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**GLAZING (PATENT, FIREPROOF, ETC.) SECTION.**

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STANDARD "REFORM" BAR

Specially treated and galvanized lead capped bar with condensation channels. The glass sheets are bedded on soft asbestos cords and securely but freely fastened with delta springs and supported at foot by special stop fittings. These bars require no lead sheathing and their condition can therefore be seen at any time with the utmost ease.

"REFORM" BAR WITHOUT LEAD CAPPING

If desired standard "Reform" section Glazing Bars can be supplied without lead cappings as shown by illustration on the right hand side.

HAYWARDS "Reform" Puttyless Roof Glazing has specially treated steel bars, heavily galvanized. These are independent of lead sheathing which, in practice, may prove destructive instead of protective, by secreting moisture between the two metals and thus allowing rust to eat its way unsuspected through the lower bearing or shoe end of the steel bar. Moisture collecting on "Reform" bars rapidly evaporates, and no rust or deterioration takes place. Satisfaction and efficiency are guaranteed.

NOTE THESE ADVANTAGES

1. Scientific construction.
2. Dustproof and clean.
3. Easy to fix.
4. Supports planks or boards.
5. Has condensation channels.
6. Glass free to expand or contract.
7. Readily applied to new or existing buildings.

"Reform" Roof on new Garage Buildings, King's Cross, London.
Haywards "Reform" system of puttyless roof glazing has been on the market for some 60 years, during which period it has been consistently improved and has steadily found wide favour amongst Architects, Engineers, and Building Contractors, for all classes of roof work, economy combined with lasting efficiency being the chief consideration.

Haywards "Reform" Puttyless Roof Glazing has been adopted in connection with an extensive rebuilding scheme at these important premises, the area supplied being in the neighbourhood of 35,000 ft. super.
SPECIAL ATTENTION is drawn to Haywards Roof Lights Catalogue which gives full particulars, with fixing details, of Roof Glazing, Lantern Lights, Skylights, Domes, etc.

This catalogue is issued in two sections, and copies will be sent to those interested, free on application.
The Manoir de la Trinité is a fine old mansion built of local stone and granite, standing in an extensive private park amidst beautiful scenery. The Manoir has historical associations, and is mentioned in several old French chronicles. When Sir Reginald Blomfield, the eminent architect, restored, modernized and extended the building, owing to the War, the winter garden which adjoins the magnificent library and private chapel was left unfinished. The task of completing this was subsequently entrusted to Haywards Ltd. by the Architect to the Seigneur de la Trinité.

This important work included the fitting of marble floor, mosaic tile panels, marble columns, pre-cast concrete and plastered brackets and beams, steel casements (with opening portions operated by screw rod gear), and roof constructed with rolled steel joist beams, joist trusses and rafters, cast valley gutters and Haywards “Reform” Puttyless Glazing with ¼-inch wired cast glass and lead flashings.
HAYWARDS "REFORM" GLAZING is adaptable to all types of roof, including Winter Gardens, Power Stations, Carriage Sheds, Garages, Tennis Courts, Arcades, Swimming Baths, Aerodromes, Verandas, all types of Factory Roofs, Lanterns and Skylights, etc., etc.
Roof and gables glazed throughout on Haywards "Reform" Puttyless system.

The facia of roof illustrated above was also executed by Haywards in leaded glazing. Having the services of an expert staff of designers and craftsmen in connection with this speciality also, we invite enquiries and will readily submit designs or estimates.
THIS glazing is obviously suitable for every type of glass roof, and it is almost impossible to put the latter into closely defined categories. Lanterns and Skylights of standard designs are dealt with on pages 50—53 in Section 21 of this Catalogue; but in the photo reproduced here, we have an example of large lantern lights of special construction, showing well the adaptability of “Reform” Puttyless Roof Glazing.

Internal and external view of Haywards “Reform” Glazing in Lanterns of special design as supplied to Messrs. Style & Winch’s Brewery, Maidstone. Roofs over coppers.
HAYWARDS "Copperlite" Glazing possesses a delicacy of line not obtainable in any other type of glazing and provides an adaptable decorative medium which owes no small part of its charm to the copper came of varying widths and bronze or copper dividing bars which are part of its construction. It combines the highest fire-resisting quality with a fine appearance which is in complete accord with the modern trend of architectural design.

One of a series of "Copperlite" Door Panels supplied to the instructions of Messrs. Wimperis, Simpson & Guthrie, Architects, Messrs. Gee, Walker & Slater Ltd., Contractors.

"Copperlite" panel with bronze divisional bars and cast bronze rosettes. One of a number supplied for Parliament Buildings, Northern Ireland.

Architect: Sir Arnold Thornely, F.R.I.B.A.
HAYWARDS "COPPERLITE" GLAZING prevents fire spreading. Its fire-resisting properties have been demonstrated by the results of the most severe test ever applied to glazing. Copy of the British Fire Committee’s Test Certificate will be furnished on request. "Copperlite" Glazing is composed of small glass squares assembled in copper came (having a definite initially-formed rebate) and framing, electro copper deposited; it combines great strength and fire-resisting qualities with decorative appearance.

"COPPERLITE" FIRE-RESISTING GLAZING is used in partitions, screens, doors and windows, also in corridors, light wells and staircase enclosures, and other similar places where it is important to prevent the spread of fire. It is of fine appearance and provides a decorative medium of the best kind.

"COPPERLITE" ORNAMENTAL GLAZING for internal domes, ceiling lights, etc., can be made to varied designs, and is stronger than any other type of glazing. The increased latitude permissible when a strictly fire-resisting glazing is not required, gives scope for the production of the most delightful effects.

"COPPERLITE" GLAZING—PLAIN

In ordinary rectangular panes, ¼-in. plate glass, delivered London 4/6
Ditto, delivered outside London 5/-

In ordinary rectangular panes, ¼-in. obscured glass, such as Flemish, Arctic, Double Rolled, etc., delivered London 4/3
Ditto, delivered outside London 4/9

If with plain border, add per foot run 3d.
Fixing in London, add per foot super 8d.
Panels curved on plan, add 3/–

"COPPERLITE" GLAZING—PRISMATIC

Panels made up of 4 by 4 in. best white flint glass prisms delivered London 11/–
Ditto, delivered outside London 11/6

If in rolled prismatic "Phdelux" Glass delivered London 6/6
Ditto, delivered outside London 7/–

DIVIDING BARS

\[
\frac{1}{2} \times \frac{1}{2} \text{ "H" section flat-faced copper} \quad 2/6 \\
\frac{1}{2} \times \frac{1}{2} \text{ "H" section flat-faced bronze} \quad 2/6 \\
\]

Each Cross joints to the above 2/6

Details and Prices of Haywards special reeded-faced and sunk-faced bronze dividing bars on application.

Haywards "Copperlite" Glazing is of the highest quality both in appearance and fire-resisting efficiency. Do not fail to obtain estimates.
The HEYWOOD

BY APPOINTMENT TO H.M. THE KING

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The HEYWOOD System gives maximum transmission of light, is watertight (under guarantee), indestructible, and free from maintenance costs. An area of 70,000,000 superficial feet has been supplied.

