

THE ARCHITECTS'

# JOURNAL

BUILDING EXHIBITION NUMBER

ONE SHILLING



easily erected  
for sound and thermal insulation  
for spans up to 35 feet  
adaptable

prestressed  
requiring no shuttering  
fire resisting  
economical

*More than 1,250,000 sq. feet of Stahlton floors have been sold in 1953*

## *Stahlton* Prestressed Floors

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R. Costain & Sons (Liverpool) Ltd., Barlows Lane, Liverpool, 9, Lancs. Telephone: LIverpool Aintree 4141



## THE TUBULAR STEEL CONSTRUCTION

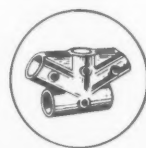
that  
can be built quicker and cheaper than any other form of steel construction.

is flexible in design, and can be built to architects' designs.

can be used for roof trusses with all other forms of construction.

can be built as a temporary structure if required, and dismantled and reassembled.

can be used in conjunction with our welded tubular structures, for buildings of special size requirements.



for further details write to Head Office

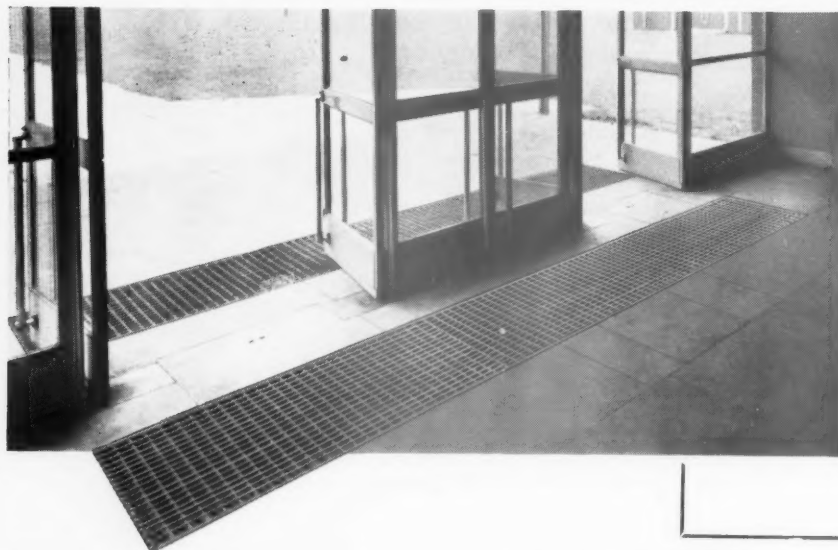
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CONSTRUCTION

BOTTLE CRATE STORAGE SHEDS  
MESSRS. WHITBREAD & CO. LTD.

**RAYLOR BROTHERS LTD.**

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WORKS: HAILEY RD, WITNEY, OXFORD.



## NUWAY fibred rubber MATTING & FLOORING OVERLAYS

**IN THE NEW SCHOOLS  
OF COVENTRY. . . . .**

Illustration shows NUWAY mats in the wells of Whitmore Park School, Saddler Road, Coventry, Coventry Education Committee. Architects: Richard Sheppard & Partners, LONDON.

### EXTERNALLY

Externally, NUWAY matting is being widely used for the new schools and Public Buildings of Coventry as it has been elsewhere for over a quarter of a century, to prevent dust and grit from being brought on to the attractive polished floors that are so much a feature of the buildings of today.

### INTERNALLY

Internally, NUWAY fibred-rubber link overlays are being increasingly adopted to provide hard-wearing non-slip silent and resilient "second floors" having fifteen years guaranteed life, which can be laid at a moment's notice to provide ventilated protection for polished floors during periods of heavy use.

NUWAY matting is always on display at the Building Centre, 9, Conduit Street, London, W.1 and 425, Sauchiehall Street, Glasgow, C.2. Technical literature and specimen section supplied on request.

**NUWAY MANUFACTURING CO. LTD. COALPORT. SHROPSHIRE**



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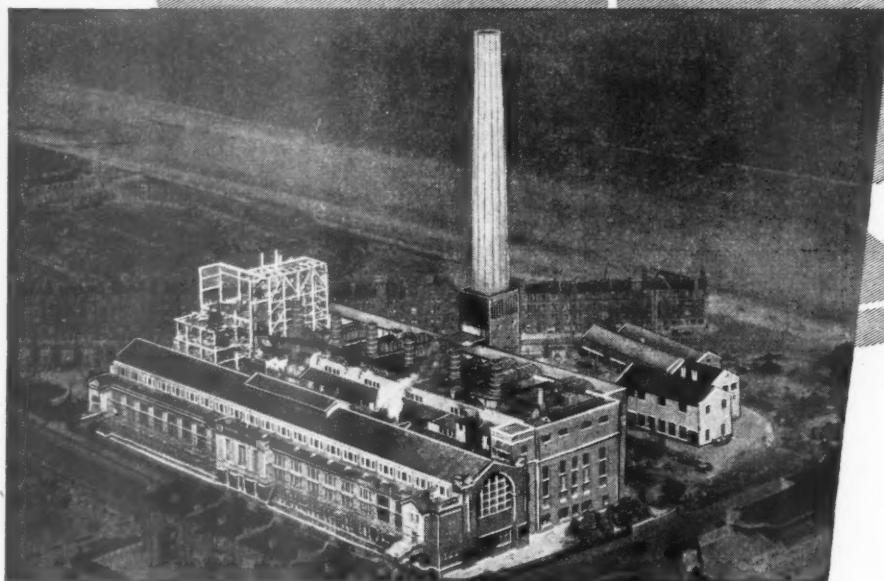
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# P & G BATTERIES

in the public service



Behind a number of Britain's large scale enterprises lies the quiet efficiency of P & G Batteries. The generation of electricity is a case in point. The Portobello Power Station at Edinburgh (shown here) employs P & G Stationary Batteries for Switchgear Operation, Emergency Lighting and other duties. Portobello is one of many. P & G service extends into many fields and covers complete specifications for any battery installations you care to name, a second and impartial opinion on an existing scheme, the provision of equipment and its installation, regular inspection and report. We welcome discussion on any project on the sound principle that two heads are invariably better than one.

## **PRITCHETT & GOLD and EPS Co. Ltd**

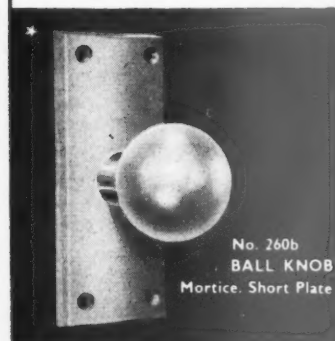
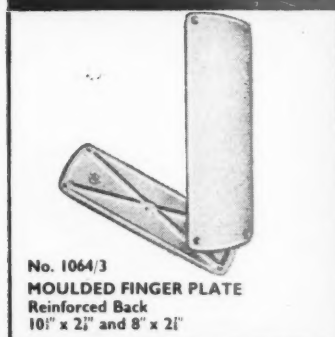
137 VICTORIA STREET · LONDON · SW1

*Batteries and Control Panels for Emergency Lighting*



PC25A

This door furniture works well,  
lasts long and suits modern  
ideas of decoration



★ Models indicated by this star are supplied with the Lacinoid patent "floating spindle". This dispenses with the need for grub screws and ensures a rattle-free fitting for all normal door thicknesses. The following models can be supplied on request with "floating spindle" and fixed rose: 400, 300 and 290.

*Architects and contractors are invited to apply  
to the address below for information concerning  
new models as they appear from time to time.*

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TRADE MARK

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Telephone: HORNCHURCH 2981  
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*See round the Creda*

## HC 4904 UNIT-TYPE RANGE

**Hob height only 2' 10"**—cooks can see inside utensils and stir contents without strain

**Multi-plate boiling top**—either a 24" x 16" boiling plate for stock pot or two 16" x 12" for large stewpans, or four 12" x 8" for smaller stewpans. Also two 8" x 6" for simmering large pots, etc.

**6" clear hob space** between boiling plates, and at each end

**Special Creda finish**—hard-wearing, easy to clean vitreous enamel

**Special under-hob structure** isolates wiring from any spilt liquids. Full-sized crown (removable without lifting hob) collects spillage

**2 stage oven thermostat**—rapid heating, low maintenance consumption

**Even oven heat**—side and bottom elements give constant heat and a fully general purpose oven

**Oven-door thermometers** fitted if required

**Grid shelves** draw to three-quarters full length without appreciable drop; carry full weight when extended

**Control panel**—fully illuminated, serviced from the front

**Full size roast pan**—very rigid; and no joins to harbour fat

**Door handle**—no insulation needed—the all-metal handle always remains cool

**Full sealed oven**—raised edge on door frame cuts into special door gasket—an adjustable door ventilator dissipates excess steam

**Base of oven** has strap to give flat contact with floor. Adjusting bolts in each corner

**Troublefree door seal** remains unaffected by movement in transit and on site. Doors can be replaced without special labour to 'bed' door

**Doors open 150°**. Robust stop prevents damage

# Creda

## HEAVY DUTY COOKING EQUIPMENT

*and note!* more than 3,000 items of Creda cooking apparatus have been supplied to School Feeding Centres during the past four years



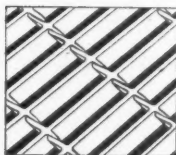
MADE BY THE HOUSE OF **Simplex**

SIMPLEX ELECTRIC CO LTD, CREDa WORKS, BLYTHE BRIDGE, STAFFS & BRANCHES A  COMPANY

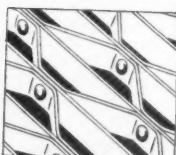


# FLOORING SYSTEMS

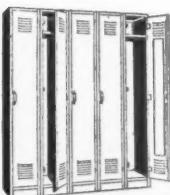
Put the factory on a sound footing



FLOWFORGE



\* FLOWMESH



Open steel flooring that provides maximum load-carrying capacity, with minimum weight.

The ideal solution to the problem of providing light-passing, ventilating, non-slip floors.

Four standard types provide a choice to meet any requirement . . . in strength, in lightness and in price.

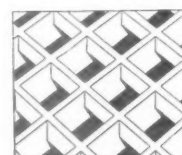
All types are obtainable as stair and ladder treads, fitted with standard end plates.

Can be cut to the most intricate outlines, to fit round machines, form operating platforms, etc.

\* These two types are also available in Aluminium Alloy—non-corrodible and non-sparking



\* FLOWMESH LIGHT

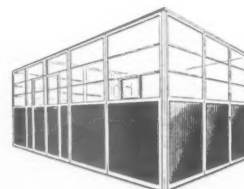


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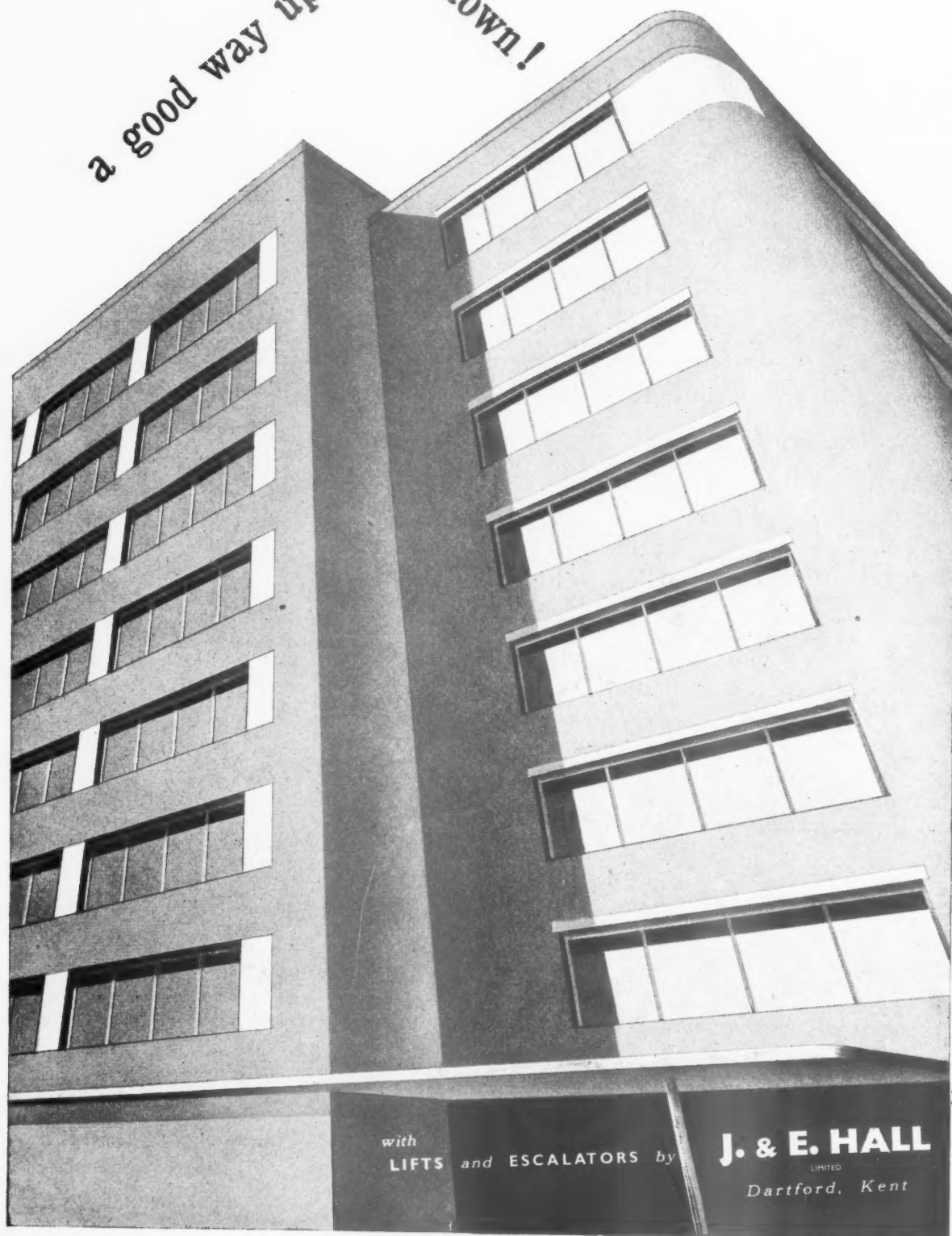
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...and down!



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Don't get cold feet...

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*There's nothing like* 

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P4 H



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What made her stop—look at—and buy that particular article? Quite simple, really! It had a more eye-taking finish than its brothers—it *looked* better, and other things being equal, was a more desirable purchase. That's the kind of sales compelling effect a Cellon finish can give to any product.

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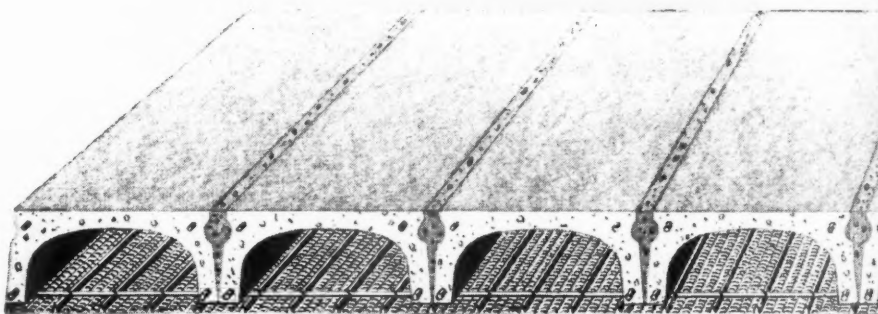
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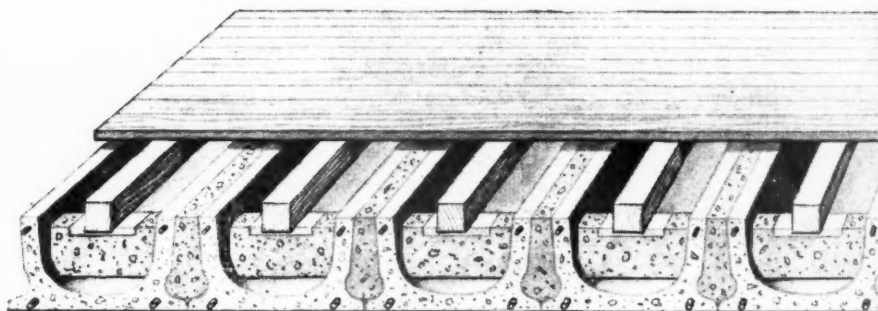
# The most comprehensive service in concrete

*Three systems permit full flexibility and provide sound resistance, strength, wide range of spans and service accommodation.*

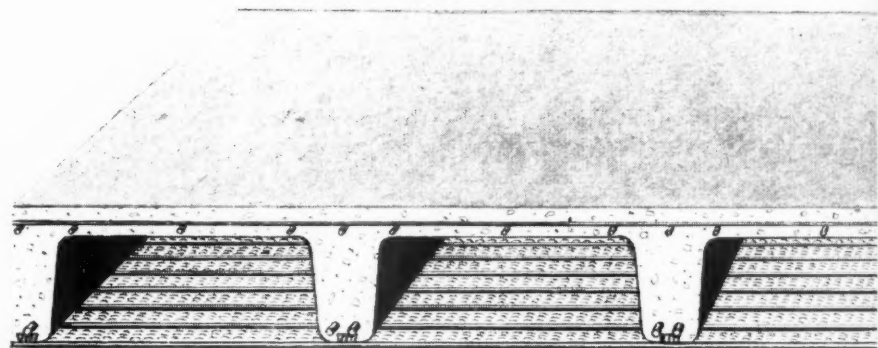
**Precast Type 1**      The type 1 Truscon Precast Floor spans up to 18' 0". Any floor or ceiling finishes can be attached, and in conjunction with a suspended or semi-suspended ceiling, a high degree of sound resistance is obtained.



**Precast Type 2**      The type 2 (or the semi-suspended tread type) Precast Truscon floor combines the fire resisting qualities of a reinforced concrete floor with the resilience of the timber floor, provides good sound resistance, and accommodation for electric light conduits and domestic services.



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Truscon floors are designed for individual jobs and full working drawings are supplied to the Contractor. We undertake the constructing of these floors and related ancillary concrete work.

Truscon floors have behind them our full resources as specialists for nearly fifty years as reinforced concrete engineers. Resident engineers operate from our branch offices throughout the country.

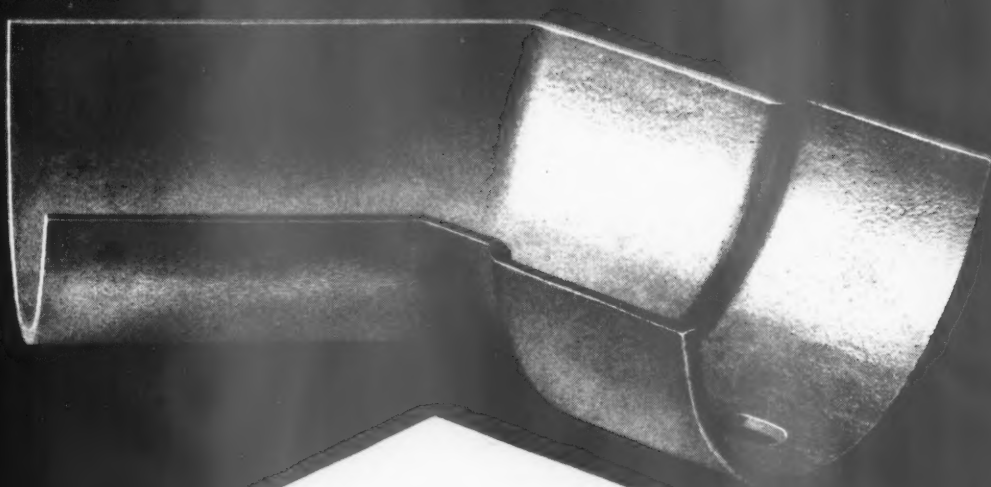
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**REINFORCED CONCRETE ENGINEERS & CONTRACTORS**  
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*City Architect and Planning Officer, Archibald G. Jury, Esq., F.R.I.B.A., F.R.I.A.S.  
Consulting Engineers Messrs. F. A. Macdonald & Partners*

## Ten-storey flats, Moss Heights, Glasgow

This scheme, which is being carried out for the Corporation of Glasgow, provides for the erection of three 10-storey blocks of flats in reinforced concrete and two 4-storey blocks in traditional brick construction.

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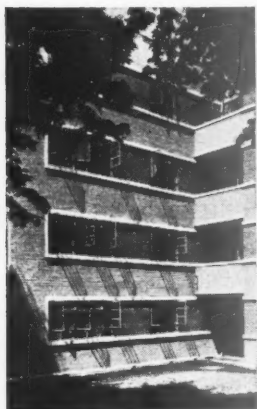
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*suit all  
housing styles*

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THE CRITTALL MANUFACTURING CO. LTD., BRAINTREE



Better looking  
permanent roofs  
*in Colour!*

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Ruberoid Slates possess the weatherproof qualities for which Ruberoid products are famous, and add permanently to the appearance of a boarded roof in any surroundings.

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No allowance need be made for breakages in transit or handling. Once laid, the tiles will not lift or shift in the worst weather.

*Illustrated Brochure No. 836 gives full details of size, weight, etc.*

*Ruberoid Contract Departments, located in convenient centres, estimate for the supply and fixing of Ruberoid Slates or Built-up Roofing specifications anywhere in the British Isles.*

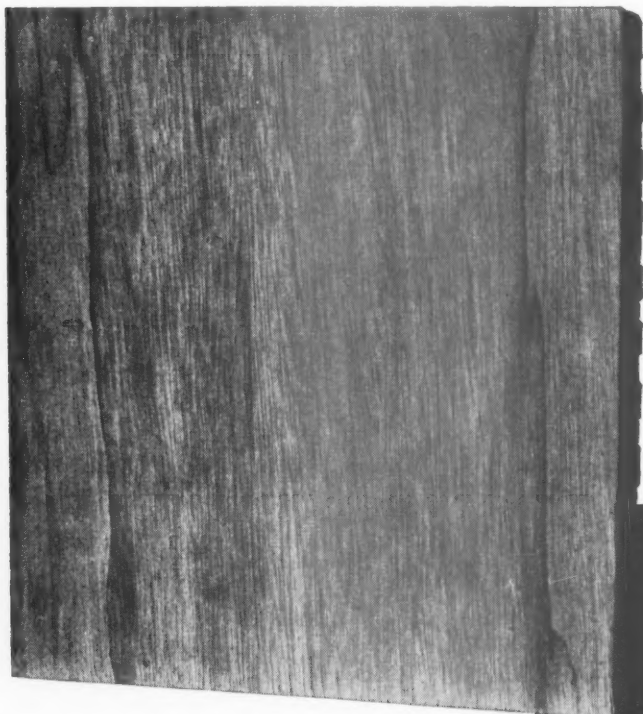
# RUBEROID SLATES

A Product of :—

THE RUBEROID COMPANY LIMITED,

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# ARDUX

*the new  
wood floor*

The 'Ardux' tile consists of a hardwood surface and a resin-bonded sand base. It thus combines the decorative value of wood with dimensional stability and complete resistance to damp, rising moisture, dry rot, rodents and micro-organisms. Initial cost is moderate and simple fixing with cement mortar direct on a concrete sub-floor offers substantial economies in laying.

'Ardux' flooring is particularly suitable for use in conjunction with sub-floor heating.



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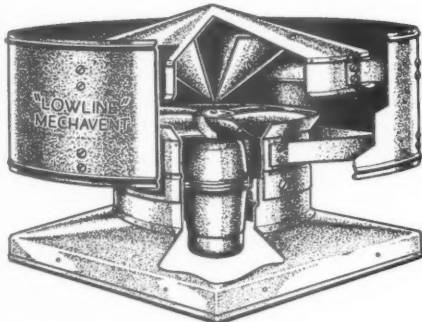
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# Scientific

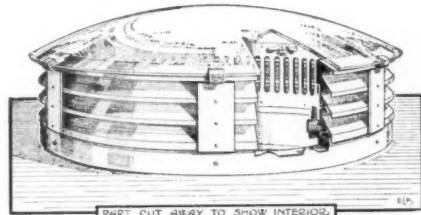


# Ventilation



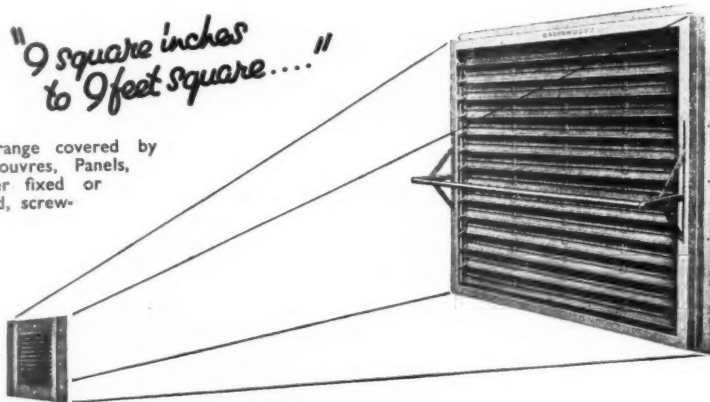
- The Greenwood-Airvac "LOWLINE" Extractor—two models, for natural or mechanical extraction—six sizes from 9in. to 30in. diameter stack, bases to suit flat, sloping or ridge roof-mounting—weatherproof—galvanised after manufacture—the LOW extractor with the HIGH performance.

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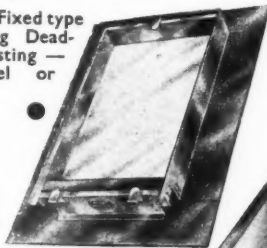


"9 square inches to 9 feet square...."

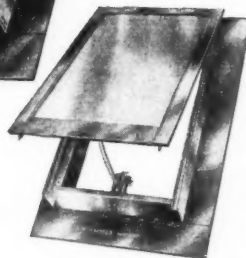
... is the extensive range covered by GREENWOOD-AIRVAC Louvres, Panels, Registers, Grilles, whether fixed or movable, painted or plated, screw-fixing or built-in.



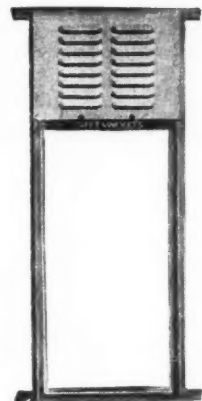
● 'PERMAVENT' Fixed type non-condensating Dead-light — anti-misting — galvanised steel or copper.



● 'PERMAVENT' Ventilight Type VAS—all-steel — gauze-backed multi-louvres top and bottom — top-hinged light with locking push-stay—delivered unglazed — permanent ventilation even when closed.



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● 'PERMAVENT' Opening type non-condensating Skylight —Leggott's patent opening gear optional —galvanised steel or copper.

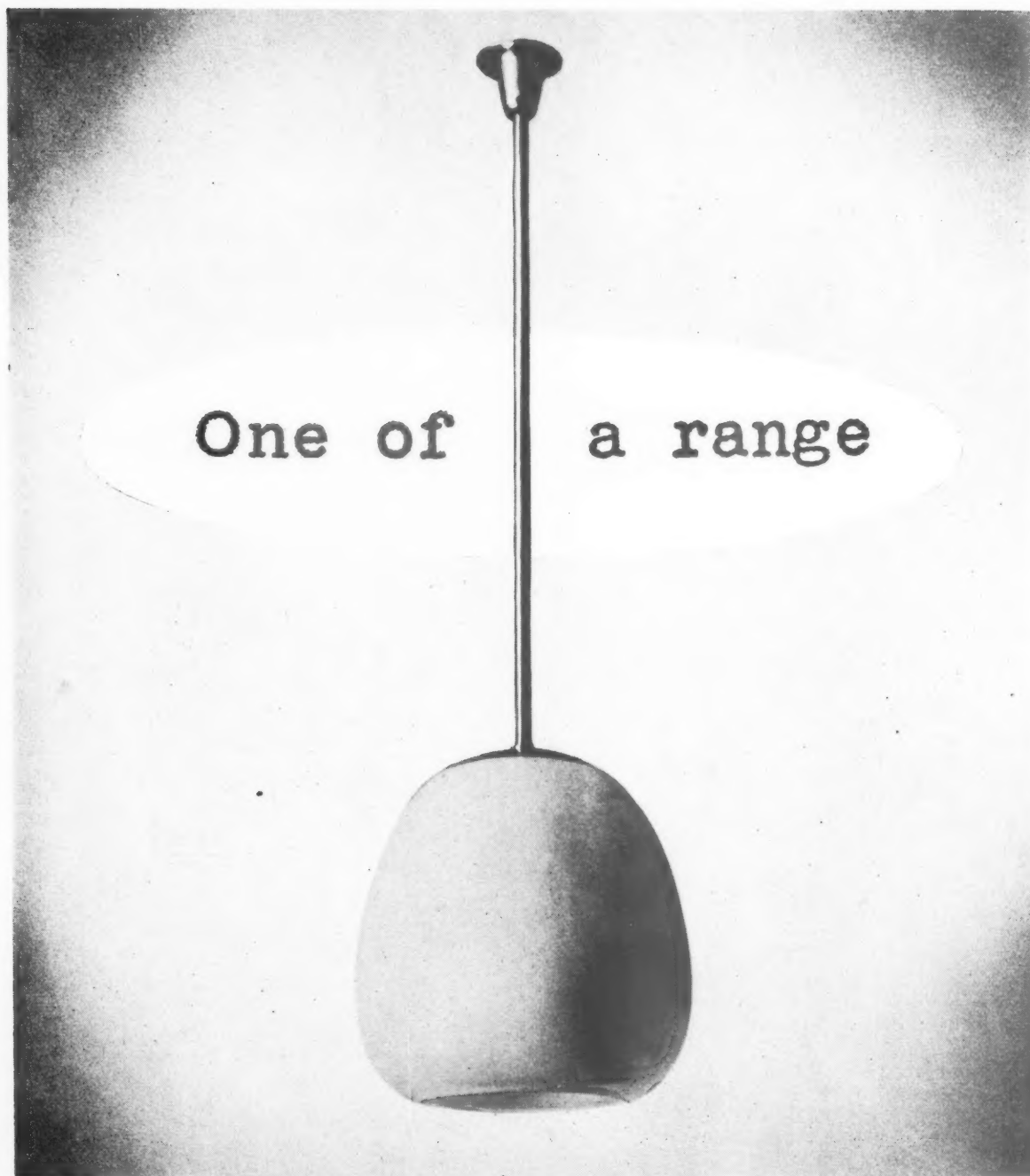
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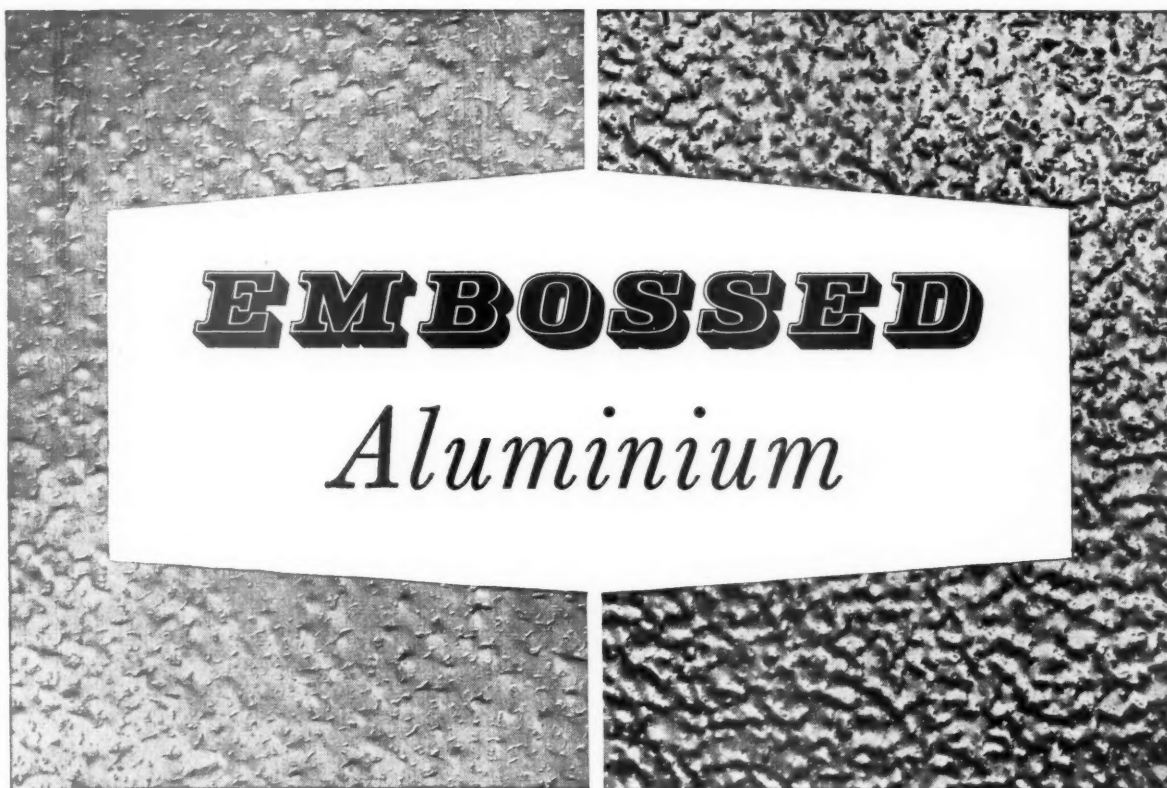




of Falks contemporary lighting fittings



91 FARRINGDON ROAD, LONDON, E.C.1, AND BRANCHES



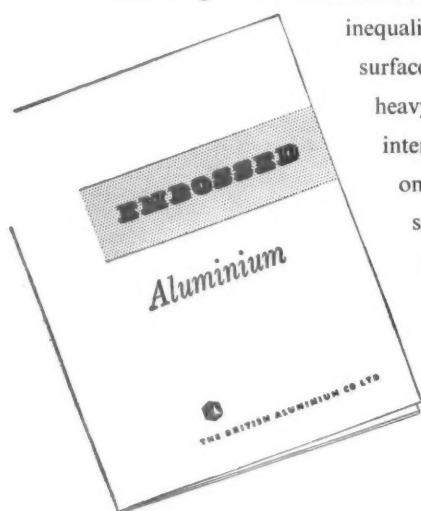
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*Aluminium*

