



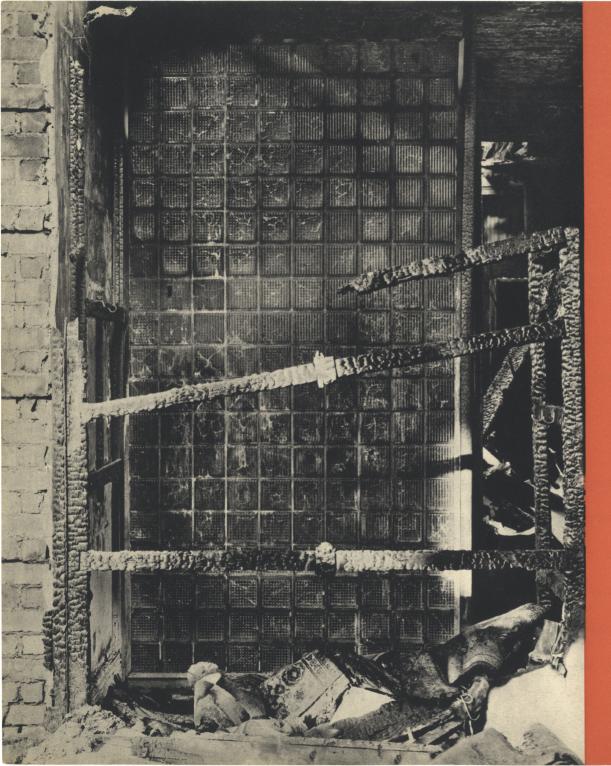
Cover photograph: Stairway at the La Roche Factory, Welwyn, constructed by Lenscrete Limited. Assoc. Architects: Professor O. R. Salvisberg of Zurich, and C. Stanley Brown of London. Photograph supplied by Lenscrete Ltd.



Factories, offices, shops, private houses, flats, cinemas, public buildings; all over England, Insulight Glass Bricks are being used for the buildings of to-day. Clean, strong and easy to lay, they make translucent walls of high sound-insulation and thermal efficiency. Practical and decorative, they provide a rigid wall face with the maximum amount of light transmission. Translucent but not transparent, they lend themselves to natural or artificial illumination. They are eminently suitable for external and internal walls, for staircase lights, panels,

bays, partitions; for flat or curved surfaces; for any position when a diffused, "all-over" light is required; or light combined with privacy.

Illustrated in this book are many examples of the use of Insulight Glass Bricks. Every day more and more architects are using them because of their physical properties, because they blend harmoniously and beautifully with other building materials, because they are an inspiration to effective design and a means of achieving it.



This panel of Insulight Glass Bricks survived the all-night fire at Kendal Milnes, Manchester. Situated on the second floor, adjoining a well that acted as a fan to the flames, it withstood the severest test of the fire in a truly amazing manner. Although discoloured and crazed in parts, it remained intact in spite of being subjected to sudden extreme changes of temperature. In addition to its use as an architectural feature and its light diffusion properties, the panel proved its effectiveness as a fire retardant.

Photograph by Entwistle, Thorpe & Co. Ltd.

FIRE-RESISTANCE

OF

INSULIGHT GLASS BRICKS

Insulight Glass Bricks have been tested for fire resistance at the Building Research Station, England, and have been classified Grade D under the conditions of the British Standard Definitions No. 476, as a fire-resisting building material. (See this page for illustration of result of actual fire at Kendal Milne's premises, Manchester.)

Other tests carried out by the Building Research Station include:

Light Transmission No. 538, ref. B.R.S. 36/12/16B.

Transmission of Air-borne Sound No. 451, ref. B.R.S. 36/12/16.

Compressive Strengths, No. 480, ref. B.R.S. 36/12/16.

Transmission of Heat, No. 569, ref. B.R.S. 36/12/16B.

Stability tests have also been carried out at our own Works and copies of reports on all the above tests are obtainable from: PILKINGTON BROTHERS LTD., ST. HELENS, Lancs.

A.R.P. Glass Bricks have been tested, along with other types of glass by the Home Office for A.R.P. structural defence purposes, and it was found that Glass Bricks supplied in concrete frames are HIGHLY resistant to blast, vide A.R.P. Handbook No. 5, "Structural Defence"—Chapter 6, Section 6.2 (G).

(a) P.B.1

 $8'' \times 4_8''' \times 3_8'''$ Surface pattern of 1'' convex ribs carried vertically on both exterior faces and horizontally on both interior faces. Approximate weight 4 lbs. 5 ozs.

(b) **P.B.2**

 $5\frac{3}{4}'' \times 5\frac{3}{4}'' \times 3\frac{3}{8}''$. Surface pattern of $\frac{1}{2}''$ convex ribs carried vertically on both exterior faces and horizontally on both interior faces. Approximate weight 3 lbs. 11 ozs.

(c) P.B.2 Corner Brick

Surface pattern of $\frac{1}{2}$ " convex ribs carried vertically on both exterior faces and horizontally on both interior faces. Approximate weight 3 lbs. 10 ozs.

(d) P.B.32

 $7\frac{3}{4}$ " $\times 7\frac{3}{4}$ " $\times 3\frac{7}{8}$ ". Surface pattern of $\frac{1}{2}$ " convex ribs carried vertically on both exterior faces and horizontally on both interior faces. Approximate weight 6 lbs.

(e) P.B.32 Corner Brick

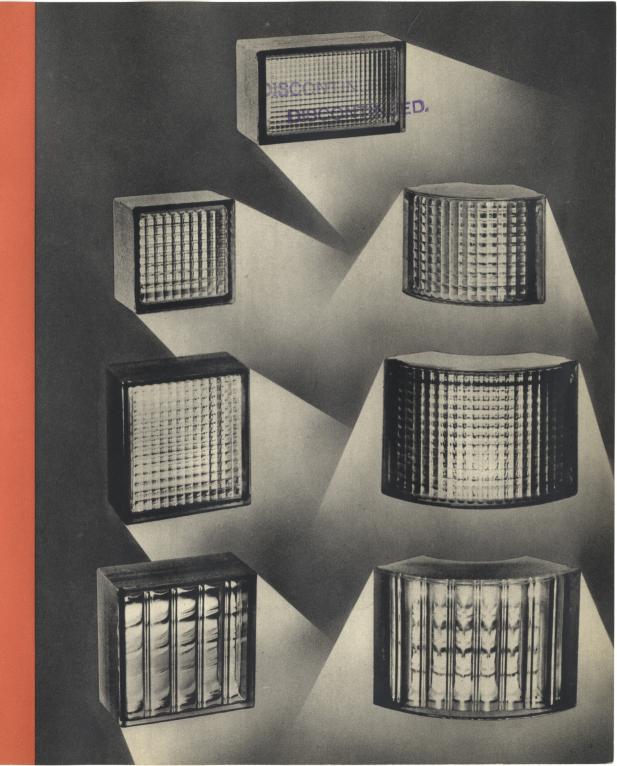
Surface pattern of $\frac{1}{2}$ " convex ribs carried vertically on both exterior faces and horizontally on both interior faces. Approximate weight 7 lbs. 10 ozs.