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PENNYCOOK'S ENTIRELY LEAD SHEATHED BAR TO CARRY 7' 9" SPAN. DIFFERENT SECTIONS IN STOCK FOR ALL SPANS OF LIGHTS.

ESTABLISHED IN 1878 THE PENNYCOOK'S SYSTEM IS IN WORLD-WIDE USE ON ALL KINDS OF ROOFS.

THE MAXIMUM DAYLIGHT EFFECT ENABLES WORKMEN TO GIVE OF THEIR BEST.

WATER-TIGHT — PERMANENT OUR GLAZING REQUIRES NO MAINTENANCE AND IS GUARANTEED.

LEAD SHEATH IS HERMETICALLY SEALED.

CONTRACTS EXECUTED PROMPTLY. OUR FIXERS ARE SKILLED MEN AND ACCUSTOMED TO ALL DESIGNS OF ROOFS, AND ARE IN THE CHIEF INDUSTRIAL CENTRES OF GREAT BRITAIN.

MACFARLANE, LANG & CO. LTD., GLASGOW AND LONDON. 200,000 SQUARE FEET WITH 153 SPECIAL STEEL AND LEAD OPENING LIGHTS IN USE ON ROOFS.

PERSPECTIVE VIEWS OF TWO OF OUR ONE-PIECE CAST SHOES FOR FIXING BARS AT BOTTOM. OUR SHOES DO AWAY WITH PIERCING THE STEEL AND LEAD SHEATH.

PENNYCOOK'S SPECIALIZE IN LANTERN, CUPOLAS, SPAN AND DOME LIGHTS TO SUIT EVERY TYPE OF ROOF.

30,000,000 SQUARE FEET IN USE IN GREAT BRITAIN ALONE.

LONDON COUNTY HALL, LONDON COUNTY COUNCIL. 108 LANTERN LIGHTS, 22 SPAN LIGHTS, 10 LEAN-TO LIGHTS. 3,600 SQUARE FEET AND 23 HOPPERS ON OUR SYSTEM.

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DETAILS AND ESTIMATES ON APPLICATION TO ABOVE ADDRESSES.
PENNYCOOK'S GLAZING

ADAPTED TO WOOD AND STEEL ROOFS, QUARTER FULL SIZE

WOOD ROOFS

TOP OF GLAZING ON LEAN TO LIGHT

BOTTOM OF GLAZING ON LEAN TO LIGHT

GLAZING AT RIDGE

GLAZING AT INTERMEDIATE PURLIN

GLAZING AT SIDES OR SLATED ROOF

BOTTOM OF GLAZING AT SIDES OF SLATED ROOF

GLAZING AT RIDGE

GLAZING AT SIDES

TOP OF GLAZING WITH CORRUGATED SHEETS ABOVE

BOTTOM OF GLAZING WITH CORRUGATED SHEETS BELOW

STEEL ROOFS

BOTTOM OF GLAZING WITH CORRUGATED SHEETS BELOW

GLAZING AT SIDES

TOP OF GLAZING WITH CORRUGATED SHEETS BELOW

GLAZING AT RIDGE
CHALLENGE Roof Glazing is ideally practical for its purpose, because in design and construction it is calculated to withstand every condition, general or climatic, to which it may be subjected under ordinary stress.

Special features of the "Challenge" System are—

(1) All steel is below the glass, therefore it is fully protected even if the lead above the glass is damaged.

(2) The bottom end of the bar is turned up and lead clothed to act as a glass top, thereby avoiding the use of loose shoes. (See illustration.)

The Steel Glazing Bars, made in suitable sections for all spans, are hermetically sealed in lead, and all holes are copper-bushed.

The stout lead cores which extend above the glass are amply strong enough to take boarding for cleaning purposes or for replacing broken glass.

"Reversed" sections are manufactured for those who prefer that type.

A fully illustrated Section book containing useful information will be sent on application.

We are specialists in Dome Work, all glass being bent and fitted in our Works before despatch.

Also manufacturers of the "Challenge" copper fire-resistant glazing.

THE
BRITISH CHALLENGE GLAZING
COMPANY
BRANCH OF
ROBINSON, KING & BRITISH CHALLENGE GLAZING CO. LTD.
GROVE GLASS WORKS, MARSHGATE LANE
STRATFORD, LONDON, E. 15.

Telephones: MARYLAND 4165 (3 lines). Telegrams: ASTRAGAL, PHONE, LONDON.
“CHALLENGE” COPPER FIRE-RESISTING GLAZING of every description

THE TIVOLI THEATRE, STRAND.

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Branch of ROBINSON, KING & BRITISH CHALLENGE GLAZING CO. LTD.
GROVE GLASS WORKS, MARSHGATE LANE
STRATFORD • LONDON • E.15
THE HELLIWELL PATENT

"PERFECTION" GLAZING

No Putty. No Paint. Guaranteed Absolutely Watertight. Imperishable Steel Glazing Bars, galvanised to prevent corrosion or entirely covered with lead.

GLAZING BARS

CAPS IN EITHER ZINC, COPPER OR LEAD

The Curbs tone Patent "MANCHESTER"
SYSTEM OF GLAZING
With STEEL BARS

Galvanised and entirely covered with lead to prevent corrosion.

No. 2 SECTION. To carry 9½ ft. between Purlins,
also
No. 1 SECTION. To carry 7½ ft. between Purlins.

MILLIONS OF FEET FIXED IN ALL PARTS OF THE WORLD

Extensively used by
H.M. GOVERNMENT,
THE PRINCIPAL RAILWAY COMPANIES
At Home and Abroad,
also by
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Etc., etc.

Admirably adapted for
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on
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GLAZING (PATENT, FIREPROOF, ETC.) SECTION.

LUXFER—ROOF GLAZING—LUXFER

LUXFER * LEAD * COVERED * GLAZING * BARS

FULL — SIZE SECTIONS

<table>
<thead>
<tr>
<th></th>
<th>NO. 5</th>
<th>NO. 5A</th>
<th>NO. 5B</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM SPAN BETWEEN SUPPORTS</td>
<td>6'0&quot;</td>
<td>8'6&quot;</td>
<td>10'6&quot;</td>
</tr>
<tr>
<td>WEIGHT OF BAR PER FOOT RUN.</td>
<td>2'8 LBS</td>
<td>4'1 LBS</td>
<td>5'0 LBS</td>
</tr>
<tr>
<td>WEIGHT OF GLAZING PER FOOT SUPER.</td>
<td>4'9 LBS</td>
<td>5'6 LBS</td>
<td>6'0 LBS</td>
</tr>
<tr>
<td>SPACING OF GLAZING BAR CENTRES.</td>
<td>1/2 ROUGH CAST GLASS</td>
<td>2'0 1/2&quot;</td>
<td>2'0 1/2&quot;</td>
</tr>
<tr>
<td></td>
<td>1/2 WIRED CAST GLASS</td>
<td>2'0 1/2&quot;</td>
<td>2'0 1/2&quot;</td>
</tr>
</tbody>
</table>

LUXFER LTD., 16 Hill Street, Finsbury, London, E.C.2

Telegrams: "LUXFER, FINSQUARE, LONDON"  Telephone: NATional 0444
The popularity of the Paragon system is so well established among Architects and Builders that we need do no more than recapitulate here the seven distinguishing points which have so much contributed to its success. We would gladly send our Brochure A giving fuller particulars of our System of Glazing, or furnish estimates on request.

