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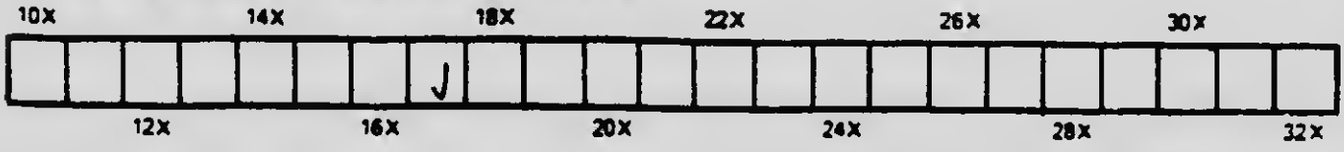
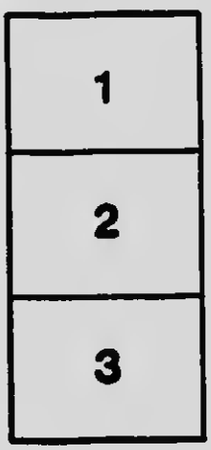
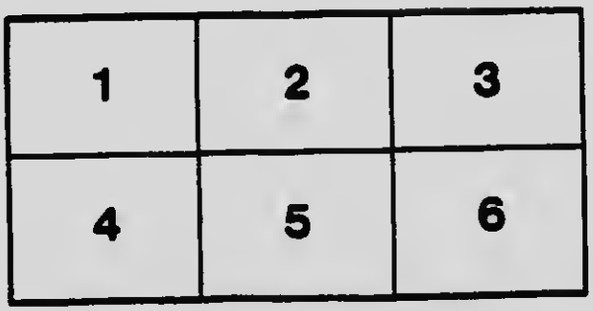






HEATING ENGINEER'S COMPANION

1913 - 14

Cancelling All Previous Lists

The GURNEY FOUNDRY CO., Limited
TORONTO

Stock Carried at Montreal, Hamilton, Winnipeg, Calgary, Edmonton, Lethbridge, Vancouver.

TO THE HEATING ENGINEERS, ARCHITECTS AND CONTRACTORS IN CANADA:

WE take this opportunity of expressing our appreciation to all Heating Engineers, Architects and Contractors of Canada for their generous support which has enabled us to increase our boiler and radiator plant this season about 50%. This will guarantee good care of all orders entrusted to us in future.

We hold ourselves responsible to the extent of furnishing castings or parts to replace any such found defective through causes in manufacture, but under no consideration for loss of labor or damage. This responsibility or guarantee expires one year from date of invoice.

All undertakings subject to strikes, fires, or other circumstances beyond our control.

All shipments are made in good order and should be examined before accepting from Transportation Companies, and should there be any breakage it must be marked on the freight receipt and value collected from them.

We cannot guarantee safe delivery to destination.

Return no goods without our permission, and if returned will be subject to a discount for handling charge.

*Ratings of all boilers and radiators are shown in empirical feet, a unit used to denote the relative heating power of boilers and the cooling power of radiators.

The Gurney Foundry Company, Limited - - Toronto
The Gurney-Massey Company, Limited - - - Montreal
The Gurney Foundry Company, Limited - - Hamilton
The Gurney North-West Foundry Company, Limited Winnipeg
Metals Limited - - - Calgary, Edmonton, Lethbridge
The Gurney Foundry Company, Limited - - Vancouver


WINNIPEG.
VANCOUVER.


THE GURNEY FOUNDRY CO
BOILERS RADIATORS
HAMILTON.
METALS.
CALGARY.

WEST TORONTO PLANT

Where Gurney-Oxford Boilers and Radiators, etc., are made

TORONTO PLANT

Where Stoves, Ranges and Furnaces are made

The Gurney-Oxford Economizer

Licensed for Use with Gurney-Oxford Apparatus Only

List Price, to fit from No.	0	to No.	4	Boilers	$6.00
"	5	"	6½	"	7.00
"	7	"	10	"	8.00

See next Page for Description

The Gurney-Oxford Economizer

Engineers and Architects have felt the need of a more perfect fire controlling system for Hot Water Boilers, as with a variable climate it is often practically impossible to maintain just sufficient fire to give the desired amount of heat when the thermometer is say, forty or fifty above zero, in a Boiler which is of the capacity and design for zero weather and below.

The GURNEY-OXFORD "Economizer" illustrated on the opposite page is a housing of cast iron which connects the shell top of the Oxford Boiler to the smoke flue. In the back of this housing, as will be seen, there is an opening that may be completely closed by a snug fitting damper when the handle on the side of this housing is raised. The lowering of this handle causes the one damper flap to gradually increase the opening at the back of the housing into the smoke stack, while it decreases the smoke opening of the boiler.

This means that the Boiler may be checked off without drawing cold air over the already heated sections, which prevents this most wasteful practice. It also means that the Boiler may be checked down finer than under any other known system of control, because, even supposing that this check is carried to the point that furnace gas is not burned this gas is at once carried up the chimney and does not escape into the house.

The GURNEY-OXFORD "Economizer" is shipped without extra charge with all GURNEY-OXFORD Round Hot Water Boilers. It so increases the efficiency of this Boiler that we prefer to insure it being on every GURNEY-OXFORD Boiler rather than to sell it as a specialty.

Licensed for use only with the GURNEY-OXFORD Apparatus.

The Oxford Hot Water Boiler

Note the Economizer, the insloped walls of the firepot and first section, the revolving, gear driven grate bars, the push nipple connections, the extra capacity of first section.

The Oxford Hot Water Boiler

The illustration on the opposite page shows why the Gurney-Oxford Hot Water Boiler is the best.

Oxford Hot Water Boilers

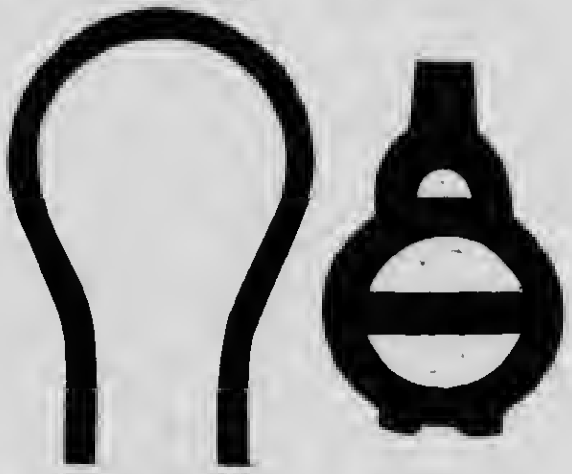
List Price of Twin, Triple and Quadruple Connections

Size of Boiler	Twin		Triple		Quadruple		Sizes of Valves Inches
	List	Run of Header Inches	List	Run of Header Inches	List	Run of Header Inches	
No. 2-E to No. 4-E...	$110	4	$160	5	$220	6	3
No. 5-E to No. 6-B...	135	5	200	6	270	8	4
No. 6½-C.....	175	6	250	8	350	8	4½
No. 7-B.....	190	6	300	8	380	9	5
No. 8-C.....	230	8	350	8	460	10	6
No. 9-D.....	250	8	400	9	500	10	6
No. 10-C.....	Prices on request.						

No allowance made for ordinary headers.

Net allowance for valves, if not required with connections, as follows:

No. 2-E to No. 4-E....$4.00 each, net
No. 5-E to No. 6-B..... 5.00 each, net
No. 6½-C..... 5.75 each, net
No. 7-B .....$6.25 each, net
No. 8-C..... 7.50 each, net
No. 9-D..... 7.50 each, net



Copper Cast Iron

Water Heaters

For Domestic Hot Water Service for Oxford Boilers

Cast Iron

From Nos. O-E to 3-E inclusive, List Price..... $2.00 each
From Nos. 4-E to 6½-C inclusive, List Price..... 3.75 each
From Nos. 7-B to 10-C inclusive, List Price..... 4.80 each

Copper

All Sizes, List Price..... 12.00 each

These Heaters rest on top edge of firepot, under first section.

All Oxford Boilers have two holes in rim of firepot with removable plugs, through which connection can be made with the Domestic Water Heaters. These Domestic Heater openings are on both sides of all Boilers.

Oxford Hot Water Boilers

Ratings, Prices, Etc.

No.	*Net Capacity Radiation, Feet	Net Capacity Lin. Feet, 1 in. Pipe.	List Price, Low Base	List Price, High Base	Diameter of Grate	Diameter of Smoke Pipe	Size of Chimney Required	No. of Flow and Return Outlets	Size Coal	Approximate Shipping weight Oxford Hot Water Heaters	
										Low Base	High Base
0E	170	500	$88.00	$94.00	17¼	7	8× 8	2-2	Stove	800	900
1E	235	700	105.00	111.00	17¼	7	8× 8	2-2	Stove	940	1000
2E	335	1000	140.00	147.00	20¼	7	8× 8	4-2	Stove	1170	1250
3E	500	1500	160.00	170.00	22¼	8	8×12	4-2	Stove	1420	1510
4E	670	2000	200.00	215.00	25¼	8	8×12	4-2	Stove	1650	1750
5E	835	2500	240.00	260.00	27¼	10	12×12	6-2	Stove	2000	21?5
6B	1000	3000	270.00	290.00	29¼	10	12×12	6-2	Egg	2365	2510
6½C	1250	3750	335.00	360.00	32¼	10	12×12	6-2	Egg	2750	2950
7B	1500	4500	392.00	420.00	35¼	11	12×12	8-2	Egg	3350	3550
8C	2000	6000	475.00	505.00	37	11	12×12	8-2	Egg	3800	4060
9D	2667	8000	524.00	554.00	38½	11	12×12	12-2	Egg	4360	4585
10C	4000	12000	850.00	.....	42	12	12×16	12-2	Egg	5225	.....

All mains should be securely covered with good non-conducting material.

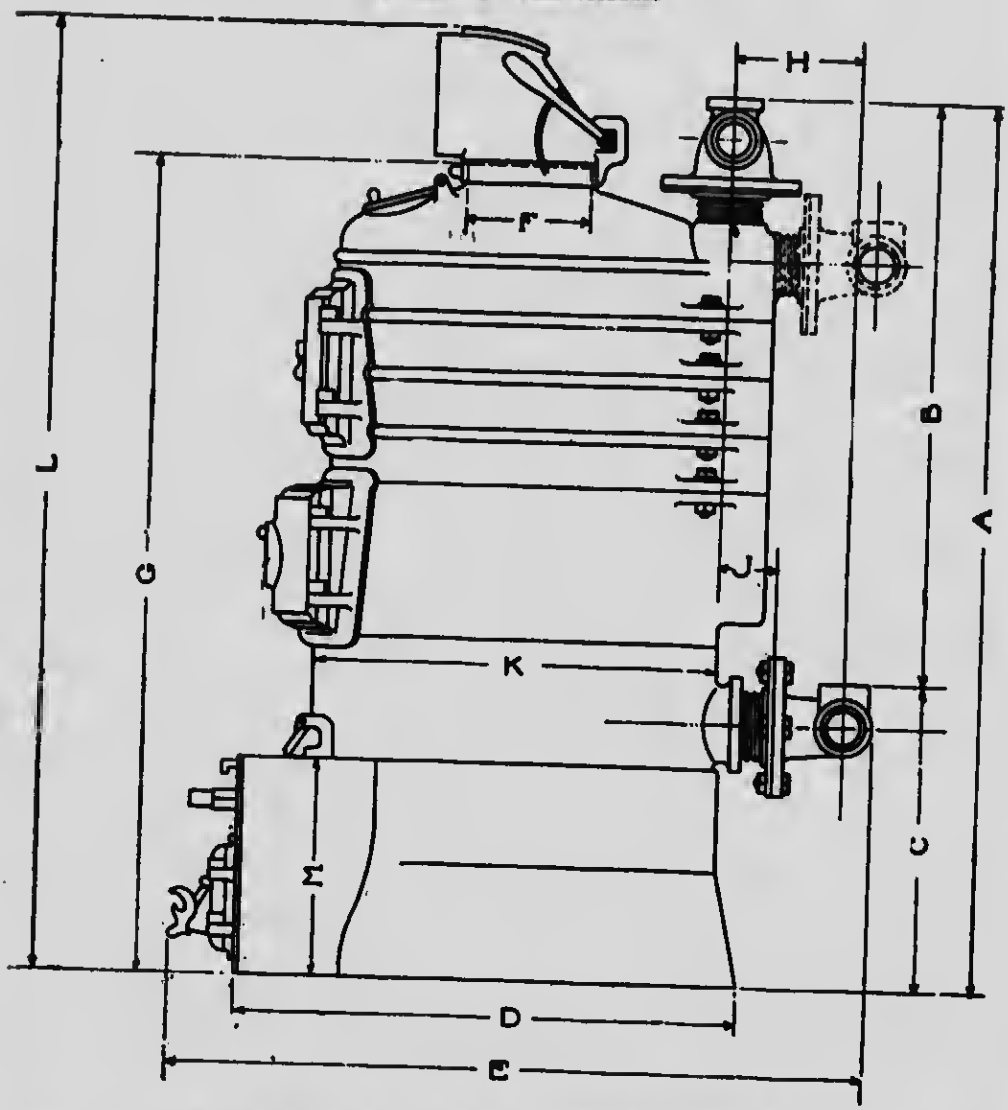
Note diameter of above Firepots and compare with others.

Detail measurements on pages 11 and 12

*See page 2.

Oxford Hot Water Boilers

Standard Dimensions



For details consult tables on pages 11 and 12.

Standard Dimensions Oxford Round Hot Water Boilers

Low Base

Dimension No.	A Total Height to top of Header, Inches.	B Top of Return to top of Flow Header, Inches	C Floor to top of Return, Inches.	D Length of Base, Inches	E Length over all, Inches	F Size of Smoke Collar	G Height to top of Smoke Collar, Inches	H Centre to Centre of Headers, Inches	J Face of Flange to Centre of Flow, Inches	K Outside Diameter of Firepot, Inches	L Height to top of Economizer, Inches	M Height of Base, Inches	Size of Screw Nipple Connections, Inches, Boiler to Header
0-E	48	31	17	25½	40½	7	44	8½	5	21½	53	12½	3″
1-E	51½	34½	17	25½	40½	7	47½	8½	5	21½	55½	12½	3″
2-E	55½	38½	18½	30	42½	7	50½	10	5½	24½	59	13	4″
3-E	58½	38	20½	32	45	8	52½	10½	5½	26	51½	14½	4″
4-E	51½	40½	21	35	48	8	54½	10½	5½	29½	64½	15½	4″
5-E	52½	43	19½	37	51	10	57½	10½	5½	31½	67	15½	4″
6-B	65½	44½	22½	39	55½	10	59½	11½	5½	34	69	15½	5″
5½-C	73½	48½	24½	42½	60	10	65½	15	9½	38½	76	17½	5″
7-B	71½	47	24½	46½	62	11	65	11½	7½	41	75	17½	5″
8-C	75½	50½	25	48½	66	11	67	14	7½	42½	77½	17½	5″
9-D	75½	50½	25	48½	59½	12	55½	13	8½	43½	75½	18	6″
10-C	78	52½	25½	52	73	12	58½	14½	8½	51	79½	18	6″

Where a low cellar height makes the saving of every inch desirable, we can supply a special top section with back outlet to take flow header.

This effects a saving in height of No. 0-E. 7″, 1-E. 7½″, No. 2-E. 8½″, No. 3-E. 8″, No. 4-E. 9″, No. 5-E. 9″, No. 6-B. 11″, No. 6½-C. 11″, No. 7-B. 10″, No. 8-C. 9½″, No. 9-D. and No. 10-C. on application.

See additional Measurements on page 9

Standard Dimensions Oxford Round Hot Water Boilers

High Base

Dimension		B	C	D	E	F	G	H	J	K	L	M	
No.	Total Height to top of Header, inches	Top of Return to top of Flow Header, Inches	Floor to top of Return, Inches	Length of Base, Inches	Length over-all, Inches	Size of Smoke Collar	Height to top of Smoke Collar, Inches	Centre to Centre of Headers, Inches	Face of Flange to Centre of Flow, Inches	Outside Diameter of Firepot, inches	Height to top of Economiser, Inches	Height of Base, Inches	Size of Screw Nipple Connections, Inches Boiler to Header
0-E	54	31	23	25½	40½	7	50	8½	5	21½	59	18½	3"
1-E	57½	34½	23	25½	40½	7	53½	8½	5	21½	62½	18½	5"
2-E	53½	58½	25½	50	42½	7	58	10	5½	24½	66	20	4"
3-E	56½	58	28½	32	45	8	60½	10½	5½	26	59½	22½	4"
4-E	59½	40½	29	35	48	8	53	10½	5½	29½	72½	23½	4"
5-E	71½	45	28½	37	51	10	56½	10½	5½	31½	75	24½	4"
6-B	77½	44½	32½	39	55½	10	59½	11½	5½	34	80	26½	5"
6½-C	81½	48½	32½	42½	60	10	70½	15	9½	58½	84	25	5"
7-B	80½	47	33½	45½	62	11	74	11½	7½	41	85	26½	5"
8-C	87	50½	34	48½	66	11	75	14	7½	42½	85	27½	5"
9-D	82	50½	35	48½	69½	12	77	13	8½	43½	86	27½	6"

In. Dia. Firepot.....	17½	17½	20½	22	25½	27½	29½	52	35	36	38½	42½
Depth of firepot.....	16½	16½	15½	15½	17½	17½	17½	20	19½	21½	21	22½
Diameter of grate.....	17½	17½	20½	22	25½	27½	29½	32	35	36	38½	42½
Area of grate.....	....	....	....	....	....	....	....	....	....	....	....	....
No. Sections.....	3	4	4	4	4	4	4	4	4	4	4	4

See additional Measurements on page 9

Read this Page Carefully

Before the boiler is set up see that the base is level in all directions.

Before the boiler is set up make sure that there is sufficient head room for the smoke pipe, also to allow a proper grade for the mains.

If you cannot obtain this the boiler should be set in a pit, care being taken that the pit has sufficient room in front to allow the proper firing of boiler, and removing of ashes.

Always place the boiler as close to the chimney as possible.

Always cover your boiler with asbestos or other non-inflammable material; this conserves your heat, and prevents cold air being drawn into smoke or fire travel through fire joints.

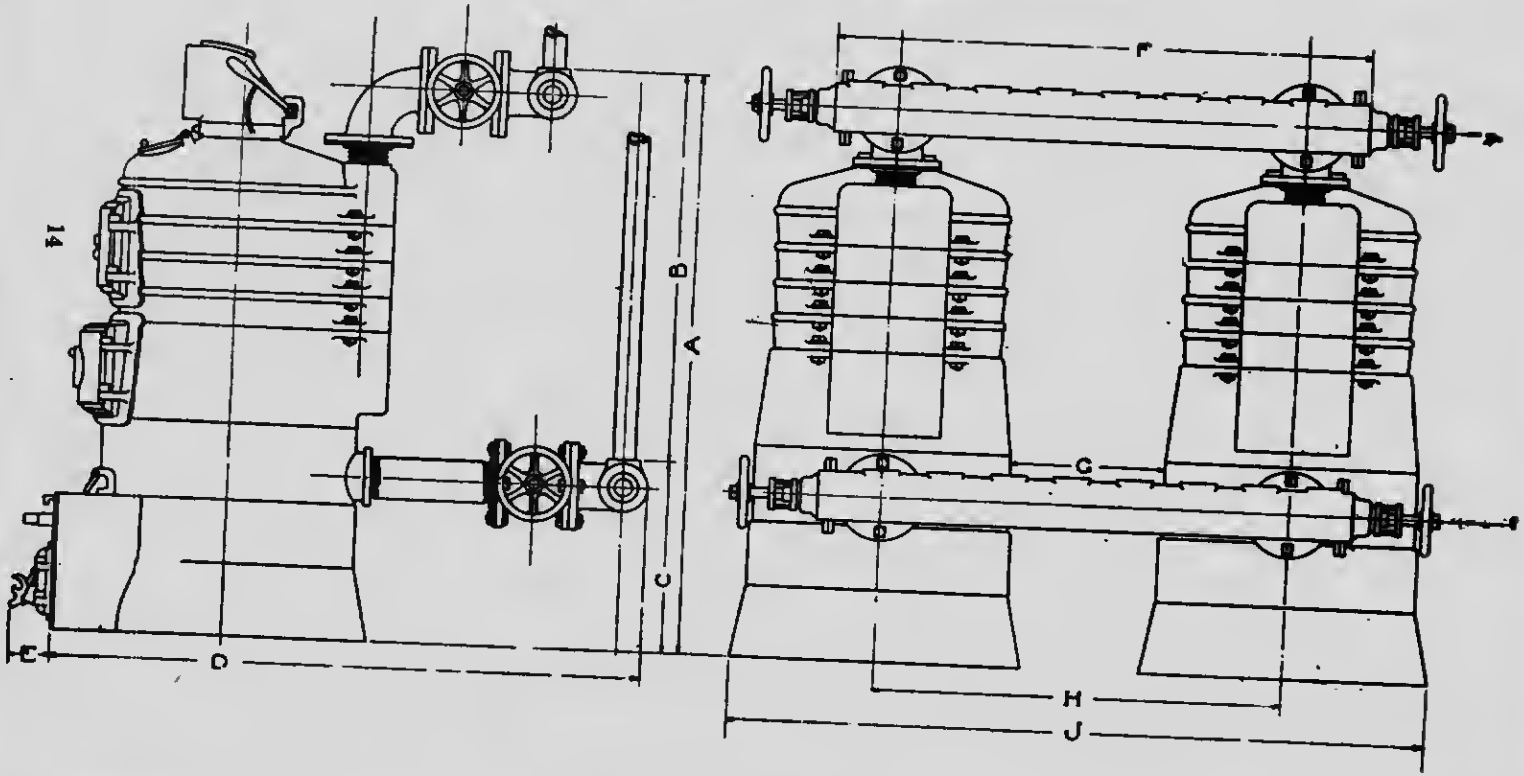
If you are using a coil or any kind of heater in the boiler to heat the range boiler remember it deducts 3 sq. ft. of heating capacity for every gallon of water heated, from the heating capacity of the boiler, and this should always enter into your calculations when choosing size of boiler.

Always instruct the party for whom you have installed the boiler, how to properly operate it, giving special stress to the fact that the grates will be burned out if the ashes are not removed at least once a day.

It is strongly advised that a hot water thermometer (see page 75) be provided for every plant, and instructions given as to the proper temperatures to maintain the water, according to the weather.

