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C1885 121209

THREE MEDALS-INTERNATIONAL HEALTH, 1884.

BRIGHTON HEALTH CONGRESS.







HAYWARD'S PATENT "SEMI-PRISM" PAVEMENT LIGHTS,

For Lighting Basements, Cellars, and Underground Apartments.



Basements can be made valuable Business Premises by using Hayward's Patent "Semi-Prism" Pavement Lights.

"HAYWARD'S PATENT LIGHTS, fixed five or six years since in front of my premises, Regent Street, throw a very good light into the basement. (Signed) "PETER ROBINSON."

"Our basement is lighted by HAYWARD'S PATENT PAVEMENT LIGHTS, the daylight being thrown 30 feet back, enabling the space to be utilised as counting-house, &c.

(Signed) "MARSHALL & SNELGROVE."

"The Hayward's Patent Semi-Prism Lights, supplied to Warwick House, Birmingham, have more than answered my expectations, and the value of the property is much enhanced.

(Signed) "JETHRO A. COSSINS, ARCHITECT."

"Warwick House, Birmingham.—We are pleased to inform you that the Pavement Lights supplied to our new premises give us entire satisfaction, and produce a better light than we ever anticipated.

(Signed) "HOLLIDAY, SON & Co."

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

THOMAS CLARKE.

Victoria Chambers, 55 & 56, Chancery Lane, W.C.

LONDON, Dec. 20, 1883.

Gentlemen,

Daildings Dam now constructing in Chancery Lane, some 1,500 feet super of Hayward's Patent "Demi Prism" Pavement Lights, and shall be obliged if you will be good enough to

send here for instructions for the same.

Having for some years used contrivances for giving extra light to Basements, I have no hesitation in stating that, after thoroughly examining the question, as to quality, ke., I am of opinion that your Demi Prism Lights give the best results. And it is owing to the satisfaction given by your work at Victoria Chambers and elsewhere, that I now ask you for the further supply. The passages of the lower ground floors in Victoria Chambers are open at all times to the inspection of Orchitects and others whom you may wish to send to inspect the results of your system in successful practical operation.

To Messes.

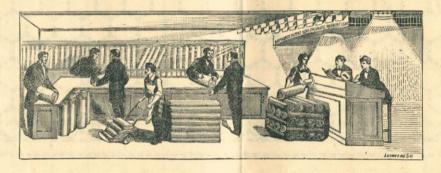
Yours faithfully, Thos. Clarke.

Hayward Brothers & Eckstein, Potent Pavement Light Works, Union St., Borough, London, S.E.

## DAYLIGHT VERSUS GAS IN BASEMENTS.



The above is a common state of things in many Basements, which can be made Valuable Business Premises by HAYWARD'S PATENT SEMI-PRISM PAVEMENT LIGHTS, as under:—



MESSRS. HAYWARD BROTHERS & ECKSTEIN call attention to HAYWARD'S Patent "Semi-Prism" Pavement and other Lights, Safety Illuminating Coal-hole Plates, &c., now so generally in use in London and all large towns, and in doing so they ask that Architects, Engineers, Builders, and others will judge for themselves the principal features of these Lights as to the following points:—

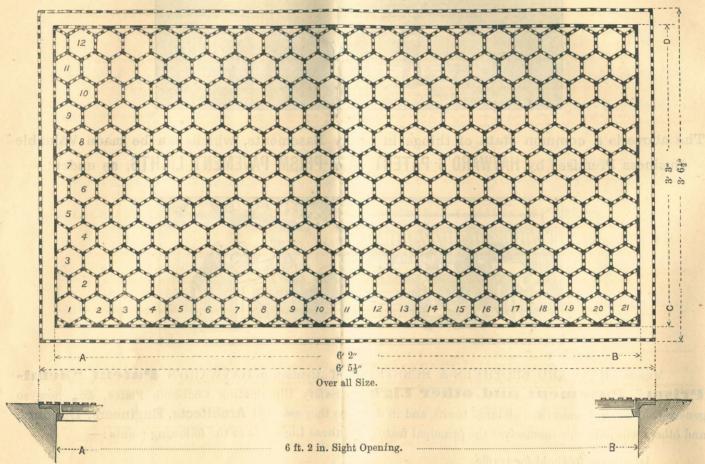
- 1st-Firm foothold for traffic.
- 2nd—That the clean upper surface of the Lenses does not hold dust, dirt, &c., and therefore the light passes through without obstruction.
- 3rd—To the remarkable quality of HAYWARD'S Patent "Semi-Prism Lenses" for gathering the light and reflecting it to the back portion of basement floors, which cannot be obtained in any other kind.
- 4th—The efficiency of Pavement Lights should be judged from underneath. Messrs. H. B. & E. have fixed in the front of their premises—Union Street—equal areas of several different descriptions of Lights now in use, all being subject to the same traffic, conditions of weather, &c.
- 5th—The Best Clear Flint Glass is used for the Lenses in these Lights.

Detailed Estimates on application for quantities.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

No. 3, "EDINBURGH" PATTERN. 3 in. HEXAGONAL LENSES.



STOCK SIZES—No. 3 PATTERN.—Frames always on hand, which can be glazed in two or three days.

Over all dimensions, including 13 in. flange all round.

Lenses in Front.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.
12 13 14 15	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 3\ 11\ \times 1\ 9\\ 4\ 2\frac{1}{2}\ ,,\ 1\ 9\\ 4\ 5\frac{3}{4}\ ,,\ 1\ 9\\ 4\ 9\frac{1}{4}\ ,,\ 1\ 9 \end{array}$	$\begin{array}{c} 3\ 11\ \times 2\ 0\\ 4\ 2\frac{1}{2}\ ,,\ 2\ 0\\ 4\ 5\frac{3}{4}\ ,,\ 2\ 0\\ 4\ 9\frac{1}{4}\ ,,\ 2\ 0 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 3\ 11\ \times 2\ 9\\ 4\ 2\frac{1}{2}\ ,,\ 2\ 9\\ 4\ 5\frac{3}{4}\ ,,\ 2\ 9\\ 4\ 9\frac{1}{4}\ ,,\ 2\ 9 \end{array}$
16 17 18	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 1 ,, 2 9 5 4½ ,, 2 9 5 8 ,, 2 9
Lenses in Depth }	4	5	6	7	8	9

No. 3 Pattern can be glazed as section B, C or CC; see pages 12 and 13. Prices, see pages 14 and 15.

Water Bars on back, and Ventilating Panels if required.

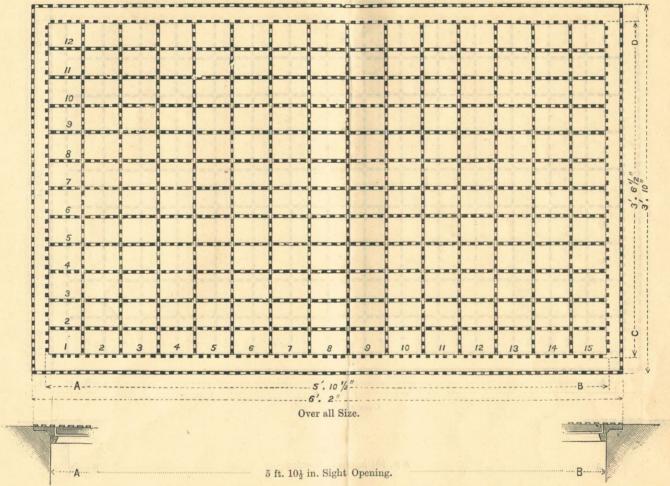
Any size made to order.

ESTIMATES ON APPLICATION.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

No. 2, "LONDON" PATTERN. 4 in. × 3 in. RECTANGULAR LENSES.



STOCK SIZES—No. 2 PATTERN.—Frames always on hand, which can be glazed in two or three days.

Over all dimensions, including 13 in. flange all round.

				100		100		3 1 61					,				100	2000	0			-	_	_	-	-	-	_	-	-	-	-	-	-
Lenses in Front.	ft. in.	ft.	in.	ft. in	. ft	in.	ft.	in.	ft. i	in.	ft.	in.	ft.	in.	ft. i	n.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
4 5 6 7	$\begin{array}{cccc} 1 & 10\frac{1}{2} \\ 2 & 3\frac{7}{2} \\ 2 & 8 \\ 3 & 0\frac{1}{2} \end{array}$	× 1 ,, 1 ,, 1	234034034034 224034034034	1 10 2 3 2 8 3 0	$\frac{1}{2} \times 1$ $\frac{1}{2}$ , 1 $\frac{1}{2}$ , 1	61 61 61 61 61	1 1 2 2 3	10½ × 3½ ,, 8 ,, 0½ ,,	1 9 1 9 1 9 1 9	934 934 943 943 943 943	1 1 2 2 3	$0\frac{1}{2} \times 3\frac{1}{2} \times 8 \times 0\frac{1}{2}$	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	14 14 14 14	1 1 2 2 3	0½ × 3½ × 8 ,, 0½ ,,	2 2 2 2	434 4434 4434 4434 4434 4434	1 1 2 2 3	10½ 3½ 8 0½	$\begin{array}{c} \times \ 2 \\ \times \ 2 \end{array}$	814 814 814 814 814	3	- 01/2	_ _ × 2	113						-		,
8 9 10 11	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	, 1 , 1 , 1	23 24 24 24 20 24 21 24 21	3 5 3 10 4 2 4 7	1	61	3 3 4 4	5½ ,, l0 ,, 2½ ,, 7¼ ,,	1 9 1 9 1 9	934 934 943 943 943 943	8 8 1 4 4	$5\frac{1}{2}$ , $0$ , $2\frac{1}{2}$ , $7\frac{1}{4}$ ,	, 2	1½ 1½ 1½ 1½ 1½	3 3 1 4 4	5½ ,, 0 ,, 2½ ,, 7¼ ,,	2 2 2 2	43434514514 44514514514 44514514514	8 1	10	,, 2 ,, 2 ,, 2 ,, 2	81 81 81 81 81	3 1	10	, 2	112	3 4	$ \begin{array}{c} 5\frac{1}{2} \\ 10 \\ 2\frac{1}{2} \\ 7\frac{1}{4} \end{array} $	, 3	8½ 3½	4	10 × 7½ ,	, 3	101
12 13 14 15	$   \begin{array}{ccccccccccccccccccccccccccccccccccc$	, 1 , 1 , 1	234514514514514 224514514514	5 0 5 4 5 9 6 2	,, 1 2 ,, 1 ., 1 ., 1	61 61 61 61 61	5 5 6	0 ,, 4½ ,, 9 ,, 2 ,,	1 9 1 9 1 9 1 9	934514514514514514514514514514514514514514	5 5 6	$0, \frac{41}{2}, \frac{9}{2}, \frac{9}{2},$	, 2	1\frac{1}{4} 1\frac{1}{4} 1\frac{1}{4} 1\frac{1}{4} 1\frac{1}{4}	5 5 6	$0, \frac{41}{2}, \frac{9}{2}, \frac{9}{2}$	2 2 2 2	43 43 43 43 43 43 43 43 43	5 5 5 6	$0 \\ \frac{41}{2} \\ 9 \\ 2$	,, 2 ,, 2 ,, 2 ,, 2	81 81 81 81 81 81	5	41	,, 2 ,, 2 ,, 2 ,, 2	113	5 5 5 6	$ \begin{array}{c} 0 \\ 4\frac{1}{2} \\ 9 \\ 2 \end{array} $	, 3	3\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	5 5 6	$0 \\ 4\frac{1}{2} \\ 9 \\ 2$	, 3	10¼ 10¼ 10¼ 10¼
Lenses in Depth	} 8	3	-		4		errode:	5				6		-		7				8	В			9		1111	THE STREET	1	0			1	2	