## A new Industrial Finish

The new embossed aluminium has an attractive surface and greater rigidity than the normal bright rolled finish, by virtue of the embossing process which work-hardens the metal and increases its overall thickness. For architects and builders, embossing has the great practical advantage of rendering the aluminium surface less vulnerable to the effects of rough usage or slight surface

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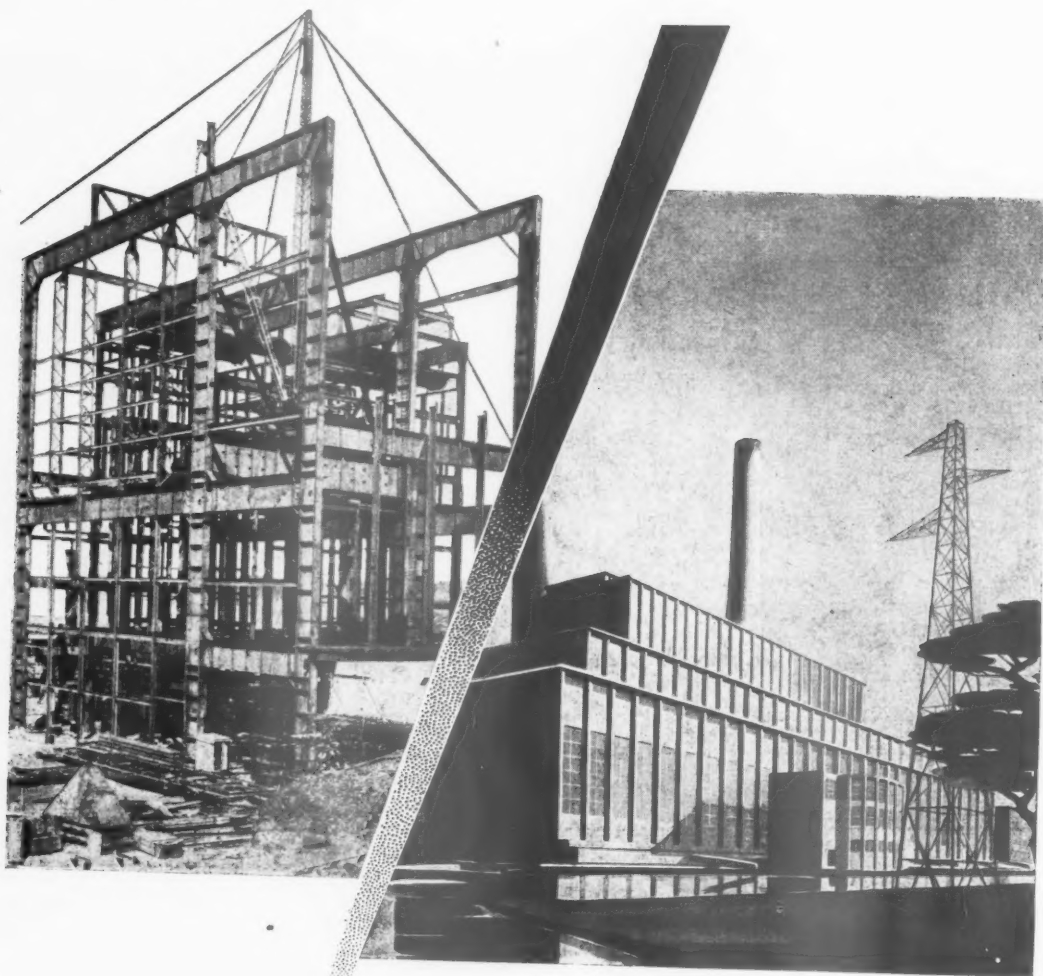
*A descriptive brochure and samples are available on application*

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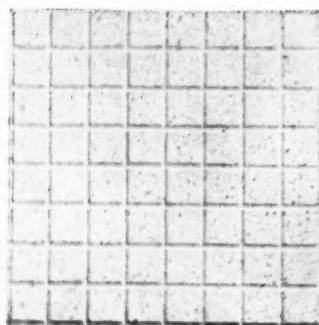
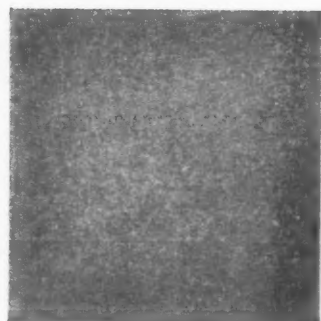
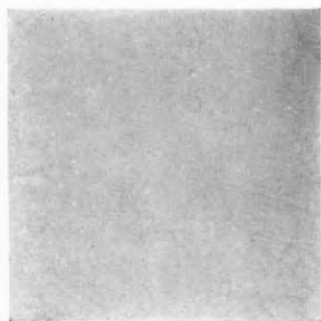
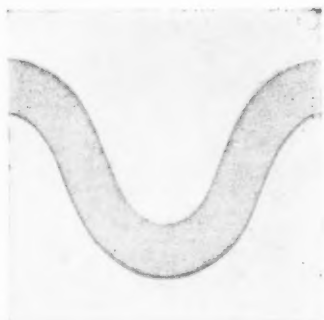
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## CARTER TILING in hospitals

Cheerful surroundings undoubtedly play an important part in hospital treatment. Carter tiling offers attractive colour and interesting texture combined with the highest standards of hygiene and the lowest cleaning and maintenance costs.



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Associated Companies: Art Pavements & Decorations Ltd.  
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# MYTON

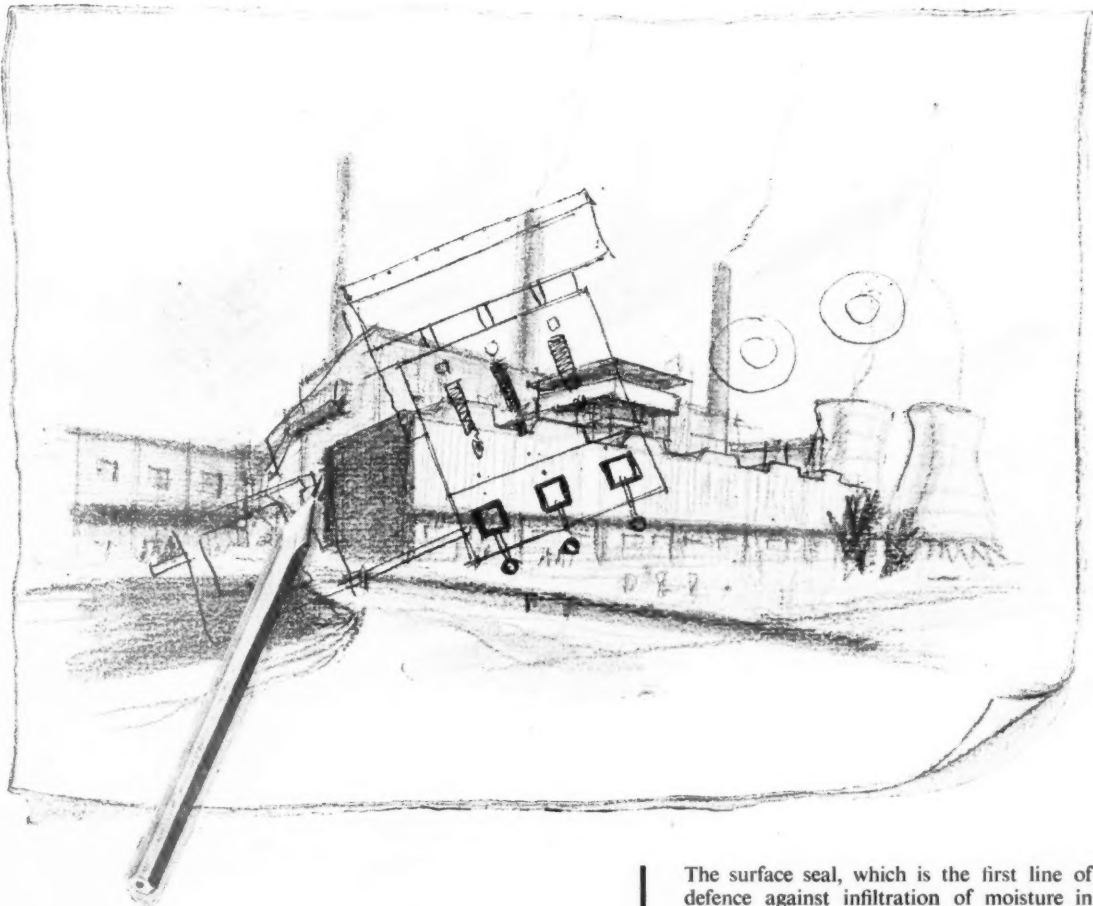
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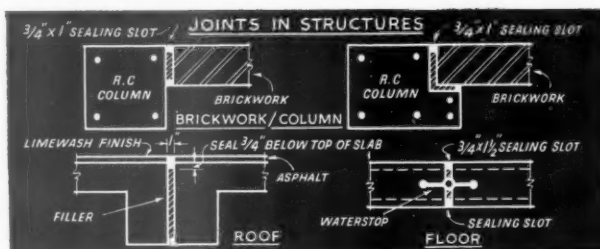
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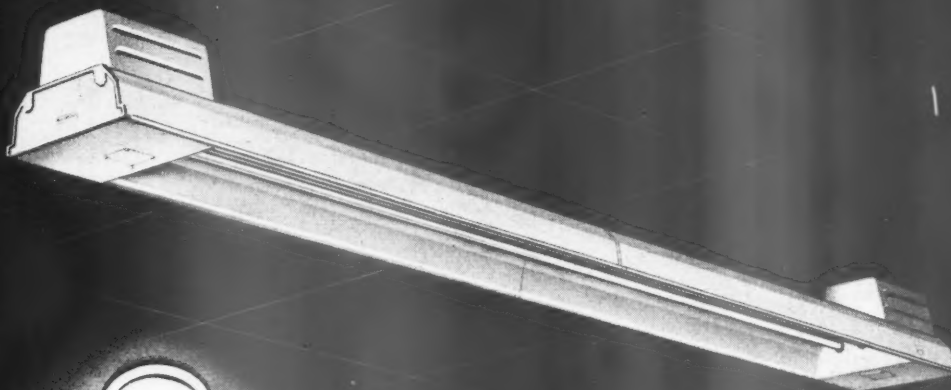
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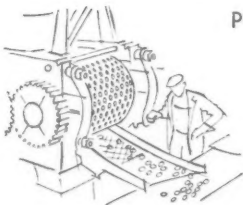
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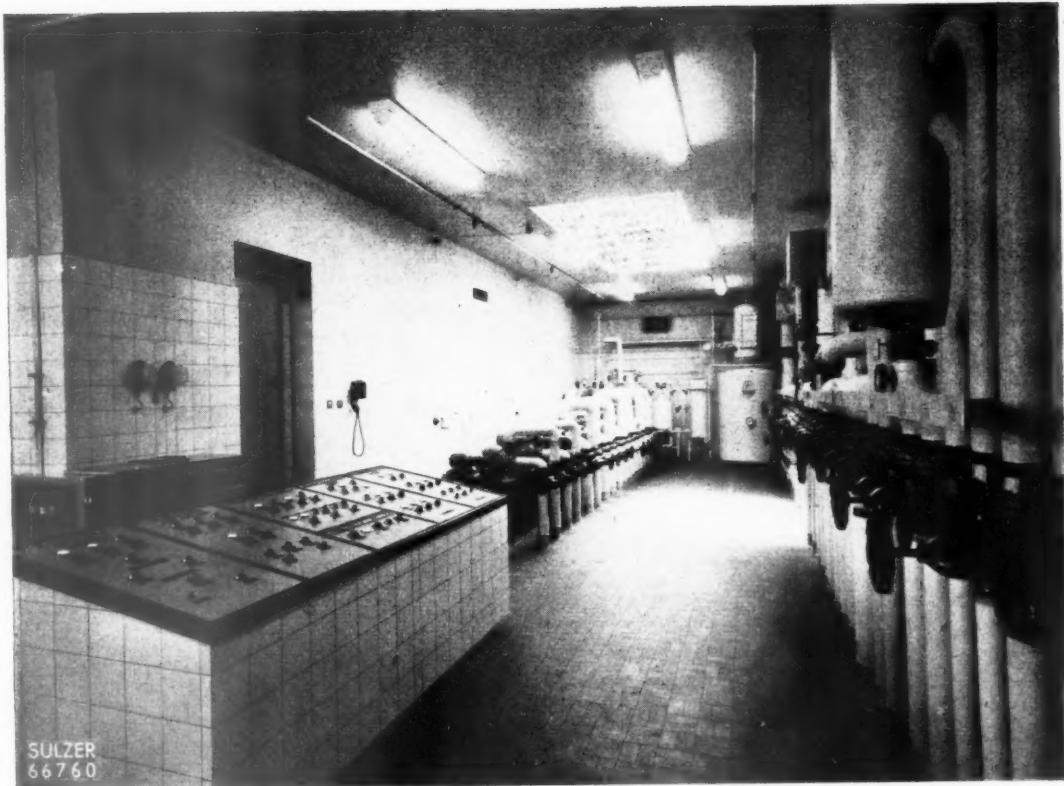
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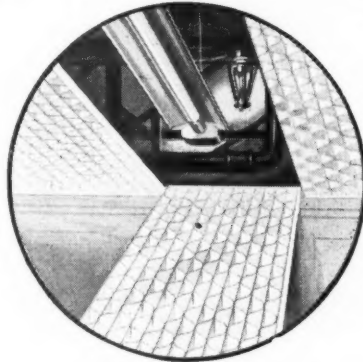
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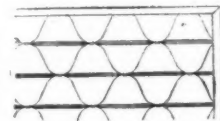


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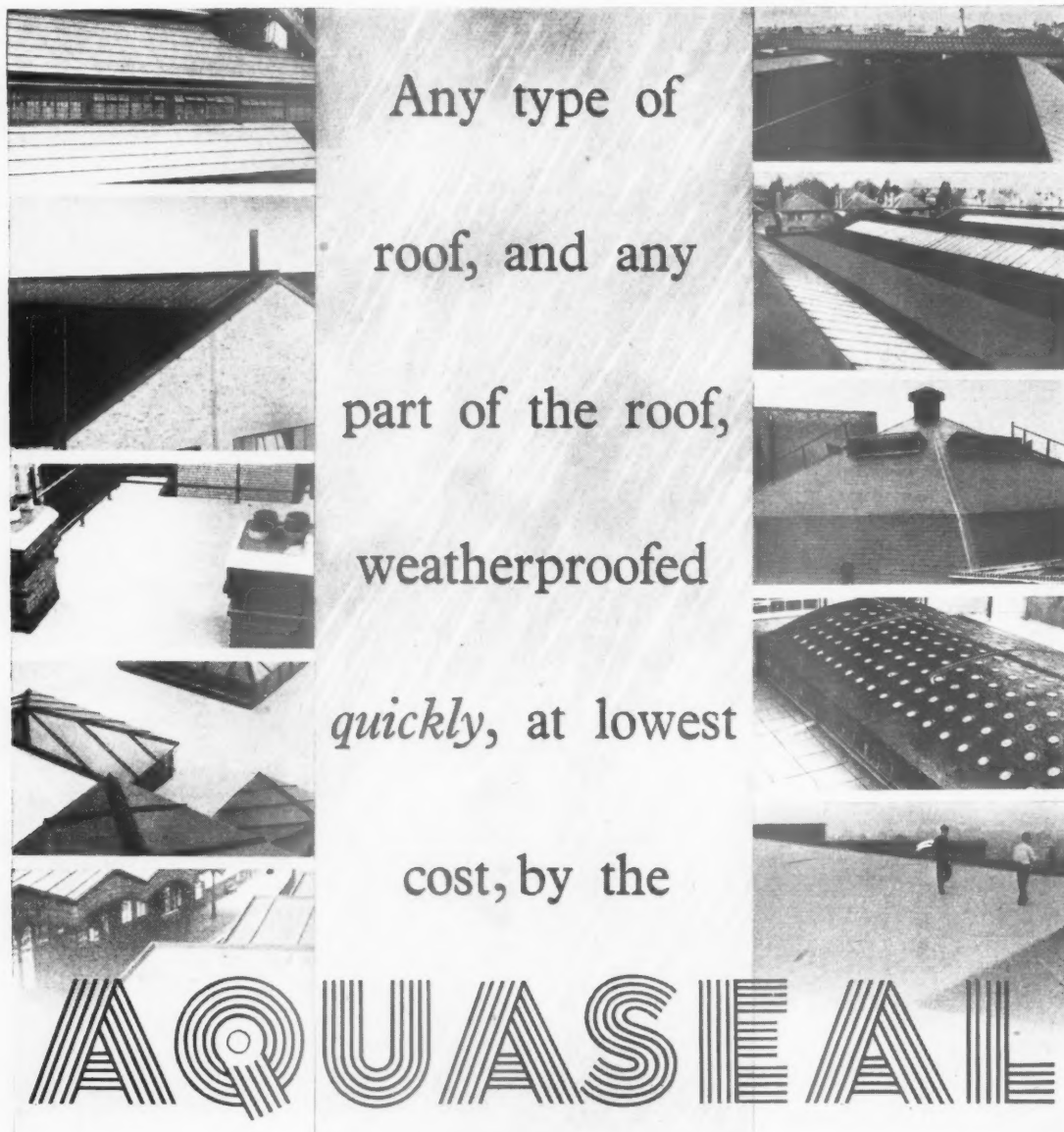


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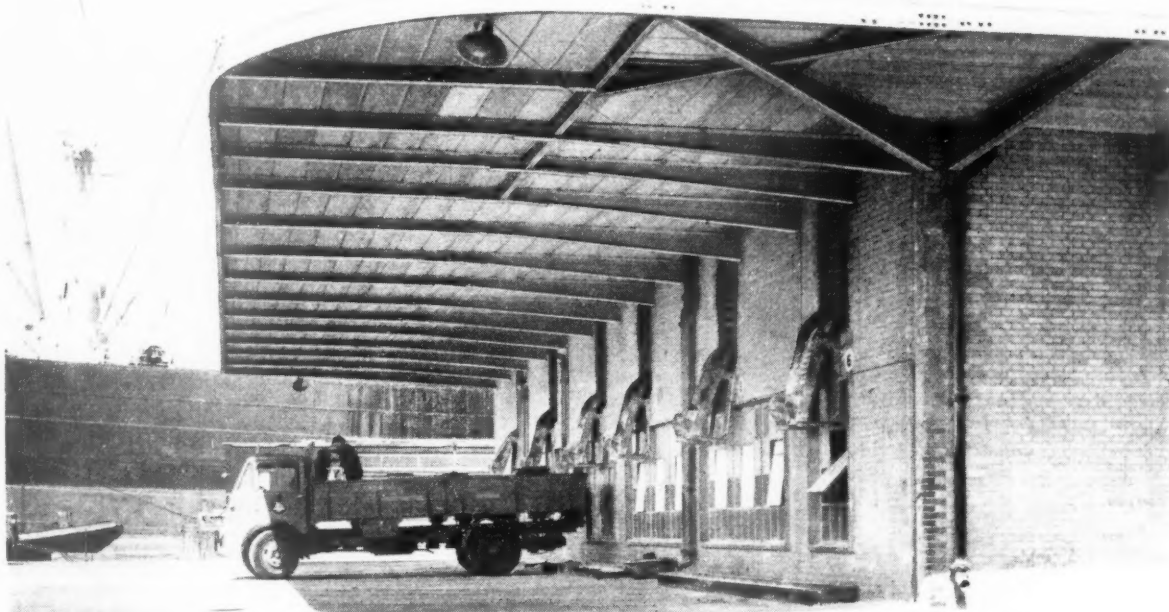
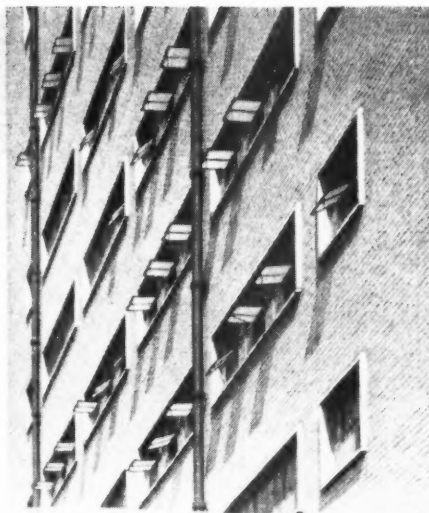
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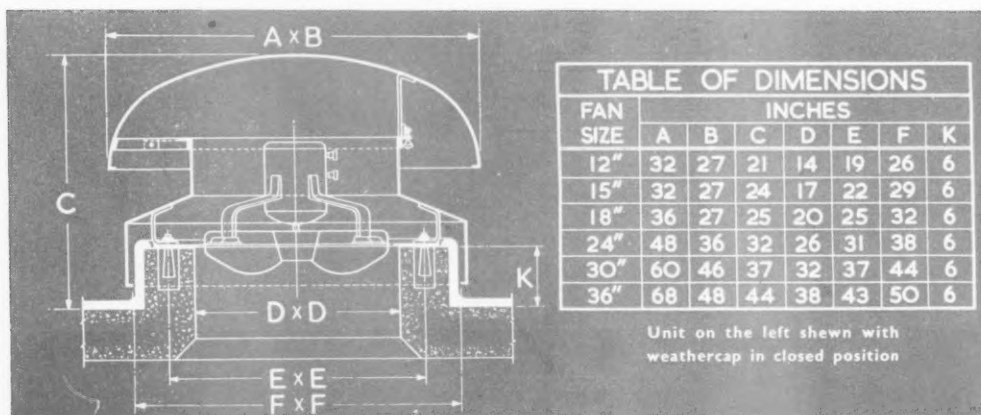
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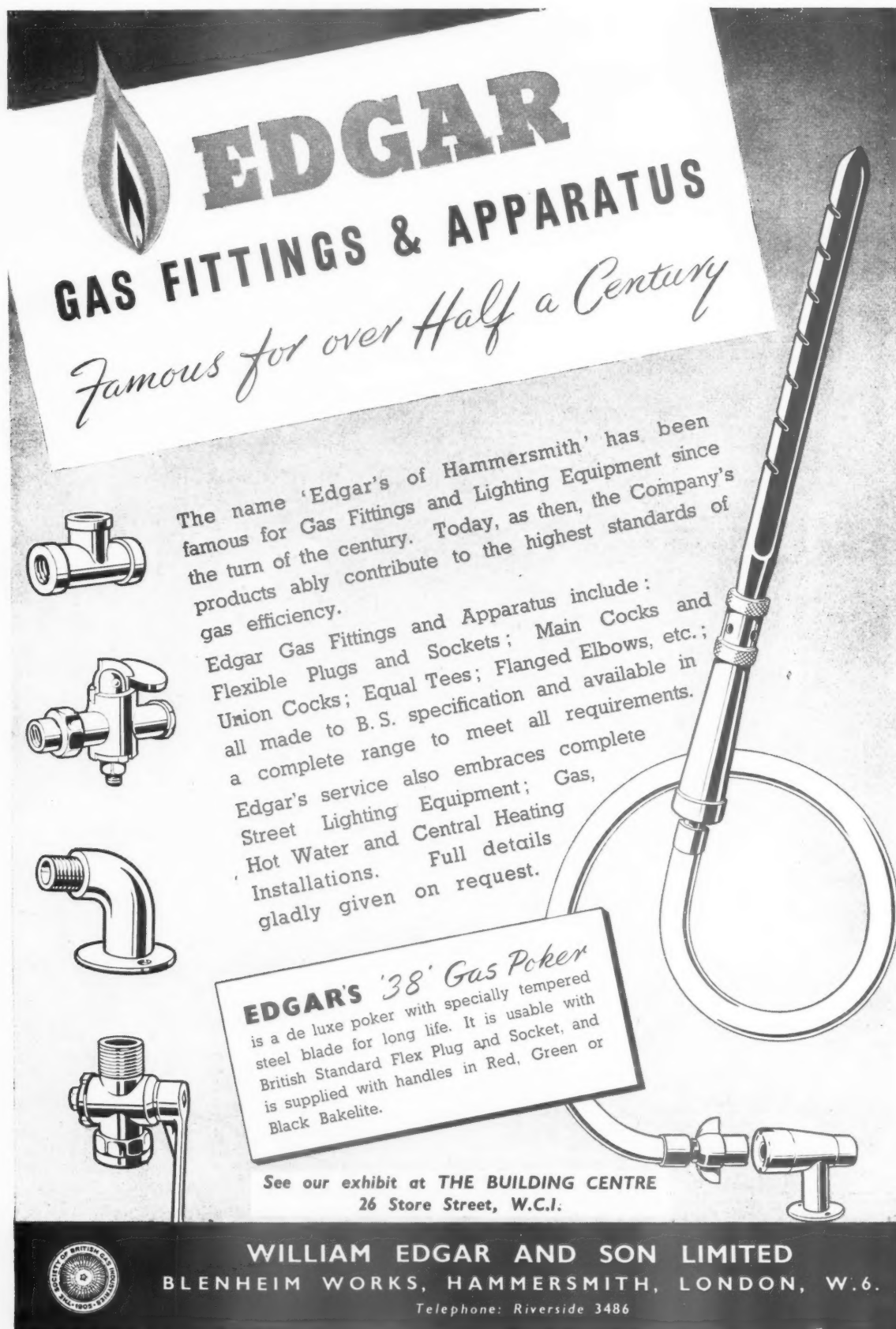
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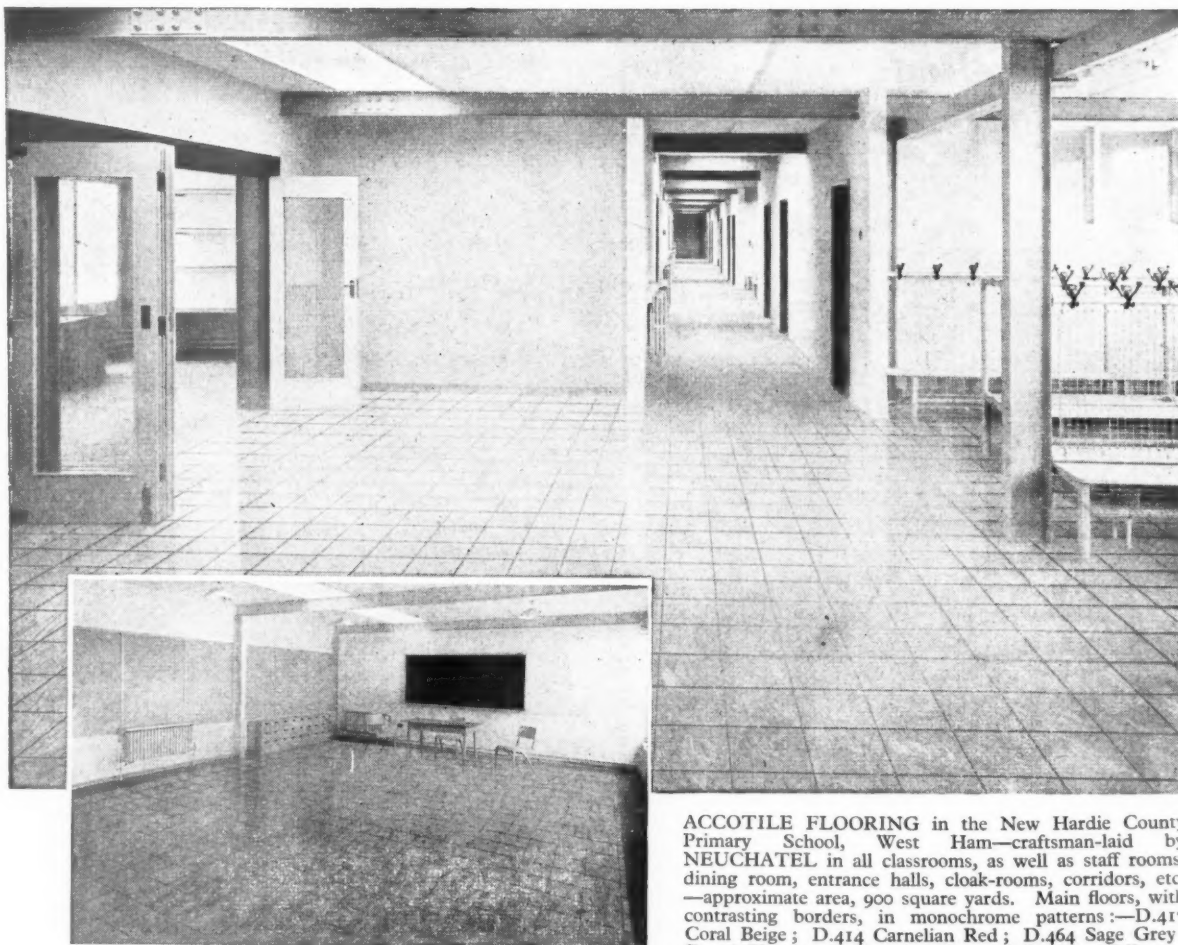
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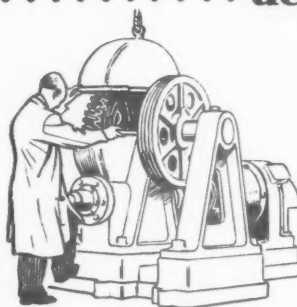
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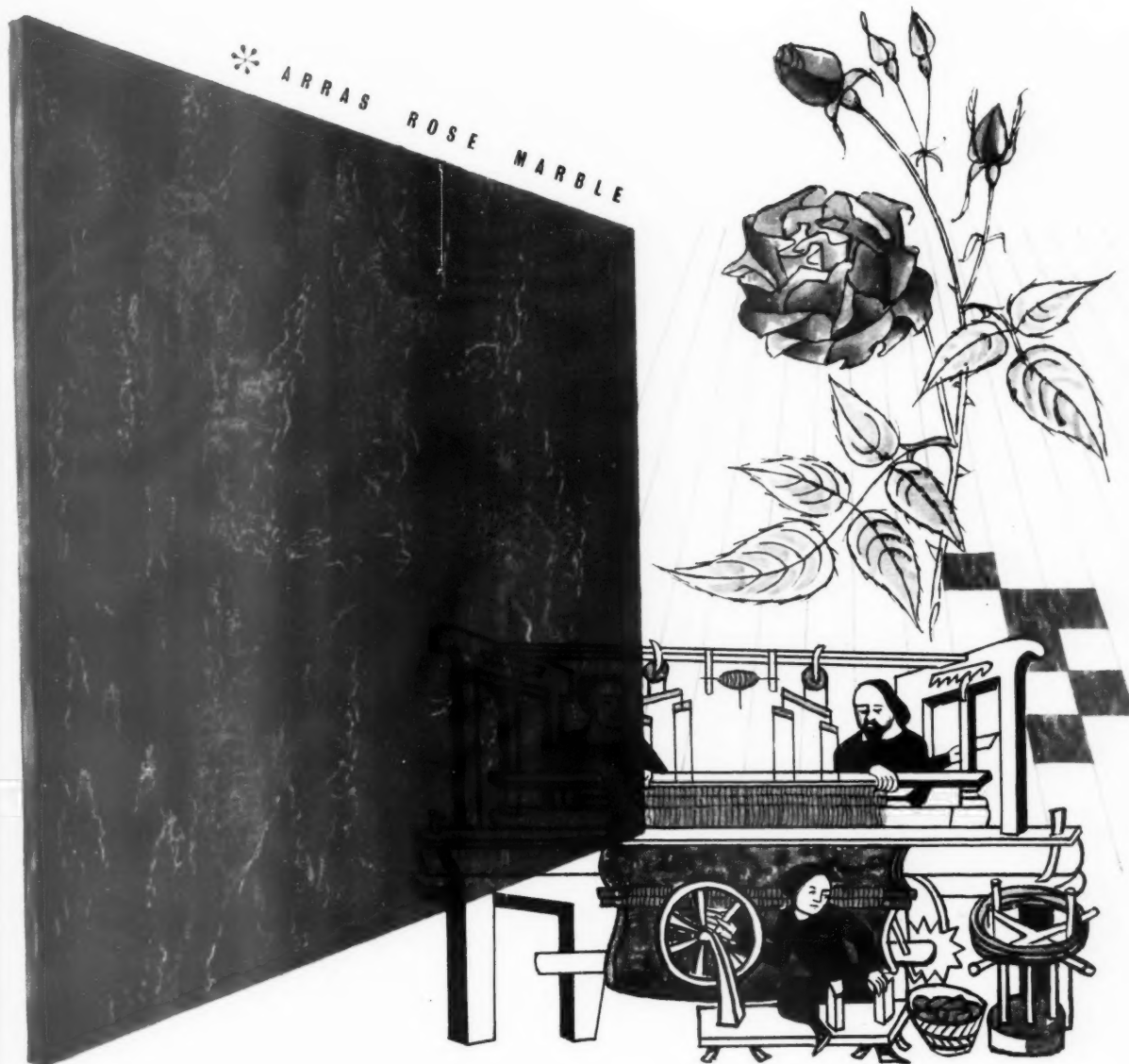
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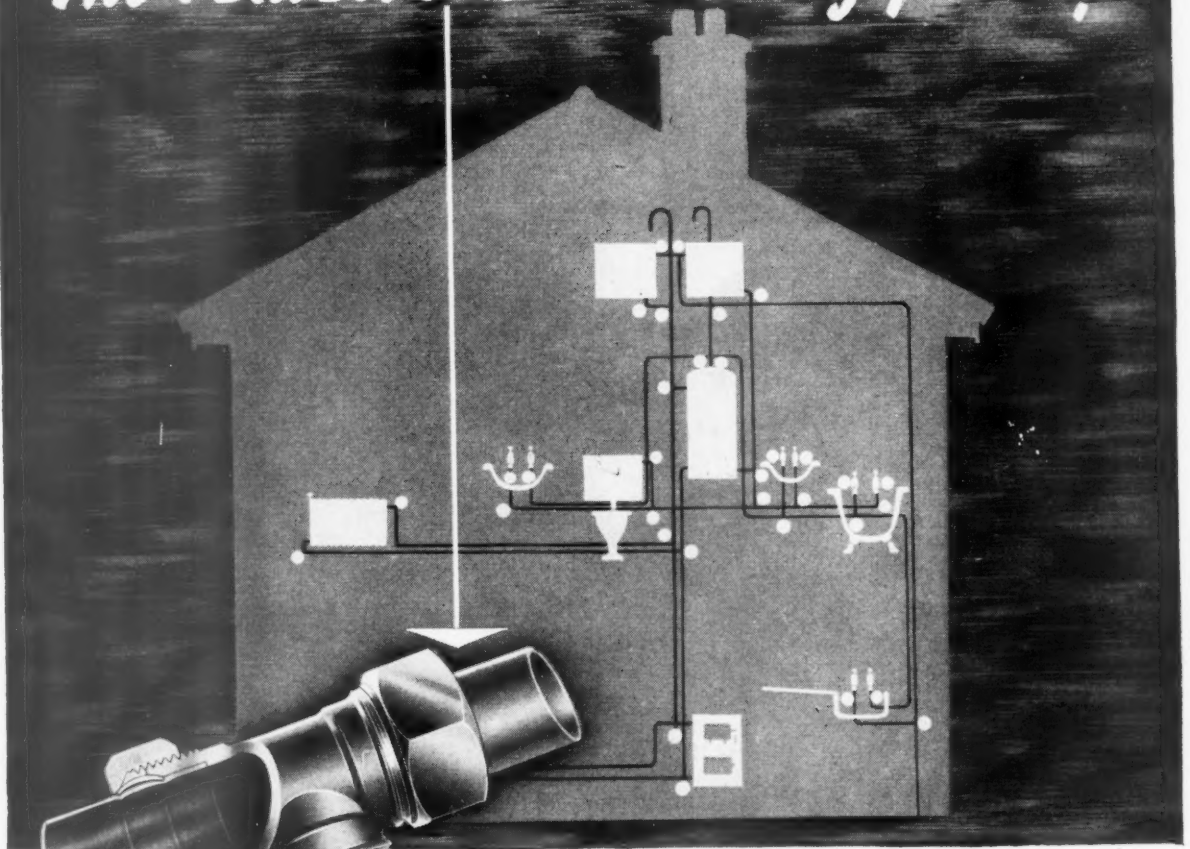
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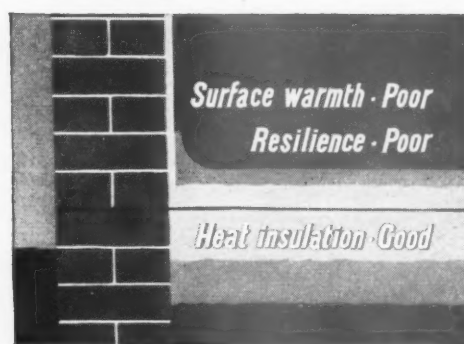
Correctly laid, a Quarry floor will last as long as the building.

