

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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CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

*Architectural Appointments
Wanted and Vacant*

No. 3240]

[Vol. 125

THE ARCHITECTURAL PRESS

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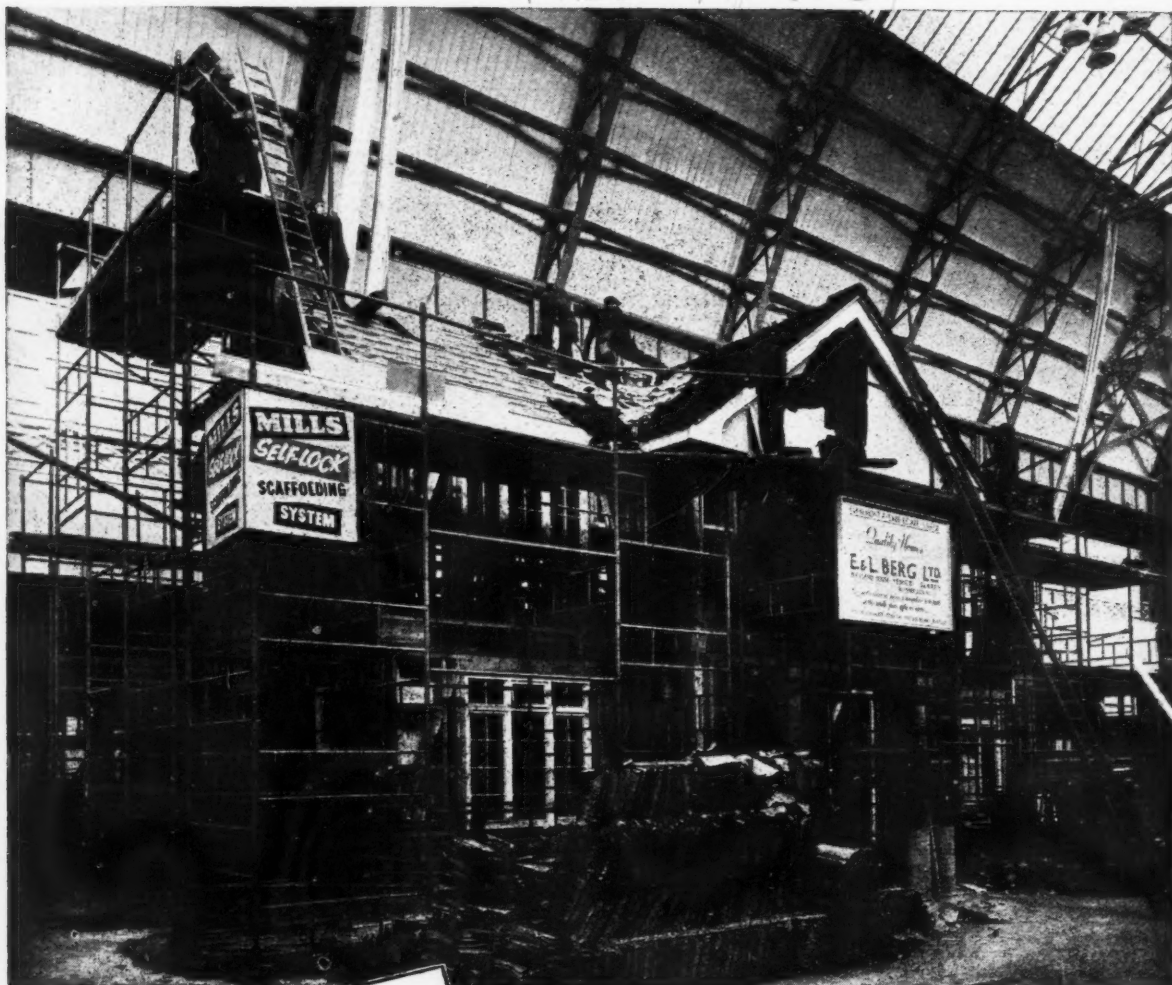
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Registered as a Newspaper.

★ 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 Ie 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. 49, 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
IOS	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. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
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 Asphalt 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. 82, New Cavendish Street, W.1.	Langham 4341
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

R 11252 Apr-June '57



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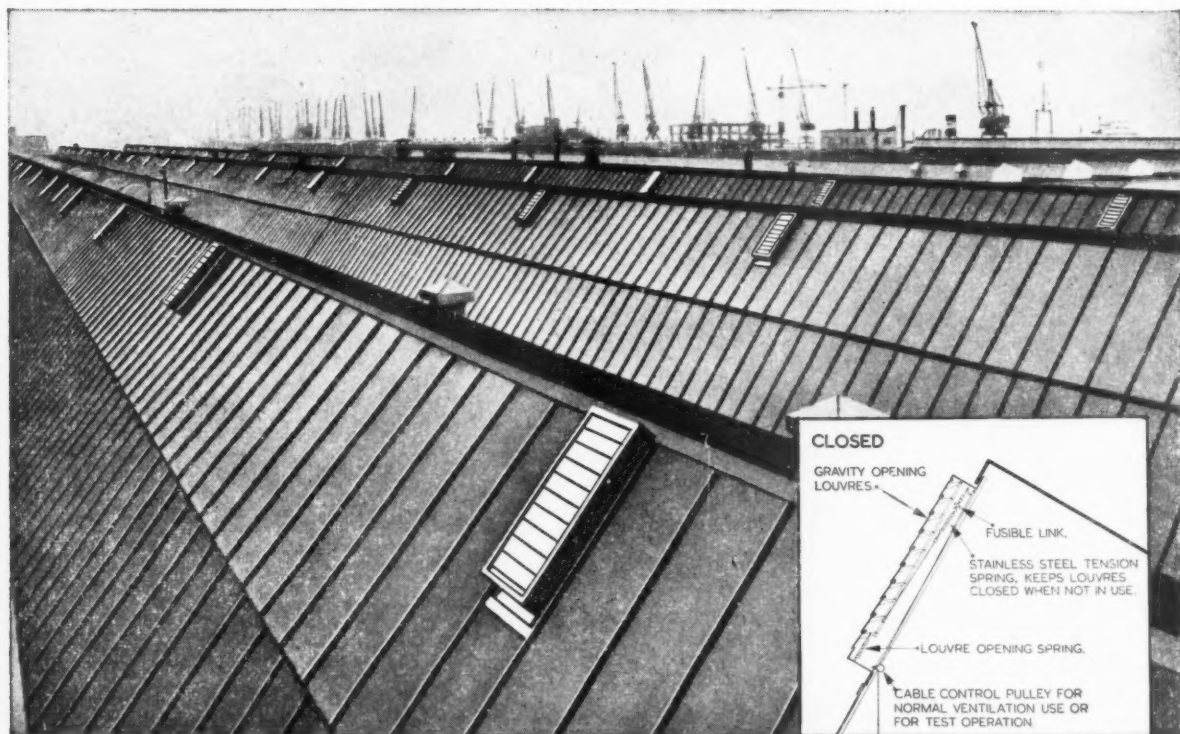
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VENTILATION AND FIRE PROTECTION!



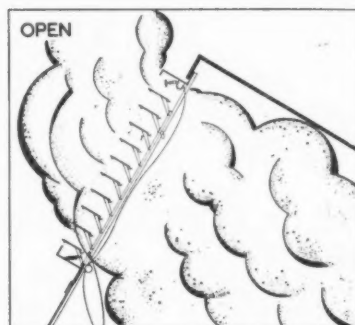
with the COLT DUAL PURPOSE FIRE VENTILATOR

at AC-Delco, Division of General Motors Ltd., Southampton.

A study of industrial fires in Great Britain and in America has shown that the primary cause for the spread of fire is the super-heated air, smoke and explosive gases trapped under the roof. They build up in heat and intensity from the fire below and cause flash fires. Furthermore, the smoke rapidly extends downwards, entirely filling the premises and preventing the work of the fire fighters.

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Write to Dept.'9/4a for paper "Some Aspects of Fire Prevention in Industrial Buildings" by M. J. Reaney, which deals fully with this matter.



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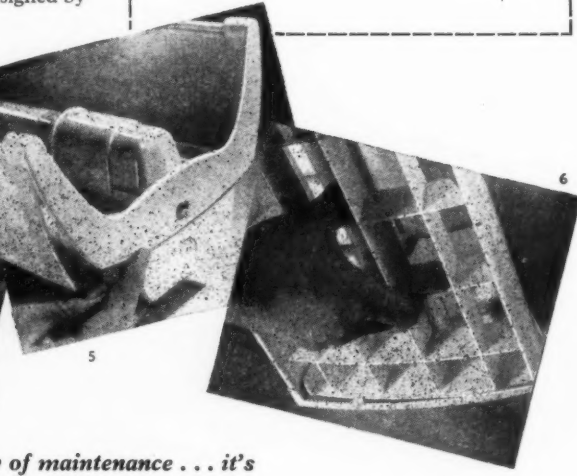
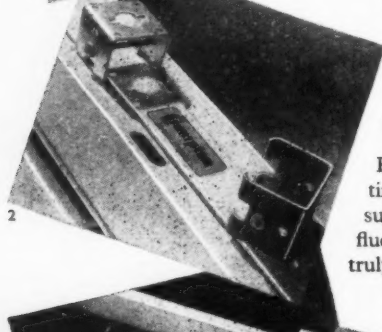
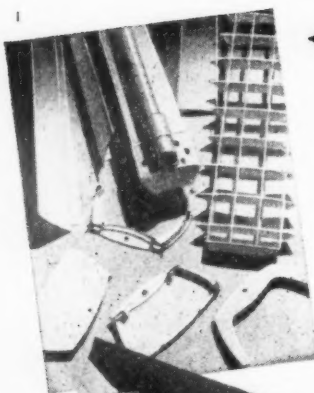
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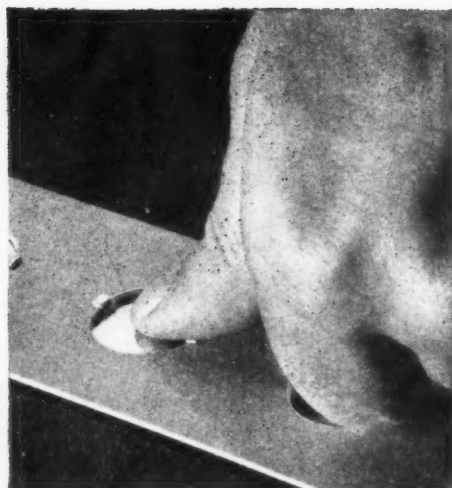
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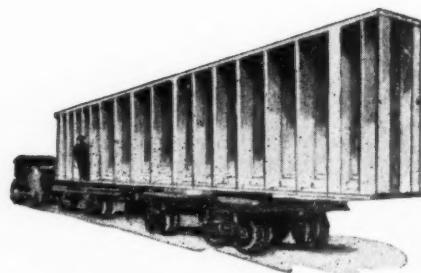
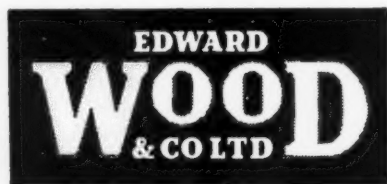


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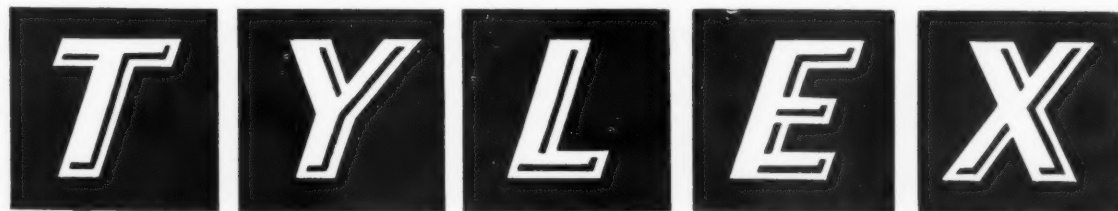
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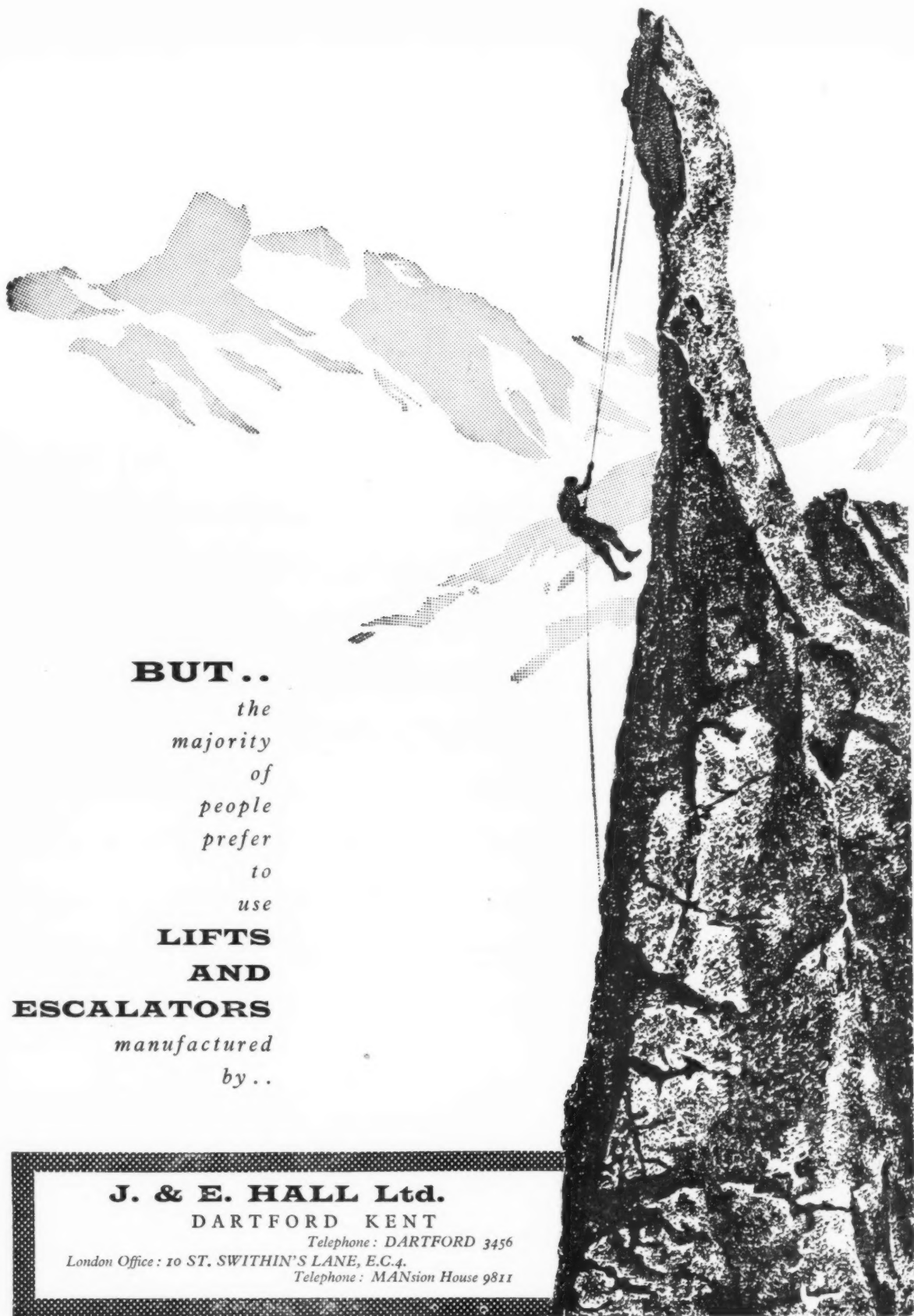
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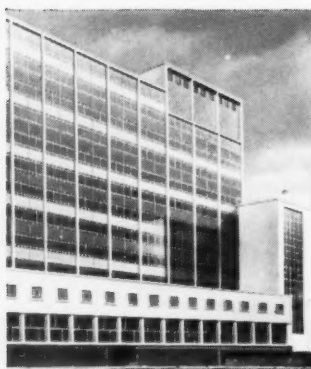
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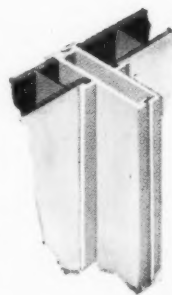
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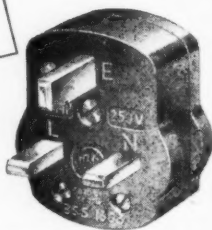
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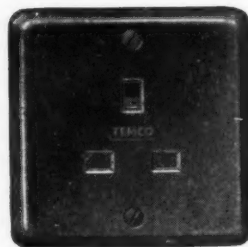
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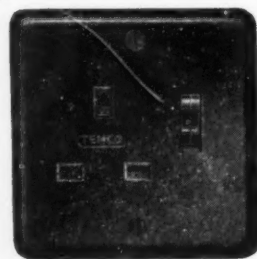
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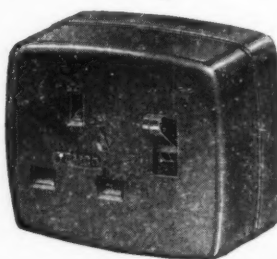
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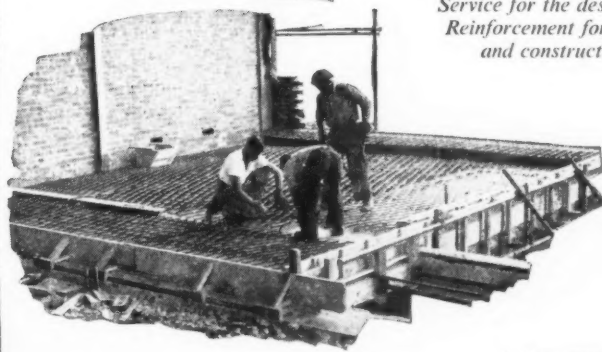
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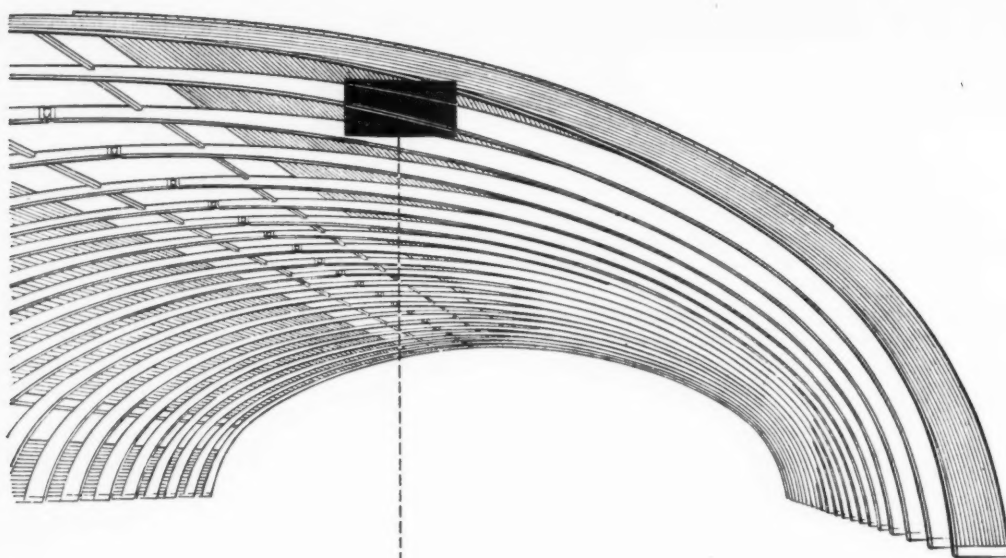
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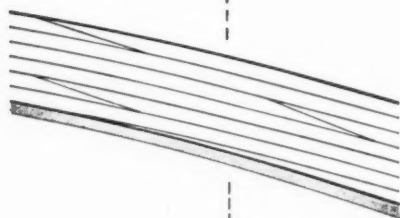
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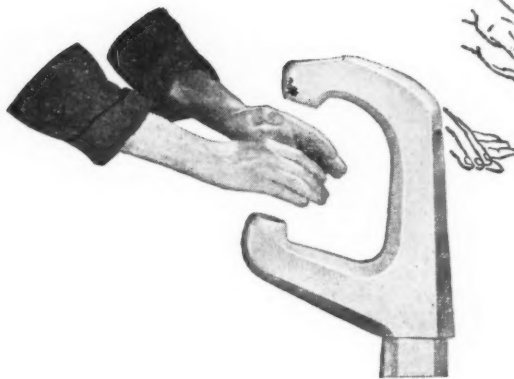
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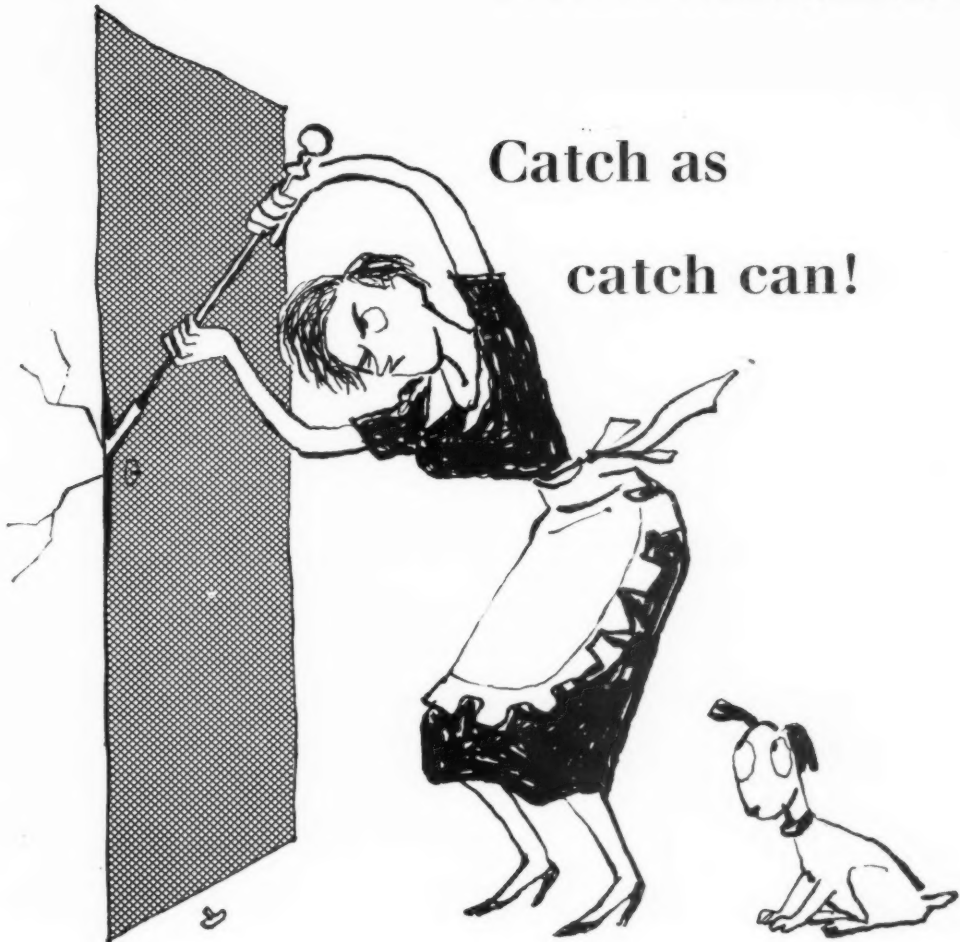
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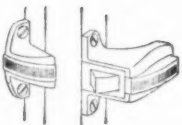
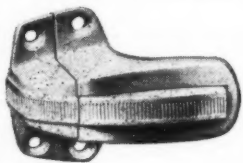
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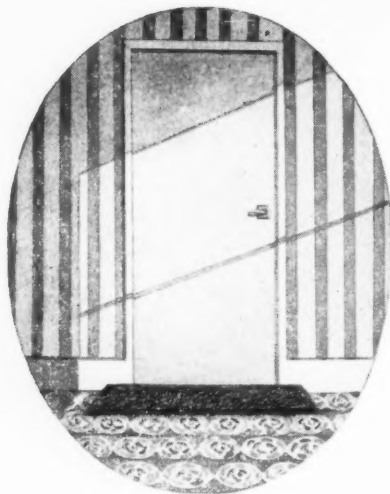
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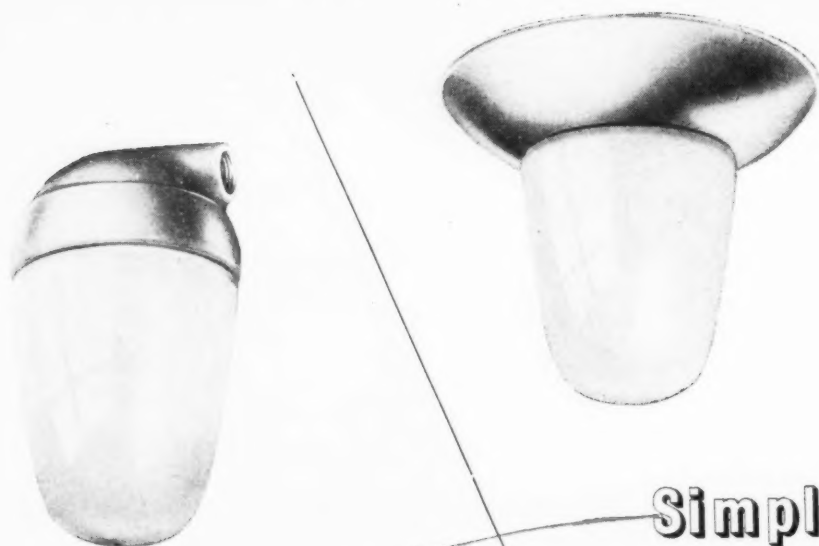
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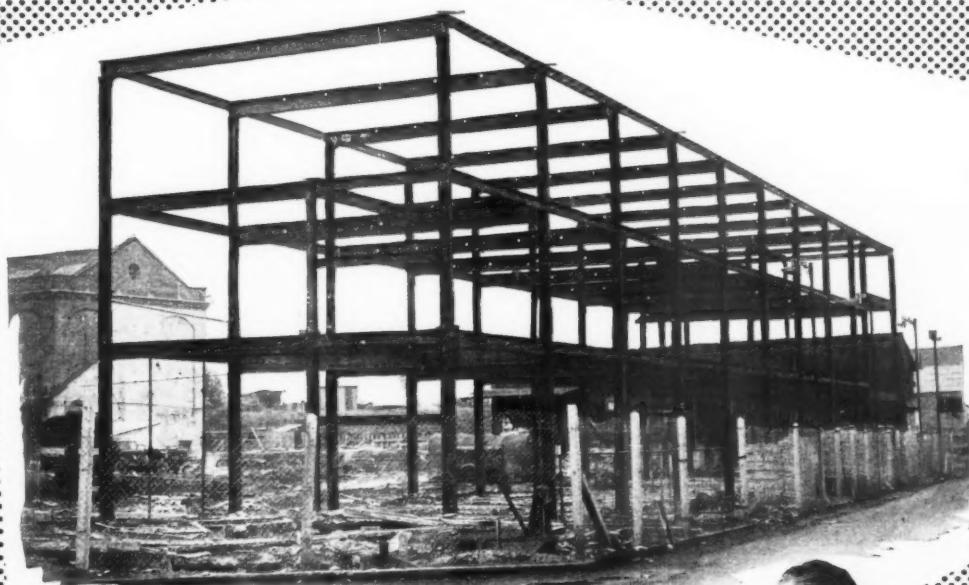
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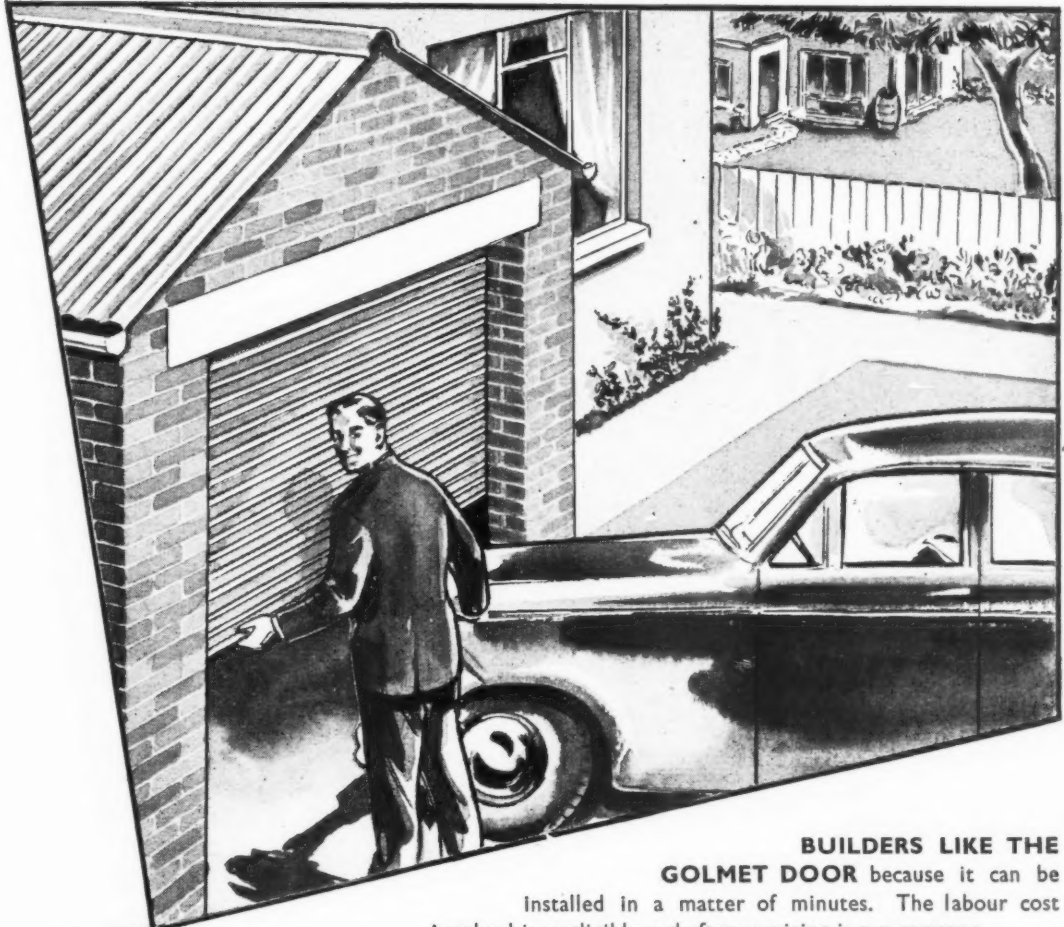
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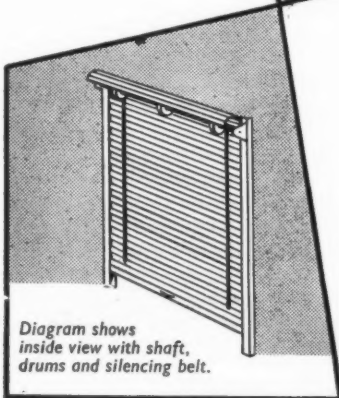


Diagram shows inside view with shaft, drums and silencing belt.

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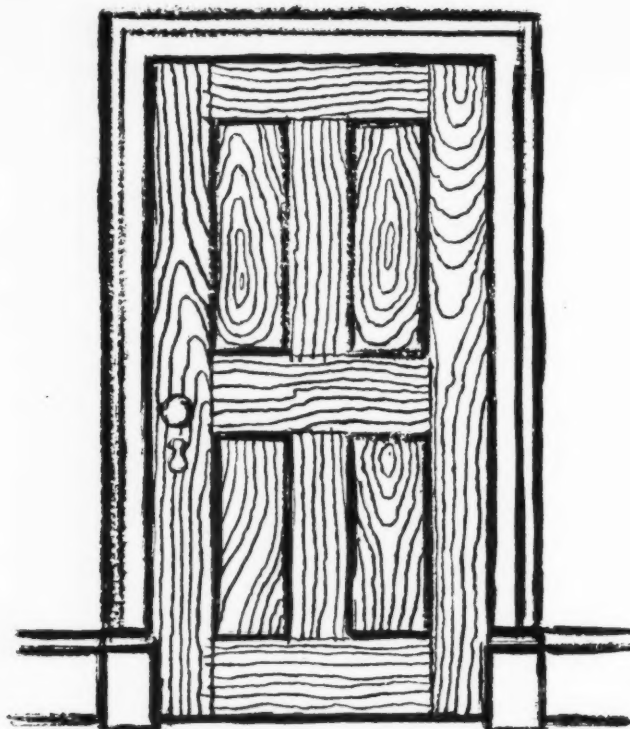
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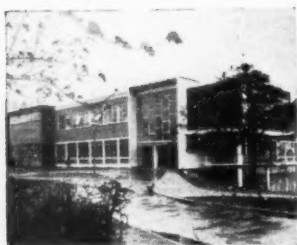


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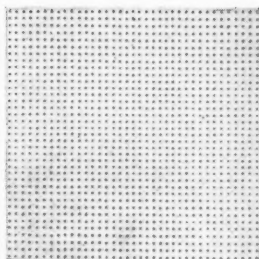


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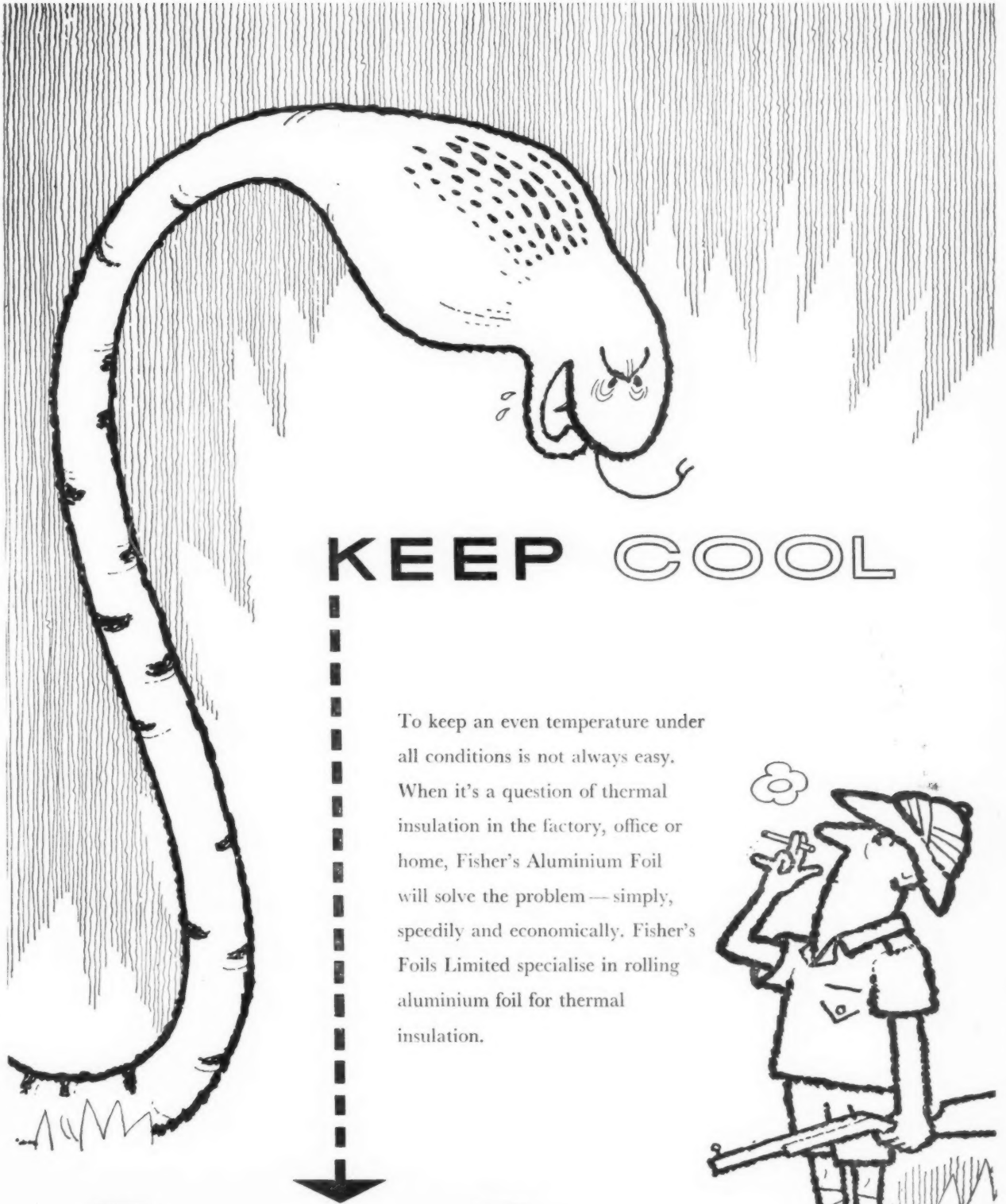
(On right) interior of Surface Coatings Laboratory.

Architect: Philip Cranswick, A.R.I.B.A., A.M.T.P.I., of Walker, Harwood & Cranswick.