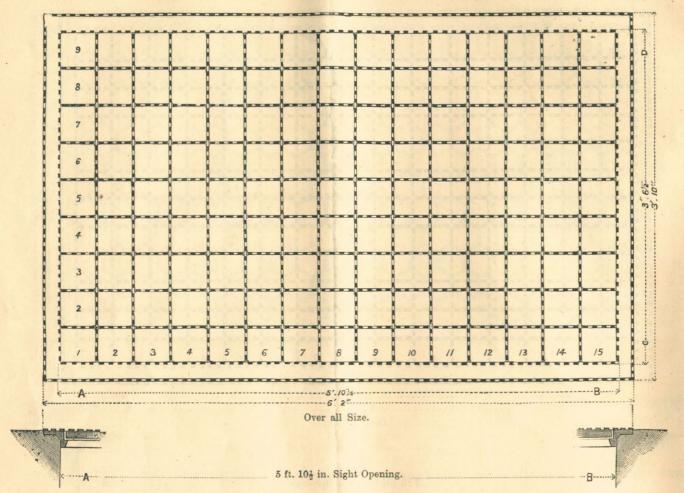
No. 2 Pattern can be glazed as section B, C, CC, or D; see pages 12 and 13. Prices, see pages 14 and 15.

Water Bars on back, and Ventilating Panels if required. Any size made to order. ESTIMATES ON APPLICATION.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,
UNION STREET, BOROUGH, LONDON, S.E.

No. 7 PATTERN. 4 in. × 4 in. LENSES.



STOCK SIZES—No. 7 PATTERN.—Frames always on hand, which can be glazed in two or three days.

Over all dimensions, including 12-in. flange all round.

Lenses in Front.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.
45 67	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
8 9 10 11	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 5\frac{1}{3}  \text{, 2 8\frac{1}{4}} \\ 5 10  \text{, 2 8\frac{1}{4}} \\ 4 2\frac{1}{3}  \text{, 2 8\frac{1}{4}} \\ 4 7\frac{1}{4}  \text{, 2 8\frac{1}{4}} \\ 6 \text{, 2 8\frac{1}{4}} \\ 7 \frac{1}{4}  \text{, 2 8\frac{1}{4}} \\ 6 \text{, 3 8 8\frac{1}{4}} \\ 6 , 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
12 13 14 15	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 0 ,, 2 8\frac{1}{5} \frac{41}{2} ,, 2 8\frac{1}{4} \frac{1}{5} \frac{9}{2} ,, 2 8\frac{1}{4} \frac{1}{5} \frac{9}{2} ,, 2 8\frac{1}{4}	5 0 ,, 8 10½ 5 4½ ,, 8 10½ 5 9 ,, 8 10½ 6 2 ,, 8 10½
Lenses in Depth	8	6	9

No. 7 Pattern can be glazed as section B, E, EE, CC, C or D; see pages 12 and 13.

Water Bars on back, and Ventilating Panels if required.

Any size made to order.

D; see pages 12 and 13. Prices, see pages 14 and 15.

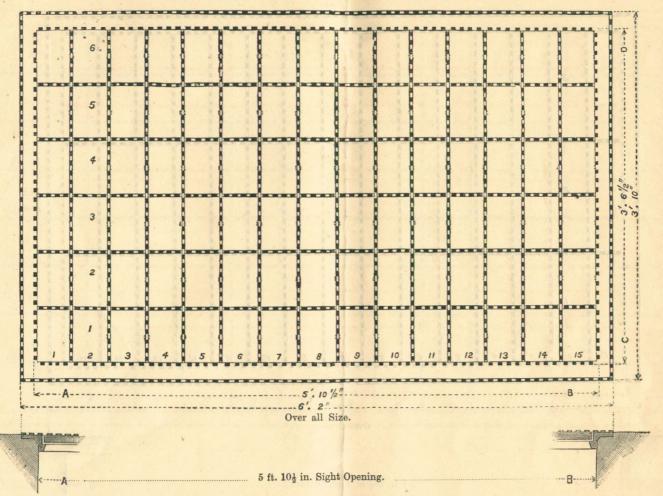
Any size made to order. ESTIMATES ON APPLICATION.

No. 7 Pattern Frames can be made with smooth top instead of projections for inside floors.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

No. 4, "MANCHESTER" PATTERN. 4 in. × 6 in. LENSES.



STOCK SIZES—No. 4 Pattern.—Frames always on hand, which can be glazed in two or three days.

Lenses. Over all dimensions, including 13-inch flange all round.

Lenses in Front.	ft. in. ft. in.				
4 5 6 7	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
8 9 10 11	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
12 13 14 15	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Lenses in Depth	2	3	4	5	6

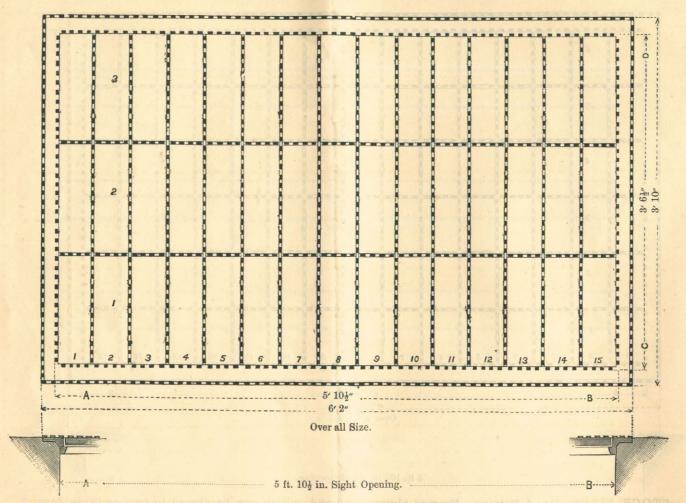
No. 4 Pattern can be glazed as sections B, K, E, C, CC, or D; see pages 12 and 13. Prices, see pages 14 and 15.

Water Bars on back, and Ventilating Panels if required. Any size made to order. ESTIMATES ON APPLICATION.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

No. 5, "REGULATION" PATTERN. 4 in.  $\times$  13½ in.



STOCK SIZES—No. 5 PATTERN.—Frames always on hand, which can be glazed in two or three days.

Over all dimensions, including 13 flange all round.

Lenses in Front.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.					
4 5 6 7	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 0½ ,, 2 11¾		E
8 9 10 11	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
12 13 14 15	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 0 ,, 2 8\frac{1}{5} \frac{4\frac{1}{2}}{5} \frac{1}{2} \frac{1}{2} \frac{1}{8} \frac{1}{4} \frac{1}{4} \frac{1}{2} \frac{1}{8} \frac{1}{4} \frac{1}{4} \frac{1}{2} \frac{1}{2} \frac{1}{8} \frac{1}{4} \frac{1}{4} \frac{1}{2} \frac{1}{2} \frac{1}{4} \frac{1}{4} \frac{1}{2} \frac{1}{4} \frac{1}{	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 0 ,, 8 10\frac{1}{2} 5 4\frac{1}{2} ,, 8 10\frac{1}{2} 5 9 ,, 8 10\frac{1}{2} 6 2 ,, 8 10\frac{1}{2}
	Andrew Property	1				2			3

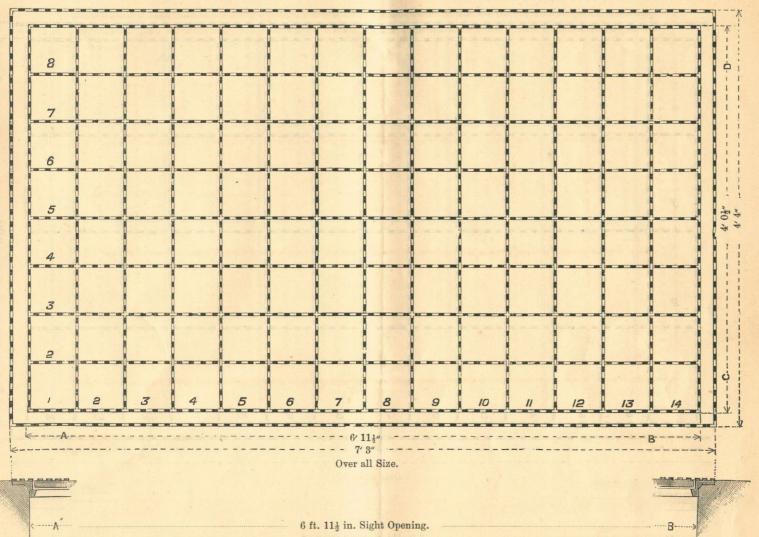
No. 5 Pattern can be glazed as section K, C or D; see pages 12 and 13. Prices, see pages 14 and 15.

Water Bars on back, and Ventilating Panels if required. Any size made to order. Estimates on Application.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

No. 8 PATTERN. 51 in. × 51 in. LENSES.



STOCK SIZES—No. 8 Pattern.—Frames always on hand, which can be glazed in two or three days.

Over all dimensions, including 13 in. flange all round.

