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LION CASTINGS

KIRKINTILLOCH
NEAR GLASGOW

LION FOUNDRY CO., LTD.

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VOLUME I
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LION



CASTINGS

LION FOUNDRY CO., LTD.

ARCHITECTURAL, STRUCTURAL AND ENGINEERING IRONFOUNDERS

KIRKINTILLOCH, Near GLASGOW

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LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

PREFACE

IT is with pleasure that we present this, the Seventh Edition of our Catalogue illustrating the extensive range of our Cast-Iron products.

In producing this volume, an attempt has been made to compile a standard work of reference for the use of our many friends in the Architectural profession and in the Building and Plumbing trades.

We trust this new edition will prove to be as reliable a source of information as previous issues have been.

We continue to produce castings of the highest quality, and it will be seen that we have added considerably to the scope of our manufactures and are now making a wide variety of specialised industrial castings as used in the many branches of the Engineering Industry.

Our technical and sales departments are always at your service, and we are at all times willing to supply Architects and Engineers with technical information.

May we express the hope that this catalogue will stimulate and enhance the confidence placed in us for so long by our many customers.

LION FOUNDRY COMPANY LIMITED

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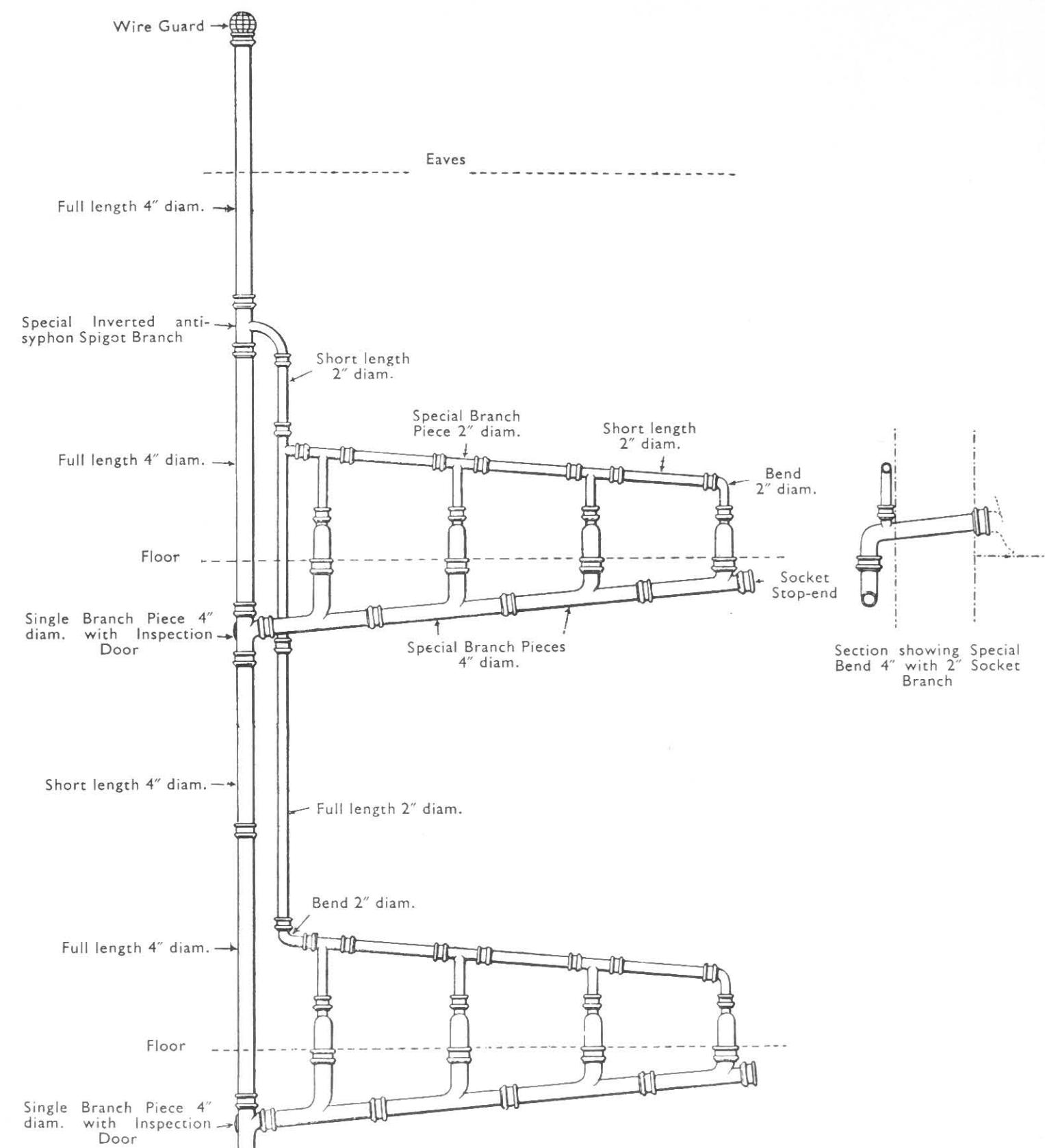
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677	Ventilating Grating .	103	798	Continuous Grating .	110	888	do. do. .	134
681	Louvre Ventilator .	108	799	do. do. .	112	892	Coal Shoot Frame and Cover . . .	127
682	Surface Grating and Frame . . .	125	803	Ventilating Grating .	104	894	Leak-proof Vent Pipe .	134
683	do. do. .	126	805	Surface Grating and Frame . . .	126	895	do. do. .	134
684	Chequer Plate . . .	118	808	do. do. .	126	896	Cesspool Box . . .	128
686	Air Brick . . .	107	809	Louvre Ventilator .	108	900	Grating . . .	119
688	Continuous Grating .	109	810	Ventilating Grating .	103	901	do. . .	119
694	Surface Grating .	122	815	P-Trap . . .	135	902	Manhole Frame and Cover . . .	146
695	do. do. .	122	816	Leak-proof Outlet .	132	905	Fire Hydrant Box . . .	146
698	Louvre Ventilator .	108	817	Louvre Ventilator .	108	906	Duct Tray Cover . . .	119
699	Air Brick . . .	107	818	S-Trap . . .	135	907	Continuous Grating . . .	111
700	Manhole Frame and Cover . . .	143	818	P-Trap . . .	135	908	Balcony Gully . . .	131
703	Louvre Ventilator .	108	819	Ventilating Grating .	103	909	Roof Gully . . .	131
709	Air Brick . . .	107	831	Continuous Grating .	116	910	Duct Tray Cover . . .	119
710	Continuous Grating .	110	833	do. do. .	112	911	Continuous Grating . . .	112
711	Surface Grating and Frame . . .	126	834	Surface Grating and Frame . . .	127	912	do. do. .	114
712	do. do. .	126	834	Surface Grating and Frame . . .	127	913	do. do. .	114
712S	do. do. .	126	839	Surface Grating . . .	123	914	Manhole Frame and Cover . . .	143
714	Continuous Grating .	117	840	Surface Grating and Frame . . .	127	915	Lamp Pillar . . .	162
718	Ventilating Grating .	103	842	Cesspool . . .	144, 145	916	Frames and Covers Units . . .	
720	Continuous Grating .	110						
724	Ventilating Grating .	103						
725	Surface Grating and Frame . . .	126						

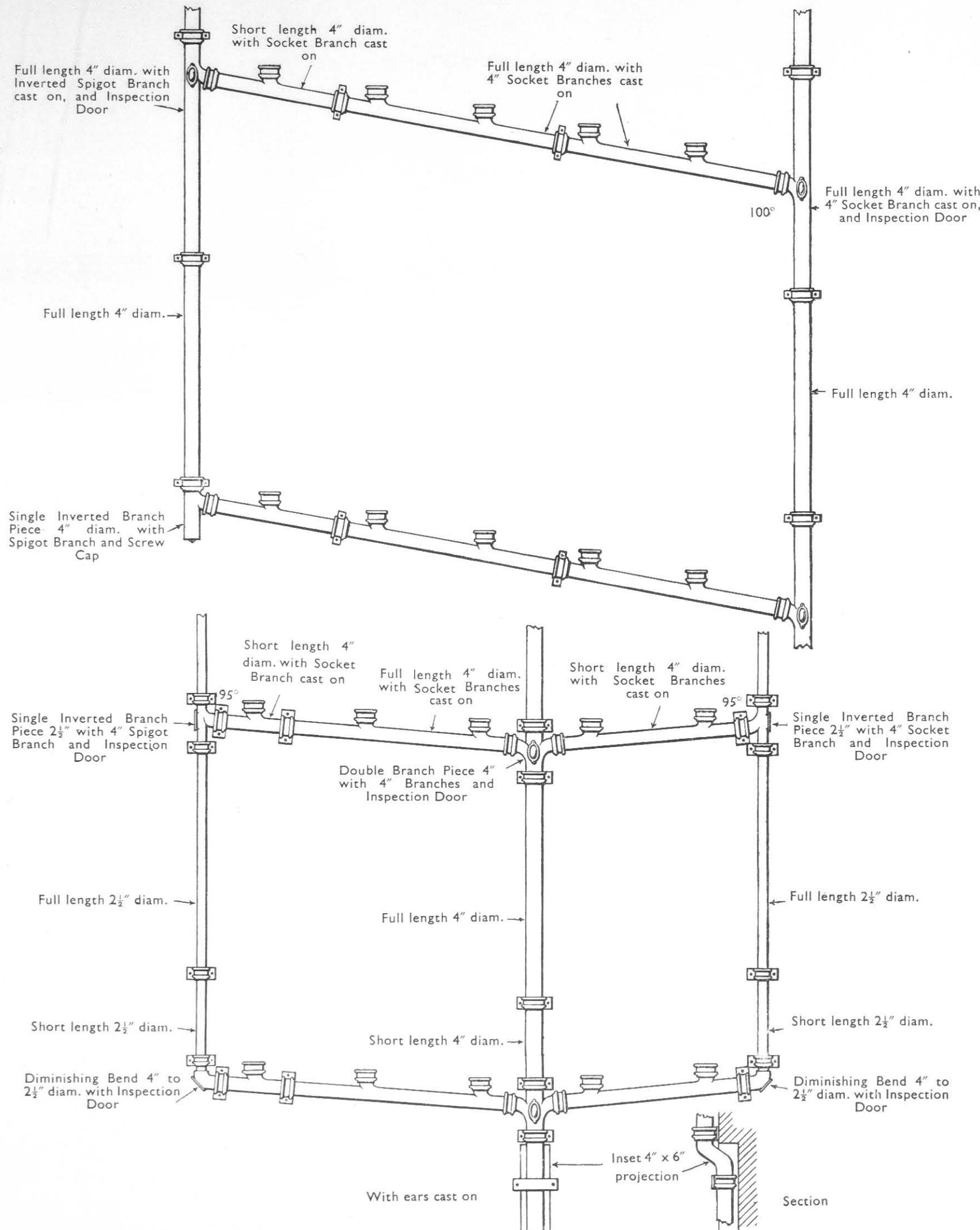
TYPICAL ARRANGEMENT OF PIPE STACKS TO ASSIST WHEN ORDERING

B.S.S.

Soil and Ventilating Pipes

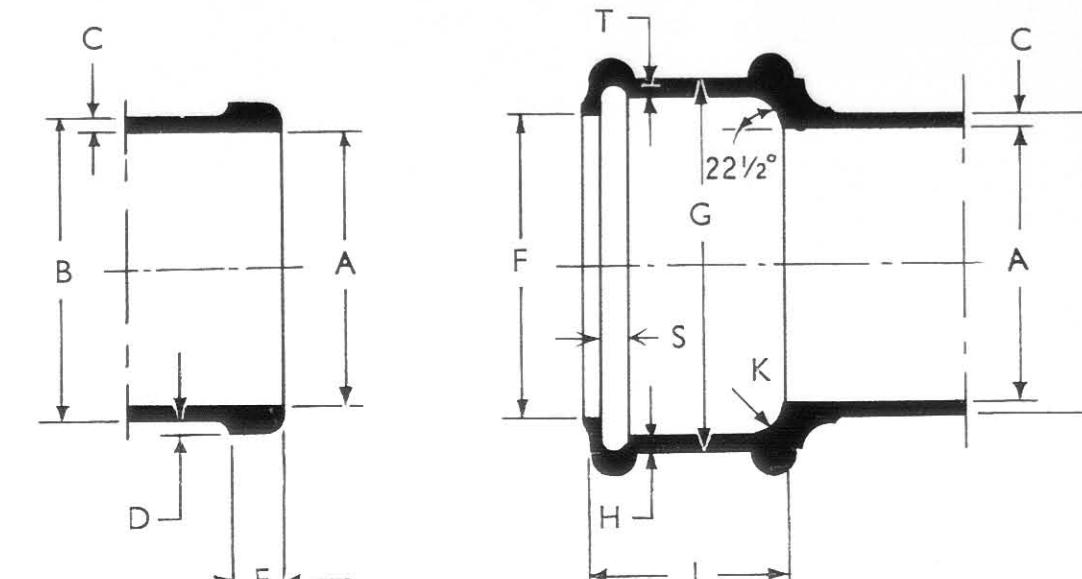


TYPICAL ARRANGEMENT OF PIPE STACKS TO ASSIST WHEN ORDERING



STRAIGHT PIPES AND TYPE "A" SOCKETS AND SPIGOTS

Dimensions of Straight Pipes and Type "A" Sockets and Spigots



NOTE. The Spigot Bead and Socket Groove shown above are optional features.

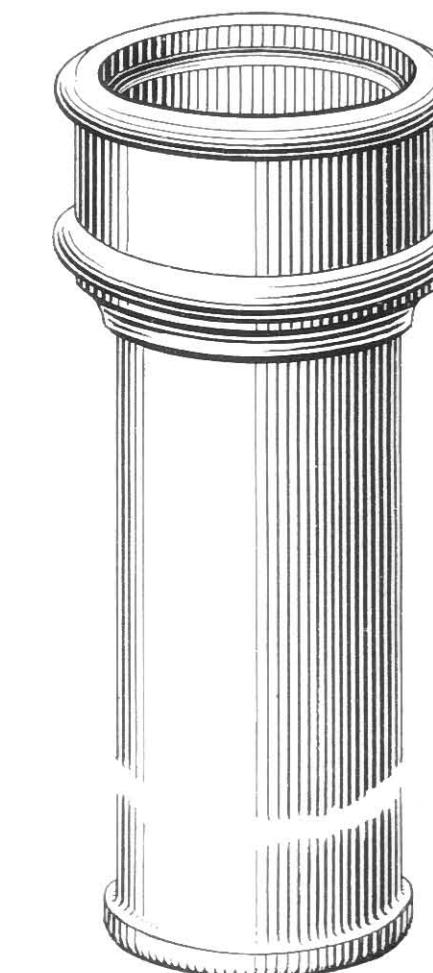


FIG. I

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

STRAIGHT PIPES AND TYPE "A" SOCKETS AND SPIGOTS

TABLE I

Dimensions of Straight Pipes and Type "A" Sockets and Spigots

PIPE SOCKET TYPE "A"	Nominal Size	Extra Heavy Grade			Heavy Grade			Medium Grade					
		in. 3½	in. 4	in. 6	in. 3	in. 3½	in. 4	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
Internal diameter minimum	A	3½	4	6	3	3½	4	2	2½	3	3½	4	6
External diameter minimum	B	4	4½	6½	3½	3½	4	2½	2½	3	3½	4	6
Thickness nominal	C	¼	¼	¼	½	½	½	½	¾	¾	¾	¾	¾
Projection of spigot band*	D	5/32	5/32	3/16	5/32	5/32	5/32	1/8	5/32	5/32	5/32	5/32	3/16
Width of spigot band*	E	5/8	5/8	5/8	1/2	5/8	5/8	1/2	1/2	5/8	5/8	5/8	5/8
Internal diameter minimum	F	4½	5	7½	3½	4½	5	2½	3½	3½	4½	5	7½
External diameter minimum	G	5½	5½	7¾	4½	5½	5½	3½	3½	4½	5	5½	7½
Thickness nominal	H	5/16	5/16	5/16	9/32	9/32	9/32	1/4	1/4	1/4	1/4	1/4	1/4
Internal depth	J	3	3	3½	2½	3	3	2½	2½	2½	3	3	3½
Internal radius	K	¼	¼	¼	¼	¼	¼	¼	¼	¼	¼	¼	¼
Width of groove*	S	½	½	½	½	½	½	½	½	½	½	½	½
Depth of groove *	T	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16

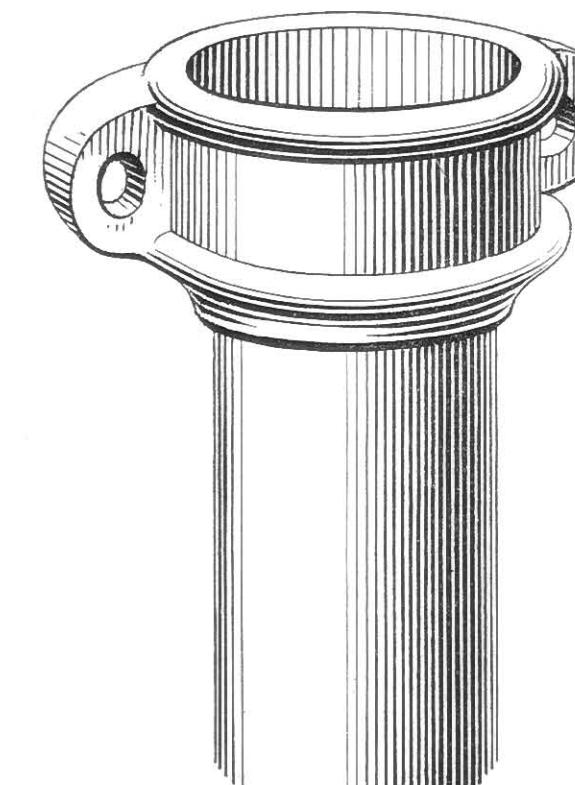
* Optional features.

PIPES WITH EARS

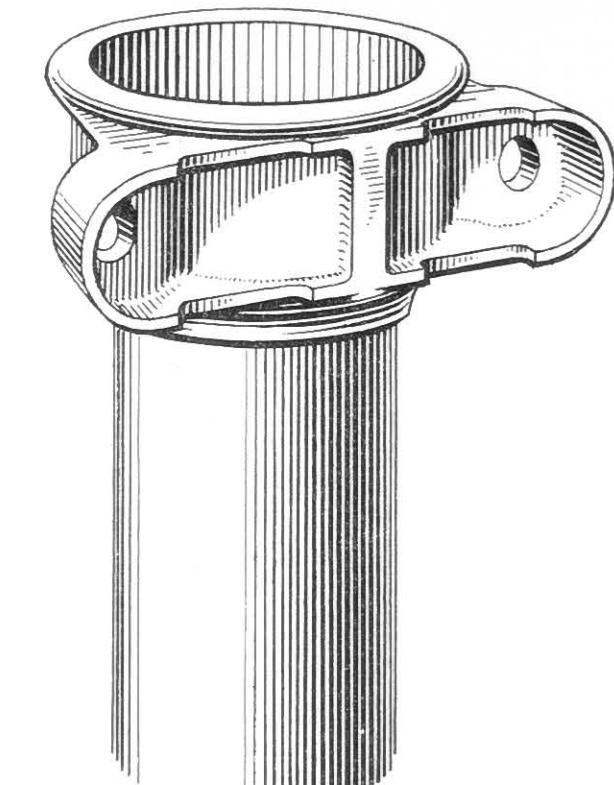
EARS.—Unless otherwise specified, pipes and fittings shall be supplied without ears. If ears are required they can be supplied as follows :—

- (a) SAND-CAST PIPES.—Cast during the manufacture of the pipe.
- (b) SPUN PIPES.—As loose bands, or rigidly attached to the socket of the pipe, or cast integrally with the pipe during the spinning operation.

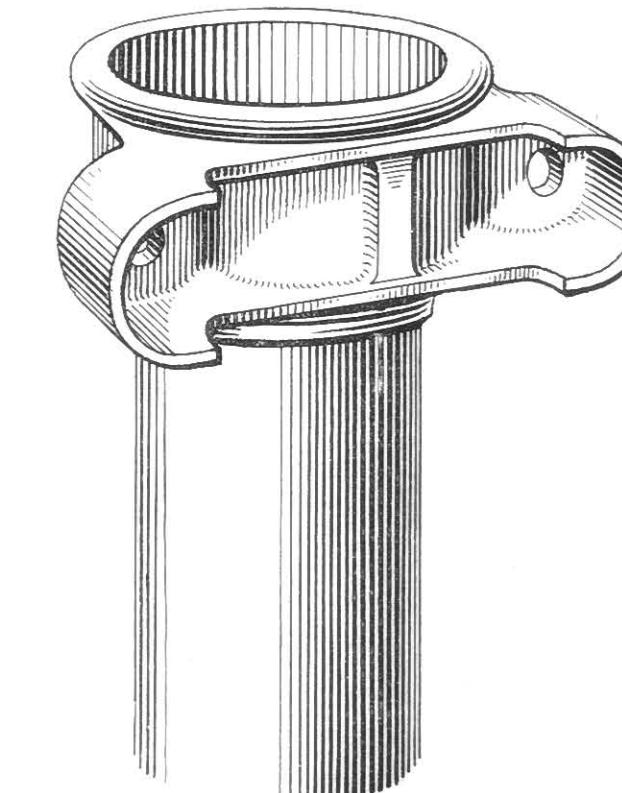
The purchaser shall state whether flat or projecting ears are required.



Front View



Flat Ear



Projecting Ear

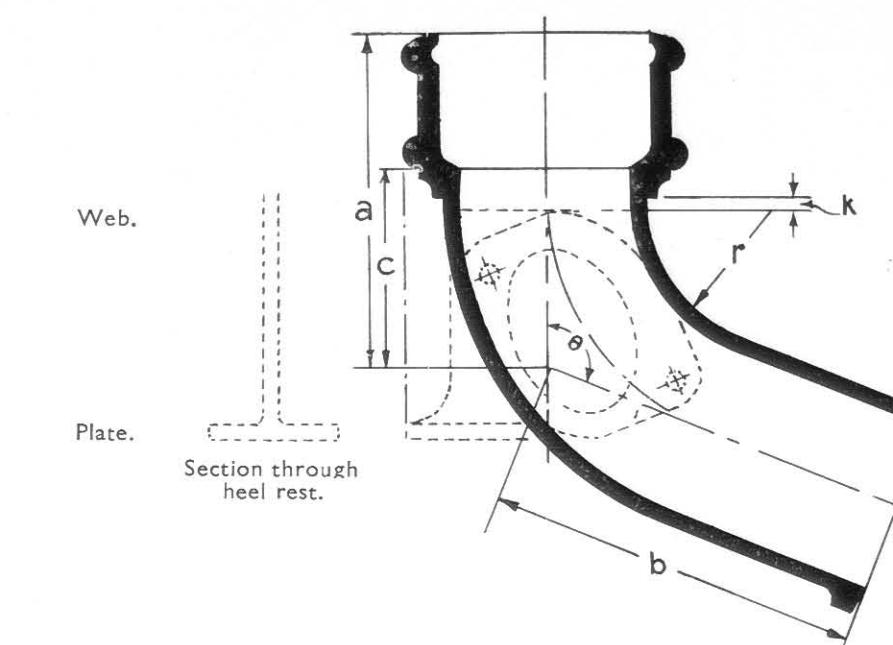
FIG. 2

SPUN PIPES



Two views of the Pipe showing the B.I.A. Ear cast integrally with the Pipe during the spinning operation.

SHORT RADIUS BENDS WITH AND WITHOUT ACCESS DOORS



Short Radius Bend

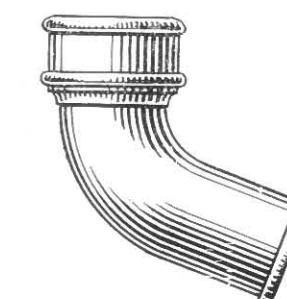


FIG. 4
 $92\frac{1}{2}^\circ$ 95° 100° $112\frac{1}{2}^\circ$
 120° 135°

Short Radius Bend with Heel Rest

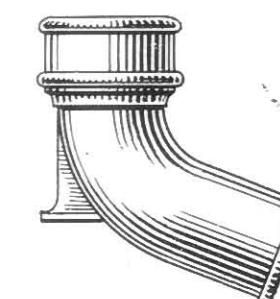


FIG. 5
 $92\frac{1}{2}^\circ$ 95° 100° $112\frac{1}{2}^\circ$
 120° 135°

Short Radius Bend with Oval Access Door on Heel

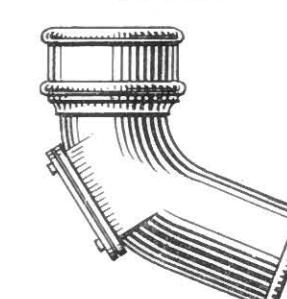


FIG. 6
 $92\frac{1}{2}^\circ$ 95° 100° $112\frac{1}{2}^\circ$
 120° 135°

Short Radius Bend with Oval Access Door on Side

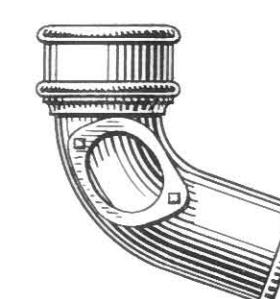


FIG. 7
 $92\frac{1}{2}^\circ$ 95° 100° $112\frac{1}{2}^\circ$
 120° 135°

SHORT RADIUS BENDS WITH AND WITHOUT ACCESS DOORS

TABLE 3

$\theta = 92\frac{1}{2}^\circ$

Nom. Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	6	6½	6½	7½	7½	9½
b	5½	6½	6½	7	7½	8½
c	3½	3¾	4½	4½	4½	5½
k	5/16	5/16	3/8	1/4	3/8	3/8
r	1½	1½	1½	1½	1½	1½

$\theta = 95^\circ$

Nom. Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	5½	6¾	6¾	7¾	7¾	8½
b	5½	6½	6½	7	7	8½
c	3¾	3½	4	4¾	4¾	5½
k	5/16	5/16	3/8	1/4	3/8	3/8
r	1½	1½	1½	1½	1½	1½

$\theta = 100^\circ$

Nom. Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	5½	6½	6½	6½	7½	8½
b	5½	6½	6½	7	7½	8½
c	3½	3¾	3¾	3¾	4½	5½
k	4/16	5/16	3/8	1/4	3/8	3/8
r	1½	1½	1½	1½	1½	1½

$\theta = 104^\circ$

Nom. Size	in. 3½	in. 4
a	6½	6½
b	7	7½
c	3½	3½
k	½	½
r	1½	1½

$\theta = 112\frac{1}{2}^\circ$

Nom. Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	5½	5½	5½	7½	7½	8½
b	5½	6½	6½	7	7½	8½
c	3½	3¾	3¾	3¾	4½	5½
k	4/16	5/16	3/8	1/4	3/8	3/8
r	1½	1½	1½	1½	1½	1½

$\theta = 120^\circ$

Nom. Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	5	5¾	5¾	7½	7¾	8½
b	5¾	6¾	6¾	6¾	6½	7½
c	2½	2½	2½	4½	4¾	5
k	5/16	5/16	5/16	1/4	3/8	7/16
r	1½	1½	1½	3½	3½	3½

$\theta = 135^\circ$

Nom. Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	5	5¾	5¾	6¾	7	7½
b	5¾	6½	6¾	6¾	6½	7½
c	2½	2½	2½	3¾	4	4½
k	½	½	½	½	½	½
r	2¾	2¾	2¾	4¾	4¾	4¾

OVAL ACCESS DOORS.—For details of oval access doors see Table 15.

The centre of an access door, when fitted, should be approximately symmetrical with the centre line of the fitting and as near the intersection of the two axes as possible.

HEEL RESTS.—The heel rests shall be located where the centre line through the socket strikes the outside edge of the pipe and extends outwards the same distance as the beads round the socket.

PLATE.—Width of plate, $\frac{2}{3}$ diameter of pipe. Thickness not less than $\frac{5}{16}$ in.

WEB.—Thickness of web, not less than $\frac{1}{4}$ in. from outside edge of pipe.

Spigots, sockets and ears of short radius bends to be the same as for straight pipes of corresponding nominal size.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LARGE RADIUS BENDS

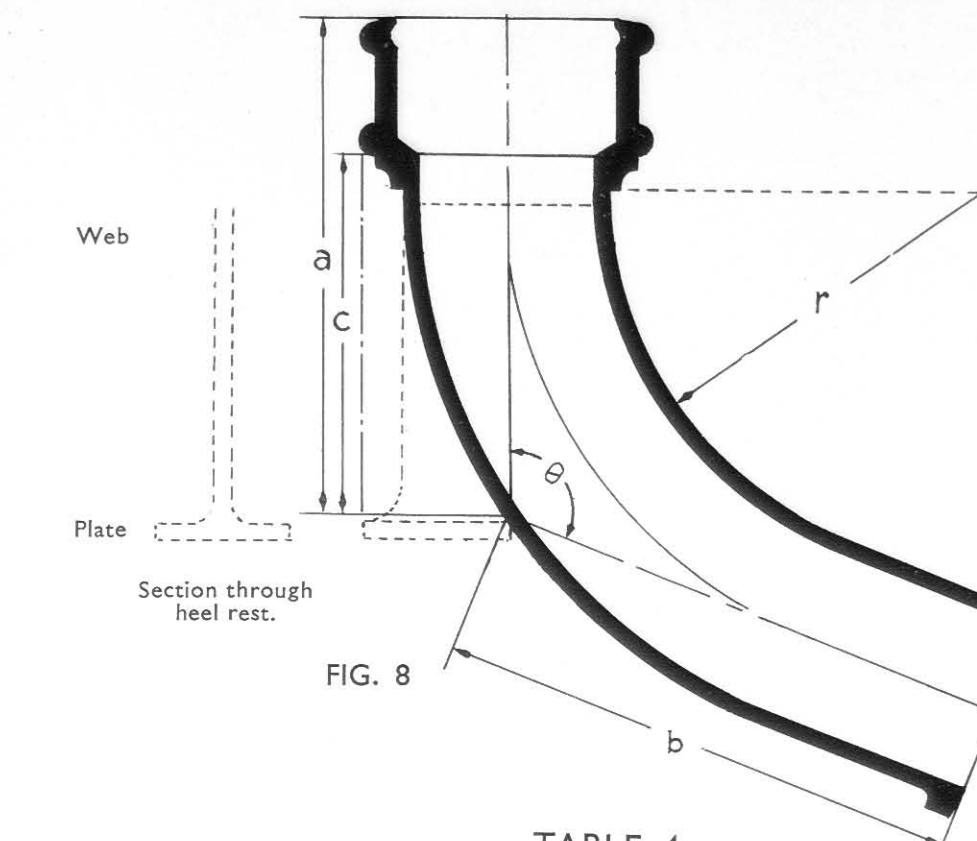


TABLE 4

Nom. Size	in. 3	in. 3½	in. 4	in. 6
a	11	11½	12	13½
b	11½	11¾	12	13
c	8½	8½	8½	9½
r	6	6	6	6

$\theta = 100^\circ$

Nom. Size	in. 3	in. 3½	in. 4	in. 6
a	10¾	11½	11½	12¾
b	11½	11¾	12	12¾
c	8	8½	8½	9½
r	6¾	6¾	6¾	6¾

$\theta = 120^\circ$

Nom. Size	in. 3	in. 3½	in. 4	in. 6
a	9¾	10	10½	11½
b	10¾	11	11½	12½
c	7	7	7½	7½
r	9	8¾	8¾	8½

$\theta = 135^\circ$

Nom. Size	in. 3	in. 3½	in. 4	in. 6
a	9	9½	9½	9¾
b	10½	10½	10½	11¾
c	6½	6½	6½	6½
r	11½	11	10½	9½

HEEL RESTS.—The heel rests shall be located where the centre line through the socket meets the outside edge of the pipe and shall extend outwards the same distance as the beads round the socket.

PLATE.—Width of plate, $\frac{2}{3}$ diameter of pipe. Thickness, not less than $\frac{5}{16}$ in.

WEB.—Thickness of web, not less than $\frac{1}{4}$ in. from outside edge of pipe.

Spigots, sockets and ears of large radius bends to be the same as for straight pipes of corresponding nominal size.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LARGE RADIUS BENDS WITH INSPECTION DOOR ON SIDE

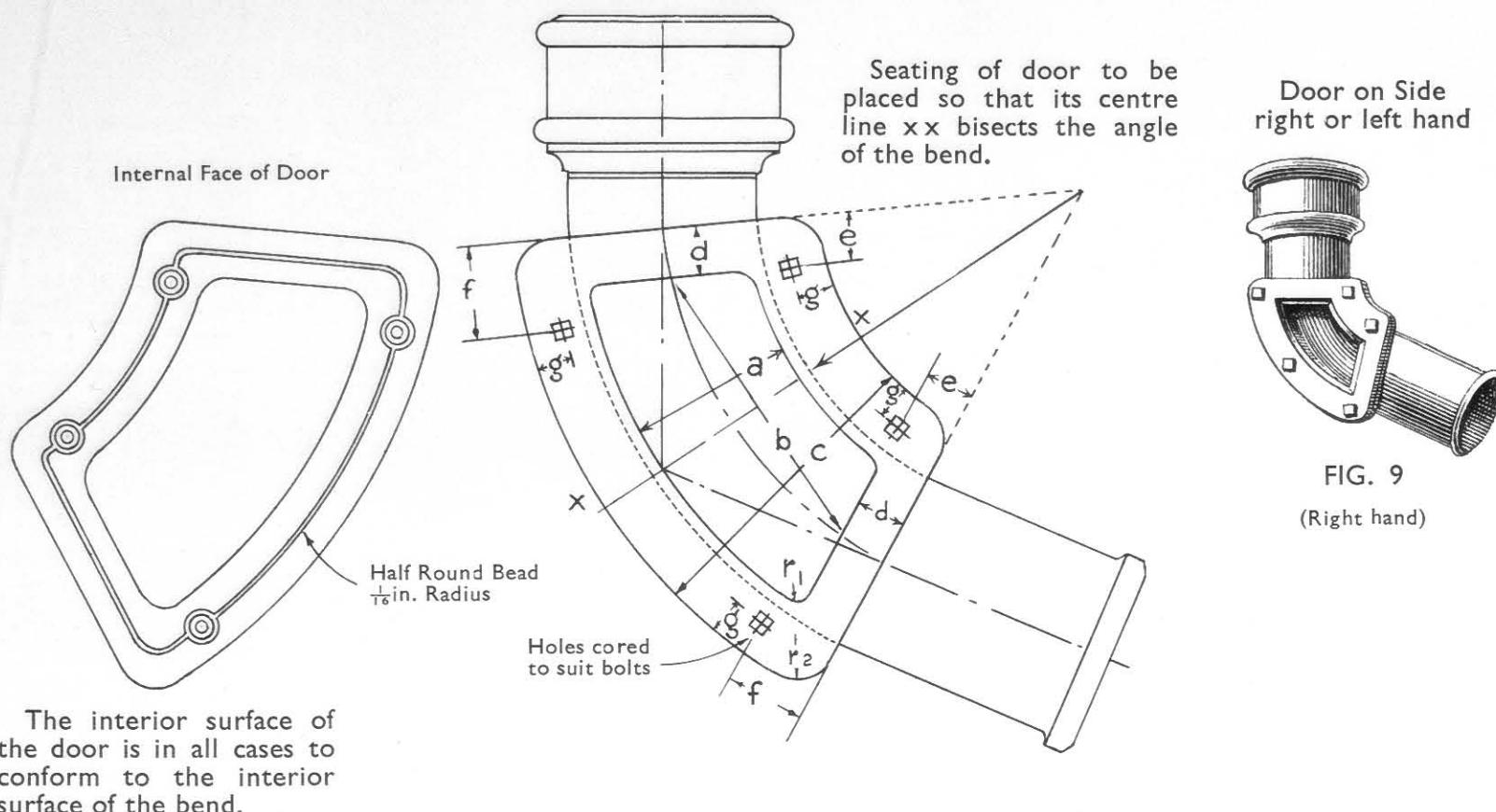


TABLE 5

Nominal Size	in. 3½	in. 4	in. 6
a	3½	4	6
b	7½	7½	7½
c	6¾	7¼	9¾
d	1¼	1¼	1¼
e	2¼	2¼	2¼
f	2¼	2¼	2¼
g	3	3	3
h	5	5	5
i	16	16	16
m	3	3	3
n	8	8	8
p	2¾	2¾	3½
q	1	1	1
r ₁	2	2	2
r ₂	7	7	7
s	3	3	3
t	½	½	½

The dimensions given above apply equally to left-hand bends.

Overall dimensions of large radius bends with inspection doors to be the same as for the plain large radius bends, Table 4.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LARGE RADIUS BENDS WITH RECTANGULAR INSPECTION DOOR ON HEEL

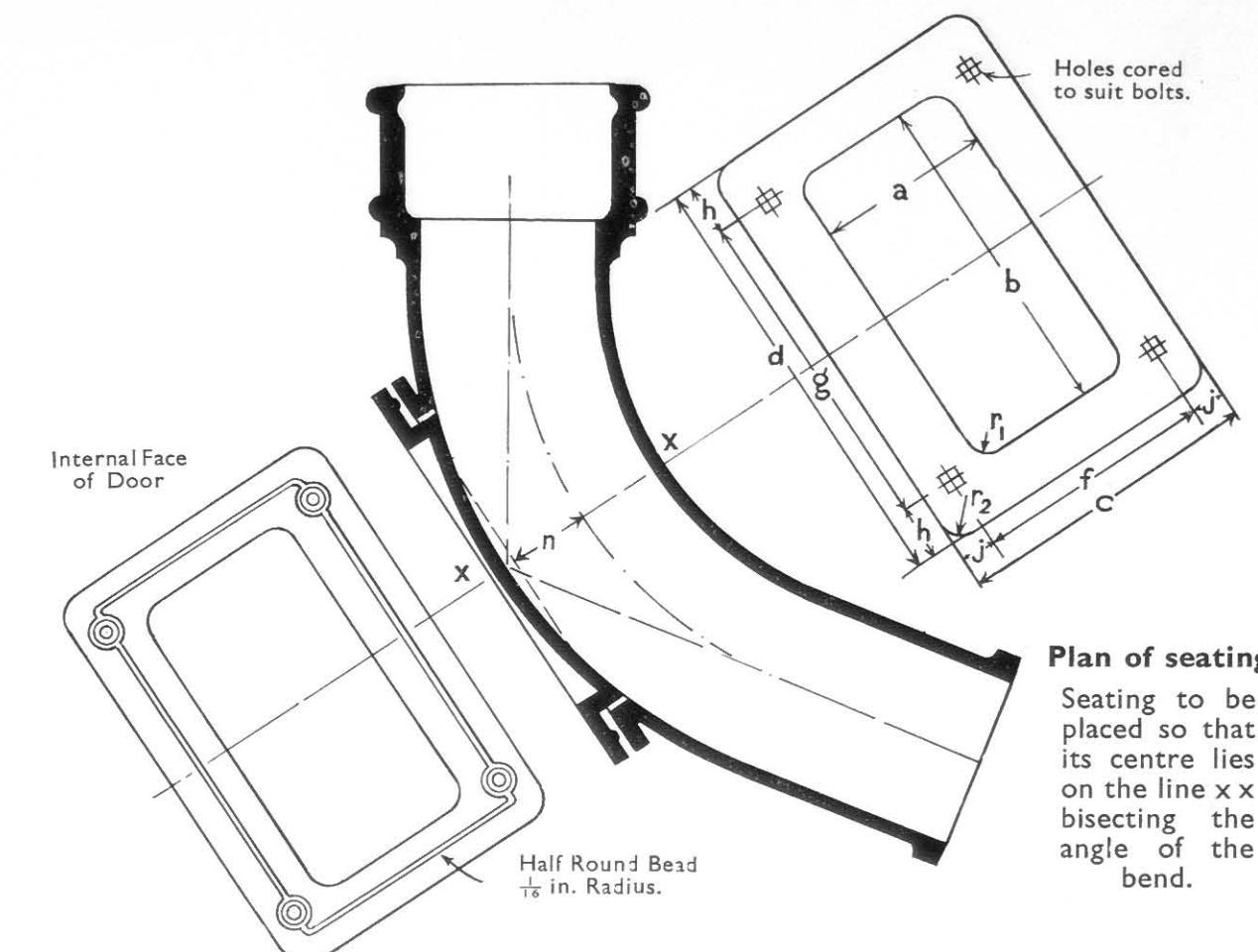
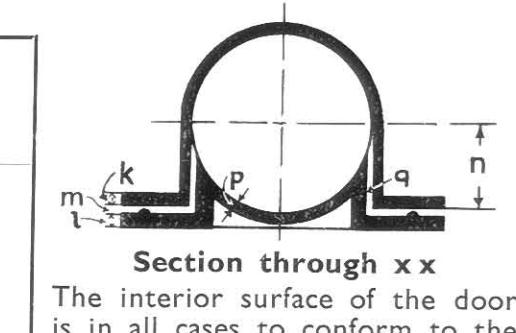


TABLE 6

Nominal Size	in. 3½	in. 4	in. 6
a	3½	4	6
b	7½	7½	7½
c	6¾	7¼	9¾
d	10	10	10
f	5½	5¾	7¾
g	7½	7½	7½
h	1	1	1
j	3	3	3
k	3	3	3
l	5	5	5
m	3	3	3
n	16	16	16
p	4	4	4
q	8	8	8
r ₁	2	2	2
r ₂	7	7	7
s	3	3	3
t	½	½	½



The interior surface of the door is in all cases to conform to the interior surface of the bend.

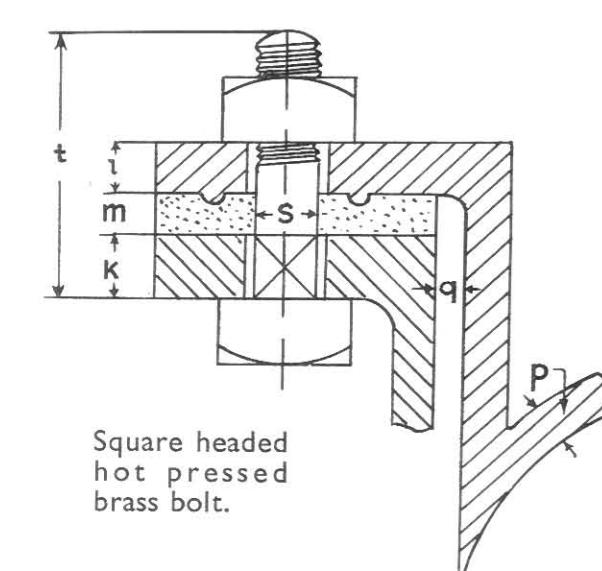


FIG. 10

92½° 95° 100° 112½° 120° 135°

Overall dimensions of large radius bends with inspection doors to be the same as for the plain large radius bends, Table 4.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

OFFSETS

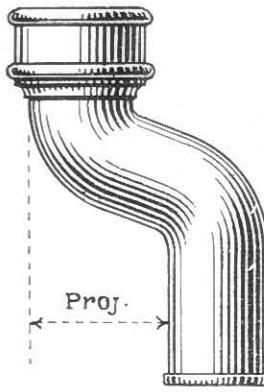
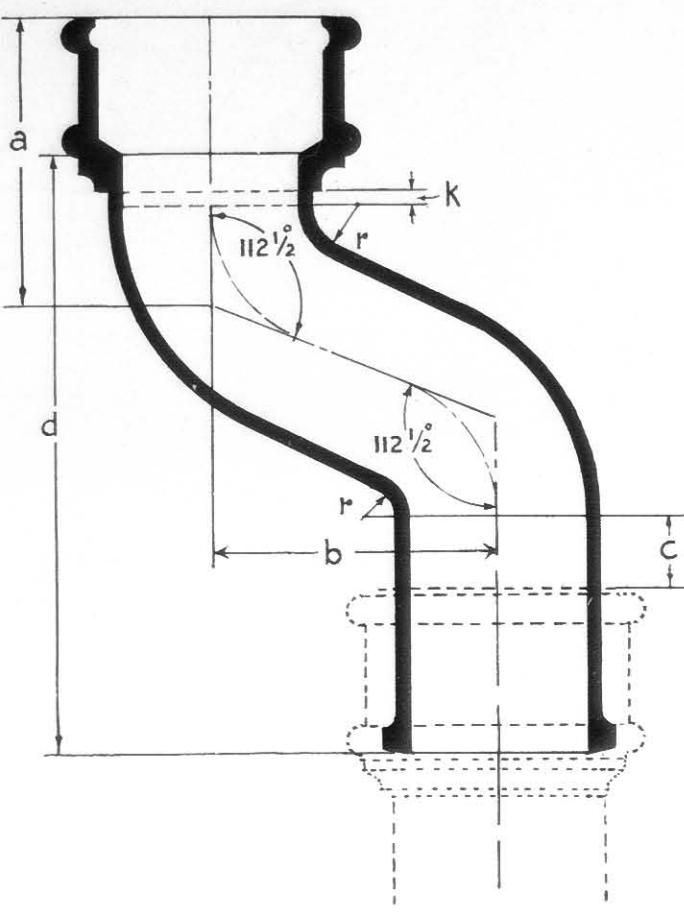


FIG. 11
Projections :
3", 4 1/2", 6", 9" and 12"

TABLE 7

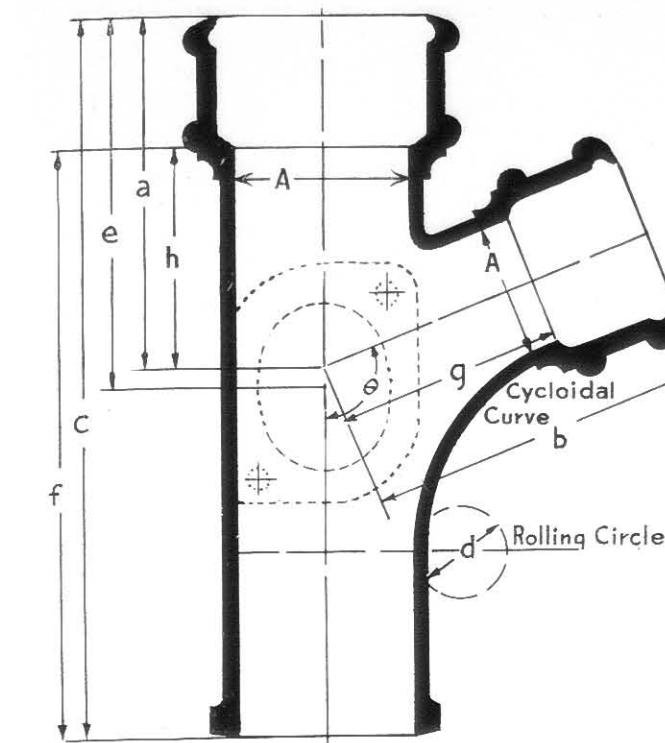
Nominal Sizes		in. 2	in. 2 1/2	in. 3	in. 3 1/2	in. 4	in. 6
Projections b	a	4 7/8	5 1/4	5 1/2	6	6 3/16	7 7/16
3 in., 4 1/2 in.	r	1	1	1	1	1	1
6 in., 9 in. and 12 in.	c	2	2	2	2	2	2
	k	1/4	1/4	1/4	1/4	1/4	1/4
3 in.	d	9 1/2	10 1/8	10 1/2	11 1/8	11 3/8	12 7/8
4 1/2 in.	d	10 3/16	10 3/4	11 3/16	11 3/4	12 1/8	13 7/8
6 in.	d	10 1/3	11 3/8	11 13/16	12 3/8	12 3/4	14 9/16
9 in.	d	12	12 5/8	13	13 5/8	14	15 13/16
12 in.	d	13 1/4	13 7/8	14 1/4	14 7/8	15 1/4	17 1/16

In the case of fittings in which the projection $b=3$ in., the two radii at the centre of the pipe will be tangential to each other at a point slightly above the sloping centre line of the fitting, owing to the small projection.

Spigots, sockets and ears of swan neck bends to be the same as for straight pipes of corresponding nominal size.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

EQUAL BRANCHES WITH AND WITHOUT OVAL ACCESS DOORS



Equal Socket Branch

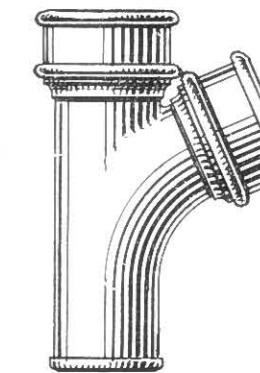
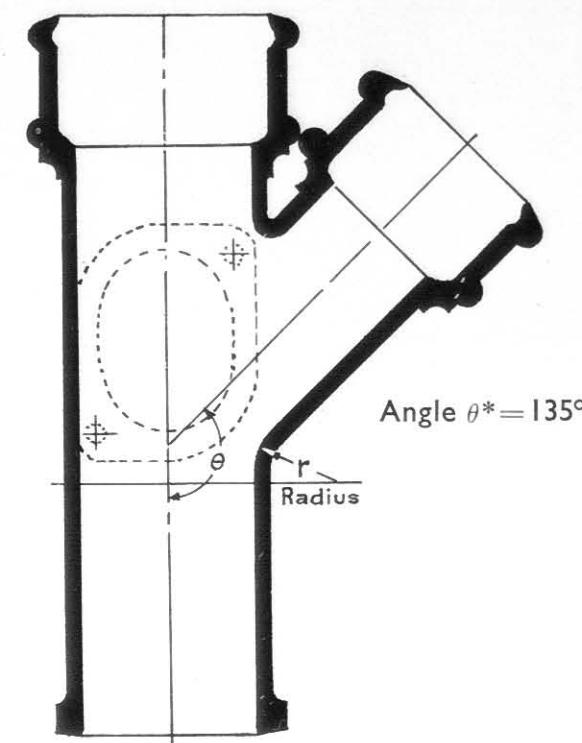


FIG. 12
92 1/2° 95° 100° 112 1/2° 120°



Equal Socket Branch

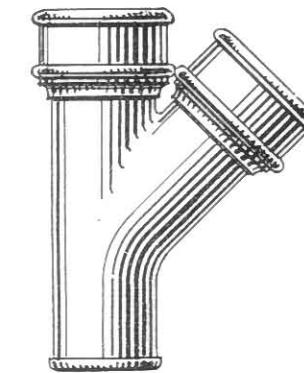


FIG. 13
135°

Equal Socket Branch
with Oval Access Door
on Back

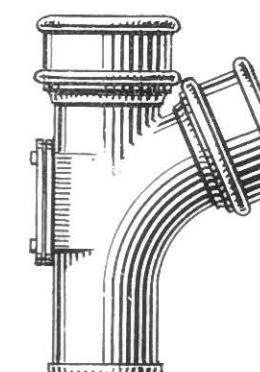


FIG. 14
92 1/2° 95° 100° 112 1/2°
120° 135°

Equal Socket Branch
with Oval Access Door
on Side

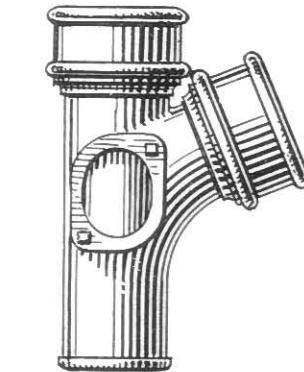


FIG. 15
92 1/2° 95° 100° 112 1/2°
120° 135°

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

EQUAL BRANCHES WITH AND WITHOUT OVAL ACCESS DOORS

$\theta = 92\frac{1}{2}^\circ$

A	in. 2	in. 2 $\frac{1}{2}$	in. 3	in. 3 $\frac{1}{2}$	in. 4	in. 6
a	4 $\frac{3}{4}$	5 $\frac{3}{16}$	5 $\frac{5}{8}$	6 $\frac{1}{16}$	6 $\frac{1}{2}$	7 $\frac{7}{8}$
b	6	6 $\frac{1}{2}$	7 $\frac{1}{8}$	7 $\frac{5}{8}$	8 $\frac{1}{8}$	10 $\frac{3}{8}$
c	11 $\frac{3}{4}$	13	14	15	16	20
d	1 $\frac{1}{2}$	1 $\frac{11}{16}$	1 $\frac{7}{8}$	2 $\frac{1}{16}$	2 $\frac{1}{4}$	3
e	6 $\frac{1}{16}$	6 $\frac{5}{8}$	7	7 $\frac{7}{16}$	7 $\frac{3}{4}$	9 $\frac{1}{4}$
f	9 $\frac{1}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{4}$	12	13	16 $\frac{1}{2}$
g	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4 $\frac{3}{8}$	4 $\frac{5}{8}$	5 $\frac{1}{8}$	6 $\frac{7}{8}$
h	2 $\frac{1}{4}$	2 $\frac{7}{16}$	2 $\frac{7}{8}$	3 $\frac{1}{16}$	3 $\frac{1}{2}$	4 $\frac{3}{8}$

$\theta = 100^\circ$

A	in. 2	in. 2 $\frac{1}{2}$	in. 3	in. 3 $\frac{1}{2}$	in. 4	in. 6
a	5 $\frac{1}{8}$	5 $\frac{9}{16}$	6	6 $\frac{1}{2}$	7	8 $\frac{5}{8}$
b	5 $\frac{3}{4}$	6 $\frac{3}{8}$	6 $\frac{7}{8}$	7 $\frac{5}{16}$	7 $\frac{3}{4}$	9 $\frac{7}{8}$
c	11 $\frac{3}{4}$	13	14	15	16	20
d	1 $\frac{1}{2}$	1 $\frac{11}{16}$	1 $\frac{7}{8}$	2 $\frac{1}{16}$	2 $\frac{1}{4}$	3
e	6 $\frac{1}{16}$	6 $\frac{5}{8}$	7	7 $\frac{7}{16}$	7 $\frac{3}{4}$	9 $\frac{1}{4}$
f	9 $\frac{1}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{4}$	12	13	16 $\frac{1}{2}$
g	3 $\frac{1}{4}$	3 $\frac{5}{8}$	4 $\frac{1}{8}$	4 $\frac{5}{16}$	4 $\frac{3}{4}$	6 $\frac{3}{8}$
h	2 $\frac{5}{8}$	2 $\frac{13}{16}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$	4	5 $\frac{1}{8}$

$\theta = 120^\circ$

A	in. 2	in. 2 $\frac{1}{2}$	in. 3	in. 3 $\frac{1}{2}$	in. 4	in. 6
a	5 $\frac{7}{8}$	6 $\frac{1}{2}$	7 $\frac{1}{8}$	7 $\frac{11}{16}$	8 $\frac{1}{4}$	10 $\frac{3}{8}$
b	5 $\frac{7}{8}$	6 $\frac{1}{2}$	7 $\frac{1}{8}$	7 $\frac{11}{16}$	8 $\frac{1}{4}$	10 $\frac{3}{8}$
c	11 $\frac{3}{4}$	13	14	15	16	20
d	1 $\frac{1}{2}$	1 $\frac{11}{16}$	1 $\frac{7}{8}$	2 $\frac{1}{16}$	2 $\frac{1}{4}$	3
e	6 $\frac{1}{16}$	6 $\frac{5}{8}$	7	7 $\frac{7}{16}$	7 $\frac{3}{4}$	9 $\frac{1}{4}$
f	9 $\frac{1}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{4}$	12	13	16 $\frac{1}{2}$
g	3 $\frac{3}{8}$	3 $\frac{3}{4}$	4 $\frac{3}{8}$	4 $\frac{11}{16}$	5 $\frac{1}{4}$	6 $\frac{7}{8}$
h	3 $\frac{3}{8}$	3 $\frac{3}{4}$	4 $\frac{3}{8}$	4 $\frac{11}{16}$	5 $\frac{1}{4}$	6 $\frac{7}{8}$

TABLE 8

$\theta = 92\frac{1}{2}^\circ$
SPECIAL LONG BRANCHES

A	in. 3 $\frac{1}{2}$	in. 4
a	13	16
b	14	15
c	15	16
d	16	20
e	17	18
f	18	20
g	19	20
h	20	22

$\theta = 95^\circ$

A	in. 2	in. 2 $\frac{1}{2}$	in. 3	in. 3 $\frac{1}{2}$	in. 4	in. 6
a	4 $\frac{7}{8}$	5 $\frac{5}{16}$	5 $\frac{3}{4}$	6 $\frac{3}{16}$	6 $\frac{5}{8}$	8 $\frac{1}{8}$
b	5 $\frac{7}{8}$	6 $\frac{7}{16}$	7	7 $\frac{1}{2}$	8	10 $\frac{1}{4}$
c	11 $\frac{3}{4}$	13	14	15	16	20
d	12	13	14	15	16	20
e	13	14	15	16	17	21
f	14	15	16	17	18	22
g	15	16	17	18	19	23
h	16	17	18	19	20	24

$\theta = 100^\circ$

A	in. 2	in. 2 $\frac{1}{2}$	in. 3	in. 3 $\frac{1}{2}$	in. 4	in. 6
a	5 $\frac{5}{8}$	6 $\frac{1}{8}$	6 $\frac{3}{4}$	7 $\frac{1}{4}$	7 $\frac{3}{4}$	9 $\frac{3}{4}$
b	5 $\frac{5}{8}$	6 $\frac{1}{8}$	6 $\frac{3}{4}$	7 $\frac{1}{4}$	7 $\frac{3}{4}$	9 $\frac{3}{4}$
c	11 $\frac{3}{4}$	13	14	15	16	20
d	12	13	14	15	16	20
e	13	14	15	16	17	21
f	14	15	16	17	18	22
g	15	16	17	18	19	23
h	16	17	18	19	20	24

$\theta = 104^\circ$

A	in. 3 $\frac{1}{2}$	in. 4
a	13	16
b	14	15
c	15	16
d	16	20
e	17	18
f	18	20
g	19	20
h	20	22

A	in. 2	in. 2 $\frac{1}{2}$	in. 3	in. 3 $\frac{1}{2}$	in. 4	in. 6
a	7	7 $\frac{7}{8}$	8 $\frac{3}{4}$	9 $\frac{1}{4}$	10 $\frac{1}{4}$	13 $\frac{3}{8}$
b	7	7 $\frac{7}{8}$	8 $\frac{3}{4}$	9 $\frac{1}{4}$	10 $\frac{1}{4}$	13 $\frac{3}{8}$
c	11 $\frac{3}{4}$	13	14	15	16	20
d	12	13	14	15	16	20
e	13	14	15	16	17	21
f	14	15	16	17	18	22
g	15	16	17	18	19	23
h	16	17	18	19	20	24
r	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$

A	in. 2	in. 2 $\frac{1}{2}$	in. 3</

UNEQUAL BRANCHES WITH AND WITHOUT OVAL ACCESS DOORS

$\theta = 92\frac{1}{2}^\circ$

A	in. 3	in. 3½	in. 3½	in. 4	in. 4	in. 4	in. 6
A ₁	2	2	3	2	3	3½	4
a	5 3/16	5 3/8	6	5 3/8	6	6	7 1/16
b	6 1/2	6 3/4	7 3/8	7	7 5/8	7 7/8	9 1/8
c	13	13 1/2	14 1/2	14	14 1/2	39	17
d	1 1/2	1 1/2	1 7/8	1 1/2	1 7/8	2 1/16	2 1/4
e	6 1/2	7	7 1/8	7 1/6	7 5/16	7 5/8	8 3/4
f	10 1/4	10 1/2	11 1/2	11	11 1/2	36	13 1/2
g	4	4 1/4	4 5/8	4 1/2	4 7/8	5 1/8	6 1/8
h	2 7/16	2 3/8	3	2 3/8	3	3	3 9/16

$\theta = 95^\circ$

A	in. 3	in. 3½	in. 3½	in. 4	in. 4	in. 6
A ₁	2	2	3	2	3	4
a	5 5/16	5 9/16	6 1/8	5 9/16	6 1/8	7 1/4
b	6 7/16	6 5/8	7 1/4	6 7/8	7 1/2	9
c	13	13 1/2	14 1/2	14	14 1/2	17
d	1 1/2	1 1/2	1 7/8	1 1/2	1 7/8	2 1/4
e	6 1/2	7	7 1/8	7 1/6	7 5/16	8 3/4
f	10 1/4	10 1/2	11 1/2	11	11 1/2	13 1/2
g	3 15/16	4 1/8	4 1/2	4 3/8	4 3/4	6
h	2 9/16	2 9/16	3 1/8	2 9/16	3 1/8	3 3/4

$\theta = 100^\circ$

A	in. 3	in. 3½	in. 3½	in. 4	in. 4	in. 6
A ₁	2	2	3	2	3	4
a	5 5/8	5 13/16	6 3/8	5 7/8	6 3/8	7 5/8
b	6 1/4	6 1/2	7 1/8	6 3/4	7 3/8	8 13/16
c	13	13 1/2	14 1/2	14	14 1/2	17
d	1 1/2	1 1/2	1 7/8	1 1/2	1 7/8	2 1/4
e	6 1/2	7	7 1/8	7 1/6	7 5/16	8 3/4
f	10 1/4	10 1/2	11 1/2	11	11 1/2	13 1/2
g	3 3/4	4	4 3/8	4 1/4	4 5/8	5 13/16
h	2 7/8	2 13/16	3 3/8	2 7/8	3 3/8	4 1/8

TABLE 9

$\theta = 112\frac{1}{2}^\circ$

A	in. 3	in. 3½	in. 3½	in. 4	in. 4	in. 6
A ₁	2	2	3	2	3	4
a	6 1/8	6 1/2	7 1/8	6 9/16	7 1/4	8 3/4
b	6 1/8	6 3/8	7	6 5/8	7 1/4	8 7/8
c	13	13 1/2	14 1/2	14	14 1/2	17
d	1 1/2	1 1/2	1 7/8	1 1/2	1 7/8	2 1/4
e	6 1/2	7	7 1/8	7 1/6	7 5/16	8 3/4
f	10 1/4	10 1/2	11 1/2	11	11 1/2	13 1/2
g	3 5/8	3 7/8	4 1/4	4 7/8	4 1/2	5 7/8
h	3 3/8	3 1/2	4 1/8	3 9/16	4 1/4	5 1/4

$\theta = 104^\circ$

A	in. 4
A ₁	3½
a	7 1/2
b	7 3/4
c	15
d	1 7/8
e	8
f	12
g	4 3/4
h	4 1/2

For details of oval access doors, see Table 15.

For dimensions of unequal branches with rectangular inspection doors, see Table 11.

$\theta = 120^\circ$

A	in. 3	in. 3½	in. 3½	in. 4	in. 4	in. 6
A ₁	2	2	3	2	3	4
a	6 1/2	6 7/8	7 1/2	7	7 11/16	9 3/8
b	6 1/2	6 3/4	7 1/2	7 1/6	7 11/16	9 1/2
c	13	13 1/2	14 1/2	14	14 1/2	17
d	1 1/2	1 1/2	1 7/8	1 1/2	1 7/8	2 1/4
e	6 1/2	7	7 1/8	7 1/6	7 5/16	8 3/4
f	10 1/4	10 1/2	11 1/2	11	11 1/2	13 1/2
g	4	4 1/4	4 3/4	4 9/16	4 15/16	6 1/2
h	3 3/4	3 7/8	4 1/2	4	4 11/16	5 7/8

* $\theta = 135^\circ$

A	in. 3	in. 3½	in. 3½	in. 4	in. 4	in. 6
A ₁	2	2	3	2	3	4
a	7 7/8	8 5/16	9 1/4	8 9/16	9 1/2	11 3/4
b	7 3/4	8 1/8	9 1/8	8 1/2	9 1/2	11 5/8
c	13	13 1/2	14 1/2	14	14 1/2	17
d	1 1/2	1 1/2	1 7/8	1 1/2	1 7/8	2 1/4
e	6 1/2	7	7 1/8	7 1/6	7 5/16	8 3/4
f	10 1/4	10 1/2	11 1/2	11	11 1/2	13 1/2
g	5 1/4	5 5/8	6 3/8	6	6 3/4	8 5/8
h	5 1/8	5 5/16	6 1/4	5 9/16	6 1/2	8 1/4
r	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

PARALLEL BRANCHES, SINGLE, EQUAL AND UNEQUAL

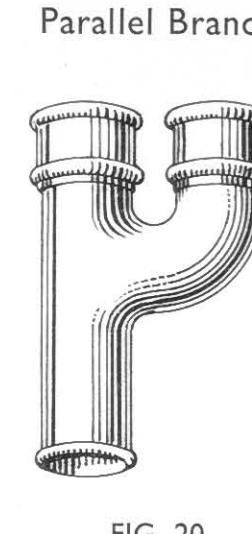
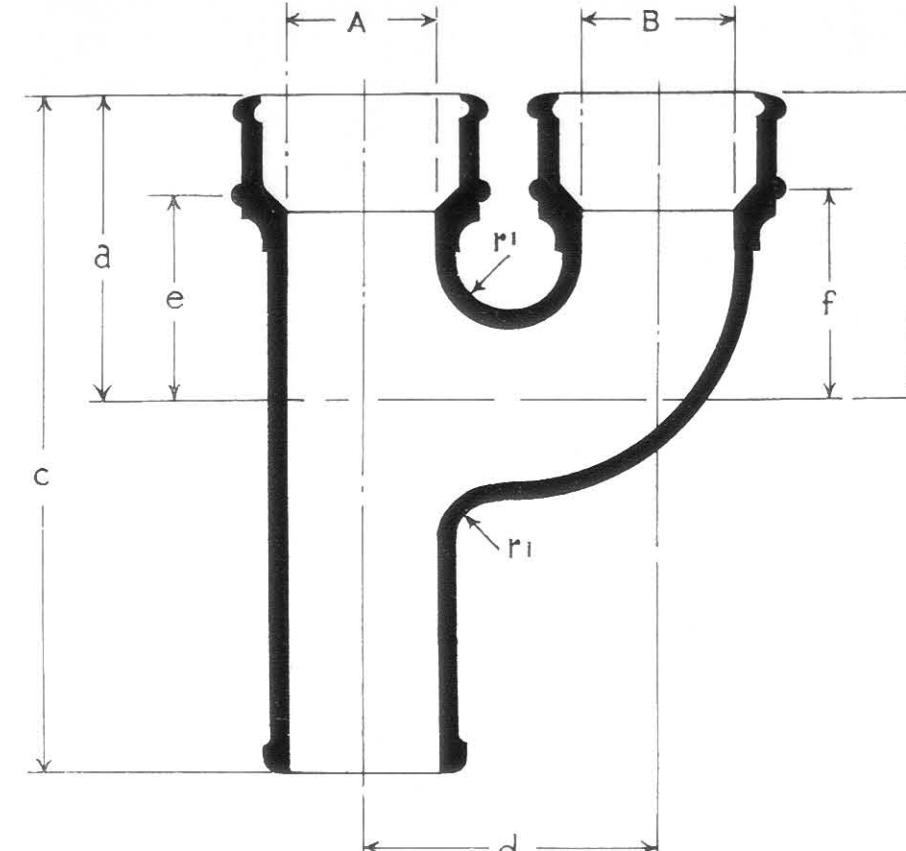


FIG. 20

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

EQUAL AND UNEQUAL BRANCHES WITH RECTANGULAR INSPECTION DOORS ONLY

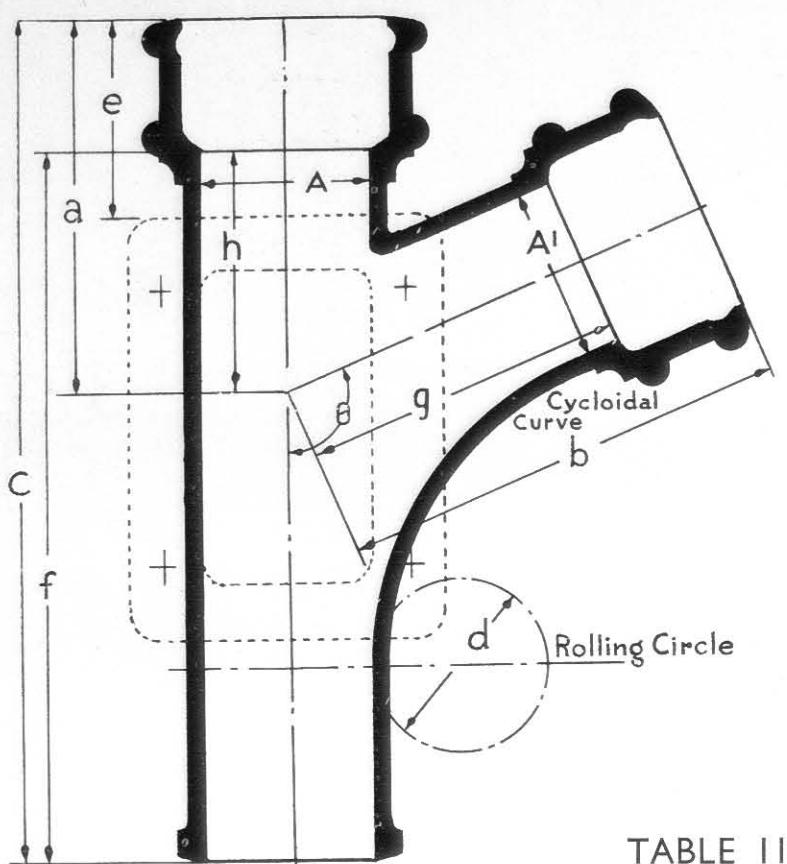


TABLE II

θ°	EQUAL				UNEQUAL					
	A	in. 3½	in. 4	in. 6	A ₁	in. 3½	in. 3½	in. 4	in. 4	in. 6
		3½	4	6		2	3	2	3	4
92½	a b	6 3/8 9 5/8	6 7/8 9 7/8	8 1/8 12 1/8	a b	6 3/8 8	6 3/8 9 5/8	6 7/8 8 1/4	6 7/8 9 5/8	8 1/8 10 7/8
95°	a b	6 7/8 9 5/8	6 11/16 9 7/8	8 7/16 12 3/8	a b	6 7/8 8	6 7/8 9 5/8	6 11/16 8 1/4	6 11/16 9 5/8	8 7/8 10 7/8
100°	a b	6 15/16 9 5/8	7 1/16 9 7/8	9 1/8 12 3/8	a b	6 15/16 8	6 15/16 9 5/8	7 3/16 8 1/4	7 3/16 9 5/8	9 1/8 10 7/8
112½°	a b	8 1/8 9 1/2	8 7/16 10 1/8	10 1/16 12 3/4	a b	8 1/8 8 1/16	8 1/8 9 1/2	8 7/16 8 1/6	8 7/16 9 1/3	10 1/16 11 1/4
120°	a b	8 2/8 9 3/4	9 1/8 10 1/8	11 9/16 12 3/4	a b	8 2/8 8 4/8	8 2/8 9 1/6	9 1/8 9 1/2	9 1/8 9 1/2	11 1/6 11 1/4
135°	a b	10 1/8 10 1/8	10 1/2 10 1/2	13 3/8 13 3/8	a b	10 1/8 9 1/16	10 1/8 9 1/8	10 1/2 9 7/16	10 1/2 9 1/2	13 3/8 11 1/16
All values of θ	c d e f	18 1/2 4 4 1/2 15 1/2	19 4 4 1/2 16	23 1/2 5 5 1/4 20	c d e f	18 1/2 3 4 1/2 15 1/2	18 1/2 3 4 1/2 16	19 4 4 1/2 16	19 4 4 1/2 20	23 1/2 4 5 1/4 20
92½°	g h	6 5/8 3 3/16	6 7/8 3 7/16	8 7/8 4 1/8	g h	5 1/2 3 3/16	6 5/8 3 3/16	5 2/8 3 7/16	6 7/8 3 7/16	7 7/8 4 5/8
95°	g h	6 5/8 3 3/16	6 8/8 3 1/16	8 8/8 4 1/5	g h	5 1/2 3 7/16	6 5/8 3 1/6	5 2/8 3 1/6	6 7/8 3 1/6	7 8/8 4 1/5
100°	g h	6 5/8 3 1/5	6 7/8 4 1/6	8 7/8 5 8/8	g h	5 1/2 3 1/5	6 5/8 3 1/5	5 3/4 4 1/6	6 7/8 4 1/6	7 8/8 5 8/8
112½°	g h	6 3/8 5 1/16	7 1/8 5 7/16	9 1/4 7 3/8	g h	5 1/16 5 1/6	6 3/8 5 1/6	5 1/5 5 1/6	7 1/8 5 1/6	8 1/4 7 3/8
120°	g h	6 3/8 5 3/4	7 1/8 6 8/8	9 1/4 8 1/6	g h	5 3/8 5 3/4	6 5/8 5 3/4	6 1/8 6 1/8	7 1/8 6 1/8	8 1/4 8 1/6
135°	g h	7 1/8 7 1/8	7 1/2 7 1/2	9 7/8 9 7/8	g h	9 1/8 7 1/8	6 7/8 7 1/8	6 1/5 7 1/2	7 1/2 7 1/2	8 1/5 9 1/8

Equal Socket Branch with Rectangular Inspection Door

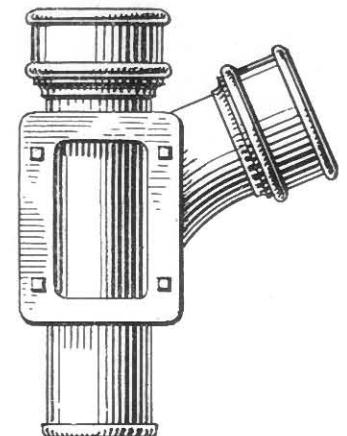
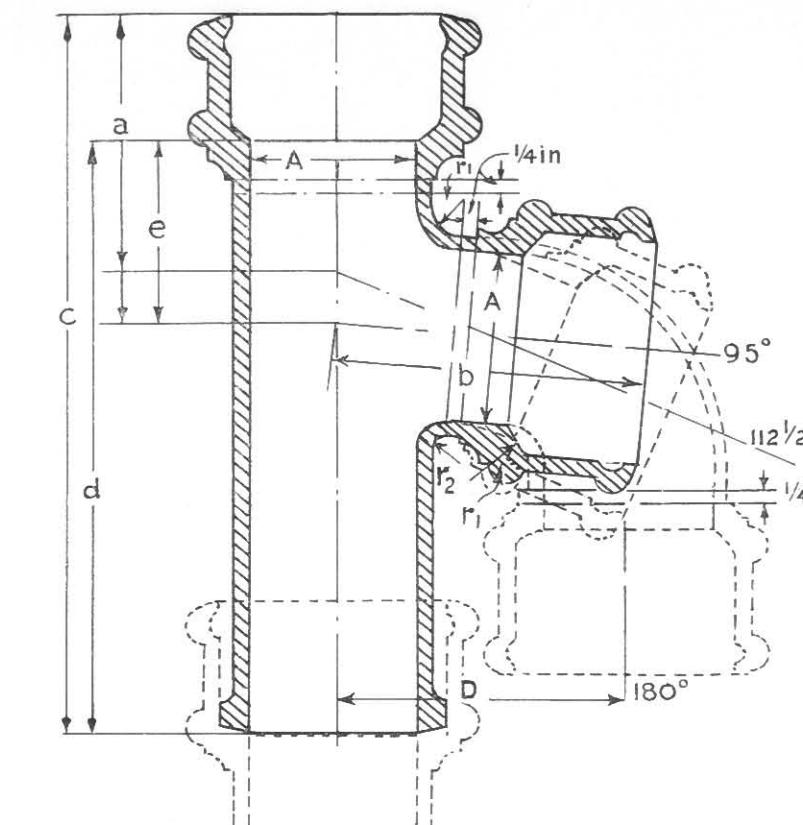


FIG. 21
92½° 95° 100° 112½° 120°
135°

INVERTED BRANCHES

Socket Type



Inverted Socket Branch

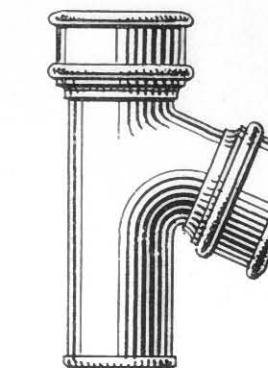


FIG. 22
95° 112½°

Inverted Socket Branch

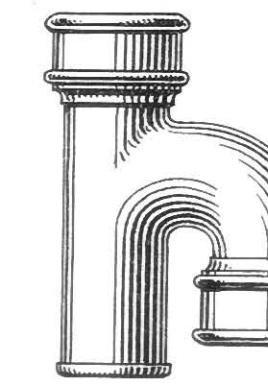


FIG. 23
180°

TABLE 12

A Main Pipe	95°					112½°					180°					
	in. 2	in. 3½	in. 3½	in. 4	in. 4	in. 2	in. 3½	in. 3½	in. 4	in. 4	in. 2	in. 3½	in. 3½	in. 4	in. 4	
A Branch	2	3½	2	4	2	2	3½	2	4	2	2	3½	2	4	2	
a	5 3/8	6 11/16	5 7/8	6 7/8	5 7/8	4 3/4	5 11/16	5	5 7/8	4 7/8	5 3/8	6 11/16	5 7/8	6 7/8	5 7/8	
b	5 3/8	6 3/4	6 1/8	7	6 3/8	6	7 11/16	6 3/4	8 1/16	7	D	4 7/8	6 1/16	5 1/4	6 9/16	5 1/2
c	12	15	13 1/2	16	14	12	15	13 1/2	16	14	12	15	13 1/2	16	14	
d	9 1/2	12	10 1/2	13	11	9 1/2	12	10 1/2	13	11	9 1/2	12	10 1/2	13	11	
e	2 7/8	3 11/16	2 7/8	3 7/8	2 7/8	2 1/4	2 11/16	2	2 7/8	1 7/8	2 7/8	3 11/16	2 7/8	3 7/8	2 7/8	
r ₁	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
r ₂	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	

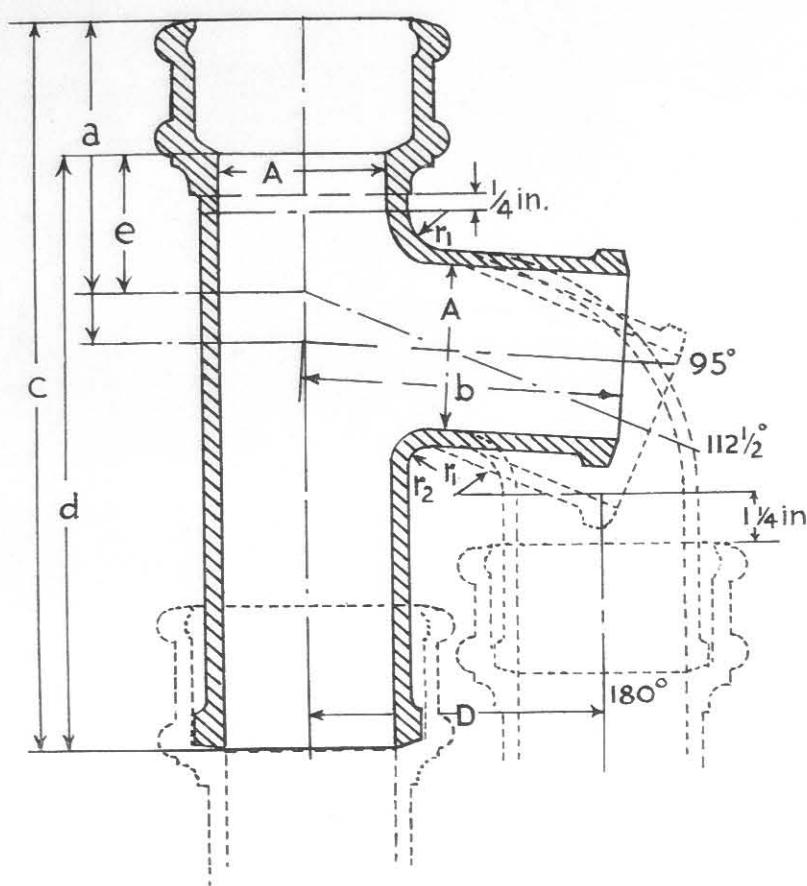
Spigots and sockets to be the same as for straight pipes of the same nominal size.

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INVERTED BRANCHES

Spigot Type



Inverted Spigot Branch

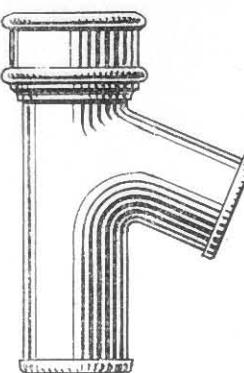


FIG. 24
95° 112½°

Inverted Spigot Branch

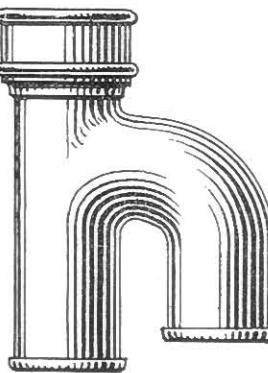


FIG. 25
180°

TABLE 13

A Main Pipe	95°					112½°					180°				
	in. 2	in. 3½	in. 3½	in. 4	in. 4	in. 2	in. 3½	in. 3½	in. 4	in. 4	in. 2	in. 3½	in. 3½	in. 4	in. 4
A Branch	2	3½	2	4	2	2	3½	2	4	2	2	3½	2	4	2
a	5¾	6½	5¾	6¾	5¾	4¾	5½	5	5¾	4¾	5¾	6½	5¾	6¾	5¾
b	5¾	6¾	6½	6¾	6¾	6½	7½	7½	8½	7¾	4½	6½	5½	6½	5½
c	12	15	13½	16	14	12	15	13½	16	14	12	15	13½	16	14
d	9½	12	10½	13	11	9½	12	10½	13	11	9½	12	10½	13	11
e	2½	3½	2½	3½	2½	2½	2½	2½	2½	1½	2½	3½	2½	3½	2½
r ₁	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
r ₂	½	½	½	½	½	½	½	½	½	½	½	½	½	½	½

Spigots and sockets to be the same as for straight pipes of the same nominal size.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

TRAPS

Trap
with Heel Rest

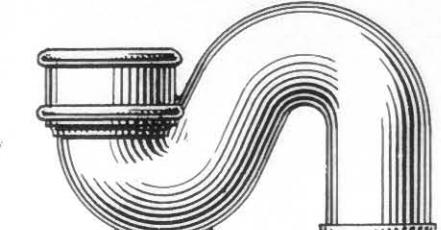


FIG. 26 180°
Any Trap can be supplied with Heel Rest

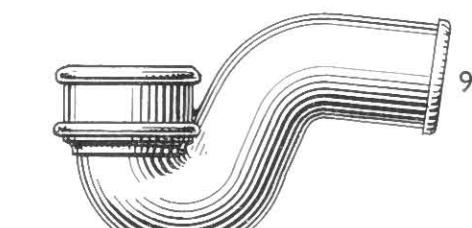
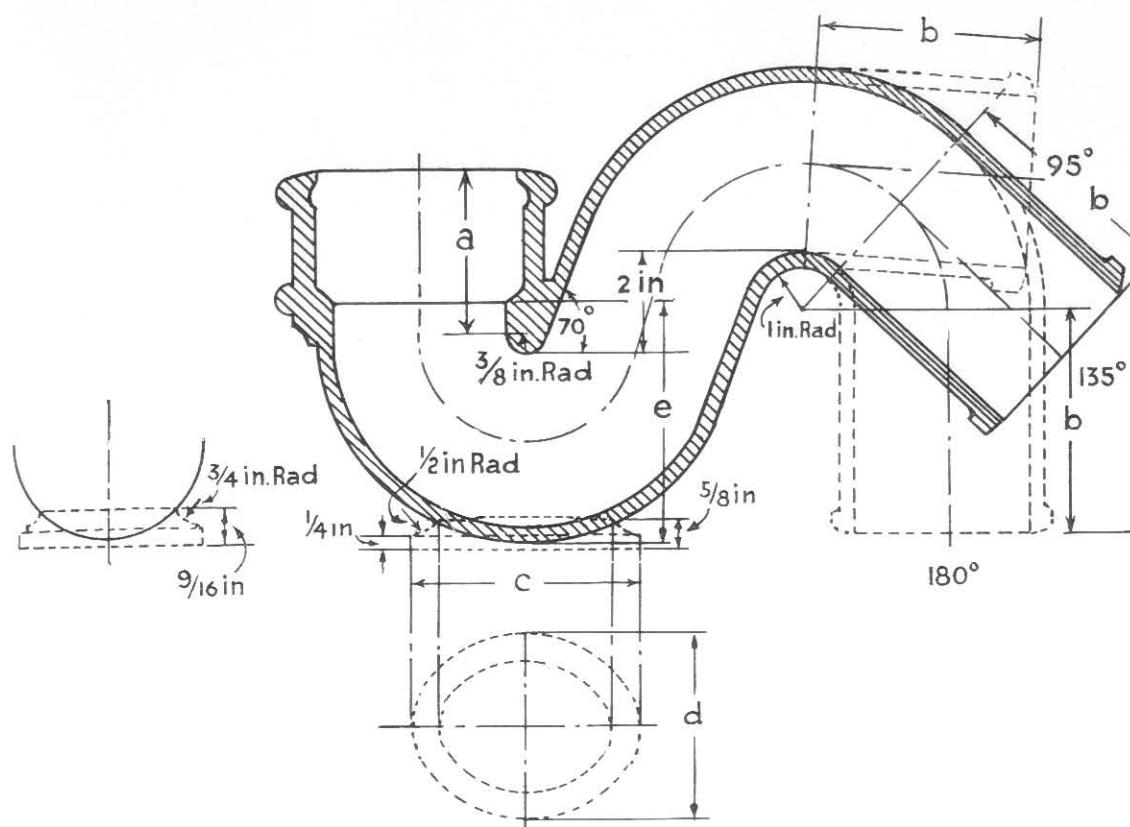


FIG. 28
95°

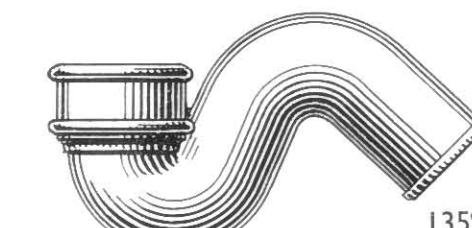


FIG. 29
135°

TABLE 14

Nominal Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	3½	3½	3½	3¾	3¾	4½
b	4½	4¾	4¾	5	5	5½
c	4	4¾	4¾	5	5½	6
d	3¾	3¾	3¾	4½	4½	5
e	3½	3½	4½	4½	5½	7½

Spigots and sockets of traps to be the same as for straight pipes of corresponding nominal size.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

OVAL ACCESS DOORS

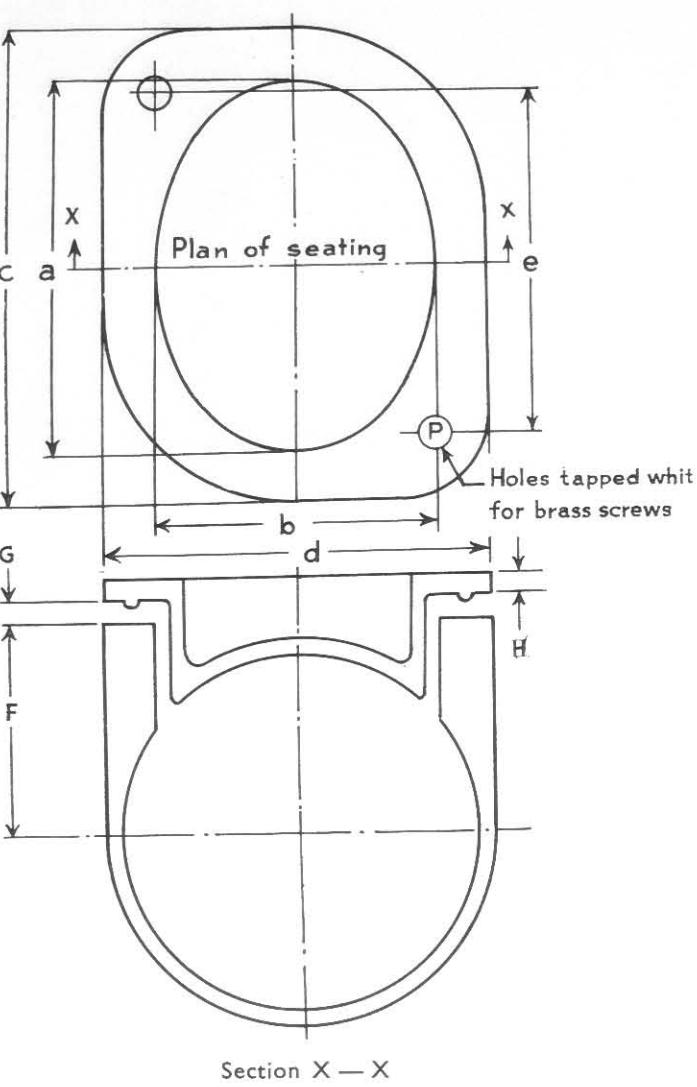


FIG. 30

Screws to be of brass or cadmium plated steel.

TABLE 15

Nominal Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	2½	3	3½	3¾	4	4¾
b	1¾	1¾	2¼	2¾	3⅛	3¾
c	3⅞	4¼	4½	4¾	5⅛	6
d	2¼	2¾	3¼	3¾	4¼	5
e	2⅞	3¼	3½	3¾	3¾	4½
F	1⅞	1⅞	1⅞	2⅞	2⅞	3⅞
G	¾	¾	¾	¾	¾	¾
H	¼	¼	¼	¼	¼	¼
P	5/16	5/16	5/16	5/16	5/16	3/8

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

RECTANGULAR INSPECTION DOORS

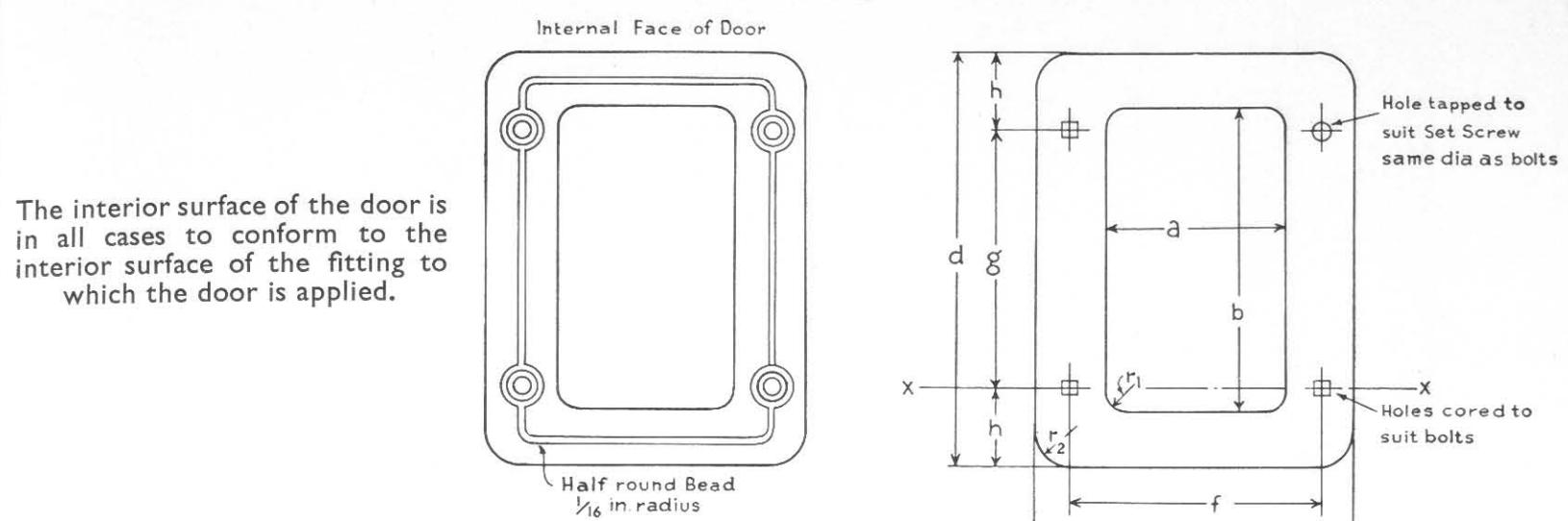
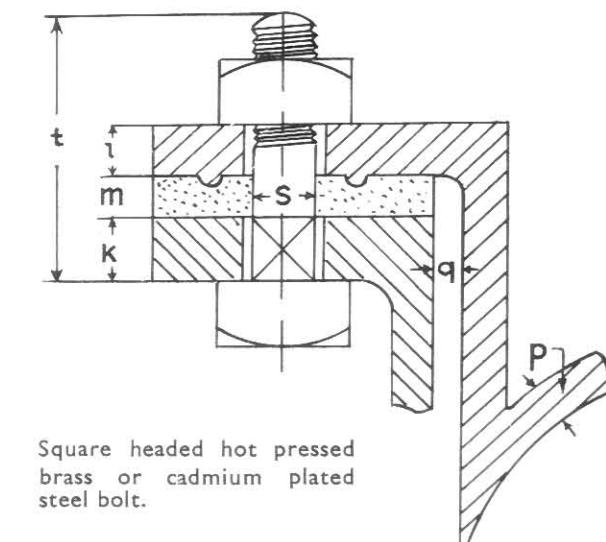


TABLE 16

Nominal Size	in. 3½	in. 4	in. 6
a	3½	4	6
b	6½	7	10
c	6¾	7½	9½
d	9	9½	12½
f	5¼	5¾	7¾
g	5½	6	9
h	1¾	1¾	1¾
	¾	¾	¾
k	¾	¾	¾
l	5/16	5/16	5/16
m	3/16	3/16	3/16
n	2¾	2¾	3¾
p	¼	¼	¼
q	⅛	⅛	⅛
r ₁	½	½	½
r ₂	7/8	7/8	7/8
s	3/8	3/8	3/8
t	1½	1½	1½

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW



DIMINISHING PIECES

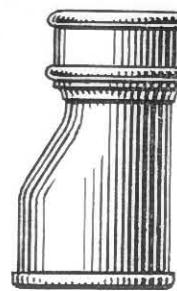
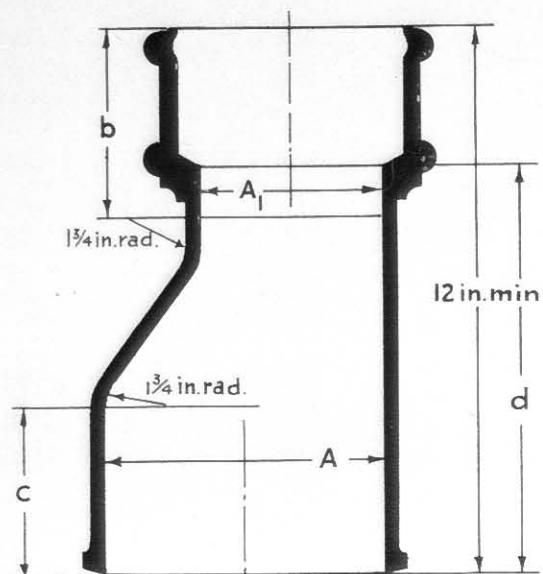


FIG. 32

TABLE 17

A	in. 2 1/2	in. 3	in. 3	in. 3 1/2	in. 3 1/2	in. 3 1/2	in. 4	in. 4
A ₁	2	2	2 1/2	2	2 1/2	3	2	2 1/2
b	3 3/8	3 3/8	3 5/8	3 3/8	3 5/8	3 3/4	3 3/8	3 5/8
c	3	3	3	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4
d	9 1/2	9 1/2	9 1/4	9 1/2	9 1/4	9 1/4	9 1/2	9 1/4

A	in. 4	in. 4	in. 6	in. 6
A ₁	3	3 1/2	3 1/2	4
b	3 3/4	4	4	4
c	3 1/4	3 1/4	3 3/4	3 3/4
d	9 1/4	9	9	9

Spigots, sockets and ears of diminishing pieces to be the same as for straight pipes of corresponding nominal size.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

STRAIGHT INSPECTION PIECES

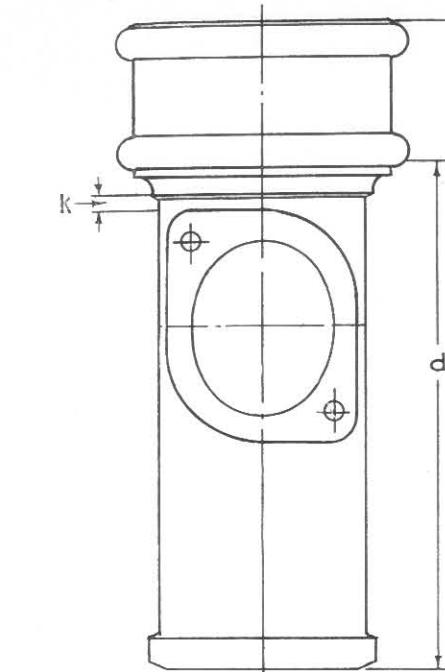


FIG. 33

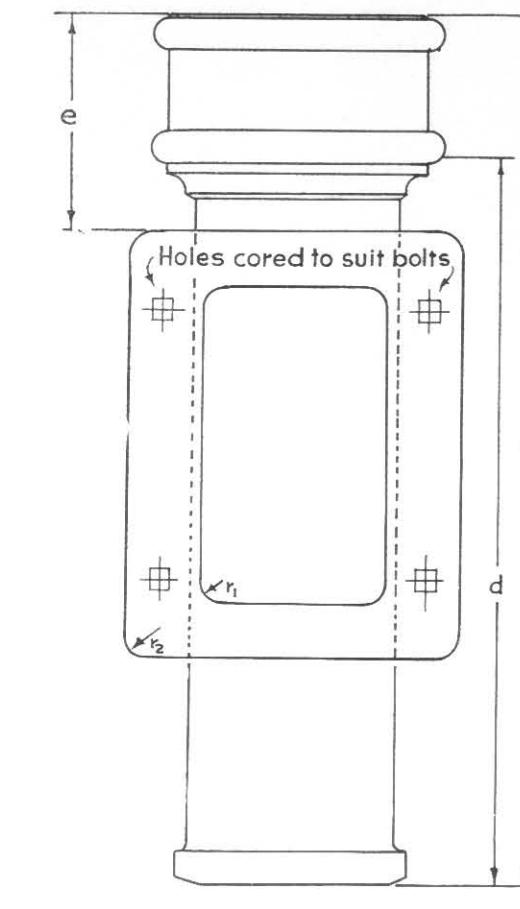


FIG. 34

TABLE 18

Nom. Size	in. 2	in. 2 1/2	in. 3	in. 3 1/2	in. 4	in. 6
c	11 3/4	12 3/4	13 1/4	13 3/4	14 1/4	16 1/4
d	9 1/4	10	10 1/2	10 3/4	11 1/4	12 3/4
k	1/4	1/4	1/4	1/4	1/4	1/4

For details of oval access doors,
see Table 15.

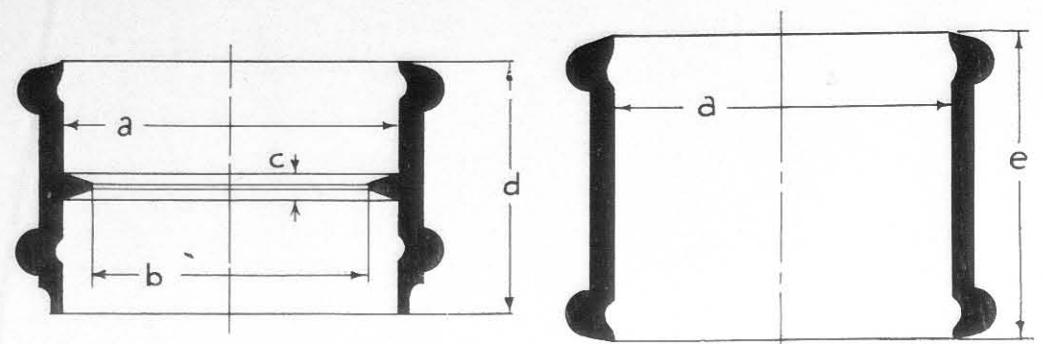
Nom. Size	in. 3 1/2	in. 4	in. 6
c	18 1/2	19	23 1/2
d	15 1/2	16	20
e	4 1/2	4 1/2	5 1/4

For details of rectangular inspection doors,
see Table 16.

Spigots, sockets and ears of inspection pieces to be the same as for straight pipes of corresponding nominal size.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LOOSE SOCKETS AND COLLARS



Loose Socket
Section

FIG. 35

TABLE 19

Nominal Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a						
b	2	2½	3	3½	4	6
c	¾	¾	¾	¾	¾	¾
d	3½	3¾	3½	3¾	3¾	4¼
e	3½	4	4	4½	4½	5½

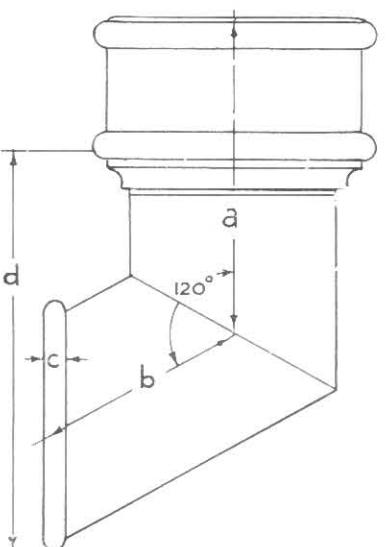
The dimensions of loose sockets shall correspond to those of the appropriate nominal size of pipe given in Table 1 or Table 2.

SHOES

TABLE 20

Nominal Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	4¾	5¾	6	6½	7	9
b	2½	3¾	3¾	4¼	4¾	7½
c	¼	5/16	¾	7/16	½	5/8
d	5	5¾	7	7¾	9	12½

Sockets and ears of shoes to be the same as for straight pipes of corresponding nominal size.