Oxford Series Hot Water Boilers

With Twin Connections. **Standard Dimensions.**



Twin Connections

Number of Boiler	Low Base										High Base						
	Total Height to top of Flow Header	Top of return to top of Flow Header	Height from Floor to top of Return	From Front of Base to Clear of Return	E-D- Over-all Dimensions	Length of Flow and Return Headers	Distance between Fireposts	Centre to Centre of Boilers	Width of Boil rs over Bases	Total Height to top of Flow Header	Top of Return to top of Flow Header	Height from Floor to top of Return	Sizes of Valves	Diam. of Header Cores	Number of Tappings	Size of Standard Tappings	Width of Valves, Face to Face
	A	B	C	D	E	F	G	H	J	A	B	C					
2–E.	59¼	41	18½	59	3½	55	11¼	36	65	66¼	41	25½	4	4	8	2	7½
3–E.	61	40¾	20½	60½	3½	55	16	42	72½	67¼	40½	28½	4	4	8	2	7½
4–E.	64	43¼	21	65	3½	55	12¾	42	76	72¼	43¼	28	4	5	8	2	7½
5–E.	65½	44¾	21	68½	3½	68	16¼	48	84	74½	44¾	30	4	5	10	2	7½
6–B.	70¼	47½	23	73¼	3¾	81	14	48	82½	81	47½	33½	5	6	12	2	8¾
6½–C.	77	51½	25¾	79	3½	107	11½	50	89½	85	51½	33½	5	7	16	2	8¾
7–B.	76	50¾	25½	83½	3½	107	9¼	50	90	85½	50¾	35	5	7	16	2	8¾
8–C.	78	52¾	25½	85¾	3½	107	7¾	50	91	86½	52¾	34¼	5	7	16	2	8¾
9–D.	76½	50½	26	87	3½	133	10	54	100	86¼	50½	36½	6	8	20	2	9½
10–C.	80½	54	26½	90½	3½	133	9	60	106	.....	.....	.....	6	8	20	2	9½

Oxford Steam Boilers

The construction of this Steam Boiler up to the section below the dome is shown on page 6.

The Insloped Walls, the big First Section, Push Nipple Joints, Gear Driven Grate Bars, Big Steam Space, are a few of the features of this Boiler

Oxford Steam Boilers

For Hard or Soft Coal or Coke or Natural Gas

Dimensions, Capacities and List Prices

No.	Outside Diameter of Boiler, Inches	Height to Smoke Outlet, Inches, Low Base	Height to Smoke Outlet, Inches, High Base	Height of Water Line, Inches, Low Base	Height of Water Line, Inches, High Base	Diameter of Grate, Inches	Grate Area, Square Feet	*Actual Capacity Direct Radiation, Ft.	Capacity Lin. Feet, 1 inch Pipe	Size Main Outlet, Inches	Size Return Outlet, Inches	Diameter of Smoke Outlet, Inches	Size of Chimney Required	List Price, including Trimmings, Low Base	List Price, including Trimmings, High Base
00 E	22	53	56	41	44	17½	1⅓	200	600	2	1½	7	8× 8	$165.00	$172.25
10 E	22	56½	59½	44½	47½	17½	1⅓	250	750	2	1½	7	8× 8	185 00	192.25
20 E	24	58½	63½	44½	49½	20½	2½	350	1,050	2½	2	7	8× 8	215.00	227.50
30 E	27	60	66	45½	51½	22½	2½	450	1,350	3	2	8	8×12	255.00	267.50
40 E	29	61	69	47	55	25½	3½	550	1,650	3	2	8	8×12	295.00	313.75
50 E	33	62	70	47½	55½	27½	4	700	2,100	3	2	10	12×12	337.50	362.50
60 B	34	63	72½	48	57½	29½	4⅔	900	2,700	3½	2½	10	12×12	400.00	431.25
60½ B	38	70	79½	54	63½	32½	5⅓	1,000	3,075	4	2½	11½	12×12	425.00	468.75
70 B	43½	73	82½	57	66½	35½	6⅔	1,275	3,825	4	2½	11½	12×12	500 00	535.00

Regular steam trimmings included, are: Steam Gauge, Safety Valve, Water Column, Glass Water Gauge, Gauge Cocks, Automatic Damper Regulator, also Cleaning Brush. This applies excepting in British Columbia, where special fittings are required.

Throughout catalogue make due allowance for mains and risers when selecting size of boiler required. All mains and boilers should be covered.

When soft coal or wood is used for fuel select a size larger boiler.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

Approximate Shipping Weights Oxford Steam Boilers

No.	Low Base	High Base	No.	Low Base	High Base
00 E	1,050 lbs.	1,125 lbs.	50 E	2,180 lbs.	2,290 lbs.
10 E	1,125 "	1,200 "	60 B	2,425 "	2,635 "
20 E	1,325 "	1,425 "	60½ B	2,630 "	2,835 "
30 E	1,575 "	1,680 "	70 B	3,210 "	3,460 "
40 E	1,750 "	1,890 "			

ALL RATINGS ARE GROSS—See Page 2

*See Page 2

Gurney Hot Water and Steam Boilers

900 Series

Gurney 900 Series Boilers are the most popular lines of header-less boilers in Canada. Built in twenty-two different sizes and suitable

for the smallest residence or large installations. During the time this boiler has been on the market, its sale has reached larger proportions than any square boiler made in the country. The specifications follow:

Ashpit is deep and roomy, insuring freedom from burnt out grates and kept free from grate rods, etc., which are placed at the side.

Grates are rocking type and a special trip will dump bars at one operation. They cannot be dumped without releasing this trip which automatically locks when bars have been righted.

Sections are of uniform thickness throughout, with large water ways and big steam space. Boiler may be enlarged at any time by purchasing additional water sections, grate sections and ashpit sides.

Fire Travel. The products of combustion are brought forward at sides of boiler first and back in the centre. The gases are compelled to impinge against the sides of firepot before escaping to the flues and the long fire travel means coal saved.

Push Nipples are used to connect sections. **Each boiler is fitted at the factory** and both the separate units and the complete boilers receive a test sixteen times greater than the pressure they are required to work under. The Push Nipple Construction saves your time in erecting.

910 Series

This Boiler has a lower water line than any other boiler in Canada. It is especially designed for cellars where head room is a consideration. Examine dimensions carefully.

917 Series Gurney Steam Boiler

No.	List Price	*Capacity, Feet	Equivalent in 1 inch Pipe	Height of Flow, Inches	Height, Water Line, Inches	Width, Inches	Length, Inches	Grate, Inches	Flows, Inches	Returns, Inches	Approximate Shipping Weight	Smoke Opening, Inches	Size of Flue Required, Inches
913S	$215.00	300	900	50¼	39½	29⅛	34¾	17×21	1-4	1-4	1,400	9	8× 8
914S	255.00	450	1,350	50¼	39½	29⅛	43½	17×30	2-4	2-4	1,725	9	8× 8
915S	312.50	600	1,800	50¼	39½	29⅛	51¼	17×39	2-4	2-2½	2,050	9	8×12
916S	350.00	750	2,250	50¼	39½	29⅛	60	17×48	2-4	2-2½	2,375	9	8×12
917S	400.00	900	2,700	50¼	39½	29⅛	68¾	17×57	2-4	2-2½	2,700	9	8×12 or equivalent

Regular steam trimmings included, excepting in British Columbia where special fittings are required.

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

*See Page 2

917 Series Gurney Hot Water Boiler

No.	List Price	*Capacity, Feet	Equivalent in 1-Inch Pipe	Height nf Flnw. Inches	Width, Inches	Length, Inches	Grate, Inches	Flnws, Inches	Returns, Inches	Approximate Shipping Weight, Lbs.	Smnke Opening, Inches	Size nf Flue Required, Inches
913W	$190.00	500	1,500	50¼	29⅛	34¾	17×21	1-4	1-4	1,400	9	8× 8 nr equivalent
914W	230.00	750	2,250	50¼	29⅛	43½	17×30	2-4	2-4	1,725	9	8× 8
915W	287.50	1,000	3,000	50¼	29⅛	51¼	17×39	2-4	2-4	2,050	9	8×12
916W	325.00	1,250	3,750	50¼	29⅛	60	17×48	2-4	2-4	2,375	9	12×12
917W	375.00	1,500	4,500	50¼	29⅛	68¾	17×57	2-4	2-4	2,700	9	12×12

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

* See Page 2

920 Series Gurney Steam Boiler

Regular steam trimmings included, excepting in British Columbia where special fittings are required.

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

No.	List Price	*Capacity Feet	Equivalent in 1 inch Pipe	Height of Flow, Inches	Height, Water Line, Inches	Width, Inches	Length, Inches	Grate, Inches	Flows, Inches	Returns, Inches	Approximate Shipping Weight	Smoke Opening, Inches	Size of Flue Required, Inches
924S	$255.00	425	1,275	56	48	32	25	21×16	1-4	2-2	1,100	8	8× 8
925S	312.50	575	1,725	56	48	32	31	21×22	2-4	2-2	1,600	8	8×13
926S	350.00	725	2,175	56	48	32	37½	21×28¼	2-4	2-2	2,100	8	8×13
927S	400.00	875	2,625	56	48	32	44	21×34½	2-4	2-3	2,600	10	8×13
928S	437.50	1,050	3,150	56	48	32	50½	21×40¾	2-4	2-3	3,100	10	12×12
929S	462.50	1,125	3,375	56	48	32	57	21×47	2-4	2-3	3,600	10	12×12

* See Page 2

The GURNEY FOUNDRY COMPANY, LIMITED

920 Series Gurney Hot Water Boiler

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

No.	List Price	*Capacity, Feet	Equivalent in 1-Inch Pipe	Height of Flow, Inches	Width, Inches	Length, Inches	Grate, Inches	Flows, Inches	Returns, Inches	Approximate Shipping Weight, Lbs.	Smoke Opening, Inches	Size of Flue Required, Inches
924W	230.00	700	2,100	56	32	25	21×16	1-4	2-4	1,100	8	8× 8
925W	287.50	900	2,700	56	32	31	21×22	2-4	2-4	1,600	8	8×13
926W	325.00	1,150	3,450	56	32	37½	21×28¼	2-4	2-4	2,100	8	8×13
927W	375.00	1,400	4,200	56	32	44	21×34½	2-4	2-4	2,600	10	12×12
928W	412.50	1,650	4,950	56	32	50½	21×40¾	2-4	2-4	3,100	10	12×12
929W	437.50	1,900	5,700	56	32	57	21×47	2-4	2-4	3,600	10	12×12

or equivalent

* See Page 2

930 Series Gurney Steam Boiler

Regular steam trimmings included, excepting in British Columbia where special fittings are required.

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

No.	List Price	*Capacity, Feet	Equivalent in 1 inch Pipe	Height of Flow, Inches	Height, Water Line, Inches	Width, Inches	Length, Inches	Grate, Inches	Flow, Inches	Return, Inches	Approximate Shipping Weight	Smoke Outlet, Inches	Size of Flue Required, Inches
934S	$475.00	1,200	3,600	64	56½	44	42	30×38	2-5	2-3	3,200	12	12×12
935S	550.00	1,500	4,500	64	56½	44	51	30×37	2-5	2-3	3,700	12	12×12
936S	625.00	1,800	5,400	64	56½	44	60	30×46	2-5	2-3	4,400	12	12×16
937S	700.00	2,100	6,300	64	56½	44	68	30×54	3-5	3-3	5,000	12	12×16
938S	775.00	2,400	7,200	64	56½	44	77	30×63	3-5	4-3	5,700	12	16×16
939S	850.00	2,700	8,100	64	56½	44	85½	30×72	3-5	4-3	6,300	12	16×16

or equivalent

* See Page 2

930 Series Gurney Hot Water Boiler

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

No.	List Price	Capacity, Feet*	Equivalent in 1-Inch Pipe	Height of Flow, Inches	Width, Inches	Length, Inches	Grate, Inches	Flow, Inches	Return, Inches	Approximate Shipping Weight	Smoke Outlet, Inches	Size of Flue Required, Inches
934W	$450.00	2,000	6,000	64	44	42	30×28	2-5	2-5	3,200	12	12×12
935W	525.00	2,500	7,500	64	44	51	30×37	2-5	2-5	3,700	12	12×12
936W	600 00	2,975	8,925	64	44	60	30×46	2-5	2-5	4,400	12	12×16
937W	675.00	3,500	10,500	64	44	68	30×54	3-5	3-5	5,000	12	12×16
938W	750.00	3,900	11,700	64	44	77	30×63	3-5	3-5	5,600	12	16×10 or equivalent
939W	812.50	4,450	13,35[illegible]	64	44	85½	30×72	3-5	3-5	6,300	12	16×16

* See Page 2.

940 Series Gurney Steam Boiler

Regular steam trimmings included excepting in British Columbia, where special fittings are required.

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

No.	List Price	Capacity, Feet*	Equivalent in 1 inch Pipe	Height, Inches	Height, Water Line, Inches	Width, Inches	Length, Inches	Grate, Inches	Flow, Inches	Return, Inches	Approximate Shipping Weight	Smoke Outlet, Inches	Size of Flue Required, Inches
945S	$800.00	2,500	7,500	72	60	56½	51	42×37	2-5	2-4	5,600	15	16×16
946S	962.50	3,125	9,375	72	60	56½	60	42×46	2-5	2-4	6,500	15	16×16
947S	1,112.50	3,750	11,250	72	60	56½	68½	42×55	3-5	3-4	7,400	15	16×16
948S	1,275.00	4,375	13,125	72	60	56½	77¼	42×64	3-5	3-4	8,300	15	16×20
949S	1,425.00	5,000	15,000	72	60	56½	86	42×73	3-5	3-4	9,200	15	16×20 or equivalent

* See Page 2.

940 Series Gurney Hot Water Boiler

Make due allowance for mains and risers when selecting size of boiler required.

When soft coal or wood is used as fuel, select a size larger boiler than for hard coal.

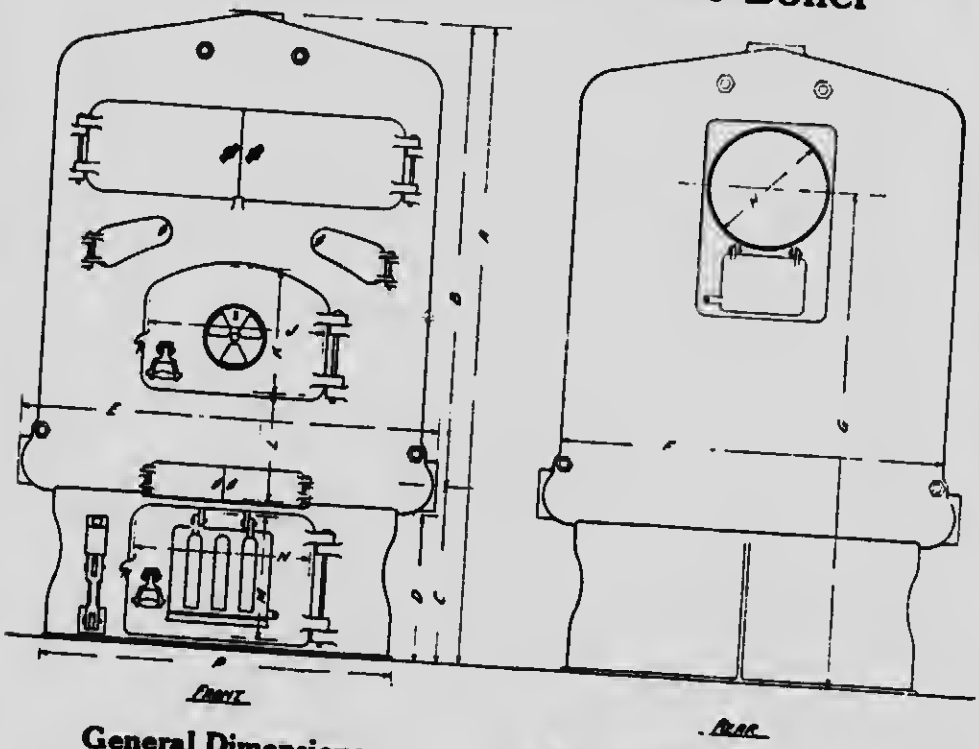
Direct-indirect radiation requires 50% more boiler capacity. Indirect radiation requires 75% increased boiler capacity.

No.	List Price	Capacity, Feet*	Equivalent in 1-Inch Pipe	Height of Flow, Inches	Width, Inches	Length, Inches	Grate, Inches	Flow, Inches	Return, Inches	Approximate Shipping Weight	Smoke Outlet, Inches	Size of Flue Required, Inches
945W	$ 762.50	4,000	12,000	72	56	51	42×37	2-5	2-5	5,600	14	16×16
946W	925.00	5,100	15,300	72	56	60	42×46	2-5	2-5	6,500	14	16×16
947W	1,075.00	6,200	18,600	72	56	69	42×55	3-5	3-5	7,400	14	16×16
948W	1,212.50	7,300	21,900	72	56	78	42×64	3-5	3-5	8,300	14	16×20
949W	1,362.50	8,400	25,200	72	56	87	42×73	3-5	3-5	9,200	14	16×20

or equivalent

* See Page 2.

Dimensions 900 Series Boiler

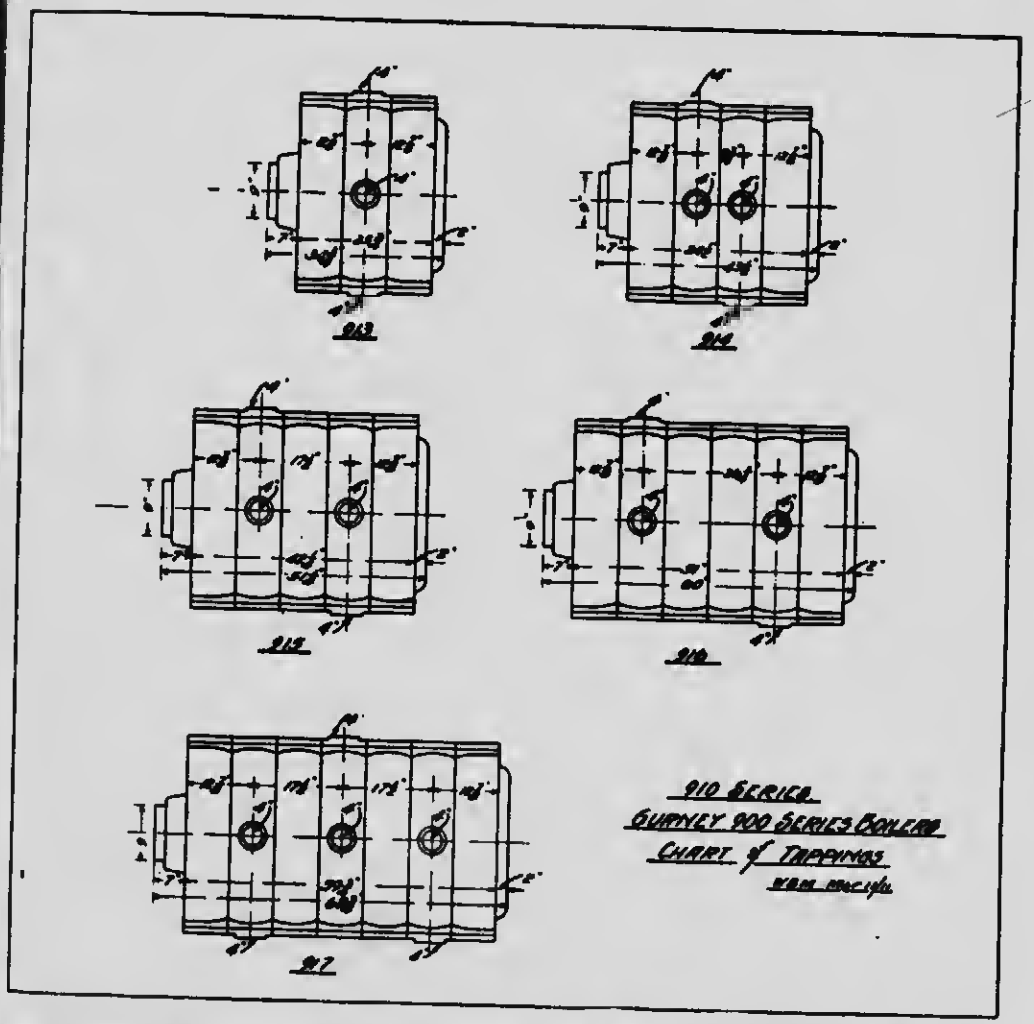


General Dimensions.

All Dimensions in Inches

Series	A Total Height	B Distance from Centre Line of Return to Top of Boiler	C Distance from Floor to Centre Line of Return Opening	D Height of Base	E Total Width of Section	F Width of Section	G From Floor to Centre Line of Smoke Collar	H Outside Diameter of Smoke Collar	J Width of Fire Door	K Height of Fire Door	L Depth from Bottom of Fire Door to Grate	M Width of Ash Pit Door	N Height of Ash Pit Door	P Width of Base	Size of Push Nipple: Flow	Size of Push Nipple: Return
917	50¼	35¾	13¾	11	29½	24¼	34½	9	17½	8½	9½	11½	8	24	4	3
920	56	41½	14½	11	32	27½	42	10	16	10	10	16	8	29¾	4	3
930	64	47	17	14	44	38¼	49	12	18	12	12	17½	11	35	5	4
940	72	54¼	17½	14	56½	52½	52	15	23	11	14	Two Doors 12½ x 10		47	6	4

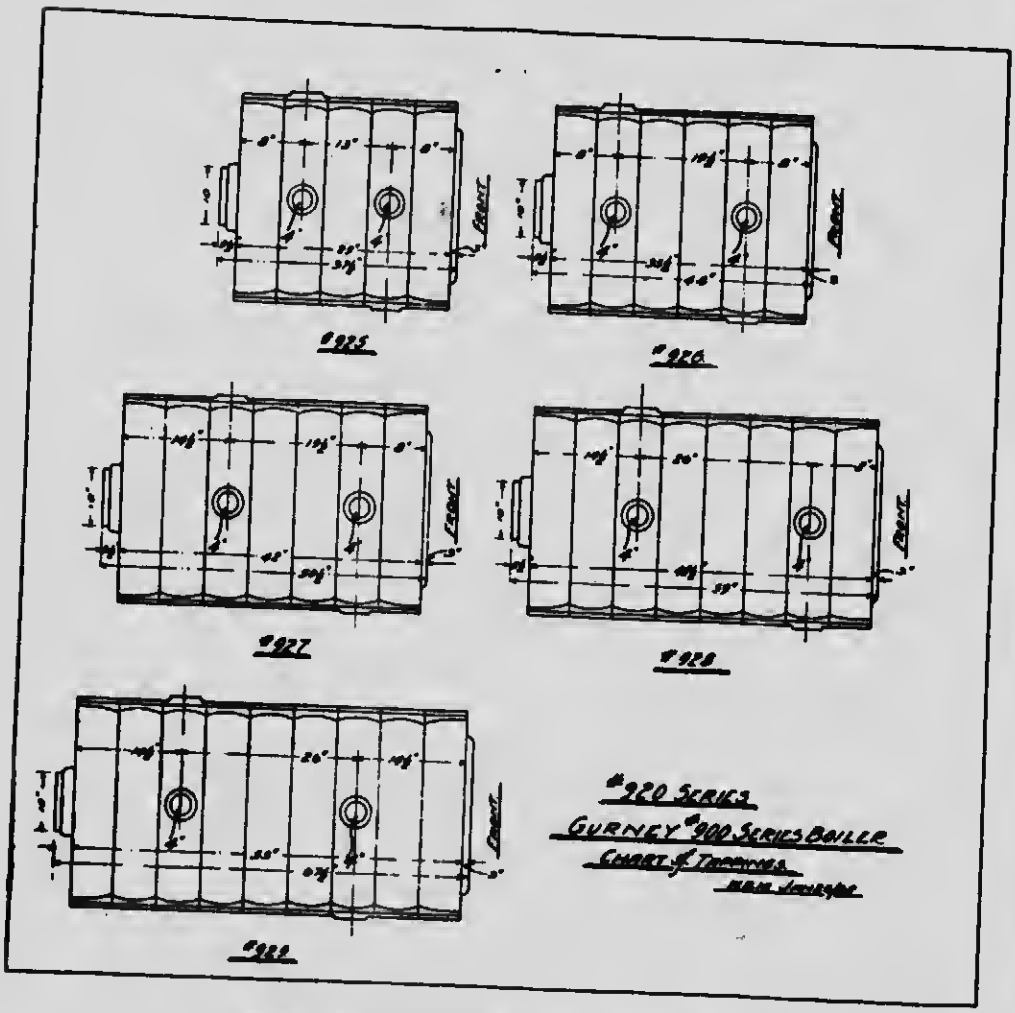
Chart of Tappings 910 Series Boiler



NOTE—913 boiler has one return tapping only; but section may be reversed.