Lenses in Front	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.
6 7 8	3 4 × 1 4 3 10 ,, 1 4 4 4 ,, 1 4	8 4 × 1 10 3 10 ,, 1 10 4 4 ,, 1 10	.8 4 × 2 4 8 10 ,, 2 4 4 4 ,, 2 4	3 4 × 2 10 3 10 ,, 2 10 4 4 ,, 2 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	4 4 × 4 4	一
9 10 11	4 10 ,, 1 4 5 4 ,, 1 4 5 10 ,, 1 4	4 10 ,, 1 10 5 4 ,, 1 10 5 10 ,, 1 10	4 10 ,, 2 4 5 4 ,, 2 4 5 10 ,, 2 4	4 10 ,, 2 10 5 4 ,, 2 10 5 10 ,, 2 10	4 10 ,, 3 4 5 4 ,, 3 4 5 10 ,, 8 4	4 10 ,, 4 4 5 4 ,, 4 4 5 10 ,, 4 4	5 4×5 4
12 13 14	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6 4 ,, 1 10 6 9 ,, 1 10 7 8 ,, 1 10	6 4 ,, 2 4 6 9 ,, 2 4 7 8 ,, 2 4	6 4 ,, 2 10 6 9 ,, 2 10 7 8 ,, 2 10	6 4 ,, 3 4 6 9 ,, 3 4 7 3 ,, 3 4	6 4 ,, 4 4 6 9 ,, 4 4 7 8 ,, 4 4	6 4 × 5 4
Lenses in Depth	2	3	4	5	6	8	10

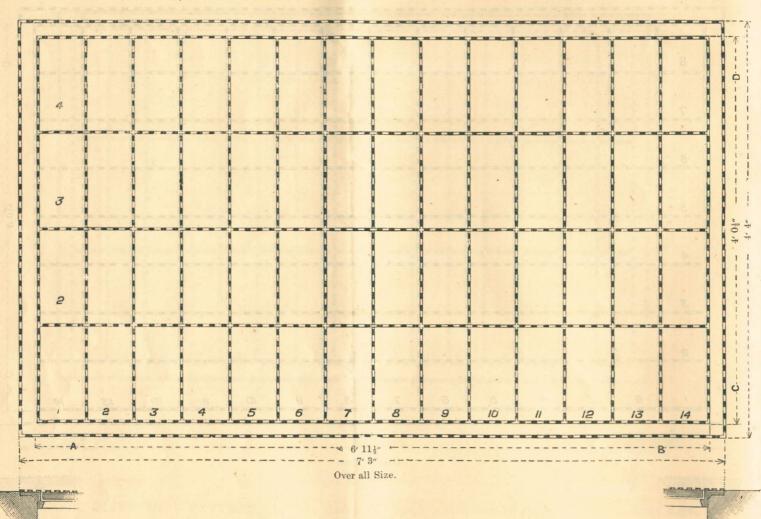
No. 8 Pattern can be glazed as section K, EE, E, or D; see pages 12 and 13. Prices, see pages 14 and 15. Water Bars on back, and Ventilating Panels, if required. Any size made to order. Estimates on Application. No. 8 Pattern Frames can be made with smooth top instead of projections, for inside floors.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS, UNION STREET, BOROUGH, LONDON, S.E.

# PAVEMENT, AREA, AND FLOOR LIGHTS.

No. 9, "SUBURBAN" PATTERN. 54 in. × 114 in. LENSES.



6 ft. 11½ in. Sight Opening

STOCK SIZES-No. 9 Pattern.—Frames always on hand, which can be glazed in two or three days.

Over all dimensions, including 13 in. flange all round.

Lenses in Front.	ft. in.	ft	i. in.		ft. in.		ft. i	n.	ft. in. ft. in.	ft. in. ft. in.	ft, in. ft. in
6 7 8	3 4 3 10 4 4	× :	1 4 1 4 1 4		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	× 21	2 2 2	4 4 4	3 4 × 3 4 3 10 ,, 3 4 4 4 ,, 3 4	4 4 × 4 4	=
9 10 11	4 10 5 4 5 10	)1 1)	1 4 1 4 1 4		4 10 5 4 5 10	)) ))	2 2 2	4 4 4	4 10 ,, 3 4 5 4 ,, 3 4 5 10 ,, 3 4	4 10 ,, 4 4 5 4 ,, 4 4 5 10 ,, 4 4	5 4 × 5 4
12 13 14	6 4 6 9 7 3	"	1 4 1 4 1 4	8	6 4 6 9 7 3	92 22 11	2 2 2	4 4 4	6 4 ,, 3 4 6 9 ,, 3 4 7 3 ,, 3 4	6 4 ,, 4 4 6 9 ,, 4 4 7 3 ,, 4 4	6 4 × 5 4
Lenses in Depth	}	1	oier	7.60	Stan	2	or all	4.0	3	4	5

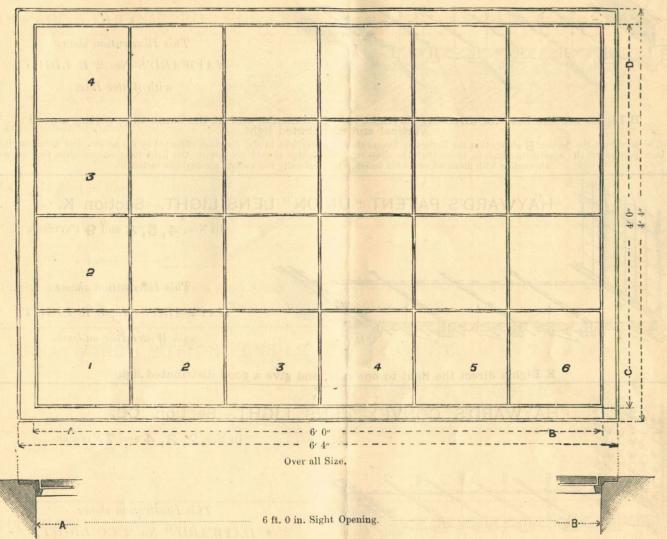
No. 9 Pattern can be glazed as section K, E or D; see pages 12 and 13. Prices, see pages 14 and 15. Water Bars on back, and Ventilating Panels if required. Any size made to order. ESTIMATES ON APPLICATION.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS, UNION STREET, BOROUGH, LONDON, S.E.

## HAYWARD'S PATENT AREA AND FLOOR LIGHTS.

No. 10, FLOOR LIGHT PATTERN. 111 in. × 111 in. LENSES.



Trim Floors to even feet

STOCK SIZES-No. 10 PATTERN.-Frames always on hand, which can be glazed in two or three days.

Lenses in Front.	ft. in.	ft. in	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.	ft. in. ft. in.
234456	2 4 × 3 4 ,, 4 4 ,, 5 4 ,, 6 4 ,,	1 4 1 4 1 4 1 4 1 4	2 4 × 2 4 3 4 ,, 2 4 4 4 ,, 2 4 5 4 ,, 2 4 6 4 ,, 2 4	3 4 × 3 4 4 4 ,, 3 4 5 4 ,, 3 4 6 4 ,, 3 4	4 4 × 4 4 5 4 ,, 4 4 6 4 ,, 4 4	5 4 × 5 4 6 4 ,, 5 4
Lenses in Depth	1		2	3	4	5

No. 10 Pattern can be glazed as section E or D; see pages 12 and 13. Prices, see pages 14 and 15. Estimates on Application.

No. 10 Pattern Frames are made with smooth top for inside floors.

#### HAYWARD BROTHERS & ECKSTEIN,

· PATENT PAVEMENT LIGHT WORKS,

### SECTIONS-HAYWARD'S LIGHTS. For PAVEMENTS, AREAS, FLOORS, ROOFS, PLATFORMS, &c.

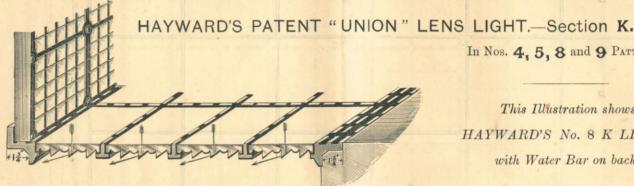
HAYWARD'S PATENT SEMI-PRISM LIGHT .- Section B.

In Nos. 2, 3, 4 and 7 Patterns.

This Illustration shows HAYWARD'S No. 2 B LIGHT, with Water Bar.

B Lights are the best for directing daylight into Basements, and at the same time giving a good vertical and distributed light.

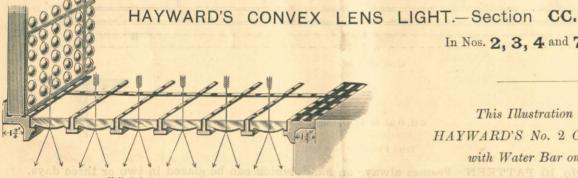
It will be seen from the Section B above, that the Reflecting Lenses throw the daylight in the direction indicated by the arrows, and distribute it over the back portion of the apartment; and, in order that the deep reflecting lenses should not impede the light from one another, they are glazed alternately with diamond or convex lenses, which intensify and radiate the daylight vertically.



In Nos. 4, 5, 8 and 9 PATTERNS.

This Illustration shows HAYWARD'S No. 8 K LIGHT, with Water Bar on back.

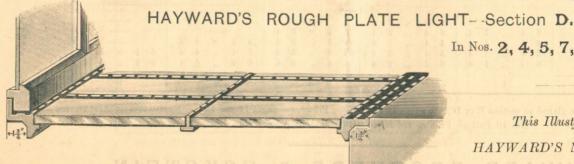
K Lights direct the light to one side, and give a good distributed light.



In Nos. 2, 3, 4 and 7 Patterns.

This Illustration shows HAYWARD'S No. 2 CC LIGHT, with Water Bar on back.

CC Lights are used where the best overhead or direct down light is required.



In Nos. 2, 4, 5, 7, 8, 9 & 10 PATTERNS.

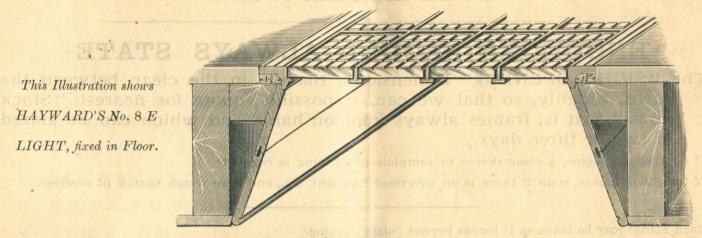
This Illustration shows HAYWARD'S No. 5 D LIGHT, with Water Bar at back.