(f) P.B.3

 $7\frac{3}{4}'' \times 7\frac{3}{4}'' \times 3\frac{7}{8}''$. Surface pattern of $1\frac{1}{4}''$ concave ribs carried on both interior faces, running vertically on one face and horizontally on the other. Both exterior faces are smooth. Approximate weight 6 lbs.

(g) P.B.3 Corner Brick

Surface pattern of $\mathbf{1}_4^{1''}$ concave ribs carried on both interior faces, running vertically on one face and horizontally on the other. Both exterior faces are smooth. Approximate weight 7 lbs. 10 ozs.



Recommendations for the fixing of Insulight Glass Bricks

NSULIGHT GLASS BRICKS are non-load bearing units which will carry their own weight with a wide safety factor up to any practical height, but because of wind pressure and other stresses it is necessary to put an intermediate support in panels over 20 feet high or 120 feet super. Very wide panels require an expansion joint every 20 feet.

The above dimensions may be exceeded for internal panels but such cases should be referred to our Technical Department.

MORTAR

A fairly dry and fatty mortar is advisable as the Glass Bricks are non-absorbent. The best mix has been found to be 4 parts (by volume) sand, I part Portland Cement and I part Slaked Lime putty, mixed fairly dry. Clean builder's sand free from gravel (not sea sand) should be used.

POINTING

The face of the joints may be struck back and smoothed during erection, or they may be raked out and later pointed up with Snowcrete, Colourcrete or similar materials. A "keyed" joint formed with a curved jointing tool is the finish mostly used.

REINFORCEMENT

Reinforcing strips should be built into every third to every fifth course according to the size and position of the panel. The ends should pass through the clearance joint and be built into or secured to the main structure. "Exmet" $2\frac{1}{2}$ in. wide No. 20 gauge expanded metal has been found suitable for this purpose.

CLEARANCE JOINTS

The head and both vertical sides of every panel must be built into recesses free of the main substructure—except for the reinforcement—to avoid risk of

settlement load or expansion strains affecting the panel. The recesses which should be kept free of any spillings of mortar and filled with a non-hardening compound of which there are many suitable varieties on the market, should be $4\frac{1}{4}$ in. wide by I in. deep allowing a $\frac{1}{2}$ in. clearance and a $\frac{1}{2}$ in. cover over the face of the glass brick with $\frac{3}{16}$ in. play on either face.

SILLS

The bottom course should be bedded in cement mortar on to the sill which should first be coated with an asphalt emulsion to allow for slight movement without disrupting the mortar bed and thereby preserving the weather-tightness of the panel.

DOORWAYS

Doorways which have to be built into a panel need special structure details to avoid shock and strains being transmitted into the panel.

WINDOWS AND VENTILATORS

can be set in a panel as "insets". See pocket in inside back cover for information sheets showing the typical fixing methods.

Our Technical Department is available for consultation.

QUANTITIES ALLOWING FOR \$\frac{1}{4}IN. MORTAR JOINTS

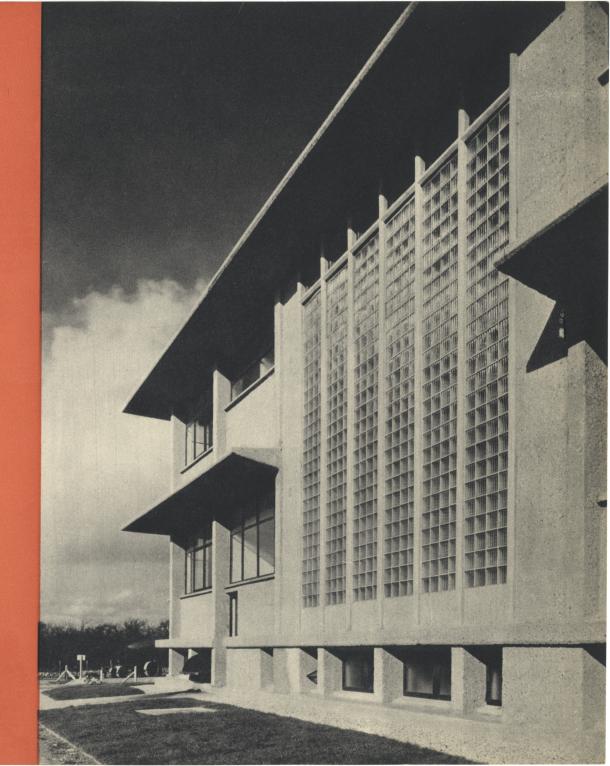
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P.B.32 ,,	"	201	or	$100 = 44\frac{1}{2}$,,	,,	"	
or in metric figures		_						
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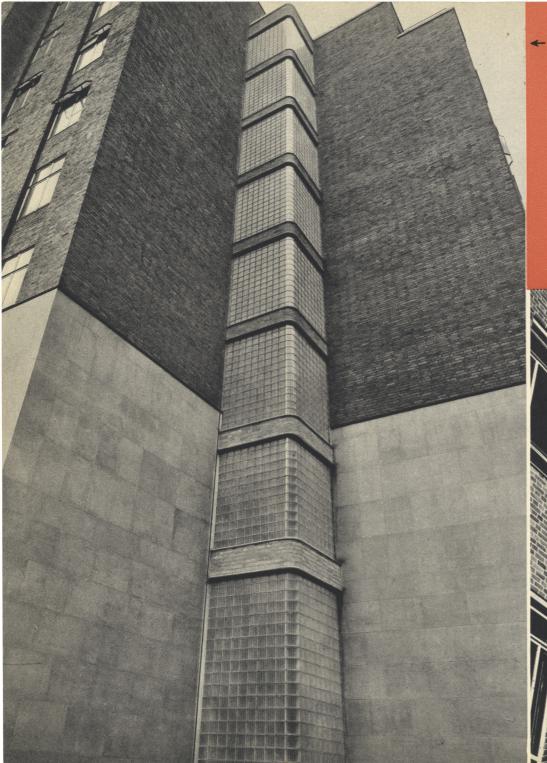
NEW OFFICES OF THE TUNNEL PORTLAND CEMENT COMPANY PITSTONE, IVINGHOE, TRING

Engineer: Sir E. Owen Williams, K.B.E

Fixers: P. Lind & Co. Ltd

Six panels of Insulight Bricks, each separated by a concrete mullion, give character and distinction to the appearance of this building. Insulight Glass Bricks were chosen because of their effective light transmitting and diffusing qualities and the insulation they provide, in addition, against temperature changes.