Shoe

FIG. 37

CAST-IRON HOLDERBATS*

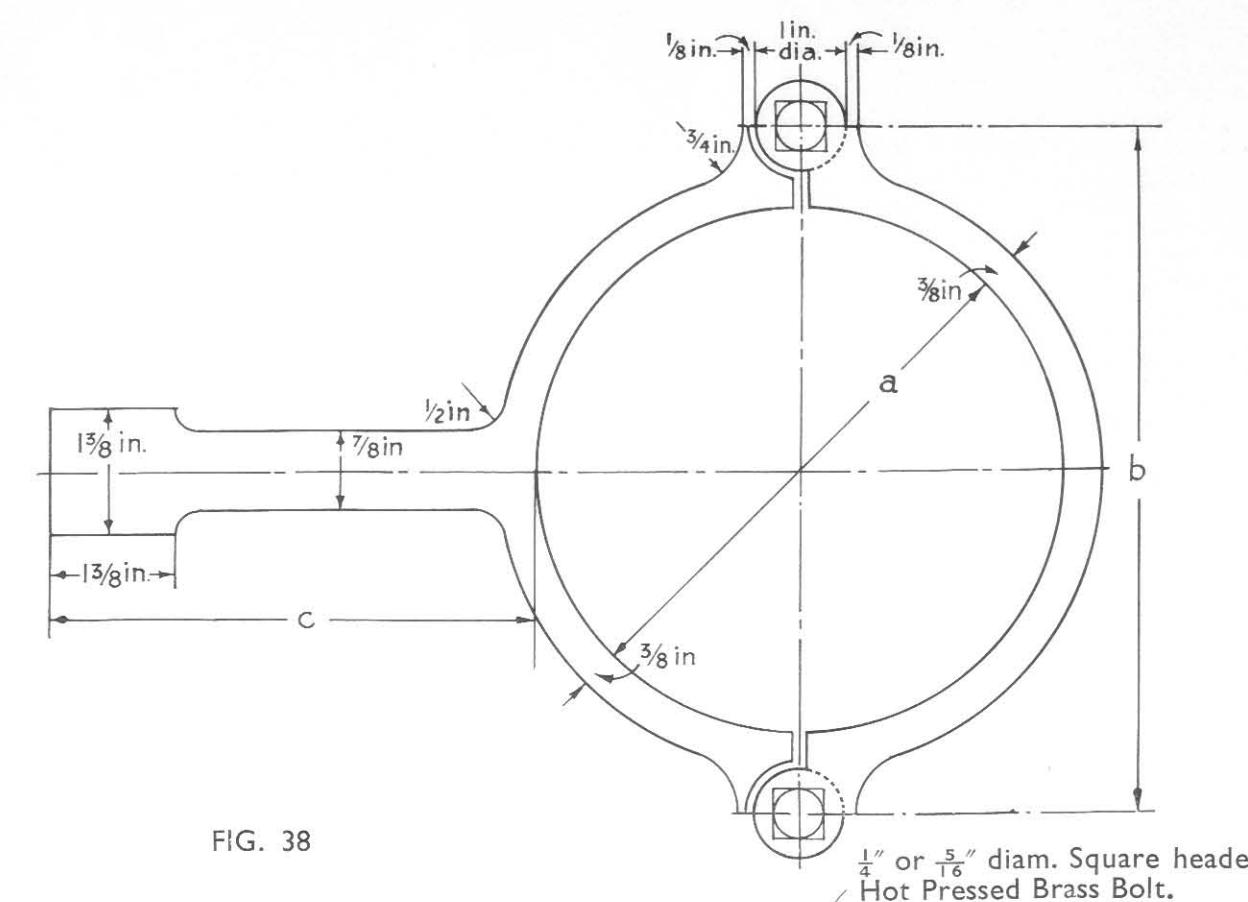


FIG. 38

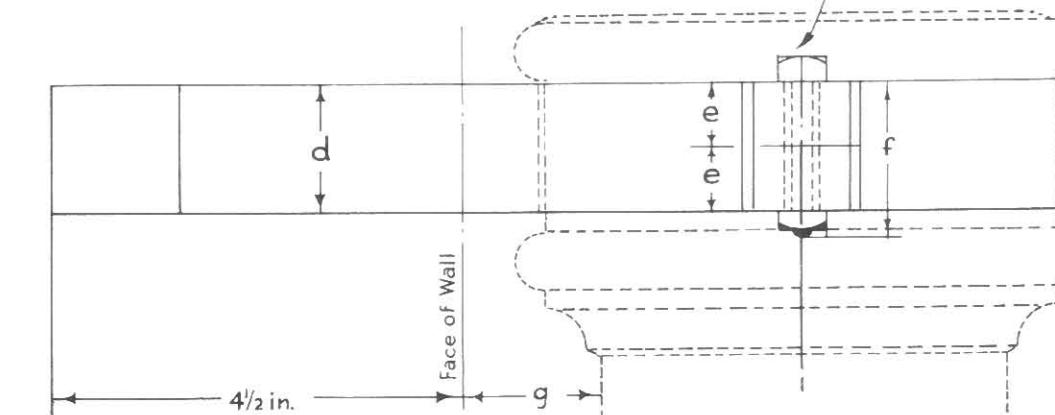


TABLE 21

Nom. Size of Pipe	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 6
a	3½	4	4½	5½	5¾	7¾
b	5½	5¾	6¾	7	7½	9¾
c	5 3/16	5 3/16	5 3/16	5 3/16	5 3/8	5 5/16
d	1 1/16	1 5/16	1 5/16	1 7/16	1 7/16	1 13/16
e	1 1/8	1 3/8	1 3/8	1 2/3	2	2
f	1 1/8	1 3/8	1 3/8	1 2/3	2	2 3/8
g	1/4	1/4	1/4	1/2	1/2	1/2

*Similar Holderbats in Mild Steel can also be supplied.

SANITARY CONNECTIONS

Applicable to $3\frac{1}{2}$ in. and 4 in. Pipes only

Socket to fit W.C. outlet
KEY DIAGRAM

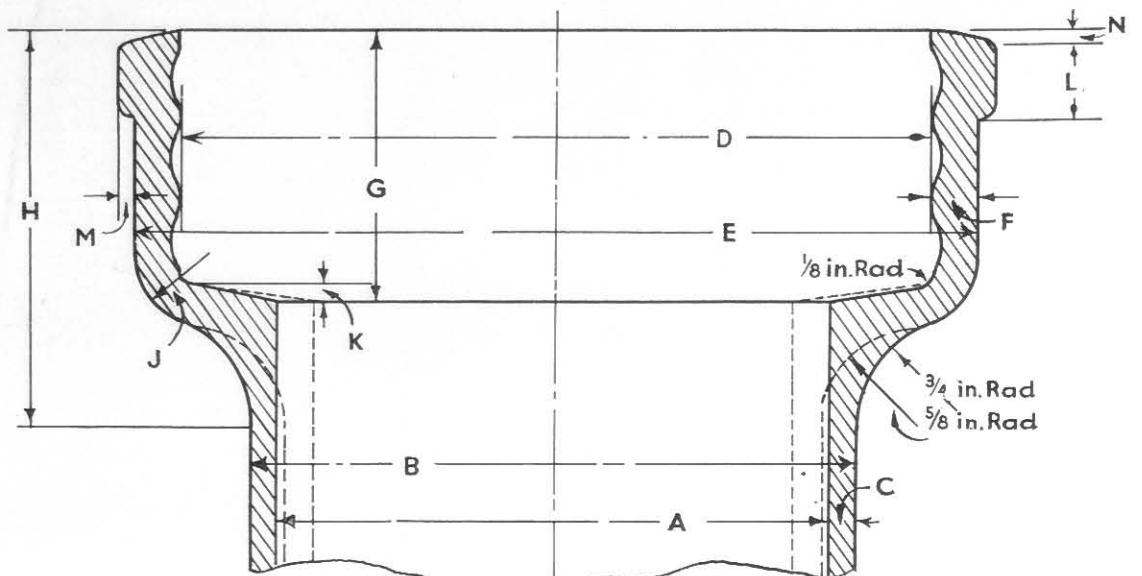


TABLE 22

PIPE	Nominal Size			in. 3 $\frac{1}{2}$	in. 4
		in.	3 $\frac{1}{2}$		
INTERNAL diameter, minimum		A	3 $\frac{1}{2}$	4	
EXTERNAL diameter		B	3 $\frac{3}{8}$	4 $\frac{1}{3}$	
Thickness, minimum		C	$\frac{13}{64}$	$\frac{13}{64}$	
INTERNAL diameter, minimum		D	6		
EXTERNAL diameter		E	6 $\frac{5}{8}$		
Thickness		F	$\frac{5}{16}$		
INTERNAL depth of socket		G	2		
EXTERNAL depth of socket		H	2 $\frac{7}{8}$		
INTERNAL radius		J	$\frac{7}{16}$		
Depth of bevel		K	$\frac{1}{8}$		
Width of bead		L	$\frac{9}{16}$		
Projection of bead		M	$\frac{1}{8}$		
Taper on end		N	$\frac{1}{16}$		

TYPE "A"

Nominal Size	in. 3 $\frac{1}{2}$	in. 4	Nominal Size	in. 3 $\frac{1}{2}$	in. 4
a	5 $\frac{1}{2}$	5 $\frac{1}{2}$	a	5 $\frac{1}{2}$	
b	3 $\frac{3}{4}$	4 $\frac{1}{4}$	b	3 $\frac{3}{4}$	
c	$\frac{1}{8}$	$\frac{1}{8}$	c	4 l/D	
d	4	4	d	4	
			e	2 $\frac{3}{4}$	

TYPE "B"

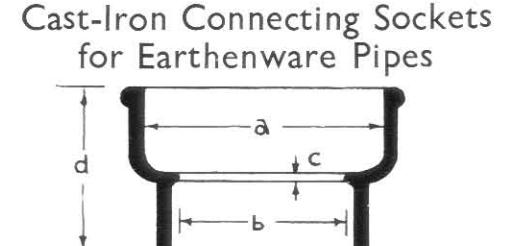
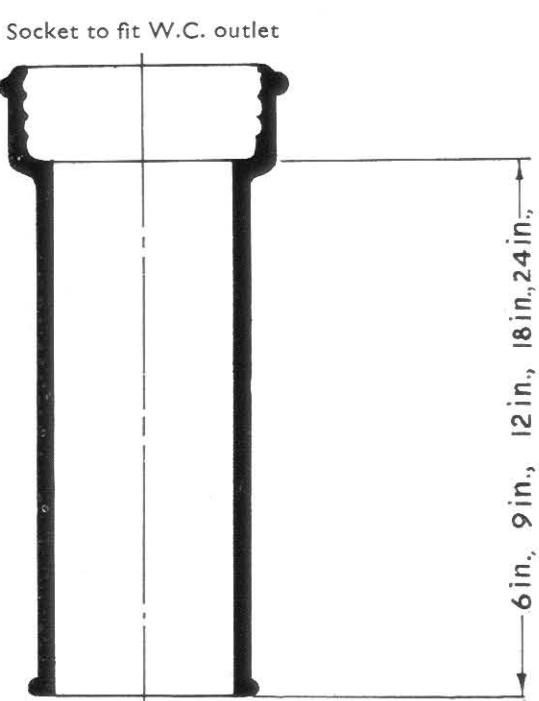


FIG. 40
Type "A"

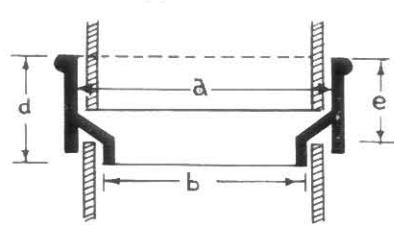


FIG. 41
Type "B"

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

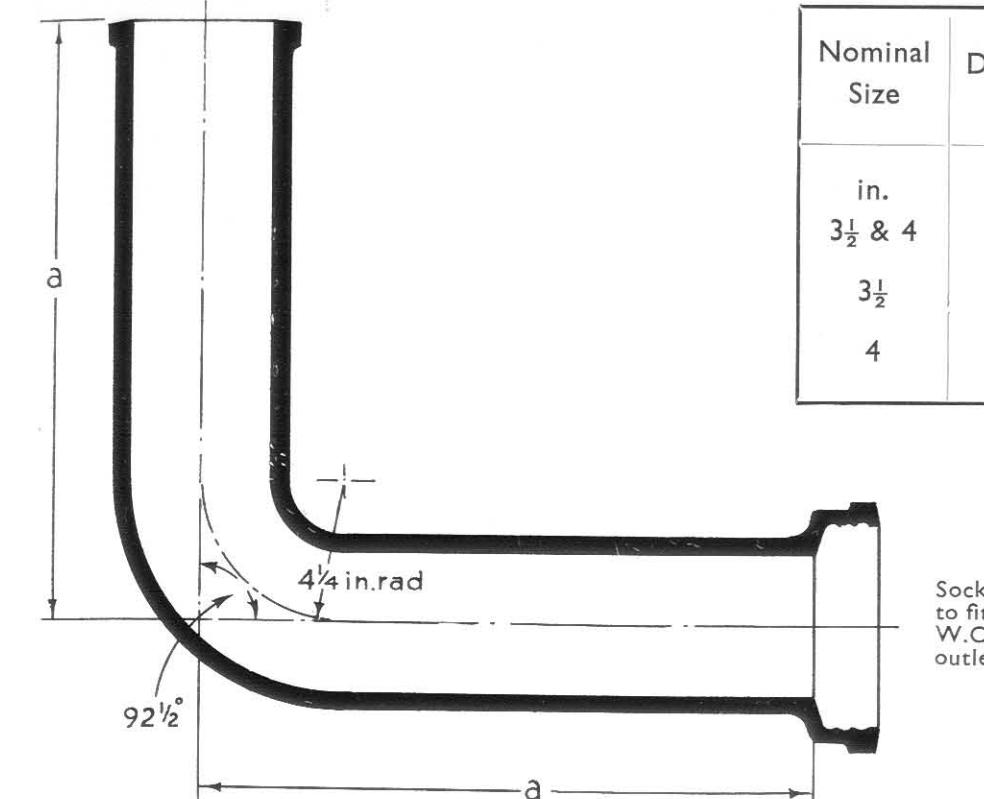
SANITARY CONNECTIONS

Applicable to $3\frac{1}{2}$ in. and 4 in. Pipes only

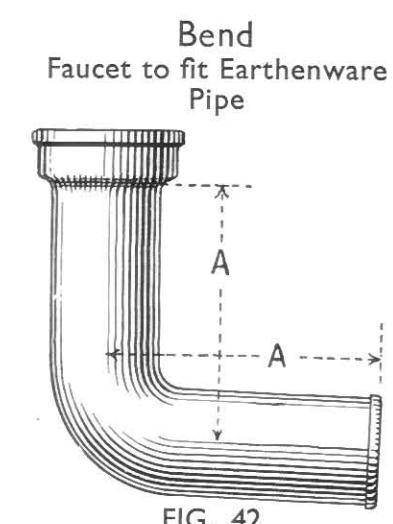
TABLE 23

Nominal Size	Dimensions	6 in. wall	9 in. wall	11 in. wall	13 $\frac{1}{2}$ in. wall
in. 3 $\frac{1}{2}$ & 4	a	15	18	20	22
3 $\frac{1}{2}$	b	12 $\frac{3}{4}$	15 $\frac{1}{2}$	17 $\frac{3}{8}$	19 $\frac{1}{4}$
4	b	12 $\frac{1}{2}$	15 $\frac{1}{4}$	17 $\frac{1}{8}$	19

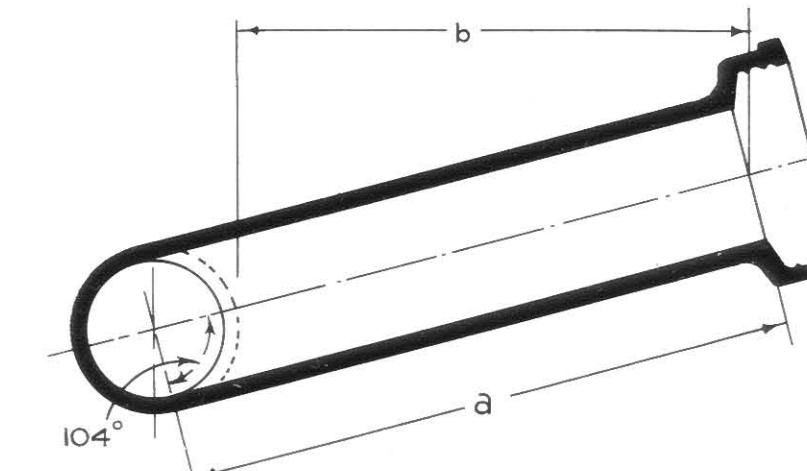
Bends



Socket to fit W.C. outlet.



Dimension "A" as "a" above
Other sizes available :
12", 14", 16", 17" and 24"



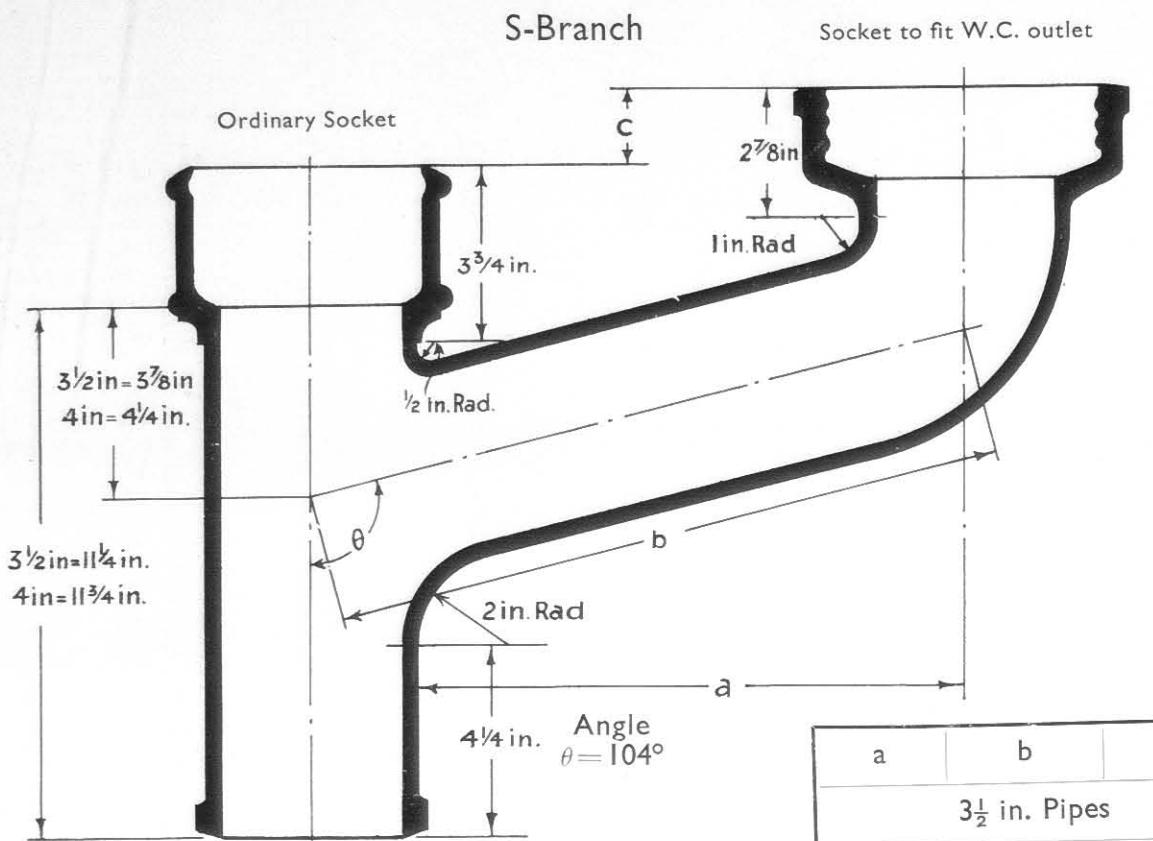
Long-Tailed Bend
Inside diameter of Faucet,
5 $\frac{3}{4}$ "

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

SANITARY CONNECTIONS

Applicable to $3\frac{1}{2}$ in. and 4 in. Pipes only

S-Branch



S-Branch
Faucet to fit Earthenware Pipe

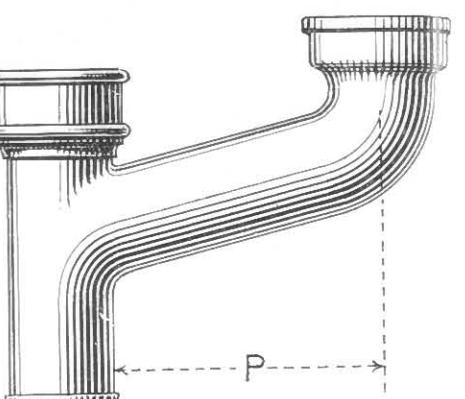
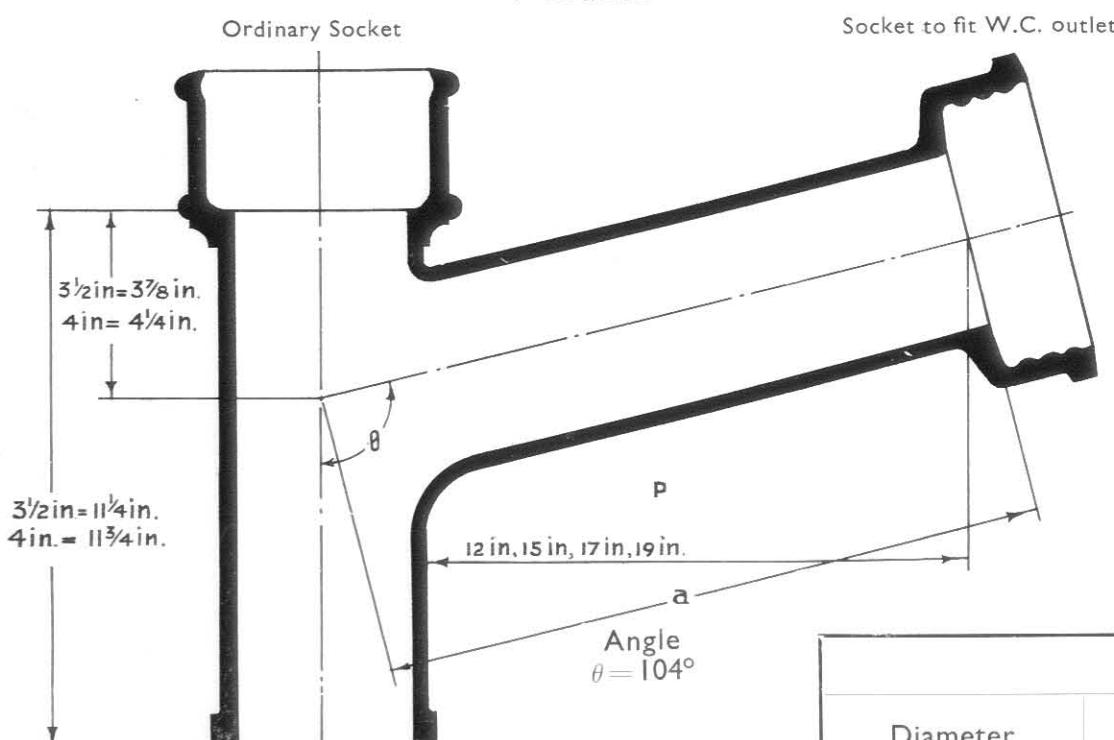


FIG. 44

TABLE 24

3 1/2 in. Pipes			4 in. Pipes		
a	b	c	a	b	c
in.	in.	in.	in.	in.	in.
12	14 3/8	12 3/2	12	14 5/8	11 3/2
15	17 1/2	2 1/2	15	17 2/3	2 1/2
18	20 9/16	3 7/8	18	20 1/3	3 3/2
21	23 1/2	3 3/2	21	23 2/9	3 2/7
24	26 3/4	4 2/3	24	27	4 1/9

P-Branch



P-Branch
Faucet to fit Earthenware Pipe

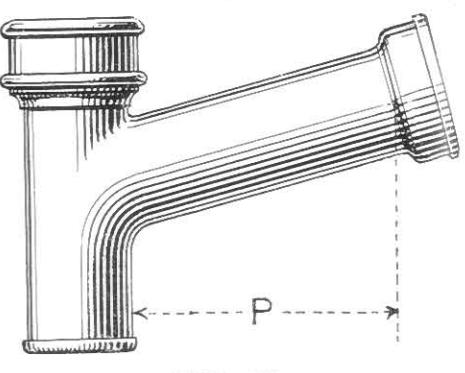


FIG. 45

TABLE 25

Dimension a				
Diameter	6 in. wall	9 in. wall	11 in. wall	13 1/2 in. wall
in. 3 1/2	in. 14 1/2	in. 17 5/8	in. 19 5/8	in. 21 3/4
4	14 3/4	17 7/8	19 7/8	22

Dimension "P" : 18", 21" and 24" Other sizes available.

NOTE : The nominal sizes, 12", 15", 17" and 19", relate to the respective wall sizes in the Table.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

BRITISH STANDARD SPECIFICATION "H" CAST-IRON MULTI-BRANCH PIPE FITTINGS

for Single-Stack Plumbing

Multi-Branch Fittings in various lengths—mainly 2' 6" to 3' 0" and 3' 6"—and in 3", $3\frac{1}{2}$ " and 4" diameters. Bosses, Branches and Inspection Doors placed where required.

BOSSES

Normally set at $92\frac{1}{2}^\circ$ and tapped 1 1/4", 2" and 1 1/2" B.S. Pipe Thread to suit Lavatory Basin, Sink Outlet and Bath Waste respectively.

BRANCHES

Branches can be of varying diameters and can be set at any degree to order $92\frac{1}{2}^\circ$, 95° , 100° , 104° , etc.

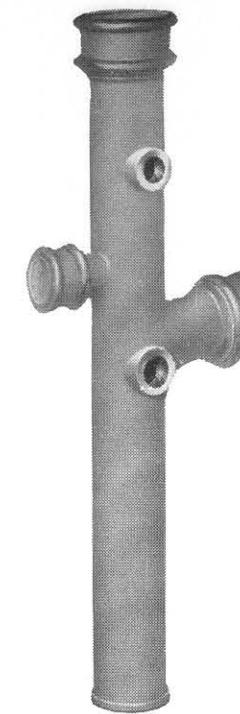


FIG. 46

Multi-Branch Pipe with ordinary branches.



FIG. 47

Multi-Branch Pipe with ordinary branch and Inspection door.

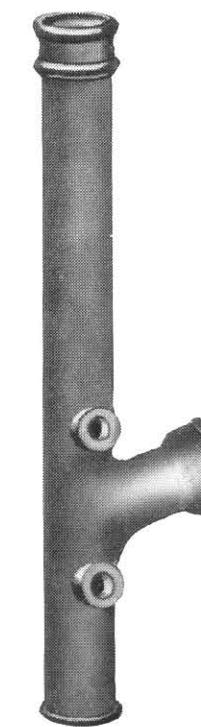
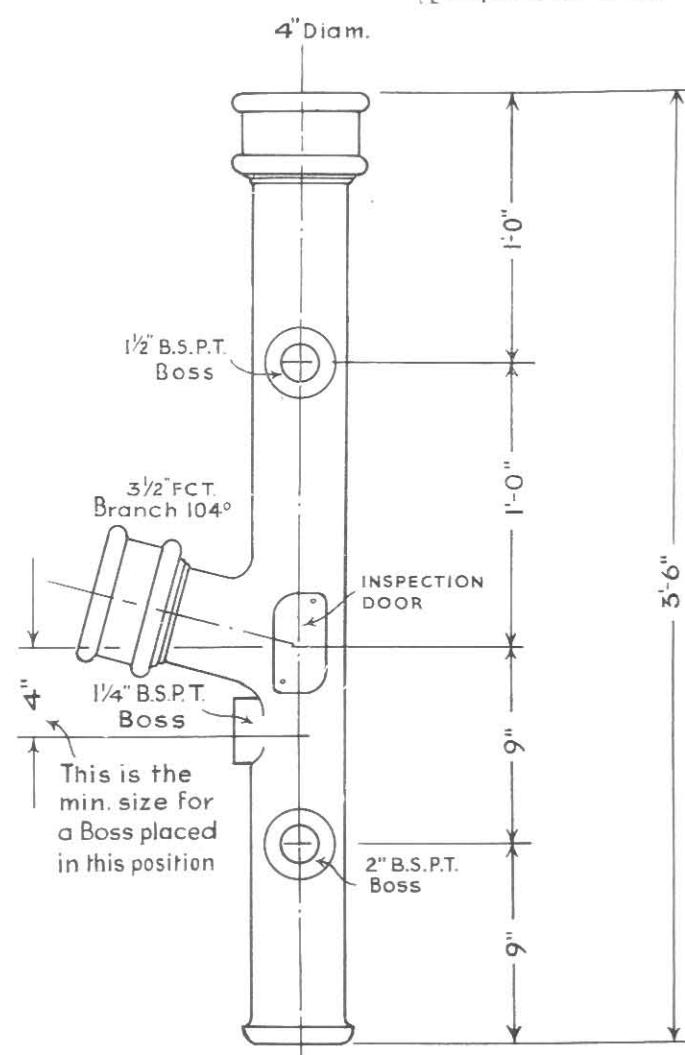


FIG. 48

Multi-Branch Pipe with branch to suit W.C. outlet. The projection of branch is similar to standard P-branch projections.



Typical sketch of Multi-Branch Pipe showing sizes required when ordering.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LAYOUT OF TYPICAL SINGLE-STACK SHOWING MULTI-BRANCH

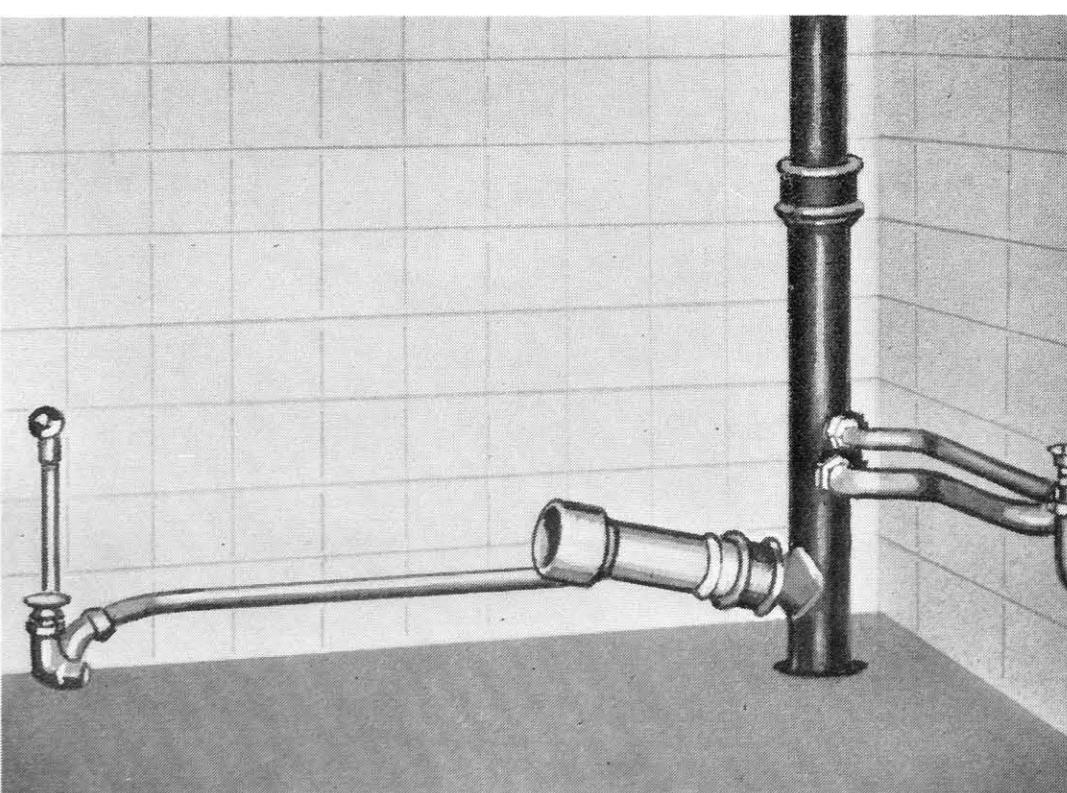
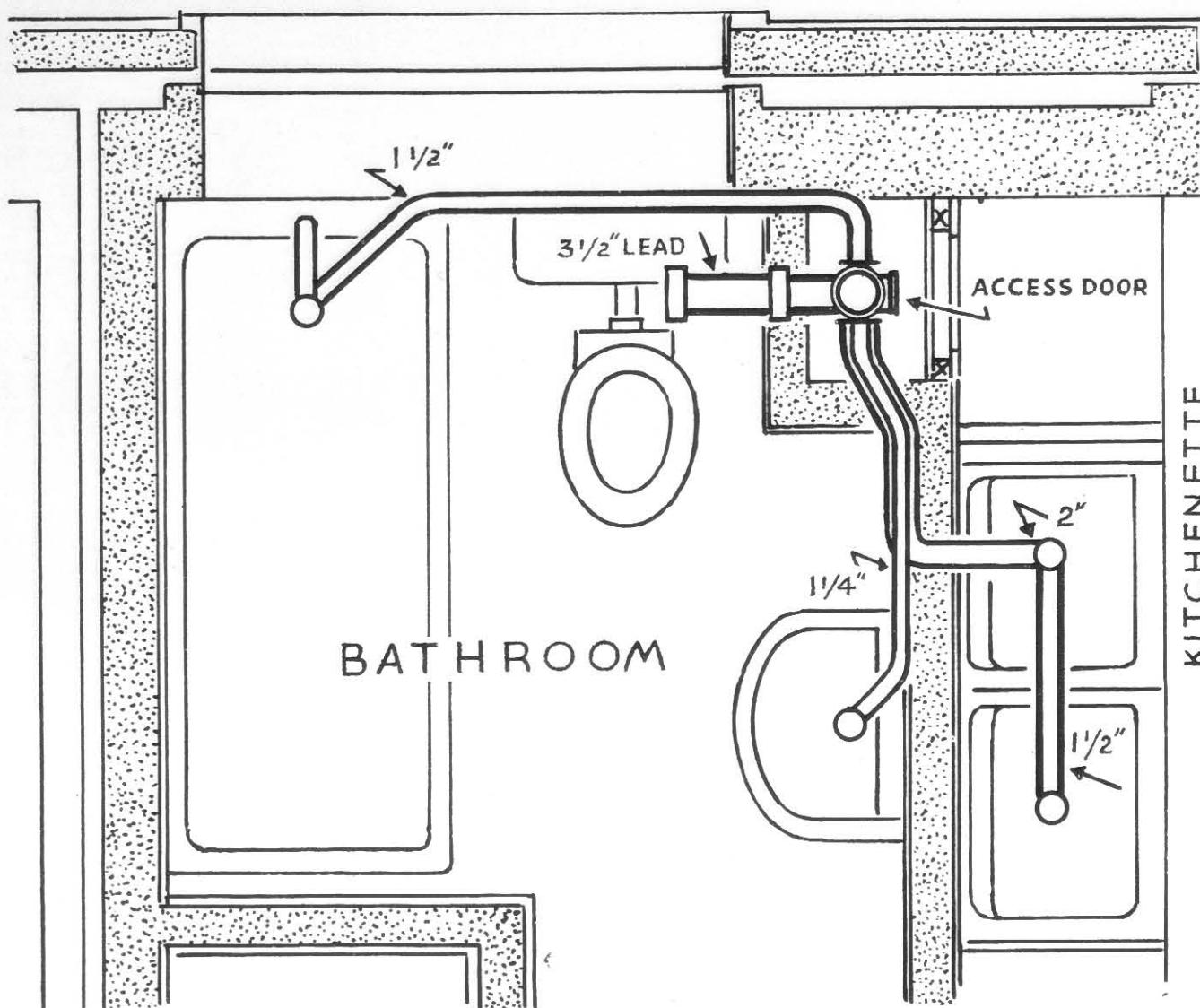
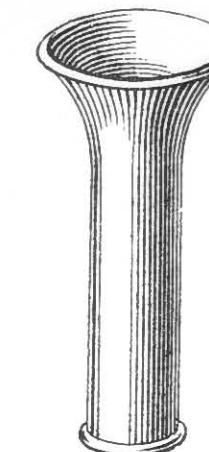


FIG. 50

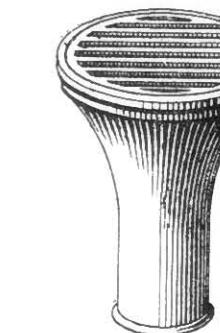
SOIL AND VENTILATING PIPES

No. 10
Bellmouth



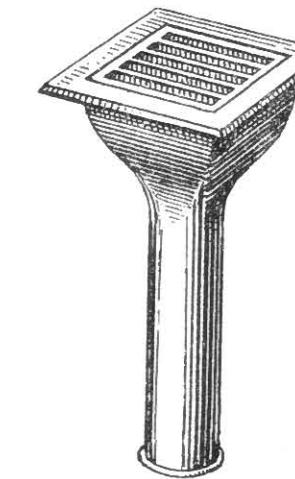
2", 2 1/2", 3", 3 1/2" and 4" Diam.
All 1' 6" Long

No. 11
Bellmouth with Loose or
Hinged Grating



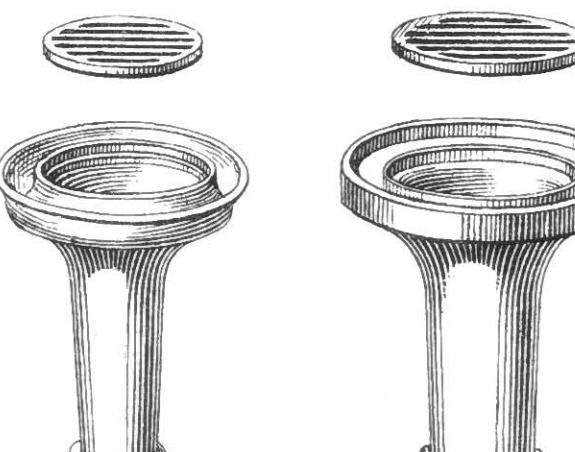
Diam. 3" 4" 6"
Height 1' 0" 1' 0" 1' 0"

No. 750
Square Bellmouth
with
6" x 6" Loose Grating



2 1/2" and 4"
10 1/4" x 10 1/4" over top
by 1' 6 1/2" Long overall

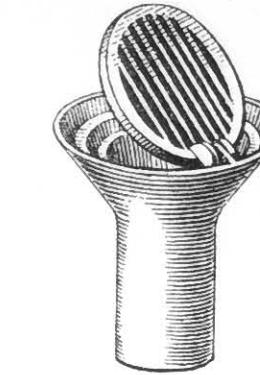
No. 751
Bellmouths with Loose Gratings



2" and 3"
11" Diam. over top
by 1' 0" Long overall

3 1/2", 4" and 5"
1' 0 1/4" Diam. over top
by 1' 0" Long overall

No. 667
Bellmouth Piece with Hinged
Grating



Diam. 2" 2 1/2" 3"
Height 10" 10" 10"

Grating 4 5/8" 6" 6 1/2"

Union Slip and Packing Piece, for replacing Pipes

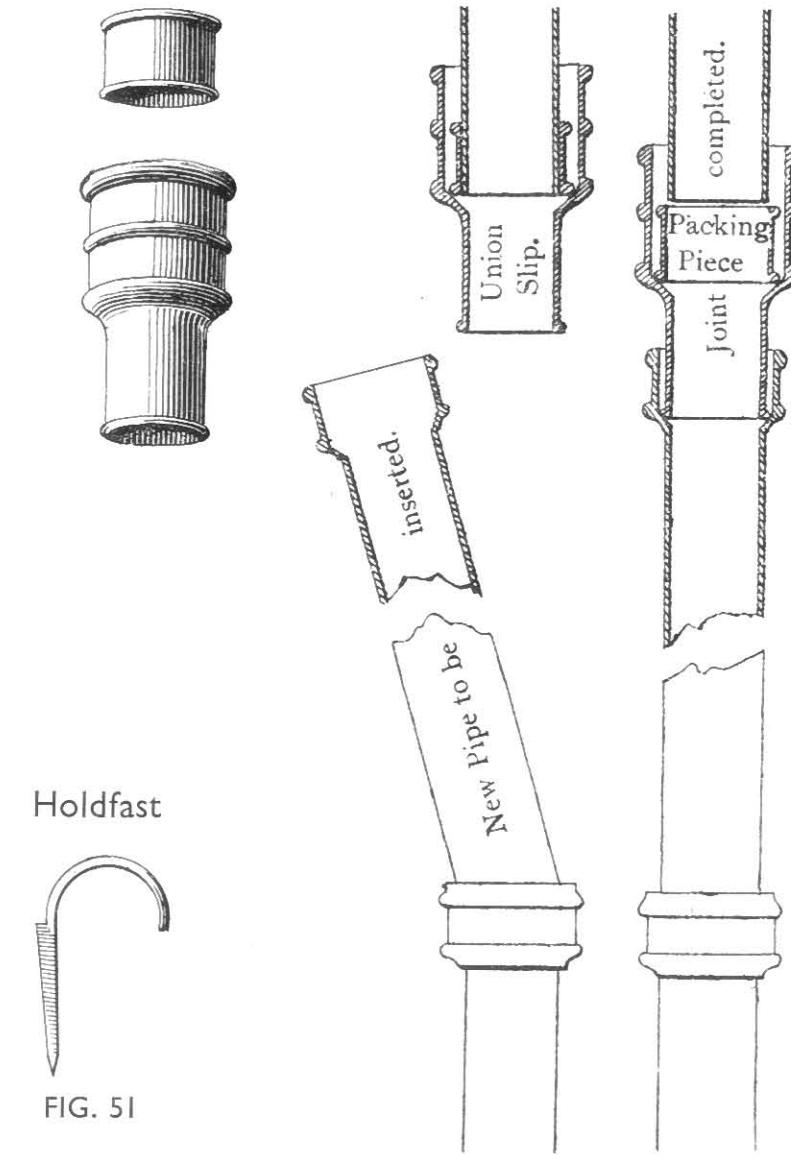


FIG. 51

FIG. 52

No. 1 RAIN-WATER PIPES

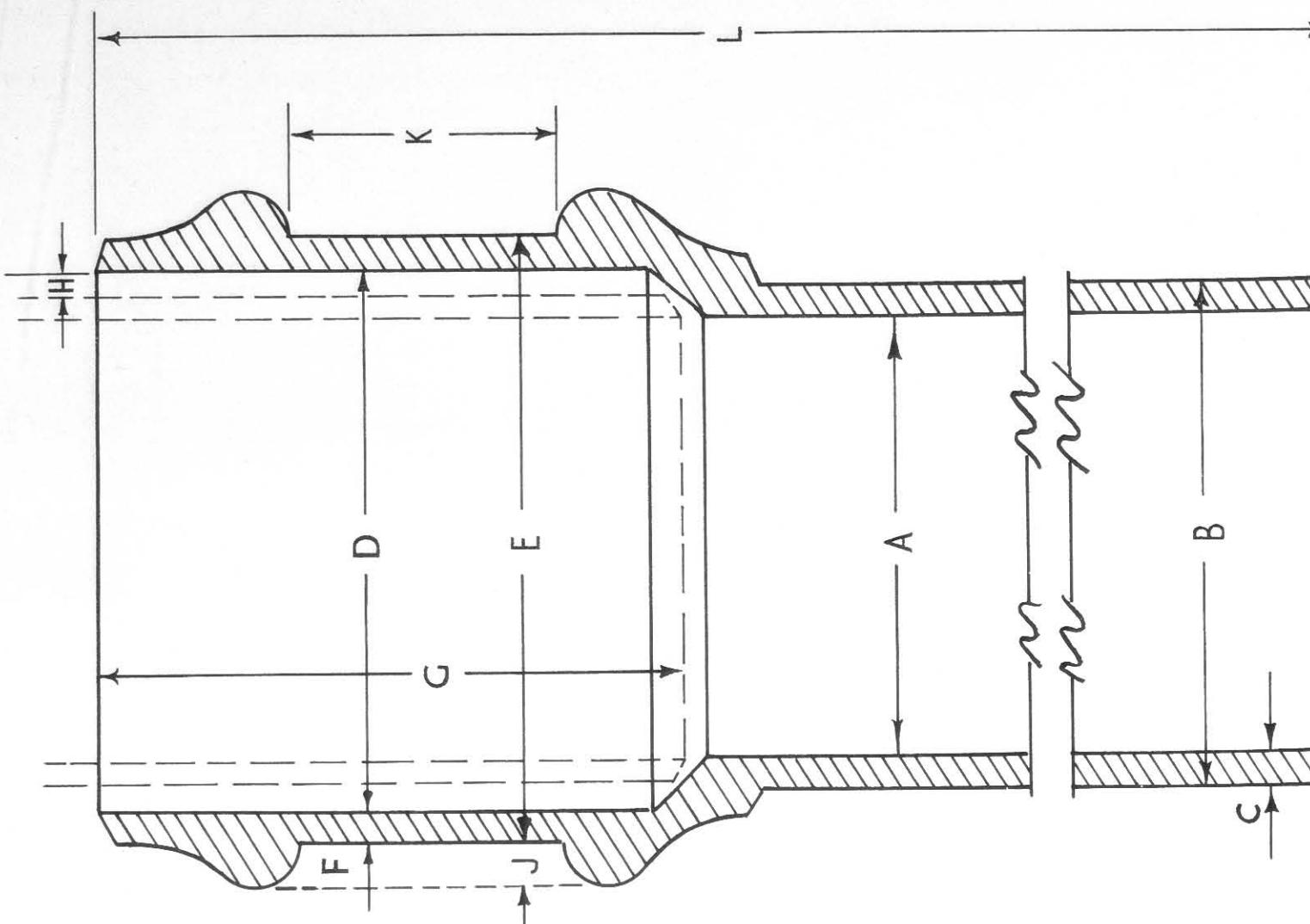


TABLE 26

Nominal Size		in. 2½	in. 3	in. 4	in. 5	in. 6	
PIPE	Internal diameter	A	2 3/8	2 7/8	3 7/8	4 7/8	5 7/8
	External diameter	B	2 5/8	3 1/8	4 1/8	5 1/8	6 1/8
	Thickness	C	1/8	1/8	1/8	1/8	1/8
	Internal diameter	D	2 1/16	3 7/16	4 5/16	5 5/16	6 3/8
	External diameter	E	3 7/32	3 23/32	4 3/8	5 5/8	6 11/16
	Thickness	F	9/64	9/64	5/32	5/32	5/32
	Internal depth of socket	G	2 1/2	2 1/2	3 1/8	3 3/4	3 7/8
	Packing space	H	5/32	5/32	3/32	3/32	1/8
	Projection of beads	J	5/32	5/32	1/4	5/16	5/16
SOCKET	Distance between beads	K	1 1/2	1 1/2	1 5/8	2	2 1/4
	Overall length (feet)	L	6	6	6	6	6

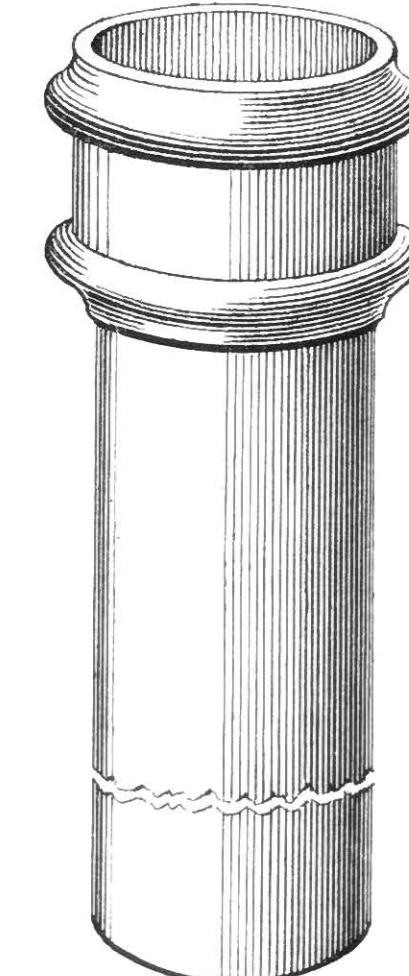
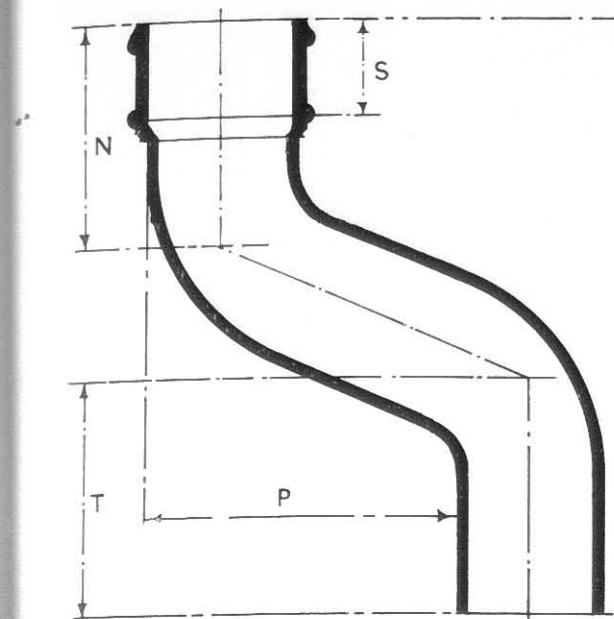


FIG. 53

RAIN-WATER OFFSETS



Swan Neck

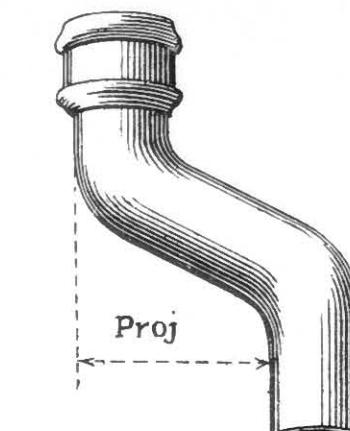


FIG. 54

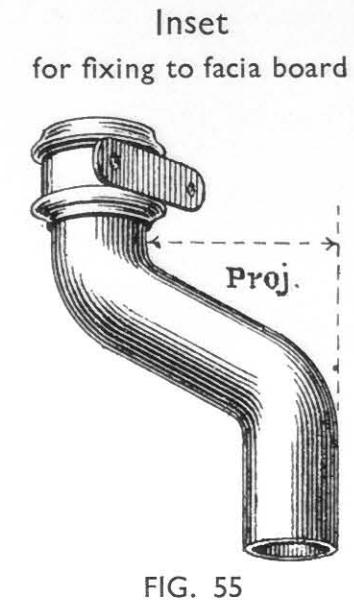


FIG. 55

TABLE 27

Nominal Size		in. 2½	in. 3	in. 4	in. 5	in. 6
P-Projection	1 in.				12 7/8 5 1/4 5 7/8 3 3/8	
	1 1/2 in.	L N T S	11 1/8 4 1/2 5 2 5/8	11 7/8 5 5 2 5/8	13 4/8 5 1/2 5 3/4 3 3/8	15 3/8 6 1/2 6 1/2 3 3/4
	2 1/4 in.	L N T S	11 3/8 4 3/4 4 3/4 2 5/8	12 1/4 6 5 1/2 2 5/8	14 1/8 5 1/2 5 3/4 3 3/8	16 7 1/8 6 3/4 3 3/4
	3 in.	L N T S	10 4 3/8 3 1/2 2 5/8	13 3/8 5 1/4 5 1/4 3 3/8	13 5/8 7 7 3 3/8	16 1/2 7 1/4 7 1/4 3 3/8
	3 1/2 in.	L N T S			15 1/4 6 1/4 6 1/4 3 3/8	
	4 1/2 in.	L N T S	10 3/8 4 3/4 3 1/2 2 5/8	13 1/4 5 1/2 5 1/2 3 3/8	15 1/4 6 6 3 3/8	17 7 1/8 6 3/4 3 3/4
	5 1/4 in.	L N T S	12 1/4 4 2/4 5 2 5/8	13 1/4 5 1/4 5 1/4 3 3/8	17 1/8 7 1/2 7 1/2 3 3/8	19 5/8 7 1/4 7 1/4 3 3/4
	6 in.	L N T S	11 3/8 4 3/4 3 1/2 2 5/8	11 7/8 5 1/4 6 1/4 3 3/8	17 3/8 8 1/8 8 1/8 3 3/8	21 8/1 8 1/4 8 1/4 3 3/8
	7 in.	L N T S		16 1/2 7 7 3 3/8	19 5/8 8 1/8 8 1/8 3 3/8	
	7 1/2 in.	L N T S	13 7/8 4 1/2 5 1/4 2 5/8	14 7/8 5 1/4 6 2 5/8	15 3/8 5 1/4 6 3 3/8	19 3/8 8 1/8 8 1/8 3 3/8

Nominal Size		in. 2½	in. 3	in. 4	in. 5	in. 6
P-Projection	8 in.				14 1/4 4 3/4 6 2 5/8	17 6 7/8 6 7/8 3 3/8
	9 in.	L N T S	12 5/8 4 3/4 3 1/2 2 5/8	15 3/8 5 5 2 5/8	15 3/8 6 6 2 5/8	17 1/2 7 7 3 3/4
	10 1/2 in.	L N T S			15 3/8 5 1/2 5 1/2 2 5/8	16 3/8 6 6 2 5/8
	12 in.	L N T S	13 7/8 4 3/4 3 1/2 2 5/8	14 1/8 5 4 1/4 2 5/8	18 6 1/8 7 3 1/8	19 3/4 7 1/4 8 1/4 3 3/8
	15 in.	L N T S			15 1/8 3 1/2 2 2 1/2	19 5/8 6 1/2 6 1/2 3 1/8
	18 in.	L N T S			20 1/2 6 6 2 5/8	19 3/8 7 1/2 7 1/2 3 3/4
	21 in.	L N T S			22 6 6 2 5/8	21 1/8 6 6 3 1/8
	24 in.	L N T S			22 1/4 5 1/4 4 1/4 2 5/8	21 1/8 5 1/4 4 1/4 2 5/8
	27 in.	L N T S			24 5 1/4 6 1/4 2 5/8	25 1/4 5 7/8 6 1/4 3 1/8
	30 in.	L N T S			26 1/4 6 6 2 5/8	25 3/4 6 1/4 6 1/4 3 1/8

RAIN-WATER BENDS

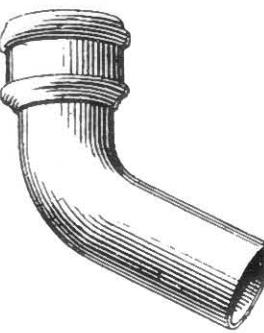
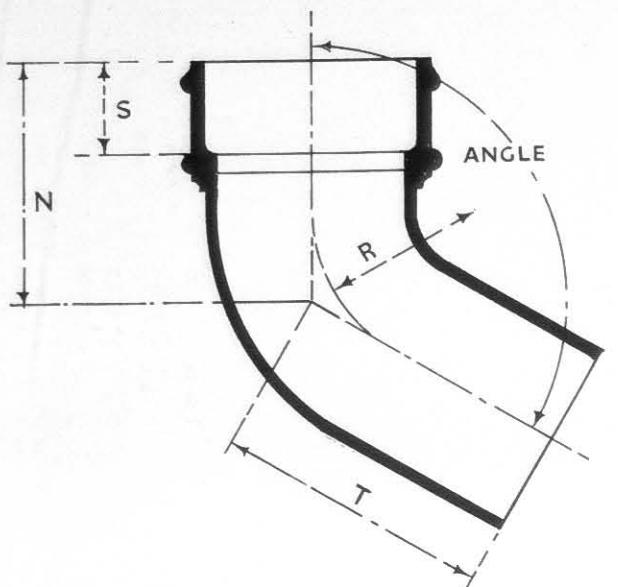
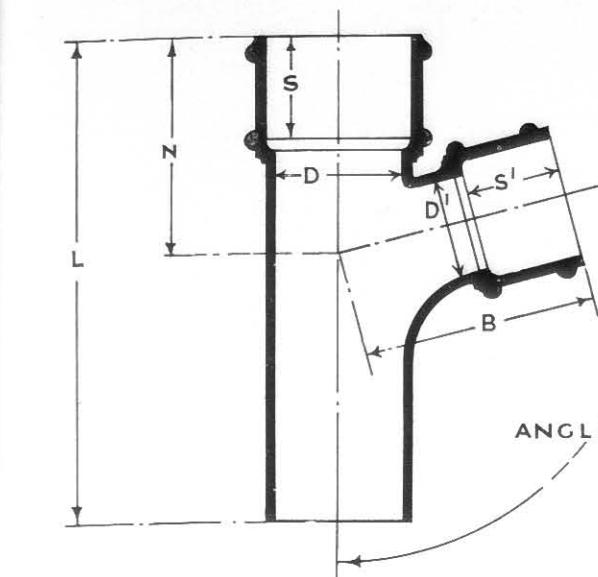


FIG. 56

TABLE 28

Nominal Size		in. 2 $\frac{1}{2}$	in. 3	in. 4	in. 5	in. 6	Nominal Size		in. 2 $\frac{1}{2}$	in. 3	in. 4	in. 5	in. 6
Angle	S	2 $\frac{5}{8}$	2 $\frac{5}{8}$	3 $\frac{1}{8}$	3 $\frac{3}{4}$	3 $\frac{7}{8}$	Angle	S	2 $\frac{5}{8}$	2 $\frac{5}{8}$	3 $\frac{1}{8}$	3 $\frac{3}{4}$	3 $\frac{7}{8}$
	N	5 $\frac{3}{8}$	6 $\frac{1}{4}$	7 $\frac{3}{8}$	9	10 $\frac{5}{8}$		T	4 $\frac{7}{8}$	5 $\frac{3}{8}$	6 $\frac{1}{8}$	7 $\frac{5}{8}$	9
90°	T	7 $\frac{1}{4}$	6 $\frac{1}{4}$	7 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{5}{8}$	115°	R	6 $\frac{1}{8}$	6	6 $\frac{7}{8}$	8 $\frac{1}{8}$	9
	R	2 $\frac{3}{4}$	2 $\frac{1}{2}$	3 $\frac{7}{8}$	4 $\frac{3}{8}$	4 $\frac{7}{8}$		3	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4 $\frac{5}{8}$	5 $\frac{1}{8}$	
95°	N	6	6 $\frac{1}{4}$	7 $\frac{1}{4}$	8	8 $\frac{3}{4}$	120°	T	5	5 $\frac{1}{2}$	6 $\frac{1}{2}$	8	7 $\frac{7}{8}$
	T	6 $\frac{3}{8}$	6 $\frac{3}{8}$	7 $\frac{5}{8}$	8 $\frac{5}{8}$	9 $\frac{1}{4}$		R	6 $\frac{1}{8}$	6 $\frac{1}{2}$	7 $\frac{5}{8}$	8	7 $\frac{7}{8}$
100°	N	5 $\frac{3}{4}$	6 $\frac{5}{8}$	7 $\frac{7}{8}$	7 $\frac{3}{4}$	8 $\frac{7}{8}$	135°	R	3 $\frac{1}{8}$	3 $\frac{1}{2}$	4	4 $\frac{1}{4}$	4 $\frac{1}{4}$
	T	6 $\frac{3}{8}$	6 $\frac{5}{8}$	7 $\frac{1}{4}$	8 $\frac{1}{2}$	9 $\frac{1}{8}$		N	5	5 $\frac{1}{2}$	5 $\frac{3}{4}$	7 $\frac{1}{8}$	7
105°	N	5 $\frac{7}{8}$	6 $\frac{5}{8}$	7 $\frac{1}{4}$	8	8 $\frac{3}{8}$	147°	T	5 $\frac{1}{8}$	6 $\frac{1}{8}$	6 $\frac{3}{4}$	7	7 $\frac{5}{8}$
	T	6 $\frac{1}{4}$	6 $\frac{3}{8}$	7 $\frac{1}{2}$	8 $\frac{1}{8}$	8 $\frac{3}{4}$		R	3 $\frac{3}{8}$	3 $\frac{3}{4}$	3 $\frac{3}{4}$	4 $\frac{5}{8}$	4 $\frac{5}{8}$
110°	N	5 $\frac{1}{4}$	6 $\frac{1}{8}$	6 $\frac{1}{4}$	8 $\frac{1}{4}$	8 $\frac{3}{8}$	158°	T	5 $\frac{1}{4}$	5 $\frac{3}{4}$			
	T	6	7 $\frac{1}{4}$	6 $\frac{7}{8}$	8 $\frac{1}{8}$	8 $\frac{3}{8}$		R	3 $\frac{1}{8}$	5			
112 $\frac{1}{2}$ °	S	2 $\frac{1}{2}$	2 $\frac{1}{2}$		3		158°	N	4 $\frac{3}{8}$				
	N	4 $\frac{3}{4}$	4 $\frac{7}{8}$		6 $\frac{1}{8}$			T	5 $\frac{1}{4}$				
	T	4 $\frac{3}{4}$	4 $\frac{7}{8}$		6 $\frac{1}{8}$			R	4 $\frac{3}{4}$				

RAIN-WATER SINGLE BRANCHES



Single Branch Piece
(Socket Branch)

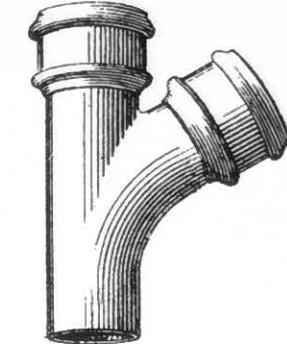
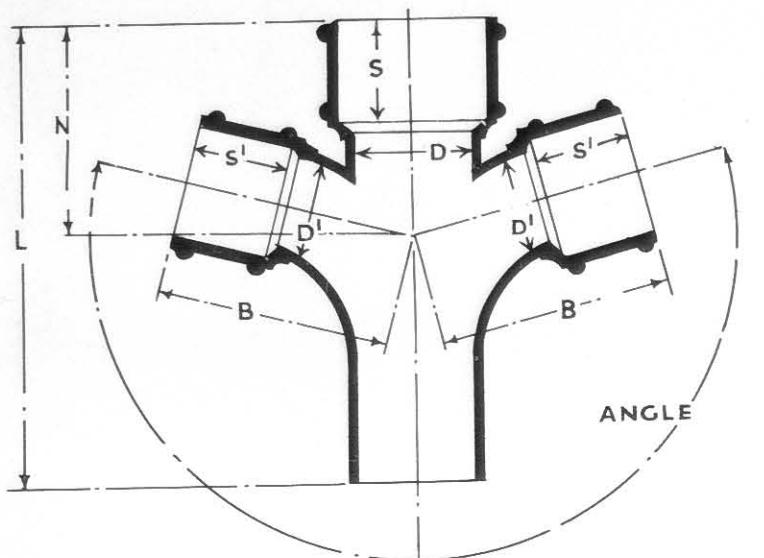


FIG. 57

TABLE 29

Diameter D	in. 2 $\frac{1}{2}$	in. 2 $\frac{1}{2}$	in. 2 $\frac{1}{2}$	in. 3	in. 3	in. 3	in. 3	in. 4	in. 4	in. 4	in. 4	in. 5	in. 5	in. 6	
	S	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	
90°	N	5	6 $\frac{1}{8}$	12 $\frac{3}{4}$	11	11 $\frac{3}{4}$	12 $\frac{3}{8}$	12	15	15	15	16	16	18	18
95°	N	4 $\frac{3}{4}$	5 $\frac{7}{8}$	12 $\frac{5}{8}$	12	12 $\frac{3}{4}$	12 $\frac{1}{4}$	12	14 $\frac{1}{4}$	14 $\frac{1}{4}$	14 $\frac{1}{4}$	17	17	18 $\frac{3}{4}$	18 $\frac{3}{4}$
100°	N	5 $\frac{1}{2}$	6 $\frac{1}{8}$	12 $\frac{3}{4}$	12	12 $\frac{3}{8}$	12 $\frac{1}{2}$	12	14 $\frac{1}{8}$	14 $\frac{1}{8}$	14 $\frac{1}{8}$	16 $\frac{1}{2}$	16 $\frac{1}{2}$	18 $\frac{1}{8}$	18 $\frac{1}{8}$
105°	N	4 $\frac{5}{8}$	5 $\frac{3}{4}$	11 $\frac{3}{4}$	11 $\frac{1}{4}$	11 $\frac{5}{8}$	11 $\frac{1}{8}$	11 $\frac{3}{8}$	13 $\frac{1}{4}$	13 $\frac{1}{4}$	13 $\frac{1}{4}$	14 $\frac{1}{4}$	14 $\frac{1}{4}$	16 $\frac{1}{2}$	16 $\frac{1}{2}$
110°	N	6	6 $\frac{1}{2}$	12 $\frac{1}{2}$	12 $\frac{1}{4}$	12 $\frac{1}{8}$	11 $\frac{7}{8}$	11 $\frac{3}{4}$	13 $\frac{7}{8}$	13 $\frac{7}{8}$	13 $\frac{7}{8}$	14 $\frac{1}{8}$	14 $\frac{1}{8}$	16 $\frac{1}{2}$	16 $\frac{1}{2}$
112 $\frac{1}{2}$ °	N	5 $\frac{3}{4}$	5 $\frac{3}{4}$	11 $\frac{3}{8}$	11 $\frac{1}{8}$	11 $\frac{5}{8}$	11 $\frac{1}{2}$	11 $\frac{1}{2}$	13 $\frac{7}{8}$	13 $\frac{7}{8}$	13 $\frac{7}{8}$	14 $\frac{1}{8}$	14 $\frac{1}{8}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$
115°	N	5 $\frac{1}{2}$	5 $\frac{1}{2}$	12 $\frac{5}{8}$	11 $\frac{7}{8}$	11 $\frac{5}{8}$	11 $\frac{3}{4}$	11 $\frac{3}{4}$	12 $\frac{5}{8}$	12 $\frac{5}{8}$	12 $\frac{5}{8}$	15 $\frac{3}{8}$	15 $\frac{3}{8}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$
120°	N	5 $\frac{3}{4}$	5 $\frac{3}{4}$	10 $\frac{7}{8}$	12	12 $\frac{3}{8}$	12 $\frac{2}{8}$	13	12 $\frac{7}{8}$	12 $\frac{7}{8}$	12 $\frac{7}{8}$	13 $\frac{1}{8}$	14 $\frac{3}{8}$	14 $\frac{1}{4}$	20
135°	N	7 $\frac{1}{8}$	7	12 $\frac{1}{8}$	13	12 $\frac{1}{2}$	12 $\frac{1}{2}$	13	13 $\frac{5}{8}$	13 $\frac{5}{8}$	13 $\frac{5}{8}$	15 $\frac{1}{8}$	15 $\frac{1}{8}$	16 $\frac{3}{8}$	16 $\frac{3}{8}$
147°	N	8 $\frac{7}{8}$	7	12 $\frac{1}{8}$	13	12 $\frac{1}{2}$	12 $\frac{1}{2}$	13	13 $\frac{5}{8}$	13 $\frac{5}{8}$	13 $\frac{5}{8}$	15 $\frac{1}{8}$	15 $\frac{1}{8}$	16 $\frac{3}{8}$	16 $\frac{3}{8}$

RAIN-WATER DOUBLE BRANCHES



Double Branch Piece
(Socket Branches)

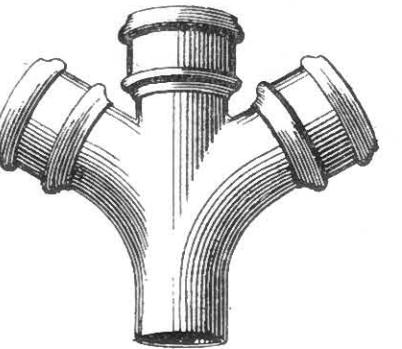


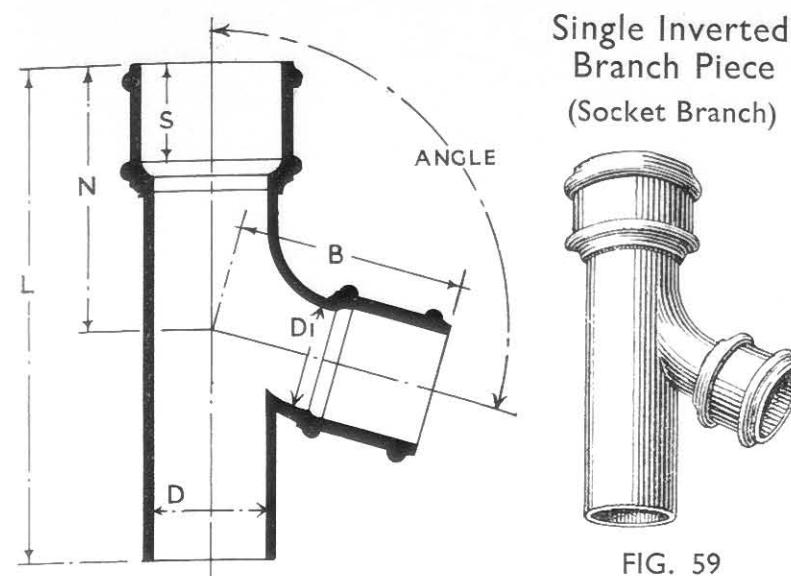
FIG. 58

TABLE 30

Diameter D		in. 2½	in. 2½	in. 2½	in. 3	in. 3	in. 3	in. 3	in. 4	in. 4	in. 6
S		2½	2½	2½	2½	2½	2½	2½	3½	3½	3½
Diameter D'		1½	2	2½	1½	2	2½	3	2	3	4
S'		2½	2½	2½	2½	2½	2½	2½	3½	3½	3½
105°	N				6½	5¾	5¾	6½		6¾	
	B				6½	6	5¾	6¾		6¾	
	L				12½	12½	12½	12½		14½	
110°	N			5½							
	B			5½							
	L			12½							
112½°	N		5½								
	B		5½								
	L		12½								
120°	N	5½	6½	6½	5¾	6½	6½		7½	8½	13
	B	5¾	5¾	6½	5½	6½	6½		7½	8½	14
	L	11½	12½	12½	11¾	12½	13	13½	13½	14½	21½
135°	N									9½	
	B									9½	
	L									15½	

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

RAIN-WATER INVERTED BRANCHES



Single Inverted
Branch Piece
(Socket Branch)

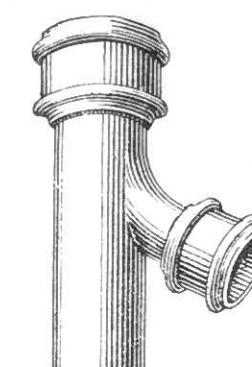
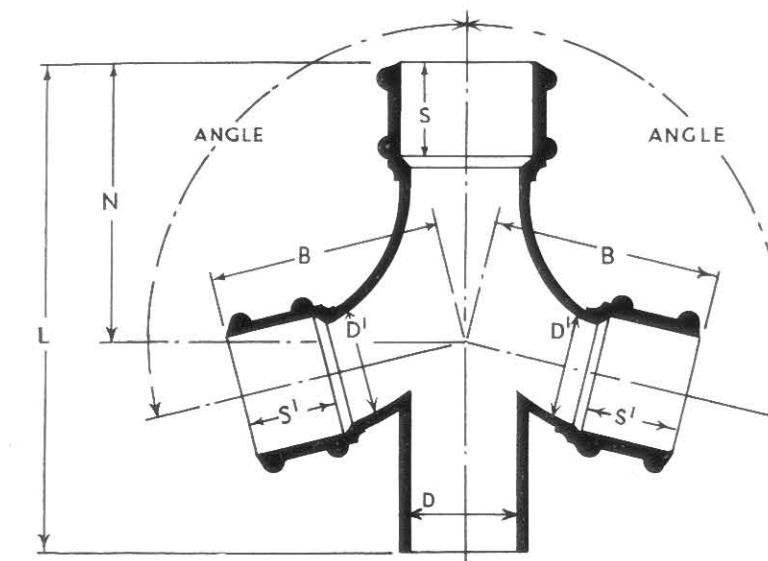


FIG. 59

TABLE 31

Diameter D	in. 2½	in. 3	in. 4	
S	2½	2½	3½	
Diameter D'	2½	2½	2	
S'	2½	2½	2½	
120°	N	6½	6½	6¾
	B	6	6¾	6¾
	L	13½	13½	14½
135°	N	5½		
	B	7		
	L	14½		



Double Inverted Branch Piece
(Socket Branches)

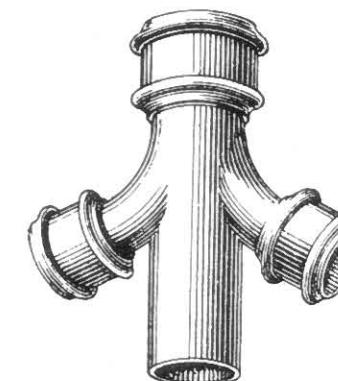


FIG. 60

TABLE 32

Diameter D	in. 2½	in. 3	in. 4	
S	2½	2½	3½	
Diameter D'	2½	2½	2½	
S'	2½	2½	2½	
110°	N	6		
	B	5½		
	L	13		
120°	N	6	6½	6¾
	B	6½	6¾	6¾
	L	13½	13½	14½

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

RAIN-WATER SHOES

Shoes for Light Grade Pipes

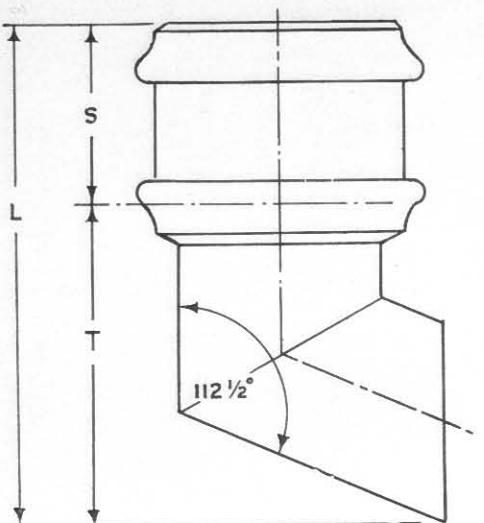


TABLE 33

Nominal Size	in. 2 1/2	in. 3	in. 4	in. 5	in. 6
S	2 1/2	2 1/2	2 1/2	3 3/4	3 7/8
T	4	4 1/2	5 5/8	9 1/2	11 1/8
L	6 1/2	7	8 1/8	13 1/4	15

Anti-Splash Shoes for Light Grade Pipes

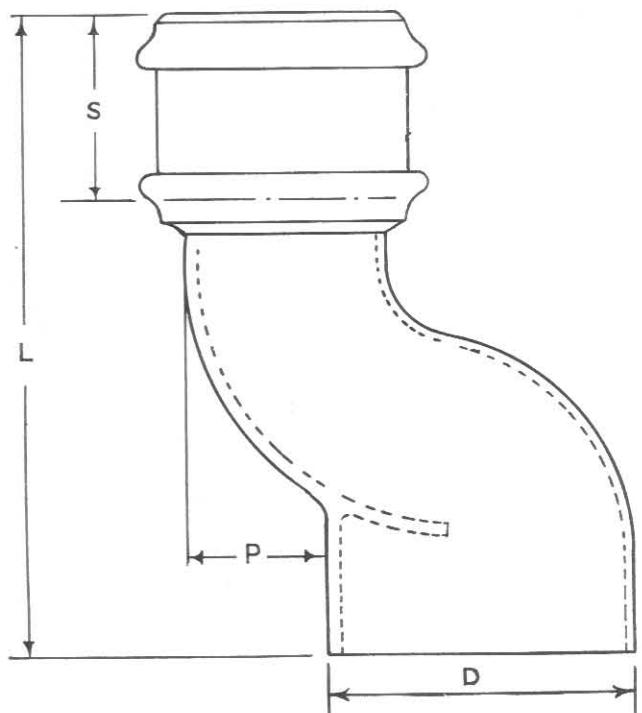


TABLE 34

Nominal Size	in. 2 1/2	in. 3	in. 4	in. 5
S	2 5/8	2 5/8	3 1/8	3 3/4
P	3 1/4	3	3 1/2	3 1/4
D	3 5/8	4	5 1/4	6 1/4
L	9 1/4	9 3/4	12	13 3/4

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MISCELLANEOUS RAIN-WATER FITTINGS

Eaves Bend

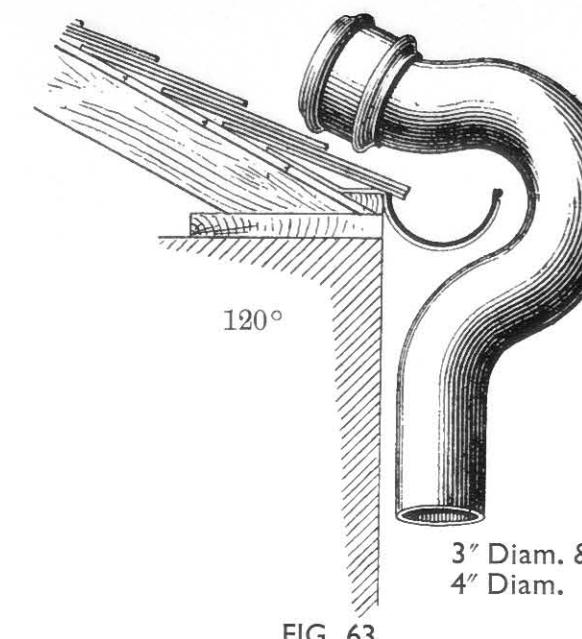


FIG. 63

Y Piece



FIG. 64

Curved Breeches Piece

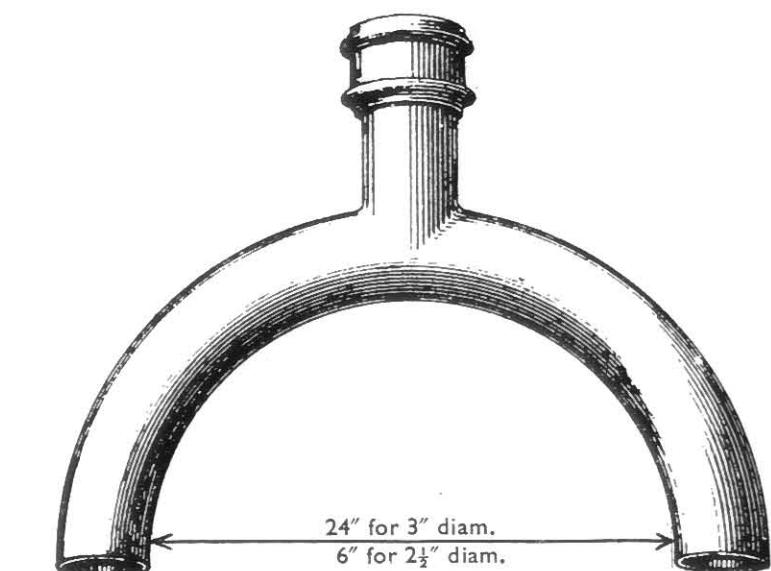


FIG. 66

Parallel Branch Piece
(Socket Branch)

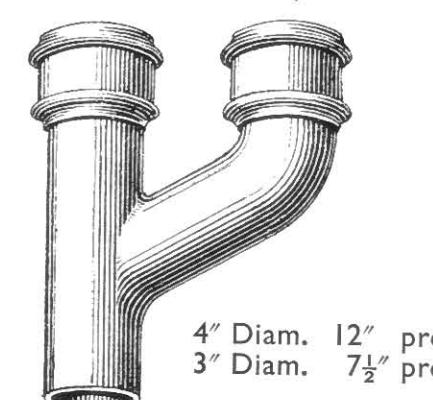


FIG. 65

Double Boot

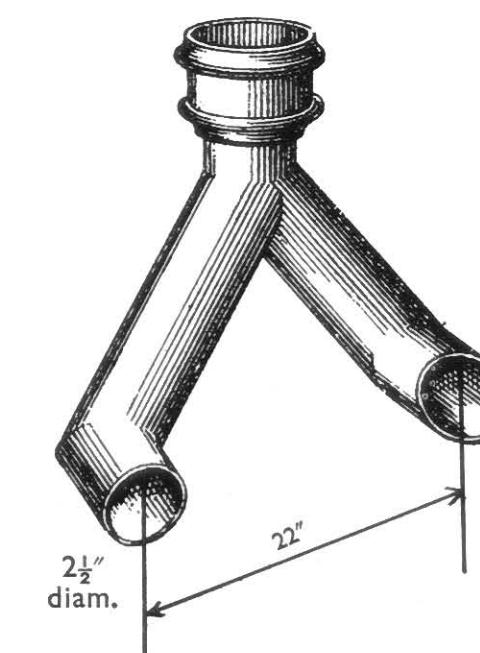


FIG. 67

Straight Breeches Piece

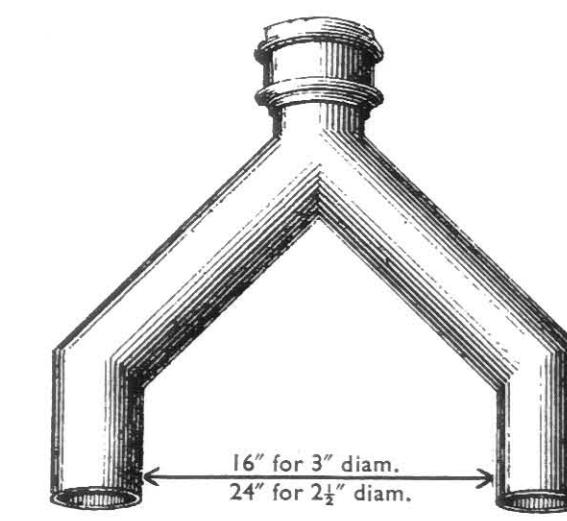
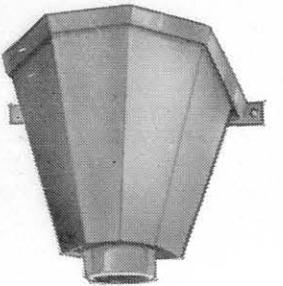


FIG. 68

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

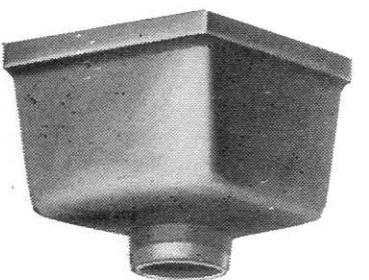
RAIN-WATER HEADS

No. 1
B.S.S. (Hopper Type)



Nominal Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 5	in. 6
A	7 5/8	7 5/8	7 5/8	9 1/2	9 1/2	10 3/4	12
B	6 3/8	6 3/8	6 3/8	8 5/16	8 5/16	9 7/16	10 9/16
C	7 1/4	7 1/4	7 1/4	8	8	8 1/2	9
D	3 1/8	3 1/8	3 1/8	3 15/16	3 15/16	4 1/2	5
E	4 1/8	4 1/8	4 1/8	5 1/2	5 1/2	6 5/16	7 1/16
F	10 1/8	10 1/8	10 1/8	12	12	13 1/4	14 1/2
G	2 5/6	2 9/16	2 13/16	3 5/16	3 9/16	4 1/16	4 9/16
H	1 7/8	2 3/8	2 7/8	3 3/8	3 7/8	4 7/8	5 7/8
J	2 1/8	2 5/8	3 1/8	3 5/8	4 1/8	5 1/8	6 5/32
K	2 5/16	2 13/16	3 5/16	3 13/16	4 5/16	5 5/16	6 11/32
L	3 1/2	3 1/2	3 1/2	5	5	6	7
M	5/8	5/8	5/8	1	1	1 1/4	1 1/2

No. 2
B.S.S. (Box Type)

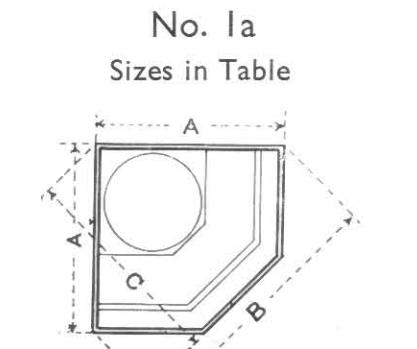
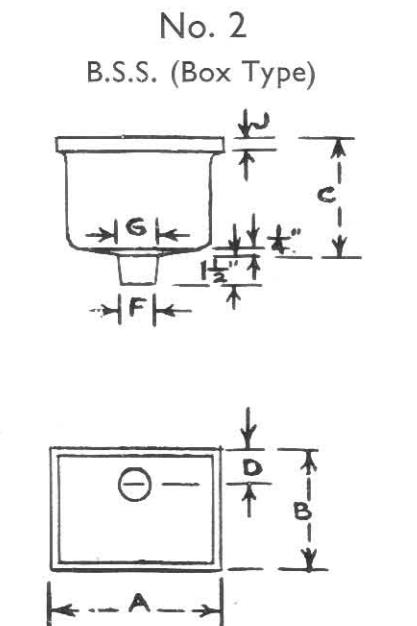
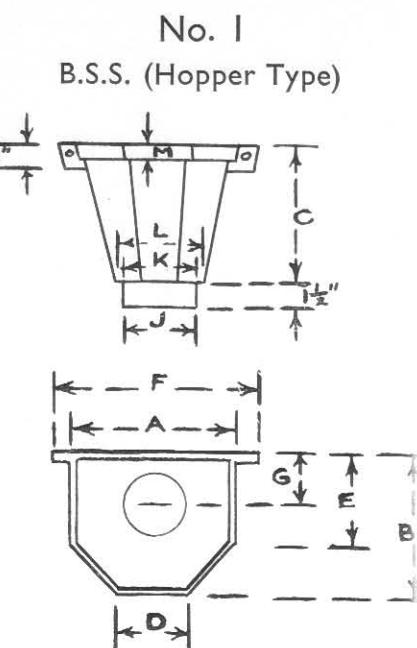


Nominal Size	in. 2	in. 2½	in. 3	in. 3½	in. 4	in. 5	in. 6
A	10	10	10	12	12	12	12
B	7	7	7	10	10	10	10
C	7	7	7	8	8	8	8
D	2 5/16	2 9/16	2 13/16	3 5/16	3 9/16	4 1/16	4 9/16
E	1 7/8	2 3/8	2 7/8	3 3/8	3 7/8	4 7/8	5 7/8
F	2 1/8	2 5/8	3 1/8	3 5/8	4 1/8	5 1/8	6 5/32
G	2 5/16	2 13/16	3 5/16	3 13/16	4 5/16	5 5/16	6 11/32
J	7/8	7/8	7/8	1	1	1	1

No. 1a Corner Heads

Drop	A	B	C	Depth
1 1/2	6 1/4	8 3/4	7	8
2	6 1/4	9	7	7 1/2
2 1/2	7 1/4	10 1/4	8	8 1/4
3	7 3/4	11	8 1/2	8 1/4
3 1/2	8 1/2	12	9 1/2	9 1/4
4	8 1/2	12	9 1/2	9
4 1/2	9 1/4	13	10 1/2	9 1/4
5	9 3/4	14	11	10 1/4
6	11	15 1/2	12 1/2	10 3/4

No. 1a



RAIN-WATER HEADS

* Can be supplied without date or enrichments to order

No. 12



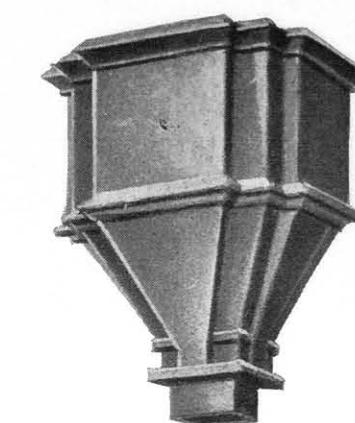
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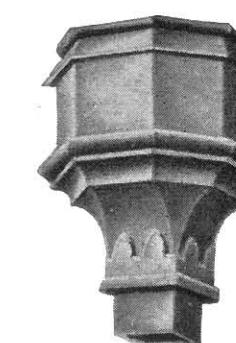
No. 18



No. 32 and 32A



No. 45



No. 46
Also Nos. 46A and P

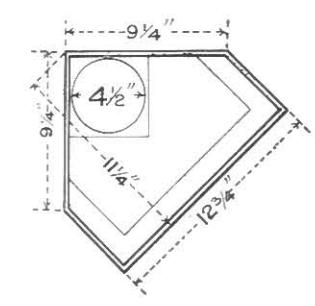


No. 48

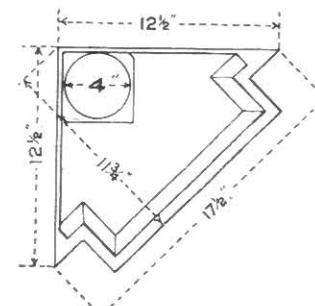


PLANS OF CORNER HEADS

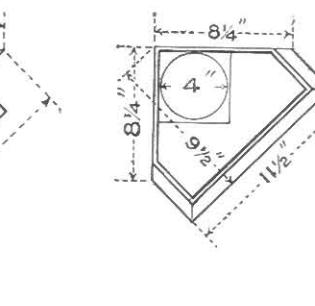
No. 12
11 3/4" Deep



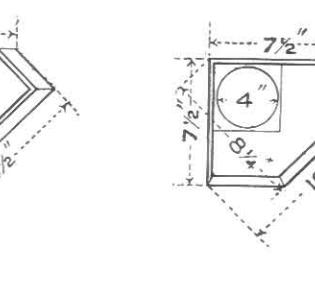
No. 15
17 1/2" Deep



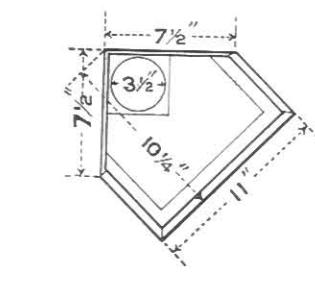
No. 18
18" Deep



No. 45
13" Deep



No. 46
13" Deep



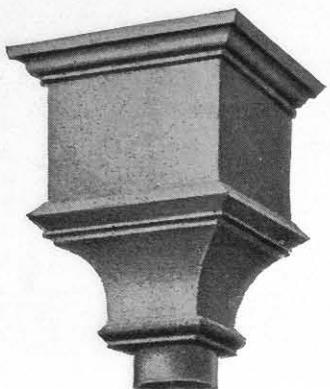
SIZES (IN INCHES) OF FLAT HEADS

No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box.	Depth (Exclusive of Outlet).
12	5	13	—	8 3/4	—	12 1/2
12	6	14	—	10 1/4	—	13
15	6 x 4	17 3/4	9	9 1/4	—	17 1/2
18	4	11 3/4	—	8 1/2	—	16 1/2
32	6 x 4	14 3/4	9	7 1/4	—	17 1/2
32A	4 x 3	11 1/4	—	7 1/4	—	14
45	4 1/2	11	—	7 1/4	—	14 1/2
46	4 1/2	11	—	8	—	12 1/2
46A	3	8	—	6	—	10 1/2
46P	4	10 3/4	9 1/4	9 1/4	—	12 1/2
48	4 1/2	14 1/2	—	—	—	18

RAIN-WATER HEADS

* Can be supplied without enrichments to order

No. 70



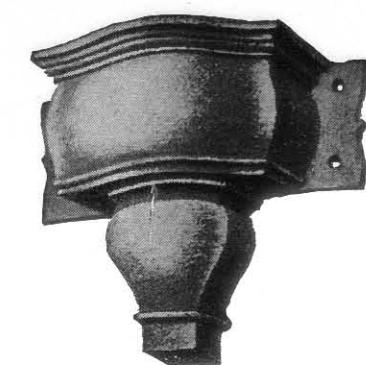
No. 96
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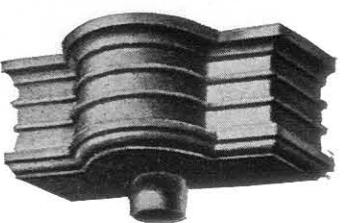
No. 163



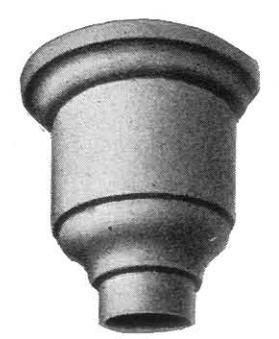
No. 168
Also No. 168B



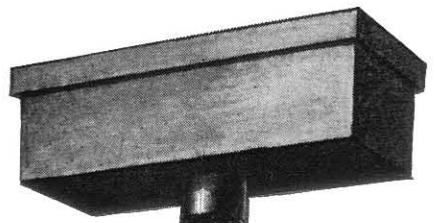
No. 170



No. 175

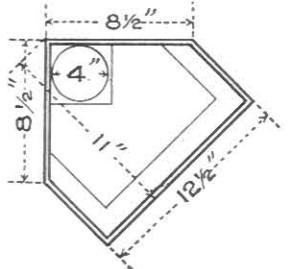


No. 188

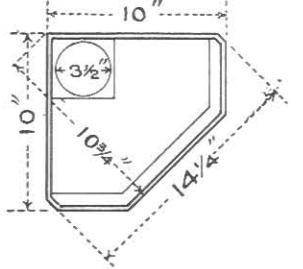


PLANS OF CORNER HEADS

No. 70
15" Deep



No. 96
16 1/2" Deep

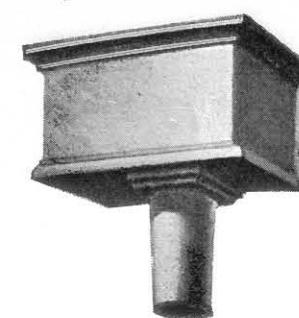


No. 195. Also No. 195A
Handed or Central

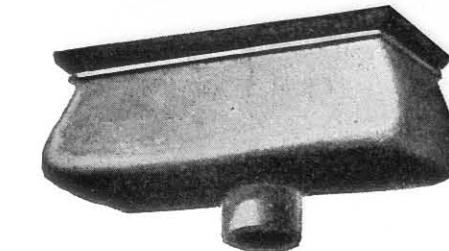


RAIN-WATER HEADS

No. 177
Also Nos. 177A, B, C
and E
(Corner Head)



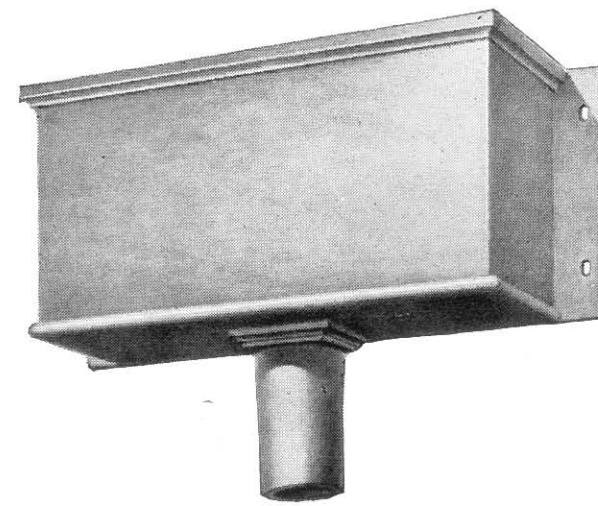
No. 196
Also Nos. 196A and B
(Handed or Central)



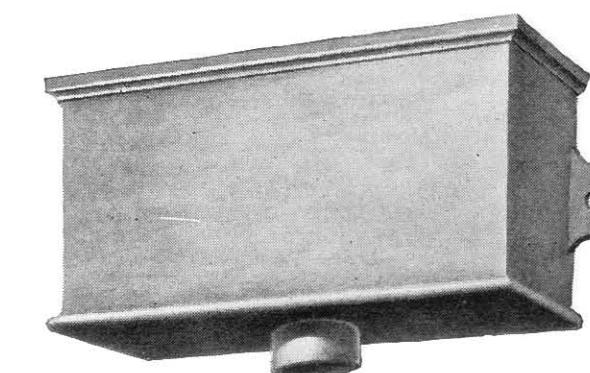
No. 201
Also Nos. 201A, C, D
and E (Corner Head)
Handed or Central



No. 177D

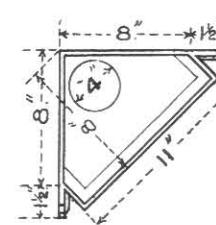


No. 201B

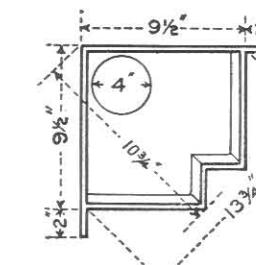


PLANS OF CORNER HEADS

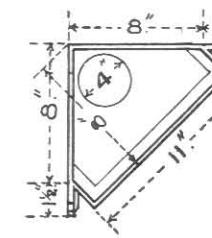
No. 177
12 1/2" Deep



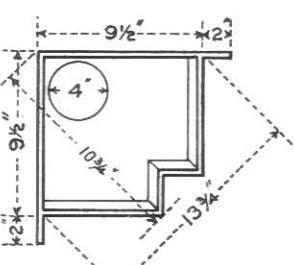
No. 177E
12 1/4" Deep



No. 201
7 1/4" Deep



No. 201E
7" Deep



SIZES (IN INCHES) OF FLAT HEADS

No.	Outlet up to	Length.	Length over Ears.	Pro-jection.	Depth of Box.	Depth (Exclusive of Outlet).
70	5	13	—	8 1/2	—	15 1/4
96	4 1/2	14	—	7 1/2	—	16 1/2
163	4	16	—	9 1/2	—	12 1/2
168	4	16	19	8	6 3/4	15 1/2
168B	6	16	19	10 1/4	6 3/4	15 1/2
170	4	15 1/4	—	9	—	6 3/4
175	4	12	—	9	—	12
188	4	18	—	6	—	6
195	3 1/2	30 1/2	—	6	6	10 1/2
195A	3 1/2	15 1/4	—	5 1/2	6	10 1/2

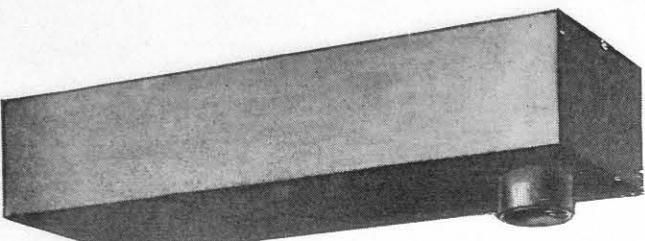
SIZES (IN INCHES) OF FLAT HEADS

No.	Outlet up to	Length.	Length over Ears.	Pro-jection.	Depth of Box.	Depth (Exclusive of Outlet).	No.	Outlet up to	Length.	Length over Ears.	Pro-jection.	Depth of Box.	Depth (Exclusive of Outlet).
177	3	11 1/4	13 1/4	6 3/4	7	12 1/4	201	3 1/2	18 1/4	22 1/4	7 1/4	6 3/4	—
177A	3 1/2	18 1/4	20 1/4	7 1/2	7 1/2	12 1/4	201A	15	11 1/4	29 1/2	9	6 3/4	7
177B	4	20	22	8	7 1/2	12 1/4	201B	6	26	14	—	—	13
177C	4	10 1/2	15 1/4	8 1/2	6	11 1/4	201C	5	10 1/2	23 1/2	8 1/2	8	6
177D	5	26	30 1/2	9	12 3/4	17 1/2	201D	5	20	—	—	—	7 1/2
196	4	12 1/2	—	7	—	6 1/2							
196A	5	18 1/2	—	7 1/2	—	9 1/2							
196B	4	24	—	7 1/2	—	—							

RAIN-WATER HEADS

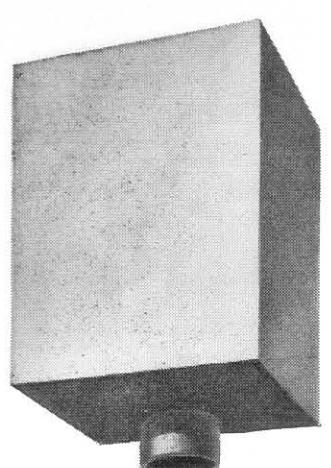
* Can be supplied without date or enrichments to order

No. 208
Also Nos. 208A, F, H
and J



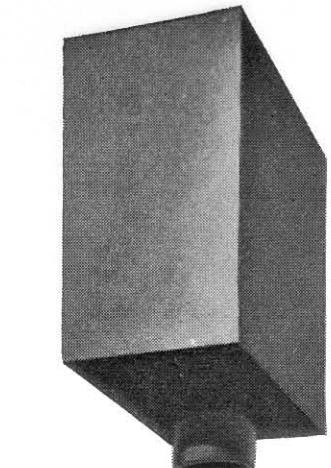
No. 210
*

No. 208C
Also Nos. 208E, K, L,
O, P and R



No. 210A
*

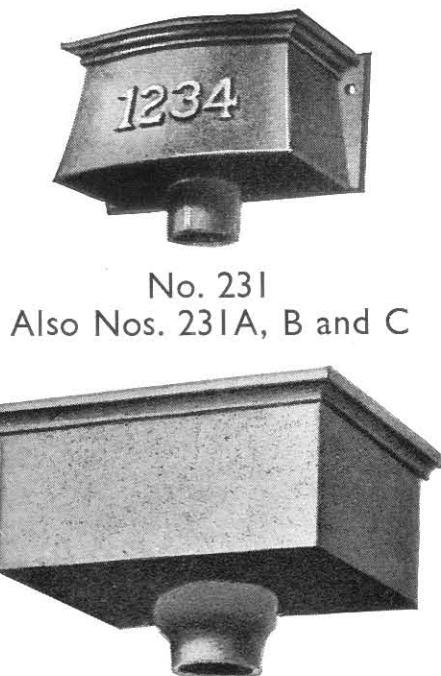
No. 208B
Also Nos. 208D, G, M,
N, Q and S



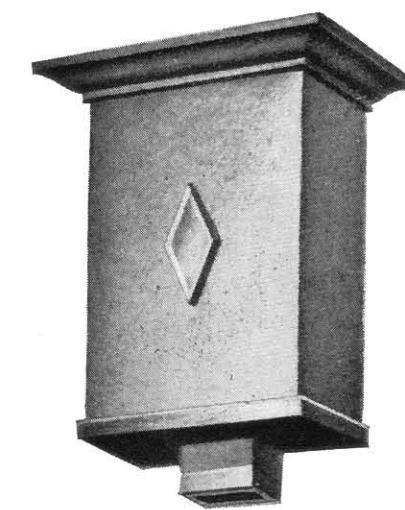
No. 216
*



Any Crest to order
No. 226
Also Nos. 226A and C
*



No. 231
Also Nos. 231A, B and C



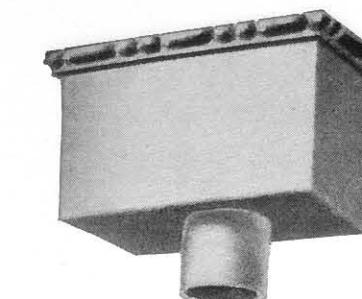
SIZES (IN INCHES) OF FLAT HEADS													
No.	Outlet up to	Length.	Length over Ears.	Pro- jection.	Depth of Box.	Depth (Exclusive of Outlet).	No.	Outlet up to	Length.	Length over Ears.	Pro- jection.	Depth of Box.	Depth (Exclusive of Outlet).
208	6	30	—	9	—	6	208P	6	15	—	12	—	18
208A	6	21	—	8½	—	9	208Q	6	12	—	15	—	18
208B	6	9	—	12	—	15	208R	6	18	—	15	—	13
208C	6	12	—	9	—	15	208S	6	15	—	18	—	13
208D	6	9	—	15	—	18	210	4½	17¾	17½	9	9	16
208E	6	15	—	9	—	18	210A	4	12½	13½	6½	7½	9½
208F	6	18	—	15	—	9	216	5	16	—	9	—	21
208G	4	8	—	9	—	8	226	4	16	19	8	—	7
208H	6	24	—	9	—	7	226A	5	16	19	10½	—	5
208J	6	18	—	9	—	7	226C	3	8½	11½	6½	—	9
208K	4	9	—	8	—	9	231	6	19½	—	13	9	9
208L	4	9	—	7	—	9	231A	6	24	—	9	9	9
208M	4	7	—	9	—	9	231B	6	24	—	11	10	10
208N	6	12	—	15	—	13	231C	6	24	—	15	12	12
208O	6	15	—	12	—	13							

