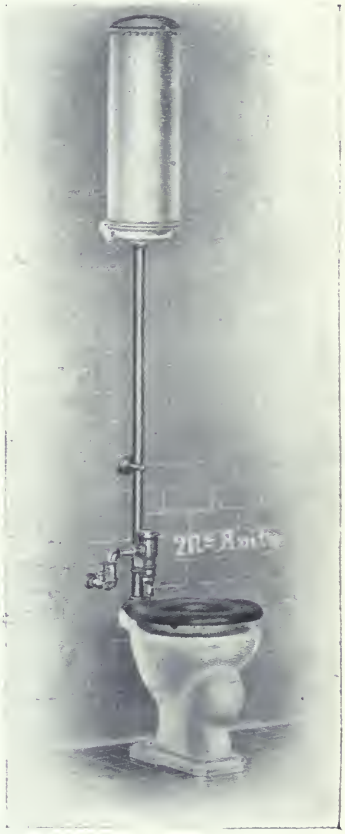
Plate 1122 "Royal Tyro"

McAvity's High Combination, with Round Corner Golden Oak, Varnish Finish 5 Gallon Tank, with 10 oz. Copper Lining; Chain and Pull; 1¼" Nickel Plated Flush Pipe and Connection; "Royal" Syphon Action Wash-down Bowl with Oak Windsor Seat, Floor Flange, Bolts and Gasket.

Complete as Described..... $41.00

If with ⅜" Nickel Plated Supply Pipe, add $4.00.

"ROYAL" HIGH TANK COMBINATIONS



McAvity's "Royal" Automatic Pressure Tank Closet, with "Royal" Vitreous China Syphon action Bowl; "Royal" Automatic Seat Action Valve; Supply to Wall, with Loose Key Stop; Galvanized Iron Tank, finished in White Enamel Paint; 1½" Nickel Plated Flush Pipe and Connection; Golden Oak Seat, with Nickel Plated Reinforcement.

Price as Described..... **$65.00**

Plate 1131 "Royal Prexlo"

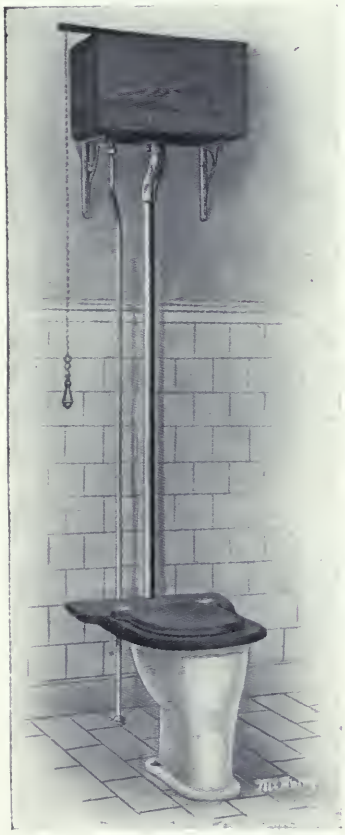


Plate 1132 "Royal Richelieu"

McAvity's "Royal Richelieu" High Tank Combination, comprising "Richelieu" Vitreous China Wash-out Bowl; Golden Oak Varnish Finish 5 Gallon Tank, lined with 10 oz. Copper; complete with Fittings, Chain and Pull; Golden Oak "Richelieu" Seat; Nickel Plated 1¼" Flush Pipe and Rubber Connection.

Price as Described..... **$36.50**

If with ⅜" Nickel Plated Supply Pipe, add $4.00

Can also be supplied with Plain Pine Tank and Lead Flush Pipe.

"ROYAL" HIGH TANKS AND FITTINGS

Plate 1141

Round Corner Varnish Finish Oak Tank with Moulding. Same style can be supplied in Quarter Oak, Oil Rubbed Piano Polished or Mahogany Finish.

Size, Gallons	10
Plate 1141 as Described, Varnished	$14.00
Lining only	6.00

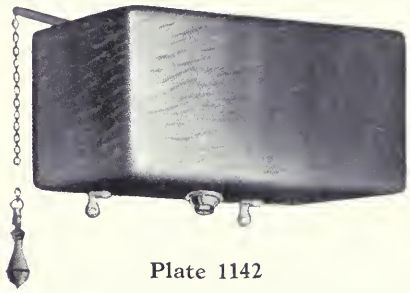


Plate 1142

Plain Round Corner Varnish Finish Oak Tank. Same style can be supplied in Oil Rubbed Piano Polished or Mahogany Finish.

Sizes, Gallons	5	10
Plate 1142 Plain	$ 9.00	$12.00
" Varnished	10.50	13.50
Lining only	3.50	6.00

Expansion Tank

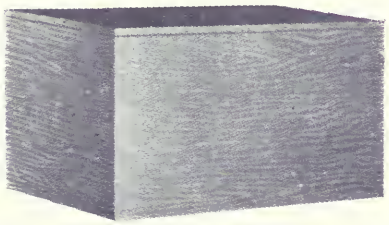


Plate 1143

Tank Without Valve, with Ball Cock, Lining, with 1½" Coupling and Tail.

Size, Gallons	5
Plate 1143 Plain	$6.00
Lining only 17" x 8" x 10½"	3.50

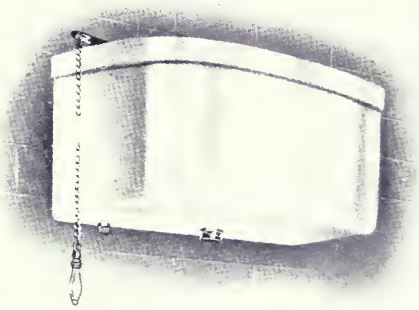


Plate 1144

Solid Vitreous China High Tank with Rush Syphon Valve and High Pressure Ball Cock.

Sizes, Gallons	5	10
Plate 1144, each	$30.00	$40.00

Rush Valve

Plate 1147

Sizes	1¼"	1½"
Plate 1147	$3.00	$3.25

Lift Lever

Plate 1145

Price, each $1.00

Plate 1148

Pull and Chain

Chain and Pull, China Handle, each $1.50

Wood Handle, each $1.00

Rush Valve Washer

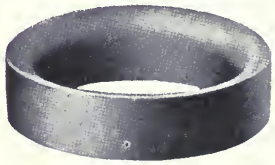


Plate 1146

Sizes	1¼"	1½"
Price, per Doz.	$1.00	$1.25

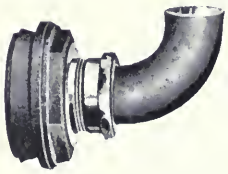


Plate 1149

Reducing Speed with Bent Tail and Coupling 2" x 1¼"

Price, each $1.75

BALL COCKS

Straight Tail

Plate 1151

For High Tanks

McAvity Patent

For Bottom or End Supply for High Tank

Plate 1152

Ball Cock Plug

Rubber Plug incased in brass for McAvity High Tank Ball Cock.

Sizes..... ½″ ⅝″

Price, per Doz.... $3.00, $5.00

Bent Tail

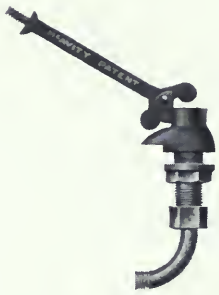


Plate 1153

Sizes	½″	⅝″
Plate 1151, Straight Tail, Each	$1.00	$1.25
Plate 1152, Bent " "	1.00	1.25

To make Ball Cocks suitable for Bottom of Tank, take out Cotter Pin and reverse the Lever.

McAvity Improved Ball Cock for Iron Pipe

Plate 1154

Plate 1154 Ball Cocks are intended for large Storage Tanks. The size of the Ball, and the length of the Rod should be determined by the pressure. Made in sizes from ½″ to 2″.

Prices will be furnished upon application.

Copper Balls

Plate 1155

Sizes: 2″, 3″, 4″, 5″, 6″, 7″, 8″, 10″ and 12″

Prices on Application.

Hartford Ball Cock

Plate 1156

Shanks Ball Cock

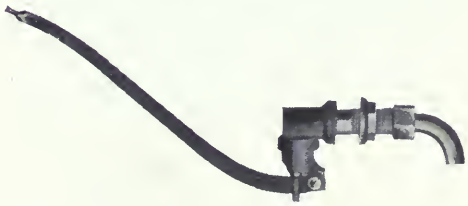


Plate 1157

Sizes	½″	¾″
Plate 1156, each	$1.50	$1.75

Sizes	½″	¾″
Plate 1157, each	$1.00	$1.25

THE "ROYAL" CLOSET BOWL

Plate 1161 "Royal Richelieu"

McAvity's Solid Vitreous China High Tank Bowl, for Rubber Connection.

Price, each..... $12.25

Plate 1162 The "Royal"

McAvity's Solid Vitreous China Syphon Action Wash-Down Bowl, for Roughing-in from 12" to 14".

This Bowl is supplied with our No. 10", "OK." and 0.8", Combination.

Price, each..... $15.00
" with Spud..... 15.75

For Right or Left Hand Seat Vent add $1.00.
For Nickel Plated Copper Tube add $1.75.

Plate 1163 "Royal Viking"

McAvity's Enameled Cast Iron Syphon Action Wash-down Bowl, with 2" Spud.

Enameled, Inside only..... $26.10
" all over..... 29.48

Plate 1164 "Royal Milclo"

McAvity's Enameled Cast Iron Syphon Jet Bowl, with 2" Spud.

Enameled, Inside only..... $31.80
" all over..... 33.50

Cast Iron Bowls can be furnished with Right or Left Hand Seat Vents, also with 1½" and 1¼" Spuds for High Tanks.

"ROYAL CLOSET BOWLS"

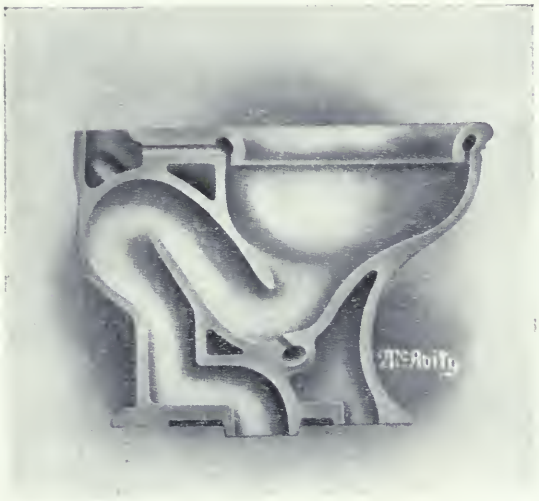


Plate 1171 "Royal Sypho"

Illustration showing Sectional View of "Royal" Sypho Twin Syphon Bowl, as furnished on our "Royal Swan" Combination.

McAvity's Solid Vitreous China Twin Syphon Jet Bowl.

This Bowl is also supplied with our "Rockcliff", "Berwick", and 05" Combinations.

Price of Bowl only **$19.00**
" " with Spud **19.75**

For Right or Left Hand Seat Vent, add $1.50.
For Nickel Plated Copper Tube, add $1.00.

Plate 1172 "Royal Trojan"

McAvity's Solid Vitreous China Syphon Action Wash-Down Bowl, with Reverse Trap.

Illustration showing Sectional View of "Royal Trojan," with Reverse Trap.

Price of Bowl only $16.00
" " with Spud 16.75

For Right or Left Hand Seat Vent, add $1.50.
For Nickel Plated Copper Tube, add $1.00.

"ROYAL" CLOSET BOWLS

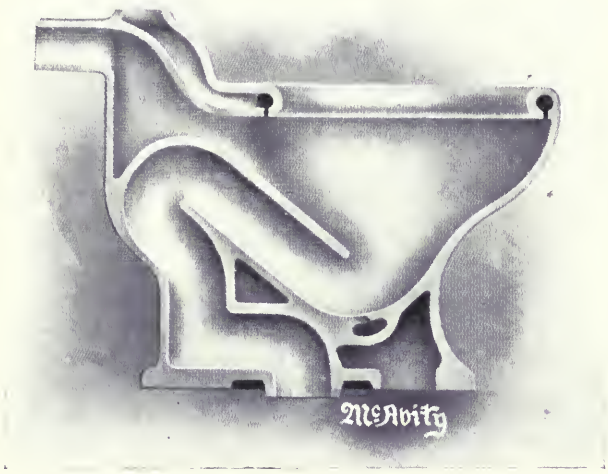


Plate 1181 "Royal Archer"

Sectional View of Twin Syphon Bowl with Back Vent.

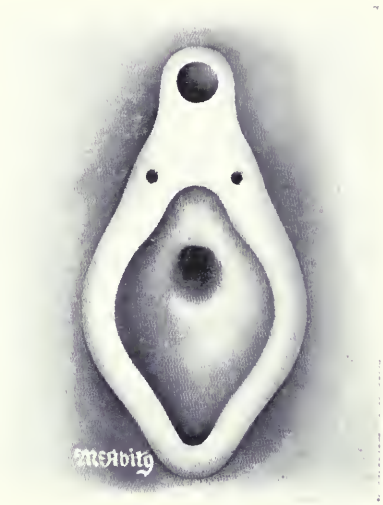


Plate 1182 "Royal Sanitary"

Top view of Royal Leader showing Extended Lip and Rear.

Plate 1183 "Royal Archer"

McAvity's Solid Vitreous China Twin-Syphon Jet Bowl, with Back Vent.

Price, each	$20.00
" with Spud	20.75

Plate 1184 "Royal Leader"

McAvity's Solid Vitreous China Twin Syphon Jet Bowl, with Extended Lip and Rear.

Price, each	$20.00
" with Spud	20.75

"ROYAL" CLOSET BOWLS

McAvity's Solid Vitreous China Wall Closet, Extra Heavy, with Extended Lip and Top Supply; fitted with Birch, Mahogany Finish Crescent Seat with Re-enforcing Strip, attached to the Closet with Nickel Plated Brass Adrian Hinges. Twin Seat Bumper and Wall Bolts.

This Closet can be fitted with Kenny or Paragon Flushometers.

Prices on Application.

Plate 1191 "Royal Nidra"

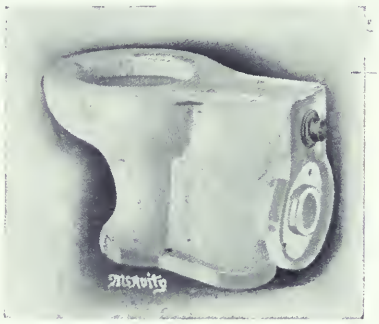


Plate 1192 "Royal Ceaser"

McAvity's Solid Vitreous China Syphon Jet Closet Bowl, featuring concealed Pipes, Sanitary Foot and Rim, with Instantaneous Flush, made with Angle Wall Flange, Back Supply and Wall Outlet for special Vulcan-Asbestos Gasket.

Prices upon Application.

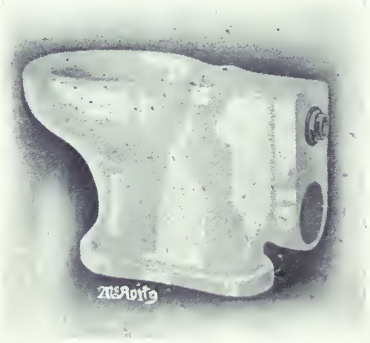


Plate 1193 "Royal Circe"

McAvity's Solid Vitreous China Syphon Jet Closet Bowl, featuring concealed Pipes, Sanitary Foot and Rim, with Instantaneous Flush, made with Angle Wall Flange. Back Supply and Wall Outlet can also be furnished with Integral Crockery Seat.

Prices upon Application.

Plate 1194 "Royal India"

McAvity's Solid Vitreous China Wall Closet with Hooded Back Supply; fitted with Birch, Mahogany Finish Crescent Seat with Re-enforcing Strip, attached to the Closet with Nickel Plated Hinges. Kenny Valve behind the Wall, with Oscillating China Handle and Brass Flush Pipe; Twin Seat Bumper and Wall Bolts.

Prices upon Application.

O. S.

"ROYAL" CLOSET CONNECTIONS

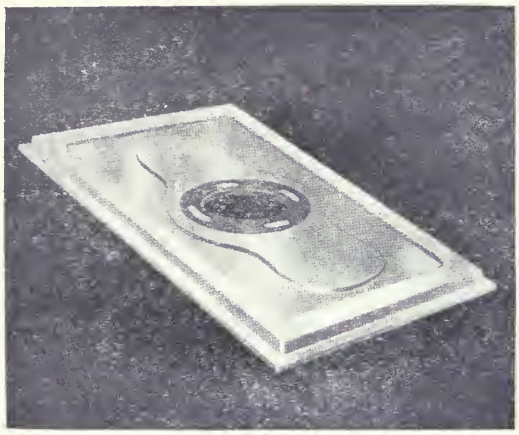


Plate 1201

Enameled Iron Closet Base for Twin Syphon Bowl.

Plate 1202

Enameled Iron Closet Base for Syphon Action Bowl.

Price on application.

An unpleasant odor in many bath rooms is caused from the unsanitary condition of the floor around the closet bowl.

The connection between the bowl drainage pipes is air tight.

The porcelain enameled iron base to closet adds to the clean, sanitary appearance of toilet rooms and is the final touch in modern bath room construction.

Plate 1203

The Vulcan-Asbestos Gasket Connection is used for attaching Closets to soil pipe. Consists of Brass Wall Flange with Thimbles, threaded 4" iron pipe female; complete with Bolts and Vulcan-Asbestos Gasket.

VULCAN FLANGE

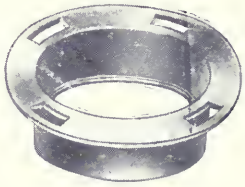


Plate 1204

This is the type of Flange furnished in Cast Iron with all "Vulcan" Connections

"VULCAN"
CAST IRON CLOSET CONNECTIONS

No. 3

Plate 1205

"No. 3" Vulcan Connection has inlets on Sides Tapped 1½" I.P.

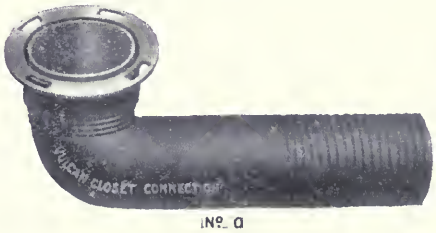


Plate 1206

Takes the place of the Lead Bend, Brass Ferrules and Closet Floor Flange, and will save at least one Dollar on each Closet Outfit installed, at the same time insure a better and more sanitary job.

Nos.	0	3
Sizes	4"	4"
Price, each	$2.75	$3.75

ENAMELED IRON HOPPERS

McAvity's Porcelain Enameled Inside, Tall Flushing Rim Hopper, with Bent Tail and Coupling.

McAvity's Porcelain Enameled Inside, Short Flushing Rim Hopper, with Bent Tail and Coupling.

Plate 1211

Price, with Seat Attachment	$10.50
" without " "	9.75

Plate 1212

Price, with Seat Attachment	$9.90
" without " "	9.15

McAvity's C.I. "P." Trap, Enameled Inside, with 2" Hub Vent Outlet 4".

McAvity's C.I. "S" Trap. Enameled Inside, with Hub Vents, Outlet 4".

Plate 1213

Price, with Vent	$4.25
" without Vent	4.00

Plate 1214

Price, with Vent	$4.50
" without Vent	4.25

McAvity's Porcleain Enameled Prison Lavatory, with Waste to Wall and Concealed Valve with Push Button; Round Hopper, with Combined Enameled Seat and Flushing Rim; Concealed Closet Valve.

Particulars and Prices on Application.

Plate 1215

SHIP'S CLOSETS

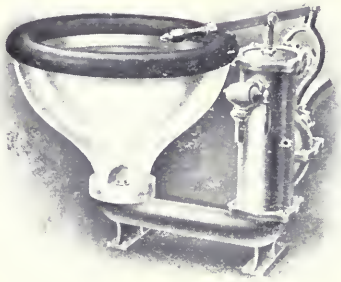


Plate 1221 "Royal Tunisian"

McAvity's Brass Pump Water Closet, with Round Porcelain Flushing Rim Bowl, All Brass Supply and Discharge Pump; Quick Opening Hand Valve; fitted with Oak Seat, Nickel Plated Brass Post Hinges.

Dimensions:

14″ Front to Back 18″ Wide 13″ High

Complete as Described..... **$45.00**

This Closet can be installed above or below water line, when placed below, it can be furnished with heavy flanged ground cocks, on inlet or outlet to permit of repairs.

McAvity's Ship's Closet, with extra Heavy Vitreous China Bowl covered with Heavy Sheet Lead; fitted with Special Ground Cock Attachment to Pull.

The Supply and Discharge is controlled by Pull Handle turning on and shutting off water, discharging contents at same time.

Complete as Described..... **$35.00**

This Closet is designed for above water line.

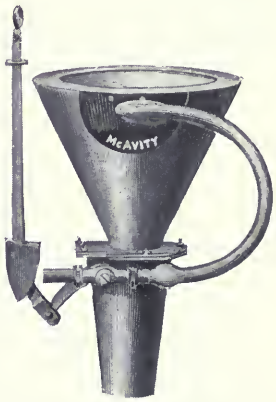


Plate 1222 "Royal Megantic"

Plate 1223 "Royal Ionian"

McAvity's Heavy Ship's Closet, with Flushing Rim Hopper. This Closet is made with Extra Heavy Lead Base Boxes and Brass Flap Valve. Operated with Pull Up Rod and Supplied with Long Handle Compression Stop Valve.

Complete as Described..... **$45.00**

This Closet is designed for freight vessels, where strength is the essential. The Valve box being large, permits the Bath and Lavatory connections to connect above trap, which prevents blow-up when vessel is in seaway; it is connected by heavy lead and scupper pipe, which can be furnished in any length, or weight desired.

ANTI-FREEZING CLOSETS

Plate 1231 "Royal Storm King"

McAvity's Porcelain Enameled Inside Long Round Hopper, with Oak Self-Raising Seat, with Iron Reinforcement; Automatic Valve; Valve Shelf with Clamp; Chain with Turnbuckle, 5′ Length; 4″ Extra Heavy Soil Pipe, with Flange; P. Trap with Hand Hole and Cover, with Trap Drilled for Drip Pipe.

Complete as Described..... **$37.00**

Plate 1232 "Royal Frost King"

McAvity's Porcelain Enameled Inside Long Hopper, with Iron Reinforced Oak Self-Raising Seat, Galvanized Cast iron Tank, Trap, and five feet of 4″ Pipe with valve and rods.

The Frost King is so constructed, that on depressing the seat the valve below is opened permitting tank to fill. On the seat being released, the tank empties, giving a thorough flush, the supply stops and drains.

These closets are designed for Warehouses and Buildings where it is not advisable to install fixtures that would freeze, as the trap and supply on these closets are below frost line this danger is eliminated.

Complete as Described..... **$40.00**

EDUCTION RANGE CLOSETS

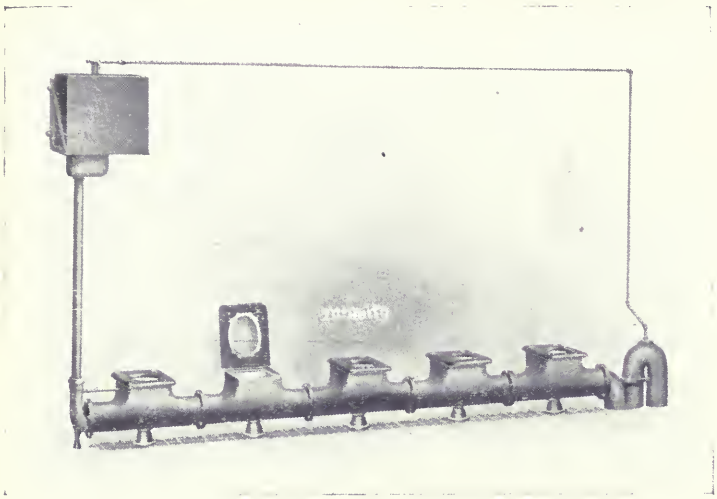


Plate 1241 "Royal Educo"

McAvity's Automatic Syphon Eduction Range Closet without Partitions, with painted Cast Iron Tank; Galvanized Flush and Air Pipes; Closets are Enameled Inside, Outside painted One Coat White; Hinged Oak Seat with Iron Reinforcements.

Outlet is regularly furnished on **Right Hand Side.** If desired on Left please state clearly when ordering.

Closets can also be furnished with 5″ x 2″ Vent Connections on each Section, for Sheet Iron Vent. Or Tapped 2″ I. P. Size.

Seats can also be furnished Stationary or Self-Raising.

NUMBER OF SEATS

Size of Seats	2	3	4	5	6	7	8	9	10	11	12	13	14	15
24″.....	$183.00	$217.59	$270.00	$302.00	$344.50	$387.00	$429.50	$472.00	$514.00	$556.50	$599.00	$641.50	$683.50	$726.00
27″.....	190.00	228.00	274.00	319.50	365.50	411.00	457.00	503.00	548.50	594.50	640.50	.....	.....	.....
30″.....	198.00	239.50	289.50	339.50	389 00	439.00	489.00	539.00	588.50	638.50	688.50	.....	.....	.....

McAvity's Automatic Syphon Eduction Range Closet with Pressed Steel Partitions; Painted Cast Iron Tank; Galvanized Flush and Air Pipes. Closets are Enameled Inside, Outside painted One Coat White.

Outlet is regularly Furnished on Right Hand Side. If desired on Left please state clearly when ordering.

Closets can also be furnished with 5″ x 2″ Vent Connections on each Section for Sheet Iron Vent or Tapped 2″ I. P. Size.

Seats can be also furnished Stationary or Self Raising.

Plate 1242 "Royal Encardo"

NUMBER OF SEATS

Size of Seats	2	3	4	5	6	7	8	9	10	11	12	13	14	15
24″.....	$329.00	$292.00	$363.00	$414.00	$475.00	$536.00	$597.00	$658.00	$718.50	$779.50	$840.50	$901.50	$962.50	$1023.50
27″.....	246.00	302.50	367.00	431.00	495.50	560.00	624.50	689.00	753.50	817.50	882.00	.....	.....	.....
30″.....	253.50	313.75	382.50	451.00	519.50	588.00	656.50	725.00	793.50	861.50	930.00	.....	.....	.....

If required with Backs — Add for each 24″ Section.....$17.50
27″ " 18.50
30″ " 20.00

These fixtures are entirely automatic; Flushing at regular intervals, the frequency of which can be controlled by placing a Stop Valve on the Supply to Tank. There are no movable parts except the seat and cover, and all styles except the Washout range are fitted with the Syphon Eduction Outlet and Air Pipe, which produces quick removal of the entire contents of the range and insures a thorough flushing of the interior. Each style can be furnished with or without partitions or backs, or with single or entire equipment or private enclosures; also in double ranges back to back. Plates (1241) (1242) (1251) contain a large volume of water and present the smallest amount of exposed surface beneath the seats. Owing to the large number of sizes and styles and the variety of equipment of range closets, it is important to specify size of seats, and location of outlet (at Right or Left). The Illustrations all show Right Hand Outlet, also if with Partitions, Backs or Enclosures.

We strongly recommend the use of Porcelain Enameled Closets, But can furnish Painted if desired.

EDUCTION RANGE CLOSETS

McAvity's Automatic Syphon Eduction Range Closet with Pressed Steel Partitions and Paneled Oak Doors; Painted Cast Iron Tank; Galvanized Flush and Air Pipes. Closets are Enameled Inside, and Outside Painted one Coat white.

Closets can be furnished with 5″ x 2″, Vent Connections on each section for Sheet Iron Vent, or Tapped 2″ I. P. Size.

Seat can also be furnished Stationary or Self Raising.

Unless otherwise ordered Ranges will be furnished with Enameled interior, 24″ Seats and Outlet on Right Hand End.

Plate 1251 "Royal Privato"

NUMBER OF SEATS

Size of Seats...	2	3	4	5	6	7	8	9	10	11	12	13	14	15
27″.....	$343.50	$458.50	$581.00	$703.50	$826.00	$949.00	Prices	on Ap	plicat	ion.				
30″.....	351.50	470.00	596.50	723.50	850.00	976.50	"	"	"					

Owing to the large number of sizes and styles and the variety of equipment of Range Closets, it is important to specify size of Seats, and location of Outlet (at Right or Left.) The Illustrations all show right hand Outlet, also if with Partitions, Backs or Enclosures

We strongly recommend the use of Porcelain Enameled Closets, But can furnish Painted if desired.

If required with Back, Add, each....24″ **$17.50** 27″ **$18.50** 30″ **$20.00**

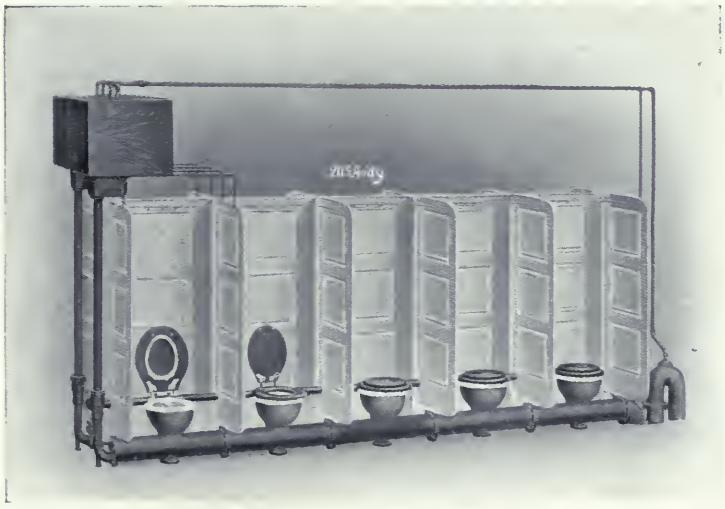


Plate 1252 "Royal Tantalus"

McAvity's Automatic Individual Bowl Double Syphon Range Closet with Pressed Steel Partitions and Backs; Painted C. I. Tank; Galvanized Flush and Air Pipes; Brass Pipes and Union Couplings connected to the Flushing Rim of each Bowl; Hinged Oak Seats with Iron Reinforcements and Covers.

Seats can also be furnished Stationary or Self Raising.

Unless otherwise ordered Ranges will be Furnished with Enameled interior, 24″ Seats and Outlet on Right Hand as shown.

NUMBER OF SEATS

Size of Seats.....	4	6	8	10	12	14	16
24″ "	$618.00	$765.00	$933.50	$1101.50	$1270.00	$1438.50	$1606.50
27″ "	633.50	788.50	965.00	1141.50	1317.50	1494.00	1670.50
30″ "	649.50	812.50	996.50	1180.50	1364.50	1548.50	1732.50

On this Range each bowl is separate, with a Flushing Rim, thus combining the advantages of a separate closet and an automatic flushing range. Can also be furnished with private enclosures Doors and partition.

OPEN SYPHON RANGE CLOSET

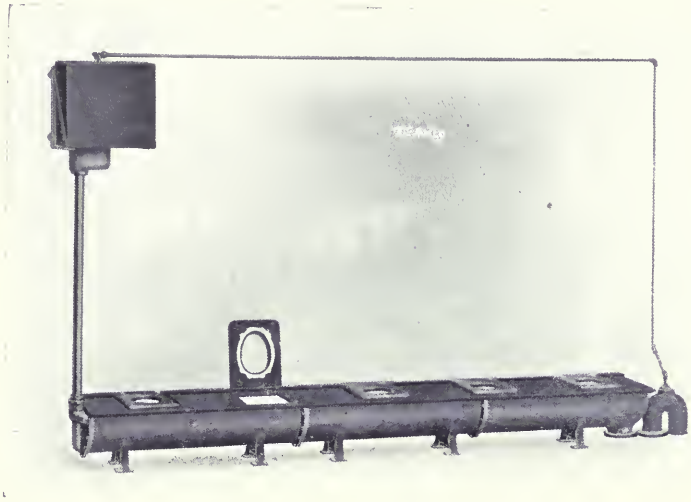


Plate 1261 "Royal Tarchon"

McAvity's Automatic Open Syphon Range Closet without partitions; fitted with Painted Cast Iron Tanks; Galvanized Flush and Air Pipes; Oak Top Plates and Back Strips, with Hinged Oak Seats, with Iron Reinforcements; Perforated Wash-Down Pipes. fitted inside Range (Brass on Enameled and Galvanized on Painted Ranges), No Covers on Seats, Partitions, backs or Enclosures can be furnished either painted or enameled Steel.

These Ranges consist of an open trough in which the water is of sufficient depth to submerge the soil, but there is no separation by water seal between each seat opening.

NUMBER OF SEATS

Size of Seats	3	4	5	6	7	8	9	10	11	12	13	14	15
24"	$239.00	$282.50	$325.50	$369.00	$412.50	$455.50	$499.00	$542.50	$585.50	$629.00	$672.50	$716.00	$759.00
27"	250.50	298.00	345.00	392.50	439.50	487.00	534.00	581.50	628.50	676.00	.....	.....	.....
30"	262.50	313.50	364.50	415.50	466.50	517.50	569.00	620.00	661.00	722.00	.....	.....	.....

For 2" I.P. Size Boss back of each Seat for Vent, add each, $2.00.

McAvity's Automatic Open Syphon Range Closet without Partitions, with Painted Cast Iron Tank; Galvanized Flush and Air Pipes; Enameled Iron Top Plates; Hinged Oak Seats, with Iron Reinforcements and Covers. Ventilating Extension (Pipe to Flue not furnished) for 14" Pipe and Perforated Wash-down Pipe inside of Range (Brass on Enameled and Galvanized on Painted Ranges). Partitions and Backs on Enclosures can be furnished either painted or Enameled Steel.

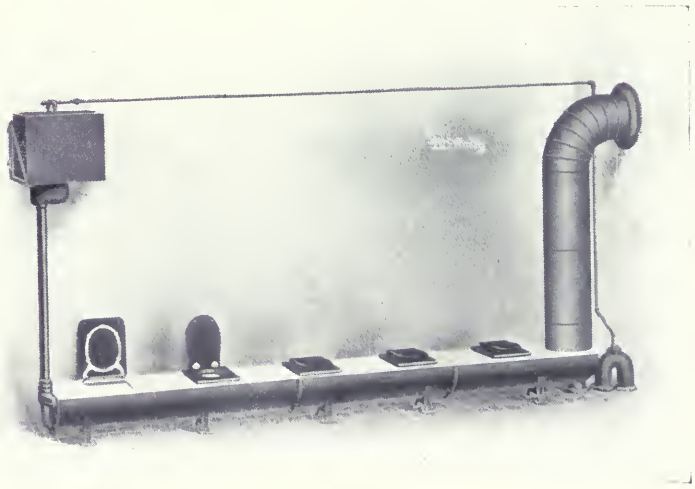


Plate 1262 "Royal Talus"

NUMBER OF SEATS

Size of Seats	3	4	5	6	7	8	9	10	11	12	13	14	15
24"	$287.00	$339.00	$391.00	$443.00	$495.00	$546.50	$597.50	$650.50	$698.00	$754.50	$706.00	$858.00	$910.00
27"	299.00	355.00	410.50	466.50	522.00	578.00	632.50	689.50	741.00	801.00	.....	.....	.....
30"	309.50	370.00	429.50	489.50	549.00	608.50	667.50	728.00	773.00	834.00	.....	.....	.....

Plate 1262 is similar in action to Plate 1261. Further information and prices on Partition, Backs and Enclosures will be furnished on application.

EDUCTION URINALS

McAvity's Automatic Eduction Urinals without partitions, With Painted Cast Iron Tank; Galvanized Flush and Air Pipes, and Perforated Washdown Pipe fitted along back; (Brass on Enameled, and Galvanized on Painted Urinals).

Brackets to Floor, instead of Wall, as shown, Each Extra. Pressed Steel Partitions, Painted each..... $14.00

Pressed Steel Partitions, Enameled, each..... $18.60

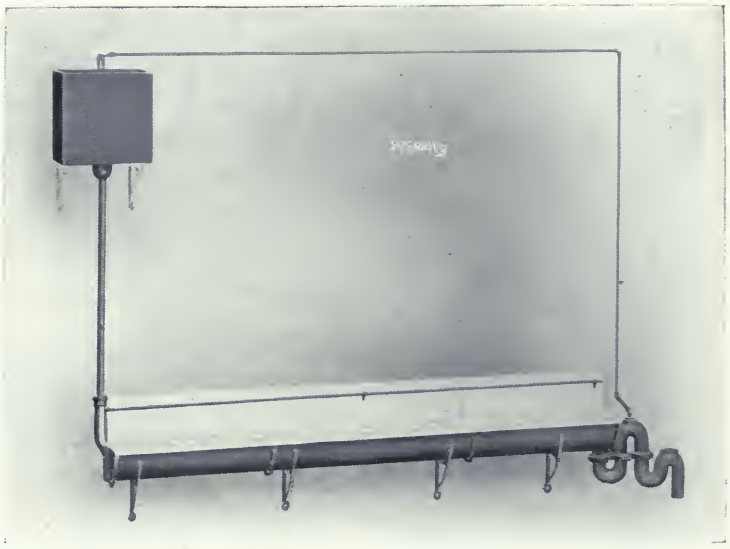


Plate 1271 "Royal Urania"

Length in feet...	4′	5′	6′	7′	8′	9′	10′	11′	12′	14′	15′	16′
Prices	$186.00	$211.50	$237.00	$262.00	$287.50	$313.00	$338.50	$364.00	$389.50	$440.00	$465.50	$491.00

Unless otherwise ordered Urinals with Enameled interior and Outlet on Right End as shown will be furnished.

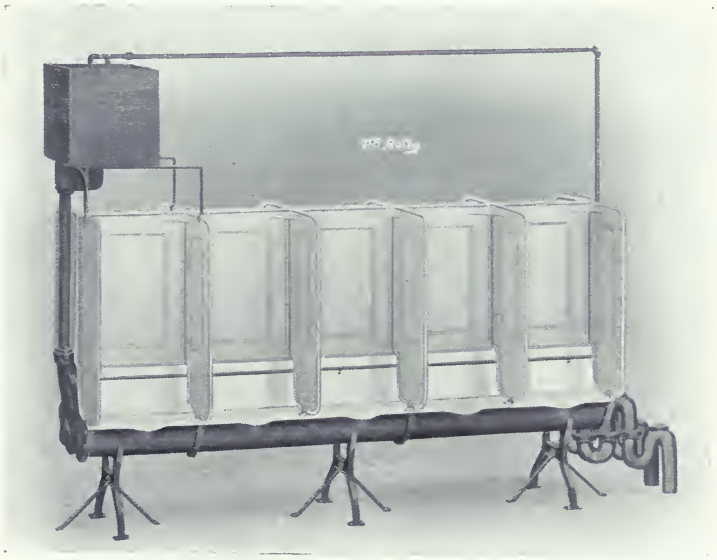


Plate 1272 "Royal Uranus"

McAvity's Automatic Syphon Eduction Lipped Double Urinal, with Partitions and Backs, with Painted Cast Iron Tank; Galvanized Flush and Air Pipes, and Perforated Washdown Pipes fitted along backs (Brass on Enameled, and Galvanized on Painted Urinals).

Length in feet.....	4′	5′	8′	10′	12′	14′	16′
Prices.....	$509.50	$666.00	$824.50	$982.00	$1139.00	$1296.50	$1454.00

These Urinals operate on the same principle as our Open Syphon Range Closets. The trough contains a good volume of Water which is rapidly removed by the Syphon Eduction Outlet when the Tank starts to Flush. Leaving the contents of the Tank to thoroughly scour and cleanse the interior. The Syphon is timed and controlled by putting a Stop Valve on the Supply to Tank. When installed in factories where they are used only in the day time; Waste of water can be avoided by shutting off the supply at night.

AUTOMATIC URINALS

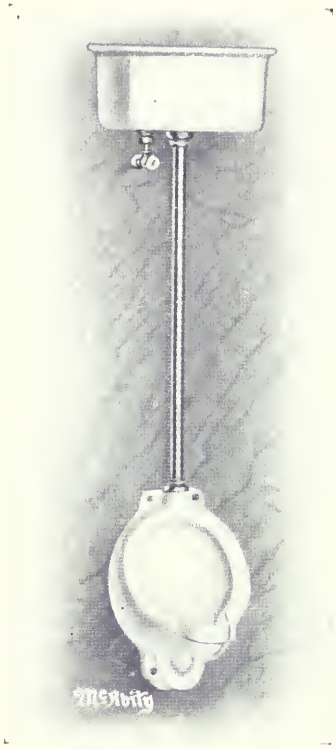


Plate 1281 "Royal Andes"

McAvity's Solid Vitreous China Syphon Jet Urinal, with Top Inlet and Back Outlet, Brass Outlet Thimble and Wall Screws; Enameled Iron Automatic Tank, with Nickel Plated Angle Supply, with Stop Valve and Nickel Plated Flush Pipe.

Prices on Application.

Plate 1281 can be furnished in Batteries of Two or Three, supplied from the One Tank.

Whenever possible Syphon Jet Urinals should be fitted with Back Outlet through the Wall. This arrangement conceals all Metal Outlet Connections. When Waste Connections cannot be provided for behind the Wall, Urinals with Bottom Outlets can be provided.

McAvity's Porcelain Enameled Iron Roll Rim Trough Urinal, with Integral Back, on Concealed Wall Hanger; Brass Bee-hive Strainer; Perforated Brass Wash-down Pipe; Golden Oak Automatic Tank with 16 oz. Copper Lining; Concealed Hanger and Nickel Plated Brass Flush Pipe; 1½" Nickel Plated "P" Trap to Wall.

Length, ft...	2′	2½′	3′	3½′	4′	5′
Less Trap..	$78.00	$83.50	$89.00	$94.50	$100.00	$122.50

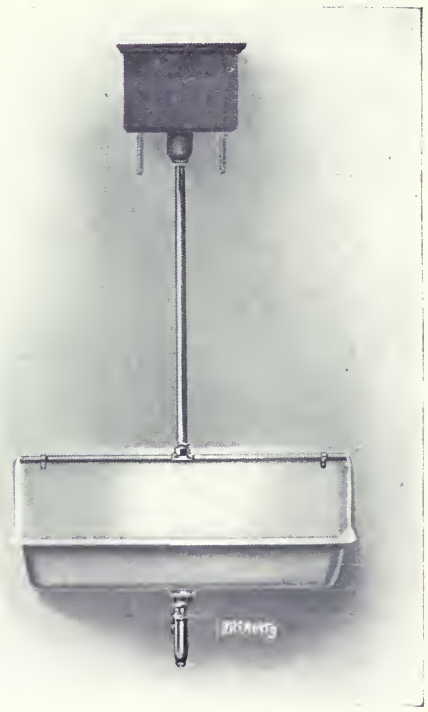


Plate 1282 "Royal Martello"

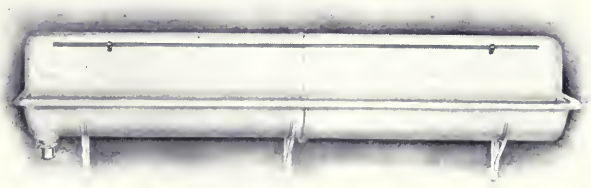


Plate 1283 "Royal Vedas"

McAvity's Porcelain Enameled Iron Roll Rim Urinal, with Separate Back; Brass Beehive Strainer; Perforated Wash-down Brass Pipe.
Up to 5′-0″ supplied with Trap in Centre.

Len. ft.	2′	2½′	3′	3½′	4′
Price...	$29.00	$33.50	$38.00	$42.00	$46.00

Len.feet...	5′	6′	7′	8′	9′
Price.	$59.00	$73.00	$87.00	$101.00	$115.00

Len. feet..	10′	12′	14′	15′
Price.....	$128.50	$157.50	$184.50	$198.50

WALL URINALS

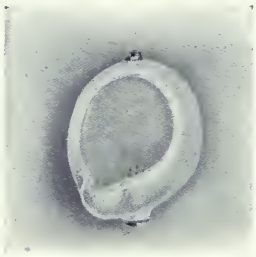


Plate 1291

McAvity's Solid Vitreous China Flat Wall Lipped Urinal. Can be furnished in the following sizes:—

Height, 18″	Width, 15″
" 15″	" 13″
" 14″	" 12″

Prices on Application.

Plate 1292

McAvity's Porcelain Enameled Iron Flat Back Lipped Urinal, supported on Concealed Wall Hanger, with Inlet and Outlet Coupling.

Size: 18½″ High, 13″ Wide

Price..... $32.00

Plate 1293

McAvity's Porcelain Enameled Iron Lipped Corner Urinal, supported on Concealed Wall Hangers, with Inlet and Outlet Couplings.

Size: 18½″ High
13½″ along each Wall.

Price.....$32.00

Plate 1295

Plate 1294

McAvity's Solid Vitreous China Corner Lipped Urinal. Can be furnished in the following sizes: 13″ x 13″, 11½″ x 11½″, 10½″ x 10½″.

Prices on Application.

Urinal or Closet Stall

Made of 1¼″ Wrought Iron Pipe, with Sheet Iron Partitions and Panelled Wood Doors as shown. When ordering, please state the number of sections required.

Prices on Application.

URINAL STALL FITTINGS

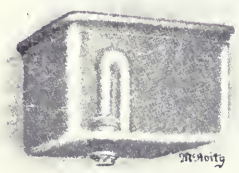


Plate 1301

McAvity's Golden Oak Urinal Tank with Automatic Intermittent Flush Valve.
Complete as Described:
3 gal. 5 gal. 8 gal. 10 gal.
$20.00 $26.00 $33.00 $38.00

Plate 1302

McAvity's Kenney Urinal Flushometer.

Each..... **$20.00**

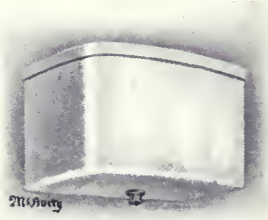


Plate 1303

McAvity's Vitreous China Urinal Tank, with Automatic International Flush Valve.
Complete as Described:
3 gal. 5 gal. 8 gal. 10 gal.
$30.00 $35.00 $40.00 $45.00 ea.

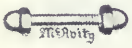


Plate 1304

Double Head Bolts.
Each... **$0.25**

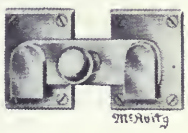


Plate 1305

Door Latch with Keeper.
Each... **$3.25**

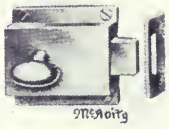


Plate 1306

Door Latch with Keeper.
Each... **$2.75**

Plate 1307

Door Indicator.
Each... **$1.25**

Plate 1308

Lead Expansion Shields.
Each... **$0.10**

Plate 1309

Door Check, with Keeper for Door Opening Out.
Each.... $2.00

Plate 13010

Door Check with Keeper for Door Opening Out.
Each.... **$2.00**

Plate 13011

Door Check with Keeper for Door Opening In.
Each.... **$2.00**

Plate 13012

Single Acting Spring Hinge.
Each.... **$4.50**

Plate 13013

Single Acting Plain Hinge.
Each.... **$3.00**

Plate 13014

Door Stop, without Keeper.
Each.... **$2.00**

Plate 13015

Threaded Brass Rod.
Per Foot, **$0.25**

Plate 13016

Single Acting Plain Hinge.
Each.... **$2.75**

Plate 13017

Single Acting Spring Hinge.
Each.... **$6.50**

Plate 13018

Double Acting Spring Hinge.
Each... **$7.00**

Plate 13019

Angle Clamp.
Each.. **$0.25**

Plate 13020

Flanged Bolt Nut.
Each.... **$0.25**

URINAL STALL FITTINGS

Plate 1311

The "Royal" Nickel Plated Adjustable Fan Spreader and Spud, for Porcelain Urinal Stalls.

Each..... $3.50

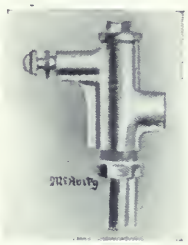


Plate 1312

The "Royal" Nickel Plated Push Button Flush, for Urinals.

Each..... $12.00

Plate 1313

The "Royal" Cast Brass Flushing Rim, Floor Drain and Trap, with Nickel Plated Hinged Cover and 3″ Outlet.

Each..... $28.50

Plate 1314

"Royal" Vitreous China Strainer, for Porcelain Urinal Stalls.

Each..... $1.50

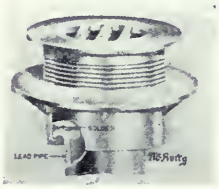


Plate 1315

"Royal" Nickel Plated Brass Outlet Strainer and Coupling for Porcelain Urinal Stalls, Lead Pipe Connections.

Each..... $3.50

Plate 1316

"Royal" Nickel Plated Brass Outlet Strainer and Coupling for Porcelain Urinal Stalls, Iron Pipe Connections.

Each..... $2.25

Plate 1317

Bottom End Standard.

Each.... $3.00

Plate 1318

Bottom Tee Standard.

Each.... $3.50

Plate 1319

Top Running Standard.

Each.... $3.75

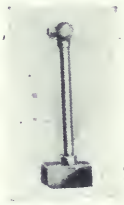


Plate 13110

Top End Standard.

Each... $3.75

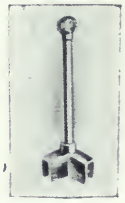


Plate 13111

Top Corner Standard.

Each.... $4.50

Plate 13112

Single Head Bolts.

Each... $0.15

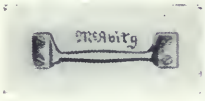


Plate 13113

Door Pull.

Each.... $0.70

Plate 13114

Centre Wing Clamp.

Each... $0.50

Plate 13115

Right Wing Clamp.

Each... $0.50

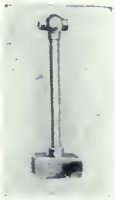


Plate 13116

Top Tee Stand.

Each... $4.50

Plate 13117

Bottom Corner Stand.

Each... $3.25

Plate 13118

Bottom Running Standard.

Each... $3.75 O.S.

VITREOUS URINALS

McAvity's Vitreous China Syphon Jet Urinal with Integral Trap; Kenney Nickel Plated Lever Handle Flushometer; Nickel Plated Brass Outlet Coupling.

Complete as Described..... **$55.00**

Prices do not include Marble or Slate Stall, which will be quoted on application.

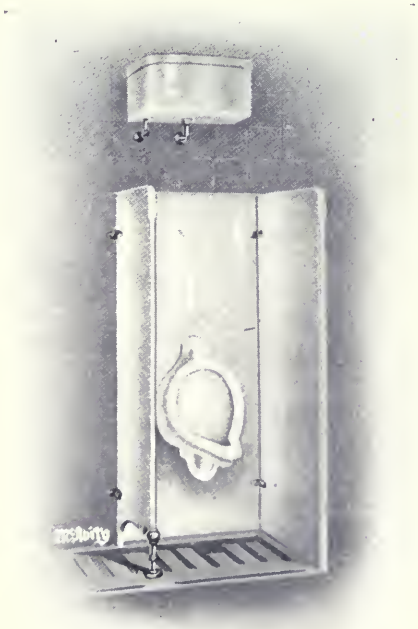
Plate 1321 "Royal Hylas"

McAvity's Vitreous China Syphon Jet Urinal with Integral Trap and Back Outlet; Kenney Nickel Plated Lever Handle Flushometer.

Complete as Described..... **$60.00**

Prices do not include Marble or Slate Stall, which will be quoted on application.

Plate 1322 "Royal Hecuba"



McAvity's Syphon Jet Urinal, with Integral Trap, Back Inlet and Outlet; "Royal" Vitreous China Automatic Tank; Concealed Flush Pipe and Connections.

Complete as Described..... **$60.00**

Prices do not include Marble or Slate Stall, which will be quoted on application.

Plate 1323 "Royal Helicon"

URINALS

McAvity's Solid Porcelain Interlocking Urinal Stalls, with Integral Seam Covers, and Drip Receptors; fitted with Six Gallon Automatic Vitreous China Tank; Nickel Plated Continuous Flush Pipe and Fan Spreaders; Nickel Plated Strainers and Couplings. Most Sanitary Urinal made; No Joints under water. Takes less time to install than any other Urinal Battery. Made in two widths 18″ and 24″.

Complete as Described:	18″	24″
3 Section.....	**$200.00**	**$250.00**
2 Section.....	**145.00**	**175.00**
Dimensions:	18″	24″
Height over all...	48″	48″
Width over all.....	18″	24″
" " 2 Part.	37″	49″

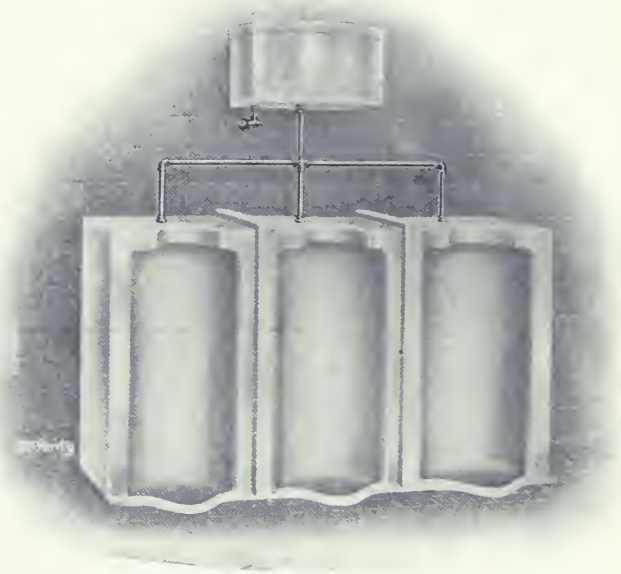


Plate 1331 "Royal Hydra"

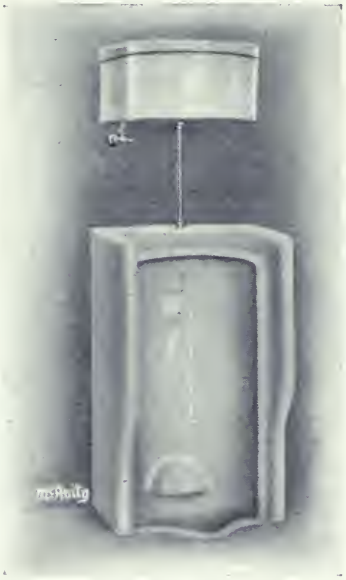


Plate 1332 "Royal Covento"

McAvity's Solid Porcelain Urinal with Six Gallon Automatic Vitreous China Tank; Nickel Plated Flush Pipe, and Angle Supply with Stop Valve.

This plate shows location of Hooded Vent on Body of Urinal. Vent is Integral with the Urinal and so made that it sheds water without splashing. Vent can be supplied on any style of Porcelain Stall Urinal.

Add to price of each Urinal Stall..... **$5.00**

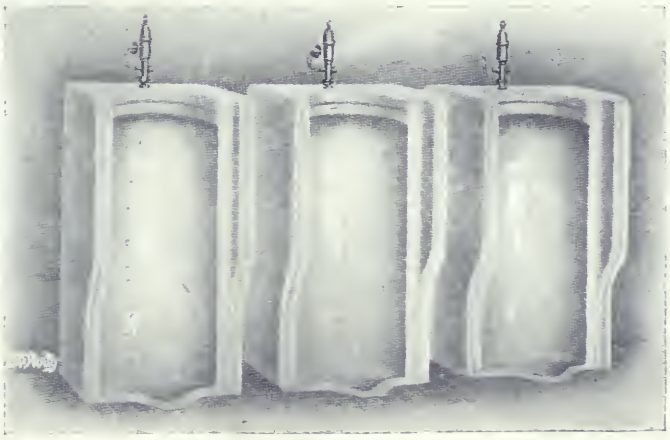


Plate 1333 "Royal Stonehenge"

McAvity's Solid Procelain Urinal Stall, with Integral Porcelain Front Shield and Drip Receptors; Kenney Nickel Plated Lever Handle Flushometer; Nickel Plated Bars, Outlet, Strainers and Couplings also Fan Spreaders and Couplings.

Price, each, Complete as Described:

	18″ Section	24″ Section
Single.....	$75.00	**$85.00**

Can also be supplied with Automatic China Tanks.

VITREOUS CHINA URINALS

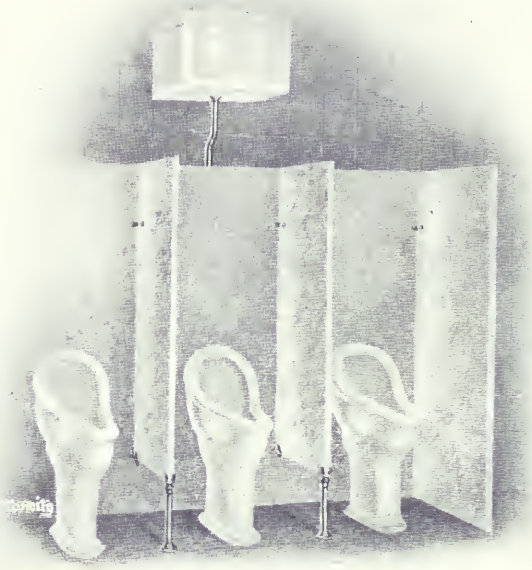


Plate 1341 "Royal Thorncliff"

McAvity's Solid Vitreous China Syphon Jet Urinals on Pedestals; fitted with Vitreous China Automatic Tank; Nickel Plated Flush Pipe, and connections to Bowls.

Plate .... As described less marble

Single section.....$ 62.00

Three section, with single Tank.. 135.00

McAvity's Solid Porcelain Corner Urinal Stall with Integral Drip Receptor; Kenney Nickel Plated Lever Handle Flushometer; Nickel Plated Brass Outlet Strainer and Coupling; Nickel Plated Fan Spreader and Coupling.

Price on application

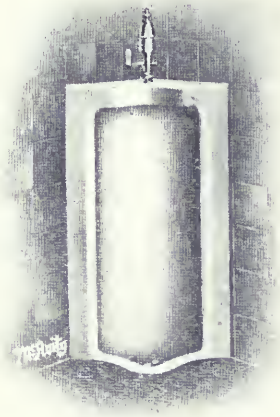


Plate 1342 "Royal Forum"

Plate 1343 "Royal Poycelo"

McAvity's Solid Porcelain Patented Urinal Stalls with the exception of the side Partitions, this Urinal is made in one integral piece, No Joints or seams under water; fitted with Nickel Plated Brass Push Button Flushometer.

Nickel Plated Fan Spreader and Strainer.

Plate	Price 18"	Price 24"
2 Section.....	$180.00	$210.00
3 Section.....	275.00	310.00

These urinals can also be operated by Tank as shown on other designs.

O. S.

PORCELAIN URINALS

McAvity's Solid Porcelain Urinal Stalls with High Tops and extended Shields; Five gallons Automatic Vitreous China Tank with 1½ reamed slip nut; Nickel Plated continuous Flush Pipes; Nickel Plated Fan Spreaders for ½" I. P. Size Supplies.

Removeable Porcelain Strainer

Dimensions:

Height from Floor to Top of Stalls	4'8"
Width Over all one Stall	3'
" " two "	5'
" " three "	7'
" " four "	9'

For every additional section add two feet over all dimensions.

Larger Automatic Tanks, or Urinals with Vents, can be furnished if desired.

Price, Two part as described.....**$275.00**

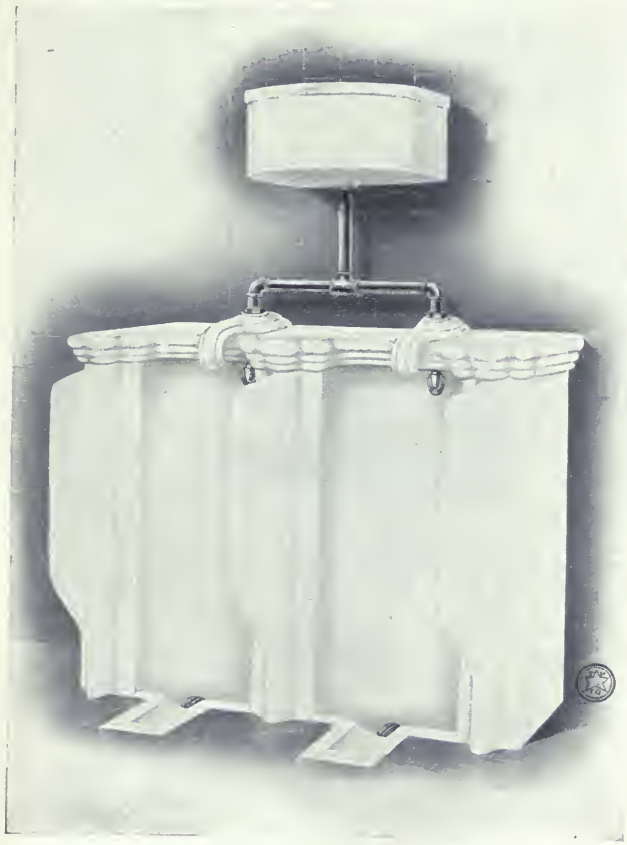


Plate 1352 "Royal Devonshire"

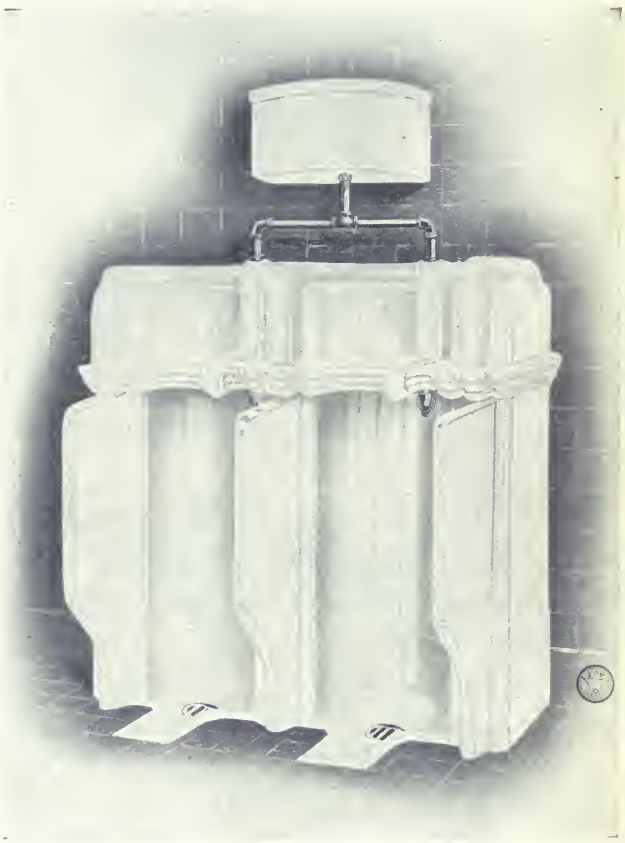


Plate 1351 "Royal Kenilworth

McAvity's Solid Porcelain Urinal Stalls with Low Tops and extended Shields; Five gallon Automatic Vitreous China Tank with 1½ reamed slip nut; Nickel Plated Continuous Flush Pipes; Nickel Plated Fan Spreader for ½" I. P. Size Supplies.

Removeable Porcelain Strainer

Dimensions:

Height from Floor to Top of Stalls	43¾
Width over all Single Stall	3'
" " two "	5'
" " three "	7'
" " four "	9'

For every additional section add two feet over all dimensions.

Larger Automatic Tanks, or Urinals with Vents, can be furnished if desired.

Price, two part as described.....**$225.00**

"ROYAL" BATH FAUCETS

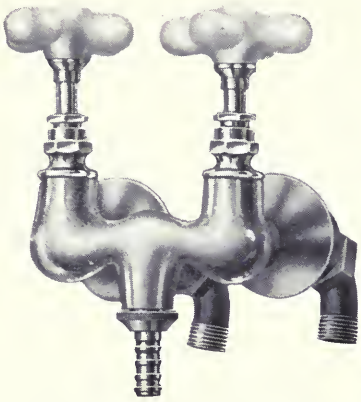


Plate 1361 "Royal Swan"

McAvity's Heavy Nickel Plated Compression Double Bath Faucet, with Solid China four Arm Handles, Indexed; Incased washer and Stuffing Box with couplings and Tails.

Price, each.....$10.00

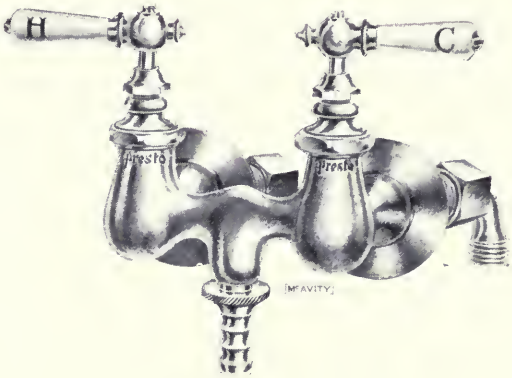


Plate 1362 "Royal Presto"

McAvity's Heavy Nickel Plated Quick Opening Compression Double Bath Faucet, with China Lever Handles, Indexed; Incased washer and Stuffing Box with Couplings and Tails.

The corrugated stem allows the Handle to be set at any angle.

Price, each.....$8.50

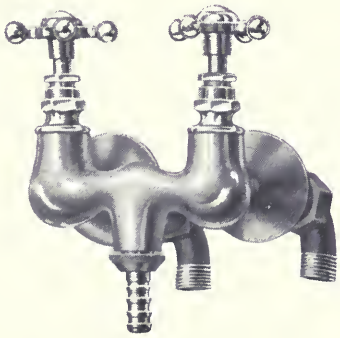


Plate 1363 "Royal World"

McAvity's Heavy Nickel Plated Compression Double Bath Faucet, with four Arm China Indexed Handles; Incased washer and Stuffing Box with Couplings and Tails.

Price, each.....$7.50

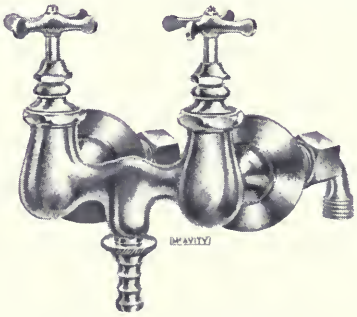


Plate 1364 "Royal A1"

McAvity's Heavy Nickel Plated Compression Double Bath Faucet, with four Arm Solid Metal Handles, Plain; Incased Washer and Stuffing Box with Couplings and Tails.

Price, each.....$6.50

"ROYAL" BATH FAUCETS

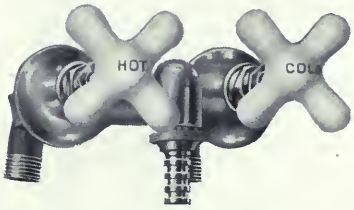


Plate 1371 "Royal OK"

McAvity's Heavy Nickel Plated Compression Double Bath Faucet with four Arm Solid China Indexed Handles; Incased Washer and Stuffing Box, with Couplings and Tails.

Price, each.....$9.50

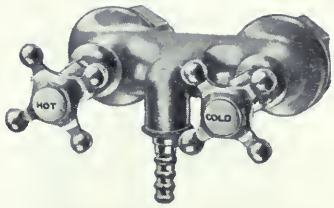


Plate 1372 "Royal OK"

McAvity's Heavy Nickel Plated Compression Double Bath Faucet with four Arm China Indexed Handles; Incased Washer and Stuffing Box, with Couplings and Tails.

Price, each.....$7.50

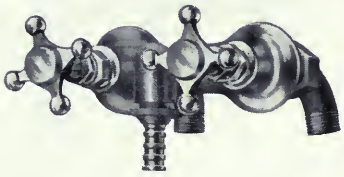


Plate 1373 "Royal OK"

McAvity's Heavy Nickel Plated Compression Double Bath Faucet with Four Arm Plain Metal Handles; Incased Washer and Stuffing Box, with Couplings and Tails.

Price, each.....$6.50

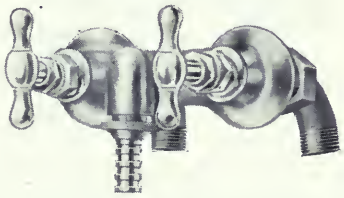


Plate 1374 "Royal OK"

McAvity's Heavy Nickel Plated Compression Double Bath Faucet with Solid Metal Tee Handles; Incased Washer and Stuffing Box, with Couplings and Tails.

Price, each.....$6.00

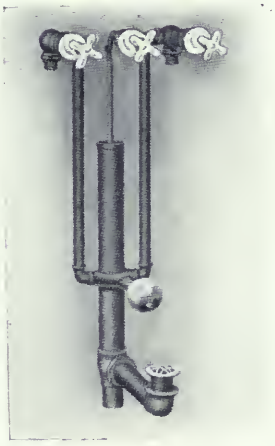


Plate 1375 "Royal Utopia"

McAvity's "Royal" Bottom Bell Supply and Waste Fitting with Solid China Handles, for Tiled-in-Baths.

Can be supplied with any style of Handle.

Price, each.....$25.00

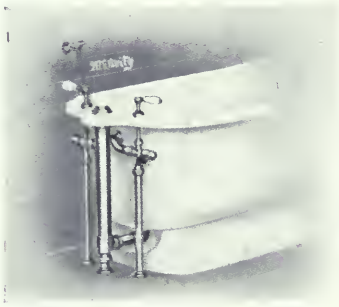


Plate 1376 "Royal Alva"

McAvity's Royal Bottom Bell Supply and Waste Fitting; China Lever Handles; China Knob Indexed Waste and Nickel Plated Supply Pipes and Flanges.

Price, each.....$30.00

"ROYAL" BATH WASTES AND SUPPLY PIPES

Made of Heavy Cast Composition Bronze, Good Nickel Plate and of neat design.

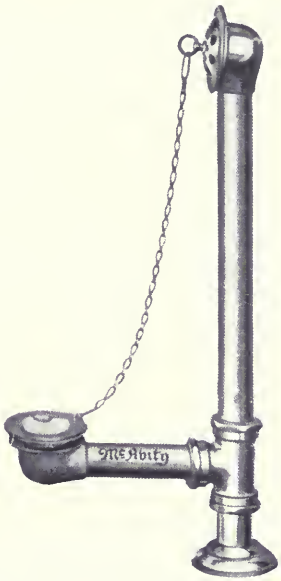


Plate 1381 "Royal World"

McAvity's Nickel Plated Combined Waste and Overflow with Chain and Stopper; Outlet 1¼" O.D.

Price.....$5.00

Plate 1382 "Royal Aetna"

McAvity's Nickel Plated Bath Standing Waste and Overflow: Outlet 1½" O.D.

Price.....$15.00

Elbow with Stop

Bent with Stop

Plate 1383

McAvity's Nickel Plated Elbow Bath Supplies; ⅝ O.D. annealed Brass.

Price, per pr.....$3.50

Plate 1384

McAvity's Nickel Plated Elbow Bath Supplies with Indexed Stop Valve; ⅝ O.D. annealed Brass.

Price, per pr.....$7.00

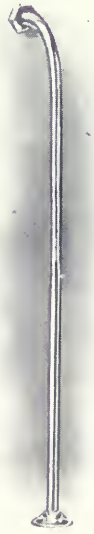


Plate 1385

McAvity's Nickel Plated Bent Bath Supplies; ⅝ O.D. annealed Brass.

Price, per pr.....$3.50

Plate 1386

McAvity's Nickel Plated Bent Bath Supplies with Indexed Stop Valves; ⅝ O.D. annealed Brass.

Price, per pr.....$7.00

THE "ROYAL" BATH BELL SUPPLY AND WASTE COMBINATIONS

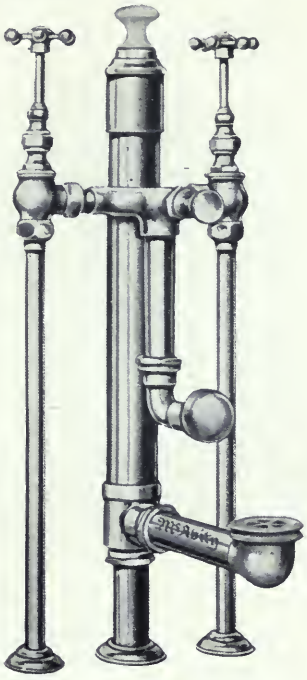


Plate 1391 "Royal Olympic"

McAvity's Heavy Nickel Plated Bottom Bell Supply and Waste Combination Fitting with Six Ball China Indexed Handle; Compression Valves and Indexed China Knob on Waste; Supplies ½" I.P. Size; Outlet 1½" O.D.
Price, each.....$35.00
Can also be furnished with Lever Handle.

To be used Outside of Tub Rim.

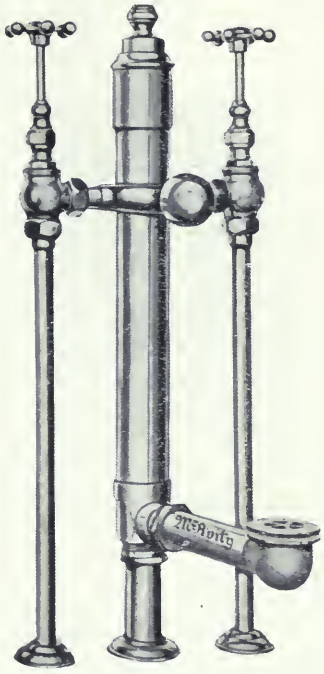


Plate 1392 "Royal Bristol"

McAvity's Heavy Nickel Plated Top Bell Supply and Waste Combination Fitting, with Six Ball China Handle Compression Valves and Indexed China Knob on Waste; Supplies ½" I. P. Size; Outlet 1½" O.D.
Price, each.....$32.50
Can also be furnished with Lever Handle.

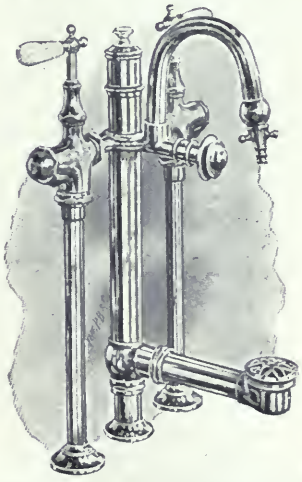


Plate 1393 "Royal Princess"

McAvity's Nickel Plated Over Rim Combination Supply and Waste Fitting for Solid Porcelain Baths; Fuller Design Valves; China Indexed Lever Handles and Indexed China Knob on Waste; Supplies ½" I. P. Size; Outlet 1½" O.D.
Price, each.....$37.50

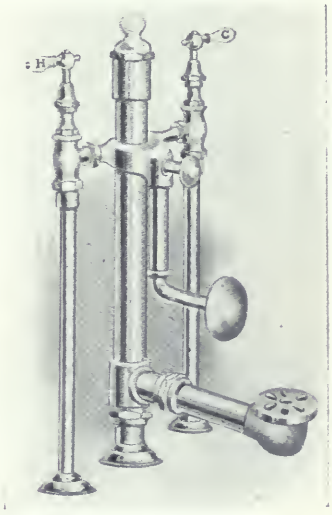


Plate 1394 "Royal Crown"

McAvity's Heavy Nickel Plated Bottom Bell Supply and Waste Combination, with China Lever Quick Opening Compression Valve; ½" I.P. Size Supplies, Outlet 1½" O.D.
Price, each.....$36.00

The above Fitting are to be used outside Rim of Tub.

THE "ROYAL" LAVATORY COMBINATIONS

for Enameled Iron and Solid Porcelain Lavatories

Plate 1401 "Royal Loraine"

McAvity's Nickel Plated Brass Combination Supply and Pop-up Waste Fixture, with Solid China Four Arm Handles on Compression Valves and Waste; Semi-Raised Nozzle.

Price, each.....$35.00

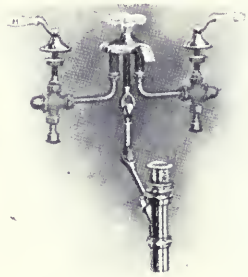


Plate 1402 "Royal Neva"

McAvity's Nickel Plated Brass Combination Supply and Pop-up Waste Fixture, with China Offset Lever Handles on Fuller Design Valves, and Solid China Four Arm Handle on Pop-up Waste; Semi-Raised Nozzle.

Price, each.....$35.00

When ordering please State clearly whether for Enameled Iron or Solid Procelain. Further Information will be furnished on application.

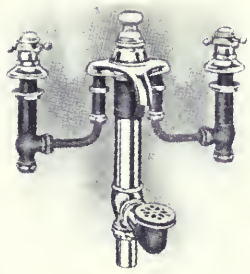


Plate 1403 "Royal Lorna"

McAvity's Nickel Plated Brass Combination Supply and Waste Fixture with Four Arm China Index Handles on Self-Closing Valves; Standing Waste with China Knob, Flat Nozzle. For Vitreous Lavatories or Solid Porcelain Lavatories.

Price, each.....$35.00

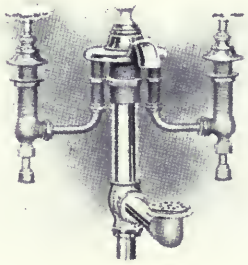


Plate 1404. "Royal Chester"

McAvity's Nickel Plated Brass Combination Supply and Waste Fixture, with Solid China Four Arm Handles on Compression Valves; Standing Waste with China Knob; Semi-Raised Nozzle.

Price, each.....$35.00

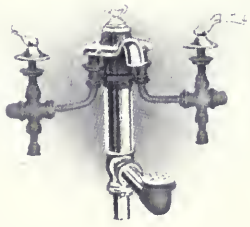


Plate 1405 "Royal Avon"

McAvity's Nickel Plated Brass Combination Supply and Waste Fixture, with China Offset Lever Handles on Fuller Valves; Standing Waste with China Knob; Semi-Raised Nozzle.

Price, each.....$35.00

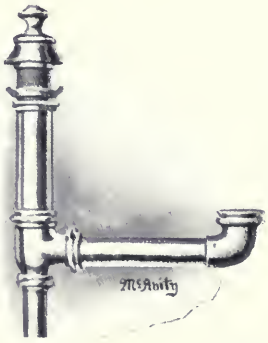


Plate 1406 "Royal Atlas"

McAvity's Nickel Plated Bi Transit Waste for Enameled Iron and Porcelain Lavatories with China Indexed Top.

Price, each.....$7.50

"ROYAL" SHAMPOO FAUCETS

Plate 1411 "Royal Saturn"

McAvity's "Royal Saturn" Heavy Nickel Plated Basin and Shampoo Faucet with Solid Four Arm China Handles, Rubber Tube and Nickel Plated Spray Bulb.

Price, each.....$30.00

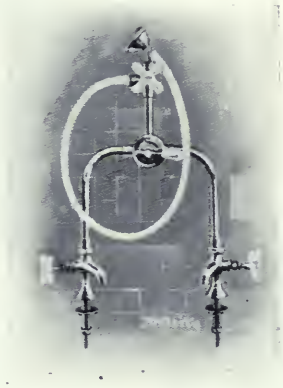


Plate 1412 "Royal Selene"

McAvity's "Royal Selene" Heavy Nickel Plated Basin and Shampoo Faucet with Solid Four Arm China Handles; Mixing Valve on Shampoo extension; Rubber Tube and Nickel Plated Spray Bulb. An Ideal Barbers Fixture.

Price, each.....$30.00

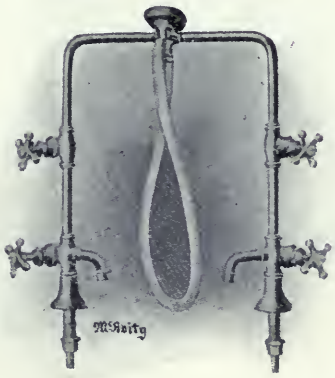


Plate 1413 "Royal Severn"

McAvity's "Royal Severn" Heavy Nickel Plated Basin and Shampoo Faucet with Four Arm Solid Metal Handles, China Indexes.

Price, each.....$25.00

Plate 1414 "Royal Spartan"

McAvity's "Royal Spartan" Heavy Nickel Plated Combination Basin and Shampoo Faucet with Single Spout; Four Arm Solid Metal Handles with China Indexes; Rubber Tube and Nickel Plated Spray Bulb. A very compact Fixture.

Price, each.....$28.00

All these Faucets can be Supplied with Lever Handles in China or Solid Metal

"ROYAL" LAVATORY FITTINGS

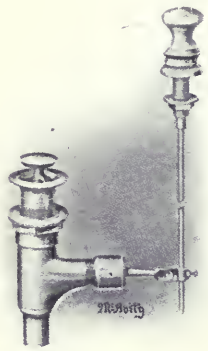


Plate 1421
"Royal Riverglade"

McAvity's Heavy Nickel Plated Pop-Up Lavatory Waste.

A heavy and durable fixture of simple construction operates by pushing down to open.

Lift Knob to Close.

Tail ∅c 1¼" O.D. Diameter.

Plate 1421 with Metal Knob, each.....$10.00

Plate 1422 with China Knob and Escutcheon, each.....$15.00

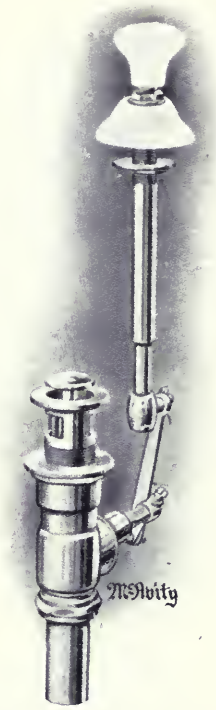
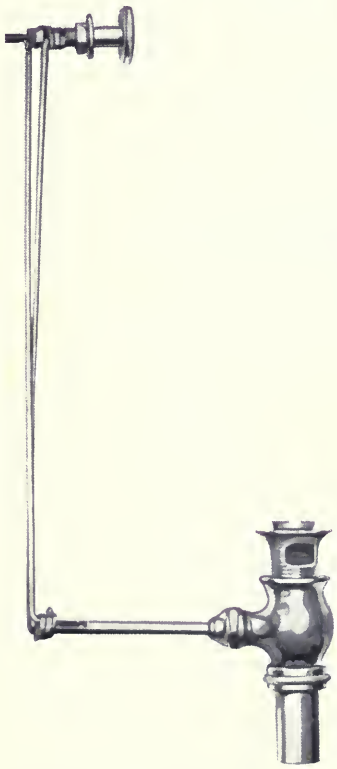


Plate 1422 "Royal Riverview"

McAvity's Heavy Nickel Plated Straight Basin Waste with Nickel Plated Coupling Plug, Flange and Rubber Stopper.

Plate 1423 "Royal Saxon"

	1¼"	1½"
Price, each.....	$4.00	$6.00



McAvity's Heavy Nickel Plated Improved Lift Waste with Metal Handle.

For use with Basins drilled through the back.

Plate 1424 "Royal Riverside"

Price, each.....$8.00

NICKEL PLATED SELF-CLOSING BASIN COCKS

Plate 1431 "Royal Sanicap"

Heavy Nickel Plated Dome Cap Basin Faucet, with Four Arm Solid China Handles, Indexed. The perfectly smooth circular surface of this Faucet makes it practically impervious to dirt, and very easily kept clean.

Specially recommended for Hospital use.

Price, per Doz..... $70.00

Plate 1432 "Royal Sanicap"

Heavy Nickel Plated Dome Cap Basin Faucet, with Four Arm Solid Metal Handles, Indexed. The perfectly smooth circular surface of this Faucet makes it practically impervious to dirt, and very easily kept clean.

Price, per Doz..... $64.00

Plate 1433 "Royal Wheeloc"

Heavy Nickel Plated Self-Closing Basin Faucet with Solid Metal Six Arm Roller Bearing Handles, Indexed.

An Ideal Faucet for Hotels, Hospitals, Institutions, or Business Buildings where economy of water and efficiency of operation are to be considered.

Price, per Doz..... $75.00

Plate 1434 "Royal Minos"

Heavy Nickel Plated "Doherty Pattern" Basin Faucet, Encased Washer and Heavy Phosphor-Bronze Spring.

Price, per Doz..... $58.00

Plate 1435

Solid China Cross Handles, without Brass Socket.

Per Doz..... $6.00

"ROYAL" BASIN FAUCETS

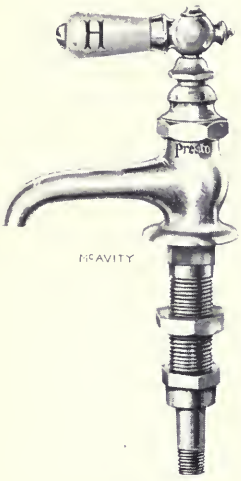


Plate 1441

"Royal Presto". A Quick Opening Basin Faucet, with China Lever Handle, Indexed, Special Corrugated Stem, allows Handle to be adjusted to any angle.

A quarter turn gives full opening. Stuffing Box and Incased Washer.

Price, per Doz..... **$30.00**

Plate 1442

"Royal Swan". Four Arm Solid China Indexed Handles; Incased Washer and Stuffing Box and Threaded ¼" Iron Pipe Size.

Heavy Pattern.

Price, per Doz..... **$30.00**

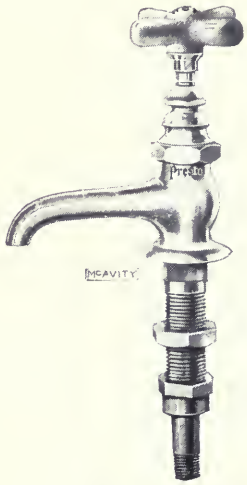


Plate 1443

"Royal World". Four Arm Solid China Index Handles; Incased Washer and Stuffing Box.

Price, per Doz..... **$30.00**

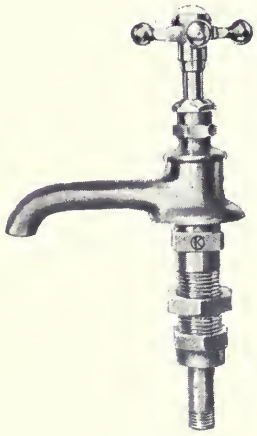


Plate 1444

"Royal O.K." Four Arm China Indexed Handles, Incased Washer and Stuffing Box.

Light Pattern.

Price, per Doz..... **$24.00**

Plate 1445

"Royal B". Four Arm China Indexed Handles, Incased Washer and Stuffing Box.

Heavy Pattern.

Price, per Doz..... **$27.00**

Plate 1446

"Royal Century". Four Arm Solid China Indexed Handles, Incased Washer and Stuffing Box.

Light Pattern.

Price, per Doz..... **$27.00**

Note:—These Faucets have Stuffing Box and Incased Washer, and are Heavily Nickel Plated.

"ROYAL" BASIN FAUCETS

Plate 1451

"Royal C" Nickel Plated Four Arm Solid Metal Handles, not indexed. Incased Washer and Stuffing Box.

Price, per Doz..... $21.00

Plate 1452

"Royal" Nickel Plated Fuller Design Basin Faucets. Furnished with China Lever and Indexed Top.

Price, per Doz..... $60.00

As illustrated, per Doz. 51.00

Plate 1453

"Royal D" Nickel Plated Solid Metal Tee Handle Faucet, with Incased Washer and Stuffing Box.

Price, per Doz..... $20.00

Plate 1454

"Royal" Automatic Basin Faucet with China Index: This Faucet is so constructed that the flow of water can be regulated at from 5 to 20 Seconds. It eliminates waste, and may be set so that the hands can be washed in running water.

Price, per Doz..... $90.00

Plate 1455

"Royal Lachine" Nickel Plated Heavy Low Down Self-Closing Basin Faucet, with China Indexed four Arm Handle.

Price, per Doz..... $60.00

Plate 1456

"Royal" Perry Pattern Heavy Nickel Plated Self-Closing Basin Faucet, with four Arm Solid Metal Handle China Indexed.

Price, per Doz..... $60.00

"ROYAL" BASIN SUPPLY PIPES

Plain Angle

Plate 1461
Size ⅝" O.D. Price per Pair... $4.50

Annealed Brass

Angle with Stop Valve

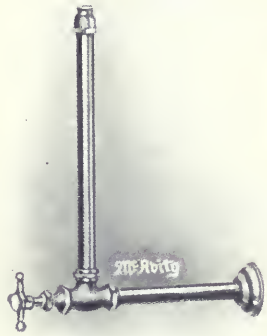


Plate 1462
Size ⅝" O.D. Price per Pair... $7.50

Angle with Air Chamber

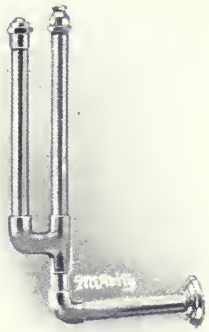


Plate 1463
Size ⅝" O.D. Price per Pair.. .$9.00

Angle with Air Chamber and Stop Valve

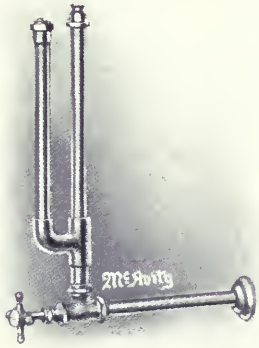


Plate 1464
Size ⅝" O.D. Price per Pair $10.50

Plain

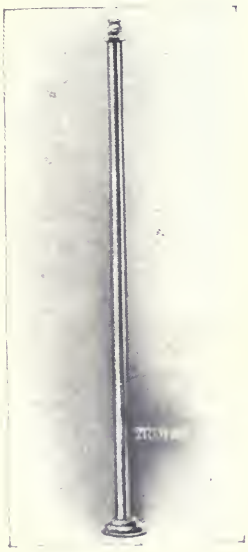


Plate 1465
Size ⅝" O.D.
Price per Pair.....$4.00

Plain with Stop Valve

Plate 1466
Size ⅝" O.D.
Price per Pair.....$7.00

Plain with Air Chamber

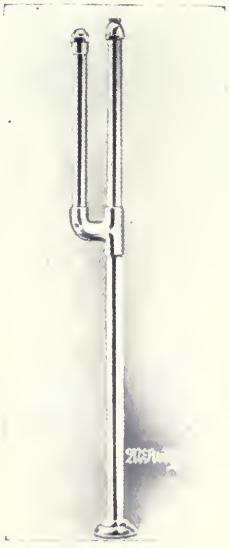


Plate 1467
Size ⅝" O.D.
Price per Pair....$9.00

Plain with Air Chamber and Valve

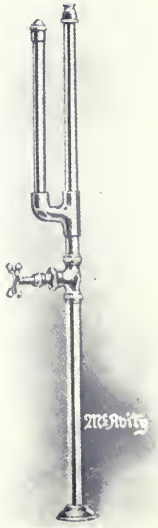


Plate 1468
Size ⅝" O.D.
Price per Pair.....$10.50

ADJUSTABLE TRAPS

NO VENT "S"

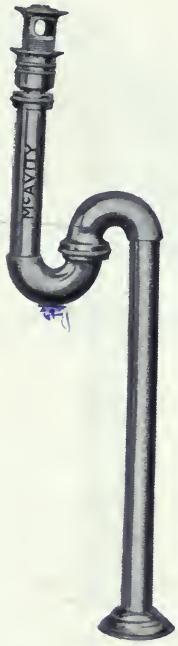


Plate 1471

Nickel Plated Adjustable "S" Trap	1¼"	1½"
Price, each	$6.00	$8.00
With Trap Screw, Add	.75	.75

VENTED "S"

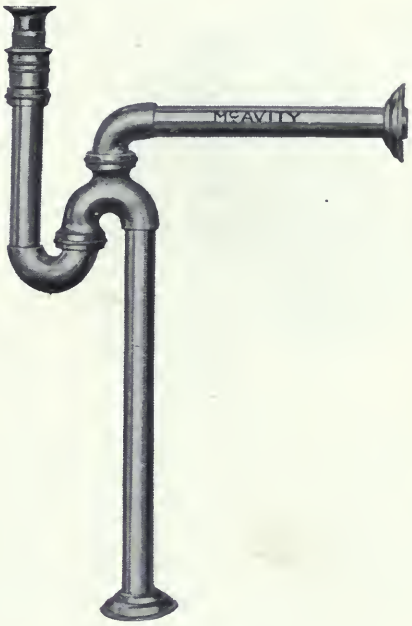


Plate 1472

Nickel Plated Adjustable "S" Trap with Vent to Wall	1¼"	1½"
Price, each	$9.00	$11.00
With Trap Screw, Add	.75	.75

Plate 1473

Nickel Plated Adjustable "P" Trap Plain	1¼"	1½"
Price, each	$6.00	$8.00
With Trap Screw, Add	.75	.75

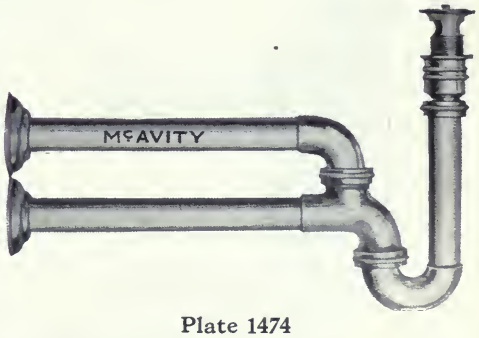


Plate 1474

Nickel Plated Adjustable "P" Trap With Vent to Wall	1¼"	1½"
Price, each	$9.00	$11.00
With Strap Screw, Add	.75	.75

The above Traps can also be furnished with Sink Connection at the above price.

"WORLD" CENTRIFUGAL NON-SYPHON TRAPS

No Vent "S"

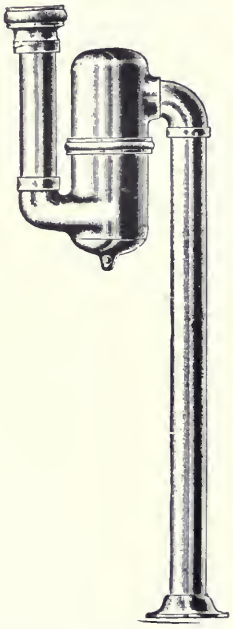


Plate 1481 "Royal World"

Full "S" (No Vent) Nickel Plated Trap, Complete to Floor with Flange, Plug and Stopper.

1¼" Each	$ 9.00
1½" "	13.00
2" "	18.00

Vented "S"

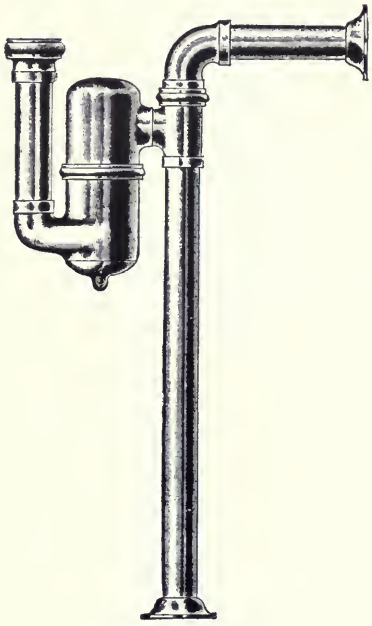


Plate 1482 "Royal World"

Full "S" (Vented) Nickel Plated Trap, Complete to Floor with Flange, Plug and Stopper.

1¼" Each	$11.00
1½" "	16.00
2" "	21.50

No Vent "P" or ½ "S"

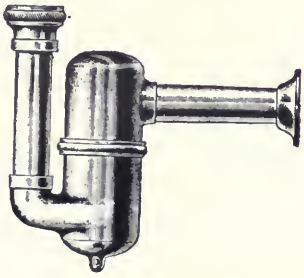


Plate 1483 "Royal World"

½ "S" (No Vent) Nickel Plated Trap, Complete to Wall, with Flange, Plug and Stopper.

1¼" Each	$ 8.00
1½" "	12.00
2" "	17.00

Vented "P" or ½ "S"

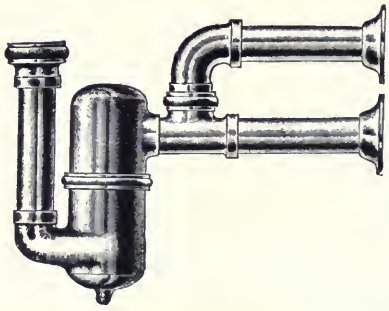


Plate 1484 "Royal World"

½ "S" (Vented) Nickel Plated Trap, Complete to Wall, with Flange, Plug and Stopper.

1¼" Each	$10.00
1½" "	15.00
2" "	20.50

The above Traps can also be furnished with Sink Connection at the above price.

McAVITY'S GUARANTEE

"WORLD" CENTRIFUGAL NON-SYPHON TRAP

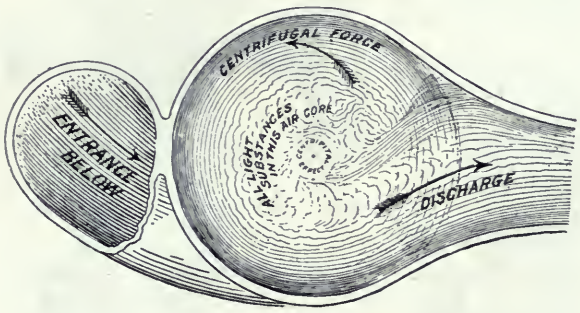


Plate 1491

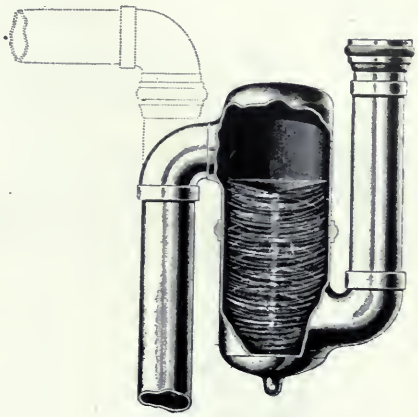


Plate 1492

The above Sectional Cuts of World Centrifugal Trap, show the currents of water and air core formed when the Trap is in motion.

It is absolutely impossible to syphon these Centrifugal Lead Traps even if not vented as they have a large body and a large air cushion. City By-Laws and Architects call for the ordinary S Lead Trap to be back vented, but will permit these non-syphoning Traps to be put in without vents which really makes them the cheapest Traps on the market. Our Patent covers the Centrifugal action and is much superior to other Traps of a somewhat similar design, as in the "World" Type the Centrifugal action makes them self-cleansing whereas the other style Trap clogs up and has to be constantly cleansed.

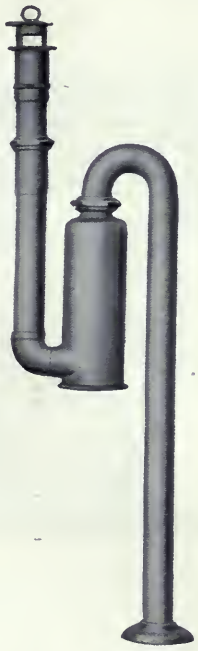


Plate 1493
McAvity's "Royal" Nickel Plated and adjustable Anti-Syphon.

	1¼"	1½"
Price, each "S"	$9.00	$13.00
" " ½ "S"	8.00	12.00

Plate 1494
McAvity's "Royal Sanitas" Pattern Cast Brass Trap.

	1¼"	1½"
Price, each, "S"	$6.00	$10.00
" " ½ "S"	6.00	10.00

Plate 1495
McAvity's "Royal Elliptic" Cast Brass Trap with Vent.

	1¼"	1½"
Price, each, "S"	$10.00	$12.00

"ROYAL" DEEP SEAL TRAPS AND CONTINUOUS WASTES

FULL "S"

Ground or Slip Joint

½ "S" Nickel Plated Deep Seal Trap, complete to Wall, with Flange, Plug and Stopper.

	1¼"	1½"	2"
Plate 1501—Full "S".	$6.90	$11.10	$17.10
" 1502—½ "S"..	6.00	9.45	15.45

Can also be furnished with sink connection at same price.

½ "S" or "P"

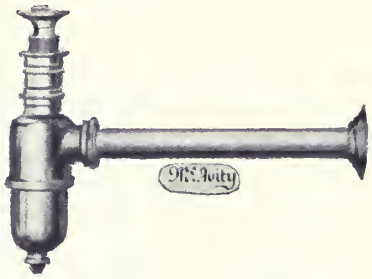


Plate 1502 "Royal Deep Seal"

Plate 1501 "Royal Deep Seal" Full "S" Nickel Plated Deep Seal Trap, complete to Floor, with Flange, Plug and Stopper.

END WASTE

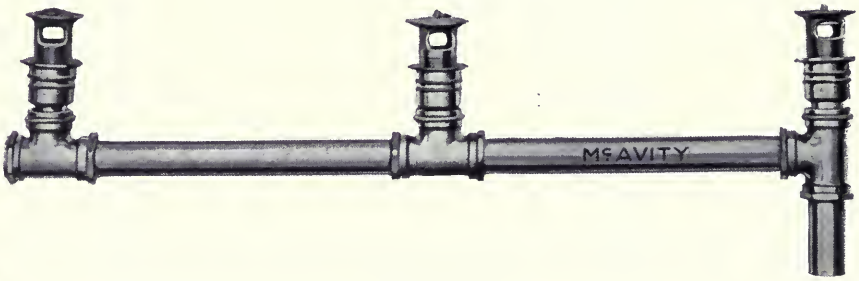
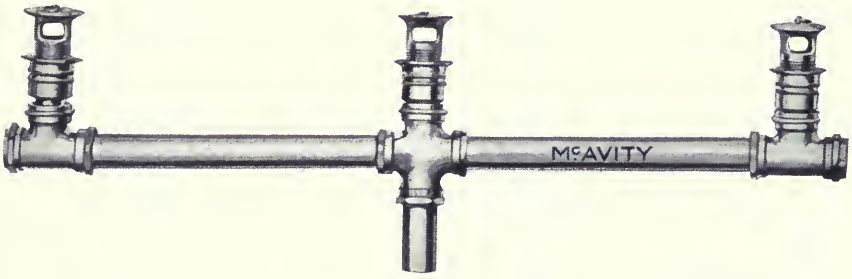


Plate 1503



CENTRE WASTE

Plate 1504

WASTE BETWEEN SECTIONS

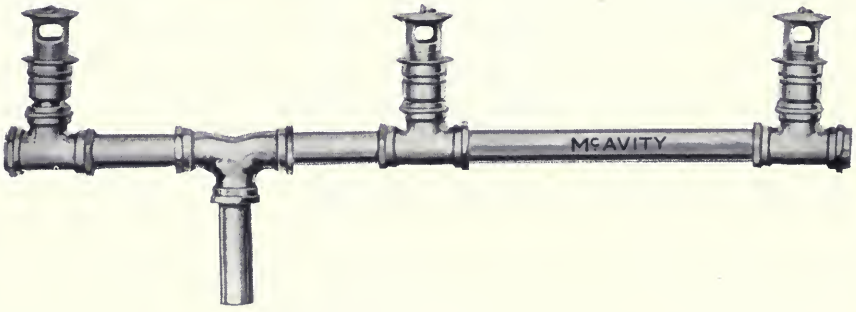


Plate 1505

When ordering continuous Waste, specify distance center to center of plugs, and state exactly where Traps are required. Unless otherwise ordered Trap on end will be supplied.

Prices on Application.

NICKEL PLATED PLUGS

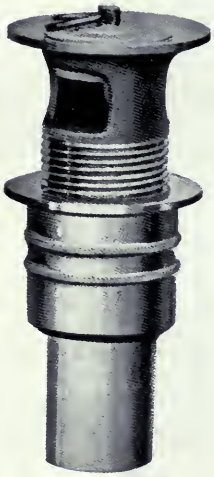


Plate 1511

McAvity's Heavy Nickel Plated Basin P.O. Plug and Coupling for Traps.

Size	1¼″
Price, per Doz.....	$15.00

Plate 1512

McAvity's Nickel Plated Basin P.O. Plug and Coupling for Straight Waste.

Size.....	1¼″
Price, per Doz.....	$12.00

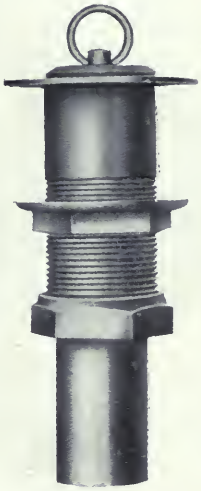


Plate 1513

McAvity's Nickel Plated Basin Plug, with Coupling and Tail, for Common Overflow Basin.

Size on tail.....	1″
Price, per Doz.....	$12.00

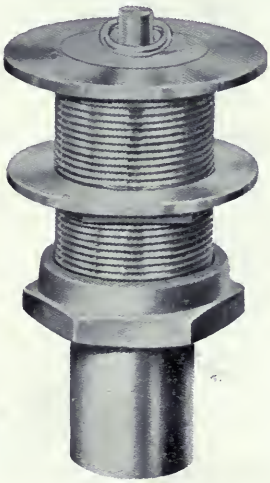


Plate 1514

McAvity's Heavy Cast Brass Wooden Wash Tray Plug, with Tail and Coupling, and Rubber Stopper ((Screwed Iron Pipe Size).

	1¼″	1½″
Price, per Doz., with T. and C.....	$30.00	$40.00
Price, per Doz. without T. and C.....	25.00	35.00

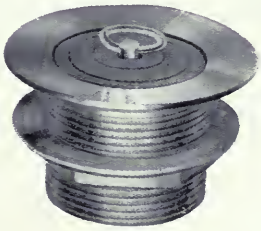


Plate 1515

McAvity's Heavy Nickel Plated Cast Brass Wash Tray Plug, with Coupling for enamel Iron Laundry Trays, Screwed for Iron Pipe.

Size	1½″
Price, per Doz.	$35.00
With Coupling and Tail	40.00

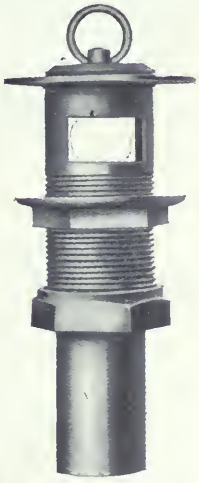


Plate 1516

McAvity's Nickel Plated Basin Plug, with Coupling and Tail for P.O. Basin.

Size on Tail.....	1″
Price, per Doz.....	$12.00

HOSPITAL LAVATORY FIXTURES

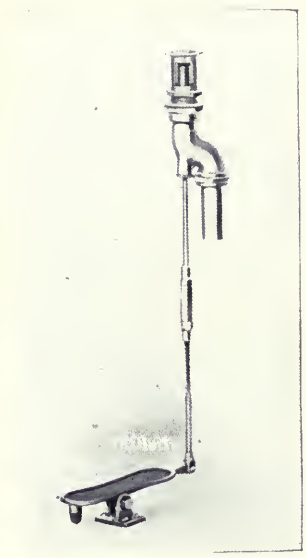


Plate 1521 "Royal Tharcon"

McAvity's Nickel Plated Foot Operated Waste with Trap Connection and Foot Pedal

Price, each.....$13.00

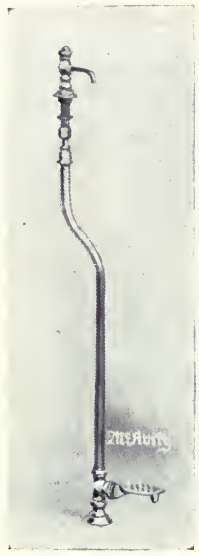


Plate 1522 "Royal Thevon"

McAvity's Nickel Plated Pedal Supply Pipe with Basin Faucet and Foot Operated Valve.

Price, each.....$11.25

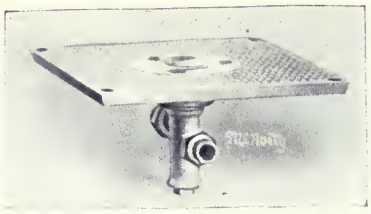


Plate 1523 "Royal Asquard"

McAvity's Foot Valve on Floor Plate for concealed Work. Can be used on Sinks, Lavatories or Drinking Fountains.

Price, each.....$16.15

Plate 1525

McAvity's Nickel Plated Royal Open Standing Lavatory Overflow.

Price, each.....$3.00

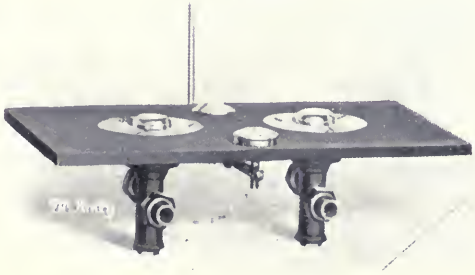


Plate 1524 "Royal Cadmus"

McAvity's Nickel Plated Combination Floor Plate with two Foot Operated Valves and Foot Operated Waste. For use with Hospital Lavatories or Sinks.

Price on application.

HOSPITAL FIXTURES

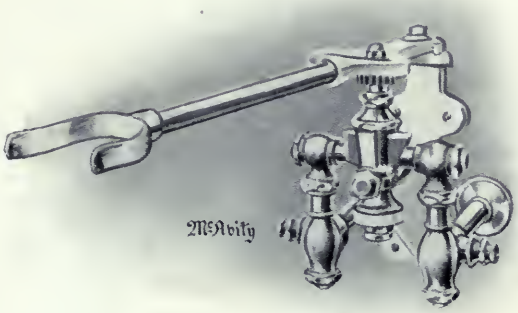


Plate 1531 "Royal Tiber"

McAvity's Knee Action Mixing Valve to attach to Wall with ½" I.P. Size Supplies and Brass Flanges to Wall, Outlet ½ I.P. Female.

This is a large substantial Valve having distinct advantages; it can be placed under a variety of Sinks or Lavatories, which should be large, not under 13", and in keeping with Knee Action Valve, thus allowing ample room for the operation of Lever.

Price.....$83.30

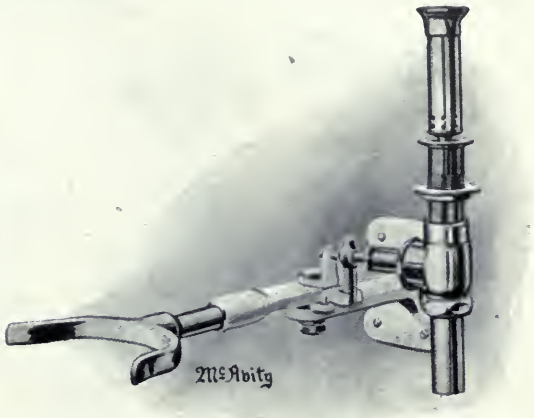


Plate 1532 "Royal Tyr"

McAvity's Knee-Action Waste to attach to Wall with Pop-up Stand Pipe for Overflow. For Lavatory or Sink having no overflow.

Can be installed under a variety of Sinks or lavatories with ample space to permit free action of Lever. Can also be furnished with China Lever instead of Knee-action.

Price.....$39.00

McAvity's Pedestal Waste with Pop-up Plug, for Vitreous China or Enameled Iron Surgical Lavatory having Overflow.

Diameter of Flange of Plug Body 2⅛". Tail Piece of Waste 1¼" O.D.

Can also be furnished for Lavatory without Overflow.

Price... .....$27.50

Plate 1533 "Royal Orillia"

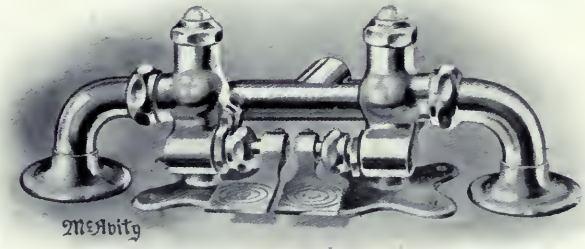


Plate 1534 "Royal Weyburn"

McAvity's Pedal Valves for Surgical Lavatories and Sinks. Inlet and Outlet for ½" I.P. Female.

These Valves are Non-hammering; self-closing Pattern for Hot and Cold Water and may be readily Re-washered.

Price.... ...$34.25

McAvity's Heavy Vitreo China Round Front Flushing Rim Dental Lavatory with 6" back and concealed wall hanger, with Nickel Plated Outlet Strainer, Goose-Neck Nozzle, compression Valve with No. 7-C China Index Handle to supply rim and Nozzle and 1¼" trap to wall.

Dimensions:

Lavatory.....13" x 14½"
Basin.....8½" in diameter
Dental Lavatory, complete as described
Price, each.....$30.00

Plate 1535 "Royal Athany"

"WORLD" HIGH BACK SINK FAUCETS

With Incased Washer and Stuffing Box

Hose

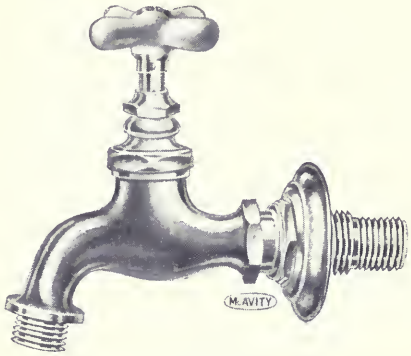


Plate 1541

McAvity's Compression H.B. Sink Faucets, with Indexed China Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz..... $40.00

"WORLD"

Nickel Plated Only

Plain

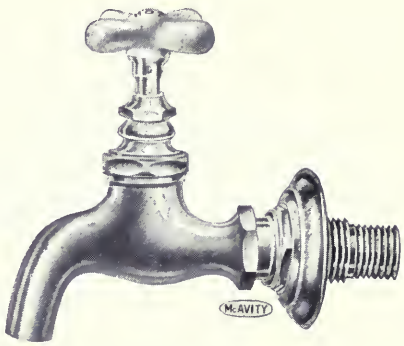


Plate 1542

McAvity's Compression H.B. Sink Faucets, with Indexed Solid China Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz..... $36.00

Hose

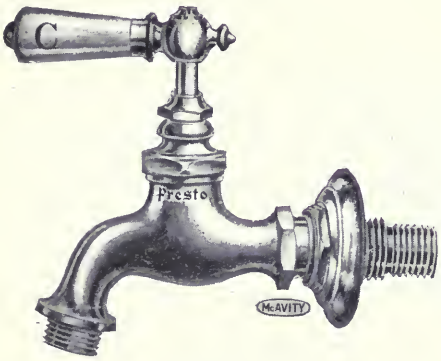


Plate 1543

McAvity's Compression H.B. Sink Faucets, with Indexed China Lever Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz..... $34.00

"Presto"

A quarter Turn gives Full Opening.

Corrugated Stem permits Lever to be adjusted to any angle.

Plain

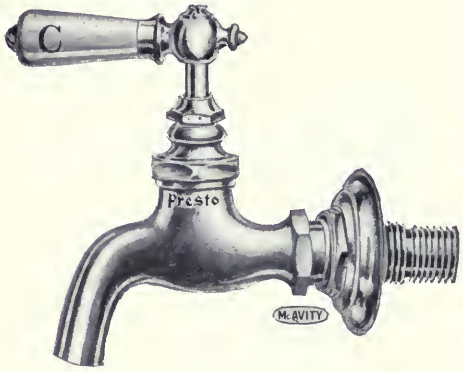


Plate 1544

McAvity's Compression H.B. Sink Faucets, with Indexed China Lever Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz..... $30.00

Hose

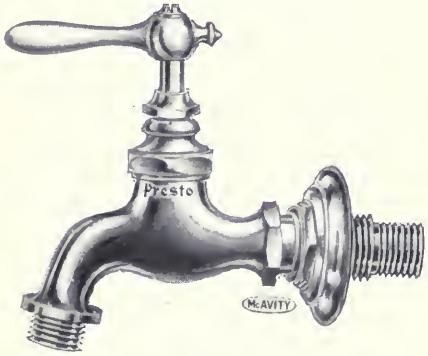


Plate 1545

McAvity's Compression, H.B. Sink Faucets, with Solid Lever Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz, Finished..... $24.00
" " Nickel Plated..... 28.00

"Presto"

A Quarter Turn gives Full Opening.

Corrugated Stem Permits Lever to be Adjusted to any angle.

Plain

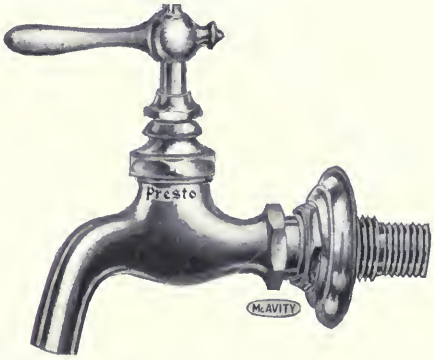


Plate 1546

McAvity's Compression H. B. Sink Faucets, with Solid Lever Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz., Finished..... $22.00
" " Nickel Plated..... 26.00

"WORLD" HIGH BACK SINK FAUCETS

Incased Washer and Stuffing Box

Hose

"WORLD"

Nickel Plated Only

Plain

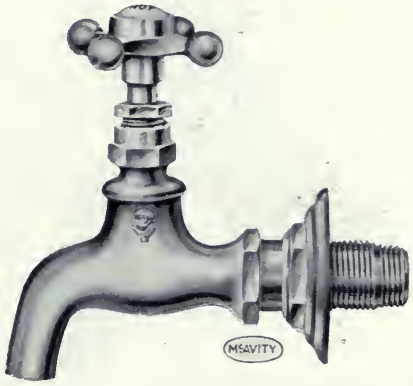


Plate 1551

McAvity's Compression H.B. Sink Faucets, with four arm China Indexed Handle, and Adjustable Flange, Threaded ½" I.P. Size.