← AIR MINISTRY BUILDING, Berkeley Square, London, W.1

Architect: Gordon Jeeves. Fixers: J. Healey (London) Ltd.

General Contractors: Sir Robert McAlpine & Son.

Insulight Glass Masonry was used to provide maximum lighting for the staircase, and to introduce a feature using modern materials for the rear elevation.

Photograph supplied by Messrs. J. Healey (London), Limited.

CAMBRIDGE SCHOOL OF ANATOMY

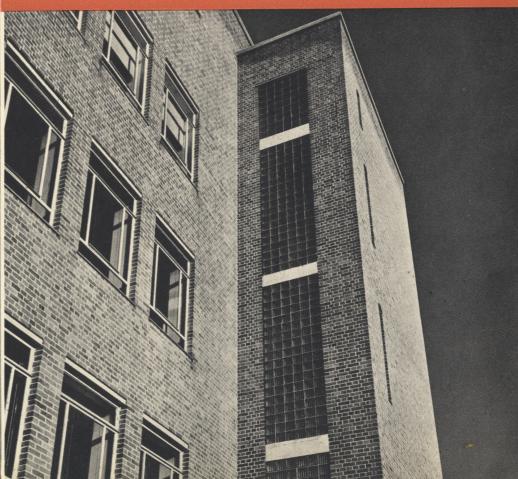
Architects: Messrs. Stanley Hall, Easton & Robertson, FFF/R.I.B.A.

Contractors: Messrs. Rattee & Kett.

Insulight Glass Bricks were used to provide adequate lighting for the staircase. Other considerations were the size of the window and the architectural merits of Insulight Bricks.

Photograph by John Maltby.

5

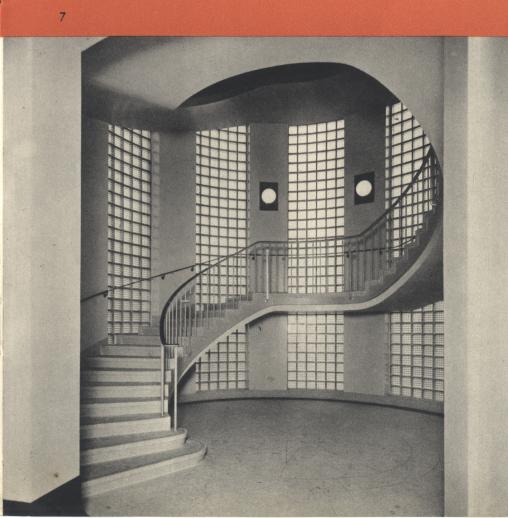


METROPOLITAN WATER BOARD

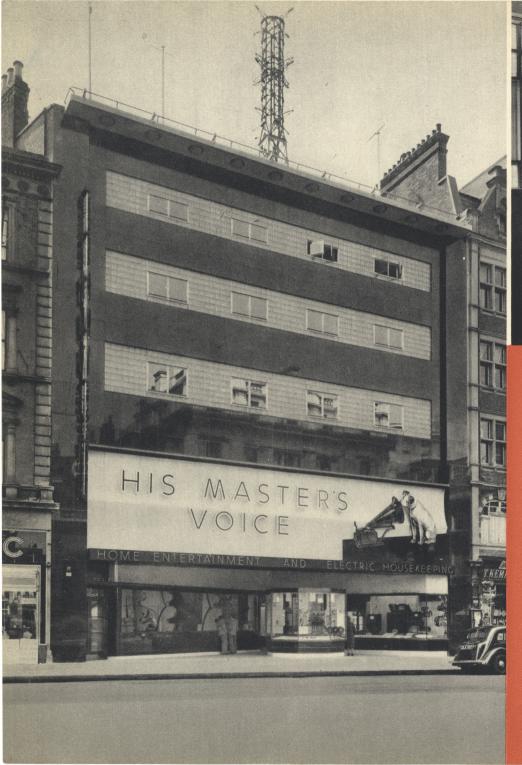
Architects: Messrs. Stanley Hall, Easton & Robertson, FFF/R.I.B.A. Staircase Light Constructed by Lenscrete Limited.

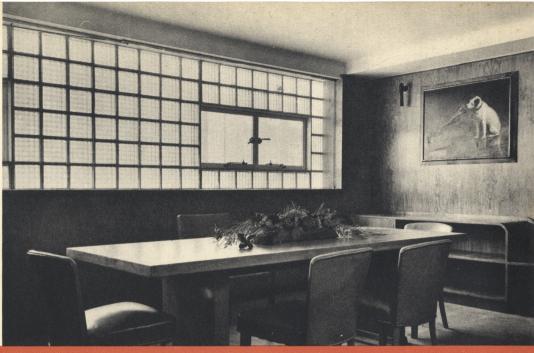
Exterior and interior views of the staircase in the new offices of the Metropolitan Water Board. Insulight Glass Bricks were used as a decorative feature and in order to obtain long windows without intermediate transomes.

Photograph Supplied by Lenscrete Limited.









NEW "H.M.V." BUILDING Oxford Street, W.1

Architect: J. Emberton, F.R.I.B.A. Fixers: J. Clark & Son, Ltd.

Insulight Glass Bricks were used to ensure that maximum daylight should be available to each floor; in addition, casement windows are set in to the glass brick panels. Additional advantages are the exclusion of street noises, and the restriction of the effect on internal conditions by external temperature changes.