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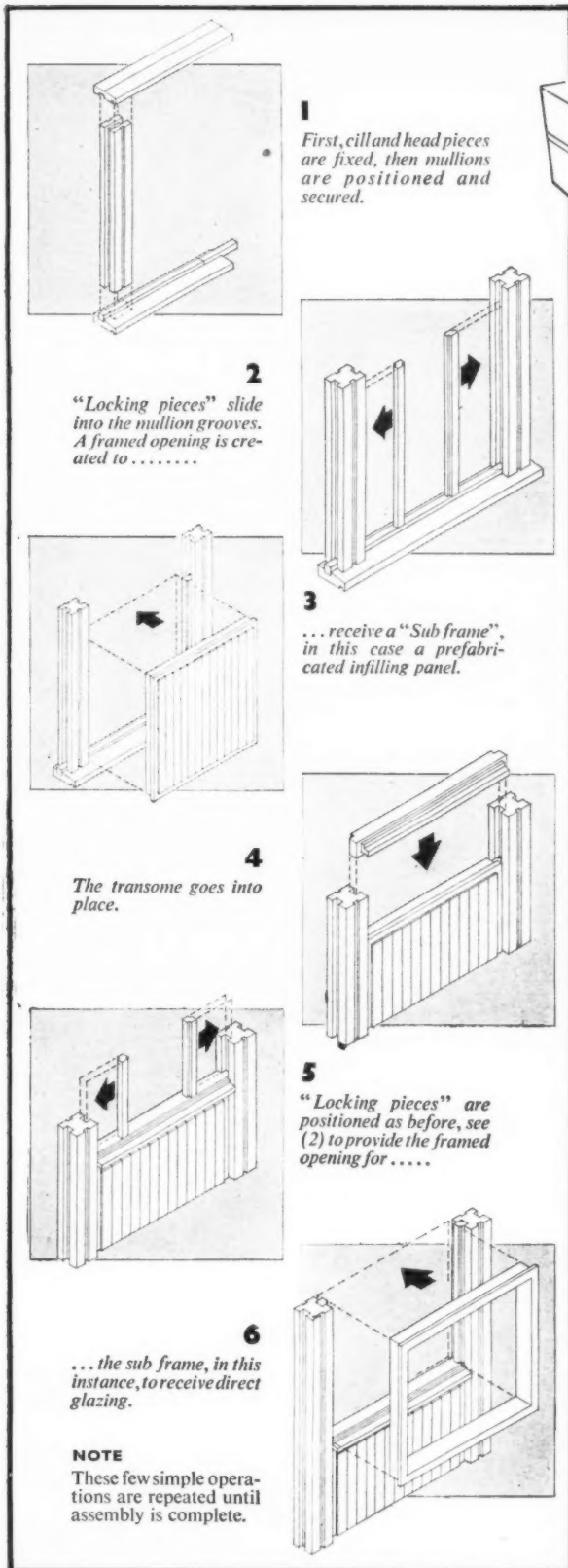
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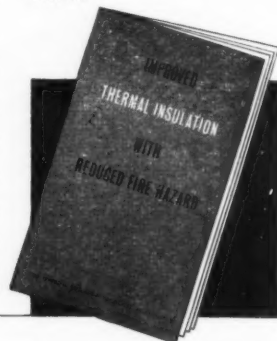
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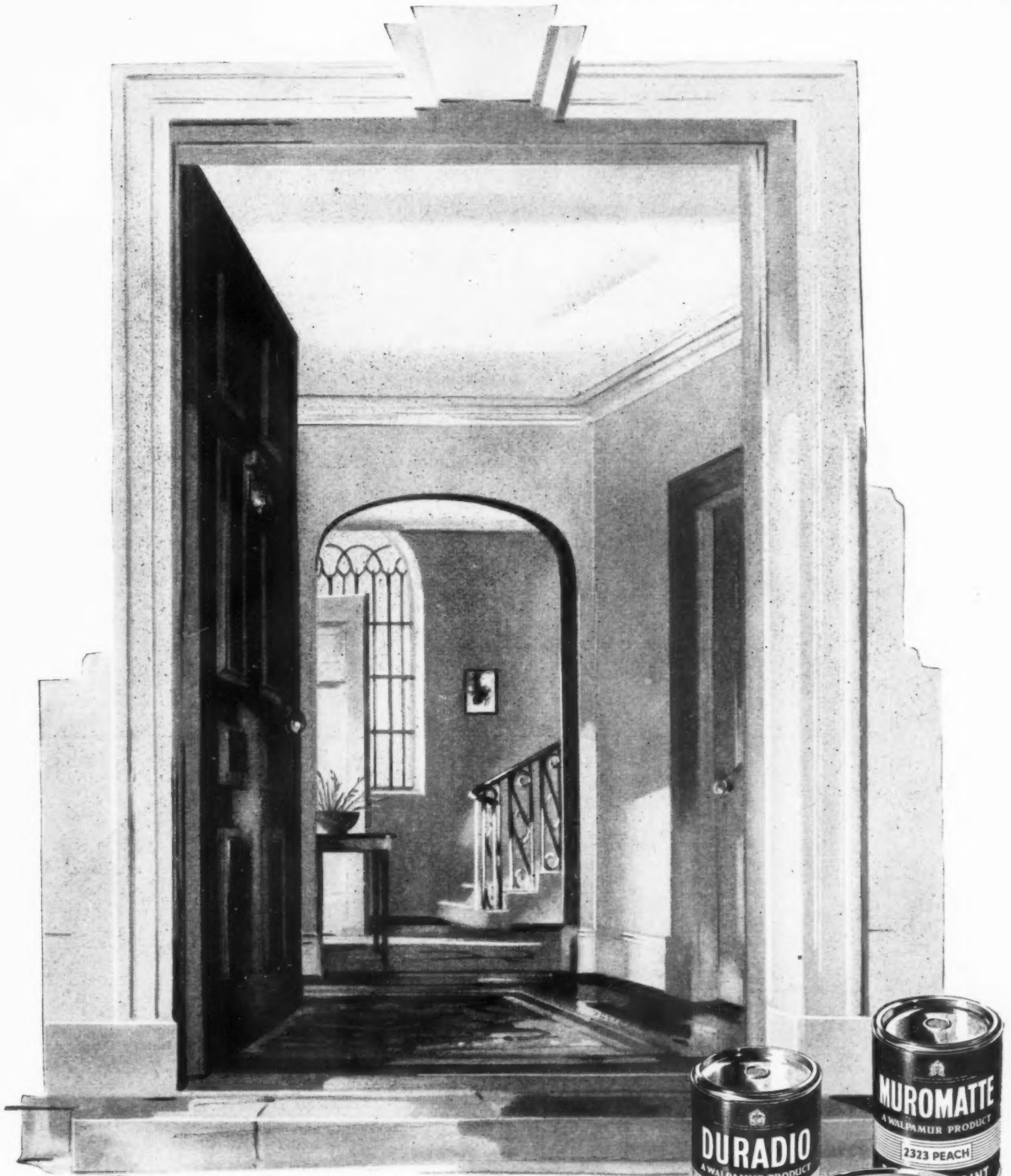
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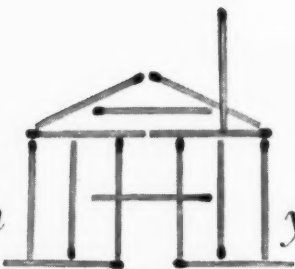
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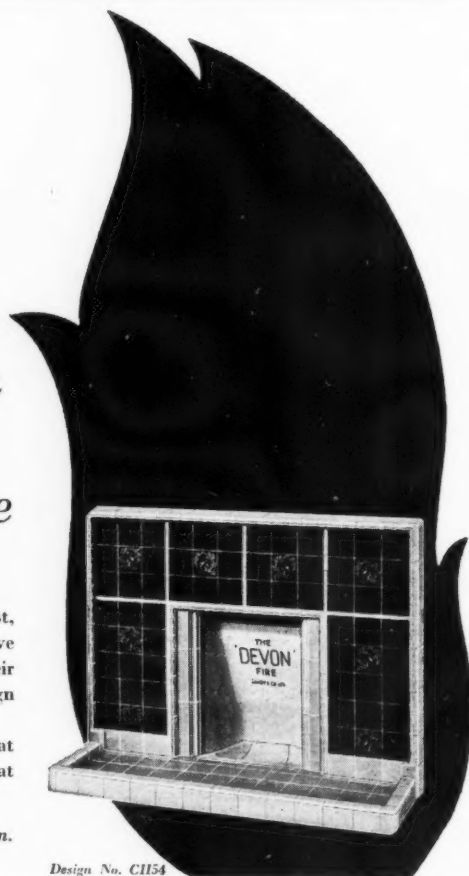
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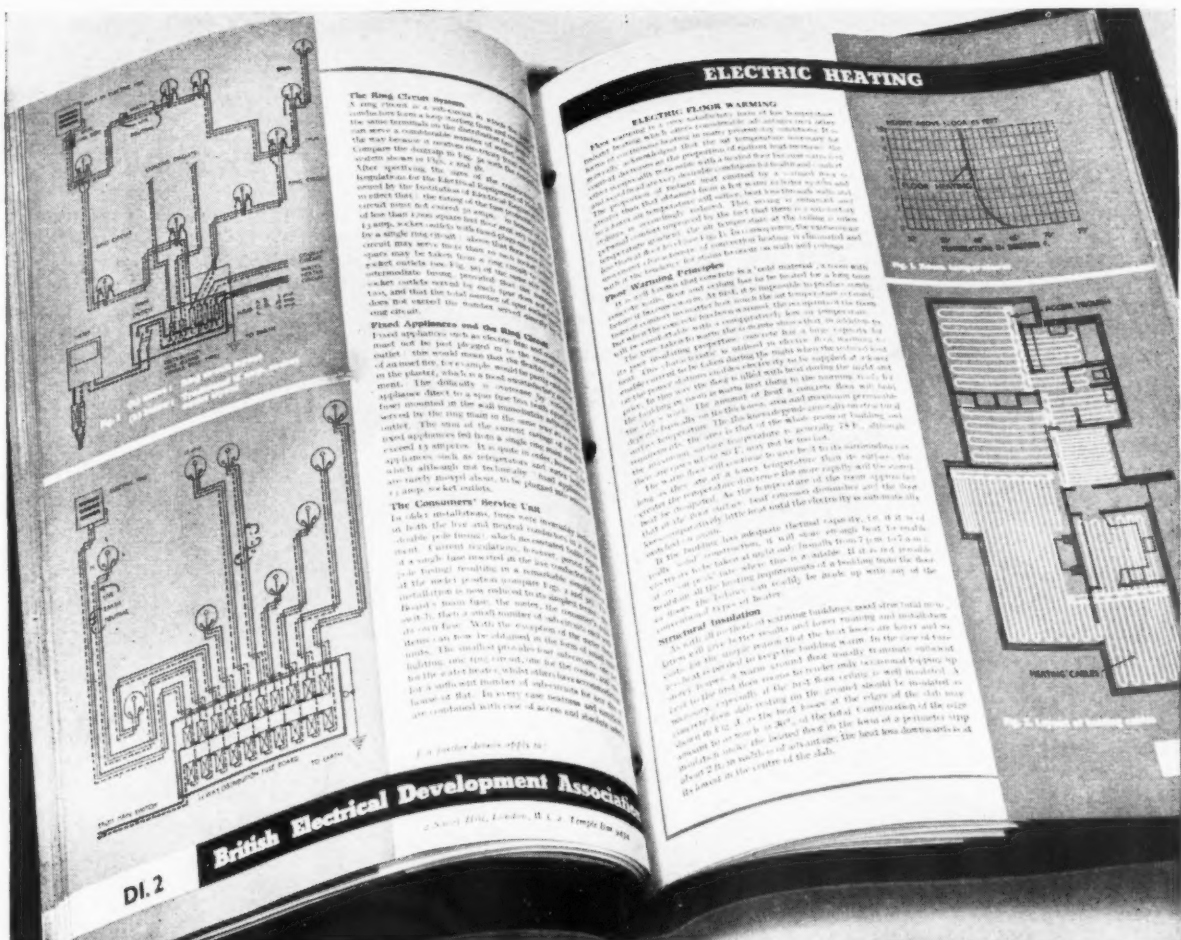
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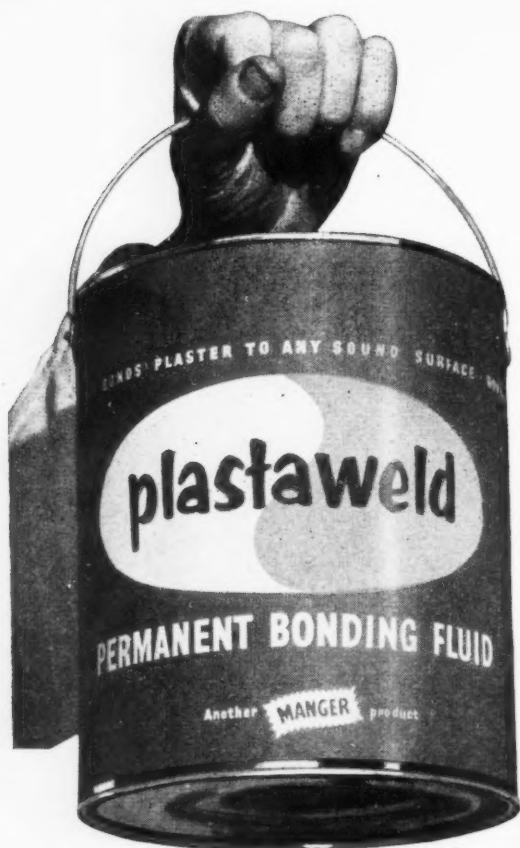
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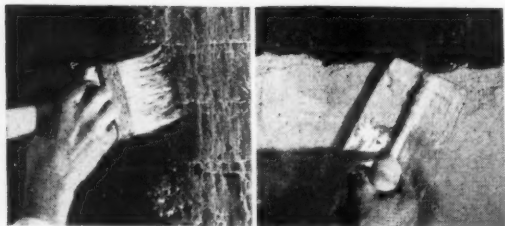




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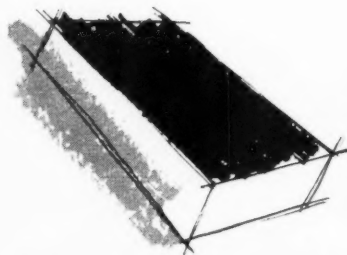
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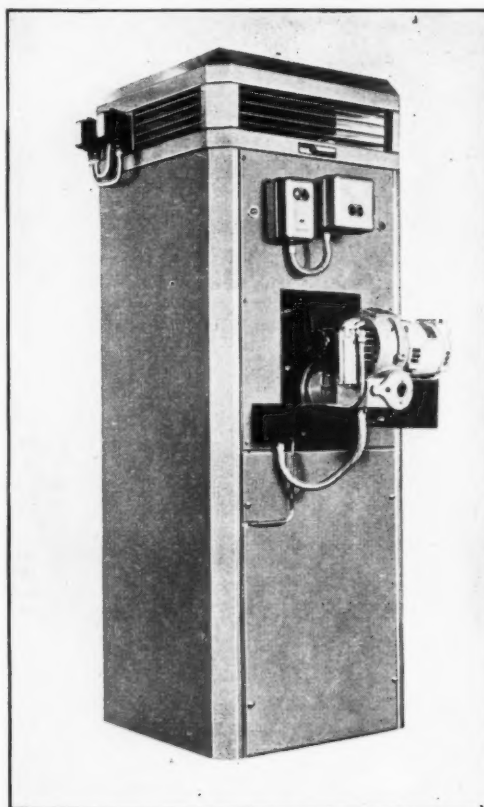
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by **COLT**

OIL-FIRED AIR HEATERS

SOME OUTSTANDING ADVANTAGES

- Immediate Delivery.
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Send for free Manual on Colt Heating & Ventilation to Dept. L.150/4.



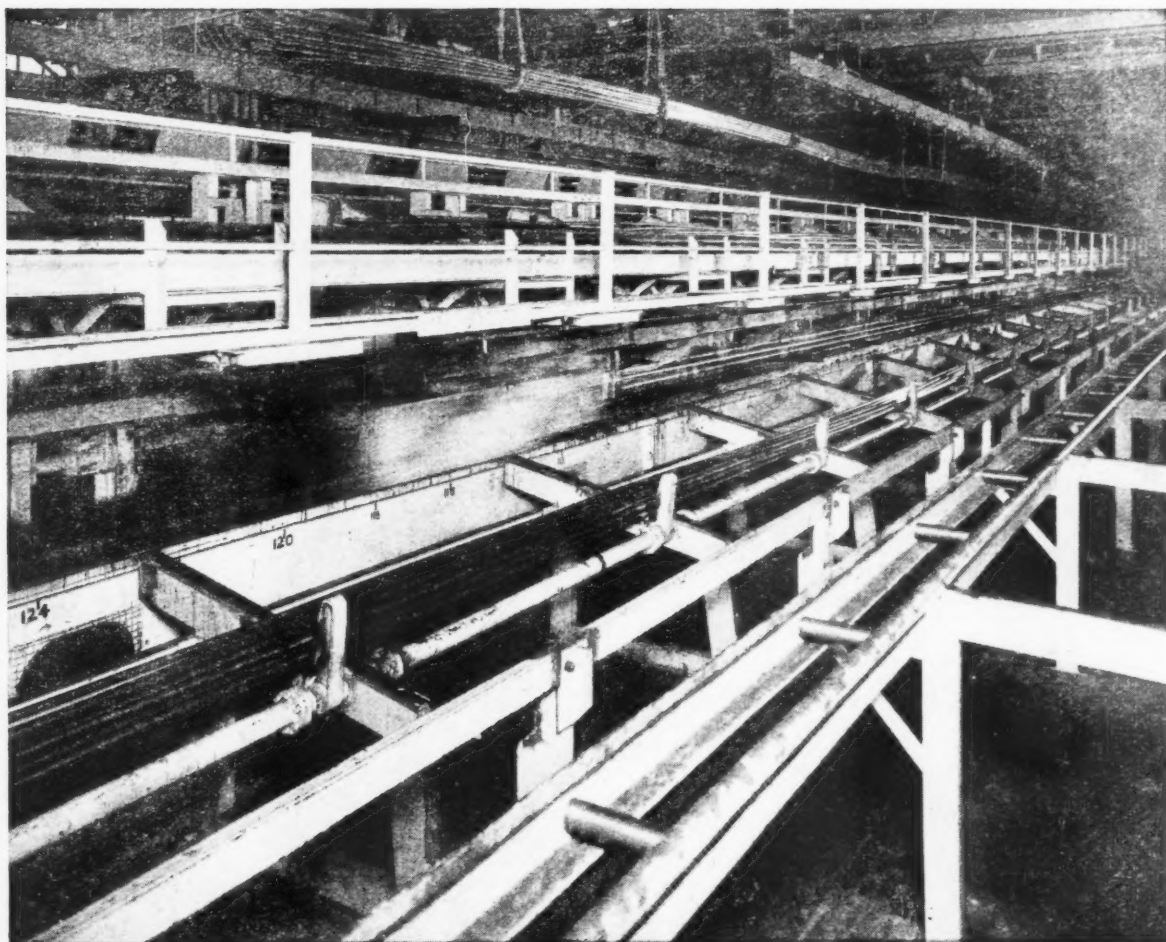
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Branches at: Birmingham, Bradford, Bridgend (Glam.), Bristol, Coventry, Dublin, Edinburgh, Glasgow, Liverpool, London, Manchester, Newcastle-upon-Tyne, Sheffield, and Warwick.
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A hundred years of know-how...

The main mill at Kirkby Works houses the most powerful tube drawing machinery in the world.

High-speed triple drawbenches and drawblocks of the most advanced design produce tubes in straight lengths up to

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A century of experience in copper tube making went into designing Kirkby — a great manufacturing unit planned for an even greater future.

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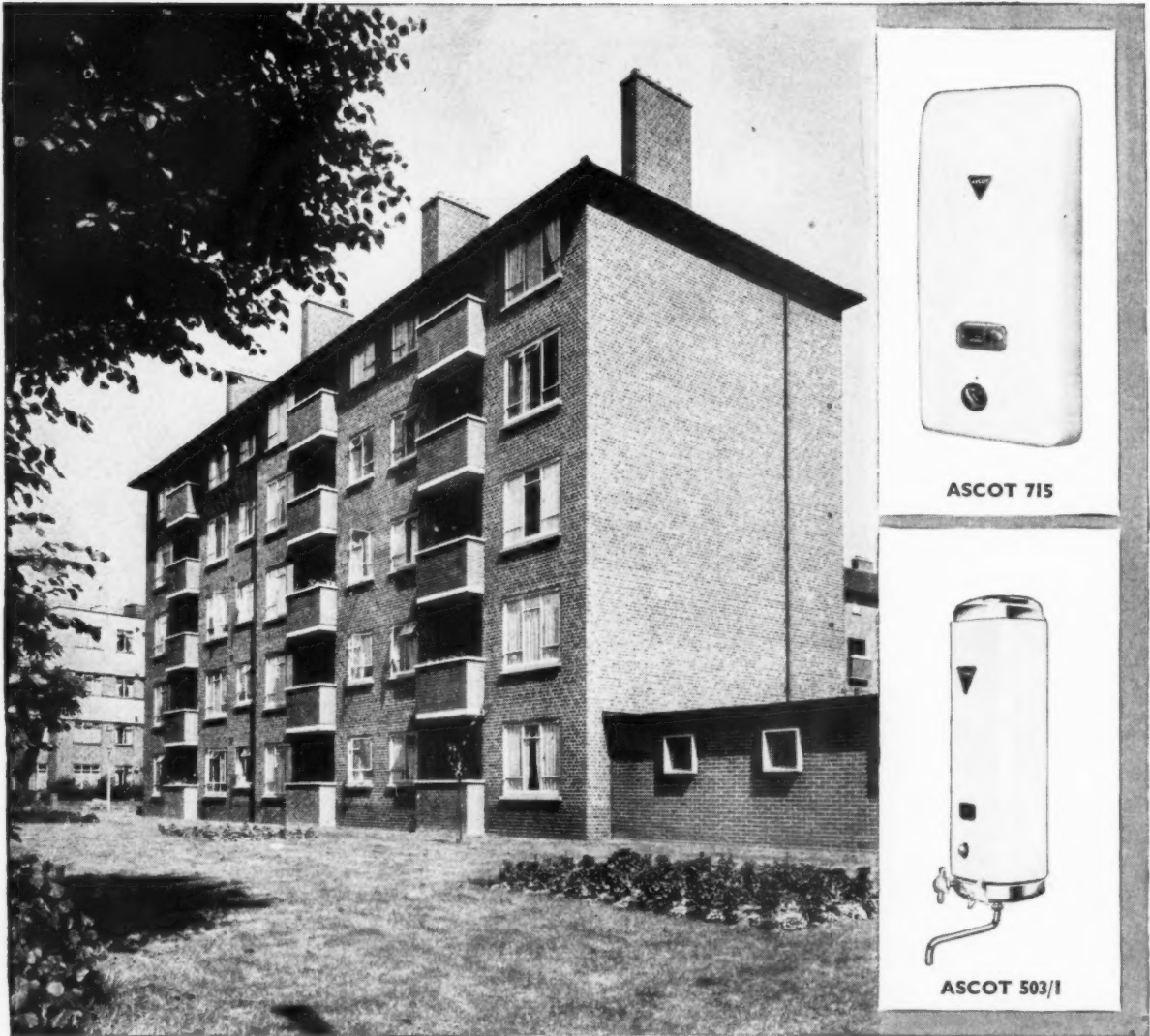
IMPERIAL CHEMICAL INDUSTRIES LIMITED, LONDON S.W.1.

CT₃



Extensions to the Thorpe Road Works
LAURENCE SCOTT & ELECTROMOTORS LTD., NORWICH
Architects: A.F. Scott & Sons, Norwich

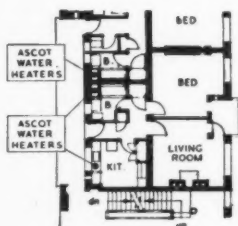
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Designers, Fabricators and Erectors of Structural Steelwork



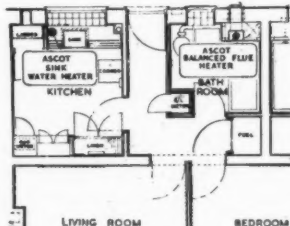
ASCOT IN NEW HOUSING (2)

The Metropolitan Borough of Hackney's new Keir Hardie Estate comprises 49 flats and maisonettes grouped in three five-storey blocks on the east side of Upper Clapton Road. Hot water for all these dwellings, which range from three-bedroom maisonettes to bed-sitting-room flats, is supplied by Ascot Instantaneous Gas Water Heaters.

An Ascot 715 "Balanced Flue" Multipoint installed in every bathroom provides hot water for bath, washbasin and, in the case of the smaller dwellings, for the kitchen sink. Ascot 503 sink water heaters are installed in the kitchens of the larger dwellings where long pipe-runs from the 715's would otherwise be necessary.



Plan of complete single-bedroom flat.



Kitchen and Bathroom of single-bedroom flat.

RESPONSIBLE AUTHORITIES

G. L. A. Downing, O.B.E., M.Inst. C.E.,
(Borough Engineer & Surveyor)

R. H. Harrison, A.R.I.B.A.
(Chief Assistant Architect)

J. H. Elmer, A.R.I.B.A.
(Assistant Architect)

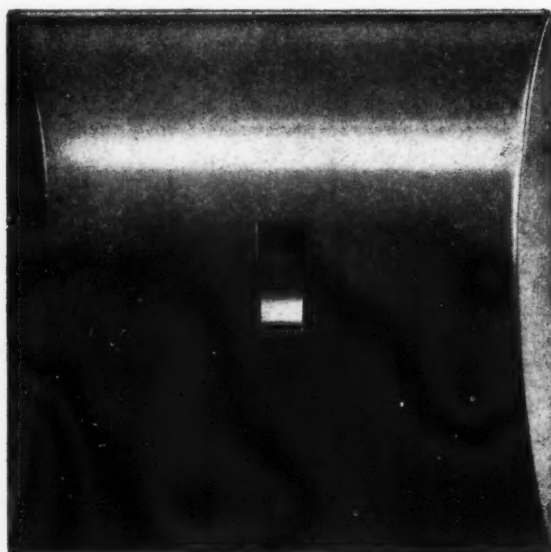
V. W. Allen
(Chief Building Surveyor)



ASCOT GAS WATER HEATERS LTD • 255 NORTH CIRCULAR ROAD • LONDON • NW10

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A member of the PARNALL Group of Companies.

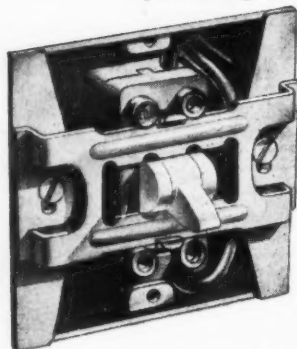


FALKS new switch makes all others obsolete

Here is a handsome new switch, modern in every respect and unique being without plate fixing screws.

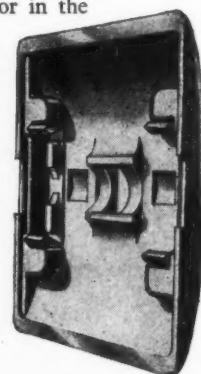
The design must appeal to every architect and its simplicity to the contractor in the saving of fixing time.

Note these special features—



The 'Snapfast' switch unit is fitted to the standard box by two screws. It is very readily wired and the box provides ample space for cable slack. Provision is also made within the switch assembly to correct "out of square" boxes.

The secret of the FALKS 'Snapfast' lies in the Spring steel inserts which register with the unit frame and securely hold the cover.



It is now the simplest of operations to snap the cover into position. Although firmly fixed it can be prised off and replaced without damage to switch or surroundings.



'SNAPFAST' SWITCH BY

FALKS

FALK STADELMANN & CO. LTD. 91 Farringdon Rd., London, E.C.1. HOL 7654. Showrooms at: 20/22 Mount St., London, W.1. MAY 5671

Branches at: Glasgow: Central 9494 (4 lines). Edinburgh: Tel. No. 30181/2. Manchester: Deansgate 3351. Liverpool: Central 7683/4/5. Birmingham: Central 8031/2/3. Newcastle-under-Lyme: Tel. No. 69573. Dublin: Tel. No. 77694/5. Cardiff: Tel. No. 30351. Swansea: Tel. No. 55442. Newcastle-on-Tyne: City 22483/4/5. Leeds: Tel. No. 29741/2. Bradford: Tel. No. 21905. Nottingham: Tel. No. 44273. Brighton: Tel. No. 28616 & 20732. Southampton: Tel. No. 21336. Bristol: Tel. No. 27117/8. Belfast: Tel. No. 31269.



ZYLEX and ASTOS

Keep a building warm and dry between them

ZYLEX Slaters' Felt

is a high-quality, bituminous felt with exceptional heat-insulation properties. It keeps warmth in, and draughts and weather out. In two grades: **Reinforced**, with a base of closely woven hessian, and exceptionally strong. Can be stretched directly over open rafters—saving the cost of a boarded roof. **Standard**, for boarded roofs, makes a clean, waterproof membrane under slates or tiles.

ASTOS

Asbestos Dampcourse

is the 100 per cent. permanent damp-course, an impervious and imperishable barrier against rising damp. Composed of asbestos fibre and bitumen, it is capable of withstanding normal foundation settlement without risk of failure. Complies with B.S.S. 743/1951. In two grades: **Standard** and **Leadlined**.

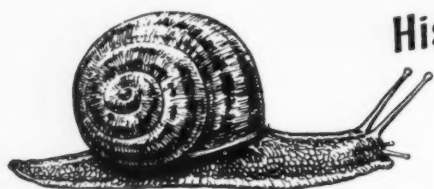
Well insulated above and protected from rising damp below, a building stays warm and dry longer. There is no more certain way of guaranteeing this protection than by specifying ZYLEX Slaters' Felt and ASTOS Asbestos Dampcourse—two Ruberoid products for two important positions.

The reliable, tested qualities of these two products make all the difference to the effective protection of buildings. Many architects and builders, all over the world, make a point of specifying ZYLEX and ASTOS by name, to be absolutely sure of having the best materials. Make sure of the very best protection for that building of yours—specify ZYLEX Slaters' Felt and ASTOS Asbestos Dampcourse.

Further details, together with samples, will be gladly sent on request.

**THE
RUBEROID
COMPANY LIMITED**

2 COMMONWEALTH HOUSE
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His shelter

is cheap enough

BLISTER HANGAR, SIZE 90' x 91'
SUPPLIED TO :—
CLIFTON'S SERVICE STATION LTD.,
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BLISTER HANGARS ARE 91' WIDE,
PROVIDING INEXPENSIVE, LARGE,
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THORNS

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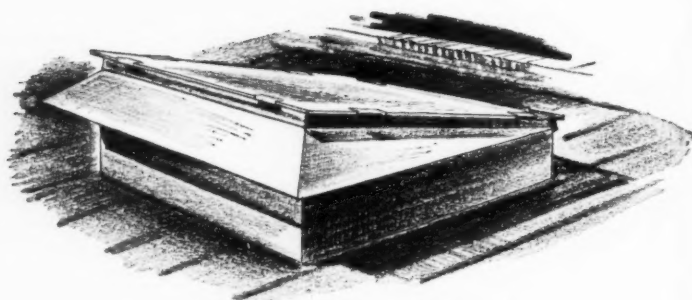
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J. THORN & SONS LTD., (DEPT. 188), BRAMPTON ROAD, BEXLEYHEATH, KENT

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Aluminium Alloy fixed and
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in single or multiple units.
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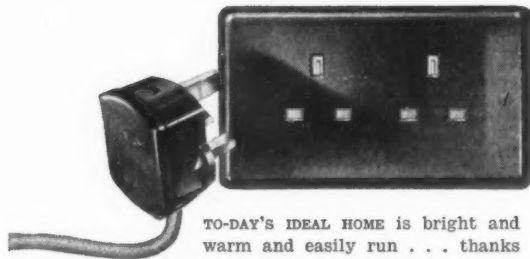
THIS IS ONE of a number of MK advertisements, each of which will be seen by more than four million readers of **HOMES & GARDENS**, **HOUSE BEAUTIFUL**, **HOUSE AND GARDEN** and **IDEAL HOME**.

A new house today is exceptional if it has seven or eight socket-outlets . . . and that is barely half the recommended minimum. Inadequate planning of this kind prevents Electricity from making its full vital contribution to modern living.

Everyone who is building, converting or extending their home is faced with this urgent problem. Many of the questions that puzzle them are answered in a new MK publication which is offered free to readers who will see this series of advertisements.



Welcome to a well-wired home!



TO-DAY'S IDEAL HOME is bright and warm and easily run . . . thanks largely to electricity and the appliances which it enables us to enjoy.

But electricity can only serve you fully if your home has plenty of socket-outlets . . . sited for maximum convenience and comfort.

The twin socket shown here is especially useful for many positions . . . on each side of the living-room fireplace and above your kitchen worktop, for example. It gives you two outlets for little more than the price of one. Plan your socket-outlets carefully, room by room. It will repay you thousandfold in extra ease and comfort. Your electrical contractor will gladly advise you.



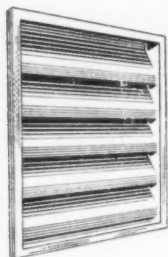
MK is a great name for socket-outlets, switches and plugs. Choose accessories bearing the name 'MK' for extra quality and value.

FREE!

Write now for free booklet "Planning the electrical home"



M. K. Electric Ltd., Wakefield Street, Edmonton, London N.18



IMPROVED VENTILATION... FOR INDUSTRY



Regd.
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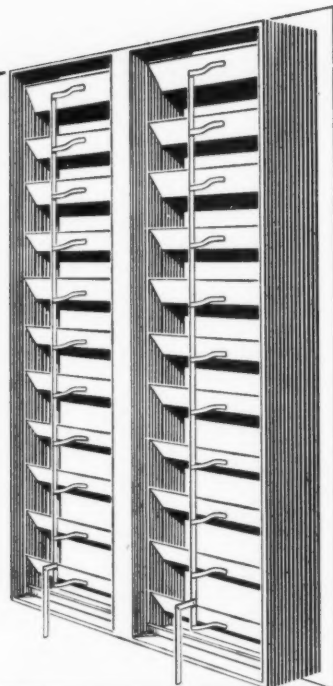
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LOUVRES

Greenwood's extensive range of louvred ventilators are designed to solve the ventilation problems of modern industry. The louvres of almost any size can be fixed or movable with manual or motorised control.

Fully illustrated leaflet on request.



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Patentees, Designers and Manufacturers of Ventilating Equipment and Electrical Conduit Systems.

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There is no greater satisfaction than that of a *JOB WELL DONE!*

TO complete a contract knowing that they have done a really worth-while job has been the policy of RAWLINGS BROS. for over sixty years. An exceptional knowledge of the construction of 19th century buildings, combined with a reputation for skilled craftsmanship and high quality work, are guarantees of Rawlings Bros. ability to undertake conversion of Georgian and Victorian houses to meet modern requirements—the decoration of all types of building and all forms of electrical installation.

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PAXTILES *reach a new ceiling*
in sound insulation efficiency



MIDLAND HOTEL, BELFAST.
Photograph by courtesy of Ulster Transport
Authority.

THE HIGH LEVEL of sound absorption reached by NEWALLS (Regd. Brand) Paxtiles sets the standard of acoustic perfection. Paxtiles not only absorb unwanted noise but can add much to the decor of walls and ceilings. Paxtiles are fire proof, vermin proof and have a high efficiency as heat insulation. Paxtiles can be painted any colour without impairing effectiveness and are made in many sizes to suit every possible requirement. For every problem of sound insulation Paxtiles are the ideal answer. If you need effective sound insulation coupled with outstanding decorative treatment talk to us about Paxtiles. Consultation is offered gladly and will cost you nothing.

Newalls
(REGD. BRAND)

PAXTILES

NEWALLS INSULATION CO. LTD. *Head Office:* WASHINGTON, CO. DURHAM

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*Offices and Depots at LONDON, GLASGOW, MANCHESTER, NEWCASTLE UPON TYNE
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Lion Fire Escape Stairs are made for strength and safety. Available either straight or spiral, they are constructed in steel with cast iron perforated treads and landings. For over 60 years Lion Foundry Co. Ltd. have been supplying and erecting fire-escape stairs for Government Buildings, Local Authorities, Hospitals, Office Blocks, Theatres, etc.

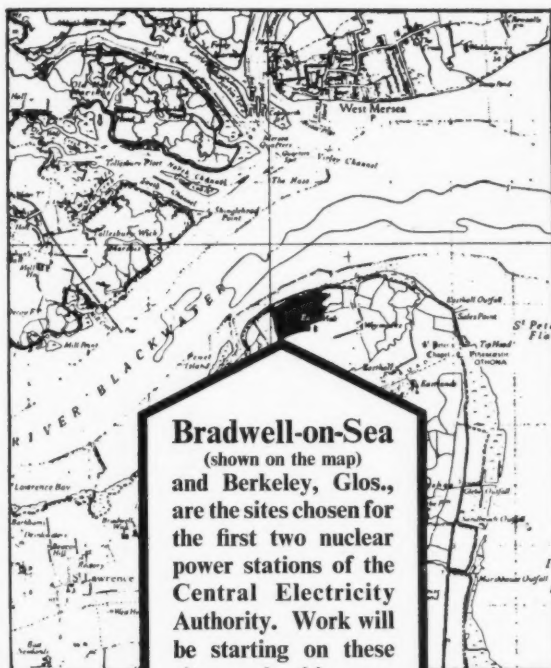
LION FOUNDRY COMPANY LTD.

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Electricity from Nuclear Energy



Bradwell-on-Sea
(shown on the map)
and Berkeley, Glos.,
are the sites chosen for
the first two nuclear
power stations of the
Central Electricity
Authority. Work will
be starting on these
sites early this year.

Crown Copyright
Reserved

The growing need for power

As Britain's industrial efficiency increases, so does the need for power. The demand for power doubles every ten years; supplies of home-produced coal do not keep pace with these developments. Nuclear energy will do much to make up the discrepancy between the demands for electric power and the available coal supplies.

Central Electricity Authority's Bradwell and Berkeley nuclear power stations are the first stage in Britain's programme of nuclear power. By 1965, there will be twelve stations, employing both gas- and liquid-cooled reactors, supplying power to the Grid. Developments during the past 18 months show that the capacity of these early power stations may be double the original estimate. This means that by 1965, nuclear power will be producing energy equal to 10 to 12 million tons of coal a year — that is, 16 per cent of the total national demand.

As the demand for power grows, nuclear energy will become more and more important as a source of electric power, upon which the economic future of the country so largely depends.





"TRITON" *Light Brindled Pantiles*

for a house at Luton, Bedfordshire

Architect: C. Gurney Burgess, L.R.I.B.A. of the

Peter Dunham Group, FAL/R.I.B.A.

Roofing Contractors: Roberts Adlard & Co. Ltd., Watford

General Contractor: J. Newell, Caddington, Nr. Luton

WHEATLY



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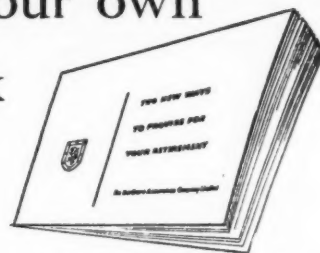
Specimens of Wheatly burnt clay products may be seen at the Building Centre, London. They include Single-lap Roofing Tiles, Ridge Tiles (blue and red), Floor Quarries, Air Bricks and Briquette Fireplaces.

WHEATLY & COMPANY LIMITED
SPRINGFIELD TILERIES · TRENT VALE · STOKE-ON-TRENT

Telephone: NEWCASTLE (Staffs) 66251

Telegrams: WHEATLY, TRENTVALE

If you have to provide for your own retirement—here's a book that will help you.



The last Budget brought good news of tax concessions for those who have to make their own retirement arrangements. 'The Northern' have devised two new plans to make the most of these important new tax reliefs.

Before you make your own plans, you should in your own interest consult 'The Northern'. Their informative and very helpful booklet "Two New Ways to Provide for Your Retirement" will answer *all* your questions. Get

your copy from the nearest Northern Office, or from your Insurance Broker, or simply fill in this coupon.

You'll be on good terms with

THE
NORTHERN

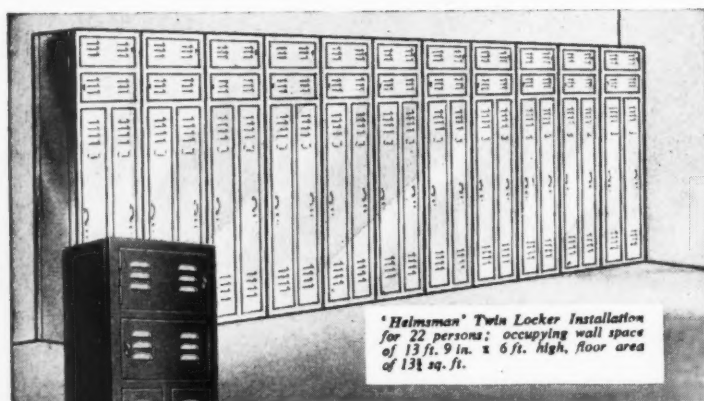
To The Northern Assurance Co. Ltd.,
1 Moorgate, London, E.C.2.

Please send me, without obligation, a copy of your booklet "Two New Ways to Provide for Your Retirement."

Name.....

Address

A.7



'Helmsman' Twin Locker Installation for 22 persons: occupying wall space of 13 ft. 9 in. x 6 ft. high, floor area of 13½ sq. ft.

**Save MONEY and
37½% WALL
SPACE ON
CLOTHES
STORAGE!**

Each Twin Locker Unit provides separate accommodation for the clothing and personal belongings of two persons. Fitted with modern streamlined SLIDEX Handle with 3-Point Latching, lockable with padlock. Standard size: 72in. by 15in. by 12in. deep. Wide choice of colours and other sizes. **LIST PRICE £4.18.6** (in nests of 3) per person. (£9.17.0 per Twin Locker.) (Traditional 6-Lever Lock in lieu or in addition if required.) Other 'Helmsman' Products: Shelving; Open-type; solid sides; solid back and sides; Cupboards; Bin Units; Cabinets; All-steel Desks. Full details gladly sent on request, or 'phone Mr. Quin at Larkwood 4411.

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PAINT

MUST DO MORE THAN DECORATE

Magnet could be chosen for its looks alone ; for its lustrous gloss
and dense film. For the variety of shades given by 30 intermixable colours. But first
and foremost Magnet is a white lead base hard gloss paint —
and **WHITE LEAD PAINT LASTS.**

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They've got it there, we can have it here!

Scene in a Canadian Home—time, mid-winter. Double-glazed windows are a recognised feature of every modern home in Canada and the United States. That's why they're always cosy and warm while we shiver in a much less extreme climate and waste our costly, precious fuel in trying to combat our bitter brand of penetrating cold. The effective way of increasing winter warmth and cutting rising fuel bills, is to fit Pilkington's

'INSULIGHT' DOUBLE GLAZING UNITS



Write for full details to Pilkington Brothers Limited, St. Helens, Lancs. (Tel: St. Helens 4001) or Selwyn House, Cleveland Row, St. James's, London, S.W.1. (Tel: Whitehall 5672-6). Supplies are available through the usual trade channels.

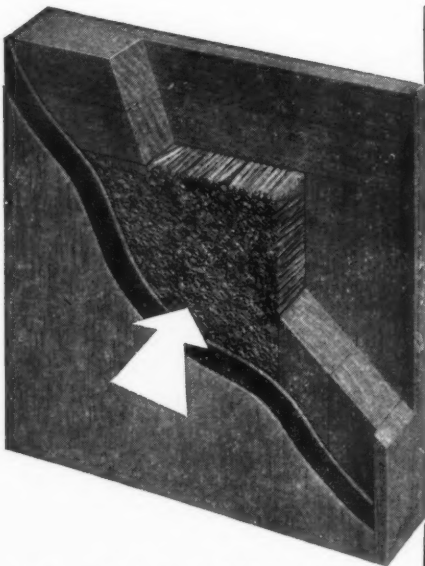
'INSULIGHT' IS A REGISTERED TRADE MARK OF PILKINGTON BROTHERS LIMITED



The New Flush Door

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WERNO**

STRENGTH IS IN THE CORE



THIS TUBULAR CORE MEANS
A BETTER DOOR

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POINT FOR POINT, PRICE FOR PRICE,
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STANDS HEAD AND SHOULDERS ABOVE THE
ORDINARY FLUSH DOOR.



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- ★ Doors shot to exact size.

PLYWOOD-FACED INTERIOR AND EXTERIOR DOORS
HARDBOARD-FACED INTERIOR DOORS

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If you have any space partitioning problems which you think the ESAVIAN principle might be able to solve, may we suggest you get in touch with us?

These two sound-deadened Partitions (Type 700) in pencil-striped sapele mahogany show the flexible use of space at the Students Union Building Council Chamber, University of London. Architects: Adams, Holden & Pearson, F.F.R.I.B.A.

Esavian Ltd., Esavian Works, Stevenage, Herts. Tel.: Stevenage 500
Esavian Works, Carfin, Lanarkshire. Tel.: Holytown 391.

THE

ESAVIAN

PRINCIPLE

FOR FOLDING AND SLIDING DOORS, WINDOWS, PARTITIONS AND SCREENS

BROUGHTON MOOR—Olive Green Stone Slabs

THE WORLD'S FINEST NATURAL
EXTERNAL FACING SLABS

Technical pamphlets illustrating the following uses are available on request.

Flooring	Pamphlet 1
Facings	2
Coping	3
Cills	4
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BROUGHTON MOOR—Green Slate Quarries

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NATURAL RIVEN SLAB

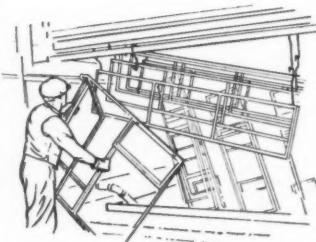
The illustration shows the beautiful texture and character of this material.
Other finishes include:
fine rubbed, sanded,
frame sawn.



STAGE 1
Preparing the surface



STAGE 2
Applying the zinc



STAGE 3
Insulating the surface

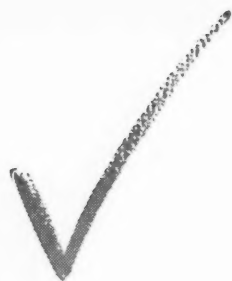
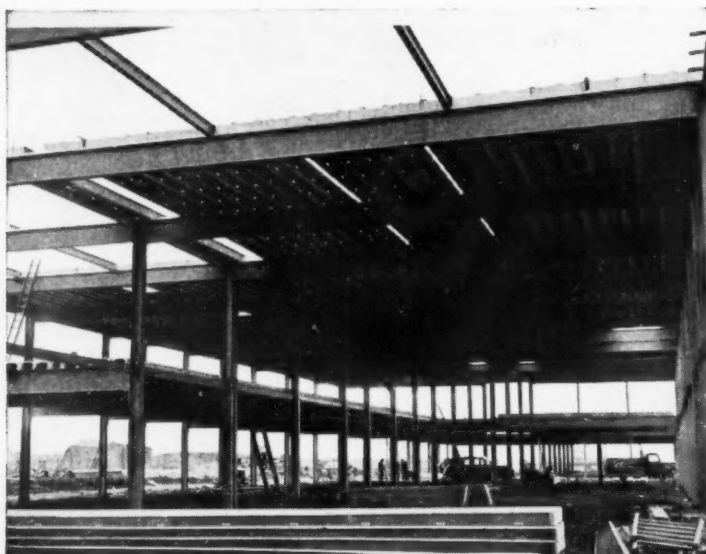
All Beacon windows are
really finished except for
the decorative coats

BEACON WINDOWS
are
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metallised
to give them
life long protection
against rust and
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Full marks
FOR
structural steelwork
BY
RUBERY OWEN



Penkridge School. Here shown is the two-storey building of a new Secondary Modern School for Staffordshire County Council Education Committee.

