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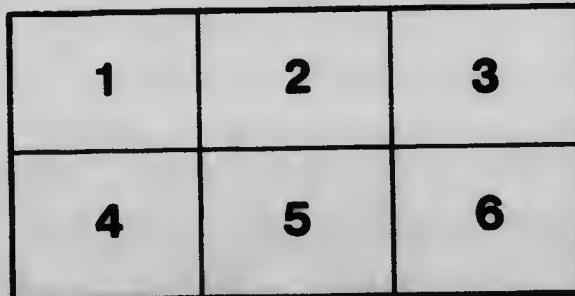
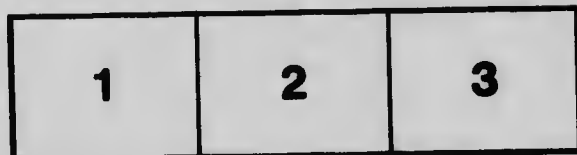
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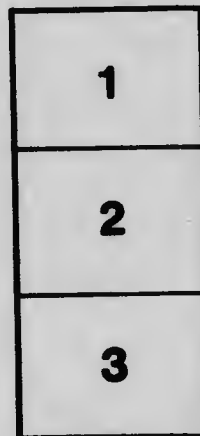
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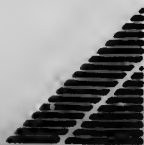
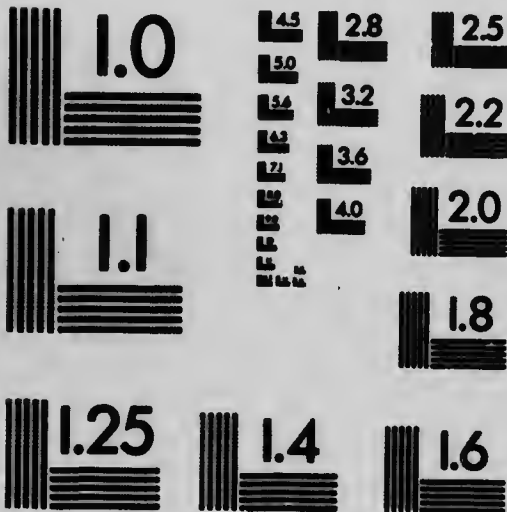
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Pocket List

OF THE WORLD
FAMOUS

Safford Radiators

Triumph

Round and Sectional Steam and
Hot Water Boilers

Importers of and Dealers in Iron Pipe,
Fittings, Brass and Iron Body Valves,
and Steam Fitters' Sundries. 

The
Dominion Radiator Company
limited

TORONTO, CANADA

MONTREAL BRANCH

Entered according to Act of the Parliament of Canada, in the office of the Minister of Agriculture at Ottawa, in the year 1900, by the Dominion Radiator Company, Limited, of Toronto.

TO 116 CRAIG ST. WEST

Safford Radiators.

FAVORITE and DAISY.

FOUR COLUMN.

Capacities and Dimensions.

Number of Sections.	*Length in. per Section.	HEATING SURFACE—SQUARE FEET.					
		42 in. in Height. 9" Sq. Ft. per Section.	38 in. in Height. 8" Sq. Ft. per Section.	35 in. in Height. 6" Sq. Ft. per Section.	32 in. in Height. 5" Sq. Ft. per Section.	28 in. in Height. 4" Sq. Ft. per Section.	16 in. in Height. 2" Sq. Ft. per Section.
2	8	19 1/3	16	13 1/3	10 2/3	8	5
3	12	29	24	20	16	12	7 1/2
4	16	38 2/3	32	26 2/3	21 1/3	16	10
5	20	48 1/3	40	33 1/3	26 2/3	20	12 1/2
6	24	58	48	40	32	24	15
7	28	67 2/3	56	46 2/3	37 1/3	28	17 1/2
8	32	77 1/3	64	53 1/3	42 2/3	32	20
9	36	87	72	60	48	36	22 1/2
10	40	96 2/3	80	66 2/3	53 1/3	40	25
11	44	106 1/3	88	73 1/3	58 2/3	44	27 1/2
12	48	116	96	80	64	48	30
13	52	125 2/3	104	86 2/3	69 1/3	52	32 1/2
14	56	135 1/3	112	93 1/3	74 2/3	56	35
15	60	145	120	100	80	60	37 1/2
16	64	154 2/3	128	106 2/3	85 1/3	64	40
17	68	164 1/3	136	113 1/3	90 2/3	68	42 1/2
18	72	174	144	120	96	72	45
19	76	183 2/3	152	126 2/3	101 1/3	76	47 1/2
20	80	193 1/3	160	133 1/3	106 2/3	80	50
21	84	203	168	140	112	84	52 1/2
22	88	212 2/3	176	146 2/3	117 1/3	88	55
23	92	222 1/3	184	153 1/3	122 2/3	92	57 1/2
24	96	232	192	160	128	96	60
25	100	241 2/3	200	166 2/3	133 1/3	100	62 1/2

*In estimating length of Radiator allow 1/2 inch for each section.

Safford Radiators.

TRIDENT.

THREE COLUMN.

Capacities and Dimensions.

Number of Sections.	*Length $2\frac{1}{2}$ in. per Section.	HEATING SURFACE—SQUARE FEET.					
		41 in. in Height. 6 Sq. Ft. per Section.	38 in. in Height. 6 Sq. Ft. per Section.	32 in. in Height. 4 $\frac{1}{2}$ Sq. Ft. per Section.	26 in. in Height. 3 $\frac{3}{4}$ Sq. Ft. per Section.	22 in. in Height. 3 Sq. Ft. per Section.	18 in. in Height. 2 $\frac{1}{2}$ Sq. Ft. per Section.
2	5	12	10	9	7 $\frac{1}{2}$	6	4 $\frac{1}{2}$
3	7 $\frac{1}{2}$	18	15	13 $\frac{1}{2}$	11 $\frac{1}{4}$	9	6 $\frac{3}{4}$
4	10	24	20	18	15	12	9
5	12 $\frac{1}{2}$	30	25	22 $\frac{1}{2}$	18 $\frac{3}{4}$	15	11 $\frac{1}{4}$
6	15	36	30	27	22 $\frac{1}{2}$	18	13 $\frac{1}{2}$
7	17 $\frac{1}{2}$	42	35	31 $\frac{1}{2}$	26 $\frac{1}{4}$	21	15 $\frac{3}{4}$
8	20	48	40	36	30	24	18
9	22 $\frac{1}{2}$	54	45	40 $\frac{1}{2}$	33 $\frac{3}{4}$	27	20 $\frac{1}{4}$
10	25	60	50	45	37 $\frac{1}{2}$	30	22 $\frac{1}{2}$
11	27 $\frac{1}{2}$	66	55	49 $\frac{1}{2}$	41 $\frac{1}{4}$	33	24 $\frac{3}{4}$
12	30	72	60	54	45	36	27
13	32 $\frac{1}{2}$	78	65	58 $\frac{1}{2}$	48 $\frac{3}{4}$	39	29 $\frac{1}{4}$
14	35	84	70	63	52 $\frac{1}{2}$	42	31 $\frac{1}{2}$
15	37 $\frac{1}{2}$	90	75	67 $\frac{1}{2}$	56 $\frac{1}{4}$	45	33 $\frac{3}{4}$
16	40	96	80	72	60	48	36
17	42 $\frac{1}{2}$	102	85	76 $\frac{1}{2}$	63 $\frac{3}{4}$	51	38 $\frac{1}{4}$
18	45	108	90	81	67 $\frac{1}{2}$	54	40 $\frac{1}{2}$
19	47 $\frac{1}{2}$	114	95	85 $\frac{1}{2}$	71 $\frac{1}{4}$	57	42 $\frac{3}{4}$
20	50	120	100	90	75	60	45
21	52 $\frac{1}{2}$	126	105	94 $\frac{1}{2}$	78 $\frac{3}{4}$	63	47 $\frac{1}{4}$
22	55	132	110	99	82 $\frac{1}{2}$	66	49 $\frac{1}{2}$
23	57 $\frac{1}{2}$	138	115	103 $\frac{1}{2}$	86 $\frac{1}{4}$	69	51 $\frac{3}{4}$
24	60	144	120	108	90	72	54
25	62 $\frac{1}{2}$	150	125	112 $\frac{1}{2}$	93 $\frac{3}{4}$	75	56 $\frac{1}{4}$

*In estimating length of Radiator allow $\frac{1}{2}$ inch for each plug or bushing.

Safford Radiators.

FAVORITE and DAISY.

TWO COLUMN.

Capacities and Dimensions.

Number of Sections	Length $\frac{1}{2}$ in. per Section.	HEATING SURFACE—SQUARE FEET.				
		38 in. in Height. 4 Sq. Ft. per Section.	39 in. in Height. $3\frac{1}{2}$ Sq. Ft. per Section.	36 in. in Height. $2\frac{1}{2}$ Sq. Ft. per Section.	30 in. in Height. 2 Sq. Ft. per Section.	16 in. in Height. $1\frac{1}{2}$ Sq. ft. per Sec.
2	7	8	$6\frac{2}{3}$	$5\frac{1}{3}$	4	3
3	$10\frac{1}{2}$	12	10	8	6	$4\frac{1}{2}$
4	14	16	$13\frac{1}{3}$	$10\frac{2}{3}$	8	6
5	$17\frac{1}{2}$	20	$16\frac{2}{3}$	$13\frac{1}{3}$	10	$7\frac{1}{2}$
6	21	24	20	16	12	9
7	$24\frac{1}{2}$	28	$23\frac{1}{3}$	$18\frac{2}{3}$	14	$10\frac{1}{2}$
8	28	32	$26\frac{2}{3}$	$21\frac{1}{3}$	16	12
9	$31\frac{1}{2}$	36	30	24	18	$13\frac{1}{2}$
10	35	40	$33\frac{1}{3}$	$26\frac{2}{3}$	20	15
11	$38\frac{1}{2}$	44	$36\frac{2}{3}$	$29\frac{1}{3}$	22	$16\frac{1}{2}$
12	42	48	40	32	24	18
13	$45\frac{1}{2}$	52	$43\frac{1}{3}$	$34\frac{2}{3}$	26	$19\frac{1}{2}$
14	49	56	$46\frac{2}{3}$	$37\frac{1}{3}$	28	21
15	$52\frac{1}{2}$	60	50	40	30	$22\frac{1}{2}$
16	56	64	$53\frac{1}{3}$	$42\frac{2}{3}$	32	24
17	$59\frac{1}{2}$	68	$56\frac{2}{3}$	$45\frac{1}{3}$	34	$25\frac{1}{2}$
18	63	72	60	48	36	27
19	$66\frac{1}{2}$	76	$63\frac{1}{3}$	$50\frac{2}{3}$	38	$28\frac{1}{2}$
20	70	80	$66\frac{2}{3}$	$53\frac{1}{3}$	40	30
21	$73\frac{1}{2}$	84	70	56	42	$31\frac{1}{2}$
22	77	88	$73\frac{1}{3}$	$58\frac{2}{3}$	44	33
23	$80\frac{1}{2}$	92	$76\frac{2}{3}$	$61\frac{1}{3}$	46	$34\frac{1}{2}$
24	84	96	80	64	48	36
25	$87\frac{1}{2}$	100	$83\frac{1}{3}$	$66\frac{2}{3}$	50	$37\frac{1}{2}$

* In estimating length of Radiator allow $\frac{1}{2}$ inch for each plug or bushing.

Safford Radiators.

PERFECT.

TWO COLUMN.

Capacities and Dimensions.

Number of Sections.	†Length 2½ in. per Section.	HEATING SURFACE—SQUARE FEET.						
		45 in. in Height. Sq. Ft. per Section.	38 in. in Height. Sq. Ft. per Section.	33 in. in Height. Sq. Ft. per Section.	30 in. in Height. Sq. Ft. per Section.	26 in. in Height. Sq. Ft. per Section.	23 in. in Height. Sq. Ft. per Section.	20 in. in Height. Sq. Ft. per Section.
2	5	10	8	6⅓	6	5⅓	4⅓	4
3	7½	15	12	10	9	8	7	6
4	10	20	16	13⅓	12	10⅓	9⅓	8
5	12½	25	20	16⅓	15	13⅓	11⅓	10
6	15	30	24	20	18	16	14	12
7	17½	35	28	23⅓	21	18⅓	16⅓	14
8	20	40	32	26⅓	24	21⅓	18⅓	16
9	22½	45	36	30	27	24	21	18
10	25	50	40	33⅓	30	26⅓	23⅓	20
11	27½	55	44	36⅓	33	29⅓	25⅓	22
12	30	60	48	40	36	32	28	24
13	32½	65	52	43⅓	39	34⅓	30⅓	26
14	35	70	56	46⅓	42	37⅓	32⅓	28
15	37½	75	60	50	45	40	35	30
16	40	80	64	53⅓	48	42⅓	37⅓	32
17	42½	85	68	56⅓	51	45⅓	39⅓	34
18	45	90	72	60	54	48	42	36
19	47½	95	76	63⅓	57	50⅓	44⅓	38
20	50	100	80	66⅓	60	53⅓	46⅓	40
21	52½	105	84	70	63	56	49	42
22	55	110	88	73⅓	66	58⅓	51⅓	44
23	57½	115	92	76⅓	69	61⅓	53⅓	46
24	60	120	96	80	72	64	56	48
25	62½	125	100	83⅓	75	66⅓	58⅓	50

* 30 and 23-inch Radiators are made for steam only.

† In estimating length of Radiator allow ¼ inch for each plug or bushing.

Safford Radiators.

FLORENCE.

TWO COLUMN.

Capacities and Dimensions.