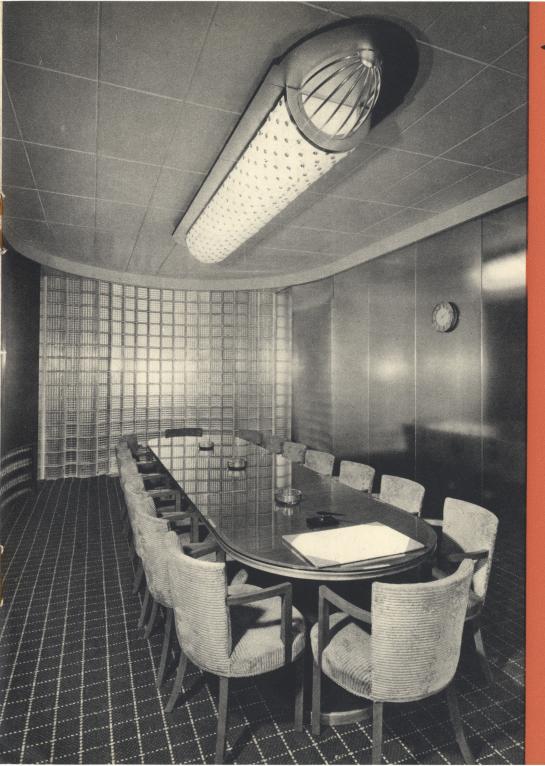
The interior view shows the Boardroom at the Offices. Both photographs are reproduced by courtesy of "The Architectural Review."

CENTRAL LONDON ELECTRICITY SHOWROOMS Regent Street, London, W.1

Architect: E. Maxwell Fry, A.R.I.B.A. Fixers: Holland, Hannen & Cubitts, Ltd.

The many advantages of Insulight Glass Bricks are fully illustrated in this photograph; their clean, pleasing appearance and high light transmission being clearly shown. It is these properties, together with those of heat and sound insulation, which make them ideal for use in modern offices, factories, showrooms, etc., and also as a background for display.





BOARDROOM Messrs. PILKINGTON BROS. LTD. Piccadilly Showrooms

Insulight Glass Bricks were used for the wall panel because of their light transmission and sound insulation properties and the privacy they ensure.

Photograph by John Somerset Murray.

WAITING-ROOM ENTRANCE Messrs. PILKINGTON BROS. LTD. Piccadilly Showrooms

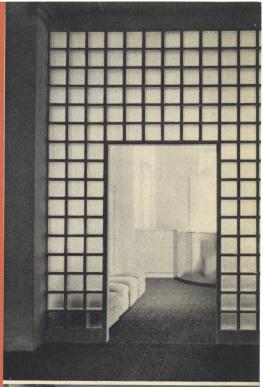
The door surround is composed entirely of Insulight Glass Bricks because of their good light transmission, cleanliness and decorative properties.

Photograph by John Somerset Murray.

OFFICES, BRITISH VITROLITE CO. Hoxton

Architects: F. W. Knight and Sir John Simpson & Partners.

Insulight Glass Bricks, above "VITROLITE" dadoes, were used in this corridor because they are clean, hygienic, and secure good interior light conditions with effective sound insulation.





(1) EXTENSION KIRK SANDALL HOTEL, Doncaster

Architects: T. H. Johnson & Son, F.F./R.I.B.A.

Fixers: W. Firth, Doncaster.

Insulight Glass Bricks were chosen for their light transmission and decorative effect, and also for the privacy which they afford.

Photograph by Charles R. H. Pickard

(2) FOREST HILLS HOTEL, Aberfoyle

Architects: the late R. A. Scrymgeour and J. A. McGavin. Builders: R. Lamont & Sons, Milngavie.

Curved partition walls constructed of Insulight Glass Bricks separate the Sun Lounge from the Smoke Room Bar. Insulight Glass Bricks were used firstly to secure good light from the Sun Lounge into the Bar, and secondly to secure privacy. Sound insulation plays an important part in this scheme, the whole forming a very pleasant piece of decorative wall panelling. Insulight Glass Bricks not only blend decoratively with their surroundings, but their light transmitting and sound and thermal insulating properties make them particularly suitable for internal positions.

Photograph by A. T. Kelly.

(3) ATLANTIC RESTAURANT, EMPIRE EXHIBITION, GLASGOW Cocktail Bar

Designer: Kenneth Cheesman.

Architects: Thomas P. Marwick & Son. Fixers: A. S. Wright & Co., Glasgow.

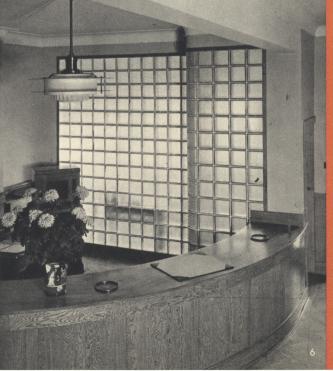
The counter walls, which are illuminated, are constructed of P.B.32 Insulight Glass Bricks, the wavy form being obtained by the use of Insulight Corner Bricks at the angles. The top is of 1 inch clear Rough-cast Plate Glass, silvered up the wavy line of the bar front to mask lamps and construction. Humorous decorative motifs are deeply sandblasted at intervals on the underside of the glass top. The job was designed essentially for decorative effect.











(4) ODEON CINEMA, EXETER

Architect: H. W. Weedon, Birmingham. Fixers: F. W. Wilkins & Sons Ltd., Torquay.

The brightness and clean lines of this section of the foyer are due to the use of Insulight Glass Bricks which blend attractively with the other materials chosen and are ideally suited to the method of illumination.

Photograph by S. A. Chandler & Co., Ltd.

(5) JACOBS FACTORY, AINTREE

Architects: Morter & Dobey, Liverpool.

Insulight Glass Bricks have been used here to secure light, as a decorative feature, and for sound insulation.

Photograph by Stewart Bale.

(6) BOB MARTIN'S NEW PREMISES, SOUTHPORT

Architects: John Clark & Sons, Liverpool. Fixers: Buck & Hodson Ltd., Southport.

The partition wall dividing the waiting room and reception desk in the entrance hall is constructed of Insulight Glass Bricks. Their high light transmission, which is clearly shown in the photograph, and their sound and thermal insulating properties, recommended them for this particular installation. Their decorative value was another point in their favour.

Photograph by Stewart Bale.

FLATS, BROOM ESTATE, GLASGOW

Architect: W. E. Gladstone, of Mactaggart & Mickel Ltd. Fixers: Mactaggart & Mickel Ltd.

