

THE ARCHITECTS' JOURNAL



standard contents

every issue does not necessarily contain
all these contents, but they are
the regular features which
continually recur

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Wanted and Vacant

No. 3275]

[Vol. 126

THE ARCHITECTURAL PRESS

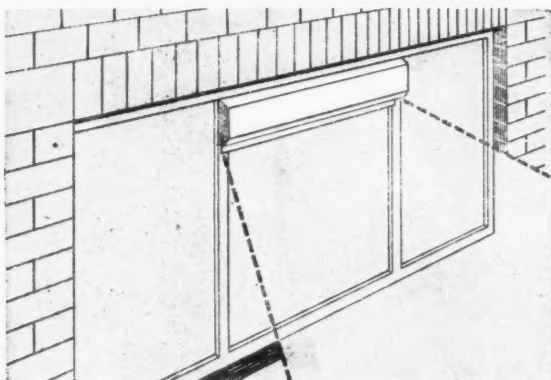
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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ig one week, Ih to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

IHVE	Institution of Heating and Ventilating Engineers. 4½, Cadogan Square. Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1. Mayfair 7086
ILA	Institute of Landscape Architects, 2, Guilford Place, W.C.1. Holborn 0281
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, Strand, W.C.2. Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1. Museum 7179
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1. Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172
ISE	Institute of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128
LDA	Lead Development Association. 18, Adam Street, W.C.2. Whitehall 4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1. Museum 3891
LSPC	Lead Sheet and Pipe Council. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1. Trafalgar 7711
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1. Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1. Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1. Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James' Square, S.W.1. Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2. Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1. Reliance 7611
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1. Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1. Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1. Welbeck 0619
NCBMP	National Council of Building Material Producers, 10, Storey's Gate, S.W.1. Abbey 5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry. 21, John Adam Street, Adelphi, W.C.2. Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1. Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4. Macaulay 4451
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1. Whitehall 1693
NHBRC	National House Builders Registration Council. 58, Portland Place, W.1. Langham 0064/5
NPL	National Physical Laboratory. Head Office, Teddington. Molesey 1380
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3. Mansion House 9383
NSAS	National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1. Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1. Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1. Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1. Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1. Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 5, Old Palace Yard, S.W.1. Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1. Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2. Trafalgar 2366
RSH	Royal Society of Health. 90, Buckingham Palace Road, S.W.1. Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19. Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1. Victoria 2186
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1. Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3. Mansion House 3921
SIA	Society of Industrial Artists. 7, Woburn Square, London, W.C.1. Langham 1984/5
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1. Langham 7616
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4. City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4. City 5040
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1. Whitehall 4341
ZDA	Zinc Development Association. 34, Berkeley Square, W.1. Grosvenor 6636



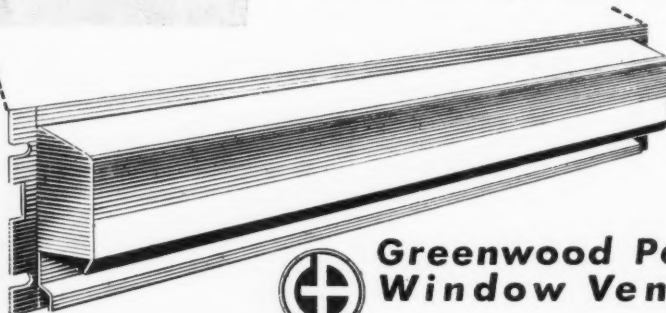
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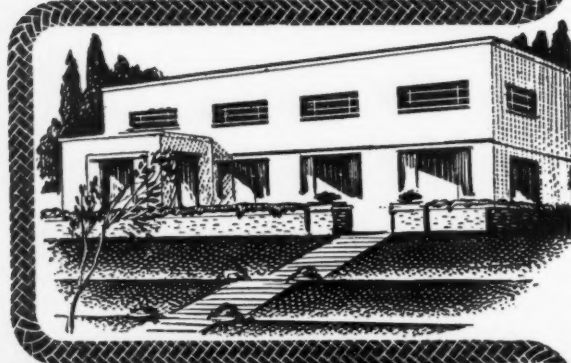
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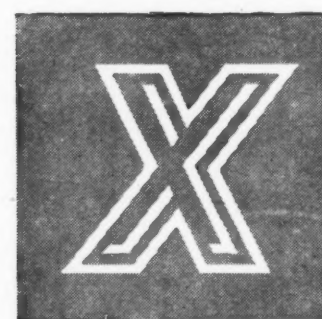
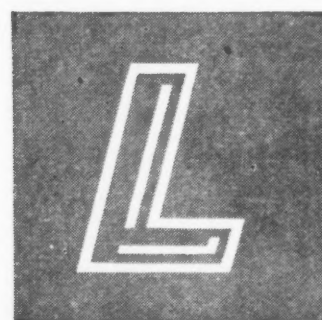
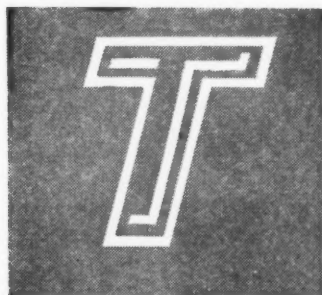
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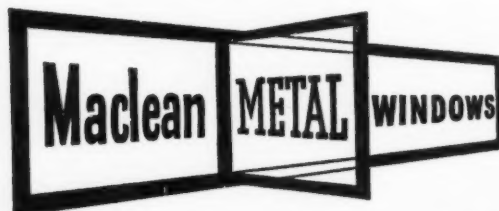
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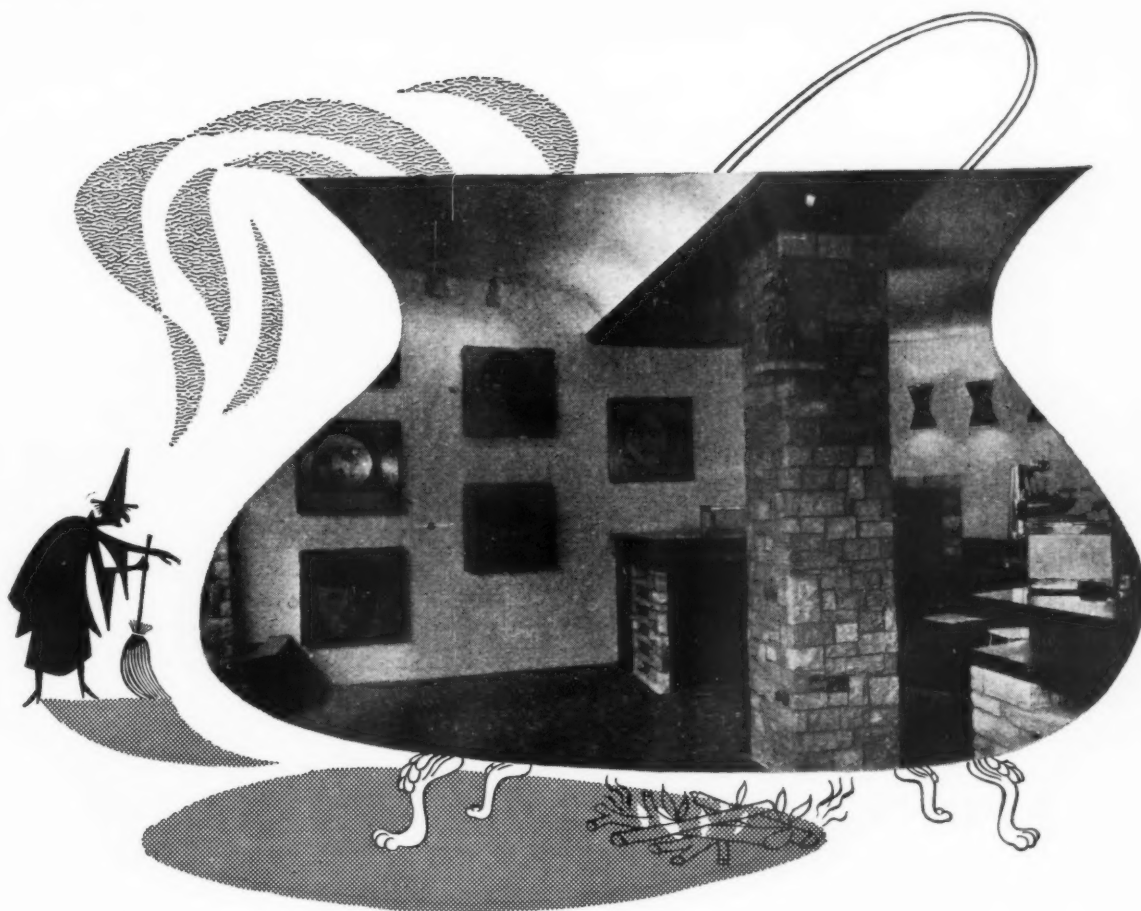
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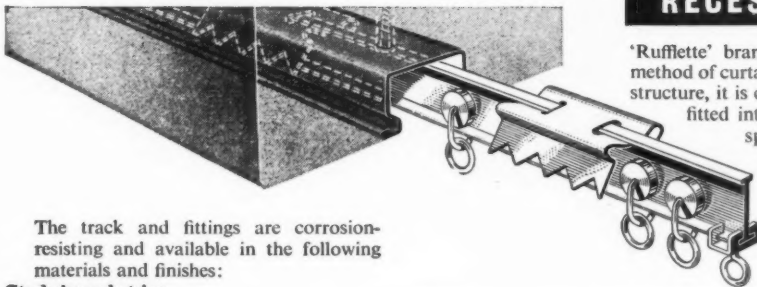
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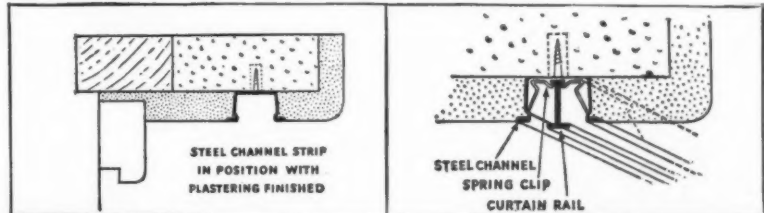
Solid brass or aluminium alloy.

Runners:

Brass, nickel-plated.

End stops:

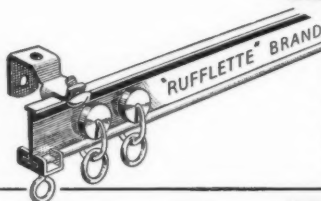
Pressed steel, brassed or zinc-plated.



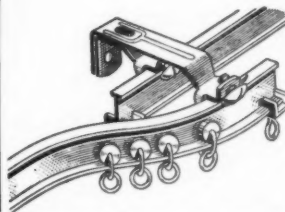
STEEL CHANNEL STRIP
IN POSITION WITH
PLASTERING FINISHED

STEEL CHANNEL
SPRING CLIP
CURTAIN RAIL

CURTAIN TRACK



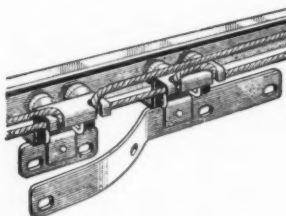
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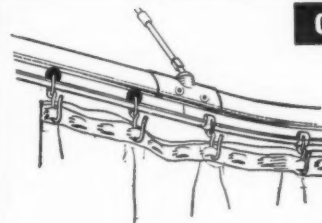
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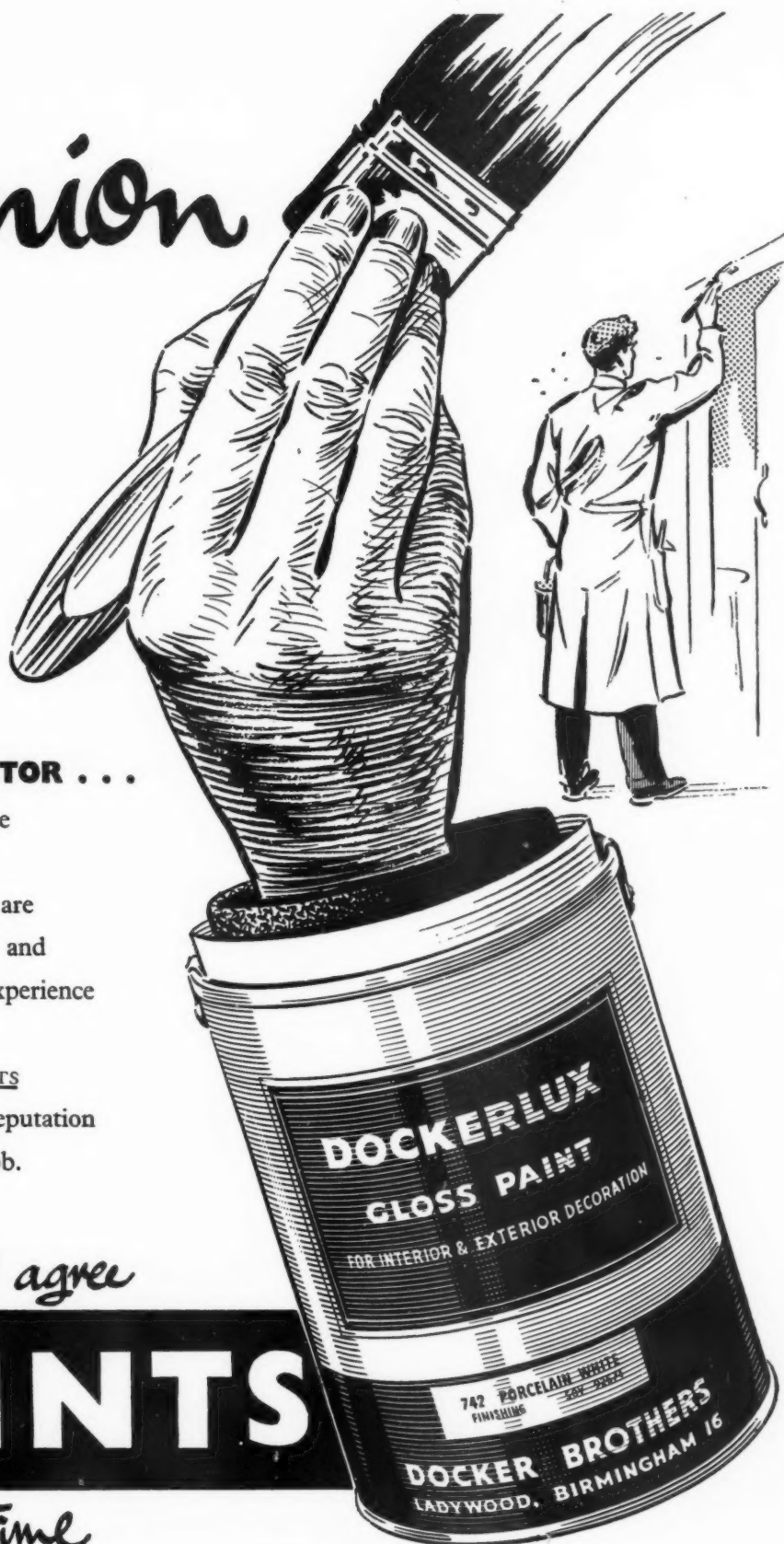
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		Initial test	Retested after 3 years' natural weathering
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Cement Block	untreated	6.0	5.9
	DRI-SIL treated	0.4	0.7
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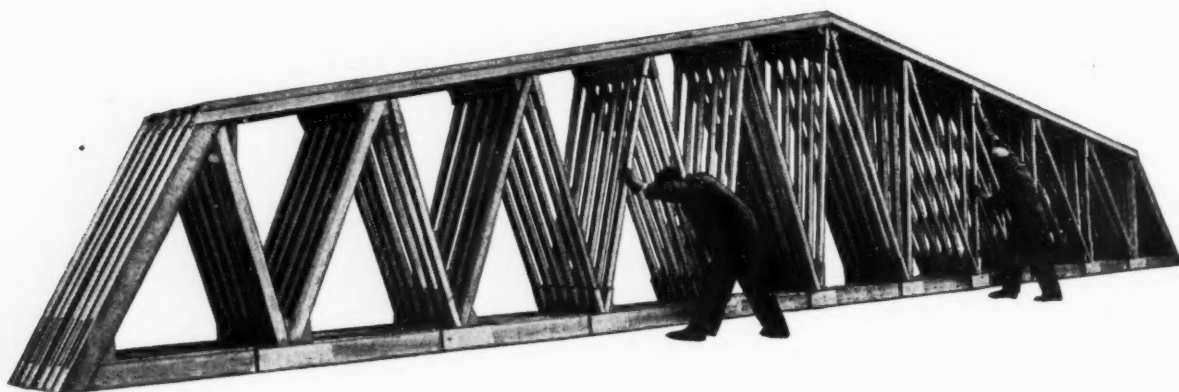
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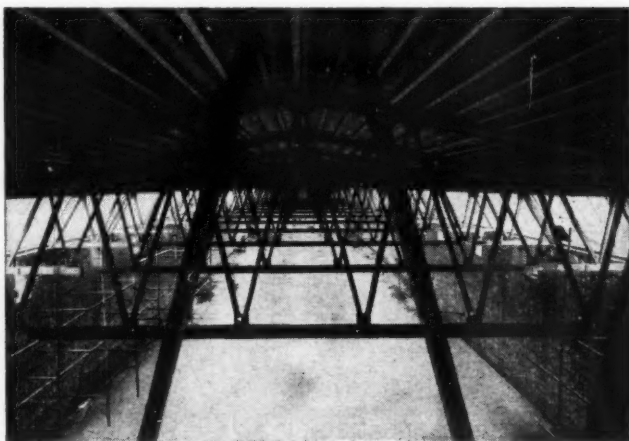


Full steam ahead

Resistance to steam and to other hazards of industrial processes may well call for timber structures, and timber structures today mean *glued* structures.

Synthetic resin adhesives have eliminated the weaknesses associated in the past with glued joints and a modern resin-bonded truss is amazingly strong and rigid for its weight—and *durable*, too, under the most severe conditions of exposure.

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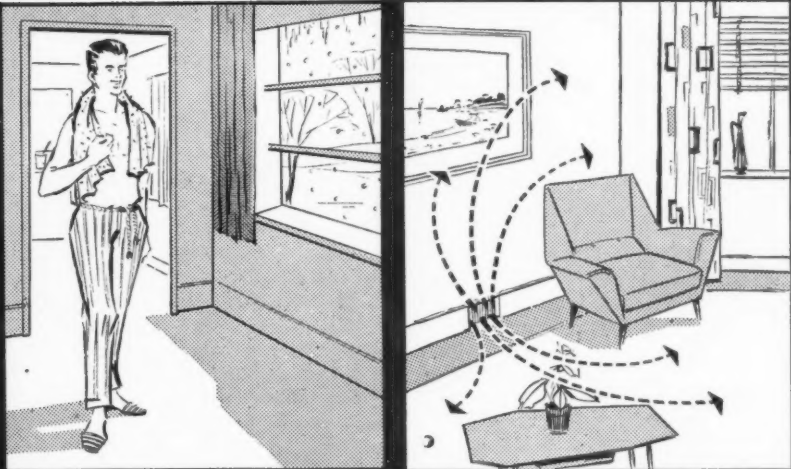
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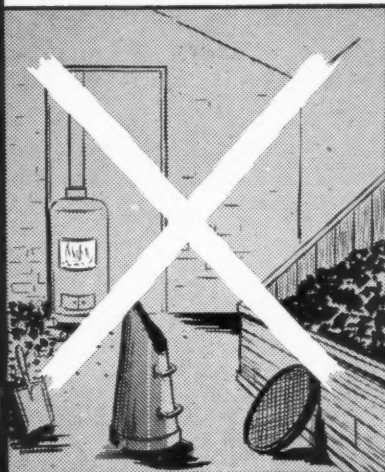
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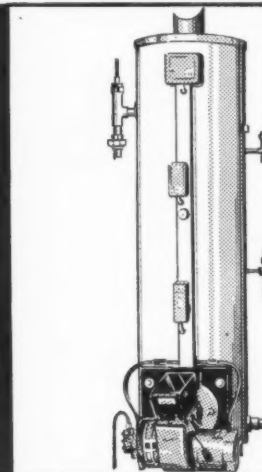


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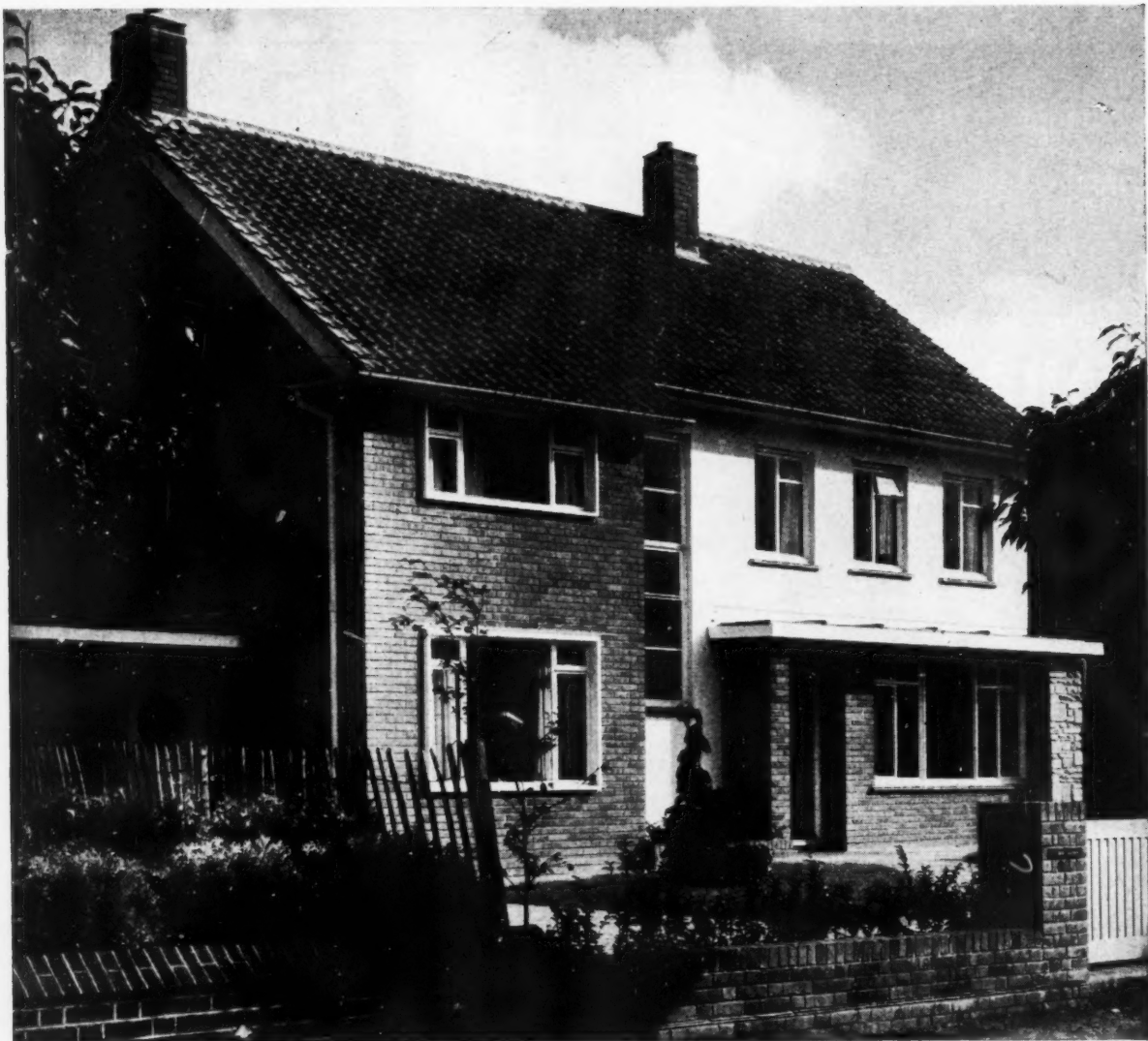
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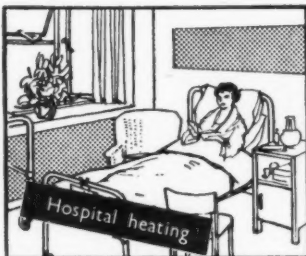
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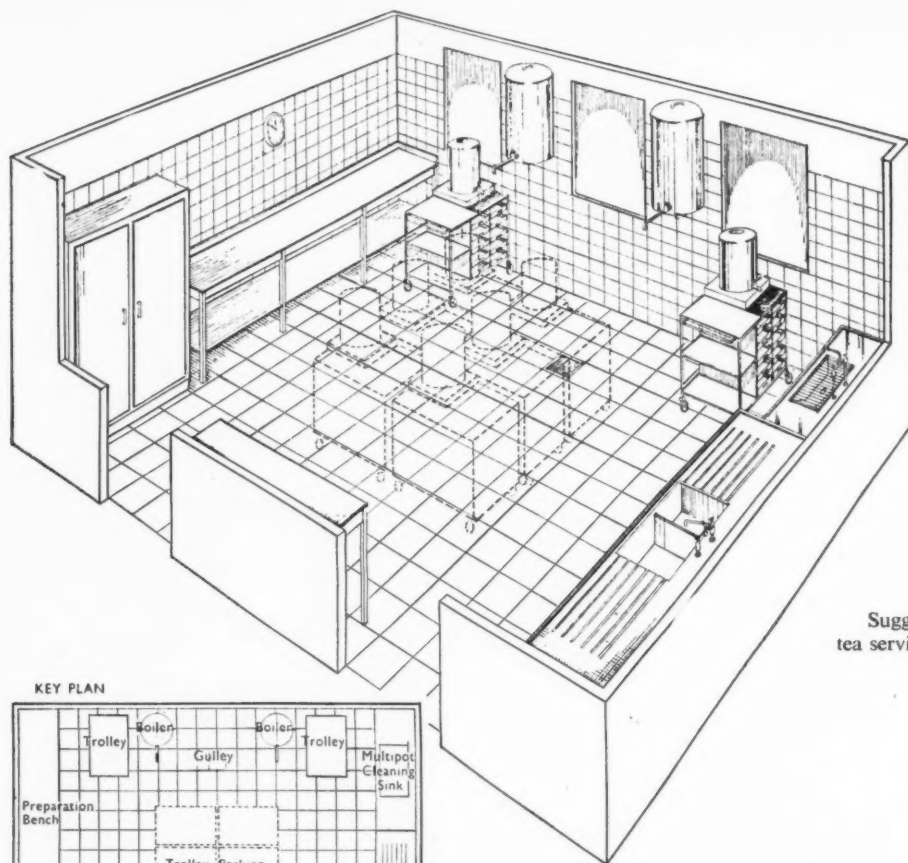


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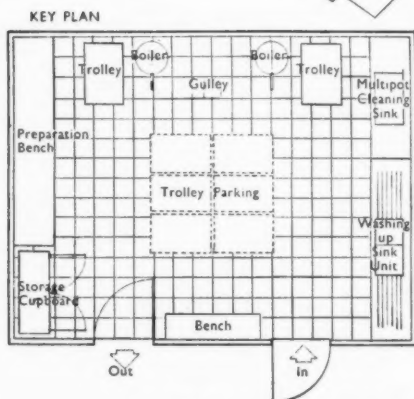
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AP 3767/11

E.Br.



Suggested layout of a tea service trolley station for 8 trolleys.



KITCHEN DESIGN

—Schools, Hospitals, Factories, Hotels, Restaurants and Cafés

Public catering has increased considerably in the post-war years to include most of the larger factories. Meals are likewise provided in schools, hospitals, sanatoria, office canteens, self-service meal counters and so on. The public has also shown an increased interest in the continental habit of 'dining out' at hotels and restaurants as an evening's entertainment. Of course these different establishments provide different menus, different methods of cooking and different services within different price ranges so that kitchens of any one class cannot be compared precisely with those of another. Yet the efficiency of any kitchen depends upon the correct selection, arrangement, operation and care of appliances enabling chefs and kitchen staff to accomplish the maximum effective work in the minimum time. Many establishments have applied time and motion study methods in the preparation of specifications of the kitchen layout and capacity of the equipment.

The Gas Industry through its Area Gas Boards has studied the design and layout of industrial and commercial kitchens throughout the country for a number of years. Although each Area Gas Board supplies kitchen appliances, yet the Gas Industry adopts the modern tendency in commerce of

market research and technical sales service as an essential to good business relationships. To this end teams of experts have made continuous surveys over a large cross-section of public service caterers. They have obtained information on (1) The type of equipment used; (2) the capacity of the equipment; (3) the fuel used; (4) specimen menus of the meals; (5) numbers of meals cooked; (6) registered gas consumption; (7) whether gas kitchens were under- or over-equipped.

Kitchen Surveys

In fact, one recent comprehensive survey in the South of England covered hospitals, day schools, boarding schools, works canteens, hostels, and civic restaurants. From this it emerged that both fuel costs and overall costs per similar meal vary considerably. Through study and comparison of these costs with the degree of kitchen planning and with the care taken in maintenance and installation, the Area Gas Boards are able to offer advice for an adequate economic meal service which is based upon practical experience.

A kitchen must be well designed at its inception, for subsequent alterations and modifications are expensive and never

give the same ultimate satisfaction. If any Area Gas Board is approached by the caterer or his architect, he can benefit from the pooled knowledge and advice arising from such surveys. Whatever the particular problem, the Area Gas Board will provide a specification and design layout as a technical guide to both the architect and caterer. This service is free, authoritative and practical.

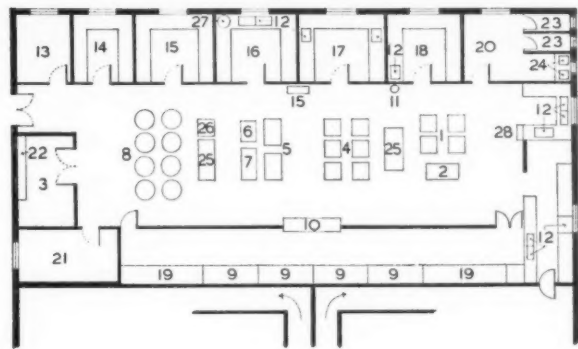
The Ministry of Education, working closely with the Hotel and Catering Institute, is actively promoting the education of young people in both basic and advanced cookery—now more than 8,000 students are receiving such instruction. In the training of cooks the need for accurate and easily manipulated control of a wide range of cooking temperatures make gas almost a universal fuel, both during instruction and in ultimate food preparation. Many training Colleges use completely gas-equipped training kitchens.

Results are the criterion of success

The following well-known restaurants and hotels using gas kitchens are worthy of more than passing thought by the caterer. The Westbury Hotel (London's first 'American' hotel) costing some three million dollars was provided with a gas kitchen including a four-unit solid top range, an under-fired grill, salamander, deep fat fryer, hot closet, bain-marie and carving wells. The Piccadilly Hotel, London, a twelve-oven-size gas range with the latest burners. The ovens are thermostatically controlled and incorporate a heavy duty salamander which can be used from either side of the range. In the centre on each side there is a hot closet section with open bain-marie. One end of the range has three oval frying pans and the whole unit is finished in high grade enamel and stainless steel.

The L'Ecu de France, well known for its variety of dishes prepared by many famous chefs, also uses a modern gas kitchen. There is a battery of seven solid top cookers with an under-fired gas grill—the whole kitchen is designed especially for speedy service. Add to these the Marine Hydro, Rhyl; the Beach Ballroom, Aberdeen—where there is normal service of 300 to 400 meals a day with a similar number of high teas, and which on special occasions will accommodate from 1,000 to 1,200 diners; the Park Lane Hotel, London; Simpson's Restaurant in Piccadilly—using an up-to-date gas-fired roasting spit. The Stratford Memorial Theatre is attended by some 43,000 visitors from all parts of the world each month. Meals are planned and prepared in a modern gas kitchen, most of the cooking being done on a four-oven range. An average of some 1,350 meals is served a week, with up to 12,000 hot drinks in the same period.

A recent report from the Chief Factory Inspector said that in all newly-built factories of any appreciable size a canteen has now come to be regarded "as one of the essential employee services" and that "new canteens are of excellent



Kitchen for 1,500 — approximately 90' x 40'.

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|-------------------------------|-------------------------------|----------------------------------|
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| 2. Double Oven | 10. Two-tier Hot Cupboard | 19. Cold Cupboards |
| 3. Cold Room | 11. Mixing Machine | 20. Staff Room |
| 4. Steamers | 12. Sinks | 21. Staff Dining Room |
| 5. 2-pan Fish Fryer | 13. Office | 22. Slat Shelves |
| 6. Pastry Oven | 14. Dry Store | 23. Water Closets |
| 7. Boiling Table | 15. Vegetable Store | 24. Hand Basins |
| 8. Six 30-gallon Boiling Pans | 16. Vegetable Preparation | 25. Table |
| Two 40-gallon Boiling Pans | 17. Meat and Fish Preparation | 26. Cooling Racks |
| | | 27. Potato Peeler |
| | | 28. Pot Rack |

Portable tables used as required.

design and sensibly planned". The Docks and Inland Waterways Executive, Southampton—Reckitt and Colman Ltd. in their Norwich factory—the British Nylon Spinners Ltd. factory at Pontypool—the English Steel Corporation in their Sheffield factory, are just a few excellent industrial canteens using gas kitchens.

Whatever the size of Hotel, Restaurant or Canteen its reputation hinges upon its catering service. Good meals entail careful kitchen planning, the right choice and placing of the equipment, as well as wise food purchasing. Then dishes are well cooked, service delays are eliminated, no difficulties are experienced in dealing with fluctuating demands, labour is saved and a more contented staff leads to greater factory output.

In view of the widespread preference for gas in all industrial and commercial kitchens, the Gas Industry, through its Area Gas Boards, regularly collates information on the latest developments in kitchen planning and design and the performance of gas appliances.

The Gas Industry through its Area Gas Boards has helped many caterers to run their premises more efficiently, more economically, and more profitably.

REFERENCES

Up-to-date information on the use of gas for large-scale catering is obtainable from:

- Scottish Gas Board, Edinburgh
- Northern Gas Board, Newcastle-upon-Tyne
- North Western Gas Board, Manchester
- North Eastern Gas Board, Leeds
- East Midlands Gas Board, Leicester
- West Midlands Gas Board, Birmingham
- Wales Gas Board, Cardiff
- Eastern Gas Board, London, S.W.1
- North Thames Gas Board, London, W.8
- South Eastern Gas Board, Croydon
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- The Gas Council, 1 Grosvenor Place, London, S.W.1



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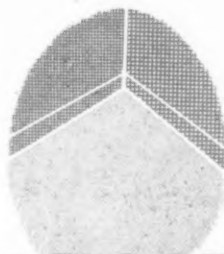
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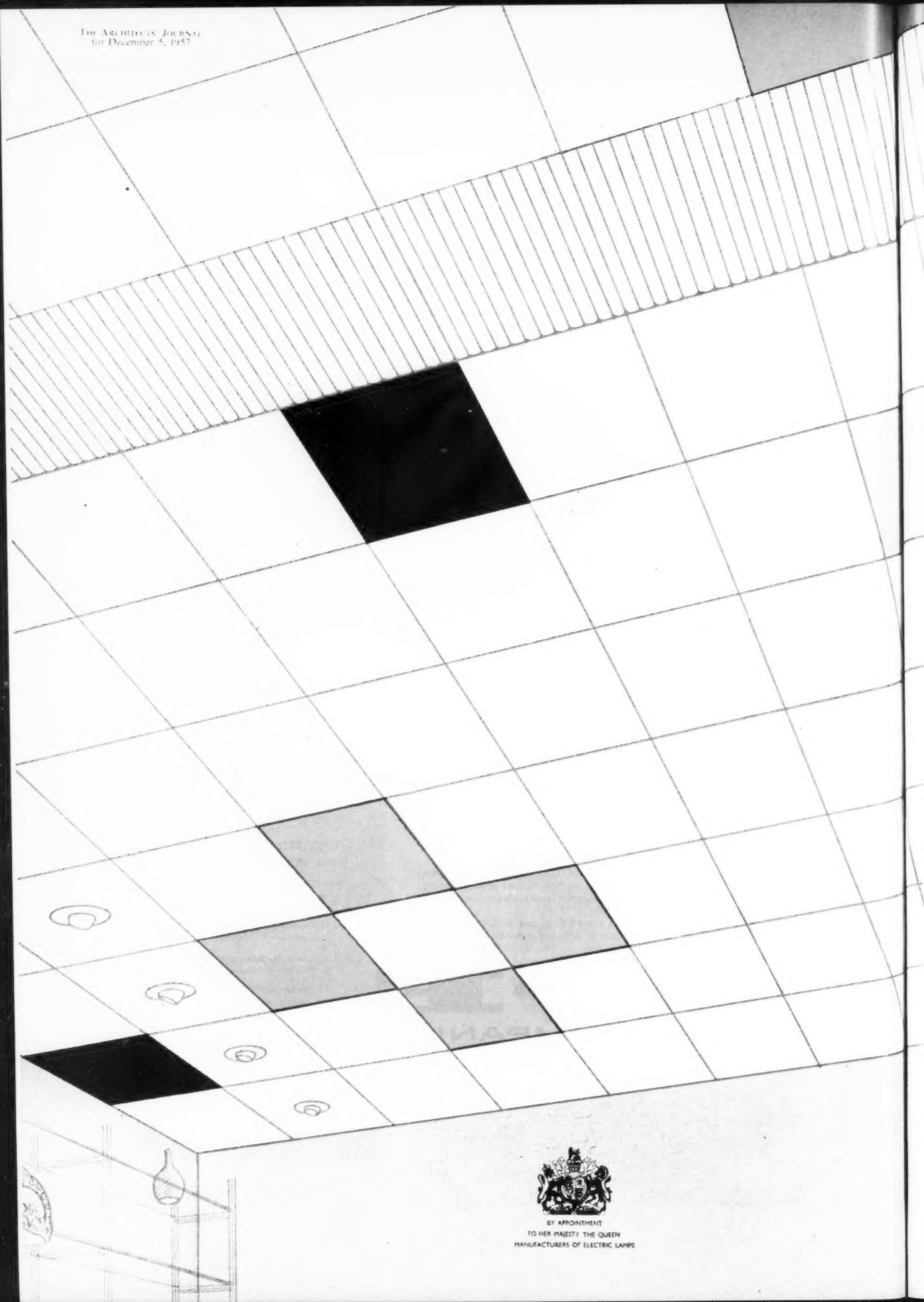
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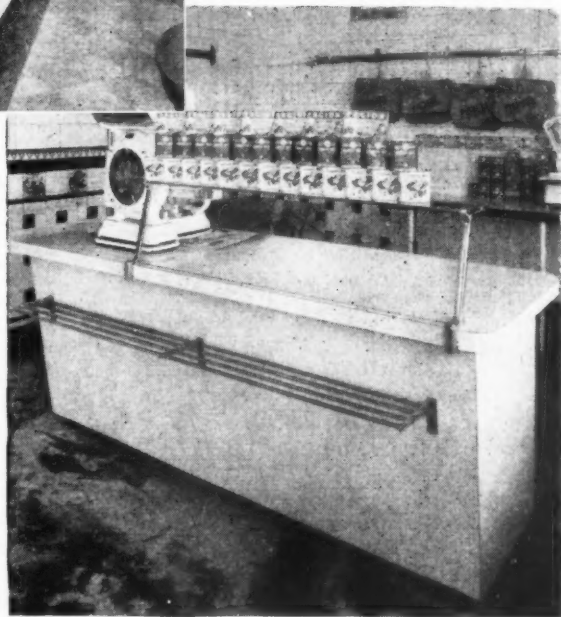
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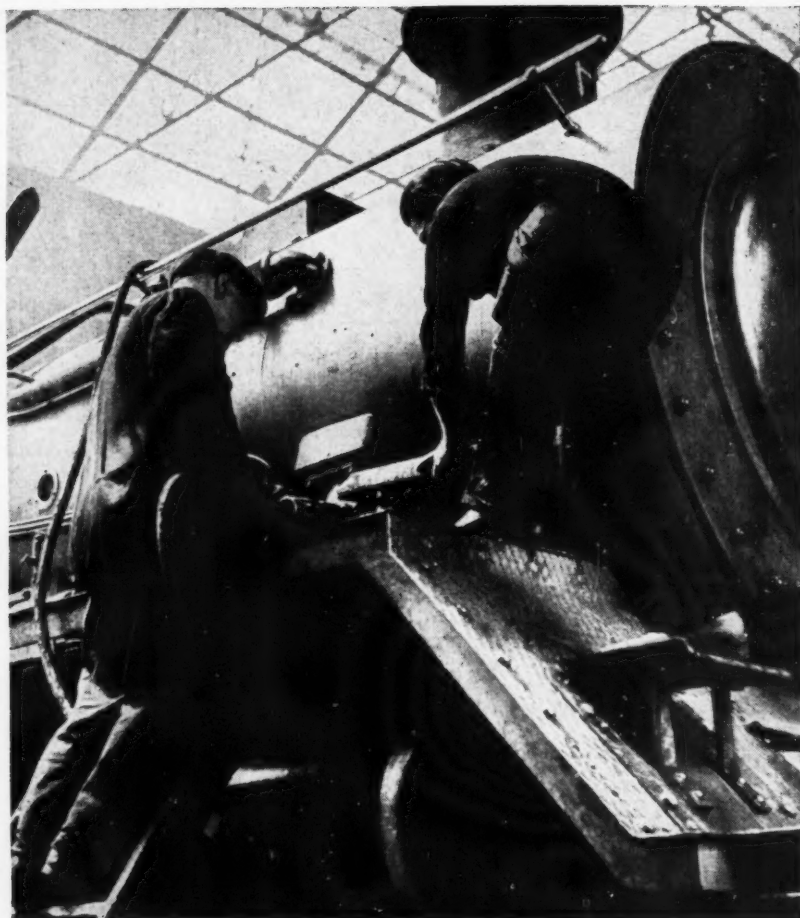
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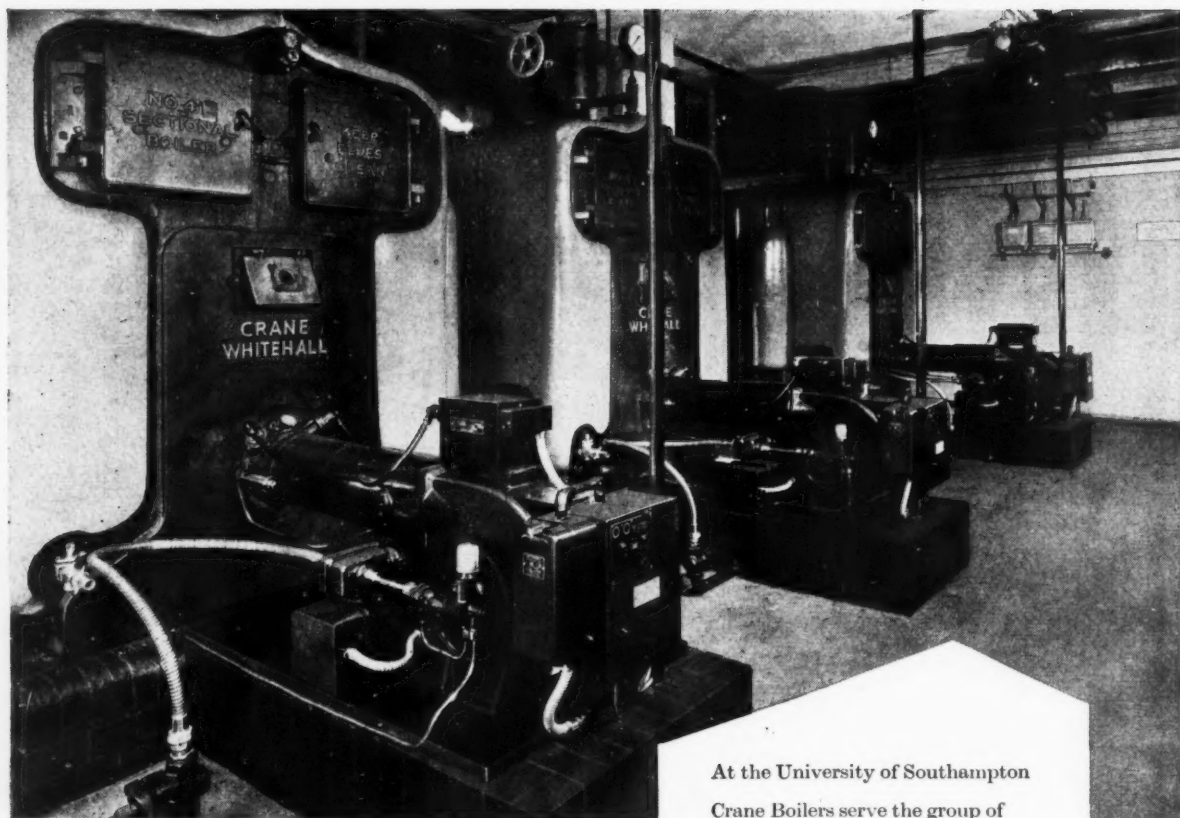
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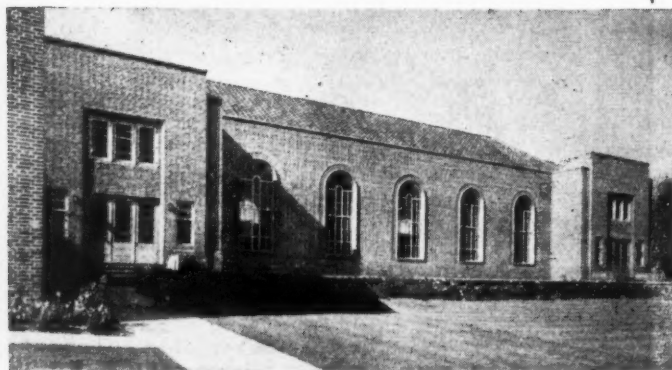
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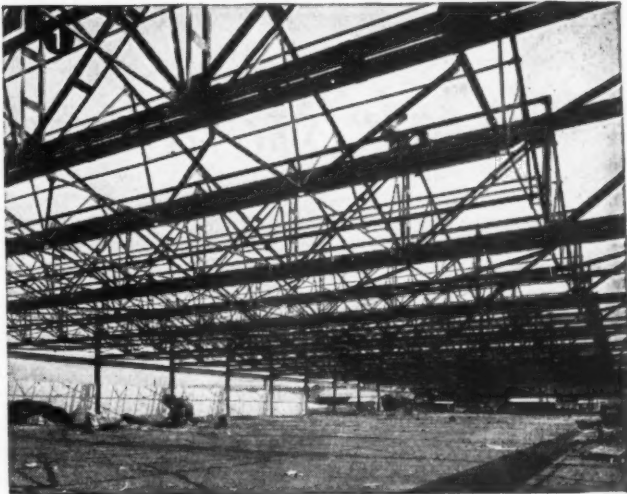
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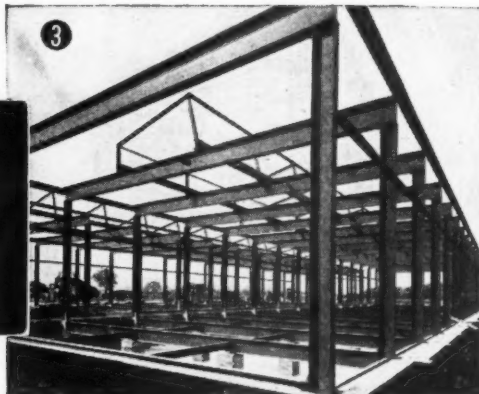
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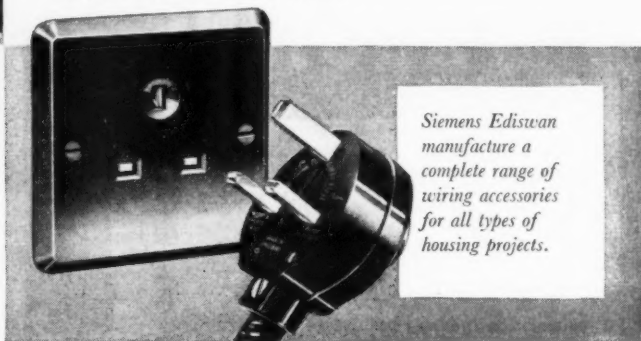
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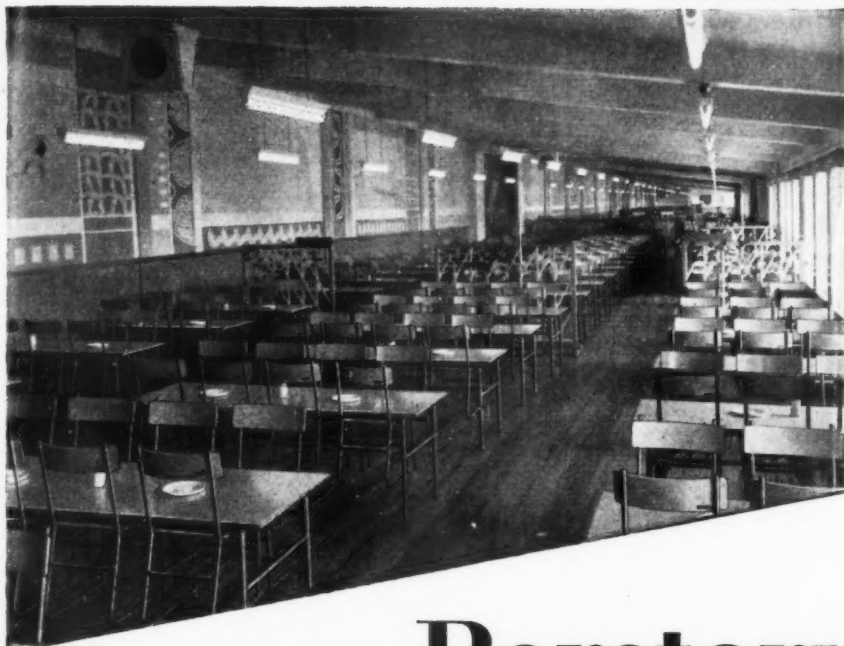
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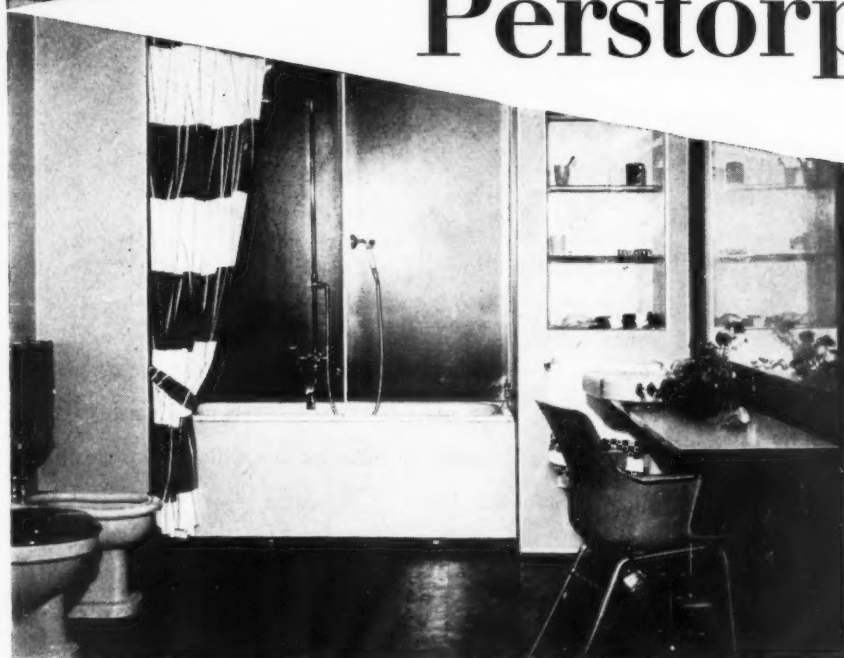
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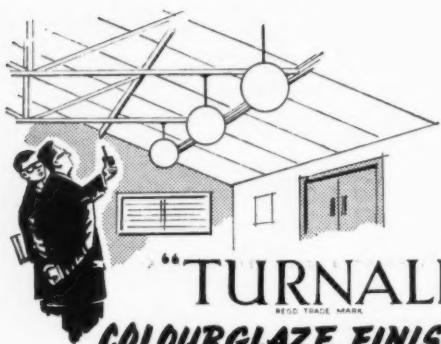
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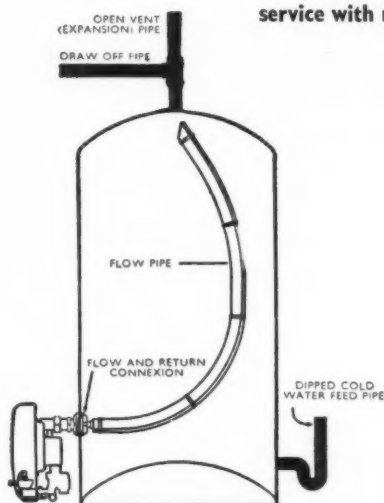
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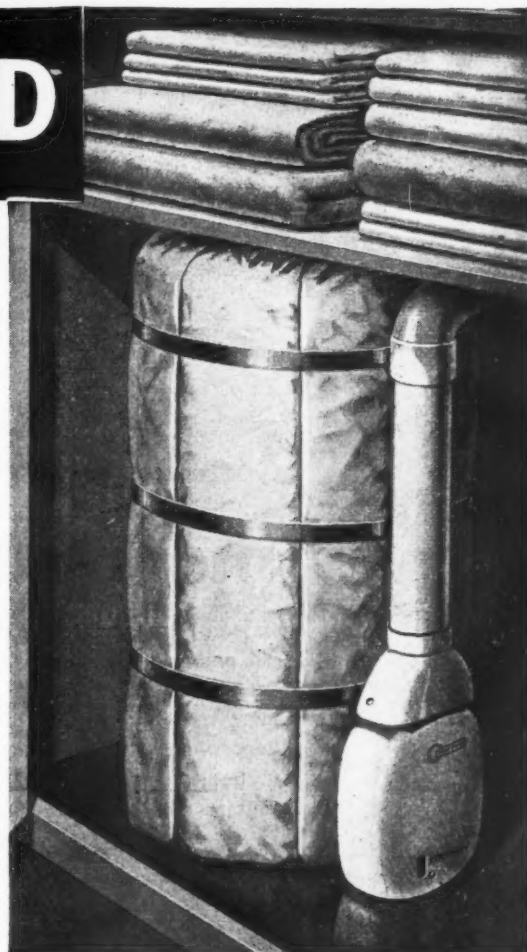
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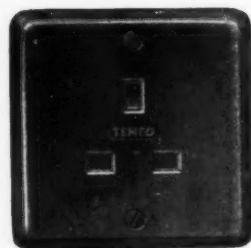
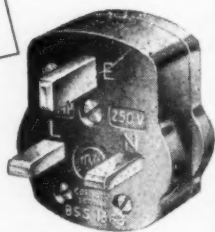