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

RAIN-WATER HEADS

* Can be supplied without enrichments to order

No. 237
Also No. 237A



No. 250
*

No. 238
*

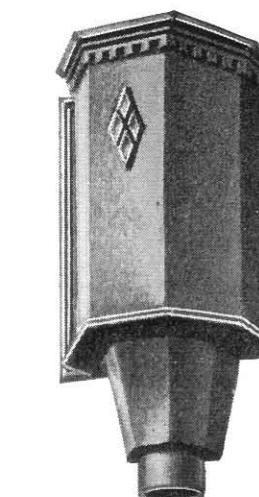


No. 246
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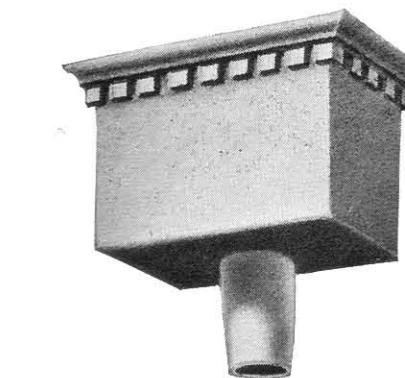
No. 239
*



No. 252
*



No. 242



SIZES (IN INCHES) OF FLAT HEADS

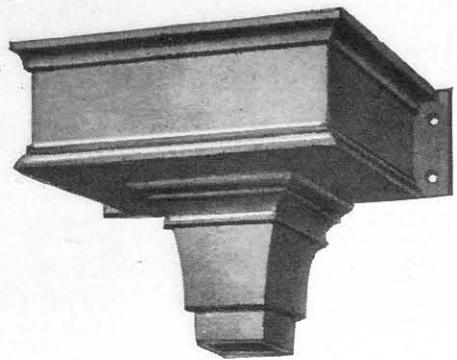
No.	Outlet up to	Length.	Length over Ears.	Pro- jection.	Depth of Box.	Depth (Exclusive of Outlet).
237	4	15	—	7	9	10
237A	4	21	—	9	14	14
238	4	18½	24	7½	8	16½
239	4	18	—	10	9	12
242	4	15	—	8½	10	14
246	6	25¾	—	9½	9	15
250	3½	11	12	7	15½	20
252	3½	10½	12	6½	15	20
256	5	20	23	8	—	8½

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

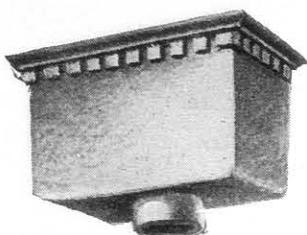
RAIN-WATER HEADS

* Can be supplied without enrichments to order

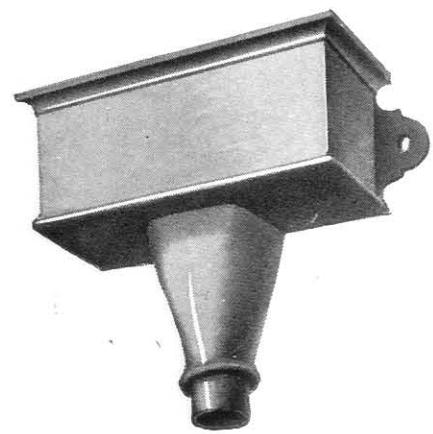
No. 258
Also No. 258A



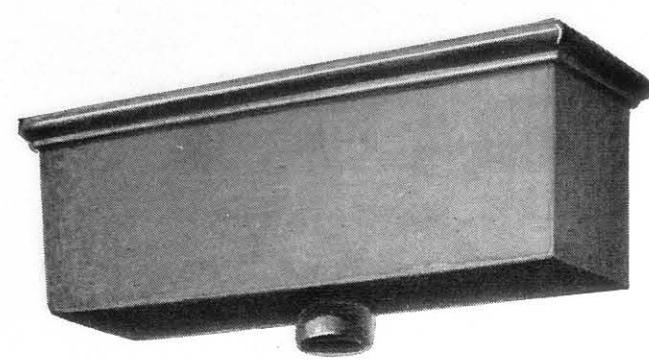
No. 271



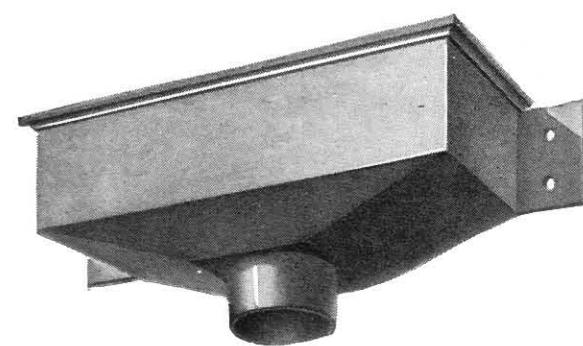
No. 275



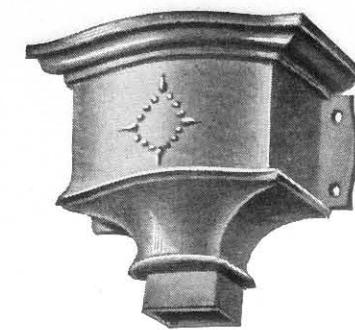
No. 268
Also Nos. 268A and B
Handed or Central



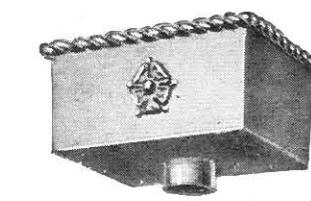
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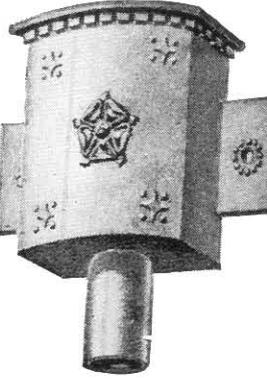
No. 267



No. 273
Also Nos. 273A and B
*



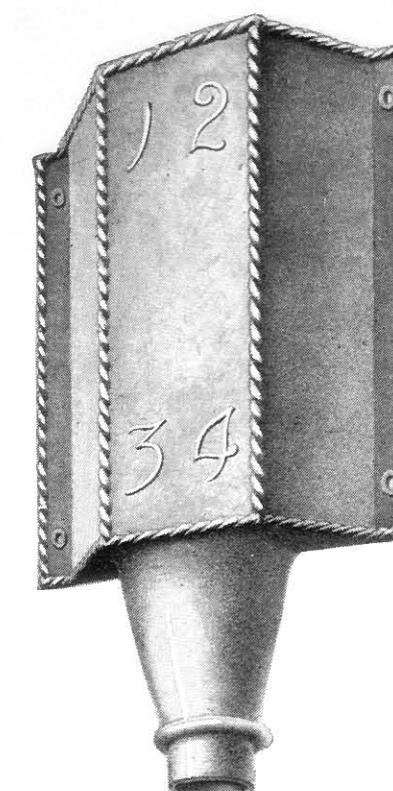
No. 281



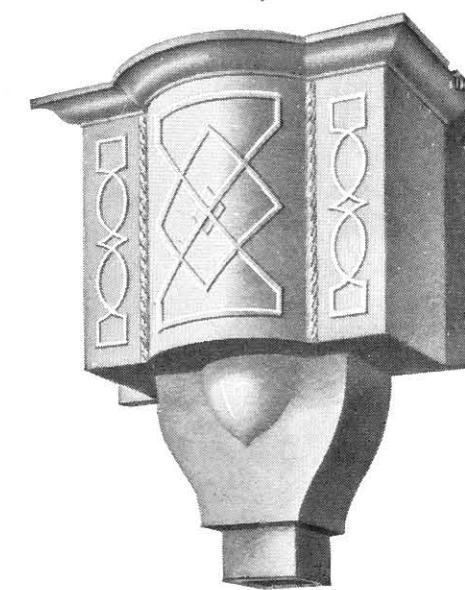
RAIN-WATER HEADS

* Can be supplied without date or enrichments to order

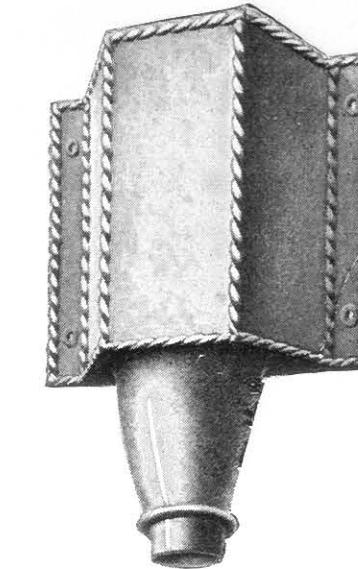
No. 283
*



No. 289
*



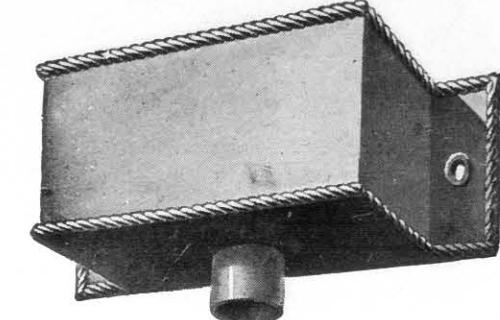
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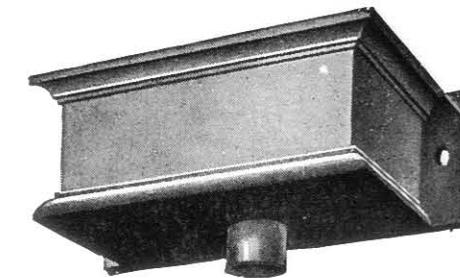
No. 290



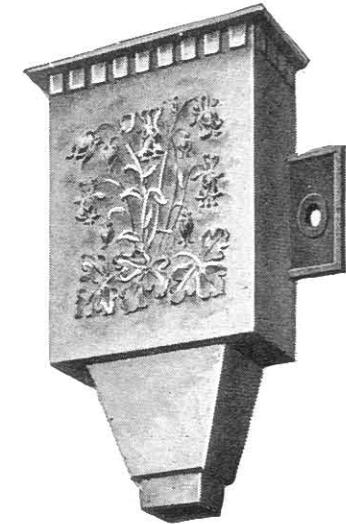
No. 285



No. 288
Also No. 288A



No. 291



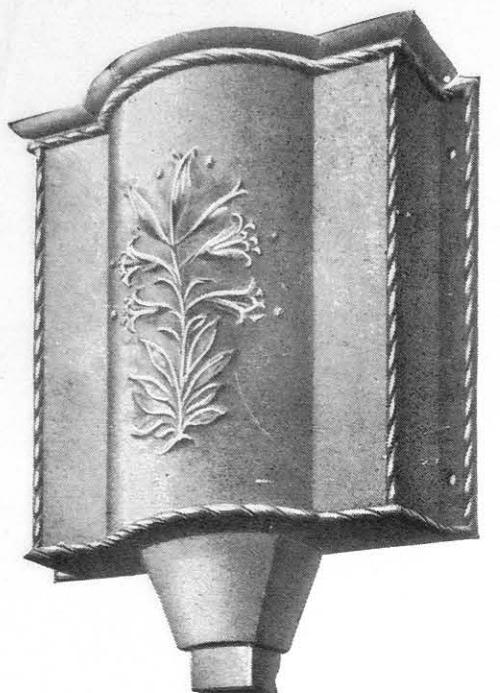
SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box	Depth (Exclusive of Outlet).
258	3½	18½	21	9½	7	14½
258A	3½	13½	14	8½	7	14½
267	4	14½	15	7	—	12
268	6	29	—	10½	—	12
268A	6	17	—	10½	—	12
268B	4½	22	—	7½	—	7
271	4	12	—	7½	—	7½
273	4	11½	—	7	—	6½
273A	4	18	—	7	—	6½
273B	4	15	—	7	—	6½
274	6	25	31	9½	—	9
275	3½	18½	22½	7½	7½	15
281	4	10½	15	7	12½	15½

SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box	Depth (Exclusive of Outlet).
283	4	18	22	9½	23	32
284	4	14	18	8½	15½	23½
285	6	18½	26	9	—	9
288	6	18½	21	9½	—	7
288A	6	13½	14	8½	—	7
289	4½	20½	22	11½	14	22
290	4	13	18	6½	7	10½
291	4 x 3	13½	18½	6½	14½	20½

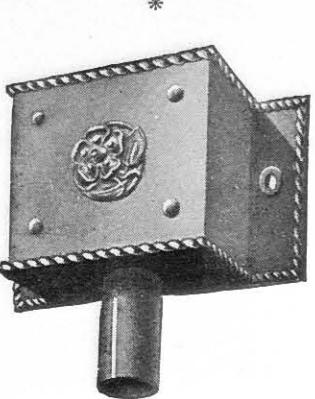
RAIN-WATER HEADS

* Can be supplied without enrichments to order

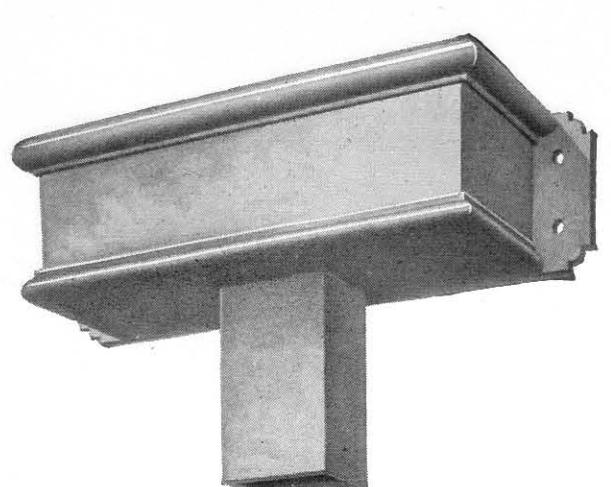
No. 292



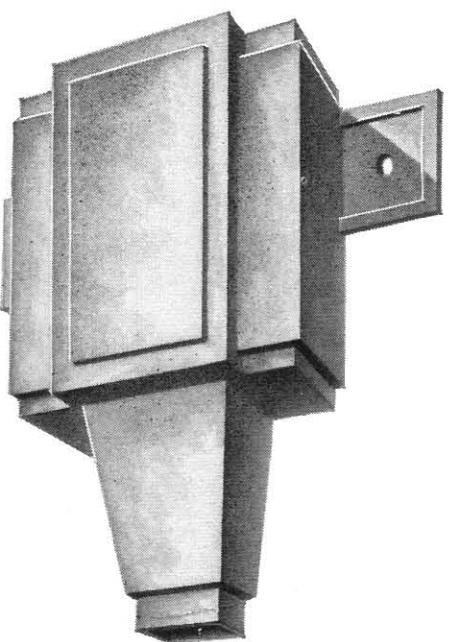
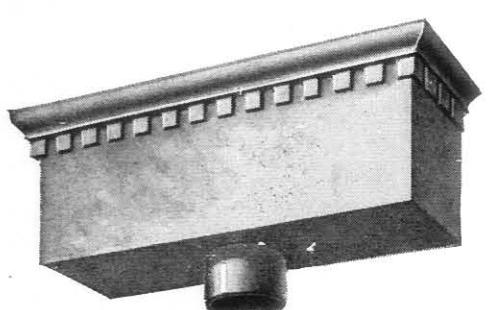
No. 294



No. 296



No. 297



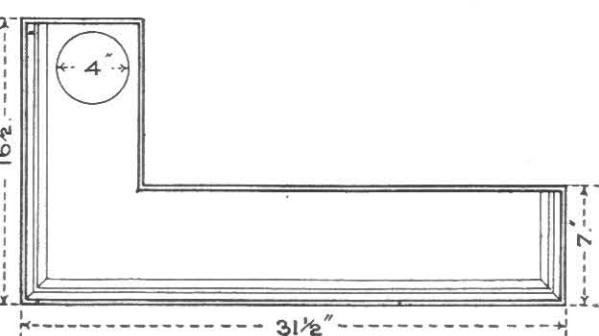
No. 298

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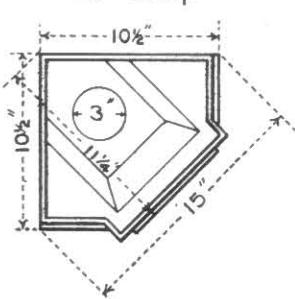
Plans of Corner Heads

No. 297
(for External Corner)

8" Deep
Right or Left Hand



No. 300A
26" Deep



SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Pro- jection.	Depth of Box.	Depth (Exclusive of Outlet).
292	4	25	27	9	23	29 1/4
294	4	12	17	6	9	12
296	6 x 4	26 1/2	30 1/2	9 1/2	8 1/4	15
297	4	24 1/2	—	7	—	8
298	4	17	22	8	—	12 1/2
300	5 x 3	15 1/2	25 1/2	10 1/2	16 1/4	26
300A	5 x 4	15 1/2	25 1/2	7 1/2	16 1/4	26

RAIN-WATER HEADS

* Can be supplied without enrichments to order

No. 304



No. 305



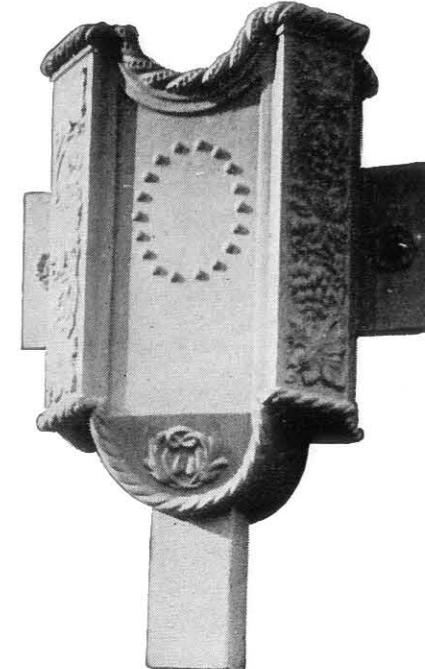
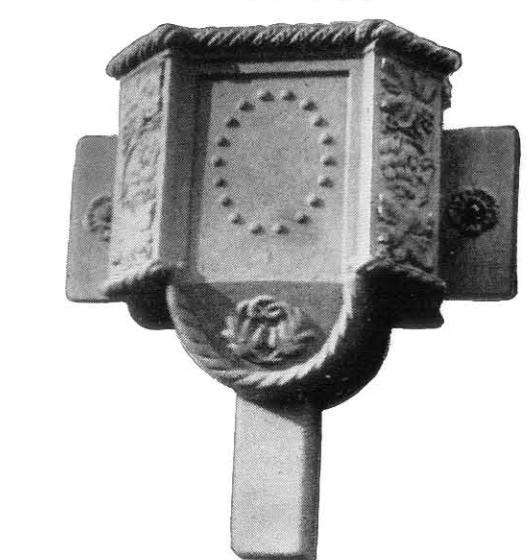
No. 306
Also No. 306A



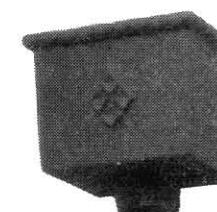
No. 307



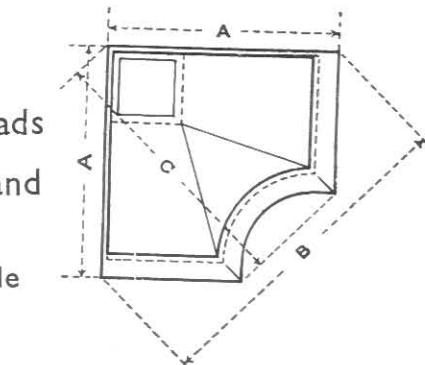
No. 313A



No. 309



Plan of
Corner Heads
Nos. 306 and
306A
Sizes in Table



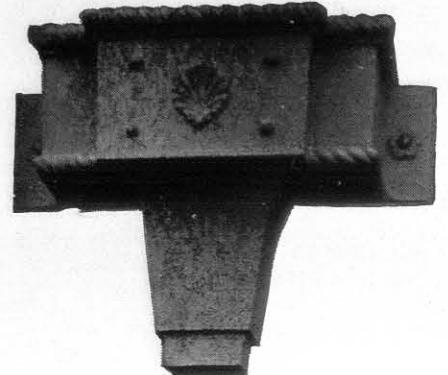
SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Pro- jection.	Depth of Box.	Depth (Exclusive of Outlet).
304	3 1/2	19	21	11 1/4	—	11
305	4	20 3/4	22	11 1/4	—	24
306	5 x 4	21	—	10 1/2	—	21 1/2
306A	4 1/2 x 3 1/2	18 1/2	—	9 1/2	—	17 3/4
307	3 1/2	13	18	6	7	13
309	2 1/2	8	—	6	—	6
313	4 x 3	15 1/4	20	7	22	26
313A	4 x 3	15 1/4	20	7	15	19

SIZES (IN INCHES)					
No.	Outlet up to	A	B	C	Depth
306	4 x 4	13 1/2	19	15 1/2	21 1/2
306A	4 x 4	12	17	14 3/4	17 3/4

RAIN-WATER HEADS

* Can be supplied without enrichments to order

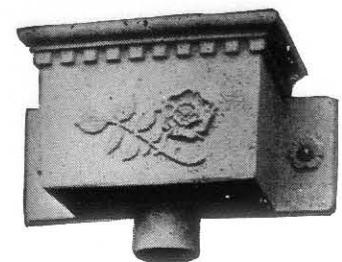
No. 314
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No. 315
*



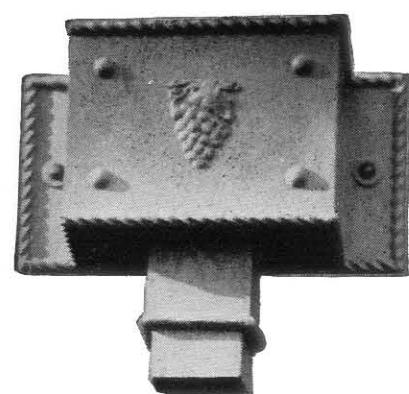
No. 316
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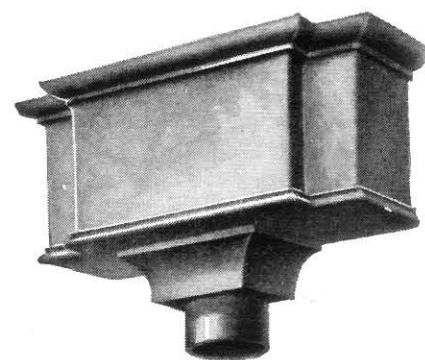
No. 317



No. 318
*



No. 319



No. 320
Also No. 320A
*

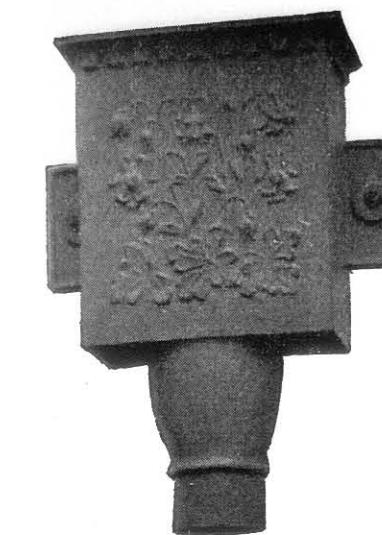


SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Pro- jection.	Depth of Box.	Depth (Exclusive of Outlet).
314	4 x 3	18	22	9	7	14 $\frac{1}{2}$
315	4 x 3	12	16	9	7	13 $\frac{1}{2}$
316	4	12	15	7 $\frac{1}{2}$	—	7 $\frac{1}{2}$
317	4	15	17	10 $\frac{1}{2}$	9	14 $\frac{1}{2}$
318	4	12	17	6	9	12 $\frac{1}{2}$
319	4	20	—	8	8 $\frac{3}{4}$	11 $\frac{1}{2}$
320	4	12	17	6	—	15 $\frac{1}{2}$
320A	3	10	15 $\frac{1}{4}$	5	—	13

RAIN-WATER HEADS

* Can be supplied without enrichments to order

No. 321



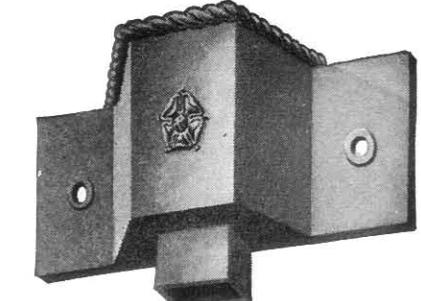
No. 322



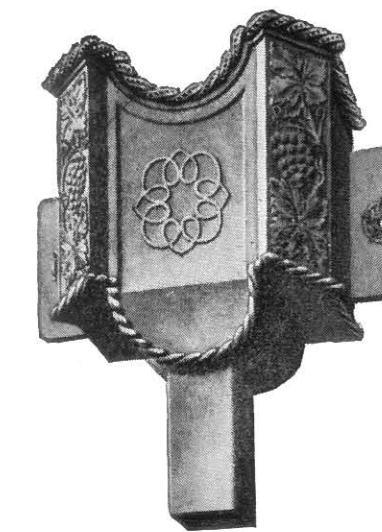
No. 323



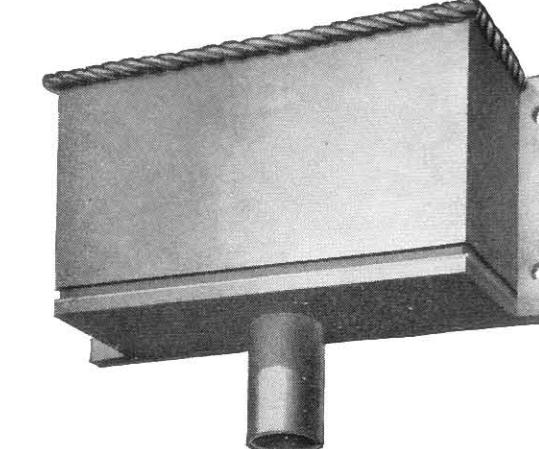
No. 328
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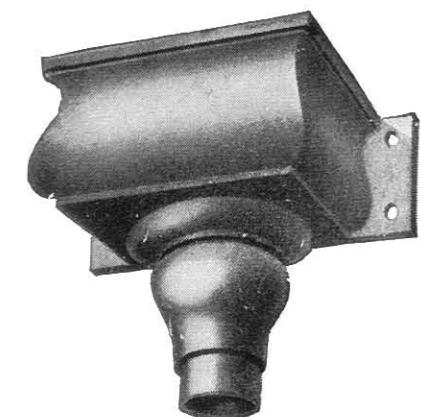
No. 325



No. 326



Also No. 326A



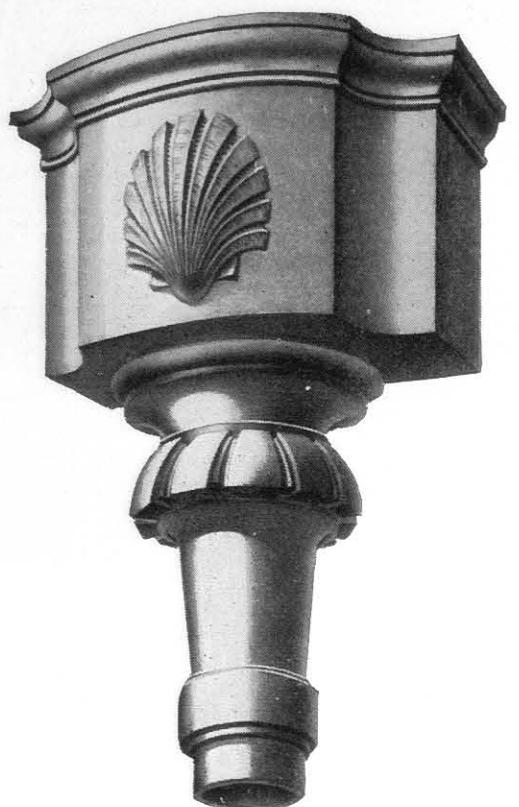
No. 329
Also No. 329A

SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Pro- jection.	Depth of Box.	Depth (Exclusive of Outlet).
321	4	13 $\frac{3}{4}$	18 $\frac{1}{4}$	6 $\frac{1}{4}$	14 $\frac{1}{2}$	20 $\frac{1}{2}$
322	4	20	23	9	11 $\frac{1}{2}$	19
323	4	20	23	9	—	11
325	4 x 3	15 $\frac{1}{4}$	20	7	15 $\frac{3}{4}$	19
326	5	24 $\frac{1}{4}$	29	7 $\frac{3}{4}$	12 $\frac{1}{4}$	15 $\frac{3}{4}$
326A	5	15	20	7 $\frac{3}{4}$	7	10 $\frac{3}{4}$
328	4 x 3	11	21	6	—	9
329	4	14	18 $\frac{1}{4}$	11	6 $\frac{3}{4}$	15
329A	4	14	18 $\frac{1}{4}$	9 $\frac{3}{4}$	6 $\frac{3}{4}$	15

RAIN-WATER HEADS

* Can be supplied without enrichments to order

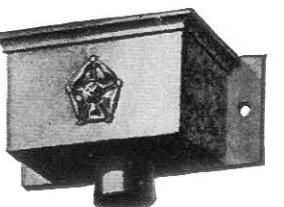
No. 330
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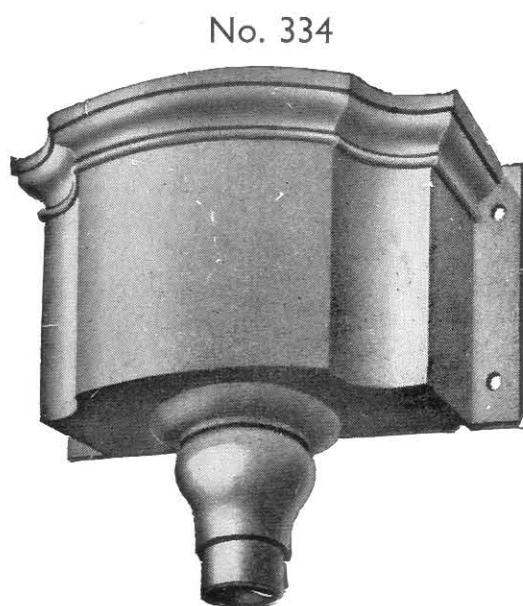
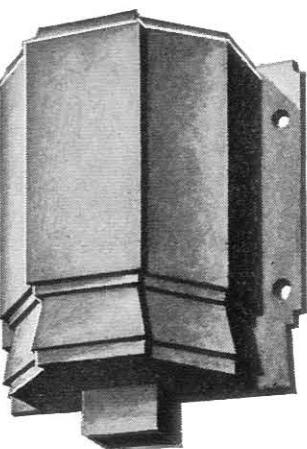
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Also No. 331A



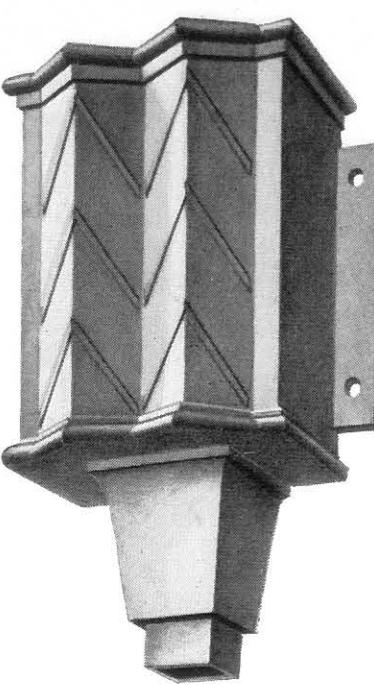
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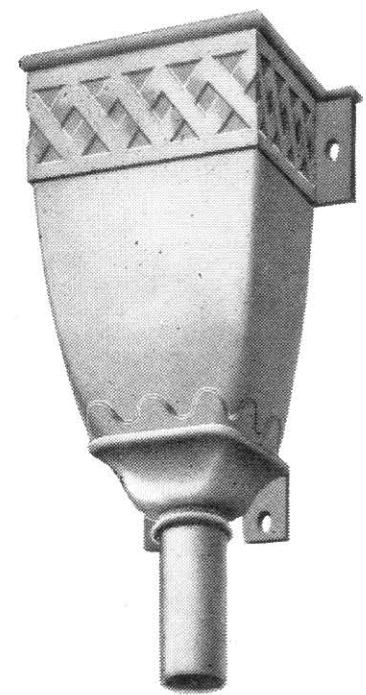
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No. 332



No. 337

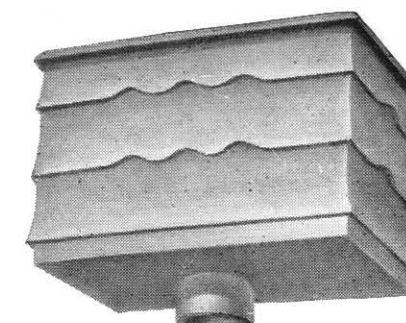


RAIN-WATER HEADS

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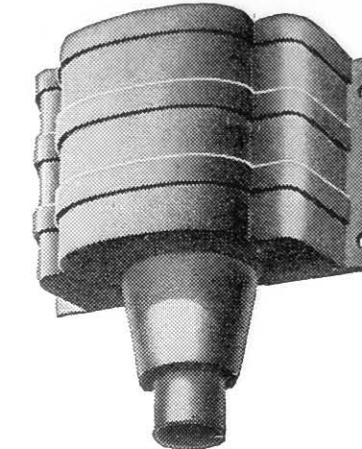
No. 338
Also Nos. 338A, B, C,
D and E



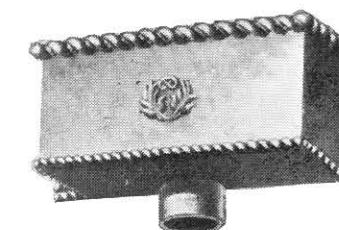
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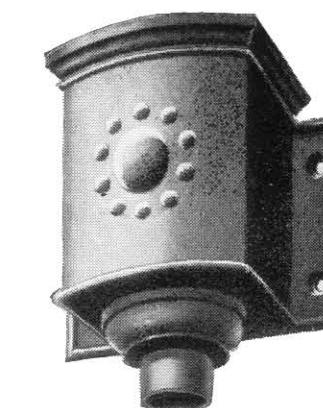
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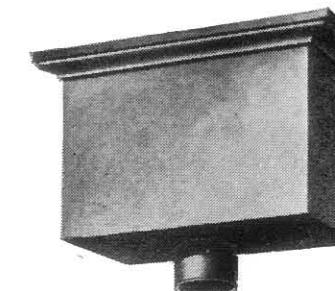
No. 344
Also No. 344B
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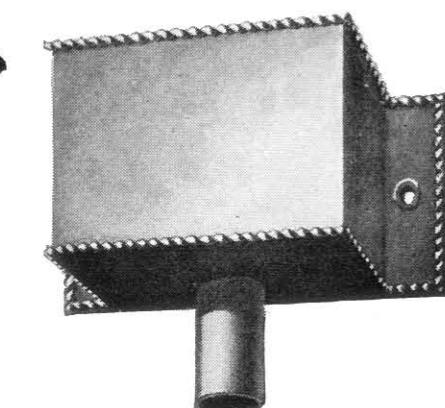
No. 345



No. 347



No. 348



SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box.	Depth (Exclusive of Outlet).
330	6	24	—	12 $\frac{1}{4}$	13 $\frac{3}{4}$	30 $\frac{1}{4}$
331	3 $\frac{1}{2}$	10	12	9	—	7
331A	3 $\frac{1}{2}$	10	12	7 $\frac{1}{2}$	—	7
332	4 x 4	15 $\frac{1}{2}$	18 $\frac{1}{4}$	8 $\frac{1}{2}$	18 $\frac{1}{2}$	27
334	4	24	27	12 $\frac{1}{4}$	12 $\frac{1}{2}$	21 $\frac{1}{4}$
335	4 $\frac{1}{2}$	10	12 $\frac{1}{2}$	7	—	5 $\frac{1}{2}$
335A	5	15	18	8	—	8
335B	6	12 $\frac{1}{2}$	15 $\frac{1}{2}$	9 $\frac{1}{2}$	—	6
336	4 x 4	12	16 $\frac{1}{4}$	7 $\frac{1}{2}$	—	16
337	4	13 $\frac{1}{4}$	17 $\frac{1}{2}$	9	—	28

No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box.	Depth (Exclusive of Outlet).
338	6	15 $\frac{1}{2}$	—	—	9	10 $\frac{1}{2}$
338A	4	12 $\frac{1}{2}$	—	—	7 $\frac{1}{4}$	8 $\frac{1}{2}$
338B	4	8	—	—	8 $\frac{1}{4}$	15 $\frac{1}{2}$
338C	6	42	—	—	9	10 $\frac{1}{2}$
338D	6	30	—	—	9	10 $\frac{1}{2}$
338E	6	24	—	—	9	10 $\frac{1}{2}$
339	3	11 $\frac{1}{2}$	15 $\frac{1}{2}$	6 $\frac{1}{4}$	10 $\frac{1}{4}$	15
340	4	15 $\frac{1}{2}$	19 $\frac{1}{2}$	8	10	16
344	4	11 $\frac{1}{4}$	13 $\frac{3}{4}$	7	—	6 $\frac{1}{4}$
344B	4	15	17	7	—	6 $\frac{1}{4}$
345	4	10 $\frac{1}{2}$	16	9 $\frac{1}{2}$	11	13 $\frac{3}{4}$
347	3	15 $\frac{1}{2}$	—	6 $\frac{1}{4}$	11	9
348	5	15	20	8	10 $\frac{1}{4}$	13

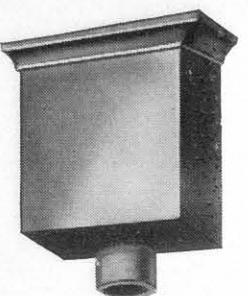
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

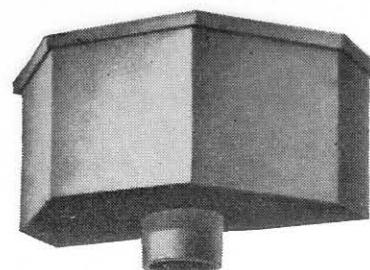
RAIN-WATER HEADS

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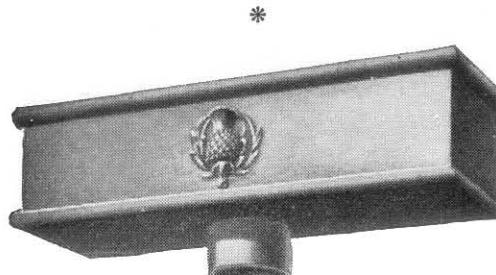
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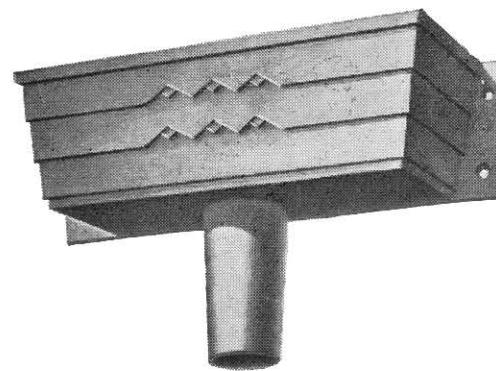
No. 354



No. 355
Also Nos. 355A and B

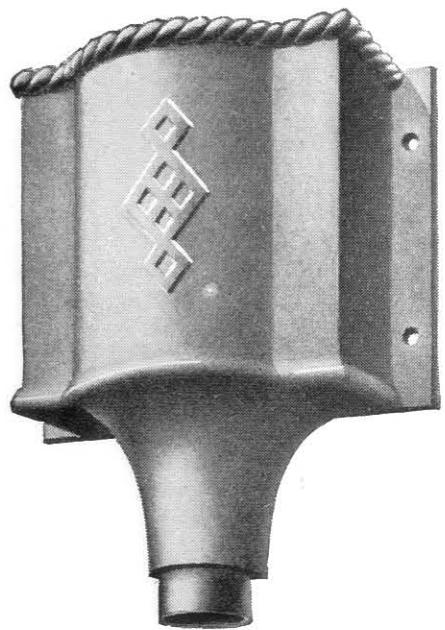


No. 358
Also No. 358A

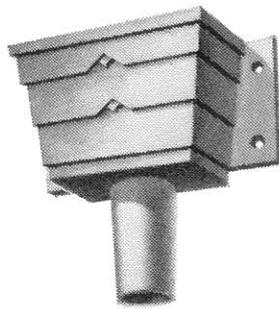


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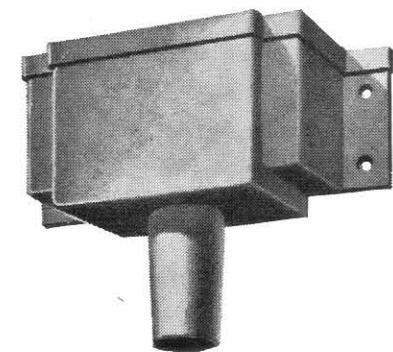
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No. 357



No. 359

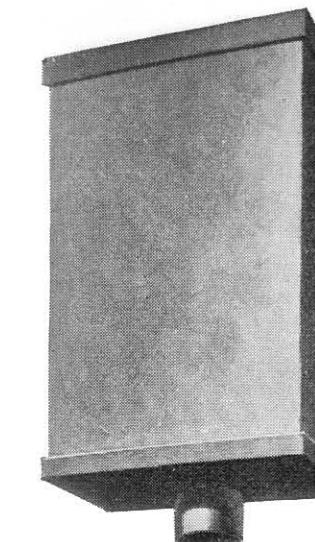


RAIN-WATER HEADS

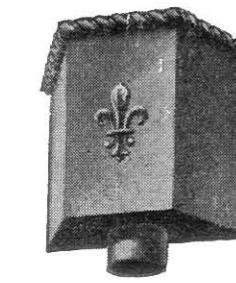
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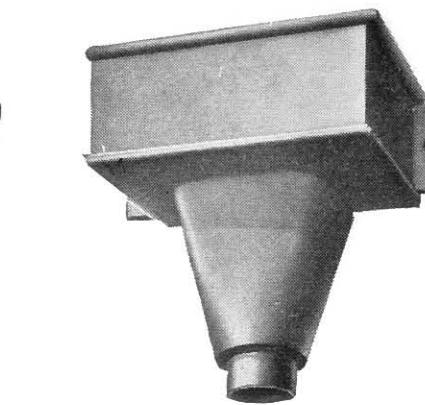
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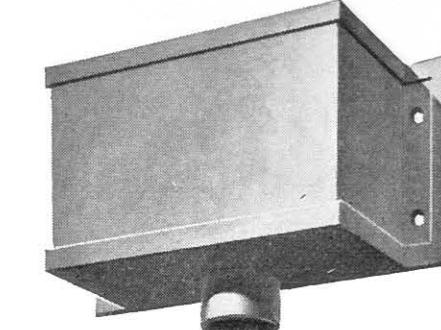
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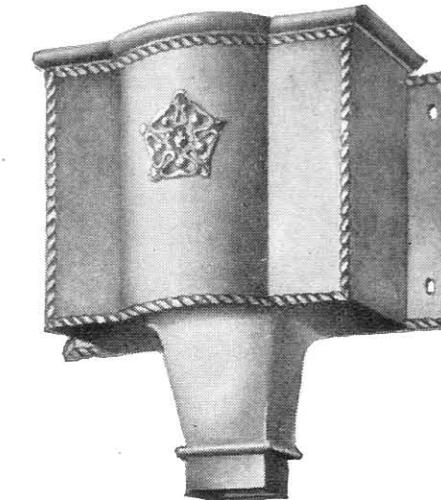
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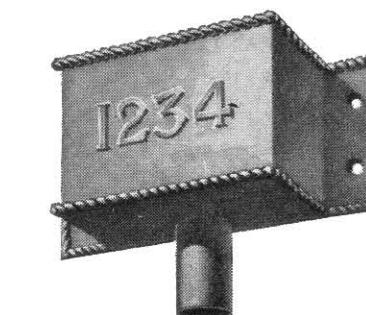
No. 365
Also No. 365A



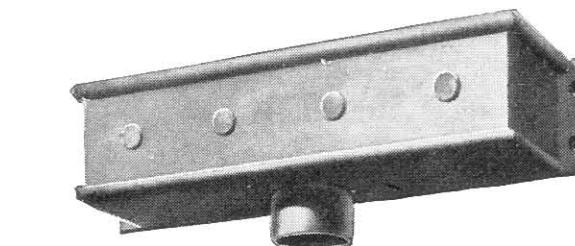
No. 375
Also No. 375A



No. 367A

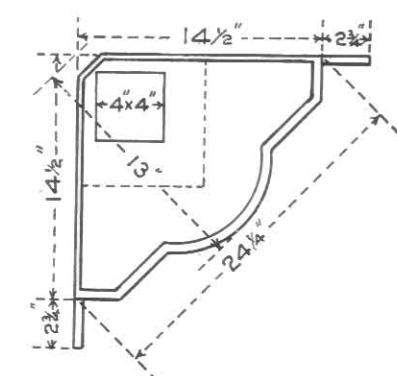


No. 372
Also No. 372A



Plan of Corner Head
No. 375

22 $\frac{1}{2}$ " deep



SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box.	Depth (Exclusive of Outlet).
352A	3 $\frac{1}{2}$	12	—	6	—	12
354	6	18	—	9	—	8
355	3 $\frac{1}{2}$	24	—	6	—	6
355A	3 $\frac{1}{2}$	18	—	6	—	6
355B	3 $\frac{1}{2}$	12	—	6	—	6
356	3 $\frac{1}{2}$	18	21 $\frac{1}{2}$	8 $\frac{1}{2}$	16 $\frac{1}{4}$	24 $\frac{1}{4}$
357	3	10	13	6	7	11
358	3 $\frac{1}{2}$	21 $\frac{1}{2}$	25	7	7	12
358A	3 $\frac{1}{2}$	29 $\frac{3}{4}$	33 $\frac{1}{4}$	7	7	12
359	3 $\frac{1}{2}$	14 $\frac{1}{2}$	19 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$	12 $\frac{1}{2}$

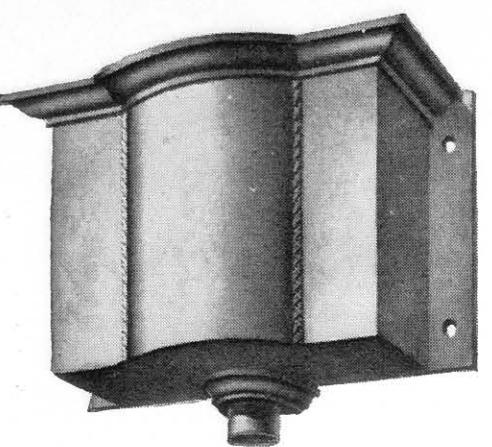
SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box.	Depth (Exclusive of Outlet).
362	5	13	—	7 $\frac{1}{2}$	—	19 $\frac{1}{2}$
363	3	11 $\frac{3}{4}$	—	7 $\frac{1}{2}$	—	9
364	4	15	18	9 $\frac{1}{4}$	6	14
365	6	15	20 $\frac{1}{4}$	9	—	10
365A	6	18	25	10	—	12
367A	4	12	18	6 $\frac{1}{2}$	7 $\frac{1}{2}$	11
372	4	24	26 $\frac{1}{4}$	6	—	6
372A	4	18	20 $\frac{1}{2}$	6	—	6
375	5 x 4	18	22 $\frac{1}{2}$	9	14	23
375A	5 x 4	15	19 $\frac{3}{4}$	7 $\frac{3}{4}$	12	20

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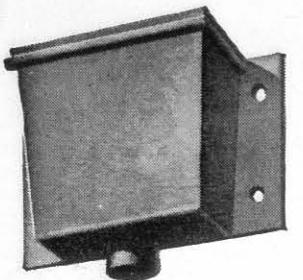
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

RAIN-WATER HEADS

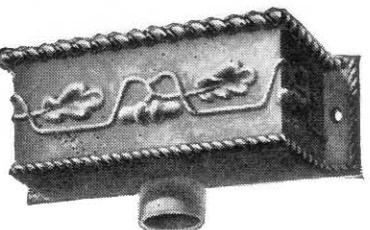
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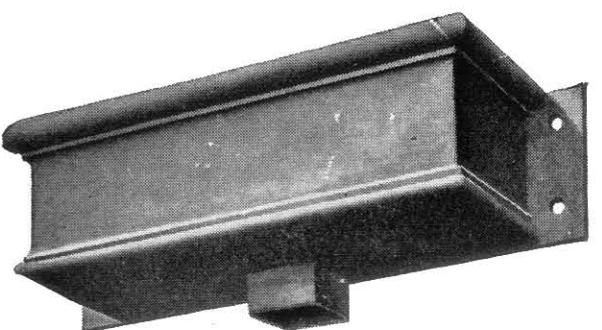
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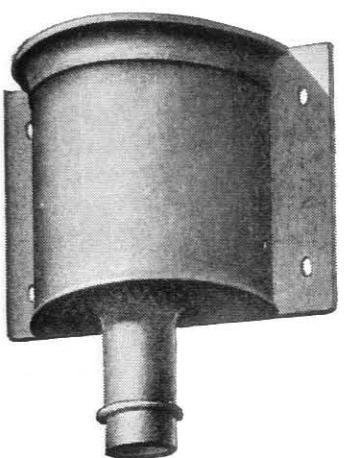
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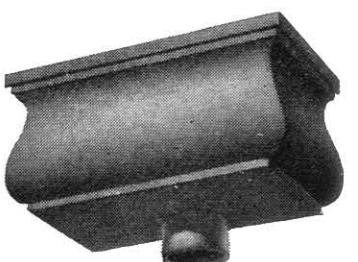
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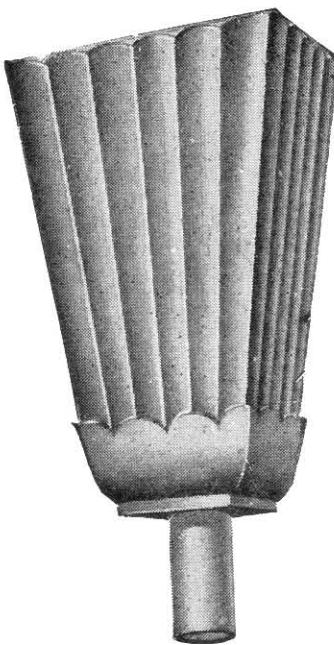
No. 386



No. 391
Also No. 391A



No. 390

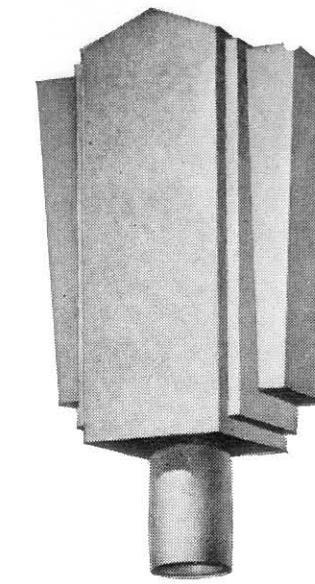


RAIN-WATER HEADS

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No. 392



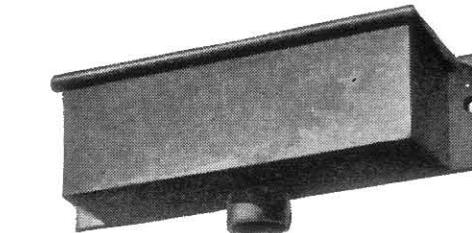
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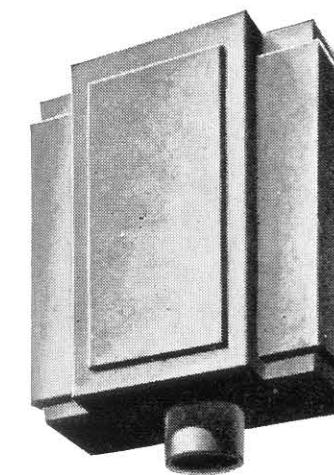
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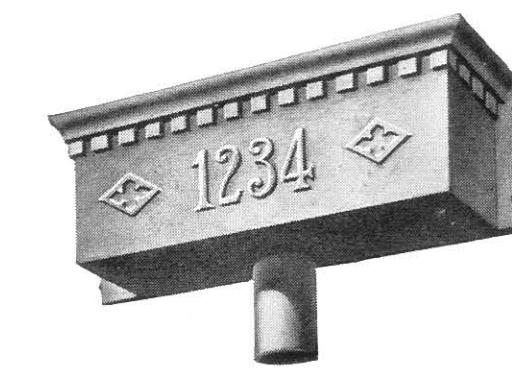
No. 394
Also Nos. 394A, B, C and D



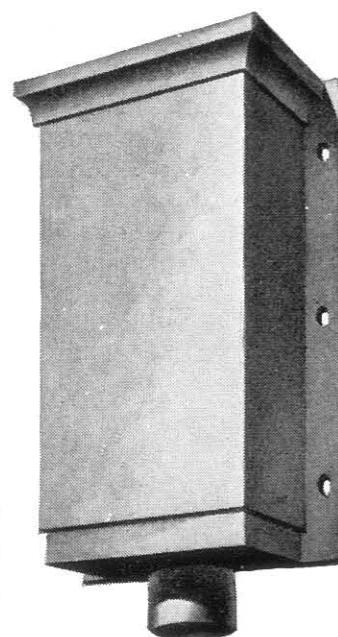
No. 397
Also No. 397A



No. 398
*



No. 400



SIZES (IN INCHES) OF FLAT HEADS

No.	Outlet up to	Length.	Length over Ears.	Projection.	Depth of Box.	Depth (Exclusive of Outlet).
376	3	10	13 $\frac{1}{2}$	5 $\frac{1}{2}$	—	9
377	2 $\frac{1}{2}$	20 $\frac{3}{4}$	22	11 $\frac{1}{4}$	14	16
385	4	15	17	7	—	6 $\frac{1}{4}$
386	3 $\frac{1}{2}$	13 $\frac{1}{2}$	18	8	13	18 $\frac{1}{2}$
388	6	26 $\frac{1}{2}$	30 $\frac{1}{2}$	9 $\frac{1}{2}$	—	8 $\frac{1}{4}$
390	4 $\frac{1}{2}$	13 $\frac{1}{2}$	—	9	21	24 $\frac{1}{2}$
391	6	14	—	11	—	7
391A	6	14	—	9 $\frac{3}{4}$	—	7
392	6	14	—	—	8	23 $\frac{1}{2}$
394	6	24	30	—	6	9 $\frac{1}{2}$
394A	6	21	27	—	6	9 $\frac{1}{2}$
394B	6	18	24	—	6	9 $\frac{1}{2}$
394C	6	15	21	—	6	9 $\frac{1}{2}$
394D	6	12	18	—	6	9 $\frac{1}{2}$
396	3 $\frac{1}{2}$	24	—	—	6	—
396A	3 $\frac{1}{2}$	18	—	—	—	6
397	6	15 $\frac{1}{2}$	—	—	10 $\frac{3}{4}$	16 $\frac{3}{4}$
397A	4	15 $\frac{1}{2}$	—	—	7 $\frac{1}{2}$	16 $\frac{3}{4}$
398	4 $\frac{1}{2}$	24 $\frac{1}{2}$	28 $\frac{1}{2}$	7	8	10 $\frac{1}{4}$
399	4	19	24 $\frac{1}{2}$	10 $\frac{1}{4}$	10	18 $\frac{1}{2}$
400	6	12	14	9	—	24

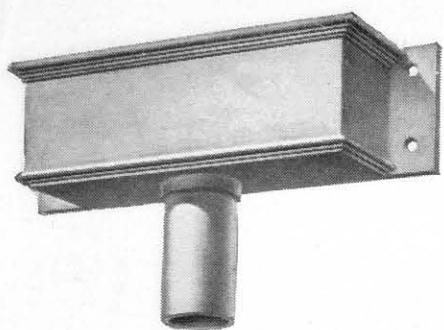
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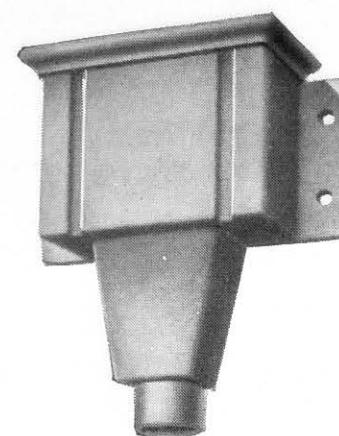
RAIN-WATER HEADS

No. 401

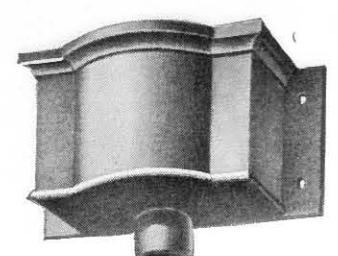
Also Nos. 401A, B, C and D



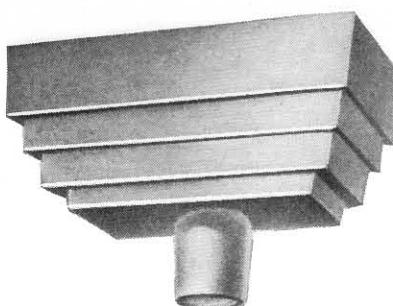
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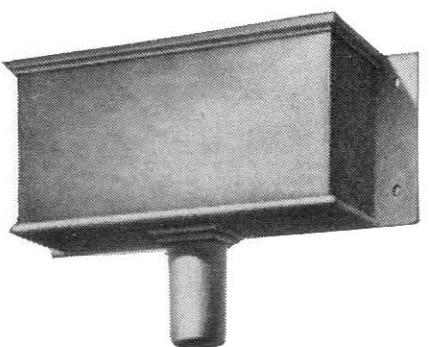
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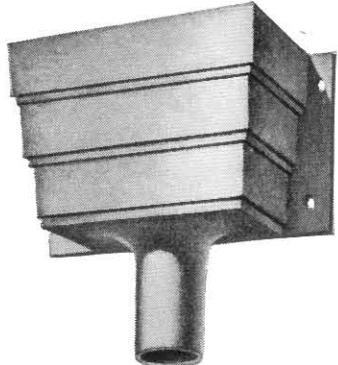
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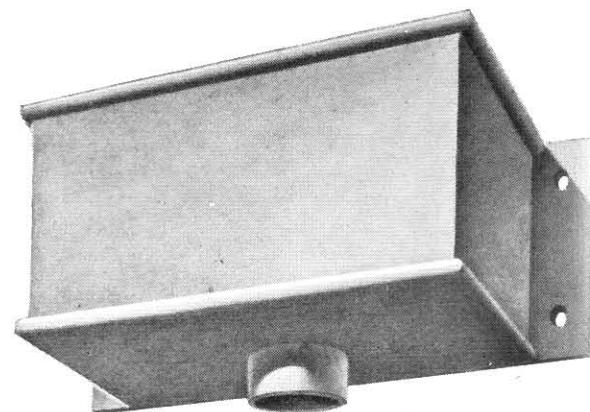
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No. 414

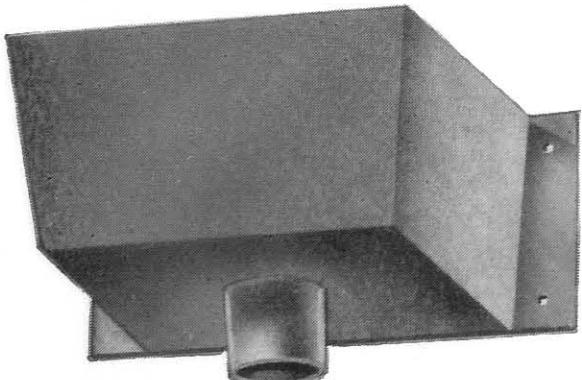


No. 417



No. 424

Also No. 424A

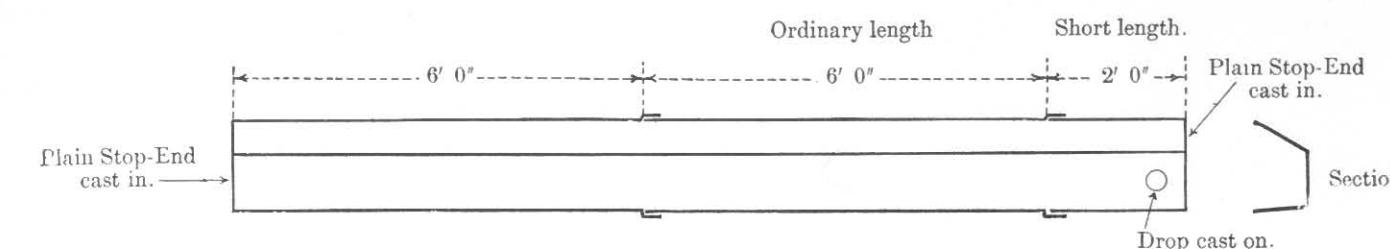


SIZES (IN INCHES) OF FLAT HEADS						
No.	Outlet up to	Length.	Length over Ears.	Pro-jection.	Depth of Box.	Depth (Exclusive of Outlet).
401	4 $\frac{1}{2}$	18 $\frac{1}{2}$	23	6 $\frac{1}{2}$	6	10 $\frac{1}{2}$
401A	4 $\frac{1}{2}$	10 $\frac{3}{4}$	15 $\frac{1}{4}$	6 $\frac{1}{2}$	6	10 $\frac{1}{2}$
401B	4 $\frac{1}{2}$	21	25 $\frac{1}{2}$	6 $\frac{1}{2}$	6	10 $\frac{1}{2}$
401C	6	18 $\frac{1}{2}$	23	8	6	10 $\frac{1}{2}$
401D	3	7 $\frac{1}{2}$	12	6 $\frac{1}{2}$	6	10 $\frac{1}{2}$
402	4	13 $\frac{1}{4}$	16 $\frac{1}{2}$	7	10	18
405	4	12	14 $\frac{1}{2}$	7	—	7
406	4	18	—	8	8 $\frac{1}{2}$	10 $\frac{1}{2}$
408	3	18	22 $\frac{1}{2}$	6	7	12
414	4	12	15 $\frac{1}{2}$	8	9 $\frac{1}{4}$	12 $\frac{3}{4}$
417	6	24	30	12	—	6
424	6	26	30	13	—	12
424A	6	18	22	13	—	12

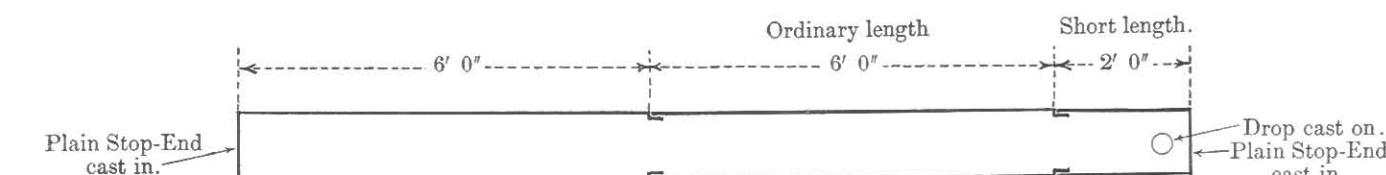
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PLANS OF CAST-IRON GUTTERS AND CONNECTIONS TO ASSIST IN ORDERING

TYPICAL STRETCH OF No. 24 BOUNDARY WALL GUTTER,
with outside joints on right hand.

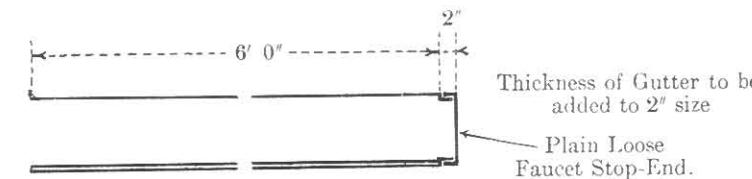


TYPICAL STRETCH OF ORNAMENTAL GUTTER,
with inside joints on right hand.
Front of gutter is denoted by double lines.

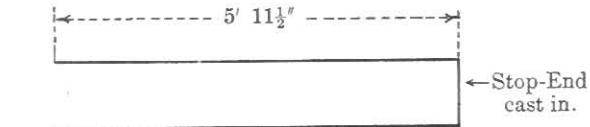


The effective length of gutters is intended to be 6' 0" but this size may vary from $\frac{1}{16}$ " to $\frac{1}{8}$ " either way and exact lengths can be obtained only from the castings laid in position.

ORDINARY LENGTH WITH LOOSE STOP-END



LENGTH WITHOUT INSIDE OR OUTSIDE JOINTS.



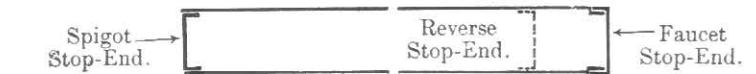
PLAIN STOP-ENDS

For Equal-Sided Gutters (as Nos 1 and 2).



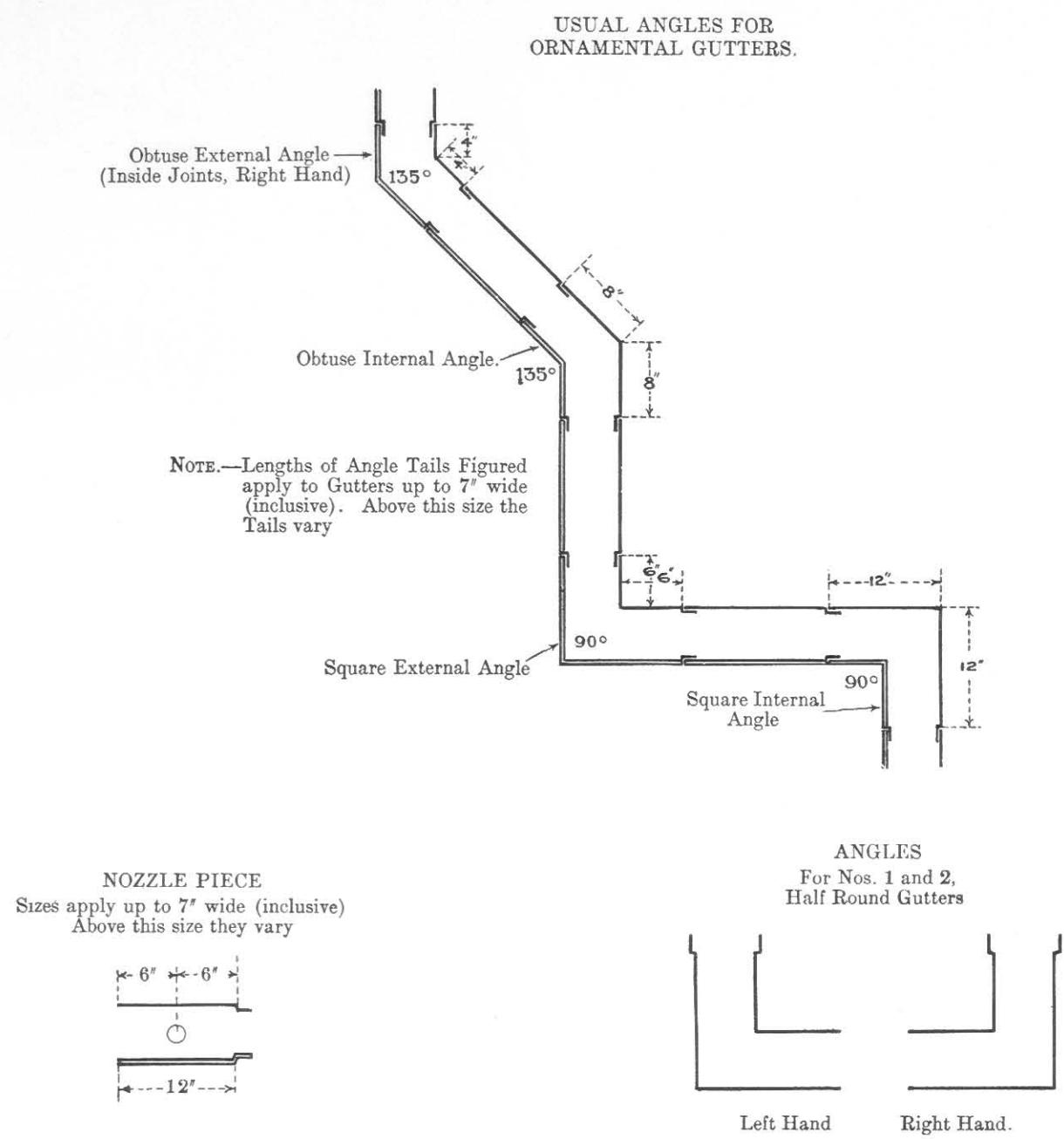
PLAIN STOP-ENDS

For Unequal-Sided Gutters (as Usual Ornamental Patterns).



LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

PLANS OF CAST-IRON GUTTERS AND CONNECTIONS TO ASSIST IN ORDERING



GENERAL RULES

ORNAMENTAL GUTTERS have inside joints on right hand looking at front of gutter.

No. 3 O.G. GUTTERS have outside joints on right hand looking at front.

ORDINARY HALF-ROUND GUTTERS have outside joints.

BOUNDARY-WALL GUTTERS (as No. 24) have outside joints on right hand looking at upright side.

UNEQUAL-SIDED GUTTERS (as No. 35) have outside joints on right hand looking at steep side.

GUTTERS up to about 6" x 5" have one bolt hole at joint; from 6" x 5" to about 14" x 6", two bolt holes; above 14" x 6", three bolt holes.

For GUTTERS up to about 12" x 6", bolts for joints are $\frac{1}{4}$ " diam. x $\frac{3}{4}$ ", 1" or $1\frac{1}{4}$ " long, according to thickness, and above 12" x 6", $\frac{3}{8}$ " diam. x $1\frac{1}{4}$ " or $1\frac{1}{2}$ " long.

The above rules are only general, and each set of sections has a few exceptions

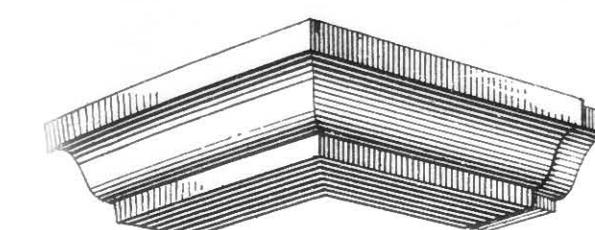
The term "Faucet" always applies to wider end.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

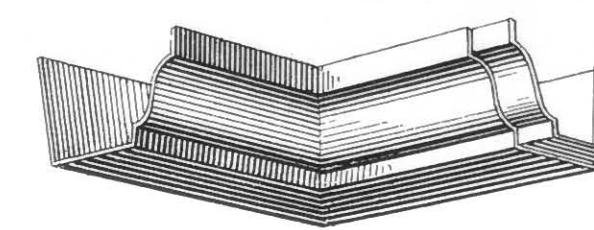
ORNAMENTAL GUTTER CONNECTIONS

These can be supplied to suit most of the Gutters shown in Catalogue

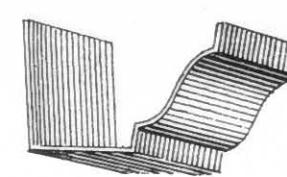
External Angle



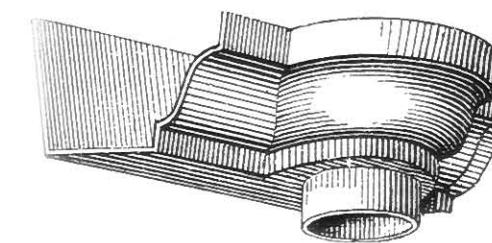
Internal Angle



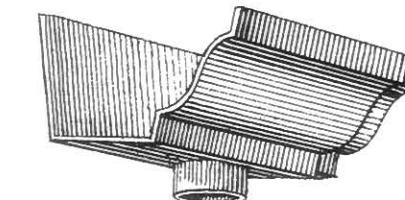
Union Clip



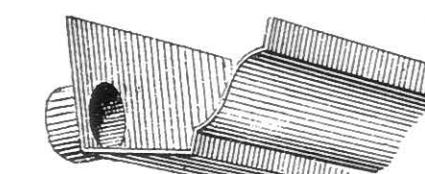
Projecting Nozzle Piece



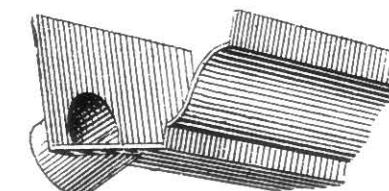
Nozzle Piece



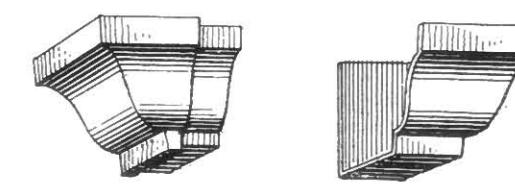
Drop Cast-on Back



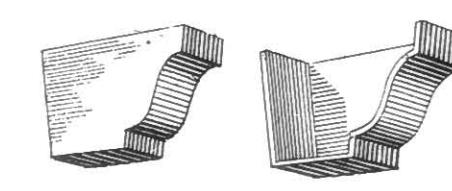
Drop Cast-on Corner



Ornamental Stop-Ends



Plain Stop-Ends

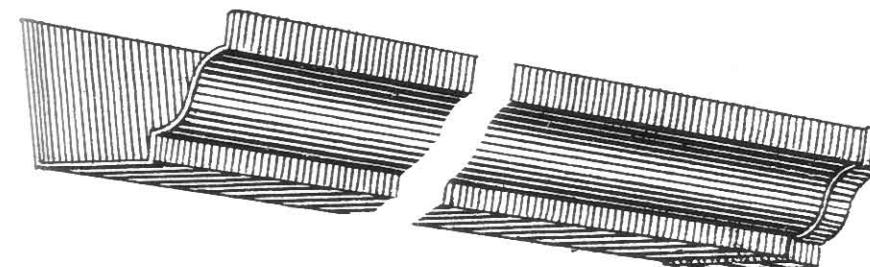


Above Connections are shown with Inside Joints at Right Hand

TYPICAL ORNAMENTAL GUTTERS

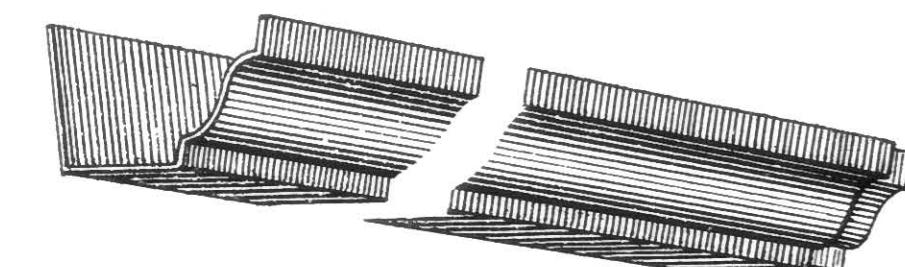
6' 0" Joint to Joint

With Outside Joints at Right Hand



Outside Joints give an uninterrupted water-way

With Inside Joints at Right Hand



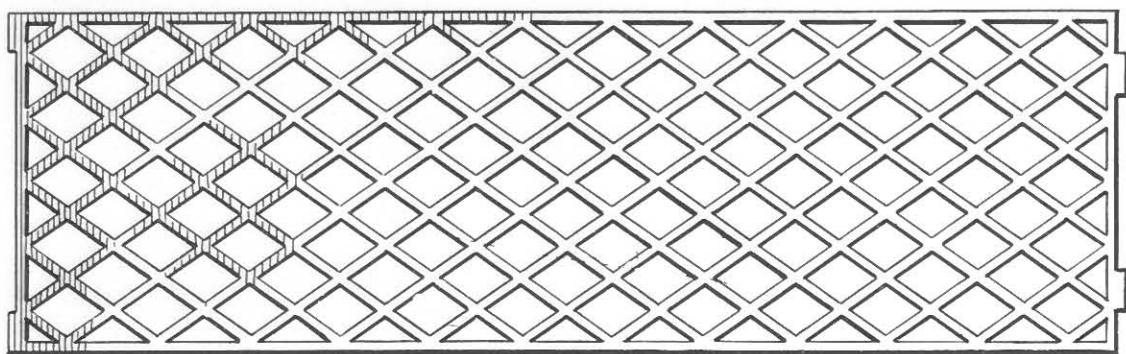
Inside Joints give, on the outside, an unbroken moulding

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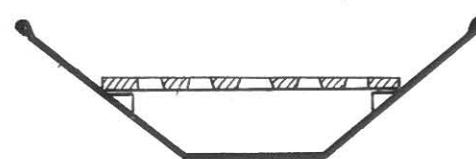
GUTTER GRATINGS

No. 136

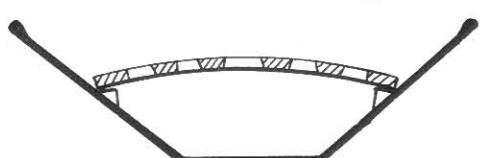
Snow Gratings
for Boundary-Wall and Valley Gutters



Flat Grating



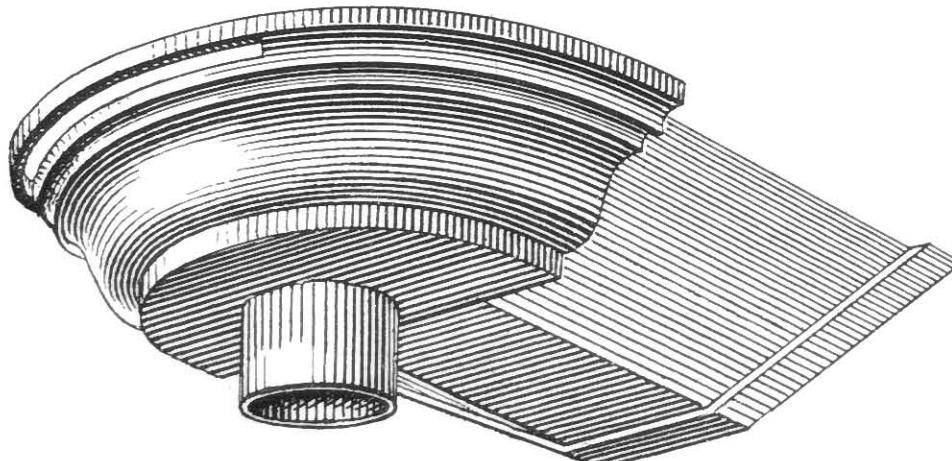
Cambered Grating



SIZES

Width	Thickness	Length	Width	Thickness	Length
$6\frac{3}{4}''$	$\frac{5}{16}''$	$3' 10\frac{1}{4}''$	$14''$	$\frac{5}{16}''$	$4' 0''$
$8''$	$\frac{5}{16}''$	$3' 11''$	$15''$	$\frac{1}{2}''$	$4' 0''$
$9''$	$\frac{5}{16}''$	$3' 11''$	$16''$	$\frac{1}{4}''$	$4' 0''$
$10''$	$\frac{5}{16}''$	$4' 0''$	$16\frac{1}{2}''$	$\frac{1}{2}''$	$4' 0''$
$11''$	$\frac{5}{16}''$	$3' 11''$	$18\frac{3}{4}''$	$\frac{5}{16}''$	$4' 0''$
$11''$	$\frac{3}{8}''$	$4' 0''$	$24''$	$\frac{1}{2}''$	$3' 1\frac{1}{2}''$
$13''$	$\frac{5}{16}''$	$4' 0''$			
$13\frac{1}{4}''$	$\frac{1}{2}''$	$4' 0''$			

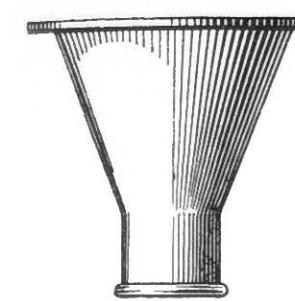
Ornamental Nozzle-End
for Valley Gutter



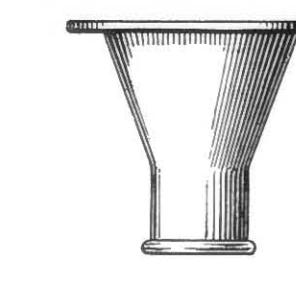
Supplied with or without overflow
and to suit any
Valley Gutter in Catalogue
up to $21'' \times 6''$

HOPPER OUTLETS FOR GUTTERS

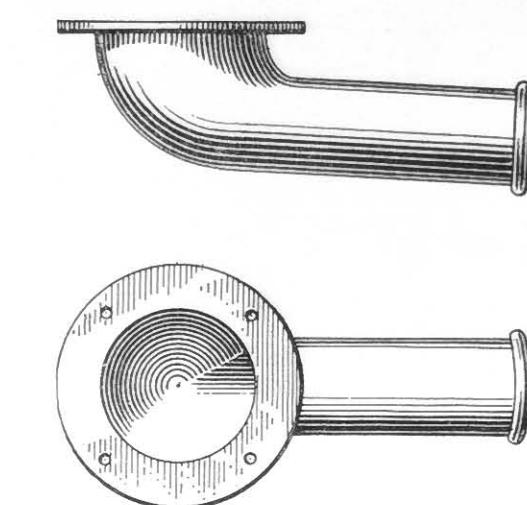
No. 1



No. 2



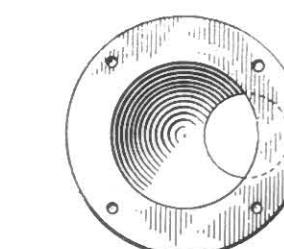
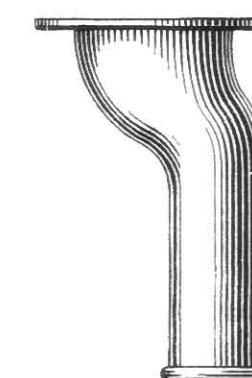
No. 3



4" Diam. x 12" x 8" Flange
10 $\frac{1}{4}$ " High, $\frac{3}{16}$ " Thick

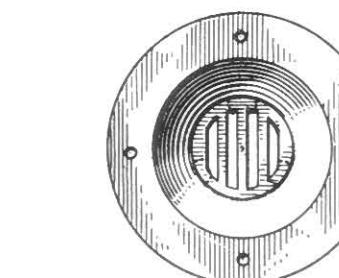
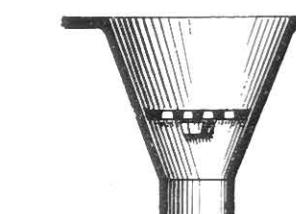
5" Diam. x 11" Diam. Flange
12" High, $\frac{1}{4}$ " Thick

No. 4



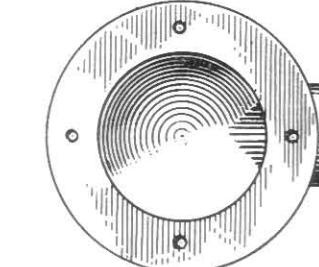
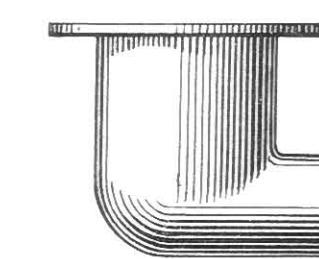
4" Diam. x $10\frac{1}{2}$ " Diam. Flange
15 $\frac{3}{4}$ " High
 $\frac{3}{16}$ " Thick

No. 5
with $4\frac{1}{2}$ " Diam. Grating



3" Diam. x 12" Diam. Flange
9" High, $\frac{3}{16}$ " Thick

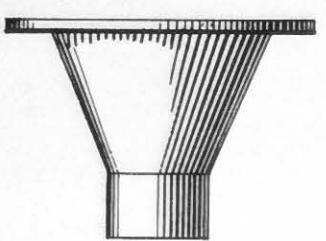
No. 6



4" Diam. x 12" Diam. Flange
10 $\frac{1}{4}$ " High, $\frac{1}{4}$ " Thick

HOPPER OUTLETS FOR GUTTERS

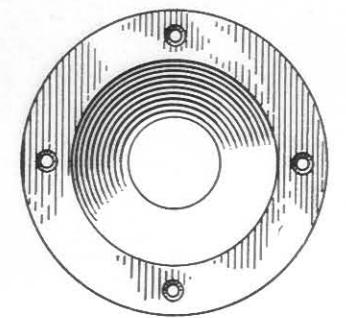
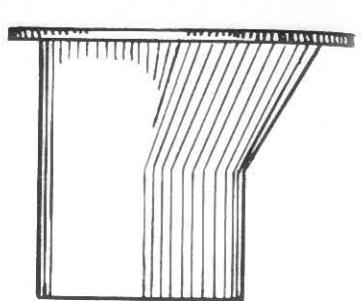
No. 7



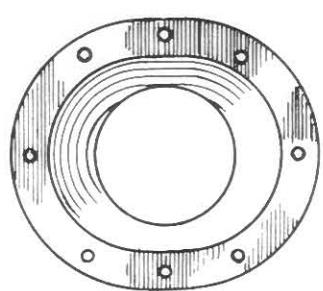
No. 8



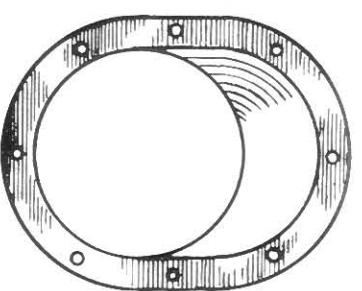
No. 9



13 $\frac{1}{2}$ " Diam. Flange, 9 $\frac{1}{2}$ " High
4" and 6" Diam., $\frac{1}{4}$ " Thick
16" Diam. Flange, 9" High
8" Diam., $\frac{1}{4}$ " Thick



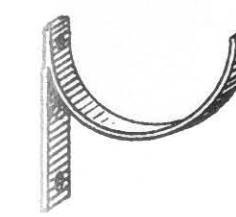
6" Diam. x 1' 1 $\frac{3}{4}$ " x 11 $\frac{7}{8}$ " Flange
8" High x $\frac{3}{16}$ " Thick



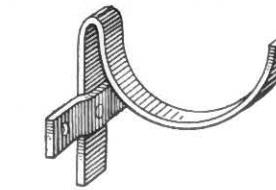
9" Diam. x 1' 3" x 1' 0" Flange
1' 0" High x $\frac{1}{4}$ " Metal

MILD STEEL GUTTER BRACKETS

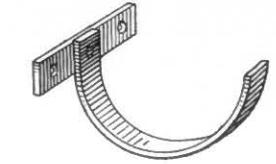
No. 15



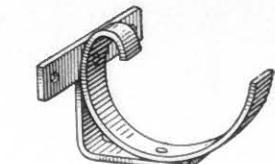
No. 24



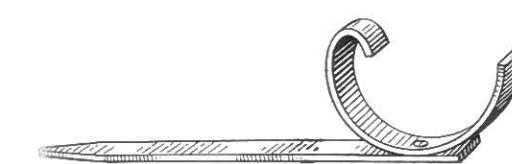
No. 25



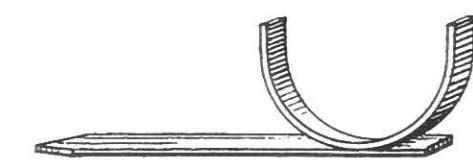
No. 26



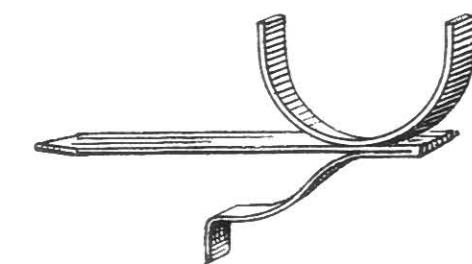
No. 30



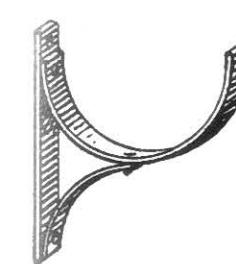
No. 18



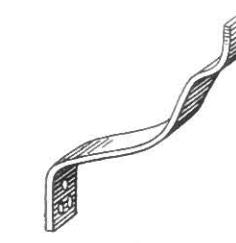
No. 19



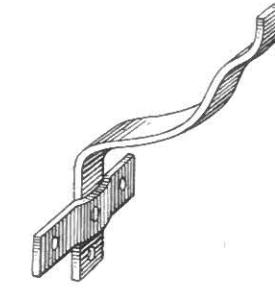
No. 16



No. 27



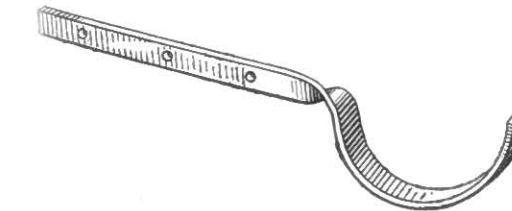
No. 29



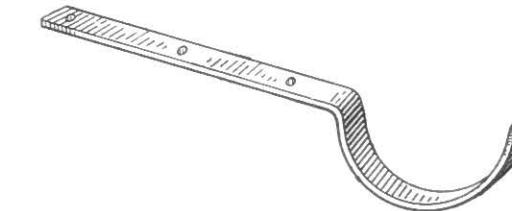
No. 17



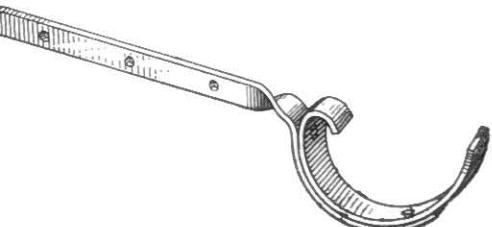
No. 32
for side fixing



No. 33
for top fixing

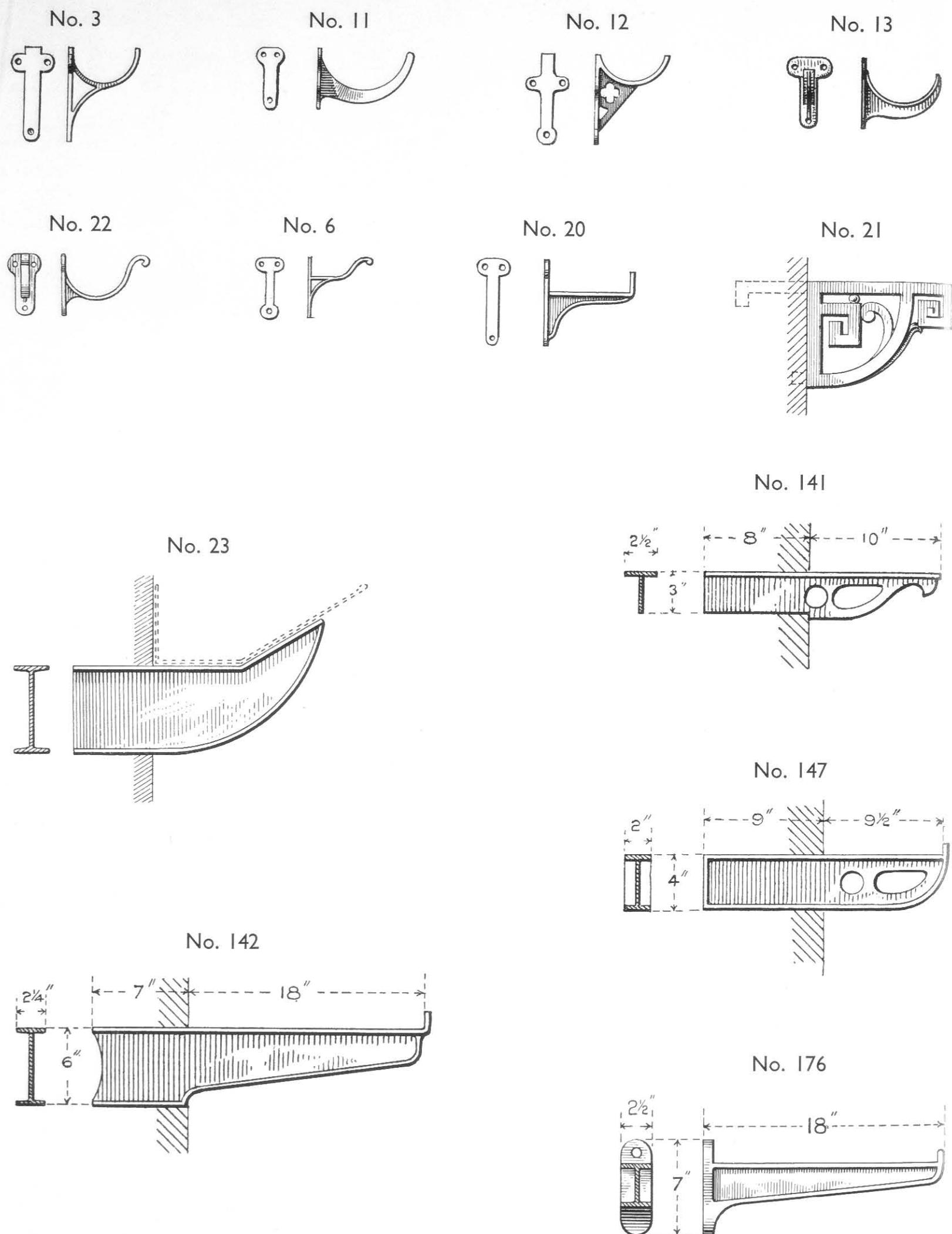


No. 28



All the above Brackets to suit any Half-Round or Ornamental Gutter in Catalogue

CAST-IRON GUTTER BRACKETS



HALF-ROUND GUTTERS

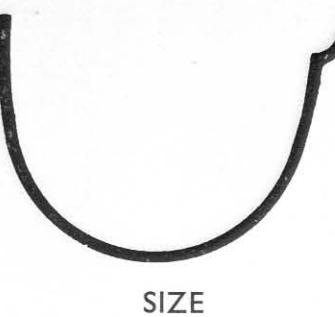
No. 1. Plain Half-Round	No. 20. Deep Half-Round
SIZE	
3"	6" x $\frac{3}{16}$ "
3" x $\frac{3}{16}$ "	6" x $\frac{1}{4}$ "
3" x $\frac{1}{4}$ "	7"
3 1/2"	7" x $\frac{3}{16}$ "
3 1/2" x $\frac{3}{16}$ "	8"
3 1/2" x $\frac{1}{4}$ "	8" x $\frac{3}{16}$ "
4"	8" x $\frac{1}{4}$ "
4" x $\frac{3}{16}$ "	9"
4" x $\frac{1}{4}$ "	9 1/2"
4 1/2"	9 1/2" x $\frac{1}{4}$ "
4 1/2" x $\frac{3}{16}$ "	9 1/2" x 4 1/4" x $\frac{1}{4}$ "
4 1/2" x $\frac{1}{4}$ "	10"
5"	10" x $\frac{3}{16}$ "
5" x $\frac{3}{16}$ "	12" x 5" x $\frac{3}{16}$ "
5" x $\frac{1}{4}$ "	13" x 6" x $\frac{1}{4}$ "
5" x $\frac{3}{8}$ "	13 3/8" x 5 3/4" x $\frac{3}{16}$ "
6"	6"
SIZE	
3" x $2\frac{1}{2}$ " x $\frac{3}{16}$ " I.J.	3" x $2\frac{1}{2}$ "
3 1/2" x $3\frac{1}{2}$ " x $\frac{3}{16}$ " I.J.	4" x $2\frac{1}{2}$ "
4" x $3"$	4" x $3"$
4" x $3" \times \frac{3}{16}$ "	4" x $3" \times \frac{3}{16}$ " I.J.
4 1/2" x $2\frac{3}{4}$ " x $\frac{1}{4}$ " I.J.	4 1/2" x $3"$
4 1/2" x $3"$	4 1/2" x $3" \times \frac{3}{16}$ "
4 1/2" x $3" \times \frac{3}{16}$ " I.J.	4 1/2" x $3\frac{1}{2}"$
4 1/2" x $3\frac{1}{2}"$	4 1/2" x $3\frac{1}{2}"$ I.J.
4 1/2" x $3\frac{1}{2}"$ I.J.	4 1/2" x $3\frac{1}{2}"$
4 1/2" x $3\frac{1}{2}"$	4 1/2" x $3\frac{1}{2}"$ I.J.
4 1/2" x $3\frac{1}{2}"$ I.J.	4 1/2" x $3\frac{1}{2}"$
4 1/2" x $3\frac{1}{2}"$	4 1/2" x $4\frac{3}{4}"$
4 1/2" x $4\frac{3}{4}"$	5" x $3"$
5" x $3"$	5" x $3" \times \frac{3}{16}$ "
5" x $3" \times \frac{3}{16}$ " I.J.	5" x $3" \times \frac{3}{16}$ "
5" x $\frac{1}{4}$ "	5" x $\frac{1}{4}$ "
A5" x $3\frac{1}{2}"$	A5" x $3\frac{1}{2}"$ x $\frac{3}{16}$ " I.J.
A5" x $3\frac{1}{2}"$ x $\frac{3}{16}$ " I.J.	B5" x $4"$
B5" x $4"$	B5" x $4" \times \frac{3}{16}$ "
B5" x $4" \times \frac{3}{16}$ " I.J.	A5" x $4" \times \frac{3}{16}$ " I.J.
A5" x $4" \times \frac{3}{16}$ " I.J.	5" x $4\frac{1}{2}" \times \frac{3}{16}$ "
5" x $4\frac{1}{2}" \times \frac{3}{16}$ "	5" x $5" \times \frac{3}{16}$ " I.J.
5" x $5" \times \frac{3}{16}$ " I.J.	5 1/2" x $4"$
5 1/2" x $4"$	6" x $3\frac{1}{2}"$
6" x $3\frac{1}{2}"$	6" x $3\frac{1}{2}" \times \frac{3}{16}$ " I.J.
A6" x $4" \times \frac{3}{16}$ "	A6" x $4" \times \frac{3}{16}$ "
A6" x $4" \times \frac{3}{16}$ " I.J.	A6" x $4" \times \frac{3}{16}$ " I.J.
A6" x $4" \times \frac{1}{4}$ "	C6" x $4"$
C6" x $4"$	6" x $5" \times \frac{3}{16}$ "
6" x $5" \times \frac{3}{16}$ "	7" x $5" \times \frac{1}{4}$ "
7" x $5" \times \frac{1}{4}$ "	A8" x $5"$
A8" x $5"$	8" x $6" \times \frac{3}{16}$ "
8" x $6" \times \frac{3}{16}$ "	9" x $6" \times \frac{3}{16}$ "
9" x $6" \times \frac{3}{16}$ "	10" x $7" \times \frac{3}{16}$ "
10" x $7" \times \frac{3}{16}$ "	12" x $7" \times \frac{1}{4}$ "

Gutters with Outside Joints except where marked I.J.

Full-size sections on application

HALF-ROUND GUTTERS

No. 20. Deep Half-Round



SIZE
 $4'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $4\frac{1}{4}'' \times 3'' \times \frac{3}{16}''$
 $A4\frac{1}{2}'' \times 2\frac{3}{4}''$ I.J.
 $A5'' \times 3''$ I.J.
 $5'' \times 3\frac{1}{2}''$
 $5'' \times 3\frac{1}{2}''$ I.J.
 $5'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $5'' \times 3\frac{1}{2}'' \times \frac{1}{4}''$
 $5'' \times 3\frac{1}{2}'' \times \frac{1}{4}''$ I.J.
 $5\frac{1}{2}'' \times 3'' \times \frac{3}{16}''$

No. 20. Deep Half-Round



SIZE
 $A5\frac{1}{2}'' \times 4'' \times \frac{3}{16}''$
 $B5\frac{1}{2}'' \times 4'' \times \frac{3}{16}''$ I.J.
 $6'' \times 4''$ I.J.
 $6'' \times 4'' \times \frac{3}{16}''$
 $B6'' \times 4'' \times \frac{1}{4}''$
 $B6'' \times 4'' \times \frac{1}{4}''$ I.J.
 $6'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$
 $6\frac{1}{2}'' \times 3'' \times \frac{1}{4}''$
 $10'' \times 6''$

No. 20E. Deep Half-Round



SIZE
 $4'' \times 3'' \times \frac{3}{16}''$ I.J.
 $4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$ I.J.
 $5'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$ I.J.
 $5'' \times 4'' \times \frac{3}{16}''$ I.J.

No. 20. Deep Half-Round.



No. 20. Deep Half-Round

SIZE
 $5'' \times 4''$ I.J.
 $5'' \times 4'' \times \frac{3}{16}''$ I.J.
 $5'' \times 4'' \times \frac{1}{4}''$ I.J.

SIZE
 $3\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{3}{16}''$ I.J.
 $4\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{1}{4}''$
 $A4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $4\frac{3}{4}'' \times 3''$
 $4\frac{3}{4}'' \times 3\frac{1}{2}''$
 $C5'' \times 4''$
 $C5'' \times 4'' \times \frac{3}{16}''$
 $D5'' \times 4'' \times \frac{3}{16}''$ I.J.
 $C5'' \times 4'' \times \frac{1}{4}''$
 $5\frac{1}{4}'' \times 2\frac{1}{2}'' \times \frac{3}{16}''$
 $5\frac{1}{4}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $7'' \times 4'' \times \frac{3}{16}''$
 $8'' \times 5''$

Gutters with Outside Joints except where marked I.J.

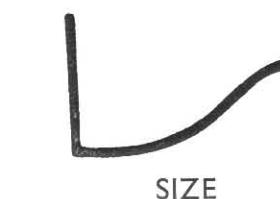
Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

O.G. GUTTERS

With Outside Joints, except where marked I.J.

No. 3 O.G.



SIZE

$A4'' \times 3'' \times \frac{3}{16}''$

$A4\frac{1}{2}'' \times 3'' \times \frac{3}{16}''$

$4\frac{3}{4}'' \times 2\frac{1}{4}'' \times \frac{1}{4}''$

$B5'' \times 3'' \times \frac{3}{16}''$

$B5'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$

$5\frac{3}{4}'' \times 2\frac{3}{4}'' \times \frac{1}{4}''$

$A6'' \times 3'' \times \frac{1}{4}''$

$A6'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$

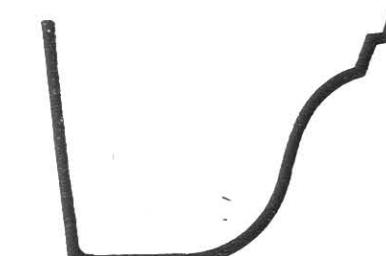
$6\frac{1}{4}'' \times 4'' \times \frac{3}{16}''$

No. 4 O.G.



SIZES
 as for No. 3

No. 19 (Notts O.G.)



SIZE

$A3''$ L.H.

$A4''$ L.H.

$A4\frac{1}{2}''$ L.H.

$A4\frac{1}{2}'' \times 2\frac{7}{8}''$

$A4\frac{1}{2}'' \times 3$ L.H.

$N4\frac{1}{2}'' \times 3$ L.H.

$A5''$ L.H.

$A6'' \times 4''$ R.H. & L.H.

$N6'' \times 4''$ L.H.

$A7\frac{1}{2}'' \times 5''$ L.H.

Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

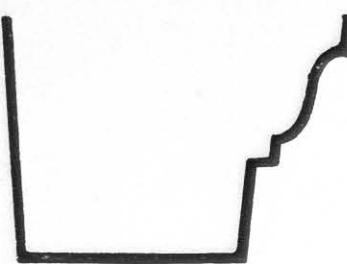
Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MOULDED GUTTERS

With Inside Joints except where marked O.J.

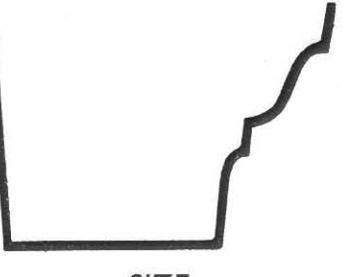
No. 6



SIZE

$4\frac{5}{8}'' \times 4\frac{1}{2}''$ L.H.
 $4\frac{3}{4}'' \times 3\frac{1}{2}''$
 $5\frac{1}{4}'' \times 5\frac{1}{4}'' \times \frac{3}{16}''$
 $7'' \times 6'' \times \frac{1}{4}''$
 $8\frac{1}{2}'' \times 7'' \times \frac{1}{4}''$
 $9'' \times 5''$
 $9'' \times 7\frac{1}{4}''$ L.H.
 $\{ 10'' \times 6'' \times 7\frac{1}{4}''$
 at front $\times \frac{3}{16}''$

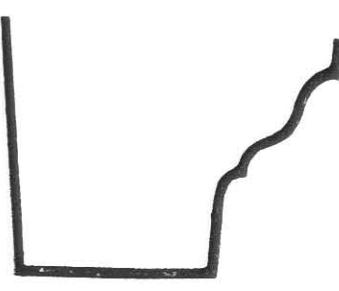
No. 6



SIZE

$3\frac{1}{2}'' \times 2\frac{1}{2}''$
 $4\frac{1}{2}'' \times 3'' \times \frac{3}{16}''$
 $B4\frac{1}{2}'' \times 3\frac{1}{2}''$ L.H.
 $K4\frac{1}{2}'' \times 3\frac{1}{2}''$ L.H.
 $4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $5'' \times 4''$ L.H.
 $A5'' \times 4''$ L.H.
 $B5'' \times 4''$ L.H.
 $5'' \times 4'' \times \frac{3}{16}''$
 $6'' \times 4''$
 $6'' \times 4'' \times \frac{3}{16}''$
 $6'' \times 4'' \times \frac{3}{16}''$ O.J.
 $6'' \times 4'' \times \frac{1}{4}''$
 $6'' \times 4\frac{1}{2}''$
 $A6'' \times 4\frac{1}{2}''$ Also L.H.
 $B6'' \times 4\frac{1}{2}''$
 $6'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$
 $6'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$
 $6'' \times 6''$
 $6'' \times 6'' \times \frac{3}{16}''$
 $6'' \times 6\frac{1}{2}'' \times \frac{1}{4}''$
 $6'' \times 4\frac{1}{2}''$
 $10'' \times 6''$
 $10'' \times 6'' \times \frac{3}{16}''$
 $10'' \times 7\frac{1}{4}''$

No. 6



SIZE

$5\frac{1}{4}'' \times 4''$
 $5\frac{1}{4}'' \times 4'' \times \frac{1}{4}''$

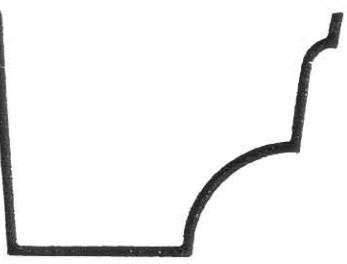
No. 6



SIZE

$\{ 6'' \times 5'' \times 4\frac{1}{2}''$
 at front $\times \frac{3}{16}''$
 $A9'' \times 6'' \times \frac{1}{4}''$

No. 7



SIZE

$5'' \times 4\frac{1}{2}''$

No. 7



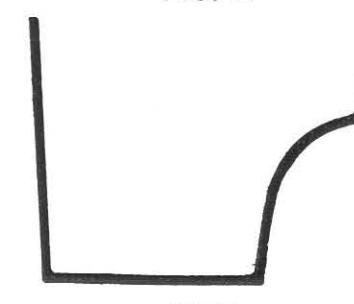
SIZE

$7\frac{1}{2}'' \times 6''$

MOULDED GUTTERS

With Inside Joints except where marked O.J.

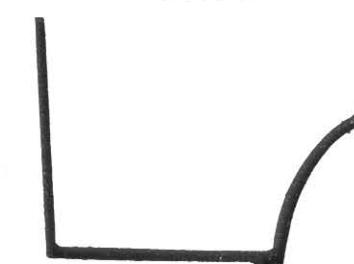
No. 8



SIZE

$3'' \times 2\frac{1}{2}''$
 $4'' \times 2\frac{3}{4}''$
 $4'' \times 3'' \times \frac{3}{16}''$
 $4\frac{1}{2}'' \times 2\frac{3}{4}''$
 $4\frac{1}{2}'' \times 3''$
 $4\frac{1}{2}'' \times 3'' \times \frac{3}{16}''$
 $A4\frac{1}{2}'' \times 3'' \times \frac{1}{4}''$
 $A4\frac{1}{2}'' \times 4''$
 $4\frac{1}{2}'' \times 4''$
 $4\frac{1}{2}'' \times 3''$
 $4\frac{1}{2}'' \times 4'' \times \frac{1}{4}''$
 $4\frac{7}{8}'' \times 4\frac{1}{2}'' \times \frac{1}{16}''$
 $5'' \times 3\frac{1}{2}''$
 $A5'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $A5'' \times 3\frac{1}{2}'' \times \frac{1}{16}''$ O.J.
 $5'' \times 4''$
 $A5'' \times 4''$
 $5'' \times 4'' \times \frac{3}{16}''$
 $5'' \times 4'' \times \frac{1}{4}''$
 $5'' \times 5''$
 $5'' \times 4'' \times \frac{1}{16}''$
 $5\frac{1}{4}'' \times 4''$
 $5\frac{1}{4}'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$
 $5\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $5\frac{1}{2}'' \times 4''$
 $\{ 5\frac{1}{2}'' \times 4\frac{1}{2}'' \times 6\frac{1}{2}''$
 at front $\times \frac{3}{16}''$
 $5\frac{3}{4}'' \times 3\frac{1}{4}''$

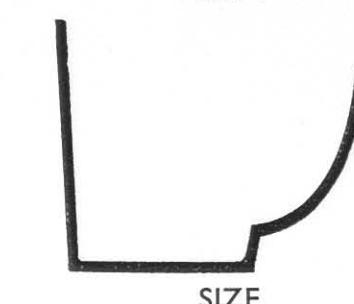
No. 8



SIZE

$6'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $6'' \times 4\frac{3}{4}'' \times \frac{1}{4}''$

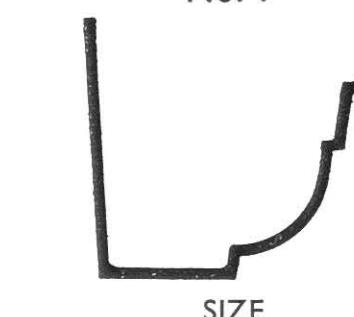
No. 9



SIZE

$5\frac{1}{2}'' \times 3\frac{3}{4}''$

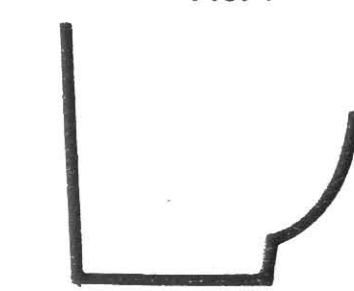
No. 9



SIZE

$5\frac{1}{2}'' \times 4\frac{1}{2}''$

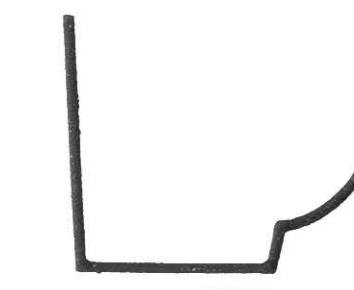
No. 9



SIZE

$5'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$

No. 9



SIZE

$6'' \times 5'' \times \frac{1}{4}''$ O.J.
 $6\frac{1}{4}'' \times 3\frac{3}{4}''$
 $6\frac{1}{4}'' \times 4'' \times \frac{1}{4}''$
 $6\frac{1}{4}'' \times 4'' \times \frac{1}{4}''$ O.J.
 $6\frac{1}{2}'' \times 3\frac{1}{2}''$
 $7'' \times 4'' \times \frac{3}{16}''$
 $7'' \times 5\frac{1}{2}''$
 $8'' \times 4''$
 $10'' \times 6'' \times \frac{3}{16}''$

Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

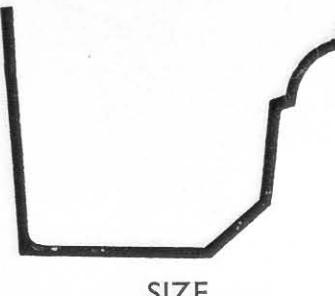
Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

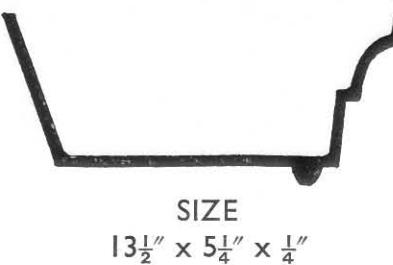
MOULDED GUTTERS

With Inside Joints except where marked O.J.

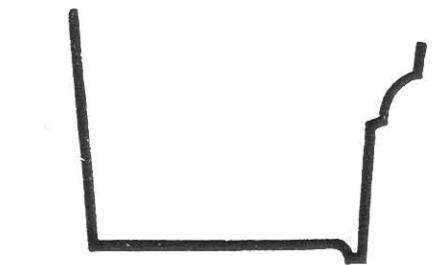
No. 10



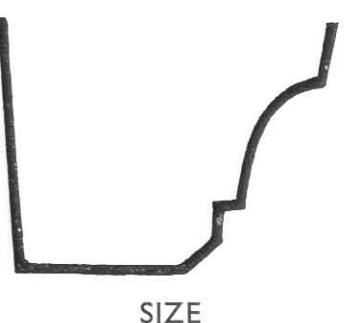
No. 12



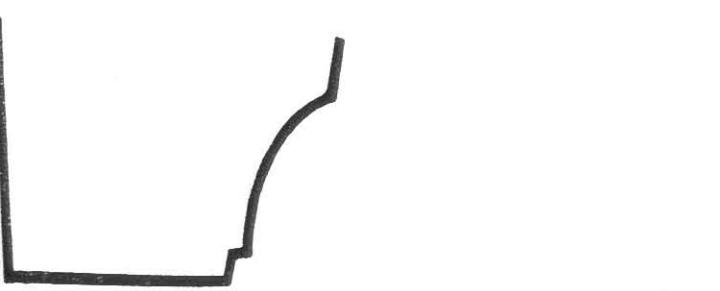
No. 12



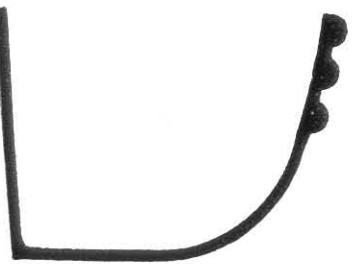
No. 10



No. 12



No. 13



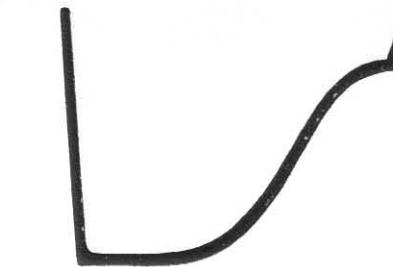
Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

DEEP O.G. GUTTERS

With Inside Joints except where marked O.J.

No. 19 Deep O.G.



SIZE

$5\frac{1}{4}'' \times 3\frac{1}{4}'' \times \frac{3}{16}''$

$5\frac{1}{4}'' \times 3\frac{1}{2}''$

$5\frac{1}{4}'' \times 3''$ O.J.

$5\frac{1}{2}'' \times 3\frac{1}{2}''$

$5\frac{1}{2}'' \times 4''$

$5\frac{3}{4}'' \times 3\frac{3}{4}'' \times \frac{3}{16}''$

$5\frac{3}{4}'' \times 5\frac{5}{8}'' \times \frac{3}{16}''$

$6'' \times 3'' \times \frac{3}{16}''$ O.J.

$6'' \times 3\frac{1}{2}''$ O.J.

$6'' \times 4''$

$C7'' \times 5''$

$B7'' \times 5'' \times \frac{3}{16}''$ O.J.

$7'' \times 6''$

$7'' \times 6'' \times \frac{3}{16}''$

$B7'' \times 6'' \times \frac{3}{16}''$

$7\frac{1}{4}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$

$8'' \times 4''$

$B8'' \times 4'' \times \frac{1}{4}''$ L.H.

with drip on front

$8'' \times 5''$

$B8'' \times 5'' \times \frac{1}{4}''$

$(8'' \times 5\frac{1}{4}'' \times 4\frac{1}{2}'')$

at front $\times \frac{3}{16}''$

$8'' \times 5\frac{1}{2}''$

$8'' \times 6'' \times \frac{3}{16}''$

$9'' \times 5'' \times \frac{3}{16}''$ O.J.

$9'' \times 7'' \times \frac{1}{4}''$

$9\frac{3}{4}'' \times 5''$

$10'' \times 6''$

$10\frac{1}{2}'' \times 6\frac{1}{2}'' \times \frac{1}{4}''$

$11\frac{1}{2}'' \times 5''$

$12'' \times 7'' \times \frac{1}{4}''$ O.J.

3'' $\times 2\frac{1}{8}''$

$3\frac{3}{4}'' \times 2\frac{3}{4}'' \times \frac{1}{4}''$

4'' $\times 2\frac{1}{2}''$ O.J.

4'' $\times 2\frac{3}{4}''$ O.J.

$C4'' \times 2\frac{3}{4}''$ O.J., L.H.

4'' $\times 3''$

4'' $\times 3''$ O.J.

$C4'' \times 3''$ O.J.

4'' $\times 3'' \times \frac{3}{16}''$

$4\frac{1}{4}'' \times 2\frac{3}{4}''$ O.J.

$4\frac{1}{4}'' \times 2\frac{1}{2}'' \times \frac{3}{16}''$

$4\frac{1}{2}'' \times 3''$

$4\frac{1}{2}'' \times 3''$ O.J.

$4\frac{1}{2}'' \times 3'' \times \frac{3}{16}''$

$4\frac{3}{4}'' \times 3\frac{3}{4}'' \times \frac{3}{16}''$ O.J.

$4\frac{3}{4}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$ O.J.

$4\frac{3}{4}'' \times 3\frac{3}{2}'' \times \frac{3}{16}''$ O.J.

$4\frac{3}{4}'' \times 3\frac{5}{8}'' \times \frac{3}{16}''$

$5'' \times 3''$

$B5'' \times 3''$

5'' $\times 3'' \times \frac{3}{16}''$ O.J.

5'' $\times 4''$

5'' $\times 4''$ O.J.

$D5'' \times 4''$ O.J., L.H.

5'' $\times 4'' \times \frac{3}{16}''$

$B5'' \times 4''$ L.H.

$C5'' \times 4'' \times \frac{3}{16}''$

5'' $\times 4'' \times \frac{3}{16}''$ O.J.

$5'' \times 4'' \times 3\frac{1}{4}''$

at front $\times \frac{1}{4}''$

5'' $\times 5'' \times \frac{3}{16}''$

7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

8'' $\times 4\frac{1}{2}'' \times \frac{3}{16}''$

10'' $\times 6'' \times \frac{1}{4}''$

$A10'' \times 6'' \times \frac{1}{4}''$ O.J.

10'' $\times 8'' \times \frac{1}{4}''$

11\frac{1}{2}'' $\times 6'' \times \frac{1}{4}''$

7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

8'' $\times 4\frac{1}{2}'' \times \frac{3}{16}''$

10'' $\times 6'' \times \frac{1}{4}''$

$A10'' \times 6'' \times \frac{1}{4}''$ O.J.

10'' $\times 8'' \times \frac{1}{4}''$

11\frac{1}{2}'' $\times 6'' \times \frac{1}{4}''$

7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

8'' $\times 4\frac{1}{2}'' \times \frac{3}{16}''$

10'' $\times 6'' \times \frac{1}{4}''$

$A10'' \times 6'' \times \frac{1}{4}''$ O.J.

10'' $\times 8'' \times \frac{1}{4}''$

11\frac{1}{2}'' $\times 6'' \times \frac{1}{4}''$

7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

8'' $\times 4\frac{1}{2}'' \times \frac{3}{16}''$

10'' $\times 6'' \times \frac{1}{4}''$

$A10'' \times 6'' \times \frac{1}{4}''$ O.J.

10'' $\times 8'' \times \frac{1}{4}''$

11\frac{1}{2}'' $\times 6'' \times \frac{1}{4}''$

7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

8'' $\times 4\frac{1}{2}'' \times \frac{3}{16}''$

10'' $\times 6'' \times \frac{1}{4}''$

$A10'' \times 6'' \times \frac{1}{4}''$ O.J.

10'' $\times 8'' \times \frac{1}{4}''$

11\frac{1}{2}'' $\times 6'' \times \frac{1}{4}''$

7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

8'' $\times 4\frac{1}{2}'' \times \frac{3}{16}''$

10'' $\times 6'' \times \frac{1}{4}''$

$A10'' \times 6'' \times \frac{1}{4}''$ O.J.

10'' $\times 8'' \times \frac{1}{4}''$

11\frac{1}{2}'' $\times 6'' \times \frac{1}{4}''$

7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

8'' $\times 4\frac{1}{2}'' \times \frac{3}{16}''$

10'' $\times 6'' \times \frac{1}{4}''$

$A10'' \times 6'' \times \frac{1}{4}''$ O.J.

10'' $\times 8'' \times \frac{1}{4}''$

11\frac{1}{2}'' $\times 6'' \times \frac{1}{4}''$

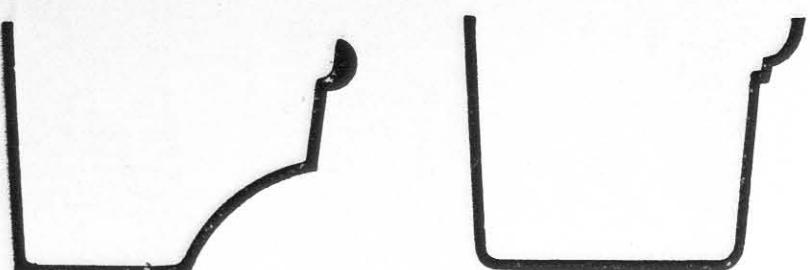
7'' $\times 5'' \times \frac{3}{16}''$

8'' $\times 6''$

MOULDED GUTTERS

With Inside Joints except where marked O.J.

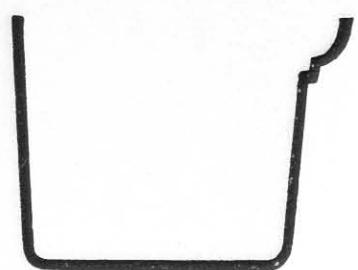
No. 29



SIZE

$4\frac{1}{2}'' \times 3''$
 $4\frac{1}{2}'' \times 3'' \times \frac{1}{4}''$
 $5'' \times 4''$
 $5'' \times 4'' \times \frac{1}{4}''$
 $\{ 5'' \times 4\frac{1}{4}'' \times 5''$
 $\{ \text{at front } \times \frac{3}{16}''$
 $5\frac{1}{4}'' \times 4\frac{1}{4}'' \times \frac{3}{16}''$
 $5\frac{1}{4}'' \times 4\frac{1}{4}'' \times \frac{1}{4}''$
 $5\frac{3}{8}'' \times 4''$
 $6'' \times 3\frac{1}{4}'' \text{ O.J.}$
 $6'' \times 4''$
 $6'' \times 4\frac{3}{4}''$
 $7'' \times 6''$

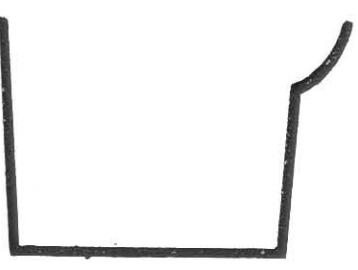
No. 29



SIZE

$4\frac{1}{2}'' \times 4'' \times \frac{3}{16}''$
 $5'' \times 3\frac{3}{4}'' \times \frac{3}{16}''$
 $A5'' \times 3\frac{3}{4}'' \times \frac{1}{6}''$
 $6'' \times 5''$
 $6'' \times 6'' \times \frac{5}{16}''$
 $6'' \times 8'' \times \frac{3}{16}''$

No. 29A



SIZE

$4\frac{1}{2}'' \times 4''$

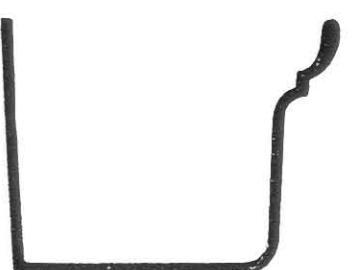
No. 29



SIZE

$5\frac{1}{8}'' \times 4''$
 $6\frac{1}{4}'' \times 4'' \times \frac{3}{16}''$
 $6\frac{1}{4}'' \times 4'' \times \frac{1}{4}''$

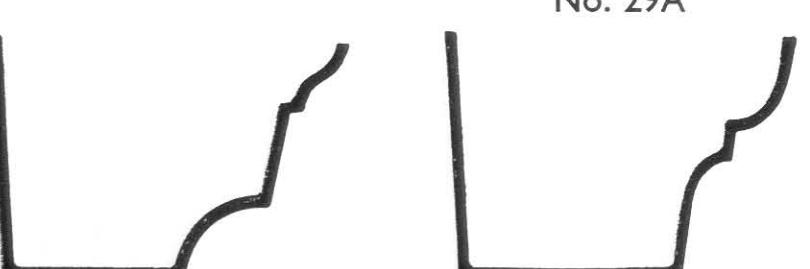
No. 29A



SIZE

$6'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$

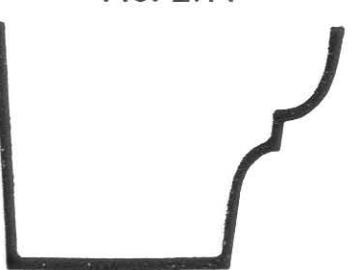
No. 29



SIZE

$5\frac{1}{2}'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$

No. 29A



SIZE

$5\frac{1}{2}'' \times 4\frac{1}{2}''$

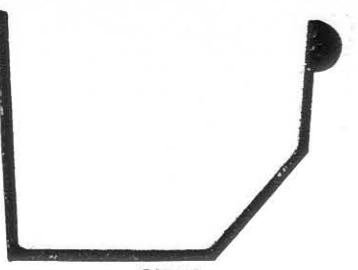
Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

MOULDED GUTTERS

With Inside Joints except where marked O.J.

No. 34



SIZE

$A4'' \times 3'' \times \frac{3}{16}'' \text{ O.J.}$
 $4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
 $4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{1}{4}''$
 $4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}'' \text{ O.J.}$
 $4\frac{3}{4}'' \times 4'' \times \frac{3}{16}''$
 $4\frac{3}{4}'' \times 4\frac{1}{2}'' \times \frac{3}{16}'' \text{ O.J.}$
 $5\frac{1}{4}'' \times 4'' \times \frac{3}{16}''$
 $6\frac{1}{4}'' \times 5''$
 $6\frac{1}{4}'' \times 5'' \times \frac{1}{4}''$
 $B6\frac{1}{2}'' \times 5'' \times \frac{3}{16}''$
 $A6\frac{1}{2}'' \times 5'' \times \frac{1}{4}'' \text{ O.J.}$
 $10\frac{1}{2}'' \times 5'' \times \frac{3}{16}''$

No. 34



Note.—The following gutters can be used also as Trough Boundary-Wall Gutters. See page 97.

SIZE

$3'' \times 2'' \text{ O.J.}$
 $4'' \times 3''$
 $4'' \times 3'' \times \frac{3}{16}''$
 $4\frac{1}{2}'' \times 3'' \times \frac{3}{16}'' \text{ O.J.}$
 $4\frac{1}{2}'' \times 4''$
 $4\frac{1}{2}'' \times 4'' \times \frac{3}{16}''$
 $5'' \times 3''$
 $5'' \times 3'' \times \frac{1}{4}'' \text{ O.J.}$
 $5'' \times 4''$
 $5'' \times 4\frac{1}{2}'' \times \frac{1}{4}'' \text{ O.J.}$
 $5\frac{1}{2}'' \times 3\frac{3}{4}'' \times \frac{1}{4}''$
 $\{ 5\frac{1}{2}'' \times 4\frac{1}{2}'' \times 4''$
 $\{ \text{at front } \times \frac{1}{4}''$
 $6'' \times 4''$
 $6'' \times 4\frac{3}{4}'' \times \frac{1}{4}''$
 $6'' \times 5''$
 $6\frac{1}{4}'' \times 4\frac{3}{4}'' \times \frac{3}{16}''$
 $6\frac{1}{2}'' \times 5'' \times \frac{3}{16}''$
 $7'' \times 5''$
 $7'' \times 5'' \times \frac{1}{4}'' \text{ O.J.}$
 $A7'' \times 5'' \times \frac{1}{4}'' \text{ O.J.}$
 $8'' \times 7'' \times \frac{1}{4}''$
 $\{ 21'' \times 6'' \times 1\frac{1}{2}'' \text{ sole } \times \frac{1}{8}'' \text{ O.J., R.H.}$

$\{ 9'' \times 5'' \times 4\frac{1}{2}''$
 $\{ \text{at front}$

The following Gutters have O.J., L.H. looking at upright side of Gutter except where marked otherwise

9''

$\times 6'' \times \frac{3}{16}''$

10

$\frac{1}{2}'' \times 8'' \times \frac{1}{2}''$

10

$\frac{1}{2}'' \times 8'' \times \frac{3}{8}'' \text{ O.J., R.H.}$

11

$\frac{1}{2}'' \times 4\frac{1}{2}'' \times \frac{3}{16}'' \text{ I.J., R.H.}$

11

$\frac{1}{2}'' \times 6'' \times \frac{1}{2}'' \text{ I.J., R.H.}$

11

$\frac{1}{2}'' \times 6'' \times \frac{1}{4}'' \text{ I.J.}$

12

$\frac{1}{2}'' \times 6'' \times \frac{3}{16}'' \text{ I.J.}$

12

$\frac{1}{2}'' \times 7'' \times \frac{1}{2}''$

13

$\frac{1}{2}'' \times 7'' \times \frac{1}{4}''$

14

$\frac{1}{2}'' \times 5'' \times \frac{1}{4}''$

14

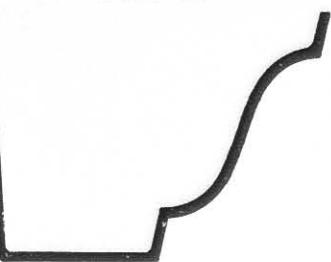
$\frac{1}{2}'' \times 7'' \times \frac{1}{4}''$

14

MOULDED GUTTERS

With Inside Joints except where marked O.J.

No. 42



SIZE

$3\frac{1}{2}'' \times 2''$	$5\frac{1}{2}'' \times 4'' \times \frac{3}{16}''$
$3\frac{1}{2}'' \times 2''$ O.J., L.H.	$5\frac{1}{2}'' \times 4\frac{1}{4}''$
$3\frac{1}{2}'' \times 3''$	$5\frac{1}{2}'' \times 4\frac{1}{4}'' \times \frac{3}{16}''$
$4'' \times 2\frac{1}{2}''$	$5\frac{1}{2}'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$
$4'' \times 2\frac{1}{2}''$ O.J.	$5\frac{3}{4}'' \times 4''$ L.H.
$4'' \times 2\frac{1}{2}'' \times \frac{3}{16}''$	$B5\frac{3}{4}'' \times 4''$ L.H.
$4'' \times 3''$	$6'' \times 3\frac{1}{2}''$
$B4'' \times 3''$ L.H.	$6'' \times 3\frac{1}{2}''$ O.J.
$N4'' \times 3''$ L.H.	$A6'' \times 3\frac{1}{2}''$
$4'' \times 3'' \times \frac{3}{16}''$	$6'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$
$4'' \times 3'' \times \frac{3}{16}''$ O.J.	$6'' \times 4''$
$4'' \times 3'' \times \frac{1}{4}''$	$6'' \times 4''$ O.J.
$4'' \times 3\frac{1}{2}''$	$GD6'' \times 4''$ L.H.
$4\frac{1}{4}'' \times 3''$	$6'' \times 4'' \times \frac{3}{16}''$
$4\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{3}{16}''$	$C6'' \times 4'' \times \frac{3}{16}''$
$C4\frac{1}{2}'' \times 3''$	$6'' \times 4'' \times \frac{1}{4}''$
$D4\frac{1}{2}'' \times 3''$	$6'' \times 4'' \times \frac{3}{8}''$
$D4\frac{1}{2}'' \times 3''$ O.J.	$6'' \times 4\frac{1}{4}''$
$4\frac{1}{2}'' \times 3'' \times \frac{3}{16}''$	$6'' \times 4\frac{1}{2}''$
$4\frac{1}{2}'' \times 3'' \times \frac{1}{4}''$	$6'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$ O.J.
$A4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$ O.J.	$6'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$
$4\frac{3}{4}'' \times 3''$	$6'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$ O.J.
$5'' \times 2\frac{1}{2}''$	$6'' \times 4\frac{3}{4}''$ L.H.
$5'' \times 3''$	$6'' \times 5''$
$5'' \times 3'' \times \frac{3}{16}''$	$6'' \times 5''$ O.J., L.H.
$A5'' \times 3'' \times \frac{3}{16}''$	$6'' \times 5'' \times \frac{3}{16}''$
$5'' \times 3\frac{1}{2}''$	$6'' \times 5'' \times \frac{1}{4}''$
$5'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$	$6'' \times 5\frac{1}{4}''$
$5'' \times 4''$	$6'' \times 5\frac{1}{4}'' \times \frac{3}{16}''$ O.J.
$5'' \times 4''$ O.J.	$6'' \times 5\frac{1}{2}''$
$A5'' \times 4''$	$6'' \times 5\frac{1}{2}'' \times \frac{1}{4}''$ O.J.
$B5'' \times 4''$ L.H.	$6'' \times 5\frac{1}{2}'' \times \frac{1}{4}''$ O.J.
$D5'' \times 4''$ L.H.	$6'' \times 6'' \times \frac{3}{16}''$ O.J.
$F5'' \times 4''$ L.H.	$6\frac{1}{4}'' \times 4\frac{1}{4}''$ O.J.
$K5'' \times 4''$	$6\frac{1}{4}'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$
$N5'' \times 4''$ L.H.	$6\frac{1}{2}'' \times 4'' \times \frac{1}{4}''$
$5'' \times 4'' \times \frac{3}{16}''$	$6\frac{1}{2}'' \times 4\frac{1}{2}''$
$5'' \times 4'' \times \frac{3}{16}''$ O.J.	$A6\frac{1}{2}'' \times 4\frac{1}{2}''$
$\{ 5'' \times 4'' \times \frac{3}{16}''$	$6\frac{1}{2}'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$
$\{ O.J., L.H.$	$\{ 6\frac{7}{8}'' \times 5\frac{1}{8}'' \times 4\frac{3}{4}''$
$5'' \times 4'' \times \frac{1}{4}''$ O.J.	\backslash at front
$K5'' \times 4'' \times \frac{1}{4}''$	$6\frac{7}{8}'' \times 5\frac{1}{8}''$
$5'' \times 4\frac{1}{2}''$	$6\frac{7}{8}'' \times 5\frac{1}{8}'' \times \frac{3}{16}''$
$5'' \times 4\frac{1}{2}''$ O.J., L.H.	$B7'' \times 4''$ L.H.
$5'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$	$D7'' \times 4''$
$\{ 5'' \times 4\frac{1}{2}'' \times 4''$	$7'' \times 4\frac{1}{2}''$
$\{$ at front O.J.	$7'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$
$5\frac{1}{4}'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$	$A7'' \times 4\frac{1}{2}'' \times \frac{3}{16}''$
$5\frac{3}{8}'' \times 4\frac{1}{8}''$ O.J., L.H.	$7'' \times 4\frac{3}{4}'' \times \frac{3}{16}''$ L.H.
$5\frac{1}{2}'' \times 4''$	$7'' \times 5''$
$5\frac{1}{2}'' \times 4''$ O.J.	$7'' \times 5''$ O.J.

Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

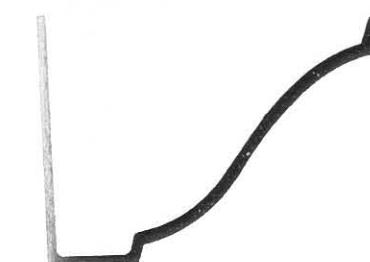
Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MOULDED GUTTERS

With Inside Joints except where marked O.J.

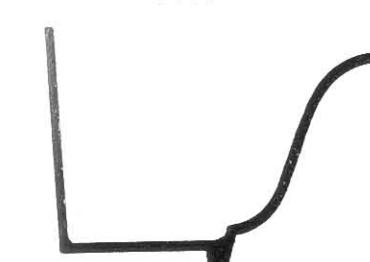
No. 42



S17

$$\begin{aligned}
 C4\frac{1}{2}'' \times 3'' \\
 4\frac{1}{2}'' \times 3\frac{1}{2}'' \\
 4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16} \\
 4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{1}{4} \\
 B6'' \times 4'' \times \frac{3}{16} \\
 9'' \times 4'' \\
 9'' \times 5'' \times \frac{3}{16} \\
 12'' \times 7\frac{3}{4}'' \\
 \end{aligned}$$

No. 4



SIT

$4\frac{1}{2}'' \times 3\frac{1}{2}''$	$B6'' \times 4\frac{1}{2}''$ L.H.
$4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$	$6'' \times 4\frac{1}{2}'' \times \frac{1}{4}''$
$A4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$ O.J.	$7'' \times 5''$
$5'' \times 4''$	$7'' \times 5'' \times \frac{3}{16}''$
$5\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{3}{16}''$	$7'' \times 5'' \times \frac{1}{4}''$
$5\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{1}{4}''$	$8'' \times 6''$
$5\frac{1}{2}'' \times 4''$	$10'' \times 6'' \times \frac{1}{4}''$
$6'' \times 4\frac{1}{2}''$	

4" x $2\frac{3}{4}$ " x $\frac{1}{4}$ "
 A5" x $4\frac{1}{2}$ " x $\frac{3}{16}$ "
 A6" x $4\frac{1}{4}$ " x $\frac{1}{4}$ "
 7" x 4" x $\frac{3}{16}$ "

No. 4



SI

A6" x 4" x $\frac{3}{16}$ "
 $9\frac{1}{2}$ " x 6"

JOINTS

Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MOULDED GUTTERS

With Inside Joints except where marked O.J.

No. 78



SIZE

4" x 2½"
4" x 2½" x ¾"
A4" x 3" x ¾"
4½" x 3"
5" x 3" x ¾"
5" x 5" x ¾"
5½" x 4" x ¾"
6½" x 4" x ¾"
7" x 4" x ¾"

No. 78



SIZE

A4½" x 3" x ¾"
A5" x 4" x ¾"

No. 215



SIZE

A5" x 4" x ¾"
6" x 5" x ¼"

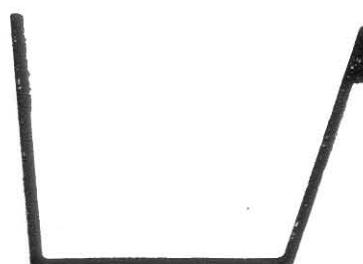
No. 78



SIZE

B4½" x 3" x ¼"
B5" x 3" x ¾"
6" x 4" x ¾"
6" x 4" x ¼"
6" x 4½"

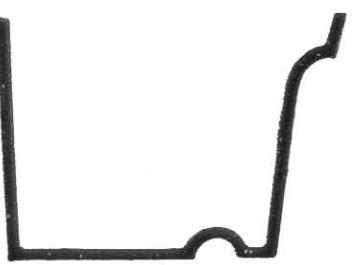
No. 215



SIZE

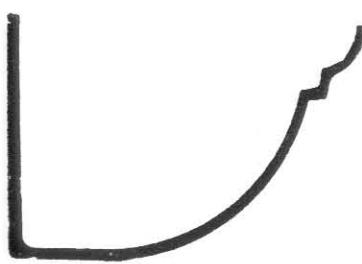
5" x 3"
5" x 3½"
5" x 4" x ¾"

No. 252



SIZE
5½" x 3¾"

No. 78



SIZE
4" x 3"
5" x 4"

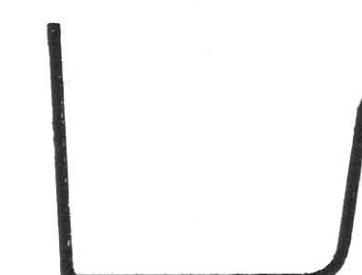
Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

MOULDED GUTTERS

With Inside Joints except where marked O.J.

No. 270



SIZE

6" x 4" x ¾"
Also No. 270A
5" x 4" x ¾"

but with square corner

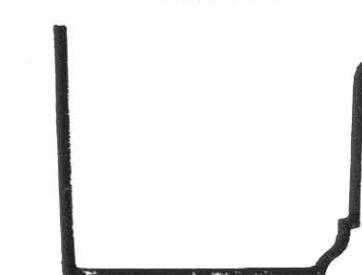
No. 278



SIZE

4½" x 3½" x ¾"

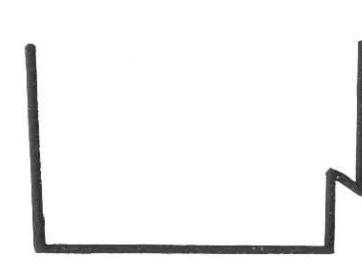
No. 271



SIZE

5" x 4" x ¼"

No. 280



SIZE

6" x 3¾" x ¾"

No. 278



SIZE

5" x 4" x ¾"
6" x 4½" x ¼"
6" x 5" x ¾"
6½" x 5" x ¼"

No. 287



SIZE

6" x 4" x ¼"

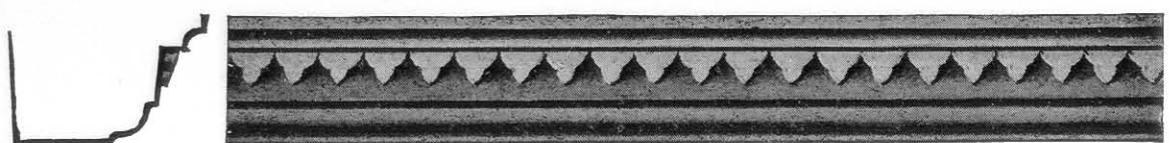
ENRICHED GUTTERS

With Inside Joints except where marked O.J.



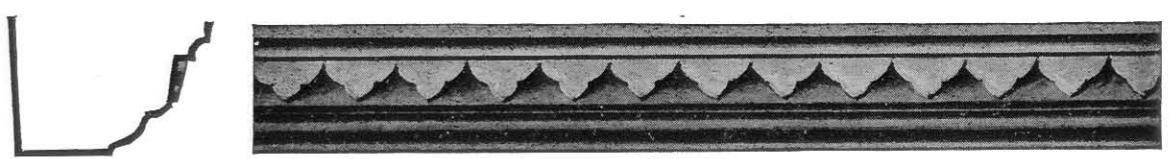
No. 116

$6\frac{1}{4}'' \times 5''$



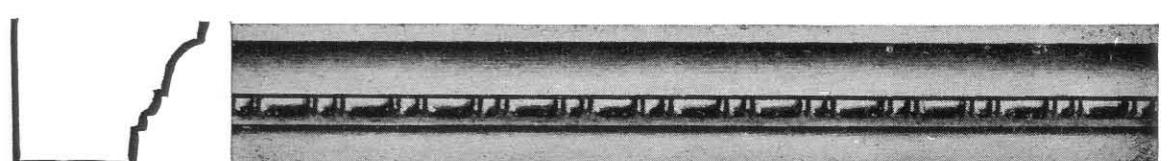
No. 202

$6'' \times 4''$
 $7'' \times 5''$
 $8'' \times 5''$



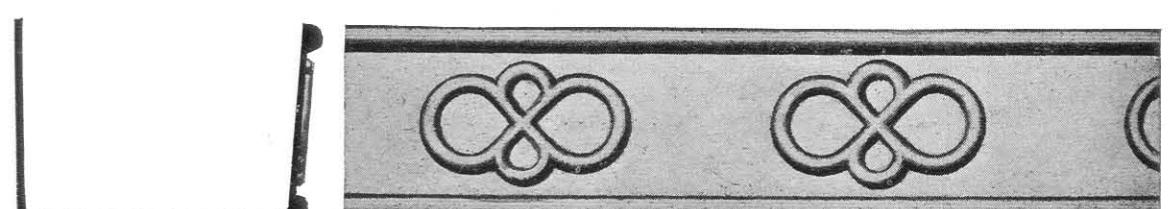
No. 202

$A5'' \times 4'' \times \frac{3}{16}''$
 $A6'' \times 4'' \times \frac{3}{16}''$
 $A8'' \times 5'' \times \frac{3}{16}''$



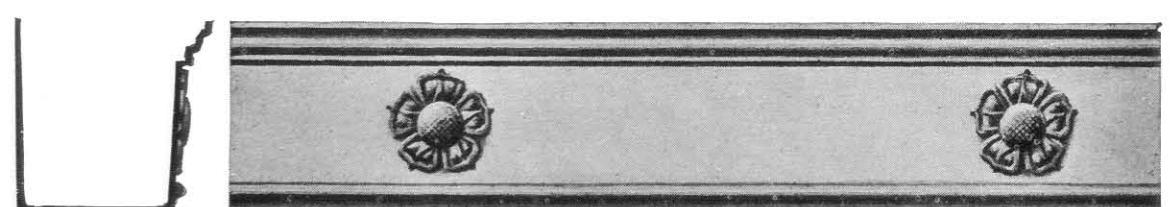
No. 246

$6'' \times 4\frac{1}{2}''$



No. 251

$9'' \times 6''$



No. 253

$6'' \times 6''$

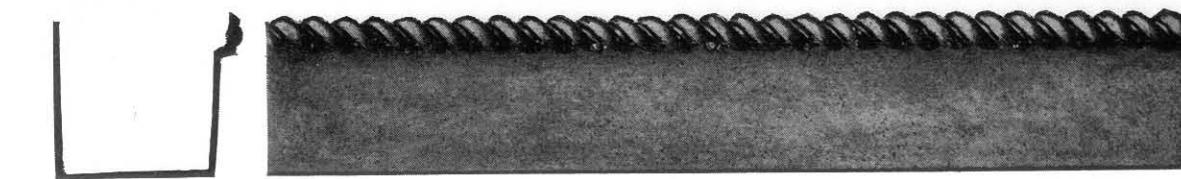
Joints are at Right Hand (except where marked L.H.) looking at front of gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

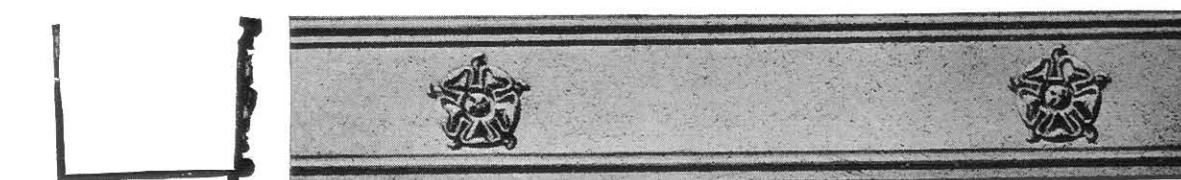
ENRICHED GUTTERS

With Inside Joints except where marked O.J.



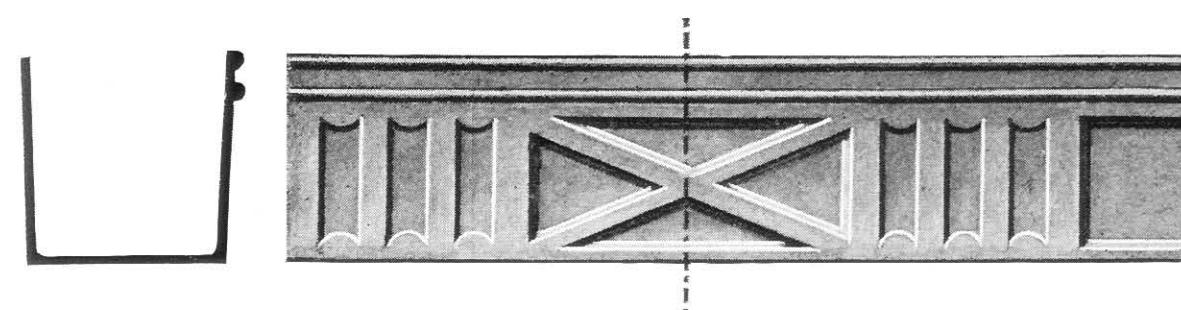
No. 255

$6'' \times 5'' \times \frac{3}{16}''$



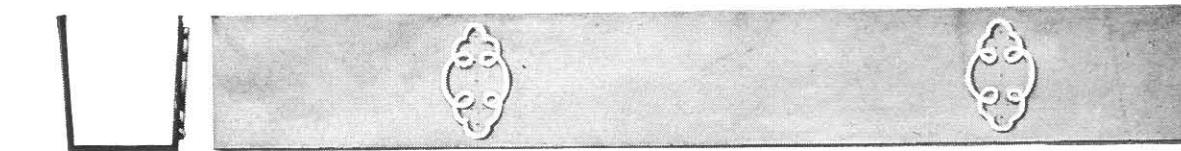
No. 257

$6\frac{1}{4}'' \times 5'' \times \frac{1}{4}''$



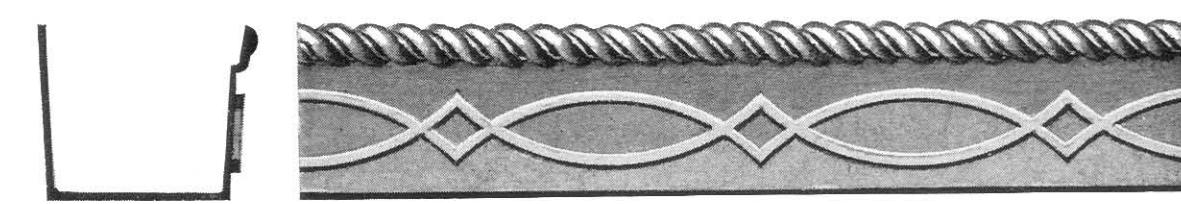
No. 261

$6'' \times 6'' \times \frac{1}{4}''$



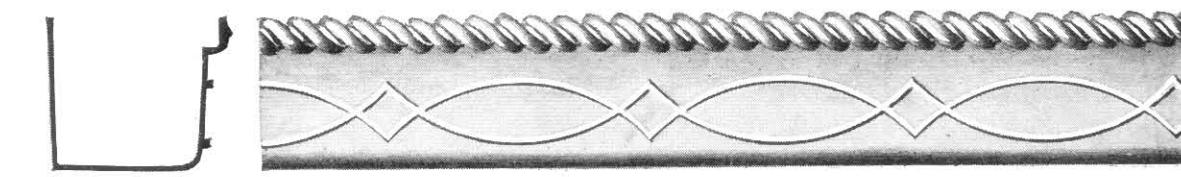
No. 264

$4'' \times 4\frac{1}{2}''$



No. 265

$6'' \times 5'' \times \frac{3}{16}''$



No. 266

$6'' \times 5'' \times \frac{3}{16}''$

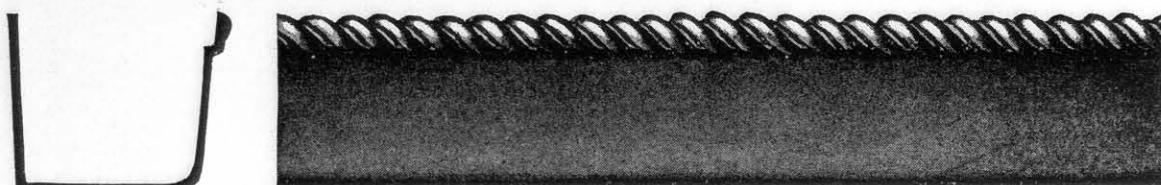
Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

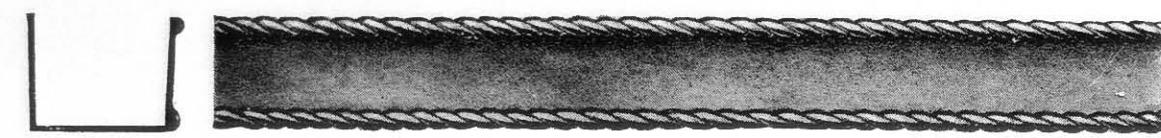
ENRICHED GUTTERS

With Inside Joints except where marked O.J.



No. 268

6" x 4" x $\frac{3}{16}$ "
6" x 5" x $\frac{3}{16}$ "
7" x 5" x $\frac{1}{4}$ "



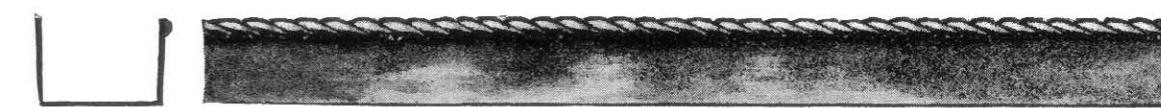
No. 273

4" x 5" x $\frac{3}{16}$ "
5" x 4" x $\frac{3}{16}$ "



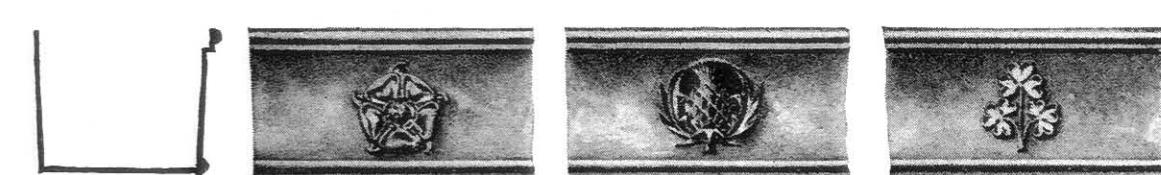
No. 273

4" x 5" x $\frac{3}{16}$ "



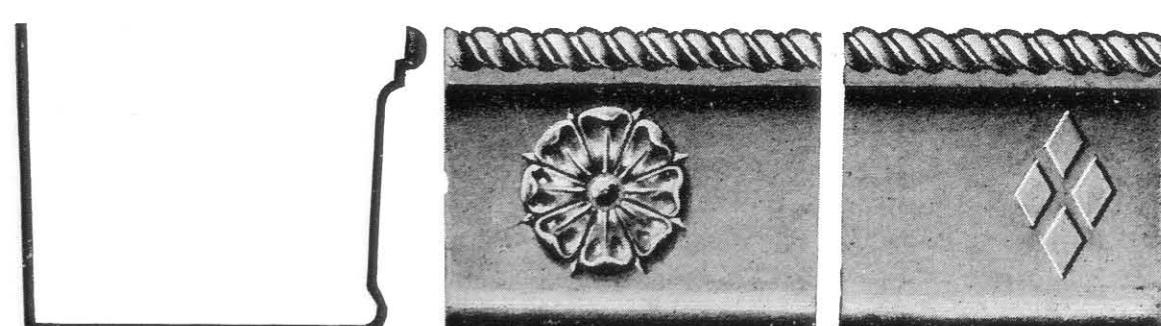
No. 274

4" x 3" x $\frac{3}{16}$ "



No. 275

6 $\frac{1}{4}$ " x 5" x $\frac{1}{4}$ "



No. 276

11 $\frac{3}{4}$ " x 9" x $\frac{1}{4}$ "

Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

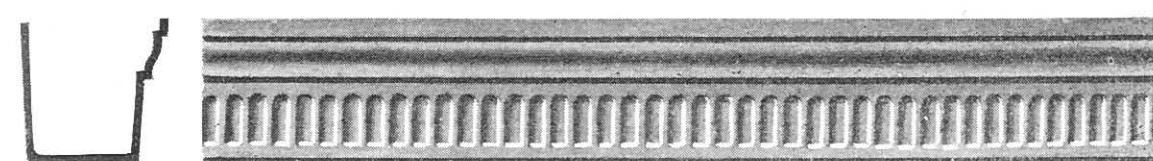
ENRICHED GUTTERS

With Inside Joints except where marked O.J.



No. 277

5" x 4 $\frac{1}{2}$ " x $\frac{3}{16}$ "



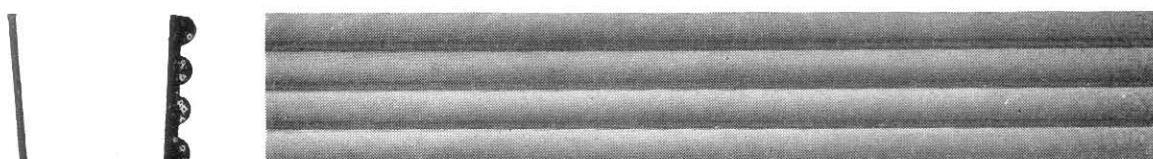
No. 279

4" x 3 $\frac{3}{4}$ " x $\frac{3}{16}$ "



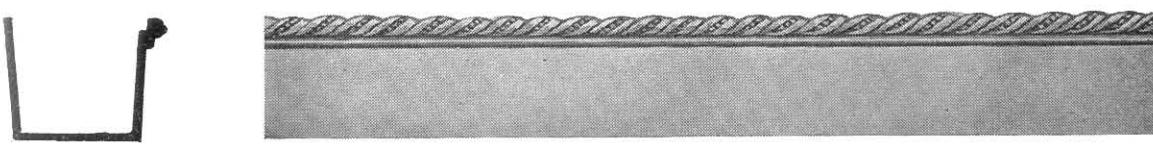
No. 281

5" x 4"



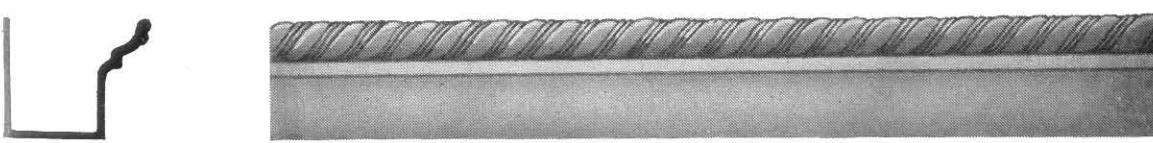
No. 282

5" x 4 $\frac{1}{2}$ " x $\frac{1}{4}$ "



No. 284

5" x 4 $\frac{1}{2}$ " x $\frac{3}{16}$ "



No. 285

10" x 6" x $\frac{1}{4}$ "

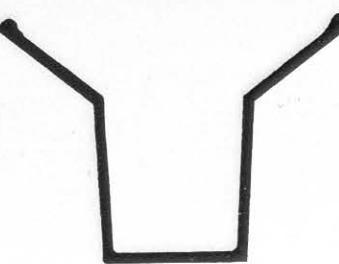
Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

VALLEY AND BOX GUTTERS

With Outside Joints except where marked I.J.



No. 15
Valley Gutter

SIZE	Roof Pitch
12" x 5 $\frac{1}{2}$ " x 6 $\frac{3}{4}$ " sole x $\frac{3}{16}$ "	37°
14" x 7 $\frac{1}{2}$ " x 8" sole x $\frac{3}{16}$ "	32° & 27°
30" x 11 $\frac{1}{2}$ " x 23" sole x $\frac{5}{16}$ "	54°

No. 21
Box Gutter



SIZE

4" x 2"	6" x 6"	10" x 6" x $\frac{3}{16}$ "
4" x 3"	6" x 6" x $\frac{1}{16}$ "	10" x 6" x $\frac{4}{16}$ "
4" x 3" I.J.	6" x 6" x $\frac{1}{4}$ "	10" x 7" x $\frac{3}{16}$ "
4" x 3" x $\frac{3}{16}$ "	6" x 6" x $\frac{1}{4}$ " I.J.	10" x 7 $\frac{1}{4}$ " x $\frac{4}{16}$ " I.J.
4" x 3" x $\frac{3}{16}$ " I.J.	B7" x 4"	10" x 8" x $\frac{3}{16}$ "
4" x 3" x $\frac{1}{4}$ "	B7" x 4" x $\frac{3}{16}$ "	11" x 5" x $\frac{3}{16}$ " I.J.
4" x 4"	7" x 5"	11" x 5" x $\frac{1}{16}$ "
4" x 4" x $\frac{3}{16}$ "	7" x 5" x $\frac{3}{16}$ "	11" x 5" x $\frac{4}{16}$ "
4" x 4" x $\frac{1}{4}$ "	7" x 5" x $\frac{1}{16}$ "	11" x 5" x $\frac{5}{16}$ "
4" x 6"	7" x 6"	11" x 6" x $\frac{3}{16}$ "
4 $\frac{1}{2}$ " x 3"	7" x 6" x $\frac{3}{16}$ "	11" x 6" x $\frac{4}{16}$ "
4 $\frac{1}{2}$ " x 4"	7" x 6" x $\frac{1}{16}$ "	11" x 8" x $\frac{3}{16}$ "
4 $\frac{1}{2}$ " x 4" x $\frac{3}{16}$ "	7 $\frac{1}{2}$ " x 3 $\frac{1}{4}$ " x $\frac{3}{16}$ " I.J.	12" x 5" x $\frac{3}{16}$ "
4 $\frac{1}{2}$ " x 4" x $\frac{1}{16}$ " I.J.	B8" x 4" x $\frac{3}{16}$ "	12" x 5" x $\frac{4}{16}$ "
4 $\frac{1}{2}$ " x 4" x $\frac{1}{4}$ "	8" x 4" x $\frac{1}{16}$ "	12" x 6" x $\frac{3}{16}$ "
4 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ "	8" x 5" x $\frac{3}{16}$ "	12" x 6" x $\frac{4}{16}$ "
4 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " x $\frac{1}{4}$ "	8" x 5" x $\frac{1}{16}$ "	A12" x 6" x 10" sole x $\frac{1}{4}$ "
A5" x 3"	8" x 6" x $\frac{3}{16}$ "	12" x 7" x $\frac{3}{16}$ "
A5" x 3" x $\frac{3}{16}$ "	8" x 6" x $\frac{1}{16}$ "	12" x 8" x $\frac{3}{16}$ "
A5" x 3" x $\frac{1}{4}$ "	8" x 6" x $\frac{3}{8}$ "	12" x 9" x $\frac{4}{16}$ "
5" x 4"	9" x 4" x $\frac{3}{16}$ "	12" x 10" x $\frac{5}{16}$ "
5" x 4" I.J.	9" x 4" x $\frac{1}{16}$ "	12 $\frac{1}{2}$ " x 4" x $\frac{3}{16}$ "
5" x 4" x $\frac{3}{16}$ "	9" x 4 $\frac{1}{2}$ " x $\frac{3}{16}$ "	13" x 6" x $\frac{4}{16}$ "
5" x 4" x $\frac{1}{4}$ "	9" x 5 $\frac{1}{2}$ " x $\frac{3}{16}$ "	13 $\frac{1}{2}$ " x 8" x $\frac{3}{16}$ "
5" x 5"	9" x 5" x $\frac{4}{16}$ "	14" x 6" x $\frac{3}{16}$ "
5" x 5" x $\frac{3}{16}$ "	9" x 6" x $\frac{3}{16}$ "	14" x 6" x $\frac{4}{16}$ "
6" x 2"	9" x 6" x $\frac{1}{16}$ "	14" x 7" x $\frac{1}{16}$ "
6" x 3"	9" x 6" x $\frac{4}{16}$ " I.J.	14" x 7" x $\frac{5}{16}$ "
6" x 3" x $\frac{1}{4}$ "	9" x 6" x $\frac{2}{16}$ "	15" x 6" x $\frac{4}{16}$ "
6" x 4"	B9" x 6" x $\frac{4}{16}$ "	15" x 6" x $\frac{3}{8}$ "
6" x 4" x $\frac{3}{16}$ "	10" x 4" x $\frac{3}{16}$ "	16" x 6" x $\frac{5}{16}$ "
6" x 4" x $\frac{1}{16}$ "	10" x 4" x $\frac{4}{16}$ "	16" x 7" x $\frac{4}{16}$ "
6" x 4 $\frac{1}{2}$ "	10" x 4 $\frac{5}{16}$ "	16 $\frac{1}{2}$ " x 6" x $\frac{3}{16}$ "
6" x 4 $\frac{1}{2}$ " x $\frac{3}{16}$ "	10" x 5" x $\frac{3}{16}$ "	18" x 4 $\frac{1}{2}$ " x $\frac{2}{16}$ "
6" x 4 $\frac{1}{2}$ " x $\frac{1}{4}$ "	10" x 5" x $\frac{1}{16}$ "	18" x 9" x $\frac{4}{16}$ "
6" x 5"		24" x 6" x $\frac{5}{16}$ "
6" x 5" x $\frac{3}{16}$ "		
6" x 5" x $\frac{1}{4}$ "		
6" x 5 $\frac{1}{2}$ "		

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

BOX GUTTERS

With Outside Joints except where marked I.J.

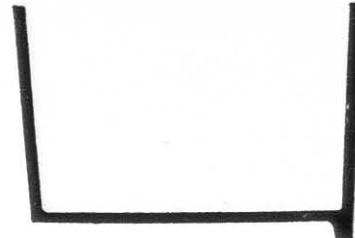
No. 21



SIZE

A4" x 3"	I.J.
6 $\frac{1}{2}$ " x 5" x $\frac{1}{4}$ "	I.J.
A7" x 4"	I.J.

No. 21



SIZE

12" x 6" x $\frac{3}{16}$ " I.J.
12 $\frac{1}{2}$ " x 6" x $\frac{3}{16}$ "
12 $\frac{3}{2}$ " x 6" x $\frac{3}{16}$ " I.J.

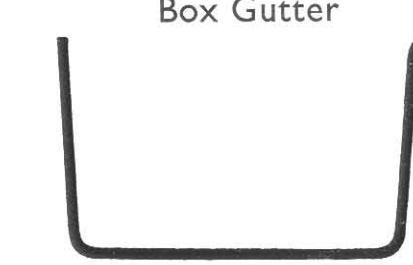
No. 21



SIZE

5" x 3 $\frac{1}{2}$ " x $\frac{3}{16}$ " I.J.
7" x 4" x $\frac{3}{16}$ "

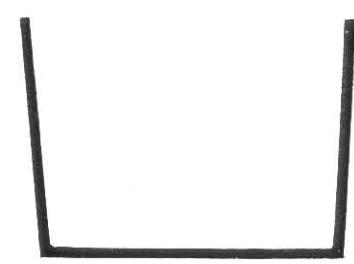
No. 21
Box Gutter



SIZE

A10" x 7" x $\frac{3}{16}$ "
13 $\frac{3}{4}$ " x 6" x $\frac{1}{4}$ "

No. 21



SIZE

A6" x 4" x $\frac{5}{16}$ "
A6" x 4 $\frac{1}{2}$ " x $\frac{3}{16}$ " I.J.

SIZE

5 $\frac{1}{2}$ " x 3" x $\frac{1}{4}$ " I.J.

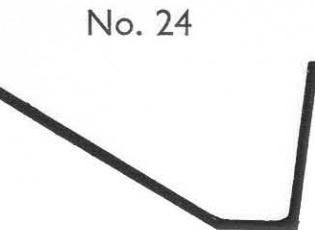
Joints are at Right Hand (except where marked L.H.) looking at front of Gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

BOUNDARY-WALL GUTTERS

With Outside Joints except where marked I.J.



SIZE	Roof Pitch	SIZE
6" x 4" x $3\frac{1}{2}$ " sole x $\frac{1}{4}$ "	58°	13" x 5" x 6" sole x $\frac{3}{6}$ "
6 $\frac{1}{2}$ " x 5" x $2\frac{3}{4}$ " sole x $\frac{1}{4}$ "	56°	13" x 5" x 7" sole x $\frac{1}{4}$ "
7" x $3\frac{1}{2}$ " x 3" sole	41°	13" x 5" x 9" sole x $\frac{3}{6}$ "
7" x 4" x $4\frac{1}{2}$ " sole	63°	13" x 5" x 9" sole x $\frac{5}{6}$ "
7" x 5" x $3\frac{3}{4}$ " sole x $\frac{3}{6}$ "	60°	13" x $6\frac{1}{2}$ " x 5" sole x $\frac{3}{6}$ "
8" x 4" x 6" sole x $\frac{3}{6}$ "	64°	13 $\frac{1}{4}$ " x 9" x 7" sole x $\frac{3}{6}$ "
8" x 4" x 6" sole x $\frac{1}{4}$ "	64°	13 $\frac{7}{8}$ " x $6\frac{1}{2}$ " x $6\frac{1}{4}$ " sole x $\frac{1}{4}$ "
8" x 5" x 5" sole x $\frac{3}{6}$ "	59°	14" x 4" x 6" sole x $\frac{5}{6}$ " L.H.
8" x 5" x 5" sole x $\frac{1}{6}$ " I.J.	59°	14" x $4\frac{1}{2}$ " x 6" sole x $\frac{3}{6}$ "
8 $\frac{1}{4}$ " x 5" x $1\frac{3}{4}$ " sole x $\frac{3}{6}$ "	38°	14" x 5" x 5" sole x $\frac{1}{6}$ "
9" x $5\frac{3}{4}$ " x $4\frac{1}{4}$ " sole x $\frac{3}{6}$ "	54°	14" x 5" x 6" sole x $\frac{3}{6}$ "
9" x 6" x $5\frac{1}{2}$ " sole x $\frac{3}{6}$ "	60°	14" x 5" x 6" sole x $\frac{1}{4}$ "
9 $\frac{1}{4}$ " x 3" x 3" sole x $\frac{3}{6}$ "	27°	14" x 5" x 6" sole x $\frac{1}{6}$ "
9 $\frac{1}{2}$ " x 3" x 3" sole x $\frac{3}{6}$ "	20°	14" x 5" x 6" sole x $\frac{5}{6}$ "
9 $\frac{1}{2}$ " x $5\frac{1}{4}$ " x $4\frac{3}{4}$ " sole x $\frac{1}{4}$ "	48°	14" x 5" x $6\frac{1}{2}$ " sole x $\frac{3}{6}$ "
10" x 4" x $4\frac{1}{4}$ " sole x $\frac{3}{6}$ "	35°	14" x 5" x $6\frac{1}{2}$ " sole x $\frac{1}{4}$ "
10" x 4" x $4\frac{1}{4}$ " sole x $\frac{1}{4}$ "	35°	14" x 5" x 7" sole x $\frac{1}{4}$ "
10" x 4" x 6" sole x $\frac{1}{4}$ "	45°	14" x 5" x 8" sole x $\frac{3}{6}$ " L.H.
10" x $4\frac{1}{2}$ " x $3\frac{3}{4}$ " sole x $\frac{3}{6}$ "	37°	14" x 6" x 8" sole x $\frac{3}{6}$ "
10" x $4\frac{1}{2}$ " x $3\frac{3}{4}$ " sole x $\frac{1}{4}$ "	37°	14" x 6" x 8" sole x $\frac{1}{6}$ "
10" x 5" x $4\frac{3}{4}$ " sole x $\frac{3}{6}$ "	45°	14" x 6" x 8" sole x $\frac{5}{6}$ "
10" x 5" x $6\frac{1}{2}$ " sole x $\frac{3}{6}$ "	56°	14" x 6" x 8" sole x $\frac{3}{8}$ "
10 $\frac{3}{4}$ " x $6\frac{1}{2}$ " x 7" sole x $\frac{3}{6}$ "	59°	14" x 8" x $5\frac{3}{4}$ " sole x $\frac{5}{6}$ "
11" x 5" x 6" sole x $\frac{3}{6}$ "	46°	14" x 8" x 8" sole x $\frac{1}{4}$ " I.J.
11 $\frac{1}{2}$ " x 4" x 6" sole x $\frac{1}{4}$ "	37°	14 $\frac{1}{2}$ " x $6\frac{1}{4}$ " x 9" sole x $\frac{1}{4}$ "
12" x 4" x $4\frac{3}{4}$ " sole x $\frac{3}{6}$ "	29°	14 $\frac{1}{2}$ " x 7" x $5\frac{1}{4}$ " sole x $\frac{5}{6}$ "
12" x $4\frac{1}{2}$ " x 5" sole x $\frac{3}{6}$ "	34°	14 $\frac{1}{2}$ " x 7" x $6\frac{1}{4}$ " sole x $\frac{3}{6}$ "
12" x 5" x 5" sole x $\frac{3}{6}$ "	36°	15" x 5" x 6" sole x $\frac{3}{6}$ "
12" x 5" x 5" sole x $\frac{1}{4}$ "	36°	15" x 5" x 9" sole x $\frac{3}{6}$ "
12" x 5" x 6" sole x $\frac{3}{6}$ "	40°	15" x 5" x 11" sole x $\frac{3}{8}$ "
12" x 5" x 6" sole x $\frac{1}{4}$ "	40°	15" x 5" x 11" sole x $\frac{1}{4}$ "
12" x 5" x $9\frac{1}{2}$ " sole x $\frac{3}{6}$ "	65°	15" x 6" x 9" sole x $\frac{3}{8}$ "
12" x 6" x $2\frac{3}{4}$ " sole x $\frac{3}{6}$ "	35°	15 $\frac{1}{4}$ " x 7" x 9" sole x $\frac{3}{16}$ "
12" x 6" x $2\frac{3}{4}$ " sole x $\frac{1}{4}$ "	35°	15 $\frac{1}{2}$ " x $5\frac{3}{4}$ " x $7\frac{3}{4}$ " sole x $\frac{3}{16}$ "
12" x 6" x 5" sole x $\frac{3}{6}$ "	40°	15 $\frac{1}{2}$ " x 6" x 8" sole x $\frac{3}{16}$ "
12" x 6" x 5" sole x $\frac{3}{8}$ "	40°	15 $\frac{3}{4}$ " x 6" x 9" sole x $\frac{1}{16}$ "
12" x 6" x 6" sole x $\frac{3}{6}$ "	45°	15 $\frac{3}{4}$ " x 6" x 9" sole x $\frac{4}{16}$ "
12" x 6" x 6" sole x $\frac{1}{4}$ "	45°	16" x 5" x $5\frac{3}{4}$ " sole x $\frac{3}{6}$ "
12" x 8" x 6" sole x $\frac{1}{4}$ " L.H.	56°	16" x 6" x 6" sole x $\frac{3}{16}$ "
12" x 8" x $8\frac{1}{2}$ " sole x $\frac{1}{4}$ "	68°	16" x 6" x 6" sole x $\frac{1}{4}$ "
12 $\frac{1}{2}$ " x $6\frac{1}{2}$ " x $5\frac{1}{2}$ " sole x $\frac{3}{8}$ "	42°	16" x $6\frac{1}{2}$ " x 8" sole x $\frac{3}{16}$ " I.J.
		16" x 7" x $7\frac{3}{4}$ " sole x $\frac{5}{16}$ "
		16" x $7\frac{1}{4}$ " x $7\frac{1}{4}$ " sole x $\frac{1}{4}$ "
		16 $\frac{3}{4}$ " x 6" x 8" sole x $\frac{1}{4}$ "
		16 $\frac{3}{4}$ " x $7\frac{1}{4}$ " x $7\frac{1}{4}$ " sole x $\frac{5}{16}$ "

Joints are at Right Hand (except where marked L.H.) looking at upright side of Gutter

Full-size sections on application

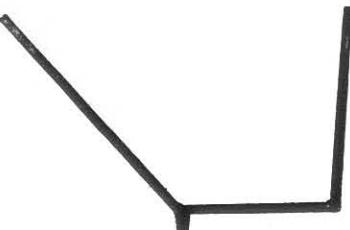
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

BOUNDARY-WALL AND VALLEY GUTTERS

With Outside Joints except where marked I.J.



Boundary-Wall Gutter

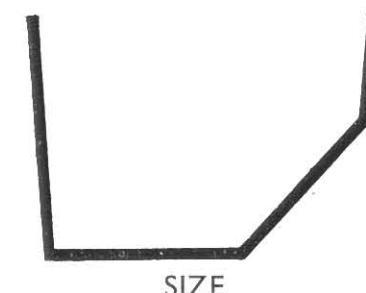


Boundary-Wall Gutter



SIZE	Roof Pitch
" x 6" x $6\frac{1}{2}$ " sole x $\frac{1}{4}$ "	68°
$\frac{1}{2}$ " x $6\frac{1}{2}$ " x 11" sole x $\frac{1}{4}$ "	71°

No. 34. Trough
Boundary-Wall Gutter



3" x 2"	9" x 5" x $4\frac{1}{2}$ " at front I.J.
4" x 3" I.J.	* 9" x 6" x $\frac{3}{16}$ " O.J., L.H.
4" x 3" x $\frac{3}{16}$ " I.J.	* $10\frac{1}{4}$ " x 8" x $\frac{1}{4}$ " O.J., L.H.
$4\frac{1}{2}$ " x 3" x $\frac{3}{16}$ "	* $10\frac{1}{2}$ " x 8" x $\frac{3}{8}$ " O.J., R.H.
$4\frac{1}{2}$ " x 4" I.J.	* 11" x $4\frac{1}{2}$ " x $\frac{3}{16}$ " I.J., R.H.
$4\frac{1}{2}$ " x 4" x $\frac{3}{16}$ " I.J.	* 11" x 6" x $\frac{1}{4}$ " I.J., R.H.
5" x 3" I.J.	* $11\frac{3}{4}$ " x 6" x $\frac{1}{4}$ " I.J., L.H.
5" x 3" x $\frac{1}{4}$ "	* 12" x 6" x $\frac{3}{16}$ " I.J., L.H.
5" x 4" I.J.	* 12" x 7" x $\frac{5}{16}$ " O.J., L.H.
5" x $4\frac{1}{2}$ " x $\frac{1}{4}$ "	* $13\frac{1}{2}$ " x 7" x $\frac{1}{4}$ " O.J., L.H.
$5\frac{1}{2}$ " x $3\frac{1}{2}$ " x $\frac{1}{4}$ " I.J.	* 14" x 5" x $\frac{1}{4}$ " O.J., L.H.
$5\frac{1}{2}$ " x $4\frac{1}{2}$ " x 4" at front x $\frac{1}{4}$ " I.J.	* $14\frac{1}{2}$ " x 7" x $\frac{1}{4}$ " O.J., L.H.
6" x 4" I.J.	* A16" x 7" x $\frac{1}{4}$ " I.J., R.H.
6" x $4\frac{3}{4}$ " x $\frac{1}{4}$ " I.J.	* 16" x 7" x $\frac{5}{8}$ " I.J., L.H.
6" x 5" I.J.	* 18" x 6" x $\frac{5}{16}$ " O.J., R.H.
$6\frac{1}{4}$ " x $4\frac{3}{4}$ " x $\frac{3}{16}$ " I.J.	* 18" x 9" x $\frac{1}{4}$ " O.J., L.H.
$6\frac{1}{2}$ " x 5" x $\frac{3}{16}$ " I.J.	{ 21" x 6" x $14\frac{1}{2}$ " sole x $\frac{1}{4}$ " O.J.
7" x 5" I.J.	{ R.H.
7" x 5"	
7" x 5" x $\frac{1}{4}$ " I.J.	
A7" x 5" x $\frac{1}{4}$ "	
8" x 7" x $\frac{1}{4}$ " I.J.	

*These Gutters have O.J., L.H. or R.H.
looking at upright side except where
marked L.L.

Joints are at Right Hand (except where marked L.H.) looking at front & upright side of Gutter

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

VALLEY GUTTERS

With Outside Joints except where marked I.J.

No. 31

Valley Gutter



SIZE	Roof Pitch	SIZE	Roof Pitch
9" x 5" x 6" sole x $\frac{1}{4}$ "	73°	19" x 4" x 5" sole x $\frac{1}{4}$ "	30°
10" x 4" x 2 $\frac{1}{2}$ " sole x $\frac{3}{16}$ "	47°	19" x 5" x 5" sole x $\frac{1}{4}$ "	37°
12" x 3" x 5 $\frac{3}{4}$ " sole x $\frac{3}{16}$ "	43°	19" x 5" x 5" sole x $\frac{3}{8}$ "	37°
12" x 3 $\frac{1}{2}$ " x 3" sole x $\frac{1}{6}$ "	37°	19" x 5" x 7" sole x $\frac{1}{4}$ "	39°
12" x 3 $\frac{1}{2}$ " x 3" sole x $\frac{1}{4}$ "	37°	19" x 5" x 7 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	39°
12" x 5" x 3 $\frac{1}{2}$ " sole x $\frac{3}{16}$ "	50°	19" x 5" x 9" sole x $\frac{1}{4}$ "	45°
12" x 5" x 3 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	50°	19" x 5 $\frac{1}{2}$ " x 4 $\frac{3}{4}$ " sole x $\frac{1}{4}$ "	37°
12" x 6" x 5" sole x $\frac{1}{4}$ "	60°	19" x 5 $\frac{3}{4}$ " x 8" sole x $\frac{1}{4}$ "	47°
12" x 6" x 6" sole x $\frac{3}{16}$ "	63°	19" x 6" x 5" sole x $\frac{3}{8}$ "	40°
12" x 8" x 4 $\frac{1}{2}$ " sole x $\frac{1}{16}$ "	65°	19" x 6" x 5 $\frac{1}{4}$ " sole x $\frac{1}{2}$ "	40°
12 $\frac{1}{2}$ " x 4" x 6 $\frac{1}{4}$ " sole x $\frac{3}{16}$ "	52°	19" x 6" x 7" sole x $\frac{1}{2}$ " I.J.	45°
13" x 4 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " sole x $\frac{5}{16}$ "	38°	19" x 6 $\frac{1}{4}$ " x 7" sole x $\frac{1}{4}$ "	46°
13 $\frac{1}{4}$ " x 4 $\frac{3}{4}$ " x 6" sole x $\frac{1}{4}$ "	53°	20" x 6" x 6 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	42°
14" x 4" x 6" sole x $\frac{1}{4}$ "	45°	20" x 6" x 8" sole x $\frac{5}{16}$ "	45°
14" x 5" x 6" sole x $\frac{3}{16}$ "	52°	20" x 6" x 9" sole x $\frac{5}{8}$ "	47°
14" x 5" x 8 $\frac{1}{4}$ " sole x $\frac{3}{16}$ "	59°	20" x 6" x 10" sole x $\frac{1}{4}$ "	50°
14" x 6" x 7" sole x $\frac{1}{6}$ "	60°	20" x 7" x 16" sole x $\frac{1}{2}$ "	74°
14" x 6" x 7" sole x $\frac{1}{4}$ "	60°	20 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " x 6" sole x $\frac{1}{4}$ "	35°
14 $\frac{1}{2}$ " x 3 $\frac{3}{4}$ " x 6" sole x $\frac{1}{4}$ "	38°	20 $\frac{3}{4}$ " x 4" x 5 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	29°
15" x 4" x 6" sole x $\frac{3}{16}$ "	40°	21" x 6" x 9 $\frac{1}{2}$ " sole x $\frac{1}{2}$ "	47°
15" x 4 $\frac{1}{2}$ " x 6" sole x $\frac{3}{16}$ "	45°	21" x 6" x 16" sole x $\frac{1}{4}$ "	66°
15" x 5" x 2" sole x $\frac{3}{16}$ "	36°	21" x 7" x 13" sole x $\frac{3}{8}$ "	60°
15" x 5" x 2" sole x $\frac{1}{4}$ "	36°	21 $\frac{1}{4}$ " x 8" x 9" sole x $\frac{1}{2}$ "	50°
15" x 5" x 5" sole x $\frac{3}{16}$ "	45°	21 $\frac{1}{4}$ " x 8" x 9" sole x $\frac{5}{16}$ "	50°
15" x 5" x 5" sole x $\frac{1}{4}$ "	45°	21 $\frac{1}{2}$ " x 4 $\frac{3}{4}$ " x 12" sole x $\frac{5}{16}$ "	44°
15" x 5" x 7" sole x $\frac{3}{16}$ "	51°	22" x 4" x 3 $\frac{1}{4}$ " sole x $\frac{5}{16}$ "	25°
15" x 5" x 10 $\frac{1}{4}$ " sole x $\frac{1}{16}$ "	64°	22" x 5 $\frac{3}{4}$ " x 8" sole x $\frac{5}{16}$ "	37°
15" x 6" x 8" sole x $\frac{3}{16}$ "	60°	22" x 6" x 12" sole x $\frac{1}{4}$ "	50°
15" x 6" x 8" sole x $\frac{1}{4}$ "	60°	22" x 6 $\frac{1}{2}$ " x 9" sole x $\frac{1}{4}$ "	44°
16" x 6" x 5" sole x $\frac{3}{16}$ "	47°	22" x 7" x 8" sole x $\frac{1}{4}$ "	45°
16" x 6" x 5" sole x $\frac{1}{4}$ "	47°	22" x 7" x 10" sole x $\frac{1}{4}$ "	48°
16" x 6" x 5" sole x $\frac{1}{4}$ "	47°	22" x 7 $\frac{1}{2}$ " x 12" sole x $\frac{1}{4}$ "	57°
16" x 6" x 9" sole x $\frac{1}{4}$ "	59°	22 $\frac{1}{4}$ " x 5 $\frac{3}{4}$ " x 14 $\frac{1}{2}$ " sole x $\frac{5}{16}$ "	52°
16" x 7" x 8" sole x $\frac{1}{4}$ "	60°	23" x 5 $\frac{3}{4}$ " x 6" sole x $\frac{1}{4}$ "	33°
16" x 8" x 9 $\frac{3}{4}$ " sole x $\frac{1}{4}$ "	67°	24" x 5" x 7" sole x $\frac{1}{4}$ "	30°
17" x 4 $\frac{1}{2}$ " x 8" sole x $\frac{3}{16}$ "	45°	24" x 5 $\frac{1}{2}$ " x 5" sole x $\frac{1}{4}$ "	29°
17" x 5" x 10" sole x $\frac{5}{16}$ "	54°	24" x 6" x 6" sole x $\frac{1}{4}$ "	33°
17 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " x 6" sole x $\frac{3}{16}$ "	37°	24" x 6" x 8 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	38°
17 $\frac{1}{2}$ " x 6" x 3" sole x $\frac{3}{16}$ "	38°	A24" x 6" x 8 $\frac{1}{2}$ " sole x $\frac{5}{16}$ "	36°
18" x 4" x 6 $\frac{1}{4}$ " sole x $\frac{3}{16}$ "	30°	24" x 6" x 10" sole x $\frac{1}{4}$ "	40°
18" x 5" x 9" sole x $\frac{1}{4}$ "	48°	24" x 6" x 12" sole x $\frac{1}{4}$ "	45°
18" x 5" x 12" sole x $\frac{1}{4}$ "	59°	24" x 6" x 15" sole x $\frac{1}{4}$ "	53°
18" x 6" x 3 $\frac{3}{4}$ " sole x $\frac{1}{4}$ "	40°	24" x 6" x 16" sole x $\frac{3}{8}$ "	55°
18" x 6" x 5" sole x $\frac{1}{4}$ "	42°	24" x 6" x 6 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	33°
18" x 6" x 7" sole x $\frac{3}{16}$ "	47°	24" x 6 $\frac{1}{2}$ " x 5" sole x $\frac{1}{4}$ "	33°
18" x 6" x 7 $\frac{3}{4}$ " sole x $\frac{5}{16}$ "	50°	24" x 6 $\frac{1}{2}$ " x 5" sole x $\frac{5}{8}$ "	33°
18" x 6" x 8" sole x $\frac{1}{4}$ "	50°	25" x 7" x 12" sole x $\frac{1}{4}$ "	48°
18" x 6" x 9" sole x $\frac{1}{4}$ "	53°	26" x 7" x 13" sole x $\frac{3}{8}$ "	30°
18" x 6" x 12" sole x $\frac{1}{4}$ "	63°	26" x 6 $\frac{1}{2}$ " x 5" sole x $\frac{1}{4}$ "	30°
18" x 6 $\frac{1}{2}$ " x 15 $\frac{3}{4}$ " sole x $\frac{5}{16}$ "	80°	26 $\frac{1}{2}$ " x 6" x 7 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	32°

Full-size sections on application

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

NORTH-LIGHT AND TROUGH VALLEY GUTTERS

With Outside Joints except where marked I.J.

No. 35. North-Light Valley Gutter



SIZE	Roof Pitch
11" x 6" x 6" sole x $\frac{1}{4}$ "	65° & 70°
12 $\frac{1}{2}$ " x 5" x 2 $\frac{1}{2}$ " sole x $\frac{3}{16}$ "	35° & 60°
13 $\frac{1}{4}$ " x 4 $\frac{3}{4}$ " x 5 $\frac{1}{4}$ " sole x $\frac{1}{4}$ "	39° & 65°
14" x 4" x 4 $\frac{3}{4}$ " sole x $\frac{3}{16}$ "	30° & 60°

SIZE	Roof Pitch
14" x 5" x 8" sole x $\frac{1}{4}$ "	52° & 65°
14 $\frac{1}{4}$ " x 5 $\frac{1}{2}$ " x 7" sole x $\frac{1}{4}$ "	45° & 71°
15" x 5" x 5 $\frac{1}{2}$ " sole x $\frac{1}{4}$ "	37° & 59°
15" x 5" x 6" sole x $\frac{1}{4}$ "	37° & 63°
15" x 5" x 6" sole x $\frac{1}{4}$ "	37° & 63°
15" x 6" x 4 $\frac{1}{4}$ " sole x $\frac{1}{4}$ "	44° & 59°
15 $\frac{1}{2}$ " x 5" x 6 $\frac{1}{4}$ " sole x $\frac{1}{4}$ "	37° & 63°

SIZE	Roof Pitch
15 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " x 9" sole x $\frac{1}{4}$ "	50° & 69°
15 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " x 9" sole x $\frac{5}{16}$ "	50° & 69°
15 $\frac{1}{2}$ " x 6" x 4 $\frac{1}{4}$ " sole x $\frac{1}{4}$ "	39° & 60°
15 $\frac{3}{4}$ " x 5 $\frac{3}{8}$ " x 6 $\frac{3}{8}$ " sole x $\frac{3}{16}$ "	36° & 64°
16" x 6" x 7 $\frac{1}{8}$ " sole x $\frac{3}{8}$ "	39° & 75°

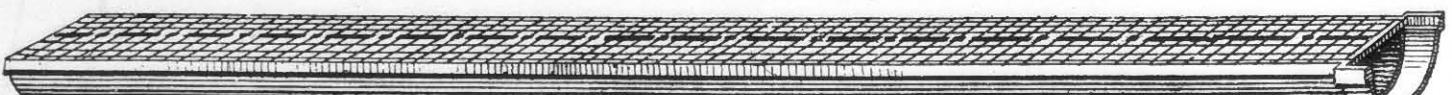
SIZE	Roof Pitch
16" x 6" x 9" sole x $\frac{1}{4}$ "	50° & 70°
17" x 6" x 5 $\frac{1}{2}$ " sole x $\frac{3}{8}$ "	32° & 67°
17" x 7" x 9" sole x $\frac{1}{4}$ "	50° & 69°
18" x 5" x 6" sole x $\frac{3}{8}$ "	30° & 60°
18" x 6" x 5 $\frac{1}{4}$ " sole x $\frac{1}{4}$ "	31° & 60°

SIZE	Roof Pitch

<tbl_r cells="2" ix="1" maxcspan="1" maxrspan

PAVEMENT GUTTERS

No. 1. With Perforated Cover, Loose or Fixed

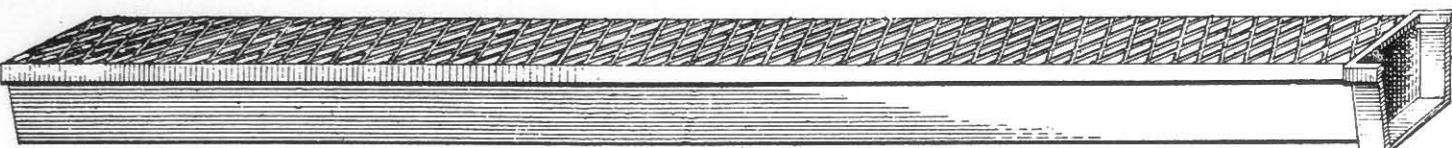


4" x 2 1/2" x 5/16" Thick. Cover 1/2" Thick
and 6" x 3" x 5/16" Thick. Cover 1" Thick (maximum)

SECTIONS



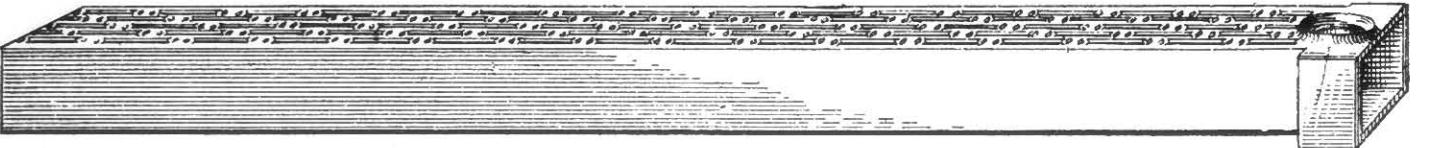
No. 2. With Solid Cover, Loose or Fixed



5" x 4" x 1/4" Thick. Cover 5/16" Thick



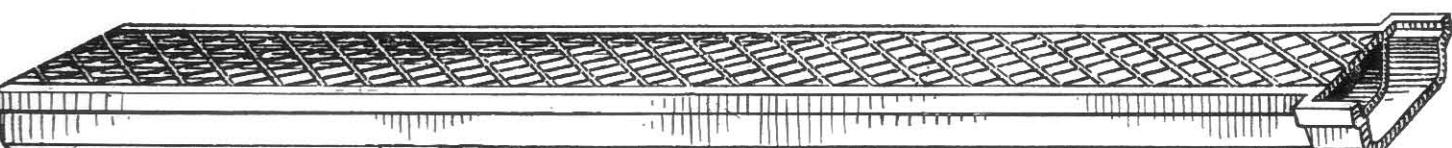
No. 3. Cast with Solid Top



3" x 3" x 1/4" Thick and 4 1/2" x 3 1/2" x 5/16" Thick
Top 7/16" over Roughening



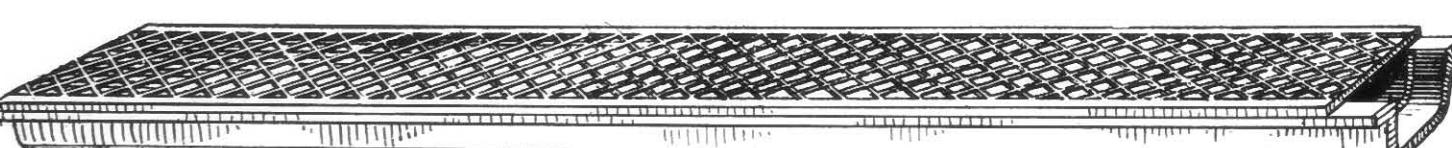
No. 4. With Solid Cover, Loose or Fixed



6 1/2" x 2 3/4" x 1/4" Thick. Cover 7/16" Thick



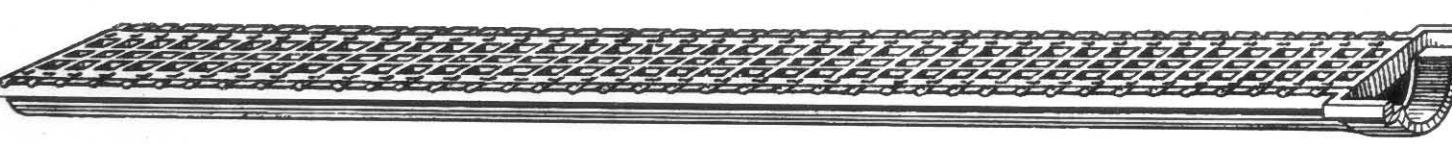
No. 5. With Solid Cover, Loose or Fixed



7" x 2 1/2" x 1/4" Thick. Cover 1/4" Thick over Chequer



No. 6. With Heavy Perforated Cover, Loose or Fixed

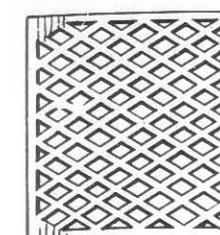


6" x 3" x 5/16" Thick. Cover 1" Thick



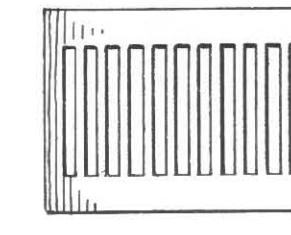
VENTILATING GRATINGS AND PANELS

No. 8



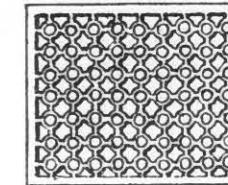
9" x 4 1/2" x 1/4" Thick
9" x 6" x 5/8" Thick
10" x 6 1/2" x 1/4" Thick
12" x 4" x 1/4" Thick
10" x 10" x 3/8" Thick

No. 9



8" x 6" x 3/8" Thick
9" x 4" x 1/4" Thick
9" x 6" x 5/8" Thick
10" x 8" x 1/4" Thick
11" x 11" x 1/4" Thick
12" x 9" x 1/2" Thick

No. 15



6" x 6" x 1/4" Thick
9" x 3" x 1/4" Thick
9" x 4" x 1/4" Thick
9" x 6" x 5/8" Thick
10" x 8" x 1/4" Thick
14" x 7" x 1/4" Thick
11" x 11" x 1/4" Thick
12" x 12" x 1/4" Thick
18" x 18" x 1/4" Thick

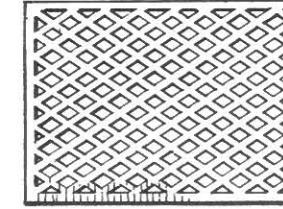
12" x 3" x 1/4" Thick
12" x 6" x 1/4" Thick
12" x 8" x 1/4" Thick
12" x 12" x 1/4" Thick
14" x 7" x 1/4" Thick
18" x 12" x 1/4" Thick
18" x 18" x 1/4" Thick

No. 35



5 1/2" x 5 1/2" x 1/4" Thick
8" x 8" x 1/2" Thick

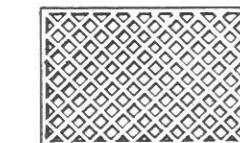
No. 33



7" x 7" x 1/4" Thick
8" x 8" x 1/4" Thick
10" x 6" x 1/4" Thick
12" x 8" x 1/4" Thick
12" x 9" x 5/16" Thick
12" x 12" x 1/6" Thick

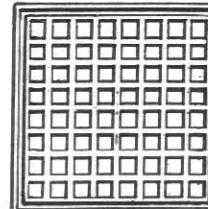
13" x 7" x 5/16" Thick
13" x 9" x 5/16" Thick
14" x 8" x 1/6" Thick
21" x 12" x 5/16" Thick
23" x 16" x 5/16" Thick
12" x 6" x 1/4" Thick
15 1/2" x 5 1/2" x 5/16" Thick

No. 36



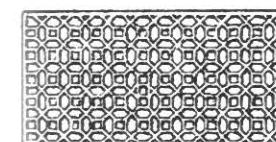
6" x 4" x 1/4" Thick
6" x 6" x 1/4" Thick
9" x 3" x 1/4" Thick
9" x 4 1/2" x 1/4" Thick
9" x 6" x 1/4" Thick
9" x 9" x 1/4" Thick
12" x 6" x 1/4" Thick
15 1/2" x 5 1/2" x 5/16" Thick

No. 46



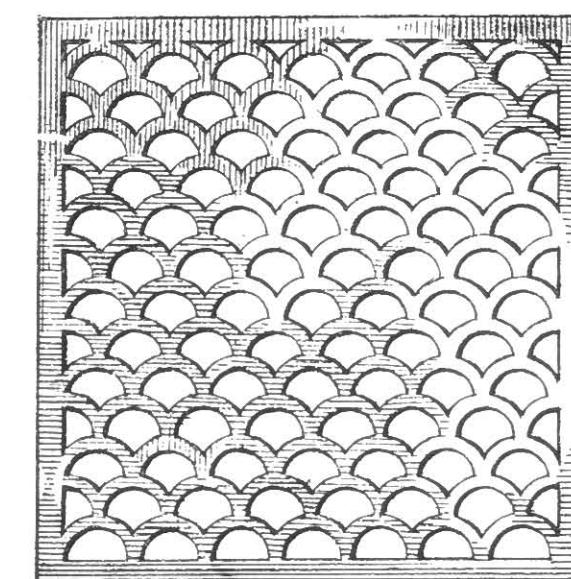
6" x 6" x 1/2" Thick
9" x 6" x 1/2" Thick
9" x 6" x 1" Thick
9" x 9" x 1/2" Thick
12" x 6" x 1/2" Thick
12" x 7" x 2/3" Thick
12" x 9" x 9/8" Thick
12" x 9" x 1/2" Thick
14" x 7" x 1/2" Thick
14" x 10" x 1" Thick
14" x 14" x 1/2" Thick
15" x 7" x 2/3" Thick
15" x 12" x 1/2" Thick
17" x 15" x 2/3" Thick
18" x 12" x 2/3" Thick
24" x 12" x 1/2" Thick
36" x 15" x 11/16" Thick

No. 45



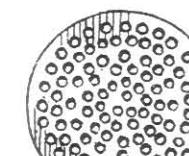
5" x 5" x 1/4" Thick
6" x 6" x 1/4" Thick
9" x 3 3/4" x 5/16" Thick
9" x 6" x 1/4" Thick
12" x 2 1/2" x 5/16" Thick
12" x 6" x 1/4" Thick
13 1/2" x 8 1/2" x 5/16" Thick
14" x 3 1/2" x 1/4" Thick
14" x 6" x 1/4" Thick
14" x 7" x 5/16" Thick

No. 47



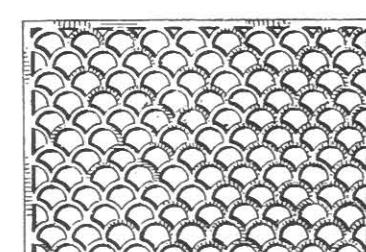
23 1/2" x 25" x 5/8" Thick

No. 76



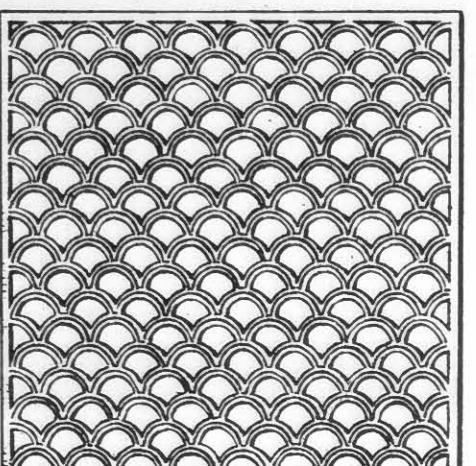
Diam. Thick
3" x 1/2" Thick
3 7/8" x 7/16" Thick
4" x 3/8" Thick
5" x 1/2" Thick
6" x 3/8" Thick
6 1/2" x 1/2" Thick
7" x 1/2" Thick
7 1/2" x 9/16" Thick
7 1/2" x 1/2" Thick
8" x 1/2" Thick
9" x 3/8" Thick
9" x 1/2" Thick

15" x 7" x 5/16" Thick
15" x 9" x 5/16" Thick
16" x 11" x 1/4" Thick
19" x 31" x 5/16" Thick
21" x 17" x 5/16" Thick



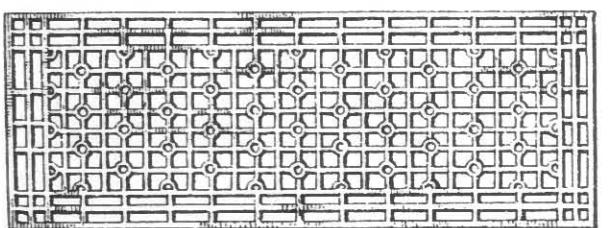
VENTILATING GRATINGS AND PANELS

No. 85



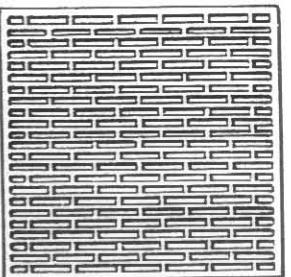
$20\frac{1}{2}'' \times 20\frac{3}{4}'' \times \frac{3}{8}''$ Thick

No. 147



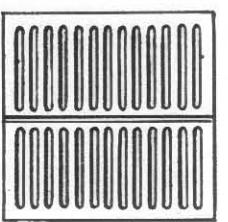
$34'' \times 12\frac{1}{2}'' \times \frac{7}{16}''$ Thick

No. 622



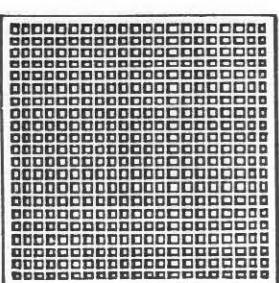
$6'' \times 3''$ $9'' \times 9''$ $12'' \times 9''$
 $6'' \times 4''$ $10'' \times 4''$ $12'' \times 12''$
 $6'' \times 6''$ $10'' \times 6''$ $14'' \times 10''$
 $8'' \times 6''$ $10'' \times 10''$ $18'' \times 6''$
 $9'' \times 4''$ $12'' \times 3''$ $18'' \times 12''$
 $9'' \times 6''$ $12'' \times 4''$ $18'' \times 18''$
 $9'' \times 8''$ $12'' \times 6''$
All $\frac{5}{16}''$ Thick

No. 95



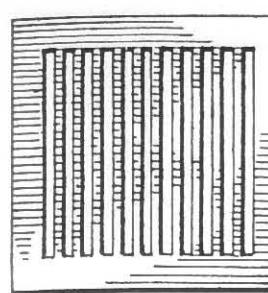
$9'' \times 9'' \times \frac{1}{4}''$ Thick