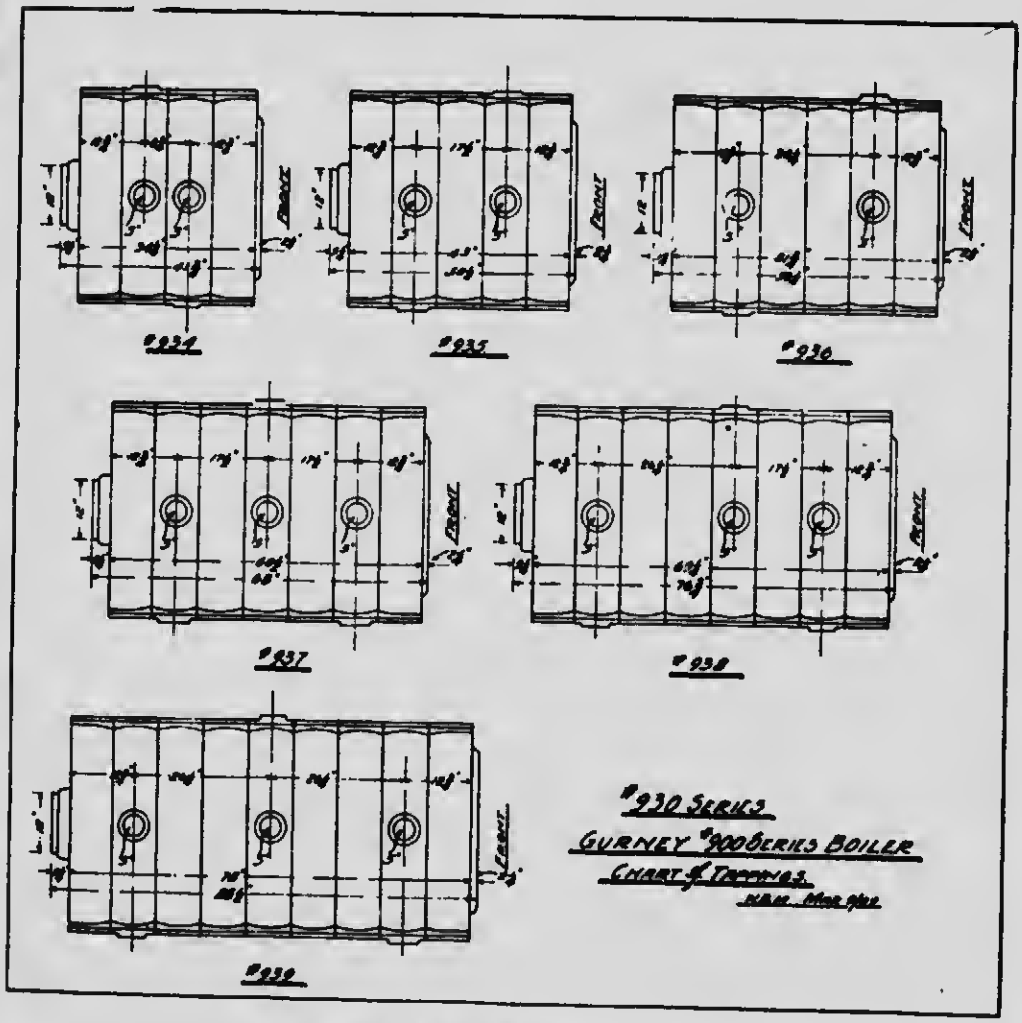
Use at least 2-flow connections for steam.

Chart of Tappings 920 Series Boiler



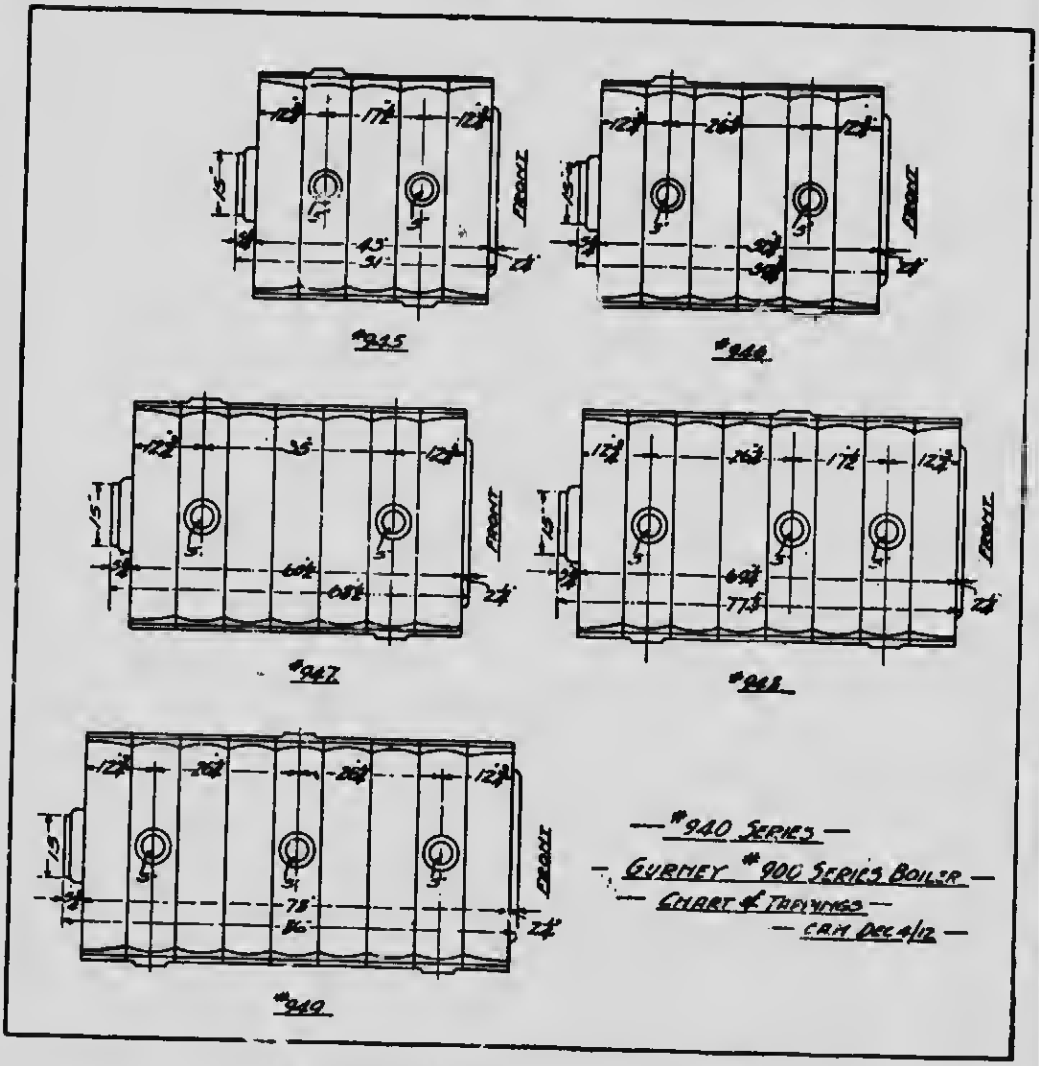
Use at least 2-flow connections for steam.

Chart of Tappings 930 Series Boiler



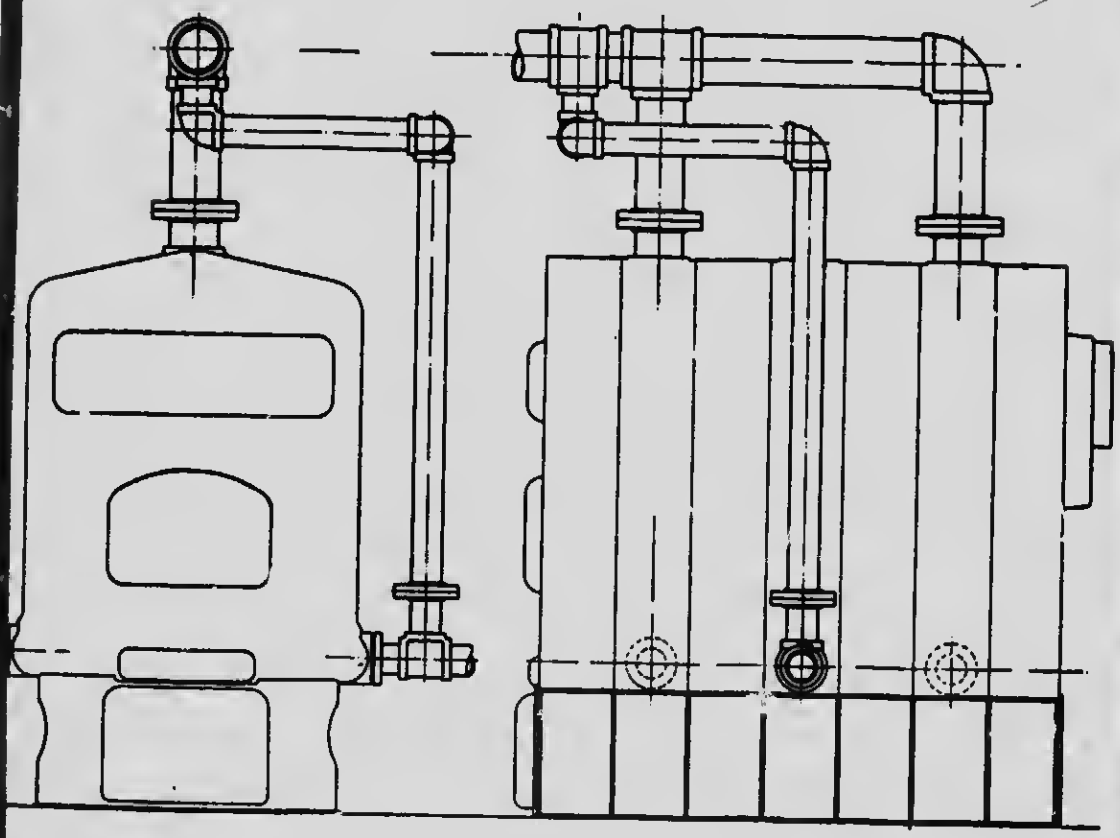
Use at least 2-flow connections for steam.

Chart of Tappings 940 Series Boiler



Use at least 2-flow connections for steam.

Boiler Connections



Showing correct method of connecting equalizing pipe from flow main to the return entering boiler.

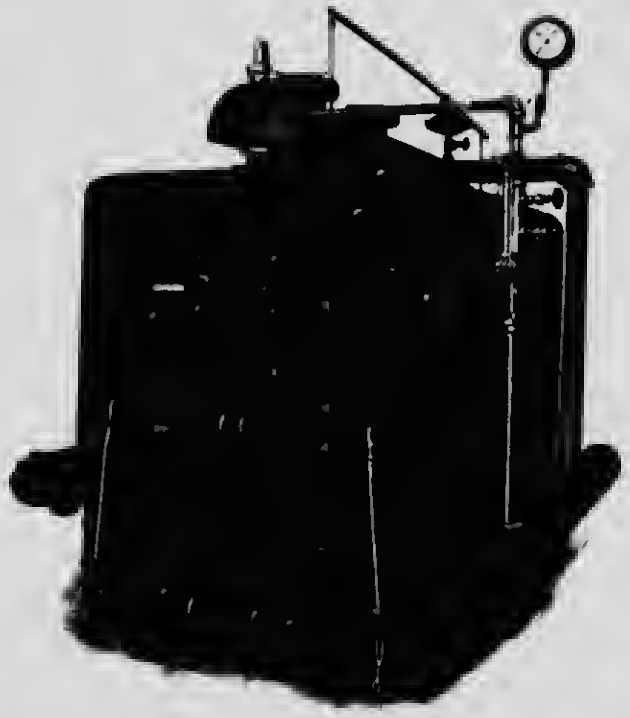
The Gurney Bright Idea Boiler

This boiler is intended to cater to engineers preferring a HEADER boiler

The large number of these boilers in successful operation over a long period of years is our best argument in their favor. The Bright Idea exactly meets the requirements of the trade for a boiler with large steam space headers. This boiler comes in sixteen different sizes and three different widths. It is built for any kind of fuel and for steam or hot water work. Every care is taken to insure uniform castings, and we have attained almost absolute freedom from expansion cracks. Any section may be removed without displacing the whole boiler. The grates are accessible for repairs and easily operated. The flue surfaces are extremely large, and the long fire travel insures the best use of the products of combustion. All boilers are supplied with full complement of firing tools and steam boilers with best grade of low pressure steam trimmings.

Gurney Bright Idea Boiler

For Steam or Hot Water



These Boilers have capacity of 1,000 to 7,250 feet of radiation for Steam. 1,650 to 12,000 feet of radiation for Hot Water.*

*See page 2.

Gurney Bright Idea Steam Boiler

For Hard or Soft Coal, Coke, Wood or Natural Gas

STEAM

Description, Capacities and Prices

No.	List Price, Hard and Soft Coal	Capacity, Feet*	Capacity, Lin. Feet 1-inch Pipe	Height of Water Line, Inches	Height, including Headers, Inches	Length, Inches	Width, including Headers, Inches	Size Grate, Inches	Flow Outlets, Inches	Return Outlet, Inches	Diameter Smoke Pipe, Inches	Approx. Shipping Weights
1,020	$ 425.00	1,000	3,000	55	59½	41	55	28×25	2-4	2-3	12	3,500
1,021	475.00	1,200	3,500	55	59½	47	58	28×32	2-4	2-3	12	4,000
1,022	525 00	1,400	4,200	55	59½	53	55	28×38	2-4	2-3	12	4,400
1,023	575.00	1,500	4,800	55	59½	59	55	28×44	2-4	2-3	12	4,900
1,024	525.00	1,800	5,400	55	59½	55	58	28×50	3-4	3-3	12	5,
1,025	575.00	2,000	6,000	55	59½	71	55	28×55	3-4	3-3	12	5,900
1,130	782.50	2,350	7,050	58	74	82	78	40×44	1-3 and 1-4	2-4	14	7,200
1,131	850.00	2,700	8,100	58	74	87	78	40×50	1-5 and 1-4	2-4	14	7,800
1,132	937.50	3,050	9,150	58	74	74	78	40×58	1-6 and 1-4	2-4	14	8,400
1,133	1,025.00	3,400	10,200	55	74	79	75	40×52	1-5 and 1-4	2-4	14	9,000
1,250	1,112.50	3,750	11,250	55	79	80	88	48×51	2-8	2-4	20	11,500
1,251	1,237.50	4,250	12,750	55	79	88	88	48×58	2-5	2-4	20	13,000
1,252	1,425.00	5,000	15,000	55	79	94	88	48×85	2-8	2-4	20	14,400
1,253	1,512.50	5,750	17,250	55	79	108	88	48×72	3-8	3-4	20	15,700
1,254	1,800.00	8,500	19,500	55	79	121	88	48×79	3-5	3-4	20	17,800
1,255	1,987.50	7,250	21,750	58	79	128	88	48×85	3-6	3-4	20	20,000

Regular Steam Trimmings included in price.

All ratings are gross. Allow for radiation of piping when selecting size of Boiler.

Direct-indirect radiation requires 50 per cent. increased boiler power.

Indirect radiation requires 75 per cent. increased boiler power.

* See page 2.

The GURNEY FOUNDRY COMPANY, LIMITED

Gurney Bright Idea Hot Water Boiler

For Hard or Soft Coal, Coke, Wood or Natural Gas

HOT WATER

Description, Capacities and Prices

No.	List Price, Hard and Soft Coal	Capacity, Feet*	Capacity, Lin. Feet 1-inch Pipe	Height, including Headers, Inches	Length, Inches	Width, Including Headers, Inches	Size Grate, Inches	Main Outlet, Inches, Flow and Return	Diameter Smoke Pipe, Inches	Approx. Shipping Weights
1,020	$ 400.00	1,550	4,950	69½	41	55	28×26	2-4	12	3,500
1,021	450.00	2,000	6,000	59½	47	55	28×32	2-4	12	4,000
1,022	500.00	2,325	5,975	59½	53	56	28×38	2-4	12	4,400
1,023	550.00	2,650	7,950	59½	59	55	28×44	3-4	12	4,900
1,024	600.00	2,975	8,925	69½	65	55	28×50	3-4	12	5,400
1,025	650.00	3,300	9,900	69½	71	56	28×55	3-4	12	5,900
1,130	737.50	3,875	11,525	74	52	76	40×44	1-3 and 1-4	14	7,200
1,131	812.50	4,450	13,350	74	57	75	40×50	1-6 and 1-4	14	7,800
1,132	900.00	5,025	15,075	74	74	75	40×55	1-5 and 1-4	14	8,400
1,133	987.50	5,500	15,800	74	79	75	40×62	1-6 and 1-4	14	9,000
1,250	1,075.00	6,200	18,600	79	80	88	48×51	2-6	20	11,500
1,251	1,175.00	7,000	21,000	79	86	88	48×58	2-6	20	13,000
1,252	1,362.50	8,250	24,750	79	94	88	48×65	2-6	20	14,400
1,253	1,550.00	9,575	28,725	79	106	88	48×72	3-5	20	15,700
1,254	1,737.50	10,750	32,250	79	121	88	48×79	3-6	20	17,800
1,255	1,925.00	12,000	36,000	79	128	88	48×86	3-6	20	20,000

All ratings are gross, allow for radiation of piping when selecting size boiler.

* See page 2.

Gurney Gothic Steam Boiler

Capacity Direct Radiation 200 Feet*

Made in One Size

No.	Height, Inches	Diameter Base, Inches	Diameter Grate, Inches	Diameter. Smoke Outlet, Inches	Number and Size Outlet, Inches	List Price including Trimmings	Shipping Weight
16	45	25	16	7	1-2 Flow 1-1½ Return	$165.00	700 lbs.

* See page 2.

The Gothic Heater

A very efficient heater, will be found especially suitable when large quantities of water are required for barber shops, restaurants, small greenhouses, baths, etc. It is very strongly constructed. Has a deep firepot which ensures slow combustion and economy of fuel. No water joints.

No.	Height Inches	Diameter of Firepot, Inches	*Actual capacity Direct Radiation Feet	Tank Capacity Gallons	Diameter of Smoke Outlet, Inches	Size of Flue Required, Inches	Sizes of Flow and Return Outlet Inches	List Price	Approximate Shipping Weights
12	35	12	175	225	6	9×9	1-2 Flow 2-2 Return	$55.00	450
14	37	14	250	325	7	9×9	1-2½ Flow 2-2 Return	75.00	550
16	39	16	350	450	7	9×9	1-2½ Flow 2-2 Return	100.00	675

* See page 2

The Doric Heater

A most powerful tank heater well known to the Canadian trade. It gives splendid service for heating water as the section is one single casting without joints. Its low height makes it very desirable where there is small cellar head room.

No.	List Price Low Base	List Price High Base	Capacity Net Feet *	Equivalent Capacity in Feet of 1-inch Pipe	Adaptable Tank Size Gallons
11 B	$140.00	$147.00	335	1005	250
12 B	160.00	170.00	500	1500	350
13 B	200.00	215.00	670	2010	450
14 B	240.00	260.00	835	2505	600

No.	Height in Inches Low Base	Height in Inches High Base	Diameter of Base in Inches	Outside Diameter of Firepot in Inches	Diameter of Grate in Inches	Diameter of Smoke Outlet Inches	Size of Chimney Required Inches	No. and Size of Flow and Return Outlets	Approximate Shipping Weight Low Base	Approximate Shipping Weight High Base
11 B	56	61	25	22½	20	7	9 × 9	4 2"	940	1030
12 B	56	62	27	25½	22	7¼	9 × 9	4 2½"	1240	1330
13 B	58	66	30	29	24	8	9 × 9	6 2½"	1575	1700
14 B	58	66	33	33	27	9	12 × 12	6 2"	1835	2050

* See Page 2

Gurney-Oxford Defiance Heater

Plain

A splendid tank heater, with convenient pot hole in top. Will give excellent satisfaction for very small hot water jobs. A splendid stable heater.

List Price

For Coal

No.	Tank Capacity	Capacity in 1 Inch Pipe	Approx. Shipping Weight	List Price
110	150 gals.	400 feet	350 lbs.	$45.00
112	200 gals.	600 feet	400 lbs.	52.50

Gurney-Oxford Jacket Heater

"A" Series

Tank Capacity, using hard coal, 75 to 100 gallons.
" " " soft coal, 50 to 75 "

List Price	$24.00
Diameter of Firepot	10 inches
Depth of Water Cylinder	17 inches
Iron Pipe Connections	1¼ inches
Height over all	27 inches
Tappings—Flow	2-1 inches
Tappings—Return	1-1¼ inches
Approximate Shipping Weight	200 lbs.

NOTE—Where head room is extremely limited this heater can be supplied with a shallower water cylinder at same list price.

Rancher Jacket Heater

Water Heating Laundry Stove

A CERTAIN WASH-DAY FAVORITE

An Up-to-Date Laundry Stove that will also heat a 52 Gallon Water Tank

Outlets may face either right or left, changeable on the job.

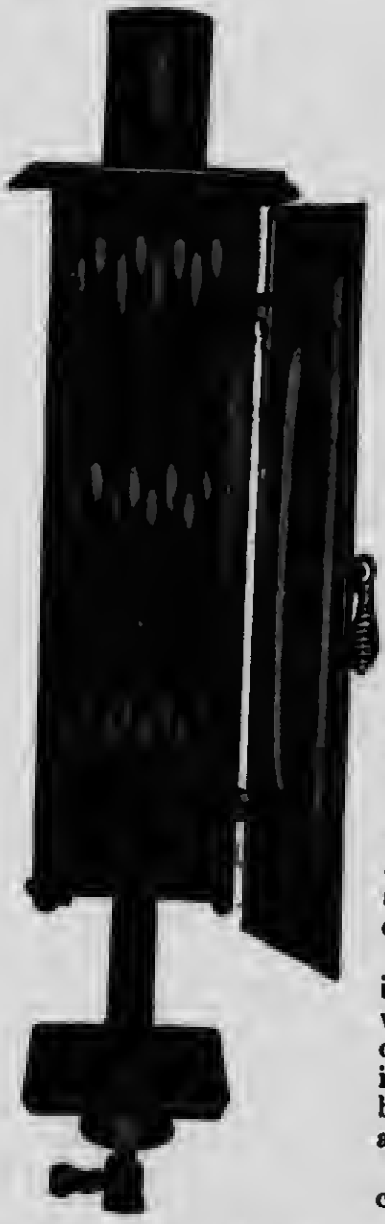
DETAILS

Size of top, No. 138	14 × 20 inches
Size of top, No. 139	15 × 21½ inches
Tapped	1 inch for both Flow and Return
Height from floor	21 inches
Shipping Weight	100 lbs.