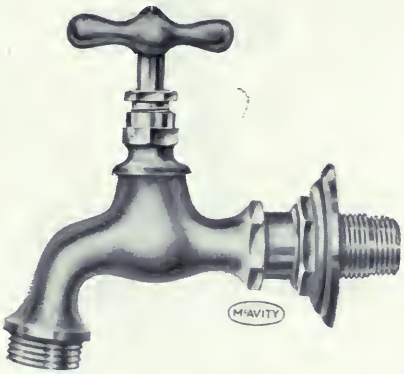
Price, per Doz..... $34.00

Plate 1552

McAvity's Compression H.B. Sink Faucets, with four arm China Indexed Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz..... $30.00

Hose



"WORLD"

Brass or Nickel Plated

Plain

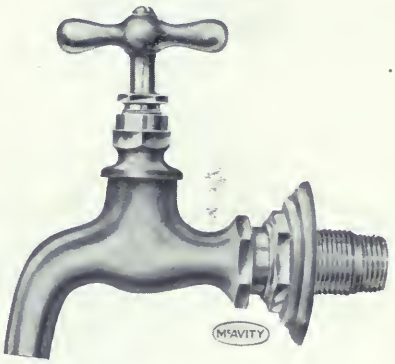


Plate 1553

McAvity's Compression H.B. Sink Faucets, with Tee Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz., Finished..... $24.00
" " Nickel Plated..... 28.00

Plate 1554

McAvity's Compression H.B. Sink Faucets, with Tee Handle, and Adjustable Flange. Threaded ½" I.P. Size.

Price, per Doz., Finished..... $22.00
" " Nickel Plated..... 26.00

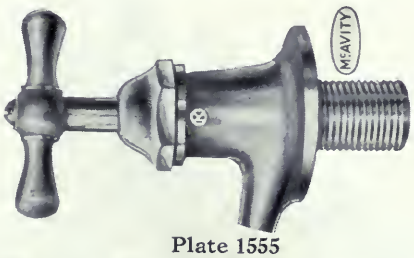


Plate 1555

McAvity's Heavy Nickel Plated Compression Wash Tray Faucet, for Iron Pipe, with Solid Flange and Tee Handle. ½"

Price, per Doz., Finished..... $18.60
" " Nickel Plated..... 22.20

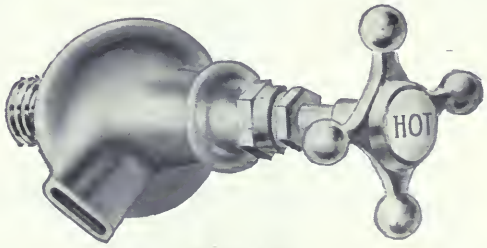


Plate 1556

McAvity's Heavy Nickel Plated Compression Wash Tray Faucets, for Iron Pipe, with Solid Flange, and China Indexed Handle.

Price, per Doz..... $28.00

Attention is invited to our "Stub" Laundry Tray Bibb as shown in Plates (1555) (1556). The Stub is designed to take as little space as possible in the tray thereby lessening the danger of striking the hands or tearing the clothes, and the nozzle so constructed to project the water into centre of tray.

The Stub like all our Faucets is made of a good hard composition bronze, and is of extra heavy weight. The Stuffing Box is packed with a Special Asbestos Washer, eliminating all danger of leak around the spindle. The washer is incased adding much to its durability and each faucet is carefully tested under hydraulic pressure before shipment.

ROYAL SELF-CLOSING FAUCETS

For Iron Pipe

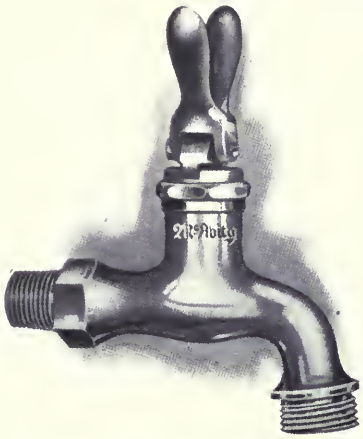


Plate 1561. Doherty Pattern Self-Closing Faucet with Hose End.

	½″	¾″
Price, per Doz., Finished.....	$38.40	$55.20
" " Nickel Plated..	44.40	63.00

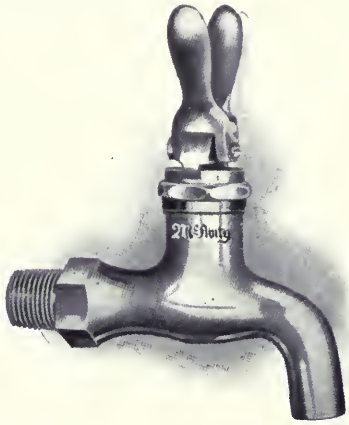


Plate 1562. Doherty Pattern Plain Self-Closing Faucet.

	½″	¾″
Price, per Doz., Finished.....	$35.40	$52.20
" " Nickel Plated..	41.40	60.00

For Iron Pipe

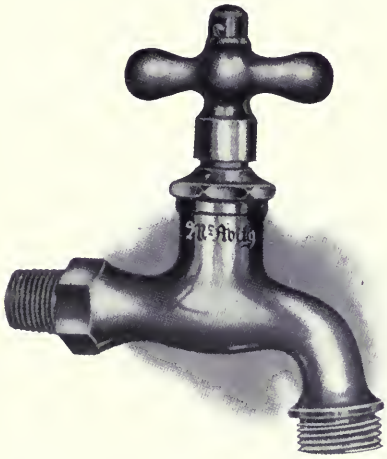


Plate 1563. Boston Pattern Self-Closing Faucet with Hose End.

	½″	¾″
Price, per Doz., Finished.....	$33.60	$50.40
" " Nickel Plated....	39.60	58.20

Plate 1564. Boston Pattern Self-Closing Faucet.

	½″	¾″
Price, per Doz., Finished.....	$30.60	$47.40
" " Nickel Plated..	36.60	55.20

For Iron Pipe

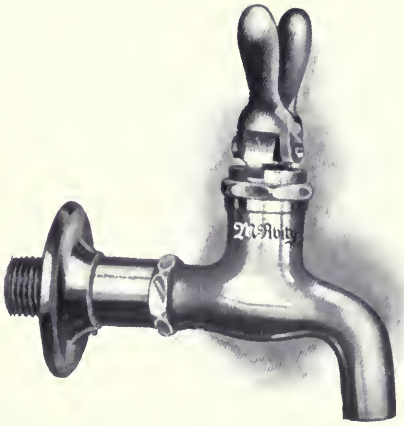


Plate 1565. Doherty Pattern Self-Closing Faucet with Adjustable Flange.

	½″	¾″
Price, per Doz., Finished.....	$45.00	$64.80
" " Nickel Plated..	51.00	72.60

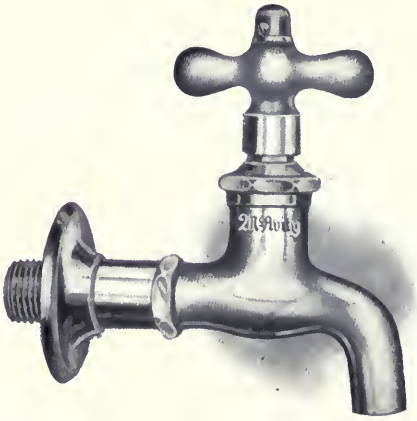


Plate 1566. Boston Pattern Self-Closing Faucet, with Adjustable Flange.

	½″	¾″
Price, per Doz., Finished.....	$40.20	$65.00
" " Nickel Plated..	46.20	67.80

"ROYAL FAUCETS"

Plate 1571

Roller Bearing

Plate 1572

Boston Pattern Self-Closing Stop Cocks, for Iron Pipe.

		½″	¾″
Price, per Doz.,	Finished.....	$40.20	$57.00
" "	Nickel Plated..	46.20	64.80

Doherty Pattern Self-Closing Stop Cocks, for Iron Pipe.

		½″	¾″
Price, per Doz.,	Finished.....	$35.40	$52.20
" "	Nickel Plated..	41.40	60.00

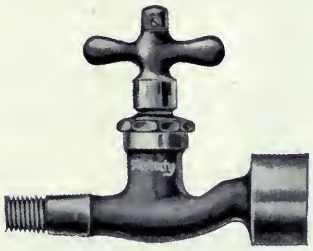


Plate 1573

Plate 1574

Boston Pattern Self-Closing Urinal Cocks, for Iron Pipe.

		½″
Price, per Doz.,	Finished.....	$38.00
" "	Nickel Plated.....	44.00
For Lead Pipe, add per Doz.....		1.50

Tee Handle Compression Urinal Cock, for Iron Pipe.

		½″
Price, per Doz.,	Finished.....	$28.20
" "	Nickel Plated.....	31.80
For Lead Pipe, add per Doz.....		1.50

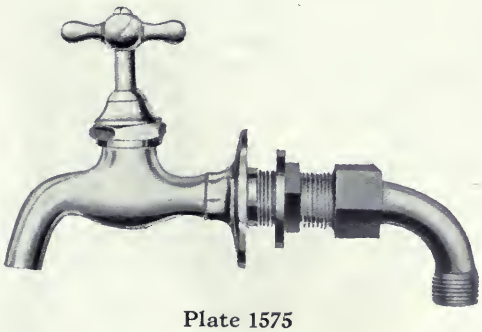


Plate 1575

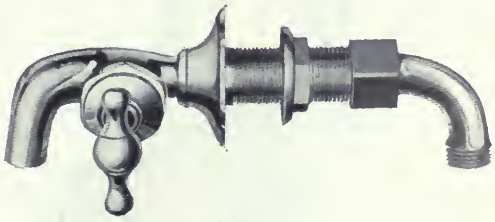


Plate 1576

Long Shank Compression, with Solid Flange, with Bent Tail and Coupling.

		½″	⅝″
Price, per Doz.,	Finished.....	$39.60	$49.80
" "	Nickel Plated..	43.20	53.40

Bent Nose Wash-Tray Bibbs, with Long Shank, with Lock Nut, and Bent Lead Pipe Tail with Coupling.

		½″	⅝″
Price, per Doz.,	Finished.....	$37.20	$47.40
" "	Nickel Plated.	40.80	51.00

"ROYAL" FAUCETS

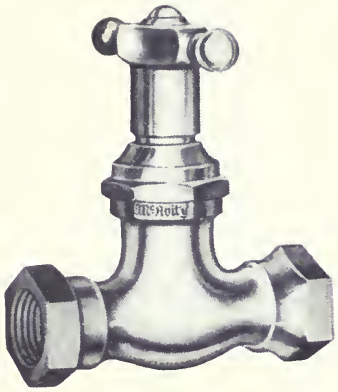


Plate 1581

Heavy Nickel Plated Zane Pattern, Self-Closing Stop Cock, for Iron Pipe.

	½″	¾″
Price, per Doz., Finished.....	$30.60	$47.40
" " Nickel Plated...	36.60	55.20

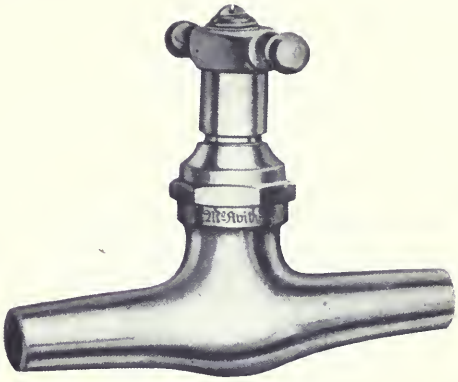


Plate 1582

Heavy Nickel Plated Zane Pattern Self-Closing Stop Cock, for Lead Pipe.

	½″	⅝″
Price, per Doz., Finished.....	$33.00	$40.80
" " Nickel Plated....	39.00	46.80

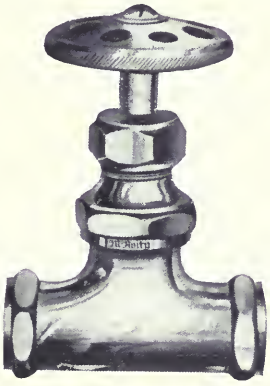


Plate 1583

Heavy Nickel Plated, Straight Lavatory Stop Valve, with Wheel Handle.

	⅜″	½″
Price, per Doz.....	$25.20	$30.00

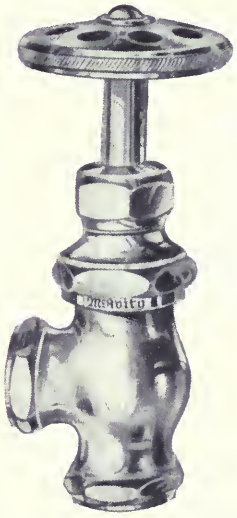


Plate 1584

Heavy Nickel Plated Angle Lavatory Stop Valve, with Wheel Handle.

Price, per Doz.

⅜″	½″
$25.20	$30.00

Plate 1585

Heavy Nickel Plated, Straight Lavatory Stop Valve, with Loose Key Handle.

	⅜″	½″
Price, per Doz.....	$25.20	$30.00

Heavy Nickel Plated Angle Lavatory Stop Valve, with Loose Key Handle.

Price, per Doz.

⅜″	½″
$25.20	$30.00

Plate 1586

PANTRY COCKS

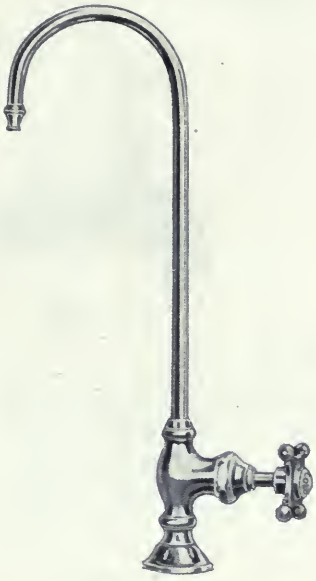


Plate 1591

Nickel Plated Pantry Cock, with Four Arm China Index Handle.

	Plain	Hose
Per Doz.....	$66.50	$70.20
With Tee Handle, per Doz.....	57.60	60.60

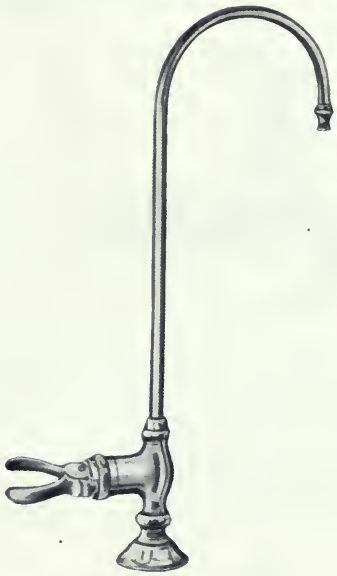


Plate 1592

Nickel Plated Doherty Pattern Self-Closing Pantry Cocks.

	Plain	Hose
Per Doz.....	$75.00	$78.60
Boston Pattern, per Doz.....	75.00	78.60

SILL COCKS

Plate 1593

Compression Sill Cocks, with Tee Handle. Rough, N.P.,

	½"	¾"
Price, per Doz.....	$27.00	$27.00
With Iron Wheel, Rough N.P., N.P., Price, per Doz.....	31.80	31.80

Plate 1594

Sill Cocks, with Loose Key Handle.

	½"	¾"
Rough N.P., per Doz.....	$39.00	$39.00

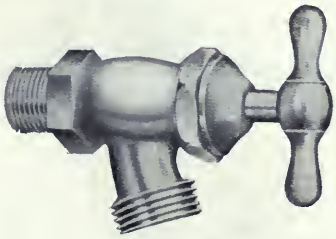


Plate 1595

Boiler Drain Cock.

	½" x ½"	¾" x ¾"-½"
Rough Nickel Plated	$17.40	$19.80

Street Washer. This Fitting is designed to attach Water Hose to side of building.

Price, per Doz..... $20.00

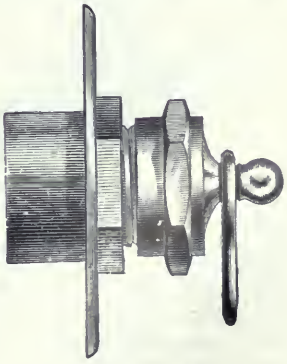


Plate 1596

COMPRESSION BIBBS AND STOPS

Plain

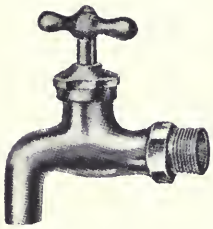


Plate 1601

For Iron Pipe
With Incased Washer

Hose

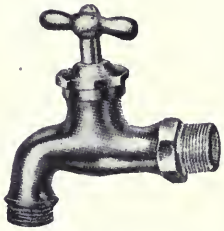


Plate 1602

Size		½″	⅝″	¾″	1″
Plate 1601—Finished	Per Doz.	$19.80	$25.20	$33.00	$60.00
" 1601—Nickel Plated	"	23.40	28.80	37.20	66.00
" 1602—Finished	"	22.80	28.20	36.00	67.20
" 1602—Nickel Plated	"	26.40	31.80	40.20	73.20
Add for Stuffing Box	"	4.80	5.40	6.00	10.80

Plain

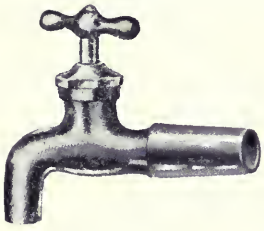


Plate 1603

For Lead Pipe
With Incased Washer

Hose

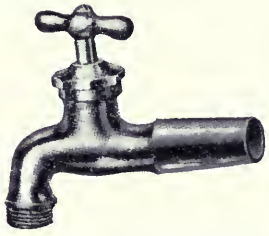


Plate 1604

Size		½″	⅝″	¾″	1″
Plate 1603—Finished	Per Doz.	$21.00	$27.00	$35.40	$63.60
" 1603—Nickel Plated	"	24.60	30.60	39.60	69.60
" 1604—Finished	"	24.00	30.00	38.40	70.80
" 1604—Nickel Plated	"	27.60	33.60	42.60	76.80
Add for Stuffing Box	"	4.80	5.40	6.00	10.80

For Iron Pipe

Plate 1605

Compression Stops
With Incased Washer

For Lead Pipe

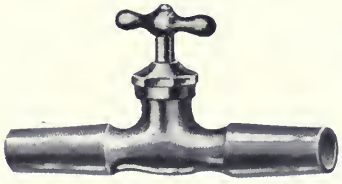


Plate 1606

Size		½″	⅝″	¾″	1″
Plate 1605—Finished	Per Doz.	$19.80	$25.20	$33.00	$60.00
" 1605—Nickel Plated	"	23.40	28.80	37.20	66.00
" 1606—Finished	"	22.20	28.80	37.80	67.20
" 1606—Nickel Plated	"	25.80	32.40	42.00	73.20
Add for Stuffing Box	"	4.80	5.40	6.00	10.80

COMPRESSION STOPS AND GROUND BIBBS

Lead and Iron

Plate 1611

Compression Stops

With Incased Washer

Lead with Coupling and Tail

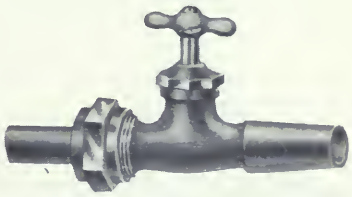


Plate 1612

Sizes		½″	⅝″	¾″	1″
Plate 1611—Finished	Per Doz.	$21.00	$27.00	$35.40	$63.60
" 1611—Nickel Plated	"	24.60	30.60	39.60	69.60
" 1612—Finished	"	31.80	39.60	51.00	93.60
" 1612—Nickel Plated	"	35.40	43.20	55.20	99.60
Add for Stuffing Box	"	4.80	5.40	6.00	10.80

Plain

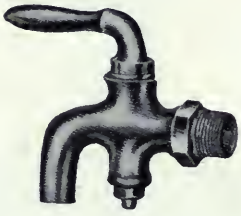


Plate 1613

Ground Bibbs for Iron Pipe

Hose

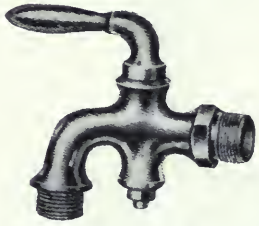


Plate 1614

Sizes		⅜″	½″	⅝″	¾″	1″
Plate 1613—Finished	Per Doz.	$25.20	$25.80	$35.40	$45.00	$64.80
" 1613—Nickel Plated	"	30.00	30.60	41.40	54.00	76.80
" 1614—Finished	"	28.20	28.80	38.40	48.00	72.00
" 1614—Nickel Plated	"	33.00	33.60	44.40	57.00	84.00

Plain

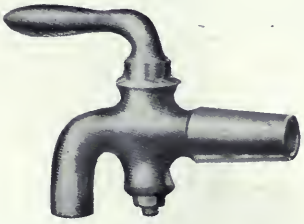


Plate 1615

Ground Bibbs for Lead Pipe

Hose

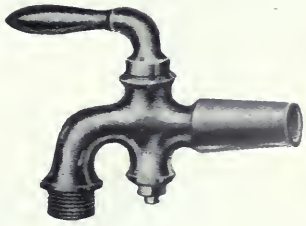


Plate 1616

Sizes		⅜″	½″	⅝″	¾″	1″
Plate 1615—Finished	Per Doz.	$26.40	$27.00	$37.20	$47.40	$68.40
" 1615—Nickel Plated	"	31.20	31.80	43.20	56.40	80.40
" 1616—Finished	"	29.40	30.00	40.20	50.40	75.60
" 1616—Nickel Plated	"	34.20	34.80	46.20	59.40	87.60

"WORLD" COMPRESSION BIBBS

PLAIN

Plate 1621

"World"

With Incased Washer and Stuffing Box

HOSE

Plate 1622

Sizes	½"	⅝"	Sizes	½"	⅝"
Plate 1621—Finished....Per Doz.	$25.80	$31.80	Plate 1622—Finished....Per Doz.	$28.80	$34.80
" 1621—Nickel Plated "	29.40	35.40	" 1622—Nickel Plated "	32.40	38.60

PLAIN

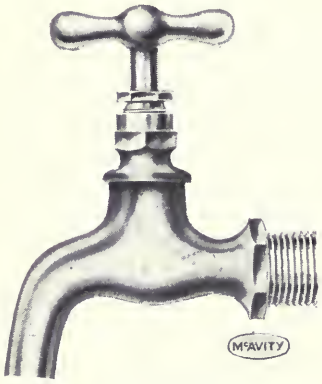


Plate 1623

"World"

With Incased Washer and Stuffing Box.

HOSE

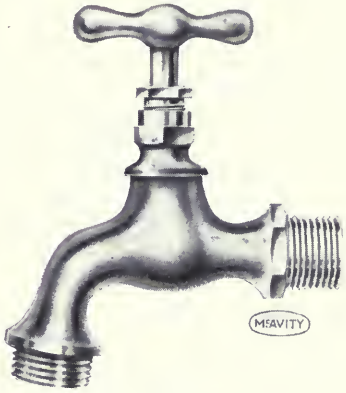


Plate 1624

Sizes	½"	¾"	Sizes	½"	¾"
Plate 1623—Finished....Per Doz.	$24.60	$30.60	Plate 1624—Finished....Per Doz.	$27.60	$33.60
" 1623—Nickel Plated. "	28.20	34.20	" 1624—Nickel Plated "	31.20	37.20

PLAIN

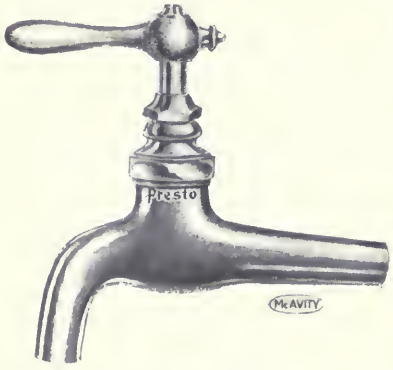


Plate 1625

"Presto"

With Incased Washer and Stuffing Box.

A Quarter Turn gives Full Opening, with Special Corrugated Stem, etc.

HOSE

Plate 1626

Sizes	½"	⅜"	Sizes	½"	⅝"
Plate 1625—Finished.....Per Doz.	$25.80	$31.80	Plate 1626—Finished....Per Doz.	$28.80	$34.80
" 1625—Nickel Plated "	29.40	35.40	" 1626—Nickel Plated "	32.40	38.60

COMPRESSION BIBBS

Plain

Plate 1631

"Presto"

With Incased Washer and Stuffing Box.

A Quarter Turn gives a Full opening, with Special Corrugated Stem; Lever can be adjusted to any Angle.

Hose

Plate 1632

Sizes	½"	¾"
Plate 1631—Finished	$24.60	$30.60
" 1631—Nickel Plated	28.20	34.20
" 1632—Finished	27.60	33.60
" 1632—Nickel Plated	31.20	37.20

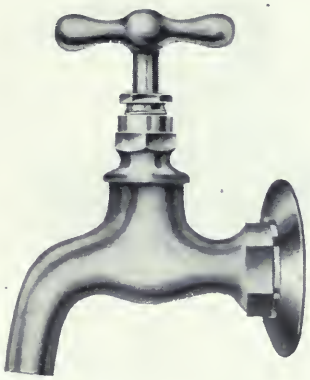


Plate 1633

"World"

Solid Flange

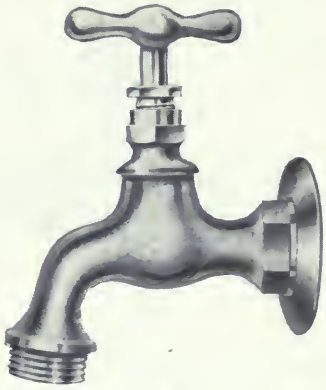


Plate 1634

Sizes	½"	¾"
Plate 1633—Finished	$33.60	$41.40
" 1633—Nickel Plated	37.30	45.00
" 1634—Finished	39.60	50.40
" 1634—Nickel Plated	43.20	54.00

Lead and Iron

Plate 1635

"World"

Compression Stops with Incased Washer and Stuffing Box.

Iron Pipe

Plate 1636

Sizes	½"	¾"
Plate 1635—Finished	$27.00	$34.20
" 1635—Nickel Plated	30.60	37.80
" 1636—Finished	24.60	30.60
" 1636—Nickel Plated	28.20	34.20

STOP AND WASTE COCKS

For Lead Pipe

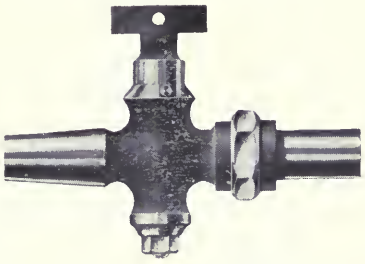


Plate 1641

Clifford Pattern
ROUND WAY
with Coupling and
Tail, without Waste.

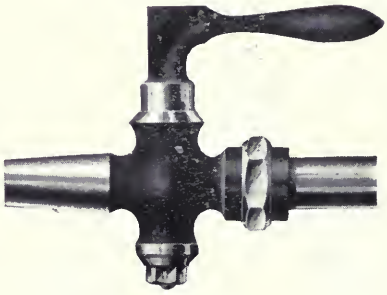


Plate 1642

Sizes		½″	⅝″
Plate 1641—Tee Handle	Per Doz.	$37.80	$51.60
" 1642—Lever	"	37.80	51.60

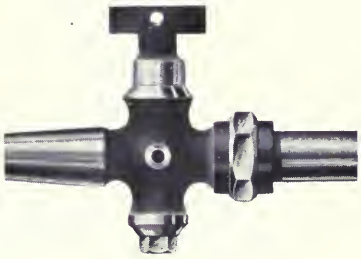


Plate 1643

Clifford Pattern
ROUND WAY
with Coupling and
Tail, with Waste.

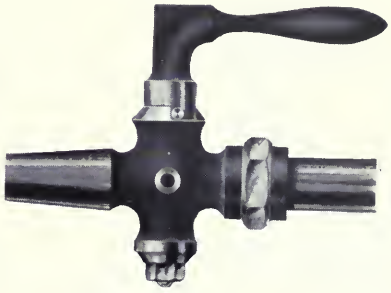


Plate 1644

Sizes		½″	⅝″
Plate 1643—Tee Handle	Per Doz.	$38.40	$52.20
" 1644—Lever Handle	"	38.40	52.20

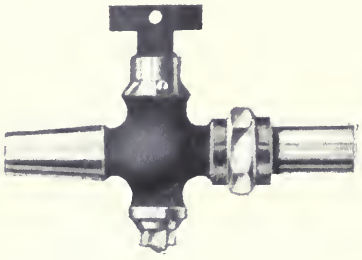


Plate 1645

Clifford Pattern
FLAT WAY
with Coupling and
Tail, without Waste.

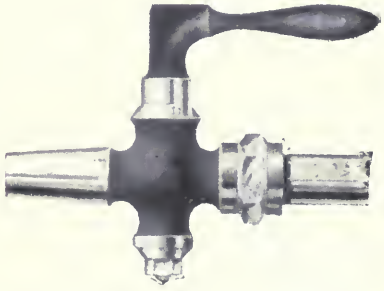


Plate 1646

Sizes		½″	⅝″
Plate 1645—Tee Handle	Per Doz.	$32.40	$45.00
" 1646—Lever Handle	"	32.40	45.00

For S. & W. Cocks, for Iron and Lead, see Page 173.

STOP AND WASTE COCKS

For Lead Pipe

Plate 1651

Clifford Pattern
FLAT WAY
with Coupling and
Tail with Waste.

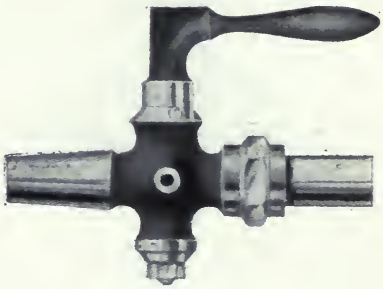


Plate 1652

Sizes		½″	⅝″
Plate 1651—Tee Handle	Per Doz.	$33.00	$45.60
" 1652—Lever Handle	"	33.00	45.60

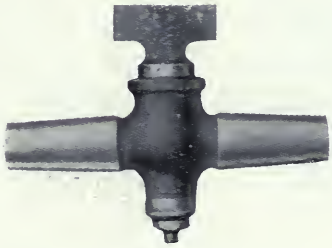


Plate 1653

Malcolm Pattern
FLAT WAY
without Waste

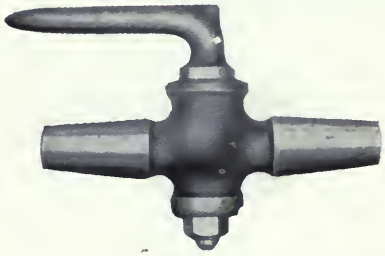


Plate 1654

Sizes		½″	⅝″
Plate 1653—Tee Handle	Per Doz.	$23.40	$33.00
" 1654—Lever Handle	"	23.40	33.00

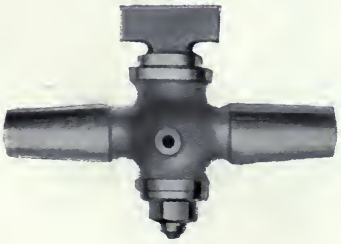


Plate 1655

Malcolm Pattern
FLAT WAY
with Waste

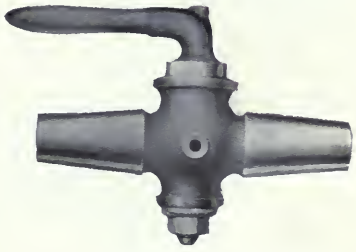


Plate 1656

Sizes		½″	⅝″
Plate 1655—Tee Handle	Per Doz.	$24.00	$33.60
" 1656—Lever Handle	"	24.00	33.60

STOP AND WASTE COCKS

For Iron Pipe

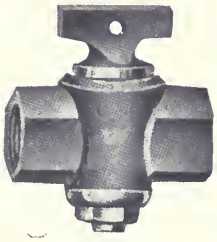


Plate 1661

Newport Pattern
ROUND WAY
without Waste

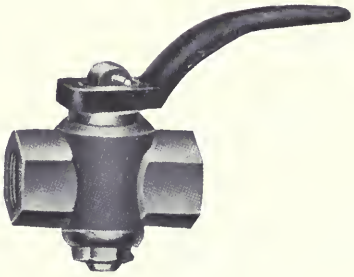


Plate 1662

Sizes		½″	¾″	1″
Plate 1661—Tee Handle	Per Doz.	$28.80	$49.80	$88.80
" 1662—Lever Handle	"	28.80	49.80	88.80

Plate 1663

Newport Pattern
ROUND WAY
with Waste

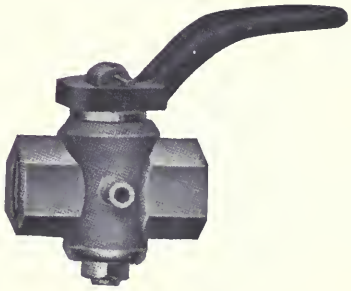


Plate 1664

Sizes		½″	¾″	1″
Plate 1663—Tee Handle	Per Doz.	$29.40	$50.40	$90.00
" 1664—Lever Handle	"	29.40	50.40	90.00

Plate 1665

Ronald Pattern

Ronald Pattern
ROUND WAY
without Waste

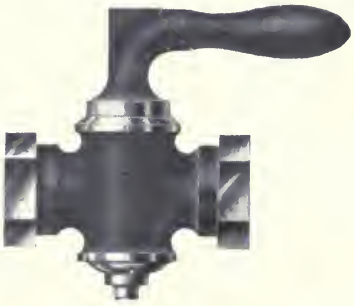


Plate 1666

Sizes		½″	⅝″	¾″	1″
Plate 1665—Tee Handle	Per Doz.	$26.40	$36.00	$46.20	$73.80
" 1666—Lever Handle	"	26.40	36.00	46.20	73.80

STOP AND WASTE COCKS

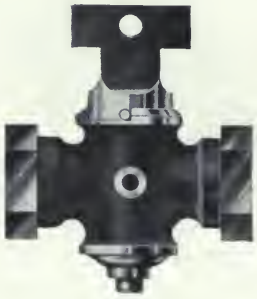


Plate 1671

Ronald Pattern
ROUND WAY
with Waste

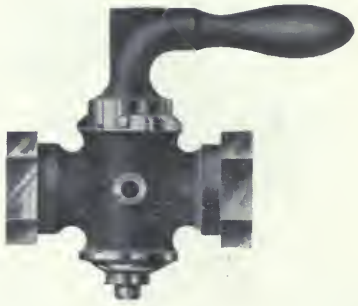


Plate 1672

Sizes	½"	⅝"	¾"	1"
Plate 1671—Tee Handle ..... Per Doz.	$27.00	$36.60	$46.80	$75.00
" 1672—Lever Handle ..... "	27.00	36.60	46.80	75.00

Plate 1673

Stewart Pattern
FLAT WAY
without Waste

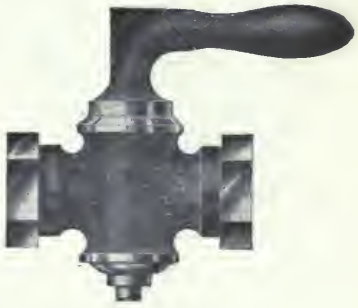


Plate 1674

Sizes	½"	⅝"	¾"	1"
Plate 1673—Tee Handle ..... Per Doz.	$21.00	$29.40	$36.00	$52.80
" 1674—Lever Handle ..... "	21.00	29.40	36.00	52.80

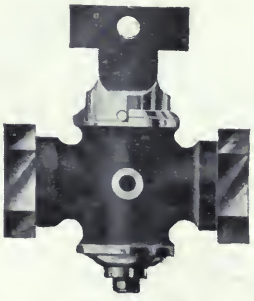


Plate 1675

Stewart Pattern
FLAT WAY
with Waste

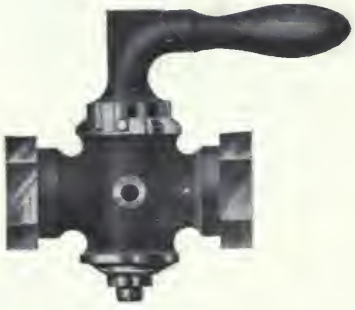


Plate 1676

Sizes	½"	⅝"	¾"	1"
Plate 1675—Tee Handle ..... Per Doz.	$21.60	$30.00	$36.60	$54.00
" 1676—Lever Handle ..... "	21.60	30.00	36.60	54.00

" WORLD " HIGH GRADE STOPS

Without Waste

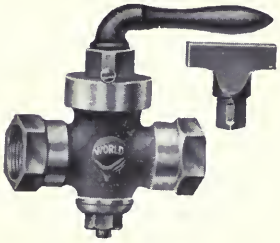


Plate 1681

"WORLD"
For Iron Pipe
ROUND WAY
Right or Left Hand

With Waste

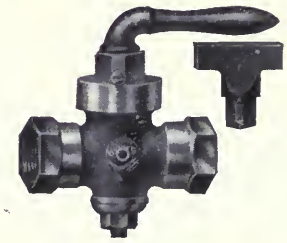


Plate 1682

Sizes	½"	⅝"	¾"	1"
Plate 1681—Without Waste ..... Per Doz.	$26.40	$36.00	$46.20	$73.80
" 1682—With Waste ..... "	27.00	36.60	46.80	75.00

Without Waste

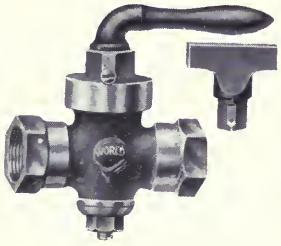


Plate 1683

"WORLD"
For Iron Pipe
FLAT WAY
Right or Left Hand

With Waste

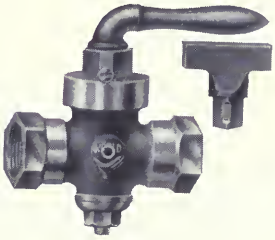


Plate 1684

Sizes	½"	⅝"	¾"	1"
Plate 1683—Without Waste ..... Per Doz.	$21.00	$29.40	$36.00	$52.80
" 1684—With Waste ..... "	21.60	30.00	36.60	54.00

Without Waste

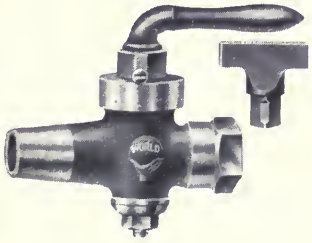


Plate 1685

"WORLD"
For Lead and Iron
ROUND WAY
Right or Left Hand

With Waste

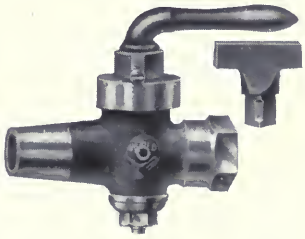


Plate 1686

Sizes	½"	⅝"	¾"	1"
Plate 1685—Without Waste ..... Per Doz.	$28.80	$39.60	$51.00	$81.00
" 1686—With Waste ..... "	29.40	40.20	51.60	82.80

The construction of this cock is such that it can be instantly changed from a right hand to a left hand cock, and vice versa, by simply giving the cap a quarter turn on the square of key. Lever Handles always furnished unless otherwise ordered.

"WORLD" HIGH GRADE STOPS

Without Waste

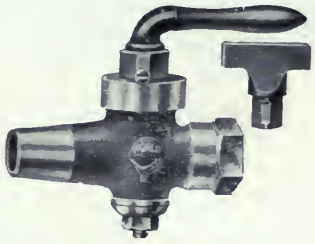


Plate 1691

"WORLD"
For Lead and Iron
FLAT WAY
Right or Left Hand

With Waste

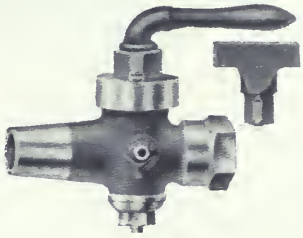


Plate 1692

Sizes		½"	⅝"	¾"	1"
Plate 1691—Without Waste	Per Doz.	$23.40	$33.00	$40.80	$60.00
" 1692—With Waste	"	24.00	33.60	41.40	61.20

Without Waste

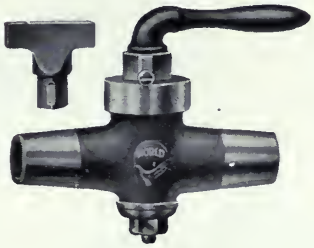


Plate 1693

"WORLD"
For Lead Pipe
ROUND WAY
Right or Left Hand

With Waste

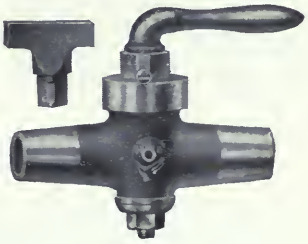


Plate 1694

Sizes		½"	⅝"	¾"	1"
Plate 1693—Without Waste	Per Doz.	$28.80	$39.60	$51.00	$81.00
" 1694—With Waste	"	29.40	40.20	51.60	82.20

Without Waste

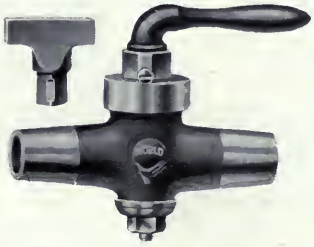


Plate 1695

"WORLD"
For Lead Pipe
FLAT WAY
Right or Left Hand

With Waste

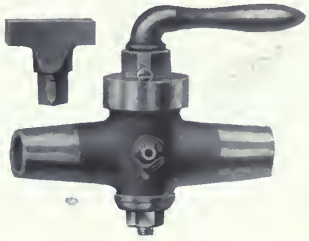
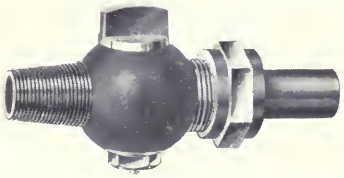


Plate 1696

Sizes		½"	⅝"	¾"	1"
Plate 1695—Without Waste	Per Doz.	$23.40	$33.00	$40.80	$60.00
" 1696—With Waste	"	24.00	33.60	41.40	61.20

All the genuine "World" goods have "World" cast on body, which affords absolute protection against inferior imitations, as this trade-mark is copyrighted.

"WORLD" CORPORATION COCKS



"WORLD"

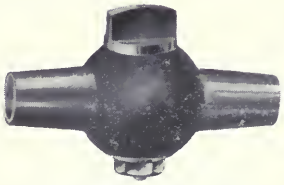
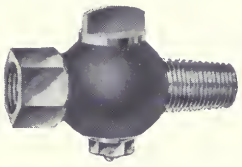


Plate 1701
Corporation Cocks, Straight Coupling, for Lead and Iron Pipe.

Plate 1702
Corporation Cock, for Lead Pipe.

Sizes	½"	⅝"	¾"	1"	1¼"	1½"
Plate 1701 ... Per Doz.	$21.00	$30.00	$38.40	$ 60.00	$129.00	$192.00
" 1702 ... "	19.20	26.40	38.40	60.00	.....	.....



"WORLD"

Plate 1703
Corporation Cock, Male and Female, for Iron Pipe.

Plate 1704
Corporation Cock Male and Female Coupling and Tail for Iron Pipe.

Sizes	½"	⅝"	¾"	1"	1¼"
Plate 1703 ... Per Doz.	$19.20	$26.40	$34.20	$54.00	.....
Plate 1704 ... "	21.00	30.00	38.40	60.00	$129.00

"WORLD"

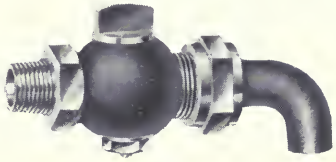
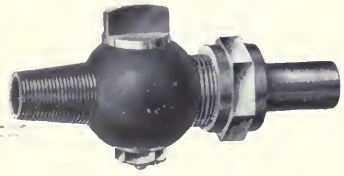


Plate 1705
Corporation Cock, with Straight Coupling, for Lead and Iron Pipe.

Plate 1706
Corporation Cock, with Bent Coupling, for Lead and Iron Pipe.

Sizes	½"	⅝"	¾"	1"	1¼"
Plate 1705 ... Per Doz.	$21.00	$30.00	$38.40	$60.00	$129.00
" 1706 ... "	21.00	30.00	38.40	60.00	129.00

FOR MUELLER'S AND HALL'S TAPPING MACHINES



"WORLD"

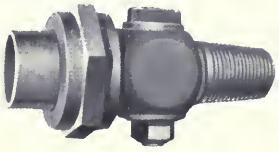


Plate 1707
Corporation Cock Straight Coupling.

Plate 1708
Corporation Cock for Flanged Lead Connection.

Sizes	½"	⅝"	¾"	1"	1¼"	1½"
Plate 1707 ... Per Doz.	$21.00	$30.00	$38.40	$60.00	$129.00	$192.00
" 1708 ... "	28.80	39.60	50.40	78.00	153.00	240.00

"WORLD" CORPORATION COUPLINGS AND COCKS

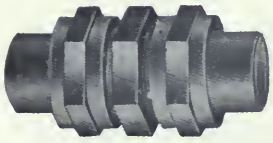


Plate 1711

Lead Flange Coupling for Lead Pipe, Both Ends.

Plate 1712

Lead Flange Coupling for Lead and Iron Pipe.

Plate 1713

Straight Coupling for Iron Pipe, Ribbed for Wrench.

Sizes	⅜"	½"	⅝"	¾"	1"	1¼"	1½"	2"
Plate 1711 ..... Per Doz.	$18.00	$21.00	$30.00	$35.40	$46.80	$90.00	$111.00	$171.00
" 1712 ..... "	9.00	10.20	15.60	18.00	24.00	45.60	60.00	90.00
" 1713	.....	28.80	39.60	50.40	78.00	153.00	240.00	300.00

Plate 1714

Curb Cocks, Iron Pipe Tee Handle.

"WORLD" CURB COCKS

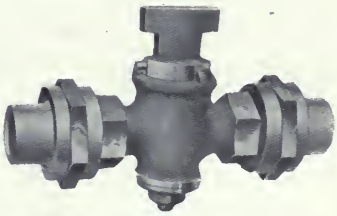


Plate 1715

Curb Cocks, Tee Handle Lead Flange Union Couplings.

Sizes	½"	¾"	1"	1¼"	1½"	2"
Plate 1714 Flat Way ..... Per Doz.	$25.80	$42.00	$60.60	$101.40	$167.40	$288.00
" 1714 Round Way ..... "	31.20	52.20	81.60	132.60	215.40	372.00
" 1715 Round Way ..... "	45.60	78.60	121.80	204.60	317.40	516.00

Plate 1716

Service Cock Female, for Iron Pipe.

"WORLD" SERVICE COCKS

Plate 1717

Service Cock I. S. Coupling Ring.

Sizes	½"	⅝"	¾"	1"
Plate 1716 ..... Per Doz.	$24.00	$30.00	$36.00	$60.00
" 1717 ..... "	30.00	36.00	54.00	84.00

"WORLD" INVERTED PLUG CURB COCKS

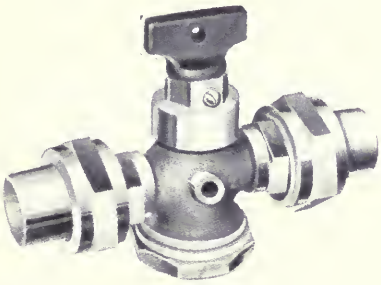


Plate 1721

Loose Key,
Round Way,
Brass Cap Bottom
with Leather Washer

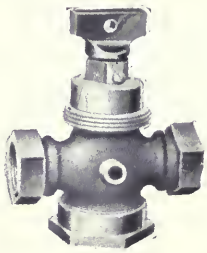


Plate 1722

Sizes	½"	⅝"	¾"	1"	1¼"	1½"	2"
Plate 1721—S & W, with Two End Flange Union Couplings, each	$4.60	$6.05	$7.65	$11.50	$19.20	$29.70	$48.00
" 1721—No Waste, with Two End Flange Union Couplings, each	4.55	6.05	7.60	11.40	19.05	29.05	47.50
" 1721—S. & W, with One End Flange Union Couplings, and One End Screwed Inside Thread, each	3.80	4.95	6.30	9.50	15.70	24.65	40.75
" 1721—No Waste, with One End Flange Union Couplings, and One End screwed Inside Thread, each	3.75	4.90	6.25	9.40	15.55	24.45	40.25
" 1722—S. & W, with Inside Thread, each	3.40	4.30	5.45	8.15	13.20	21.20	36.00
" 1722—No Waste, with Inside Thread, each	3.35	4.25	5.40	8.05	13.05	20.95	35.50
" 1722—S & W, Lead and Screwed Inside, each	3.60	4.60	5.85	8.75	14.10	22.70	38.50
" 1722—No Waste, Lead and Screwed Inside, each	3.55	4.55	5.80	8.65	13.95	22.45	38.00
" 1722—S & W, Lead Pipe Both Ends	3.60	4.60	5.85	8.75	14.10	22.70	38.50
" 1722—No Waste Lead Pipe Both Ends, each	3.55	4.55	5.80	8.65	13.95	22.45	38.00

When ordering please state size of Lead Pipe. Further prices and information will be furnished upon application.

"WORLD" LEAD PIPE CONNECTIONS

Plate 1723 Wiped Joint Connection.

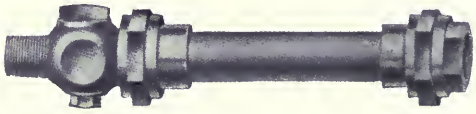


Plate 1724 Lead Flange Joints

WITH EITHER MALE OR FEMALE NIPPLES

Sizes	⅜"	½"	⅝"	¾"	1"	1¼"	1½"	2"
Length of Pipe	18"	18"	18"	18"	18"	24"	30"	36"
Plate 1723—Per Doz.	$54.00	$63.00	$75.00	$87.00	$129.00	$234.00	$372.00	$582.00

WITH LEAD FLANGE ENDS

Sizes	⅜"	½"	⅝"	¾"	1"	1¼"	1½"	2"
Length of Pipe	18"	18"	18"	18"	18"	24"	30"	36"
*Plate 1724—Per Doz.	$54.00	$63.00	$75.00	$87.00	$129.00	$234.00	$372.00	$582.00

WEIGHTS PER FOOT OF X STRONG AND XX STRONG LEAD PIPE

Sizes	⅜"	½"	⅝"	¾"	1"	1¼"	1½"	2"
X Strong ... Lbs.	2	2½	3	3½	4	6	7	9
XX Strong ... Lbs.	2½	3	3½	4	5	7	10	10

*Prices include X Strong Pipe.

STOP AND WASTE COCKS

Tee Handle

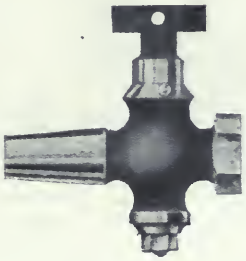


Plate 1731

Allan Pattern
For Iron and Lead
without Waste
FLAT WAY

Lever Handle

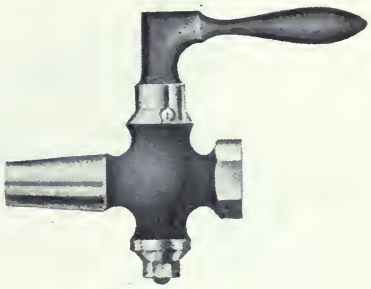


Plate 1732

Sizes	½"	⅝"	¾"	1"
Plate 1731—Tee Handles	$23.40	$33.00	$40.80	$60.00
" 1732—Lever "	23.40	33.00	40.80	60.00
Round Way, Tee " not Illustrated	28.80	39.60	51.00	81.00
" " Lever " " "	28.80	39.60	51.00	81.00
⅝" Size tapped ¾" Iron Pipe.				

Tee Handle

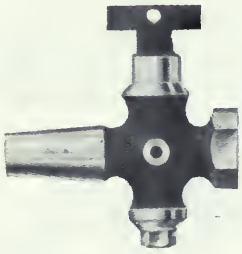


Plate 1733

Allan Pattern
For Iron and Lead
with Waste
FLAT WAY

Lever Handle

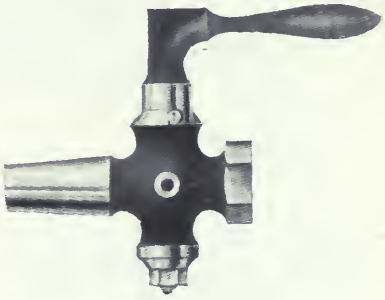


Plate 1734

Sizes	½"	⅝"	¾"	1"
Plate 1733—Tee Handles	$24.00	$33.60	$41.40	$61.20
" 1734—Lever "	24.00	33.60	41.40	61.20
Round Way Tee " not Illustrated	29.40	40.20	51.60	82.20
" " Lever " " "	29.40	40.20	51.60	82.20

Plate 1735

The "Gem" Compression Stop and Waste Valve will do all any Drain Cock will do, and does away with the trouble experienced by all who have used Ground Key Work.

Can be used for Stop and Waste or for Stop only. Can be used as Globe Valve. Used either right or left hand.

This S. & W. Valve is not automatic, the two little caps on side control it all.

Made in three sizes only.

A trial order will convince you of the superiority of the "Gem" Compression Stop and Waste Valve over Ground Key Work.

	½"	¾"	1"
Price, each	$1.00	$1.50	$2.00

BRASS FITTINGS

SOLDER NIPPLES

Male

Plate 1741

Female

Plate 1742

Sizes	⅜″	½″	¾″	1″	1¼″	1½″	2″
Plate 1741—Male ..... Per Doz.	$3.60	$4.20	$6.00	$8.40	$10.80	$15.00	$21.00
" 1742—Female ..... "	3.60	4.20	6.00	8.40	10.80	15.00	21.00

Solder Union

Plate 1743

Loose Coupling

Ground Joint

Solder Coupling

Plate 1744

Sizes	⅜″	½″	⅝″	¾″	1″	1¼″	1½″	2″
Plate 1743 ..... Per Doz.	$4.80	$6.00	.....	$7.80	$10.20	$13.20	$15.00	$21.00
" 1744 ..... "	.....	7.80	$9.00	10.80	14.40	18.00	25.20	36.00

BOILER COUPLINGS

Straight

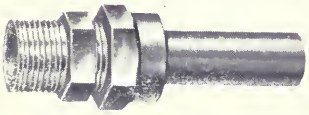


Plate 1745

Lead Pipe

Bent

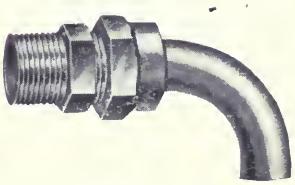


Plate 1746

Sizes	½″	⅝″	1″
Plate 1745—Straight ..... Per Doz.	$10.80	$13.80	$18.00
" 1746—Bent ..... "	12.60	16.20	21.00

BOILER COUPLINGS

Straight

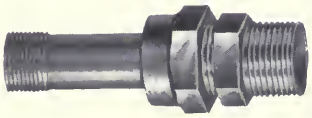


Plate 1747

Iron Pipe

Bent

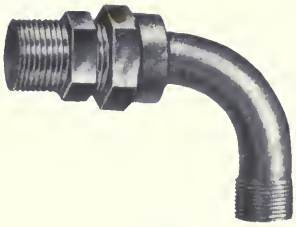


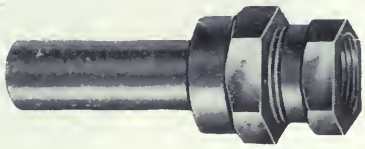
Plate 1748

Sizes	½″	¾″	1″
Plate 1747—Straight ..... Per Doz.	$12.00	$15.60	$20.40
" 1748—Bent ..... "	13.80	18.00	23.40

WATER BACK COUPLINGS

For Lead Pipe

Straight



Female

"WORLD"

Bent

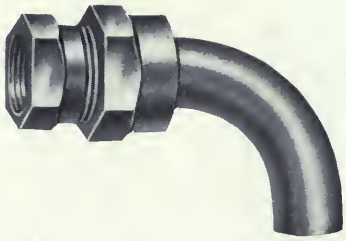
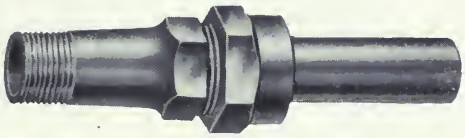


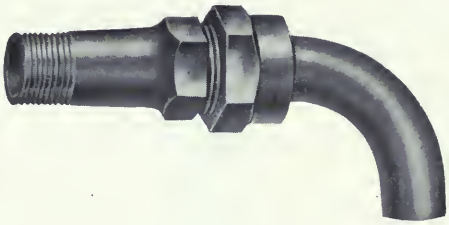
Plate 1751 Plate 1752

Sizes	½"	¾"	1"
Plate 1751—Straight ..... Per Doz.	$10.80	$13.80	$18.00
" 1752—Bent ..... "	12.60	16.20	21.00

LONG PATTERN

Straight Male Bent





"WORLD"

Plate 1753 Plate 1754

Sizes	½"	¾"
Plate 1753—Straight ..... Per Doz.	$12.60	$16.80
" 1754—Bent ..... "	14.40	19.20

For Iron Pipe on the above, add—to List $2.50

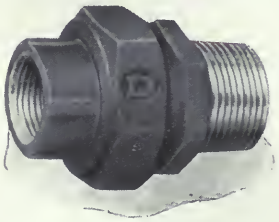
Long Spud, 1". For Bottom of Boiler

Plate 1755

This Long Spud for the Bottom of Galvanized Boiler, does away with Iron Nipple and Coupling.

Price, per Doz. $8.00

Straight



Galvanized Boiler Couplings.

Bent

Plate 1756

1" x ½", each ..... $ .45
1" x ¾", each ..... .60

Plate 1757

1" x ½", each ..... $ .45
1" x ¾", each ..... .60

GALVANIZED RANGE BOILERS

Standard

Plate 1761

Plate 1762

Extra Heavy

Plate 1763

GALVANIZED EXPANSION TANKS

Capacity	Diameter	Length	Price
10 Gals.	12″	20″	$8.00
15 "	12″	30″	9.00
18 "	12″	36″	9.50

GALVANIZED RANGE BOILERS

Standard Test 200 lbs. Extra Heavy Test 250 lbs.

Capacity Gallons	Diameter	Length	Price of Standard	Price of Extra Heavy
15	12″	32″	$13.50	
18	12″	36″	14.50	
20	12″	42″	15.75	
30	12″	60″	19.00	
35	13″	60″	21.00	
40	14″	60″	24.00	
52	16″	60″	31.00	Upon
66	18″	60″	38.00	application.
82	20″	60″	45.50	
100	22″	60″	63.50	
120	24″	60″	72.50	
144	24″	72″	103.00	
168	24″	84″	120.00	
192	24″	96″	132.00	

Plate 1764

STANDS

Diameter	12″	13″	14″	16″	18″	20″	22″	24″
Price, each	$1.80	$1.85	$2.00	$2.15	$2.85	$3.25	$3.90	$5.00
" " for Copper	2.25	2.40	3.00	3.50	4.00	.....	.....	.....

GALVANIZED IRON STEEL STORAGE TANKS

All Sizes—Prices on application.

Plate 1765

COPPER RANGE BOILERS DOUBLE RIVETTED

Standard Tested To 200 lbs.

Plate 1771

Capacity Gallons	Diameter	Length	Price
30	12″	60″	$35.00
35	13″	60″	39.00
40	14″	60″	43.00
45	14″	69″	50.00
50	14″	72″	58.00
60	16″	72″	68.00
70	17″	72″	80.00
80	18″	72″	95.00
90	19″	72″	115.00
100	20″	72″	150.00
120	22″	72″	200.000
144	24″	72″	250.000
168	24″	84″	300.000
192	28″	72″	350.000

N.B.—For Boiler Stands, see page 176

GALVANIZED RANGE BOILERS WITH GALV. STEAM COIL

Vertical

BOILERS WITH COPPER COILS CAN ALSO BE FURNISHED

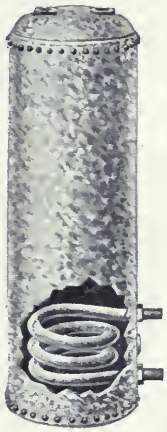


Plate 1772

Made Standard and Extra Heavy

Plate 1773

Horizontal

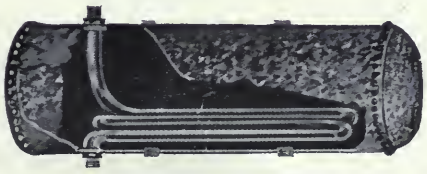


Plate 1774
Coil Outlet Top and Bottom

Galvanized Boiler Union Tee

This long shank has 1″ Outside Thread and is screwed into the hole in the bottom of the Boiler; the ¾″ union connects to the water back, while the sediment faucet or stop may be attached to the ½″ opening opposite the union.

Price, each..... $ .75

Horizontal

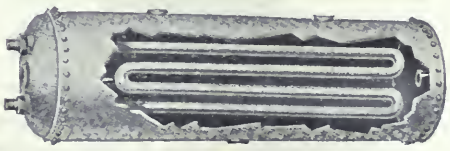


Plate 1775 Coil Outlet at End

Horizontal

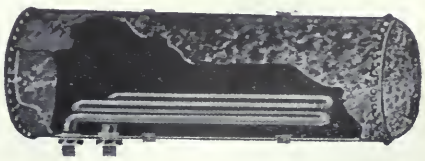


Plate 1776 Coil Outlet at Bottom

Prices on application.

Full "S"

Plate 1781

Half "S" or "P"

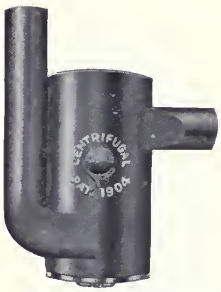


Plate 1782

"WORLD" CENTRIFUGAL NON-SYPHONING LEAD TRAP

It is absolutely impossible to syphon these Centrifugal Lead Traps even if not vented as they have a large body and a large air cushion. City By-Laws and Architects call for the ordinary S Lead Trap to be back vented but will allow these Non-Syphoning Traps to be put in without vents, which really makes them the cheapest Traps on the market. Our Patent covers the Centrifugal action and is much superior to other Traps of a somewhat similar design, as in the "World" Type the Centrifugal action makes them self-cleansing whereas the other style Trap clogs up and has to be constantly cleansed.

Bath

Plate 1783

Bath

Plate 1784

Sizes	1¼"	1½"	2"
Plate 1781—Regular "S" Trap; Price, each	$1.35	$1.75	$2.50
" 1782—½ "S" or "P" Trap, Price, each	1.25	1.50	2.25
" 1783—Bath Trap, Nickel Plated Flanged Top, Price, each	1.55	2.00	2.50
" 1784—Bath Trap, Nickel Plated Top, No Outlet, Price, each	1.55	2.00	2.50

DRAWN LEAD TRAPS

Plate 1785 Full "S"

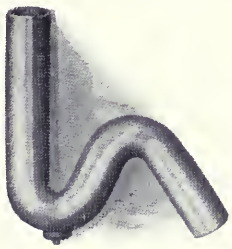


Plate 1786 ¾ "S"

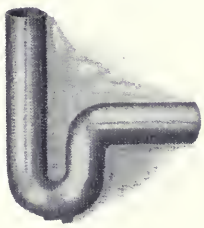


Plate 1787 ½"S" or "P"

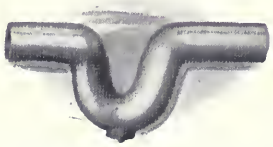


Plate 1788 Running

Plate 1789 Bag

	Standard					Extra Heavy				
	1¼"	1½"	2"	3"	4"	1¼"	1½"	2"	3"	4"
Plate 1785—Full "S" Tp.	$ .58	$ .90	$ 1.38	$2.69	$3.25	$ .87	$1.25	$1.85	$3.09	$4.30
" 1786—¾ "S" "	.55	.81	1.30	2.62	3.07	.81	1.15	1.73	2.99	3.95
" 1787—P "	.51	.75	1.20	2.24	2.94	.77	1.09	1.57	2.58	3.25
" 1788—Running "	.48	.72	1.13	2.09	2.53	.70	1.03	1.46	2.35	3.28
" 1789—Bag "	.68	1.08	1.73	3.35	4.47	1.06	1.54	2.33	3.96	6.30
Full "S" 24" long, per in	.04	.06	.08	Additional						

DRAWN LEAD BENDS

Short Lead Bend

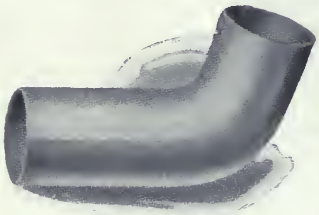


Plate 1791

Sizes	1¼″	1½″	2″	3″	4″
Standard	$ .35	$ .55	$ .80	$1.50	$1.80
Extra Heavy	.60	.85	1.10	1.60	2.25

Long Lead Bend

Plate 1792

Sizes	1¼″	1½″	2″	3″	4″
Standard	$ .40	$ .65	$1.05	$1.75	$2.40
Extra Heavy	.65	1.00	1.35	2.00	3.00

Extension Lead Bend

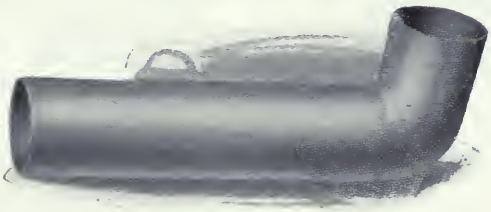


Plate 1793

Standard

Short Inlet x 12″ Outlet	$ .59	$ .85	$1.14	$1.95	$2.10
" x 15″ "	.71	1.03	1.38	2.31	2.55
" x 18″ "	.83	1.21	1.62	2.67	3.00
" x 20″ "	.91	1.33	1.78	2.91	3.30
Long Inlet x 12″ "	.64	1.01	1.39	2.20	2.70
" x 15″ "	.76	1.19	1.63	2.56	3.15
" x 18″ "	.88	1.37	1.87	2.92	3.60
" x 20″ "	.96	1.49	2.03	3.16	3.90

Box or Drum Trap

Plate 1794

Price, Regular..... $2.00
" Vented..... 3.00

McAvity's Fine Solder

Plate 1795
Guaranteed Strictly 45 and 55

Plate 1796

Plate 1797

Wiping Solder

Plate 1798

Handy 5 lb. Blocks.

The lowest prevailing market prices will be quoted on Solder, Tin and Lead, upon application.

COIL AND WASTE LEAD PIPE

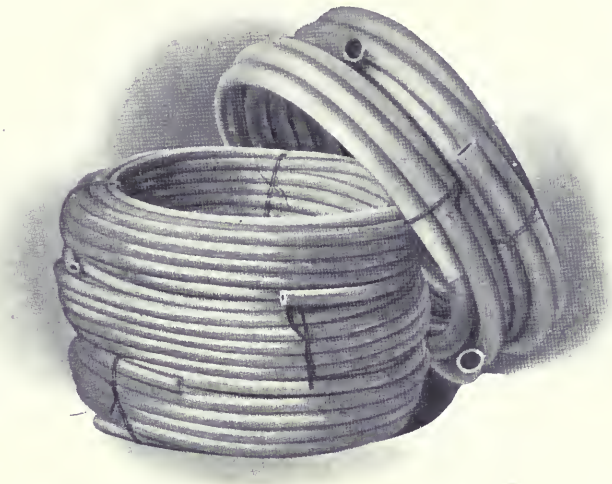


Plate 1801

Pounds, Per Yard

Items Marked * Are Corporation Standards

Diameter Ins.	Extra Light	Light	Medium	Strong	Extra Strong
¼″	.....	2	.....	3½	4
⅜″	.....	2½	.....	3″	*4
½″	3½	4″	4½	5-5½-*6	7-8
⅝″	4½	5	6	7	8–*9
¾″	5	6	7	8	9–*10
1″	5	6	7	8	9–10–*14
1¼″	6–7	8–9	10	12	14–16–18
1½″	8–9–10	11	12	14	18
1¾″	10	14	16	.....	.....
2″	15–16	18	20	22	24
2¼″	17	.....	.....	.....	.....
2½″	17	23	27	30¾	.....
2¾″	17	.....	.....	.....	.....
3″	18	26	28	36–38	43–45
3½″	23	.....	.....	45	49
4″	24	36	.....	50	.....

In 8 foot lengths.

Plate 1802

LEAD WASTE PIPE

Inside Diameter Inches	1¼″	1½″	2″	2½″	3″	3½″	4″
Extra Light Weight per Yd. in Lbs.....	4	5	6	....	....	....	....
Light " " "	5–5¾	5½–6¼	7	....	....	....	....
Medium" " "	6	7	8	12½	16½–18	....	....
Strong " " "	7	8	10½	15½–17	23	24	26
Extra Strong " " "	8	9–10	13	23	36	....	36

The lowest prevailing market prices on Lead Pipe will be quoted on application.

SHEET LEAD AND BABBITT

Plate 1811 Sheet Lead

Thickness in inches.....	1/24"	3/64"	1/16"	5/64"	5/32"	7/64"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"	1/2"	1"
Weight pr-sq-ft. in lbs.....	2½	3	4	5	6	7	8	10	12	14	16	20	24	32	60

Sizes of Sheets...2½ & 3 lb. 30'-0" x 7'-9" — 3½ lb. & up 20'-0" x 7'-9".

Pig Lead

Plate 1812

Plate 1813

Handy 5 lb. Blocks

The lowest prevailing prices will be quoted upon application.

Block Tin

Plate 1814

Plate 1815

Lead Tacks

Price, per lb..... $ .20

McAvity "BB" or "Genuine" Babbitt

Plate 1816

"BB Genuine" Babbitt for heavy work at high speed is the best metal that can be obtained. Containing almost 99% pure tin, it is very tough and durable. In bearings which require "Genuine Babbitt" "BB Genuine" will be found most satisfactory, as its composition is absolutely uniform and the hardening constituents only the best and purest virgin metals. List Price, per lb..... $ .75

Plate 1817

"World" Babbitt

We have been making Babbitt Metal for forty years, and the alloy we use in our "World" Brand is the result of our long experience, which has enabled us to know the qualities that go to make a good Bearing Metal. It is made in one grade only, and each cone of every bar has the "World" Trade Mark moulded on same. Great care is taken in its preparation and all that leaves the factory will be absolutely satisfactory. List Price, per lb..... $ .35

Vulcan Babbitt

An extra grade alloy which retains all the good points of Genuine Babbitt and still may be marketed at a lower price. A bearing lined with Vulcan Babbit will run longer with no attention than a bearing lined with Genuine, due to the fact that this metal will absorb and hold oil. Recommended for the heavier classes of work.

List Price, per lb..... $ .25

Plate 1818

NICKEL PLATED FITTINGS

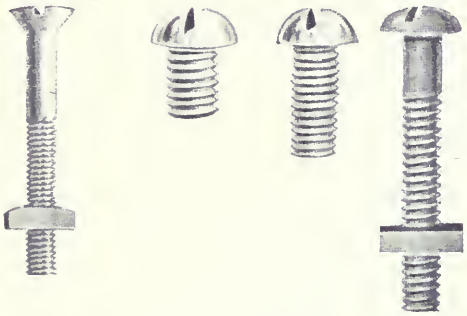


Plate 1821

Nickel Plated Brass Machine Screws and Bolts.

Price on application.

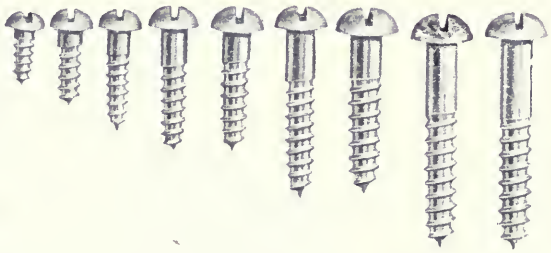


Plate 1822

Nickel Plated Round and Flat Head, Wood Screws for Bath Room, Fittings Sizes.

Prices on Application.

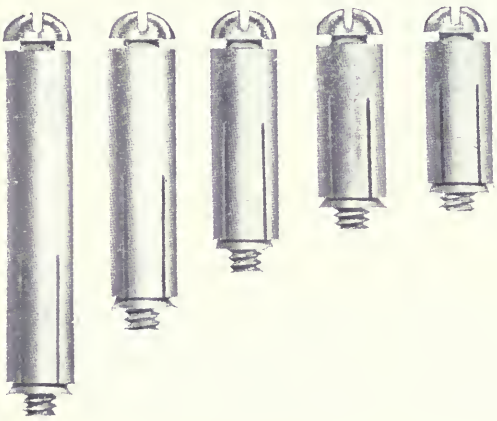


Plate 1823

Expansion Bolts

Prices on application.

Plate 1824

Nickel Plated, "S" Hooks.

Price, per Doz., Nickel Plated.. $1.75
Price, per Doz., Brass Plated... 1.25

Plate 1825
Split Links

Price, per Gross, Brass..... $1.75
Price, per Gross, Nickel Plated.... 2.00

Waste for	Vent Trapped	Slip Joint for	Each
1¼" L.P.	1¼" I.P.	1¼" Tube	$1.25
1½" "	1¼" "	1¼" "	1.50
1½" "	1½" "	1¼" "	1.50
1½" "	1½" "	1½" "	1.50

Plate 1826

Vent Tee with Nickel Plated Slip Joint Nut on Side, Waste for Lead Pipe, Vent for Iron Pipe.
Size.

Plate 1827

Vent Tee, Female thread on Side, Waste for Lead Pipe. Vent for Iron Pipe.

Sizes	1¼"	1½"
Each.....	$1.25	$1.50

NICKEL PLATED FITTINGS

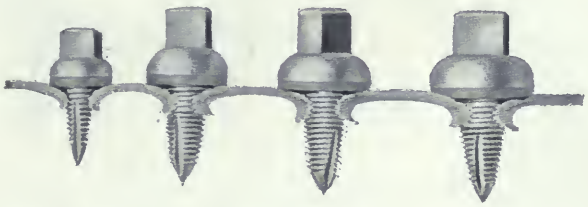


Plate 1831

Boiler Repair Plugs

Sizes from...	1/8"	1/4"	3/8"	1/2"
Price per Doz.	$4.50	$4.50	$4.50	$4.50

Anchor Patch Bolt

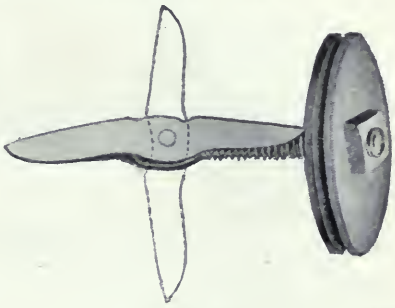


Plate 1832

Boiler Patch for repairing Leaks or Rust Holes in Galvanized Boilers.
Price, per Doz..... $5.00

Plate 1833

Hose Bibb End, Plain
Price, per Doz..... $3.00

Plate 1834

Removable Hose Bibb End.
Price, per Doz..... $3.00

Plate 1835

Nickel Plated Anti-Splash and Filter will eliminate all splash, No matter how strong the pressure is.
Nickel Plated per Doz.$ 1.20
White Enameled..... 1.50

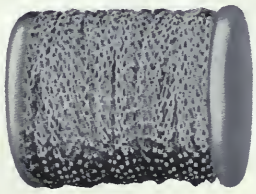


Plate 1836

Nickel Plated Basin Chain.

Price per ft.....	$ .10
Galv. Iron per ft.....	.05
Bronze (Heavy) per ft..	.16
Brass Light per ft.....	.08

Plate 1837

Opal Glass Filter, Reversible and Self Cleaning. Will fit Plain or screwed Faucets.

Contains Two perforated Strainers and is fitted with a filtering material which positively will not foul.

Price, per Doz.....$6.00

Plate 1838

Anti - Splash and filter for Plain Faucets. Will also fit Hose Bibb.

Price, per Doz.....$2.00

Nickel Plated Filter, Self Cleaning, Charged with Charcoal and quartz, Filler is reversible by interchanging Metal Ends. Can be screwed to any Faucet having Hose Nozzle thread or to plain Faucet, By means of Rubber Gaskett.

Price, per Doz.....$6.50

Plate 1839

NICKEL PLATED SLIP JOINT FITTINGS

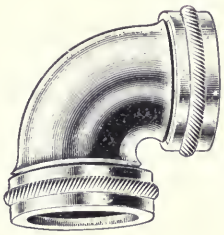


Plate 1841

Heavy Nickel Plated Brass Slip Joint 90% Elbow, with Two Slip Connections.

Price, each			
1″	1¼″	1⅜″	1½″
$1.50	$1.75	$2.00	$2.50

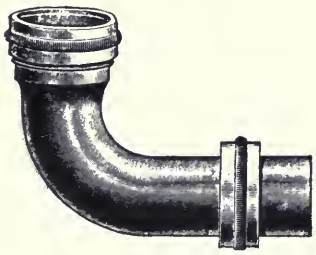


Plate 1844

Heavy Nickel Plated Slip Joint 90% Elbow and 1¼″ with 1¼″ Slip Joint, Long Tail.

Price, each	1″	1¼″ x 1″
	$1.00	$1.50

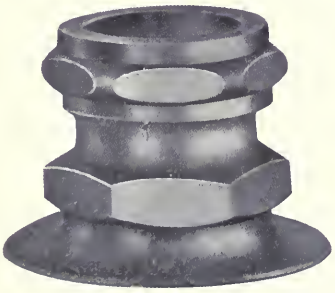


Plate 1847

Heavy Nickel Plated Slip Joint Coupling, for Waste Pipe.

1¼″ I.P. Size, 1¼″ O.D. Tube..... $1.50

1½″ I.P. Size, 1¼″ O.D. Tube..... $1.75

1½″ I.P. Size, 1½″ O.D. Tube..... $2.00

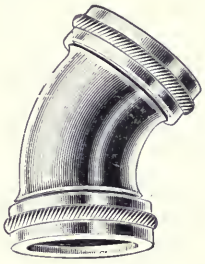


Plate 1842

Heavy Nickel Plated Brass Slip Joint 45% Elbow, with Two Slip Connections.

Price, each			
1″	1¼″	1⅜″	1½″
$1.50	$1.75	$2.00	$2.50

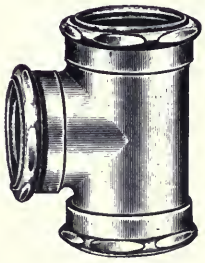


Plate 1845

Heavy Nickel Plated Brass Slip Joint Tee, with Slip Joint Connections.

Size.....	1¼″	1⅜″	1½″
Each.....	$2.00	$2.50	$3.00

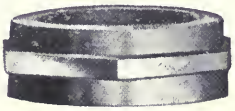


Plate 1848

Heavy Nickel Plated Brass Slip Joint Coupling Nuts.

Size 1¼″ I.P.S. Slips 1¼″ Each..... $ .30

Size 1½″, I.P.S. Slips 1¼″, Each..... $ .50

Size 2″, I.P.S. Slips 1½″. Each..... $ .75

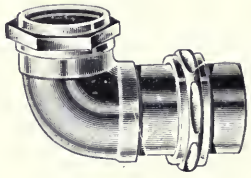


Plate 1843

Heavy Nickel Plated Brass Slip Joint 90% Elbow.

Price, each		
2″x 1¼″	2″ x ⅜″	2″ x 1½″
$3.00	$3.50	$4.00

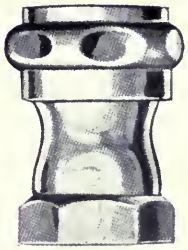


Plate 1846

Heavy Nickel Plated Brass Slip Joint Coupling, for Supply Pipes.

⅜″ I.P.S. Slips ⅜″ O.D. Price, each..... $ .75

½″ I.P.S. Slips ⅜″ O.D. Size, each..... $ .90

With Rubber Washers and Friction Rings.

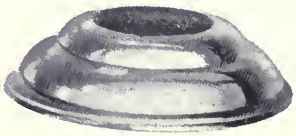


Plate 1849

Nickel Plated Brass Spun Flange.

Size.....	⅜″	½″	¾″	1″
Per Doz..	$1.50	$1.50	$1.50	$1.75

Size.....	1¼″	1½″	2″
Per Doz....	$2.00	$2.50	$2.50

NICKEL PLATED FITTINGS

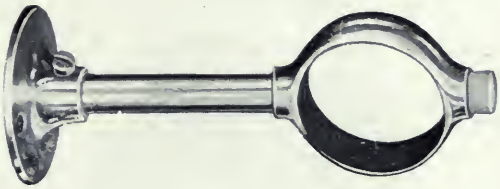


Plate 1851

Heavy Nickel Plated Adjustable Flush Pipe Support, with Rubber Seat Bumper.
Price, each..... $1.00

Plate 1852

Heavy Nickel Plated Adjustable Flush Pipe Support. Plain.
Price, each..... $ .75

Plate 1853

Heavy Nickel Plated Flush Pipe Strap, with Rubber Bumper.
Price, each..... $ .40

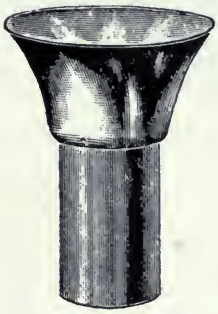


Plate 1855

Nickel Plated Brass Sink Connection.
Size 1¼". Pr, each.. $1.00
" 1½". " " 1.50

Plate 1856

Nickel Plated Brass Urinal Trap Connection.
Price, each..... $1.00

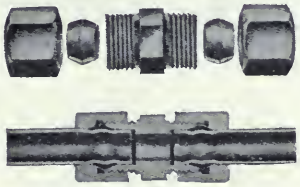


Plate 1854

"Royal" Compression Couplings, for Connecting Brass or Copper Tube without Soldering. Brazing or Threading. Made in all sizes.

Price on application.

Plate 1857

Closet Reducing Spud. With Slip Joint Nut
Size, 2 x 1¼", each..... $1.25
Size, 2" x 1½". each..... 1.50

Plate 1858

Nickel Plated Flanged Cover, for Box Trap. Cover 6" Diameter.
Price, each..... $1.50

Heavy Nickel Plated Cock, Hole Cover, with Low nut.
1¼" Lavatory.
Per Doz..... $3.00
1½" for Bath.
Per Doz..... 4.50

Plate 1859

RUBBER GOODS

SUCTION SINK STOPPER

Plate 1861

Price, per Doz..... $6.00

BATH SUCTION STOPPER

Plate 1863

Price, per Doz..... $6.00

BASIN GASKETT

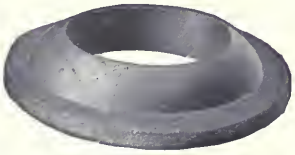


Plate 1865

Price, per Doz..... $1.20

FEATHEREDGE WASHER

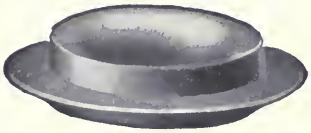


Plate 1867

	1¼″	1⅝″	1½″	2″
Price, per Doz.....	$2.40	$3.00	$3.60	$4.80

RUBBER STOPPERS

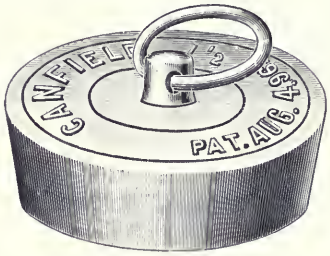


Plate 1862

Sizes:

½″	¾″	1″	1⅛″	1¼″	1⅜″	1½″	2″
Price, per Doz.	$1.20	$1.20	$1.50	$1.80	$1.80	$2.40	$3.00

BASIN SUCTION STOPPER

Plate 1864

Price, per Doz..... $4.00

SINK GASKETT

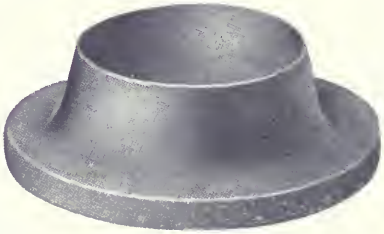


Plate 1866

Price, per Doz.....$2.05

WEDGE BATH GASKETT

Plate 1868

Price, per Doz..... $1.80

"EXCELO" BIBB WASHERS

Plate 1871

Price per 100, Hot and Cold.....$2.50

Excelo Bibb Washers

Plate 1872

Leather	Fibre	Rubber
Price, per 100.....$ .70	Price, per 100.....$1.00	Price, per 100.....$1.00

Top Packing Washer

Plate 1873

Price, per 100.....$1.20

Rush Syphon Washer

Plate 1874

Size 1¼" Price, per Doz.....$1.20
Size 1½".....1.80

Bi-Transit Washer
No. 1

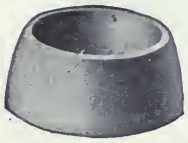


Plate 1875

Sizes.....	1"	1¼"	1½"
Per Doz.....	$1.80	$2.40	$3.00

Bi-Transit Washer
No. 2

Plate 1876

Sizes.....	1"	1¼"	1½"
Per Doz....	$1.80	$2.40	$3.00

Bi-Transit Washer
No. 3

Plate 1877

Sizes.....	1"	1¼"	1½"
Per Doz....	$1.80	$2.40	$3.00

Bi-Transit Washer
No. 4

Plate 1878

Sizes.....	1"	1¼"
Price, per Doz.....	$2.40	$2.75

Bath Waste Washer
No. 5

Plate 1879

Sizes.....	1"	1¼"	1½"
Price, per Doz.....	$2.40	$2.75	$3.50

RUBBER GOODS

Plumbers' Rubber Force Cup No Handle

The "Royal" Force Cup

Plate 1881

	No. 1	No. 2
Price, each.....	$0.75	$1.00

Plate 1882

Sizes.....	4½"	6"
With Handle, Price.....	$1.50	$2.00
Without Handle.....	1.25	1.50

"Excelo" Force Cup
24" Handle

Plate 1883

	No. 1	No. 2
Price, each..	$1.00	$1.50

Tack Bumper

No. 1 No. 2 No. 3

Plate 1884

Price, per Doz..... $ .60

Square Gauge Glass Washers

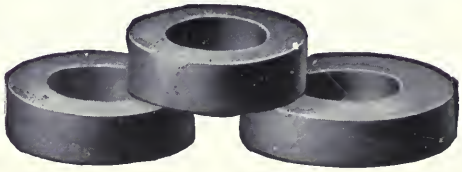


Plate 1885

Sizes.....	½"	⅝"	¾"	1"
Per Doz.....	$ .40	.40	.40	.50

Screw Bumpers

No. 1 No. 2 No. 3 No. 4

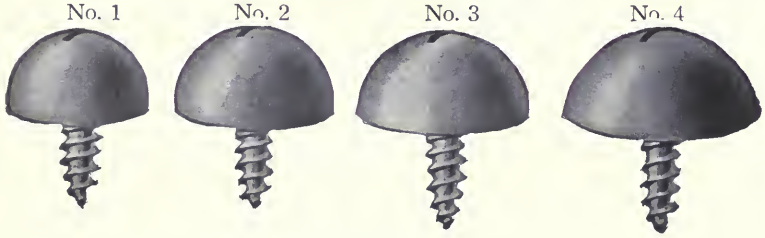


Plate 1886

Sizes.....	1"	2"	3"
Price, per Doz.....	$ .50	.60	.75

Round Gauge Class Washers

Plate 1887

Sizes	½"	⅝"	¾"
Per Doz.	$ .40	.40	.40

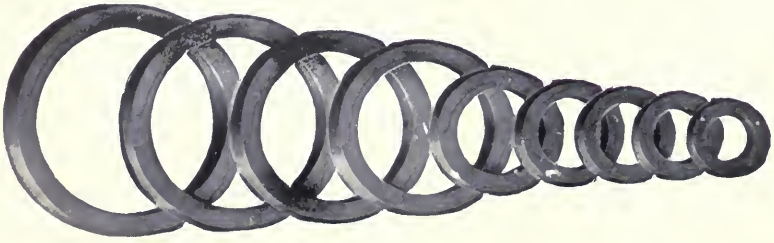


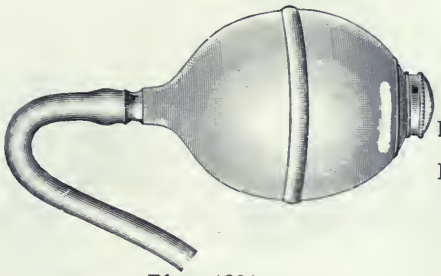
Plate 1888

Slip Joint Washers

Made in any Size.

Price, per Doz.....$ .50

RUBBER GOODS



Rubber Bulbs

Price, each 60c.

Plate 1891

Test Plug Rubber

Plate 1892

Sizes	2″	4″
Per Doz.....	$2.40	$3.00

Conical Connection

Plate 1893

Sizes.....	1¼″	1½″
Price, per Doz.....	$3.00	$4.00

Twyford or Connection

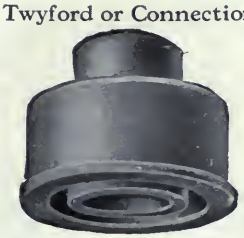


Plate 1894

Sizes.....	1¼″	1½″
Price, Doz.	$3.60	$4.80

Plate 1895

Fuller Balls, ⅜″ ½″ ⅝″-1″

Price, per Doz..... $1.80

Plate 1896

Rubber Tube, Inside Diameter

Size.....	¼″	5/16″	⅜″	½″	¾″
Price, per foot...$	.20	.22	26.	.30	.40

Plate 1897

Spud Rubber

for "Royal" Closet Bowl.

Price, per Doz..... $1.20

Plate 1898

Rubber Sheet Packing

Rubber Cloth Insertion. In Rolls, 36″ Wide, 1/32″, 1/16″, ⅛″ ¼″, Thick.

Price, per lb..... $ .40

Plate 1899

D.C.—Sheet Packing

This is a first class Packing. Cloth on both sides. It can be removed and repeatedly replaced. Every Roll has two rows of Diamonds with the letters D.C. in black as shown, extending through the entire length of the roll.

Price, per lb..... $1.00

Plate 18910

R.—Sheet Packing

As durable as any Packing made, especially adapted for High Pressure and not affected by Steam, Heat, Liquors, Ammonia, or Alkalies. It will conform to rough or uneven surfaces, making a perfectly tight joint. The color of this Packing is Red, with Trade Mark on each and every roll.

Price, per lb.....$ .60

CAST IRON SOIL PIPE AND FITTINGS

VULCAN (A) BRAND

SINGLE HUB

In 5 Foot Lengths

Plate 1901

Sizes	2″	3″	4″	5″	6″	7″	8″
Light, per foot	$ .26	$ .32	$ .42	$ .60	$ .75	....	....
Medium "	.32	.50	.68	.90	1.05	....	....
Extra Heavy, "	.40	.65	.85	1.15	1.35	$1.75	$2.25

DOUBLE HUB

In 5 foot Lengths.

Plate 1902

Sizes	2″	3″	4″	5″	6″	7″	8″
Light, per foot	$ .32	$ .38	$ .48	$ .70	$ .90	....	....
Medium "	.38	.56	.74	1.00	1.20	....	....
Extra Heavy "	.46	.71	.91	1.25	1.50	$1.95	$2.25

AVERAGE WEIGHT CAST IRON SOIL PIPE—Per Length, 5 Feet

Sizes	2″	4″	5″	6″	8″
Light Lbs.	$ .17	$ .32	$ .48	$ .62	....
Medium "	.23	.45	.66	.75	....
Extra Heavy "	.28	.67	.87	1.00	....

SINGLE HUB BENDS

1/4

Plate 1903

1/5

Plate 1904

1/6

Plate 1905

1/8

Plate 1906

1/16

Plate 1907

S zes	2″	3″	4″	5″	6″	7″	8″
Medium each	$ .55	$ .85	$1.15	$2.00	$2.75	...	...
Extra Heavy "	.65	1.00	1.30	2.20	3.25	$4.00	$5.00

DOUBLE HUB BENDS

1/4

Plate 1908

1/5

Plate 1909

1/6

19010

1/8

19011

1/16

19012

Sizes	2″	3″	4″	5″	6″	7″	8″
Medium each	$ .85	$1.15	$1.45	$2.30	$3.05	...	...
Extra heavy "	.95	1.30	1.60	2.50	3.55	$4.30	$5.30

Note:—For Bends with Inlets see page 193 The determining of the Right or Left Hand Side Inlets or Outlets of all fittings is based on facing the Hub End or Ends when placed proper position for caulking.

"VULCAN" SOIL PIPE FITTINGS

TY, Y, Half Y and TEE BRANCHES

TY

Plate 1911

Y

Plate 1912

Half Y

Plate 1913

TEE

Plate 1914

Sizes	2" x 2"	3" x 2"	3" x 3"	4" x 2"	4" x 3"	4" x 4"	5" x 4"	5" x 5"	6" x 4"	6" x 6"	8" x 6"	8 x 8"
Medium	$ .85	$1.45	$1.45	$2.10	$2.10	$2.10	$2.80	$2.80	$4.00	$4.00	.....	.....
Extra Heavy	1.00	1.65	1.65	2.40	2.40	2.40	3.30	3.30	4.50	4.50	$8.00	$9.00

For Long Branches see page 198

TY, Y, Half Y and TEE BRANCHES with Side Inlet.

TY

Plate 1915

Y

Plate 1916

Half Y

Plate 1917

TEE

Plate 1918

Sizes	2" x 2"	3" x 2"	3" x 3"	4" x 2"	4" x 3"	4" x 4"	5" x 4"	5" x 5"	6" x 4"	6" x 6"	8" x 6"	8" x 8"
Medium	$1.85	$2.45	$2.45	$3.10	$3.10	$3.10	$3.80	$3.80	$5.00	$5.00	.....	.....
Extra Heavy	2.00	2.65	2.65	3.40	3.40	3.40	4.30	4.30	5.50	5.50	$10.00	$10.00

DOUBLE TY, Y, Half Y and TEE BRANCHES

Double TY

Plate 1919

Double Y

Plate 19110

Double Half Y

Plate 19111

TEE

Plate 19112

Sizes	2" x 2"	3" x 2"	3" x 3"	4" x 2"	4" x 3"	4" x 4"	5" x 4"	5" x 5"	6" x 4"	6" x 6"	8" x 6"	8" x 8"
Medium	$1.70	$2.40	$2.40	$3.10	$3.10	$3.10	$3.90	$3.90	$6.00	$6.00	$11.25	$11.25
Extra Heavy	2.00	2.75	2.75	3.60	3.60	3.60	4.45	4.45	6.75	6.75	13.25	13.50

DOUBLE TY, Y, Half Y and TEE—With Side Inlet

Double TY

Plate 19113

Double Y

Plate 19114

Double Half Y

Plate 19115

Double TEE

Plate 19116

Sizes	2" x 2"	3" x 2"	3" x 3"	4" x 2"	4" x 3"	4" x 4"	5" x 4"	5" x 5"	6" x 4"	6" x 6"	8" x 6"	8" x 8"
Medium	$2.70	$3.40	$3.40	$4.10	$4.10	$4.10	$4.90	$4.90	$7.00	$7.00	$12.25	$12.25
Heavy	3.00	3.75	3.75	4.60	4.60	4.60	5.45	5.45	7.75	7.75	14.25	14.25

Note:—The determining of the Right or Left Hand Side Inlets or Outlets of all fittings is based on facing the Hub End or Ends when placed proper position for caulking.

"VULCAN" ◇ SOIL PIPE FITTINGS

Plain

Plate 1921

OFFSETS

Sizes	2" x 2"	2" x 4"	2" x 6"	2" x 8"	2" x 10"
Medium, Each	$ .95	$1.10	$1.25	$1.40	$1.60
Extra Heavy, Each	1.15	1.35	1.50	1.65	1.80

Sizes	2" x 12"	3" x 4"	3" x 6"	3" x 8"	3" x 10"
Medium, Each	$1.75	$1.60	$1.75	$1.95	$2.20
Extra Heavy	1.95	1.85	2.00	2.25	2.50

Outlet

Plate 1922

Sizes	3"x 12"	4"x 4"	4"x 6"	4"x 8"	4"x 10"	4"x 12"	4"x 14"	4"x 16"	4"x 18"	4"x 20"	4"x 22"	4"x 24"	5"x 4"
Medium, Each	$2.40	$1.80	$2.05	$2.35	$2.60	$2.95	$3.80	$4.20	$4.80	$5.45	$6.35	$7.00	$3.95
Extra Heavy, Each	2.70	2.10	2.40	2.70	3.00	3.40	4.45	4.85	5.65	6.50	7.85	8.75	4.50

Sizes	5"x 6"	5"x 8"	5"x 10"	5"x 12"	5"x 14"	5"x 16"	6"x 4"	6"x 6"	6"x 8"	3"x 10"	3"x 12"	3"x 14"	3"x 16"
Medium, Each	$4.40	$1.85	$5.30	$5.75	$6.25	$6.75	$5.00	$5.50	$6.00	$6.50	$7.00	$7.75	$ 8.90
Extra Heavy, Each	5.00	5.50	6.00	6.50	7.00	7.50	6.00	6.50	7.00	7.50	8.00	9.00	10.25

Offsets having Hub Vents add to list **$1.00.**

Inverted Y.

Size	4"
Medium, each	$2.25
Extra Heavy, each	2.50

Plate 1923

Double Inverted Y.

Size	4"
Medium, each	$3.00
Extra Heavy, each	3.50

Plate 1924

Combination Y and ⅛ Bend

Size	Mid.
4" x 4"	$3.75
4" x 4" 30" Long	8.15
4" x 4" x 36" Long	9.65

Plate 1925

Upright Y Branch

Size	Med.
4" x 4"	$3.75

Plate 1926

Combination Y and ⅛ Bend with Vent

Size	Med.
4" x 4" x 2" Vent	$4.75

Plate 1927

T-Y with Vent and Side Inlet.

Size	Med
4" x 4" Inlet 2" Vent 2"	$6.50

Inlet Right or Left

Plate 1928

Note:—The determining of the Right or Left Hand Side Inlets or Outlets of all fittings is based on facing the Hub End or Ends when placed in proper position for caulking.

"VULCAN" SOIL PIPE FITTINGS

R. H. Side Inlet

Plate 1931

Bends with Inlets

Sizes	Med.	Extra Heavy
2"	$1.55	$1.65
3"	1.85	2.00
4"	2.15	2.30
5"	3.00	3.20
6"	3.75	4.25
8" on application		

Heel Inlet

Plate 1932

Long Quarter Bends

Plate 1933

Long Eight Bends

Plate 1934

Sizes	Medium	Extra Heavy	Sizes	Medium	Extra Heavy
12" x 4"	$2.90	$3.50	12" x 4"	$2.90	$2.30
18" "	3.50	4.25	18" "	3.50	4.25
24" "	4.40	5.25	24" "	4.40	5.25
30" "	5.00	6.00	30" "	5.00	6.00
36" "	6.00	7.00	36" "	6.00	7.00

Long Quarter and Eight Bends

with side or End Inlets

Plate 1935

Sizes	Medium	Extra Heavy
12"	$3.90	$4.50
18"	4.50	5.25
24"	5.40	6.25
30"	6.00	7.00
36"	7.00	8.00

Spigol End

Plate 1936

Ventilating Caps

Sizes	Short	Long	Sizes	Short	Long
2"	$ .70	$1.15	2"	$1.00	$1.45
3"	.90	1.55	3"	1.20	1.85
4"	1.50	2.20	4"	1.80	2.50
5"	3.20	4.00	5"	3.50	4.30
6"	4.40	5.40	6"	4.70	5.70
8"	on application		8"	on application	

Hub End

Plate 1937

Single Hub

Plate 1938

RETURN BENDS

Sizes	Med.	Ex. heavy	Sizes	Med.	Ex. heavy
2"	$ .95	$1.05	2"	$1.25	$1.35
3"	1.70	1.80	3"	2.00	2.10
4"	2.40	2.65	4"	2.70	2.95
5"	3.65	4.15	5"	3.95	4.45
6"	4.50	5.25	6"	4.80	5.55
8"			8"		

Double Hub

Plate 1939

Note:—The determining of the Right or Left Hand Side Inlets or Outlets of all fittings is based on facing the Hub End or Ends when placed in proper position for caulking.

"VULCAN" SOIL PIPE FITTINGS

Plain

Plate 1941

Plain Increaser

Sizes	2" to 3"	2" to 4"	3" to 4'	4" to 5"	4"–6"	5" to 6"	6" to 8"
Medium	$ .85	$1.10	$1.10	$1.45	$1.75	$1.75	.....
Extra Heavy	1.00	1.25	1.25	1.75	2.25	2.25	$5.00

Increaser with Inlet

Sizes	2" to 3"	2" to 4"	3" to 4"	4" to 5"	4"–6"	5" to 6"	6" to 8"
Medium	$1.85	$2.10	$2.20	$2.45	$2.75	$2.75	.....
Extra Heavy	2.00	2.25	2.25	2.75	3.25	3.25	$6.00

With Inlet

Plate 1942

Reducer

Plate 1943

Reducers

Sizes	3" to 2"	4" x 2"–3"	5" x 3"–4"	6" x 4"–5"	8" x 6"
Medium	$ .85	$1.10	$1.45	$1.75	.....
Extra Heavy	1.00	1.25	1.75	2.25	$4.25

Covers

Plate 1944

Trap Covers

Sizes	2"	3"	4"	5"	6"
Medium each	$0.15	$0.20	$0.25	$0.40	$0.50
Extra Heavy "	.22	.32	.40	.50	.65

Single

Plate 1945

Single and Double Hubs

Sizes	2"	3"	4"	5"	6"	8"
Medium	$ .45	$ .70	$ .85	$1.20	$1.45	.....
Extra Heavy	.50	.80	.95	1.35	1.60	$3.50

Double

Plate 1946

Single and Double same price

Plain

Plate 1947

Pipe Bands

Sizes	4"	5"	6"
Plate 1947—Plain	$1.75	$2.45	$3.35
" 1948—With Hub	2.45	3.25	4.39

With Inlet

Plate 1948

Double Tapped Tees

Plate 1949

Single Tapped Tees and Ty's

Sizes	2" x 1¼"–½"–2"	3" x 1¼"–1½"–2"	4" x 1¼"–½"–2"
Medium	$1.60	$2.00	$2.60
Extra Heavy	1.75	2.20	2.95

Double Tapped Tees and Ty's

Sizes	2" x 1¼"–1½"–2"	3"–1¼"–1½"–2"	4"–1¼"–1½"–2"
Medium	$2.70	$3.20	$3.90
Extra Heavy	3.00	3.55	4.40

Single Tees

Plate 19410

Connolly Saddle Hubs

½" Y Plate 19411

Y Plate 19412

Tee Plate 19413

Sizes	2"	3"	4"	5"	6"
Plate 19411—½" Y	$1.00	$1.10	$1.15	$1.30	$1.55
" 19412—Y	1.00	1.10	1.15	1.30	1.55
" 19413—Tee	.95	1.00	1.10	1.25	1.40

Note:—The determining of the Right or Left Hand Side Inlets or Outlets of all fittings is based on facing the Hub End or Ends when placed in proper position for caulking.

"VULCAN" SOIL PIPE FITTINGS

½ S. or P.

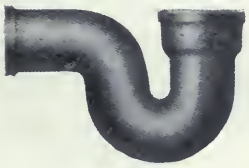


Plate 1951

Plain Traps

Sizes	Medium	Extra Heavy
2″	$1.15	$1.35
3″	1.90	2.25
4″	2.50	3.00
5″	4.25	4.75
6″	6.00	7.00
8″	....	13.00

Full S

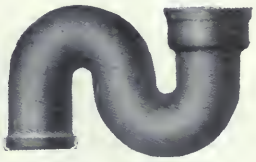


Plate 1952

¾ S.

Plate 1953

Running

Plate 1954

¾ S.
with Hand Hole and Cover.

Plate 1956

½ S. or P.
with Hand Hole and Cover.

Plate 1955

Running
with Hand Hole and Cover.

Plate 1957

½ S. or P.
with Hub Vent

Plate 1958

Traps with Hand Hole and Cover,
and with Hub Vent.

Sizes	Medium	Extra Heavy
2″	$2.15	$2.35
3″	2.90	3.25
4″	3.50	4.00
5″	5.25	4.75
6″	7.00	8.00
8″	...	10.00

Full S.
with Hand Hole and Cover.

Plate 1959

Running
with Hub Vent

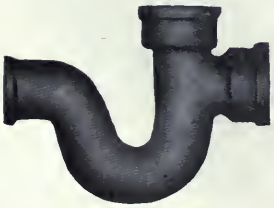


Plate 19510

¾ S.
with Hub Vent.

Plate 19511

Full S.
with Hub Vent.

Plate 19512

Note:—The determining of the Right or Left Hand Side Inlets or Outlets of all fittings is based on facing the Hub End or Ends when placed in proper position for caulking.

"VULCAN" ◇ SOIL PIPE FITTINGS

½ S. or P.

Plate 1961

½ S. or P.

Plate 1962

TRAPS WITH HAND HOLE AND COVER

With Side and End Inlets.

Sizes	Medium	Extra Heavy
2″	$3.15	$3.35
3″	3.90	4.25
4″	4.50	5.50
5″	6.25	6.75
6″	8.00	9.00
8″	. . .	15.00

¾ S.

Plate 1963

¾ S.

Plate 1964

Full S.

Plate 1965

Full S.

Plate 1966

½ S. or P.

Plate 1967

TRAPS WITH BRASS CLEANOUT

Sizes	Medium	Extra Heavy
2″	$3.20	$4.00
3″	4.00	4.80
4″	5.60	6.80
5″	10.00	10.80
6″	12.00	13.00

Special Order only.

¾ S.

Plate 1968

Running

Plate 1969

Full S.

Plate 19610

Long ½ S or P Trap

2″ x 16″

This Trap is supplied 2″ Size only and furnished with or without cleanout plug under Seal.

½ S. or P.

Plate 19611

Note:—The determining of the Right or Left Hand Side Inlets or Outlets of all fittings is based on facing the Hub End or Ends when placed in proper position for caulking.

"VULCAN" ◇ SOIL PIPE FITTINGS

Double Hub Running Trap

Plate 1971

Sizes	Med.	Extra Heavy
2″	$3.15	$3.65
3″	4.40	4.90
4″	5.50	6.00
5″	7.25	7.75
6″	9.00	10.00
8″	...	16.00

Running Trap with Y Branch and Vent

Sizes	Med.
2″ with 3″ Vent	$3.10
3″ " 2″ "	4.15
4″ " 4″ "	5.50

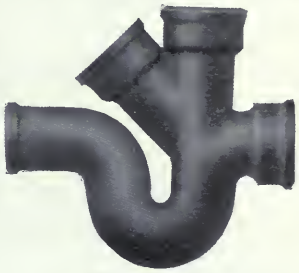


Plate 1972

Strainer

Plate 1973

2″.....$ .40
3″..... .45
4″..... .50
5″..... .75
6″..... 1.00

Plate 1974

Vent Branch

Sizes	Med.	Extra Heavy
2″	$1.25	$1.50
3″	1.75	2.00
4″	2.25	2.50
5″	3.00	3.50
6″	3.90	4.50
8″	...	9.00

Strainer with Legs

Plate 1975

2″.....$ .60
3″..... .65
4″..... .75
5″..... 1.00
6″..... 1.25

Reducing ¼″ Bend with Trap Screw cleanout.

Plate 1976

4″.....each, $3.50

PIPE PLUGS

Plate 1977

Sizes	2″	3″	4″	5″	6″
Medium	$ .20	.30	.40	.60	.75
Extra Heavy	$ .25	.35	.50	.75	1.00

Double ¼ Bend

Plate 1978

4″.....each, $4.00

Three Way Branch

Plate 1979

4″.....each, $6.00

Straight Sleeves

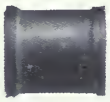


Plate 19710

Sizes	Medium
2″	$ .45
3″	.70
4″	.85
5″	1.20
6″	1.45

Triple Elbow

Plate 19711

4″.....each, $7.50

Note:—The determining of the Right or Left Hand Side Inlets or Outlets of all Fittings is based on facing the Hub End or Ends when placed in proper position for caulking.

"VULCAN" ◇ SOIL PIPE FITTINGS

Plate 1981 "Victor" Cleanout

Victor, Iron Body Trap Screw Ferrule or Cleanout. Heavy Iron Body, with Brass Flanged Cover, Solid Square Nut, Simple, Strong, Full Way Perfect Joint Non-Corrosive. Brass Cover can be removed without difficulty.

Covers are threaded Standard I.P. Size.

Sizes.....	2"	3"	4"	5"	6"	8"
Price, Ea.	$ .80	$1.20	$1.80	$3.30	$4.00	$6.00

"VULCAN" or "DANDY"

CLEANOUTS

Iron Body, with Solid Brass Cover

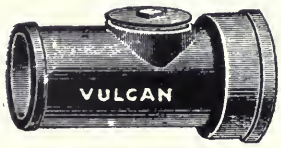


Plate 1982 "Dandy" Cleanout

Vulcan Iron Body Cleanout, with Solid Brass Cover. The Cover Screws into the body and can be easily removed.

Covers are threaded Standard I.P. Size.

Sizes.....	2"	3"	4"	6"	8"
Price, Each...	$1.80	$2.40	$2.70	$5.00	$8.00

Plate 1983

"VULCAN" INSERTABLE JOINTS

By means of this joint a new fitting can be inserted in the line of soil pipe or a broken one replaced without disturbing the line or breaking out an entire length of pipe, thus saving labor and expense.

Directions:

Cut out of the Soil Pipe the length of Fitting you desire to insert, 11½" from this Joint. Slip the Lead Ring which accompanies every joint over the Pipe above, push the Joint up as far as possible; place Y or other pipe or fitting in the hub below and drop the Joint down into it. The Lead Ring will drop into the Joint and rest upon the shoulders inside. Place a little Oakum on top of the Lead Ring, pour on the lead and the work is complete. It is not necessary to disturb the pipe above or below to get the stack mended.

Size.....	2"	4"	5"	6"
Price, Each.....	$2.50	$3.50	$5.00	$7.00

Long Pattern Y, TEE and TY Branches.

Y

Plate 1984

TEE

Plate 1985

TY

Plate 1986

Sizes	Med	Extra Heavy	Sizes	Med	Extra Heavy
4" x 18"	$4.45	$5.35	5" x 30"	$7.95	$ 9.10
4" x 24"	5.20	6.10	5" x 36"	8.95	10.10
4" x 30"	5.95	6.85	6" x 18"	7.75	8.75
4" x 36"	6.70	7.60	6" x 24"	8.75	9.75
5" x 18"	5.95	7.10	6" x 30"	9.75	10.75
5" x 24"	6.95	8.10	6" x 36"	10.75	11.75

ROOF FLANGE

Adjustable Roof Flashing made of Copper and Galvanized Iron

This Adjustable Roof Flashing, while a model of simplicity, is the most durable and efficient flashing made. Perfect adjustment to any pitch of roof from 50 degrees to flat is secured by the patented flange and Sleeve; the process of adjustment when applied to the roof being so simple a child can do it. A special feature of this flashing is that the collar or calking ring, which is of pure lead, is soldered to the sleeve thereby eliminating the trouble and annoyance which is so often caused by a collar which is merely pressed on, coming off in shipment.

To apply simply slide it down the pipe until it conforms with the pitch of the roof; secure with a few nails and you have a water-tight joint between the Pipe and Roof that is there to stay.

Sizes	2"	4"
Galvanized Adjustable Flashing, Each	$1.50	$2.00
Copper Adjustable Flashing, Each	4.10	4.50

Plate 1991 Adjustable Roofing Flange

TRAP SCREW
With Wide Flange

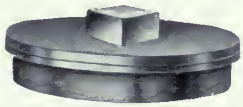


Plate 1992

TRAP SCREW
Wide Flange and Bent Coupling

Plate 1993

Sizes	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
Plate 1992—Per Doz	$5.40	$6.60	$7.20	$12.00	$15.00	$21.00	$24.00	$27.00
" 1993—Vented, with 1½" Coupling, Doz	.....	.....	.....	.....	.....	21.60	25.80	28.80

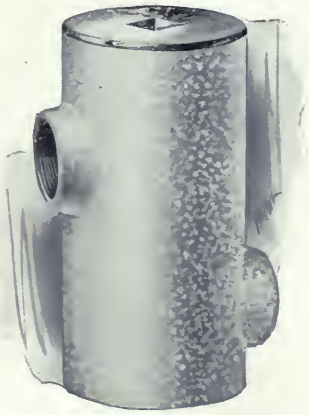


Plate 1994

Cast Iron Box Trap, 4" x 8" with heavy Brass Flanged Cover and Solid Square Nut. Threaded for 1½" Iron Pipe.

Price, each..... $4.00

STANDARD for STANDARD PIPE

Sizes	2"	3"	4"
Length	2⅞"	2⅞"	3¼"
Price per Doz	$14.40	$24.00	$31.20

HEAVY for STANDARD PIPE

Sizes	2"	3"	4"
Length	2⅞"	3⅙"	3¼"
Price per Doz	$16.20	$26.40	$34.80

STANDARD for EXTRA HEAVY PIPE

Sizes	2"	3"	4"
Length	3¼"	3¼"	3⅜"
Price per Doz	$16.08	$28.20	$36.00

All Brass Ferrule with Cap

Plate 1995

BRASS FERRULES

STRAIGHT

Plate 2001

TAPER

Plate 2002

STRAIGHT, SHORT PATTERN

Sizes	2″	3″	4″
Length	3½″	3½″	3½″
Plate 2001—Standard, for Standard Pipe ... Per Doz.	$ 9.00	$15.60	$18.60
Plate 2001—Heavy, for Standard Pipe ... "	10.80	18.00	22.20
Sizes	2″	3″	4″
Length	4⅛″	4⅛″	4¼″
Plate 2001—Standard, for Extra Heavy Pipe ... Per Doz.	$11.40	$19.80	$24.00
Plate 2001—Heavy, for Extra Heavy Pipe ... "	13.20	22.20	27.60

Plate 2001 Straight, Long Pattern

Sizes	2″	3″	4″	5″	6″
Length	4¼″	4½″	4⅝″	4⅞″	5″
Plate 2001—Standard, for Standard Pipe ... Per Doz.	$11.40	$19.80	$24.00	.....	.....
Plate 2001—Heavy, for Standard Pipe ... "	13.20	22.20	27.60	$61.20	$68.40

Plate 2002 Taper Reducing, Short Pattern

Sizes	2″ x 1½″
Length	3½″
Plate 2002—Heavy, for Standard Pipe ... Per Doz.	$9.00
Size	2″ x 1½″
Length	4⅛″
Plate 2002—Heavy, for Extra Heavy Pipe ... Per Doz.	$11.40

Taper Reducing, Long Pattern.