Number of Sections.	Length $2\frac{1}{2}$ in. per Section.	HEATING SURFACE—SQUARE FEET.					
		45 in. in Height.	38 in. in Height.	32 in. in Height.	26 in. in Height.	20 in. in Height.	16 in. in Height.
		Sq. Ft. per Section.	Sq. Ft. per Section.	Sq. Ft. per Section.	Sq. Ft. per Section.	Sq. Ft. per Section.	Sq. Ft. per Section.
2	5	10	8	6 $\frac{2}{3}$	5 $\frac{1}{3}$	4	3
3	7 $\frac{1}{2}$	15	12	10	8	6	4 $\frac{1}{2}$
4	10	20	16	13 $\frac{1}{3}$	10 $\frac{2}{3}$	8	6
5	12 $\frac{1}{2}$	25	20	16 $\frac{2}{3}$	13 $\frac{1}{3}$	10	7 $\frac{1}{2}$
6	15	30	24	20	16	12	9
7	17 $\frac{1}{2}$	35	28	23 $\frac{1}{3}$	18 $\frac{2}{3}$	14	10 $\frac{1}{2}$
8	20	40	32	26 $\frac{2}{3}$	21 $\frac{1}{3}$	16	12
9	22 $\frac{1}{2}$	45	36	30	24	18	13 $\frac{1}{2}$
10	25	50	40	33 $\frac{1}{3}$	26 $\frac{2}{3}$	20	15
11	27 $\frac{1}{2}$	55	44	36 $\frac{2}{3}$	29 $\frac{1}{3}$	22	16 $\frac{1}{2}$
12	30	60	48	40	32	24	18
13	32 $\frac{1}{2}$	65	52	43 $\frac{1}{3}$	34 $\frac{2}{3}$	26	19 $\frac{1}{2}$
14	35	70	56	46 $\frac{2}{3}$	37 $\frac{1}{3}$	28	21
15	37 $\frac{1}{2}$	75	60	50	40	30	22 $\frac{1}{2}$
16	40	80	64	53 $\frac{1}{3}$	42 $\frac{2}{3}$	32	24
17	42 $\frac{1}{2}$	85	68	56 $\frac{2}{3}$	45 $\frac{1}{3}$	34	25 $\frac{1}{2}$
18	45	90	72	60	48	36	27
19	47 $\frac{1}{2}$	95	76	63 $\frac{1}{3}$	50 $\frac{2}{3}$	38	28 $\frac{1}{2}$
20	50	100	80	66 $\frac{2}{3}$	53 $\frac{1}{3}$	40	30
21	52 $\frac{1}{2}$	105	84	70	56	42	31 $\frac{1}{2}$
22	55	110	88	73 $\frac{1}{3}$	58 $\frac{2}{3}$	44	33
23	57 $\frac{1}{2}$	115	92	76 $\frac{2}{3}$	61 $\frac{1}{3}$	46	34 $\frac{1}{2}$
24	60	120	96	80	64	48	36
25	62 $\frac{1}{2}$	125	100	83 $\frac{1}{3}$	66 $\frac{2}{3}$	50	37 $\frac{1}{2}$

† In estimating length of Radiator allow $\frac{1}{2}$ inch for each plug or bushing.

Safford Radiators.

TORO.

TWO COLUMN.

Capacities and Dimensions.

Number of Sections	* Length 2½ in. per Section	HEATING SURFACE—SQUARE FEET.			
		33 in. in Height. 4 Sq. Ft. per Section.	32 in. in Height. 3½ Sq. Ft. per Section.	26 in. in Height. 2½ Sq. Ft. per Section.	20 in. in Height. 2 Sq. ft. per Sec.
2	5	8	6⅔	5⅓	4
3	7½	12	10	8	6
4	10	16	13⅓	10⅔	8
5	12½	20	16⅔	13⅓	10
6	15	24	20	16	12
7	17½	28	23⅓	18⅔	14
8	20	32	26⅔	21⅓	16
9	22½	36	30	24	18
10	25	40	33⅓	26⅔	20
11	27½	44	36⅔	29⅓	22
12	30	48	40	32	24
13	32½	52	43⅓	34⅔	26
14	35	56	46⅔	37⅓	28
15	37½	60	50	40	30
16	40	64	53⅓	42⅔	32
17	42½	68	56⅔	45⅓	34
18	45	72	60	48	36
19	47½	76	63⅓	50⅔	38
20	50	80	66⅔	53⅓	40
21	52½	84	70	56	42
22	55	88	73⅓	58⅔	44
23	57½	92	76⅔	61⅓	46
24	60	96	80	64	48
25	62½	100	83⅓	66⅔	50

* In estimating length of Radiator allow ¼ inch for each plug or bushing.

Safford Radiators.

ROYAL and PROVINCIAL.
TWO COLUMN.

Capacities and Dimensions.

Number of Sections	Length $2\frac{1}{2}$ in. per Section.	HEATING SURFACE—SQUARE FEET.				
		45 in. in Height. 6 Sq. Ft. per Section.	38 in. in Height. 4 Sq. Ft. per Section.	32 in. in Height. $2\frac{1}{3}$ Sq. Ft. per Section.	26 in. in Height. $2\frac{1}{2}$ Sq. Ft. per Section.	20 in. in Height. 2 Sq. ft. per Sec.
2	5	10	8	$6\frac{2}{3}$	$5\frac{1}{3}$	4
3	$7\frac{1}{2}$	15	12	10	8	6
4	10	20	16	$13\frac{1}{3}$	$10\frac{2}{3}$	8
5	$12\frac{1}{2}$	25	20	$16\frac{2}{3}$	$13\frac{1}{3}$	10
6	15	30	24	20	16	12
7	$17\frac{1}{2}$	35	28	$23\frac{1}{3}$	$18\frac{2}{3}$	14
8	20	40	32	$26\frac{2}{3}$	$21\frac{1}{3}$	16
9	$22\frac{1}{2}$	45	36	30	24	18
10	25	50	40	$33\frac{1}{3}$	$26\frac{2}{3}$	20
11	$27\frac{1}{2}$	55	44	$36\frac{2}{3}$	$29\frac{1}{3}$	22
12	30	60	48	40	32	24
13	$32\frac{1}{2}$	65	52	$43\frac{1}{3}$	$34\frac{2}{3}$	26
14	35	70	56	$46\frac{2}{3}$	$37\frac{1}{3}$	28
15	$37\frac{1}{2}$	75	60	50	40	30
16	40	80	64	$53\frac{1}{3}$	$42\frac{2}{3}$	32
17	$42\frac{1}{2}$	85	68	$56\frac{2}{3}$	$45\frac{1}{3}$	34
18	45	90	72	60	48	36
19	$47\frac{1}{2}$	95	76	$63\frac{1}{3}$	$50\frac{2}{3}$	38
20	50	100	80	$66\frac{2}{3}$	$53\frac{1}{3}$	40
21	$52\frac{1}{2}$	105	84	70	56	42
22	55	110	88	$73\frac{1}{3}$	$58\frac{2}{3}$	44
23	$57\frac{1}{2}$	115	92	$76\frac{2}{3}$	$61\frac{1}{3}$	46
24	60	120	96	80	64	48
25	$62\frac{1}{2}$	125	100	$83\frac{1}{3}$	$66\frac{2}{3}$	50

NOTE—Provincial made in 45 in., 38 in. and 32 in. heights only.

* In estimating length of Radiator allow $\frac{1}{2}$ inch for each plug or bushing.

Safford Radiators.

IDEAL FLUE VENTILATING.

Capacities and Dimensions.

Number of Sections	*Length in. per Section.	HEATING SURFACE—SQUARE FEET.				
		42 in. in Height. 8 1/4 Sq. Ft. per Section.	38 in. in Height. 7 Sq. Ft. per Section.	32 in. in Height. 5 3/4 Sq. Ft. per Section.	26 in. in Height. 4 1/2 Sq. Ft. per Section.	20 in. in Height. 3 1/2 Sq. Ft. per Section.
2	6	16 1/2	14	11 1/2	9	6 1/2
3	9	24 3/4	21	17 1/4	13 1/2	9 3/4
4	12	33	28	23	18	13
5	15	41 1/4	35	28 3/4	22 1/2	16 1/4
6	18	49 1/2	42	34 1/2	27	19 1/2
7	21	57 3/4	49	40 1/4	31 1/2	22 3/4
8	24	66	56	46	36	26
9	27	74 1/4	63	51 3/4	40 1/2	29 1/4
10	30	82 1/2	70	57 1/2	45	32 1/2
11	33	90 3/4	77	63 1/4	49 1/2	35 3/4
12	36	99	84	69	54	39
13	39	107 1/4	91	74 3/4	58 1/2	42 1/4
14	42	115 1/2	98	80 1/2	63	45 1/2
15	45	123 3/4	105	86 1/4	67 1/2	48 3/4
16	48	132	112	92	72	52
17	51	140 1/4	119	97 3/4	76 1/2	55 1/4
18	54	148 1/2	126	103 1/2	81	58 1/2
19	57	156 3/4	133	109 1/4	85 1/2	61 3/4
20	60	165	140	115	90	65
21	63	173 1/4	147	120 3/4	94 1/2	68 1/4
22	66	181 1/2	154	126 1/2	99	71 1/2
23	69	189 3/4	161	132 1/4	103 1/2	74 3/4
24	72	198	168	138	108	78
25	75	206 1/4	175	143 3/4	112 1/2	81 1/4

* In estimating length of Radiator allow 1/4 inch for each plug or bushing

Safford Radiators.

ZENDA.

SINGLE COLUMN.

Capacities and Dimensions.

Number of Sections	Length $2\frac{1}{2}$ in. per Section	HEATING SURFACE—SQUARE FEET.				
		38 in. in Height. 3 Sq. Ft. per Section.	32 in. in Height. $2\frac{1}{2}$ Sq. Ft. per Section.	26 in. in Height. 2 Sq. Ft. per Section.	23 in. in Height. $1\frac{2}{3}$ Sq. Ft. per Section.	20 in. in Height. $1\frac{1}{2}$ Sq. ft. per Sec.
2	5	6	5	4	$3\frac{1}{3}$	3
3	$7\frac{1}{2}$	9	$7\frac{1}{2}$	6	5	$4\frac{1}{2}$
4	10	12	10	8	$6\frac{2}{3}$	6
5	$12\frac{1}{2}$	15	$12\frac{1}{2}$	10	$8\frac{1}{3}$	$7\frac{1}{2}$
6	15	18	15	12	10	9
7	$17\frac{1}{2}$	21	$17\frac{1}{2}$	14	$11\frac{2}{3}$	$10\frac{1}{2}$
8	20	24	20	16	$13\frac{1}{3}$	12
9	$22\frac{1}{2}$	27	$22\frac{1}{2}$	18	15	$13\frac{1}{2}$
10	25	30	25	20	$16\frac{2}{3}$	15
11	$27\frac{1}{2}$	33	$27\frac{1}{2}$	22	$18\frac{1}{3}$	$16\frac{1}{2}$
12	30	36	30	24	20	18
13	$32\frac{1}{2}$	39	$32\frac{1}{2}$	26	$21\frac{2}{3}$	$19\frac{1}{2}$
14	35	42	35	28	$23\frac{1}{3}$	21
15	$37\frac{1}{2}$	45	$37\frac{1}{2}$	30	25	$22\frac{1}{2}$
16	40	48	40	32	$26\frac{2}{3}$	24
17	$42\frac{1}{2}$	51	$42\frac{1}{2}$	34	$28\frac{1}{3}$	$25\frac{1}{2}$
18	45	54	45	36	30	27
19	$47\frac{1}{2}$	57	$47\frac{1}{2}$	38	$31\frac{2}{3}$	$28\frac{1}{2}$
20	50	60	50	40	$33\frac{1}{3}$	30
21	$52\frac{1}{2}$	63	$52\frac{1}{2}$	42	35	$31\frac{1}{2}$
22	55	66	55	44	$36\frac{2}{3}$	33
23	$57\frac{1}{2}$	69	$57\frac{1}{2}$	46	$38\frac{1}{3}$	$34\frac{1}{2}$
24	60	72	60	48	40	36
25	$62\frac{1}{2}$	75	$62\frac{1}{2}$	50	$41\frac{2}{3}$	$37\frac{1}{2}$

* In estimating length of Radiator allow $\frac{1}{2}$ inch for each plug or bushing.

Safford Radiators.

ACME WINDOW FLUE.

Capacities and Dimensions.

Number of Sections	Length in. per Section.	HEATING SURFACE—SQUARE FEET.				
		20 in. in Height. 6 Sq. Ft. per Section.	18 in. in Height. 5 1/2 Sq. Ft. per Section.	16 in. in Height. 4 1/2 Sq. Ft. per Section.	14 in. in Height. 4 Sq. Ft. per Section.	13 in. in Height. 3 1/2 Sq. ft. per Sec.
2	6	12	10 2/3	9 1/3	8	7 1/3
3	9	18	16	14	12	11
4	12	24	21 1/3	18 2/3	16	14 2/3
5	15	30	26 2/3	23 1/3	20	18 1/3
6	18	36	32	28	24	22
7	21	42	37 1/3	32 2/3	28	25 2/3
8	24	48	42 2/3	37 1/3	32	29 1/3
9	27	54	48	42	36	33
10	30	60	53 1/3	46 2/3	40	36 2/3
11	33	66	58 2/3	51 1/3	44	40 1/3
12	36	72	64	56	48	44
13	39	78	69 1/3	60 2/3	52	47 2/3
14	42	84	74 2/3	65 1/3	56	51 1/3
15	45	90	80	70	60	55
16	48	96	85 1/3	74 2/3	64	58 2/3
17	51	102	90 2/3	79 1/3	68	62 1/3
18	54	108	96	84	72	66
19	57	114	101 1/3	88 2/3	76	69 2/3
20	60	120	106 2/3	93 1/3	80	73 1/3
21	63	126	112	98	84	77
22	66	132	117 1/3	102 2/3	88	80 2/3
23	69	138	122 2/3	107 1/3	92	84 1/3
24	72	144	128	112	96	88
25	75	150	133 1/3	116 2/3	100	91 2/3

* In estimating length of Radiator allow 1/4 inch for each plug or bushing.

Safford Radiators.

WALL RADIATORS.

FOWLER & WOLFE PATTERN.

Made in Four Different Sizes.

Capacity of Section	Width, Inches	Length, Inches	Thickness, Inches	Capacity One Inch Pipe
5 sq. feet	13	17	3	15 feet of inch pipe
6 " "	13	21	3	18 " " "
7 " "	13	24	3	21 " " "
9 " "	13	24	3 1/8	27 " " "

These may be built into stacks horizontal or vertical. The measurement will be calculated by the number of loops connected together according to the above table.

DINING ROOM RADIATORS.

FOUR COLUMN. DAISY ORNAMENTAL. HEIGHT—38 IN. ONLY.

Sizes and List Price.