Note these points.

- The steel bar is completely lead-clothed, with a jointless lead sheath or mantle.
- There are no outside fastenings whatever.
- No loose glass stops.
- The bottom end of the bar is sealed against damp—and consequent rust.
- Only glass and lead is exposed to the atmosphere.
- The specially designed steel core of robust strength affords maximum support to glass and provides . . .
- Efficient condensation channels.

PARAGON GLAZING CO.
LIMITED
5 VICTORIA ST., WESTMINSTER, S.W.1

Telephone: ABBEY 2348
(Private Branch Exchange).
Telegrams: ECLAIRAGE
(SO-WEST), LONDON.
"Kaleyards" Patent Glazing

WITH SPECIAL B.N.F. TERNARY ALLOY SHEATHING

The Kaleyards Patent Glazing Bar is made in three strengths:

No. 1. Light bar to carry spans up to 7 ft. 0 ins. wide.
No. 2. Medium bar to carry spans from 7 ft. 0 ins. to 9 ft. 0 ins. wide.
No. 3. Heavy bar to carry spans from 9 ft. 0 ins. to 11 ft. 0 ins. wide.

THE BARS CAN BE SUPPLIED WITH LOOSE OR FAST CLIPS.
PARTICULARS WILL BE SENT UPON APPLICATION.

WILLIAMS, GAMON & CO.
(KALEYARDS LTD.)
VICTORIA ROAD, CHESTER

The Glaslok System of Patent Glazing is suitable and highly satisfactory for every type of roof.

The Steel Bar is lead-clothed after being treated with anti-rust solution. The under-wing comes from below the underside of the glass and when turned over on to the glass, locks it in position, forming a cushion for expansion. The Top Wing is an added protection against the weather.

Write for the latest fully illustrated "Glaslok" Catalogue, section-book and model of Glazing Bars. Full details upon application.
MONK PATENT ROOF GLAZING

NOT ASSOCIATED WITH ANY COMBINE
OUR PRICES ARE STRICTLY COMPETITIVE

Glazing supplied and fixed by us is guaranteed for a period of 5 years for being Waterproof, Dustproof and Durable. Repeat Orders from Architects, leading Constructional Engineers, Builders, and Municipal Authorities testify to the favourable opinion of the MONK PATENT GLAZING as being one of the soundest Bars on the market.

ADVANTAGES


Bars provided with strong Copper or Brass Bottom Stops. Also special Slip-on Bottom Stop is supplied when specified, which does not pierce the bar.

1. STEEL BAR Bitumenized or Galvanized.
2. LEAD COVER.
3. GLASS.
4. CHANNELS on Top Wing prevent dust or dirt from entering building.
5. UNDER WINGS form a seating for Glass.
6. INNER WINGS to ensure a watertight joint and form a cushion to Glass.

MONK BAR NO. 2.
FOR BEARING CENTRES, UP TO 10' 0".

MONK BAR NO. 1A
11 1/2" DEEP IN STALK
FOR BEARING CENTRES
UP TO 8' 6".

MONK BAR NO. 1.
FOR BEARING CENTRES, UP TO 7' 0".

CONTRACTORS TO H.M.O. WORKS, WAR OFFICE, AIR MINISTRY AND LONDON C.C.

FOR SOUND, RELIABLE WORK, SPECIFY MONK PATENT GLAZING
LOWEST POSSIBLE PRICES SUBMITTED ON REQUEST
FULL-SIZE SAMPLES OF BARS FORWARDED WHEN REQUESTED

MONK PATENT GLAZING ©

Crawford Street, ROCHDALE

Phone: 2845. Grams: "MONK, ROCHDALE 2845."

Branches: NEWCASTLE, BELFAST, BIRMINGHAM, CARDIFF.

London Office: 3 CENTRAL BUILDINGS, WESTMINSTER.
Phone: WHITEHALL 7202. Grams: "WHITEHALL 7202, LONDON."
HILLS GLASS ROOFING

HILLS' PATENT GLAZING solves in the most economical manner the problem of making Glass Roofs rigid, permanent and weatherproof. The elimination of all quickly perishable elements from the system obviates the need for any attention or maintenance charges. Exhaustive research on this type of roof construction has enabled us to incorporate with our PATENT GLAZING SYSTEM all types of ventilation in a most economical manner.

5 YEARS' GUARANTEE. HILLS' PATENT GLAZING is guaranteed for a period of five years against failure of system or defective workmanship. The standard pitch of Patent Glazing is 30°. Various pitches can be used satisfactorily if local conditions permit, but whilst every care will be taken, the above Guarantee does not apply for Patent Glazing fixed at less than 20° pitch.

SPECIAL SERVICE FACILITIES. Modern methods of building construction and erection demand facilities for quick delivery. Our own Lorry Delivery Service enables us to give a 48-hour delivery service on Standard Lantern Lights (details on application), and on Patent Glazing orders of average quantities.

View showing an extensive Hills' Patent Glazing installation at a North London Factory.

View showing reconstruction after Fire at Factory premises, Bristol.
GLAZING (PATENT, FIREPROOF, ETC.) SECTION.

COPPER SHOE

A—Lead Sheath.
B—Steel Bar.
C—Asbestos Cord.

SPECIFICATION

CORE—British mild steel tees, bituminous coated or galvanized to specification.

SHEATH—Pure virgin lead, weight about 2 lbs. per square foot.

ENDS—Soldered by special process, forming perfect weather-tight seal.

SEATING OF GLASS—90 per cent. pure asbestos cord, with 10 per cent. cotton for strengthening purposes, treated with scientifically prepared sealing oil.

SHOE—14-gauge stamped copper which does not pierce the bar.

WEATHER FILLETS—Creosoted wood or lead covered to specification.

GLASS—British manufacture.

HILLS PATENT GLAZING COMPANY LIMITED

GROVE LANE · SMETHWICK · BIRMINGHAM

LONDON:
Telephone: Royal 1618.

MANCHESTER:
Deansgate House, 274 Deansgate, Manchester 3.
Telephone: Blackfriars 7932.

BELFAST:
140 Scottish Provident Buildings, Belfast.
Telephone: Belfast 8796.

NEWCASTLE-ON-TYNE:
George M. Carter, Carton House, Newcastle-on-Tyne 2.
Telephone: Jesmond 1450

LGASSOW:
11 Bothwell Street, Glasgow, C.2.
Telephone: Central 2714.

Phone: SMETHWICK 0808 (3 lines)
SIMPLEX LEAD GLAZING

For ROOFS, SKYLIGHTS and
HORTICULTURAL WORK

Will solve most of the difficulties of ordinary glazing. No putty or
painting required. Absolute permanence. Suitable sections for various
work are illustrated below. Architects’ specifications and requirements
carefully followed.

No. 1 No. 2 No. 3 No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10

The system is used on a variety of structures and in increasing quantities.

CAN BE FIXED BY LOCAL WORKMEN.

The simplest and most economical system for ROOF and VERTICAL WORK in Conservatories, Wineries, Hot-Houses, Garden Frames, WORKSHOPS, Manufactories, Mills, Weaving Sheds, Laundries, Swimming Baths, Stables, Agricultural Buildings, Temporary Huts, &c., and for Skylights anywhere.