Sizes	2″	3″	4″	5″	6″
Length	4¾″	4¾″	5″	5″	5⅜″
Plate 2002—Standard, for Extra Heavy Pipe ... Per Doz.	$13.80	$24.00	$29.40	.....	.....
Plate 2002—Heavy, for Extra Heavy Pipe ... "	15.60	26.40	33.00	$70.20	$77.40

BENT

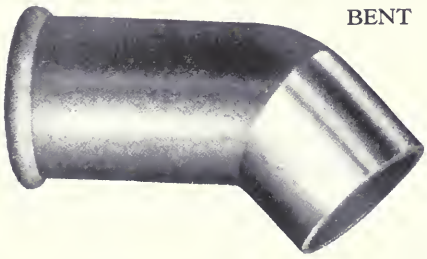


Plate 2003

Plate 2004 With Hub

Sizes	2″	4″
Length	5¼″	7½″
Plate 2003—Heavy, for Standard Pipe ... Per Doz.	$27.00	$60.00
Sizes	2″	4″
Length	6 1/5″	8″
Plate 2003—Heavy, for Heavy Pipe ... Per Doz.	$30.00	$66.00
Sizes	2″	4″
Plate 2004—Heavy, for Standard Pipe ... Per Doz.	$13.80	$28.20
Plate 2004—Heavy, for Extra Heavy Pipe ... "	16.20	33.60

PIPE HANGERS

"VULCAN" READY VENT CAP

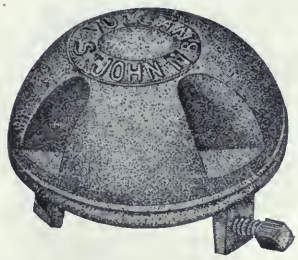


Plate 2011

Simple and low priced. Put on and adjusted in a moment by means of set screw. Saves making a joint.
Price, 4", Each..... $1.50

GALVANIZED SOLID RING PIPE HANGERS

Plate 2013

Plate 2014

Short.....	⅛"	½"	¾"	1"	1¼"	1½"	2"
Plate 2013— Black, per 100.	$5.00	$5.00	$5.80	$7.75	$10.00	$14.00	$22.00
Plate 2013— Gold.....	6.50	6.50	7.00	9.00	12.00	16.00	25.00
Plate 2014— Long, Black...	6.50	6.50	8.00	10.00	12.00	15.00	24.00
Plate 2014— Long Gold.....	8.00	8.00	10.00	12.00	14.00	18.00	27.00

UNIVERSAL RING

Plate 2017

Sizes.....	½"	¾"	1"	1¼"	1½"	2"	2½"
Price, Each.....	$ .14	$ .14	$ .16	$ .18	$ .20	$ .22	$ .24
Sizes.....	3"	3½"	4"	4½"	5"	6"	7"
Price, Each.....	$ .26	$ .30	$ .32	$ .34	$ .36	$ .40	$ .63

PIPE RESTS AND HOOK

Rest

Plate 2019

Hook

Plate 20110

Sizes.....	2"	3"	4"	5"	6"
Pipe Rests, Standard, Each.....	$ .40	$ .60	$ .75	$ .90	$1.25
Pipe Hooks, Standard, Each.....	.08	.10	.12	.15	.20

Plate 20112

EXPANSION PIPE HANGER
(Cast Iron)

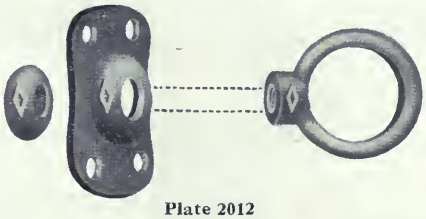


Plate 2012

Sizes	Price Each	Tapped for Pipe	Sizes	Price Each	Tapped for Pipe
½"	$ .17	¼"	3½"	$ .55	½"
¾"	.17	⅜"	4"	.63	½"
1"	.18	⅜"	4½"	.90	½"
1¼"	.19	⅜"	5"	1.12	¾"
1½"	.25	⅜"	6"	1.35	¾"
2"	.29	⅜"	7"	1.80	¾"
2½"	.36	½"	8"	2.25	¾"
3"	.44	½"			

PIPE STRAPS

Straight Wall

Plate 2015

Corner

Plate 2016

Sizes.....	2"	4"	5"	6"
Plate 2015—Straight Wall, Eac5	$ .25	$ .30	$ .40	$ .50
" **2016**—Corner, Each.....	.25	.30	.40	.50

LAG SCREW

Plate 2018

Sizes.....	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"
Price, Each..	$.10	$.10	$.10	$.10	$.10	$.12	$.12	$.12	$.14
Sizes.....	4"	4½"	5"	6"	7"	8"	9"	10"	.....
Price, Each .	$.14	$.14	$.14	$.14					.....

Plate 20111

TINNED STRAPS
(Pressed Steel)

SOLD FROM POUND LIST.

Sizes	Price Per Pound	No. of Pieces Per 100 Pounds	Approx. Weight Per 100 pcs.	Price Per 100 pcs.
¼"	$ .20	5,000	2	$ .40
⅜"	.20	3,333	3	.67
½"	.20	2,500	4	.80
¾"	.20	2,000	5	1.00
1"	.20	1,429	7	1.40
1¼"	.20	1,000	10	2.00
1½"	.20	1,000	10	2.00
2"	.20	769	13	2.60

EXTENSION BAR

Sizes.....	½"	¾"	1"	1¼"	1½"	2"	2½"
Price, per foot...	$ .10	$ .10	$ .10	$ .10	$.10	$ .12	$ .12
Sizes.....	3"	3½"	4"	4½"	5"	6"	.....
Price, per foot...	$ .12	$ .15	$ .15	$ .15	$ .15	$ .12	.....

"VULCAN" CAST IRON CESSPOOLS

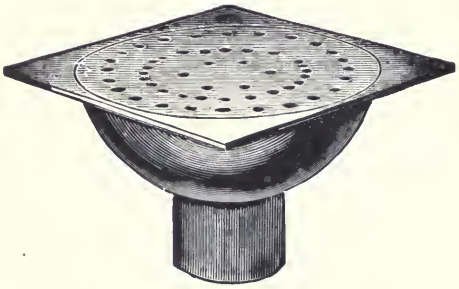


Plate 2021

Sizes	6″ x 6″	9″ x 9″
Outlet, Outside	2″	3″
Plate 2021—Each	**$4.00**	**$8.00**

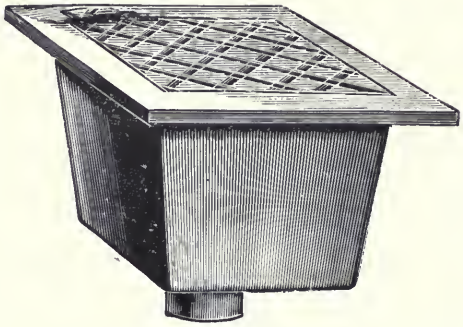


Plate 2022

Sizes	11″ x 11″
Outlet, Outside	3½″
Plate 2022—Each	**$12.00**

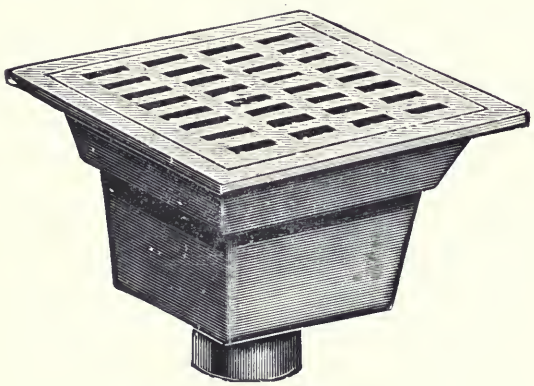


Plate 2023

Sizes	16″ x 16″
Depth	10″
Outlet, Outside	4″
Plate 2023—Each	**$16.00**

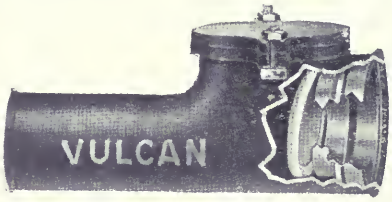


Plate 2024 Vulcan Sewer Valve

Sizes	2″	3″	4″
Price, Each	**$4.00**	**$6.00**	**$8.00**
Sizes	5″	6″	8″
Price, Each	**$12.00**	**$16.00**	**$24.00**

A recognized Standard for many years as a satisfactory Sewer Gas and Back Water Valve.

All working parts are made of brass, and are all accessible by means of the cleanout plate on top.

For medium and Extra Heavy Soil Pipes.

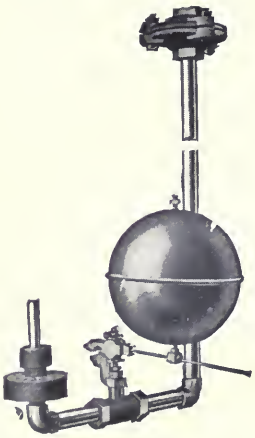


Plate 2025

"Vulcan" Cellar Drainer or Water Pressure Ejector

These Water Pressure Ejectors or Cellar Drainers are of High Capacity, automatically operated by a copper float controlled quick opening and closing valve, it cannot leak and allows the ejector to give its great efficiency by working to full capacity. A valve is also provided inside the Strainer, which closes the instant the drainer ceases operation, holding all the water in the pipes all primed for starting instantly at the next filling of the sump, and also preventing flooding of the cellar if for any reason the water pressure is insufficient to operate the ejector.

Plate 2026

Valve is made with shoulder so that it can be placed between Hub and Spigot of Soil Pipe or Fittings.

Brass Back Water Valves

Sizes, 2″, 3″, 4″, 5″ and 6″.
Prices on Application.

Supply Pipe Discharge Pipe	½″ 1″	¾″ 1¼″	1″ 1½″	1¼″ 2″	1½″ 2½″	2″ 3″
Capacity per hour, gallons	50 to 250	100 to 400	150 to 600	200 to 800	275 to 1000	350 to 1220
Lift ... feet	6′ to 12′	6′ to 12′	6′ to 12′	6′ to 12′	6′ to 12′	6′ to 12′
Pressure to Operate ... lbs.	15 to 80	15 to 80	15 to 80	15 to 80	15 to 80	15 to 80
Price, with Automatic Movement, Each	**$25.00**	**$40.00**	**$55.00**	**$80.00**	**$101.00**	**$160.00**

TERRA COTTA SOIL PIPE AND FITTINGS

OR SALT GLAZED SEWER PIPE.

Running

Plate 2031

Running with H. H.

Plate 2032

Sizes	4″	6″	8″	10″	12″
Plate 2031	$3.00	$4.00	$7.00	$10.50	$18.00
" 2032	3.00	4.00	7.00	10.50	18.00
" 2033	3.00	4.00	7.00	10.50	18.00
" 2034	3.00	4.00	7.00	10.50	18.00

Price each

Sizes.....	4″	6″	8″	10″	12″
Plate 2035	$1.80	$2.70	$4.90	$7.35	$10.80
" 2036	1.80	2.70	4.90	7.35	10.80

½″ S or P

Plate 2033

Full S

Plate 2034

Mininum weights for a car load of Pipe

4″15″ inclusive 30,000 lbs.

18″-30″ inclusive 26,000 lbs.

Double Bevel

Plate 2035

Terra Cotta Socket Pipe

Plate 2037

Y. Pipe

Plate 2036

Price per Foot on Pipe

Sizes.....	4″	6″	8″	10″	12″	
Plate 2037...	$ .30	$ .45	$ .70	$1.05	$1.35	per ft.
Weight lbs...	10	12	23	33	43	
" 2038...	1.35	1.80	2.80	4.20	6.10	each
" 2039...	1.35	1.80	2.80	4.20	6.10	"

Increaser

Plate 2038

Reducer

Pla te 2039

Reducers have sockets on large end
Increaser have sockets on small end

Slant

Plate 20310

⅛″ Bend

Plate 20311

¼″ Bend

Plate 20312

Sizes		4″	6″	8″	10″	12″
Plate 20310	each	$ .90	$1.35	$2.10	$3.15	$4.05
" 20311	"	1.20	1.80	2.80	4.20	5.40
" 20312	"	1.20	1.80	3.15	4.75	6.10

Single Square or Tee

Plate 20313

Single Bevel or Y

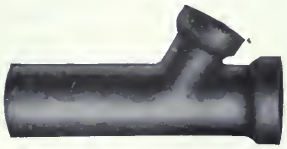


Plate 20314

Double Square or Cross

Plate 20315

Sizes		4″	9″	8″	10″	12″
Plate 20313	each	$1.35	$1.80	$3.15	$4.75	$6.10
" 20314	"	1.35	1.80	3.15	4.75	6.10
" 20315	"	1.80	2.70	4.90	7.35	10.80

Sizes from 12″ to 30″ to order.

Prices on application.

"VULCAN" DRAINAGE FITTINGS

APPROVED GOVERNMENT SPECIFICATION

Plate 2041

Inlet Piece with Grating. Furnished with One, Two, Three or Four Branches.
Size, 10″ x 4″ x 4″ Diameter.

Plate 2042

Extension Piece with Cover. Furnished with One, Two, Three or Four Branches.
Size, 10″ Diam., Branches, 4 ″ Diam., ½″ C.I. Plate, with Eye in Centre.

Plate 2043

Hydrotherapy Bath Waste. Made of Cast Iron, Inside White Enameled Inside, with Heavy Cast Brass, Nickel Plated Bee-Hive Strainer, 3″ I.P. Size Connection, with Locknut.
Size, 8″ Square, 6″ Deep.

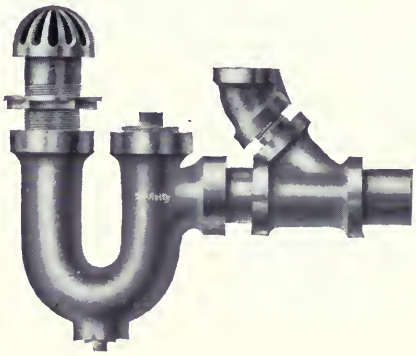


Plate 2044

Urinal Outlet and Trap, with Vent Connection, Nickel Plated Brass Bee-Hive Strainer Cleanout Plug.
Size, 2″
Waste Outlet for Showers can also be furnished for above Trap.

Plate 2045

4″ C. I. ¼ Bend, with Heel Rest.

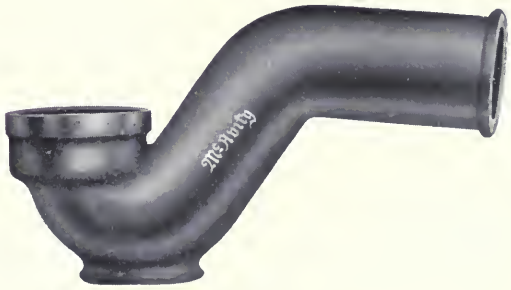


Plate 2046

4″ C. I. P. Trap, with Hub Rest.

Further information and prices will be furnished on application.

"VULCAN" DRAINAGE FITTINGS

APPROVED GOVERNMENT SPECIFICATION

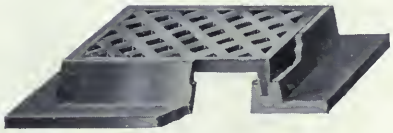


Plate 2051

Frame and Grating

Grate Size, 10″ Square.
Frame " 15½″ "

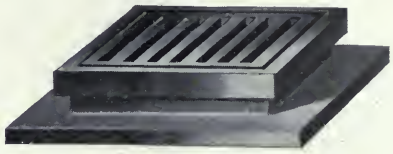


Plate 2052

Frame and Grating

Grate, Size, 10″ Square.
Frame " 15½″ "

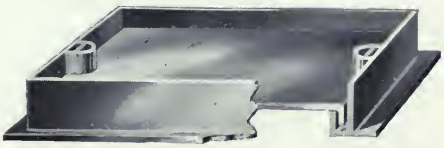


Plate 2053

Manhole Frame and Cover

Inside Size, 2′ 3″ x 1′ 9″.
Outside " 2′ 9″ x 2′ 0″.

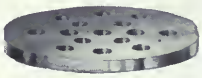


Plate 2054

Size, 9¾″ Diameter.

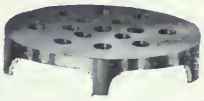


Plate 2055

Size, 9¾″ Diameter.

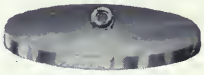


Plate 2056

Manhole Cover
Sizes to Order.

Plate 2057

Manhole Grating
Sizes to Order.

Plate 2058

All Brass Cleanout, with Oil Dressed Leather Gasket.

Sizes, 2″, 3″, 4″, 6″, 8″.

Dimens. of 4″. Height Over-all, 7″.

MANHOLE FRAMES AND COVERS

Plate 2059 Manhole Frame and Cover

Above is cut of our Standard Sewer Manhole, 24″ opening, 10″ high and 6″ Round Flange. Has Four Ribs and weighs about 420 lbs. complete. Strongly constructed for street traffic. Can furnish with holes in cover for ventilation or solid as desired; also cast letters or numbers on covers if so wanted.

We have many other patterns and can furnish almost any size or shape.

Prices upon Application.

Further information and prices will be furnished on Application.

"McAVITY" SANITARY CAST IRON SEWER CASTINGS

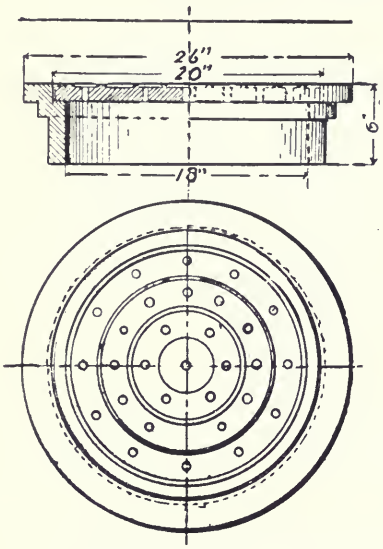


Plate 2061 Manhole Cover

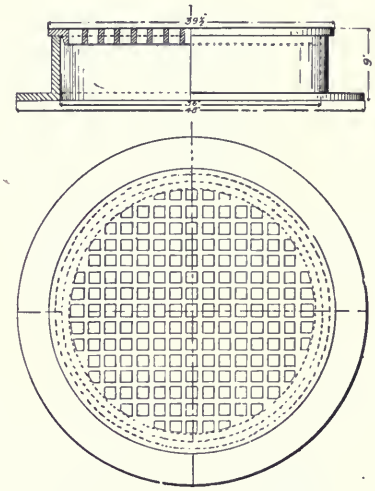


Plate 2062 Manhole Cover

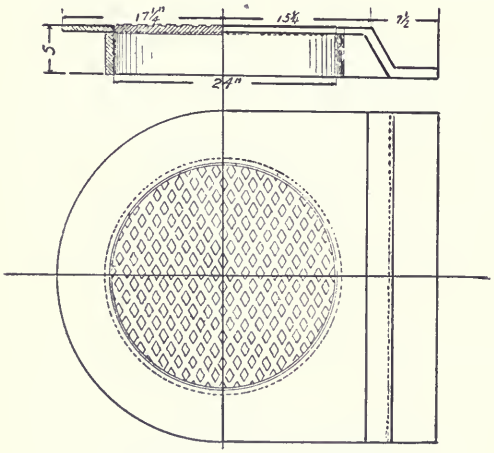


Plate 2063 Catch Basin Cover

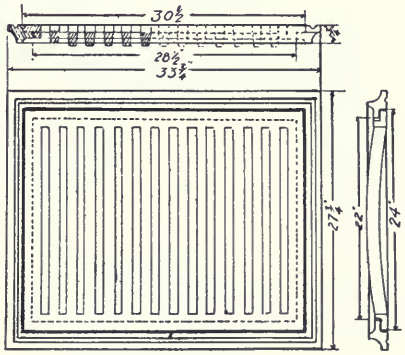


Plate 2064 Inlet

Special Castings of all Descriptions to Order.

Prices upon Application.

Plate 2066

Plate 2065

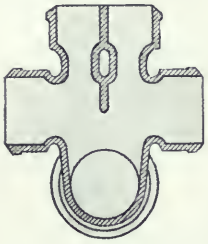
For Prices and information on Cast Iron Water Pipe and Fittings, send for our No. 40 Catalogue.

2067

F AND W SOIL PIPE FITTINGS

Illustrations showing the F. & W. Drainage and Vent System Fittings.

Further information and prices will be furnished on Application.



Double Vent, for Double Range Combination.

Plate 2071

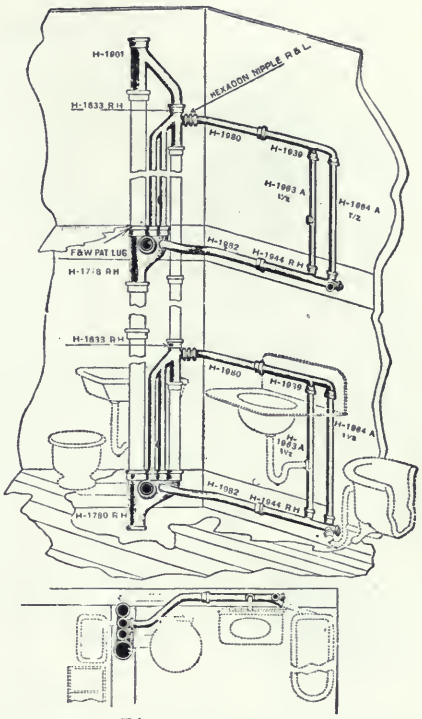


Plate 2072

Illustration showing F. & W. Fittings as arranged for Bath, Lavatory and Closet.

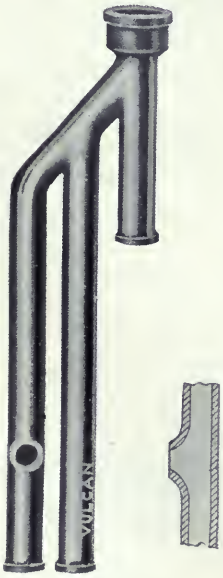


Plate 2073

Bath and Lavatory Combination, with R or L H Inlets.

Plate 2074

Sanitary Tee, with Closet and Sink Inlets.

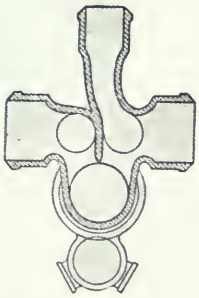


Plate 2075

Sanitary Cross, Triple Vent, with Double Closet, Front and Back, and Sink Inlets.

"VULCAN" CAST IRON DRAINAGE FITTINGS

CAST IRON DRAINAGE FITTINGS

Design. These Fittings are specially designed for sanitary plumbing for use with wrought pipe. They are made with a shoulder which engaged Flush with the Pipe, thus ensuring a free continuous flow as the Inside Diameter of the Fittings and Pipe are the same—see cuts. The inlets on Drainage Fittings are always the smallest openings and all 90° Fittings are tapped pitched to give a flow of ¼″ to the foot.

Uses. 1. Drainage Fittings and Wrought Pipe make a most desirable substitute for Cast Iron Soil Pipe and Fittings for sanitary installations.

2. For Vacuum Cleaning systems and Sprinkler installations they can be utilized advantageously as an unobstructed flow is assured.

3. Drainage Fittings can be used in place of the regular Long Sweep Fittings as they are made in both long and short sweep and can be tapped pitched or straight.

Screwed for Wrought Pipe

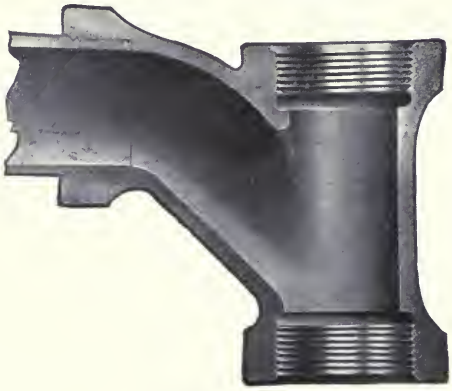


Plate 2081

4. Drainage Fittings can be used to advantage wherever the regular cast Fittings are now utilized.

Advantage. The improved appearance and decided benefits derived from any system having all screwed joints instead of caulked joints will be readily appreciated. Considerable time is also saved in making connections and in many cases screwed joints can be made quite easily in positions where caulking would be most difficult.

BRASS DRAINAGE FITTINGS

BRASS SOLDERING NIPPLES

29

Plate 2082
Brass Soldering Nipples

Plate No.	Sizes	Each	Sizes	Each
2062	1″	$ .80	3″	$2.75
	1¼″	.90	4″	4.00
	1½″	1.05	5″	9.00
	2″	1.50	.....	.....

BRASS CLOSET FLANGES FOR FLAT GASKETS.

34

Plate 2083

Closet Flange Brass
For Flat Gasket

Plate No.	Size	Each	Dimension A
2063	4″	$7.00	7″

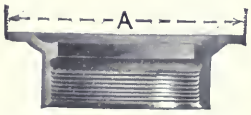
33

Plate 2084

Closet Flange for hat Gasket

CLOSET FLANGES

Plate No.	Sizes	Galv.	Dimension A
2064	4″	$1.35	7″
2065	4″	1.35	7″



35

Plate 2085

Closet Flange for Ring Gasket

"VULCAN" CAST IRON DRAINAGE FITTINGS

ELBOWS

1

Plate 2091 90° Elbow

2

Plate 2092 60° Elbow

3

Plate 2093 45° Elbow

Sizes	1"	1¼"	1½"-1¼"	1½"	2"	2½"	3"	4"	5"	6"	7"	8"
Plate 2091—Black, Each	$ .28	$ .30	$ .57	$ .38	$ .57	$1.20	$1.45	$2.30	$4.25	$6.25	$11.50	$15.00
" **2091**—Galvanized, Each	.49	.52	1.00	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25
Centre to Face	1⅝"	1¾"	2"-1⅞"	2¼"	2⅜"	2¾"	3¼"	3¾"	4½"	5¼"	5⅞"	6⅞"
Plate 2092—Black, Each	$ .28	$ .30	.....	$ .38	$ .57	$1.20	$1.45	$2.30	$4.25	$6.25	$11.50	$15.00
" **2092**—Galvanized, Each	.49	.52	.....	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25
Centre to Face	1¼"	1½"	.....	1¾"	2"	2⅛"	2⅞"	3⅛"	3⅞"	4⅛"	4¼"	4⅝"
Plate 2093—Black, Each	$ .28	$ .30	.....	$ .38	$ .57	$1.20	$1.45	$2.30	$4.25	$6.25	$11.50	$15.00
" **2093**—Galvanized, Each	.49	.52	.....	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25
Centre to Face	1¼"	2⅛"	.....	1½"	1¾"	2"	2⅜"	2¾"	3¼"	3½"	3½"	3¾"

4

Plate 2094 22½° Elbow

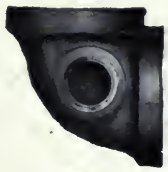
5

Plate 2095 11¼° Elbow

6

Plate 2096 5⅜° Elbow

Sizes	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	7"	8"
Plate 2094—Black, Each	$ .28	$ .30	$ .38	$ .57	$1.20	$1.45	$2.30	$4.25	$6.25	$11.50	$15.00
" **2094**—Galv., Each	.49	.52	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25
Centre to Face	1⅛"	1¼"	1¼"	1⅜"	1¾"	2"	2¼"	2⅝"	2⅞"	2 13/16"	3" 3/16"
Plate 2095—Black, Each	$ .28	$ .30	$ .38	$ .57	$1.20	$1.45	$2.30	$4.25	$6.25	$11.50	$15.00
" **2095**—Gal., Each	.49	.52	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25
Centre to Face	1⅛"	1¼"	1¼"	1⅜"	1⅝"	1¾"	2"	2¼"	2⅜"	2½"	2⅞"
Plate 2096—Black, Each	$ .28	$ .30	$ .38	$ .57	$1.20	$1.45	$2.30	$4.25	$6.25	$11.50	$15.00
" **2096**—Galv., Each	.49	.52	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25
Centre to Face	1"	1¼"	1¼"	1⅜"	1⅝"	1¾"	2"	2¼"	2⅜"	2⅜"	2 9/16



7

Plate 2097
Elbow with 2" Side Outlet

8

Plate 2098
Elbow with 2" Steel Outlet.

Plate No.	Sizes	Black	Galv.	Centre to Face
2097	4"	$3.85	$6.75	3¾"
2098	4"	3.85	6.75	3¾"

NOTE.—90° Elbows are tapped pitched ¼" to 1."

"VULCAN" CAST IRON DRAINAGE FITTINGS

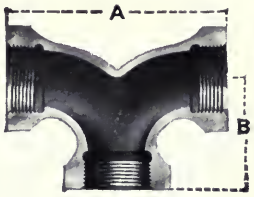
ELBOWS LONG TURN

11

Plate *2101
90° Elbow, Long Turn

12

Plate 2102
45° Elbow, Long Turn

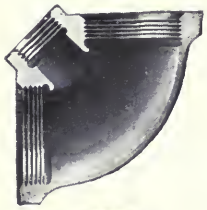


15

Plate **2103
Three-Way Elbows.

Sizes	1″	1¼″	1½″	2″	2½″	3″	4″	5″	6″	7″	8″
Plate 2101—Black, Each	$ .32	$ .35	$ .42	$ .65	$1.40	$1.75	$2.75	$5.25	$7.50	$13.50	$19.00
" 2101—Galv., Each	.56	.60	.72	1.15	2.45	3.10	4.80	9.20	13.15	23.50	33.25
Centre to Face	2½″	3⅛″	3½″	4″	4¾″	5¼″	6⅛″	7¼″	8¼″	8¼″	9⅜″
Plate 2102—Black, Each	$ .32	$ .35	$ .42	$ .65	$1.40	$1.75	$2.75	$5.25	$7.50	$13.50	$19.00
" 2102—Galv., Each	.56	.60	.72	1.15	2.45	3.10	4.80	9.20	13.15	23.50	33.25
Centre to Face	1½″	1¾″	1⅞″	2¼″	2⅝″	2⅞″	3½″	4⅛″	4⅞″	6¼″	6¾″

Sizes	1¼″	1½″	2″	2½″	3″	4″-3″	4″	5″-4″	5″	6″-4″	6″-5″	6″
Plate 2103—Black, Each	$ .75	$ .85	$1.10	$2.25	$3.00	$5.50	$5.00	$8.25	$7.50	$15.00	$15.00	$13.50
" 2103—Galv., Each	1.25	1.50	1.95	3.90	5.25	9.65	8.75	14.50	13.15	26.25	26.25	23.50
Dimensions A	4½″	5″	6″	7¼″	8½″	9½″	10¼″	11⅜″	14½″	12⅜″	13⅜″	16½″
" B	2¼″	2½″	3″	3⅜″	4¼″	4¼″	5⅛″	5⅜″	7¼″	5⅜″	6¼″	8¼″



9

Plate *2104
Elbow with 2″ Cleanout

13

Plate ***2105
Closet Elbows, Flanged

14

Plate ***2106
Closet Elbows

Plate No.	Sizes	Black	Galvanized	Centre to Face	A	B	C
2104	4″	$5.00	$8.75	6⅛″	.....	.....	.....
2105	4″	4.25	7.40	.....	3¾″	4⅝″	7″
2106	4″	4.25	7.40	.....	3¾″	4½″	.....

*NOTE.—90° Elbows are tapped pitched ¼″ to 1″.
**NOTE.—The inlets on three way elbows are tapped pitched ¼″ to 1′.
In reducing three way elbows the outlet is read first.
***NOTE.—Closet Elbows are tapped pitched ¼″ to 1″

COUPLINGS

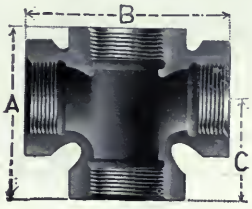
10

Plate 2107 Couplings

Sizes	1″	1¼″	1½″	2″	2½″	3″	4″	5″	6″	7″	8″
Plate 2107—Black, Each	$ .65	$ .70	$ .80	$ .90	$1.20	$1.50	$2.50	$4.00	$6.00	$8.00	$10.00
" 2107—Galv., Each	1.15	1.25	1.40	1.60	$2.10	2.60	$3.40	$7.00	10.50	14.00	17.50
Length	2⅛″	2¼″	2⅜″	2¾″	3⅛″	3½″	4″	4¼″	4½″	5½″	5⅝″

"VULCAN" CAST IRON DRAINAGE FITTINGS

90° Double T Y'S



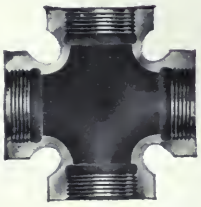
20

Plate 2111

Sizes	1"	1¼"-1"	1¼"	1½"-1¼"	1½"	2"-1¼"
Plate 2111—Black, Each	$ .60	$ .77	$ .70	$ .95	$ .85	$1.50
" 2111—Galv., Each	1.05	1.35	1.22	1.65	1.50	2.60
Dimensions A	3¼"	3½"	3¾"	3⅞"	4¼"	4⅝"
" B	3⅞"	4½"	4½"	5"	5"	5¾"
" C	1⅞"	2"	2¼"	2⅜"	2½"	2¾"
Sizes	2"-1½"	2"	2½"-1½"	2½"-2"	2½"	3"-1½"
Plate 2111—Black, Each	$1.50	$1.30	$3.15	$3.15	$2.85	$3.75
" 2111—Galv., Each	2.60	2.30	5.50	5.50	5.00	6.55
Dimensions A	4⅝"	5"	4⅞"	5½"	6¼"	5"
" B	5¾"	6"	6"	6½"	7½"	6½"
" C	2¾"	3"	2¾"	3¼"	3¾"	2⅞"
Sizes	3"-2"	3"	4"-2"	4"	5"-4"	5"
Plate 2111—Black, Each	$3.75	$3.40	$5.75	$5.25	$10.50	$9.50
" 2111—Galv., Each	6.50	5.95	10.00	9.20	18.50	16.50
Dimensions A	5¾"	7¼"	5⅞"	8¾"	10⅜"	11¼"
" B	7¼"	8½"	8"	10½"	12¼"	14½"
" C	3⅜"	4¼"	3⅜"	5¼"	6⅝"	7¼"
Sizes	6"-2"	6"-4"	6"-5"	6"	7"	8"-6"
Plate 2111—Black, Each	$15.50	$15.50	$15.50	$14.00	$25.00	$40.00
" 2111—Galv., Each	27.00	27.00	27.00	24.50	42.50	68.00
Dimensions A	8⅜"	10⅝"	12¼"	12⅞"	13¾"	1-51/16"
" B	12¾"	13½"	15"	16½"	16½"	17"
" C	5⅝"	6⅝"	8"	8¼"	8¼"	10"
Sizes	8"	....	....	....	....	....
Plate 2111—Black, Each	$36.00	....	....	....	....	....
" 2111—Galv., Each	62.00	....	....	....	....	....
Dimensions A	15½"	....	....	....	....	....
" B	18½"	....	....	....	....	....
" C	9¼"	....	....	....	....	....

Note:—The inlets are tapped pitched ¼" to 1'.

BASIN CROSSES



18

Plate 2112
Basin Cross

Sizes	1½"	2"	2"-1½"
Plate 2112—Black, Each	$1.50	$1.75	$1.95
" 2112—Galv., Each	2.50	3.10	3.40
Dimensions A	6½"	7¾"	6¾"
" B	6½"	7¾"	6¾"

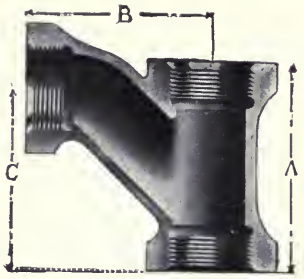
The arrow on the crosses indicated the direction of the flow.

Note:—The inlets are tapped pitched ¼" to 1'.

McAVITY'S GUARANTEE

"VULCAN" CAST IRON DRAINAGE FITTINGS

Plate 2121



LONG TURN 90° T. Y.

21

Sizes	1¼"-1"	1¼"	1½"-1"	1½"-1¼"	1½"	2"-1"
Plate 2121—Black, Each	$ .63	$ .57	$ .80	$ .80	$ .70	$1.20
" 2121—Galv., Each	1.10	1.00	1.40	1.40	1.22	2.10
Dimensions A	3⅝"	4⅛"	3⅞"	4½"	4½"	4"
" B	3½"	3⅝"	3⅝"	3⅞"	3¾"	3¾"
" C	3¼"	3⅝"	3½"	3⅞"	3¾"	3¼"

Sizes	2"-1¼"	2"-1½"	2"	2½"-1"	2½"-1¼"	2½"-1½"
Plate 2121—Black, Each	$1.20	$1.20	$1.10	$2.65	$2.65	$2.65
" 2121—Galv., Each	2.10	2.10	1.95	4.65	4.65	4.65
Dimensions A	4⅝"	5¼"	5⅝"	4⅝"	5⅛"	5⅜"
" B	4⅛"	4⅜"	5⅜"	4⅛"	4½"	4½"
" C	4¼"	4½"	5⅜"	3⅞"	4⅜"	4⅜"

Sizes	2½"-2"	2½"	3"-1½"	3"-2"	3"-2½"	3"
Plate 2121—Black, Each	$2.65	$2.40	$3.75	$3.75	$3.75	$3.35
" 2121—Galv., Each	4.65	4.20	6.55	6.55	6.55	5.85
Dimensions A	6"	6¾"	5½"	6¼"	6¾"	7⅞"
" B	5¾"	6¼"	5¼"	6"	6½"	7½"
" C	5¾"	6¼"	4⅞"	5⅞"	6¼"	7½"

Sizes	4"-1½"	4"-2"	4"-2½"	4"-3"	4"	5"-1½"
Plate 2121—Black, Each	$6.60	$6.60	$6.60	$6.60	$6.00	$10.50
" 2121—Galv., Each	11.55	11.55	11.55	11.55	10.50	18.50
Dimensions A	6"	6½"	7¼"	7⅞"	10¼"	6¼"
" B	6"	6⅝"	7⅛"	8"	9⅞"	6"
" C	4½"	6"	6½"	7⅝"	9⅞"	5"

Sizes	5"-2"	5"-2½"	5"-3"	5"-4"	5"	6"-2"
Plate 2121—Black, Each	$10.50	$10.50	$10.50	$10.50	$9.50	$22.00
" 2121—Galv., Each	18.50	18.50	18.50	18.50	16.50	38.50
Dimensions A	77"	7½"	8¼"	9¾"	11⅛"	7½"
" B	7"	7½"	8½"	10½"	12"	7¾"
" C	6¼"	6⅝"	7¾"	10¾"	12"	6¾"

Sizes	6"-3"	6"-4"	6"-5"	6"	7"-3"	7"-4"
Plate 2121—Black, Each	$22.00	$22.00	$22.00	$20.00	$33.00	$33.00
" 2121—Galv., Each	38.50	38.50	38.50	35.00	58.00	58.00
Dimensions A	8⅞"	10¼"	11¾"	13⅛"	10⅞"	13 5/16
" B	9¼"	11"	12¾"	14½"	9 11/16"	11⅝"
" " C	8⅜"	10½"	12⅝"	14½"	7 1/16	10½"

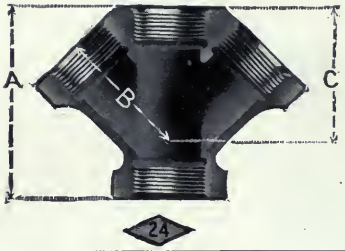
Sizes	7"-5"	7"-6"	7"-7"	8"-3"	8"-4"	8"-6"
Plate 2121—Black, Each	$33.00	$33.00	$30.00	$44.00	$44.00	$44.00
" 2121—Galv., Each	58.00	58.00	52.50	77.00	77.00	77.00
Dimensions A	....	....	14½"	10⅝"	13⅜"	....
" B	....	....	10¼"	10⅞"	12"	....
" C	....	....	10¼"	85/16	10 7/16"	....

Sizes	8"	....	....	....	....	....
Plate 2121—Black, Each	$40.00	....	....	....	....	....
" 2121—Galv., Each	70.00	....	....	....	....	....
Dimensions A	17"	....	....	....	....	....
" B	14	....	....	....	....	....
" C	13¼"	....	....	....	....	....

Note:—The inlet is tapped pitched ¼" to 1'.

"VULCAN" CAST IRON DRAINAGE FITTINGS

Plate 2131



45° DOUBLE Y

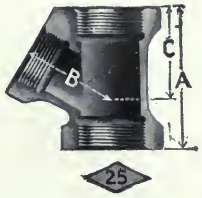
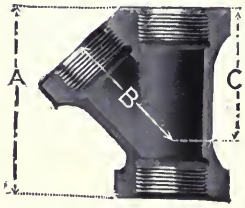


Plate 2132 60%

Sizes	1¼"	1½"-1¼"	1½"	2"–1¼"	2"–1½"	2"
Plate 2131—Black, Each	$ .90	$1.10	$1.00	.....	$1.60	$1.45
" 2131—Galv., Each	1.60	1.90	1.75	.....	2.80	2.55
Dimensions A	4¼"	4⅜"	4⅝"	4 9/16"	4⅝"	5⅜"
" B	3"	3 3/16"	3⅜"	3 11/16"	3⅜"	3⅞"
" C	3"	3⅛"	3⅜"	3½"	3¼"	3⅞"
Sizes	2½"-1¼"	2½"-1½"	2½"	3"-1½"	3"-2"	3"
Plate 2131—Black, Each	$3.60	$3.60	$3.25	$4.40	$4.40	$4.00
" 2131—Galv., Each	6.30	6.30	5.70	7.70	7.70	7.00
Dimensions A	5"	5⅜"	6⅞"	5½"	6¼"	7⅞"
" B	4⅛"	4¼"	4⅞"	4¾"	5"	5¾"
" C	3¾"	4"	4⅞"	4⅜"	4¾"	5¾"
Sizes	4"-2"	4"-3"	4"	5"-2"	5"-3"	5"-4"
Plate 2131—Black, Each	$6.35	$6.35	$5.75	$11.75	$11.75	$11.75
" 2131—Galv., Each	11.00	11.00	10.00	20.50	20.50	20.50
Dimensions A	7⅝"	8¼"	10⅞"	6¾"	8¾"	10"
" B	6¼"	6⅝"	7⅝"	6¾"	7⅜"	8⅛"
" C	6"	6⅜"	7⅝"	6"	6⅞"	7⅞"
Sizes	5"	6"-2"	6"-3"	6"-4"	6"	7"-6"
Plate 2131—Black, Each	$10.75	$17.50	$17.50	$17.50	$16.00	$31.50
" 2131—Galv., Each	18.80	30.50	30.50	30.50	28.00	54.00
Dimensions A	11⅝"	7¼"	8¾"	10⅛"	13⅜"	15⅜"
" B	8⅝"	7¾"	8¼"	8¾"	10"	11 9/16"
" C	8⅝"	6¾"	7½"	8¼"	10"	11⅜"
Sizes	7"	8"-4"	8"-6"	8"		
Plate 2131—Black, Each	$28.50	$42.00	$42.00	$38.00		
" 2131—Galv., Each	50.00	72.00	72.00	66.50		
Dimensions A	15 9/16"	11⅞"	14 7/16"	17⅝"		
" B	11½"	10 11/16"	11⅞"	13 3/16"		
" C	11½"	10 11/16"	11⅞"	13 3/16"		
Sizes	1½"	2"-1½"	2"	3"-2"	3"	4"-2"
Plate 2132—Black, Each	$ .65	$1.05	$ .95	$2.90	$2.65	$4.25
" 2132—Galv., Each	1.15	1.85	1.65	5.10	4.65	7.40
Dimensions A	4⅝"	4⅞"	5½"	6⅜"	6⅝"	6⅝"
" B	2⅝"	3"	3¼"	4⅛"	4¼"	4¾"
" C	2⅝"	2⅞"	3¼"	3⅞"	4¼"	4¼"
Sizes	4"-3"	4"	5"-2"	5"-3"	5"-4"	5"
Plate 2132—Black, Each	$4.25	$3.85	$7.80	$7.80	$7.80	$7.10
" 2132—Galv., Each	7.40	6.75	13.65	13.65	13.65	12.50
Dimensions A	8"	9⅜"	6⅞"	8½"	9½"	11⅜"
" B	5⅛"	5¾"	5½"	6"	6⅛"	6¾"
" C	5"	5¾"	4⅝"	5½"	6"	6¾"
Sizes	6"-2"	6"-4"	6"-5"	6"	8"-4"	8"-6"
Plate 2132—Black, Each	$11.50	$11.50	$11.50	$10.50	$27.50	$27.50
" 2132—Galv., Each	20.00	20.00	20.00	18.50	48.00	48.00
Dimensions A	7¾"	9⅞"	11¼"	13"	10 11/16"	12 7/16"
" B	6⅛"	6⅞"	7⅛"	7⅞"	7⅞"	8 9/16"
" C	5¼"	6½"	7⅛"	7⅞"	7⅞"	8 9/16"

"VULCAN" CAST IRON DRAINAGE FITTINGS

Plate 2141



45° Y'S

23

Sizes	1¼"	1½"-1¼"	1½"	2"-1¼"	2"-1½"	2"
Plate 2141—Black, Each	$ .52	$ .72	$ .65	$1.05	$1.05	$ .95
" 2141—Galv., Each	.90	1.25	1.15	1.85	1.85	1.65
Dimensions A	4¼"	4⅜"	4⅝"	4½"	4¾"	5⅜"
" B	3"	3¼"	3⅜"	3⅝"	3 11/16"	3⅞"
" C	3"	3⅛"	3⅛"	3½"	3⅝"	3⅞"
Sizes	2½"-1¼"	2½"-1½"	2½"-2"	2½"	3"-1¼"	3"-1½"
Plate 2141—Black, Each	$2.30	$2.30	$2.30	$2.10	$2.90	$2.90
" 2141—Galv., Each	4.00	4.00	4.00	3.70	5.10	5.10
Dimensions A	5"	5⅜"	6⅛"	6⅞"	5¼"	5½"
" B	4⅛"	4¼"	4½"	4⅞"	4⅝"	4¾"
" C	3¾"	4"	4⅜"	4⅞"	4¼"	4⅜"
Sizes	3"–2"	3"–2½"	3"	4"–1¼"	4"–1½"	4"–2"
Plate 2141—Black, Each	$2.90	$2.90	$2.65	$4.25	$4.25	$4.25
" 2141—Galv., Each	5.10	5.10	4.65	7.40	7.40	7.40
Dimensions A	6¼"	7"	7⅞"	5½"	5¾"	7⅝"
" B	5"	5⅜"	5¾"	5½"	5⅝"	6¼"
" C	4¾"	5¼"	5¾"	4⅞"	5"	6"
Sizes	4"–2½"	4"–3"	4"–4"	"–2"	5"–3"	5"–4"
Plate 2141—Black, Each	$4.25	$4.25	$3.85	$7.80	$7.80	$7.80
" 2141—Galv., Each	7.40	7.40	6.75	13.65	13.65	13.65
Dimensions A	7¾"	8¼"	10⅞"	6¾"	8⅜"	10"
" B	6¼"	6⅝"	7⅝"	6¾"	7⅜"	8⅛"
" C	5¾"	6⅜"	7⅝"	6"	6⅞"	7⅜"
Sizes	5"	6"–2"	6"–2½"	6"–3"	6"–3"	6"–5"
Plate 2141—Black, Each	$7.10	$11.50	$11.50	$11.50	$11.50	$11.50
" 2141—Galv., Each	12.50	20.00	20.00	20.00	20.00	20.00
Dimensions A	11½"	7¼"	7⅞"	8¾"	10⅛"	11⅞"
" B	8⅝"	7¾"	7⅞"	8¼"	8¾"	9⅜"
" C	8⅝"	6¾"	7⅛"	7½"	8¼"	9⅛"
Sizes	6"	7"–3"	7"–3"	7"–5"	7"–6"	7"
Plate 2141—Black, Each	$10.50	$21.00	$21.00	$21.00	$21.00	$19.00
" 2141—Galv., Each	18.50	37.00	37.00	37.00	37.00	33.25
Dimensions A	13⅜"	10"	11 9/16"	13½"	15⅜"	15 9/16"
" B	10"	9⅝"	10 1/16"	11"	11 9/16"	11½"
" C	10"	8⅞"	10 1/16"	10½"	11⅜"	11½"
Sizes	8"–3"	8"–4"	8"–5"	8"–6"	8"	
Plate 2141—Black, Each	$27.50	$27.50	$27.50	$27.50	$25.00	
" 2141—Galv., Each	48.00	48.00	48.00	48.00	44.00	
Dimensions A	10 15/16"	11⅞"	13⅜"	14 7/16"	17⅝"	
" B	10¼"	10 11/16"	11 3/16"	11⅞"	13 3/16"	
" C	10¼"	10 11/16"	11 3/16"	11⅞"	13 3/16"	

"VULCAN" CAST IRON DRAINAGE FITTINGS

LONG TURN 90° DOUBLE T.Y.'S

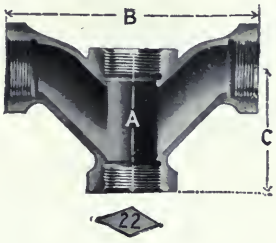


Plate 2151 90° Double T.Y., Long Turn

Sizes	1¼"–1"	1¼"	1½"–1"	1½"–1¼"	1½"	2"–1¼"
Plate 2151—Black, Each	$1.10	$1.00	$1.25	$1.25	$1.10	$1.90
" 2151—Galv., Each	1.90	1.75	2.25	2.25	1.95	3.35
Dimensions A	3⅝"	4⅛"	3⅞"	4½"	4½"	4⅝"
" B	7"	7¼"	7¼"	7¾"	7½"	8¼"
" C	3¼"	3⅝"	3½"	3⅞"	3¾"	4¼"

Sizes	2"–1½"	2"	2½"–1¼"	2½"–1½"	2½"	3"–1½"
Plate 2151—Black, Each	$1.90	$1.75	$4.00	$4.00	$3.60	$5.50
" 2151—Galv., Each	3.35	3.10	7.00	7.00	6.30	9.65
Dimensions A	5¼"	5⅝"	5⅛"	5⅜"	6¾"	5½"
" B	8¾"	10¾"	9"	9"	12½"	10½"
" C	4½"	5⅜"	4⅜"	4⅜"	6¼"	4⅞"

Sizes	3"–2"	3"	4"–2"	4"–3"	4"	5"–4"
Plate 2151—Black, Each	$5.50	$5.50	$10.00	$10.00	$9.00	$15.50
" 2151—Galv., Each	9.65	8.75	17.50	17.50	15.75	27.00
Dimensions A	6¼"	7⅞"	6½"	7⅞"	10¼"	9¾"
" B	12"	15"	13¼"	16"	19¾"	21"
" C	5⅞"	7½"	6"	7⅝"	9⅞"	10¾"

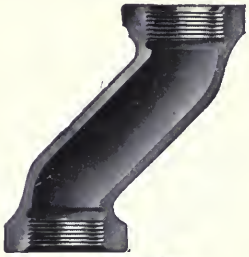
Sizes	5"	6"–2"	6"–4"	6"–5"	6"	7"
Plate 2151—Black, Each	$14.00	$33.00	$33.00	$33.00	$30.00	$45.00
" 2151—Galv., Each	24.50	58.00	58.00	58.00	52.50	79.00
Dimensions A	11½"	7½"	10¼"	11¾"	13½"	14½"
" B	24"	15½"	22"	25½"	29"	20½"
" C	12"	6¾"	10½"	12⅝"	14½"	10¼"

Sizes	8"–6"	8"
Plate 2151—Black, Each	$66.00	$60.00
" 2151—Galv., Each	112.00	105.00
Dimensions A	14⅞"	17"
" B	24½"	28"
" C	11¾"	13¼"

NOTE.—The inlets are tapped pitched ¼" to 1'.

"VULCAN" CAST IRON DRAINAGE FITTINGS

Plate 2161 OFFSETS



32

Sizes	2″	2″	2″	2″	3″	3″
Plate 2161—Black, Each	$2.15	$2.40	$2.60	$2.85	$3.35	$4.00
" 2161—Galv., Each	3.75	4.20	4.55	5.00	5.85	7.00
Dimensions A	7½″	9½″	11½″	13½″	8¾″	10¾″
" B	4″	6″	8″	10″	4″	6″
Sizes	3″	3″	4″	4″	4″	4″
Plate 2161—Black, Each	$4.75	$5.50	$5.00	$5.75	$6.50	$7.50
" 2161—Galv., Each	8.40	9.65	8.75	10.00	11.35	13.15
Dimensions A	12¾″	14¾″	9¾″	11¾″	13¾″	15¾″
" B	8″	10″	4″	6″	8″	10″
Sizes	4″	5″	5″	5″	5″	6″
Plate 2161—Black, Each	$8.50	$9.00	$10.00	$11.00	$12.00	$12.50
" 2161—Galv., Each	15.00	15.75	17.50	19.25	21.00	22.00
Dimensions A	17¾″	12⅝″	14⅝″	16⅝″	18⅝″	13⅝″
" B	12″	6″	8″	10″	12″	6″
Sizes	6″	6″	6	....	....	....
Plate 2161—Black, Each	$13.50	$14.50	$15.50	....	....	....
" 2161—Galv., Each	23.50	25.50	27.00	....	....	....
Dimensions A	15⅝″	17⅝″	19⅝″	....	....	....
" B	8″	10″	12″	....	....	....

CLOSET TEES

36

Plate 2162 "Closet Tee" With 90° Auxiliary Inlet

37

Plate 2163 "Closet Tee" With Vent

39

Plate 2164 "Closet Tee with 45° Auxiliary Inlet

Plate 2162	Size 4″	DIMENSIONS				With 2″ Inlet on Right Side		With 2″ Inlet on Left Side	
		A	B	C		Black	Galv.	Black	Galv.
		8¾″	5¼″	3½″		$5.75	$10.00	$5.75	$10.00
Plate 2163	Size 4″	DIMENSIONS				With 2″ Inlet on Right Side		With 2″ Inlet on Left Side	
		A	B	C	D	Black	Galv.	Black	Galv.
		8¾″	5¼″	3½″	2¼″	$5.75	$10.00	$5.75	$10.00
Plate 2164	Size 4″	DIMENSIONS				With 2″ 45° Inlet on Right Side		With 2″ 45° Inlet on Left Side	
		A	B	C		Black	Galv.	Black	Galv.
		A 8¾″	5¼″	3½″		$6.35	$11.00	$6.35	$11.00

The above cuts of closet Tees show right hand Inlets.

Note:—The inlets are tapped pitched ¼″ to 1′.

"VULCAN" CAST IRON DRAINAGE FITTINGS

CONNECTIONS

Plate 2171 "Roof Connection"

INCREASERS

Plate 2172 "Increaser"

Sizes	2"	3"	4"	5"	6"
Plate 2171—Black, Each	$1.15	$1.20	$1.50	$2.00	$4.25
" 2171—Galv., Each	2.00	2.10	2.60	3.50	7.40
Dimensions A	3½"	4⅝"	5¾"	6¾"	7¾"
" B	3¾"	4⅞"	6"	7"	8½"
" C	3"	4¼"	5¼"	6"	7⅛

Sizes	3"-2"	4"-2"	4"-3"	5"-2"	5"-3"	5"-4"
Plate 2172—Black, Each	$2.50	$3.75	$3.75	$5.50	$5.50	$5.50
" 2172—Galv., Each	4.40	6.55	6.55	9.65	9.65	9.65
Dimensions A	9"	9"	9"	9"	9"	9"

Sizes	6"-4"	6"-5"	7"-4"	7"-6"	8"-4"	8"-6"
Plate 2172—Black, Each	$6.50	$6.50	$12.00	$12.00	$15.00	$15.00
" 2172—Galv. Each	11.35	11.35	20.00	20.00	26.25	26.25
Dimensions A	9"	9"	9"	9"	9"	9"

SPECIAL UPRIGHT Y BRANCHES

Plate 2173 "Special Upright"

PARTITION CROSSES

Plate 2174 "Partition Cross

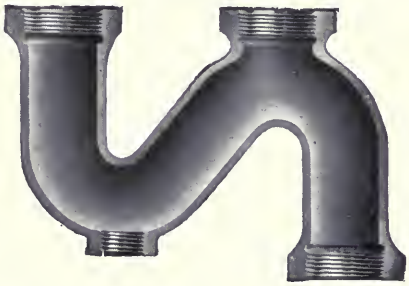
Plate	Sizes	Black	Galv.	DIMENSIONS A	DIMENSIONS B
2173	2"-1½"	$2.90	$5.10	5⅞"	3"
2173	2½"-1½"	4.40	7.75	5⅞"	3⅜"
2173	2½" 2"	4.50	7.75	7"	4½"
2173	3"-2"	6.00	10.50	9⅝"	3⅝"
2173	3"	5.50	9.75	9 11/16"	4½"
2173	4"-2"	8.75	15,25	7⅛"	4¾"
2173	4"	8.00	14.00	11¾"	5⅞"
2174	1¼"-1½"	1.25	2.20	3½"	5½"

Note:—The inlets are tapped pitched ¼" to 1'.

"VULCAN" CAST IRON DRAINAGE FITTINGS

TRAPS

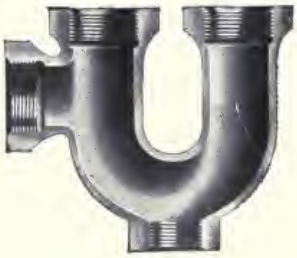
Plate 2181



"S. Trap"

41

Sizes	2"	3"	4"	5"	6"
Plate 2181—Black, Each	**$4.00**	**$9.25**	**$14.00**	**$21.00**	**$36.00**
" **2181—Galv., Each**	**7.00**	**16.00**	**24.00**	**37.00**	**63.00**
Dimensions A	8¼"	10¾"	14⅛"	16¾"	20¼"
" B	6¼"	8"	10⅝"	12½"	15⅛"
" C	8"	11¼"	13¾"	16⅞"	19¾"
Sizes of Cleanout	1"	1¼"	2"	2"	2"
Sizes of Vent	2"	3"	4"	4"	4"



42

Plate 2182 "Half S Trap"

43

Plate 2183 "Running Trap"

Sizes	1¼"	1½"	2"	3"	4"	5"	6"	7"	8"
Plate 2182—Black	**$1.55**	**$1.70**	**$2.20**	**$5.00**	**$10.00**	**$21.50**	**$32.50**	**$40.00**	**$55.00**
Plate 2182—Galv., Each	**2.70**	**3.00**	**3.85**	**8.75**	**17.50**	**37.50**	**57.00**	**70.00**	**95.00**
Dimensions A	2¼"	2½"	3 1/16	4⅛"	5⅛"	6"	6½"	7¾"	8 15/16
" B	3⅛"	3⅜"	4"	5⅜"	7"	8⅜"	10⅛"	11¼"	12⅜"
" C	2"	2¼"	2½"	3½"	4⅛"	4¾"	5⅜"	6⅛"	6¾"
Sizes of Cleanout	1"	1"	1"	1¼"	2"	2"	2"	....	....
Sizes of Vent	1¼"	1½"	2"	3"	4"	4"	4"	5 "	6"
Plate 2183—Black, Each	**$2.40**	**$2.70**	**$3.30**	**$5.50**	**$9.75**	**$24.50**	**$33.50**	**$50.00**	**$65.00**
Plate 2183—Galv., Each	**$4.20**	**$4.70**	**$5.75**	**$9.50**	**$17.00**	**$43.00**	**$58.50**	**$87.50**	**$115.00**
Dimensions A	7¾"	8⅜"	10⅛"	10¾"	17¼"	20½"	23¼	26¾"	30¼"
" B	3⅛"	3⅜"	4"	5⅜"	7"	8⅜"	10⅛"	11¼"	12⅜"
" C	2"	2¼"	2½"	3½"	4⅛"	4¾"	5⅜"	6⅛"	6¾"
Sizes of Cleanout	1"	1"	1"	1¼"	2"	2"	2"	....	....
Sizes of Vent	1¼"	1½"	2"	3"	4"	4"	4"	5"	6"

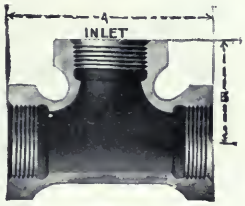
Note:—Plate 2182. The outlet is tapped pitched ¼" to 1'.
Note:—Plate 2183. The Inlet and Outlet is tapped pitched ¼" to 1'.
When ordering specify with or without vent.

"VULCAN" CAST IRON DRAINAGE FITTINGS

TEES

16

Plate 2191 Tee



17

Plate 2192 Basin Tee

Sizes	1¼"	1½"–1¼"	1½"	2"–1¼"	2"–1½"	2"	2½"–1½"	2½"–2"	2½"	3"–1½"	3"–2"
Plate 2191—Black, Tees, Each	$ .45	$ .65	$ .55	$ .90	$ .90	$ .80	$1.65	$1.65	$1.50	$2.20	$2.20
" **2191**—Galv., Tees, Each	.80	1.25	1.00	1.60	1.60	1.40	2.75	2.75	2.50	3.85	3.85
Dimensions A	1⅞"	2"	2⅛	2½"	2½"	2⅜	2½"	2⅝"	2¾"	3"	3"
" B	3¾"	3¾"	4¼"	4¼"	4½ "	4¾"	4¾"	5"	5½"	5¼"	5½"
Plate 2192—Black Basin Tees, Each	$ .60	$ .77	$ .70	$1.20	$1.10	$1.10	.....	.....	$1.75	.....	.....
" **2192**—Galv., Basin Tees, Each	1.00	1.35	1.22	2.10	2.10	1.95	.....	.....	3.00	.....	.....
Dimensions A	5"	6½'	6½"	6¾"	6¾"	7¾"	.....	.....	8½"	.....	.....
" B	2½"	3¼"	3¼"	3⅜"	3⅜"	3⅞"	.....	.....	4¼"	.....	.....
Sizes	3"	4"-2"	4"–3"	4"	5"–2"	5"–3"	5"–4"	5"	6"	7"	8"
Plate 2191—Black, Tees, Each	$2.00	$3.60	$3.60	$3.25	$6.60	$6.60	$6.00	$6.00	$8.75	$16.00	$21.00
" **2192**—Galv., Tees, Each	3.50	6.30	6.30	5.70	11.55	11.55	11.55	10.50	15.25	28.00	37.00
Dimensions A	3⅜"	3½"	3¾"	3⅞"	4"	4¼"	4⅜"	4½"	5¼"	5 11/16"	6 13/16"
" B	6¼"	6"	7"	7¾"	6"	6⅞"	8"	9"	10½"	11⅛"	13⅝"

NOTE.—The inlet is tapped pitched ¼" to 1".

38

Plate 2193 Closet Tee, Long Turn

40

Plate 2194 Closet Tee with Top Inlet, Long Turn

Plate	Sizes	With 2" Inlet on Right Side Only		With 2" Inlet on Left Side Only		With 2" Inlet on Both Sides	
		Black	Galv.	Black	Galv.	Black	Galv.
2193	3"	$5.25	$9.20	$5.25	$9.20	$5.75	$10.00
"	4"	9.00	15.75	9.00	15.75	10.00	17.50
"	5"–4"	12.00	21.00	12.00	21.00	13.00	22.75
"	6"–4"	23.00	40.00	23.00	40.00	25.00	44.00
2194	4"	10.00	17.50	10.00	17.50	11.00	19.25
"	5"–4"	13.00	22.75	13.00	22.75	14.50	25.50
"	6"–4"	25.00	44.00	25.00	44.00	28.00	49.00

For dimensions of the above long turn fittings see dimensions of long turn T Y.

The arrow on the Tees indicates the direction of the flow.

NOTE.—The inlet is tapped pitched ¼" to 1'.

"VULCAN" CAST IRON DRAINAGE FITTINGS

90° T.Y

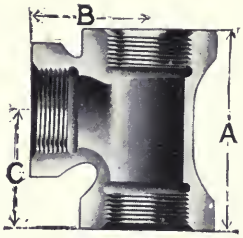


Plate 2201

19

Sizes	1"	1¼"–1"	1¼"	1½"–1"	1½"-1¼"	1½"
Plate 2201—Black, Each	$ .40	$ .50	$ .45	$ .63	$ .63	$ .57
" 2201—Galv., Each	.70	.90	.80	1.00	1.10	1.00
Dimensions A	3¼"	3½"	3¾"	3¾"	3⅞"	4¼"
" B	1⅞"	2¼"	2¼"	2⅜"	2½"	2½"
" C	1⅞"	2"	2¼"	2¼"	2⅜"	2½"

Sizes	2"–1¼"	2"–1½"–1½"	2"–1½"	2"	2½"–1¼"	2½"-1½"
Plate 2201—Black, Each	$ .95	$ .95	$ .95	$ .85	$2.00	$2.00
" 2201—Galv., Each	1.65	1.65	1.65	1.50	3.50	3.50
Dimensions A	4⅝"	4⅜"	4⅝"	5"	4⅞"	4⅞"
" B	2⅞"	2 11/16"	2⅞"	3"	3"	3"
" C	2¾"	2 11/16"	2¾"	3"	3¾"	2¾"

Sizes	2½"-2"	2½"	3"-1¼"	3"-1½"	3"-2"	3"
Plate 2201—Black, Each	$2.00	$1.80	$2.40	$2.40	$2.40	$2.20
" 2201—Galv., Each	3.50	3.15	4.20	4.20	4.20	3.85
Dimensions A	5½"	6¼"	5"	5"	5¾"	7¼"
" B	3¼"	3¾"	3¼"	3¼"	3⅝"	4¼"
" C	3¼"	3¾"	2⅞"	3⅞"	3⅜"	4¼"

Sizes	3"-4"	4"-1¼"	4"-1½"	4"-2"	4"-2½"	4"-3"
Plate 2201—Black, Each	$3.85	$3.85	$3.85	$3.85	$3.85	$3.85
" 2201—Galv., Each	6.75	6.75	6.75	6.75	6.75	6.75
Dimensions A	8⅛"	5¼"	5¼"	5⅞"	6⅝"	7⅜"
" B	4¼"	3¾"	3¾"	4"	4⅜"	4¾"
" C	4¾"	3"	3"	3⅜"	3¾"	4¼"

Sizes	4"	5"-1½"	5"-2"	5"-2½"	5"-3"	5"-4"
Plate 2201—Black, Each	$3.50	$7.15	$7.15	$7.15	$7.15	$7.15
" 2201—Galv., Each	6.15	12.50	12.50	12.50	12.50	12.50
Dimensions A	8¾"	5¾"	8"	7⅜"	9¼"	10⅜"
" B	5¼"	4⅜"	5¾"	5¼"	5⅞"	6⅛"
" C	5¼"	3¼"	5⅜"	4½"	6"	6⅝"

Sizes	5"	6"-1½"	6"-2"	6"-3"	6"-4"	6"-5"
Plate 2201—Black, Each	$6.50	$10.50	$10.50	$10.50	$10.50	$10.50
" 2201—Galv., Each	11.35	18.50	18.50	18.50	18.50	18.50
Dimensions A	11¼"	6"	8⅜"	9⅝"	10⅝"	12¼"
" B	7¼"	5⅛"	6⅜"	6¼"	6¾"	7½"
" C	7¼"	3½"	5⅜"	6½"	6⅝"	8"

Sizes	6"	7"	8"–2"	8"–3"	8"–4"	"8–5"
Plate 2201—Black, Each	$9.50	$17.50	$25.50	$25.50	$25.50	$25.50
" 2201—Galv., Each	16.50	30.50	44.50	44.50	44.50	44.50
Dimensions A	12⅞"	13¾"	....	9 15/16"	11½	12⅜"
" B	8¼"	8¼"	....	7¼"	7½"	8½"
" C	8¼"	8¼"	....	6⅜"	7½"	7¾"

Sizes	8"–6"	8"	....	....	....	....
Plate 2201—Black, Each	$25.50	$23.00	....	....	....	....
" 2201—Galv., Each	44.50	40.00	....	....	....	....
Dimensions A	15 1/16"	15½"	....	....	....	....
" B	8½"	9¼"	....	....	....	....
" C	10"	9¼"	....	....	....	....

Note:—The inlet is tapped pitched ¼" to 1'.

PLUMBERS' TOOLS

Plate 2211
Tap Borer. Price, per Doz. $6.00

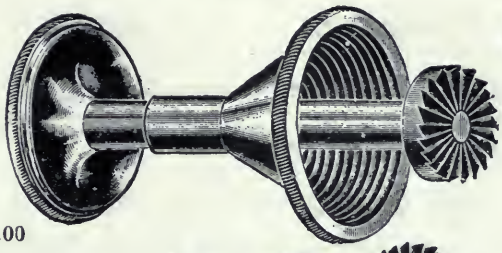


Plate 2213
Shave Hook.
Price, per Doz.... $6.00

Plate 2214
Plumbers' Snips

No. 8	3½"	Cut Each..	$3.50
No. 9	3	"	3.00
No. 10	2½"	"	2.50

Plate 2212
Bibb reseating Tool with Cutters
For ⅜"-½"-⅝"-¾" Bibbs.
Price, Each..... $5.00
Extra Cutters, per set..... 2.50

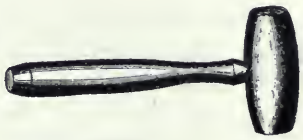


Plate 2215
Bench Mallet.
Price, per Doz..... $6.00

Plate 2217
Lead Pipe Bending Spring

Sizes	1"	1¼"	1½"	2"
Price, Each.....	$1.25	$1.50	$1.75	$2.00

Plate 2216
Burner Pliers

Sizes	5"	6"	7"
Price, Each.	$ .75	$1.00	$1.25

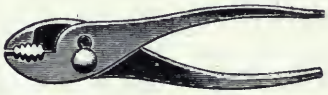


Plate 2219—Combination Pliers

Sizes	6"	8"	10"
Nickel Plated..	$ 1.50	$1.75	$2.00
Polished Steel..	1.25	1.50	1.75
Blue finished Steel....	1.00	....	....

Plate 22110
Steel Bend Iron
Price, Each..... $ .75

Plate 2218
Boxwood Lead Dresser
Price, per Doz..... $15.00

Plate 21111
"Rivetting Hammer"

Sizes	1"	2"	3"
Price.....	$1.50	$1.25	$1.00

Plate 22112

Cold Chisel.....	½"	⅝"
Price, Each.....	$ .50	$ .75

Plate 22113—Cape Chisel
Price, Each, ¾"..... $ .50

Plate 22114
Straight Caulking Chisel
Price, Each..... $ .75

Plate 22115
Picking Chisel
Price, Each..... $ .75

Plate 22116
Regular Caulking Chisel
Size, ¾" Price, Each.... $ .75

Plate 22117
Long Packing Iron
Size, 18". Price, Each.... $ .75

Plate 22118
R and L Hand Caulking Chisel
Price, Each..... $1.00

Plate 22119
Round nose Pliers,
Stocked from 4" to 8"

TOOLS

ASBESTOS LEAD JOINT RUNNER

Time Saver and Sure Joint Maker for Plumbers, Water and Gas Companies

It is adapted for soil, water or gas pipes, or a bell pipe of any description where a joint is poured with moulton lead. Always ready, and not affected by heat or cold.

RED-HOT LEAD DOES NOT AFFECT IT

This tool fills a long-felt want of something that would be easy to handle and convenient to apply for making joints in bell pipe. The different sizes are applicable to any size of pipe from two inch to the largest pipe for water main.

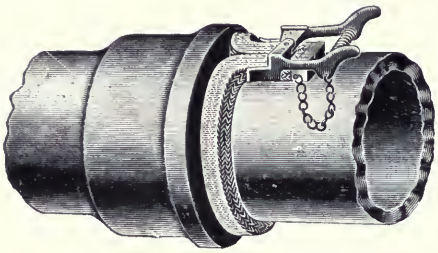


Plate 2221 No. 1

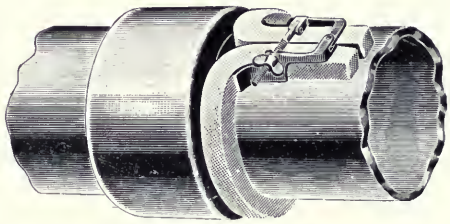


Plate 2222 No. 2

As Shown in Cut No. 1

No. 1 Improved	¾″	square for	2, 3, and	4″ Pipe..		$2.30
No. 2 "	¾″	" "	4, 5, and	6 " ..		2.45
No. 3 "	1″	" "	6, 8, and	10 " ..		4.70
No. 4 "	2	" "	10, 12, and	14 " ..		6.20

As Shown in Cut No. 2

No. 5 Improved	1¼″	Square, for	8, 10 and	12″ Pipe,	$ 9.65
No. 6 "	1¼″	" "	10, 12 and	14 "	10.70
No. 7 "	1¼″	" "	16, 18 and	20 "	13.80
No. 8 "	1¼″	" "	24″ Pipe.....		15.85
No. 9 "	1¼″	" "	30″ "		18.90
No. 10 "	1¼″	" "	36″ "		21.10
No. 11 "	1¼″	" "	40″ "		22.35
No. 12 "	1¼″	" "	42″ "		24.45
No. 13 "	1¼″	" "	48″ "		25.75

Boxwood Drift Plug

Plate 2223

Size ½″ to 2″
Price, per Doz. $3.00

Copper Bolts

Plate 2224

Weight of Bolts per Pair

Lbs.....	1½	2	2½	3	4
Price, Each.....	$0.75	$1.00	$1.25	$1.50	$2.00

Lbs.....	5	6	8	10	12
Price, Each.....	$2.50	$3.00	$3.50	$4.50	$6.00

Boxwood Turn Pin

Plate 2225

Nos. 1-2-3-, Price, per Doz.....$3.00

Plumbers' Ladle

Plate 2226

Sizes.....	2½″	3″	4″	5″	6″	7″
Price, Each....	$0.40	$0.50	$0.60	$0.70	$0.80	$1.00

Sizes.....	8″	9″	10″	12″	14″	.....
Price, Each...	$1.20	$1.40	$1.60	$1.60	$2.50	$4.00

Copper Hatchet Bolt

Plate 2227

Weight of Bolts per Pair

Lbs.	3	4	5	6
Price, Each...	$1.00	$1.50	$1.75	$2.00

TOOLS

Double Testing Plug

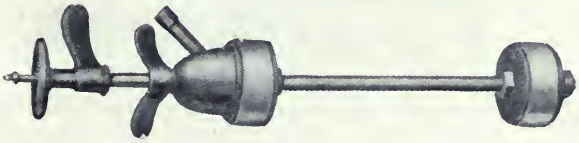


Plate 2231

Sizes	2″	3″	4″	5″	6″
Price, Each	$4.50	$5.50	$7.50	$8.00	$10.50

Test Plugs can also be furnished for Angle Fittings.

Single Test Plug

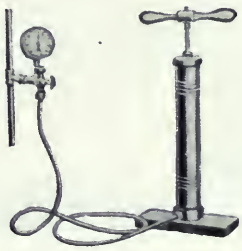
Plate 2233

Sizes	2″	3″	4″	5″	6″
Price, Each.	$1.00	$1.25	$2.50	$4.00	$4.50

Solder Pots

Plate 2232

Sizes	4″	5″	6″
Price	$1.00	$1.25	$1.50
Sizes	7″	8″	9″
Price	$2.00	$2.50	$3.00
Sizes	10″	12″	14″
Price	$3.50	$4.50	$6.00



Test Pump and Gauge

Plate 2234

2″ Bore 10″ Stroke.

Price..... $35.00

Basin Wrench

Plate 2236

Plumbers' Force Pump

Plate 2235

This pump is designed for removing obstructions in Waste and Water Pipes. The working parts are made of Brass.

Price, Each..... $20.00

Wiping Cloths

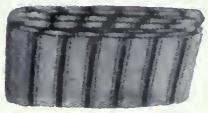


Plate 2237
Ticking
Per Set of 5.....$1.50

Plate 2238
Moleskin
Per Set of 5.....$2.00

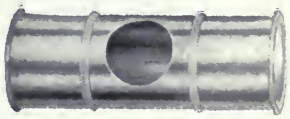


Plate 2239
Crease Box
Small.....$2.50 Large.....$3.00

STILLSON WRENCHES

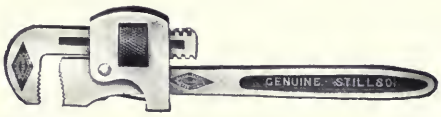


Plate 2241
Stillson Wrench with Steel Handle, 6″ to 10″ Style

Plate 2242
Stillson Wrench with Wood Handle, 6″ to 18″

Plate 2243
Stillson Wrench with Steel Handle, 36″ and 48″

Plate 2244
Stillson Wrench with Steel Handle, 14″ to 24″ Style

Lengths.....	6″	8″	10″	14″	18″	24″	36″	48″
Takes Pipe...	⅛″ to ½″	⅛″ to ¾″	⅛″ to 1″	¼″ to 1½″	¼″ to 2″	¼″ to 2½″	¼″ to 3½″	1″ to 5″
Price.....	$2.00	$2.25	$2.50	$3.50	$5.00	$7.25	$13.50	$20.00

10″ and larger Wrenches will always be sent with Steel Handles unless otherwise specified. All styles of Stillson Wrenches, sizes 6″ to 24″, are packed six of one size to the box. Sizes 36″ to 48″ are packed singly.

Plate 2245
Trimo Pipe Wrench, Steel Handle. Made with Steel Handle in all sizes

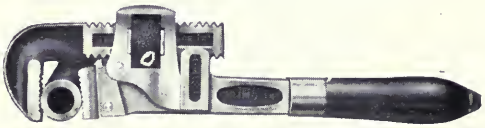


Plate 2246
Trimo Pipe Wrench, Wood Handle. Made with Wood Handle in four sizes —6″, 8″, 10″ and 14″

TRIMO PIPE WRENCHES

Lengths, Open.....	6″	8″	10″	14″	18″	24″	36″	48″
Taking Pipe.....	⅛″ to ½″	⅛″ to ¾″	⅛″ to 1″	¼″ to 1½″	¼″ to 2″	¼″ to 2½″	½″ to 3½″	1″ to 5″
Wrenches, Each....	$2.00	$2.25	$2.50	$3.50	$5.00	$7.25	$13.50	$20.00
Movable Jaws, Ea..	.75	.80	.85	1.15	1.75	2.25	4.35	7.50
Nuts, Each.....	.12	.15	.20	.30	.35	.55	1.10	1.50
Insert Jaws, Each..	.35	.40	.50	.60	.70	.80	1.10	2.00
Frames, Each.....	.38	.42	.50	.60	.75	.95	1.70	2.20
Wood Handles with Ferrule, Each....	.16	.16	.18	.25	.....	.....	.....	.....
Nut Guards, per Pr.	.15	.15	.20	.30	.35	.45	.55	.65

ADJUSTABLE HEX WRENCH
No. 0 for Small Hexagons

Plate 2247
Adjustable Hex Wrench

Especially adapted for automobile use and for small bibbs, cocks, unions, etc. Has tire puller handle.

Sizes	Sizes of Hex Across Flats.	Length Open.	Length Closed.	Each.
No. 0.....	½″ to 1″	8¼″	7⅝″	$1.75

HEX WRENCH

The Hex Wrench is the only perfect device for making-up valves, cocks, bibbs and unions, making-in or removing valve bonnets Jaws and handles are drop-forged from high-grade tool steel, frames of best quality of malleable iron.

Plate 2248 Hex Wrench

Sizes	Sizes of Hex Across Flats.	Length Open.	Length Closed.	Each
No. 1.....	3¼″ to 1 7/16″	14″	13″	$ 5.00
No. 2.....	1½ to 2⅞	25″	23″	12.00

Packed 6 in a box.

WRENCHES

STILSON PARTS—BARS

Plate 2251
6″ to 18″ Wood Handle

Plate 2252
6″ to 10″, Steel Handle

Plate 2253
14″ to 24″, Steel Handle

Plate 2254
8″ and 10″, Automobile

Plate 2255 36″ and 48″, Steel Handle

BARS WITH SPRINGS

Sizes	6″	8″	10″	14″	18″	24″	36″	48″
Plate 2251—Each	$ .95	$1.00	$1.10	.....	$1.50	$2.25	.....	.....
" 2252, 2253—Each	.....	1.10	1.10	$1.50	.....	.....	.....	.....
" 2254—Each	.....	1.00	1.10	.....	.....	.....	.....	.....
" 2255— "	.....	.....	.....	.....	2.25	3.50	$7.00	$10.50

Plate 2256

Plate 2257

Plate 2258

Plate 2259

Sizes	6″	8″	10″	14″	18″	24″	36″	48″
Jaws, Each	$ .75	$ .80	$ .85	$1.15	$1.75	$2.25	$4.35	$7.50
Frames, Each	.38	.42	.50	.60	.75	.95	1.70	2.20
Adjusting Nuts, Each	.12	.15	.20	.30	.35	.55	1.10	1.50
Wood Handles, Each	.16	.16	.18	.25	.28	.....	.....	.....
End Nuts, Each	.15	.15	.20	.20	.20	.....	.....	.....
Frame Pins, Each	.03	.03	.04	.04	.04	.04	.05	.05
Spring Rivets, Each	.01	.01	.02	.02	.02	.02	.02	.02
Springs, Each	.10	.10	.10	.10	.11	.10	.13	.13
Number of Springs to Each Wrench	1	1	3	3	3	3	1	1

COES TYPE STEEL HANDLE WRENCHES

Plate 22510 Steel Handle Wrench

COES TYPE KNIFE-HANDLE WRENCHES

Plate 22511 Knife-Handle Wrench

Sizes	6″	8″	10″	12″	15″	18″	21″
Black, per Doz.	$9.00	$10.00	$12.00	$14.00	$24.00	$30.00	$36.00

BRASS PIPE WRENCHES

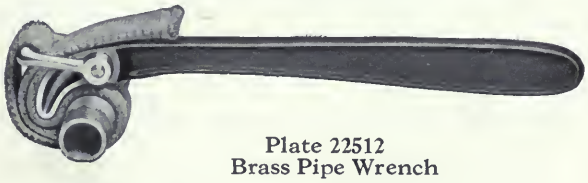


Plate 22512
Brass Pipe Wrench

Sizes	12″	18″
Takes Pipe	⅛″ to 2″	1″ to 5″
Each	$1.50	$2.50
Extra Straps, Each	.25	.50

ALLIGATOR WRENCHES

Plate 2261 " Alligator Wrench, No. 1

Plate 2262 " Alligator Wrench, Nos 2 to 5 "

Numbers	1	2	3	4	5
Length	5¾"	9"	16"	22"	27"
Takes Pipe	⅛" to ⅜"	⅜" to ¾"	½" to 1¼"	1¼" to 2"	2" to 3"
Per Doz.	$4.00	$12.00	$24.00	$36.00	$54.00

STOP COCK WRENCHES

Plate 2263

Numbers	0	1	2	2½	3	3½	4	4½	5	5½
Sizes	¼"	5/16"	⅜"	7/16"	7/16"	½"	9/16"	⅝"	11/16"	¾"
Length	3"	3¼"	3⅝"	4"	4½"	4½"	5½"	6"	6½"	6½"
Plate 2263.....Each	$ .10	$ .10	$ .12	$ .14	$ .14	$ .16	$ .18	$ .24	$ .28	$ .28

Numbers	6	6½	7	7½	8	8½	9	10	11	12
Sizes	¾"	⅞"	1"	1 1/16"	1⅛"	1 3/16"	1¼"	1½"	1¾"	2"
Length	7⅝"	8½"	8¾"	9½"	9¾"	9¾"	11"	11 1/16"	12"	13⅛"
Plate 2263.....Each	$ .38	$ .46	$ .50	$ .80	$ .88	$. 96	$1.12	$2.00	$4.00	$5.00

THE " WORLD " PIPE WRENCH

" The Harder you pull the Tighter it Grips "

Plate 2264

The World is a Wrench of new design. In addition to its powerful gripping action it is especially valuable for turning the heads of nuts or bolts from which the corners have been worn, and will hold and turn Pipe more satisfactorily than other Wrenches made for this purpose. **" The harder you pull the tighter it grips."**

Handle and Jaws of cast steel, milled; jaws sharply cerrated.

Length over all	6"	9"	12"	16"	20"
Capacity of Jaws	13/16"	1⅛"	1½"	2 1/16	2⅝"
Price, Each	$2.00	$2.25	$3.00	$4.00	$6.00

PARMELEE WRENCHES

Plate 2271 No. 1, Sleeve Lock

Plate 2272 No. 1, Nut Lock

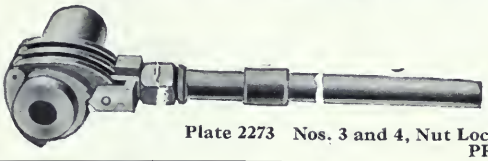


Plate 2273 Nos. 3 and 4, Nut Lock

Plate 2274 No. 2, Nut Lock

PRICE LIST

Numbers	1	2½	4	5
Length	10″	20″	25″	.....
Takes Pipe	⅜″ to 1″	1″ to 2″	2″ to 3″	3″ and 4″
Complete, per Set	$5.00	$7.50	$9.50	$13.00
Wrench without Girths, Each	2.25	3.00	5.00	7.50

EXTRA GIRTHS

Numbers	1	2½	2½	4	5	5
Sizes	⅜″ ½″, ¾″, 1″	1″ and 1¼″	1½″ and 2″	2, 2½″, 3″	3″	4″
Each	$1.50	$2.00	$2.50	$3.00	$5.00	$6.00

PINS

No. 1, Each	$ .40	No. 3, Each	$ .70
No. 2, "	.60	No. 4, "	2.00

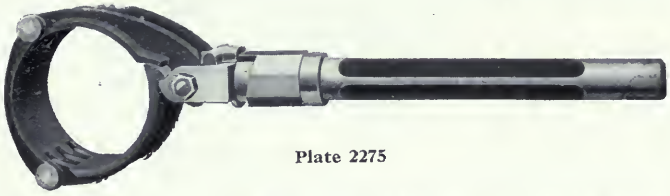


Plate 2275

HEAVY WRENCHES FOR TRENCH WORK

No. 6 Handle takes No. 4 regular 4″ Girth, also a 4″ Heavy Girth.

No. 7 Handle takes 6″ and 8″ Heavy Girth

Orders should specify the outside diameter of the pipe on which Girths are to be used. Prices on Application.

VULCAN PATTERN BIJAW WRENCHES

Plate 2276 Vulcan Pattern Bijaw Wrench, with Flat Chain

Plate 2277 Vulcan Pattern Bijaw Wrench with Cable Chain

Numbers	30	31	32	33	33½	34	35	16
Length	14″	20″	27″	37″	45″	50″	64″	87″
Weight ... Lbs.	1¾	5¾	10	16	24	31	50	137
Takes Pipe	⅛″ to ¾″	⅛″ to 1½″	¼″ to 2½″	¾″ to 4″	1″ to 6″	1½″ to 8″	2″ to 12″	4″ to 18″
Plate 2276, Each	$2.50	$3.50	$5.00	$7.00	$9.00	$11.00	$18.00	$40.00
" 2277, "	2.50	3.50	5.00	7.00	9.00	11.00	18.00	40.00
Extra Flat Link Chain, Each	.75	1.00	1.50	2.50	3.25	4.00	6.00	13.00
" Cable Chain, Each	.75	1.00	1.50	2.50	3.25	4.00	6.00	13.00
Extra Jaws, per Pair	1.00	1.75	2.75	4.00	4.75	5.50	7.50	16.00

ROBBINS PATTERN CHAIN WRENCHES

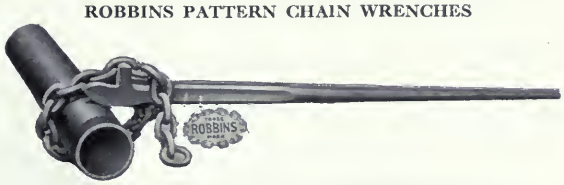
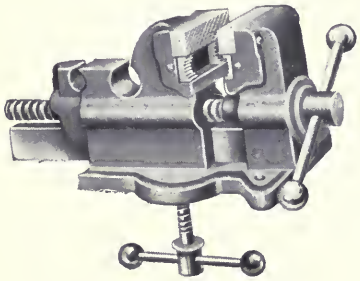


Plate 2278 Robbins Pattern Chain Wrenches

Numbers	2	3	4	5	6	7
Length of Lever	27″	36″	48″	60″	72″	84
Size Chain	5/16″	⅜″	7/16″	½″	⅝″	¾
Weight ... Lbs.	8	13	21	35	60	125
Takes Pipe	¾″ to 4″	1″ to 5″	1½″ to 6″	2″ to 8″	2½″ to 12″	3″ to 16″
Each	$5.50	$6.25	$9.00	$12.50	$16.00	$30.00

COMBINATION VISES

Plat 2281 VANDERMAN TYPE COMBINATION VISE.



No. 0. Takes Pipe 1/8" to 2½" with Bending Form to 1"., Each $15.00

No. 1. Takes Pipe 1/8" to 7" with Bending Form to 1½"., Each.... 20.00

No. 3. Takes Pipe 1/8" to 10", with Bending Form to 2 "., Each.... 30.00

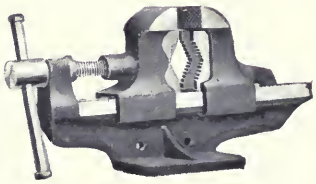
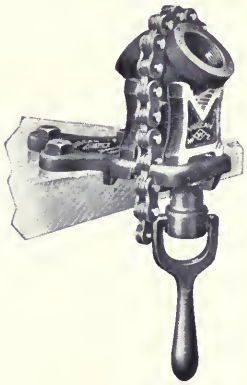


Plate 2281 Vanderman Type Combination Vise

Plate 2282 Armstrong Type Combination Vise

Plate 2282 ARMSTRONG TYPE COMBINATION VISE

Takes Pipe 1/8" to 3", Each..... $12.00



CHAIN VISE

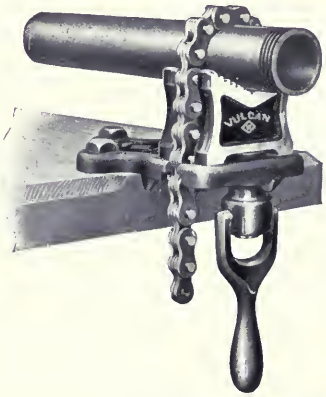


Plate 2283 Vulcan Chain Vise

Plate 2284 Vulcan Chain Vise

Plates 2283, 2284 VISES AND EXTRA PARTS

No.	Takes Pipe	Vise Complete.	Jaws.	Chain with Screw.	Screw.	Handle and Nut	Nut.
1	1/8" to 2"	$3.50	$1.50	$1.25	$ .40	$1.10	$ .70
2	1/4" to 4"	7.50	3.50	2.40	.70	2.10	1.35
4	3/4" to 8"	18.00	9.00	6.00	1.25	3.50	7.00

3-WHEEL CUTTERS

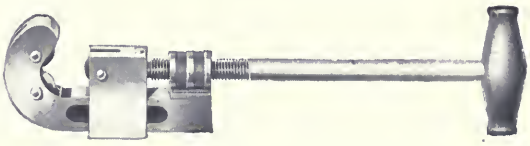


Plate 2285 3-Wheel Cutter, Barnes Pattern

Nos.	Cuts Pipe. Inches	Each.	Extra Wheels. Each.	Extra Pins. Per Doz.	Extra Hooks. Each.	Extra Slides. Each.	Extra Nuts. Each.	Extra Handles Each.
1	1/8" to 1"	$4.50	$ .25	$1.00	$1.75	$ .75	$ .25	$1.00
2	1/2" to 2"	6.00	.30	1.00	2.60	1.00	.25	1.25
3	1½" to 3"	10.00	.40	1.00	4.55	2.00	....	2.25
4	2½" to 4"	20.00	.50	2.00	9.50	4.50	....	4.50
5	4" to 6"	30.00	.75	2.00	13.75	7.00	....	7.00
6	6" to 8"	40.00	.75	2.00	20.00	8.50	....	9.25
6½	8" to 10"	45.00	.75	2.00	23.00	9.50	....	10.25
7	9" to 12"	50.00	.75	2.00	25.00	11.25	....	11.50

*Nut and Hook in one piece in these sizes.

DIES AND PIPE CUTTERS

"TRIMO" CUTTERS

Plate 2291

Sizes Number	1	2	3
Cuts Pipe	⅜″ to 1¼″	¼″ to 2″	1″ to 3″
Price, Each	$4.50	$6.00	$10.00
Extra Nuts, Each	.35	.35	.40
" Extra Wheels, or Extra Rolls, Each	.30	.30	.40
" Pins with Cotter Pins, per Doz	1.00	1.00	1.00
" Anti-friction Washers, per Doz	.60	.60	.60
" Roll Block, Each	1.25	1.25	2.25
" Frame, each	2.25	2.50	3.25
" Handle Screw, Each	1.00	1.25	2.00
" Handle, Each	.35	.35	.35
" Roll Block Pin, Each	.03	.03	.03

ROLLER CUTTERS

Plate 2292 Roller Cutter

Numbers	1	2	3	4	5
Cuts Pipe	⅛″ to 1″	1″ to 2″	2″ to 3″	2½″ to 4″	4″ to 6″
Each	$3.00	$4.50	$11.00	$18.00	$28.00
Extra Blocks and Wheels, Each	1.25	1.75	2.75	3.50	4.00
" Wheels, Each	.24	.32	.60	.60	.60
" Rollers, Each	.24	.32	.50	.50	.60
" Pins, Each	.10	.10	.15	.15	.15

DIE PLATES

"Armstrong Type"

Plate 2293 Adjustable Die Plate, Nos. 1 to 2½

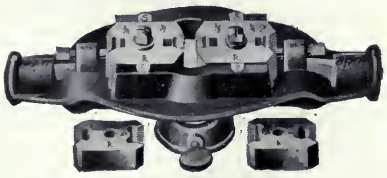


Plate 2294
Showing Plate with Double-End Dies

ADJUSTABLE DIE PLATES

Numbers	Thread Pipe	Price, Complete
No. 1 Stock	⅛″ to ½″ Right	$ 9.00
" 1 "	⅛″ to ½″ " and Left	14.00
" 2 "	¼″ to 1″ "	12.00
" 2 "	⅛″ to 1″ "	14.00
" 2 "	¼″ to 1″ " and Left	20.00
" 2 "	⅛″ to 1″ " " "	22.00
" 2½″ "	½″ to 1¼″ "	14.00
" 2½ "	¼″ to 1¼″ "	20.00
" 2½ "	½″ to 1¼″ " and Left	21.00
" 2½ "	¼″ to 1¼″ " " "	27.00
" 3 "	1¼″ to 2″ "	18.00
" 3 "	1″ to 2″ "	21.00
" 3 "	¾″ to 2″ "	24.00
" 3 "	½″ to 2″ "	27.00
" 3 "	1¼″ to 2″ " and Left	30.00
" 3 "	1″ to 2″ " " "	37.00
" 3 "	¾″ to 2″ " " "	44.00
" 3 "	½″ to 2″ " " "	51.00
" 6 "	2½″ to 3″ "	45.00
" 6 "	2⅛″ to 3″ " and Left	60.00
" 7 "	2½″ to 4″ "	75.00
" 7 "	3½″ to 4″ "	55.00
" 7 "	2½″ to 4″ " and Left	110.00
" 7 "	2½″ × 3 or 3½ × 4 Right and Left	75.00

REPAIRS FOR ADJUSTABLE DIE PLATES

Numbers	1	2	2½	3	6	7
Collar Screws, Each	$ .12	$ .12	$ .15	$ .15	$ .25	$ .25
Adjusting Screws, Each	.10	.10	.15	.15	.20	.20
Thumb Screws, Each	.10	.10	.10	.15	.....	.....
Handles, per Set	.30	.50	.50	.75	3.00	3.00
Long Guides, Each	.....	.50	.....	.....	.....	.....
Leaders, Each	.....	.....	.....	.....	4.00	5.00

PIPE VISES

"Klingfast" Pattern

Plate 2301

Hinged Pipe Vises
Malleable Iron

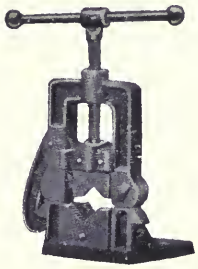


Plate 2302

Hinged Pipe Vises
Maleable Iron

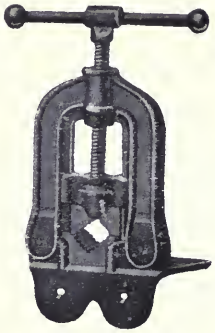


Plate 2303

Size	No. 1
Takes Pipes	⅛" to 2"
Plate 2301 "Klingfast" Pipe Vise, Each	$3.00
Plate 2302 Holds Pipe	⅛" to 2½"
Plate 2302 Hinged Pipe Vise, Each	$10.00
Plate 2303 Holds Pipe	⅛" to 3½"
Plate 2303 Hinged Pipe Vise, Each	$13.00

MACHINIST OR PIPE VISES

"McAvity's" Boston Pattern — With Renewable Steel Jaws

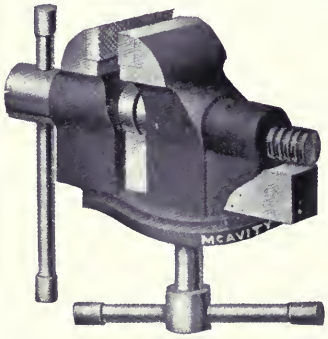


Plate 2304

Takes Pipe	⅛" to 6"
Size of Jaw	5"
Plate 2304 Complete Vise, Each	$18.00

REPAIRS

Front or Sliding Jaw, Each	$11.50
Small Steel Jaws, Per Pair	4.50
Tail Screw, Each	2.60
Long Handle, Each	2.60
Short Handle, Each	2.40
Steel Collar, Each	.80
Large Vise Screw, Each	4.50
Flange, Each	.60
Vise Jaw Screws, Each	.20
Headless Screws, Each	.20

TOLEDO THREADING TOOLS

CAPACITY 1 TO 2, INCLUSIVE

LIST PRICE, $24.00

Can also be furnished reversed in all its parts for cutting left hand threads.

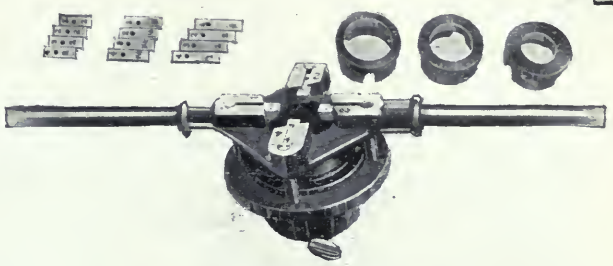


Plate 2311 Adjustable Threading Tool

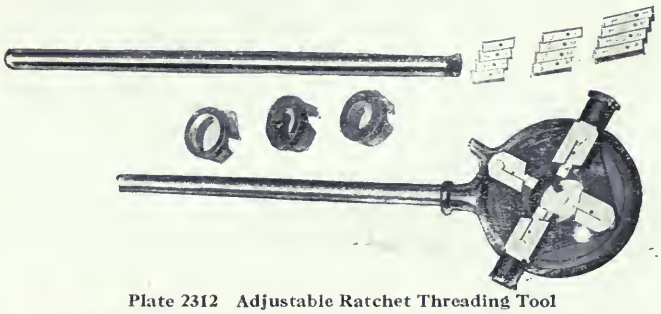


Plate 2312 Adjustable Ratchet Threading Tool

CAPACITY 1" TO 2", INCLUSIVE

LIST PRICE $31.00

This Tool is the same as Plate 2311, with the addition of a Ratchet allowing threading to be done in ditches or positions close to walls or ceilings.

Both of the above Tools are Adjustable for variations in sizes of Fittings. Threads of Standard Taper or Straight Locknut Threads may be cut with the above. All threads are finished at one cut.

JARDINE THREADING TOOLS

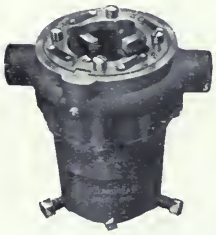


Plate 2313 Adjustable Threading Tool

CAPACITY 1" TO 2", INCLUSIVE

RIGHT OR LEFT

LIST PRICE $24.00

Plate 2313. The leading screw on Tool is completely covered, excluding dirt and chips; the stock is made large enough to pass a 2 inch Nipple Holder allowing the threading of the shortest Nipple.

Plate 2314 Adjustable Ratchet Threading Tool

CAPACITY 1" TO 2" INCLUSIVE

RIGHT OR LEFT

LIST PRICE, $31.00

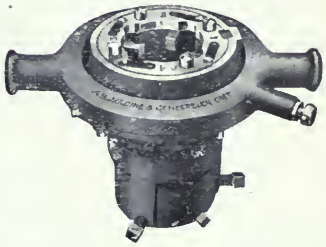


Plate 2314 The same principles apply in this Tool as Plate 2314 with the addition of a Ratchet allowing threading to be done in ditches or positions close to walls or ceilings.

Left Hand Dies extra. All threads are finished at one cut.

DIE STOCKS

(Oster Bull Dog Type)

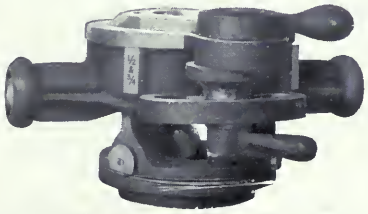


Plate 2315 Die Stock, Nos. 102 to 104½

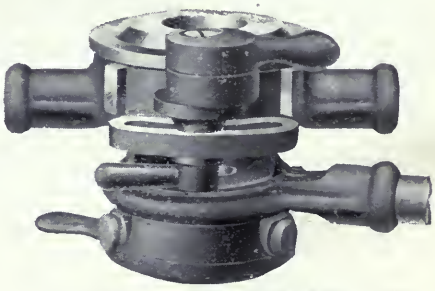


Plate 2316 Die Stock, Nos. 102R to 105R

BULL DOG DIE STOCKS

Nos.	Sizes of Pipe	Sets of Dies	List Price
101	⅛", ¼" & ⅜"; ½" & ¾"	3	$13.00
102	¼" & ⅜"; ½" & ¾"; 1" & 1¼"	3	17.00
103	1" & 1¼"; 1½" & 2"	2	22.00
104	½" & ¾"; 1" & 1¼"; 1½" & 2"	3	25.00
104½	¼" & ⅜"; ½" & ¾"; 1" & 1¼" 1½" & 2"	4	28.00
105	1½" & 2"; 2½" & 3"	2	40.00
105½	1" & 1¼"; 1½" & 2"; 2½" & 3"	3	43.00
107	2½" & 3"; 3½" & 4"	2	55.00
107½	1½" & 2"; 2½" & 3"; 3½" & 4"	3	58.50

BULL DOG RATCHET DIE STOCKS

Nos.	Sizes of Pipe	Sets of Dies	List Price
102R	¼" & ⅜"; ½" & ¾"; 1" & 1¼"	3	$20.00
103R	1" & 1¼"; 1½" & 2"	2	27.00
104R	½" & ¾"; 1" & 1¼"; 1½" & 2"	3	30.00
105R	1½" & 2"; 2½" & 3"	2	50.00
105½R	1" & 1¼"; 1½" & 2"; 2½" & 3"	3	53.00
107R	2½" & 3"; 3½" & 4"	2	60.00
107½R	1½" & 2"; 2½" & 3"; 3½" & 4"	3	63.50
108R	2½" & 3"; 3½" & 4"; 4½" & 5"	3	75.00
108½R	1½" & 2"; 2½" & 3"; 3½" & 4" 4½" & 5"	4	80.00

⅛" inch pipe dies may be added to range of No. 102 at the cost of one extra set of dies.

These Stocks not made with Cut-off Attachment

EXTRA DIES FOR BULL DOG STOCKS — Per Set (4 Pieces)

				Right or Left Hand	
No. 101	$2.50	No. 105½	$5.00	No. 105R	$5.00
No. 102	3.00	No. 107	6.00	No. 107R	6.00
No. 103	3.50	No. 107½	6.00	No. 107½R	6.00
No. 104	3.50	No. 102R	3.00	No. 108R	1.00
No. 104½	3.50	No. 103R	3.50	No. 108½R	10.00
No. 105	5.00	No. 104R	3.50		

EVERY BULL DOG TOOL HAS FIVE BIG FEATURES. (1) Self-locking, quick-opening, adjustable dies; (2) Self-locking, quick-opening, self-centering guides; (3) Three-lever control; (4) No loose bushings or breakable small parts; (5) No running back over newly cut threads. Built for perfect lubrication and long service.

DIES PLATES

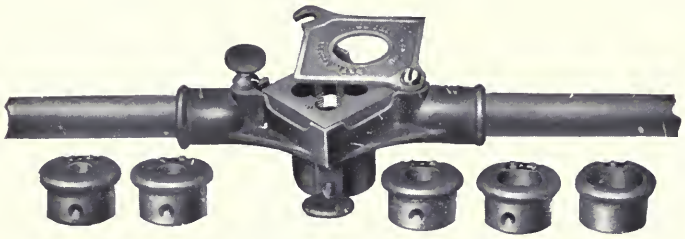


Plate 2321 "Solid" Die Plates Nos. 00 to 1¾, without Leader Screw

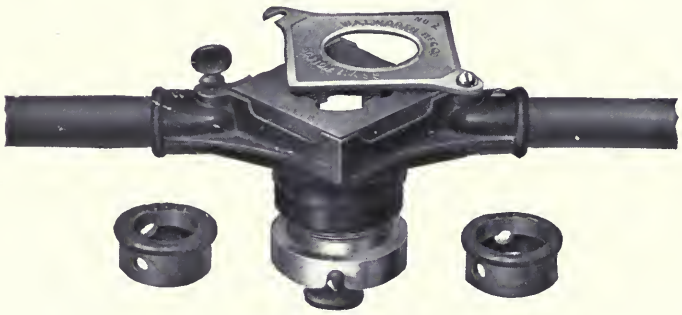


Plate 2322 "Solid" Die Plates, Nos. 2, 3, 4 with Leader Screw

"SOLID" DIE PLATES—PLATES 2301, 2302

Numbers	00 Brass Pipe	0	1	1½	1¾	2	3 2-arm.	4 4-arm.
Threads	⅝", ¾", ⅞"	⅛"–½"	¼"–1"	¾"–1¼"	1"–1½"	1¼"–2"	2½', 3"	2½", 3"
Size Dies	2" x ½"	2" x ½"	2½" x ¾"	3" x ¾"	3" x ¾"	4" x ⅞"	5" x 1¼"	5" x 1¼"
Die Plates Only, Each	$3.00	$3.00	$3.50	$4.00	$4.00	$8.50	$20.00	$26.00
Die Plates Complete, with Solid Dies, Each	8.00	8.00	10.50	9.50	9.50	14.50	35.00	42.00
Extra Solid Dies, Each	1.40	1.40	1.60	2.00	2.00	2.50	9.00	9.00
Extra Bushings, Each	.30	.30	.40	.60	.60	.75	2.00	2.00
Extra Die Frames, Each	.....	.....	.30	.40	.40	.50	.60	.60
*Solid Dies for Plumbers' Brass Pipe, Each	2.00	.....	2.50	.....	.....	.....	.....	.....
Malleable Body Only, Each	.....	2.00	2.40	3.00	3.00	4.00	10.00	13.50
Leader Screws with Thumb Screws, Each	.....	.....	.....	.....	.....	2.50	7.00	7.00
Handles, per Set	.....	1.90	2.25	2.75	2.75	3.50	10.00	20.00
Brass Face Plates, Each	.....	.75	.90	1.35	1.35	2.25	3.50	3.50
Thumb Screws for Face Plates or Bushings, Each	.....	.20	.30	.30	.30	.30	.40	.40

*Fine Thread Dies other than ⅝", ¾" and ⅞". No. 00 and No. 1 to order only, at special prices depending on quantity wanted

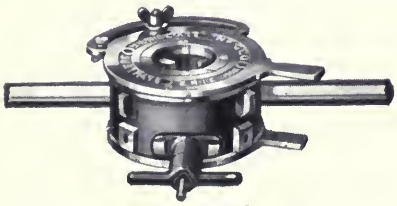


Plate 2323

SCREW PLATE AND PIPE CUTTER

Jareckl Type

Numbers	1	2	2	3½	4A	4B	5	5A
Threads and Cuts	¼" to ¾"	½" to 1¼"	1" to 2"	½" to 2"	1½" to 3"	2½" to 4"	4½" to 6"	6" to 8"
Plate 2323, Each	$14.00	$16.00	$20.00	$22.50	$35.00	$50.00	$75.00	$125.00
Dies, right or left Hand, per Set	2.00	2.00	2.00	2 Sets 4.00	3.00	3.00	6.00	2 Sets 12.00
Knives, Each	.40	.40	.40	.40	.50	.50	.60	.60
Weight Lbs.	8	15½	22	23	71½	76	95	136

Has adjustable, self-centering Dies and Guides.
The operator can detach the Plate from the finished work without turning back on the thread.
Threads can be cut over or under size.
Each set of Dies, Threads four sizes pipe.
Large pipe can be threaded by taking two or more cuts.
It is much cheaper and better than any combination of tools doing the same work.

PLUMBERS' FURNACES

The Best and Most Extensively Used Coil Fire Pot in the World

Plate 2331

No. 10 Coil Fire Pot

(1 Gallon Capacity)

For over twenty years the No. 10 has (in its class) been the greatest selling and the most extensively used coil fire pot made. Generating power, intensity of heat and economy in fuel consumption, to a very marked degree, distinguish this from any other make. The tank is made of heavy galvanized iron, fitted with galvanized cast iron top plate and bottom ring. All small or light castings are malleable iron or brass. The coil is made of extra heavy pipe and the burner of steel. The needle point valves, which are fitted with stuffing boxes, are always tight and give the user perfect control of the fire.

Price, each..... **$10.00**

Plate 2332

No. 20 Coil Fire Pot

Is exactly like the No. 10 except that it is fitted with our automatic brass air pump which is more durable than bulbs and enables the user to use more air, thereby producing a blue blast flame that is intensely hot.

Price, each..... **$12.00**

Plate 2333

No. 221 KEROSENE FIRE POT

(One Gallon Capacity)

The No. 221 Kerosene Fire Pot contains many improvements that make it the best Kerosene Fire Pot ever produced. It is perfect in construction and remarkable in heat producing qualities, using but little fuel. The tank is made of heavy gauge seamless drawn steel, reinforced, tinned inside and out, and fitted with patented Cushion Protection Band preventing injury to base of tank, and supplied with large funnel and filler plug, having Dust Proof Cap. A large, automatic brass pump quickly and easily supplies all needed air pressure. The burner is made with a powerful generator that superheats the kerosene gas before it is burned, producing perfect combustion and the maximum degree of heat, enabling the operator to secure a clear, blue flame, free from smoke and odor. The filler plug at the top of the tank is made with an air valve screw which releases the air pressure and extinguishes the flame. All burner parts are made strong and easily accessible for cleaning, should they ever become clogged from impurities in the fuel. A cleaning needle is supplied free of charge. Try it. Shipping Weight, each, 12 lbs.

Price, each..... **$18.00**

No. 5 FIRE POT (FIVE PINTS)

The No. 5 is an exact duplicate of the No. 1, only smaller, being about two-thirds its size. Height over all 12½″; diameter at base, 8⅜″ and at top 6″.

The tank is made of heavy gauge seamless drawn steel reinforced, tinned inside and out, and fitted with patented Cushion Protection Band preventing injury to base of tank, and supplied with large funnel and filler plug having Dust Proof Cap.

The Top Section is large enough to easily handle a pair of 8-pound coppers and a 5″ metal pot at the same time. The burner produces a pure blue flame, intensely hot, using but little gasoline (less than half required by some makes). While the No. 5 is not as large and powerful as the No. 1, still it will do any work any other make of fire pot will do, and much that cannot be done with them. By removing the Top Section, the base may be used as a torch or brazing fire, thus enabling the user to accomplish any work any torch will do.

Price, each..... **$18.00**

Plate 2334

McAVITY'S GUARANTEE

PLUMBERS' FURNACES

No. 71 FIRE POT (SEVEN PINTS)

For Gasoline — The Hottest Fire Pot Made

Plate 2341

For Plumbers, Tinners, Roofers, Electricians and Metal Workers. The No. 71 is Smokeless, Odorless and Noiseless. The tank is made of heavy gauge seamless drawn steel reinforced, tinned inside and out and fitted with patented Cushion Protection Band preventing injury to base of tank and supplied with large funnel and filler plug having Dust Proof Cap.

A pot of lead can be melted and a pair of 12 lb. coppers quickly heated at the same time. The burner has two heating surfaces. The gas is superheated before it is urned, producing intensely hot blue flames burning from each side to the center. A sub-flame for the generator allows the heating flame to be turned low if desired, thus saving fuel expense, and the maximum heat can be had at a moment's notice. The flames are protected by a hood with cover and are not affected by wind or storm.

Patented automatic Brass Pump supplies ample air pressure.

Weight, each, 14¼ lbs.

Price, each, Steel Tank..... $27.00.

No. 72 FIRE POT (FIVE PINTS) For Gasoline

The No. 72 Fire Pot is Smokeless, Odorless and Noiseless.

The tank is made of heavy gauge seamless drawn steel reinforced, tinned inside and out, and fitted with patented Cushion Protection Band preventing injury to base of tank and supplied with large funnel and filler plug having Dust Proof Cap.

The No. 72 Fire Pot is one size smaller than No. 71, otherwise it is exactly the same. Although more compact it will do more work than any other make of fire pot on the market.

The Top Section will take care of a pair of 8 lb. soldering coppers and melt a pot of lead at the same time. The burner has two heating surfaces. The gas is superheated before it is burned, producing intensely hot blue flames, burning from each side to the center. A sub-flame for the generator permits the heating flame to be turned low if desired, thus saving fuel expense and the maximum heat can be had at a moment's notice.

Weight, each, 13½ lbs.

Price, each, Steel Tank..... $24.80

Plate 2342

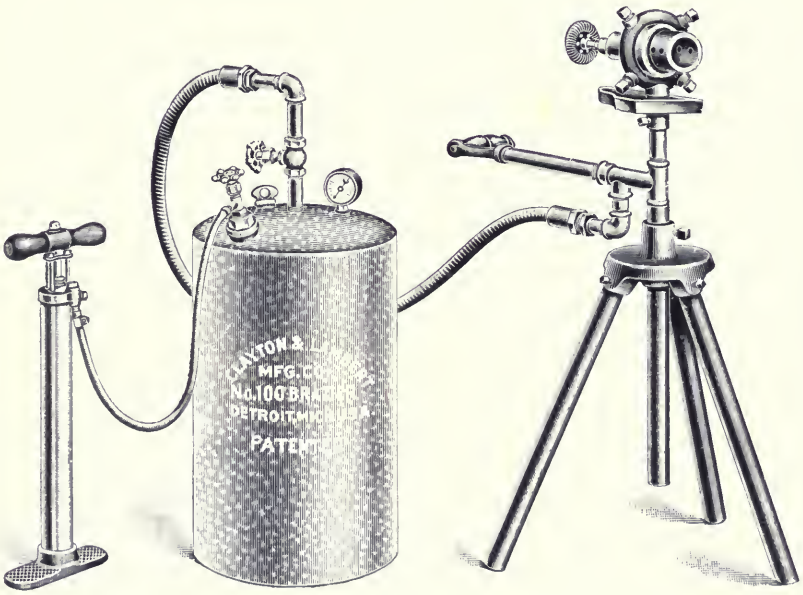


Plate 2343

No. 100 Brazing Machine.

(Patented)

Equipped with Heavy Powerful Generator Creating the Most Intense Smokeless Blue Flame Ever Produced from Gasoline and Air.

Especially constructed for straightening automobile frames and axles, engine drive-arms, brazing bicycle and motor cycle frames, taking dents out of steel plates on boilers and for melting lead, zinc or babbitt, tempering tools and for all purposes where an intense heat is required.

The burner is large and powerful. It is made on our patented coil principle which permits the gas to be superheated before it is burned, and produces an intensely hot blue flame about two inches in diameter.

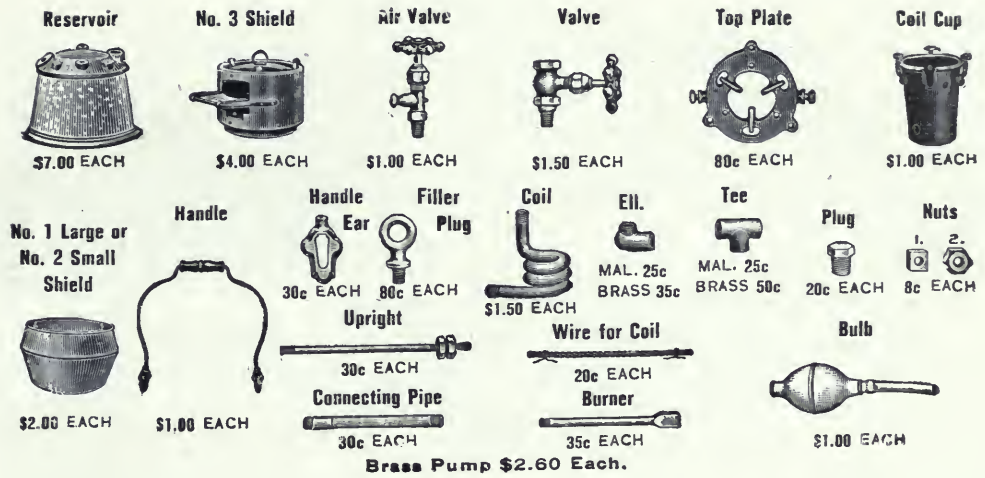
A brazed ten-gallon galvanized steel tank is furnished, which is connected with the burner by 12 feet of flexible rubber hose, enabling the operator to place the burner in any position desired. The tripod, which is adjustable, will be found convenient to hold the burner in position. The burner sets into the tripod and may be quickly and easily removed. A strong patented compound pressure pump is also supplied, and the operator can quickly obtain the pressure required. The tank is also equipped for compressed air. This machine can be equipped and operated with double burner head if desired.