Size	No. of loops in Radiator (exclusive of Oven)	Square Feet of Heating Surface	Extreme Length, Inches	Price, without Top	Price with Plain Top	Price with Plated Top
AA	2	21	28	\$48 31	\$50 25	\$52 35
A	4	37	36	53 83	55 50	58 20
B	6	53	44	60 61	63 00	66 30
C	8	69	52	68 14	70 50	74 40
D	10	85	60	74 25	78 00	82 50
E	12	101	63	80 95	85 50	90 00
F	14	117	76	87 73	93 00	98 70

Ovens are 21 inches long by 13 inches wide.

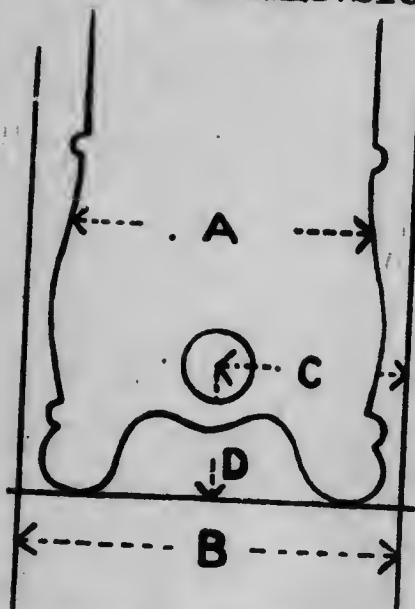
CIRCLE RADIATORS.

TWO COLUMN.			THREE COLUMN.			FOUR COLUMN.		
No. of Sections	Outside Diameter at Legs	Inside Diameter at Legs	No. of Sections	Outside Diameter at Legs	Inside Diameter at Legs	No. of Sections	Outside Diameter at Legs	Inside Diameter at Legs
16	24	7	12	26½	6½	12	24	7
18	26	9	14	27¼	7¼	14	28	11
20	27½	10½	16	28½	8½	16	29½	12½
24	29½	12½	18	29½	9½	18	33½	16½
28	33½	16½	20	30½	10½	20	34	17
32	37	20	22	31½	11½	22	36	19
38	41	24	24	32½	12½	28	40	23
40	41	24	26	33	13	32	52½	35½
44	50	33	28	33½	13½			
46	53	36	30	35½	15½			

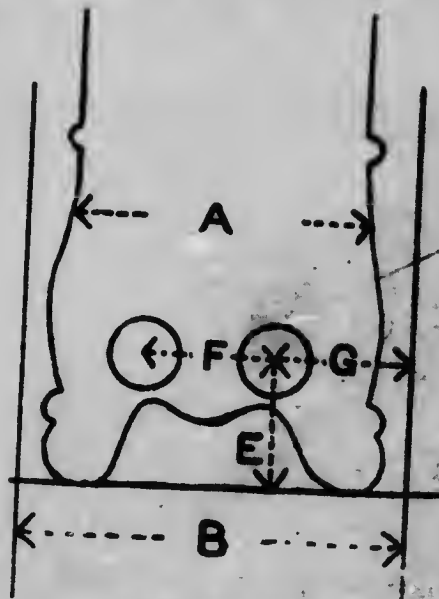
NOTE.—Circle radiators not made in two column Favorite and Daisy.

Safford Radiators.

DIMENSIONS OF LOOPS.



Single Connection.



Twin Connection.

	A	B	C	D	E	F	G
	In.	In.	In.	In.	In.	In.	In.
Zenda	4 1/2	5 1/2	2 3/4	4 1/2	..	..	..
Floreñce	8	8 1/2	4 1/4	4 1/2	4 1/2	3 1/4	2 5/8
Toro	7 3/4	7 3/4	3 7/8	3 7/8	3 7/8	3 1/4	2 1/4
Daisy (2-loop) ..	5	6 1/2	3 1/4	3 3/4	3 3/4	3 1/4	1 5/8
Favorite (2-loop)	5	6 1/2	3 1/4	3 3/4	3 3/4	3 1/4	1 5/8
Royal	7 1/4	8 1/2	4 1/4	3 7/8	..	..	..
Provincial	7 1/4	8 1/2	4 1/4	3 7/8	..	..	..
Perfect	7 1/4	8 1/4	4 1/8	3 7/8	3 7/8	3 1/4	2 1/2
Trident	9	9 1/2	4 3/4	4 1/2	4 1/2	3 1/4	3 1/8
Daisy (4-loop) ..	8 1/4	8 1/2	4 1/4	4	4	3 1/4	2 5/8
Favorite (4-loop)	8 1/4	8 1/2	4 1/4	4	4	3 1/4	2 5/8
Ideal	8 3/4	8 3/4	4 3/8	6	6	3 1/4	2 3/4
Acme	12 1/2	12 3/4	6 3/8	3	3	3 1/4	4 3/4

Safford Radiators.

TAPPINGS.

The following list applies to all radiators :

ONE PIPE STEAM.

25 square feet and under.....	1	inch
Above 25 but not exceeding 60 square feet.....	1¼	"
Above 60 but not exceeding 100 square feet.....	1½	"
Above 100 square feet.....	2	"

All one pipe connections, unless otherwise ordered, are tapped left hand. All connections are tapped eccentric.

TWO PIPE STEAM.

48 square feet and under.....	1	x	¾	inch
Above 48 but not exceeding 95 square feet.....	1¼	x	1	"
Above 95 square feet.....	1½	x	1¼	"

All two pipe connections, unless otherwise ordered, are tapped right hand. Return opening is tapped eccentric.

WATER, SINGLE OR TWIN CONNECTIONS.

48 square feet and under.....	1	x	1	inch
Above 48 but not exceeding 100 sq. ft.....	1¼	x	1¼	"
Above 100 square feet.....	1½	x	1½	"

All twin connections, unless otherwise ordered, are tapped left hand. Single connections are tapped right hand. All Hot Water Radiators are shipped twin connection, tapped left hand, unless otherwise ordered.

Wall Radiators are tapped top and bottom same end left hand for hot water unless otherwise ordered.

NOTE.—These remarks apply to both direct and direct-indirect radiators. When using union valves or union elbows please state this fact in ordering so that connections may be tapped right hand.

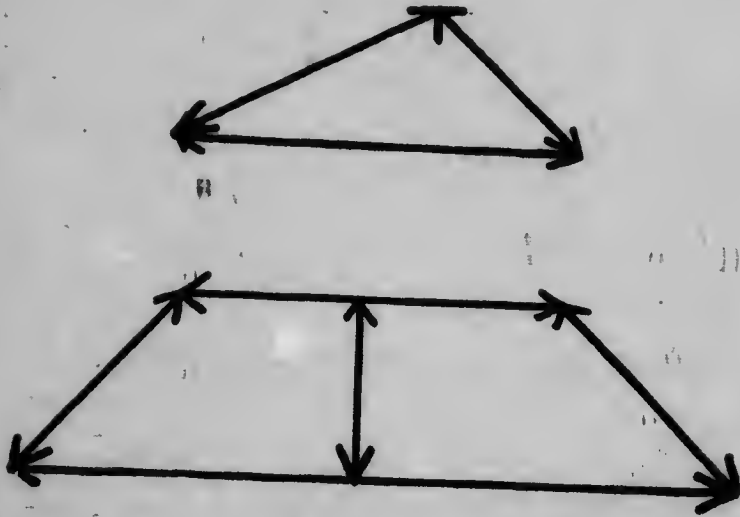
Safford Radiators.

TAPPINGS FOR WEBSTER SYSTEM.

Size of Tappings for Radiators with Webster System.

RADIATORS CONTAINING:	
Square Feet of Surface.	Supply and Return.
From 1 to 30 sq. ft.	$\frac{1}{2}$ in. Supply, $\frac{1}{2}$ in. Return
" 31 to 80 "	$\frac{3}{4}$ " " $\frac{1}{2}$ " "
" 81 to 150 "	1 " " $\frac{1}{2}$ " "
" 151 to 200 "	$1\frac{1}{4}$ " " $\frac{1}{2}$ " "
" 201 to 300 "	$1\frac{1}{2}$ " " $\frac{3}{4}$ " "
" 301 to 600 "	2 " " $\frac{3}{4}$ " "
" 601 to 1200 "	$2\frac{1}{2}$ " " 1 " "

NOTE.—Return Openings are tapped eccentric.

Safford Radiators.**SPECIAL MEASUREMENTS.**

In ordering angle radiators, where it is not convenient to send templet, it will be quite satisfactory to send sketch as above, with exact measurements of the different lengths, as shown.

For curved radiators, if the curve is a section of a true circle, the radius of the circle will be sufficient; if not, a templet, preferably in wood, but satisfactory if made of heavy paper, is necessary.

If ordering "twin connections," state whether wanted on right hand or left hand side facing radiator.

Safford Radiators.

DIMENSIONS OF OPENINGS.

OF BACK INLETS, TWO AND FOUR COLUMN, DIRECT-INDIRECT,
AND IDEAL FLUE VENTILATING RADIATORS.

TWO COLUMN DIRECT-INDIRECT.

Width of collar $2\frac{1}{4}$ inches,
Length of smallest collar..... $5\frac{1}{2}$ "

which can be increased by any multiple of two and one-half inches to the desired length.

FOUR COLUMN DIRECT-INDIRECT.

Width of collar $2\frac{1}{4}$ inches.
Length of smallest collar..... $8\frac{1}{2}$ "

which can be increased by any multiple of four inches to the desired length.

IDEAL FLUE VENTILATING.

Size of Radiator.	Dimensions of Collar.
3 sections	3 x $2\frac{3}{8}$ inches.
4 "	3 x 4 "
5 "	3 x 7 "
6 "	3 x $8\frac{1}{2}$ "
7 "	$3\frac{1}{2}$ x 11 "
8 "	$3\frac{1}{2}$ x $11\frac{1}{4}$ "
9 "	$3\frac{1}{2}$ x 14 "

and for each additional section length is increased three inches.

**TRIUMPH
ROUND HOT WATER BOILERS.**

Price List, Dimensions and Capacities.

Number of Heater	Capacity Cast Iron Radiation, including mains. Square feet	Capacity Cast Iron Radiation, not including mains. Square feet	Capacity one-inch pipe, including mains. Lineal feet	Capacity one-inch pipe, not including mains. Lineal feet	List Price	Height to Top Outlet of Boiler. Inches	Ht. to Top Outlet of Headers. In.	Outside Diameter at Base. Inches	Diameter of Grate. Inches	Size of Smoke Outlet. Inches	Number and Size of Outlets of Boiler. $\frac{1}{2}$ Inches	Number and Size of Outlets of Headers. Inches
2-19	575	430	1725	1290	\$ 114 00	50 $\frac{3}{4}$	56	30 $\frac{1}{2}$	19	8	2-2 $\frac{1}{2}$	4-2
3-19	650	490	1950	1470	150 00	54 $\frac{3}{4}$	60	30 $\frac{1}{2}$	19	8	2-2 $\frac{1}{2}$	4-2
2-22	875	680	2625	1980	184 00	52 $\frac{1}{4}$	59	35	22	9	2-3	4-2
3-22	950	715	2850	2145	190 00	57 $\frac{1}{4}$	64	35	22	9	2-3	4-2
2-25	1025	770	3075	2310	205 00	55	64	38	25	9	2-3 $\frac{1}{2}$	8-2
3-25	1150	865	3450	2595	224 00	60	69	38	25	9	2-3 $\frac{1}{2}$	8-2
2-28	1500	1125	4500	3375	256 00	55 $\frac{1}{2}$	65	41 $\frac{3}{8}$	28	10	2-4	8-2
3-28	1650	1250	4950	3750	326 00	60 $\frac{1}{2}$	70	41 $\frac{3}{8}$	28	10	2-4	8-2
2-31	2100	1575	6300	4725	392 00	59	69	44 $\frac{1}{8}$	31	10	2-4	{ 4-2 $\frac{1}{2}$ 4-2
3-31	2325	1760	6975	5280	400 00	64 $\frac{1}{4}$	75	44 $\frac{1}{8}$	31	10	2-4	{ 4-2 $\frac{1}{2}$ 4-2
2-34	2475	1860	7425	5580	410 00	61 $\frac{1}{2}$	72	48 $\frac{3}{8}$	34	11	2-5	{ 4-2 $\frac{1}{2}$ 4-2
3-34	2725	2050	8175	6150	424 00	66 $\frac{1}{8}$	77	48 $\frac{3}{8}$	34	11	2-5	{ 4-2 $\frac{1}{2}$ 4-2

For additional measurements see pages 23 and 24.
Domestic Water Heaters for above, each \$3.00.

TRIUMPH ROUND STEAM BOILERS.

Price List, Dimensions, and Capacities.

No.	Height (to top outlet) Inches	Outside Diam. at Base, Inches	Diam. Grate Inches	Height Water Line, Inches	One Outlet and two Inlets Size, Inches	Ratings (see note) Square Feet	Size of Smoke Outlet, Inches	List Price
2-19S	57	30 ½	19	50	2 ½	350	8	\$140 00
3-19S	61 ½	30 ½	19	54 ½	2 ½	400	8	158 00
2-22S	58 ¾	35	22	53 ½	3	525	9	182 00
3-22S	63 ¾	35	22	56 ¾	3	575	9	210 00
2-25S	61 ¾	38	25	54 ¾	3 ½	625	9	215 00
3-25S	66 ¾	38	25	59 ¾	3 ½	700	9	226 00
2-28S	62 ½	41 ¾	28	56	4	900	10	274 00
3-28S	67 ½	41 ¾	28	61 ¾	4	1000	10	296 00
2-31S	66	44 ¾	31	57 ¾	4	1275	10	326 00
3-31S	71 ¾	44 ¾	31	63 ¾	4	1400	10	350 00
2-34S	69	48 ¾	34	59 ¾	5	1500	11	387 00
3-34S	75	48 ¾	34	65 ½	5	1650	11	425 00

For additional measurements, see pages 23 and 24

NOTE.—Ratings are gross, and provide that all piping (mains, returns and risers) shall be figured as radiation in estimating size of Boiler required.

Domestic Water Heaters for above, each \$3.00.

TRIUMPH SECTIONAL BOILERS.

Steam.

Water.