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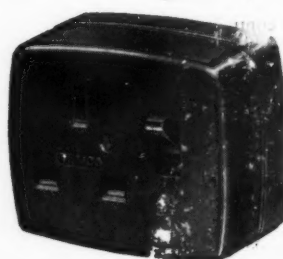
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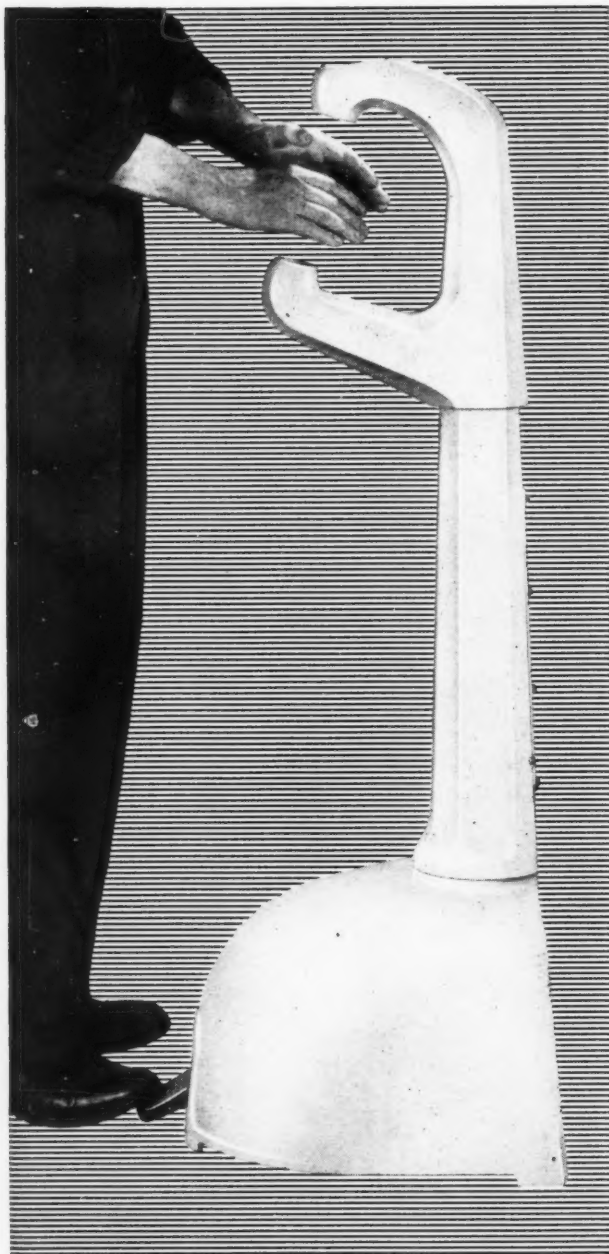
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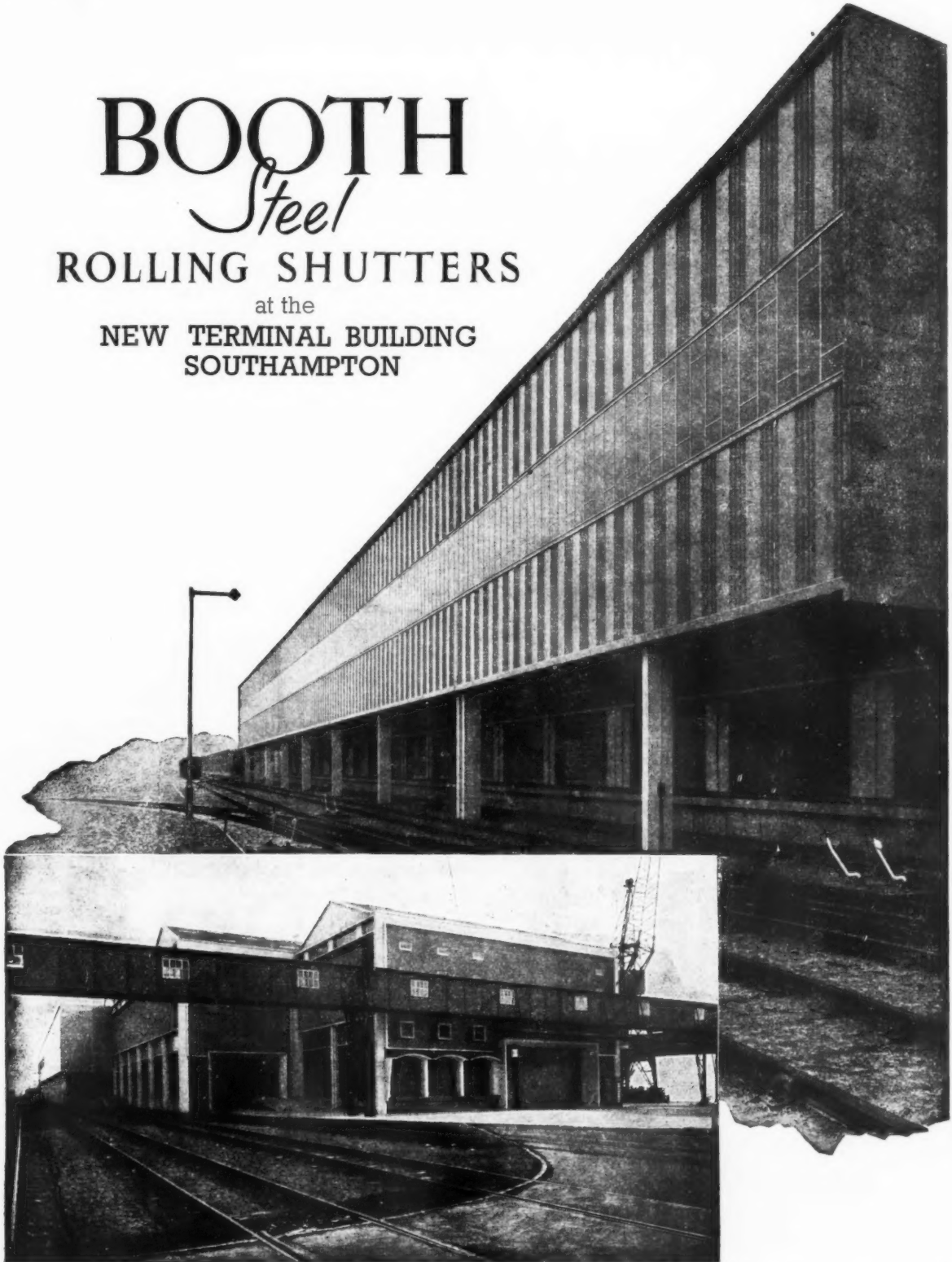
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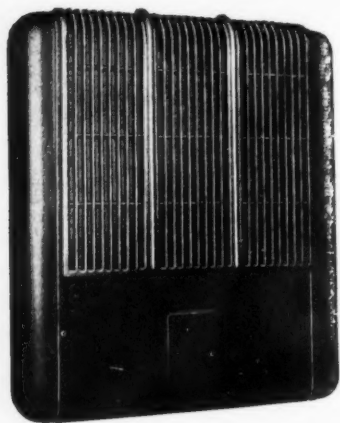


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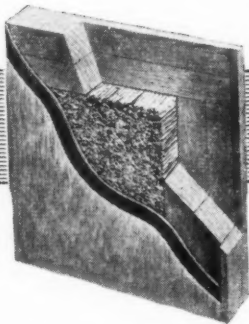
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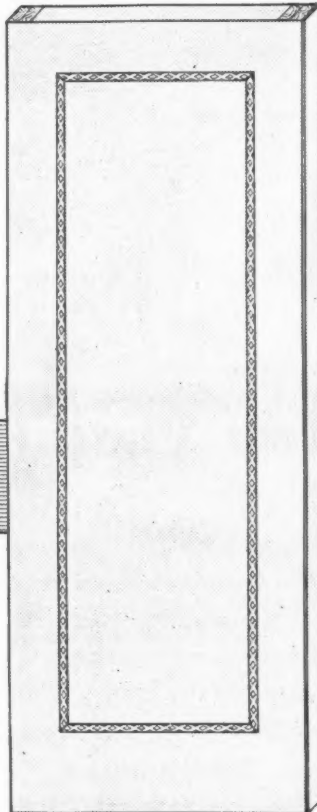
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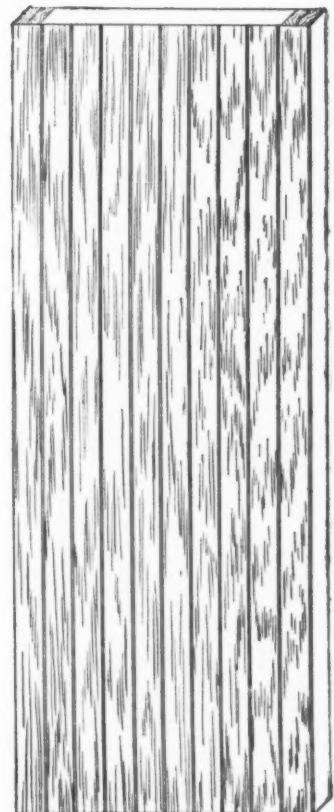
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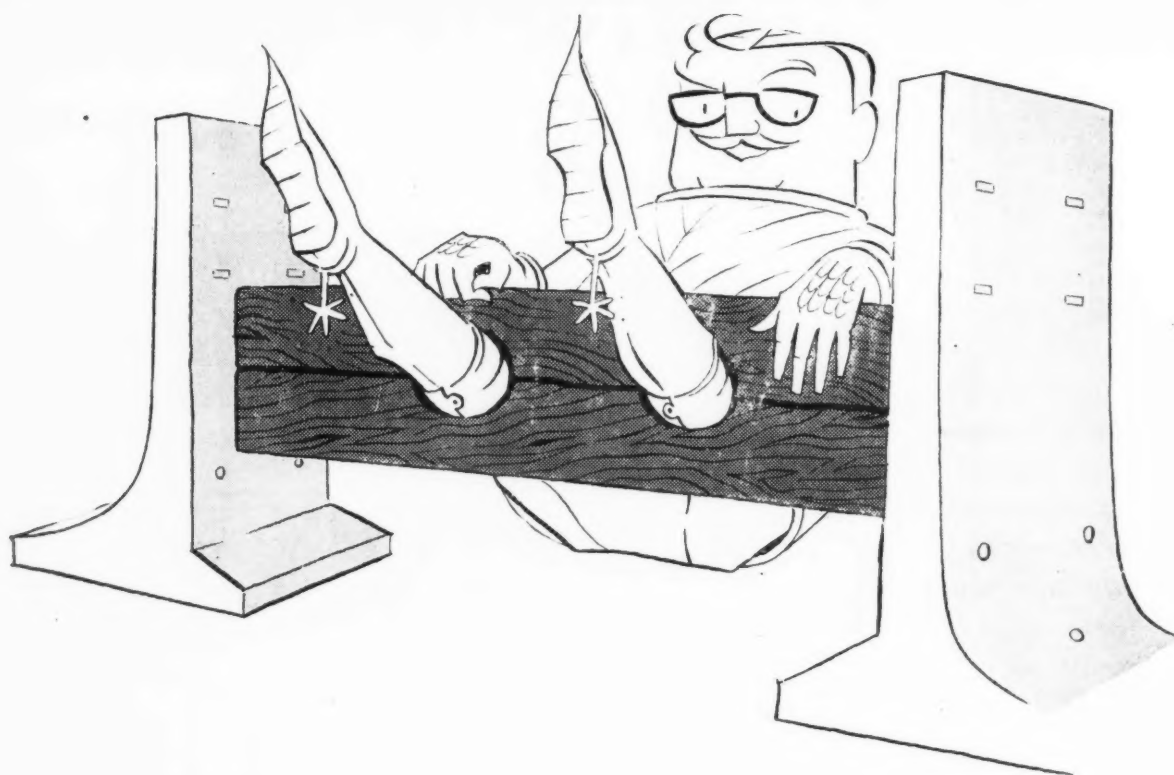
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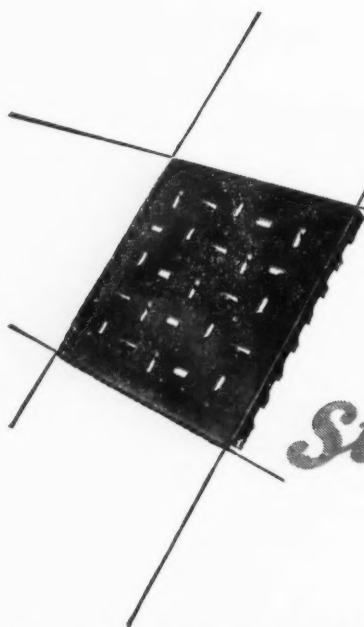
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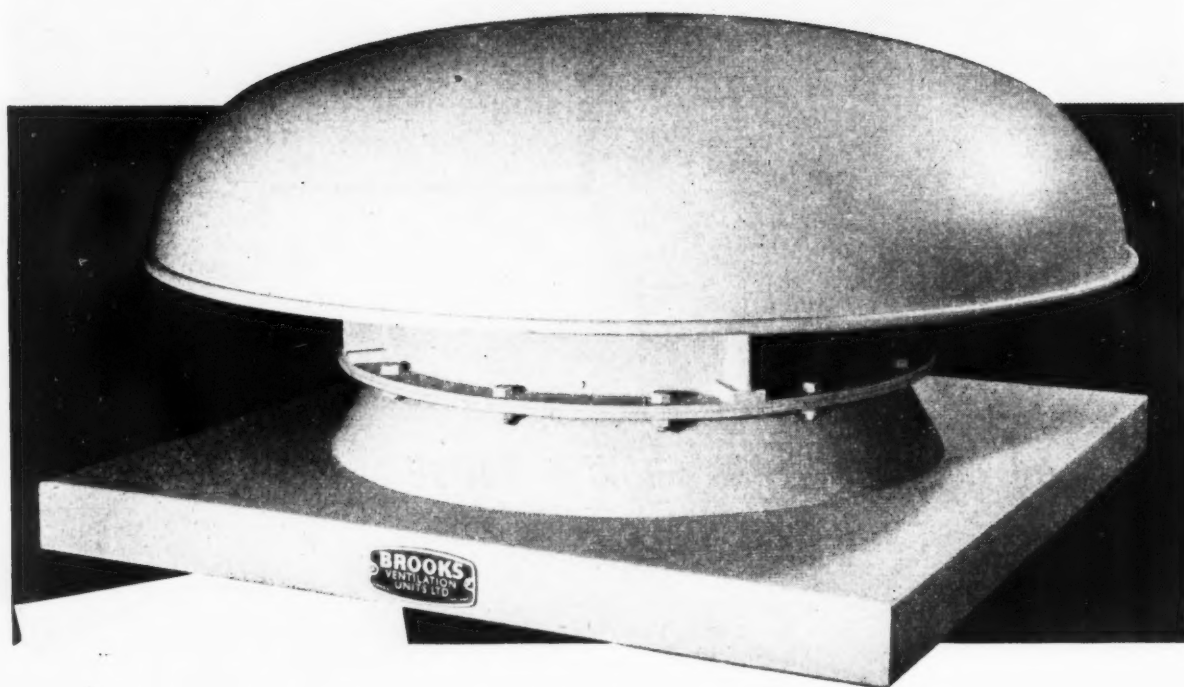
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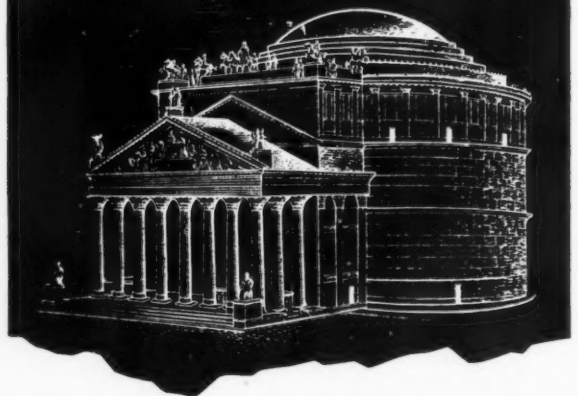
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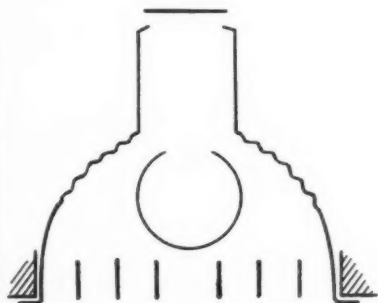
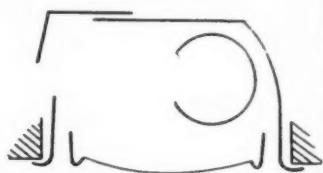
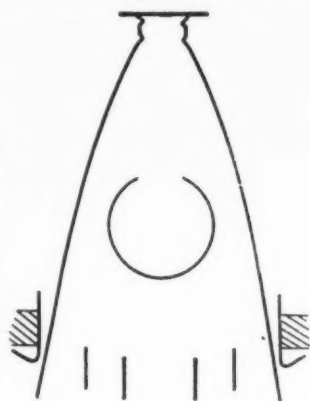
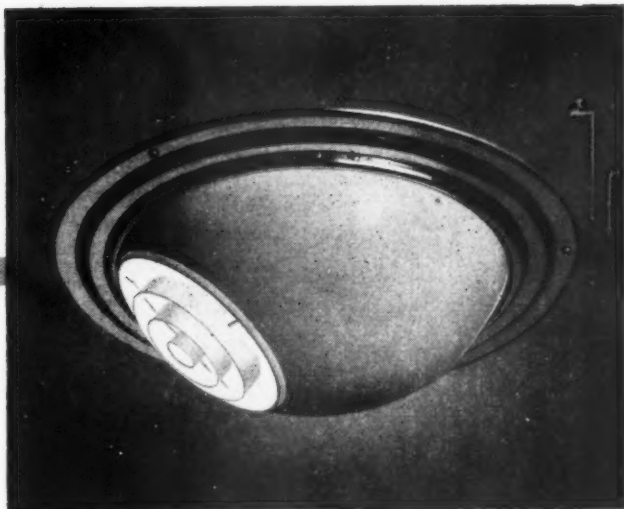
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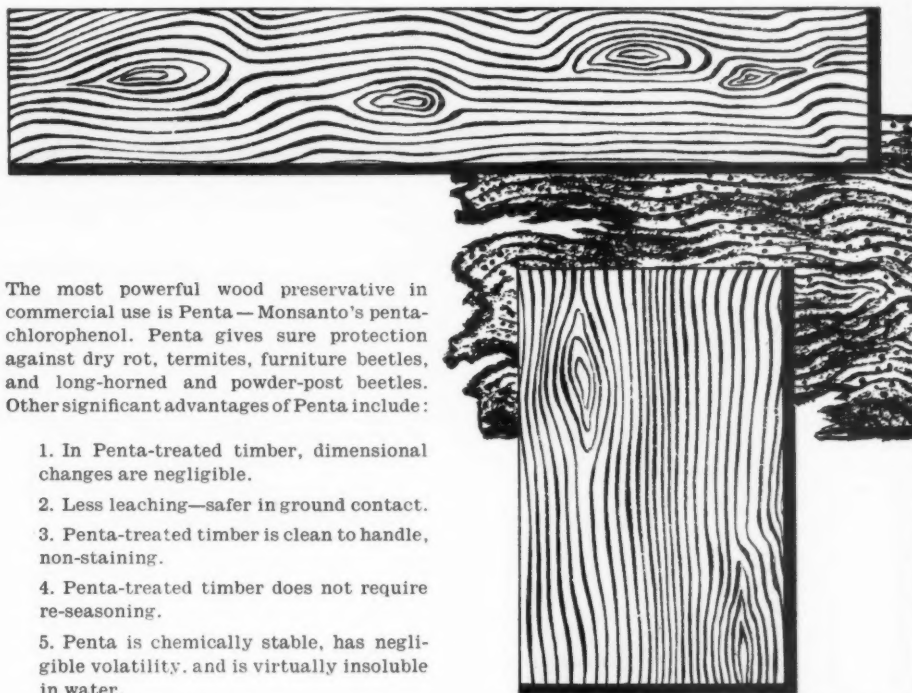
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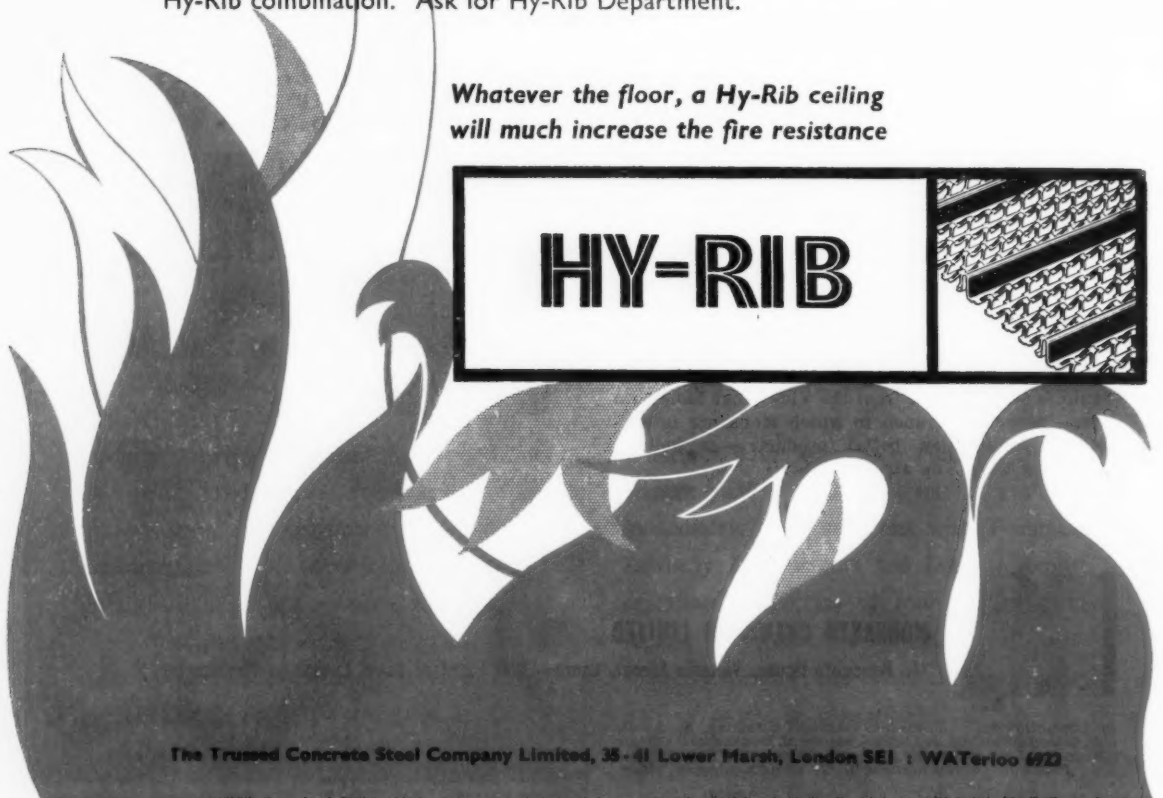
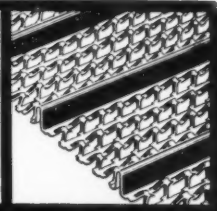
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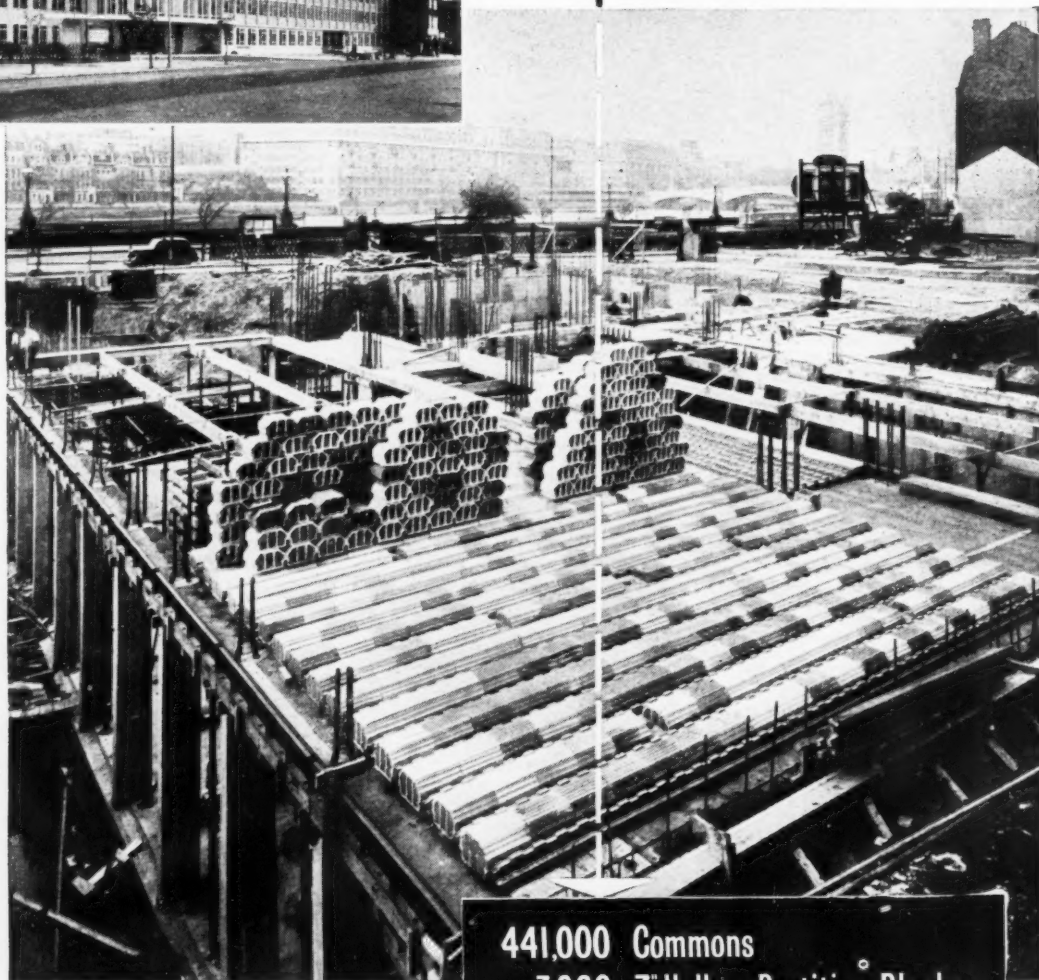
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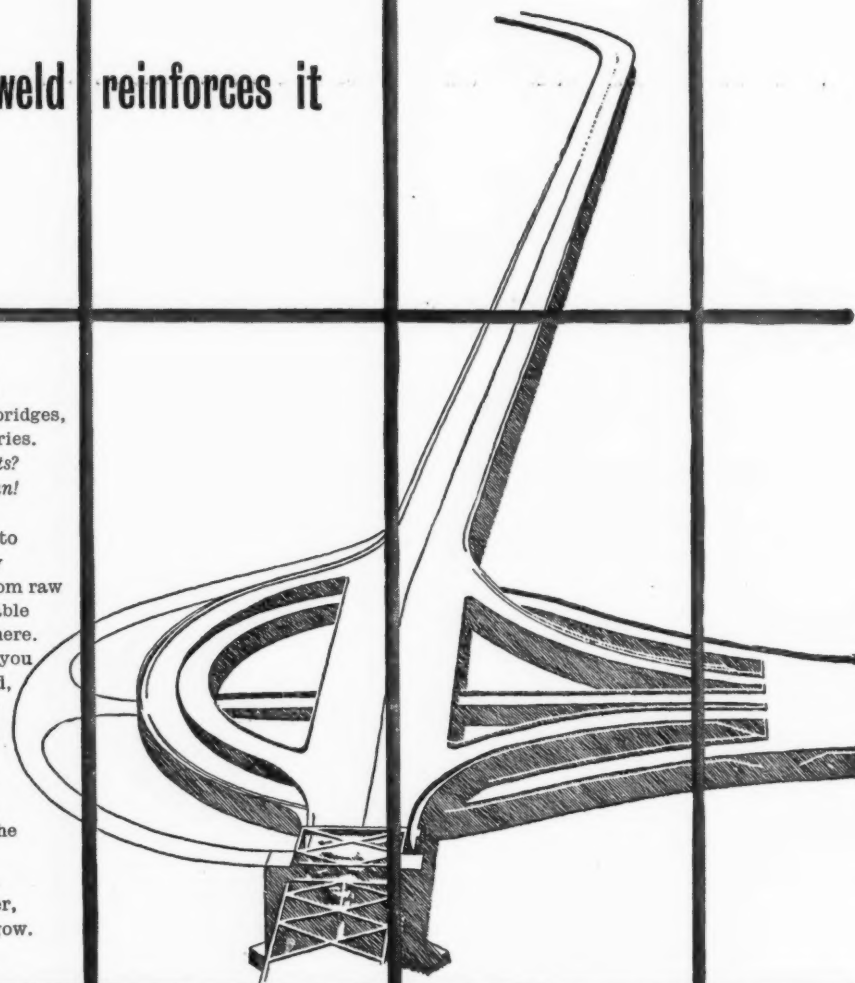
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Floor Treatments Limited specialise in the treatment of floors that receive exceptionally heavy foot traffic. It is a sphere in which they may claim exceptional experience, being responsible in an advisory capacity for some 35,000 floors in schools, public buildings and hospitals throughout the country.

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This is the floor of the STOCK EXCHANGE first treated in 1955 with a Floor Treatments product.

The floor, of hardwood, was laid by Messrs. Vigers Brothers Limited.



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Many of the great variety of hardwoods now coming into our yards are from Gliksten-owned forests and concessions in British Honduras and Ghana. Careful on-the-spot grading and selection ensures a sustained high level of quality for distribution in this country. There are Hardwoods and Veneers for all purposes; for Ship and Boat Building; for Flooring and Constructional Work; for Furniture and Fittings; for Shopfitting and, in fact, for every conceivable purpose. May we tell you more about the fascinating variety now available?

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GLIKSTEN HARDWOODS AND VENEERS *that's excellent!*



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Another notable **TOWNSON** *building*



This impressive, contemporary administration block is a further example of the fine buildings recently entrusted to Townson craftsmanship. A striking addition to the ninety-year-old list of fine buildings by TOWNSON'S OF BOLTON—Builders and Civil Engineering Contractors.

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APPROVED:

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FIRE EXTINGUISHERS**

APPROVED BY THE FIRE OFFICES COMMITTEE

Model 1301 Universal (Royal Navy) Extinguisher. . . FOC Ref. NO. 104/6 for Class A fire risks (fires involving wood, paper, textiles and other carbonaceous substances).

Model 1400 Air Foam Extinguisher. FOC Ref. NO. 104/3 for Class B fire risks (fires on petrol, greases, oils, paraffin, white spirit and diesel oil).

Model 1003 Auto (CTC) Extinguisher. FOC Ref. NO. 104/5 for Class C fire risks (minor electrical risks and small petrol fires).

Model 2003 Auto (Chloro-Flash) Extinguisher. FOC Ref. NO. 104/7 for Class B & C fire risks (extra-hazardous fires involving spirits, alcohols, organic solvents and electrical equipment).

Model 1604 Dry Powder Extinguisher. FOC Ref. NO. 104/8 for class B & C fire risks (flammable liquids of every type—unless they are shielded—and all electrical risks).

All these models comply with British Standard specifications, where these exist. No British standards exist for chlorobromomethane extinguishers or double-action nozzles like that of the Universal extinguisher. But special FOC approval has been given to these Nu-Swift features because of their increased efficiency.

COMPLYING WITH BRITISH STANDARD CODE OF PRACTICE

(British Standard Code of Practice C.P. 402.401 (1951) is published on behalf of the Council for Codes of Practice for Buildings by the British Standards Institution.)

Universal (Royal Navy) Extinguisher Model 1301 for .. Class A fires
Air Foam Extinguisher Model 1400 Class B fires

ACCEPTED BY THE LONDON COUNTY COUNCIL

Consent granted under Sec. 20 of the London Building Acts (Amendment) Act 1930.

All Nu-Swift extinguishers that are approved by the Fire Offices Committee.



Why Nu-Swift are better:
Nu-Swift extinguishers are the only ones on the market to combine these essential advantages.

Immediate action—
instant pressure-charge operation eliminates waiting for a chemical action to build up pressure.

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Nu-Swift extinguishers are used in the commonsense upright position. There are distinctive colours for the models for different fire risks.

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Nu-Swift pressure charges produce a pressure that is always exactly right for fire-fighting. They do not leak, evaporate, or cause corrosion.

**FOR EXTRA SAFETY IN BUILDINGS NEW AND
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London contractors on partitioning job say:—

'No other material goes up as fast as Stramit!'



The smart appearance of the office of Max Rayner (Artwork) Ltd. owes much to its new, glazed Stramit partitions in 1-in. x 4-in. timber framing: the Stramit is held in position by quadrant moulds.

Messrs. Brooking Brothers, contractors of London, recently erected Stramit partitions at the offices of Max Rayner (Artwork) Ltd. in Lexington Street, W.1. They stated that, in their opinion, no other material could go up at the speed with which they were able to erect Stramit partitions. But speed is only a small part of the Stramit story. Stramit partitions are smart, as you can see from this picture. There is a notable absence of drumming, too, when Stramit is employed. And this material positively resists fire. Stramit of standard grade takes paint and plaster direct. It is also available faced with hardboard or fabric (the latter in a variety of attractive colours and designs).

WHAT IS STRAMIT?

Stramit is a low-cost, dry-construction material made of compressed straw. It combines great strength and rigidity with exceptional values of thermal insulation and sound reduction. And it positively resists fire.

Stramit is available in three grades. Standard grade (for ceilings, partitioning, factory screens, etc.) weighs approximately 3.8 lb./sq. ft. and costs from 9/- per sq. yd., including delivery.

Also available: Roofing grade (for roof-decking, wall-linings, etc.); Low-Density grade (for non-load-bearing thermal insulation) and a special asbestos facing (to give a Class I rating for spread of flame).

STOCK SIZES: 4 ft. wide x 6, 8, 9, 10 & 12 ft. long.
Special sizes made to order.

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THE TWO-INCH THICK

BUILDING SLABS

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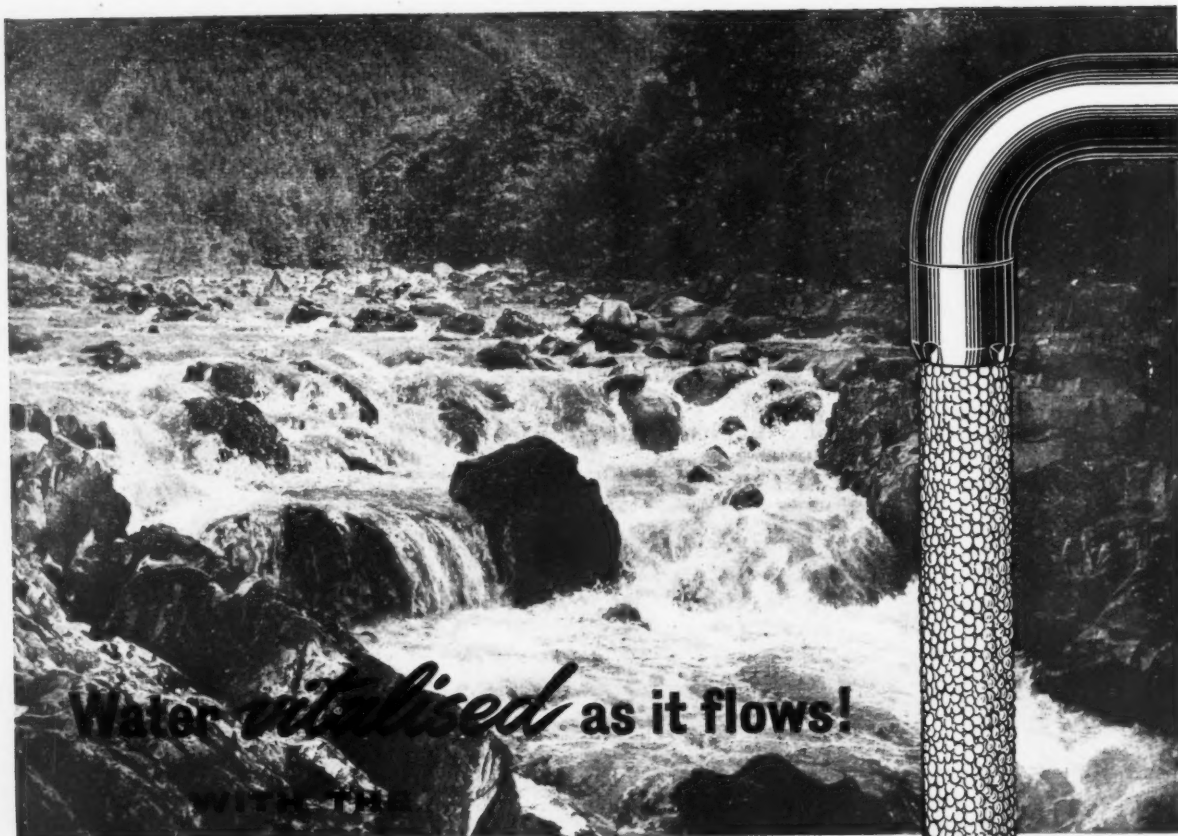
Please send me full details of Stramit Slabs.

Name of firm.....

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Water vitalised as it flows!

“Isa” REGISTERED TRADE MARK AERATOR

Aghnides Patents Nos. 625,084 — 685,463 and Patent Pending

The “Isa” Aerator establishes intimate contact between water and air, adding dissolved oxygen to the water, thereby restoring the original spring-like qualities lost whilst stored in pipes and tanks.

The novel feature is that it is an integral part of the tap, housed in the spout end, and no chemicals are used. As water flows, its pressure energy is utilised to draw in air, saturating the stream with air bubbles. These bubbles escape from the now aerated and revitalised water instantly it is drawn, leaving it crystal-clear, more hygienic, and more pleasant in taste.

Aerated water washes faster, better!



The air bubbles cushion impact, eliminate splash and spread the water evenly over the object being washed.

The bubbly stream makes more and richer suds, provides better and speedier rinses, and prevents scum or film formation.

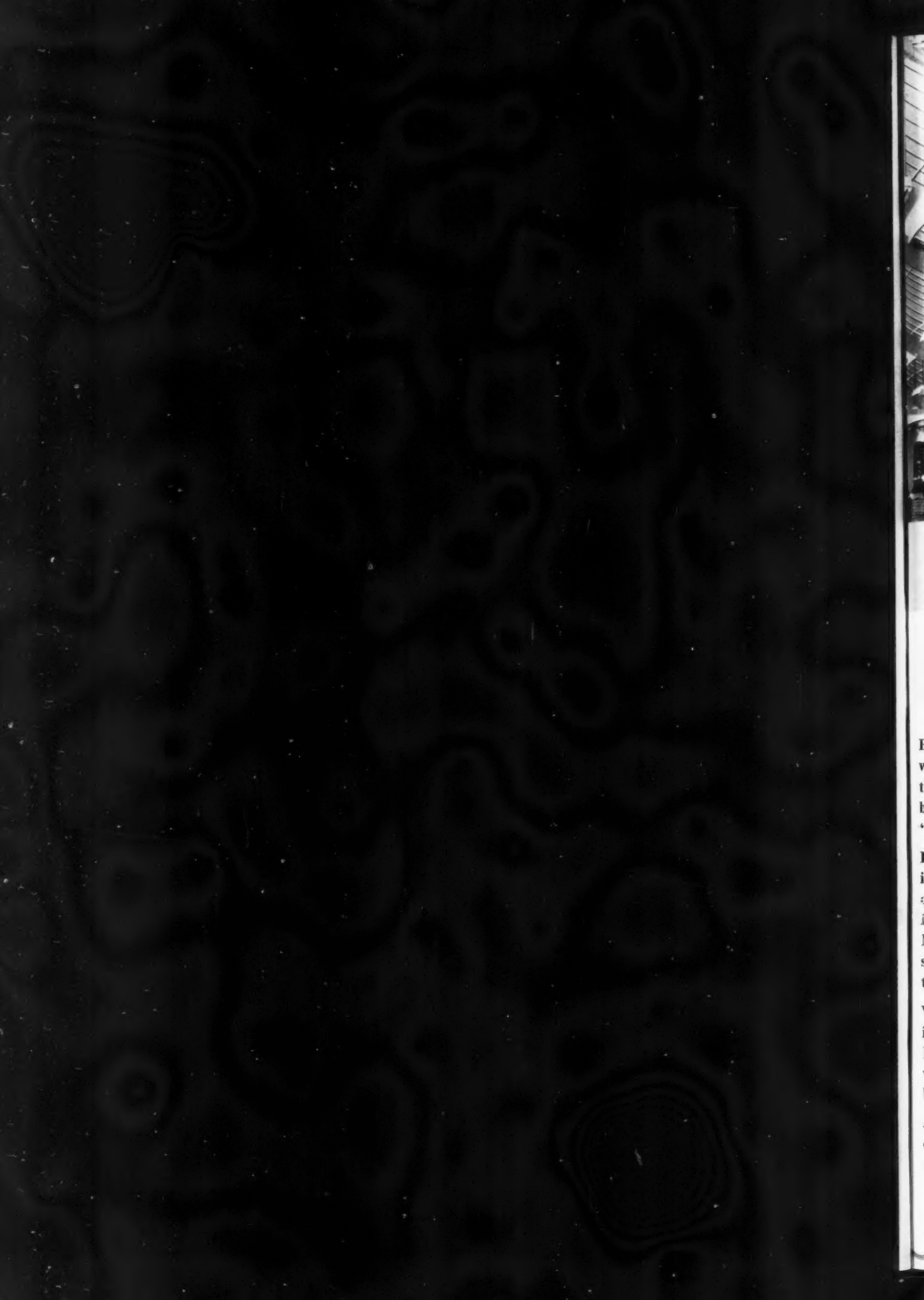
Using an “Isa” Aerator, washing becomes quicker, more economical and easier !!!



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IDEAL BOILERS & RADIATORS LIMITED, IDEAL WORKS, HULL.



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**NOW YOU CAN
INSULATE EXISTING
PROTECTED METAL ROOFS & WALLS
BY THE
ROBERTSON 'IN-SITU' LINING METHOD**

THE ADVANTAGES

Existing buildings of protected metal which are not lined can now be given the fuel-saving advantages of insulation by employing the ROBERTSON 'IN-SITU' METHOD OF LINING.

Insulation board, flame retardant or incombustible, can be positioned quickly and easily WITHOUT DISTURBING THE ROOFING MATERIAL and the lining boards are supported firmly in both directions—they cannot sag or become dislodged.

With costs for space heating increasing, the initial expenditure on ROBERTSON 'IN-SITU' LINING will be regained in a very short time by the saving in fuel costs.

May we send you illustrated literature describing the Robertson 'In-Situ' Lining Method?