Complete, as illustrated, list price.

Complete, with Double Burner Head, list price, each, $252.00.

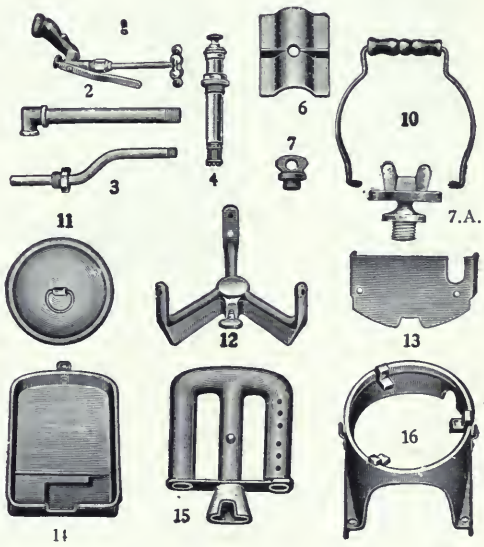
Complete, with Two Single Burners attached to separate lengths of hose, Two Tripods, and Brazing Stand; List Price, each, $1274.40.

REPAIRS FOR COIL FIRE POTS NOS. 10 AND 20



EXTRA REPAIR PARTS FOR NOS. 71 AND 72 FIRE PORTS

			List Price
No.	1	Wheel Handle, Needle, Stuffing Box, Generator and Slide	$4.00
"	2	Generator Pipe, ¼" and Elbow ¼" x ⅛"	.80
"	3	Feed Pipe ⅛" and Nut	1.60
"	4	Pump	2.60
"	5	Pump Collar	.30
"	6	Flame Plate	.40
"	7	Filler Plug, Old Style	.80
"	7B	Filler Plug, New Style, with dust proof cap	1.50
"	8	Filler Plug Collar	.30
"	9	Filler Plug Washer	.10
"	10	Bail Handle	.50
"	11	Hood Cover No. 71	1.00
"	11B	Hood Cover No. 72	1.00
"	12	Spider	2.00
"	13	Hearth Rest	1.00
"	14	Hearth Plate	2.00
"	15	Burner Plate Tubes and Plugs	4.40
"	16	Hood No. 71	4.00
"	16B	Hood No. 72	3.80
"	17	Slip Nut for Feed Pipe	.60
"	18	Generator Wire	.20
"	19	Oil Slide	.20
"	10	Tank Complete, No. 71	14.00
"	20B	Tank Complete, No. 72	14.00



No. 28 TORCH (SIZE 1¾" x 7¼")

The No. 28 Torch is made to meet the demand for an efficient Alcohol Blow Pipe or Torck at a close price. The alcohol is fed to the burner by a good sized wick and the rubber tube that connects with a small brass blow pipe enables the user to blow an air blast into the burning alcohol, producing a fine, pointed flame, of intense heat excellent for fine soldering, etc. It is the ideal Torch for electricians' and jewelers' use or for any work requiring a pointed, concentrated flame. The No. 28 is made of Polished Brass, Nickel Plated. A large filler on the side makes the tank easy to fill. A small cap covers the wick when not in use and protects it from dirt and prevents evaporation of the fuel. The best alcohol torch on the market for the money.

Shipping Wght, each 1 lb.

No. 28 — Price, each, Nickeled, $7.20

LEAD FURNACES

"ROYAL" SAFETY BURNER No. 4

Heavy Riveted and Brazed Steel Tank 12" x 24"

Tank capacity - 8 gals. of Kerosene
Consumes at full speed, 1 gal. per hour.

With pressure of 35 to 40 lbs. will melt easy 700 to 800 per hour.

One charge will last 9 hours.

This burner is used for Water Works Construction.

Prices upon application.

Patented

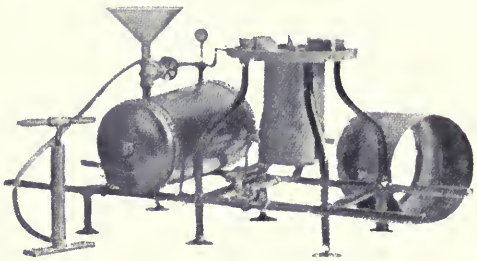


Plate 2361

Patented

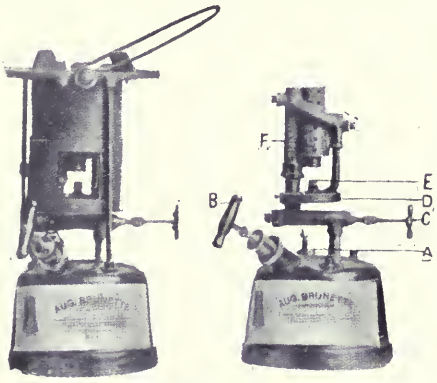


Plate 2362

"ROYAL" SAFETY BURNER No 1.

Solid Pressed Steel Tank

Tank capacity - 3 qts. of Kerosene.

Consumes at full speed, only 1 pint per hour 45 minutes.

With pressure of about 10 lbs. will melt from 25 to 30 lbs. of lead inside of 12 minutes.

Can also be furnished in 2 and 3 gallon sizes.

Price, 3 quarts.....$20.00
" 2 gallons..... 30.00
" 3 " 35.00

No. 20 TORCH (6 QUARTS)

The No. 20 is a better torch of its kind than is usually offered, and its practical operation and durability proves our claim. Heavy tin is used in the tank construction. The burner produces a light equal to eight or ten gas lights. The expense of running approximates about one cent per hour. The burners are heavier, better made and superior in quality to any other. Stuffing boxes are fitted to each burner and valve, thus making them durable and preventing leaks. They are also made for fishing jacks, double or single, as desired.

Shipping weight, each, 4¼ lbs.

Price upon application.

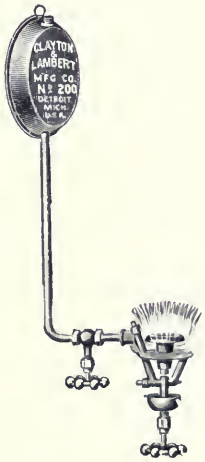


Plate 2363

TORCH

No. 37 TORCH (PINT SIZE)

Plate 2372

The No. 37 is the best pint size torch made. It is fitted with our latest improved burner which protects the gas or vapor from the wind or cold, as the orifice through which the gas passes is shielded by the burner tube, thus making it possible to keep the flame blue, and positive in heat intensity in almost any extreme of wind or weather, and uses but little gasoline. Our patent automatic air pump with check valve, is used, insuring the desired air pressure at all times. This style of pump is used on all C. & L. torches and has no equal. The enthusiastic endorsement everywhere accorded the torch certainly commends it to your attention. Try it. You will be pleased.

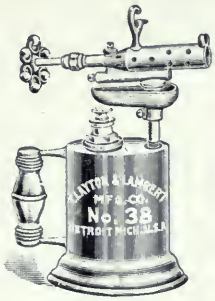


Plate 2371

No. 38 TORCH (PINT SIZE)

The No. 38 is just like the No. 37, except that the burner has a hook and support for holding soldering coppers. Repair men like this style.

Shipping weight, each, 2¾ lbs. Per dozen, crated, 36 lbs.

Cubic feet, per dozen, crated, 2½.

No. 107 TORCH (QUART SIZE)

Plate 2374

The No. 107 quart size Torch is light and well balanced, and fills a long-felt want. The tank is made of heavy seamless drawn brass reinforced, and C. & L. patented automatic brass pump, with double springs, forms the handle. Remember, a pump with double springs is far superior to a pump with a single spring. The burner is fitted with wheel handle and made of bronze metal, producing a steady blue flame of intense heat. No better value was ever offered for the price. It will please and satisfy you.

Plate 2373

No. 108 TORCH (QUART SIZE)

The No. 108 is a duplicate of the No. 107, except fitted with solid hook and support. It is a first-class Torch, extra good value for the price, and is sure to please.

No. 31 TORCH (QUART SIZE)

Has no equal where intense heat is desired

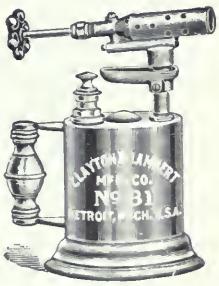


Plate 2376

This quart torch makes a perfect fire, whether employed indoors or out, in hard wind or extreme cold. A strong blast heat is generated by a powerful burner and the resulting blue flame is a joy to the user. Every desired adjustment is quickly made. A surprisingly small amount of gasoline is required compared with the results obtained in heat efficiency. The torch creates a good impression the minute it is handled, being strong, exceedingly well built and handsomely finished. If durability and service are what you want, the No. 31 will certainly please you.

Plate 2375

No. 32 TORCH (QUART SIZE)

No. 32 has every feature in construction and finish found in No. 31, with the added advantage, for repair men, of a hook and support on the burner for holding soldering coppers.

ASBESTOS SECTIONAL COVERING

For Steam Pipes, Etc.

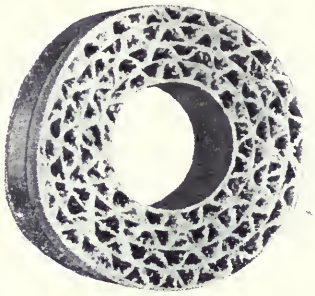


Plate 2381

The use of Asbestos Covering on Steam Pipes, Boilers, and other heated surfaces results in:
A large saving of Fuel, Prevention of Radiation of Heat.
Reduces Fire Risks, Increases Power and Capacity of Plants.
This Pipe Covering is supplied in sections 3′ long, jacketed and with bands. Sold in full sections only. For regular flanges or fittings larger than 10″, use Asbestos Cement Felting.

Inside Diameter of Pipe Inches	Price per Foot	Inside Diameter of Pipe Inches	Price per Foot
½″	$ .22	6″	$ .80
¾″	.24	7″	1.00
1″	.27	8″	1.10
1¼″	.30	9″	1.20
1½″	.33	10″	1.30
2″	.36	12″	1.85
2½″	.40	14″	2.10
3″	.45	*16″	2.35
3½″	.50	18″	2.60
4″	.60	20″	2.85
4½″	.65	24″	3.30
5″	.70	30″	4.00

All Pipe Coverings are supplied in sections three feet long, jacketed and with bands, except where otherwise specified in the descriptive matter. For irregular flanges or fittings larger than 10″ use our Magnesia Cement or Asbestos Cement Felt.

*All Magnesia Coverings above 14″ furnished in segmental form; other coverings in sectional forms in all sizes.

Plate 2382

HAIR FELT

This article is extensively used for lining Cold Storage Houses, Refrigerator Cars and Ice Houses; for covering Steam Pipes, Boilers, Hot and Cold Water Pipes, or anything requiring insulation. It is heat proof, cold proof, sound proof, economical, durable and easily applied.

Thickness	½″	¾″	1″
Per Square Foot		Net prices upon application.	

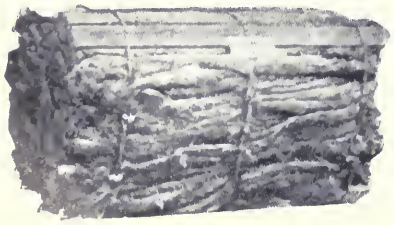


Plate 2383

OAKUM

In Bales of 50 lbs. . . . . per lb. $ .20

McAVITY SPECIALS

Plate 2391

"Hand and Ring" Portland Cement.
Four Bags Equal one Barrel.

Price, per Bag, 87½ lbs..... $1.05
" Bbl. 380 lbs..... 3.80

One part Cement to four parts sand is a usual mixture, for running lines of Terra Cotta Pipe.

Plate 2392

"Hand and Ring" Asbestos Cement.
Per bag of 100 pounds.....$3.00

Used for covering heating and other boilers and all irregular surfaces which cannot be covered by sectional pipe covering, to prevent radiation of heat. It is neat in appearance, a good non-conductor and absolutely fireproof.

Plate 2393

H & R Cotton or Lamp wicking.
Price, per ball (2 oz.).....$ .20

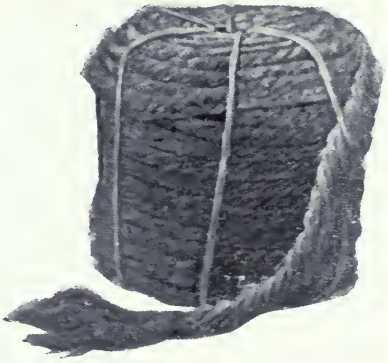


Plate 2394

Hemp Rope Packing.
A Bale contains 50 lbs.
Price, per lb.....$ .30

Plate 2395

Excelo Asbestos Packing.
Price, per ball (¼ lb.)...$ .40

Plate 2396

Sold in ½, 1 and 5 lb. Tins.
Price, per lb.....$ .75

An Iron Cement made in Powder Form, for repairing leaks or breaks in castings, or in making connections in steam or Hydraulic work.

Plate 2397

Sold in ½, 1 and 5 lb. Tins.
Price, per lb.....$ .25

For repairing Stoves and Furnaces.

Plate 2398

Sold in 5 lb. Tins.

Price, per lb.....$ .25

For repairing leaks in roofs, also for pointing Wood, Brick, Iron and Stone Work.

SPECIALS

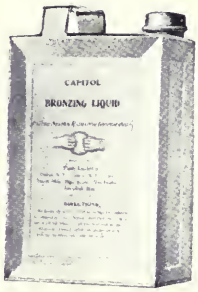


Plate 2401
Hand and Ring
Bronze Powder
Gold, per lb.....$2.20
Aluminum, per lb..... 2.00

Plate 2402
Hand and Ring
Bronzing Liquid
Quart.....$1.70

Plate 2403
McAvity B.B.
White Lead
Sold in Tin, from 1 lb. to 100 lb.
Price, per lb.....$ .25

Sold also in small packages, with small bottle of liquid enclosed.

One pound of gold bronze with 1 quart of liquid will cover about 300 square feet of radiation. One pound of aluminum bronze with 1 gallon of liquid will cover about 600 square feet of radiation.

Plate 2404
McAvity Putty
Sold in Tins from 12½ to 100 lb.
Price, per lb.....$ .15

Tyte-Unyte
Pipe Joint Compound
Plate 2405
Sold in ½, 1, 5 lb. Tin.
Price, per lb.....$ .50

Plate 2406
Hand and Ring Pipe Joint Compound
Sold in ½ ,1, 5 lb. Tins.
Price, per lb.....$ .50

"Royal Drummond" Plate 2409

Vitreous China Bowl, for Marble Slab Lavatories.

Outside size.....	12"	13"	14"	15"	14"x17"	15"x19".
With Patent Overflow.....	$2.20	$2.50	$3.00	$3.50	$6.65	$6.75
Without Patent Overflow....	2.00	2.50	2.50	3.00	6.00	6.25

McAvity's Hard Metal Creamer Taps
Patented

Loose Key.

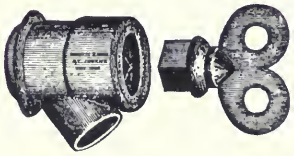


Plate 2407

Fast Key.

Plate 2408

Plate 2407. Loose Key, Per Doz. $4.00

Plate 2408. Fast Key, Per Doz. $3.00

Extra Loose Keys, Per Doz.. $1.50

These Creamer Taps are made of hard white metal, which, on account of its non-corrosive qualities, is the best metal that can be used for the Purpose.

MEDICINE CABINETS AND MIRRORS

Plate 2411

White Enameled Medicine Cabinet with Plate Glass Shelves and Heavy Beveled Plate Mirror.
Size 18″ x 24″ Price, each.....**$15.00**

Plate 2412

White Enameled Recess Medicine Cabinet with Plate Glass Shelves, and Heavy Beveled Plate Mirror.
Size, 18″ x 24″ To set in Wall.
Price, each.....**$20.00**

Plate 2413

Heavy Beveled Plate Glass Oblong Mirror with White Enameled Frame.
Sizes.....14″ x 24″ 16″ x 28″ 18″ x 24″ 18″ x 30″
Price, each **$7.50** **$9.50** **$9.00** **$11.50**

Plate 2414

Oblong Beveled Plate Glass Mirror with Heavy Nickel Plated Brass Frame.
Sizes.....16″ x 24″ 18″ x 30″ 18″ x 36″ 24″ x 30″
Price, each **$15.00** **$18.00** **$23.00** **$26.00**

Plate 2415

Oval Beveled Plate Glass Mirror with Heavy Nickel Plated Brass Frame.
Sizes.....14″ x 24″ 16″ x 24″ 18″ x 30″ 21″ x 30″
Price, each **$12.00** **$15.00** **$22.00** **$25.00**

Plate 2416

Heavy Beveled Oval Plate Glass Mirror with White Enameled Frame.
Sizes.....14″ x 24″ 16″ x 28″ 18″ x 24″ 18″ x 30″
Price, each **$7.50** **$9.50** **$9.00** **$11.50**

"ROYAL" BATH ROOM FITTINGS

Plate 2421

Soap, Tumbler Holder and shelf Combination.

Complete Crystal.....$20.00
Complete Opal..... 22.00

Plate 2422

Crystal Tumbler.

Price, each.....$ .40

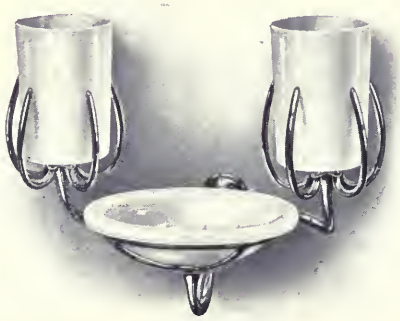


Plate 2423

Nickel Plated Soap and Tumbler Combination.

Price, each.....$8.00

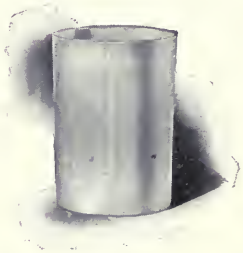


Plate 2424

Opal Tumbler.

Price, each.....$ .40

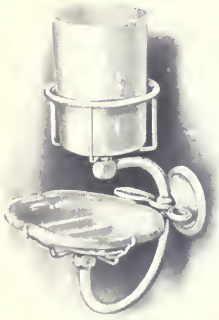


Plate 2425

White Enamel on Brass Soap and Tumbler Holder.

Price, each.....$6.50

Plate 2426

Nickel Plated Soap Holder with Opal Dish.

Price, each.....$2.50

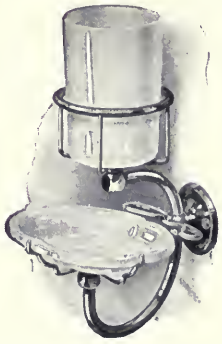


Plate 2427

Nickel Plated Soap and Tumbler Combination.

Price, each.....$6.00

"ROYAL" BATH ROOM FITTINGS

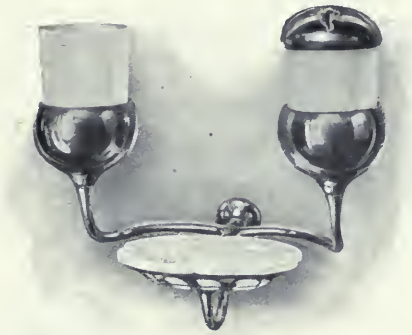


Plate 2431

Nickel Plated Soap and Tumbler Holder with Tooth brush attachment.
Price, each.....$8.00

Plate 2432

Nickel Plated Soap and Tumbler Holder.
Price, each.....$6.50

Plate 2433

Nickel Plated Soap and Tumbler Combination.
Price, each.....$6.00

Plate 2434

Nickel Plated Soap and Tumbler Combination.
Price, each.....$6.00

Plate 2435

Nickel Plated Soap and Tumbler Combination.
Price, each.....$6.00

Plate 2436

Nickel Plated Tumbler Holder.
Price, each.....$2.50

Plate 2437

Nickel Plated Tumbler Holder.
Price, each.....$3.00

Plate 2438

Nickel Plated Tumbler Holder.
Price, each.....$2.25

"ROYAL" BATH ROOM FIXTURES

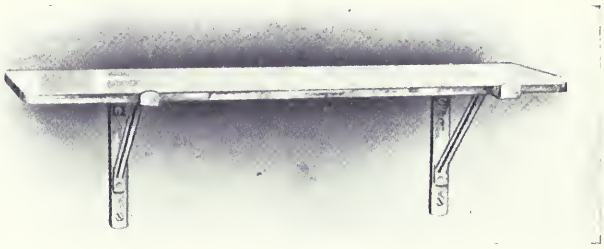


Plate 2441

With Nickel Plated Brackets.

Crystal	Opal
5 x 18", each....$2.50	5" x 18", each..$3.00
5 x 20", each.... 2.75	5" x 20", each.. 3.25
5 x 24", each.... 3.00	5" x 24", each.. 3.75
5 x 30", each.... 3.25	5" x 30", each.. 4.25
5 x 36", each.... 3.50	

Plate 2442
White Enameled Soap Holder with Opal Dish.
Price, each.....$2.00

Plate 2443
White Enameled Soap Holder with Opal Dish.
Price, each.....$2.00

Plate 2444
Nickel Plated Soap Holder.
Price, each.....$3.00

Plate 2445
Nickel Plated Soap Holder.
Price, each.....$3.50

Plate 2446
Nickel Plated Soap Holder.
Price, each.....$3.00

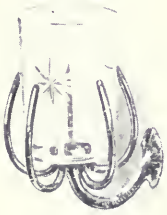


Plate 2447
Nickel Plated Tumbler Holder.
Price, each.....$3.00

Plate 2448
Nickel Plated Soap Holder.
Price, each.....$3.50

Plate 2449
Nickel Plated Tumbler Holder.
Price, each.....$3.00

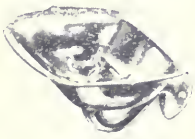


Plate 24410
Nickel Plated Soap Holder.
Price, each.....$3.50

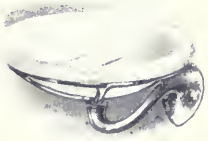


Plate 24411
Nickel Plated Soap Holder.
Price, each.....$2.50

Plate 24412
Nickel Plated Soap Holder.
Price, each.....$3.50

"ROYAL" BATH ROOM FITTINGS

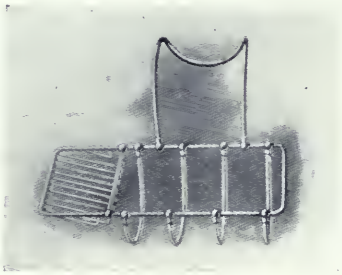


Plate 2451

Heavy Nickel Plated Brass Soap and Sponge Holder for Bath, furnished with Soap on Right or Left Hand.
Price, each.....$5.00

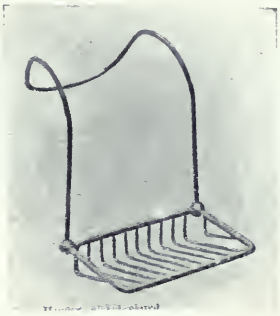


Plate 2452

Heavy Nickel Plated Brass Soap Holder for Bath.
Price, each.....$2.50

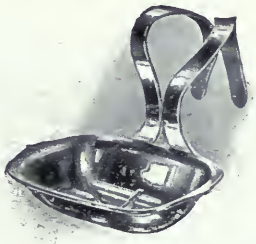


Plate 2453

Nickel Plated Bath Soap Holder.
Price, each.....$3.50

Plate 2454

Nickel Plated Bath Soap Holder.
Price, each.....$2.50

Plate 2455

White Enameled Tooth-brush Holder.
Price, each.....$2.00

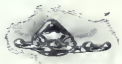


Plate 2456

Nickel Plated Tooth-brush Holder.

Price, each.....$1.00

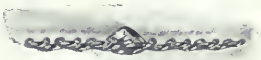


Plate 2457

Nickel Plated Tooth-brush Holder.

Price, each.....$2.00

Plate 2458

Nickel Plated Hat and Coat Hook.
Price, each..... $1.00

Plate 24510

Nickel Plated Tooth-brush Holder.
Price, each.....$ .75

Plate 24512

Nickel Plated Hat and Coat Hook.

Price, each.....$1.25

Plate 2459

Strap Hook.
Price, each.....$ .50

Plate 24511

Robe Hook.
Price, each.....$ .50

"ROYAL" BATH ROOM FITTINGS

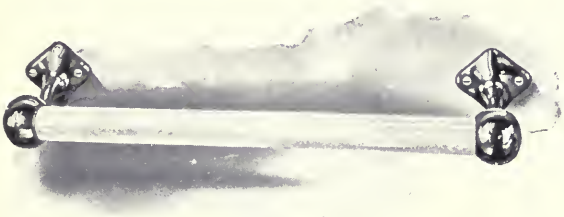


Plate 2461
Diameter 1¼″ Opal

1¼″ x 18″, each	$6.00
1¼″ x 24″, each	7.00
1¼″ x 30″, each	8.00
1¼″ x 36″, each	9.00

Plate 2462
Diameter 1¼″ Crystal

1¼″ x 18″, each	$5.50
1¼″ x 24″, each	6.50
1¼″ x 30″, each	7.50
1¼″ x 36″, each	8.50

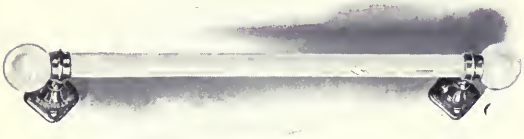


Plate 2463
Opal Bar 1″, Opal balls, 2″ diameter

1″ x 18″, each	$7.00
1″ x 24″, each	8.00
1″ x 30″, each	9.00
1″ x 36″, each	10.00

Plate 2464
Glass Bar 1″, Crystal balls, 2″ diameter

1″ x 18″, each	$6.50
1″ x 24″, each	7.50
1″ x 30″, each	8.50
1″ x 36″, each	9.50

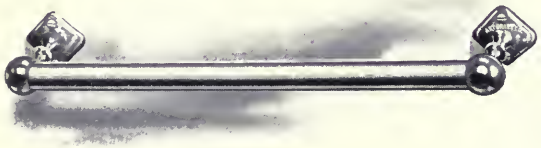


Plate 2465
Diameter 1″ Crystal

1″ x 18″, each	$4.00
1″ x 24″, each	4.50
1″ x 30″, each	5.00
1″ x 36″, each	6.00

Plate 2466
Diameter 1″ Opal

1″ x 18″, each	$4.25
1″ x 24″, each	5.50
1″ x 30″, each	5.50
1″ x 36″, each	6.50

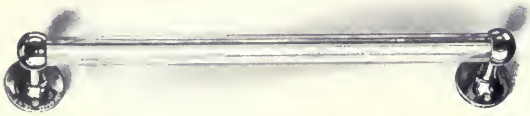


Plate 2467
Diameter ⅝″ Opal

⅝″ x 18″, each	$3.00
⅝″ x 24″, each	3.50
⅝″ x 30″, each	4.00

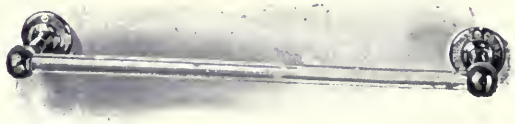


Plate 2468
Diameter ⅝″ Crystal

⅝″ x 18″, each	$2.75
⅝″ x 24″, each	3.25
⅝″ x 30″, each	3.75

TOWEL BARS

Plate 2471

1″ Diameter Opal and Glass

Opal

1″ x 18″, each	$3.00
1″ x 24″, each	3.50
1″ x 30″, each	4.00
1″ x 36″, each	4.50

Glass

1″ x 18″, each	$2.75
1″ x 24″, each	3.25
1″ x 30″, each	3.75
1″ x 36″, each	4.25

Plate 2474

Three Bar Towel Rack, Bars ½″, Diameter, Length 24″.

Price, each, Opal	$10.00
" " Glass	9.00

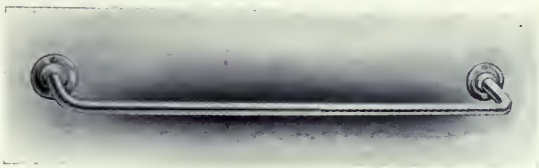


Plate 2476

½″ Diameter, Nickel Plated Brass.

½″ x 12″, each	$2.00
½″ x 18″, each	2.25
½″ x 24″, each	2.50
½″ x 30″, each	2.75
½″ x 36″, each	3.00

Plate 2472

Diameter ½″ Opal

½″ x 18″, each	$3.00
½″ x 24″, each	3.50
½″ x 30″, each	4.00

Plate 2473

White Enameled on Brass with Opal Bar.

1″ x 18″, each	$5.00
1″ x 24″, each	5.00
1″ x 30″, each	6.00

Plate 2475

White Enameled on Brass.

½″ x 18″, each	$2.25
½″ x 24″, each	2.75
½″ x 30″, each	3.25
½″ x 36″, each	4.50

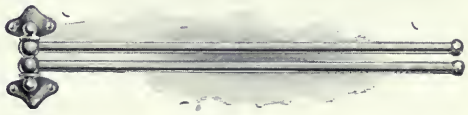


Plate 2477

Nickel Plated 2 Prong Bar.

Price, each $2.00

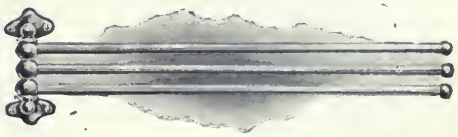


Plate 2478

Nickel Plated 3 Prong Bar.

Price, each $2.50

"ROYAL" BATH ROOM FITTINGS

Plate 2481
Corner Lavatory Soap Holder.
Price, each.....$1.00

Plate 2482

Laundry Tray Soap Holder.
Price, each.....$1.00

Plate 2483

Lavatory Soap Holder.
Price, each.....$1.00

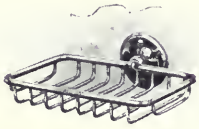


Plate 2484

Nickel Plated Soap Holder.

Price, each.....$1.75

Nickel Plated Sink Soap Holder.

Price, each..... $1.50

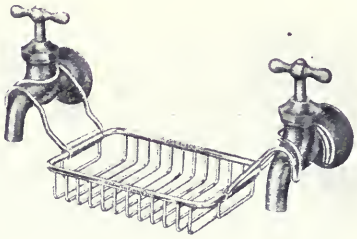


Plate 2485

Plate 2486

White Enameled Paper Holder with Concealed Spring.
Price, each.....$4.50

Plate 2487

Nickel Plated Paper Holder with concealed Spring.
Price, each.....$4.00

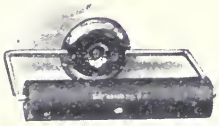


Plate 2488

Nickel Plated Paper Holder
Price, each.....$1.00

Plate 2489

Nickel Plated Paper Holder.
Price, each.....$1.50

Plate 24810

Nickel Plated Paper Holder.
Price, each.....$1.50

"ROYAL" BATH ROOM FITTINGS

Plate 2491

Oak Bath Seat with Rubber Protectors.

Price, each.....$3.00

Plate 2492

White Enameled Bath Seat, with Rubber Protectors.

Price, each.....$4.00

Plate 2493

Canvas Bath Seat with Nickel Plated Holder.

Price, each.....$4.00

Plate 2494

White Enameled Bath Stool.

Price, each.....$5.00

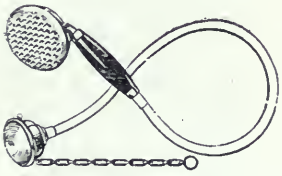


Plate 2495

Hand Spray with Rubber point Head.

Price, each.....$3.50.

Plate 2496

Nickel Plated Spray Holder

Price, each.....$ .60

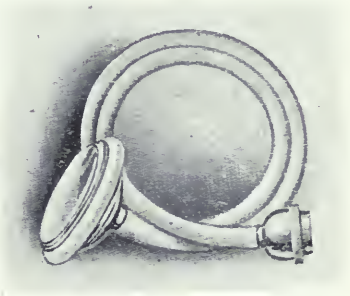


Plate 2497

Hand Sprays with 3″ Head.

Price, each.....$2.00

Plate 2498

Nickel Plated Mug Holder.

Price, each.....$1.50

Plate 2499

Nickel Plated Match Holder.

Price, each..... $1.50

Plate 24910

Nickel Plated Tumbler Holder.

Price, each.....$2.50

"VULCAN" HOT WATER BOILERS

Plate 2501

Plate 2502

List Prices, net Ratings and Dimensions

Nos.	List Price	Net Rating Square Feet	Diameter of Grate	Height Over All	Height to Top Outlets	Height to Centre of Return	Number and Size of Outlets and Inlets	Sizes of Smoke Pipe	Approximate Shipping Weight, Lbs.
4–19–W	**$150.00**	380	19″	52⅝″	45⅞″	14¾″	2–2½″	8″	900
5–19–W	**155.00**	430	19″	57⅛″	50⅜″	14¾″	2–2½″	8″	1000
6–19–W	**160.00**	480	19″	61¾″	55 ″	14¾″	2–2½″	8″	1125
4–22–W	**170.00**	550	22″	55⅝″	47⅝″	15¾″	2–3″	9″	1150
5–22–W	**190.00**	610	22″	60″	52 ″	15¾″	2–3″	9″	1275
6–22–W	**200.00**	670	22″	64⅞″	56⅞″	15¾″	2–3″	9″	1425
4–25–W	**220.00**	740	25″	56¼″	48¾″	16¼″	2–3½″	9″	1350
5–25–W	**240.00**	820	25″	61″	53½″	16¼″	2–3½″	9″	1500
6–25–W	**250.00**	900	25″	66⅛″	58⅝″	16¼″	2–3½″	9″	1675
4–28–W	**270.00**	980	28″	59½″	50¾″	16⅜″	2–4″	10″	1675
5–28–W	**300.00**	1060	28″	64½″	55¾″	16⅜″	2–4″	10″	1875
6–28–W	**315.00**	1140	28″	69⅝″	10⅞″	16⅜″	2–4″	10″	2125
4–31–W	**335.00**	1240	31″	61⅝″	53⅛″	16¼″	2–4″	10″	1950
5–31–W	**365.00**	1370	31″	66¾″	58¼″	16¼″	2–4″	10″	2225
6–31–W	**392.00**	1500	31″	72¼″	63¾″	16¼″	2–4″	10″	2450
4–34–W	**425.00**	1750	34″	63⅝″	54¼″	17 ″	2–5″	11″	2300
5–34–W	**450.00**	1900	34″	69″	59⅝″	17 ″	2–5″	11″	2550
6–34–W	**482.50**	2100	34″	74⅝″	65¼″	17 ″	2–5″	11″	2825

"Vulcan" Round Water Boiler

The ratings on Vulcan Water Boilers are based on their capacity to maintain a temperature of 170 degrees in the water in the Radiators throughout a period of eight hours on one firing. It is of course assumed that sufficient radiating surface has been allowed in the various rooms to maintain a temperature of 70 degrees Fahrenheit during zero weather. Under more severe climatic conditions a reasonable allowance should be made to provide for the additional tax imposed on the Boiler. A liberal allowance has been made for mains, returns, risers, etc., so that the ratings shown indicate the actual capacity of these Boilers in direct radiation.

Guarantee and Coverings

Vulcan Boilers are guaranteed only to the extent of furnishing new castings for any found defective in manufacture. On account of the varying conditions surrounding their installation, we do not guarantee our Boilers otherwise.

Both on account of increased efficiency and greater economy, we recommend that all Boilers be thoroughly protected by a substantial covering of asbestos.

Water—Measurements are in Inches

	A	B	I	K	P	R	S	V	X
4–19–W	27″	45⅞″	14¾″	8½″ x 11¾″	8″	52⅝″	15⅞″	24⅛″	19¼″
5–19–W	27″	50⅜″	14¾″	8½″ / 11¾″	8″	57⅛″	15⅞″	24⅛″	19¼″
6–19–W	27″	55″	14¾″	8½″ / 11¾″	8″	61¾″	15⅞″	24⅛″	19¼″
4–22–W	30⅛″	47⅝″	15¾″	9″ x 13¼″	9″	55⅝″	16¾″	27 11/32″	23″
5–22–W	30⅛″	52″	15¾″	9″ x 13¼″	9″	60″	16¾″	27 11/32″	23″
6–22–W	30⅛″	56⅞″	15¾″	9″ x 13¼″	9″	64⅞″	16¾″	27 11/32″	23″
4–25–W	33⅛″	48¾″	16¼″	9″ x 13¼″	9″	56¼″	17½″	30⅛″	25½″
5–25–W	33⅛′	53½″	16¼″	9″ x 13¼″	9″	61″	17½″	30⅛″	25½″
6–25–W	33⅛″	58⅝″	16¼″	9″ x 13¼″	9′	66⅛″	17½″	30⅛″	25½″
4–28–W	36¾″	50¾″	16⅜″	9⅝″ x 18″	10″	59½″	18⅝″	34 1/16″	29⅜″
5–28–W	36¾″	55¾″	16⅜″	9⅝″ x 18″	10″	64½″	18⅝″	34 1/16″	29⅜″
6–28–W	36¾″	60⅞″	16⅜″	9⅝″ x 18″	10″	69⅝″	18⅝″	34 1/16″	29⅜″
4–31–W	39⅛″	53⅛″	16¼″	9⅝″ x 18″	10′	61⅝″	19 5/16″	36⅞″	32¼″
5–31–W	39⅛″	58¼″	16¼″	9⅝″ x 18″	10″	66¾″	19 5/16″	36⅞″	32¼″
6–31–W	39⅛″	63¾″	16¼″	9⅝″ x 18″	10″	72¼″	19 5/16″	36⅞″	32¼″
4–34–W	42″	54¼″	17″	9⅝″ x 18″	11″	63⅝″	19 13/16″	39 27/32″	37″
5–34–W	42″	59⅝″	17″	9⅝″ x 18″	11″	69″	19 13/16″	39 27/32″	37″
6–34–W	42″	65¼″	17″	9⅝″ x 18″	11″	74⅝″	19 13/16″	39 27/32″	37″

Vulcan Boilers are so designed that any casting, whether round or square, may be taken through any door or opening which is not less than 2 feet 6 inches wide.

Vulcan Boiler Measurements

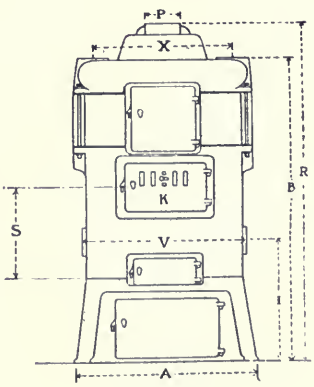


Plate 2503

"VULCAN" STEAM BOILERS

Plate 2511

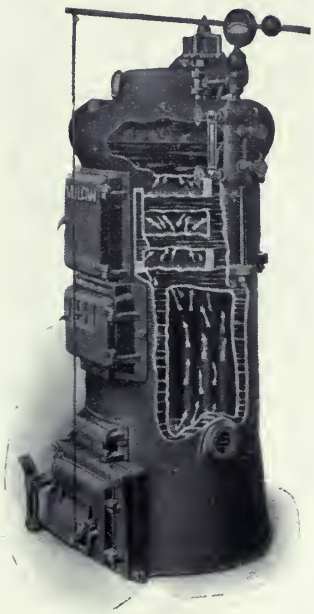


Plate 2512

LIST PRICES, NET RATINGS AND DIMENSIONS

Nos.	List Price	Gross Rating Square Feet	Diameter of Grate	Height to Top Outlet	Height to Centre of Return	Height to Water Line	Outlets, Number and Size	Inlets, Number and Size	Sizes of Smoke Pipe.	Apprx. Shipp'g Weight, Lbs.
4-19-S	**$205.00**	300	19″	52½″	14¾″	45½″	1-2½″	2-2½″	8″	1000
5-19-S	**215.00**	350	19″	57″	14¾″	50″	1-2½″	2-2½″	8″	1150
6-19-S	**235.00**	400	19″	61⅝″	14¾″	54⅝″	1-2½″	2-2½″	8″	1300
4-22-S	**255.00**	450	22″	54″	15¾″	47″	1-3″	2-3″	9″	1350
5-22-S	**295.00**	525	22″	58½″	15¾″	51½″	1-3″	2-3″	9″	1450
6-22-S	**312.50**	575	22″	63¼″	15¾″	56¼″	1-3″	2-3″	9″	1625
4-25-S	**295.00**	550	25″	55⅝″	16¼″	47⅞″	1-3½″	2-3½″	9″	1575
5-25-S	**325.00**	625	25″	60¼″	16¼″	52½″	1-3½″	2-3½″	9″	1700
6-25-S	**337.50**	700	25″	65⅜″	16¼″	57⅝″	1-3½″	2-3½″	9″	1900
4-28-S	**375.00**	800	28″	57⅝″	16⅜″	49¼″	1-4″	2-4″	10″	1900
5-28-S	**400.00**	900	28″	62⅝″	16⅜″	54¼″	1-4″	2-4″	10″	2125
6-28-S	**425.00**	1000	28	67⅝″	16⅜″	59½″	1-4″	2-4″	10″	2400
4-31-S	**450.00**	1100	31″	59¾″	16¼″	51″	1-4″	2-4″	10″	2200
5-31-S	**500.00**	1275	31″	65″	16¼″	56¼″	1-4″	2-4″	10″	2450
6-31-S	**525.00**	1400	31″	70⅜″	16¼″	61⅝″	1-4″	2-4″	10″	2675
4-34-S	**500.00**	1300	34″	61½″	17″	52″	1-5″	2-5″	11″	2550
5-34-S	**550.00**	1500	34″	67″	17″	57½″	1-5″	2-5″	11″	2775
6-34-S	**587.50**	1650	34″	72⅝″	17″	63⅛″	1-5″	2-5″	11″	3100

STEAM MEASUREMENTS

	G	B	I	K	M	P	R	S	V
4-19-S	26⅝″	52½″	14¾″	8½″ x 11¾″	45½″	8″	59⅝″	15⅞″	24⅛″
5-19-S	26⅝″	57″	14¾″	8½″ x 11¾″	50″	8″	64⅛″	15⅞″	24⅛″
6-19-S	26⅝″	61⅝″	14¾″	8½″ x 11¾″	54⅝″	8″	68¾″	15⅞″	24⅛″
4-22-S	30¼″	54″	15¾″	9″ x 13¼″	47″	9″	62¼″	16¾″	27 17/32″
5-22-S	30¾″	58½″	15¾″	9″ x 13¼″	51½″	9″	66¾″	16¾″	27 17/32″
6-22-S	30¼″	63¼″	15¾″	9″ x 13¼″	56¼″	9″	71½″	16¾″	27 17/32″
4-25-S	32 15/16″	55⅝″	16¼″	9″ x 13¼″	47⅞″	9″	63⅜″	17½″	30⅛″
5-25-S	32 15/16″	60¼″	16¼″	9″ x 13¼″	52½″	9″	68″	17½″	30⅛″
6-25-S	32 15/16″	65⅜″	16¼″	9″ x 13¼″	57⅝″	9″	73⅛″	17½″	30⅛″
4-28-S	36 15/16″	57⅝″	16⅜″	9⅝″ x 18″	49¼″	10″	66⅝″	18⅝″	34 1/16″
5-28-S	36 15/16″	62⅝″	16⅜″	9⅝″ x 18″	54¼″	10″	71⅝″	18⅝″	34 1/16″
6-28-S	36 15/16″	67⅝″	16⅜″	9⅝″ x 18″	59½″	10″	676⅞″	18⅝″	34 1/16″
4-31-S	40⅜″	59¾″	16¼″	9⅝″ x 18″	51″	10″	68⅝″	19 5/16″	36⅞″
5-31-S	40⅜″	65″	16¼″	9⅝″ x 18″	56¼″	10″	73⅞″	19 5/16″	36⅞″
6-31-S	40⅜″	70⅜″	16¼″	9⅝″ x 18″	61⅝″	10″	79¼″	19 5/16″	36⅞″
4-34-S	45 3/16″	61½″	17″	9⅝″ x 18″	52″	11″	71¼″	19 13/16″	39 27/32″
5-34-S	45 3/16″	67″	17″	9⅝″ x 18″	57½″	11″	76¾″	19 13/16″	39 27/32″
6-34-S	45 3/16″	72⅝″	17″	9⅝″ x 18″	63⅛″	11″	82⅜″	19 13/16″	39 27/32″

VULCAN BOILER MEASUREMENTS

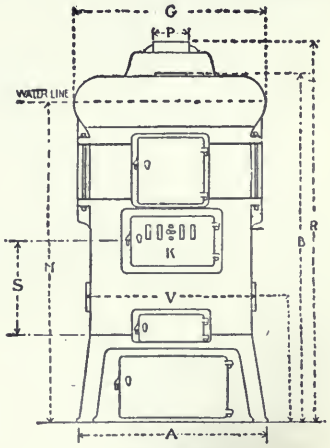


Plate 2513

VULCAN BOILER RATINGS

Fuel Basis for Ratings

Vulcan Boilers (except "Down-Draft" type).—The ratings are based on use of good grades of anthracite coal, since that fuel is more nearly uniform in heating effects. For the smaller sizes of VULCAN Boilers coal of regular "stove" or "range" size is in most cases the best to use; while in the larger boilers "egg" size will be found more suitable. Other kinds of fuel, preferably "caking" soft coals, may be used if due consideration is given to differences in calorific power in space occupied by a given weight of the fuel, and in amount of attendance necessary.

RATING CONDITIONS

The ratings for Vulcan Sectional Water and Steam and Round Steam Boilers provided that all piping (mains and risers, flow and return), in addition to the direct radiation to be used, shall be figured as radiating surface in estimating the size of the Boiler required.

These ratings are for direct radiation. When any other heating surface than direct radiation is to be supplied, increased Boiler capacity must be figured according to the demand in each case.

When indirect radiation is to be used not less than 75 per cent. increase over direct radiation should be figured in determining size of Boiler required.

"VULCAN" SECTIONAL WATER BOILERS

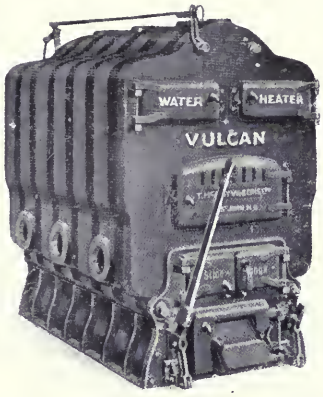


Plate 2521

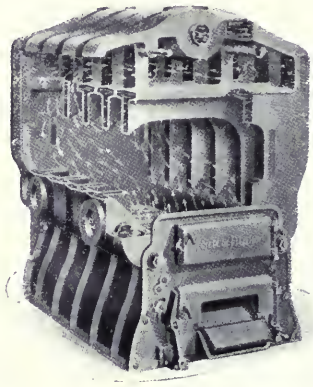


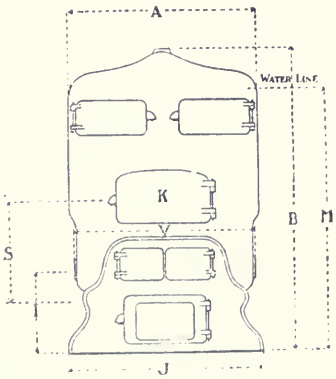
Plate 2522

"Vulcan" Sectional Water Boilers—List Price and Data

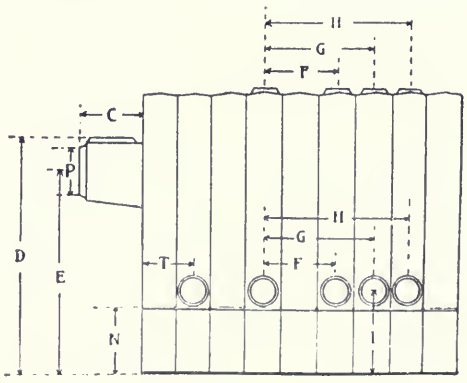
No. (Including Sections)	Length Total	Height Total	Width Total	Grate Area Sq. ft.	Average Fire Pot Sq. ft.	Outlets	Smoke Pipe	Ash Pit (Inside) Pipe	Ratings (Note)	List Price Complete
W-15-4	40 7/8"	42 1/2"	27 1/2"	1.95	2.47	2-3"	8"	20 15/16" x 21 5/8"	500	**$190.00**
W-15-5	47 1/8"	42 1/2"	27 1/2"	2.60	3.30	2-3"	8"	20 15/16" x 27 13/16"	700	**230.00**
W-15-6	53 3/8"	42 1/2"	27 1/2"	3.25	4.13	2-3"	8"	20 15/16" x 34 "	900	**270.00**
W-19-5	51 3/4"	50 "	31 1/4"	3.32	4.00	2-3"	9"	20 " x 29 15/16"	1000	**287.00**
W-19-6	58 3/8"	50 "	31 1/4"	4.15	5.00	2-3"	9"	20 " x 36 5/8"	1250	**325.00**
W-19-7	65 "	50 "	31 1/4"	4.98	6.00	3-3"	9"	20 " x 43 5/16"	1500	**375.00**
W-22-5	53 1/4"	53 "	35 1/4"	4.08	4.84	2-4"	10"	23 1/8" x 31 13/16"	1300	**350.00**
W-22-6	60 1/4"	53 "	35 1/4"	5.10	6.05	2-4"	10"	23 1/8" x 38 7/8"	1650	**400.00**
W-22-7	67 1/4"	53 "	35 1/4"	6.12	7.26	3-4"	10"	23 1/8" x 45 15/16"	2000	**450.00**
W-25-5	59 1/4"	57 7/8"	40 3/8"	5.44	6.48	2-4"	11"	28 " x 35 3/16"	1825	**425.00**
W-25-6	66 7/8"	57 7/8"	40 3/8"	6.80	8.10	2-4"	11"	28 " x 42 7/8"	2225	**487.50**
W-25-7	74 1/2"	57 7/8"	40 3/8"	8.16	9.72	3-4"	11"	28 " x 50 9/16"	2650	**550.00**
W-25-8	82 1/4"	57 7/8"	40 3/8"	9.52	11.34	3-4"	11"	28 " x 58 1/4"	3050	**612.50**
W-28-5	60 "	60 5/8"	43 1/2"	6.24	7.33	2-4"	12"	30 5/8" x 35 1/2"	2150	**475.00**
W-28-6	68 "	60 5/8"	43 1/2"	7.80	9.16	2-4"	12"	30 5/8" x 43 1/2"	2675	**562.50**
W-28-7	76 "	60 5/8"	43 1/2"	9.36	10.99	3-4"	12"	30 5/8" x 51 1/2"	3200	**637.50**
W-28-8	84 "	60 5/8"	43 1/2"	10.92	12.83	3-4"	12"	30 5/8" x 59 1/2"	3725	**725.00**
W-36-5	69 3/4"	69 1/8"	53 1/4"	9.12	10.40	2-5"	15"	38 15/16" x 40 3/4"	3450	**675.00**
W-36-6	78 7/8"	69 1/8"	53 1/4"	11.40	13.00	2-5"	15"	38 15/16" x 49 7/8"	4325	**800.00**
W-36-7	88 "	69 1/8"	53 1/4"	13.68	15.60	3-5"	15"	38 15/16" x 59 "	5200	**925.00**
W-36-8	97 1/8"	69 1/8"	53 1/4"	15.96	18.20	3-5"	15"	38 15/16" x 68 1/8"	6050	**1062.50**
W-36-9	105 1/4"	69 1/8"	53 1/4"	18.24	20.80	4-5"	15"	38 " x 77 1/4"	6925	**1187.50**
W-48-6	92 "	81 3/4"	68 "	18.00	18.75	2-6"	21"	52 " x 54 1/2"	8700	**1437.50**
W-48-7	102 3/4"	81 3/4"	68 "	21.60	22.50	2-6"	21"	52 " x 65 1/4"	10375	**1687.50**
W-48-8	113 1/2"	81 3/4"	68 "	25.20	26.25	3-6"	21"	52 " x 76 "	12050	**1950.00**
W-48-9	124 1/4"	81 3/4"	68 "	28.80	30.00	3-6"	21"	52 " x 86 3/4"	13725	**2200.00**
W-48-10	135 "	81 3/4"	68 "	32.40	33.75	3-6"	21"	52 " x 97 1/2"	15400	**2462.50**

For each supply outlet on top of Boiler there are corresponding return inlets on both sides. The return tappings on the back section of the 48" Boilers should be yoked together and used in preference to the additional return tappings on either side of the Boiler. Above are hard-coal ratings—soft coal requires one size larger. For Wood Burning.—On special order the 19" Boilers are fitted with special grates and 10 1/4" x 18" fire-door; 22" and 25" with 11 1/8" x 18" fire-door; 28", with 12 13/16" x 19 13/16" fire-door; 36", with 13 15/16" x 24" fire-door.

"Vulcan" Sectional Boiler Measurements



Front View



Sectional View

For details of measurements, see page 253

Boilers are so designed that any casting, whether round or square, may be taken through any door or opening which is not less than 2' 6" wide.

"VULCAN" STEAM BOILERS

Plate 2531

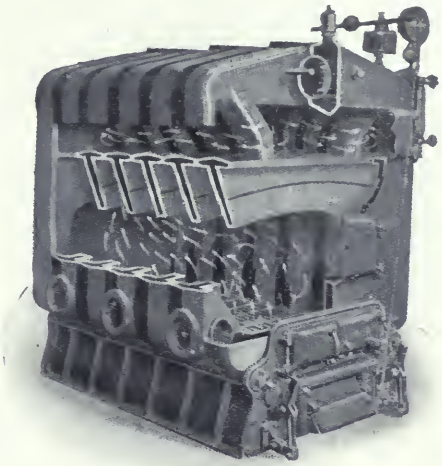


Plate 2532

Vulcan Sectional Steam Boilers — List Prices and Data

No. (Including Sections)	Length Total	Height Total	Width Total	Water Line	Grate Area Sq. Ft.	Average Fire Pot Sq. Ft.	Outlets	Smoke Pipe	Ash Pit (Inside)	Ratings (Note)	List Price Complete
S-15-4	40⅞"	53½"	34½"	40⅞"	1.95	2.47	2-3"	8"	20 15/16" x 21⅝"	300	**$215.00**
S-15-5	47⅛"	53½"	34½"	40⅞"	2.60	3.30	2-3"	8"	20 15/16" x 27 13/16"	425	**255.00**
S-15-6	53⅜"	53½"	34½"	40⅞"	3.25	4.13	2-3"	8"	20 15/16" x 34"	550	**295.00**
S-19-5	51¾"	55¾"	38"	43⅜"	3.32	4.00	2-3"	9"	20" x 29 15/16"	600	**312.50**
S-19-6	58⅜"	55¾"	38"	43⅜"	4.15	5.00	2-3"	9"	20" x 36⅜"	750	**350.00**
S-19-7	65"	55¾"	38"	43⅜"	4.98	6.00	3-3"	9"	20" x 43 5/16"	900	**400.00**
S-22-5	53¼"	59½"	42"	46¼"	4.08	4.84	2-4"	10"	23⅛" x 31 13/16"	800	**375.00**
S-22-6	60¼"	59½"	42"	46¼"	5.10	6.05	2-4"	10"	23⅛" x 38⅞"	1000	**425.00**
S-22-7	67¼"	59½"	42"	46¼"	6.12	7.26	3-4"	10"	23⅛" x 45 13/16"	1200	**475.00**
S-25-5	59¼"	64⅛"	47¼"	51"	5.44	6.48	2-4"	11"	28" x 35 3/16"	1100	**450.00**
S-25-6	66⅞"	64⅛"	47¼"	51"	6.80	8.10	2-4"	11"	28" x 42⅞"	1350	**512.50**
S-25-7	74½"	64⅛"	47¼"	51"	8.16	9.72	3-4"	11"	28" x 50 9/16"	1600	**575.00**
S-25-8	82¼"	64⅛"	47¼"	51"	9.52	11.34	3-4"	11"	28" x 58¼"	1850	**637.50**
S-28-5	60"	67 1/16"	50½"	53⅜"	6.24	7.33	2-4"	12"	30⅝" x 35½"	1300	**500.00**
S-28-6	68"	67 1/16"	50½"	53⅜"	7.80	9.16	2-4"	12"	30⅝" x 43½"	1625	**587.50**
S-28-7	76"	67 1/16"	50½"	53⅜"	9.36	10.99	3-4"	12"	30⅝" x 51½"	1950	**662.50**
S-28-8	84"	67 1/16"	50½"	53⅜"	10.92	12.83	3-4"	12"	30⅝" x 59½"	2275	**750.00**
S-36-5	69¾"	76¼"	60"	60¾"	9.12	10.40	2-5"	15"	38 13/16" x 40¾"	2100	**700.00**
S-36-6	78⅞"	76¼"	60"	60¾"	11.40	13.00	2-5"	15"	38 13/16" x 49⅞"	2625	**837.50**
S-36-7	88"	76¼"	60"	60¾"	13.68	15.60	3-5"	15"	38 13/16" x 59"	3150	**962.50**
S-36-8	97⅛"	76¼"	60"	60¾"	15.96	18.20	3-5"	15"	38 13/16" x 68⅛"	3675	**1100.00**
S-36-9	106¼"	76¼"	60"	60¾"	18.24	20 80	4-5"	15"	38 13/16" x 77¼"	4200	**1225.00**
S-48-6	92"	97"	80"	72"	18.00	18 75	2-6"	21"	52" x 54½"	5275	**1500.00**
S-48-7	102¾"	97"	80"	72"	21.60	22.50	2-6"	21"	52" x 65¼"	6300	**1750.00**
S-48-8	113½"	97"	80"	72"	25.20	26.25	3-6"	21"	52" x 76"	7325	**2012.50**
S-48-9	124¼"	97"	80"	72"	28.80	30.00	3-6"	21"	52" x 86¾"	8350	**2262.50**
S-48-10	135"	97"	80"	72"	32.40	33.75	3-6"	21"	52" x 97½"	9375	**2525.00**

Additional measurements on pages 252 and 254. For each supply outlet on top of Boiler there are corresponding return inlets on both sides. Return tappings on 48" Steam Boilers are 4", and the two on the face of back section should be yoked together and used in preference to the other inlets. Do not bush flow-pipe outlets—connect all of them full size of the main. Above are hard-coal ratings —for soft coal requires one size larger in each case. See Note on ratings, page 251. For Wood Burning.—On special order the 19" Boilers are fitted with special grates and 10¼" x 18" fire-door; 22" and 25", with 11⅛" x 18" fire-door; 28", with 12 13/16" x 19⅞" fire-door; 36", with 13 13/16" x 24" fire door. Distance in inches on the outlines of Vulcan Sectional Boilers on page 252.

	15" Boilers		19" Boilers		22" Boilers		25" Boilers		28 "Boilers		36" Boilers		48" Boilers	
	Water	Steam	Water	Steam	Water	Steam	Water	Steam	Water	Steam	Water	Steam	Water	Steam
A.....	27½"	28½"	31¼"	32¼"	35¼"	36¼"	40⅜"	41½"	43½"	44½"	53¼"	54¼"	68"	69"
B.....	42 7/16"	46 3/16"	50"	50"	53"	53"	57⅞"	57⅞"	60⅝"	60⅝"	69⅛"	69⅛"	81¾"	81¾"
†C.....	13 9/16"	13 9/16"	15⅝"	15⅝"	15¼"	15¼"	17½"	17½"	18⅛"	18⅛"	21 11/16"	21 11/16"	27¼"	27¼"
‡D.....	41⅛"	41⅛"	45⅛"	45⅛"	47¾"	47¾"	53"	53"	55⅞"	55⅞"	63⅜"	63⅜"	73⅛"	73⅛"
E.....	34¾"	34¾"	37¾"	37¾"	40½"	40½"	44⅛"	44⅛"	46¼"	46¼"	52 9/16"	52 9/16"	59½"	59½"
F.....	12½"	12½"	13¼"	13¼"	14⅛"	14⅛"	15⅜"	15⅜"	16"	16"	18¼"	18¼"	21½"	21½"
G.....	18¾"	18¾"	19⅞"	19⅞"	21¼"	21¼"	23 1/16"	23 1/16"	24"	24"	27⅜"	27⅜"	32¼"	32¼"
H.....	25"	25"	26½"	26½"	28¼"	28¼"	30¾"	30¾"	32"	32"	36½"	36½"	43"	43"
I.....	16 9/16"	16 9/16"	16"	16"	16¾"	16¾"	17¾"	17¾"	17⅞"	17⅞"	18 7/16"	18 7/16"	22⅜"	22⅜"
J.....	23¾"	23¾"	26"	26"	29⅛"	29⅛"	34½"	34½"	37⅛"	37⅛"	45 7/16"	45 7/16"	58⅜"	58⅜"
K.....	8"x14"	8"x14"	§8"x14"	§8"x14"	§8"x14"	§8"x14"	§9"x18"	§9"x18"	§9"x18"	§9"x18"	§10" x 20"	§10" x 20"	11"x19"	11"x19"
M.....	.....	40⅞"	.....	43⅜"	.....	46¼"	.....	51"	.....	53⅜"	.....	60¾"	.....	72"
N.....	11¾"	11¾"	9⅜"	9⅜"	9½"	9½"	9⅞"	9⅞"	10"	10"	10 13/16"	10 13/16"	14 11/16"	14 11/16"
P.....	8"	8"	9"	9"	10"	10"	11"	11"	12"	12"	15"	15"	21"	21"
S.....	13¼"	13¼"	12⅜"	12⅝"	12⅜"	12⅜"	14¼"	14¼"	14¼"	14¼"	15⅜"	15⅝"	17¾"	17¾"
T.....	7½"	7½"	8"	8"	8½"	8½"	9⅛"	9⅛"	9½"	9½"	10⅞"	10⅞"	12¾"	.....
V.....	25 13/16"	25 13/16"	29⅝"	29⅝"	33 9/16"	33 9/16"	39⅜"	39⅜"	41 15/16"	41 15/16"	52⅝"	52⅝"	64 11/16"	64 11/16"

†Measured without Smoke-Hood Cover. ‡Measured with Smoke-Hood Cover on.

§For Wood, Feed Door K in 19" Boilers is 10⅛" x 18"; in 22" Boilers is 11⅛" x 18"; in 25" Boilers is 11⅛" x 18"; in 28" Boilers is 12 13/16" x 19⅞"; in 36" Boilers is 13 13/16" x 24".

Do not bush the flow pipe outlets of Steam Boilers; connect all of them full size to the main.

"VULCAN" SMOKELESS DOWN-DRAFT WATER BOILERS

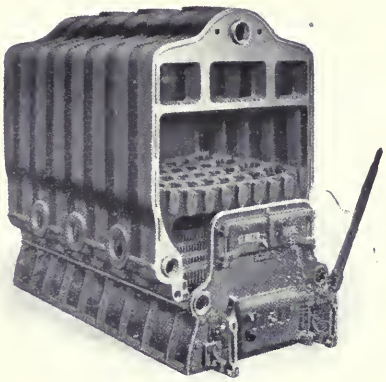


Plate 2541

Plate 2542

For Guarantee and Coverings, Rating Conditions, Coils, etc., page 250
For Fuels and Operation of Down-Draft Smokeless Boilers, page 256.

" Vulcan " Smokeless Down-Draft Boilers

Water Boilers—Data, Ratings and List Prices

Nos.	Height to Top of Outlet	Width	Total Length	Water Grate Area Sq. ft.	Free Air Area Through Grate Sq. Ft.	*Inlets	*Outlets	Size of Chimney Flue	Height of Ratings Flue	Price Sq. Ft.	Complete
364-W	62¾″	40⅜″	66⅞″	5.46	2.56	4-4″	2-4″	12″ x 12″	40′	2,450	$ 540.00
374-W	62¾″	40⅜″	74 9/16″	7.33	3.40	4-4″	2-4″	12″ x 12″	50′	2,950	627.50
381-W	62¾″	40⅜″	82¼″	9.19	4.25	6-4″	3-4″	12″ x 12″	50′	3,450	715.00
394-W	62¾″	40⅜″	89 13/16″	9.19	4.25	6-4″	3-4″	12″ x 16″	60′	3,950	802.50
3104-W	62¾″	40⅜″	97⅝″	11.07	5.10	6-4″	3-4″	12″ x 16″	60′	4,450	890.00
468-W	69⅛″	53¼″	78⅞″	8.8	3.96	4-5″	2-5″	16″ x 16″	50′	4,800	924.00
478-W	69⅛″	53¼″	88″	11.8	5.31	4-5″	2-5″	16″ x 16″	50′	5,600	1,024.00
488-W	69⅛″	53¼″	97⅛″	14.8	6.66	6-5″	3-5″	16″ x 16″	60′	6,400	1,124.00
498-W	69⅛″	53¼″	106¾″	14.8	6.66	6-5″	3-5″	16″ x 16″	70′	7,200	1,224.00
4108-W	69⅛″	53¼″	115⅜″	17.8	8.00	6-5″	3-5″	20″ x 20″	70′	8,000	1,324.00
4118-W	69⅛″	53¼″	124½″	17.8	8.00	6-5″	3-5″	24″ x 24″	80′	8,800	1,424.00
4128-W	69⅛″	53¼″	133⅝″	20.8	9.35	6-5″	3-5″	24″ x 24″	80′	9,600	1,524.00
670-W	81¾″	68″	102¾″	17.2	7.8	†4-6″	3-6″	24″ x 24″	65′	10,000	1,584.00
680-W	81¾″	68″	113½″	21.5	9.9	†4-6″	3-6″	24″ x 24″	75′	11,500	1,764.00
690-W	81¾″	68″	124¼″	25.8	11.7	†4-6″	3-6″	24″ x 28″	75′	13,000	1,944.00
6100-W	81¾″	68″	135″	25.8	11.7	†4-6″	4-6″	28″ x 28″	80′	14,400	2,124.00
6110-W	81¾″	68″	145¾″	30.1	13.7	†4-6″	4-6″	30″ x 30″	85′	15,800	2,304.00
6120-W	81¾″	68″	156½″	30.1	13.7	†14-6″	4-6″	30″ x 30″	90′	17,300	2,484.00

*On sizes 364-W to 4128-W for each outlet there are two inlets—one on each side of boiler. †Two outlets are on rear section. Above chimney flue sizes are based on sea level conditions—add 2 per cent. to area for each 500 feet elevation above sea level.

Steam Boilers—Data, Ratings and List Prices

Nos.	Height with Trimmings	Width with Trimmings	Total Length	Water Grate Area Sq. Ft.	Free Air Area Through Sq. Ft.	Water Line	*Outlets	Size of Chimney Flue	Height of Chimney Flue	Ratings Sq. Ft.	Price Complete
364-W	69″	47¼″	66⅞″	5.46	2.56	54 7/16″	2-4″	12″ x 12″	40′	1,500	$ 550.00
374-S	69″	47¼″	74 9/16″	7.33	3.40	54 7/16″	2-4″	12″ x 12″	50′	1,800	640.00
384-S	69″	47¼″	47½″	9.19	4.25	54 7/16″	3-4″	12″ x 12″	50′	2,100	730.00
394-S	69″	47¼″	82 13/16″	9.19	4.25	54 7/16″	3-4″	12″ x 16″	60′	2,400	820.00
3104-S	69″	47¼″	97⅝″	11.07	5.10	54 7/16″	3-4″	12″ x 16″	60′	2,700	910.00
468-S	76¼″	60″	78⅞″	8.8	3.96	60¾″	2-5″	16″ x 16″	50′	3,000	944.00
478-S	76¼″	60″	88″	11.8	5.31	60¾″	2-5″	16″ x 16″	50′	3,500	1,044.00
488-S	76¼″	60″	97⅛″	14.8	6.66	60¾″	3-5″	16″ x 16″	60′	4,000	1,144.00
498-S	76¼″	60″	106¼″	14.8	6.66	60¾″	3-5″	16″ x 16″	70′	4,500	1,244.00
4108-S	76¼″	60″	115⅜″	17.8	8.00	60¾″	3-5″	20″ x 20″	70′	5,000	1,344.00
4118-S	76¼″	60″	124¼″	17.8	8.00	60¾″	3-5″	24″ x 24″	80′	5,500	1,444.00
4128-S	76¼″	60″	133⅝″	20.8	9.35	60¾″	3-5″	24″ x 24″	80′	6,000	1,544.00
670-S	97″	80″	102¾″	17.2	7.8	72″	3-6″	24″ x 24″	65′	6,300	1,604.00
680-S	97″	80″	113½″	21.5	9.9	72″	3-6″	24″ x 24″	75′	7,200	1,784.00
690-S	97″	80″	124¼″	25.8	11.7	72″	3-6″	24″ x 28″	75′	8,100	1,964.00
6100-S	97″	80″	135″	25.8	11.7	72″	4-6″	28″ x 28″	80′	9,000	2,144.00
6110-S	97″	80″	145¾″	30.1	13.7	72″	4-6″	30″ x 30″	85′	9,900	2,324.00
6120-S	97″	80″	156½″	30.1	13.7	72″	4.6″	30″ x 30″	90′	10,800	2,504.00

*For each outlet there are two inlets—one on each side of Boiler; sizes 670 to 6120 inclusive have four inlets, two being on rear section. Above chimney flue sizes are based on sea level conditions—add 2 per cent. to area for each 500 feet elevation above sea level.

VULCAN DOWN-DRAFT SMOKELESS BOILERS.—The ratings are based upon the use of an average grade of "free-burning" soft coal, a fuel obtainable in all localities. If "caking" coals or those of inferior qualities are to be used, proper allowance should be made.

THE "VULCAN" MAGAZINE FEED BOILER

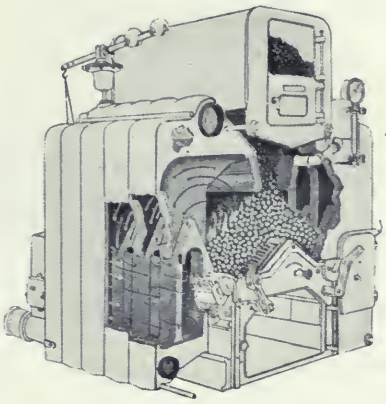


Plate 2551

Large size, opened up so you can see for yourself the Adjustable Throat.

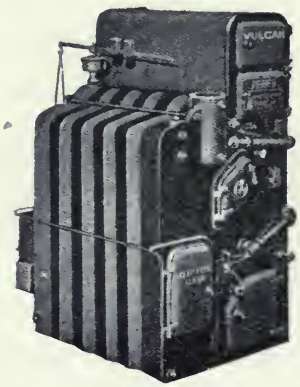


Plate 2552

Single side — made this way in the smaller sizes.

This Vulcan Boiler Line now includes a Magazine Feed Type of Boiler — The Vulcan. It is the **only** Magazine Feed type of Boiler that can burn any size coal — from buckwheat to egg or stove.

It can do it, because it has an adjustable Water-Cooled Throat, with which the size of the feed opening can be varied to suit the size of the coal used.

Being able to use **any** size of coal, or coke, is one of the strongest kind of strong points in its favor.

Any coal you can get, high or low grade, you can burn. And burn economically.

Its Magazine is extra **large sized**, making it unnecessary to coal more than once a day in the coldest weather; and but two or three times a week during ordinary weather.

The Vulcan has twenty-three distinctive features, each one of which "does its bit" toward making it burn less coal, and require less attention.

The Vulcan unfailingly "makes good" all over the country, as it is adapted equally well for Steam, Vapor, Vapor-Vacuum or Hot Water Heating Systems.

Send for full particulars.

"VULCAN" HEATERS, B.H. TYPE, FOR LIVE OR EXHAUST STEAM

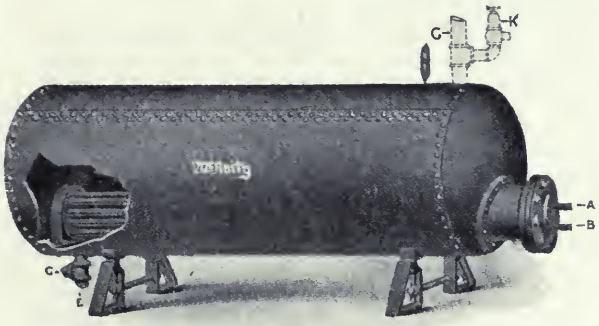


Plate 2553

These Heaters are furnished in any size from 24" x 48", having a storage capacity of 94 gallons, and capable of heating 100 gallons of water per hour to 180 degrees with steam at 5 pounds pressure, up to 60" x 168", having a storage capacity of 2,052 gallons and capable of heating 3,000 gallons of water per hour with steam at one pound pressure. They can be adapted to any service, are easily cleaned, the heating coil is removable, and are suitable for water pressure up to 100 lbs., and steam pressure up to 100 lbs. The prices are very reasonable, and the Heaters are of reliable and standard make.

Prices will be furnished **on application** on giving the quantities of water required and the steam pressure to be used. They will also be tapped for Jacket Heater connections without extra charge. Supports are furnished free with Heater.

LIST OF SIZES

Diameter....	24"	24"	24"	30"	30"	30"	30"	36"	36"	36"	36"	36"	36"	42"	42"	42"
Length.....	48"	60"	84"	60"	72"	84"	96"	60"	72"	84"	96"	108"	120"	72"	84"	96"
Storage capacity, gallons.	94	117	164	184	221	258	300	265	318	370	425	475	530	430	500	575

Diameter.....	42"	42"	42"	42"	48"	48"	48"	48"	48"	54"	54"	54"	60"	60"	60"
Length.....	108"	120"	144"	168"	96"	108"	120"	144"	168"	120"	144"	168"	120"	144"	168"
Storage Capacity Gallons.....	650	720	860	1040	754	848	950	1130	1320	1190	1428	1665	1473	1757	2052

"VULCAN" SMOKELESS DOWN-DRAFT BOILERS

The ratings of Vulcan Down-Draft Boilers are based on the use of the average grades of soft coal. These Boilers will burn any kind of soft coal without generating smoke.

OPERATION

In starting fire in Down-Draft Boiler, build a strong wood fire on the lower grates. When the wood fire is well under way, a layer of dry wood should be laid on the upper grates, on which should be fed a layer of soft coal, eight to twelve inches deep. A light layer of kindling wood placed on top of the coal and fired will ignite the fuel and the wood underneath it.

Do not feed any coal directly onto lower grates — as they are intended to burn only the live coals which drop through the upper grate spaces.

If large lump coal is used, it must be broken up before feeding. Do not put on too much coal at one time, but rather feed frequently.

Use the slice bar only when more air is needed to burn coal on upper grates. Clean the flues two or three times a week — or daily, if necessary.

Care is required in starting a new fire; otherwise there will be some smoke with the first green coal; but if the foregoing instructions are followed, there will be little or no smoke when the fire is started.

After the fire is started there need be no smoke when recoaling. Sometimes, however, when the fire is burned too low, and a quantity of green coal is thrown on, there will be a little smoke for two or three minutes. If the smoke lasts beyond five minutes, it is wholly because of improper firing.

CLEANING STEAM BOILERS

Accumulations of oil, grease, or grit in a new system cause a Boiler to foam, prevent generation of steam, and produce an unsteady water line; therefore it is necessary to blow off Boiler under pressure. This should be done within a week after the Boiler is installed and in operation. If one blowing off does not result in a clean water-gauge glass, proper generation of steam and a steady water line, the Boiler should be blown off a second, and if necessary a third time. This rule will produce good results:

WHEN WATER SUPPLY PRESSURE IS AVAILABLE

Remove the safety valve from the Boiler and connect a blow-off pipe to the opening, extending the pipe to the outside of the building or to some suitable drain. The size of this pipe should be as follows:

Boilers rated from	600 sq. ft.	to	1200 sq. ft.	¾″	pipe.
"	"	"	1200	"	2500	"	1″	"
"	"	"	2500	"	4500	"	1¼″	"
"	"	larger than 4500 sq. ft.....					1½″	"

A ¾″ garden hose is of sufficient capacity for a Boiler of about 800 square feet.

Close off all the Radiator valves connected with the system, or if the main flow and return pipes are equipped with gate valves, these valves may be closed in place of closing the Radiator valves.

Fill the Boiler to the top of gauge glass with water. Build hot fire in Boiler and blow water and steam out through the safety valve tapping and pipe above referred to. Maintain as much steam pressure as possible in Boiler up to twenty pounds, as indicated on steam gauge. Supply cold water in the bottom of the Boiler and maintain water line at top of gauge glass or at a point which will permit the steam to siphon water and grease from the surface of the water in Boiler. Continue the blowing for about two hours. Then close off the water feed valve and drain the water through the draw-off down to the proper water line in the Boiler.

Remove the blow-off pipe and replace the safety valve.

Open up the Radiator valves or the gate valves on the flow and return pipes, as the case may be, and then the heating outfit is ready for operation with the Boiler thoroughly cleaned inside.

CLEANING STEAM BOILER IN SPRING

At the close of the heating season fill the Steam Boiler with water to the safety Valve and let it thus stand through the summer. Disconnect smoke-pipe, thoroughly clean it, and store away in a dry place. Leave Boiler doors open. Clean all the inner surfaces, and at the opening of the next season withdraw the water and refill with fresh water to the water line, starting the Boiler as before. See that the cement between the sections is in place. If it has dropped out, have the joints tightly recemented.

HEATING DATA AND USEFUL INFORMATION

Copied from Standard Authorities

Instructions for Applying Covering On "VULCAN" Boilers

Apply two thicknesses of 1″ Mineral Wool Blocks, or one thickness of 1″ Asbestos Sponge Felt, after which is to be applied a ½″ coat of Asbestos, the whole covered with canvas casing.

An easy method of applying the above is to form a loop around the boiler by ½″ rope and a slip knot. Then place one ply of covering material inside this loop until the circle is complete, then tighten the rope until all the blocks are drawn firmly against the boiler. Wire the blocks with galvanized wire, using two strands for each row of blocks. Where using Mineral Wool blocks, repeat the above for the second ply of blocks. Be sure that all joints are broken. Put on a rough coat of Asbestos Cement, and then a finishing coat, and trowel smooth. Over this paste canvas jacket.

INSTRUCTIONS FOR APPLYING ASBESTOS CEMENT

To Boilers, Domes, Heaters, Etc.

The cement is usually applied in three coats one-half inch to three-quarter inch thick, regulated according to the total thickness required. The material is mixed with water in an ordinary box to a consistency of mortar and should be allowed to stand several hours before using. For applying, use an ordinary plasterer's trowel.

Apply the first coat about ½″ thick to the boiler while it is warm, leaving the surface rough in order that the second coat may properly adhere. Stop back about 1″ from all manholes, doors and other openings, and when putting on last coat, finish up the edges around all openings to a nice bevel.

After the first coat is thoroughly dry, the second coat may be applied in the same manner as the first, and half, and after leaving it rough for the reception of the next coat.

For the third coat mix H and R Portland Cement with the H and R Asbestos Cement, proportions half and half, and after applying, smooth it down, a hard finish will result.

Note—The boiler should be kept quite hot during the application, as each coat should be thoroughly dry before proceeding with the next.

HEATING DATA AND USEFUL INFORMATION

To Ascertain Horsepower of Boilers

Standard adopted by American Society of Mechanical Engineers is 30 pounds of water evaporated into dry steam per hour from temperature of feed water 100° Fahrenheit, into steam of 70 pounds pressure.

In calculating horsepower of Tubular Boilers consider 15 square feet of heating surface equivalent to one nominal horsepower and 8 to 10 square feet of heating surface of internal fired boilers equivalent to one nominal horse power.

Each nominal horsepower of boilers requires one cubic foot of feed water per hour.

Consumption of fuel averages 7½ pounds of coal or 15 pounds dry pine wood for every cubic foot of water evaporated.

Steam Memoranda

A cubic inch of water evaporated under ordinary atmosphere pressure is converted into one cubic foot of steam (approximately).

The specific gravity of steam (at atmospheric pressure) is .411 that of air 34° Fahrenheit, and .0006 that of water at same temperature.

27.222 cubic feet of steam weighs one pound; 13.817 cubic feet of air weighs one pound.

Locomotives average a consumption of 3,000 gallons of water per 100 miles run.

The best designed power boilers, well set, with good draft, and skillful-firing, will evaporate from 7 to 10 pounds of water per pound of first-class coal.

On one square foot of grate can be burned on an average from 10 to 12 pounds of hard coal, or 18 to 20 pounds of soft coal per hour, with natural draft. With forced draft nearly double these amounts can be burned.

A standard boiler horsepower is the evaporation of 30 pounds of water per hour from a feed water temperature of 100° Fahr. into steam at 70 pounds gauge pressure.

To ascertain heating surface in tubular boilers multiply two-thirds the circumference of boiler by length of boiler in inches and add to it the area of the tubes + (⅔ tube sheets — of tubes).

1 square foot of boiler heating surface will supply from 7 to 10 square feet of radiating surface. Each horsepower of the boiler will supply from 240 to 360 feet of 1″ steam pipe, or 80 to 120 square feet of radiating surface.

"VULCAN" WATER HEATERS

Plate 2581

Vulcan Ideal Premier

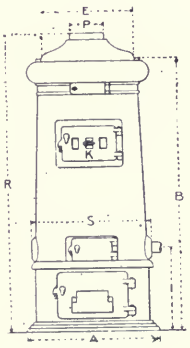
Plate 2582

Vulcan Ideal Junior

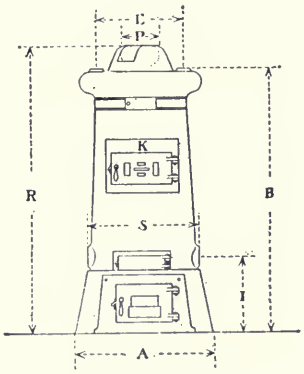
DATA AND LIST PRICES

Pattern Name	No.	Grate	Nom. Diam. Grate	Outlets	*Capacity Gallons	List Price
Premier	101	Slide-centre	10″	1″-1½″	140	$ 30.00
"	121	Rocking	12″	3″-1½″	210	56.00
"	§122	"	12″	3″-1½″	230	67.00
"	151	"	15″	3″-2″	335	78.00
"	§152	"	15″	3″-2″	375	93.00
"	181	"	18″	3″-2″	600	102.00
"	§182	"	18″	3″-2″	600	122.00
Junior With Base Plate and Legs	00	Slide-centre	10″	1″-1½″	60	21.50
Junior Without Plate and Legs	00	"	10″	1″-1½″	60	20.00
Junior	00	"	10″	1″-1½″	90	28.00
"	A-10	"	12″	3″-1½″	190	51.00
"	§A-12	"	12″	3″-1½″	210	60.00
"	A-20	Rocking	15″	3″-2″	380	71.00
"	§A-22	"	15″	3″-2″	425	85.00
"	A-30	"	18″	3″-2″	600	91.00
"	§A-32	"	18″	3″-2″	660	111.00

§Equipped with Dome sections.



Vulcan Junior



Vulcan Premier Junior

VULCAN JUNIOR WATER HEATERS

No.	A	B	E	I	P	R	S
* 00	15¼″	15 5/32″	.....	14 25/32″	5″	27 5/8″	.....
0	18″	31″	.....	14½″	5″	34½″	.....
A-10	20¼″	35″	12″	13¼″	6″	39″	18¾″
A-12	20¼″	40¾″	14¾″	13¾″	6″	44½″	18¾″
A-20	42⅞″	42⅛″	14⅞″	14½″	6″	47⅞″	20 9/16″
A-22	22⅞″	48¼″	17¼″	14½″	6″	53¼″	20 9/16″
A-30	26¼″	42¾″	18¼″	15¼″	7″	48⅞″	23⅞″
A-32	26¼″	49″	17¾″	15¼″	7″	54¼″	23⅞″

*These measurements are for the No. 00 Heater as regularly furnished with Base Plate and Legs. For Heater without Base Plate and Legs deduct 3″ from measurements R, B and I.

PREMIER JUNIOR WATER HEATERS

No.	A	B	E	I	P	R	S
101	18″	29⅝″	.....	9¼″	5″	33⅛″	.....
121	24″	37¼″	12″	13⅞″	6″	41½″	18¼″
122	42″	42½″	14¾″	13⅞″	6″	46¾″	18¼″
151	25¾″	42⅝″	14¾″	15⅛″	6″	47⅝″	20⅝″
152	25¾″	47⅞″	17¼″	15⅛″	7″	53⅝″	20⅝″
181	27″	44¾″	18¼″	15⅛″	7″	50″	24¼″
181	27″	51¼″	17¾″	15⅛″	7″	57″	24¼″

"VULCAN" WATER HEATERS

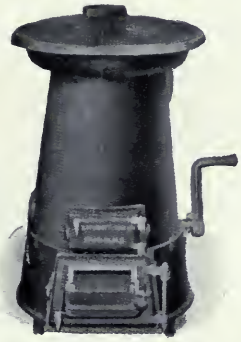
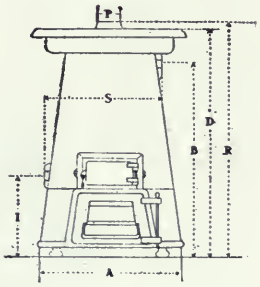


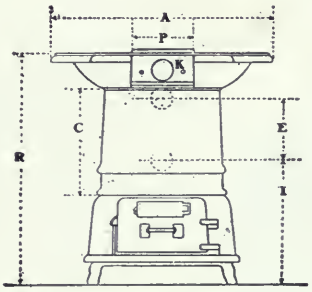
Plate 2591 Vulcan Ideal

Plate 2592 Vulcan Ideal Laundry

Pattern Name	No.	Grate	Nom. Diam. Grate	Outlets	Capacity Gallons	List Price
Ideal	10	Rocking	10″	1″–1½″	80	**$27.00**
"	12	"	12″	1″–1½″	145	**33.00**
"	15	"	15″	1″–1½″	240	**47.00**
Laundry	1–D	Slide-center	10″	1″–1″	100	**29.00**



Vulcan Ideal



Vulcan Ideal Laundry

Ideal Vulcan Water Heaters

No.	A	B	D	I	P	R	S
10	16″	21½″	26¾″	9⅝″	5″	27½″	12⅛″
12	19½″	22⅜″	27½″	9⅞″	5″	28¾″	14⅛″
15	21″	24½″	30¼″	10⅜″	6″	31″	16⅞″

When Water Heaters are subjected to some unusual pressure, as is the case when tanks are connected direct to City Pumping Station, and the pressure is increased during times of conflagration or the like, it is recommended that the system be equipped with a Water-Pressure Reducing Valve.

No fire tools are supplied with above Heaters.

Ideal Laundry Water Heater No. 1-D

No.	A	C	E	K	I	P	R
1-D	27½″	12⅜″	7 1/16″	″5¼″x9¾″	14½″	6″	27″

Actual practice has demonstrated that a heater which will raise the water from 25 to 30 degrees per hour in the storage tank is sufficiently large for the ordinary residence. The above ratings are based on raising the quantity of water stated in gallons 25 degrees Fahrenheit per hour for eight consecutive hours on one full charge of hard coal as fuel. In apartment buildings, barber shops, etc., where the demand is proportionately heavier, larger heater capacity must be provided.

"VULCAN" RADIATORS

Single Column

Plain

Plate 2601

No. of Sections	* Length 2½" per Sec.	Heating Surface—Square Feet				
		38" Height 3 sq. ft. per Sec.	32" Height 2½ sq. ft. per Sec.	26" Height 2 sq. ft. per Sec.	23" Height 1⅔ sq. ft. per Sec.	20" Height 1½ sq. ft per Sec.
2	5"	6	5	4	3⅓	3
3	7½"	9	7½	6	5	4½
4	10"	12	10	8	6⅔	6
5	12½"	15	12½	10	8⅓	7½
6	15"	18	15	12	10	9
7	17½"	21	17½	14	11⅔	10½
8	20"	24	20	16	13⅓	12
9	22½"	27	22½	18	15	13½
10	25"	30	25	20	16⅔	15
11	27½"	33	27½	22	18⅓	16½
12	30"	36	30	24	20	18
13	32½"	39	32½	26	21⅔	19½
14	35"	42	35	28	23⅓	21
15	37½"	45	37½	30	25	22½
16	40"	48	40	32	26⅔	24
17	42½"	51	42½	34	28⅓	25½
18	45"	54	45	36	30	27
19	47½"	57	47¼	38	31⅔	28½
20	50"	60	50	40	33⅓	30
21	52½"	63	52½	42	35	31½
22	55"	66	55	44	36⅔	33
23	57½"	69	57½	46	38⅓	34½
24	60"	72	60	48	40	36
25	62½"	75	62½	50	41⅔	37½
26	65"	78	65	52	43⅓	39
27	67½"	81	67½	54	45	40½
28	70"	84	70	56	46⅔	42
29	72½"	87	72½	58	48⅓	43½
30	75"	90	75	60	50	45
31	77½"	93	77½	62	51⅔	46½
32	80"	96	80	64	53⅓	48

Ornamental

Plate 2602

Two Column

Plain

Plate 2603

No. of Sections	* Length 2½" per Sec.	Heating Surface—Square Feet					
		45" Height 5 sq. ft. per Sec.	38" Height 4 sq. ft. per Sec.	32" Height 3⅓ sq. ft. per Sec.	26" Height 2⅔ sq. ft. per Sec.	23" Height 2⅓ sq. ft. per Sec.	20" Height 2 sq. ft. per Sec.
2	5	10	8	6⅔	5⅓	4⅔	4
3	7½"	15	12	10	8	7	6
4	10"	20	16	13⅓	10⅔	9⅓	8
5	12½"	25	20	16⅔	13⅓	11⅔	10
6	15"	30	24	20	16	14	12
7	17½"	35	28	23⅓	18⅔	16⅓	14
8	20"	40	32	26⅔	21⅓	18⅔	16
9	22½"	45	36	30	24	21	18
10	25"	50	40	33⅓	26⅔	23⅓	20
11	27½"	55	44	36⅔	29⅓	25⅔	22
12	30"	60	48	40	32	28	24
13	32½"	65	52	43⅓	34⅔	30⅓	26
14	35	70	56	46⅔	37⅓	32⅔	28
15	37½"	75	60	50	40	35	30
16	40"	80	64	53⅓	42⅔	37⅓	32
17	42½"	85	68	56⅔	45⅓	39⅔	34
18	45"	90	72	60	48	42	36
19	47½"	95	76	63⅓	50⅔	44⅓	38
20	50"	100	80	66⅔	53⅓	46⅔	40
21	52½"	105	84	70	56	49	42
22	55"	110	88	73⅓	58⅔	51⅓	44
23	57½"	115	92	76⅔	61⅓	53⅔	46
24	60"	120	96	80	64	56	48
25	62½"	125	100	83⅓	66⅔	58⅓	50
26	65"	130	104	86⅔	69⅓	60⅔	52
27	67½"	135	108	90	72	63	54
28	70"	140	112	93⅓	74⅔	65⅓	56
29	72½"	145	116	96⅔	77⅓	67⅔	58
30	75"	150	120	100	80	70	60
31	77½"	155	124	103⅓	82⅔	72⅓	62
32	80"	160	128	106⅔	85⅓	74⅔	64

Ornamental

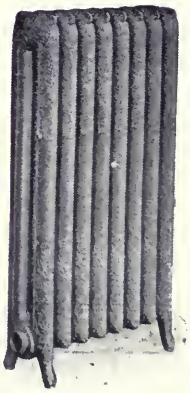


Plate 2604

These Radiators tapped 2" and bushed as per list on page 263.

Orders for Water Radiation should state whether tappings are desired for single or twin connection. Twin connections are tapped left-hand. Single, or opposite end connections are tapped right-hand unless otherwise ordered.

Single-Column Radiators for Steam are connected with right-hand threaded extra-heavy nipples; for Water, extra-heavy right and left threaded nipples at top and bottom

For distance from floor to centre of tapping and other measurements, see page 263.

*In estimating length of Radiator, allow ½" for each bushing.

"VULCAN" RADIATORS

"Vulcan" Three Column Radiators For Steam and Water

Plain

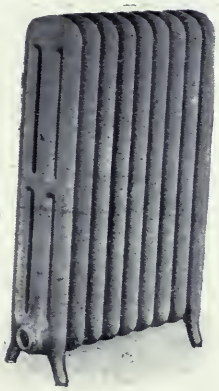


Plate 2611

No. of Sections	* Length 2½" per Sec.	Heating Surface—Square Feet 45" Height 6 sq. ft. per Sec.	38" Height 5 sq. ft. per Sec.	32" Height 4½ sq.ft. per Sec.	26" Height 3¾ sq.ft. per Sec.	22" Height 3 sq. ft. per Sec.	18" Height 2¼ sq.ft. per Sec.
2	5"	12	10	9	7½	6	4½
3	7½"	18	15	13½	11¼	9	6¾
4	10"	24	20	18	15	12	9
5	12½"	30	25	22½	18¾	15	14¼
6	15"	36	30	27	22½	18	13½
7	17½"	42	35	31½	26¼	21	15¾
8	20"	48	40	36	30	24	18
9	22½"	54	45	40½	33¾	27	20¼
10	25"	60	50	45	37½	30	22½
11	27½"	66	55	49½	41¼	33	24¾
12	30"	72	60	54	45	36	27
13	32½"	78	65	58½	48¾	39	29¼
14	35"	84	70	63	52½	42	31½
15	37¼"	90	75	67½	56¼	45	33¾
16	40"	96	80	72	60	48	36
17	42½"	102	85	76½	63¾	51	38¼
18	45"	108	90	81	67½	54	40½
19	47½"	114	95	85½	71¼	57	42¾
20	50"	120	100	90	75	60	45
21	52½"	126	105	94½	78¾	63	47¼
22	55"	132	110	99	82½	66	49½
23	57½"	138	115	103½	86¼	69	51¾
24	60"	144	120	108	90	72	54
25	62½"	105	125	112½	93¾	75	56¼
26	65"	156	130	117	97½	78	58½
27	67½"	162	135	121½	101¼	81	60¾
28	70"	168	140	126	105	84	63
29	72½"	174	145	130½	108¾	87	65¼
30	75"	180	150	135	112½	90	67½
31	77½"	186	155	139½	116¼	93	69¾
32	80"	192	160	144	120	96	72

Ornamental

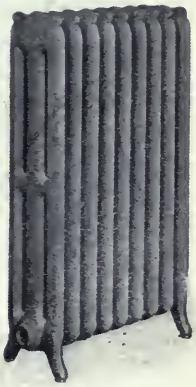


Plate 2612

For other measurements, see pages 263.

"Vulcan" Four Column Radiators For Steam and Water

Plain

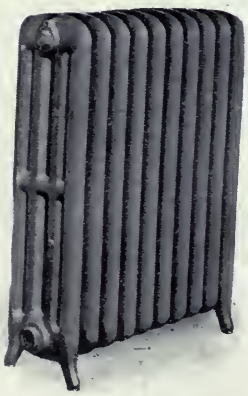


Plate 2613

No. of Sections	* Length 3" per Sec.	Heating Surface—Square Feet 45" Height 10 sq. ft. per Sec.	38" Height 8 sq. ft. per Sec.	32" Height 6½ sq.ft. per Sec.	26" Height 5 sq. ft. per Sec.	22" Height 4 sq. ft. per Sec.	18" Height 3 sq. ft. pe Sec.
2	6"	20	16	13	10	8	6
3	9"	30	24	19½	15	12	9
4	12"	40	32	26	20	16	12
5	15"	50	40	32½	25	20	15
6	18"	60	48	39	30	24	18
7	21"	70	56	45½	35	28	21
8	24"	80	64	52	40	32	24
9	27"	90	72	58½	45	36	27
10	30"	100	80	65	50	40	30
11	33"	110	88	71½	55	44	33
12	36"	120	96	78	60	48	36
13	39"	130	104	84½	65	52	39
14	42"	140	112	91	70	56	42
15	45"	150	120	97½	75	60	45
16	48"	160	128	104	80	64	48
17	51"	170	136	110½	85	68	51
18	54"	180	144	117	90	72	54
19	57"	190	152	123½	95	76	57
20	60"	200	160	130	100	80	60
21	63"	210	168	136½	105	84	63
22	66"	220	176	143	110	88	66
23	69"	230	184	149½	115	92	69
24	72"	240	192	156	120	96	72
25	75"	250	200	162½	125	100	75
26	78"	260	208	169	130	104	78
27	81"	270	216	175½	135	108	81
28	84"	280	224	182	140	112	84
29	87"	290	232	188½	145	116	87
30	90"	300	240	195	150	120	90
31	93"	310	248	201½	155	124	93
32	96"	320	256	208	160	128	96

Ornamental

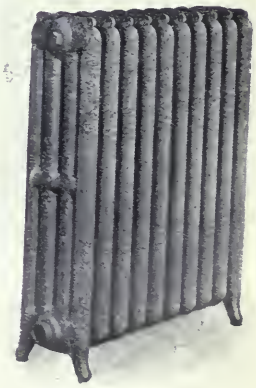


Plate 2614

Above Radiators are tapped 2" and bushed as per list on page 263.

Order for Water Radiation should state whether tappings are desired for single or twin connection. Twin connections are tapped right-hand unless otherwise ordered.

Made with extra-heavy right-and left-hand threaded nipples.

For distance from floor to centre of tapping and other measurements, see pages 263.

*In estimating length of Radiator, allow ½" for each bushing.

"VULCAN" RADIATOR

"Vulcan" Plain Window Radiators — For Steam or Water

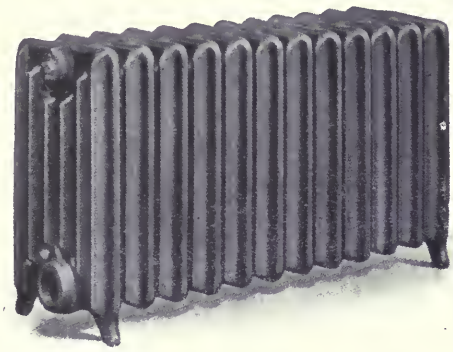


Plate 2621

No. of Sections	*Length 3" per Section	Heating Surface—Square Feet		
		20" Height 5 sq. ft. per Section	16" Height 3¾ sq. ft. per Section	13" Height 3 sq. ft. per Section
2	6"	10	7½	6
3	9"	15	11¼	9
4	12"	20	15	12
5	15"	25	18¾	15
6	18"	30	22½	18
7	21"	35	26¼	21
8	24"	40	30	24
9	27"	45	33¾	27
10	30"	50	37½	30

Can be built up like all " Vulcan " Radiators to any practical greater number of sections.

Each section is 12½" wide.

Tappings.—2" and bushed as per list on page 263.

Connections.—Extra-heavy right and left threaded nipples at top and bottom .

*Add ½" to length for each bushing.

" VULCAN " Style B. Steam Wall Plain

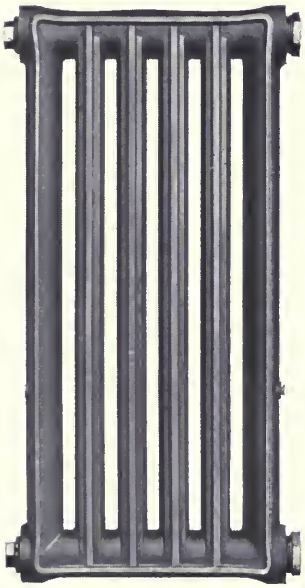


Plate 2622

Made in 7 and 9 ft. sections

" VULCAN " Style A. For Water or Steam

Plate 2623

Made in 5 - 7 - 9 - 12 ft. sections

Sq. Feet Heating Surface	Equivalent of 1" Pipe	Length	Width	Thickness	Distance Between Centers of Tappings	
					End of Section	Side of Section
VULCAN PLATE 2623 — STYLE A						
5	15"	17"	13"	3"	10"	14⅛"
7	21"	24"	13"	3"	10"	21"
9	27"	24"	13"	3 3/16"	10"	21"
12	36"	28"	15"	3⅝"	11 1/16"	24"
VULCAN PLATE 2622 — STYLE B						
7	21"	23⅜"	13"	3⅛"	10½"	20⅜"
9	27"	29⅜"	13"	3⅛"	10½"	26¼"

Made both Screw and Push Nipples.

"VULCAN" RADIATORS

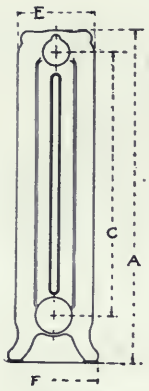


Plate 2631

A. Total Height.

C. Distance from centre of top to centre of bottom opening of Water Radiators.

E. Width of sections.

F. Width at feet.

G. Distance from centre to centre of sections.

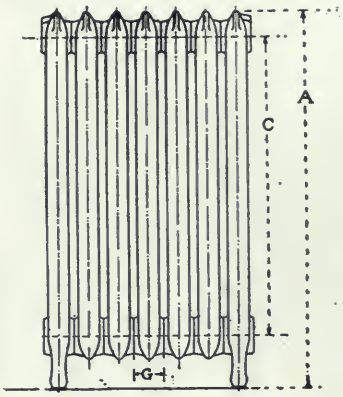


Plate 2632

Measurements of Vulcan Direct Radiators

Measurements are in Inches.

Pattern and Catalogue Height		A	C	E	F	G	Heating Surface Sq. Ft.
One-Column.	38	37 5/8"	31 3/32"	4 13/32"	5 5/8"	2 1/2"	3
	32	31 37/64"	25 13/64"	4 13/32"	5 3/8"	2 1/2"	2 1/2
	26	26"	19 15/32"	4 13/32"	5 5/8"	2 1/2"	2
	23	23 3/32"	16 9/16"	4 13/32"	5 3/8"	2 1/2"	1 2/3
	20	20 11/64"	13 41/64"	4 13/32"	5 3/8"	2 1/2"	1 1/2
Two-Column.	45	45 25/64"	38 25/32"	7 3/8"	8 3/16"	2 1/2"	5
	38	37 45/64"	31 3/32"	7 3/8"	8 3/16"	2 1/2"	4
	32	31 53/64"	25 13/64"	7 3/8"	8 3/16"	2 1/2"	3 1/3
	26	26 5/64"	19 15/32"	7 3/8"	8 3/16"	2 1/2"	2 2/3
	23	23 11/64"	16 9/16"	7 3/8"	8 3/16"	2 1/2"	2 1/3
	20	20 1/4"	13 41/64"	7 3/8"	8 3/16"	2 1/2"	2
Three-Column...	45	45 15/16"	38 25/32"	9"	9 7/8"	2 1/2"	6
	38	38 11/32"	31 3/32"	9"	9 7/8"	2 1/2"	5
	32	32 11/32"	25 13/64"	9"	9 7/8"	2 1/2"	4 1/2
	26	26 19/32"	19 15/32"	9"	9 7/8"	2 1/2"	3 3/4
	22	22 11/32"	15 1/32"	9"	9 7/8"	2 1/2"	3
	18	18 5/16"	11 3/16"	9"	9 7/8"	2 1/2"	2 1/4
Four-Column	45	46"	38 25/32"	10 1/2"	11 1/4"	3"	10
	38	38 5/16"	31 3/32"	10 1/2"	11 1/4"	3"	8
	32	32 7/16"	25 13/64"	10 1/2"	11 1/4"	3"	6 1/2
	26	26 11/16"	19 15/32"	10 1/2"	11 1/4"	3"	5
	22	22 7/16"	15 1/32"	10 1/2"	11 1/4"	3"	4
	18	18 13/32"	18 5/16"	10 1/2"	11 1/4"	3"	3
Window.....	20	20"	15 1/16"	12 1/2"	12 1/2"	3"	5
	16	16"	11 3/32"	12 1/2"	12 1/2"	3"	3 3/4
	13	13"	8 1/16"	12 1/2"	12 1/2"	3"	3
Hospital.....	45	45 5/16"	38 25/32"	7 3/8"	8 1/4"	3"	5
	38	37 5/8"	31 3/32"	7 3/8"	8 1/4"	3"	4
	32	31 47/64"	25 13/64"	7 3/8"	8 1/4"	3"	3 1/3
	26	26"	19 15/32"	7 3/8"	8 1/4"	3"	2 2/3
	23	23 3/32"	16 9/16"	7 3/8"	8 1/4"	3"	2 1/3
	20	20 11/64"	13 41/64"	7 3/8"	8 1/4"	3"	2

Distance from Floor to Centre of Lower Tappings

Measurements are in inches

Pattern	Water Supply and Return	Single Pipe Steam	Two-Pipe Steam	
			Supply	Return
Vulcan 1-Column.....	4 1/2"	4"	4 1/2"	4"
Vulcan 2-Column.....	4 1/2"	4"	4 1/2"	4"
Vulcan 3-Column.....	4 1/2"	4"	4 1/2"	4"
Vulcan 4-Column.....	4 1/2"	4 1/2"	4 1/2"	4 1/2"
Vulcan Window.....	3"	3"	3"	3"
Vulcan Hospital.....	4" 1/2	4 1/2"	4 1/2"	4 1/2"

Tappings of Vulcan Radiators

Steam

One-Pipe Work

Up to 24 square feet, inclusive.....1 "
Above 24, up to 60 square feet.....1 1/4"
Above 60, up to 100 square feet.....1 1/2"
Above 100 square feet.....2 "

Two-Pipe Work

Up to 48 square feet, inclusive.....1 " x 3/4"
Above 48, up to 96 square feet.....1 1/4" x 1 "
Above 96 square feet.....1 1/2" x 1 1/4"

Water

Tapped for Supply and Return

Up to 40 square feet, inclusive.....1 " x 1 "
Above 40, up to 72 square feet.....1 1/4" x 1 1/4"
Above 72 square feet.....1 1/2" x 1 1/2"

Vapor tappings top and bottom opposite ends; supply, 3/4", return 1/2".

All air-valve tappings of Direct Radiators are regularly made 1/8".

Special Measurements

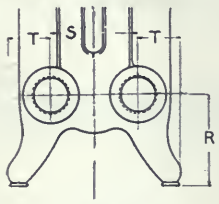


Plate 2633

Twin Tappings

Measurements are in inches

Pattern	R	S	T
2-Column.....	4 1/2"	3 1/4"	2 5/8"
3-Column.....	4 1/2"	3 1/4"	3 3/8"
4-Column.....	4 1/2"	3 1/4"	4 "
Window.....	3 "	3 1/4"	4 5/8"

" VULCAN " RADIATOR BRACKETS

"VULCAN" Wall Radiator Brackets

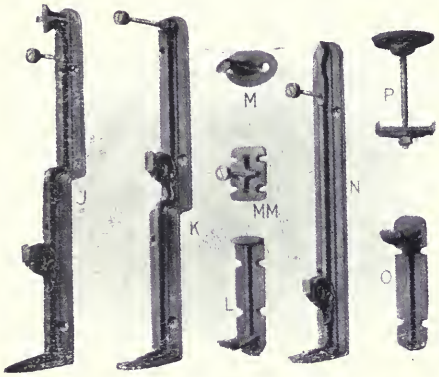


Plate 2641

Brackets "J": To fit over a 9½" high baseboard or skirting, and for supporting Wall Radiators Nos. 7-B and 9-B. With each "J" Bracket we furnish one ¼" stove-bolt and one button.

Height from floor to centre of lowest tapping (supply or return):

J-1 Bracket	9½"
J-2 Bracket	7½"
J-3 Bracket	5½"

Brackets "K": To fit over baseboard or skirting, and for supporting Wall Radiators Nos. 7-A and 9-A. With each "K" Bracket we furnish one ¼" stove-bolt and one button. Height from floor to centre of lowest tapping (supply or return):—

K-1 Bracket (will fit over 11½" high baseboard)	16"
K-2 Bracket " " " 9½" " "	14"
K-3 Bracket " " " 7½" " "	12"
K-4 Bracket " " " 5½" " "	10"
K-5 Bracket " " " 3½" " "	8"
K-6 Bracket " " " 1½" " "	6"

Brackets "L," "O," "MM" and "M": Screwed to wall, baseboard or wainscotting. "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 always be provided for use with each "L" or "O" Bracket. "L", "O" and "MM" Brackets are slotted for four, and the "M" Bracket for two wood screws—not furnished by us. With each "MM" Bracket we furnish one ¼" stove-bolt and one button.

Bracket "N" is a straight right-angle Bracket, without offset, for supporting all sizes of Wall Radiators; height from floor to centre of end tapping bosses, 5½". With each "N" Bracket we furnish one ¼" stove-bolt and one button.

Ceiling Bracket "P": Made of cast plate, 3½" diameter and screwed to ceiling joists by four screws—not furnished by us. The bolt furnished gives a distance of 3½" to 5" from bottom of Radiator to ceiling. Other length bolts can be furnished on special order.

NOTE.—In ordering buttons and stove-bolts separately, state for which bracket, because of different lengths of bolts.

"VULCAN" CONCEALED BRACKETS

For supporting Single-Column, Two-Column, Three-Column and Four-Column Direct Radiators of patterns made by us. Distance from wall to centre of tapping in Radiator is—in the Single-Column, 3¼"; Two-Column, 5", Three-Column, 5¾"; Four-Column, 6½". A set consists of one each top and bottom support. Ordinarily two sets will support a medium size of Radiator.

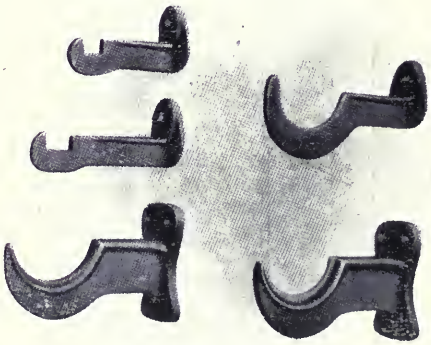


Plate 2642

RADIATOR WRENCHES

Plate 2643

Nipple Wrench

For sections this wrench will be found most practical. Made of drop-forged steel, for right- and left-hand threaded nipples having a hexagon nut at centre. In ordering state whether for 2½" or 3" nipple. Carried in stock.

Direct Radiator Wrench

These steel wrenches are made especially for assembling or disassembling direct Radiators connected with right- and left-hand threaded nipples. They are made in two sizes—for 1½" and 2" nipples, and in three lengths—1-foot, 2-foot and 4-foot. Carried in stock.

Plate 2644

O.S. DISTRIBUTORS

Positions of Tappings are indicated by figures 1, 2, 3.
Price List and Dimensions

Stock No.	Tappings, 1 | 2 | 3	Dimensions A	B	C	D	List Price Each
605	¾″ x ½″ x ½″	2¾″	1½″	2¼″	1¼″	$0.50
606	¾″ x ¾″ x ½″	2 11/16″	1⅜″	2⅛″	1 3/16″	.50
607	¾″ x ½″ x ¾″	2 13/16″	1½″	2⅛″	1¼″	.50
608	1 ″ x ½″ x ¾″	3⅜″	2 ″	2 15/32″	1⅜″	.60
609	1 ″ x ¾″ x ½″	3⅜″	2 ″	2 15/32″	1 5/16″	.60
610	1 ″ x ¾″ x ¾″	3⅝″	2 ″	2¾″	1⅜″	.60
611	1 ″ x ¾″ x 1 ″	3¾″	2 ″	2¾″	1½″	.60
612	1 ″ x 1 ″ x ¾″	3¾″	2 ″	2¾″	1⅜″	.60
613	1 ″ x 1 ″ x 1 ″	4 ″	2¼″	3 ″	1½″	.60
614	1¼″ x 1 ″ x 1 ″	4⅜″	2⅜″	3⅝″	2 ″	.80
615	1¼″ x 1 ″ x 1¼″	4½″	2½″	3¾″	2 ″	.80
616	1¼″ x 1½″ x 1 ″	4⅜″	2⅜″	3½″	2 ″	.80
617	1¼″ x 1¼″ x 1¼″	5 ″	2¾″	3⅞″	2 ″	.80
618	1½″ x 1¼″ x 1 ″	4½″	2⅜″	3¾″	1⅞″	.90
619	1½″ x 1 ″ x 1¼″	4¾″	2⅜″	4 ″	2¼″	.90
620	1½″ x 1¼″ x 1¼″	4⅝″	2⅜″	4 ″	2¼″	.90
621	1½″ x 1¼″ x 1½″	4¾″	2½″	3⅞″	2 ″	.90
622	1½″ x 1½″ x 1¼″	4¾″	2½″	3¾″	1⅞″	.90
623	1½″ x 1½″ x 1½″	5⅛″	2¾″	4¼″	2¼″	.90
624	2 ″ x 1¼″ x 1½″	4¾″	2⅛″	4¼″	2¼″	1.20
625	2 ″ x 1½″ x 1¼″	4¾″	2⅛″	4⅜″	4¼″	1.20
626	2 ″ x 1½″ x 1½″	5 ″	2⅛″	4½″	2¼″	1.20
627	2 ″ x 2 ″ x 1¼″	4⅞″	2½″	4½″	2¼″	1.20
628	2 ″ x 2 ″ x 1½″	5¼″	2⅛″	4½″	2¼″	1.20
629	2 ″ x 2 ″ x 2 ″	5⅝″	2⅞″	3¾″	2⅜″	1.20
630	2½″ x 1½″ x 1½″	5¼″	2⅞″	4⅞″	2½″	2.00
631	2½″ x 2 ″ x 1½″	5⅝″	3⅛″	5⅜″	2½″	2.00
632	2½″ x 2 ″ x 2 ″	5⅞″	3⅛″	5¼″	2⅝″	2.00

Order by Number

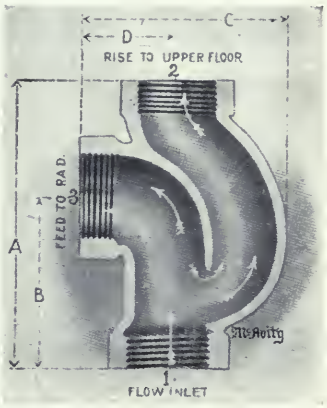


Plate 2651

Plate 2652

HEATING DATA AND USEFUL INFORMATION

Proportioning Radiation

There are many different rules for the proportioning of radiation, but owing to the widely varying conditions pertaining to heating installations, many of them are of little value — not much better than a rule of thumb, and serve but for more or less indifferent checking.

Where large buildings especially are to be heated, the services of a thoroughly trained and competent Heating Engineer should be secured to proportion radiation.

We append herewith several rules.

Mills and Baldwin's well-known Rules for the proportioning of radiation for steam heating are better known to the old time steam-fitter, and are more or less a guide when the outside temperature is zero or above, and the sizes of rooms and the general conditions are normal.

The Glass and Wall Rule, while fairly reliable for normal conditions at zero, is useless for rooms in which the amount of glass and exposed wall are abnormal.

We recommend the use of the Heat Transmission Rule only. It provides for a range of temperatures any degree above zero to any degree below. Because of lack of space, we start at 20 above and stop at 20 degrees below. Intelligently used, and making a slight allowance for northerly exposed rooms over southerly ones, it will be found satisfactory and reliable.

Proportioning Radiation—Steam Heating

Mills' Rule

A very popular and easily remembered formula is the well known Mills' 2-20-200 Rule (Western Canada 2-10-200), in which the total amount of steam radiation required is obtained as follows:—

$$\frac{\text{Glass}}{2} + \frac{\text{Ex. wall}}{20} + \frac{\text{Cu. contents}}{200} = \text{sq. ft. of radiation.}$$

Note.—This rule does not work out well in the case of halls or rooms having less than ordinary amounts of wall and glass surface, where the opening and closing of outside doors changes the air frequently. In such cases the radiation should be increased 20% or over.

Baldwin's Rule

Another much used formula which is applicable to varied outside and inside temperatures:

$$\frac{\text{Inside temperature—outside temperature}}{\text{Steam temperature—inside temperature}} = \text{the square feet of heating surface required for each square foot of glass or its equi-}$$

valent in wall surface. And 10 square feet wall surface is assumed to equal 1 square foot of glass. Then add 20% for leakage through doors or windows.