No. of Boiler	Rating, Square feet (See note.)	List Price \$	Number of Sections	*Length Inches	Width, Inches	Foundation Inches	Grate, Inches	Length of Smoke Hood, Inches	Smoke Outlet, Ins.	Number of Outlets	List Price \$	Rating, Square feet (See note.)	No. of Boiler
S-15-5	425	196	5	27 1/2	28 1/2	24	15x24 1/2	13 1/4	8	2-3	180	700	W-15-5
S-15-6	550	230	6	33 3/4	28 1/2	24	15x30 3/4	13 1/4	8	2-3	210	900	W-15-6
S-15-7	675	266	7	40	28 1/2	24	15x37	13 1/4	8	2-3	241	1100	W-15-7
S-15-8	800	310	8	46 1/4	28 1/2	24	15x43 1/4	13 1/4	8	2-3	275	1300	W-15-8
085	500	230	5	34	28	30	18x26 1/2	12 1/4	8	2-3	192	825	185
086	625	265	6	40	28	36	18x26 1/2	12 1/4	8	2-3	224	1025	186
087	750	300	7	46	28	42	18x30 3/4	12 1/4	8	2-3	260	1250	187
S-21-5	800	335	5	35	40	30 3/4	21x28	15 1/4	10	2-4	270	1325	W-21-5
S-21-6	1000	390	6	42	40	30 3/4 x 43	21x35	15 1/4	10	2-4	322	1650	W-21-6
S-21-7	1200	450	7	49	40	30 3/4 x 50	21x42	15 1/2	10	2-4	376	2000	W-21-7
045	900	346	5	39	40 1/2	35	24x27 1/2	14 3/8	12	2-4	300	1500	245
046	1100	400	6	46 1/4	40 1/2	42 1/4	24x34 3/4	14 3/8	12	2-4	344	1825	246
047	1300	455	7	53 1/2	40 1/2	49 1/2	24x42	14 3/8	12	2-4	392	2150	247
048	1500	516	8	60 3/4	40 1/2	56 3/4	24x49 1/4	14 3/8	12	3-4	440	2475	248

*Add to length given, the length of smoke hood for total length. For additional measurements see pages 25 and 26.

NOTE.—Ratings are gross, and provide that all piping (mains, returns and risers) shall be figured as radiation in estimating size of Boiler required.

TRIUMPH SECTIONAL BOILERS.

Steam.

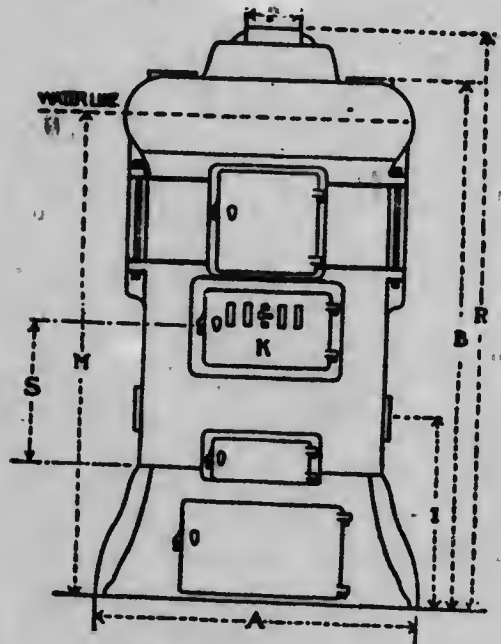
Water.

No. of Boiler.	Rating. Square feet. (See note.)	List Price.	Number of Sections.	*Length. Inches.	Width. Inches.	Foundation. Inches	Grate. Inches.	Length of Smoke Hood. Inches.	Smoke Outlet. Ins.	Number of Outlets.	List Price.	Rating. Square Feet. (See note.)	No. of Boiler.
S-30-5	1275	\$ 500	5	35 1/4	51	32 x 40	30x28	21	13	2-4	\$ 430	2100	W-30-5
S-30-6	1625	586	6	42 1/4	51	39 x 40	30x35	21	13	2-4	570	2675	W-30-6
S-30-7	1975	675	7	49 1/4	51	46 x 40	30x42	21	13	2-4	586	3250	W-30-7
S-30-8	2325	760	8	56 1/4	51	53 x 40	30x49	21	13	3-4	664	3825	W-30-8
065	1800	725	5	46 3/4	61	43 x 49 1/2	36x32 3/4	10 1/4	14	2-5	640	2950	365
066	2250	844	6	55	61	51 1/4 x 49 1/2	36x40 1/4	10 1/4	14	2-5	750	3700	366
067	2700	962	7	63 1/4	61	59 1/2 x 49 1/2	36x48 7/8	10 1/4	14	2-5	856	4450	367
068	3150	1,082	8	71 1/2	61	67 3/4 x 49 1/2	36x57 1/2	10 1/4	14	3-5	966	5200	368
069	3600	1,200	9	79 3/4	61	76 x 49 1/2	36x65 3/4	10 1/2	16	3-5	1,076	5950	369
S-48-6	3700	1,464	6	64	69	55 x 52	48x54	27 1/4	21	2-6	1,375	6125	W-48-6
S-48-7	4500	1,685	7	74 3/4	69	66 x 52	48x64 3/4	27 1/4	21	2-6	1,585	7425	W-48-7
S-48-8	5300	1,910	8	85 1/2	69	77 x 52	48x75 1/2	27 1/4	21	3-6	1,800	8750	W-48-8
S-48-9	6100	2,134	9	96 1/4	69	88 x 52	48x86 1/4	27 1/4	21	3-6	2,000	10075	W-48-9
S-48-10	6900	2,360	10	107	69	99 x 52	48x97	27 1/4	21	3-6	2,220	11375	W-48-10

*Add to length given, length of smoke hood, for total length.
For additional measurements see pages 25 and 26.
NOTE.—Ratings are gross, and provide that all piping (mains, returns and risers) shall be figured as radiation in estimating size of Boiler required.

TRIUMPH.
ROUND HOT WATER AND STEAM BOILERS.

MEASUREMENTS.



For Hard Coal.

Above outlines do not represent the Water Boiler. Outlines of Steam Boiler used to show measurements of both types.

TRIUMPH

ROUND HOT WATER AND STEAM BOILERS.

MEASUREMENTS—Continued.

Table of distances between points as outlined on skeleton sketch of Boilers shown on opposite page.

These measurements are given in inches.

STEAM.								
No.	A	B	I	K	M	P	R	S
2-19-S	30½	57	14¾	8½ x 11¾	50	8	64¾	15¾
3-19-S	30½	61½	14¾	8½ x 11¾	54½	8	68¾	15¾
2-22-S	35	58¾	16¼	9 x 13¾	53½	9	67	16
3-22-S	35	63¾	16¼	9 x 13¾	56¾	9	71¼	16
2-25-S	38	61¾	17½	9 x 13¾	54¼	9	70¼	16
3-25-S	38	66¾	17½	9 x 13¾	59¼	9	75¼	16
2-28-S	41¾	62½	17¾	9½ x 18	56	10	70¼	18
3-28-S	41¾	67½	17¾	9½ x 18	61¾	10	75¼	18
2-31-S	44¾	66	18	9½ x 18	57¼	10	74¾	18
3-31-S	44¾	71¾	18	9½ x 18	63¼	10	81¼	19½
2-34-S	48¾	69	19	9½ x 18	59¾	11	77½	19½
3-34-S	48¾	75	19	9½ x 18	65½	11	84¼	20

WATER.							
Nc.	A	B	I	K	P	R	S
2-19-W	30½	50¾	14¾	8½ x 11¾	8	57¾	15¾
3-19-W	30½	54¾	14¾	8½ x 11¾	8	62½	15¾
2-22-W	35	52¼	16¼	9½ x 13¾	9	60½	16
3-22-W	35	57¼	16¼	9½ x 13¾	9	64¼	16
2-25-W	38	55	17½	9½ x 13¾	9	63½	16
3-25-W	38	60	17½	9½ x 13¾	9	68½	16
2-28-W	41¾	55½	17¾	9½ x 18	10	63¼	18
3-28-W	41¾	60½	17¾	9½ x 18	10	68¼	18
2-31-W	44¾	59	18	9½ x 18	10	67¾	18
3-31-W	44¾	64¼	18	9½ x 18	10	74¾	19½
2-34-W	48¾	61¾	19	9½ x 18	11	70¾	19½
3-34-W	48¾	66¾	19	9½ x 18	11	75¼	20

TRIUMPH SECTIONAL BOILER MEASUREMENTS.

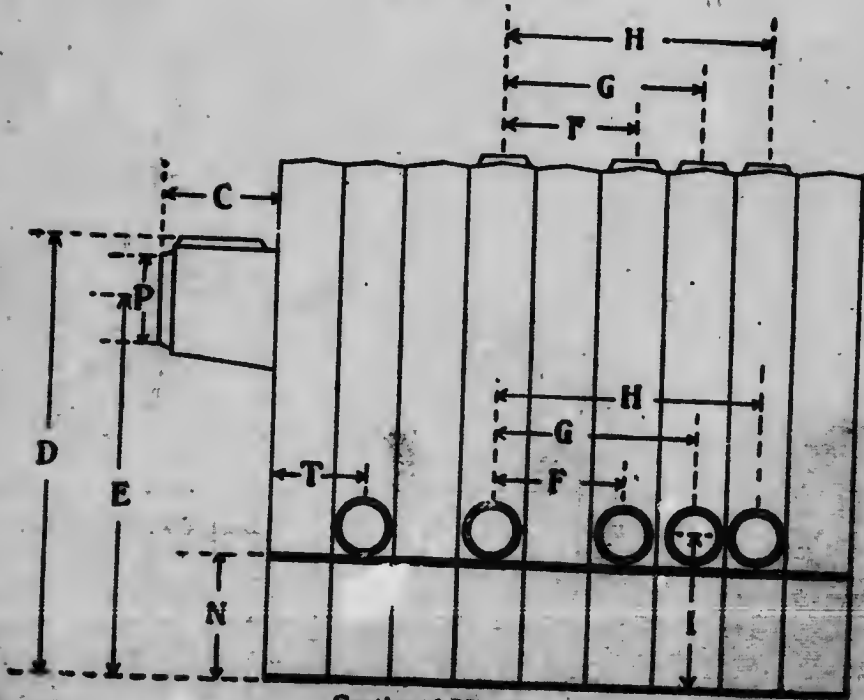
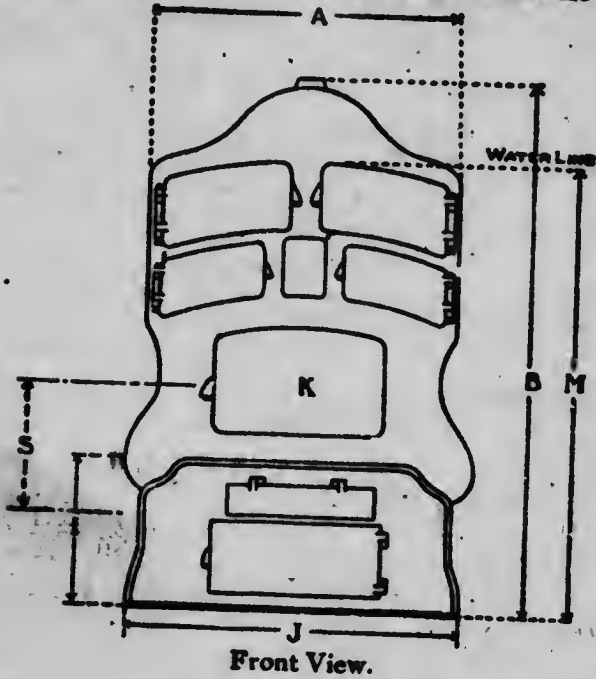


Fig. details of measurements see page opposite.

TRIUMPH SECTIONAL BOILER MEASUREMENTS—Continued.

Table of distances between points as noted upon the outline drawings of TRIUMPH Sectional Boilers shown on opposite page. These measurements are all given in inches.

	15 inch Boilers		18 inch Boilers		21 inch Boilers		24 inch Boilers		30 inch Boilers		36 inch Boilers		48 inch Boilers	
	Water	Steam	Water	Steam	Water	Steam	Water	Steam	Water	Steam	Water	Steam	Water	Steam
A	27½	28½	28	28	39	40	40½	40½	50	51	57½	61½	68	69
B	42½	46½	52	56½	54½	58½	58¾	61¾	65¾	69¾	71½	71½	81¾	81¾
+C	13½	13½	11½	11½	15½	15½	14½	14½	20¾	20¾	+10¾	+10¾	27¾	27¾
D	40¾	40¾	47½	47½	50¾	50¾	54½	54½	61	61	61¾	61¾	73¾	73¾
E	34¾	34¾	41¾	41¾	43¾	43¾	46¾	46¾	52¾	52¾	52¾	52¾	59½	59½
F	12	12	12	12	14	14	14½	14½	14	14	16½	16½	21½	21½
G	18	18	18	18	21	21	21¾	21¾	21	21	24¾	24¾	32¾	32¾
H	24	24	24	24	28	28	29	29	28	28	33	33	43	43
I	16½	16½	15½	15½	17½	17½	18¾	18¾	18¾	18¾	20½	20½	22¾	22¾
J	23¾	23¾	26¾	26¾	30¾	30¾	33½	33½	40	40	49½	49½	58¾	58¾
K	8x14	8x14	8½x17	8½x17	9½x17½	9½x17½	9x18	9x18	9x20	9x20	10½x19½	10½x19½	11x19	11x19
M	38¾	38¾	44½	44½	48	48	49½	49½	58x20	58x20	61	61	70	70
N	11¾	11¾	12½	12½	12¾	12¾	14	14	13¾	13¾	14	14	14½	14½
P	8	8	8	8	10	10	12	12	13	13	14	14	21	21
S	13¾	13¾	11¾	11¾	14¾	14¾	11½	11½	16¾	16¾	14¾	14¾	17¾	17¾
T	7½	7½	8¾	8¾	8½	8½	9½	9½	8½	8½	12½	12½	17¾	17¾

† Measured without Smoke Hood Cover. ‡ Except in No. 300 and No. 069 the Smoke Hood length is 10½ inches. § Except Nos. 260 and 069, in which the measurement is 16 inches. Do not push fire box outlets—cover all of them full size to the main.

STANDARD DIMENSIONS OF STEAM HEATING BOILERS — WITHOUT DOMES.