ARCHITECT: A. C. H. STILLMAN, ESQ., F.R.I.B.A.
Architect to Staffordshire County Council Education Committee

CONSULTING ENGINEERS: Messrs. DUNCAN & HARMAR, LONDON.

Main Contractors: Messrs. Intercon Constructions, Ltd., London.

Sub-Contractors: Messrs. A. & R. Astbury, Cannock, Staffs.

RUBERY OWEN & CO. LTD.
STRUCTURAL DIVISION

P.O. Box 10, Darlaston, Wednesbury, Staffs.
James Bridge 3131.

Technical Bureaux:
BIRMINGHAM, LONDON, COVENTRY, SOUTHAMPTON

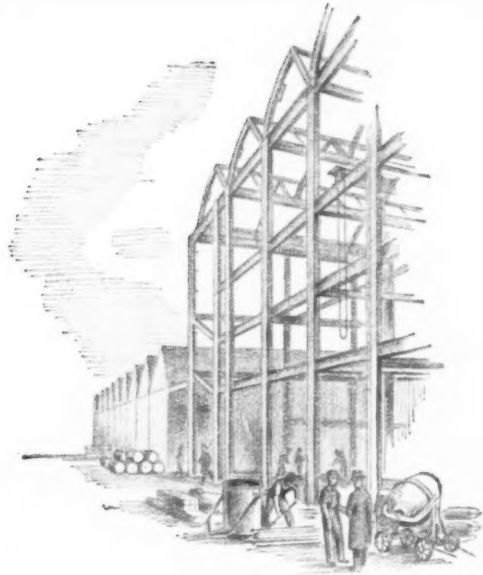


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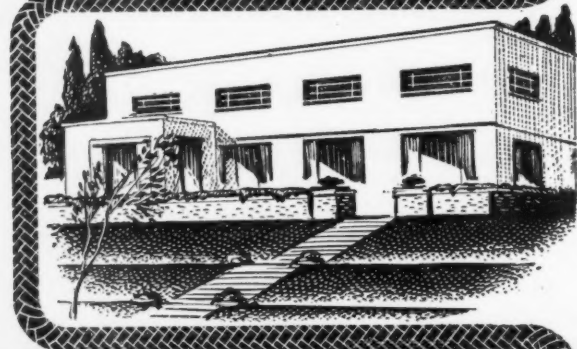


MAY WE SEND YOU PROOF OF OUR CLAIMS ?

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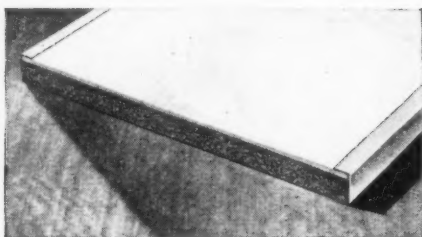
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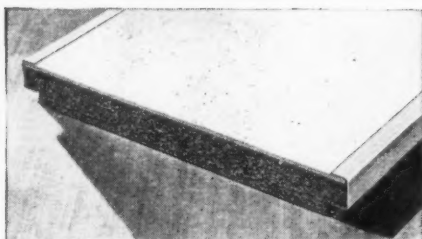
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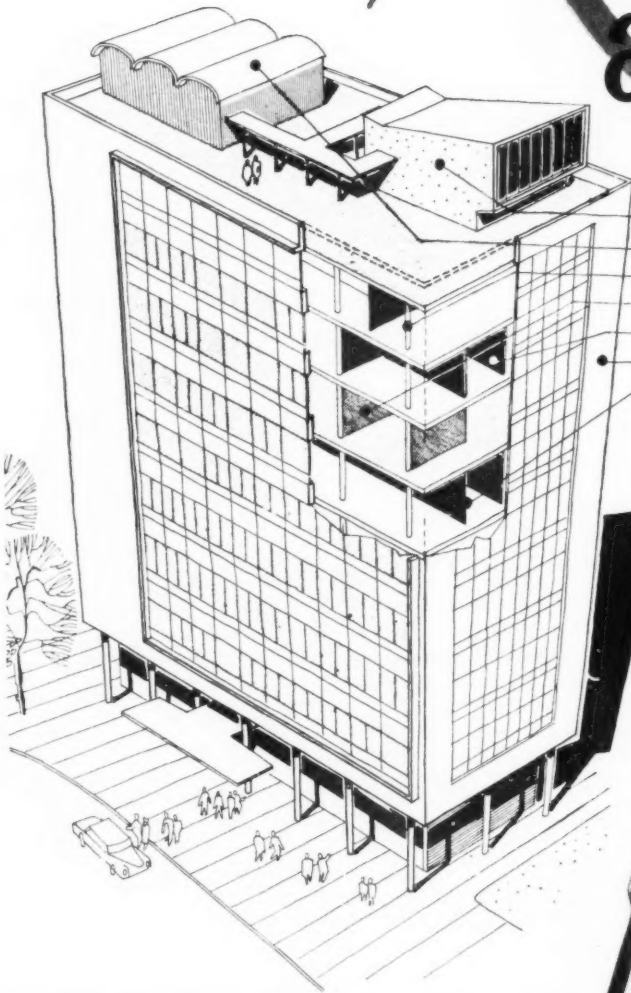
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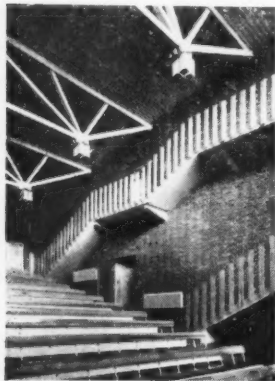
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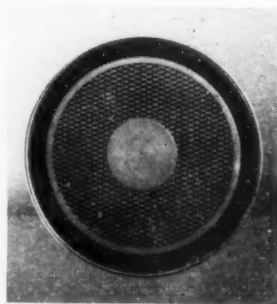
FINLAND PLYMOUTH BARBICAN ANTISUBTOPIAN

Finland will be in the news in April and so the REVIEW will publish a study of the rise of Modern Finnish architecture and Aalto's relation to it—the relationship of *The One and the Few*—by



School at Kulosaari, by Jorma Jarvi.

Reyner Banham, and an extensive survey of recent Finnish buildings. In the same issue, Gordon Cullen considers the plight of the *Plymouth Barbican*, a live neighbourhood-centre that local planning powers—that-be seem determined to destroy by a subtopian combination of rule-of-thumb demolitions and preservations. At the small-scale end of urban design, Nicolette Gray contributes a first essay on the character and function of *Street-Lettering*, and Robert Maguire completes his survey of paving materials in *Skill*. A revolutionary electric fire is described, and buildings illustrated include factories by Ove Arup and



Electric fire, by Kenneth Browne.

Partners, and W. S. Milburn and Partners, while a never-completed dream, Sir John Soane's *Triumphal Bridge*, is discussed by Dorothy Stroud. Lastly, but by no means least, April will see the inauguration of the ARCHITECTURAL REVIEW's *Counter Attack Bureau*, whose first case-study will be the replacement by Semi-dets. of terrace housing at Princetown.

AMERICA

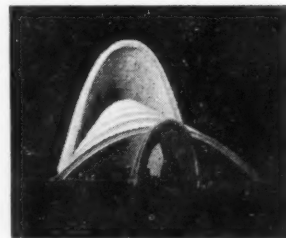
A *personnage* assembled from scraps of American advertisements and spitting ticker-tape on the cover of the May ARCHITECTURAL REVIEW will announce the theme of a special issue on *Machine Made America*, compiled explained and assessed by the REVIEW's executive editor, Ian McCallum, whose previous foray into the American scene caused raised eyebrows and raised voices when its results appeared in print as a special issue of the REVIEW under the title *Man Made America*, this new survey, based on a study



The Seagram Building, New York.

of architecture rather than the wider scene of land- and town-
scape, will scrutinise the aesthetics and the technics of the curtain wall as an example of what happens to one of the cherished dreams of the Modern Movement when it finally becomes commercially practicable, and becomes part of the available syntax of architecture. After this it will survey the diverse, original stimulating and experimental work of individuals and individualists from Coast to Coast, a body of work that is the *genetrix* of architectionic ideas without which the industrial contribution may prove sterile and short-lived.

Machine Made America will conclude by attempting to fit both industrialist and individualist into



Concrete shell church by J. Johansen.

the *matrix* of the wider scene of world architectural development in this century and of American culture in the age of mass-production.

COUNTER ATTACK GROTESQUE OLIVETTI

Ian Nairn, of *Outrage* fame, will contribute a first essay on the aims and objectives of the newly-formed *Counter-Attack Bureau*, to the June issue of the

ARCHITECTURAL REVIEW, and make proposals for positive anti-Outrage policies for the threatened suburban village-centres of Ewell, Colnbrook and Huyton. Two widely diverse Italian subjects to be discussed in the same issue will be the grotesque statuary and architecture of the Orsini garden at Bomarzo, considered iconographically by Dr. S. Lang, and the impressive and



Subtopian Mess at Colnbrook.

intelligent record of patronage in architecture, the arts, and design, of Adriano Olivetti, considered biographically by Georgina Masson. New buildings in this issue will be as different in type and place as the *Golden Lane* development by Chamberlin, Powell and Bon, and the *Museum at Accra* by Drake and Lasdun; the old buildings of the month will be *Balmes House*, Hackney, a forgotten but representative piece of artisan mannerism which will be described and discussed by Priscilla Metcalf, and those in *Halifax Street*, Sydenham, another threatened area that comes within *Counter-Attack's* purview. *Skill* features of the month include a broad survey of food-preparation equipment, and in *Miscellany* Robert Melville contributes, as



Golden Lane, by Chamberlin, Powell and Bon.

usual, his column of off-beat opinions on the world of art-galleries and exhibitions.

ar

THE ARCHITECTURAL REVIEW
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(Top right). Hills new "Hilcon" factory
(Lower right). Great Bar Comprehensive School, Birmingham.
(Below). New Fire Station, Chesterfield.



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CONCERTO IN A FLAT



Brahms or Bartok do not make good neighbours. All very well in the Concert Hall, but the double bass practising in the top floor flat, can madden the most ardent enthusiast. A pity the architect had not used Rocksil Brand Mineral Wool, the ideal insulation material which absorbs airborne energies and insulates impact noise at source. Rocksil Brand Mineral Wool is also a good thermal insulation medium is non-hygroscopic, rot-proof, fungus-proof, and completely odourless. Rocksil is manufactured in many forms, including sound insulation quilt. Write for leaflet No. KH.23.

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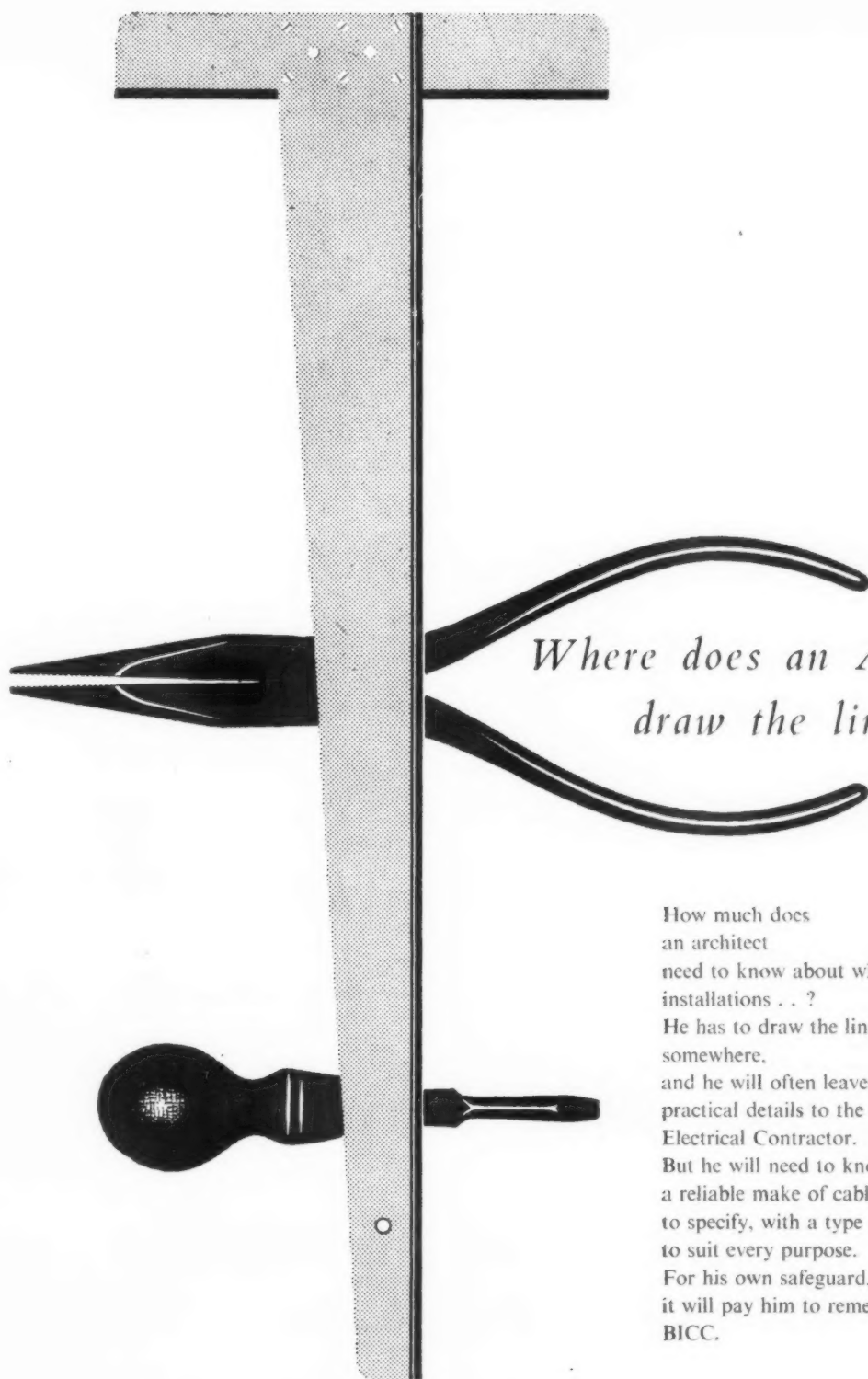
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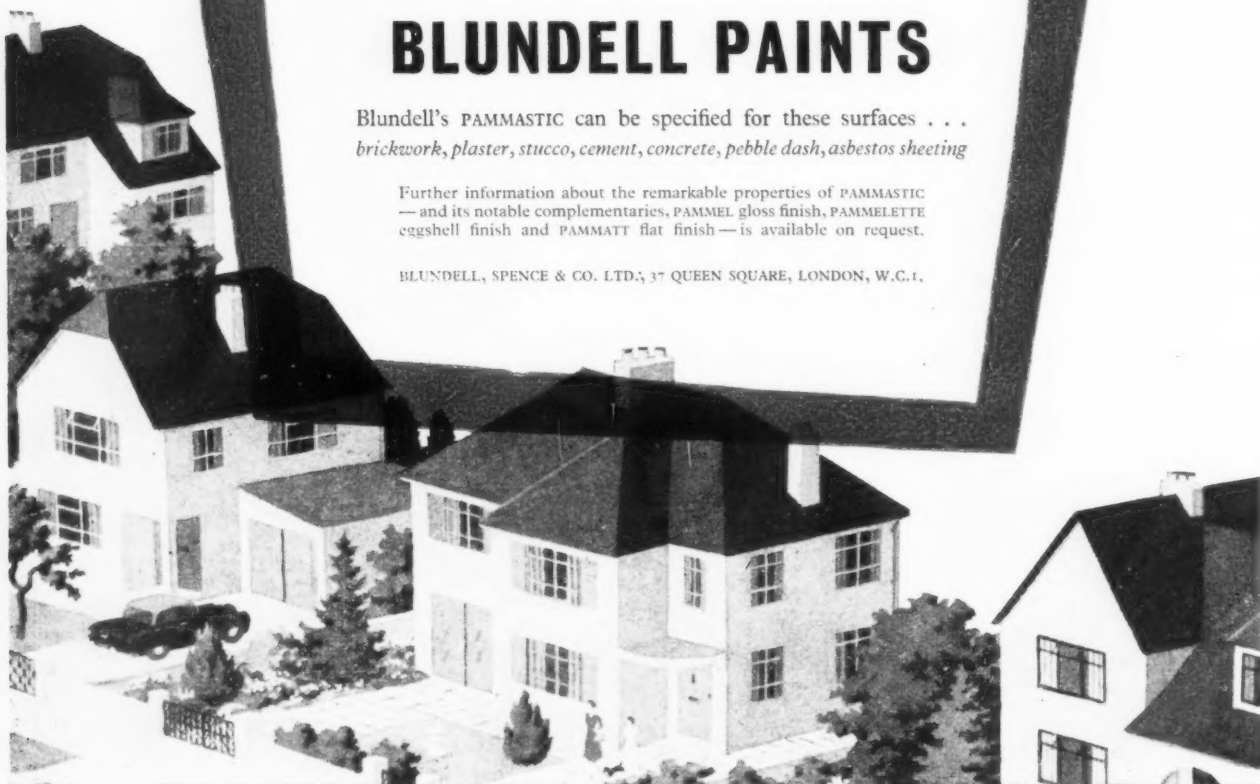
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THE ARCHITECTS' JOURNAL

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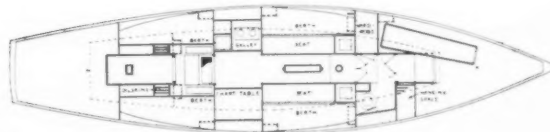
NOT QUITE ARCHITECTURE

CLIENT AT SEA

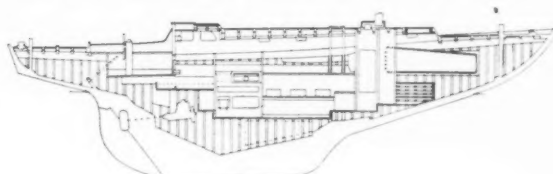
Not Forgetting the Builder

Last week F. B. R. Brown, the architect-cum-yacht-designer, wrote about the problem of hull design. This week he goes below deck.

The detailed arrangement below decks consists of a solution to the simple problem of providing living, eating, cooking, sleeping and storage space for as many as five souls within an area of less than 200 square feet. Living means somewhere comfortable to sit, and a table at which to eat and drink. Cooking is done on a swinging stove fuelled by paraffin under pressure or Calor gas; the former needs priming with methylated spirit to heat the burner, a trick which defeats many otherwise intelligent people; the latter involves careful installation and operation, because if there is a leak the gas, being heavier than air, cannot run away under the kitchen door, and the resulting explosion can be spectacular. Bunks must be designed so that the sailor can climb into them and stay in them



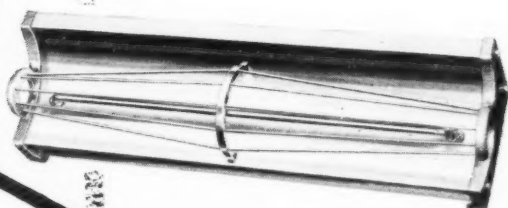
Plan and section of a boat designed by F. B. R. Brown.



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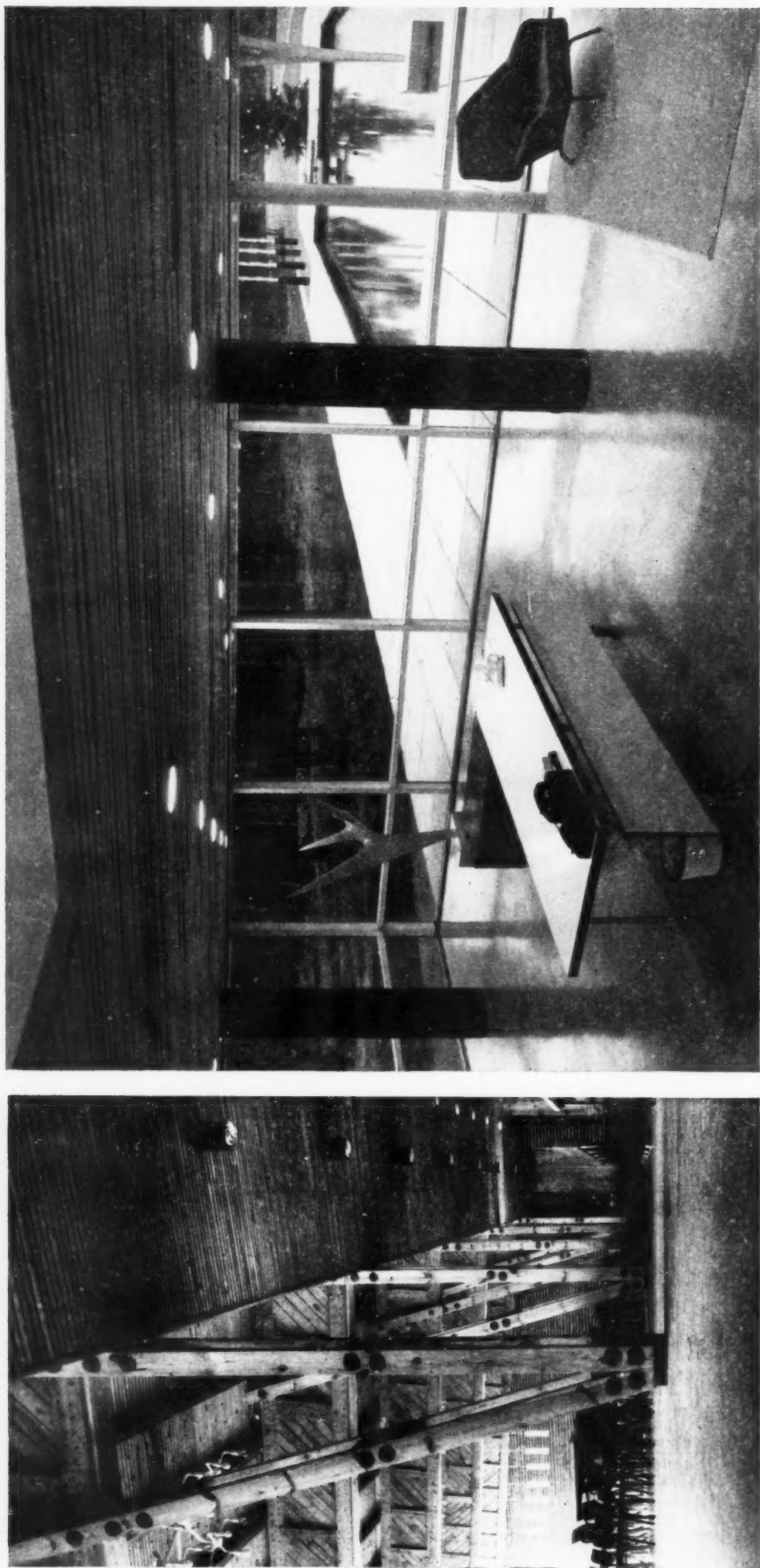
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The Rough and the Smooth

Backing up the Gold Medal ceremonies for Alvar Aalto at the RIBA there will be an exhibition which will show to British architects a broad survey of the work of the Finnish School as a whole. Though not a large school it has already developed under Aalto's leadership a remarkable vigour and diversity, and, in the April *Architectural Review*, Reynier Banham characterizes it as tough-minded and structurally adventurous, more influenced by the freedom of Aalto's work than by his forms or his methods. Freedom, tough minds, and adventure have produced a national style that embraces practically the whole range of possibilities summed up in the phrase "Modern Architecture." Here, on the left, at one extreme is the students' restaurant on the new technical university campus at Otaniemi, by Kaija and Heikki Siren, an unadorned wooden structure of asymmetrical portal frames, with a rough, frank emphasis on

joints, fixings and materials-as-found. In diametrical contrast, right, is the office and reception area of a factory at Hanko by Viljo Rewell, equally Finnish, but as smooth as the smoothest industrial offices that America or Western Germany could offer. And between these two extremes lies a whole range of good, competent or brilliant architecture that is almost unknown to the world at large, but makes it abundantly clear that Regional need not be synonymous with Provincial, Modern need not be synonymous with any particular canon of forms, building-types or materials, and that Finnish architecture is by no means synonymous with Aalto's own personal achievement, however much it may owe to the prestige that achievement has bestowed on Finland abroad, and on architecture at home. The exhibition opens at the RIBA on April 11, the day after Aalto gives the first of the Institute's annual discourses.

in any weather; a width of more than about 21 in. allows the occupant too much freedom of movement when the ship rolls, and the mattress must be of the right degree of softness without bounce. Sanitation is provided for by a simple bucket or an expensive machine with two pumps for emptying and flushing with sea water; the opulent yachtsmen who have forgotten Henry Ford's dictum "What you don't fit don't give no trouble," sometimes instal an electrically-driven machine.

*

Having dealt with the foregoing, the designer must not forget to provide for stowage of charts (and a space on which to use them) and space for a petrol or diesel auxiliary motor. The rest of the available space can be used for fresh water and fuel tanks, sails, ropes, anchors, food, drink, sea—and shore-going—clothes, bedding, radio, and everything needed to be independent of the shore. Painted plywood in light colours, plenty of light (through toughened glass) and water resisting fabric upholstery in plain colours have replaced the gloomy, heavily moulded mahogany railway carriage effects of earlier days. Yacht designers have not yet got round to the recently-fashionable string or perspex rod partitions.

*

When drawings (and spec.) are complete, tenders are invited. It is hardly necessary to tell architects that they are usually too high, especially from your favourite builder. Cost planning does not exist in this field, and there are no bills—elemental or otherwise. The process of actually getting a yacht built is harrowing. Yacht builders tend to be volatile and charming, but quite unbusinesslike. There is much compensation in watching the shipwrights producing admirable craftsmanship in expensive hardwoods and metals; there are still many men who could get more money in a factory or at bonussed building work, but who prefer to remain craftsmen.

*

At last the boat is launched and completed, and ready for the thrill of sailing in her. Speed can only be exactly assessed by racing against similar boats, in varying conditions of wind and sea. But comfort, convenience and behaviour must be assessed by the designer's subjective judgment of other boats in similar conditions. There is something to learn from every voyage in every boat, and no designer can be wholly successful if he cannot recognize these lessons and incorporate them in his next design.

F. B. R. BROWN

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

The Editors

MISTAKEN STANDARDS

THE announcement by the RIBA and the BC of a competition for manufacturers' trade literature which will be restricted to literature conforming to BS 1311:1955, places us in the unhappy position of having to oppose a venture which, in theory, sounds so deserving. The trouble of course is the marriage of so excellent a cause to such a spavined, knock-kneed partner as BS 1311:1955. This Standard is the classic example of the kind of Standard which is determined not by the inherent rightness of what it proposes but by what was deemed to be the convenience of the greatest number in the trade. Discussion at the BC Forum (see page 495) which followed the announcement of this competition showed that this alleged convenience was in fact strongly contested by the trade. But even if this were not so, the ultimate criterion for this kind of product should be not whether the makers of it (*i.e.*, the trade) find it convenient, but whether the users of it (in this case the architects) find it acceptable. Also, granted that we are here concerned with dimensions and not with content, the criterion of acceptability in this case must be aesthetic; for in the end architects will only use trade literature if it gives them the right information in a manner which they find good to look at. On this count BS 1311:1955 comes a hideous cropper.

It is the large leaflet size which matters most. This is given in BS 1311 as 11 in. by 8½ in., dimensions which result in a stocky, graceless proportion which may be judged by reference to our august contemporary the *RIBA Journal*. THE ARCHITECTS' JOURNAL, which, after all, was the pioneer of standardized information for architects, adopted a format in 1942 which was based on the International Standard of paper sizes known as the A series.* The large leaflet size in this A series is (in English) 11¾ in. by 8¼ in., and has the engaging quality that its sides are in the proportion 1:2 (*i.e.*, the golden section). It is hardly necessary to point out the advantages of this, its intrinsic charm (recognized by generation after generation of architects), and the convenient way in which a sheet can be doubled and halved and still present the same proportion.

We understand that BSI are shortly to reconsider this question, and that there is at least a likelihood that the international standard will in the end be given *droit de cite* in this country,

*In fact the Information Sheets when torn out are exactly on the Standard; the AJ itself is ⅛ in. wider to allow for binding.

alongside the graceless indigenous product. If so, this adds the more force to our contention that it was ill-advised for the RIBA to promote a competition which makes compliance with this Standard a *condition* for entry. Granted that the cause of standardization is a good one and that we cannot shake the confidence of those whom architects have been encouraging to use BS 1311 by suddenly turning our backs on it, would it not be possible to amend the conditions and to permit the entry of literature conforming to the international standard?

PLAN BEFORE YOU BUILD

This is the title of a seven-page pamphlet issued by the J.C.C.* as a "guide for all those who put building work in hand". Here are some quotations: "A pre-requisite of advance planning is the establishment of a complete understanding between building owner and architect" . . . "the joint aim should be to establish finally the nature and extent of the services and accommodation required. For this purpose, the building owner must provide the architect with a full statement of his requirements and tell him what he is prepared to pay." (Which suggests that there is a complete misunderstanding on the Committee's part of the architect's role). "A hurried start inevitably leads to costly variations . . . and is bound to put off the date for occupation . . ." "The wise building owner will appreciate the importance of allowing time to prepare full working drawings . . . and a complete bill of quantities." There are similar homilies on giving time for the builder to place orders, and on variations.

The Committee have, in fact, decided that the *client* is at fault and must be told, gently but firmly, to mend his ways. This is an absurdly smug point of view. It is because clients have little confidence in the ability of the professions and the industry to provide buildings efficiently and economically that they insist on hurrying things up and persist in interfering. Any propaganda for improvement to the present situation should do four things; it should explain in detail just what the architect, surveyor and builder have to do, and how they do it; it should mention the cost- and time-planning techniques that have been developed in the last few years; and it should quote some examples (with figures) to prove that advance planning *does* save time and money.

The client's confidence will not be nourished by a jealously-guarded professional mystique. Nor will it be nourished by the profession ignoring either individual efforts at reform, or the growth of "all in" service organizations providing both design and construction. These organizations have arisen to meet the needs of commercial clients who find traditional design-construction procedure giving them no guarantee of time or cost. The Joint Consultative Committee was charged to carry on the work of the Robertson Committee (of 1954) on Tendering Procedure. It is pathetic that they can do no more than repeat the pious hopes of three years ago.

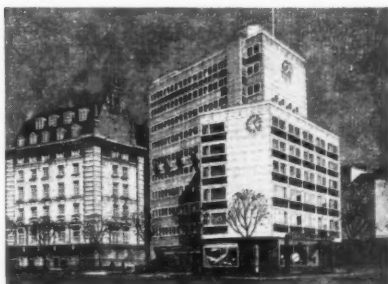
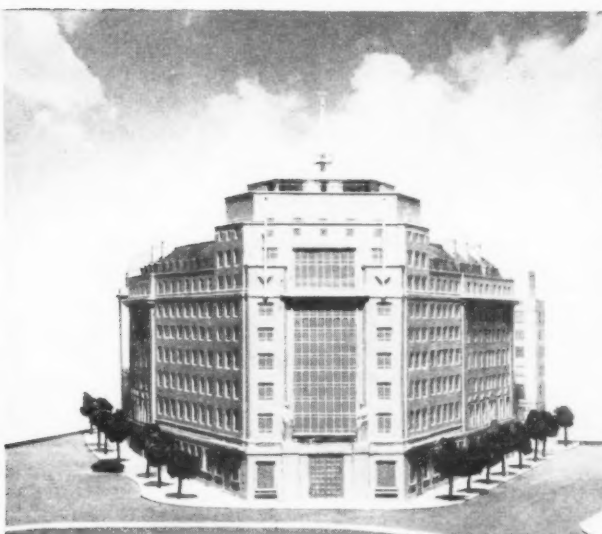
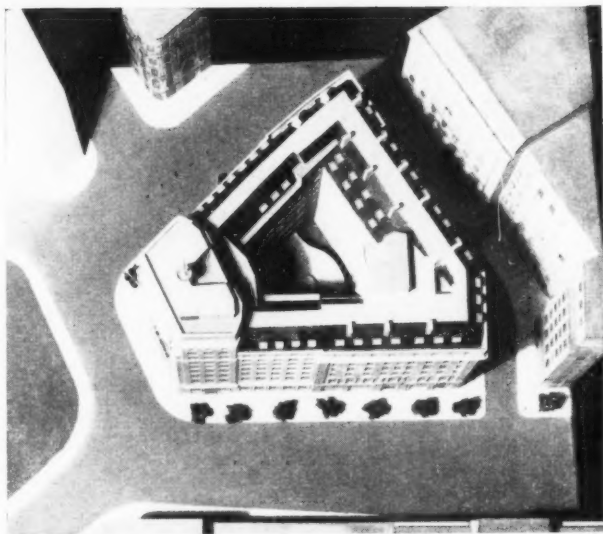


ARCHITECTS AND THE BUDGET

What do you want from the budget? No, sir, *not* you: We all know you hope for a cut in surtax, or a bit off the purchase tax on a new Jag. The question is addressed to the average reader. And in his customary thorough manner ASTRAGAL intends to answer it. Apart from your forlorn hope that there will be an improvement in investment allowances (which would encourage industrial and commercial firms to spend more on new plant, and the buildings that go with them), you should, dear average (salaried) reader, put a little wishful thinking into the question of professional expenses.

The salaried man has to prove that his expenses are wholly, necessarily and exclusively incurred in connection with his job. An architect-planner employed by a local authority, for example, cannot get income tax relief on his subscription to the Town Planning Institute unless the authority certifies that it is a condition of employment. And since the authority employs unqualified men it will not normally do so—even when it has advertised the qualification as a requirement for the job. Salaried architects are expected to pay for their technical journals and books out of their taxed income. The inevitable result is that most of them do not buy or read nearly as many books or journals as they should.

* Joint Consultative Committee of Architects, Surveyors and Builders.



Adams, Holden and Pearson submitted a design in the English Electric Company's competition (1954) for an office block on the Gaiety Theatre site (sketch, extreme left). The competition was won by Gordon Tait (design on left). The Company, however, decided to commission a new design by Adams, Holden and Pearson. This scheme, shown above and above left, was not well received by the Royal Fine Art Commission, but it has been passed by the LCC. And the chairman of the Company, Sir George H. Nelson, says that the building will be "a service to contemporary and future Londoners and will not affront the ghosts of their gay Edwardian forbears."

DEPARTMENT OF MOTES IN EYE

And talking of money, do you ever read the report of the Comptroller and Auditor General, which is published at this time of year? It usually makes fascinating reading and this year it is better than ever—quite apart from the revelation of the purchase of 20 years' supply of unmentionables for the women's services, and the trifling matter of £14 million tossed away on a troop carrier that couldn't carry the troops.

What interests me most is the apparent inability of the Treasury, which screws local authorities down to the last penny when it is building schools or houses, to exercise the most elementary control over building costs by the services. In December, 1951, the Treasury approved the construction of six bomb stores by the Air Ministry at an estimated cost of £146,000. In July, 1953, when the stores were three-quarters completed, the cost of one of them was put at £230,000. It was completed in July, 1954, and in March, 1956—nearly two years after completion—the Treasury was "disturbed" to learn that the cost was £288,000, attributed mainly to "very difficult site conditions." By

June, 1956, the cost had risen to £325,000, the further increase being due to "a pricing error in the contractor's bill." Then there was the underground power house, which though estimated in December to cost £75,000, in fact cost £176,490 because "the original estimate had been prepared without a proper appreciation of the problems involved in the construction of a power house underground."

*

Even more extraordinary is the building of three prefabricated bungalows as married quarters for civilians at an estimated cost, in June, 1950, of £7,500. By August, 1953, the Air Ministry had decided, owing to the "limited space available" (one would have thought this was known all along), to build instead permanent two-storey houses costing £10,800. At the end of 1956 the Treasury was told that the "estimate" for the final cost was £13,379, although in fact the Ministry had paid the bill eight months earlier.

*

So much for the recommendation of the Committee on Public Accounts in its report for 1952-3 that original esti-

mates submitted to the Treasury should be "as realistic as possible" and that information later produced should reach the Treasury in time for it to exercise "effective control."

BRITISH ARCHITECTURE IN BERLIN

While British architecture may not be the most glamorous in the world, the best is no longer entirely discreditable. ASTRAGAL is therefore glad to know that it will be well displayed in Berlin this summer. In addition to the "live architecture" exhibited by Yorke, Rosenberg and Mardall, there will be two other shows—both architectural and both organized by the Central Office of Information. At the International Building Exhibition each country will be provided by the German government with a pleasant pavilion of the rigid tented type. The British pavilion will be devoted entirely to British architecture of the last few years, photographs and models.

The only omission will be schools, but educational buildings are to be the theme of the exhibition in the UK pavilion at the annual Berlin Fair. Here the photographs will be imaginatively supplemented by "three-dimensional" exhibits in the form of a "mock-up" classroom and some of the best of our school furniture and equipment.

*

Happily the COI are taking professional advice on the choice of the architecture to be shown. They are consulting R. Furneaux Jordan, who tells me that while the selection will, broadly speaking, be of work in the modern idiom, the principles on which the choice is made will be those that the selection committee of the "Ten Years of British Architecture" exhibition laid down for themselves when preparing that exhibition for the Arts Council.

MR. DALE'S BIOGRAPHY

The rehabilitation of James Wyatt, already noticed by this column, now takes a turn for the authoritative with the republication (altered out of all recognition) of Anthony Dale's book on him.* This appears to be a sensible piece of work, leaning over neither forwards nor backwards in its attempts to be fair to an architect whose prime fault seems to have been a remarkable capacity for inflaming professional jealousy, beginning with the unforgivable crime of putting up a masterpiece, the Pantheon in Oxford Street, while in his 'twenties. Mr. Dale is particularly good on the anti-Wyatt intrigues, without playing down Wyatt's faults, and he describes his building career without particularly illuminating it. But things like that Gothic extravaganza at Fonthill still stand in acute need of illumination. Wyatt, though rehabilitated in esteem, still lacks an author to do him full justice.

A GRAVES SITUATION

The petrol situation being what it is, ASTRAGAL had recently to make an extensive foray through wilder England by means of British Railways—which is a change from simply looking at those elegant exhibitions at Euston, saying *how nice*, and then getting back into the car. Warned of the terrors to

come by an itinerant winesman, who complained that BR have now quite run out of the "rather good '52 Graves" that used to be served in restaurant cars until recently, one went fearing the worst (and nearly achieved it in a squalid two-coach push-pull near Staleybridge), but also received a very pleasant surprise around Macclesfield. This was one of the new four-coach diesels, which set a standard in suburban travel that London commuters might well envy. Not only mechanically, with a smooth jerk-free motion, low noise-level and the minimum of rock and roll, but also visually.

*

There were open interiors, big windows and plenty of them, seating that allowed the first class passengers to pretty-well breathe down the motor-man's neck and enjoy a view of the track ahead; straightforward, unpretentious detailing and trim that looked as if someone had been paying close attention to second-class Continental rolling stock—marred only by some clumsy bent—aluminium checkerplating over ducts along the skirting. An unusually good job for BR; Eastern and Southern Regions please copy.

*

And you can stop weeping over the Graves. There still remain a couple of red Bordeaux that are quite palatable if taken hot.

NEW WAYS WITH OLD OCTOPUS

Of all the reviews of Ian Nairn's *Counter Attack* none is more welcome than that in a recent *New Statesman and Nation*: partly because it thinks *Counter Attack* is a Good Thing (except for the afforestation article which ASTRAGAL can see as a first-rate subject for a ding-dong article in the pages of the *Architectural Review*), but chiefly because it is written by Clough Williams-Ellis. As older readers know and younger readers ought to learn, many of the things that *Outrage* said had been said twenty years earlier by Mr. Williams-Ellis in *England and the Octopus*. The tragedy is that these things had to be said again. This may well have been due to the combination of the war and the feeling after it that "now we've got Town and Country Planning it'll all go right automatically." Alas, it didn't.

ASTRAGAL

LETTERS

Guy Morgan and Partners,
F.R.I.B.A.

R. Gardner-Medwin, F.R.I.B.A.
Principal, Liverpool School of Architecture

E. A. Baker

E. M. Ackery, of B.E.D.A.

Eric de Maré, A.R.I.B.A.

Sir Frederic Osborn,
Chairman of Executive, TCPA

A. E. Telling

J. E. Jackson, F.R.I.B.A.

Method Of The Fine
Art Commission

SIR.—We would like to refer to Robert Furneaux Jordan's excellent criticism in the *Observer* for March 17, of a building in Knightsbridge for which we are architects. Mr. Jordan referred to Dame Evelyn Sharpe's remarks made at the RIBA dinner, concerning the activities of the Royal Fine Art Commission, and the consequential risk of the repression of all experiment and excitement in architecture—to which you referred in a recent issue.

Our original design for this building incorporated the very suggestions made by Mr. Jordan. It does seem a tragedy that at the outset we were advised that such a design would not be considered, and had to re-design the scheme on totally different lines. There is very often confusion of thought between the various authorities who control a single design; within the Royal Fine Art Commission itself there are many conflicting points of view.

Is there not an alternative to Dame Evelyn Sharpe's suggestion that the Royal Fine Art Commission should temporarily suspend its activities where architects are concerned? The Commission have obviously proved of great value in many cases, but it often happens that they are not unanimous at their meetings, which causes great embarrassment and confusion to the architect who is present. Could not the working of the Royal Fine Art Commission be modified, as follows?

After the investigation of the design by the whole Commission, when we suggest that the architect should not be present, rejection of the design should only be decided by a unanimous vote, and in the event of rejection the architect should be advised of the main reasons for this by a sub-committee of three members of the Commission in order to give him assistance in the necessary redesigning. If one or more of the Commission should be in favour, a similar sub-committee consisting of a maximum of three members would be appointed to discuss the matter further with the architect, if they feel that really fundamental changes are necessary. Otherwise the architect would be left free to carry on his own detail ideas.

Imagine any other of the arts—painters, sculptors or musicians, having their work dealt with as at present. Confusion is worse confounded when one meets a group who are not agreed amongst themselves, still less often agreeing with the planning authority. Great art can never be achieved this way.

As matters stand now, the architect realizing that the outcome of this often incoherent meeting is going to be a letter from the Commission, recommending changes with which he does not agree, loses the grip of his original idea, and the result is often emasculated architecture.