With zero outside and 70 degrees inside this rule reduces to very simple proportions, viz.:

$$\frac{70^0 - 0^0}{212^0 - 70^0} = \frac{70}{142} = \tfrac{1}{2} \text{ nearly.}$$

Then the total square feet of equivalent glass surface ÷ 2 + 20% = sq. ft. of steam radiation.

A careful analysis of this rule will show that it reaches almost exactly the same result as the Mills Rule at 70°.

Heat Transmission Rule

Example.—Consider a living room 14′ x 15′ exposed on two sides and having a 10 foot ceiling. The room has 60 square feet of glass and 230 (net) square feet of exposed wall. To find the correct amount of radiator surface to maintain 70 degrees inside when the outside temperature is at zero.

Cubic contents	2,100 x 2.1	4,410
Glass, square feet	60 x 75	4,500
Wall, square feet	230 x 25	5,750
		14,660

14,660 divided by 160=91 sq. ft. of direct hot water radiation.
14,660 divided by 250=58 sq. ft. of direct steam radiation.

HEATING DATA AND USEFUL INFORMATION

Proportioning Radiation — Heat Transmission Rule

(For figuring radiation for heating by water or steam, to maintain 70 degrees inside).

	Different degrees of outside temperature.				
	20 above zero	10 above zero	zero	10 below zero	20 below zero
For ½ air change per hour multiply the cubic contents by:—	.5	.6	.7	.8	.9
For 1 air change per hour multiply the cubic contents by:—	1.0	1.2	1.4	1.6	1.8
For 1½ air change per hour multiply the cubic contents by:—	1.5	1.8	2.1	2.4	2.7
For 2 air changes per hour multiply the cubic contents by:—	2.0	2.4	2.8	3.2	3.6
Multiply the exposed glass by:—	50	65	75	85	95
Multiply the exposed wall by:—	17	20	25	27	30

Use the co-efficient for ½ air change for rooms only requiring tempering.
" " " 1 " " " bedrooms.
" " " 1½ " " " living rooms.
" " " 2 " " " halls, bath and exposed rooms.

Add the results thus obtained and divide by 160, and the result will be the square feet of direct Hot Water radiation required to heat the room.

Add the results thus obtained and divide by 250, and the result will be the square feet of direct Steam radiation required to heat the room.

VENTILATION

For school rooms, it is standard practice to supply 30 cubic feet of fresh warmed air per child per minute, or 1,800 cubic feet of air per child per hour. True it is an average child will consume only about 18 cubic feet of air per hour, but as each foot of vitiated air contaminates and renders unfit for breathing 100 cubic feet of air, it follows that the standard requirement of 1,800 cubic feet of air per child per hour is correct.

A school room having 40 pupils should therefore be provided with 72,000 cubic feet of air per hour.

The term "B.T.U." is the scientific name used for the measurement of heat. One "B.T.U." is the equivalent of 788 foot pounds of work.

In the raising of the temperature of air, it is conceded that 1.6 B.T.U. will raise 1 cubic foot of air 80 degrees.

Using the preceding data, it will thus be found that to raise 72,000 cubic feet of air 80 degrees, 115,200 B.T.U. will be required, or for a ten-roomed school, containing 400 pupils, 1,152,000 B.T.U. will be required.

It is conceded that one square foot of Safford Cast Iron Hot Blast Radiation, will give off an average of 1,500 B.T.U. per hour, working under normal school conditions, so that 765 square feet of Hot Blast Radiation will thus be required for the heating of the air required for ventilation for the said school.

It is customary to figure on the air passing through the Heater at 1,300 lineal feet per minute, or 78,000 lineal feet per hour. and therefore, in proportioning the sizes of the Heaters, it would be necessary to select Heaters with a free area space of not less than 10 square feet. In practice it will be found that to get sufficient radiation distributed in, say, four stacks, a greater free area will be provided, and slightly greater or less amount of radiation. For instance, working out the above example, we find it will require:——

4 stacks of 40″ Hot Blast Radiators, having 18 sections each, in all 774 square feet of radiation with a free area of 11.16 square feet.

Or 4 stacks of 50″ Hot Blast Radiators, having 14 sections each, in all 756 square feet of radiation with a free area of 10.76 square feet.

Or 4 stacks of 60″ Hot Blast Radiators, having 13 sections each, in all 768 square feet of radiation with a free area of 11.05 square feet.

INDIRECT RADIATOR HEATING

Free Area Through Registers—For Calculating Air Passage in Indirect or Hot-Blast Heating

Register Opening	Free Area in Square Feet	Register Opening	Free Area in Square Feet	Register Opening	Free Area in Square Feet	Register Opening	Free Area in Square Feet
8″ x 8″	0.30	14″ x 14″	0.91	18″ x 24″	2.00	27″ x 27″	3.37
8″ x 10″	0.37	14″ x 16″	1.04	18″ x 27″	2.25	27″ x 38″	4.75
8″ x 12″	0.44	14″ x 18″	1.17	18″ x 30″	2.50	28″ x 28″	3.63
9″ x 12″	0.50	14″ x 20″	1.30	18″ x 36″	3.00	28″ x 30″	3.88
10″ x 10″	0.46	14″ x 22″	1.43	20″ x 20″	1.85	28″ x 32″	4.15
10″ x 12″	0.56	16″ x 16″	1.19	20″ x 22″	2.04	28″ x 36″	4.66
10″ x 14″	0.65	16″ x 18″	1.33	20″ x 24″	2.22	30″ x 30″	4.17
10″ x 16″	0.74	16″ x 20″	1.48	20″ x 26″	2.41	30″ x 36″	5.00
10″ x 18″	0.83	16″ x 22″	1.63	20″ x 28″	2.59	30″ x 42″	5.83
10″ x 20″	0.93	16″ x 24″	1.78	20″ x 30″	2.77	30″ x 48″	6.67
10″ x 22″	1.02	16″ x 28″	2.07	20″ x 32″	2.96	36″ x 36″	6.00
10″ x 24″	1.11	16″ x 30″	2.22	20″ x 36″	3.33	36″ x 40″	6.67
12″ x 12″	0.67	16″ x 32″	2.37	24″ x 24″	2.67	36″ x 42″	7.00
12″ x 14″	0.78	16″ x 36″	2.67	24″ x 27″	3.00	36″ x 48″	8.00
12″ x 15″	0.83	18″ x 18″	1.50	24″ x 30″	3.33	38″ x 38″	6.67
12″ x 16″	0.89	18″ x 20″	1.67	24″ x 32″	3.55	38″ x 40″	7.03
12″ x 18″	1.00	18″ x 21″	1.75	24″ x 36″	4.00	38″ x 42″	7.38
12″ x 24″	1.33						

PIPES AND AREAS FOR INDIRECT HEATING

The following table will provide quick calculations for all cases of indirect heating for residences or any moderate-sized Steam or Water-heating.

Dimensions of Pipe	Area in Square Inches	Size of Register Required	Dimensions of Pipe	Area in Square Inches	Size of Register Required
8″	50	8″ x 12″	16″	201	18″ x 24″
9″	63	9″ x 14″	18″	254	20″ x 26″
10″	78	10″ x 16″	20″	314	24″ x 27″
12″	113	14″ x 16″	22″	380	24″ x 32″
14″	154	16″ x 20″	24″	452	30″ x 30″

Heating Water in Tanks and Pools

Size of Heater

In specifying heaters for any given capacity be sure to see that one is provided that will burn the fuel economically. If the heater is too small, the fire will have to be forced and a large percentage of the heat will escape up the chimney.

Many mistakes are made and much disappointment occasioned by not carefully considering the actual power needed to heat water. We give herewith some information that will be useful in estimating the power required.

Horse-Power Required

One boiler horse-power is equal to the work of evaporating 34½ pounds of water from 212 degrees—to steam at 212 degrees. As it takes 966 British thermal units to evaporate one pound of water from 212 degrees to steam, it follows the evaporation of 34½ pounds is equal to 33,327 B. T. U.

One U. S. gallon of water weighs (at 42 degrees) 8.33 lbs., therefore it takes 833 B.T.U. to heat one gallon 100 degrees; or, it will take 83,300 B.T.U. to heat 100 gallons and 833,000 to heat 1,000 gallons from 42 degrees to 142 degrees Fahrenheit, or from any other temperature at which the water may be to a point 100 degrees higher.

As 33,327 B.T.U. is equal to one horse-power, and the work of heating 1,000 gallons equals 833,000 B.T.U., we see by dividing the one into the other that heating 1,000 gallons per hour is equal to practically twenty-five horse-power.

HEATING DATA AND USEFUL INFORMATION

Heating Water in Tanks and Pools—Fuel Needed to Heat Water

The amount of heat in anthracite coal varies from 12,000 to 14,000 B.T.U. per pound, but the average will be about 12,500 B.T.U., which is the amount we assume in these calculations.

When burning coal is Safford Water Heaters, about 70 per cent. of the heat generated can be transmitted to the water which is being circulated through the heater.

As shown in a previous paragraph it requires 833,000 B.T.U. to raise the temperature of 1000 gallons of water 100 degrees Fahrenheit.

If we transmit 70 per cent. of the value of the fuel to the water (and as 70 per cent. of 12,500 equals 8,750 B.T.U.) for every 1,000 gallons heated 100 degrees Fahrenheit, we must burn 95 pounds of coal.

GREENHOUSE HEATING

While Greenhouses may be satisfactorily heated with Steam, Hot Water is generally preferred because of its ability to store large quantities of heat, and in case the fires are neglected or go out, this stored heat is given off gradually, and by preventing a sudden fall in temperature protects the plants from injury.

Table of Amounts of Radiating Surface Necessary to Heat a Given Amount of Glass Exposure to Various Temperatures in Zero Weather.

Square Ft. of Glass Exposure	STEAM — No. of Square Feet of Radiation Required at					Square Ft. of Glass Exposure	HOT WATER — No. of Square Feet of Radiation Required at				
	40°	45°	50°	60°	70°		40°	45°	50°	60°	70°
25	2 7-9	3 1-8	3 4-7	4 1-6	5	25	4 1-6	5	6 1-4	7 1-7	8 1-3
50	5 5-9	6 1-4	7 1-7	8 1-3	10	50	8	10	13	14	16
75	8	9	10	13	15	75	13	15	19	21	25
100	11	13	14	17	20	100	17	20	25	29	33
200	23	25	30	33	40	200	33	40	50	57	67
300	34	38	43	50	60	300	50	60	75	86	100
400	45	50	57	67	80	400	67	80	100	114	133
500	56	63	72	83	100	500	83	100	125	143	167
1000	112	125	143	167	200	1000	167	200	250	286	333
2000	223	250	286	333	400	2000	333	400	500	572	667
3000	334	375	429	500	600	3000	500	600	750	857	1000
4000	445	500	571	667	800	4000	667	800	1000	1143	1333
5000	556	625	714	833	1000	5000	833	1000	1250	1429	1667
10000	1112	1250	1429	1667	2000	10000	1667	2000	2500	2857	3333
20000	2223	2500	2857	3333	4000	20000	3333	4000	5000	5714	6667

For poorly constructed houses add 10 per cent. to the above amounts.

For 10 degrees below zero multiply feet* radiation by 1.11. For 20 degrees below zero multiply feet* radiation by 1.23.

For 30 degrees below zero multiply feet* radiation by 1.35. For 40 degrees below zero multiply feet* radiation by 1.48.

Do not use Asphalt or Tar Paints in a Greenhouse. They will injure the plants. Paint pipes with lampblack and boiled oil thinned with turpentine.

A most important part of a greenhouse is its chimney. This should be of brick or tile and of ample size, and should never be less than twenty-five feet high.

PROPORTIONING RADIATION

Glass and Exposed Wall Rule—For Figuring Radiation for Heating with Hot Water—**FOR WATER**

SQUARE FEET EXPOSED GLASS

EXPOSED WALL SURFACE	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100
40	8	13	17	22	25	3;	35	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108
80	13	17	22	25	30	35	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114
120	17	22	25	30	35	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117
160	22	25	30	35	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122
200	25	30	35	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126
240	30	35	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130
280	35	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	109	114	117	122	126	130	134
320	38	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138
360	42	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142
400	47	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146
440	50	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150
480	55	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155
520	59	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162
560	64	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166
600	69	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171
640	72	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175
680	75	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180
720	80	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184
760	83	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184	189
800	88	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184	189	193
840	92	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184	189	193	197
880	97	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184	189	193	197	200
920	100	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184	189	193	197	200	205
960	105	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184	189	193	197	200	205	208
1000	108	114	117	122	126	130	134	138	142	146	150	155	162	166	171	175	180	184	189	193	197	200	205	208	213

Glass and Wall Rule—For Figuring Radiation for Heating with Direct Steam

SQUARE FEET EXPOSED GLASS

EXPOSED WALL SURFACE	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100
40	5	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65
80	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68
120	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70
160	13	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73
200	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75
240	18	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78
280	20	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80
320	23	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83
360	25	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85
400	28	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88
440	30	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90
480	33	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93
520	35	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95
560	38	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98
600	40	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100
640	43	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103
680	45	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105
720	48	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108
760	50	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108	110
800	53	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108	110	113
840	55	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108	110	113	115
880	58	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108	110	113	115	118
920	60	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108	110	113	115	118	120
960	63	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108	110	113	115	118	120	123
1000	65	68	70	73	75	78	80	83	85	88	90	93	95	98	100	103	105	108	110	113	115	118	120	123	125

DIRECTIONS.—Figure all exposed glass surface in each room. Figure all exposed wall surface in each room. (Where interior partitions are adjoining rooms in which no heat is placed, figure one-half of such partitions.) Having found these exposures look down the side until you come to the number of feet of exposed wall surface and then looking across to the number of feet of exposed glass in that column will give the number of feet of radiation required.

SAFETY VALVES

Low Pressure Pop Safety Valves

Plate 2681

The McAvity's Pop Safety Valve for house heating boilers is made for steam pressures up to 20 pounds. It is not merely a relief valve, but is designed to pop and give warning of excessive boiler pressure. Being a safety device the valve is manufactured with special care and is throughly dependable. The adjustment is exact, and it reseats within fraction of a pound of the pressure for which it is set, so that no undue waste of steam can occur.

The base of the valve is of heavy malleable iron which prevents the seat from being distorted in making connection with the boiler.

Every valve is set for the desired pressure, and after a thorough test is sealed in such manner as to do away with any chance of the regulation being tampered with.

Finished in polished brass.

Unless otherwise specified valve set to pop at 15 lbs. will be furnished.

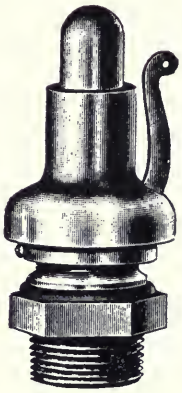


Plate 2682

Plate 2682—Is a strictly high-grade pop valve for pressure not to exceed 30 lbs. Made for House Heating Boilers only. The base is made in both Iron and Brass. The Iron base will be sent unless otherwise ordered.

Sizes	¾″	1″	1¼″	1½″	2″	2½″	3″
Plate 2681	$7.00	$8.00	$9.00	$10.00	$15.00	$40.00	$75.00

Sizes	¾″	1″	1¼″	1½″	2″	2½″	3″
Plate 2682	$7.00	$8.00	$9.00	$10.00	$15.00	$40.00	$75.00

"McAVITY'S MODEL 90

Boiler Feeder

With Gland and Packed Plug

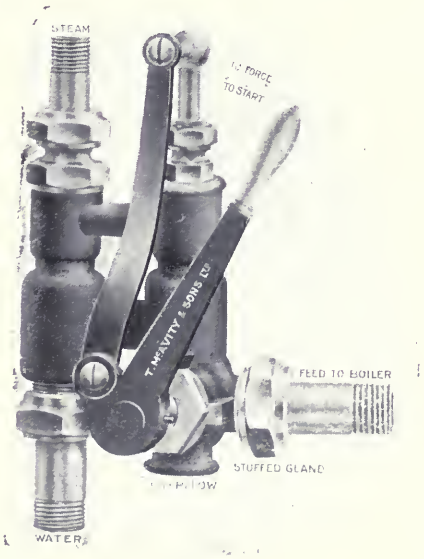


Plate 2683

PRICE LIST, CAPACITIES AND SIZE OF PIPE CONNECTIONS

Price List Adopted

Sizes	Prices Each	Pipe Connections		
		Steam	Suction and Delivery	Overflow
7½″	**$16.00**	⅜″	⅜″	¼″
8¾″	**18.00**	⅜″	½″	⅜″
10 ″	**20.00**	⅜″	½″	⅜″
12½″	**25.00**	½″	¾″	½″
15 ″	**30.00**	½″	¾″	½″
17½″	**40.00**	¾″	1 ″	¾″
20 ″	**45.00**	¾″	1 ″	¾″
22½″	**55.00**	1″	1¼″	1 ″
25 ″	**60.00**	1″	1¼″	1 ″
30 ″	**75.00**	1¼″	1½″	1¼″
35 ″	**90.00**	1¼″	1½″	1¼″
40 ″	**110.00**	1½″	2 ″	1½″
45 ″	**125.00**	1½″	2 ″	1½″

Capacity per Hr. with 60 Lbs. Steam Pressure	Horse-power	
	For the Ordinary Type of Boiler and Engine	On a Basis on 30 Lbs. Evaporations per H.P. per Hr.
60 gals.	4 to 6	5 to 8
90 "	6 to 8	8 to 15
120 "	8 to 15	15 to 25
220 "	15 to 30	25 to 35
300 "	30 to 40	35 to 60
420 "	40 to 60	60 to 75
540 "	60 to 75	70 to 100
720 "	75 to 90	100 to 130
900 "	90 to 120	130 to 175
1260 "	120 to 165	120 to 165
1740 "	165 to 230	235 to 300
2230 "	230 to 300	300 to 400
2800 "	300 to 375	400 to 500

McAVITY'S GAUGES

PRESSURE GAUGES—Single Spring

Plate 2691 Type S.P.

VACUUM GAUGES

Plate 2692 Type S.V.

Type SP

Service. For any pressure medium which will not deteriorate brass.

Construction. Made in Iron Case with Brass or Nickel Plated Ring and in Brass or Nickel Plated Deep or Shallow Case. The interior mechanism consists of a Single Ashcroft Spring and Standard Geared Movement. The connection is ⅛″ male bottom on the 2½″ size, and ¼″ male bottom on all larger sizes.

Graduation. Will be graduated to any pressure from 20 to 1,000 pounds. For higher pressures, see Hydraulic Gauge.

Type SV Vacuum

Service. For the indication of vacuum.

Construction. Made in Iron Case with Brass or Nickel Plated Ring and in Brass or Nickel Plated Deep or Shallow Case. The interior mechanism consists of a Single Ashcroft Spring —in reversed position—and Standard Geared Movement. The connection is ⅛″ male bottom on the 2½″ size and ¼″ male bottom on all larger sizes.

Graduation. Will be graduated to thirty inches of vacuum or, when specified, to equivalent pounds.

PRICES, EACH. TYPE SP AND SV.

Sizes Dial	2½″	3″	3½″	4½″	5″	5½″	6″	6¾″	8½″	10″	12″
Iron Case, Brass Ring, Each	$ 6.00	$ 6.00	$ 7.00	$ 8.00	$ 8.00	$10.00	$13.00	$16.00	$22.00	$32.00	$50.00
Iron Case, N. P. Ring, Each	6.15	6.15	7.18	8.20	8.20	10.25	13.50	16.60	22.75	33.00	51.50
Brass Case, Each	8.00	8.00	9.00	10.00	11.00	12.00	16.00	20.00	30.00	40.00	75.00
Nickel Plated Case, Each	8.60	8.60	9.75	11.00	12.00	13.25	17.50	22.00	32.50	43.00	79.00
Brass Deep Case, O. G. or Oct. Ring, Each	.....	.....	.....	.....	.....	.....	.....	23.00	33.50	44.00	80.00
Nickel Plated Deep Case, O. G or Oct. Ring, Each	.....	.....	.....	.....	.....	.....	.....	25.00	36.00	47.00	84.00

Prices include a T Handle Cock for sizes 3″ to 6¾″, inclusive; a Small Union Cock for sizes 8½″ and 10″ and a Large Union Cock for size 12″.

GAUGE GLASSES

Genuine Scotch Glass

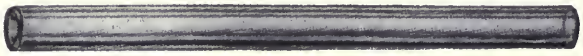


Plate 2701

Lenghts	10″	11″	12″	13″	14″	15″	16″	18″	20″	22″	24″	30″	36″	48″
½″–⅝″ Per Doz	$3.00	$3.24	$3.60	$3.84	$4.20	$4.44	$4.80	$5.40	$6.00	$6.60	$7.20	$9.00	$10.80	$14.52
¾″ Per Doz.	3.60	3.96	4.32	4.80	5.16	5.52	5.88	6.60	7.44	8.16	8.88	11.16	13.44	18.00
⅞″ Per Doz.	5.04	5.64	6.12	6.60	7.08	7.56	8.16	9.12	10.20	11.16	12.12	15.24	18.2	24.36
1″ Per Doz.	6.12	6.72	7.32	7.92	8.52	9.12	9.72	10.92	12.12	13.44	14.64	18.24	21.96	29.16

RUBBER WASHERS FOR GAUGE GLASSES

Gauge Glass Cutters
(Red Devil)

Plate 2702

Plate 2703

Plate 2704

Sizes Glass	½″	⅝″	¾″	⅞″	1″
Common, Per Dozen	$ .20	$ .25	$ .30	$ .40	$ .60

Plate 2703—Cuts ¼″ to 5″, each ..... $ .50

This simple little instrument will be found as effective in its results as any of the Gauge Glass Cutters costing five times its price.

WATER GAUGES

Expansion Tank

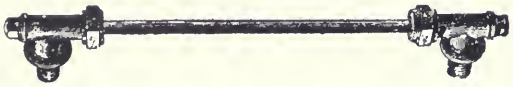


Plate 2705

EXPANSION TANK PLATES

Brass

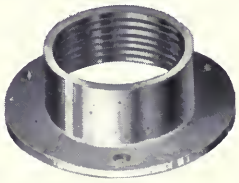


Plate 2706

Threaded for Iron Pipe	Size of Glass	Style	Price Without Glass	Price Each Complete
¼″ or ⅜″	⅝″	Rough	.....	$3.00

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″	1½″
Plate 2706—each	$1.75	$1.75	$2.00	$2.25	$2.50	$3.00	$4.00	$6.00

RADIATOR AIR VALVES

Plate 2711

Plate 2712

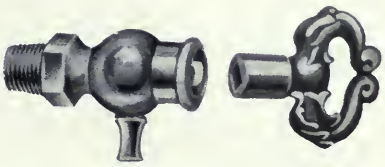


Plate 2713

Sizes	1/8"	1/4"
Plate 2711—Wood Wheel, each	$ .70	$ .75
Plate 2712—Metal Wheel, each	.70	.75
Plate 2713—Loose Key, each	.55	.60
Plate 2713—Extra Keys for each	.18	.18

RADIATOR AIR VALVES
Improved Automatic

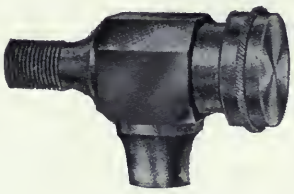


Plate 2714

Direction for Setting. Always open the valve by unscrewing the adjusting screw before placing on radiator or heating coil; after it becomes **hot,** set the screw down **lightly** until there is no escape of steam at outlet.

Screw cap on **tight** to prevent the valve being tampered with and it is ready to leave.

EXTRA HEAVY COMPRESSION LOOSE KEY
Government Pattern
(Cut is about half size)

Plate 2715

Price on application.

Sizes	1/8"	1/4"
Plate 2714—Finished and Nickel Plated.....Per Doz..	$7.50	$7.50

Plate 2716

CYLINDER RELIEF VALVES
Standard Brass

Also Made with Wood Wheel for Regulating

Sizes	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Plate 2716—each	$8.00	$10.00	$12.00	$15.00	$20.00	$30.00	$50.00	$100.00

For use on Pumps, Steam Engine Cylinders, Pipe Lines, Tanks, Hydraulic Presses and Elevators.

In ordering, state pressure at which valve is to open.

BOILER FITTINGS

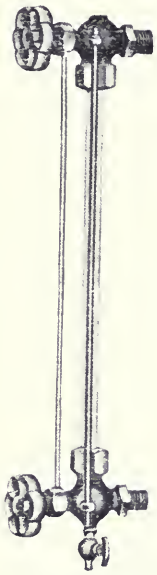


Plate 2721 No. 1 Rough Body Iron Wheel

WATER GAUGES

Plate	No.	Threaded for Iron Pipe	Size of Glass	Style	Number of Guards	Each
2721	1	⅜″ or ½″	⅝″	Iron Wheel, Rough	2	$3.00
2722	1½	½″	⅝″	Wood Wheel, Finished	2	7.50

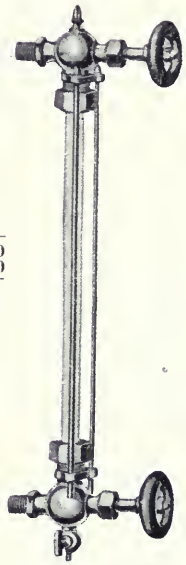


Plate 2722 No. 1½ Finished Body Wood Wheel.

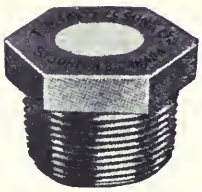


Plate 2723 Regular Length

FUSIBLE PLUG

Plate 2724 Extra Long Length

Sizes	⅜″	½″	¾″	1″	1¼″	1½″	2″
Plate 2723—Regular Length, Each	$ .50	$ .60	$ .75	$1.00	$1.50	$2.00	$3.00
Plate 2724—Extra Long Length, Each	.....	1.20	1.50	2.00	3.00	4.00	6.00

STEAM TRAPS

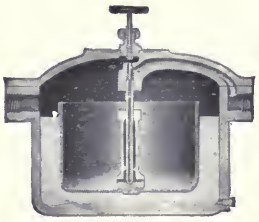


Plate 2725 Bucket Type

BUCKET TYPE

Suitable for Pressures 20 to 60 Lbs.

Numbers	1	2	3	4
Pipe Connection	¾″	1″	1¼″	1½″
Height	10″	12″	14½″	17″
Diameter	9½″	12″	14½″	17″
Draining Capacity 1″ Pipe, Feet	1,500′	2,500′	4,500′	6,000′
Each	$20.00	$28.00	$45.00	$65.00

IMPROVED TRAPS, FLOAT TYPE

***Regular Pressure Traps Suitable for Steam Pressures 1 to 125 Lbs. Low Pressure Traps Suitable for Steam Pressures 1 to 20 lbs. Extra Heavy Traps Suitable for Steam Pressures 125 to 200 Lbs.**

Numbers	12	13	14	15	16	17	18
Pipe Connections	½″	¾″	1″	1¼″	1½″	2″	2½″
Draining Capacity, 1″ Pipe	500′	1,500′	4,000′	8,000′	15,000′	20,000′	25,000′
Regular and Low Pressure, Each	$12.00	$18.00	$30.00	$40.00	$60.00	$80.00	$100.00
Extra Heavy, Each	.....	24.00	40.00	55.00	75.00	90.00	110.00

* When not otherwise ordered, Regular Pressure Traps will be sent. When extra Heavy Traps are ordered and pressure not stated, Traps will be sent suitable for 125 to 200 pounds pressure.

Water Gauges are furnished on all sizes except No. 12.

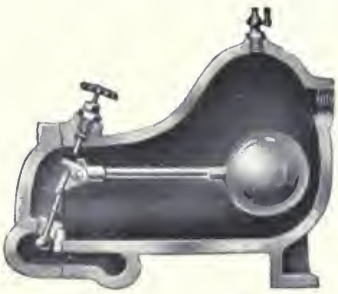


Plate 2726 Sectional View

"McSHANE" SIGHT-FEED LUBRICATORS

Patented

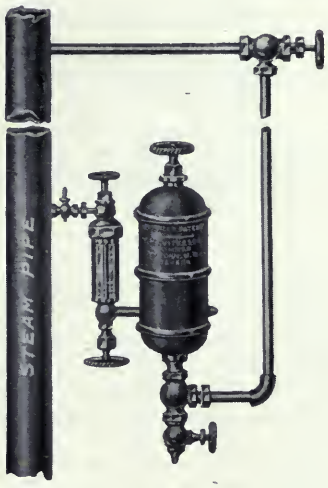


Plate 2731 Single Connection

Plate 2732 Double Connection

Numbers	3	4	5	6
Plate 2731—Single, Each	$16.00	$21.00	$28.00	$40.00
Plate—2732—Double Each	20.00	26.00	36.00	48.00
Capacity, Pints	½	1	2	4
Diam. of Engine Cylinder, Suitable for, Ins	10 to 18	18 to 30	30 and over	30 and over
Extra Glasses, 1¼" x 3⅛", Each	$ .50	$ .50	$ .50	$ .50

Can be supplied Nickel Plated at an extra price.

Can be fitted with an Oil Indicator at an extra price.

This Lubricator is manufactured particularly for the higher class of Engines.

The perfect details of this Lubricator are the result of long experience and careful study.

The Steam Heating Chamber within the Oil Reservoir is always filled with live Steam, causing the heaviest oil to feed freely and keep at a high temperature even in the coldest weather.

This Lubricator is a high grade device in every way, full finished, highly polished and has been used exclusively by a number of the largest engine builders in the country. Every Lubricator is tested and guaranteed perfect in workmanship and operation.

They are uniform in action and never fail when properly applied and operated.

They effect a saving in oil from 50 to 90 per cent over old methods, and the saving in wear of machinery by their use can hardly be estimated; but it is safe to say that in many cases the amount saved exceeds the cost of the Lubricator every three or four months.

Simplicity of construction. The Lubricator contains no piston, springs or plunger, and as the body is cast in one piece it will not get out of order, but with proper care should last a lifetime.

They are adapted to feed any clean oil, white or black, light or heavy.

They are so constructed as to entirely overcome pulsation, and a steady feed is always secured.

Supplied with either Single or Double Feed.

A feature of this, and all other "McAvity" Lubricators, is the extra large sight-feed glass, which enables the operator to see at a glance the flow of oil. This is a feature your engineer will appreciate. No condenser bulbs to freeze.

LUBRICATORS

"YOUNG CANADIAN"

Sight-Feed Lubricators

Plate 2741

The introduction of the "**Young Canadian**" **Sight-feed Lubricator** has worked an entire revolution in Lubricators and methods of oiling. By their use all wearing parts of the Engine, from Throttle-Valve down, receive just the quantity of oil, needed continuously while the Engine is working. The method of oiling by means of these Lubricators consists in introducing the oil, drop by drop, into the Steam Pipe, where it atomizes and mingles with the Steam and is carried to every part of the Valves and Cylinder, lubricating all parts reached by the steam.

The Sight-feed features, which shows the oil, drop by drop on its way to the parts to be lubricated, enables the Engineer to see at a glance how rapidly the oil is being fed, and by the use of the Feed Valve he can adjust the Lubricator to feed any quantity desired — even as low as one drop in five minutes. When the feed is once regulated it need not be changed until the oil is exhausted, though the Engine may be run a week.

Can be supplied Nickel Plated at an Extra Price.
Designed for Cylinders of less Diameter than 10″.

Size Iron Pipe Connection	⅜″
Plate 2741—Single Connection, Finished, each	**$12.00**
Plate 2742—Double Connection, Finished, each	**12.00**
Capacity, Pints	**1**
Extra Glasses, ¾″ x 2½″, each	**.25**

"McAVITY" SIGHT-FEED LUBRICATORS

Nickel Plated

The "**McAvity**" **Sight-Feed Lubricator** is a high-grate device in every way—full finished, nickel plated and highly polished with the sight-feed at its uppermost points—a direct flow of oil being always obtainable by simply adjusting the valve at the bottom of the Lubricator which extends through the body and is seated at the top.

It will work under light pressure, owing to the fact that the oil is always at the outlet and the feed can be regulated from the smallest drop to a continuous stream by simply adjusting the above mentioned valve at the bottom of the lubricator body.

It is especially adapted for outside use in changeable climates. For example: in the case of extreme cold, the steam circulates through the lubricator, warms the oil—and it can even be brought to a scalding heat. The lubricator can also be charged with non-freezing spirits in the sight-feed.

Directions

To fill the cup, close valves B and A, open D and remove plug E. When the water is all discharged, close the valve D and fill with oil at plug E. Then replace plug E and open valves B and A and regulate the drop or quantity of oil you wish to feed by the valve C. To fill the glass or sight-feed, remove plug on top of glass and fill with clear water, white spirits or white wine vinegar (the two latter will not freeze). If you fill the cup when steam is on,close valves A and B before removing plug.

Sizes Iron Pipe Thread	¼″ x ⅜″
Capacity, Pints	½
Plate 2742, each	$7.50
Extra Glasses, ¾″ x 1½″, each	.20

Plate 2742

STEAM TRAPS

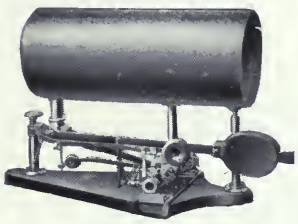


Plate 2751 Return Trap

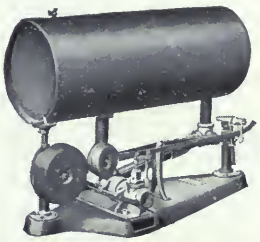


Plate 2752 Non-Return Trap

Sizes, Capacity and Weights Tilting Non-Return Steam Traps

Nos.	Inlet	Outlet	Capacity in Water Discharged per Hour	Drainage Capacity in 1″ Pipe Lineal	Capacity Square Feet Direct Radiation	Capacity Lineal Feet Hot Blast Heater	Weight
21	1 ″	1 ″	200 gal.	12,000′	3,000	1,300′	100
22	1¼″	1¼″	400 "	25,000′	5,200	2,400′	175
23	1½″	1½″	600 "	40,000′	12,000	5,200′	250
24	2 ″	2 ″	720 "	60,000′	21,000	9,000′	275
25	2½″	2½″	900 "	90,000′	33,000	16,000′	350
26	3 ″	3 ″	13,00 "	140,000′	50,000	50,00′	450

Tilting Return, Vacuum and Condenser Steam Traps

Nos.	Sizes of Drum	Size of Inlet and Outlet Connections	Size of Steam Pipe Connections	Capacity of Water in Lbs. per Hour	Drainage Capacity in Feet of 1″ Pipe Lineal	Capacity Square Feet Direct Radiation	Capacity Lineal Feet Hot Blast Heater	Weight
1	10″ x 24″	1 ″	1 ″	1,050′	5,000′	2,300	1,000′	100
2	12″ x 30″	1¼″	1 ″	1,850′	9,000′	4,000	1,800′	175
3	14″ x 36″	1½″	1¼″	4,000′	20,000′	9,000	4,000′	250
4	16″ x 40″	2 ″	1¼″	6,000′	35,000′	16,000	7,000′	275
5	18″ x 42″	2½″	2 ″	11,000′	50,000′	25,000	12,000′	350
6	18″ x 42″	3 ″	2 ″	15,000′	75,000′	40,000	18,000′	400

The above capacities are figured on a basis of 50 pounds pressure to the square inch. The above drainage capacity in inch pipe is based on ordinary radiating conditions. For lumber kilns, greenhouses and moist goods, divide by two. For laundries, brick dryers and wet goods, divide by three. For fan stacks and blowers, divide by five.

Note.—3′ of 1″ pipe equal one square foot of surface. 2.3′ of 1¼″ pipe equals one square foot of surface. 2′ of 1½″ pipe equal one square foot of surface. 1.61′ of 2″ pipe equals one square foot of surface.

Automatic Traps

Plate 2753 Condenser Trap

Condenser Trap

The Condenser Trap is a combination of the features of an Automatic Return Trap and the Jet of Spray Condenser. It is especially adapted to service on exhaust steam and reduced pressure heating, cooking and drying apparatus. The positive vacuum formed in the tank of the trap removes rapidly all condensation in the system, accelerates the travel of the steam and reduces the back pressure on the engine. It increases the circulation of the steam and the efficiency of the radiation, and reduces fuel bills, Made of Material especially adapted for the requirements of the service intended. Uses no automatic or vacuum valves on systems drained. Vacuum acts directly on surfaces drained. Wherever this trap has been installed it has unfailingly demonstrated its efficiency and superiority.

Prices upon request.

Receivers

Numbers	1	2
Length	30″	40″
Height	16″	20″
Diameter	10″	12″

Plate 2754 Furnished in Copper, Brass or other specified metals

No. 1 Receiver has capacity for Traps Nos. 1 and 2. No. 2 Receiver has capacity for Traps Nos. 3, 4, 5 and 6.

To compute the equivalent in 1″ pipe of any quantity of pipe of larger diameter, use the following table of equations:

Sizes of Pipe	1¼″	1½″	2″	2¼″	3″	3½″	4″	4½″	5″	6″	7″	8″
Equivalent of 1 Lineal ft. in 1″, each	**$1.26**	**$1.44**	**$1.81**	**$2.19**	**$2.66**	**$3.04**	**$3.42**	**$3.80**	**$4.23**	**$5.03**	**$5.80**	**$6.55**

Special Note.—Quotations on copper or brass tanks with bronze, brass, nickel, steel or cast iron fittings will be made on request.

CUSTOMS OF PIPE TRADE

All sales are contingent upon strikes, accidents and other delays unavoidable or beyond our control. All prices are subject to change without notice. All quotations are made for immediate acceptance unless otherwise stipulated.

Terms: Net cash in thirty days, unless otherwise agreed upon.

All claims for corrections, reductions or shortage must be made within ten days after receipt of goods.

All goods are guaranteed only so far as to replace any proving unsatisfactory.

No charges for labor or expenses for any cause are allowed against goods rejected.

Shippers are not responsible for goods lost or damaged in transit: the carriers must be held in such cases.

Orders should not be specified " same as last," but in detail.

Pipe is shipped in random lengths with threads and couplings (except extra and double extra strong, which are always " Plain Ends ", unless otherwise specified.

Extra charge is always made for pipe cut to specified lengths.

Pipe ordered cut to specified lengths, with couplings, is always measured to include couplings — i. e., " over all "— unless otherwise designated.

Pipe ordered cut to exact lengths is always furnished with ends threaded, unless otherwise specified — this does not apply to extra strong and double extra strong pipe.

Couplings are not furnished with pipe ordered cut to specified lengths, unless so stipulated.

Dimensions
Standard Wrought Iron Pipe

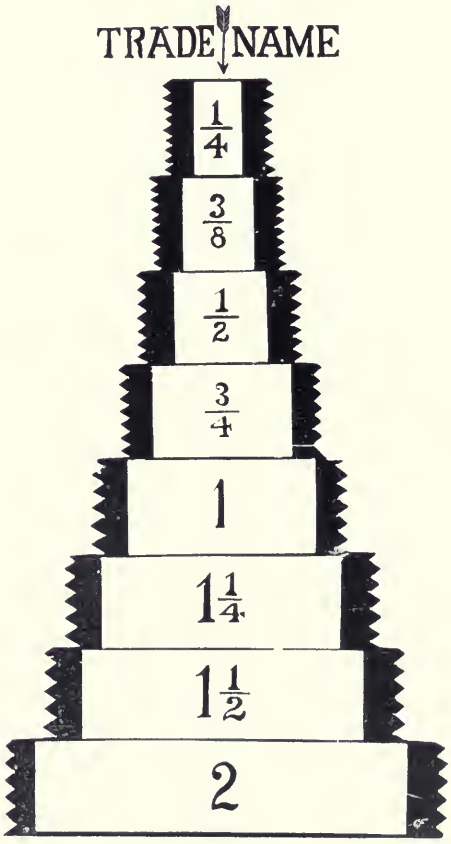


Plate 2761

The above cut represents a centre sectional view of wrought iron pipe from ¼″ to 1″, each pipe being ½″ long, showing actual inside and outside diameter of pipe size of threads, etc.

To those not versed in iron pipe sizes — and even gas-fitters are puzzled sometimes—this chart will come in handy when any doubt exists regarding drops in ceilings or walls, or when size of fittings is questioned; and if consulted there will be no excuse for anyone to order fittings for " ½″ iron pipe" when they really want ¼″ iron pipe, etc.

WROUGHT PIPE

STANDARD WROUGHT IRON PIPE

FOR STEAM, GAS AND WATER

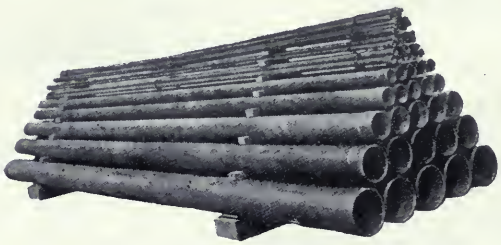


Plate 2771

BLACK AND GALVANIZED

Sizes	Diameters		Thickness	Weight per Foot		Threads per Inch
	External	Internal		Plain Ends	Threads and Couplings	
⅛"	.405	.269	.068	.244	.245	27
¼"	.540	.364	.088	.424	.425	18
⅜"	.675	.493	.091	.567	.568	18
½"	.840	.622	.109	.850	.852	14
¾"	1.050	.824	.113	1.130	1.134	14
1 "	1.315	1.049	.133	1.678	1.684	11½
1¼"	1.660	1.380	.140	2.272	2.281	11½
1½"	1.900	1.610	.145	2.717	2.731	11½
2 "	2.375	2.067	.154	3.652	3.678	11½
2½"	2.875	2.469	.203	5.793	5.819	8
3 "	3.500	3.068	.216	7.575	7.616	8
3½"	4.000	3.548	.226	9.109	9.202	8
4 "	4.500	4.026	.237	10.790	10.889	8
5 "	5.563	5.047	.258	14.617	14.810	8
6 "	6.625	6.065	.280	18.974	19.185	8
8 "	8.625	8.071	.277	24.696	25.000	8
8 "	8.625	7.981	.322	28.554	28.809	8
10 "	10.750	10.192	.279	31.201	32.000	8
10 "	10.750	10.136	.307	34.240	35.000	8
10 "	10.750	10.020	.365	40.483	41.132	8
11 "	11.750	11.000	.375	45.557	46.247	8
12 "	12.750	12.090	.330	43.773	45.000	8
12 "	12.750	12.000	.375	49.562	50 706	8
13 "	14.000	13.250	.375	54.568	55.824	8
14 "	15.000	14.250	.375	58.573	60.375	8
15 "	16.000	15.250	.375	62.597	64.500	8

All Weights and Dimensions Are Normal

EXTRA STRONG WROUGHT IRON PIPE

Black and Galvanized

Sizes	Diameters		Thickne s	Weight per Foot Plain Ends
	External	Internal		
⅛"	.405	.215	.095	.314
¼"	.540	.302	.119	.535
⅜"	.675	.423	.126	.738
½"	.840	.546	.147	1.087
¾"	1.050	.742	.154	1.473
1 "	1.315	.957	.179	2.171
1¼"	1.660	1.278	.191	2.996
1½"	1.900	1.500	.200	3.631
2 "	2.375	1.939	.218	5.022
2½"	2.875	2.323	.276	7.661
3 "	3.500	2.900	.300	10.252
3½"	4.000	3.364	.318	12.505
4 "	4.500	3.826	.367	14.983
5 "	4.563	4.813	.375	20.778
6 "	6.625	5.761	.432	28.573
8 "	8.625	7.625	.500	43.388
10 "	10.750	9.750	.500	54.735
11 "	11.750	10.750	.500	60.075
12 "	12.750	11.750	.500	65.415

DOUBLE EXTRA STRONG PIPE

Black and Galvanized

Sizes	Diameters		Thickness	Weight per Foot Plain Ends
	External	Internal		
½"	.840	.252	.294	1.714
¾"	1.050	.434	.308	2.440
1 "	1.315	.599	.358	3.659
1¼"	1.660	.896	.382	5.214
1½"	1.900	1.100	.400	6.408
2 "	2.375	1.503	.436	9.029
2½"	2.875	1.771	.552	13.695
3 "	3.500	2.300	.600	18.583
3½"	4.000	2.728	.636	22.850
4 "	4.500	3.152	.674	27.541
5 "	5.563	4.063	.750	38.552
6 "	6.625	4.879	.864	53.160
8 "	8.625	6.875	.875	72.424

All Weights and Dimensions are Normal

WROUGHT IRON PIPE

Cut to order

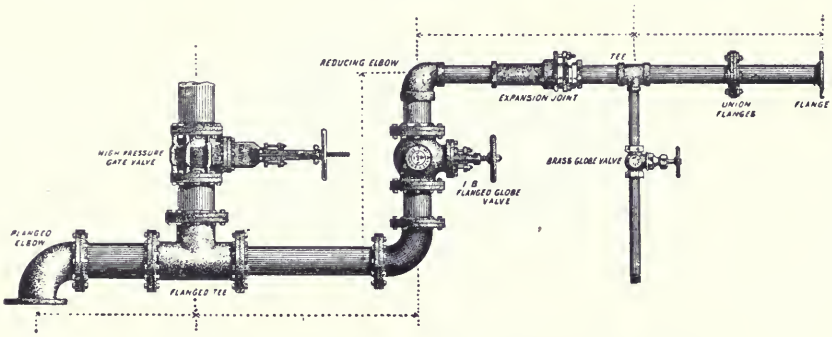


Plate 2781. Diagram Showing Valves and Fittings.

We make a specialty of cutting and threading pipe and fitting up in accordance with your specifications. In sending sketches kindly give centre to centre measurements showing size of pipe and fittings required. It is also necessary to know for what purpose the pipe is to be used and the pressure required to stand.

Orders or inquiries covering cut lengths of any size should specify whether plain ends, threads only, threads and couplings, or flanges are required. A separate charge is made for couplings or flanges, either loose or screwed on pipe, when pipe is ordered cut to specified lengths.

PRICE LIST OF STANDARD THREADS FOR WROUGHT IRON PIPE

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″
Price Per Thread	$ .20	$ .20	$ .20	$ .25	$ .25	$ .30	$ .30
Sizes	1½″	2″	2½″	3″	3½″	4″	..
Price Per Thread	$ .50	$ .60	$ .80	$ .80	$1.00	$1.50	....
Sizes	5″	6″	..	8″	..	10″	12″
Price Per Thread	$2.00	$2.50	....	$4.00	....	$5.50	$7.50

USEFUL INFORMATION

Capacity of Pipe

(Without Pressure)

Sizes	One Foot in Length		
	Cu. Ft.	U.S. Gal.	Imp. Gal.
¼″	.0003	.0025	.0021
⅜″	.0008	.0057	.0048
½″	.0014	.0102	.0085
¾″	.0031	.0230	.0192
1 ″	.0055	.0408	.034
1¼″	.0085	.0638	.0532
1½″	.0123	.0918	.077
2 ″	.0218	.1632	.136
2½″	.0341	.2550	.213
3 ″	.0491	.3672	.306
3½″	.0668	.4998	.417
4 ″	.0873	.6528	.544
5 ″	.1364	1.020	.85
6 ″	.1963	1.469	1.22
8 ″	.3491	2.611	2.176
10 ″	.5454	4.080	3.4
12 ″	.7854	5.875	4.896

SQUARE FEET HEATING SURFACE

In one hundred feet of Iron Pipe

Pipe	Sq. Ft.	Pipe	Sq. Ft.
1¼″	34.43	3½″	104.72
1¼″	43.30	4 ″	117.81
1½″	49.75	.....	.....
2 ″	62.17	5 ″	145.64
2½″	75.26	6 ″	173.44
3 ″	91.63	.....	.....

STANDARD WROUGHT NIPPLES

Plate 2791 Close

Plate 2792 Short Shoulder or Space

Plate 2793 Long

Table of Sizes and Lengths Kept in Stock

Length						Sizes	Prices		Prices of Extra Long Nipples								
*Close	*Short	Long					Close or Short	Long	4″	5″	6″	7″	8″	9″	10″	11″	12″
¾″	1½″	2″	2½″	3″	3½″	⅛″	$ .04	$ .06	$ .07	$ .08	$ .10	$ .12	$ .14	$ .15	$ .17	$ .18	$ .19
⅞″	1½″	2″	2½″	3″	3½″	¼″	.04	.06	.07	.08	.10	.12	.14	.15	.17	.18	.19
1″	1½″	2″	2½″	3″	3½″	⅜″	.04	.06	.07	.08	.10	.12	.14	.15	.17	.18	.19
1⅛″	1½″	2″	2½″	3″	3½″	½″	.05	.07	.08	.10	.12	.14	.16	.18	.20	.22	.23
1⅜″	2″	2½″	3″	3½″	4	¾″	.06	.09	.....	.11	.13	.17	.18	.20	.22	.24	.26
1½″	2″	2½″	3″	3½″	4″	1″	.08	.13	.....	.15	.18	.23	.25	.28	.31	.34	.36
1⅝″	2½″	3″	3½″	4″	4½″	1¼″	.11	.17	.....	.20	.24	.29	.33	.36	.40	.44	.47
1¾″	2½″	3″	3½″	4″	4½″	1½″	.13	.20	.....	.25	.29	.36	.40	.45	.50	.54	.59
2″	2½″	3″	3½″	4″	4½″	2″	.18	.27	.....	.32	.38	.50	.54	.59	.65	.72	.77
2½″	3″	3½″	4″	4½″	5″	2½″	.39	.59	.....	.....	.68	.90	.97	1.06	1.17	1.26	1.35
2⅝″	3″	3½″	4″	4½″	5″	3″	.48	.72	.....	.....	.85	1.08	1.20	1.33	1.45	1.58	1.70
2¾″	4″	4½″	5″	5½″	6″	3½″	.75	1.05	.....	.....	.....	1.30	1.45	1.60	1.75	1.90	2.05
2⅞″	4″	4½″	5″	5½″	6″	4″	.85	1.20	.....	.....	.....	1.52	1.69	1.87	2.05	2.22	2.40
3″	4½″	5″	5½″	6″	6½″	5″	1.55	2.45	.....	.....	.....	2.58	2.83	3.10	3.35	3.60	3.85
3⅛″	4½″	5″	5½″	6″	6½″	6″	1.85	2.90	.....	.....	.....	3.05	3.35	3.70	4.00	4.30	4.65
3½″	5″	.....	.....	.....	.....	8″	3.55	.....	.....	.....	4.05	4.55	5.05	5.50	6.00	6.50	7.00
3⅞″	5″	.....	.....	.....	.....	10″	6.75	.....	.....	.....	.....	.....	8.25	8.90	9.70	10.40	11.15
4½″	.....	.....	.....	.....	.....	12″	8.00	.....	.....	.....	.....	.....	10.00	10.80	11.75	12.70	13.65

*These lengths conform to the Manufacturers' Standard.

Nipples made to order from extra strong pipe at double above list.

Nipples longer than 12″, made to order and charged as cut pipe, and Threads extra.

Plate 2794 Close

Plate 2795 Short Shoulder or Space

Plate 2796 Long

Galvanized—Right Hand

Table of Sizes and Lengths

Length						Sizes	Prices		Prices of Extra Long Nipples								
*Close	*Short	Long					Close or Short	Long	4″	5″	6″	7″	8″	9″	10″	11″	12″
¾″	1½″	2″	2½″	3″	3½″	⅛″	$ .06	$ .11	$ .12	$ .15	$ .17	$ .21	$ .24	$ .26	$ .29	$ .31	$ .34
⅞″	1½″	2″	2½″	3″	3½″	¼″	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34
1″	1½″	2″	2½″	3″	3½″	⅜″	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34
1⅛″	1½″	2″	2½″	3″	3½″	½″	.06	.11	.13	.16	.18	.23	.26	.28	.31	.33	.36
1⅜″	2″	2½″	3″	3½″	4″	¾″	.08	.14	.....	.18	.21	.26	.29	.32	.35	.38	.41
1½″	2″	2½″	3″	3½″	4″	1″	.11	.19	.....	.24	.28	.34	.38	.42	.47	.51	.55
1⅝″	2½″	3″	3½″	4″	4½″	1¼″	.17	.29	.....	.32	.38	.45	.51	.57	.63	.69	.75
1¾″	2½″	3″	3½″	4″	4½″	1½″	.21	.35	.....	.39	.46	.55	.63	.70	.77	.84	.91
2″	2½″	3″	3½″	4″	4½″	2″	.27	.47	.....	.52	.61	.74	.83	.93	1.03	1.13	1.23
2½″	3″	3½″	4″	4½″	5″	2½″	.56	.86	.....	.....	1.00	1.26	1.41	1.56	1.71	1.86	2.01
2⅝″	3″	3½″	4″	4½″	5″	3″	.70	1.10	.....	.....	1.30	1.60	1.80	2.00	2.20	2.40	2.60
2¾″	4″	4½″	5″	5½″	6″	3½″	1.20	1.70	.....	.....	.....	2.10	2.35	2.60	2.85	3.15	3.40
2⅞″	4″	4½″	5″	5½″	6″	4″	1.35	1.87	.....	.....	.....	2.30	2.60	2.90	3.20	3.50	3.80
3″	4½″	5″	5½″	6″	6½″	5″	2.30	3.15	.....	.....	.....	3.75	4.20	4.60	5.00	5.40	5.85
3⅛″	4½″	5″	5½″	6″	6½″	6″	2.80	4.25	.....	.....	.....	4.50	5.00	5.55	6.05	6.60	7.15
3½″	5″	.....	.....	.....	.....	8″	5.00	.....	.....	.....	5.80	6.65	7.50	8.35	9.25	10.10	10.95

*These lengths conform to the Manufacturers' Standard.

STANDARD WROUGHT NIPPLES

Plate 2801

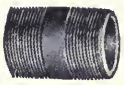


Plate 2802

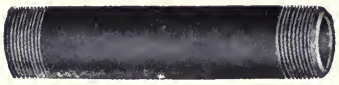


Plate 2803

PLAIN—RIGHT AND LEFT

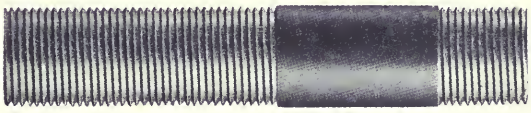
TABLE OF SIZES AND LENGTHS

Length						Sizes	Prices		Prices of Extra Long Nipples								
									Inches								
Close	Short	Long					Close or Short	Long	4″	5″	6″	7″	8″	9″	10″	11″	12
¾″	1½″	2″	2½″	3″	3½″	⅛″	$ .05	$ .08	$ .09	$ .11	$ .13	$ .16	$ .18	$ .20	$.23	$ .25	$ .27
⅞″	1½″	2″	2½″	3″	3½″	¼″	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27
1″	1½″	2″	2½″	3″	3½″	⅜″	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27
1⅛″	1½″	2″	2½″	3″	3½″	½″	.07	.10	.11	.13	.16	.18	.21	.24	.27	.29	.31
1⅜″	2″	2½″	3″	3½″	4″	¾″	.08	.12	.....	.15	.17	.23	.25	.27	.29	.32	.35
1½″	2″	2½″	3″	3½″	4″	1″	.11	.18	.....	.20	.24	.31	.33	.37	.41	.45	.48
1⅝″	2½″	3″	3½″	4″	4½″	1¼″	.15	.23	.....	.27	.32	.39	.45	.50	.55	.60	.65
1¾″	2½″	3″	3½″	4″	4½″	1½″	.18	.27	.....	.34	.39	.48	.52	.60	.67	.72	.80
2″	2½″	3″	3½″	4″	4½″	2″	.24	.36	.....	.43	.51	.67	.72	.80	.87	.96	1.03
2½″	3″	3½″	4″	4½″	5″	2½″	.52	.79	.....	.....	.91	1.20	1.30	1.40	1.55	1.68	1.80
2½″	3″	3½″	4″	4½″	5″	3″	.65	.90	.....	.....	1.13	1.44	1.60	1.77	1.93	2.10	2.27
2¾″	4″	4½″	5″	5½″	6″	3½″	1.00	1.40	.....	.....	.....	1.75	1.95	2.15	2.35	2.55	2.75
3″	4″	4½″	5″	5½″	6″	4″	1.15	1.60	.....	.....	.....	2.00	2.25	2.50	2.75	3.00	3.25

Add 60% to above lists for Galvanized R. and L. Nipples.

LOCK-NUT OR TANK NIPPLES

BLACK



GALVANIZED

Plate 2804 Lock Nut or Tank Nipple

BLACK

NOT OVER SIX INCHES LONG

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plate 2804—Each	$ .50	$ .50	$ .55	$ .65	$ .70	$ .90	$ .95	$ 1.10	$ 1.50	$ 1.75

GALVANIZED

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Galvanized, Each	$ .65	$ .65	$ .75	$ .80	$ 1.00	$ 1.15	$ 1.25	$ 1.45	$ 2.10	$ 2.50

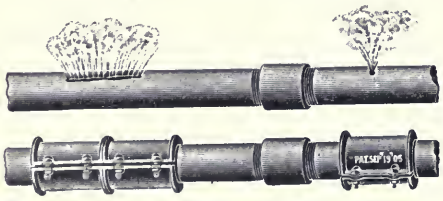


Plate 2805

"VULCAN" PIPE CLAMP

The vulcan Pipe Clamp is very simple. Its consists of a malleable iron cylinder divided in halves—the halves hinged along one side and fitted with tightening bolts on the other.

When a leak appears, place a strip of packing over it, apply and tighten the clamp. It is a permanent repair 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.

Sizes of pipe, inches	½	¾	1	1¼	1½	2	2½	3	3½	4
Length over all	3¼	3¼	3½	3¾	4	4¼	4½	5	5½	6
Price Each	$ .80	$ .90	$1.00	$1.20	$1.40	$1.60	$2.00	$2.50	$3.00	$4.00

Standard Weight

CAST IRON SCREWED FITTINGS

125 Pounds Working Pressure

ELBOWS 45°

Plate 2811 Straight

Plate 2812 Reducing

Plate 2813

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"
Plate 2811—R. H. Each	$ .05	$ .05	$ .06	$ .08	$ .10½	$ .16	$ .20	$ .28	$ .50
" 2811—R. & L., Each	.06	.06	.07	.09	.12	.18	.23	.32	.60
" 2812—Red. Each	.06	.06	.07	.09	.12	.18	.23	.32	.60
" 2813—Each	.06	.06	.07	.10	.12	.19	.24	.34	.60

Sizes	3"	3½"	4"	5"	6"	8"	10"	12"
Plate 2811—R. H., Each	$ .75	$1.05	$1.20	$2.00	$2.75	$6.75	$13.50	$20.00
" 2812—R. & L., Each	.85	.....	.....	.....	.....	.....	.....	.....
" 2812—Red. Each	.85	1.20	1.40	2.30	3.15	7.75	15.50	23.00
" 2813—Each	.90	1.25	1.45	2.50	3.45	8.50	17.00	25.00

For elbows tapped left hand use Right and Left Elbow List.
Right and Left Hand Elbows have ribs on the band of the end that is tapped left hand.
22½°, 30° or 60° Elbows, made to order.

STRAIGHT TEES

Plate 2814 Straight

REDUCING TEES

Plate 2815 Reducing

STRAIGHT CROSSES

Plate 2816 Straight

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Plate 2814—Each	$ .08	$ .08	$ .09	$ .12	$ .15	$ .23	$ .29	$ .41	$ .73	$ 1.10
" 2815— "	.00	.09	.10	.14	.17	.27	.33	.47	.83	1.25
" 2816— "	.00	.15	.16	.22	.27	.42	.53	.75	1.30	2.00

Sizes	3½"	4"	5"	6"	8"	10"	12"
Plate 2814—Each	$1.50	$1.75	$3.00	$4.00	$9.75	$19.50	$29.00
" 2815— "	1.75	2.00	3.50	4.60	11.25	22.50	33.50
" 2816— "	2.70	3.15	5.50	7.25	17.50	35.50	52.50

The largest opening of reducing fittings determines the list price.
For list of standard sizes see page 283.
Customers when ordering R & L Tees must state which opening is to be tapped left hand.
R and L Tees made to order only, at a special price.

REDUCING CROSSES

Plate 2817 Reducing

STRAIGHT AND REDUCING Y-BRANCH

Plate 2818 Straight

Plate 2819 Reducing Coupling

Sizes	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"	12"
Plate 2817—Each	$ .18	$ .25	$ .30	$ .46	$ .60	$ .83	$1.45	$2.20	$3.00	$3.50	$6.00	$8.00	$19.25	$38.50	$58.00

Sizes	2½"	3"	3½"	4"	5"	6"	8"	10"	12"
Plate 2818—Each	$1.66	$2.50	$3.50	$4.00	$7.00	$9.20	$22.50	$45.00	$67.00
Reducing, Each	1.90	2.90	4.00	4.60	8.00	10.60	26.00	51.75	77.00
Plate 2819—*Each	.....	.....	.....	.....	2.00	2.70	6.75	10.00	15.00

The largest opening of Reducing Fittings determines the list price.
*Sizes smaller than 4½", furnished in Malleable, see page 292.

CAST IRON FITTINGS

STANDARD WEIGHT

CAST IRON SCREWED FITTINGS

125 pounds working pressure

All cast iron screwed fittings are chamfered, which prevents the threads being damaged, and permits an easy entrance of the pipe. This feature will be appreciated by pipe fitters who have had trouble with battered threads.

These fittings are of good design and weight, and are suitable for steam working pressures up to 125 pounds or water working pressures to 175 pounds.

Where there is danger of shocks or water hammer we recommend the use of extra heavy fittings.

We do not recommend the use of screwed fittings above six inch as flanged fittings are more suitable for the larger sizes.

Our cast iron fittings are made from a superior grade "World" process iron of high tensile strength.

Our fully equipped laboratory, which makes daily chemical and physical tests, assures a uniform product.

Our improved tapping machinery assures full threads, true to gauge, and in perfect alignment.

All of our cast iron fittings are carefully inspected for defects of any nature before leaving the factory.

LIST OF STANDARD SIZES

CAST IRON SCREWED FITTINGS

90° ELBOWS—STRAIGHT AND REDUCING

Sizes	Sizes	Sizes	Sizes	Sizes
¼" x ¼"	1¼" x 1¼"	2" x ¾"	3½" x 2½"	5" x 2½"
⅜" x ⅜"	1¼" x 1"	2½" x 2½"	3½" x 2"	6" x 6"
⅜" x ¼"	1¼" x ¾"	2½" x 2"	4" x 4"	6" x 5"
½" x ½"	1¼" x ½"	2½" x 1½"	4 x 3½"	6" x 4"
½" x ⅜"	1¼" x ⅜"	2½" x 1¼"	4" x 3"	
½" x ¼"	1½" x 1½"	2½" x 1"	4" x 2½"	8" x 8"
¾" x ¾"	1½" x 1¼"	3" x 3"	4" x 2"	
¾" x ½"	1½" x 1"	3" x 2½"		8" x 7"
¾" x ⅜"	1½" x ¾"	3" x 2"		8" x 6"
1" x 1"	2" x 2"	3" x 1½"	5" x 5"	
1" x ¾"	2" x 1½"	3" x 1¼"	5" x 4½"	10" x 10"
1" x ½"	2" x 1¼"	3½" x 3½"	5" x 4"	10" x 8"
1" x ⅜"	2" x 1 "	3½" x 3"	5" x 3"	12" x 12"

45° ELBOWS

⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"
4"	4½"	5"	6"	7"	8"	9"	10"	12 "	.....

90° ELBOWS—RIGHT AND LEFT

¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"

REDUCING COUPLINGS

	5" x 3"	6" x 4"	6" x 2"	8" x 4"
5" x 4½"	5" x 2½"	6" x 3½"		10" x 8"
5" x 4"	5" x 2"	6" x 3"	8" x 7"	10" x 6"
5" x 3½"	6" x 5"	6" x 2½"	8" x 6"	12" x 10"

ECCENTRIC COUPLINGS

1¼" x 1"	2½" x 2"	3½" x 2"	5" x 4"	6" x 3"
1¼" x ¾"	2½" x 1½"	3½" x 1¼"	5" x 3½"	6" x 2½"
1½" x 1¼"	2½" x 1¼"	4" x 3½"	5" x 3"	
1½" x 1"	3" x 2½"	4" x 3"	5" x 2½"	
2" x 1½"	3" x 2"	4" x 2½"	5" x 2"	8" x 6"
2" x 1¼"	3" x 1½"	4" x 2"	6" x 5"	8" x 5"
2" x 1"	3½" x 3"		6" x 4"	.....
2" x ¾"	3½" x 2½"	5" x 4½"	6" x 3½"	.....

CAST IRON FITTINGS

List of Standard Sizes

CAST IRON SCREWED FITTINGS

Plate 2831

TEES

Plate 2832

In describing Tees, the run is first named, then the outlet.

Thus, 2" T 1½" is read 2" x 1½" x 1¼"
1¼"

Sizes	Sizes	Sizes	Sizes	Sizes
¼" x ¼" x ¼"	1½" x ¾" x 1½"	2½" x 1½" x 1¼"	3½" x 1¼" x 3½"	5" x 3" x 3"
⅜" x ⅜" x ⅜"	1½" x ¾" x 1¼"	2½" x 1½" x 1"	3½" x 1" x 3½"	5" x 3" x 2½"
⅜" x ⅜" x ¼"	1½" x ¾" x 1"	2½" x 1¼" x 2½"	3" x 3" x 3½"	5" x 3" x 2"
½" x ½" x ½"	1½" x ¾" x ¾"	2½" x 1¼" x 2"	4" x 4" x 4"	5" x 2½" x 5"
½" x ½" x ⅜"	1½" x ½" x 1½"	2½" x 1¼" x 1½"	4" x 4" x 3½"	5" x 2½" x 4"
½" x ½" x ¼"	1½" x ½" x 1¼"	2½" x 1" x 2½"	4" x 4" x 3"	5" x 2½" x 3"
½" x ⅜" x ½"	1½" x ⅜" x 1½"	2½" x 1" x 2"	4" x 4" x 2½"	5" x 2" x 5"
½" x ⅜" x ⅜"	1¼" x 1¼" x 1½"	2½" x ¾" x 2½"	4" x 4" x 2"	5" x 1¼" x 5"
⅜" x ⅜" x ½"	1¼" x 1" x 1½"	2½" x ½" x 2½"	4" x 4" x 1½"	4" x 4" x 5"
¾" x ¾" x ¾"	1¼" x ¾" x 1½"	2" x 2" x 2½"	4" x 4" x 1¼"	6" x 6" x 6"
¾" x ¾" x ½"	1¼" x ½" x 1½"	2" x 1½" x 2½"	4" x 4" x 1"	6" x 6" x 5"
¾" x ¾" x ⅜"	1" x 1" x 1½"	2" x 1¼" x 2½"	4" x 4" x ¾"	6" x 6" x 4"
¾" x ¾" x ¼"	1" x ¾" x 1½"	2" x 1" x 2½"	4" x 3½" x 4"	6" x 6" x 3½"
¾" x ½" x ¾"	¾" x ¾" x 1½"	2" x ¾" x 2½"	4" x 3½" x 3½"	6" x 6" x 3"
½" x ½" x ½"	2" x 2" x 2"	1½" x 1½" x 2½"	4" x 3½" x 3"	6" x 6" x 2½"
¾" x ⅜" x ¾"	2" x 2" x 1½"	1½" x 1¼" x 2½"	4" x 3½" x 2½"	6" x 6" x 2"
¾" x ⅜" x ⅜"	2" x 2" x 1¼"	1½" x 1" x 2½"	4" x 3½" x 2"	6" x 6" x 1½
¾" x ¼" x ¾"	2" x 2" x 1"	3" x 3" x 3"	4" x 3½" x 1½"	6" x 6" x 1¼"
½" x ½" x ¾"	2" x 2" x ¾"	3" x 3" x 2½"	4" x 3½" x 1¼"	6" x 6" x 1"
1" x 1" x 1"	2" x 2" x ½"	3" x 3" x 2"	4" x 3½" x 1"	6" x 5" x 6"
1" x 1" x ¾"	2" x 2" x ¼"	3" x 3" x 1½"	4" x 3" x 4"	6" x 5" x 5"
1" x 1" x ½"	2" x 1½" x 2"	3" x 3" x 1¼"	4" x 3" x 3½"	6" x 5" x 4"
1" x 1" x ⅜"	2" x 1½" x 1½"	3" x 3" x 1"	4" x 3" x 3"	6" x 5" x 3½"
1" x 1" x ¼"	2" x 1½" x 1¼"	3" x 3" x ¾"	4" x 3" x 2½"	6" x 5" x 3"
1" x ¾" x 1"	2" x 1½" x 1"	3" x 3" x ½"	4" x 3" x 2"	6" x 5" x 2½"
1" x ¾" x ¾"	2" x 1½" x ¾"	3" x 2½" x 3"	4" x 3" x 1½"	6" x 5" x 1½"
1" x ¾" x ½"	2" x 1½" x ½"	3" x 2½" x 2½"	4" x 3" x 1¼"	6" x 4" x 6"
1" x ½" x 1"	2" x 1¼" x 2"	3" x 2½" x 2"	4" x 3" x 1"	6" x 4" x 4"
1" x ½" x ¾"	2" x 1¼" x 1½"	3" x 2½" x 1½"	4" x 3" x ¾"	6" x 4" x 3"
1" x ½" x ½"	2" x 1¼" x 1¼"	3" x 2½" x 1¼"	4" x 2½" x 4"	6" x 3" x 6"
1" x ⅜" x 1"	2" x 1¼" x 1"	3" x 2½" x 1"	4" x 2½" x 3½"	6" x 2½" x 6"
1" x ¼" x 1"	2" x 1¼" x ¾"	3" x 2½" x ¾"	4" x 2½" x 3"	6" x 2" x 6"
¾" x ¾" x 1"	2" x 1" x 2"	3" x 2" x 3"	4" x 2½" x 2½"	5" x 5" x 6"
¾" x ½" x 1"	2" x 1" x 1½"	3" x 2" x 2½"	4" x 2½" x 2"	5" x 3½" x 6"
½" x ½" x 1"	2" x 1" x 1¼"	3" x 2" x 2"	4" x 2½" x 1½"	4" x 4" x 6"
1¼" x 1¼" x 1¼"	2" x 1" x 1"	3" x 2" x 1½"	4" x 2½" x 1¼"	8" x 8" x 8"
1¼" x 1¼" x 1"	2" x 1" x ¾"	3" x 2" x 1¼"	4" x 2½" x 1"	8" x 8" x 6"
1¼" x 1¼" x ¾"	2" x ¾" x 2"	3" x 2" x 1"	4" x 2" x 4"	8" x 8" x 5"
1¼" x 1¼" x ½"	2" x ¾" x 1½"	3" x 1½" x 3"	4" x 2" x 3"	8" x 8" x 4"
1¼" x 1¼" x ⅜"	2" x ½" x 2"	3" x 1½" x 2½"	4" x 2" x 2½"	8" x 8" x 3½"
1¼" x 1¼" x ¼"	2" x ½" x 1½"	3" x 1½" x 2"	4" x 2" x 2"	8" x 8" x 3"
1¼" x 1" x 1¼"	2" x ¼" x 2"	3" x 1¼" x 3"	4" x 1½" x 4"	8" x 8" x 2½"
1¼" x 1" x 1"	1½" x 1½" x 2"	3" x 1" x 3"	4" x 1¼" x 4"	8 x 8" x 2"
1¼" x 1" x ¾"	1½" x 1¼" x 2"	2½" x 2½" x 3"	4" x 1" x 4"	8 x 8" x 1½"
1¼" x 1" x ½"	1½" x 1" x 2"	2½" x 2" x 3"	3½" x 3½" x 4"	8' x 8" x 1¼"
1¼" x ¾" x 1¼"	1½" x ¾" x 2"	2½" x 1½" x 3"	3" x 3" x 4"	8" x 6" x 8"
1¼" x ¾" x 1"	1¼" x 1¼" x 2"	2" x 2" x 3"	2½" x 2½" x 4"	8" x 6" x 6"
1¼" x ¾" x ¾"	1¼" x 1" x 2"	3½" x 3½" x 3½"	2" x 2" x 4"	8" x 5" x 8"
1¼" x ½" x 1¼"	1¼" x ¾" x 2"	3½" x 3½" x 3"	5" x 5" x 5"	8" x 5" x 5"
1¼" x ½" x 1"	1" x 1" x 2"	3½" x 3½" x 2½"	5" x 5" x 4"	8" x 4" x 8"
1¼" x ¼" x 1¼"	1" x ¾" x 2"	3½" x 3½" x 2"	5" x 5" x 3½"	8" x 4" x 6"
1" x 1" x 1¼"	¾" x ¾" x 2"	3½" x 3½" x 1½"	5" x 5" x 3"	6" x 6" x 8"
1" x ¾" x 1¼"	2½" x 2½" x 2½"	3½" x 3½" x 1¼"	5" x 5" x 2½"	10" x 10" x 10"
¾" x ¾" x 1¼"	2½" x 2½" x 2"	3½" x 3½" x 1"	5" x 5" x 1¼"	10" x 10" x 8"
1½" x 1½" x 1½"	2½" x 2½" x 1½"	3½" x 3½" x ¾"	5" x 5" x 1½"	10" x 10" x 6"
1½" x 1½" x 1¼"	2½" x 2½" x 1¼"	3½" x 3" x 3½"	5" x 5" x 1¼"	10" x 10" x 5"
1½" x 1½" x 1"	2½" x 2½" x 1"	3½" x 3" x 3"	5" x 5" x 1"	10" x 10" x 4"
1½" x 1½" x ¾"	2½" x 2½" x ¾"	3½" x 3" x 2½"	5" x 5" x ¾"	10" x 10" x 3"
1½" x 1½" x ½"	2½" x 2½" x ½"	3½" x 3" x 2"	5" x 4" x 5"	10" x 10" x 2"
1½" x 1¼" x 1½"	2½" x 2" x 2½"	3½" x 3" x 1½"	5" x 4" x 4"	10" x 8" x 8"
1½" x 1¼" x 1¼"	2½" x 2" x 2"	3½" x 3" x 1¼"	5" x 4" x 3½"	8" x 8" x 10"
1½" x 1¼" x 1"	2½" x 2" x 1½"	3½" x 3" x 1"	5" x 4" x 3"	12" x 12" x 12"
1½" x 1" x ¾"	2½" x 2" x ¾"	3½" x 3" x ¾"	5" x 4" x 2½"	12" x 12" x 10"
1½" x 1¼" x ½"	2½" x 2" x ½"	3½" x 2½" x 3½"	5" x 4" x 2"	12" x 12" x 8"
1½" x 1" x 1½"	2½" x 2" x ¾"	3½" x 2½" x 3"	5" x 4" x 1½"	12" x 12" x 6"
1½" x 1" x 1¼"	2½" x 2" x ½"	3½" x 2½" x 2½"	5" x 3½" x 3½"	12" x 12" x 5"
1½" x 1" x 1"	2½" x 1½" x 2½"	3½" x 2½" x 2"	5" x 3" x 5"	12" x 12" x 4"
1½" x 1" x ¾"	2½" x 1½" x 2"	3½" x 2" x 3½"	5" x 3" x 4"	12" x 8" x 10"
1½" x 1" x ½"	2½" x 1½" x 1½	3½" x 1½" x 3½"	5" x 3" x 3½"	12" x 8" x 8"

CAST IRON FITTINGS

STANDARD WEIGHT

CAST IRON SCREW FITTINGS

125 Pounds Working Pressure

Plate 2841 Open

OPEN PATTERN RETURN BENDS

Sizes	¾″	1″	1¼″	1½″	2″	2½″	3″	4″
Centre to Centre	1⅞″	2⅜″	3″	3½″	4½″	5½″	6½″	7½″
Plate 2841—Right Hand, Each	$ .26	$ .30	$ .40	$ .55	$ .80	$1.35	$2.20	$6.50
Plate 2841—Right and Left, Each	.30	.35	.46	.64	.92	1.55	2.50	.....

CLOSE PATTERN RETURN BENDS

Sizes	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″
Centre to Centre	1¼″	1½″	1¾″	2¼″	2½″	3¼″	3¾″	4¼″	6″
Plate 2842—Right Hand, Each	$ .18	$ .20	$ .22	$ .28	$ .40	$ .57	$1.20	$1.70	$5.00
Plate 2842—Right and Left, Each	.21	.23	.26	.33	.46	.66	1.40	1.95	5.25

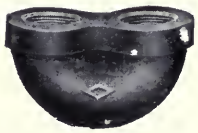


Plate 2842 Close

Plate 2843
Pitched Return Bends have Length for Coil Marked on Them

PITCHED RETURN BENDS

Sizes	1″	1″	1″	1″	1″	1¼″	1¼″	1¼″
Length of Coil	3′	4′	5′	6′	8′	4′	5′	6′
Centre to Centre	1¾″	1¾″	1¾″	1¾″	1¾″	2¼″	2¼″	2¼″
Plate 2843—Right Hand or Left and Right, Each	$ .26	$ .26	$ .26	$ .26	$ .26	$ .33	$ .33	$ .33

One inch Return Bends for coils longer than 8′ are tapped straight.

BACK OUTLET RETURN BENDS

Sizes	¾″	1″	1¼″	1½″	2″	2½″	3″
Centre to Centre, Close Pattern	1⅞″	2¼″	2¼″	2½″	3¼″	3¾″	4¼″
Plate 2844—Right Hand, Close Pattern, Each	$ .38	$ .42	$ .60	$ .80	$1.15	$2.00	$3.00
Plate 2844—Right and Left, Each	.42	.48	.70	.95	1.30	2.30	3.50

The Back outlet of Right and Left Return Bends is always tapped right hand.

Plate 2844 Back Outlet

Plate 2845

WIDE PATTERN RETURN BENDS

Sizes	1″	1″	1″	1″	1″	1¼″	1¼″	1½″
Centre to Centre	3″	4″	5″	6″	8″	4″	6″	4⅞″
Plate 2845—Black, Each	$ .45	$ .50	$ .60	$ .75	$1.00	$1.00	$1.25	$1.30

Sizes	1½″	1½″	2″	2″	2″	2″	4″	.....
Centre to Centre	6″	8″	4⅞″	6″	7″	8″	11″	.....
Plate 2845—Black, Each	$1.60	$2.00	$ 1.75	$2.00	$3.00	$3.50	$7.50	.....

STANDARD WROUGHT IRON COUPLINGS

For Steam, Gas and Water Pipe

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″
Plate 2846—Black, Each	$ .05	$ .05	$ .06	$ .07	$ .10	$ .13	$ .17
Plate 2846—Galvanized, Each	.06	.06	.08	.10	.13	.18	.25

Sizes	1½″	2″	2½″	3″	3½″	4″	.....
Plate 2846—Black Each	$ .21	$ .28	$ .40	$ .60	$ .80	$1.00	.....
Plate 2846—Galvanized, Each	.32	.40	.55	.80	1.05	1.40	.....

Sizes	5″	6″	8″	10″	12″
Plate 2846—Black Each	$1.65	$2.40	$4.25	$7.50	$10.00
Plate 2846—Galvanized, Each	2.25	3.25	5.50	.....	.....

Plate 2846 Straight

CAST IRON FITTINGS

Standard Weight

CAST IRON SCREWED FITTINGS

125 Lbs. Working Pressure

PLUGS

Plate 2851 Square Plug

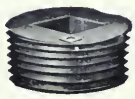


Plate 2852 Countersunk Plug

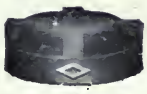


Plate 2853 Caps

Square Head

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″
Plate 2851—Each	$ .02	$ .02	$ .02	$ .02	$ .03	$ .04	$ .05	$ .07	$ .10

							Hexagon Head		
Sizes	2½″	3″	3½″	4″	5″	6″	8″	10″	12″
Plate 2851—Each	$ .18	$ .25	$ .38	$ .42	$ .88	$1.20	$2.75	$ 3.75	$5.00

Countersunk Plugs—Tapped Plugs—Left-Hand Plugs—Solid Plugs

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″
Plate 2852—Countersunk Plugs, Each	.....	.....	.....	$ .04	$ .06	$ .08	$ .09	$ .11	$ .15	$ .30	$ .40	$ .92	$1.10	$2.00	$3.50
Plugs Tapped for Air Cock, Each	.....	.....	.....	.....	$ .12	$ .15	$ .20	$ .25	$ .30	.....	.....	.....	.....	.....	.....
Left-Hand Plugs, Each	.....	.....	.....	.....	.06	.08	.09	.11	.15	.....	.....	.....	.....	.....	.....
Solid Plugs, Each	$ .04	$ .04	$ .04	.04	.06	.08	.09	.11	.15	.27	.38	.57	.63	1.35	1.80

Sizes	3½″	4″	5″	6″	8″	10″	12″
Plate 2853—Each	$ .75	$ .87	$1.20	$1.55	2.85	$5.50	$7.00
Plate 2853—Galvanized	1.50	1.74	2.40	3.10	5.70	11.10	14.00

Sizes smaller than ½″ furnished in malleable, see page 292.

LOCK-NUTS

Plate 2854 Lock-Nuts

Sizes	2½″	3″	3½″	4″	5″	6″	8″	10″	12″
Plate 2854—Each	$ .27	$ .34	$ .47	$ .64	$ .90	$1.30	$2.35	$3.00	$4.00
Plate 2854—Galvanized, Each	.54	.68	.94	1.28	1.80	2.60	4.70	6.00	8.00

Sizes smaller than 2″ furnished in malleable.

Sizes	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″	8″
Plate 2855—Each	$ .55	$ .72	$1.00	$1.50	$2.40	$3.00	$4.00	$6.00	$8.00	$11.00

Plate 2855
Eccentric Coupling

FLOOR FLANGES
Cast Iron, Black, Galvanized

Plate 2856

Floor Flanges

Sizes	⅜″	½″	¾″	1″	1¼″	1½″	2″
Plate 2856—Black, Each	$ .14	$ .15	$ .18	$ .22	$ .25	$ .36	$. 45
Plate 2856—Galvanized, Each	.28	.30	.36	.44	.50	.72	.90

CAST IRON FITTINGS

Standard Weight

CAST IRON SCREWED FITTINGS

125 lbs. Working Pressure

Plate 2861 "Flanged Union"

FLANGED UNIONS, FACED

Plate 2862

STANDARD FLANGES

Number of Bolts	Diameter of Bolt Circle	Diameter of Flanges	Price Each Galvanized	Price Each Black	Sizes
3	1 15/16"	2 13/16"	$ .80	$ .40	½"
3	2 5/16"	3 5/16"	.92	.46	¾"
3	2 9/16"	2 9/16"	1.04	.52	1 "
4	2⅞"	3⅞"	1.28	.64	1¼"
4	3¼"	4⅜"	1.56	.78	1½"
4	3¾"	5 "	2.00	1.00	2 "
4	4½"	6 1/16"	2.50	1.25	2½"
4	5⅛"	6 11/16"	3.00	1.50	3 "
4	5⅝"	7 3/16"	3.60	1.80	3½"
5	6 3/16"	7¾"	4.20	2.10	4 "
5	7 5/16"	8 15/16"	6.30	3.15	5 "
6	8½"	10⅛"	7.90	3.95	6 "
8	10 11/16"	12 5/16"	14.00	7.00	8 "
10	13 "	14⅞"	23.00	11.50	10 "
12	15⅛"	17 "	32.00	16.00	12 "

STANDARD FLANGES

Sizes	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"	12"
Standard Flanges Faced Only, each	$ .55	$ .60	$ .65	$ .75	$ .85	$ .95	$1.20	$1.35	$1.60	$2.00	$3.10	$4.50	$6.50
Standard Flanges, Faced and Drilled, each	.80	.85	.90	1.00	1.10	1.25	1.55	1.80	2.05	2.50	3.80	5.50	7.65

Outside Diameter of Reducing and Blind Flanges	6"	7"	7½"	8½"	9"	10"	11"	13½"	16"	19"
Standard Reducing Flanges, Faced Only, each	1.30	1.45	1.55	2.00	2.20	2.65	3.30	5.10	7.45	10.75
Standard Reducing Flanges, Faced and Drilled, each	1.55	1.70	1.85	2.35	2.65	3.10	3.80	5.80	8.45	11.90
Standard Blind Flanges, Faced Only, each	1.15	1.30	1.40	1.80	2.00	2.40	3.00	4.60	6.75	9.75
Standard Blind Flanges, Faced and Drilled, each	1.40	1.55	1.70	2.15	2.45	2.85	3.50	5.30	7.75	10.90

All reducing Flanges of same outside diameter take same prices.

CAST IRON FITTINGS

BUSHINGS

Plate 2871

Plate 2872

Sizes	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″
Plate 2871—Each	$ .04	$ .04	$ .05	$ .06	$ .07	$ .09	$ .14	$ .21	$ .30	$ .40
Galvanized, Each	.08	.08	.10	.12	.14	.18	.28	.42	.60	.80

Sizes	4″	5″	6″	8″	10″	12″
Plate 2872—Each	$ .50	$.93	$1.25	$2.75	$3.75	$ 5.00
Galvanized, Each	1.00	1.85	2.50	5.50	7.50	10.00

Bushings reducing one size only, up to and including 2½″ are malleable, and are listed among malleable fittings. The list price of Bushings is determined by the male thread size. For list of sizes, see below.

Standard
CAST IRON SCREWED REDUCING BUSHINGS

Sizes	Sizes	Sizes	Sizes	Sizes
⅜″ x ⅛″	1½″ x 1 ″	3 ″ x 1¼″	4 ″ x 3 ″	8 ″ x 2″
½″ x ¼″	2 ″ x ¼″	3 ″ x 1½″	4 ″ x 3½″	8 ″ x 2½″
¾″ x ¼″	2 ″ x ⅜″	3 ″ x 2 ″	5 ″ x 2 ″	8 ″ x 3″
¾″ x ⅜″	2 ″ x ½″	3 ″ x 2½″	5 ″ x 2½″	8 ″ x 4″
1 ″ x ¼″	2 ″ x ¾″	3½″ x 1 ″	5 ″ x 3 ″	8 ″ x 5″
1 ″ x ⅜″	2 ″ x 1 ″	3½″ x 1¼″	5 ″ x 3½″	8 ″ x 6″
1 ″ x ½″	2 ″ x 1¼″	3½″ x 1½″	5 ″ x 4 ″	10 ″ x 4″
1¼″ x ¼″	2½″ x ½″	3½ x 2 ″	6 ″ x 1½″	10 ″ x 5″
1¼″ x ⅜″	2½″ x ¼″	3½″ x 2½″	6 ″ x 2 ″	10 ″ x 6″
1¼″ x ½″	2½″ x 1 ″	3½″ x 3 ″	6 ″ x 2½″	10 ″ x 8″
1¼″ x ¾″	2½″ x 1¼″	4 ″ x 1 ″	6 ″ x 3 ″	10 ″ x 9″
1½″ x ¼″	2½″ x 1½″	4 ″ x 1¼″	6 ″ x 3½″	12 ″ x 6″
1½″ x ⅜″	3 ″ x ½″	4 ″ x 1½″	6 ″ x 4 ″	12 ″ x 8″
1½″ x ½″	3 ″ x ¾″	4 ″ x 2 ″	6 ″ x 5 ″	12 ″ x 10″
1½″ x ¾″	3 ″ x 1 ″	4 ″ x 2½″		

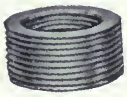


Plate 2873 Faced Bushing, Malleable Iron

Sizes	Sizes	Sizes	Sizes	Sizes
⅜″ x ¼″	1¼″ x ¾″	2 ″ x ¾″	3½″ x 3 ″	5″ x 4″
½″ x ⅜″	1½″ x 1¼″	2½″ x 2 ″	3½″ x 2½″	5″ x 3″
¾″ x ½″	1½″ x 1 ″	2½″ x 1½″	3½″ x 2 ″	6″ x 5″
¾″ x ⅜″	1½″ x ¾″	2½″ x 1¼″	4 ″ x 3½″	6″ x 4″
1 ″ x ¾″	2 ″ x 1½″	3 ″ x 2¼″	4 ″ x 3 ″	6″ x 3″
1 ″ x ½″	2 ″ x 1¼″	3 ″ x 2″	4 ″ x 2½″	.....
1¼″ x 1 ″	2 ″ x 1 ″	3 ″ x 1½″	4 ″ x 2 ″	.....

PIPE ROLLS

Plate 2874

Plate 2875

Pipe Rolls, 1″ to 14″

Sizes of Pipe	1″	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″	8″	10″	12″	14″
Length of Roll or Centre to Centre	2½″	3″	3½″	3″	3⅜″	4⅛″	4½″	5″	6⅛″	7⅛″	9⅛″	11½″	13¾″	17¼″
Sizes of Hole	⅝″	⅝″	⅝″	⅝″	⅝″	⅝″	⅝″	11/16″	11/16″	11/16″	⅞″	⅞″	⅞″	⅞″
Plates 2874, 2875—Each	$ .06	$ .07	$ .08	$ .13	$ .15	$ .18	$ .21	$ .21	$ .24	$ .27	$ .44	$1.00	$1.50	$1.80

Special Flanges, for Hanging Rolls, tapped for 9/16″ rod, and drilled for screws. Each 10 cents.

CAST IRON FITTINGS

BRANCH TEES

Plate 2881

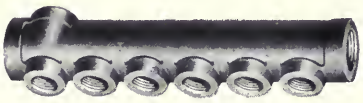


Plate 2882

Plate 2883

1½" BRANCH TEES — 3½" CENTRE TO CENTRE Plate 2881

Number of Branches	2	3	4	5	6	7	8	9	10	12
1½" or 2" Run, Each	$2.10	$2.70	$3.35	$4.00	$4.65	$5.25	$5.85	$6.50	$7.60	$8.50
2½" Run, Each	2.85	3.45	4.15	5.00	5.75	6.50	7.00	8.25	9.25	10.50

2" BRANCH TEES — 4½" CENTRE TO CENTRE. Plate 2881

Number of Branches	2	3	4	5	6	7	8	9	10	12
2" Run, Each	$4.10	$5.25	$6.40	$7.65	$8.80	$10.60	$11.50	$12.25	$13.50	$15.00
2½" or 3" Run, Each	4.50	5.75	7.00	8.50	9.75	11.75	12.75	13.50	15.00	16.50

1" BRANCH TEES — 2½" CENTRE TO CENTRE. Plate 2881

Number of Branches	2	3	4	5	6	7	8	9	10	12
1" or 1¼" Run, Each	$ .90	$1.05	$1.15	$1.35	$1.60	$1.90	$2.20	$2.65	$3.15	$4.40
1½" Run, Each	1.00	1.15	1.30	1.45	1.75	2.20	2.45	2.90	3.30	4.75
2" Run, Each	1.15	1.35	1.60	1.85	2.10	2.45	2.75	3.40	4.00	5.10

1¼" BRANCH TEES — 3" CENTRE TO CENTRE. Plate 2881

Number of Branches	2	3	4	5	6	7	8	9	10	12
1¼" or 1½" Run, Each	$1.30	$1.65	$2.00	$2.40	$2.80	$3.20	$3.60	$4.30	$4.80	$5.25
2" Run, Each	1.50	1.90	2.40	2.90	3.30	3.90	4.50	5.25	5.85	6.50
2½" Run, Each	1.95	2.40	2.85	3.55	3.95	4.20	4.95	6.15	6.85	7.65

Back Outlet Tees, Plate 2882, 2883 same list price as above, except that the back outlets will be charged as additional front outlets. For example, a Back Outlet Six Branch Tee will be charged as a Seven Branch, Plate 2881 Tee. Side Outlet Tees or Tees with outlet larger than the run, to order at special prices. Always order branch tees by size and number. Branch tees will always be sent with ends same size as branches, unless otherwise ordered. Branch tees for circulation are tapped right hand in all openings.

Plate 2881 Branch Tees always furnished unless otherwise ordered. Large sizes made to order on receipt of sketch.

HOOK PLATES—EXPANSION PLATES

Plate 2884
Single Hook Plate

Plate 2885
Single Expansion Plate

Plate 2886
Hook Plate

Plate 2887
Expansion Plate

Plate 2888
Steel Hook Plate

CAST IRON HOOK PLATES — Plate 2884, 2886

Number of Hooks	1	2	3	4	5	6
For 1" Pipe, 2½", Centre to Centre	$ .09	$ .18	$ .23	$ .26	$ .32	$ .38
For 1¼" Pipe, 3" Centre to Centre	.10	.21	.27	.32	.41	.52
For 1½" Pipe, 3½" Centre to Centre	.15	.28	.43	.58	.72	.88
For 2" Pipe, 4"½ Centre to Centre	.22	.43	.65	.90	1.15	1.35

C. I. EXPANSION PLATES — Plate 2887, 2885

Number of Hooks	1	2	3	4	5	6
For 1" Pipe, 2½" Centre to Centre	$ .15	$ .25	$ .35	$ .50	$ .60	$ .70
For 1¼" Pipe, 3" Centre to Centre	.17	.27	.40	.60	.70	.80
For 1½" Pipe, 3½" Centre to Centre	.25	.40	.60	.75	.90	1.00
For 2" Pipe, 4½" Centre to Centre	.40	.60	.85	1.00	1.35	1.55

Orders for plates with more than six branches will be filled with two plates. For example, an order for a 10-branch plate may be filled with two 5-branch or one 4 and one 6, such combination depending on available stock.

STEEL HOOK PLATES. Plate 2888

Number of Hooks	1	2	3	4	5	6
For 1" Pipe, 2½" Centre to Centre	$ .09	$ .18	$ .27	$ .36	$ .45	$ .54
For 1¼" Pipe, 3" Centre to Centre	.10	.20	.30	.40	.50	.60
For 1½" Pipe, 3½" Centre to Centre	.15	.30	.45	.60	.75	.90

Number of Hooks	7	8	9	10	12
For 1" Pipe, 2½" Centre to Centre	$ .63	$ .72	$ .81	$ .90	$1.08
For 1¼" Pipe, 3" Centre to Centre	.70	.80	.90	1.00	1.20
For 1½" Pipe, 3½" Centre to Centre	1.05	1.20	1.35	1.50	1.80

CAST IRON FITTINGS

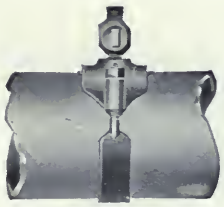


Plate 2891

WATER PIPE SADDLES

Malleable Iron — Wrought Iron Straps

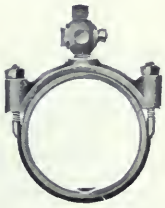


Plate 2892

Sizes	0	1	2	3	4	5	6	8	10	11
For W. I. Pipe Size	1½"	2"	2½"	3"	3"	3½"	3½"	4 "	4½"	4½"
For C. I. Pipe Size	.....	.....	2"	.....	.....	3"	3"	.....	4"	4"
Tapped for Pipe	½"-¾"	½"-1"	½"-1¼"	½"-1"	1¼"-2"	¾"-1"	1¼"-2"	2"	⅜"-1½"	2"
Plate 2891—Each	**$1.00**	**$1.00**	**$1.25**	**$1.25**	**$1 50**	**$1.50**	**$1.75**	**$2.00**	**$1.80**	**$2.15**

Sizes, Number	12	13	14	15	16	17	18	19	20	21
For W. I. Pipe Size	4½"	5"	5"	5"	.....	.....	.....	6"	6"	6"
For C. I. Pipe Size	4"	.....	.....	.....	5"	5"	5"	.....	.....	.....
Tapped for Pipe	2½"-3"	¾"-1½"	2"	2½"-3"	½"-1½"	2"	2½"-3"	¾"-1½"	2"	2½"-3"
Plate 2891—Each	**$4.00**	**$1.80**	**$2.15**	**$4.00**	**$2.00**	**$2.40**	**$4.50**	**$2.25**	**$2.50**	**$5.00**

Sizes, Number	22	23	24	25	26	27	30½	31	32	35	36
For W. I. Pipe Size	.....	.....	.....	7"	7"	7"	8"	8"	8"	10"	*12"
For C. I. Pipe Size	6"	6"	6"	.....	.....	.....	.....	.....	.....	.....	.....
Tapped for Pipe	¾"-1½"	2"	2½"-3"	¾"-1½"	2"	2½"-3"	¾"-1½"	2"-3"	4"	¾"-2"	¾"-2"
Plate 2891—Each	**$2.50**	**$2.70**	**$5.00**	**$2.50**	**$2.70**	**$5.00**	**$5.50**	**$5.50**	**$6.00**	**$9.00**	**$10.00**

*Malleable Iron Strap.

Plate 2893

STEAM PIPE SADDLES

Malleable Iron — Wrought Iron Straps

Sizes of Pipe	1½"	2"	2½"	3"	3½"	4"	5"	5"
Tapped for Pipe	½"-¾"	½"-1½"	¾"-1½"	¾"-2"	¾"-2"	¾"-2"	¾"-2"	2½"-3"
Plate 2893	**$ .90**	**$1.00**	**$1.25**	**$1.25**	**$1.40**	**$1.50**	**$2.75**	**$2.75**

Sizes of Pipe	6"	6"	8"	10"	10"	12"	12"
Tapped for Pipe	¾"-2"	2½"-4"	1"-4"	1½"-4"	4½"-6"	1½"-4"	4½"-6"
Plate 2893—Each	**$2.75**	**$5.75**	**$6.50**	**$10.00**	**$10.00**	**$14.00**	**$14.00**

FLOOR AND CEILING PLATES

Nickel Plated — Adjustable

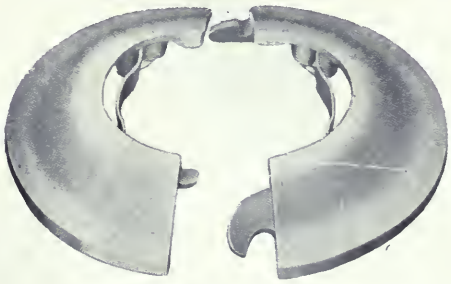


Plate 2894

Made of Grey Iron, Nickel Plated. A two-piece plate. Special springs and catch, hold the plate firmly to pipe.

PRICE LIST—Sizes ½" to 6"

Sizes	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	4½"	5"	6"
Nickel Plated, Each	$ .27	$ .28	$ .32	$ .35	$ .38	$ .45	$ .65	$ .80	$1.00	$1.25	$1.50	$1.75	$2.00

MALLEABLE IRON FITTINGS

All our Malleable Fittings are now furnished with chamfered ends, which prevents damage to the threads and permits easy entrance of the pipe.

This feature will be appreciated by pipe fitters who have had trouble with battered threads.

GENERAL CLASSIFICATION

Adopted by Manufacturers June 5, 1907

CLASS	A	B	C
Black ..... per lb.	$ .40	$ .20	$ .13
Galvanized ..... "	.50	.28	.20
Caps	1/8"	1/4" to 1" inclusive	1 1/4" and larger
Chandelier Hooks	.....	all sizes	.....
Chandelier Loops	.....	all sizes	.....
Couplings R. H.	1/8"	1/4" to 3/4" inclusive	1" and larger
Couplings, R. and L.	1/8"	1/4" to 3/4" inclusive	1" and larger
Crosses, Straight Sizes	1/8"	1/4" to 1" inclusive	1 1/4" and larger
Crosses, Reducing	.....	1" and smaller	1 1/4" and larger
Drop Elbows	.....	all sizes	.....
Drop Tees	.....	all sizes	.....
Elbows	1/8", 1/4" x 1/8", 3/8" x 1/8" 1/2" x 1/8"	1/4", 3/8" x 1/4", 3/8" 1/2" x 1/4", 1/2" x 3/8", 1/2"	3/4" and larger
Elbows, 45°	.....	1/4" to 2" inclusive	2 1/2" and larger
Elbows, R. and L.	1/4", 3/8"	1/2", 3/4", 1"	1 1/4" and larger
Elbows, Side Outlet or Three-Way	.....	all sizes	.....
Extension Pierces	.....	all sizes	.....
Locknuts	1/8"	1/4" to 1 1/4" inclusive	1 1/2" and larger
Reducing Couplings	1/4" x 1/8", 3/8" x 1/8", 1/2" x 1/8"	3/8" x 1/4" to 1" x 3/4" inclusive	1 1/4" and larger
Return Bends, R. H.	.....	1/2" to 1" inclusive	1 1/4" and larger
Return Bends, R. and L.	1/2"	3/4" and larger	.....
Service Elbows	.....	1/4", 3/8", 1/2", 3/4" x 1/2", 3/4", 1" x 3/4"	1" and larger
Service Elbows, 45°	.....	1/2" to 2" inclusive	.....
Service Tees	.....	1/4", 3/8", 1/2", 3/4" x 1/2", 3/4", 1" x 3/4", 1" x 3/4" x 1"	1" and larger
Tees	1/8", 1/8" x 1/4", 1/4" x 1/8" x 1/8", 1/4" x 1/8" x 1/4", 1/4" x 1/8", 3/8" x 1/8", 1/2" x 1/8"	1/4", 1/4" x 3/8", 3/8" x 1/4", x 1/4" 3/8" x 1/4" x 3/8", 3/8" x 1/4", 3/8" 3/8" x 1/2", 3/8" x 3/4", 3/8" 1", 1/2", 1/2" reducing	3/4" and larger
Tees, Side Outlet or Four-Way	.....	all sizes	.....
Wall Plates	.....	all sizes	.....
Wastenuts	.....	all sizes	.....
Ys, 45°	.....	all sizes	.....

*Such fittings in Class C as have outlets smaller than 3/4" will be classed as "B."

The run of Tees gives the size for purpose of classification; the outlet being larger does not change it.

Right and left fittings not classified take one class higher than right hand. Four small quantities of right and left fittings we charge extra, according to actual time threading to order.

All straight and leading sizes and kinds of fittings are carried in stock galvanized.

Plate 2901 Plain Elbow

Plate 2902 Flat Band Elbow

Plate 2903 Flat Band 45° Elbow

Sizes	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"
Plate 2901, 2902. Right Hand, Each	$ .06	$ .07	$ .08	$ .10	$ .15	$ .22	$ .25	$ .35	$ .50	$ .90	$1.50	$2.25	$3.00	$4.00	$6.50
Right and Left, Each	.....	.09	.11	.13	.17	.25	.30	.40	.65	.....	.....	.....	.....	.....	.....
Right Hand, Galvanized, Each	.08	.09	.11	.14	.20	.32	.40	.60	.90	1.50	2.60	3.75	5.00	6.50	10.00

Sizes	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"
Plate 2903—Each	$ .08	$ .10	$ .12	$ .18	$ .26	$ .36	$ .54	$ .82	$1.25	$2.50	$3.25	$4.50	$6.00	$7.50
Glavanized, Each	.12	.15	.20	.25	.40	.50	.85	1.35	1.90	3.75	4.75	6.75	9.00	11.00

MALLEABLE IRON FITTINGS

Plate 2911
"Side Outlet Elbow"

SIDE OUTLET ELBOWS
DROP ELBOWS

Plate 2912
"Female Drop Elbow"

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"
Plate 2911—Each	.....	$ .08	$ .10	$ .18	$ .30	$.45	$ .60	$1.00
Plate 2911—Galvanized, Each	.....	.10	.15	.25	.45	.65	.90	1.50
Plate 2912—Each	$ .06	.08	.12	.20	.25	.....	.....	.....
Plate 2912—Galvanized, Each	.....	.12	.20	.35	.40	.....	.....	.....

Plate 2913 "Four-Way Tee"

FOUR-WAY TEES
DROP TEES

Plate 2914 "Drop Tee, Female"

Sizes	⅜"	½"	¾"	1"	1¼"	1½"	2"
Plate 2913—Four-way Tee, Each	$ .12	$ .14	$ .20	$ .35	$ .50	$ .80	$1.25
Galvanized, Each	.17	.20	.28	.50	.70	1.10	1.75
Plate 2914—Female Drop Tee, Each	.10	.14	.22	.30	.....	.....	.....
Galvanized, Each	.15	.25	.40	.55	.....	.....	.....

Plate 2915 "Close Pattern"

RETURN BENDS

Plate 2916 "Open Pattern"

CLOSE PATTERN

Sizes	½"	¾"	1"	1¼"	1½"	2"
Centre to Centre	1"	1¼"	1½"	1¾"	2 3/16"	2⅝"
Plate 2915—Right Hand, Plain, Each	$ .18	$ .25	$ .35	$ .50	$ .75	$1.00
Plate 2915—Right Hand, Galvanized, Each	.25	.35	.55	.75	1.15	1.65
Plate 2915—Right and Left, Plain, Each	.23	.30	.45	.60	.90	1.25
Plate 2915—Right and Left, Galvanized, Each	.....	.40	.65	.....	.....	.....

OPEN PATTERN

Sizes	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Centre to Centre	1"	2"	2"	3"	3½"	4"	4½"	5"
Plate 2916—Right Hand, Plain, Each	$ .20	$ .30	$ .50	$.65	$ .85	$1.25	$2.00	$3.00
Plate 2916—Right Hand, Galvanized, Each	.28	.45	.70	.90	1.25	2.00	3.50	5.00
Plate 2916—Right and Left, Plain, Each	.25	.38	.60	.80	1.05	1.55	2.50	3.75
Plate 2916—Right and Left, Galvanized, Each	.....	.55	.80	.....	.....	.....	.....	.....

McAVITY'S GUARANTEE

MALLEABLE IRON FITTINGS

Plate 2921 "Plain Tee

TEES

Straight and Reducing

Plate 2922 "Flat Band Tee"

Sizes	⅛"	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"
Plate 2921 or 2922 Each	$ .08	$ .09	$ 14	$ .15	$ .15	$ .25	$ .30	$ .45	$ .60	$ 1.05	$ 1.70	$ 2.50	$ 3.40	$ 5.00	$ 7.75
Galvanized, Each	.10	.11	.17	.18	.20	.38	.50	.70	1.00	1.90	3.00	4.25	5.75	8.00	12.00

Plate 2923 Plain Cross

CROSSES

Plain and Banded

Plate 2924 Flat Band Cross

CROSSES — STRAIGHT AND REDUCING

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"
Plate 2923 or 2924—Each	$ .09	$ .10	$ .16	$ .20	$ .30	$ .40	$ .60	$1.00	$1.75	$3.00	$3.25	$5.25	$7.50	$13.00
Galvanized, Each	.12	.14	.25	.29	.45	.60	.90	1.50	2.75	4.50	5.00	8.00	.....	.....

Plate 2925 Bushing

BUSHINGS

Plate 2926 Faced Bushing

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"
Plate 2925—Each	$ .04	$ .04	$ .04	$ .05	$ .06	$ .07	$ .09	$ .14	$ .21	.....	.....	.....	.....	.....
Plate 2925—Galvanized, Each	.08	.08	.08	.10	.12	.14	.18	.28	.42	.....	.....	.....	.....	.....
Plate 2926—Each	.....	.08	.09	.11	.13	.17	.22	.32	.48	$ .70	$1.20	$1.50	$2.60	$3.75
Plate 2926—Galvanized, Each	.....	.....	.....	.....	.20	.25	.33	.48	.72	1.05	1.80	2.25	.....	.....

LOCK-NUTS

Plate 2927 Lock-Nuts

CAPS

Plate 2928 Caps

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"
Plate 2927—Each	$ .02	$ .03	$ .04	$ .05	$ .07	$ .09	$ .11	$ .18
Plate 2927—Galvanized, Each	.03	.04	.05	.07	.10	.14	.20	.30
Plate 2928—Each	.03	.04	.05	.08	.12	.16	.24	.32
Plate 2928—Galvanized, Each	.04	.05	.08	.12	.17	.24	.38	.52

Sizes	.....	2½"	3"	3½"	4"	5"	6"	.....
Plate 2928—Each	.....	$ .45	$ .85	$1.00	$1.20	$2.50	$3.50	.....
Plate 2928—Galvanized, Each	.....	.76	1.30	1.60	2.00	.....	.....	.....

MALLEABLE IRON FITTINGS

COUPLINGS

Plate 2931 Right Hand

Plate 2932 Right and Left

Sizes	⅛"	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Plate 2931—Right Hand, Each	$ .03	$ .03	$ .05	$ .07	$ .10	$ .14	$ .20	$ .25	$ .35	.....	.....
Plate 2931—Right Hand, Galvanized Each	.....	.05	.07	.10	'17	.23	.30	.40	.55	.....	.....
Plate 2932—Right and Left, Each	.....	.04	.06	.08	.12	.16	.25	.36	.52	$ .70	$1.00
Plate 2932—Right and Left, Galvanized, Each	.....	.06	.09	.10	.17	.25	.35	.55	.75	1.05	1.50

REDUCING COUPLINGS

Plate 2933 Flat Band Reducing Coupling

Plate 2934 Y Bend

REDUCING COUPLING — Plate 2933

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
Plate 2933—Each	$ .05	$ .06	$ .07	$ .10	$ .16	$.20	$ .28	$ .45	$ .70	$1.00	$1.50	$1.85
Plate 2933—Galvanized, Each	.08	.10	.10	.15	.25	.35	.45	.75	1.05	1.65	2.40	3.05

Y BENDS — Plate 2934

Sizes	½"	¾"	1"	1¼'	1½"	2"	2½"	3"	4"
Plate 2934—Each	$ .40	$ .50	$ .60	$ .80	$1.00	$1.70	$2.00	$4.00	$5.50
Plate 2934—Galvanized, Each	.60	.75	.90	1.25	1.50	2.50	3.00	6.00	8.25

STREET OR SERVICE ELBOWS

Plate 2935 90° Flat Band Street Elbow

Plate 2936 45° Flat Band Street Elbow

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Plate 2935—Each	$ .10	$ .10	$ .12	$ .20	$ .25	$ .40	$ .55	$ .90	$1.50	$2.25
Plate 2935—Galvanized Each	.12	.12	.15	.28	.35	.55	.80	1.30	2.25	3.50
Plate 2936—Each	.....	.....	.12	.20	.25	.40	.55	.90	.....	.....
Plate 2936—Galvanized, Each	.....	.....	.15	.28	.35	.55	.80	.80	1.30	.....

90° Street Elbows also furnished reducing as follows: ¾" x ½", 1" x ¾", 1" x ½", 1¼" x 1", 1½" x 1", 1½" x 1¼", 2" x 1¼", 2" x 1½", 2½" x 2", 3" x 2½" and 4" x 3", at list of largest size opening.

SERVICE TEE

Plate 2937 Flat Band Service Tee

Sizes	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Plate 2937—Each	$ .12	$ .15	$ .25	$ .35	$ .50	$ .75	$1.15	$2.00	$2.50
Price, Galvanized, Each	.15	.20	.35	.50	.70	1.10	1.65	2.75	3 50

Service Tees also furnished reducing as follows: ¾" x ½" x ¾", ¾" x ¾" x 1", 1" x ¾" x 1", 1" x 1" x 1¼", 1¼" x ¾". x 1¼", 1¼" x 1" x 1", 1¼" x 1" x 1¼", 1½" x ¾" x 1½", 1½" x 1" x 1½", 1½" x 1¼" x 1½", 2" x 1½" x 2", 2½" x 2" x 2½" and 3" x 2½" x 3", at a list of largest size opening.

MALLEABLE IRON FITTINGS

STANDARD MALLEABLE UNIONS

Gaskets extra.

Plate 2941 Malleable Union

Plate 2942 Two-Third Union

Sizes	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	.....
Plate 2941, Each	$ .18	$ .18	$ .20	$ .22	$ .27	$ .33	$ .46	$ .58	$ .75	$ 1.55	$ 2.10	$ 3.65	$ 4.35	.....
Galvanized, Each	.27	27	.30	.33	.40	.50	.70	.90	1.15	2.35	3.15	5.50	6.50	.....

Sizes	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
Plate 2942—Each	$ .12	$ .14	$ .16	$ .19	$ .22	$ .30	$ .40	$ .50	$ 1.00	$ 1.40	$ 2.40	$ 3.00
Galvanized, Each	.18	.20	.22	.25	35.	.50	.60	.75	1.60	2.10	3.70	4.35

UNION ELBOWS

Gaskets Extra

Plate 2943 With Male Union

Plate 2944 With Female Union

Sizes	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Plate 2943—Each	$ .43	$ .45	$ .48	$ .62	$ .72	$ 1.05	$ 1.20	$ 1.80	$3.30
Plate 2943—Galvanized, Each	.65	.70	.72	.93	1.08	1.60	1.80	2.70	4.95
Plate 2944—Each	.38	.40	.42	.54	.63	.90	1.05	1.55	2.85
Plate 2944—Galvanized, Each	.57	.60	.63	.81	.95	1.35	1.58	.235	4.30

UNION TEES

Gaskets Extra

Plate 2945 With Male Union

Plate 2946 With Female Union

Sizes	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Plate 2945—Each	$ .48	$ .50	$ .52	$ .65	$ .80	$ 1.10	$ 1.30	$ 1.95	$ 3.70
Plate 2945—Galvanized, Each	.72	.75	.78	1.00	1.20	1.65	1.95	2.95	5.55
Plate 2946—Each	.40	.43	.45	.57	.70	.95	1.15	1.70	3.20
Plate 2946—Galvanized, Each	.60	.65	.68	.86	1.05	1.45	1.75	2.55	4.80

MALLEABLE IRON FITTINGS

GALVANIZED CIRCULATING BOILER FITTINGS

MALLEABLE IRON

Gaskets Extra

Plate 2951
Boiler Elbow,
without Union

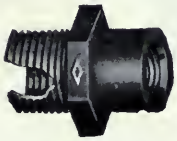


Plate 2953
Boiler Coupling,
without Union

Plate 2954
Boiler Coupling,
with Union

Plate 2952
Boiler Elbow,
with Union

	Female, Male	Female, Male	Female, Male
Sizes	¾″ x ¾″ x 1″	¾″ x ½″ x 1″	½″ x ½″ x 1″
Plate 2952—Galvanized Elbow with Union, Each	$ .75	$ .75	$ .60
Plate 2954—Galvanized Coupling with Union, Each	.75	.75	.60
Plate 2951 or 2953—Without Union, Each	.40	.40	.40

GALVANIZED WASH TRAY FITTINGS

Plate 2955 Wash Tray Tee

Plate 2956 Wash Tray Ell, Right

Plate 2957 Wash Tray Ell, Left

Sizes	½″	¾″	1″
Plate 2955—Wash Tray Tees, Galvanized	$ .20	$ .30	$ .30
Plate 2956, 2957—Wash Tray Ells, Galvanized, Each	.20	.30	.....

MALLEABLE CROSS-OVERS

Plate 2958

Cross-Over, Flat Band

Plate 2959
Back-Outlet Cross-Over,
Flat Band

Plate 29510

Cross-Over Tee, Flat Band

Sizes	½″	¾″	1″
Plate 2958, 2959, 29510—Cross-Overs, Black, Each	$ .20	$ .30	$ .45
Plate 2958—Cross-Overs, Galvanized, Each	.25	.40	.60
Plate 2959—Cross-Overs, B. O. Galvanized, Each	.30	.50	.75
Plate 29510—Cross-Over Tee, Galvanized, Each	.50	.70	1.00

BRASS FITTINGS

Malleable Pattern — Iron Pipe Size

FOR 125 LBS. STEAM WORKING PRESSURE

Plate 2961 90° Elbow

Plate 2962 45° Elbow

Plate 2963 Drop Elbow

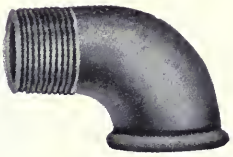


Plate 2964 Service Ebow

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″
Plate 2961—Elbows 90°, Each	$ .12	$ .15	$ .20	$ .28	$ .40	$ .63	$ .90	$1.20	$2.00	$3.50	$6.00	$ 8.00	$10.00
Elbows, Reducing, Each	.....	.19	.25	.35	.50	.80	1.10	1.50	2.50	4.25	7.50	10.00	12.50
Plate 2962—Elbows 45°, Each	.16	.20	.25	.31	.40	.63	.90	1.20	2.00	3.50	6.00	8.00	10.00
Elbows, Side Outlet, Each	.....	.45	.60	.85	1.20	1.90	2.75	3.60	6.00	10.50	18.00	.....	.....
Plate 2963—Drop Elbows, Each	.....	.....	.35	.45	.65	1.05	1.50	2.00	3.40	.....	.....	.....	.....
Plate 2964—Service Elbows, Each	.25	.27	.33	.48	.63	.85	1.50	2.00	3.25	6.00	10.00	.....	.....

Right and Left Elbows, 25 per cent advance on above prices.
For list on Finished and Finished Nickel Plated Fittings, see page 299.