An unusual exterior view of a semi-circular staircase panel constructed of Insulight Glass Bricks. Insulight Glass Bricks were chosen primarily for their light transmitting and diffusing value. Sound insulation was another point considered, and Insulight Glass Bricks were used because they would cut out the noise of traffic up the service staircase on the other side of the panel. The decorative effect of Insulight Glass Bricks has also proved admirable.

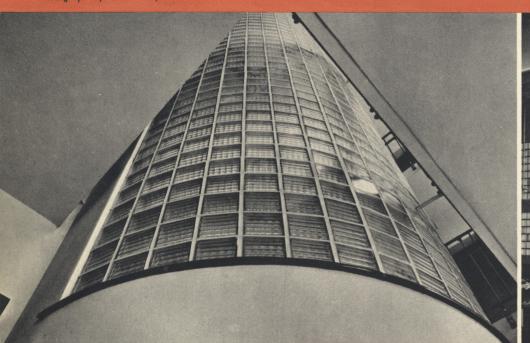
Photograph by A. T. Kelly.

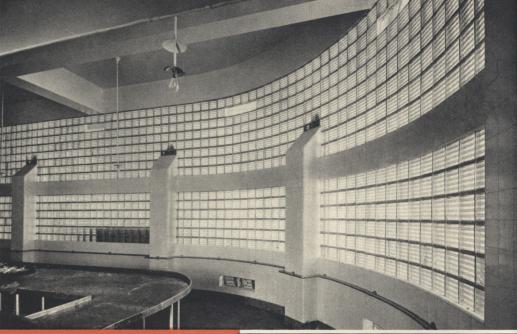


Architects: Architects' Department, F. W. Woolworth & Co. Ltd. Contractors: J. M. Newton & Sons Ltd.

All the advantages of Insulight Glass Bricks have been incorporated in this installation. They were used primarily to secure light into the kitchen. At the same time the architect had in mind the insulation of the cafe from atmospheric conditions in the kitchen. Insulation is also obtained against heat, sound and odour. The Insulight Glass Bricks provide all the light necessary to the kitchen inside, even when fixed as an internal partition, and they are indispensable from the hygienic point of view.

Photograph by Stewart Bale by courtesy of F. W. Woolworth & Co. Ltd.





DRAWING OFFICE Messrs. AIRCRAFT COMPONENTS LIMITED. CHELTENHAM

Fixers: Sharpe & Fisher Ltd., Cheltenham.

The numerous panels of Insulight Glass Bricks included in this Drawing Office, provide satisfactorily the essential conditions in a building of this type-privacy, insulation from outside noises, excellent

Photographs by Courtesy of Aircraft Combonents Ltd.

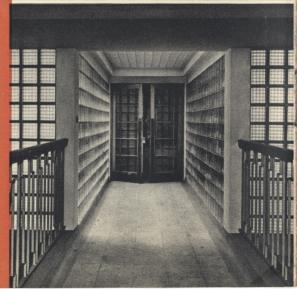
COLLEGE OF ART AND TECHNOLOGY, LEICESTER

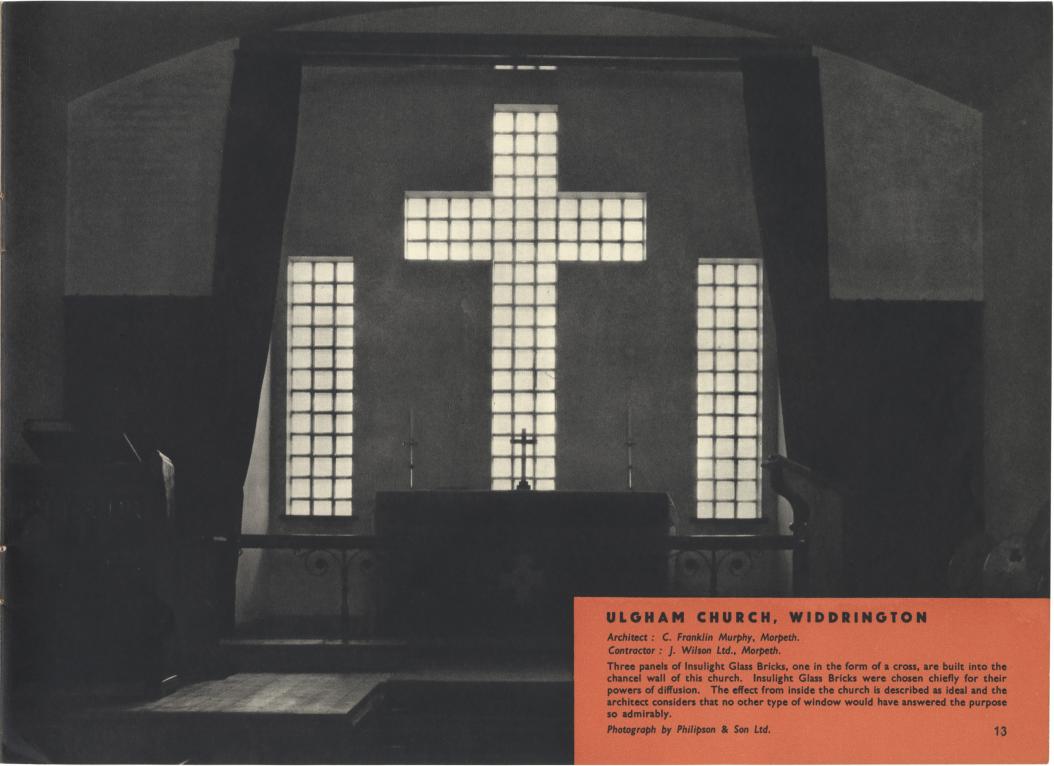
Architects: Pick, Everard, Keay & Gimson, Leicester.

Fixers: H. Herbert & Sons, Leicester.

Insulight Glass Bricks were chosen for the Bridge connecting the old and new Colleges because the architect desired something which would give a rigid wall face and also provide the maximum amount of light. Insulight Glass Bricks combine excellent light transmission and insulating properties with a clean and pleasing appearance.

Photograph by Fisher & Potter Ltd.