PRICES, see pages 14 and 15.

D Lights are used where a good overhead light is required, with neatness and economy.

# SECTIONS—HAYWARD'S LIGHTS, PAVEMENTS, AREAS, FLOORS, ROOFS, PLATFORMS, &c.

HAYWARD'S CHECKERED LENS LIGHT .- Section E. In Nos. 4, 7, 8, 9 and 10 PATTERNS.



E Lights are used in floors where a good direct and fairly distributed light is required. They are very neat in appearance, and pleasant to the feet.

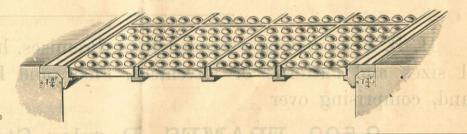
#### HAYWARD'S BUTTON LENS LIGHT.—Section EE. In Nos. 7 or 8 Patterns.

This Illustration shows

HAYWARD'S No. 8 EE

Light, fixed in Floor or

Curbs.



HAYWARD'S DIAMOND LENS LIGHT.—Section C. In Nos. 2, 3, 4, 5 and 7 PATTERNS.

This Illustration shows

HAYWARD'S No. 2 C

LIGHT, fixed in Ordinary

Floor.



PRICES, see pages 14 and 15.

#### HAYWARD BROTHERS & ECKSTEIN

PATENT PAVEMENT LIGHT WORKS,

#### ORDERS SHOULD STATE-

The NUMBER of Pattern and INITIAL LETTER of Section selected.—See pages 12 & 18. The Size, whether "SIGHT OPENING" or "OVER ALL."

The direction in which the light is required to be reflected.

Also whether the Water Bar is wanted along the back, and if any ventilation is required.

ANY SIZE CAN BE MADE TO ORDER.

### ENQUIRIES SHOULD ALWAYS STATE-

The "SIGHT OPENING" Dimensions, that is, in the clear between the curbs, roughly, so that we can, if possible, quote for nearest "Stock Sizes," that is, frames always kept on hand, and which can be glazed in two or three days.

If of irregular shape, a clear sketch or template of opening is requisite.

If for Floor Lights, state if there is an overhead Skylight, &c., and give rough sketch of position.

Each Flange may be taken as 13 inches beyond "sight opening."

It is recommended to cut the rebates of curbs after the Light is at site; 2 inches on by \( \frac{3}{4} \) inches deep is required. The Flanges rest on the curb-stone and are bedded in Portland cement.

The Lights are complete in themselves, and require Bearings on three sides only.

When the Lights have to be in two parts, it is better to arrange to carry them by a tranverse bearer under joint, if possible, than by a longitudinal bearer along the back.

H. B. & E., having extended their Premises, have a complete stock of all sizes and Patterns of Pavement, Floor and Roof Lights always on hand, comprising over

## 2,500 FRAMES, Regular Stock Sizes, and 400 ODD FRAMES.

These are well worth inspection, as H. B. & E. can now complete orders for their Patent and other Lights in two or three days, from "Stock Sizes," and at a saving of about 15 per cent.

#### SPECIAL QUOTATIONS FOR QUANTITIES AND ESTIMATES ON APPLICATION.

Also Prices for Mosaic, Granite Face, and Tile Lights, Roadway Lights, Opening Flaps, and Vertical Stall Board Lights.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS.

Per Foot Super.

## PRICE LIST

## HAYWARD'S PATENT LIGHTS.

Prices per foot super over all, at our Works, fitted ready for fixing.

\* "Stock Sizes," that is, Frames always kept on hand, and which can be glazed in two or three days on receipt of order.

	1011	oot baper.
No. 2 D, 4 D, 5 D, 7 D,  8 D, 9 D and 10 D Hayward's Rough-plate Lights -	*Stock Sizes. 5/0	Made to Order
No. 2 C, 3 C, 4 C, 5 C, 7 C Hayward's Diamond (underside) Lens Lights No. 2 CC, 3 CC, 4 CC, 7 CC Hayward's Convex (underside) Lens Lights	OU	7/6
No. 4 E, 7 E, 8 E Hayward's Checkered (top) Lens Lights No. 7 EE, 8 EE Hayward's Button (top) Lens Lights	7/0	8/6
No. 9 E and 10 E Hayward's Checkered (top) Lens Lights	8/0	9/6
No. 4 K, 5 K, 8 K, 9 K Hayward's Patent "Union" Lens Lights -	8/6	10/0
No. 3 B, 4 B, 7 B Hayward's Patent "Semi-prism" Lens Lights -	10/6	12/0
No. 2 B Hayward's 4 × 3 Patent "Semi-prism" Lens Lights -	9/6	11/0

The Numbers 2, 3, 4, 5, &c., refer to the Pattern of Frame. See pages 4, 5, 6, 7, 8, 9, 10 and 11.

The Initial Letters B, C, D, &c., refer to the description of Glazing. See pages 13 and 14.

Prices for Mosaic, Granite Face, and Tile Lights, Roadway Lights, Opening Flaps (see page 16), and Vertical Stall Board Lights (see pages 12 and 20), on application.

Opening Flaps (see page 16), with or without	Guttere	ed	Curb	Fram	nes, r	per fo	ot su	per	18- A L 41	100
extra to shove prices			A de la trans		***	***		**	0/0	10/0
Equilibrium Opening Lights (see page 17)						••	- 1.		10/0	12/0
Rolling Lights (see page 18)						mai 3			10/0	12/0
Rolling and Tip Up Lights (see page 19) Water Bars on back of Lights (see page 12), to	••			··		ok	••	,	ner foot run	6d.
Water Bars on back of Lights (see page 12), by	o prevent v	V 26 DE	i rummir	18 Over	the ba	OH			Por Jose I	04.

"SPECIAL."-3-in. Rough Plate Glass cut to Sizes.

PRICES SUBJECT TO ALTERATIONS WITHOUT NOTICE.

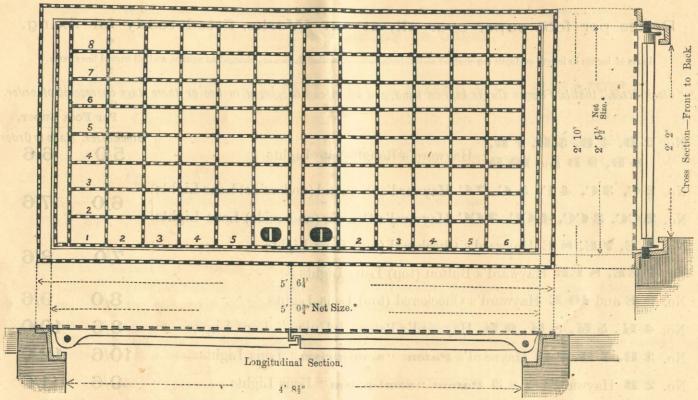
SPECIAL QUOTATIONS FOR QUANTITIES. ESTIMATES ON APPLICATION.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENTEES & MANUFACTURERS,

## HAYWARD'S IMPROVED GLAZED CELLAR FLAPS.

No. 2, or "LONDON" PATTERN. - 4 in. × 3 in. LENSES."



The Illustration shows a Pair of Flaps in a Guttered Curb Frame all round. This frame can be made on the front and each end only, so that the back is open for clearance of bulky packages if required. A hole is drilled and tapped in lowest front corner to attach pipe to drain.

These Flaps are usually glazed with convex lenses to reduce the weight, as compared with Hayward's Patent Semi-Prism Lights.

In order to reduce the cost of Cellar Flaps, we now keep regular "Stock Sizes" always on hand, as in the following Net Size List, which we can supply at a little over price of fixed lights, with an extra for fitting in Wrought Frame, or in Guttered Curb Frame, as required.

#### FIFTY-SIX DIFFERENT SIZES ALWAYS IN STOCK.

\* Net Size of Flaps when laid together in pairs-without Frame or Guttered Curb.

10 11 12	2 2	9	×	3	1 41	3	13 13 14	X E	3 1 4 4 4 8 8 8	3 3	61 61	×	3	1 41 8	3	11 11	×	3	1 44	4	31/32/31/31	×	3	1 41	4	8	×	3	1 41	5 5	03 03	×	3	1 43
8 9 10	2	9	X	2	$5\frac{1}{2}$	3	13	× 2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3	61	×	2	$5\frac{1}{2}$	3	11	X	2	51	4	31	X	2	$5\frac{1}{2}$	4	8	X	2	51	5	03 03 03 03	×	2	51
5 6 7	2	9	X	1	103	3	13	$\times$ ]	7 10½	3	61	X	1	10%	3	11	X	1	101	4	31	X	1 :	101	4	8	X	1 1	101	5	03 03 03	×	1	104
Lenses, back to front.	ft.	in.	1	ft.	in.	ft.	in.	ft	in.	ft.	in		ft.	in.	ft.	in		ft.	in.	ft.	in		ft.	in	ft.	in.	. f	it.	in	ft.	in	. :	ft.	in.

\* See Illustration above.

ESTIMATES ON APPLICATION.—See pages 14 and 15.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

## HAYWARD'S

## Equilibrium Opening Light.

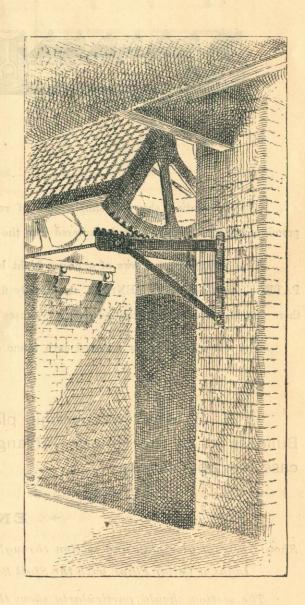
THE Illustration, taken from a photograph of three openings at Leadenhall House, shows a very convenient and useful form of Pavement Light for warehouse and other basements, that we have introduced. This provides for the passage way of goods through the Pavement by means of a Light balanced on a rack quadrant arrangement, supported on brackets from the side walls. Thus the Pavement Light may be readily and easily drawn up, so as to leave free passage for the descent of goods. The great usefulness of this quadrant for application to large numbers of buildings is apparent.