# Clay Floor Quarries

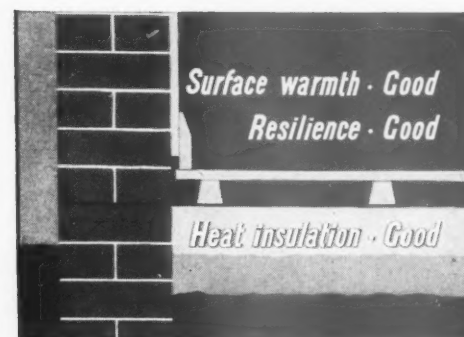
# WHICH



# DO YOU



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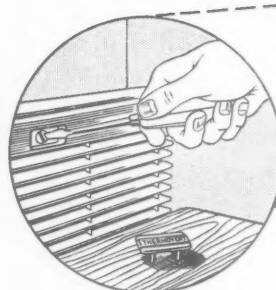


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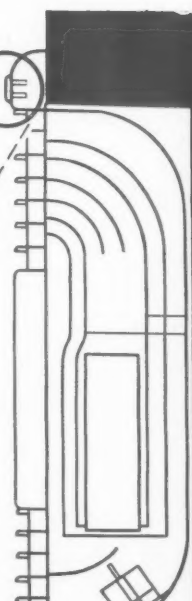
EVEN IN SMALL

DETAILS—

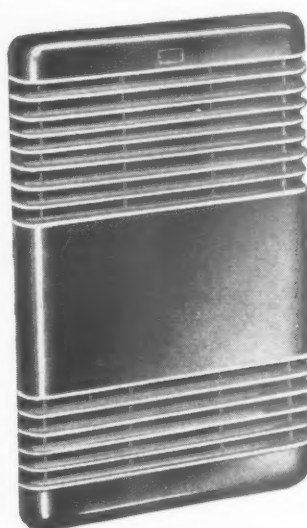
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Ltd. Architects: Sir Alex Gibbs & Partners,  
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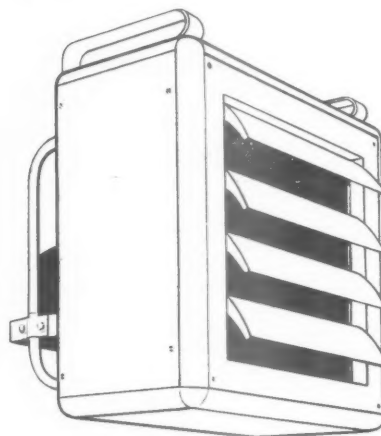
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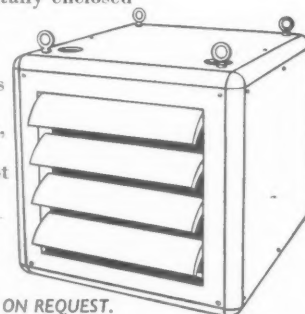


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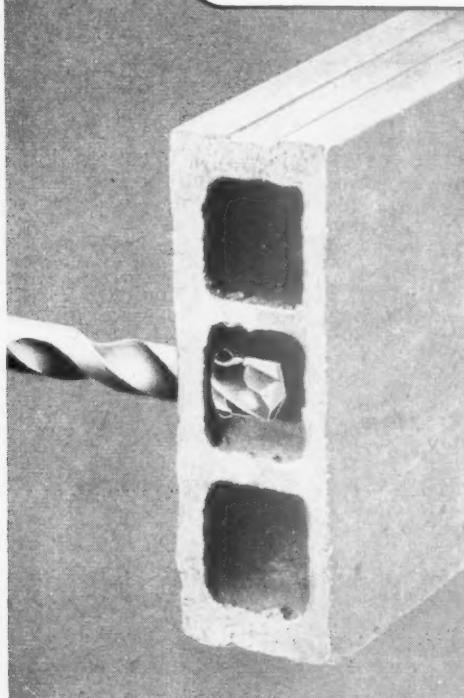
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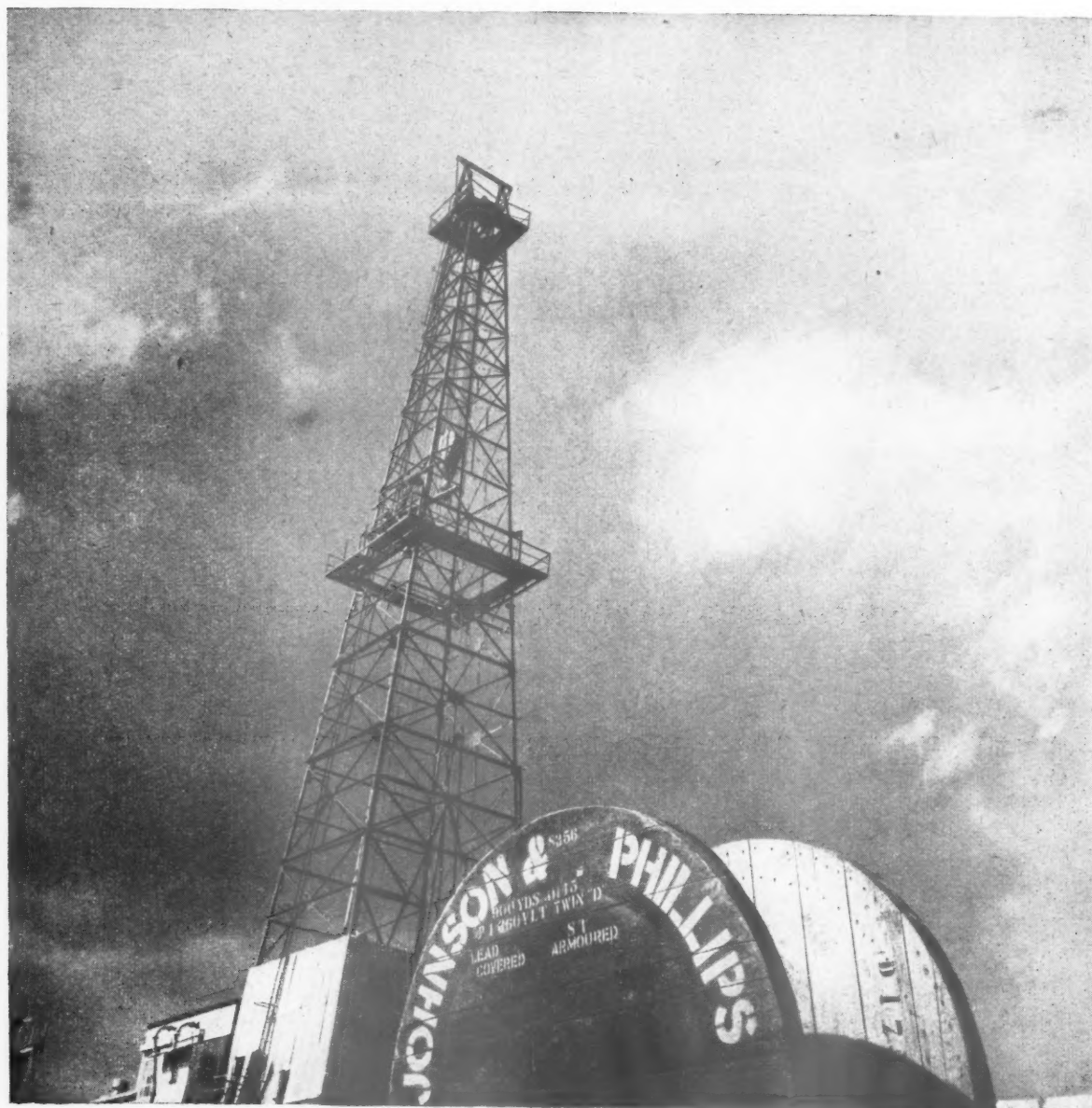
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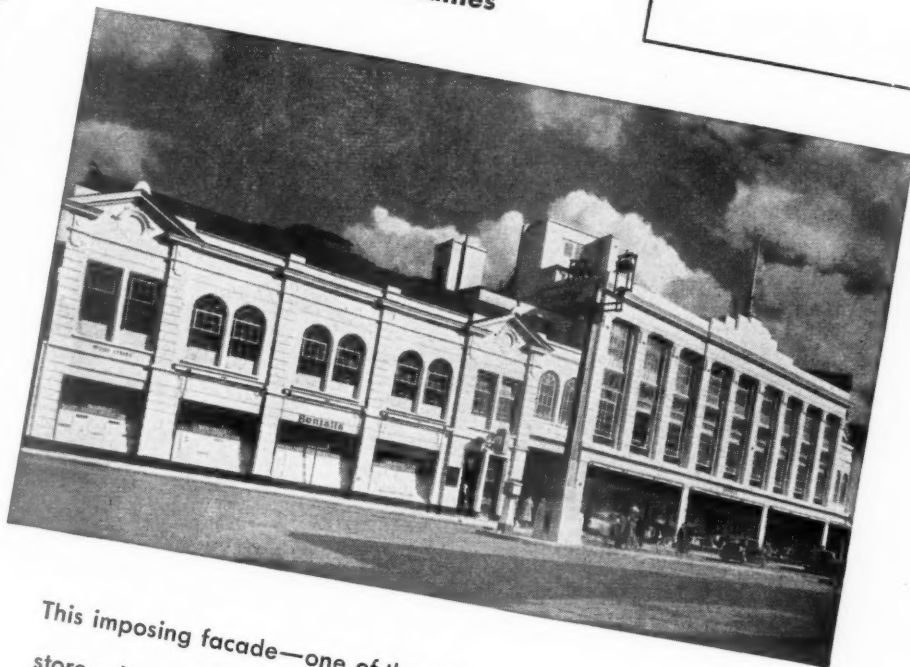
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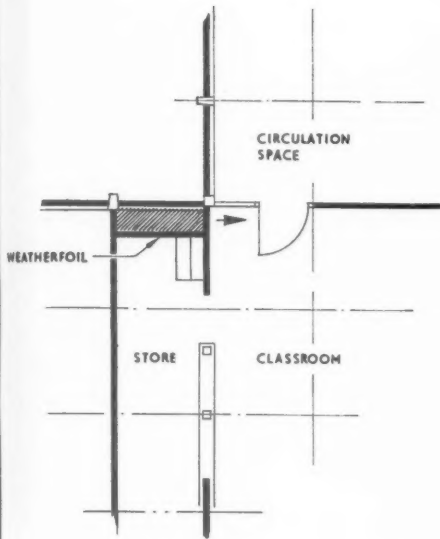
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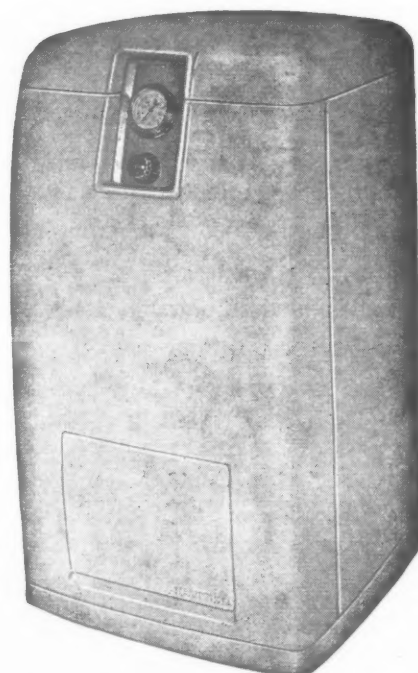
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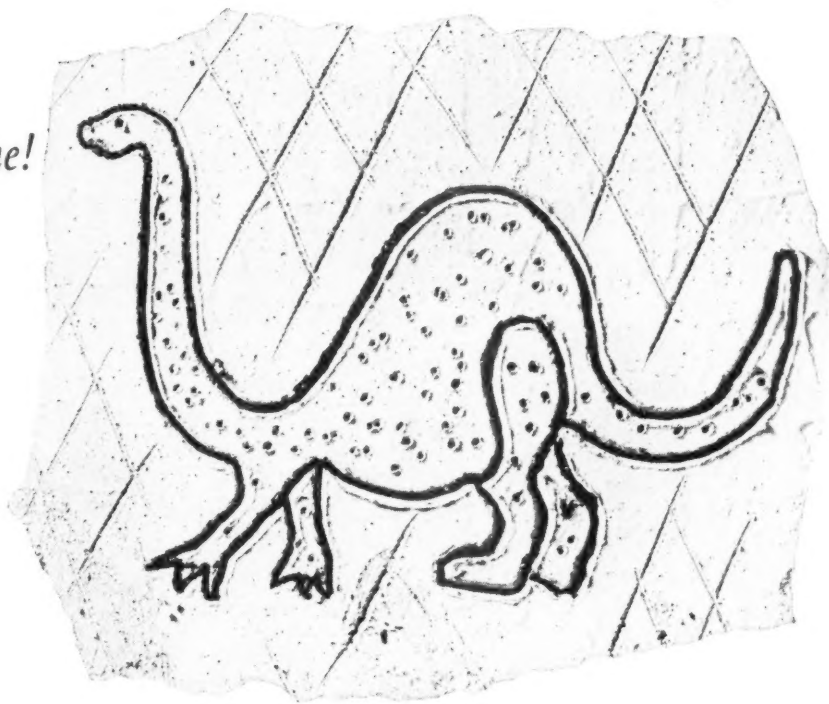
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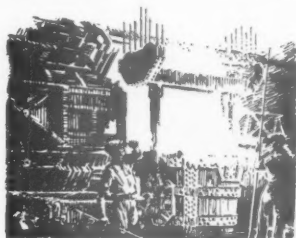


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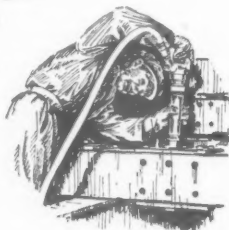


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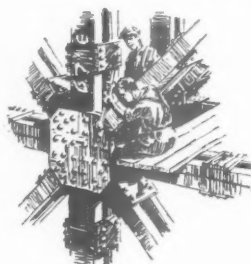


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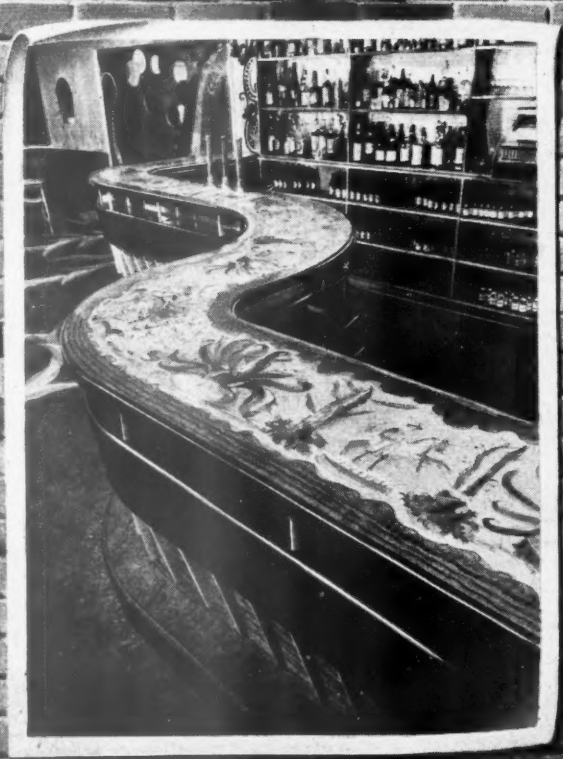
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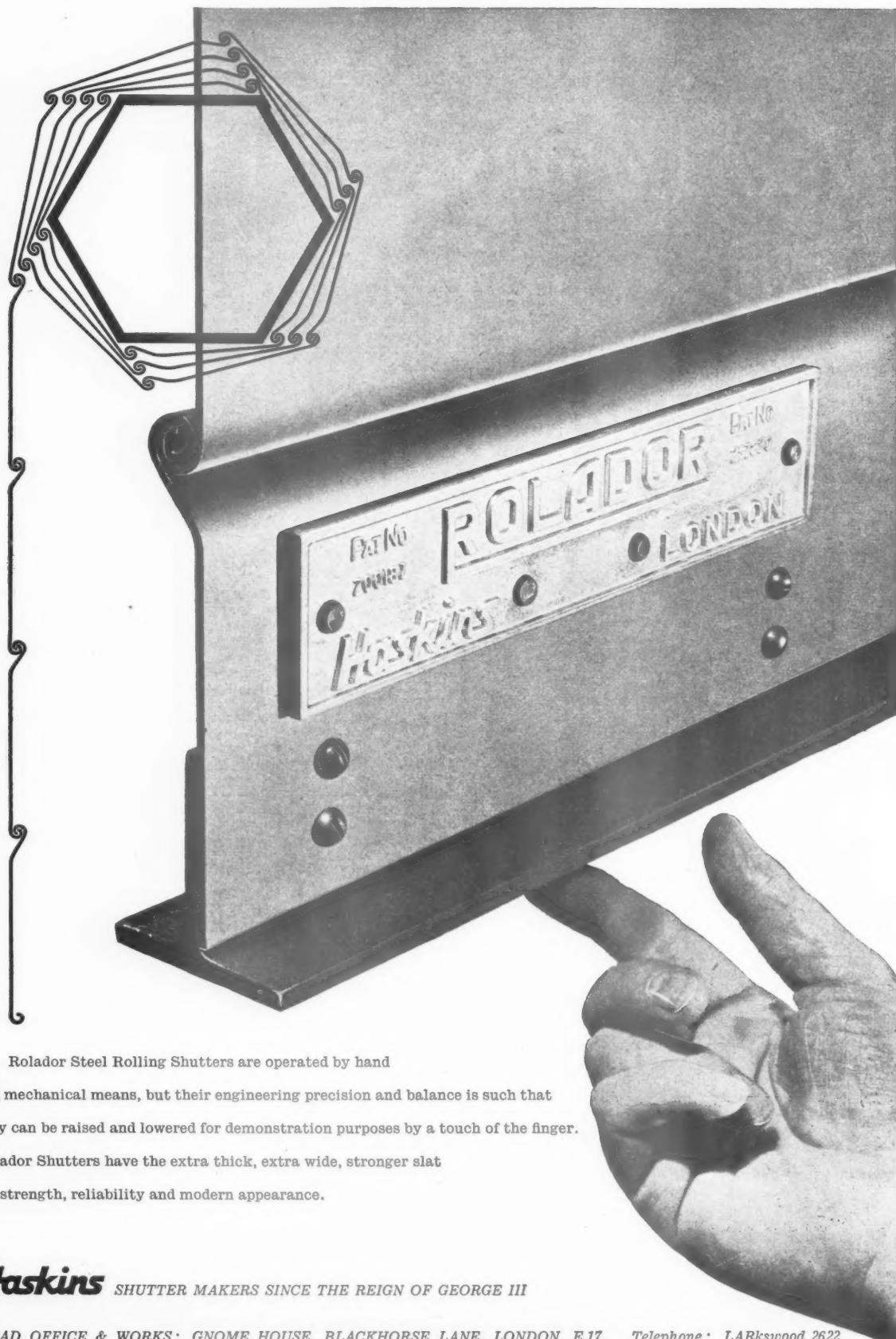
*The interior decoration throughout by Veneercraft Ltd.*

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Since the size is so great as to make it impossible to photograph the whole installation, the above illustration is taken from a scale model.

The other views show:

(2) the partly built tunnel, with transition from circular to octagonal shape.

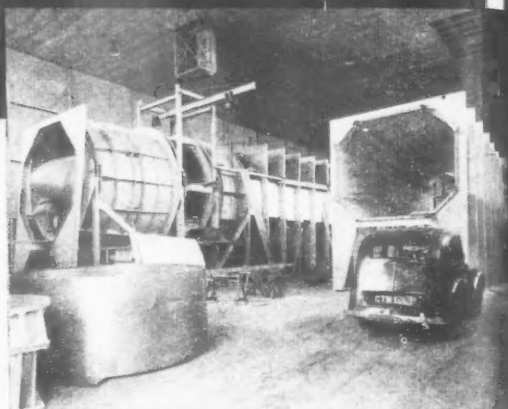
(3) A corner, showing the aluminium alloy frames, and part of the tunnel completed.

(4) Looking along the aligned frames before the walls were fitted.

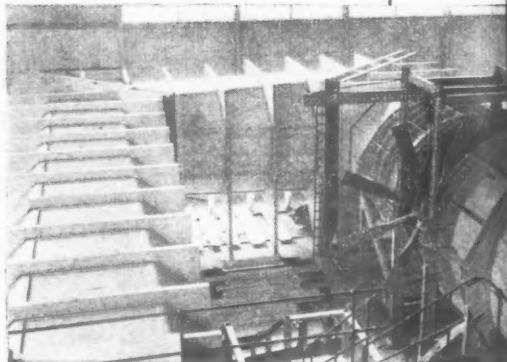
Flexoply 1½-inch laminated packings were bolted to the frames and to these packings were screwed Flexo 11-ply shell panels, beech-mahogany-beech, a total of 1-inch thick.

Much of the plywood had to be moulded in order to effect the transitions in cross-section, nearly 12,000 sq. ft. of Flexo plywood, weighing more than 20 tons, were used, and secured by more than 50,000 screws.

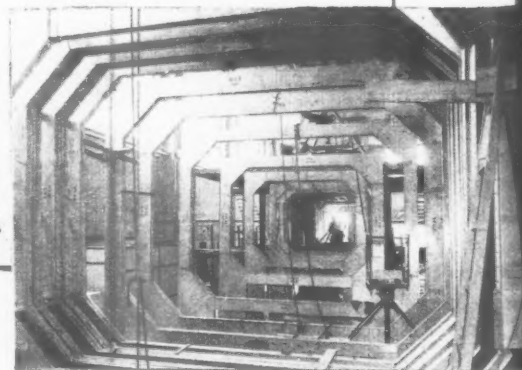
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THE ARCHITECTS' JOURNAL

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\* To preserve freedom of criticism these editors, as leaders in their respective fields, remain anonymous

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#### ENOUGH TO MAKE BRIGHTON ROCK

Most architects are now accustomed to hearing—if not actually uttering themselves—the phrase . . . “What a pity they’re going to build there.” The ring of despair with which these words are spoken is often justified, but there are times, perhaps, when architects, at least, should withhold their disapproval until they have seen what will be built. Pre-judging the issue is a beguiling hobby but has its risks.

\*

These cautious words, delivered from ASTRAGAL’S now well-smoothed perch upon the fence, are inspired by the proposal, recently announced, to build a new town hall in Brighton facing the Pavilion. This proposal involves the

demolition of a number of very pretty Regency houses (see page 682), and has aroused local protests as well as another letter to *The Times*. None of these houses is, of course, as the protestants admit, a masterpiece, but together they constitute a piece of unusually delightful and coherent scenery which everybody will agree would be very sadly missed.

\*

No doubt another site—if it could be found—would be more visually welcome to Brighton visitors. Nevertheless, it is at least conceivable that the new building will be a good one, and it is certainly inconceivable that it could be as discouraging to the eye as that existing semi-circular block of shops near the Pavilion which, as far as ASTRAGAL remembers, went up without a murmur of protest at the time, and has effectively ruined at least one important part of the old Steine. ASTRAGAL, therefore, remains sympathetic to preservation but open to conviction by a new masterpiece. May we be told, please, whether any drawings yet exist?

#### VICTORIA EMBANKMENT

Equally guarded—perhaps this unusual caution is due to the redness of experts’ faces over the Piltdown Man?—is ASTRAGAL’S opinion of the suggestion that the new central strip along the Victoria Embankment should be planted with shrubs and not left paved.

\*

While always a one for improvement, ASTRAGAL doubts the merit of this proposal. Shrubs in London tend to get sooty, shrunken and smelly; their roots are usually full of bus tickets and sandwich paper; they often have to be pro-

tected by horrid little railings. Moreover, previous evidence of similar “improvement” in London squares of the Westminster City Council is discouraging where it has not been actively disastrous.

\*

Still, fair’s fair and without drawing on details my judgment is withheld.

#### MANIERA LIVERPUDLIANA

The ageless Mr. Wright having returned the compliment to those who have discussed his Venice project without seeing the drawings by answering back without having read the arguments, that matter is probably closed for the moment.

\*

Other architects have designs on Venice no doubt, and at the AA at the moment there is an exhibition of Liverpool thesis designs which includes a Turkish Bath on the Grand Canal—a project which would probably cause Peter Quennell, who has recently been so upset in *The Times*, to take a screaming header from the Rialto Bridge. It would also cause quite a bit of alarm among citizens who are by no means as architecturally prejudiced as the instigator of the anti-Frankie campaign, for it is the high point of that curious post-war development, rudely referred to as *Maniera Liverpooliana*—rigidly symmetrical Beaux-Arts plans (with just the teeniest naughty deviations), and detailing made by mixing early Corb with Tecton and adding a few judiciously chosen bits of factory architecture.

\*

The honest plods of Bedford Square are not taking too kindly to all this, though they must admit that these

CREATION WITH CRAFTSMANSHIP



The Halifax Building Society, Barnet. Architect: W. Wesley Turney, L.R.I.B.A.

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**TRUTH.**

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**THE WORKMEN**

AT A

**Certain Builder's in Gray's-inn-road,**  
WERE NOT CALLED ON TO DO ANY THING DEROGATORY TO THEIR  
**RIGHTS AND PRIVILEGES**

They were only required to cease a hostility they had carried on for Two Days against  
**The Beer they had been drinking for Years.**  
A FEW WRONG HEADED YOUNG INGRATES INFECTED TO A FURIOUS DEGREE BY THE  
**WICKED PRINCIPLES**  
OF  
**THE TRADES UNION,**

Urged them to turn out and they were induced to drag into the dispute the Workmen from the out door Jobs with whom no difference had arisen either as to Beer or any thing else. **THE UNION** in fact being  
**THE EVIL SOURCE OF THIS UNJUST PROCEEDING**  
Has given another proof that it ought to be Extinguished and the above mentioned Builders now require every Workman in their employ to renounce it by signing a paper headed thus:  
**"We hereby declare that we are not Members of any Trades Union."**  
The men who have already Subscribed to this declaration amount  
**NOW TO NEARLY THREE HUNDRED**  
Amongst whom will be found neither Clerks, Apprentices, or Errand Boys.

July 22nd, 1834

R. Greenlaw, Printer 40, Chichester Place, King's Cross.

ASTRAGAL recently came across this museum-piece, which he feels readers will be interested to see.

designs have the courage of their æsthetic convictions, and are done with a certain wilful professionalism which one does not often find in students' work. Probably the earliest and latest schemes are the easiest for the un-instructed to digest, the former being more the usual kind of English Corbishness, the latter more the usual kind of imitation Roman Modern which one can see anywhere. It is obvious that the only begetter of the *Maniera* (whoever he was) must have left before this one was done, for it is a much more humdrum affair.