Plate 2965 Tee

Plate 2966 Drop Tee

Plate 2967 Cross

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″
Plate 2965—Tees, Each	$ .17	$ .21	$ .28	$ .40	$ .55	$ .85	$1.25	$1.70	$2.80	$5.00	$8.50	$11.00	$14.00
Tees, Reducing, Each	.....	.25	.35	.50	.70	1.05	1.55	2.10	3.50	6.25	10.50	14.00	17.00
Plate 2966—Drop Tees, Each	.....	.....	.58	.74	1.05	1.70	2.45	3.30	5.60	.....	.....	.....	.....
Plate 2967 Crosses, Each	.25	.30	.40	.55	.80	1.25	1.80	2.40	4.00	7.00	12.00	16.00	20.00
Crosses, Reducing, Each	.....	.38	.50	.70	1.00	1.55	2.25	3.00	5.00	8.75	15.00	20.00	25.00

For List on Finished and Finished Nickel Plated Fittings, see Page 299.

BRASS UNIONS

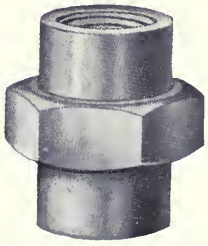


Plate 2968 Semi-Finished

BRASS UNIONS, SEMI-FINISHED OR POLISHED

Sizes	⅛″	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″
Brass Unions, Semi-Finished, Each	$ .45	$ .55	$ .75	$ .95	$1.30	$1.75	$2.50	$3.00	$4.50	$8.25	$12.75	$22.50	$30.00
Brass Union, Polished, Each	.50	.60	.85	1.05	1.40	1.90	2.75	3.25	5.00	9.00	14.00	25.00	33.00

BRASS FITTINGS

MALLEABLE PATTERN—IRON PIPE SIZE
FOR 125 LBS. STEAM WORKING PRESSURE

Plate 2971 Return Bend, Close

Plate 2972 Return Bend, Open

Plate 2973 Y Branch

RETURN BEND AND Y BRANCHES

Sizes	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
Plate 2971—Each	$ .70	$ 1.00	$ 1.25	$ 1.80	$ 2.50	$ 4.25	$ 7.00	$10.00	.....	.....
" 2972— "	.80	1.10	1.40	2.15	3.00	4.75	8.25	11.00	.....	.....
" 2973— "	.75	1.10	1.65	2.50	3.30	5.50	9.50	16.00	$21.00	$26.00

Plate 2974 Coupling

Plate 2975 Reducing Coupling

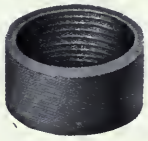


Plate 2976 Cap

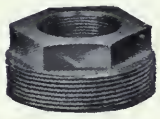


Plate 2977 Bushing

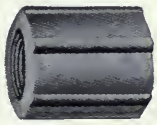


Plate 2978 Right and Left Coupling

COUPLINGS, LOCKNUTS, CAPS, PLUGS AND BUSHINGS

Sizes	⅛"	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
Plate 2974—Couplings, Each	$.10	$.13	$.17	$.25	$.37	$.55	$ .80	$1.00	$1.60	$2.50	$3.50	$5.25	$7.00
" 2978—Couplings, R. and L., Each	.13	.17	.22	.30	.45	.70	1.00	1.30	2.00	3.10	4.50	.....	.....
" 2975—Couplings, Reducing, Each	....	.15	.20	.28	.40	.60	.90	1.10	1.75	2.75	4.00	6.00	8.00
" 2979—Locknuts, Each	.10	.10	.12	.15	.20	.28	.40	.55	.80	1.75	2.75	4.00	5.00
" 2976—Caps, Each	.10	.13	.16	.20	.30	.42	.60	.80	1.25	2.50	3.50	5.50	7.00
" 29710—Plugs, Each	.08	.10	.12	.15	.20	.30	.45	.60	.95	1.50	2.25	3.75	5.00
Solid Plugs, Each	....	....	.18	.22	.30	.45	.80	1.20	1.90	3.00	4.50	7.50	10.00
Counter Sunk Plugs, Each	....	....	....	.22	.30	.45	.65	.90	1 40	....	....	....	....
Plate 2977—Bushings, Each	....	10	.12	.15	.22	.35	.50	.70	1.00	1.50	2.50	3.75	5.00
" 29711—Flush Bushings, Ea.	....	.12	.15	.19	.27	.44	.62	.87	1.25	1.85	3.10	4.75	6.25

Plate 2979 Locknut

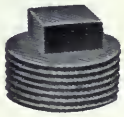


Plate 29710 Plug

For list on Finished and Finished Nickel Plated Fittings, see page 299.

Note.—Right and Left Elbows and Right and Left Return Bends, furnished at an advance of 25% over above prices. Bushings and Reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

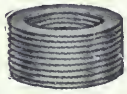


Plate 29711 Flush Bushing

EXTRA HEAVY—IRON PIPE SIZE—CAST IRON PATTERN
FOR 250 LBS. STEAM WORKING PRESSURE

Plate 29712 Return Bend, Close

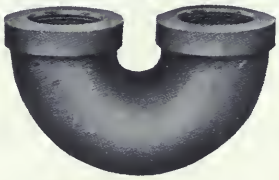


Plate 29713 Return Bend, Open

Plate 29714 Coupling

RETURN BENDS AND COUPLINGS

Sizes	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"
Plate 29712—Return Bends, C.P., Each	$ 1.65	$ 2.50	$ 3.50	$ 5.00	$ 7.00	$10.00	$16.00	$22.00	$30.00	$40.00	.....	.....
" 29713—Return Bends, O.P., Each	1.80	2.75	4.00	5.50	8.00	11.00	18.00	25.00	35.00	45.00	.....	.....
" 29714—Couplings, Each	.70	1.10	1.65	2.25	3.00	4.50	7.00	10.00	13.00	17.00	$27.00	$35.00

CAST IRON PATTERN, POLISHED, FOR IRON PIPE

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"
Elbows, 90°	$ .73	$ .90	$ 1.25	$ 1.75	$ 2.50	$ 3.50	$ 4.50	$ 6.25	$10.50	$14.75	$23.50	$31.00	$48.00	$60.00
Elbows, Red'g	.....	1.15	1.50	2.10	3.00	4.10	5.35	7.50	12.00	17.25	28.00	36.00	56.00	70.00
Elbows, 45°	.95	1.15	1.50	2.00	2.85	4.00	5.10	6.75	11.00	15.50	25.00	33.00	51.00	65.00
Elbows, R. & L.	.90	1.15	1.50	2.10	3.00	4.10	5.35	7.50	12.00	17.25	.....	.....	.....	.....
Tees	1.00	1.25	1.70	2.35	3.35	4.65	6.00	8.35	14.00	19.75	32.00	42.00	64.00	80.00
Tees, Reducing	.....	1.50	2.05	2.80	4.00	5.50	7.00	9.75	16.00	23.00	37.00	50.00	70.00	90.00
Crosses	1.50	1.90	2.50	3.50	5.00	7.00	9.00	12.50	21.00	29.50	43.00	55.00	85.00	105.00
Crosses, Red'g	.....	2.35	3.00	4.25	6.00	8.25	10.75	15.00	24.00	35.00	50.00	64.00	95.00	120.00
Couplings	.75	.90	1.15	1.70	2.40	3.20	4.15	5.85	9.00	13.00	18.50	24.00	37.00	47.00
Return Bends, Close	.....	.....	2.85	4.00	5.50	7.50	10.00	13.50	21.00	29.00	45.00	58.00	.....	.....
Return Bends, Open	.....	.....	3.00	4.25	6.00	8.00	11.00	14.50	23.00	32.00	50.00	63.00	.....	.....
Wyes	1.70	2.10	2.70	4.00	5.50	8.00	10.25	14.50	24.00	34.00	48.00	63.00	96.00	120.00

BRASS FITTINGS

EXTRA HEAVY—IRON PIPE SIZE—CAST IRON PATTERN

FOR 250 LBS. STEAM WORKING PRESSURE

Plate 2981
90° Ell

Plate 2982
Reducing Ell

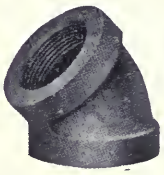


Plate 2983
45° Ell

ELBOWS

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″
Plate 2981—Elbows. 90°, Each	$ .33	$ .45	$ .65	$ 1.00	$ 1.50	$ 2.25	$ 3.00	$ 4.50	$ 8.00	$11.25	$16.00	$22.00	$35.00	$45.00
" 2982—Elbows, Reducing, Each	.....	.55	.75	1.20	1.80	2.60	3.50	5.25	9.00	13.00	19.00	25.00	40.00	50.00
" 2983—Elbows, 45°, Each	.45	.55	.75	1.10	1.65	2.50	3.25	4.50	8.00	11.25	16.00	22.00	35.00	45.00

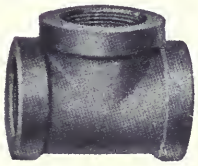


Plate 2984
Tee

Plate 2985
Tee Reducing

Plate 2986
Cross

TEES AND CROSSES

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″
Plate 2984—Tees, Each	$ .45	$ .60	$ .90	$ 1.35	$ 2.00	$ 3.00	$ 4.00	$ 6.00	$10.75	$15.00	$22.00	$30.00	$46.00	$60.00
" 2985—Tees, Reducing, Each	.....	.70	1.05	1.55	2.30	3.50	4.50	6.75	12.00	17.00	25.00	35.00	51.00	66.00
" 2986—Crosses, Each	.70	.90	1.30	2.00	3.00	4.50	6.00	9.00	16.00	22.50	28.00	37.00	60.00	75.00
Crosses, Reducing, Each	.....	1.10	1.50	2.40	3.60	5.25	7.00	10.50	18.00	26.00	32.00	42.00	66.00	82.00

For list of Standard Sizes, see Page 301.

FLANGE UNIONS — IRON BOLTS

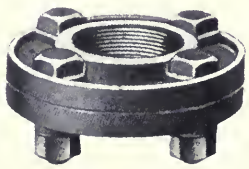


Plate 2987 Standard Weight
Flange Union

Plate 2988 Extra Heavy
Flange Union

PLATE 2987, 2988—BRASS FLANGE UNIONS

Sizes	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″
Flange Unions, 125 lbs. Work'g Press, Iron Bits	$ 4.00	$ 4.50	$ 5.00	$ 5.50	$ 7.00	$ 9.00	$11.50	$15.00	$18.00	$22.00	$35.00	$45.00
Extra Heavy Flange Unions	.....	7.50	8.50	11.00	13.00	16.00	18.00	24.00	27.00	30.00	48.00	60.00

BRASS FITTINGS

MALLEABLE PATTERN—IRON PIPE SIZE

FOR 125 LBS. STEAM WORKING PRESSURE

POLISHED

Sizes	⅛"	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
Elbows, 90°	$ .30	$ .35	$ .45	$ .56	$ .75	$ 1 10	$ 1.55	$ 2.00	$ 3.00	$ 5.50	$ 9.00	$ 14.00	$ 17.50
Elbows, Reducing, Each	.....	.44	.55	.70	.95	1.40	1.90	2.50	3.75	6.75	11.25	17.50	22.00
Elbows, 45°, Each	.38	.45	.55	.66	.85	1.23	1.70	2.20	3.25	6.00	9.75	15.50	19.50
Elbows, Street, Each	.47	.52	.63	.83	1.08	1.45	2.30	3.00	4.50	8.50	13.75	.....	.....
Elbows, Side Outlet, Each	.....	1.05	1.35	1.70	2.25	3.30	4.70	6.00	9.00	16.50	27.00	.....	.....
Elbows, Drop, Female, Each	.....	.....	.85	1.05	1.40	2.00	2.80	3.60	5.40	.....	.....	.....	.....
Tees	.42	.49	.63	.80	1.05	1.50	2.15	2.80	4.20	7.75	12.75	19.50	24.50
Tees, Reducing, Each	.....	.60	.77	1.00	1.30	1.85	2.65	3.50	5.25	9.75	15.80	24.50	30.50
Tees, Drop, Single Ear, Fach	.....	.....	1.13	1.37	1.80	2.55	3.65	4.70	7.00	.....	.....	.....	.....
Tees, Drop, Double Ear, Each	.....	.....	1.28	1.54	2.05	3.00	4.25	5.50	8.40	.....	.....	.....	.....
Tees, Side Outlet, Each	.....	.....	.....	2.05	2.70	3.90	5.70	7.40	11.50	.....	.....	.....	.....
Crosses	.60	.70	.90	1.10	1.50	2.20	3.10	4.00	6.00	11.00	18.00	28.00	35.00
Crosses, Reducing, Each	.....	.88	1.10	1.40	1.85	2.75	3.85	5.00	7.50	13.75	22.50	35.00	44.00
Couplings, Each	.24	.28	.36	.46	.63	.90	1.30	1.60	2.35	4.00	5.75	9.75	12.50
Couplings, Right and Left, Each	.31	.37	.47	.58	.80	1.15	1.65	2.10	3.00	5.10	7.50	.....	.....
Couplings, Reducing, Each	.....	.35	.45	.56	.75	1.05	1.55	1.90	2.75	4.75	7.00	12.00	15.50
Bushings, Regular, Each	.....	.22	.27	.35	.47	.70	1.00	1.40	2.00	3.00	4.50	6.25	8.00
Plugs, Regular, Each	.23	.30	.37	.43	.55	.75	1.00	1.30	1.95	3.00	4.25	6.25	8.00
Plugs, Solid, Each	.....	.....	.43	.50	.65	.90	1.35	1.90	2.90	4.50	6.50	10.00	13.00
Plugs, Countersunk, Each	.....	.....	.....	.42	.55	.80	1.15	1.55	2.25	.....	.....	.....	.....
Caps, Each	.20	.25	.31	.40	.55	.77	1.10	1.50	2.25	4.00	5.50	8.00	10.00
Locknuts, Each	.24	.25	.32	.40	.50	.65	.85	1.10	1.60	3.25	4.75	6.50	8.00
Return Bends, Close, Each	.85	1.00	1.30	1.55	2.05	2.65	3.75	4.90	7.25	13.00	19.00	.....	.....
Return Bends, Open, Each	.95	1.10	1.35	1.65	2.15	2.80	4.10	5.40	7.75	14.25	20.00	.....	.....
Wyes, Each	.....	.....	1.35	1.60	2.15	3 05	4.45	5.70	8.50	15.50	25.00	33.00	41.00

Note.—Right and Left Elbows and Right and Left Return Bends, furnished at an advance of 25% over above prices. Bushings and Reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

POLISHED AND NICKEL PLATED

Sizes	⅛"	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
Elbows, 90°	$ .36	$ .42	$ .53	$ .65	$ .87	$ 1.25	$ 1.75	$ 2.25	$ 3.35	$ 6.15	$ 10.00	$ 16.00	$ 20.00
Elbows, Reducing, Each	.....	.52	.65	.82	1.10	1.60	2.15	2.85	4.15	7.60	12.50	20.00	25.00
Elbows, 45°, Each	.45	.53	.65	.78	1.00	1.43	1.95	2.55	3.65	6.85	11.00	18.00	22.50
Elbows, Street, Each	.54	.60	.73	.95	1.23	1.65	2.55	3.35	4.90	9.35	15.00	.....	.....
Elbows, Side Outlet, Each	.....	1.25	1.60	2.00	2.60	3.75	5.35	6.80	10.00	18.50	30.00	.....	.....
Elbows, Drop, Female, Each	.....	.....	1.00	1.25	1.65	2.30	3.20	4.10	6.00	.....	.....	.....	.....
Tees, Each	.50	.58	.75	.93	1.22	1.70	2.45	3.15	4.65	8.65	14.00	22.30	28.00
Tees, Reducing, Each	.....	.72	.90	1.15	1.50	2.10	3.00	3.95	5.85	10.90	17.50	28.00	35.00
Tees, Drop, Single Ear	.....	.....	1.33	1.62	2.15	2.95	4.25	5.45	7.90	.....	.....	.....	.....
Tees, Drop, Double Ear, Each	.....	.....	1.48	1.80	2.40	3.40	4.85	6.25	9.30	.....	.....	.....	.....
Tees, Side Outlet, Each	.....	.....	.....	2.35	3.05	4.35	6.35	8.20	12.50	.....	.....	.....	.....
Crosses, Each	.72	.84	1.05	1.30	1.75	2.50	3.50	4.50	6.70	12.30	20 00	32.00	40.00
Crosses, Reducing, Each	.....	1.05	1.30	1.65	2.15	3.15	4.35	5.70	8.30	15.40	25.00	40.00	50.00
Couplings, Each	.29	.33	.42	.53	.72	1.00	1.45	1.80	2.60	4.50	6.50	11.25	14.25
Couplings, Right and Left, Each	.37	.44	.55	.67	.92	1.30	1.85	2.35	3.35	5.75	8.50	.....	.....
Couplings, Reducings, Each	.....	.42	.53	.65	.87	1.20	1.75	2.15	3.10	5.40	8.00	14.00	18.00
Bushings, Regular, Each	.....	.26	.32	.42	.55	.82	1.15	1.65	2.35	3.50	5.15	7.10	9.00
Plugs, Regular, Each	.28	.37	.45	.52	.67	.90	1.20	1.55	2.30	3.50	4.90	7.10	9.00
Plugs, Solid, Each	.....	.....	.51	.59	.77	1.05	1.55	2.15	3.25	5.00	7.15	10.85	14.00
Plugs, Countersunk, Each	.....	.....	.....	.49	.63	.92	1.30	1.75	2.55	.....	.....	.....	.....
Caps, Each	.23	.29	.36	.47	.63	.89	1.25	1.75	2.60	4.50	6.15	8.85	11.00
Locknuts, Each	.29	.30	.39	.48	.60	.77	1.00	1.30	1.85	3.75	5.40	7.35	9.00
Return Bends, Close, Each	1.05	1.20	1.55	1.85	2.40	3.10	4.40	5.70	8.25	15.00	22.00	.....	.....
Return Bends, Open, Each	1.15	1.30	1.60	1.95	2.50	3.25	4.75	6.20	8.75	16.25	23.00	.....	.....
Wyes, Each	.....	.....	1.60	1.90	2.50	3.50	5.10	6.50	9.50	17.50	28.00	37.00	46.00

Note.—Right and Left Elbows and Right and Left Return Bends, furnished at an advance of 25% over above prices. Bushings and reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

BRASS FITTINGS

MALLEABLE PATTERN—FINE THREAD

FOR 125 LBS. STEAM WORKING PRESSURE

ROUGH

Sizes	⅝″	¾″	⅞″	1″	1¼″	1½″	1¾″	2″	2¼″	2½″
Elbows, 90°, Each	$ .20	$ .28	$ .32	$ .40	$ .63	$ .80	$ .90	$ 1.20	$ 1.80	$ 2.00
Elbows, Reducing, Each	.25	.35	.40	.50	.80	1.00	1.10	1.50	2.25	2.50
Elbows, 45°, Each	.25	.31	.35	.40	.63	.80	.90	1.20	1.80	2.00
Elbows, Street, Each	.33	.48	.55	.63	.85	1.30	1.50	2.00	3.00	3.25
Elbows, Side Outlet, Each	.60	.85	.95	1.20	1.90	2.50	2.75	3.60	5.00	6.00
Elbows, Drop, Each	.35	.45	.55	.65	1.05	1.35	1.50	.....	.....	.....
Tees, Each	.28	.40	.45	.55	.85	1.10	1.25	1.70	2.50	2.80
Tees, Reducing, Each	.35	.50	.55	.70	1.05	1.40	1.55	2.10	3.25	3.50
Tees, Drop, Single Ear, Each	.45	.57	.62	.80	1.25	1.60	1.85	.....	.....	.....
Tees, Drop, Double Ear, Each	.60	.75	.80	1.05	1.70	2.10	2.45	.....	.....	.....
Tees, Side Outlet, Each	.....	1.20	1.40	1.65	2.50	3.00	3.75	5.00	.....	.....
Crosses, Each	.40	.55	.65	.80	1.25	1.60	1.80	2.40	3.60	4.00
Crosses, Reducing, Each	.50	.70	.80	1.00	1.55	2.00	2.25	3.00	4.50	5.00
Couplings, Each	.17	.25	.30	.37	.55	.70	.80	1.00	1.40	1.60
Couplings, Right and Left, Each	.22	.30	.35	.45	.70	.90	1.00	1.30	1.80	2.00
Couplings, Reducing, Each	.20	.28	.32	.40	.60	.80	.90	1.10	1.50	1.75
Bushings, Regular, Each	.12	.15	.18	.22	.35	.40	.50	.70	.85	1.00
Plugs, Each	.12	.15	.18	.20	.30	.40	.45	.60	.80	.95
Plugs, Solid, Each	.18	.22	.25	.30	.45	.70	.80	1.20	1.60	1.90
Plugs, Countersunk, Each	.....	.22	.25	.30	.45	.60	.65	.90	1.20	1.40
Caps, Each	.16	.20	.25	.30	.42	.55	.60	.80	1.15	1.25
Locknuts, Each	.12	.15	.18	.20	.28	.35	.40	.55	.70	.80
Return Bends, Close, Each	.55	.70	.75	1.00	1.25	1.70	1.80	2.50	4.00	4.25
Return Bends, Open, Each	.60	.80	.85	1.10	1.40	2.05	2.15	3.00	4.50	4.75
Wyes, Each	.60	.75	.85	1.10	1.65	2.25	2.50	3.30	5.25	5.50
Rough Unions, Each	.65	.85	1.00	1.15	1.60	2.00	2.25	2.70	3.50	4.00

POLISHED

Sizes	⅝″	¾″	⅞″	1″	1¼″	1½″	1¾″	2″	2¼″	2½″
Elbows, 90°, Each	$ .45	$ .55	$ .60	$ .75	$ 1.10	$ 1.45	$ 1.55	$ 2.00	$ 2.75	$ 3.00
Elbows, Reducing, Each	.55	.70	.75	.95	1.40	1.80	1.90	2.50	3.50	3.75
Elbows, 45°, Each	.55	.65	.70	.85	1.25	1.60	1.70	2.20	3.00	3.25
Elbows, Street, Each	.63	.83	.90	1.10	1.45	2.10	2.30	3.00	4.25	4.50
Elbows, Side Outlet, Each	1.35	1.70	1.80	2.25	3.30	4.50	4.70	6.00	8.00	9.00
Elbows, Drop, Each	.85	1.05	1.15	1.40	2.00	2.65	2.80	.....	.....	.....
Tees, Each	.63	.80	.85	1.05	1.50	2.00	2.15	2.80	3.90	4.20
Tees, Reducing, Each	.77	1.00	1.05	1.30	1.85	2.50	2.65	3.50	4.90	5.25
Tees, Drop, Single Ear, Each	1.15	1.40	1.45	1.80	2.55	3.40	3.65	.....	.....	.....
Tees, Drop, Double Ear, Each	1.30	1.55	1.60	2.00	3.00	3.90	4.25	.....	.....	.....
Tees, Side Outlet, Each	.....	2.00	2.25	2.70	3.90	5.00	5.70	7.40	.....	.....
Crosses, Each	.90	1.10	1.20	1.50	2.20	2.90	3.10	4.00	5.50	6.00
Crosses, Reducing, Each	1.10	1.40	1.50	1.85	2.75	3.60	3.85	5.00	7.00	7.50
Couplings, Each	.36	.46	.50	.63	.90	1.20	1.30	1.60	2.15	2.35
Couplings, Right and Left, Each	.47	.58	.65	.80	1.15	1.55	1.65	2.10	2.80	3.00
Couplings, Reducing, Each	.45	.56	.60	.75	1.05	1.45	1.55	1.90	2.50	2.75
Bushings, Each	.27	.35	.40	.47	.70	.90	1.00	1.40	1.85	2.00
Plugs, Each	.37	.43	.46	.55	.75	.90	1.00	1.30	1.80	1.95
Plugs, Solid, Each	.43	.50	.53	.65	.90	1.25	1.35	1.90	2.60	2.90
Plugs, Countersunk, Each	.....	.42	.45	.55	.80	1.10	1.15	1.55	2.00	2.25
Caps, Each	.31	.40	.45	.55	.77	1.00	1.10	1.50	2.15	2.25
Locknuts, Each	.32	.40	.45	.50	.65	.80	.85	1.10	1.50	1.60
Return Bends, Close, Each	1.30	1.55	1.65	2.05	2.65	3.65	3.75	4.90	7.00	7.25
Return Bends, Open, Each	1.35	1.65	1.75	2.15	2.80	4.00	4.10	5.40	7.50	7.75
Wyes, Each	1.35	1.60	1.75	2.15	3.05	4.20	4.45	5.70	8.25	8.50
Unions, Each	.85	1.05	1.25	1.40	1.90	2.50	2.75	3.25	4.50	5.00

Note.—Right and Left Elbows and Right and Left Return Bends, furnished at an advance of 25% over above prices.
Bushings and Reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

BRASS FITTINGS

STANDARD SIZES OF BRASS FITTINGS—Malleable Pattern

STRAIGHT SIZES

Elbows, ⅛″ to 4″
Elbows, Right and Left, ½″ to 1¼″
Elbows, 45°, ⅛″ to 3″
Service or Street Elbows, ⅛″ to 2″
Drop Elbows, ⅜″ to ¾″
Tees, ⅛″ to 4″
Drop Tees, ⅜″ to ¾″ and ¾″ x ½″
Crosses, ⅛″ to 2″
Y-Branches, ⅜″ to 2″
Couplings, ⅛″ to 4″
Couplings, Right and Left, ¼″ to 2″

Plugs, ⅛″ to 4″
Solid Plugs, ⅜″ and ½″
Socket Plugs, ½″ to 1½″
Caps, ⅛″ to 4″
Acorns, ½″ and 3¼″
Locknuts, ⅛″ to 4″
Return Bends, Close Pattern, ½″ to 2″ and ½″ and ¾″ Right and Left.
Return Bends, Open Pattern, ½″ to 2″ and ½″ and ¾″ Right and Left.

REDUCING SIZES

ELBOWS

¼″ x ⅛″
⅜″ x ¼″
½″ x ¼″
½″ x ⅜″
¾″ x ⅜″
¾″ x ½″
1″ x ½″
1″ x ¾″
1¼″ x 1″
1½″ x 1″
1½″ x 1¼″
2″ x 1½″
2½″ x 2″

TEES

¼″ x ⅛″
⅛″ x ¼″
⅜″ x ⅛″
⅜″ x ¼″
¼″ x ⅜″
½″ x ⅛″
½″ x ¼″
½″ x ⅜″
½″ x ½″
¾″ x ½″
¾″ x ¼″
¾″ x ⅜″
¾″ x ½″
½″ x ¾″
1″ x ⅜″
1″ x ½″
1″ x ¾″
¾″ x 1″
1¼″ x ½″
1¼″ x ¾″
1¼″ x 1″

¾″ x 1¼″
1″ x 1¼″
1½″ x ½″
1½″ x ¾″
1½″ x 1″
1½″ x 1¼″

TEES.—Cont.

1¼″ x 1½″
2″ x ¾″
2″ x 1″
2″ x 1¼″
2″ x 1½″
1½″ x 2″
2½″ x 1″
2½″ x 1¼″
2½″ x 1½″
2½″ x 2″
2″ x 2½″
3″ x 1½″
3″ x 2″
3″ x 2½″
¼″ x ⅛″ x ⅛″
¼″ x ⅛″ x ¼″
⅜″ x ¼″ x ¼″
⅜″ x ¼″ x ⅜″
½″ x ¼″ x ¾″
½″ x ¼″ x ½″
½″ x ⅜″ x ⅜″
½″ x ⅜″ x ½″
¾″ x ½″ x ½″
¾″ x ½″ x ¾″
1″ x ½″ x 1″
1″ x ¾″ x ½″
1″ x ¾″ x ¾″
1″ x ¾″ x 1″
1¼″ x ½″ x 1¼″
1¼″ x ¾″ 1¼″
1¼″ x 1″ x 1″
1¼″ x 1″ x 1¼″
1½″ x 1¼″ x 1½″
2″ x 1½″ x 1½″

CROSSES

¼″ x ⅛″
⅜″ x ⅛″
⅜″ x ¼″
½″ x ¼″
½″ x ⅜″

CROSSES.—Cont.

¾″ x ⅜″
¾″ x ½″
1″ x ½″
1″ x ¾″
1¼″ x 1″
1½″ x 1¼″
2″ x 1½″
2½″ x 2″

COUPLINGS

¼″ x ⅛″
⅜″ x ⅛″
⅜″ x ¼″
½″ x ¼″
½″ x ⅜″
¾″ x ⅜″
¾″ x ½″
1″ x ½″
1″ x ¾″
1¼″ x ¾″
1¼″ x 1″
1½″ x 1″
1½″ x 1¼″
2″ x 1″
2″ x 1¼″
2″ x 1½″
2½″ x 2″

BUSHINGS

¼″ x ⅛″
⅜″ x ⅛″
⅜″ x ¼″
½″ x ⅛″
½″ x ¼″
½″ x ⅜″
¾″ x ¼″
¾″ x ⅜″
¾″ x ½″
1″ x ¼″
1″ x ⅜″
1″ x ½″

BUSHINGS.—Cont.

1″ x ¾″
1¼″ x ¼″
1¼″ x ⅜″
1¼″ x ½″
1¼″ x ¾″
1¼″ x 1″
1½″ x ½″
1½″ x ¾″
1½″ x 1″
1½″ x 1¼″
2″ x ½″
2″ x ¾″
2″ x 1″
2″ x 1¼″
2″ x 1½″
2½″ x 1″
2½″ x 1¼″
2½″ x 1½″
2½″ x 2″
3″ x 1″
3″ x 1¼″
3″ x 1½″
3″ x 2″
3″ x 2½″
3½″ x 3″
4″ x 3″

FLUSH BUSHINGS

¼″ x ⅛″
⅜″ x ¼″
½″ x ¼″
½″ x ⅜″
¾″ x ½″
1″ x ½″
1″ x ¾″
1¼″ x 1″
1½″ x 1¼″
2″ x 1½″
2½″ x 2″

CAST IRON PATTERN—STRAIGHT SIZES

Elbows, ¼″ to 4″
Elbows, 45°, ¼″ to 4″, except 3½″.
Tees, ¼″ to 4″
Crosses, ¾″ to 2″
Y-Branches, ¾″ to 3″

Couplings, ¼″ to 3″
Return Bends, Close Pattern, ¾″ to 1½″
Return Bends, Open Pattern, ¾″ to 1½″
Return Bends, Close Pattern, R. & L., ¾″
Return Bends, Open Pattern, R. & L., ¾″

REDUCING SIZES

ELBOWS

½″ x ⅜″
¾″ x ½″
1″ x ¾″
1¼″ x 1″
1½″ x 1¼″
2″ x 1½″
2½″ x 2″

TEES

⅜″ x ¼″
½″ x ¼″
½″ x ⅜″
½″ x ¾″
¾″ x ¼″
¾″ x ⅜″
¾″ x ½″

TEES.—Cont.

¾″ x 1″
1″ x ⅜″
1″ x ½″
1″ x ¾″
1″ x 1¼″
1¼″ x ⅜″
1¼″ x ½″
1¼″ x ¾″
1¼″ x 1″
1¼″ x 1½″
1½″ x ½″
1½″ x ¾″
1½″ x 1″
1½″ x 1¼″
1½″ x 2″
2″ x ½″
2″ x ¾″

TEES.—Cont.

2″ x 1″
2″ x 1¼″
2″ x 1½″
2″ x 2½″
2½″ x 1″
2½″ x 1¼″
2½″ x 1½″
2½″ x 2″
3″ x 1¼″
3″ x 1½″
3″ x 2″
3″ x 2½″
4″ x 1½″
4″ x 2″
½″ x ⅜″ x ½″
¾″ x ½″ x ¾″
1″ x ½″ x 1″

TEES.—Cont.

1″ x ¾″ x ¾″
1¼″ x ¼″ x 1¼″
1¼″ x ⅜″ x 1¼″
1¼″ x ½″ x 1¼″
1¼″ x ¾″ x 1¼″
1¼″ x 1″ x 1¼″
1½″ x ½″ x 1½″
1½″ x ¾″ x 1½″
1½″ x 1¼″ x 1¼″
1½″ x 1¼″ x 1½″
2″ x 1″ x 2″
2″ x 1¼″ x 2″
2″ x 1½″ x 1½″
2″ x 1½″ x 2″
2½″ x 2″ x 2″
2½″ x 2″ x 2½″
3″ x 2″ x 3″

Unions, Standard Weight, ⅛″ to 3″
Unions, Extra Heavy, ¼″ to 3″
Unions, Octagon, ⅛″ to 2½″

Unions, Hydraulic, ¼″ to 1½″
Flange Unions, Standard Weight, ¾″ to 4″, except 3½″
Flange Unions, Extra Heavy. To order only.

BRASS NIPPLES

IRON PIPE SIZES

Plate 3021 Close Nipple

Plate 3022 Shoulder or Space

Sizes	Length Close	Length										
		Close	1½″	2″	2½″	3″	3½″	4″	4½″	5″	5½″	6″
⅛″	¾″	$ .11	$ .13	$ .15	$ .17	$ .19	$ .21	$ .23	$ .25	$ .27	$ .29	$ .31
¼″	⅞″	.13	.16	.19	.22	.25	.28	.31	.34	.37	.40	.43
⅜″	1″	.15	.19	.23	.27	.31	.35	.39	.43	.47	.51	.55
½″	1⅛″	.23	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70
¾″	1⅜″	.28	.....	.35	.42	.49	.56	.63	.70	.77	.84	.91
1″	1½″	.37	.....	.44	.53	.62	.71	.80	.89	.98	1.07	1.16
¼″	1⅝″	.60	.....	.....	.75	.88	1.01	1.14	1.27	1.40	1.53	1.66
1½″	1¾″	.70	.....	.....	.90	1.05	1.20	1.35	1.50	1.65	1.80	1.95
2″	2″	1.00	.....	.....	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60
2½″	2½″	1.70	.....	.....	.....	2.00	2.30	2.60	2.90	3.20	3.50	3.80
3″	3½″	2.50	.....	.....	.....	2.90	3.30	3.70	4.10	4.50	4.90	5.30
3½″	2¾″	4.00	.....	.....	.....	.....	.....	5.40	6.00	6.60	7.20	7.80
4″	3″	4.75	.....	.....	.....	.....	.....	6.15	6.85	7.55	8.25	8.95
5″	3½″	8.50	.....	.....	.....	.....	.....	.....	10.60	11.65	12.70	13.75
6″	3½″	11.50	.....	.....	.....	.....	.....	.....	14.10	15.40	16.70	18.00

Polished Brass Nipples, Longer than Close, 25% Extra.
Note.—Sizes not listed above made to order at special net prices.
For Extra Heavy Brass Nipples add 100 per cent to above list.

Plate 3023

"WORLD" UNION FLANGES

MALLEABLE IRON OR STEEL

WITH COPPER NON-CORROSIVE SEAT—BALL JOINT

Suitable for any steam working pressure up to 250 pounds and for Hydraulic pressures up to 1500 Pounds

Sizes	1″	1¼″	1½″	2″	2½″
Weight.....Lbs.	3½	5	7	10	16
Bolts	4-⅜″	4-⅜″	4-7/16″	4-½″	4-½″
Price, Each	$ .80	$1.20	$1.60	$2.00	$3.20

Sizes	3″	3½″	4″	5″	6″
Weight	23	26	37	45½	51
Bolts	5-½″	5-½″	5-⅝″	6-⅝″	8-⅝″
Price, Each	$4.80	$6.00	$7.50	$10.00	$12.50

Galvanized on application.

This Type of Union is also made Double Extra Heavy and particularly adapted to Marine and Railroad use. Price List double Standard List above.

COPPER TUBING

WEIGHT OF

SEAMLESS BRASS AND COPPER TUBING

Plate 3031

Iron Pipe Sizes—Regular

Iron Pipe Sizes	Diameter		Pounds per Foot	
	Outside	Inside	Brass	Copper
⅛″	.405″	.281″	.246	.259
¼″	.540″	.375″	.437	.459
⅜″	.675″	.494″	.612	.644
½″	.840″	.625″	.911	.958
¾″	1.050″	.822″	1.235	1.298
1″	1.315″	1.062″	1.740	1.829
1¼″	1.660″	1.368″	2.557	2.689
1½″	1.900″	1.600″	3.037	3.193
2″	2.375″	2.062″	4.017	4.224
2½″	2.875″	2.500″	5.830	6.130
3″	3.500″	3.062″	8.314	8.741
3½″	4.000″	3.500″	10.85	11.41
4″	4.500″	4.000″	12.29	12.93
4½″	5.000″	4.500″	13.74	14.44
5″	5.563″	5.062″	15.40	16.19
6″	6.625″	6.125″	18.44	19.39
7″	7.625″	7.062″	23.92	25.15
8″	8.625″	8.000″	30.05	31.60
9″	9.625″	8.937″	36.94	38.84
10″	10.750″	10.019″	43.91	46.17

IRON PIPE SIZES—Extras over Base Price Brass Tubes

⅛″	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″	8″
8	7	4	2	.....	.....	.....	.....	Base Price		.....	.....	.....	6	7	11c.

Iron Pipe Sizes—Extra Heavy

Iron Pipe Sizes	Diameter		Pounds per Foot	
	Outside	Inside	Brass	Copper
⅛″	.405″	.205″	.353	.371
¼″	.540″	.294″	.593	.624
⅜″	.675″	.421″	.805	.847
½″	.840″	.542″	1.191	1.253
¾″	1.050″	.736″	1.622	1.706
1″	1.315″	.951″	2.386	2.509
1¼″	1.660″	1.272″	3.291	3.460
1½″	1.900″	1.494″	3.986	4.191
2″	2.375″	1.933″	5.508	5.791
2½″	2.875″	2.315″	8.407	8.839
3″	3.500″	2.892″	11.24	11.82
3½″	4.000″	3.358″	13.66	14.37
4″	4.500″	3.818″	16.41	17.25
4½″	5.000″	4.250″	20.07	21.10
5″	5.563″	4.813″	22.51	23.67
6″	6.625″	5.750″	31.32	32.93
7″	7.625″	6.625″	41.22	43.34
8″	8.625″	7.625″	47.00	49.42

The above are catalogue weights for estimating purposes only. Tubes are charged at actual scale weights. These Tubes are carried in stock in 12 foot lengths. Cut or cut and threaded to order at an extra charge. See following page for list of base sizes and extras.

BRASS TUBING

Weight in Pounds Per Lineal Foot of
SEAMLESS BRASS TUBES

Outside Diameter — **No. 16 Stubs Gauge ★**
Thickness, Inches, .065 — **Nearest Fraction, 1/16 - -**

DIAMETER INCHES

Sizes	3/16" 0.92"	1/4" .139"	5/16" .186"	3/8" .233"	7/16" .280"	1/2" .327"	9/16" .374"	5/8" .421"	11/16" .468"	3/4" 5.15"	13/16" .562"	7/8" .609"	15/16" .656"	1" .703"	1 1/8" .797"
Sizes	1 1/4" .891"	1 3/8" .985"	1 1/2" .108"	1 5/8" 1.17"	1 3/4" 1.27"	1 7/8" 1.36"	2" 1.46"	2 1/8" 1.55"	2 1/4" 1.64"	2 3/8" 1.74"	2 1/2" 1.83"	2 5/8" 1.93"	2 3/4" 2.02"	2 7/8" 2.11"	3 " 2.21"
Sizes	3 1/8" 2.30"	3 1/4" 2.40"	3 3/8" 2.49"	3 1/2" 2.58"	3 5/8" 2.68"	3 3/4" 2.77"	3 7/8" 2.87"	4" 2.96"	4 1/8" 3.05"	4 1/4" 3.15"	4 3/8" 3.24"	4 1/2" 3.34"	4 5/8" 3.43"	4 3/4" 3.52"	4 7/8" 3.62"
Sizes	5" 3.71"	5 1/8" 3.81"	5 1/4" 3.90"	5 3/8" 3.99"	5 1/2" 4.09"	5 5/8" 4.18"	5 3/4" 2.28"	5 7/8" 4.37"	6" 4.46"	6 1/8" 4.56"	6 1/4" 4.65"	6 3/8" 4.75"	6 1/2" 4.84"	6 5/8" 4.93"	6 3/4" 5.03"
Sizes	6 7/8" 5.12"	7" 5.22"	7 1/8" 5.31"	7 1/4" 5.40"	7 3/8" 50"	7 1/2" 5.59"	7 5/8" 5.69"	7 3/4" 5.78"	7 7/8" 5.87"	8" 5.97"	8 1/8" 6.06"	8 1/4" 6.16"	8 3/8" 6.25"	8 1/2" 6.34"	8 5/8" 6.44"
Sizes	8 3/4" 6.53"	8 7/8" 6.63"	9" 6.72"	9 1/8" 6.81"	9 1/4" 6.91"	9 3/8" 7.00"	9 1/2" 7.10"	9 5/8" 7.19"	9 3/4" 7.28"	9 7/8" 7.38"	10" 7.47"	.....	.....	.....	.....

To determine the weight of a 16 stubs gauge tube of a given Inside Diameter, add, .098 to weights in above list.
★Commonly called by some Plumbers' Tube, carried in stock in 12′ lengths.
The above are Catalogue Weights for estimating purposes only.
Tubes are charged at actual scale weights.
Cut or cut and threaded to order at an extra charge.
See below for list of Base Sizes and Extras.

Prices are for 100 Pounds or more per Item in one Order
SEAMLESS TUBE PRICE LIST
Outside Diameters in Inches
Net Extras Over Base Prices, cents per Pound
Make no price that Does not appear on List

Stubs Gauge	Decimal	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1 1/4"	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"
4 to 11	.238"to.120"	....	....	....	....	....	....	....	....	BASE PRICE										$ .01	$ .01
12	.109"	....	....	....	....	$ .06	$ .05	$ .05	$ .05											.02	.02
13 or 3/32	.095"	....	....	....	....	.07	.05	.05	.05											.03	.03
14	.083"	....	....	$ .07	$ .07	.07	.05	.05	.05	$ .01	$ .01	$ .01	$ .01	$ .01	$ .01	$ .01	$ .01	$ .01	$ .01	.04	.04
15	.072"	....	$ .08	.07	.07	.07	.05	.05	.05	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.06	.06
16 or 1/16	.065"	$ .08	.08	.07	.07	.07	.05	.05	.05	.02	.02	.02	.02	.02	.02	.02	.02	.02	.05	.06	.07
17	.058"	.08	.08	.07	.07	.07	.05	.05	.05	.03	.03	.03	.03	.03	.03	.03	.03	.05	.06	.07	.08
18	.049"	.09	.09	.08	.08	.08	.06	.06	.06	.04	.04	.04	.04	.04	.04	.04	.06	.07	.08	.09	.10
19	.042"	.09	.09	.08	.08	.08	.06	.06	.06	.05	.05	.05	.05	.05	.05	.07	.08	.09	.10	.11	.13
20	.035"	.09	.09	.08	.08	.08	.06	.06	.06	.06	.06	.06	.06	.06	.07	.07	.08	.09	.11	.11	.13
21 or 1/32	.032"	.11	.10	.10	.08	.08	.07	.07	.07	.07	.07	.07	.07	.07	....	....	....	....	....	....	....
22	.028"	.13	.13	.11	.11	.09	.08	.08	.08	.08	.08	.08	.08	.08	....	....	....	....	....	....	....
23	.025"	.15	.15	.13	.13	.11	.11	.11	.11	.11	.11	.11	.13	.15	....	....	....	....	....	....	....
24	.022"	.31	.26	.24	.23	.22	.21	.19	.18	.18	.19	.19	.20	.21	....	....	....	....	....	....	....
25	.020"	.34	.29	.27	.25	.24	.23	.22	.22	.23	.24	....	....	....	....	....	....	....	....	....	....

Stubs Gauge	Decimal	4 1/4"	4 1/2"	4 3/4"	5"	5 1/4"	5 1/2"	5 3/4"	6"	6 1/4"	6 1/2"	6 3/4"	7"	7 1/4"	7 1/2"	7 3/4"	8"	8 1/2"	9"	9 1/2"	10"
4 to 11	.238" to .120"	$ .01	$ .03	$ .03	$ .05	$ .05	$ .06	$ .06	$ .07	$ .07	$ .07	$ .07	$ .07	$ .09	$ .09	$ .09	$ .11	$ .11	$ .11	$ .14	$ .17
12	.109"	.02	.04	.04	.06	.06	.07	.07	.08	.08	.08	.08	.08	.10	.10	.10	.12	.12	.12	.15	.18
13 or 3/32	.095"	.03	.05	.05	.07	.07	.08	.08	.09	.09	.09	.09	.09	.11	.11	.11	.13	.13	.13	.16	.19
14	.083"	.04	.06	.06	.08	.08	.09	.09	.10	.10	.10	.10	.10	.12	.12	.12	.14	.14	.14	....	....
15	.072"	.06	.07	.07	.09	.09	.11	.11	.14	.14	.14	.16	.16	.19	.19	.19	....	....	....	....	....
16 or 1/16	.065"	.08	.11	.11	.11	.16	.16	.16	.19	.19	.23	.23	.23	.26	.26	.26	....	....	....	....	....
17	.058"	.09	.12	.12	.12	.17	.17	.17	.20	.20	.24	.24	.24	.27	.27	.27	....	....	....	....	....
18	.049"	.11	.14	.14	.14	.20	.20	.20	.23	.23	.30	.30	..30	....	....	....	....	....	....	....	....
19	.042"	.15	.17	.21	.21	.25	.29	.31	.31	....	....	....	....	....	....	....	....	....	....	....	....
20	.042"	.19	.19	.23	.23	.31	.31	....	....	....	....	....	....	....	....	....	....	....	....	....	....
21 or 1/32	.032"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
22	.028"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
23	.025"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
24	.022"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
25	.020"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Sizes between gauges or diameters take price of nearest gauge or diameter.
For all Seamless Tubes of any shape other than Round, special prices quoted upon application.
In ordering, be careful to state whether tube is wanted outside diameter or inside diameter; also thickness of wall.
Prices for sizes larger or smaller than appear on list quoted upon application.
Special facilities for furnishing diameters in all gauges small than 3/8".
Charges for Threading, Nickel Plating, Polishing and Cutting, are net in addition to price to Tubing.

TO ASCERTAIN PRICES FOR

Copper Tubes.....add to above prices.....cents per lb.
Bronze or Gilding Tubes.....add to above prices.....cents per lb.
Low Brass Tubes.....add to above prices.....cents per lb.
Base Price quoted upon application for Tobin Bronze, Phosphor Bronze and Admiralty Mixture.

SHEET COPPER

TABLE OF WEIGHTS OF SHEET COPPER

Per Square Foot, and Thickness per Stubs Gauge

Rolled Copper has Specific Gravity of 8.90.. One Cubic Foot Weighs 558.125 Lbs.

SPECIAL SIZES MADE TO ORDER

Stubs wire gauge	Thickness in decimal parts of 1″	Weight per square foot in ounces	Weight of sheet 14″ x 48″ in pounds	Weight of sheet 24″ x 28″ in pounds	Weight of sheet 30″ x 60″ in pounds	Weight of sheet 36″ x 72″ in pounds	Weight of sheet 48″ x 72″ in pounds
35	.00537″	4	1.16	2	3.12	4.50	6
33	.00806″	6	1.75	3	4.68	6.75	9
31	.0107	8	2.33	4	6.25	9	12
28	.0134	10	2.91	5	7.81	11.25	15
27	.0161	12	3.50	6	9.37	13.50	18
26	.0188″	14	4.08	7	10.93	15.75	21
25	.0215″	16	4.66	8	12.50	18	24
24	.0242″	18	5.25	9	14.06	20.25	27
22	.0269″	20	5.83	10	15.62	22.50	30
21	.0322″	24	7	12	18.75	27	36
19	.0430″	32	9.33	16	25	36	48
18	.0538″	40	11.66	20	31.25	45	60
16	.0645″	48	14	24	37.50	54	72
15	.0754″	56	16.33	28	43.75	63	84
14	.0860″	64	18.66	32	50	72	96
13	.095″	70	.....	35	55	79	105
12	.109″	81	.....	40½	63	91	122
11	.120″	89	.....	44½	70	100	134
10	.134″	100	.....	50	78	112	150
9	.148″	110	.....	55	86	124	165
8	.165″	123	.....	61	96	138	194
7	.180″	134	.....	67	105	151	201
6	.203″	151	.....	75½	118	170	227
5	.220″	164	.....	82	128	184	246
4	.238″	177	.....	88½	138	199	266
3	.259″	193	.....	96	151	217	289
2	.284″	211	.....	105½	165	238	317
1	.300″	223	.....	111½	174	251	335
0	.340″	253	.....	126½	198	285	380

APPROXIMATE WEIGHT OF SHEET COPPER PER SQUARE FOOT IN FRACTIONAL PARTS OF AN INCH

$\frac{1}{16}$″ thick..... 3 lbs. to the square foot
⅛″ thick..... 6 lbs. to the square foot
¼″ thick.....12 lbs. to the square foot
½″ thick.....24 lbs. to the square foot
1″ thick.....46½ lbs. to the square foot

The area of a circle is equal to the square of the diameter multiplied by 0.7854. The circumference of a circle is equal to the diameter multiplied by 3.1416.

To Ascertain the Weight of Copper.—Find the number of cubic inches in the piece, multiply by 0.3214, and the product will be the weight in pounds. Or, multiply the length and breadth (in feet) and that by the pounds per square foot.

These weights are theoretically correct, but variations must be expected in practice.

TABLE OF WEIGHTS PER SQUARE FOOT OF

COPPER AND BRASS SHEETS

STUBS GAUGE

Nos.	Thickness	Copper Pounds	Brass Pounds	Nos.	Thickness	Copper Pounds	Brass Pounds
0000	.464″ or $\frac{7}{16}$″ full.....	20.556	19.431	17	.058″ or $\frac{1}{16}$″ scant.....	2.627	2.48
000	.425″.....	19.253	18.19	18	.049″ or $\frac{3}{64}$″ full.....	2.220	2.10
00	.380″ or ⅜″ full.....	17.214	16.264	19	.042″ or $\frac{3}{64}$″ scant.....	1.90	1.80
0	.340″ or $\frac{11}{32}$″ scant.....	15.402	14.552	20	.035″ or $\frac{1}{32}$″ full.....	1.59	1.50
1	.300″or $\frac{19}{64}$″full.....	13.59	12.84	21	.032″ or $\frac{1}{32}$″ scant.....	1.45	1.37
2	.284″ or $\frac{9}{32}$″ full.....	11.865	12.155	22	.028″.....	1.27	1.20
3	.259″ or ¼″ full.....	11.733	11.09	23	.025″.....	1.11	1.07
4	.238″ or $\frac{13}{64}$″full.....	10.781	10.19	24	.022″.....	.997	.941
5	.220″ or $\frac{7}{32}$″ full.....	9.966	9.416	25	.020″.....	.906	.856
6	.203″ or $\frac{13}{64}$″ full.....	9.20	8.689	26	.018″.....	.815	.770
7	.180″ or $\frac{3}{16}$″ scant.....	8.154	7.704	27	.016″ or $\frac{7}{64}$″.....	.725	.685
8	.165″ or $\frac{11}{64}$″ scant.....	7.475	7.062	28	.014″.....	.634	.599
9	.148″ or $\frac{9}{64}$″ full.....	6.704	6.334	29	.013″.....	.589	.556
10	.134″ or $\frac{9}{64}$″ scant.....	6.070	5.735	30	.012″.....	.544	.514
11	.120″ or ⅛″ scant.....	5.436	5.137	31	.010″.....	.453	.428
12	.019″ or $\frac{7}{64}$″.....	4.938	4.667	32	.009″.....	.408	.385
13	.095″ or $\frac{3}{32}$″ full.....	4.303	4.066	33	.008″.....	.362	.342
14	.083″ or $\frac{5}{64}$″ full.....	3.760	3.552	34	.007″.....	.317	.2996
15	.072″ or $\frac{5}{64}$″ scant.....	3.262	3.08	35	.005″.....	.227	.214
16	.065″ or $\frac{1}{16}$″ full.....	2.945	2.78	36	.004″.....	.181	.171

These weights are theoretically correct, but variations must be expected in practice.

Sheet Brass carried in stock.

Hard Sheet Brass No. 10 to 22, Stubs Gauge Sheets, 1′ x 6′.

Spring Sheet Brass No. 20 to 26, Stubs Gauge, in rolls 12″ wide, about 25′ long.

Soft sheet Brass Nos.16 and 18 Gauge, 1″, 2″ and 3″wide No. 26 and No. 28 Stubs Gauge 18″ wide.

Half Soft Sheet Brass .005″ thick in rolls 8″ and 12″ wide.

Diamond Sheet Brass for Step Plates in rolls 8″ wide.

HOSE CONNECTIONS

HOSE COUPLINGS

Plate 3061 Hose Coupling, 1″ and smaller

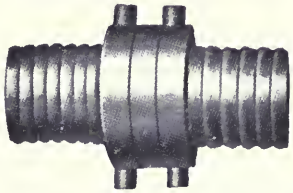


Plate 3062 Hose Coupling, 1¼″ and larger

HOSE COUPLINGS

Sizes	½″	⅝″	¾″	1″	1¼″	1½″	2″	2½″	3″
Hose Thread, Per Doz.	$2.40	$2.40	$2.40	$4.40	$10.00	$14.00	$24.00	$48.00	$75.00
Iron Pipe Thread, Per Doz.	2.65	2.65	2.65	4.65	10.50	15.00	26.00	50.00	76.00

Plate 3063 Steam Hose Coupling

STEAM HOSE COUPLINGS

Sizes	½″	¾″	1″	1¼″	1½″	2″	2½″
I. P. Thread ..... Per Doz.	$15.00	$15.00	$18.00	$24.00	$30.00	$42.00	$72.00
Female Two Threads ..... "	10.00	10.00	12.00	16.00	20.00	28.00	48.00

Plate 3064 Male

BRASS HOSE NIPPLES

Sizes	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plates 3064-5 Per Doz.	$3.50	$3.50	$5.00	$9.00	$10.00	$14.00	$28.00	$40.00

Plate 3065 Male et Female

HOSE CLAMPS

Galvanized Steel Hose Clamps for Water Hose

Plate 3066

Sizes Hose	Ply of Hose	Inside Diameter of Clamp when Open ½″ to ¾″ Between Ears	Price Per Doz.	Number of Dozens in a Box
½″	2, 3, 4 and 5	¾″ to 1″	$ 1.00	6
¾″	2, 3, 4 and 5	1 1/16″ to 1¼″	1.00	6
1″	2, 3, 4 and 5	1 5/16″ to 1½″	1.50	3
1¼″	3, 4 and 5	1 11/16″ to 1⅞″	2.50	3
1½″	3, 4 and 5	2″ to 2¼″	3.00	3
2″	3, 4 and 5	2 7/16″ to 2—″	4.00	2
2¼″	3, 4 and 5	2¾″ to 2⅞″	5.50	2
2½″	3, 4 and 5	2 15/16″ to 3⅛″	7.00	2
2¾″	4	3¼″	8.50	1
3″	3, 4, 5 and 6	3 7/16″ to 3¾″	10.00	1

PATENT HOSE COUPLINGS

Sizes	1½″	2″	2½″
Plate 3067 ..... Per Doz.	$36.00	$48.00	$60.00

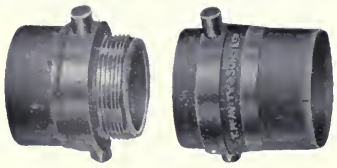


Plate 3067 Canvas and Rubber Hose

HOSE PIPES

Plate 3071
Solid Tip Hose Pipe

Plate 3072 Screw Tip Hose Pipe

Plate 3073 Screw Tip Hose Pipe with Pet Cock

Sizes	¾″	1″	1¼″	1½″	2″	2½″
Plate 3071—Length to Screw	8″	8″	12″	12″	12″	15″
" 3071—Discharge	¼″	5/16″	⅜″	7/16″	9/16″	¾″
" 3072—Length to Screw	7½″	8½″	12″	13″	12″	15″
" 3072—Discharge	¼″	¼″	⅜″	⅜″	⅝″	⅝″
" 3073—Length to Screw	6″	8″	12″	15″	.....	.....
" 3073—Discharge	¼″	¼″	⅜″	⅝″	.....	.....
" 3071—Hose Thread, per Doz	$ 7.00	$ 9.50	$18.00	$22.00	$34.00	$65.00
" 3072— " " "	8.00	10.00	20.00	25.00	38.00	75.00
" 3073— " " "	11.00	15.00	40.00	65.00	.....	.....

HOSE SPRAY PIPES

Adjustable for throwing a solid stream or spray

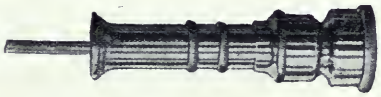


Plate 3074 Showing Stream

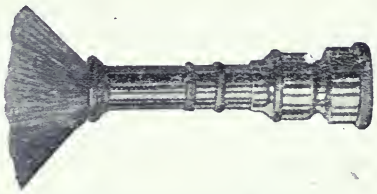


Plate 3075 Showing Spray

Sizes	¾″	1″
Plate 3074—Per Doz	$10.00	$15.00

HOSE PIPES

Screw Tip Hose Pipe, Extra Heavy

Sizes	2″	2½″	2½″
Lengths	20″	20″	24″
Plate 3076	$ 3.67	$ 3.67	$ 4.33

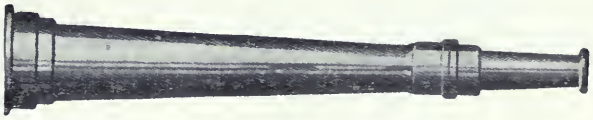


Plate 3076

Plate 3077 Screw Nozzle, Swivel Handle, Martin Wound, and Painted Red

UNDERWRITERS' HOSE PIPE

Size	2″½
Length	30″
Plate 3077—Each	$8.00

PATENT CONTROLLING HOSE NOZZLES

Size	2½″
Plate 3078—Each	$25.90

Plate 3078

HOSE RACKS

SWINGING HOSE RACKS

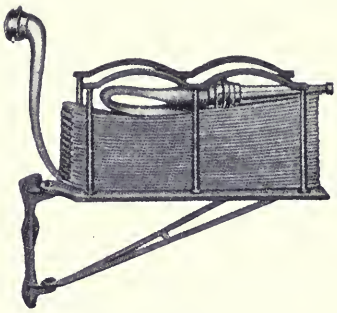


Plate 3081

For Unlined Linen				For Lined Linen or Mill			
Nos.	Sizes Hose	Capacity	Price, Each	Nos.	Sizes Hose	Capacity	Price Each
1	1½″ or 2″	50′	**$5.00**	7	1½″ or 2″	50′	**$7.00**
2	2½″	50′	**5.00**	8	2½″	50′	**7.00**
3	1½″ or 2″	100′	**6.00**	9	1½″ or 2″	100′	**7.50**
4	2½″	100′	**6.00**	10	2½″	100′	**8.00**
5	1½″ or 2″	150′	**7.00**	..	.....	....	....
6	2½″	150′	**7.00**	..	.....	....	....

Made either with Brackets to attach to walls, or with Clamps to fit Stand Pipes.

HOSE RACKS

A Nipple with iron pipe threads and in the same finish as the Rack, is included with Plate 3082. Nipples with special threads or special finishes are extra. This rack may also be supplied with wall brackets, or with pipe clamps up to 2½" inclusive, at the same price. The hose is hung in vertical loops over pins which drop instantly as the hose is withdrawn; only one fold is released at a time, thus preventing a tangled mass on the floor.

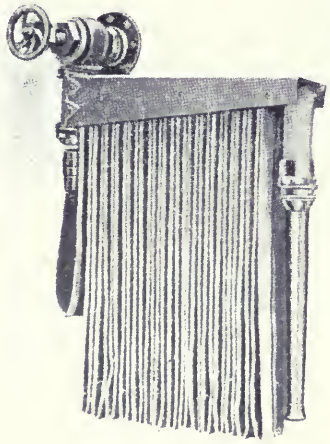


Plate 3082

Plate 3082—Swinging Fire Hose Rack, with attachment to Nipple on Valve. Capacity, 1½" or 2" linen Hose, 50′, 75′, 100′, 150′, 200′. Also furnished Japanned Red on Iron; White Enamel on Iron; Polished or Nickel plated Brass.

Plate 3083 is furnished with Wall Brackets as shown, or with Pipe Clamps to attach any size Standpipe up to 4″ inclusive. Can also be furnished to suit Cotton Rubber Lined Mill Hose.

Plate 3083—Japanned Red on Iron.

Racks in other finishes or for other sizes of hose can be furnished if desired.

When ordering hose racks always specify size, length and kind of hose, also style of finish and of attachment required; if with nipple attachment or pipe clamps, give size of pipe.

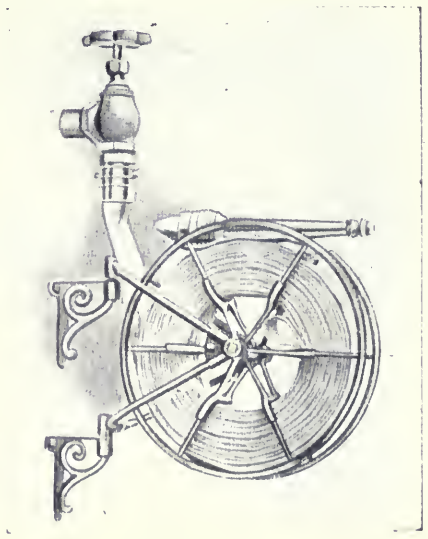


Plate 3083

NOTICE.—We are not yet prepared to offer for sale the Hydrants, Indicator Posts and Valves shown on Page 309. At the time of going to press we have designs in process of preparation, some of which are now before the Associated Factory Mutual Laboratories for examination and approval. Patterns and Tools are being made in anticipation.

We hope before many months to have these Specialties finally approved but until such time we cannot offer these Specialties for sale.—*May, 1920.*

HYDRANTS

UNDERWRITERS' APPROVED VALVES, INDICATOR POSTS AND HYDRANTS

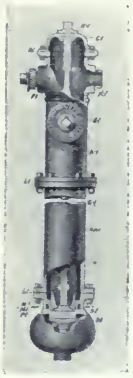


Plate 3091 "McAvity" Improved Fire Hydrant A. F. M.

Look for this Trade Mark. This denotes that the Associated Factory Mutual Fire Insurance Companies have approved and recommend a Valve or Fitting on which this Trade Mark appears. This is your guarantee.

Plate 3092 "McAvity" Improved Indicator Post, A.F.M.

Plate 3093

O. S. & Y. Flanged Gate Valve, A. F. M.

Plate 3094

Brass Hose Gate Valve A. F. M.

Plate 3095

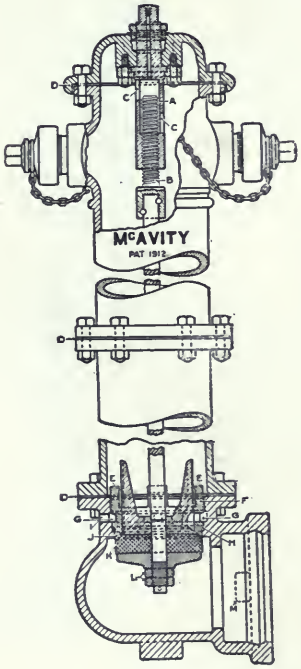
Swing Check Valve A. F. M.

Plate 3096

Siamese Connection A. F. M.

Write for further information.

Prices on Application.



McAVITY'S IMPROVED FIRE HYDRANT

Patented 1919

Adopted as Standard, August 1919

In the construction of our Improved Fire Hydrant the most advanced methods of manufacturing and arrangement of detail have been adopted to meet the requirements of Water Works Superintendents in all parts of the country.

A special and exclusive feature is the patented operating nut, which is of great importance in Canada or other countries where the temperature drops below freezing. In our new Hydrant this Operating Nut is made of a design that permits the water to flow freely thereby preventing freezing.

These Hydrants can be furnished with either of our special design of seats. Bronze to Iron or the Bronze to Bronze principal which is very clearly explained in detail in our number 40 Catalogue which we shall be pleased to send upon application.

T. McAVITY & SONS, LIMITED

IMPROVED SERVICE BOXES

For Water or Gas Service

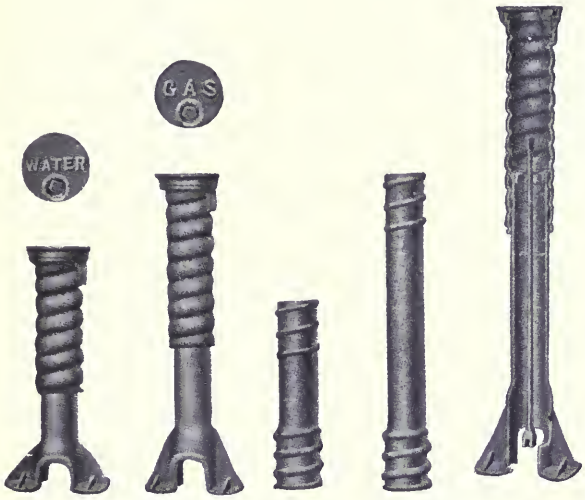


Plate 3101

This is the type of Box best known to the Eastern trade and the cut illustrates the construction, which is simply a Screw working down over a Stem and making variations in length to suit different depths of Trenches.

PRICE LIST

No. 0	10″	$2.80
No. 1	13″ to 21½″	4.40
No. 2	2′ to 3′ 3″	4.80
No. 3	2′ 8″ to 4′	5.20
No. 4	2′ 10″ to 4′ 10″	6.00
No. 5	3′ 6″ to 5′ 6″	6.40
No. 7	4′ to 6′	7.00
No. 8	6′ to 8′	8.00

Extension pieces furnished for increasing length of boxes—9″ extension; 16½″ extension; 28″ extension.

Always specify whether you desire Covers marked "Water" or 'Gas.'

EXTENSION SERVICE BOXES

Sizes	2½′	3′	3½′	4′	4½′	5′	5½′	6′	6½′	7′	7½′
Extends	1½′ to 2½′	2′ to 3′	2½′ to 3½′	3′ to 4′	3½′ to 4½′	4′ to 5′	4½′ to 5½′	5′ to 6′	5½′ to 6½′	6′ to 7′	6½′ to 7½′
No. 2, Each	$1.00	$1.05	$1.10	$1.15	$1.20	$1.25	$1.30	$1.35	$1.40	$1.45	$1.50
No. 3, Each	1.15	1.20	1.25	1.30	1.35	1.40	1.45	1.50	1.55	1.60	1.65
No. 4, Each	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20

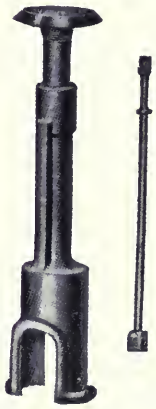


Plate 3102
Extension Service Box

No. 2. For ½″, ¾″ and 1″ Cocks. No. 3. For 1″, 1¼″ and 1½″ Cocks. No. 4. For 1½″ and 2″ Cocks.

The Base is cast iron made sufficiently strong to avoid any chance of breakage.

The Upper Portion is constructed of Wrought Iron Pipe which is fitted into base. The lower end is forged to fit in a slot in the base, which prevents the pipe from turning.

The Cover is of Cast Iron with threaded Brass Bushing inserted where it screws on to pipe. This prevents threads from rusting in. The Key for turning Shut Off Rod and Cock is provided with Spanner with which to remove cover by unscrewing. We make all covers from Heavy Pattern.

The Rod is of Wrought Iron, with socket forged on lower end to fit head of stop. The upper end is forged to fit shut off key.

A Flat Brass Spring is placed in the cavity at the top of base, which, pressing against the pipe, holds it in place in whatever position it is placed.

The boxes are heavily coated, inside and out with Asphaltum Varnish.

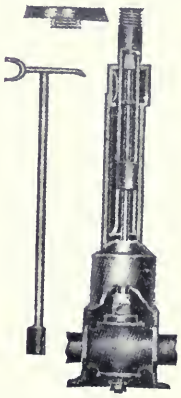


Plate 3102
Sectional View

WATER METERS

(AMERICAN TYPE AND NEW NIAGARA TYPE)

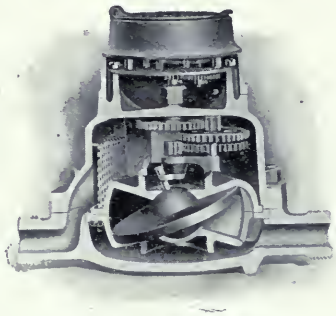


Plate 3111 Water Meter

(AMERICAN TYPE AND NEW NIAGARA TYPE)

Plate 3112

PRICE LIST OF WATER METERS

Sizes of Meter	⅝"x ½"	⅝"x ¾"	¾"	1"	1¼"	1½"	2"	2½	3
Greatest Proper Capacity Cu. Ft. per Minute	3′	3′	5′	8′	12′	16′	24′	32′	40′
Niagara meter only, with all Galvanized Iron Outside Case, Each	**$16.00**	**$16.00**	**$24.00**	**$32.00**	**$48.00**	**$64.00**	**$96.00**	**$128.00**	**$160.00**
American meter only, with Bronze Main Case and Galvanized Iron Base, Each	**18.00**	**18.00**	**27.00**	**36.00**	**54.00**	**72.00**	**108.00**	**144.00**	**180.00**
American meter only, with all Bronze Outside Case, Each	**20.00**	**20.00**	**30.00**	**40.00**	**60.00**	**80.00***	**120.00***	**160.00**	**200.00**
Brass Couplings (Flanges no Charge), per pair extra	**1.00†**	**1.50‡**	**1.50†**	**2.00‡**	**3.00**	**4.00**	**6.00**	**8.00**	.....
Weight, Meter and Couplings Boxed, Lbs.	14	14	20	28	40	60	100	150	200

*1½" and 2" all bronze case meters may be furnished with internal standard pipe threads when specially ordered.
†In these sizes, quarter bent couplings may be furnished at the following prices per pair: ⅝", $1.50; ¾", $2.00; 1", $3.00.

BRIEF DESCRIPTION

NEW NIAGARA TYPE.—The New Niagara Type Meter has the outer casing made of a fine grade of cast iron, carefully galvanized. When a meter is frozen, one-half of the outer case usually breaks, thus relieving the inner and more expensive parts from injurious strain. A new half of outer case for the ⅝" size costs but $1.20.

AMERICAN TYPE.—The American Type Meter has the main outer casing made of bronze with either a galvanized cast iron base or a bronze base. A meter with the iron base is the least expensive and the most rigid.

STANDARDIZED PARTS.—Their working parts are exactly alike and carefully made on the interchangeable plan from the best materials. An internal removable strainer protects them.

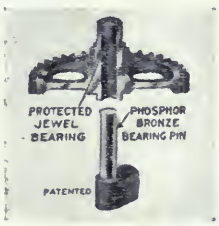


Plate 3113

REINFORCED DISC.—The measuring chamber is of large capacity and is fitted with a hard rubber measuring disc having a metallic plate reinforcement. Disc for ⅝" meter, $1.50.

PIVOT BEARINGS.—The larger and heavier gears revolve on frictionless pivot bearings.

SELF-CLEANING.—The main works are washed free of sediment by the downward flow of water.

DIRT-PROOF BEARINGS.—All submerged bearings are so constructed that dirt is excluded. Gradual wear from sediment and rapid cutting from sand are thus prevented and the accuracy and life of the meter increased.

ADJUSTMENT FOR PRESSURES.—All sizes may be regulated to pass full capacity at either high or low pressures by slightly turning the measuring chamber upon its seat.

SIMPLE.—They are simple and accessible for inspection or repair, having only seven submerged working parts. These parts may be immediately removed upon opening the meter at the bolted flanges and without disconnecting the meter from the pipe.

Sizes of Meter	Greatest Proper Capacity Cubic Feet per Minute	Niagara Meter only with all Galv. Iron Outside Case	American Meter only with Bronze Main Case and Galv. Iron Base	American Meter only with all Bronze Outside Case	Brass Couplings Per Pair Extra	Approximate Weight, Meter and Couplings, boxed, lbs.
⅝" x ½"	3	**$16.00**	**$18.00**	**$20.00**	**$1.00**	14
⅝" x ¾"	3	**16.00**	**18.00**	**20.00**	**1.50**	14
¾"	5	**24.00**	**27.00**	**30.00**	**1.50**	20
1"	8	**35.20**	**39.60**	**44.00**	**2.00**	30
1¼"	12	**48.00**	**54.00**	**60.00**	**3.00**	40
1½"	16	**64.00**	**72.00**	**80.00**	**4.00**	60
2"	24	**96.00**	**108.00**	**120.00**	**6.00**	100
2½"	32	**140.00**	**157.50**	**175.00**	**8.00**	150
3"	40	**192.00**	**216.00**	**240.00**	Flanges no Charge	200

"WORLD" UNIONS

BRONZE TO BRONZE—WITH MALLEABLE OR STEEL COUPLING NUT

Patented

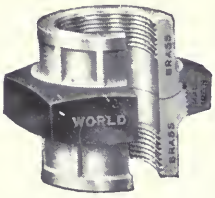


Plate 3121 Complete Union

SOME ADVANTAGES POSSESSED BY NO OTHER UNION

Every "World" Union has trade mark "World" Pat. "10" cast on same and is fully guaranteed.

Being Extra Heavy of the best quality Solid Bronze Ends with Steel Coupling Nut they will not break, stretch or pull apart.

The Bronze to Bronze principle prevents corrosion and tight joints can be made under all conditions and as often as desired. The Bronze to Bronze principle has proven by actual tests to be the most serviceable.

Absolutely tight under high pressure of Steam—cheap and economical enough to use for all services and pressures of Steam, Gas, Air or Oil.

The Ball Joint finds its own seat.

The "World" Union is thoroughly self aligning.

No obstruction in Union giving full inside diameter.

No Washers or Gaskets.

Made of best quality Bronze with beaded lines to give Wrenches a good grip.

Threads cut to exact standard, carefully machined to Gauge and interchangeable throughout.

Every Union tested; try one in our worst place.

No Steel exposed, no loose Seats.

ALL MALLEABLE IRON WITH COPPER NON-CORROSIVE SEAT—BALL JOINT

Patented

Plate 3122 Complete Union

SOME ADVANTAGES POSSESSED BY NO OTHER UNION

Every "World" Union has trade mark "World" Pat. "10" cast on same and is fully guaranteed.

Absolutely tight under high pressure of Steam—cheap and economical enough to use for all services and pressures of Steam, Gas, Air or Oil.

The Ball Joint finds its own seat.

The "World" Union is thoroughly self aligning.

No obstruction in Union giving full inside diameter.

No Washers or Gaskets.

Threads cut to exact standard, carefully machined to Gauge and interchangeable throughout.

Every Union tested; try one in your worst place.

No Steel exposed, no loose Seats.

This Type of Union is made of the best quality of Malleable Iron. The Ball Joint makes up on a Copper Seat, thereby preventing corrosion.

Recommended for regular service.

Sizes	⅛"	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Plate 3121—Each	$ .30	$ .30	$ .40	$ .50	$ .60	$ .80	$ 1.20	$ 1.60	$ 2.00	$ 3.20	$ 4.80
" 3122— "	.30	.30	.40	.50	.60	.80	1.20	1.60	2.00	3.20	4.80
" 3123— "	.30	.30	.40	.50	.60	.80	1.20	1.60	2.00	3.20	4.80

BRONZE TO IRON WITH STEEL COUPLING NUT

Patented

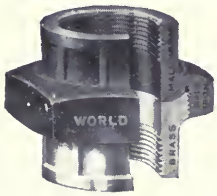


Plate 3123 Complete Union

Every "World" Union has trade mark "World" Pat. 10 cast on same, and is fully guaranteed.

The manufacture of a good union is a matter we have given considerable attention, and the great number of "World" Unions now in use show appreciation of our efforts. The advantages possessed by one over another of the three designs shown must necessarily be left to the user. Some engineers prefer the Bronze to Bronze principal, others the Copper Inlaid Seat, while an equal or even greater number claim the Bronze to Iron Union, as made by us, to be the most satisfactory.

This Union is made on one end with the best grade of Malleable Iron, the other of a special Bronze particularly adapted for its strength and which eliminates all danger of threads striping. The Steel Coupling Nut prevents stretching or pulling apart. Threads are cut to standard and interchangeable throughout, and as in our other designs care is taken to produce an absolutely tight joint under high pressure.

VALVE DISCS

" VICTOR " COPPER VALVE DISCS

With Asbestos Core

"Victor" Discs are the most effective combination that has been worked out.

Every engineer knows, that there is nothing better for valve discs than copper and asbestos when combined in the right way. This result has been obtained in "Victor" Valve Discs. They are a clever combination of elastic copper and asbestos, forming a cushion on which the seats may close without injury to it or themselves, and with the certainty of closing tightly.

In valves of the Jenkins' type there no longer is any excuse for leaks or frequent renewals, for " Victor " Valve Discs have all the elasticity that is needed, yet cannot deteriorate or disintegrate like rubber.

We could give you many reasons why " Victor " Valve Discs excel other valve discs—here are just five. It is not enough that they shall be as good as we say they are — they must be as good as you expect them to be.

Plate 3131

1.— Made of Copper and Asbestos, thus allowing for Expansion and Contraction.

2.— They are adapted for — High or Low Pressure Steam. Hot or Cold Water. Gas or Air.

3.— One " Victor " Disc will outlast six Vulcanized Rubber or Asbestos Discs.

4.— "Victor" Discs give more than six times the wear of other valve discs, therefore their economy is easily apparent.

5.— " Victor " Discs interchange with genuine Jenkins' or McAvity Discs.

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"
Plate 3131—Each	$ .18	$ .21	$ .27	$ .30	$ .36	$ .54	$ .75	$1.08	$1.44	$1.80	$2.25	$2.70	$3.60	$4.50

RADIUM DISC

Plate 3132

JENKINS DISC

Plate 3133

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"
Plate 3132—Radium Discs, Each	$ .06	$ .08	$ .08	$ .10	$ .12	$ .18	$ .24	$ .36	$ .48	$ .80	$1.00	$1.20	$1.60	$2.00
Plate 3133—Jenkins Each	.06	.08	.08	.10	.12	.18	.24	.36	.48	.80	1.00	1.20	1.60	2.00

"WORLD" GASKETS

Elastic Corrugated Copper with Asbestos Lining

Used Inside Bolt Circle

For Standard and Extra Heavy Flanged Fittings

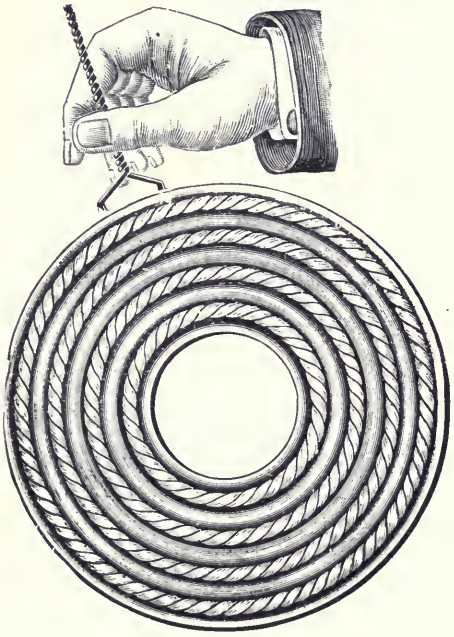


Plate 3141

In these Gaskets are combined all the strength and elasticity of copper with the heat resistance and "packability" of asbestos. They make tight joints where nothing else will — where the best of other Gaskets fail. They make permanently tight joints.

Why not try them on a few of your most troublesome joints? Put them in service with high superheated steam on high pressure steam lines, where the fluctuations of pressure or temperature are sudden, frequent and extreme — put them in the very places where the best of other Gaskets have failed, and be guided by the results in your future purchases of Gaskets. That's all we ask. And you can hardly do less, in justice to yourself, than to make the trial. We don't care how you try them. We don't even ask you to be fair in the trial. You can hardly have any worse condition than they have met and corrected, and you are welcome to try them under any conceivable adverse condition found in power plant service.

When ordering, please give inside and outside diameter required, and state whether for Standard Flanged Fittings, Extra Heavy Flanged Fittings, Union Companion, Male and Female or Tongue and Groove Flanges.

This is the Gasket you'll come to — why not now?

FOR STANDARD FLANGED FITTINGS

Sizes of Pipe	Sizes of Gasket Inches x O.S. Dia.	Price per Gasket
½"	⅝" x 1¼"	$0.08
¾"	⅞" x 2"	.12
1"	1¼" x 2½"	.16
1¼"	1½" x 2¾"	.20
1½"	1¾" x 3"	.24
2"	2¼" x 4"	.32
2½"	2¾" x 4¾"	.40
3"	3¼" x 5¼"	.48
3½"	3¾" x 6¼"	.56
4"	4¼" x 6⅝"	.64
5"	5¼" x 7⅝"	.80
6"	6¼" x 8⅝"	.96
8"	8¼" x 10⅞"	1.28
10"	10¼" x 13¼"	1.60
12"	12¼" x 16"	1.92
14"	14½" x 17⅝"	2.24
15"	15½" x 18⅞"	2.40
16"	16½" x 20⅛"	2.56
18"	18½" x 21½"	2.88
20"	20½" x 23¾"	3.20
22"	22½" x 25⅞"	3.52
24"	24½" x 28⅛"	3.84

FOR EXTRA HEAVY FLANGED FITTINGS

Sizes of Pipe	Sizes of Gasket Inches x O.S. Dia.	Price per Gasket
½"	⅝" x 2⅜"	$0.09
¾"	⅞" x 2⅝"	.14
1"	1¼" x 2⅞"	.18
1¼"	1½" x 3⅛"	.27
1½"	1¾" x 3½"	.30
2"	2¼" x 4¼"	.36
2½"	2¾" x 5"	.45
3"	3¼" x 5⅞"	.54
3½"	3¾" x 6½"	.63
4"	4¼" x 7"	.72
5"	5¼" x 8⅜"	.90
6"	6¼" x 9¾"	1.08
8"	8¼" x 12"	1.44
10"	10¼" x 14¼"	1.80
12"	12¼" x 16¾"	2.16
14"	14½" x 19"	2.52
15"	15½" x 19⅞"	2.70
16"	16½" x 21⅜"	2.88
18"	18½" x 23⅜"	3.24
20"	20½" x 25½"	3.60
22"	22½" x 27½"	3.96
24"	24½" x 30"	4.32

Special prices for Gaskets larger than 36" outside diameter.

Write for discount. Large stock in the above sizes always on hand.

Special sizes made to order.

Price on application.

STANDARD BRASS VALVES

Globe, Check, and Angle for 125 lbs. Steam Working Pressure

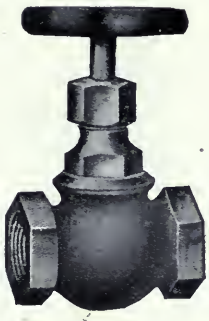


Plate 3151 Globe Valve

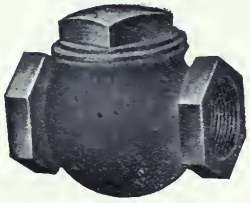


Plate 3152 Horizontal Check Valve

Plate 3153 Angle Valve

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plate 3151—Globe, Each	$ .72	$ .77	$1.00	$1.26	$1.80	$2.52	$3.50	$5.30	$10.00	$14.00
Plate 3152—Check, Each	.65	.70	.90	1.15	1.60	2.25	3.15	4.75	9.00	13.00
Plate 3153—Angle, Each	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40

McAVITY'S IMPROVED GLOBE, CHECK, AND ANGLE VALVES

Composition Disc

150 lbs. Steam Working Pressure

Plate 3154 Globe Valve

Plate 3155 Horizontal Check Valve

Plate 3156 Angle Valve

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plate 3154—Globe, Each	$1.10	$1.25	$1.60	$2.20	$2.80	$4.00	$5.50	$8.75	$15.75	$22.00
Plate 3155—Check, Each	1.10	1.20	1.30	1.90	2.60	3.60	5.00	7.50	13.50	21.00
Plate 3156—Angle, Each	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00

A full line of Valves and Steam Goods are shown in our number 40 Catalogue. A copy of which will be fowarded upon request.

WORLD VALVES

"WORLD" XX BRASS VALVES

Suitable for 250 lbs. steam working pressure DOUBLE TAPER BRONZE SEATS

Plate 3161 Globe Valve

Plate 3163 Horizontal Check Valve

Plate 3162 Angle Valve

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"
Plates 3161, 3162, Each.	$2.50	$2.50	$3.75	$4.25	$5.50	$7.75	$10.00	$15.00	$27.50	$38.50
Plate 3163—Each.....	2.50	2.50	3.75	4.25	5.50	7.75	10.00	15.00	27.50	38.50

Plate 3164
Globe Valve, Screwed

"WORLD" BRASS GATE VALVES

Extra Heavy

For 250 lbs. steam working Pressure

NON-RISING STEM—SOLID WEDGE—WITH GLAND

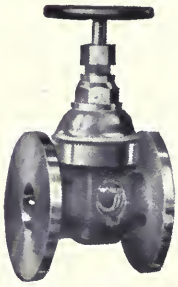


Plate 3165
Globe Valve, Flanged

Sizes	½"	¾"	1"	1¼"	1½"	2"	2½"
Plate 3164—Each.....	$5.00	$6.00	$8.00	$11.25	$16.50	$23.00	$40.00
" 3165— "	.....	.....	16.00	21.50	30.00	41.00	65.00

Plate 3166

"WORLD" BRASS ANGLE GATE VALVES

WHITE METAL NON-CORROSIVE SEATS

Government Pattern

Sizes	¾"	1"	1¼"	1½"	2"
Plate 3166—Rough Body, Fin. Brass Wheel, Each.....	$3.95	$5.05	$6.20	$7.50	$10.50
" 3166— " " Nickel Plated all over, Brass Wheel, Each...	4.35	5.45	6.60	7.90	11.00
" 3166—Fin. and Nickel Plated all over, Brass Wheel, Each.....	6.20	7.35	8.50	10.25	15.00

BRASS VALVES

McAvity Disc

150 lbs. steam working pressure — Copper and Asbestos inlay

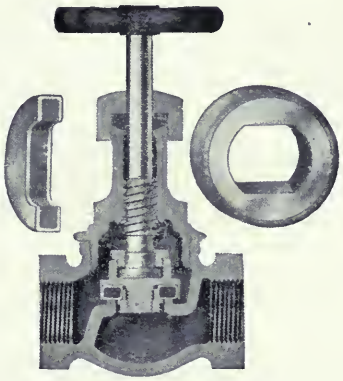


Plate 3171

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plate 3171—Globe, Ea.	$1.10	$1.25	$1.60	$2.20	$2.80	$4.00	$5.50	$8.75	$15.75	$22.00
" 3172—Angle (not illustrated), Each	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00
" 3173—Check (not illustrated), Each	1.10	1.20	1.30	1.90	2.60	3.60	5.00	7.50	13.50	21.00

"VICTOR 200" BRASS VALVES

Suitable for Working Pressure of 200 lbs. Tested 800 lbs. Hydraulic

VICTOR COPPER DISC
with Inlay of Asbestos

Plate 3174 Globe Valve

Globe
and
Angle

Plate 3175 Angle Valve

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plates 3174, 3175—Each	$1.30	$1.50	$1.90	$2.50	$3.50	$5.00	$7.00	$11.00	$20.00	$29.00

Sizes	¾″	1″	1¼″	1½″	2″	2½″	3″
Flanged Globe and Angle	$6.00	$8.00	$11.00	$14.00	$20.00	$33.00	$48.00

Dimensions furnished on request. These valves are much heavier than ordinary Brass Valves and particularly recommended where exceptionally strong and durable Valves are required.

RADIATOR VALVES

"McAVITY" BRASS RADIATOR ANGLE VALVES

Standard Pattern

COMPOSITION DISC

Plate 3181—Without Union

Plate 3182 With Union

Sizes	½″	¾″	1″	1¼″
Plate 3181—Rough Body, Nickel Plated all over, Each	$2.40	$2.90	$3.60	$4.90
" 3181—Finished Nickel Plated all over, Each	2.90	3.40	4.15	5.65
" 3182—Rough Body, Nickel Plated all over with Union, Each	3.15	3.90	4.70	6.25
" 3182—Finished, Nickel Plated all over with Union, Each	3.60	4.40	5.20	6.80

Heavy Pattern

COMPOSITION DISC

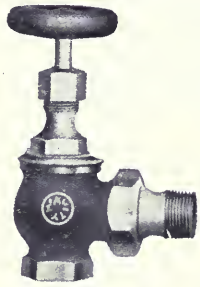


Plate 3183 Without Union

Plate 3184 With Union

Sizes	½″	¾″	1″	1¼″	1½″	2″
Plate 3183—Rough Body, Nickel Plated all over, Each	$2.40	$2.90	$3.60	$4.90	$6.65	$10.90
" 3183—Finished and Nickel Plated all over, Each	2.90	3.40	4.15	5.65	7.65	12.15
" 3184—Rough Body, Nickel Plated all over with Union, Each	3.15	3.90	4.70	6.25	8.15	13.00
" 3184—Finished and Nickel Plated all over with Union, Each	3.60	4.40	5.20	6.80	9.15	14.25

Valves Finished all over and Rough Body with Finished Trimmings, made to order.

Plate 3185

RADIATOR VALVES

Quick Opening—For Hot Water

Rough Body—Nickel Plated all over

Sizes	1″	1¼″	1½″
Plate 3185—without Union, Each	$2.65	$3.70	$5.00
" 3186—With Union, Ea.	3.65	5.05	7.10

All right hand threads.

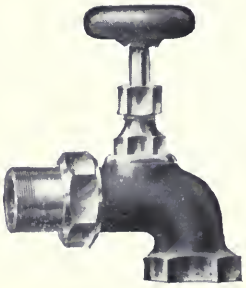


Plate 3186

RADIATOR VALVES

For Hot Water

GLOBE AND ANGLE WITH WOOD WHEEL

Sizes	¾″	1″	1¼″
Plate 3191 and 3192—Rough Body, Plain, Each	$1.75	$2.35	$3.25
" 3191 " 3192— " " Plated All Over, Each	2.10	2.75	3.70
" 3191 " 3192—Finished All Over, Each	2.50	3.25	4.35
" 3191 " 3192— " and Plated All Over, Each	2.85	3.65	4.80

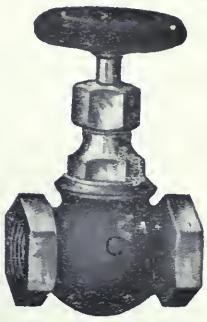


Plate 3191
Globe Valve

WITH FINISHED BRASS WHEEL

Sizes	¾″	1″	1¼″
Plates 3191 and 3192—Finished All Over, Each	$3.50	$4.25	$5.60
" 3191 " 3192— " and Plated All Over, Each	4.10	4.90	6.30

Plate 3192
Angle Valve

Plate 3193

HOT WATER RADIATOR VALVES

Quick Opening

with and without union

*WITHOUT UNION

Sizes	¾″	1″	1¼″	1½″	2″
Plate 3193—Rough Body, Plated All Over, Each	$1.95	$2.65	$3.70	$5.00	$7.75
" 3193—Finished Body, Plated All Over, Each	2.50	3.25	4.45	6.00	9.25

**WITH UNION

Sizes	¾″	1″	1¼″	1½″	2″
Plate 3194—Rough Body, Plated all Over, Each	$2.85	$3.65	$5.05	$7.10	$10.85
" 3194—Finished Body, Plated All Over, Each	3.40	4.30	5.80	8.10	12.35

Plate 3194

**Threads—Right Hand on Union, Right Hand on Bottom.

*Threads—Right Hand on Side, Right Hand on Bottom.

These Valves have a by-pass in the disc which allows continuous circulation when Valve is closed, thereby preventing freezing.

GATE VALVES

BRASS GATE VALVES

Plate 3201 Standard Brass Peet Valve
Rising Spindle

Plate 3202 McAvity Brass Gate Valve
Stationary Spindle

Plate 3201 — STANDARD BRASS PEET VALVES — For 100 lbs. Steam Working Pressure

Sizes	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Rough Body, Iron Wheel, Each	$1.65	$2.05	$2.80	$3.70	$5.00	$7.30	$13.00	$19.00
Rough Body, Wood Wheel, Each	2.00	2.55	3.40	4.50	6.00	8.90	.....	.....
Rough Body, Brass Wheel, Each	2.90	3.30	4.65	5.85	7.60	10.60	.....	.....
Rough Body, Nickel Plated all over, Wood Wheel, Each	2.40	3.00	3.85	5.00	6.60	9.65	.....	.....
Finished and Nickel Plated all over, Wood Wheel, Each	3.70	4.50	5.60	7.35	9.70	14.80	.....	.....
Rough Body, Nickel Plated all over, Brass Wheel, Each	3.35	3.80	5.20	6.45	8.35	11.55	.....	.....
Finished and Nickel Plated all over Brass Wheel, Each	4.60	5.30	6.95	8.80	11.40	16.50	.....	.....

PLATE 3202 — McAVITY BRASS GATE VALVES
Non-rising Stem — Solid Wedge — with Gland — For 125 lbs. Steam Working Pressure

Sizes	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plate 3202	$1.65	$2.05	$2.80	$3.70	$5.00	$7.30	$13.00	$19.00

The McAvity Solid Wedge, Non-Rising Stem, Brass Gate Valve is made from a high grade of steam metal. The design is pleasing in appearance and the metal is distributed in a manner that gives the maximum strength. The hexagon ends are made heavy to stand the strains due to connecting up. These valves are provided with a gland in the stuffing box and can be repacked while under pressure by having the valve wide open. A special feature of " McAvity " Plate 3202 Solid Wedge Gate Valve is the outside screw construction of Bonnet giving greater stability and strength.

The stem is of ample size to stand the strains which arise in operating the valve.

Standard IRON BODY SAFETY VALVES

Brass Trimmings — For 100 lbs. Steam Working Pressure

Plate 3203 Cross Safety Valves

Sizes	1¼″	1½″	2″	2½″
Plate 3203, Each	$5.00	$5.80	$7.80	$13.25

3″	3½″	4″	4½″	5″	6″
$17.25	$23.00	$28.75	$34.50	$41.50	$57.75

STANDARD BRASS SAFETY VALVES

Ball and Lever Type

For Steam Working Pressures to 100 lbs.

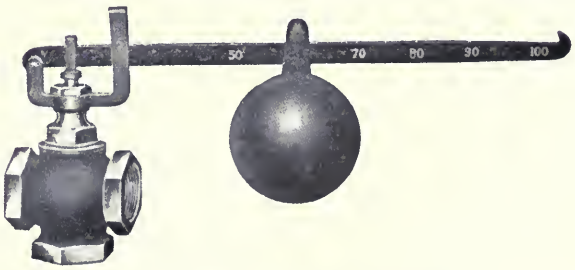


Plate 3204 Cross Safety Valve

Sizes	⅜″	½″	¾″	1″	1¼″	1½″	2″
Plate 3204—Each	$2.50	$3.25	$3.90	$4.70	$7.15	$9.00	$12.50

CHECK VALVES

THE GENUINE McSHANE
Straightway Swinging
CHECK VALVE
(Patented)

For Use Upright or Horizontally

Plate 3211 Exterior View

Expecially adapted to Pumps, Boilers and Injectors.

Simple and Strong.

Can be repaired by simply removing cap.

200 lbs. Working Pressure.

Always ready for inspection

Plate 3212 Interior View

Sizes	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″
Plates 3211, 3212, Each	$2.50	$2.50	$2.75	$3.10	$4.00	$5.50	$7.00	$10.00	$19.00	$27.00

To avoid imitation and to get the **Genuine McShane**, see that the name **T. McAvity's & Sons, Ltd.** is on every Valve.

IRON BODY CHECK VALVE

Plate 3213 Screwed

For Horizontal or vertical pipe lines.

For 150 lbs. Steam working Pressure

Screwed and Flanged

Plate 3214 Flanged

Sizes	2½″	3″	3½″	4″	5″	6″
Plate 3213—Screwed, Each	$12.00	$13.50	$17.50	$20.00	$30.00	$36.00
Plate 3214—Flanged, Each	14.50	17.00	21.00	24.00	34.00	41.00

Standard Weight

IRON BODY SWING CHECK VALVES

Brass seat and Disc

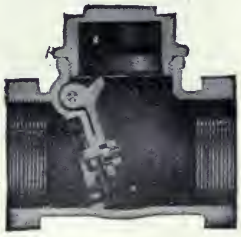


Plate 3215

SCREWED

Sizes	2½″	3″	3½″	4″	4½″	5″	6″	7″	8″
Plate 3215—Screwed, Each	$12.00	$13.00	$17.50	$20.00	$26.00	$30.00	$36.00	$55.00	$70.00
Sizes	10″	12″	.....	.....	.....	.....	.....	.....	.....
Plate 3215—Screwed, Each	$110.00	$160.00	.....	.....	.....	.....	.....	.....	.....

STEAM COCKS

SQUARE HEAD

STANDARD WEIGHT
FOR 125 LBS. STEAM WORKING PRESSURE

Plate 3221 Standard Square Head

"McAVITY" PATTERN

HEAVY WEIGHT
FOR 175 LBS. STEAM WORKING PRESSURE

Plate 3222 McAvity, Square Head

Sizes	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	*3½"	*4"
Plate 3221—Each	$ .85	$1.00	$1.25	$1.70	$2.35	$ 3.70	$4.85	$7.30	$14.50	$22.50	$38.50	$50.00
" 3222— "	.85	1.00	1.25	1.70	2.35	3.70	4.85	7.30	14.50	22.50	38.50	50.00

*Sizes 3½" and 4" made to order only.

IRON PLUG COCKS

CHANNEL, ASBESTOS PACKED

Plate 3223
Sectional View of Asbestos Packed Cock

FOR STEAM, OIL, TAR, AMMONIA, ETC.

In presenting this list of our new and improved Asbestos Packed Cocks, would advise that all **regular Iron Cocks are tested at 500 lbs. pressure, and are good for 150 lbs. working pressure.**

The extra heavy Iron Cocks are tested at 1000 lbs. pressure and are good for 250 lbs. working pressure.

They are so **treated** in packing that they will not shrink or leak in use, and the **plugs are gound** and so **treated** that they will not rust, no matter how long in stock, a feature that the trade will appreciate.

Engineers that have trouble with blow-off valves, from high pressure or bad water, will find this valve all that it should be in saving of time and trouble.

Prices on application.

BRASS PLUG COCKS

CHANNEL, ASBESTOS PACKED

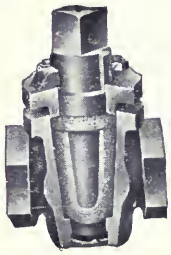


Plate 3224

Sectional View of Asbestos
Packed Cock

FOR STEAM, OIL, TAR, AMMONIA, ETC.

In presenting this list of our new and improved Asbestos Packed Cocks, would say that **all these valves are tested to 500 pounds pressure** (unless otherwise ordered) thus insuring safety at all medium pressures.

They are also so treated in packing, that they will not shrink or leak in use, and the plugs are specially ground and barffed and so treated in testing that they will not rust no matter how long in stock, a feature that the trade will appreciate.

Engineers that have trouble with blow-off valves, from high pressure or bad water will find this valve all that it should be in saving of time and trouble.

STANDARD BRASS GAS SERVICE COCKS

Sizes	¼"	⅜"	½"	¾"	1"	1¼"
Plate 3225—Each	$ .75	$ .85	$ .95	$1.15	$1.50	$2.25

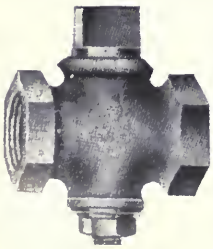


Plate 3225 Flat Head

STANDARD WEIGHT IRON COCKS

FOR 150 LBS. STEAM WORKING PRESSURE

STANDARD WEIGHT—ALL IRON COCKS—SCREWED

Sizes	½"	¾"	1"	1¼"	1½"	2"
Plate 3226—All Iron, Each	$ .90	$ 1.05	$ 1.30	$ 1.60	$ 1.95	$2.70

Sizes	2½"	3"	3½"	4"	5"	6"
Plate 3226—All Iron, Each	$ 4.40	$ 6.75	$12.00	$15.50	$32.00	$45.00

Plate 3226 Screwed

IRON VALVES

Brass Trimmings
FOR 125 LBS. STEAM WORKING PRESSURE

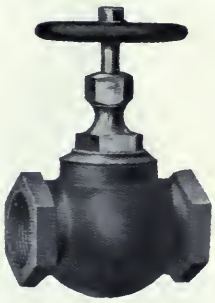


Plate 3231 Globe Valve

Brass Trimmings
FOR 125 LBS. STEAM WORKING PRESSURE

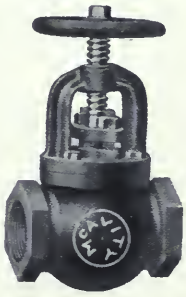


Plate 3232 Globe Valve

JENKINS DISC
Yoke Top
Bronze Trimmings

Plate 3233 Globe Valve, Screwed

Sizes	2″	2½″	3″
Plate 3231—Globe, Each	$5.40	$7.35	$9.80

Sizes	2½″	3″	3½″	4″	4½″	5″	6″	7″	8″	10″	12″
Plate 3232 — Globe, Each	$ 9.00	$12.50	$15.25	$19.00	$24.00	$27.00	$37.50	$63.00	$72.00	$114.00	$170.00
Plate 3233—Globe, Each	12.00	16.75	19.50	24.00	32.00	40.00	48.00	80.00	90.00	130.00	185.00

The above lists apply also to Angle Valves of Same Pattern.

STANDARD GATE VALVES

IRON BODY — DOUBLE BRONZE DISCS AND SEATS
For 125 lbs. Steam Working Pressure
NON-RISING STEM — PARALLEL SEATS

Plate 3234 Screwed

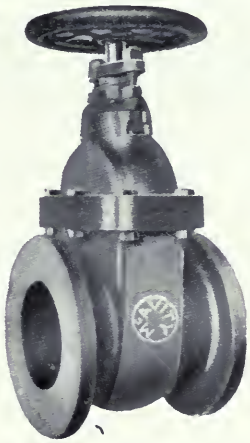


Plate 3235 Flanged

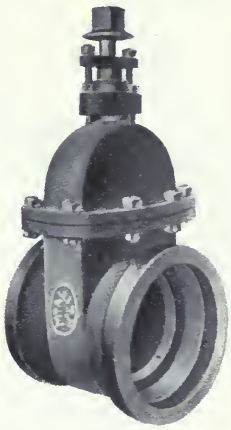


Plate 3236 Bell Ends

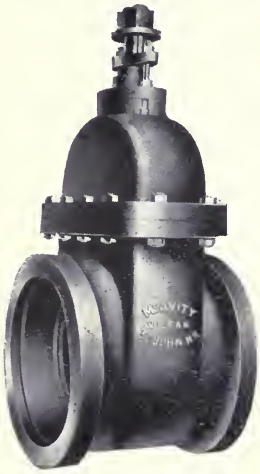
Sizes	2″	2 1/16″	3″	3½″	4″	4½″	5″	6″	7″	8″	9″	10″
Plate 3234 — Screwed, Each	$10.00	$11.50	$14.00	$17.00	$19.00	$24.00	$27.50	$32.50	$45.00	$54.00	$76.00	$90.00
Plate 3235 — Flanged, Each	12.00	13.50	16.50	19.50	23.00	28.00	31.50	36.50	49.00	58.00	81.00	95.00
Plate 3236 — Bell Ends, Each	.....	.....	14.00	.....	19.00	.....	27.50	32.50	45.00	54.00	.....	90.00

Sizes	12″	14″	15″	16″	18″	20″	22″	24″	26″	28″	30″
Plate 3234—Screwed, Each	$125.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plate 3235—Flanged, Each	133.00	$181.00	$220.00	$260.00	$350.00	$425.00	$530.00	$600.00	$800.00	$950.00	$1100.00
Plate 3236—Bell Ends, Each	125.00	173.00	.....	250.00	340.00	415.00	.....	590.00	.....	.....	1075.00

GATE VALVES

Iron Body — Bronze Mounted Renewable Double Bronze Seats — Double Faced Bronze Gates — Non-Rising Stem

FOR CAST IRON WATER PIPE | **FOR WOOD PIPE**



FOR WATER WORKING PRESSURES

Sizes 12″ and Smaller up to 175 lbs.

Sizes 12″ and 16″ up to 150 lbs.

Sizes 18″ and Larger up to 120 lbs.

TESTED TO 350 LBS. HYDRAULIC PRESSURE

With nut for Operating Wrench, as in Cut, or with Wheel if Desired

Valves Open by Turning to the Left, Made to Open to The Right if Desired — no Extra Price

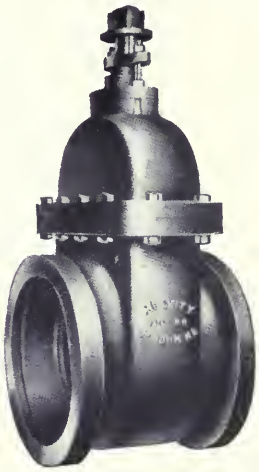


Plate 3241 Bell End

Plate 3242 For Wood Pipe

Sizes	3″	4″	5″	6″	7″	8″	10″
Plates, 3241, 3242—Each	**$14.00**	**$19.00**	**$27.50**	**$32.50**	**$45.00**	**$54.00**	**$90.00**
Sizes	12″	14″	16″	18″	20″	24″	30″
Plates, 3241, 3242—Each	**$125.00**	**$173.00**	**$250.00**	**$340.00**	**$415.00**	**$590.00**	**$1075.00**

LARGER SIZES, PRICES ON APPLICATION

STANDARD GATE VALVES

Iron Body — Double Bronze Discs and Seats
FOR 125 LBS. STEAM WORKING PRESSURE.
Outside Screw and Yoke — Rising Spindle

BRONZE SPINDLES

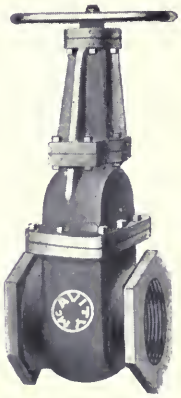


Plate 3243 Screwed

Plate 3244 Flanged

The outside Screw and Yoke indicates whether the Valve is open, partly open or closed.

Sizes	2″	2½″	3″	3½″	4″	4½″	5″	6″
Plate 3243—Each	**$19.00**	**$20.50**	**$23.50**	**$27.00**	**$32.50**	**$40.00**	**$45.00**	**$52.00**
Plate 3244—Each	**21.00**	**22.50**	**26.00**	**29.50**	**36.50**	**44.00**	**49.00**	**56.00**
Sizes	7″	8″	9″	10″	12″	14″	15″	16″
Plate 3244—Each	**$73.00**	**$90.00**	**$118.00**	**$136.00**	**$180.00**	**$255.00**	**$310.00**	**$350.00**

Sizes	18″	20″	22″	24″	26″	28″	30″
Plate 3244—Each	**$470.00**	**$565.00**	**$700.00**	**$775.00**	**$1025.00**	**$1210.00**	**$1400.00**

Plate 3241—Size of Operating Nuts:— 3″, 1⅛″ sq.; 4″, 1½″ sq.; 6″, 8″, 10″ and 12″, 2″ sq.; 14″, 16″, 18″ and 20″, 2½″ sq. Larger sizes as desired.

Unless otherwise ordered Valves will be furnished open to the Left and with Operating Nuts as size shown.

IRON VALVES

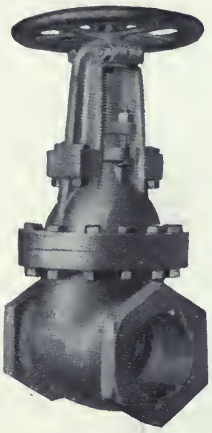


Plate 3251

" McAVITY " GATE VALVES

Extra Heavy

Iron Body — Double Bronze Disc and Seat—

Solid Wedge

For 250 lbs. Steam Working Pressure

Rising Stem, with Yoke

Plate 3252

Sizes	2½"	3"	3½"	4"	4½"	5"	6"
Plate 3251—Screwed, Each	$ 41.00	$ 54.00	$ 67.00	$ 72.00	$ 92.00	$ 100.00	$ 115.00
Plate 3252—Flanged, Each	43.50	57.00	70.00	77.00	97.00	105.00	122.00

Sizes	7"	8"	9"	10"	12"	14"	15"	16"
Plate 3251—Screwed, Each	$ 147.00	$ 187.00	$ 257.00	$ 283.00	$ 390.00	$ 510.00	$ 610.00	$ 750.00
Plate 3252—Flanged, Each	.....	16½"	17"	18"	19¾"	18"	19½"	19½"

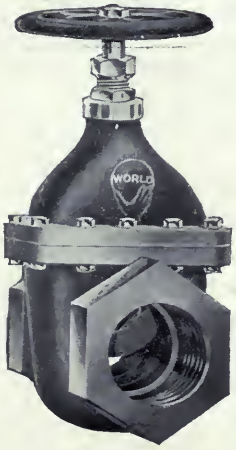


Plate 3253

IRON BODY—DOUBLE BRONZE DISCS AND SEATS—SOLID WEDGE

For 250 lbs. Steam Working Pressure

With Renewable Bronze Seats, to Screw in

Screwed and Flanged

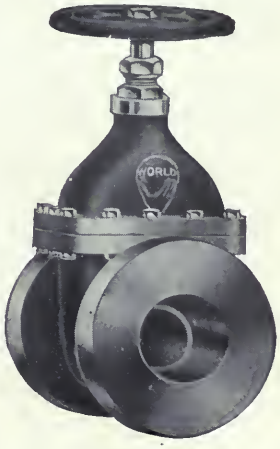


Plate 3254

Sizes	2"	2½"	3"	3½"	4"	4½"	5"	6"
Plate 3253—Screwed, Each	$27.50	$33.00	$45.00	$57.00	$60.00	$77.00	$85.00	$100.00
Plate 3254—Flanged, Each	30.00	35.00	48.00	60.00	65.00	82.00	90.00	107.00

Sizes	7"	8"	9"	10"	12"	14"	15"	16"
Plate 3253—Screwed, Each	$125.00	$155.00	$225.00	$250.00	.....	.....	.....	.....
Plate 3254—Flanged, Each	132 00	162 00	232 00	258.00	$335.00	$440.00	$540.00	$675.00

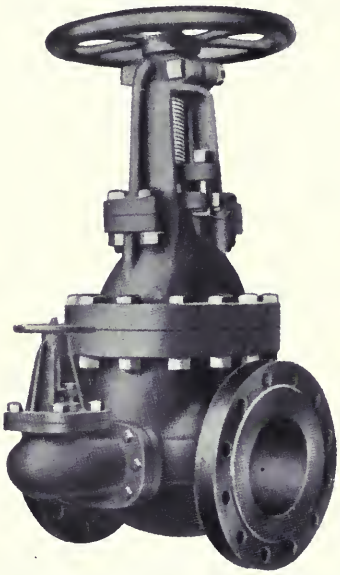
" McAvity " Gate Valves are made with Bronze Fittings throughout, with Bronze Renewable Seats. We manufacture these Valves with relieving mechanism which is particularly recommended in the larger sizes. All our Valves are made with Spindles larger than standard; we found this proved advisable to obviate possibility of spindles being broken when turned in the wrong direction by inexperienced workmen. We manufacture when ordered Bronze spindles with steel rod cast in center of spindle giving additional strength.

We can supply our Gate Valves with Tobin Rolled Bronze Spindles or tube regular cast Bronze Spindles heated and hydraulically pressed and hammered, in place of ordinary cast Bronze Spindles.

GATE VALVES

Iron Body — Double Bronze Disc and Seat — Solid Wedge
With By-Pass

For 250 lbs.
Steam Working Pressure.



Rising Stem with Yoke.
Steel Stems Nickel Plated

Plate 3261 Flanged, with By-Pass

Sizes	6″	7″	8″	9″	10″	12″
Plate 3261—Each	$170.00	$190.00	$240.00	$310.00	$335.00	$455.00
Drilling, Face to Face, Each	15⅞″	16¼″	16½″	17″	18″	19¾″

Sizes	14″	15″	16″	18″	20″	24″
Plate 3261—Each	$580.00	$680.00	$825.00	$1050.00	$1250.00	$1700.00
Drilling, Face to Face	18″	.....	19½″	26″	28″	31″

.6″ Valves have Bronze Spindles. Larger sizes, Steel Spindles, Nickel Plated.

CAST STEEL EXTRA HEAVY GATE VALVES

For 250 lbs. Working Saturated
Steam Pressure

500 lbs. Working Water
Pressure

2″ and Smaller, Discs of Bronze

2½″ and Larger, Discs of Cast Steel,
and Disc Rings, Seat Rings
and Stems of Bronze

Plate 3262 Non-Rising Stem

Sizes	1¼″	1½″	2″	2½″	3″	3½″	4″	4½″
Plate 3262—Faced, Each	$37.50	$40.00	$41.50	$52.50	$64.00	$78.00	$90.00	$105.00
Plate 3262—F. & D., Each	40.25	42.75	44.50	55.75	67.75	82.00	94.50	109.75

Sizes	5″	6″	7″	8″	9″	10″	12″
Plate 3262—Faced, Each	$115.00	$130.00	$155.00	$185.00	$230.00	$280.00	$340.00
Plate 3262—F. & D., Each	120.00	136.00	162.00	193.00	239.00	290.00	352.00
Faced, with By-Pass, Each	.....	170 00	.....	225.00	.....	325.00	400.00
F. & D. with By-Pass, Each	.....	176.00	.....	233.00	.....	335.00	412.00

Price for Faced and Drilled Steel Valves includes Spot Facing.

All our Valves are made from the " World " Process Gun Iron, which commends itself to the experienced engineer. This process consists of the addition of fifteen per cent mild steel cuttings, such as boiler trimmings and punchings, and the introduction of a number of jets of highly superheated steam into the cupolas during process of melting. Through its use is produced cast iron which partakes of some of the qualities of Bessemer Steel and Malleable Iron. It is more ductile and resilient and closer grained than iron made without its use and has a much increased tensile strength. Castings are less porous. and it is particularly recommended in valves and fittings which are subjected to strains of expansion and high pressure of steam, and there is no additional cost. We have taken castings made from this " World " Process Gun Iron, six inches square by one-eighth thick and have punched them cold with twenty-five three-quarter inch holes without showing a fracture, of which course would be impossible to attempt with ordinary cast iron.

"WORLD" GATE VALVES

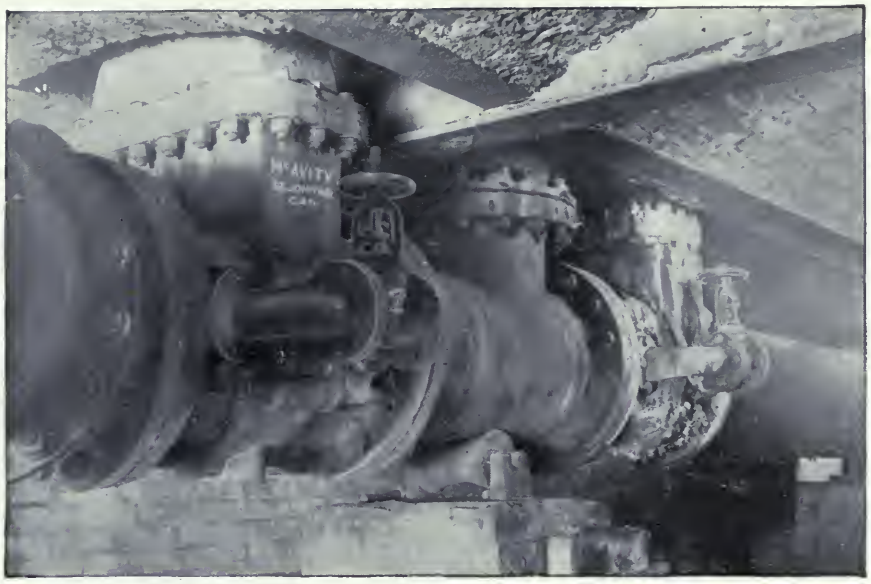


Plate 3271

Photograph of 14" McAvity "World" Extra Heavy By-Pass Gate Valves. On the Main Steam Line of the Montreal Street Railway Power Plant, at 347 William St., Montreal.