#### ENQUIRIES

Should always give plan and section through opening where it is proposed to fix any kind of Opening Light or Cellar Flaps, with the Stall Board over it, and state whether it is also to open.

The section should particularly show the level of pavement and inside flooring.

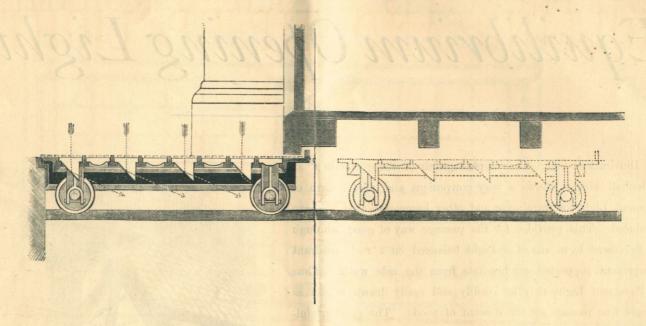
H. B. &. E. will submit plan and estimate, or advise Architects and Builders as to the simplest arrangements that can be made in any particular case, on application.



#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

## HAYWARD'S ROLLING LIGHT.



The Illustration shows a simple plan of running back a portion of Pavement Lights in front of warehouse premises, so that packages can be lowered into the Basement.

This arrangement allows of a heavy Light being moved backwards and forwards with ease, and HAYWARD'S PATENT SEMI-PRISM LENSES are usually fixed in them, as the weight of Light is of little consequence, nor is there any risk of breaking the underside of Lenses as in ordinary Cellar Flaps.

The above Light has a guttered curb frame on the front and two ends.

H. B. & E. will submit plans and estimate, or advise Architects and Builders as to the simplest arrangements that can be made in any particular case, on application.

#### \*\* ENQUIRIES \*\*

Should always give plan and section through opening where it is proposed to fix any kind of Opening Light or Cellar Flaps, with the Stall Board over it, and state whether it is also to open.

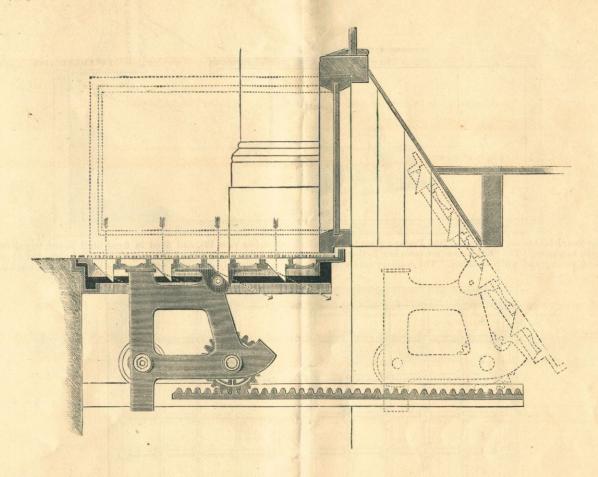
The section should particularly show the level of pavement and inside flooring.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

## HAYWARD'S

## ROLLING AND TIP-UP LIGHTS.



THE Illustration shows a simple plan of running back a portion of Pavement Lights in front of warehouse premises, so that packages can be lowered into the Basement.

This arrangement allows of a heavy Light being moved backwards and forwards with ease. The Light is pivotted on the carriage, so that when it is back it can be tipped up and give an extra depth to clear packages. HAYWARD'S Patent Semi-Prisms are usually fixed in them, as the weight of Light is of little consequence, nor is there much risk of breaking the underside of lenses, as in ordinary Cellar Flaps.

ESTIMATES ON APPLICATION.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

### HAYWARD'S STALL BOARD LIGHTS

In various Patterns and Lenses (see page 12).

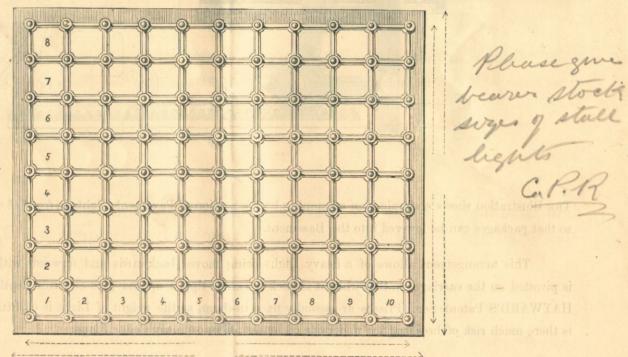
CROUND FLOOR

JOINT DIRECTION &

BASEMENT

BASEMENT

Stall Board Lights are ornamental Iron Frames, glazed with various lenses (see page 12), and fixed in front Stall Board, to reflect a strong light into the basement. The Stall Boards are complete in themselves. readily fixed, are ornamental, give a good effect to fronts, and dispense with ordinary iron railing and window sashes. The ordinary area windows can also be entirely dispensed with, and the basement continued out to the area wall.



PRICES FROM 5/- TO 10/- PER FOOT SUPERFICIAL

ESTIMATES ON APPLICATION.

#### STAIR RISERS, Reflecting Lenses in Iron Frames-

3 lenses 4-in. square, 14-in.  $\times$   $4\frac{3}{4}$ -in. outside measure each 4/04 ditto  $16\frac{1}{4}$ -in.  $4\frac{3}{4}$ -in. ditto each 5/05 ditto  $23\frac{1}{4}$ -in. ditto each 6/66 ditto 28-in.  $4\frac{3}{4}$ -in. ditto each 7/6From these sizes any length can be made up.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,
UNION STREET, BOROUGH, LONDON, S.E.

## HAYWARD'S IMPROVED SAFETY COAL PLATES.

No. 1 Pattern.—Made 12, 14, 16, 18 and 21-in. diameter. No. 1 C, 12-in., Ventilating.







No. 3, Registered Pattern.—12, 14, 16 and 18-in. diameter stock sizes, uninating
No. 3 D, 12-in., half Illuminating and half Ventilating.
No. 3 E,

No. 3 C, 12-in. half Illuminating and half Solid Iron.



No. 3 E, 12-in., Illuminating.



The Coal Plate to be complete requires Protecting Ring, Chain and Staple.

Section through Coal Plate showing deep rim A and protecting ring.





PRICES.									
CIRCULAR COAL PLATES.		OUTS	SIDE DIAME	TER.					
OTROOLAR COAL PLATES.	12-in.	14-in.	16-in.	18-in.	21-in.				
No. 1 B Illuminating with Circular Lenses  1 C Plain Iron Ventilating  No. 1 B Illuminating with Circular Lenses  Plain Iron Ventilating  No. 1 B Illuminating with Circular Lenses	5/6 2/9 2/6	7/0 3/6 3/3	10/0 7/6 7/6	12/0 10/0 9/6	16/6 15/0 14/6				
Half Illuminating and half Solid Iron  Half Illuminating and half Solid Iron  Ventilating  Glazed with Diamond Lenses  Hayward's Patent Semi-prism Lenses	5/0 5/0 6/0 9/0	7/6 7/6 8/0 12/0	9/6 9/6 10/6 15/0	16/0 16/6 18/0 23/0	=				
PROTECTING PINCO FOR CIRCUIAR COAL PLATES.									
PROTECTING RINGS FOR CIRCULAR COAL PLATES.	12-in.	14-in.	16-in.	18-in.	21-in.				
Circular Rings for Flagged Pavements	3/0 4/6	4/6	7/0						
COLLABE COAL DIATES	ata I	1	SQUARE	OUTSIDE.	1				
SQUARE COAL PLATES.		12-in.	14-in.	16 in.	18-in.				
No. 1. Illuminating with Circular Lenses	horeps ::	7/6 8/6 —	10/6 12/0	15/0 18/0	16/0 18/0 —				
PROTECTING FRAMES FOR SQUARE COAL PLATES.    RABBET MEASURE.   12-in.   14-in.   16-in.   18-in.   18-									
Square Frames for Flagged Pavement	eraine,	2/6	3/0 3/6	7/0	5/0 10/0				

2-ft. 6-in. CHAIN, WITH HOOK AND STAPLE, 1s. 3d.
ARCHITECTS should specify HAYWARD'S SAFETY COAL PLATES with PROTECTING RING and CHAIN.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS, UNION STREET, BOROUGH, LONDON, S.E.

# HAYWARD'S PATENT SELF-LOCKING COAL PLATE

consists of a protecting Ring fixed in the pavement into which the Self-Locking Coal Plate is dropped, and immediately secured or locked by projecting bolts on each side, actuated by an ingenious arrangement of two small levers with a small weight in centre.

The Coal Plate can be pushed out with a broom handle or stick, or a rod connected to the centre weight.

The drawing clearly shows how simple the arrangement is, and being so compact in itself cannot be broken or get out of order.

~/~!~!~!~!~!~!~!~!~!~!~!~!~!

By Act of Parliament householders and owners of property are liable to HEAVY PENALTIES, "If any occupier or occupiers do or shall leave open or NOT SUFFICIENTLY OR SUBSTANTIALLY cover and keep covered AND SECURED to the satisfaction of the Local Authorities, any Coal Plate."

Damages of £70 and £125 were given in two Cases of Accidents. See opposite.

## PRICES OF HAYWARD'S PATENT SELF-LOCKING COAL PLATE and PROTECTING RING.

	Outside diameter of Coal Plate, and inside rabbet of Ring.					
	12-in.	14-in.	16-in.	18-in.		
No. 1 B. Illuminating	7/6	9/6	13/0	16/0		
No. 1 C. Ventilating	4/6	5/6	7/0	8/0		
No. 1 D. Solid Iron	4/6	5/6	7/0	8/0		

Rods extra, if required.



ARCHITECTS should specify HAYWARD'S Patent Self-Locking Coal Plates, Illuminating, Ventilating, or Solid Iron.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENTEES AND MANUFACTURERS,

#### ACCIDENTS

## FROM INSECURE COAL-HOLE PLATES.

Extract from the "Daily Telegraph," November 17th, 1882.

QUEEN'S BENCH DIVISION. (Before Mr. Justice Grove and a Special Jury.) WYLDING v. THOMAS.

The plaintiff in this case was a shopkeeper at Battersea, and the defendant was a potato salesman in business on the south side of Covent Garden Market. On Jan. 7 last the plaintiff was a customer at the defendant's shop, and carried thence a bushel of apples. He trod upon a Disc or Coal Plate which was in the footpath outside the Colonnade, but over a cellar which the defendant occupied. The plaintiff's case was that the Coal Plate was pressed out of its place, and one of his legs went down the hole. The result was a very serious injury. The action was to recover compensation.