No. 139 takes 9-inch pit bottom wash boiler.
No. 138 takes 8-inch pit bottom wash boiler.
Capacity using hard coal, 52 gals.
Capacity using soft coal, 40 gals.

LIST PRICE

No. 138	$16.00
No. 139	17.00



The Gurney-Oxford Ninex Hot Water Generator

Owing to its construction this heater will give a good quantity of hot water in a remarkahly short space of time. Every salesman should note and every user should be aware of the following valuahle features about this heater.

1. The Heater contains 30 feet of pure copper tuhing, securely expanded in a cast metal header. The water is split into small units and heats very quickly. This is a great advantage over the single coil, where the water must travel through the entire heater before being freed.

The peculiar arrangement of these coils ensures the best possihle comhustion of the gas consumed, and ensures the largest possihle comhustion space above the hurners.

The Burner is of the most modern design, capahle of perfect results. The air mixer is unique in construction, ensuring the right proportion of air for comhustion at all times.

The outside casing is of heavy cast iron, neat and well finished, and provided with full sized door opening for cleaning coils and lighting hurners. This is an immense advantage as the heater may be kept at the highest point of efficiency at all times.

A cast iron drip pan is provided to catch any condensation.

No.	Overall Dimensions	Approx. Shipping Weight 49 lbs.	Code Word	List Price
1	7½" wide, 9" deep x 27" high		Emporium	$19.00

Data re Tubular Boilers

Standard Dimensions Horizontal Return Tubular Boilers for Heating

Size Diameter By Length	Nominal H.P.	Heating Surface Feet*	Tubes		Thickness		Connections		Grates		Smoke Box	Gross Rating in sq. ft. of Radiation*	Brick required		Shipping Weight Lbs.
			No.	Size	Shell	Heads	Outlet	Return	Width	Length	Diameter		Fire Brick	Common Brick	
36″ × 10 ft.	20	305	32	3″	¼″	5/16″	4″	3″	30″	42″	18″	2,000	600	6,500	5,000
36″ × 12 ft.	25	365	32	3″	¼″	5/16″	4″	3″	30″	48″	18″	2,400	600	7,000	5,050
42″ × 10 ft.	25	363	38	3″	¼″	3/8″	5″	3″	36″	42″	20″	2,400	700	8,000	6,500
42″ × 12 ft.	35	434	38	3″	¼″	3/8″	5″	3″	36″	48″	20″	2,900	700	9,000	7,000
42″ × 14 ft.	35	504	38	3″	¼″	3/8″	5″	3″	36″	48″	20″	3,350	700	10,000	7,500
48″ × 10 ft.	35	484	52	3″	5/16″	3/8″	6″	4″	42″	42″	22″	3,200	800	10,000	7,400
48″ × 12 ft.	40	578	52	3″	5/16″	3/8″	6″	4″	42″	48″	22″	3,800	800	11,000	8,300
48″ × 14 ft.	45	672	52	3″	5/16″	3/8″	6″	4″	42″	48″	22″	4,400	800	12,000	9,200
54″ × 12 ft.	50	704	64	3″	5/16″	3/8″	6″	4″	48″	48″	24″	4,600	900	12,000	10,750
54″ × 14 ft.	60	818	64	3″	5/16″	3/8″	6″	4″	48″	48″	24″	5,200	900	12,000	12,000
60″ × 12 ft.	60	849	78	3″	5/16″	3/8″	7″	5″	54″	48″	26″	5,400	950	14,000	11,400
60″ × 14 ft.	70	987	78	3″	5/16″	3/8″	7″	5″	54″	54″	26″	6,500	900	15,500	14,250
60″ × 16 ft.	80	1,055	62	3½″	5/16″	3/8″	7″	5″	54″	60″	28″	7,000	900	17,000	16,000
66″ × 14 ft.	100	1,222	98	3″	3/8″	7/16″	8″	6″	60″	54″	30″	8,000.	1,000	17,500	18,000
66″ × 16 ft.	115	1,305	78	3½″	3/8″	7/16″	8″	6″	60″	60″	30″	9,000	1,000	18,000	19,500
72″ × 14 ft.	115	1,410	114	3″	3/8″	7/16″	8″	6″	66″	54″	34″	9,000	1,700	19,000	18,750
72″ × 16 ft.	130	1,588	96	3½″	3/8″	7/16″	8″	6″	66″	60″	34″	0.500	1,800	20,000	20.500

*See page 2.

The above data represent standard practice but are not guaranteed by us.

Steel Storage Tanks—Galvanized or Black

All Tanks are Double Rivetted, are air tight when they leave the shop and when they reach destination. Special attention is paid to the tappings and none but long, clean, sharp threads are passed by our inspector. All tanks are given two tests; one a water test at 100 lbs. pressure, and the other an air test at 125 lbs. pressure.

Double Rivetted Hot Water Tanks

Nominal Capacity, Gallons	Diameter, Inches	Length, Feet	Thickness, Shell	Thickness, Heads	Approximate Weight, Pounds	Regular Opening	Storage Tanks Only		Coils Built in Tank	
							Black	Galvanized	Black Pipe	Galvanized
120	24	5	3-16	5-16	425	1½	$55.00	$ 76.50	$15.00	$17.00
145	24	6	3-16	5-16	445	1½	58.00	85.50	16.00	18.00
180	30	5	3-16	5-16	495	2	64.00	.....	15.00	17.00
195	24	8	3-16	5-16	560	2	.....	108.00	.....	18.00
220	30	6	3-16	5-16	560	2	70.00	112.50	16.00	18.00
245	24	10	3-16	5-16	675	2	.....	121.50	.....	19.00
255	30	7	3-16	5-16	625	2	75.00	.....	17.00	19.00
295	30	8	3-16	5-16	700	2	88.00	138.35	20.00	20.00
315	36	6	3-16	5-16	750	2	92.00	139.90	19.00	22.00
365	36	7	3-16	5-16	825	2	102.00	159.00	20.00	23.00
420	36	8	3-16	5-16	900	2	112.00	169.15	21.00	24.00
525	36	10	3-16	5-16	1,050	2	131.00	198.75	23.00	26.00
575	42	8	1-4	3-8	1,450	2	135.00	223.50	22.00	25.00
720	42	10	1-4	3-8	1,650	2	150.00	203.25	25.00	28.00
865	42	12	1-4	3-8	1,900	2	196.00	316.90	28.00	31.00
1000	42	14	1-4	3-8	2,200	2	219.00	357.75	31.00	34.00

Gurney-Oxford Closed Tanks

Cast Iron

For Pressure Hot Water Heating

Prices include the following trimmings:—Pressure Gauge, Safety Valve, Water Glass, Funnel Cock and Pet Cock.

	Size in Inches.	List Price.
No. 1 Tank.....	19½ × 11 diameter...	$33.00
No. 2 Tank.....	22 × 13 diameter....	35.00
No. 3 Tank.....	25½ × 15 diameter....	40.00
No. 4 Tank.....	28½ × 16 diameter....	45.00

If mountings are not required, deduct $14.00 from list prices.

Made to stand horizontally or vertically.

Radiator Connections

Every practical heating man in this country is familiar with the claims of makers of screw and push nipple joints for radiators. We illustrate herewith the two types. We make both and are prepared to supply the heating engineers of the country with what they want in this line. Our position in this respect is unique among the manufacturers of Canada, as all the others are making one joint only.

Of the two we strongly urge the use of the push nipple joint, which we guarantee more fully than we can the screw nipple construction. Every practical man knows that a screw nipple joint must be made with a gasket of fibrous material, usually paper, and this element of weakness is not present in the iron to iron, all metal push nipple joint.

Push Nipple

Screw Nipple

We make three sizes of screwed nipples:

1st.—1½" Standard pipe thread, used on wall radiators only.

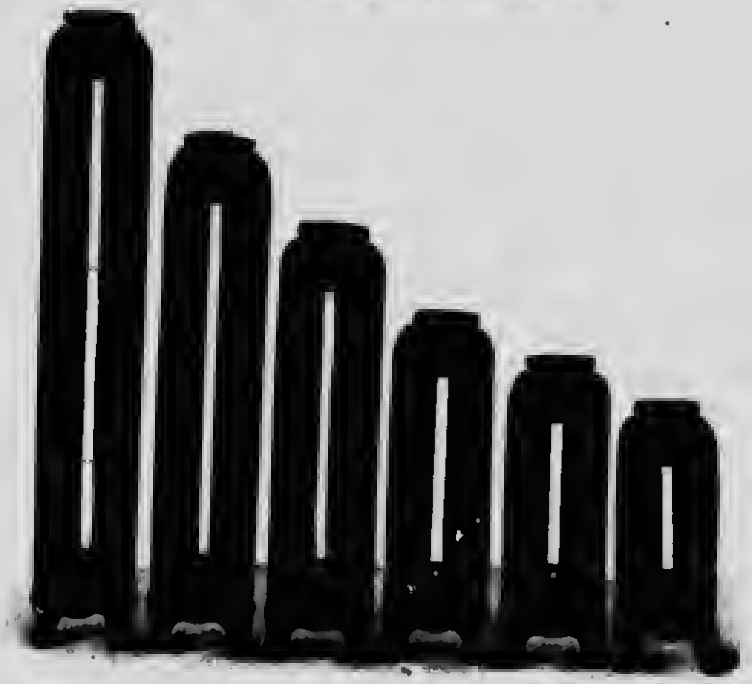
2nd.—Screw nipple radiators where the plugs in the radiators are marked with a G, Full 2" nipple.

3rd.—All radiators other than wall radiators and radiators with plugs marked with a G, call for 1 15-16" screw nipples.

In ordering specify which size of nipple required.

Gurney-Oxford Duet Radiator

Each Section is 7¼ inches wide.



Distance from floor to centre of tapping, one pipe, steam	3½ inches
Distance from floor to centre of tapping in centre opening, hot water	4 inches
Distance from floor to centre of tapping in twin opening	4 inches
Distance from wall to centre of tapping in centre opening	4 inches
Distance from wall to centre of tapping in twin opening	2⅜ inches
Distance from centre to centre of twin opening	3⅛ inches
Distance from floor to centre of top opening—	
45 inch Radiator	42¾ inches
38 inch Radiator	35 inches
32 inch Radiator	29¼ inches
26 inch Radiator	23½ inches
23 inch Radiator	20¾ inches
20 inch Radiator	17¾ inches

Table of Gurney-Oxford Duet Radiator Capacities

Plain or Ornamental **Direct or Direct-Indirect**

Steam or Hot Water

Size of Radiator No. of Loops Long	Extreme Length of Radiator, Inches	List 48 Cents 45 Inches High		List 48 Cents 38 Inches High		List 52 Cents 32 Inches High		List 58 Cents 28 Inches High		List 58 Cents 23 Inches High		List 52 Cents 20 Inches High	
		*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe
2 × 2	5	10	30	8	24	5⅔	20	5⅓	15	4⅔	14	4	12
2 × 3	7½	15	45	12	38	10	30	8	24	7	21	5	18
2 × 4	10	20	50	18	48	13⅓	40	10⅔	32	9⅓	28	8	24
2 × 5	12½	25	75	20	80	16⅔	50	13⅓	40	11⅔	35	10	30
2 × 6	15	30	90	24	72	20	60	16	48	14	42	12	36
2 × 7	17½	35	105	28	84	23⅓	70	18⅔	58	18⅓	49	14	42
2 × 8	20	40	120	32	95	28⅔	80	21⅓	54	18⅔	55	16	48
2 × 9	22½	45	135	35	108	30	90	24	72	21	83	18	54
2 × 10	25	50	150	40	120	33⅓	100	25⅔	80	23⅓	70	20	80
2 × 11	27½	55	185	44	132	38⅔	110	29⅓	88	25⅔	77	22	68
2 × 12	30	60	180	48	144	40	120	32	98	28	84	24	72
2 × 13	32½	85	195	52	156	43⅓	130	34⅔	104	30⅓	91	28	78
2 × 14	35	70	210	58	188	48⅔	140	37⅓	112	32⅔	98	28	84
2 × 15	37½	75	225	60	180	50	150	40	120	35	105	30	90
2 × 16	40	80	240	64	192	53⅓	150	42⅔	128	37⅓	112	32	98
2 × 17	42½	85	255	58	204	55⅔	170	45⅓	138	39⅔	119	34	102
2 × 18	45	90	270	72	218	60	180	48	144	42	126	38	108
2 × 19	47½	95	285	75	228	53⅓	190	50⅔	152	44⅓	133	38	114
2 × 20	50	100	300	80	240	58⅔	200	53⅓	150	46⅔	140	40	120

Width of Radiator, 7¼ in. *See page 2.

Gurney-Oxford Tremont Radiator

Each Section is 9¾ inches wide.

Distance from floor to centre of tapping in centre opening	4	inches
Distance from wall to centre of tapping in centre opening	5	inches
Distance from wall to centre of tapping : . twin opening	2¾	inches
Distance from floor to centre of tapping in centre opening	4	inches
Distance from centre to centre in twin openings	4¼	inches
Distance from floor to centre of top opening—		
39 inch Radiator	37⅛	inches
33 inch Radiator	31½	inches
27 inch Radiator	25¼	inches
21 inch Radiator	19¾	inches

Gurney-Oxford Tremont Radiators

For Hot Water or Steam **Plain or Ornamental**

Dimensions and Capacities

Size of Radiator No. of Loops Long	Extreme Length of Radiator in Inches	List 48 Cents		List 52 Cents		List 55 Cents		List 52 Cents	
		39 Inches High *6 Feet per Section	Equivalent Lineal Feet of 1-inch Pipe	33 Inches High *5¼ Feet per Section	Equivalent Lineal Feet of 1-inch Pipe	27 Inches High *4¼ Feet per Section	Equivalent Lineal Feet of 1-inch Pipe	21 Inches High *3¼ Feet per Section	Equivalent Lineal Feet of 1-inch Pipe
3 X 2	5	12	36	10½	31½	8½	25½	5½	19½
3 X 3	7½	18	54	15¾	47¼	12¾	38¼	9¾	29¼
3 X 4	10	24	72	21	63	17	51	13	39
3 X 5	12½	30	90	26¼	78¾	21¼	63¾	15¼	48¾
3 X 6	15	36	108	31½	94½	25½	76½	19½	58½
3 X 7	17½	42	126	36¾	110¼	29¾	89¼	22¾	68¼
3 X 8	20	48	144	42	126	34	102	25	78
3 X 9	22½	54	162	47¼	141¾	38¼	114¾	29¼	87¾
3X10	25	60	180	52½	157½	42½	127½	32½	97½
3X11	27½	66	198	57¾	173¼	46¾	140¼	35¾	107¼
3X12	30	72	216	63	189	51	153	39	117
3X13	32½	78	234	68¼	204¾	55¼	165¾	42¼	125¾
3X14	35	84	252	73½	220½	59½	178½	45½	136½
3X15	37½	90	270	78¾	236¼	63¾	191¼	48¾	146¼
3X15	40	96	288	84	252	68	204	52	156
3X17	42½	102	306	89¼	267¾	72¼	215¾	55¼	165¾
3X18	45	108	324	94½	283½	76½	229½	58½	175½
3X19	47½	114	342	99¾	299¼	80¾	242¼	61¾	185¼
3X20	50	120	360	105	315	85	255	65	195

* See page 2.

Gurney-Oxford Quartet Radiator

Each Section is 8½ inches wide

Distance from floor to centre of tapping in centre opening	4	inches
Distance from wall to centre of tapping in centre opening	4⅜	inches
Distance from wall to centre of tapping in twin opening	2½	inches
Distance from floor to centre of tapping in twin openings	4	inches
Distance from centre to centre in twin opening	3⅜	inches
Distance from floor to centre of top opening—		
42½ inch Radiator	40¾	inches
38½ inch Radiator	36¾	inches
32½ inch Radiator	30½	inches
26½ inch Rndiator	24¾	inches
20½ inch Radiator	18¾	inches

Table of Gurney-Oxford Quartet Radiator Capacities

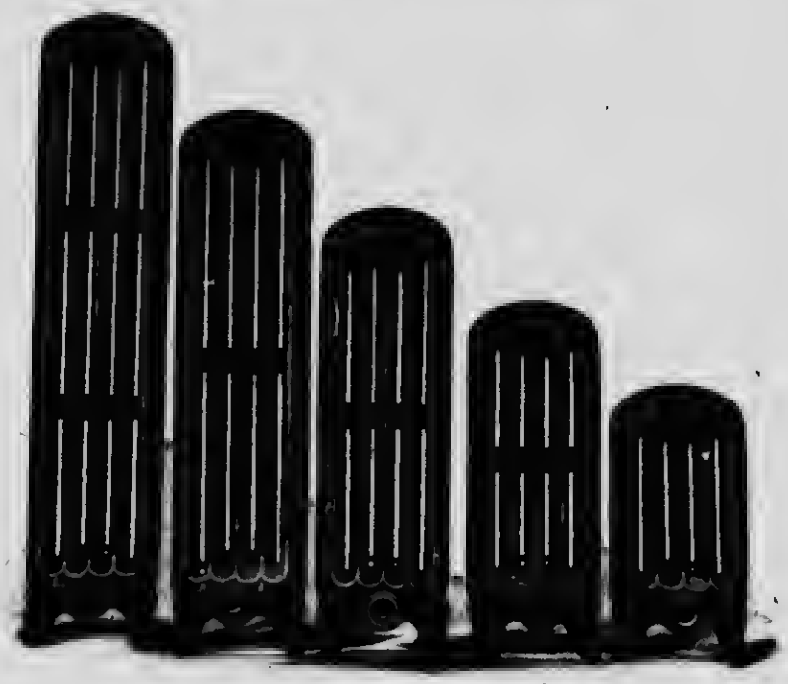
Plain or Ornamental **Direct or Indirect** **Steam or Hot Water**

Size of Radiator No. of Loops Long	Extreme Length of Radiator in Inches	List 48 Cents 42½ Inches High		List 48 Cents 38½ Inches High		List 62 Cents 32½ Inches High		List 66 Cents 26½ Inches High		List 62 Cents 20½ Inches High	
		*Feet of Heating Surface	Equivalent 1-inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe
4 × 2	8½	10⅓	68	16	48	13⅓	40	10⅔	32	8	24
4 × 3	12½	20	87	24	72	20	60	16	48	12	36
4 × 4	16½	38⅔	116	32	96	26⅔	80	21⅓	64	16	48
4 × 5	20¾	48⅓	146	40	120	33⅓	100	26⅔	80	20	60
4 × 6	24¾	58	174	48	144	40	120	32	96	24	72
4 × 7	28¾	67⅔	203	56	168	46⅔	140	37⅓	112	28	84
4 × 8	32¾	77⅓	232	64	192	53⅓	160	42⅔	128	32	96
4 × 9	37	87	261	72	216	60	180	48	144	36	108
4 × 10	41	96⅔	290	80	240	66⅔	200	53⅓	160	40	120
4 × 11	46	106⅓	310	88	264	73⅓	220	58⅔	176	44	132
4 × 12	49	116	348	96	288	80	240	64	192	48	144
4 × 13	53	126⅔	377	104	312	86⅔	260	69⅓	208	52	156
4 × 14	57½	136⅓	406	112	336	93⅓	280	74⅔	224	56	168
4 × 15	61½	145	435	120	360	100	300	80	240	60	180
4 × 16	65½	154⅔	464	128	384	106⅔	320	85⅓	256	64	192
4 × 17	69½	164⅓	493	136	408	113⅓	340	90⅔	272	68	204
4 × 18	73¾	174	522	144	432	120	360	96	288	72	216
4 × 19	77¾	183⅔	551	152	456	126⅔	380	101⅓	304	76	228
4 × 20	82	193⅓	580	160	480	133⅓	400	106⅔	320	80	240

Width of Radiator, 8½ inches. *See page 2.

Gurney-Oxford Quintet Radiator

Each Section is 9¾ inches wide



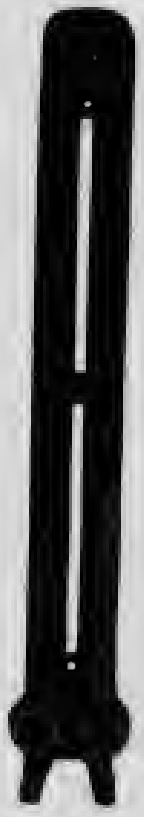
Distance from floor to centre of tapping in centre opening	3¾ inches
Distance from wall to centre of tapping in centre opening	5 inches
Distance from wall to centre of tapping in twin opening	2⅝ inches
Distance from floor to centre of tapping in twin opening	3¾ inches
Distance from centre to centre in twin openings	4¾ inches
Distance from floor to centre of top opening—	
47 inch Radiator	44½ inches
40 inch Radiator	37¾ inches
33 inch Radiator	31 inches
26 inch Radiator	24 inches
20 inch Radiator	17¾ inches

Table of Gurney-Oxford Quintet Radiator Capacities

Ornamental Only **Steam or Hot Water**

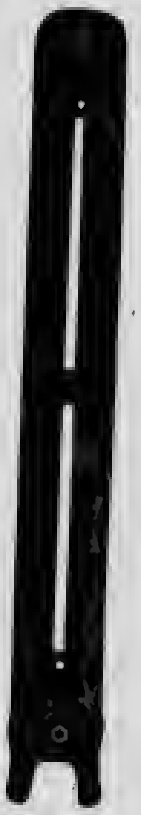
Size of Radiator No. of Loops Long	Extreme Length of Radiator, Inches	List 46 Cents — 47 Inches High		List 46 Cents — 40 Inches High		List 52 Cents — 33 Inches High		List 56 Cents — 26 Inches High		List 52 Cents — 20 Inches High	
		*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe	*Feet of Heating Surface	Equivalent 1-Inch Pipe
5× 2	8¾	25	76	22	66	16	54	14	42	10	30
5× 3	12¾	39	117	33	99	27	81	21	63	15	45
5× 4	16¾	52	155	44	132	36	106	26	64	20	60
5× 5	20¾	65	195	55	165	45	135	35	105	25	75
5× 5	25	78	284	66	196	54	162	42	126	30	90
5× 7	29	91	273	77	231	63	169	49	147	35	105
5× 8	33	104	312	66	264	72	216	56	166	40	120
5× 9	37	117	351	99	297	61	243	63	189	45	135
5×10	41¼	130	390	110	330	90	270	70	210	50	150
5×11	45¼	143	429	121	363	99	297	77	231	55	165
5×12	49¼	156	466	132	396	108	324	64	252	60	180
5×13	53¼	159	507	143	429	117	351	91	273	65	195
5×14	57½	162	546	154	452	126	378	96	294	70	210
5×15	61½	195	565	165	495	135	405	105	315	75	225
5×15	65½	206	624	175	528	144	432	112	336	60	240
5×17	59½	221	553	167	551	153	459	119	357	65	255
5×18	73¾	234	702	198	594	162	466	126	378	90	270
5×19	77¾	247	741	209	527	171	513	133	399	95	265
5×20	81¾	260	760	220	660	160	540	140	420	100	300

Width of Radiator, 9¾ inches. *See page 2.