#### AA PLAY

Those of you who were unable to get tickets for "The Diary of a Scoundrel," the latest production of Section AA at the Bolton's Theatre, missed a splendidly gay evening.

ASTRAGAL is always interested in diaries, whether written by scoundrels or just by other architectural journalists, and he can testify from experience that this one—as devised by Ostrovsky and Rodney Ackland and rattlingly well produced by John Smith—was as good for a laugh as the

recently unearthed diary by his young cousin, which contained the following memorable note for November 12: "shoped in morning, sick in afternoon."

Incidentally, anyone who is interested in future activities of Section AA should write to John Roebuck, 48, Eaton Terrace, S.W.1.



*T. H. Thorpe and Partners, of Derby, sent ASTRAGAL this picture of their office building, which is scheduled as one of historic interest by the MOW. An unconfirmed report says that Robert Adam designed it for his own use when working on the building of Kedleston Hall some three miles away. ASTRAGAL would be interested to hear from architect readers who have offices in—or live in—buildings of historic interest.*





## *Must These Houses Go?*



A distinguished band of Brighton's well-wishers wrote a letter to *The Times* last week, protesting at the proposal to pull down Regency buildings in Pavilion Parade (above) and some of those in the Old Steine (left). The proposal is part of the development plan for Brighton County Borough, which has been submitted by the corporation to the MOHLG. It is suggested that the new town hall, if and when built, shall be placed on the site of these buildings, almost opposite the east front of the Royal Pavilion. *The Times* letter-writers said that "while we are aware that none of these houses is of the highest architectural quality, their removal would transform the central section of Brighton, close to the Royal Pavilion, which still retains its interesting contemporary character, into a largely modern setting. This we should deplore, particularly since we understand that there is at least one alternative site for the town hall which would not involve the destruction of buildings of this character." The Minister's inquiry is to take place this month and objections to the plan have already been lodged. ASTRAGAL comments on page 679.

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## NEW TOWNS DEBATE

The debate at last week's meeting of the Architecture Club—I am told—was one of the most lively and interesting that the Club has had for some time. The motion was "that the New Towns are a failure." In proposing the motion Leo de Syllas could find nothing at all to praise in the New Towns, and in opposing it Frederick Gibberd could find nothing to blame (he described the motion itself as "monstrous"). The chairman of the Hemel Hempstead Corporation and the general manager of Harlow made eloquent and enthusiastic speeches saying how fine their towns were—and so did the chairman of the LCC Planning Committee.

Among the architect speakers G. A. Jellicoe said that a New Town seemed to him like a new book. Sir Hugh Casson said he didn't understand money but he knew the smell of a town, and the New Towns hadn't it. Ralph Tubbs said there was too much segregation in the New Towns. And Thomas Sharp said that there was too much space.

But in spite of an occasional murmur of disappointment, poor Mr. de Syllas didn't find a single supporter in his contention about failure.

## WITHOUT COMMENT

The following is part of an advertisement which appeared in the *Isle of Wight County Press* on November 14:—

## NOTICE TO BUILDERS

"The Corporation are desirous of having erected two blocks of flats on land adjoining Field House, Linden Road, Newport, I.W. One block to comprise four two bed-room flats and the other four one bed-room flats. The buildings should comply with the requirements of the Housing Manual, 1949, and the two Supplements thereto entitled "Houses, 1952" and "Houses, 1953," and should conform with the Corporation's houses existing nearby. Estimates (on Forms to be obtained from the Borough Engineer), inclusive of all costs, plans, etc., and accompanied by designs, plans, and specifications, should be submitted . . ."

ASTRAGAL

## POINTS FROM THIS ISSUE

Regency houses **threatened with demolition** .. pages 679 and 682

**DSIR** cuts restored .. .. . page 686

A report on the **Building Exhibition** .. .. . page 687

## The Editors

## WHAT ARE WE PREPARED TO PAY ?

**A**T the national conference held recently by the Town and Country Planning Association on *Financial Problems of Planning*, the theme implicit to nearly all the discussions was : how much planning can the country afford ?

The conference was a most useful one : the papers and discussion sharply defined the anomalies and problems that are prominent in this interim phase of planning legislation. The occasion was also unique : it was the first time that a conference had been held on a subject on which legislation is about to be introduced into Parliament. When the new Planning Bill is debated some Members will already have had the advantage of a preliminary debate with representatives of many authorities.

Although the conference's interest was principally centred upon the new policy for payment of compensation and its possible effects upon planning, some worthwhile excursions were made into the field of immediate practicalities. Sir Howard Roberts made some sensible suggestions about overcoming the problem of dispensing industry from congested centres and F. J. Osborn pleaded for an overhaul of the housing subsidy policy. In the discussion many speakers agreed that for expensive sites there should be an equal subsidy for high and low development ; some spoke also in favour of a subsidy, instead of being on a dwelling unit basis, to be on a floor space system, similar to that practised in Northern Ireland.

With the abandonment of the financial sections of the 1947 Act and the policy of once and for all buying up of development rights, many speakers expressed the fear that planning would return to its pre-war ineffectiveness. With the new code mooted, the government makes no attempt to collect betterment. Thus there will be no money available to offset compensation payments. Local authorities will still decide on the merits of a planning application ; if they reject an application, and compensation is payable the latter will come from unspecified central funds, the ultimate controller of which is the Treasury.

That the country can have only as much planning—whether positive or negative in character—as it can afford is probably true. If the new system is going to work, however, in the long-term and to withstand the hazards of yearly budgets, it will call for an extraordinarily high standard of integrity of purpose from local authorities and Whitehall alike.

## LETTERS

E. M. Hobbs

G. Needham, A.M.I.C.E.,  
A.M.I.Struct.E.

## Architects on the Carpet

SIR.—I don't think anybody has answered Mr. Ruse of Dunn's of Bromley (AJ: September 24) and I think someone should.

Mr. Ruse, if he will allow me to say so, makes the same assumptions as all other purveyors of merchandise and building components, i.e., that they are the only ones that matter, and that all the other dimensional requirements can be modified to suit them. This is the root cause of the present dimensional chaos, which in turn leads to "modules, grid-plans, dimensional co-ordination and so forth. . . ." And, incidentally, to Modular Societies.

He pleads the special case of the small house, which is about the most difficult thing in the world to design successfully and please everybody—including the carpet salesman—very largely because this same dimensional unco-ordination is felt at its most acute in these necessarily confined spaces.

I particularly like the phrase "linoleum is always 6 ft. wide"! What a picture this conjures up.

But most of all I like Mr. Ruse's inclusion in the same paragraph of two of his dimensions, viz., 2 ft. 3 in. and 6 ft.

Architects! Never have carpeting and linoleum in the same room—unless one dimensions, viz., 2 ft. 3 in. and 6 ft.

E. M. HOBBS.

London.

[The correspondent Mr. Hobbs refers to criticized architects for not troubling "to understand the characteristics of floor covering materials, what quantities and widths are most likely to be wanted in this room and that, and in what direction carpets should be run—and so on."—Ed.]

## Public Lavatories

SIR.—Your issue of May 14 was devoted mainly to various aspects of the design and equipment of public lavatories. You, and your readers, may therefore be interested in a case put forward by a resident of my district.

This lady suffers from arthritis, and she feels that for herself and other people suffering from this or similar handicaps, grab-rails should be provided in at least one w.c. compartment in each public lavatory. She has in mind the provision of a rail at each side of the compartment by which a person so disabled would obtain assistance in rising and sitting.

The question of marking such a compartment in a special way might lead to difficulties, and if this fitting were adopted in a small unattended lavatory it would be better to treat all compartments in the same way.

It would probably be wise to set the grab-rails at about 45 deg. from the horizontal, both for the convenience of the user and to discourage misuse, such as climbing or standing on the rails.

C. NEEDHAM.

Surrey.

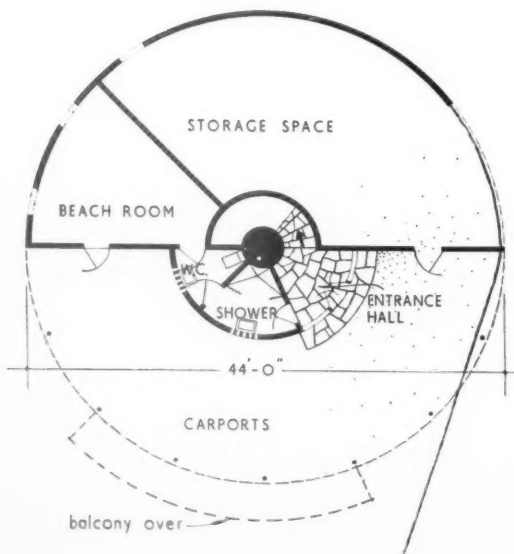
## HOUSE AT FRANKSTON, VICTORIA, AUSTRALIA

This house, designed by Roy Grounds, is built of Victorian mountain-ash, left in its natural state to weather to the silver grey of the surrounding wind-twisted native trees. Joinery frames of doors and windows are protected with white paint, and the steel columns on the entrance floor are painted black. The roof is an inward sloping disc of aluminium, 52 ft. in diameter, the single downpipe being constructed inside the central brick chimney stack, which forms a core for all services and heating, as well as being the structural spine for central support of floor and roof members and the circular concrete staircase. The whole structure sits on a reinforced concrete mat, laid direct on sandy loam. The external walls consist of 48 prefabricated timber panels, each 3 ft. wide. The internal finishes to walls and ceilings are local, straight-grained waxed hardwood, or flush-jointed fibrous plaster. All walls and the roof are insulated with aluminium foil. Below left, part of the car-port; below right, the staircase. Bottom, from the south-east; opposite from the north.



Site plan

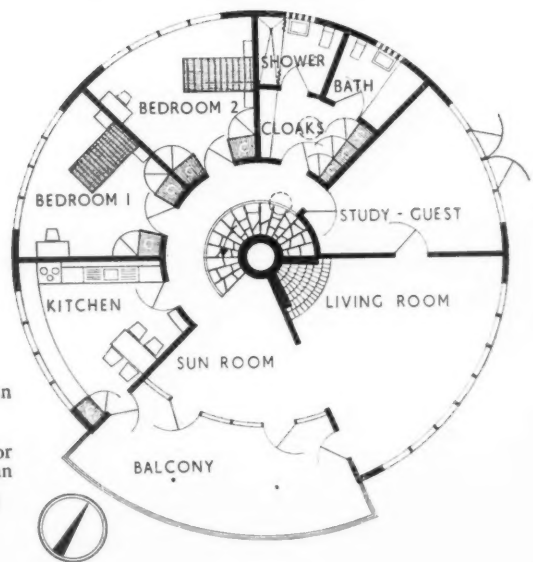




Ground floor plan

First floor plan

[Scale:  $\frac{1}{4}$ " = 1' 0"]







MOW

## Changes in Building Licences Next Year

On January 1 the free limit for industrial and agricultural building work will be increased from £2,000 to £25,000 and for all other work, including housing, from £500 to £1,000. From the same date local authorities will give licences automatically for houses up to 1,500 sq. ft. in size, and for not more than 50 houses at a time, and they will have discretionary powers to issue licences for houses up to 2,500 sq. ft.

This was announced in the Commons on Monday by Sir David Eccles, Minister of Works. He also said that proposals for houses in excess of 2,500 sq. ft. would be referred to the Minister of Housing and Local Government. Applications to build more than 50 houses at one time would be referred by the local authority, with their recommendation, to the regional office of the Ministry of Housing for consideration in consultation with the Ministry of Works, since building plans of this size might affect the programme to be carried out in an area wider than that of the local authority immediately concerned. These arrangements for

private house-building would also apply to Scotland.

As a further step towards simplifying licensing procedure, from January 1, 1954, applications for building licences for all classes of buildings except housing should be sent to the Regional Licensing Office of the Ministry of Works. If in any area the load on the building industry appeared likely to become excessive, his regional officers would operate the starting date procedure and thus preserve a balance between building work in the private and public sectors of the economy.

In answer to questions, Sir David Eccles said that there was ample labour to meet this increase in freedom. There was at the moment an increasing capacity in the building industry and this particular practice would make only a small demand on it.

He went on to say that the sponsoring arrangements whereby the building owner who wants to put up a factory goes to the Board of Trade and Ministry of Supply will cease. Only in cases where the area is in danger of severe overload will the Ministry of Works apply to the Board of Trade or Ministry of Supply to know if the building is of vital importance.

## DSIR

### Cuts to End

Cuts made two years ago in the post-war programme for expanding the work of DSIR and the research associations financed through the department are to be restored in full by the Government. This was announced last week by Sir Ian Heilbron, chairman of the Advisory Council of Scientific and Industrial Research. He also said that DSIR would now be empowered to plan research broadly on a five-year basis. This important step would make possible flexibility and continuity of policy.

## EDINBURGH

### Building Restricted

The Secretary of State for Scotland has refused permission for the Edinburgh Corporation to build blocks of houses on rising ground near Holyrood Park, Arthur's Seat and old Duddingston.

After studying the report of a public inquiry held by James Walker, Q.C., helped by Professor Gordon Stephenson, of Liverpool University, the Secretary of State announced that building shall be confined to the lowest part of the site, below the 200 ft. contour line; that the maximum density is not to exceed 75 persons per acre; and that the height of buildings shall be controlled. The original scheme, which brought protests from local people, was for the erection of 800 dwellings in blocks of four, three and two storeys.

## DIARY

*Smoke and Smog.* Exhibition at the Museum of Hygiene, 90, Buckingham Palace Road, S.W.1. (Sponsor: RSI.) Weekdays, 10 a.m. to 5 p.m.; Saturdays, until 12 noon. UNTIL DECEMBER 5

*Charles Rennie Mackintosh.* Exhibition at the RIBA, 66, Portland Place, W.1. (Sponsor: Saltire Society and Arts Council.) Weekdays, 10 a.m. to 7 p.m.; Saturdays, until 5 p.m. UNTIL DECEMBER 23

*Russia Revisited.* F. R. Yerbury. At the AA, 36, Bedford Square, W.C.1. 6 p.m. DECEMBER 3

*The Problems of Aerodrome Development.* T. F. Bird. At the TCPA, 28, King Street, W.C.2. (Sponsor: Students' Planning Group.) 6.30 p.m. DECEMBER 3

*Building Without Grace: An Aggressive Examination.* Siegfried Charoux. At the RIBA, 66, Portland Place, W.1. 6 p.m. DECEMBER 8

*Students' Work.* Exhibition at the Hammersmith School of Building and Arts and Crafts, Lime Grove, Shepherd's Bush, W.12. Weekdays, 10 a.m. to 8 p.m. DECEMBER 8-16

*The Principles and Practical Applications of the Partial Prestressing of Concrete.* P. W. Abeles. At the ISE, 11, Upper Belgrave Street, S.W.1. (Sponsor: RCA.) 6 p.m. DECEMBER 9

*Charles Rennie Mackintosh.* Dr. Howarth. At the RIBA, 66, Portland Place, W.1. (Sponsor: RIBA Library Group.) 6 p.m. DECEMBER 10

*The South Bank Project.* Dr. J. L. Martin. At the AA, 36, Bedford Square, W.C.1. 6.15 p.m. DECEMBER 10



Two views of St. Paul's Methodist Hall at Northgate, Crawley. It is the first ecclesiastical building to be completed in the New Town. The hall, right, which is 55 ft. long, 32 ft. wide and 20 ft. 6 in. high at the centre, is being used temporarily as a church. The main feature of its construction is the precast concrete portal frame and precast concrete roof troughs which form a coffered ceiling. The end wall of the gallery and side walls of the proscenium are faced with felt padded with kapok, fixed to rough boarding on a 4½-in. brick back. There are also three classrooms with a floor area of 2,132 sq. ft., a kitchen and ancillary rooms. Total floor area 7,830 sq. ft. Contract price, £26,450. Architects, Cyril A. Farey, Son and Adams. Consulting engineer, Felix J. Samuely. Acoustic consultant Hope Bagenal.



*Changes in the building industry tend to take place slowly—in fact, almost imperceptibly, so that it is all too easy not to notice that they have taken place at all. In scouring the Building Exhibition (which closed yesterday) for new products, of which there were very few, our Specialist Editors noted a large number of exhibits which symbolized changes in building technique which are already widely accepted by the industry. These included light cladding systems for framed buildings, three of which are described in this week's issue; ready-to-decorate room-height panels for partitions and for the inner skin of cavity walling; floor and roof decking systems of a variety of materials; and various other products designed to reduce site man-hours, such as precast concrete eaves and gutter units, and to minimize the amount of wet construction, such as patent suspended ceiling systems. In the following report the JOURNAL's Specialist Editors have concentrated on new products, since most of the other exhibits have already been mentioned in our regular feature "The Industry" or elsewhere in the JOURNAL. In addition to illustrations of the products described, the report is accompanied by photographs of some of the most attractive stands and of some of the men who helped to make this year's Building Exhibition not only the largest, but probably the most successful.*

## THE BUILDING EXHIBITION: 1953

REPORT BY THE JOURNAL'S SPECIALIST EDITORS

### THE DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

There were several important lessons to be learnt on the BRS section of the DSIR stand—the first concerned condensation in chimneys. The increasing use of slow-burning fires and stoves, and the consequent reduction in the rate at which air passes up the chimney, increases the danger of condensation. The damage which such condensation can cause was demonstrated by means of a model (photo right) and the following advice was given:—

*For new chimneys:* (i) use a properly-throated precast concrete capping;

(ii) use a damp-proof course under the capping and at roof level;

(iii) avoid the use of a dense rendering;

(iv) provide a suitable flue lining, e.g., by using socketed glazed earthenware pipes;

(v) insulate the flue lining from the chimney stack. One way of doing this is to have an air-space between the brickwork and the lining; in which case, leave a small hole at the lower end for drainage.

*When rebuilding a damaged flue:* incorporate as many of the above five points as possible, but a single length of asbestos-cement pipe inserted from the top may be more convenient than socketed pipes.

The architect is asked to pass on to the householder the following advice:

- (i) do not burn wet kitchen waste;
- (ii) store solid fuel under cover and keep it dry.

### FOAMED SLAG BLOCKS

A sample of walling of high quality foamed slag concrete blocks demonstrated most effectively how attractive these blocks can be and, in the opinion of the writer, if neatly laid, they would be satisfactory, unplastered, even for, say, one wall of a living room. BRS does not go as far as this, but suggests that they are adequate for entrance halls, etc.

Part of the sample wall had not been painted and even this was attractive. The blocks were silver-grey in colour and the flush joints a buff-coloured mortar. The remainder of the wall had been spray-painted with one coat of emulsion paint (in a pastel shade) and this was enough to penetrate deeply into the crevices of the blocks. It was interesting to note that, whereas the unpainted blocks are naturally rough to the touch, this single coat of paint made a tremendous difference and rubbing one's hand across the painted blocks caused no discomfort.

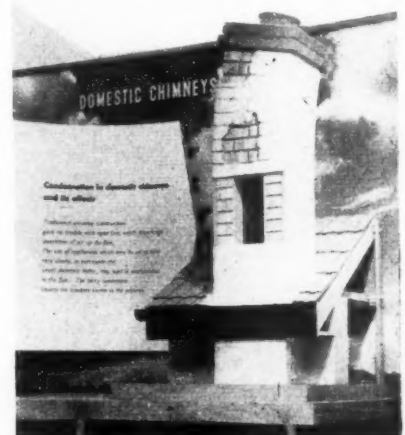
The mix used was 1 part cement : 3 parts fine foamed slag : 6 parts coarse foamed slag.

### DRYING OUT

It is well known that several tons of water are used in constructing the traditional house, and that decoration

should not be applied to walls, ceilings, etc., until this has dried out, if the decorations are not to be discoloured and disfigured. Rule of thumb methods are not satisfactory guides as to when the building is sufficiently dry, since the appearance and the "feel" of the surfaces may give a misleading impression.

BRS has developed and had on show at the exhibition a small, portable "dampness meter" which is placed adjacent to the surface to be tested and which gives a direct reading on a dial of the degree of dampness present. The instrument is soon to be made available commercially and should

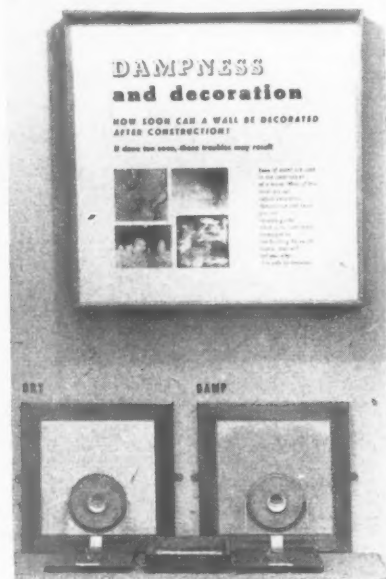




Above, Harold Macmillan, Minister of Housing and Local Government, making his opening speech at the Building Trades Exhibition on November 18. On his left is Howard Robertson, president of the RIBA—also chairman of this year's Exhibition. Below, left, Mrs. Molly Montgomery, now managing director of the Exhibition, who has helped to organize the Exhibitions since the war. Amongst the many who attended the opening ceremony were: bottom right, W. F. S. Woodford, secretary of the Institution of Production Engineers, with Sir Thomas Hutton, director and secretary of the British Productivity Council. Below right, Sir Harry R. Selley, president of the National Federation of Master Builders, with the Federation's secretary, L. B. Venning.



prove invaluable to the conscientious contractor. Before long, it should become possible for the architect to



The BRS exhibit of two "dampness meters"; the one on the left against a damp wall, the other against a dry wall.

specify that the contractor tests surfaces with such a meter before decorating them.

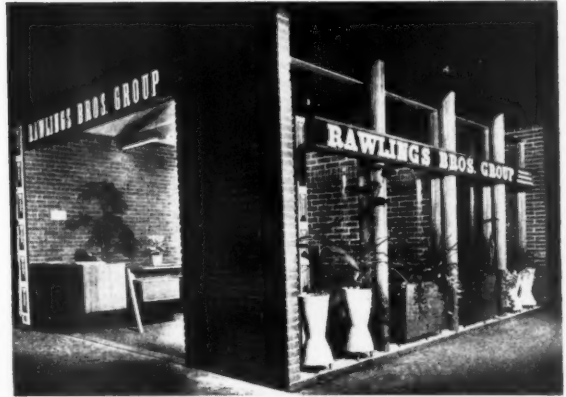
#### THE MOBILE TOWER CRANE

A model of the tower crane, the use of which effected a 1,000 man-hour saving per house in a recent BRS experiment, was on show (see photo below), together with a model of the site on which it was used.

It will be remembered that a large proportion of this saving was believed to be due not so much to the crane itself as to the fact that the use of any crane makes it essential to organize the site to a far greater extent than is usual. This would apply equally to



Right, the design for Rawlings Bros. Ltd. stand was won in a competition held by the Hammersmith School of Building and assessed by Wells Coates. The winner was R. H. Gordon, an architectural student. Below, the Ruberoid Co. Ltd. stand; architect, Eric Brown.





other types of crane and it would be wrong to allow the justifiable publicity that the tower crane has been receiving to make us forget the great success that has been and still is being achieved with other mechanical-handling plant.

#### MOHLG—THE IMPORTANCE OF MIXED DEVELOPMENT

The major part of the Ministry of Housing and Local Government stand was devoted to a visual demonstration, by means of charts, drawings and models, of the thesis that the best solution to the housing needs of the average town is mixed development of flats, maisonnettes and houses.

The average town was described as one which suffers from areas of old houses crowded together, factories mixed with houses, lack of open space, traffic congestion, lack of land—other than farmland—for expansion, and limited resources of money and labour.

The Ministry appears to favour re-housing from 70 to 80 per cent. of the people on sites within the town, and the remainder on new estates. It is claimed that, by means of mixed development, this can be done, in the average town, at a net density of about 120 persons per acre.

It is well known that the overwhelming majority of people prefer houses, but to give them all houses would mean, says the Ministry, transferring as many as 40-50 per cent. to new estates (thereby using up more valuable farming land), and it is equally well known that people prefer to stay within the town.

On the other hand, to re-house everyone on the old sites would mean more flats, higher rents (because tall blocks of flats cost more to build than houses—it is interesting to note that on the Continent it is the other way round), and less private gardens.

Mixed development has, therefore, a lot to commend it, and the Ministry exhibited a model of how the Churchill Gardens scheme of Powell and Moya, will appear when completed. Although well above average density, this scheme proves how successful architecturally mixed development can be.

#### REDUCING THE COST OF MULTI-STOREY FLATS

Also on show was a display explaining how the cost of multi-storey housing could be reduced by reducing the number of stopping places for lifts, and by increasing the number of dwellings on each floor served by each lift.

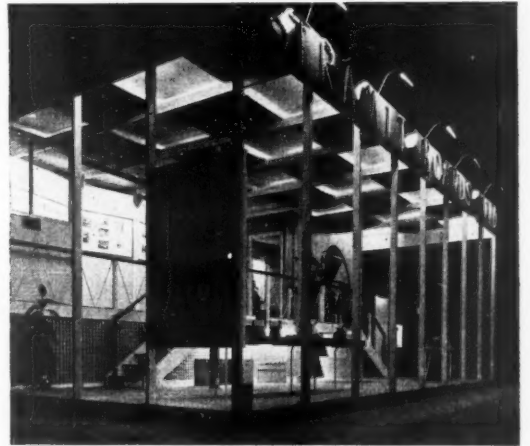
It is estimated that each stop omitted saves approximately £100. One way to halve the number of stops is to have maisonnettes instead of flats; another method, not mentioned by the MOHLG but in use in the United States, is for the lift to stop every third floor only, from which levels, tenants on other



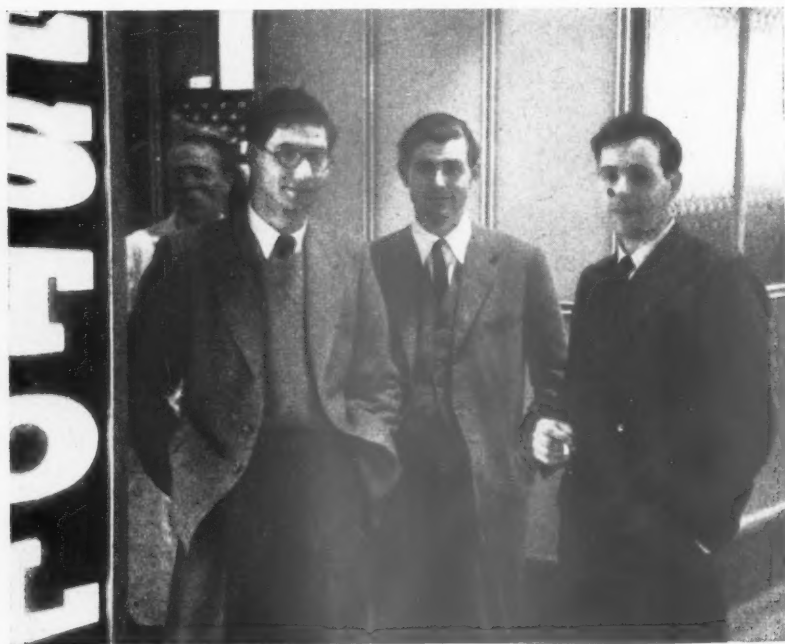
Above and below, the Architectural Press Ltd. stand designed by the Dewar-Mills Associates. The mural, seen below, depicting the AP offices at 9-13, Queen Anne's Gate, was enlarged from an original by Gordon Cullen.



Right, the Stramit Boards Ltd. stand, designed by June Park. Below, the Timber Development Association stand designed by J. R. M. Poole, formerly Chief Architect to the TDA. Dominating the exhibits on the stand is shown the highly fire-resistant rigid-frame system of construction, consisting of built-up timber sections joined together by steel gusset plates, bolts and timber connectors.







Above, Brian Cassidy, John Dennys and Nigel Farrington, who designed the Cape Asbestos stand (page 699). Having completed their studies at the AA, they have set up in partnership and practise from a small top floor room round the corner from their old school. This is their first stand at the exhibition. Below left, Roderick Ham and Guy Shepperd who (together with John Macalpine) designed the Chaseside stand, their first in partnership. They recently teamed up and practise from three studios in Edwardes Square. Mr. Ham has just played General Kroutitzki in Ostrovsky's "Diary of a Scoundrel," a Section AA production. (See ASTRAGAL's note on page 681.) Below right, Rodney Gordon, student at the Hammersmith School of Building and Arts and Crafts, who won £25 and the commission for the design of Rawlings Bros. stand, in a competition open to students of that school; Wells-Coates adjudicated. This is Rawlings' first competition-designed stand (see page 689).



floors either ascend or descend one storey by stairs.

Since long access balconies are unpopular, the Ministry appears to favour Y- and T-shaped blocks, with up to three flats in each wing. It is careful to warn, however, that these types of building are more difficult to site than straight blocks, if each dwelling is to secure a proper share of sunlight. Great care must be taken by the architect to prevent one block from over-shadowing another.

#### CONVERSION, IMPROVEMENT AND RENOVATION

Another MOHLG exhibit illustrated six types of property suitable for improvement, conversion, or renovation, being :

- (i) the large terrace house—suitable for sub-division ;
- (ii) the three-storey terrace—capable of horizontal conversion and improvement ;
- (iii) the two-storey terrace—in need of modern amenities ;
- (iv) the large detached house—capable of sub-division ;
- (v) the almshouse—to be made more comfortable and convenient for old people ;
- (vi) the country cottage—in need of modern amenities.

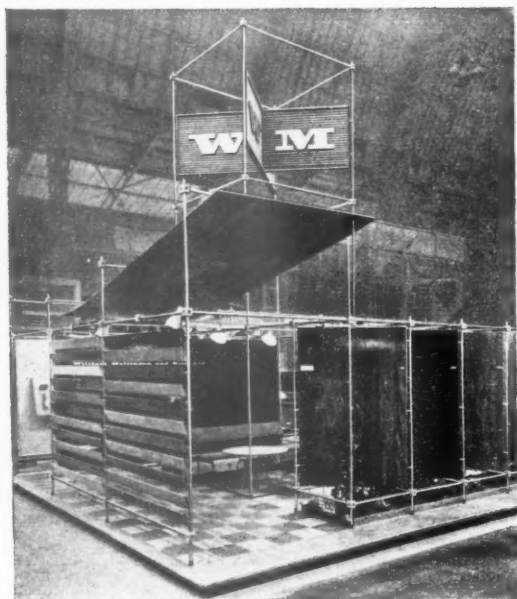
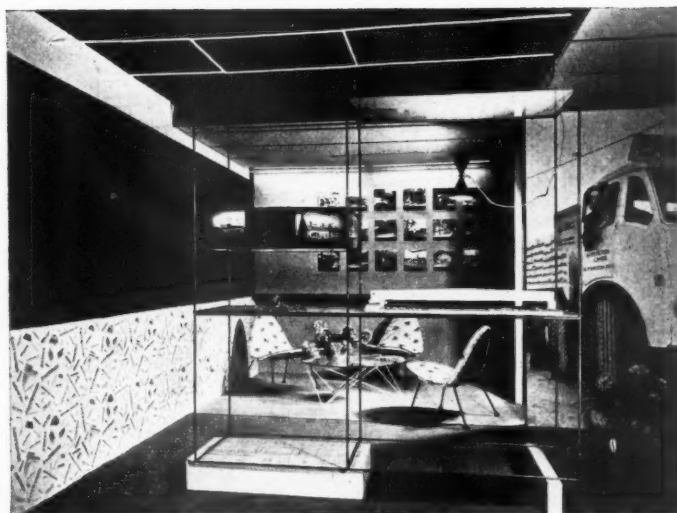
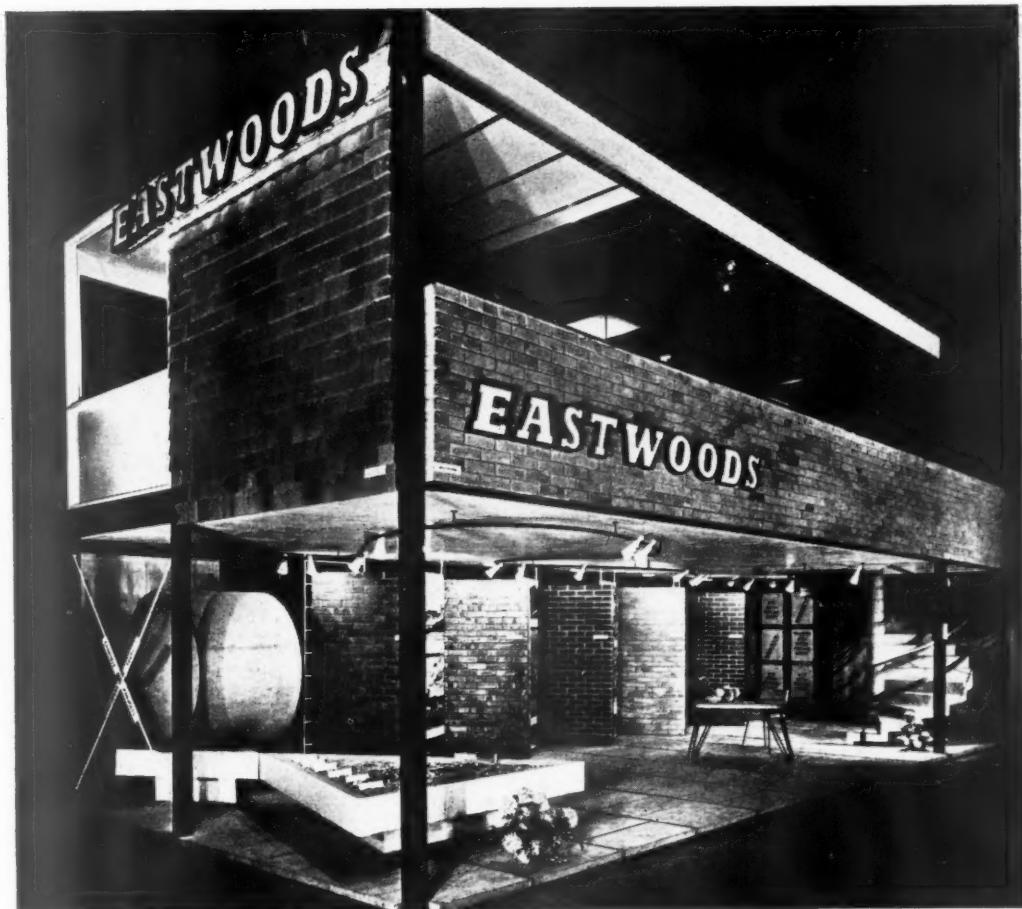
#### PREFABRICATED CLADDING SYSTEMS

Now that the new model byelaws make it possible to use light cladding to framed buildings, a number of firms are busy devising patent cladding systems. Two were on view at Olympia that are still in the prototype stage, although one of these has reached the stage where estimates have been made for an actual job. The firm is Williams & Williams Ltd. ; the system is known as "Wallspan" ; the job for which it is being considered is the Yorke, Rosenberg and Mardall multi-storey technical college at Leeds.