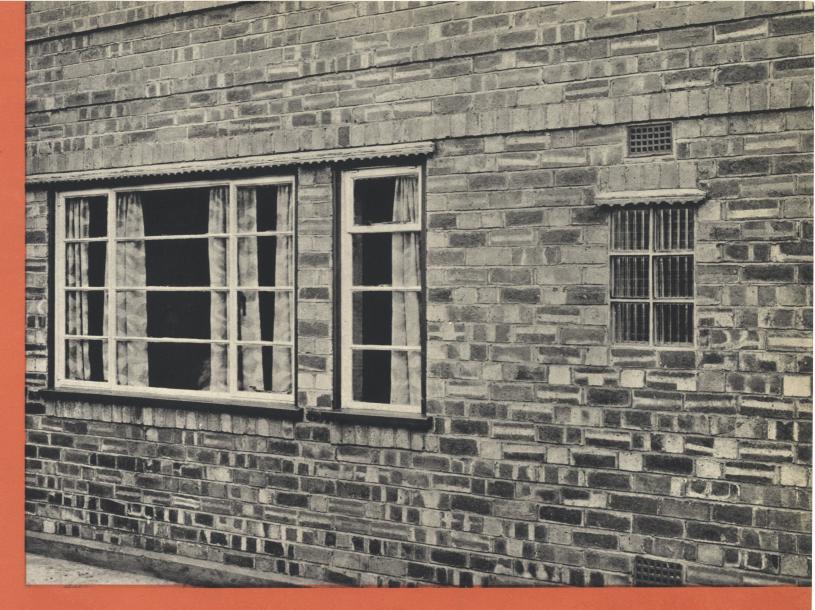




VENTILATOR UNIT

This photograph shows a concrete ventilator with glass louvres set in an Insulight Glass Brick panel. In this example the glass strips are Majestic pattern, but they can be supplied in any of the Figured Rolled or Cathedral types.

Photograph by Stewart Bale.



INSULIGHT GLASS BRICKS FOR LARDER WINDOWS

The variety of architectural uses to which Insulight Glass Bricks can be put has been indicated to some extent in the previous pages. But, by their very nature, they inspire all sorts of other uses. This photograph shows just one—Larder windows of Insulight Glass Bricks used on a big Housing Estate. Many builders consider them cheaper and better than casement windows for larders, store-rooms, etc.

PILKINGTON BROTHERS LTD

ST. HELENS, LANCS.



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Subsidiary Companies	Queenborough, Kent. Sheet Glass Ltd. Telephone: Sheerness 352 and 353. Pontypool, Mon. Pilkington Brothers (South Wales) Ltd. Telephone: Pontypool 316. Canada Pilkington Brothers (Canada) Ltd., Central Office: 17 Mercer Street, Toronto, Ontario. Depots: Halifax (N.S.) Montreal (P.Q.) Toronto (Ont.) Hamilton (Ont.) Winnipeg (Man.) Calgary (Alta.) Edmonton (Alta.) Vancouver (B.C.). Brazil Pilkington Brothers (Brazil) Ltd., Office and Depot: Caixa Postal 2075, Rio de Janeiro.
Cables	A.B.C. 5th Edition. A.B.C. 6th Edition (5 letters). Marconi. Lombard. Bentley's complete phrase. Bentleys, second phrase. Western Union (5 letters).



INSULIGHT GLASS BRICKS. RTICAL SIDES — RECESS DETAILS.

RECESS

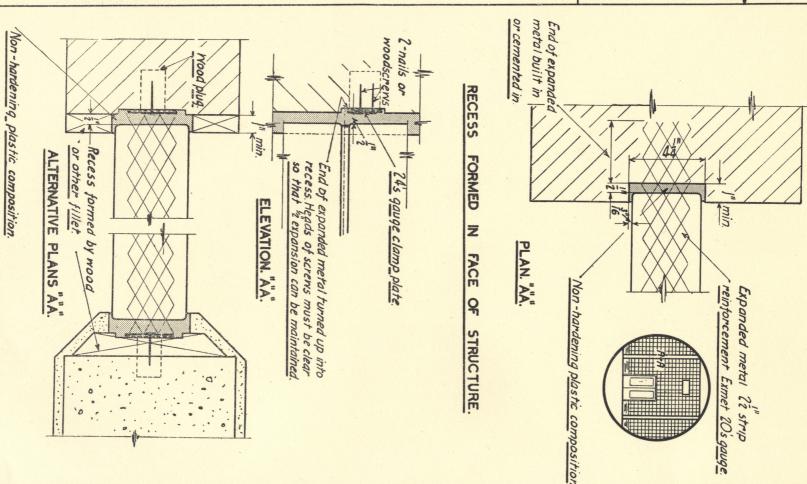
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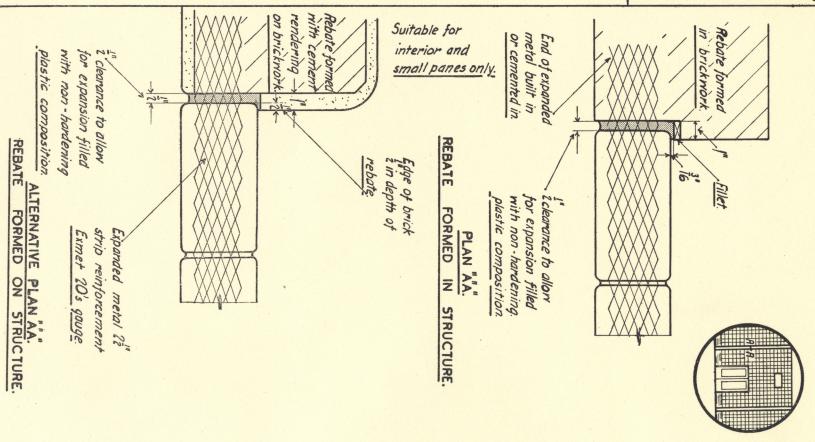
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PILKINGTON BROS. LTD. DETAIL.

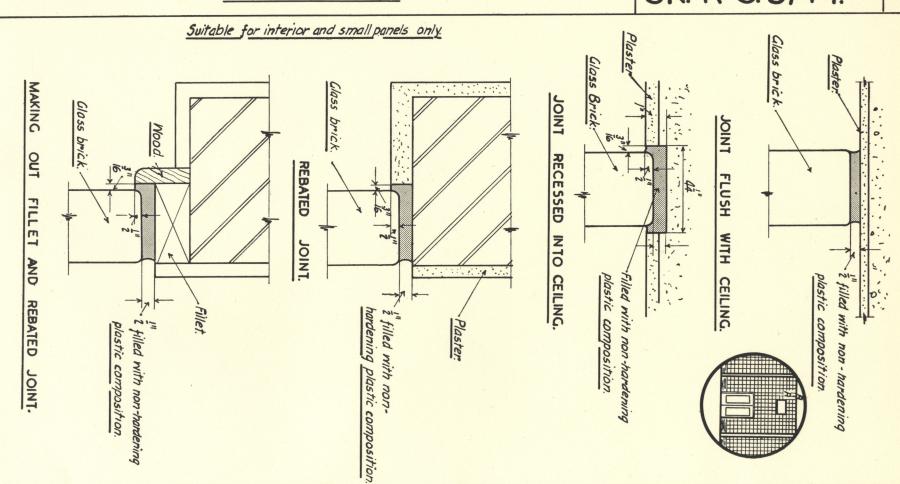
INSULIGHT GLASS BRICKS. DETAILS OF REBATED JOINTS.