TESTED FOR 100 LBS.—WORKING PRESSURE.

Diameter, Ina.	Length, Feet.	Thickness of Shell.	Thickness of Heads.	Tubes.		Heating Surface.	Horse Power at 15 sq. ft.	Shipping Weight.	Diam. of Stack.	List Price.
				No.	Diam.					
30	8	$\frac{1}{8}$	$\frac{1}{8}$	22	3	178	12	2800	13	\$430 00
30	10	$\frac{1}{8}$	$\frac{1}{8}$	22	3	222	14	3300	13	468 00
36	10	$\frac{1}{8}$	$\frac{1}{8}$	32	3	313	21	4550	16	580 00
36	12	$\frac{1}{8}$	$\frac{1}{8}$	32	3	374	25	5050	16	632 00
40	10	$\frac{1}{8}$	$\frac{1}{8}$	38	3	369	24	5200	18	660 00
40	12	$\frac{1}{8}$	$\frac{1}{8}$	38	3	441	29	5750	18	682 00
42	10	$\frac{1}{8}$	$\frac{1}{8}$	40	3	389	26	5700	18	700 00
42	12	$\frac{1}{8}$	$\frac{1}{8}$	40	3	464	31	6300	18	752 00
44	10	$\frac{1}{8}$	$\frac{1}{8}$	44	3	424	28	6050	22	752 00
44	12	$\frac{1}{8}$	$\frac{1}{8}$	44	3	507	34	6700	22	800 00
48	10	$\frac{1}{8}$	$\frac{1}{8}$	52	3	495	33	7400	22	880 00
48	12	$\frac{1}{8}$	$\frac{1}{8}$	52	3	594	39	8150	22	940 00
48	14	$\frac{1}{8}$	$\frac{1}{8}$	52	3	686	46	8950	22	1050 00
52	12	$\frac{1}{8}$	$\frac{1}{8}$	58	3	658	44	9100	24	1068 00
52	14	$\frac{1}{8}$	$\frac{1}{8}$	58	3	764	51	10000	24	1126 00
54	12	$\frac{1}{8}$	$\frac{1}{8}$	64	3	720	48	9600	26	1115 00
54	14	$\frac{1}{8}$	$\frac{1}{8}$	64	3	836	56	10650	26	1208 00
60	12	$\frac{1}{8}$	$\frac{1}{8}$	78	3	865	57	11400	26	1300 00
60	14	$\frac{1}{8}$	$\frac{1}{8}$	78	3	1005	67	12400	26	1450 00

NOTE—A horse power for low pressure heating purposes is considered equivalent to 100 square feet gross radiation.

NOTE—While we quote a regular discount on these boilers, on account of the continued variations in the metal market, it is advisable to write and get our net prices for these when required.

STANDARD
STEAM, GAS AND WATER PIPE.



BLACK AND GALVANIZED.

Nominal Size Inside Diameter. Inches.	Price per foot Black. \$ c.	Nominal Thickness. Inches.	Nominal Weight per foot. Pounds.	No. of Threads per inch of Screw.	Threading Price List.
1/8	5 1/2	.068	0.24		
1/4	5 1/2	.088	0.42	27	.05
3/8	5 1/2	.091	0.56	18	.05
1/2	8 1/2	.109	0.84	18	.05
3/4	11 1/2	.113	1.12	14	.05
1	16 1/2	.134	1.67	14	.05
1 1/4	22 1/2	.140	2.24	11 1/2	.06
1 1/2	27	.145	2.68	11 1/2	.07
2	36	.154	3.61	11 1/2	.08
2 1/2	57 1/2	.204	5.74	11 1/2	.10
3	75 1/2	.217	7.54	8	.15
3 1/2	95	.226	9.00	8	.20
4	1 08	.237	10.66	8	.25
4 1/2	1 30	.246	12.49	8	.35
5	1 45	.259	14.50	8	.45
6	1 88	.280	18.76	8	.55
7	2 35	.301	23.27	8	.70
8	2 82	.322	28.18	8	.85
9	3 40	.344	33.70	8	1.00
10	4 25	.366	40.00	8	1.25
11	4 75	.375	45.00	8	1.50
12	5 20	.375	49.00	8	2.50
				8	2.50

RADIATOR VALVES.

SIZE	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2
N.P. W.W. Standard, without union	\$	\$ c.	\$ c.	\$ c.	\$ c.
" " " with union....	2 10	2 75	3 70	4 85	7 00
N. P. Quick Opening, angle or straightway, without union	2 90	3 75	5 00	6 50	10 00
N. P. Quick Opening, angle or straightway, with union	1 95	2 65	3 70	5 00	7 75
N.P. W.W. Standard Globe, without union	2 85	3 65	5 05	7 10	10 85
N.P. Radiator elbows, with union	1 70	2 10	2 75	3 70	4 85
Jenkins or D.R. N.P. mt'gs, without union	2 00	2 50	3 20	4 00	7 00
Jenkins or D.R. N.P. mt'gs, with union	2 30	2 80	3 50	4 80	6 55
Jenkins or D.R. N.P. all over, without union	3 05	3 80	4 60	6 15	8 05
Jenkins or D.R. N.P. all over, with union	2 40	2 90	3 60	4 90	6 65
Jenkins or D.R., W.W. N.P. Globe, without union	3 15	3 90	4 70	6 25	8 15
N.P. Gate W.W. without union	2 40	2 90	3 60	4 90	6 65
" " " with union	2 00	2 60	3 45	4 70	6 35
N.P. Govt Pattern, fin. all over	3 10	3 75	4 65	6 10	7 85
Elbow Gate valves, without union.	4 35	5 45	6 60	7 90	11 00

RADIATOR AIR VALVES.

Compression, wood wheel.....	Per doz.....	\$ 2 50
" metal wheel.....	" 	4 50
" loose key.....	" 	2 50
Loose Keys, extra.....	" 	1 00
Automatic, hot water.....	" 	20 00
Jenkins, automatic.....	" 	10 00
" cups extra.....	" 	2 50
Allen, automatic.....	" 	15 00
Norwall, automatic.....	" 	22 50
Monash No. 6, automatic.....	" 	30 00
Monash No. 7, ".....	" 	35 00
Davis No. 7, ".....	" 	20 00
Libra.....	" 	13 00
 No. 2, automatic.....	" 	20 00
 No. 5, automatic.....	" 	10 00
Extension Pieces.....	" 	20 00
	" 	3 00

STANDARD BRASS VALVES, BRASS AND IRON COCKS.

SIZES	1/4	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Standard Globe	72	77	1 00	1 80	2 52	3 50	5 30	10 00	14 40	20 50	26 00
" Angle	72	77	1 00	1 80	2 52	3 50	5 30	10 00	14 40	20 50	26 00
" Peet			1 30	2 25	3 25	4 25	6 25	10 00	14 40	20 50	26 00
" Gate			1 30	2 25	3 25	4 25	6 25	10 00	14 40	20 50	26 00
Jenkins or D.R. Globe	1 10	1 25	1 60	2 80	4 00	5 50	8 75	15 75	23 00		
Jenkins or D.R. Angles	1 10	1 25	1 60	2 80	4 00	5 50	8 75	15 75	23 00		
Standard Horizontal Check	65	70	1 90	2 80	3 25	4 75	8 00	13 00	24 00	33 50	
Standard Vertical and Angle Check	72	77	1 00	1 80	2 52	3 50	5 30	10 00	14 40	20 50	26 00
Swing Check			2 25	3 50	4 25	5 50	7 50	15 00	22 00		
Jenkins or D.R. Check			1 20	2 75	3 60	4 25	5 50	7 50	13 50		
Expansion Joints, Brass			1 50	2 75	3 60	4 25	5 50	7 50	13 50		
Steam Cocks, Sq. Head, Brass	85		1 50	2 75	3 60	4 25	5 50	7 50	13 50		
" " Three-way, Brass			2 10	3 0	3 70	4 85	7 30	14 50	23 50	38 50	50 00
" " Iron			2 10	3 0	3 70	4 85	7 30	14 50	23 50	38 50	50 00
" " with brass washer			1 00	1 00	1 85	2 70	4 40	6 75	12 00	15 00	20 00
" " brass plug			1 00	1 55	2 35	3 20	5 15	7 75	14 00	19 00	25 00
" " three-way			1 30	1 80	2 65	3 75	5 25	8 75	13 00	17 50	23 50
" " with brass washer			1 30	1 80	2 65	3 75	5 25	8 75	13 00	17 50	23 50
" " brass plug			1 30	1 80	2 65	3 75	5 25	8 75	13 00	17 50	23 50
Pet Cocks, T Handle	40	50	60	2 40	3 10	4 50	6 25	9 75	13 75	20 00	26 00
Pet Cocks, L Handle	55	65	75	2 40	3 10	4 50	6 25	9 75	13 75	20 00	26 00
Rough Stop Cocks, T handle, per doz.			15 00	17 00	26 00	38 00	50 00	70 00	90 00	110 00	130 00
Rough Stop Waste Cocks, T handle, per doz.			15 00	17 00	26 00	38 00	50 00	70 00	90 00	110 00	130 00
Foot Valves, Standard, Sod, Iron			17 00	19 00	28 00	41 00	55 00	75 00	100 00	130 00	160 00
" " Fig'd			17 00	19 00	28 00	41 00	55 00	75 00	100 00	130 00	160 00
" " Galvanized, Sod			1 15	1 30	1 40	1 90	2 40	3 30	4 50	6 00	7 50
			1 75	2 00	2 10	2 85	3 60	5 00	6 75	9 00	11 00

STANDARD IRON BODY VALVES.

SIZES.		1X	1½	2	2½	3	3½	4	4½	5	6	7	8	10	12	
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
Globe & Ang. Val. without Y'ke.	Sod., ea	5 40	7 35	9 80	12 50	15 00	18 50	22 50	27 00	31 00	37 50	43 00	50 00	72 00	114 00	170 00
" "	Fig'd.	7 00	9 00	12 50	15 00	18 50	22 50	27 00	31 00	37 50	43 00	50 00	72 00	114 00	170 00	
" "	Sod.	8 00	10 75	15 00	18 50	22 50	27 00	31 00	37 50	43 00	50 00	58 00	77 00	123 00	187 00	
" "	Fig'd.	7 25	11 00	16 00	19 00	23 00	27 00	31 00	37 50	43 00	50 00	58 00	77 00	123 00	187 00	
Jenk. Disc. without Y'ke.	Sod.	8 50	13 00	18 00	22 00	26 00	30 00	34 00	40 00	48 00	58 00	68 00	80 00	130 00	185 00	
" "	Fig'd.	10 00	13 00	18 00	22 00	26 00	30 00	34 00	40 00	48 00	58 00	68 00	80 00	130 00	185 00	
" "	Sod.	11 75	14 00	18 50	21 50	25 00	28 00	31 00	34 00	42 00	50 00	58 00	80 00	130 00	185 00	
" "	Fig'd.	11 75	14 00	18 50	21 50	25 00	28 00	31 00	34 00	42 00	50 00	58 00	80 00	130 00	185 00	
Horizontal Check Valves																
Angle	Sod.	3 00	6 50	8 90	12 25	14 25	19 00	22 00	22 00	22 00	30 00	45 00	57 00	105 00	155 00	
Horizontal	Sod.	3 60	6 50	8 90	12 25	14 25	19 00	22 00	22 00	22 00	30 00	45 00	57 00	105 00	155 00	
Angle	Fig'd.	5 25	8 25	11 50	15 50	18 00	22 50	26 00	26 00	26 00	35 00	50 00	62 00	115 00	175 00	
Vertical	Fig'd.	5 25	8 25	11 50	15 50	18 00	22 50	26 00	26 00	26 00	35 00	50 00	62 00	115 00	175 00	
" "	Sod.	7 00	9 50	12 50	17 00	21 00	25 00	30 00	30 00	33 00	40 00	63 00	73 00	125 00	175 00	
" "	Fig'd.	8 75	11 50	15 00	20 00	25 00	30 00	35 00	37 50	45 00	67 00	78 00	135 00	185 00	250 00	
Cross Safety Valves																
Angle	Sod.	5 00	5 80	7 80	13 25	17 25	23 00	28 75	34 50	41 50	57 75	68 00	132 00	185 00	250 00	
Cross	Sod.	5 00	5 80	7 80	13 25	17 25	23 00	28 75	34 50	41 50	57 75	68 00	132 00	185 00	250 00	
Angle	Fig'd.	10 25	16 00	21 50	27 50	34 00	40 00	48 00	55 00	65 00	100 00	140 00	180 00	250 00	350 00	
" "	Fig'd.	10 25	16 00	21 50	27 50	34 00	40 00	48 00	55 00	65 00	100 00	140 00	180 00	250 00	350 00	
Swing Check Valves																
" "	Sod.	15 00	18 00	24 00	30 00	37 00	44 00	52 00	60 00	68 00	80 00	100 00	120 00	150 00	200 00	
" "	Fig'd.	17 00	21 00	27 00	34 00	40 00	48 00	56 00	64 00	72 00	85 00	105 00	125 00	155 00	205 00	
Jenkins Disc Check Valves																
" "	Sod.	10 50	14 00	17 00	20 00	23 00	28 00	30 00	30 00	40 00	45 00	55 00	67 00	80 00	135 00	
" "	Fig'd.	12 50	16 50	20 00	23 00	26 00	33 00	35 00	35 00	43 00	50 00	60 00	75 00	90 00	135 00	
Expansion Joints, Iron Body																
" "	Sod.	7 00	8 00	10 00	14 00	18 00	23 00	28 00	33 00	43 00	50 00	60 00	70 00	100 00	160 00	
" "	Fig'd.	15 00	16 00	18 00	25 00	30 00	40 00	48 00	55 00	65 00	80 00	95 00	110 00	160 00	225 00	
Exp. Jts, Ir. Body, 6" Trav'ce																
" "	Sod.	11 00	13 00	17 50	25 00	30 00	40 00	48 00	55 00	65 00	80 00	95 00	110 00	175 00	250 00	
" "	Fig'd.	13 00	20 00	25 00	35 00	40 00	50 00	58 00	65 00	80 00	95 00	110 00	130 00	185 00	250 00	
Weber Valves																
" "	Sod.	10 00	12 00	15 00	18 00	20 00	23 00	23 00	23 00	28 00	32 00	45 00	55 00	90 00	125 00	
" "	Fig'd.	10 00	12 00	15 00	18 00	20 00	23 00	23 00	23 00	28 00	32 00	45 00	55 00	90 00	125 00	

MALLEABLE IRON FITTINGS.