This system claims to afford the following advantages—

1. It effects a saving of 90 per cent. of the usual maintenance and repairs outside, as nothing but glass and lead is exposed to the atmosphere.
2. Repairs of accidental breakages can be readily effected, as there are no fastenings or screws to remove at any time.
3. No putty is used, and no breakages arise from changes of temperature or vibration from any cause.
4. The work is Airtight, Water-tight, Wind-tight, and as nearly indestructible as possible.
5. There is no noise due to vibration from gales of wind.
6. It is equally applicable to Sloping Roofs and Vertical Glazing.
7. The Lead strips, which are the special feature of this system, can be fitted by any local firm or workmen. They are fastened to the woodwork with 1-inch copper nails, the angles of the Strips are paid with thick white lead paint before being dressed down on the glass, which is effected with a small wooden glazing tool (supplied with the strips).

As a general rule 21 oz. glass, 15 in. wide, is recommended for Horticultural Work; and for lights in Mills and Factories, 1-in. rough rolled plate, 24 ins. wide.

WHEN ORDERING PLEASE STATE—

1. The LENGTHS of Strips required. 3. The THICKNESS of Glass proposed to be used.
2. The NUMBER of Strips to each length.

N.B.—A wooden tool for dressing down the lead is always sent with the Strips free of Charge for orders 50 ft. run and upwards, and Wrought Copper Nails, for fastening the strips, will be supplied. PRINTED INSTRUCTIONS are also sent, which should be carefully read, as they contain some hints which it is advisable to know and act upon. Any quantity supplied.

SIMPLEX TEE BAR GLAZING

No. 90. ROLLED BAR TYPE. For unsupported spans up to 7½ feet.

FULL PARTICULARS AND CURRENT PRICES SENT POST FREE.

GROVER & COMPANY LIMITED
BRITANNIA WORKS
CARPENTERS ROAD, STRATFORD, LONDON, E.15
Telegrams: "ADOPTED, PHONE, LONDON." Cables: "ADOPTED, LONDON." Phone: "MARYLAND 4342-4343."
STOPSTARA
GLAZING COMPOUND
FOR STEEL AND METAL WINDOWS, CASEMENTS AND LIGHTS

The Only Permanently Efficient Method of Glazing Modern Buildings

PUTTY, at first sight, seemingly unimportant, is, in reality, a structural material, and should be chosen and specified with the same foresight and care as stone, bricks and tiles.

Linseed oil putty, red-lead putty, metallic putty, gold-size putty and ordinary putty mixed with white lead, lead oxide, etc., are quite useless for Metal Casements. Such putties remain soft indefinitely and finger mark, exude oil, bladder, run or soften and ruin the paint or else crack and, whilst looking unsightly, allow rain or condensation to enter the building or affect the steel.

STOPSTARA GLAZING COMPOUND is subject to none of the defects mentioned. It is specified by Architects and Engineers and, having now been in use for some years, has been thoroughly tested by time and exposure.

STOPSTARA is entirely different from all ordinary putties—it hardens right through gradually by a combined chemical and mechanical action, and this fact enables Stopstara to be painted about 48 hours after application, if necessary, thus showing a great saving in time and scaffolding expenses.

STOPSTARA works easily, trims neatly and remains exactly as finished without shrinking, cracking or wrinkling. It use obviates the fitting of expensive, and often troublesome, glazing beads of wood or metal. For internal screens and partitions, now so largely erected in office and factory buildings, Stopstara is undoubtedly the only satisfactory glazing material.

Although apparently so hard, Stopstara retains its plastic and elastic nature for all time and is easily hacked out for any reglazing.

COST: In quantity and labour, Stopstara is the same as ordinary putty, but its extra price adds about 6d. to 9d. per casement, according to size, over linseed oil putty. Architects emphatically agree that this small extra is well worth the absolute satisfaction and permanent efficiency gained.

It is suggested that all Architects and Engineers should definitely specify STOPSTARA GLAZING COMPOUND to ensure a satisfactory job and to obviate any defects developing some months after the building is finished as has so often been the case with ordinary putty or where this item has been left open in the specification.

Specification: “All Windows, Casements and Lights to be Glazed with Stopstara Glazing Compound”

Manufactured only by

DOCKER BROTHERS
Rotton Park Street, Ladywood, BIRMINGHAM 16
and 4 & 6 Moor Lane, London, E.C.2

Gramophone Company Ltd. "His Master's Voice," Hayes, Middlesex.
(All windows glazed with Stopstara.)

Municipal Electricity Works, Rotterdam (Holland).
(All windows glazed with Stopstara.)

Newport Power Station, Newport.
(All windows glazed with Stopstara.)

Barr Smith Library, Adelaide (South Australia).
(All windows glazed with Stopstara.)

Telephone: Birmingham: Edgbaston 3031
London: Metropolitan 2775
Illustrations show exterior and interior views of Dome Light glazed in

GEORGIAN WIRED CAST GLASS

:: at ::

THE ROYAL EXCHANGE
LONDON, E.C.

to the order of Messrs. Carmichael Ltd. When the Royal Exchange was glazed originally, some 50 years ago, T. & W. IDE were entrusted with the contract.

Office and Works:

GLASSHOUSE FIELDS
RATCLIFFE, LONDON, E.I

Telephone: STEPNEY GREEN 2333

Showrooms:

15/16 RATHBONE PLACE, OXFORD ST., W.1
LOCK-LIGHT

THE IMPROVED FORM OF FIRE-RESISTING GLAZING

U.K. Patents No. 353159, 354959, 349875, 384730, 367706, 380259, 383068, 388870

Produced in the following Metals:

STAYBRITE STEEL — BRONZE — COPPER — CHROMIUM-PLATE
COPPER BRONZED OR CELLULOSE SPRAYED TO ANY REQUIRED COLOUR

Lock-lights are made on an entirely new principle, eliminating the weakness of soldered joints. This is achieved by employing inter-locking and machine-accurate came, which give a product far more rigid and resistant to fire than is obtainable by the use of soldered joints. In addition, the metals are produced with a high polish, which is easily maintained.

DOORS & SCREEN AT 3 ST. JAMES’S SQUARE, S.W.1.

INFORMATION SHEET and SAMPLE PANEL will be forwarded on application from the sole Manufacturers:

T. & W. IDE
GLASSHOUSE FIELDS, RATCLIFFE, LONDON, E.1

Telephone No.: STEPNEY GREEN 2333. Telephone: "TWIDE, EDO, LONDON."
LUXFER WINDOW PRISMS

Briefly Luxfer Window Prisms prevent any waste of daylight. Hitherto sheet window glass has admitted daylight, but has allowed it to fall immediately to the floor near the window, where the greater part of it is at once absorbed and lost; whilst, on the other hand, Luxfer Window Prisms deflect the rays of light horizontally at the window, carrying them back into the room away from the window, and diffusing the light uniformly all over the interior of the building.

An effect of LUXFER PRISM lighting such as the above may be seen at Bloomsbury Hall, Hart Street, W.C.

Fig. 1.—The daylight in the room from PLATE GLASS showing the light falling upon the floor and being absorbed or lost. (Contrast with Fig. 2.)