Gurney-Oxford Prima Radiator

Each Section is 4¾ inches wide.



End Sections

Distance from floor to centre of tapping in centre opening	4 inches
Distance from floor to centre of tapping in twin opening	4¼ inches
Distance from wall to centre of tapping in centre opening	2½ inches
Distance from wall to centre of tapping in twin opening	1½ inches
Distance from centre to centre in twin openings	3¼ inches
Distance from floor to centre of top opening—	
30 inch Radiator	37½ inches
34 inch Radiator	31½ inches
27 inch Radiator	25¼ inches

Gurney-Oxford Prima Radiator Capacities

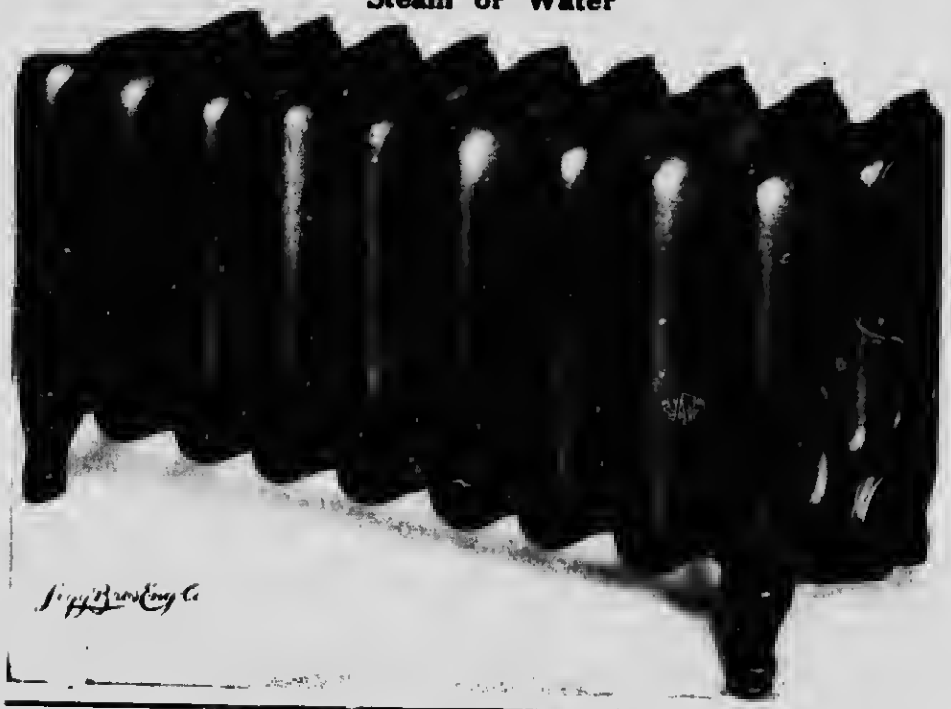
Plain or Ornamental **Steam or Water**

Size of Radiator No. of Loops Long	Extreme Length of Radiator in Inches	List 48 Cents		List 52 Cents		List 56 Cents	
		39 Inches High		34 Inches High		27 Inches High	
		*Feet of Heating Surface	Equivalent 1-inch Pipe	*Feet of Heating Surface	Equivalent 1-inch Pipe	*Feet of Heating Surface	Equivalent 1-inch Pipe
2× 2	8	8	24	6⅔	20	5⅓	16
2× 3	11½	12	36	10	30	8	24
2× 4	15	16	48	13⅓	40	10⅔	32
2× 5	18½	20	60	16⅔	50	13⅓	40
2× 6	22	24	72	20	60	16	48
2× 7	25½	28	84	23⅓	70	18⅔	50
2× 8	29	32	96	26⅔	80	21⅓	64
2× 9	32½	36	108	30	90	24	72
2×10	36	40	120	33⅓	100	26⅔	80
2×11	39½	44	132	30⅔	110	29⅓	88
2×12	43	48	144	40	120	32	96
2×13	46½	52	156	43⅓	130	34⅔	104
2×14	50	56	168	40⅔	140	37⅓	112
2×15	53½	60	180	50	150	40	120
2×10	57	64	192	53⅓	160	42⅔	128
2×17	60½	68	204	56⅔	170	45⅓	136
2×18	64	72	210	60	180	48	144
2×19	67½	76	228	03⅓	190	50⅔	152
2×20	71	80	240	66⅔	200	53⅓	160

Width of Radiator, 4¾ in. *See page 2.

Gurney-Oxford Window Radiator

Steam or Water



Size of Radiator Number of Loops long	Extreme Length of Radiator in Inches	List 74 Cents — 13½ Inches High		List 68 Cents — 16½ Inches High	
		*Feet Heating Surface	Equivalent in 1-Inch Pipe	*Feet Heating Surface	Equivalent in 1-Inch Pipe
5 × 2	6	8	24	10	30
5 × 3	9	12	36	15	45
5 × 4	12	16	48	20	60
5 × 5	15	20	60	25	75
5 × 6	18	24	72	30	90
5 × 7	21	28	84	35	105
5 × 8	24	32	96	40	120
5 × 9	27	36	108	45	135
5 × 10	30	40	120	50	150
5 × 11	33	44	132	55	165
5 × 12	36	48	144	60	180
5 × 13	39	52	156	65	195
5 × 14	42	56	168	70	210
5 × 15	45	60	180	75	225
5 × 16	48	64	192	80	240
5 × 17	51	68	204	85	255
5 × 18	54	72	216	90	270
5 × 19	57	76	228	95	285
5 × 20	60	80	240	100	300

Width of Radiator, 11½ inches. Distance from floor to centre of opening, 3 inches, distance between openings, twin connections, 3¼ inches. *See page 2.

The 9-foot Section, Vertical

The 7-foot Section, Horizontal

Gurney-Oxford Narro Wall Radiator

Tappings from Centre to Centre

5 ft. Section	$10\frac{15}{16}$	in.
7 ft. Section, Horizontal	$10\frac{15}{16}$	in.
7 ft. Section, Vertical	16	in.
9 ft. Section, Horizontal	$10\frac{15}{16}$	in
9 ft. Section, Vertical	21	in.

Gurney-Oxford Narro Wall Radiator

Dimensions, Capacities, etc. **Five Foot Loop**

3 inch wide. List Price 52c. per foot. Price does not include brackets.

No. of Section	Height, Inches	Length, Inches	*Feet of Heating Surface	Equivalent in 1-inch Pipe
1	14	13½	5	15
2	14	27	10	30
3	14	40½	15	45
4	14	54	20	60
5	14	67½	25	75
6	14	81	30	90
7	14	94½	35	105
8	14	108	40	120
9	14	121½	45	135
10	14	135	50	150

The Seven Foot Loop, Horizontally Connected

3 inch wide. List Price 50c. per foot. Price does not include brackets.

No. of Sections	Height, Inches	Length, Inches	*Feet of Heating Surface	Equivalent in 1-inch Pipe
1	14	19⅛	7	21
2	14	38¼	14	42
3	14	57⅜	21	63
4	14	76½	28	84
5	14	95⅝	35	105
6	14	114¾	42	126
7	14	133⅞	49	147

The Seven Foot Loop, Vertically Connected

3 inch wide. List Price 50c. per foot. Price does not include brackets.

No. of Sections	Height, Inches	Length, Inches	*Feet of Heating Surface	Equivalent in 1-inch Pipe
1	19⅛	14	7	21
2	19⅛	28	14	42
3	19⅛	42	21	63
4	19⅛	56	28	84
5	19⅛	70	35	105
6	19⅛	84	42	126
7	19⅛	98	49	147

*See page 2.

The Nine Foot Loop

Horizontally Connected

3 inches wide. List Price 48c. per foot. Price does not include brackets.

No. of Sections	Height, Inches	Length, Inches	*Feet of Heating Surface	Equivalent in 1-inch Pipe
1	14	24⅛	9	27
2	14	48¼	18	54
3	14	72⅜	27	81
4	14	96½	36	108
5	14	120⅝	45	135
6	14	144¾	54	162

The Nine Foot Loop

Vertically Connected

3 inches wide. List Price 48c. per foot. Price does not include brackets.

No of Sections.	Height, Inches	Length, Inches	*Feet of Heating Surface	Equivalent in 1-inch Pipe
1	24⅛	14	9	27
2	24⅛	28	18	54
3	24⅛	42	27	81
4	24⅛	56	36	108
5	24⅛	70	45	135
6	24⅛	84	54	162
7	24⅛	98	63	189
8	24⅛	112	72	216

Tappings From Centre to Centre

5 ft. section..... 10 11/16 inches
7 ft. section, horizontal..... 10 11/16 inches
7 ft. section, vertical..... 16 inches
9 ft. section, horizontal..... 10 11/16 inches
9 ft. section, vertical..... 21 inches

List price per section for extra work in building wall radiators in tiers.....35c.

For building wall radiators in stacks we make an extra charge, as follows:

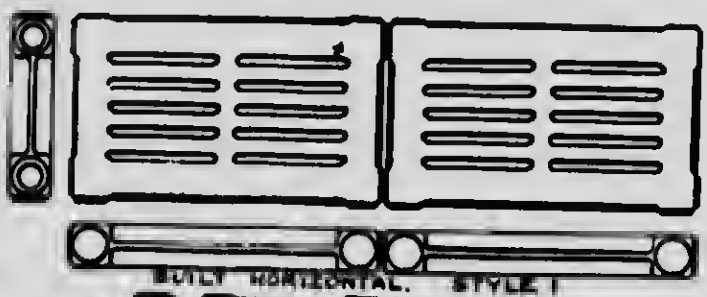
No. Sections Thick	1 and 2 Sections Long	3 and 4 Sections Long	5 and 6 Sections Long
2	$4.00	$4.50	$5.00
3	6.00	6.50	7.00
4	8.00	8.50	9.00
5	10.00	10.50	11.00
6	12.00	12.50	13.00

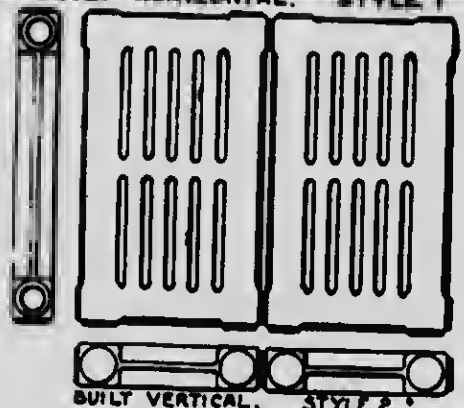
For each additional thickness an extra charge of $2.00 to above list prices.
In ordering specify style required, as shown on following pages.
* See page 2.

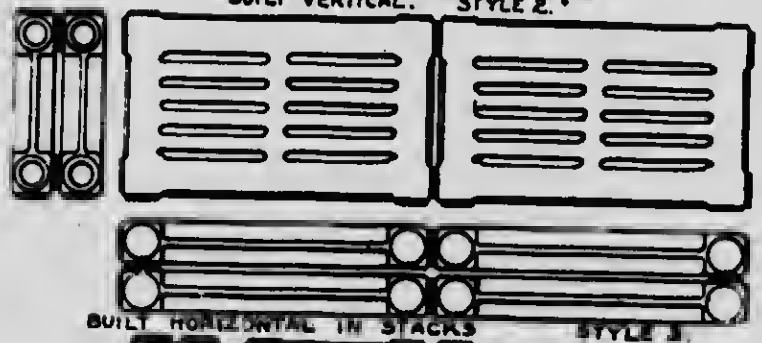
The GURNEY FOUNDRY COMPANY, LIMITED

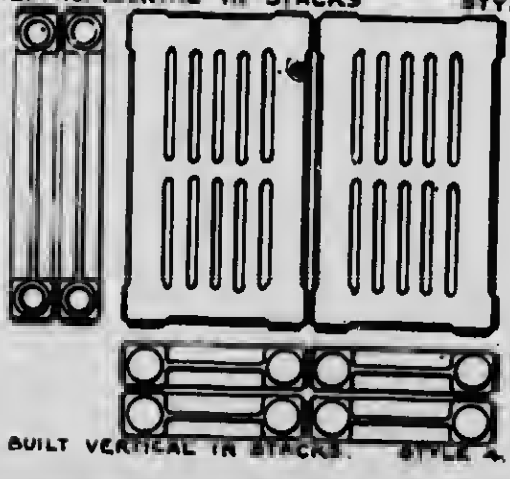
Gurney-Oxford Narro Wall Radiator

Assembled Sections



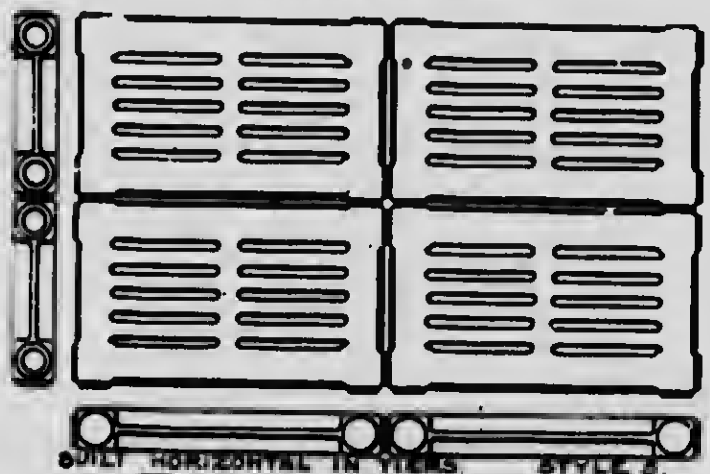




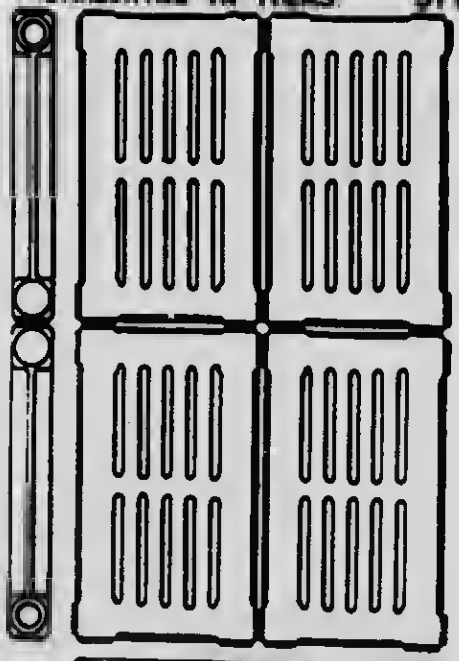


Gurney-Oxford Narro Wall Radiator

Assembled Sections



BUILT HORIZONTAL IN TIERS. STYLE 3.



BUILT VERTICAL IN TIERS. STYLE 6

Gurney-Oxford Dining Room Radiator

For Hot Water and Steam

	Length	Depth	Height
Size of Top Oven	20¾	10¾	18 inches
Size of Bottom Oven	20¾	10¾	8½ inches

Size	No. of Loops in Radiator Exclusive of Oven	*Feet of Heating Surface	Extreme Length in Inches	Price Without Top	Price With Plain Top	Price With Nickeled Top
1	2	21	30	$48.31	$50.25	$52.35
2	4	37	38	53.83	55.50	58.20
3	6	53	46	60.61	63.00	66.30
4	8	69	54	68.14	70.50	74.40
5	10	85	62	74.25	78.00	82.50
6	12	101	70	80.95	85.50	90.00
7	14	117	78	87.73	93.00	98.70

*See page 2.

Gurney-Oxford Hospital Radiator

Made in Duet and Tremont styles all heights. Add 1 inch per section to the length of Radiator in figuring.

See discount sheet for price.

This Radiator represents most advanced practice in hospital equipment, being so designed that any lodgement of dust is readily cleaned away so that germs have little or no opportunity to multiply.

Gurney-Oxford Ventilating Radiator Attachment

Converting Direct Radiators to Ventilating Type

This new adjustable box base is constructed so that it will take an adequate supply of air either through the floor or the wall. The base dampers are fitted so that when the front damper is open, the base, or back damper, is closed, and vice versa. This insures a continuous circulation.

This base can be furnished with floor damper instead of back inlet. Where floor inlet dampers are required, same should be specially stated when ordering, otherwise back inlet dampers will be supplied.

Bases for Duet, Tremont and Quartet Radiators

No. of Sections	Size of Collar for Duet or Tremont	Size of Collar for Quartet	List Price
5	2⅝ × 5	3 × 11⅝	$ 5.00
6	2⅝ × 9	3 × 14¾	6.00
7	2⅝ × 9	3 × 14¾	7.00
8	2⅝ × 9	3 × 14¾	8.00
9	2⅝ × 14½	3 × 18¾	9.00
10	2⅝ × 14½	3 × 18¾	10.00
11	2⅝ × 14½	3 × 18¾	11.00
13	2⅝ × 14½	3 × 18¾	13.00
15	2⅝ × 14½	3 × 18¾	15.00
17	2⅝ × 19½	3 × 18¾	17.00
19		3 × 18¾	19.00

Gurney-Oxford Climax

Ventilating or Indirect Radiator **Push Nipple Connection**

Gurney-Oxford Climax Indirect Radiators

Indirect Only

For Heating and Ventilating by Steam or Hot Water

Table of Capacities

No. of Sections in Stack	*Feet of Heating Surface	Equivalent 1-inch Pipe	Area Cold Air Supply Square Inches	Area Warm Air Flue Square Inches	Size for Brickwork Hot Air Flue, Ins.	Size of Register Inches
2	26	78	54	72	8× 8	9×12
3	39	117	72	96	8×12	10×14
4	52	156	90	120	8×12	12×15
5	65	195	108	144	12×12	12×19
6	78	234	126	168	12×12	14×22
7	91	273	144	192	12×16	14×24
8	104	312	162	226	12×16	16×20
9	117	351	180	240	12×20	16×24
10	130	390	198	264	12×20	20×20
11	143	429	216	288	12×24	20×24
12	156	468	234	312	12×24	20×24

*See page 2.

Length 36 inches; Height 11 inches; Width 3½ inches per section.

List price per section, loose.....$4.50
List price per section, built up..... 5.00

In ordering loose indirect radiator, specify the exact number of sections in each stack, so that the proper number of end sections will be supplied.

School Pin Indirect Radiators

Steam Section

Each section contains 20 square feet of heating surface.

Length 36 inches, height 13⅞ inches, width each section occupies in stack 3¾ inches, height at connecting point 15 inches.

Sections will be shipped separately unless specified in stacks. When ordered assembled they will be shipped in stacks of not more than six sections each.

School Pin Indirect Sections are connected with 2 inch right and left hexagon nipples.

To Figure Radiation

Four Good Rules

(1) Divide the glass surface hy 2 and the wall surface exposed hy 10. The sum of these two quantities equals the amount of steam radiation required for 70 degrees inside with zero outside.

(2) Divide the glass surface by 2, the wall surface exposed by 20, and the cuhic contents hy 200. The sum of the three quantities equals the amount of steam radiation required for 70 degrees with zero outside (Mill's rule).

(3) Divide the wall surface hy 4, the cubic contents hy 55 (for one change of air per hour, or 27 for two changes of air per hour), and to these quantities add the glass surface and divide the sum by 4. For steam radiation required for 70 degrees inside with zero outside (Carpenter's rule).

(4) Divide the net outside wall surface hy 4 and the cubic contents by 55 (for one change of air per hour), and to these quantities add the glass surface. Multiply the sum by the difference hetween the outside temperature and the desired inside temperature. Divide the product hy 255 for steam and 155 for hot water direct radiation. This rule provides for any range of temperature desired.

The following additions are to he made to any calculations for exposures: North and west, 20 per cent.; east, 10 per cent.

For indirect work add 60 per cent.

To ascertain hot water radiation when steam radiation has been determined, add 60 per cent., or divide steam radiation hy 150 and multiply hy 250.

Another rule in common practice throughout Canada to give 70 degrees with 40 degrees below zero, is:—

For Steam—Divide the cuhic contents hy 200, exposed wall surface, **less glass,** hy 10, and glass surface hy 2. Add the results together and that is the amount of feet of radiation* that will be required for an average exposed room.

For Water—Divide cubic contents hy 50, exposed wall, **less glass,** hy 10, and glass by 3. This is for east or south exposures. For north or west exposures add another 10 to 15 per cent. Also for the Halls, Bath-rooms and Vestihules 40 per cent. should be added to the above figure.

The above are not guaranteed, but are from the best authorities.

* See Page 2.

Radiator Specialties

To be added to Base Prices

Circular and **Curved** Radiators, steam or water	$1.05 per section extra
Angle Radiators, steam or water	5.30 per angle extra
Corner Radiators, steam or water	5.30 per corner extra
Plain Top, 2 loop	.20 per section
Plain Top, 4 loop	.40 per section
Plated Top, 2 loop	.30 per section
Plated Top, 4 loop	.60 per section
High legs, 4 to 9 inches, add	.60 per leg section
High legs, 10 to 15 inches, add	1.20 per leg section
High legs, 16 inches and over, add	2.00 per leg section

NOTICE

Radiators requiring loops for repairs, when such radiators are not illustrated in this, our latest edition heating catalogue, will be charged at the list price of the height radiator call for, without any discount.

High Legs

Detachable High Legs, made in any size to suit two, three and four bar wide radiators.

High Legs, 4 to 9 inches, add . . .$0.60 per leg section
High Legs, 10 to 15 inches, add . . .1.20 per leg section
High Legs, 16 inches and over, add.2.00 per leg section

Altitude Gauges

List Prices
American $3.00
Morrison 6.40

Steam Gauges

List Prices

5 inch $3.30
4½ inch 2.40
3½ inch 2.50

No. 1 Wall Radiator Brackets

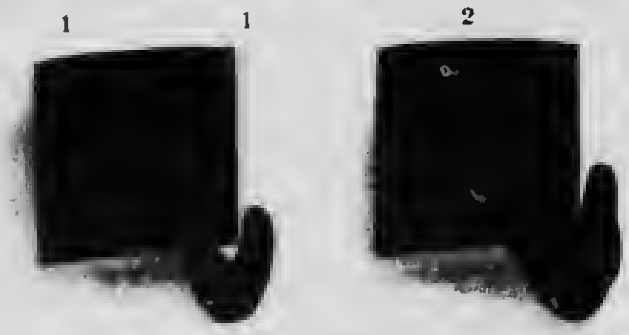
List per pair. . . . .18c.