Classification.

CLASS	A	B	C	D	E
List Price } Black per pound } Galvan'zd	40c. 50c.	20c. 30c.	16c. 20c.	13c. 20c.	11c. 18c.
Elbows	$\frac{1}{2}$, $\frac{3}{4}$ x $\frac{1}{2}$, $\frac{3}{4}$ x $\frac{3}{4}$	$\frac{1}{2}$, $\frac{3}{4}$, $\frac{3}{4}$ x $\frac{1}{2}$, $\frac{1}{2}$ x $\frac{3}{4}$	$\frac{1}{2}$, $\frac{1}{2}$ x $\frac{3}{4}$	$\frac{3}{4}$, 1	1 $\frac{1}{2}$ and larger
Elbows, R. and L.	$\frac{1}{2}$, $\frac{3}{4}$ x $\frac{1}{2}$, $\frac{3}{4}$ x $\frac{3}{4}$	$\frac{1}{2}$ and smaller	$\frac{3}{4}$, 1	1 $\frac{1}{2}$ and larger	.....
Elbows, 45°	$\frac{1}{2}$, $\frac{3}{4}$	$\frac{1}{2}$ and smaller	$\frac{3}{4}$ to 2	2 $\frac{1}{2}$ and larger	.....
Elbows, Straight .....	.....	$\frac{1}{2}$ and smaller	$\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{2}$ x $\frac{1}{2}$, 1 x $\frac{1}{2}$	1 and larger	.....
Elbows, Drop .....	.....	$\frac{1}{2}$ and smaller	$\frac{1}{2}$ and larger	.....	.....
Elbows, Side Outlet .....	.....	$\frac{1}{2}$ and smaller	$\frac{1}{2}$ & $\frac{1}{2}$ reducing	.....	.....
Tees	$\frac{1}{2}$, $\frac{3}{4}$ x $\frac{1}{2}$, $\frac{3}{4}$ x $\frac{3}{4}$	$\frac{1}{2}$ and smaller	$\frac{1}{2}$ and larger	.....	.....
Tees, Four Way .....	.....	$\frac{1}{2}$ and smaller	$\frac{1}{2}$ and larger	.....	.....
Tees, Drop .....	.....	$\frac{1}{2}$, $\frac{3}{4}$ and $\frac{1}{2}$	$\frac{1}{2}$ and larger	.....	.....
Crosses, straight .....	.....	1 and smaller	$\frac{3}{4}$ and 1	.....	.....
Crosses, Reducing .....	.....	$\frac{3}{4}$, $\frac{1}{2}$	.....	1 $\frac{1}{2}$ and larger	.....
Return Bends .....	.....	$\frac{3}{4}$, $\frac{1}{2}$	$\frac{3}{4}$, 1	1 $\frac{1}{2}$ and larger	.....
Return Bends, R. & L.	$\frac{3}{4}$, $\frac{1}{2}$	$\frac{3}{4}$, 1	1 $\frac{1}{2}$ and larger	1, 1 $\frac{1}{2}$	1 $\frac{1}{2}$, 2
Couplings, R. H.	$\frac{1}{2}$	$\frac{1}{2}$, $\frac{3}{4}$	$\frac{1}{2}$, $\frac{3}{4}$	1 and larger	.....
Couplings, R. and L.	$\frac{1}{2}$	$\frac{1}{2}$, $\frac{3}{4}$	$\frac{1}{2}$, $\frac{3}{4}$	1 $\frac{1}{2}$ and larger	.....
Couplings, Red.	$\frac{1}{2}$ x $\frac{1}{2}$, $\frac{3}{4}$ x $\frac{1}{2}$	$\frac{3}{4}$ x $\frac{1}{2}$ to $\frac{3}{4}$ x $\frac{3}{4}$	$\frac{3}{4}$ x $\frac{1}{2}$ to 1 x $\frac{3}{4}$	1 $\frac{1}{2}$ and larger	.....
Caps .....	.....	$\frac{1}{2}$, $\frac{3}{4}$	$\frac{1}{2}$ to 1 $\frac{1}{2}$	.....	.....
Locknuts .....	.....	$\frac{1}{2}$ to $\frac{3}{4}$	$\frac{3}{4}$ and larger	.....	.....
Extension Pieces .....	.....	$\frac{3}{8}$, $\frac{1}{2}$	.....	.....	.....

NOTE—Fittings in Class D having one or more outlets smaller than $\frac{3}{4}$ inch will be charged to Class C.
Fittings in Class E having one or more outlets smaller than 1 inch will be charged to Class D.

LONG SWEEP (WATER) FITTINGS.

Sizes	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12
No. 1 Water Elbows, Cl.	\$ c. 32	\$ c. 40	\$ c. 55	\$ c. 80	\$ c. 110	\$ c. 150	\$ c. 200	\$ c. 250	\$ c. 300	\$ c. 350	\$ c. 400	\$ c. 450	\$ c. 500	\$ c. 550	\$ c. 600
No. 2 Dbl. Water Elbows	\$ c. 64	\$ c. 80	\$ c. 110	\$ c. 160	\$ c. 220	\$ c. 300	\$ c. 400	\$ c. 500	\$ c. 600	\$ c. 700	\$ c. 800	\$ c. 900	\$ c. 1000	\$ c. 1100	\$ c. 1200
No. 3 Water Tees	\$ c. 48	\$ c. 60	\$ c. 82	\$ c. 120	\$ c. 160	\$ c. 220	\$ c. 300	\$ c. 400	\$ c. 500	\$ c. 600	\$ c. 700	\$ c. 800	\$ c. 900	\$ c. 1000	\$ c. 1100
No. 4 Water Crosses	\$ c. 85	\$ c. 110	\$ c. 150	\$ c. 210	\$ c. 280	\$ c. 380	\$ c. 500	\$ c. 650	\$ c. 800	\$ c. 950	\$ c. 1100	\$ c. 1250	\$ c. 1400	\$ c. 1550	\$ c. 1700
No. 1 Water Elbows, Red'g.	\$ c. 48	\$ c. 60	\$ c. 85	\$ c. 120	\$ c. 160	\$ c. 220	\$ c. 300	\$ c. 400	\$ c. 500	\$ c. 600	\$ c. 700	\$ c. 800	\$ c. 900	\$ c. 1000	\$ c. 1100
No. 2 Dbl. W. Elbows, Red'g.	\$ c. 96	\$ c. 120	\$ c. 165	\$ c. 240	\$ c. 320	\$ c. 440	\$ c. 580	\$ c. 760	\$ c. 960	\$ c. 1180	\$ c. 1420	\$ c. 1680	\$ c. 1960	\$ c. 2260	\$ c. 2580
No. 3 W. Tees Red'g.	\$ c. 72	\$ c. 90	\$ c. 125	\$ c. 180	\$ c. 240	\$ c. 330	\$ c. 440	\$ c. 580	\$ c. 760	\$ c. 960	\$ c. 1180	\$ c. 1420	\$ c. 1680	\$ c. 1960	\$ c. 2260
No. 4 Water Crosses, Red'g.	\$ c. 110	\$ c. 140	\$ c. 195	\$ c. 270	\$ c. 360	\$ c. 480	\$ c. 640	\$ c. 840	\$ c. 1080	\$ c. 1360	\$ c. 1680	\$ c. 2040	\$ c. 2440	\$ c. 2880	\$ c. 3360

PIPE HANGERS.

Sizes	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10
Exp. Ring Hangers, Complete..	\$ c. 17	\$ c. 18	\$ c. 19	\$ c. 20	\$ c. 22	\$ c. 24	\$ c. 26	\$ c. 28	\$ c. 30	\$ c. 32	\$ c. 34	\$ c. 36	\$ c. 38	\$ c. 40	\$ c. 42	\$ c. 44	\$ c. 46
Grabber Hangers, without plates..	\$ c. 20	\$ c. 20	\$ c. 22	\$ c. 24	\$ c. 26	\$ c. 28	\$ c. 30	\$ c. 32	\$ c. 34	\$ c. 36	\$ c. 38	\$ c. 40	\$ c. 42	\$ c. 44	\$ c. 46	\$ c. 48	\$ c. 50
Extension Bar, 10 foot..	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08	\$ c. 08
Ring Stays, per foot	\$ c. 5 00	\$ c. 5 80	\$ c. 6 75	\$ c. 7 50	\$ c. 8 00	\$ c. 8 50	\$ c. 9 00	\$ c. 9 50	\$ c. 10 00	\$ c. 10 50	\$ c. 11 00	\$ c. 11 50	\$ c. 12 00	\$ c. 12 50	\$ c. 13 00	\$ c. 13 50	\$ c. 14 00
Ring Stays, short, black, per 100	\$ c. 6 50	\$ c. 7 00	\$ c. 8 00	\$ c. 9 00	\$ c. 10 00	\$ c. 11 00	\$ c. 12 00	\$ c. 13 00	\$ c. 14 00	\$ c. 15 00	\$ c. 16 00	\$ c. 17 00	\$ c. 18 00	\$ c. 19 00	\$ c. 20 00	\$ c. 21 00	\$ c. 22 00
" " galvanized	\$ c. 6 50	\$ c. 7 00	\$ c. 8 00	\$ c. 9 00	\$ c. 10 00	\$ c. 11 00	\$ c. 12 00	\$ c. 13 00	\$ c. 14 00	\$ c. 15 00	\$ c. 16 00	\$ c. 17 00	\$ c. 18 00	\$ c. 19 00	\$ c. 20 00	\$ c. 21 00	\$ c. 22 00
" " long, black	\$ c. 8 00	\$ c. 10 00	\$ c. 12 00	\$ c. 14 00	\$ c. 16 00	\$ c. 18 00	\$ c. 20 00	\$ c. 22 00	\$ c. 24 00	\$ c. 26 00	\$ c. 28 00	\$ c. 30 00	\$ c. 32 00	\$ c. 34 00	\$ c. 36 00	\$ c. 38 00	\$ c. 40 00
" " galvanized	\$ c. 8 00	\$ c. 10 00	\$ c. 12 00	\$ c. 14 00	\$ c. 16 00	\$ c. 18 00	\$ c. 20 00	\$ c. 22 00	\$ c. 24 00	\$ c. 26 00	\$ c. 28 00	\$ c. 30 00	\$ c. 32 00	\$ c. 34 00	\$ c. 36 00	\$ c. 38 00	\$ c. 40 00

BLACK AND GALVANIZED UNION.

Size	1/4		3/8		1/2		3/4		1		1 1/4		1 1/2		2		2 1/2		3		
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	
Lip.....	18	27	20	30	22	33	27	40	33	50	46	70	58	90	75	115	55	92	35	103	15
Jefferson.....	30	45	40	60	50	75	60	80	80	120	120	180	160	240	200	300	204	304	80	107	20
Kewance.....	19	23	22	26	27	34	40	49	48	60	66	82	80	110	141	40	210	275	265	360	60

FLANGE UNIONS.

Size	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	10	12
	Standard.....	\$ 52	64	78	100	125	150	180	210	270	315	395	500	700	1150	1600
Jefferson.....	80	120	160	200	240	300	360	480	580	700	850	1100	1500	2800	4000

GRABLER STEEL HOOK PLATES.

Size	1	1 1/4	1 1/2	2
Number of Hooks.....	30	30	25	20
Price.....	\$2 50	\$3 25	\$3 75	\$4 25

BRANCH TEES OR HEADERS.

	1 inch Branch Tees		1½ inch Branch Tees.	1½ inch Branch Tees	2 inch Branch Tees
	2½ in. n Centre to Centre		3 inch Centre to Centre	3½ inch Centre to Centre	4½ inch Centre to Centre
	2 inch Run	2½ in. Run	2½ inch Run	3 inch Run	3½ inch Run
2	\$1 15	\$	\$	\$	\$
3	1 35	.....	2 40	3 80	6 25
4	1 60	.....	2 85	4 60	7 75
5	1 85	.....	3 55	5 50	9 25
6	2 10	.....	3 95	6 25	10 75
7	2 45	.....	4 20	7 25	13 00
8	2 75	.....	4 95	7 75	14 00
9	3 40	4 30	6 15	9 00	15 00
10	4 00	5 00	6 85	10 00	16 50
11	4 80	5 50	7 25	10 75	.....
12	5 10	5 85	7 65	11 50	.....
13	6 00	.....	8 25	.....	.....
14	7 25	.....	9 00	.....	.....
15	7 25	.....	9 75	.....	.....
16	8 25	.....	10 95	.....	.....

NOTE.—All openings in branch tees for circulation are tapped right hand. Branch tees for box coils are always tapped left hand in branches, and right hand in back inlet.

HOOK AND RING PLATES.

Number of Branches	1	2	3	4	5	6	7	8	9	10	11	12
HOOK PLATES.												
1 in. pipe, 2½ in. centre to centre	c. 09	c. 18	c. 23	c. 26	\$ c. 32	\$ c. 38	\$ c. 48	\$ c. 59	\$ c. 65	\$ c. 75	\$ c. 85	\$ c. 1 00
1½ " 3 " "	10	21	27	32	41	52	68	80	90	1 00	1 35	1 40
1½ " 3½ " "	15	28	43	58	72	88	1 10	1 25	1 40	1 55	1 65	1 90
2 " 4½ " "	22	43	65	90	1 15	1 35						
RING PLATES.												
1 in. pipe, 2½ in. centre to centre	16	28	41	50	62	72	96	1 00				
1½ " 3 " "	21	35	50	62	75	1 10	1 25	1 40				

WROUGHT IRON NIPPLES.

BLACK IRON—RIGHT HAND.