These with other sizes of Valves and Fittings which were installed in the Year 1897 are in active use to-day, giving continuous service under 125 lbs. Working Steam Pressure and they are in as good condition as when put in over Twenty-three years ago.

Similar Valves have been in continuous use for over twenty years in the Halifax Tramways, Winnipeg Street Railway Power House, Dominion Steel Corporation, Nova Scotia Steel and Coal Co., and numerous other plants.

To meet the present day demands for Superheated Steam, we now make "World" Valves for Working Pressures 175 to 250 lbs. of Cast Steel with Nickel Seats and Fittings.

"WORLD" STEAM PRESSURE REDUCING VALVES

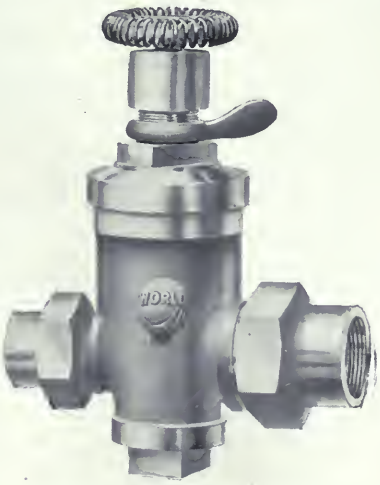


Plate 3272

Sizes..... ½" to 6"

"WORLD" WATER PRESSURE REGULATORS

For Service Pipes with Union Coupling

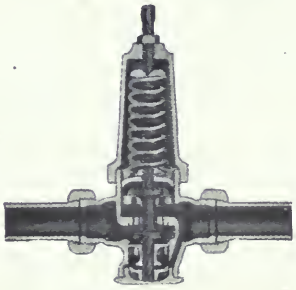


Plate 3273

Brass, Sectional View

Sizes..... ½" to 2"

RADIATOR VALVES

"WORLD" AUTOMATIC VALVES AND TRAPS

"WORLD" INDEXED CONTROL VALVES

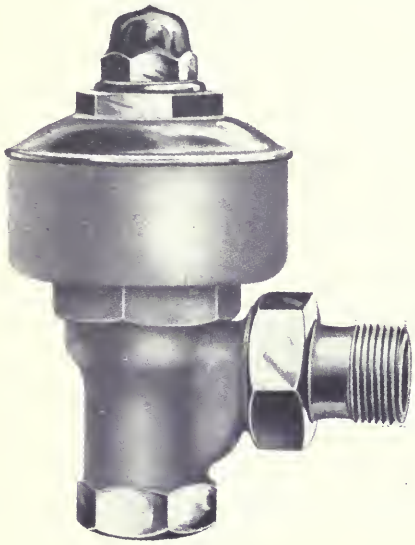


Plate 3281

Angle and Straight

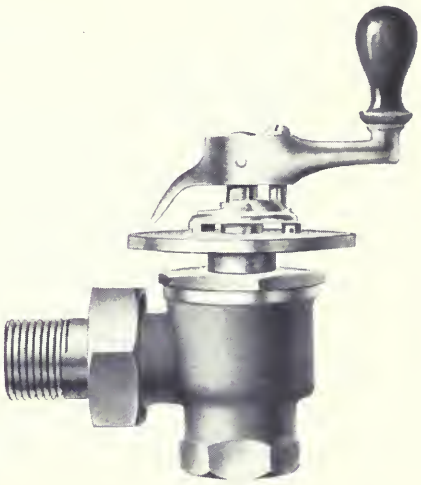


Plate 3282

Plate 3281—The Automatic-Valve is a patent drain valve or Steam Trap. It will absolutely prevent the waste of steam wherever a difference of pressure exists between the inlet and discharge sides, and it can be used under all conditions where it is desired to discharge water of condensation.

It will save coal consumption and reduce your maintenance expense, to say nothing of efficiency in preventing waste of steam or hot water.

For example, in caring for the condensation from direct radiators, coils, indirect heating stacks, engine cylinders, steam tables, glue kettles for draining steam supply mains, oil separators, feed-water heaters in sugar refineries, paper mills, soap factories, hotels, apartment houses, office buildings, or anywhere that live or exhaust steam is used, this valve will pay for itself in a short time.

It is made of the best steam metal throughout, extra heavy with phosphor bronze diaphragm and oil tempered steel springs, nickel plated. All parts are interchangeable, every part is inspected, and each valve tested under steam and water tests at high pressure.

The valve seat is located at the lowest possible point. There is no possibility of dirt or scale collecting within the valve body.

The valve will seat absolutely true under all conditions, because the valve stem guide is extra long, and is brought as near the seat as is practical.

This valve has no stuffing box, and no gaskets are used anywhere. All joints are faced, and are steam-tight under all conditions.

The expansion chamber is so constructed as to be perfectly non-collapsible, and is absolutely tight.

The valve is compact and self-contained. It does not require supports of any kind, but is carried by the pipe connections.

It adapts itself automatically to varying pressures, and does not require frequent readjustment.

All you need is a monkey wrench if you want to inspect or adjust it at any time. You do not have to disconnect the valve body from its pipe connections.

VALVE SIZES AND CAPACITIES

	Steam pressure in pounds.	Valve Sizes			
		½"	¾"	1"	1¼"
		Bronze bodies and seats.		Iron bodies and removable bronze seats.	
Discharging capacities in lineal feet 1" pipe	2	2,000	5,000	10,000	17,500
	5	2,700	6,500	13,000	22,500
Relative discharging capacities for different pressures, assuming ½" valve as unity		1.0	2.5	5.0	8.75

Prices upon Application.

"WORLD" INDEXED RADIATOR CONTROL VALVES

Plate 3282. This valve is constructed throughout of the best steam metal; it is fully nickeled, is simple, durable, and readily accessible in every part. It has no stuffing box to leak, as has the ordinary valve, and does not require repacking from time to time. Its regulation is self-indicated upon the dial. When it is set to one half, for instance, one-half of the radiator to which it is attached will become steam-hot, while the remaining half will be practically cold.

The valve in addition to its features of graduation, possesses all the advantages of the ordinary globe or gate valve, and can be forcibly closed to its seat so as to be tight under all ordinary conditions. Each valve is tested under high pressure, and will be found perfect in all respects.

To within a few years there was no method of regulating the heat from a steam radiator so that it could be controlled in any way, and it was necessary to have the radiator all hot or all cold.

This system of heat regulation, however, overcomes this difficulty and makes it possible to heat any fractional part desired of the radiator, as one-quarter, one-half, one-third, or the whole if necessary. On the coldest days this system of heat regulation regulates the degree of heat in the radiator, so that either the maximum of heat or the minimum may be obtained. The whole or a fractional part of the radiator may be used with the Automatic system so that the heat in the coldest or the mildest weather may be regulated to a nicety in any part of a building. Prices upon application.

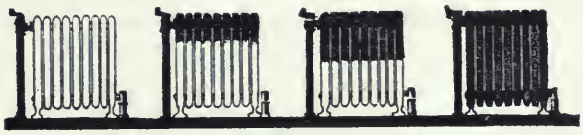


Plate 3291

Illustration Showing Graduation of Steam

Our make of "Automatic" and Indexed Radiator Control Valves are spoken of very highly. Are in use at the Ritz Hotel, Montreal; Bell Telephone Building, Montreal; Ottawa Post Office and Customs House and other large Government and Department Buildings, and also installed in most of the Railway Depots, Institutions and larger Buildings throughout Canada.

"McAVITY" BRASS RADIATOR ANGLE VALVES

With McAvity Victor Discs

Standard and Heavy Pattern

Plate 3292 Without Union

McAvity "Victor" Discs

Plate 3293

Plate 3294 With Union

Sizes	½"	¾"	1"	1¼"
Plate 3292—Rough Body, Nickel Plated all over, Each	$2.40	$2.90	$3.60	$4.90
" 3292—Finished Nickel Plated all over, Each	2.90	3.40	4.15	5.65
" 3294—Rough Body, Nickel Plated all over with Union Each	3.15	3.90	4.70	6.75
" 3294—Finished Nickel Plated all over with Union, Each	3.60	4.40	5.20	6.80

The annoyance caused by the ever present leak in Radiator Valves that are fitted with composition Graphite Discs which do not respond quickly to changes in temperature, thereby permitting a leak for some time after the valve has been closed. This trouble is entirely eliminated by using our Radiator Valves which are fitted with McAvity "Victor" Discs, which outwear composition discs six to one. The "Victor" is made of Copper and Asbestos cleverly combined, that while producing a disc of great wearing qualities, retains an elasticity that responds readily to changes in temperature, and gives immediate action when valve is shut off.

RAILWAY CAR FIXTURES

The "Royal"
Car Closet

With Side Wall Pull Plate 3301

With Side Handle Plate 3302

The "Royal" Car Closet is made in two pieces. The bottom bowl, or base, is made of Enameled Cast Iron. The Top Bowl of either Vitreous China or Enameled Iron, as desired. Can be operated right or left by reversing handle.

The "Royal" is so constructed to use with gravity or pressure tank, and should water fail, can easily be changed to dry closet. No cold air or dust can enter car through this closet, and will not freeze from outside cold. Further information and prices upon application.

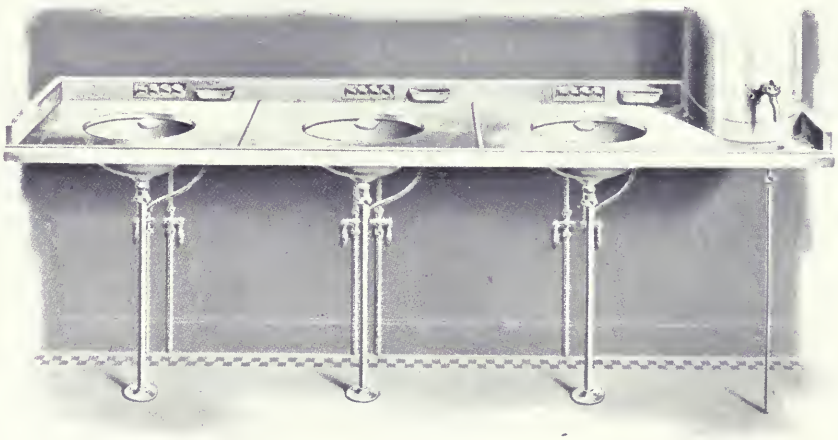


Plate 3303 "Royal Bathurst"

"Royal" Washstands are made of a solid metal, being the same color throughout, which includes the trimmings, so that it is unnecessary at any time to remove these fixtures for replating. They have the appearance of silver or nickel plate, and this color is retained throughout their life. They are readily kept clean and the metal always retains its luster.

The present clear surface push button type of trimmings are removed from the surface of the Washstand, being placed upon the Splasher, are easily operated, and in the case of repairs being necessary, can be removed without difficulty and without dismantling the Washstand. The Drain Valve is absolutely sanitary and has ample capacity to drain the water quickly with no danger of clogging.

The Soap Dish is mounted upon the Splash Rail and connected to the Main Drain Pipe so that all the water is drained from the Dish. The Soap Dish can also be pressed into the surface of the Washstand and drained into the bowl if preferred, but we believe the Washstand is more attractive in appearance to have it applied to the Splasher.

"Royal" Washstands can be furnished in any shape or size desired and fitted with any trimmings required. Also with combination hot and cold water or cold water faucets only as desired. They can be furnished for either open or closed plumbing. When for open plumbing all necessary piping for the fresh and waste water will be supplied by us.

Prices and information on the above Fitting will be furnished upon application.

SPECIALS

World Strainers

"World Strainers" are designed to prevent entrance to pipes of all dirt, grit, pipe scale and various foreign substances always found in abundance in every public water system.

Protection by Strainers insures the longevity of the entire system, reduces the up-keep cost to practically nothing, doubles the life of all your expensive fixtures, meters and appliances; also insures smooth working of the whole installation.

In making a study of conditions of Water Supply for Buildings we find that many impurities and even small fish pass through the pipes of municipal water systems and on into the apartment fixtures, seriously obstructing the supply and on decaying cause bad odors and then sickness.

Frequently the expensive operation of "cutting the pipes" has to be resorted to in search of the trouble. This is costly and unnecessary.

All can be prevented by the installation of "World" Strainers on every job.

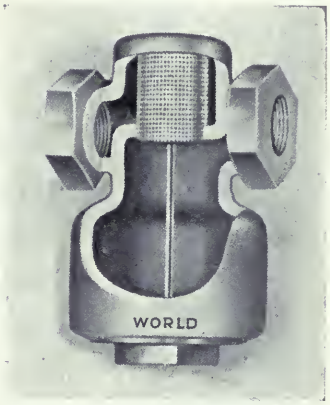


Plate 3311 Sectional View

Sizes	½"	¾"	1"	1¼"	1½"	2"
Price, Brass Screwed	$4.05	$4.75	$6.80	$19.50	$28.00	$42.60

Sizes	2"	2½"	3"	4"	5"	6"
Iron Flanged	$25.00	$30.00	$35.00	$40.00	$60.00	$80.00

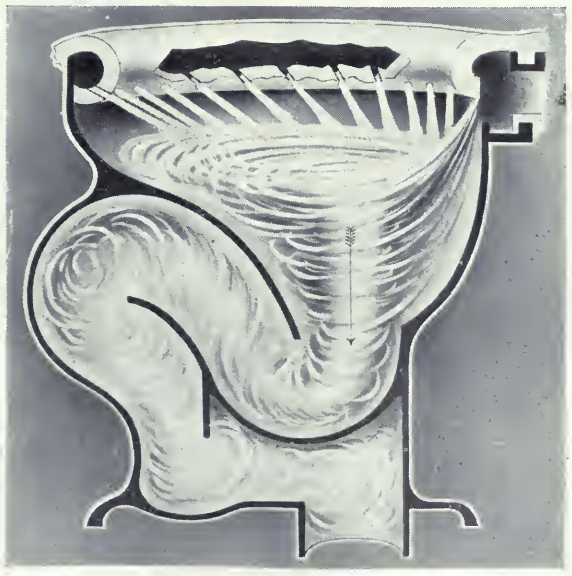


Plate 3312 "Royal Hygienico"

"ROYAL HYGIENICO"

Centrifugal Action

A heavy Vitreous China Syphonic Action Bowl, with Special Flushing Rim, which is designed that the jets are so directed as to produce a centrifugal motion, as shown in illustration, thereby throughly cleansing the Bowl.

This Bowl is considered one of the most sanitary, and can be supplied with any of our "Royal Combinations" at extra price.

HOUSE PUMPS

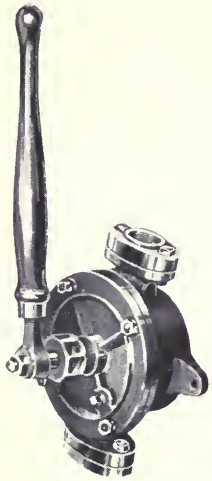


Plate 3321

THE "WORLD" SEMI-ROTARY CLOCK PUMP

With Brass Wing Piston, Brass Valves and Valve Box

Arranged with Removable Wood Lever

This is a powerful Lift and Force Pump, acts quickly and easily, gives absolute suction and delivery at each stroke; no lost motion.

Handy, efficient, reliable and durable. The lever may be worked from either a vertical or horizontal position.

These Wing-Valve Pumps are practically metallic fitted and having no leather packing are well suited to pumping Hot Liquids, Oils, Wine, Cider, etc.

The pipe connections being flanged enables the pump to be removed at any time without disturbing the pipe.

No.	Suction	Discharge	Capacity	Price
				Each
2	1″	1″	9 galls.	$12.00
3	1¼″	1¼″	11 "	14.00
4	1¼″	1¼″	15 "	16.00
5	1½″	1½″	20 "	18.00

CLOSED TOP PITCHER SPOUT PUMP

With Revolving Bearer Top, Bolt Fastenings and Cut-Off Base.

McAvity's Pitcher Pump represents our improved Pitcher Spout Pump with closed top to prevent dust and other substances from entering.

It is often a cause for complaint with the Open Top Pitcher Pumps that they are apt to throw the water over the top. To obviate this, the opening in this pump is only large enough for the rod to work through.

To prevent freezing, trip the suction valve by raising lever to extreme height; thus allowing water to leave cylinder.

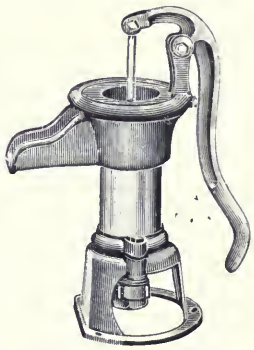


Plate 3322

No.	Diam. Cyl.	Size of Suction	Capacity per Stroke	Price	
				Iron	Brass Lined
1	2½″	1″	09 galls.	$4.20	$8.00
2	3″	1¼″	12 "	4.70	9.00
3	3½″	1¼″	17 "	5.20	10.00
4	4″	1½″	22 "	6.20	11.30
5	4½″	2″	34 "	9.50	15.60
6	5″	2½″	43 "	17.00	28.00

Plate 3323 **Cup Leather**

All Sizes

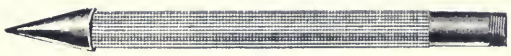


Plate 3324 **Well Point**

Sizes, 1¼″, 1½″, 2″

Plate 3325 **Lower Leather**

All Sizes

We carry a stock of Farm, House, Ships, and Steam Pumps. All information and prices will be furnished upon application.

HOUSE PUMPS

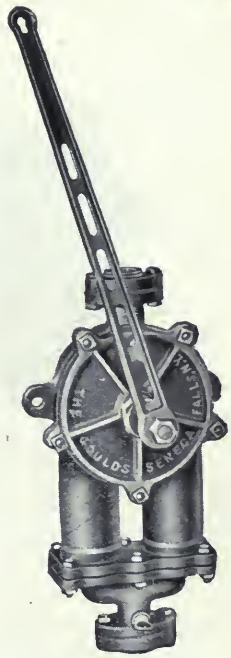


Plate 3331 "Victor"

McAVITY'S "VICTOR" DOUBLE CYLINDER FORCE PUMP

Lift and Force 75 to 100 Feet

The "Victor" is adapted for a large variety of uses on ships, in factories and residences. The capacity is large, and but little manual power is required to deliver the maximum quantity of water. There are two cylinders with leather packed plungers, which contain brass poppet valves. The suction valves are of leather. The plungers operated by the long malleable lever, produce the same effect as a double acting pump.

No.	Diameter Cylinder	Stroke	Capacity 45 Revolutions, Gallons	Suction and Discharge	Lift and Force	Price	
						Iron	Brass Lined
0	2″	3″	3.70	1	150	$20.00	$24.00
2	2½″	4″	7.65	1¼	150	24.00	30.00
4	3″	4½″	12.15	1¼	125	30.00	36.00

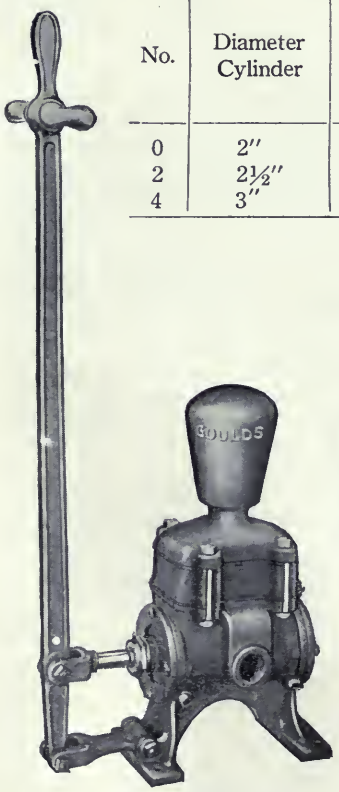


Plate 3332

McAVITY'S DOUBLE-ACTING FORCE PUMP

Lift and Force 50 to 75 Feet

Plate 3332—The "Gem" is a moderate-priced double-acting force pump, adapted for raising water to upper floors and attic tanks, also for general service pumping, as in mills, factories, and stores. The fulcrum is placed at the base, giving powerful leverage, and the air chamber is large, insuring even flow from the discharge. By means of the Jack, this pump can be adapted for power drive.

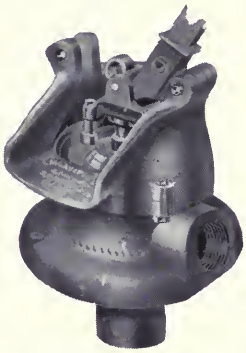
No.	Diam. Cyl.	Stroke	Capacity per Rev.	Suction pipe	Discharge Pipe	*Lift and Force	Approx. Wgt in lbs.	Iron	Brass-Lined
2	2½″	5″	.21 gal.	1¼″	1″	75′	65	$32.00	$39.00
4	3″	5″	.31 "	1¼″	1″	75′	66	38.00	42.00

*Total lift and force from supply to point of delivery. Pump not more than 15 feet above water.

The "Gem" can be fitted with brass air cock for use on pneumatic tank water systems, permitting pump to supply both air and water.

P U M P S

"WORLD" DIAPHRAGM PUMPS



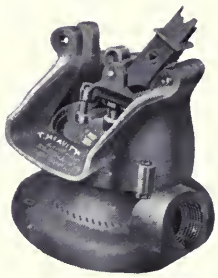


Plate 3341 Bottom Inlet Plate 3342 Combined Bottom and Side Inlet Plate 3343 Side Inlet

These Pumps are used by contractors for pumping excavations, cellars, pipe trenches, etc.; on vessels, barges, dredges, railroads, in quarries or wherever it is desired to raise large quantities of water mixed with sand, gravel, mud, etc. Also used very largely for pumping out holds of ships and for any service where a pump of large capacity is required. **Can be used with either Iron Suction Pipe or Rubber Suction Hose.**

It will discharge water containing sand, gravel, coal dust, mud, drainage, or any semi-liquid matter without choking or perceptibly wearing the pump.

This pump has a hole in the lug in which to fasten a rope used in hoisting and lowering pump into trenches, etc.

This is a useful feature and one not usually found in pumps of this class.

	Stroke	Suction	Capacity per Hour	List
Plate 3341—Bottom Inlet	3″	3″	3500 gals	**$24.00**
" 3343—Side Inlet	3″	3″	3500 "	**28.00**
" 3342—Combined Bottom and Side Inlet	3″	3″	3500 "	**32.00**

Suction Hose, Brass Nipple, Couplings and Strainer extra.

DUPLEX BOILER FEED PUMP—REGULAR OR BRASS FITTED

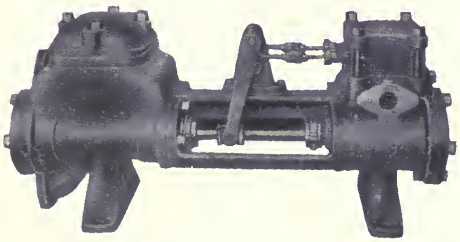


Plate 3344

The Duplex Boiler Feed Pump is exceedingly simple in design, all parts are accurately made of the most suitable materials and are interchangeable. Large stuffing boxes are provided, allowing ample packing space. The moving parts being of large dimensions, a minimum amount of wear and friction and proportionately longer life is assured.

Regular Fitted: Includes, for sizes 10″ stroke and smaller, seamless drawn brass driven liners in the water cylinders, cast iron glands and steel piston rods. Medium rubber valves for cold water. The brass tube liners and the bore in the water cylinders are painted with white lead before sleeve is driven in, thus permitting easy removal of sleeve when replacement becomes necessary.

Brass Fitted: Includes, for sizes 10″ stroke and smaller, same as for regular fitted but with hard rubber valves for hot or cold water and tobin bronze piston rods, cast iron water pistons are used.

DUPLEX BOILER FEED PUMP, Regular or Brass Fitted.

The sizes listed below represent a line of Standard Boiler Feed Pumps, for working pressures not exceeding 150 pounds to the square inch, and are regularly fitted with valves suitable for hot or cold water.

Steam Cylinder	Water Cylinder	Stroke	Capacity: Gallons per Stroke Each Piston	Capacity: Strokes per Minute Each Piston	Capacity: Gallons per Minute Displacement of both Pistons	H. P. of Boiler Pump will Feed	Steam Pipe	Exhaust Pipe	Suction Pipe	Discharge Pipe	Price Regular Fitted Each	Extra for Brass Fitted Each
2″	1¼″	2¾″	.014	100 to 300	2 to 8	30	⅜″	½″	1″	¾″		
3″	2″	3″	.04	100 to 250	8 to 20	85	⅜″	½″	1¼″	1″		
4½″	2¾″	4″	.10	100 to 200	20 to 40	180	½″	¾″	2″	2″		
5¼″	3½″	5″	.20	100 to 200	40 to 80	310	¾″	1¼″	2½″	2½″		
6″	4″	6″	.33	100 to 150	66 to 100	475	1″	1½″	3″	3″		
7½″	5″	6″	.51	100 to 150	100 to 150	700	1¼″	1½″	4″	3″		
7½″	4½″	10″	.69	75 to 125	100 to 170	800	1¼″	1½″	4″	3″		
9″	5½″	10″	.93	75 to 125	135 to 230	1100	1½″	2″	4″	3″		
10″	6″	10″	1.22	75 to 125	180 to 300	1400	1½″	2″	5″	4″		

An extra charge is made for brass pistons and for bronze piston rods.

WATER SYSTEM

"VULCAN" PNEUMATIC WATER SYSTEM

With ¾ Horse-Power Electric Motor and Power Pump for Wells and Cisterns 25 feet deep or less

Plate 3351

The pump is belted to the motor in this system which practically eliminates all noise. The automatic pressure regulator starts and stops the motor when the pressure falls or rises beyond a predetermined point. The pump has a capacity of 575 gallons per hour. Pump and motor are mounted upon a cast-iron sub-base 3′ x 22″, and are connected by a short belt. The cast-iron base insures permanent alignment of pump and motor.

We should be fully informed regarding the kind of current and the voltage available.

EQUIPMENT SPECIFICATIONS OF SYSTEM

One 30″ x 8′ horizontal tank.

One 2¼″ x 5″ double-acting power pump with air charging device and brass-lined cylinder; with Type "C" drive (including cast-iron sub-base and 20″ x 3″ pulley).

One ¾ horse-power, A. C., single-phase, 60 cycle, 110-220 volt electric motor.

One automatic pressure regulator.

One 1″ check valve.

One 1″ globe valve.

One ¾″ relief valve.

One pressure gauge.

One ½″ hose bibb.

One 1″. stop and waste cock.

One 2-pole switch.

One glass water gauge.

Size	Capacity Per Min. at 60 Strokes Gallons	Weight Pounds	Maximum Pressure Pounds	Capacity of 30″ x 8′ Tank Gallons	Weight of Complete Outfit Pounds
2¼″ x 5″	9.6	140	75	295	1100

Pneumatic Water Systems can be furnished for Hand Power, Gasoline Engine or Water as above illustration. For Sizes and Prices on Hand Power Systems only.

Tank	Capacity	Price	Tank	Capacity	Price
24″ x 6″	140 gals.	$160.00	30″ x 8″	295 gals.	$234.00
24″ x 8″	195 "	189.00	34″ x 10″	365 "	269.00
24″ x 10″	235 "	210.00	36″ x 6″	315 "	251.00
30″ x 6″	220 "	199.00	36″ x 8″	420 "	296.00

Further information will be furnished upon Application.

HOSPITAL FIXTURES

Needle Spray and Rain Douche Operated from Controller Table

The "Royal" Nickel Plated Needle Spray and Rain Douche with Four Standards, each with one 3″ Adjustable Ball-joint Spray and three 3″ Rigid Sprays, all with removable faces and separate supply from Controller Table; one 8″ Shower Head with removable face and Adjustable Ball-Joint with separate supply from Controller Table.

Distance from center to center of Standards, 31″; Marble Stall, 48″ x 48″ Inside.

The above shower is made of extra heavy brass parts throughout. The Rain Douche and Needle Sprays have removable faces so that any foreign matter clogging the needle perforations can easily be removed.

Price on Application.

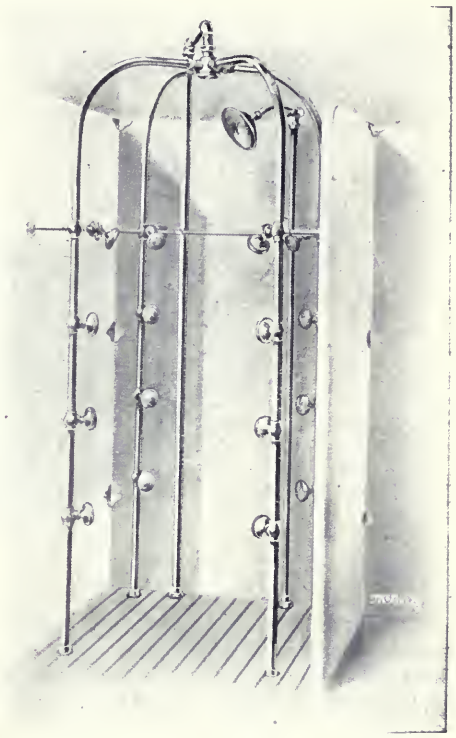


Plate 3361 "Royal" Margaret

THE "ROYAL" CONTROLLER TABLE

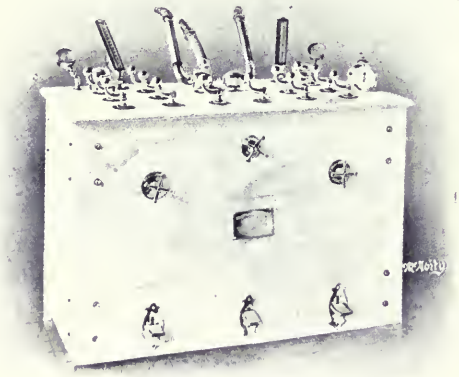


Plate 3362 "Royal" Jeanette

The "Royal" Controller Table, 1908 design, of selected Italian Marble, arranged for hot, cold and ice-cold water supply to table, with outlet connections from table to special shower, consisting of separate lines to the Overhead Douche, Side Sprays, Perenial, Bath and Sitz Tubs; Two Nickel Plated Adjustable Stand Pipes with Jet and Spray Nozzles for Scotch douche treatment and One Hose Nozzle for steam vapor, complete with all necessary Quick-Opening Controller, Regulating and Mixing Valves; Two Special Thermometers with Bell Alarms indicating maximum temperature, Two Pressure Gauges, Pedal Drain Valves, Alarm Clock and Battery.

All working parts are of Brass, all exposed parts are Nickel Plated and all Valves provided with Escutcheon Plates properly indexed.

Prices on Application.

The Ball-Bearing Handles of the Controller Valves are conveniently arranged and easily operated, a Ball which fits and remains stationary in the palm of the hand, turns on the lever and permits quick and easy movement. Both Stand Pipes are adjustable, directing the stream to any height or angle.

HOSPITAL FIXTURES

Plate 3371 "Royal Hampton"

Continuous Flowing Bath

The "Royal" Porcelain Enamel Iron Continuous Flowing Bath with 3″ Roll-Rim, finished outside with Water-proof White Enamel, extra large Nickel Plated Combination Overflow and Lift Waste, Nickel Plated Mixing Chamber with Thermometer, Nickel Plated Supply Pipes to Floor with Loose-Key Stop Valves and Cast Offset Unions with Cast Brass Floor Flanges, Nickel Plated Supply to Bath with the Patent Combination Volume and By-Pass Valve.

Prices on Application.

Length of Bath only 6½′.

Floor space required including Waste Fitting, length 7′ width 29″.

Can be furnished if desired with Supply Pipes run to the ceiling instead of to the floor; a large number of baths have been furnished thus, as it is found more convenient in old buildings to run the Supply Pipes to the Baths along the wall near the ceiling.

A large number of continuous flowing baths of the above design have been installed in many asylums throughout the country and are giving excellent satisfaction.

Can be furnished with Fittings for Two Baths.

SECTIONAL MASSAGE TABLE

This Sectional Massage Table is provided with a Bed divided into Three Sections which can be adjusted to any desired position, as shown in the illustration. The Bed is Padded and covered with Leather or Pantasota, or, if preferred, finished with a solid Oak Top and provided with Pneumatic Cushions.

The Tables are of Quartered Oak, Polished or with a Dull Finish; the Trimmings can be furnished in Lacquered Iron or Nickel Plated Brass.

We are prepared to furnish all metal pack beds with Metal Springs of proper dimensions.

Prices on Application.

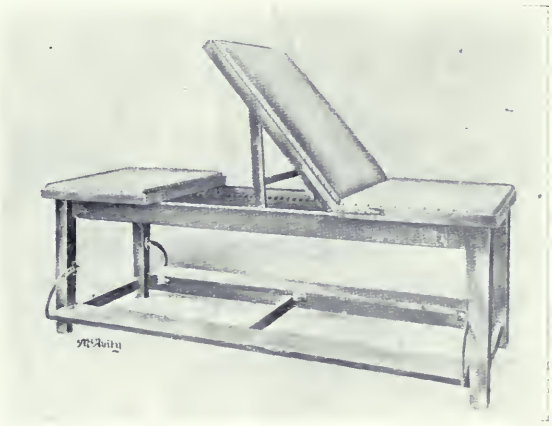


Plate 3372 "Royal Dorothy"

The Footboards are Adjustable and can be dropped down for service or raised and turned in out of the way of the attendant. The tables are of standard height, but can be made 2″ higher or lower as may be desired.

HOSPITAL FIXTURES

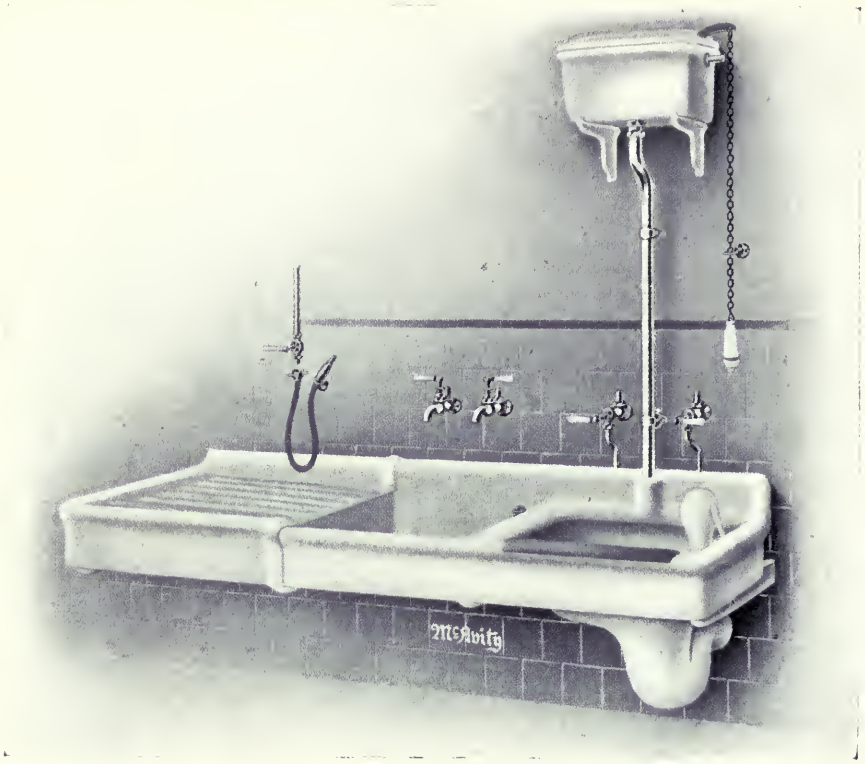


Plate 3381 "Royal Louise"

"Royal" Porcelain Combined Bed-pan and Urine Bottle Washer, Scalding Sink and Drainer. Size 98" x 23" over all. 3-gallon size Porcelain Tank and Cover with Fittings and Enameled Brackets, Nickel Plated Chain and Guide Ring with Porcelain Pull, Flush Pipe and Clips, Hot and Cold Bibbs with Porcelain Lever Handles, Standing Waste and Overflow to Scalding Sink, Stop Taps with Lever Handles, Pipes and Jets to Bed-pan Sink, Cold Tap with Detachable Nozzle and Wall Clips. The Sink and Drainer supported on Enameled Cantilever Brackets.

Price, Sink complete with Brackets and all Fittings, **$600.00**, Weight 1138 lbs.

PHYSICIAN'S SCALES

Physician's Scales for use in hydrotherapeutic wards, finished White Enamel with double Nickel Plated Beam and Measuring Rod.

Size of Platform, 13½" x 19½".

Can be furnished without Measuring Rod, if desired.

Prices on Application.

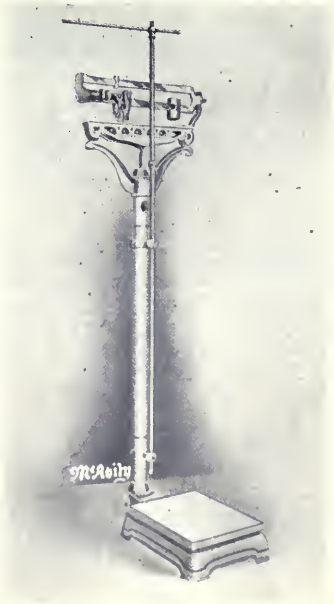


Plate 3382 "Royal Rosamond"

HOSPITAL FIXTURES

Excelsior Porcelain Combined Bed-pan and Urine Bottle Washer and Scalding Sink, made in one piece. Size 51″ x 23″ over all, with Teakwood Inset Rim to Bed-pan Sink, Porcelain Tank, 3-gallon size, with Cover and Fittings, White Enameled Tank Brackets, Nickel Plated Chain and Guide Ring with Porcelain Pull, Flush Pipe and Clips, Hot and Cold Bibbs with Porcelain Lever Handles, Standing Waste and Overflow to Scalding Sink, Lever Handles, Stop Taps, Pipes and Jets to Bed-pan Sink. The Sink supported on White Enameled Cantilever Brackets.

Sink complete, with Brackets and all Fittings..... **$500.00**

Plate 3391 "Royal Rosalind"

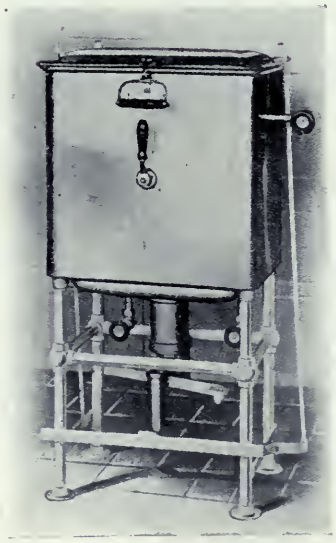


Plate 3392 "Royal Belle"

The "Royal" Sterilizer is made entirely of metal and heavily Nickel Plated. By its use the pan and contents can be thoroughly sterilized, and escape of all odors prevented without further handling.

Prices and further information will be furnished upon application.

HOSPITAL FIXTURES

Washing Table for Hospitals, with Pedestals, in best quality Excelsior White Porcelain, with Nickel Plated Fittings, comprising ¾″ Hot and Cold Bibbs, with Stays to Wall, Body Spray with Hinges, Pulley, Balance Weight and Chain for swinging up to the wall when not in use, Hand Spray with Rubber Tube, 2″ Outlet Grating and Down Pipe to Discharge into Channel.

Plate 3401 "Royal Eleanor"

Length of Table over all	6′ 6″
Width of Table over all	2′ 6″
Depth of Table over all	6″
Height from Floor to Top of Table	3′ 0″
Shipping Weight of Porcelain only	1200 lbs.
Shipping Weight Complete with Fittings	1250 lbs.

Prices on Application.

Hospital Kitchen Sink, made of Heavy Porcelain China; fitted with "World" Faucets; Nickel Plated Standing Waste, continuous to Floor.

Prices and further information upon application.

Plate 3402 "Royal Avonmore"

HOSPITAL FIXTURES

All "Royal" Plumbing Fixtures are sold of first quality only and to obtain the exact fixture the customer will clearly designate the name as "Royal Moncton" Bath and give the size required, thereby assisting us in giving service.

To prevent misunderstanding kindly remember that the prices throughout this Catalogue are list (or approximate only) and do not include freight, crating, labour, or other charges of installing and that all prices are subject to change without notice.

ARCHITECTS AND PLUMBERS

We would recommend to prospective builders that the services of a competent Architect and Plumber be secured, as, without their aid and advice costly errors may occur, which the cost of correcting might readily pay their fee. This, however, must not deter you from coming to us for any information in connection with Plumbing and Heating Fixtures which we shall be pleased to supply direct.

Plumbing should always be installed by competent plumbers, cheap plumbing fixtures poorly installed are a constant source of annoyance and a great menace to health.

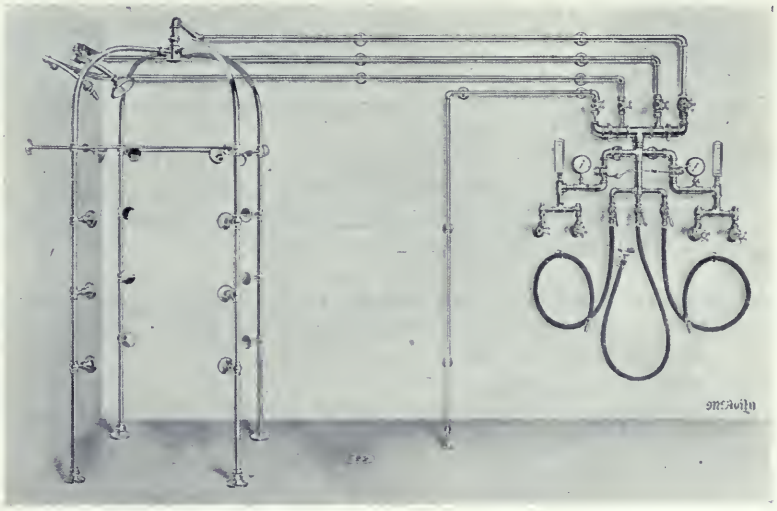


Plate 3411 "Royal Nita"

WALL TYPE HYDRO APPARATUS

"Royal" Nickel Plated Combination Needle Spray and Rain Douche, to have Four Nickel Plated Standards with Heavy Brass Floor Flanges with Flange and Dowel Extensions into Floor, Standards to have Nickel Plated Brass Continuous Horizontal Braces between Standards and to Wall. Each Standard to have Four 3" Sprays with Removable Faces, top row of Sprays to have Adjustable Ball Joints; One Rain Douche with Swing Joint and One Jet Douche with Ball Joint. Nickel Plated Combination Supply and Mixing Apparatus with Two Sets of Supplies from Wall for both Hot and Cold Water, each set provided with Nickel Plated Thermometer and Pressure Gauge, Nickel Plated Quick-Acting Lever Attachment for making instantaneous changes in temperature, Nickel Plated Brass Header with Supplies to Needle Spray, Rain Douche, Jet Douche and Perineal. Three Nickel Plated Supplies with Hose Attachments, Jet and Spray Nozzles and Nickel Plated Lever Handle Operated Control Valves. All as illustrated.

Floor space required 4' by 14'.

Can be furnished with Thermostatic Control Valve if desired.

Prices on application.

SUGGESTIONS

IN localities where there are no Plumbing Show Rooms, selecting suitable fixtures is often unsatisfactory. To overcome or lesson this difficulty and to assist the house owner in buying, and the architect and plumber in specifying goods that will give entire satisfaction, the following "Royal" Plumbing Lines are grouped and classified.

The Material in all cases being of first quality only, we are confident that the installation of Fixtures and Fittings bearing the Names and Trade Marks given in Catalogue will insure a most satisfactory job.

Where the fixtures required are to be of moderate prices, we would suggest the selection or consideration of class A consisting of the following:—

Class A

BATH:— "Royal Moncton" or "Sussex" fitted with China Indexed Nickel Plated "OK" Faucets; Nickel Plated ⅝ OD Supplies and "World" Combination Waste and Overflow, as illustrated on page 20.

LAVATORIES:— "Royal Sault" or "Sudbury," complete to floor with China Indexed "OK" Faucets; Nickel Plated Supplies and Nickel Plated Straight Waste, as illustrated on pages 48 to 50.

COMBINATIONS:— "Royal 10," with Vitreous China Syphon Action Bowl and St. John Post Hinge Oak Seat, as illustrated on page 102.

SINKS:— "Royal Dalhousie" High Back, Enameled Iron Sinks, 20″ x 30″, fitted with two Nickel Plated China Indexed Adjustable Flanged Faucets, and 1½″ Nickel Plated "World" Centrifugal Trap, as shown on page 86.

LAUNDRY TRAYS:—"Royal Newcastle," fitted with Four China Indexed Stub Faucets and "World" Centrifugal Lead Trap, as shown on page 92. This tray can be furnished in any number sections desired.

BOILERS:— 30 or 35 Gallons Galvanized "Excelo" with Tube; Stand and four "World" Boiler Couplings and one "World" Drain Cock.

COCKS:— All Stop and Waste Cocks equal to "World" as shown on pages 164 to 173.

SOIL PIPE:— All Soil Pipe and Fittings required to be equal to "Vulcan," as shown on pages 190 to 200.

Class B

Should space permit of designs of more massive appearance than those suggested in Class A—The group in Class B will be found to represent the utmost value at the price, and within reach of the most economical buyer.

BATHS:— "Royal Moncton," fitted with "World" China Indexed Compression Faucets; Nickel Plated "Royal" Supplies with Indexed Stop Valve and "World" Combined Waste and Overflow, as illustrated on page 20.

LAVATORIES:— "Royal Regina," Size 20″ x 24″, fitted with Style "B" China Indexed Faucets; Nickel Plated Supplies with China Indexed Stop Valves and Straight Waste, as shown on page 45.

CLOSETS:— "Royal Argo" Combination with Solid Vitreous China Tank, with Stop Valve on Supply; Vitreous China Syphonic Action Bowl and St. John Oak Seat, as shown on page 101.

PLUMBING SUGGESTIONS FOR THE HOME

Class B—Continued

SINK AND LAUNDRY TRAY COMBINATIONS:— "Royal Fredericton" with one wringer holder; fitted with two Nickel Plated China Indexed Adjustable Flange Sink Faucets and two Nickel Plated China Indexed Stub Faucets on Tray, as shown on page 90. Traps to be two 1½" "World" Centrifugal Lead.

BOILER:— 35 Gallon Galvanized "Excelo" Range Boiler with Stand; Tube; Four "World" Couplings and "World" Drain Faucet.

COCKS:— All Stop and Waste Cocks required to be equal to "World", as shown on page 164 to 173.

SOIL PIPE:— All Soil Pipe to be equal to "Vulcan," as shown on pages 190 to 200.

Class C

Where it is desirable to select Fixtures for a high grade residence that will correspond with the other furnishings therein and where the question of price must necessarily be considered. In the group of Class C will be found Fixtures that will satisfy the most descriminating.

BATH:— "Royal Hurona," fitted with "Presto" China Lever Quick-Opening Compression Faucets; Nickel Plated Supplies with China Index Stop Valves; "Royal Aetna" Standing Waste and Overflow, as shown on page 19.

LAVATORIES:— "Royal Lavonia" or "Clytie" Solid Vitreous China Pedestal Lavatory, fitted with "Presto" Quick-Opening China Lever Faucets; Nickel Plated Supplies with Indexed Stop Valves and "Royal Atlas" Bi-Transit Waste to Floor, as shown on pages 32 to 33

COMBINATIONS:— "Royal Swan" Combination with Vitreous China Tank, with Pressure Reducing Valve on Supply; Vitreous China Syphon Jet Bowl with White Pryalin Seat, as shown on page 101.

SINKS:— "Royal Perth," fitted with two "Presto" Quick Opening China Lever Faucets with Adjustable Flanges; Cast Iron Vulcan Air Chambers and 1½" Nickel Plated "World" Centrifugal No-Syphoning Trap, as illustrated on page 84.

LAUNDRY TRAY:— "Royal Woodstock," fitted with four Nickel Plated China Indexed Stub Faucets; "Vulcan" Air Chambers and 1½" Nickel Plated Continuous Waste with "World" Centrifugal Trap, as illustrated on page 91.

BOILERS:— 35 Gallon Galvanized "Excelo" Range Boiler with Tube Stand; Four "World" Couplings and "World" Drain Cock.

HEATING:— "Vulcan" No. ( ) Round Water Boiler, equipped with Valves having McAvity Copper-Asbestos Discs.

RADIATORS:— "Vulcan" ( ) Column Radiators, equipped with Valves having McAvity's Copper-Asbestos Discs.

All Stop and Waste Cocks to equal "World," as shown on pages 164 to 173.

All Soil Pipe and Fittings to equal "Vulcan" as shown on pages 190 to 200.

SUGGESTIONS

Class D

In keeping with the progress made in the development of House Furnishings, as examplified by the adoption of Improved Heating Systems, Better Lighting and other electrical household appliances.

Modern Plumbing is represented in the group of Class D by the most attractive and latest designs, which may be said to be the last word in Plumbing Fixtures.

BATH:— 5 ft. "Royal Iroquois" Bath, fitted with "Royal" Bottom Bell Supply and Waste Combination Fitting, concealed in wall, having Compression Valves with Indexed China Cross Handles, and China Escutcheons, as shown on page 16.

FOOT BATH:— "Royal Digby", fitted with "Royal" Bell Supply and Waste Combination with Indexed China Handle, as bath shown on page 23.

LAVATORY:— "Royal Antwerp", Size 22″ x 23″, fitted with "Royal Avon" Supply and Waste Combination, with Supplies and Waste to Wall, as shown on page 38.

SHOWER:— "Royal Florence" Nickel Plated Head and Shoulder Bath, as shown on page 67.

CLOSETS:— "Royal Swan" with Solid Vitreous China Tank with Pressure Reducing Valve on Supply; Vitreous China Twin Syphon Jet Bowl, with Ivory Seat, as shown on page 101.

SINK:— "Royal Westmount" Sink Combination, fitted with "Swan" Compression Faucets; Vulcan Air Chamber; and 1½″ "World" Centrifugal Trap, as shown on page 82.

LAUNDRY TRAY:— "Royal La Salle" Two-Section Tray, fitted with "World" Compression Indexed Faucets; Nickel Plated 1½″ Continuous Waste with Nickel Plated Centrifugal "World" Trap, as shown page 91.

HEATING:— Vulcan Sectional Steam Boiler Number ( ), equipped with Valves having McAvity Copper-Asbestos Discs.

RADIATORS:— "Vulcan" ( ) Column Ornamental, equipped with Fig. ( ) Valves, having McAvity Copper-Asbestos Discs, and Gate valves McAvity, figures ( ) and Angle Globe and Radiator. ( ) ( )

SOIL PIPE:— All Soil Pipe and Fittings to equal "Vulcan", as shown on pages 190 to 200.

COCKS:— All Stop and Waste Cocks to equal "World" as shown on pages 164 to 173.

In making the above suggestions and in the specifying of any particular fixture it is not with the intention of claiming greater merit of one over another of the same class, except that these so indicated appear to be the favorites with previous buyers. Intending purchasers should interest themselves in other designs shown in this Catalogue and in specifying same even or "equal" to, will be assured of securing high grade material, no matter whose make.

Owing to unsettled trade conditions the prices given are approximate only. We shall, however, be pleased at all times to quote prevailing prices.

SUGGESTIONS

Class E

Our lines of Plumbing for School Buildings will be found complete and of the best workmanship, comprising Lavatories, Closets, Urinals, Drinking Fountains, etc. The most important of these is the Closet and from our very complete lines we would particularly draw attention to Fixtures especially designed for School Buildings.

"Royal Autova," Plate 972; fitted with "Royal" Seat Action Valve, as shown and described on Page 97.

"Royal Nicolet," Plate 992; fitted with Kenny Flushometer (....) Pressure, as shown and described on Page 99.

"Royal Weyburn" Plate 1001; fitted with Paragon Automatic Valve, as shown and described on Page 100.

"Royal Automatic," No. 08 Combination, as shown and described on page 103.

Where under certain conditions it is not advisible to install Closets with Flushometers or Automatic Valves as Plates 972-1001, our No. 08 Automatic will be found most satisfactory. This Combination is entirely automatic, the Flush Valve being tripped by a strong yet simple device when the seat is released. Should, however, through time, the clutch become worn, the Flush Valve may be released as any ordinary Closet by the Side Lever which is always connected to Valve and may be operated at all times independent of Automatic Attachment. This feature does away with the necessity of closing down entire system for repairs during school hours. The cover being always in an upright position the closet may be used as an urinal.

Thousands of our No. 08 Automatics are in use in Canada and are giving entire satisfaction.

In the construction of large Public Buildings, Hospitals, Schools, Railway Depots, or Modern Hotels, no department receives more consideration than the Plumbing and Heating, no effort being spared by the Architects or Engineers to have this installation most effective and up to date.

Throughout this Catalogue these latest designs of Plumbing Fixtures are illustrated, and on which we shall at all times be pleased to quote prices or furnish all information to those interested.

In Class F the Fixtures are designs that appeal to Architects and are installed in most of the large Hotels.

BATH:—	"Royal Iroquois" (Plate 162) Porcelain Enameled Bath; fitted with Bottom Bell Supply, as shown and described on page 16.
LAVATORY:—	"Royal Belvedere," Plate 271, "Royal Carthage," Plate 332, as shown and described on pages 27 and 33.
SHOWER:—	"Royal Troy," Plate 651, "Royal Bloor," Plate 652, as shown and described on page 65.
CLOSETS:—	"Royal Nicolet," Plate 992; fitted with Kenny Flushometer; "Royal Weyburn"; fitted with "Paragon" Automatic Valve as shown and described on pages 99-100.
SINK:—	"Royal Westmount," Plate 821; fitted with "World" Faucets, as shown on page 82.
HEATER:—	"Vulcan" Hot Water Heater, Size (....), having a storage capacity of (....) gallons and capable of heating (....) gallons per hour to 190 degrees at 6 lbs. pressure.
RADIATORS:—	"Vulcan" Radiators (.....) Column equipped with "World" Automatic Control Valves and Trap.

Class F

HOSPITAL

Architects designing Hospitals may be interested in the various fixtures and appliances illustrated in this Catalogue which contains all the necessary apparatus for the installation of Modern Hospital Plumbing, as continuous Flowing Bath, Massage Tables, Bed Pan Sterilizers, Lavatories, Showers, Hydratherapeutic Outfits for use in Hospitals, Asylums and Sanitariums and which we shall be pleased to give any further information and prices.

McAVITY'S GUARANTEE

TO ARCHITECTS AND ENGINEERS:

THESE standard specifications for piping plant are given as a guide suitable for the goods you might embody in your specifications or their equal as we guarantee these goods suitable for the purposes specified. The figure numbers referred to are from our number 40 Catalogue, a copy of same will be sent upon request.

Specify "McAvity or Equal:" If Architects, Engineers and Superintendents will kindly specify **"McAvity"** or **"World"** or equal, they are assured of securing Valves and Fittings of the very best quality, made **right**, and lowest prices consistent with quality, guaranteed by an old reliable firm, who agree to replace, free of charge, any Valve or Fitting that may happen to pass all our tests and still prove defective.

The **"World"** and **"McAvity"** Brass and Iron Valves, Cocks and Fittings are made of the best formulae. Uniformity of product is insured by using best materials of highest workmanship, and daily laboratory and physical tests on a Riehle 75-ton testing machine are made by our own chemists.

The Iron Valves are made of the "World" Process Gun Iron of the following formula:—

"World" Process Gun Iron consists of the addition of fifteen per cent mild steel cuttings such as boiler trimmings and punchings, and the introduction of a number of jets of highly superheated steam into the cupolas during the process of melting. Through its use is produced cast iron which partakes of some of the qualities of Bessemer Steel and Malleable Iron. It is more ductile and resilient and closer grained than iron made without its use, and has a much increased tensile strength. Castings are less porous, and it is particularly recommended in Valves and Fittings which are subjected to strains of expansion and high pressure of steam and **there is no additional cost.** We have taken castings made from this **"World"** Process Iron, 6 inches square by ⅛ inch thick, and have punched them cold with twenty-five ¾ inch holes without showing a fracture, which, of course, would be impossible to attempt with ordinary cast iron. All our Valves and Fittings are made of Gun Iron by **"World"** process.

We also manufacture a line of Steel Valves and Steel Fittings for superheated steam.

PIPING SPECIFICATIONS FOR A HIGH PRESSURE PLANT

The following specification is compiled to cover material for high pressure steam lines, and is in general use by acknowledged authorities:—

Pipe.—All pipe shall be Genuine Wrot Iron or Lapweld Steel. For pressure up to 200 pounds, all sizes to and including 12″, to be full weight; large O.D. Pipe to be ⅜″ thick. For pressure above 200 pounds, extra heavy pipe shall be used for sizes 12″ and under; O.D. Pipe to be 7-16″ thick.

Pipe Bends.—To be made of full weight pipe, bent to a radius of at least five (5) times the diameter; longer radius where possible to attain elasticity. To be free from buckles and blisters, practically circular in cross section, and true to dimensions; bent before being flanged and true to dimensions, so that they may be bolted in place without forcing.

Fittings. All fittings 2½″ and larger to be flanged, conforming to dimensions for A. S. M. E. or McAvity Extra Heavy Fittings, pages 516 and 517. Fittings smaller than 2½″ may be Extra Heavy Cast Iron, screwed pattern.

Valves.—All valves 2½″ and larger, unless otherwise specified, to be flanged Gate Valves with outside screw and yoke; 7″ and larger fitted with by-pass.

The types of valves to be as follows: On boiler leads 6″ and smaller equal to "World" Fig. 1122 Gate Valves; 7″ and larger, equal to "World" Fig. 1131 Gate Valves, or "Victor" Angle Fig. 844, or "World" Fig. 874 Valves; yoked bonnets above 2″; below 2″, to be screwed bonnet.

Facing of Flanges.—All flanges to be faced with facing strip and finished smooth, raising the flange faces 1-16″ inside the bolt holes, except in exhaust lines, when flanges are faced straight across.

Bolts.—Bolts made of mild steel, with square head and hexagon nuts.

Gaskets. "World" Elastic Corrugated Copper with Asbestos Lining, Fig. 4861 gaskets inside bolt circle.

Small Valves. Gate Valves up to and including 2″, equal to "World" Fig. 621 extra heavy; Globe and Angle Valves up to and including 2″, equal to "Victor" Fig. 401 or "World" Fig. 451 or Check Valves equal to "McShane" Fig. 201 extra heavy.

Unions.—Extra Heavy Flanges, in pairs, equal to Fig. 5181, shall be used on all screwed lines wherever necessary to enable repairs to be made without disturbing the main lines.

Screwed Unions ¼″ to 3″, to be equal to "World" Bronze to Iron Heavy Pattern, Steel Nuts, Fig. 3123.

Boiler Feeder or Inspirator to be equal to Fig. 2241 or Fig. 2402, Hancock.

Figure numbers referred to are from our number 40 Catalogue, a copy of same will be sent upon request.

PIPING SPECIFICATIONS FOR A HIGH PRESSURE PLANT--Continued

Pop Safety Valves to be equal to McAvity Improved, with raised diaphragm seat, Figs. 1651 and 1652. Montreal covered hood and lock pattern if set below 125 pounds. If set above 125 pounds, to be equal to "World" Extra Heavy Lockup Pattern. Ontario, Saskatchewan, Alberta or British Columbia approved designs, Fig. 1662.

Brackets.—Equal to Figs. 5441 to 5451, McAvity New Pattern Adjustable Brackets.

Lubricators.—We recommend the McShane Patent Sight Feed Lubricator, Figs. 2641-2642; also McAvity Oil and Steam Separators, Figs. 2751, 2752, 2753; Back Pressure Valves, etc., Fig. 981 and 982; McAvity Automatic Stop and Check Valves, Fig. 1271; McAvity Automatic Exhaust Relief Valves. Fig. 9621.

BOILER FEED LINES

Pipe.—Main Boiler Feeder Header shall be made of extra heavy Genuine Wrot Iron or Steel Lapweld.

Fittings.—Fittings smaller than 2½" to be extra heavy cast iron pattern, screwed; 2½" and larger to be extra heavy flanged.

Valves.—Gate Valves 2½" and larger to be equal to "World," Fig. 1082. If valves are angle type, equal to "Victor," Fig. 844, or "World," Fig. 874, yoked above 2½"; below 2" can be screwed bonnet. Check Valves 2" and smaller to be McShane, Fig. 202, extra heavy, larger sizes equal to Fig. 914, McShane flanged.

Gaskets.—"World" Elastic Corrugated Copper with Asbestos Lining, Fig. 4861, gaskets inside bolt circle.

Facing of Flanges.—Flanges with facing strips.

Bolts.—Same as for high pressure lines.

EXHAUST LINES

Pipe.—All pipe to be lapweld steel pipe, sizes to and including 12" to be merchant weight 14" to 24" 3-16" thick or heavier above 24"; no pipe heavier than ⅜" shall be used. The Vertical Riser Relief Valve Pipe may be spiral riveted, with steel flanges riveted on.

Pipe Bends.—All Bends shall be made of full weight pipe, bent and fitted with screwed cast iron flanges, threaded, made on and refaced after bend is made.

Pipe Flanges.—All Flanges to be cast iron, sizes 24" and below, screwed upon the pipe. Larger sizes shrunk upon the pipe, peened and afterwards refaced.

Fittings.—Fittings 2½" and smaller to be standard cast iron screwed fittings; 3" and larger flanged, standard weights. Fittings 14" and larger may be made in low pressure weight.

Valves.—All Stop Valves to be gate or angle valves. Valves on important lines to be O. S. & Y.; other valves may be inside screw. On lines 1½" and smaller use Fig. 582 or McAvity, Fig. 282, or equal. Gate Valves 2" to 24" use McAvity, Fig. 1002, or equal.

Expansion Joints.—To be equal to McAvity, which we make in both balanced and unbalanced with tie rod; as Fig. 951, also Figs. 921, 922, 931.

Exhaust Valves.—To be equal to McAvity Automatic Exhaust Relief Valves. Fig. 9621.

Gaskets.—"World" Elastic Corrugated Copper with Asbestos Lining, Fig. 4861, gaskets inside bolt circle.

Bolts.—To be mild steel, square head and hexagon nut.

Facing of Flanges.—Flanges with facing strips.

BLOW-OFF

Pipe.—Extra strong from boiler to blow-off valves, balance standard.

Fittings.—Extra heavy flanged to blow-off valves, balance standard flanged.

Valves.—Blow-off valves consisting of two "World" Fig. 1082, Flanged Gate Valves bolted together; or "World" Extra Heavy Flanged Angle Valve, Fig. 874, together with a "World" Extra Heavy Flanged Blow-off with Yoke, as Fig. 1754, or "World" Extra Heavy Flanged Angle Valve with Yoke, Fig. 874, with Blow-off Valve, as Fig. 1771.

Flange Facing.—Flanges with facing strips.

Gaskets.—"World" Elastic Corrugated Copper with Asbestos Lining, Fig. 4861.

Figure numbers referred to are from our number 40 Catalogue, a copy of same will be sent upon request.

BLOW-OFF--Continued

BOLTS.—Square Head and hexagon nut.

Drip Lines.—Pipe, Valve and Fittings for high pressure steam lines to be extra heavy, screwed, furnished with sufficient flanges or screw unions to enable repairs to be easily made. All valves to be Gate or Angle pattern.

All our valves are given six separate and distinct tests. First by hydraulic pressure on one side of the double gate; then the valve reversed and the other side of the gate tested. Afterwards a blank flange bolted to one end and the gate opened in order to test the bonnet. Then each valve is connected to a live steam pipe and the same process gone through. This live steam test allows for expansion, and the bonnet bolts are all taken up ¾ to a full turn, and after the valves are installed there is no following up necessary and absolutely tight valves are assured.

We make the above valves and fittings in **Cast Iron "World" Gun Iron, Semi-Steel, Cast Steel,** and **Malleable Iron.**

Prices upon application.

NOTE.—Preferably, we would be pleased to show your engineer or architect McAvity's Valves now in daily service subject to all conditions and varying in length of service or would be pleased to show you in Power Plants of Halifax Electric or Montreal Tramways and Winnipeg Street Railway our valves and fittings which are giving daily satisfaction with over twenty years use to their credit.

STYLES OF PIPE JOINTS

SCREWED FLANGES

Made in all weights and metals

CAST IRON—SEMI-STEEL—CAST STEEL—FORGED STEEL

Plate 3481

Plan Number One.—The screwed joint when properly made, gives good satisfaction. We make high pressure joints by screwing up the flanges by power on a long taper thread cut to a true standard, care being taken in the tapering of the flanges and the threading of pipe to correct size, so the same will screw up to the shoulder in the flange and not expose thread, which would form a weak point in pipe line. We also take care to have the threads perfectly clean, which is one of the secrets in making a tighter screwed joint.

STYLE OF PIPE JOINTS—Continued

For general service our screwed-on flange gives universal satisfaction. For steam and water lines, at pressures up to 125 lbs., to flange is screwed home, and not refaced.

For higher pressure, we recommend screwing on the flange until the end of the pipe projects beyond the face, then refacing by taking a cut across the flange and end of pipe, insuring a perfect joint with the gasket bearing on the end of the pipe. This prevents the pressure from working through the thread of the flange, and insures a long life for the joint.

For all High Pressure service, and where it is objectionable to reduce the thickness of the wall of the pipe by threading, and for all pipe 14″ and larger, we recommend our Worldlap Flange Joint.

Plan Number Two.—The McAvity "World" Joint is not merely turning over the pipe half way to the bolt holes, thus providing sufficient surface for the gasket, but McAvity Improved Method of "World" Joint is to bevel the face of the flange to the width of the laps, to allow for the slight difference in the thickness of pipe between the inside and outside portions of the lap caused by drawing over the pipe, as shown in illustration, By constructing the joint in this manner the full thickness and strength of the pipe is retained, thus making this "World" Joint much stronger than the joints made by merely drawing over the pipe without beveling flange, as in order to obtain an absolutely true face it is necessary to turn off the lapped over portion of pipe to be the same thickness both at outer and inner edge, whereas by beveling flange the full strength is given where it is most needed.

We consider this the best joint on the market, and you do not reduce the strength of the pipe by threading.

WORLDLAP FLANGES

Made in all weights for any service

CAST IRON—SEMI-STEEL—CAST STEEL—FORGED STEEL

Plate 3491

The Worldlap Flange Pipe Joint has proven itself to be the best joint yet designed for any service. Its advantages are many:—

First.—The pipe is not weakened by cutting into the wall.

Second.—The gasket bears on the face of the lap, and absolutely prevents leakage through the bore of the flange.

Third.—The advantage of the flange swiveling on the pipe is obvious to the fitter.

Fourth.—The flange has maximum strength, and is not subject to torsional strains in attaching.

For highly superheated steam lines, where the expansion strains are very severe, it is sometimes necessary to reinforce the lap by upsetting the end or welding on a reinforcing band; the occasions for this, however, are rare. By our method of manufacture, the thickness of the lap is reduced very little at the outer edge, with practically no reduction at the radius of the lap; therefore, for all but the most severe service, we recommend our regular standard joint. We see no real advantage in squaring the corner of the lap.

For fuller detail, see our Number 40 Catalogue, a copy of same will be forwarded upon request.

PLUMBING AND DRAINAGE

(Socket and Spigot System)

Extent of the Work.—This contractor shall include the execution, erection and completion of all the herein described work, together with the furnishing of all materials, tools, appliances, scaffolding, apparatus and labour necessary for said execution, erection and completion, except as otherwise distinctly stated.

Cutting and Patching.—Other contractors will build all chases and do all cutting of masonry, wood and other work for this contractor, and repair same after him. But this contractor shall furnish all necessary measurements and other information for the other trades.

Excavation and Back Filling.—This contract shall include all excavation and back filling required in the execution of this work. No back filling shall be done until the system has been tested. Back filling shall be done in layers and thoroughly tamped. Any material not used in the back filling shall be carted away.

PIPES AND FITTINGS

All pipes and fittings shall be the internal diameter designated.

Cast Iron Pipe Fittings and Joints.—All cast iron pipes used for soil, waste and sewers shall be "Vulcan." All cast iron used for vent and rain water pipes shall be "medium" weights and dimensions.

The pipes shall have all necessary branches, offsets and other fittings. The necessary changes in the direction of the drains and sewers must be made in the direction of the flow by means of "Y" branches, one-quarter, one-eighth or one-sixteenth bends, at about the points indicated upon the drain plan.

All joints in cast iron pipes and fittings are to be made with picked oakum and molten lead, the joints to be made impermeable to gasses by bedding the lead with hammer and caulking-iron. The lead for caulking is to be pure soft pig-lead.

Wrought Iron Pipes.—Wrought iron pipes shall be the best welded, of uniform thickness, and capable of withstanding a hydrostatic pressure of 150 lbs. per square inch; same shall be galvanized and put together with all necessary bends, tee-pieces, connectors, etc; elbows are not to be used except where quite unavoidable, and then to be of the round description. Where it is necessary to form bends or sets in the line of piping, these, when easy, are to be made without heating the pipe; when sharp, to be made before galvanizing. The pipes shall be screwed, socketed and put together with red lead.

Lead Pipe and Connections.—All connections of lead pipes shall be made by wiped joints.

All connecting-up lead pipes shall be of the best quality drawn lead, weights to be as follows:—

1¼", 7 lbs. per yard.
1½", 8 lbs. per yard.
2", 10½ lbs. per yard.
3", 16½ lbs. per yard.
4", 24 lbs. per yard.

Connection of lead to cast iron pipes shall be made by brass ferrules of the same size as the lead pipe, caulked in the hub of iron pipe with lead, and attached to lead pipe by properly soldered wiped joints.

Pipe Hangers and Supports.—All vertical runs of pipe shall be supported by strong iron bands 1½" x ½", one band under each hub. The horizontal runs shall be supported in position by special pipe hangers to approval.

Lead pipes shall be firmly secured in position with hard metal backs, soldered to pipes and fastened with screws. These backs shall be not more than three feet apart. Support suspended pipes in properly made wrought iron stirrups sufficiently rigid to prevent trapping.

DRAINAGE SYSTEM

Sewer.—The mason contractor will pay for connection and bring 8" tile drain to within 5 feet of the building. This contractor shall bring a 6" (cast iron sewer) or (salt-glazed vitrified) pipe to the tile drain, the connection being made with a collar of bricks, laid in cement mortar. This sewer shall have branches inside the building to the foot of the various soil, waste and rain water pipes and the basement fixtures. All sewers and branches inside the building shall be cast iron or salt-glazed vitrified pipe.

NOTE.—Courtesy of Specification Data, except Catalogue references.

PLUMBING AND DRAINAGE—Continued

Clean-outs.—Heavy cast iron "Victor" clean-outs with brass screws shall be placed in the sewers at the end of each branch 8′ long or longer, at the foot of all soil and waste pipes, and 30′ apart horizontally, and at each other point the Architects may consider necessary. All clean-out plugs shall be made accessible.

Main Trap.—At a point just inside the building a (cast iron) or (salt-glazed vitrified) running trap shall be placed upon the house sewer. The breather shall be four inches cast iron extending through the wall and up to the grade with a return bend. The running trap shall have a brass clean out plug screwed into same. As Plate (1969) McAvity's Catalogue.

Soil and Waste Pipes.—Unless the type of fixture demands a different sized pipe, the soil and waste stacks, with the branches to the different fixtures, shall be of the following sized pipe:—

Water closet, 4″.
Slop sinks, bell traps, and urinals, 3″.
Bath tubs and basins, 2″.

All soil and waste pipes shall be "Vulcan."

Fittings at the foot of vertical stacks shall be set with the top flush with the basement floor and be clamped to the nearest foundation support.

Rain Water Pipes.—All rain water pipes inside the building shall be of cast iron of the sizes marked on the plans.

Provide at the foot of the rain water pipes a gravel basin or trap, with outlet near the top. Arrange for suitable hand hole.

(Or, in case the rain water pipes are of sheet metal, specify as follows):—

Bring 4″ cast iron branches 12″ above grade, into which the sheet metal contractor will connect the rain water pipes.

Traps and Vents.—Each fixture in which the trap is not cast integral shall be cast with an accessible brass clean-out plug in trap. Each trap shall be vented with a pipe one size larger than the trap. No vent pipe shall be smaller than 3″ in diameter where it passes through the roof, and all vent pipes must continue to rise after leaving the trap, and pass through the roof separately or combine with other pipes. Connection of a vent pipe with a soil pipe shall be at least 5′ above the highest fixture. All vent pipes shall be standard cast iron, except where architectural conditions will not permit this conveniently (in partitions and furred spaces), where they shall be standard wrought iron.

Flashing.—All soil and vent pipes through the roof space shall be flashed with five-pound lead carried to top of the bell hub, bent down into same and extended out through the pipe over roof 12″ in each direction.

Surface Drains.—There shall be (four) bell traps similar to "Vulcan," Plate (2023), complete as described, located where directed in basement.

Carry a two-inch waste to refrigerator, and connect with a lead safe 12″ square, placed under the refrigerator.

Testing.—The entire plumbing and drainage system within the building must be tested by the plumber in the presence of (the Architect) or (the Plumbing Inspector) under a water test. All pipes must remain uncovered in every part until they have successfully passed the test. The plumber must securely close all openings as directed. The use of wooden plugs for this purpose is prohibited.

The test to be applied by closing the lower end of the main drain and filling the pipes to the highest opening above the roof with water. This test shall include at one time the house drain and branches, all vertical and horizontal soil, waste and vent and leader lines, and all branches therefrom, to a point above the finished floor and beyond the finished face of walls and partitions.

NOTE.—Courtesy of Specification Data, except Catalogue references.

PLUMBING AND DRAINAGE—Continued

WATER SUPPLY

Cold Water Supply.—This contractor shall pay for street and meter connection and bring into the building a 2″ water supply. Just inside the building a 2″ "World" Strainer Plate (3311) shall be placed, between two Fig. (611) McAvity Gate Valves to permit of repairs. There shall be branches and risers of proper size to the various fixtures. Cold water supplies shall be valved at the lowest point with a ¾″ drain connection to the sewers.

A supply of size directed shall be carried to within 4′ of the boiler.

Hydrants.—Run a (....) pipe to the following locations..... with self-draining hose cocks, and so arranged that they cannot freeze up.

Valving. All mains to different stacks of fixtures shall be separately valved in basement, with suitable Valves as shown in McAvity's Number 40 Catalogue.

All fixtures to have separate shut-off valves on both hot and cold water supplies.

Standpipes. From the (....″) main in basement take (....″) standpipes and run same up through building; place on each floor a (....″) x (....″) x (....″) "T" with (...″) bronze hose valve having spanner tap and chain.

Provide and fix to each valve a Plate 6383 hose rack, and to each outlet (....′) of best quality Underwriters' Fig. 6391 rubber-lined fire hose with approved nozzles. As Fig. 6312 McAvity's Catalogue.

Galvanized Iron Cisterns.—Provide and fix where shown on drawings a galvanized wrought iron riveted cistern to contain (.....) gallons, with all necessary brass fittings for pipes and overflow. (If cistern is exposed to frost in roof space, jacket the cistern with mineral wool 3″ thick, and enclose same with ⅞″ match boarding with close-fitting hinged flap and fastening for access.)

Weight of iron, 20 to 400 gallons—⅛″ full plate.

Weight of iron, 500 to 1000 gallons—3-16″ full plate.

Cisterns containing over 250 gallons to have angle iron round top and bottom and cross stay rods. The connections of all pipes with cisterns to be made with proper brass boiler screws with double nuts and unions.

State whether there is to be a separate cistern for drinking water, and specify any other cisterns that may be required, and add clause making previous description apply to each.

Cistern Lead Lined.—Provide and fix where shown on drawings a lead lined cistern .....′ by .....′ by.....′ deep, lined with 6-lb. lead, neatly and closely worked to wood framed cistern, with wiped soldered angles. The upper edge of lead to be dressed over top edges of cistern and well copper nailed, and to have necessary perforations for pipe, the lead being neatly cut and dressed into sinkings in the wood. The wood cistern to be built out of (....″) plank dressed both sides, with ploughed and cross joints, and properly framed together.

Cistern Wastes.—The waste from cistern shall be one size larger than supply pipes; to be taken from near the top and carried down to discharge over (Laundry Tub) in Basement.

Lead Safes. Each cistern shall have beneath it a safe of 5-lb. lead (of the specified size) and to be turned up 4″, the lead to be laid on closely jointed boarding with a fall to outlet at one corner. The outlet shall be 50 per cent. larger than the service pipe and to discharge over (Laundry Tub) in Basement.

Hot Water Heater. Furnish and set up where shown, on No. . "Vulcan" or equal (gas) (coal) Heater, with smoke connection and hot and cold water connections to the hot-water tank further specified.

Hot Water Tank.—A 1½″ branch, separately valved, shall be carried to ring in the boiler. This contractor shall furnish and set up a hot-water tank 12″ in diameter and 4′ long, suspended from the ceiling with hangers. This tank shall be formed of steel, with riveted joints, tested to 100 pounds hydrostatic pressure, and be galvanized. This contractor shall provide all necessary openings and fittings upon this tank for the connections. Tank shall have manhole and all necessary holes and fittings for connections. The heating contractor shall make the connections to the water front of the boiler, while this contractor shall make the connections to the auxiliary heater and the plumbing pipes.

NOTE.—Courtesy of Specification Data, except Catalogue references.

PLUMBING AND DRAINAGE—Continued

Hot Water Piping.—From the tank and gas heater a 1½″ hot-water main shall be carried through the building, with branches and risers to all fixtures, except water-closets and urinals. Branches shall be same sizes as specified for cold-water supply. In the boiler-room a valve and ¾″ drain connection shall be placed upon the hot-water piping, so the entire system can be drained to sewer at this point. Hot-water pipes shall have return circulation, no "dead end" being longer than 8′.

Rough Valves.—A rough valve shall be placed upon each branch and riser and wherever else necessary for the perfect working of the system. Same shall be a McAvity Fig 611 gate valve with rough brass body, stem and trimmings, and wheel handles placed in an accessible place.

Air Chambers.—Concealed galvanized "Vulcan" air chambers shall be placed upon supply pipes at each fixture, at the foot of each riser that occurs at the end of a long run, and wherever else necessary to prevent water hammer.

Pipe Covering.—All hot-water pipes and the hot-water tank shall be covered with "Excelo" asbestos sectional covering approved by the Architects, with canvas jacket, held in place by lacquered bands or sewed on, as the conditions may require. All cold-water pipes shall be covered with (.....) wool felt pipe covering, guaranteed water-tight.

Testing Water Supply Pipes.—All water supply piping, both hot and cold, shall be tested by this contractor before the work is covered in, in the same manner as specified for the plumbing and drainage system, and if any leaks are found, they shall be made tight.

PLUMBING FIXTURES

Fixtures in general.—Fixtures in general shall be those further listed or their equals in other makes as selected by the Architects. Except as otherwise distinctly stated in this specification, fixtures shall be complete as described upon the plates.

Nickel Plating.—All exposed pipes and fittings of the fixtures shall be brass, nickel plated. Water supply piping shall be seamless brass tubing, iron pipe size, and shall be brought through the walls where possible, without regard to the method illustrated upon the plates. All pipes to fixtures shall be fitted with nickel plated flanges where they pass through walls and floors. Exposed water pipes to fixtures shall be iron pipe size, and fitted with nickel plated valves.

Specification of Plumbing Fixtures Covering, Factory, Residential and General Building Use.—Check off Fixtures to be used and incorporate them in your General Specification. Fixtures herein are specified complete, but can be changed to suit your various requirements.

Baths.—Supply and set up complete as shown (specify quantity required) McAvity's "Royal" (specify name of Bath desired and size). See pages 17 to 21. Specify all Fixtures by "Royal" Plate Number and page in Catalogue No. 45.

Basins.—Supply and set up complete as shown (specify quantity required) McAvity's "Royal" (specify name of Basin, size and Fittings.) See pages 24 to 64.

NOTE.—For Province of Quebec, Basin Traps shall be either Centrifugal Pattern, or Adjustable Trap, Vented. See pages 147 to 149.

For Ontario, all Basin Traps must be of Adjustable Pattern Vented; and shall have Ground Joints on Vent and Trap. See page 147.

For Maritime Provinces, Straight Basin Waste, as per Plate (1423), page (142), may be used, with Lead Box Trap under Floor.

Water Closets.—Supply and set up complete as shown (specify quantity required) McAvity's "Royal" (specify name of Closet Combination desired). See pages (96 to 106). State whether or not closet is to be supplied with Brass Floor Flange.

NOTE.—For Schools, Factories, Hotels and Office Buildings, we wish to call your attention to our No. 08 "Royal" Combination. This Fixture is not only positively automatic, but can also be operated by means of the Push Button on the side of the Cistern, thus insuring a Combination which is guaranteed to work under all conditions. Fixture can be supplied with any style Bowl, and Seat, except Richelieu.

Urinals.—Supply and set up complete as shown (specify quantity required) McAvity's "Royal", Catalogue No. 45. For details of various Urinals, see pages (127 to 135).

Sinks.—Supply and set up complete as shown (specify quantity required) McAvity's "Royal" (specify name of Sink, Size and Plate Number). Specify style and size of Sink Faucets, and be sure to call for "World" Centrifugal Lead Traps, which are absolutely Non-Syphoning and Self Cleansing under all conditions.

See pages (82 to 86) for Details of Sinks.
See page (178) showing "World" Centrifugal Lead Traps.
NOTE.—Courtesy of Specification Data, except Calalogue references.

PLUMBING AND DRAINAGE—Continued

Slop Sinks.—Supply and set up complete as shown (specify quantity required) McAvity's "Royal" (specify name of Slop Sink desired). See pages (75 to 81), Size (. . .). Style of Sink Faucets.

NOTE.—If Slop Sink does not require Trap Standard, specify "World" Centrifugal Lead Trap.

Laundry Tubs.—Supply and set up complete as shown (specify quantity required) McAvity's "Royal" (specify name of Laundry Tub Combination desired). See pages 91 to 95; state whether Single, Double or Triple Fixture, and style of Faucet required.

NOTE.—In specifying Lead Traps always call for "World" Centrifugal, positively Non-Syphoning.

Grease Trap.—The Waste from Kitchen Sink to be connected to Grease Trap, "Royal" Plate (811); state whether Grease Trap is to be on, or below, floor.

For Complete Bath Room Fixtures, see pages (. . to . .).

Showers.—To be shown "Royal" No. 45 Catalogue, Plate 692. Hot and cold water supplies. Mixing chamber. Rubber curtain, etc.

Marble.—See Specification for Marble to be supplied by another contractor, but this contractor to supply all necessary nickel plated standards, wing backs, legs, brackets, wall brackets for securing marble in position, as Plate ( ) McAvity's, No. 45 Catalogue.

Local Ventilation.—From the ceilings of all rooms where plumbing fixtures occur run galvanized iron ducts to flue indicated on plans, provide enameled iron registers at terminals of ducts in each room.

Ventilation by Fan.—Describe fan and motor, number of cubic feet of air to be discharged per minute, size of branch ducts, main trunk. Wiring to fan. Location of switch. Pent house discharge on roof, with louvres or canopy or discharge into flue.

Lavatory Fittings.—Towel racks, soap trays, glass holders, sponge holders, tooth-brush holders, mirrors, glass shelves, etc., as Plates ( ) McAvity's No. 45 Catalogue.

Lavatory Partitions.—Lavatory partitions may be constructed of (Marble), (Wood) or (Sheet Steel). If of sheet steel, Architect should state manufacture and sizes and that they are to be installed according to the specifications of the manufacturer. See Plate 1295 McAvity's No. 45 Catalogue.

HOT WATER HEATING

Extent of Work.—This contract shall include the execution, erection and completion of all the hereindescribed work, together with the furnishing of all materials, tools, appliances, scaffolding, apparatus and labour necessary for said execution, erection and completion.

General Description.—Heating shall be by means of a two-pipe hot water system, the water being heated in a boiler in the basement, with risers to the various radiators, with a return under the ground floor. The radiators in basement shall be placed upon the ceiling.

Plans.—This contractor shall prepare a complete set of plans, showing size and run of the various mains and risers, the size of radiators, etc. These plans shall be approved by the Architects before work is started.

Boilers.—Boiler shall be the "Vulcan" cast iron sectional boiler No. 8, capable of supplying (. . . . . .) square feet net of radiation without forcing, or equal boiler approved by the Architects. The boiler shall be supplied complete with all necessary fittings and firing tools, including one poker and slice bar, one fire brush and handle, and one slicing shovel. All Cocks and Valves to be McAvity's "World", Plates ( )

(This contractor shall construct a pit for boiler, with walls and floors of concrete, six inches thick, with a 1″ finish of equal parts cement and sand trowelled smooth. Under the floor shall be a 4″ layer of broken stone, brick or gravel. The depth of the pit shall be such as may be proper for the boiler selected.)

Smoke Connection.—The boiler shall be connected to smoke flue through a pipe of No. 16 black iron, the pipe to have area full size of the opening in the boiler.Pipe shall have proper balanced damper, with clean-out door.

Water Connections and Draw-off Cocks.—Feed water will be brought to within 4′ of the boiler by the plumber, but connection shall be made to the boiler by this contractor. The draw-off cocks shall be placed at the lowest points of the system and fitted for hose attachment.

Boiler Covering.—Exposed portions of the boiler shall be covered 2 inches thick with plastic asbestos cement.

Pipe Covering.—All mains in basement (and risers) shall be covered with (asbestos) (magnesia) sectional covering, with canvas cover, and secured by brass bands.

Water Front and Connections.—The heater shall contain a hot-water front capable of heating 60 gallons of water per hour to the boiling point. This contractor shall connect this hot-water front to a tank upon the basement ceiling. This tank will be furnished and set by the plumber, who will make all connections from same to the plumbing pipes.

NOTE– Courtesy of Specification Data, except Catalogue references.

HOT WATER HEATING—Continued

Mains.—The Mains shall be of ample size to carry all risers and radiators attached to the system, and shall be so graded that the water will have a free and easy circulation with a low fire.

Pipes and Fittings.—All pipes used throughout shall be of the best quality of wrought pipe of standard weight and thickness, smooth inside and free from imperfections. All threads shall be clean cut, straight and true. All fittings shall be of the best heavy gray iron, with taper threads.

Flanged Unions.—At proper points upon mains, branches and return mains, there shall be located right and left couplings or flanged unions, so that parts may be disconnected without injury to the balance of the system. Coupling may be used for all pipes up to two inches in size; all larger pipes shall be connected with flanged unions made tight with "World" Copper Abestos gaskets. Screwed Unions to be "World" Bronze to Iron, Plate 3123 McAvity's Catalogue.

Hangers.—All piping shall be supported at intervals not exceeding 10′ with approved adjustable hangers.

Floor Plates.—Where pipes pass through floor, ceilings and walls, they shall be covered with neat cast-iron plates, nickel plated.

Radiators.—Radiators, where so described in schedule, shall be "Vulcan" wall type. All other radiators shall be two or three or four column cast iron "Vulcan" (. . . . .) radiators, with legs of type selected by the Architects.

Expansion Tank.—Expansion tank shall be formed of No. 22 gauge galvanized iron, and fitted with gauge glass and brass guard rods. This tank shall be placed in the attic above the highest point upon the system. The flow connections to tank shall be so made as to maintain a circulation of contained water at all times when the apparatus is in use. The tank shall be properly supported upon a suitable shelf, and provided with a pipe for venting the overflow, wasting to the gutter.

Radiator Valves.—Each radiator shall be controlled by a quick-opening ("World") radiator valve, nickel plated, with hardwood handle. Plate ( ) McAvity's No. 45 Catalogue.

Air Valves.—Each radiator shall be furnished with an approved air valve, nickel plated.

Bronzing and Painting.—All radiators shall be given two coats aluminum bronze, and all exposed pipes shall be given three coats lead and oil paint, of colour selected by the Architects.

Installation and Operation.—When directed by the Architect, this contractor shall temporarily connect up the radiators in such position as will make the backs of the radiators and the wall behind the radiators accessible for painting. The owner will then take charge of the heating plant and operate it for drying out of the plaster, woodwork, etc. When all painting of radiators and of the walls behind same is complete, and when directed by the Architect, this contractor shall disconnect the radiators and reconnect them in their permanent position, ready for the tests further mentioned.

Test.—When completed, the system shall be tested and made air tight.

Guarantee.—If, within the period of one year after completion, any defect of material or workmanship should appear in the apparatus, this contractor shall remedy same at his own expense.

LIST OF RADIATORS

The radiators are to be ("Vulcan") make, and are to be furnished in the following rooms of the sizes enumerated:

Location	No. of Rads.	Height	Sq. Ft.	Total
Drawing Room.....	(3)	(32)	(80)	( )

NOTE.—Courtesy of Specification Data, except Catalogue references.

VAPOUR STEAM HEATING

Extent of Work.—The proposal submitted by the contractor tendering shall include the execution, erection and completion of all the herein-described work, together with the furnishing of all the tools, material, appliances, apparatus and labour, to make a complete system of vapour heating, as hereinafter specified.

General Description.—The building shall be heated by a two-pipe vapour steam (low pressure) system operating between atmosphere and one pound pressure. It shall have steam main and riser pipes supplying steam to radiators, and risers and return mains carrying the air and water of condensation from the radiators. Return mains to be carried back to boiler-room dry, and with a gradual pitch downward towards boiler. Boiler to be so located that there shall be a distance of 24″ or more between the lowest branch of dry return and the waterline in the boiler. All air from the system to be vented through suitable apparatus located at the point where the several branches of the returns join and drop to enter the return header of the boiler.

Boiler.—Contractor shall furnish and install on suitable foundation, one (size) boiler, as manufactured by (kind), and guaranteed to be free of all defects, to have perfect internal equalization, and to have tight-fitting firing and draft doors. Boiler to be guaranteed by the manufacturers to be capable of supplying steam at low pressure to (.....) square feet, net of direct cast iron radiation without forcing. Boiler shall be placed as near smoke flue as possible, and at such an elevation that the distance between manufacturers' boiler waterline and the bottom of the lowest point of any dry return pipe shall be not less than 24″ for cast iron sectional boilers or 36″ for tubular or steel fire-box boilers.

The boiler shall be set in brick work according to the plans and specifications furnished by the manufacturers for this particular style and size of boiler, and executed in a manner approved by the architect.

Boiler to be provided with approved rocking and dumping grates, shaking lever, and all fire tools necessary, including poker, slice bar, hoe, scoop, and cleaning brush, and to be equipped with all necessary trimmings, including a water column, Fig. 2042 McAvity's No. 40 Catalogue, with gauge glass and try cocks, a low-pressure, automatic damper regulator, pressure gauge, a safety valve set at 5# and a blow-off cock, Fig. 1731 McAvity's No. 40 Catalogue. Water connection to be made through brass feed cock, with handle attached.

(This contractor shall construct a pit for boiler, with walls and floor of concrete, six inches thick, and a 1″ finish of equal parts cement and sand, trowelled smooth. Under the floor shall be a 4″ layer of broken stone, brick or gravel. The depth of the pit shall be such as may be proper for the boiler selected.)

Smoke Pipe.—Boiler shall be connected to chimney with gas-tight smoke pipe made of (No. .....) black iron, free from abrupt bends and with gradual pitch upwards towards chimney. It must not project beyond inside surface of chimney wall, but must be securely fastened to both boiler and chimney. A close-fitting, easy-moving, hand damper must be provided in same, and when two or more boilers are installed in battery, a similar damper must also be installed in the connection to each boiler. A balanced check damper equal in area to the smoke pipe must be installed in smoke pipe between chimney and hand damper.

Vapour Attachments.—Pressure and temperature to be controlled by means of a positive damper motor, which shall operate the drafts and check damper on boiler, controlling the pressure on same between variable limits of zero and 18 ounces. These attachments and the apparatus for venting the air from the system to be of the type as manufactured by (.....), and to be installed according to the manufacturers' instructions.

Manufacturers shall guarantee this apparatus to be positive in action and free from all defects, and shall furnish, through the contractor, complete instructions for the operation of these attachments.

Air Relief Eliminator.—All dry returns to be joined together into a stand pipe at least 24″ above water line of boiler. Contractor to furnish and install on top of stand pipe an air relief eliminator of (.....) make, and of suitable capacity to relieve all air from the system. Eliminator valves to discharge into atmosphere in basement, and have no connection to chimney.

Mains and Risers.—Steam mains and branches to be run as shown on plans and of ample size to handle all risers and radiators attached to the system, and to grade in direction of flow of steam ½″ in ten feet. The ends of steam mains to join below waterline and enter return header of boiler. The ends of steam mains to be vented into dry returns through a thermostatic air line valve. Lateral branches or spring pieces to risers or radiators to be taken off top of main at 45°, and to be one size larger than riser or pipe which they supply, and to have a good pitch toward steam main.

NOTE.—Courtesy of Specification Data, except Catalogue references.

VAPOUR STEAM HEATING—Continued

Return Piping.—The returns (dry) to be run at ceiling of basement, starting as high as possible to permit branches from return risers to enter same by 45° on top. Returns to be graded in direction of flow with fall of 1″ in ten feet toward the boiler and to be free of sags or pockets. Returns to be connected independently from steam main drip to return header at rear or side of boiler.

Risers.—All risers to be run (concealed in places provided) or (open) and all reductions in riser sizes to be made below the floor line upon which rests the radiator to be connected.

Radiator Valves.—Each radiator to be controlled by a "World" Indexed Control Plate 3291 graduated inlet valve, nickel plated, and to be connected at the top of hot-water type radiators.

Radiator Traps.—A "World" Automatic Plate 3281 radiator trap to be connected to the return outlet from each radiator, said outlet to be at the low point of radiator and always at end opposite steam inlet. This trap shall connect each radiator with the return pipe and shall pass air and water of condensation and close against steam.

Condensation Return Pump —(On systems larger than 6000 sq. ft., or where returns are below waterline of boiler, this is a convenient and positive means of handling.) (Not necessary on smaller installations.)

An approved condensation centrifugal boiler return pump, direct connected to electric motor, using (D.C.) or (A.C.) current, (.....) volts, (if A.C.) (.....) cycle, (.....) phase, complete with receiver and automatic cut-in and cut-out switch, to be supplied and mounted on suitable concrete foundation in boiler-room, at such elevation that all dry returns can grade down toward and discharge into the top of the receiver. Vent connection to relieve air from system to be provided out of top of receiver.

Pump to be of such size and capacity that it will handle the maximum condensation from the system against a maximum steam pressure of 10 pounds on the boiler; when operating not to exceed 20% of the time.

Returns to be by-passed around pump with drain connection and with valved connection to return header of boiler, so that system may be operated when pump is cut out. Discharge from pump to be full size into return header of boiler, with gate and check valve in same.

Radiation.—All radiation to be installed (as shown on plans) or (as per schedule): There shall be a total of (.....) square feet, of plain pattern, hot water type direct radiation of (kind) make or other approved.

Radiators to be tapped top and bottom, opposite ends. The bottom or return connection to be eccentric ½″ tapping. Air valve tappings in radiators to be plugged.

Pipe and Fittings.—All pipes shall be best quality of wrought iron of standard weight and thickness, smooth inside, free from imperfections and true to shape. All threads shall be clean cut, straight and true. All fittings to be of the best heavy gray iron, with taper threads and heavy beaded. Ends of pipes to be reamed to remove burrs and all joints to be made up tight iron to iron.

Flanges and Unions.—At proper points on mains, branches and return mains shall be located right and left couplings or "World" flange unions, so that pipes may be disconnected without injury to the balance of the system. Coupling may be used on pipe up to 2″; all larger sizes of pipes, Plate (3023) "World", flange unions to be used. Screwed Unions to be "World" Bronze to Iron, McAvity's Catalogue, Plate (3123).

Hangers.—All piping to be supported at intervals not exceeding 10 feet, by approved adjustable pipe hangers.

Floor Plates.—Where pipes pass through floors, ceilings or partitions use neat cast iron, nickel plated floor and ceiling plates.

Test.—Concealed riser to be capped and tested with at least 15 pounds water pressure and made tight. When completed system to be tested in presence of architect to his satisfaction.

Covering.—All steam mains and spring pieces to be covered with (asbestos) (magnesia) sectional covering, with canvas cover, and secured by brass bands. Fittings in steam main covered with plastic asbestos cement, with canvas cover and bands.

Boiler to be covered with "Excelo" plastic asbestos cement, carefully wired on 2″ thick, with canvas cover carefully pasted down.

NOTE.—Courtesy of Specification Data, except Catalogue references.

VAPOUR STEAM HEATING—Continued

Painting.—All radiators and exposed pipes to be painted two coats of "Excelo" Bronzing Liquid as directed by architect. Boiler fronts and exposed iron parts to be painted one coat black asphaltum paint.

Cleaning.—After system has been in operation for several days, clean boiler thoroughly by boiling several hours, with safety valve opening used to freely vent and discharge water at top, while admitting cold water at bottom.

Guarantee.—Contractor shall guarantee system for one year against defects or improper workmanship and to circulate steam thoroughly throughout system without noise, and without air binding, on not to exceed 1 pound pressure on the boiler.

Vapour System—Supply Piping										Return Piping			
Pipe Size	Allowance for Elbows in Feet of Pipe	Allowance for Valves in Feet of Pipe	Vertical Risers Not over 100 Feet Long from Main to Farthest Radiator	Horizontal Pipe Connection to Main for 100 Feet Risers	Pipe capacities in square feet of direct cast iron radiation given for each length of Supply Piping in Feet from Source of Supply to Farthest Radiator. (Allowance for elbows and valves must be added to measured distance.) The last reduction on steam mains shall not be less than 3" diameter on systems larger than 2,300 sq. ft.					Pipe Size	Return Risers	Return Mains	Steam Main Drip
					200	400	600	800	1,000				
¾"	2	2	40	...	.....	.....	.....	.....	.....	¾"	300	.....	.....
1 "	2	3	100	40	.....	.....	.....	.....	.....	1 "	600	400	400
1¼"	2	3	180	100	.....	.....	.....	.....	.....	1¼"	...	1,100	700
1½"	3	5	300	180	.....	.....	.....	.....	.....	1½"	...	2,300	1,600
2 "	5	7	600	300	360	320	260	230	200	2 "	...	4,000	2,400
2½"	6	9	...	600	700	600	480	420	370	2½"	...	6,700	4,100
3 "	9	14	...	...	1,100	950	780	670	600	3 "	...	12,100	7,200
3½"	10	15	...	...	1,600	1,400	1,200	1,000	900	3½"	...	20,200	12,000
4 "	14	21	...	...	2,300	2,000	1,700	1,400	1,250	4 "	...	27,000	16,000
5 "	19	28	...	...	4,100	3,600	2,900	2,500	2,300	5 "	...	48,000	29,000
6 "	24	36	...	...	6,500	5,700	4,700	4.000	3,600	6 "	...	.....	48,000
7 "	29	44	...	...	9,800	8,500	6,900	6,000	5,400	...	...	.....	.....
8 "	35	53	...	...	13,800	12,000	9,800	8,500	7,500	...	...	.....	.....
10 "	47	70	...	...	24,500	21,200	17,300	15,000	13,500	...	...	.....	.....
12 "	59	88	...	...	39,000	33,600	27,500	23,800	21,300	...	...	.....	.....

VACUUM STEAM HEATING

These specifications and accompanying plans are intended to provide for all labour and material necessary to furnish and install a complete vacuum system of steam heating of the character and extent as hereinafter specified.

Scope of Work.—The plans and these specifications contemplate furnishing and installing boilers, boiler setting, breeching, pressure reducing valve, oil separator, cast iron radiators, steam and return mains, steam valves, radiator valves, radiator traps, boiler feed pump and receiver, vacuum pump, pump governor, receiving tank and everything shown or reasonably implied to make the system complete.

Boilers.—Contractor shall furnish and erect' where shown on plans, (two) Vulcan horizontal return tubular boilers, (48") in diameter by (14') long, and containing (32) (3½") tubes. This boiler to be applicable to a working pressure of (....) pounds and shall be tested thoroughly to a hydrostatic pressure of (....) pounds per square inch at the factory. These boilers to have a normal rating of (.....) horse power, and to be constructed in strict accordance with the by-laws regulating the construction and inspection of boilers in the province in which they are to be installed, and to be provided with valves in steam and return lines, as provided by provincial regulations.

NOTE.—Courtesy of Specification Data, except Catalogue references.

VACUUM STEAM HEATING—Continued

Boilers are to be accompanied by certificate of inspection, same to be furnished by the boiler manufacturers.

The heating contractor shall do all excavating, concrete and brick work necessary for the boiler setting. The walls of the setting to be placed on suitable foundation of concrete (12″) deep. The walls are to be constructed in accordance with the manufacturers' boiler setting plan. The furnace and bridge wall to be faced with No. 1 fire brick, laid in fire clay mortar from two courses below the grates. Boiler setting to be complete in all its parts, having through rods and buck-stays of suitable construction for the support of the brick work.

Furnish cast iron flush fronts of neat design with double folding doors, to swing horizontally, opening to tubes. Each shall have two fire doors and one ash pit door to lift. The fire doors shall have perforated baffle plates to door and fitted with damper.

Provide a heavy cast iron box, arch plate and dead plate, and all other casting or iron work that may be required for setting the boiler in the most complete and substantial manner.

The boilers are to be complete with the usual valves, gauges, blow-off cocks, "World" as illustrated in McAvity's No. 40 Catalogue, an approved make of rocking grate bars, and a complete set of firing tools consisting of poker, slice bar, hoe, one No. 6 steel scoop, flue cleaner with double-jointed handle, and one steam flue blower provided with 20 feet of steam hose

Water supply to be connected to brass feed cocks, with handles attached, as Illustrated in McAvity's. No. 40 Catalogue.

Boilers must be properly connected and so valved that either may be operated independently of the other The heating contractor will connect boilers to the heating system and do all work in accordance with the plans in connection with the proper installation as above specified.

Smoke Breeching.—Furnish and install breeching of the size and shape indicated, to be made of (....) gauge steel plate and connected to chimney as indicated on the plans. Provide a (14) x (18″) clean-out door, to be located in the end of breeching. Furnish dampers in connection to each boiler, together with chain for operating same from the boiler room floor. Breeching to have a cross sectional area of at least (.....) square inches. Breeching to be pitched up from boiler to chimney. Where necessary to make bends, it is to be done by four-piece elbows.

Blow-off Tank.—Furnish and place in boiler room, in the position as shown on plans, or where directed by architect one cast iron blow-off tank, of (.....) in diameter by (.....) deep. Blow-off tank to be provided with the necessary inlet and outlet openings. Vent pipe leading from tank to be (2″) and extend out through roof. Cast iron cover to be provided with clean-out opening and necessary bolts to make the tank absolutely water and air tight. Tank to be connected and discharged into sewer (at some point in boiler room).

Pressure Reducing Valve.—Heating contractor shall furnish and install, where shown on plans, (one) "World" pressure reducing valve, as Fig. ( ) Illustrated in McAvity's No. 40 Catalogue. Reducing valve to be properly valved and by-passed, and with the tube connecting the diaphragm connected into the steam main at least six feet from the pressure reducing valve on the low-pressure side. Connection to be made on either side or top of steam main, but not on the bottom.

Vacuum Pump.—Furnish and install, where shown on plans, one (size) (kind) vacuum pump, of approved make, of suitable size to handle, (.....) square feet, of direct radiation, or equivalent. Discharge from pump to be into receiving tank. Pump to have tobin bronze piston rod, brass lining in water end and brass fittings. Contractor shall furnish concrete foundation for pump, same to be not less than 10″ high.

Vacuum Pump Governor.—Install on steam supply pipe to vacuum pump, one (name) vacuum pump governor, of same size as steam connection to pump. Connect diaphragm chamber of governor to return mains at least 20 feet from the suction strainer. Install a by-pass on the governor, properly valved, so that it may be cut out for adjustment or repair without interfering with the operation of the pump.

Receiving Tank.—Heating contractor shall furnish and install, where shown on plans, one (.....) x (.....) steel receiving tank. Shell of tank to be made of (3-16″) steel, and heads of (¼″) steel. Tank to be provided with tappings for the discharge of vacuum pump, and the supply to boiler feed pump and receiver, also a tapping for draw-off cock and a (2″) opening in top for vent to atmosphere. Tank to be placed at such an elevation that the water will flow by gravity from it to the automatic receiver of boiler feed pump.

NOTE.—Courtesy of Specification Data, except Catalogue references.

VACUUM STEAM HEATING—Continued

Back Pressure Valve.—Where shown on plans and by tee connection between oil separator and low pressure steam main, in the line carrying exhaust steam from the pumps and other steam units, install one (size) Fig. ( ) McAvity's No. 40 Catalogue, back pressure valve. Connect to vent from blow-off tank.

Boiler Feed Pump and Receiver.—Contractor will furnish and install in boiler room, where indicated on plans, one (.....) x (.....) x (.....) boiler feed pump with automatic receiver, and of approved make. Pump to be brass fitted with tobin bronze piston rod, brass valves, valve seats, stem, spring, brass bushed, stuffing box, glands, etc., and brass lining in water end. Contractor will furnish heavy concrete foundation for pump and receiver not less than 10″ in height.

Lubricators.—Vacuum pump to be equipped with (size) pint lubricator, of the double connection type, Plate 2742 McAvity's No. 45 Catalogue, and the boiler feed pump to be equipped with Plate 2742 McAvity's No. 45 Catalogue, pint lubricator, of double connection type. Both lubricators to be sight feed.

Oil Separator.—Furnish and install in the exhaust pipe from pump and other steam units and as shown on plans (one) (size) oil separator. Fig. 2753 McAvity's No. 40 Catalogue. This separator to be dripped to sewer through an approved grease trap.

Suction Strainer.—Contractor will furnish and install in the return line near the vacuum pump one Plate 3311 McAvity's No. 45 Catalogue, suction strainer. Basket to be constructed of brass wire screen or other suitable non-corrosive material.

Gauges and Board.—At a convenient place in boiler room, or where directed by architect, install on white marble gauge board, one, Plate 2691 McAvity's No. 45 Catalogue, gauge for boiler pressure, one, Plate 2691 McAvity's No. 45 Catalogue, gauge for low-pressure heating mains, and one, Plate 2692 McAvity's No. 45 Catalogue, vacuum gauge. Vacuum gauge to be connected into vacuum return main, and the pressure gauges into their respective high and low pressure steam mains. Gauges shall be properly installed on board with water seal loop on pressure gauges. Gauges to have nickel plated rim and iron case and to be first class in every particular.

Valves.—Valves to be of ("World") or equal manufacture. All valves (2″) and under to be brass valves with iron wheels; over (2″) to be iron body with brass steam and trimmings and iron wheels. All valves used in low-pressure piping, either supply or return, must be "World" gate valves. Any globe or angle valves used must have Copper Asbestos Discs as Plate 3131, McAvity's No. 45 Catalogue.

Check Valves.—Where it is necessary to use check valves, best quality horizontal swinging checks must be used. "McShane" Brass Fig. ( ) Iron Body Fig. ( ) as shown in McAvity's No. 40 Catalogue.

Radiator Valves.—Contractor shall furnish and install (state if at top or bottom) of all radiators (hot water pattern) ("World") valves W.W. Q.O. Plate ( ) McAvity's No. 45 Catalogue. Valves shall have nickel plated finish and nipple and union connections to radiators.

Sizes to be according to the following schedule:—

½″— up to 40 square feet.
¾″— 41 to 100 square feet.
1″—101 to 180 square feet.

By-Passes.—Reducing pressure valve and vacuum pump governor shall be equipped with by-passes with cut out valve installed therein, making it possible to cut out these various specialties for repairs and yet keep the plant in operation.

Pipes and Fittings.—All pipes to be made of the best grade wrought iron and of size shown on plans. They must be of standard thickness and have full cut threads. Pipes 1¼″ or smaller to be butt welded; 1½″ or over to be lap welded. Fittings to be of tough grey cast iron, heavy beaded on all low-pressure pipes. Fittings of sizes 4″ and larger in the high-pressure header and connections from the boiler shall be flanged fittings. Castings to be smooth, of uniform thickness, entirely free from holes, and cut with full tapering thread. All joints must be reamed and freed from burrs and made up iron to iron. Before being installed, all pipes are to be stood on end and pounded to remove all scale and dirt.

NOTE.—Courtesy of Specification Data, except Catalogue references.

VACUUM STEAM HEATING—Continued

Mains.—Steam connections from boiler to be (size) to be provided with (size) McAvity's "World" angle valve, with Victor Copper Asbestos Discs and these connect into a (.....) high-pressure header, in which due allowance must be made to take care of expansion and contraction. Steam connections from boiler to enter high-pressure steam header on the top and all steam connections taken from the high-pressure steam header to be taken off of top. One high-pressure drip connection is to be taken from the high-pressure header, through approved drip trap. Low-pressure steam mains to be run as indicated on plans, and graded down in direction of flow of steam, ½" in ten feet. Returns to be graded down towards the vacuum pump, ½" in ten feet.

Expansion of Mains.—Due allowance must be made for expansion and contraction of all supply mains. Where, in the opinion of the heating contractor, it is necessary, double-swing joints shall be installed to take up expansion in risers, so that no pockets will be formed by extreme expansion.

Hangers.—All pipes which run near ceiling shall be suspended from ceiling through hangers of approved make, spaced not more than ten feet apart in a neat and substantial manner Both steam and return mains must be free from sags or pockets.

Risers.—All risers to be supplied by spring pieces taken off the top of steam mains. Connections from top of main to be made with 45° elbows. Horizontal spring pieces to risers must be one size larger than the riser it supplies, or, if over five feet long, two sizes larger, unless otherwise shown on plans. No riser, either supply or return, to be less than ¾" pipe.

Risers to be run concealed in partitions or in the open, according to the desire of the architect, providing architect gives due and timely notice to the heating contractor when building is being erected, and will provide a place for said pipes when concealed.

Concealed risers must be capped and plugged and a water pressure of at least 15 pounds applied, and all leaks made tight when pipes are installed.

Risers outside of partitions must be plumb and close to the wall. All openings through ceilings and floors must be at least ¾" larger than the outside diameter of the pipe and to be isolated from all wood by a standard nickel plated ceiling and floor plate which will meet the requirements of the law in the province in which the system is installed.

Drips.—Drip ends and all rises of steam mains, where indicated, through (kind) drip trap. If of necessity any change of piping is made that will cause any pocket or sag in piping, provision must be made for dripping same through approved drip trap.

Radiation.—Contractor shall place all radiators as shown (on plans) or (in these specifications). Any change as to the amount or position of radiation must be referred to the architect for approval.

There shall be a total of (....) square feet of direct radiation, consisting of an approved pattern of "Vulcan" hot water cast iron floor and wall radiation, as indicated on plans. If radiators are placed under windows, care must be exercised that no radiators extend above the window sills. All air vent openings to be plugged. Radiators all to be tapped top and bottom, opposite ends, as per schedule under "Radiator Valves" and "Radiator Traps."

Radiator Traps.—Heating contractor shall furnish and install on the return end of each radiator, and at the low point in the steam mains and risers, a Plate 3281, World Automatic McAvity's No. 45 Catalogue, thermostatic trap the thermostatic member of which is in the steam chamber of the trap, and subject to the conditions existing in the radiator. Trap to have valve and valve seat that will allow the free passage of sand, scale and other foreign matter. When these traps are applied to the return end of the radiator, the outlet of radiators are to be bushed to ½" using an eccentric bushing, unless radiators are of a pattern with the hub placed to drain the radiator, or the radiator tapped solid, in which event the tapping should be placed as low as possible.

Return Mains.—All vertical return pipes from the radiator trap to be ½" unless otherwise shown on plans. No horizontal pipe from the radiator traps or return risers to be less than ¾" pipe. All connections from return risers to be into the top of the return main. Returns shall be free from sags or pockets, and shall have a pitch of ½" in ten feet toward the vacuum pump. When returns are below vacuum pump, or are to be raised, it must be made by "lift fitting." A gradual raise to the pump will not be permitted.

Where returns are placed below floors, they are to be run in a reinforced trench, with ¼" steel plate cover, set in concrete. Pipes in trench to be provided with suitable supports at intervals of not less than ten feet.

NOTE—Courtesy of Specification Data, except Catalogue references.

VACUUM STEAM HEATING—Continued

Testing.—Contractor shall thoroughly test the apparatus in the presence of the owner and architect. All low pressure piping shall be subjected to a test of ten pounds without displacing or straining any portion of it or causing it to leak. All leaks in high or low pressure piping or in valves shall be made tight before acceptance.

Painting.—All uncovered pipe, boiler front, smoke breeching, exposed iron in boiler fitting, to be painted one coat of graphite mineral paint. Radiators and risers to be painted a colour to correspond with the interior finish of the room.

Cleaning.—After the whole system has been in operation for two weeks, the contractor will go over it carefully, cleaning out all accumulation of scale and dirt and leaving the whole system in perfect running order.

Covering.—All steam mains and spring pieces are to be covered with "Excelo" sectional pipe covering shown in McAvity's No. 45 Catalogue, and at least 1″ thick. Returns to be left uncovered. Fittings to be plastered flush and covered with asbestos fire felt cement, and covered with duck neatly pasted down. Covering to be painted with two coats of fire-proof water paint of colour selected.

In General.—The heating contractor must have a competent superintendent constantly on the grounds to superintend the installation of the work. When the work is completed, all parts pertaining to plant must be adjusted. Attention must be paid by contractor to the finish and neatness of the work in all details. Rough work of any kind will not be accepted.

Any dirt, rubbish, or grease on walls, floors or fixtures, for which the heating contractor is responsible, shall be removed by him.

Heating contractor must exercise care in installing pipe and fittings and see that they are free from paint, grease or other debris. All temporary openings in piping to be protected in such a manner that dirt cannot get into the system.

Guarantee.—The heating contractor shall guarantee the system to circulate the steam through every radiator without noise, and shall guarantee the apparatus to work satisfactorily for one year, and should any defects appear during that time, he shall remedy it without cost to the owner. The term "defect" as above used shall not be construed to embrace such imperfections as would naturally follow improper treatment, accident, or the wear and tear of use.

PIPE SIZES, VACUUM SYSTEM

Vacuum System—Supply Piping												Return Piping		
Pipe Size	Allowance for Elbows in Feet of Pipe	Allowance for Valves in Feet of Pipe	Vertical Risers Not Over 100 Feet Long from Main to Farthest Radiator	Horizontal Pipe Connections to Main for 100 Feet Risers	Pipe capacities in square feet of direct cast iron radiation given for each length of Supply Piping in Feet, from Source of Supply to Farthest Radiator. (Allowance for elbows and valves must be added to measured distance).							Vertical Pipe Size	Horizontal Pipe Size	Capacity Sq. Ft. Radiation
					100	200	400	600	1,000	1,500	2,000			
¾″	2	2	50	...	65	50	40	35	30	25	20	½″	1 ″	20
1 ″	2	3	100	50	120	100	80	70	60	50	45	½″	1 ″	45
1¼″	2	3	180	100	240	190	150	130	110	90	80	½″	1 ″	80
1½″	3	5	300	180	390	310	250	210	180	150	136	¾″	1 ″	136
2 ″	5	7	650	300	870	670	540	460	390	330	290	¾″	1 ″	290
2½″	6	9	1,200	650	1,690	1,250	1,000	870	740	620	550	¾″	1 ″	550
3 ″	9	14	2,000	1,200	2,590	2,040	1,650	1,430	1,210	1,020	900	¾″	1 ″	900
3½″	10	15	3,000	2,000	3,900	3,100	2,500	2,190	1,850	1,570	1,390	1 ″	1 ″	1,390
4 ″	14	21	4,400	3,000	5,480	4,390	3,530	3,120	2,630	2,230	1,960	1 ″	1¼″	1,960
5 ″	19	28	....	4,100	9,720	7,900	6,460	5,680	4,810	4,110	3,630	1¼″	1¼″	2,710
6 ″	24	36	.....	.....	.....	12,870	10,680	9,390	7,980	6,720	5,710	1½″	1½″	3,630
7 ″	29	41	.....	.....	.....	19,090	15,930	14,120	12,040	10,290	9,130	...	1½″	5,710
8 ″	35	53	.....	.....	.....	26,910	22,680	20,180	17,120	14,330	12,720	...	2 ″	9,130
9 ″	41	61	.....	.....	.....	35,580	30,170	26,920	23,150	19,790	17,380	...	2 ″	12,720
10 ″	47	70	.....	.....	.....	46,710	40,050	35,860	30,890	26,510	23,610	...	2 ″	17,380
12 ″	59	88	.....	.....	.....	73,210	63,870	57,660	49,950	43,080	38,400	...	2½″	23,610
14 ″	71	106	.....	.....	.....	.....	.....	86,400	75,430	65,310	58,290	...	2½″	38,400
15 ″	..	..	.....	.....	.....	.....	.....	.....	....	85,770	71,910	..	3 ″	58,290
....	..	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	3 ″	71,910

NOTE.—Courtesy of Specification Data, except Catalogue references.