Fig. 2.—The daylight bent into the same room under identical conditions by LUXFER WINDOW PRISMS. (Contrast with Fig. 1.)

Zenith Angles

It may be generally taken that where there is a Zenith Angle (i.e., the angle between an imaginary line drawn from the bottom of the window, or portion of the window to be treated, and the top of the opposite building) of 40 deg. or more with the vertical, Luxfer Prisms may be used in the window sashes.

The Canopy is employed where the Zenith Angle is less than 40 deg., or, again, where the height of the building opposite the opening to be equipped is greater than the distance to the said building. Prisms are placed in independent wood or iron frames outside the opening, and at an angle from the vertical, like an awning.

The Canopy may be made to revolve to facilitate cleaning when fixed above the ground floor.

LUXFER LTD., 16 HILL STREET, FINSBURY, LONDON, E.C.2
Telegrams: "LUXFER, FINSQUARE, LONDON " Telephone: NATIONAL 0444
In this and the pages immediately following particulars are given of various types of Haywards Lights, both "Crete-o-lux" (reinforced concrete) patterns and Iron-frame. These are supplied as Pavement Lights, Floor Lights, Roof Lights, Stallboards, Cellar Flaps, etc., the "Crete-o-lux" form of construction being the most modern development for application to present-day ferro-concrete buildings.

The photographs show Haywards "Crete-o-lux" Reinforced Concrete Lantern Lights at the premises of Messrs. Marks & Spencer Ltd., High Street, Guildford. Tops of Lanterns are Haywards "Eight-ex" type Lights, sides are Haywards Steel Sashes, "Non-Krode." The lenses throughout are of Haywards "W" high quality glass of British manufacture, specially developed after much research to withstand "fledding" and other defects. 100 per cent. EFFICIENCY is ensured by using "Crete-o-lux" Lights, manufactured only by Haywards, the Pavement Light pioneers. Special quotations are given for each specific contract, the circumstances of the job having full consideration when preparing estimates.
Haywards Canopy with "Crete-o-Lux" Lights, at Morden Underground Station.

Haywards "Crete-o-Lux" Roof Lights at the Swimming Pool, Portobello, supplied to the instructions of the City Engineer of Edinburgh.

Ask for interesting illustrated Lists giving details of the various types of "Crete-o-Lux" Lights for Pavements, Roofs, Canopies, etc.


Haywards Canopy with "Crete-o-Lux" Lights at Midland County Dairy, Dudley.

PAVEMENT LIGHTS, ETC., SECTION.

HAYWARDS

“CRETE-O-LUX” LIGHTS

“EX” TYPE

“EIGHTEX” TYPE
CENTRES: 6½” EACH WAY
LENSES: 5½” SQUARE

“NINEX” TYPE
CENTRES: 10½” EACH WAY
LENSES: 9” SQUARE
Also
“NINEX” DOUBLE GLAZED

“TWOEX” TYPE
CENTRES: 5” LONGITUDINALLY;
4” TRANSVERSELY
LENSES: 4” X 3”

“SEVENEX” TYPE
CENTRES: 4½” EACH WAY
LENSES: 4” SQUARE
Prices upon application.

ALL-GLASS SOFFIT LIGHTS

No. 58 TYPE 4” X 4” Centres.
No. 59 TYPE 6” X 6” Centres.

These lights are of excellent appearance, and have an all-glass under surface which requires no painting. They can be supplied in any shape or size, and are readily adaptable to unusual conditions. Their construction in situ is not recommended. The best results are obtained when they are made at our Works under expert supervision, with full facilities for hardening the concrete without flaws or distortion.

“58C” or “59C” Cement Surface.
“58C” or “59C” Tiled Surface.
“58C” or “59C” Cement and Carbrum.
“58C” or “59C” Non-Slip White Tiles.
Prices upon application.

HAYWARDS LTD - UNION ST. BORO. LONDON. S.E.1
TELEPHONE: WATERLOO 6035-6039 (5 LINES)
TELEGRAMS: HAYWARD BROS. LONDON
No. 18 TYPE LIGHTS 4" X 3" Lenses.

Ordering Number. | Sections. | Price per ft. super
--- | --- | ---
"18 P" | "Pludelux" | 14/-
"18 B" | Semi-Prism | 11/6
"18 K" | Union Lens | 11/-
"18K&C" | Union and Convex Lens | 10/6
"18 C" | Convex Lens | 10/6
"18 D" | Rough Plate Glass | 9/6

No. 19 TYPE LIGHTS 6" X 3" Centres.

Ordering Number. | Sections. | Price per super ft Stock Sizes.
--- | --- | ---
"19 P" | "Pludelux" and Cement | 18/6 per super ft.
"19 B" | Semi-Prism | 16/-
"19 C" | Convex | 14/-
"19 P" | "Pludelux" and Tiles | 20/-
"19 B" | Semi-Prism | 17/6
"19 C" | Convex | 15/6
"19 P" | "Pludelux" and Mosaic | 30/-
"19 B" | Semi-Prism | 27/6
"19 C" | Convex | 25/6

No. 19 "Carbrum" Light, non-slip pattern (as illustrated) Prices on application.

No. 51 TYPE LIGHTS — TILED — 4" X 4" Centres.

Ordering Number. | Glazing. | Price per super ft Stock Sizes.
--- | --- | ---
"51 P" | "Pludelux" | 20/-
"51 B" | Semi-Prism | 17/6
"51 C" | Convex | 15/6

Marble Tiles, add to above 5/- per ft. Mosaic, add 6/- per ft.

All Prices subject to market fluctuations.

Parts of inches charged as full inches. Irregular shapes charged as square, curved lines extra. Special quotations for Quantities or Ornamental Tiled Borders.
No. 8 TYPE FLOOR OR ROOF LIGHTS.  
5½" × 5½" Lenses  Can also be supplied with nibbed top.

<table>
<thead>
<tr>
<th>Ordering Number</th>
<th>Sections</th>
<th>Price per ft. super</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;8 B&quot; Semi-Prism</td>
<td>B8</td>
<td>13/-</td>
</tr>
<tr>
<td>&quot;8 K&quot; Union Lens</td>
<td>K8</td>
<td>12/-</td>
</tr>
<tr>
<td>&quot;8 H&quot; Beaded Lens</td>
<td>H8</td>
<td>11/-</td>
</tr>
<tr>
<td>&quot;8 E&quot; Button Lens</td>
<td>E8</td>
<td>11/-</td>
</tr>
<tr>
<td>&quot;8 C&quot; Checkered Lens</td>
<td>C8</td>
<td>11/-</td>
</tr>
<tr>
<td>&quot;8 D&quot; Convex Lens</td>
<td>D8</td>
<td>11/-</td>
</tr>
<tr>
<td>&quot;8 D&quot; Rough Plate Glass</td>
<td>D8</td>
<td>10/6</td>
</tr>
</tbody>
</table>