LENGTH IN INCHES		Size, Inches	PRICES		PRICE OF EXTRA LONG NIPPLES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Close	Short		Close of	Long	LENGTHS IN INCHES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
1 1/8	1 1/2	1 1/8	\$.04	\$.06	\$.07	\$.08	\$.10	\$.12	\$.14	\$.15	\$.17	\$.17	\$.17	\$.18	\$.20	\$.22	\$.24	\$.26	\$.28	\$.30	\$.32	\$.34	\$.36	\$.38	\$.40	\$.42	\$.44	\$.46	\$.48	\$.50	\$.52	\$.54	\$.56	\$.58	\$.60	\$.62	\$.64	\$.66	\$.68	\$.70	\$.72	\$.74	\$.76	\$.78	\$.80	\$.82	\$.84	\$.86	\$.88	\$.90	\$.92	\$.94	\$.96	\$.98	\$.1.00	\$.1.02	\$.1.04	\$.1.06	\$.1.08	\$.1.10	\$.1.12	\$.1.14	\$.1.16	\$.1.18	\$.1.20	\$.1.22	\$.1.24	\$.1.26	\$.1.28	\$.1.30	\$.1.32	\$.1.34	\$.1.36	\$.1.38	\$.1.40	\$.1.42	\$.1.44	\$.1.46	\$.1.48	\$.1.50	\$.1.52	\$.1.54	\$.1.56	\$.1.58	\$.1.60	\$.1.62	\$.1.64	\$.1.66	\$.1.68	\$.1.70	\$.1.72	\$.1.74	\$.1.76	\$.1.78	\$.1.80	\$.1.82	\$.1.84	\$.1.86	\$.1.88	\$.1.90	\$.1.92	\$.1.94	\$.1.96	\$.1.98	\$.2.00	\$.2.02	\$.2.04	\$.2.06	\$.2.08	\$.2.10	\$.2.12	\$.2.14	\$.2.16	\$.2.18	\$.2.20	\$.2.22	\$.2.24	\$.2.26	\$.2.28	\$.2.30	\$.2.32	\$.2.34	\$.2.36	\$.2.38	\$.2.40	\$.2.42	\$.2.44	\$.2.46	\$.2.48	\$.2.50	\$.2.52	\$.2.54	\$.2.56	\$.2.58	\$.2.60	\$.2.62	\$.2.64	\$.2.66	\$.2.68	\$.2.70	\$.2.72	\$.2.74	\$.2.76	\$.2.78	\$.2.80	\$.2.82	\$.2.84	\$.2.86	\$.2.88	\$.2.90	\$.2.92	\$.2.94	\$.2.96	\$.2.98	\$.3.00	\$.3.02	\$.3.04	\$.3.06	\$.3.08	\$.3.10	\$.3.12	\$.3.14	\$.3.16	\$.3.18	\$.3.20	\$.3.22	\$.3.24	\$.3.26	\$.3.28	\$.3.30	\$.3.32	\$.3.34	\$.3.36	\$.3.38	\$.3.40	\$.3.42	\$.3.44	\$.3.46	\$.3.48	\$.3.50	\$.3.52	\$.3.54	\$.3.56	\$.3.58	\$.3.60	\$.3.62	\$.3.64	\$.3.66	\$.3.68	\$.3.70	\$.3.72	\$.3.74	\$.3.76	\$.3.78	\$.3.80	\$.3.82	\$.3.84	\$.3.86	\$.3.88	\$.3.90	\$.3.92	\$.3.94	\$.3.96	\$.3.98	\$.4.00	\$.4.02	\$.4.04	\$.4.06	\$.4.08	\$.4.10	\$.4.12	\$.4.14	\$.4.16	\$.4.18	\$.4.20	\$.4.22	\$.4.24	\$.4.26	\$.4.28	\$.4.30	\$.4.32	\$.4.34	\$.4.36	\$.4.38	\$.4.40	\$.4.42	\$.4.44	\$.4.46	\$.4.48	\$.4.50	\$.4.52	\$.4.54	\$.4.56	\$.4.58	\$.4.60	\$.4.62	\$.4.64	\$.4.66	\$.4.68	\$.4.70	\$.4.72	\$.4.74	\$.4.76	\$.4.78	\$.4.80	\$.4.82	\$.4.84	\$.4.86	\$.4.88	\$.4.90	\$.4.92	\$.4.94	\$.4.96	\$.4.98	\$.5.00	\$.5.02	\$.5.04	\$.5.06	\$.5.08	\$.5.10	\$.5.12	\$.5.14	\$.5.16	\$.5.18	\$.5.20	\$.5.22	\$.5.24	\$.5.26	\$.5.28	\$.5.30	\$.5.32	\$.5.34	\$.5.36	\$.5.38	\$.5.40	\$.5.42	\$.5.44	\$.5.46	\$.5.48	\$.5.50	\$.5.52	\$.5.54	\$.5.56	\$.5.58	\$.5.60	\$.5.62	\$.5.64	\$.5.66	\$.5.68	\$.5.70	\$.5.72	\$.5.74	\$.5.76	\$.5.78	\$.5.80	\$.5.82	\$.5.84	\$.5.86	\$.5.88	\$.5.90	\$.5.92	\$.5.94	\$.5.96	\$.5.98	\$.6.00	\$.6.02	\$.6.04	\$.6.06	\$.6.08	\$.6.10	\$.6.12	\$.6.14	\$.6.16	\$.6.18	\$.6.20	\$.6.22	\$.6.24	\$.6.26	\$.6.28	\$.6.30	\$.6.32	\$.6.34	\$.6.36	\$.6.38	\$.6.40	\$.6.42	\$.6.44	\$.6.46	\$.6.48	\$.6.50	\$.6.52	\$.6.54	\$.6.56	\$.6.58	\$.6.60	\$.6.62	\$.6.64	\$.6.66	\$.6.68	\$.6.70	\$.6.72	\$.6.74	\$.6.76	\$.6.78	\$.6.80	\$.6.82	\$.6.84	\$.6.86	\$.6.88	\$.6.90	\$.6.92	\$.6.94	\$.6.96	\$.6.98	\$.7.00	\$.7.02	\$.7.04	\$.7.06	\$.7.08	\$.7.10	\$.7.12	\$.7.14	\$.7.16	\$.7.18	\$.7.20	\$.7.22	\$.7.24	\$.7.26	\$.7.28	\$.7.30	\$.7.32	\$.7.34	\$.7.36	\$.7.38	\$.7.40	\$.7.42	\$.7.44	\$.7.46	\$.7.48	\$.7.50	\$.7.52	\$.7.54	\$.7.56	\$.7.58	\$.7.60	\$.7.62	\$.7.64	\$.7.66	\$.7.68	\$.7.70	\$.7.72	\$.7.74	\$.7.76	\$.7.78	\$.7.80	\$.7.82	\$.7.84	\$.7.86	\$.7.88	\$.7.90	\$.7.92	\$.7.94	\$.7.96	\$.7.98	\$.8.00	\$.8.02	\$.8.04	\$.8.06	\$.8.08	\$.8.10	\$.8.12	\$.8.14	\$.8.16	\$.8.18	\$.8.20	\$.8.22	\$.8.24	\$.8.26	\$.8.28	\$.8.30	\$.8.32	\$.8.34	\$.8.36	\$.8.38	\$.8.40	\$.8.42	\$.8.44	\$.8.46	\$.8.48	\$.8.50	\$.8.52	\$.8.54	\$.8.56	\$.8.58	\$.8.60	\$.8.62	\$.8.64	\$.8.66	\$.8.68	\$.8.70	\$.8.72	\$.8.74	\$.8.76	\$.8.78	\$.8.80	\$.8.82	\$.8.84	\$.8.86	\$.8.88	\$.8.90	\$.8.92	\$.8.94	\$.8.96	\$.8.98	\$.9.00	\$.9.02	\$.9.04	\$.9.06	\$.9.08	\$.9.10	\$.9.12	\$.9.14	\$.9.16	\$.9.18	\$.9.20	\$.9.22	\$.9.24	\$.9.26	\$.9.28	\$.9.30	\$.9.32	\$.9.34	\$.9.36	\$.9.38	\$.9.40	\$.9.42	\$.9.44	\$.9.46	\$.9.48	\$.9.50	\$.9.52	\$.9.54	\$.9.56	\$.9.58	\$.9.60	\$.9.62	\$.9.64	\$.9.66	\$.9.68	\$.9.70	\$.9.72	\$.9.74	\$.9.76	\$.9.78	\$.9.80	\$.9.82	\$.9.84	\$.9.86	\$.9.88	\$.9.90	\$.9.92	\$.9.94	\$.9.96	\$.9.98	\$.10.00	\$.10.02	\$.10.04	\$.10.06	\$.10.08	\$.10.10	\$.10.12	\$.10.14	\$.10.16	\$.10.18	\$.10.20	\$.10.22	\$.10.24	\$.10.26	\$.10.28	\$.10.30	\$.10.32	\$.10.34	\$.10.36	\$.10.38	\$.10.40	\$.10.42	\$.10.44	\$.10.46	\$.10.48	\$.10.50	\$.10.52	\$.10.54	\$.10.56	\$.10.58	\$.10.60	\$.10.62	\$.10.64	\$.10.66	\$.10.68	\$.10.70	\$.10.72	\$.10.74	\$.10.76	\$.10.78	\$.10.80	\$.10.82	\$.10.84	\$.10.86	\$.10.88	\$.10.90	\$.10.92	\$.10.94	\$.10.96	\$.10.98	\$.11.00	\$.11.02	\$.11.04	\$.11.06	\$.11.08	\$.11.10	\$.11.12	\$.11.14	\$.11.16	\$.11.18	\$.11.20	\$.11.22	\$.11.24	\$.11.26	\$.11.28	\$.11.30	\$.11.32	\$.11.34	\$.11.36	\$.11.38	\$.11.40	\$.11.42	\$.11.44	\$.11.46	\$.11.48	\$.11.50	\$.11.52	\$.11.54	\$.11.56	\$.11.58	\$.11.60	\$.11.62	\$.11.64	\$.11.66	\$.11.68	\$.11.70	\$.11.72	\$.11.74	\$.11.76	\$.11.78	\$.11.80	\$.11.82	\$.11.84	\$.11.86	\$.11.88	\$.11.90	\$.11.92	\$.11.94	\$.11.96	\$.11.98	\$.12.00

WROUGHT IRON NIPPLES.

GALVANIZED—RIGHT HAND.

LENGTH IN INCHES		Size, Inches	PRICES		PRICES OF EXTRA LONG GALVANIZED NIPPLES																				
Close	Short		Close or Short	Long	LENGTHS IN INCHES																				
1	1 1/2	1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	1	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	1 1/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	1 1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	1 3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	2 1/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	2 1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	2 3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	3	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	3 1/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	3 1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	3 3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	4 1/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	4 1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	4 3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	5	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	5 1/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	5 1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	5 3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	6	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	6 1/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	6 1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	6 3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	7	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	7 1/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	7 1/2	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	7 3/4	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128
1	1 1/2	8	08	11	12	15	17	21	24	26	29	31	34	38	41	45	51	57	63	70	83	91	101	113	128

WROUGHT IRON NIPPLES.
GALVANIZED—RIGHT AND LEFT.

LENGTH IN INCHES		Size, Inches	Prices		PRICE OF EXTRA LONG NIPPLES.																																																	
			Close or Short	Long	Length in Inches.																																																	
Close	Short	Long	\$ c.	\$ c.	4	5	6	7	8	9	10	11	12	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.																																			
			\$	\$	c.	c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.																																			
3/8	1 1/2	3 1/2	.08	.13	.15	.18	.21	.26	.29	.32	.37	.40	.43	.15	.18	.21	.26	.29	.32	.37	.40	.43	.46	.51	.56	.61	.66	.72	.77	.83	.88	.96	1.04	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28
7/8	1 3/4	3 3/4	.08	.13	.15	.18	.21	.26	.29	.32	.37	.40	.43	.46	.51	.56	.61	.66	.72	.77	.83	.88	.96	1.04	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28									
1	2	4	.11	.16	.18	.21	.26	.29	.34	.38	.43	.46	.50	.53	.59	.66	.72	.80	.88	.96	1.07	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28												
1 1/8	2 1/2	4 1/2	.13	.1924	.27	.37	.40	.43	.46	.51	.56	.61	.66	.72	.80	.88	.96	1.07	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28													
1 1/4	3	4 1/2	.18	.2932	.38	.50	.53	.59	.66	.72	.80	.88	.96	1.07	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28																	
1 3/8	3 1/2	5	.24	.3743	.51	.62	.72	.80	.88	.96	1.07	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28																				
2	4	5 1/2	.29	.4354	.62	.77	.83	.96	1.07	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28																						
2 1/2	5	6	.39	.5769	.82	1.07	1.15	1.28	1.39	1.54	1.65	1.81	1.92	2.08	2.24	2.48	2.66	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28																									
2 3/4	5 1/2	6 1/2	.83	1.25	...	1.46	1.81	2.30	2.56	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28																																			
3	6	7	1.04	1.54	...	1.81	2.30	2.83	3.09	3.36	3.63	3.91	4.18	4.45	4.72	5.00	5.28																																					
3 1/2	6 1/2	7 1/2	1.60	2.24	...	2.83	3.63	4.45	4.72	5.00	5.28																																											
4	7	8	1.84	2.56	...	3.20	3.60	4.00	4.40	4.80	5.20																																											

FLOOR AND CEILING PLATES.

SIZES	1/4	1/2	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
C. I. Floor Plain	\$ c. 06	\$ c. 06	\$ c. 08	\$ c. 11	\$ c. 14	\$ c. 16	\$ c. 24	\$ c. 30	\$ c. 35	\$ c. 42
..... Plated	12	12	14	18	22	26	35	45		
C. I. Double Floor... Plain	..	15	15	15	15	..	..	..	..	..
..... Plated	..	30	30	30	30	..	..	..	..	..
C. I. Ceiling..... Plain	11	13	16	18	23	27	36	50	55	68
..... Plated	14	17	20	23	30	35	..	..	..	..
C. I. Ceiling, 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		
Spun Brass Ceiling.. Plated	20	22	24	30	35	43	55	75		
Spun Brass Ceiling, with set screw Plated	22	24	26	32	38	46	60	80		
Model 2 piece Floor { Plain	14	14	18	20	24	28	43	60	90	1 25
and Ceiling..... { Plated	25	25	28	32	35	38	52	75	1 10	1 50
Grabber 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, and Ceiling Plated	..	10	11	12	13	17				
H. B. Perfection Fl'r.. Plated	10	10	11	12	13	15	30	50		
..... Ceiling.. Plated	25	25	28	32	35	38	52	75		

GALVANIZED TELESCOPIC FLOOR SLEEVES.