MAIL THIS POSTCARD TODAY

Under test at the Fire Research Organisation, Boreham Wood, Robertson Protected Metal roofs lined with flame-retardant insulating board by the Robertson Method, were granted a Class 1A certificate which rates them as having negligible flame spread and more than two hours resistance to penetration by fire.

Robertson Protected Metal Sheetting is still unsurpassed as a long-service cladding material which is free from maintenance costs.

Have you had your copy of CODE OF PRACTICE—PART 1

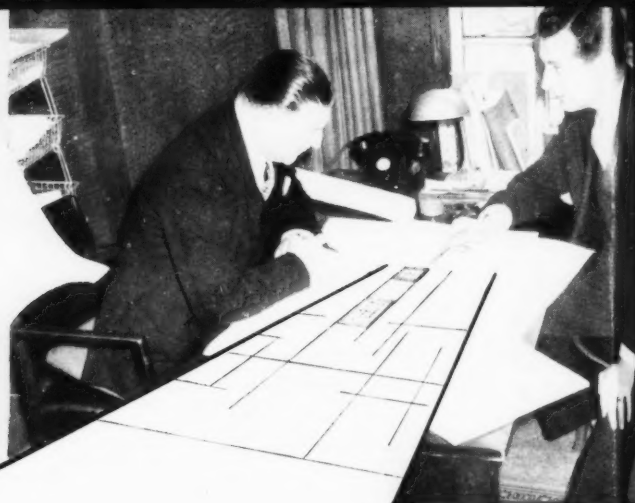
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ELLESMERE PORT
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CONVERSATIONS IN AN ARCHITECT'S OFFICE



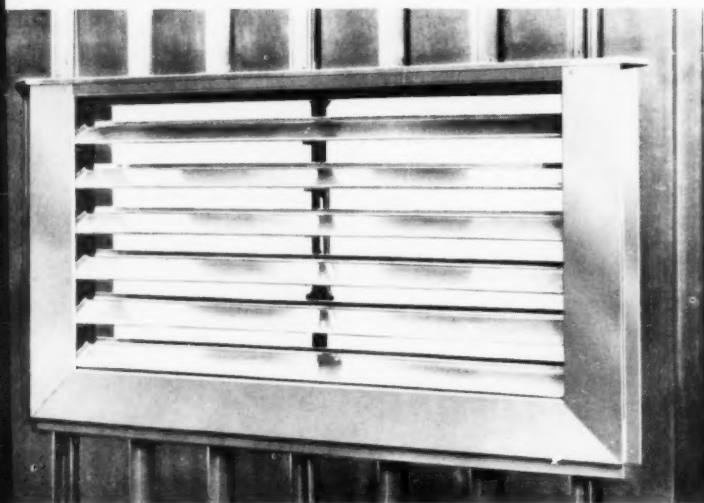
"The inlets for admitting fresh air have been positioned low in the walls and are distributed evenly throughout the building.

Why is that—surely openings on the glazing would have been adequate?

Not really. To ensure satisfactory ventilation, air must enter at a low point in the building, rise to the ridge and then exhaust through the ridge ventilator. In that way, ALL the stale air is removed and satisfactory ventilation at working level is assured.

Very well—but can the inlets be closed when required, to restrict the air flow?

Certainly—these Robertson Air Inlets can be adjusted positively in any position from fully open to fully closed."



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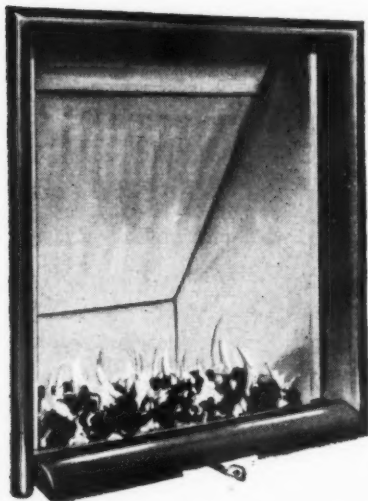
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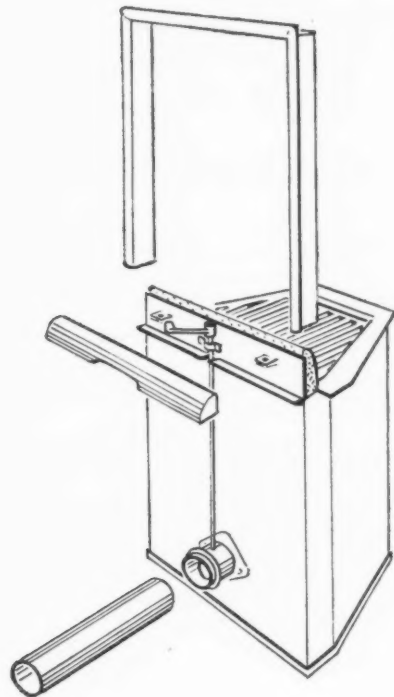
THE RAYBURN SUNK FIRE makes the ordinary grate old-fashioned

In two sizes: 18" to heat up to 2,000 cu. ft.
16" to heat up to 1,750 cu. ft.
The 16" model is also available with boiler.



For further details of the Rayburn Sunk Fire write to the Housing Division—

The word Rayburn is a registered trade mark of Allied Ironfounders Ltd.



... and five reasons why

THE NEW LOOK

For years, the basic appearance of a fire has remained unchanged. Now, here at last, with the completely new look, is the Rayburn Sunk Fire. Its shallow front, hearth-level fire and beautiful simplicity makes an ordinary grate look old-fashioned. That's why the Rayburn Sunk Fire is one of the few to really satisfy the needs of new houses and modern room design.

HEARTH-LEVEL HEAT

The 18" model will heat rooms up to 2,000 cu. ft., and the 16" model rooms up to 1,750 cu. ft. And it is really efficient heating too, because the low position of the fire means greater warmth at floor level.

UNDER-FLOOR AIR SUPPLY

Air is piped to the Rayburn Sunk Fire *under* the floor. The result is a far better rate of burning, with the following advantages for the householder.

QUICK-ACTING CONTROL

Controlling the Rayburn's rate of burning is simple and accurate; and, because of its piped air supply from outside, it will revive far quicker than an ordinary fire.

ANY FUEL IS SUITABLE

The Rayburn's better combustion means that almost any type of fuel can be used—even that of poor quality. And the ashpan volume is 746 cu. in., so it only needs emptying every 3-5 days.

THE BOILER MODEL The 16" model only can be supplied with a back boiler. This will provide ample domestic hot water from a 30-gallon cylinder, or heat radiators up to 45 sq. ft. of radiating surface. In addition the fire will heat a room up to 1,500 cu. ft.

ALLIED IRONFOUNDERS LTD

Makers of cookers, boilers, fires, stoves and baths.

28 Brook Street, London, W.1



ALL Hiduminium Rainwater Goods

conform to B.S.S.*



that means you can rely on
them — always. And that you can be sure that they
will fit on to any existing B.S. unit.

Rainwater Goods in Hiduminium are light and strong ;
they're easier to transport and fit ; they will not crack even
in the coldest weather and, because they are completely
rustproof, cannot stain surrounding surfaces ; they
need no painting and are highly resistant to corrosion.

* Conforming to British Standards Specification 1430/1947.

Hiduminium
makes the most of *Aluminium*

HIGH DUTY ALLOYS LIMITED • SLOUGH • BUCKS

clear headroom to apex

MANY FLEXIBLE SIZES.... EXTENDIBLE IN WIDTH AND LENGTH

If you want to enclose space, Marley 'G' Type Buildings provide a rapid, economical and effective answer.

A range of standard sizes, up to 50ft. (or more), is available in single or multiple clear spans of great strength. Bays can be left open where covered storage only is required or infilled for totally enclosed buildings.

We install foundations, erect and roof, leaving the local contractor to handle the normal building work.

There is a Marley Concrete Building for almost every purpose.

**LOW IN FIRST COST • SUPPLIED AND ERECTED BY EXPERTS • SUPERB MODERN LINES
GREAT STRENGTH • HIGH FIRE RESISTANCE • RUST AND ROT PROOF • NO MAINTENANCE**

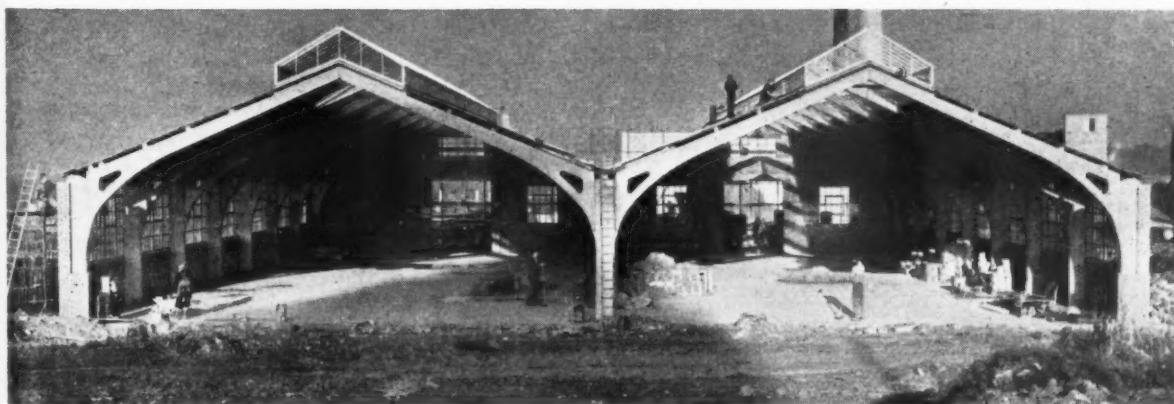
Please write to your NEAREST branch for comprehensive details or for a Technical Representative to call by appointment

MARLEY CONCRETE LIMITED

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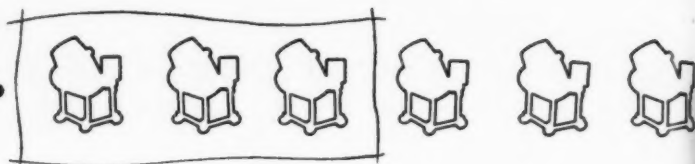
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MAKERS OF THE WORLD'S LARGEST RANGE OF PRE-CAST CONCRETE BUILDINGS AND GARAGES

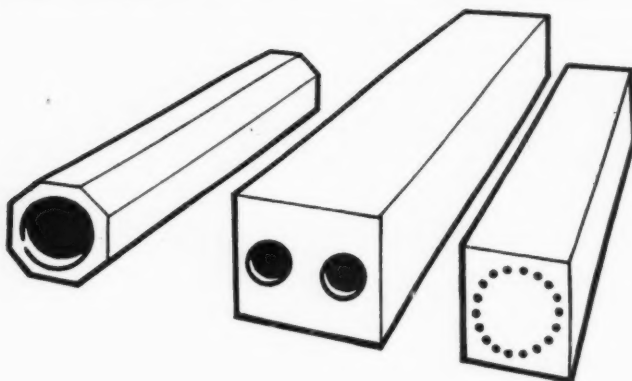
Save concrete..



Save weight...



**Use
Sonovoid
in piles, slabs
and beams**



Sonovoid is fibre tubing which is used to create voids in concrete piles, slabs and beams.

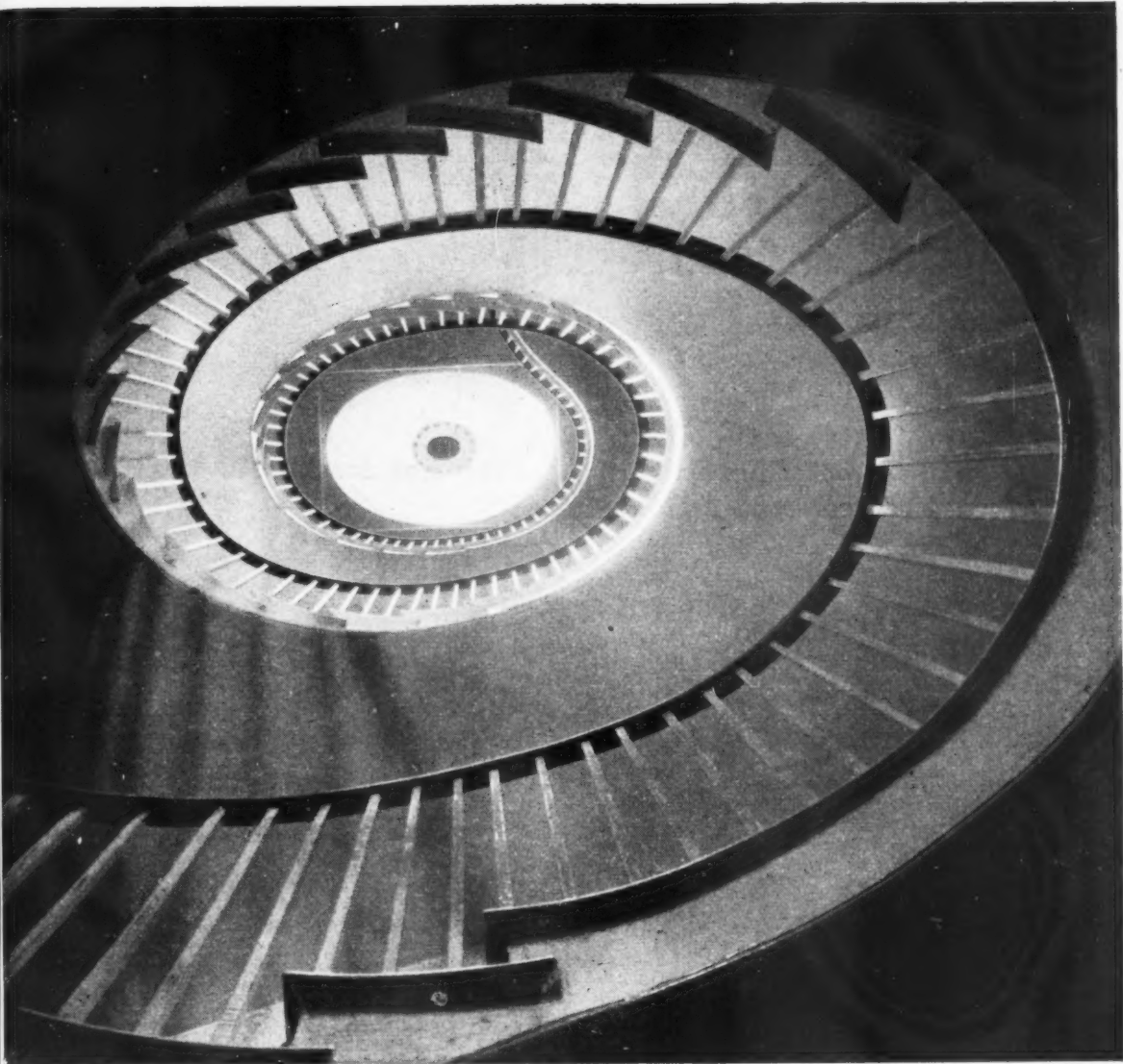
It saves weight, concrete and reinforcing steel.

It can be used for pre-cast or cast-in-situ jobs whether unstressed, pre-stressed or post-stressed.

Sonovoid tubes can even be curved. Write for full details of price and delivery.

 ***Sonovoid***
for creating voids

T.P.T. CONSTRUCTION PRODUCTS *Division of The Textile Paper Tube Co. Ltd.*
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RISING SPIRAL

Warmth to heat homes, factories and office buildings is the friendlier side of the fire story. But a side in which the same long term view should be taken as with fire protection and precaution.

Effective thermal insulation prevents the wide scale wastage of fuel through heat losses, assists the national economy, and rewards the property owner with lowered overheads and relief from the full brunt of spiralling fuel costs.

Are you aware of the dual nature of Insulating Gypsum Plasterboard?

As a lining it not only provides excellent thermal insulation but also a real protection from the spread of fire.

There is no better or more inexpensive method of ensuring two such worthwhile ends.



*Insulating GYPSUM Plasterboard is BRITISH and ...
CONSERVES FUEL ... RESISTS FIRE*

★ FACTS

- are given in this
- brochure and we shall
- be pleased to send
- you a copy.
- *Please write to the*
- *address below.*

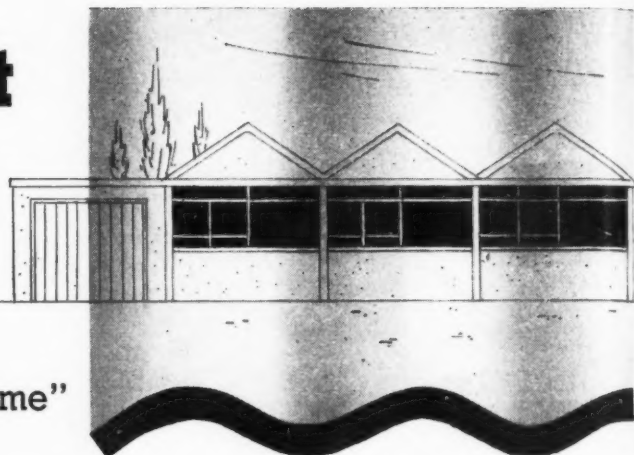


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THE GYPSUM PLASTERBOARD DEVELOPMENT ASSOCIATION · G.P.O. BOX 321 LONDON · W.1
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Independent laboratory controlled tests . . .

● BSS 476/53 —
"surface spread of flame"



**prove 'corroglaze' superiority over all other forms of
corrugated roof lighting sheets.**

The danger of fire spread, particularly in roofs, is a matter of major concern to architects and all associated with the building industry.

Terminology used in describing the fire resistant characteristics of roof lighting materials is vague, and to clarify the matter beyond dispute, tests have been made under British Standard (B.S. 476/1953). **These tests clearly establish Corroglaze as the only corrugated roof lighting sheet which is non-combustible and therefore cannot in any way assist the spread of flame.**

ELIMINATES FIRE HAZARD . . .



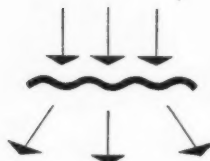
Corroglaze is pure glass. It cannot flash, smoulder, burn or drip flaming particles. It is the **ONLY** corrugated roof lighting medium affording this very necessary protection.

TRANSMITS MORE LIGHT



High light transmission is essential. Corroglaze provides and maintains this under the most adverse atmospheric conditions. It does not discolour under exposure and is unaffected by chemical fumes.

BETTER LIGHT SPREAD



Scientifically designed prismatic-type ribbing on the underside of Corroglaze results in excellent light diffusion eliminating dull areas and harsh light.

RANGE: Corroglaze which is reinforced with 1in. square mesh and supplied ready mitred if desired, is manufactured in profiles to match corrugated asbestos, aluminium or galvanised iron sheets in most popular demand. **FIXING:** Glazing bars are unnecessary. Fixing holes or flashings are not required, thus eliminating consequent risk of leakage. **ECONOMY:** Panel-spaced Corroglaze gives greater light distribution yet saves over 30 per cent. costs when compared with patent glazing laid in straight runs.



corroglaze

100% pure glass

The only non-combustible
corrugated
roof lighting
sheets.

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SMITHS

new service for the ARCHITECT & DESIGNER

Smiths Clocks and Watches Ltd. and English Clock Systems have combined to give a complete service to both Architect and Designer. All Wall Clocks in the new extensive Smiths and E.C.S. ranges together with 'specials' can now be ordered through the Architects' Service Department of English Clock Systems. Clocks can be either 'Sectric' or fitted with impulse movements for operation from E.C.S. Pendulum Master Clock.

Also available: the larger interior/ exterior clocks, advertising clocks, time recorders, bell signal clocks, watchman's clocks, time switches and process timers etc. In fact, the new Architects' Service Department can supply the complete range of timekeeping equipment required for factory, school or office.

'SPECIALS' SERVICE

In case there is not a suitable clock for the particular requirements from the wide range available we can now produce to Architects' own specification from 6" Wall Clocks to the largest Tower Clock.

BRANCH OFFICE & SHOWROOMS
IN MANCHESTER, BIRMINGHAM
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Medway SURFACE MOUNTED WALL CLOCK from the E.C.S. range. Light Gill Sans numerals on white circular dial, arrow-type hands. Hinged-type case of spun aluminium. Standard finish in bronze (any colour supplied at small extra cost).

Dimensions: Dia. of face 9", 12". Overall dia: 11½", 14½". Projection from wall: 2¼"
Flush fitting model **FIFE**—Cream or white finish—wall box supplied.
Surface mounted model **BRISTOL**—Bakelite case—6", 9", 12" dials.

INFORMATION AND LEAFLETS FROM THE ARCHITECTS' SERVICE DEPT.

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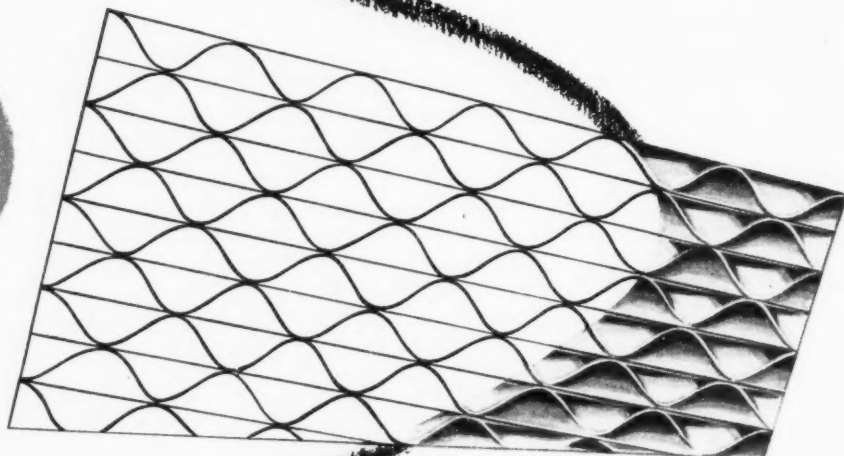
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* A BRANCH OF THE CLOCK AND WATCH DIVISION OF

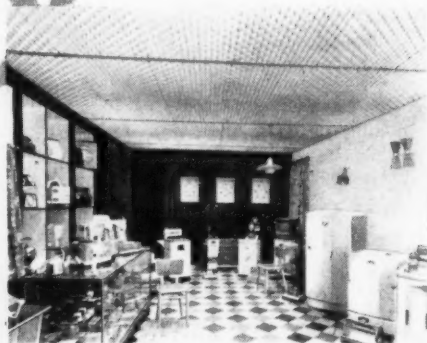
SMITHS

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DIFULITE



**throws new light
on the subject**

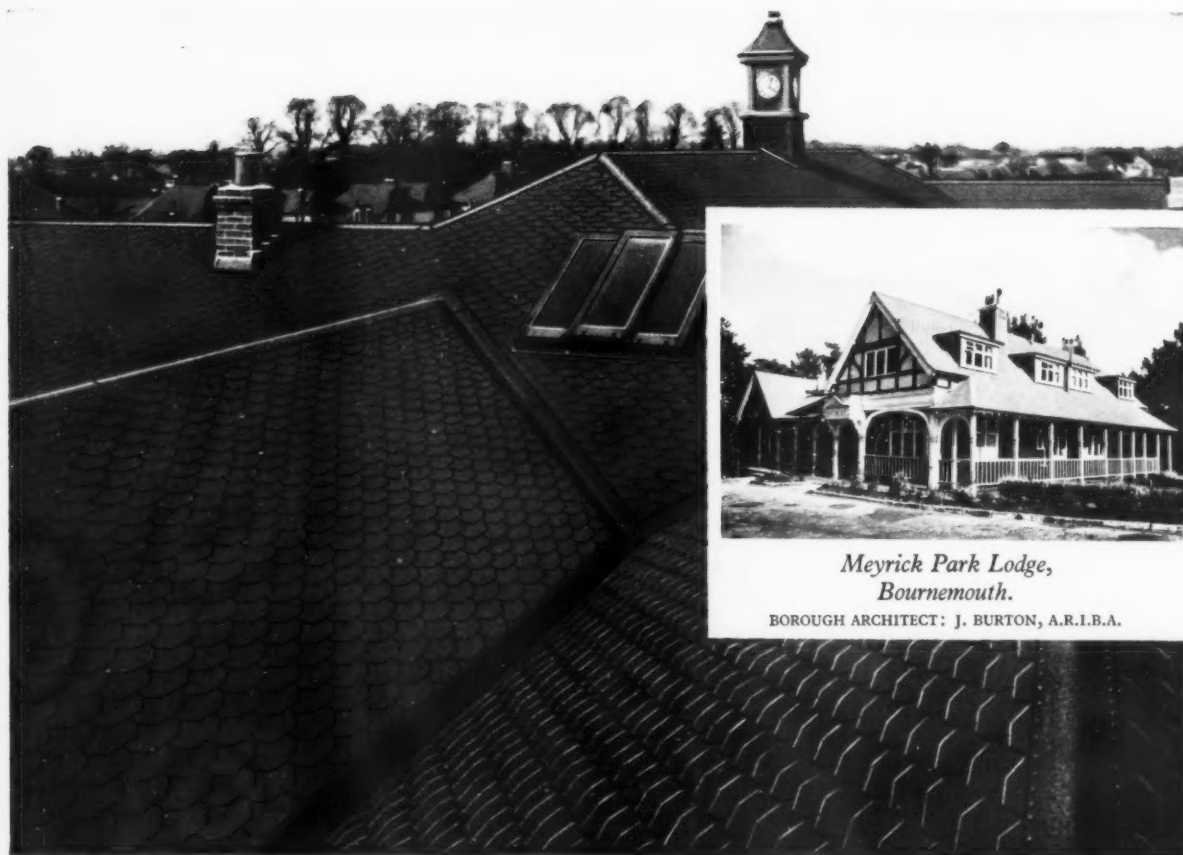


Here is the Ideal method of overhead light diffusion. Difulite Louvred Ceilings have a highly decorative appeal and ensure maximum efficiency with minimum installation costs. Each Difulite panel is so constructed that it can be removed without difficulty for easy cleaning and lighting maintenance. Write now for the new difulite folder to :—

Metal Sections Ltd
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Telephone: BR0adwell 1541





*Meyrick Park Lodge,
Bournemouth.*

BOROUGH ARCHITECT: J. BURTON, A.R.I.B.A.

B.B.C. Sports Pavilion, Motspur Park. CONTRACTORS: S. J. FRANKLIN & CO.

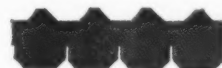
Two way attraction

Where thorough weatherproofing must be combined with pleasing, unobtrusive colour and texture *together with economy*, Ruberoid Strip Slates are a roofing material without equal. Provided the roof in question is fully boarded and has a pitch of not less than 30°, their mineralised finish, outstanding pliability (which ensures that they will neither slip nor break once in position) added to their economical simplicity of laying, make them a doubly attractive proposition — to you and your Clients.

SHAPES AND COLOURS

Octagonal and Square Butt shapes are available in the three colours illustrated; with the addition of Natural Bangor Slate Blue in the Square Butt type. Where extra fire resistance is called for, Grey Asbestos Base Square Butt Slates are available.

for COLOUR
STRENGTH · ECONOMY



*Natural Delabole
Slate Grey*



Venetian Red



*Westmorland
Slate Green*

RUBEROID STRIP SLATES

For technical literature, contact :

THE RUBEROID COMPANY LIMITED, 427 COMMONWEALTH HOUSE, 1-19 NEW OXFORD STREET, LONDON, W.C.1





More scope

for creative achievement in floor styling



Architect: Charles Pike, F.R.I.B.A. & Partners.

* Linoleum laid by CELLULIN FLOORING CO., LTD.



... stands for The Linoleum Manufacturers' Association, 127 Victoria St., London, S.W.1. For further information write to the Association or to any of the following members:—

Barry Ostlere & Shepherd Ltd., Kirkcaldy
Dundee Linoleum Co. Ltd., Dundee
Linoleum Manufacturing Co. Ltd., 6 Old Bailey, E.C.4
Michael Nairn & Co. Ltd., Kirkcaldy
North British Linoleum Co. Ltd., Dundee
Scottish Co-operative Wholesale Society Ltd., Falkland, Fife
Jas. Williamson & Son Ltd., Lancaster

Here, at The Bishop Simpson Church of England School, Redhill, Surrey, is another example of the skilful use of linoleum. Available in a vast range of patterns, linoleum offers wide scope for creative achievement in floor styling. Any members of The Linoleum Manufacturers' Association will gladly help you to develop your ideas.

PLAN FOR

LINOLEUM



THE ARCHITECTS' JOURNAL

No. 3275 Vol. 126 December 5, 1957

9-13 Queen Anne's Gate, London, S.W.1. Tel. WHI 0611

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NOT QUITE ARCHITECTURE

DROP DEAD, DROPHEAD!

It has long been recognized that the automobile—the Detroit dreamboat, that is, not the Coventry coughdrop—is more than just a means of transportation. Stylists, Thomists, art-critics, general semanticists, Freudians and self-appointed guardians of public morality (in that order, to give credit where it is due) over the last decade have discovered that—to quote one of them—"Your Car Reveals Your Sex Fears."

While they are calling down hellfire on the two-pedal Oedipus complex, the automotive sub-conscious has ramified into a deeper hidden depth, that was recently probed by Victor (Fort Worth) Gruen, who exemplified it by the following case-history.

Ramming his '57 Chevvy with her '49 Buick at least half a dozen times, she screamed, "Turn around and fight like a man! My car can beat your fancy damn heap any day of the week and twice on Sunday."

Which is all very well, one supposes, but, since styling anticipates function, how do you get styling to anticipate this one, especially at a time when Detroit, frightened out of its wits by the consequences of equipping every suburban housewife with nearly enough horsepower for vertical take-off, is trying to build safety into the contract, and keep death off the landscaped multi-lane thru-way.

Answer—there's always a customizer, always some do-it-yourselfer who wants to make marginal modifications to the standard product in order to kid himself that he is keeping ahead of the Jones-boy, and two quite independent lines of development put a skull-and-cross-bones aesthetic into his hands. Firstly there were the advertisement for Cave Man Masks ("Have a Hideous Head!"), for replicas of shrunken heads ("Gives your den a lived-in look"), for do-it-yourself Voodoo kits, and so forth.

At the same time there was the development of pin-stripping, an attack of John-



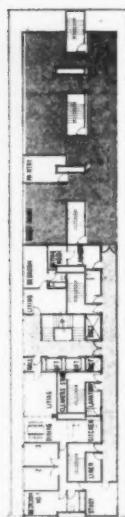
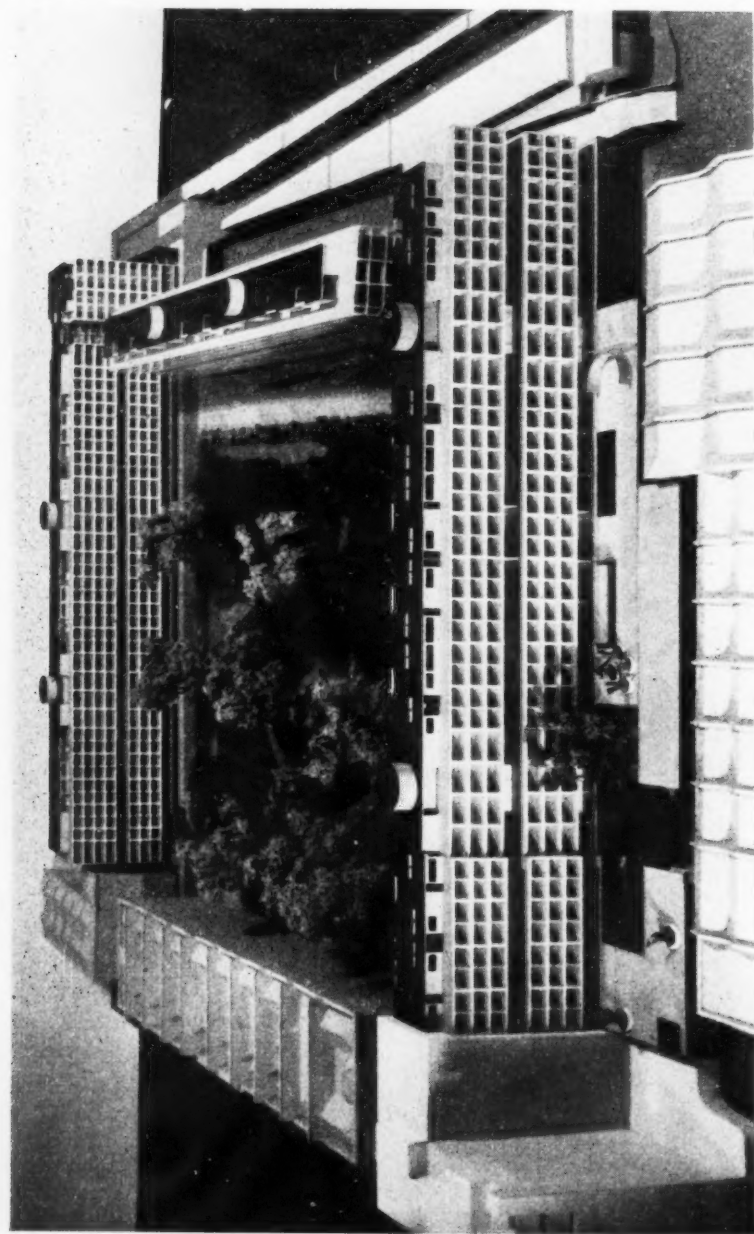
CATERING EQUIPMENT

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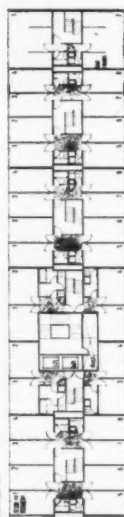
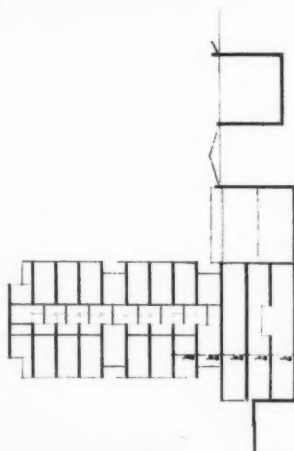
LLOYDS
NEW BUILDING

by

"Stotts of Oldham"



Gallery floor plan

Study-bedroom floor plan [Scale: $\frac{1}{8}'' = 1' 0''$]SECTION 3
Cross section [Scale: $\frac{1}{8}'' = 1' 0''$]

Contemporary Collegiate

Richard Sheppard and Partners' design for halls of residence for Imperial College is the first attempt we have seen to interpret the collegiate idea of student accommodation in an acceptable, twentieth-century, architecture. The scheme is to go forward in conjunction with the expansion of the College, on the Imperial Institute site to designs by Norman and Dawbarn. The sites, for teaching accommodation and residence, lie west and east, respectively, of Exhibition Road, Kensington. As the model above shows, the new halls are to replace the tall terraces of houses on three sides of Princes Gardens. The existing lawn and trees of the square are to be preserved, and the roads on these sites will be closed, thus allowing the gardens to extend right up to the buildings. The road on the north side of the square, seen at the top of the model, will alone remain, for traffic running between Ennismore Gardens and Exhibition Road. Each student is given a small study-bedroom, and photographs of two full-size mock-ups are shown on page 837. These rooms are grouped in clusters of four or eight on each floor—together with bathrooms and store—generally round a three-storey staircase. In this

respect the planning resembles the traditional layout of English university colleges. The stairs, generally six in number for each hall of residence, are served by a gallery floor, on the ground and fourth floors (shown recessed above). This gallery (which is reached by lifts if on the fourth floor) contains a flat for the warden and deputy warden, a laundry room, kitchen and quiet and common rooms. The halls are all physically distinct from each other, but are planned side by side in each block. There are four halls of 108 students in each of the east and south blocks, and two of 108 and two of 140 in the north block. There is, in addition, a hall of 70 planned separately. The gallery is designed to be comparable in function with—and to replace—the traditional quadrangle. It is fully glazed and, for a large part, the full width of the building. A cafeteria, capable of serving up to 1,800 meals, is on the ground floor of the south block. A small room for dining "in hall" is also provided. A car park is at the back of the east block and a swimming pool, rowing tank, squash and fives courts on the north side.

Piperish Americana that had the customizers applying cart-painters' flourishes to key corners of their vehicles, either by paint or by decals—transfers to you. The fusion of these two lines of thought was trailed by the development of miniaturized shrunken heads, to swing in the rear windows of cars, and was consummated by invention of Ghoul Decals, choice vignettes to use instead of pinstriping, with an ikonography that covered—and I quote—Man removing Eyeball, Hop-head eating Engine, Man Eviscerating Self, and the themes illustrated below.



This, of course will fully confirm the suspicion of those who hanker after the good old pre-technological Golden Age, that civilization is going up the pole, down the drain or right round the bend, and that things aren't what they were in Grandad's day. Aren't they? Let me recount a pretty pastorate that should give peasant-culture sentimentalists something to ponder on.

A busload of us students was coming back from San Gimignano to Florence, over the moonlit hills of the Chianti country. We were about evenly divided between Anglo-Saxons from various parts, and French from the Sorbonne. The lights were out, the French were in the back reverting to normal in pairs. The Anglo-Saxons, Banham excepted, were in the front and, lest the devil find work for idle lips, began to sing. As the kilometres rolled by, they covered the folk songs of the English speaking world with encyclopaedic thoroughness—not just the obvious ones like *Sam Hall*, *Frankie and Johnnie*, *Waltzing Matilda*, but more recondite material from deeper in the peasant past, like *J D Stinson's Outfit*, or *The Pricketty Bush*. To amuse such Gallic ears as were still attending, I roughed in translations of the lyrics in my best Intermediate French. Finally, as we rumbled over the Cascine Bridge, they shaped their glottises around the sombre chords of *Strange Fruit*, and the lovely bespectacled creature in my arms stirred and enquired languidly "Combien de morts cette fois?"

REYNER BANHAM

The Editors

WANTED: A NEW NASH

THE statement of the Crown Estate Commissioners on the Nash Terraces is characterized by woolly language, foggy thought and a singular lack of information. It is scarcely credible that ten years after the Gorrell Committee's report expressed the most gloomy view of the structural condition of the terraces, the Commissioners are unable to express an opinion either on the condition of the buildings or the cost of preserving them. A thorough survey should have been undertaken to enable the Commissioners to base their statement on ascertained facts with firm estimates of capital cost and annual maintenance. The proposal to invite private developers to restore and convert more than half the Terraces, including many of the principal Park facades, has the advantage that it relieves the Commissioners of the need to find the capital, but is in other ways highly questionable. It would be far better for the Commissioners to retain complete control and responsibility for the work; having gained experience with the conversion of Cumberland Terrace they could work systematically through the Terraces on a ten-year programme as the leases fall in between 1963 and 1970. We question, too, the wisdom of placing the site of Someries House and Cambridge Gate (and possibly Cambridge Terrace) on the market and inviting developers to come forward with possible schemes. The object of this is "to discover how best modern buildings of really good quality can be fitted into the Nash design." This proposition fills us with alarm. The Nash Terraces and Regent's Park must stand or fall as a whole, and the Commissioners appear to envisage a process of piecemeal redevelopment in which the unity of the whole design would eventually be destroyed. The Commissioners have not excluded the replacement of other terraces if private developers see no profit in conversion, while Hanover and Kent Terraces are, apparently, unlikely to be kept for more than 20 years. A process may begin that will lead to the disintegration of the grand design and prejudice ultimate comprehensive redevelopment when the principal Terraces can no longer be preserved. The decisions of the Commissioners are by no means as good as they look at first sight.

THE BUILDING EXHIBITION

This week we conclude our report of the 1957 Building Exhibition. Reviewing the vast ensemble, we can truthfully say that each year (to be exact each *other* year) it gets more interesting to architects. The reason for this, broadly speaking, is that the Building Industry is slowly attracting a larger share of the nation's intellect. Its metabolic rate (to borrow a metaphor from nutrition) is faster: the time-lag between the first mention of a new idea and its final exploitation in a product or a technique tends to be less. We

may pride ourselves that one reason for this is the intrusion of architects into the cycle of development. It would be instructive to note how many products at this year's exhibition owe their form or their very existence to the fact that they were first "developed" for some architect's programme.

Another medium for focusing intellect on the problem of building is, of course, the Building Research Station and that influence too is steadily advancing.

Each exhibition reflects to some extent the phase through which the industry is passing. This time it is a phase of consolidation. There are no startling developments like the heat pump and the curtain wall of 1955; but more ideas are being followed up. Site mechanization is gaining momentum, insulation is being made easier and cheaper, windows are being adapted for high buildings and for easy maintenance, there are improvements in self-finishing materials, plumbing is being made cheaper and more expeditious and there is a wealth of new equipment for forced-draught central heating and generally for providing better heating in the medium-cost house.

What is the purpose of the Building Exhibition? It is of course a trade fair and it would be wrong to assess it by a professional standard. Nevertheless the architect is probably (though vicariously) the biggest customer and it is only to apply the criteria of good business to ask if he is being served by it as well as he could be. When he goes there does he see what he wants to see? There are two sides to this question: is it easy for him to see what is there? and is everything new in building to be seen at the Exhibition? Though we are firmly convinced that a visit to the Building Exhibition is *always* worth the architect's while (and this year more than ever), the answer to both of these questions must none the less be "No." Because the Exhibition is not sectionalized (apart from contractors' equipment and woodworking machinery) he must walk miles and miles if he wants to find out what there is in any category. Further, though there was much that is new and interesting at this year's Exhibition, there is much which is new and interesting but which was not in the Exhibition (as can be judged, for instance, by checking through the *AJ Industry* notes for the past year). In our view there is a direct connection between the failure of the organizers to sectionalize the show and their failure to attract so sizeable a part of what ought to be there. For if there were a move to group at least the main categories together there would be a stronger incentive to manufacturers to organize for it and to make it the occasion to show new products. Apart from this there is the general point that in these days of the increasing application of scientific method, our institutions *must* keep pace. They can no longer abide by the pattern of *laissez faire*, of the jolly free-for-all which characterized the era in which the Building Exhibition was born; for if they do they will slowly lose their grip on the public imagination. The Building Exhibition is a most important national event: what a pity if it were to fail by being too flabby.



BEWARE ULTRA-TOPIA!

Consistency and tact are clearly two of Henry Brooke's virtues. He opened the TCPA conference on post-war planning on Thursday with a warning against the dangers of "ultra-perfectionism" and of attempting to do too much. Suiting the action to the word he then moved across Westminster Bridge to the House of Commons to announce that the Government is to build no more new towns in England and Wales. Since the conference, though divided on many things, seemed to be unanimous that it was high time some more new towns were built, and planning rescued from the doldrums in which it is stuck, he was no doubt well-advised to say nothing about this to the conference.

*

And certainly nobody is going to accuse Whitehall of being "ultra-perfectionist" in planning or architectural matters these days. In fact it is lagging not only behind the planners and the local authorities, but also behind industrialists like A. G. B. Owen, the sponsor of the BRM racing car, who told the conference most emphatically that good planning, in his experience, actually paid.

LEARNING ABOUT LEARNING

The meeting called by the London branch of the ABT to discuss education in the building industry did not

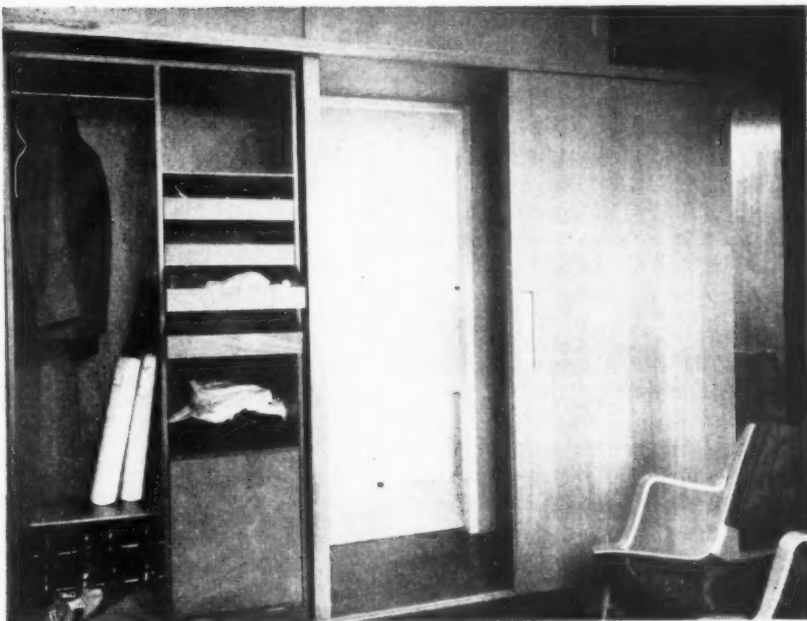
get the attendance it deserved. The cause, one hopes, was the counter-attraction of the Building Exhibition rather than lack of interest in the report of the London Regional Advisory Council for Higher Technological Education which proposed the establishment of a College of Advanced Building Technology in central London. ASTRAGAL was very pleased to hear D. E. Woodbine-Parish, one of the authors of the report, say that he regarded the proposed college only as a first step towards a university training for the leaders of the building industry. For the principal weakness of the report was its thinking in terms of an improved Polytechnic rather than of a new University Faculty embodying quite revolutionary educational ideas.

*

Percy Johnson-Marshall, who has been pioneering this concept of a University Faculty for a number of years, was mild (perhaps too mild) in his criticisms of the report which, he recognized, had to be a "diplomatic document." But he was able to elaborate his ideas with his customary enthusiasm, the fundamental thing being, in his view, to teach everybody to understand the other man's job. This should be done by means of a common basic course for all who entered the Faculty before more specialized studies began. He strongly urged the need for practical work to be an integral part of the syllabus, on the lines of the Birmingham School, and for each Faculty of Building to embody regional research centres that would immensely expand the work now being done at BRS. There is obviously a great need for a wider discussion of these ideas, and of the report.

LETHABY UNVEILED

With due ceremony, though rendered inaudible by the traffic in Southampton Row, and ringed around by residual Eminent Edwardian Aesthetes as well as the usual exotic beauties that the Central School always seems to be able to produce for occasions such as this, the chairman of the LCC last week unveiled a memorial plaque to W. R. Lethaby, the Central's founder-principal. The unveiling accomplished, the company then adjourned indoors to hear the PRA declare open a rather sparse exhibition of Lethaby's works and drawings, which is worth seeing for two things at least—his designs for



L. W. Lane, chief planning officer of the LCC, speaking yesterday to the TPI on the planning problems of central London referred to the necessity of developing more halls of residence, and suggested that students' hostels could be used as hotels for tourists out of term time. This extremely sensible idea has been considered by Richard Sheppard and Partners in their scheme for Imperial College halls of residence in Princes Gardens, Kensington (see this week's frontispiece). They have had two full-size mock-ups made of students' study-bedrooms which are shown above and below. Centre, left, is the entrance to the rooms. It is surely sensible that whenever student accommodation is planned for the London area—where there is a deficiency of 5,000 hotel rooms—that the designs should allow for the dual use of the rooms.



Liverpool Cathedral, which will make you wonder if Gaudi is quite as unique as he is commonly taken to be, and the parallel between what Lethaby did for the traditional High Wycombe chair and what Ponti has done for the traditional Chiavari chair. In both cases a top-flight professional designer intervened in the process of traditional craftsmanship with entirely satisfactory results.

FLASH-BACK

Michael Patrick, the principal of the AA, spent an evening last week showing members slides of students' work executed since the mid 'twenties. Only a small handful of students attended (no doubt they are in revolt again about something or other), but plenty of middle-aged members were there and indulged in a splendid orgy of nostalgia. Slowly and wittily, but speaking without much trace of what the text of his speech gave as a "sneer," Michael Patrick displayed, described and deflated the student conceits of the past thirty-odd years. He covered, of course, that key period, the evolution of modern architecture in the AA, an evolution which coincided at Liverpool, year for year, according to Robert Gardner-Medwin and Peter Sheppard, who proposed and seconded the vote of thanks. It was all fascinating, if necessarily rather superficial stuff, and ASTRAGAL was intrigued to note, once again, how many of those who do well as students vanish thereafter. Name after name was given of people whose only moment of fame, it would seem, was when an "M" was scrawled in one corner of their drawings, and they reached the dim glory of the AA's slide collection.

Michael Patrick released a bombshell for all who are complacent, in his concluding paragraphs. He prophesied that, if the architect in practice is a reflection of the student in training, "the further appearance of our towns is likely to reach a degree of æsthetic chaos far surpassing anything achieved in the nineteenth century. . . . The Victorian fight of classicism against Romanticism may be a squabble when compared with the coming scrap between planned geometric clarity and organic intuition." Few schools must possess a principal capable of being so detached and disinterested as Mr. Patrick would appear to be.

ASTRAGAL

LETTERS

David W. Lloyd

R. V. Wootton

David Stern, A.R.I.B.A.

Richard H. Sheppard, F.R.I.B.A.