Mr. Murphy, Q.C., and Mr. Bullen were for the plaintiff; and Mr. Willis, Q.C., and Mr. Anderson for the

defendant.

The jury gave a verdict for the plaintiff, damages £125.

Extract from the "Builder," 9th November, 1878.

Dangerous Coal Plates.—On Monday evening Mr. Bedford held an inquest on the body of Mrs. Sarah Flower, of No. 41, Guilford Street, Russell Square. The deceased was walking along Guilford Street, when she slipped through the coal trap outside No. 43, the Plate of which had been left unfastened. The occupier of No. 43 was called and disclaimed all knowledge of the insecurity of the Plate, but admitted that three-fourths of the Plates in the neighbourhood were unfastened. Verdict: Accidental death.

Extract from the "Building Times," April 30th, 1881.

Mrs. Amelia Hart and her husband obtained compensation to the extent of £70 in the Sheriff's Court on Thursday, from Mr. Thursfield, as damages for injuries resulting from the insecurity of a Coal-hole Plate. Mrs. Hart, a teacher of music in Woburn Place, was passing the house of defendant, in Montague Place, Russell Square, when the Coal-hole Plate being unfastened, she fell and injured her right leg, and was much shaken. Mr. Thursfield had been willing to pay damages, the only question was the amount. Mr. Under-Sheriff Burchell said the defendant was legally liable in having a dangerous and insecure Coal-hole Plate. The jury returned a verdict for the amount stated.

## Hayward's Safety Coal Plates and Rings have been used throughout the following important thoroughfares in the City and the West End of London.

New and Old Broad Street, E.C. Cornhill, E.C.
Leadenhall Street, E.C.
Moorgate Street, E.C.
Princes Street, E.C.
Throgmorton Avenue, E.C.
King William Street, E.C.
Cannon Street, E.C.
Threadneedle Street, E.C.
Chombard Street, E.C.
Gracechurch Street, E.C.
Billiter Avenue, E.C.
High Holborn, W.C.
Etc.

Bishopsgate Street, E.C.
Poultry and Cheapside, E.C.
Aldersgate Street, E.C.
St. Paul's Churchyard
Holborn Viaduct, E.C.
Red Cross Street, E.C.
Fleet Street, E.C.
New Bridge Street, E.C.
Part Oxford Street
,, Strand
,, Piccadilly
Northumberland Avenue
New and Old Bond Street, W.
Etc.

Cursitor Street, W.C.
Gower Street, W.C.
Woburn Place, W.C.
Kepple Street, W.C.
Torrington Place, W.C.
Part Russell Square, W.C.
Grosvenor Place, S.W.
Colchester Street, S.W.
Cornwall Street, S.W.
King's Road, Chelsea
Chelsea Vestry Wharf
Norland Market, W.
Stamford Street, S.E.
Waterloo Road, S.E.
Etc.

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

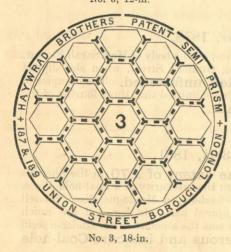
### HAYWARD'S

## CIRCULAR FLOOR OR PAVEMENT LIGHTS,

FOR CELLARS, VAULTS AND SUBWAYS.



No. 3, 12-in.



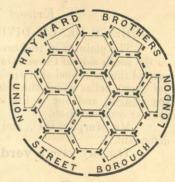
#### PRICES OF STOCK SIZES.

No. 3 Pattern (Registered).

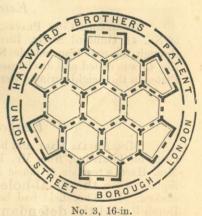
#### 3-in. Hexagonal Lenses.

Outside	Diamond	Patent Semi-Prism
Diameter.	Lenses.	Lenses.
10-in.	5/0	isia 6/0
12-in.	6/6	9/6
14-in.	9/0	12/6
16-in.	11/0	15/6
18-in.	18/0	23/0
22-in.	30/0	35/0
25-in.	40/0	50/0
31-in.	60/0	75/0
36-in.	70/0	90/0
40-in.	80/0	115/0
- COLUMN SEALOR	100	To the first

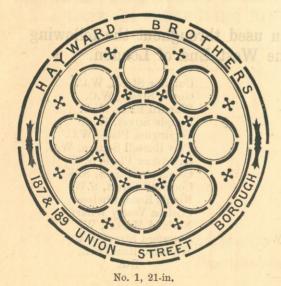
4-in. × 3-in. Rectangular Lens Pattern. 56-in. 175/0 225/0



No. 3, 14-in.



7/0



63-in. dia., with deep 4-in. Convex Lens		6/0
8-in. dia., with deep 6-in. Convex Lens	DISWY	7/0
12-in. dia., with deep 6-in. Convex Lens	L C'Nes	8/0
12-in. dia., with thick plate glass	o. i. diri	6/0
12-in. dia., with thick plate glass in quarters		8/0
12-in. dia., with Convex Lens	100 m (100)	14/0
14-in. dia., with thick plate glass	illa ••••	8/0
With eye for chain as a Coal Plate, 1/0 extra to about	ove price	es.
21-in. dia., with one 6½-in. Lens and eight 4-in	a	18/0

#### HAYWARD BROTHERS & ECKSTEIN,

Ring for ditto

PATENT PAVEMENT LIGHT WORKS,

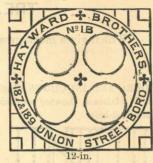
## HAYWARD'S SQUARE FLOOR OR PAVEMENT LIGHTS,

FOR CELLARS, VAULTS, AND SUBWAYS.

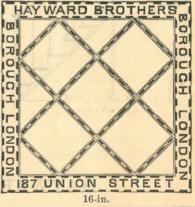
#### PRICES OF STOCK LIGHTS.

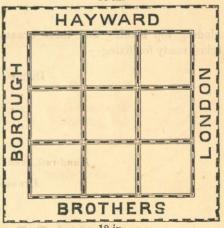
				1/.
	Outside Dimensions.		Frame.	
	12-in. square, Illuminating, with four circular lenses	7/6	2/6	imog insia
	12-in. square, Illuminating, with four 4-in. square			
	lenses doods ni wyswin	8/6	2/6	
	12-in. square, Ventilating	6/6	2/6	F
	14-in. square, Illuminating, with eight squares		ib .11 13	
	$5\frac{1}{2}$ by $2\frac{1}{2}$ -in	12/0	3/0	
	16-in. square, Illuminating, 4-in. diamond squares	15/0	7/0	
	16-in. square, Illuminating, strong pattern, five squares		ib . A d bas a	ă
	18½ by 2½-in		7/0	. 1
	18-in. square, Illuminating, nine 4-in. square lenses,			L
	Birmingham pattern	18/0	5/0	HA
	18-in. square, Special Asphalte Frame for do	12	10/0	101
	19-in. square, Illuminating, nine squares, 5 by 5-in	18/0		R
	Particulars for all kinds of	G M bons	omo setembre	UC
	18-in. octagon, Light, 3-in. plate glass	20/0	6/0	工
100	18-in. octagon, Ventilating	16/0	6/0	0
	24-in. octagon, Lights, 3/4-in. plate, and lens in centre	30/0	APPEOX	DO
	21 m. coolagon, Eighus, 4-in. place, and tens in centre	ALLE	BORN	181
	24-in. square, Strong Roadway Lights	32/0	M.)	
	the bar on each step, with half round handerall, atter	and cont	no sand lat	
		Diamond		T
	24-in. square, No. 3 hexagonal lens pattern	Lenses.	Lenses. — 40/0	5
		and in		0
	27-in. square, No. 3 hexagonal lens pattern	38/0	50/0	OR
	30-in. square, No. 3 hexagonal lens pattern	47/0	63/0	BC
	<del>++0++</del>			

Numerous other Special made Lights for Road Traffic, &c.









#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,

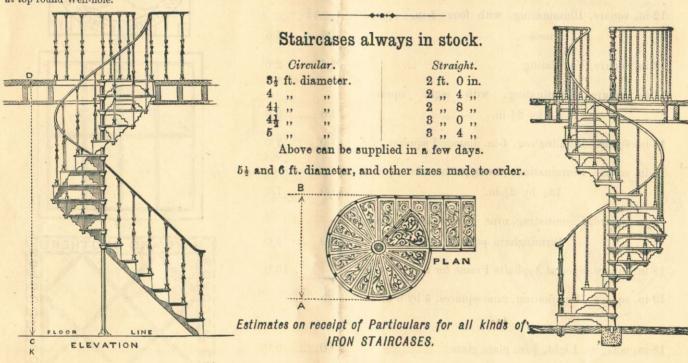
#### HAYWARD'S

### IMPROVED CIRCULAR IRON STAIRCASES.

TREAD, RISER, AND SPANDRIL IN ONE,

Which gives much greater strength and stiffness than when the Treads are built up of Three pieces.

ORDERS AND INQUIRIES should state the outside diameter, A—B, and the height from floor to floor, C—D, and give a rough sketch of position of Staircase, showing convenient point for first step on ground floor and top landing, and whether Balusters and Hand-rail are required at top round Well-hole.



#### APPROXIMATE PRICE OF

#### HAYWARD'S ORNAMENTAL STAIRCASES

(FROM STOCK),

Including top landing and three ornamental bars on landing, one bar on each step, with half-round hand-rail, fitted and marked ready for fixing—

								8.	d.	
Diameter	3	ft.	6	in.	per foot	rise	 	 16	0	
,,	4	,,	0	,,	,,	,,	 	 18	0	
,,,	4	,,	3	,,	,,	,,				
					,,					

Hand-rail round Well-hole at top extra if required, and according to size.

Ornamental Panel Balusters, or two bars on a step, extra.