"Wallspan" comprises mullions and transoms of extruded aluminium, fixed outside (or inside) the structural frame—not within it. This grid of aluminium members can be filled in with glass, fixed direct to the mullions and transoms ; opening lights of standard aluminium window sections ; or any form of panel or sheet material.

The mullions are made in three sizes, depending on the distance between the points at which they are attached to the structural frame : 5 in. deep when supported at 5-ft. centres ; 6½ in. deep when supported at 15-ft. centres ; 9 in. deep when supported at 20-ft. centres.

The transoms are fixed to the mullions by means of spigots screwed to the mullions in the required positions at the works. Glazing and in-filling, of other sheet materials is held in position



Top and above, two views of the stand for Eastwoods Ltd. Architects, Stillman and Eastwick-Field; assistant architects, Ralph Smorczewski and Roger Meredith. Mural by Peter Peretti, model by Ernst Priefert. The stand has a main steel frame and the staircase is precast, post-tensioned concrete by the Lee-McCall system. Left, stand by Clive Latimer for William Mallinson & Sons Ltd.

by means of beads with a spring clip fixing.

The components would be delivered to the site, all cut to the exact lengths required and with all fixing spigots, spring clips, etc., in the necessary positions, ready for immediate assembly.

General price data are not yet available, but Williams & Williams are ready to price any job submitted to them by an architect.

The other new cladding system was shown by I.C.I. It is known as the "Kynal" secret fixing system, the basic element being an extruded aluminium member which acts as a cover strip to the edges of adjacent sheets of aluminium. The heads of the fixing bolts are held in this extrusion so that they are not visible on the outside of the building. A special form of corrugated aluminium sheeting has been developed for use with this fixing system. The sheets have alternate wide and narrow corrugations, the latter being of the same section as the cover strip between the sheets.

The system will be completed by head, sill and corner extrusions, details of which are not yet available.

It is hoped that full information, including prices, supply position, etc., will be available within a month or so.

(Another interesting cladding system, already in use on the Continent, is described on page 703.)

#### THE GAS COUNCIL

It is surprising how at an exhibition like this one comes across products which are not new, but which, for some reason, have not achieved the publicity or the success they deserve. The Gas Council's stand was a case in point. On it was a cooker by **Sidney Flavel & Co. Ltd.** (a sturdy job, incidentally, with an attractive bow front), with a really clever gadget—an oven shelf which hooks on to the oven door in any of three positions, so that when you open the door the baking dish comes out with it, and you don't burn your fingers each time you want to see how the joint is getting on.

This gadget is an optional extra on all the firm's cookers.

Two gas circulators were on show on the Gas Council stand—one by **Parkinson Water Heaters Ltd.**; one by **Radiation Group Sales Ltd.** These are the gas industry's equivalent to the electric immersion heater for summer hot water. Yet for some reason, while everybody has heard of immersion heaters, gas circulators are by no means so well known.

They are more expensive to instal, but they have this advantage—they can heat up a small quantity of water very quickly, because they heat first the water at the top of the storage tank. (With an immersion heater, it is the water at the bottom which is heated first, so that this water tends to get mixed with the rest of the water in

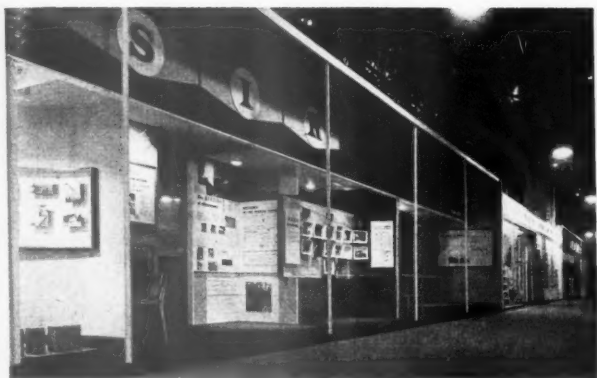


Right, part of the permanent, factory-made, single-storey house intended for use in this country and for world-wide export. The manufacturers are **W. J. Simms, Sons & Cooke Ltd.** Architect, **W. M. Carter.** See page 702.

Above, the **Twistee Reinforcement Co. Ltd.** stand. Architect, **Noel Moffett.** Left, **Armstrong Cork Co. Ltd.** stand, designed by **C. E. Gilbert.**







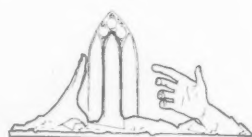
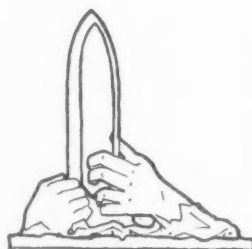
Left, the stand for Williams & Williams, Ltd. Architects, F. R. S. Yorke, E. Rosenberg and C. S. Mardall; associate, T. R. Evans, assistant architect-in-charge, W. Pack. Above left, the DSIR stand which was designed by E. Wilkes of the Exhibitions Division, COI. Above right, the MOHLG stand, designed by A. V. Whitehead, of the same department.

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Above left, Dr. Kalman Hajnal-Konyi and Sidney M. Myers, consulting engineers, who created the Myko floor illustrated on page 707. Right and above, the evolution and resulting abstract symbolising the mason's craft which was on view at the stand of Bath and Portland Stone Firms Ltd. Carved from Portland stone, it is 12 ft. high and was designed by Donald Hamilton, Wakeford and Partners. Below, Econa's symbol of their willingness to do anything. A special trap (just visible left of centre), perhaps solves the outlet problem on a euphonium. Other problems, Econa claim, are solved with equal imagination.



the tank, and hot water cannot be drawn off until all the water in the tank is hot, unless a small supplementary immersion heater is fixed near the top of the tank.)

Another appliance worth being reminded of is the gas-operated airing cupboard heater. One manufactured by the Phoenix Supply Company was shown by the Gas Council. It costs under £5; uses only 2 cu. ft. of gas per hour; and the flame is entirely enclosed so that there is no danger of fire.

#### FIRE PREVENTION

The Fire Protection Association stand showed its usual publications including a new pamphlet showing that of 46,696 building fires in the UK in 1952, 6,104 were due to structural defects in the buildings themselves. This figure can be broken down as follows:—

Fires in chimneys not confined to the chimney .. .. .	2,556
Grate fires igniting structural timber under hearth .. .. .	2,592
Flue fires .. .. .	956

In other words, more than one fire in eight was associated with some part of the building fabric with which architects and builders are closely concerned.

#### A NEW STRUCTURAL USE OF TIMBER

The central feature of the TDA stand was a row of four timber rigid frames. These represented a new development which is unusual in a number of respects. Firstly, it is not suggested that this method of construction will save timber (although it might save labour); nor is it suggested that it will prove the cheapest possible method. It is claimed, however, that the TDA rigid frames will offer "marked advantages where unobstructed headroom, low maintenance costs and aesthetic considerations are important," and that they will be highly fire-resistant. The frame consists of columns and rafters, each composed of two or more sections of comparatively small timber (e.g. two 9-in. by 2-in. timbers,  $\frac{1}{4}$  in. apart, or for large spans, two thicknesses of four 4-in. by 2-in. sections, edge glued, and again  $\frac{1}{4}$  in. apart). The knee joints and the joint at the apex are formed by means of a  $\frac{1}{4}$ -in. mild-steel plate placed between the two thicknesses of timber, and secured to them by bolts and timber connectors.

Phillip Reece, director of TDA, pointed out recently that, while "glued laminated construction may well provide the ultimate result of structural timber development (and it is because of this that the TDA has taken part in the OEEC-sponsored mission to study developments in the USA)," so far, glued laminated arches, not, in any case, a form unique to timber, were expensive.

In developing its rigid frames, TDA has attempted to achieve continuity



Top left and right, the C.D. Productions, Ltd. stand, architects Philip Dowson and Francis Pym. The sculpture is by Oliffe Richmond. The stand demonstrated the Punt roof system designed by Ove Arup and Partners. Above left, the London Brick Co. stand, architect, John Harris. Above, Metal Sections Ltd., the architect was Rodney Thomas. Left, the MOW stand was designed by S. Hart-Still of the Exhibition Division of the GOI.

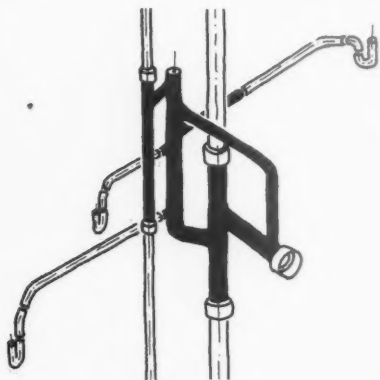
without resorting to lamination or gradual curves. A number of different solutions were tested before the final choice of this compromise construction of steel plates and edge-to-edge glued timber members was chosen.

It is estimated that the rigid frames will be about half the price of laminated arches. Either softwood or hardwood can be used and, because of the difficulty of embedding toothed-plate connectors into hardwood (split-rings and shear plates are dearer), TDA has produced a new type of connector specially for hardwood. It is a light, pressed steel shear plate, which does not have to be embedded under pressure, and is much cheaper than the ordinary shear plate connector.

As mentioned above, one of the advantages claimed for these rigid frames is their high degree of fire resistance. One of the most important factors determining the fire-resistance of a structural member is the "specific surface"—i.e. the ratio of the surface of a member to its mass.

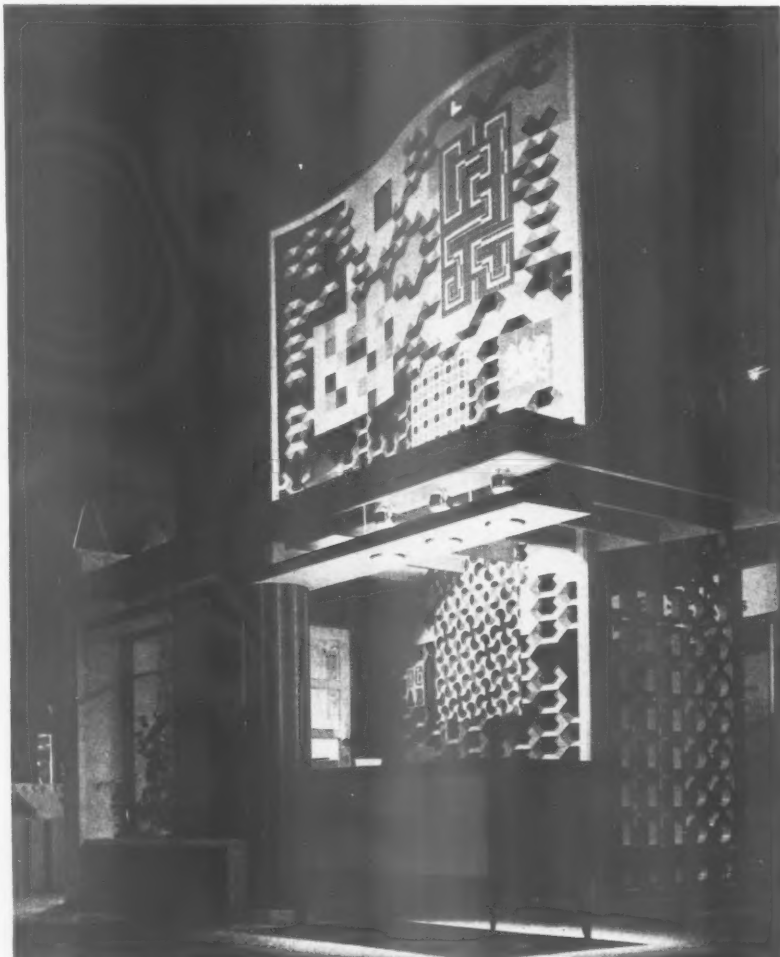
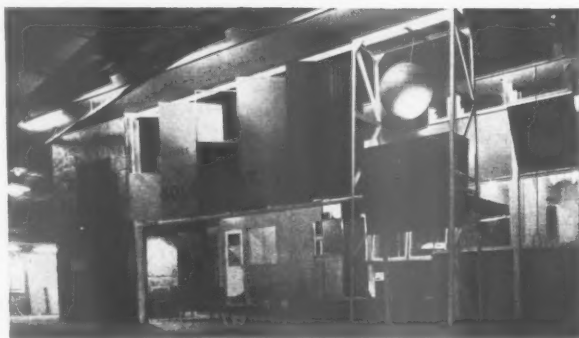
A baulk of timber cannot easily be set on fire or kept on fire, unless it is subjected to a high temperature for a fairly long time. But if the baulk of timber is cut into shavings it will burn very easily indeed. A Belfast truss is the nearest thing structurally to a heap of shavings; the normal TDA trusses are a vast improvement; the rigid frame, much better still, and it is estimated that its endurance under fire tests may prove to be as much as 30 minutes—i.e. twice as long as unprotected steelwork.

An article on the TDA rigid frame, written by Phillip Reece, appears in the current *TDA Quarterly Review*, and we shall probably be hearing a good deal more on the subject.



PLUMBING

The above drawing is an expanded version of a neat plumbing unit by **Econa Modern Products Ltd.** which can fit into a 12-in. square duct, form part of an eight-storey plumbing system and which eliminates untidy, expensive, difficult to fit and install, branch vent pipes. Single pipes from each fitting discharge into an "inter-vent" pipe

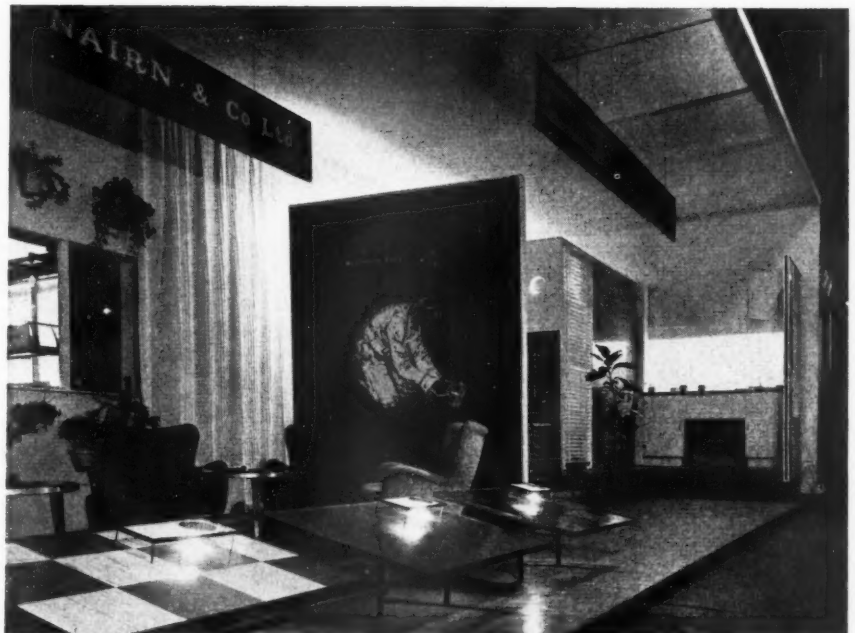


Left, D. Anderson & Son, Ltd. This stand showed roofing felt; the architect was John Diamond of the Design Research Unit. Below left, stand for Holoplast Ltd. Architect, E. D. Jefferiss Mathews of J. Douglass Mathews and Partners; assistant architect, B. G. Green. The stand shows new external cladding for multi-storey buildings. Below, the Carter Group of Companies' stand, designed by A. B. Read and Christopher Read. The tile mural seen in the photograph was designed by Gordon Cullen.

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Top and right, stand for the Brush Group on which was shown diesel engines for the building trade. The stand was designed by F. M. Gross. Above, Cape Asbestos Co., Ltd., architects, Cassidy, Farrington and Denny. Right, the stand for Michael Nairn & Co., Ltd., and British Congo-leum Ltd., architects, Neville Conder and Peter Miller. The first of these two firms exhibited a new vinyl floor tile and the latter a waterproof wall covering for interior use in kitchens, bathrooms, etc.







Domestic heat pump installation, providing space heating, domestic hot water and cooling for larder. The cooling unit can be seen top left; the pump is in the insulated water tank, behind the sink. See note below, right.

with rodding cap on top (which enables the soil pipe to be cleaned down to the unit in the flat below) and the waste then flows into the main soil pipe. The top of the "inter-vent" pipe connects with the main anti-syphon pipe. We's can discharge direct into the soil pipe (see sketch), or into the inter-vent pipe. An alternative, but similar, unit will receive the waste discharge from two flats side by side. In all cases, of

course, waste pipes must be at the correct slope to ensure that the seals in the traps are not broken (see BRS Digest No. 49 on one pipe plumbing). Econa also showed their latest patent resealing or "anti-vac" trap. A cylinder, at right angles to the waste pipe, has been inserted in the middle of an "S" trap. The cylinder, through which waste flows, holds enough waste water to reseal the trap (should a partial vacuum form) when the syphon is broken. The chamber is quickly removable for cleaning.

#### FLOOR FINISH

Linoleum as a floor finish does not now occupy the position it once held for years with architects, partly because it now has so many rivals with which to compete and partly because it has been blamed for causing dry-rot in timber floors and criticised for cracking. Both faults are, needless to say, not the fault of the material so much as the fault of the architect and the builder—or the housewife—in laying it badly in the wrong conditions. The Linoleum Manufacturers' Association's stand, designed by John Bainbridge (associate designer Eric Schubert-Stevens) and illustrated on this page, shows the versatility of the

material as regards inlaid patterns—should such be desired. On the stand was a reprint of a series of abrasive tests made by the National Bureau of Standards of the US Department of Commerce. This showed that linoleum, together with a cork composition tile, gives a better performance, as regards abrasion, than rubber, asphalt tile and various wood and composition tiles and blocks. The advantages of linoleum tiles, or squares, and the colour range, are both considerable.

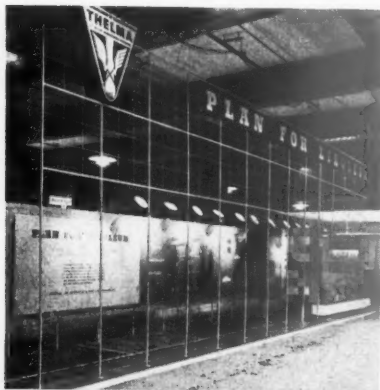
Abrasion tests made on the Adamite Co.'s Altro safety floor coverings were also very satisfactory. This sheet flooring, made of 2.5 mm. PVC plastic to which aluminium oxide has been added to provide non-slip qualities, is available in eleven colours at a cost, laid, of 28s. (+ 25 per cent. tax) a sq. yd. The plain sheet, at 18s. (plus tax) is just pure PVC. It is considered a heavy duty floor suitable for public buildings, light factories, and, of course, laboratories, on account of its resistance to acids and alkalis. A thinner PVC sheet, backed with a jute felt base, and therefore with a slightly soft "tread," has recently been produced. A dozen colours are available, some with basket-weave or ribbed surface textures at a cost, laid, of about 16s. a sq. yd. All sheeting should be laid on a bitumen adhesive and for maintenance a liquid water wax emulsion dressing is suggested.

#### DOMESTIC HEAT PUMPS

The most interesting heating development shown at the exhibition was the joint display by the Electricity Supply Authorities and the Ministry of Fuel and Power which dealt with heat pumps. Mr. Sumner's Norwich pump, built by himself and an apprentice during the war, has been described many times already, and the Festival Hall pump, which can be used for heating in winter and cooling in summer, is also fairly well known.

During this summer, however, the South Western Electricity Board has been experimenting with domestic heat pumps in the houses of one or two employees, and has succeeded in supplying them with domestic hot water for a current cost of 2s. 4d. per week, the amount of water used varying between 10 and 30 gallons per day. A standard compressor unit from an English Electric refrigerator has been used, with the evaporator unit in the larder, thus providing refrigerated food storage space, the heat from which is transferred to the hot water. Meter readings of current used and water heated showed a performance ratio varying between  $1\frac{1}{2}$  and  $2\frac{1}{2}$  (i.e., between  $1\frac{1}{2}$  and  $2\frac{1}{2}$  times the heat put into the compressor unit motor was extracted in hot water).

For well-designed heat pumps this is comparatively low but, allowing for



The stand of the Linoleum Manufacturers' Association, see note on right.

heat losses in the cylinder and the pipe runs, the performance ratio works out at between  $2\frac{1}{2}$  and 4. It is possible that the 30-gallon cylinder used may be too large for the  $\frac{1}{2}$ -h.p. compressor, but this is the normal cylinder size for domestic work, and it would be preferable to use a larger compressor.

The installation shown on the stand (page 700) uses compressed air as the circulating medium and is arranged to cool a larder and provide hot water, but this system could, it was suggested, be easily modified to provide space heating by means of warm air circulation.

It is to be hoped that it will not be long before heat pump units will be available in sizes suitable for the small house, for they should show a very considerable economy in heating costs. Figures are difficult to find, but a design exists which should sell at not more than £200 and which is intended to provide space heating and hot water for an "average bungalow." It is not unreasonable to interpret this as a home with a floor area of 650 sq. ft. or so for which the hot water supply would normally require an immersion heater of 2 kilowatts at least, probably 3, plus at least two 2-kilowatt fires for space heating. The heat pump design has a 5-h.p. motor, which would have a current rating of  $3\frac{1}{2}$  to 4 kilowatts for the total heat load of the house. Bearing in mind that the motor would be thermostatically-controlled, and working only at intervals, it is easy to see

that the current consumption for heating by normal electrical methods should be reduced to about one-third, or even less.

#### CEMENT SAVING

Porous or weak mortars are desirable for ordinary brickwork in order to encourage the drying out of the brickwork after rain. With light-weight blocks, weak mortars are essential. In external rendering again, a weak mortar is preferable to avoid cracking. The bricklayer and the plasterer, however, dislike working with a "lean" mix. They get a "fat" mix by using too much cement, or by adding lime, or even clay. An alternative addition to the "lean" mix which makes it easy to work, entrains air and forms a slightly porous mortar is a plasticizer called Phomene, produced by the Pyrene Co. Ltd. They claim that up to half the average amount of cement used on a building for mortar and rendering can be saved. The foaming agent is added at the rate of half a pint per cwt. of cement. It costs 8s. a quart and is sold in pint tins so as to avoid the wastage which the large tin encourages.

#### BLACKBOARDS

The Unique Balance Co. Ltd. are now using their spiral balances for adjustable blackboards. A set of three boards measuring just over 9 ft. wide costs £24. The two flanking boards are cantilevered from single balances and can be swung

through 180 deg., thereby making both sides of the board available.

#### LATTICE SCREENS

Lattice screens of terra-cotta and concrete are one of the features of buildings on the Continent which many architects admire. It was interesting, therefore, to see two firms exhibiting at Olympia units to make this type of screen wall. The first was the **Sussex and Dorking United Brick Companies Ltd.**, who exhibited a screen, (photo below left) constructed of small burnt clay units. These units are available to order and, if sufficient interest is aroused, they will go into regular production.

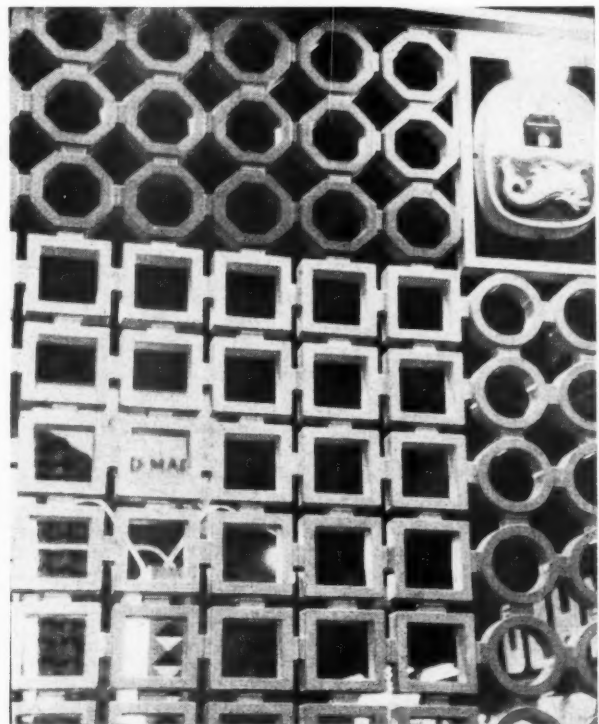
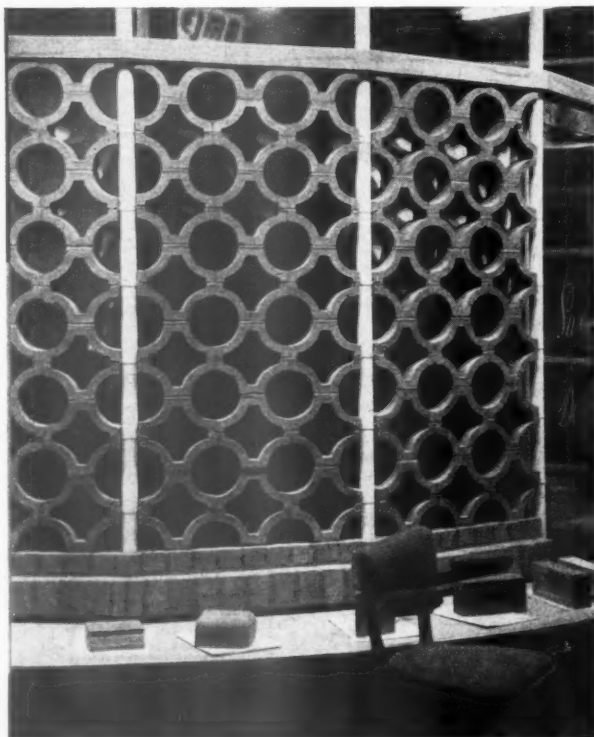
On the stand of the **Carter Group of Companies** was a somewhat more elaborate screen (see photo below) composed of three types of glazed, pierced faience units, each about 1 ft. square. The cost is somewhat high, due to the difficulty in producing units glazed both sides, but the result is most effective.

Again, so far, only available to order; quantity production, which would, of course, bring down the price, will depend on the demand.

#### PRESSED STEEL WINDOW FRAMES

Also exhibited in order to obtain "user's reactions" was **Crittall's** pressed steel sub-framing. This replaces the normal outer frame of a standard metal window to produce a profile similar to that produced by a timber sub-frame.

*Below left, lattice screen of hollow burnt-clay units, manufactured by the Sussex and Dorking United Brick Companies Ltd. Below right, similar screen constructed of various types of pierced faience units, glazed both sides, manufactured by the Carter Group of Companies.*



Normal ventilators (opening lights) are hung direct to the pressed steel frame; glass for fixed lights is fixed direct to it.

#### SQUARE HOLES

Small holes for fencing, washing-line poles and small piles are expensively and inefficiently dug by pick and shovel. The hand auger is very much more effective and so is the **Guiterman Square-hole Digger** and **Multipick** (designed by C. J. Rice). The latter are expensive tools (over £25 each) when compared with the cost of traditional tools, but are considerably more efficient. The Square-hole Digger is roughly a "grab" on the end of an extendible rod operated by hand levers. The Multipick consists of a steel tube enclosing a steel ram which can be operated to provide a 14-lb. hammer blow per strike. A variety of heads enables the pick to be used for digging, tamping, undercutting holes and driving timber shoring. The value of the undercutting of post-holes, of avoiding the unnecessary disturbance of earth,

and of economising in concrete shows the need for these tools.

#### ELECTRIC COOKER

**British National Electrics, Ltd.**, were showing a new cooker, Model C51, which is intended to be a cheaper version of the Model C49. It is a simple, straightforward, design and considerable trouble has been taken to ensure that the top, the plates and the grill are easy to dismantle and clean. However, this cooker once more repeats details (typical of nearly all cookers) which are fundamentally unsatisfactory: such as ill-fitting joints on the inside of doors, where they are most readily fouled, and dirt-catching mouldings on handles. More attention seems to be paid today, by the designers of cookers, on making an exterior streamlined rather than making an interior easy to clean. The exterior is physically easy to clean anyway.

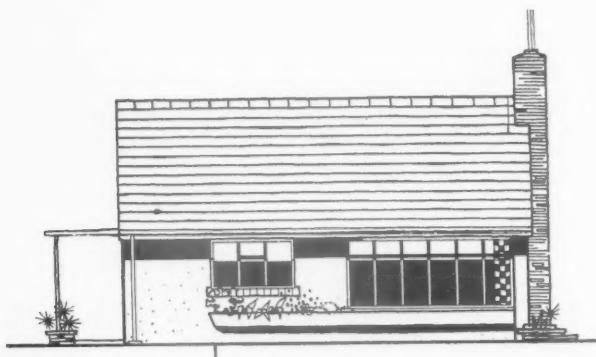
#### EXTENDIBLE HOUSE

Architects may be asked by prospective clients for professional advice on a house which they can extend at a later

date "like the one at the Building Exhibition." The plans of the **Simms, Sons & Cooke, Ltd.**, Extendible House are therefore shown below. The costs given are for the supply and delivery of carcase, plumbing and electrical installations and for the supply and fixing of tiles by the **Marley Tile Co.**

Sites more than 100 miles from Nottingham will cause an additional haulage fee. To the sums given should be added the sum of approximately £460 for the erection and painting of the building. A concrete raft is recommended and a floor finish of thermo-plastic tiles is suggested—apparently at extra cost to judge from the brochure: "Needless to say, this ground floor finishing cover is not supplied by us, and is left entirely to the discretion of the client. As a guide, the sum of £60 should be allowed to provide for, say, thermo-plastic tiles supplied and laid over the whole floor area."