No. 2 Adjustable Pedestal

List. . . . . 60c. each

Small Stud Wall Brackets

List. . . . . 5c. each



Legless Radiator Brackets

These are used in connection with legless radiators for raising radiator above floor level.

List Prices:—Top 70c. Bottom 90c.

Hot Water Thermometers

List Prices. . . .$2.80

Directions for Ordering Radiators

1—Give style of radiator stating if 2, 3, 4 or 5 bar wide. If wall radiator state whether 5, 7, or 9 foot sections.
2—Give height and number of sections or loops.
3—State whether plain or ornamental.
4—State whether right hand or left hand tappings are wanted.
5—Specify exact tappings (see tappings lists, pages 79—82).
6—State whether steam or hot water radiators are required.
7—If for steam state whether for one pipe or two pipe system.
8—If for water state whether twin or opposite end connections are wanted.
9—In ordering leg sections state just which end is wanted—feed or return—and how tapped (see tapping list).
10—For convenience in handling if long radiators are wanted, state how they are to be divided in order to avoid straining or breaking in shipment.
11—In ordering curved or angle radiators refer to page 78. (How to order angle radiators).
12—In ordering indirect radiators state exact tapping for flow, return and air vent. Sections are shipped loose unless otherwise ordered. Be sure to state how many stacks the sections are to be built up in so as to indicate required number of end sections.
13—In all correspondence referring to orders, give date and order number on "Acknowledgment of Order" and your own order number if possible.
14—Give exact routing for shipment and state when wanted.
15—Give name of job on order.
16—If radiators are required for any special system, give name of system.
17—In ordering wall radiators state whether vertically, or horizontally assembled and where to be tapped.
18—In ordering wall radiators give style of assembling as shown on pages 64 and 65.
19—It is a general custom to designate a radiator thus:

1—3 × 9×39 Tremont plain H.W. Twin L.H.

This means, one radiator, three columns wide, nine loops long, 39" high, Tremont plain pattern, hot water type, tapped twin, left hand.

Classification of Radiator Sections.

In making out orders for radiator sections if the following classification is used it will assist in a definite understanding of your requirements.

"Feed end," to indicate feed end section, for one pipe and two pipe steam and twin hot water.

"Return end," to indicate section connected to return of two pipe steam system or opposite end hot water connections.

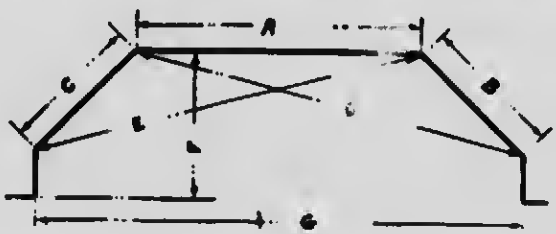
"Centre leg," to indicate intermediate section having feet.

"Centre," to indicate intermediate sections without feet.

In ordering sections state whether plain or ornamental pattern, height, whether 2, 3, 4, or 5 bar wide, whether for hot water or steam, and for supply and return end-sections state exact tapping and give name of system if any special system. Always mention whether twin connection or not, for hot water. If for steam, mention, if for one or two pipe steam and give exact tappings whether right or left hand. (See "tappings" as on pages 79–82.)

In ordering twin connection repairs, state whether right or left hand tapping.

How to Order Angle Radiators



The above diagram shows the measurements necessary to ensure a perfect angle radiator. In ordering be careful to give exact measurement for each dimension indicated by the letters, A, B, C, D, E, F, G.

It is preferable that you furnish an exact templet, but where it is not convenient a diagram as above will be required.

Be sure to indicate how the tappings are to be made and where located.

For twin connections state whether they are to be on the right hand or left hand end as you face the radiator.

For curved radiators a templet made of wood should be furnished.

For corner radiators send an exact diagram or a templet and state how many sections are to be on each arm, and how each arm is to be tapped.

Tapping List of Radiators

Steam, Hot Water and Special Systems

One-Pipe Steam Radiators Containing—	Inches
25 square feet and under	1
25 to 60 square feet	1¼
60 to 90 square feet	1½
Over 90 square feet	2

NOTE—One Pipe Steam Radiators are tapped Left Hand unless otherwise ordered.

Two-Pipe Steam Radiators Containing—	
48 square feet and under	1 × ¾
48 to 95 square feet	1¼×1
Over 95 square feet	1½×1¼

NOTE—Two-pipe Steam Radiators are tapped Right Hand unless otherwise ordered.

All Gurney Steam Radiators will be tapped as above. When any special tappings are desired they should be plainly stated on orders.

Tapping List of Radiators

Steam, Hot Water and Special Systems

Dunham Vacuum System

(Steam Type Radiators)

Heating Surface			Inlet	Outlet
80 sq. ft.	and under		¾"	½"
81 sq. ft.	to	150 sq. ft.	1"	½"
151 sq. ft.	to	250 sq. ft.	1¼"	½"
251 sq. ft.	to	350 sq. ft.	1½"	½"
351 sq. ft.	to	600 sq. ft.	2"	¾"
601 sq. ft.	to	1,200 sq. ft.	2½"	¾"
1,201 sq. ft.	to	1,800 sq. ft.	3"	1"
1,801 sq. ft.	to	2,700 sq. ft.	3½"	1"

All Returns tapped Right Hand eccentric. No air vent tapping (if tapped to be plugged). Flows right or left hand thread as specified.

Webster Vacuum System

(Steam Type Radiators)

Heating Surface			Inlet	Outlet
35 sq. ft.	and under		½"	½"
36 sq. ft.	to	80 sq. ft.	¾"	½"
81 sq. ft.	to	125 sq. ft.	1"	½"
126 sq. ft.	to	150 sq. ft.	1"	¾"
151 sq. ft.	to	300 sq. ft.	1¼"	¾"
301 sq. ft.	to	450 sq. ft.	1½"	¾"
451 sq. ft.	to	600 sq. ft.	2"	1"
601 sq. ft.	to	1,200 sq. ft.	2½"	1"

All returns tapped Right Hand eccentric. No air vent tapping (if tapped to be plugged). Flows tapped right or left hand thread as specified.

Tapping List of Radiators

Steam, Hot Water and Special Systems

Dunham Vacuo-Vapor System
(Steam Type Radiators)

Heating Surface			Inlet	Outlet
35 sq. ft.	and under		¾″	½″
36 sq. ft.	to	70 sq. ft.	1″	½″
71 sq. ft.	to	160 sq. ft.	1¼″	½″
161 sq. ft.	to	250 sq. ft.	1½″	½″
251 sq. ft.	to	490 sq. ft.	2″	¾″
491 sq. ft.	to	800 sq. ft.	2½″	¾″
801 sq. ft.	to	1,500 sq. ft.	3″	¾″

All tappings are opposite ends. Flows right or left hand thread as specified. Returns right thread tapped eccentric. No air vent tapping.

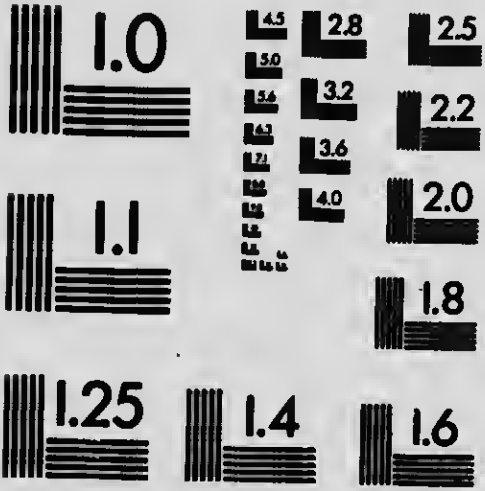
Webster Modulation System
(Hot Water Type Radiator only used)

Direct Radiators		Direct-Indirect Radiators	
Supply End		Supply End	
Up to 20 sq. ft.	½″	Up to 16 sq. ft.	½″
Up to 60 sq. ft.	¾″	Up to 48 sq. ft.	¾″
Up to 120 sq. ft.	1″	Up to 96 sq. ft.	1″
Up to 180 sq. ft.	1¼″	Up to 144 sq. ft.	1¼″
Up to 225 sq. ft.	1½″	Up to 180 sq. ft.	1½″
Returns		Returns	
Up to 100 sq. ft.	½″	Up to 50 sq. ft.	½″
Up to 225 sq. ft.	¾″	Up to 100 sq. ft.	¾″
		Up to 225 sq. ft.	1″

All tappings are Right Hand. Flows at top and returns at bottom opposite end. Returns tapped eccentric. No air vent tapping.

MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE Inc

1653 East Main Street
Rochester, New York 14609 USA
(716) 482 - 0300 - Phone
(716) 288 - 5989 - Fax

Tapping List of Radiators

Steam, Hot Water and Special Systems

HOT WATER

Single or Twin Connections. Standard Tappings

Hot Water Radiators Containing—	Inches
48 square feet and under	1 ×1
48 to 100 square feet	1¼×1¼
Over 100 square feet	1½×1½

All Hot Water Radiators tapped twin connections left hand thread unless otherwise ordered.

All tappings for opposite end connection at bottom right hand thread unless otherwise ordered.

In ordering special tappings they should be clearly specified.

Wall Radiators for Hot Water are tapped top and bottom. same end left hand unless otherwise specified.

Honeywell Hot Water Generator System

First Floor

Up to 25 square feet	½ inch
From 25 to 60 square feet	¾ inch
Over 60 square feet	1 inch

Second Floor

Up to 30 square feet	½ inch
From 30 to 100 square feet	¾ inch
Over 100 square feet	1 inch

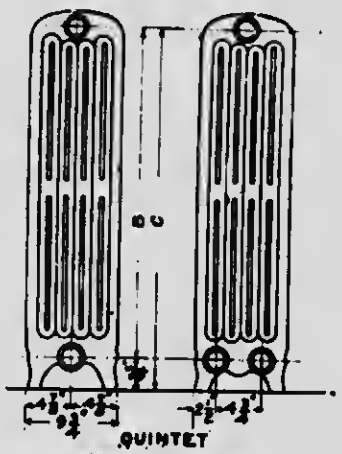
Third Floor

Up to 50 square feet	½ inch
From 50 to 125 square feet	¾ inch
Over 125 square feet	1 inch

In ordering radiators for any pressure or generator system the tapping of each radiator should be specified. System of tapping same as for standard system above except as to size.

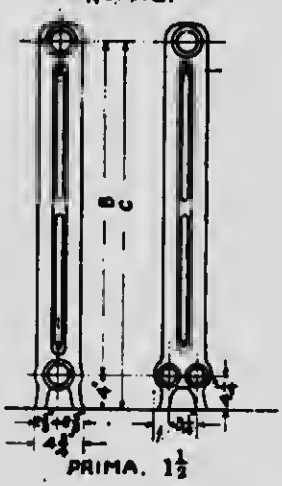
Quintet

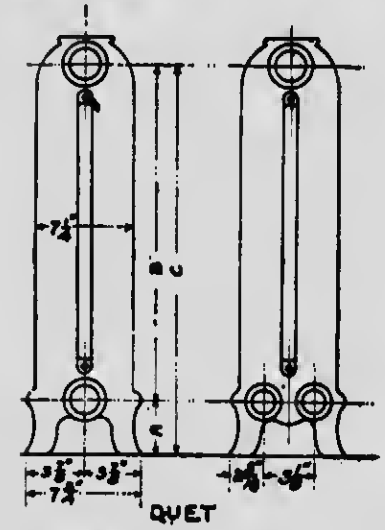
Radiator Height	B	C
Inches	Inches	Inches
47	40¾	44½
40	34	37¾
33	27¼	31
26	20¼	24
20	14	17¾

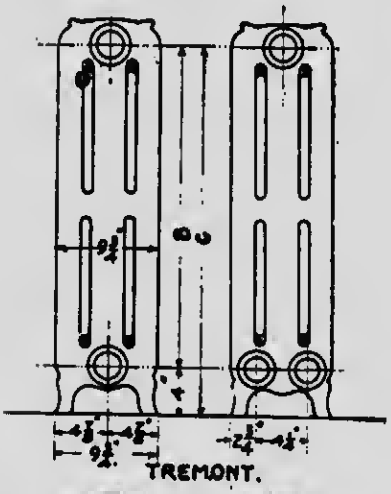


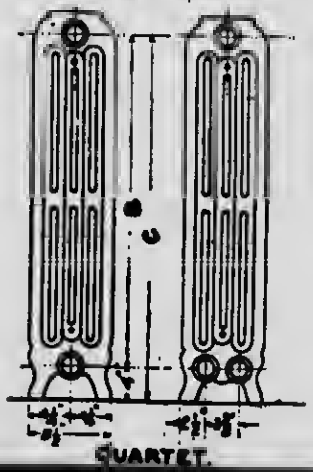
Prima

Radiator Height	B	C
Inches	Inches	Inches
39	33½	37½
34	27½	31½
27	21¼	25¼









Duet

Hot Water				One Pipe, Steam
	A	B	C	A—3½ inches
In.	In.	In.	In.	
45	4	38¾	42¾	Two pipe, Steam
38	4	31	35	A=4 ins. (Feed)
32	4	25¼	29¼	Return Tapped Eccentric
26	4	19½	23½	A=3½ ins.
23	4	16½	20½	
20	4	13¾	17¾	

Tremont

Radiator Height	B	C
Inches	Inches	Inches
21	15¾	19¾
27	21¼	
33	27½	
39	33⅛	37⅛

Quartet

Radiator Height	B	C
Inches	Inches	Inches
20½	14¾	18¾
26½	20¾	24¾
32½	26½	30½
38½	32¾	36¾
42½	36¾	40¾

Diameter of Circular Radiators

	No. of Sections in Radiator	Diam. Inside Inches	Diam. Outside Inches
Duet	16	8	24
"	18	10¼	26¼
"	24	16¼	32
"	28	20⅛	36
"	32	24	40
"	38	30	45¾
"	46	38	53½
Tremont	16	8	28
"	18	10⅛	30
"	20	12¼	32½
"	22	14½	34½
"	24	16¾	36¾
Quartet	12	9½	27
"	14	12¾	30
"	16	15½	33
"	18	18¼	36¼
"	20	21¾	39¼

Reliable Vacuum Steam Heating Apparatus

(Air Line System)

The following advantages of Reliable Vacuum System of heating are the result of experience and practical operation:

First: Less steam is required for heating, which means less coal burned, hence it is a money-saving system.

The Reliable Vacuum System effects a fuel economy of at least 25 per cent. over the ordinary steam plant.

This is not an advertising statement, but a conservative estimate derived from the actual operation of many hundreds of Reliable Vacuum Systems.

Second: A uniform, rapid and positive circulation of steam is secured throughout the entire heating system.

Third: The opportunity for use of exhaust steam for heating without back pressure on the engine or pumps, automatically supplemented by live steam where the exhaust is not sufficient to heat the building.

Under these conditions the cost of steam production in winter is but little if any greater than in summer. With a vacuum system, the building can be heated at atmospheric pressure in cold weather and much below atmosphere in mild weather. When the oil and foreign matter are eliminated exhaust steam is as valuable for heating purposes as live steam.

Fourth: Circulation of live steam in low pressure heating systems without pressure.

Fifth: Heating at low steam temperature, which is the most efficient, as more heat units will be taken up by the air passing over the heating surfaces at a low temperature.

Sixth: It is a sealed system, with no leakage or offensive odors from the air valves.

Seventh: No short circuiting in the radiators, causing air pockets.

In laying out a new system, pipe sizes, boiler and radiation are figured, according to good engineering practice, the same as for the ordinary single pipe gravity steam system at 5 pounds pressure.

Reliable Vaccum Pumps are made in two types; one, operated by city water pressure; the other by electricity. They are mechanically simple, start and stop automatically, and require no attention.

The cost to operate Reliable Vacuum Pumps, whether electric or hydraulic, is negligible where the system has been properly installed.

Reliable Electric Vacuum Pumps

For the Air Line System

Number of Pump	Max. Cap. Ft. Radiation	CYLINDER SIZES		SIZE OF CONNECTION		Strokes per Minute
		Bore	Stroke	Discharge Pipe	Suction Pipe	
111	4,000	2¼ in.	3 in.	¾ in.	¾ in.	90
112	8,000	3 in.	3½ in.	1 in.	1 in.	70
113	16,000	4 in.	3½ in.	1¼ in.	1¼ in.	70
114	24,000	4 in.	5 in.	1½ in.	1½ in.	68
115	35,000	5 in.	5 in.	2 in.	2 in.	60

Number of Pump	Horse Power	DIMENSIONS			Shipping Weight lbs.	List Price
		Height	Width	Depth		
111	⅙ H.P.	16½ in.	13 in	17 in.	260	$510.00
112	½ H.P.	21 in.	24 in.	30 in.	530	828.70
113	¾ H.P.	24 in.	24 in.	30 in.	600	892.50
114	1 H.P.	31 in.	30 in.	30 in.	750	1071.00
115	1½ H.P.	31 in.	30 in.	30 in.	825	1224.00

Equipment: Includes pump, motor, automatic cut-off switch, and vacuum controller, strainer, vacuum expansion tank, and vacuum gauge.

Note: The capacities given are maximum ratings and should not be exceeded in any case.

Reliable Hydraulic Vacuum Pump

Sizes and List Prices

No.	Diameter Motor Cylinder Inches	Diameter Suc. Cyl. Inches	Length Stroke Inches	Height over all Inches	Shipping Weight Lbs.	List Price
101	2	2½	4	25	110	$100
103	2	3	6	28	150	255
104	2½	4	6	28	156	208
106	3⅜	5 13/16	10	42	200	305

The above prices include pump, condenser, bracket, vacuum gauge, and strainer.

Sizes to Use

Tables based on operation of system under a 7-inch vacuum.

No. Pump	City Water Pressure	Maximum Radiation Sq. Ft.	No. Pump	City Water Pressure	Maximum Radiation Sq. Ft.
101	20	700	104	40	4,200
101	40	800	100	20	6,600
103	20	2,000	106	40	9,600
103	40	3,000	2–106	20	14,000
104	20	2,800	-106	40	20,000

When city water pressure is between 15 and 20 pounds use pump one size larger than that called for at pressure of 20 pounds.

When water pressure at any time exceeds 50 lbs. a pressure reducing valve must be used.

The Reliable Vacustat

The name in itself is distinctive and absolutely descriptive of the device—"Vacu"—pertaining to a vacuum, and —"stat"—meaning to hold or maintain. The Vacustat is the means whereby a vacuum can be maintained in the system. It effectually permits all air to be exhausted from the radiator by the pump, and prevents steam being pulled from the radiator.

In operation, air is conducted from the radiator through the Vacustat, each Vacustat being directly connected to the vacuum pump by a system of air piping. The Vacustat is open so long as there is air in the radiator. Steam coming in contact with the Vacustat closes it tightly, making it impossible for the pump to pull steam into the air lines.

The Vacustat has been properly adjusted at the factory to conform to operating conditions; will properly vent the radiator and close tight against steam.

The adjustment of the Vacustat is permanent and will not have to be changed, either by the steam fitter when applying to radiator, or at any time in the future by building tenants.

Flushing Fitting

The Vacustat is fool-proof, and so constructed that the adjustment cannot be tampered with.

The Vacustat is dirt-proof, and foreign matter from the heating system cannot come in contact with the working parts; when necessary, such matter may be removed from Vacustat without taking apart and interfering with adjustment.

This may be done by removing Vacustat from radiator and flushing under a stream of water.

By reference to the drawing, the following explains briefly the operation of the Vacustat.

Assuming the radiator to be filled with cold air, as the pump is placed in operation the air is exhausted from the radiator through inlet passage of the Vacustat. It passes through the strainer and ports, around the rim of the thermal button and down through the centre of the composition seat into the air line. Steam following the air comes into contact with the thermal button, the bottom of which acting as a diaphragm, expands and at the proper temperature comes into close contact with the composition seat, preventing the egress of steam through the aperture in the seat.

The cooling of the thermal button by air permits the diaphragm to contract, again opening the aperture in the valve seat and permitting the venting of the radiator.

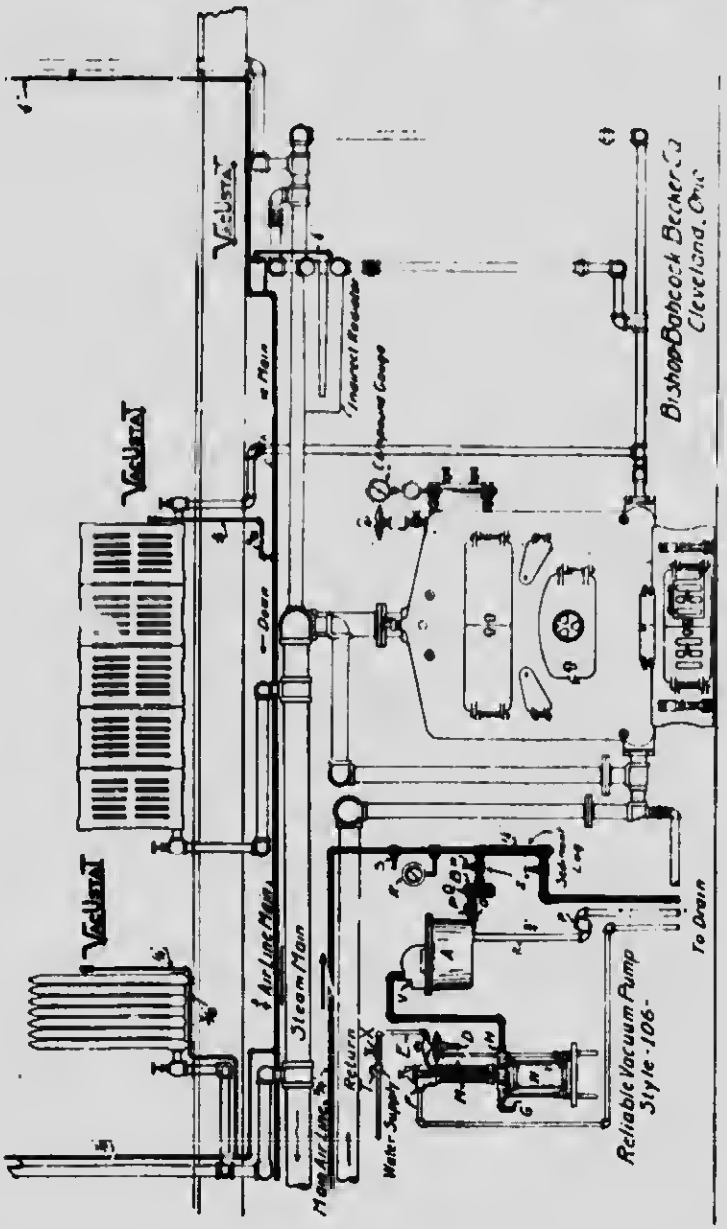
In view of the fact that the system, if new, should be flushed out before connecting pump, some means must be provided for an open connection between radiator and air line.

Obviously, the body casting of the Vacustat can not be utilized in this way, as in the case of the ordinary air valve from which the thermostatic member can be removed temporarily, therefore, a flushing fitting is included with every Vacustat. It is merely used in place of the Vacustat, one connection fitting radiator tapping, the other the union connection to air line, thus permitting the entire heating system to be flushed and cleaned without injury to Vacustat.