This has been our experience, and we think it has been emphasized in Mr. Furneaux Jordan's very able criticism in the *Observer* for March 17.

GUY MORGAN AND PARTNERS.

London.

Costs At School

SIR,—I suppose your leader of March 14 was intended to provoke the heads of schools into putting the goods in the shop window. Fine.

The Birmingham school's four day course on architectural economics was admirable, but it didn't prove that other schools are not (quietly) doing something about the subject.

At Liverpool we have had for some time a course in building economics and site organization in which a contractor co-operates with practising architects (covering private and public practice) and with members of staff who are doing research in building economics and building science. But the best way to make students conscious of cost-control is to emphasize the economic factors in every major studio project (and in every live project they study) and to have a quantity surveyor around who not only lectures but gives advice at the design stage, as he would in practice.

We also offer a Master's Degree for post-graduate research in architectural economics, amongst other practical subjects.

Who said the other schools are not interested?

R. GARDNER-MEDWIN.

Liverpool.

Elemental Bills

SIR,—I see from your recent leading article in the AJ that you eagerly await the report of the RICS Committee investigating elemental bills of quantities, and it would appear that your impatience leads you to wishful thinking on the measure of support that the RICS Committee must give to elemental bills—if, indeed, they find elemental bills of quantities worthy of any support or further consideration.

The RICS will no doubt issue a report on the usual lines, stating that whilst elemental bills may be of some use in particular cases there is no reason to suggest that the new layout should be generally adopted. The adoption of this style of bill must obviously be left to the decision of the parties concerned, as it is not a function of the Institution to instruct members on matters such as this.

I consider that you are leading architects sadly astray by suggesting that the elemental bill of quantities alone can give them a ready-made value analysis. The information given by this type of bill can only be used for future reference, particularly the distant future, provided a volume of explanations (suitably flagged with "do's," "don't's" and "beware's") is prepared and submitted together with the figures obtained. The architect-advocate for elemental bills himself stresses the need that like must be compared with like and every allowance must be carefully made for differing circumstances. If, therefore, the new job is to be so very much like the last, what is gained by this new analysis of tenders? If the new job is so very different, then the old ready-made figures will have to be patched beyond recognition.

We are told that function is really the deciding factor in splitting up the new style bill into its various parts, but in building so much is inter-connected that pertinent division is seldom possible. This is particularly so in regard to the structure, and direct comparison of one element with another is of little value without taking into account the effect the structure has on each element.

Quite frankly, the elemental bill, like any multiple-use tool, can only partially do the job for which it is intended, and therefore in my view it is very wrong to spoil a well tried, and trusted, tool in order to partially assist one small function.

The bill of quantities was originally prepared by the estimator, but now, for obvious advantages, it is produced for him, therefore give him the bill he wants. The National Federation of Building Trade Employers has previously expressed a preference for bills of quantities split into trades (*RICS Journal*, July, 1952). It is nonsense to say that elemental bills are an advantage in planning site operations—if architects give the builder full and proper drawings in good time he can properly plan his job without the aid of any style of bills of quantities.

The present bill of quantities does not just happen to follow a certain pattern, it is designed for a purpose. The items are given in strict order for the benefit of the estimator, so that he can, while pricing a particular trade, live with that trade, get to know it and effectively weigh up all the important facts. The predominance of one trade over another must be quickly and easily assessed so that each trade's requirement and plant can be given fair consideration. With elemental bills nothing can be readily assimilated, the train of thought so vital to estimating can never get going to the best advantage and if you wreck the estimating you automatically wreck the cost.

In framing, from sketchy information, approximate estimates for the architect's use in planning one has, of course, a fairly accurate knowledge of the main costs involved, the only unknown parts being the value of what can be termed the odds and ends, the short lengths, the mitres and narrow widths, etc., etc. The value of these unknown parts can be assessed quite easily and accurately in the office of the architect or quantity surveyor and there is no need to ask every tenderer to do the analysis for us.

ERNEST A. BAKER.

Surrey.

The Editors write: A design can be cost planned from an analysis of another building not identical with it. The "patching beyond recognition" would mean use of ratios to adjust for differing quantities of the element, and use of experience and common sense (which most quantity surveyors would use anyway) to adjust for differing quality and market conditions. (See AJ for July 28, 1955.)

The trade bill is a "well tried and trusted tool . . . designed for a purpose." Agreed, but the purpose was fitted to design and construction of the past, e.g., plumbing is normally measured but electric (invented after the trade bill) is not. (See JOURNAL for July 14, 1955.) Moreover, it is common practice for the trade bill to be elemented in a surprising number of aspects, e.g., external works.

"It is nonsense that elemental bills are an advantage in planning site operations . . ." and "... with the elemental bill the train of thought so vital to estimating can never get going. . . ." On these points we refer Mr. Baker to the Building Centre meeting on October 24 last year (AJ, November 8) where N. S. Farrow (Howard Farrow Ltd.) said, "From the planning stage we have found that elemental bills have been of tremendous advantage," and P. E. Trench (Bovis Ltd.) said, "the accepted method of estimating in this country is pretty archaic anyway."

Finally, we suggest that much more practical experience with various forms of elemental bills is needed before we can assess their value.—The Eds.

How Much Hot Water

SIR,—It used to be said that the decline and fall of the Roman Empire was accelerated by, if indeed it was not directly due to, a gradual sapping of the nation's moral and physical fibre brought about by an excessive indulgence in hot baths. This, like so much of the history taught in the early part of the century, is absurd but it probably contains at least a grain of truth.

There must be quite a number of men alive today who complained bitterly in July, 1939, if their daily bath water was not really hot but who thought themselves extraordinarily lucky in September, 1939, if they got one bath in a fortnight and later on, of course, especially to the Desert Rats, this would have been untold luxury.

Efforts are being made, possibly with the best of intentions, to persuade householders that they should use at least 250 gallons of hot water per week, and preferably 350 gallons or even more, and this can only be an effort to persuade people to take more hot baths. Even the most houseproud of women can scarcely use more than a few gallons of hot water per week in making the house cleaner. These huge consumption figures can only be brought about by a larger number of hot baths.

Those of us who are old enough to remember the opening years of the present century needed only our eyes, and noses, to tell us that a large proportion of the population had what would probably be described in this more delicate age as "a low standard of personal hygiene"; in other words, they were dirty, but is this true today?

In spite of the efforts of certain toilet preparation manufacturers to persuade us otherwise, is it very often that our senses tell us that we are in the presence of a dirty person? Surely today most people are clean enough not to offend their neighbours and what more has anyone the right to ask?

We read, however, such statements as "many families, because their standards of cleanliness are high, use far more than 250 gallons of hot water per week," and what is this but an implication that the family that uses less has a low standard of cleanliness. What business is it of anyone outside to dictate on such a personal matter? Would it not be far better for the protagonists of more hot water to persuade the relatively few offensive individuals to use, say, five gallons a week than to attempt to persuade the ordinary sensibly clean family to increase their 150 gallons per week?

One final point. Is it a good thing from the national point of view to campaign for more hot water? Apart from the question of fuel there is the question of the water itself and the fact that we seem to get plenty of rain in this country does not necessarily mean that as a nation we have ample supplies of water on tap. Restrictions in the use of water due to the dry summer of 1955 persisted well into 1956 and far too many householders had the mortification of suffering from a shortage of water at the tap with near flood conditions outside.

E. M. ACKERY.

London.

Not Quite Politics

SIR,—It's a cheering spring sight to see a writer on architecture pulling back the blinds, if only for a minute, as Reyner Banham does in his piece on Corb. Lewis and the Caliph (March 21). But please go

on looking out; don't pull the blinds back again. If you do, the Caliph will still be down there on the street corner, looking remarkably like a Common Man who doesn't read the architectural magazines. I give you the proposition: the problem of how to improve the environment, visually and in every way, is not primarily architectural at all. Architecture is a by-product in the manufacture of a civilization. Unfortunately we haven't yet decided that we want to make a civilization. All we want just now is to see that everybody has a job so that he can get some money. That's destroying civilization—and all hope of decent architecture.

ERIC DE MARE.

London.

"TCPA In A Tangle"

SIR.—ASTRAGAL's comment "The TCPA in a Tangle" (March 21) misses the cardinal point of our correction of the article in *The Times* on the San Basilio housing estate. That article was headlined: "Better Use of Building Land: Italian Estates as Example to British Planners," and the basis of its rebuke to our new-town planners was that they could not get more than 50 to 58 people on an acre of two-storey houses with large gardens, whereas the Italians could get 200 on an acre. The essence of the argument was that the Italians had shown that a density four times as great as that of English housing schemes was practicable with two-storey houses and gardens. If the writer's chief purpose had been, as ASTRAGAL thinks, "to draw attention to the agreeably compact appearance of the scheme," he would not have made so much of the alleged wastefulness of space of the English parallels.

If your professional readers will look at the layout plan of San Basilio, published in *Town and Country Planning* (March, 1957), they will see that in the main its appearance must be much more "open" than that of the English new towns—in any of which photographs could be taken showing individual groups of a far more "compact" appearance than the San Basilio group shown in *The Times* photograph you reproduce. That photograph was in fact as misleading as the text of the article, because it was quite unrepresentative of a very open and pleasant layout.

London.

FREDERIC J. OSBORN.

SIR.—ASTRAGAL criticizes the TCPA (March 21) for making "such heavy weather over correcting an obvious error" in *The Times* article on the San Basilio housing scheme. The error may not have been obvious to the general readership of that newspaper, but if it was obvious it is surprising that *The Times* Architectural Correspondent should have made it the very basis of his article, which was a criticism of the densities achieved in English housing schemes rather than of their appearance.

A. E. TELLING.

London.

Not Even a Picnic

SIR.—I think a very great dis-service is done to the profession by the use of such words as "symposium." Most lay persons do not know what it means and it causes embarrassment. I wonder if the profession as a whole realizes that Pears gives its definition as "A banquet of philosophers."

We are a profession fighting for survival as can be evidenced by the appalling state of our architecture and it is certainly no banquet; we do ourselves no good by being pompous—let us use the word "conference" and done with it.

J. E. JACKSON.

Kent.

THE STAR AND THE LCC

This week we begin our news features with a report on The Star's front-page attack on the LCC's Ackroydon Estate, an attack which we fear will do damage both to the LCC's justified reputation for being—as far as architecture is concerned—one of the most enlightened local authorities in the world, and to modern architecture as a whole.

When a good idea for a sensational newspaper story comes up at an editorial conference, all hope of a balanced presentation of the facts usually goes out of the window. This seems to have happened when the London evening newspaper, *The Star*, no doubt with the laudable intention of increasing its circulation, decided to blazon the problem of damp on the London County Council's Ackroydon estate on its front page as "The Shame of London." Another headline told of a woman who grew cress in the armchairs in her flat which, one would gather from the photograph, was in the 11-storey point block illustrated, although it was not. The story said that in almost every one of the buildings on the estate, from maisonettes to point blocks, the damp was so bad that "carpets have rotted on floors, mould grows on ceilings, mildew ruins clothes in wardrobes, food spoils in larders, puddles form continuously on kitchen floors." Not, please note, that in

one, or two, houses "puddles form on floors," but that this is a general phenomenon. A leading article headlined "London's Pride" compared Ackroydon to "rat-ridden dockland," declared that the story will "shock, horrify and anger," demanded to know what the LCC architects had to say about it, and called for a public inquiry to ascertain "why this has happened, whose fault it is, and whether the LCC have made certain it will never happen again." *The Daily Telegraph*, not to be outdone, published a report the following day on similar lines, in which it referred to Ackroydon as "The white elephant of Wimbledon Common."

The Ackroydon estate was described by this JOURNAL in 1954 as a triumph for the LCC's housing division, because it provided high density housing while preserving the spacious and well-planned gardens that existed on the site by a combination of point blocks with lower flats, maisonettes and

Monday, March 25, 1957

THE STAR

No. 51,000 Tenpence

PHONE STAR NEWS DESK: FLE 5000

LATE FINAL

THE SHAME OF LONDON

Woman grows cress on damp armchairs in flats that are the wonder of the world

"Star" Reporter

YOU CAN'T MISS THEM IF YOU WALK ON WIMBLEDON COMMON—THE TOWERING ELEVEN-STORY BLOCKS OF FLATS ON PARKSIDE.

Town planners came from all over the world to admire.

They are part of the magnificent land now Ackroydon Estate, which won for the London County Council's architects the Government's Gold Medal for 1954.

But for hundreds of its tenants the matter that is passing has been a nightmare.

An expert ticks another where it counts—any one of the buildings from the post-war revolution to the "point blocks."

The point is **DAMP**. Damp is so bad that the carpets have rotted on floors, mould grows on ceilings, mildew ruins clothes in wardrobes, food spoils in larders, puddles form continuously on kitchen floors.

Damp is bad, no doubt, but it is not the wonder of the world. It is the wonder of the world that it should be so bad in the flats that are the wonder of the world.

Dr Adams: Surprise defence move

"Star" Reporter

EVIDENCE of how much the LCC has done for its tenants is shown in the fact that the LCC has been able to secure the services of Dr Adams, a leading expert on the subject of damp, to investigate the problem.

Dr Adams, who has been working on the problem for some time, has found that the LCC has done a great deal to improve the living conditions of its tenants.

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Peace makers get to work & hopes grow

"Star" Reporter

DIRECT peace talks in the ten-days-old shipyard strike of 200,000 men spread in London today between the employers and union leaders.

Mr. Harold Wilson, Minister of Labour, said in his first "peace-maker" broadcast that he was not a plan to stop the "peace" talks.

He said that the strike was a "peace-maker" and that the employers and union leaders were working together to solve the problem.

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Dock men ban Queen Elizabeth

"Star" Reporter

RIPPER who nearly killed a woman in the dock, has been banned from the shipyard.

The Ripper, who was caught in the act of killing a woman in the dock, has been banned from the shipyard.

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Economy...

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2 trapped as car overturns

A car overturned on the road, trapping two people inside.

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The car overturned on the road, trapping two people inside.

MAID FREED BY FIREMEN

A maid was trapped in a room, but was freed by firemen.

The maid was trapped in a room, but was freed by firemen.

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The maid was trapped in a room, but was freed by firemen.

The maid was trapped in a room, but was freed by firemen.

Rate rises by 3s 10d

The rate has risen by 3s 10d.

The rate has risen by 3s 10d.

The rate has risen by 3s 10d.

The rate has risen by 3s 10d.

The rate has risen by 3s 10d.

60 Men Meet

Sixty men met to discuss the problem.

The sixty men met to discuss the problem.

The sixty men met to discuss the problem.

The sixty men met to discuss the problem.

The sixty men met to discuss the problem.

RAIN

It is raining heavily.

It is raining heavily.

It is raining heavily.

It is raining heavily.

It is raining heavily.

Food more for your money with Ferguson



The Ferguson food processor is a great help in the kitchen.

The Ferguson food processor is a great help in the kitchen.

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housing. The Ministry of Housing and Local Government awarded a Housing Medal for a group of 4- and 5-storey flats, and architects from all over the world have admired both the architecture and the layout of this estate. If things were as bad as *The Star* headlines imply, this would indeed be a grave matter. But the JOURNAL, after investigating the facts, has found that while there is undoubtedly a difficult problem of damp in the Ackroydon and other estates, *The Star* report is misleading and exaggerated, unfair to the LCC Architects' Department, calculated to help neither the tenants nor the Council, and is denigrating one of Britain's greatest housing achievements by describing it as if it were a slum.

For example, *The Star* makes great play in its headline with the woman who grew cress in her armchair. She is said to have done so several months ago. But since then the LCC has lined the walls with cork slabbing, and the trouble has not recurred. A representative of *The Star*, when questioned by the JOURNAL, admitted that this was "an old story" that had been "dead for a long time."

The facts, as far as it has been possible to ascertain them, are these. Damp from condensation has been a problem in post-war housing, not only on LCC estates, but generally. On the Ackroydon estate there have been complaints about damp for about two years, during which the LCC Architects' Department, in consultation with the Building Research Station, has been attempting in a spirit of urgency to locate the cause of it and to apply remedial measures. Whatever else *The Star* has done, it has not prodded the LCC into action, for the LCC was in action already. There are 450 dwellings on the Ackroydon estate, of which 120 are in point blocks, the remainder in houses, maisonettes and flats in blocks up to five storeys. The LCC's insulation standards are relatively high, a U value of 0.27 for the external walls. The point blocks have non-load-bearing cavity walls (4½-in. brick, 2-in. cavity and 4½-in. clinker block). The flats and maisonettes are of cross-wall construction, with 13½-in. solid end walls, and infilling cavity walls (4½-in. brick, 2-in. cavity and 3-in. clinker block). In later LCC estates a higher standard has been adopted for the end load-bearing cross-walls.

Over the past two years there have been complaints about dampness from about one in five of the tenants. Of these, about 20, all of which were in the 4-storey maisonette blocks, were serious. There were no serious cases in the point blocks illustrated as "The Shame of London," although there were less serious complaints about condensation in kitchenettes and near windows in the point blocks, and some trouble associated with the roofs. There appears to be a weakness in the thermal insulation of the maisonettes where some of the rooms overhang balconies, and at concrete beams over the windows; but this weakness does not result in serious condensation in every case, which points to the possibility that a great deal depends on the habits of families. A visit to the Ackroydon estate by a representative of the JOURNAL confirmed the LCC's estimate of the extensiveness of the complaints, and also confirmed that while there were individual cases as serious as those mentioned by *The Star*, they are not typical. One dwelling will be completely free from damp, while an identical dwelling with the same orientation will suffer from it quite severely. There seem to be more complaints from those families which are out all day, the house being left with the windows shut and no fire, than from those where the house is occupied and warmed throughout the day. An entire family returning home in the evening to a stone-cold house, cooking meals, boiling clothes and having baths, can suddenly produce a very large amount of moisture and serious condensation.

The fact that the LCC in common with other authorities is experiencing more condensation trouble in post-war houses than

in pre-war houses which have lower insulation standards may, it is thought, be attributable to the use of hard plaster, which has been generally adopted to facilitate permanent decoration and early occupation.

The remedial measures so far applied by the LCC, apart from redecorating, have been to apply cork slabbing and insulating board to seriously affected walls, and to provide additional ventilation by means of air bricks in cupboards and larders. In some of the cases seen these measures appear to have been satisfactory, in others not: the problem has not yet been completely solved, and investigations are continuing.

It is unfortunate that central heating was not installed in the Ackroydon point blocks, and the JOURNAL criticized the lack of central heating some time ago. *The Star*, while criticizing the LCC now for this decision, does not seem to know that the LCC learned the lesson some years ago, for all subsequent point blocks have been centrally heated. The LCC has been something of a pioneer in central heating for municipal housing, but the economic problems of the tenants cannot be ignored, and it is becoming increasingly difficult for housing committees, since cuts in subsidies and high interest rates forced up rents, to approve central heating which imposes an uncontrollable fuel bill on the tenant. It was evident on the Ackroydon estate that some tenants were only spending minimal sums on space heating, which may well be a contributory factor.

It was interesting to discover from the Ackroydon tenants that *The Star* reports have aroused very mixed feelings. Many of the tenants resent the implication that they are living in slums. Although *The Star* and the *Telegraph* investigators do not seem to have met any appreciative tenants, almost all those approached by the JOURNAL greatly appreciated both the surroundings in which they lived, and the consideration paid to their complaints by the LCC. In one house visited, cork-lining and decoration had been completed the previous day, only three weeks after damp had been reported; in another the treatment had been done within four weeks; in another there had been repeated visits by surveyors and architects. One woman, with no complaint of damp, said "I could not wish to live anywhere better," and another said: "This is the finest estate in London, and anybody here will tell you so."

That the Ackroydon and other post-war estates should be afflicted by condensation difficulties is regrettable, and the problems must be urgently investigated. The LCC was doing this before *The Star* came on the scene. Ackroydon is, despite its faults, not a slum or a scandal but a creditable achievement, and the term "London's Shame" could be more fitly applied to those who use it about Ackroydon.

NEWS

COMPETITION

Fermi Memorial Results

Reginald C. Knight, of Florida, has won the first prize of 5,000 dollars in the international competition for a memorial pavilion (dedicated to Enrico Fermi, the scientist) in Chicago.

Awards of 1,000 dollars each have been made to Peter Roesch, of Hamburg; J. H. Box, J. R. Pratt and Joanne H. Pratt, of Dallas, Texas; and H. Jackson, C. Nivela, V. J. Solomita and J. Zalewski, of Cambridge, Massachusetts.

Awards of 500 dollars each have been made to E. Ludwig, of Dusseldorf; J. Lippert and D. Sommer, of Karlsruhe together with Dr. E. Lantzi; L. J. Johnson and Arthur S. Takeuchi, of Chicago; and I. Z.

Sazevich, D. H. Larson and Enrique Garcia-Reyes, of San Francisco.

The above awards have been made because the assessors (Mies van der Rohe, Gordon Bunshaft, J. L. Sert, P. L. Nervi and L. L. Whyte (physicist)) could not find anything worthy of the second and third awards.

Writing about the first prizewinning scheme, the assessors say: "It provided an integrated solution of the problem in relation to the entire project, in the form of an open plaza appropriately used. Moreover, in this open plaza the designer has created the brilliant conception of using sound as a unifying principle for the entire project. The instrument employed for achieving this result is a system of vertical, tubular bells which are so placed in three rows as to form a satisfactory composition defining a space and relating it to the surrounding area. In the opinion of the jury, this has produced the most beautiful and dignified memorial to Enrico Fermi, the scientist, particularly appropriate since it achieves a unification of art and science."

"This submission leaves the allocated site entirely open at the pedestrian level, and plans auditorium and covered exhibition space at the traffic level. The auditorium is square in shape and the exhibition space is distributed around it. The basement provides for equipment, storage and services."

"The main feature of this project is—paraphrasing the words of the winner—that the entire design is based upon the integration of space, structure and acoustics in one total concept which will have meaning not only within the confines of the memorial site but over the entire area. Through the controlled medium of sound, architecture will be able to reach out and touch the lives of many more people than would be possible through vision alone. The upper pedestrian plaza, surfaced with translucent white material, will glow softly at night."

"LITERATURE"

Standardization Discussed

The Forum at the Building Centre which followed the announcement of the joint RIBA Building Centre competition for trade literature (see first leader, page 489) was by far the best attended and went with a bang. It differed from the previous Forums (reported in the AJ in the last few weeks) in that both speakers—Edward Mills, architect, and Ronald Leather, of Pilkington Bros.—were on the same side. This did not matter much, since most of the people at the meeting seemed to be on the other side.

There were two main points at issue: whether the sizes given in BS 1311:1955 (sizes that were insisted upon in the competition) were the right ones, and whether the advertising industry should have its wings clipped by any form of standardization whatever. The first of these issues was discussed with a bitterness that was very refreshing. The main point urged by the opposition was that BS 1311 made functional typography (in particular the practice known as "bleeding off") difficult if not impossible. John Gloag, speaking on this question, made the pertinent point that in the early 'thirties it was the architects who originated this approach to typography and that in point of fact their attitude towards each piece of technical literature was directly conditioned by the typographic form in which it came.

Miss Wiegand, a senior technical officer at BSI, and the technical secretary to the committee which prepared the latest revision of BS 1311, gave an admirably clear account of how the revision was arrived at, and made it quite clear that it was on a basis of a correlation between English paper sizes and the existing practice of most manufacturers. Doubtless this disagreement among those who, by and large, were in favour of the principle of standardization was a welcome relief to those who wanted none at all.

Although anti-standardization talks were heard during the evening, none of them contained a respectable argument.

Discussion on the more important question of what literature should contain was very poor and served to show up the fact that though every architect thinks he knows what he wants from trade literature no one has given sufficient thought to the problem to provide any worthwhile answers.

ABT

Architect Should Be £2,000-a-year Man

Fears that the cutting off of the general housing subsidy, and the passing of the Rent Bill, will lead to a reduction in the work available for architects and a boom in speculatively built housing were expressed by K. J. Campbell, vice-President, at the annual general meeting of the Association of Building Technicians last week. Mr. Campbell, who was deputizing for the President, R. J. Soper, also urged architects and surveyors to organize for the purpose of achieving the salary level spurned by the doctors—namely £2,000 a year for the average qualified man. The meeting unanimously passed a resolution vigorously protesting against the Rent Bill on the ground that it would accentuate the effects of the existing housing shortage. "We believe," it said, "that at the present time any amending legislation to the present Rent Restriction Acts must fix a maximum to all permitted rent increases, and that the Government should increase the programme of new domestic buildings at rents which all sections of the community can afford."

Mr. Campbell said: "the most disquieting thing for us all, technicians and operatives alike, is the information that the building work now in the pipe line—that is, between the drawing board and commencement of work—is seriously thinning out. The poison of credit squeeze, and other restrictions of capital development, works slowly although none the less surely, and it is some time after the dose is administered that it takes effect. We have given this warning many times, and so have others, that you cannot turn the work of building on and off like a tap, but no notice is taken. Even if the present policy were reversed today it would be too late to prevent a period of serious 'recession' in some months' time—and unfortunately there is no sign of any revision of policy."

"We therefore must expect some difficulties as the year goes on. It is true that with the shortening of work we are beginning to find that building prices are ceasing to rise, are indeed beginning to drop and competition is becoming keener. This is indeed most acceptable but it seems a pity that keen pricing must wait for bad times and that prosperity in the industry brings high prices."

"The situation is not improved either by the recent Housing Acts or the present Rent Bill. The cutting off of the general housing subsidy has already caused many local authorities to reduce seriously or even entirely to stop their house building programmes. The result is not absolutely clear yet but it appears likely that the effects of this and of the Rent Bill, which is intended to increase rents very considerably, will be to cut down still further the work available for architects and other technicians. It may well lead in fact to the accelerated revival of speculative building for sale. The 'Opportunity' State may well become indeed a golden opportunity for rapid, substandard building to cash in on the needs of people forced to buy because of rising levels of rents. But the opportunities for architects and others concerned with better building appear to be missing. Perhaps we are not the people

the Prime Minister had in mind.

"The situation clearly is not a good one in which to consider improvement of salaries or status. It is regrettable that after a great length of time the RIBA has found no solution to the problem of assisting the salaried architect—the reverse in fact. A step forward could be made if only it would take up our interim suggestion of a joint council with ourselves for private offices. It is regrettable again that it has not done so. If we were larger in numbers it would be more difficult for the Institute to drag its feet in this matter."

"For heaven's sake let us remember the doctors, whom the old myth represented as superhuman persons concerned only with relieving human suffering and not at all with sordid money. Now we find that they are men and women like ourselves, only better organized than ourselves—more trade union conscious, if you like, than surveyors or architects, and being on the average on a miserable pittance of £2,000 a year they are striking against this penury. What a poor showing surveyors, engineers and architects, with an average salary far lower, make in comparison. Far from taking action in their own defence most of them do not even belong to a union but continue to bleat helplessly to their learned societies who cannot help them. Well, we must try as best we can by precept and example to make them see the basic truths the doctors have grasped. Join your association, make it strong, and even if we cannot follow the medical profession to its highest flights we should be able eventually to reach the level they are now spurning—£2,000 a year for the average qualified man."

BUILDING LAW

Rights of Light: Is Legislation Needed?

The Lord Chancellor has appointed a committee to advise him whether legislation is desirable, (1) to amend the law relating to rights of light in relation to war-damaged sites or sites whose development was prevented or impeded by reason of restrictions or controls imposed during or after the late war; and (2) to preserve rights of light acquired or in process of acquisition by buildings which subsequently suffered war damage.

The chairman of the committee will be Justice Harman and the members Guy Biscoe, F.R.I.C.S., P. V. Burnett, F.R.I.B.A., J. Catlow, J. C. Craig, A.R.I.C.S., A. J. Driver and G. H. Newsom, QC.

The secretary of the committee will be K. M. Newman, to whom communications may be addressed at the Lord Chancellor's Office, House of Lords.

Under the present state of the law, a right of light may be acquired if light has been enjoyed for a period of 20 years without an interruption of at least one year, so that the owner of a property demolished by bombing in 1940 may find that adjoining owners have acquired rights over his site if he cannot rebuild by 1959. The only method of preventing this, if friendly legal agreement cannot be reached, is for him to erect hoarding to obstruct adjoining owners' light for a year—an expensive matter and one which inevitably destroys goodwill. It is this state of affairs which may be changed under section (1).

Also under existing law, a building which has been partly or wholly demolished can still retain its rights of light over adjoining properties, but for how long is unclear; section (2) is concerned with clarifying this point.

SCHOOLS

Why Ceilings Fell

The use of longer hangers than usual is thought to have been the reason why ceil-

ing panels installed in north Lincolnshire schools fell down, or became dangerous. This was the answer given in the House of Commons last week by Sir Edward Boyle, the Parliamentary Secretary, Ministry of Education, to Cyril Osborne, M.P. for Louth. Mr. Osborne said that 7,500 ceiling panels had been installed at Beacon Hill Secondary Modern School, Cleethorpes, at a cost of £1 each; that the school had to be closed within a few weeks of the school's official opening by Sir Edward Boyle, that pupils at High Holme School, Louth, had been moved out of rooms with suspected ceilings and that other schools had closed and nearly 2,000 school children had been sent home while the county architects made inspections.

Sir Edward Boyle said in reply: "this type of ceiling has several advantages. It has good sound absorbent properties. It has been proved under test to provide valuable fire resistance and it allows easy access to services. In certain of the schools mentioned, however, a longer hanger than usual was used to suspend the panels from the beams, and officers of the Ministry and the local authority consider that, in these circumstances, panels might be dislodged by normal vibration. My officers have brought these facts to the notice of other authorities likely to be concerned. The cost of the additional work and the liability for meeting the cost have not yet been determined."

FILMS

Wanted: A List of Architectural Subjects

The FIFA (Federation Internationale du Film sur l'Art) has been asked by UNESCO to compile an international catalogue of films on architecture. Anyone able to help the Federation in its researches is asked to inform it of any films seen on architecture of the past and the present, on town-planning and landscape gardening, not forgetting to mention the country in which the film was produced and by whom it is distributed. Architects are asked to inform the Federation about any short films which have been made on their work. Information to be sent to Madame S. Gille-Delafon, 140, rue du faubourg St. Honoré, Paris, 8ème.

DIARY

Presentation of the RIBA Royal Gold Medal. To Alvar Aalto. At the RIBA, 66, Portland Place, W.1. 6 p.m. APRIL 9

Design and Performance of Architectural Lighting Systems. By P. M. Collins and J. Reid. IES meeting at the Lighting Service Bureau, 2 Savoy Hill, W.C.2. 6 p.m. APRIL 9

Glass in Recent European Architecture. Talk by Sven Eternfeldt. At the BC, 26, Store Street, W.C.1. 6.15 p.m. APRIL 10

RIBA Annual Discourse. Talk by Alvar Aalto. At the RIBA, 66, Portland Place, W.1. 6 p.m. APRIL 10

Cost Control in Building. Course at the Regent Street Polytechnic School of Architecture, in collaboration with the AJ. 1, *The Need for Cost Control*, by J. M. Austin Smith, A.R.I.B.A. (April 30). 2, *Cost Analysis*, by James Nisbet, A.R.I.C.S. (May 7). 3, *The Elemental Bill of Quantities*, by Clifford Nott, A.R.I.C.S., and Ivan Tomlin, A.I.B.E. (May 14). *Cost Planning I*, by G. Grenfell Baines, A.R.I.B.A., A.M.T.P.I. (May 28). 5, *Cost Planning II*, by John Wilkinson, A.R.I.B.A., and Arnold Towler, A.R.I.C.S. (June 4). 6, *Symposium*, with all speakers (June 18). All lectures start at 6.30 p.m. Applications (enclosing 11s. registration fee) to the Registrar, The Polytechnic, 309, Regent Street, W.1.

CRITICISM

The architects reply

Burles and Newton, the architects for the church at Basildon New Town which was criticized by J. M. Richards in last week's JOURNAL, have written this reply.

Firstly, we should like to express to Mr. Richards our appreciation of his admirably-expressed and discerning statement of the problems to be faced in considering the design of a contemporary church. We entirely endorse the expression of the need for the qualities of dignity and repose and agree that these qualities are dependent upon an honest use of structure and a straightforward use of materials. Equally admirable is Mr. Richards's clear and accurate description of the

plan, structure and decoration of this church. His criticism is, we feel, both penetrating and discerning, which makes it stimulating and interesting to reply to. Mr. Richards rightly lays emphasis on the necessity of obtaining the right atmosphere and we feel that to some extent success or failure in this lies in the singleness of purpose with which the architect tries to meet the principal functions of the church. In this case, the high altar is the centre around which the church is built and plan, structure, finishes and colour are all directed toward this point.

This brings us to Mr. Richards's criticism of the colours and the way they are used. The colours were introduced to help to emphasize and focus attention on the high altar and to make use of the ample daylight (the natural and most effective basis for all decoration), the walls below the windows are painted white to soften the contrast between the light voids of the windows and the shade on the wall surface below them. Where the light distributes itself over surfaces without voids, such as the ceiling and the east wall, the surfaces have been panelled and coloured. The moulded members are left in untreated concrete or painted white. Only the flat surface of the panels is in strong colour, to take advantage of the glowing effect of the daylight. This relationship of colour and modelling to daylight was the basis of the design of the colour decoration. The restricted depth and simplicity of the modelling inherent in the use of this type of construction calls for articulation by the use of deep colour. And the grid pattern of the decoration is designed to compose with

Exterior of the church at Basildon from the south-west (liturgically the north-east).





Looking diagonally across the interior towards the Lady Chapel.

the grid pattern of the structure itself, the change and elaboration of pattern in the ceiling over the sanctuary corresponds with the change of the spacing of the columns in this part of the church and gives appropriate definition and enrichment to the most sacred part of the church—as it were accelerating the rhythm of the roof pattern to produce a climax over the altar. In answer to the question whether these arguments justify the use of added colour—we feel they do. One essential for right atmosphere, it is felt, is created by the effect of light on colour—and particularly because the light is contained in the space enclosed by the pattern of structural frame and surface. It is also felt that contrast in the use of colour and pattern gives an effect of vitality, rather than confusion and restlessness.

Until Mr. Richards raised this very important point regarding the ceiling treatment, we had no misgivings at all. To reassure ourselves, we have re-drawn the ceiling over the photograph without the coffering, and we feel, after comparing the two results, that we would make the same decision again.

In reply to the criticism of the east end, both internally and externally, our answer is that internally the white plaster surround of the recess forms a frame to the strongly-painted end wall, thus providing a

concentration of interest round the altar and tester. We considered that a reduction in the height of the roof over the altar recess would have lost the serenity of the unbroken ridge line, for in the flat landscape this ridge and tower silhouette can be seen from a considerable distance above the surrounding two-storey housing.

As to the tower, the brick panels project only on the east and west faces. The reason for this, we think, is apparent in the photo of the west end, where it can be seen that the brick panel of the tower is projected to compose with the solid load-bearing brick walls flanking the concrete framing of the west window and entrance. On the north face of the tower the concrete columns project to be consistent with the projecting columns of the north wall of the nave.

We think that Mr. Richards's approach to the problem of the tower design is different from this, in that we had regarded the baptistery as a pierced concrete base for the superstructure.

We were disappointed that Mr. Richards had such hard words to say about the execution of the baptistery. Bearing in mind the limitations of the materials used, we had not been critical in that respect. We had not had any misgivings here about the scale—could Mr. Richards be more precise? Looking at the photograph of the baptistery interior, we feel inclined now to agree with Mr. Richards; but is not this partly due to the strong silhouette of the concrete framework? This is much more noticeable in the photographs than in the church, where there is a strong side light. The wide soffit of the eaves follows naturally from the use of a low-pitched roof. The effect of coffered panels was considered a suitable form of enrichment, necessary for the articulation of the prominent surface of the soffit, the coffering being spaced so as to reflect the pattern of the clerestory windows. The wide overhang of the eaves called for this form of treatment.

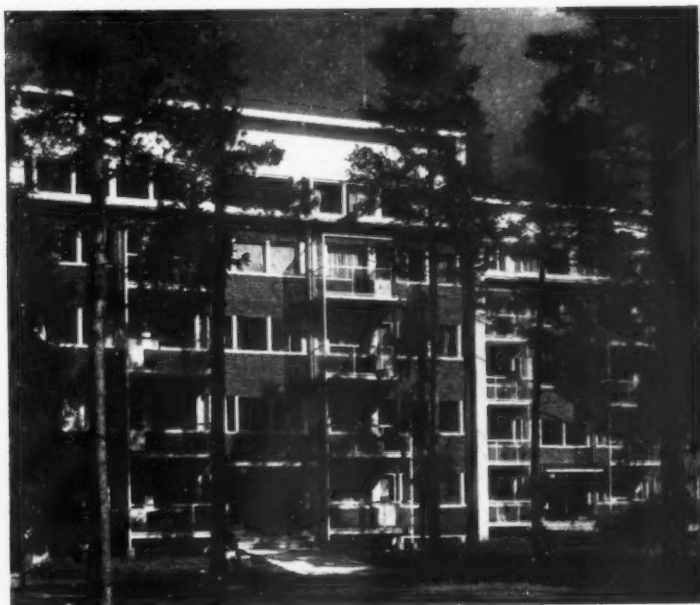
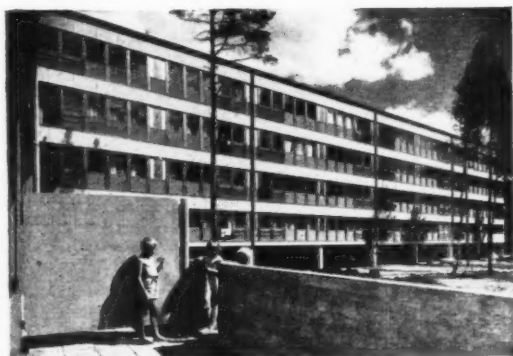
It will be seen from the photograph that the external wall of the chapel is composed of three complete concrete frames. Within these frames it seemed both logical and desirable to create interest and emphasis by varying the surface treatment. We did the same thing with the north wall of the tower, which is framed-in by the projecting concrete columns. This variation of surface treatment has been introduced to bring the qualities and interest of texture and colour into relationship with architectural form. The full effect of this will be apparent only when the landscaping has been completed.

Going back now to Mr. Richards's opening remarks, in which he mentions the barrier between modern design and the worshipper, it may be interesting to record that the experience of the parish priest here seems to be that given the right atmosphere, the worshipper is ready to respond to a modern church, and this appears in fact to have acted as a stimulant to the practice of religion.

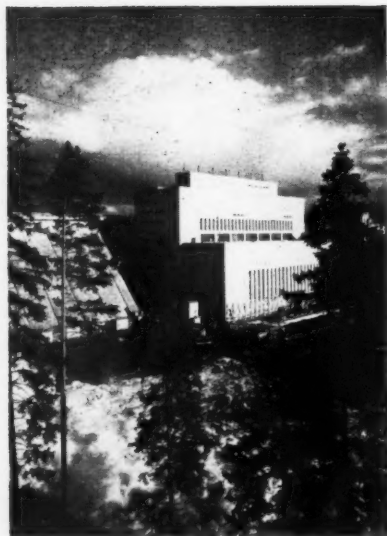
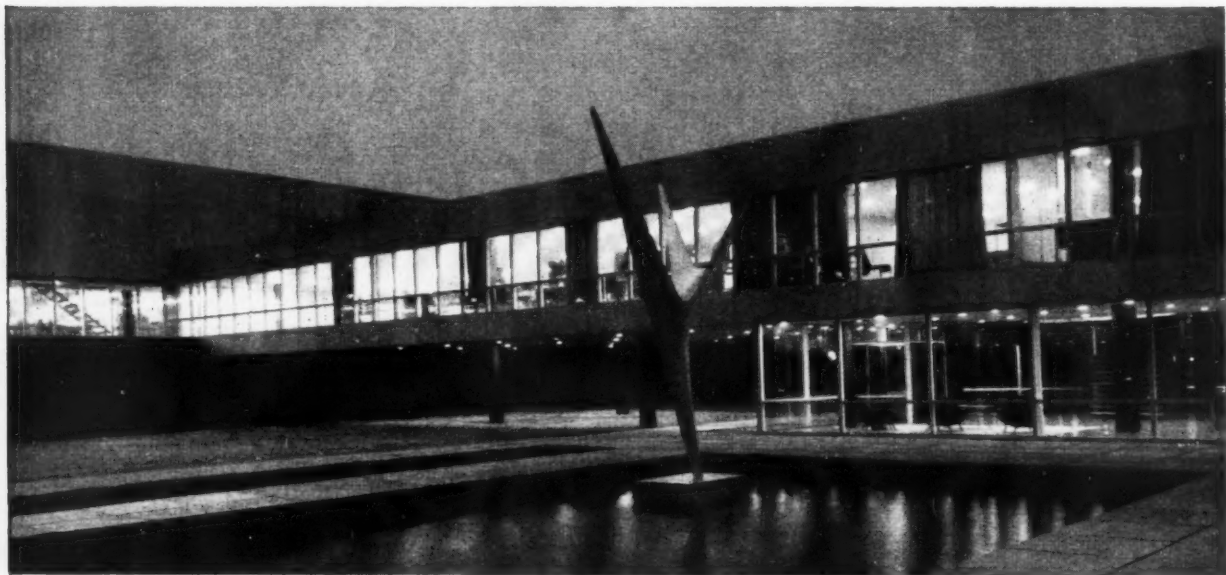
In this respect it has fulfilled the intention of the Bishop of the Diocese that the church should form a religious and social focal point and should contribute to the architectural development of the new town.