Another Outrage

SIR.—There is one long-standing piece of well-meant subtopia in the main street of Amersham which I should like to point out in addition to your woeful list of outrages. Some time before the war some cottages (possibly slums) were demolished on the north side of the street, revealing the façade of the church behind. So as to keep that view the site was laid out as a pretty garden. The result is that the east end of the street has lost its feeling of total enclosure and is now disconnected rows of buildings. This space should be filled again with buildings right up to the street line, leaving perhaps a small gap so that the church could be glimpsed from one point in the street. Otherwise the tower only would be visible, rising over the roofs of low houses as it still does, for example, in Farnham, Surrey, and Chipping Sodbury, Glos., with satisfying effect.

The new gasholder is absolutely shocking; outrages like this demolish any argument that may be put forward in favour of nationalized boards remaining exempt from planning control. Down with apathy!—let every man who feels strongly about the fair face of England continue to assault the citadels of subtopia-breeding until they are stormed and vanquished. Till then outrages of this calibre will continue to be committed.

DAVID W. LLOYD.

Bristol.

Cost Analyses

SIR.—Thank you for the many cost analyses published to date, providing much useful information.

I would like to make the following suggestions, aimed at making the analyses directly comparable in predicting the cost of new work at design stage.

1. Express cost of item in terms of its own area:

e.g. FLOORS:

Structure: 4 in. 6:1 concrete

on 6 in. hardcore 12s. yd. super

Finish: Wood block 30s. yd. super

TOTAL ELEMENT: 42s. yd. super

Percentage of job cost: 25 per cent.

The FRAME if any, would be measured as external wall area, with cladding or brickwork and internal skins and finishes costed per yd. super of wall area, stating the thickness, and if space allows, state the insulation value or "performance factor."

With roofing there is the traditional mixture of measuring by squares in tiling & boarding, ft. sup. and cwt. in metal coverings, and yd. sup. in felt. So:

2. Let all be measured per yard super:

Confusion occurs when comparing flat roof coverings with pitched roofs, so that to simplify comparison, all roofing (structure, covering and ceiling) should be costed per area measured on plan in preference to area of sloping surface.

3. State elements as per cent. job cost:

Main elements costs can be more easily grasped (and adjusted when planning) if given as a percentage of the total building cost. It would not be necessary to show the cost of the whole element in cash, just the rate per yd. super.

R. V. WOOTTON,

Surrey.

[We thank Mr. Wootton for his suggestions which will be put to the AJ Study Group. Item (1) is being considered by the group to improve the usefulness of analyses in approximate estimating. We agree that there are too many different units of measurement in use and that it would be convenient to show elements as percentages of the total cost, but there is a snag. For example, the sanitary fittings would cost about the same for a small and a large house—but shown only as percentages they would appear to be of different values.—THE EDITORS.]

The Purley Way

SIR.—The tale of woe in your "Not Quite Architecture" column of November 7, would be infuriating enough if it were an isolated incident, but we all know that this sort of thing happens daily.

My particular interest, however, is that in 1954, we had precisely the same experience when we submitted drawings for a non-traditional house in the same district. Coulsdon and Purley UDC used then exactly similar phrasing in their objections that were apparently intended to force the architect you write about to design to conform with the lowest denominator.

Our client's house (below) was in a road of every kind of development, including, in addition to the horrors contained in your columns, Mansard roofs, eye-brow windows and glazed roofing tiles.



The fight with Coulsdon and Purley UDC took several months and the drawings for the house were twice rejected by them. We then applied to the Ministry of Housing and Local Government and after further delays and much time and work spent in the preparation of "the Case," the Minister allowed our appeal and made it quite clear to the council that they were not to hamper schemes merely because they were contemporary in character. All this work must have cost the local ratepayers a good deal and, due to the work involved and the rising building costs, our client was also forced to foot a large bill.

For how much longer must the designs of architects be hampered by ill-informed, untrained local councillors, sometimes with axes to grind?

DAVID STERN.

London.

Bread and Butter

SIR.—The correspondence which has followed the publication of my letter about the formation of a society of local government architects has been most helpful and constructive. We have received a large number of letters at the RIBA supporting this proposal, and read those that have been published in the technical press.

I should, on behalf of my committee, like to thank the editors of the papers for the help and publicity they have given to this matter.

London.

RICHARD H. SHEPPARD.

NEWS

COMPETITIONS

Ten Timber House Designers Chosen

Ten architects, selected from some 300 applicants have now received instructions about the timber housing programme which is being sponsored by the British Columbia Lumber Manufacturers' Association. Each of the ten architects will receive for his services a fee of £250 in sterling or, if he likes, the equivalent of £350 in dollars for an architectural study tour in Canada.

In assessing the claims of candidates who submitted entries for the competition, the BCLMA were helped by their architectural consultants—Wells & Hickman, A./A.R.I.B.A.

Announcing the names of the architects who will constitute the design panel, G. C. Edgett, Timber Development Director of the Association, stated in London last week that submissions had brought to light such a wealth of talent that the final selection of the panel members had proved extremely difficult. It had been necessary to introduce criteria other than design capabilities and knowledge of timber's potentialities in making decisions.

Members of the panel, whose names are given below with details of the projects assigned to them, will begin work at once and it is hoped that house plans will be published early next spring.

Peter Barefoot, A.R.I.B.A., of Ipswich, Suffolk, will design project 1—"terraced farmworkers' cottages for farmer/landowner. One or two-storey dwellings with three bedrooms. Cost per unit £1,800 maximum."

Edward M. C. Butcher, A.R.I.B.A., of Poole, Dorset, will design project 2—"bungalows for retired couples. Basic design for two-bedroom accommodation to cost £2,000. Additional details to show how improvements can be made for another £300."

James F. Munce, A.R.I.B.A., of Belfast, and C. Wycliffe Noble, A.R.I.B.A., of London, will design project 3—"a basic house type of improved design which can be clad with alternative materials to achieve variety on schemes for estate developer/builders. Prefabrication of certain components an advantage. Construction costs should not exceed £2,500."

(Note: Designs for this type of housing have been entrusted to two members of the panel. Project 6 in the original schedule—"Rural house for civil servant" has been abandoned.)

James B. G. Houston, A.R.I.B.A., of Kilbirnie, Ayrshire, will design project 4—"a three-bedroom semi-detached house with connecting garage. House to have open-plan design and electric floor heating. House to sell at £2,800, excluding cost of land."

Colin Gray, A.R.I.B.A., of Nottingham, will design project 5—"modern bungalow or split-level house for young sales agent which can be extended in the future. Cost must not exceed £3,000."

Philip R. Middleton, A.R.I.B.A., of Middlesbrough, Yorks, will design project 7—"display house for home exhibition suitable for countryside development later. House to appeal to average tastes and not to cost over £3,000 to build."

Robert W. Paine, A.R.I.B.A., of Canterbury, Kent, will design project 8—"a four-bedroom rural house for a solicitor. Open plan to which guest room and study can be added. Client will pay £4,000."

Kenneth Wood, A.R.I.B.A., of East Molesey, Surrey, will design project 9—"split level

house for an advertising agent. Requirements include accommodation for four young children and resident domestic help, central heating and ample storage and garage space. Cost up to £4,500."

J. Roy Parker, A.R.I.B.A., of Liverpool, will design project 10—"a modern home built by an architect for himself." House plan to include drawing office near front door and spacious domestic offices. Construction costs should be about £5,000.

Final Date Postponed

The registration date for the Toronto city hall competition has been postponed. All entries bearing a postmark not later than December 31 will be eligible.

NASH TERRACES

Statement by Crown Estate Commissioners

We print below the statement of the Crown Estate Commissioners on the Nash Terraces in Regent's Park, together with the comments (in italics) of our representative who attended the press conference given by the chairman of the Commissioners, Sir Malcolm Trustram Eve.

On our appointment a year ago as Crown Estate Commissioners one of the most important problems we found was the future of the buildings surrounding and leading to Regent's Park. This problem has existed at least since 1946 when a Government Committee, under Lord Gorell, considered the future of the Terraces. There are 374 houses in the 22 Terraces around the Park or forming its entrances. We make no apology for not having made an earlier public statement about these buildings—first, because of the difficulties of the problem, and, secondly, because nearly all the buildings are occupied and are not, at least at present, deteriorating. Most of the terraces and buildings concerned, but not all, were designed by John Nash, who was the architect employed by our predecessors, about 130 years ago.

What is meant by saying that the terraces are not deteriorating? If this is seriously meant it implies that no serious structural problems exist.

2. We now announce:

- (i) That a number of Nash Terraces will definitely be preserved for effective use for many years to come.
- (ii) That an attempt will be made to secure the same result for all the other Terraces designed by Nash or his contemporary, Decimus Burton, if this can be achieved without undue capital cost.
- (iii) That, while an assured future cannot yet be foreseen for all the Nash and Decimus Burton Terraces, present plans do not provide for the demolition of any such Terrace, or for the elevation of any such Terrace to be altered.

What is meant by "undue capital cost"? It does seem extraordinary that,

10 years after the Gorell report, the Commissioners are unable to say what, in their view, is the maximum sum that could reasonably be spent on preserving the terraces.

General principles

3. Perhaps the major contribution of Nash was his creation of Regent's Park itself, its entrances, and gardens. None of these can, or will, be altered, except perhaps in detail. We therefore speak only of his Terraces and not of his great planning layout.

4. Accepting the unique character of Nash's Terraces in Regent's Park we are clear that they—

- (a) cannot be left in their present state, doomed to early decay;
- (b) cannot be demolished merely to erect modern replicas; and
- (c) cannot all be restored to effective use if the cost would be anything like £8 to £10 million—the present equivalent of the estimates put before the Gorell Committee.

Equally we are clear that, before considering demolition, we must try to secure some effective use for them by restoration, coupled with a moderate financial return on the capital to be employed.

Here again the extraordinary wooliness of the Commissioners' language manifests itself. The terraces cannot be restored "if the cost would be anything like £8 to £10 million." But what would be a reasonable expenditure? And what is a "moderate financial return"? The Commissioners will not say: no figures have been published to show the income and expenditure on Regent's Park.

5. We first thought that, side by side with our investigation into the preservation of the Terraces, we should institute a national competition for a master plan for new buildings surrounding Regent's Park so that a comparison could be made between the appearance and cost of buildings erected by modern architects, and of Nash Terraces converted to modern use. Decisions would then have been deferred until the results of the proposed competition for a "master plan" for the Estate were available. After seeking advice, we have decided to omit such a competition at this stage, and to concentrate entirely on the possible methods of preserving by conversion the present Terraces for effective use.

Sir Malcolm Trustram Eve denied that the Commissioners ever decided to demolish the terraces. But the fact that it was decided to hold the competition does strongly suggest that they were, at least, seriously considering demolition.

6. The biggest problem is the structural condition of the Terraces. We could not recommend very large amounts of capital being expended unless they would result in a further life for the buildings of at least 60 years. Alarming evidence was given before the Gorell Committee on this subject. We do not yet accept or reject this evidence given over 10 years ago. Experience has been gained in the meantime by our predecessors, by the Ministry of Works and by developers who have been converting old houses in various places. We propose to test this matter by practical samples carried out by ourselves and others, and we shall try to interest any expert who can suggest a lowering of the costs.

What on earth have the Commis-

sioners and their predecessors in office being doing for the last 10 years, if they are still unable to accept or reject the evidence given 10 years ago on the structural condition of the terraces? The time to test the matter was surely before they had announced any decisions.

Decisions taken

Park Crescent, Park Square East and West, and York Gate

7. We have decided to preserve and rebuild, where destroyed or damaged, Park Crescent, Park Square East and West, and York Gate, and to complete the extensive works already carried out to restore as far as possible their original façades. These Terraces, comprising 61 houses, constitute the main Southern entrances to the Park, and are, in our view, its most important features. Leases will be granted or extended, and it is our hope that the restorations can be carried out without any subsidy. We must, however, continue to be given some latitude in departing from purely residential use and, in this connection, we acknowledge with gratitude the advice already given by the London County Council.

Once again, what is meant by a "subsidy"? Does this mean a government subsidy, or the acceptance of something less than a commercial return?

Hanover and Kent Terraces

8. We shall retain all the 38 houses in Hanover Terrace and Kent Terrace. None of these has been used as offices, and nearly all are occupied by one, or at the most two, families as houses or maisonettes. We think that the houses in these two terraces have a further "economic" life of at least 20 years. We shall, therefore, offer to grant or extend leases throughout each of these Terraces for about this period in return for the carrying out of improvements or the payment of increased rents. It would be premature now to consider their future after that period but it is possible that the period could later be extended.

It is not at all clear what is really to happen to these terraces. What is meant by "economic life"? Does this mean that in 20 years time they are likely to be replaced if they then cease to yield a "moderate return"? And does this mean that a process of piecemeal replacements is then to follow?

Cumberland Terrace

9. Some evidence exists of the large cost of converting the houses in Nash Terraces into modern accommodation comprising flats. We think it is vital that we should obtain up-to-date and practical experience of the actual cost of a large sample. Cumberland Terrace (33 houses) is largely unoccupied, and we have decided ourselves to convert the Terrace within its present main walls, together with some houses adjoining and the Mews property behind. It is clear that we cannot expect anything like a normal commercial return from this expenditure. We feel, however, that any large landowner with the necessary means should be ready to make some unprofitable contribution to preserve lovely buildings. This will be our main contribution in Regent's Park.

Immediately after the war St. Pancras Borough Council expressed some interest in Cumberland Terrace for their housing purposes, and later London University showed similar interest in taking over the Terrace as a University Hostel. Each authority,

after obtaining advice, came to the conclusion that the conversion would be too expensive for it to contemplate.

We have engaged Mr. Louis de Soissons, R.A., to design and supervise these conversions, and preparations are well advanced. According to a provisional assessment of cost the total expenditure is expected to be in the region of £650,000. The plans involve the production of six small houses, 48 high-rented flats and 29 single or two-roomed flats, with 44 garages. The north block would be retained as six single houses. We have engaged a structural engineer and a quantity surveyor, and intend that work should start as soon as possible.

Sir Malcolm Trustram Eve, asked what was meant by a "nothing like a normal commercial return," said that he would not know until he knew how much the conversion was going to cost.

Cambridge Gate, Someries House and Cambridge Terrace

10. The only Terrace we propose to demolish, as soon as possession can be obtained, is Cambridge Gate (10 houses). The site of this Terrace was formerly occupied by the Colosseum, designed by Decimus Burton. When this building was demolished, the present Terrace was erected in 1876 in its place. It has no architectural merit. Next to Cambridge Gate is a single building now known as Someries House. The original building was designed by Nash for an Adult Orphanage, but little remains of his design. It is now being used as Government offices, and a temporary canteen building has been erected in the garden. The Gorell Committee not only recommended that this Terrace and this building could be demolished, but that they should be. We propose to choose a skilled developer, advised by an architect acceptable to us, to redevelop the sites in harmony with the surrounding Nash buildings and Terraces. We have taken this decision not only because the buildings are not worthy of preservation, but also because it is important to discover how best modern buildings of really good quality can be fitted into the Nash design. For this same reason we approved the impending erection of a new building for the Royal College of Obstetricians and Gynaecologists, to a design by Mr. de Soissons, on the site between Sussex Place and Hanover Terrace formerly occupied by Sussex Lodge, which has been demolished.

The key phrase here is "in harmony with the surrounding Nash buildings and terraces," a phrase drafted (according to Sir Malcolm) by the Royal Fine Art Commission. The statement implies that the building designed by Mr. de Soissons is what the Commissioners mean by a "modern building" in harmony with the terraces. When Sir Malcolm was asked by some architectural journalists if the reference to Mr. Soissons meant that the Commissioners did not want a modern building, Sir Malcolm replied that he was not an architect. When it was pointed out to him that he was a client, he replied that they would rely in the first place on the advice of the Royal Fine Art Commission, and would have to have the advice of their own architect. "Who is your architect?" he was asked, and replied "We haven't got one." As for the meaning of "in harmony" Sir

Malcolm said simply "I don't know what it means."

Next to Cambridge Gate is Cambridge Terrace. This is a Nash Terrace, but the Gorell Committee thought it had the least merit of all, and should be demolished. Four of its 10 houses are gutted and only two are used as residences. We do not, therefore, rule out the possibility of including this Terrace later in the redevelopment scheme.

The remaining terraces

11. These decisions will deal with 153 houses out of a total of 374 houses in the Terraces around Regent's Park. The remaining 221 houses are at present occupied either by lessees for residential accommodation until dates ranging from 1962 to 1969, or as offices by the Government. The larger of these Terraces are Sussex Place and Cornwall, York and Chester Terraces (145 houses). In addition, there are nine smaller Terraces containing 76 houses.

12. We have already been approached by experienced developers asking whether they could be given an opportunity of trying to convert a Nash Terrace into first-class residential accommodation on a commercial basis. We propose to give these developers every opportunity to consider the problem and to satisfy us that they can carry out this objective. Indeed, we are anxious to receive offers from other experienced developers, provided that they are advised by architects acceptable to us. As a result, it may be possible that, after large-scale conversions, all the buildings facing Regent's Park will contain modern residential accommodation. To assist these conversions, we shall need latitude to use parts of the buildings not facing the Park for some non-residential uses. It is our intention to allow a period of at least one year to enable these and other experts to give us their advice on this very important matter. If we, and they, are successful, these Terraces will be able to be preserved. If not, we must then give further urgent thought to their future.

13. It has been suggested to us that we ought now to ask the Government either to make a grant of a large sum of money for the preservation of the Nash Terraces or to authorize us by statute to use our income for this purpose. The time, however, is not, in our view, ripe to ask for grants. We must first establish beyond doubt whether or not the restoration of Nash Terraces in Regent's Park can be carried out without a large subsidy. It is our view that the Government, who are occupying as offices about half the main buildings, can now best help by retaining them as offices for the necessary periods.

14. The Royal Fine Art Commission has expressed its agreement with the decisions we have taken and has warmly welcomed our general approach to the problem of the Terraces. The Commission has said that it will be glad to advise on the design of any new buildings to be erected in place of Cambridge Gate and Someries House and has asked to be consulted at an early stage on any proposals for the treatment of those Terraces which are to be retained. The London County Council as the local Planning Authority have also been consulted. They note with pleasure that there is no present intention to demolish any of the Nash Terraces and look forward to further consultations on the proposals so that they can be considered in relation to London's general planning problems.

The Commissioners are only considering piecemeal redevelopment of London's greatest example of comprehensive planning. It will be a disaster if any rebuilding takes place without a three-dimensional plan for the whole area.

CRITICISM

The architect replies

Last week J. M. Richards criticized the teachers' training college in Birmingham, which was designed in the office of the city architect, A. G. Sheppard Fidler. Here is Mr. Sheppard Fidler's reply.

I am pleased to have the opportunity of replying to some of the points raised in J. M. Richards' criticism. It is true that restricting conditions sometimes defeat the architect's best intentions, and this is to some extent true in the design of this project.

The first wishes of the architect were to succumb to the "temptation to give a collegiate character" and the first settled plan included a central space with the college building to the west and north and hostels on the east side, the south side remaining open.

Better use of contours, preservation of trees, severe restriction in cost, consideration of the character of the site and the essentially different functions of the buildings were factors which dictated the later planning.

The site is really not large enough, nor of a suitable shape, to allow for sufficient recreational facilities and the adoption of a quadrangular plan.

For these reasons the provision of "one well-defined closed area" had to be abandoned, and I am not convinced in my own mind that for a college of this size a closed plan is really essential or desirable. Further, considerable advantage has been derived from the open planning in achieving admirable aspects and open views for a large proportion of rooms.

The college building has been very kindly dealt with

The main entrance to the main block with the library above and the administrative wing on the left.



in the criticism and I would only say in reply that the utmost care has been taken to deal effectively with noise problems in the dining-room and library, and from my observations of the building in use the methods adopted are proving to be adequate with the one exception that dining-room chairs on a wood block floor do cause some annoyance. This problem is being examined.

The external road and main entrance noises are virtually unnoticed in the library.

In accommodating the sick quarters, quietness, isolation, ease of access from the approach road and a southerly aspect were factors which decided their situation.

The three staff flats for the matron, assistant matron and catering supervisor, although perhaps cramped in approach, are in themselves of sufficient size, have a good aspect and are placed logically in the plan near to the sick quarters and domestic parts of the college block. The criticisms deal with the planning of college residential accommodation in general, drawing attention to the recommendations of the Ministry of Education, particularly so far as sizes of rooms and social atmosphere are concerned.

I would say immediately that I heartily agree with these general recommendations, but in the case of this college the study/bedroom area was agreed as reasonable by the Authority at the time of planning, and the corridor plan was adopted for reasons of economy. Considerable research was made into forms of construction and plan in order to achieve the lowest possible cost.

Within the money available (and embodying fixed widths of common room, hair-dressing room, laundering room, pantries and other small spaces), it was not found possible to increase the size of study/bedrooms or the width of corridors, but an endeavour was made despite these restrictions to avoid the institutional atmosphere, with, I think, reasonable success.

The lengths of unbroken corridor are quite small, giving access to four study/bedrooms only on each side, and sufficiently well naturally lighted although without direct window light.

The hostel common rooms were of a fixed area in the schedule of accommodation and they are intended to provide a space where the students can hold more intimate converse, parties and small dances, entertain friends and generally feel "more at home" than is possible in the larger college common room. Smaller sitting rooms would not provide for all of these facilities.

The desirable breaks in plan of the hostel blocks do reflect sufficiently in the elevations to give interest and relieve monotony and the use of different materials perhaps tends to elaborate too much on the "interest" theme.

The buildings are, in fact, of loadbearing cross wall construction, but this is not expressed elevationally, except in the end wall stops: the face walls being of 11-in. cavity brick construction throughout.

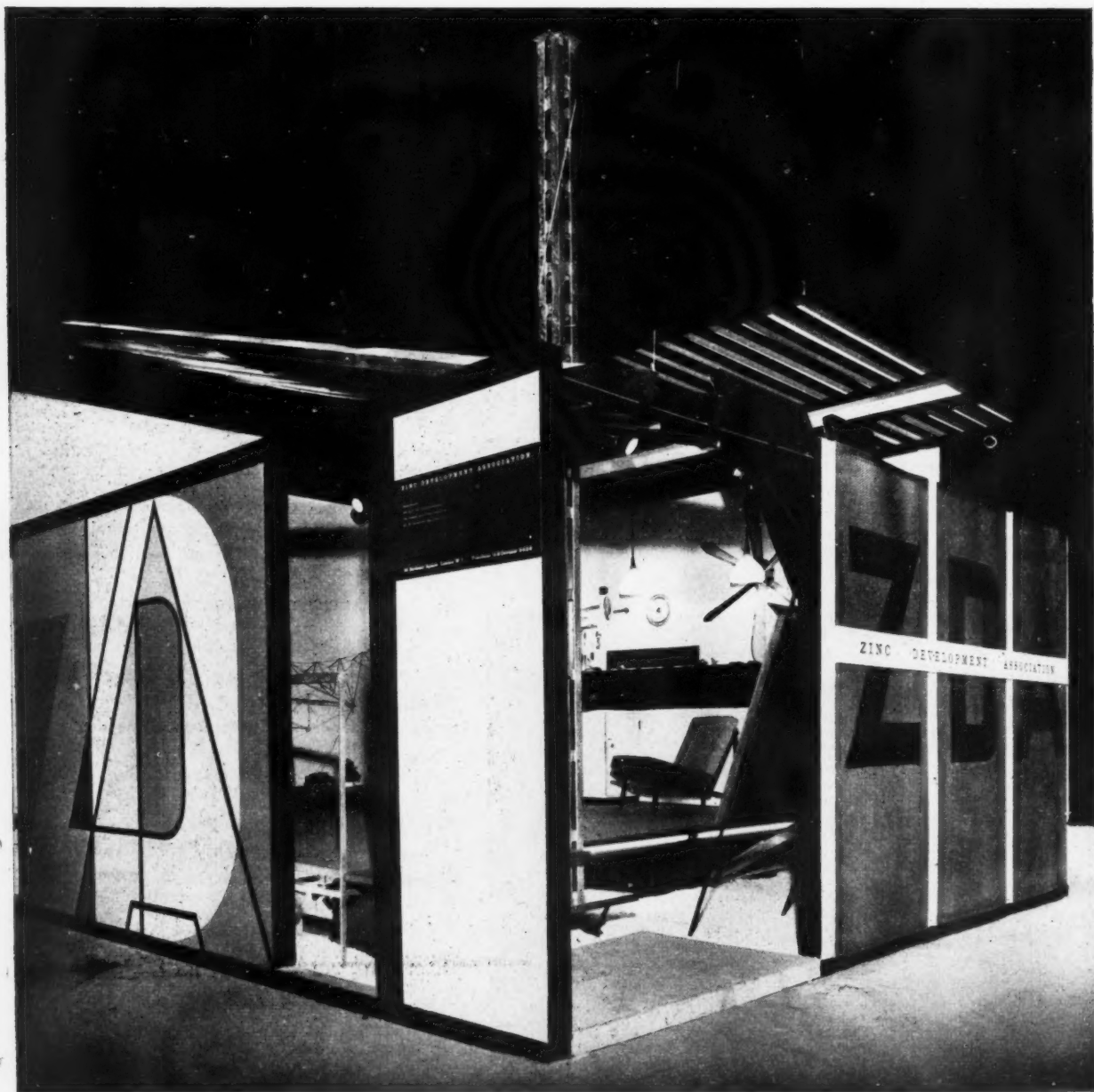
May I add a slight correction concerning dates, namely that the first sketches were made early in 1951 and not as stated in 1953.

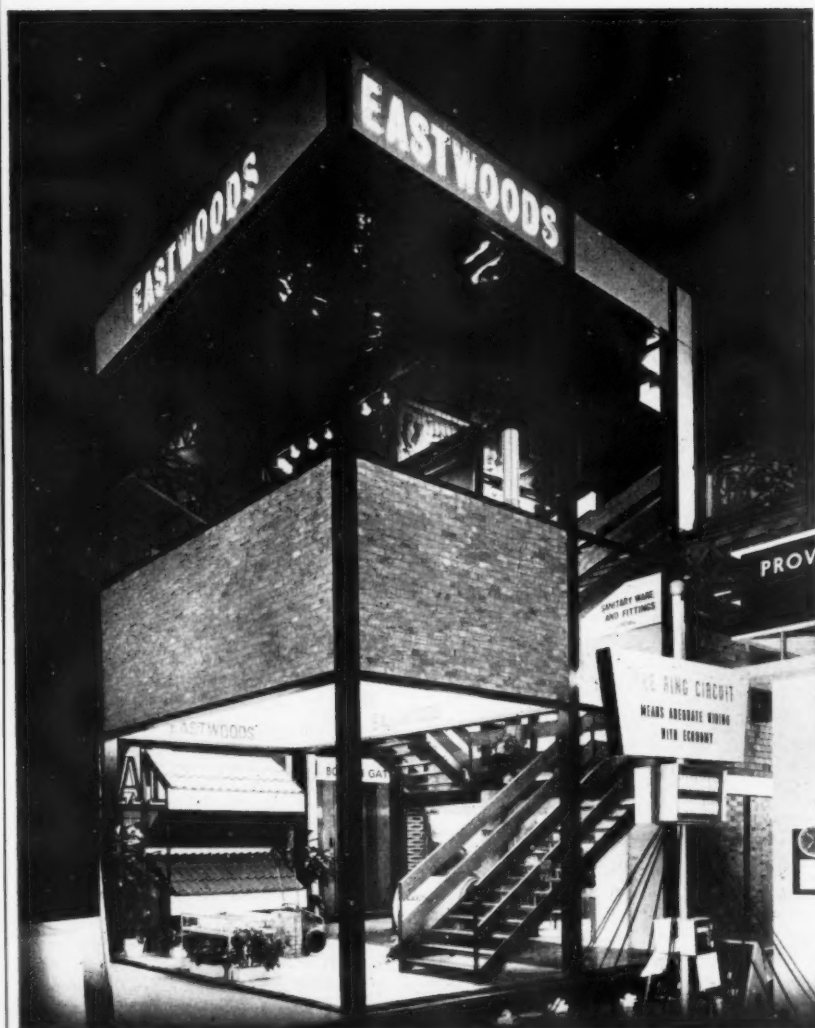
Report on the

Building Exhibition: part 2

We here resume and complete our report of the Building Exhibition. As we explained last week the classification used is that of the AJ Library of Information Sheets. Last week we dealt with sections 27-45, which covered *services and equipment*, *applied finishes and treatments* and *furniture and fittings*. This week we deal with sections 1-26—or at least with those on which there is something to report.

The Zinc Development Association stand, designed by James Cubitt and Partners.





Above left: the Cape Building Products stand, designed by Cassidy, Farrington and Denny. Above right: the stand for the Plastic Marketing Co. Ltd., designed by Dewar-Mills Associates.



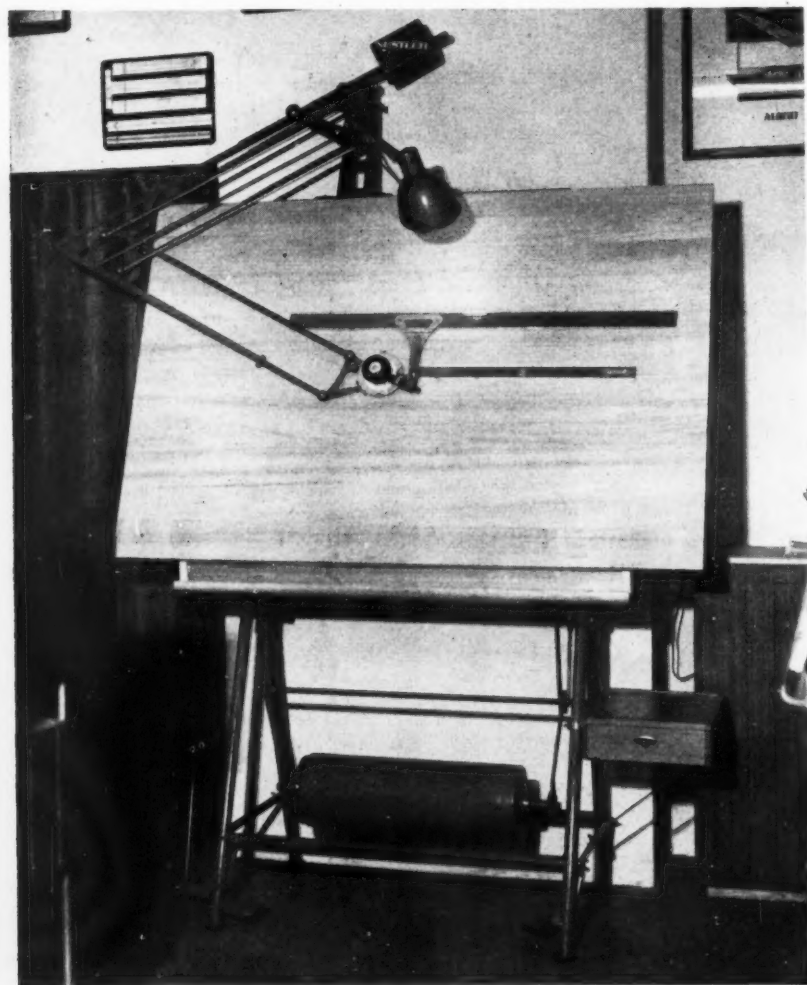
Above: the stand for Turners Asbestos Cement Co. Ltd., designed by H. T. Cadbury-Brown.

Left: the stand for Eastwoods Ltd., designed by Stillman and Eastwick-Field. This stand at the end of the Grand Hall had display on four levels and staircases rising from ground floor to gallery level.



The stand for the London Brick Co. Ltd., designed by John Harris.

General

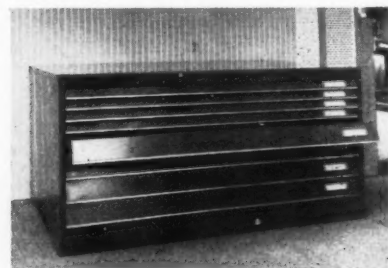


The German Nestler counter-balanced board and draughting machine.

1

General practice

There was very little at the Exhibition in the way of equipment for the architect's office. One very small stand tucked away in the gallery, however, showed some quite exceptional draughting equipment made by the German firm NESTLER (*Hudes Merchandising Corporation Ltd., Charter House, 52, Gloucester Place, W.1. Welbeck 3521*).



The steel plan chest by G. A. Harvey & Co. Ltd.

We illustrate here a counterbalanced board with a draughting machine fitted with a parallel rule—more convenient for the architect than the usual short scales. Similar equipment is available for every type of drawing board down to half-Imperial, and the prices are, on the whole, cheaper than most equivalent British examples. The same firm also showed Nestler scales, set squares, and stencils; the latter in an attractive, slightly condensed letter face.

G. A. Harvey & Co. (London) Ltd. (Woolwich Road, S.E.7. Greenwich 3232) exhibited a new stove-enamelled steel PLAN CHEST of good design. The example shown here is an eight-drawer antiquarian unit and costs £79 14s. 7d., but it should be

pointed out that this price includes the cost of the top and plinth units, which in some cases may be dispensed with. A Double Elephant cabinet with 6 deep drawers, top and plinth would cost £64 10s. 6d.

A new surveying level, the SIGHTMASTER, was shown by W. Ottway & Co. Ltd. (Orion Works, Northfield Avenue, W.13, Ealing 5844). Priced at £22 10s. 6d. it is very simple

to operate, though not sufficiently accurate for jobs larger than small site surveys.

4

Planning and design

One exhibit which might well be mentioned

here was shown on the *Cape Building Products Ltd.*'s stand (Cowley Bridge Works, Uxbridge, Middlesex. Uxbridge 4313) and consisted of diagrams showing the use of Asbestolux in the context of three different building types and to provide certain specific periods of fire resistance. This presentation of a material in its likely building context seemed particularly well conceived.

Construction (by materials)

6

Concrete

A most interesting material which has been on the market now for about a year and already achieved considerable fame is AGLITE expanded shale aggregate shown by The Butterley Co. Ltd. (9, Upper Belgrave Street, S.W.1. Sloane 8172-3). The properties of Aglite concrete are good thermal insulation, high strength/weight ratio, low drying shrinkage, and ease of cutting, chasing and nailing. It is therefore suitable for such diverse application as building blocks, insulating screeds, structural components (including prestressed work) and, when used with a high alumina cement, refractory concrete. TEMBO lightweight prestressed beam units with Aglite aggregate are made by a subsidiary company, Richard Lees, Ltd. (Hulland Ward, nr. Derby).

An air-entraining "additive" for concrete, new to this country but well proved on the continent, was shown by Expandite, Ltd. (Chase Road, N.W.10. Elgar 4321). It is called BARRA 55 and its main purpose is to increase the plasticity of the concrete and so make compaction quicker and more certain. Another new product for the same purpose in ENTRAINIT, made by Thomas Hedley & Co. Ltd. (Gosforth, Newcastle-upon-Tyne 3. Gosforth 5-7141).

The price per ton is from 18s. to 25s. more than for ordinary Portland cement.

For increasing the workability of mortars there was another "additive," BARROLIN C, shown by Expandite, Ltd. (see also above under Concrete.)

8

Glass

Though glass has been so much in the news lately there are few new products available. Pilkington Brothers Ltd. (St. Helens, Lancs, St. Helens 4001) had a lot of interesting gimmicks to show on their stand, but closer inspection showed that these were composed of products which are either not yet being produced commercially or have been on the market for years. Throughout the emphasis was on glass as a decorative rather than as a useful material; and though we do not doubt that this decision represents a shrewd assessment of the average architect's attitude, we are not at all sure that it was right. After all, the visionary projects which this imaginative firm is so fond of sponsoring will all come to nothing if research proves incapable of making glass a more efficient filter for heat and light than it is at present. We are also inclined to wonder if the present decorative exploitation of glass has not reached a dead end. Sensitive as were Lady Casson's seven designs for new decorative glasses, they lacked that simplicity which seems so essential in a mass-produced glass which is to be used either to see through or to reflect light. The one-off Victorian sand-blasted design is one thing, the mass-produced light filter is another: these fall uncomfortably somewhere between the two.

One relatively new product was ARMOUR-CLAD, a toughened glass available both in cast and plate form in two thicknesses, $\frac{1}{4}$ in. and $\frac{3}{8}$ in. and with colour fused on to the inner side. Sixteen colours are at present available (including among them black but not white). These all conform to BS.2660 and are in themselves excellent. The main purpose of this range is, of course, the

cladding of panel walls; but once again we wonder if many of these colours are not basically unsuitable for use in large areas and whether the architect is not being wooed by an unsound argument.

12

Miscellaneous materials

A new building paper with the name MOISTOP was shown on the stand of J. H. Sankey & Son Ltd. (Essex Works, Ripple Road, Barking, Essex. Rippleway 3855). It shows yet another unexpected use of plastics by the building industry, for one side is coated with a film of polythene, making the paper completely waterproof. The price is 1s. 0½d. sq. yd.

The PRC SEALING AND COATING COMPOUNDS shown by British Paints, Ltd. (Crewe House, Curzon Street, W.1 Grosvenor 6401-5) are of interest; they have been used in the USA for some time and are now produced in this country under licence. The range includes an expansion joint compound, a window sealant, a sewer seal, a rubber coating for protection against weather, oil and grease, and a rubber caulking compound. Some idea of the adhesion and plasticity of



PRC expansion joint compound.

these compounds may be gained from the photograph, which shows a twisted piece of expansion joint compound. Secomastic Ltd. (Western Road, Bracknell, Berks. Bracknell 910) have produced a new sealing strip which they call SECOSTRIP. It is intended as a general purpose sealer and is available in $\frac{1}{8}$ in. and $\frac{1}{4}$ in. diameter extrusions wound on a reel.

7

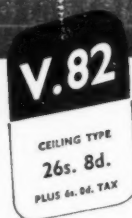
Cement, mortars and plasticisers

One of the most inconvenient properties of cements is that they deteriorate, or "go off" in storage unless kept absolutely dry. The Cement Marketing Co. Ltd. (Portland House, Tothill Street, S.W.1. Abbey 3456) have now produced a cement called HYDRACRETE, which not only overcomes this difficulty completely but also makes the concrete or mortar in which it is mixed waterproof and easy to work, without reducing strength.

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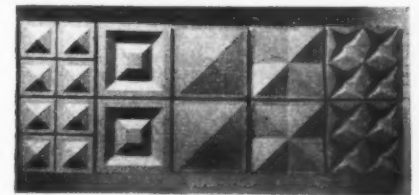
Construction (by products)



Keytoclad tiles being hung.



Above: Blue-Black Uxbridge flints. Below: Flagreca concrete walling blocks.



13

Bricks

The brickmaking industry put on a most remarkable show at the Exhibition. Stands were on the whole well designed, with large areas of brickwork which enabled one to see what the bricks really do look like.

There was a noticeable trend towards darker bricks. One instance of this was the wall of BLUE-BLACK UXBRIDGE FLINT BRICKS on the stand of Cape Building Products, Ltd. (Cowley Bridge Works, Uxbridge, Middx. Uxbridge 4313). These new bricks looked very well laid in a dark matching mortar (see photograph on this page, which of course tells you very little). The price is 290s. per thousand ex works.

WESSEX DARK and MEDIUM MULTI-COLOURED STOCK FACINGS were new products shown by Eastwoods Sales, Ltd. (Eastwood House, 158-160, City Road, E.C.1. Clerkenwell 2040). These have a very regular shape; their prices are 232s. 6d. and 190s. per thousand ex works respectively.

The BRS section of the DSIR stand was partly devoted to the subject of packed bricks. It has been found that, by packing bricks in lots of 50 by means of a wire strap, site handling operations may be greatly simplified, less damage is suffered by the bricks, and building sites are kept tidier. Several brick marketing firms have adopted the system; a section of the Eastwoods Sales Ltd. stand was given over to advertising this. This is perhaps the best section in which to mention KEYTOCLAD, a system of tile-hanging for walls. The photograph shows how the tiles are hung and also their appearance: they are in fact, a development of the so-called "mathematical tile." These tiles have been used by Nottingham County Architect's Department as part of the building system designed to overcome the prob-

lems of mining subsidence (described in the JOURNAL on October 24, 1957); the makers are Maidenhead Brick & Tile Co., Ltd. (Inholmes, Burgess Hill, Sussex. Burgess Hill 2224). Prices are 262s. 6d. for stretchers and 252s. 6d. for headers per thousand ex works.

14

Building blocks and slabs

The development of building blocks goes patiently forward on two fronts: the increase of the strength/weight ratio of the loadbearing part of the block and the improvement of finishes. The first objective is to be obtained by the use of a lightweight aggregate of which there are two which may be regarded as relatively new on the market. The first is AGLITE, which is technically described as a "bloated carbonaceous shale," a material which is discussed at greater length elsewhere. In this context it is sufficient to say that the manufacturers (The Butterley Co. Ltd., 9, Upper Belgrave Street, S.W.1. Sloane 8172-3) sell their lightweight aggregate to "selected blockmakers" who make concrete blocks, presumably to a single specification. These have compressive strengths of 500, 750 and 1,000 lb./sq. in. with densities of 65, 69, and 73 lb. and K values of 1.9, 2.0 and 2.3 respectively.

Exploiting another lightweight aggregate, TERLITE, the Cotswold Dale Stone Co. Ltd. (Magdalen Works, Tetbury, Glos. Tetbury 204) are marketing a range of lightweight cladding panels with a reconstructed stone face and Terlite backing. Panels can be made to any reasonable pattern in thicknesses of 2½ in., 3 in. and 4 in. Provided panels do not exceed between 8 and 12 sq. ft. in area (according to thickness) they do not need reinforcement and are proportionately cheaper than slabs which do. Actual

weight of finished slabs is from 70—100 lb. per cu. ft.

Some new concrete walling blocks with profiled faces were shown on the F.B.B.M. stand. They are made by Flynn Brothers (Otterham Quay, Rainham, Kent. Rainham 81427) and are called FLAGRECA. The photograph, above, shows five patterns at present in production; special moulds can however be made for orders of some size. The last and the most interesting product in this class is undoubtedly SPECTRA-GLAZE (The Borneo Co. Ltd., 62-3, Mark Lane, E.C.3. Royal 8801) which is in fact a concrete block on to one side of which has been cast a glaze composed of glass silica sand and a polyester resin thermo-setting binder. The object of this is to produce an internal wall surface which will make plastering unnecessary. To give a better finish on the site each block is provided with a strong ¼-in. lip with sharp arrises, so that the usual ½-in. mortar joint will only show a ¼-in. joint. The blocks can be obtained in different colours with closers and with blocks which have the glaze on one end face for turning corners. Price is about 60s. per sq. yd., delivered in the London area.

15

Sheet materials

A new sheeting made of resin-bonded glass fibre, introduced by B.I.P. Reinforced Products, Ltd. (Streety Works, Sutton Coldfield, Warwicks. Streety 2411), incorporates fine parallel threads of nylon. These, however, are not "structural" but for the sole purpose of distinguishing the material from other such sheetings; they also give it a

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Construction (by products) *continued*

very pleasant appearance. The sheeting is called **FILON**, and is produced by a continuous process which allows any length to be supplied. Translucency may be varied and a wide colour range is possible although it is not yet in full production. It is made to various profiles to match those of common roof sheetings. Price for 6 oz. sheeting is about 4s. 6d. per sq. ft., for 8 oz. sheeting 5s. 5d.

Another new resin-bonded glass fibre sheeting is **CASCALITE POLISHED FLAT SHEET** made by **Cascelloid** (*Abbey Lane, Leicester. Leicester 61811*). This is made in a number of good clear standard colours and other colours may be matched. Price is approximately 4s. per sq. ft.

Among the building boards on show were two developments of existing products; **Celotex, Ltd.** (*North Circular Road, Stonebridge Park, N.W.10. Elgar 5717*) had a better-quality hardboard which they call **GOLD STAR**, and **Novobord (UK) Ltd.** (*Bush House, Aldwych, W.C.2. Covent Garden 2003-4*) showed a version of their already excellent quality chipboard which has a melamine face as preparation for painting. It is called **NOVOTAN** and sells for 1s. 8d. per sq. ft. ($\frac{1}{2}$ -in. single-faced) and 1s. 10d. ($\frac{3}{4}$ -in. single-faced). Sheet size is 9 ft. by 9 ft.

A new **ASBESTOS PARTITION BOARD** was introduced by **Turners Asbestos Cement Co. Ltd.** (*Everite House, Southwark Street, S.E.1. Waterloo 4712*) which has been rated at Class I for surface spread of flame, is very flexible, and may be nailed. Its thickness is $\frac{1}{2}$ in., sheet size is 8 ft. by 4 ft., and price 4s. 3½d. per sq. yd.

Another sheet material which has been used for a long time in shipbuilding but has only recently been introduced into the building industry is **SOLASTOS**, shown by **L. Keizer Ltd.** (*Kingsborough House, Wood Street, Kingston-upon-Thames, Surrey. Kingston 9566-7*). This incorporates Turnall asbestos ships board, and is faced with a variety of materials such as wood veneer, laminated plastic, and p.v.c. decorative fabrics. Thicknesses range from $\frac{1}{4}$ in. to 1 in. and for a plain finish prices range correspondingly from 1s. 6d. to 3s. 6d. per sq. ft. An addition to the Holoplast series of partition panels is the **HOLOPLAST 80 PANEL** (*Holoplast Ltd., 116, Victoria Street, S.W.1. Victoria 9354-7*). It is made in two thicknesses—1 in. and 1½ in.—a width of 4 ft., and height from 4 ft. to 10 ft. Finishes are stove enamel, veneers, or Decorplast. One of its main advantages is good sound reduction, achieved by the use of a core of exfoliated vermiculite. The price (stove enamelled) is approximately 6s. per sq. ft.

One interesting application of a sheet material—in this case $\frac{1}{2}$ -in. **PLIMBERITE** (*British Plimber Ltd., Dovers Corner, Rainham, Essex. Rainham 5262*)—shown at the Exhibition was the gluing together of two sheets to form stairtreads. These when sealed and waxed form good looking treads (as can be seen from the photograph) at a price which must be considerably less than hardwood.



Plimberite stair treads.

16 Roof sheets

By and large the palm for originality in this section must go to **LONG RIGIDAL ALUMINIUM CORRUGATED SHEETS** (*The British Aluminium Co. Ltd., Norfolk House, St. James's Square, S.W.1. Whitehall 7868*). At first sight this extrusion of roofing sheets to a maximum 35 ft. length seems a rather unnecessary act of manufacturing virtuosity; but in reality it is a very useful exploitation of a material which is perhaps almost alone in being light and strong enough to be handled in such lengths. The advantage is that a very high proportion of industrial roof slopes can now be roofed in a single span of sheeting, giving better weathertightness, reduced deflection, a small but nonetheless significant saving in material in roof laps, easier lining up and neater appearance.

Another product which, though not new, has developed in the same direction, is **TURNALL LARGESPAN COMBINED SHEETS** (*Turners Asbestos Cement Co. Ltd. Everite House, Southwark Street, S.E.1. Waterloo 4712*): though asbestos cement does not permit such spectacular lengths as aluminium (the maximum length of Large-span is 8 ft. 6 in., giving a maximum purlin spacing of 7 ft. 6 in. centres); this product makes up in interest by virtue of the fact that, being designed as a double-skinned unit, it can accommodate insulation between. The principle of Large-span combined sheets will be familiar to *JOURNAL* readers (they have been described in *The Industry*): sheets are part corrugated, part flat, the flat half of one section forming a tray and a flat soffit beneath the corrugated part of the next sheet. The cavity between sheets is described as "largely unventilated" and as giving a Btu U value of 0.520; but if 1 in. glass fibre infill is inserted this is reduced to 0.169 Btu. Another development of the same firm is **COLOUR-GLAZE**, a factory-applied paint surface for any asbestos cement products. Since archi-

tecs have never been quite reconciled to the natural colour of asbestos cement, this move should much extend its uses; particularly since the colours themselves are mostly excellent, many having been taken from BS.2660.

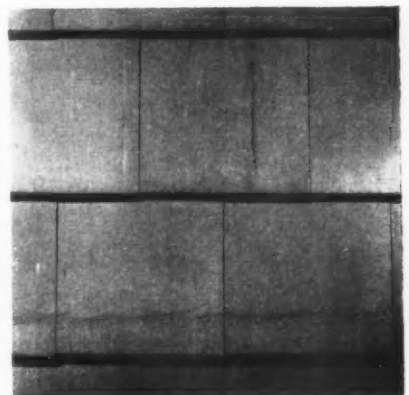
The anxieties which have been bred in us by the Jaguar fire lend a special interest to self-extinguishing fire-retardant **CASCALITE SELFEX** reinforced corrugated roof sheeting (*Cascelloid, Abbey Lane, Leicester. Leicester 61811*). It seems that this translucent sheeting behaved sufficiently well under test for the LCC to permit continuous runs of rooflight to be made of it. Those who wish to use it in this way must apply for a waiver, as permission is only given on the merits of each case.