Price List

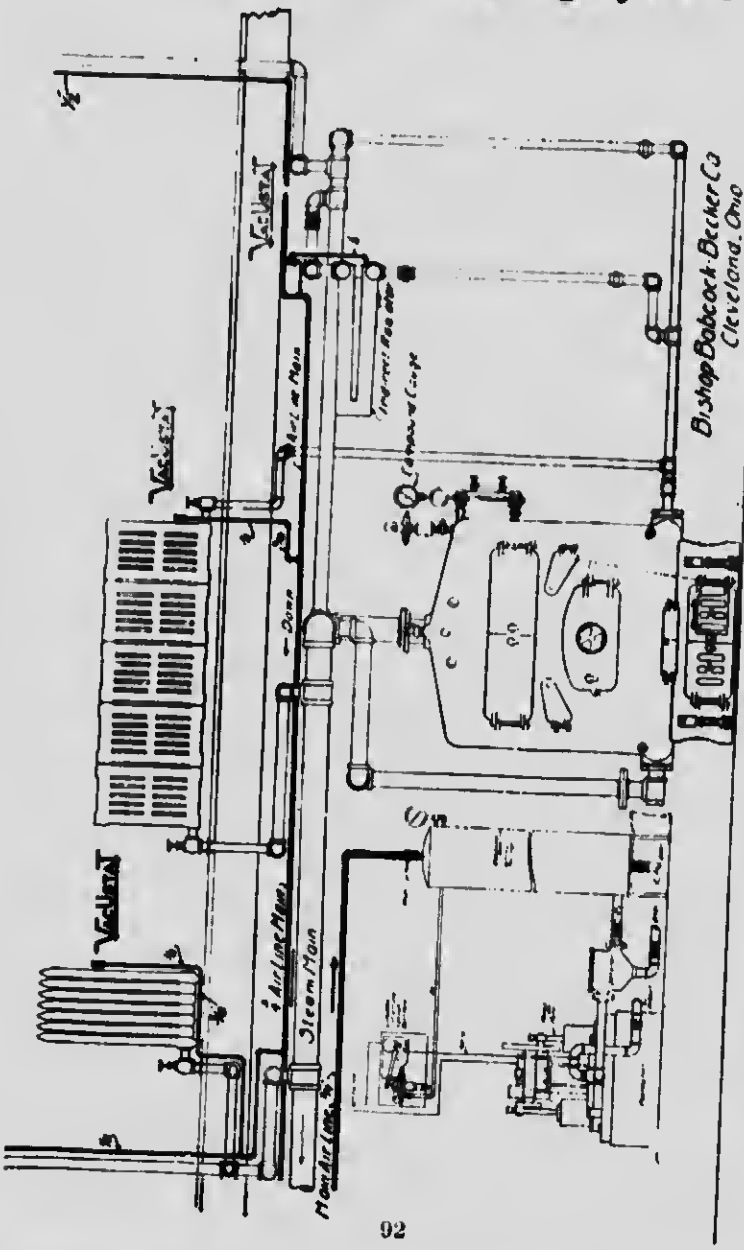
⅛ inch	each	$4.05
¼ inch	each	4.05

Typical Installation of Reliable Hydraulic Air Line Vacuum Heating System



General Drawing showing Reliable Hydraulic Vacuum Pump in connection with a Low Pressure Steam Heating Plant

Typical Installation of Reliable Electric Air Line Vacuum Heating System



General Drawing showing Reliable Electric Vacuum Pump in connection with a Low Pressure Steam Heating Plant

City Water Pressure Regulator

The city water pressure regulator shown above should be used with Reliable Hydraulic Vacuum Pump wherever the city water pressure exceeds 50 pounds.

By simple adjustment of the set screw, higher pressures can be reduced to 50 pounds and constantly maintained at this point regardless of any variation in the city pipes.

In cities where the city water pressure is subject to sudden increase for fire purposes a pressure regulator should always be used.

LIST PRICES

No. 2—½" connections, for Nos. 101, 103 and 104 Reliable Vacuum Pumps $10.00
No. 3—¾" connections, for No. 106 Reliable Vacuum Pump .. 15.60

Reliable Automatic Air Valves

LIST PRICE

No. 1 Reliable Air Valve, with ⅛" radiator connection and ¼" union connection for air line $2.00
No. 3 Reliable Air Valve, with ¼" radiator connection and ⅜" union connection for air line 2.30

Radiator Valves

SIZES	½ inch	¾ inch	1 inch	1¼ inch	1½ inch	2 inch
N. P. W. W. Standard Globe, without Union	$1.70	$2.10	$2.75	$3.70	$4.85	$7.60
" " " " " with "	2.50	2.90	3.75	5.00	6.50	10.00
Standard Globe Brass, W. W. without Union	1.40	1.75	2.35	3.25	4.35	6.85
" " " " with "	2.15	2.50	3.30	4.40	5.90	9.25
N. P. W. W. Standard Angle, without Union	1.70	2.10	2.75	3.70	4.85	7.60
" " " " with "	2.50	2.90	3.75	5.00	6.50	10.00
" " Angle Rad., Jenkins Disc, without Union	2.40	2.90	3.60	4.90	6.65	10.90
" " " " " with "	3.15	3.90	4.70	6.25	8.15	13.00
" " Globe, Jenkins Disc, without Union	2.40	2.90	3.60	4.90	6.65	10.90
" " " " with "	3.15	3.90	4.70	6.25	8.15	13.00
Quick Opening, N.P.W.W. Angle, with Union	.....	2.85	3.65	5.05	7.10	10.85
" " " " " without "	.....	1.95	2.65	3.70	5.00	7.75
Q.O. N.P.W.W. Straightway, with Union	.....	.....	4.70	6.35	9.10	13.95
Q.O. " " " without "	.....	.....	3.70	5.00	7.10	10.85
Union Ells for Water Radiators, N.P.R.H	1.75	2.00	2.50	3.20	4.00	7.00
Gate Valves, W.W.N.P., without Union	2.00	2.60	3.45	4.70	6.35	9.80
" " " " with "	3.10	3.75	4.65	6.10	7.85	12.10

Hook Plates—Single Hook

SIZE OF PIPE	1 inch	1¼ inch	1½ inch	2 inch	2½ inch	3 inch
Price each	$0.90	$0.10	$0.15	$0.22	$0.45	$0.60

Branch Hooks

No. of Branches	2	3	4	5	6	7	8	9	10	11	12
1 in. Pipe, 2½in. Centre to Centre. Price ea.	$0.18	$0.23	$0.26	$0.32	$0.38	$0.48	$0.59	$0.65	$0.70	$0.85	$1.00
1¼ " " 3 " " " " "	.21	.27	.32	.41	.52	.68	.80	.90	1.20	1.35	1.40
1½ " " 3½ " " " " "	.28	.43	.58	.72	.88	1.10	1.25	1.40	1.55	1.65	1.90
2 " " 4½ " " " " "	.45	.65	.90	1.15	1.35	.....	.....	.....	.....	.....	.....

Iron Body Valves

SIZES	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.	6 in.	7 in.	8 in.	10 in.	12 in.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Globe and Aagle Valves, without Yoke, Scd.....each	....	....	5.40	7.35	9.80	.....	.....	.....	.....	.....	.....	.....	.....	.....
Globe and Angle Valves, without Yoke, Flgd.....each	....	....	7.00	9.00	12.50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Globe and Angle Valves, with Yoke, Scd.....each	....	....	7.00	9.00	12.50	15.25	19.00	24.00	27.00	37.50	63.00	72.00	114.00	170.00
Globe and Angle Valves, with Yoke, Flgd.....each	....	....	8.60	10.75	15.00	18.50	22.50	27.50	31.00	42.00	68.00	77.00	123.00	187.00
Globe and Aagle, Jenk. Disc, without Yoke, Scd.....each	....	....	7.25	11.00	16.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Globe aad Aagle Jenk. Disc, without Yoke, Flgd.....each	....	....	8.50	13.00	18.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Globe aad Angle Jeak. Disc, with Yoke, Scd.....each	....	....	10.00	12.00	16.75	19.50	24.00	32.00	40.00	48.00	80.00	90.00	130.00	185.00
Globe aad Aagle Jenk. Disc., with Yoke, Flgd.....each	....	....	11.75	14.00	18.50	21.50	26.00	34.00	42.00	50.00	80.00	90.00	130.00	185.00
Horizoatal Check Valves, Scd., "	....	....	3.60	6.50	8.90	12.25	14.25	19.00	22.00	30.00	45.00	57.00	105.00	155.00
" " " Flgd., "	....	....	5.25	8.25	11.50	15.50	18.00	22.50	26.00	35.00	50.00	62.00	115.00	175.00
Aagle " " Scd., "	....	....	3.60	6.50	8.90	12.25	14.25	19.00	22.00	30.00	45.00	57.00	105.00	155.00
" " " Flgd., "	....	....	5.25	8.25	11.50	15.50	18.00	22.50	26.00	35.00	50.00	62.00	115.00	175.00
Vertical " " Scd., "	....	....	7.00	9.50	12.50	17.00	21.00	30.00	33.00	40.00	62.00	73.00	125.00	.....
" " " Flgd., "	....	....	8.75	11.50	15.00	20.00	25.00	33.50	37.00	45.00	67.00	78.00	135.00	.....
Angle Safety Valves, Scd..... "	5.00	5.80	7.80	13.25	17.25	23.00	28.75	34.50	41.50	57.50	93.50	132.00	.....	.....
" " " Flgd..... "	5.00	5.80	7.80	13.25	17.25	23.00	28.75	34.50	41.50	57.50	93.50	132.00	.....	.....
Swiag Check Valves, Scd..... "	....	....	.....	15.00	18.00	24.00	27.00	.....	38.00	48.00	62.00	75.00	125.00	.....
" " " Flgd..... "	....	....	.....	17.00	21.00	27.00	30.00	.....	44.00	52.00	67.00	80.00	135.00	.....
Jenkins Disc Check Valves, Scd. "	....	....	.....	10.50	14.00	17.00	20.00	25.00	30.00	40.00	.....	.....	.....	.....
" " " " Flgd. "	....	....	.....	12.50	16.50	20.00	23.00	28.00	33.00	43.00	.....	.....	.....	.....
Weber Valves, Scd..... "	....	....	10.00	11.50	14.00	17.00	19.00	24.00	27.50	32.50	45.00	54.00	90.00	125.00
" " Flgd..... "	....	....	12.00	13.50	16.50	19.50	23.00	28.00	31.50	36.50	49.00	58.00	95.00	133.00

Brass Valves, Stop Cocks, Etc.

SIZES	¼in.	⅜in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.
Standard Globe, Iron Wheel	$0.72	$0.77	$1.00	$1.26	$1.80	$2.52	$3.50	$5.30	$10.00	$14.40	$26.50	$36.00
Standard Angle, Iron Wheel.	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40	26.50	36.00
Standard Globe, Flanged Iron Wheel	.....	.....	.....	.....	6.75	8.50	10.50	16.00	.....	.....	.....	.....
Standard Angle, Flanged Iron Wheel	.....	.....	.....	.....	6.75	8.50	10.50	16.00	.....	.....	.....	.....
Jenkins Disc Globe Iron Wheel	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00	.....	.....
Jenkins Disc Angle Iron Wheel	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00	.....	.....
Standard Horizontal Check..	.65	.70	.90	1.15	1.60	2.25	3.15	4.75	9.00	13.00	24.00	32.50
Standard Angle and Vertical Check	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	.....	.....	.....	.....
Standard Swing Check Valves	.....	2.15	2.25	2.75	3.50	4.25	5.50	7.50	15.00	22.00	.....	.....
Jenkins Disc Horizontal Check Valves	.....	1.20	1.30	1.90	2.60	3.60	5.00	7.50	14.00	.....	.....	.....
Steam Cocks, Standard Sq. Head and Flat Head	.85	1.00	1.25	1.70	2.35	3.70	4.85	7.30	.....	.....	.....	.....
Bibb Cocks for Iron Pipe, Lever Handle, per doz...	20.40	21.60	22.80	36.60	51.00	.....	.....	.....	.....	.....	.....	.....
Compression Bibb for Iron Pipe, per dozen.....	13.20	13.80	14.40	26.40	48.00	.....	.....	.....	.....	.....	.....	.....
Compression Bibb, Hose and Iron, per dozen.....	.....	16.20	16.80	28.80	54.00	.....	.....	.....	.....	.....	.....	.....
Stops, Lever Handle, R.B., per dozen.....	16.20	17.40	18.60	30.60	42.00	70.20	105.00	186.00	.....	.....	.....	.....
Standard Peet, screwed....	.....	.....	1.30	1.75	2.50	3.50	5.00	7.50	.....	.....	.....	.....
Standard Gate, screwed....	.....	.....	1.30	1.75	2.25	3.25	4.25	6.25	.....	.....	.....	.....
Compression Gauge Cocks..	.....	1.10	1.20	1.30	.....	.....	.....	.....	.....	.....	.....	.....
Compression Stop Cocks, doz	.....	12.60	15.00	27.60	48.00	.....	.....	.....	.....	.....	.....	.....

Gurney-Oxford Automatic Steam Vent

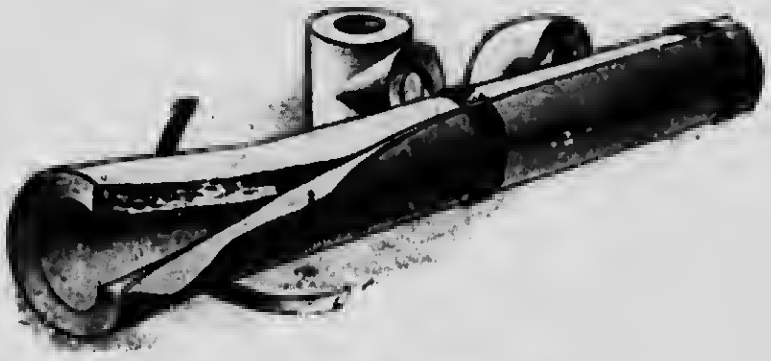
List Price, per dozen.....$12.00

Air Valves

	Per Dozen
Air Vents for Hot Water, Wood Wheel	$2.50
" " Metal "	4.50
" " Keyed	2.50
Extra Keys	1.00
Jenkins Automatic, Steam	7.50
" Cups Extra	2.00
Gurney-Oxford Automatic, Steam	12.00

Price List of Asbestos Sectional Covering

For Wrought Iron Pipe and Fittings



For Air Cell Use Same List

For Wrought Iron Pipe

Inside Diam. of Pipe Inches	Price per lin. ft. Canvas Jacketed	Inside Diam. of Pipe Inches	Price per lin. ft. Canvas Jacketed
½	$0.22	4	$0.60
¾	.24	4½	.65
1	.27	5	.70
1¼	.30	6	.80
1½	.33	7	1.00
2	.36	8	1.10
2½	.40	9	1.20
3	.45	10	1.30
3½	.50		

The sections are 36 inches in length. A sufficient number of fastenings furnished without additional charge. Sold in full sections only.

Ashestos cement in 100 lb. bags, $2.50 per bag.

One hag covers 10 square feet 2 inches thick.

Wrought Iron Nipples—Right Hand

Length, Inches						Size, Inches	Prices		Price 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	$0.04	$0.06	$0.07	$0.08	$0.10	$0.12	$0.14	$0.15	$0.17	$0.18	$0.19
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
2½	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
3	4	4½	5	5½	6	4	.85	1.20	.....	.....	.....	1.52	1.69	1.87	2.05	2.22	2.40
3	4	4½	5	5½	6	4½	1.25	1.70	.....	.....	.....	2.25	2.50	2.75	2.95	3.17	3.40
3¼	4½	5	5½	6	6½	5	.55	2.45	.....	.....	.....	2.58	2.83	3.10	3.35	3.60	3.85
3¼	4½	5	5½	6	6½	6	.85	2.90	.....	.....	.....	3.05	3.35	3.70	4.00	4.30	4.65
3½	5	.....	.....	.....	.....	7	3.20	.....	.....	.....	3.60	4.05	4.45	4.90	5.30	5.75	6.15
3½	5	.....	.....	.....	.....	8	3.55	.....	.....	.....	4.05	4.55	5.05	5.50	6.00	6.50	7.00
4	5	.....	.....	.....	.....	9	5.25	.....	.....	.....	.....	.....	6.50	7.10	7.75	8.40	9.00
4	5	.....	.....	.....	.....	10	6.75	.....	.....	.....	.....	.....	8.25	8.90	9.70	10.40	11.15
4	5	.....	.....	.....	.....	12	8.00	.....	.....	.....	.....	.....	10.00	10.80	11.75	12.70	13.65

Wrought Iron Nipples—Right and Left Hand

Length, Inches						Size, Inches	Prices		Price of Extra Long Nipples								
									Inches								
Close	Short	Long					Close or Short	Long	4	5	6	7	8	9	10	11	12
3/4	1 1/2	2	2 1/2	3	3 1/2	1/8	$0.05	$0.08	$0.09	$0.11	$0.13	$0.16	$0.18	$0.20	$0.23	$0.25	$0.27
7/8	1 1/2	2	2 1/2	3	3 1/2	1/4	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27
1	1 1/2	2	2 1/2	3	3 1/2	3/8	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27
1 1/8	1 1/2	2	2 1/2	3	3 1/2	1/2	.07	.10	.11	.13	.16	.18	.21	.24	.27	.29	.31
1 3/8	2	2 1/2	3	3 1/2	4	3/4	.08	.12	.....	.15	.17	.23	.25	.27	.29	.32	.35
1 1/2	2	2 1/2	3	3 1/2	4	1	.11	.18	.....	.20	.24	.31	.33	.37	.41	.45	.48
1 5/8	2 1/2	3	3 1/2	4	4 1/2	1 1/4	.15	.23	.....	.27	.32	.39	.45	.50	.55	.60	.65
1 3/4	2 1/2	3	3 1/2	4	4 1/2	1 1/2	.18	.27	.....	.34	.39	.48	.52	.60	.67	.72	.80
2	2 1/2	3	3 1/2	4	4 1/2	2	.24	.36	.....	.43	.51	.67	.72	.80	.87	.96	1.03
2 1/2	3	3 1/2	4	4 1/2	5	2 1/2	.52	.79	.....	.....	.91	1.20	1.30	1.40	1.55	1.68	1.80
2 1/2	3	3 1/2	4	4 1/2	5	3	.65	.96	.....	.....	1.13	1.44	1.60	1.77	1.93	2.10	2.27
2 3/4	4	4 1/4	5	5 1/2	6	3 1/2	1.00	1.40	.....	.....	.....	1.75	1.95	2.15	2.35	2.55	2.75
3	4	4 1/4	5	5 1/2	6	4	1.15	1.60	...	....	.....	2.00	2.25	2.50	2.75	3.00	3.25

Fittings—Cast Iron

SIZES	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.	6 in.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Crosses	....	....	0.16	0.22	0.27	0.42	0.53	0.75	1.30	2.00	2.70	3.15	4.60	5.50	7.25
Elbows, 90°	0.05	0.05	.06	.08	.10½	.16	.20	.28	.50	.75	1.05	1.20	1.75	2.00	3.15
" Reducing	....	....	.07	.09	.12	.18	.23	.32	.60	.85	1.20	1.40	2.00	2.30	3.15
" R. and L.	.06	.06	.07	.09	.12	.18	.23	.32	.60	.85	....	....	....	....	....
" 45°	....	.06	.07	.10	.12	.19	.24	.34	.60	.90	1.25	1.45	2.20	2.50	3.45
Tees	.08	.08	.09	.12	.15	.23	.29	.41	.73	1.10	1.50	1.75	2.55	3.00	4.00
" Reducing	....	....	.10	.14	.17	.27	.33	.47	.83	1.25	1.75	2.00	2.95	3.50	4.60
Return Bends, Close, R.H.	....	....	.18	.20	.22	.28	.40	.57	1.20	1.70	....	....	....	....	....
" " Open, R.H.	....	....	....	.26	.30	.40	.55	.80	1.35	2.20	....	....	....	....	....
" " Pitched, R.H.	....	....	....	....	.26	.33	....	....	....	....	....	....	....	....	....
" " Back Outlet, R.H	....	....	....	.38	.42	.60	.80	1.15	2.00	3.00	....	....	....	....	....
Caps	....	....	....	....	....	....	....	.26	.40	.54	.75	.87	1.05	1.20	1.55
" Malleable, use pound list	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Plugs, R.H.	.02	.02	.02	.03	.04	.05	.07	.10	.18	.25	.38	.42	.65	.88	1.20
" Left H	....	....	....	.06	.08	.09	.11	.15	....	....	....	....	....	....	....
" Solid	.04	.04	.04	.06	.08	.09	.11	.15	.27	.38	.57	.63	1.00	1.35	1.80
" Countersunk	....	....	.04	.06	.08	.09	.11	.15	.30	.40	....	....	....	....	....
Bushings, R.H.	....	.04	....	05	.06	.07	.09	.14	.21	.30	.40	.50	.75	.93	1.25
" L.H.	....	.08	....	.10	.12	.14	.18	.28	....	....	....	....	....	....	....
Reducers	....	....	....	....	....	....	....	.43	.60	.80	1.00	1.35	1.85	2.00	2.70
" Eccentric	....	....	....	....	....	....	....	1.00	1.50	2.40	3.00	4.00	5.00	6.00	8.00
Couplings, R. H. W. I.	.05	.06	.07	.10	.13	.17	.21	.28	.40	.60	.85	1.00	1.50	1.65	2.40
" R. & L.H., Malleable	.04	.05	.08	.12	.16	.25	.36	.52	....	....	....	....	....	....	....
Lock Nuts	....	....	....	....	....	....	....	.25	.27	.34	.47	.64	.85	.90	1.30
" Malleable	.02	.03	.04	.05	.07	.09	.11	.18	....	....	....	....	....	....	....
Hexagon, R. & L. Nipples	....	....	....	.25	.30	.40	.50	.70	....	....	....	....	....	....	....

Prices all kinds fittings on application.

Unions, Black Iron

SIZES	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.	6 in.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Standard, Malleable	0.18	0.20	0.22	0.27	0.33	0.46	0.58	0.75	1.55	2.10	.....	.....	.....	.....	.....
Standard, Flanged	.....	.....	.....	.....	.52	.64	.78	1.00	1.25	1.50	1.80	2.10	2.70	3.15	3.95
Dart, with brass joint	.30	.40	.50	.60	.80	1.20	1.60	2.00	3.20	4.80	.....	.....	.....	.....	.....