No. 96



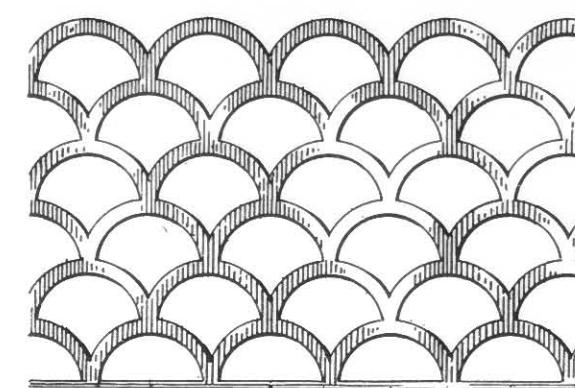
$6'' \times 4''$	$9'' \times 4\frac{1}{2}''$	$12'' \times 6''$
$6'' \times 6''$	$9'' \times 6''$	$12'' \times 8''$
$7'' \times 7''$	$9'' \times 8''$	$12'' \times 9''$
$8'' \times 6''$	$9'' \times 9''$	$12'' \times 10''$
$8'' \times 7''$	$10'' \times 4''$	$12'' \times 12''$
$8'' \times 8''$	$10'' \times 6''$	$14'' \times 10''$
$9'' \times 3''$	$10'' \times 8''$	$18'' \times 6''$
$9'' \times 3\frac{1}{2}''$	$10'' \times 10''$	$18'' \times 12''$
$9'' \times 4''$	$12'' \times 4''$	$18'' \times 18''$
All $\frac{5}{16}''$ Thick		

No. 677



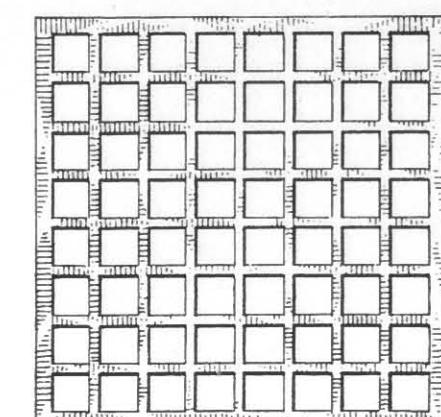
$12'' \times 12'' \times \frac{1}{2}''$ Thick

No. 718



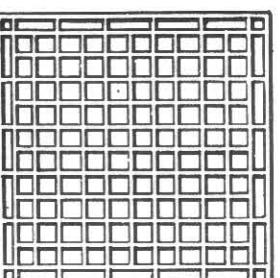
Up to $44\frac{1}{2}'' \times 30\frac{1}{4}'' \times \frac{3}{4}''$ Thick

No. 724



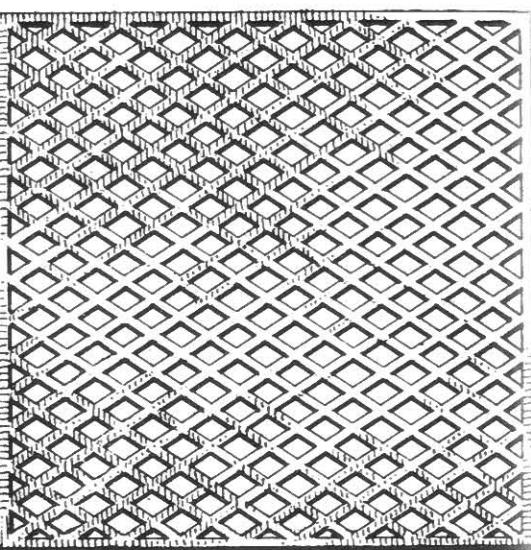
$24'' \times 24'' \times \frac{1}{2}''$ Thick

No. 141



$9'' \times 9''$ $12'' \times 12''$
 $12'' \times 8\frac{1}{2}''$ $22'' \times 12''$
All $\frac{1}{2}''$ Thick

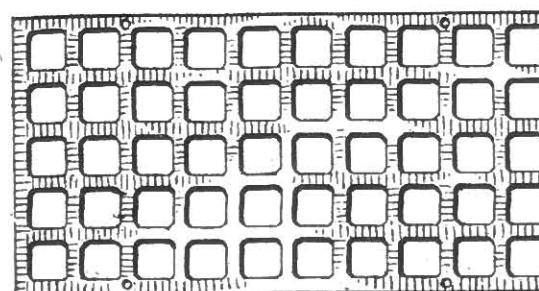
No. 248



$23\frac{1}{2}'' \times 23\frac{1}{2}'' \times \frac{1}{2}''$ Thick

No. 726

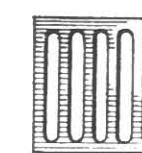
Double Grating for Mosquito Gauze



$23\frac{1}{2}'' \times 13'' \times \frac{1}{2}''$ Thick

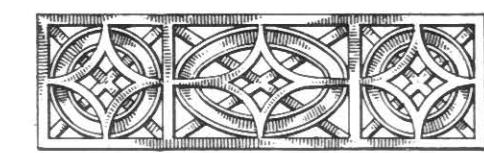
Inner Grating Detachable for Removal of Gauze

No. 819



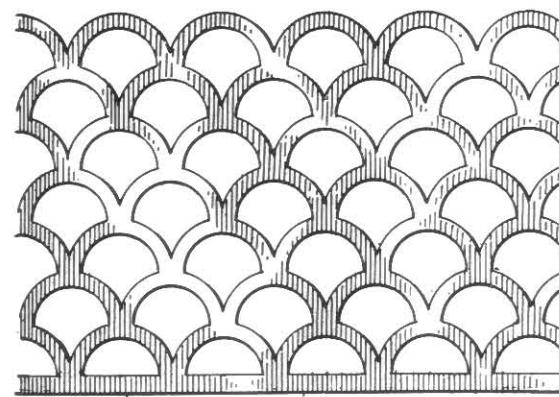
$6'' \times 6'' \times \frac{5}{16}''$ Thick
 $9'' \times 9'' \times \frac{5}{16}''$ Thick

No. 844



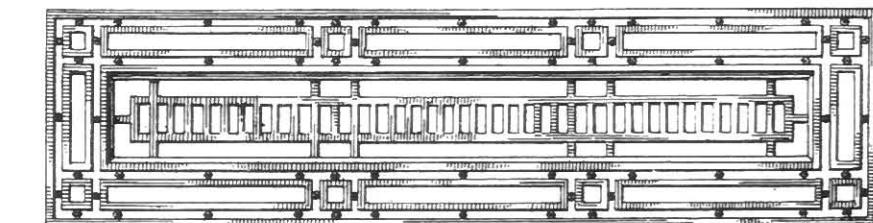
$26\frac{1}{4}'' \times 8'' \times \frac{1}{2}''$ Thick

No. 787



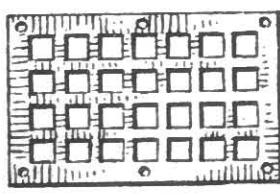
Up to $62'' \times 23\frac{1}{4}'' \times \frac{5}{8}''$ Thick

No. 795



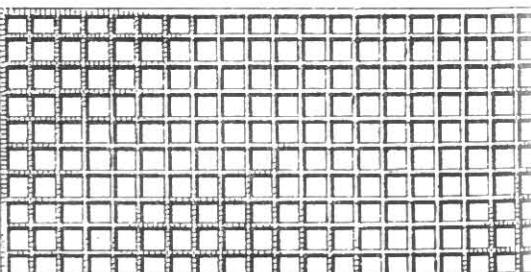
$48\frac{3}{4}'' \times 13'' \times \frac{3}{4}''$ Thick

No. 652



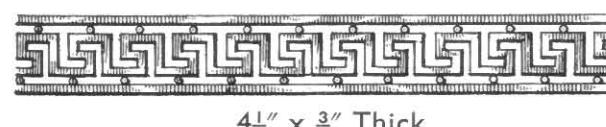
$12'' \times 7'' \times \frac{1}{4}''$ Thick

No. 651



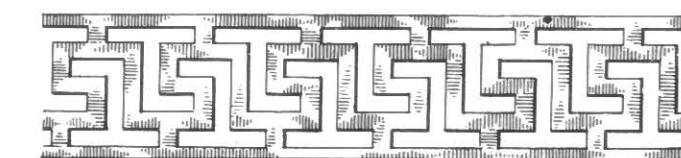
$17\frac{1}{2}'' \times 11\frac{1}{2}'' \times \frac{3}{8}''$ Thick
 $22'' \times 12\frac{3}{4}'' \times \frac{1}{2}''$ Thick
 $24'' \times 12'' \times \frac{1}{2}''$ Thick

No. 810



$4\frac{1}{2}'' \times \frac{3}{8}''$ Thick

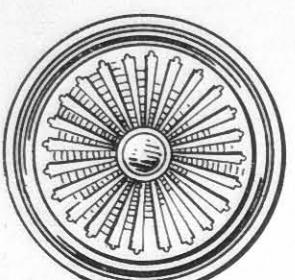
No. 867



$8\frac{1}{2}'' \times \frac{1}{4}''$ Thick

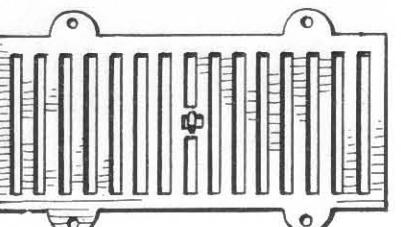
VENTILATING GRATINGS WITH MOVABLE BACK PLATES

No. 12



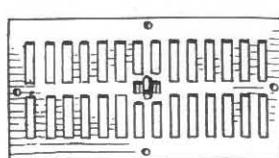
6" and 12" Diam.
 $\frac{3}{16}$ " Thick

No. 16



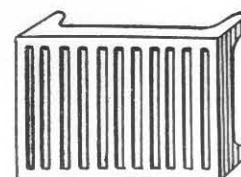
9" x 6" x $\frac{1}{2}$ " Thick
12" x 8" x $\frac{1}{2}$ " Thick
13 $\frac{3}{4}$ " x 10" x $\frac{1}{2}$ " Thick
14" x 9" x $\frac{1}{2}$ " Thick
15 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
18" x 7 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
18" x 10" x $\frac{1}{2}$ " Thick
24" x 10" x $\frac{1}{2}$ " Thick

No. 70



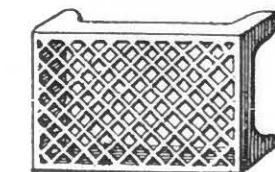
9" x 5" x $\frac{1}{4}$ " Thick
9" x 6" x $\frac{1}{4}$ " Thick
12" x 6" x $\frac{1}{4}$ " Thick
14" x 6" x $\frac{1}{4}$ " Thick

No. 2



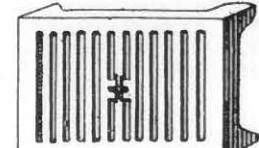
4 $\frac{1}{2}$ " x 3" x 2" x $\frac{1}{4}$ " Thick
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 3 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " x $\frac{1}{4}$ " Thick
9" x 4" x 2 $\frac{3}{8}$ " x $\frac{3}{16}$ " Thick
9" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 6 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 9" x 2 $\frac{3}{4}$ " x $\frac{5}{16}$ " Thick
12" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 6 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x $\frac{3}{16}$ " Thick
12" x 12" x 2" x $\frac{5}{16}$ " Thick
13 $\frac{1}{2}$ " x 9" x 3" x $\frac{5}{16}$ " Thick
14" x 3 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick

No. 3



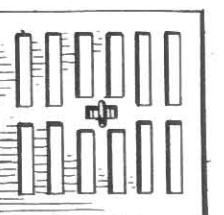
6" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 4" x 2 $\frac{1}{4}$ " x $\frac{3}{16}$ " Thick
9" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 6" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 8" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 12" x 3" x $\frac{3}{8}$ " Thick
14" x 10 $\frac{1}{4}$ " x 3" x $\frac{3}{8}$ " Thick
24" x 9" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick

No. 4
Movable Back Plate



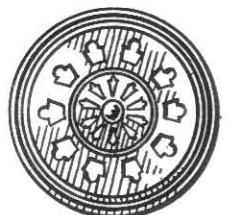
6" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 4" x 2 $\frac{1}{4}$ " x $\frac{3}{16}$ " Thick
9" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 6" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 8" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 12" x 3" x $\frac{3}{8}$ " Thick
14" x 10 $\frac{1}{4}$ " x 3" x $\frac{3}{8}$ " Thick
24" x 9" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick

No. 72



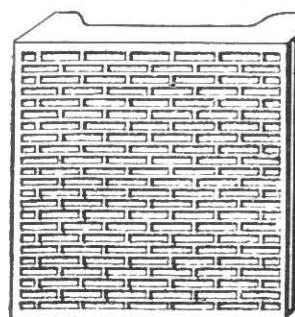
5" x 5" x $\frac{5}{16}$ " Thick
6" x 6" x $\frac{5}{16}$ " Thick
7" x 7" x $\frac{5}{16}$ " Thick
9" x 9" x $\frac{5}{16}$ " Thick
11" x 11" x $\frac{5}{16}$ " Thick

No. 94



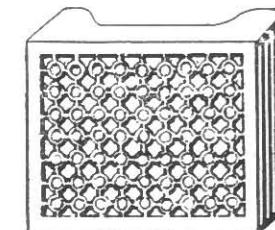
9" Diam. x $\frac{3}{16}$ " Thick
22" Diam. x $\frac{5}{16}$ " Thick

No. 22



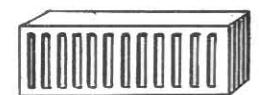
9" x 3" x 2 $\frac{1}{2}$ "
9" x 9" x 2 $\frac{1}{2}$ "
12" x 6" x 2 $\frac{1}{2}$ "
12" x 9" x 2 $\frac{1}{2}$ "
12" x 12" x 2 $\frac{1}{2}$ "
All $\frac{5}{16}$ " Thick

No. 23



10" x 8" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick

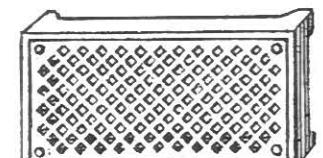
No. 30



3" x 3" x 3" x $\frac{3}{8}$ " Thick
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick

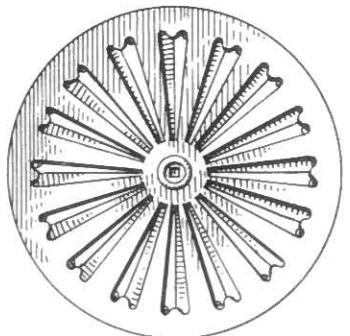
No. 71

Front can be taken out



9" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick

No. 803
Movable Back Plate



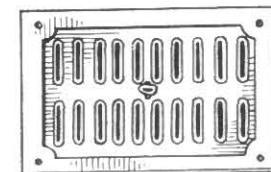
17" Diam.
Fixed Plate $\frac{3}{8}$ " Thick
Movable Plate $\frac{5}{16}$ " Thick

No. 143



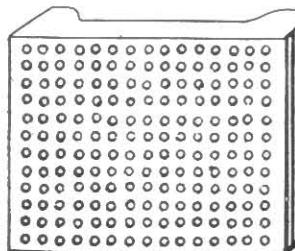
10" x 4" x $\frac{1}{4}$ " Thick

No. 585



11 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick

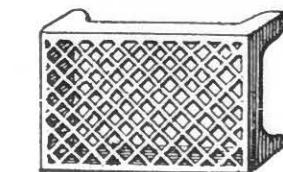
No. 34



12" x 9" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick
12" x 12" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick

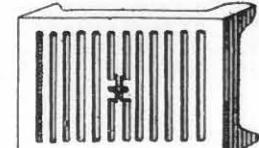
AIR BRICKS

No. 3



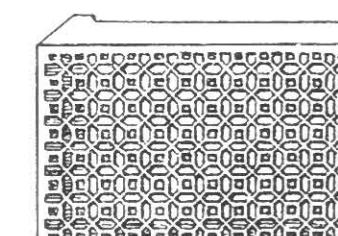
6" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 4" x 2 $\frac{1}{4}$ " x $\frac{3}{16}$ " Thick
9" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 6" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 8" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 12" x 3" x $\frac{3}{8}$ " Thick
14" x 10 $\frac{1}{4}$ " x 3" x $\frac{3}{8}$ " Thick
24" x 9" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick

No. 4
Movable Back Plate



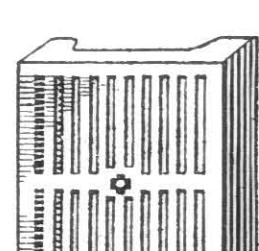
6" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 4" x 2 $\frac{1}{4}$ " x $\frac{3}{16}$ " Thick
9" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 6" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 8" x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
12" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
12" x 12" x 3" x $\frac{3}{8}$ " Thick
14" x 10 $\frac{1}{4}$ " x 3" x $\frac{3}{8}$ " Thick
24" x 9" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick

No. 55



9" x 6" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick
9" x 6 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick
12" x 6" x 3" x $\frac{5}{16}$ " Thick
14" x 3 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " x $\frac{1}{4}$ " Thick
14" x 7" x 2 $\frac{3}{4}$ " x $\frac{1}{4}$ " Thick
14" x 7 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " x $\frac{1}{4}$ " Thick
14" x 9" x 2 $\frac{3}{4}$ " x $\frac{3}{8}$ " Thick
14 $\frac{1}{2}$ " x 5 $\frac{3}{4}$ " x 3" x $\frac{5}{16}$ " Thick

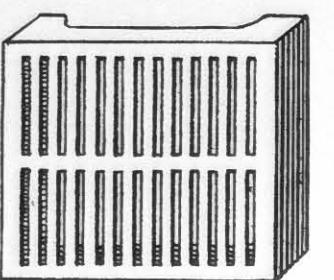
No. 97
Movable Back Plate



10 $\frac{1}{2}$ " x 9" x 2 $\frac{3}{4}$ " x $\frac{1}{4}$ " Thick

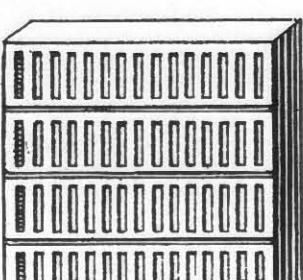
AIR BRICKS

No. 98



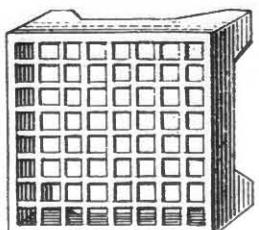
9" x 9" x 2 $\frac{3}{8}$ " x $\frac{1}{4}$ " Thick
12" x 10 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " x $\frac{3}{16}$ " Thick
18" x 10 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " x $\frac{1}{6}$ " Thick

No. 99



12" x 12" x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick

No. 123



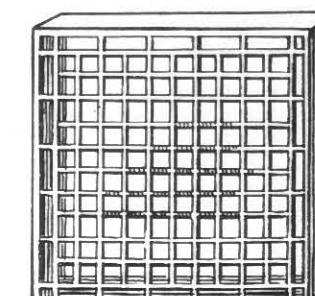
9" x 3" x 2 $\frac{3}{8}$ " x $\frac{1}{4}$ " Thick
9" x 9" x 2 $\frac{3}{4}$ " x $\frac{3}{8}$ " Thick
12" x 12" x 1 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
12" x 12" x 2 $\frac{3}{4}$ " x $\frac{1}{2}$ " Thick

No. 629



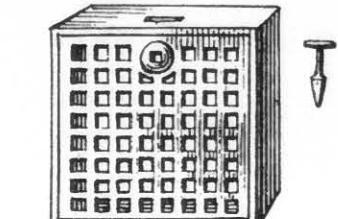
11" x 9" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick

No. 641



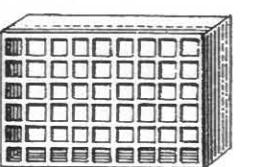
9" x 6" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
9" x 9" x 2" x $\frac{1}{2}$ " Thick
12" x 12" x 2" x $\frac{1}{2}$ " Thick

No. 656
Hinged Grating



9" x 9" x 2" 14" x 9" x 2"
 $\frac{3}{8}$ " Thick

No. 123



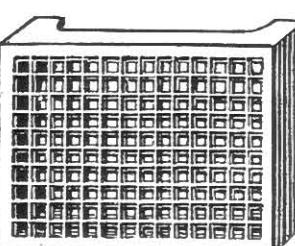
6" x 6" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
9" x 3" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
9" x 6" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
12" x 6" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
12" x 12" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
14" x 6 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
14" x 9" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
14" x 10" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
24" x 12" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick

No. 138
Movable Back Plate



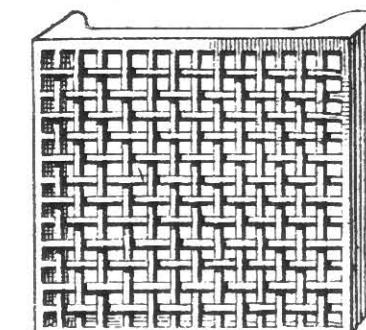
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{3}{16}$ " Thick

No. 589



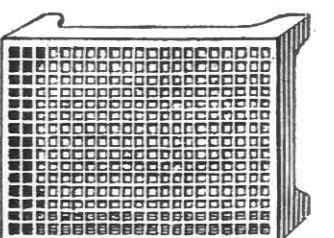
9" x 5 $\frac{1}{4}$ " x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick
9" x 6" x 2 $\frac{1}{2}$ " 9" x 9" x 2 $\frac{1}{2}$ "
12" x 6" x 2 $\frac{1}{2}$ " 12" x 8 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "
and 12" x 9" x 2 $\frac{1}{2}$ "
All $\frac{5}{16}$ " Thick

No. 658



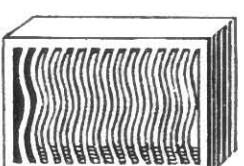
9" x 3" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
9" x 6" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
9" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
10" x 10" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
13" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
14" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
14" x 13" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
18" x 9" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick
18" x 13" x 2 $\frac{1}{2}$ " x $\frac{1}{2}$ " Thick

No. 590



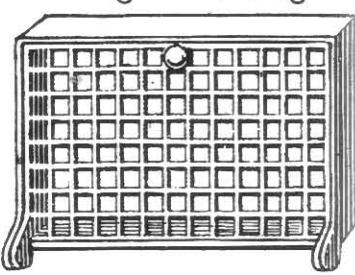
12" x 9" x 3" x $\frac{5}{16}$ " Thick
16" x 9" x 3" x $\frac{5}{16}$ " Thick

No. 618



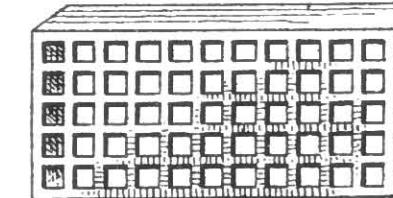
9" x 6" x 3" x $\frac{3}{8}$ " Thick

No. 626
Hinged Grating



14" x 9" x 2" x $\frac{1}{4}$ " Thick

No. 699



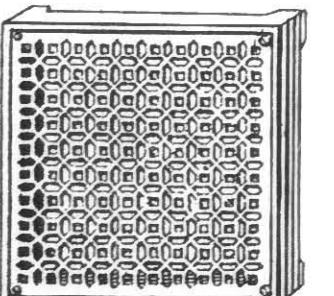
12" x 6 $\frac{1}{4}$ " x 2" x $\frac{1}{2}$ " Thick
16" x 7 $\frac{1}{2}$ " x 2" x $\frac{1}{2}$ " Thick

No. 709



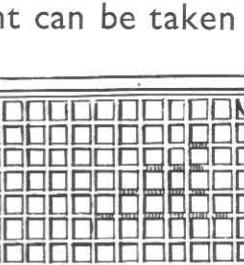
5" Diam. x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick

No. 625
Front can be taken out



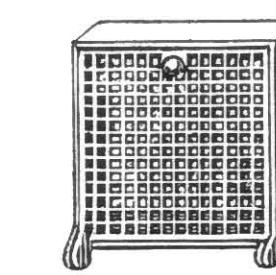
12" x 12" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick
14" x 6 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick

No. 628



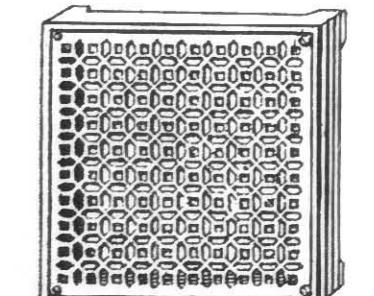
9" x 3" x 2 $\frac{1}{2}$ " 9" x 6" x 2 $\frac{1}{2}$ "
9" x 9" x 2 $\frac{1}{2}$ " 12" x 9" x 2 $\frac{1}{2}$ "
12" x 12" x 2 $\frac{1}{2}$ " 14" x 9" x 2 $\frac{1}{2}$ "
14" x 14" x 2 $\frac{1}{2}$ " 18" x 6" x 2 $\frac{1}{2}$ "
and 18" x 18" x 2 $\frac{1}{2}$ "
All $\frac{5}{16}$ " Thick

No. 627
Hinged Grating



9" x 9" x 2" x $\frac{5}{16}$ " Thick

No. 625
Front can be taken out



12" x 12" x 2 $\frac{1}{2}$ " x $\frac{5}{16}$ " Thick
14" x 6 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x $\frac{1}{4}$ " Thick

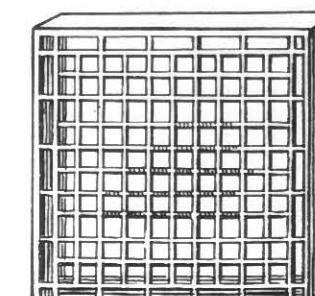
AIR BRICKS

No. 629



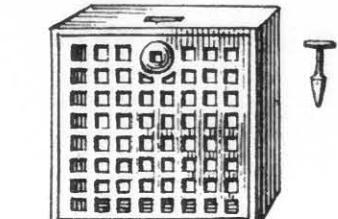
11" x 9" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick

No. 641



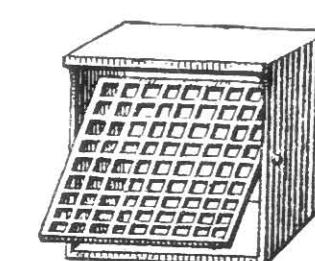
9" x 6" x 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " Thick
9" x 9" x 2" x $\frac{1}{2}$ " Thick
12" x 12" x 2" x $\frac{1}{2}$ " Thick

No. 656
Hinged Grating



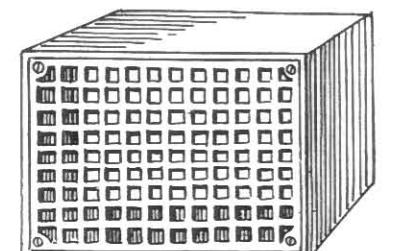
9" x 9" x 2" 14" x 9" x 2"
 $\frac{3}{8}$ " Thick

No. 669
Hinged Grating



9" x 9" x 4 $\frac{1}{2}$ " 12" x 6" x 4 $\frac{1}{2}$ "
and 14" x 6" x 4 $\frac{1}{2}$ "
All $\frac{1}{4}$ " Thick

No. 686
Front can be taken out

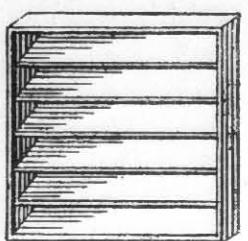


12" x 9" x 4 $\frac{1}{2}$ " 14" x 9" x 4 $\frac{1}{2}$ "
and 18" x 9" x 4 $\frac{1}{2}$ "
All $\frac{1}{4}$ " Thick

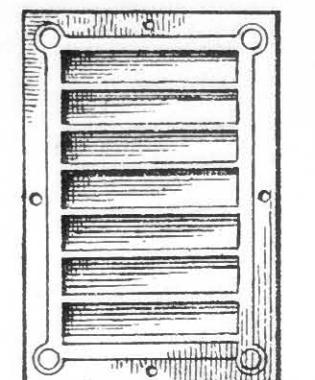
LOUVRE VENTILATORS

No. 65

Fixed Louvres



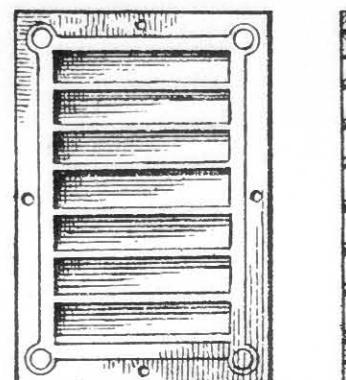
$9\frac{1}{2}'' \times 9\frac{1}{2}'' \times 1\frac{1}{2}'' \times \frac{3}{16}''$ Thick
 $11'' \times 4'' \times 1\frac{1}{2}'' \times \frac{3}{16}''$ Thick
 $14'' \times 7'' \times 1\frac{1}{2}'' \times \frac{3}{16}''$ Thick
 $14'' \times 13'' \times 1\frac{1}{2}'' \times \frac{3}{16}''$ Thick
 $21'' \times 18'' \times 1\frac{3}{4}'' \times \frac{3}{16}''$ Thick



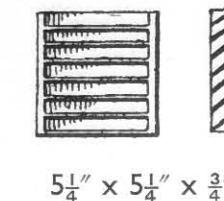
$11'' \times 16'' \times 1\frac{3}{4}'' \times \frac{3}{16}''$ Thick
Front can be taken out

No. 681

Fixed Louvres

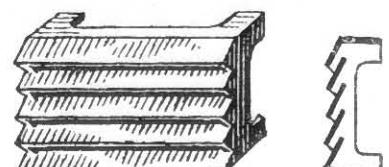


No. 698
Fixed Louvres



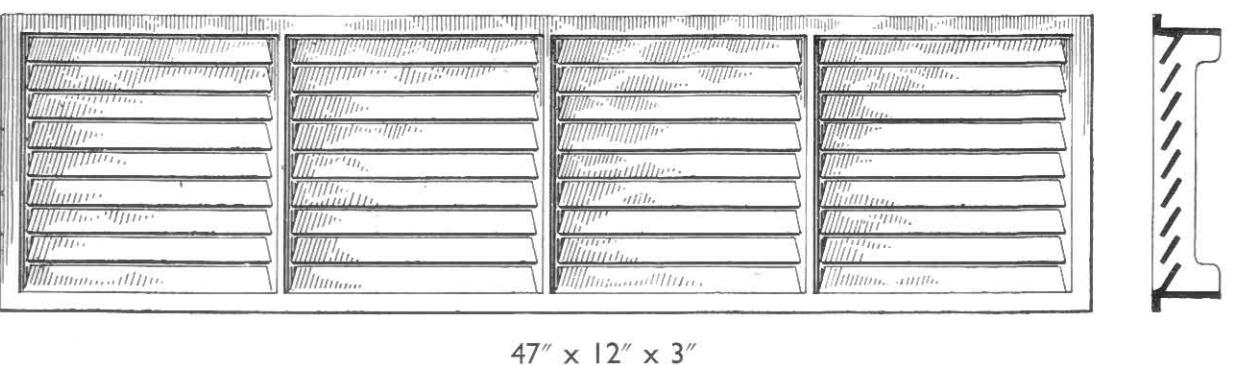
$5\frac{1}{4}'' \times 5\frac{1}{4}'' \times \frac{3}{4}''$

No. 703
Fixed Louvres
(Vermin Proof)



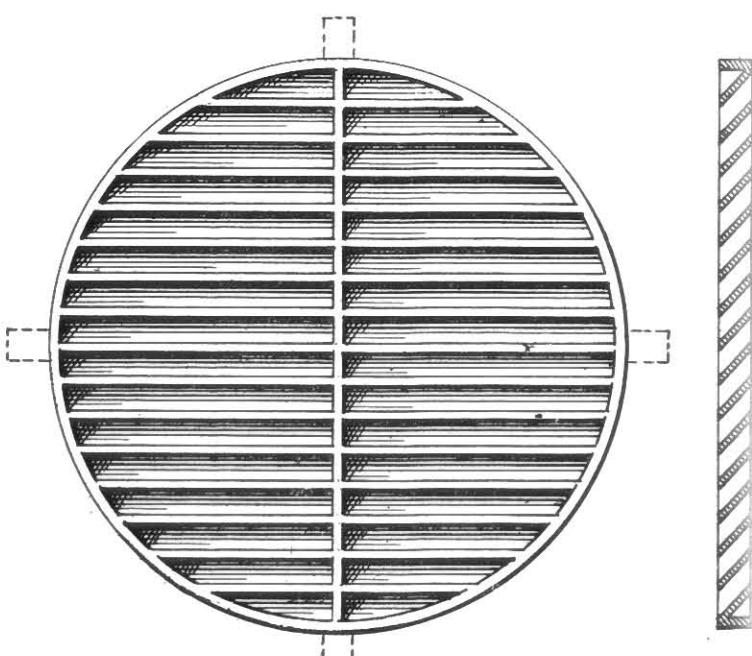
$9'' \times 3'' \times 2\frac{3}{4}''$
 $9'' \times 4\frac{1}{2}'' \times 2\frac{3}{4}''$
 $9'' \times 6'' \times 2\frac{3}{4}''$
 $9'' \times 9'' \times 2\frac{3}{4}''$
 $12'' \times 6'' \times 2\frac{3}{4}''$
 $12'' \times 9'' \times 2\frac{3}{4}''$
 $12'' \times 12'' \times 2\frac{3}{4}''$
Also No. 891
 $6'' \times 6'' \times 1\frac{3}{4}''$
 $8'' \times 6'' \times 1\frac{3}{4}''$

No. 817
Fixed Louvres



$47'' \times 12'' \times 3''$

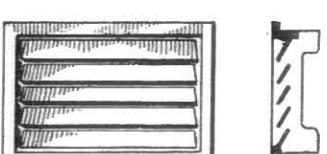
No. 809
Fixed Louvres



$13'', 19\frac{1}{4}''$ and $25\frac{1}{4}''$ Diam. $\times 1\frac{1}{2}''$

No. 817

Fixed Louvres



$9'' \times 3'' \times 2''$
 $9'' \times 6'' \times 2''$
 $9'' \times 9'' \times 2''$

CONTINUOUS GRATINGS

No. 35



$3'' \times 4' 2\frac{3}{4}''$ Long $\times \frac{1}{2}''$ Thick. $\frac{3}{4}''$ Mesh
 $3'' \times 3' 0''$ Long. (Border All Round)

No. 107



$4'' \times 2' 9''$ Long $\times \frac{3}{16}''$ Thick

No. 129



$3'' \times 3' 2\frac{1}{2}''$ Long $\times \frac{3}{8}''$ Thick. $\frac{7}{8}''$ Mesh

No. 688



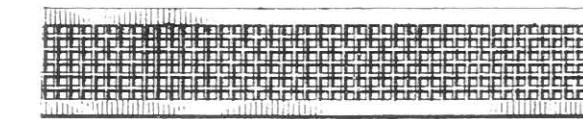
$4'' \times 3' 6''$ Long $\times \frac{1}{4}''$ Thick. $\frac{7}{16}''$ Mesh

No. 46



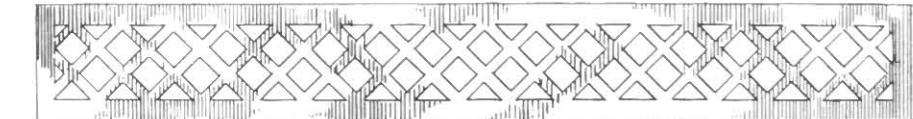
$5'' \times 3' 11\frac{1}{2}''$ Long $\times \frac{7}{16}''$ Thick. $\frac{9}{16}''$ Mesh
 $6'' \times 1' 10''$ Long $\times \frac{3}{8}''$ Thick. $\frac{9}{16}''$ Mesh
 $6'' \times 2' 5\frac{3}{4}''$ Long $\times \frac{3}{8}''$ Thick. $\frac{9}{16}''$ Mesh
 $6'' \times 4' 0''$ Long $\times \frac{7}{16}''$ Thick. $\frac{9}{16}''$ Mesh

No. 639



$6'' \times 4' 0''$ Long $\times \frac{5}{8}''$ Thick. $\frac{1}{2}''$ Mesh
 $6\frac{1}{2}'' \times 2' 0''$ Long $\times \frac{5}{8}''$ Thick

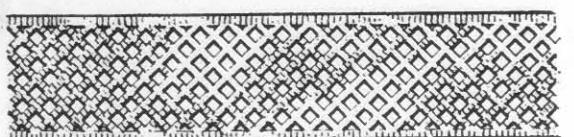
No. 48



$6\frac{3}{4}'' \times 4' 2\frac{7}{8}''$ Long $\times \frac{3}{4}''$ Thick. $1\frac{1}{2}''$ Mesh
Border All Round

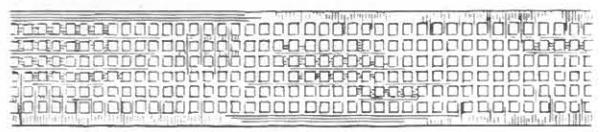
CONTINUOUS GRATINGS

No. 720



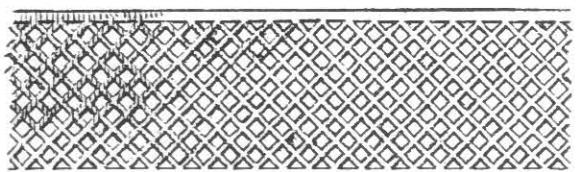
6" x 3' 11 $\frac{3}{8}$ " Long x 1" Thick. $\frac{5}{8}$ " Mesh

No. 46



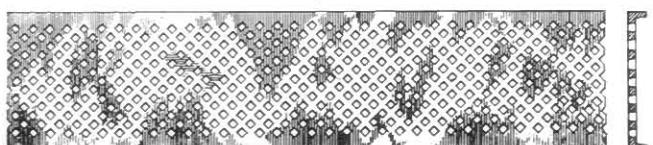
7" x 3' 11 $\frac{1}{2}$ " Long x 1" Thick. $\frac{9}{16}$ " Mesh

No. 35



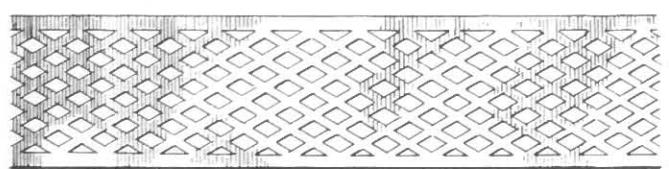
8" x 3' 0 $\frac{1}{2}$ " Long x 1" Thick. $\frac{3}{4}$ " Mesh
8 $\frac{1}{2}$ " x 2' 11 $\frac{1}{8}$ " Long x 1" Thick. $\frac{3}{4}$ " Mesh
9" x 4' 2 $\frac{7}{8}$ " Long x 1" Thick. $\frac{3}{4}$ " Mesh

No. 596



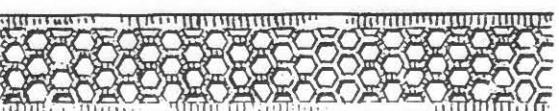
8 $\frac{1}{4}$ " x 4' 0" Long x 1" Thick. $\frac{3}{8}$ " Mesh
1" Thick on Edges

No. 868



9" x 3' 0" Long x 1" Thick. $\frac{7}{8}$ " Mesh

No. 749



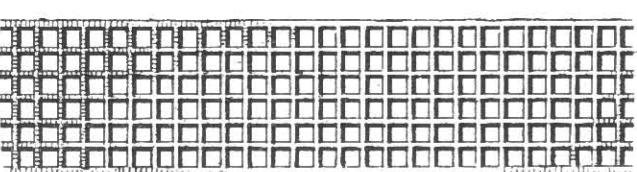
6" x 2' 0" Long x $\frac{5}{8}$ " Thick. $\frac{7}{8}$ " Mesh

No. 798



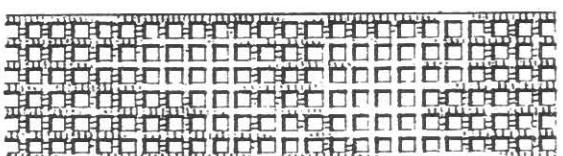
7 $\frac{3}{4}$ " x 3' 0 $\frac{3}{8}$ " Long x $\frac{1}{2}$ " Thick. $\frac{5}{8}$ " Slots

No. 587



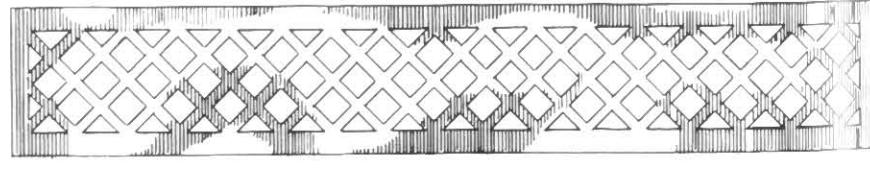
8" x 2' 11 $\frac{3}{8}$ " Long x $\frac{3}{4}$ " Thick. 1" Mesh
9" x 4' 0" Long x $\frac{3}{4}$ " Thick. 1" Mesh

No. 710



8 $\frac{1}{2}$ " x 3' 11 $\frac{1}{2}$ " Long x 1" Thick. $\frac{7}{8}$ " Mesh

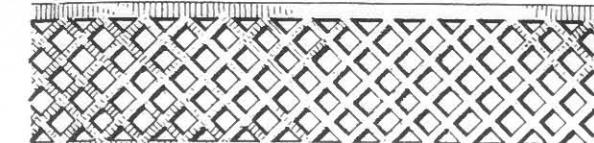
No. 48



8 $\frac{3}{4}$ " x 4' 2 $\frac{7}{8}$ " Long x $\frac{3}{4}$ " Thick. 1 $\frac{1}{2}$ " Mesh
(Border All Round)

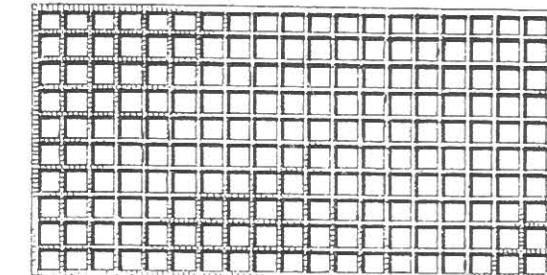
CONTINUOUS GRATINGS

No. 116



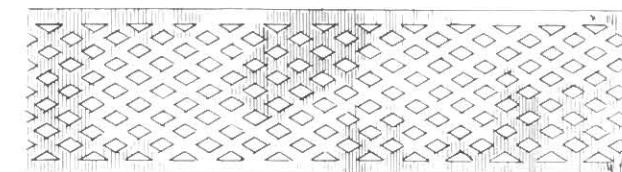
9" x 4' 2 $\frac{3}{8}$ " Long x $\frac{3}{8}$ " Thick. 1 $\frac{1}{8}$ " Mesh

No. 651



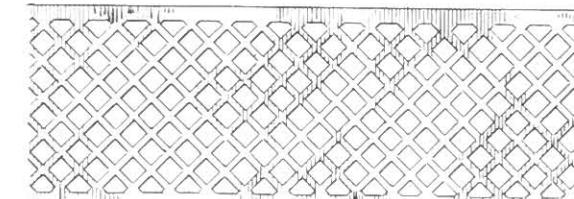
10" x 2' 2 $\frac{1}{4}$ " Long x $\frac{1}{2}$ " Thick. $\frac{7}{8}$ " Mesh
11 $\frac{5}{8}$ " x 1' 5 $\frac{5}{8}$ " Long x $\frac{3}{8}$ " Thick. $\frac{7}{8}$ " Mesh
11 $\frac{3}{4}$ " x 1' 11 $\frac{1}{2}$ " Long x $\frac{1}{2}$ " Thick. $\frac{7}{8}$ " Mesh
1' 0" x 2' 0" Long x $\frac{1}{2}$ " Thick. $\frac{7}{8}$ " Mesh
1' 0 $\frac{7}{8}$ " x 1' 8 $\frac{5}{8}$ " Long x $\frac{1}{2}$ " Thick. $\frac{7}{8}$ " Mesh
(Border All Round)

No. 869



10" x 4' 2 $\frac{1}{8}$ " Long x $\frac{1}{2}$ " Thick. $\frac{7}{8}$ " Mesh

No. 645

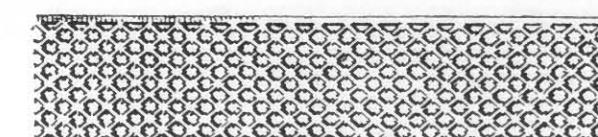


1' 0" x 3' 6" Long x $\frac{3}{4}$ " Thick. 1 $\frac{1}{8}$ " Mesh

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

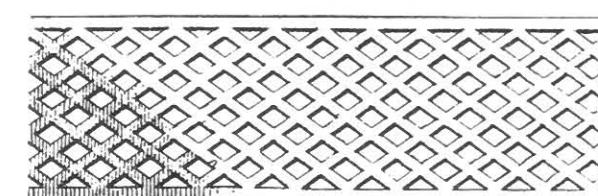
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

No. 117



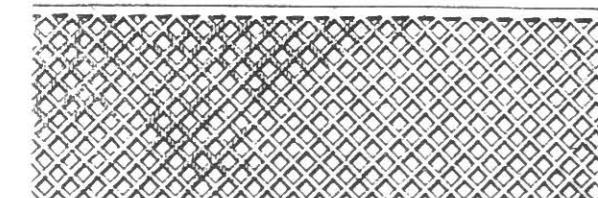
9" x 4' 0" Long x $\frac{1}{2}$ " Thick

No. 249



10 $\frac{3}{4}$ " x 4' 2 $\frac{3}{8}$ " Long x $\frac{11}{16}$ " Thick. $\frac{15}{16}$ " Mesh

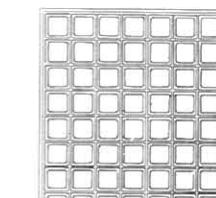
No. 35



11 $\frac{3}{4}$ " x 4' 2 $\frac{3}{8}$ " Long x $\frac{1}{2}$ " Thick. $\frac{3}{4}$ " Mesh
1' 0" x 4' 2 $\frac{3}{8}$ " Long x $\frac{1}{2}$ " Thick. $\frac{3}{4}$ " Mesh

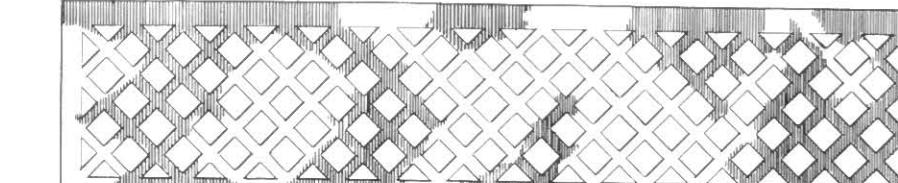
No. 907

For reinforcing the surface of Concrete Floors



1' 0" x 1' 0" Long x $\frac{3}{4}$ " Thick. 1" Mesh
(with Border on Two Sides only)
1' 0 $\frac{1}{2}$ " x 1' 0 $\frac{1}{2}$ " Long x $\frac{3}{4}$ " Thick. 1" Mesh
(with Border on All Four Sides)

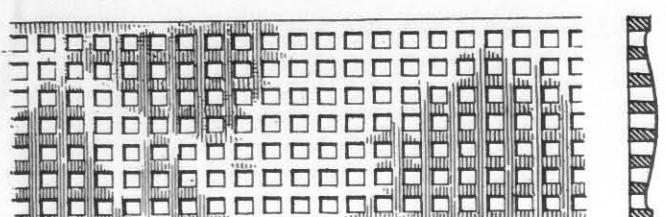
No. 48



1' 0" x 4' 2 $\frac{7}{8}$ " Long x $\frac{3}{4}$ " Thick. 1 $\frac{1}{2}$ " Mesh

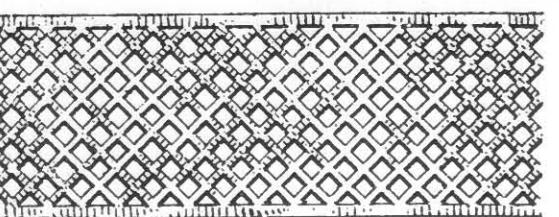
CONTINUOUS GRATINGS

No. 799



1' 0" x 3' 3" Long. $\frac{7}{8}$ " Mesh
1 $\frac{1}{8}$ " Thick at Edge, 1 $\frac{5}{8}$ " Thick at Centre

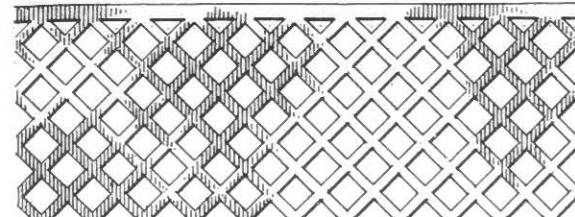
No. 739



1' 0" x 4' 2" Long x $\frac{5}{8}$ " Thick. 1" Mesh

CONTINUOUS GRATINGS

No. 48



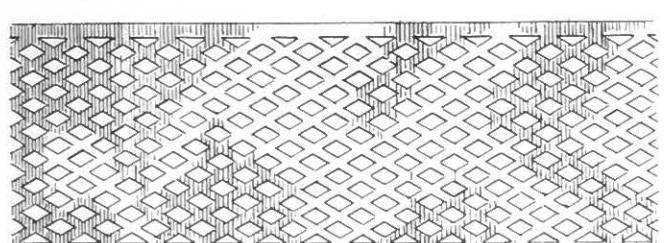
1' 3" x 4' 3" Long x $\frac{3}{4}$ " Thick. 1 $\frac{1}{2}$ " Mesh

No. 864



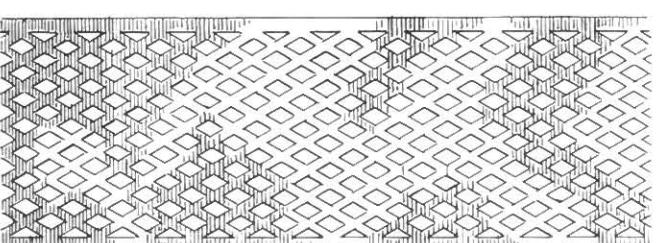
1' 3" x 2' 0" Long x 2" Thick. 1" Slots

No. 868



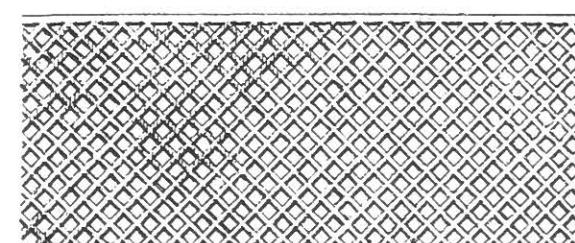
1' 1 $\frac{1}{2}$ " x 4' 0 $\frac{5}{8}$ " Long x 1" Thick. $\frac{7}{8}$ " Mesh

No. 869



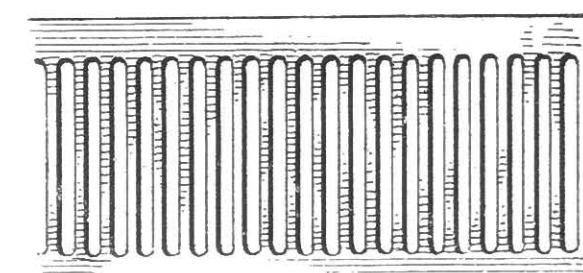
1' 1" x 4' 2 $\frac{1}{8}$ " Long x $\frac{1}{2}$ " Thick. $\frac{7}{8}$ " Mesh

No. 35



1' 3" x 4' 2 $\frac{3}{4}$ " Long x $\frac{1}{2}$ " Thick. $\frac{3}{4}$ " Mesh

No. 741



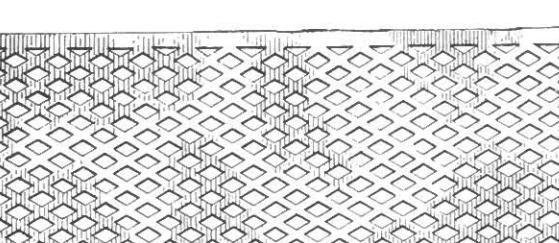
1' 3 $\frac{7}{8}$ " x 2' 6" Long x 1" Thick. $\frac{3}{4}$ " Slots

No. 741



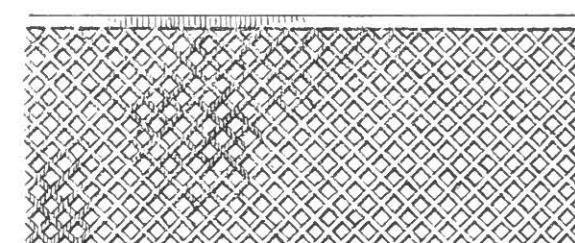
1' 2" x 5' 4 $\frac{7}{8}$ " Long x $\frac{3}{4}$ " Thick. 1" Slots

No. 833



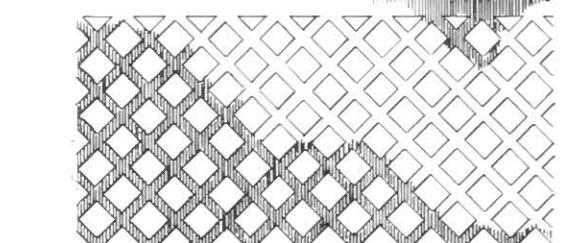
1' 2 $\frac{3}{4}$ " x 3' 1 $\frac{5}{8}$ " Long x $\frac{7}{8}$ " Thick. $\frac{13}{16}$ " Mesh

No. 35



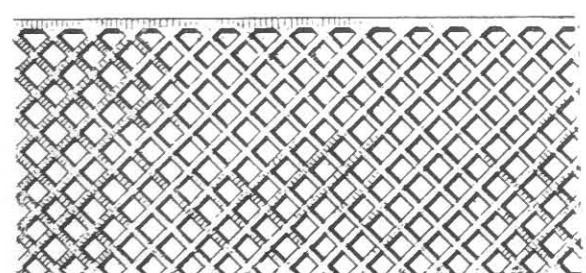
1' 4 $\frac{3}{8}$ " x 3' 10 $\frac{3}{4}$ " Long x $\frac{1}{2}$ " Thick. $\frac{3}{4}$ " Mesh

No. 68



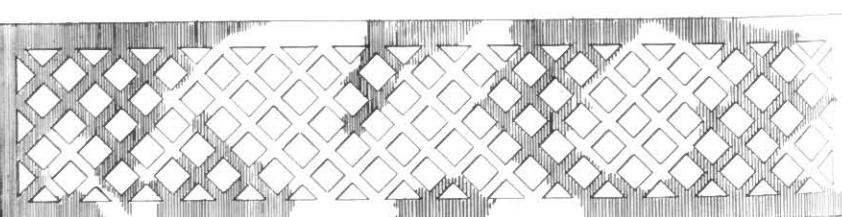
1' 5" x 2' 4" Long x 1" Thick. 1 $\frac{1}{2}$ " Mesh

No. 645



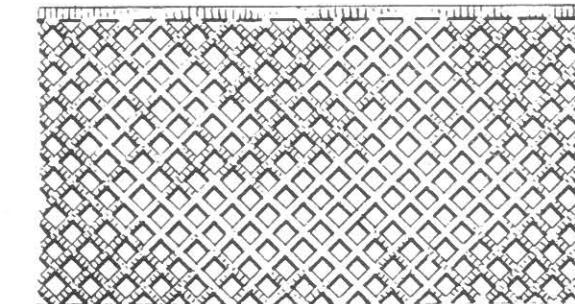
1' 2 $\frac{7}{8}$ " x 4' 3" Long x $\frac{3}{4}$ " Thick. 1 $\frac{1}{8}$ " Mesh
1' 3 $\frac{3}{8}$ " x 3' 6 $\frac{1}{2}$ " Long x $\frac{3}{4}$ " Thick. 1 $\frac{1}{8}$ " Mesh

No. 911



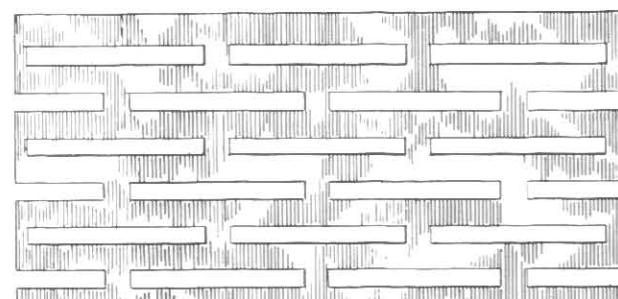
1' 2 $\frac{7}{8}$ " x 3' 0" Long x 1 $\frac{1}{2}$ " Thick. 1 $\frac{1}{2}$ " Mesh

No. 739



1' 5 $\frac{3}{4}$ " x 4' 1 $\frac{7}{8}$ " Long x $\frac{5}{8}$ " Thick. 1" Mesh

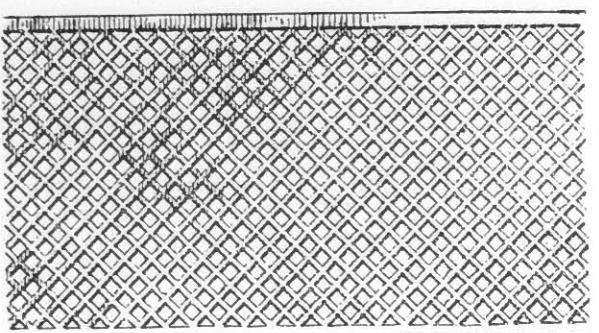
No. 864



1' 6" x 3' 11 $\frac{1}{2}$ " Long x 2" Thick. 1" Slots

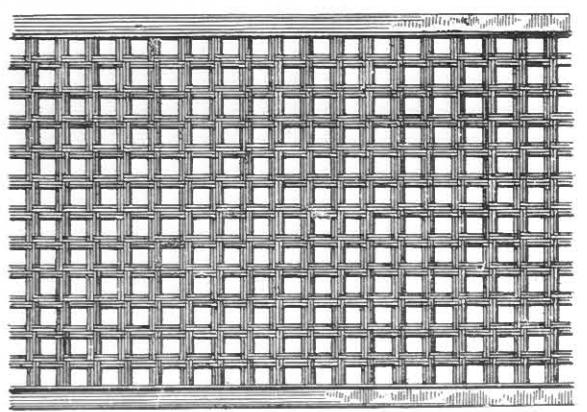
CONTINUOUS GRATINGS

No. 35



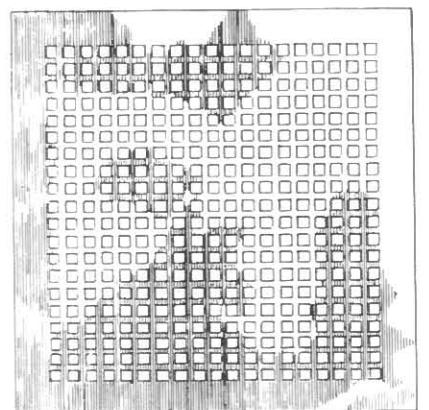
1' 6" x 4' 2 $\frac{3}{4}$ " Long x $\frac{1}{2}$ " Thick. $\frac{3}{4}$ " Mesh

No. 149



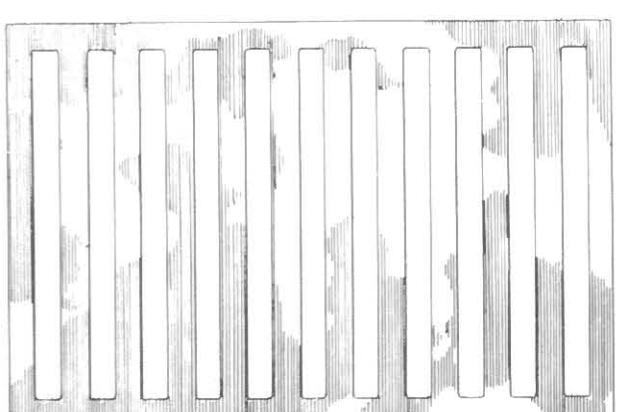
1' 11 $\frac{1}{4}$ " x 2' 10 $\frac{1}{8}$ " Long x $\frac{1}{2}$ " Thick. 1" Mesh

No. 913



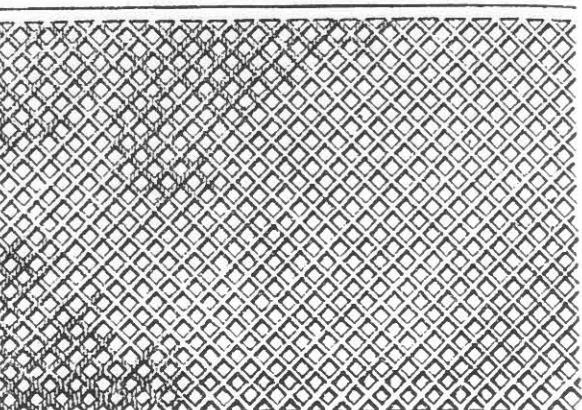
1' 11 $\frac{3}{4}$ " x 1' 11 $\frac{3}{4}$ " Square x $\frac{5}{8}$ " Thick. $\frac{3}{4}$ " Mesh

No. 912



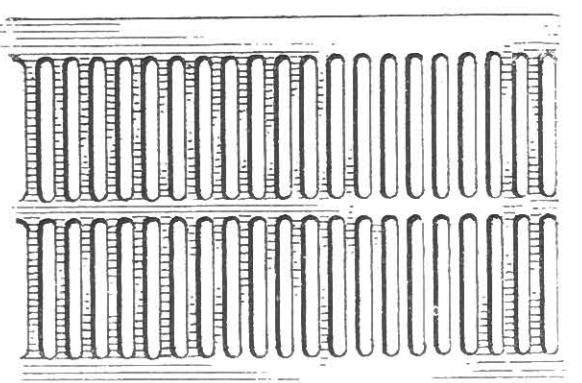
1' 11 $\frac{3}{4}$ " x 2' 11 $\frac{5}{8}$ " Long x 2" Thick. 1 $\frac{1}{2}$ " Slots

No. 35



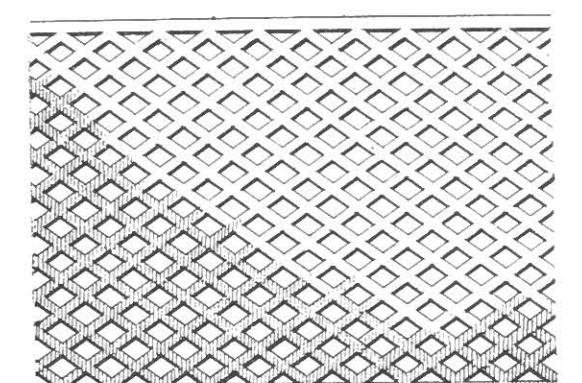
1' 11 $\frac{7}{8}$ " x 4' 3" Long x $\frac{1}{2}$ " Thick. $\frac{3}{4}$ " Mesh

No. 741



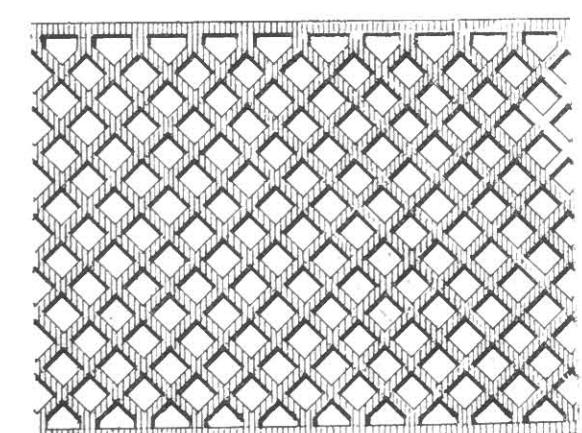
1' 9 $\frac{3}{4}$ " x 2' 6" Long x 1" Thick. $\frac{3}{4}$ " Slots

No. 249



1' 10" x 3' 9 $\frac{1}{4}$ " Long x $\frac{11}{16}$ " Thick. $\frac{15}{16}$ " Mesh

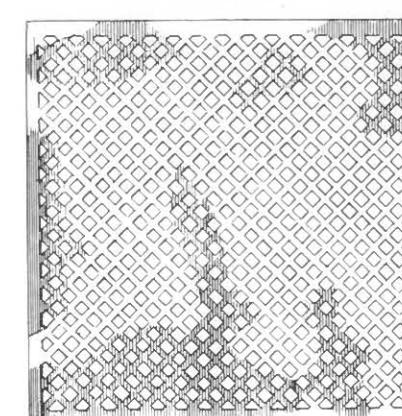
No. 144



2' 0" x 3' 1 $\frac{1}{2}$ " Long x $\frac{1}{2}$ " Thick. 1 $\frac{5}{8}$ " Mesh

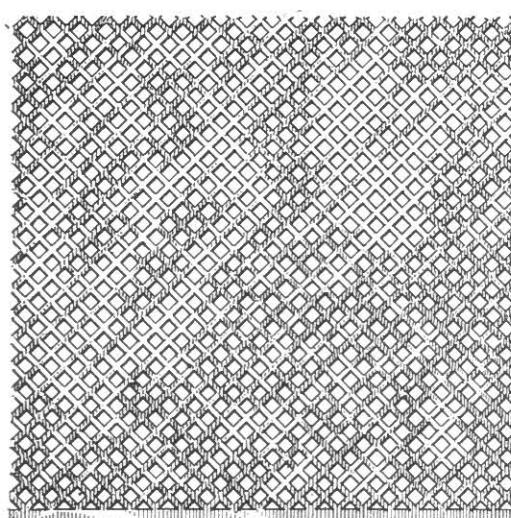
CONTINUOUS GRATINGS

No. 755



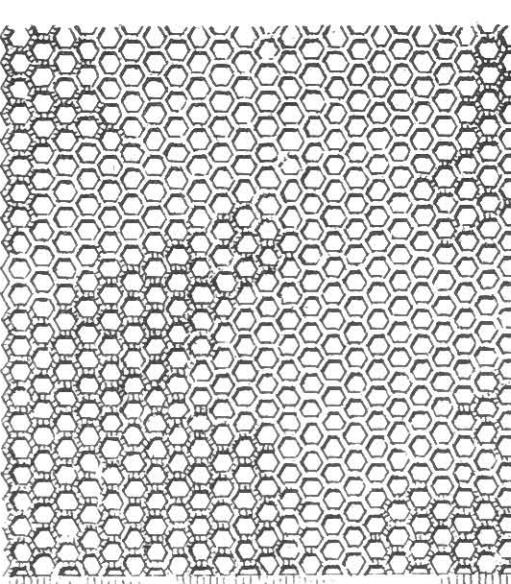
2' 0" x 2' 0" Square x $\frac{5}{8}$ " Thick. $\frac{5}{8}$ " Mesh

No. 755



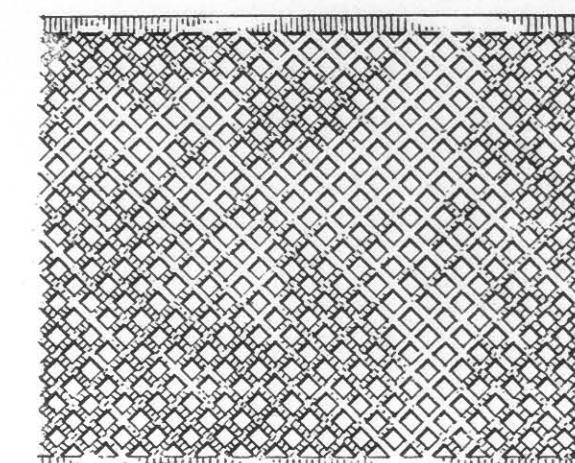
Up to 2' 11 $\frac{1}{2}$ " x 3' 10 $\frac{3}{4}$ " Long x $\frac{5}{8}$ " Thick
 $\frac{5}{8}$ " Mesh

No. 749



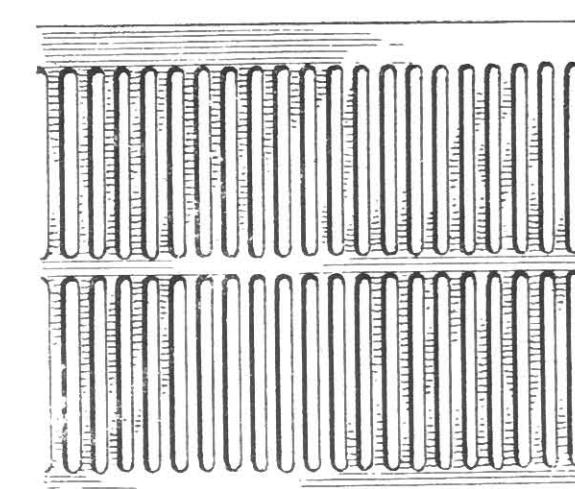
3' 0" x 3' 0" Long x $\frac{5}{8}$ " Thick. $\frac{7}{8}$ " Mesh

No. 738



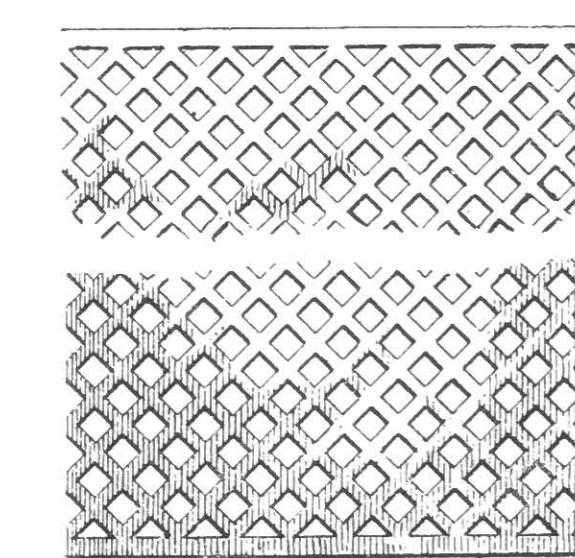
2' 3" x 3' 0" Long x $\frac{3}{4}$ " Thick. 1" Mesh

No. 741



2' 4" x 2' 6" Long x 1" Thick. $\frac{3}{4}$ " Slots

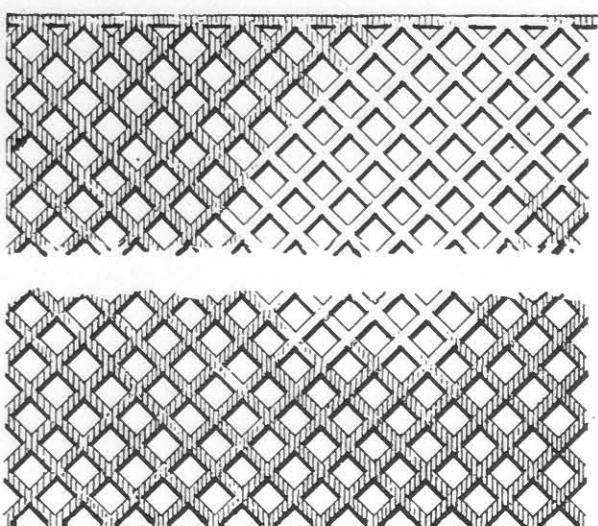
No. 68



2' 11 $\frac{3}{8}$ " x 3' 1 $\frac{1}{4}$ " Long x 1" Thick. 1 $\frac{1}{2}$ " Mesh
T Section of Bar

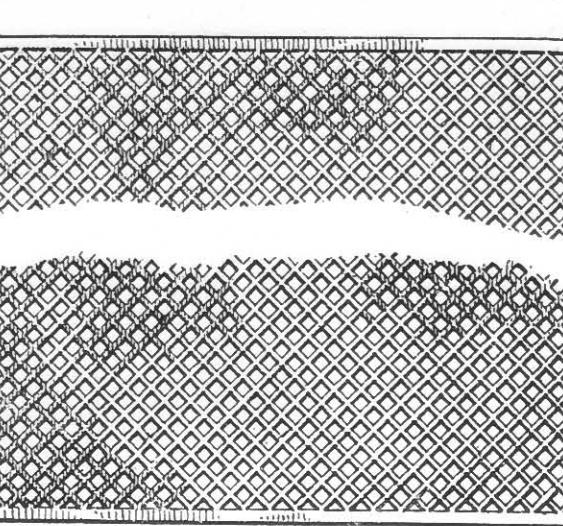
CONTINUOUS GRATINGS

No. 144



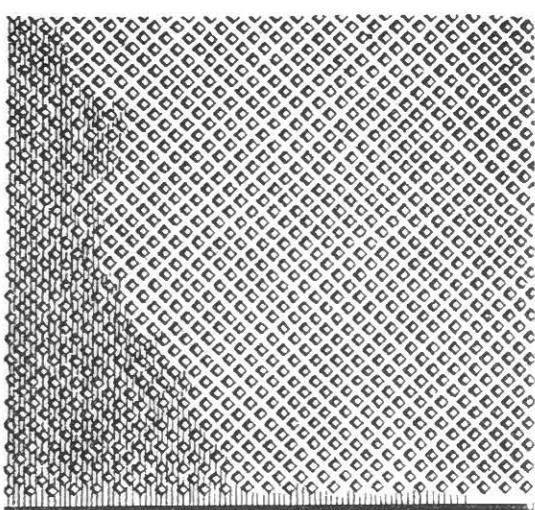
3' 0" x 2' 10" Long x $\frac{1}{2}$ " Thick. $1\frac{5}{8}$ " Mesh

No. 35



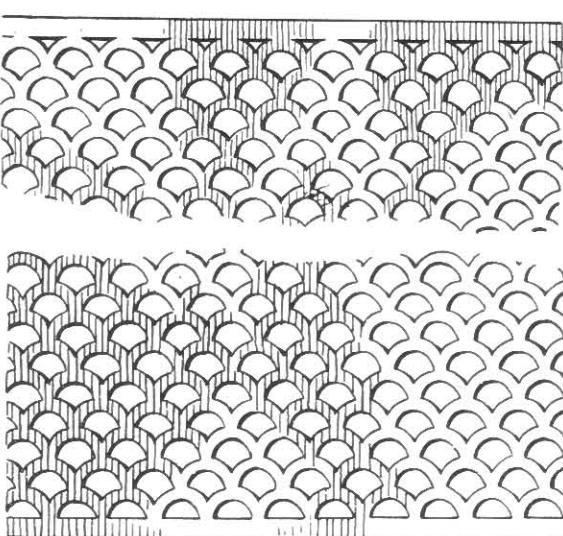
2' 11 $\frac{7}{8}$ " x 3' 0 $\frac{3}{4}$ " Long x $\frac{1}{2}$ " Thick. $\frac{3}{4}$ " Mesh

No. 596



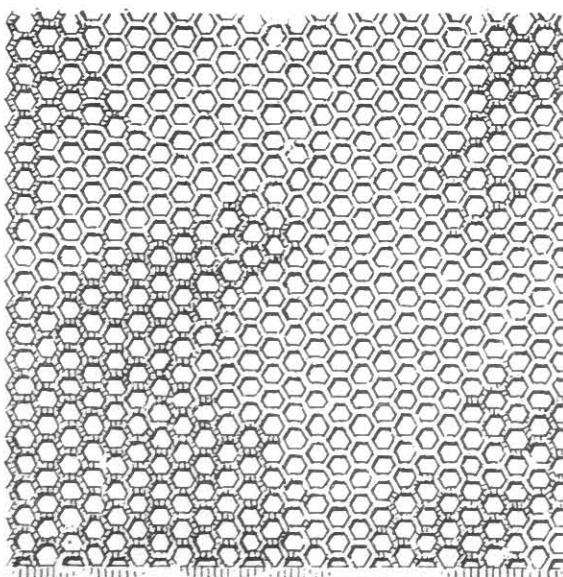
Up to 3' 11" x 2' 4" Long x $\frac{1}{2}$ " Thick. $\frac{3}{8}$ " Mesh

No. 47



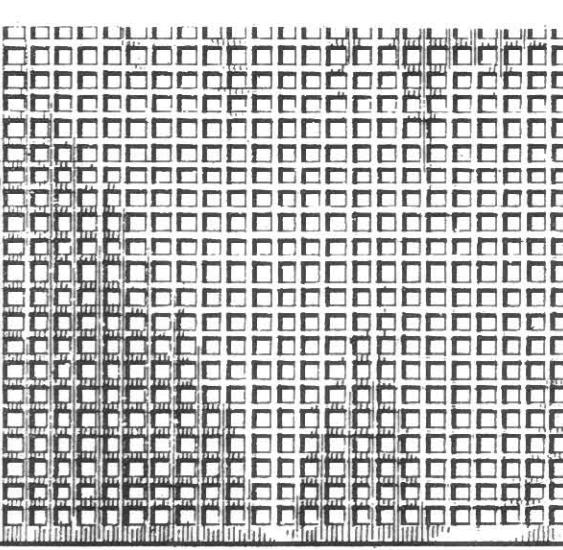
3' 6" x 3' 6" Long x $\frac{5}{8}$ " Thick

No. 831



Up to 4' 0" x 3' 0" Long x 1" Thick. $\frac{7}{8}$ " Mesh

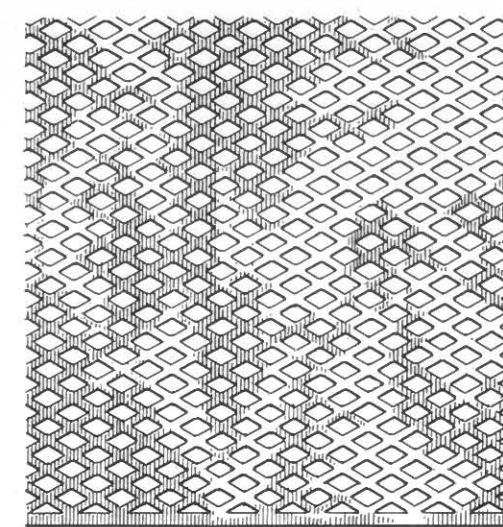
No. 164



Up to 3' 4" x 3' 4" Long x $\frac{7}{8}$ " Thick. $\frac{3}{4}$ " Mesh

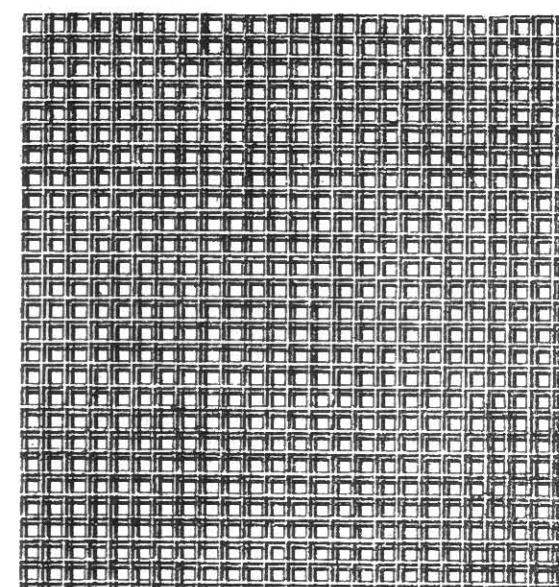
CONTINUOUS GRATINGS

No. 868



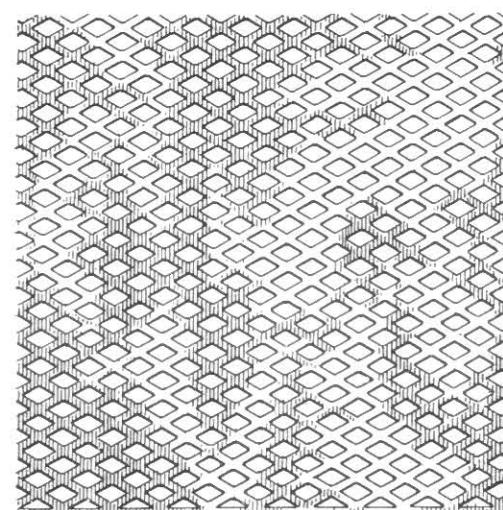
Up to 4' 3" x 4' 1 $\frac{3}{4}$ "
1" Thick, $\frac{7}{8}$ " Mesh

No. 649



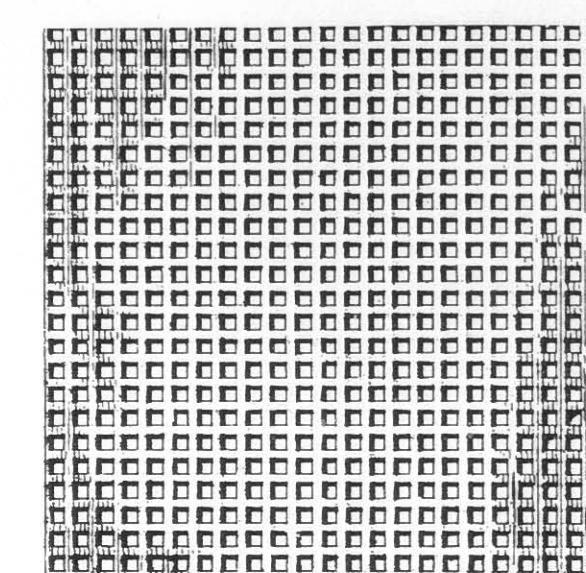
Up to 4' 4" x 3' 2"
 $\frac{9}{16}$ " Thick, $\frac{5}{8}$ " Mesh

No. 869



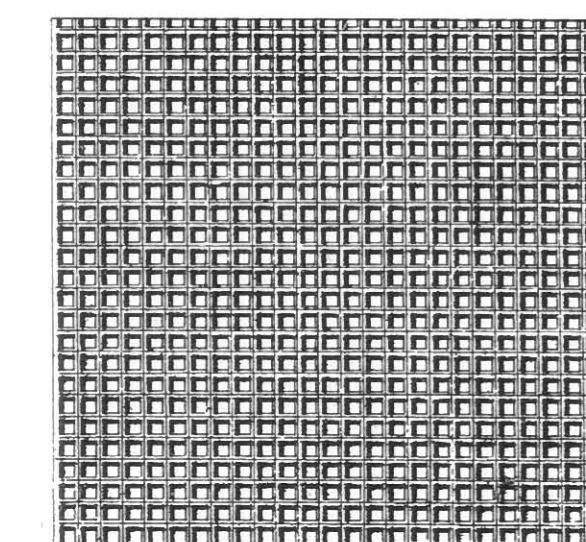
Up to 4' 4 $\frac{1}{4}$ " x 4' 2"
 $\frac{1}{2}$ " Thick, $\frac{3}{4}$ " Mesh

No. 672



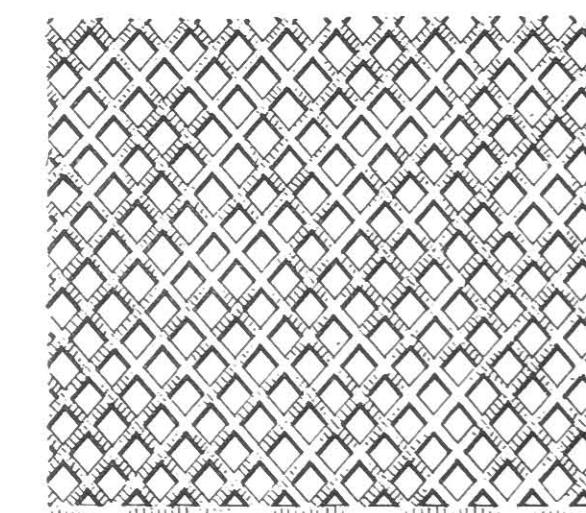
Up to 4' 3" x 3' 3"
 $\frac{7}{8}$ " Thick, $\frac{3}{4}$ " Mesh

No. 659



Up to 4' 4" x 3' 2"
 $\frac{5}{8}$ " Thick, $\frac{11}{16}$ " Mesh

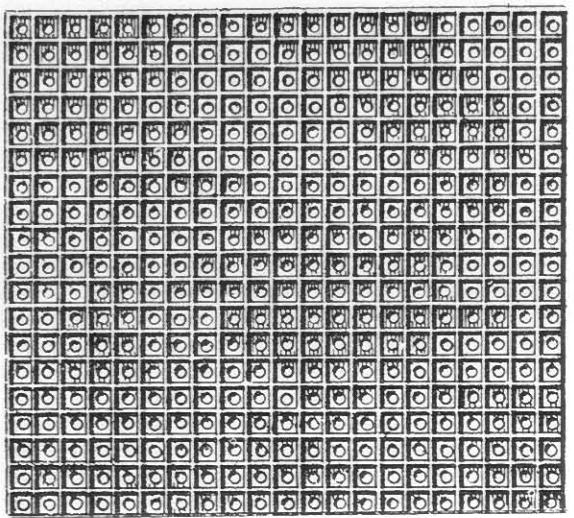
No. 714



Up to 4' 6 $\frac{5}{8}$ " x 4' 0 $\frac{5}{8}$ "
 $1\frac{1}{4}$ " Thick, $1\frac{3}{8}$ " Mesh

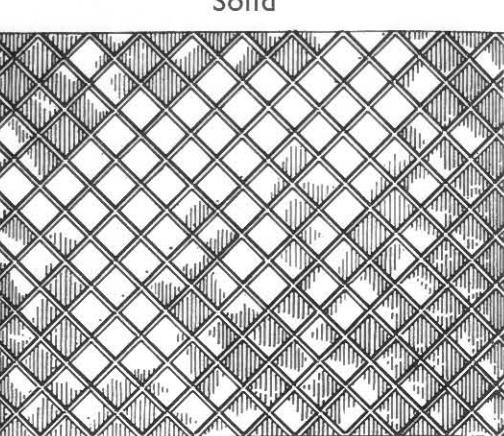
CONTINUOUS GRATINGS AND PLATES

No. 162



Up to 4' 10" x 3' 7" Long x $\frac{11}{16}$ " Thick

No. 105



Up to 3' 0" x 2' 0" x $2\frac{1}{8}$ " Chequer. Also 3' 0" x 1' $\frac{5}{8}$ " Thick min., $\frac{3}{4}$ " Thick max.

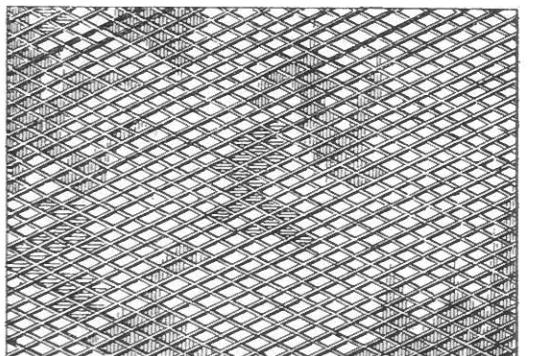
Up to 11" x 4' $5\frac{3}{8}$ " x $1\frac{1}{8}$ " Chequer. Also 8' x 4' x $0\frac{1}{4}$ " $\frac{3}{8}$ " Thick min., $\frac{1}{2}$ " Thick max.

Up to 2' 11" x 2' 10" x $2\frac{9}{16}$ " Chequer
 $\frac{1}{4}$ " Thick min., $\frac{3}{8}$ " Thick max.

Also 2' 11" x 1' 2" x $2\frac{9}{16}$ " Chequer
 2' 11" x 10" x $2\frac{9}{16}$ " Chequer
 2' 11" x 4" x $2\frac{9}{16}$ " Chequer
 2' $5\frac{3}{4}$ " x 6" x $2\frac{9}{16}$ " Chequer
 2' 6" x 6" x $2\frac{9}{16}$ " Chequer
 3' 0" x 10 $\frac{3}{4}$ " x $2\frac{9}{16}$ " Chequer

No. 684

Solid



Up to 3' 0" x 1' 6"

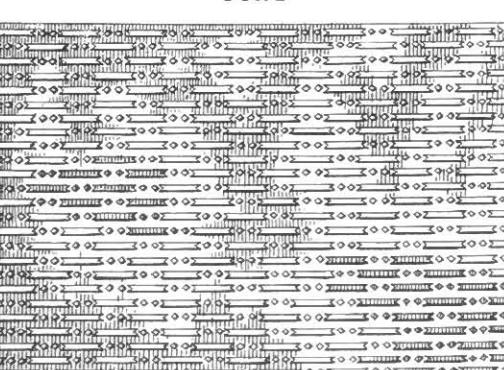
Up to 3' 0" x 1' 9"

$\frac{1}{4}$ " Thick min., $\frac{3}{8}$ " max. x $\frac{7}{8}$ " Chequer

Up to 4' 0" x 2' 0"
 $\frac{3}{8}$ " Thick min., $\frac{1}{2}$ " Thick max., x $\frac{7}{8}$ " Chequer

3' $3\frac{3}{8}$ " x 1' 0" x $\frac{7}{8}$ " Chequer x $\frac{3}{8}$ " Thick
 2' $0\frac{1}{4}$ " x 1' 0" x $\frac{7}{8}$ " Chequer x $\frac{3}{8}$ " Thick

No. 114

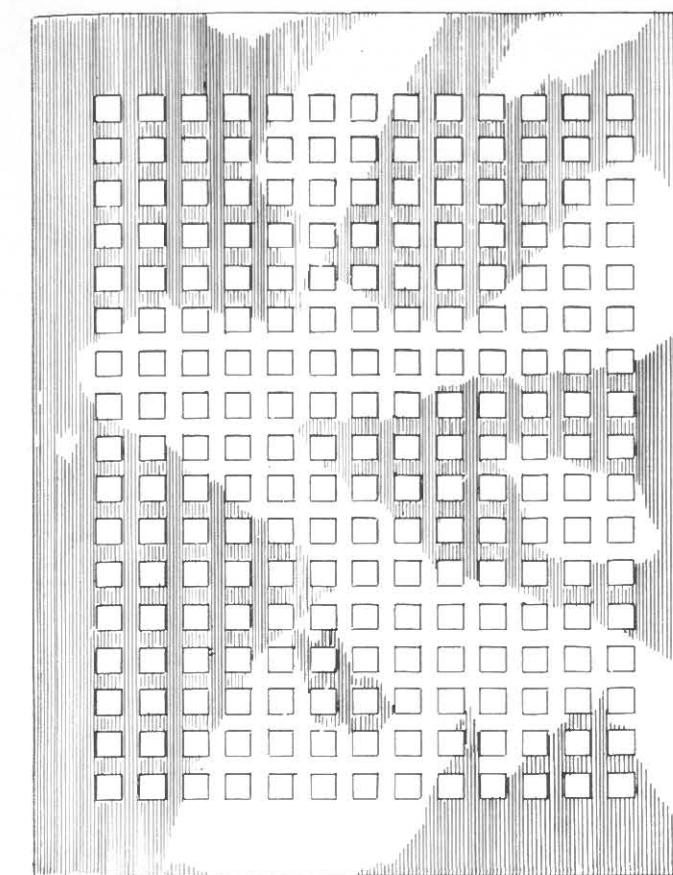


Up to 4' 3" x 3' 3"
 $\frac{1}{2}$ " Thick min., $\frac{5}{8}$ " Thick max.

Up to 3' 6" x 2' $7\frac{1}{4}$ "
 $\frac{3}{8}$ " Thick min., $\frac{1}{2}$ " Thick max.

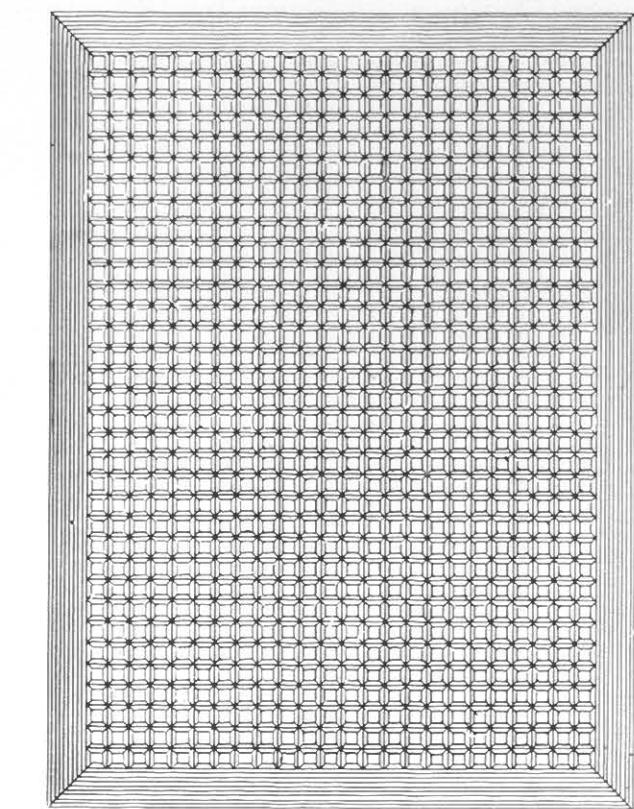
GRATINGS

No. 900



4' $2\frac{7}{8}$ " x 3' $2\frac{7}{8}$ "
 (border all round)
 1 $\frac{1}{2}$ " Thick. 1 $\frac{1}{2}$ " Mesh

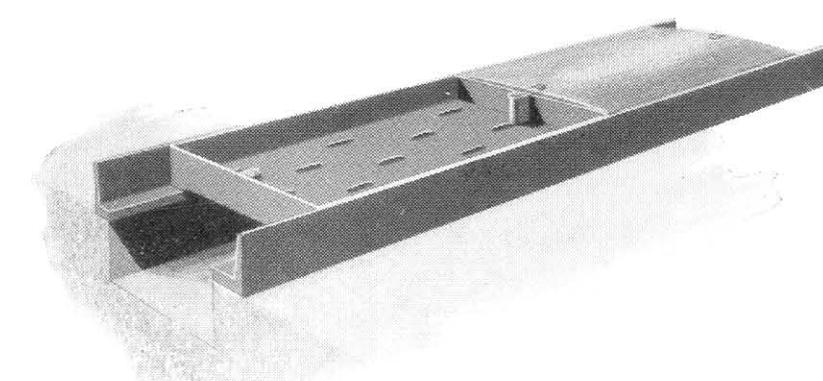
No. 901



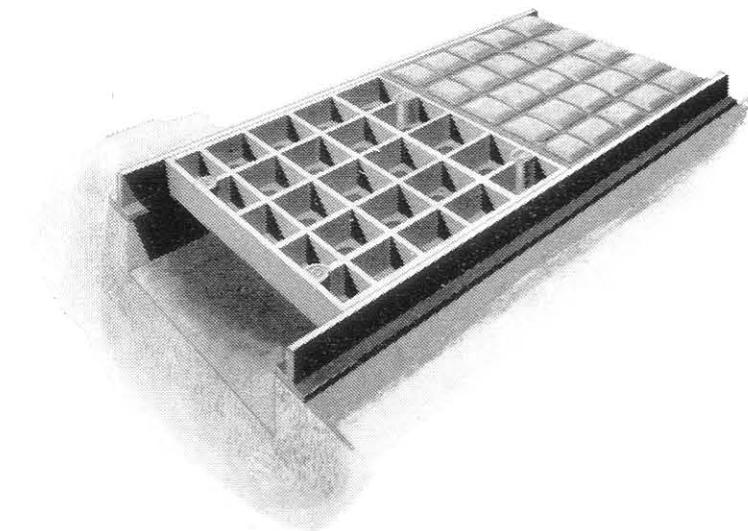
3' $10\frac{3}{4}$ " x 2' $10\frac{1}{4}$ "
 (border all round)
 1 $\frac{3}{8}$ " Thick. $\frac{3}{4}$ " Mesh

CAST-IRON DUCT TRAY COVERS

No. 906



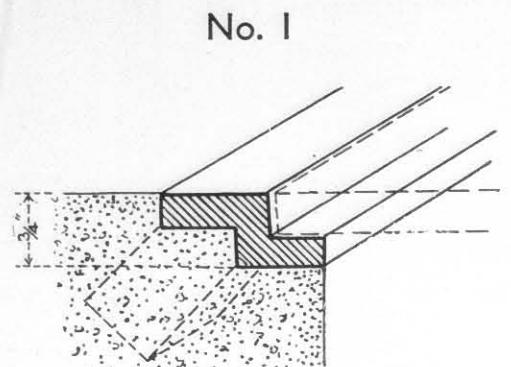
No. 910



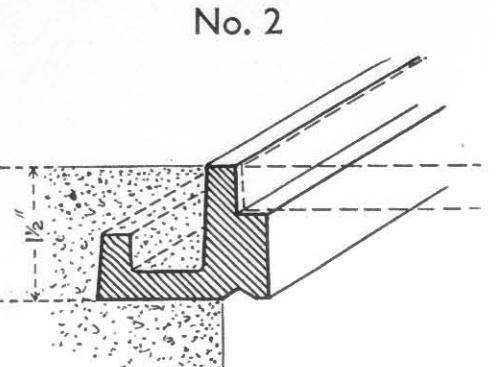
Clear Width of Duct	Sizes of Cover
1' 0"	1' $3\frac{1}{4}$ " wide x 3' 0" long x 1 $\frac{3}{4}$ " deep
1' 3"	1' $6\frac{1}{4}$ " wide x 3' 0" long x 1 $\frac{3}{4}$ " deep
1' 6"	1' $9\frac{1}{4}$ " wide x 3' $5\frac{1}{8}$ " long x 1 $\frac{3}{4}$ " deep

Clear Width of Duct	Sizes of Covers
2' 0"	2' $3\frac{1}{4}$ " wide x 2' $3\frac{1}{2}$ " long x 4 $\frac{3}{8}$ " deep
2' 9"	3' $0\frac{1}{4}$ " wide x 3' $0\frac{1}{8}$ " long x 4 $\frac{3}{8}$ " deep
3' 0"	3' $3\frac{1}{4}$ " wide x 3' $0\frac{5}{8}$ " long x 4 $\frac{3}{8}$ " deep

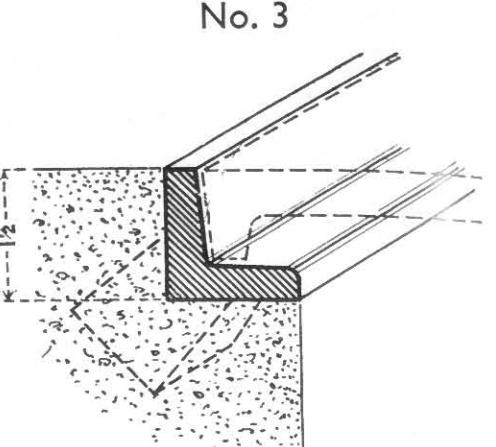
CURBS FOR TRENCH COVERS



For $\frac{1}{2}$ " Thick Cover
4' 3" and 4' 7" Long
Also $1\frac{3}{8}$ " High for 1" Thick Cover
4' 6" Long

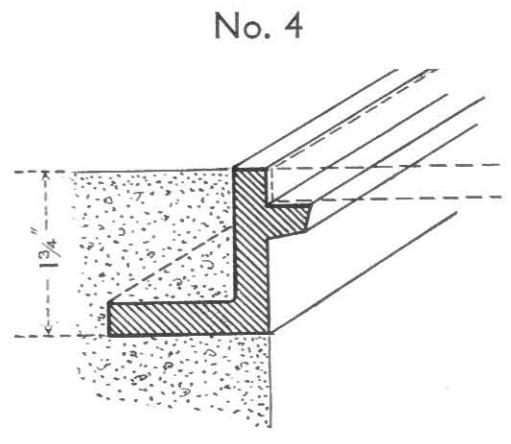


For $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " Thick Covers
4' 2" Long

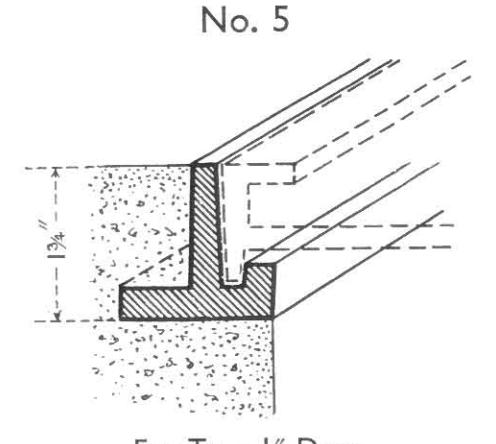


For $\frac{3}{8}$ ", $\frac{7}{16}$ ", $\frac{1}{2}$ ", $\frac{9}{16}$ ", $\frac{5}{8}$ ", $\frac{3}{4}$ " 1" and $1\frac{3}{4}$ " Thick Cover 4' 0" Long

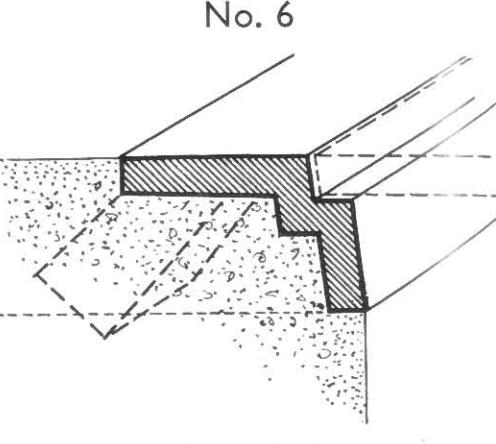
Also :
For $\frac{1}{4}$ " Thick Cover 3' 10 $\frac{1}{8}$ " Long
For $1\frac{1}{8}$ " Thick Cover 4' 8 $\frac{1}{2}$ " Long
For $1\frac{1}{2}$ " Thick Cover 3' 5 $\frac{1}{2}$ " Long
For $1\frac{1}{16}$ " Thick Cover 4' 6" Long



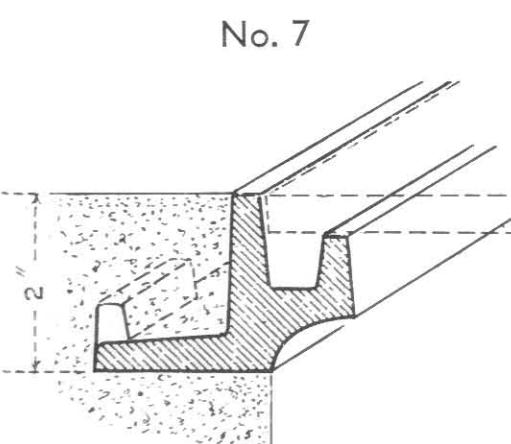
For $\frac{5}{16}$ " Thick Cover 4' 6" Long
For $\frac{3}{8}$ " Thick Cover 4' 0" Long



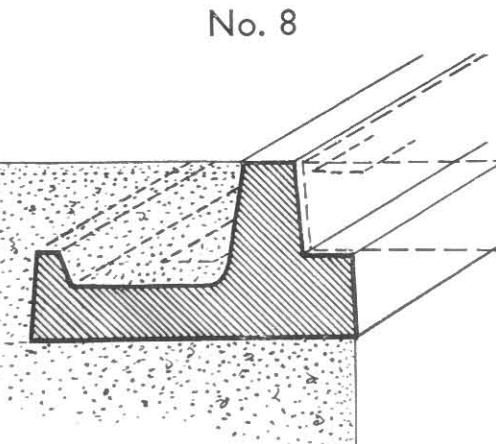
For Tray 1" Deep
4' 2 $\frac{1}{2}$ " Long



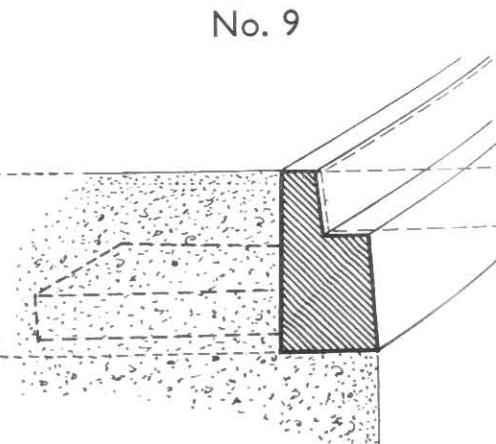
For $\frac{1}{2}$ " Thick Cover
4' 0" Long



For $\frac{7}{16}$ " Thick Cover
4' 6" Long
Also for $\frac{1}{2}$ " Thick Cover
3' 7" and 4' 0" Long

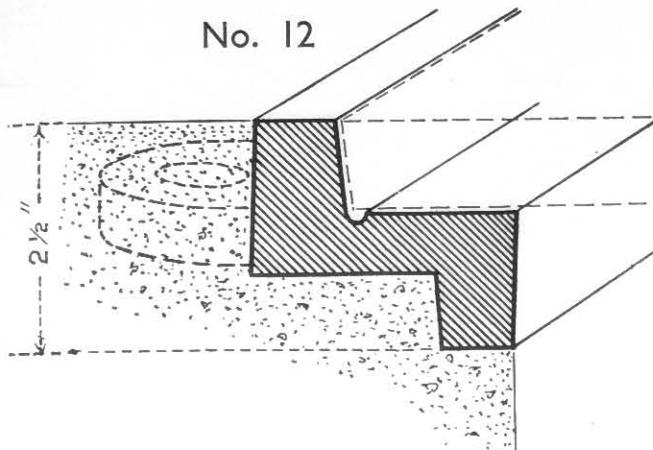


For 1" Thick Cover
3' 11 $\frac{1}{2}$ " Long

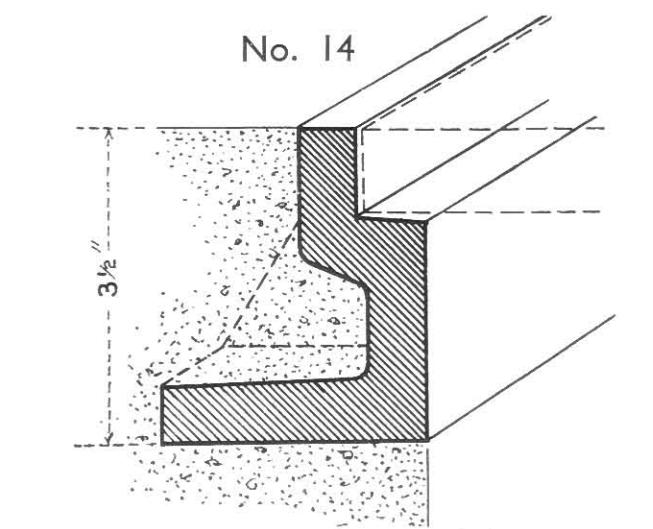


For $\frac{3}{16}$ " Thick Cover 4' 2 $\frac{1}{4}$ " Long
For $\frac{5}{8}$ " Thick Cover 4' 0" Long
For $\frac{1}{2}$ " Thick Cover 4' 2 $\frac{1}{4}$ " Long ($1\frac{1}{4}$ " High)
For $1\frac{1}{8}$ " Thick Cover 4' 0" Long

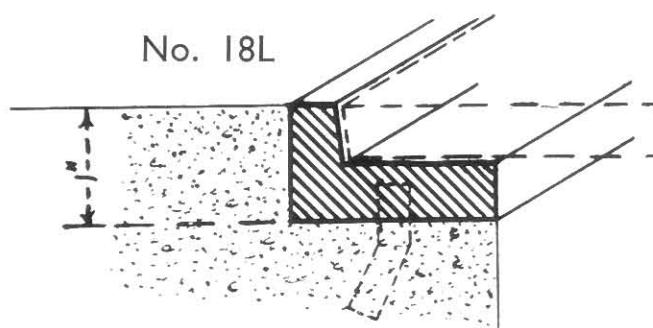
CURBS FOR TRENCH COVERS



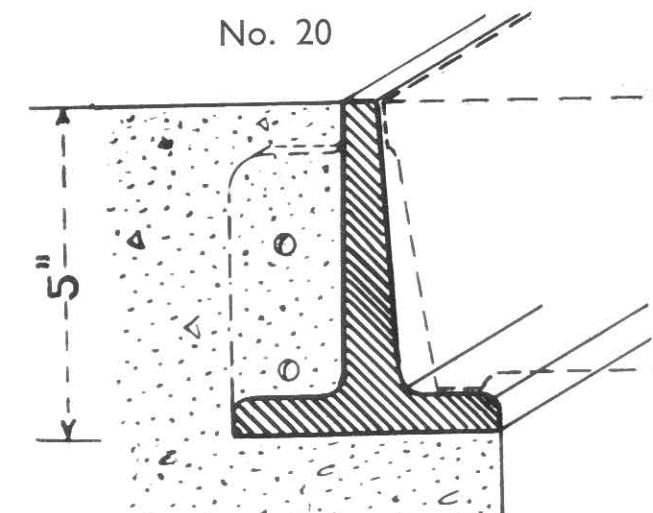
For 1" Thick Cover 5' 0" Long



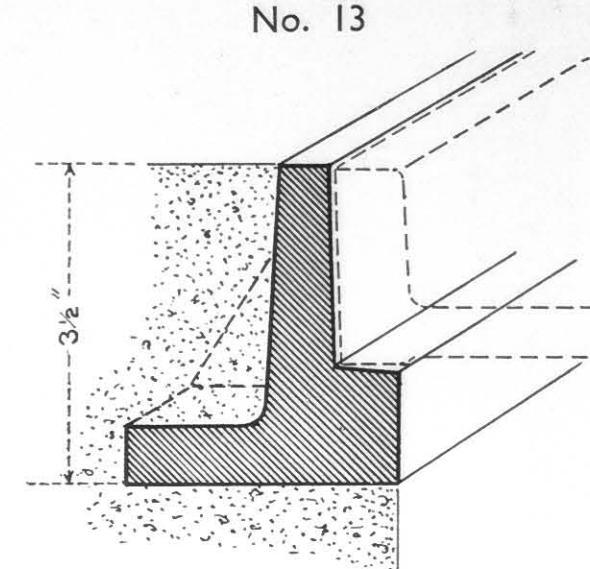
For 1" Thick Cover 6' 6" Long



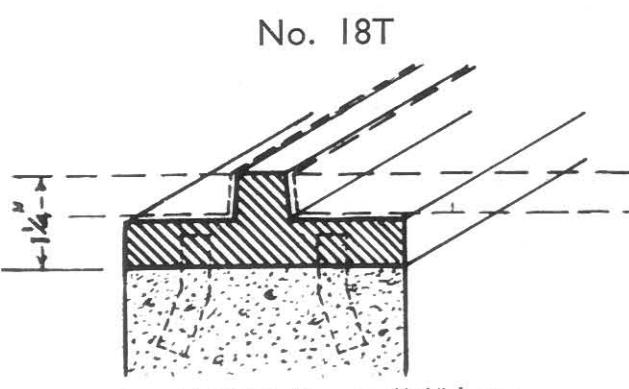
For $\frac{1}{4}$ " Thick Cover 3' 10 $\frac{5}{8}$ " Long
Also $1\frac{1}{4}$ " High for $\frac{1}{2}$ " Thick Cover 4' 6" Long



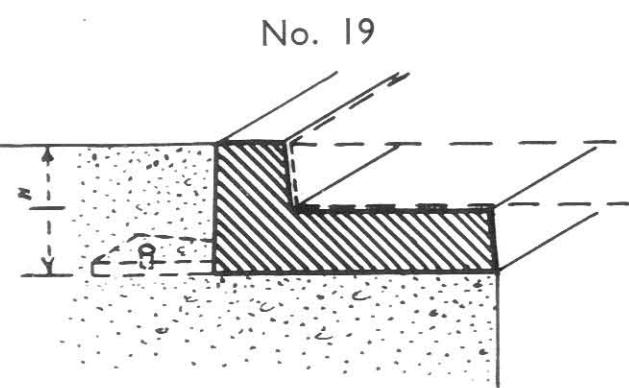
For 4 $\frac{3}{8}$ " Thick Cover 4' 0" Long
with end Flanges for fixing Curbs



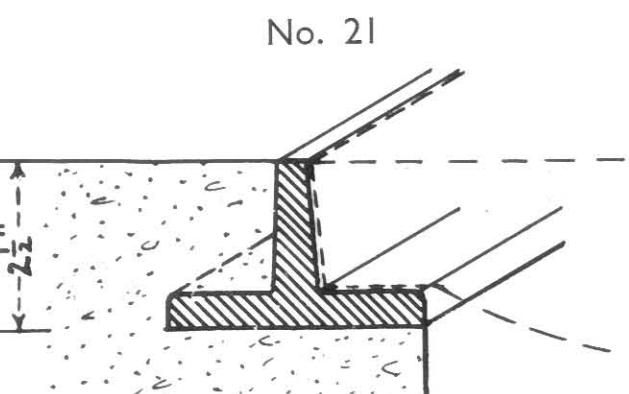
For Tray 2 $\frac{1}{4}$ " Deep 4' 9" Long



For $\frac{1}{2}$ " Thick Cover 4' 6" Long
Also 2" High for $1\frac{1}{4}$ " Thick Cover 4' 6" Long



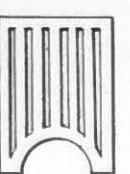
For $\frac{3}{8}$ ", $\frac{5}{8}$ ", $\frac{3}{4}$ ", 1" and $1\frac{5}{16}$ " Thick Covers 4' 0" Long
Also for $\frac{1}{2}$ " and $1\frac{3}{4}$ " Thick Covers 5' 0" Long



For 2" Thick Cover 4' 6" Long

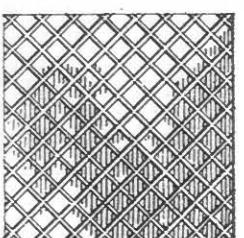
SURFACE GRATINGS AND PLATES

No. 41
Hart's Trap



$4\frac{3}{4}'' \times 7'' \times \frac{3}{8}''$ Thick
 $5\frac{1}{4}'' \times 6\frac{3}{4}'' \times \frac{5}{16}''$ Thick
To suit Pipes
 $2\frac{1}{2}''$, $3''$, $3\frac{1}{2}''$ and $4''$ Diam.