The last product to be considered in this section is **NURAPHALTE ROOFING**. This is a specialist service provided by *The Weatherill Roofing Co. (Whitehall Place, Gravesend, Kent. Gravesend 6176)*, the Nuraphalte roof itself being composed of 4 ft. x 4 ft. sheets of Nuralite, a thermoplastic roofing compound of 9 laminates of bitumen and asbestos which has been on the market for some time. These square sheets are laid diagonally to anything between 1 deg. and 30 deg. and are welded together along the edge. One important point about Nuraphalte roofing is that it carries a guarantee of 25 years. The company are very specific about prices which are the same for contracts anywhere in the country. They will not undertake a contract for less than £100. An area of 80 sq. yd. costs £100 (i.e. at 25s. per yd.). For an area of 81-162 sq. yd. the unit price is 24s. 9d. per sq. yd., thereafter the price per sq. yd. reduces with the size of the contract until, for areas of over 1,144 sq. yd., it falls to 16s. 6d. Extra must be added to all of these prices for eaves and verges (at 1s. 6d. per ft. run), for upstands (at 1s. per ft. run) and cover flashing (at 2s. per ft. run).

17 Roof tiles and slates

A new concrete roof tile, called the **STONEWOLD** concrete slate since it is produced in slate grey, lichen green and moorland

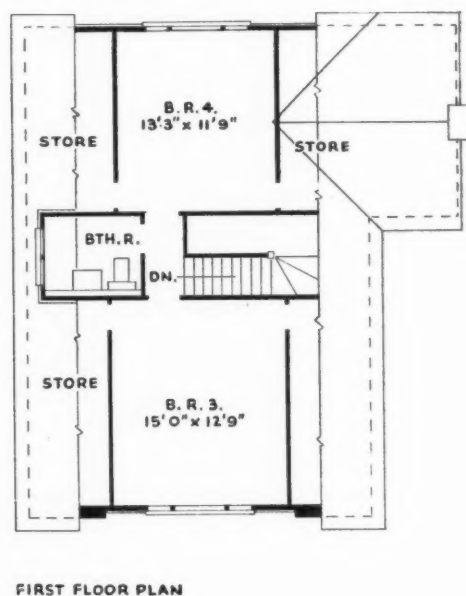
Stonewold concrete slates.





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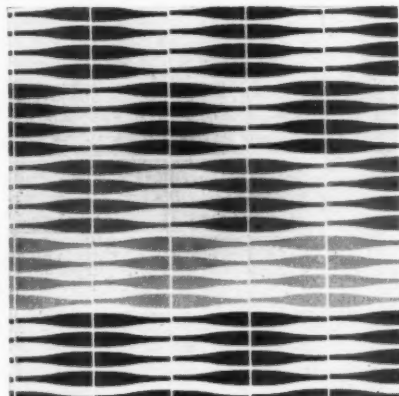
Construction (by products) *continued*

stone colours and may be laid to a pitch of only $22\frac{1}{2}$ deg., was exhibited by *Redland Tiles Ltd.* (Castle Gate, Reigate, Surrey. Reigate 4781). Although a single-lap interlocking tile in principle, the finished appearance is that of a double-lap slate, as can be seen from the photograph on page 847.

Price is £70 for 1,000, coverage being 77 per square. The same firm now make a CLEAR PERSPEX DOUBLE ROMAN TILE giving about 2 ft. of light area (price 45s. each) and PVC EAVES FILLERS for their No. 52 English pantiles (price 9d. per ft. run).

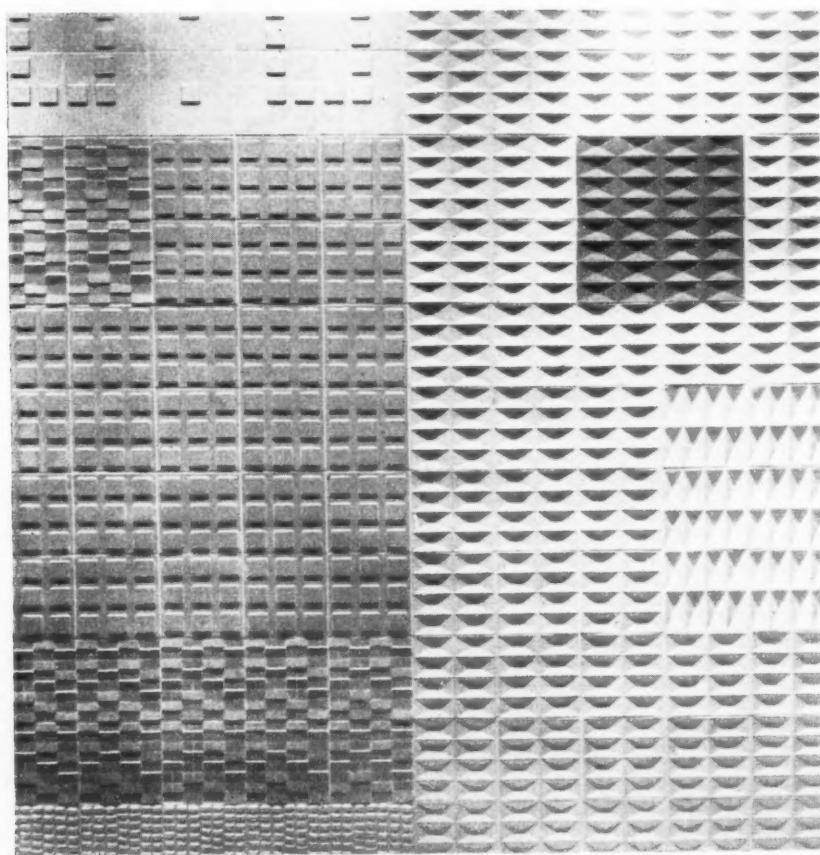


The Redland perspex double Roman roof tile.



Above left: the Langboro Mosaic 2-in. tile. Above right: the patterned, glazed tile by H. & G. Thynne Ltd.

Below: some of the range of textured surface tiles, made by Carter Tiles.

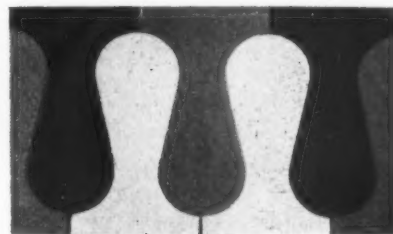


18

Floor and wall tiles

The architect's interest in floor and wall tiles is broadly of two kinds: he is interested in what new effects can be obtained, and he is interested in how he can obtain the old effects more cheaply.

To take the new effects first, one very



The "Tipo Moresco" ceramic mosaics, designed by Gio Ponti and made by Ceramica Joo Milano.

noticeable feature of this Exhibition was the influx of Italian mosaic, which was to be seen on at least three stands. Though most of the more adventurous effects produced by these products are frankly unpleasant, some at least deserve to be considered. Bearing in mind that the SAIVO mosaics were to be seen on Elder Reed's stand at the last Exhibition, the most interesting among the newcomers were the CERAMICA JOO MILANO mosaics shown by Zanelli (London) Ltd. (Victoria Works, Victoria Road, New Barnet, Herts. Barnet 5192-3). These are fixed on sheets of approximately $12\frac{1}{2}$ in. \times $12\frac{1}{2}$ in., in a great variety of shapes (the shape illustrated is called "Tipo Moresco" and was designed by Gio Ponti) and of sharp, un-English colours. Prices vary with the type of mosaic and, still more, with the quantity, but seem to average out at about 9s. per sq. ft. for areas of less than 100 sq. ft. and 6s. per sq. ft. for areas of over 1,000 sq. ft. The Swedish IFO tiles (Obtainable from Dennis M. Williams Ltd., 43, Thames Street, Kingston-upon-Thames. Kingston 9998/9) are not, of course, new, but they have a quality of colour and texture which is always a pleasant surprise, particularly in the plain coloured matt tiles. The price of their red tile (which is the cheapest) is 35s. 5d. per sq. yd. for areas under 5 sq. yd., falling to 24s. 7d. for areas of over 150 sq. yd.

One interesting development which, in its

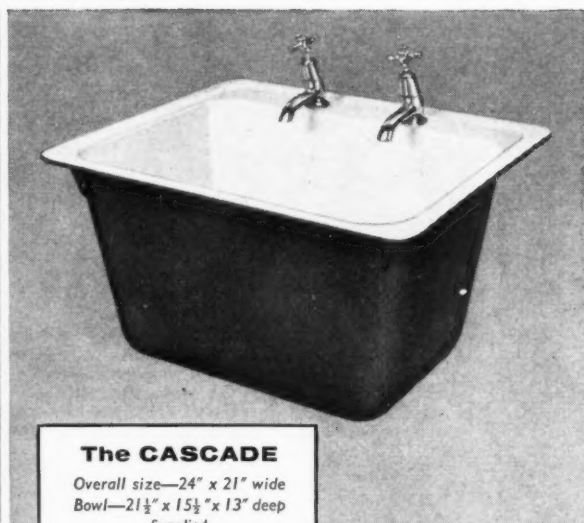
Cast-iron strength

and specially designed to fit into
existing cabinets and counter tops



The ARGYLL

Overall size—24" x 21" wide
Bowl—21½" x 15½" x 8" deep
Supplied
with or without overflow hole



The CASCADE

Overall size—24" x 21" wide
Bowl—21½" x 15½" x 13" deep
Supplied
with or without overflow hole

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*** Longer life**

With a cast-iron base, the Argyll and Cascade are really made to last.

*** Harder wearing**

Finished in white, acid-resisting enamel, they will stand up to really hard wear; and they're hygienic and easy to keep clean too.

*** Fit them anywhere**

They're specially designed with a flat rim, for letting into the top of most existing cabinets, cupboards and counter work-tops.

*** Extra neat joint**

If required, an aluminium frame and clips are available to give a neater joint between sink and counter-top.

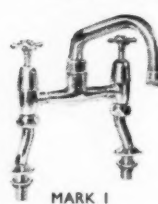
*** Waste fitting**

The Argyll and Cascade are available with either a B.S.1½" or strainer waste.

*** Domestic or Industrial**

The Argyll and Cascade are equally suitable for either purpose.

AND HERE'S THE NEW TWOFLO— ideal for Argyll and Cascade Sinks



MARK I



MARK III

Construction (by products) continued

effect, lies half-way between tile and mosaic is the LANGBORO MOSAIC a 2 in. mosaic/tile (see illustration) manufactured by Langley London Ltd. (163-7, Borough High Street, S.E.1. Hop 4444). Price is 33s. per sq. yd. supplied and delivered. Another firm with a good show of mosaics—particularly of mosaics backed on to concrete panels—was John Ellis & Sons Ltd. (21, New Walk, Leicester. Leicester 56682).

Among patterned glazed tiles we would mention those of H. & G. Thynne Ltd. (19, Bedford Row, W.C.1. Chancery 8012), who are adventurous and whose colours are exceptionally good. Price for the design illustrated (S.1017) is approximately 100s. per sq. yd. delivered.

There is no reasonable doubt that the most important contribution to tile design was the TEXTURED SURFACE TILE (*The Carter Group of Companies*, 29, Albert Embankment, S.E.11. Reliance 1471). This (as the name suggests) is a moulded relief tile (see photograph): it may be obtained unglazed in one of the four terra cotta shades or glazed in a choice of 50 colours. Carters have a number of good patterns, but they are insistent that architects can have their own patterns made, if they are technically possible, at small extra cost (if the order is reasonably large). The average price for a small order is £4 10s. to £4 15s. per sq. yd. delivered. Carter's stand was excellent (it usually is) and among other things had a good display of mosaic, both glass mosaic, the price of which is given as about £10 7s. per sq. yd. fixed and ceramic mosaic (about £5 6s. unfixed).

Up to now we have been considering mainly wall tiles. One new development in floor tiling is the new range of FLEXIBLE VINYL TILES which is being put on the market by Michael Nairn & Co. Ltd. (131, Aldersgate Street, E.C.1. Monarch 3211-8), and will be available in about two months. One advantage of these tiles is that they can be laid cold. The colours, as usual with this manufacturer, are mostly excellent. There are two thicknesses: "industrial" 3.20 mm. and "domestic" 2.50 mm., prices laid being 35s. per sq. yd. and 25s. per sq. yd. respectively.

Semtex Ltd. (*Semtex House*, Welsh Harp, N.W.9. Hendon 6543) are likewise marketing a new flexible vinyl tile; they are also making changes in their rubber tiles which will be gratifying to architects, introducing more plain colours and—what is even more praiseworthy—adapting their colour range to BS.2660.

Attempts to make tiling less expensive mostly take the form of paint or flexible sheets which look like tiles but are really something quite different. Mention should be made, however, of EJECTA POLYSTYRENE WALL TILES (*James Halstead Ltd.*, Crow Oak Works, Whitefield, Manchester. Whitefield 2251-3). These are really made for the do-it-yourself market and are sold with a foolproof adhesive. Most of the colours, being those traditional to the English latter-day bathroom, are not accept-

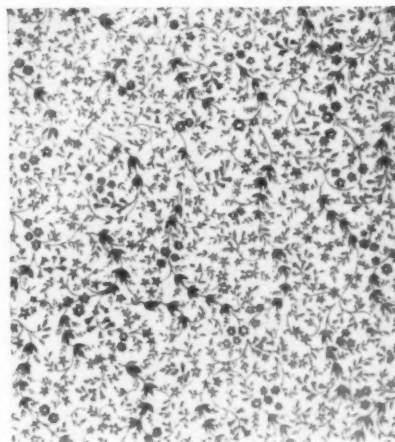
able to architects, but there is a good red, a good white and a good black. Tile size is 6 in. × 6 in.: the price for tile and adhesive (but unfixed) is £2 per sq. yd. Another contribution to cheaper tiling is provided by ENDURITE NO. 2 TILES (*The Safety Treat Ltd.*, Dace Road, E.3. Amherst 4407). These are 1 in. thick non-vitreous non-slip concrete tiles made in red, green, buff, stone, grey, and black. They are 12 in. × 12 in. and cost 3s. 8d. each; the cost per sq. yd. unfixed is therefore only 33s. per sq. yd.

19

Floor and wall finishes

PRE-FINISHED PLYWOOD PANELS were shown by L. Keizer (*Technical Products*, Ltd. (*Kingsborough House*, Wood Street, Kingston-on-Thames, Surrey. Kingston 9566). Panels are 8 ft. by 16 in. by ½ in. in seven different woods with a colourless plastic finish, and prices range from 3s. 5d. to 5s. 5d. per sq. ft.

Bakelite, Ltd. (12-18, Grosvenor Gardens, S.W.1. Sloane 0898) had three new WARE-RITE PATTERNS on show, which are not yet on the market, called Regent, Maize and Floral (see illustration). These are smaller-scaled patterns than have been used so far in this medium—giving an effect which could only be produced by such a material



Warerite floral pattern

and which therefore seem particularly well suited to it. The price is 4s. per sq. ft.

FLEXIBLE TIMBER PANELLING supplied in rolls was shown by Planiflex Ltd. (49, South Audley Street, W.1. Mayfair 3301). It is in the form of battens ½ in. thick edge-to-edge with a concave/convex joint between. Moulded surfaces are also made and the standard stock size of roll is 6 ft. by 8 ft. Prices vary from 9s. 6d. to 25s. 6d. per sq. ft.

A new CARPET UNDERLAY is shown by

Semtex, Ltd. (*Semtex House*, N.W.9. Hendon 6543). It is made of soft foam rubber with a "treaded" surface in rolls 54 in. wide. It should be useful for reducing impact sound on timber suspended floors. The price is 15s. per sq. yd.

A PVA floor finish called PLASCO was shown by the Armstrong Cork Co. Ltd. (*Bush House*, Aldwych, W.C.2. Covent Garden 1101). It is a jointless finish with granite chipping aggregate laid not less than ¼ in. thick. Five colours are made and it is claimed that the finish hardens in 72 hours; it requires a screed. Price 18s. to 22s. per sq. yd.

Two methods of WELDING JOINTS IN PVC flooring were shown by *The Adamite Co. Ltd.* (94-98, Petty France, S.W.1. Abbey 5911). One method is to leave a gap between adjacent sheets, which is then filled with PVC paste hardened *in situ* with a hot-air gun. The other method, used for their heavy duty flooring, is to lay PVC rods in the gaps, which are fused in the same way but at a higher temperature.

The makers of Bourne Seal, *Floor Treatments, Ltd.* (*High Wycombe, Bucks*) have developed a new plastic finish called GLEEM. Resin and acid hardener are both in the same solution, the acid being somehow restrained from acting until the solution is applied. It gives a wax-like finish to wood surfaces, is suitable for floors, and costs 61s. 5d. per gallon (enough for 372 sq. ft. of hardwood).

SYNTEKO, a product with similar uses, but coming from Sweden is shown by *Synteko, Ltd.* (*St. Margaret Works, Leicester. Leicester 20811*). It has a very high gloss finish, and costs 39s. per gallon for the hardener and 44s. per gallon for the accelerator (5 parts hardener to 1 part accelerator). One gallon of the mixture covers 25-30 sq. yds.

A material used for zebra crossings was shown by *Dohm, Ltd.* (157, Victoria Street, S.W.1. Victoria 1414). It is called CAN TILE, is claimed to withstand extremes of temperature, acids, and alkalis, and can be applied to almost any surface: price 68s. per gallon.

20

Floors and roofs. Structural elements

Structurally the Building Exhibition had little to offer that was new or significant, but there was one PRESTRESSED SUSPENDED FLOOR shown for the first time by *Udalls Prestressed Concrete Ltd.* (*West Quay Road, Southampton. Southampton 26367*). This consists of rows of cardboard boxes which have a space between them, filled *in situ* to form tee beams. The boxes rest on partition blocks laid flat on centring, and are thus expended shuttering. The tee beams are prestressed with the Gifford-Udall jack. The system can also take the form of a tee beam floor on top of wood wool slabbing. The floor is most suitable for long spans (over 30 ft.) and heavy loadings. The card-

Co-operation... AND BISON WIDE SLAB

During the erection of this block of maisonettes at Barnes...

Three floors, each of 300 sq. yds., were completed in four working days. The first floor took two days, but the second and third only a little over half a day each.

Laying of the Bison Wide Slab units started at 8 a.m. and finished at 1.15 p.m., the bricklayers being enabled to get on with the next 'lift' by 10.15 a.m.

Co-operation of this kind has quite a bit to do with the tremendous growth of Concrete Limited.



Architect: W. R. Shepherd, A.M.I.C.E., M.I.MUN.E., F.R.I.C.S., A.M.T.P.I.
Borough Engineer and Surveyor

Builders: R. H. Lynn & Co. Ltd.



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Construction (by products) *continued*

board boxes are packed flat for transport and it is evident that they should be carefully handled on site—especially if vibrators are used. Detailed prices are given in a handout. To take one only, a 40 ft. span 14 in. thick costs 81s. 4d. per sq. yd.

The makers of Trofdek, *H. Newsum Sons & Co. Ltd.* (238, High Street, Lincoln. Lincoln 812) showed a recent venture DIAFRAME: timber-framed panels of 4 ft. width clad on top with plywood. Thickness varies from 5½ in. to 9½ in. and lengths are made according to order. They do the same job as Trofdek but for smaller spans—up to 17 ft.

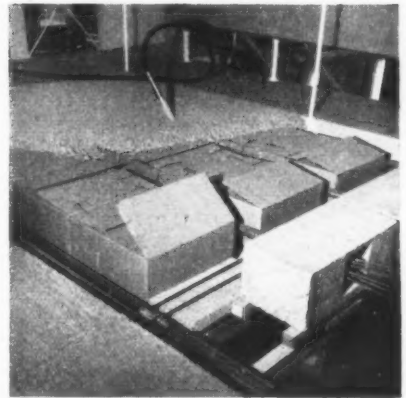
A concrete plank floor is produced by *Omnia Constructions Ltd.* (121, London Wall, E.C.2. Monarch 2272). The planks have reinforcement projecting from the top and support hollow pots between them, the structure being filled with *in situ* concrete. The longest span is 28 ft.

Two firms combine to produce a gypsum concrete roof system: *D. Anderson & Son Ltd.* (Stretford, Manchester. Longford 1113) and *Fibreglass Ltd.* (St. Helens, Lancs. St. Helens 4224). It consists of Fibreglass-based

roofing felt in rigid sheets laid between bulb tees which are welded to the main purlins. On this is poured 2 in. of gypsum plaster with chicken-wire reinforcement, finished with Thermoglas built-up roofing. The whole thing is called PYRODEK and has a U value of 0.16. The Fibreglass "formboards" are 31 in. wide in lengths up to 50 in. Prices are from about £3 per yd. for an area of 500-1,000 sq. yd.

The stand of *Concrete Ltd.* (16, Northumberland Avenue, W.C.2. Whitehall 5504) demonstrated the virtuosity of reinforced and prestressed concrete in its floors, staircase, roof, and a 35 ft. long "pylon." A relatively new product is the WIDE SLAB unit—a precast floor unit of large area and suitable for crane hoisting.

Roof support problems in domestic building are tackled by *Sommerfelds Ltd.* (167, Victoria Street, S.W.1. Victoria 1000). They make a lattice steel purlin to span between gable walls of a house and of a depth sufficient to act as ceiling joist binders. It was developed for the LCC, and a beam with a clear span of 22 ft. costs approximately £12-£14.



Udall's prestressed suspended floor under construction.

21

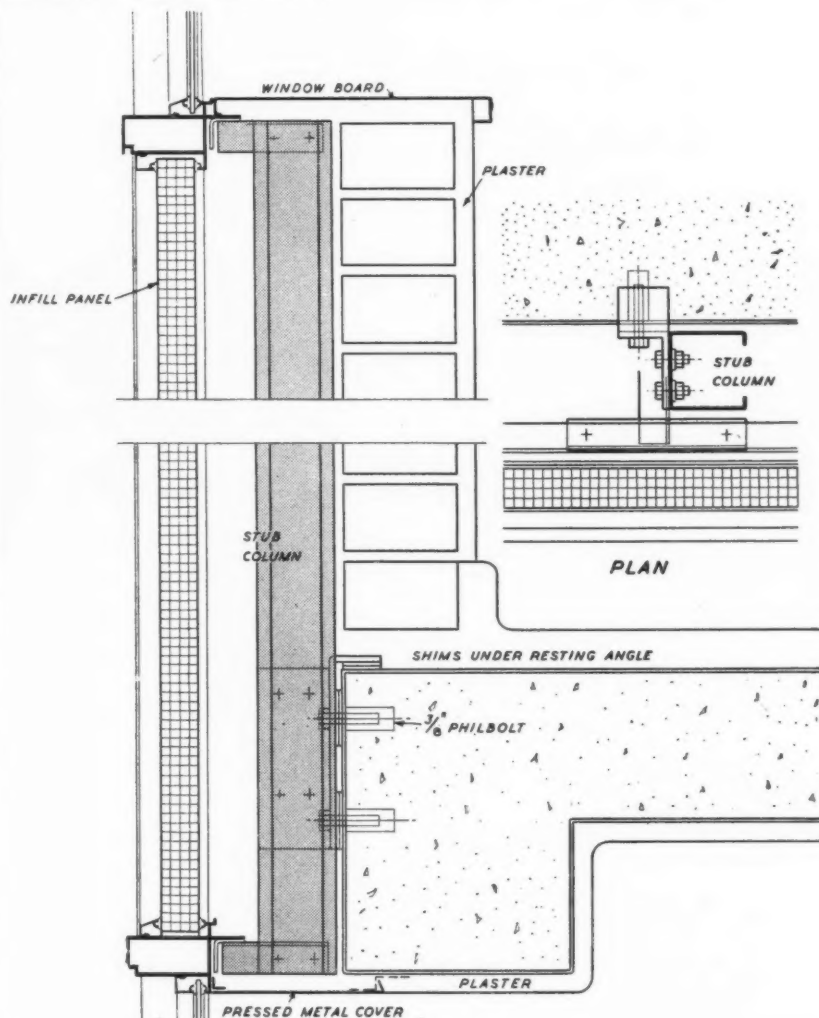
Structural elements, partitions and walls

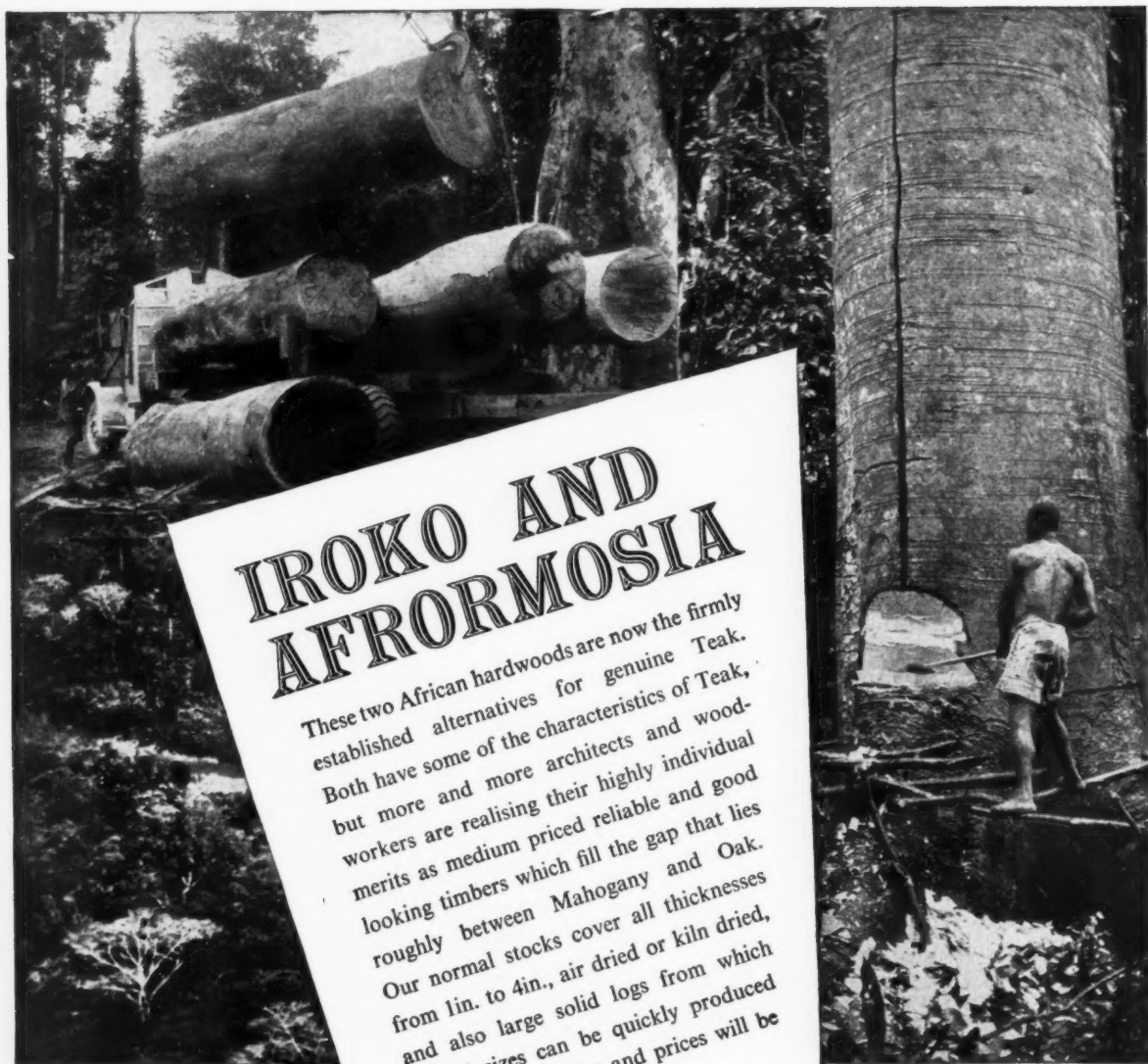
This section, which a few years ago would have been filled with movable office partitions, produced only three curtain and one fire resisting walls. This is not, of course, the total number of products on show which fall into this category, but only of those which we may call in some respect "new." Particularly noticeable is the falling off in the curtain wall exhibits. Is this because manufacturers are doubtful of the future of this class of wall construction? Or is it that they imagine that they have solved all the problems? Neither reason would seem justified, for curtain walling is at once one of our most promising technical developments and which needs most careful attention. In particular it is most disturbing that none of the manufacturers of metal curtain walls have thought it worth their while to overcome the "cold bridge" defect which was first pointed out by BRS as being highly critical, goodness knows how long ago.

The main point about the CRITALL FENESTRA WALL 237 (*The Crittall Manufacturing Co. Ltd.*, 210, High Holborn, W.C.1. Holborn 6612) is its acceptance of the horizontal floor line. The floor does not necessarily project to the face of the curtain, but the wall itself is supported on a sill height stub column which is bolted to the floor. The main supporting members are thus horizontal, an arrangement which gives complete weathering without mastics (see diagram). So long as a back-up wall is required, this seems a sensible arrangement. The MURAGARD CURTAIN WALL (*Gardiner, Sons & Co. Ltd.*, Broad Plain, Bristol 2. Bristol 20011) has, we believe, made curtain wall history by providing 2 hour fire resistance *without* a back-up wall (see photograph). This has been achieved by using a slender prestressed, precast mullion (which will not, of course, let the wall down in case of fire) and by spanning between with 3 in. Seco panels, made of woodwool sandwiched between flexible asbestos cement.

The third and last curtain wall is a timber

Detail of the Crittall Fenestra wall 237





Photos by courtesy of
The United Africa Co. Ltd.

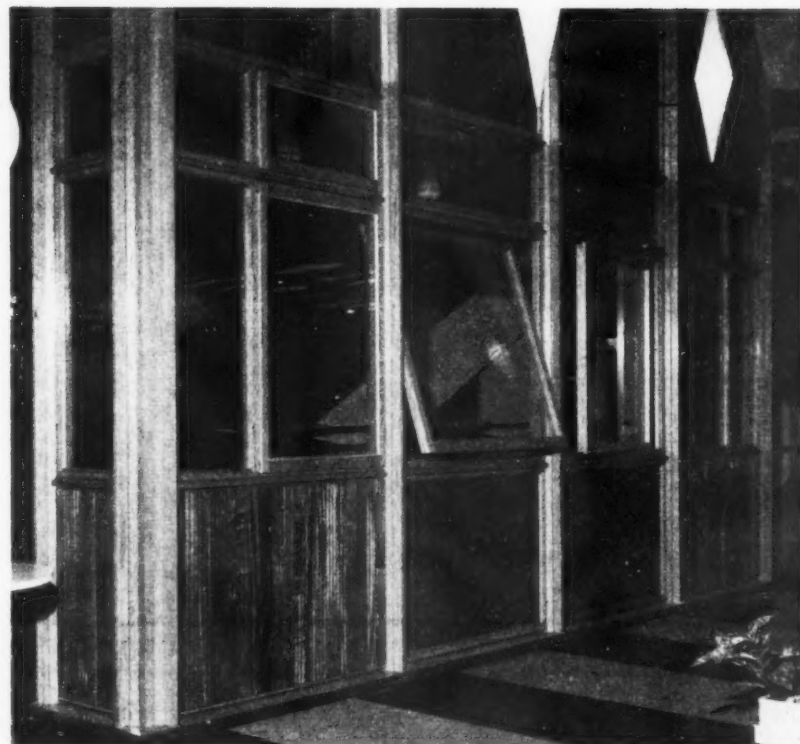
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Construction (by products) *continued*

version which was first marketed by *H. Newsum Sons & Co. Ltd.* (238, *High Street, Lincoln, Lincoln 812*) in the spring of this year. Named **WAL-PAK**, it is for two-storey buildings and, in contradistinction to Crittall's *Fenestra 237*, insists upon the verticals (see illustration). Designed for rapid erection (you merely erect the mullions and insert panels and frames in between) it is certainly the best looking of the timber systems now on the British market.

The last item under this heading is a **FIRE RESISTING WALL** by *Metal Sections, Ltd.*, *Oldbury, Birmingham. Broadwell 1451*. Built of two skins of Asbestolux on a light m.s. frame with an outer covering of corrugated asbestos, it gives a fire rating (against internal fires) of 3½ hours, and therefore meets the 2-hr. fire requirement of Byelaw 38 for all but non-domestic buildings. Approximate cost between 50s. and 70s. per sq. yd. erected.

22

Ceilings

An exhibit shown by *Burgess Products Ltd.* (*Acoustical Division, Brookfield Road, Hinckley, Leics. Hinckley 700*), raises a problem of classification, for it is a ceiling, but also a heating installation. Above the acoustic tiles for which this firm is well known, are parallel electric cables; above these again is an insulating blanket. The tiles may be of a number of sizes from 12 in. sq. to 40 in. × 20 in. and their surface temperature is 90–100 deg. F. Heat output is thermostat controlled. It is claimed that the ceiling provides a two-hour fire resistance and can accommodate what are called "modular" light fittings. The price is about 8s. 6d. per sq. ft.

A new **STUDLESS PLASTERBOARD** was shown by *Bellrock Gypsum Industries Ltd.* (200, *Westminster Bridge Road, S.E.1. Waterloo 3461*). This is a paper-lined gypsum sheet incorporating edge battens giving a "channel section." It will be available next year. Sizes are 8 ft. × 2 ft. and 8 ft. × 4 ft. and the price will be in the region of 5s. per sq. yd. The firm also showed a Bellrock panel in a waterproof version suitable for external use.

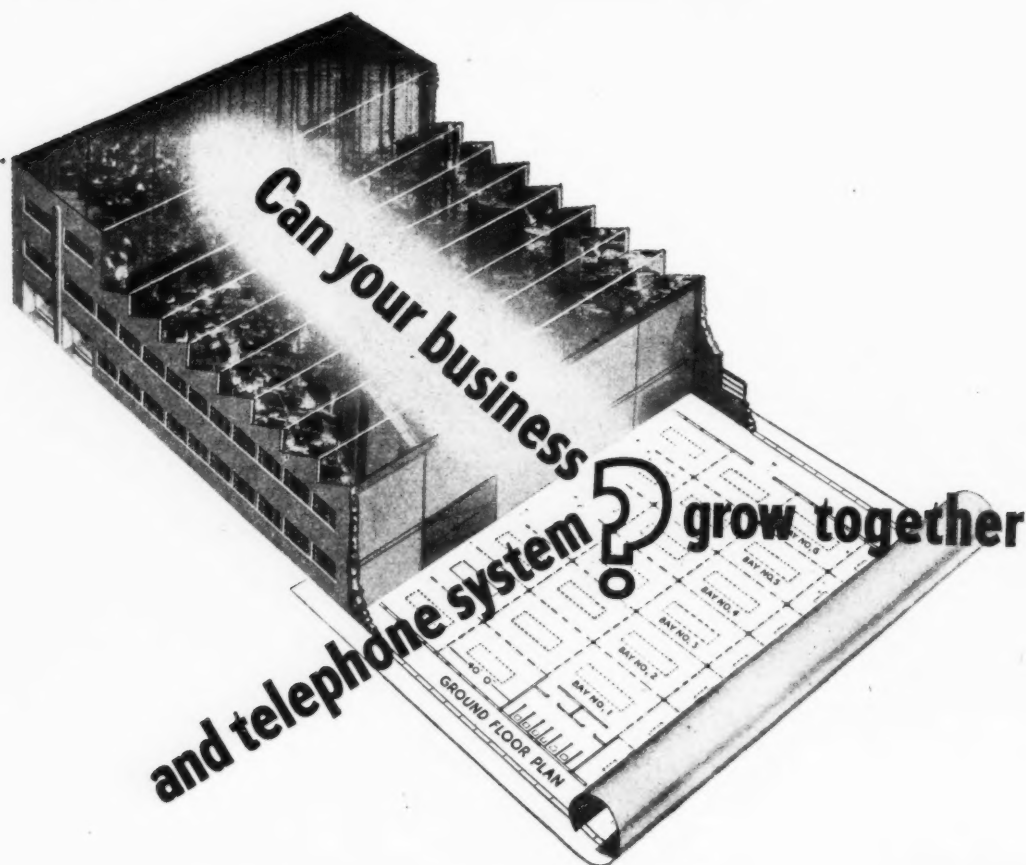
23

Doors and frames

The **THAMES-WERNO** fire check door, which *Thames Plywood Manufacturers Ltd.* (*Hart Lane, Barking, Essex. Rippleway 5511*) introduced early this year, was on show; this has now received official LCC approval. "Highlight of the plywood contribution to new ideas," however (to quote the hand-out), was a hollow skirting-board and

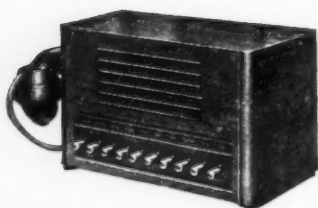
Above left: the Muragard curtain wall.

Left: Newsum's wal-pak timber curtain wall.



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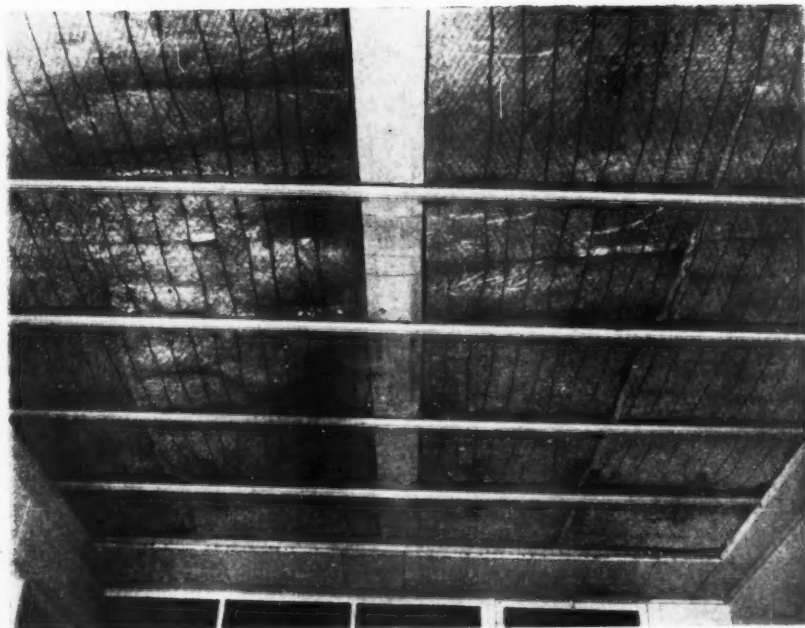
43-47 PARKER STREET, KINGSWAY, LONDON, W.C.2

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INTERNAL TELEPHONES

STAFF LOCATION

MUSIC FOR INDUSTRY

Construction (by products) *continued*

The Burgess electric ceiling heating system.

architrave.

A new development in flush door construction is the CONCAVO door (Crosby & Co. Ltd., Lion Works, Farnham, Surrey. Farnham 5291). It has no core, the plywood or hardboard faces being moulded into a concave shape to touch in the centre, where they are glued together. This evidently produces a very strong door which is not subject to rippling or warping, which is sufficient justification of the design. The makers, however, go further to suggest that "the severity of the flat surfaces of traditional flush doors often conflicts with contemporary furnishings and architecture. The Concavo door . . . merges . . ."!! The price (for hardboard) is 32s.

24

Window frames and roof glazing

Though (as we have pointed out in section 21) the show of curtain walls was disappointing, there is a fair amount going on in window manufacturing in the narrower sense. The main preoccupations are how to solve the problems of cleaning and reglazing in high buildings, and thermal insulation. The first is to be overcome by windows that pivot inwards Carda-wise and casements that project and slide so that you can get at them from what would have been the hinge side, and by glazing from within; and the second is to be overcome by weatherstripping and by double (in one case triple) glazing. The cleaning and glazing worry is really a very old one and it speaks volumes for the lack of intellect which we

have shown in window design that this problem has not been faced before; for the long-arm hinge never really did the trick. The insulation worry is relatively new since fuel supply has only recently become critical in this country. Here we can but repeat the warning of BRS (which applies only to metal windows) that double glazing may prove of little avail if the "cold bridge" effect is not prevented in the frame.

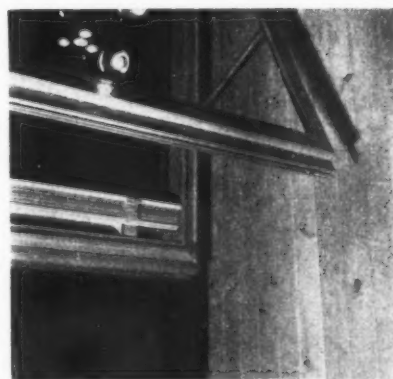
A number of British manufacturers have now adopted the reversible casement principle. Thus Henry Hope & Sons Ltd. (17, Berners Street, W.1. Museum 8412) have developed HOPE'S REVERSIBLE CASEMENT, a window which pivots through 180°. It can be obtained in a horizontally pivoting version (maximum recommended size 5 ft. 6 in. by 5 ft. 6 in.) or in a vertically pivoting section (maximum recommended size 6 ft. 0 in. by 4 ft. 0 in.); in aluminium (when it can be single or doubled glazed) or in galvanized steel (for single glazing only).

The AYGEE RESISTAL (Aygee Ltd., Aintree Road, Perivale, Middlesex. Perivale 6211) is a steel-framed window with aluminium linings and facings. There are two versions: one is a squareish double glazed window (not less than 4 ft. high, not more than 5 ft. high or 7 ft. wide), the other is a single glazed version with a hinged sub-light beneath. The CRITTALL Manufacturing Co. Ltd. (210, High Holborn, W.C.1. Holborn 6612) have two new products which fall in this field. The first is the CRITTALL CONTINENTAL WINDOW, a very handsome all-aluminium, double-glazed, fully weatherstripped affair (see illustration) with a neatly-operated venetian blind between the leaves. The cost (excluding the blind) is approximately 30s. per sq. ft. This firm's

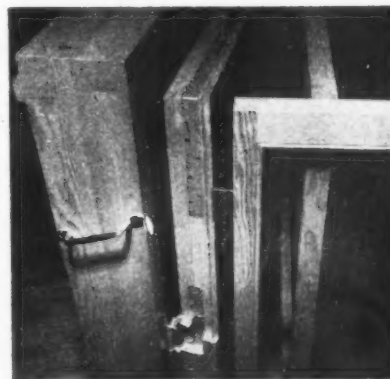
second product is a RANGE OF WINDOWS FOR USE IN MULTI-STOREY FLATS. Made in four standard heights, the range includes a large square horizontal overswing window and a vertical side projected window (see illustration) which on being opened gives a clear space of 12 in. on both sides for cleaning. Henry Hope & Sons Ltd. also

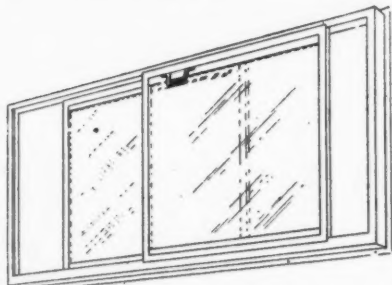


Above: the Crittall vertical projected window for multi-storey flats. Below: the Crittall Continental double-glazed window.



Below, the Holcon triple-glazed Carda window.



Construction (by products) *continued*

The Quicktho dual horizontal sliding window.

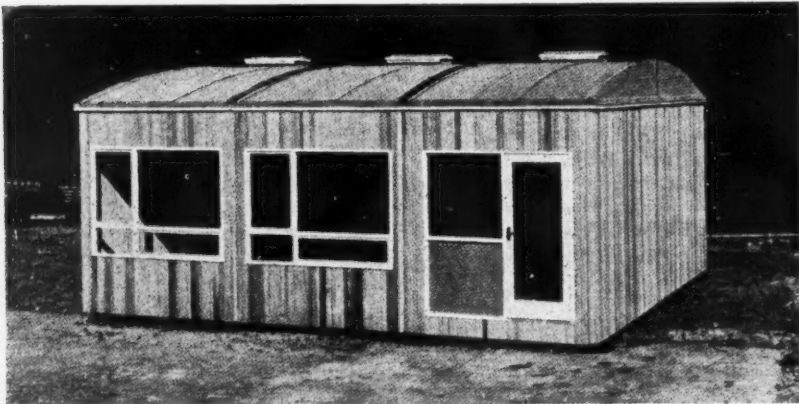
have a new side projected window of substantially the same kind.

Passing to new window types which are interesting mainly for their thermal insulation or weather exclusion value, we find that Carda now have a TRIPLE-GLAZED UNIT which opens up internally rather like a triptych for cleaning (see illustration) and which costs about 20 per cent. more than the double-glazed version. They also (though it hardly comes in in this context) have a version of the ordinary Carda timber window on which the external wood surfaces are wholly covered with anodized aluminium to save maintenance. These work out cheaper than the same windows manufactured in teak. Both the above products are sold by

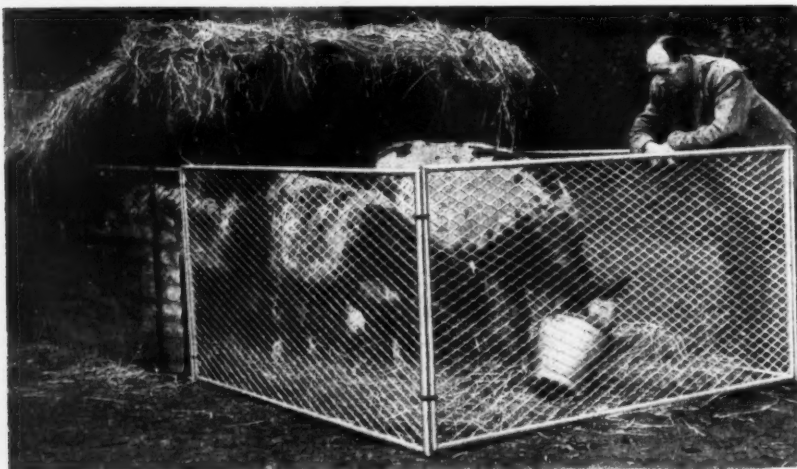
Holcon Ltd. (4, Drapers Gardens, Throgmorton Avenue, E.C.2. National 7517).

An interesting development in thermal insulation (which was, incidentally, illustrated in Thomas Markus's article on the glass curtain wall published in the JOURNAL for November 21, Fig. 3, p. 779) is the CHAMBERLIN INSULATE WINDOW (Chamberlin Weatherstrips Ltd., 436, Hook Road, Chessington, Surrey. Lower Hook 1181-3). This is a sliding inner sash for fitting inside an existing window to give, in effect, double glazing.

The metal sash window which was quite a novelty only two years ago is now almost as popular as the metal casement. One newcomer to the market is BRABY'S ALUMINIUM ALLOY VERTICAL SLIDING SASH (Frederick Braby & Co. Ltd., Fitzroy Works, 352-64, Euston Road, N.W.1. Euston 3456). This is glazed from the inside and is available in three standard sizes: 2 ft. by 4 ft., 2 ft. 6 in. by 5 ft., and 3 ft. by 6 ft. Another exhibit in this class (but horizontally sliding) is the DUAL HORIZONTAL SLIDING WINDOW by Quicktho (1928) Ltd. (Point Pleasant, S.W.18. Vandyke 4115-6). This comprises a pair of aluminium windows (see drawing), both sliding on nylon rollers, which together can fill openings of up to 11 ft. wide and 4 ft. high.



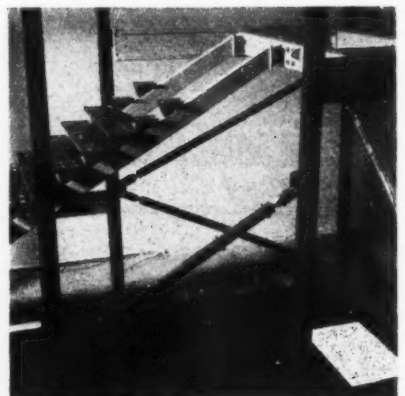
Above: the Terrapin Mark 24 mobile classroom. Below: an Expamet Uniframe used as an animal pen.



25

Complete structures

Four years ago there was a large number of exhibits which could be classed under this head; but the day of fully prefabricated buildings is evidently over and this time there is only one really legitimate entry—and one other which is squeezed in because the subject is only comprehensible in the context of the complete structural system of which it is a part. To take the second of these first, we illustrate below a hinged stair which has been developed by Brockhouse Steel Structures Ltd. (25, Hanover Square, W.1. Mayfair 8783), in conjunction with Donald Gibson and his team of architects in Nottingham, for buildings on sites liable to subsidence. It has a two-way hinge at head and foot.



The Brockhouse hinged stair.

The one authentic prefabricated building is the TERRAPIN MARK 24 MOBILE CLASSROOM (Terrapin Ltd., 6, Porter Street, W.1. Welbeck 7996-7). The operative word is "mobile," for the classrooms can apparently be erected in a day and moved in a day. As the famous educational bulge moves up the age groups this kind of feat is of real value. The classrooms are divided into units (the example illustrated is a three-unit classroom) and it is of interest to note that each unit weighs approximately 2 tons 3 cwt. Remembering that temporary constructions of this kind usually look terrible, it is heartening to be able to point out that these don't.