SK. R-S. 5/42.



INSULIGHT GLASS BRICKS. CEILING DETAILS.

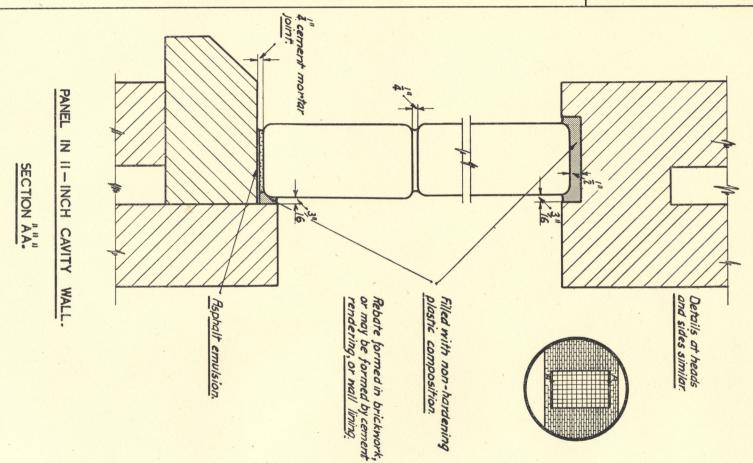
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PILKINGTON BROS LTD. DETAIL.

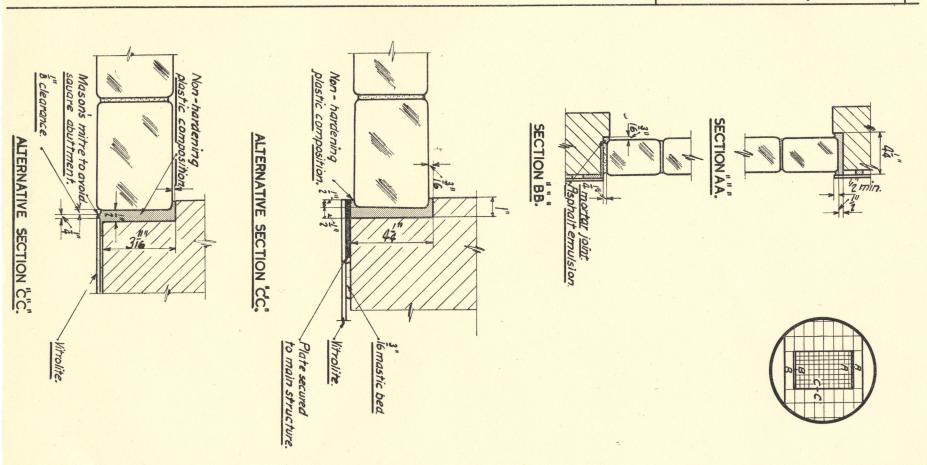
INSULIGHT GLASS BRICKS. DETAIL OF HEAD & SILL.

SK. R-S. 5/45.



INSULIGHT GLASS BRICK PANEL IN VITROLITE FACED WALL

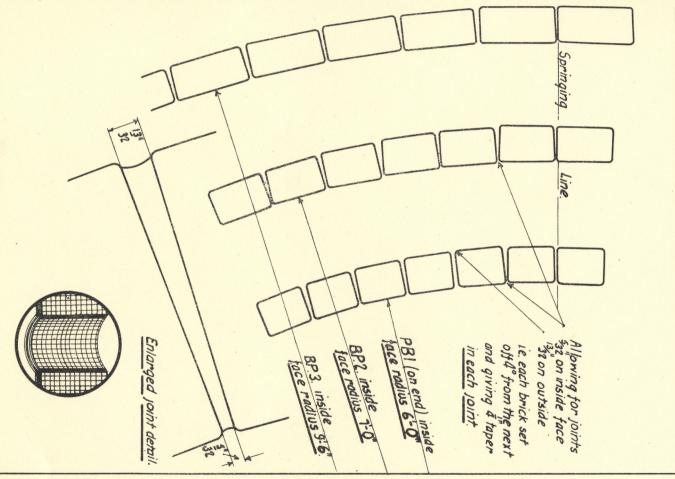
SK. R-S. 5/47.



PILKINGTON BROS., LTD. DETAIL.

INSULIGHT GLASS BRICKS. WIDTH OF JOINTS FOR VARIOUS CURVES.

SK. R-S. 5/48.



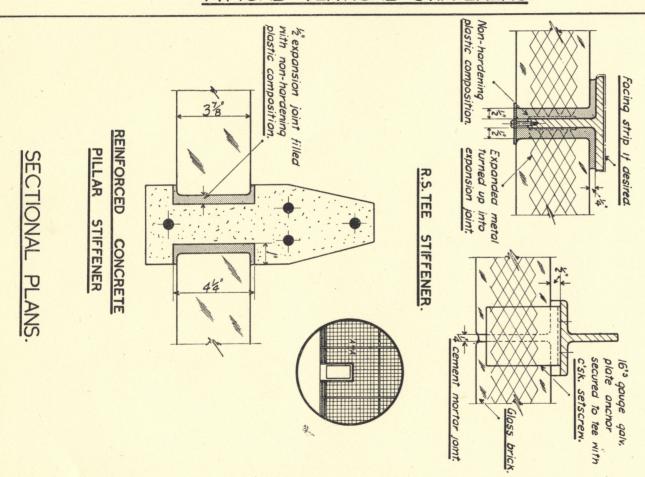
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~1 <u>−</u>	372	16	AK3	Outside	P.8.7.	15.
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32	15 m	32	10	Outside	3.	

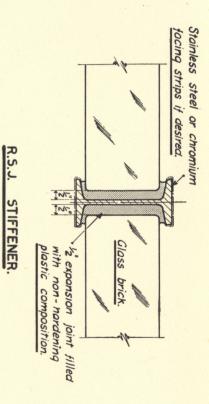
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INSULIGHT GLASS BRICKS. VERTICAL STIFFENERS.