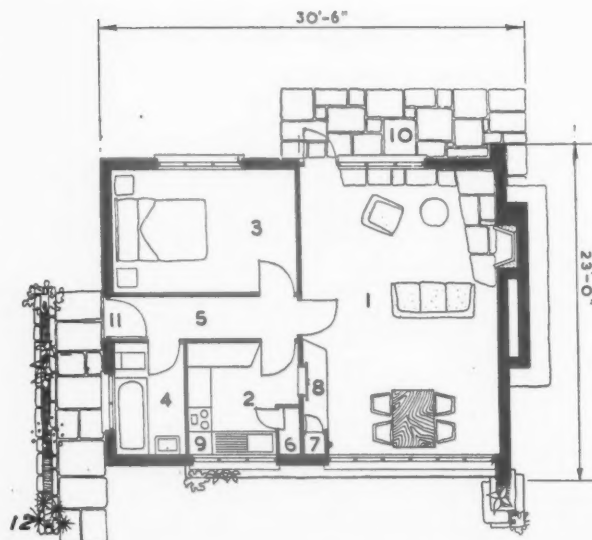
A prototype house was erected at Olympia, and when it was visited by the



Basic house plan and main elevation of the Extendible House built and exhibited at Olympia. Alongside, to a smaller scale, are the three variations in the house plans. The total floor area of the basic house is 564 sq. ft.

#### KEY

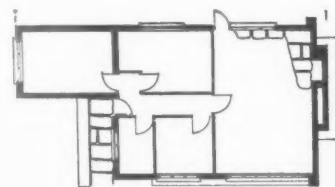
1. Combined living and dining space 12 ft. 3 in. x 19 ft. 9 in.
2. Kitchen, 9 ft. 5 in. x 7 ft. 8 in.
3. Bedroom, 8 ft. 2 in. x 15 ft.
4. Bathroom, 5 ft. 6 in. x 7 ft. 8 in.
5. Hall, 3 ft. x 15 ft.
6. Larder
7. Linen cupboard, floor to ceiling.
8. Serving hatch.
9. Water heater.
10. Terrace.
11. Front entrance.
12. Flower trough and porch hood support frame.



**BASIC HOUSE £723 . 17 . 6**

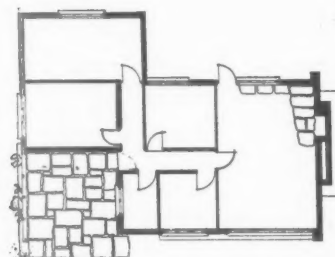
Extra for Car Port £85 . 0 . 0

No fuel or other store is included.



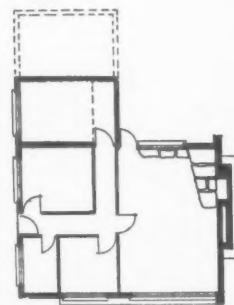
**HOUSE "A" £882 . 5 . 0**

Including Car Port



**HOUSE "B" £1013 . 5 . 0**

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**HOUSE "C" £857 . 10 . 0**

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## DEMOUNTABLE ORCHESTRA PLATFORM: ROYAL FESTIVAL HALL

*Gordon Symondson, designer, in collaboration with J. L. Martin, Architect to the London County Council*

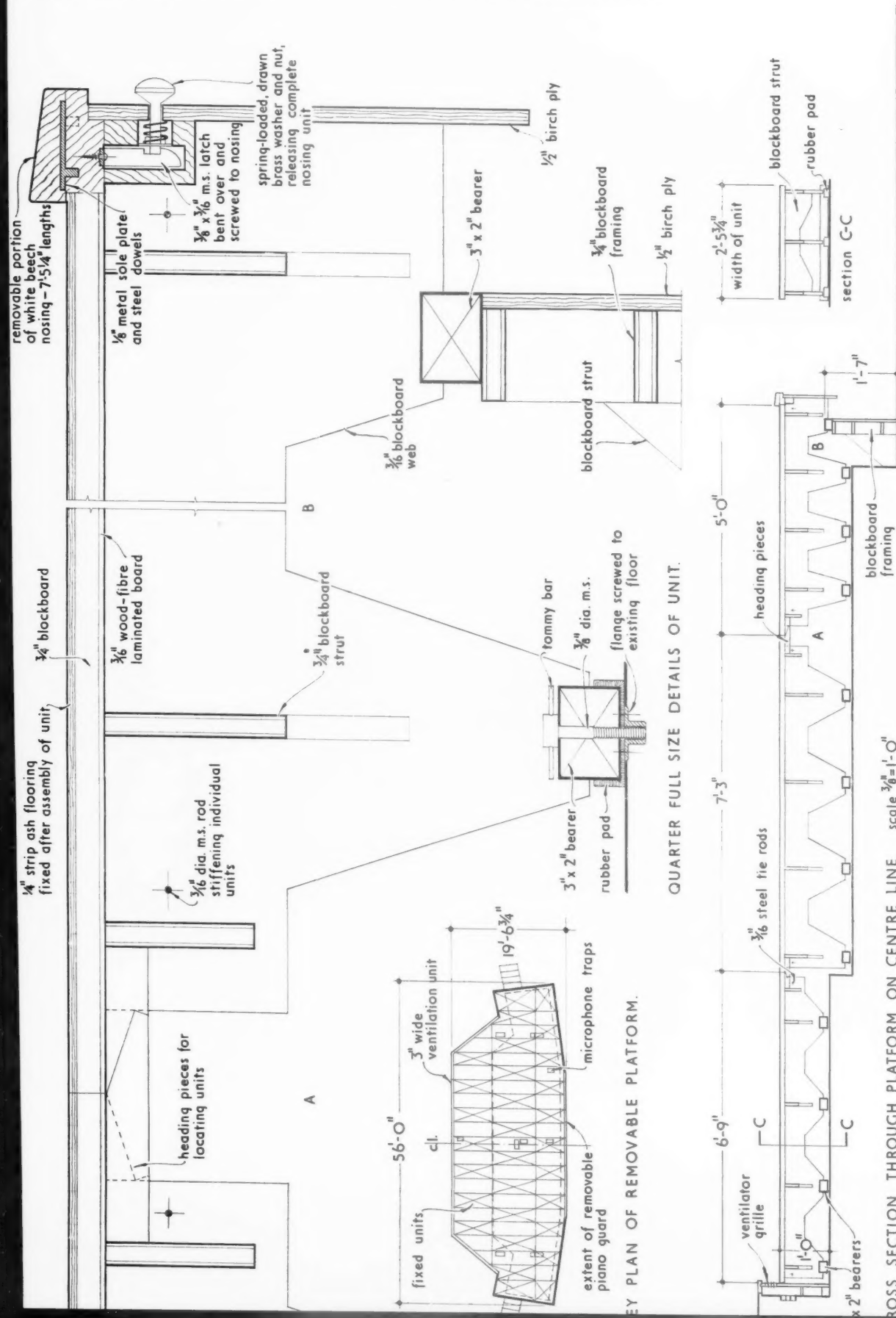


*Each platform unit is built up of blockboard sheets, the chief supporting members being cut in a castellated silhouette for lightness sake and to save waste of material. Heading pieces in the back and forward edges of each unit help to locate the units and to prevent any movement between them. In addition, every other unit is secured to the floor by means of a hand screw. A removable piano guard which runs along part of the front edge of the platform enables pianos to be run off without damaging the nosing.*

# WORKING DETAIL

## DEMOUNTABLE ORCHESTRA PLATFORM: ROYAL FESTIVAL HALL

Gordon Symondson, designer, in collaboration with J. L. Martin, Architect to the London County Council



## WORKING DETAIL

FUEL STORE: HOUSE AT OTHAM

Brian Peake, architect

HEATING : 11



The fuel store, which is concealed behind the left-hand pair of doors, comprises two steel hoppers, one for coal and the other for wood. These are filled from outside the building. The hoppers pivot on hinges and can be tilted forward into the room to a convenient angle. When they are full, they are liable to be heavy so the adjustable stops have been designed to hold them in position while the fuel is being taken out.

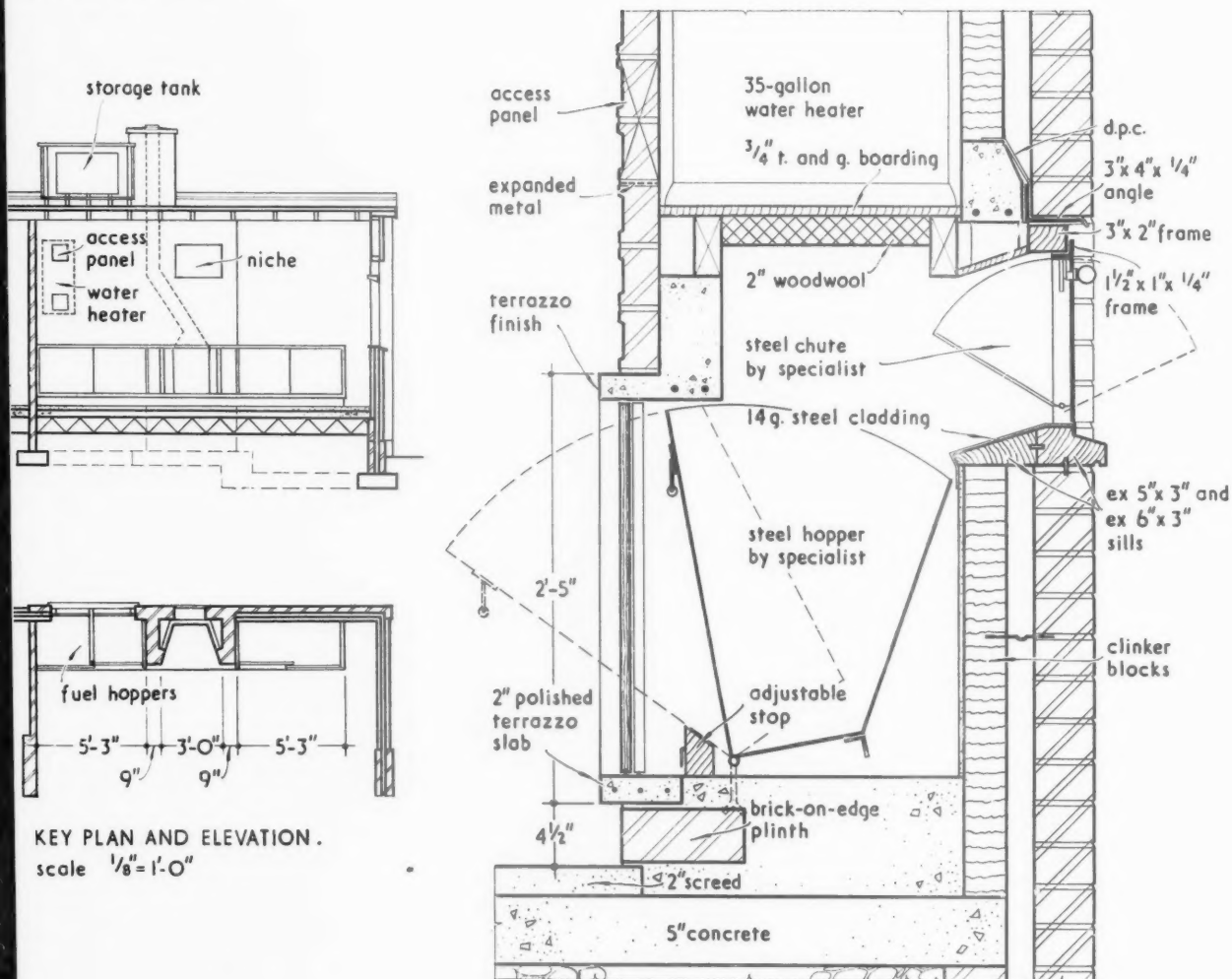


# WORKING DETAIL

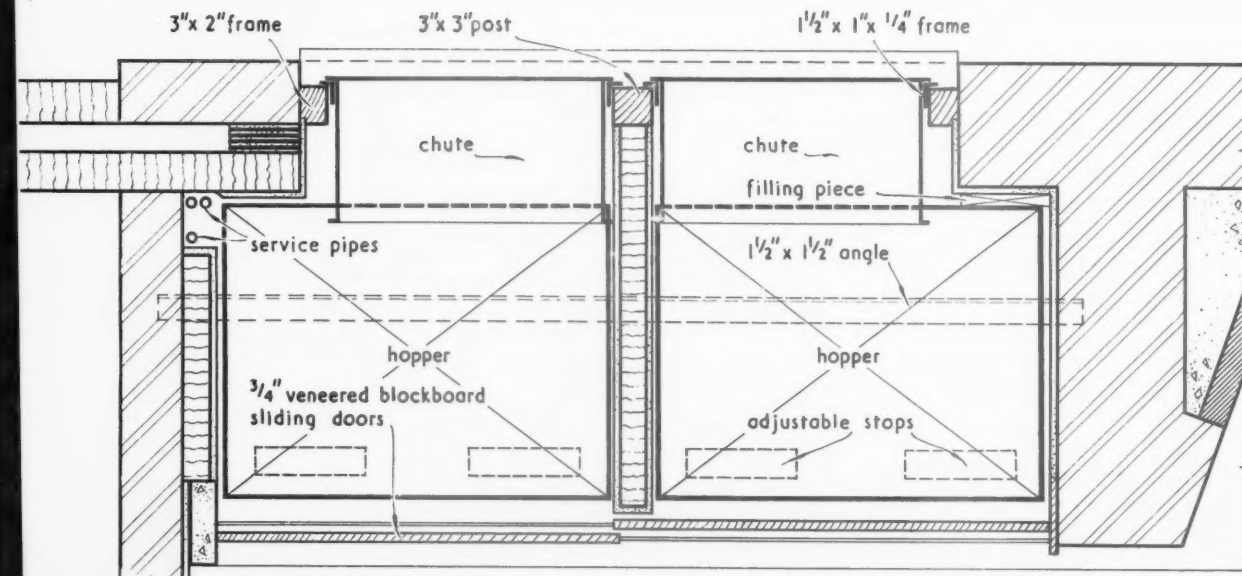
FUEL STORE: HOUSE AT OTHAM

Brian Peake, architect

HEATING : 11



SECTION THROUGH FUEL STORE.  
scale 1"=1'-0"



PLAN OF FUEL STORE. scale 1"=1'-0"



\*

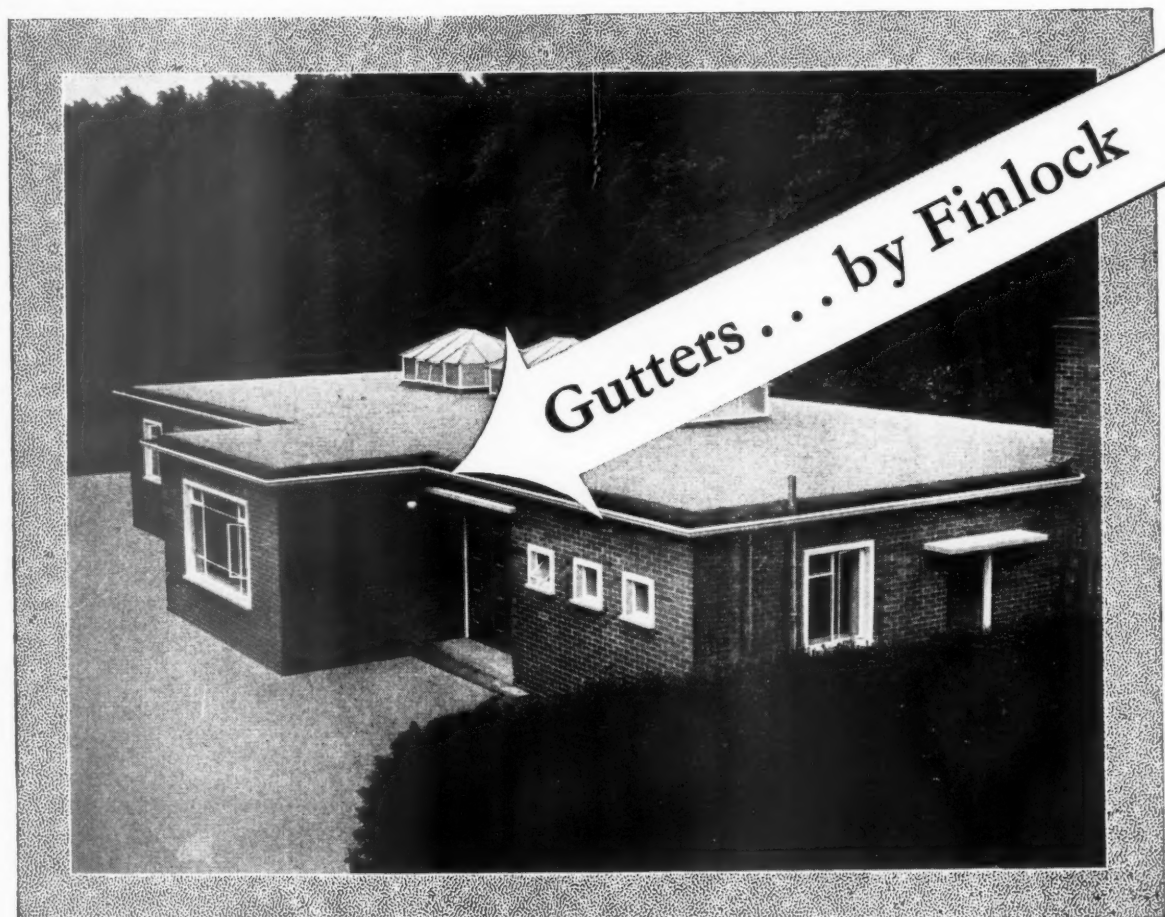
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\* *You'll see them on all the best modern buildings . . .*



*New Ante-Natal Clinic, Peterborough. Photo by permission of "The Peterborough Citizen & Advertiser" (Copyright).  
Architect : S. Dodson & Son, L.A.R.I.B.A., Peterborough. Builder : Mr. H. J. Firman, Peterborough.*

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*(J. M. Wilson, H. C. Mason & Partners, Chartered Architects)*

*after this stern Corrosion Test:*

A standard hot-dip galvanized window and sub-frame were fixed to Dover Harbour wall on 22nd September, 1950, and were not removed until 10th October, 1951. Although submerged by high tides twice daily for more than 12 months, neither window nor sub-frame showed any sign of rust.

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JOURNAL representative there was a queue of people waiting to see over it and speak to the consulting architect, W. M. Carter, and his assistant. The interior was very pleasantly furnished and decorated.

The structural system consists of prefabricated timber panels  $3\frac{1}{2}$  in. thick. They are faced externally with  $\frac{3}{8}$ -in. resin-bonded plywood, glued and nailed to vertical studs at 12-in. centres. Glass wool fibre is sent loose for fixing on the site as insulation (U factor: 0.14 approx.) and  $\frac{3}{8}$ -in. plasterboard is used for the internal face. The panels are 8 ft. high by multiples of 4 ft. in breadth. The gable walls and chimney can be of traditional material, or a factory built wall with pre-cast concrete fireplace unit and concrete tubular internal chimney can be substituted. The roof may be low pitch, with boarding and asphalt shingles, or at a 35 deg. pitch for traditional tiling.

The house is called extendible and it differs from other timber houses in this respect, largely because the walls and partitions of the bedroom of the basic plan (through which all extensions are made), are removable without affecting

the stability of the structure and are "inter-changeable" (presumably this means dimensionally co-ordinated), with the "sections required for the extension." As can be seen from the plans, the extended house, with long passages, is not the product of a really flexible system of construction in the sense that certain structural systems for school building are flexible today.

#### AN INGENIOUS CLADDING SYSTEM

For architects, the most interesting and practicable of the new exhibits was a patented aluminium roofing and wall cladding, called "Fural," and sold by S. W. Ronald & Co. (London), Ltd. Most architects having watched craftsmen on their knees laying aluminium, copper, lead or zinc sheets by means of endless rolls, drips or welts and ceaseless beating and cutting must wonder that no one has overcome the trouble of thermal movement in sheet materials except by cutting the sheet into small, interlocking pieces; an example of the advantages of machine-production being crippled by weakness in building technology. As far as aluminium is concerned, however, it would appear that

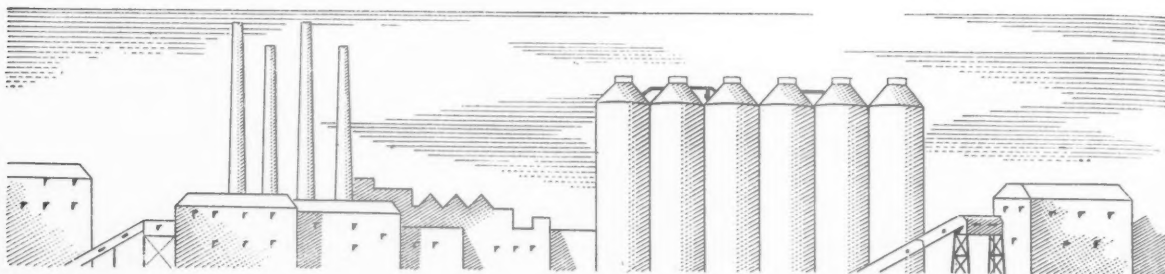
an answer has been found. Whether the same principle would apply to other sheet metals is another matter—certainly not with regard to lead, at any rate.

"Fural" sheeting, which has been developed and used extensively in Switzerland over the past two years, was invented by a Swiss architect, J. Furrer, of Altdorf, in 1949. It is made from an aluminium and manganese alloy conforming to NS3 in B.S. 1470, being rolled in strips to 22 SWG and then moulded on presses. The final strip is delivered to the site in rolls 90 ft. long and 27 in. wide. This forms a one-man load of 100 lb.

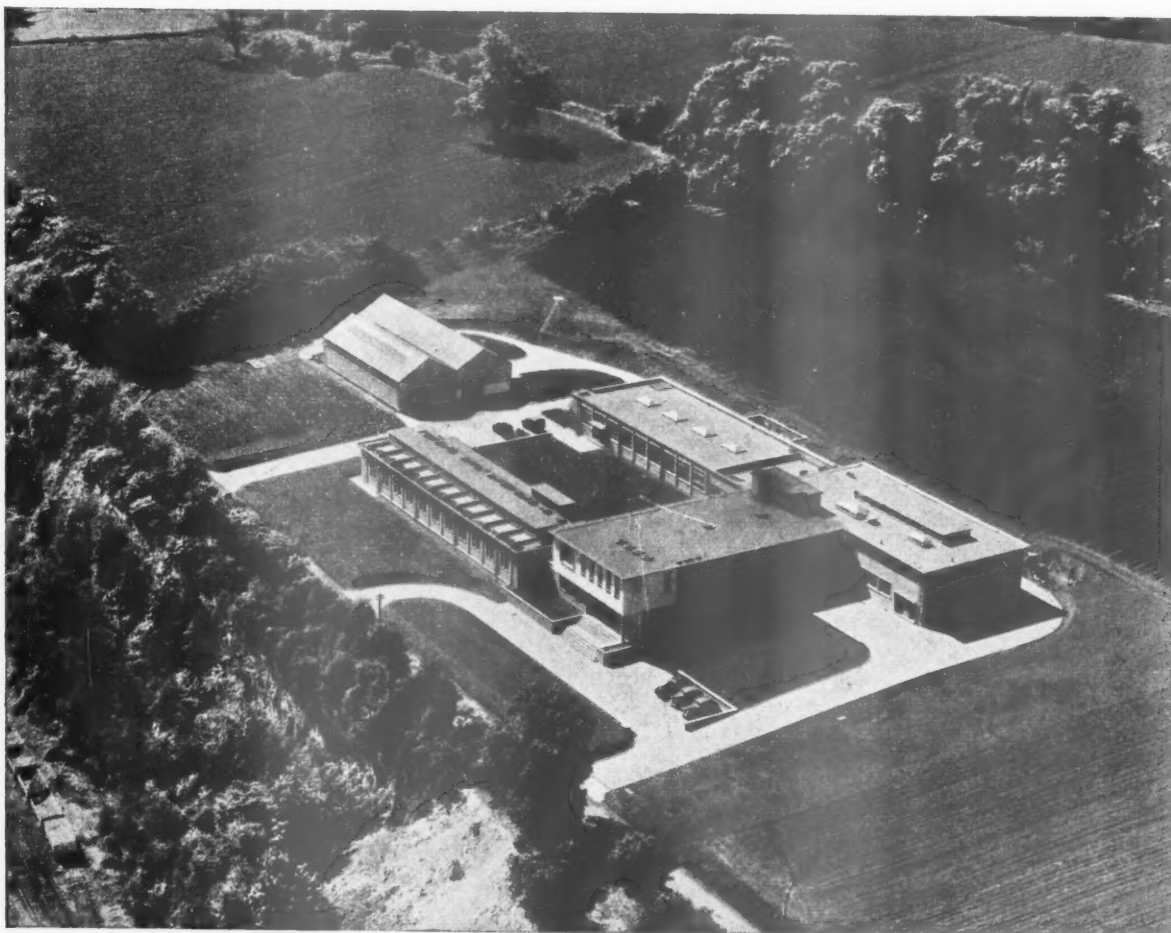
The sheet is corrugated, the ribs being at 6-in. centres and having a dovetail section. The sheet is laid in horizontal bands across the roof, the dovetail-section ribs clipping over dovetail tongues projecting from aluminium strips nailed to battens. The battens are at 2-ft. centres, and the sheet, being 27 in. wide, a 3-in. overlap is formed. The uppermost 3 in. of each rib is of slightly smaller section than the remainder in order to allow the overlapping sheet to fit snugly. In the photograph below can be seen the top sheet

A mock-up of part of a "Fural" roof which was on view at Olympia. On the right is a typical underside of a "Fural" roof. Note the very clean appearance.





## Building for the Industries of the World



### CEMENT

The new Research Laboratories of the Associated Portland Cement Manufacturers Ltd., recently constructed by Richard Costain Ltd. to the design of the Architects, Westwood, Sons & Harrison, FF.R.I.B.A.

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of a mock-up roof at Olympia about to be put into position. By bending the sheet backwards the dovetail-section ribs can be opened sufficiently to pass over the projecting dovetail tenons on the aluminium strips, seen attached to the side of the batten which rests on ordinary rafters. On the extreme left in the photograph can just be seen the ridge-piece. This—which need not have the welt shown at the top—has a castellated edge and is held in place over the ribbed sheet by an aluminium strip of heavier gauge which clips down over the ribs of the top sheet and grips the projecting tongues of the ridge piece at the same time.

The main trouble of all sheet materials in large sizes is, of course, thermal movement. How is this dealt with in this case? Firstly, movement throughout the length of the sheet is taken up between the ribs. The restraining strips are sufficiently concave between the dovetail tenons to allow the metal sheet to rise up when it is cooled, and therefore to shorten, or fall down when the sheet is warmed and therefore to lengthen. Movement of the strip itself is allowed by it having horizontal slots, instead of round holes, for nailing to the battens. Movement across the breadth of the sheet is allowed by the fact that each sheet can slide upon the sheet below it.

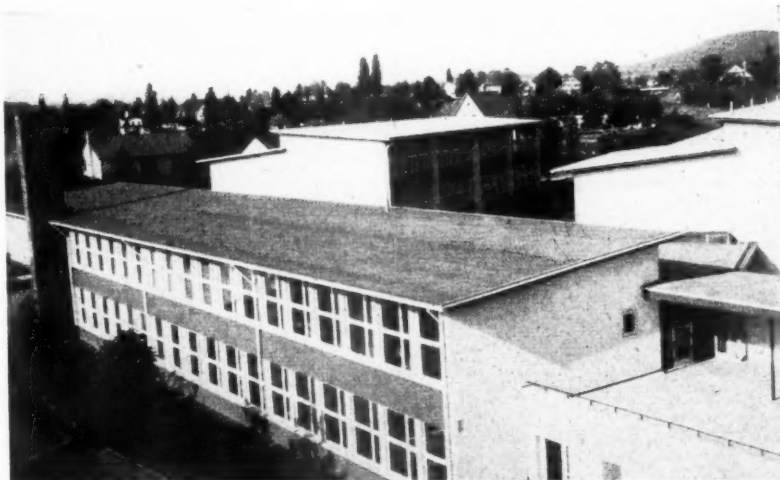
Valleys, hips and the flashing of gable and parapet walls, and chimneys follows more or less normal methods. To get the maximum benefit out of the system, however, it is obvious that the above intricacies should be avoided. The fixing of guttering is normal.

#### THE ADVANTAGES

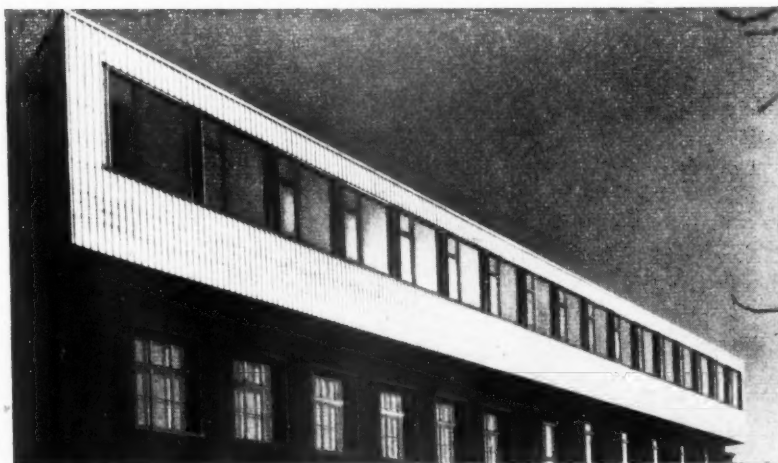
What are the advantages? With true Swiss thoroughness J. Furrer has listed them. The 3-in. overlap of the sheets is completely clear of the supporting structure, thus minimising the risk of water seepage by capillary attraction. There are no nail or bolt holes anywhere in the sheets. The fixing strips are held by nails at right angles to any sucking or compressive wind load. The sheet will carry a uniformly distributed load of 250 lb. per square foot. By reason of its light weight, rafters and roof members can be proportionately lighter and therefore walls or columns can be weaker. It is simple to lay and needs no special tools. Being in continuous lengths "cutting to waste" is reduced. It is so fixed that it need have no contact with any other metal which may cause electrolytic action. It is fully "recoverable" and can be quickly stripped and relaid. The sheet can be laid vertically as wall-cladding. Being aluminium it is resistant to corrosion, has good thermal insulation value, the bright reflecting surface having low heat absorption and high radiation. Condensation can be prevented by ventilation under the sheeting. Being much



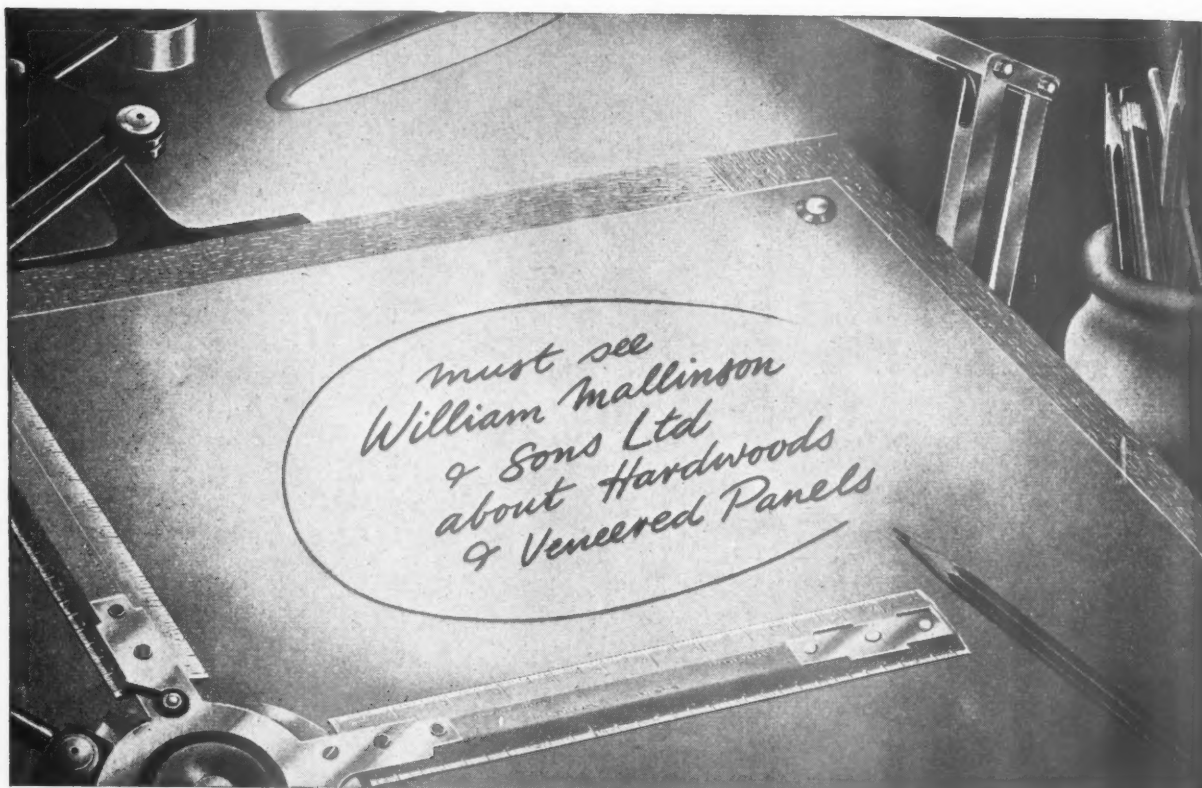
Above, workmen laying a "Fural" roof at Salzburg. Rubber-soled shoes are recommended. The sheets are unrolled and temporarily clipped into position, leaving enough play for the roofer to bend back the sheet in order to open up the ribs as he works along.