No. 10 FLOOR TYPE LIGHTS 11½" × 11½" Lenses

<table>
<thead>
<tr>
<th>Ordering Number</th>
<th>Sections</th>
<th>Price per ft. super</th>
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</thead>
<tbody>
<tr>
<td>&quot;10 L&quot; Lighthouse Lens</td>
<td>L10</td>
<td>11/-</td>
</tr>
<tr>
<td>&quot;10 E&quot; Checkered Lens</td>
<td>E10</td>
<td>11/-</td>
</tr>
<tr>
<td>&quot;10 D&quot; Rough Plate Glass</td>
<td>D10</td>
<td>10/6</td>
</tr>
</tbody>
</table>

No. 11 ROADWAY TYPE LIGHTS 3" × 3" Lenses  Extra strong

<table>
<thead>
<tr>
<th>Ordering Number</th>
<th>Sections</th>
<th>Price per ft. super</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;11 B&quot; Semi-Prism</td>
<td>B11</td>
<td>16/6</td>
</tr>
<tr>
<td>&quot;11 O&quot; Bull's Lens</td>
<td>O11</td>
<td>15/6</td>
</tr>
<tr>
<td>&quot;11 C&quot; Convex Lens</td>
<td>C11</td>
<td>15/6</td>
</tr>
<tr>
<td>&quot;11 D&quot; Rough Plate Glass</td>
<td>D11</td>
<td>14/6</td>
</tr>
</tbody>
</table>

All prices subject to market fluctuations.
PAVEMENT LIGHTS, ETC., SECTION.

HAYWARDS

CELLAR FLAPS

No. 18 TYPE 4" x 3" LENSES.

In 4-sided (as illustrated) or 3-sided Guttered Frame.

These Flaps are supplied in four-sided guttered frame as illustrated, or in three-sided guttered frame with removable back bar, for use in conjunction with Stallboard Doors. Flaps measuring more than 4 ft. 1½ ins. from back to front are supported centrally by a cup and knuckle fitment in addition to the pivots at the ends. The opening of the flaps is assisted by springs; balance gear can be fitted if required.

"18 K" Union Lens, Small  
Semi-prisms ... ... 23/-
"18 K" and "C" Union and Convex  
Lenses ... ... 22/-
"18 C" Convex Lenses ... ... 21/-
"18 D" Special Quality Rough Plate  
Glass ... ... 20/-

WROT (Checkered) STEEL FLAPS

Standard Sizes or to Order.

Haywards Wrot Checkered Plate Cellar Flaps are extremely useful where a strong, durable means of access to a basement is required without any call for daylight illumination when the flaps are closed. The flaps are strengthened by means of Tee iron stiffeners on the underside, and secured on the inside by means of an extra strong bolt.

Prices per foot super:
Standard Sizes ... ... 21/-
Other sizes to order ... ... 22/-

HAYWARDS CELLAR FLAPS, No. 11 TYPE

Per ft. super
"110" Bull's-eye Lens 37/6
"11C" Convex Lens 37/6
"11D" Rough Plate Glass 35/-

All prices are subject to market fluctuations.

HAYWARDS LTD. UNION ST. BORO. LONDON. S.E.1
TELEPHONE: WATERLOO 6035-6039 5 LINES
TELEGRAMS: HAYWARD BROS. LONDON
PAVEMENT LIGHTS, Etc., Section.

STALLBOARDS

IRON-FRAME STALLBOARDS

Illustration shows Haywards Stallboard Light No. 28 pattern, 6 x 6 in. centres. Lights of any size can be supplied at the following prices for various types of lens:

- 28 A Reflecting Lens
- 28 E Chequered
- 28 EE Button
- 28 C Convex
- 28 D Rough Plate Glass

Stallboard Lights can be supplied, if required, with hopper ventilators to open and close by rack and pinion gear at extra cost. Iron-frame Stallboard Doors also supplied.

“CRETE-O-LUX” (FERRO-CONCRETE) STALLBOARDS

“Crete-o-lux” Stallboard Lights are the neatest, cleanest, and most translucent available. Illustration shows No. 61 type, 6 x 6 in. centres. Lenses are of guaranteed “W” glass.

- 61 A Prismatic Lens
- 61 D/C Diamond Lens

Glass Ventilator Panels are extras. Gunmetal ventilating hoppers can be supplied with rack and pinion gear at extra cost. “Crete-o-lux” Stallboard Doors also supplied.

Prices upon application.
COAL PLATES
Safety and Self-Locking

Haywards Improved Safety Coal Plates, with deep rim and ring, and 2 ft. 6 in. chain and staple.

Haywards Patent "Self-Locking" "Non-Slip" Coal Plates, requires ring to be complete.

For Stone.

For Asphalte.

No. 5D. Solid.

No. 5C. Ventilating.

No. 5B. Illuminating.

No. 10. Solid 12 in. "Non-Slip."

No. 1D. Solid.

HAYWARDS CIRCULAR FLOOR
OR PAVEMENT LIGHTS

Specify Haywards Circular Vault Light.........., diam., glazed with diamond lenses, manufactured by Haywards Ltd., Union Street, S.E.

<table>
<thead>
<tr>
<th>Pattern No. 30</th>
<th>&quot;Diamond&quot; Lenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 in. dia.</td>
<td>11/-</td>
</tr>
<tr>
<td>12 in. dia.</td>
<td>13/3</td>
</tr>
<tr>
<td>14 in. dia.</td>
<td>20 6</td>
</tr>
<tr>
<td>16 in. dia.</td>
<td>28 6</td>
</tr>
<tr>
<td>18 in. dia.</td>
<td>40 4</td>
</tr>
</tbody>
</table>

All Prices subject to market fluctuations.
LUXFER FLOOR LIGHTS
WITH FLUSH IRON TOP
No. 6 PATTERN, 5\(\frac{1}{2}\) in. x 5\(\frac{1}{2}\) in. LENSES

Stock sizes, glazed with Diamond Lenses ... ... ... ... ... ... ... 11/6 per foot super.

No. 10 PATTERN, 11\(\frac{1}{2}\) in. x 11\(\frac{1}{2}\) in. LENSES

Prices for stock sizes: Prismatic Lenses, 13/6; Diamond Lenses, 12/6; Rough Plate Glass, special quality ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... 10/- per foot super.

... ... special sizes to order ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... extra 1/-

LUXFER LTD., 16 HILL STREET, FINSBURY, LONDON, E.C.

Telegrams: "LUXFER, FINSQUARE, LONDON."
LUXFER PAVEMENT LIGHTS

No. 46 PATTERN, LUXFER MULTI-PRISM

In this pattern the cast-iron frame does not show on the surface. Luxfer Multi-prisms are placed in every pocket so that the maximum amount of light is utilized. Both the back and front of the lens are curved surfaces scientifically constructed so as to use to the best advantage every available ray of light. In the manufacture no expense is spared to make it what it is universally recognized to be, i.e., the very best pavement light that can be obtained.

No. 46 PATTERN

WITH CEMENT SURFACE

Glazed with Luxfer Multi-prisms ... 18/6 per foot super.
Extra to special sizes made to order ... 1/- ..
Extra to water bar ... ... ... 6d. ..
Irregular shapes charged square to largest dimension.
All curved lines extra.

WITH TILED SURFACE

Glazed with Luxfer Multi-prisms ... 22/- per foot super.
Extras as above.
Any combination of Red, White, Black, Green, Buff and Chocolate can be used.