No. 105
Solid Plate



$6'' \times 6'' \times \frac{3}{8}''$ Thick
 $6'' \times 6'' \times \frac{1}{2}''$ Thick
 $7\frac{1}{2}'' \times 7\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $8'' \times 8'' \times \frac{3}{8}''$ Thick
 $8'' \times 8'' \times \frac{1}{2}''$ Thick
 $9'' \times 9'' \times \frac{1}{2}''$ Thick
 $10'' \times 10'' \times \frac{1}{2}''$ Thick
 $10'' \times 10'' \times \frac{5}{8}''$ Thick
 $11'' \times 11'' \times \frac{1}{2}''$ Thick
 $12'' \times 12'' \times \frac{5}{8}''$ Thick
Can also be supplied any
Size or Shape up to
 $8'' \times 8''$

No. 87

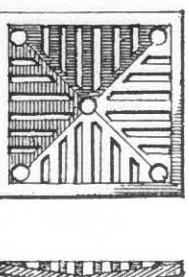


$3''$, $4''$, $4\frac{1}{2}''$, $5''$, $5\frac{1}{2}''$, $6''$,
 $6\frac{1}{2}''$, $7''$, $8''$, $11\frac{1}{2}''$, $17\frac{1}{2}''$
Diam. $\times \frac{1}{2}''$ Thick

Also

$6''$ Diam. $\times \frac{3}{8}''$ Thick
 $8\frac{1}{2}''$ Diam. $\times \frac{1}{2}''$ Thick
 $9''$ Diam. $\times \frac{1}{2}''$ Thick
 $10''$ Diam. $\times \frac{1}{2}''$ Thick
Also No. 510D
 $10\frac{3}{4}''$ Diam. $\times \frac{3}{4}''$ Thick
with six $1\frac{1}{4}''$ Deep Legs

No. 56

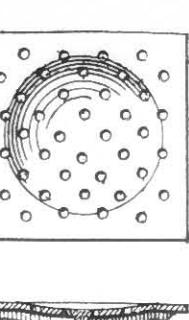


No. 67



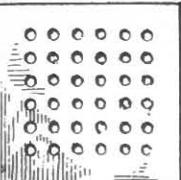
$7'' \times 7'' \times \frac{3}{16}''$ Thick
 $9'' \times 9'' \times \frac{3}{16}''$ Thick
 $12'' \times 12'' \times \frac{1}{4}''$ Thick

No. 118



Section
 $6'' \times 6'' \times \frac{1}{4}''$ Thick
 $7'' \times 7'' \times \frac{1}{4}''$ Thick
 $8'' \times 8'' \times \frac{1}{4}''$ Thick
 $9'' \times 9'' \times \frac{1}{4}''$ Thick
 $10'' \times 10'' \times \frac{3}{8}''$ Thick
 $12'' \times 12'' \times \frac{3}{8}''$ Thick

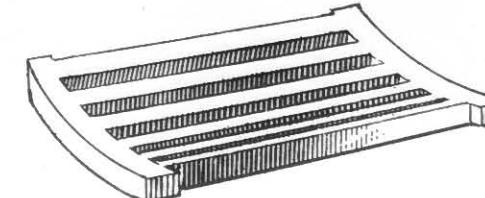
No. 64



$4'' \times 4'' \times \frac{3}{8}''$ Thick
 $4'' \times 4'' \times \frac{3}{16}''$ Thick
 $6'' \times 6'' \times \frac{3}{8}''$ Thick
 $6'' \times 6'' \times \frac{1}{2}''$ Thick
 $7'' \times 7'' \times \frac{1}{2}''$ Thick
 $7'' \times 7'' \times \frac{3}{8}''$ Thick
 $7\frac{1}{2}'' \times 7\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $8'' \times 8'' \times \frac{3}{8}''$ Thick
 $8'' \times 8'' \times \frac{1}{4}''$ Thick
 $9'' \times 5'' \times \frac{1}{2}''$ Thick
 $9'' \times 6'' \times \frac{1}{2}''$ Thick
 $9'' \times 6'' \times \frac{5}{8}''$ Thick
 $9'' \times 9'' \times \frac{1}{2}''$ Thick
 $9\frac{1}{2}'' \times 9\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $9\frac{3}{4}'' \times 9\frac{3}{4}'' \times \frac{1}{2}''$ Thick
 $10'' \times 10'' \times \frac{3}{8}''$ Thick
 $10'' \times 10'' \times \frac{1}{2}''$ Thick
 $10\frac{1}{4}'' \times 10\frac{1}{4}'' \times \frac{1}{2}''$ Thick
 $11\frac{1}{2}'' \times 11\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $12'' \times 12'' \times \frac{3}{8}''$ Thick
 $12'' \times 12'' \times \frac{1}{2}''$ Thick
 $14'' \times 14'' \times \frac{1}{2}''$ Thick
 $15'' \times 12'' \times \frac{1}{2}''$ Thick
 $6'' \times 10'' \times \frac{1}{2}''$ Thick
 $18'' \times 18'' \times \frac{5}{8}''$ Thick
 $23'' \times 13'' \times \frac{5}{8}''$ Thick
 $27'' \times 22\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $30'' \times 24'' \times \frac{1}{2}''$ Thick
 $36'' \times 15'' \times \frac{5}{8}''$ Thick
Also with Smaller Holes
 $6'' \times 6'' \times \frac{1}{2}''$ Thick
 $7\frac{3}{4}'' \times 7\frac{3}{4}'' \times \frac{1}{2}''$ Thick
 $8'' \times 8'' \times \frac{1}{2}''$ Thick
 $9\frac{1}{2}'' \times 9\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $12'' \times 6'' \times \frac{5}{8}''$ Thick

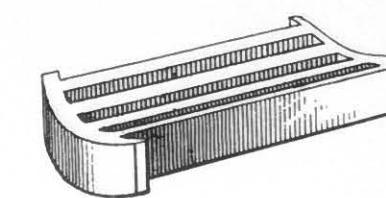
SURFACE GRATINGS AND PLATES

No. 88



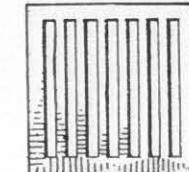
$18'' \times 12'' \times 1\frac{1}{4}''$ Thick

No. 89



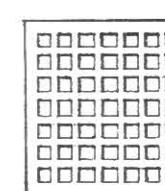
$14'' \times 8\frac{3}{4}'' \times 2\frac{1}{4}''$ Thick

No. 104



$6'' \times 6'' \times \frac{3}{8}''$ Thick
 $6'' \times 6'' \times \frac{1}{2}''$ Thick
 $7'' \times 7'' \times \frac{3}{8}''$ Thick
 $7'' \times 7'' \times \frac{1}{2}''$ Thick
 $7\frac{1}{2}'' \times 7\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $8'' \times 8'' \times \frac{3}{8}''$ Thick
 $8'' \times 8'' \times \frac{1}{2}''$ Thick
 $9'' \times 9'' \times \frac{1}{2}''$ Thick
 $9'' \times 9'' \times \frac{5}{8}''$ Thick
 $9\frac{1}{2}'' \times 9\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $10'' \times 10'' \times \frac{1}{2}''$ Thick
 $11\frac{3}{4}'' \times 11\frac{3}{4}'' \times \frac{1}{2}''$ Thick
 $12'' \times 6'' \times \frac{1}{2}''$ Thick
 $12'' \times 9'' \times \frac{1}{2}''$ Thick

No. 115
Ribbed on Underside



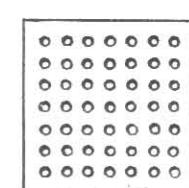
Min.
 $6'' \times 6'' \times \frac{7}{16}''$ Thick
 $7\frac{1}{2}'' \times 7\frac{1}{2}'' \times \frac{7}{16}''$ Thick
 $9'' \times 9'' \times \frac{3}{8}''$ Thick
 $9\frac{1}{2}'' \times 9\frac{1}{2}'' \times \frac{3}{8}''$ Thick
 $9\frac{3}{4}'' \times 9\frac{3}{4}'' \times \frac{7}{16}''$ Thick

No. 119



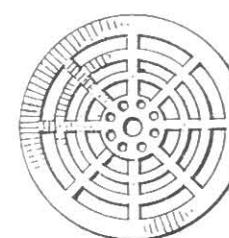
$4''$ Diam. $\times \frac{1}{2}''$ Thick
 $5\frac{3}{4}''$ Diam. $\times \frac{1}{2}''$ Thick
 $6\frac{3}{4}''$ Diam. $\times \frac{1}{2}''$ Thick

No. 616



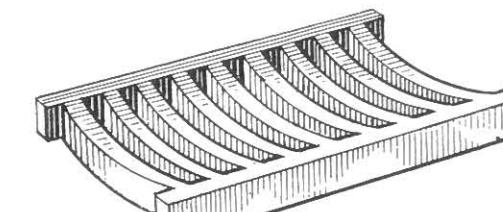
$7'' \times 7'' \times \frac{3}{8}''$ Thick
 $7\frac{1}{2}'' \times 7\frac{1}{2}'' \times \frac{3}{8}''$ Thick
 $8'' \times 8'' \times \frac{3}{8}''$ Thick
 $8\frac{1}{2}'' \times 8\frac{1}{2}'' \times \frac{3}{8}''$ Thick
 $9'' \times 6'' \times \frac{1}{2}''$ Thick
 $9'' \times 9'' \times \frac{1}{2}''$ Thick
 $9\frac{1}{2}'' \times 9\frac{1}{2}'' \times \frac{1}{2}''$ Thick
 $10'' \times 10'' \times \frac{5}{8}''$ Thick

No. 120



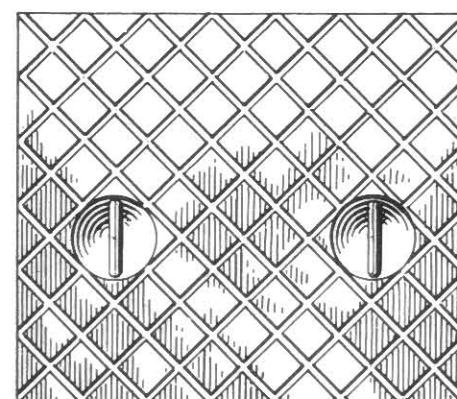
$8''$, $9\frac{3}{4}''$, $11''$, $12''$, $12\frac{1}{2}''$
and $14''$ Diam.
All $\frac{1}{2}''$ Thick

No. 785



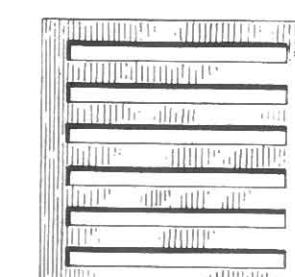
$18'' \times 12\frac{1}{4}'' \times 1\frac{1}{2}''$ Thick

No. 847



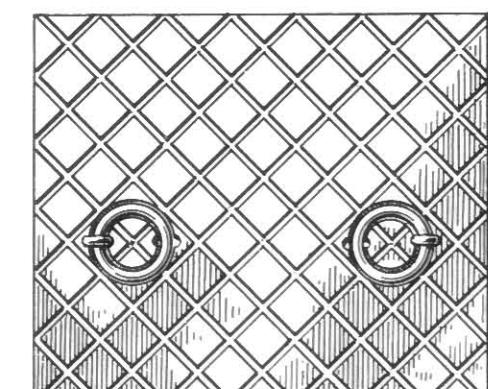
$20'' \times 20'' \times \frac{11}{16}''$ Thick

No. 839



$12'' \times 12'' \times 1''$ Thick
 $12'' \times 12'' \times 1\frac{1}{2}''$ Thick
Also No. 889
 $12'' \times 8\frac{3}{4}'' \times 1''$ Thick
 $12'' \times 13\frac{3}{4}'' \times 1''$ Thick

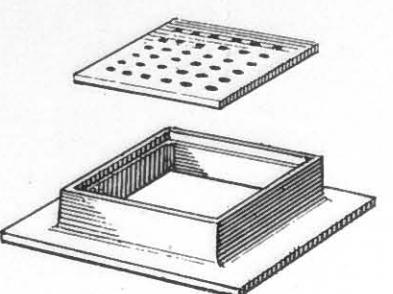
No. 848



$20'' \times 20'' \times \frac{11}{16}''$ Thick

SURFACE GRATINGS WITH FRAMES

No. 64

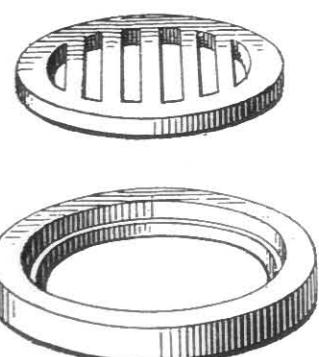


Opening	Overall	Depth	Thickness of Grating
*6" x 6"	8 $\frac{3}{8}$ " x 8 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	3/8"
*6" x 6"	8 $\frac{3}{8}$ " x 8 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "
*6" x 6"	8 $\frac{3}{8}$ " x 8 $\frac{3}{8}$ "	3"	1 $\frac{1}{2}$ "
*6" x 6"	9 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ "	3"	1 $\frac{1}{2}$ "
*7" x 7"	9 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*7" x 7"	9 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*8" x 8"	10" x 10"	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*8" x 8"	10" x 10"	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*8" x 8"	10 $\frac{3}{8}$ " x 10 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
8" x 8"	12 $\frac{1}{4}$ " x 12 $\frac{1}{4}$ "	3"	1 $\frac{1}{2}$ "
8" x 8"	11 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ "	3"	1 $\frac{1}{4}$ "
*9" x 9"	11 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*9" x 9"	11 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*10" x 10"	12 $\frac{1}{4}$ " x 12 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*10" x 10"	12 $\frac{1}{4}$ " x 12 $\frac{1}{4}$ "	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
10" x 10"	12 $\frac{3}{8}$ " x 12 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*10" x 10"	13 $\frac{1}{4}$ " x 13 $\frac{1}{4}$ "	3"	1 $\frac{1}{2}$ "
10" x 10"	14 $\frac{1}{4}$ " x 14 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*12" x 12"	14 $\frac{1}{4}$ " x 14 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*12" x 12"	14 $\frac{1}{4}$ " x 14 $\frac{1}{4}$ "	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
12" x 12"	14 $\frac{3}{8}$ " x 14 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
*12" x 12"	16" x 16"	3"	1 $\frac{1}{2}$ "
12" x 12"	16" x 16"	3 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
16" x 16"	19 $\frac{3}{4}$ " x 19 $\frac{3}{4}$ "	2"	1 $\frac{1}{2}$ "
18" x 18"	21 $\frac{1}{2}$ " x 21 $\frac{1}{2}$ "	2"	1 $\frac{1}{2}$ "
18" x 18"	22 $\frac{1}{2}$ " x 22 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
23" x 13"	27 $\frac{1}{2}$ " x 17 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
20" x 9"	24 $\frac{1}{2}$ " x 13 $\frac{1}{2}$ "	4"	1 $\frac{1}{2}$ " solid

Any of these can be supplied with Solid Plate Cover as No. 105

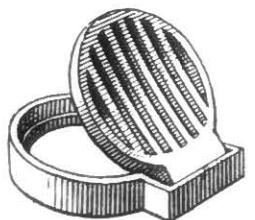
* Also Hinged

No. 90



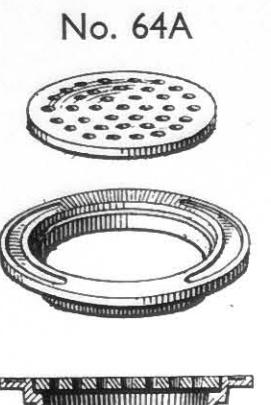
Opening	Overall	Depth	Thickness of Grating
11" Diam.	14" Diam.	2"	1"
13" Diam.	16" Diam.	2"	1"

No. 73

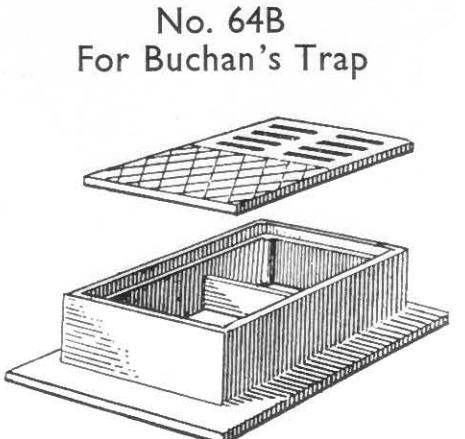


Opening	Overall	Depth	Thickness of Grating
2 $\frac{3}{4}$ " Diam.	4 $\frac{3}{8}$ " Diam.	5/8"	3/8"
6"	7 $\frac{3}{8}$ " Diam.	1 $\frac{1}{4}$ "	3/8"

No. 64A
For Buchan's Trap

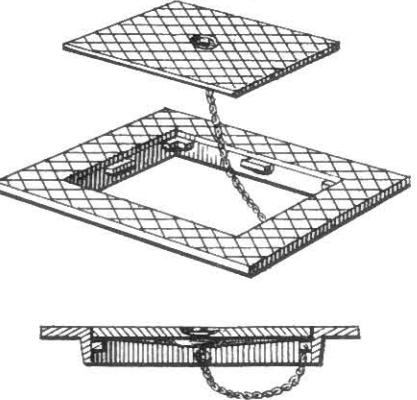


Opening	Overall	Depth	Thickness of Grating
8" Diam.	11" Diam.	2"	1/2"
10" Diam.	13" Diam.	2"	1/2"

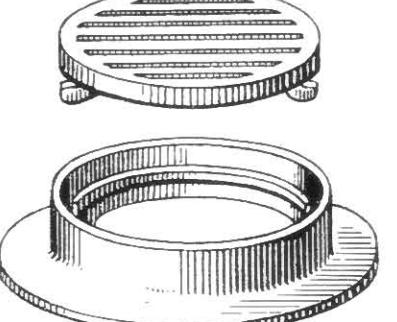


Opening	Overall	Depth	Thickness of Grating	Style of Perforations
12" x 6"	14 $\frac{1}{2}$ " x 8 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	5/16"	Round Holes
12" x 7"	16" x 11"	3 $\frac{1}{2}$ "	1/2"	Round Holes or Slots
14" x 7"	17" x 10"	2 $\frac{3}{4}$ "	1/2"	To lock
14" x 9"	18" x 13"	4 $\frac{1}{2}$ "	1/2"	Do.
16" x 8"	20 $\frac{1}{2}$ " x 12"	3 $\frac{1}{2}$ "	1/2"	Round Holes
16" x 8"	20" x 12"	4"	1/2"	Do.
18" x 7"	22" x 11"	4 $\frac{1}{2}$ "	1/2"	Round holes or Slots
18" x 7"	22" x 11"	5"	3/4"	Do.
16" x 8"	18" x 10"	2"	7/16"	Round Holes throughout
				To lock

No. 64C



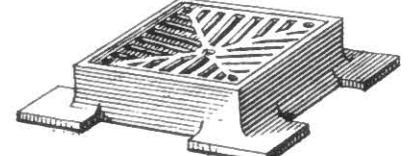
No. 66



Opening	Overall	Depth	Thickness of Grating
10" x 10"	14" x 14"	1 $\frac{5}{8}$ "	3/8"
10" x 10"	14" x 14"	2"	5/8"
11" x 11"	16" x 16"	1 $\frac{1}{2}$ "	1/2"
12" x 12"	16" x 16"	2"	1/2"

*Also with Dished Grating

No. 102

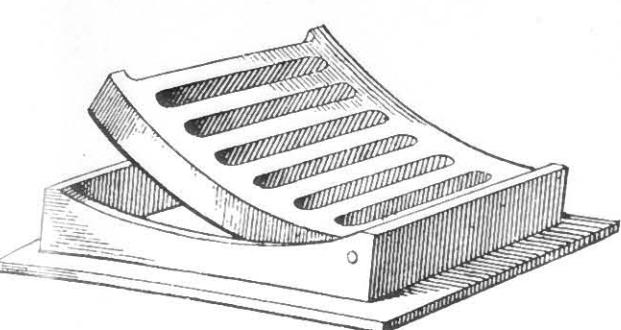


Over Top	Overall	Depth	Thickness of Grating
7" x 7"	10" x 10"	2"	1/2"
8" x 8"	11" x 11"	2"	1/2"
*9" x 9"	12" x 12"	2 $\frac{3}{8}$ "	1/2"
11" x 11"	14" x 14"	2 $\frac{3}{8}$ "	1/2"

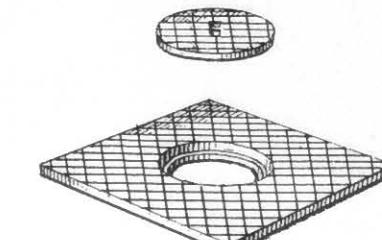
*Also Hinged

SURFACE GRATINGS WITH FRAMES

No. 133

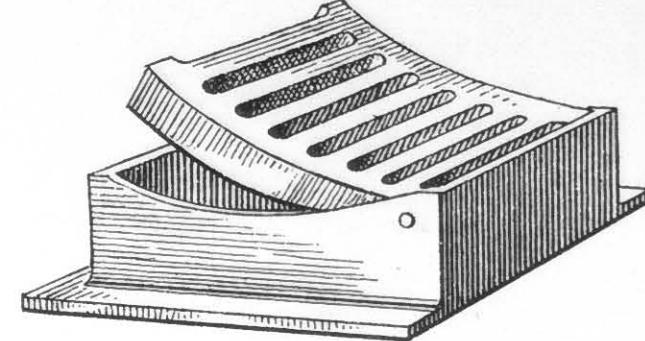


No. 126



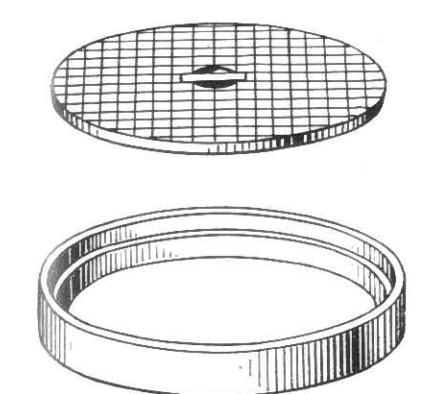
Opening	Overall	Depth	Thickness of Cover
5" Diam.	10" x 10"	5/8"	

No. 133K



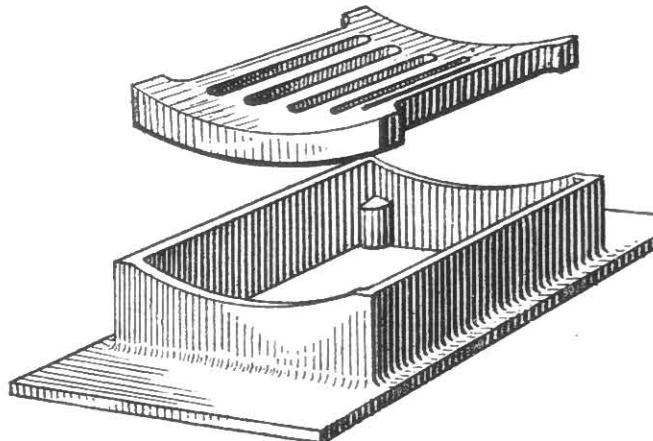
Opening	Overall	Depth	Thickness of Grating
14" x 14"	17" x 18 $\frac{1}{2}$ "	6"	2 $\frac{1}{2}$ "

No. 144
Coal Shoot Frame and Cover



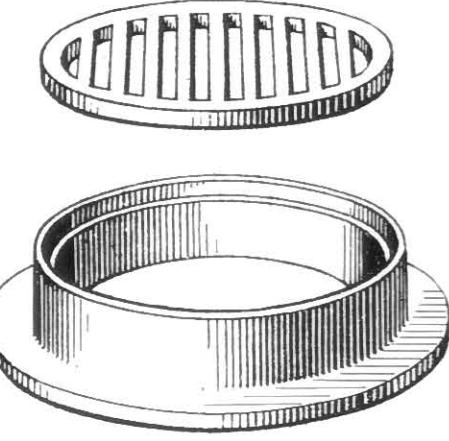
Opening	Overall	Depth	Thickness of Cover
14" Diam.	16" Diam.	1 $\frac{3}{4}$ "	1/2"

No. 133L



Opening	Overall	Depth	Thickness of Grating
12" x 18"	14" x 26"	4 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "

No. 621

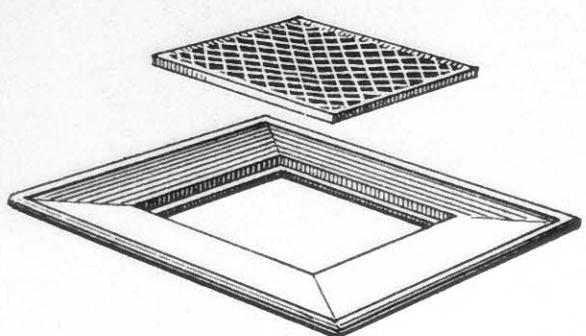


Opening	Overall	Depth	Thickness of Grating
15 $\frac{1}{2}$ " Diam.	20" Diam.	4"	3/4" also 1"

No. 662

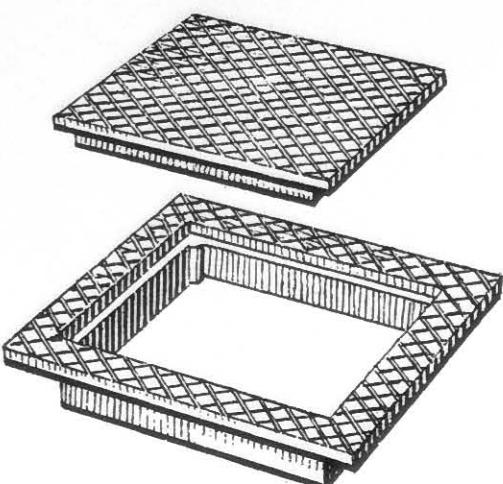
SURFACE GRATINGS AND PLATES WITH FRAMES

No. 683



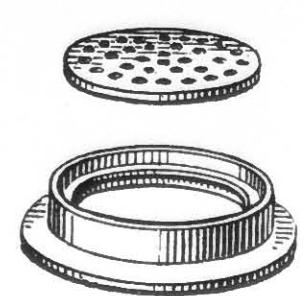
Opening	Overall	Depth	Thickness of Grating
8 $\frac{3}{4}$ " x 8 $\frac{3}{4}$ "	15 $\frac{1}{2}$ " x 15 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	$\frac{1}{2}$ "

No. 725



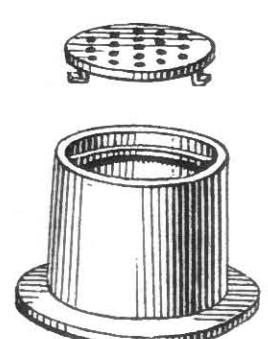
Opening	Overall	Depth	Thickness of Grating
6" Diam.	8 $\frac{3}{4}$ " Diam.	2 $\frac{1}{4}$ "	$\frac{1}{2}$ "

No. 711

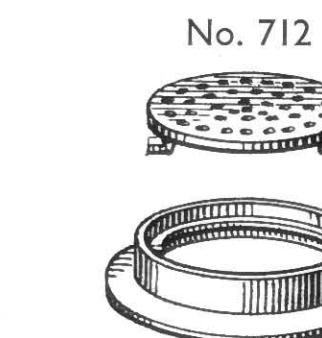


Opening	Overall	Depth	Thickness of Grating
6" Diam.	8 $\frac{3}{4}$ " Diam.	2 $\frac{1}{4}$ "	$\frac{1}{2}$ "

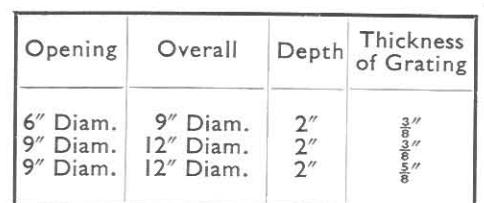
No. 712



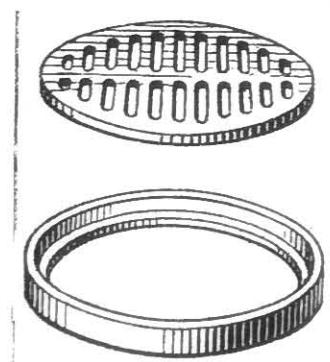
Opening	Overall	Depth	Thickness of Grating
6" Diam.	9" Diam.	6 $\frac{1}{4}$ "	$\frac{3}{8}$ "



Opening	Overall	Depth	Thickness of Grating
6" Diam.	9" Diam.	2"	$\frac{3}{8}$ "

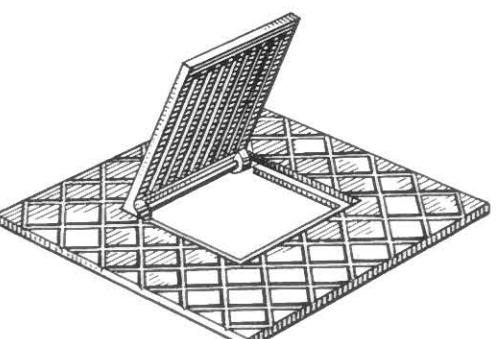


No. 743

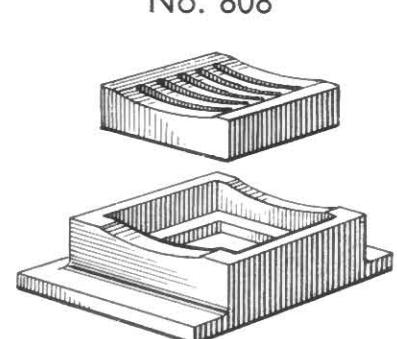


Opening	Overall	Depth	Thickness of Grating
10 $\frac{1}{2}$ " Diam.	11 $\frac{1}{2}$ " Diam.	1"	$\frac{3}{8}$ "

No. 805



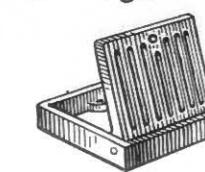
No. 808



Grating	Overall	Thickness
9" x 9"	18" x 18"	$\frac{1}{2}$ "

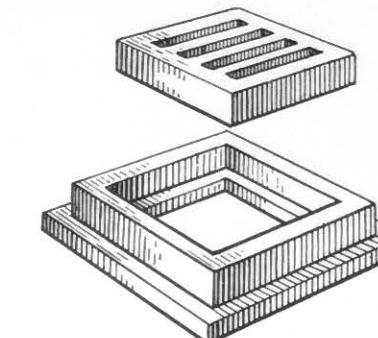
SURFACE GRATINGS WITH FRAMES

No. 834
With Hinged Grating

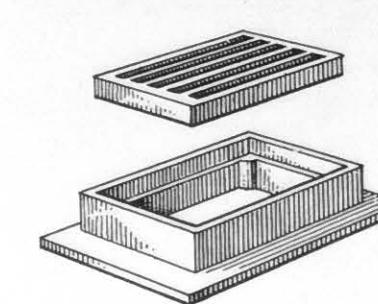


Grating	Overall	Depth	Thickness of Grating
5" x 5"	5 $\frac{3}{4}$ " x 5 $\frac{3}{4}$ "	1"	$\frac{1}{2}$ "

No. 840

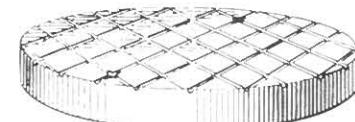


No. 870



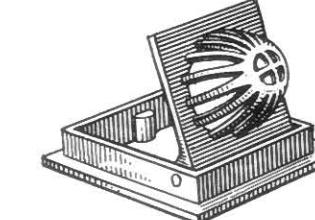
Opening	Overall	Depth	Thickness of Grating
8 $\frac{1}{4}$ " x 5 $\frac{3}{4}$ "	12" x 9 $\frac{1}{2}$ "	3"	1"

No. 892
Coal Shoot Frame and Cover



Grating	Overall	Depth	Thickness of Grating
8" x 8"	11 $\frac{3}{4}$ " x 11 $\frac{3}{4}$ "	2 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "

No. 877



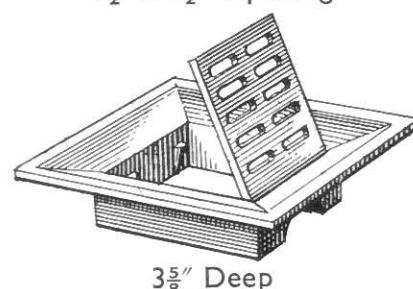
No. 882



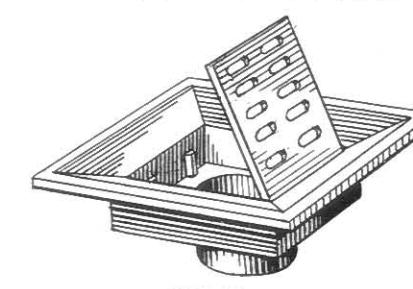
Opening	Overall	Depth of Frame	Thickness of Grating
6" x 6"	8 $\frac{3}{4}$ " x 8 $\frac{3}{4}$ "	1 $\frac{1}{2}$ "	$\frac{5}{16}$ "

GREASE BOX COVERS

No. 121A
6 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ " Opening

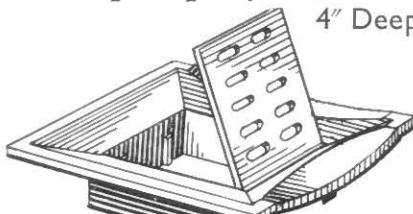


3 $\frac{5}{8}$ " Deep



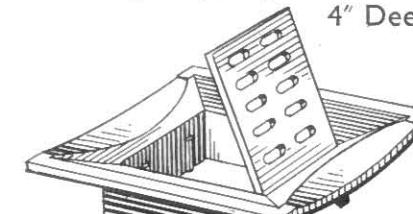
2 $\frac{3}{4}$ " Deep

No. 121E
6 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ " Opening



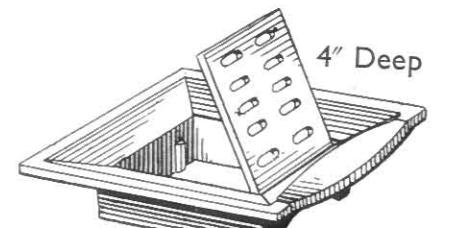
4" Deep

No. 121G
6 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ " Opening



4" Deep

No. 121D
6 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ " Opening



4" Deep

No. 121C
As above but with 4" Diam. Outlet
3 $\frac{1}{4}$ " Deep

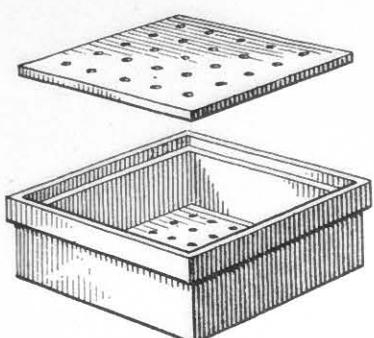
13" x 13" Overall x $\frac{5}{8}$ " Thick

No. 121F
As above but with 4" Diam. Outlet
3 $\frac{1}{4}$ " Deep

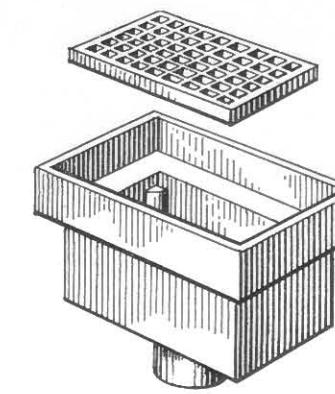
No. 121H
As above but with 4" Diam. Outlet
3 $\frac{1}{4}$ " Deep

CESSPOOL BOXES

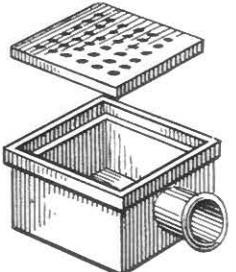
No. 92



No. 759



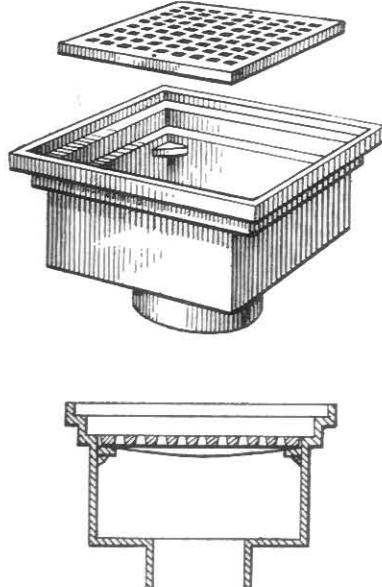
No. 758



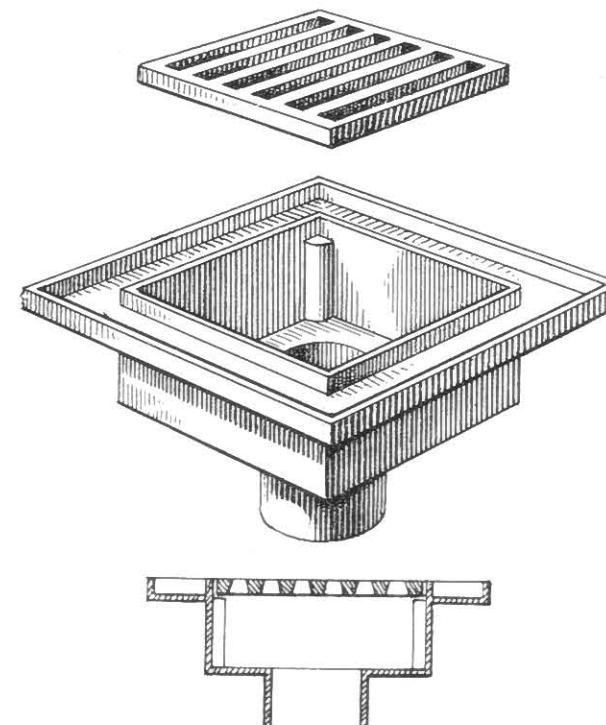
Outlet on Side or Bottom

No.	Grating	Overall	Depth	Thickness of Grating
92	9 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ "	10 $\frac{1}{2}$ " x 10 $\frac{1}{2}$ "	3 $\frac{5}{8}$ "	$\frac{3}{8}$ "
758	6 $\frac{3}{8}$ " x 6 $\frac{3}{8}$ "	7" x 7"	3 $\frac{5}{8}$ "	$\frac{3}{8}$ "

No. 842



No. 896

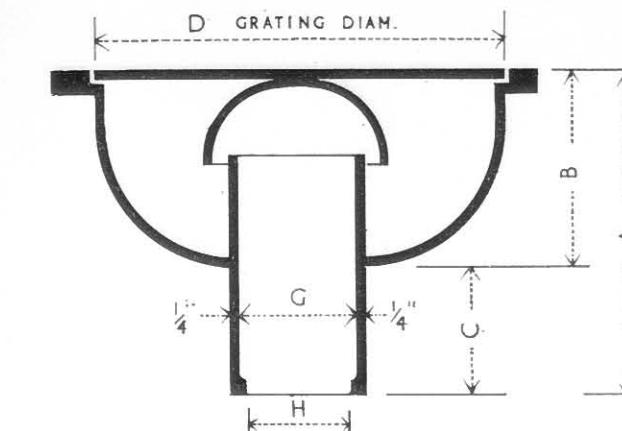


Grating	Overall	Depth	Thickness of Grating
9" x 9"	12" x 12"	6"	$\frac{1}{2}$ "

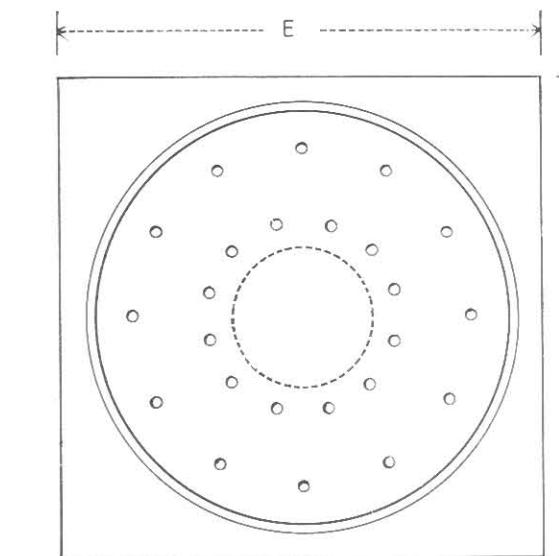
Grating	Overall	Depth	Thickness of Grating
6" x 6"	10" x 10"	3 $\frac{3}{4}$ "	$\frac{3}{8}$ "

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

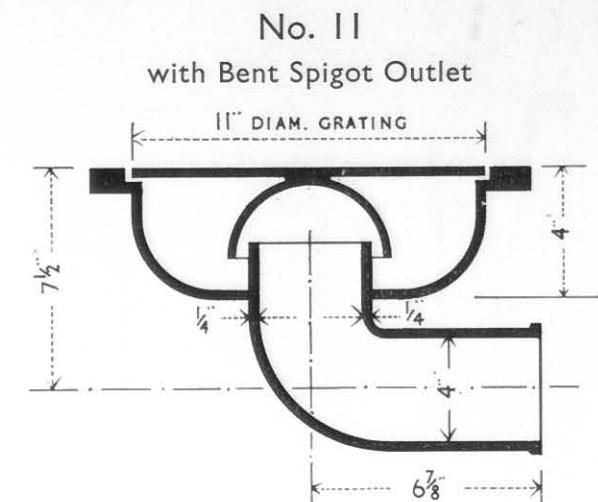
BELL-TRAP CESSPOOLS



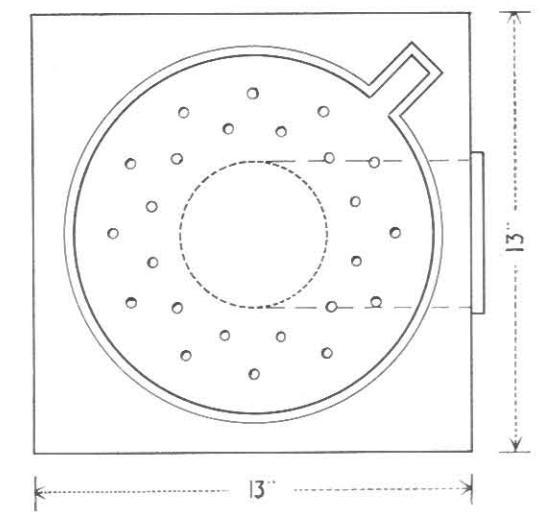
Section



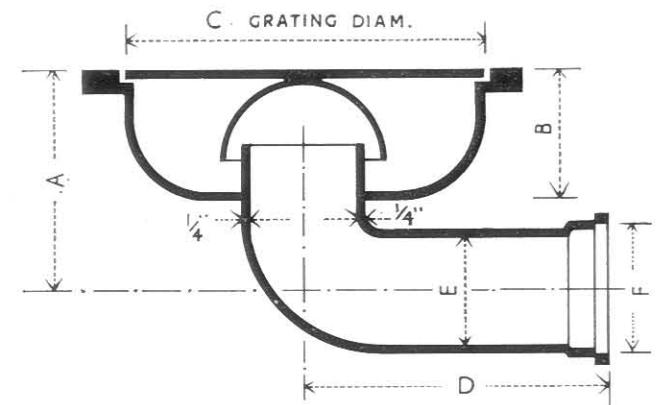
Plan



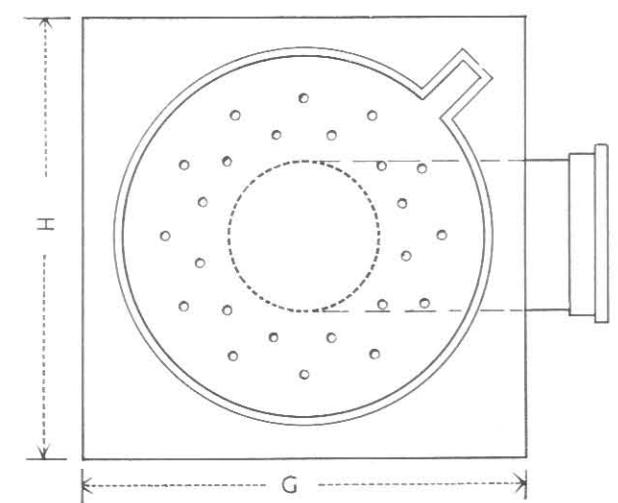
No. 11
with Bent Spigot Outlet



No. 12 & 15
with Bent Sanitary Faucet Outlet. For dimensions, see Table bottom left.



Section



Plan

Dimensions in Inches							
No.	A	B	C	D	E	F	G
1	3 $\frac{5}{8}$	3 $\frac{1}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{4}$	6	6	1 $\frac{1}{2}$
In brass	2 $\frac{9}{16}$	2 $\frac{1}{4}$	1 $\frac{5}{8}$	2 $\frac{13}{16}$	3	3	1 $\frac{1}{2}$
2	3 $\frac{5}{8}$	3 $\frac{1}{4}$	2 $\frac{1}{4}$	5 $\frac{3}{4}$	6	6	1 $\frac{1}{2}$
3	3 $\frac{5}{8}$	3 $\frac{1}{4}$	2 $\frac{1}{4}$	5 $\frac{3}{4}$	6	6	1 $\frac{1}{2}$
9	6	4	2	11	13	13	4
10	12	4	8	11	13	13	4
10	12	4	8	11	18	18	4
13	6 $\frac{3}{4}$	4	2 $\frac{3}{4}$	11	13	13	3 $\frac{3}{4}$
14	6 $\frac{3}{4}$	3 $\frac{3}{4}$	3	11	13	13	5 $\frac{3}{8}$
14A	6 $\frac{7}{8}$	3 $\frac{7}{8}$	3	11	13	13	4 $\frac{15}{16}$
14B	7 $\frac{3}{4}$	4 $\frac{3}{4}$	3	14	16	16	7 $\frac{5}{8}$

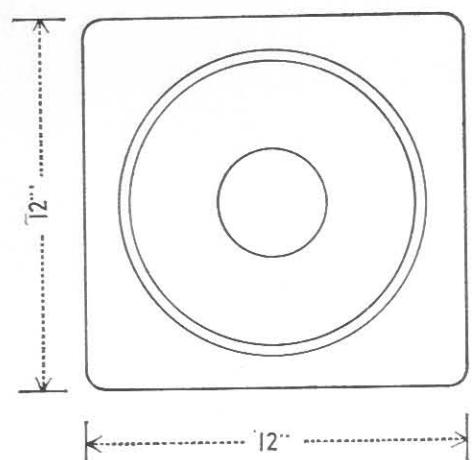
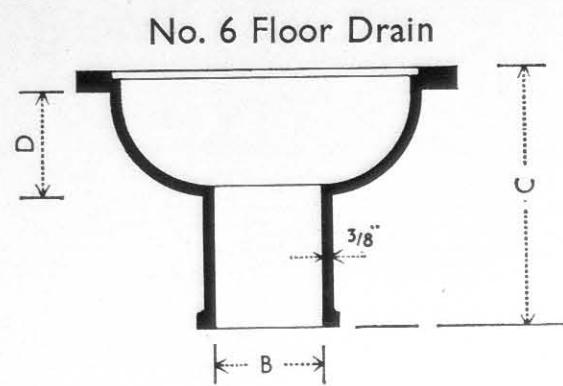
GRATINGS

Loose	Hinged	Screwed
No. 1	Nos. 2, 9, 10, 13, 14, 14A & 14B	No. 3

Dimensions in Inches							
No.	A	B	C	D	E	F	G
12	7 $\frac{1}{2}$	4	11	13	4	5 $\frac{3}{8}$	13
15	9 $\frac{1}{4}$	4 $\frac{1}{4}$	12	14	6	7 $\frac{3}{8}$	14

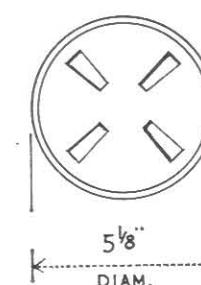
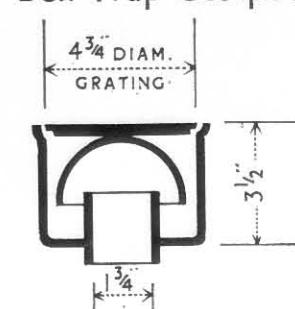
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

FLOOR DRAINS AND CESSPOOL TRAPS

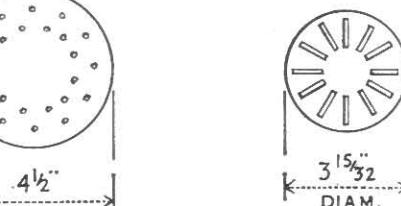
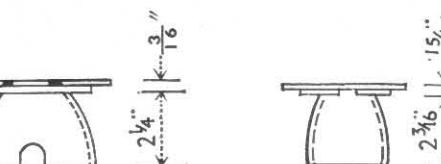


B	C	D	B	C	D
4"	6 2/3"	3 1/8"	6"	10 1/2"	2 1/2"
4"	8 1/2"	3 1/8"	6"	11 1/2"	2 1/2"
4"	11 1/2"	3 1/4"			

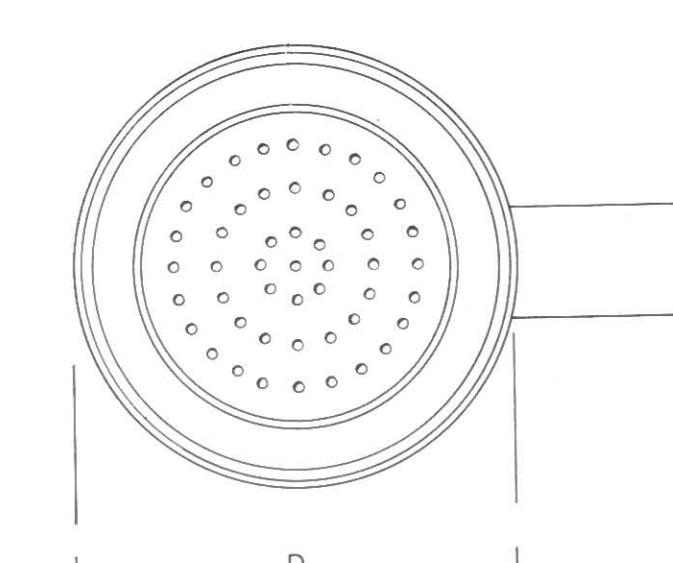
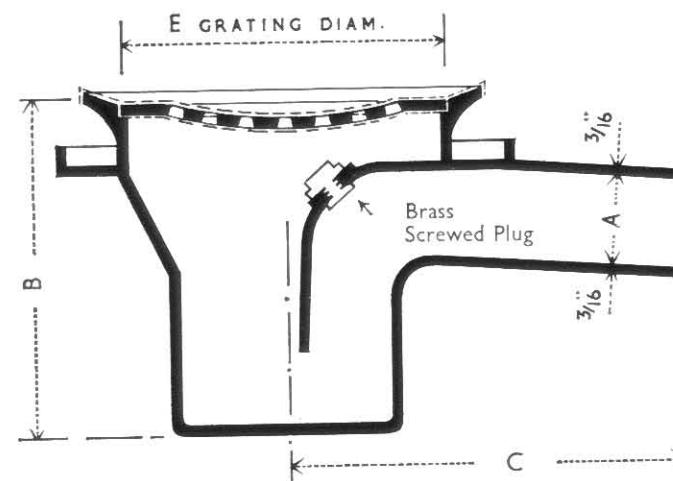
No. 7
Bell-Trap Cesspool



No. 4
Bell-Trap Gratings

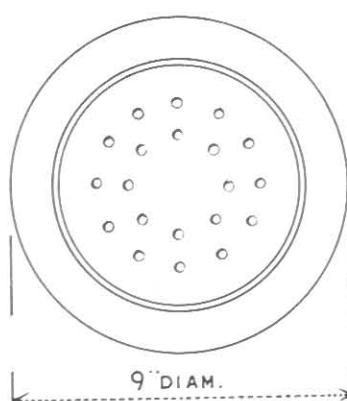
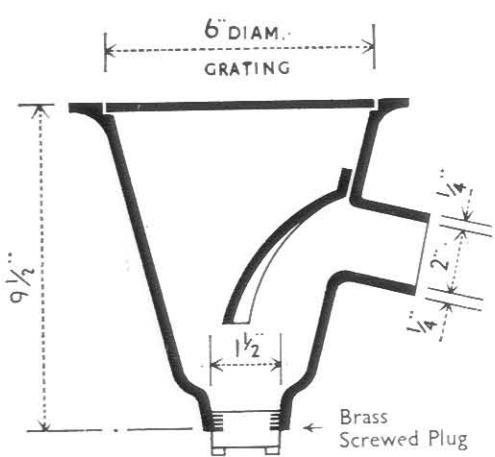


No. 16 Floor Drain



A	B	C	D	E
3"	10"	1' 0"	1' 1"	9 1/4"
4"	10"	1' 0"	1' 4"	1' 0 1/4"

No. 8 Floor Drain

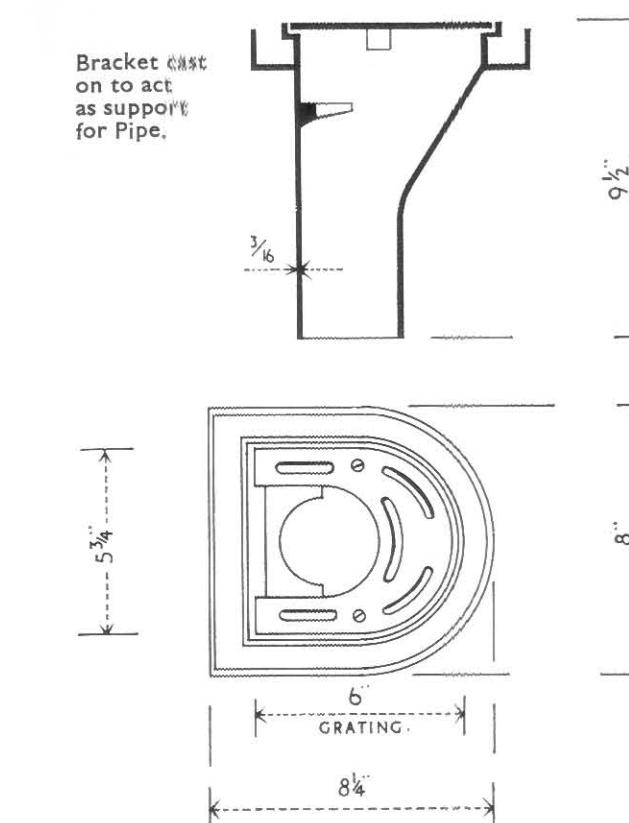


A	B	C	D	E
3"	10"	1' 0"	1' 1"	9 1/4"
4"	10"	1' 0"	1' 4"	1' 0 1/4"

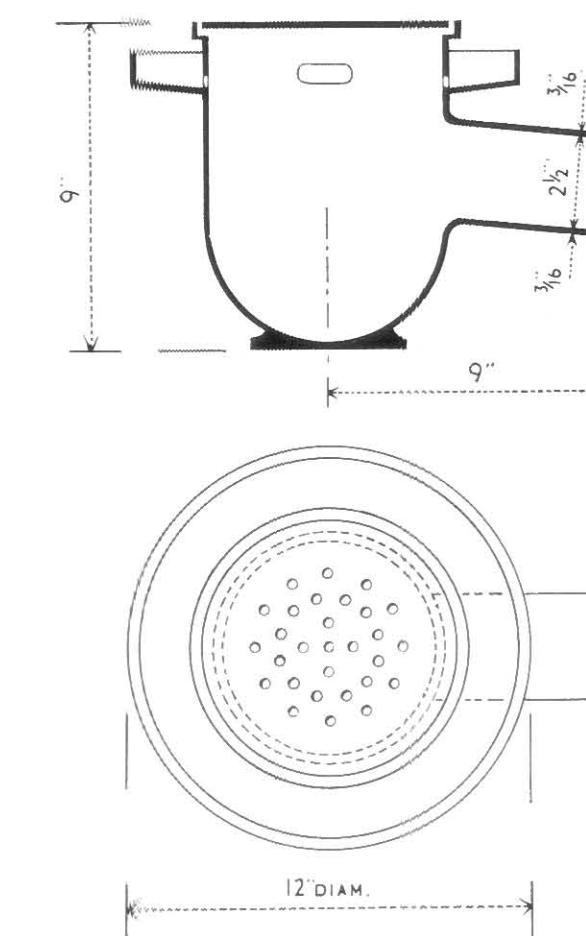
BALCONY AND ROOF GULLIES

No. 908
C.I. Balcony Gully

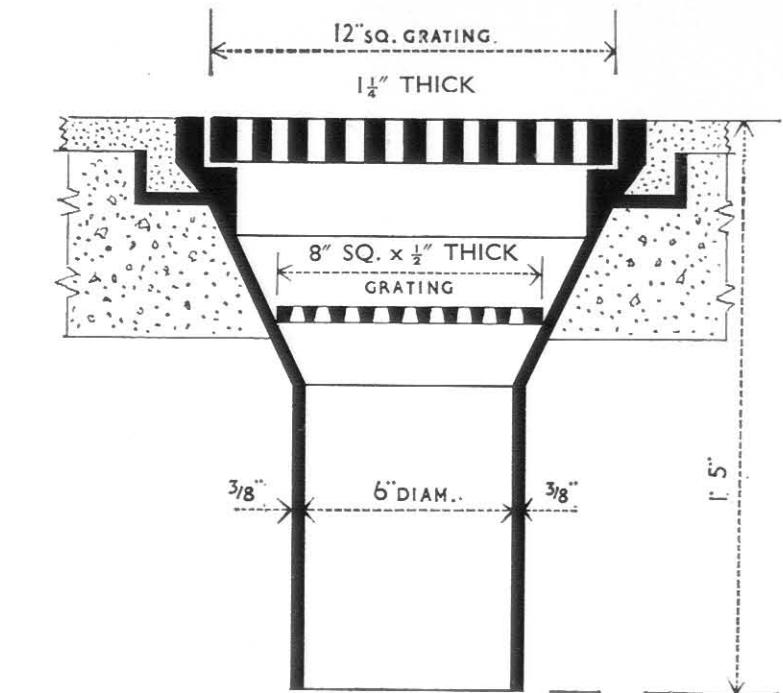
Outlet to suit 2 1/2" and 3" Light Rain-Water Pipes.



No. 17
C.I. Roof Gully



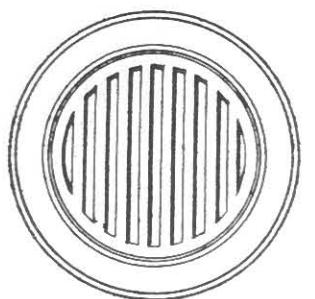
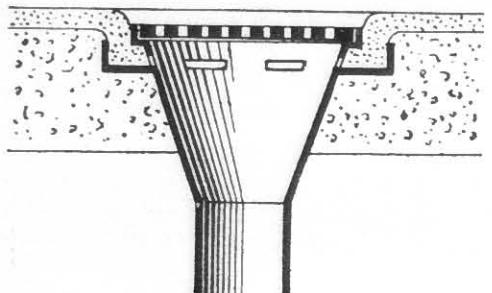
No. 909
Roof Gully



LEAK-PROOF OUTLETS FOR ASPHALTE

No. 796

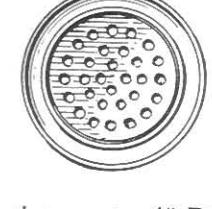
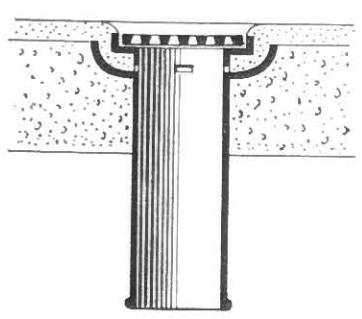
1' 1 $\frac{1}{2}$ " Diam. x 1' 0" Long Overall
Grating 9" Diam. $\frac{1}{2}$ " Thick



For Pipes 2 $\frac{1}{2}$ ", 3", 3 $\frac{1}{2}$ ", 4", 5" and 6" Diam.
 $\frac{3}{16}$ " Metal
Also for No. 1, 4" Diam.

No. 796A

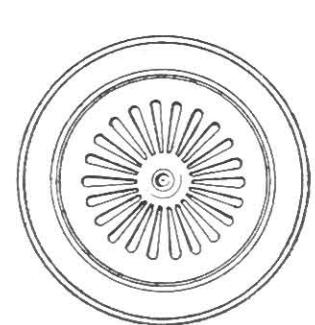
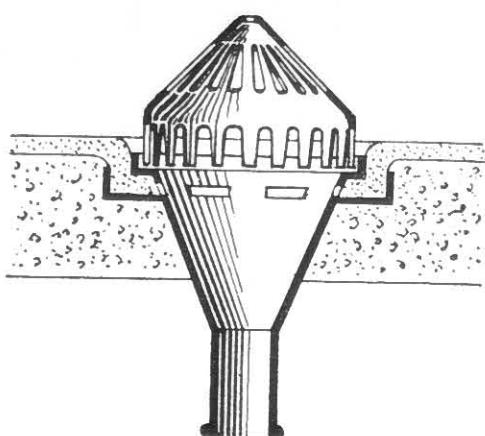
8" Diam. x 1' 0" Long
Overall
Grating 5 $\frac{1}{2}$ " Diam.
 $\frac{1}{4}$ " Thick



Outlet up to 4" Diam.
 $\frac{3}{16}$ " Metal

No. 797

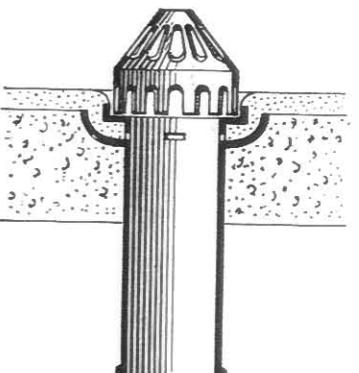
1' 1 $\frac{1}{2}$ " Diam. x 1' 0" Long Overall
Grating 9" Diam. $\frac{3}{16}$ " Thick



For Pipes 2 $\frac{1}{2}$ ", 3", 3 $\frac{1}{2}$ ", 4", 5" and 6" Diam.
 $\frac{3}{16}$ " Metal
Also for No. 1, 4" Diam.

No. 797A

8" Diam. x 1' 0" Long
Overall
Grating 5 $\frac{1}{2}$ " Diam.
 $\frac{3}{16}$ " Thick

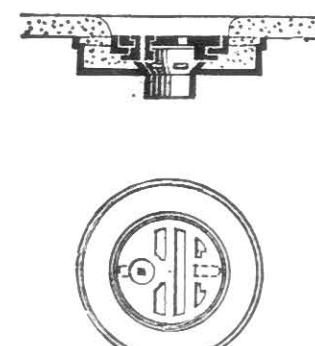


Outlet up to 4" Diam.
 $\frac{3}{16}$ " Metal

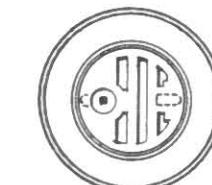
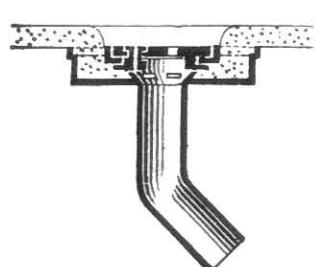
No. 816

7 $\frac{3}{4}$ " Diam. Overall. Grating 4 $\frac{1}{2}$ " Diam., $\frac{1}{2}$ " Thick

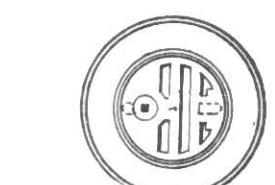
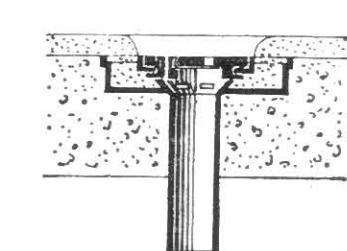
with 1 $\frac{1}{8}$ " Short Tail
for Lead Pipe



with Bent Tail



with 7" Long Straight Tail



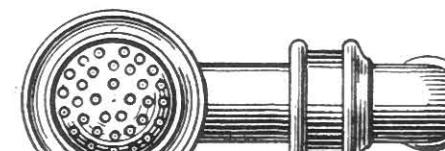
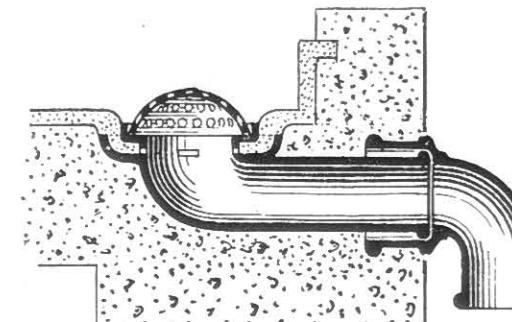
To suit 2" Diam. Pipes. $\frac{1}{8}$ " Metal

LEAK-PROOF OUTLETS FOR ASPHALTE

No. 845

8" Diam. Overall
Grating 5 $\frac{1}{2}$ " Diam., $\frac{1}{4}$ " Thick
(2" to 4" Pipe)

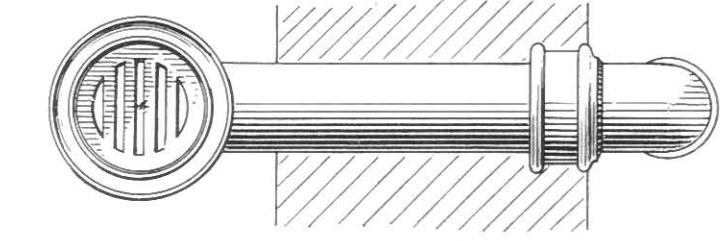
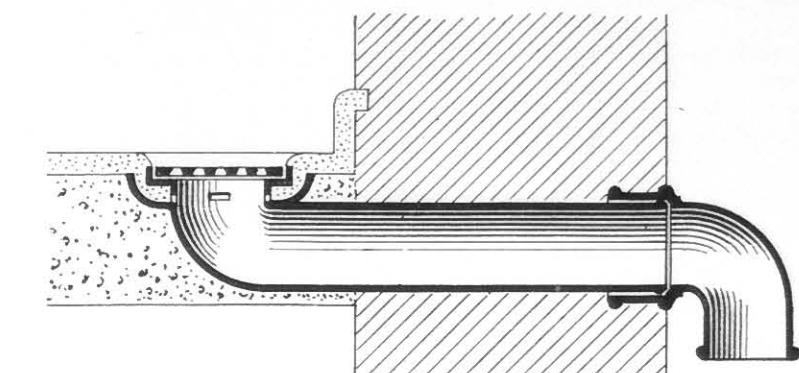
Also 10 $\frac{3}{4}$ " Diam. Overall
Grating 8" Diam., $\frac{1}{4}$ " Thick
(6" Pipe)



2", 3", 3 $\frac{1}{2}$ " and 4" Diam., $\frac{3}{16}$ " Metal
with Spigot Tail
10 $\frac{1}{2}$ " Long from Centre of Grating
Also 6" Diam., $\frac{3}{16}$ " Metal
with Spigot Tail
14 $\frac{1}{2}$ " Long from Centre of Grating

No. 850

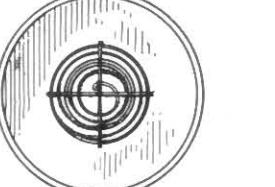
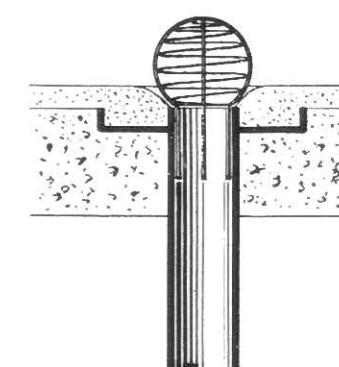
8" Diam. Overall
Grating 5 $\frac{1}{2}$ " Diam., $\frac{1}{4}$ " Thick. (2" to 4" Pipe)
Also 10 $\frac{3}{4}$ " Diam. Overall
Grating 8" Diam., $\frac{1}{2}$ " Thick. (6" Pipe)



2", 3", 3 $\frac{1}{2}$ " and 4" Diam., $\frac{3}{16}$ " Metal
with Spigot Tail. 10 $\frac{1}{2}$ " Long from Centre of Grating
Also 6" Diam., $\frac{3}{16}$ " Metal
with Spigot Tail. 14 $\frac{1}{2}$ " Long from Centre of Grating

No. 849

9 $\frac{1}{4}$ " Diam. x 1' 0" Long
Overall



To suit 3" Diam. Pipes
 $\frac{1}{8}$ " Metal

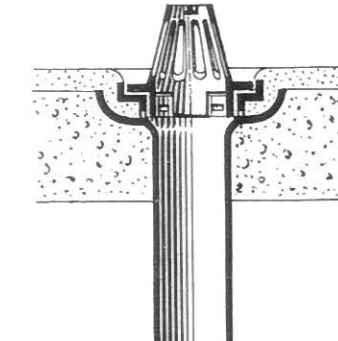
No. 874

6" Diam. x 1" Deep
Overall
Grating 4" Diam., $\frac{3}{8}$ " Thick



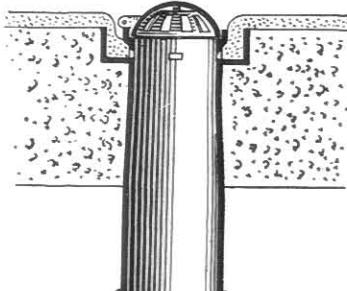
No. 875

8" Diam. x 1' 0" Long
Also 1' 6" Long
Overall
Grating 4" Diam., $\frac{3}{8}$ " Thick



No. 881

6 $\frac{1}{2}$ " Diam. x 1' 0" Long
Overall
Hinged Grating
 $3\frac{3}{4}$ " Diam.

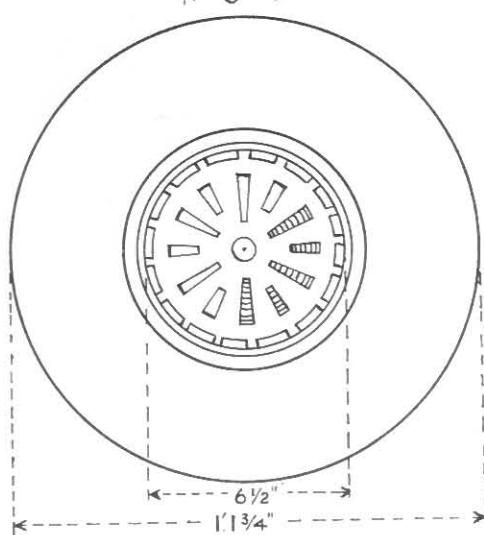
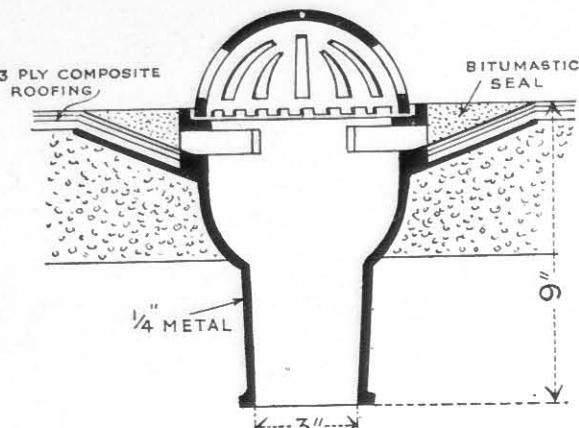


To suit Pipe 4" Diam.
 $\frac{1}{4}$ " Metal

LEAK-PROOF OUTLETS FOR ASPHALTE

No. 883

1' 1 $\frac{3}{4}$ " Diam. Overall
Grating 6 $\frac{1}{2}$ " Diam. $\frac{1}{4}$ " Thick

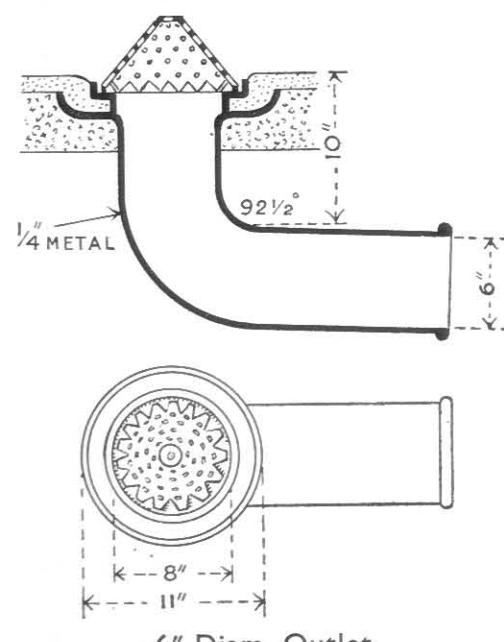


9" Long. 3" and 6" both with Bead to suit B.S.S. M.H. or E.H. Pipes.

8 $\frac{1}{2}$ " Long. 2", 2 $\frac{1}{2}$ ", 3 $\frac{1}{2}$ " and 4" all with Bead to suit B.S.S. M.H. or E.H. Pipes.

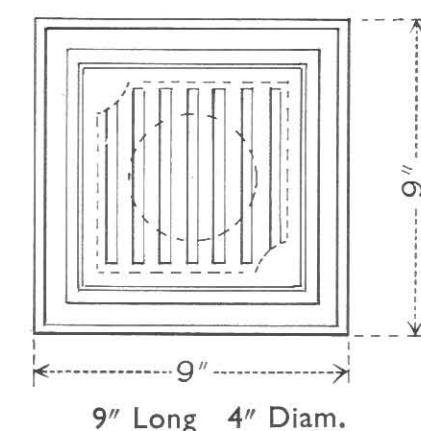
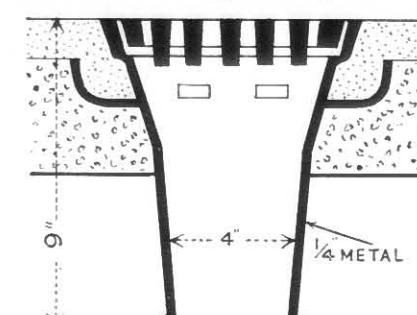
No. 888

11" Diam. Overall
Grating 8" Diam. $\frac{1}{4}$ " Thick



No. 886

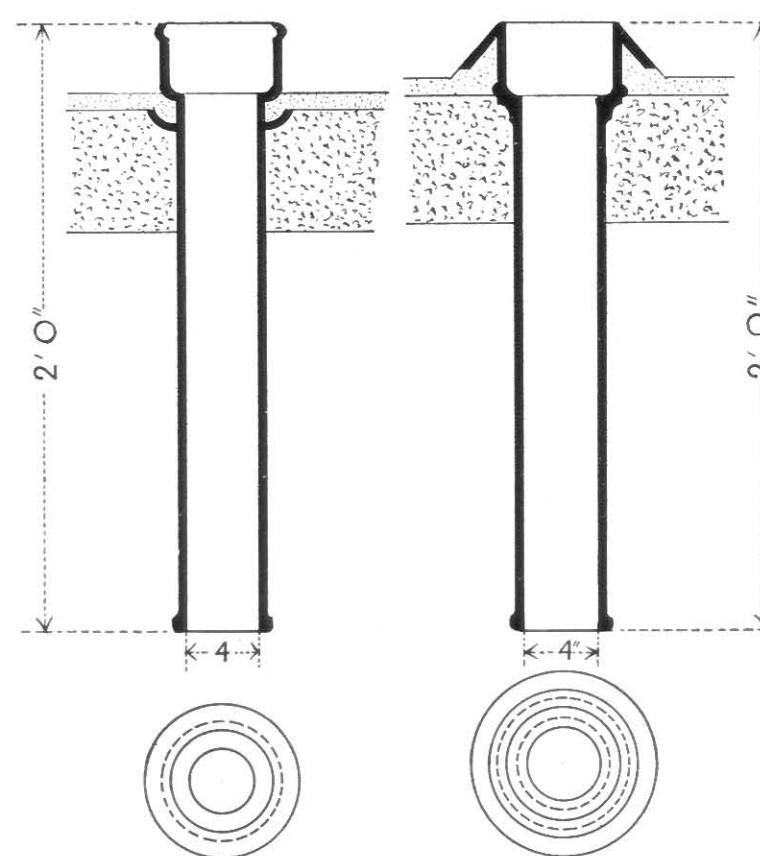
9" x 9" Overall
Grating 6 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ " x 1 $\frac{1}{16}$ " at Centre and $\frac{1}{2}$ " at edge



LEAK-PROOF VENT PIPES FOR ASPHALTE ROOF

No. 894

2' 0" Long Overall

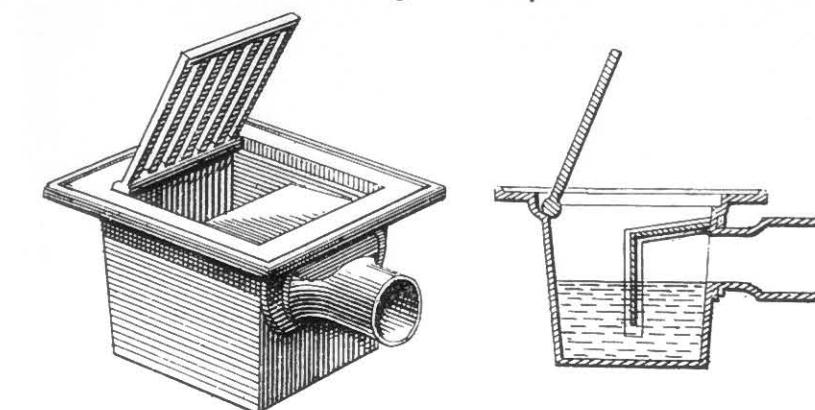


No. 895

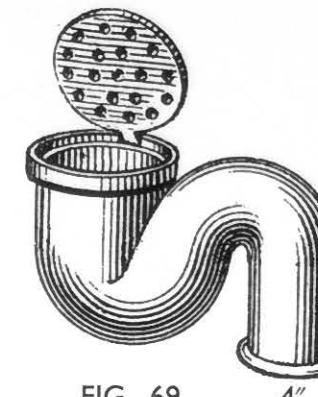
2' 0" Long Overall

TRAPS

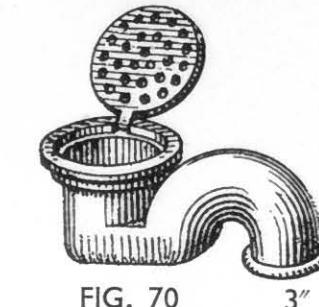
No. 4
Regent Trap



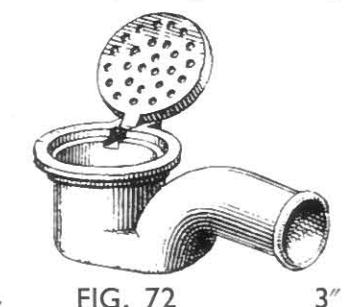
S-Trap
with 6" Hinged Grating



Flat-Bottomed
S-Trap
with 4 $\frac{3}{4}$ " Hinged Grating



Flat-Bottomed
P-Trap
with 4 $\frac{3}{4}$ " Hinged Grating



Overall	Grating	Thickness of Grating
10" x 10" x 6 $\frac{1}{4}$ " Deep	6" x 6" Hinged	$\frac{5}{8}$ "
12" x 12" x 7 $\frac{1}{2}$ " Deep	8" x 8" Hinged	$\frac{5}{8}$ "
15" x 15" x 9" Deep	10" x 10" Loose	$\frac{1}{2}$ "
18" x 18" x 13" Deep	12" x 12" Loose	$\frac{1}{2}$ "

FIG. 69 4"

P-Trap
with 6" Hinged Grating

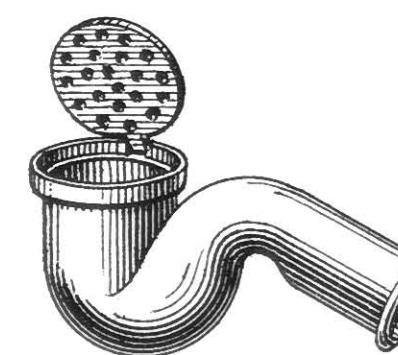
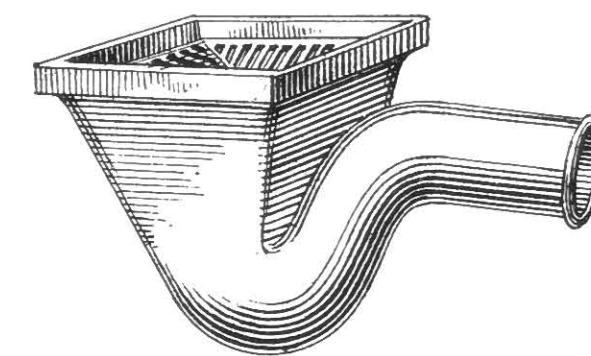


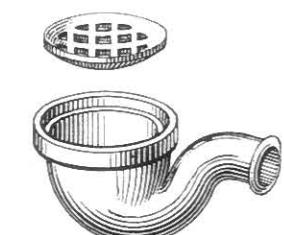
FIG. 71

No. 3
Gully Trap
with 10" x 10" Loose Grating



No. 815 P-Trap

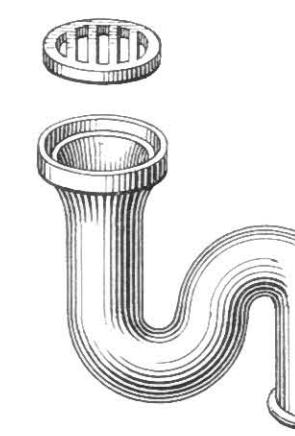
2" Diam. 115°
with 5" Diam. Grating
 $\frac{3}{8}$ " Thick



No. 786
Rain-Water Gully Inlet
9" x 9" x 9" Deep
with 8" x 8" Grating $\frac{1}{2}$ " Thick

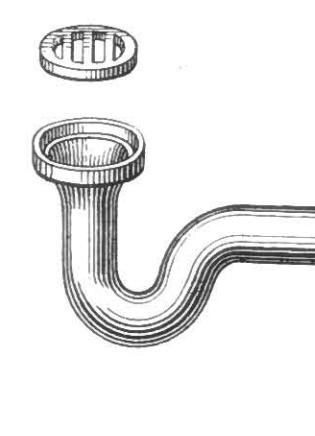
No. 818 S-Trap

3" Diam.
with 5" Diam. Grating
 $\frac{1}{2}$ " Thick



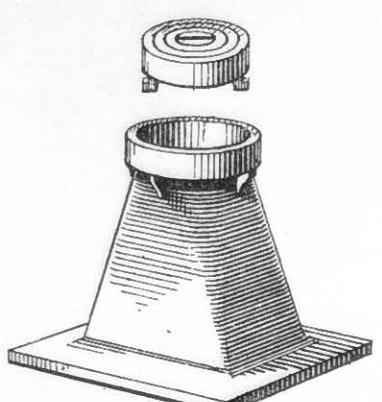
No. 818 P-Trap

2" Diam. 90°
with 4" Diam. Grating
 $\frac{1}{2}$ " Thick



STOP COCK CASES

No. 1



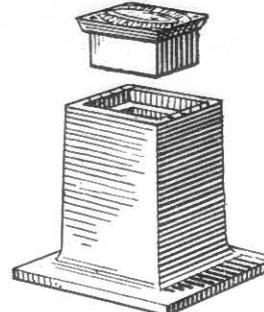
Overall	Opening
10½" x 10½" x 9½" Deep	3½" Diam.

No. 2



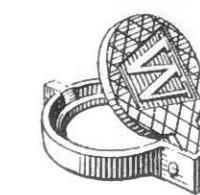
Overall	Clear Opening
6½" x 1" Deep 6¾" x 7/8" Deep 9½" x 1" Deep 9½" x 1" Deep 12" x 1½" Deep	4½" Diam. 4½" Diam. 6½" Diam. 6½" Diam. 7½" Diam.

No. 3



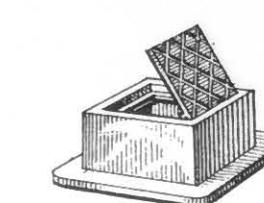
Overall	Clear Opening
7" x 7" x 6" Deep 8" x 8" x 8" Deep	3" x 3" 3½" x 3½"

No. 12



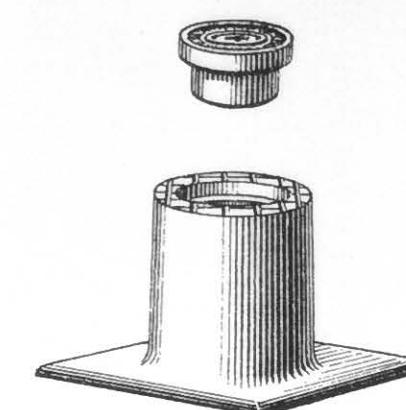
Overall	Clear Opening
6½" x 1" Deep	4½" Diam.

No. 13



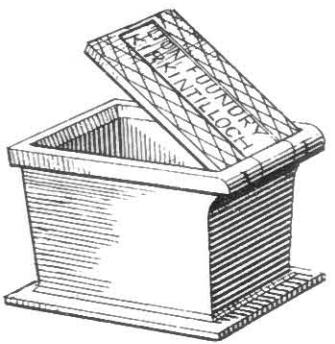
Overall	Clear Opening
7" x 7" x 3½" Deep 7½" x 7½" x 3½" Deep 12" x 10" x 3½" Deep	3½" x 3½" 4" x 3½" 8" x 6"

No. 14



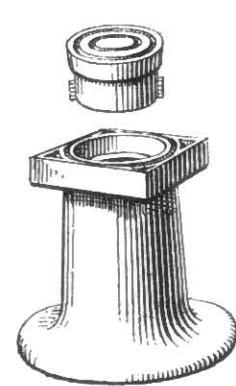
Overall	Clear Opening
12" x 12" x 9" Deep	3½" Diam.

No. 4



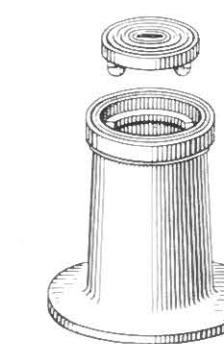
Nominal Size	Overall	Clear Opening
6" x 6" x 7" Deep	7" x 7"	5" x 5"
8" x 6" x 7" Deep	9" x 7"	7" x 5"
*9" x 8" x 6" Deep	10½" Diam. x 8" Deep	8" x 7"

No. 5



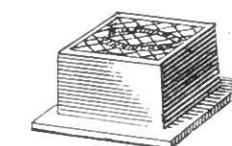
Overall	Clear Opening
9½" Diam. x 8" Deep	3½" Diam.

No. 6



Overall	Clear Opening
9" Diam. x 7½" Deep	3½" Diam.

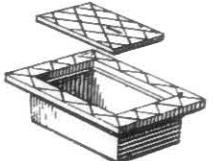
No. 10



Top can be supplied either
Hinged or Chained

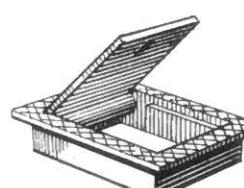
Overall	Clear Opening
6½" x 6½" x 3½" Deep	4½" x 4½"
7" x 7" x 3" Deep	4½" x 4"
7" x 7" x 4½" Deep	4½" x 4½"
7½" x 7" x 3½" Deep	5½" x 4½"
8½" x 8½" x 3½" Deep	5½" x 5½"
8½" x 8½" x 4" Deep	5½" x 5½"
9½" x 9½" x 3½" Deep	6" x 6"
10½" x 10½" x 3½" Deep	7" x 7"
11" x 8" x 3½" Deep	9" x 6"
11" x 11" x 3" Deep	9" x 9"
11" x 11" x 4" Deep	9" x 9"

No. 7



Overall	Clear Opening
6½" x 5" x 2½" Deep	3½" x 2½"

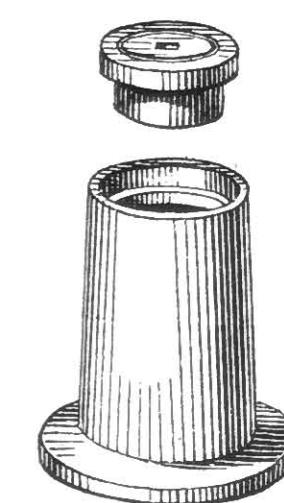
No. 8



Overall	Clear Opening
7½" x 6" x 2½" Deep	5½" x 1½"

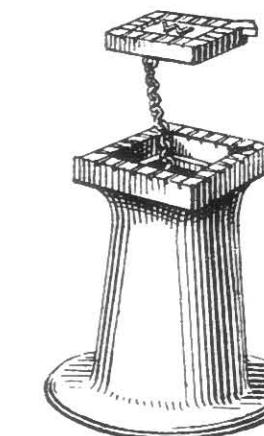
STOP COCK CASES

No. 15



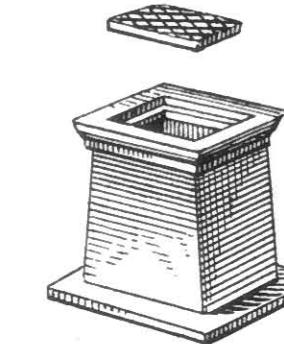
Overall	Clear Opening
10½" Diam. x 10½" Deep	4½" Diam.
9" Diam. x 5½" Deep	4" Diam.

No. 16



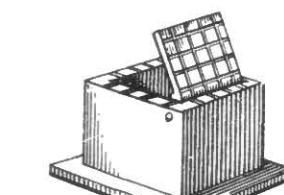
Overall	Clear Opening
10" Diam. x 9" Deep	4" Diam.

No. 17



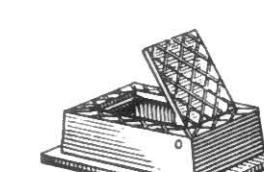
Overall	Clear Opening
8" x 8" x 8" Deep	3½" x 3½"

No. 18



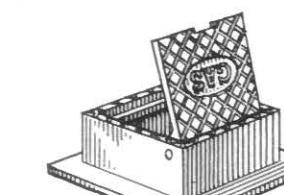
Overall	Clear Opening
7½" x 7" x 4½" Deep	4½" x 4½"

No. 19



Overall	Clear Opening
8" x 6½" x 2" Deep	5½" x 3½"

No. 21

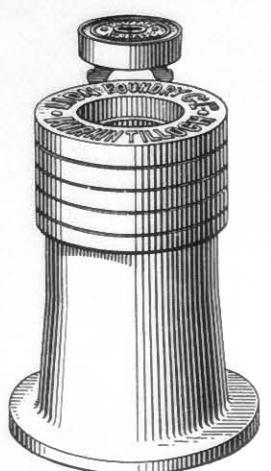


Overall	Clear Opening
8" x 8" x 3½" Deep	4½" x 4½"

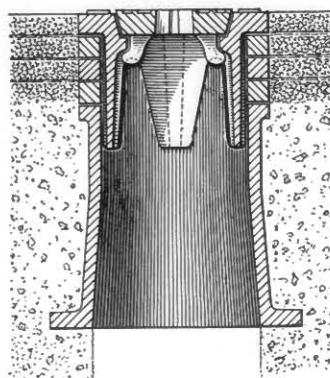
STOP COCK CASES

No. 22

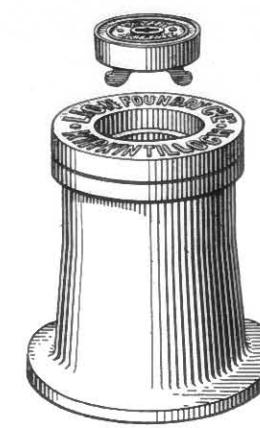
Adjustable Road Surface Box



General View
with Three Packing
Rings



Section
showing application
of Packing Rings



General View
without
Packing Rings

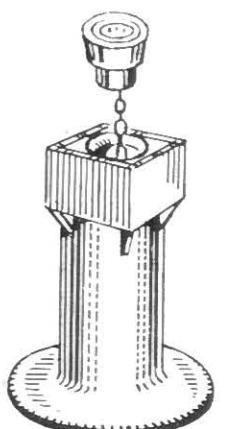
10" Diameter x 9" High Overall ; 3 $\frac{3}{4}$ " Diameter Clear Opening

Can be made to other Sizes and Shapes to Order

By the insertion of one or more Packing Rings the Cover can be raised to suit
New Surface Level of Road without disturbing the Box.

STOP COCK AND VALVE CASES

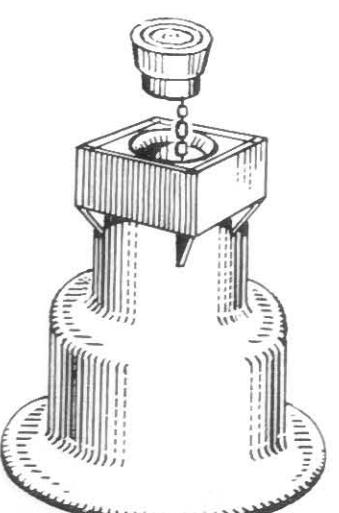
No. 24



No.	Overall	Clear Opening
24	9" Diam. x 8 $\frac{1}{4}$ " Deep	3 $\frac{1}{4}$ " Diam.