#### HAYWARD BROTHERS & ECKSTEIN,

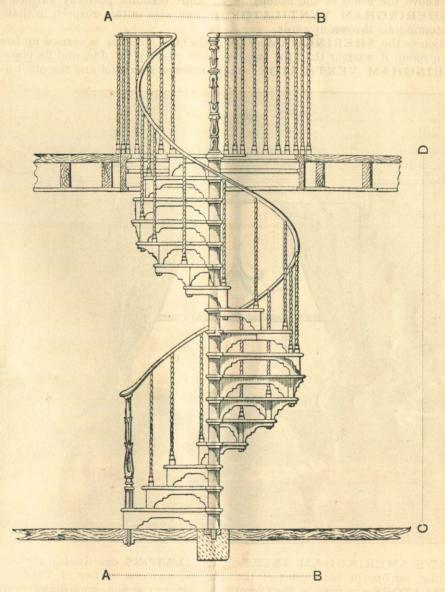
IRON STAIRCASE MANUFACTURERS,

### HAYWARD'S

### IMPROVED CIRCULAR IRON STAIRCASES.

TREAD, RISER, AND SPANDRIL IN ONE,

Which gives much greater Strength and Stiffness than when the Treads are built up of Three Pieces.



ORDERS AND INQUIRIES should state the outside diameter, A—B, and the height from floor to floor, C—D, and give a rough sketch of position of Staircase, showing convenient point for first step on ground floor and top landing, and whether Balusters and Hand-rail are required at top round Well-hole.

Estimates, on receipt of particulars, for all kinds of Iron Staircases.

#### HAYWARD BROTHERS & ECKSTEIN,

MANUFACTURERS OF STRAIGHT, SPIRAL, AND ALL KINDS OF IRON STAIRCASES,
UNION STREET, BOROUGH, LONDON, S.E.

## VENTILATION.

Extracts from a PAPER read at the DOMESTIC ECONOMY CONGRESS, by CAPTAIN DOUGLAS GALTON:-

"The simple forms of ventilation rest on the principle of an outlet for the warmed air and an inlet for fresh air.

"The position of the inlet is of material importance, because the question as to whether draughts are felt or not, necessarily depends upon that. It is desirable to admit fresh air, especially cool air, at the upper part of the room, above the heads of the occupants. It thus becomes partially warmed by the air already in the room. The SHERINGHAM VENTILATOR is admirable in this respect, in that it is placed near the ceiling, and the incoming air thrown upwards.

"If, in addition to the SHERINGHAM VENTILATOR, the flue is carried up from near the ceiling of a room, the air of a room, if warmer than the outer air, will pass up the flue, and its place be supplied with air

through the SHERINGHAM VENTILATOR—one will act as an outlet and the other as an inlet.'



HAYWARD'S SHERINGHAM INLET VENTILATORS are fixed in the exterior wall about two feet below the ceiling, on one or both sides of the window, and one or two of THE IMPROVED MICA OUTLET VENTILATORS are fixed in the Chimney breast, in the flue, immediately under the Cornice. By this arrangement the upper stratum of air in the room is continually changed imperceptibly and without draught. A great advantage, too, from this plan is that when all have retired to bed, the action of these vents is not impeded, and the air of the room is absolutely fresh in the morning.

This arrangement can generally be adapted to existing apartments with less trouble and expense than

any other.

Illustrated Price Lists and Particulars on Application.

MEDALS AWARDED-BRIGHTON, 1881; NATIONAL HEALTH, 1883; AND INTERNATIONAL HEALTH, 1884.

#### HAYWARD BROTHERS & ECKSTEIN,

VENTILATOR MANUFACTURERS,

### HAYWARD'S SHERINGHAM VENTILATOR,



FOR THE INTRODUCTION OF FRESH AIR

THROUGH AN EXTERNAL WALL WITHOUT A DRAUGHT.

The Ventilator is allowed to remain open (or so far as may be considered necessary), and its peculiar construction directs the incoming current of fresh air along the ceiling, where it will spread on all sides; so that, in its descent, it will not cause the slightest draught, but imperceptibly force the air to the fire-place and to the chimney outlet ventilator, thus thoroughly ventilating the apartment. (See page 28.)

The tendency of the door is to remain open, but is adjusted to any angle, or closed entirely, by a single flexible

cord, with a small balance weight attached, which can be on the right or left as desired.

To be "Complete" requires-Outside Air Brick, Weight and Cord, Leading Pulley.

	Size of Size of	A Box 9 by 3. Front 11½ by 5½.	Box 9 by 6. Front 11 by 8½.	Box 13½ by 6. Front 16 by 8½.	D * Box 15 by 10. Front 19 by 14.
No. 1. IRON—Plain		A 1 4/0 A 4 4/6 A 6 5/0 A 2 6/0	C 1 5/6 C 4 6/0 C 6 6/6 C 2 8/0	B 1 7/0 B 4 7/6 B 6 8/0 B 2 10/6	D 1 21/0 D 4 23/6 D 6 25/0 D 2 28/0
5. GALVANIZED—Plain 7. Do. White and Gold 8. Do. Coloured to Match Walls 3. Do. With Brass Fronts and Doors		A 5 5/6 A 7 A 8 } 8/6 A 3 18/6	C 5 7/6 C 7 C 8 } 10/0 C 3 80/0	B 5 9/6 B 7 B 8 } 12/6 B 3 50/0	D 5 27/0 HX 3 85/0 S 1 85/0 S 27/0 S 25/0 S 25/

#### BALANCE WEIGHTS, CORD, AND LEADING PULLEYS.

Japanned Bronze or	
White and Gold.	3
Veights, Plain Iron	A 1 4d.
Ditto Japanned Bronzed  Ditto ditto White and Gold	A 6 8d. A 2 1/0
Extra Leading Pulley	4d.
Mexible Cord for all sizes 2d	nor word

EXTRA LEADING PULLEY. 000

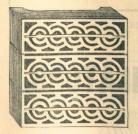
C 1 5d.	B 1 6d.	D 1 1/0
C 6 10d.	B 6 1/0	D 6 2/0
C 2 1/4	B 2 1/6	D 6 2/0 D 2 3/0
4d.	4d.	10d.
ite Silk, for A. 6d	: for B C & D 8d.	ner vard

### ORNAMENTAL AIR BRICKS, GALVANIZED OR PLAIN.

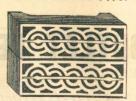
Wh

Scroll Pattern 9×9.

Diamond Pattern 9 × 9.



Scroll Pattern 9 × 6.



Scroll Pattern 9×3.





 $9 \times 3$ ,  $9 \times 6$ ,  $9 \times 9 \times 9 \times 9 \times 9 \times 10^{-10} \times 10^{$ 

 $9 \times 3$ ,  $9 \times 6$ ,  $9 \times 9$ ,  $13\frac{1}{2} \times 6$ ,  $13\frac{1}{2} \times 9$ .

A Contract Contract	9 by 3.	9 by 6.	9½ by 9½.	18½ by 6.	18½ by 9½.	17 by 12.
Plain Iron	6d.	10d.	1/4	1/4	2/0	2/6
Galvanized	10d.	1/4	2/0	2/0	3/0	4/0

Several Hundred Thousand Sheringham Ventilators are in use.

GALVANIZED VENTILATORS AND AIR BRICKS ARE RECOMMENDED.

To be "Complete" requires-Outside Air Brick, Weight and Cord, Leading Pulley.

#### HAYWARD BROTHERS & ECKSTEIN,

MANUFACTURERS AND PROPRIETORS IN CONNECTION WITH THE INVENTOR. UNION STREET, BOROUGH, LONDON, S.E.

### IMPROVED MICA OUTLET VENTILATORS.

(BOYLE'S PATENT.)

For the Discharge of Heated and Vitiated Air from Rooms into the Smoke Flue.
(She page 28.)

The Valves are made of Mica, which is Light, Rigid, and Incorrodible, and are so sensitive that they open with the slightest appreciable up current in the flue, immediately close against down draughts, and effectually prevent any smoke entering the room.



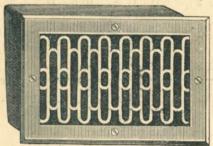
Front, No. 1 11 x 7



Back, 11 × 7.



Front, No. 3, 11 × 7.



Front, No. 1, 16 × 11.



11 × 7 11 × 9 11 × 11

16 × 11 5 × 11

ADB.

5
7
9
11
11
11

Front, No. 3, 16 × 11.

Over 500,000 in Use.

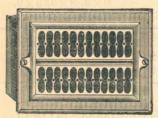
QUALITY.	Size of Front. Size of Box.	11 × 5 in. 9 × 8.	11 × 7 in. 9 × 5½	11 × 9 in. 9 × 73	$\begin{array}{c} 11 \times 11 \text{ in.} \\ 9 \times 9\frac{1}{2} \end{array}$	$16 \times 11 \text{ in.} \\ 13\frac{1}{2} \times 9\frac{1}{2}$
No. 1. Plain Iron, 1. Japanned Bronze, 1. Do. White and Gold, 3. Brass Trellis Front, Brass Hit-and-Miss Fronts	K.S: 04.1.	4/0 5/0 6/0 7/0	6/0 7/0 8/0 10/6 20/0	9/0 10/6 11/6 14/0 25/0	11/0 13/0 15/0 18/0 33/0	16/0 18/0 20/0 25/0 46/0

Also Vertical Ventilators, 5 by 11 in. and 7 by 11 in., at same Prices.

### HAYWARD'S SILK-FLAP OUTLET VENTILATORS.

(NOISELESS.)

For Prevention of Down Draught in Air-Extracting Shafts.



	Size of Front. Size of Box.	11½ × 5½ in. 9 × 3	$11 \times 8\frac{1}{2} \text{ in.}$ $9 \times 6$	$11 \times 11\frac{1}{2} \text{ in.}$ $9 \times 9$	$15\frac{1}{2} \times 11\frac{1}{2}$ in. $18\frac{1}{2} \times 9$
Plain Iron Japanned Bronze	: ::	 3/3 3/9	5/9 6/9	7/0 8/6	8/6 10/6

Also in White and Gold.

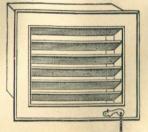
### HAYWARD BROTHERS & ECKSTEIN,

VENTILATOR MANUFACTURERS,
UNION STREET, BOROUGH, LONDON, S.E.

#### HAYWARD'S

### LOUVRE VENTILATORS (IRON).

FOR THE INTRODUCTION OF FRESH AIR.

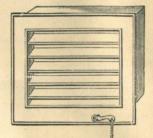


No. 1 INLET.

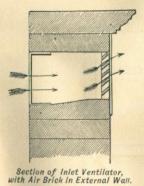
By means of a Cord and Cleat Hook, these Ventilators can be partially or wholly closed.

INLETS OR OUTLETS.