26

Products: miscellaneous

One product which defies any more specific classification is EXPAMET UNIFRAMES (The Expanded Metal Co. Ltd., Burwood House, Caxton Street, S.W.1. Abbey 7766). These are light "expanded metal" panels welded to 1-in. dia. tubular frames to form a finished panel 6 ft. 2 in. by 3 ft. 1 in., the whole being finished with aluminium paint. A system of fixing clips enables these to be put to an extraordinary variety of uses from pens for animals to shelving and warehouse partitioning.

building illustrated

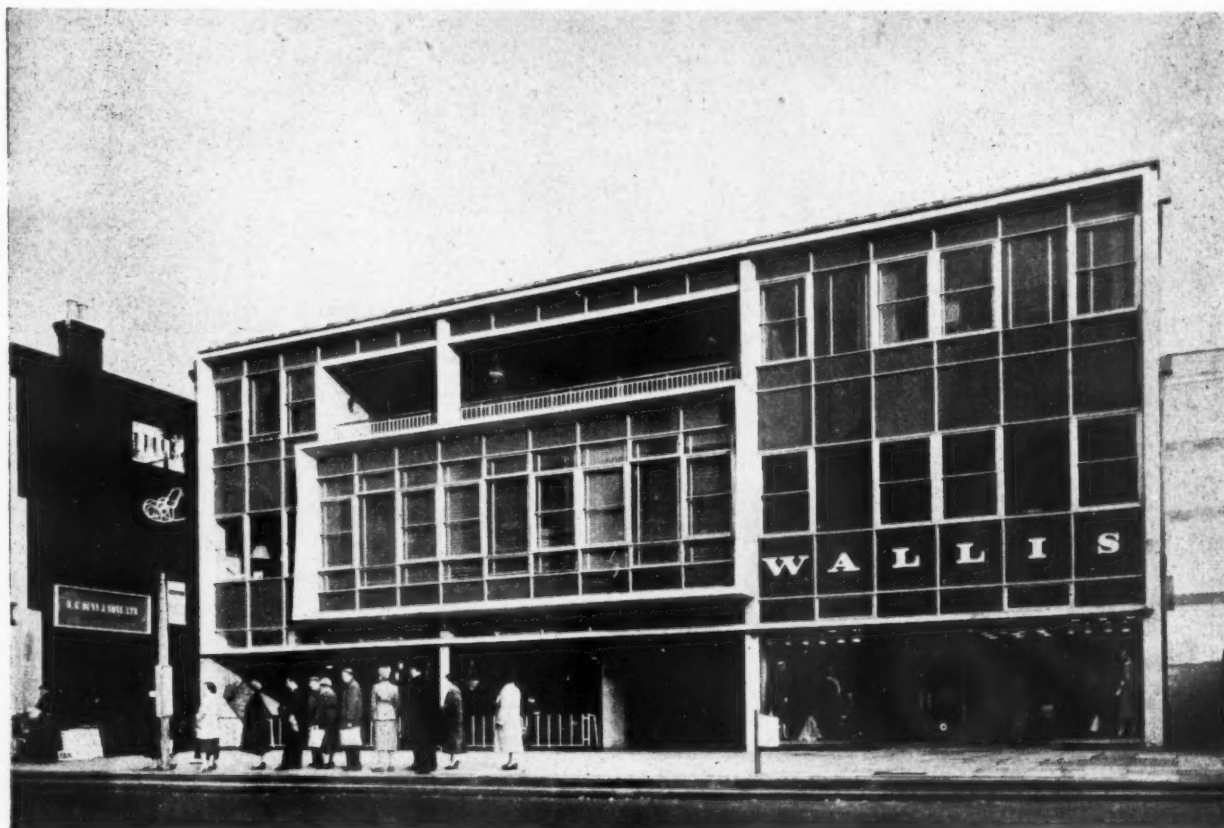
Furniture shop in Market Square, Bromley, Kent

FURNITURE SHOP

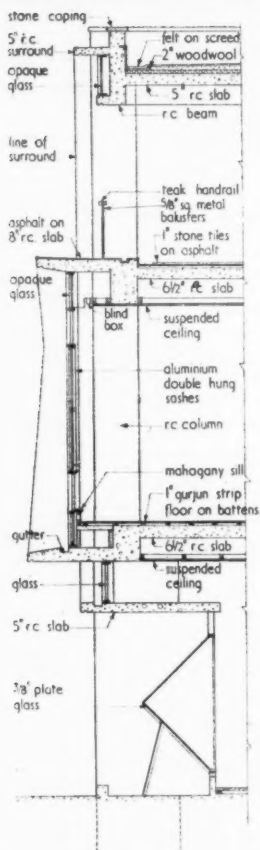
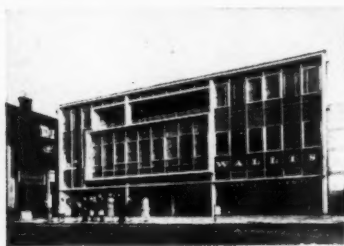
for DUNN'S OF BROMLEY, in MARKET PLACE, BROMLEY, KENT; designed by BERTRAM CARTER quantity surveyors MARTIN SHEFFIELD and BRISTOW, in association with R. G. READ

Shop design has two prime functions to fulfil: first to attract the passing customer and second to provide the widest opportunity for display. These requirements often lead to a blatancy which in most cases is probably excusable; but the building illustrated this week is a special case—the headquarters and show-rooms of a furnishing company who were among the earliest patrons of good modern design in England and were noteworthy pioneers in putting it on the market. It should, therefore, be able to stand up to the most critical examination.

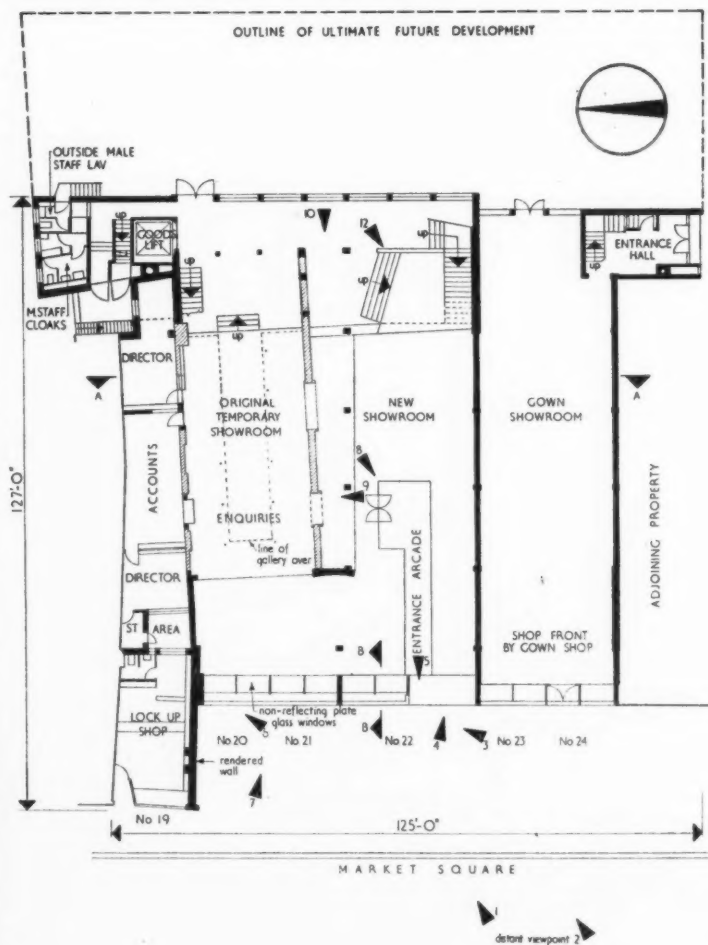
Viewpoint 1: the entrance facade, which faces Market Square.



building illustrated

Detail section B-B [Scale: $\frac{1}{8}" = 1' 0"$]

Viewpoint 2 (left): this is probably the most frequently obtained view since it is taken from a much used pedestrian crossing in the very heart of the town's shopping centre. The concrete frame which surrounds the facade above first floor level is filled in with aluminium "curtain walling." The subsidiary frame looks quite arbitrary in its position as there is nothing to show why it is off-centre or why it lies to the left rather than to the right. Similarly, there is no indication that it is more than ornamental and what, as ornament, it is meant to emphasize is not apparent. The architect gives three explanations: (1) The client asked for a picture frame to emphasize the part of the building intended for his own use, although later he took over significantly more of the premises. (2) The picture-frame encloses fenestration with a higher head and lower sill than elsewhere, as additional light was needed in that part of the plan. (3) The building is designed as the first instalment of a terrace which will eventually extend farther to the left. Viewpoint 3 (below left): the pavement shoppers' close-up of the building. The protruding end wall of an existing building has been painted black. A white painted bent wood rocking chair is suspended on cantilevered supports as a suitable emblem for the firm. The joints of the concrete frames are painted white. A wavy line in the frame, shows that the concrete lacks the precision which the use of this kind of architectural idiom appears to demand. The architect says "the shuttering was set up from the old floor level which in some cases was, in fact, bare earth—with the result that there was subsidence in the shuttering—it is not the material which must be blamed." The wide projection of the frame collects large quantities of water from the impervious glass membrane. As will be seen from the detail, drainage has been provided which one would have thought quite adequate; yet when the building was inspected water was dripping from the projection on to the pavement below. These faults have now been corrected.

Ground floor plan showing photographic viewpoints [Scale: $\frac{1}{8}" = 1' 0"$]

analysis

CLIENTS REQUIREMENTS

A furniture shop to replace the one damaged by incendiary bombs in 1941, retaining the "temporary" showroom. Planning to be so arranged as to permit building in stages, sub-division for disposal of sections in a manner not determined, and to comply with the Planning Authority's proposals for the reconstruction of the area. The Authority further required that the building should incorporate the corner property occupied by Messrs. Tutts (on the north side), thus terminating its proposals for the comprehensive reconstruction. White Hart Slip, to the south, was to be doubled in width to extend the shopping area and afford access to a common service yard at the rear. As trading would be still further restricted during the operations, a sales area was placed across the whole frontage during the building contract, within the area caused by the setting back of the building line some 19 ft.

SITE

The area is about 14,500 sq. ft. virtually on the crown of a hill. The sand sub-stratum was not penetrated during excavations and is evidently of considerable depth and is remarkably fine. Excavations revealed Tudor brickwork, numerous wells and cess pools, indicating continuous habitation over the centuries. Messrs. Dunn's have occupied their present site since 1710.

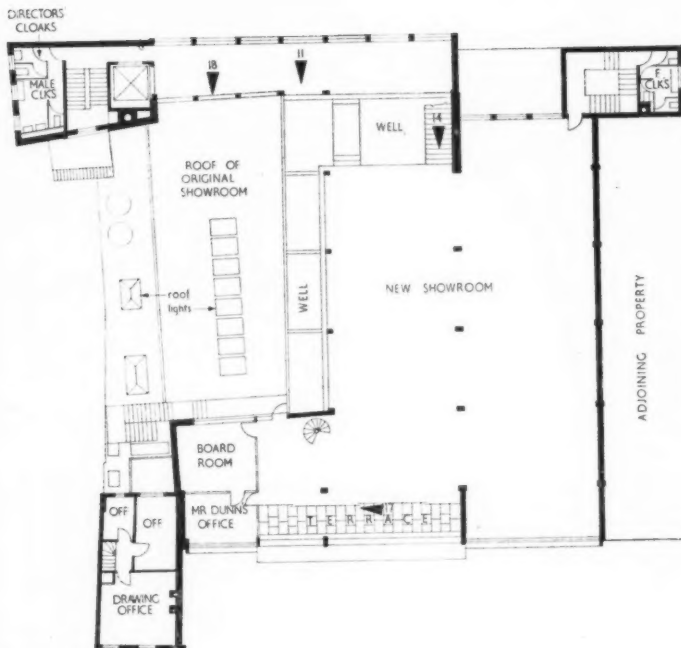
PLAN

Two walls which survived the fire in 1941 were raised up 3 ft. 6 in. by a precast concrete clerestory and roof in 1947; a small extension projected towards Market Square as an entrance, and a gallery was reconstructed to give temporary accommodation. Earlier designs assumed its demolition, covering the site with a three-storeyed structure. The client decided finally to arrange for the retention of this "temporary building."

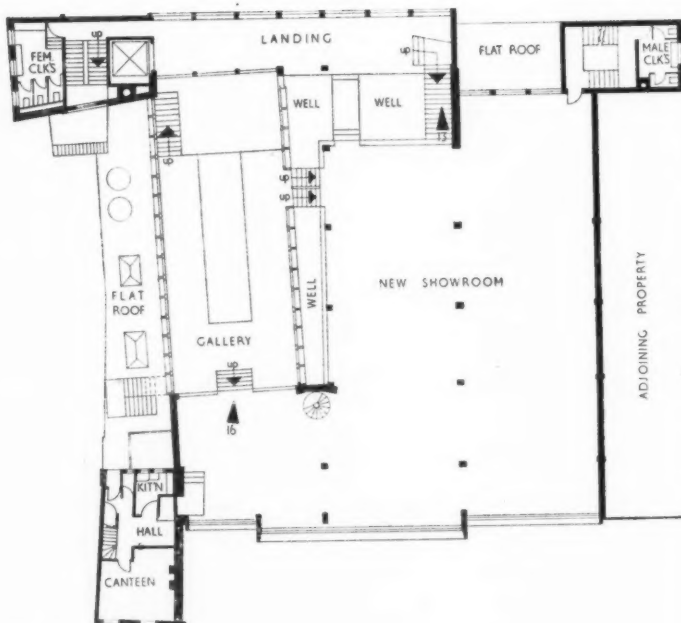
The retention of this showroom set some interesting problems in planning and structure. The new building does not touch it. The north light patent glazing, rising above the roof, is supported by cantilevers.

Reinforced concrete was used for the new building; the frame, floors, flat roofs and trusses of the north light roof are of this material. The north light roof slopes themselves are of wood wool covered with three layers of bituminous roofing felt. The concrete frame sets the pattern of the elevations, that to Market Square having an infilling of patent aluminium curtain walling above the ground floor. It incorporates aluminium double hung sash windows and solid panels of two-thickness glass with coloured film between. Those elevations yet to be built to White Hart Slip, the common yard and right of way at the rear, are designed for brick panels of two contrasting colours as infilling panels between the frames. The non-reflecting shop windows are to the architect's own design, having been used experimentally in 1947 in the "temporary" building. In the frameless, glazed arcade, a German glass cement was used. Internally the finishings are subordinate to the purpose of the building—a shop for the display and sale of furniture, textiles, carpets, glass, china, pottery and electrical fittings. Most walls to the sales areas are not plastered, the stairways are granolithic and only ceilings provide colour. The insulation board ceilings to the ground and first floors are suspended, masking the beams and affording mobile supports for display, together with interchangeable lighting units. A comprehensive layout of electrical socket outlets on the concrete soffit makes it possible for new lighting fittings to be provided in any part of the ceilings.

The heating system is an oil-fired, low-pressure, hot-water



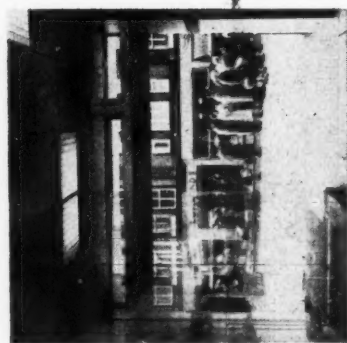
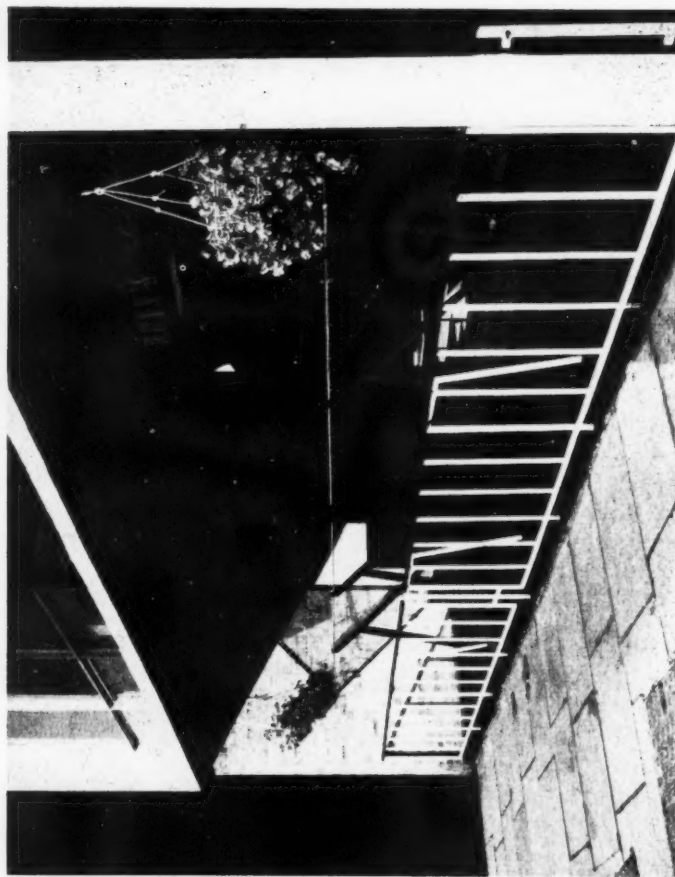
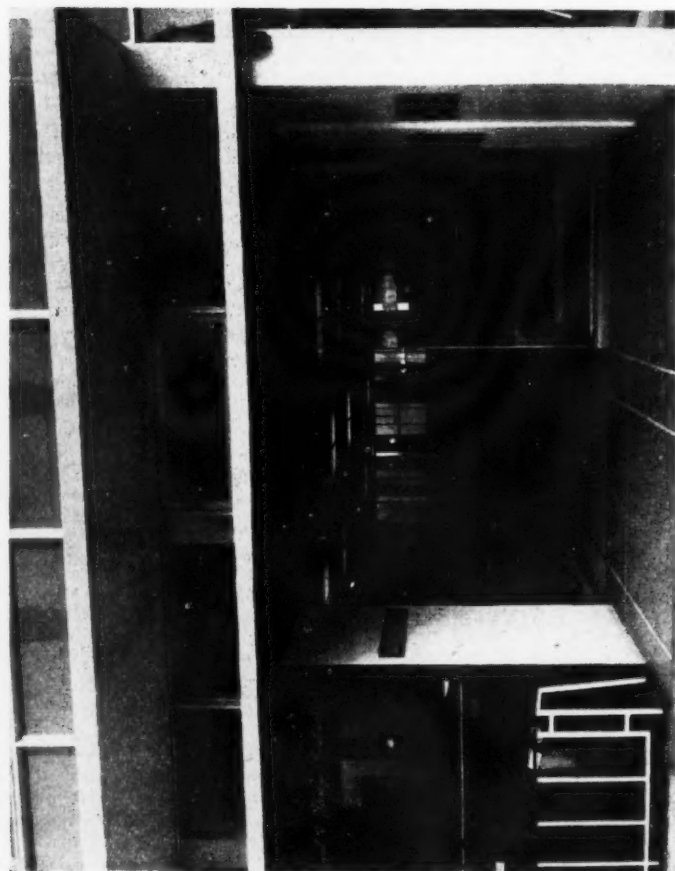
Second floor plan



First floor plan

The plan of the building, as such, is quite uncomplicated, since the principal requirement was simply to provide as much flexible display space as possible. The main problem to be overcome was the incorporation of existing showrooms, built to replace war damage in 1948. Here the architect has been most skilful and ingenious, treating as an exciting opportunity what might have proved a great embarrassment.

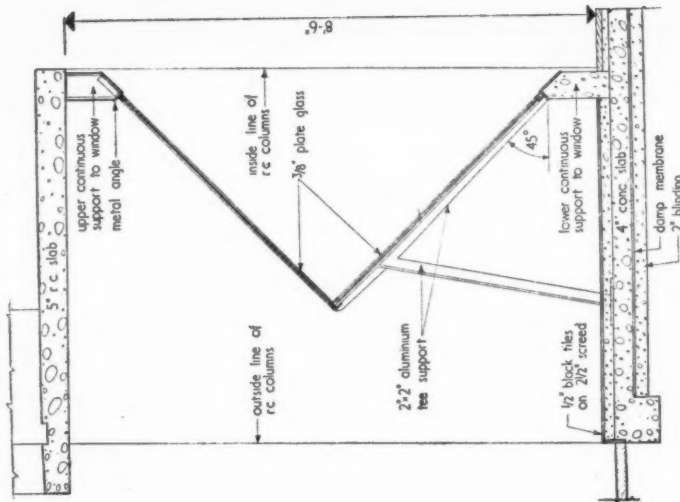
building illustrated



Viewpoint 4 (above left): the bottom member of the outside frame is, in effect, a deep canopy some 2 ft. below the first floor level which occurs in line with the bottom edge of the inner concrete frame. Between these two elements is squeezed a row of clerestory lighting; the difficulty of obtaining access to this, both for cleaning and for opening the ventilating lights may be appreciated from a glance at the section. Viewpoint 5 (left) shows this feature from the other side. The architect states that the height of the canopy was governed by the needs of proportion and its width by the non-reflecting window to which it forms a hood. The top of the canopy gives a certain amount of reflected light. He agrees it may be difficult to wash the glass from the inside but says trans-

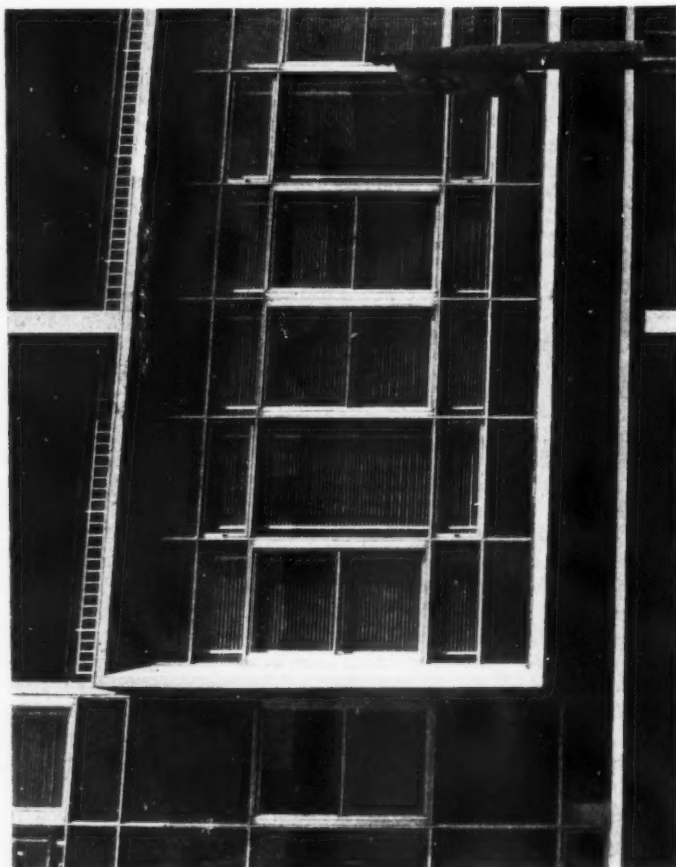
lucency is not an essential requirement. Viewpoint 6 (above): here the architect has provided a large display window, reflection-free, designed as an alternative to the conventional but expensive concave sheet. In order to prevent reflections, the soffit and reveals have been painted a dark grey and the paving tiles are black. The street railing, needed to protect the window, is also predominantly black and the total impression is somewhat gloomy. Half way up the window the two sheets of plate glass meet at an angle. The resulting joint stands out as a white line across the interior display. The architect states that a similar window designed as an experiment in 1948 was repeated because it was so successful.

analysis



Viewpoint 7: two types of opening lights are used between aluminium curtain walling mullions: horizontal centre pivot hung sashes, one at low level behind radiators and the other just below ceiling level; and secondly, very smoothly working vertical sliding sash windows, also in aluminium. The effect where two of these join is somewhat heavy. The sliding panels in the curtain walling are coloured Munsell 5.0 Y 4/4 (a sort of olive green).

Section through non-reflecting glass window [Scale: 1" = 1' 0"]



installation, designed and executed by Matthew Hall & Co. Ltd.

The elevations are determined by the form of structure and are governed by the angle of $54^{\circ} 45'$.

As only partial redevelopment has taken place so far, the elevations are incomplete and the interior, of necessity embodying staircase, lifts, lavatories, offices, etc., is therefore lacking in open floor space, scale and special character, the future section being virtually uninterrupted floor space.

When the building is finished it will have two sales areas per floor, separated by the central well and staircase. The natural levels of the site have been exaggerated to give the rear portion a mezzanine character, the difference in level being but 2 ft. 6 in. The flights of stairs are well separated to enforce circulation among the display. Goods are received at the rear (future common service yard to all shops on the site) and are also dispatched from this bay adjacent to the goods lift serving all floors. Sales areas are on all levels, including the existing showroom—ground floor and balcony linked in turn by short flights of stairs to the new building. Cloakrooms are housed in secondary staircase towers, and on the second floor the client has his private office and boardroom. The boardroom will be open to public view while not in use.

Ultimately there will be some 40,460 sq. ft. of floor space, and Messrs. Tutts' property will add a further 4,010. Of the total of 44,470 sq. ft., 27,235 sq. ft. are now occupied, of which Messrs. Wallis utilize about 3,000 sq. ft. These areas are exclusive of No. 19 Market Square to the north of the main building, the upper portion occupied by Messrs. Dunn's with a tobacconist on the ground floor, together with all stairways, lifts, cloakrooms, etc.

The ground floor shop front to nos. 23 and 24 was designed by Russell, Cole and Bender.

MAIN CONSTRUCTION

Reinforced concrete frame on simple pier foundations. R.c. floors and trusses to glazed north light areas. The main frontage is designed as one shop window with the use of wall cladding (curtain walling).

Rear elevation is a temporary one, in view of future extensions at rear to complete the scheme.

cost per sq. ft. floor area	s	d
preliminaries and insurances	2	0½

Contingencies (includes provisional items subsequently omitted complete or undertaken by client direct)	2	11½
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STRUCTURAL ELEMENTS

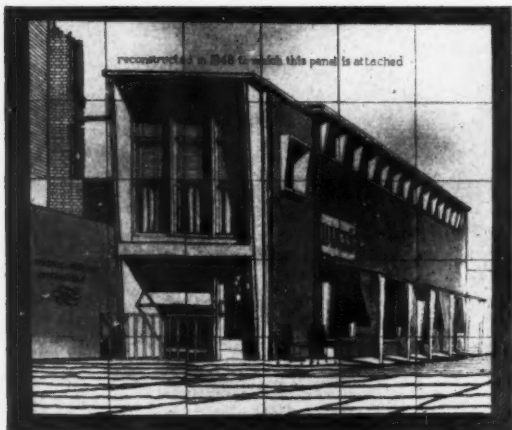
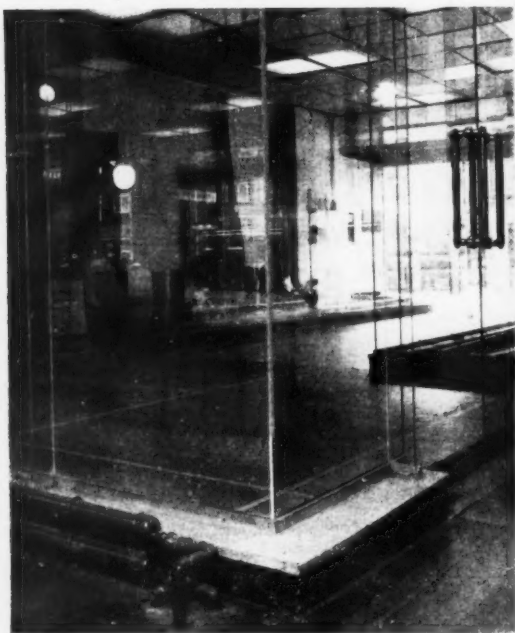
Work below ground floor level, foundation type, basement	9	9
Concrete pier bases and beds throughout in 1 : 2 : 4 reinforced concrete.		
Suspended floors over basements.		
Brick retaining walls to basements at north and south staircase towers, finished asphalt tanking.		
Cost includes reinforced concrete work and suspended floors over basements, but excludes additional cost of covering wells and cesspools.		

External walls and facings	4	11
Curtain walling to main facade. West elevation in double thickness glass with coloured film between in aluminium frame with a natural finish. Cost includes windows in curtain walling.		
Brickwork: north and south towers of 14-in. and		

building illustrated



Left: the temporary back elevation (from south-east) from which the building will be further extended. Viewpoint 8 (centre left): the inner display windows reveal an interesting use of glass as a structural material. Very large sheets of plate glass in long runs are given added stability by plate glass buttresses 3 in. wide, as seen in this detail of the main entrance doors. The use of large areas of plate glass poses obvious problems of condensation, to which an acceptable solution seems difficult to find, as it is only prevented by ugly 2½-in. diameter flow-and-return heating pipes, painted grey, running round the terrazzo plinth. The architect states that the "arcade" where these pipes occur was a client's revision to the original plan and it was impossible entirely to conceal the pipes.



Viewpoint 9, left: among the decorative features are a number of tiled plaques, designed by Gordon Cullen. This one depicts the showrooms built in 1948 after the firm's premises had been bombed in the war, and which are now incorporated within the new building. Viewpoint 10, above: the building wraps round the old premises, and the external walls of the 1948 building become internal partitions. This photograph shows the very effective junction between the old work and the new, with a most amusing inversion of exterior and interior window, where the new clerestory comes above the old. This junction has the additional virtue of providing a considerable source of natural light for the whole depth of the showrooms from front to back so that the natural colours of fabrics can easily be seen without being taken out into the street. Colours: wall on right—olive (Munsell 5.0 Y4/4); first floor soffit, lemon yellow (7.5 Y 8/10); the gutter of the existing building is the same; second floor soffit, Light red (7.5 R 6/10); the column in the opening into the old building at mezzanine level is bright red (10.0 R 5/14); columns, beams and cantilevers are white with hardwood trim.

analysis

s d

11-in. cavity brickwork, struck pointed. Facings in Leicester Grays and Shropshires.
East and south temporary elevations, 11-in. cavity fletton brickwork, struck pointed, giving simplicity of design, construction and low cost.

$$\text{ratio: } \frac{\text{solid wall}}{\text{floor area}} = \frac{0.656}{1}$$

(Solid wall above ground floor level, excluding existing walls to which no work was necessary, minus openings.)

$$\text{ratio: } \frac{\text{curtain walling, excluding windows in same}}{\text{floor area}} = \frac{0.041}{1}$$

Frame or load-bearing element

Concrete columns, beams and trusses throughout. 1 : 2 : 4 r.c. with high tensile and mild steel reinforcement.

Exposed aggregate r.c. panels.

Beam spans: 25 ft. and 15 ft. 2 in. Column grid: 25 ft. and 15 ft. 2 in.

Upper floor construction

Reinforced concrete all floors, 1 : 2 : 4. (Cost excludes false ceilings.)

Staircases

Precast concrete cantilever steps for main central staircase, with granolithic finish. Staircase situated in well with "open air" treatment of design. Height: floor to floor, 12 ft. 5 in. average.

Width between flight and bridge: 14 ft. 2 secondary staircases, *in situ* r.c. with granolithic finish.

(Cost includes bridges over well, finishes and balustrades, including open wells, balconies, etc.)

Roof construction

Flat roofs, r.c. 1:2:4 r.c., wood wool and screed, finished 3 layers of felt and Derbyshire spar.

North light areas, 2-in. wood wool and screed, finished 3 layer felt and white mineral surface.

Area of flat roofs, including dome lights: 4,325 sq. ft.

Area of sloping roof, excluding patent glazing: 2,256 sq. ft.

$$\text{ratio: } \frac{\text{Total area of flat and sloping roofs}}{\text{floor area}} = \frac{0.328}{1}$$

(Cost includes r.c. flat roofs, wood wool, north light roofs and coverings.)

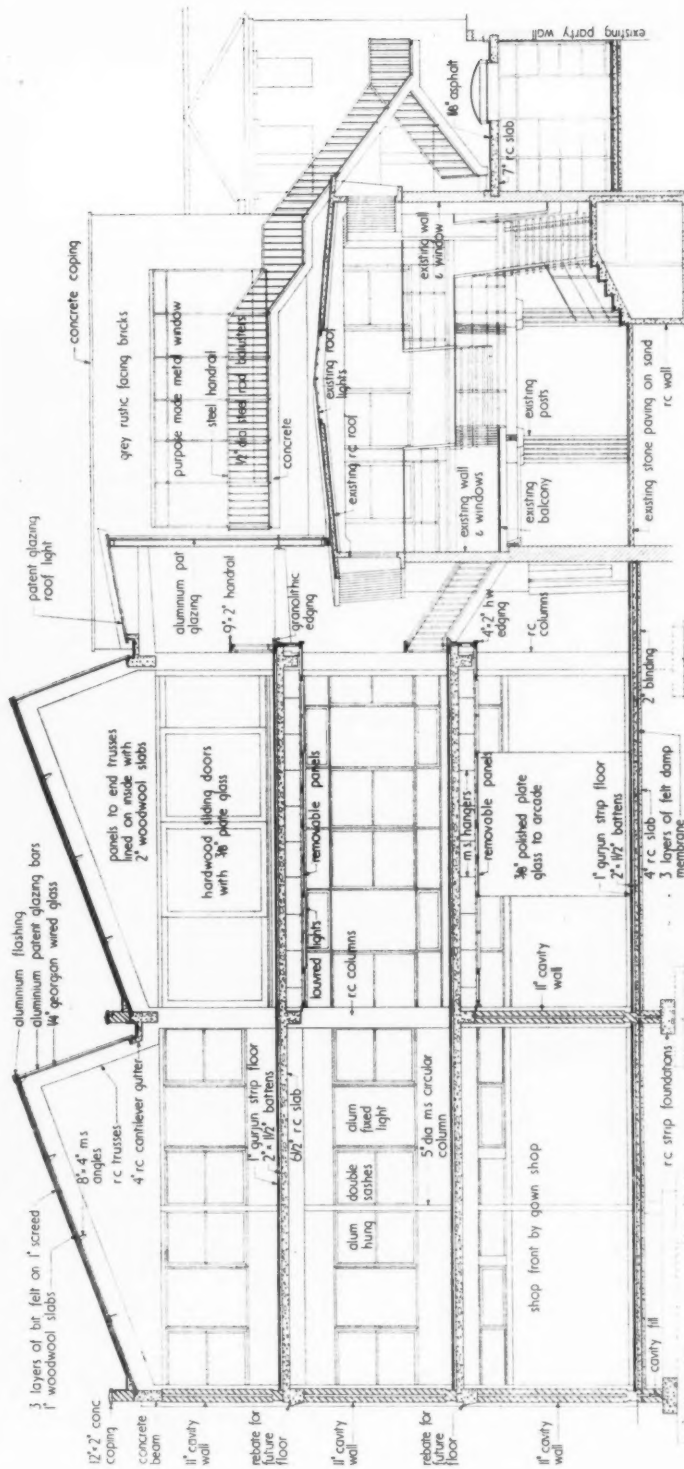
Roof lights

Dome lights to main staircase well, glass domes on ventilator upstands.

Patent glazing to north lights, Georgian wired rough cast glass in aluminium bars.

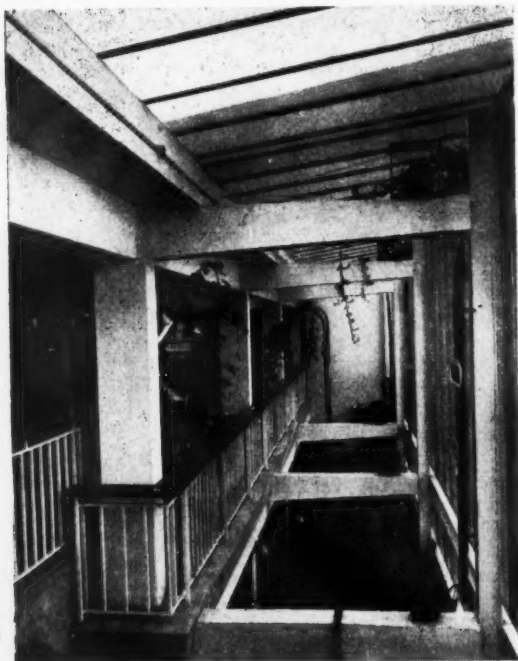
Same for north elevation, with light screen wall suspended over existing eaves.

$$\text{ratio: } \frac{\text{patent glazing and roof lights}}{\text{floor area}} = \frac{0.118}{1}$$

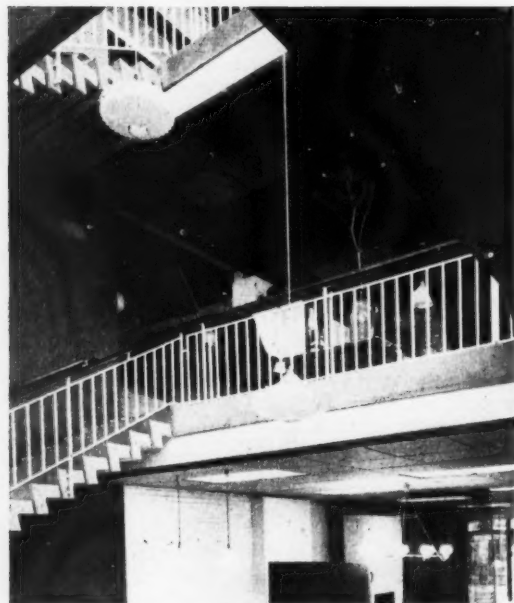
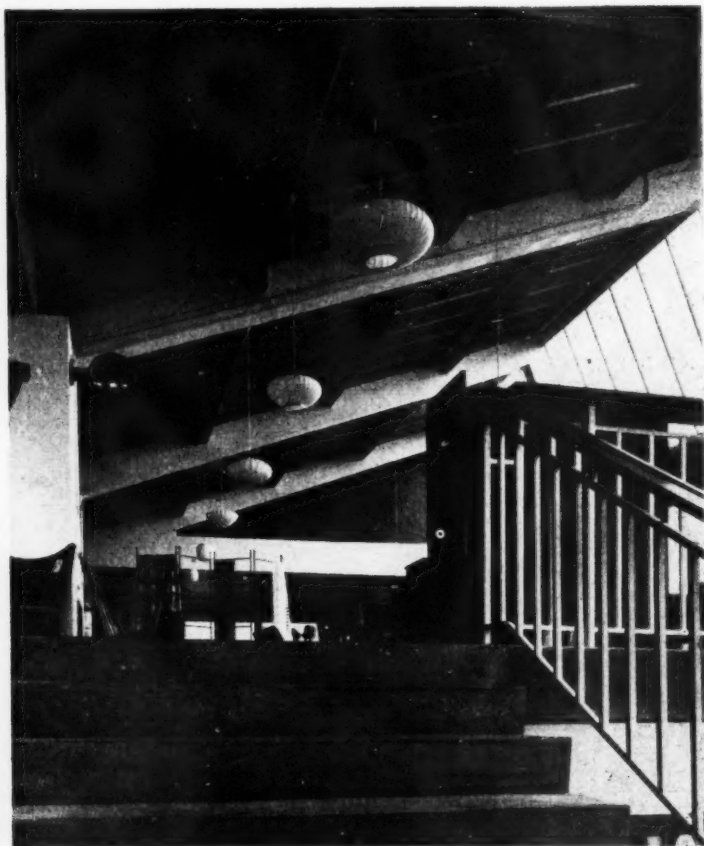


Section A-A
[Scale: 1/8" = 1' 0"]

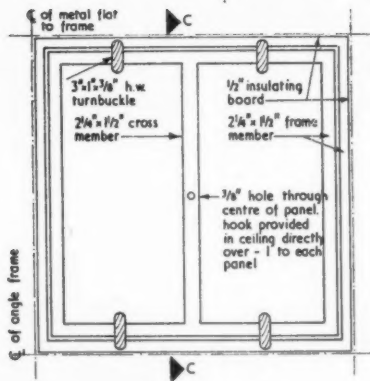
building illustrated



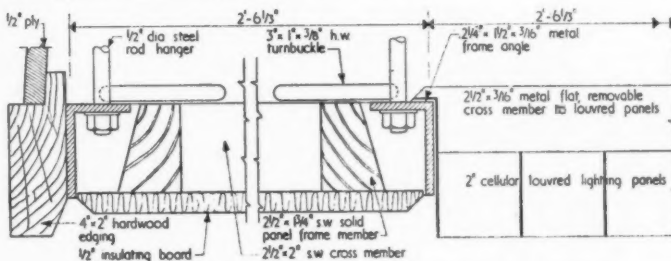
Viewpoint 11, left: from second floor level on to the junction of the old building and the new. The vigorous spatial experiences provided here are notable in their own right, but they also meet extremely successfully the need for exciting display. Even the serpentine vacuum cash tubes, seen at the far end, make their own contribution in contrast to the more natural growth of the vines. Colour comes mainly from carpets and other goods displayed on the floors below.



Viewpoints 13, above left and 12, left. The capacious stair well has been used to provide an excellent display space for pendant light fittings. In the hands of imaginative window dressers, no opportunity the architect has provided need be neglected for display purposes, as the next photograph shows. Even places which in some circumstances might prove more awkward than they are worth, for example where this landing runs on underneath the return flight of stairs, can become a virtue. However awkward this space may be in other circumstances because of its inaccessibility for cleaning, here it becomes merely another display opportunity. The architect says: "Everything has been done deliberately to afford space for display; nothing is accidental. The whole essence of design is to provide a background for furniture, and where possible some surprise vistas." Viewpoint 14, above: a view from the second floor half landing, showing the pitched beams under the north light roof. There is great need in furniture showrooms for easily-removable light partitions or screens, since many of the objects displayed are intended in use to be placed against a wall (wardrobes, for example, appear unsightly if seen from the back). A certain amount of difficulty in providing vertical support for screens is found under high roofs such as this, and in the greater part of the showrooms a much lower ceiling has been provided. Here the columns are white, the beam below the north light is grey (N.6), and the wood-wool roof soffit is a lemon yellow (7.5 Y 8/10).



Plan, typical solid ceiling panel [Scale: 3/4" = 1' 0"]



Section C-C through typical solid ceiling panel and part louvred panel [Scale: 3/4" = 1' 0"]

Below: the ceiling (see Detail, above) has very easily accessible fixings for anything which needs to be suspended, such as the light fitting and the tension wires from which screens are hung. The cast-iron spiral staircase (black treads, white balusters) leads up to the managing director's office.



analysis

Windows

Double hung sashes in curtain walling, of aluminium. Natural finish. Elsewhere, casements in aluminium natural finish. Sliding windows from 2nd floor showroom to balcony, of polished hardwood.

ratio: $\frac{\text{windows in solid and curtain walling}}{\text{floor area}} = \frac{0.154}{1}$

(Cost includes windows in curtain walling and sliding windows from showroom to balcony, but excludes patent glazing, shop fronts and arcade.)

External doors

Wood doors to staff entrance, boiler house and escape, 1 3/4-in. panelled softwood, painted. (Cost excludes armourplate doors to south tower and arcade.)

Shopfronts and arcade

Non-reflecting windows and arcade to main facade, west elevation, polished plate in aluminium, natural finish. Doors to arcade and south tower, polished armourplate.

Cost includes shopfront to 23/24 Market Square, subsequently omitted (executed by lessees), together with glazing and doors.

ratio: $\frac{\text{net opening area of shopfront and arcade}}{\text{floor area}} = \frac{0.034}{1}$

Glazing

Main elevation 1st and 2nd floors, 32-oz. clear sheet and 1/4 in. polished plate; rear elevation, rough cast.

(Cost includes glazing to windows and doors, but excludes shop fronts and arcade.)

PARTITIONING

Internal partitions

Brick and clinker block for toilet blocks, finished plaster, emulsion paint and tiles.

(Cost includes internal cross wall, subsequently omitted on upper floors.)

Timber and glass screen round boardroom and managing director's private office.

Hardwood frame and plate glass, finished French polish.

W.c. doors and partitions

Painted softwood flush doors to toilets, and clinker block partitions, finished plaster and painted.

Internal doors

Softwood, flush doors throughout, painted.

Ironmongery

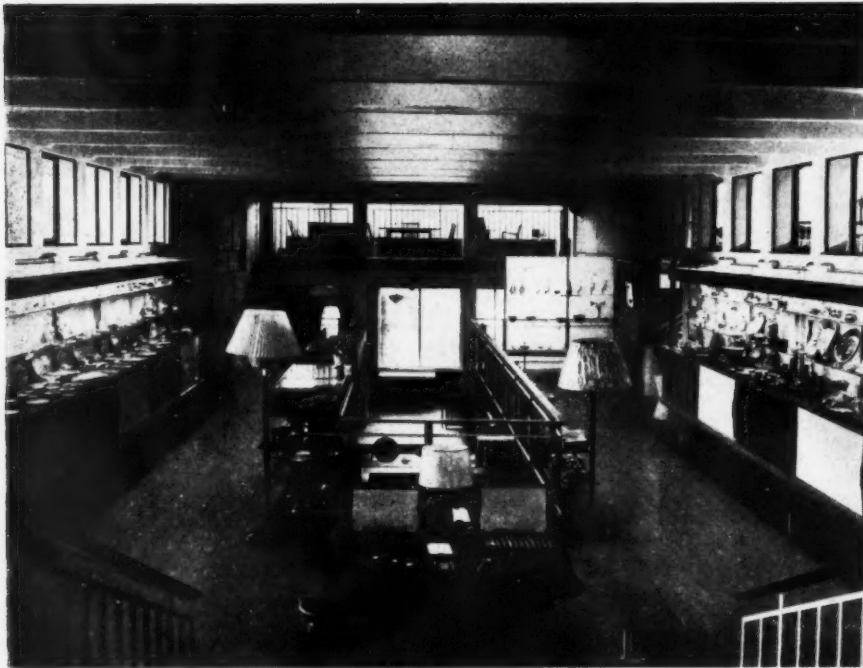
Anodised aluminium throughout.

(Cost includes sliding door gear and also curtain tracks, mirrors, etc., subsequently omitted from building contract.)

FINISHES

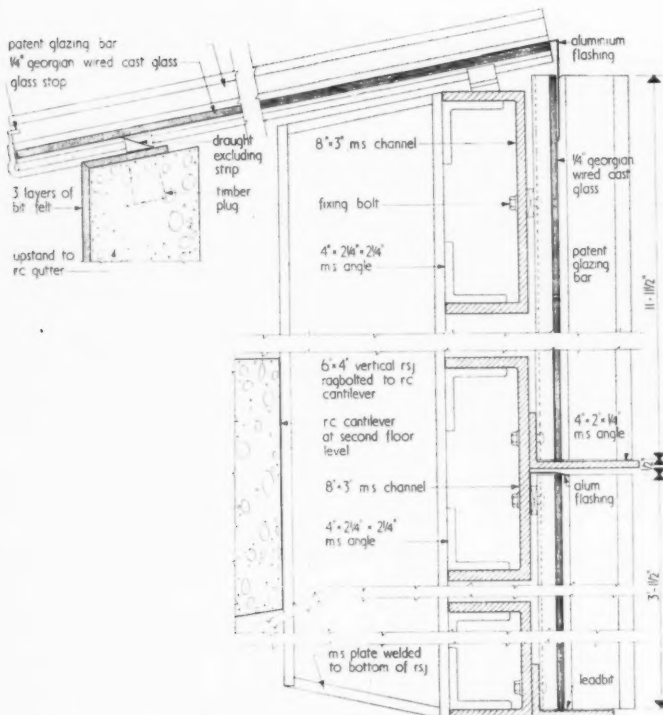
Variations, not reflected in costs, have since been ordered to suit employers' and lessee's requirements for floor, wall and ceiling finishes. All finishes listed below are as included in the building.

building illustrated

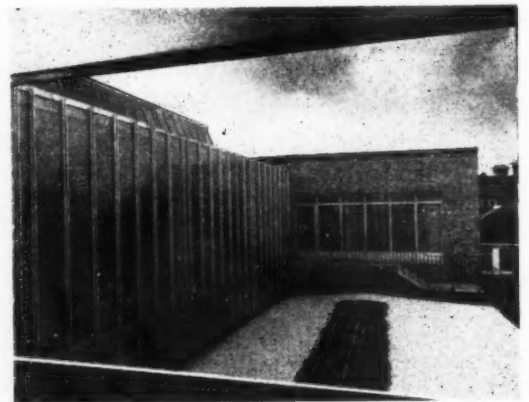


Viewpoint 16, above, from the first floor of the new building, looking down into the old. The opening in the right-hand wall leads to the short flight of steps seen in the photographs on page 860, and this will give some idea of the stimulating space relationships. Viewpoint 17, right: the balcony, looking towards the managing

director's office. The bull's-eye window at the far end is not an inter-wars cliché, but a genuine brass porthole, reflecting the yachting enthusiasms of the managing director. Hardwood hand-rail, white columns, beams and end wall, green ceiling (10GY 5/2). Hardwood sliding windows on the right.