Pipe Hangers

SIZES	¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.	6 in.	7 in.	8 in.	9 in.	10in.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Exp. Ring Hangers, complete	.....	0.17	0.18	0.19	0.25	0.29	0.36	0.44	0.55	0.63	0.90	1.12	1.35	1.80	2.25	.....	.....
Exp. Ring Hangers, without plates	.....	.08	.12	.15	.20	.25	.30	.40	.50	.60	.80	1.00	1.25	1.70	2.15	.....	.....
Grabler Hangers	.20	.20	.22	.24	.28	.30	.32	.40	.44	.48	.51	.54	.60	.95	1.25	1.60	1.90
Grabler Extension Bar, 10-ft. lengths, per ft.	.08	.08	.08	.08	.08	.09	.09	.09	.10	.10	.10	.10	.10	.20	.20	.28	.28
Ring Stays, short, black, per 100	5.00	5.80	6.75	7.50	10.00	14.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ring Stays, short, galvanized.....per 100	6.50	7.00	8.00	9.00	12.00	16.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ring Stays, long, black, per 100	6.50	8.00	10.00	12.00	15.00	20.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ring Stays, long, galvanized.....per 100	8.00	10.00	12.00	14.00	18.00	24.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Pressure Reducing Valves

SIZES	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.	5 in.	6 in.
Kieley	$22.00	$28.00	$35.00	$ 44.00	$57.00	$72.00	$85.00	$100.00	$135.00	$180.00
Davis No. 1	22.00	24.00	25.00	30.00	35.00	40.00	50.00	60.00	75.00	100.00

Davis No. 1.....	22.00	24.00	25.00	30.00	35.00	40.00	50.00	60.00	75.00	100.00

Floor and Ceiling Plates

SIZES	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.
C. I. Floor.....Plain	$0.06	$0.06	$0.08	$0.11	$0.14	$0.16	$0.24	$0.30	$0.35	$0.42
" " .....Plated	12	.12	.14	.18	.22	.26	.35	.45	.....	.....
" Double Floor.....Plain	.....	.15	.15	.15	.15	.....	.....	.....	.....	.....
" " .....Plated	.....	.30	.30	.30	.30	.....	.....	.....	.....	.....
" Ceiling .....Plain	.11	.13	.16	.18	.23	.27	.36	.50	.55	.68
" " .....Plated	.14	.17	.20	.23	.30	.35	.....	.....	.....	.....
" " 2-piece.....Plain	.....	.22	.28	.32	.40	.50	.65	.90	1.00	1.20
" " " .....Plated	.....	.26	.32	.37	.48	.58	.....	.....	.....	.....
Spun Brass Floor.....Plated	.14	.14	.18	.22	.30	.35	.42	.55	.....	.....
" " Ceiling.....Plated	.20	.22	.24	.30	.35	.43	.55	.75	.....	.....
" " with Screw.....Plated	.22	.24	.26	.32	.38	.46	.60	.80	.....	.....
B. & C. 2-piece Floor } .... Plain	.14	.14	.18	.20	.24	.28	.43	.60	.90	1.25
" " Ceiling } .....Plated	.25	25	.28	.32	.35	.38	.52	.75	1.10	1.50
Grabler Floor.....Plated	.25	.25	.28	.32	.35	.38	.52	.75	1.10	1.50
" Ceiling.....Plated	.25	.25	.28	.32	.35	.38	.52	.75	1.10	1.50
Holdfast Floor, per doz.....Plated	.72	.84	.96	1.08	1.32	1.50	1.75	.....	.....	.....
Holdfast Ceiling, per doz....Plated	1.20	1.32	1.44	1.56	1.75	2.00	2.50	.....	.....	.....
H.B. Perfection Floor.....Plated	.10	.10	.11	.12	.13	.15	.30	.50	.....	.....
" " Ceiling.....Plated	.25	.25	.28	.32	.35	.38	.52	.75	.....	.....

Expansion Tanks

Galvanized Iron. Complete with gauge glass and brass mountings.

Size 12 × 24 inches. Complete, each..$5.40
Size 12 × 30 inches. Complete, each.. 6.00
Size 14 × 30 inches. Complete, each.. 6.40
Trimmings only, per set.....1.20

Hair Felt

In rolls containing 300 square feet.

½ inch .....$6.50 per hundred square feet
¾ inch ..... 8.50 per hundred square feet
1 inch .....10.50 per hundred square feet

BRANCH TEES

No. 1. FOR CIRCULATION

No. 2. FOR CIRCULATION

INLET OPEN

No. 3. FOR BOX COILS

Number of Branches	1" Branch Tees 2½" Centre to Centre			1¼" Branch Tees 3" Centre to Centre			1½" Branch Tees 3½" Centre to Centre			2" Branch Tees 4½" Centre to Centre		
	1" or 1¼" *Run	1½" Run	2" Run	1¼" or 1½" Run	2" Run	2½" *Run	1½" or 2" *Run	2½" Run	3" Run	2" Run	2½" Run	3" *Run
2	$0.90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	1.05	.....	.....	$1.65	$1.90	.....	$2.70	$3.45	.....	$5.25	$5.75	.....
4	1.15	$1.30	.....	2.00	2.40	.....	3.35	4.15	.....	6.40	7.00	.....
5	1.35	1.45	.....	2.40	2.90	$3.55	4.00	5.00	$5.50	7.65	8.50	$9.25
6	1.60	1.75	$2.10	2.80	3.30	3.95	4.65	5.75	6.25	8.80	9.75	10.75
7	1.90	2.20	2.45	3.20	3.90	4.20	5.25	6.50	7.25	10.60	11.75	13.00
8	2.20	2.45	2.75	3.60	4.50	4.95	5.85	7.00	7.75	11.50	12.75	14.00
9	2.65	2.90	3.40	4.30	5.25	6.15	6.50	8.25	9.00	12.25	13.50	15.00
10	3.00	3.30	4.00	4.80	5.85	6.85	7.60	9.25	10.00	13.50	15.00	16.50
11	3.35	4.50	4.80	5.00	6.25	7.25	8.00	9.75	10.75	14.25	15.75	17.25
12	3.75	4.75	5.10	5.25	6.50	7.65	8.50	10.50	11.50	15.00	16.50	18.25

1	inch Branch Tees,		1 or 1¼ inch Run			re	1⅞ Inches inside diameter.		
1	"	"	1½ or 2	"	"		2½	"	"
1¼	"	"	1¼, 1½ or 2 in.		"		2½	"	"
1¼	"	"	2½ inch		"		3	"	"
1½	"	"	1½ or 2 inch		"		2½	"	"
1½	"	"	2½ inch		"		3	"	"
1½	"	"	3	"	"		3½	"	"
2	"	"	2	"	"		2½	"	"
2	"	"	2½	"	"		3	"	"
2	"	"	3	"	"		3½	"	"

NOTE—*Our standard covers 1¼" run for 1" Branch Tees; 2½" run for 1¼" Branch Tees and 2" run for 1½" Branch Tees. Other runs are supplied at other lists, but not as promptly as standard.

Price List for Cutting and Threading Pipe

Cutting and Threading Pipe Extra

Size	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	7	8	9	10	12
Cut Price, each	.06	.06	.06	.06	.06	.08	.10	.14	.20	.30	.40	.50	.60	.80	1.00	1 20	2.00	2.50	3.50
Thread " "	.06	.06	.06	.06	.06	.08	.10	.14	.20	.30	.40	.50	.60	.80	1.00	1.20	2.00	2.50	3.50

Cutting to Length Extra

Inch	6 Feet and Longer		2 Feet and Under 6 Feet		1 Foot and Under 2 Feet	
	Black	Galvanized	Black	Galvanized	Black	Galvanized
¼	$0.50	$0.66	$0.66	$0.83	$0.83	$ 1.00 per 100 ft.
⅜	.50	.66	.66	.83	.83	1.00 " " "
½	.60	.77	.77	1.02	1.02	1.30 " " "
¾	.68	.81	.81	1.15	1.15	1.50 " " "
1	.83	1.15	1.15	1.55	1.65	2.15 " " "
1¼	1.13	1.58	1.58	2.25	2.25	2.95 " " "
1½	1.35	1.89	1.89	2.70	2.70	3.50 " " "
2	1.80	2.52	2.52	3.60	3.60	4.70 " " "
2½	2.85	3.99	3.99	5.70	5.70	7.40 " " "
3	3.70	5.18	5.18	7.40	7.40	9.60 " " "
3½	5.20	7.28	7.28	10.40	10.40	13.50 " " "
4	5.95	8.30	8.30	11.90	11.90	15.50 " " "

Pieces under 1 foot sold on Nipple List.

Dimensions of Standard Weight Steam and Water Pipes

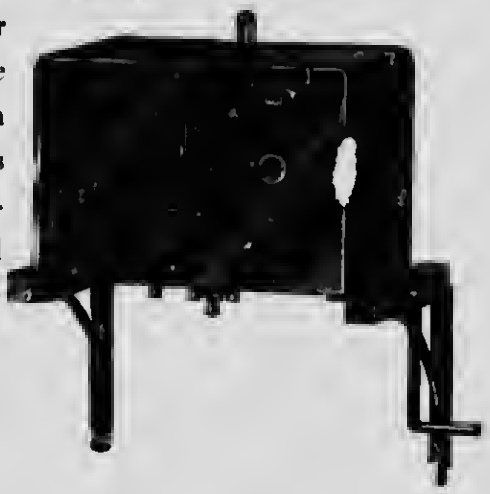
Jan. 1st, 1913.

Size	Internal Diameter	External Diameter	Length of Pipe per Sq. ft. of External Surface	Sq. ft. External Surface per 100 Lineal ft.	Internal Area	Water Contained per Lineal ft.	Thread per Inch	Weight per ft.
Inches	Inches	Inches	Feet	Sq. feet	Inches	Pounds	Number	Pounds
¼	0.364	0.540	7.075	14.13	.1041	.044	18	0.425
⅜	0.493	0.675	5.657	17.67	.1916	.062	16	0.568
½	0.622	0.640	4.502	22.21	.3046	.132	14	0.852
¾	0.624	1.050	3.637	27.49	.5333	.231	14	1.134
1	1.049	1.315	2.930	34.44	.8629	.373	11½	1.664
1¼	1.380	1.660	2.331	43.46	1.496	.648	11½	2.281
1½	1.610	1.900	2.010	49.75	2.037	.880	11½	2.731
2	2.067	2.375	1.611	62.07	3.355	1.453	11½	3.078
2½	2.469	2.875	1.326	75.30	4.785	2.076	8	5.619
3	3.068	3.500	1.091	91.66	7.389	3.200	8	7.616
3½	3.548	4.000	0.005	100.50	9.887	4.261	8	9.202
4	4.026	4.500	0.849	117.78	12.730	5.512	8	10.889
4½	4.506	5.000	0.765	130.72	15.960	6.906	8	12.642
5	5.047	5.563	0.067	145.56	20.006	8.660	8	14.610
6	6.065	6.625	0.557	179.35	26.689	12.509	8	19.185
7	7.023	7.625	0.501	199.60	38.738	16.774	6	23.169
8	7.961	8.625	0.444	225.22	50.004	21.666	6	28.804
9	8.941	9.625	0.394	253.60	62.79	27.165	8	31.166
10	10.020	10.750	0.355	281.69	78.85	34.138	8	44.132
11	11.000	11.750	0.225	307.69	95.033	41.150	6	40.247
12	12.000	12.750	0.293	341.30	113.096	46.971	6	50.706

The Thermostat

The Thermostat, or mechanical thermometer, by its action controls the operation of the whole mechanism of the Regulator. Is made with a Time Attachment as illustrated or without the Time Attachment.

When the coil at the top of the Thermostat is exposed to a change of temperature, it expands or contracts, creating a motion which is imparted to the projecting arm, closing the electric circuit by forming a contact with one of the posts at the lower end. As the circuit is closed, an electric current flows through the magnets of the Motor, releasing the brake, and the driving shaft of the Motor makes a half revolution. The Thermostat is protected by an ornamental metal screen, which has upon its face an accurate thermometer. It should be located in the living room at an average temperature point. All the other parts of the device are located in the basement.



Honeywell Heat Generator

No. 1 for 1,200 square feet Radiation	$25.00	each
No. 2 for 2,500 " " "	35.00	"
No. 3 for 3,500 " " "	50.00	"
No. 4 for 10,000 " " "	65.00	"

These Generators are used in connection with Hot Water Systems when the circulation is sluggish, radiation insufficient or piping too small.

Ask for Special Printed Matter

Sizes of Mains

The size of steam mains depends on four factors, viz.: the surface to be carried, the velocity of the steam, the drop in pressure, and length of mains. No arbitrary rule can be laid down to suit all cases.

The sizes given in the following table are considered conservative, and are to be used under ordinary conditions:

Mains Not Exceeding 100 Feet in Length.

Size of Main Inches	Feet of Radiation			Returns Two Pipe Steam	
	Steam One Pipe	Water Two Pipe	Steam Two Pipe	Dry	Wet
1¼	75	100	80	1	1
1½	125	200	180	1	1
2	350	300	325	1½	1¼
2½	550	450	650	2	1½
3	1,000	700	1,100	2	2
3½	1,400	900	1,500	2½	2
4	1,800	1,200	2,100	2½	2
4½	2,500	1,500	2,700	3	2½
5	3,000	2,000	3,500	3	2½
6	4,500	3,000	6,000	3½	3

Where piping is not **thoroughly** covered it should be figured as radiation. Branch mains carrying water and steam in opposite directions should be increased one size.

Branch mains carrying two or more branches should equal in internal diameter the sum of internal area of the branches. (See table of pipe areas.)

Uptakes from boiler to mains should be of increased sizes.

Above from good authorities, but are not guaranteed.

Cast Iron Steam Jacketted Kettles

Capacities and Shipping Weights

Capacity	Shipping Weight	List Price	List Price with binged Cover
30 Gals.	471 lbs.	$140.00	$170.00
40 Gals.	541 lbs.	160.00	190.00
50 Gals.	600 lbs.	180.00	220.00
60 Gals.	731 lbs.	210.00	250.00

Greenhouse Heating

Estimating Radiation

The area in square feet of glass surface, wall surface, the exposure, the construction of the huilding, the outside temperature and the uses to which the house is to be put, are all to be considered when calculating the amount of radiation required. The tahle herewith given will be found useful for any required inside temperature ranging from 40 degrees to 70 degrees and with outside temperatures ranging irom zero to 40 degrees below zero, Fahrenheit. It is necessary to have ample radiating surface, also boilers of ample capacity to take care of quick drops in temperature easily. The surface of wrought iron pipe is as follows:—

1 foot of	1″	pipe has	.344	sq. ft. of	surface.
1 "	1¼	"	.434	"	"
1 "	1½″	"	.497	"	"
1 "	2″	"	.621	"	"

Sizes of Mains

For houses of average length and coils well ahove the heater, the mains for hot water may be proportioned as follows:—

For 200 to	300	sq. ft. of	surface	2″
" 300 "	500	"	"	2½″
" 600 "	800	"	"	3″
" 800 "	1100	"	"	3½″

The longer the mains and the less the coils are above the heater, the larger the mains must be.

If mains are short and thc coils well elevated ahove heater they will carry increased amount of surface.

Arrangement of Coils

For coils up to 40 feet long use 1¼″ pipe, up to 75 feet 1½″ pipe, and for coils longer than this use 2″ pipe. It is better to use two or more coils in long houses instead of the long coils, and have the coils valved so that any part can be closed off if desired. Tests have shown little or no difference in so far as the growth of plants, whether over-head heating or under-the-bench heating has been used, and the mains and coils can be arranged to suit varying conditions.

To get the best circulation the mains should be overhead and thc coils beneath the benches.

Greenhouse Heating

Radiating Surface Required for Greenhouse Heating at Various Temperatures. Zero Weather.

Square feet of Glass	STEAM — Radiation Required at					Square feet of Glass	HOT WATER — 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
1,000	112	125	143	167	200	1,000	167	200	250	286	333
2,000	223	250	286	333	400	2,000	333	400	500	572	667
3,000	334	375	429	500	600	3,000	500	600	750	857	1,000
4,000	445	500	571	667	800	4,000	667	800	1,000	1,143	1,333
5,000	556	625	714	833	1,000	5,000	833	1,000	1,250	1,429	1,667
10,000	1,112	1,250	1,429	1,667	2,000	10,000	1,667	2,000	2,500	2,857	3,333
20,000	2,223	2,500	2,857	3,333	4,000	20,000	3,333	4,000	5,000	5,714	6,667

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.

*See page 2.

Requirements for Chimneys

No chimney flues should be less than 8″ x 8″, or 8″ diameter if round.

Chimneys should be:—

1—Straight and free from any obstructions.

2—A separate flue should be provided for each fire.

3—There should be no opening into the flue except that at the bottom to receive the smoke pipe from the boiler or furnace and the cleanout opening door for the removal of soot.

4—The same size and shape should be maintained throughout.

5—They should be built up clean of any obstructing buildings.

6—They should be built on inside walls and not outside walls, wherever possible.

The fact that a flue will draw up a lighted piece of paper or other light material is no indication of a good or fair draft. An indicated velocity is not proof of a good draft. It is necessary that it shall be of sufficient area to carry away the gases of combustion. The draft of a chimney depends both on the area of flue and the velocity due to height. Square or round chimneys are always to be preferred. Wide chimneys that are shallow in depth ARE TO BE AVOIDED.

The following table of chimney sizes will be found to give results under average conditions.

RADIATION (Direct)		CHIMNEY SIZE	
Hot Water Sq. Ft.	Steam Sq. Ft.	Round inches	Rectangular inches
400 to 700	250 to 450	8	8 × 8
800 to 1,200	500 to 800	10	8 × 13
1,300 to 2,200	850 to 1,400	12	13 × 13
2,400 to 3,500	1,500 to 2,100	14	13 × 17
3,600 to 5,500	2,200 to 3,500	16	17 × 17
5,600 to 10,000	3,600 to 6,000	18	17 × 21

(Requirements for Chimneys, Continued)

A more specific table is given by Prof. R. C. Carpenter suitable to various sized heating plants and different chimney heights, as follows:

RADIATION (Direct)		Height of Chimney Flue				
Steam Sq. ft.	Hot Water Sq. ft.	30 Ft.	40 Ft.	50 Ft.	60 Ft.	80 Ft.
		Inches	Inches	Inches	Inches	Inches
250	375	7.0	6.7	6.4	6.2	6.0
500	750	9.2	8.8	8.2	8.0	6.6
750	1,150	10.8	10.2	9.6	9.3	8.8
1,000	1,500	12.0	11.4	10.8	10.5	10.0
1,500	2,250	14.4	13.4	12.8	12.4	11.5
2,000	3,000	16.3	15.2	14.5	14.0	13.2
3,000	4,500	18.5	18.2	17.2	16.6	15.8
4,000	6,000	22.2	20.8	19.6	19.0	17.8
5,000	7,500	24.6	23.0	21.6	21.0	19.4
6,000	9,000	26.8	25.0	23.4	22.8	21.2
7,000	10,500	28.8	27.0	25.5	24.4	23.0
8,000	12,000	30.6	28.6	26.8	26.0	24.2
9,000	13,500	32.4	30.4	28.4	27.4	25.6
10,000	15,000	34.0	32.0	30.0	28.6	27.0

Dimensions given are diameters of flues in inches or the side of square flue.

Area of Circles

Diam. Inches	Area	Diam. Inches	Area	Diam. Inches	Area	Diam. Inches	Area
1/8	.012	7	38.48	19	283.53	37	1075.2
1/4	.049	7 1/2	44.17	19 1/2	298.64	38	1134.1
3/8	.110	8	50.26	20	314.16	39	1194.6
1/2	.196	8 1/2	56.74	20 1/2	330.06	40	1256.6
3/4	.441	9	63.61	21	346.36	41	1320.2
1	.785	9 1/2	70.88	21 1/2	363.05	42	1385.4
1 1/8	.994	10	78.54	22	380.13	43	1452.2
1 1/4	1.227	10 1/2	86.59	22 1/2	397.60	44	1520.5
1 1/2	1.767	11	95.03	23	415.47	45	1590.4
1 3/4	2.405	11 1/2	103.87	23 1/2	433.73	46	1661.9
2	3.141	12	113.10	24	452.39	47	1734.9
2 1/4	3.976	12 1/2	122.71	24 1/2	471.43	48	1808.5
2 1/2	4.908	13	132.72	25	490.8	49	1885.5
2 3/4	5.939	13 1/2	143.13	26	530.9	50	1963.5
3	7.06	14	153.94	27	572.5	51	2042.8
3 1/4	8.29	14 1/2	165.13	28	615.7	52	2123.7
3 1/2	9.62	15	176.71	29	660.5	53	2206.1
3 3/4	11.04	15 1/2	188.69	30	706.8	54	2290.2
4	12.56	16	201.06	31	754.7	55	2375.8
4 1/2	15.90	16 1/2	213.82	32	804.2	56	2463.0
5	19.63	17	226.98	33	855.3	57	2551.7
5 1/2	23.75	17 1/2	240.52	34	907.9	58	2642.0
6	28.27	18	254.46	35	962.1	59	2733.9
6 1/2	33.18	18 1/2	268.80	36	1017.8	60	2827.4

Other dimensions of circles are obtained, viz.:

Diameter × 3.1416 = circumference.
Diameter × .8862 = side of an equal square.
Diameter × diameter × .7854 = area of circle.
Circumference ÷ 3.1416 = diameter.
Circumference ÷ 6.28318 = one-half of diameter or radius.
Circumference × 1/4 of diameter = area of circle.
Square inches × .007 = square feet.
Circular inches × .00546 = square feet.
Cube inches × .00058 = cube feet.

Useful Data

One cubic inch of water weighs	.036 lbs.
One cubic inch of cast iron weighs	.26 lbs.
One cubic inch of wrought iron weighs	.28 lbs.
One cubic inch of copper weighs	.31 lbs.
One cubic inch of lead weighs	.41 lbs.
One cubic foot of water weighs	62.321 lbs.
One United States gallon of water weighs	8.33 lbs.
One Imperial gallon of water weighs	10.00 lbs.
One United States gallon equals	231.00 cu. in.
One Imperial gallon equals	277.274 cu. in.
One cubic foot of water equals	7.48 U.S. gals.
One cubic foot of water equals	6.23 Imp. gals.
One pound of steam equals at atmospheric pressure	27.222 cu. ft.
One pound of air equals at 70 degrees Fahr.	13.817 cu. ft.
One Imperial gallon equals	.16 cu. ft.
One United States gallon equals	.1366 cu. ft.
One pound of water equals	27.72 cu. ft.
One pound of water equals	.10 Imp. gals.
One pound of water equals	.083 U.S. gals.

A column of water 1 foot high is equal to a pressure of .433 lbs. per square inch.

A pressure of 1 lb. is equal to a column of water 2.31 feet high.

Mercury freezes at 37.9 degrees Fahr. below zero, and alcohol at not less than 200 degrees Fahr. below zero. Mercury boils at 662 and alcohol at 173 degrees Fahr.

Water expands one twenty-third part, or 4⅓ per cent., from 32 degrees Fahr. to 212 degrees Fahr.

Water boils at 98 degrees Fahr. in a perfect vacuum, and at the sea level at 212 degrees Fahr.

A heat unit (British Thermal Unit) is the quantity of heat required to raise one pound of water from 40 degrees to 41 degrees Fahr., or one degree.

A pound of anthracite coal contains about 14,000 heat units.

Tons of coal in a coal bin are found by multiplying height, breadth and depth together and dividing the result by 40. For soft coal divide by 49.

Water converted into steam expands about 1,700 times its volume. One cubic inch of water will produce approximately 1 cubic foot of steam.

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