FINNISH BUILDINGS FOR NEXT WEEK'S EXHIBITION AT RIBA

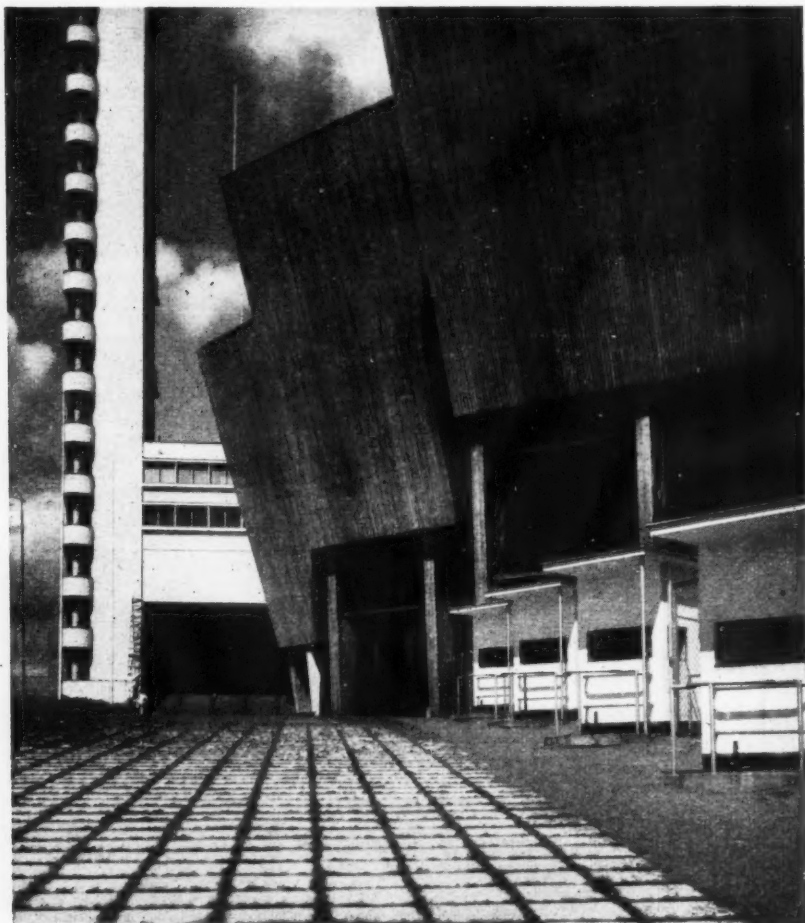
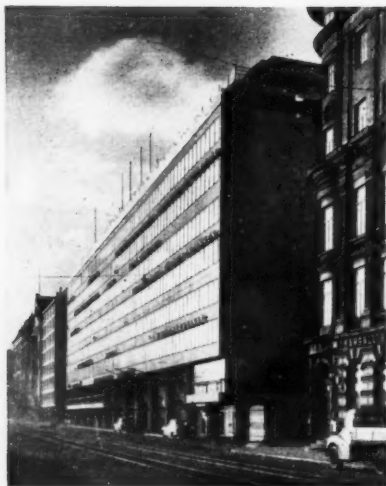
An exhibition of Finnish architecture opens at the RIBA, 66, Portland Place, W.1, on Thursday next, April 11, the day after Alvar Aalto gives the first talk in the RIBA's series of annual discourses. (Mr. Aalto is, of course, the recipient of the RIBA's Royal Gold Medal for 1957.) Among the photographs of buildings exhibited are those shown on these pages, and in this week's frontispiece. Right: a dwelling house at Tapiola (1955), designed by Viljo Rewell. Below: a prefabricated apartment house designed by the same architect—also Tapiola (1955). Bottom: "snake house" apartments at Helsinki (1951), designed by Yrjö Lindegren. Below right: apartments at Otaniemi (1955), designed by Kaija and Heikki Siren.



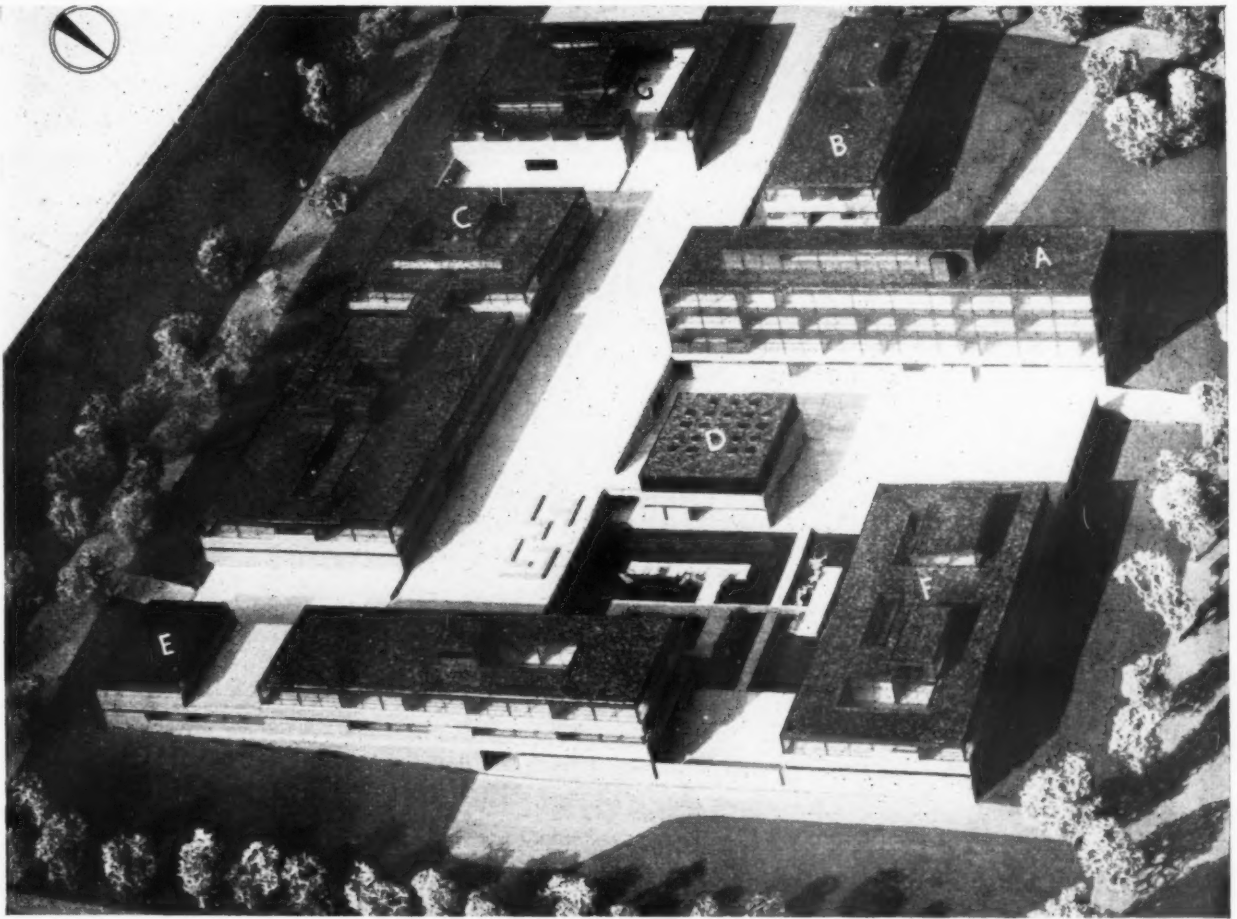
FINNISH BUILDINGS FOR RIBA EXHIBITION : continued



Above: Kudeneule factory at Hanko (1956), designed by Viljo Rewell. Left: power plant at Pyhäkoski (1949), designed by Aarne Ervi. Bottom left: office building at Palace Hotel, Helsinki (1952), designed by Viljo Rewell and Keijo Petäjä. Bottom: Olympic stadium at Helsinki (1934/52), designed by Yrjö Lindegren and Toivo Jäntti.



UNIVERSITY COLLEGE OF LEICESTER: PROPOSED DEVELOPMENT



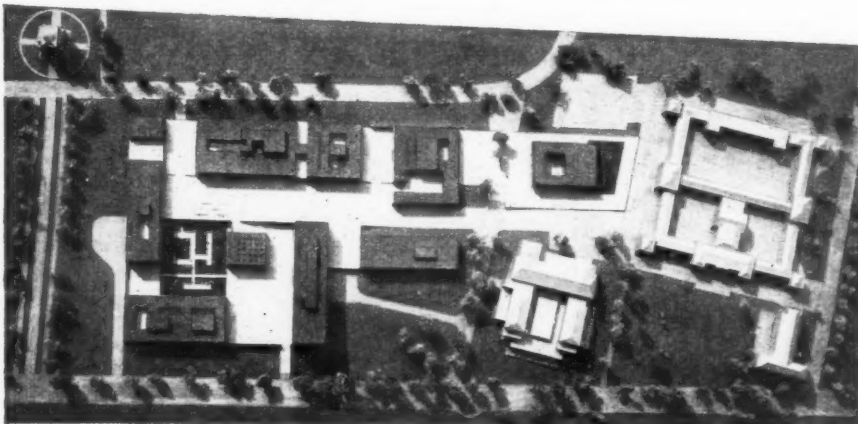
Professor J. L. Martin, who is consultant architect to the University College of Leicester, has prepared the scheme shown here—in association with Colin St. John Wilson—as a general guide to layout. The scheme, which may well be varied in detail when the future building requirements are known more accurately, has been prepared primarily for University purposes and has yet to be discussed with the planning authority. The chemistry buildings (A and B on the model), which are to be built first, are being designed by the executive architects, Architects Co-partnership.

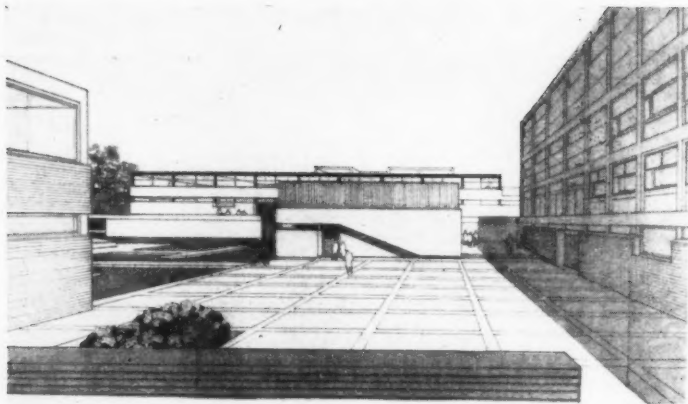
- A. Chemistry teaching
- B. Chemistry research
- C. Physics
- D. Lecture theatre

- E. Mathematics
- F. Botany and zoology
- G. Tutorial and research

The site of the proposed development runs parallel to, and rises steeply from, University Road (foot of bottom picture). Viewed from this road, the existing University buildings (extreme right of the bottom photograph) form a dignified and simple brick structure with grey slated roofs. These buildings stand at a higher level than the site which is to be developed. To their left

and right on the bottom photograph is the new refectory and union building which is just being completed and the new biological laboratories (both by Thomas Worthington and Sons). On the extreme left of the bottom photograph is an avenue of trees leading to the war memorial, designed by Sir Edwin Lutyens, which occupies a prominent position on the sky-line. The siting of the new buildings between this avenue and the



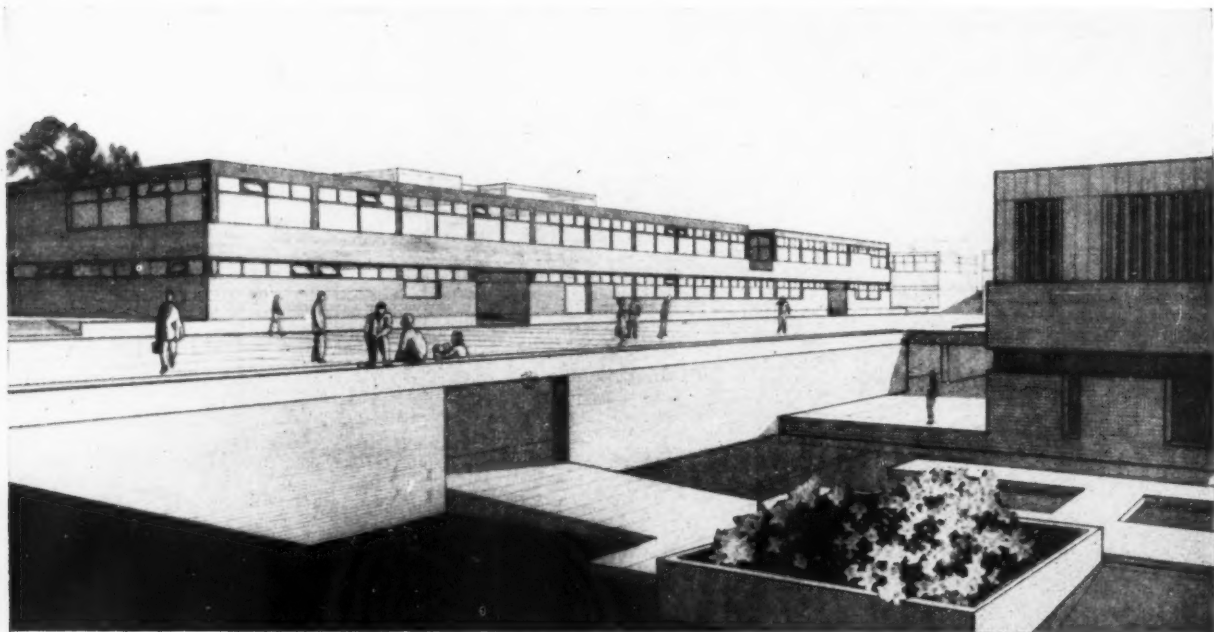


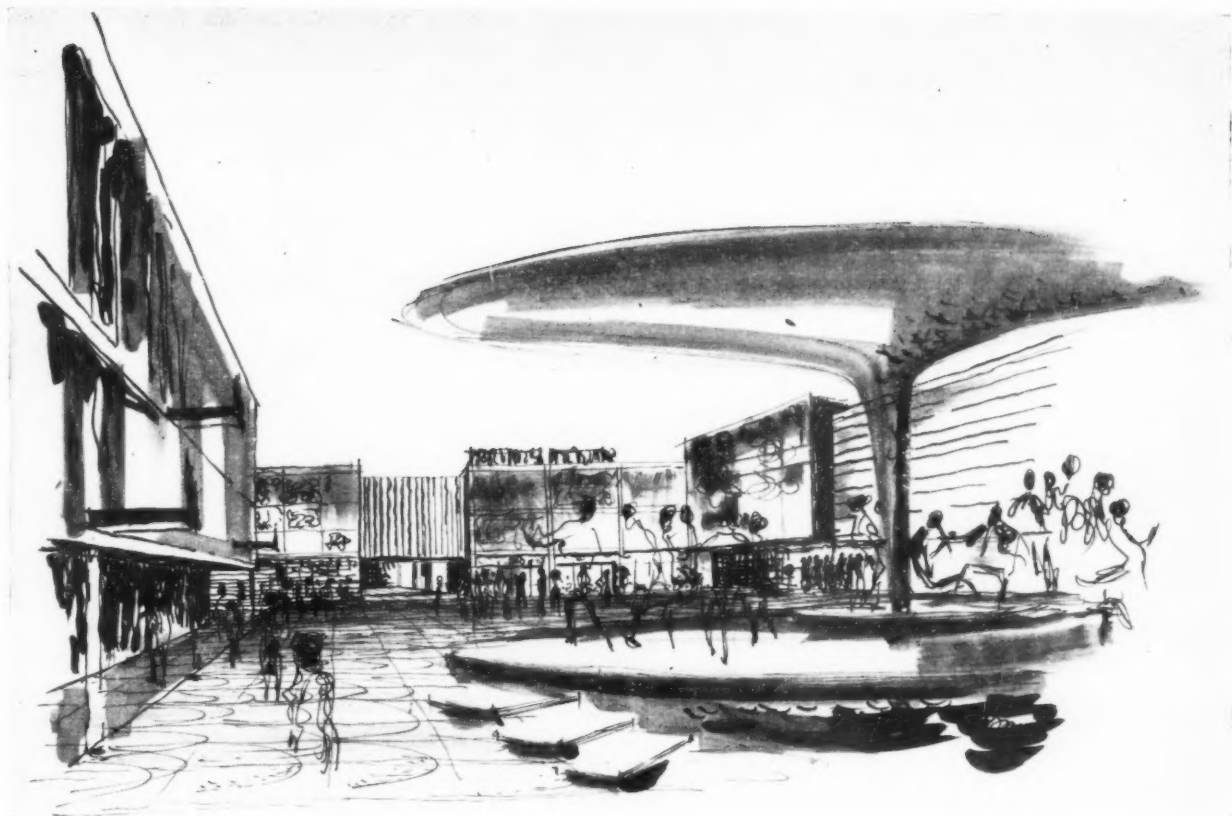
View looking towards lecture theatre.

existing buildings presents several problems. The war memorial arch and the fringe of trees along the edge of the neighbouring park provide a sky-line which the architects want to preserve. Apart from this, there is the problem of relating the new and the older buildings to each other. The model shows how this is to be achieved. The principal entrance to the complete University Precinct will be along Mayor's Walk, a road which will reach the approximate centre of the new layout. From this point a lateral road connects the older buildings to the new group of buildings. The building development at this centre point is "very much a question for the future and must, at this stage, be a matter of conjecture." It is, however, suggested that it might be appropriate, at some time, to place a Senate House at this central point in the scheme. The layout is influenced partly by the slope of the ground. Descending

levels have been used in the layout to give a maximum advantage to the buildings when problems of excavation or basement are considered. The levels are also used to create a series of interrelated and interlocking terraces. Around these terraces or courts the main buildings have been placed. A considerable effort has been made to keep down the heights of buildings. This has been thought desirable for two reasons: first, in order to interfere as little as possible with the interesting sky-line formed by the fringe of trees along the boundary of Victoria Park, and second, because of the desire to retain a human scale within the layout. Only one block of buildings is four storeys high, the main chemistry block (A), the remainder being for the most part two-storeyed structures. All buildings are based on a general dimensional grid. Within this unity there can be a considerable range of treatment for the individual buildings. It is likely, for example, that the chemistry building will be a "glassy structure" in which the window stretch like a skin between the metal frames of the building. Other buildings, however, may be faced in the lower storeys with considerable areas of brickwork from which the steel frame is exposed only in the upper storey, where the need for window space is greatest. The buildings are given a general unity by the terrace walling and the general treatment of the brick base from which they spring. The interlocking levels of the courtyards centre around the lecture theatre which is constructed predominantly in brickwork, its upper portion being formed of a combination of timber louvres and vertical glazing.

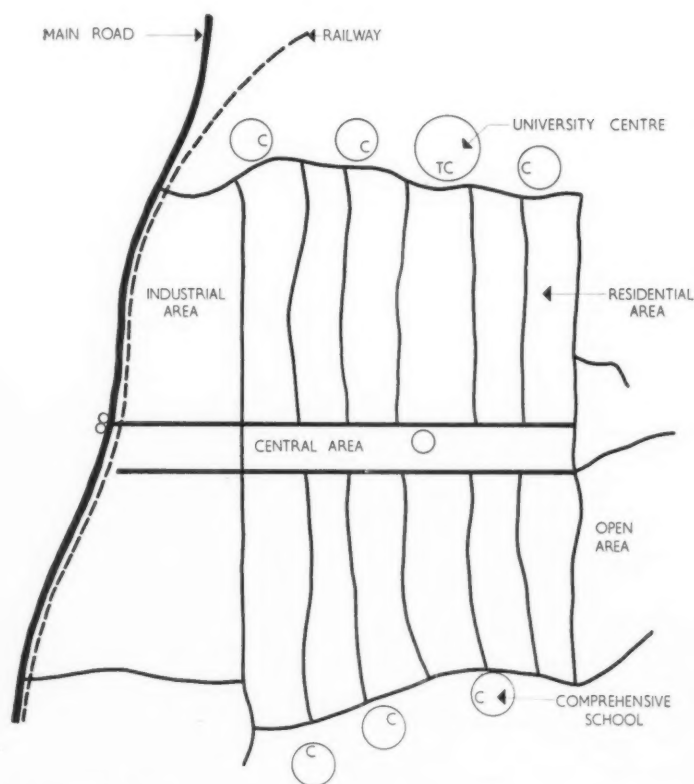
View from mathematics block looking towards physics block.





The entertainments square in the central area.

PROJECT FOR A LINEAR NEW TOWN



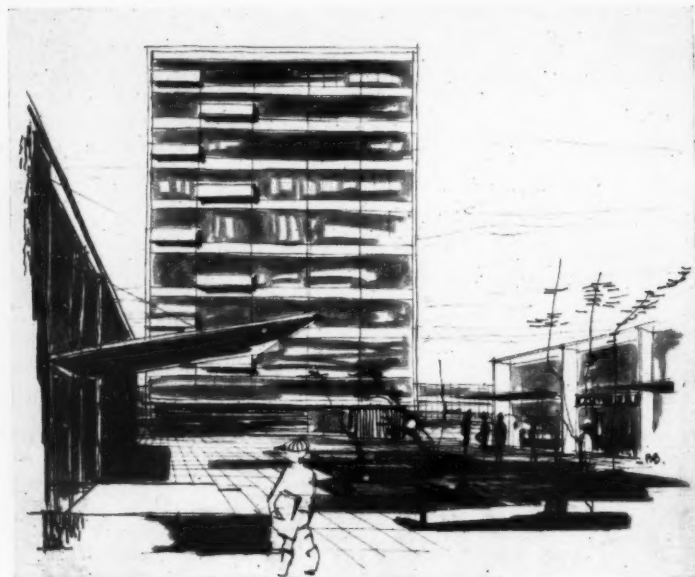
Diagrammatic map

When we published, on November 22, a project for a new town prepared by students of the Town Planning Department of University College, London, we referred briefly to an alternative project designed by a few students who disagreed about some of the ideas that had been put into the first scheme. A member of this minority group, Mayer Hillman, writes here about the alternative scheme—a scheme in which densities in the residential area are higher and the town is even more for pedestrians.

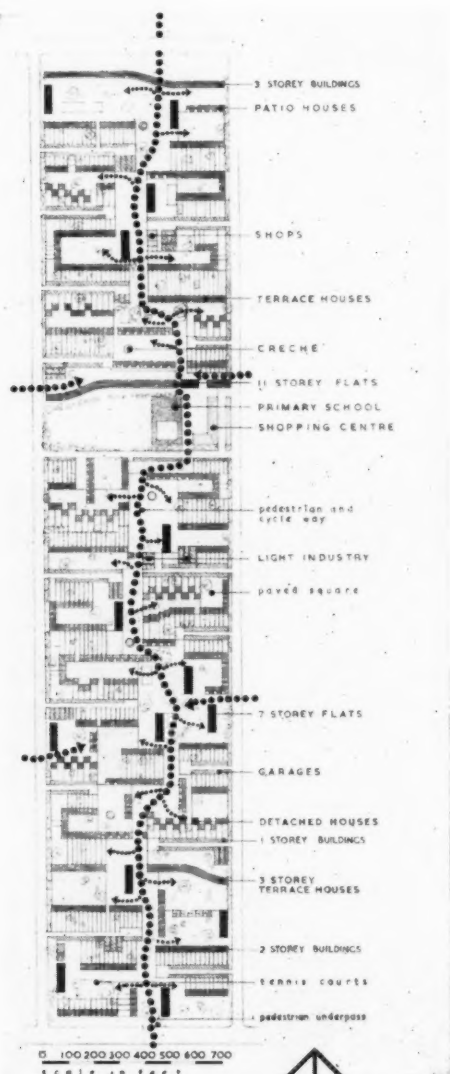
It is generally agreed that the time has come to reconsider the principles and practices followed in the planning of the new towns, as outlined in the New Towns Act, 1946, and as executed in Harlow, Crawley, Stevenage and elsewhere.

Some of the points criticised are as follows:
Sprawl and long journeys—resulting from low density.

Lack of physical cohesion—due to the demarcation of neighbourhoods and the splitting of land uses.



Above: one of the main residential squares, contained in one of the linear residential strips (below). Sketches by Barbara Bienias.



Lack of social cohesion—due to the unbalanced population.

Absence of character and architectural unity—as in suburbs or company villages for factory employees.

Egocentricity—the towns have no relation to their region, nearby towns or the National Transport system.

Psychological discomfort of the road pattern—this is caused by lack of order, danger to pedestrians and the inevitable noise and fumes.

The design prepared by J. B. Lehrman and myself presupposes as a solution to decentralization from an overcrowded city, the creation of small towns of populations between 60,000 and 100,000 persons. Each of these has the form of a natural town with its own sources of labour and wealth. It is deliberately designed to attract people and to have a fertile social and cultural life. This would require the integration of industrial and cultural functions, as in the marriage of industry and education in Oxford, or the specialized industry of Wycombe.

The proposed town is designed as a centre of national importance. It has a university for aeronautical and agricultural research. This should bring a slightly higher proportion of professional and technical workers which would stimulate cultural and communal activity, a *sine qua non* of a living town. To achieve a balanced stationary population, a fast rate of development would be needed so that there would have to be an incentive in the way of Government subsidies for certain age groups. The population is 60,000.

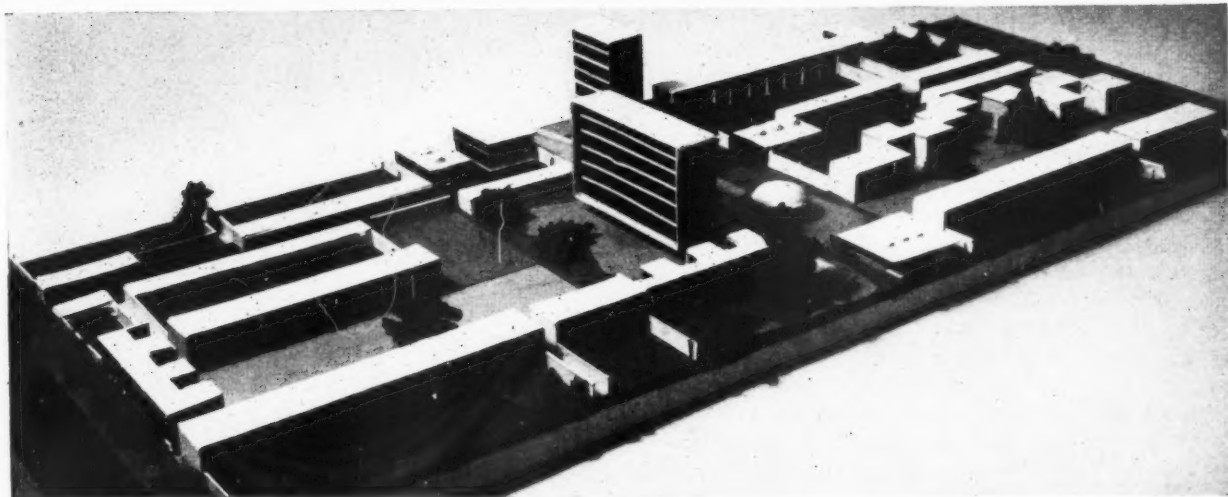
In an age dominated by the internal combustion engine, this design has consciously envisaged a pedestrian town, whose size and high density would allow an adequate communal life within walking distance. It implies the disestablishment of the neighbourhood concept, in favour of a single effective town centre. Yet the town acknowledges the need for the convenience and close proximity of roads and parking spaces. To preserve compactness the playing fields have been placed on the edge of the town.

As in the Greek colonies, the imposition of a geometrical plan on an irregular site has been used to create an order without rigidity. Some free zoning, such as the provision of light industry in the residential areas, has been allowed for convenience and variety.

Master plan

In choosing the site, one area seemed to be particularly suitable. Firstly, it is adjacent to a trunk road and railway linking industrial centres. Secondly, the site possesses special physical characteristics: these are a ridge for the linear development of the central area, a hill to the north for the University centre, and flat ground, adjacent to the main road and railway, at right-angles to the ridge, suited for a linear development for the industrial area. Thirdly, it is an area of woodland in poor farm land.

The master plan has the following arrangement—a linear central area and 12 linear residential strips, six running north and six south of the centre. Each



strip is three-quarters of a mile long and 750 ft. wide. The comprehensive schools and most open space are concentrated in a girdle around the town.

The radius of the town is 1 mile. The overall town density is 35 persons to the acre. The residential area density is 65 persons to the acre (on the basis of one person per habitable room). The town covers 1,710 acres.

Industry	220 acres
Commercial and central	90 acres
Residential	920 acres
Comprehensive schools	240 acres
Open space	240 acres

(The standard recommended by the New Towns Committee, 12 persons per acre overall, would require 5,000 acres for a town of 60,000 inhabitants.)

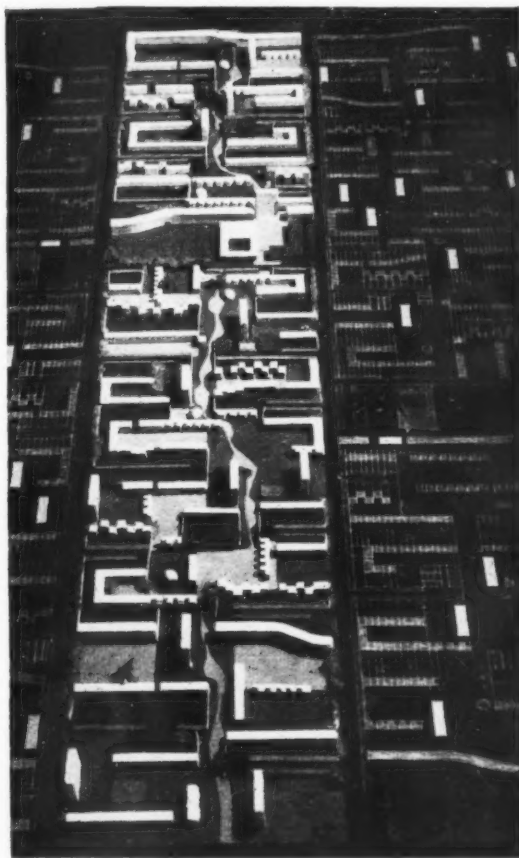
Residential area

Twelve linear residential strips accommodate 5,000 people each, to support a primary school. Inside each strip is a pedestrian path and cycle way, in the form of a parkway. Only the surface of these routes would define their functions. The parkway which is at times paved, at times grassed, leads from the comprehensive schools on the edge of the town to the central area without, at any time, crossing a vehicular route. Along this way, at intervals, are crèches, tennis courts, games areas, small shops, a local shopping centre with the primary school adjacent and small factories and workshops at the end of some of the culs de sac. These are for small industrial enterprises which can employ women part-time. They would also help to give life and character to what so often prove to be dull residential areas in existing New Towns. All houses are of two/three storeys and all flats of seven storeys, except the 11-storey block pinpointing the small shopping centre in each strip. Seventy per cent. of the dwellings have garages. These are sited on either side of the culs de sac, at no point more than 150 ft. from any dwelling.

The whole design is inverted to focus on the parkway.

The visual effect aimed at is one of progression, past

Above: detailed model of part of one of the residential strips. Below: a complete linear strip. The actual line of roads would be determined by siting and landscaping conditions.



squares of various shapes, sizes and colours with the direction to and from the central area accentuated by the tall flat blocks.

The size of the gardens varies in depth from the courtyard of the patio house to the medium size (30 ft.-70 ft.) of the terrace house to that of the largest detached house which would be up to 100 ft. deep.

The density is 65 rooms to the acre. Forty-five per

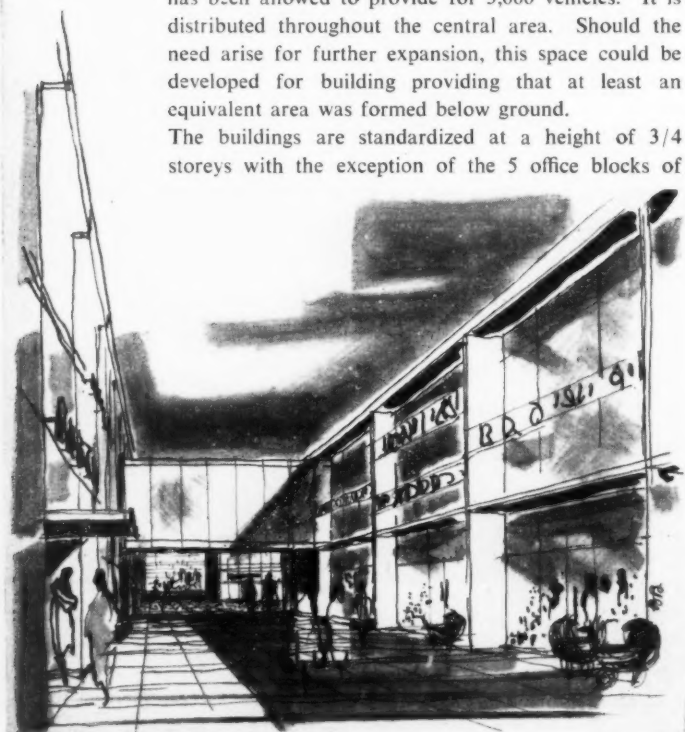
cent. of the dwellings are flats and 55 per cent. are houses. These proportions are based on the age structure to be aimed at, in Ruth Glass's opinion, in the development of new residential areas, namely: Age 0-14 21.6 per cent., working age group 62.3 per cent., and old people 16.1 per cent. This compares with the age distribution of immigrants into Crawley, namely: Age 0-14 32.5 per cent., and adults 67.5 per cent.

Central area

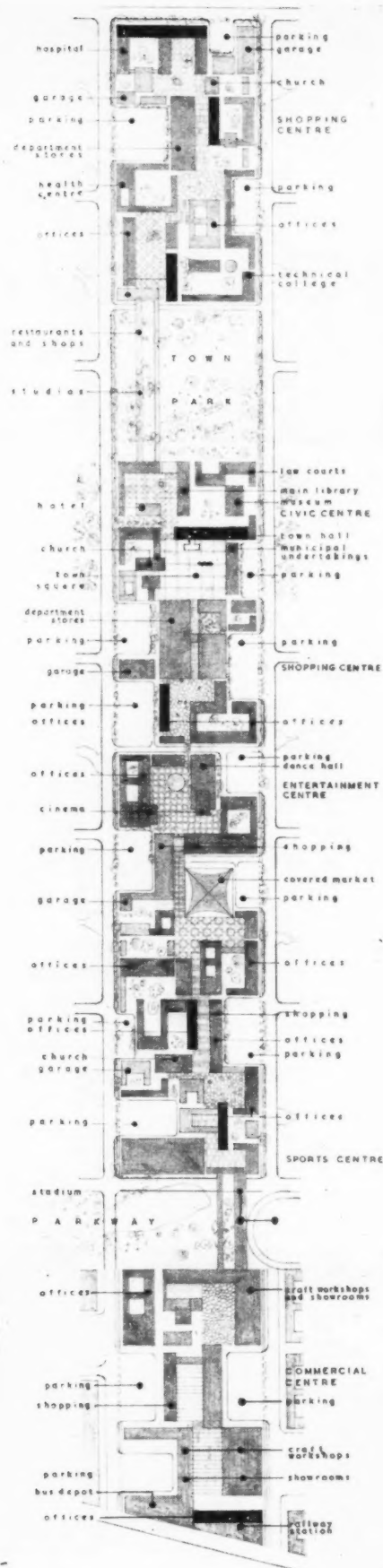
A linear development along the ridge serves all residential areas. The commercial west side is integrated in design with the industrial area. It incorporates the railway and bus depots, warehouses, craft workshops and their showrooms. It is linked to the main area by the offices, restaurants and tiers of seats of the town stadium. The sports centre overlooks the lake, whose north edge is crossed by the main road from the bypass. Office, entertainment, and shopping centres lie between here and the civic centre. They are arranged round informal squares of various sizes along the central pedestrian way. Shops and department stores have service access from car parks behind them. The civic centre on the highest point of the town adjoins the town park. On its north side is an arcade of shops, studios and restaurants which leads to the quieter part of the central area. Here there is a technical college, offices, and another shopping centre. The pedestrian way terminates at the hospital.

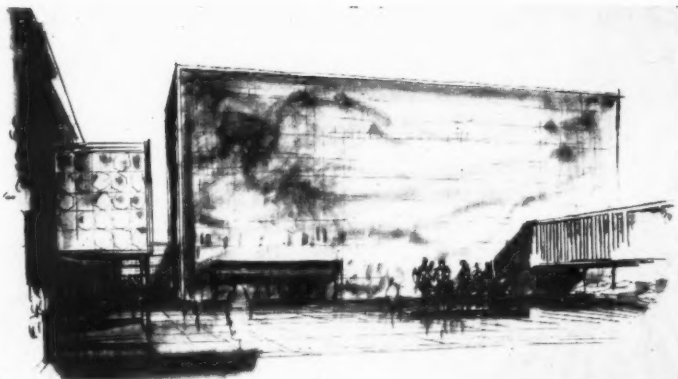
Pedestrians and vehicles are segregated allowing the former to move freely throughout the central area. Cyclists use the cycle way on the inner edge of the main road round the central area. Substantial parking space has been allowed to provide for 3,000 vehicles. It is distributed throughout the central area. Should the need arise for further expansion, this space could be developed for building providing that at least an equivalent area was formed below ground.

The buildings are standardized at a height of 3/4 storeys with the exception of the 5 office blocks of



Above: one of the shopping centres situated in the central area (plan right).





The central area town square, looking towards the town hall.

13 storeys accenting the pedestrian way and the town hall and hospital of 10 storeys.

As in the residential areas, the development is focused inwards on to the pedestrian way.

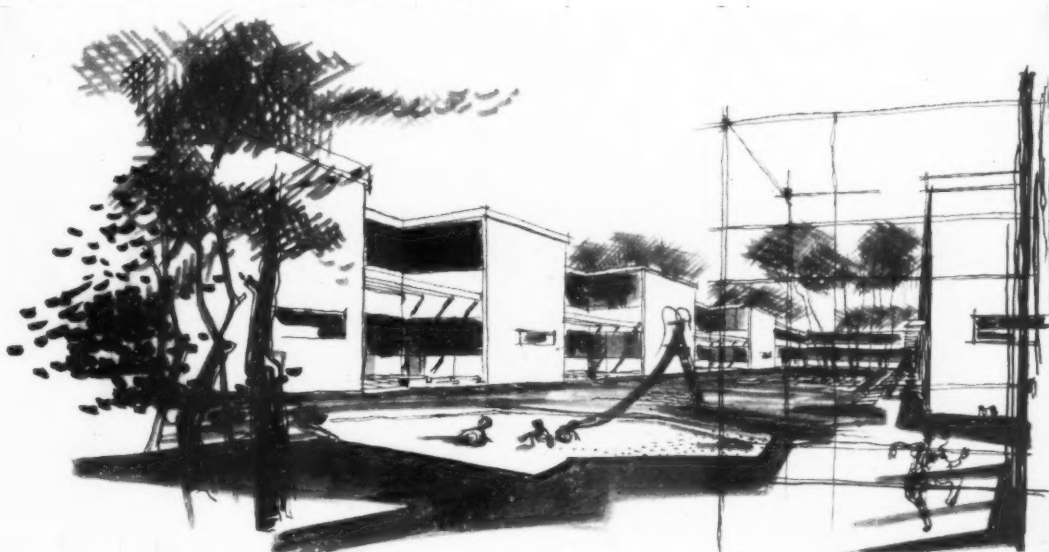
Industrial area

The form of development in the industrial area is a linear growth adjacent to the main road and rail arteries so that goods can be delivered and taken away without disturbing the other activities of the town. The density is 60 persons to the acre for the 12,000 industrial population. As in Garnier's *cité industrielle* it is separated from the main urban area by a park, in this case linear, acting not only as a buffer between the industrial and residential areas but also providing in all cases, close at hand, a recreation space for the working population. It should be noted that small industrial enterprises are to be allowed to develop in the residential areas.

Open Space

Most of the open space is sited to preserve the compactness of the town. In view of the high density, the size of the town and the nature of the residential areas, it is felt that the linear parkway and the town park are sufficient open space for the population.

A typical residential area, seen from the pedestrian way.



The large recreation areas for both the comprehensive school and the adult population are sited outside the peripheral town road where they can be integrated in the countryside.

Communications

The separation of pedestrian and motor traffic is one of the governing factors in the design of the town. This has been achieved by conforming to the strict linear development which allows a grid-iron road and pedestrian way pattern to be superimposed on each other.

One residential area is illustrated on the diagram on page 500.

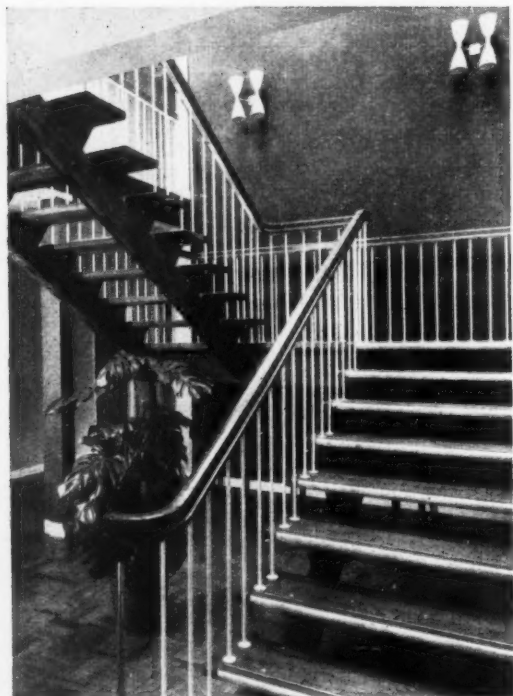
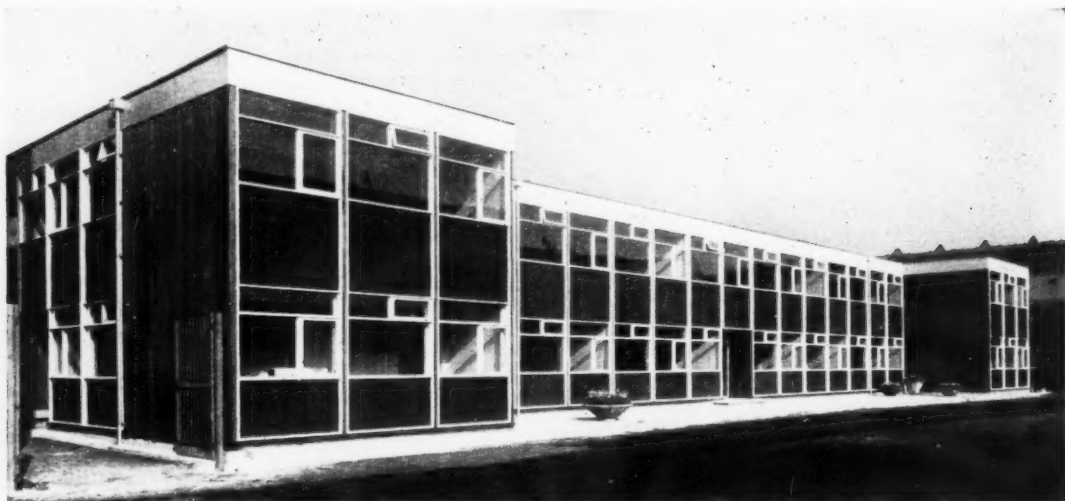
This arrangement permits an uninterrupted movement for everybody in any particular strip along its whole length, a journey of no more than 10-12 minutes, making most journeys worthwhile on foot. Yet, culs de sac are not more than 150 ft. from any dwelling and the 40 ft. motor roads leading to the central area or out of the town are no more than 400 ft. from any point in the strip. There are no pavements to these roads. There are cross pedestrian and cycle ways with underpasses at the roads linking adjacent strips and a pedestrian way along the central area.