Section through patent glazing at 10° pitch and vertical [Scale: 1" = 1' 0"]



Viewpoint 18, the extremely classic treatment of the clerestory of the new building above the roof of the original building (see cross-section left) is very pleasing.

analysis

Floor finishes

Terrazzo: main staircase and well, cloakrooms, arcade, S.E. tower and entrance, in situ terrazzo with brass and ebonite strips, diaper pattern. 43s. to 54s. per sq. yd.
 Hardwood: all showroom floors, 1 in. (nominal) Gurjun strips at 31s. 9d. per sq. yd.
 Granolithic: bridges, 1½-in. granolithic.
 Precast slabs: adjoining existing building, 2-in. precast.
 Screeds: cement and sand.

Wall finishes

Fairface brickwork generally. Sand limes, emulsion paint and flat paint. Plaster for main staircase well and cloakrooms, finished emulsion paint.

Ceiling finishes (cost includes false ceilings)

Ground and 1st floors, suspended ceilings on mild steel light framework with ½-in. insulation board panels. Emulsion paint.
 2nd floor north light area, natural woodwool, finished emulsion paint.
 2nd floor front, and 1st floor 23/24 Market Square, fairface concrete, 1 : 2 : 4. R.C. finished emulsion paint.

Decorations (cost includes all paint work)

Applied paint: metalwork (balustrades), gloss oil on prime coat. White.
 Woodwork: gloss oil on primer, doors B.S. 710 blue, frames, white.
 Brickwork: emulsion, grey Munsell 47, or white.
 Insulation board ceilings, emulsion, B.S. 008 yellow, ground floor, and special mix (red) and white on 1st floor.
 R.C. columns and beams: emulsion, white.
 Plastered wall to main staircase: emulsion, B.S. 504 green.
 Existing building walls: emulsion, Munsell 5·0 4/4.
 Existing building interior walls: distemper, pink-white; ceiling, emulsion, Munsell 47.

FITTINGS

Include cash desk, sign—stove enamelled steel and white plastic infilling, black metal work with white plastic and red lettering.
 Cash carrier system throughout, steel, installed by client.

SERVICES

Plumbing: external, and rainwater disposal

Down pipes generally, spun and cast iron LCC type, painted.

Plumbing: internal

Waste disposal, one pipe system, concealed in ducts. Vertical and horizontal.
 LCC type cast iron and copper. Exposed pipework painted.

Hot water storage

Electric water heaters in all cloakrooms. 5 and 7½ gall. capacity.

Cold water storage

North-east and south-east tower blocks, G I tanks, 500 and 200 gallons respectively.

Plumbing: sanitary fittings

In cloakrooms, white fireclay, glazed.

Total for internal plumbing and hot and cold water, and sanitary fittings

1 10½

Heating installation

Cost includes 2 separate gas-fired boilers and low pressure hot water heating installations. One of these has subsequently been varied to oil firing.

1,103,000 BTU/hr basement NE corner, oil, automatic.

95,000 BTU/hr basement SE corner, gas. This small boiler serves the ground floor of 23/24 Market Square, which is now occupied by a gown shop.

The first and second floors are fed from the larger boiler, but the circuits can be reconnected to the boiler house of Nos. 23, 24. Heating of the showroom is by radiators and low-pressure hot water coils under certain windows.

Ventilation

No mechanical ventilation.

Drainage

Separate. Soil and rainwater: salt glazed and cast iron, brick manholes.

Gas installation

To serve gas boiler in basement.
 Cost includes gas services to 2 separate boilers, one of which was subsequently omitted in change to oil firing.

Electrical installation (provisional estimate)

Special lighting in selling areas. Generally 12 lumens.
 Louvred fluorescent fittings. General overall lighting with spots and tungsten fittings.
 Specially designed fluorescent lighting units, flexible in position by use of removable panels in false ceiling designed by the architect.
 V.i.r. cables throughout, in heavy gauge screwed, welded conduit.
 415/240 volts. 3 phase 4 wire service. Switchroom in basement. Distribution boards in ground, first and second floors.

Lifts

Goods lift in N.E. tower block, capacity, 1 ton; speed 50 ft. per min.
 Motor room over shaft. (Cost includes landing shutter doors.)
 Total cost per square foot of floor area

£71,845

 20,075 sq. ft. = 71 7

THERMAL INSULATION

2-in. wood wool, all roofs.

The glass "sandwich" provides a permanent external easily cleaned facing material and reasonable insulation, by means of two layers of plate glass.

An additional plywood panel is provided on the inside face on softwood framing, forming a second cavity.

"U" value 0·25.

analysis

SPECIAL ACOUSTICAL TREATMENT

Sound absorption material

$\frac{1}{4}$ -in. insulation board panels forming false ceiling in sales areas on ground and first floors.

FIRE

Structural precautions

Normal, conforming with local byelaws.

Planning precautions

Normal. Access for fire fighting, Market Square and White Hart Slip, from Widmore Road.

Means of escape: 2 staff staircases and additional fire escape external to roof of offices adjoining.

REFUSE DISPOSAL

Method: collection by local authority. Type of refuse: packaging, boxes, etc.

TIME SCHEDULE

Tender date: October 25, 1954

Contract signed: December 8, 1954

Work commenced: January 3, 1955.

Work completed: July, 1957.

Type of contract: RIBA with quantities.

Difficulties were experienced with inclement weather and foundation work, owing to discovery of 12 disused wells and cesspools.

COST SUMMARY

Floor area, new building (measured within external walls) excluding basement, 20,075 sq. ft.

Cost based upon tender figure:

Net costs (including due proportion of preliminaries, insurances and contingencies):

Main building at 71s. 7d. per sq. ft. of floor area	£71,845
-----------------------------------------------------	---------

Existing showroom (20 Market Square) adaptation and incorporation in main building, including re-decoration	£886
-------------------------------------------------------------------------------------------------------------	------

Existing premises (19 Market Square) extension conversion and re-decoration of ground floor	£2,313
---------------------------------------------------------------------------------------------	--------

Temporary showroom for use during building operations	£1,461
-------------------------------------------------------	--------

External works and site clearance	£1,312
-----------------------------------	--------

Gross cost	£77,817
------------	---------

COST COMMENTS

Critical examination of the overall cost broken down into floor area costs will show that the allocation of money has been evenly spread over the various elements and that no section of the work has been abnormally costly to the detriment of any other consideration.

The client's brief in the first instance provided architectural problems in planning: for example, the retention of the existing showroom caused difficulties which were overcome, but would not be easy to plan for in terms of cost.

Consideration of future development will make it difficult to form an initial cost picture, especially in regard to service requirements. The scheme as a whole is essentially an individual one, and should, from the cost point of view, be treated as such.

The very nature of the building is to display goods for sale

and attract the public. Therefore, certain sections of the structure and finishes are directed towards these two main planning aspects. For example: ceilings are a focal point for display purposes, and these are linked with an elaborate electrical circuit, both of which are reflected in a higher cost than normally expected.

CONTRACTORS

General contractors: E. H. Smith (Croydon) Ltd. *Sub-contractors—Asphalt and felt roofing:* Excel Asphalte Co. Ltd. *Bricks:* Henry J. Greenham (1929) Ltd. *Glass:* James Clark & Eaton Ltd. *Patent glazing, casements and window furniture:* Williams & Williams Ltd. *Wood flooring:* Hollis Bros. Ltd. *Patent flooring:* Alpha Mosaic & Terrazzo Co. *Central heating system:* Matthew Hall & Co. Ltd. *Gas fitting:* The Gas Board. *Electric wiring:* Troughton & Young Ltd. *Electric light fixtures:* Troughton & Young Ltd. and Merchant Adventurers Ltd. *Boilers:* Ideal Boilers & Radiators Ltd. *Plumbing:* Geo. E. Taylor Ltd. *Door furniture:* Yannedis & Co. Ltd. *Telephones, bells and clocks:* GPO and General Telephone Systems Ltd. *Fireproof doors:* Leaderflush Ltd. *Sanitary fittings:* Adamsez Ltd. *Lifts:* J. & E. Hall Ltd. *Signs:* Lettering Centre and London Signs and Illuminations Ltd. *Paint:* Keystone Paint and Varnish Co. Ltd. and Hadfields (Merton) Ltd.

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working detail

SLIDING PARTITION: FLATS IN LONDON, E.C.1

Chamberlin, Powell and Bon, architects



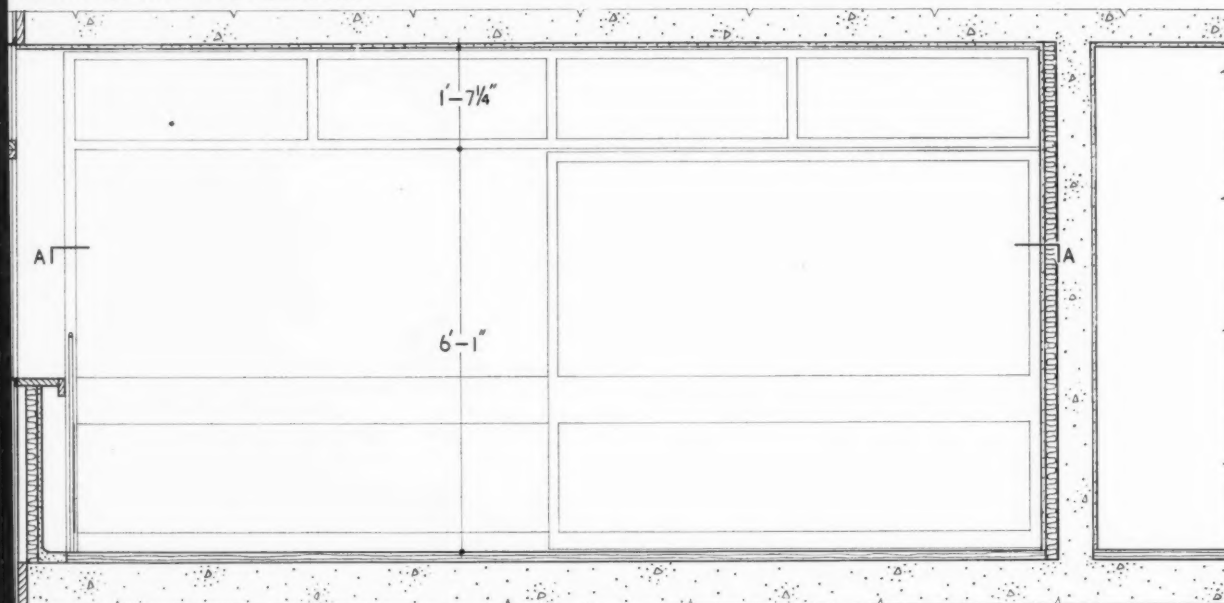
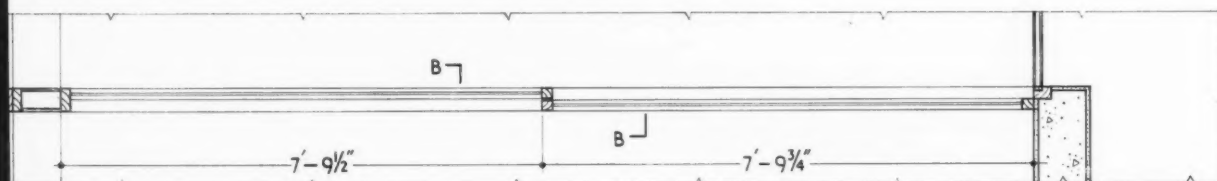
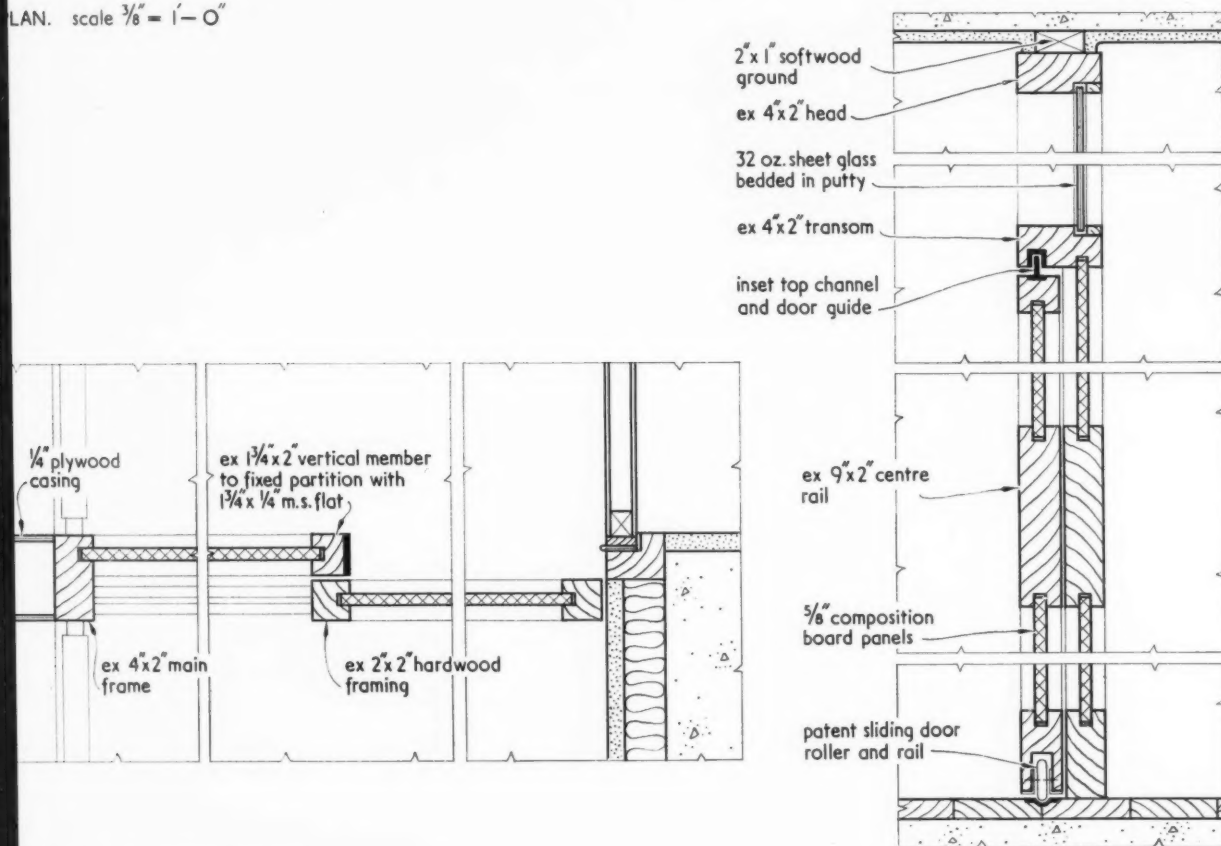
The interest in this detail lies in the fact that what is shown is in fact a sliding wall and not, as it might so easily have been, a mere sliding door, making thereby two "finished rooms" when closed, with no sense of makeshift. The second point to notice is the skill with which both the fixed and moving leaf are covered by a 4 in. by 2 in. frame. This is achieved by making the framing of the leaves out of 2 in. by 2 in. hardwood and by fixing a m.s. plate to the forward edge of the fixed leaf to give rigidity.

working detail

WALLS AND PARTITIONS: 56

SLIDING PARTITION: FLATS IN LONDON, E.C.1

Chamberlin, Powell and Bon, architects

ELEVATION. scale $\frac{3}{8}$ " = 1'-0"PLAN. scale $\frac{3}{8}$ " = 1'-0"SECTION B-B. scale $\frac{1}{2}$ " = 1'-0"PLAN AT A-A. scale $\frac{1}{2}$ " = 1'-0"

BALCONY: THEATRE IN MIDDLESBROUGH

E. De Pierro, architect

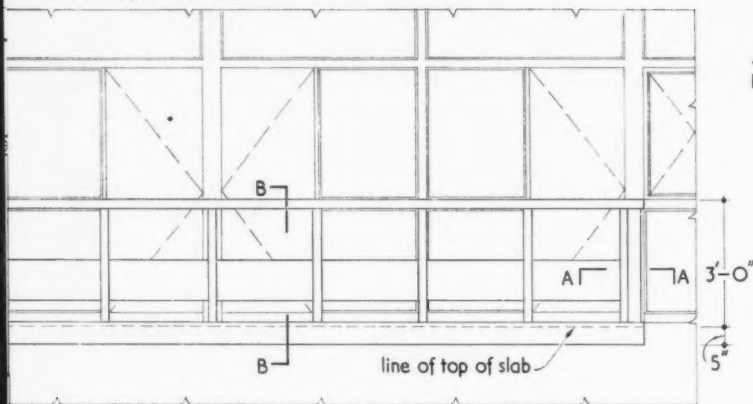


This timber balcony front which, it must be remembered, forms part of a building which had to be built very economically, is interesting chiefly on account of the relationship of the balusters, the balcony edge and the fascia. The latter screens electric lamps and conduit which serve both to light the entrance pavement below and a sign above (which had not been fixed at the time the photograph was taken).

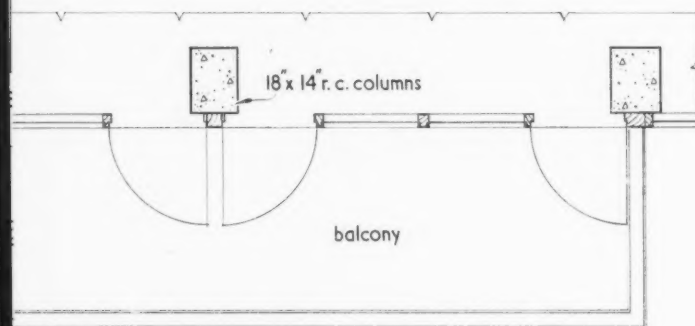
working detail

BALCONY: THEATRE IN MIDDLESBROUGH

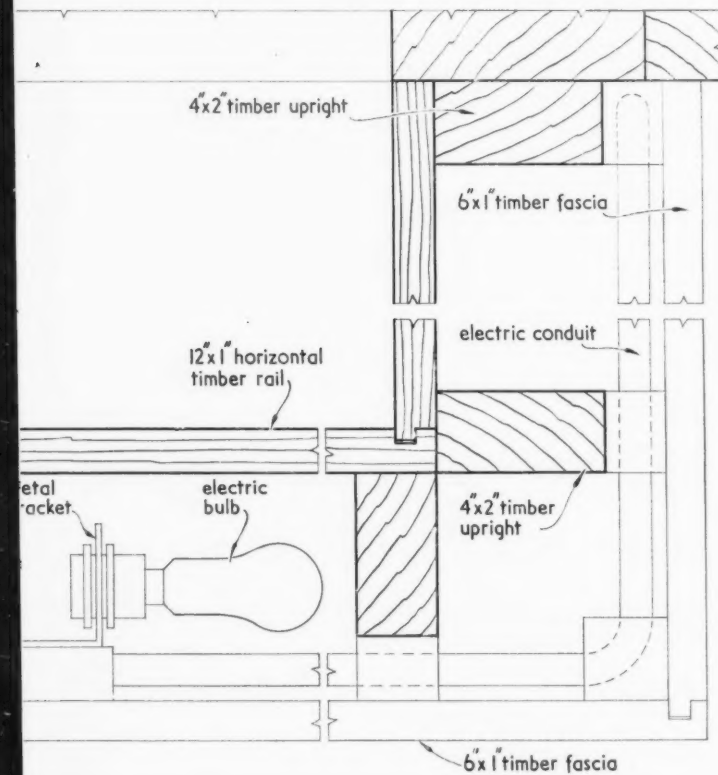
E. De Pierro, architect



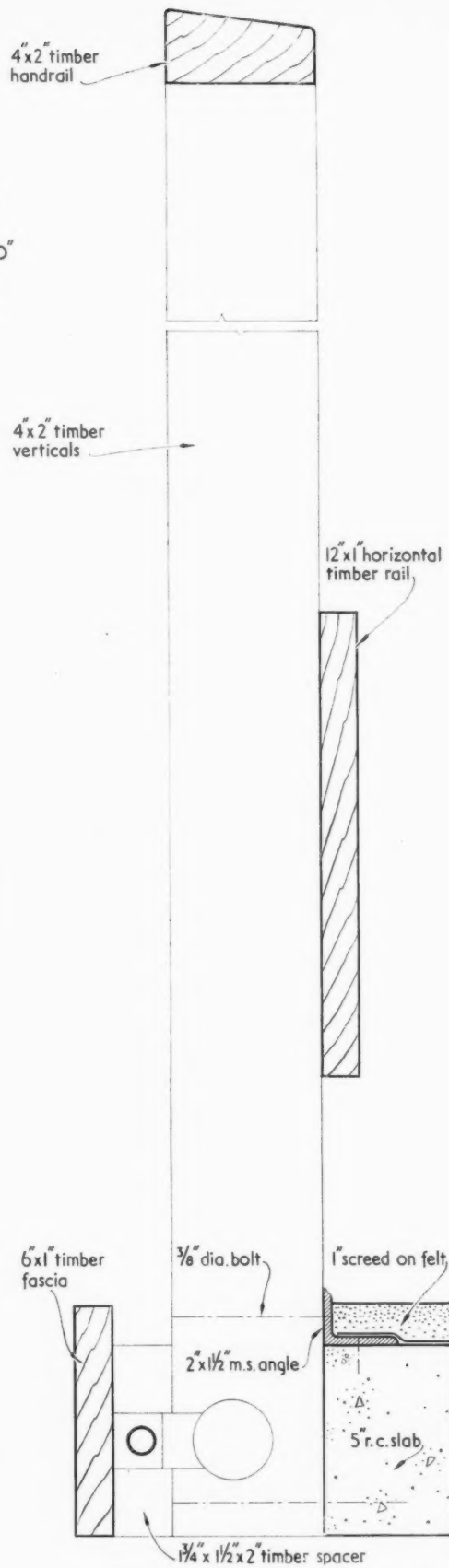
ELEVATION. scale $\frac{1}{4}'' = 1' - 0''$



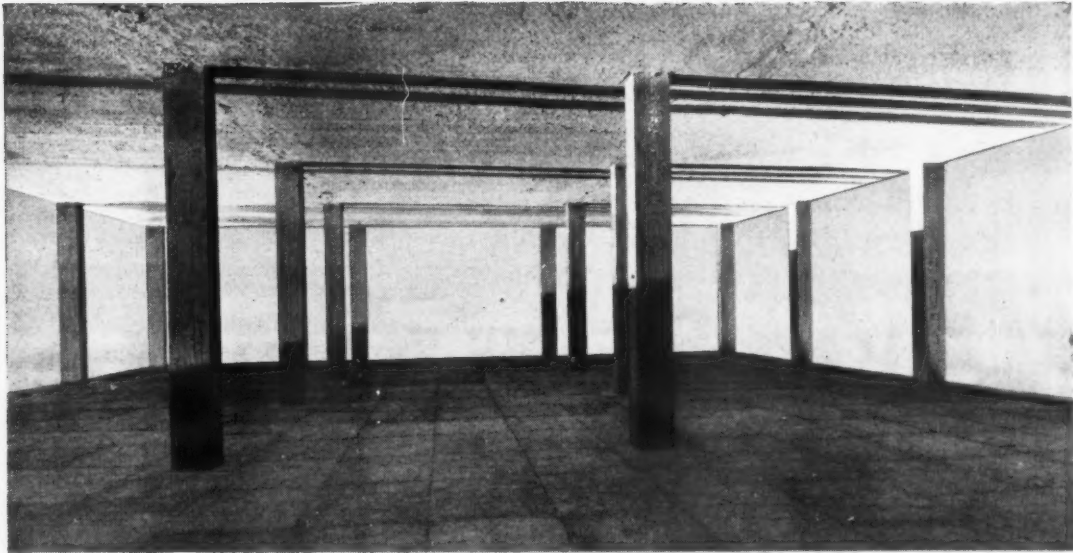
PLAN. scale $\frac{1}{4}'' = 1' - 0''$



SECTION A-A. scale $\frac{1}{4}''$ full size



SECTION B-B. scale $\frac{1}{4}''$ full size



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It depends which way you look at it. With the Plate System by Truscon a floor, seen upside down, becomes a ceiling. And v.v. (*vice versa*). Can you tell which is really the floor?

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The Plate System does not compress an architect's work within the framework of a stereotyped plan nor does it attempt to do his work for him. It is more than a system of design, for combined with careful planning and the use of cranes and precast components we have made it a very rapid system of construction. It is cheap in cost but not in appearance.

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LIGHTING SHOWROOMS IN KNIGHTSBRIDGE

Redesigned showrooms for Troughton & Young Ltd. were opened last week at 143, Knightsbridge. They were designed by Hulme Chadwick (chief assistant, Alexander Bayes). The ceiling consists of a number of panels, horizontal (at different levels), sloping and

vertical, so arranged that pendant fittings can be seen from one direction, sufficiently spaced so that they can be judged independently, whilst from the other end of the showroom it is possible to see ceiling fittings on the lower part of the ceiling and recessed fittings on the slope. The ceiling panels are of fibrous plaster in two tones of grey, with white dividing lines and mulberry red on the lowest level. The large number of switches required are arranged in panels to coincide with the fittings displayed on ceilings and walls, thus avoiding the need for diagrams and coding. Walls are used for the display of bracket fittings, table lamps on shelves and standard lamps. The wall finishes are veneered sycamore panels and Japanese grass paper. The redesigning of the premises coincides with the 50th anniversary of the foundation of the clients' parent Company; the Lighting Company was formed 30 years ago. The general contractors were David Esdaile & Co. Ltd.



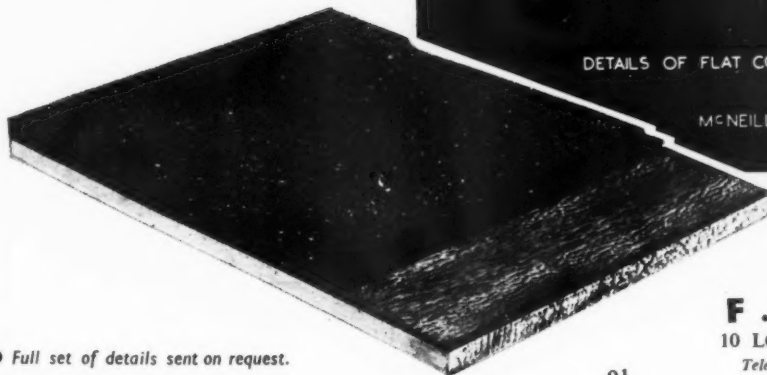
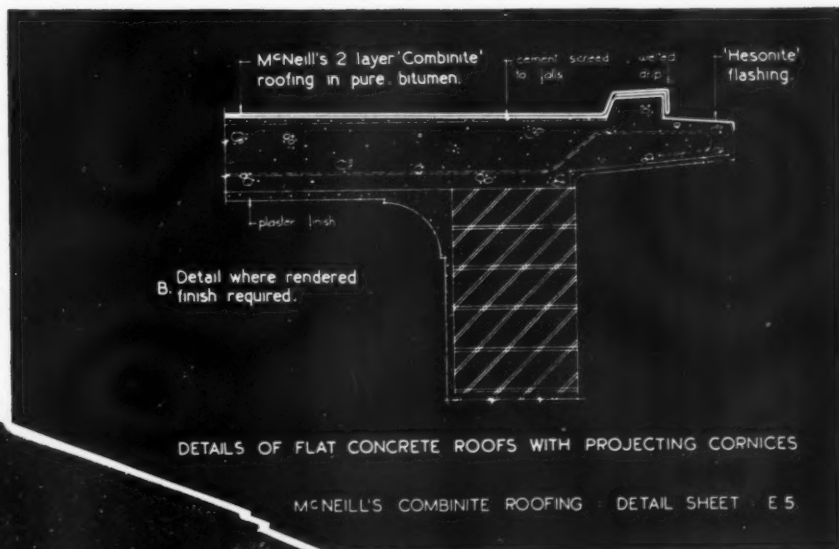
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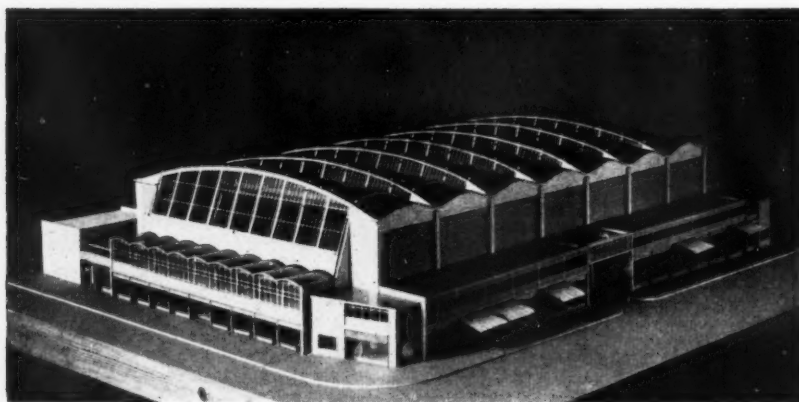
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PROPOSED MARKET IN PLYMOUTH



This is the Pannier Market project (seen from the north-west) at Plymouth, Devon, designed by Walls and Pearn. In the centre of the west facade is the entrance from Market Avenue. The construction will consist of r.c. portal frames, with a post-tensioned tie between the frames and the use of a normal hinge on one side and a Freyssinet flat jack placed at the point of reaction at the other side. This jack will be stressed when the frames have hardened sufficiently and before the roof ribs and shells are cast, thus counteracting the stresses which will be developed due to their weight. Work has now begun on the site, but it will be approximately two years before the building is completed.

Announcements

PROFESSIONAL

Leslie G. Dight, F.R.I.C.S., chartered quantity surveyor, has moved to 35, Portland Place, London, W.1 (telephone Langham 5341), where he will be pleased to receive trade catalogues, etc.

Clifford Culpin, F.R.I.B.A., has taken into association Roland Robertson, Leonard F. Hobart, Anthony Sargeant, and Philip Vallis, A/A/A.A.R.I.B.A. The practice will continue under the title of Clifford Culpin from 39, Doughty Street, London, W.C.1 (telephone Chancery 5395).

Denys Hinton, A.A.DIPL.(HONS.), A.R.I.B.A., has been appointed deputy director of the Birmingham School of Architecture. He will continue to practise from 21, The Parade, Leamington Spa.

Young and Brown, chartered quantity surveyors, have moved to Roman House, Fore Street, E.C.2 (telephone Monarch 6532).

Corrections

The Editors have been told by Stramax Ceilings (G.B.) Ltd. that the information given in Information Sheet 29.H5 (AJ, November 28) was supplied in conjunction with Clark & Fenn Ltd., and acknowledgment to this company should have been made. The Sheet will therefore be reissued in the JOURNAL of December 12 and readers are asked to cancel the version of November 28 from their collections.

On page 726 of our issue for November 14, we published a synopsis referring to the Ascot stand at the Building Exhibition. This paragraph gave the telephone number as Willesden 5121. It is, in fact, Willesden 1234.

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NATURAL RIVEN SLAB

The illustration shows the beautiful texture and character of this material.
Other finishes include:
fine rubbed, sanded,
frame sawn.



ASCOT IN NEW HOUSING (5)

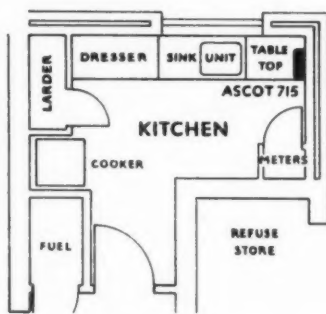
As part of its redevelopment scheme for The Drive, Walthamstow, the Walthamstow Borough Council, has recently built 28 flats in two, three and four storey blocks. To provide an instantaneous hot water service Ascot 715 "Balanced Flue" Multipoint Gas Water Heaters were

installed in the kitchens of all the dwellings which vary in size from bed-sitting-rooms to two-bedroom flats.

The photograph above shows a three and a four storey block at The Drive and the plans below show details of a single-bedroom flat in one of the three-storey blocks.



SINGLE-BEDROOM FLAT



KITCHEN OF SAME FLAT

RESPONSIBLE AUTHORITIES

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(Borough Architect, Engineer and Surveyor)

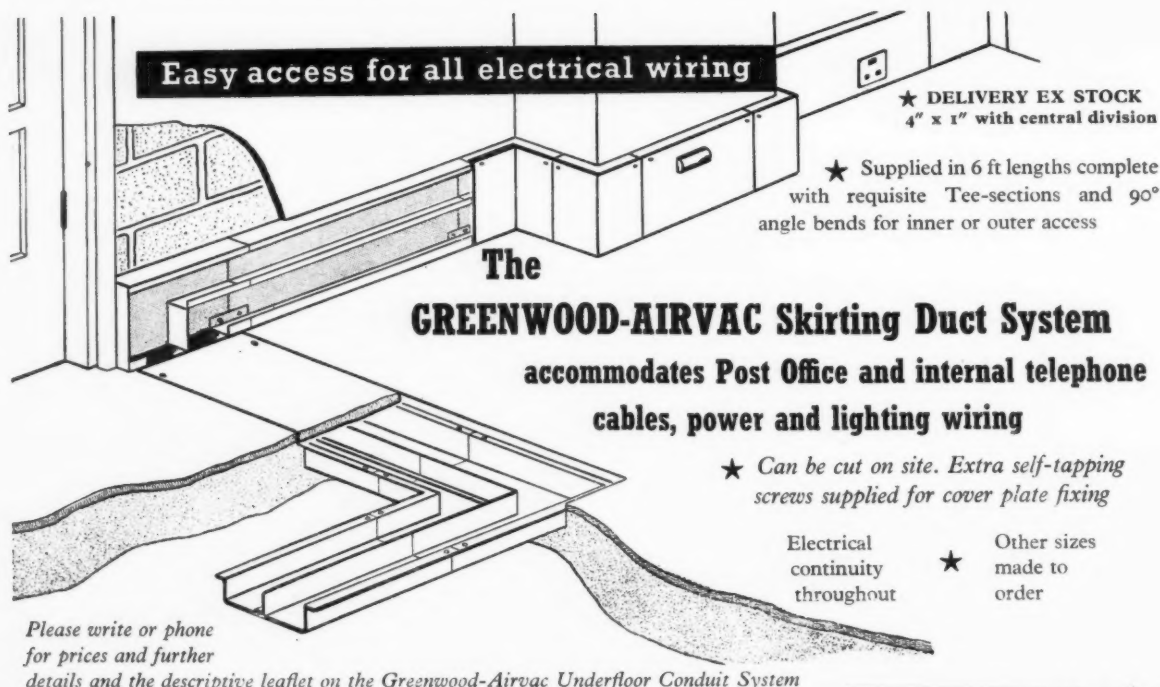
C. F. Kimm, A.R.I.B.A.
(Assistant in charge)

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Borough of Walthamstow
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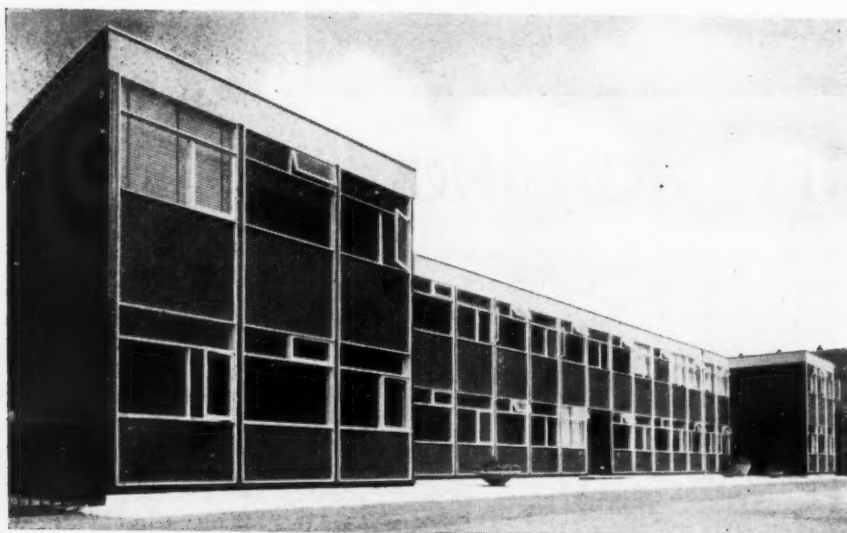
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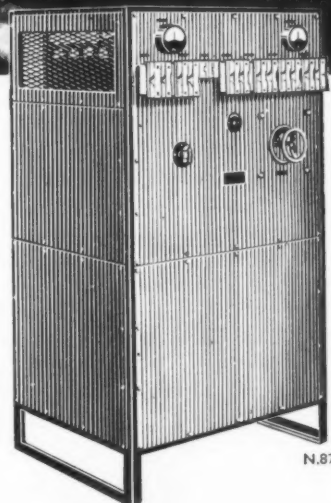


THE ROYAL NATIONAL LIFEBOAT INSTITUTION

Perhaps the greatest of British charities, this famous institution was founded in 1824, and by the time its second report was published had already contributed to the saving of 342 lives. By 1924—centenary year—it had given awards for the saving of nearly 60,000 lives and today that figure stands at over 78,000. At this very moment, all along our coastline, 154 lifeboat crews are ready for the emergency call which means that someone is in peril on the sea. They never let them down.

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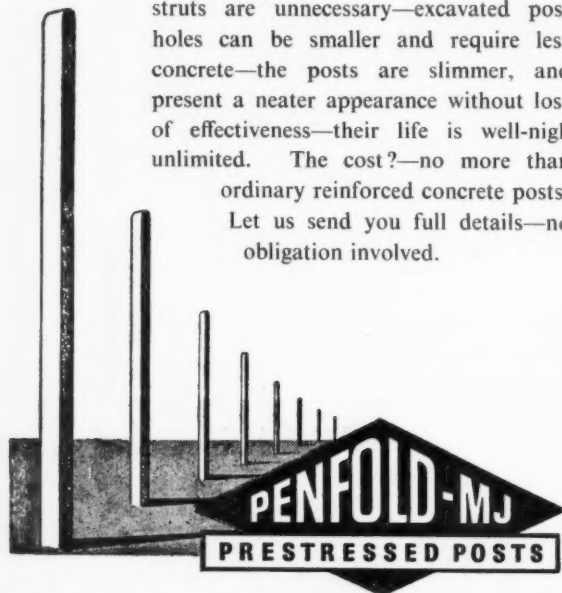
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AN EYE TO THE FUTURE . . .

Nearly 400 years ago Galileo, after years of endeavour constructed the first telescope. His restless pioneering spirit brought the galaxy of stars closer to this little earth and enabled men, for the first time, to reach out into the infinity of the heavens above them. Penfold, too, are pioneers. Following their recent introduction of Stainless Steel Chain Link Fencing, they now introduce PRE-STRESSED CONCRETE POSTS, manufactured by an exclusive Scandinavian method of proved design they possess a strength several times that of the ordinary reinforced concrete post. In consequence, straining struts are unnecessary—excavated post holes can be smaller and require less concrete—the posts are slimmer, and present a neater appearance without loss of effectiveness—their life is well-nigh unlimited. The cost?—no more than ordinary reinforced concrete posts!

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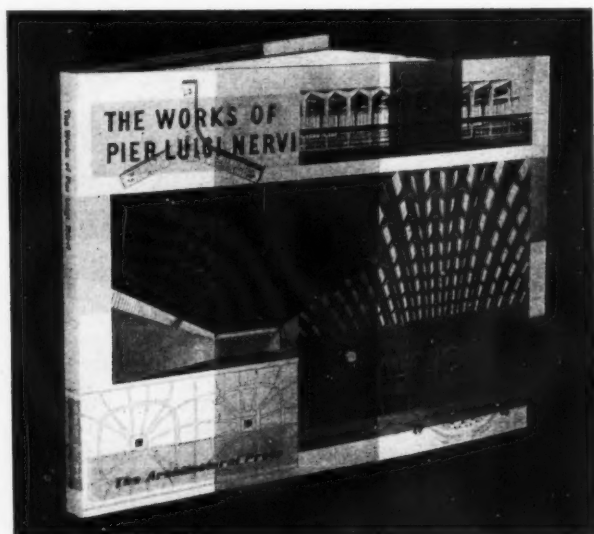
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THE WORKS OF PIER LUIGI NERVI

Introduction by Ernesto N. Rogers

THIS BOOK SURVEYS AND COMPREHENSIVELY ILLUSTRATES all the completed works of the Italian engineer-architect-contractor Pier Luigi Nervi, unquestionably the greatest master of concrete construction of our age. His buildings of the past thirty years take their place in the tradition of Europe's finest engineering architecture, related in spirit to the work of Freyssinet, of Perret, and of Maillart.



Among the many buildings illustrated are the stadium at Florence with its audacious widely cantilevered grandstand roof; the 320-ft. by 130-ft. aircraft hangars at Orbello poised miraculously on six slender supports; the already famous Exhibition Halls at Turin with their magnificent roofs; a number of industrial buildings each of very original construction; and the Unesco Building in Paris designed in collaboration with Marcel Breuer and Bernard Zehruss. In addition, the book illustrates all Nervi's more important projects.

In his preface Nervi says: 'My belief in the inherent aesthetic force of a good structural solution was never shaken.' His genius is such that he not only intuitively creates surprisingly daring and original architectural forms: he also calculates them, thinking out and solving constructional problems down to the last detail; and then he builds them. He thus achieves a synthesis between art and science such as only Maillart and Perret have previously achieved in our time. His concepts are truly three-dimensional in character: form and content are fused into a single spatial diagram. Most of his commissions have, nevertheless, been awarded not primarily on the basis of their incredible daring and beauty but because they cost so much less than comparable structures by anyone else.

Because Nervi's work so clearly reveals the immense possibilities offered to architects and engineers by reinforced concrete the book devotes much space to illustrating and explaining the details of his designs, his methods of building with prefabricated elements.