WITH MOSAIC SURFACE

Glazed with Luxfer Multi-prisms and having ceramic Mosaic Surface ... 27/- per foot super.
Glazed with Luxfer Multi-prisms and having marble Mosaic Surface ... 29/-
Extras as above.

LUXFER LTD., 16 HILL STREET, FINSBURY, LONDON, E.C.

Telegrams: "LUXFER, FINSQUARE, LONDON."
Telephone: NATIONAL 0444.
LUXFER PAVEMENT LIGHTS

No. 45 PATTERN, LUXFER MULTI-PRISM, 4 in. × 3 in. LENSES

This is a bonded pattern with iron surface between the lenses. Luxfer Multi-prisms are placed in every pocket, so that the maximum amount of light is utilized. These lenses are designed to throw the light clear of the prism immediately in front. Various prices are shown according to the depth of the lenses employed.

No. 45 Pattern Luxfer Multi-prism Pavement Lights

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 D</td>
<td>D</td>
<td>15/-</td>
</tr>
<tr>
<td>45 E</td>
<td>E</td>
<td>14/-</td>
</tr>
<tr>
<td>45 K</td>
<td>glazed with Minor Multi-prisms</td>
<td>11/6</td>
</tr>
<tr>
<td>45 C</td>
<td>glazed with Diamond Lenses</td>
<td>10/-</td>
</tr>
</tbody>
</table>

Parts of inches charged as inches. Irregular shapes charged square. All curved lines extra.

LUXFER No. 38 TILED LIGHTS

No. 352.

LUXFER No. 38, TILED LIGHTS.—The prices vary according to depth of lens employed.

Glazed with Luxfer Multi-prisms in every pocket

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxfer Multi-prisms and convex lenses in alternate rows</td>
<td>24/- 21/- 20/- per foot super.</td>
</tr>
<tr>
<td>All convex lenses</td>
<td>22/- 19/- 18/-</td>
</tr>
</tbody>
</table>

For white Sicilian marble tiles add to above prices 1/6 per foot super. Water bar, 6d. per foot run extra.
LUXFER PAVEMENT LIGHTS

Cellar Flaps can be supplied to match any of the patterns of Luxfer Pavement Lights with either cement or tiled surface.

LUXFER CELLAR FLAPS

No. 2 Pattern, 4 x 3 in. Lenses.

These Flaps may be counterbalanced by means of springs at a small extra charge. The Gutters may be continued on all four sides. A hole is drilled and tapped in Gutter for purposes of draining. A movable Bearing Bar is supplied for back. Gutters should be periodically cleaned.

Price per ft. super.

<table>
<thead>
<tr>
<th>Stock Sizes</th>
<th>Glazed with Best Quality Rough Plate</th>
<th>Diamond Lenses</th>
<th>Minor Multi-Prisms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20/-</td>
<td>21/-</td>
<td>23/-</td>
</tr>
</tbody>
</table>

LUXFER SELF-LOCKING COAL PLATES

The above Coal Plates are made in the following stock sizes, which may be obtained in two days from date of order:

<table>
<thead>
<tr>
<th>Overall Diameter of Plate</th>
<th>Self-Locking Plate</th>
<th>Rings for Stone</th>
<th>Rings for Asphalte</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 in.</td>
<td>17/-</td>
<td>6/-</td>
<td>9/-</td>
</tr>
<tr>
<td>14 in.</td>
<td>19/-</td>
<td>4/-</td>
<td>9/-</td>
</tr>
<tr>
<td>16 in.</td>
<td>23/-</td>
<td>3/-</td>
<td>9/-</td>
</tr>
<tr>
<td>18 in.</td>
<td>41/-</td>
<td>5/-</td>
<td>13/-</td>
</tr>
</tbody>
</table>

LUXFER LTD., 16 HILL STREET, FINSBURY, LONDON, E.C.

Telegrams: "LUXFER, FINSQUARE, LONDON."

Telephone: NATIONAL 0444.
LUXFER STALLBOARD LIGHTS

No. 1 PATTERN, 5½ x 5½ LENSES, IN CAST-IRON FRAMES

Glazed with Luxfer Prismatic Lenses of various angles

- Diamond Lenses
- Luxfer Prismatic Glass
- White Glass

Extra to special sizes

Extra to Hopper Ventilators fitted with brass hinges, from 15/- each. Iron Grids fixed in place of Lenses without extra charge.

Parts of inches charged as full inches; irregular shapes charged square; all curved lines extra.

No. 5 PATTERN, 5½ x 5½ LENSES, ELECTRO-COPPER GLAZED

Price:

IN WROUGHT IRON FRAME COMPLETE.

- 20/- per foot super.
- Without Iron Frame (for fixing to wood), 15/- per foot super.
- Hopper Ventilators from 50/- each extra.

LUXFER LTD., 16 HILL STREET, FINSBURY, LONDON, E.C.

Telegrams: "LUXFER, FINSQUARE, LONDON." Telephone: NATIONAL 0444.
LUXFER PAVEMENT LIGHTS.
HEAVY PATTERN ROADWAY LIGHT FOR CART TRAFFIC.

SECTION OF FRAME.
Full Size.

PRICES:
Glazed with Diamond Lenses, 18/- per foot super.
With special quality Rough Plate Glass, 17/- per foot super.

LUXFER INSULATED LIGHTS FOR ELECTRICITY WORKS.

In this pattern the glass overlaps the surface of the iron frame, which is thus effectively insulated.

PRICES:
For Stock sizes .. 12/6 per foot super.
Extra for Special sizes .. 1/6 ..

LUXFER LTD., 16 HILL STREET, FINSBURY, LONDON, E.C.

MANUFACTURERS OF
LUXFER PRISMS, DOME LIGHTS, CEILING LIGHTS, SKYLIGHTS, FIRE-RESISTING, ORNAMENTAL AND ROOF GLAZINGS.
Telegrams : "LUXFER, FINSQUARE, LONDON."
Telephone : NATional 0444.
"LUXFER - BN - FERRO CONCRETE LIGHTS.