The passenger railway is of a minor importance in this self-sufficient town. The station is at the western tip of the central area.

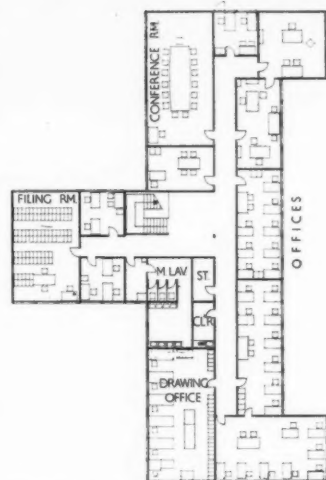
An attempt has been made to achieve the character of a city in the old Greek sense by a synthesis of building and open space which would promote community spirit and provide an orderliness sorely lacking in the New Towns. This order has been created by tying together the different areas of the town by 1. orientation, 2. accentuation of pedestrian ways, 3. standardization of building heights, 4. the creation of a pattern of terrace and detached houses, 5. three-storey terrace slabs running east to west are used to link the residential strips visually. On the periphery they define distinctly the boundary of the town.

The plan has been conceived in all its detail as an architectural unity with a truly urban environment.

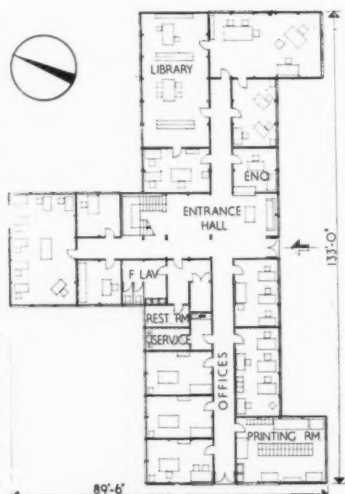
OFFICES FOR BRITISH RAILWAYS AT LONDON N.W.1



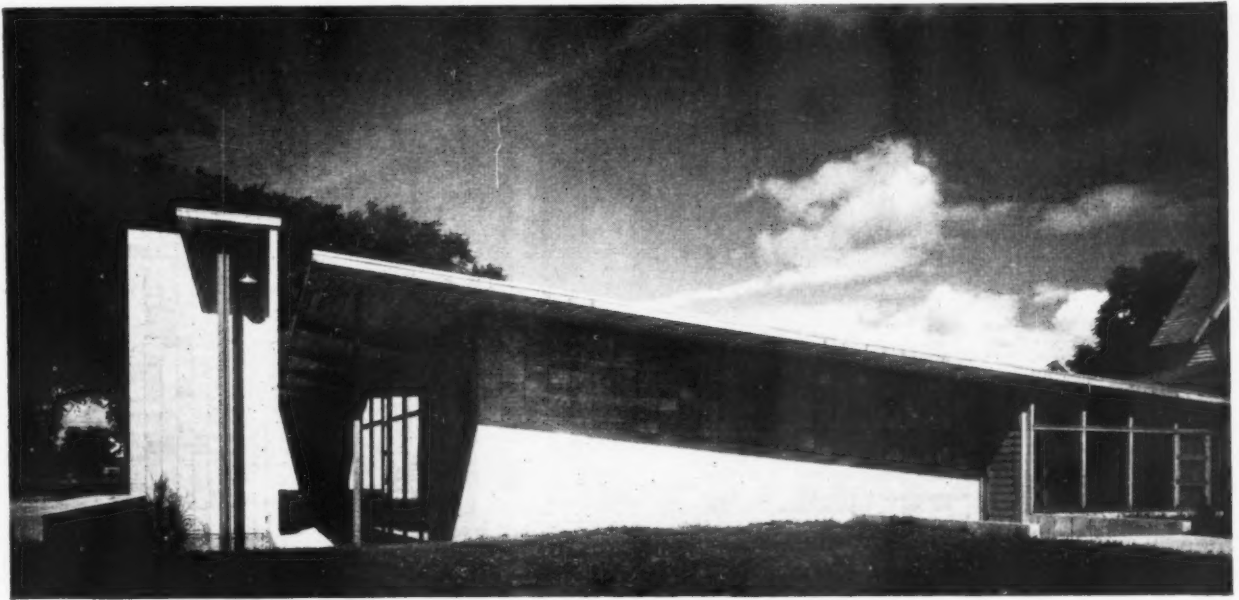
One result of the modernization plan for British Railways was that the Chief Electrical Engineer urgently needed new centralized offices. Dr. F. F. C. Curtis, the British Transport Commission's Chief Engineer, designed this two-storey building of 12,700 sq. ft. for speedy erection on a bombed site near Marylebone Station. A scheme of construction based on the use of the Derwent timber system (*AJ*, June 18, 1953) was selected. Site clearance started on September 10, 1956, and erection on November 6. The building was weatherproofed on December 10. The sub-contractors for the superstructure left the site on January 10, 1957, and the building was furnished and ready for occupation on February 21, 1957. The main entrance and southern elevation are seen above. The vertical strips are sapele mahogany; the panels are blue painted plyboard. Left, above, is the staircase, which has teak treads, strings and handrails with stove enamelled balusters. Left, is the conference room. Quantity surveyors, Newberry and Wyatt; General contractors, Bovis Ltd.; for sub-contractors see page 522.



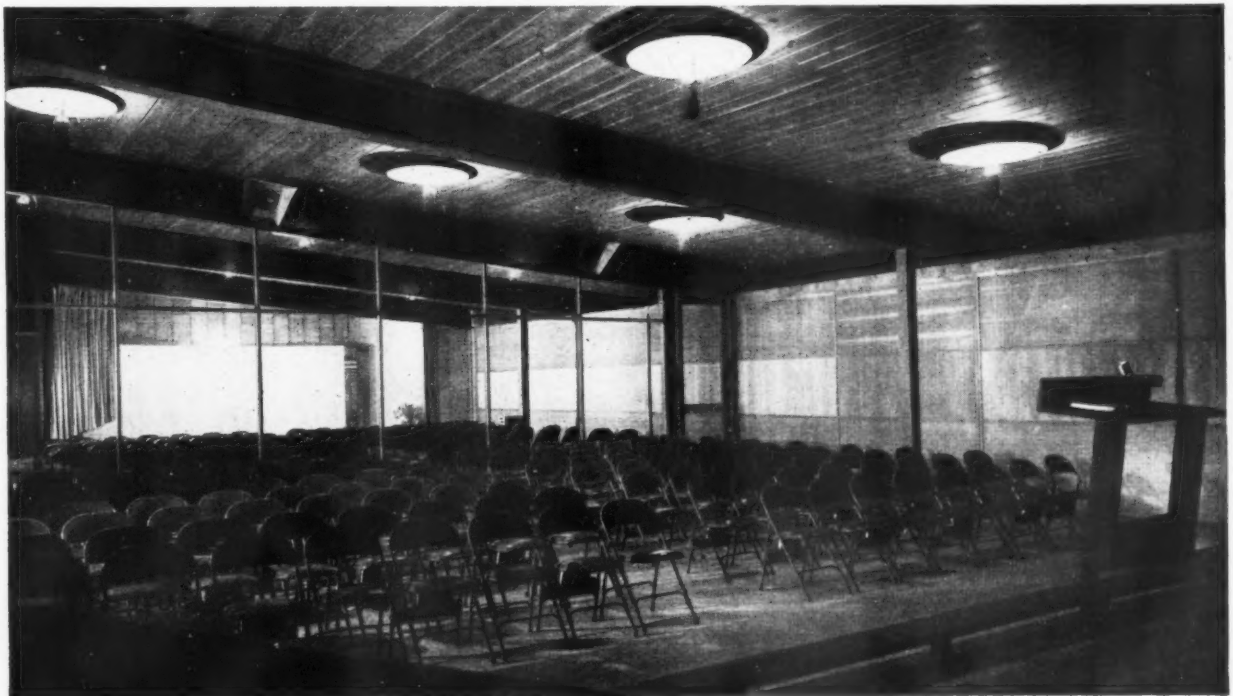
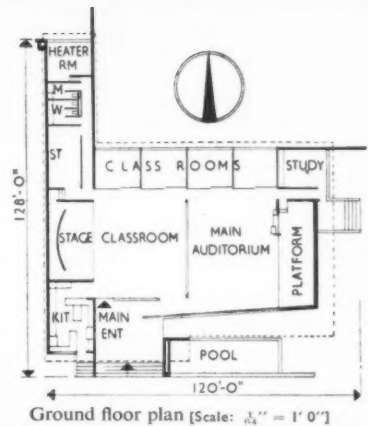
First floor plan

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

FIRST METHODIST CHURCH AT PLAINFIELD, IOWA



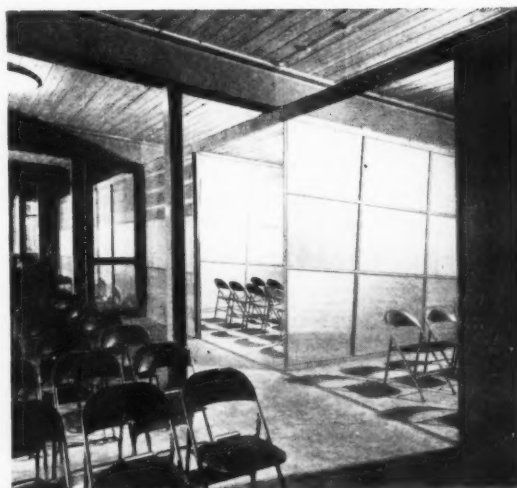
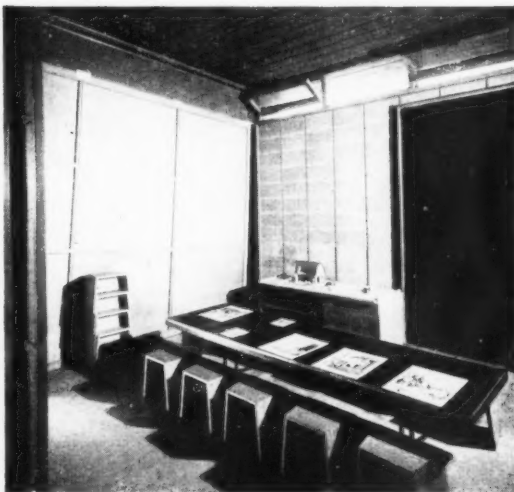
Dignity, flexibility and simplicity have been achieved by Schweikher and Elting, architects in Chicago, Illinois, in providing a wide range of accommodation at a low cost in the First Methodist Church, Plainfield, Iowa, USA. It is a small church in a small town. The principal features are, externally, the bell tower at the entrance with a reflecting pool outside (above), and, internally, the stone altar with a plain cross (page 510, top). The main assembly room (below) is the church proper. A Sunday schoolroom or social hall, of which the stage and curtains are visible in the background, is separated from it by a double glass screen. Sliding wooden doors along the north side open into four additional classrooms, which are separated from each other by partitions hinged at the top to open like garage doors. Thus



FIRST METHODIST CHURCH AT PLAINFIELD, IOWA: continued



the building can be sub-divided in many different ways. The congregation numbers 225 in a population of 300. The attendance on an average Sunday is 90, but on holidays may reach 200. The main assembly room seats 144; the Sunday schoolroom seats 90, and may be used during services either by an overflow congregation or by mothers with children. They are separated acoustically from the rest of the congregation by the screen, but can hear the Minister on the public address system. For Christmas or Easter services, or events requiring more capacity than can be provided by the church and social hall, the classrooms may be opened up entirely to increase the available floor area. Above, left, is the east end of the main assembly room, with the altar, while the two illustrations on the right show, above, a classroom used as nursery school, and below, two classrooms opening off the main assembly hall. The sliding doors, hinged partitions, and glass screen separating the main assembly hall from the Sunday schoolroom can also be seen. A study is provided for the Minister, while a heater room, toilets, store, kitchen and stage are ranged along the west wall. The roof slopes down from north to south, the ceiling heights varying from 13 ft. at the south wall to 10 ft. at the classroom doors, and 9 ft. at the classroom external walls. The materials used are concrete blocks for the external walls, steel joists and wood. The school cost 67,000 dollars, or £23,928, and the cost per sq. ft. is given as 11 dollars, or 78s. 6d.

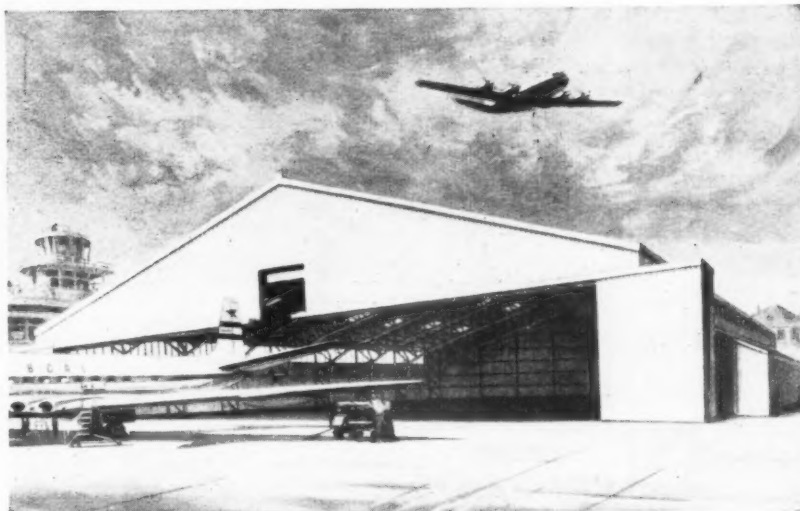


THE INDUSTRY

From the industry this week Brian Grant reviews a new standardized aircraft hangar, a light-weight roofing sheet and slates, both made from asbestos cement, vacuum concrete, a manual on prestressed concrete, progress in pulverized fuel-ash, a vertical car parking system, a bitumen-resisting paint, colour ranges for cookers, and a new boiler.

STANDARDIZED AIRCRAFT HANGARS

Messrs. Sanders & Forster have for some time been producing standard steel buildings, and have now added to their range a standard aircraft hangar which is available with spans of either 120 ft. or 145 ft., with an eaves height of 24 ft. Main frames of the buildings are spaced at 20 ft. centres and the length of the hangar can be any multiple of this figure. Manually operated sliding doors of 20 ft. high are provided across the full width of the building at one or both ends, and at the centre of the door opening there is an electrically-operated gate to give added clearance for aircraft with high tails. Side extensions, or lean-tos, 20 ft. wide can also be provided and may be used as workshops, stores or offices without obstructing the main floor areas. Lighting is provided by patent glazing either in the roof or in the side walls and for the roof and wall covering, any type of corrugated sheeting can be used provided it will span the 4 ft. 6 in. between the standard purlins. Lighting can, of course, be provided by translucent plastic sheets as an alternative to the patent glazing. The main frames of the hangar are designed as two-pin portal arches and all single components



The standard steel-framed aircraft hangar, produced by Sanders & Forster, which can be clad with any type of corrugated sheeting.

can be manhandled: special lifting tackle is only required for hoisting the main frame. Delivery of these buildings can be made in two or three months. (Sanders & Forster Ltd., Staffa Works, Leyton, London, E.10.)

DEVELOPMENTS IN ASBESTOS CEMENT

The Universal Asbestos Manufacturing Co. Ltd., has recently announced a new light-weight roofing sheet which is known as the Unex. This is produced in a single standard size of 5 ft. $\times$ 20½ in. and the thickness of the material is only ⅝ in., the weight of each sheet being just over 14 lb. The purlin spacings should not be more than 2 ft. 6 in. and the sheets are recommended for the roofing of small structures, such as bungalows, and garages, and are also suitable for wall cladding. The manufacturers also suggest that these sheets should find a ready use abroad as they are easy to transport and simple to handle.

Universal are also now producing Duchess size slates, 24 in. $\times$ 12 in., in a blue-grey colour. The slates are supplied ready holed and are fixed by two nails and also by a copper disc rivet through the tail. (The Universal Asbestos Manufacturing Co. Ltd., Tolpits, Watford, Herts.)

VACUUM CONCRETE

The vacuum process for the production of high-strength concrete was originally evolved in America, but the necessary equipment is now available here. The high compressive strength demanded nowadays in structural concrete generally depends on the use of a dry mix which needs careful placing and a considerable amount of mechanical vibration as it is very difficult to work by hand. In the American method, surplus water is extracted from the mix by a vacuum instead of waiting for it to dry out, and, as a result, a wetter and more manageable mix can be used without loss of strength.

In the vacuum process, the shuttering is lined internally with a layer of wire gauze on which is a layer of filter cloth, so that there is an air space of about ¼ in. all round the placed concrete. This air space is connected by flexible pipes first of all to a separator tank which holds the water drawn off from the concrete, and then to a vacuum exhaust unit. The concrete is placed in the usual way and vibrated to eliminate the air voids, after which the vacuum is applied. Atmospheric pressure on the outside of the shuttering causes the moisture contained in the mix to pass out through the filter cloth and wire gauze and into the separator tank,



ARCHITECT'S OWN HOUSE

'Grantchester,' Pedmore, Stourbridge, for Harold A. Kay, F.R.I.B.A

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the process being continued for up to about thirty minutes, depending on the type of unit being cast. The process is equally applicable to horizontal surfaces such as floors, and has the advantage that shuttering can be struck more quickly and that the concrete develops its final strength more rapidly. (Millars Machinery Co. Ltd., Vacuum Concrete Division, Pinner's Hall, Great Winchester Street, London, E.C.2.)

PRE-STRESSED CONCRETE

The Lee-McCall system of post-tensioning concrete members employs comparatively large diameter bars as opposed to wires, the ends of the bars being threaded and provided with nuts to take the stress after the bars have been tensioned with a hydraulic jack. The manufacturers have now issued a post-tensioning manual of some 80 pages, replacing the original notes which were published some time ago. The manual starts off with the design of typical reinforced concrete beams and continues with useful information on the detailing of reinforcing bars and the techniques used for post-tensioning. There are also useful tables on the properties of rectangular and I-beams as well as information about concrete mixes and specifications. A useful publication. (McCall's Macalloy Ltd., Templeborough, Sheffield, P.O. Box 41.)

LIGHTWEIGHT AGGREGATES

Since their preliminary announcement of eighteen months ago, the Cementation Company has had erected at Battersea Power Station, by Sinterlite Limited, two kilns to convert all pulverized fuel-ash produced there into a lightweight aggregate known as Terlite, which has a density varying between 48 and 55 lb. per cu. ft., depending on the size. Test results so far obtained have shown that it is possible to make building blocks with strengths up to 3,000 lb. per sq. in., in which both moisture movement and drying shrinkage can be kept as low as 0.025 per cent. Further experiments with other types of pulverized fuel-ash are to be carried out and it is possible that other plants will be set up at strategic points throughout the country, presumably near major power stations, in order that the aggregate may be generally available to the building industry. (The Cementation Co. Ltd., 20, Albert Embankment, London, S.E.11.)

CAR PARKING

Whatever the ultimate solution to the car parking problem may be, it is obvious that there will always be a number of people prepared to pay more than street car parking charges in order to be able to leave their cars in the centres of large towns. Wadsworth's, the lift people, have evolved, in conjunction with R. S. Pearce & Co. Ltd., of Birmingham, a system of vertical car parking which reduces the non-productive floor area needed to handle the cars to only 20 per cent. of the whole, with a capital

outlay of about £200 per vehicle space, both these figures being believed to be lower than for any other systems. The garage shown in the illustration accommodates some 250 cars on five floors within a plan area roughly 31 yd. × 25 yd., and, at peak periods, cars can be handled in or out at the rate of about one every 30 seconds. Two lifts are used, and on the upper floors the cars are manhandled on to traversing trolleys and moved sideways until they are opposite the appropriate bay. There are eight bays on each floor, and each bay holds six cars, in two rows of three cars each. Since there are two traversing trolleys on each floor, the car in the back row can be removed without any particular difficulty. (William Wadsworth & Sons Ltd., Bolton, Lancashire.)

BITUMEN RESISTING PAINT

Evotect is a new paint which can be applied direct to bitumen painted surfaces without the use of a sealer or special undercoat, provided that the bitumen is at least fourteen days old. The covering capacity is between 60 and 70 square yards per gallon and the paint is surface dry in six to eight hours and hard dry by the following day. The paint is available in twelve colours and in black or aluminium, and the manufacturers claim that it retains its gloss far better than bitumen-based paint. One coat is as a rule enough for normal atmospheric conditions and the paint should be useful for park railings, downpipes or other situations where a plain black bitumen has produced a rather depressing appearance. (Evode Ltd., Stafford.)

AGAS IN COLOUR

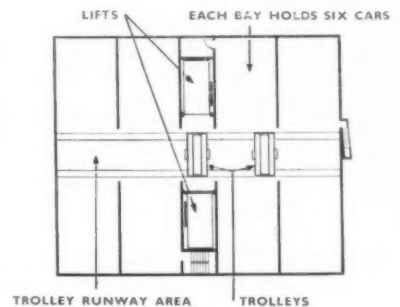
Readers will probably remember that some months ago the design of the Aga was tidied up to a certain extent and both the cookers and boilers are now available in a range of colours. The original Aga colours of a cream base and a black hotplate always seemed to me perfectly satisfactory, but for what it is worth, you can now buy the same thing in blue, green, grey or white, or in combinations of these colours, which presumably means that the cooker body may be one colour and the doors may be a different one. (Aga Heat Limited, Orchard House, London, W.1.)

NEW IDEAL BOILER

The photograph on the right shows one of the Ideal No. 2 series Neo-classic boilers which is similar to the existing No. 1 series, but is larger and with an increased heating surface. The new series which is finished in black and cream enamel is available in six sizes with ratings from 65,000 to 135,000 b.t.u.'s per hour. When the boiler is to be used with an oil burner a blank plate is fitted in place of the ash-pit door and a special lift-up fire door with an observation window. The prices start at £45 10s. for the manually-controlled model, £47 1s. 6d. for the thermostatic version, while the oil-



Above, a car leaving the lift and running on to the distributing trolley (see plan below) at the vertical car parking garage designed by William Wadsworth & Sons Ltd.



fired model is £42 13s. 9d., though this figure does not of course include the cost of the burner. (Ideal Boilers & Radiators Ltd., Ideal House, Great Marlborough Street, London, W.1.)

The Ideal No. 2 Series Neo-Classic boiler.



Time and money are being saved
wherever you see this sign...



ANOTHER BISON CONTRIBUTION TO STILL SPEEDIER AND LESS COSTLY BUILDING, Wide Slab is virtually several BISON floor beams in a single slab. Increased strength/weight ratio reduces cost and because slabs as large as 18' 0" x 7' 2" can be hoisted in one piece, valuable savings in time can be achieved.

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CON.86

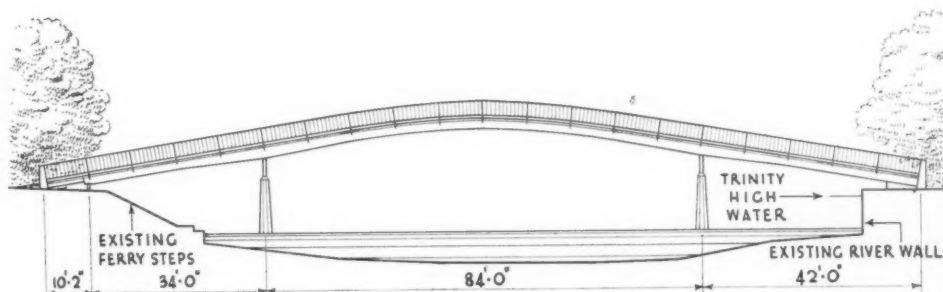
FOOTBRIDGE AT EEL PIE ISLAND, TWICKENHAM

A precast prestressed concrete footbridge of considerable character has been built at Eel Pie Island, Twickenham, for a private client, the owner of the Eel Pie Island Hotel, to replace the ferry which existed at that spot for several hundred years. This bridge is the first new bridge over the lower Thames since the reconstruction of Waterloo bridge (1942) and it is probably the first bridge on a new site since Lambeth bridge was built (1933). It was opened on February 9 by the Mayor of Twickenham. The bridge has a



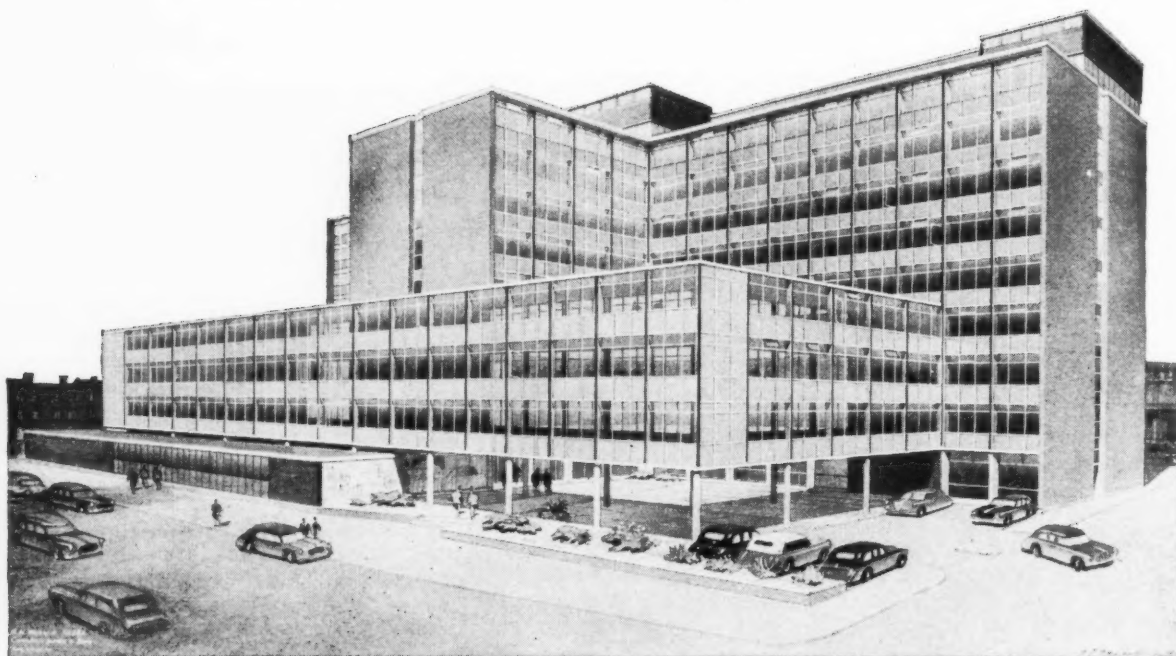
centre span of 84 ft. with two spans of 34 ft. and 10 ft. 2 in. on the one side, and a single span of 42 ft. on the other side. It is 6 ft. wide, with an overall height of 5 ft. 6 in. An unusual amount of longitudinal camber is provided in order to give the navigation clearance required over a 60-ft. width of waterway, without having long approach ramps on each bank. Precast prestressed construction was used to avoid working with in-situ concrete over the river. The deck consists of two beams, made up of factory-precast concrete T-sections 8 ft. long, coupled transversely by 4-in. thick precast reinforced concrete diaphragms and prestressed together on the Gifford-Udall-CCL system to form a continuous structure. The beams rest on in-situ concrete abutments and precast river piers; they are fixed at one end but are free to expand over precast concrete rockers on the other supports. Uplift at the beam ends is prevented by prestressing wires cast into the abutment at the fixed end and passing through the end anchorage blocks. At the free end of the bridge these wires pass through the precast concrete rocker bearing. Each of the precast concrete piers is founded on two blunt-ended reinforced concrete piles 12 in. by 12 in. and 20 ft. long, driven into the London clay. Particular care was needed in setting

these piles as a sewer passes beneath the river, very near to the bridge site. At the suggestion of the contractor the river piers were precast in three sections. These sections, each of which weighs 3 tons, were floated out on the pile-driving barge and placed by means of chain blocks hanging from the scaffold centering. The piles and the pier units are joined together by grouting mild steel bars in 6-in. diameter ducts, which pass vertically through the pier sections, and form a monolithic construction capable of resisting heavy blows from vessels or debris carried down by the ebbing tide. The piers are chamfered at each end so as to offer little obstruction to the stream. The whole operation of driving the piles and placing the piers took only 10 days. The deck beams are designed to be continuous over the three spans for the dead load and for the live load of 60 lb. per sq. ft. The precast units were assembled on a centering of scaffold tubes driven into the river bed by hand—a method which proved entirely satisfactory—and were arranged



Elevation

Building by the South Bank



Near to Waterloo and adjacent to Westminster Bridge Road, this imposing office block is rapidly being completed by Richard Costain Limited. It will make a major contribution to the attractive new development now taking place in the Borough of Lambeth.

The architect is R. N. Wakelin, F.R.I.B.A. of Campbell Jones and Sons.

The structural design by E. J. Cook & Co. (Engineers) Ltd., calls for the use of Stahlton pre-stressed floor construction which will give a continuous flat soffit to the ceiling of this nine-storey building.

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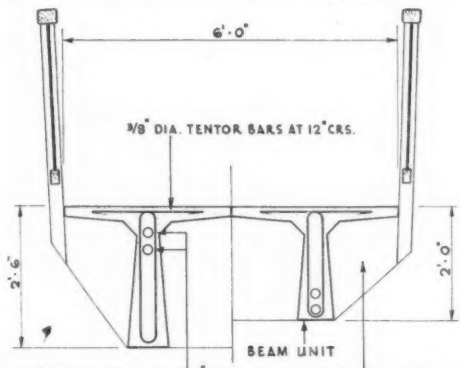
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FOOTBRIDGE AT TWICKENHAM: continued



with joints of not less than 1 in. between them. The joints were caulked with very dry mortar of equal parts of cement and sand. In the curved portion of the bridge the width of the joints increased to about 2 in. at the top. These wide joints gave some initial difficulty as the top flange sections tended to fall out but this was overcome by reinforcing the joint with a short length of $\frac{1}{4}$ -in. diameter mild steel bar and by leaving a soffit shutter board under the joint until it had hardened. The cable ducts were formed through the joints by short lengths of tube connected to lengths of $\frac{1}{4}$ -in. diameter air hose. Each of the two beams has two 160-ft. long Gifford-Udall cables, arranged in a single curve and following approximately the same route. There are twelve 0.276-in. diameter wires in each cable. These cables were drawn through the ducts without difficulty by means of a hand winch. The anchor blocks were cast in two sections and were joined together, in position, by transverse prestressing. Prestressing of the beams was carried out from each end. An allowance of 20 per cent. had been made in the design for the loss of prestress from the anchorage to mid-span owing to friction. The actual loss was found to be 16 per cent. After stressing was completed the cables were grouted, using neat cement grout with "Combex" admixture. The grout was injected with a small diaphragm pump from each anchorage to a vent-hole at mid-span. Douglas fir was used for the posts and rails and



2 No 12/0-276" DIA. G-U CABLES IN 2" DIA. DUCTS
Section

mild steel rod for the uprights. The total construction time for the bridge was three months. The consulting engineer was E.W.H. Gifford. The main contractor was Reed and Mallik Ltd., and the manufacturer of the precast units the Liverpool Artificial Stone Co. Ltd.

INFORMATION CENTRE

A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.

9.61 design: general FIRE HAZARDS

Fire hazards associated with the thermal insulation of buildings. Technical Information Sheet 4002.

Spread of fire by bituminous roof coverings. Technical Information Sheet 4004. (Fire Offices Committee, Fire Protection Association, 15, Queen Street, E.C.4, free.)

Two publications hastily prepared to hammer home the lesson of the Jaguar fire. Briefly this lesson is: if you must use a bituminous roof covering, don't lay it on a combustible deck and don't underdraw it with a combustible lining: when you use insulating linings, make them of incombustible material (e.g., plasterboard, asbestos insulating board or woodwool cement slabs) and, if possible, fix them flat against the main wall or roof, without an air space behind: when you cannot avoid an air space, break it up into small sections by means of strips of timber at least 2-in. thick to serve as firestops: don't forget to provide firestops at wall, floor and ceiling junctions.

15.140 materials: applied finishes and treatments DAMP-PROOFING GROUND FLOORS

Hot applied damp-resisting coatings for solums. BS 2832:1957. (BSI. 3s.)

In Scotland it is the practice to cover the earth beneath the ground floor with a layer of hardcore (4-6 in.) blinded with ashes (2 in.) and to cover with a waterproof treatment. The purpose of this Standard is to specify the materials to be used for three common treatments. These are (1) Coal Tar Pitch, (2) Pitch-sand Mixture, (3) Asphaltic Bitumen. Two appendices give useful notes on how they should be applied.

19.205 construction: details SHRINKAGE CRACKS IN WALLS

Avoidance of cracking in masonry construction of concrete or sand lime bricks. BRS Digest No. 6 (Revised), January, 1957. (HMSO. 3d.)

Re-publication of a Digest first published in 1949. More specific advice is given on methods of designing joints which will take up shrinkage. With facing bricks, form a vertical zigzag caulked with a mastic compound; with a wall which is to be rendered, build in a vertical felt d.p.c.

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26 SERVICES AND EQUIPMENT: MISCELLANEOUS

The Clean Air Act, 1

The Clean Air Act became law on July 5, 1956, and on the last day of last year (as we remarked in our leader of January 10, 1957) most of its provisions came into force. We have therefore asked Dr. G. E. Foxwell, C.B.E., a Past President of The Institute of Fuel and a member of the Committee on Air Pollution which framed the Act, to set down in two articles what the Act means—or ought to mean—to the practising architect. In this first article he considers the general effect of the Act and describes in some detail how it will apply to domestic premises. In his second article he will describe its application to the potential smoke maker whose equipment exceeds 55,000 B.Th.U. rating i.e., to the industrial user.

The objective of the Clean Air Act is to prevent as far as possible the discharge of smoke, grit and dust into the atmosphere from domestic or industrial premises. The Act refers to pollution arising from the combustion of fuel, other forms of pollution being dealt with by legislation already on the Statute Book. The qualifying phrase "as far as possible" is here used because the Act does not insist on impracticable standards and regards cost as one of the criteria of what is practicable.

The general effect of the Act is to cause industry, using the word in its widest sense, to refrain from making unnecessary smoke and to reduce materially the emission of grit and dust by using known technical means of operating efficiently boilers, furnaces and other plant in which fuel is burnt or treated, and installing new or additional plant where necessary; and to cause the domestic consumer to burn only smokeless fuels and to instal new appliances for burning it when necessary, in areas specified by the local authority for the district.

SUMMARY OF THE ACT

Although the Clean Air Act became law in July, 1956, not all of its provisions are yet in force. Very broadly, the domestic smoke provisions came into force on December 31, 1956, while the "appointed day" for most of the industrial provisions has not yet been announced, but is expected to be in the early months

of 1958. The industrial provisions already brought into force allow temporary exemption from the obligation not to make a heavy smoke, give power to the Minister to insist on the installation of smoke density meters in specified cases and make it an offence to instal new furnaces that are not capable of smokeless operation on the fuel for which they were designed. The local authorities have powers to control the height of new chimneys.

It is important that everyone likely to be affected, industry and domestic consumers alike, should put in hand now the preparations for whatever should be done to enable them to comply with the Act. Some of the provisions, such as the provision of smokeless fuels, the correct operation of plant and the management of locomotives and colliery spoil-banks, are not likely to come within the province of most architects. Architects may be affected, however, by many of the provisions relating to structures, plant and appliances, and for a full understanding of these it is necessary to read the detailed account that follows. This introduction is concerned with the broad outlines only of the general effect of the Act when wholly in force, in order to provide what might be described as an aerial photograph of the terrain to be covered.

Administration: the Act will be administered by local authorities under the general direction of the Ministry of Housing and Local Government and up to July 5, 1963.

Dark smoke: no one will be allowed to emit "dark smoke" from any chimney, domestic or industrial (Section 1 of the Act). This provision is not yet in force. It is subject to certain easements for industrial plant which will be described in the second article, but which concern the operation of plant rather than its construction. "Dark smoke" is defined as smoke equal to or darker than No. 2 on the Ringelmann Chart* (see overleaf) (Section 34(2)). A British Standard Chart is in course of preparation. The term "Chimney" includes "structures and openings of any kind" (Section 34(1)).

The local authority may grant temporary exemptions annually for seven years from the dark smoke provision where it is not practicable to make the necessary alterations at once (Sections 29 and 2).

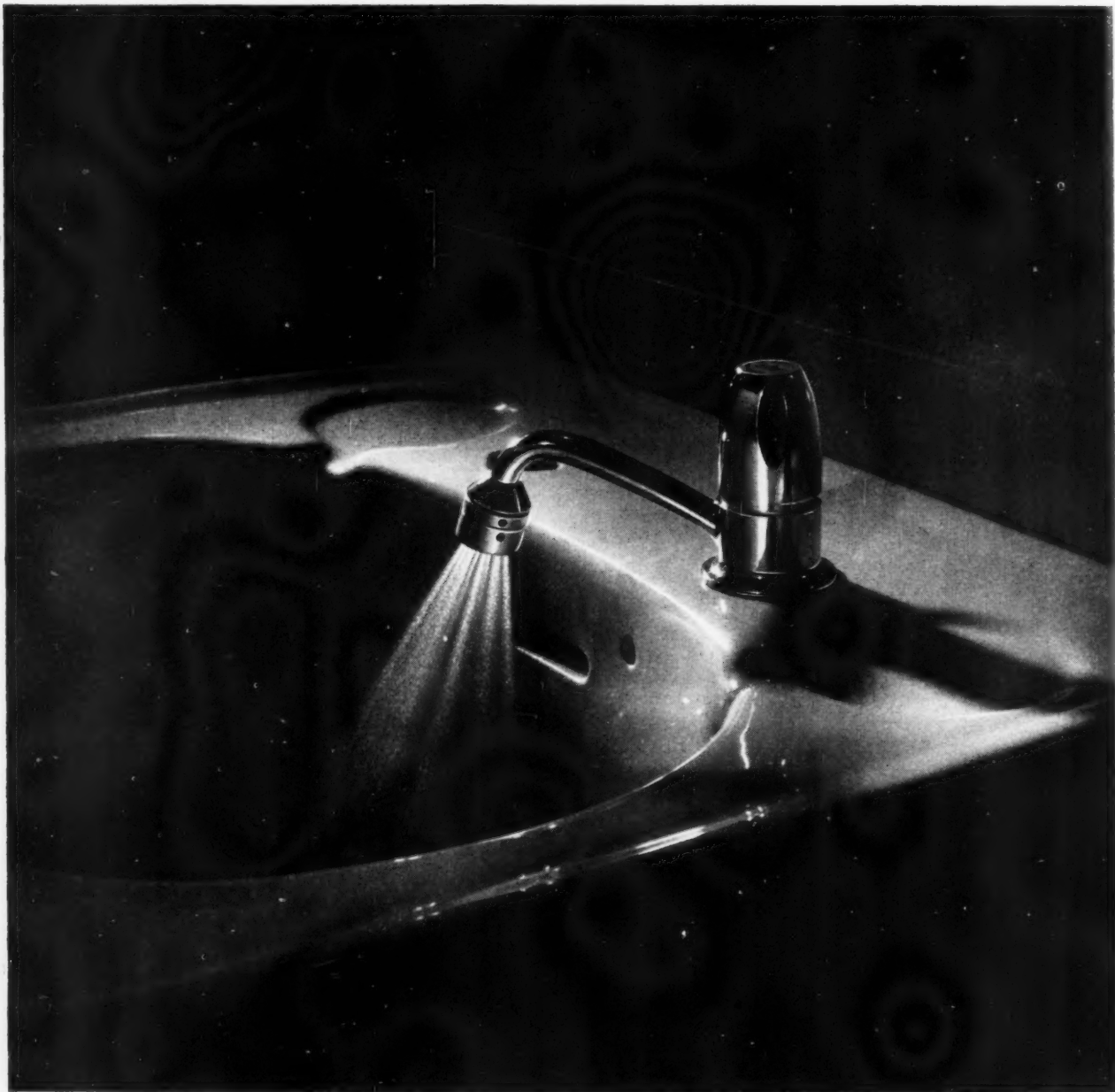
New industrial furnaces: notice must be given to the local authority of the intention to instal a new industrial furnace or to make extensions to an existing furnace (Section 3(3)).

New furnaces must be capable of being operated without making smoke of any sort (Section 3).

If the local authority gives prior approval to the plans, that approval is regarded as satisfying this requirement; but it is not obligatory to secure prior approval of the design.

Grit and dust: the owners of industrial furnaces must use any practicable means there may be for minimizing the emission of grit and dust from any chimney which serves the furnace or oven.

*Copies of this chart can be obtained from Charles Griffin & Co., Drury Lane, W.C.2 (Price for a minimum order of 3 copies) 2s. 6d. Explanatory leaflet 2d. extra.



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hot or cold at a turn. Add a spray nozzle and you wash in running water using only four pints instead of a gallon or more. "Unatap" was designed by our technical staff in collaboration with the Building Research Station and is presently in production.