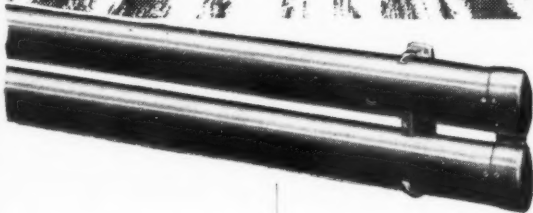
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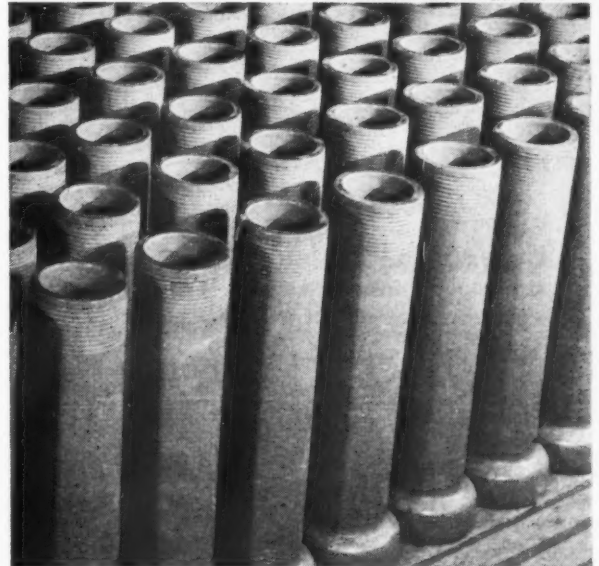
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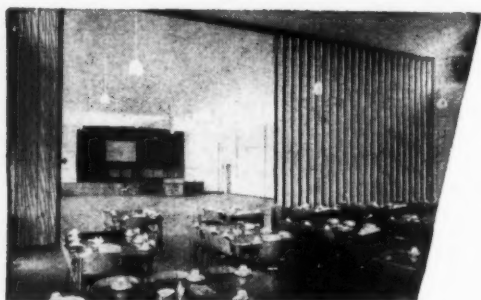
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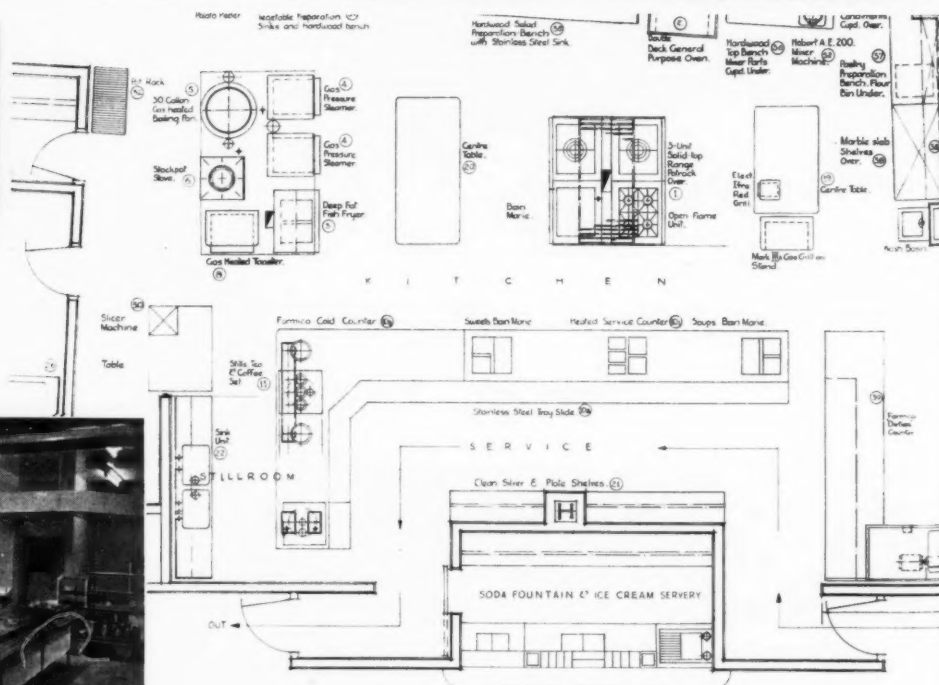
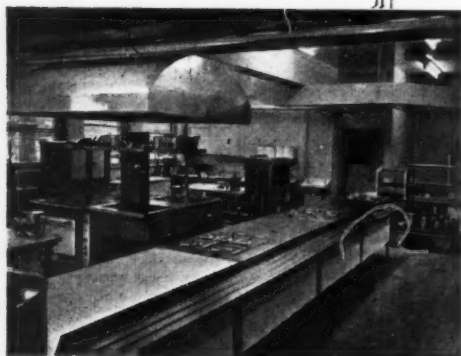
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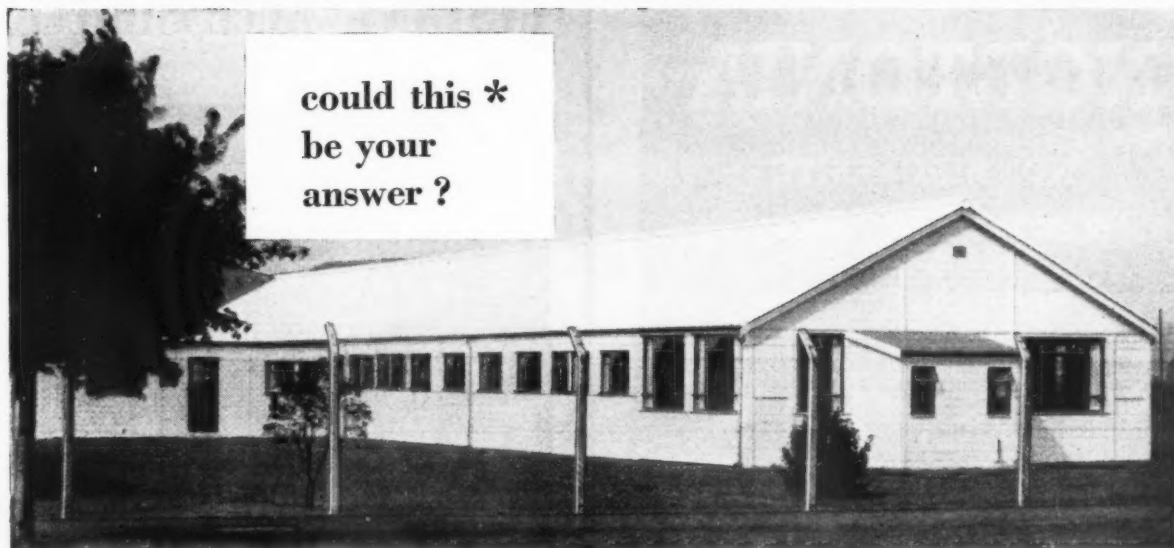
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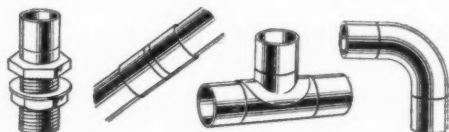
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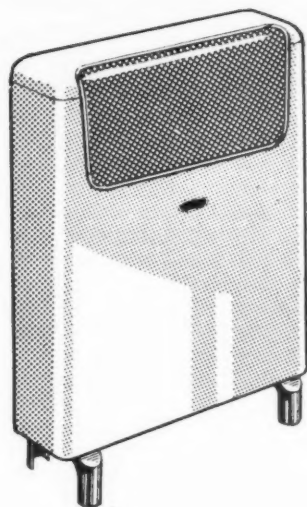
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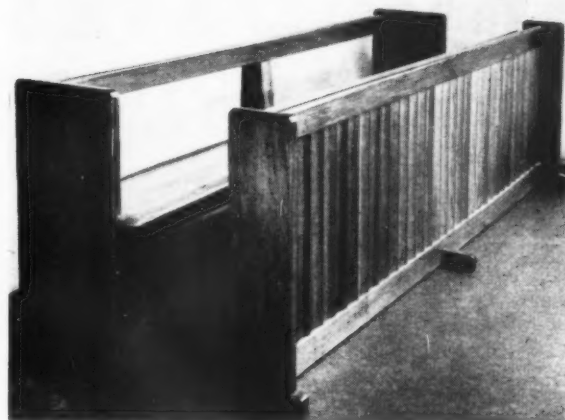
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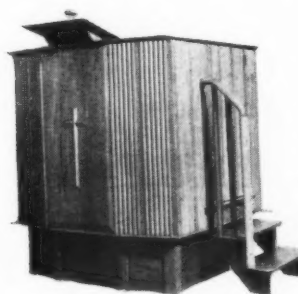


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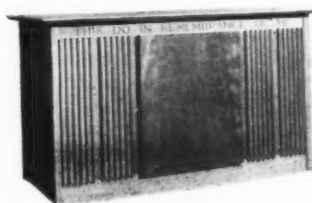
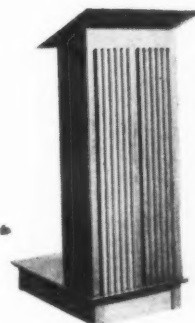


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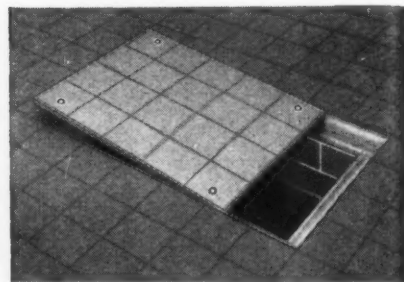
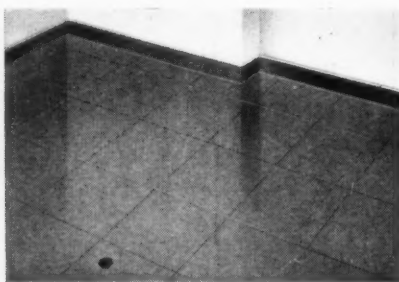
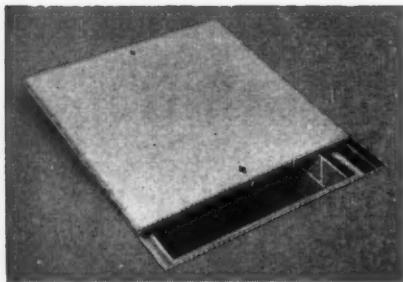
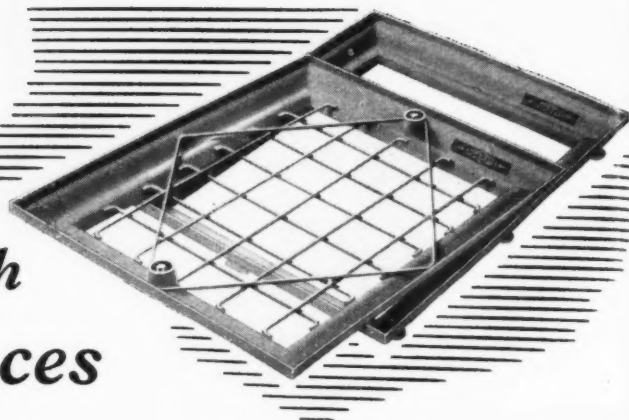
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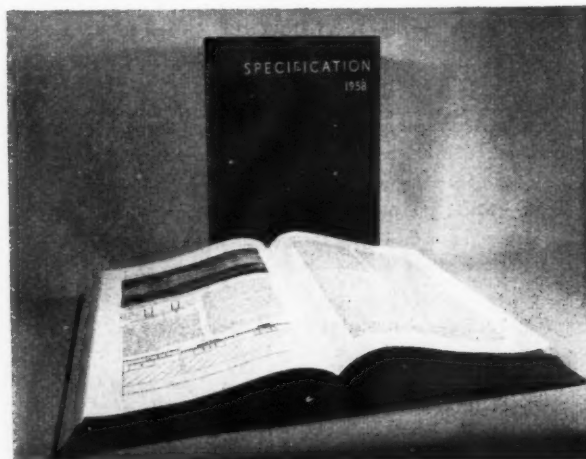
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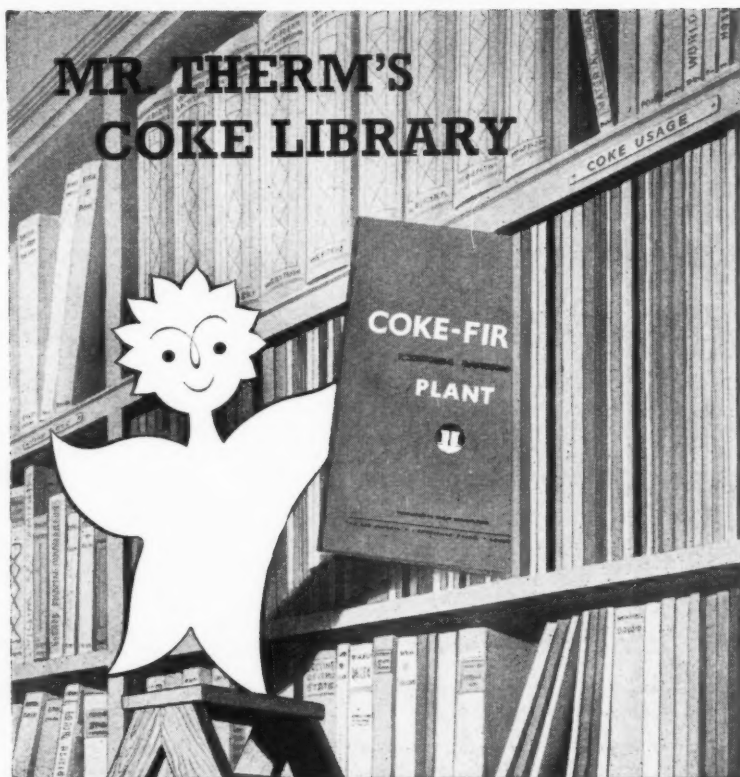


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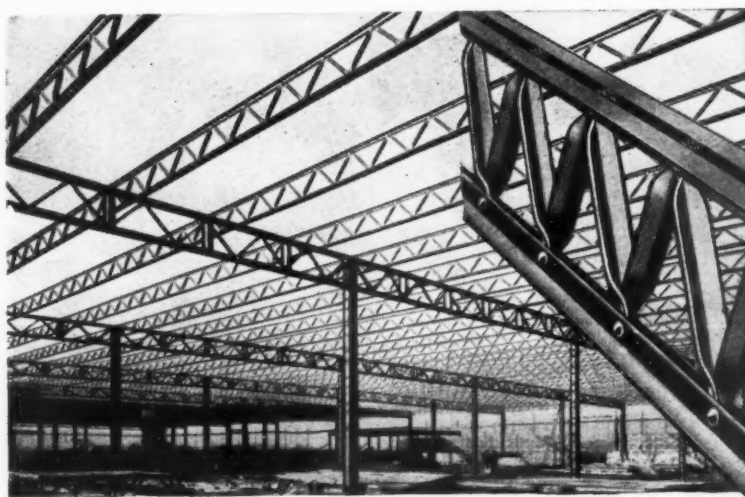
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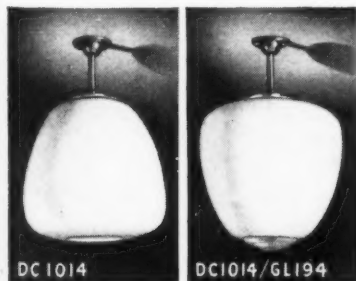
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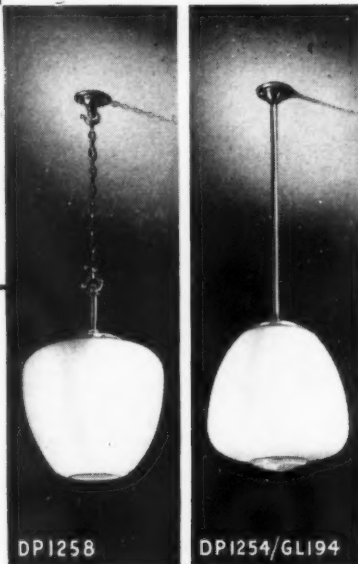
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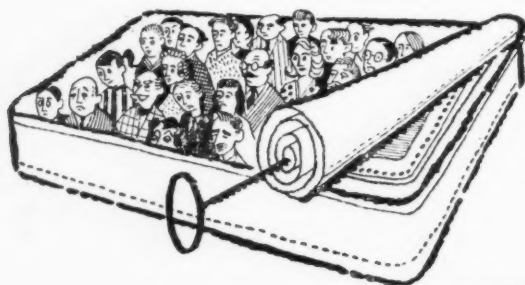
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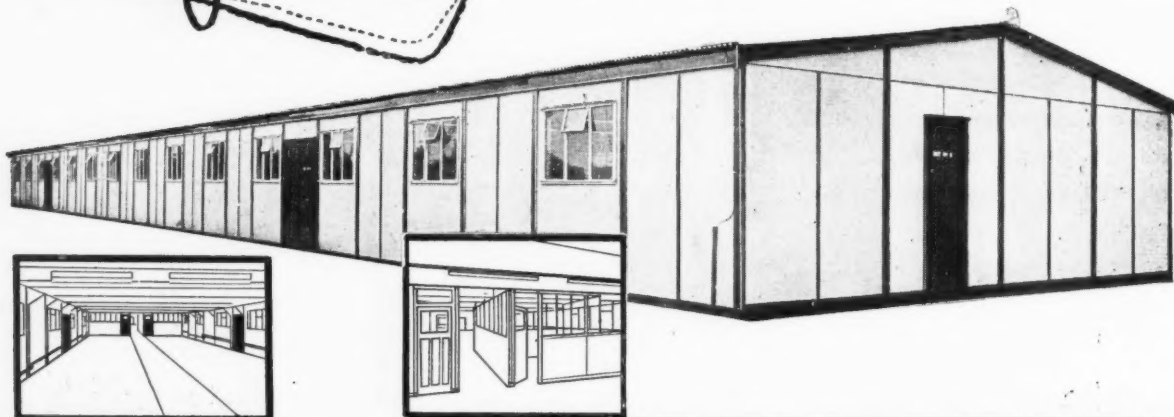
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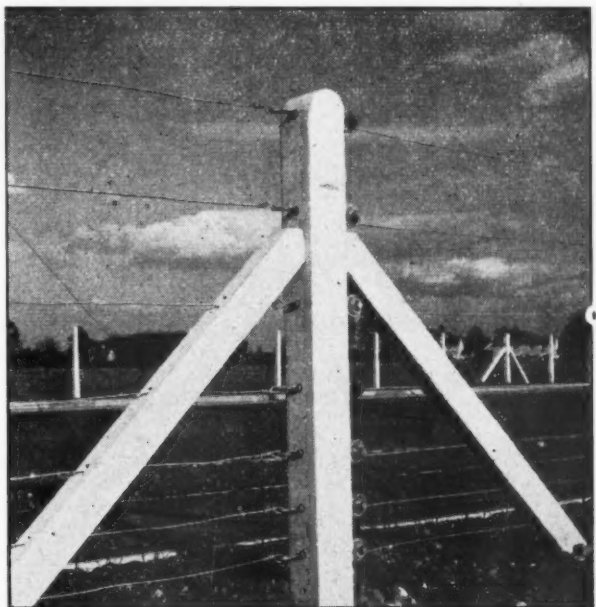
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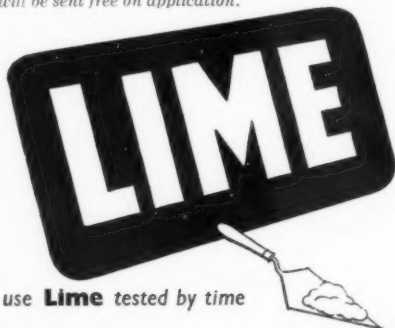
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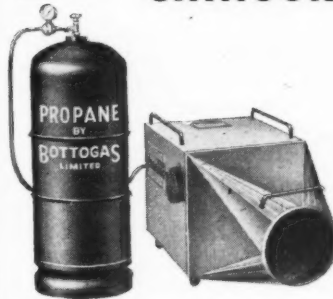
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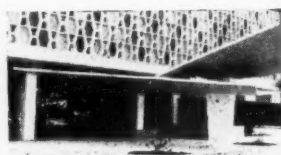
**Smithsons
Building Exhibition
ONNO**

November Architectural Review

The controversial Smithsons will make their first appearance as contributors to the Review in November, with an illustrated study of the Shape of the Community, in which they set against the exhausted diagrams of CIAM planning their vision of a more humane type of city. For non-visionaries—and for visionaries too—*Skill* will provide a full coverage of the Building Exhibition from the technical point of view, as well as an *Interiors* treatment of G. A. Jellicoe's restaurant and shopping floors at Harvey's of Guildford.

Visionary qualities, spurred by hard practical necessities, illuminate Kenneth Browne's pro-

posals for applying the ONNO traffic-directing technique to Park Lane and west Mayfair. The study of the functional tradition is advanced by Brian Spiller's article on Georgian Breweries. Buildings described in this issue will include the new Bowater Factories by Farmer and Dark, whose cladding provides a practical follow-up demonstration of patent-glazing techniques, and Rangoon University and Technical Institute, by Raglan Squire and Partners, extensively illustrated in colour. Professor

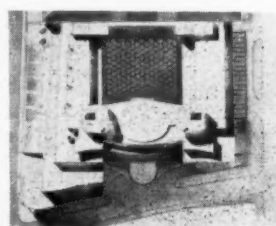


Entrance to the Library of the new Rangoon University. Architects, Raglan Squire and Partners.

Pevsner reviews Tschudi Madsen's important book on the Origins of Art Nouveau, whose character is summed up in the title *Beautiful and, if need be, useful*, and Dr. S. Lang will provide a note on Architectural Visitors to Padua, based upon a register kept by the university there, in which practically every English architect and amateur of note signed his name when passing through.

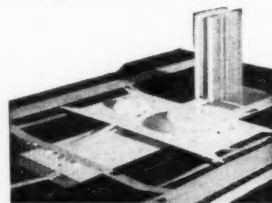
**TUC
Brasilia
Street Lighting**

December Architectural Review Design for public and administrative functions will form the subject of the two most important features in the Review for December. The *TUC Memorial Building*, designed by David Aberdeen, which is only the second public building of consequence to go up in London since the War, will be described and illustrated for the first time in completed form, and a supporting article in *Skill* will examine in detail the finishes



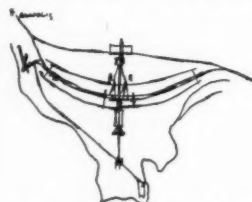
Airview drawing of David Aberdeen's TUC Memorial Building.

and mechanical equipment that make this one of the most lavish buildings—outside the commercial field—of recent years. The other major feature is concerned with *Brasilia*, the projected new capital city for Brazil, typically grandiose and Latin-American in conception, but more likely than most such schemes to achieve completion. Sir William Holford,



Oscar Niemeyer's design for the Congress Building at Brasilia.

who was one of the jury who assessed the competition for the new capital's plan, introduces the project and its site, discusses the competition, and adds a few words by way of introduction to the brilliant and unconventional winning scheme, by Lucio Costa, father of Brazil's modern movement, whose report is published in English for the first time.



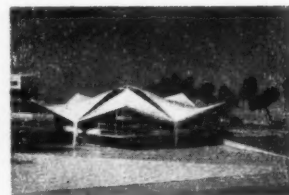
One of Lucio Costa's sketches for Brasilia.

Another father of his art, John Britton, founder of English topographical studies, will be the subject of an historical article by Peter Ferriday, and the bicentenary of the birth of the great neo-Classical sculptor Antonio Canova is celebrated by one of England's leading neo-Classical scholars, F. J. B. Watson, with a chronicle of English visitors and admirers at the sculptor's studio in Rome. Gordon Cullen will tackle one of the most vexed and debated problems of outdoor detailing, *Street Lighting*, in terms of distribution and siting, as well as the design of equipment, and interiors to be described include the IBM offices and the Garden Centre, both in new office blocks in Wigmore Street. Foreign reports will cover the *Triennale di Milano*, and the *Berlin Interbau* exhibition, and regular features like the *Counter Attack Bureau* and Robert Melville's provocative art-criticism will continue.

Preview

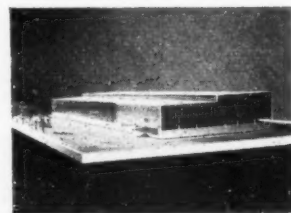
January Architectural Review

Each New Year, the Review devotes an entire special issue to a survey of what the leading architectural offices in Britain have in hand on the first day of the year.



Assembly Hall of a girls' comprehensive school at Southwark. Architects, Chamberlin, Powell and Bon.

The view presented by *Preview* is an extremely varied one; the buildings it covers range from a pub to a synagogue, by way of schools, universities, colleges, hostels, hospitals, factories, office blocks, churches, airports, planning schemes, housing layouts, a market and a seaside pavilion; and the offices and architects responsible for these projects-in-progress read like a directory of the country's top talent (as indeed they are)—the L.C.C., the Ministry of Works, ACP, T. P. Bennett and Sons, Bridgewater and Shephard, James Cubitt and Partners, Llewelyn Davies, Easton and Robertson, Frederick Gibberd, Erno Goldfinger, Gollins Melvin and Ward, Sir William Holford, Arthur Ling, Sir Leslie Martin—and so on down the alphabet to Yorke, Rosenberg and Mardall.



Factory at Wokingham. Architects, Yorke, Rosenberg and Mardall.

The reflection in *Preview's* mirror may prove flattering or alarming, but even where there appear to be grounds for satisfaction at the design of the buildings themselves, the environments into which they are being fitted still leave much to be desired, and though this is beyond the architects' control, it is not exempt from the watchful eye of the *Counter Attack Bureau*, whose month by month vigilance will be maintained even in this special issue.

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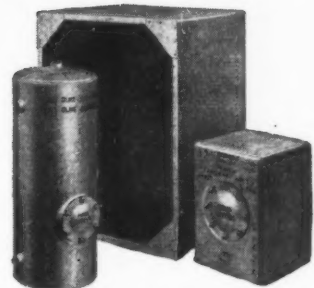
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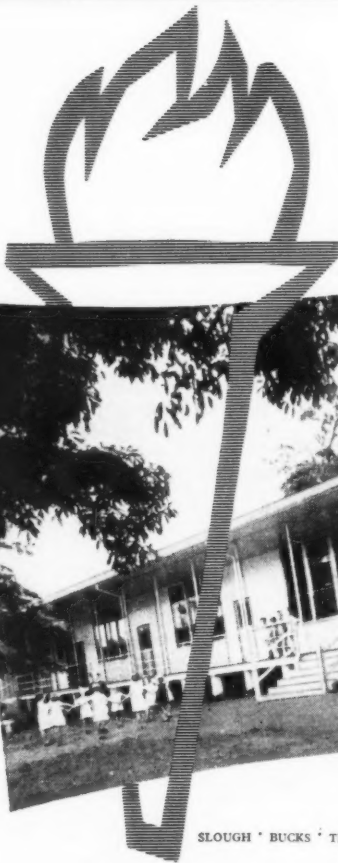
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Picture by courtesy of Bethlem Royal Hospital



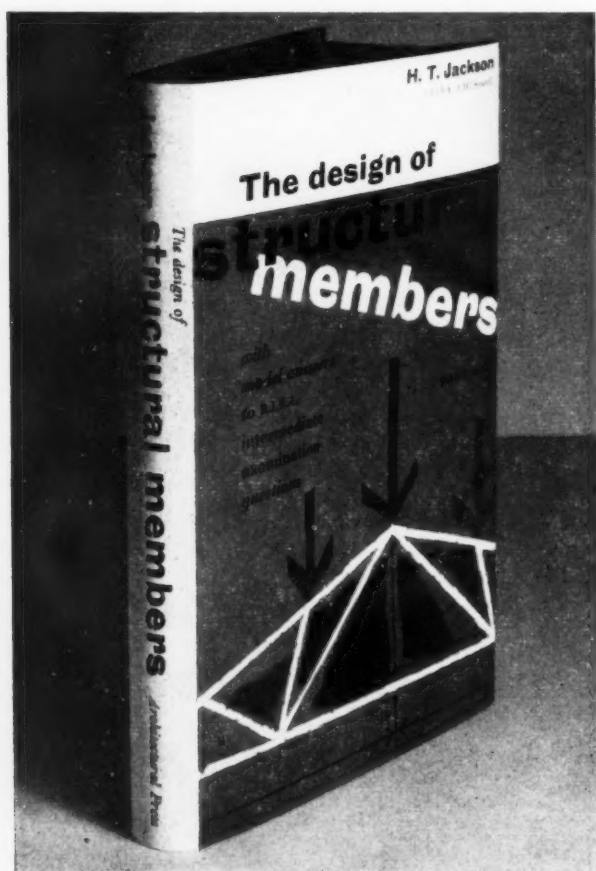
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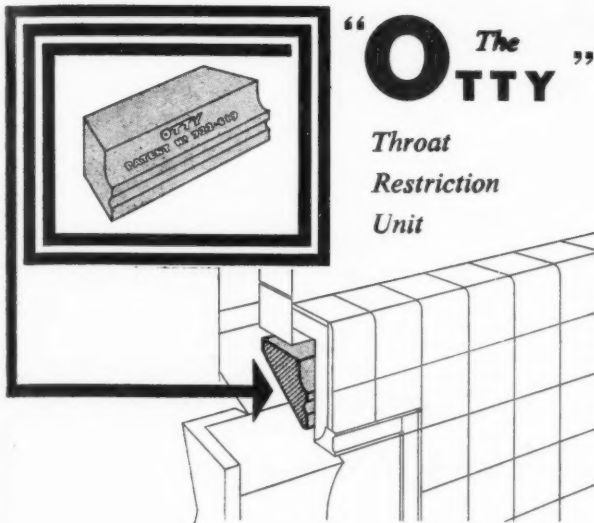
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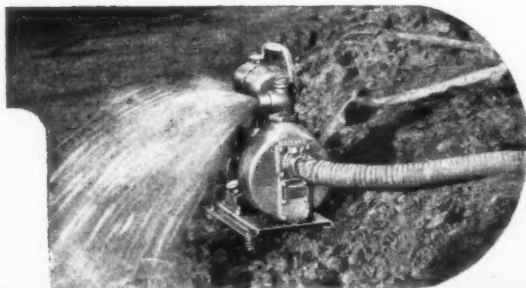
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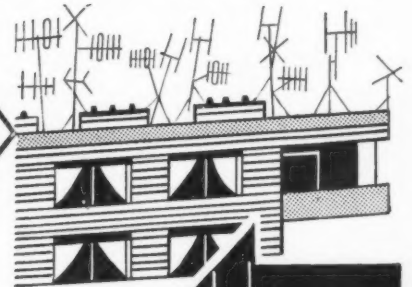
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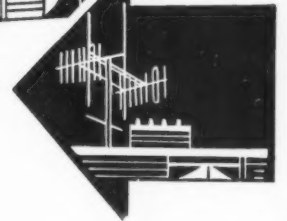


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ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment on the revised Grade A.P.T. II (£725-£830 to £845 per annum), according to qualifications and experience.

Applicants should have passed the R.I.B.A. intermediate examination or its equivalent at one of the recognised schools of architecture and have had a sound general experience.

The principal work will be preparation of improvement schemes for Council Houses, although from time to time, new works will be involved.

The appointment is subject to the Local Government Superannuation Acts, the National Conditions of Service, a satisfactory medical examination, and termination by one month's written notice on either side.

Applications endorsed "Architectural Assistant" with personal details and details of experience and qualifications, together with names of two referees, to be sent to the undersigned by first post on Saturday, December 14, 1957.

CLIFFORD E. JONES,

Clerk of the Council.

Council Offices,

1, Cheyne Walk,

Northampton

November 26, 1957.

8223

WARWICKSHIRE COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

Applications are invited for the appointment of ASSISTANT ARCHITECTS on salary scale £750-£1,030, the commencing salary to be in accordance with ability and experience. Applicants must be members of the Royal Institute of British Architects, or have passed Parts I and II of the R.I.B.A. final or special examinations, or their equivalent at one of the recognised schools of architecture.

The appointments are on the established staff and are subject to the Scheme and Conditions of Service of the National Joint Council for Local Authorities, and the Local Government Superannuation Acts 1937-1953. Successful candidates will be required to pass a medical examination.

Applications are to be on forms which can be obtained from G. R. Barnsley, F.R.I.B.A., County Architect, Shire Hall, Warwick.

L. EDGAR STEPHENS,

Clerk of the Council.

Shire Hall, Warwick.

8227

COUNTY BOROUGH OF SOUTHAMPTON

BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the following permanent positions:—

(a) SENIOR ASSISTANT ARCHITECT, Grade IV (£1,025-£1,175). Candidates should be members of the R.I.B.A.; experience of urban redevelopment an advantage.

(b) ASSISTANT PLANNING OFFICER, Special Grade (£750-£1,030).

(c) ASSISTANT ARCHITECTS, Special Grade (£750-£1,030).

Applicants should possess appropriate qualifications and should state their housing needs. Application forms from the Borough Architect, Civic Centre, Southampton. Closing date December 21, 1957.

8225

HORNCHURCH URBAN DISTRICT COUNCIL

APPOINTMENT OF ARCHITECTURAL ASSISTANT

Grade A.P.T. II (£725-£845).

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT, Grade A.P.T. II (£725-£845).

The appointment is subject to the provisions of the Superannuation Acts, 1937-53, the National Scheme of Conditions of Service, a satisfactory medical examination and termination by one month's notice on either side.

Housing accommodation will be provided if required.

Forms of application may be obtained from the undersigned and returned completed not later than Saturday, December 21, 1957.

P. L. COX,

Clerk of the Council.

Council Offices,

Billet Lane,

Hornchurch, Essex.

November 27, 1957.

8224

NATIONAL COAL BOARD

EAST MIDLANDS DIVISION

AREA ESTATES AND HOUSING MANAGER

Applications are invited from highly qualified men for the post of Estates and Housing Manager in the Leicestershire and South Derbyshire Area of the East Midlands Division of the National Coal Board.

There are extensive estates to manage and maintain. Experience in connection with building and repair work arising out of coal mining subsidence would be a great advantage. An architectural qualification or membership of the R.I.B.A. (Building Division) is desirable.

The post is superannuable and the initial salary will be fixed according to qualifications and experience within the range of £1,250 to £1,850.

Applications stating age, education and experience should be addressed to Staff Director, National Coal Board, East Midlands Division, Sherwood Lodge, Arnold, Nr. Nottingham, within 14 days. Envelopes and applications should be marked S.V. 842.

8222

COVENTRY

CENTRAL RECONSTRUCTION, Group Planning Officer, A.P.T. (£1,175-£1,325) Salary within grade if appropriate.

An imaginative ARCHITECT PLANNER is required to lead the central reconstruction team and be responsible for all design and administrative aspects of the work. This post offers a unique opportunity for creative city planning.

Housing accommodation may be available. Loan for removal expenses if required. Application forms, etc., from City Architect and Planning Officer, Bull Yard, Coventry, returnable within 10 days publication.

8183

GLAMORGAN COUNTY COUNCIL

PLANNING ASSISTANTS required to assist in the preparation of Town Maps for the County Development Plan, together with some interesting comprehensive development schemes. This work presents an opportunity for newly qualified Planners to gain valuable experience in a highly industrialised County.

Salary:—Special Grade—£750 to £1,030 per annum.

Candidates must have appropriate professional qualifications and have had at least five years' experience including Training. Applications immediately stating age, training, qualifications, experience, present salary and names of two referees to the County Planning Officer, County Hall, Cardiff.

RICHARD JOHN,

Clerk of the County Council.

8217

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited for the post of ARCHITECT. Salary range £1,100-£1,320. Applicants must be Corporate Members of the R.I.B.A. Superannuation schemes, medical examination. Housing available in due course. Apply by December 23, 1957, giving age, education and qualifications, experience and appointments held (with dates and salaries), and names of two referees, to General Manager (A), Bracknell Development Corporation, Farley Hall, Bracknell, Berks. 8226

WEST MIDLANDS GAS BOARD BOARD HEADQUARTERS

ARCHITECTURAL ASSISTANT
Applicants for the above post on the staff of the Board Architect should be fully conversant with contemporary constructional practice and be capable of undertaking medium-sized projects with a minimum amount of supervision. The work involved consists of a wide variety of interesting projects including commercial buildings, showroom and exhibition work in addition to industrial projects with the ancillary office, canteen and welfare buildings.

The salary will be within A.P.T. Grade 10 (£260-£960 per annum) of the National Salary Scale for Gas Staffs.

The post is pensionable and the successful candidate may be required to pass a medical examination. Applications, stating age, qualifications and experience, together with the names of two referees, should be addressed to the Industrial Relations Officer, West Midlands Gas Board, 6, Augustus Road, Edgbaston, Birmingham 15, to reach him not later than Monday, 16th December, 1957.

J. SWAN,
Secretary to the Board. 8231

CHURCH COMMISSIONERS

Applications are invited from fully qualified architects, aged 30-35, for the appointment of an ASSISTANT ARCHITECT in London. Commencing salary during 12 months probationary period to be £1,200 per annum followed, if satisfactory, by appointment on a pensionable established basis at a scale of £1,280-£50-£1,720 subject to medical examination.

Applications, giving names of two referees and stating age, education, details of past and present appointments, should be submitted by December 31, 1957, to the Establishment Officer, Church Commissioners, 1, Millbank, Westminster, S.W.1. 8219

PADDINGTON BOROUGH COUNCIL

Require QUANTITY SURVEYOR (A.P.T. IV: £1,055-£1,205), A.R.I.C.S. essential with experience in all branches of building work particularly housing. Commencing salary will be according to qualifications and experience. Applications stating age, qualifications, experience, present and past appointments, names and addresses of two referees should be addressed to the undersigned by December 16, 1957 (quoting A. 362).

W. H. BENTLEY,
Town Clerk. 8218

BOROUGH OF LEYTON

Applications are invited for appointment of ASSISTANT ARCHITECT at a salary in accordance with the Special Grade of the National Joint Council Scale, viz., £750 rising to £1,030 per annum, plus London Weighting at £30 per annum at age 26 or over.

Applicants must be Associates of the R.I.B.A. with considerable experience of contemporary design and the construction and supervision of multi-storey flats. The successful applicant will be engaged in connection with the Corporation's extensive programme for Redevelopment Areas.

Housing accommodation will be made available to the successful applicant if required.

Full details and form of application can be obtained from the Borough Engineer and Surveyor by whom completed applications must be received not later than Saturday December 14, 1957.

D. J. OSBORNE,
Town Clerk. 8220

LONDON COUNTY COUNCIL ARCHITECTS' DEPARTMENT

Vacancies for ARCHITECTS and SURVEYING ASSISTANTS in the Building Regulations Division as follows:—

(a) For surveys of existing premises and consideration of proposals for alterations and new construction in the Theatres Section.

(b) For building control work in connection with applications under the London Building Acts and Bye-laws as regards compliance with the Council's construction and means of escape standards.

Salaries up to £260 with starting rates according to qualifications and experience. Application form and particulars from the Architect (Ref. AR/EX/47/57), The County Hall, S.E.1 (2237). 8232

BOROUGH OF WEMBLEY

APPOINTMENT OF ASSISTANT ARCHITECT
Applications are invited for the above established appointment within the Architects' Special Salary Scale of £750-£1,030 per annum plus London "Weighting" Allowance, to work on a full and varied programme.

Application forms, to be returned by December 17, 1957, are obtainable from the Borough Engineer and Surveyor, Town Hall, Wembley. 8201

Architectural Appointments Vacant

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. Box Number, including forwarding replies. 2s. extra.

ARCHITECTURAL ASSISTANTS for University and Hospital work. Good salary, dependent on experience. Non-contributory Pension Scheme in being after probationary period. Three weeks' holiday a year, and five-day week. Reply, stating age, experience, etc., to: Thomas Worthington & Sons, 178, Oxford Road, Manchester, 13. 8081

CO-OPERATIVE WHOLESALE SOCIETY, LTD. ARCHITECTS' DEPARTMENT, BIRMINGHAM

APPLICATIONS are invited for the following appointment in the above Branch Office undertaking interesting and varied commercial and industrial projects:—

ASSISTANT ARCHITECT, capable of preparing working drawings from preliminary details. There is a 5-day week in operation, and the appointment will offer prospects of upgrading.

Applications, stating age, experience, qualifications and salary required, to G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester. 7941

JUNIOR ARCHITECTURAL ASSISTANTS

required. Five-day week. Factory and office buildings. Minimum 3 years' experience.—Write full particulars, R. H. Gallanough, L.R.I.B.A., 54, Queen Anne Street, London, W.1. 8037

SENIOR ASSISTANT who is above average ability, in design and practical experience with a good personality, is required to eventually take responsible position in office. Apply in writing to John H. D. Madin, Dip. A.R.I.B.A., 83/85, Hagley Road, Birmingham, 16. 8067

PARTNERSHIP. An expanding practice in the Midlands requires an ARCHITECT who would be suitable for partnership. Only Architects with high qualifications and ability need apply. Write giving full details. Box 8068.

ASSISTANT of intermediate standard, with office experience, good draughtsman, required for work on Flats and Houses. Please state experience, age and salary required to: R. Jelinek-Karl, F.R.I.B.A., 22, Chancery Lane, W.C.2. Hol. 5695. 8062

CHARLES B. PEARSON & SON require qualified **SENIOR ASSISTANTS** in their Manchester and Lancaster Offices. Experience in hospital work would be an advantage. Write in the first instance, giving details of age, training and experience and salary required, to 18, Dalton Square, Lancaster. 8088

SIR GILES SCOTT, SON & PARTNER have vacancies for SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS.

Work includes Churches, Schools and modern industrial and commercial buildings. Responsibility will be given according to ability. A high standard of draughtsmanship is demanded, together with initiative and management ability for the senior post.

5-day week, and good general working conditions in new offices at 9, Gray's Inn Square, W.C.1.—Apply in writing, giving brief details. 8162

TIMBER Building Prefabricating Company requires for its Farnborough Office, an **ARCHITECTURAL DRAUGHTSMAN**. Applicants should be quick and accurate with a contemporary outlook. Five-day week, staff canteen. Write giving details of age and experience to H. & H. Blacknell, Ltd., Park Place, Pinehurst Avenue, Farnborough, Hants. 8115

NEW ZEALAND Architectural Practice mainly engaged Commercial, Bank, Industrial work requires: (a) **ASSISTANT ARCHITECT** with A.R.I.B.A., salary range £950 to £1,050; and (b) **ARCHITECTURAL ASSISTANT** with about seven years good experience, salary range £750 to £850. Ability, qualifications, influence rate applicable, such being commencing salary subject good increases, twice yearly, dependent progress. Single or married men considered, excellent opportunity enterprising men, two or three years assured engagement, applicants' passage paid subject minor conditions. Apply airmail, with snapshot and personal and experience details, plus small recent eighth working drawing, to Mitchell & Mitchell and Partners, P.O. Box 187, Wellington, N.Z. 8092

SENIOR ARCHITECTURAL ASSISTANT required in Blackpool office with varied practice.—Write, giving full particulars of age, qualifications, experience, etc., to MacKeith, Dickinson & Partners, 4, South King Street, Blackpool. 8127

W. H. SAUNDERS & SON, L.A.R.I.B.A., will shortly require additional staff of Intermediate to Final standard to work on new commercial and industrial projects in their Southampton and Portsmouth offices. Bonus and Staff Assurance Scheme operate.—Applications in writing to 1, Carlton Crescent, Southampton, or 49, Commercial Road, Portsmouth. 8163

WESTMORE & PARTNERS require keen **ASSISTANT** of Inter-Final standard, interested in contemporary detailing.—Write, stating age and salary required, to 121, Cheapside, E.C.2. 8159

SHREWSBURY Architects require **SENIOR** and **JUNIOR ARCHITECTURAL ASSISTANTS**. Varied practice. Superannuation Scheme.—Apply Abbey & Hanson, 11, Wyle Cop, Shrewsbury. 8157

ASSISTANT ARCHITECT required for varied work. Should be qualified or near Final standard. Pension Scheme available.—Write, with details, training, and salary required, to H. Johnson & Son, FF./R.I.B.A., 20, Priory Place, Doncaster. 8158

PRE-FINAL ASSISTANT required. Opportunity to gain all-round experience, taking charge of jobs in office and on site. Salary £650 p.a. 5-day week.—Geoffrey Shires, 75, Victoria Street, S.W.1. Tel. ABBey 4909. 8128

GOOD position offered to **ARCHITECTURAL ASSISTANT**, of intermediate standard, in Newcastle. Applicants should be prepared to accept responsibility, capable of individual working, and have a good standard of presentation. They must also have a contemporary outlook. 5-day week, good salary offered, and luncheon vouchers.—Write, giving full particulars as to age, experience, and salary required, to Box 8155, quoting Ref. AAX/269.

GOOD position offered to **ARCHITECTURAL ASSISTANT**, of intermediate standard, in Birmingham. Applicants should be prepared to accept responsibility, capable of individual working, and have a good standard of presentation. They must also have a contemporary outlook. 5-day week, good salary offered, luncheon vouchers and social club.—Write, giving full particulars as to age, experience, and salary required, to Box 8131, quoting Ref. AAB/266.

ARCHITECT requires **CHIEF** and **SENIOR ASSISTANTS** at Chelmsford and Colchester offices. Interesting work on flats, shops, schools, etc.—Apply Roff Marsh, F.R.I.B.A., M.T.P. 1, 125, London Road, Chelmsford. 8146

MAX LOCK & PARTNERS require a **JUNIOR ASSISTANT ARCHITECT** for their Bedford office. 5-day week.—Apply in writing, stating experience, age, and salary required, to G. W. King, 5a, Harpur Street, Bedford. 8147

ARCHITECTURAL ASSISTANTS required for Industrial Practice in Victoria, S.W.1 area. Intermediate R.I.B.A. standard. Salary £600-£900, according to qualifications and experience.—Reply, giving details of age, experience, and salary required, to Box 8148.

ARCHITECTURAL DRAUGHTSMAN required at London Co-operative Society's Works Department, Whitta Road, Manor Park, London, E.12. General Architectural Drawing experience necessary. Preference will be given to applicants with experience of preparation of drawings for Industrial and Commercial Buildings. Salary scale from £53 to £93 per annum according to age and experience. The successful applicant will be required to undergo medical examination and, after transfer to staff to participate in the Society's Contributory Pension Scheme. Applications stating age, details of career and technical qualifications should be addressed to Staff Office, London Co-operative Society, Ltd., 54, Maryland Street, Stratford, London, E.15. Endorse application "Architectural Draughtsman." 8211

YOUNG firm of Architects in rural North Riding of Yorkshire with practice covering much of England, invite applications from **ASSISTANTS** of suitable outlook wishing to live in rural surroundings and work on projects including hospitals, industrial and contemporary housing. New housing accommodation may be made available on firm's country estate. Diploma qualified and unqualified applicants considered. Mortimer Partners, The Old Bank House, Northallerton. 8213

ASSISTANT required. Intermediate standard. A Private Practice. Salary by arrangement. Five-day week. State age and experience. W. J. Lewis and Sons, 68, Cranbrook Road, Ilford 1799. 8216

ASSISTANT ARCHITECT required by the Royal Arsenal Co-operative Society Limited. Experience in the preparation of designs and working drawings for all types of buildings, including shops, offices, and industrial premises essential. A knowledge of shopping layouts will be an advantage. Permanent superannuated position. Applications giving age, full particulars of experience, qualifications, and salary required to The Staff Manager, 71, Powis Street, Woolwich, S.E.18. 8204

ASSISTANT to Exhibition Manager required. Age 25-35 years with previous experience as an Architect's Draughtsman and preferably with some exhibition experience. This vacancy provides an interesting opportunity for a young man ready and willing to take growing responsibility. The vacancy is in London. Apply in writing to the Personnel Manager, Joseph Lucas Ltd., Great King Street, Birmingham 19. 8209

ARCHITECTURAL ASSISTANT, Intermediate to Final stage, urgently required. Please reply, giving details of age, experience and salary required to H. W. Shipley and Partner, Architects and Surveyors, Kingscourt, Bridge Street, Walsall. 8210

ASSISTANT wanted, capable of taking charge of Drawing Office. Practical outlook, not glorified draughtsman. Experience in specification and construction. Good class West End practice. Prospects of partnership. Box 8208.

ASSISTANT ARCHITECTS with ability to supervise contracts required for small London office. Five-day week. Write giving details of experience and salary required to Box 8207.

ASSISTANT required with London office experience for small busy West End office. Shaw & Lloyd, Museum 9693. 8206

LONDON Architects have vacancy for well-qualified **SENIOR**. Interesting work of considerable variety gives opportunities for suitable man with ability. Position could lead to Junior Partnership. Applicant must be Associate R.I.B.A. with London experience in good private practice. Age under 40. Salary £1,000 p.a. Five-day week, lunch vouchers and three weeks' annual holiday. Box 8205.

SENIOR ASSISTANT for East Anglian office. Not necessarily qualified, but capable of carrying through small contracts and supervising work; must be quick and speedy draughtsman. Box 8203.

WELL-ESTABLISHED London Architects require immediately **ASSISTANTS** for interesting and varied work in medium sized City Office. Must have Intermediate R.I.B.A. and some experience in London private practice. Opportunities and large degree of responsibility for the right men. Salary according to experience. Five-day week and luncheon vouchers. Apply by letter to Stewart & Hendry, F.F.R.I.B.A., A.M.T.P.I., 90, Fenchurch Street, London, E.C.5. 8185

SENIOR qualified **ASSISTANT ARCHITECTS** required for an interesting variety of work in good office conditions with voluntary staff superannuation scheme. Please apply, giving full details and salary required, to Douglas J. Oliver, Chartered Architects, Planning Consultants, Members of the Grenfell Baines Group, 10, St. Matthew's Street, Rugby. 8196

FREDERICK GIBBERD requires **ARCHITECTURAL ASSISTANTS** with office experience for a variety of interesting jobs. Salary £600-£750 according to experience. Apply in writing, giving full particulars, to 8, Percy Street, London, W.1. 8197

KATZ AND VAUGHAN, JUNIOR ASSIS-
TANT required. Phone: REGENT 5401. 8195

ARCHITECT'S ASSISTANT required for City Office. Capable of accurate and quick detailing. High standard of draughtsmanship important. Long term employment and excellent prospects for right man. Five-day week. Luncheon Vouchers. Write Box 8194.

WEST SURREY Practice requires **ARCHITECTURAL ASSISTANT**. Final standard. Excellent salary and prospects. Write with full details of age, experience, etc., to Box 8193.

ARCHITECTURAL ASSISTANT required for small **READING** office. R.I.B.A. Intermediate or equivalent experience, contemporary outlook. Write Box 8192.

ARCHITECTURAL ASSISTANT of Intermediate to Final R.I.B.A. standard with good general experience required. Pension scheme available. Apply stating age, qualifications and experience to Brierley, Syme & Leckenby, 10, Lendal, York. Phone 23256. 8191

ARCHITECT'S ASSISTANT with office experience, a sound knowledge of straightforward construction, and ability to produce clear working drawings, required in busy Birmingham Office. Pension Scheme. Salary £850. Box 8187.

ARCHITECTURAL ASSISTANTS required. £850 p.a. to start. State experience, age. Interesting work. Schools and commercial. Glasgow office. Box 8186.

Architectural Appointments Wanted
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ARCHITECT, large scale industrial experience. £1,000 min. salary.—Box 8132.

ARCHITECT and Surveyor seeks responsible position where 30 years' experience would be of value. Box 8178.

STUDENT of Architectural Draughtsmanship. Keen, intelligent young man, desires post in Leeds-Bradford area as trainee with a view to continuing with studies in his free time. D. D. Tubbs, 31, Coningham Road, W.12. 8214

ASSOCIATE, aged 32, educated Sherborne & A.A., 5 years' experience in London practice, in charge of handling projects, now looking for responsible post in provincial practice with view to partnership. S. or S.W. England preferred. Capital available. Box 8228.

Other Appointments Vacant
4 lines or under, 9s. 6d.; each individual line, 2s. 6d.
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JOINERY DRAUGHTSMAN required for office in West London area of large Joinery Manufacturers. Experienced in preparing orders and working details from customers' particulars. The position, offered to a man with experience and ability, is permanent, progressive and pensionable.—Reply, stating age, giving details of experience and salary required, to Box 8062.

WANTED.—**SENIOR DRAUGHTSMAN**, to take control of branch office in Wales. Previous office experience essential.—Replies to Box 8154, should state age, experience, and salary required, and will be treated confidentially.

ASSISTANT QUANTITY SURVEYOR required by the London Co-operative Society Ltd., at their Works Department, Whittia Road, Manor Park, E.12. Pension and paid sickness schemes in operation. Commencing salary £689 per annum. Candidates should be up to Intermediate standard of Institute of Quantity Surveyors and have had experience in London Building Practices and prices. Applications stating age, details of career and technical qualifications should be addressed to Staff Office, London Co-operative Society, Ltd., 54, Maryland Street, Stratford, London, E.15. Endorse application "Assistant Quantity Surveyor." 8212

SALES DEVELOPMENT. A company specialising in roofing construction requires **SALES REPRESENTATIVE**, based on London, for contact with architects, contractors, etc. Progressive post for man with initiative and knowledge of building trade. Pension scheme through Parent Company. Box 8190.

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APPLICATIONS are invited for the appointment of a **SHOPFITTING DESIGNER** with experience in Shop Fronts, Equipment and Shop Interior Layouts. Applicants should also be capable of preparing specifications and constructional details of fittings and fixtures, working in conjunction with and under the supervision of Senior Architectural Staff. The post is pensionable, subject to Medical Examination. Five-day week in operation. Applications giving age, details of experience and salary required to the Branch Architect, C.W.S. Limited, Broad Quay, Bristol 1. 8229

Other Appointments Wanted
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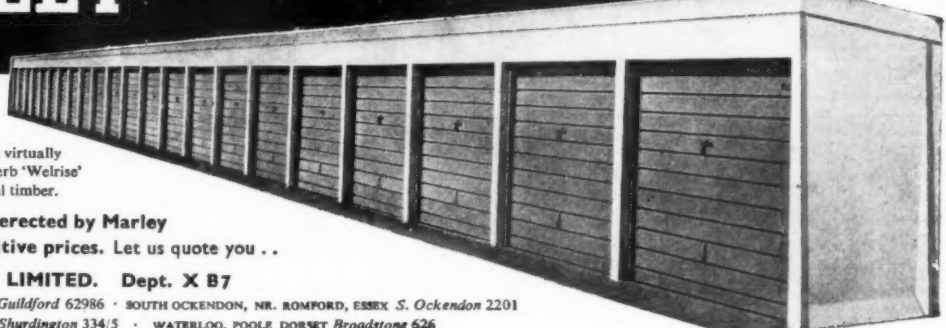
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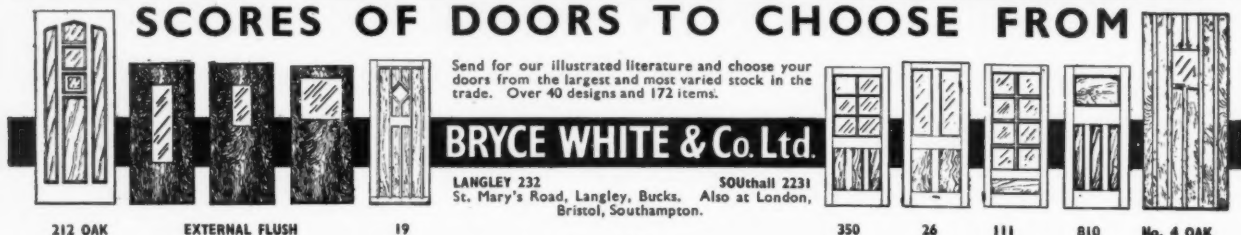
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