SK. R.S. 5/49.

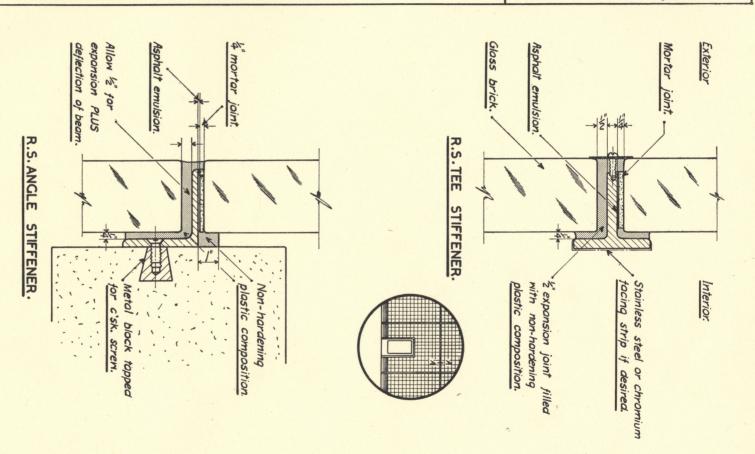
R.S.J.





INSULIGHT GLASS BRICKS. TYPICAL HORIZONTAL STIFFENERS.

SK. R.-S. 5/50

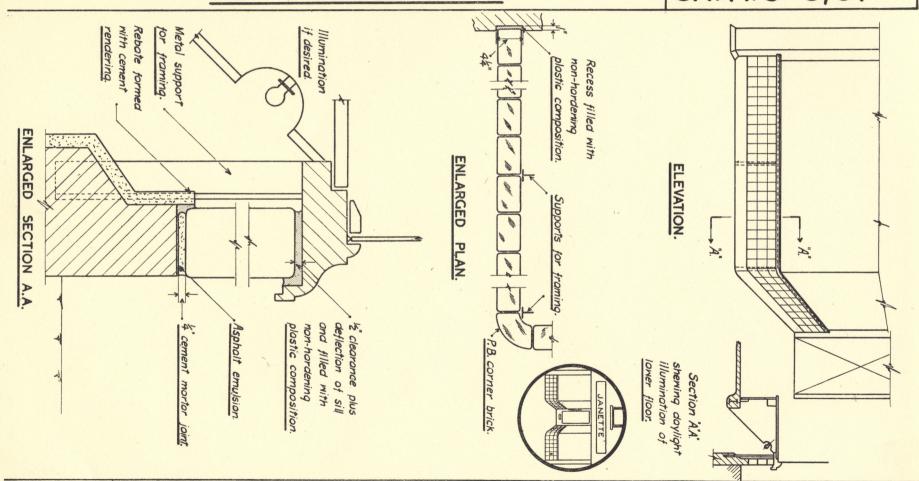


SECTIONAL ELEVATIONS

PILKINGTON BROS LTD DETAIL

INSULIGHT GLASS BRICKS. SHOP STALL RISER DETAILS.

SK. R-S. 5/51

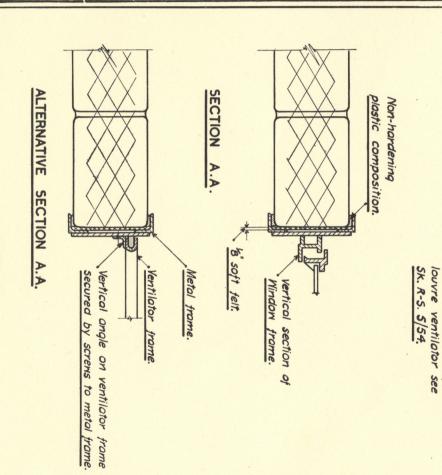


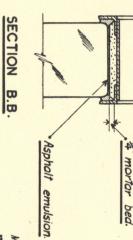
PILKINGTON BROS LTD
DETAIL

INSULIGHT GLASS BRICKS. FRAME DETAILS (WOOD) plastic Recess filled VI 24'5 gouge clamp plate and their type 2"crs as vertical stiffener beam M.S. flat holed I'dia. Bruberoid str. ELEVATION PAR and stiffener to door jambs Vertical stiffener C. Moodscrew securing clamp Exmet VERTICAL DETAIL STIFFENER BEND IN Stiffener "C" SECTION اليَّ Recess filled with 우 Filled with DOORWAY E-C If panel is in an exterior position Asphalt emulsion must be used 4 cement mortar joint under mortar joint. PILKINGTON BROS. LTD. DETAIL.

INSULIGHT **GLASS** BRICKS. **VENTILATOR & CASEMENT** INSET FRAME WINDOW.

SK. R-S. 5/53

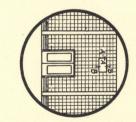




metal supplied by P.B's Ltd. Metal casements or ventilators not

for concrete and

8.8



PILKINGTON BROS., LTD. DETAIL

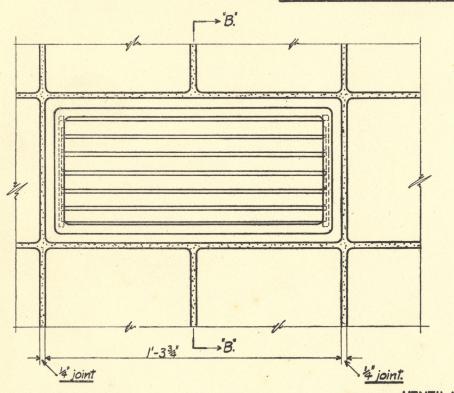
plastic composition

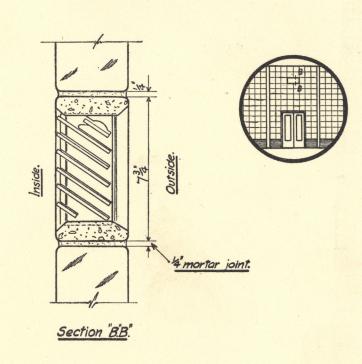
8 ruberoid

INSULIGHT GLASS BRICKS. REINFORCED CONCRETE VENTILATOR.

SK. R-S. 5/54

GLASS LOUVRES.





VENTILATOR FOR P. B. 3. GLASS BRICKS.

Can also be supplied to suit P.B.Z. Glass Bricks.