You will be hearing more about this as it gets into the news but if you want to know now write for Pamphlet U/2,

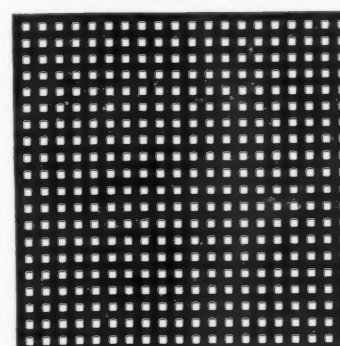
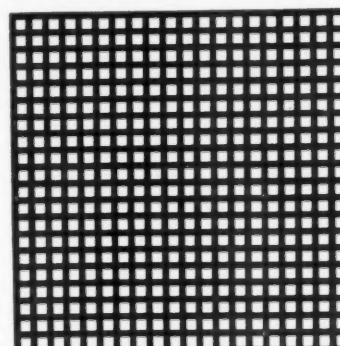
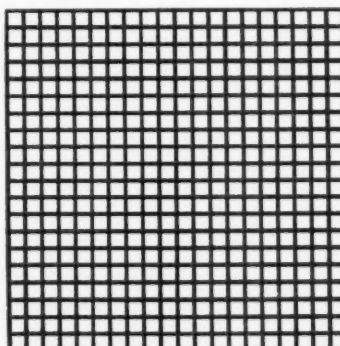
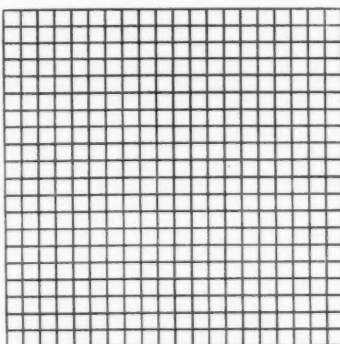
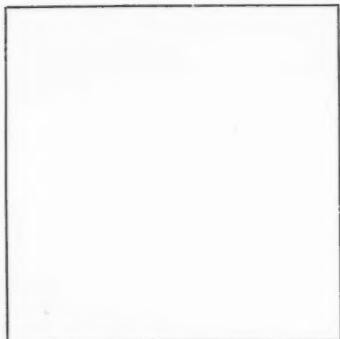
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technical section

We reproduce (left) a Ringelmann smoke chart reduced to approximately one-half full size. The ratings of the squares, reading from top to bottom, are 0, 1, 2, 3 and 4. The middle square is therefore the criterion for "dark smoke." The full-size chart should be pasted to a board and set up on a line of sight to the outlet of the stack to be tested. The chimney and chart should be viewed from about 50 ft., preferably on a sunless day and always in such a way that both have the same background.



This applies to all industrial furnaces (Section 5(1)).

Every furnace which burns pulverized fuel, or burns any other fuel at the rate of one ton an hour or more, must be provided with plant for arresting grit and dust (Section 6).

If several furnaces are attached to one chimney, for the purposes of the grit and dust provisions if under the same ownership they are regarded as one furnace (Section 34 (7)).

Height of industrial chimneys: the local authority, subject to appeal to the Ministry, are given powers to insist that the height to which new chimneys may be built shall be such as adequately to disperse pollutants emitted therefrom (Section 10).

Distinction between industrial furnaces and domestic appliances: "domestic" appliances or "furnaces" are defined as "furnaces or boilers with a maximum heating capacity of 55,000 B.Th.U. an hour" (Sections 5(4) and 5(3)). The position of a furnace not attached to a boiler is not defined; it would presumably be regarded as an industrial furnace.

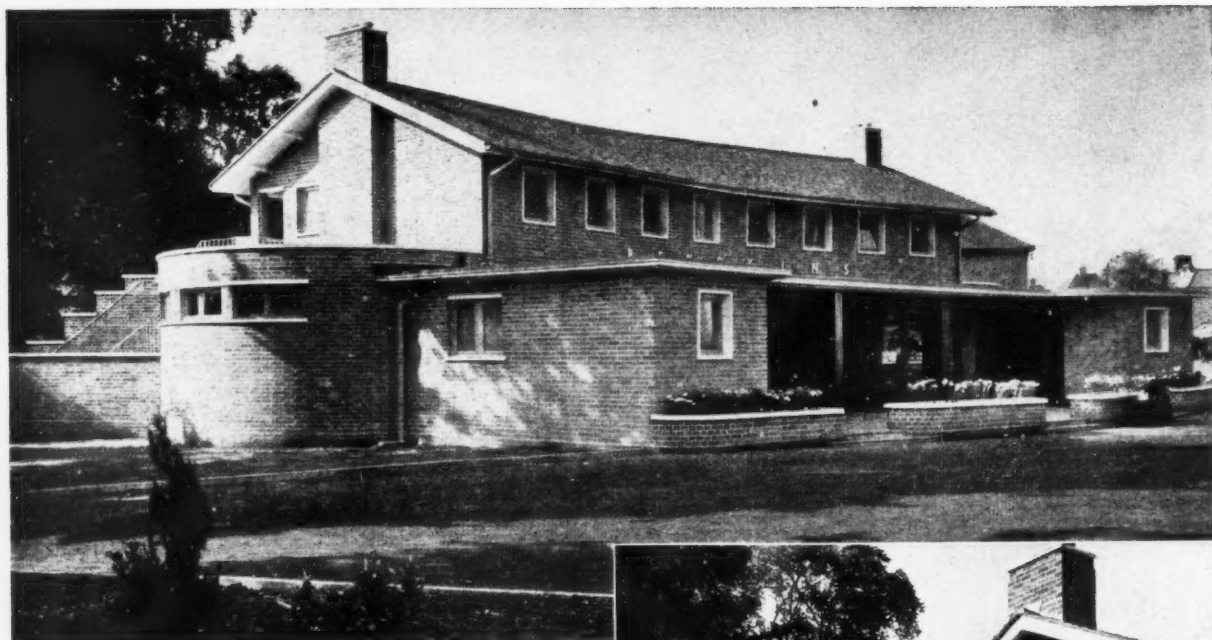
"Difficult" processes: certain processes, the list of which is not yet announced, will be put under the Alkali Inspector until "practicable means" are found by which they can be made to comply with the dark smoke, grit and dust provisions of the Act.

Domestic smoke: the requirement to make no "dark smoke" is obligatory on domestic premises. Local authorities are empowered, subject to appeal in the event of opposition, to institute "smoke control areas" where no smoke whatever may be emitted from any chimney (Section 11(2)), unless exempted by an order of the local authority (Section 11(3)) or by the Minister (Section 11(4)). This means that the domestic consumer must use smokeless fuels exclusively (Section 11(2)).

There is machinery now in force for relaxing the requirement on industrial processes to make no smoke in a smoke control area while retaining the other industrial provisions of the Act.

Because most appliances installed in private houses are not suitable for burning the smokeless fuels that will be available, provision is made for the voluntary or compulsory replacement of unsuitable appliances in smoke control areas and for the cost to be shared in the proportion: Owner or occupier, not more than 30 per cent.; local authority, at least 30 per cent.; Ministry, 40 per cent. (Sections 12-15).

Building byelaws: building byelaws may require the provision in new buildings of such arrangements for heating or cooking as are calculated to prevent so far as practicable the emission of smoke. This provision is now in force.

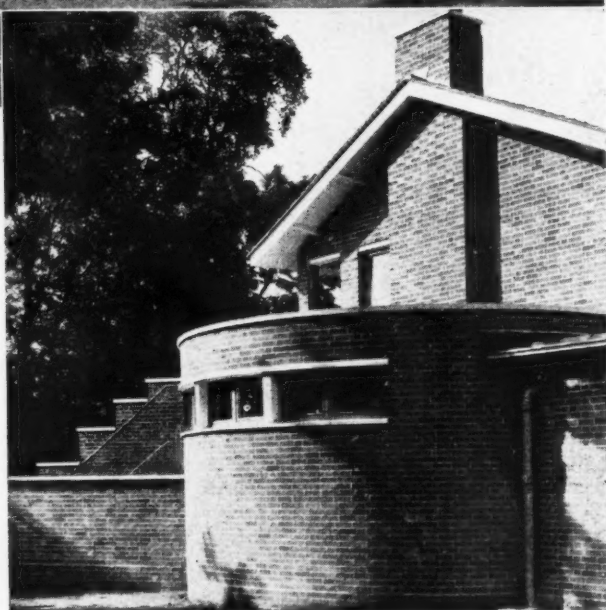


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technical section

Other provisions: among the provisions not referred to in this introduction are:

- (a) The grant of powers to local authorities to make grants towards adaptations of fireplaces in churches, chapels and charitable buildings (Section 15);
- (b) Amendment of the law of nuisances in relation to smoke emitted other than through a chimney (Section 16);
- (c) Application to colliery spoil-banks (Section 18), railway engines (Section 19), vessels in port (Section 20) and Crown Premises (Section 22);
- (d) Exemption for purposes of research (Section 21);
- (e) Obligation to set up a Clean Air Council (Section 23);
- (f) Penalties (Section 27).

Other clauses, mainly incidental to the working of the Act, will be dealt with in what follows.

This quick look at the main provisions of the Act can do no more than give a general idea of its general effect. There is a great deal more to be said if the provisions are to be understood and appreciated. There follows here a more detailed discussion confined mainly to the domestic and industrial provisions, and omitting matters not likely to concern the architect in his work.

SULPHUR

In view of their effect on building materials, it may be useful to indicate that the emission of oxides of sulphur is already within the province of the Alkali Inspector, but is not referred to in the Clean Air Act for the reason that there are no known practicable means by which oxides of sulphur (almost entirely emitted as sulphur dioxide) can be prevented from entering the atmosphere when fuel is burned. Processes are known or are under examination whereby the flue gases from perhaps a dozen of our power stations—but no more—could be washed for renewal of 95 per cent. of their sulphur content at a small additional cost. The use of electricity for heating increases the amount of sulphur oxides emitted into the atmosphere because additional coal is needed at the power station. Town gas is almost free from sulphur, this being a legal requirement.

It is by no means certain that sulphur oxides will do a great deal of harm once smoke is largely removed from the atmosphere. The evidence put before the Beaver committee on corrosion of metals, decay of buildings and health indicated that in the absence of solid particles on which the sulphur oxides could be absorbed, the action of sulphur was much less marked. The first step is to remove the smoke; it may then be found unnecessary to remove the sulphur, even if by that time we have discovered satisfactory means of doing so. The industrial health limits for exposure to sulphur dioxide for periods of eight hours or so is 10 p.p.m. (parts per million), whereas at the height of the London smog of 1952, the maximum concentration of sulphur dioxide found in the air was no more than 1.3 p.p.m., the normal for large towns being less than one-quarter of this.

ADMINISTRATION OF THE ACT

The Act will be administered by the Ministry of Housing and Local Government, and the Secretary of State for Scotland respectively, and with certain exceptions detailed enforcement is the duty of the local authority in whose area any particular premises are situated (Section 29). The exceptions concern, first, those few industrial processes which cannot comply with the Act because there is no known "practicable" means of doing so; these are put under the Alkali Inspector, and the Alkali Act of 1906 is extended to apply to smoke, grit and dust from premises on which these processes are operated (Section 17). As soon as means are found that enable compliance with the Act, each of these processes will be brought under the normal provisions of the Act, administered by the local authority.

Crown premises are another exception; here the local authority must report contraventions of the Act to the "responsible Minister" (Section 22). Building byelaws may—and probably will—require the provision in new buildings of arrangements for heating and cooking that will prevent "so far as practicable" the emission of smoke (Section 24).

The various provisions of the Act will be introduced on dates to be decided by the Minister. Particulars of the "appointed days" already announced are contained in Statutory Instruments 1956, No. 2022 (England and Wales) and No. 2026 (Scotland). These refer, as has been indicated previously to the "domestic" and "administrative" Sections of the Act, and only in one case to industrial, this being Section 2 which came into effect on July 5, 1956. It refers to permission given to local authorities for a period of seven years to exempt certain premises.

The word "practicable" occurs quite frequently in the Act, and it will save repetition if its meaning is indicated at this stage. The Act states:

"practicable" means reasonably practicable having regard, amongst other things, to local conditions and circumstances, to the financial implications and to the current state of technical knowledge, and "practicable means" includes the provision and maintenance of plant and its proper use (Section 34).

This means exactly what it says; no one will be asked to do what it is absurd to ask them to do having regard to all the circumstances in this definition.

The emission of "dark smoke," defined as previously stated, is forbidden absolutely from a date yet to be announced and this will apply to everyone, industrial and domestic alike, in every part of the country. Certain relaxations are allowed to industrial furnaces and these will be indicated in a second article when dealing with the industrial provisions of the Act.

In many Sections of the Act the term "smoke" is used without the qualification "dark." This refers to smoke of any kind and the two terms will here be used in this sense.

The core of the difficulty is that the domestic consumer uses some 70 million tons of coal (or other fuels in terms of coal equivalent) and the rest of the

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Illustration by courtesy of J. Harrison, Esq., A.R.I.B.A., County Architect, Surrey County Council.

Surrey Fire Brigade Headquarters, Reigate

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technical section

country uses about 160-170 million tons. It may be possible to produce enough smokeless fuel in time (say 15 years) to provide the fuel required by domestic consumers in towns. It would be utterly impossible to convert the whole of our coal and oil into smokeless fuel; consequently industry—and many other large consumers—must be permitted to burn coal. It would be possible to burn coal in industrial plant with clear chimneys. That would mean a serious waste of coal through the use of too much excess air. The best efficiency in burning bituminous coal in industrial plant is generally secured when a slight haze of smoke—well under Ringelmann No. 1—issues from the chimney. It is necessary to make this apparently technical point of fuel supply and plant operation in order to explain why a distinction must be made between "smoke" and "dark smoke," and why the domestic consumer is treated differently from the industrial consumer.

The "dark smoke" provision of the Act reads thus: Subject to the provisions of this Act, dark smoke shall not be emitted from a chimney of any building, and if, on any day, dark smoke is so emitted, the occupier of the building shall be guilty of an offence (Section 1(1)).

For a conviction to be secured it is not necessary for the comparison with the Ringelmann chart to have been made; other evidence adequate to satisfy the Court is admissible. The words "on any day" mean that if the offence is repeated on more than one day, action may be taken against the offender for each day on which he offends.

DOMESTIC SMOKE

There is no known way of preventing the emission of domestic smoke other than by burning smokeless fuel. The domestic consumer is now responsible for nearly half the smoke emitted and since his chimney is near ground level most of the smoke he produces descends on to himself and his fellows.

Smoke control areas

The Act enables, but does not compel, local authorities to establish smoke control areas over all or any part of their district. The procedure is that when any local authority has made its provisional plan, they will notify it to the Minister of Housing and Local Government. Among the more important matters to be decided is whether the available supply of smokeless fuel will be adequate. The Ministers concerned have issued identical Statutory Instruments for England and Wales and for Scotland declaring the following fuels to be authorized as smokeless fuels for the purposes of the Act.

Anthracite; briquetted fuels carbonized in the process of manufacture; coke; electricity; gas; low temperature carbonization fuels; low volatile steam coals.

The Act (Section 11(2)) makes it obligatory for the consumer in a smoke control area to use none but these fuels. In the peculiar way in which Acts of Parliament are drawn up, the Act says that it will be an offence to make smoke in a smoke control area,

but that "it shall be a defence to prove that the emission of smoke was not caused by the use of any fuel other than an authorized fuel."

When the Minister has accepted the proposal, the local authority will make a survey of the area and have discussions with such local bodies as seem appropriate in order to forestall possible opposition. That is not a provision of the Act, of course. When the Order is made, it must be published in the London Gazette and in the local Press, and posted in a number of conspicuous places in the proposed area for six weeks. If there are outstanding objections the Minister must hold an enquiry before confirming the Order (First Schedule to the Act).

Appliances in smoke control areas

There is overwhelming evidence, taking the country as a whole, that the domestic consumer demands an open fire at least in his living room, and this sets the difficult conundrum of how to provide a suitable fuel to take the place of bituminous coal, Britain's traditional open-fire fuel. Since vast numbers of old and obsolete stool-bottomed grates and not a few ancient cooking ranges still exist, their replacement is a serious problem.

It is not a provision of the Act, but a matter of national and personal importance that the new appliances that will replace the obsolete appliances unsuitable for burning smokeless fuels should be modern and efficient. This will save fuel and reduce sulphur pollution in proportion to the amount of fuel consumed. Further advances might be made by using modern combinations of coke and gas appliances for the various domestic heat services of cooking, water heating and space heating instead of trying to do it all by solid fuel. Power to do this depends on the manner in which the Act is implemented and on the restoration of hire-purchase facilities. Local authorities, landlords and the Treasury are all likely to favour replacements involving low capital costs, because the total cost of appliance replacement will be very considerable in any event. The best heat service cannot be bought for the lowest cost, however.

The Act recognizes the necessity to replace unsuitable appliances and provides for their replacement or alteration in existing dwellings. This alteration may be carried out

- (a) by the owner or occupier
 - (i) on his own initiative—Case 1,
 - (ii) in response to the service of a notice by the local authority (Section 12(2))—Case 2.
- (b) By the local authority themselves in exercise of their powers under the Public Health Act, 1936, following the default of the owner or occupier in complying with the notice—Case 3.

Meeting the cost of appliance conversions

The cost, as has been indicated previously, will be borne by the three parties concerned in the proportion: Owner or occupier, 30 per cent.; local authority, 30 per cent.; Ministry, 40 per cent. Powers are given to the local authority to meet part or all of the 30 per

technical section

cent. allocated to the owner or occupier in order to meet hardship in specific cases. In Case 1 and Case 2, above, the local authority will repay at least seven-tenths of the cost to the owner or occupier, and will receive a grant from the Exchequer in respect of 40 per cent. of the total cost.

New dwellings

No expenditure will be refunded on adapting or installing appliances in a building started after July 5, 1956. The local authority can make the installation of the necessary appliances in new dwellings obligatory under Section 24 through the Building Byelaws; that is optional.

Advice on suitable appliances can be obtained from the Coal Utilisation Council, the Solid Smokeless Fuels Federation and the Gas Council (or Area Gas Boards). The bulk of the solid smokeless fuel will in all probability be gas coke and this fact must be taken into account when selecting appliances.

In order to obtain his seven-tenths subsidy, the owner or occupier must fulfil conditions. The expenditure must be incurred with the approval of the local authority and the work carried out to their satisfaction (Section 12(1)). It is likely that local authorities will require occupiers to submit for approval a specification and detailed cost of what they propose. The expenditure must not be undertaken before the order setting up the smoke control area is confirmed; this prevents claims for a subsidy for houses outside smoke control areas. Moreover, the expenditure must be undertaken before the order comes into force; since the period between confirmation and enforcement is "not less than six months," the short time during which a large number of householders may be trying to get their appliances replaced may seem to limit the opportunity for getting the subsidy. This is not intended, however. The phrase "expenditure is incurred" is probably to be interpreted as "an order is placed for the work." Moreover, if for good reasons the necessary adaptations cannot be made within the limited period allowed, the owner or occupier of the house can apply to the local authority to issue a notice to him requiring the work to be done; he will then receive a grant in respect of the work he is notified to do. This comes under Case 2 mentioned previously. The powers given under the Act to local authorities to require householders or tenants to make the necessary adaptations (Section 12(2)) are intended primarily to deal with those who are recalcitrant (Case 3).

The adaptations that qualify for a grant are confined to work which "is reasonably necessary in order to make what is in all the circumstances suitable provision for heating and cooking without contraventions" of the requirements of a smoke control area (Section 14); anything in excess of what the authorities consider "reasonably necessary" must be borne by the owner or occupier. The adaptations referred to, which may be inside or outside the dwelling, are defined in the Act (Section 14(1)) as

"(a) adapting or converting any fireplace; or

(b) replacing any fireplace by another fireplace or by some other means of heating or cooking; or
(c) altering any flue or chimney which serves any fireplace; or

(d) carrying out any operation incidental to any of the operations aforesaid."

Under (d) is included such things as arranging for gas-ignition of solid fuel fires. Provision of more adequate fuel storage, however, is excluded from grant; a limitation made clear during the committee stage of the Bill.

Exemptions in smoke control areas

Capital outlay may not be justified on derelict property due for early replacement. The Act therefore authorizes the local authority to limit the operation of the Smoke Control Order to specified classes of buildings in the area and to exempt specified buildings or classes of buildings, or specified fireplaces or classes of fireplace (Section 11(3)).

There is also a provision (Section 11(4)) whereby the Minister may make an order exempting a class of fireplace "if he is satisfied that such fireplaces can be used for burning fuel other than authorized fuels without producing any smoke or a substantial quantity of smoke." This wording caused much difficulty at the Committee Stage of the Bill. Its effect is that should anyone devise a domestic grate capable of burning bituminous coal smokelessly or virtually smokelessly, the Minister has powers to authorize its use in smoke control areas. It is anticipated that the requirements will not permit more smoke than would be made in other modern appliances by fuel containing, say, 15-20 per cent. of volatile matter. If adequate supplies of smokeless fuel are not available within a reasonable time, this would be at least a way of making some progress quickly. Such experience as is available at present, however, suggests that it will be extremely difficult to produce a satisfactory open fire on these lines, though a closed stove would present fewer difficulties in design. The use of oil could also be permitted under this sub-section.

Since difficulties in fuel supply may arise on account of bad weather, strikes, and so forth, to say nothing of teething troubles in a new smoke control area, the Ministry has power to suspend or relax the order, though except in cases of urgency he must first consult the local authority (Section 11(7) and (8)). Various steps have to be taken before instituting a smoke control area, including a formal enquiry if there is opposition (Schedule 1).

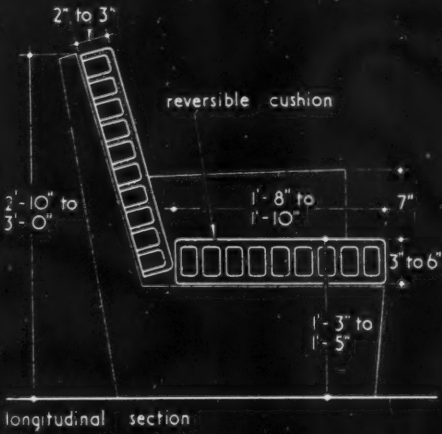
Religious and charitable premises

Powers are given to local authorities to meet, at their discretion, part or all of any expenditure incurred on adaptations rendered necessary by the Act on places of religious worship, halls and similar premises used in connection with churches and chapels, and premises occupied by non-profit-making organizations whose main objects are charitable or are otherwise concerned with the advancement of religion, education or social welfare (Section 15).

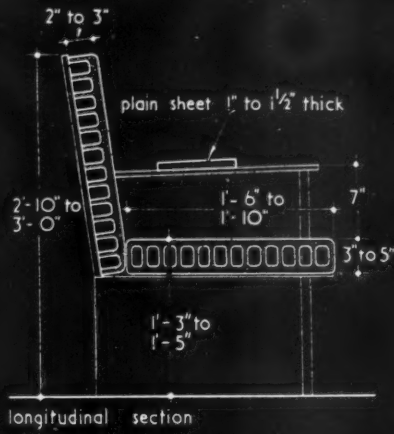
FURNITURE GENERAL CHAIRS AND SEATS

42.D2

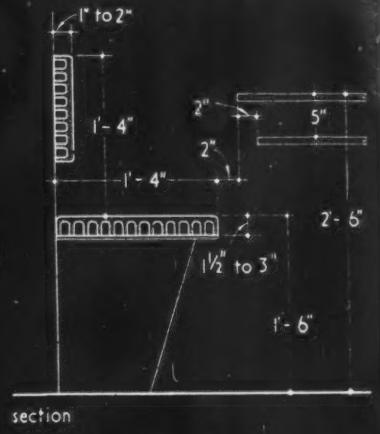
The Architects' Journal Library of Information Sheets 613. Editor: Cotterell Butler, A.R.I.B.A.



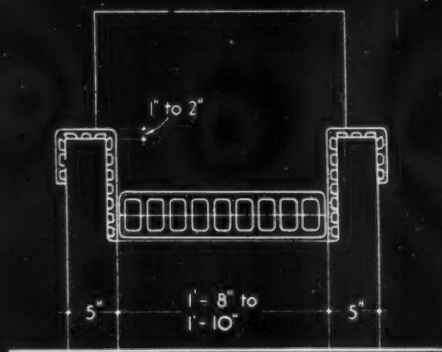
longitudinal section



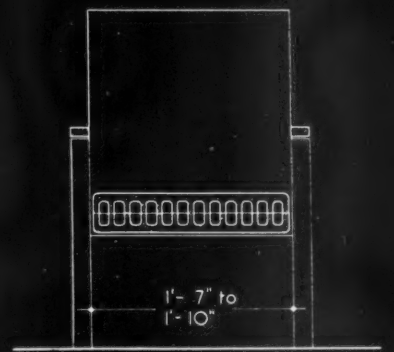
longitudinal section



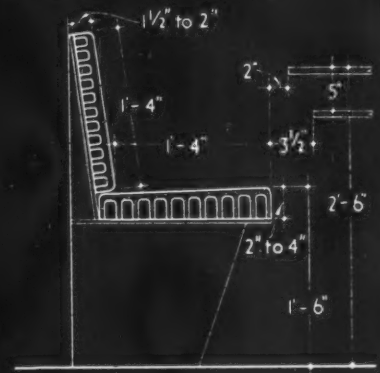
section



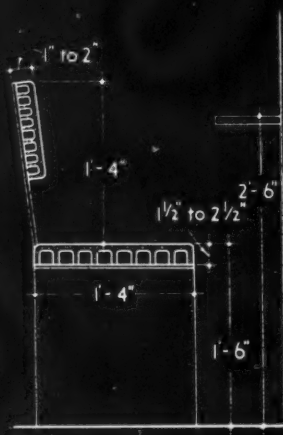
cross section
EASY CHAIR.



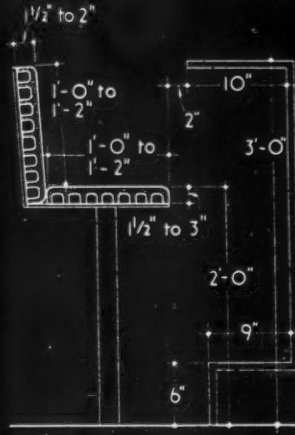
cross section
OCCASIONAL CHAIR.



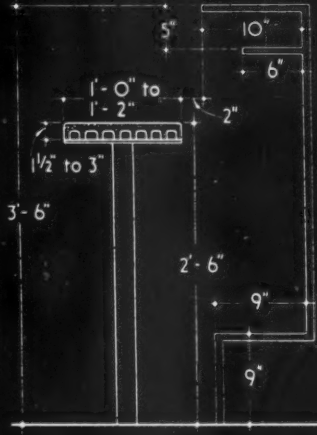
section
BENCH SEATS.



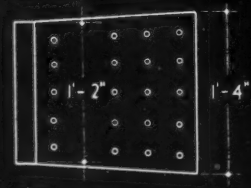
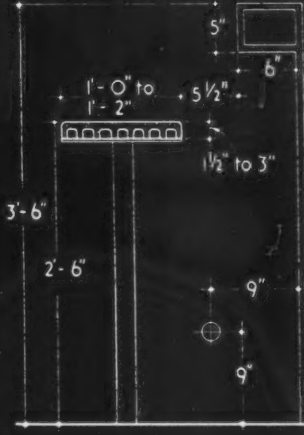
section



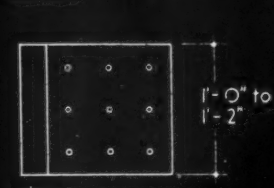
sections



ventilation holes
in rigid base



plan
DINING CHAIR.



plans
BAR STOOLS.

42.D2 LATEX-FOAM UPHOLSTERED SEATING

This Sheet describes latex foam and its use in the design of various types of seating.

Material and Characteristics

Latex foam is produced by frothing up natural latex with small quantities of vulcanising agents and other chemicals. The frothing process determines the density and texture of the final product. When the required consistency is obtained, the mixture is poured into metal moulds and heated under controlled conditions to produce the final shape and properties. When removed from the moulds, it is washed and dried. Latex foam is light in weight, odourless and non-dusting and resistant to fungus and vermin. It is unaffected by changes in atmospheric temperature or humidity. It has a long life, without losing its shape or resilience. The use of latex foam ensures uniformity of results in all types of upholstery work.

Types

Latex foam for seating applications is available in the following forms. Each is supplied in a wide range of standard shapes and sizes and, where not available in the required dimensions, can be hand-built to size.

Non-reversible cushions: These are smooth on the upper surface with moulded cavities on the underside. They are used for bench-type seating, bar stools, dining chairs, etc.

Reversible cushions: These are for use as loose cushions for seats and backs of chairs, etc. Each consists of two moulded units jointed together cavity to cavity.

Plain sheet: Available in thicknesses up to 1 in., the sheet is smooth on both surfaces. It is used for arm-pads, kneelers, etc., and with cavity sheets for making cushions to special sizes. The maximum size of sheet is usually about 6 ft. 0 in. long by 4 ft. 6 in. wide.

Cavity sheet: This has moulded cavities on one surface and has a deeper cushioning effect than plain sheet. It is available in thicknesses from 1 to 4 in. The maximum size of sheet is usually about 6 ft. 0 in. long by 4 ft. 6 in. wide.

Each type is supplied in several degrees of resilience. The correct density for each part of a seating unit should be carefully selected.

Fixing

In furniture design, latex foam must be fully supported over its whole area. The latex foam can be fixed to the base either by a suitable adhesive or by tape stuck to the latex foam and tacked to the base, the latter method being preferable. The following alternatives are suitable.

Rigid base: This may be flat or shaped, in wood, metal or plastic. Adequate ventilation holes should be provided: $\frac{1}{2}$ -in. diameter holes at 4-in. centres will

suffice. Slight resilience in the base is no disadvantage. A metal base should have a rust-resistant finish.

Upholsterer's webbing: This is suitable as a base for latex foam. The best quality should be chosen and it should be spaced as for traditional methods of upholstery.

Rubber webbing: The use of rubber webbing with latex foam is a simple and economical way of obtaining deep resilient seating.

Coil springs: Latex foam may be used over coil springs to replace other types of stuffing. A layer of hessian or similar material should be inserted between the springs and the latex foam, as the latter must not rub directly on the springs.

Tension springs: Steel tension springs make a very suitable base for latex foam but again they must be covered in a suitable manner to prevent the latex foam from rubbing them. Braided rubber cords can be used in a similar way.

A rigid base in general makes the best use of the cushioning properties of the latex foam. Most upholstery materials, e.g. moquette, tapestry, leather, leathercloth, plastic, are suitable for covering latex foam. When using leather it is advisable to insert an undercover of calico.

Seating Sizes

The diagrams on the face of the Sheet give recommended sizes as a guide to designing various types of seating using latex foam. Sizes of relevant fittings, e.g. tables, bar-counters, are also given. The thicknesses of latex foam suggested are for use with solid bases, except in the easy and occasional chairs. In general it may be taken that the thicker the latex foam used, the less may be its density.

Further Information

The Natural Rubber Development Board maintains a Technical Information Service which is available to answer questions and advise on technical problems dealing with this subject generally.

Note: When contemplating the use of latex foam for seating, reference should always be made to the latex foam manufacturers to ensure that the material is used to its greatest advantage.

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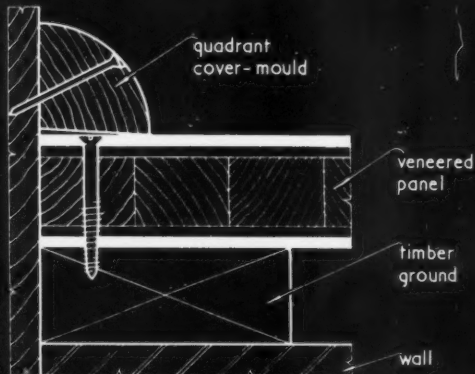
The Natural Rubber Development Board.

Address: Market Buildings, Mark Lane, London, E.C.3.

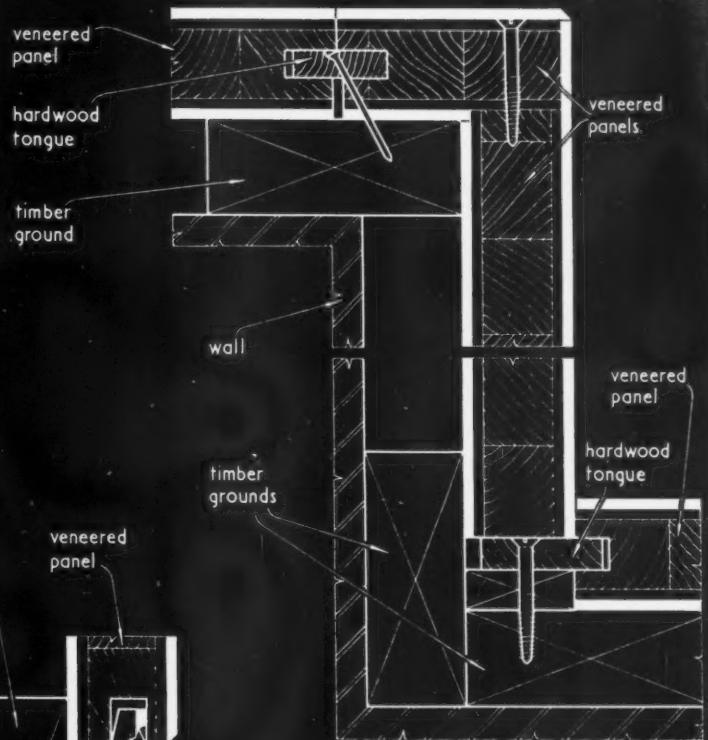
Telephone: Mansion House 9383/4.

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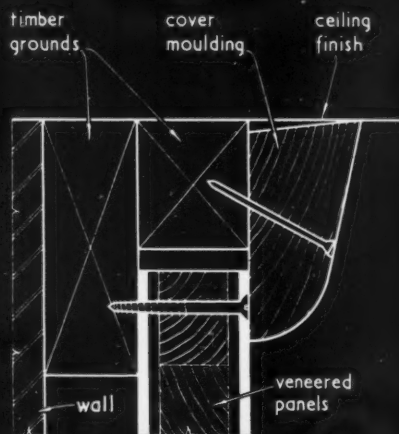
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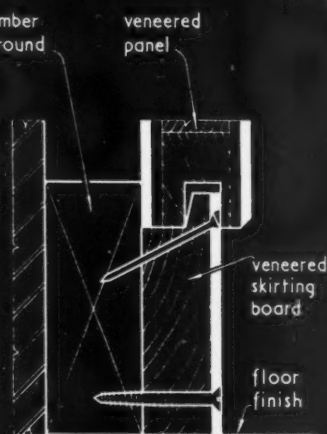
FINISH AT ARCHITRAVE.



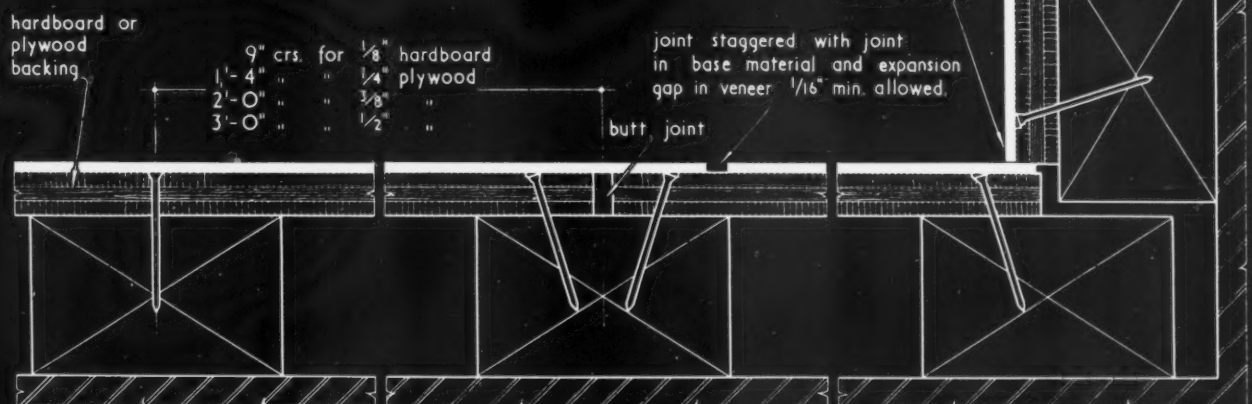
CORNER DETAILS



FINISH AT CEILING.



FINISH AT FLOOR LEVEL.



IN - SITU METHOD OF VENEERING.

FORMICA LAMINATED PLASTICS VENEERS APPLICATION TO BOARDS.

Manufacturer: Thomas De La Rue Co. Ltd.

15.T6 FORMICA LAMINATED PLASTICS : VENEERS : APPLICATIONS TO BOARDS

This Sheet is one of a series dealing with Formica laminated plastics. It describes how plastic veneers may be applied to boards to be used for various types of panelling. Sheet 15.S6 gives a general description of Formica and the forms in which it is available.

General

Formica veneers applied to boards may be used in all situations where a decorative panelling is required that is durable, hygienic, scratch-resistant and unaffected by space heating and by normal acid and alkaline concentrations. The boards may be veneered before fixing or veneers may be applied to a suitable rigid lining on the site. With a pre-veneered panel, unless it is to be secured to a really rigid frame, a counter-veneer must be provided on the back of the board to restrain any movement of that surface.

Construction of Veneered Panels

The following is the standard method of construction for veneered panels. The method of applying veneers on the site is described at the end of the notes on *Fixing*.

Base material: Plywood, blockboard or chipboard may be used as a base for the veneers. It should be $\frac{3}{8}$ in. or more in thickness and have a smooth surface, free from knots or strong grain markings.

Veneer: The $\frac{1}{16}$ -in. veneer is suitable for all general purposes, the $\frac{1}{8}$ -in. being used only where exceptionally heavy wear is anticipated.

Adhesive: Recommended adhesives are Casco and Certus (casein glues) or Beetle A2, with hardener, and Aerolite 300 or 306, with GU.X hardener (synthetic-resin glues). The veneer is rigidly bonded to the base and subjected to an all-over pressure through a flat caul.

Counter-veneer: This may be of inexpensive industrial plastic and may be slightly under the size of the board. It is pinned to the base at each corner to prevent movement during glueing.

Where fixing at close centres to a rigid frame makes counter-veneering unnecessary, the back of the board must be sealed against moisture penetration by painting or varnishing.

Fixing

Veneered panels

The drawings on the upper face of the Sheet give details of various fixings for the veneered boards. With accurately cut tongues and grooves, edges may be left square and sharp to give a hair-line joint. Where such precision is not possible the edge is best slightly bevelled to give a neat dark "vee" joint.

External and internal angles: The drawing at the top right on the face of the Sheet shows how external and internal angles may be dealt with. To ensure a good

close joint at the external angle, it is advisable to have the corner prefabricated. The internal angle using a hardwood tongue may require packing between panel and grounds to make a good joint.

Architrave: A simple cover-moulding may be used to conceal the joint. A similar treatment may be used at the floor if desired.

Cornice: This masks the top fixing screws and may be of any suitable section.

Treatment at floor: The drawing shows a recessed veneered skirting.

In-situ method of veneering

The drawing at the lower face of the Sheet shows the in-situ method of veneering.

Base material: This may be hardboard or plywood. Where the walls are sound and even, the base material may be nailed or screwed direct into wall plugs, but otherwise studding must be provided. The centring of vertical studs depends on the stiffness of the base material: for $\frac{1}{2}$ -in. hardboard it should be at 9 in. centres; $\frac{1}{2}$ -in. plywood, 1 ft. 4 in. centres, $\frac{3}{4}$ -in. plywood, 2 ft. 0 in. centres; and $\frac{1}{2}$ -in. plywood, 3 ft. 0 in. centres. Horizontal studding is required only at top, bottom and joints in the base material. Joints in the hardboard or plywood need not be close-butted but should be flush and well secured.

Veneer: The $\frac{1}{16}$ -in. veneer is used. Joints in the veneer should not coincide with joints in the base material. An expansion gap of $\frac{1}{16}$ in. minimum should be left between veneers, but $\frac{1}{8}$ in. is preferable.

Adhesive: The adhesive should be of a highly tacky solvent type, e.g., De La Rue Onsite, which bonds instantly under pressure.

Applications: In-situ veneering dispenses with the need for cover strips or securing mouldings. It allows for the application of Formica laminated plastic panels up to 9 ft. 0 in. by 4 ft. 0 in. in size and decorative effects can be obtained by alternating squares, strips, etc. In-situ veneering is suitable for all normal atmospheric conditions, but is not advised for use in very damp conditions without special preparation of the backing.

Further Information

The manufacturer maintains a technical advisory department which is available to answer questions and advise on problems relating to this subject generally.

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Thomas De La Rue & Co. Ltd.

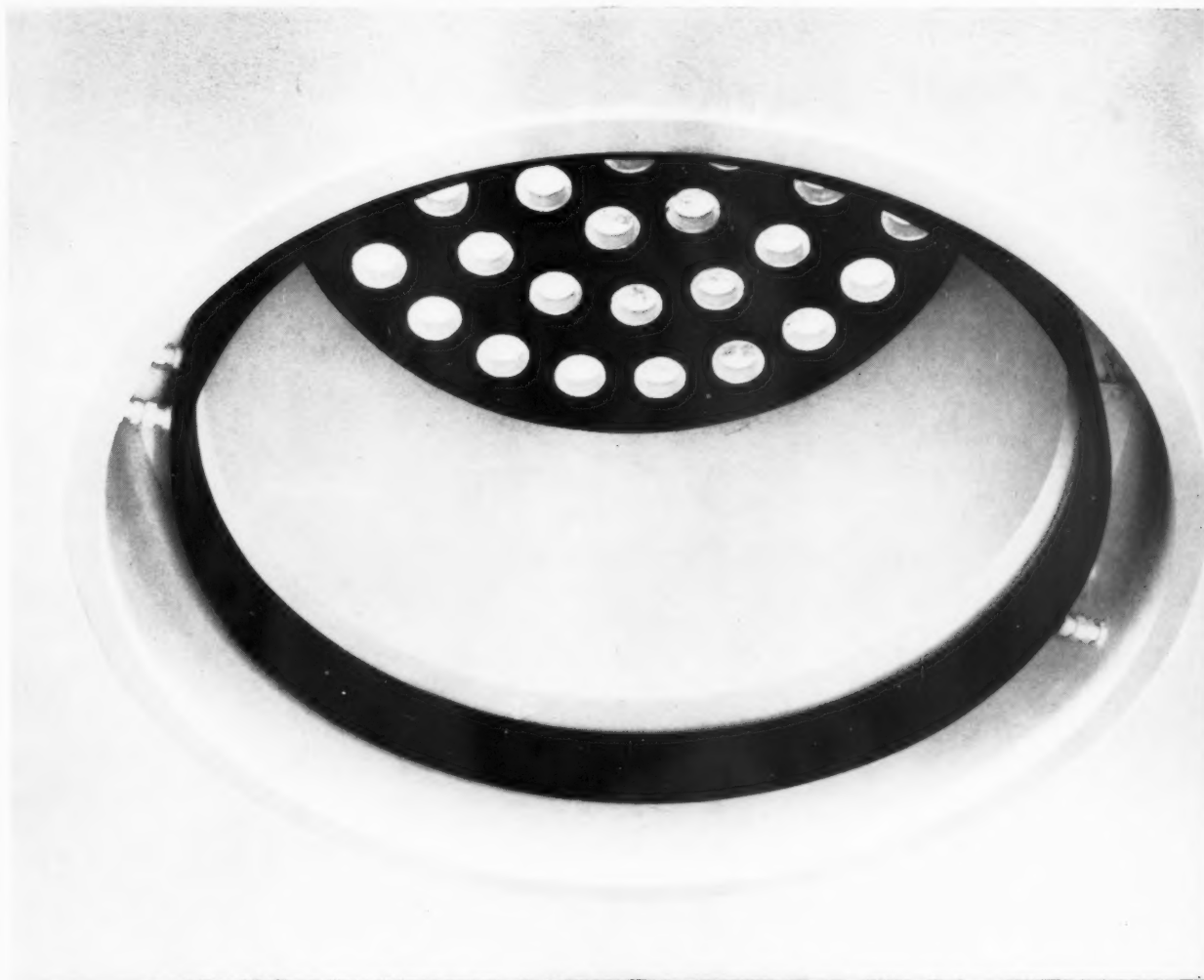
Address: Plastics Division, Imperial House,
84-86, Regent Street, London, W.1.
Telephone: Regent 2901.
Telegrams: Delinsul, Piccy, London.