No.	Overall	Clear Opening
25	14 $\frac{1}{2}$ " Diam. x 16" High	3 $\frac{1}{4}$ " Diam.

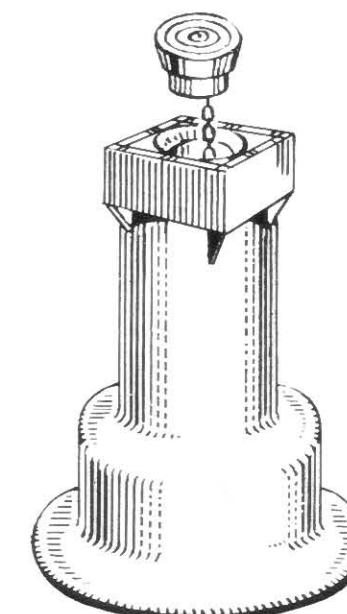
No. 26



No.	Overall	Clear Opening
26	14 $\frac{1}{2}$ " Diam. x 12" Deep	3 $\frac{1}{4}$ " Diam.

No.	Overall	Clear Opening
27	14 $\frac{1}{2}$ " Diam. x 8 $\frac{3}{8}$ " Deep	3 $\frac{1}{4}$ " Diam.

No. 25



No. 27

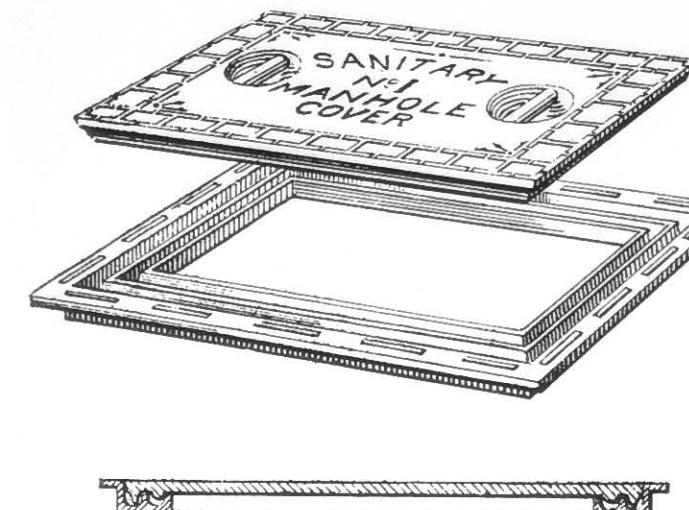


LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MANHOLE FRAMES AND COVERS

No. 1

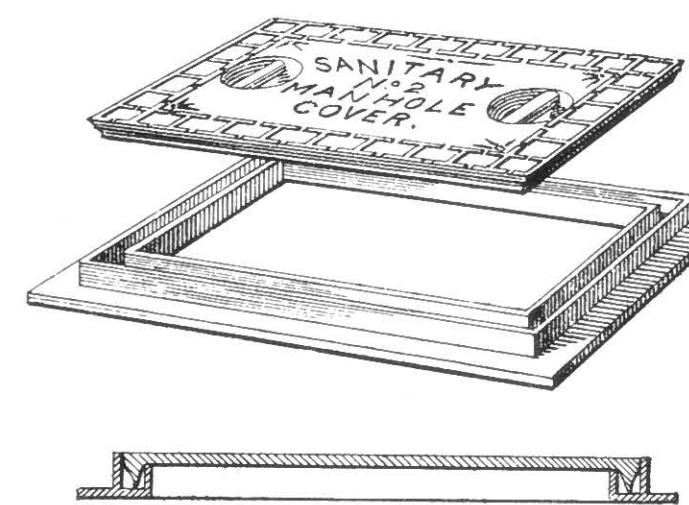
Air-Tight Double Seal



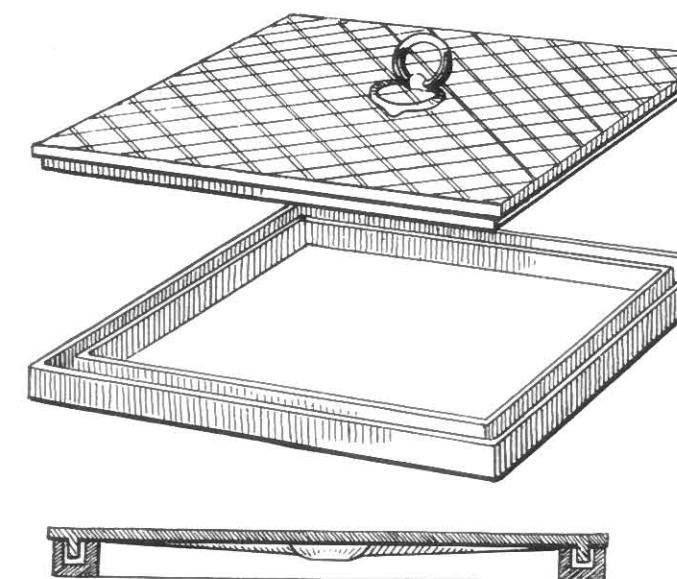
Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
18" x 10 $\frac{1}{2}$ "	25" x 17 $\frac{1}{2}$ "	2"	$\frac{9}{16}$ "	$\frac{7}{16}$ "
22" x 16 $\frac{1}{2}$ "	29 $\frac{1}{2}$ " x 23 $\frac{1}{2}$ "	2"	$\frac{5}{8}$ "	$\frac{1}{2}$ "

No. 2

Air-Tight Single Seal



Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
11" x 11"	15 $\frac{1}{2}$ " x 15 $\frac{1}{2}$ "	2"	$\frac{1}{2}$ "	$\frac{3}{8}$ "
20" x 13"	25" x 17 $\frac{3}{4}$ "	2"	$\frac{1}{2}$ "	$\frac{3}{8}$ "
20" x 14"	26 $\frac{1}{2}$ " x 20 $\frac{1}{2}$ "	2"	$\frac{9}{16}$ "	$\frac{7}{16}$ "
22" x 16"	26 $\frac{1}{2}$ " x 20 $\frac{1}{2}$ "	2"	$\frac{1}{2}$ "	$\frac{3}{8}$ "
22" x 18"	28 $\frac{1}{2}$ " x 25"	2"	$\frac{9}{16}$ "	$\frac{7}{16}$ "
24" x 12"	30 $\frac{3}{4}$ " x 18 $\frac{1}{2}$ "	2"	$\frac{9}{16}$ "	$\frac{7}{16}$ "
24" x 12"	29 $\frac{1}{2}$ " x 17 $\frac{3}{4}$ "	2 $\frac{1}{2}$ "	$\frac{9}{16}$ "	$\frac{7}{16}$ "
24" x 16"	29" x 21 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	$\frac{9}{16}$ "	$\frac{7}{16}$ "
25" x 19"	30" x 24"	2"	$\frac{1}{2}$ "	$\frac{3}{8}$ "



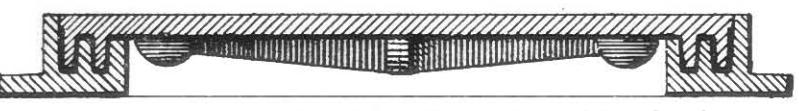
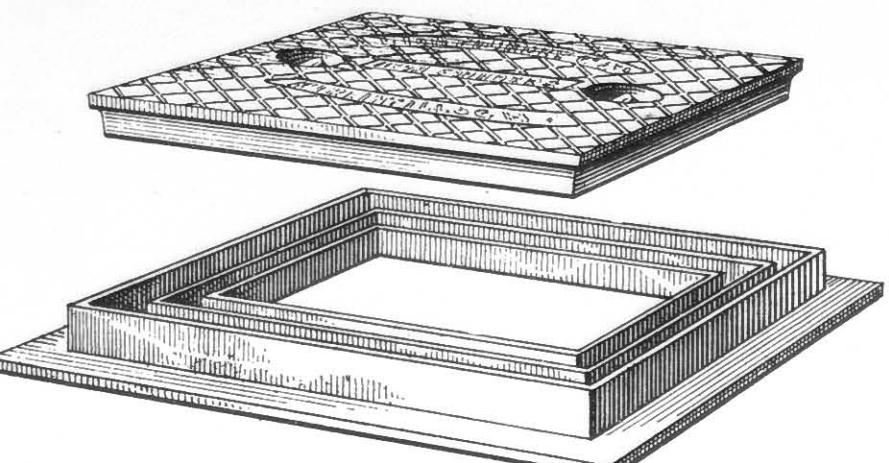
No. 3

Air-Tight Single Seal

Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
20 $\frac{1}{4}$ " x 20 $\frac{1}{4}$ "	24" x 24"	1 $\frac{3}{4}$ "	$\frac{3}{8}$ "	$\frac{1}{4}$ "

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MANHOLE FRAMES AND COVERS

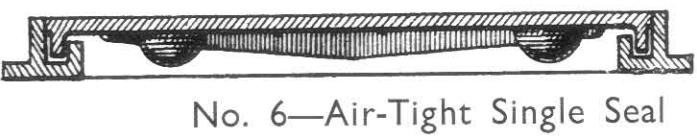
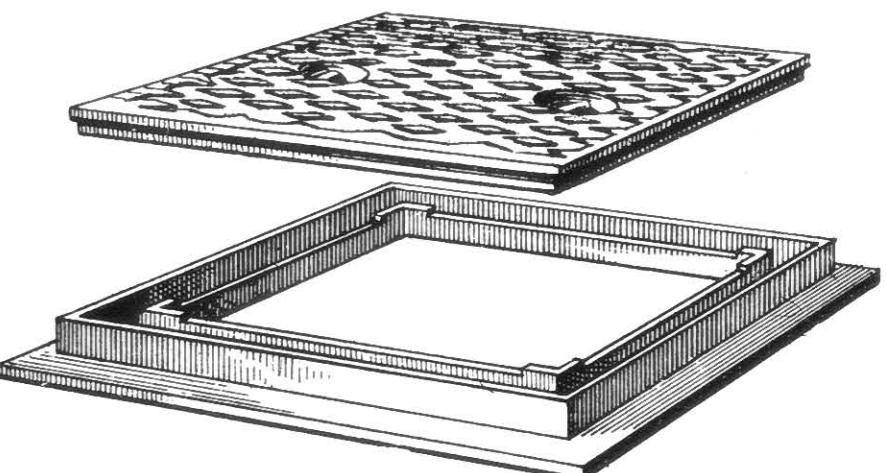


No. 4—Air-Tight Double Seal

Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
24" x 18"	34" x 28"	3 $\frac{1}{2}$ "	1"	7/8"

No. 5 similar to No. 4, but lighter

Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
24" x 18"	31 $\frac{1}{4}$ " x 25 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	1/2"	3/8"



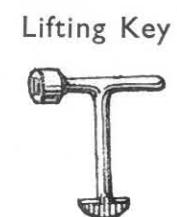
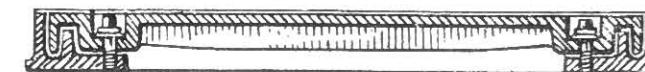
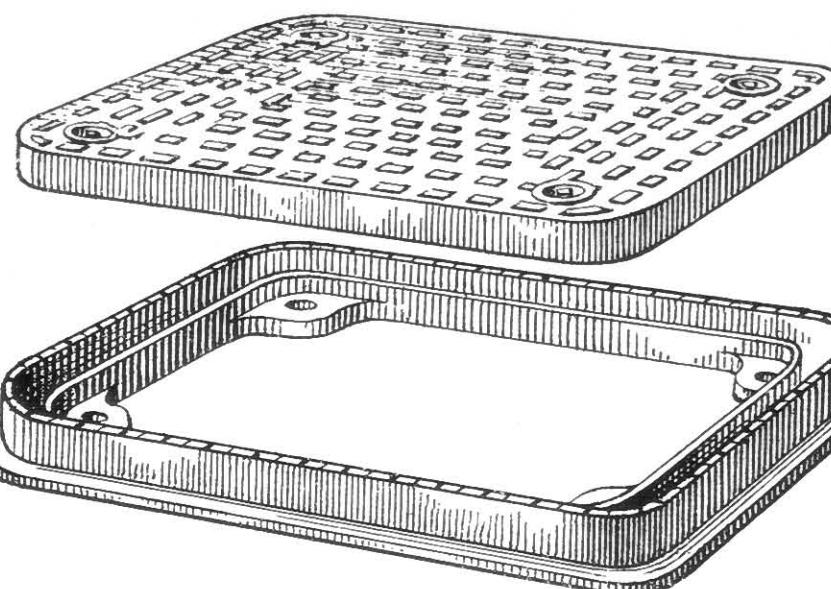
No. 6—Air-Tight Single Seal

Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
12" x 12"	18" x 18"	2 $\frac{1}{2}$ "	5/8"	1/2"
18" x 18"	21 $\frac{1}{4}$ " x 21 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	5/8"	1/2"
18" x 18"	22 $\frac{3}{4}$ " x 22 $\frac{3}{4}$ "	1 $\frac{1}{8}$ "	5/8"	1/2"
18" x 18"	23" x 23"	2 $\frac{3}{8}$ "	7/8"	5/8"
20" x 20"	26" x 26"	2 $\frac{1}{4}$ "	1/2"	3/8"
24" x 18"	27" x 21"	1 $\frac{1}{4}$ "	1/2"	1/4"
24" x 18"	27 $\frac{1}{2}$ " x 21 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	3/8"	1/4"
24" x 18"	30" x 24"	2 $\frac{1}{4}$ "	5/8"	1/2"
24" x 18"	30" x 24"	2 $\frac{3}{8}$ "	7/8"	5/8"
24" x 24"	30" x 30"	2 $\frac{3}{8}$ "	1/2"	3/8"
24" x 24"	30 $\frac{1}{4}$ " x 30 $\frac{1}{4}$ "	2 $\frac{1}{2}$ "	3/8"	1/2"
30" x 24"	36" x 30"	2 $\frac{3}{8}$ "	7/8"	1/2"

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MANHOLE FRAMES AND COVERS

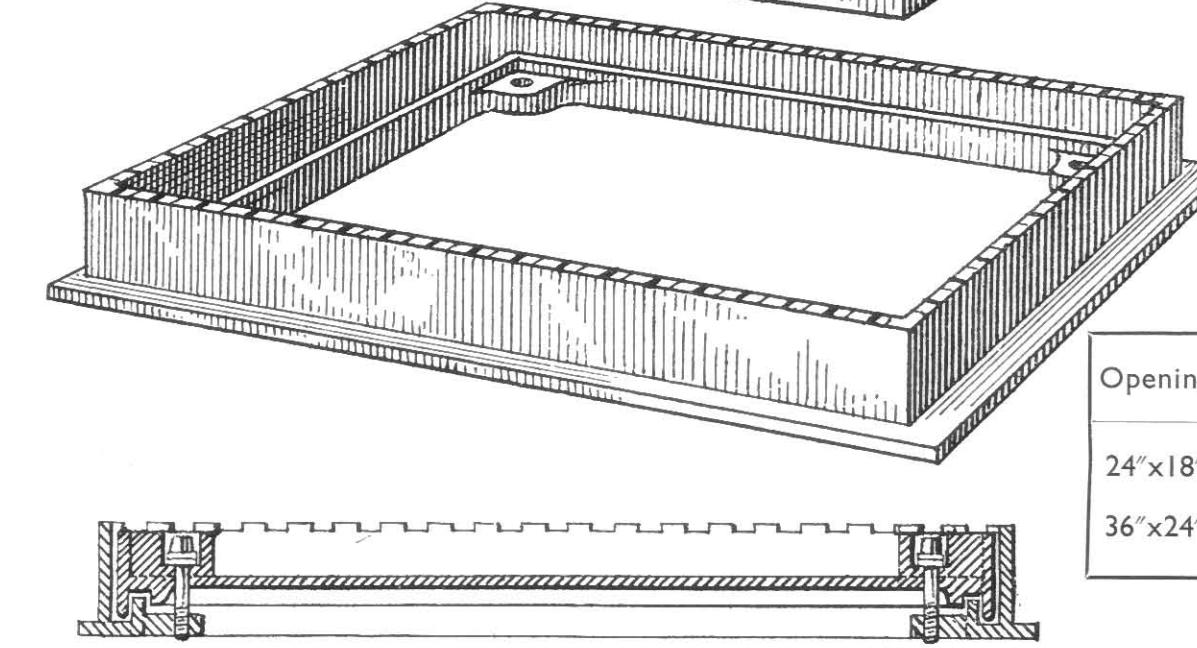
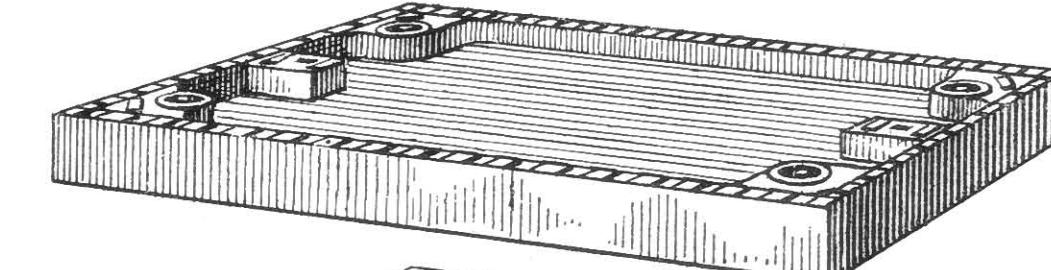
No. 7
With Rubber Joints and Gunmetal Screws



Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
24" x 18"	28 $\frac{1}{4}$ " x 22 $\frac{1}{4}$ "	2 $\frac{5}{8}$ "	9/16"	7/16"
30" x 24"	34 $\frac{1}{4}$ " x 28 $\frac{1}{4}$ "	2 $\frac{5}{8}$ "	9/16"	7/16"

No. 8

With Rubber Joints and Gunmetal Screws
Top prepared for Asphalt filling



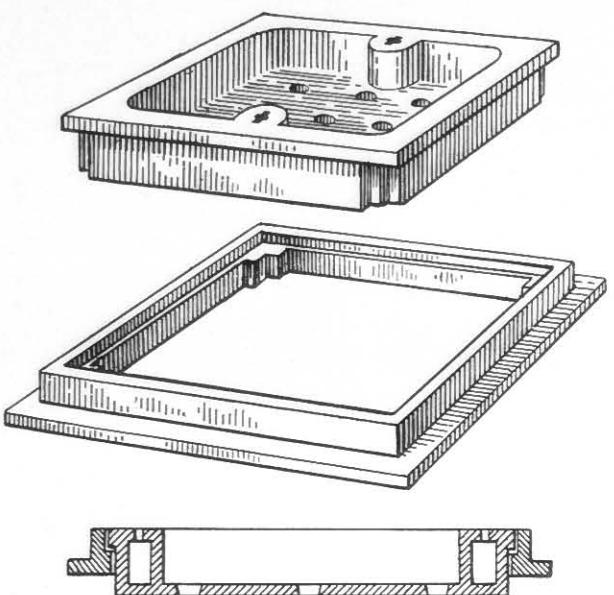
Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
24" x 18"	29 $\frac{3}{4}$ " x 24"	3 $\frac{3}{4}$ "	7/16"	7/16"
36" x 24"	41 $\frac{3}{4}$ " x 29 $\frac{3}{4}$ "	3 $\frac{3}{4}$ "	1/2"	1/2"

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MANHOLE FRAMES AND COVERS

No. 13

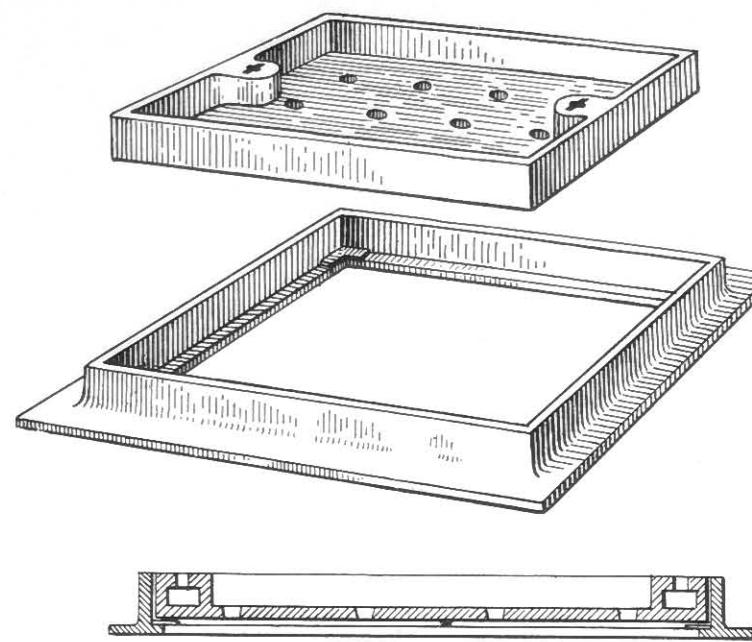
Cover prepared for Asphalte Filling



Opening	Overall	Depth	Thickness of Cover
18" x 18"	21 $\frac{1}{2}$ " x 21 $\frac{1}{2}$ "	3"	$\frac{1}{2}$ "

No. 14

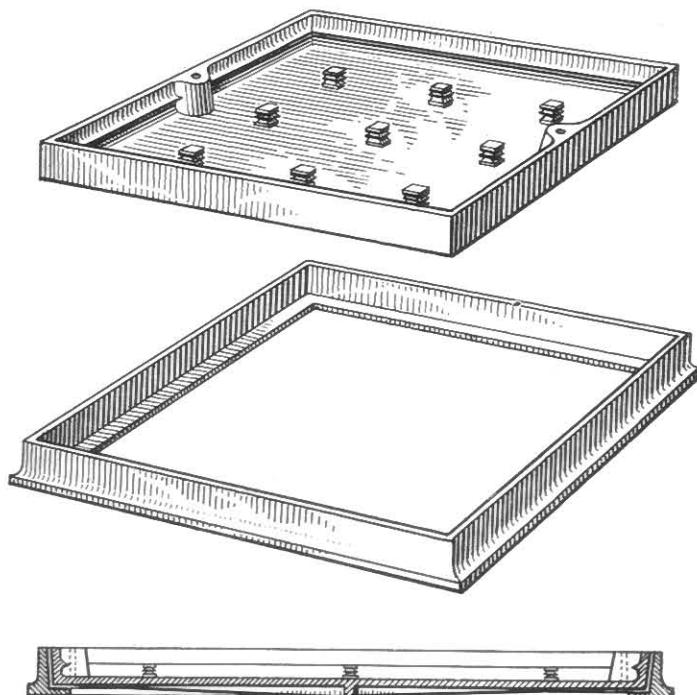
Cover prepared for Asphalte Filling



Opening	Overall	Depth	Thickness of Cover
24" x 18"	28" x 22"	2 $\frac{1}{2}$ "	$\frac{1}{2}$ "

No. 15

Cover prepared for Asphalte Filling

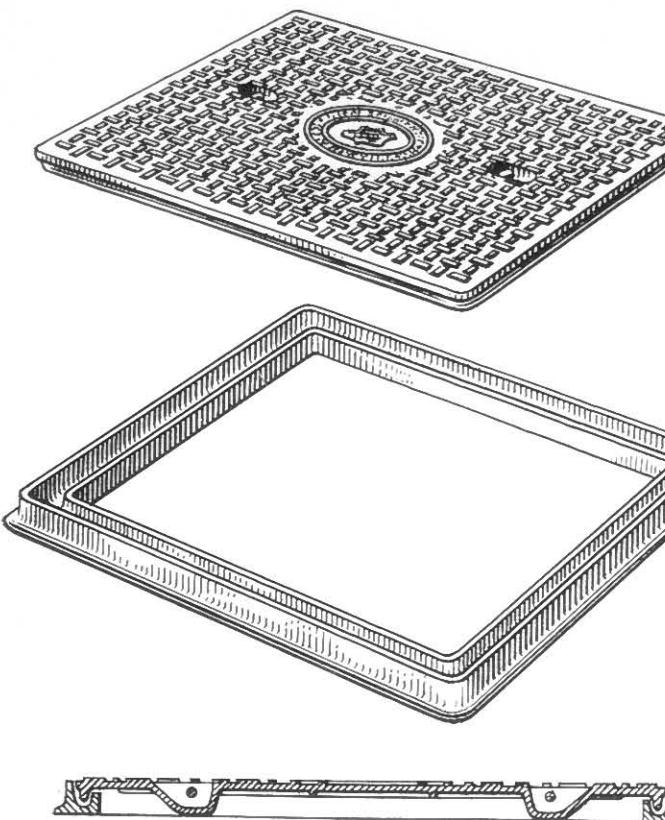


Opening	Overall	Depth	Thickness of Cover
24" x 24"	27 $\frac{1}{2}$ " x 27 $\frac{1}{2}$ "	2 $\frac{3}{8}$ "	$\frac{1}{4}$ "

MANHOLE FRAMES AND COVERS

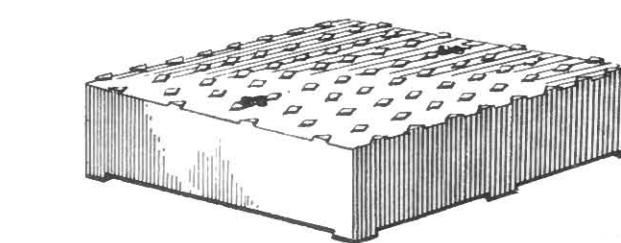
No. 914

B.S.S. Light Manhole Frame and Cover
to B.S. 437—1933

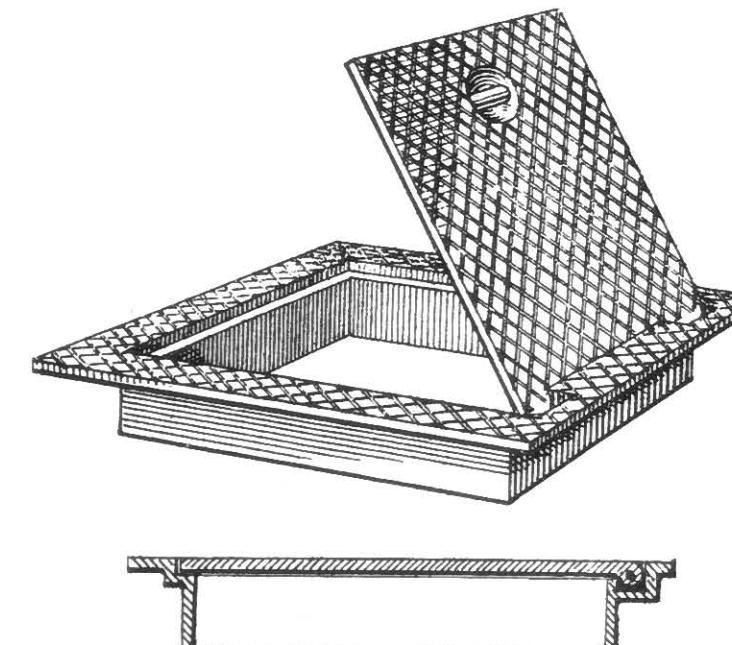


Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
24" x 24"	28" x 28"	1 $\frac{1}{2}$ "	$\frac{3}{8}$ "	$\frac{9}{32}$ "

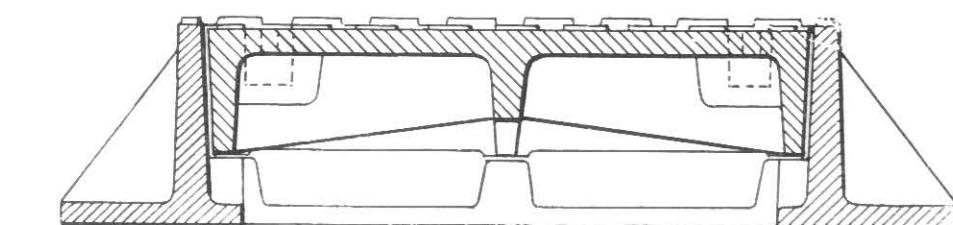
No. 757



No. 700



Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
18" x 18"	23" x 23"	4"	$\frac{7}{16}$ "	$\frac{5}{16}$ "



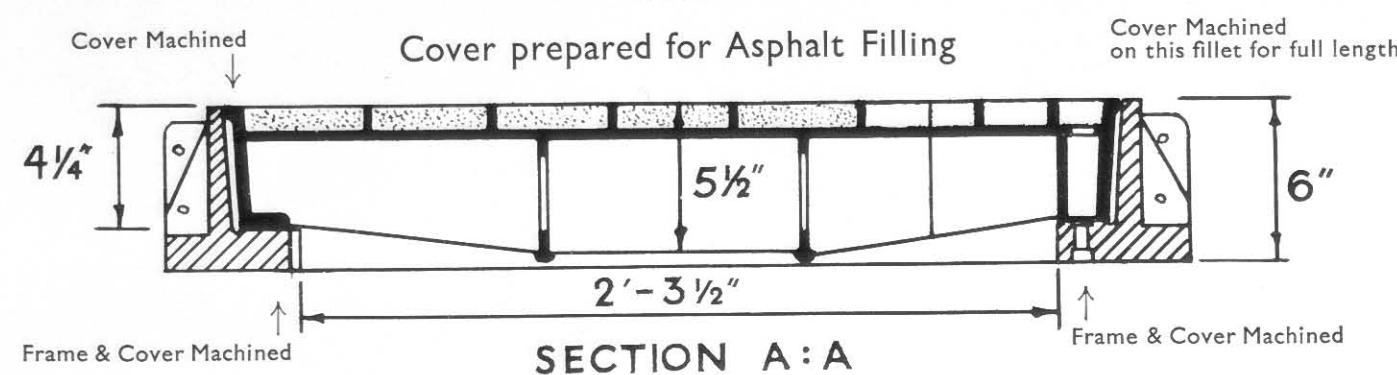
Opening	Overall	Depth	Thickness of Cover	
			Over Chequer	Under Chequer
24" x 18"	40" x 34"	9 $\frac{1}{4}$ "	$\frac{13}{8}$ "	$1\frac{1}{4}$ "

MANHOLE FRAME AND COVER

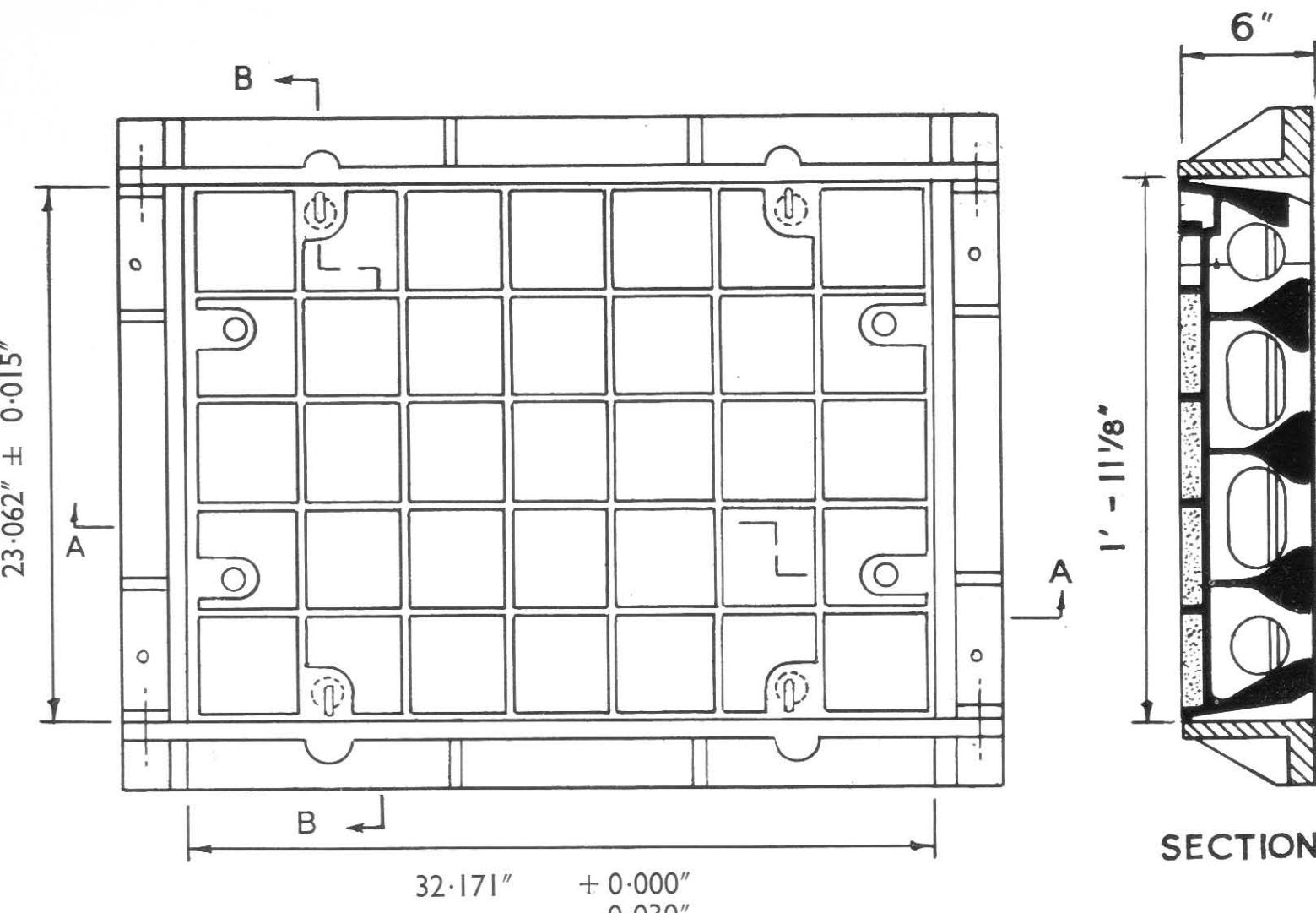
Unit consisting of End and Side Frames and Covers

Patent Applied for

No. 916



SECTION A:A



PLAN

Can be supplied in Units to suit multiples of 1' 1 1/8"

SPECIFICATION

1. Material : Cast-Iron to B.S. 1452 Grade 12.
2. Cover Filling : Hot Mastic Asphalt containing 25% by volume of ground granite.
3. Protective Coating : Black Bituminous composition.
4. All Covers capable of withstanding a load of 45 tons applied for 5 minutes to a 12" disc placed centrally on the cover.

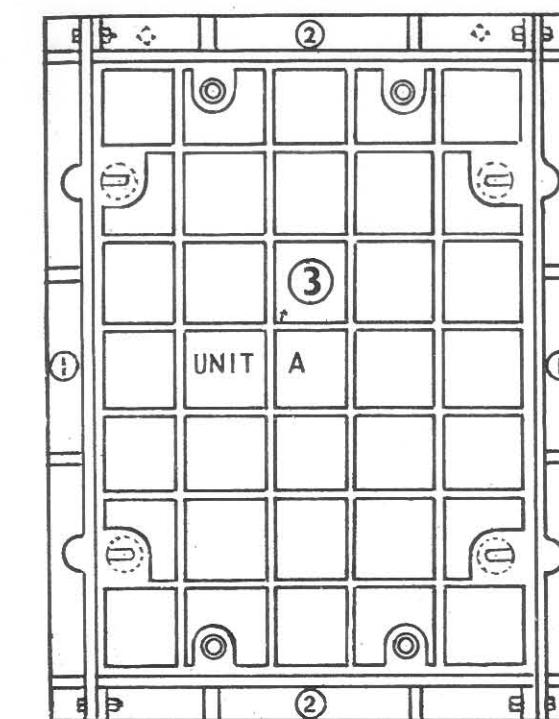
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

MANHOLE FRAME AND COVER

Unit consisting of End and Side Frames and Covers

Patent Applied for

3' - 10 1/4" CLEAR OPENING



1 Unit Type A

Unit A consists of

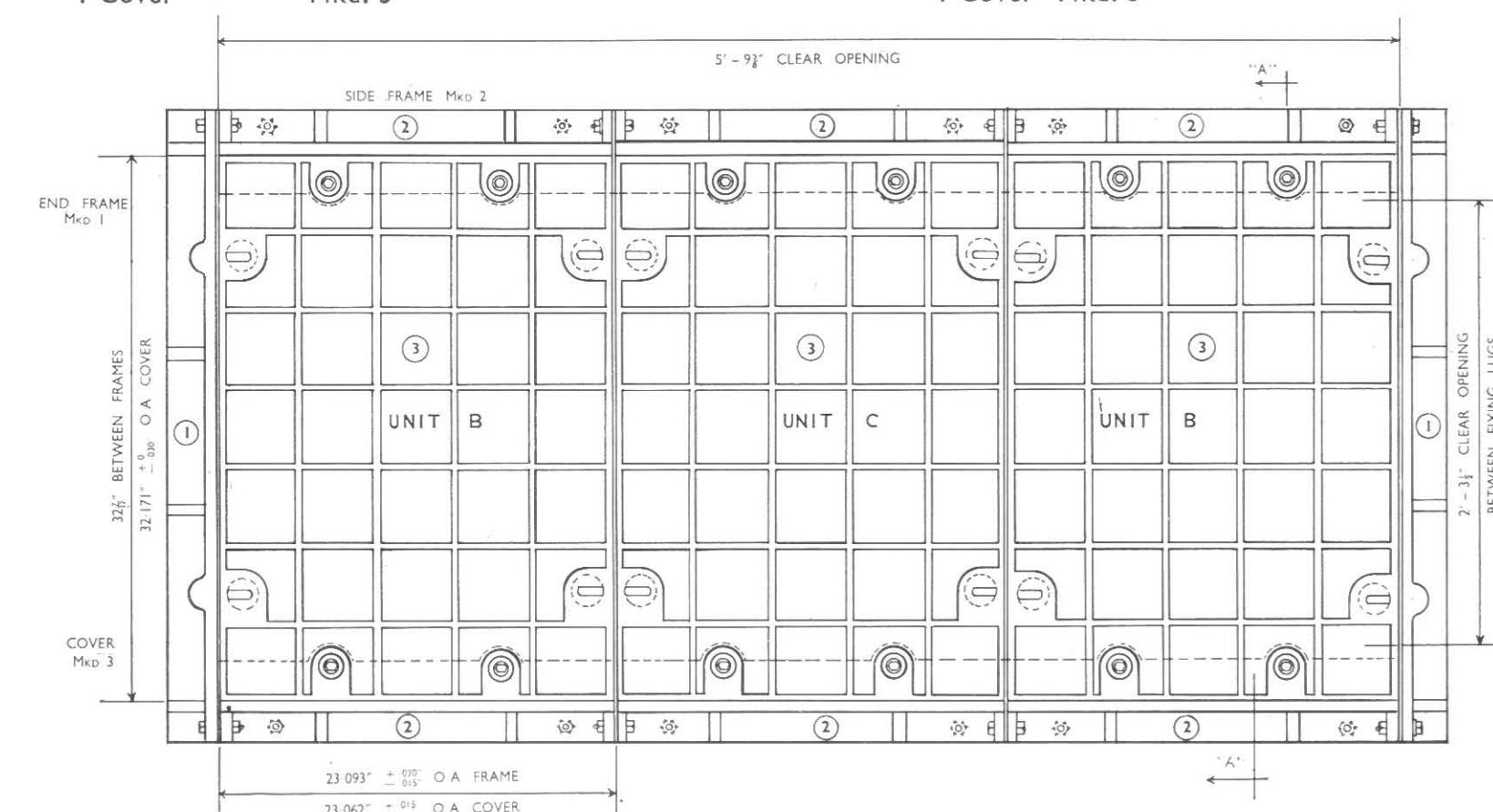
- 2 End Frames Mkd. 1
2 Side Frames Mkd. 2
1 Cover Mkd. 3

2 Units Type B

Unit B consists of

- 1 End Frame Mkd. 1
2 Side Frames Mkd. 2
1 Cover Mkd. 3

5' - 9 1/8" CLEAR OPENING



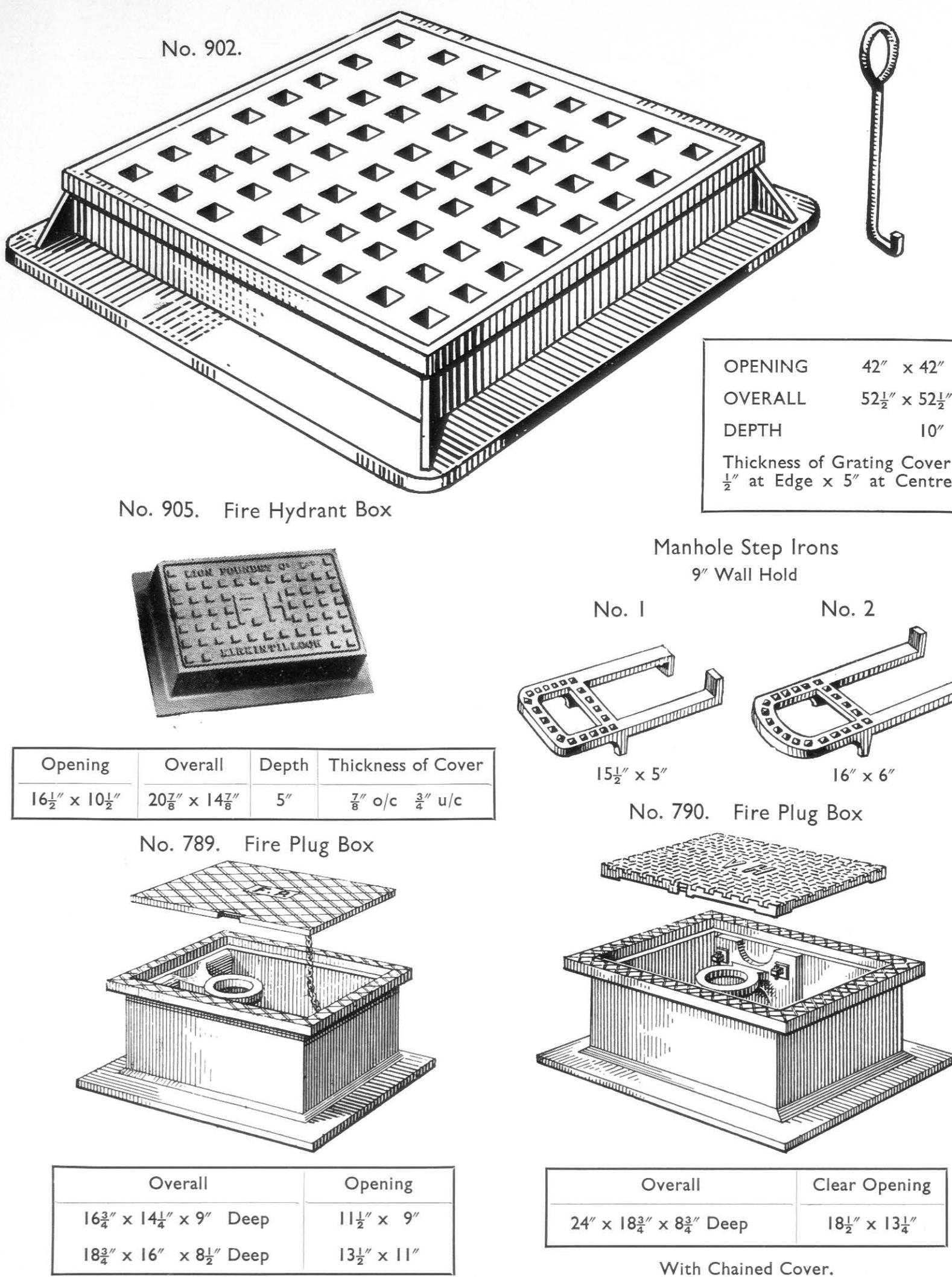
3 Units (& Over)

Comprising : 2 Units Type B. 1 or more Units Type C
Unit B as above Unit C consists of no End Frames Unit B as above
2 Side Frames, Mkd. 2. 1 Cover, Mkd. 3

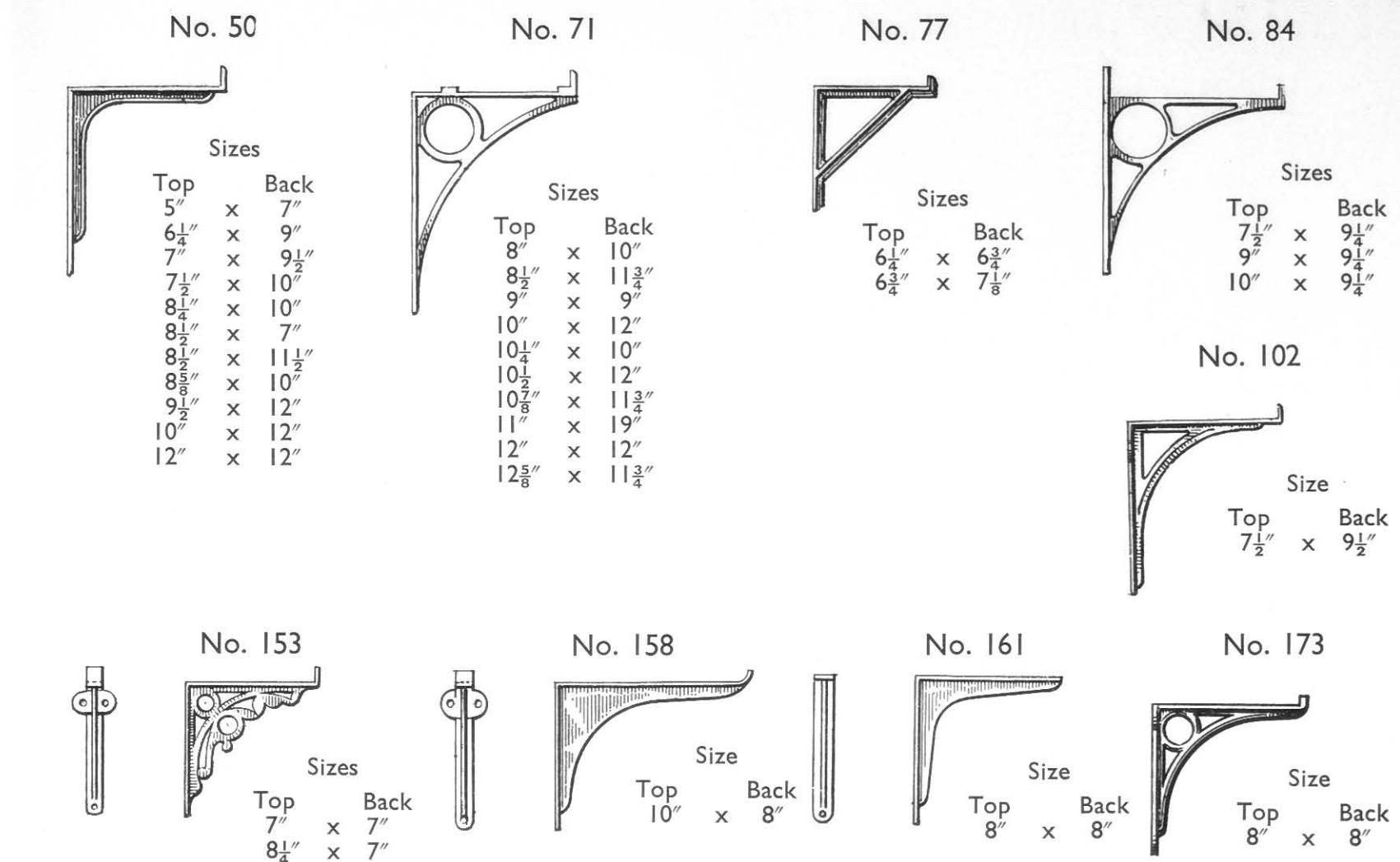
Can be supplied in any number of Units from one upwards

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

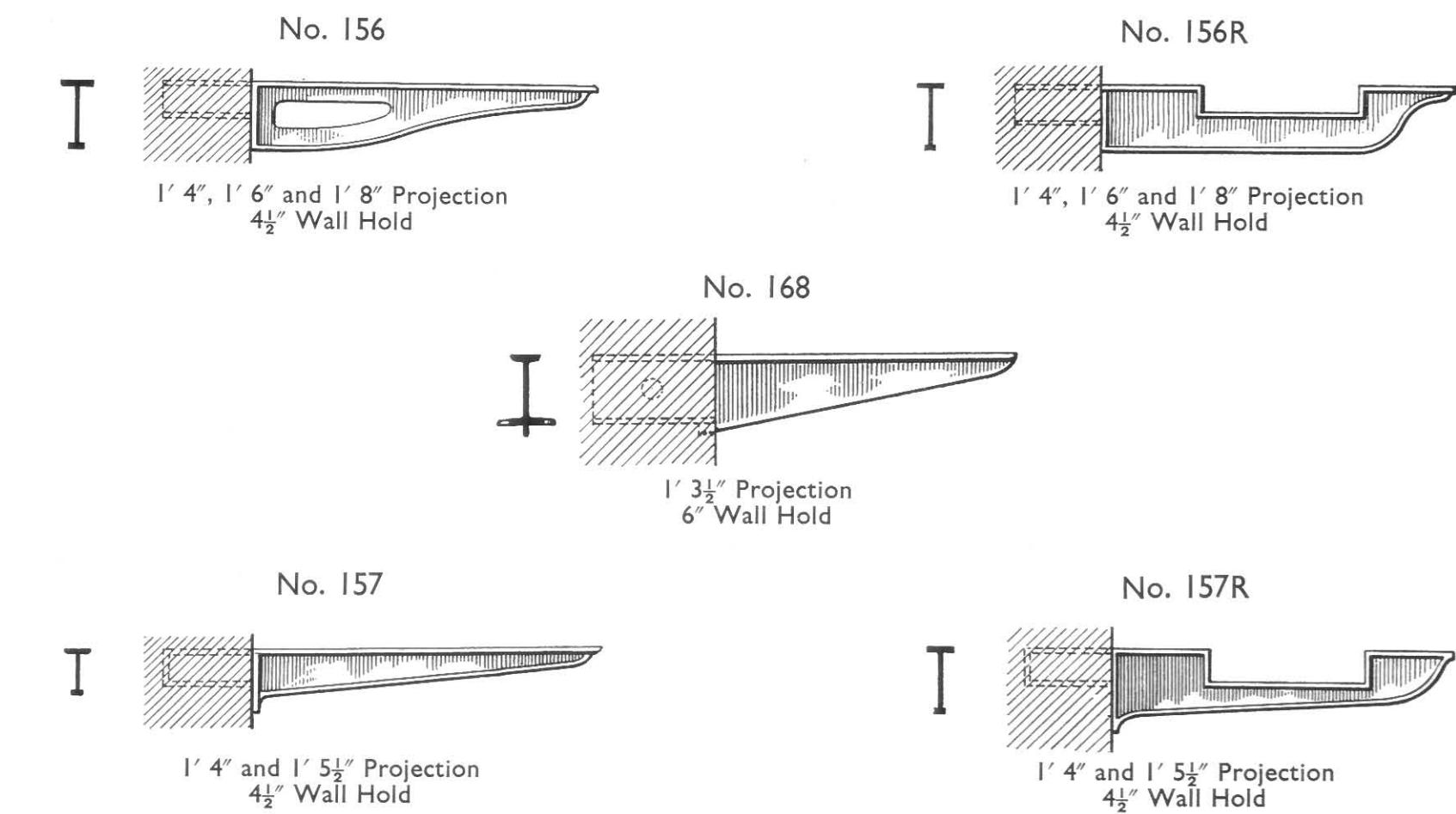
MANHOLE FRAME AND COVER



CISTERN BRACKETS

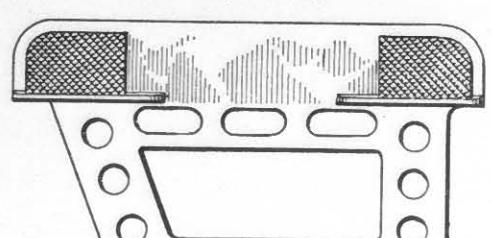


CANTILEVER BRACKETS FOR TUB AND SINK



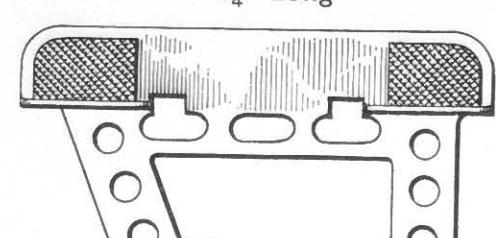
WRINGER PLATES

No. 4



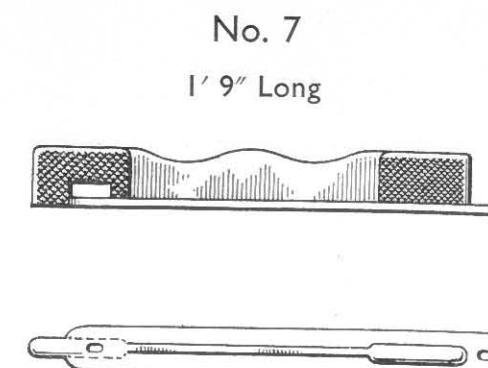
1' 8 $\frac{3}{4}$ " Long

No. 4J



1' 8 $\frac{3}{4}$ " Long

No. 7

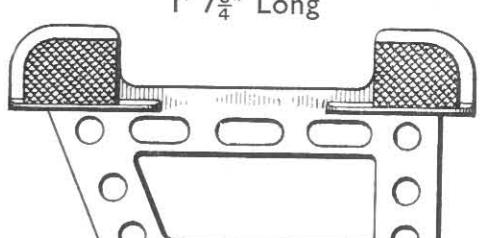


1' 9" Long

Also No. 6 similar to No. 4

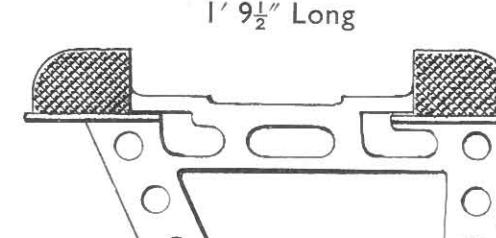
1' 3" Long

No. 8



1' 7 $\frac{3}{4}$ " Long

No. 9

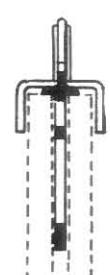
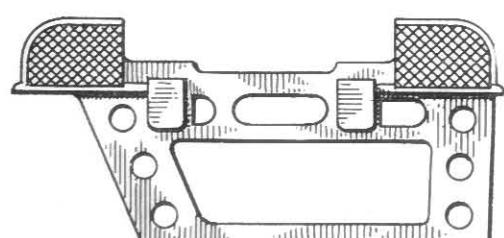


1' 9 $\frac{1}{2}$ " Long

No. 9C

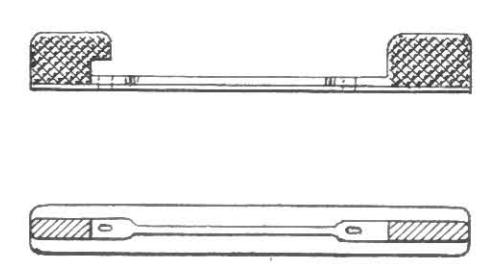
1' 9 $\frac{1}{2}$ " Long

With Tub Clips cast on



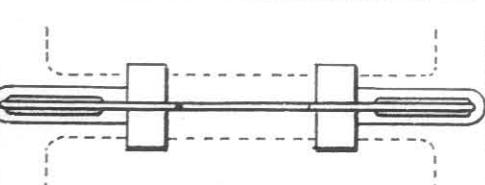
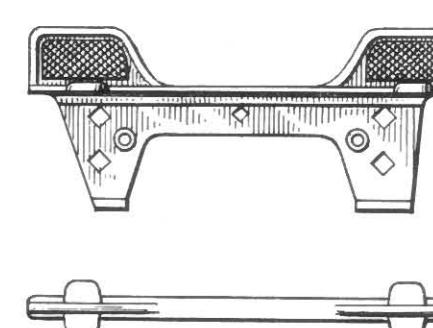
No. 10

1' 7" Long



No. 11

1' 7" Long



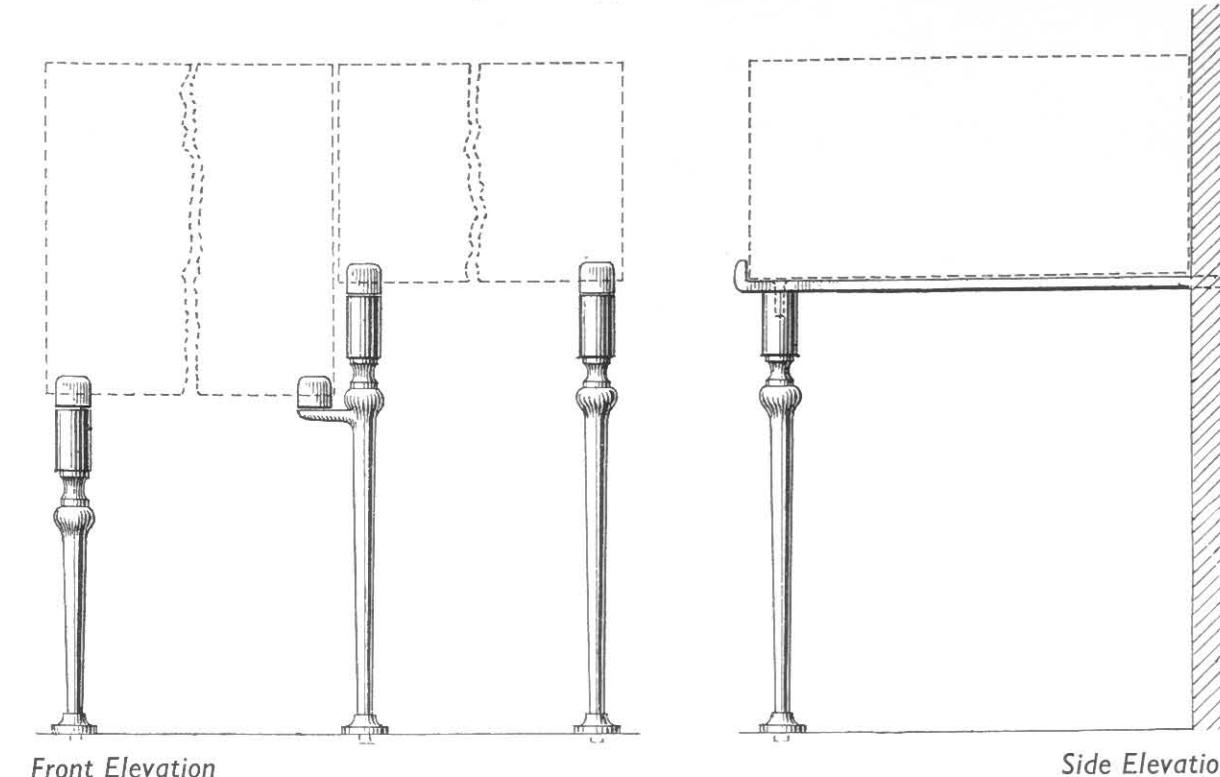
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

PILLAR-LEG SUPPORTS AND BEARERS FOR COMBINATION TUB AND SINK

No. 154

(with M.S. Bearer)

Height of Supports, 15" and 20"



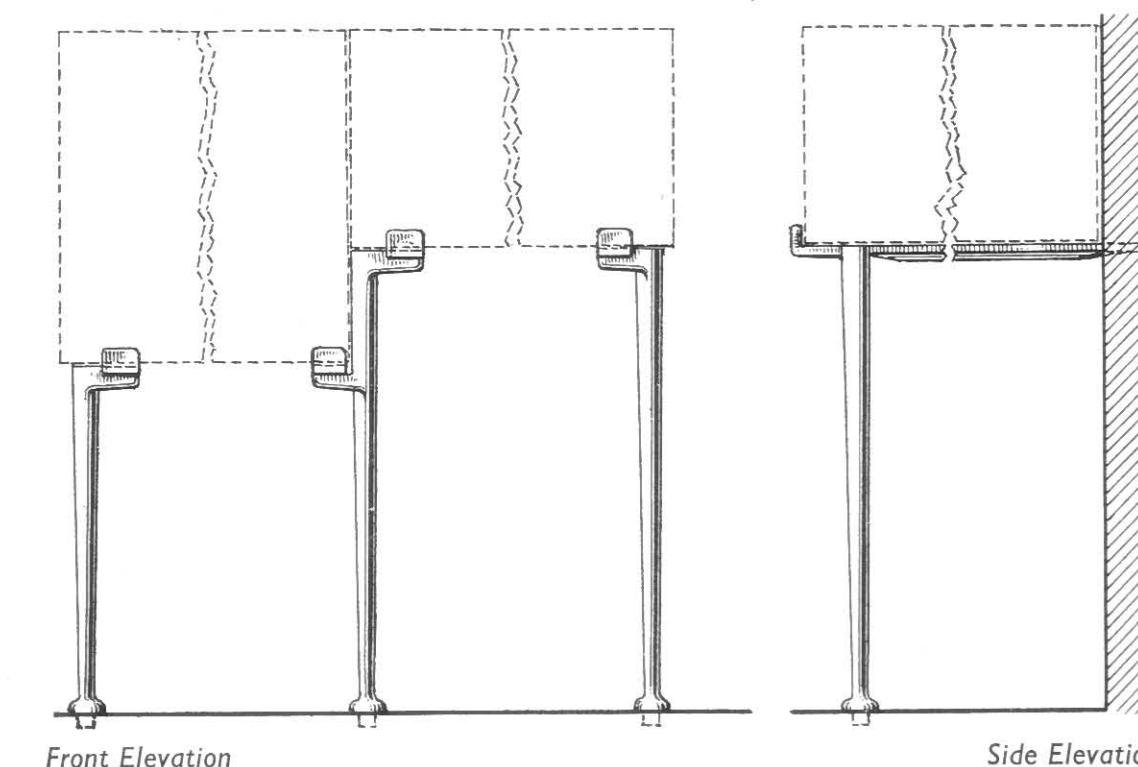
Front Elevation

Side Elevation

No. 155

(with C.I. Bearer)

Height of Supports, 15 $\frac{1}{2}$ " and 20 $\frac{1}{2}$ "



Front Elevation

Side Elevation

No. 155 can also be supplied with Pillar-Leg and broad Centre Bearer to suit Double Tubs.

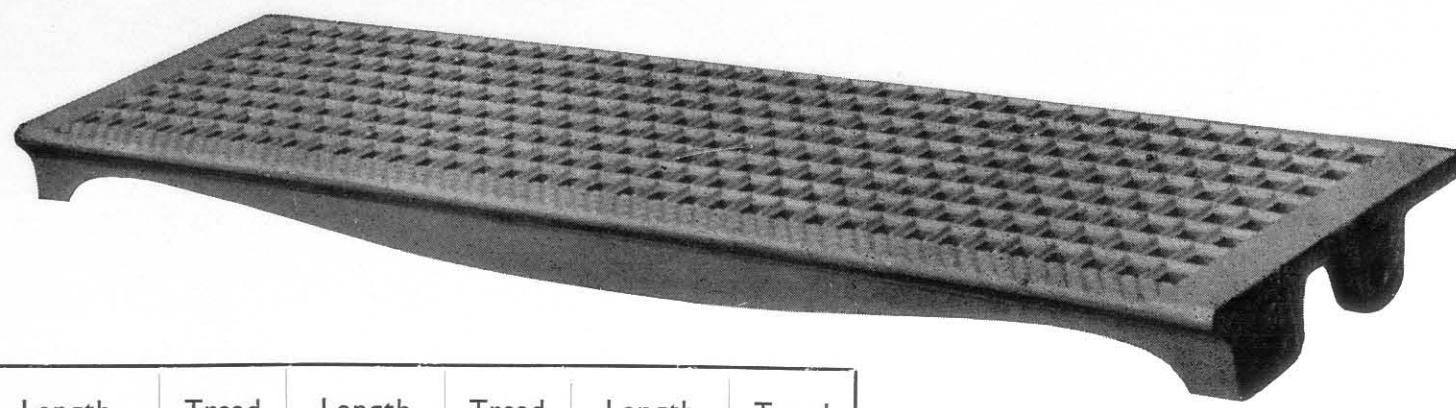
Sink Bearers supplied, 16", 18" or 20" projection.

Bearers can be supplied Recessed for Waste, also for Screwing to Wall.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

CAST-IRON STAIR STEPS

No. 50

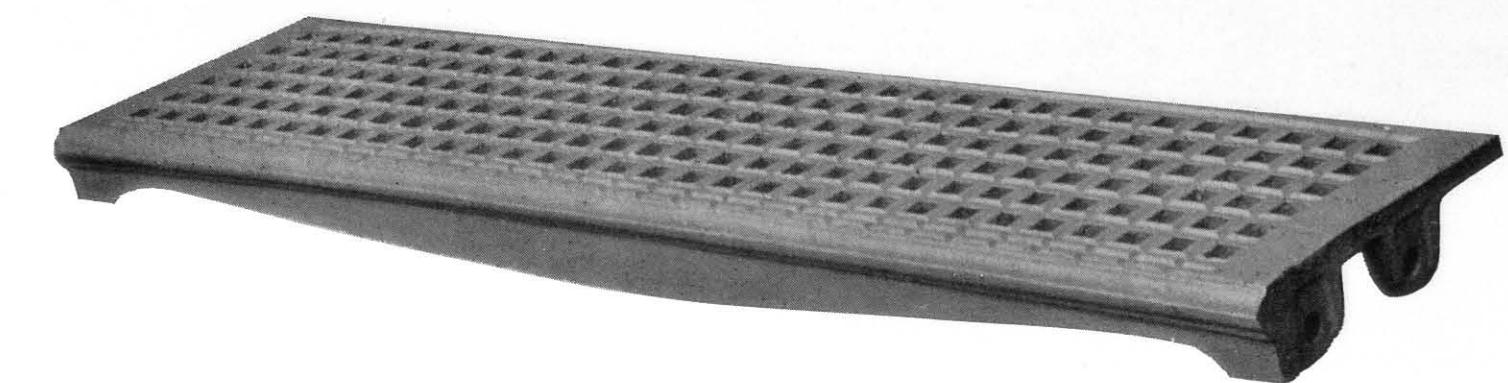


Length	Tread	Length	Tread	Length	Tread
1' 6"	3"	2' 6"	3"	3' 0"	10"
1' 6"	6"	2' 6"	8"	3' 6"	10"
2' 0"	10"	2' 6"	10"	4' 0"	10"
2' 3"	10"	2' 9"	8"		
2' 4 $\frac{1}{2}$ "	3"	2' 9"	10"		

Tread $\frac{9}{16}$ " Thick
With $\frac{3}{4}$ " sq. perforations

CAST-IRON STAIR STEPS

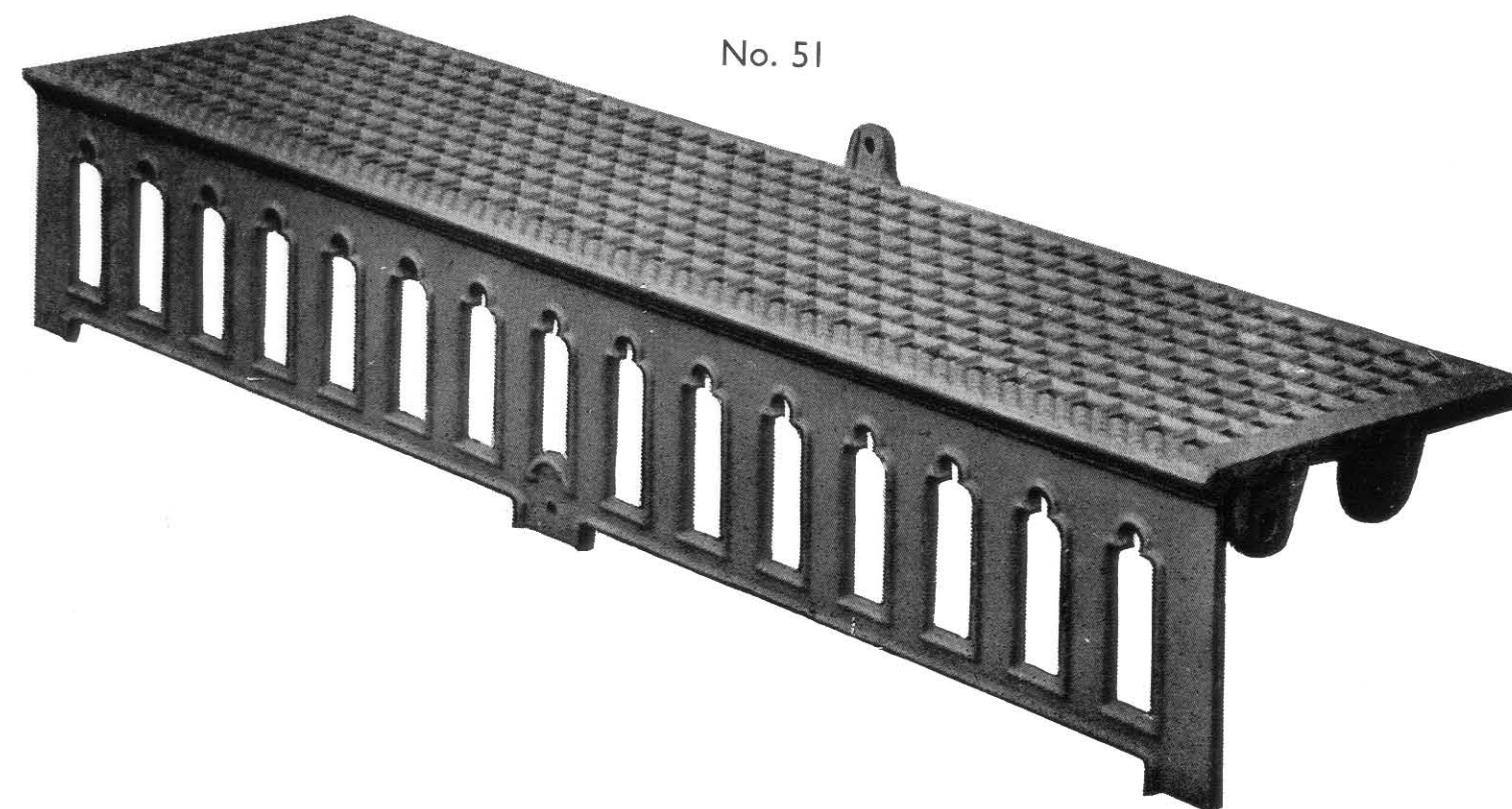
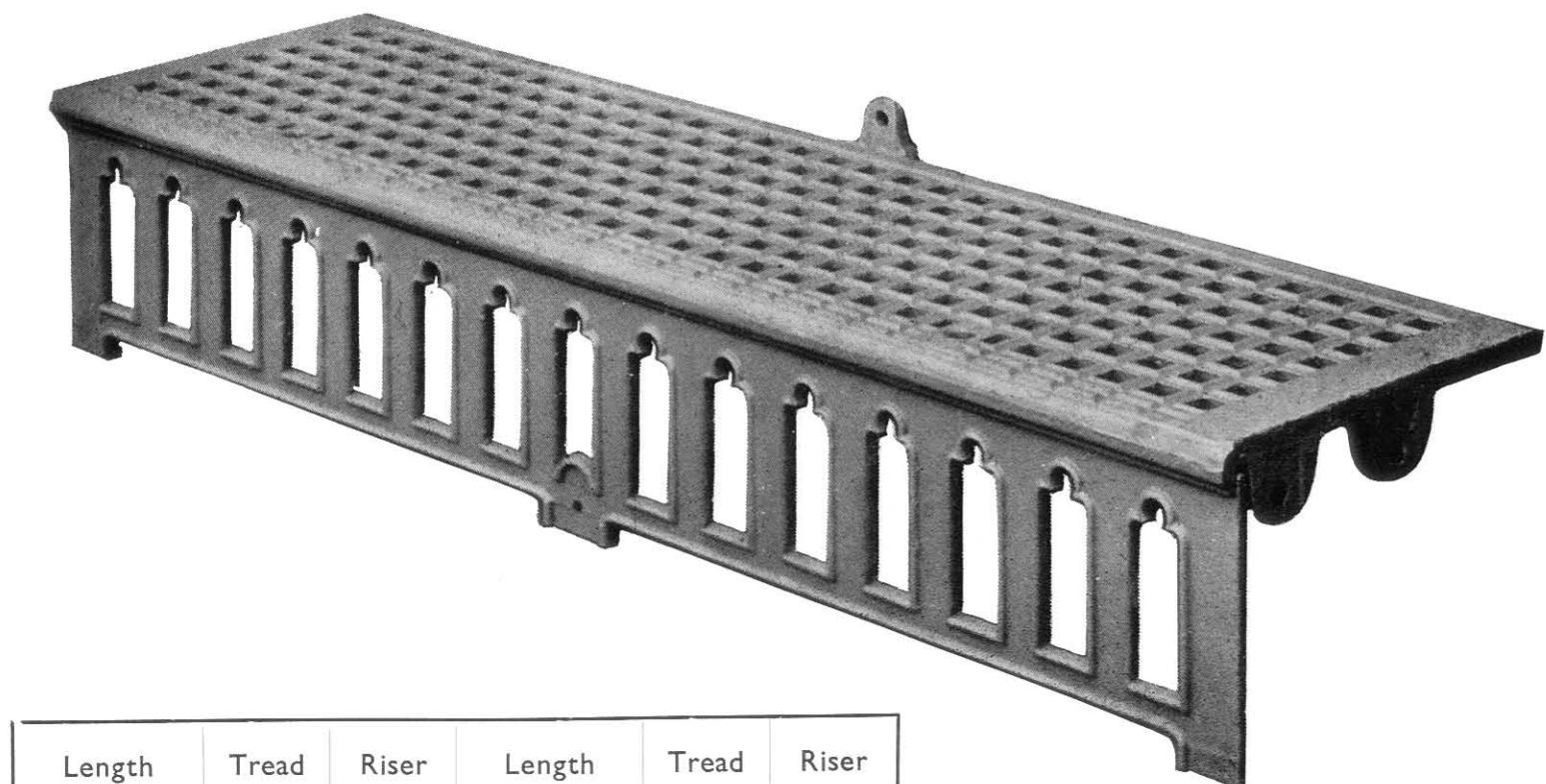
No. 54



Length	Tread	Length	Tread	Length	Tread
2' 0"	10"	3' 0"	10"	4' 0"	10"
2' 3"	10"	3' 6"	10"	4' 0"	11"
2' 6"	10"	3' 6"	11"	4' 6"	10"

Tread $\frac{5}{8}$ " Thick
With $\frac{3}{4}$ " sq. perforations

No. 55



Length	Tread	Riser	Length	Tread	Riser
2' 0"	9"	7 $\frac{1}{2}$ "	3' 0"	10"	7 $\frac{1}{2}$ "
2' 3"	10"	7 $\frac{1}{2}$ "	3' 6"	10"	7 $\frac{1}{2}$ "
2' 6"	10"	7 $\frac{1}{2}$ "	4' 0"	10"	7 $\frac{1}{2}$ "
2' 9"	10"	7 $\frac{1}{2}$ "			

Tread $\frac{9}{16}$ " Thick
With $\frac{3}{4}$ " sq. perforations

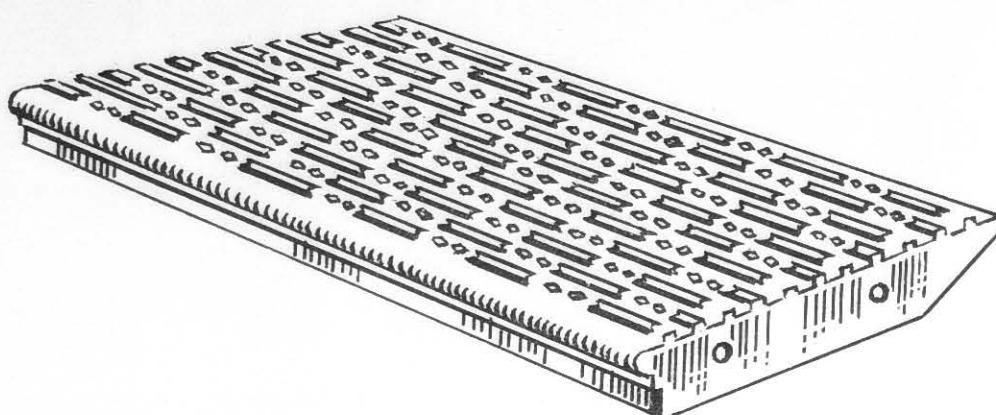
Length	Tread	Riser	Length	Tread	Riser
2' 0"	10"	7 $\frac{1}{2}$ "	3' 6"	10"	7 $\frac{1}{2}$ "
2' 3"	10"	7 $\frac{1}{2}$ "	3' 6"	11"	7 $\frac{1}{2}$ "
2' 6"	10"	7 $\frac{1}{2}$ "	3' 6"	12"	7 $\frac{1}{2}$ "
2' 6"	12"	7 $\frac{1}{2}$ "	4' 0"	10"	7 $\frac{1}{2}$ "
2' 9"	10"	7 $\frac{1}{2}$ "	4' 3"	9 $\frac{1}{2}$ "	7 $\frac{1}{2}$ "
3' 0"	10"	7 $\frac{1}{2}$ "	4' 6"	10"	7 $\frac{1}{2}$ "

Tread $\frac{5}{8}$ " Thick
With $\frac{3}{4}$ " sq. perforations

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

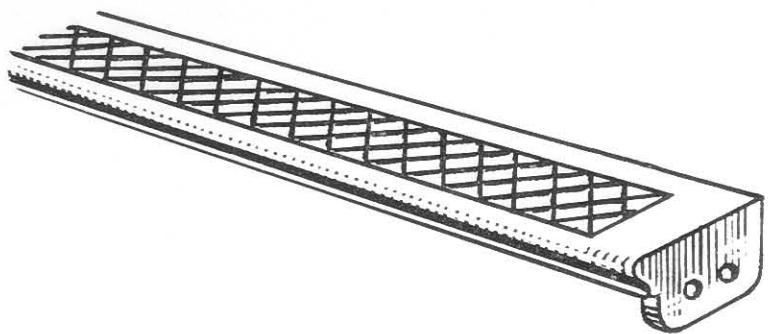
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

CAST-IRON STAIR STEPS



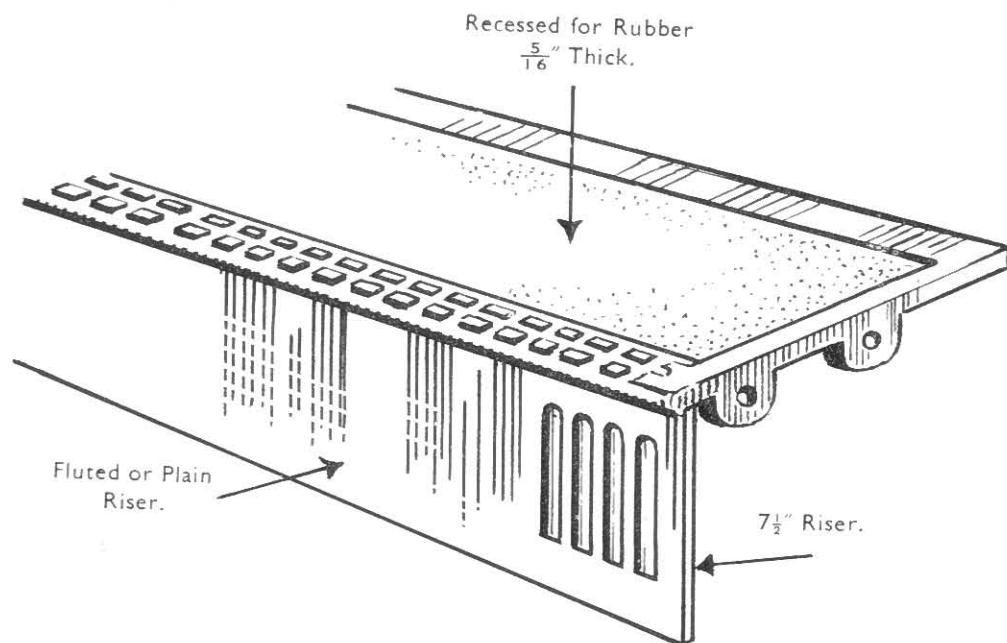
No. 21

Length	Tread	Thickness
1' 10 $\frac{1}{4}$ "	8 $\frac{1}{2}$ "	7 $\frac{1}{6}$ " U/C, 9 $\frac{1}{6}$ " O/C
2' 9 $\frac{3}{4}$ "	8 $\frac{1}{4}$ "	8 $\frac{1}{6}$ " U/C, 1 $\frac{1}{2}$ " O/C
2' 11 $\frac{1}{2}$ "	10 $\frac{1}{4}$ "	1 $\frac{1}{2}$ " U/C, 5 $\frac{5}{6}$ " O/C
2' 11 $\frac{3}{4}$ "	9"	8 $\frac{1}{6}$ " U/C, 1 $\frac{1}{2}$ " O/C
3' 5"	8 $\frac{1}{2}$ "	1 $\frac{1}{2}$ " U/C, 5 $\frac{5}{6}$ " O/C



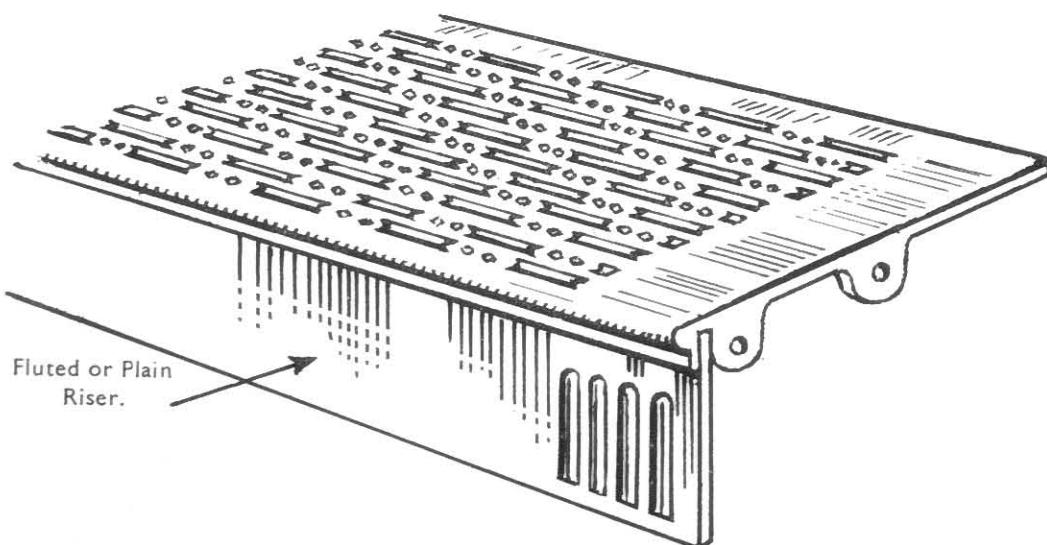
No. 23

Length	Tread	Thickness
1' 5"	3 $\frac{1}{2}$ "	5 $\frac{5}{8}$ "
2' 0"	4"	5 $\frac{5}{8}$ "
1' 2"	4 $\frac{5}{8}$ "	5 $\frac{5}{8}$ "



No. 69

Length	Tread	Thickness
2' 11"	9 $\frac{1}{2}$ "	1 $\frac{1}{6}$ "

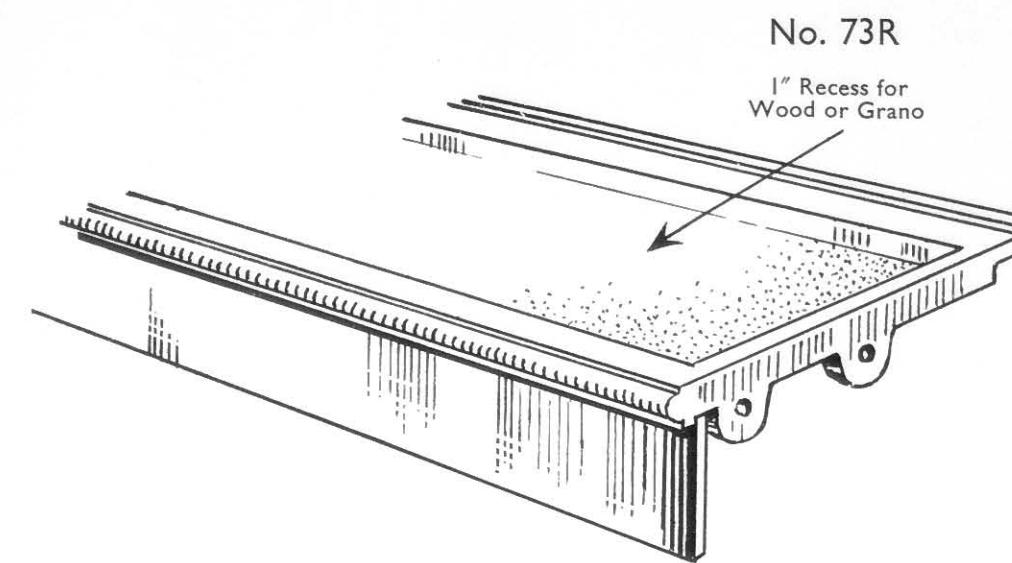


No. 73

Length	Tread	Riser	Thickness
2' 0"	10"	6 $\frac{3}{4}$ "	
2' 6"	10"	6 $\frac{3}{4}$ "	
2' 9"	8"	8 $\frac{9}{16}$ "	5 $\frac{5}{6}$ " U/C
3' 0"	10"	6 $\frac{3}{4}$ "	7 $\frac{1}{6}$ " O/C
3' 6"	10"	6 $\frac{3}{4}$ "	
4' 0"	10"	6 $\frac{3}{4}$ "	
5' 6"	12"	7"	7 $\frac{1}{6}$ " U/C
6' 0"	10 $\frac{1}{4}$ "	7"	9 $\frac{1}{6}$ " O/C

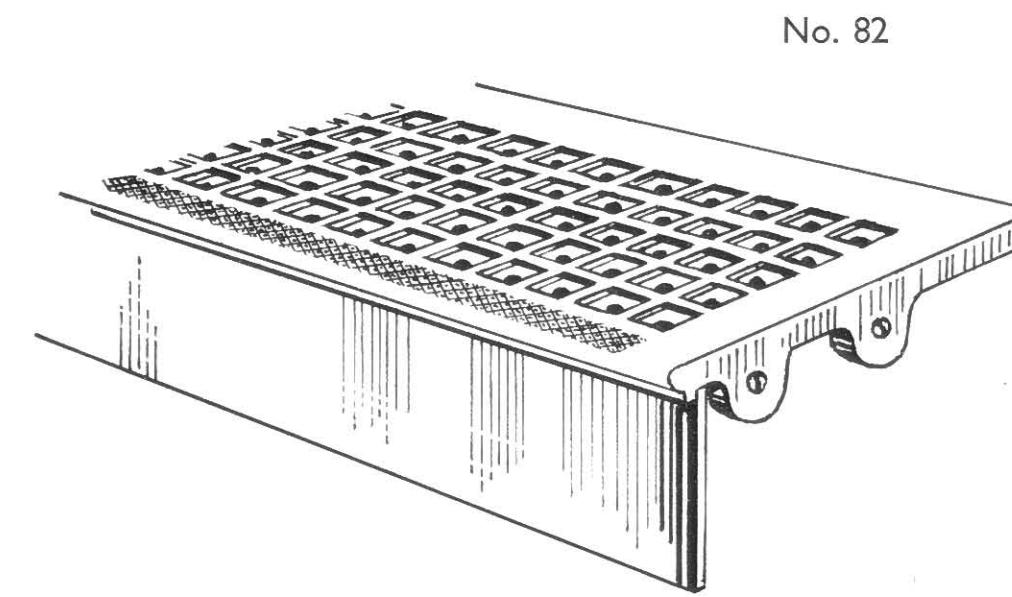
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

CAST-IRON STAIR STEPS



No. 73R

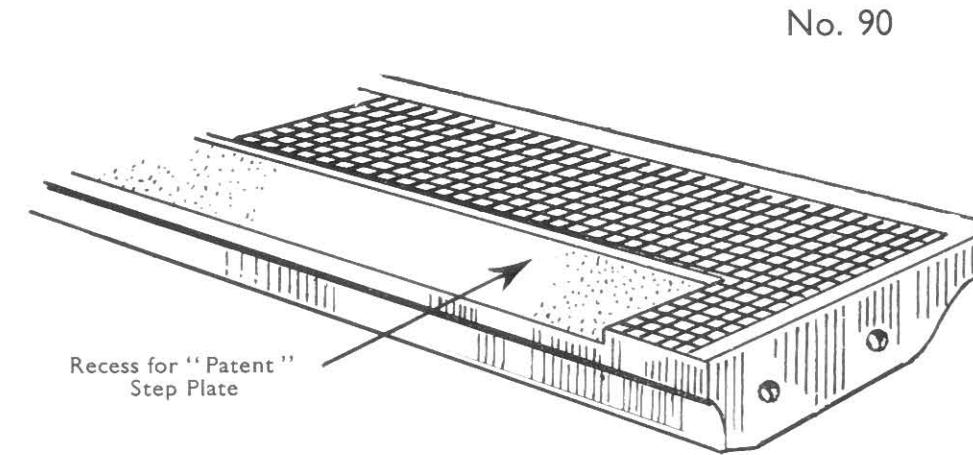
LENGTH	TREAD	RISER
4' 0"	10"	6 $\frac{3}{4}$ "
3' 6"	11"	6 $\frac{3}{4}$ "



No. 82

LENGTH	TREAD	RISER
4' 0"	10"	6 $\frac{1}{8}$ "
4' 9"	10"	6 $\frac{7}{8}$ "

3/4" Thick

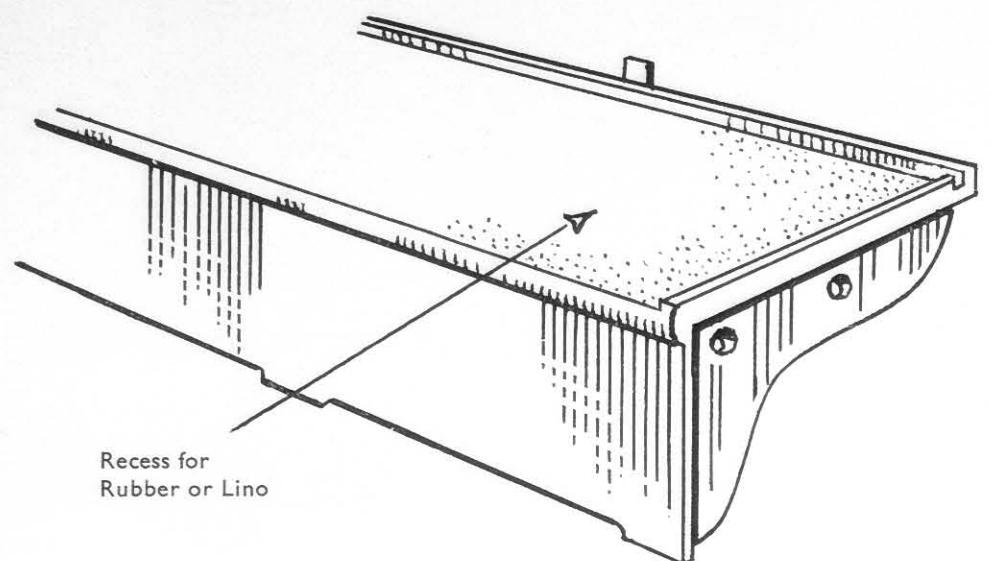


No. 90

LENGTH	TREAD	THICKNESS
3' 0"	9 $\frac{1}{2}$ "	5 $\frac{5}{8}$ "
4' 0"	9 $\frac{1}{2}$ "	5 $\frac{5}{8}$ "
2' 9"	9 $\frac{1}{2}$ "	5 $\frac{5}{8}$ "

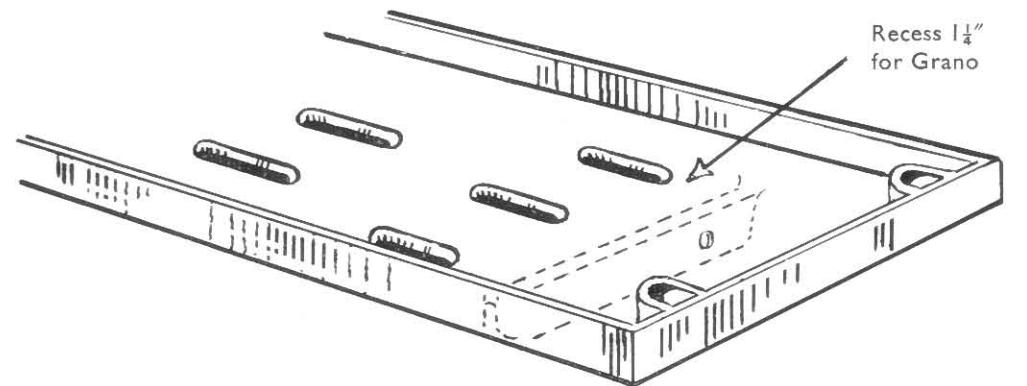
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

CAST-IRON STAIR STEPS



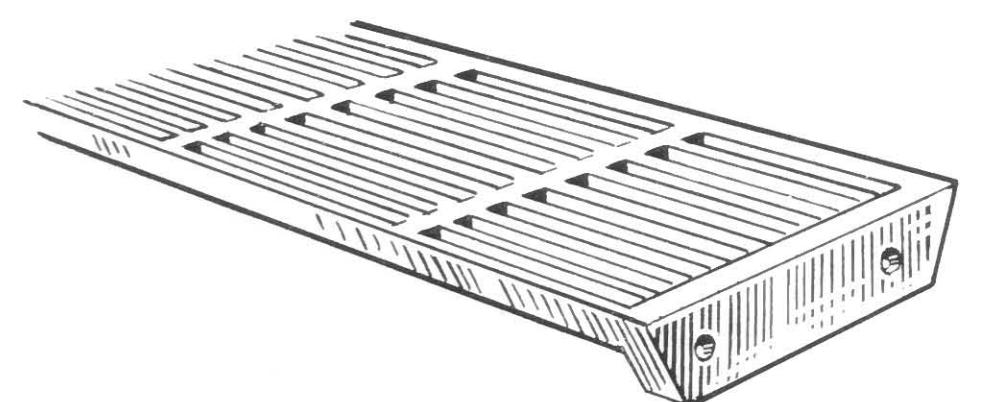
No. 91

LENGTH	TREAD	RISER	THICKNESS
3' 6"	9"	7 $\frac{1}{2}$ "	5/16"



No. 92

LENGTH	TREAD
4' 0"	1' 0"



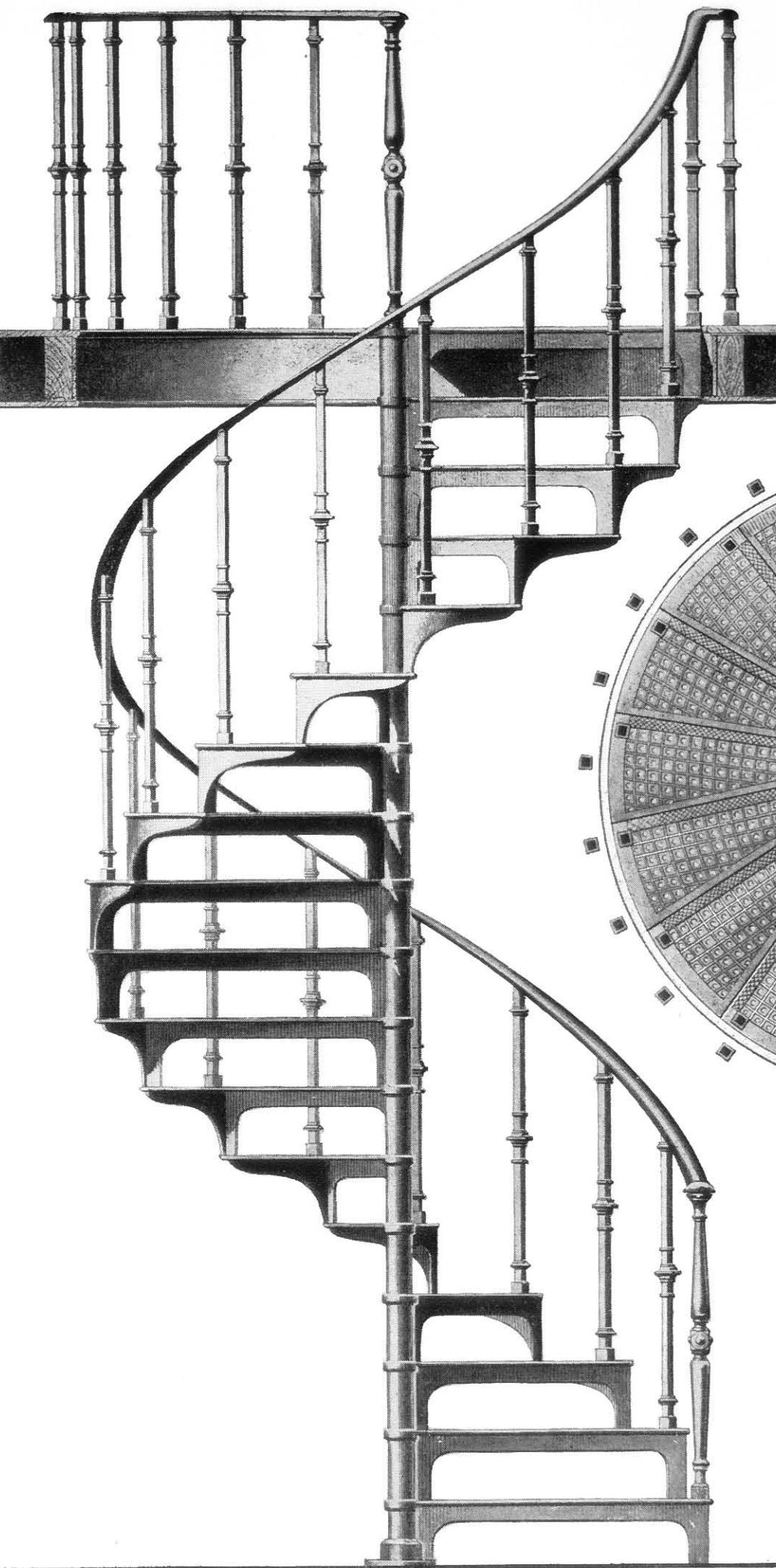
No. 93

LENGTH	TREAD	THICKNESS
2' 6"	10"	1"
3' 0"	10"	1"

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

SPIRAL STAIR

No. 5



SIZES			
Radius Overall	Clear Width	Tread	Riser
1' 6"	1' 1 $\frac{3}{4}$ "	11"	9"
1' 9"	1' 4 $\frac{3}{4}$ "	11"	8"
2' 0"	1' 7 $\frac{3}{4}$ "	1' 0"	8"
2' 3"	1' 10 $\frac{3}{4}$ "	1' 1"	8"
2' 6"	2' 1 $\frac{3}{4}$ "	1' 1"	8"
2' 9"	2' 4 $\frac{3}{4}$ "	1' 1"	8"
3' 0"	2' 7 $\frac{3}{4}$ "	1' 1"	8"

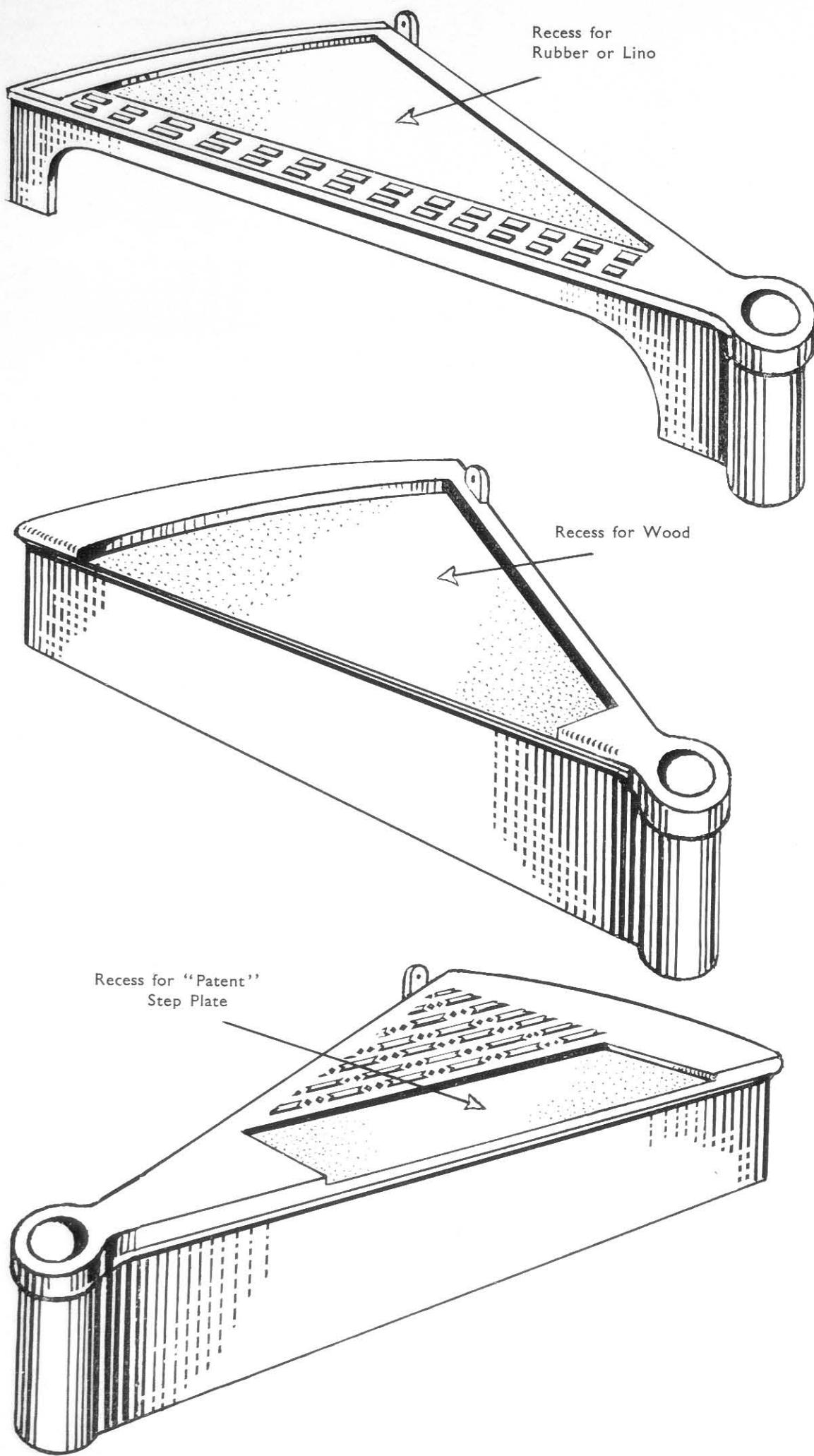
Supplied to any Height
Right-Hand or Left-Hand Wheel
Illustration shows Left-Hand Wheel

NOTE

Can be supplied with C.I. Balusters
as shown, or with $\frac{3}{4}$ " square M.S.
Balusters.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

CAST-IRON SPIRAL STAIR STEPS



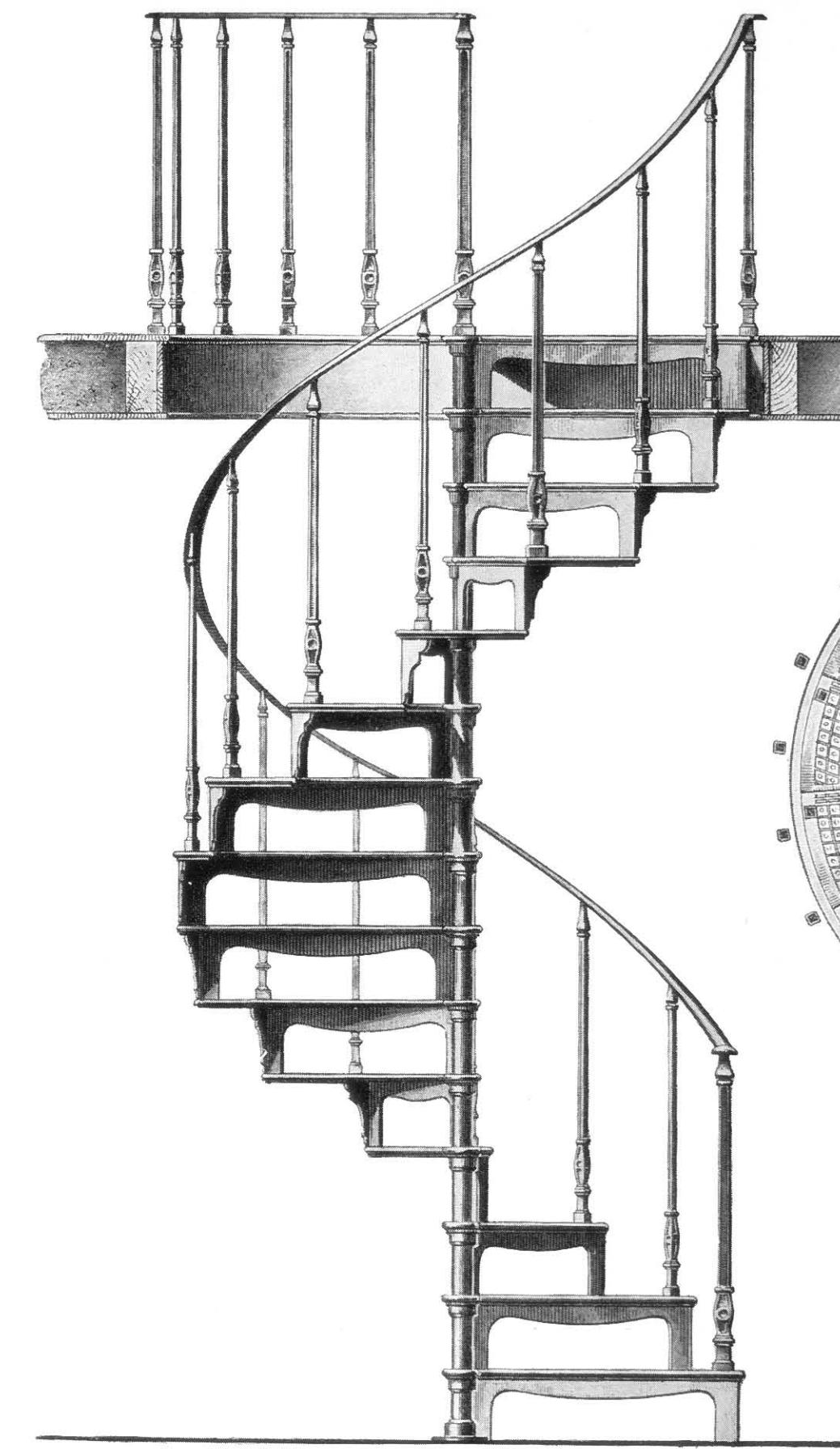
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

SPIRAL STAIR

No. 56

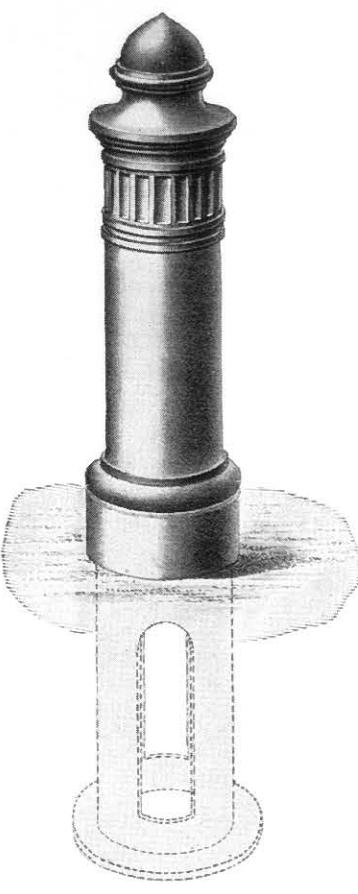
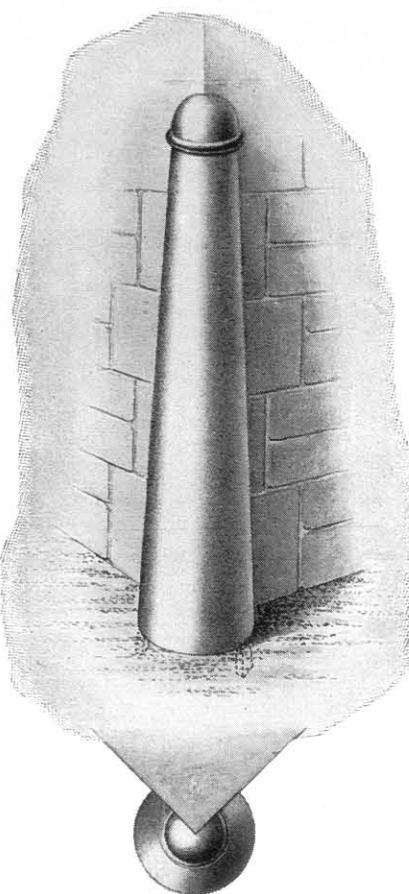
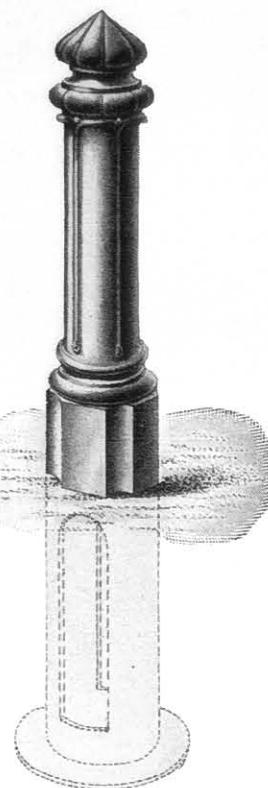
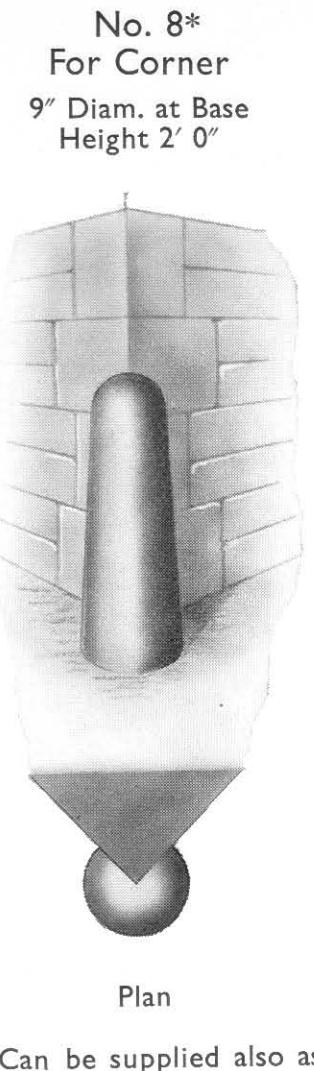
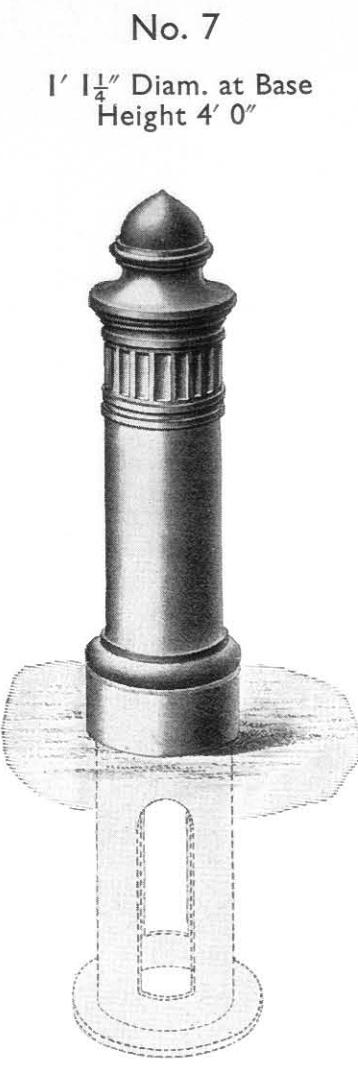
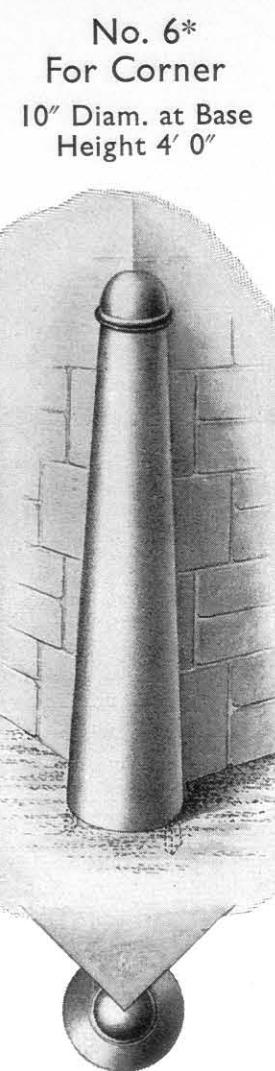
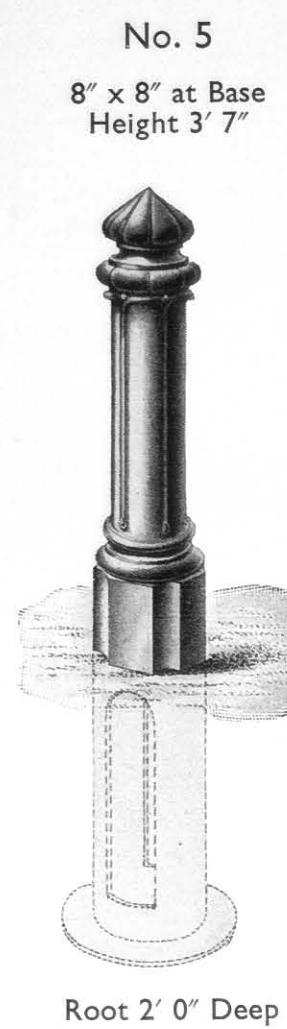
SIZES			
Radius Overall	Clear Width	Tread	Riser
1' 9"	1' 5"	0' 11"	8"
2' 0"	1' 8"	1' 0"	8"
2' 3"	1' 11"	1' 1"	8"
2' 6"	2' 2"	1' 1"	8"
2' 9"	2' 4 $\frac{3}{4}$ "	1' 1"	8"
3' 0"	2' 7 $\frac{3}{4}$ "	1' 1"	8"

Supplied to any Height,
Right-Hand or Left-Hand Wheel
Illustration shows Left-Hand Wheel



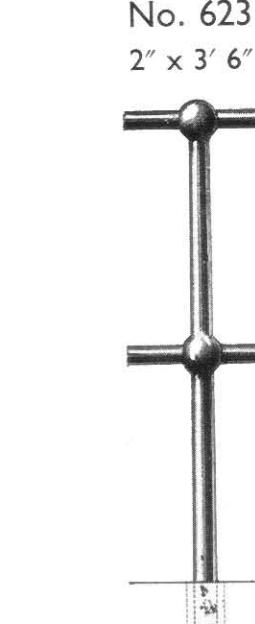
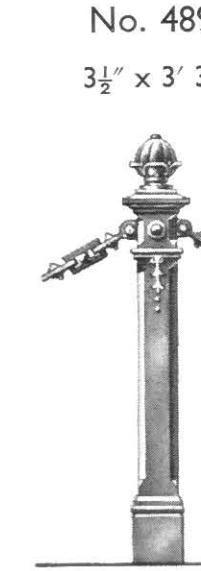
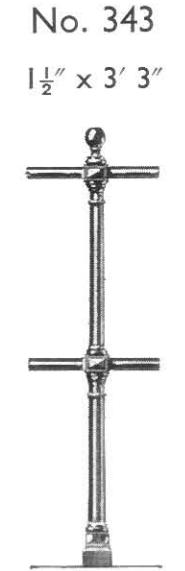
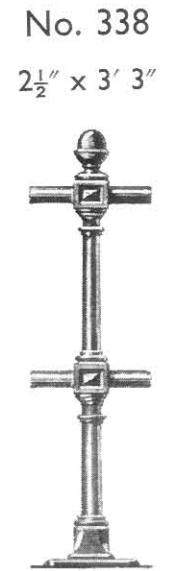
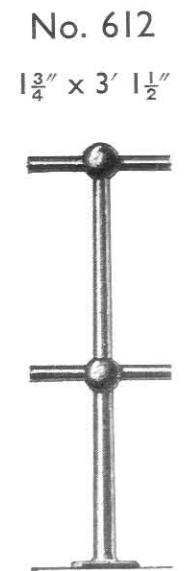
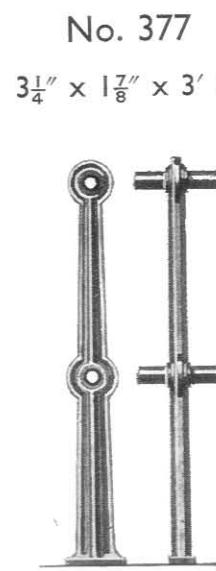
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

ROAD AND GUARD POSTS



*Can be supplied also as self-standing guard posts

RAIL STANDARDS



Rails 1 1/2" Diam.