FOR THE EGRESS OF VITIATED AIR.

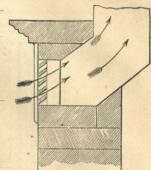


No. 2 OUTLET.

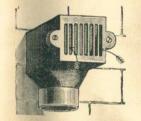


QUALITY.	SIZE OF FRO DITTO BOX.	NT.	10 × 7 in. 9 × 6 in.	12 × 9 in. 10½ × 8 in.	$15\frac{1}{4} \times 10\frac{1}{2}$ in. $14 \times 9$ in.	20 × 14 in. 18 × 12 in.
Plain Iron Japanned Br Do., White a Galvanized,	and Gold		9/0 11/0 15/0 12/0	13/0 16/0 20/0 17/0	16/0 18/0 22/0 20/0	35/0 40/0 45/0 42/0

Rocking Cleat for securing Cord, 1/- each. Cord for closing Ventilator, from 2d. per yard. Ornamental Air Bricks,  $9 \times 6$ ,  $9\frac{1}{2} \times 9\frac{1}{2}$ ,  $13\frac{1}{2} \times 9\frac{1}{2}$ ,  $17 \times 12$  in. See page 29.



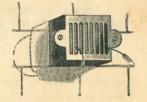
Section of Outlet Ventilator, fixed in connection with a Flue



### FRESH AIR MICA INLET VALVES.

For Ventilating Drains, by the admission of a Current of Fresh Air. In Galvanized Iron.

For 8 or 4-inch Pipes, Vertical or Horizontal.



For 3-in. Horizontal Pipe 7/-. ., 4-in. ,, 8/6.

For 3-in. Vertical Pipe 8/-,, 4-in. ,,

### **AIR-TIGHT INSPECTION COVERS** FOR DRAINS.

(Suitable for Asphalte or Stone Paving).



Stock Sizes. Plain Iron. Galvanized. 27 × 27-in. ... 40/0 ... 54/0

27 × 21-in. ... 35/0 ... 47/0

21 × 21-in. ... 30/0 ... 40/0

15 × 15-in. ... 17/0 ... 22/0 Over all.

**ORNAMENTAL HIT-&-MISS** 

**VENTILATORS & AIR BRICKS.** 

	9 × 8	9 × 6	18 × 9
Plain	1/0	1/4 1/9	7/0
Galvanized.	1/4		9/0

MEDALS AWARDED-Brighton, 1881. National Health, 1883. Three Medals, International Health Exhibition, 1884.

#### HAYWARD BROTHERS & ECKSTEIN,

VENTILATOR MANUFACTURERS,

## THE "UNION" KITCHEN RANGE WITH OPEN FIRE

(Hayward's Patent).

THE UNION

HOT

CLOSET

The peculiarity and great advantages of this Open Fire Range are, that in it the heat can be directed to the top of the Oven, or equally to the TOP and BOTTOM at the same time, by turning the flap up or down which is attached to the arrow; and in either case, the whole of the Hob above the oven presents a boiling surface or

#### HOT PLATE,

of sufficient power to heat Steaming Apparatus, Saucepans, Kettles, Stewpans, for frying or preserving. The Hob may also be used as an

#### IRONING STOVE,

thus embracing all the advantages of an enclosed cooking apparatus without its offensive smell, imperfect ventilation, and other defects, and requiring not more than one-third to one-half the consumption of fuel.

#### THE OVEN

(which can be on either side of the fire) may be kept "slow" when required for baking some kinds of puddings, jugging hares, &c.; but the temperature can be raised at pleasure, and kept at any point for baking bread, or up to a "quick" and scorching heat for roasting meat, which, if occasionally basted, cannot be distinguished from that which has been placed before the fire. For baking pastry, meat pies, &c., the heat should at first come from above, in order to raise the crust, and then a general heat should be distributed, so that the whole may be equally done and thoroughly "bottomed." This is effected with the greatest ease in the "UNION" KITCHEN RANGE, the quantity as well as the direction of the heat being entirely under control. The usual size of the Oven is about 16 inches square, but much larger are made if required.

#### THE BOILER

is, in appearance, like that of an ordinary Range, but its peculiar shape gives great power for steaming or for heating large quantities of water for baths, hot water pipes, &c., &c.

#### PRICES AND ESTIMATES ON APPLICATION.

HAYWARD BROTHERS & ECKSTEIN supply and repair Close Fire Kitcheners and every description of Cooking Apparatus.

Hot Water Apparatus supplied in connection with Kitchen Ranges already fixed. Conservatories, Forcing Houses, Vineries, &c., heated.

## HAYWARD'S PATENT #18551 PENT PRISM" PAVEMENT LIGHT "SEMI-PRISM" PAVEMENT LIGHTS

Have been fixed at over Sixty Establishments in Bond Street, London, alone, to Illuminate the Basements, and are in extensive use throughout London and Provincial Towns.

"VICTORIA CHAMBERS, 55 AND 56, CHANCERY LANE, W.C. "I shall require for the new blocks of buildings I am now constructing in Chancery Lane, some 1,500 feet super of Hayward's Patent 'Semi-Prism' Pavement Lights, and shall be obliged if you will be good enough to send here for instructions for the same. Having for some years used contrivances for giving extra light to basements, I have no hesitation in stating that, after thoroughly examining the question, as to quality, &c., I am of opinion that your Semi-Prism Lights give the best results. And it is owing to the satisfaction given by your work at Victoria Chambers and elsewhere, that I now ask you for the further supply. The passages of the lower ground floors in Victoria Chambers are open at all times to the inspection of Architects and others whom you may wish to send to inspect the results of your system in successful practical operation. (Signed)

Extract from the "Builder," March 21st, 1885.

"Messrs. HAYWARD BROTHERS & ECKSTEIN exhibit their admirable Semi-Prism Pavement Lights, the merits of which are too well known to render their enumeration necessary here. Their Self-Locking Coal Plates appear to meet the end in view in a very effectual manner."

"I am glad to be able to inform you that I am quite satisfied with HAYWARD'S PATENT PAVEMENT LIGHTS, fixed five or six years since, in front of my premises in Regent Street; they throw a very good light into (Signed) "PETER ROBINSON."

Extract from the "Building News," April 3rd, 1885.

"HAYWARD'S PATENT SELF-LOCKING COAL PLATE .- Messrs. HAYWARD BROTHERS & ECKSTEIN, of 187, Union Street, Borough, whose 'Semi-Prism' Pavement Lights have done more for the utilisation of dark basements and cellars than any other contrivance ever introduced, have now brought before the public an invention which will in another direction prove of equal value. Everyone has some time or other probably nearly broken his leg by starting a badly fitting and insecurely fastened Coal Plate. There is scarcely one of our West-end squares in which it is safe to walk after dark on this account. The new Self-Locking Coal Plate entirely avoids this danger, and will speedily be generally adopted. Its construction is simple."

"We have much pleasure in stating that HAYWARD'S PATENT PAVEMENT LIGHTS supplied by your Firm to our new premises, at 80 and 81, Strand, W.C., are perfectly successful, the light thrown into the basement being in all respects most satisfactory; and we will be glad to show their effect to any person sent by you. "GARDNER & CO." (Signed)

Extract from the "British Architect," March 20th, 1885.

"HAYWARD BROTHERS & ECKSTEIN.-In addition to their well-known and unrivalled Semi-Prism Pavement Lights, this firm show a PATENT SELF-LOCKING COAL PLATE, a very admirable contrivance, which entirely does away with any risk of its being left as a means of easy access to evil-disposed persons through negligence, and also obviates the inconvenience attached to the usual method of fastening the plates."

"WARWICK CHAMBERS, BIRMINGHAM. "I have much pleasure in saying that HAYWARD'S PATENT 'SEMI-PRISM' LIGHTS supplied by you for Warwick House in this town have more than answered my expectations. The whole length of the Warehouses-the ceilings of which are below the level of the street—are well lighted, and the value of the property thereby much enhanced.

(Signed) "JETHRO A. COSSINS, Architect."

"25, 26, 27, 28, 29, 30, New Street,
"Warwick House, 14, 16, 18, & 20, Corporation Street,
"and 54 & 55, Union Passage, Birmingham.

"We are pleased to inform you that HAYWARD'S PATENT PAVEMENT LIGHTS you supplied for our New Premises in Corporation Street give us entire satisfaction, and produce a better light than we ever anticipated. "HOLLIDAY, SON & CO." (Signed)

"We are glad to add our testimony to others in favour of HAYWARD'S PATENT PAVEMENT and other Lights which you have lately fixed in our new premises at Little Bridge Street. They give us perfect satisfaction, and have produced even a better effect than we anticipated. You are at liberty to use this note if of any service to you.

"The Gresham Press."

(Signed) "UNWIN BROTHERS."

# PATENT PAVEMENT LIGHTS

Have been fixed at over <u>Sixty Establishments</u> in <u>Bond Street</u> alone, to <u>Illuminate the Basements</u>, and are in extensive use throughout London and the Provinces.

We publish a few of the numerous Testimonials received.

"81, NEW BOND STREET, W.

"We think you have made an excellent job, and are much pleased with the thoroughly substantial way in which it has been done.

"We shall feel the greatest pleasure in recommending your Patent Lights to anyone, or in shewing the effect and fittings here to any person requiring similar ones to whom you might like to give our address.

(Signed) "BLUNT & SON."

#### EXTRACT FROM THE "WAREHOUSEMEN AND DR. PERS' TRADE JOURNAL."

"We have been asked to give an opinion respecting Hayward's Pavement Lights, for illuminating basements, &c. Having them fitted to the basement of our own offices, we are enabled to say they are really what they profess to be. But surely evidence of their value and popular appreciation is not seriously questioned, seeing that nearly one-fifth of the basements in our principal business thoroughfares are now lighted with them. In addition to the comfort afforded within, we look with special favour upon their external appearance—as also must the tradesman—for, however tempting the array of goods, one could not, in the reign of the old area grating, get sufficiently near to admire them."

"35, BUCKLERSBURY, E.C.

"I am obliged by your attention in the matter of the Patent Light in Landing. It is very effective, and, with the glass risers, makes the basement stairs and passage light and cheerful—they were practically pitch-dark beforehand.

Signed) "R. P. NOTLEY, Architect and Surveyor."

#### HAYWARD BROTHERS & ECKSTEIN,

PATENT PAVEMENT LIGHT WORKS,