Above, a school at Riehen, Basle, showing the sheeting used at a low pitch. The roofs fully exploit the virtues of the laying technique, having few interruptions in the form of chimneys and vents to interrupt the continuity of the sheets. Below, sheeting used vertically on a factory at Schönenwerd.







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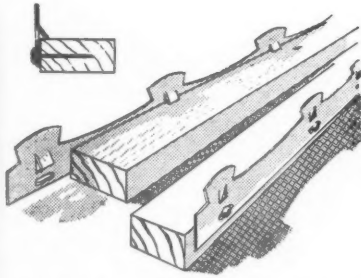
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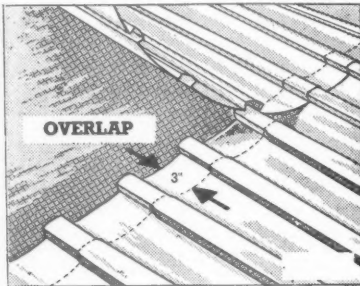


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"Fural" roofing; the restraining strips on battens.



A sheet being laid, showing the narrowing of the ribs on the edge of the sheets to allow for the overlap.

lighter than tiles and only one-seventh the weight of corrugated asbestos, it permits the lightest of sub-structure and wide spans. The only boarding necessary is that required for insulation. It costs approximately £1 per sq. yd. and can be delivered from early next year.

It has one obvious disadvantage, and to English eyes perhaps quite a large one. It cannot be laid flat. The minimum pitch is 6 deg. Le Corbusier has used it, see below, with the ribs running horizontally as wall cladding, for his own house at Vevey in Switzerland. How this seemingly illogical method is waterproofed was not known to the technicians at Olympia. Once a method has been found of laying it flat and keeping it waterproof—the tyranny, or discipline (take your choice) imposed by the pitched roof will have been overcome and nothing, it would appear, save perhaps cost and building industry conservatism, should prevent it, or something on the same or similar principle becoming a "universal" roof.



#### PLASTIC WALLS

**Holoplast Ltd.** showed many of the different uses of their plastic panel, including their recent refinements for internal movable partitions. For limited heights the aluminium extrusion or timber stiffening members between panels can now be omitted and, by means of a special channel formed in the panel during manufacture (see 2, in the illustration below), a simple tongue and groove joint is made. The junction line is emphasised by a V joint.

Panels are also formed of the normal 4 ft. width in which two of the longitudinal channels in the hollow panel have walls of double thickness. A door can be formed in the centre of the panel by cutting through the thickened walls with a saw, and covering the exposed side of the opened-up channel with an aluminium extrusion (see 4). Also shown in the illustration are a joint between solid and glazed panels and starting and corner details.

#### PLASTER PANELS

Most readers are familiar with the gypsum plaster honeycomb panels produced by **Bellrock Gypsum Industries Ltd.**

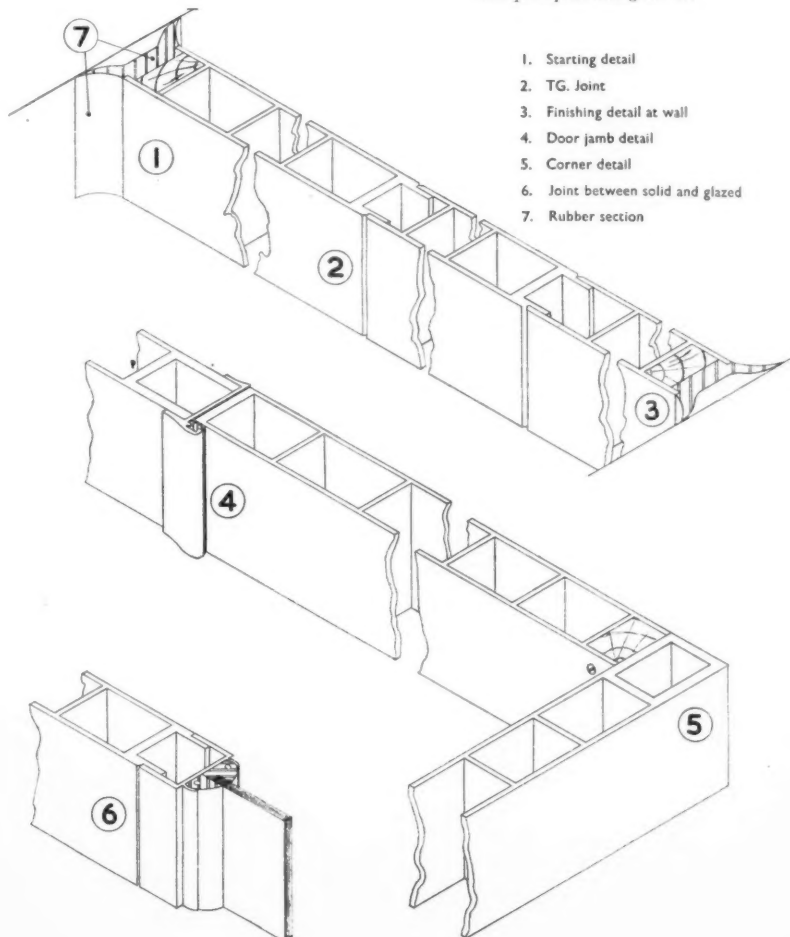
The firm is now making semi-automatic presses for leasing to building contractors who wish to make their own panels. The original hessian reinforcement has been abandoned and nylon fibre is used instead. This, in combination with the new press, has reduced costs and the plaster panels are now as cheap as brickwork and much quicker to erect.

A further refinement is now being introduced, the U value of a 4-in. panel is 0.37. If the honeycombs are filled with foamed plaster the U value is 0.15—a figure quite suitable for an outside wall. The firm is, therefore, producing a panel in which one side of the panel is formed of gypsum plaster combined with a bituminous compound to make an external skin impervious to moisture. The joints between the panels are also formed of the bitumen impregnated plaster. The dark brown colour of the resulting panel is not very attractive, but it can be painted, or preferably, rendered.

#### TILE-BLOCK FLOORS

Architects have occasionally expressed fears about putting a wood block—or indeed any form of wood flooring—over sub-floor heating. To sooth these

Holoplast partitioning details.



1. Starting detail
2. T.G. joint
3. Finishing detail at wall
4. Door jamb detail
5. Corner detail
6. Joint between solid and glazed
7. Rubber section



## PUDLO GUARDS AGAINST RISING DAMPNESS AFTER THE WORST FLOODS FOR YEARS

In January last, the defence wall holding back the tidal waters of the River Great Ouse was breached by the high tides.

As a result of this disaster the site of the Fropax Canning Factory at West Lynn was flooded to a depth of approximately six feet and the water remained over the site for many weeks before it was pumped back over the sea wall.

The architect decided to guard against any rising dampness in the new floor of the factory by incorporating 'PUDLO' Brand Waterproofing Powder in the 1 inch topping of waterproofed cement applied to the ordinary under-concrete. The topping was composed of:—

1 3/4 parts 1/4" granite chips,	1 part Portland Cement.
3/4 parts coarse, washed sand.	5 lbs. 'PUDLO' Brand Powder to each 100 lbs. cement.

*Architect:* C. J. Downing Esq., Engineers Dept. Fropax (Ware), London, E.C.1

*Builders:* Warren Bros, Clenchwarton, King's Lynn.

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fears Aero Research, Ltd., has produced a resin-bonded, sand-based tile with a  $\frac{1}{8}$ -in. hardwood (sapele) surface. This base is stable, inert and virtually impermeable. The tiles do not support combustion. They are 9 in. by 9 in. by  $\frac{7}{8}$  in. thick. The wood veneer should be kept waxed and polished, when it looks very attractive. Despite the wood facing, this flooring should be treated largely as a tile floor with regard to laying. The tiles can be set direct into a bedding layer over the site concrete (which should be hacked to provide a good key). A damp-proof course should not be necessary on a dry soil, but as the joints between the tiles are vulnerable, a DPC is essential with wet soils. The tiles can be cut easily, provided the veneer is first sawn.

#### CONCRETE FLOORS AND ROOFS

Readers will be familiar with "Myko" precast concrete floors and roofs. Two developments were shown at the exhibition. One was the use of prestressing to increase the span of the beams, from the normal 17 ft. up to 30 ft. The original nailable foamed slag casing is omitted and two wooden fillets are cast into the bottom of the beam instead. This allows ceiling boards to be fixed in the usual way. Services, unless running in line with the beams, have to be put in the floor screed which covers the foamed slag filler slabs.

The second development is the use of a wire reinforcement and expanded metal cage, to go between the usual precast beams at 2-ft. centres. This cage carries the floor screed and allows the underside of the floor slab to be plastered as a normal ceiling.

#### PRESTRESSED CONCRETE

The Prestressed Concrete Development Group exhibited the well-tried Freyssinet, Magnel, and Lee McCall methods of post-tensioning. Work carried out by these methods represents the major part of all post-tensioned work in this country. McCall's exhibited a typical beam end block showing their latest pattern of end plate, which is cast into the beam concrete and has a special grouting flange which fits into

the bar sheathing. In the final grouting operation, the grout can be injected through a hole in the end plate—a more satisfactory system than the previous method of using a sloping grouting tube passing from the beam face to the bar sheath. With this detail, of course, it is necessary to use a sheath to provide the bar duct.

The Gifford-Udall jack, recently introduced on to the market, was also displayed. Unlike previous systems, with the Gifford-Udall System only one wire is tensioned at each operation, but the jack weighs only 60 lb., and is very easy to handle. Anchorage is by means of "Calurit" wedge grips which are already established in long-line processes. The Udall beam system, consisting of a prestressed trough into which *in-situ* concrete is poured to form a composite beam section, was also on show.

Various forms of "Hoyer" type beams and slab units were displayed by Concrete Ltd., The Concrete Development Co., Millbank Floors, Shockcrete Floors, Pierhead and Stent. Attention was drawn by Millbank Floors to the use of prestressed concrete panels in walls of bins or in cavity walls where the prestress contributes to the weathering value of the concrete.

The model of the B.E.A. maintenance base structure by Holland and Hannen & Cubbitts will be well known to those who have visited previous exhibitions, but it remains, nevertheless, one of the very few real proofs of the economy of prestressed concrete. It will be remembered that this structure consists of a judicious use of reinforced concrete, post-tensioned and pre-tensioned units, and was successful in an open competition with nine other designs. There is also at London Airport a new staff catering block which provides one of the first examples of a fully rigid frame using the Lee McCall system. This building is composed almost entirely of precast reinforced concrete columns and prestressed beams "pinned" together, and the 48-ft. span rigid frame provides stability to the main structure. (This building will be described and illustrated in a forthcoming issue of the JOURNAL.)

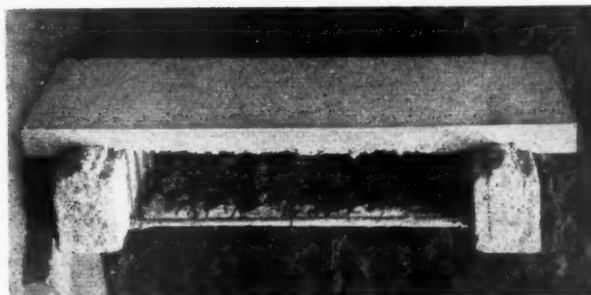
Trussed Concrete exhibited a model of the Liverpool University Medical School—a multi-storey building constructed with *in-situ* columns and prestressed beams of 37-ft. clear span, and "Truscon" precast floors.

Concrete Ltd. exhibited a  $\frac{1}{4}$ -scale model of a two-storey framed building of 30-ft. by 12-ft. bays, built up almost entirely from precast units. The difficult problem with prefabricated buildings of this type is to provide a beam-to-column connection which will be acceptable to the architect. In this building a small bracket is provided within the depth of the beam, and this is heavily reinforced by steel plates passing into the column. The "Bison" units which are used to span the 12 ft. are tapered down at the bearings to allow a Tee to be formed over the prestressed precast beam, giving a composite section.

#### PARTITIONS

Compactum Ltd. showed several varieties of sheet materials as partition panels inside their aluminium and hard wood framing. The aluminium columns are for partitions of up to 16 ft. height. Panels are joined horizontally by H-section strip. The box columns grip the panel infilling by projecting ribs and are themselves composed of two interlocking channels screwed together by self-tapping screws. These channels, when unscrewed, can collapse together (only one is fixed rigidly to floor and ceiling) and a single panel removed without affecting the remainder of the wall. The column, measuring 4 in.  $\times$  1 $\frac{1}{2}$  in., unfortunately projects appreciably from both sides of the panel. For lower heights a round aluminium column is provided, to which H-section aluminium strip can be screwed to take panels from practically any angle. A cheaper alternative is hard-wood columns with vertical grooves into which the panels fit.

*Left, "Myko" prestressed beams; right, normal "Myko" beams with wire cage allowing prestressed ceilings. These two developments are referred to under the heading, "Concrete Floors and Roofs" on this page.*



Readers requiring up-to-date information on building products and services may complete and post this form to the Architects' Journal 9, 11 and 13, Queen Anne's Gate, S.W.1

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3.12.53

## Announcements

Raglan Squire and Partners have been appointed architects for the new university buildings at Rangoon. Mr. Squire and R. Pitcher flew to Rangoon last week to make a preliminary assessment, also visiting Singapore, Kuching, Bombay and Delhi.

Charles J. Bowra, until recently chief quantity surveyor of the National Coal Board, Production Department, has now left the Coal Board and commenced private practice at 7, Victoria Street, S.W.1, where he will be pleased to receive trade lists and catalogues. (Tele.: ABBey 5426.)

James Cubitt and Partners and Leonard Manasseh and Partners are entering into partnership in Singapore and will practice there under the style of James Cubitt, Leonard Manasseh and Partners. The two firms will continue to practice in London.

Crompton Parkinson, Ltd., announce that as from December 7 their London Plant Branch Office will operate from 1-3 Brixton Road, S.W.9. (Tel.: RELiance 7676.) Other departments will remain at Crompton House, Aldwych, W.C.2. (Tel.: CHAncery 3333.)

We have been asked to bring to readers' attention the fact that the Ductube Company, Ltd. is now the sole overseas concessionaire of the Gifford-Udall C.C.L. Prestressing Jack and Anchorage system (described in the JOURNAL for Oct. 22, 1953, p. 521), and that Cable Covers, Ltd., are solely responsible for the sale of the system and equipment in the British Isles.

The LMBA is co-operating with the British Productivity Council in the setting up of

local committees throughout the London Region. It has now nominated the following members to represent it on these committees: N. S. Farrow, central London; F. Luker, east London; W. K. Laing, west London; D. C. C. Roberts, north London; D. E. Woodbine Parish, south London; W. G. Soole, Kingston; G. H. Noyes, Croydon; K. J. Pearce, north-west Kent.

By the re-opening of Steeplehouse Quarry, near Matlock, Derbyshire, closed 12 years ago, the well-known Birdseye Grey and Fossil Marbles are again available. The Hopton-Wood Stone Firms, Limited, announce that they already have adequate stocks for substantial contracts. These marbles were extensively used before the 1939-45 war, notably at the Geological Museum, London, the Civic Building in Leeds, and the Welsh Board of Health Building in Cardiff. They are very durable, and can be given a high polish. Birdseye Black Marble, from the same quarry, is also available, and stocks are building up. This marble was commonly used in conjunction with, and as a contrast to, Hopton-Wood Marble: the Bank of England and Liverpool Cathedral are among the numerous buildings where it has been thus used.

The small photograph of the fireplace in the house at Otham, Kent, illustrated as a Working Detail this week is by courtesy of the *Architect and Building News*.

## Correction

The second prize-winning design in the New Zealand Government's low cost housing competition, illustrated on page 282 of the JOURNAL for September 3, was in fact the third prizewinning design by Greenhough, Smith and Newman, of Auckland.

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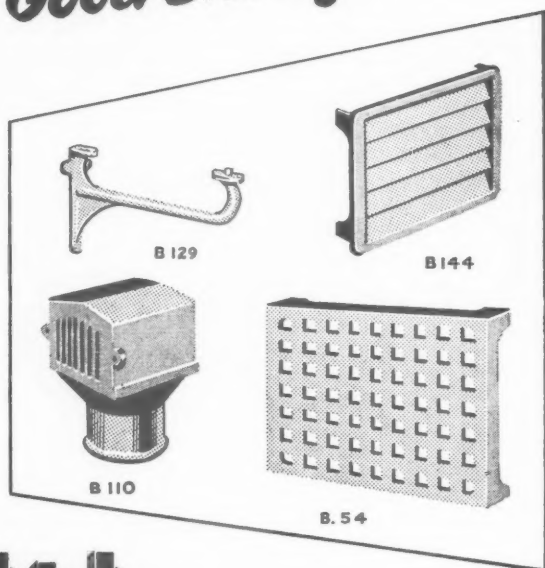


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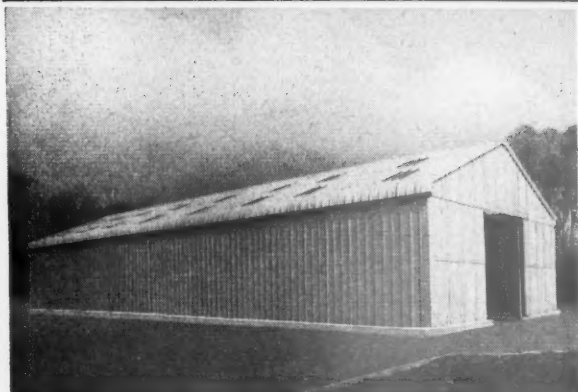
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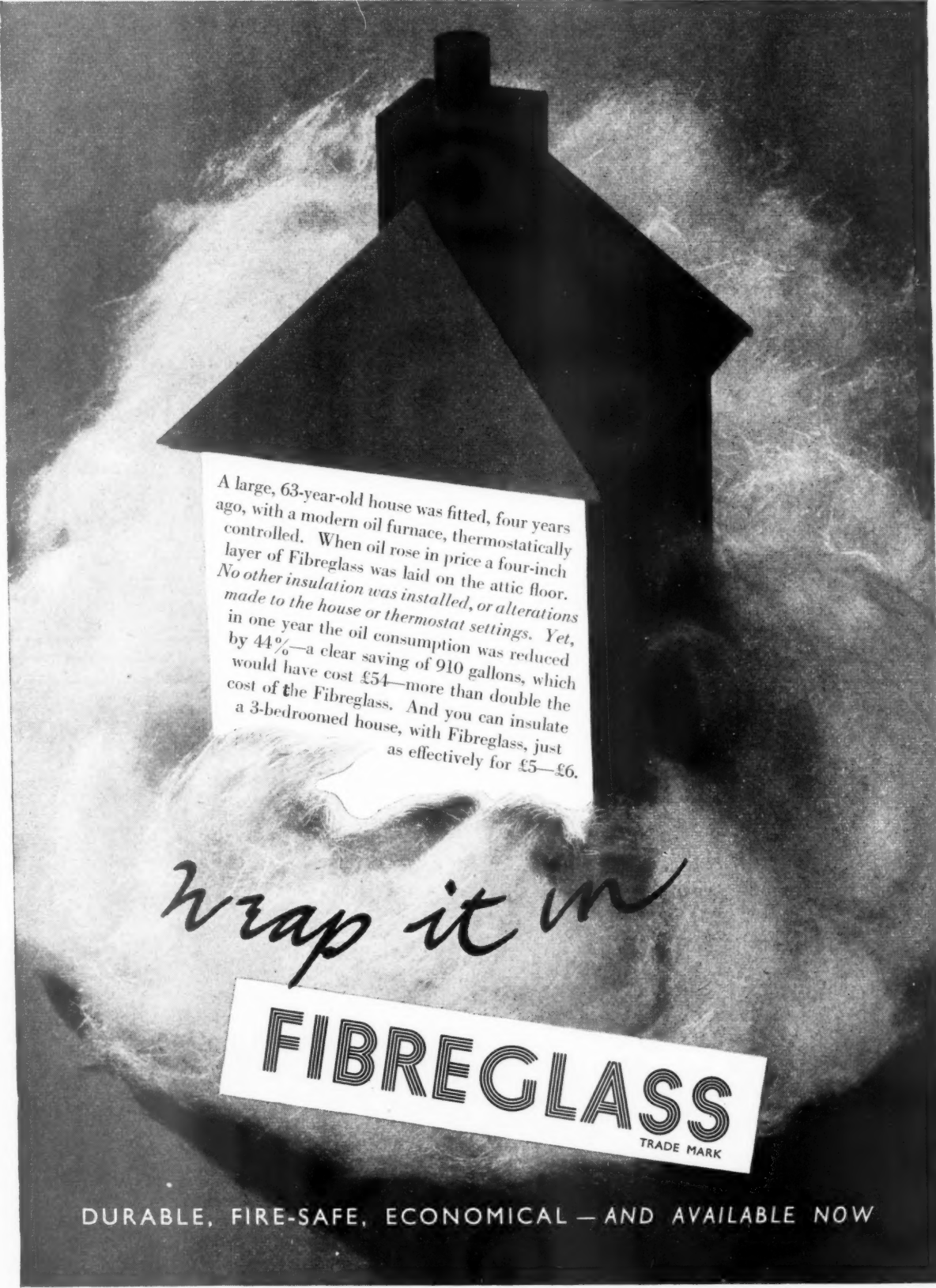
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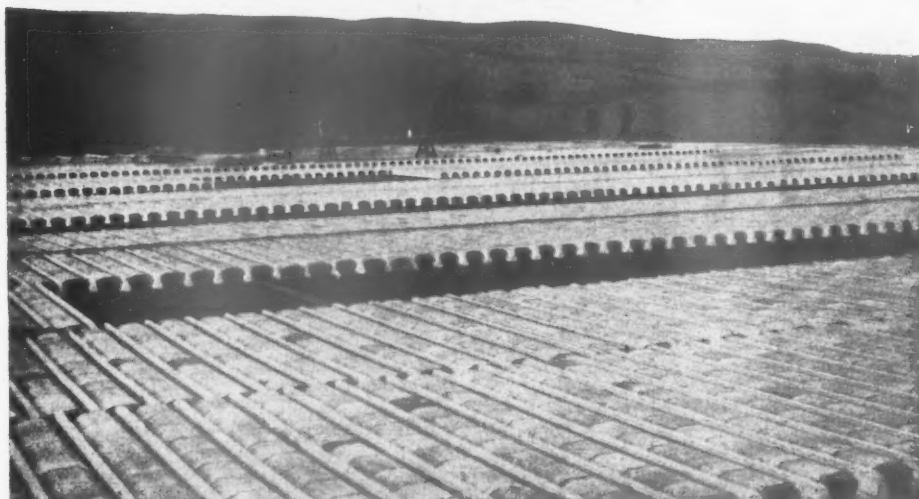
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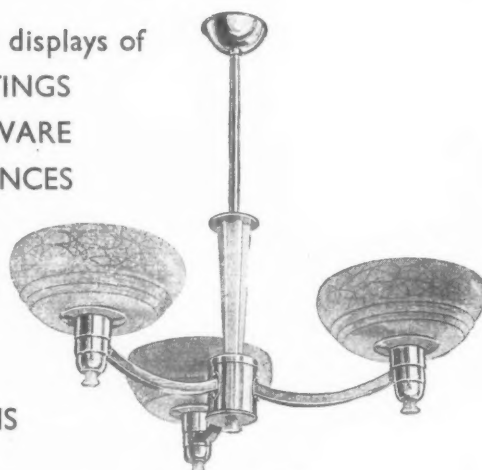
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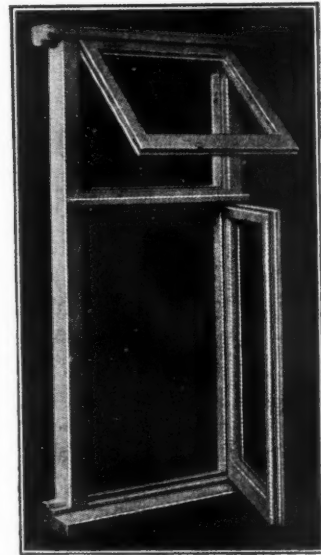
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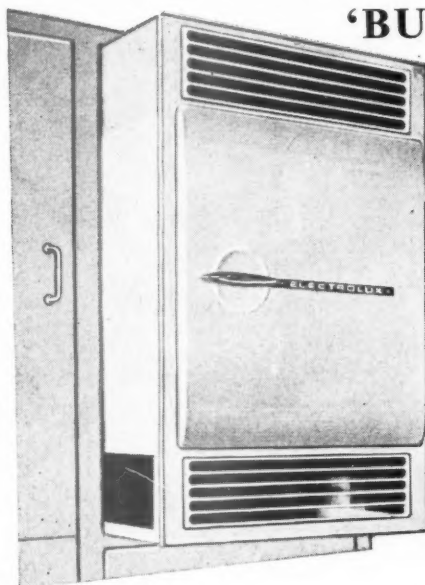
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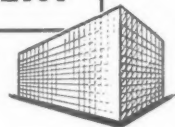
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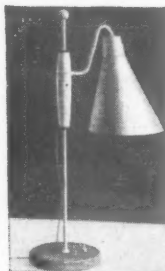
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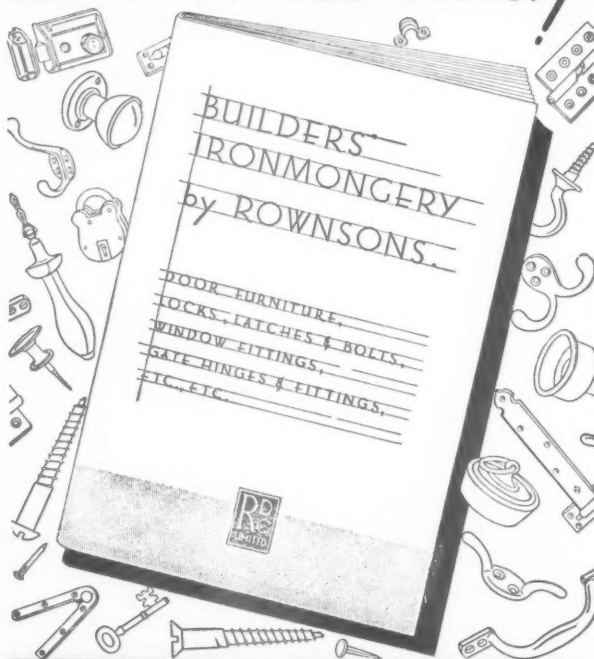
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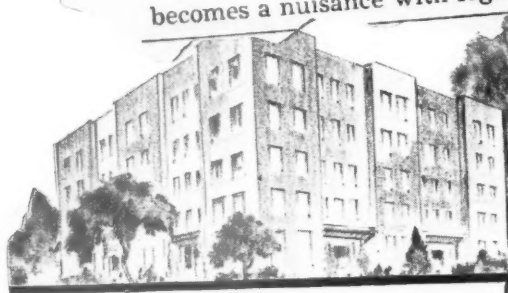
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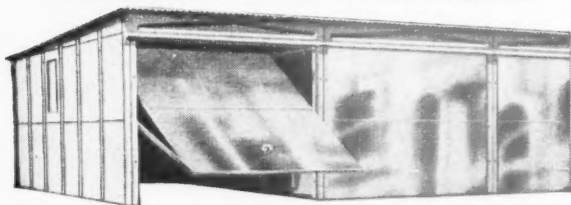
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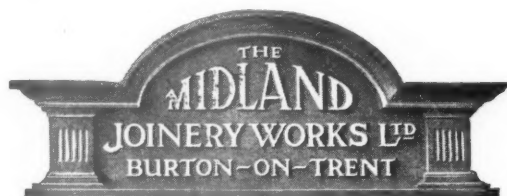


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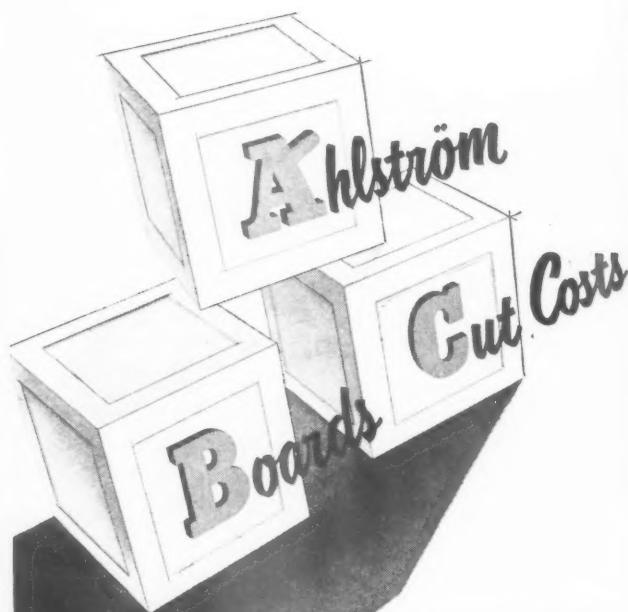
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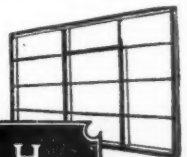


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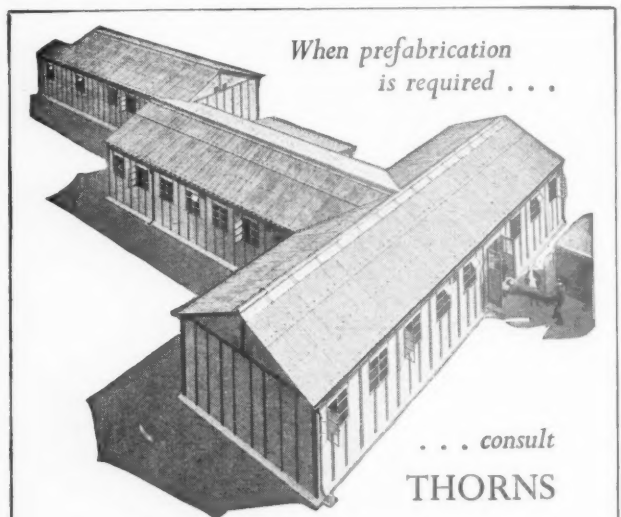
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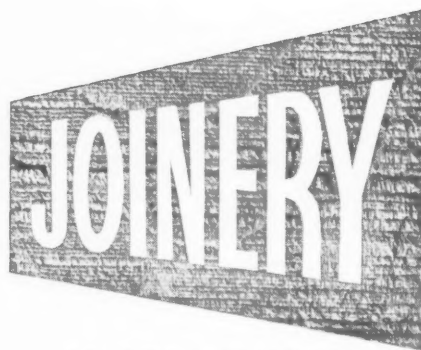
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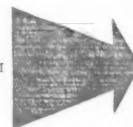
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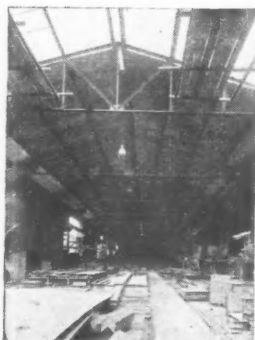
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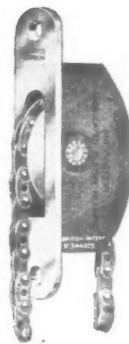
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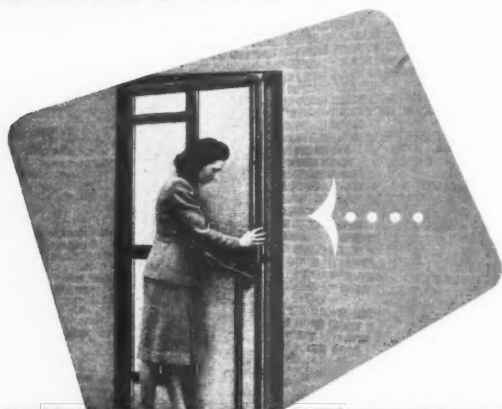


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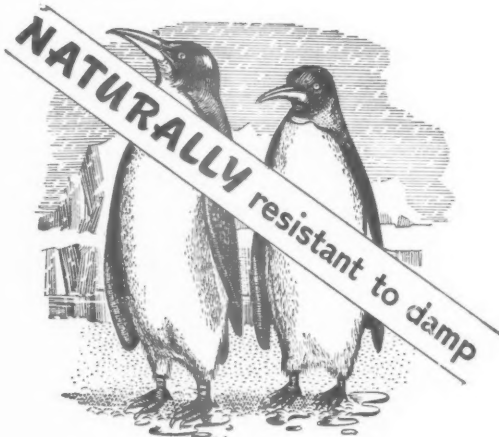
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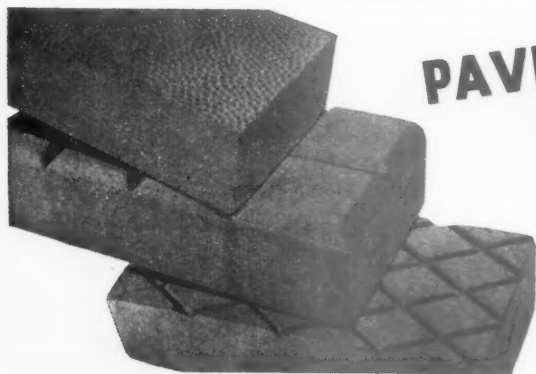
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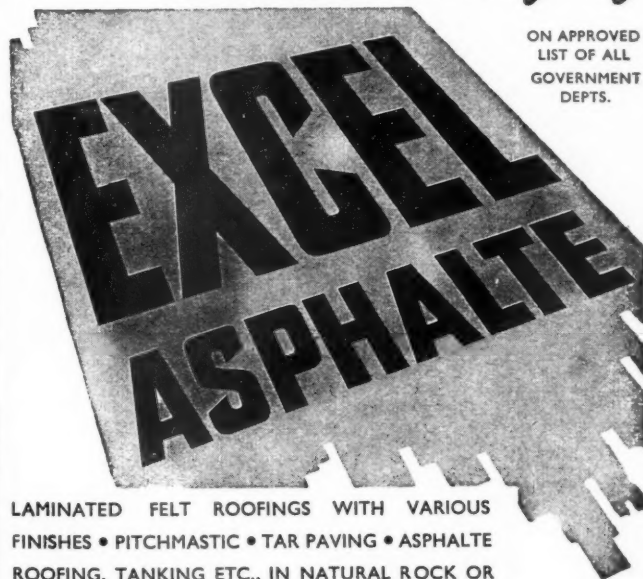
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## CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

## Public and Official Announcements

25s. per inch; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

## COUNTY BOROUGH OF SOUTHPORT.

Applications are invited for a CHIEF OFFICER, with engineering, surveying and architectural experience, to control the Engineering, Surveying, Architectural and Town Planning Department of the Corporation, at a salary within the range of £1,400 to £1,650 per annum, according to qualifications and experience, with five increments of £50.