Rails 1 1/4" Diam.

Rails 1 1/2" Diam.

Rails 1 1/8" Diam.

With No. 4 Chain
Other Heights up to
4' 5" to Order

With Loose Bottom
Socket 5" Deep
Can be supplied with
Flange or Bat in lieu of
Socket to Order

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

BOLLARD

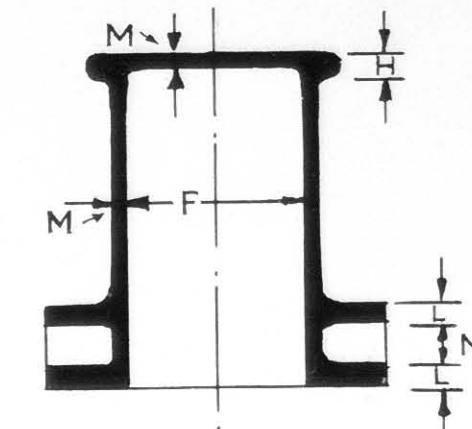
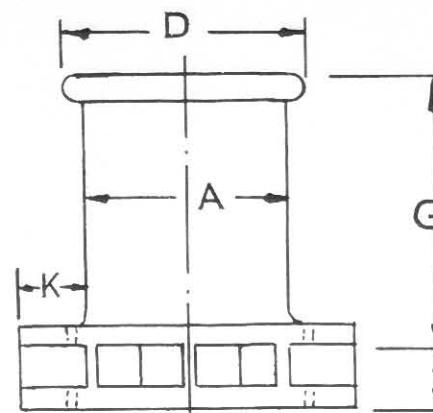
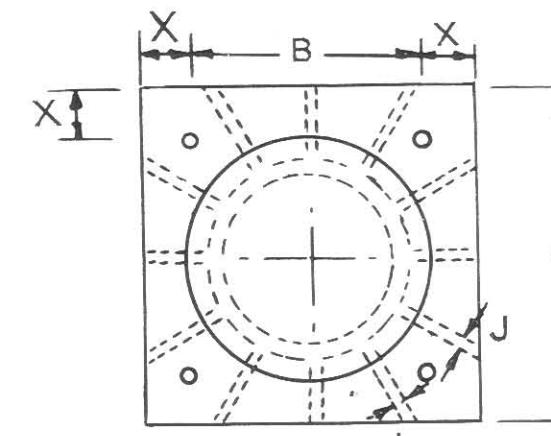


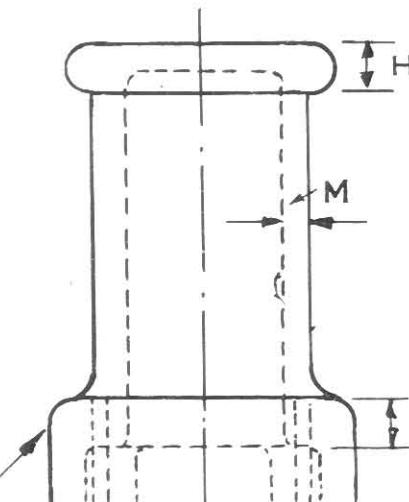
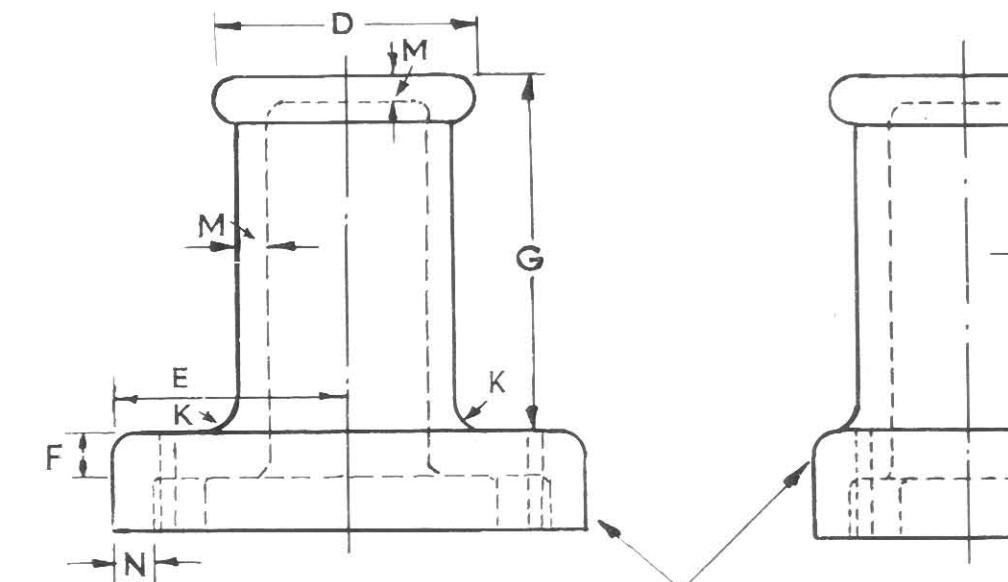
FIG. 73



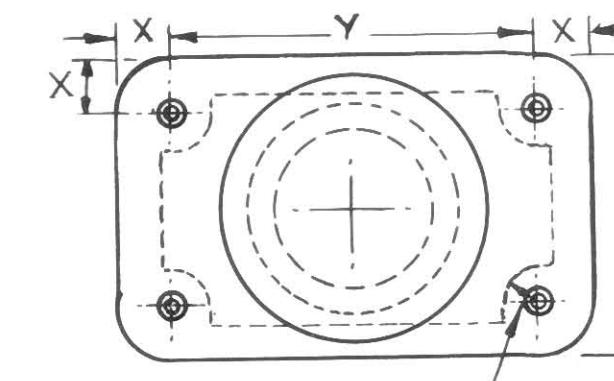
A	B	C	D	E	F	G	H	J	K	L	M	N	X
in.													

18	21	30	20	6	16	24	2	3/4	6	1 3/4	1	4 1/4	4 1/2
----	----	----	----	---	----	----	---	-----	---	-------	---	-------	-------

BOLLARD (B.S.S.) SINGLE TYPE



Where there is no wood deck, fitting strip to be $\frac{3}{16}$ in. deep for Bollards sizes 4 to 9, and $\frac{3}{8}$ in. deep for Bollards sizes 10 to 18. Where fitted in way of wood deck, depth to suit thickness of same.



Radius Twice Diam. of Bolt.

FIG. 74

SEE TABLE FOR SIZES WHERE
APPLICABLE

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

BOLLARDS (B.S.S.) DOUBLE TYPE

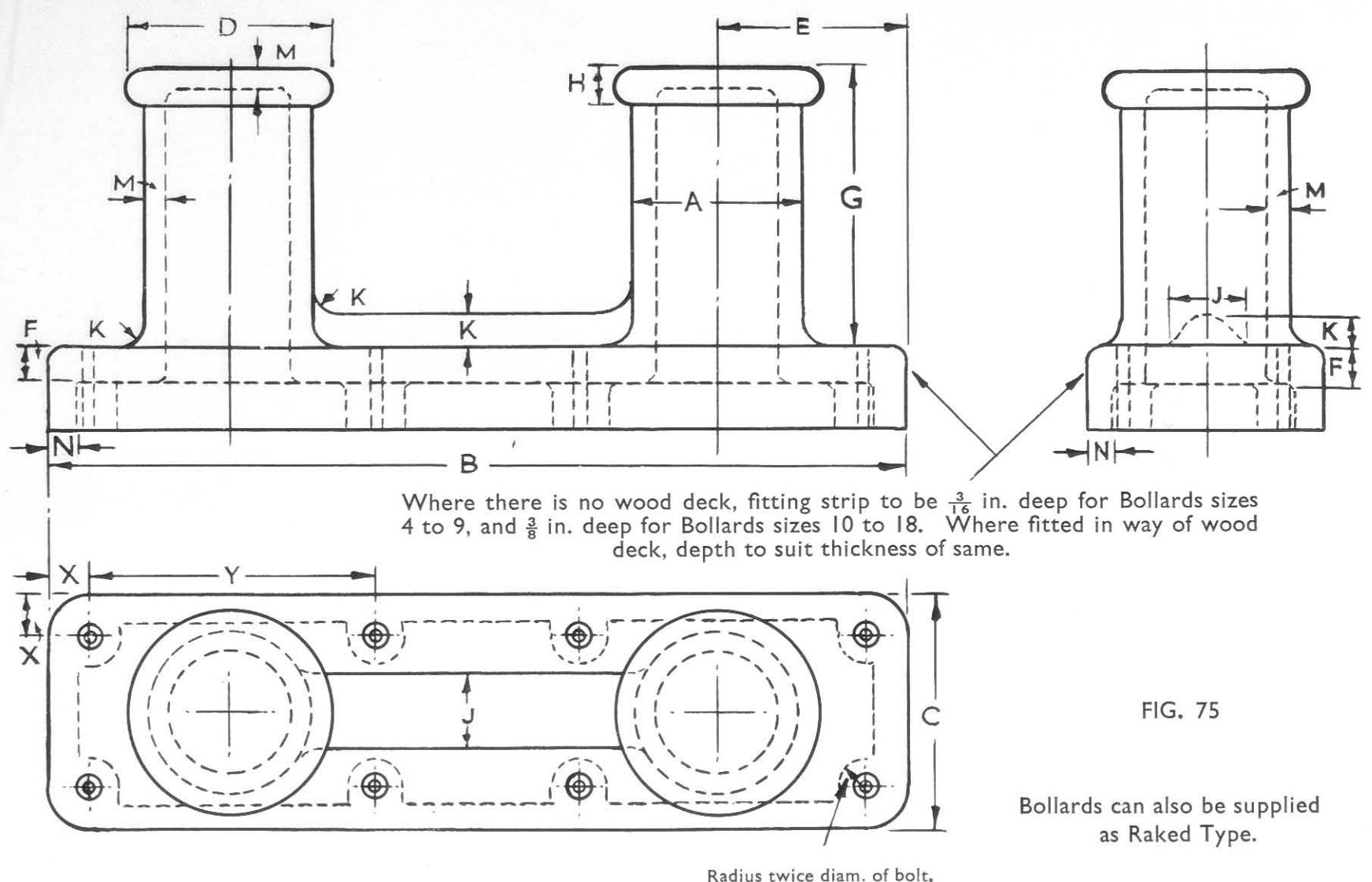


FIG. 75

Bollards can also be supplied as Raked Type.

TABLE 35
DIMENSIONS OF VERTICAL TYPE BOLLARDS

B.S. Item Number	Size of Chain Cables	Size of Bollard A	Web								M	N	Rivets (Iron)		Spacing of Rivets	
			B	C	D	E	F	G	H	J			No.	Diam.	X	Y
B.S.S. B 171	in. in.	in.	ft. in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	4	in. $\frac{3}{4}$	in. $\frac{1}{2}$	—
B.S.S. B 172	$\frac{11}{16}$ to $\frac{13}{16}$	4	1 9	6	5	$4\frac{1}{2}$	1	$7\frac{1}{2}$	1	2	$\frac{13}{16}$	$\frac{5}{8}$	4	in. $\frac{7}{8}$	in. $\frac{1}{4}$	—
B.S.S. B 173	$\frac{5}{8}$ to 1	5	2 2 $\frac{1}{4}$	7 $\frac{1}{2}$	$6\frac{1}{4}$	$5\frac{5}{8}$	$1\frac{1}{4}$	$9\frac{3}{8}$	$1\frac{1}{4}$	2 $\frac{1}{2}$	1	$\frac{4}{5}$	6	in. $\frac{7}{8}$	in. $\frac{1}{2}$	10 $\frac{1}{2}$
B.S.S. B 174	$\frac{1}{4}$ to $\frac{13}{8}$	6	2 7 $\frac{1}{2}$	9	$7\frac{1}{2}$	$6\frac{3}{4}$	$1\frac{1}{2}$	$11\frac{1}{4}$	$1\frac{1}{2}$	3	$1\frac{3}{16}$	$\frac{15}{16}$	1	in. $\frac{7}{8}$	in. $\frac{1}{2}$	10 $\frac{1}{2}$
B.S.S. B 175	$\frac{1}{4}$ to $\frac{13}{8}$	7	3 1	10 $\frac{1}{2}$	$8\frac{3}{4}$	$7\frac{7}{8}$	$1\frac{3}{4}$	$13\frac{1}{8}$	$1\frac{3}{4}$	3 $\frac{1}{2}$	$1\frac{3}{16}$	$\frac{5}{8}$	6	in. $\frac{7}{8}$	in. $\frac{1}{4}$	12 $\frac{1}{4}$
B.S.S. B 176	$\frac{1}{4}$ to $\frac{13}{8}$	8	3 6	12	10	9	2	15	2	4	$1\frac{5}{8}$	$\frac{13}{16}$	6	in. $\frac{7}{8}$	in. $\frac{1}{4}$	14
B.S.S. B 177	$\frac{1}{4}$ to $\frac{13}{8}$	9	3 11 $\frac{1}{4}$	13 $\frac{1}{2}$	$11\frac{1}{4}$	$10\frac{5}{8}$	$2\frac{1}{4}$	$16\frac{7}{8}$	$2\frac{1}{4}$	4 $\frac{1}{2}$	$1\frac{3}{16}$	$\frac{5}{8}$	6	in. $\frac{1}{2}$	in. $2\frac{1}{4}$	15 $\frac{3}{4}$
B.S.S. B 178	$\frac{1}{4}$ to $\frac{13}{8}$	10	4 $4\frac{1}{2}$	15	$12\frac{1}{2}$	$11\frac{1}{4}$	$2\frac{1}{2}$	$18\frac{3}{4}$	$2\frac{1}{2}$	5	$1\frac{1}{16}$	$\frac{13}{16}$	8	in. $\frac{1}{2}$	in. $2\frac{3}{4}$	17 $\frac{1}{2}$
B.S.S. B 179	$\frac{1}{4}$ to $\frac{13}{8}$	11	4 $9\frac{3}{4}$	16 $\frac{1}{2}$	$13\frac{3}{4}$	$12\frac{5}{8}$	$2\frac{3}{4}$	$20\frac{5}{8}$	$2\frac{3}{4}$	5 $\frac{1}{2}$	$2\frac{1}{4}$	$\frac{13}{16}$	8	in. $\frac{1}{2}$	in. $2\frac{3}{4}$	19 $\frac{1}{4}$
B.S.S. B 180	$\frac{1}{4}$ to $\frac{13}{8}$	12	5 3	18	15	$13\frac{1}{2}$	3	$22\frac{1}{2}$	3	6	$2\frac{3}{8}$	$1\frac{1}{16}$	8	in. $\frac{1}{4}$	in. 3	21
B.S.S. B 181	$\frac{1}{4}$ to $\frac{13}{8}$	14	6 $1\frac{1}{2}$	21	$17\frac{1}{2}$	$15\frac{3}{4}$	$3\frac{1}{2}$	$26\frac{1}{4}$	$3\frac{1}{2}$	7	$2\frac{13}{16}$	$2\frac{1}{8}$	10	in. $\frac{3}{2}$	in. $3\frac{1}{2}$	24 $\frac{1}{2}$
B.S.S. B 182	$\frac{1}{4}$ to $\frac{13}{8}$	16	7 0	24	20	18	4	30	4	8	$3\frac{3}{16}$	$2\frac{3}{8}$	10	in. $\frac{1}{2}$	in. 4	28
B.S.S. B 182	$\frac{1}{4}$ to $\frac{13}{8}$	18	7 10 $\frac{1}{2}$	27	$22\frac{1}{2}$	$20\frac{1}{4}$	$4\frac{1}{2}$	$33\frac{3}{4}$	$4\frac{1}{2}$	9	$3\frac{5}{8}$	$2\frac{11}{16}$	12	in. $\frac{3}{8}$	in. $4\frac{1}{2}$	31 $\frac{1}{2}$

"A" is the nominal size of Bollard.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LAMP PILLARS

No. 164

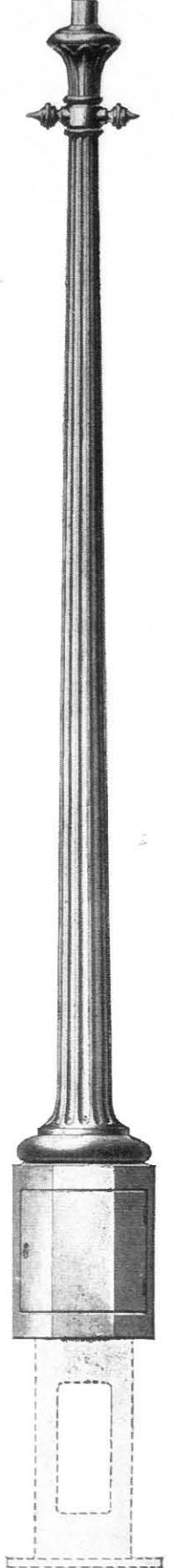
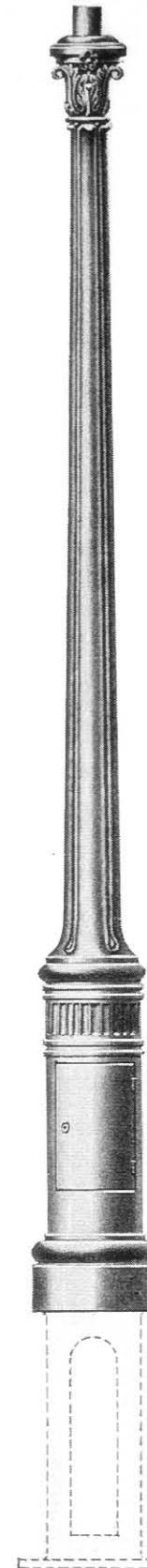
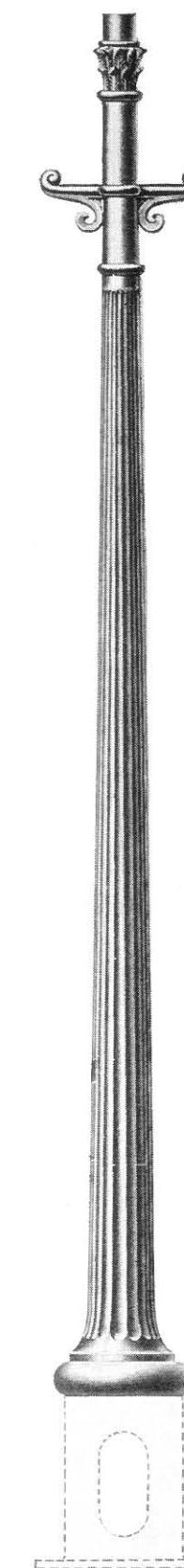
10' 7 $\frac{1}{2}$ " High
Also 12' 7 $\frac{1}{2}$ " High
Spigot 2 $\frac{3}{8}$ " Diam. x 2 $\frac{3}{4}$ " High

No. 166

10' 0" High
With Door in Base
Spigot 2 $\frac{3}{4}$ " Diam. x 2 $\frac{3}{4}$ " High

No. 167

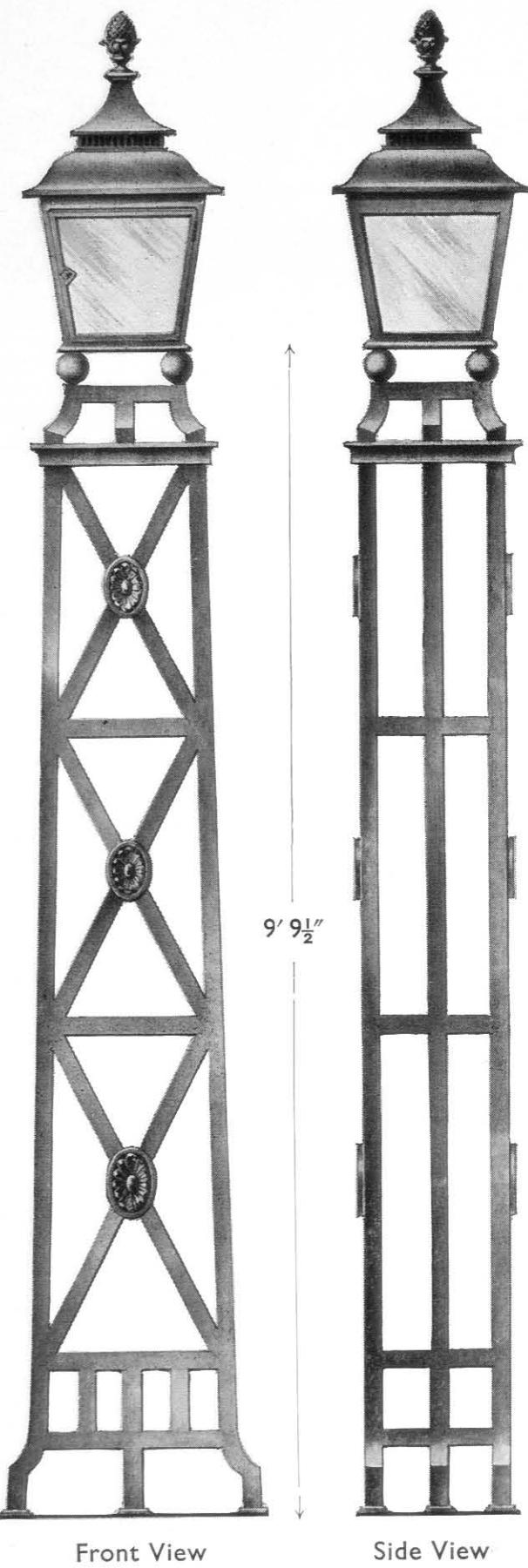
11' 0" High
Also 13' 0" High
With Door in Base
Spigot 2 $\frac{5}{8}$ " Diam. x 2 $\frac{1}{2}$ " High



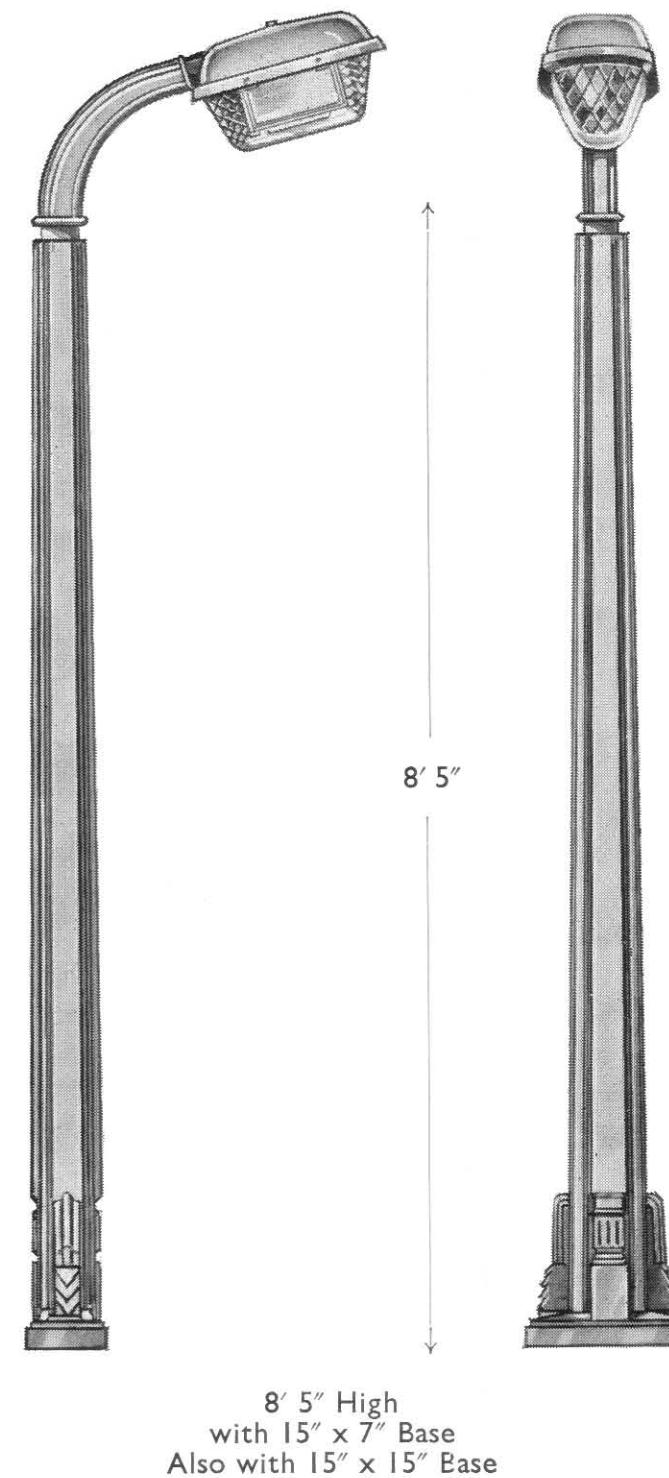
LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

LAMP PILLARS

No. 173
9' 9 $\frac{1}{2}$ " High

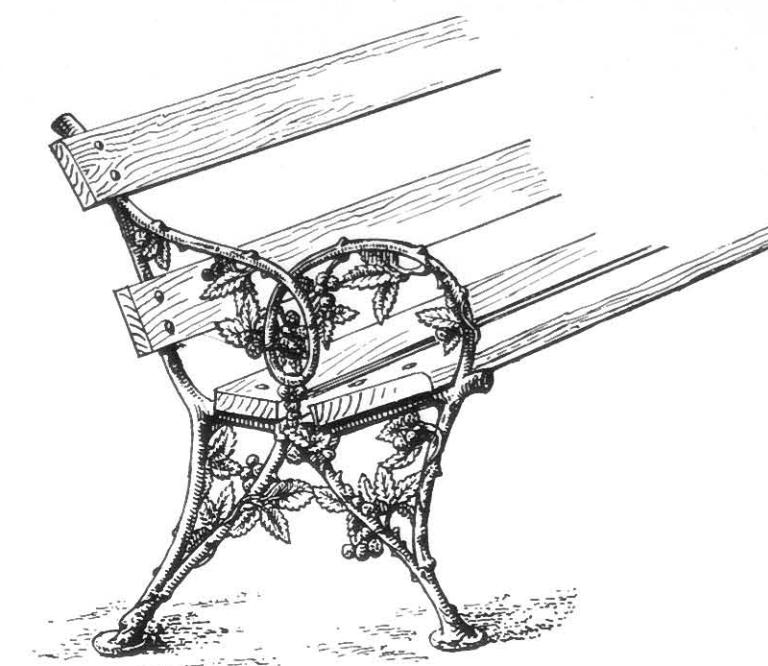


No. 915



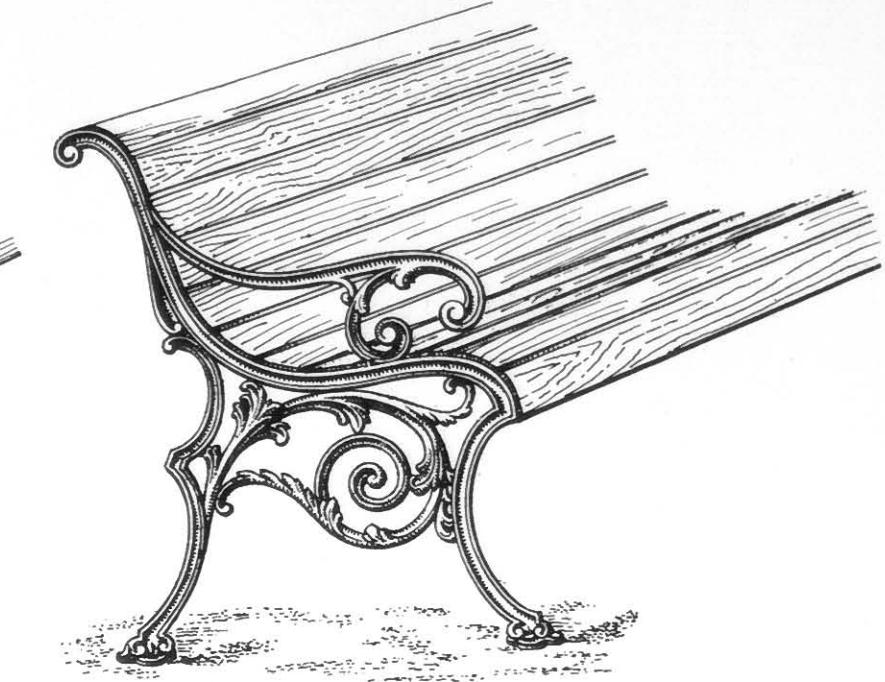
GARDEN AND PARK SEAT STANDARDS

No. 8



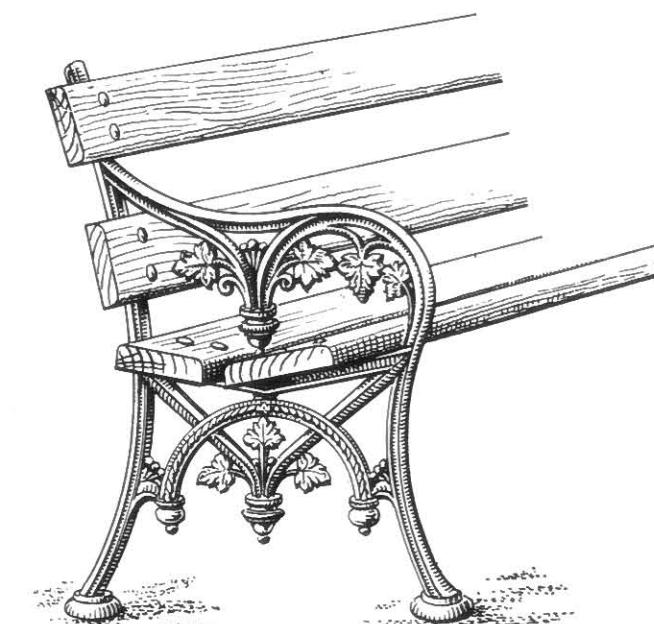
1' 10 $\frac{1}{2}$ " x 2' 8" High Overall

No. 73



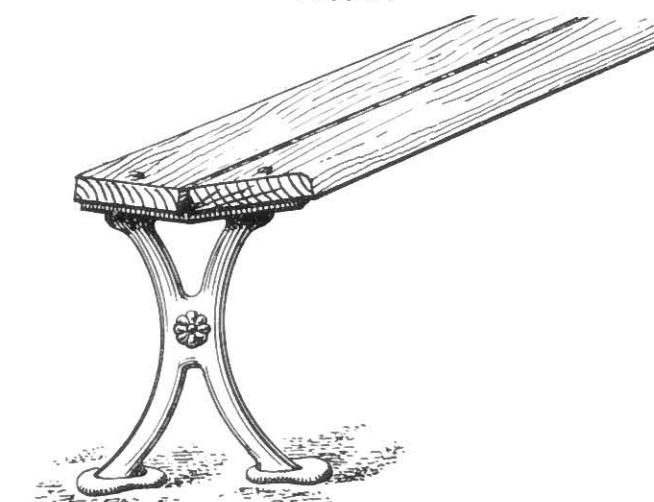
2' 2" x 2' 7 $\frac{1}{2}$ " High Overall

No. 89



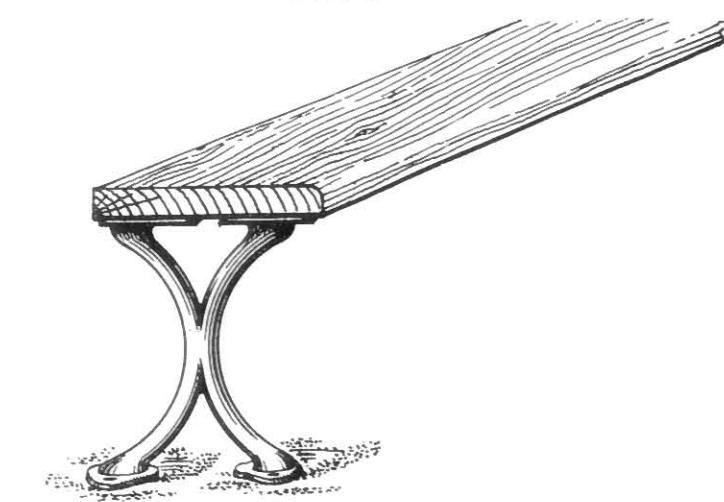
1' 11" x 2' 8"
High Overall

No. 2



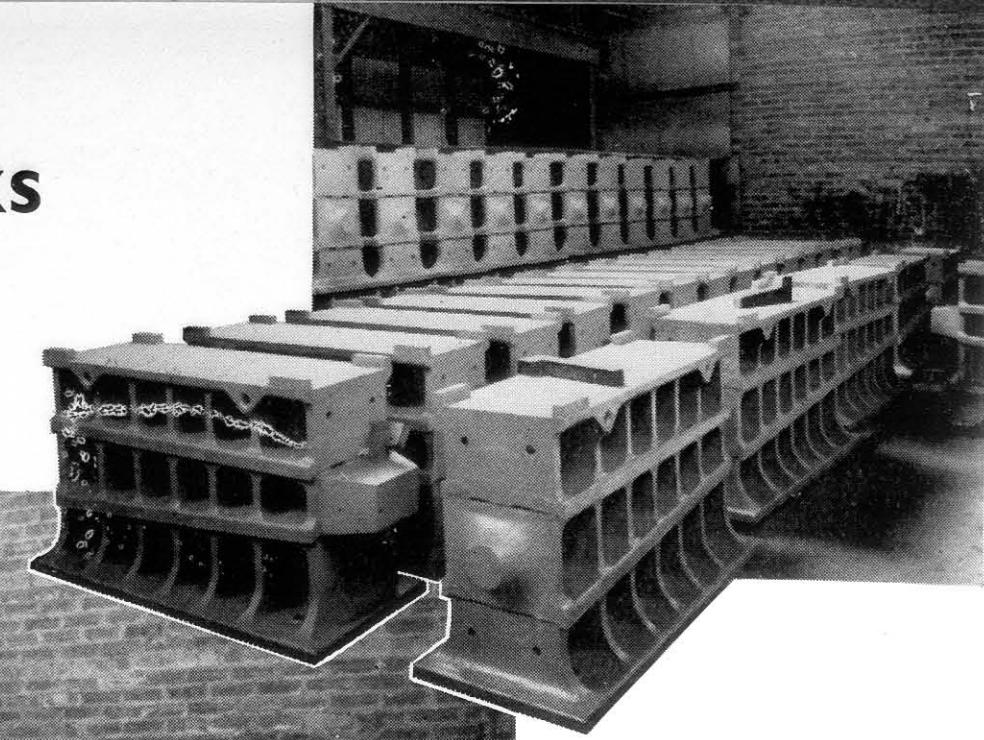
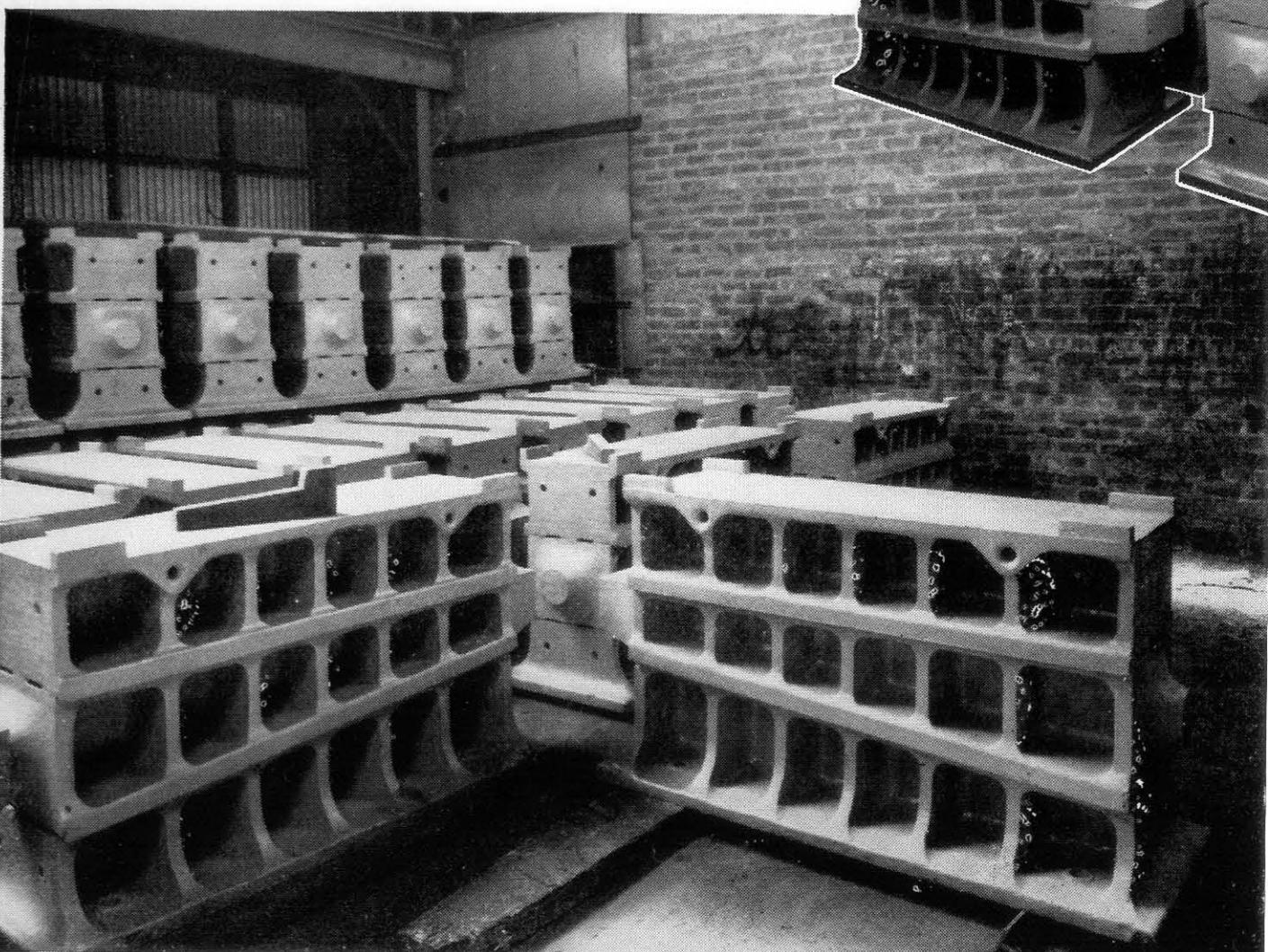
1' 5" x 2' 9 $\frac{1}{2}$ "
High Overall

No. 88



1' 0" x 1' 3 $\frac{1}{4}$ " also 1' 0" x 1' 2" High Overall

Cast-Iron Keel Blocks



Keel Blocks for No. 4 Dry Dock for Messrs Swan, Hunter & Wigham Richardson Ltd., Wallsend-on-Tyne.
Dimensions of Dock : 715 ft. long, 105 ft. wide, 29 ft. deep at H.W.O.S.T.

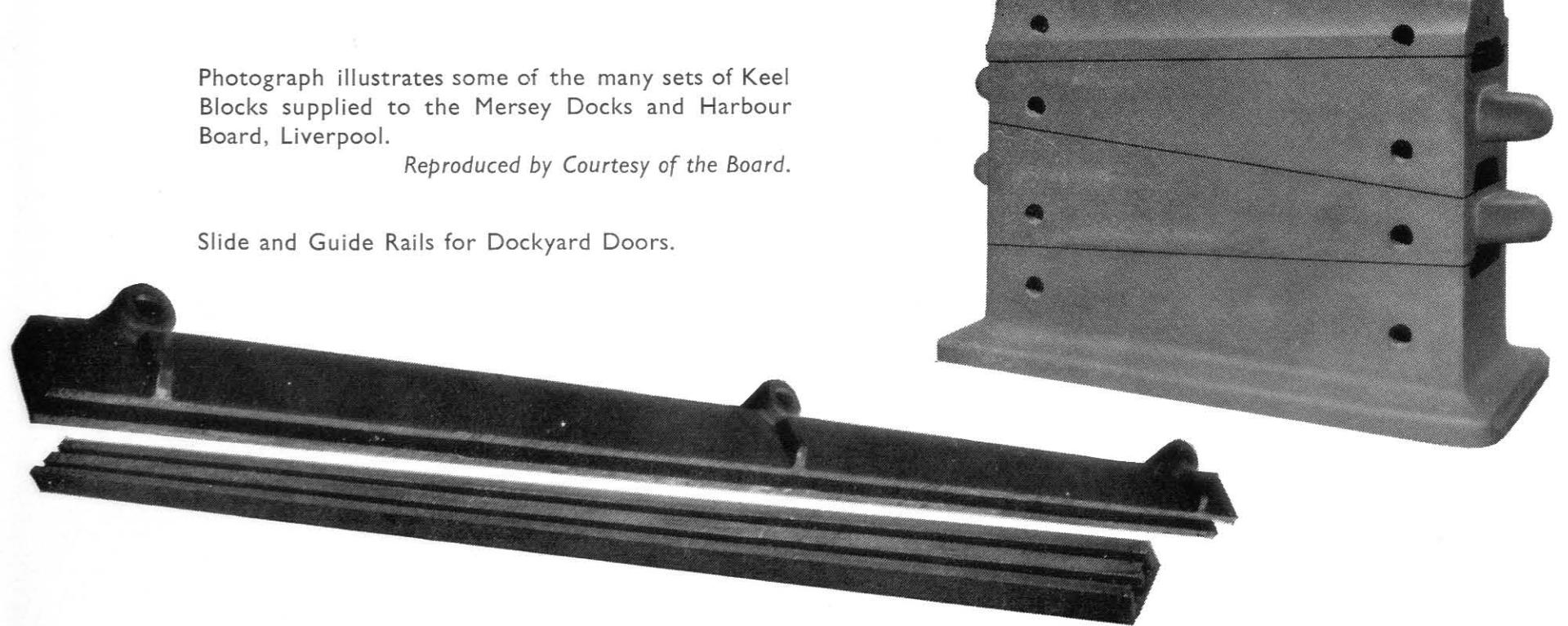
Consulting Engineers : T. F. Burns & Partners, London and Newcastle-on-Tyne.

Main Civil Engineering Contractors : Sir Robert McAlpine & Sons (Newcastle-on-Tyne) Ltd.

Photograph illustrates some of the many sets of Keel Blocks supplied to the Mersey Docks and Harbour Board, Liverpool.

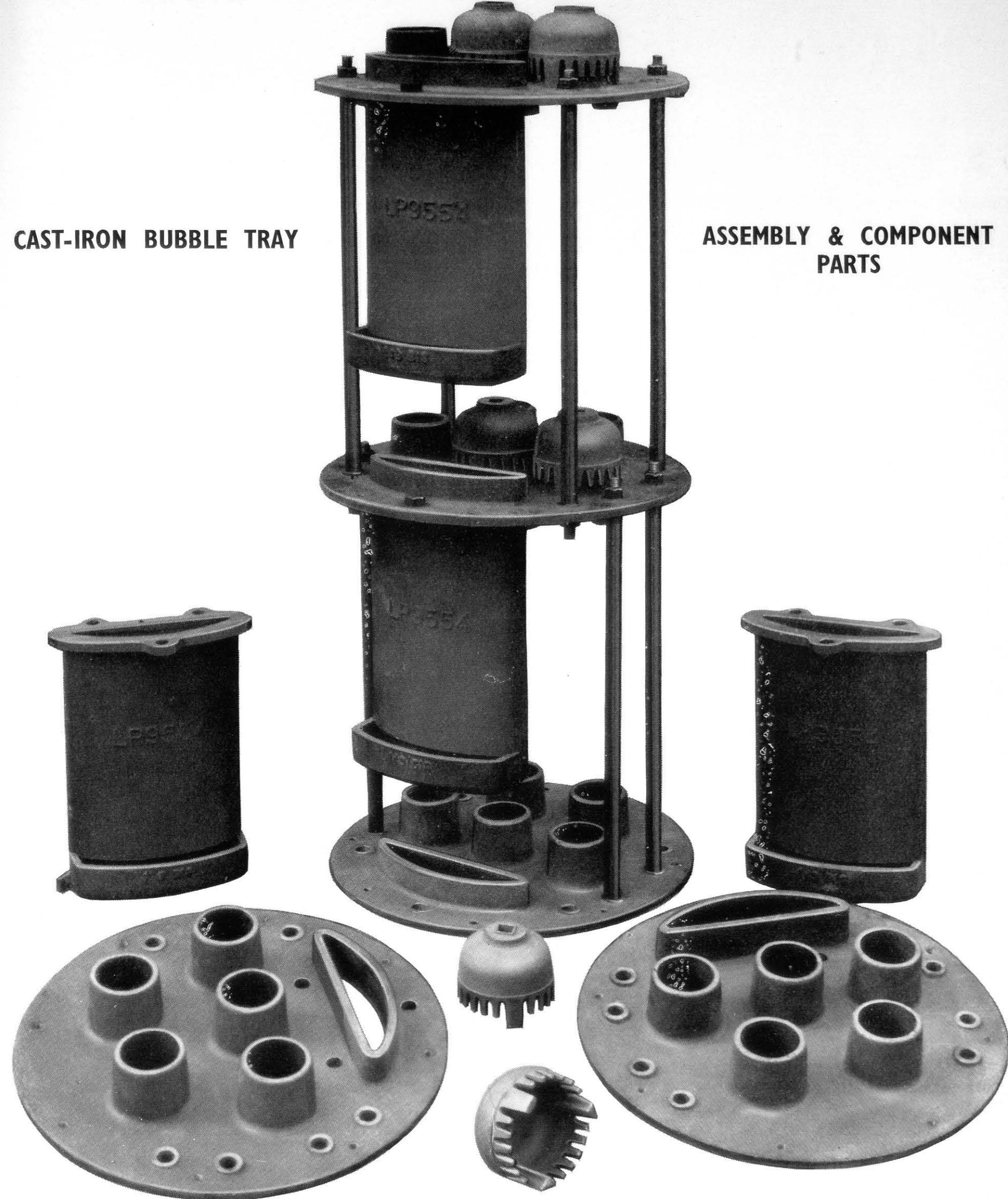
Reproduced by Courtesy of the Board.

Slide and Guide Rails for Dockyard Doors.

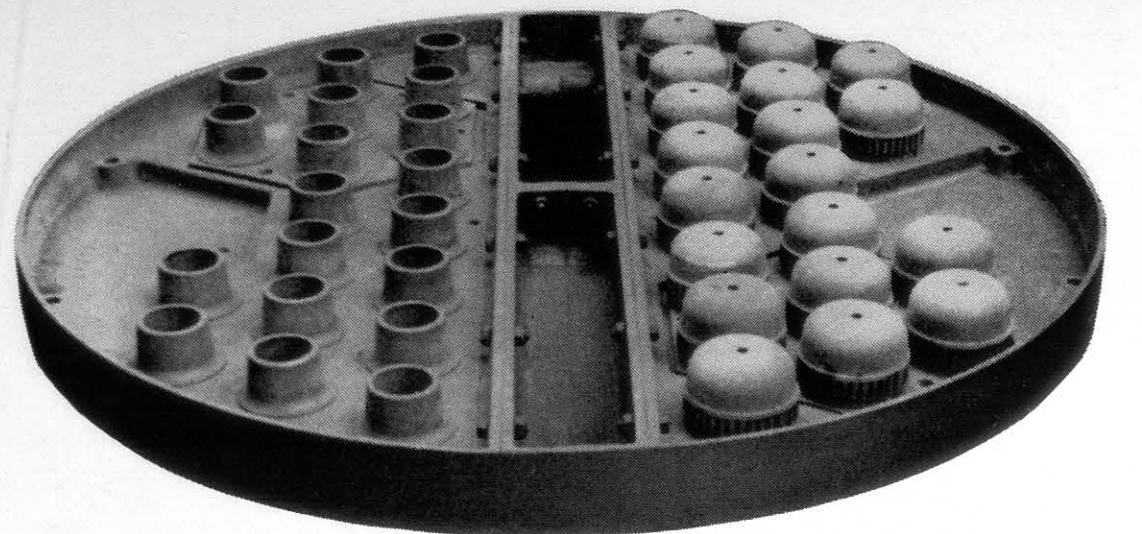


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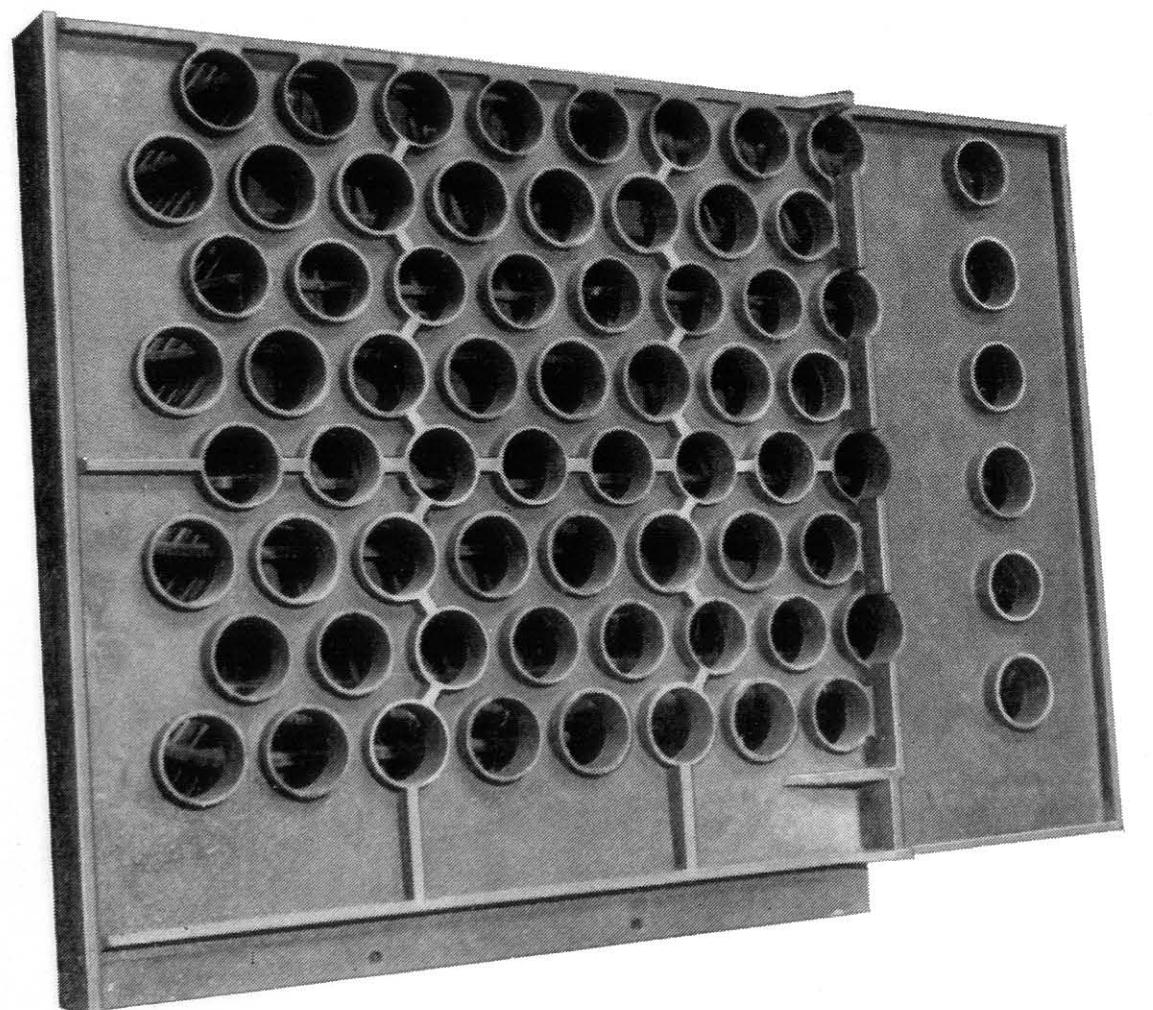
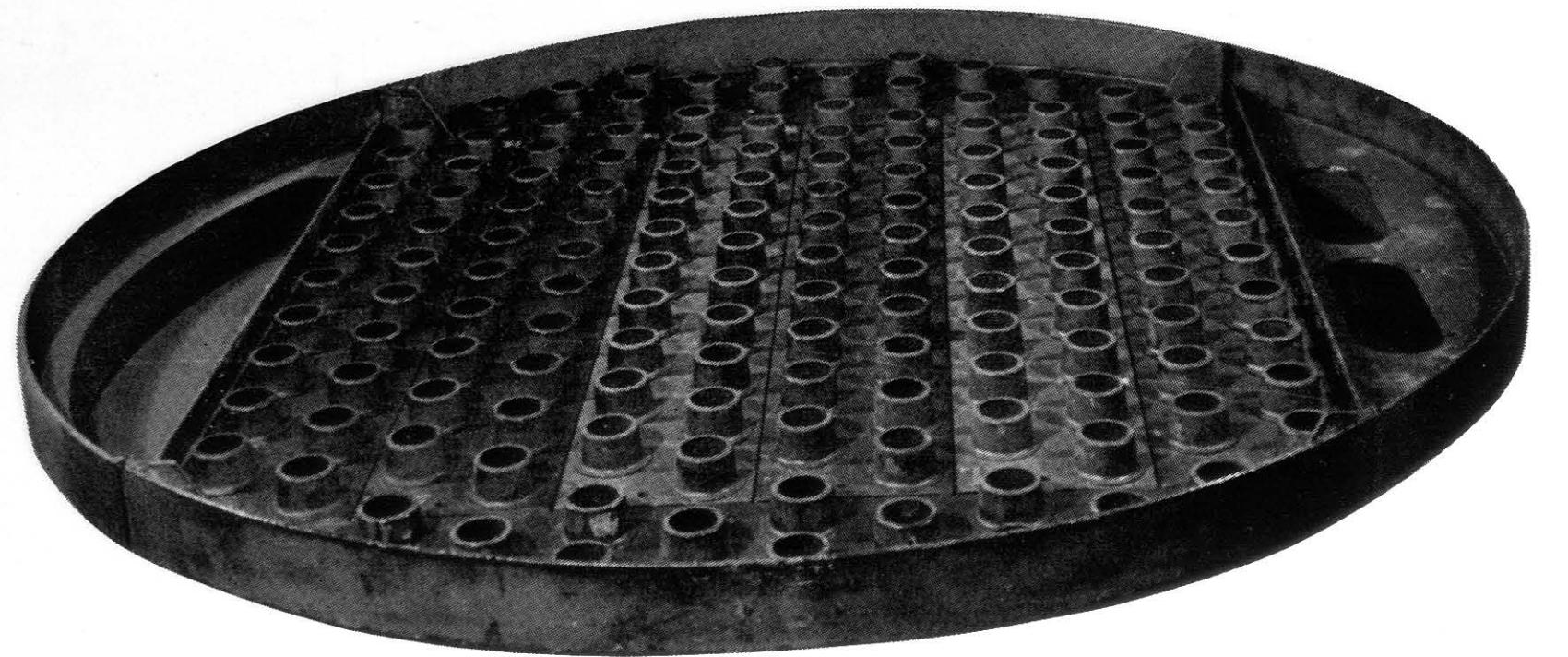
CAST-IRON BUBBLE TRAY



LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

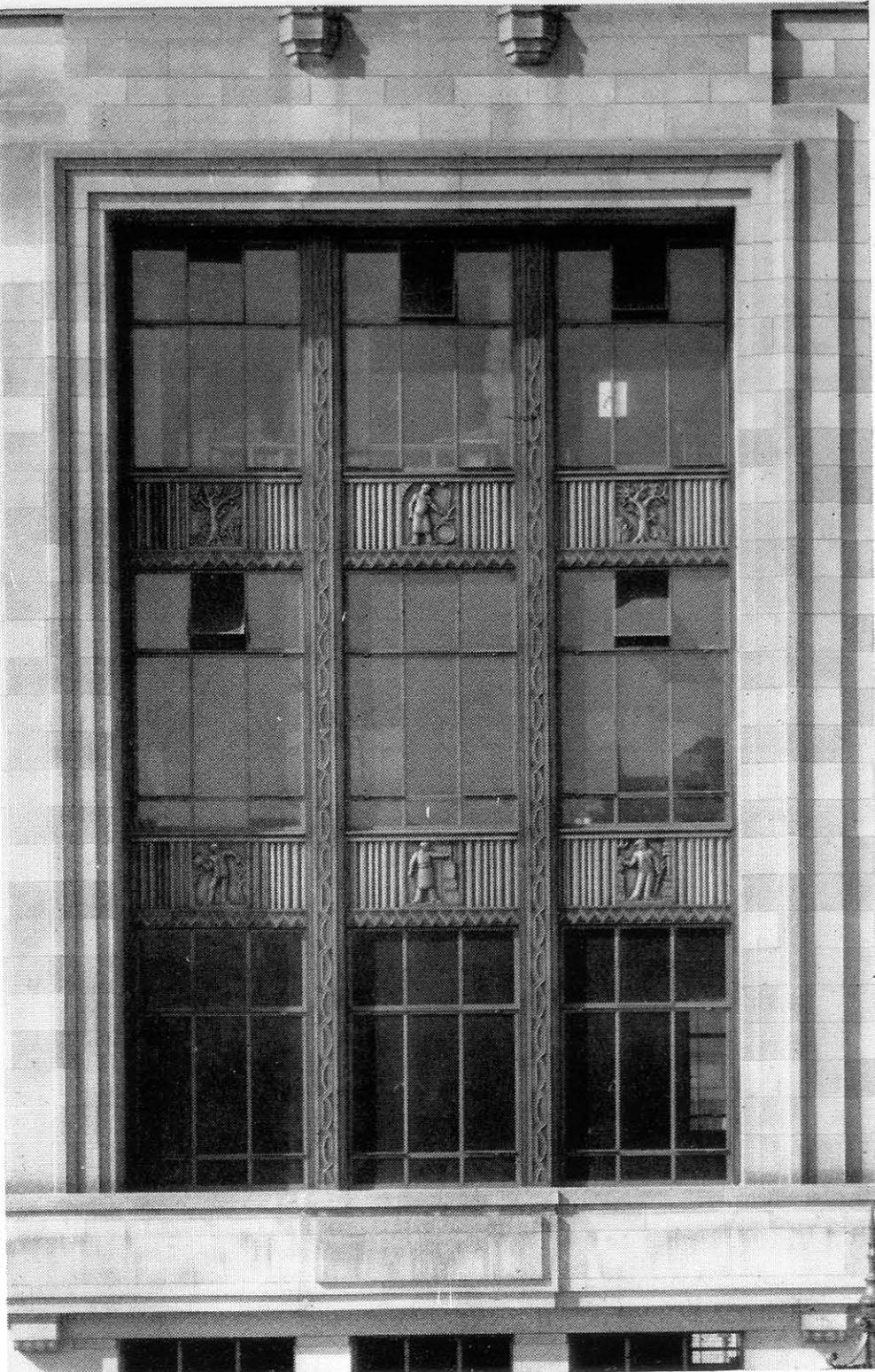


Typical Oil Bubble Trays with
Bubble Caps and Risers
as supplied to the Oil & Petroleum
Industry.



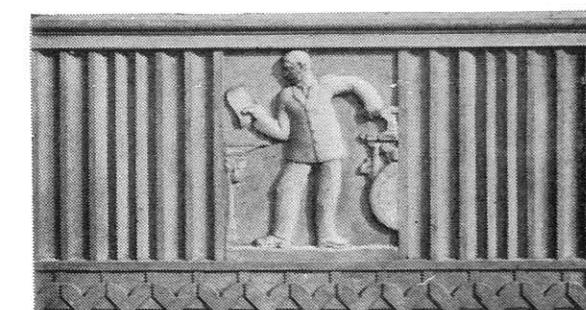
Convector End Tube Support.

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Lothian House,
Lothian Road,
Edinburgh.

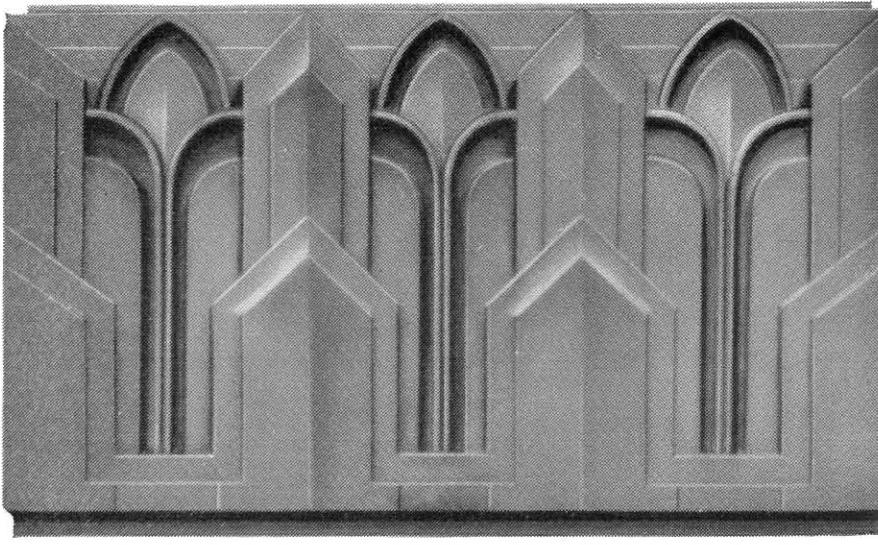
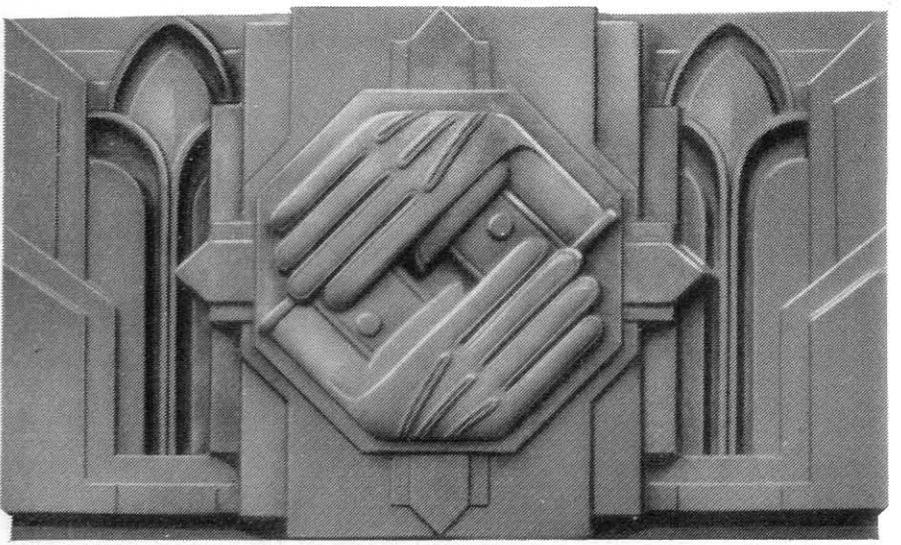
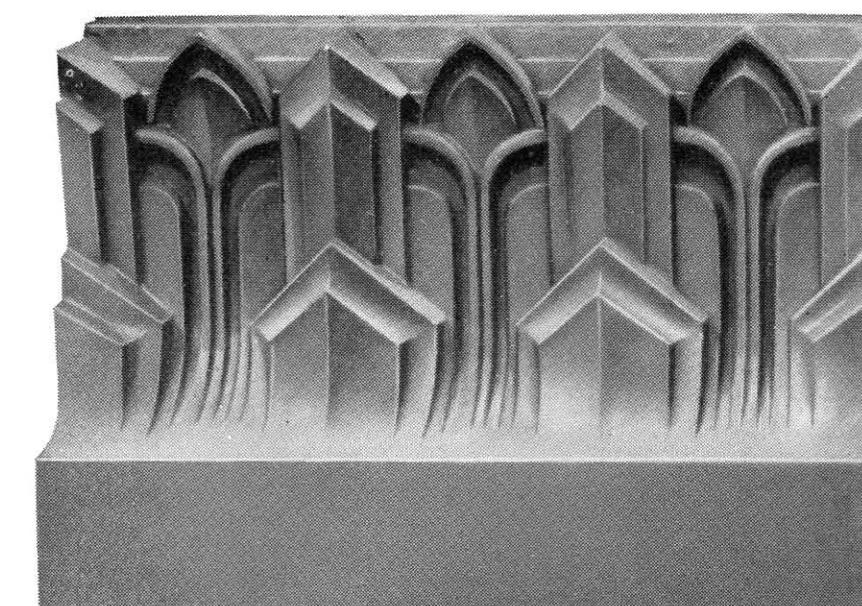
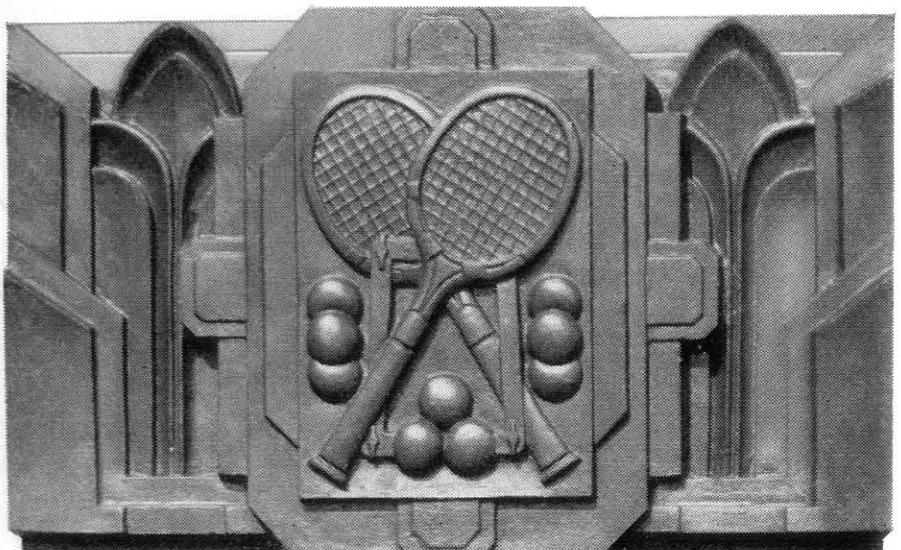
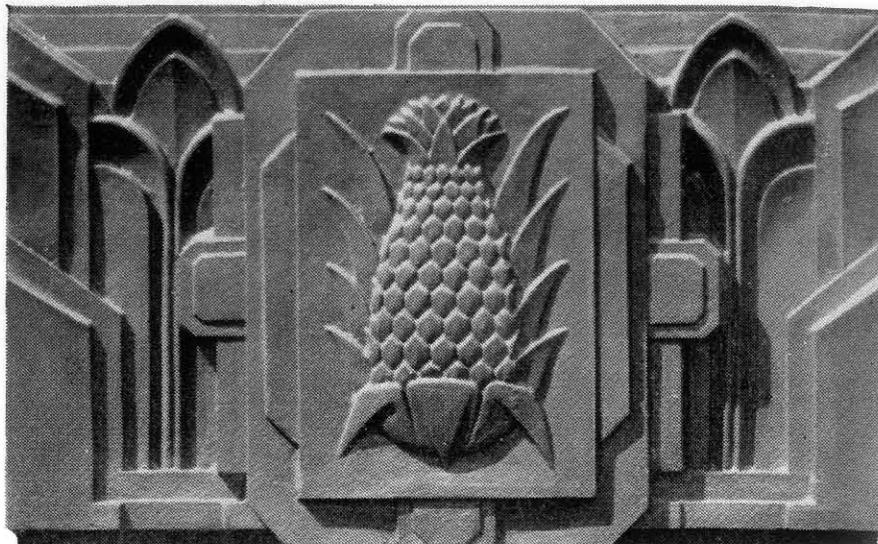
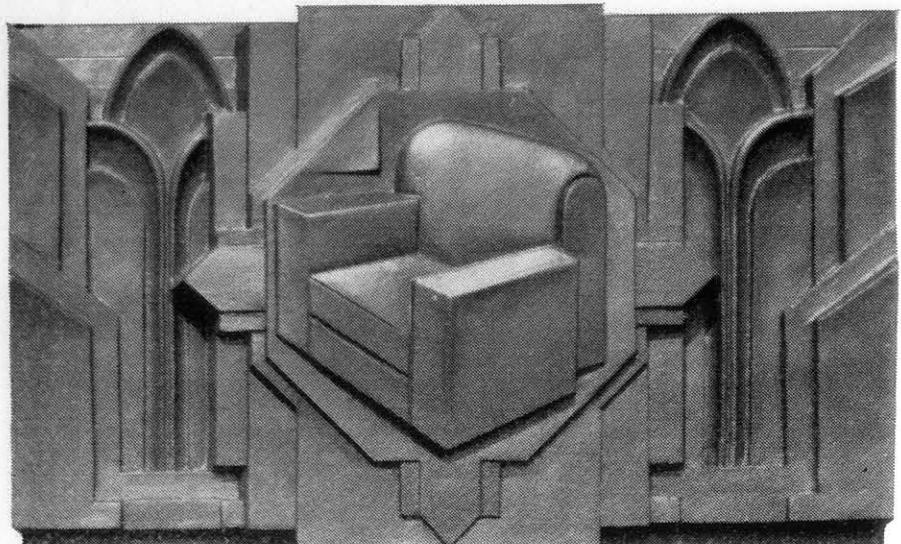
Architects :
Messrs Stewart, Kaye & Partners



LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

ORNAMENTAL AND "MOTIF" CAST-IRON BUILDING FRONT PANELS

As supplied and erected on the façade of a city building

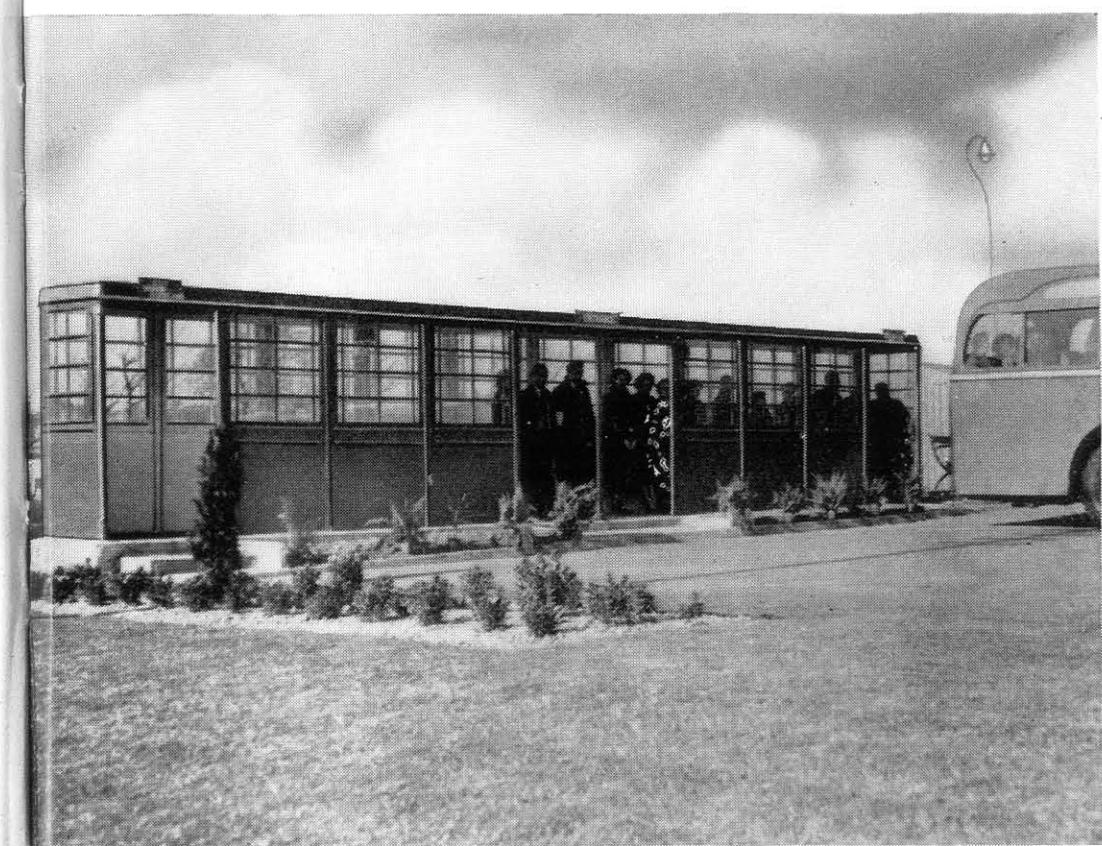


LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW



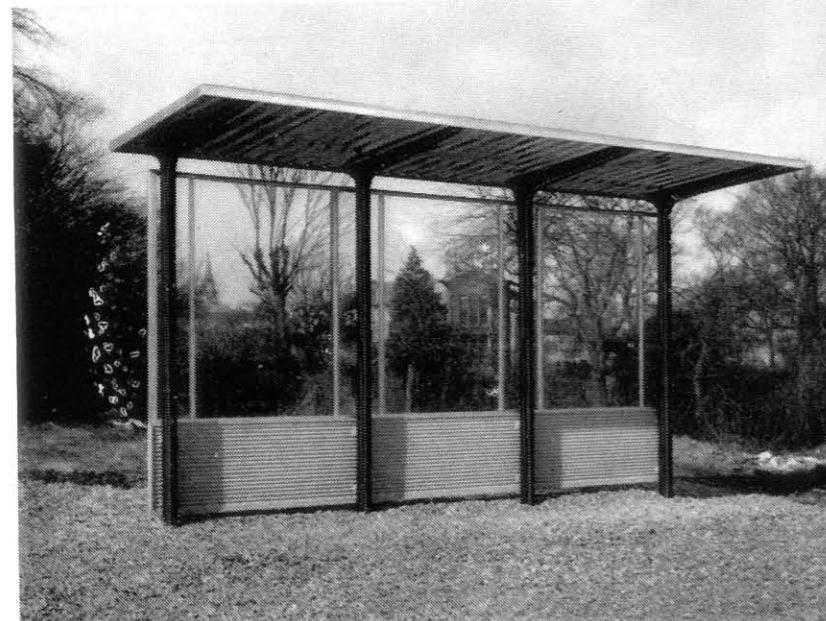
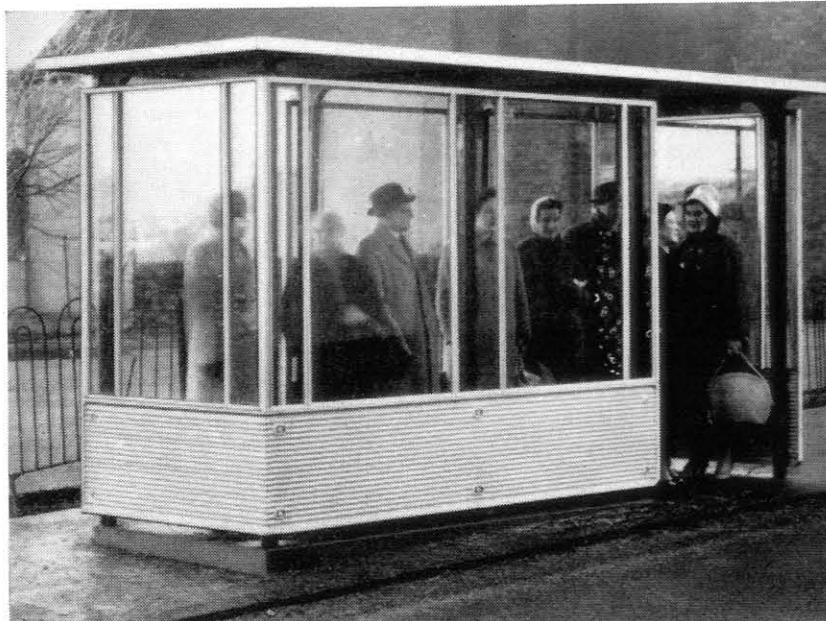
(Above)
88' 0" long x 5' 9" wide Shelter, Rothesay.

(Right)
15' 3" long Enclosed Bus Shelter designed by
David Mellor, Des. R.C.A., and approved by
the Council of Industrial Design.



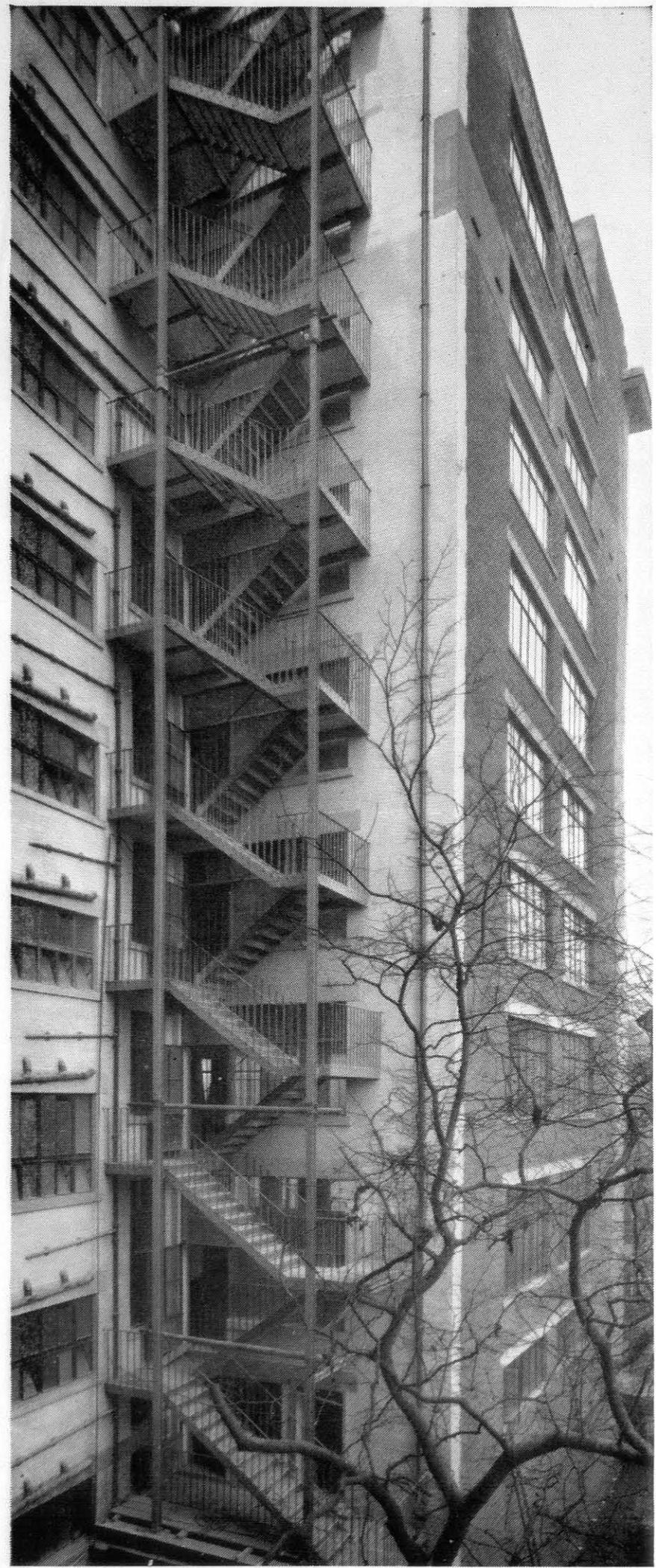
(Above)
40' 0" long Enclosed type Shelter at the Glaxo
Works, Barnard Castle, Co. Durham.

(Right)
15' 3" long Cantilever Shelter designed by
David Mellor, Des. R.C.A., and approved by
the Council of Industrial Design.



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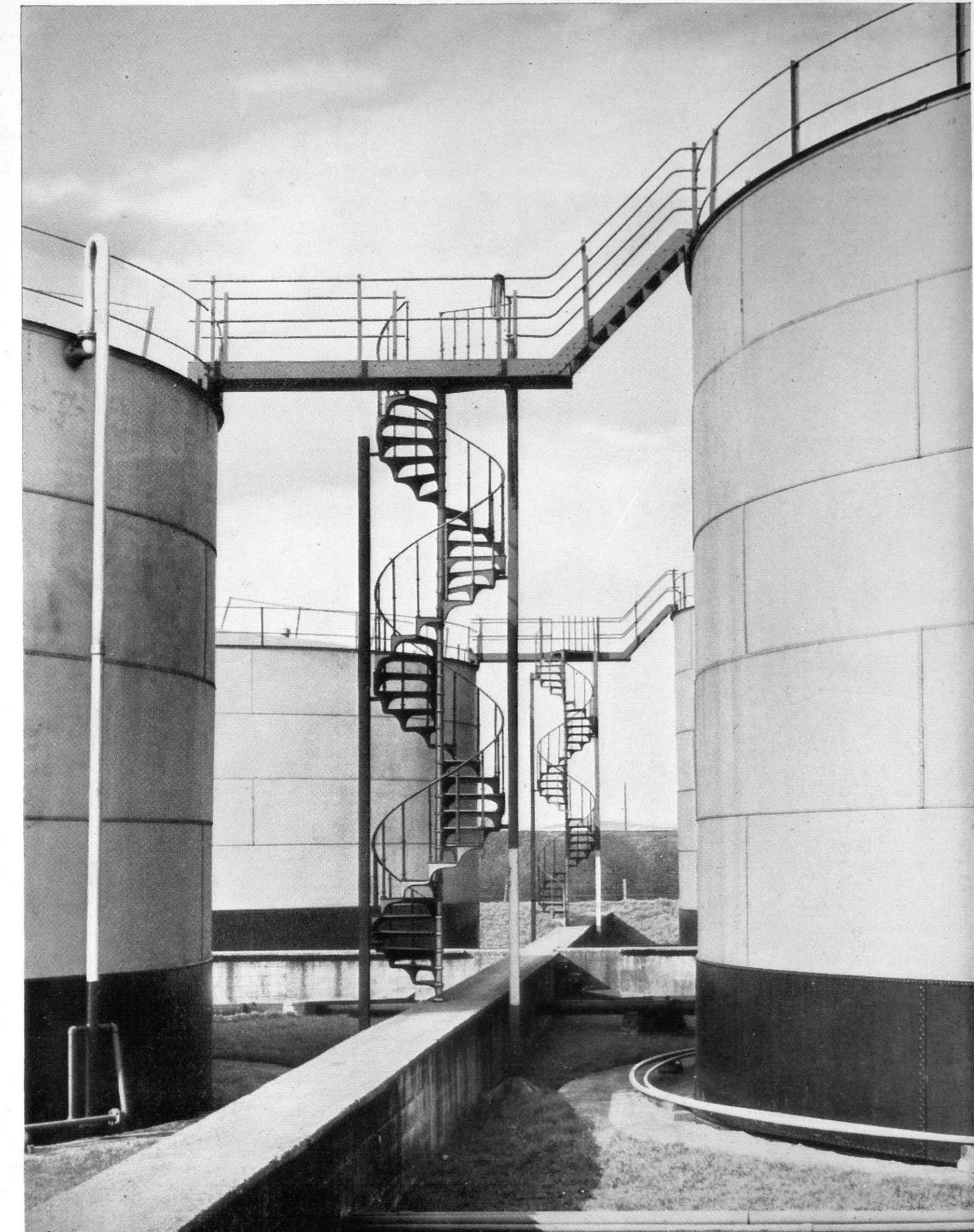
TYPICAL IRON FIRE-ESCAPE STAIRS



LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW



SPIRAL STAIRS AND GANGWAYS TO OIL STORAGE TANKS

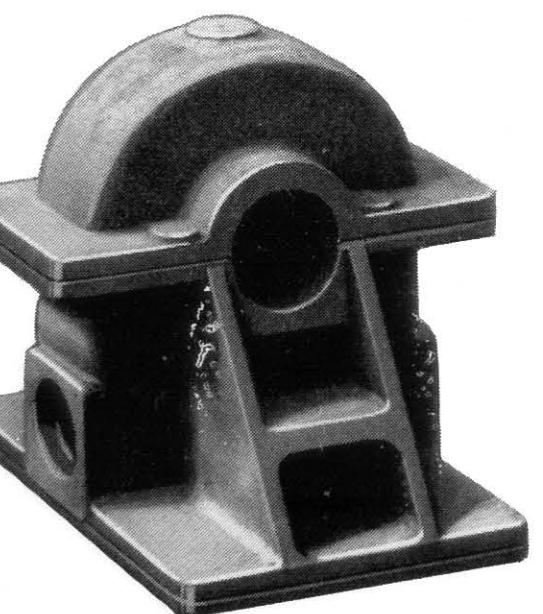


LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW

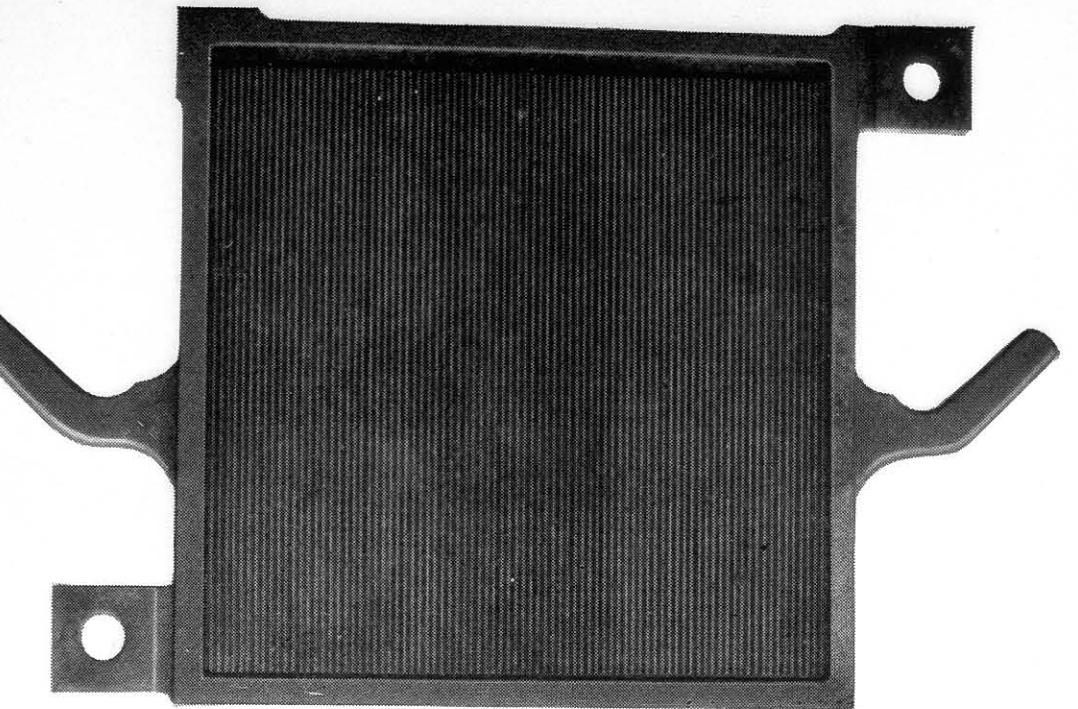
HIGH-GRADE CASTINGS



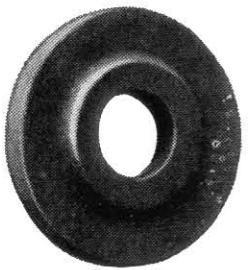
C.I. Machine Frame
6' 4" High x 3' 8" Wide Overall x 2" Deep



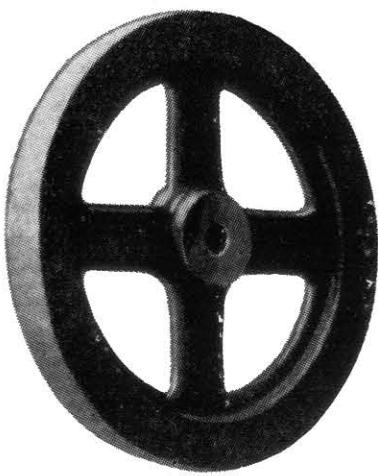
C.I. Gear Box
16 $\frac{3}{4}$ " x 14 $\frac{3}{4}$ " x 14 $\frac{1}{2}$ " Overall



C.I. Filter Press Plate
2' 11" x 2' 11" x 1 $\frac{1}{4}$ " Thick



C.I. Flange
2 $\frac{1}{4}$ " Bore x 7 $\frac{1}{4}$ " Diam. x 1 $\frac{3}{8}$ " Thick



C.I. Wheel
12 $\frac{3}{8}$ " Diam. x 1 $\frac{3}{8}$ " Thick

A selection from the
wide range of high-grade
castings made for the engineering
industry, from our own or
customers' patterns.

LION FOUNDRY CO. LTD., KIRKINTILLOCH, NEAR GLASGOW