POWER PLANT

STEAM AND EXHAUST PIPES

Steam and exhaust pipes to be of mild steel.

The steam pipe range, if short to be half an inch larger bore than the engine stop valve, if long, one inch larger.

The exhaust pipe to be not less than the same size as the exhaust branch on the engine.

All steam and exhaust pipes must be designed to drain themselves and must if possible drain in the direction of the flow of steam.

If it is not possible to carry this principle out entirely, every point where water may lodge must be provided with drain and steam trap and, if it lodges at a point where the pipes rise vertically, a drop leg must be placed at the bottom of the rise.

On no account are pipes to be put in level or rise gradually uphill, and where they change in size the bottom must be kept level.

If the boilers are below the engine the whole of the rise must be arranged at the boiler and of the range to a point from which the pipes may slope continuously to the stop valve, or, alternatively, the pipes must slope from the boilers to a separator fitted with Fig. ( ) McAvity's No. 40 Catalogue, steam trap placed as closely as possible to the engine, a vertical self-draining pipe to lead from this to the stop valve.

A drain must be fitted next to the boiler stop valve to ensure the pipes being clear of water before admitting steam pressure.

If the exhaust pipe cannot be arranged to drain automatically a drop leg with drain and steam trap should provided immediately outside the engine cylinder. If the exhaust pipe leads to a condenser it must be fitted with air cock or vacuum breaker to destroy the vacuum and prevent in the event of a stoppage, the injection water being drawn up into the cylinders.

Before coupling up the steam pipes they must be blown through with a full blast of steam to clear out the dirt and scale.

CHAIN GRATES AND MECHANICAL STOKERS

Evaporation.—The grate must be capable of evaporating full ... pounds of water from and at 212 degrees Fah. per pound of dry coal when the boiler is operated at or about its duty rating of ...Horse Power (it being understood that .... square feet of water heating surface shall constitute a horse power) and fired with .... coal containing not less than .... B.T.U. per pound of coal.

Capacity.—The grate must be capable of burning sufficient coal to develop the full rated capacity of the boiler with a draft of not less than .... inch over the fire, and full.... % in excess thereof with a draft of not less than .... inch over the fire.

Grate.—The grate to be .... wide and have .... sq. feet active grate area, the drums being .... centres.

Hopper.—The hopper to be arranged below the tube doors with hinged sides and back, so that the sides and back may be laid flat, giving ready access to the tubes.

Fire Doors.—Vertically sliding fire doors, lined with refractory bricks, to be provided. These doors to be arranged to lift by means of worms and quadrant placed in a convenient position for the firemen to adjust the depth of fuel which travels on to the grate.

The sides and top of the stoker behind the hopper to be covered in so as to prevent cold air from entering at the back of the fire door.

Grate Frames.—These frames to be constructed of cast iron properly ribbed, and provided with the necessary bolt holes and bearings for carrying the front and back drums, and to be bolted together by distance pieces and bolts, and mounted on wheels forming a continuous frame, which can be withdrawn from the boiler at will.

NOTE.—Courtesy of Specification Data, except Catalogue references.

POWER PLANT—Continued

Grate Bars.—The links forming the grate to be so constructed that they are halved together and rounded at their ends. The upper surface of the grate to remain continuous across the junction of each pair links, so that there is no opening into which ashes or clinker can fall, or an excess quantity of air gain admission.

The grate to be so constructed that it does not project under the sill plates, causing burning out of the latter, and a space of at least 1¾″ in vertical height to be arranged between the upper portion of frame side and sill plate, so that the grates may be withdrawn from the furnaces without danger of the frame or links jamming the sill plates or boiler brickwork.

Tension Gear.—The tension screws for adjusting the centres of the drums to be at the front, and not at the back.

Dumping Plates.—Dumping plates to be provided to feed the clinker on to a cut-off ash dumping valve operated from the side of the boiler.

The whole of the dumping plates and cut-off valves, etc., to be carried on two frames, one on each side of the grate, forming a self-contained piece of mechanism, which will remain in the furnace when the grate is withdrawn.

Side Air Seals.—Side channels and seals at the side of the grate between the frame and the sill plates and between the frame and side links to be provided, so that excess of air entering at these points is prevented.

Drive.—The drive to be continuous by means of machine cut gear wheels of steel running in oil in an oil tight gear box. The gears to be arranged so that not fewer than six variations in speed can be obtained.

A safety device to be included which, should any obstruction hinder the travel of the grate, will immediately throw the gear out of action.

Accessories.—The chain grate to be complete with necessary track rails and anchors, also drive shafting, bearings, and pulleys, and steam engine of ample size to run the grate.

Alternative.—Any other type of mechanical stoker to be to makers' specification, but must be in accordance with the first two clauses of the above, headed "Evaporation" and "Capacity."

STEAM ENGINES

General.—The engine to be of the (.....*) double acting inverted vertical high speed, totally enclosed type, with independent piston valves and gear for each cylinder, fitted with throttle valve governing, and provided with forced lubrication throughout.

*Any of the following types according to the conditions, and the relative first cost and economy of operation desired:—

Single Crank, Single Cylinder Simple Engine.
Two Crank, Two Cylinder Simple Engine.
Two Crank, Two Cylinder Compound Engine.
Three Crank, Three Cylinder Simple Engine.
Three Crank, Three Cylinder Compound Engine.
Three Crank, Three Cylinder Triple Expansion Engine.
Four Crank, Four Cylinder Triple Expansion Engine.

Load.—The engine to be capable of developing easily .... B.H.P., without vibration and running practically noiselessly, with initial steam pressure of .... lbs. per square inch and atmospheric exhaust. (Exhausting against .... lbs. per square inch back pressure.) (Exhausting to condenser .... inches vacuum.)

Efficiency.—The engine to have a mechanical efficiency of not less than 92%. State the steam consumption per B.H.P. at the specified load when using dry saturated steam (steam superheated .... degrees Fah.).

Cylinders.—To be entirely independent castings of hard cold blast mixture, cast on chills and finished by grinding internally. To be lagged with insulating material and covered with planished sheet steel, the whole being so arranged as to be easily removable when required.

NOTE.—Courtesy of Specification Data, except Catalogue references.

POWER PLANT—Continued

Cylinder Covers.—To be arranged so as to expose both the pistons and valve chambers on removal, and have the exposed edges beaded and polished.

Hydraulic Test.—After completion, each cylinder, with its covers in position to be subjected to a hydraulic pressure test of twice its maximum working pressure at which pressure there shall be no leakage or undue deflection.

Steam Distribution.—To be effected by means of float ring piston valves designed so as to avoid leakage through deflection of the valve chambers due to variations of temperature.

Pistons.—To be of forged mild steel, machined from solid forgings and provided with cast iron restrained packing rings having large bearing surfaces.

Piston Rods.—To be of high carbon steel, with the attachment to the crossheads allowing of the relative positions of the rods and crossheads being adjusted when required.

Crossheads.—To be of forged high carbon steel, of the open-fronted type, with large bearings and adjustable cast iron slippers.

Connecting Rods.—To be of forged mild steel, machined and polished all over, and fitted with adjustable phosphor bronze steps at each end, the adjustment being made on liners which may be removed, after slackening the bolts, without the necessity of removing the steps from the rod. The liners to be provided with safety pegs to prevent possibility of coming adrift whilst running.

Eccentrics and Rods.—To be of cast iron in one piece, secured by hardened steel dies, and fitted with adjustable straps, and forged mild steel eccentric rods, machined and polished.

Valve Spindle Joints. To be of mild steel, with hard steel pins and phosphor bronze bushings.

Valve Spindles.—To be of acid high carbon steel, with adjustment for relative position on the valve spindle joints.

Crankshaft.—To be of open hearth steel, machined from a solid forging.

Main Bearings.—To be of solid "World" phosphor bronze, arranged for easy removal without the necessity of taking out the shaft or motion work.

Motion Casing and Bedplate.—To be of cast iron of ample strength, well ribbed internally, and accurately machined and fitted with large doors.

Slides.—To be of the open-fronted type, formed by separate castings let in from the back of the motion casing, the whole of the motion work being in full view when the doors are removed.

Packing Chambers.—To be placed between the motion casing and cylinders, provided with the necessary piston rod and valve spindle stuffing boxes and metallic packing, to which easy access is given, sufficiently long to prevent any portion of the piston rods entering both the steam and oil packing.

Lubrication.—To be effected by oil under pressure supplied by a suitable pump, and distributed by copper pipes and suitable passages to all bearings in the engine. A "World" pressure regulating valve to be provided by means of which the oil pressure may be varied at will and also a convenient oil strainer, removable whilst the engine is at work.

Governor.—To be of the crankshaft type, acting on the steam supply through a balanced throttle valve. To govern within 2½% of the mean speed throughout the full range of load, and capable of holding the speed within 5% of mean on the total load being suddenly thrown off. To be provided with a suitable attachment enabling the speed of the engine to be varied 10% whilst running.

Construction.—The whole of the materials to be the best of their class, and all parts, as far as possible, to be constructed to standard jigs and micrometer measurements, so as to be interchangeable with similar parts of engine of the same class.

Finish.—All motion work and covers, as far as possible, to be machined and polished, and other external surfaces filled, smoothed and finished with three coats of paint and two coats of hard-drying varnish.

Fittings.—The following fittings to be supplied with the engine:

Fig.	Stop valve,	Fig.	Drain pipes,	Fig.	Oil regulator,	Fig.	Rod packings.
Fig.	Relief valves,	Fig.	Oil strainer,	Fig.	Oil drain cock,	Fig.	Packings,
Fig.	Drain cocks,	Fig.	Oil gauge,	Fig.	Metallic piston,	Fig.	Spanners.

NOTE.—Courtesy of Specification Data, except Catalogue references.

USEFUL INFORMATIONS

Processes and Recipes

Aluminum Solvent. Melt down block tin 8 lbs., 10 per cent. phosphor tin 4 lbs., spelter 2 lbs., lead 1 lb., and run into strips. Clean off all dirt and grease with benzine and apply the solder with a copper bit. When the molten solder covers the metal scratch through the solder with a wire brush by which means the oxide is broken and taken up. Manipulate quickly.

Annealing Cast Iron. To anneal cast iron, heat with a slow charcoal fire to dull red heat, then cover it over about two inches with fine charcoal, then with ashes let it lie until cold. Hard cast iron can be softened enough in this way to be filed or drilled.

A Solvent for Rust on Iron Objects. It is often very difficult and sometimes impossible to remove rust from articles made of iron. Those which are most thickly coated are most easily cleaned by being immersed in a solution, nearly saturated, of chloride of tin. The length of time they remain in this bath is determined by the thickness of the coating of rust. Generally twelve to twenty-four hours is long enough. The solution ought not to contain a great excess of acid, if the iron itself be not attacked. On taking them from the bath the articles are rinsed, first in water, then in ammonia, and quickly dried. The iron, when thus treated, has the appearance of dull silver. A simple polishing gives it its normal appearance.

To Remove Rust from Steel. Brush the rusted steel with a paste composed of ½ oz. cyanide potassium, ½ oz. castile soap, 1 oz. whiting, and enough water to make a paste. Then wash the steel in a solution of one-half ounce cyanide of potassium in two ounces water.

Rust on Nickeled Objects. A good recipe for the removal of rust from nickeled objects is the following:—Smear the rusted surface with grease, and after a few days rub with a rag soaked in ammonia. If some spots resist, pour carefully on a little dilute of chlorhydric acid; wipe off immediately, wash with water, and when the surface is dry, apply rottenstone.

To Keep Machinery from Rusting. Take 1 ounce of camphor; dissolve it in 1 lb. melted lard; take off the scum, and mix in as much fine black lead as will give it iron color. Clean the machinery and smear it with this mixture. After twenty-four hours, rub clean with a soft linen cloth. It will keep clean for months under ordinary circumstances.

Case Hardening Malleable Castings. Raise the casting to a cherry red, and manipulate it in crushed cyanide of potassium. Care must be taken not to inhale the fumes from the chemical.

Case-Hardening Wrought Iron. Crush and mix 3 parts (by weight) of yellow prussiate of potash and 1 part of sal-ammoniac. Heat the iron to a cherry red, and roll around in the mixture, or sprinkle with it as convenient.

Fireproof Cement. Iron filings 100 parts, lime 25 parts, salt 5 parts. Mix into a paste with vinegar. Allow the cement to dry naturally before heating.

Glass and Metal (to Cement). Mix equal parts of gold size and copal varnish, and add equal parts of dry red and white lead until the whole is of the consistency of cream. Clean both surfaces and roughen the metal with coarse emery cloth. Apply the cement thinly, and allow it to dry slowly.

How to Write Inscriptions on Metals. Take four ounces of nitric acid and one ounce of muriatic acid; mix and shake well together, and it is ready for use. Then cover your metal surface to be engraved with besswax or soap; write your inscription plainly in the wax clear to the metal; then apply the mixed acids with a feather or stick of wood, carefully filling each letter; let it remain from five to ten minutes, according to appearance desired; then throw on water, which stops the etching process, and the inscription is completed.

Iron Cement for Tank Joints, Etc. Quick setting: Take 40 lbs. of clean sifted iron borings and mix with 1 lb. flour of sulphur and 8 oz. of sal-ammoniac. Slow-setting: 100 lbs. iron borings, 1 lb. sal-ammoniac, and 8 oz. of sulphur. Moisten in each case with water to form a stiff paste, and calk carefully. Tanks used for oils should not be jointed with rust joints.

Ironwork Cement. A cement suitable for fixing railings, balusters, and other ironwork where lead cannot be used may be made by mixing 1 part borax with 6 parts white lead and 6 parts of sulphur. Mix to a thick paste with sulphuric acid, and calk into the joints.

USEFUL INFORMATIONS

Processes and Recipes — Continued

Lubricant for Drilling and Machine Tools. To 5 gals. water add 8 oz. sal-soda, 1 pint lard oil, 1 lb. soft soap. Stir the ingredients well in and boil for thirty minutes.

Prevention of Rusting-in of Screws. The screws in machines exposed to heat and moist air soon rust-in, even if oil is used, which makes the taking apart of a machine a difficult task. By dipping the screws before putting them in place in a thin paste of graphite and oil they can be removed without difficulty, even after several years.

To Harden Cast Iron. Many times it is very convenient to make an article of cast iron that needs to be finished, and which should be very hard. Cast iron can be hardened as easily as steel, and to such a degree of hardness that a file will not touch it. Take ½ pint of vitriol, 1 peck of common salt, ½ lb. saltpetre, 2 lbs. of alum, ¼ lb. prussic potash, ¼ lb. cyanide of potash all to be dissolved in ten gallons of soft water. Be sure that all the articles are dissolved. Heat the iron to a cherry red and dip it in the solution. If the article needs to be very hard, heat and dip the second time, and even the third time.

To Make Paint Adhere to Galvanized Iron. In painting galvanized iron, apply first a solution of ammonia water, using a whitewash brush to put it on with. Allow this to dry applying the paint, and there will be no difficulty about the paint adhering to the iron.

To Make Steel so Soft that it can be Worked like Copper. Pulverize beef bones, mix them with equal parts of loam and calves' hair, and stir the mixture into a thick paste with water. Apply a coat of this to the steel and place it in a crucible, cover this with another, fasten the two together with wire, and close the joint hermetically with clay. Then place the crucibles in the fire and heat them slowly. When taken from the fire let them cool by replacing them in ashes. On opening the crucibles the steel will be found so soft that it can be engraved like copper.

To Restore Burnt Cast Steel. Heat the article to a red heat and dust it with a mixture of 8 parts of red chromate of potassium, 4 parts of saltpetre, — each of aloes and gum-arabic, and ¼ of resin.

Paste that will not Sour. A paste that will not sour is composed of 3 qts. flour, 3 teaspooonsfuls powdered alum and ½ teaspoonful powdered blue vitriol. Mix in dry state and make in the usual way. Safe to make up a barrel of this paste at a time.

Mixing Concrete. A concrete mixture of the following proportions is recommended by engineers: To 1 barrel of Portland cement add 3 barrels of clean, sharp sand. Mix the two intimately, either manually or by a mechanical mixer. Add enough water to bring it to the proper consistency, the amount required being judged by one of experience in the work. Add 5 barrels of broken stone and intermix the whole, which is then ready for use. This is known as a " 1-3-5 mixture." The nature of the ingredients and the purpose for which the concrete is intended make the proportions variable, however.

Rule for Measuring the Capacity of a Square cistern

Multiply the length in feet by the width in feet, and multiply that by 1,728, then divide by 277.274. The quotient will be the number of gallons capacity of one foot in depth.

Rule for Measuring the Capacity of a Circular Cistern

Multiply the square of the diameter by .7854, or the square of the circumference by .07958, in order to find the area of the cistern; then multiply the area by the depth in inches, and divide the product by 277.274. The quotient will equal the number of gallons the cistern will contain.

In measuring cisterns, etc., 31½ imperial gallons are estimated to one barrel; 63 imperial gallons to one hogshead.

USEFUL INFORMATIONS

Water expands about one-tenth in bulk by freezing.

Water expands in heating from 39 deg. to 212 deg., one twenty-third or about 4 per cent in bulk.

A column of water 27.67 inches high has a pressure of one pound to the inch; approximately, it is estimated that every foot of water equals one-half pound pressure.

Multiplying the height of a column of water by .434 gives pressure in pounds.

A gallon of water (U.S.) contains 231 cubic inches.

A cubic foot of water weighs 62.312 pounds and equals 7.48 U.S. gallons.

Area of a Circle. Multiply square of its diameter by .7854.

Circumference of a Circle. Multiply its diameter by 3.1416.

Areas of Circles are to each other as the squares of their diameters.

The Area of an Ellipse. Multiply the product of the diameters by .7854.

The Perimeter of an Ellipse. Multiply the greater axis by 1.82 and the smaller axis by 1.315 and add the results.

The Area of any Triangle equals one-half the product of the base and perpendicular.

Doubling the Diameter of a pipe increases its capacity four times.

Wrought Iron Steam and Gas Pipe is reckoned by its internal diameter.

Boiler Tubes are reckoned by their external diameter.

Square Flue Linings, Tile, are reckoned, outside measurements.

Round Flue Linings, Tile, are reckoned, inside measurements.

Seven Bricks make a superficial foot in a four-inch wall and a corresponding proportion according to the thickness of the wall.

Area of Chimney should be one-seventh to one-tenth area of grate.

One Square Foot of Grate Area will average in consumption in low pressure steam boilers 3 to 5 pounds anthracite coal per hour.

One Square Foot of Grate Area will average in consumption in high pressure steam boilers 12 lbs. of anthracite coal per hour.

TABLE SHOWING THE RELATIVE AREAS OF STANDARD WROUGHT IRON, GAS, WATER, AND STEAM PIPE, FROM ⅛ TO 9 INCHES INCLUSIVE

Sizes	⅛″	¼″	3/8″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	3½″	4″	5″	6″	7″	8″	9″
⅛	1	4	9	16	36	64	81	144	256	400	576	784	1024	1600	2304	3136	4096	5184
¼	.....	1	2¼	4	9	16	25	36	64	100	144	196	256	400	576	784	1024	1296
⅜	.....	.....	1	1 7/9	4	7 1/9	11 1/9	16	28 4/9	44 4/9	64	87 1/9	113 7/9	155 5/9	256	384 4/9	455 1/9	574 5/9
½	.....	.....	.....	1	2¼	4	6¼	9	16	25	36	49	64	100	144	196	256	324
¾	.....	.....	.....	.....	1	1 7/9	2 7/9	4	7 1/9	11 1/9	16	21 7/9	28 1/9	44 4/9	64	87 1/9	113 7/9	111
1	.....	.....	.....	.....	.....	1	1 9/16	2 1/4	4	6 1/4	9	12 1/4	16	25	36	49	64	81
1¼	.....	.....	.....	.....	.....	.....	1	1 11/25	2 14/25	4	5 19/25	7 21/25	10 6/25	16	21 11/25	31 6/25	40 24/25	51 11/25
1½	.....	.....	.....	.....	.....	.....	.....	1	1 7/9	2 7/9	4	5 4/9	7 1/9	11 1/9	16	21 7/9	28 4/9	36
2	.....	.....	.....	.....	.....	.....	.....	.....	1	1 9/16	2¼	3 1/16	4	6¼	9	12¼	16	20¼
2½	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 11/25	1 24/25	2 14/25	4	5 19/25	7 21/25	10 6/25	12 24/25
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 13/49	1 7/9	2 7/9	4	5 4/9	7 1/9	9
3½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 15/49	2 5/49	2 16/49	4	5 15/49	5 33/49
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 9/16	2¼	3 1/16	4	5 1/16
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 11/25	1 24/25	2 14/25	3 6/25
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 13/36	1 7/9	2¼
7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 15/49	1 33/49
8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1 17/64

Example—To find how many ⅛″ pipes it takes to equal 1″ pipe, we find the smaller size (⅛″) in first column on the left and follow the line to the larger size at top table, and thus find that one 1″ pipe is equal to 64 ⅛″ pipes.

USEFUL INFORMATIONS

AREA AND CIRCUMFERENCE OF CIRCLES

Diam.	Area	Circumference	Diam.	Area	Circumference	Diam.	Area	Circumference	Diam.	Area	Circumference
⅛	0.0123	.3927	10	78.54	31.416	30	706.86	94.248	65	3318.3	204.204
¼	0.0491	.7854	½	86.59	32.987	31	754.76	97.389	66	3421.2	207.345
⅜	0.1104	1.1781	11	95.03	34.558	32	804.24	100.531	67	3525.6	210.487
½	0.1963	1.5708	½	103.86	36.128	33	855.30	103.673	68	3631.6	213.628
⅝	0.3067	1.9635	12	113.09	37.699	34	907.92	106.814	69	3739.2	216.770
¾	0.4417	2.3562	½	122.71	39.270	35	962.11	109.956	70	3848.4	219.911
⅞	0.6013	2.7489	13	132.73	40.841	36	1017.8	113.097	71	3959.2	223.053
1	0.7854	3.1416	½	143.13	42.412	37	1075.2	116.239	72	4071.5	226.195
⅛	0.9940	3.5343	14	153.93	43.982	38	1134.1	119.381	73	4185.3	229.336
¼	1.227	3.9270	½	165.13	45.553	39	1149.5	122.522	74	4300.8	232.478
⅜	1.484	4.3197	15	176.71	47.124	40	1256.6	125.664	75	4417.8	235.619
½	1.767	4.7124	½	188.69	48.695	41	1320.2	128.805	76	4536.4	238.761
⅝	2.073	5.1051	16	201.06	50.265	42	1385.4	131.947	77	4656.0	241.903
¾	2.405	5.4978	½	213.82	51.836	43	1452.2	135.088	78	4778.3	245.044
⅞	2.761	5.8905	17	226.98	53.407	44	1520.5	138.230	79	4901.6	248.186
2	3.141	6.2832	½	240.52	54.978	45	1590.4	141.372	80	5026.5	252.327
¼	3.976	7.0686	18	254.46	56.549	46	1661.9	144.513	81	5153.0	254.469
½	4.908	7.8540	½	268.80	58.119	47	1734.9	147.655	82	5281.0	257.611
¾	5.939	8.6394	19	283.52	59.690	48	1809.5	150.796	83	5410.5	260.752
3	7.068	9.4248	½	298.64	61.261	49	1885.7	153.938	84	5541.7	263.894
¼	8.295	10.210	20	314.16	62.832	50	1963.5	157.080	85	5674.5	267.035
½	9.621	10.996	½	330.06	64.403	51	2042.8	160.221	86	5808.8	270.177
¾	11.044	11.781	21	346.36	65.973	52	2123.7	163.363	87	5944.6	273.319
4	12.566	12.566	½	363.05	67.544	53	2206.1	166.504	88	6082.1	276.460
½	15.904	14.137	22	380.13	69.115	54	2290.2	169.646	89	6221.1	279.602
5	19.635	15.708	½	397.60	70.686	55	2375.8	172.788	90	6361.7	282.743
½	23.758	17.279	23	415.47	72.257	56	2463.0	175.929	91	6503.8	285.885
6	28.274	18.850	½	433.73	73.827	57	2551.7	179.071	92	6647.6	289.027
½	33.183	20.420	24	452.39	75.398	58	2642.0	182.212	93	6792.9	292.168
7	38.484	21.991	½	471.43	76.969	59	2733.9	185.354	94	6939.7	295.310
½	44.178	23.562	25	490.87	78.540	60	2827.4	188.496	95	7088.2	298.451
8	50.265	25.133	26	530.93	81.681	61	2922.4	191.637	96	7238.2	301.593
½	56.745	26.704	27	527.55	84.823	62	3019.0	194.779	97	7389.8	304.734
9	63.617	28.274	28	615.75	87.965	63	3117.2	197.920	98	7542.9	307.876
½	70.882	29.845	29	660.52	91.106	64	3216.9	201.062	99	7697.7	311.018

THE "McAVITY" TELEGRAPH CODE

CABLE ADDRESS: "McAVITY" ST. JOHN

We use the McAvity Telegraph Code, given below, and the A. B. & C. Code (4th, 5th Edition) exclusively.

The McAvity Code is arranged for, and applies only to goods listed in the McAvity catalogue. However, the A. B. & C. Code may be used if for any reason it should be more convenient or desirable.

"McAVITY" CODE

In the McAvity Code, phrases and other data for orders, shipments, etc., are listed under their respective headings with a code word for each, and each article illustrated in the catalogue has a code word opposite the catalogue number as shown on the following pages.

In using the code, arrange the words in such order that when translated, the corresponding phrases will express best what is wanted. For instance, in ordering goods, first select the required code word for shipment, then for quantity, then for size, then the code word for the article wanted, as follows:

"Somner, slugger, tersetto, antre."

Translated, this will mean "Ship by freight twenty-four one-half inch Standard Globe Valves (catalogue figure 151). No. 40 Catalogue.

Somner, Shout, Tena, Moncton, Tennor, Complete.

Please ship at once by rail, Four—Five and one half foot, "Royal Moncton" Baths, with three inch roll rim, complete with fittings.

LETTERS

Springing.....Referring to our letter——
Sprightless.....Referring to your letter——
Spriteful.....Please acknowledge receipt of our letter——
Spright.....Acknowledging receipt of your letter——
Spreading.....Act on our letter at once.
Spreader.....Advise us by letter.
Spread.....After receipt of your letter——
Spray.....After receipt of our letter——
Sprawl.....Answer by letter.
Sprang.....Answered your letter as soon as received.
Sprain.....Answered your letter by Telegraph as soon as received.
Spout.....We are anxiously awaiting letter in regard to——
Spouse.....As per letter——
Spotless.....Awaiting receipt of your letter——
Sporting.....Await letter.
Sportful.....Await letter mailed you to-day.
Sport.....Before receipt of your letter——
Spoonful.....Cancel instructions in letter——
Spooney.....Can hold matter open until we receive your letter.
Spoon.....Cannot carry out instructions contained in your letter.
Spook.....Cannot reply to your letter until——
Spondoid.....Cannot wait for your letter of——must act at once.
Sponging.....Can the matter be held in abeyance until you get our letter?
Sponginess.....Can you carry out instructions in our letter——?
Sponger.....Did you receive our letter——?
Spongeous.....Did you act on our letter——?
Sponge.....Do not act on our letter of——until you hear from us further.
Spoilable.....Do not understand your letter——
Spoil.....Do not understand the part of your letter of——referring to——
Spoffish.....Explain at once by letter.
Splutter.....Do you agree to our letter——?
Splurge.....Give full particulars by letter.
Split.....Have already advised you by letter with reference to——
Splinter.....Have nothing since letter——
Splint.....Have no reply to our letter——

LETTERS—Continued

Splice.....Have not received your letter——
Splendor.....Have received your letter——
Splendid.....Have you received our letter——
Splendent.....In accordance with our letter——
Spiteful.....If in accordance with our letter——
Spite.....If not in accordance with our letter——
Spiritual.....If not in accordance with your letter——
Spirituous.....Immediately on receipt of your letter——
Spiritless.....Immediately on receipt of our letter——
Spirited.....In compliance with your letter——
Spirit.....In compliance with our letter——
Spiring.....In our letter——
Spiration.....In reply to your letter——
Spirant.....In our letter——
Spiral.....Keep us informed by letter.
Spiracle.....Last letter received from you is dated——
Spinstry.....Letter containing full instructions was mailed——
Spinstress.....Letter explains everything.
Spinster.....Letter is not satisfactory.
Spinning.....Letter is satisfactory.
Spinner.....Letter is too indefinite.
Spinniker.....Letter is fully understood.
Spinless.....Letter must be here not later than——
Spindle.....Letter received, but contains no reference to——
Spinal.....Letter received will telegraph later.
Spinage.....Letter sent by special delivery.
Spin.....Letter sent by registered mail.
Spill.....Letter received too late.
Spikenard.....Letter received too late to carry out instructions.
Spikelet.....Not according to our letter——
Spike.....Not according to your letter——
Spider.....Refer to our letter——
Spicy.....Refer to your letter——
Spicose.....To what letter do you refer?
Spicknel.....Why do you not reply to enquiry in our letter——?
Spick.....Will carry out instructions contained in letter——

TELEGRAMS

Spice.....Did telegram of——reach you?
Spicate.....Telegram received.
Sphinx.....Telegram was not received.
Spheroid.....Telegram not received until——
Spherical.....Telegram delayed.
Sphere.....According to your telegram——
Sphenotic.....Do not hesitate to telegraph freely if necessary.
Sphenoid.....Do not telegraph in ciphers, use plain language.
Spew.....Hope to telegraph definitely in a few days.
Sperse.....Hope to telegraph definitely by——
Spermule.....If you accept, telegraph at once.
Spermatize.....If you do not telegraph we will conclude that——
Spermatin.....Must telegraph.
Spermatic.....Reply by telegraph in any event.
Sperm.....Telegraph as soon as possible.
Spending.....Telegraph at your expense.
Spender.....Telegraph at our expense.
Spend.....Telegraph on receipt of letter——
Spence.....Telegraph immediately.
Spelling.....Too late to attend to the matter to-day, will telegraph you to-morrow.

TELEGRAMS—Continued

Spellful.....Too late to attend to the matter to-day, will telegraph you by——
Spellable.....Unless you telegraph to the contrary——
Spell.....Will telegraph as soon as——
Speedness.....Will telegraph later.
Speedful.....Will telegraph you to-morrow.
Speed.....Call at Postal Office at——and enquire for telegram.
Speechless.....Telegraph using Western Union Service.
Speeching.....Telegram not understood, repeat in plain language.
Speechful.....Telegram not understood, repeat in McAvity Code.
Speech.....Telegram not understood, repeat in A. B. & C. Code.

ORDERS

Speculum.....Our order.
Speculate.....Your order.
Specular.....Enter our order for——
Spectrum.....Your order has been entered for——
Spectral.....After receipt of order, telegram came too late to stop shipment.
Spectator.....We have no order for——
Spectation.....We have an order for——
Spectant.....If necessary to make minimum car weight add——
Spectacle.....Cannot execute your order account of——
Speckle.....Cannot extend time for execution of order.
Speck.....Telegraph if order and specifications are not fully understood
Specious.....Can you increase order——?
Specimen.....Can you reduce order——?
Specify.....Can you hold order——?
Specific.....We are compelled to decline the order.
Species.....Consign the following to our order at——
Spearer.....Delay executing order.
Spear.....Do not execute order unless——
Speaking.....Do not execute order until——
Speaker.....Do not expect to fill your order until——
Speakable.....Enter order for——
Speak.....Entire order must be filled or else decline.
Spawn.....Execute order as quickly as possible.
Spavin.....Expect to be able to fill the order by——
Spatula.....Give preference to order——
Spattle.....Have executed all orders up to date.
Spatter.....Have filled order in accordance with instructions.
Spathose.....Have increased your order.
Spathic.....Have not received the order.
Spathal.....Have you entered our order for——?
Spasmodic.....Have you forwarded our order——?
Spasm.....When do you expect to ship our order No.——?
Spartan.....Hold orders for further instructions.
Sparseness.....Instructions came too late, order has been shipped.
Sparse.....How long will it take to execute order——?
Sparrow.....If order has not been executed——
Sparoid.....If order is accepted confirm at once.
Sparling.....In addition to previous order——
Sparkling.....Increase order of——
Sparkler.....Duplicate order of——
Sparkle.....Inform us by telegraph if you can execute the order.
Sparkage.....Inform us by telegraph if you cannot execute the order.
Sparkful.....May we increase order.
Sparker.....Must await your remittance before executing order.
Spark.....On receipt of order——
Sparger.....Order accepted with the following modifications——

ORDERS—Continued

Sparge.....Order already forwarded.
Spareless.....Order arrived too late.
Spare.....Order can be executed if——
Spanner.....Order cannot be executed unless——
Spanless.....Order contained in your letter of——will be executed.
Spanking.....Order contained in your letter of——cannot be executed.
Spanker.....Order contained in your telegram of——will be executed.
Spank.....Order contained in your telegram of——cannot be executed.
Spanish.....Will except the order subject to usual terms.
Spaniel.....Think it advisable to order——
Spaniard.....Unless you receive further order——
Spangle.....Unless you receive orders to the contrary——
Spang.....We are accepting orders——
Spandrel.....We are refusing orders——
Spancel.....Will execute no further orders until account is reduced.
Spadix.....Will you accept order——?
Spake.....We cannot accept your order——
Spaddle.....Impossible to fill your order within time specified.
Spacious.....If ordered by telegraph promptly, we will ship——
Space.....If ordered immediately——
Soverign.....Shall we enter order——?
Souvenir.....Give preference over all others for orders——
Southing.....Your order number——
Sourness.....Too late to make any alterations in order.
Sourish.....Have changed order——
Source.....Add to our order——

PRICES AND QUOTATIONS

Soup.....At what price and how soon can you furnish——?
Soundness.....At what price can you furnish——?
Soundless.....Quote us lowest price on——
Sounding.....Quote lowest price and best terms on——
Sounder.....What is the price of——?
Soundage.....Has there been any change in the price of——?
Soundable.....We are offered——
Sound.....Will you hold offer open——?
Soulless.....Will you allow us——?
Soul.....We quote.
Soudan.....A decline in price is likely to occur.
Soubrette.....A decline in price is not likely to occur.
Sorry.....An advance in price is likely to occur.
Sorrowful.....An advance in price is not likely to occur.
Sorrow.....We will accept offer.
Sorriness.....We will hold offer open until——
Sorrily.....There has been no material change in the price of——
Sorrage.....The price of——is to-day advanced to——
Sorosis.....All previous quotations are hereby withdrawn.
Soritical.....For immediate acceptance.
Sorites.....For acceptance within——
Sorghum.....At best prices.
Soreness.....At best prices not exceeding——
Sorel.....At price of last order.
Sordine.....At price of last shipment.
Sordid.....These quotations are subject to acceptance by telegraph only.
Sorcery.....These quotations are subject to acceptance by return mail.
Sorceress.....These quotations are for immediate acceptance only.
Sorcerer.....Prices have advanced, cannot accept order at your limit.
Sorbonist.....Quote lowest prices and name quantity.

PRICES AND QUOTATIONS—Continued

Sorbition.....At following prices——
Sorbite.....At what price——?
Sorphomore.....Quotation is free on board.
Sophister.....Will you hold quotation open?
Sophist.....At last quotation.
Sophical.....At present quotation.
Sophie.....At quotation given in letter——
Soothing.....Best quotation in market is——
Sooth.....Can hold quotation open until——
Soutag.....Give very lowest quotations.
Sonorous.....Not above your last quotation.
Sonority.....Our last quotation still holds good.
Sonorific.....Our quotation of——still holds good.
Sonnet.....Our quotation.
Sonless.....Present quotations are——
Sonifier.....We cannot do better.
Songstress.....We hereby withdraw all quotations and quote——
Songster.....We are quoting low prices——
Songless.....At a reduced price.
Songful.....At former prices.
Song.....At same price.
Sonata.....At what price can you duplicate order——?
Sonant.....At what price can you ship free on board——?
Sonance.....Wire acceptance confirm by letter.

SHIPMENTS

Somolent.....When can you ship——?
Somnific.....Ship immediately.
Somnial.....Ship as soon as possible.
Somner.....Ship by freight.
Somber.....Ship by rail.
Somatone.....Ship by boat.
Somatist.....Ship by rail and boat.
Somatie.....Ship by express.
Solvent.....Can you ship——?
Solvable.....When will you ship——?
Solutive.....Have you shipped——?
Solution.....If not when will you ship?
Soluble.....Hasten shipment.
Solubility.....Ship at once, we are entirely out.
Solstice.....Ship what you have ready, remainder as soon as possible.
Solomon.....If you cannot ship in the time named, advise us by wire.
Soloist.....Send tracer after shipment——
Solo.....Write shipping instructions.
Solitude.....Telegraph shipping instructions.
Solitary.....Must be shipped within——
Solitaire.....Must be here within——
Soliped.....Can we rely on prompt shipment?
Soliloqui.....Hold shipments until further advised.
Soliform.....Follow shipment with tracer.
Solidness.....For immediate shipment.
Solidity.....Have postponed shipments account——
Solidist.....Hold shipments until——
Solidism.....How long will shipment be delayed?
Solidify.....How much is ready for shipment?
Solidate.....If shipment has already been made——
Solidary.....If shipment has not already been made——
Solidare.....If there is any delay in shipment——

SHIPMENTS—Continued

Solicitude.....Future shipment.
Solicitous.....In one shipment.
Solicitor.....Largest possible shipment.
Solicitate.....Resume shipment at once.
Solicitant.....Stop after this shipment.
Solicit.....Telegraph when ready for shipment.
Solness.....Write when ready for shipment.
Solemnize.....Total shipment amounts to——
Solemnity.....To what shipment do you refer?
Solmness.....Why have you not shipped——?
Solemn.....Why have you shipped——?
Soldiering.....Will it be in time if shipped——?
Soldier.....Will it be in time if shipped to-day?
Solatium.....Will telegraph shipping instructions later.
Solarize.....What are you shipping?
Solarium.....Ship by quickest route.
Solar.....Ship whole order in one lot.
Solanum.....Consigned to our order and mail us Bill of Lading.
Solanoid.....Wanted at once. When will you ship? Answer by Telegraph.
Solanicine.....Will ship immediately.
Solander.....Will ship as soon as possible.
Soland.....Will ship by rail.
Solacious.....Will ship by express.
Solace.....We can ship——
Sojourn.....Will ship within——
Soilure.....We have shipped——
Soiless.....We have placed tracer on shipment.
Soiliness.....We will ship——
Soil.....We expect to ship——
Soggy.....We will try to ship——
Softness.....We have not shipped——
Softish.....We cannot ship——
Softening.....We have ready for shipment——
Softener.....Shall we ship what we have ready?
Soften.....We are making the following shipments——
Soffet.....Can make no shipments until——
Sobomite.....Can make further shipments——
Sodium.....First shipment will be made——
Sodden.....If for immediate shipment——
Soda.....If not for immediate shipment—
Socratif.....You may rely on prompt shipment.
Socratism.....Have shipped as instructed.
Socratic.....We are awaiting shipping instructions.
Society.....Can begin shipping at once and complete by——
Sociate.....Have resumed shipment.
Socially.....Have stopped shipment.
Socialize.....We shipped your order——
Socialist.....Shall we ship remainder without them?
Socialism.....We can ship the following from stock, remainder within——

DELIVERY

Social.....When can you deliver——?
Sociable.....If you can deliver——
Sober.....If you cannot deliver in time, advise us.
Sobbing.....To be delivered not later than——
Sob.....To be delivered not earlier than——
Soap.....If you will guarantee delivery within——
Soaking.....Will you guarantee delivery within——

DELIVERY—Continued

Soak.....Against delivery.
Snuffing.....Immediate delivery.
Snub.....Price to include delivery.
Snowing.....Price includes delivery.
Snow.....To be delivered same as before.
Snoring.....We guarantee delivery within——
Snore.....We can deliver——
Snooze.....We cannot deliver——
Snook.....We will deliver——
Snobbish.....We cannot guarantee delivery.
Snobbery.....Now ready for delivery.
Snob.....Will be ready for delivery about——

STOCK

Snipe.....How soon can you furnish——?
Sniffing.....How soon and at what price can you furnish——?
Sniff.....Have you in stock and can you furnish at once——?
Snicker.....Can you furnish within——?
Sneezing.....Can you furnish promptly——?
Sneeze.....If not how soon can you furnish?
Sneering.....If not all in stock, how many have you?
Sneerful.....We have no——in stock.
Sneer.....We have in stock and can ship at once——
Sneaking.....We can make to special order——
Sneaker.....We cannot make to special order——
Sneak.....We can furnish——
Snatching.....We can furnish at once——
Snatcher.....We cannot furnish——
Snatch.....We cannot furnish at once.
Snarling.....Can furnish within——
Snarler.....We have the following in stock——

TERMS

Snare.....Free on board cars here.
Snappish.....Delivered F. O. B. cars at——
Snapping.....Freight equalized with——
Snapper.....Less a freight allowance per hundred pounds——
Snap.....Net cash ten days.
Snake.....Net cash thirty days.
Snale.....Net cash sixty days.
Snag.....Net cash——days.
Smugless.....Sight draft with Bill of Lading attached.
Smuggle.....With satisfactory assurance, the bill will be paid when due.
Smug..... " discount if paid within five days.
Smudge..... " discount if paid within ten days.
Smothering..... " discount if paid within——days.
Smother.....Fitted up as per specifications.
Smouldering.....Terms are satisfactory.
Smoulder.....Terms are not satisfactory.
Smoking.....What are the most liberal terms——?
Smokeless.....What are the terms——?
Smoke.....Can give better terms.
Smithy.....Terms are very liberal.
Smithing.....Cannot give better terms.
Smithery.....All goods bearing the McAvity Trade Mark are unconditionally guaranteed.

TERMS—Continued

Smiling	The following are our usual terms——
Smile	Under the following terms——
Smirch	Bankers credit New York funds.
Smirk	Bankers credit Canadian funds.
Smite	Buyers pay exchange.
Smiter	Sellers pay exchange.
Smith	Buyers pay Cost, Insurance and Freight.
Smill	Sellers pay Insurance and Freight.
Smik	Free alongside steamer at——
Smii	F. O. B. Steamer St. John.
Smin	F. O. B. Steamer Montreal.
Smio	F. O. B. Steamer New York.
Smip	F. O. B. cars Montreal.
Smiq	F. O. B. cars New York.
Smiqa	F. O. B. cars Winnipeg.
Smir	Cash against documents payable in gold.
Smira	F. O. B. steamers London.
Smis	F. O. B. steamers Liverpool.
Smit	F. O. B. steamers Glasgow.

QUANTITIES

(Cents and Pieces)

	Cents		Cents		Cents
Smilax	1	Slope	35	Sketch	69
Smiddy	2	Slogan	36	Skeltering	70
Smickering	3	Slippiness	37	Skelter	71
Smerky	4	Slipper	38	Skeleton	72
Smelter	5	Slip	39	Skate	73
Smelling	6	Slink	40	Sitting	74
Smell	7	Sling	41	Sister	75
Smear	8	Slightness	42	Siren	76
Smatter	9	Slightly	43	Sinner	77
Smattering	10	Slight	44	Sinking	78
Smasher	11	Sliding	45	Sinker	79
Smash	12	Slide	46	Singster	80
Smartness	13	Slickness	47	Singular	81
Smart	14	Slick	48	Sing	82
Smacking	15	Sluth	49	Sinful	83
Smack	16	Slender	50	Sinew	84
Slyness	17	Sleigh	51	Sincere	85
Slyly	18	Sleeping	52	Simple	86
Slush	19	Sleepiness	53	Simper	87
Slur	20	Sleeper	54	Silfer	88
Slump	21	Sleep	55	Silly	89
Sluice	22	Sleekness	56	Silk	90
Sluggish	23	Sleek	57	Silicon	91
Slugger	24	Sledge	58	Silicate	92
Sluggard	25	Sledding	59	Silence	93
Sludge	26	Sled	60	Signify	94
Slubbing	27	Slander	61	Signet	95
Slubber	28	Skunk	62	Signatory	96
Slovenly	29	Skull	63	Signal	97
Sloven	30	Skirmish	64	Sightless	98
Slouching	31	Skip	65	Sight	99
Slouch	32	Skimp	66	Sickness	100
Sloping	33	Skillful	67		
Slopeness	34	Skill	68		

DOLLARS OR QUANTITIES

Sick	1
Shyness	2
Shriek	3
Shout	4
Shooting	5
Shoot	6
Shoddy	7
Shocking	8
Shock	9
Shiver	10
Shirk	11
Shining	12
Shingling	13
Shingle	14
Shine	15
Shiftless	16
Shifting	17
Shielding	18
Shield	19
Sherry	20
Sheriff	21
Sheep	22
Shedding	23
Shed	24
Sheaf	25
Shawl	26
Shaving	27
Shave	28
Shatter	29
Shark	30
Shameless	31
Shameful	32
Shallow	33
Shadowing	34
Shadow	35
Shading	36
Shackle	37
Shack	38
Shabby	39
Sexton	40
Sewing	41
Sew	42
Sever	43
Session	44
Servitude	45
Serving	46
Service	47
Serve	48
Servant	49
Servable	50
Serpentine	51
Serpent	52
Sermonize	53
Sermon	54
Serious	55
Serial	56
Serenity	57
Serene	58
Serenade	59
Seraph	60
Sequester	61
Sequent	62
Sequence	63
Sequel	64
Septillion	65
Septiform	66
Septenate	67
Separation	68
Separate	69
Sentry	70
Sentinel	71
Sentimental	72
Sentiment	73
Sentence	74
Sensuous	75
Sensitive	76
Sensible	77
Senseless	78
Sensation	79
Senior	80
Senator	81
Senate	82
Seminate	83
Seemly	84
Seeming	85
Sedition	86
Sedate	87
Sedan	88
Security	89
Secure	90
Sectarian	91
Secretion	92
Secretary	93
Secret	94
Secrecy	95
Seclusive	96
Seclusion	97
Seclude	98
Seaward	99
Seasonless	100
Seasoning	101
Seasonage	102
Seasonable	103
Searchless	104
Searcher	105
Scuttle	106
Scurvy	107
Scumbling	108
Scumble	109
Scum	110
Sculptor	111
Scullery	112
Scuff	113
Scrutiny	114
Scrutinize	115
Scrutable	116
Scrupulous	117
Scruple	118
Scrubber	119
Scrub	120
Scrotal	121
Scroll	122
Scroggy	123
Scrofula	124
Scriptory	125
Script	126
Scrimp	127
Scrimmage	128
Scribe	129
Scribbling	130
Scribble	131
Screach	132
Screamer	133
Scream	134
Scrawl	135
Scratch	136
Scraping	137
Scrap	138
Scrambling	139
Scramble	140
Scowl	141
Scout	142
Scourage	143
Scour	144
Scoundrel	145
Scottish	146
Scorpion	147
Scorodite	148
Scornful	149
Scorn	150
Scorious	151
Scorify	152
Scoriform	153
Scorifier	154
Score	155
Scorching	156
Scorch	157
Scincoid	158
Scientist	159
Scientific	160
Sciatic	161
Sciagraph	162
Schooner	163
Scholiast	164
Scholastic	165
Scholarship	166
Scholarly	167
Scholar	168
Schnapps	169
Schism	170
Schillar	171
Schemist	172
Scheming	173
Scheme	174
Schedule	175
Scepticism	176
Sceptical	177

DOLLARS OR QUANTITIES—Continued

Sceptic	178
Scentless	179
Scent	180
Scenograph	181
Scenical	182
Scenery	183
Scene	184
Scavenger	185
Scattering	186
Scatter	187
Scarring	188
Scaroid	189
Scarmage	190
Scarlet	191
Scarious	192
Scarifer	193
Scars	194
Scarcity	195
Scarce	196
Scar	197
Scapulary	198
Scapula	199
Scappler	200
Scapoliet	210
Scapiform	220
Scaphoid	225
Scanty	230
Scantness	240
Scantling	250
Scantily	260
Scant	270
Scansorial	275
Scansion	280
Scandium	290
Scandent	300
Scanalous	310
Scandalize	320
Scandal	325
Scantish	330
Scamper	340
Scamp	350
Scalping	360
Scalpel	370
Scalp	375
Scallop	380
Scallion	390
Scaling	400
Scaliness	410
Scald	420
Scaffolding	425
Scaffold	430
Scabrous	440
Scabling	450
Scabbard	460
Saucily	470
Sauce	475
Sarturnate	480
Saturn	490
Saturate	500
Satirist	600
Satirical	700
Satire	800
Satiety	900
Satiation	1,000
Satiate	1,500
Sateen	2,000
Satchel	3,000
Satanical	3,500
Satanic	4,000
Sassafras	4,500
Sashery	5,000
Sash	10,000
Sartorius	15,000
Satorial	20,000
Sarment	25,000
Sardonic	50,000

DOZENS

Sardine	1
Sarcasm	2
Saraband	3
Sappiness	4
Sappho	5
Sapphire	6
Saponin	7
Saponify	8
Sapling	9
Sapless	10
Sapient	11
Sapience	12
Sanction	13
Sanative	14
Samphire	15
Samite	16
Sambo	17
Samaritan	18
Salve	19
Salvatory	20
Salvation	21
Salvage	22
Salvable	23
Salute	24
Salutation	25
Salutary	26
Saltpetre	27
Saltness	28
Saltfish	29
Salty	30
Saltatory	31
Saltate	32
Salt	33
Saloon	34
Salol	35
Salmon	36
Sally	37
Sallowness	38
Sallow	39
Sallenders	40
Salix	41
Salivous	42
Salivate	43
Salivary	44
Salivant	45
Saliva	46
Salite	47
Salina	48
Salient	49
Salicin	50
Salary	60
Salad	70
Saintless	75
Saint	80
Sailor	90
Sailing	100
Sailable	125
Sail	150
Sagination	175
Saginate	200
Sagapenum	225
Sagamore	250
Sagacity	275
Sagacious	300
Sag	325
Saffron	350
Safety	375
Safe	400
Saddly	425
Sad	450
Sacrilege	475
Sacred	500
Sacque	600
Sackless	700
Sachem	800
Sable	900
Saber	1,000

SIZES

Testify	1/16	Tenement	4	Tearless	23
Tester	1/8	Tender	4¼	Tearful	24
Testator	3/16	Tendency	4½	Tear	25
Testate	¼	Tenant	5	Teamster	26
Testiment	5/16	Tena	5½	Teaming	27
Testacy	⅜	Tenacity	6	Team	28
Testable	7/16	Tenacious	6½	Teacher	29
Tersetto	½	Tempting	7	Teaching	30
Tertian	9/16	Temptation	7½	Teachable	31
Tersely	⅝	Temptable	8	Teach	32
Terse	11/16	Tempt	8½	Tea	33
Terry	¾	Temporize	9	Tavern	34
Terrorize	13/16	Temporary	9½	Taunting	35
Terrorism	⅞	Temporial	10	Taunt	36
Terror	15/16	Temple	10½	Taught	37
Territory	1	Templar	11	Tattoo	38
Terrify	1⅛	Tempest	11½	Tattler	39
Terrier	1¼	Temperate	12	Tasty	40
Terrible	1⅜	Temperance	13	Tasting	41
Terrapin	1½	Tempter	14	Tasteless	42
Terrace	1⅝	Telescope	15	Tasteful	43
Terminus	1¾	Telepathy	16	Taste	44
Terminate	1⅞	Teething	17	Tasteable	45
Terminal	2	Teeth	18	Tassel	46
Tenure	2¼	Teeter	19	Task	47
Tenuous	2½	Tedium	20	Tartaric	48
Tennor	3	Tedious	21	Tartar	49
Tennis	3½	Technic	22	Tartan	50

Tarrier	The size is——
Tarnish	The same size as——
Taring	The same size as last order.
Tariff	The same size as last shipment.
Target	The next size larger——
Tardy	The next size smaller.
Tapestry	Is not standard size.
Tantalize	Is standard size.
Tanning	Is not proper size.
Tannery	Is proper size.
Tangling	Largest size——
Tangie	Owing to the large size——
Tangible	Owing to the small size——
Tangent	Send full particulars as to size.
Tandem	What is the largest size——?
Tanager	What is the smallest size——?
Tameful	What is the present size in stock——?
Tameless	What is the size——?
Tame	What size do you require?
Tamable	You failed to state size.
Talma	Made only in special size.
Tally	Made only in regular size.
Tallow	Telegraph size at once.
Talking	Give size by return mail.
Talker	Special size would be best.
Talkative	Standard size would be best.
Talk	Not made in size named.
Talesmen	Can furnish in size named.
Talent	Sizes are O. K.
Taleful	Sizes are not correct.

SIZES—Continued

Taleous.....We recommend larger size.
Talc.....We recommend smaller size.
Taking.....We recommend same size as——
Take.....We do not understand about size.
Taintless.....Can furnish in any size required.
Taint.....Cannot furnish in sizes you require.
Tailoring.....Shall we substitute next size larger or smaller?
Tailoress.....Shall we substitute the nearest size?
Tailor.....Substitute size larger.
Tailless.....Substitute size smaller.
Tailing.....Substitute nearest size.
Tailage.....Do not substitute for sizes named.

PRESSURES AND DRILLING

Taglet.....What working pressure do you require——for
Tag.....Suitable for low pressure.
Taffy.....Suitable for medium pressure.
Tactics.....Suitable for high pressure.
Tackle.....Suitable for 125 lbs. pressure.
Tacking.....Suitable for 175 lbs. pressure.
Tabular.....Suitable for 200 lbs. pressure.
Table.....Suitable for——pressure.
Tabard.....Flanges to be drilled American Standard.
Tab.....Flanges to be drilled British Standard.
Unsought.....Do you require flanged or screwed?
Unsolved.....We require flanged.
Unsold.....We required screwed.
Unsoiled.....We require flanged and drilled.
Unsoftened.....We required flanged, not drilled.

DIMENSIONS

Unsodden.....Please give dimensions——
Unsmoked.....Dimensions are——
Unsmitten.....Dimensions must be adhered to.
Unslain.....Dimensions may be changed.
Unskilled.....Dimensions may be changed to what you suggest.
Unsinged.....You may alter dimensions to suit patterns.
Unshut.....Can change dimensions to suit——?
Unshorn.....Can we change dimensions to suit our patterns?
Unshook.....Standard dimensions.

RATES

Unshood.....Try to get better rates.
Unshaven.....At equal rates.
Unsharpen.....At lowest rate quoted.
Unshamed.....At what rate?
Unshaken.....Best rates we can get——
Unshaded.....Can get a rate of——
Unserved.....Cannot get a lower rate.
Unsettled.....Cannot quote a through rate.
Unsevered.....Can quote through rate.
Unsentenced.....Can you get a special rate?
Unsent.....Can you get a through rate?
Unsecured.....Carload rates.
Unsearched.....Do you expect any change in rates?

RATES—Continued

Unsealed.....Do you think rates will go higher?
Unscreened.....Do you think rates will go lower?
Unscoured.....Do you expect better rates?
Unscourched.....Get through rate to——
Unschooled.....Give rate to——
Unscathed.....Hold for lower rate.
Unsaved.....Lowest rate is——
Unsoluted.....On account of the high rate.
Unsolted.....Rates guaranteed.
Unsacked.....Rate not guaranteed.
Unrounded.....Rate is too high.
Unrotted.....Rates are likely to go higher.
Unrobbed.....Rates are likely to go lower.
Unroasted.....Rates are the lowest obtainable.
Unripened.....Telegraph lowest rates.

RECEIPTS

Unrewarded.....Acknowledge receipt at once.
Unrevoked.....We are in receipt——
Unrevenged.....Immediately on receipt.
Unrevealed.....Have you received——
Unreturned.....Just received——
Unretarded.....Have received——
Unrestored.....Write immediately upon receipt.
Unresolved.....Telegraph immediately upon receipt——
Unresisted.....Have not received.
Unreserved.....Will not receive——
Unrequired.....We will receive——
Unrepressed.....Did you receive——?

DISCOUNTS

Unrepented..... 2½
Unrepealed..... 5
Unrepaid..... 5 and 2½
Unrenewed..... 5 and 5
Unremoved..... 5, 5 and 2½
Unremitted..... 7½
Unrelieved..... 7½ and 2½
Unrelaxed..... 7½ and 5
Unrelated.....10
Unrejoiced.....10 and 2½
Unhearsed.....10 and 5
Unregretted.....10, 5 and 2½
Unregarded.....10, 5 and 5
Unrefreshed.....10 and 10
Unrefracted.....10, 10 and 2½
Unreformed.....10, 10 and 5
Unreflected.....10,10,5 and 2½
Unrefined.....12½
Unreduced.....12½ and 2½
Unredressed.....12½ and 5
Unrecruited.....12½ and 10
Unrecovered.....12½ and 12½
Unrecounted.....12½ and 15
Unprovoked.....12½ and 20
Unprovided.....15
Unprotected.....15 and 2½
Unpropped.....15 and 5
Unpromised.....15 and 10
Unprofessed.....15 and 15
Unprepared.....15 and 20
Unpraised.....16⅔
Unposted.....17½
Unpolished.....20
Unpointed.....20 and 5
Unplucked.....20 and 7½
Unplowed.....20 and 10
Unpledged.....20 and 12½
Unpleased.....20 and 15
Unplanted.....20 and 20
Unperjured.....22½
Unperformed.....25
Unpeppered.....25 and 2½
Unpenciled.....25 and 5
Unpastured.....25, 5 and 5
Unparted.....25 and 10
Unpardoned.....25 and 12½
Unpainted.....25 and 15
Unpaid.....25 and 20
Unpacked.....27½

DISCOUNTS—Continued

Unordered.....30
Unopened.....30 and 2½
Unnerved.....30 and 5
Unmoun.....30, 5 and 5
Unmourned.....30 and 10
Unmortgaged.....30 and 12½
Unmixed.....30 and 15
Unmissed.....30 and 20
Unmingled.....31½
Unminded.....32½
Unmilked.....33½
Unmelted.....33⅓ and 2½
Unmeasured.....33⅓ and 5
Unmatched.....33⅓, 5 and 5
Unmastered.....33⅓ and 10
Unmarried.....33⅓ and 12½
Unmarked.....33⅓ and 15
Unmangled.....33⅓ and 20
Unmanaged.....35
Unloved.....35 and 2½
Unlost.....35 and 5
Unlisted.....35 and 10
Unlighted.....35 and 12½
Unlifted.....35 and 15
Unlicensed.....35 and 20
Unlettered.....37½
Unleft.....40
Unlectured.....40 and 2½
Unlavished.....40 and 5
Unlashed.....40, 5 and 5
Unlarded.....40 and 10
Unladen.....40 and 12½
Unknotted.....40 and 15
Unkindled.....40 and 20
Unkept.....40½
Unjudged.....41½
Unimposed.....42
Unhung.....42½
Unhooked.....43
Unhidden.....43½
Unheeded.....44
Unhatched.....44½
Unharmed.....45
Unhandled.....45 and 2½
Unguided.....45 and 5
Unguarded.....45, 5 and 5
Ungrown.....45 and 10
Ungraven.....45 and 12½
Ungranted.....45 and 15
Ungoverned.....45 and 20
Ungloved.....45½
Unglazed.....46
Ungathered.....46½
Ungained.....47
Unfrozen.....47½
Unframed.....47½ and 2½
Unfought.....47½ and 5
Unforsaken.....47½, 5 and 5
Unforgotten.....47½ and 10
Unforgiven.....47½ and 12½
Unfortold.....47½ and 15
Unforseen.....47½ and 20
Unforced.....48
Unfooted.....48½
Unfixed.....49
Unfired.....49½
Unfilled.....50
Unfenced.....50 and 2½
Unfed.....50 and 5
Unfamed.....50, 5 and 5
Unfallen.....50 and 10
Unfaded.....50 and 12½
Unentered.....50 and 15
Unenlarged.....50 and 20
Unengaged.....50½
Unendowed.....51
Unenclosed.....51½
Unemptied.....52
Unemployed.....52½
Unelected.....53
Uneducated.....53½
Uneaten.....54
Undriven.....54½
Undrilled.....55
Undress.....55 and 2½
Undrawn.....55 and 5
Undoubted.....55, 5 and 5
Undivulged.....55 and 10
Undivided.....55 and 12½
Undistorted.....55 and 15
Undissolved.....55 and 20
Undisputed.....55½
Undispursed.....56
Undiscerned.....57
Undented.....57½ and 2½
Undiluted.....57½ and 5
Undigested.....57½, 5 and 5
Undevoted.....57½ and 10
Undestroyed.....57½ and 12½
Undesired.....57½ and 15
Undeserved.....57½ and 20
Undeluded.....58
Undelayed.....59
Undeformed.....60
Undefiled.....60 and 2½
Undeclined.....60 and 5
Undeclared.....60, 5 and 5
Undecided.....60 and 10
Undashed.....60 and 12½
Undamaged.....60 and 15
Uncurled.....60 and 30
Uncured.....60½
Uncumbered.....62½
Uncultured.....62½ and 2½
Uncrowned.....62½ and 5
Uncrowded.....62½, 5 and 5
Uncrossed.....62½ and 10
Uncrooked.....62½ and 12½

DISCOUNTS—Continued

Unquartered	62½ and 15
Uncounted	62½ and 20
Uncorrected	63
Unconvinced	64
Unconsoled	65
Unconfused	65 and 2½
Unconfinde	65 and 5
Unconfessed	65, 5 and 5
Unconcealed	65 and 10
Uncombed	65 and 12½
Uncolored	65 and 15
Unclouded	65 and 20
Uncleared	65½
Unclaimed	66
Unchosen	67
Unchecked	67½ and 2½
Unchastised	67½ and 5
Unchastened	67½ 5 and 5,
Uncharged	67½ and 10
Unchanted	67½ and 15
Unchanged	67½ and 20
Uncaught	68
Uncastled	70
Uncast	70 and 2½
Uncancelled	70 and 5
Uncalled	70, 5 and 5
Unbabled	70 and 10
Unburned	70 and 12½
Unburied	70 and 15
Unbuilt	70 and 20
Unbudded	71
Unbruised	72
Unbroken	73
Unbridged	74
Unbribed	75
Unbranded	75 and 2½
Unbraided	75 and 5
Unbounded	75, 5 and 5
Unbought	75 and 10
Unbooted	75 and 12½
Unbolted	75 and 15
Unboiled	75 and 20
Unblunted	75½
Unblown	76
Unblotted	77
Unblessed	80
Unbleached	80 and 2½
Unblasted	80 and 5
Unblamed	80, 5 and 5
Unbitten	80 and 10
Unbiased	80 and 12½
Unbetrayed	80 and 15
Unbesought	80 and 20
Unbenighted	80 and 22½
Unbefitted	80 and 25
Unbeloved	81
Unbeheld	82
Unbegirt	83
Unbedded	84
Unbeated	85
Unbearded	85 and 2½
Unbattered	85 and 5
Unbathed	85 and 10
Unbated	85 and 12½
Unbarbed	85 and 15
Unbaptized	85 and 20
Unbaked	86
Unbagged	87
Unavowed	88
Unavenged	89
Unauthorized	90

Unattracted	According to our discount.
Unattired	According to your discount.
Unattended	The discount is——
Unattained	The price is according to our discount sheet.
Unattacked	The price is according to your discount sheet.
Unatoned	What discount for cash?
Unassisted	Cannot allow discount for cash.
Unassulted	Refer to our discount sheet.
Unassailed	Refer to your discount sheet.
Unasked	If you can make discount.
Unarrayed	If we make discount——
Unarmed	At what discount will you sell?
Unappraised	We will allow discount.
Unappointed	We give cash discount——
Unapplied	Discount is satisfactory.
Unanswered	Discount is not satisfactory.
Unanointed	Please send us discount sheet.
Unannoyed	We have sent discount sheet.
Unamused	The best discounts we can allow are——
Unaltered	What discount will you allow?
Unalarm	We will allow——

TIME

Wrought	1920	Wriggle	1927	Wreath	1934
Wrongness	1921	Wretchless	1928	Wreakless	1935
Wrongful	1922	Wretchful	1929	Wreak	1936
Wrong	1923	Wretched	1930	Wrathless	1937
Writingly	1924	Wretch	1931	Wrathily	1938
Writer	1925	Wrestling	1932	Wrathful	1939
Wrinkle	1926	Wrestle	1933	Wrath	1940

Wrappage	This morning.
Wrap	This afternoon.
Wrangle	Last week.
Woundless	This week.
Woundable	This month.
Wound	Next month.
Worthy	Next week.
Worthless	Last of this week.
Worthiness	Within one week.
Worthily	Within ten days.
Worthful	Within two weeks.
Worsted	Within three weeks.
Worship	Within four weeks.
Worse	As soon as possible.
Worrying	At your convenience.
Worrysome	Can extend the time——
Worryment	Can you extend the time, if so, how long?
Wormling	In order to save time.
Worm	It was not in time.
Wordling	No time specified.
World	More time must be given.
Workmen	What is longest time that can be given?
Workless	There will be no delay.
Working	There has been no delay.
Workiful	There must be no delay.

Day	January	February	March	April
1st	Workable	Witchery	Window	Wigless
2nd	Work	Withcraft	Windore	Wiggle
3rd	Wordsman	Witch	Windless	Wiggery
4th	Wordless	Wisper	Winding	Wieldsome
5th	Wordish	Wishing	Windiness	Wieldless
6th	Woollen	Wisher	Windfull	Wielding
7th	Wool	Wishedly	Winder	Weilder
8th	Woodsman	Wishbone	Windag	Weildance
9th	Woodland	Wishable	Wind	Weildable
10th	Woodenly	Wiseness	Wincing	Weild
11th	Woodchuck	Wiseling	Winch	Widdow
12th	Woodbine	Wiseacres	Wince	Widish
13th	Wonderous	Wise	Wiple	Widgeon
14th	Wonderment	Wisdom	Willying	Wideness
15th	Wonderland	Wisard	Wilisome	Wickedly
16th	Wonderful	Wiry	Willow	Wicked
17th	Wonder	Wiriness	Willock	Wick
18th	Wolfing	Wiper	Willingly	Whopper
19th	Wolfish	Wipe	Willing	Whooping
20th	Woeful	Wintering	Wilful	Whoop
21st	Wizardly	Winter	Willer	Whoolly
22nd	Wizard	Winsome	Willemite	Wholesome
23rd	Witticism	Winsing	Wilily	Whizzing
24th	Witted	Winning	Wildness	Whiz
25th	Witness	Winnoc	Wildly	Whittling

TIME—Continued

Day	January	February	March	April
26th	Witling	Winking	Wildfire	Whittle
27th	Witless	Winker	Wilderness	Whither
28th	Witherite	Wink	Wilderment	Whitening
29th	Withering	Wineless	Wilder	Whitener
30th	Wither		Wild	White
31st	Witching		Wigwag	

Day	May	June	July	August
1st	Whistle	Whacking	Weaving	Warsaw
2nd	Whispering	Whacker	Weave	Warrior
3rd	Whisper	Whack	Weather	Warren
4th	Whisp	Wench	Weasel	Warrent
5th	Whiskerless	Welch	Weary	Warping
6th	Whisker	Welkin	Wearisome	Warp
7th	Whisk	Welfare	Weariness	Warning
8th	Whirtle	Welcome	Wearily	Warner
9th	Whirling	Weld	Wearable	Warmth
10th	Whirl	Weigh	Wear	Warming
11th	Whipping	Wegatism	Weapon	Warmful
12th	Whipper	Weftage	Weaning	Warm
13th	Whiplash	Weefil	Wealth	Warling
14th	Whipcord	Weesel	Weakness	Warfare
15th	Whip	Weeping	Weakly	Wardrobe
16th	Whine	Weekful	Weaken	Warden
17th	Whimisical	Weeper	Weak	Ward
18th	Whim	Weep	Wax	Warbling
19th	Whiffle	Ween	Waveless	Warble
20th	Whiff	Weeding	Wave	War
21st	Whence	Weedless	Waterless	Wandering
22nd	Whelp	Weedy	Waterish	Wander
23rd	Wheeze	Weed	Watering	Walter
24th	Wheeler	Wedlock	Watch	Walrus
25th	Wheel	Wedge	Wasting	Wallnut
26th	Wheat	Wedding	Wasteless	Walking
27th	Wharf	Wedder	Waspish	Walkable
28th	Whard	Webyl	Wask	Walp
29th	Whang	Webbing	Wasp	Walk
30th	Whaler	Web	Washing	Wakening
31st	Whale		Wart	Wakener

Day	September	October	November	December
1st	Wake	Yorker	Yearning	Zoophoric
2nd	Waive	Yonder	Yearnful	Zoophite
3rd	Wagonette	Yokelet	Yearn	Zoophily
4th	Wagon	Yokeage	Yearly	Zoophaga
5th	Waggish	Yoke	Yearling	Zoonule
6th	Wade	Yojan	Yarn	Zoonomy
7th	Waft	Yockel	Yankee	Zoonic
8th	Wafer	Yieldless	Yank	Zoon
9th	Wading	Yielding	Yachtman	Zoology
10th	Yomas	Yielder	Yachting	Zoologist
11th	Yule	Yieldance	Yacht	Zonure
12th	Yufts	Yieldable	Zymic	Zonular
13th	Yuckel	Yield	Zylonite	Zoneless
14th	Yuck	Yew	Zygosia	Zone
15th	Yucca	Yester	Zygoma	Zonate
16th	Yowl	Yern	Zygenid	Zonar

TIME—Continued

Day	September	October	November	December
17th	Youse	Yerk	Zunyite	Zokor
18th	Youthsome	Yerba	Zunis	Zoisite
19th	Youthly	Yeomanry	Zuisin	Zoilism
20th	Youthhood	Yeomanly	Zufolo	Zoilean
21st	Youth	Yeoman	Zuchetto	Zoide
22nd	Youpon	Yen	Zouave	Zoic.
23rd	Younker	Yeman	Zostera	Zohar
24th	Yougth	Yelper	Zorilla	Zodical
25th	Youngster	Yellowness	Zopilote	Zodiac
26th	Youngness	Yellowish	Zoozoo	Zocco
27th	Youngling	Yellowing	Zootomy	Zocle
28th	Youngish	Yellow	Zootomist	Zobo
29th	Younger	Yell	Zootic	Zoanthus
30th	Young	Yedding	Zoospore	Zoanthoid
31st		Yeast		Zizel

NAME INDEX

PORCELAIN BATHS

Royal Apollo.....Plate 131, Page 13
" Aquitania..... " 132 " 13
" Arcady..... " 133 " 13
Royal Arethusa.....Plate 121, Page 12
" Argus..... " 122 " 12
" Ariadne..... " 123 " 12

ENAMELED IRON BATHS

Royal Acadia.....Plate 182, Page 18
" Algonquin..... " 171 " 17
" Annapolis..... " 212 " 21
" Brunswick..... " 181 " 18
" Caledonia..... " 161 " 16
" Cascapedia..... " 141 " 14
" Charlotte..... " 203 " 20
" Frontenac..... " 192 " 19
" Hampton..... " 3371 " 337
" Hurona..... " 193 " 19
Royal Iroquois.....Plate 162, Page 16
" Lethbridge..... " 191 " 19
" Metapedia..... " 142 " 14
" Moncton..... " 202 " 20
" Newfoundland..... " 213 " 21
" Pontiac..... " 172 " 17
" Sussex..... " 211 " 21
" Sydney..... " 201 " 20
" Tecumseh..... " 151 " 15
" Transcona..... " 152 " 15

PORCELAIN FOOT AND SITZ BATHS

Royal Europa.....Plate 221, Page 22
Royal Grampian.....Plate 222, Page 22
Royal Olympus.....Plate 223, Page 22

ENAMELED IRON FOOT AND SITZ BATHS

Royal Cranbrook.....Plate 231, Page 23
Royal Digby.....Plate 232, Page 23
Royal Laurentian.....Plate 233, Page 23

VITREOUS CHINA PEDESTAL LAVATORIES

Royal Adonis.....Plate 262, Page 26
" Amphion..... " 261 " 26
" Beatrice..... " 272 " 27
" Belvedere..... " 271 " 27
" Carthage..... " 332 " 33
" Cecil..... " 292 " 29
" Clytie..... " 322 " 32
" Connaught..... " 282 " 28
" Elmira..... " 252 " 25
" Empress..... " 281 " 28
Royal Evangeline.....Plate 241, Page 24
" Helena..... " 242 " 24
" Kenora..... " 251 " 25
" Laconia..... " 331 " 33
" Medusa..... " 321 " 32
" Minerva..... " 311 " 31
" Nymph..... " 301 " 30
" Occidental..... " 312 " 31
" Savoy..... " 291 " 29
" Vivian..... " 302 " 30

VITREOUS CHINA WALL LAVATORIES—Pages 34-35

Royal Chateau.....Plate 353, Page 35
" Montcalm..... " 352 " 35
" Rose..... " 341 " 34
Royal Shamrock.....Plate 343, Page 34
" Thistle..... " 342 " 34
" Venus..... " 351 " 35

ENAMELED IRON PEDESTAL LAVATORIES—Pages 36-43

Royal Alberta.....Plate 421, Page 42
" Antwerp..... " 382 " 38
" Glasgow..... " 372 " 37
" Hamilton..... " 411 " 41
" Keewatin..... " 422 " 42
" London..... " 371 " 37
" Manitoba..... " 391 " 39
" Montreal..... " 402 " 40
Royal Ontario.....Plate 431, Page 43
" Ottawa..... " 361 " 36
" Paris..... " 362 " 36
" Quebec..... " 401 " 40
" Saskatchewan..... " 432 " 43
" Saskatoon..... " 412 " 41
" Vimy..... " 381 " 38
" York..... " 392 " 39

NAME INDEX—Continued

ENAMELED IRON WALL LAVATORIES

Royal Arthur.....Plate 522, Page 52
" Banff..... " 502 " 50
" Bedford..... " 531 " 53
" Bonaventure..... " 552 " 55
" Brandon..... " 481 " 48
" Cumberland..... " 542 " 54
" Edmonton..... " 461 " 46
" George..... " 451 " 45
" Hull..... " 571 " 57
" Kingston..... " 572 " 57
" Kitchener..... " 441 " 44
" Levis..... " 471 " 47
" Maitland..... " 521 " 52
" Nanaimo..... " 541 " 54
Royal Portage.....Plate 491, Page 49
" Prairie..... " 492 " 49
" Rideau..... " 561 " 56
" Regina..... " 452 " 45
" Sackville..... " 512 " 51
" Sault..... " 501 " 50
" Sherbrooke..... " 442 " 44
" Simcoe..... " 562 " 56
" Sudbury..... " 482 " 48
" St. Andrews..... " 532 " 53
" Tobique..... " 551 " 55
" Trenton..... " 472 " 47
" Victoria..... " 462 " 46
" Yonge..... " 511 " 51

ENAMELED IRON BARBER LAVATORIES—Page 58

Royal Britannia.....Plate 581, Page 58
Royal Invincible.....Plate 582, Page 58

ENAMELED IRON SECTIONAL LAVATORIES—Pages 59-62

Royal Collingwood.....Plate 621, Page 62
" Dartmouth..... " 592 " 59
Royal Welland.....Plate 622, Page 62
" Yarmouth..... " 591 " 59

HOSPITAL LAVATORIES AND FIXTURES

Royal Belle.....Plate 3392, Page 339
" Eleanor..... " 3401, " 340
" Louise..... " 3381 " 338
" Rosamond..... " 3382 " 338
" Rosalind..... " 3391 " 339
Royal St. James..... .....Plate 601, Page 60
" Tuscanus..... " 602 " 60
" Tyerian..... " 611 " 61
" Vancouver..... " 612 " 61

ENAMELED IRON WASH SINKS—Pages 63-64

Royal Albert.....Plate 643, Page 64
" Columbia..... " 641 " 64
Royal Brantford.....Plate 631, Page 63
" Oxford..... " 632 " 63
Royal St. Laurent.....Plate 642, Page 64

SHOWERS

Royal "Alpha".....Plate 725, Page 72
" Argyle..... " 691 " 69
" Atlantic..... " 693 " 69
" Athenia..... " 681 " 68
" Bloor..... " 652 " 65
" Bon Ami..... " 724 " 72
" Cadillac..... " 672 " 67
" Crescent..... " 684 " 68
" Dirigo..... " 662 " 66
" Florence..... " 673 " 67
" "Grecian"..... " 683 " 68
" Hudson..... " 721 " 72
Royal Ionian.....Plate 694, Page 69
" Jeannette..... " 3362 " 336
" Margaret..... " 3361 " 336
" Neptune..... " 661 " 66
" Niagara..... " 682 " 68
" Nita..... " 3411 " 341
" Pacific..... " 692 " 69
" Rosedale..... " 671 " 67
" Troy..... " 651 " 65
" Thero..... " 653 " 65
" Waverly..... " 702 " 70
" Xanthus..... " 663 " 66

NAME INDEX—Continued

SHOWER RECEPTORS

Royal Eastern.....Plate 711, Page 71
" Northern..... " 713 " 71
" Odin..... " 703 " 70
Royal Viking.....Plate 701, Page 70
" Western..... " 712 " 71

DRINKING FOUNTAINS

Royal "Artic".....Plate 741, Page 74
" Elmora..... " 742 " 74
" Iris..... " 771 " 77
" Pembroke..... " 753 " 75
Royal Romana.....Plate 743, Page 74
" Agathe..... " 752 " 75
" Verte..... " 751 " 75
" Victus..... " 744 " 74

PORCELAIN SINKS

Royal Avonmore.....Plate 3402, Page 340
" "Dixie"..... " 783 " 78
Royal Dorval.....Plate 782, Page 78
" Trojan (Slop)..... " 781 " 78

ENAMELED IRON SLOP SINKS

Royal "Como".....Plate 801, Page 80
Royal Enfield.....Plate 792, Page 79
Royal "Nelson".....Plate 791, Page 79

ENAMELED IRON SINKS

Royal Alma.....Plate 802, Page 80
" Breton..... " 842 " 84
" Bridgetown..... " 823 " 82
" Campbellton..... " 853 " 85
" Dalhousie..... " 861 " 86
" Elgin..... " 803 " 80
" Hyacinthe..... " 832 " 83
" Lakeside..... " 833 " 83
Royal LaTour.....Plate 851, Page 85
" Outremont..... " 822 " 82
" Perth..... " 841 " 84
" Senneville..... " 804 " 80
" St. Louis..... " 843 " 84
" Truro..... " 852 " 85
" Wellington..... " 831 " 83
" Westmount..... " 821 " 82

CULINARY TABLE

Royal Rothesay.....Plate 815, Page 81

MASSAGE TABLE

Royal Dorothy.....Plate 3372, Page 337

DRAIN BOARDS

Royal Bristol.....Plate 871, Page 87
" Cartier (Mat)..... " 875 " 87
Royal Linwood.....Plate 873, Page 87
" Parrsboro..... " 872 " 87
Royal Rockwood.....Plate 874, Page 87

LAUNDRY TRAYS

Royal Batiscan.....Plate 902, Page 90
" Beauport..... " 903 " 90
" Campbellton..... " 912 " 91
" Carleton..... " 922 " 92
" Colonial..... " 942 " 94
" Fredericton..... " 901 " 90
" Gaspe..... " 933 " 93
" Hercules..... " 951 " 95
Royal Kentville.....Plate 931, Page 93
" LaSalle..... " 913 " 91
" Maisonneuve..... " 921 " 92
" Muskoka..... " 941 " 94
" Newcastle..... " 923 " 92
" Rockland..... " 932 " 93
" Stoneham..... " 952 " 95
" Warwick..... " 943 " 94
Royal Woodstock.....Plate 911, Page 91

GREASE TRAPS

Royal Devon.....Plate 811, Page 81
Royal Derby.....Plate 812, Page 81

NAME INDEX—Continued

AUTOMATIC CLOSETS

Royal Automatic (08).....Plate 1032, Page 103
" Autoven..... " 961 " 96
" Autoact..... " 971 " 97
" Autova..... " 972 " 97
Royal Autosyph.....Plate 962, Page 96
" Invernes..... " 991 " 99
" Nicolet..... " 992 " 99
" Weyburn..... " 1001 " 100

LOW TANK COMBINATIONS

Royal A1.....Plate 1034, Page 103
" 1O..... " 1024 " 102
" O5..... " 1031 " 103
" OK..... " 1033 " 103
" Automatic..... " 1032 " 103
" Argo..... " 1014 " 101
Royal Berwick.....Plate 1022, Page 102
" Dececo..... " 1012 " 101
" Rockcliffe..... " 1021 " 102
" Oshawa..... " 1023 " 102
" Swan..... " 1013 " 101
" Zenith..... " 1011 " 101

HIGH TANK COMBINATIONS

Royal "Ajax".....Plate 1101, Page 110
" Avernus..... " 1102 " 110
" Dunbar..... " 1112 " 111
" Dunban..... " 1111 " 111
Royal Prexlo.....Plate 1131, Page 113
" Pioneer..... " 1121 " 112
" Richelieu..... " 1132 " 113
" Tyro..... " 1122 " 112

CLOSET BOWLS

Royal Archer.....Plate 1181, Page 118
" Hygienico..... " 3312 " 331
" India..... " 1194 " 119
" Milclo..... " 1164 " 116
" Richelieu..... " 1161 " 116
" Sypho..... " 1171 " 117
" Trojan ..... " 1172 " 117
Royal Circe.....Plate 1193, Page 119
" Leader..... " 1184 " 118
" Nidra..... " 1191 " 119
Royal..... " 1162 " 116
" Serwyn..... " 1192 " 119
" Viking..... " 1163 " 116

SHIPS' CLOSETS

Royal Megantic.....Plate 1222, Page 122
Royal Ionian.....Plate 1223, Page 122
Royal Tunisian.....Plate 1221, Page 122

ANTI-FREEZING CLOSET

Frost King.....Plate 1232, Page 123
Storm King.....Plate 1231, Page 123

RANGE CLOSETS

Royal Educo.....Plate 1241, Page 124
" Encardo..... " 1242 " 124
" Talus..... " 1262 " 126
Royal Tampico.....Plate 1251, Page 125
" Tantalus..... " 1252 " 125
" Tarchon..... " 1261 " 126

URINALS

Royal Andes.....Plate 1281, Page 128
" Covento..... " 1332 " 133
" Devonshire..... " 1352 " 135
" Forum..... " 1342 " 134
" Hecuba..... " 1322 " 132
" Helicon..... " 1323 " 132
" Hydra..... " 1331 " 133
" Hylas..... " 1321 " 132
" Kenitworth..... " 1351 " 135
Royal Martello.....Plate 1282, Page 128
" Poycelo..... " 1343 " 134
" Stonehinge..... " 1333 " 133
" Tangier..... " 1271 " 127
" Thorncliffe..... " 1341 " 134
" Tobique..... " 1272 " 127
" Vedas..... " 1283 " 128

GENERAL INDEX

Accessories, Bathroom....241–249
Adjustable Sink Brackets 89
Air Chambers..... 89
" Valves..... 271
Angle Valves, Std. Brass... 315
" " McAvity.... 315
" " "World".... 316
" " "Victor".... 317
" Radiator Valves..318-319-329
Anti-Syphon Traps.....148–150
Armstrong Stocks and Dies 229
Asbestos Cement..... 239
" Gaskets (Closet).. 120
" Joint Runners.... 222
" Pipe Covering.... 238
" Packing..... 239
Automatic Air Valves..... 271
" Basin Faucet... 145
" Closets..... 96–103
" Cellar Drainers. 202
" Range Closets..124–126
" " Urinals.. 127
" Urinals..... 128
" " Tanks.... 130
" Radiator Valves 328

Back Water Valves..... 202
" Gates..... 202
Babbitt..... 181
Bands, Hose..... 306
Basin Chains, N.P..... 183
" Cock Hole Covers... 185
" Faucets.....143–145
" Plugs, N.P..... 151
" Stopper, Rubber... 186
" Supplies, N.P..... 146
" Supply Stops, N.P.. 158
" Traps.....147–150
" Wastes, Straight... 142
" " Bi-Transit. 140
" " Pop-Up.... 142
" " Continuous 150
" Wrenches..... 223
Basins, Porcelain P. O. Com. 240
Baths.....12 to 21
" Continuous Flowing. 337
" Foot..... 22–23
" Sitz..... 22–23
" Shower..... 65–73
Bath Cocks.....136–137
" Combined Waste and Overflow..... 138
" Combination Bell Supply.....137–139
" Supplies..... 138
" Supply Stops, N.P... 158
" Seats..... 249
" Stools..... 249
" Stoppers..... 186
Bath Standing Waste..... 138
" Sponge and Soap Holders.... 245
" " Holders..... 245
" Traps, Centrifugal... 178
Bathroom Fixtures.....241–249
Ball Cocks.....106, 107, 115
Balls, Fuller..... 189
Bars, Towel, N.P..... 246
Barber Lavatories..... 58
Bee-Hive Strainers, Shower 73
Bends, Cast Iron (Soil).... 190
" Lead..... 179
" Return (Pipe)..... 284
" " (Brass)..... 297
" " (Malleable). 291
" " Cast Iron (Soil)..... 193
Bibbs, Compression.....160–163
" " Long Shank. 157
" Ground..... 161
" Self-Closing..... 156
" Wash Tray..... 155
" " " (Bent Nose)..... 157
Bibb Washers..... 187
" Ends..... 183
" Seat Reamers..... 221
" Screws..... 182
Bidets..... 100
Bi-Transit Wastes..... 140
" " Washer 187
Block Tin..... 181
Blow-Off Valves, Asbestos Packed..... 322
Boiler Couplings, Brass....174–175
" " Galv..... 175
" Drain Cock..... 159
" Feed Pumps, Duplex 334
" Feeders..... 268
" Fittings..... 272
" Repair Patches..... 183
" " Plugs..... 183
" Stands..... 176
" Union Tees..... 177
" Heater Exhaust..... 255
Boilers, Steam.....251–253
" Water....250-252, 254-255
Boilers, Copper..... 177
" (Galvanized)..... ...176–177
Bowl (Closet), Centrifugal Action..... 331
Box Traps, Iron..... 199
" " Lead..... 179
" Trap Covers..... 185
Bolts, Closet Flange..... 109
" Sink..... 88
" Soldering..... 222
Bolts, Machine, N.P..... 182
" Expansion..... 182
Brass Ferrules.....199–200
" Fittings.....296–301
" Nipples.....174, 302
" Pipe.....303–304
" Tubing.....303–304
" Sheet..... 305
" Unions..... 296
Branch Tees..... 288
Bronze Powder..... 240
" Liquid..... 240
Bubble Fountains..... 74–75
" Heads..... 76–77
Bumpers, Rubber..... 188
Branch Tees, Soil Pipe..... 191
Bushings, Cast Iron..... 287
" Malleable..... 292
" Brass..... 297

Cabinets, Medicine..... 241
Caps, Brass..... 297
" Malleable..... 292
" C.I..... 285
" Vent (Soil Pipe).... 201
Car Fixtures (Railway).... 330
Cast Iron Box Traps..... 199
" " Sink Traps..... 89
" " Enamelled Baths 14–21
" " " Closets 116
" " " Drain-Boards 87
" " " Drinking Fountains 75
" " " Drainage Fittings 208
" " " Hoppers 121
" " " Lavatories 36–59
" " " Laundry Trays 91, 95
" " " Sink and Laundry Trays 90
" " " H.B. Sinks, 82, 86
F.R. 86
" " " Sinks (Deep) 80
" " " Sinks (Common) 86
" " " Sinks Slop, H.B. 79–80
" " " Sinks Slop, F.R. 80
" " Range Closets, 124, 125, 126
" " " Urinals...127, 128
" " Receptors, Shower 71
" " Pipe Fittings,...2802-89
" " Soil Pipe Fittings 190

GENERAL INDEX—Continued

Caulking Nipples..... 200
" Irons..... 221
Ceiling Plates..... 289
Cellar Drainers..... 202
Cement Laundry Trays.... 95
" " " Legs 95
" Portland..... 239
Cesspools..... 202
Chains, Closet Pull..... 114
Chain, Safety..... 183
Chambers, Air..... 89
Check Valves, Std. Brass.... 315
Check Valves..... 316
" " (World Brass) 316
" " (Iron)..... 321
" " (Brass McShane).. 321
" " (IB McShane).. 321
China Lavatories, Pedestal. 24–33
" " Wall.... 34–35
Chisels..... 221
China Drinking Fountains.. 74
Cleanouts (Victor)..... 198
" (Dandy Vulcan)..... 198
Clinic Lavatories..... 60–61
" Lavatory Fittings...152–153
Clamps, Soil Pipe..... 201
Clock Pumps, Semi-Rotary. 332
Closet Combinations, Low..101–103
" " High.110–113
" " Automatic 96–103
" " Kenney Flushometer. 98–99
" " Paragon.. 100
Closets Frost Proof..... 123
" Ship..... 122
" Range.....124–125–126
Closet Bowl, Syphon Jet...116–117
" " Centrifugal Action..... 331
" " Archer..... 118
" " Enamelled Iron..... 116
" " Syphon Action Wash-Down. 116
" " Sanitary..... 118
" " Leader..... 118
" " Wall..... 119
" " Hoppers..... 121
" " Traps..... 121
" Connection, Vulcan. 120
" Floor Slabs..... 120
" Gasketts, Asbestos.. 120
" " Rubber... 109
" Spuds, Reducing....114–185
" Seats..... 105
Car Closets (Railway)..... 330
Closet Stalls..... 129
" Tanks, Vitreous.... 104
" " Wood..... 104
Cocks, Compression Bibbs..160–163
" Self Closing " .. 156
" Basin Compression..143–145
" " Self Closing.. 143
" Bath.....136–137
" Boiler..... 159
" Combination Slop Sink..... 81
" Plug..... 322
" Corporation.....170–172
" Curb..... 171
" " Inverted..... 172
" Pantry..... 159
" Sink..... 154
" Wash Tray (Stub).. 155
" Steam..... 322
" Service..... 171
" Shampoo..... 141
" Stop Self Closing... 158
" Shower Self Closing. 73
" Sill..... 159
" S & W. Gem..... 173
" " (Ground)...164–173
" Urinal..... 157
Cock Hole Covers..... 185
" Wrenches..... 226
Cup Leather..... 332
Combination Bath Bell Supply..... 139
" Bath Waste and Overflow..... 138
" Closets..... 96–123
" High Tank...110–113
" Low Tank...101–103
" Sink & Laundry Trays.. 90
Compression Bibbs.....160–163
" Bath Cocks...136–137
" Lavatory Stops..... 158
" Sill Cocks.... 159
" Urinal Cocks.. 157
" Gem S & W Valves..... 173
Concrete Laundry Trays... 95
Concealed Bath Supply Fittings..... 137
Connections, Slip Joint.... 184
Continuous Wastes..... 150
Continuous Flowing Baths. 337
Controller Tables..... 336
Copper Sheet..... 305
" Boilers..... 177
" Tubing..... 303
Corporation Cocks.....164 to 173
Cotton Wicking..... 239
Couplings, Boiler Brass....174–175
" Reducing C.I... 281
" Eccentric..... 285
" Solder..... 174
" Pipe Mall..... 293
" Galv. Boiler.... 175
" Brass..... 297
" Water Back.... 175
" Corporation (World)..... 171
Covers, Box Trap N.P..... 185
Culinary Table..... 81
Curtains, Shower..... 72
Curtain Rods..... 72
" Hooks..... 72
Curb Cocks..... 171
Creamer Taps..... 240
Crosses, Brass.....296–298
" Cast Iron..... 281
" Malleable..... 292
Crossovers, Malleable..... 295
Cutters, Gauge Glass..... 270
Cylinder Relief Valves..... 271

Dental Lavatories..... 153
Deep Seal Traps, N.P....148–150
" " " (Lead)... 178
Diaphragm Pumps..... 334
Dies and Stocks.....229–231–232
Discs, Valve..... 313
Doherty Basin Faucets.... 143
" Bibbs (Self Closing).....156–157
Douche, Rain.....336–341
Double Cylinder Force Pump..... 333
" Acting Force Pump..... 333
Drain Boards, Enam..... 87
" " Wood..... 87
" " Mats (Rubber).. 87
" Cocks, Boiler..... 159
Drainage & Plumbing Specifications.....349–353
Drift Plugs..... 222
Drains, Cesspool..... 202
Drainage Fittings.....208 to 220
" " (Govt.)... 204
Drinking Fountains...74–75–76–77
Drop Elbow (Brass)..... 296
" " (Malleable).. 291
" Tees (Brass)..... 296
" " (Malleable)..... 291
Duck Curtains (Shower)... 72
Duplex Boiler Feed Pump . 334

GENERAL INDEX—Continued

Elbows, C.I. 281
" (Malleable)..... 290
" (Union)..... 294
" (Brass).....296–298
" (Nickel Plated).. 184
Enameled Iron Hoppers ... 121
Eduction Closets.....124–125–126
Expansion Tanks..... 176
" " Gauges... 270
" " Plates.... 270
" Hanger Plates.. 198

Factory Lavatories.....62–63–64
" Wash Stands. ..62–63–64
Faucets, Basin Compression.....144–145
" Basin (Self Closing)..... 143
" Bath.....136–137
" Compression.....160–163
" Adjustable Sink...154–155
" (Self Closing).....156–158
" Shampoo..... 141
" Pantry..... 159
" Wash Tray (Stub) 155
" " " (Bent Nose) 157
Feed Water Heater..... 255
" Pumps, Boiler..... 334
Featheredge Washer..... 186
Ferrules, Brass.....199–200
Felt, Hair..... 238
Filters, Water..... 183
Fire Pots.....233–236
Fittings, Brass....174–296–300–301
" " Nickel Plated.....182–185
" Cast Iron Pipe....281–286
" Soil Pipe.....190–202
" Malleable.....290–295
Fixtures Plumbing, Suggestions for.. 342–345-350-354
Flanges, Brass..... 298
" N.P..... 184
" Split N.P..... 289
" Cast Iron..... 286
" Closet..... 109
" Roof..... 199
" Floor, C.I..... 285
" Screwed.....347–348
" Worldlap..... 348
" Union..... 286
Floor Drains..... 202
Flush Elbows, Red..... 184
Flushometers, Kenny..... 98–99
" Combination 99
" Paragon..... 100
F. & W. Fittings..... 207
Foot Baths.....22 and 23
Foot Vent Strainer..... 197
Force Cups..... 188
" Pumps, Plumbers..... 223
" " Single Rotary. 332
" " Double Action... 333
" " Double Cylinder.. 333
Fountain, Drinking..... 74–77
Furnaces, Plumbers.....233–236
" Brazing..... 234
" Lead..... 236
" Heating.....250–259
Furnace Parts..... 235
" Bulbs..... 189
Fixtures, Bathroom.....241–249
" Knee Action..... 153
" Pedal Supply.....152–153
" Combination Lavatory..... 140
" Shampoo..... 141
Suggestions for Plumbing..342–345
Hospital Douche..... 336
Frames, Manhole.....205–206
Frost Proof Closets..... 123
Fulller Basin Faucets..... 145
" Balls..... 189
" Combinations Bath Fitting.....138–139
Fusible Plugs..... 272

Galvanized Boilers.....176–177
" Boiler Couplings... 175
" Fittings (Malleable) 290–295
" Pipe..... 277
" Nipples..... 279
Gasoline Fire Pots.....233–236
" Torches.....236–237
Gas Cocks..... 377
Gaskets, Basin and Bath... 186
" Sink..... 186
" World..... 314
" Gauge..... 270
Gate Valves, World..... 316
" " Brass..... 320
" " IB.....323–326
Gauges, Steam Water and Vacum..... 269
" Water.....270–272
Gauge Cocks..... 272
" Cutters..... 270
" Glasses..... 270
Glass Shelves.....242–244
" Tumblers..... 242
Grates, Soil Pipe..... 205
" Drainage..... 206
Grease Boxes..... 223
" Traps, Ena..... 81
Globe Valves, Std. Brass... 315
" " McAvity....315–317
" " World..... 316
" " Iron Body... 323
" " Cast Steel... 326

Hair Felt..... 238
Handy Andy Force Cups. 188
Hangers, Pipe..... 201
Hanger Iron..... 201
Hatchet Soldering Copper,. 222
Headers, Branch Tees..... 288
Heads, Shower..... 72
Heating Apparatus Information.....256–257–266–267
Heaters, Vulcan..... 255
" " Ideal..... 258
" Laundry..... 259
Headers, Branch C.I..... 288
High Tank Combinations..110–113
High Tank Combinations Fittings.....114–115
High Tank Bowls, Richelieu..... 116
Hinges, Closet Seat..... 108
Hooks, Drive..... 201
Hook Plates..... 288
Hooks. S..... 182
Hoppers, Enam. Iron..... 121
Hopper Traps..... 121
Hose Bibb Ends..... 183
" Couplings..... 306
" Bands..... 306
" Pipes..... 307
" Rubber.....189–30[illegible]
" Nipples..... 306
" Racks..... 308
Hospital Lavatories..... 60–61
" " Fittings 152–153
Hot Water Heating Specifications.....357–358
Hospital Fixtures.....336–341
Hubs, Soil Pipe..... 194
" Saddle Connolly..... 194
Hydrants..... 309
Hydro Apparatus..... 341

Increaser, Soil Pipe..... 194
Information General.....366-369
Information, Re-Heating.....355–362
Ingot Tin..... 181
" Lead..... 181
Inspirators "McAvity"... 268
Insertable Joint..... 198
Irons, Solder..... 222

GENERAL INDEX—Continued

Iron (Cast) Box Traps..... 199
" " Sink Traps.... 89
" Body Blow-Off Valves 322
" " Brass Mounted Gate Valves...323–325
" " Brass Mounted Globe Valves. 323
" " Check Valves... 321
" " McShane Check Valves..... 321
" " Cocks..... 322
" Pipe, Black Dimensions of..... 277
" Pipe, Galv. Dimensions of..... 277

Jardine Pipe Stocks and Dies..... 231
Jenkins Discs..... 313
Joint Runners..... 222
Joints, Insertable..... 198
" Pipe.....347–348

Kenney Flushometers..... 98
" Combinations... 99
Kerosine Furnaces.....233–237
Kitchen Table (Culinary).. 81
" Sinks, H.B..... 82–86
" " F.R..... 86

Ladles, Solder..... 222
Laundry Trays, Cement.. 95
" " Porcelain.... 94
" " Ena. Iron....90–95
" Tray Faucets.....155–157
" Legs..... 95
" " Plugs..... 151
" " Mats, Wooden.... 95
Lavatories,
Ena Iron Pedestal.....36 to 43
" Wall..... 44–57
" Barber..... 58
" Dental..... 153
" Hospital..... 60–61
" Sectional..... 59–62
" Factory.....62–63–64
Porcelain Pedestal..... 24–33
" Wall..... 34–35
Lavatory
Faucets, Compression....144–145
" Self Closing.... 143
Combination Fittings.... 140
Traps, Nickel Plated.... 147
" Anti-Syphon..... 149
" "World" Nickel Plated..... 148
" Deep Seal..... 150
" Sanitas..... 149
Traps, Elliptic..... 149
Supplies, Basin..... 146
" Bath..... 138
Stops, Lavatory 158
Wastes, Straight..... 142
" Bi-Transit..... 140
" Pop-Up..... 142
" Knee Action....152–153
Lead Bends..... 179
" Bath Traps, World... 178
" Box Traps..... 179
" Drawn Traps..... 178
" Dresser..... 221
" Joint Runners..... 222
" Pipe..... 180
" Pipe Benders..... 221
" Connections.... 172
" Pig..... 181
" Tacks..... 181
" Melting Furnaces.... 236
" Sheet..... 181
Leather, Cup..... 332
" Lower..... 332
Links, Split..... 182
Liquid Bronze..... 240
Low-Dow Combinations...101–103
" " Tanks 104
" " Fittings 106–107–108–109
" " Seats 105
Lubricators.....273–274
Loose Key Stops..... 158
Lock Nuts, Malleable..... 292
Lock Nuts 285
" " Brass..... 297

Malleable Fittings.....290–295
Malletts, Plumbers..... 221
Manholes, Sewer.....205–206
Marble Stalls.....132–134
Massage Table..... 337
Medicine Cabinets..... 241
Meters, Water..... 311
Mirrors..... 241
Mixing Valves, Shower..... 69–70
Metals, Babbitt..... 181
" Lead (Pig)..... 181
" Tin (Pig)..... 181
Mountings, Exp. Tank..... 270
Monkey Wrenches..... 225

Needle Showers.....65 to 70
Spray.....336–341
Nipples, Brass..... 302
" W. I.....279–280
" Hose..... 306
" Solder..... 174
Nickel Plated Bath Room Fittings...241–249
" Fittings.....182–185
Non-Syphon Traps, N.P.....148–150
" " Lead.... 178
Nozzles, Hose..... 307

Oakum..... 238
Offsets, C.I..... 192
O. S. Distributors..... 265
Oster Pattern Stocks and Dies..... 231

Packing, Rubber..... 189
" Asbestos Wick.. 239
" Cotton..... 239
" Hemp..... 239
Pantry Cocks..... 159
Paper Holders..... 248
Patches, Boiler..... 183
Pedestal Lavatories,
" " Vitreous.24 to 33
" "Ena. Iron..36 to 43
" Drinking Fountains..... 74
" Urinals..... 134
Physicians Scales..... 338
Pins, Turn..... 222
Pipe Benders, Lead..... 221
" Covering, Asbestos... 238
" Brass.....303–304
" W.I.....277–278
" Galvanized.....277–278
" C.I. Water Pipe..... 206
" " Soil..... 190
" Saddles..... 289
" Joint Compound..... 240
" Lead..... 180
" Stocks and Dies.....229–232
" Joints.....347–348
" Clamps, Soil Pipe..... 201
" Hangers..... 201
" Straps, Tinned..... 201
" Tongs..... 227
" Cutters.....228–229
" Vises.....228–230
" Wrenches.....224–225–227
" Basin Supply..... 146
" Bath Supply..... 138
" Holders N.P..... 185
" Rolls..... 287
" Blow..... 235
Pitcher Spout Pump..... 332
Piping Specification for a high Pressure Plant..346–349–363–365
Plates, Floor and Ceiling... 289
Plugs, Basin..... 151
" Waste, Straight..... 151
" Traps N.P..... 151

GENERAL INDEX—Continued

Plugs, Wash Tray..... 151
" Drift..... 222
" Test..... 223
" Fusible..... 272
" C.I..... 285
Plug Cocks..... 322
Plumbers Chain..... 183
" Furnaces.....233–236
" Force Cups..... 188
" Pliers..... 221
" Tools.....221–223
" Oakum..... 238
Plumbing & Drainage Specifications.....350–354
Pneumatic Water System.. 335
Points, Well..... 332
Plumbing Fixtures, Suggestions for. 342–345–350–354
Pop Safety Valves.....268 and 320
Pop-Up Waste, Lavatory.. 142
Porcelain Baths..... 12–13
" Lavatories.....24 to 35
" Wall Urinals.....128–129
" Stall " 132–135
" Laundry Trays.... 94
" Basin P.O..... 240
Power Plant Specifications..346-349-363-365
Powder, Bronzing..... 240
Pots, Solder..... 223
Post Hinges, St. John..... 108
Pressure Gauges..... 269
" Reducing Valves (Steam)..... 327
" Regulating Valve (Water)..... 327
Pumps, Force..... 333
" Plumbers..... 223
" Semi-Rotary..... 332
" Pitcher..... 332
" Double Cylinder Force..... 333
" Double-Acting Force 333
" Diaphragm..... 334
" Duplex Boiler Feed.. 334
Pure Block Tin..... 181
" Pig Lead..... 181
Putty..... 240
Pryalin Seat..... 105
Pressure Tank Combinations..... 114
" Closet Combination..... 113

Quick Opening Basin Faucets 143 and 145
" " Bath Faucets.. 136
Quick Opening Sink Faucets.. 154
" " Radiator Valves... 319

Racks, Hose..... 308
" Towel.....246–247
Radiators.....260–264
Radiator Valves.....318–319
" Valves, McAvity. 329
" Automatic Valves 328
" Indexed Control Valves.....328–329
" Air Valves..... 271
" Fittings..... 264
Range Closets.....124–126
" Urinals..... 127
" Boilers, Copper..... 177
" " Galvanized.. 176
Receptors, Shower..... 70–71
Reducers, Cast Iron..... 281
" Soil Pipe..... 194
Reducing Valves (Pressure) 327
Regulators (Water Pressure)..... 327
Relief Valves..... 271
Reseating Tool..... 221
Return Bends Soil Pipe.... 193
" " C.I..... 284
" " Malleable... 291
" " Brass..... 297
Roof Flanges..... 199
Royal Rain Douche..... 336
Rubber Bumpers..... 188
" Curtain, Shower... 72
" Connection, Conical..... 189
" Connections, Twyford..... 189
" Diaphragms..... 107
" Gaskets, Sink and Lavatory..... 186
" Hose..... 189
" Packing..... 189
" Stoppers, Suction Sink..... 186
" Stoppers Bath and Basin..... 186
" Spud (Closet)..... 189
" Tubeing..... 189
" Mats Drain Board. 87
Rush Valve Washers...114 and 187

Saddle Hubs, Connolly... 194
Saddles, Water Pipe..... 289
" Steam Pipe..... 289
Scales, Physicians..... 338
Screws, Closet..... 109
" Nickel Plated..... 182
Screws, Trap..... 199
Screwed Flanges.....363–364
Seats, Bath..... 249
" Closet..... 105
Sectional Lavatories..... 59–62
Safety Valve, Pop.....268–320
Self Closing Basin Faucets. 143
" " Bibbs.....156–157
" " Bubble Fountains..... 74–75
" " Bubblers..... 75–77
" " Pantry Faucets 159
" " Stops.....157–158
" " Urinal Cocks.. 157
Semi-Rotary Clock Pump.. 332
Service Cocks..... 171
" Elbows..... 293
" Tees..... 293
" Boxes..... 310
Shampoo Fixtures..... 141
Shave Hooks..... 221
Shelves, Glass.....242–244
Showers.....68–69–70–72
Shower Baths..... 66–67
" Concealed..... 65
" Heads..... 72
" Thermometers..... 65
" Curtains..... 72
" Valves..... 72
" Head Sprays..... 249
" Receptors..... 70–71
" Stall Trap..... 73
" " Strainer..... 73
Sinks, H.B. Enameled 82–83–84–85–86
" Porcelain..... 78
" Cast Iron..... 86
" Deep Enam. F.R.... 80
" Flat Rim..... 86
" Pantry, Porcelain.... 80
" Slop H.B. Porcelain... 78
" " Enameled.. 79
" " F.R. " 80
" Hospital.....338–340
Sink and Laundry Trays... 90
" Backs..... 88
" Brackets Adj..... 89
" Cups, C.I..... 88–89
" Drain Boards..... 87
" " " Mats.... 87
" Faucets Adj. 154–155
" " Double Slop 81
" Gaskets..... 89–186
" Mats, Wood..... 88
" Bolts..... 88
" Stoppers Suction..... 89–186
" Strainers..... 88
" Soap Dishes.....88 and 248

GENERAL INDEX—Continued

Sill Cocks..... 159
Sitz Baths..... 22–23
Slate Urinals..... 132
Sleaves, C.I. Soil Pipe..... 197
Slip Joint Connections..... 184
" Elbows..... 184
" Nuts..... 184
" Tees..... 184
" Washers..... 188
Snips, Plumpers..... 221
Soap Holders.....242–245–248
Soap and Tumblers Holders.....242–243–244–245
Soil Pipe, Cast Iron..... 190
" Terra Cotta..... 203
" Fittings, C.I.....190–204
Solder Coppers..... 222
" Couplings..... 174
" Wiping and Fine.... 179
" Nipples..... 174
" Pots..... 223
" Union..... 174
Solderless Couplings..... 185
Solid Die Slocks..... 232
Specifications for power plant...346-349-363-365
Specifications for Vapour Steam Heating.....356-362
Specifications for Hot Water Heating.354-355
" for Plumbing & Drainage.....350-354
" for High Pressure plant. 346-349-363-365
Split Flanges..... 289
Spun Flanges..... 184
Stalls, Closet 129
" Urinals.....127–129–132–135
Standing Waste, Bath..... 138
" " Basin and Sink... 152
Stand, Boiler..... 176
Steam Boilers, Round..... 251
" " Sectional.... 253
" Gauges..... 269
" Cocks..... 322
" Valves.....315–326
Pressure Reducing Valves..... 327
" Radiators.....260–264
" Traps.....272–275
" Steam Heating specifications.....371–373
Steel Partitions.....124–125–129
Stocks and Dies.....229–231–232
Sterilizer..... 339
Stop and Waste Cocks.....164–173
Stop and Waste Cocks, Inverted..... 172
Stop and Waste Cocks, Corporation.....170–172
Stop and Waste Valve, Gem..... 173
Stops, Self Closing.....157–158
" Compression.....157–158–160–161
" Compression, Loose Key..... 158
Stoppers, Basin and Bath Suction..... 186
" Sink Suction..... 186
" Basin and Bath (Regular)..... 186
Stools, Bath..... 249
Straight Wastes..... 142
Strainers, Bee-Hive..... 73
" Sink..... 88
" ("World")..... 331
Straps, Tinned 201
" Soil Pipe..... 201
Street Washers..... 159
" Elbows and Tees.... 293
Supply Pipes, Bath..... 138
" " Lavatory.... 146
Suggestions for Plumbing Fixtures.....342-345-350-354
Swing Check Valves, McShane..... 321
Syphon Jet Bowl..... 117
" Action Bowl..... 116
" Valves..... 114
" Washers.....187 and 114
Sheet Copper..... 305
" Brass..... 305

Tables, Culinary..... 81
" Massage 337
" Washing, Hospital. 340
Tacks, Lead..... 181
Tap Borers..... 221
Tanks, Galvanized.....176–177
Tank Mountings..... 270
Tees, Brass.....296–298
" Iron Pipe.....281–283
" Malleable..... 292
" Union, Mall..... 294
" Nickel Plated..... 184
" Soil Pipe.....191–198
" Vent..... 182
" Branch C.I..... 288
Terra Cotta Soil Pipe..... 203
Test Plugs..... 223
" " Rubbers..... 189
" Pump, Plumbers..... 223
Toilet Paper Holders..... 248
Toothbrush Holders..... 245
Top Urinal Standards.....130–131
Torches, Contractors..... 236
" Painters..... 237
Towel Bars.....246–247
Trap Screws..... 199
" Covers, Box..... 185
" Plugs, N.P..... 151
" Screw Ferrules..... 199
Traps, Anti-Syphon N.P... 149
" Back Water..... 202
" Bath Centrifugal Lead..... 178
" C.I. Box Trap..... 199
" Lead Box..... 179
" Bell Cesspool..... 202
" Grease..... 81
" Steam.....272–275
" Drawn Lead..... 178
" Deep Seal N.P..... 150
" Elliptic N.P..... 149
" N.P. Lavatory..... 147
" Sink (C.I.) 89
" Sink Centrifugal Lead..... 178
" Soil Pipe.....195–197
" N.P. World, Centrifugal.....148–149
" N.P. Sanitas..... 149
Tubeing, Copper .....303 and 304
" Brass.....303–304
Tumbler Holders.....242–244
Turnpins..... 222
Tyte-Unyte..... 240

Unions, World..... 312
" Malleable..... 294
" Boiler..... 295
" Brass.....296–298
" Flanges, Brass.... 298
" " World... 302
Urinals, Porcelain Wall.... 129
" Enameled Iron.... 129
" Range, Iron..... 127
" Automatic..... 128
" Stall..... 129
" " Fittings.....130–131
" " Marble..... 132
" " Slate..... 132
" " Porcelain....133–135
" " Faucets..... 157
" " Connection, N.P..... 185

Vacuum Gauges..... 269
Valves, Brass 316–321
Valves Iron Body.....323–327
" S & W Gem..... 173

GENERAL INDEX—Continued

Valves Radiator Air..... 271
" Cylinder Relief..... 271
" Radiator.....318–319–329
" Pop Safety IB..... 320
" McShane Check.... 321
" Steam Pressure Reducing..... 327
" Water Pressure Regulating..... 327
" Automatic Radiator..... 328
" Indexed Radiator Control.....328–329
" Gate.....373–377
Valve Dises Victor..... 313
" " Radium..... 313
" " Jenkins..... 313
Vapour Steam Heating.....356–362
Vacuum Steam Heating....356–362
Vent Branches..... 197
" Tees..... 182
" Caps..... 201
" Strainers..... 197
Ventilating Caps..... 193
Vises.....228–230

Washstands (Railway)... 330
Wash Sinks, Enameled Iron..... 62–64
Wash Trays, Enameled Iron..... 90–95
" Trays, Cement..... 95
" Tray Bibbs, Stub... 155
" " Cocks, Bent Nose..... 157
" " Plugs..... 151
" " Legs..... 95
" " Fittings..... 295
Washing Table, Hospital... 340
Washers, Bibb..... 187
" Gauge Glass.....188–270
" Basin and Bath..186–187
" Street..... 159
" Slip Joint..... 188
Waste and Overflow, Bath. 138
" and Supply Combinations.....137–139
" Bi-Transit..... 140
" Pop-Up..... 142
" Standing Bath... 138
" " Sink and Lavatory 152
" Basin Combination Supply..... 140
" Knee Action.....152–153
" Pedal Action.....152–153
" Continuous N.P.. 150
" Straight, ... 142
" " Plugs... 151
Wall Hook Plates..... 288
" Closets..... 119
" Plates, Radiator..... 264
" Urinals.....128–129
Water Back Couplings..... 175
" Boilers, Round..... 250
" " Sectional....252–254
" Closet Combinations, Low.....101–103
" Closet Combinations, High.....110–113
" Closet Combinations, Automatic. 96–113
" Closet Combinations, Frost Proof..... 123
Water Filters..... 183
" Gauges 269–272
" " Glasses..... 270
" " Washers.....188–270
" Heaters Laundry....258–259
" " Exhaust.... 255
" Meters..... 311
" Pipe, Cast Iron..... 206
" Pressure Regulators. 327
" System Pneumatic.. 335
Well Pumps..... 332
" Points..... 332
White Rubber Hose..... 189
" Lead..... 240
Worldlap Flanges..... 348
Wood Drain Boards..... 87–88
Wicking, Candle..... 239
" Asbestos..... 239
Wiping Cloths..... 223
" Solder..... 179
Wrenches, Basin..... 223
" Trimo..... 224
" Stillson..... 224
" Hex..... 224
" Monkey..... 225
" Brass Pipe..... 225
" Alligator..... 226
" Parmelee..... 227
" Vulcan..... 227
" Robins..... 227
Wrought Iron Couplings... 284
" " Nipples.....279–280
" " Pipe.....276–278

Y, s Soil Pipe.....191–192
,s Malleable..... 293
Y, s C. I..... 281
" Brass..... 297

THE MODERN PRINTING CO.,
MONTREAL.

Classified Index

	Pages
Baths	12, 23
Bath Fittings	136, 139
Bath Room Fixtures	241, 249
Brass Nipples and Boilers Couplings	174, 175
Boilers	176, 177
Combinations (Closet)	96, 123
Drinking Fountains	74, 77
Faucets	154, 163
Heating, Boilers and Radiators	250, 267
Hose Fittings and Hydrants	306, 312
Hospital Fixtures	336, 340
Lavatories	24, 64
Lavatory Fittings	140, 153
Laundry Trays	90, 95
Lead Pipe and Traps	178, 181
Nickel Plated Goods	182, 185
Pipe and Fittings	276, 305
Plumbers Tools	221, 237
Pumps	[illegible], 335
Range Closets and Urinals	[illegible], 135
Rubber Goods	186, 189
Showers	65, 73
Specials	238, 240
Sinks	78, 89
Stop Cocks	164, 173
Steam Goods	268, 275
Soil Pipe and Fittings	190, 220
Valves	313, 329
Miscellaneous	330, 331