SIZE OF PIPE	1/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
Minimum Length, Inr.	14	14	14	14	14	14	14	14	14	14	14	14
Maximum. " "	24	24	24	24	24	24	24	24	24	24	24	24
List Price	\$ c. 1 05	\$ c. 1 20	\$ c. 1 35	\$ c. 1 50	\$ c. 1 80	\$ c. 2 10	\$ c. 2 50	\$ c. 3 00	\$ c. 3 75	\$ c. 4 50	\$ c. 5 25	\$ c. 6 15

EXPANSION TANKS.

MADE OF GALVANIZED IRON. COMPLETE WITH GAUGE GLASSES AND MOUNTINGS.

Size, 12 x 24 inches.....	each, \$4 00
" 12 x 30 "	" 4 50
" 14 x 30 "	" 5 00
Brass Mountings only, without Glass.....	per set 1 00

GAUGE GLASSES.

	1/4 x 12	1/4 x 14	1/4 x 16	1/4 x 18
Per doz ..	\$1 00	\$1 25	\$1 50	\$2 00

ASBESTOS AND MINERAL WOOL SECTIONAL COVERING.

PRICE LIST.

Inside Diameter Per Foot.	Covering per Ft.		Elbows Each.	Tees Each.	Valves Each.
	Min Wool	Asbestos			
1/2	\$ 20	\$ 18	\$ 20	\$ 30	\$ 25
3/4	21	20	25	33	25
1	23	22	25	33	25
1 1/4	25	23	25	33	25
1 1/2	27	25	25	33	25
2	30	27	27	36	27
2 1/2	33	31	31	41	41
3	37	36	36	48	48
3 1/2	41	40	40	53	53
4	45	44	44	59	59
4 1/2	50	47	50	65	65
5	54	50	58	75	75
6	59	60	65	90	90
7	65	65	83	1 20	1 20
8	75	75	1 00	1 35	1 35
9	81	80	1 10	1 50	1 50
10	87	90	1 20	1 75	1 75
12	1 00	.....	.....	.....	.....

Asbestos Cement per 100 lb. bag..... \$2.50
 Mineral Wool, per 50 lb. bag..... 5.00
 Asbestos Sheathing, per 100 sq. ft.... 10.00

HAIR FELT.

IN ROLLS CONTAINING 300 SQUARE FEET.

1/2 inch..... \$6 50 per hundred square feet.
 3/4 inch..... 8 50 " "
 1 inch..... 10 50 " "

FLOOR FLANGES.

SIZES OF PIPE	DIAMETER OF FLANGES, INCHES																	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
3 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
4 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
5	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
5 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
6	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
6 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
7	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
7 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
8	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
8 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
9	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
9 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
10	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
11	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
12	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
12 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
13	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
13 1/4	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
14	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
15	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
16	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
17	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
18	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
19	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350
20	15	22	30	42	50	62	75	90	100	115	130	150	175	200	220	250	300	350

The above is considered a complete list.

CAST IRON FLANGES.
Threaded Flanges. **Blind Flanges.**

Size Inches	Price		Price of Bolts per set of one joint	Size Inches	Price	
	Faced, each	Faced and Drilled, each			Faced, each	Faced and Drilled, each
1	\$ 1 00	\$ c. 1 25	\$ c. 25	2	\$ c.	\$ c.
1 1/4	1 05	1 35	25	2 1/2	1 40	1 70
1 1/2	1 10	1 40	25	3	1 60	2 20
2	1 20	1 50	25	3 1/2	1 85	2 50
2 1/2	1 40	2 00	25	4	2 10	2 80
3	1 60	2 25	25	4 1/2	2 50	3 35
3 1/2	1 80	2 50	25	5	2 90	3 75
4	2 15	3 00	35	6	3 25	4 10
4 1/2	2 50	3 35	70	7	3 70	4 50
5	3 20	3 65	70	8	5 00	6 40
6	3 80	4 00	75	9	5 75	7 25
7	4 25	4 75	1 15	10	7 75	9 25
8	5 00	5 60	1 70	12	9 00	10 00
9	6 75	8 25		14	14 00	16 00
10	7 75	9 25				
12	10 50	12 50				

THERMOMETERS AND GAUGES.

N.P. Hot Water Thermometer, straight, each.....	\$2.00
N.P. Hot Water Thermometer, angle, each	2.50
N.P. Steam Thermometer, with temperature and pressure scales, straight, each	4.00
N.P. Steam Thermometer, with temperature and pressure scales, angle, each.....	5.00
N.P. Altitude Gauge, with 5 inch dial, iron case, brass rim, each	3.00
Low pressure steam gauge, with 5 inch dial, iron case, N.P. rim, each	3.00

KIELEY STANDARD STEAM TRAPS.

FOR HIGH AND LOW PRESSURE.

Size Number.....	1	2	3	4	5	6	7
Size Inlet	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Size Outlet	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
No. lineal feet 1 inch pipe will drain	4,000	6,000	10,000	15,000	25,000	35,000	50,000
Price each.....\$	25.00	35.00	45.00	60.00	80.00	100.00	125.00

THE MARCK STEAM TRAP.

No.	Size of Pipe Connection	Capacity in Feet of 1 inch Pipe according to Radiating Conditions.	Price, each
00	$\frac{1}{4}$ inch	175 to 450	\$ 8 00
0	$\frac{3}{8}$ "	225 to 900	11 00
I	$\frac{1}{2}$ "	450 to 2700	17 00
II	$\frac{3}{4}$ "	900 to 5850	25 00
III	1 "	1800 to 6750	32 00
IV	$1\frac{1}{4}$ "	2250 to 10800	40 00
V	$1\frac{1}{2}$ "	4500 to 16200	55 00
VI	2 "	9000 to 24300	70 00
VII	2 "	18000 to 36000	82 00
VIII	$2\frac{1}{2}$ "	27000 to 54000	90 00

PRESSURE REDUCING VALVES.

Size, inches	1	1½	2	2½	3	3½	4	5	6
Kieley	\$ 22 00	\$ 28 00	\$ 44 00	\$ 72 00	\$ 100 00	\$ 135 00	\$ 180 00	\$ 225 00	\$ 270 00
Davis No. 1	22 00	25 00	30 00	35 00	40 00	50 00	60 00	75 00	90 00

BACK PRESSURE VALVES.

Size, inches	2	2½	3	3½	4	4½	5	6
Standard, acrowed	\$ 11 00	\$ 13 00	\$ 15 00	\$ 19 00	\$ 23 50	\$ 28 50	\$ 33 50	\$ 38 50
" flanged	14 00	16 00	17 50	22 00	26 00	30 00	37 00	43 00
Davis	20 00	24 00	18 00	23 00	25 00	30 00	40 00	47 00
Kieley	20 00	24 00	30 00	35 00	40 00	45 00	55 00	75 00

RADIATOR BRONZES.

Brilliant Aluminum	per lb.	\$2 00
" Pale Gold	"	1 25
" Copper	"	1 50
" Lemon	"	1 50
" Orange	"	1 50
" Fire	"	1 50
" Crimson	"	1 50
Superior Pale Gold	"	1 75
Enamel Aluminum	per lb.	\$3 50
Patent Olive Green	"	1 75
" New Green	"	1 75
" Light Blue	"	2 00
" Dark Blue	"	2 00
" Blue Violet	"	2 00
" Dark Green	"	1 75
Bronzing Liquid	per gal.	2 50

USEFUL DATA AND INFORMATION.

Water Boils in open vessel, atmospheric pressure, sea level at 212°.

Water Boils at lesser temperature than 212° when atmospheric pressure is less, as in case of higher altitudes. The temperature of the resultant vapor or steam will be proportionately less.

Water Boils in vacuum at 98°. Hence resultant vapor is 98°.

Water Expands in heating from 39° to 212°, one twenty-third or about 4 per cent. in bulk.

Water has greatest density or occupies least space at 39° Fahr.

A Cubic Inch of Water evaporated at atmospheric pressure (14.7 lbs.) makes (approximately) one cubic foot of steam.

Multiplying the height of a Column of Water by .434 gives pressure in pounds.

Water in Circulation is the best known absorbent of heat, and gives out more heat in cooling through a given range of temperature than any known substance.

Bodies which Absorb Heat Best Radiate it Best.

An Imperial Gallon of water weighs 10 pounds.

A Cubic Foot of water weighs 62½ pounds.

A Hundred Square Feet of radiation contains approximately 15 gallons of water.

Heat Unit, known as **British Thermal Unit**, or **B. T. U.** raises temperature of one pound of water 1°.

Heat Unit, 966 heat units will evaporate one pound of water at 212° into steam.

Heat Unit. A pound of anthracite coal contains theoretically 14,500 heat units.

Heat Unit. A pound of anthracite coal in the actual burning emits between 8000 and 9000 heat units only.

Heat Units emitted per hour by a square foot of cast iron radiation, under favorable conditions, will be two for each degree of difference between the temperature of the radiator and surrounding air.

A Horse Power. Fifteen square feet of heating surface in a standard tubular boiler is estimated as equal to one horse power.

Area of a Circle. Multiply square of its diameter by .7854.

Circumference of a Circle. Multiply its diameter by 3.1416.

Areas of Circles are to each other as the squares of their diameters.

The Area of Any Triangle equals one half the product of the base and perpendicular.

Doubling the Diameter of a pipe increases its capacity four times.

Wrought Iron Steam and Gas Pipe is reckoned by its internal diameter.

Boiler Tubes are reckoned by their external diameter.

A Ton of Hard Coal occupies a space equal to 37 cubic feet.

A Ton of Soft Coal occupies a space equal to 40 cubic feet.

A Ton and a Half Hard Coal to a hundred square feet water radiation, or to fifty square feet steam radiation is the estimated fuel consumption for the winter's firing.

A Ton of Hard Coal is considered equal to a ton and a half of soft coal.

A Square Foot of "Safford" Radiation weighs approximately seven pounds.



List of Sizes of Hot Water Mains.

Radiations		Radiations	
75 to 125	sq. ft. 1 inch pipe	700 to 950	sq. ft. 3 1/2 inch pipe
125 to 175	" 1 1/4 "	950 to 1200	" 4 "
175 to 300	" 1 3/4 "	1200 to 1575	" 4 1/2 "
300 to 475	" 2 "	1575 to 1975	" 5 "
475 to 700	" 2 1/2 "	1975 to 2375	" 5 1/2 "
	" 3 "	2375 to 3850	" 6 "

Mains		Branches	
1 in. will supply	2 1/2	1/4 in.	
1 1/4 "	" 2	1 "	
1 1/2 "	" 1	1 1/4 " and 1-1 in.	
2 "	" 2	1 1/2 "	
2 1/2 "	" 2-1 1/2 in. and 1 1/4 in., or	1-2 " and 1-1 1/4 in.	
3 "	" 1-3/4 in. and 1-1 in., or	2-2 " and 1-1 1/2 in.	
3 1/2 "	" 2-2 1/2 in. or 1-3 in., and	1-2 " or 3-2 in.	
4 "	" 1-3 in. and 1-2 1/2 in., or	2-3 " or 4-2 in.	
4 1/2 "	" 1-3 1/2 in. and 1-3 in., or	1-4 " and 1-2 1/2 in.	
5 "	" 1-4 in. and 1-3 in., or	1-4 1/2 in. and 1-2 1/2 in.	
6 "	" 2-4 in. and 1-3 in., or	1-5 in., or 10-2 in.	
7 "	" 1-6 in. and 1-4 in., or	2-4 in. and 1-2 in.	
8 "	" 2-6 in. and 1-5 in., or	5-4 in. and 2-2 in.	

List of Sizes of Steam Mains.

Radiation	One-Pipe Work	Two-Pipe Work
40 to 50 sq. ft.	1 inch	3/4 x 3/4 inch
100 to 125 "	1 1/4 "	1 x 3/4 "
125 to 250 "	1 1/2 "	1 1/4 x 1 "
250 to 400 "	2 "	1 1/2 x 1 1/4 "
400 to 650 "	2 1/2 "	2 x 1 1/2 "
650 to 900 "	3 "	2 1/2 x 2 "
900 to 1250 "	3 1/2 "	3 x 2 1/2 "
1250 to 1800 "	4 "	3 1/2 x 3 "
1800 to 2650 "	4 1/2 "	4 x 3 1/2 "
2650 to 3500 "	5 "	4 1/2 x 4 "
3500 to 5000 "	6 "	5 x 4 1/2 "
5000 to 6500 "	7 "	6 x 5 "
6500 to 8100 "	8 "	7 x 6 "
8100 to 10000 "	9 "	8 x 6 "
	10 "	9 x 6 "

The above are safe approximates, prepared from long experience, but conditions may alter these sizes.

7168 X3^c

90

**Number of Square Feet of Heating surface in
100 Lineal Feet of Standard Iron Pipe.**

From 1 to 6 Inch Diameter.

Pipe	Square Feet	Pipe	Square Feet
1 inch	34.43	3½ inch	104.72
1¼ "	43.30	4 "	117.81
1½ "	49.75	4½ "	130.90
2 "	62.17	5 "	145.64
2½ "	75.26	6 "	173.44
3 "	91.63		

Pressure of Water for each Foot in Height.

Feet in Height	Pounds Per Sq. In.	Feet in Height	Pounds Per Sq. In.	Feet in Height	Pounds Per Sq. In.
1	.43	15	6.49	50	21.65
2	.86	20	8.66	70	30.32
5	2.16	25	10.82	80	34.55
10	4.33	40	17.32	100	43.31

Temperature of Steam at Different Pressures.

Pressure Sq're Inch	Temperature	Pressure Sq're Inch	Temperature	Pressure Sq're Inch	Temperature
0 pound	212	4 pounds	225	20 pounds	257
1 "	215	5 "	228	25 "	265
2 pounds	219	10 "	240	50 "	297
3 "	222	15 "	250	100 "	338

Table Showing Expansion Wrought Iron Pipe

Temperature of Air when Pipe is Fitted	Length of Pipe when Fitted	Length of Pipe when Heated to							
		215		265		297		338	
		Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Zero	100 feet	100	1.72	100	2.12	100	2.31	100	2.70
32	100 feet	100	1.47	100	1.78	100	2.12	100	2.45
64	100 feet	100	1.21	100	1.61	100	1.87	100	2.18