SEND FOR DETAILED CATALOGUE.
# MACLEAN & CO.'S PAVEMENT LIGHTS

## No. 1 PATTERN

### 4 in. x 3 in. Rectangular Lenses

**A** All Semi-prism Lenses

**B** Semi-prism and Convex

**C** All Convex Lenses

**D** Special Quality Rough Cast

**E** Small Semi-prism Lenses

**F** Small Semi-prism and Convex Lenses

**G** Chequered Lenses

**H** Beaded Lenses

**K** Diamond Lenses

**STOCK SIZES FOR Nos. 1 and 2 PATTERNS**—Over-all dimensions, which include 1½ in. Flange all round.

### FRACTIONS OF INCHES ARE CHARGED AS FULL INCHES.

<table>
<thead>
<tr>
<th>Lenses in Front</th>
<th>Length</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ft. in.</td>
<td>in.</td>
</tr>
<tr>
<td>4</td>
<td>1 11 x 1 2</td>
<td>1 11 x 1 2</td>
</tr>
<tr>
<td>5</td>
<td>2 3/4 x 1 2</td>
<td>2 3/4 x 1 2</td>
</tr>
<tr>
<td>6</td>
<td>2 8/10 x 1 2</td>
<td>2 8/10 x 1 2</td>
</tr>
<tr>
<td>7</td>
<td>3 0/2 x 1 2</td>
<td>3 0/2 x 1 2</td>
</tr>
<tr>
<td>8</td>
<td>3 5/10 x 1 2</td>
<td>3 5/10 x 1 2</td>
</tr>
<tr>
<td>9</td>
<td>3 10/12 x 1 2</td>
<td>3 10/12 x 1 2</td>
</tr>
<tr>
<td>10</td>
<td>4 2/12 x 1 2</td>
<td>4 2/12 x 1 2</td>
</tr>
<tr>
<td>11</td>
<td>4 7/12 x 1 2</td>
<td>4 7/12 x 1 2</td>
</tr>
<tr>
<td>12</td>
<td>5 0/12 x 1 2</td>
<td>5 0/12 x 1 2</td>
</tr>
<tr>
<td>13</td>
<td>5 4/12 x 1 2</td>
<td>5 4/12 x 1 2</td>
</tr>
<tr>
<td>14</td>
<td>5 9/12 x 1 2</td>
<td>5 9/12 x 1 2</td>
</tr>
<tr>
<td>15</td>
<td>6 2/12 x 1 2</td>
<td>6 2/12 x 1 2</td>
</tr>
<tr>
<td>16</td>
<td>6 6/12 x 1 2</td>
<td>6 6/12 x 1 2</td>
</tr>
<tr>
<td>17</td>
<td>6 11/12 x 1 2</td>
<td>6 11/12 x 1 2</td>
</tr>
<tr>
<td>18</td>
<td>7 4/12 x 1 2</td>
<td>7 4/12 x 1 2</td>
</tr>
</tbody>
</table>

### NOTE.

- We make special flanges for Asphalte and Granolithic Finish.

### Unless specified otherwise, ordinary flanges are supplied.

## No. 2 PATTERN

### SECTIONS

- A
- B
- C
- D
- E
- F
- G
- H
- K

### MACLEAN & CO., 145 BATH STREET, GLASGOW

Telephone Nos.: Glasgow—5077 & 5078 Douglas Manchester—6310 Blackfriars

W. MAGSON, MIDHURST ROAD, BENTON, NEWCASTLE.

Telegrams:
- "Peramix, Glasgow"
- "Facilitate, Manchester"
MACLEAN & CO.'S No. 2 PATTERN BALANCED CELLAR FLAPS
IN FOUR-SIDED GUTTER FRAME. 4 in. x 3 in. Lenses

GLAZED SECTIONS.
2C Convex Lenses.
2D Ro. Plate.
2E Reflecting Lenses.
2H Beaded Lenses.

Prices include for guard bar, lifting hook and bolt, complete.

STOCK SIZES No. 2 PATTERN FLAP.

<table>
<thead>
<tr>
<th>Number of Lenses</th>
<th>Clearway for Goods</th>
<th>Overall 4-sided Gutter Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ft. in.</td>
<td>ft. in.</td>
</tr>
<tr>
<td>8 x 6</td>
<td>3 1/2 x 1 1/2</td>
<td>4 0 x 2 1/2</td>
</tr>
<tr>
<td>8 x 7</td>
<td>3 1/2 x 1 1/2</td>
<td>4 0 x 2 1/2</td>
</tr>
<tr>
<td>8 x 8</td>
<td>3 1/2 x 2 2 1/2</td>
<td>4 0 x 3 0 1/2</td>
</tr>
<tr>
<td>8 x 9</td>
<td>3 1/2 x 2 8</td>
<td>4 0 x 3 4</td>
</tr>
<tr>
<td>8 x 10</td>
<td>3 1/2 x 2 1 1 1/2</td>
<td>4 0 x 3 7 1/2</td>
</tr>
<tr>
<td>8 x 11</td>
<td>3 1/2 x 2 5 1/4</td>
<td>4 0 x 3 11</td>
</tr>
<tr>
<td>8 x 12</td>
<td>3 1/2 x 3 3</td>
<td>4 0 x 3 14 1/2</td>
</tr>
<tr>
<td>8 x 13</td>
<td>3 1/2 x 3 1 1/2</td>
<td>4 0 x 3 18 1/2</td>
</tr>
<tr>
<td>9 x 6</td>
<td>3 6 x 1 6</td>
<td>4 4 x 2 2</td>
</tr>
<tr>
<td>9 x 7</td>
<td>3 6 x 1 9 1/2</td>
<td>4 4 x 2 5 1/2</td>
</tr>
<tr>
<td>9 x 8</td>
<td>3 6 x 2 1</td>
<td>4 4 x 2 9 1/2</td>
</tr>
<tr>
<td>9 x 9</td>
<td>3 6 x 2 4 1/2</td>
<td>4 4 x 3 3</td>
</tr>
<tr>
<td>9 x 10</td>
<td>3 6 x 2 8</td>
<td>4 4 x 3 7 1/2</td>
</tr>
<tr>
<td>9 x 11</td>
<td>3 6 x 2 11 1/2</td>
<td>4 4 x 3 11</td>
</tr>
<tr>
<td>9 x 12</td>
<td>3 6 x 3 3</td>
<td>4 4 x 3 14 1/2</td>
</tr>
<tr>
<td>9 x 13</td>
<td>3 6 x 3 6 1/2</td>
<td>4 4 x 3 18 1/2</td>
</tr>
<tr>
<td>10 x 6</td>
<td>3 10 1/2 x 1 1/2</td>
<td>4 9 x 2 2</td>
</tr>
<tr>
<td>10 x 7</td>
<td>3 10 1/2 x 1 5 1/4</td>
<td>4 9 x 2 5 1/2</td>
</tr>
<tr>
<td>10 x 8</td>
<td>3 10 1/2 x 2 1</td>
<td>4 9 x 2 9 1/2</td>
</tr>
<tr>
<td>10 x 9</td>
<td>3 10 1/2 x 2 4 1/2</td>
<td>4 9 x 3 3</td>
</tr>
</tbody>
</table>

MACLEAN & CO., 145 BATH STREET, GLASGOW

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30 ALBERT STREET, MANCHESTER

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"Facilitate, Manchester"
SAFE TREAD PAVEMENT LIGHTS for
BASEMENT LIGHTING

We supply Lights of every kind; Stallboards, Cellar Flaps, Coal Plates, etc. Using our "Diffu-

lume" Lenses there is no better way of diffusing daylight.

INSULATED
GLASS FLOORS
for
ELECTRICITY WORKS
a speciality

Details of the illustrations shown are as follows:

T.100. 4 × 3 convex lens, also lens reversed, to show improved diffusing surface.
T.101. 4 × 3 Semi-prism.
T.102. 4 × 3 Semi-prism.
T.105. 3 in. Diam. Coal Plate Lens.

Cellar Flaps. Four-sided frame. Made also with solid iron doors and/or three-sided frame.
Prices from 18/- per ft. super.

GENERAL NOTES
Goods may be of any required size or variety.
Irregular lights charged as square.
Special prices quoted on receipt of Specification.

SEE OUR "PAVEMENT LIGHTS" PAGE.

BOROUGH ENGINEERING WORKS LTD.
Telephone: LUTON 1914
LUTON
Telegram: "JOSLIN IRONFOUNDER LUTON"