Applicants must have had similar administrative experience, and be capable of organising the Department and its functions, for which the officer selected will be wholly responsible, and will include the whole of the Council's engineering, surveying and architectural work and planning under the Town and Country Planning Acts. Applicants must have excellent ability and good experience.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, and the officer selected will be required to pass a medical examination.

Applications, stating age, qualifications, present and past appointments and details of experience, together with the names and addresses of three persons to whom reference may be made, must be forwarded to the undersigned at the Town Hall, Southport, endorsed "Chief Officer, Engineering and Architectural," not later than the 15th December next.

R. EDGAR PERRINS,

Town Clerk. 1014

## URBAN DISTRICT COUNCIL OF EAST BARNET.

The above Council invites applications for the undermentioned appointments:—

- (i) ASSISTANT ARCHITECT (Permanent Staff), A.P.T., Grade IV (£556×£15—£600), plus London weighting.
- (ii) CLERK OF WORKS—BUILDINGS (Temporary Staff), at an inclusive salary of £10 10s. a week.

Application Forms and Conditions of Appointments may be obtained from the Engineer and Surveyor, Town Hall, Station Road, New Barnet, to whom completed application forms should be delivered by 14th December, 1953. 1041

## COUNTY BOROUGH OF SOUTHEND-ON-SEA. BOROUGH ARCHITECTS' DEPARTMENT—

## APPOINTMENTS.

Applications are invited for the following appointments on the established staff:

- (a) SENIOR ASSISTANT QUANTITY SURVEYOR (A.P.T. Division, Grade VII) (£710—£785).
- (b) ASSISTANT ARCHITECT (A.P.T. Division, Grade VI) (£595—£645).

Preference will be given to applicants who hold R.I.C.S. and R.I.B.A. qualifications respectively. The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937 and the J.I.C. Scheme of Conditions of Service.

The successful candidates will be required to pass a medical examination. Applications stating age, qualifications and experience with the names of two persons to whom reference can be made to be submitted to the Borough Architect, 30, Alexandra Street, Southend-on-Sea, by Monday, 14th December, 1953.

ARCHIBALD GLEN,

Town Clerk. 1052

## CITY OF SHEFFIELD.

## CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT ARCHITECT (Group Leader), Grade A.P.T., X (salary: £895-£1,025 per annum), on the staff of the City Architect (Mr. J. L. Womersley, A.R.I.B.A., A.M.T.P.I.).

The person appointed, who should be a member of the R.I.B.A., will be in charge of the group preparing layout plans, design of dwelling types, and supervision of contracts for development in new areas.

The post is superannuable and subject to medical examination.

Applications, stating age, education and training, qualifications, present and past appointments (with dates and salaries), experience, and the names and addresses of two referees, should reach me by Monday, the 14th December, 1953.

JOHN HEYS,

Town Clerk. 1114

Town Hall, Sheffield, 1.

## BOROUGH OF ERITH.

Applications are invited for the following appointments:—(a) ENGINEERING ASSISTANT Grade A.P.T. II, £525—£570, plus London weighting. (b) ARCHITECTURAL ASSISTANT Grade A.P.T. II, £495—£540, plus London weighting.

Applicants must possess the professional qualifications required by the respective scales.

The appointments will be subject to the National Conditions of Service, to the Council's Regulations governing staff, to one month's notice in writing, to the Local Government Superannuation Acts, and to passing a medical examination.

Applications must be on the form to be obtained, together with a list of duties, from the Borough Engineer & Surveyor, Town Hall, Erith, Kent, and to be delivered to him not later than Monday, 14th December, 1953.

Canvassing, either directly or indirectly, will disqualify.

J. A. CROMPTON,

Town Clerk. 1048

Town Hall, Erith, Kent.

## CITY OF STOKE-ON-TRENT.

## CITY ARCHITECT'S DEPARTMENT.

Applications are invited from suitably qualified persons for the following appointment:—

ASSISTANT QUANTITY SURVEYOR: Salary A.P.T. Division, Grade VIII, £760—£835. Note: Suitable housing accommodation may be made available to the successful candidate.

The selected applicant will be required to pass a medical examination and the appointment will be subject to the Provisions of the Local Government Superannuation Acts, 1937 and 1963.

Applications, stating date of birth, particulars of training, experience, etc., with copies of two recent testimonials, should be received by J. B. Pigott, F.R.I.B.A., City Architect, Kingsway, Stoke-on-Trent, Staffs., endorsed with the title of the appointment, not later than Monday, 14th December, 1953.

HARRY TAYLOR,

Town Clerk. 1050

Town Hall,

Stoke-on-Trent.

17th November, 1953.

## COUNTY BOROUGH OF EAST HAM.

## HOUSING DEPARTMENT.

SENIOR ARCHITECTURAL ASSISTANT, A.P.T., VI (salary: £670-£735, plus London weighting).

Applicants should preferably be Associate R.I.B.A. and have had experience in housing work of a local authority. Further details and form of application (returnable by 12th December, 1953) obtainable from the Town Clerk, Town Hall, East Ham, E.6. 1059

## COUNTY BOROUGH OF IPSWICH.

## APPOINTMENT OF BUILDING WORKS

## SUPERINTENDENT.

Applications are invited for the appointment of Building Works Superintendent in the Borough Engineer and Surveyor's Department. Applicants must have passed the Final Examination of the Incorporated Clerks of Works' Association, the Higher National Certificate in Building, or an equivalent technical qualification.

The appointment involves the supervision and control of Building Trades employees engaged on construction work (including new buildings and housing schemes), maintenance of Corporation properties, etc., and it is essential that applicants should have a thorough knowledge of the building trade in all these branches.

The salary will be in accordance with Grades A.P.T., Va. and A.P.T., VI, i.e., within the salary range of £625 to £735. The commencing salary to be paid to the successful candidate will be dependent upon qualifications and experience.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1953, and to the passing of a medical examination.

There is no form of application, but candidates must state age, qualifications, experience, and any other relevant details. Testimonials are not required, but the names of three persons to whom reference may be made must be supplied. Applications must be received by the Borough Engineer and Surveyor, 19, Tower Street, Ipswich, not later than the 21st December, 1953.

Canvassing will disqualify. If the applicant is to his knowledge related to any member or senior officer of the Council he must disclose that fact in writing at the time of application.

J. C. NELSON,

Town Clerk. 1120

Town Hall, Ipswich.

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Permission to engage in private practice is normally granted to members of the College staff. Particulars of appointment and application forms, to be returned within fourteen days of the date of this issue, will be supplied by the Chief Education Officer, Guildhall, Kingston-upon-Hull, on receipt of stamped, addressed, foolscap envelope. 1087

## HARLOW DEVELOPMENT CORPORATION.

Applications are invited for the following posts:—

ASSISTANT ARCHITECTS (3) Salary: £625×£25—£725 per annum. Experienced in large scale housing and Municipal building projects, A.R.I.B.A. or equivalent. One permanent and two temporary appointments.

TEMPORARY JUNIOR ASSISTANT ARCHITECTS (2). Salary: £525×£25—£625 per annum. Experienced in preparation of working drawings for above projects. Intermediate R.I.B.A. or equivalent.

Housing. Permanent appointment Superannuable.

Applications, stating post applied for, together with full details and names of two referees, to reach the General Manager, Terlings, Gilston, Harlow, Essex, by 14th December, 1953. 1103

## LONDON COUNTY COUNCIL.

ARCHITECTS AND SURVEYORS, Grade III (£685-£862 10s.), required for building regulation work under London Building Acts and Bylaws, A.R.I.B.A. or A.R.I.C.S. essential. Particulars and application form (to be returned by 8th January, 1954), from Architect (AR/EK/BR/3), County Hall, S.E.1. (1309) 1102

## NATIONAL COAL BOARD—WEST MIDLANDS DIVISION.

Applications are invited for the position of CLERK OF WORKS, Grade II, in the Warwickshire Area of the West Midlands Division. Applicants should be fully conversant with W.D. Schedules of prices and able to prepare specifications of all building trades, including experience in maintenance of traditional and non-traditional houses, is necessary. Successful applicant will be expected to provide his own transport for the purpose of his duties.

Applications should be addressed to the Area Establishment Officer, Lindley Lodge, Watling Street, Highnam-on-Bell, Nuneaton, Warwickshire, by 7th December, 1953. 1105

## BRITISH ELECTRICITY AUTHORITY.

## EAST MIDLANDS DIVISION.

Applications are invited for the following positions within the Division.

## CIVIL ENGINEERING DRAUGHTSMEN.

Construction Department. (Vacancy No. 22/53.) Candidates should have experience in design and detail of reinforced concrete structures, piled and slab foundations for heavy plant, culverts, construction drainage, and sanitation schemes, associated with office and administrative buildings.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

## ENGINEERING DRAUGHTSMEN (MECHANICAL). Construction Department. (Vacancy No. 44/53.)

Senior Draughtsmen are required in the Mechanical Section of the Construction Department at North Wilford Power Station. Candidates should have experience in one or more of the following:—

- (i) Design and layout of Power Station equipment, including turbo-alternators, boiler plant, coal and ash plant, and general station auxiliaries.
- (ii) H.P. and L.P. steam and feed pipework. Condensing plant and feed heating systems.
- (iii) Conveyor plant, coal handling systems and material handling of station auxiliary equipment.

Salary and conditions of service will be in accordance with the National Joint Board Agreement Grade 5 (£567-£671 per annum) and Grade 6 (£433-£567 per annum) of Schedule D according to experience.

## ENGINEERING DRAUGHTSMEN (ELECTRICAL). Construction Department. (Vacancy No. 61/53.)

Candidates should have experience in the preparation of layouts and diagrams for the installation of E.H.T. and L.T. Switchgear, transformers, E.H.T. and L.T. cables; knowledge of protective gear systems would be an advantage.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

The above positions will be pensionable within the provisions of the British Electricity Authority and Area Boards Superannuation Scheme.

Applications should be submitted on the official form which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned to the undersigned by the dates stated. Please quote Vacancy Number.

L. F. JEFFREY,

Divisional Controller. 1074

## COUNTY BOROUGH OF CROYDON.

## ESTIMATOR AND MAINTENANCE

## SURVEYOR.

Applications are invited for this appointment from persons experienced in preparing estimates for the maintenance of public buildings. Salary A.P.T., VIII, £760-£835, plus London Weighting (£30 at age 26 and over).

The Council do not offer living accommodation. Applications on forms (obtainable from the Borough Engineer, Town Hall, Croydon) must be submitted to him by the 14th December, 1953.

E. TABERNER,

Town Clerk. 1090

**BLACKWELL RURAL DISTRICT COUNCIL.**

**ARCHITECTURAL ASSISTANT.**  
Applications are invited for the appointment of Architectural Assistant at a salary of £555 per annum, rising by annual increments of £15 to £600 (Grade A.P.T., IV).

Applicants should have passed the R.I.B.A. Intermediate Examination, or its equivalent, at one of the recognised Schools of Architecture, and have worked in an architectural office for a period of two years.

Applications, stating age, experience and training, and giving names and addresses of two persons to whom reference may be made, should be sent so as to reach the undersigned not later than 14th December, 1953.

R. EVANS,

*Clerk to the Council.*

"Dale Close," 100, Chester Road South, Mansfield. 1073

**DERBYSHIRE COUNTY COUNCIL.**

**COUNTY ARCHITECT'S DEPARTMENT.**  
Applications invited for appointment of ARCHITECTS, permanent staff, on A.P.T., Grade III (£525-£415 to £570 per annum), and A.P.T. Grade V (£595-£415 (2) and £20 to £45 per annum), for duties in connection with the General Education Section dealing with the extension, improvement and maintenance of school buildings. Forms and particulars to be obtained by 16th December from F. Hamer Crossley, County Architect, County Offices, St. Mary's Gate, Derby. 1104

**BOROUGH OF HEYWOOD.**

**BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.**  
**SENIOR ARCHITECTURAL ASSISTANT.**  
Applications are invited for the above-named permanent appointment in the department of the Borough Engineer and Surveyor, at a salary in accordance with Grade V (£595-£645) of the Scale of Salaries.

Applicants must have passed the final of the R.I.B.A. examination, or hold an equivalent qualification, and must have had considerable experience in housing, general architectural work, quantities and final accounts.

Housing accommodation, if required, will be provided for the successful applicant.

Applications stating age, qualifications and experience, accompanied by copies of three recent testimonials and appropriately endorsed, should reach the undersigned, not later than Thursday, 17th December, 1953.

Canvassing in any form will be a disqualification.

W. R. PARKER,

*Town Clerk.*

Municipal Buildings, Heywood. 1098  
18th November, 1953.

**BOROUGH OF RAMSGATE.**

**APPOINTMENT OF QUANTITY SURVEYOR.**  
Applications are invited for this appointment at a salary not exceeding Grade VI (£670-£735) according to qualifications and experience. Housing accommodation will be made available to the successful applicant, if required.

General Particulars of the appointment are obtainable from the undersigned to whom applications must be submitted by 18th December, 1953.

K. F. SPEAKMAN,

*Town Clerk.*

Municipal Buildings, Ramsgate. 1097

**LANCASHIRE COUNTY COUNCIL.**

**DEPUTY COUNTY ARCHITECT.**  
Applications are invited for the appointment of Deputy County Architect at a salary of £2,000 rising to £2,350.

The establishment of the department is a large one and first class administrative as well as architectural ability is required. The appointment will be terminable by three months' notice.

Application forms, obtainable from G. Noel Hill, F.R.I.B.A., M.T.P.I., County Architect, County Hall, Preston, must be returned not later than Monday, December 21st, 1953. 1076

**DEPARTMENT OF MUNICIPAL AFFAIRS & SUPPLY.****PROVINCE OF NEWFOUNDLAND, CANADA.**

**CITY OF ST. JOHN'S.**  
Applications are invited for the following appointments in the Joint Planning Office of the above two Authorities, at St. John's:

**TWO SENIOR PLANNING ASSISTANTS** within a salary range in accordance with prevailing Canadian rates.

Duties include the preparation of plans for the development of communities throughout the province and a Development Plan for the City of St. John's and its environs. Both appointments offer scope for independent and responsible work to applicants with energy and initiative.

Applicants must have considerable practical planning experience, preferably in a Local Government Office, and should possess professional qualifications, A.M.T.P.I. and/or A.R.I.C.S.

Appointments are by contract for 3 years in the first instance. Passage will be paid for the selected officers.

Please reply by Air Mail to the undersigned with details of age, experience, present salary and qualifications together with recent testimonials or references. Selected applicants will be interviewed in the United Kingdom. These appointments are open until 26th December, 1953.

STANLEY H. PICKETT, A.R.I.C.S.

*City Planning Officer.*

City Hall, St. John's, Newfoundland. 1086

**COUNTY BOROUGH OF BURNLEY.**

Applications are invited for the appointment of a **QUANTITY SURVEYING ASSISTANT** in the Borough Engineer's Department. The Salary Grade will be fixed in accordance with experience and qualifications but the maximum salary offered is Grade III of the National Scale (£525 rising to £570 per annum).

Applicants should have a sound knowledge of Building Construction and experience in the preparation of Bills of Quantities and Measurement of Works is essential.

Preference will be given to candidates holding appropriate qualifications.

Forms of application and conditions of appointment may be obtained from the Borough Engineer, 22/24 Nicholas Street, Burnley, to whom applications should be returned not later than 9.0 a.m. Saturday, 12th December, 1953.

C. V. THORNLEY,

*Town Clerk.*

**METROPOLITAN BOROUGH OF WOOLWICH.**

**BOROUGH ENGINEER'S DEPARTMENT.**  
**SENIOR ARCHITECTURAL ASSISTANT** required. Grade VIII (£760-£835) plus London Weighting, A.R.I.B.A. or equivalent essential. Superannuation Scheme. Medical Examination. Experience in all types of architecture undertaken by local authority.

Application forms from Borough Engineer, Town Hall, Woolwich, S.E.18, to be returned to Town Clerk by 19th December, 1953.

Canvassing disqualifies. 1089

**LINDSEY COUNTY COUNCIL.**

**COUNTY ARCHITECT'S DEPARTMENT.**  
Vacancy on permanent staff for Quantity Surveyor, Grade A.P.T., Va and Vi (£625-£735), for persons holding the Final R.I.C.S., or Grade A.P.T., IV (£555-£600), for persons holding the Intermediate R.I.C.S.

N.J.C. Conditions of Service. Canvassing will disqualify. Relationship to member or senior officer of the Council to be disclosed in writing with application.

Applications, stating age, qualifications and experience, with names of two persons to whom reference can be made, to be sent to me not later than 9th December, 1953.

A. RONALD CLARK, A.R.I.B.A.,

*A.M.T.P.I.*

*County Architect.*

County Offices, Lincoln. 1106

**HERTFORDSHIRE COUNTY COUNCIL.**

**COUNTY ARCHITECT'S DEPARTMENT.**  
Applications are invited for the appointment of ASSISTANT ARCHITECTS, Grade II, £495-£540. Previous Local Government experience not essential.

Applications, together with the names of three referees to County Architect, County Hall, Hertford, Herts, not later than first post 12th December, 1953. 1075

**BEDFORDSHIRE COUNTY COUNCIL.**

**ARCHITECTURAL ASSISTANTS.**  
Applications are invited for established posts on the following A.P.T. grades.

Grade IV (salary £555 to £600) Inter R.I.B.A. preferred.

Grade II (salary £495 to £540).

Forms to be obtained from the County Architect, Shire Hall, Bedford, whom they are to be returned not later than 10th December, 1953. 1071

**SOUTHAMPTON C.B.C. requires SENIOR**

**PLANNING OFFICER** Grade VII (£710-£785 per annum); **QUANTITY SURVEYOR** Grade VII (£710-£785 per annum); **QUANTITY SURVEYOR** Grade VI (£670-£735 per annum); **ASSISTANT QUANTITY SURVEYOR** Grade II (£495-£540 per annum). Application forms from Borough Architect, Civic Centre, Southampton, to be returned by the 14th December, 1953. 1072

**LONDON ELECTRICITY BOARD.****SENIOR DRAUGHTSMAN.**

Applications are invited for the above position in the Design and Planning Branch of the Northern Sub-Area at Aldgate, London, E.C.1.

Applicants should have had training and experience in building construction and the design of steelwork and reinforced concrete structures, and be capable of preparing drawings and making calculations for the alteration of existing premises and the conversion of basements into sub-stations and transformer chambers. Experience in the lay-out of electrical equipment up to 11 k.V., whilst not essential, would be an advantage.

The post is graded under Schedule "D" of the National Joint Board agreement as Grade 5, £595 7s. to £704 11s. per annum, inclusive of London allowance.

Application forms obtainable from Secretary, 46, New Broad Street, E.C.2, to be returned completed by 19th December, 1953. Please enclose addressed envelope and quote ref. V/1692/A. on all correspondence. 1122

**Tenders for Contracts**

6 lines or under, 12s. 6d.; each additional line, 2s.

**BOROUGH OF BASINGSTOKE.****ERECTION OF SINGLE PERSONS' DWELLINGS.**

Tenders are invited for the erection of one block of Single Persons' Dwellings in 3 storeys.

Bills of Quantities and Form of Tender may be obtained from the Borough Architect, Eric Almond, Dipl. Arch., A.R.I.B.A., Municipal Build-

ings, Basingstoke, on payment of a deposit of £2 2s., returnable on receipt of a *bona fide* tender. The Council do not bind themselves to accept the lowest or any tender.

Tenders are to be received by the undersigned not later than the first post Monday, 28th December, 1953.

MEIRION O. JONES,

*Town Clerk.*

Municipal Buildings, Basingstoke. 1113

**CAMBRIDGESHIRE COUNTY COUNCIL.****CAMBRIDGESHIRE TECHNICAL COLLEGE.****EXTENSION.**

**FIRST INSTALMENT.**  
**CONTRACTORS** wishing to tender for the above work are invited to submit their names to the undersigned not later than 16th December, 1953. The building consists of a three-storey steel-framed classroom block, with single-story workshops of a total cubic capacity of about 331,700 cu. ft., with minor alterations to the existing College.

**CLERK OF THE COUNCIL,**

Shire Hall, Cambridge. 1078

**Architectural Appointments Vacant**

4 lines or under, 7s. 6d.; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she is, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

**ASSISTANT** required for large general Architectural Practice with offices in Maidenhead. Some experience in specification writing essential. Salary £300 to £500, according to experience. Box 8953.

**VACANCY** arises for Articled Pupil (Architectural or Building Surveying) in City firm. Box 9468.

**A SENIOR ARCHITECTURAL ASSISTANT** required, full experience in preparation of Working Drawings, Details, and supervision of office and Industrial Buildings in the London Area. Good knowledge of construction and design essential. Apply in writing giving full particulars of qualifications, age, experience and salary required to Box 9829.

**HILLS (WEST BROMWICH), LTD.,** Albion Road, West Bromwich, Staffs., can offer a 12 months' experience engagement to young ARCHITECTS in their West Bromwich Estimating and Drawing Offices. Excellent salaries and expenses paid. Apply Personnel Manager. 9968

**ARCHITECTURAL ASSISTANT**, of Inter. standard, required for small office, Chancery Lane. Office experience essential. Good draughtsman, working drawings and details. Please reply, stating details of experience and salary required. Box 1063.

**SENIOR ASSISTANT** required for large South Coast practice. Must be qualified, have first class designing ability, a sound knowledge of construction and specifications, and have had several years' experience in a senior capacity. The successful applicant will be required to take full charge of the drawing office and work in course of construction, under the managing partner. Full particulars including indication of salary expected and when available, to Box 1056.

**REQUIRED**, at Company's Head Office, Guildford, **ARCHITECTURAL ASSISTANT**, A.R.I.B.A. Varied work, mainly factory. Five day week. Salary by arrangement. Box 1026.

**ARCHITECT SURVEYOR**, with sound practical experience, for large private housing and industrial development. Must be quick and accurate surveying and levelling. Salary: £850, plus rent-free modern house. Apply A. & J. Mucklow & Co., Ltd., Haden Cross, Old Hill, Staffs. 1096

**JUNIOR ARCHITECTURAL ASSISTANT** and **DRAUGHTSMAN** required immediately in West End office. The work is varied and of considerable interest. Salary £3 10s. Box 1111.

**ARCHITECTURAL ASSISTANT** required in small busy office in Westminster. Must be quick and neat draughtsman, with at least 3 years' experience in private practice. Salary according to capabilities. Write with full particulars to Michael Brashier, A.R.I.B.A., 11, Gayfer Street, S.W.1. 1115

**ARCHITECTURAL DRAUGHTSMEN**, up to Inter R.I.B.A. standard, required; Westminster area. Write, stating experience and salary, to Box 1116.

**MAJOR** Building Contractors require immediately the services of an **ARCHITECTURAL DRAUGHTSMAN**. Must have good all-round experience in building subjects, design, detail, and site surveys. Neatness, accuracy and speed essential. Applications, stating full details of experience, age, and salary required, should be made to Box 1117.

**ARCHITECTURAL ASSISTANTS**, with up to 5 years' office experience, required for small office. Write with full particulars, including age and salary, to Hasker & Hall, Architects, 13, Welbeck Street, W.1. 1081

**SENIOR ASSISTANT** required by busy N.E. London office. Experience of Commercial and Industrial buildings essential. Write age, experience, and salary required. Box 1094.

**FIRM** of Architects, doing good class of work Overseas, require **ASSISTANTS**, of varying experience, for London office. Must be good draughtsmen. Salaries: £550 to £700 per annum, according to experience. Write Box 1095.

**RHODESIAN** firm of Architects and Surveyors require **SENIOR ASSISTANT ARCHITECT** for Kitwe office. Aged 30-40, some administrative experience. Salary: £960 per annum. Free passage out. Further particulars from Overseas Technical Service, 5, Weldon Crescent, Harrow. 1108

**QUALIFIED** and experienced **ASSISTANTS** required for office in Liverpool. Apply, giving full details and salary required, to Box 1124.

**WANTED**, for London, competent **ASSISTANT**. Good draughtsmen. Box 1077.

**ARCHITECTURAL DRAUGHTSMAN** required, capable of carrying out working drawings and specifications. Applicants should apply in writing, giving details of experience, age, etc., to Personnel Department, Albert E. Reed & Co., Ltd., Ayresford Paper Mills, Larkfield, near Maidstone, Kent. 1080

**SENIOR ARCHITECTURAL ASSISTANT** required in Architects' Department of a large London financial organisation, to work on projected new office buildings and conversions. Please write, giving particulars of age, experience and salary required, to Box 1082.

**BRIAN PEAKE** requires experienced **SENIOR ASSISTANT**, to take control interior re-modelling and decoration contracts. Starting salary approximately £600. Also **JUNIOR ASSISTANT**, especially capable of preparing interior colour presentation drawings. Please telephone HYD. 4914 for appointment. 1093

**SCHOOL** trained **ARCHITECTURAL ASSISTANT**, with a minimum of 5 years' experience of contemporary commercial, industrial and/or school work, required by J. M. Austin-Smith & Partner. Applicants should write, giving particulars of education, age, training, qualifications and experience, to 29, Sackville Street, London, W.1. Salary by arrangement. 1092

## Architectural Appointments Wanted

**A.R.I.B.A.**, Dip.Arch. (36) seeks senior position in contemporary London office where there is scope for technical and constructional knowledge. Box 9809.

**A.R.I.B.A.**, A.M.T.P.I. (28 years), virtually all London experience, seeks responsible post, preferably London, Dublin, Belfast. Box 813.

**CHIEF ASSISTANT** (45) seeks post London, S. or S.W. England. Thoroughly experienced every branch architecture, including surveys, quantities, specifications, etc. Can organise, control and administer branch office. Available one month from appointment. Salary required: £800 per annum. Box 1021.

**ASSOCIATE**, B.A. (43), chartered and generally experienced, own car and office space, seeks co-operation/employment, based Sussex area. Box 1060.

**A.R.I.B.A.**, A.M.T.P.I. (43 years), virtually all London experience, seeks responsible post, preferably London, Dublin, Belfast. Box 813.

**ARCHITECT** (49) seeks responsible post in London office whereby 15 years' administrative experience gained in handling fair-sized contracts could be utilised. Present salary £825. Box 1119.

**ASSOCIATE**, office trained (34), seeks senior position leading to partnership in small practice. Anywhere considered, but preferably near coast. Present salary £700. Box 1110.

**FINAL R.I.B.A.** (27), school trained with contemporary outlook, seeks responsible position in City or West End of London general practice. Experienced sketch scheme to complete working drawings, site supervision, etc. Industrial, domestic and conversions. Own car. Salary commencing £650. Please reply to Box 817.

**CAPABLE ASSISTANT**, reading towards special Final, seeks employment. Provinces. Industrial, agriculture and refrigeration experience; some domestic. Box 816.

**ASSOCIATE R.I.B.A.** (38) seeks appointment of responsibility. Wide experience and accustomed to full control. Box 1084.

**WOMAN ARCHITECT** (26), school trained, requires London appointment. Box 818.

## Other Appointments Vacant

4 lines or under, 1s. 6d.; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 16-59 inclusive unless he or she or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

**SENIOR QUANTITY SURVEYOR** required by well-known and progressive company of building and Civil Engineering Contractors, established in Midlands for many years. Experience is required in control of staff and settlement of final accounts on contracts up to £500,000 value. Salary offered will be according to qualifications and experience, but a minimum of £1,400 per annum is envisaged. Assistance with housing accommodation may be provided if necessary. The appointment is intended to be permanent and subject to Superannuation Scheme after preliminary period of satisfactory service. Replies will be treated in strict confidence. Box 1029.

**DESIGNER** required. This post is for a Senior with experience, and entails interesting and varied work. Apply, giving details of age, experience and salary required, to Personnel Manager, Hills (West Bromwich), Ltd., Albion Road, West Bromwich. 1034

**ESTIMATORS**—Two required for senior positions with Structural Engineers dealing with specialised form of construction widely used for the School building programme. Initial training given: good salaries. Full details of age, experience and salary required, to Personnel Manager, Hills (West Bromwich), Ltd., Albion Road, West Bromwich. 1035

**ARCHITECT'S SECRETARY** required, full or part time, in small private practice, Chancery Lane. Experience with Architect or Surveyor essential. Shorthand and sample book-keeping. Please state particulars and salary required. Box 1062.

**RHODESIAN** firm of Architects and Surveyors require qualified **QUANTITY SURVEYOR**, to work under A.R.I.C.S. Partner at Kitwe. Further particulars from Overseas Technical Service, 5, Weldon Crescent, Harrow. 1107

**DRAUGHTSMEN** for Industrial Heating and Ventilation Plants. Must be able to prepare scheme and detail drawings without supervision. Salaries commensurate with experience. Only first-class applicants considered. Write Visco Engg., Co., Ltd., Stafford Road, Croydon. 1099

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**EXPERIENCED** London **ARCHITECT** will undertake Surveys, Working Drawings, ½ inch and F.S. Details, Specifications and Perspectives. Box 1065.

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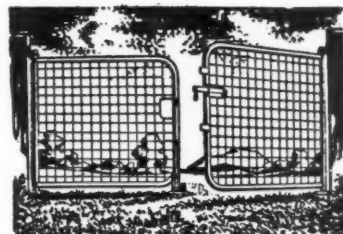
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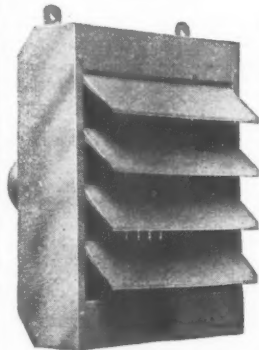


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