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ROOF LIGHT: EYE HOSPITAL AT ROTTERDAM

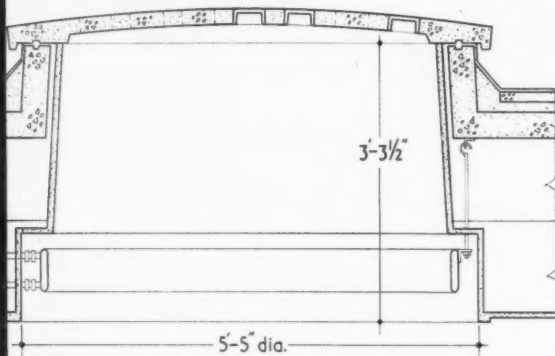
J. H. Van den Broek and J. B. Bakema, architects, material supplied by J. G. Hummerston



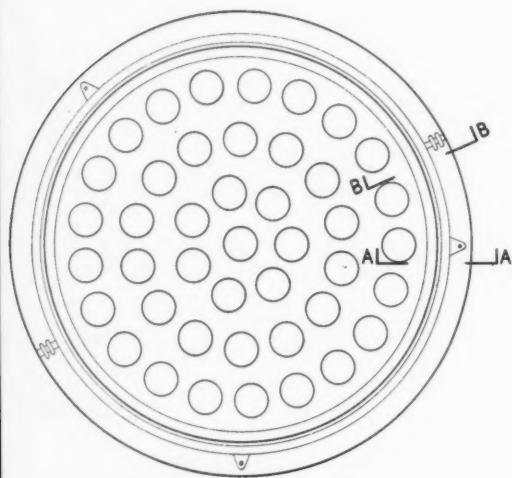
Points of interest about this roof light are the neatness of the ring radiator, which is placed where it is to avoid down draughts, and the use of low value (i.e. dark) colour to articulate form on the assumption that the light holes are small enough to prevent glare.

ROOF LIGHT: EYE HOSPITAL AT ROTTERDAM

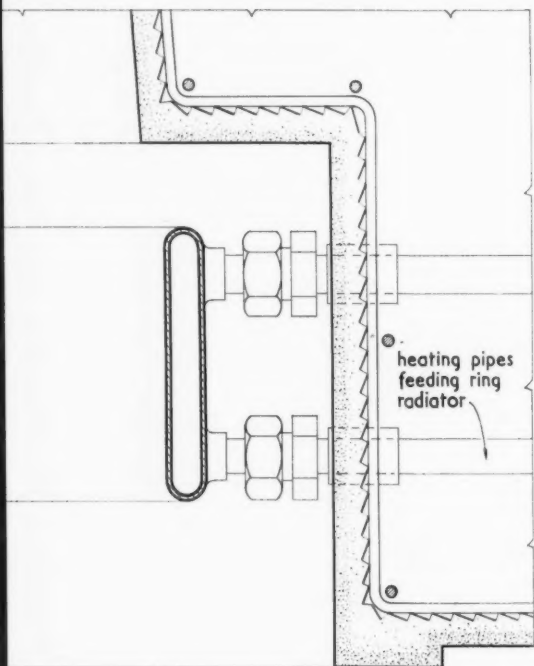
J. H. Van den Broek and J. B. Bakema, architects, material supplied by J. G. Hummerston



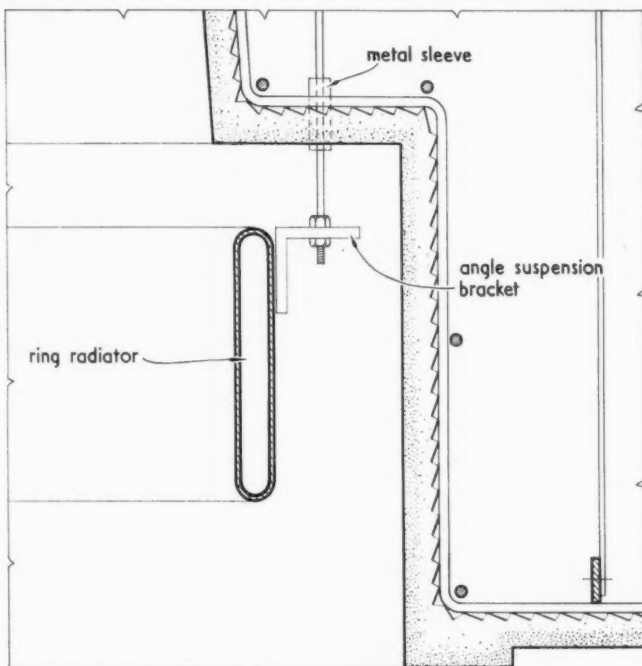
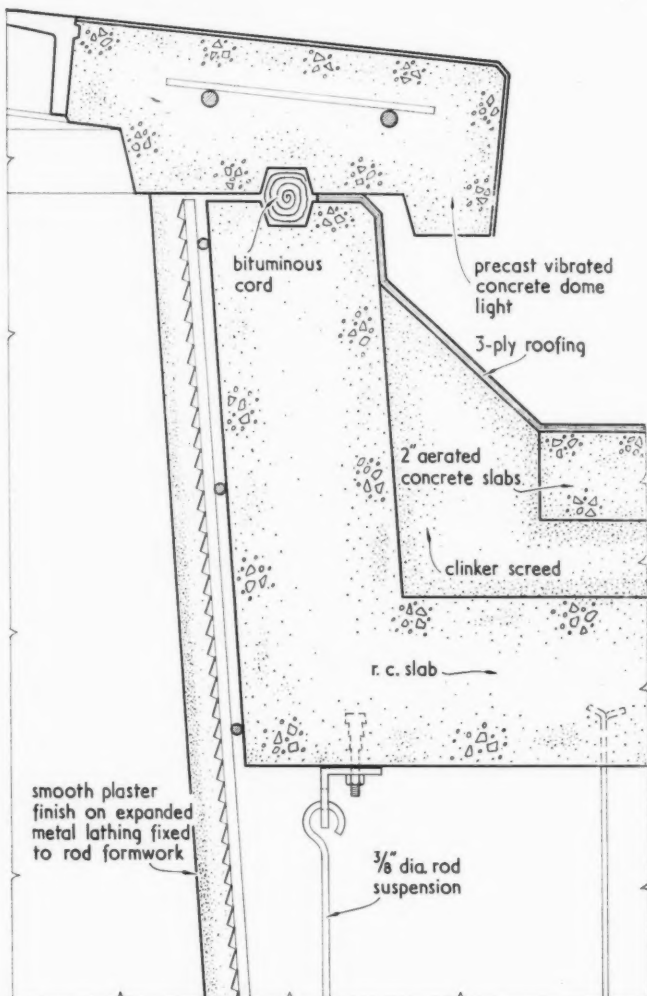
CROSS SECTION. scale 1/2" = 1'-0"



PLAN OF UNDERSIDE. scale 1/2" = 1'-0"



SECTION B-B. scale 1/4 full size



SECTION A-A.

note: figured dimensions in feet and inches are approximate

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HALL OF RESIDENCE IN SOUTH KENSINGTON

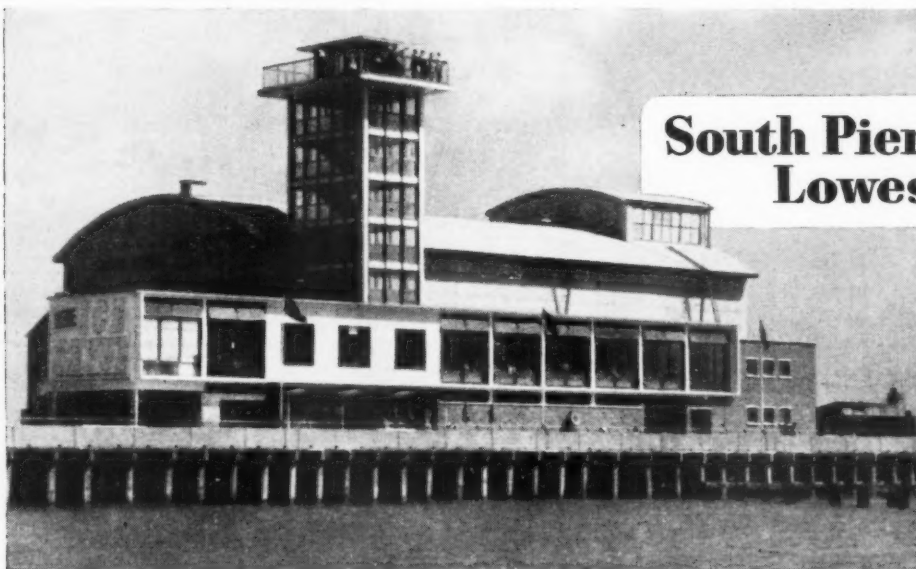
A hall of residence for about 70 students is to be built in Princes Gardens, adjacent to the main buildings of the Imperial College of Science and Technology, South Kensington, as part of an ambitious educational scheme by the Vickers Group to

train more technologists for industry. It has been designed by Richard Sheppard and Partners. The company have promised a grant of £150,000 to build and equip the hall, which will be maintained by the college. It is expected that the hall will be completed by 1959. It will provide accommodation for 70 or 75 students, of whom up to 15 will be Vickers undergraduate apprentices.



Contractors

Offices for Chief Electrical Engineer, British Railways Central Staff, B.T.C., Melbury Terrace, London, N.W.1. (Page 508.) Architect: Dr. F. F. G. Curtis, A.R.I.B.A. Quantity surveyors: Newberry & Wyatt. General contractors: Bovis Ltd. Sub-contractors—Derwent superstructure: Vic. Hallam Ltd. Electrical installation: City Electrical Co. Ltd. Thermoplastic tiling: Armstrong Cork Co. Ltd. Asphalt flooring: H. V. Smith & Co. Ltd. Wood-block flooring: Vigers Bros. Ltd. Linoleum: H. E. Richards (Flooring) Ltd. Plastering: H. & F. Badcock Ltd. Tarmacadam paving: Tarpaving & Tarmacadam Ltd. Floor and wall tiling: Carter (Brockley) Ltd. Landscaping: A. Stevens, Snr. Blinds: J. Avery & Co. Ltd. Reinforcement: B.R.C. Engineering Co. Ltd. Handrails and balustrades: Builders Iron & Zincwork Ltd. Cat ladders: Clark Hunt & Co. Ltd. Aggregates: W. W. Drinkwater (Willesden) Ltd. Paint: W. & J. Leigh Ltd. Manholes bases: Mono Concrete Co. Ltd. Sanitary fittings: Stitson's Sanitary Fittings. Entrance gates: Stoner & Saunders Ltd. Plymax w.c. partitions: Venesta Ltd. Light fittings: Merchant Adventurers of London Ltd., and Troughton & Young Ltd. Chairs: Heal's Contracts Ltd., and Russell Furnishings Ltd. Desks and tables: Constructional Units Ltd. Settee and occasional table: Hille of London Ltd. Carpets and drawing office furniture: Furnishing Contracts Ltd.



South Pier Pavilion Lowestoft

Architects:
Skipper & Partners,
F/A.R.I.B.A.

Contractors:
R. G. Carter Limited,
Great Yarmouth.

All the hardwoods and decorative veneered panels used in the striking new Pier Pavilion at Lowestoft were supplied by

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MANUFACTURERS OF PLYWOOD, ARMOURPLY, PANELS, COMPOSITE PARTITIONING AND INSULATING BOARDS

Announcements PROFESSIONAL

Bronek Kaiz, M.B.E., DIPL.ING. ARCH., F.S.I.A., and R. Vaughan, F.R.I.B.A., A.A.D.I.P., have moved to 208A, Regent Street, W.1 (Tel.: Regent 5401).

Arthur Lindsay, A.R.I.B.A., and Max Gerlach, M.A.A., of P.O. Box 1648, Accra, have altered their title to Arthur Lindsay, Max Gerlach and Associates.

Ewan Blackledge, B.A.R.C.H., A.R.I.B.A., has taken Angela Lynch, A.A.D.I.P., A.R.I.B.A., and Miles Broughton, A.A.D.I.P., A.R.I.B.A., into partnership. The firm will now be known as Blackledge and Broughton, of 8, Rodney Street, Liverpool, 1 (telephone: Royal 1098).

T. Bedford, M.I.C.E., M.I.STRUCT.E., M.I.MECH.E., M.CONSE.E., and R. M. Evans, B.S.C., A.M.I.C.E., have taken R. H. L. Bayes, A.M.I.STRUCT.E., and J. L. M. Ransford, B.S.C.(ENG.), A.M.I.C.E., into partnership. The firm will now be known as Thomas Bedford and Partners, of 41-42, New Bond Street, W.1 (telephone: Mayfair 5808-9).

William and Segar Owen, chartered architects, of 4, Museum Street, Warrington, are taking Halsall Owen, DIPL. ARCH.(L'POOL), A.R.I.B.A., into partnership as from April 6.

H. I. Matheson, A.R.I.A.S., and Ian A. Mackenzie, DIPL. ARCH., A.R.I.B.A., A.R.I.A.S., are amalgamating their practices, as from April 8, under the title of Matheson & Mackenzie. Their address will be Tulloch Street, Dingwall (telephone: Dingwall 2252).

Albert W. Moore & Son, F/R.I.B.A., have moved to 53, Cannon Street, London, E.C.4 (telephone: City 3151 and 3176).

T. A. Lodge, O.B.E., F.R.I.B.A., F.R.I.C.S., is retiring from practice on April 5. The firm of Lancaster & Lodge will continue at 10, Woburn Square, W.C.1, under the remaining Partners—A. Johnson, F.R.I.B.A., N. E. S. Morris, F.R.I.B.A., O.B. J. L. Rowe and R. H. Davies, A.R.I.B.A., F.R.A.I.A.

Sir John Burnet, Tait & Partners announce that they have formed a separate architectural practice in association with Felix Wilson & Partners, under the title of Sir John Burnet, Tait, Wilson & Partners. The existing practices of both Sir John Burnet, Tait & Partners and Felix Wilson & Partners will continue as before.

TRADE

Bratt Colbran Ltd., General Engineers, of Lancelot Road, Wembley, announce that F. Davies and P. Law have been appointed Directors of the firm.

British Insulated Callender's Cables Ltd. announce that the alteration and extensions to their Edinburgh Branch Office at 80-82, Hanover Street, have now been completed. Their extra storage space will enable a larger and more comprehensive range of cables and accessories to be readily available from stock.

British Electrical Development Association announce that J. I. Bernard, B.S.C., M.I.E.E., M.I.H.V.E., has been appointed Director and Secretary of the Association in succession to V. W. Dale, COMPANION I.E.E.

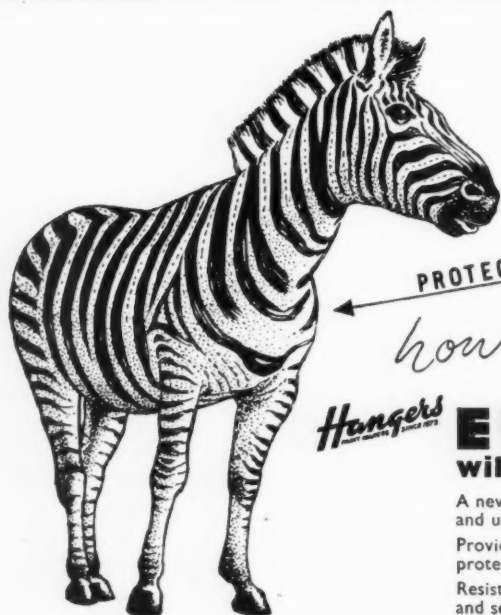
Kwikform Ltd. announce that E. A. Waldron has joined their new Plant Sales Division at their branch at Waterloo Road, Birmingham, 25. Their range of equipment covers the new Rob Roy Contractors' plant series including mixers, dumpers, pumps, saw benches and portable weighbatch machinery.

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Corrections

The consulting engineers for the Church of England Primary School at Bexhill-on-Sea (A.J. March 14, 1957) were Jenkins & Potter, and the quantity surveyors were Davis, Belfield & Everest.

On page 330 of the JOURNAL for February 28, 1957, the top three photographs show "Rotaflex" light fittings at the Lyng Hall Comprehensive School, Coventry. These fittings were designed by the MOE in collaboration with Thorn Electrical Industries Ltd. (Atlas Lighting Division), whose name was omitted from the list of sub-contractors for this school.



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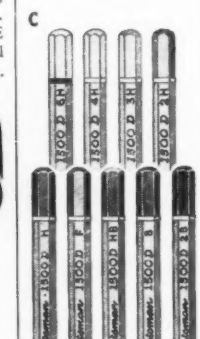
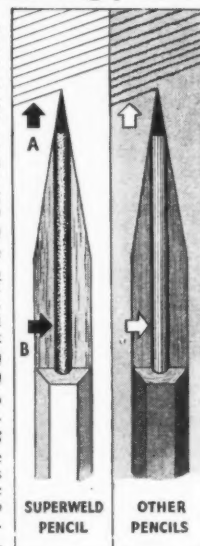
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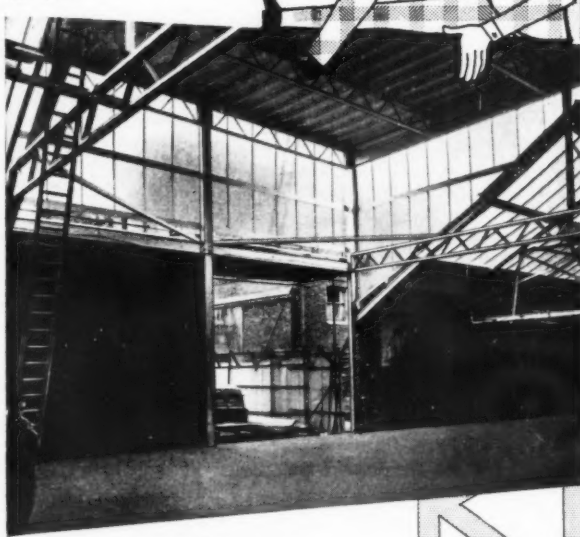
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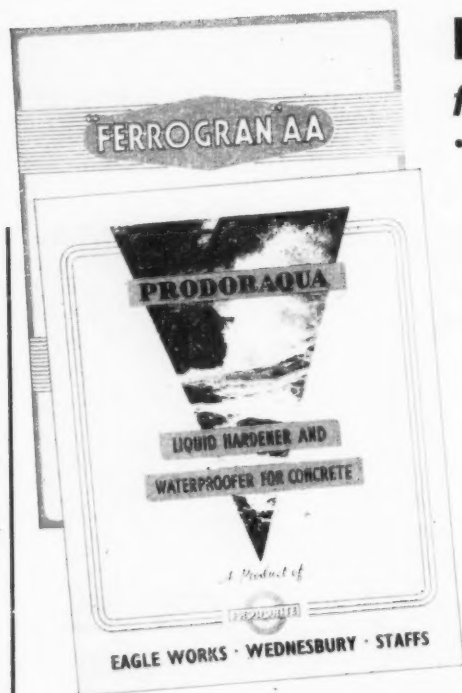
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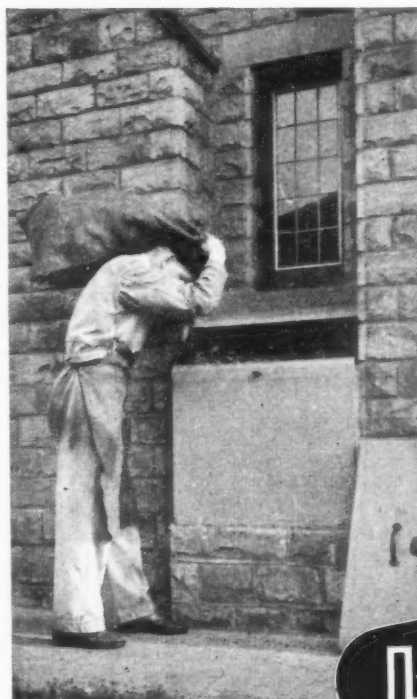
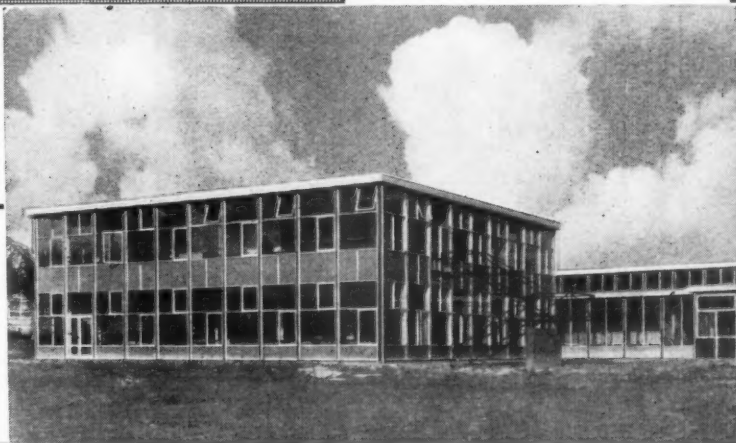
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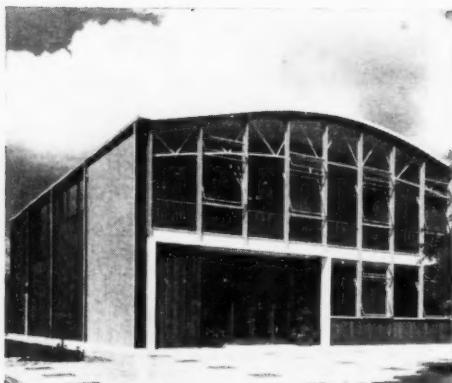
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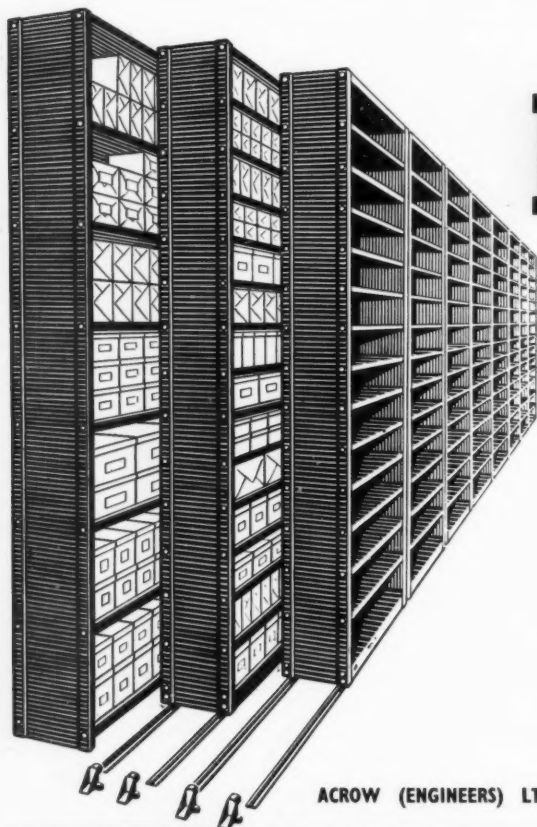
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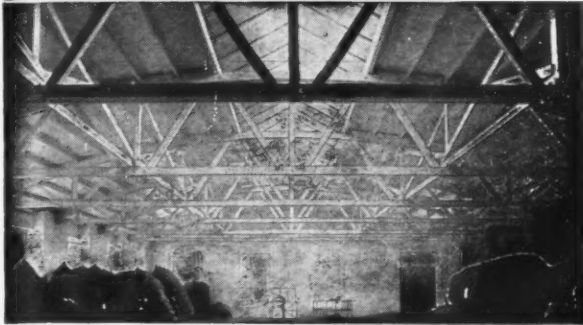
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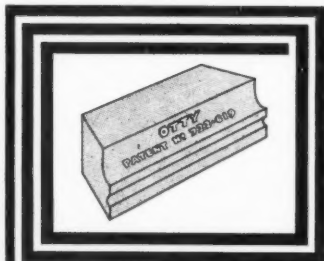
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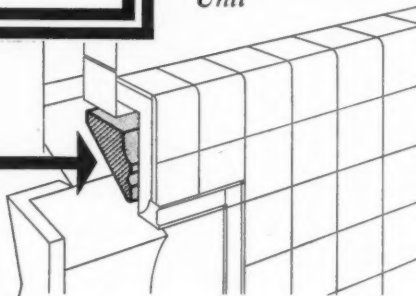
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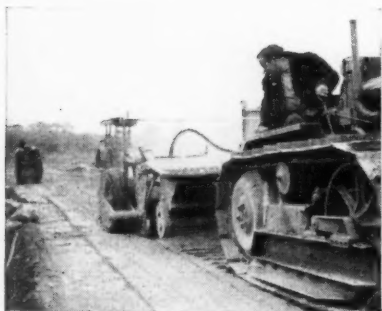
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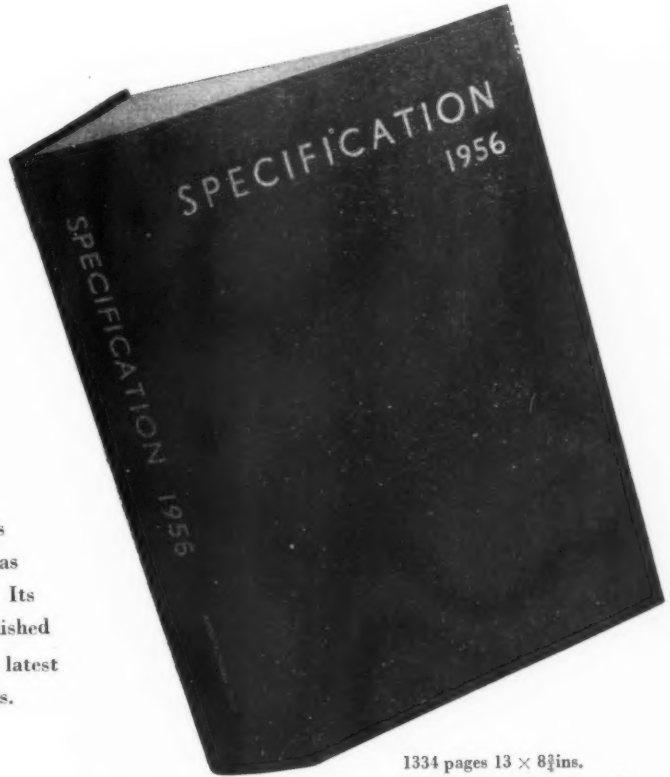
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EAST ANGLIAN REGIONAL HOSPITAL BOARD

Department of the Regional Architect (Guy Aldis, A.R.I.B.A., A.A.Dipl.) for planning of a scheme for the major development of a General Hospital which the Board has commenced.

(1) ASSISTANT ARCHITECTS. Candidates must be qualified and registered architects, and have had good general experience in design, construction and specification writing. Knowledge of hospital work desirable. Salary £680—£985; additional increments within scale based on experience and age may be granted.

(2) ARCHITECTURAL ASSISTANTS. Candidates must have passed the Intermediate Examination of the R.I.B.A. or equivalent. Salary £510 (at 21 or over)—£710 per annum; entry point may be fixed above minimum, but will not exceed £590.

Applications, indicating post and stating age, qualifications, experience, and details of present position, with names of three referees, to Secretary of Board, 117, Chesterton Road, Cambridge by 15th April, 1957. 5698

CITY OF SALISBURY
SOUTHERN RHODESIA
VACANCY—SENIOR ARCHITECT (£1,725 × £50—£1,875 per annum).

Applicants should be Associates of the Royal Institute of British Architects, and have extensive experience in designing, supervision, and administrative work.

The Council will refund travelling expenses on the following basis:—

Person appointed—£102 in respect of sea passage from U.K. to port of disembarkation in Africa, plus first-class single rail fare to Salisbury.

Wife of person appointed—£66.
Children of person appointed, who are under the age of 16 years—first child £26 8s., remaining children £13 4s. each.

The successful applicant will be required to submit a satisfactory medical certificate, serve a probationary period of six months, and if thereafter confirmed in his appointment to join the Southern Rhodesia Local Authorities Joint Pension and Widow and Orphans' Fund. No allowances are payable, and entry will be at the minimum of the grade.

Unfurnished accommodation will be provided for a period of two years at the rental ruling from time to time.

Applications, stating age, place of birth, nationality, marital state, qualifications and experience, and earliest date duties could be commenced, together with names of three referees, should be sent by Air Mail to the City Architect, P.O. Box 382, Salisbury, Southern Rhodesia. 5744

LINDSEY COUNTY COUNCIL
PLANNING DEPARTMENT

Applications are invited for the following appointments:—

(a) SENIOR ASSISTANT. A.P.T. Grade V (£814 17s. 6d.—£994 5s.).

(b) ASSISTANT. A.P.T. Grade III and special grade (£656—£861).

(c) ASSISTANT. A.P.T. Grade II (£609 17s. 6d.—£691 17s. 6d.).

All appointments at Headquarters, Lincoln. Qualifications for (a): A.R.I.B.A. or A.M.T.P.I. Preference will be given to candidates with architectural experience in dealing with redevelopment schemes, housing layout, and architectural control.

Candidates for (b) and (c) must have passed Intermediate Examination of T.P.I. and have experience in surveys for and preparation of Town Maps. Promotion from A.P.T. III to special grade in case of (b) will be dependent on officer passing T.P.I. final and having 5 years' experience.

Appointments (a) and (b) require officers to provide own cars for official journeys, for which an allowance will be paid at essential users' rate for cars not exceeding 10 h.p. or 1,199 c.c. Superannuation and N.J.C. conditions of service as approved by the County Council. Canvassing will disqualify. Relationship to any member or senior officer of the Council to be disclosed in writing by applicants.

Applications, with particulars of age, training, experience and names of two referees, to County Planning Officer, The Castle, Lincoln, not later than 8th April, 1957. 5699

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited from Corporate Members of the R.I.B.A. for the post of ASSISTANT ARCHITECT, Grade A.P.T. VI—Salary £902 × £41 (5)—£1,107.

Superannuation schemes, medical examination. Housing available in due course.

Apply by 22nd April giving age, education and qualifications, experience and appointments held (with dates and salaries) and names of two referees to the General Manager (A.A.), Bracknell Development Corporation, Farley Hall, Bracknell, Berks. 5754

NORTHERN IRELAND HOUSING TRUST
ASSISTANT ARCHITECT, GRADE I

The Trust invites applications for the post of Assistant Architect, Grade I, on the salary scale £928—£1,018.

Candidates must be Associate Members of the Royal Institute of British Architects.

Preference will be given to ex-service candidates.

The person appointed will be required to participate in a contributory superannuation scheme which allows for the reciprocal transfer of benefits in Local Government Schemes in suitable cases.

Assistance in obtaining housing accommodation may be given in suitable circumstances to the successful candidate.

Please apply not later than 15th April, 1957, giving full details of age, education, qualifications and experience, including present post and salary, to the General Manager, Northern Ireland Housing Trust, 12, Hope Street, Belfast.

Please mark envelope 33/60. 5796

BUCKS COUNTY COUNCIL

Applications are invited for the appointment of two Assistant Architects in the County Architect's Department, salary A.P.T. Grade IV, £727 15s. p.a. to £907 2s. 6d. p.a.

The appointments are superannuable and subject to medical examination.

A weekly allowance of 25s. and return fare home once every two months may be paid for six months to newly appointed married officer of the Council unable to find accommodation.

Applications, on forms to be obtained from F. B. Pooley, County Architect, County Offices, Aylesbury, must be returned by 23rd April, 1957. 5781

ARCHITECTURAL AND CIVIL ENGINEERING ASSISTANTS, as under, required by Lanark County Council for Department of County Housing Architect and Engineer at Hamilton (Samuel McColl, F.R.I.B.A., F.R.I.A.S.):—

(a) SENIOR ARCHITECTS AND ENGINEERS.

Salary £1,100 (£1,150).

(b) ASSISTANT ARCHITECTS AND ENGINEERS.

A. and P. Grades VIII (£930/£1,005); VII (£875/£950); VI (£825/£890); V (a) (£765/£825); V (£730/£780); IV (£670/£715); III (£635/£680); II (£595/£640); I (£565/£610).

Applicants for appointments above A. and P. Grade V (a) must be qualified by examination.

Medical examination. Superannuation. No canvassing. Applications, stating age, post applied for, experience and qualifications, and with names and addresses of three referees should be lodged with County Clerk, P.O. Box No. 1, Glasgow, by 12th April, 1957. 5792

COUNTY BOROUGH OF SOUTH SHIELDS
ARCHITECTS

Applications are invited from suitably qualified persons for appointments in the Architect's Section of the Borough Engineer's Department.

Salaries according to qualifications and experience up to A.P.T. Grade IV/V (£727 15s.—£994 5s.).

Housing accommodation may be made available to successful applicants if necessary.

The selected applicants will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government Superannuation Acts 1937 and 1953, and the National Joint Council Conditions of Service.

Canvassing will be a disqualification and candidates must disclose any relationship to the members or Senior Officers of the Council.

Application forms, obtainable from the Borough Engineer, Town Hall, South Shields, should be returned to him not later than Monday, 15th April, 1957.

R. S. YOUNG,
Town Clerk. 5748

CITY OF LEEDS
CITY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(a) ASSISTANT ARCHITECT, Grade A.P.T. IV, Salary Scale £727 15s.—£907 2s. 6d.

(b) ASSISTANT ARCHITECTS, A.P.T. III, £656—£784 2s. 6d.

(c) ARCHITECTURAL ASSISTANTS, A.P.T. II, £609 17s. 6d.—£691 17s. 6d.

(d) ARCHITECTURAL ASSISTANTS, A.P.T. I, £543 5s.—£625 5s.

(e) ASSISTANT SURVEYOR, A.P.T. IV, £727 15s.—£907 2s. 6d.

Candidates for Post (e) must have had Town Planning experience.

(f) ASSISTANT SURVEYOR, A.P.T. II, £609 17s. 6d.—£691 17s. 6d.

(g) ASSISTANT QUANTITY SURVEYOR, A.P.T. V, £314 17s. 6d.—£994 5s.

(h) ASSISTANT QUANTITY SURVEYOR, A.P.T. IV, £727 15s.—£907 2s. 6d.

(i) ASSISTANT QUANTITY SURVEYOR, A.P.T. II, £609 17s. 6d.—£691 17s. 6d.

The payment of salary increments will be subject to satisfactory service and will be granted normally with effect from the 1st April following the completion of six months' service.

The appointments are subject to the Local Government Superannuation Acts 1937—1953 and the successful applicants will be required to pass a medical examination.

Application forms may be obtained from the City Architect, Priestley House, Quarry Hill, Leeds, 9, to whom they should be returned together with copies of three recent testimonials, by Wednesday, 24th April, 1957.

Canvassing in any form, either directly or indirectly, will be a disqualification.

R. A. H. LIVETT,
City Architect.

Priestley House,
Quarry Hill,
Leeds, 9.

21st March, 1957. 5752

SENIOR ASSISTANT ARCHITECTS. Commencing salary £1,035 rising to £1,210 a year (two positions). Applicants must be registered Architects having passed the requisite examinations and must be good designers, capable of preparing working drawings and specifications for, and site supervision of, all types of building projects.

ASSISTANT ARCHITECTS. Salary according to age and experience on a scale rising to a maximum of £1,025 a year. Applicants must be registered Architects having passed the requisite examination, and must be good designers, capable of preparing working drawings and specifications for, and site supervision of all types of building projects, under limited supervision. Previous hospital experience not essential.

Applications giving age, qualifications and experience with dates, together with the names of two referees, should be sent to the Secretary, North East Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, within 14 days. 5766

CORPORATION OF LONDON
REQUIRE

ARCHITECTURAL ASSISTANT

On the auxiliary staff of the City Surveyor: salary £1,025—£1,230.

Applicants must be Associates of the R.I.B.A. with comprehensive practical experience.

Apply in writing to The City Surveyor, 55/56 Moorgate, E.C.2. 5760

MINISTRY OF EDUCATION

PRINCIPAL ARCHITECT

The Civil Service Commissioners invite applications from Registered Architects for this pensionable post in London, to take Charge, under the Chief Architect, of the Development Group of the Architects and Buildings Branch. The Group, comprising 15 architects and 6 quantity surveyors together with administrative staff and members of H.M. Schools Inspectorate, covers the whole field of design, building and equipping of educational buildings in the light of current educational methods and technical and economic conditions. The Group undertakes a limited number of educational building projects in order to develop and test new ideas; the results of this work and of other studies are published.

Candidates must be at least 35 years of age on 1st May, 1957. They should have administrative ability, experience of the techniques of development work, architectural abilities in the widest sense, and qualities of leadership.

Men's salary £2,000-£2,300. Women's pay at present somewhat lower, but being raised to reach equality with men's scale by 1961.

Further particulars and application forms from Secretary, Civil Service Commission, Scientific Branch, 30, Old Burlington Street, London, W.1, quoting S4685/57/7. Completed applications should be returned by 16th May, 1957. 5811

HAYES AND HARTINGTON URBAN DISTRICT COUNCIL

Applications are invited for:—(a) ASSISTANT ARCHITECT within Grade A.P.T. IV, i.e., £727 15s.—£907 2s. 6d. per annum; (b) ARCHITECTURAL ASSISTANT within Grade A.P.T. III, i.e., £656—£784 2s. 6d. per annum, plus appropriate London weighting in each instance, 21-25 years £20 per annum, 26 years and over £30 per annum. Candidates for (a) must be capable of preparing sketch designs, full working drawings, specifications, supervision of building contracts, etc., preference will be given to applicants who have passed the examination for the Associateship of the R.I.B.A.; (b) must have had good general architectural experience and should have passed the Intermediate examination R.I.B.A. Housing accommodation will be made available for (a) if necessary. Five-day week. Further particulars and conditions of service and form of application available from the undersigned, which when completed must be returned by 23rd April, 1957.

GEORGE HOOPER,
Clerk and Solicitor,

Town Hall,
Hayes, Middx. 5820

CITY AND COUNTY OF NEWCASTLE UPON TYNE

**CITY ARCHITECT'S DEPARTMENT
PROPOSED NEW TOWN HALL
APPOINTMENT OF PRINCIPAL ASSISTANT ARCHITECT**

Applications are invited from Associate Members of the R.I.B.A., for the undermentioned special appointment in the City Architect's Department. This appointment is additional to the present Establishment of the Department, and the successful candidate will be engaged solely upon duties in connection with the New Town Hall Scheme, the estimated total cost of which is in the region of £2 million.

Principal Assistant Architect, A.P.T. Division, Grade VII (£999 7s. 6d.—£1,230).
Candidates for the above appointment must have received a sound architectural training, preferably at a recognised School of Architecture; should be capable designers with sound experience in the control of building works of high quality. Forms of application together with further particulars and Conditions of the Appointment may be obtained upon application to George Kenyon, A.R.I.B.A., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle upon Tyne. Closing date, Friday, 3rd May, 1957.

JOHN ATKINSON,
Town Clerk.

Town Hall,
Newcastle upon Tyne 1.
28th March, 1957. 5821

CONTRACTS OFFICER

SINGAPORE IMPROVEMENT TRUST

Applications are invited for the appointment of Contracts Officer on two years' Contract in the Architects' Department for duties in connection with the advertising and letting of Building and other Contracts, estimating, costing, financial control, etc.

Applicants should be Associates of the Royal Institution of Chartered Surveyors—Quantities or Building Surveying Sections, but applicants with similar qualifications or appropriate experience will be considered.

Commencing salary according to qualifications and experience within the scale £1,250—£2,300 per month (equivalent to £1,750 to £3,220 per annum) no allowances payable except for duty transport.

Strict medical examination. Air passages for Officer and family subject to certain limits. Appointment required to join Singapore Central Provident Fund. Furnished quarters provided, if available, at moderate fixed rental. Eight weeks' full pay leave on completion of contract. Ten days' local leave annually.

Applications in Duplicate stating if married or single, date and place of birth, with details of education, qualifications (with dates), training and experience, and accompanied by Duplicate copies of testimonials to Messrs. Allen & Williams, 1, Victoria Street, London, S.W.1, by Thursday, 18th April, 1957. 5764

PADDINGTON BOROUGH COUNCIL

ASSISTANT QUANTITY SURVEYOR

(A.P.T. IV: £757 15s.—£937 2s. 6d. p.a.)

Applications are invited for the above-mentioned post at a salary within the scale shown according to qualifications and experience. Candidates must be Intermediate R.I.C.S. (Quantities Sub-Division) and should be experienced in estimate preparation, working up, abstracting, billing, site measurement, and working up to final account stage. Applications stating age, qualifications, experience, present and past appointments, names and addresses of three referees, should reach the undersigned (quoting A.333) by 13th April, 1957.

W. H. BENTLEY,
Town Clerk.

Town Hall,
Paddington Green, W.2. 5759

HEMEL HEMPSTEAD DEVELOPMENT CORPORATION

SENIOR ARCHITECT (Vacancy No. 41). Salary scale £315—£594

ASSISTANT ARCHITECT (Vacancy No. 42). Salary scale £610—£692 p.a.

Applicants for Vacancy No. 41 must be A.R.I.B.A. and those for Vacancy No. 42 should have passed Intermediate R.I.B.A. examination. In each case good experience is required in the design and execution of large scale housing schemes.

Starting salary according to qualifications and experience.

Conditions of service similar to those in Local Government.

Housing accommodation available.

Applications, endorsed with appropriate vacancy number, giving age, education, qualifications, and experience, and names of two referees, should reach General Manager, Westbrook Hay, Hemel Hempstead, by 12th April. 5782

BOROUGH OF WIDNES

BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT at a salary within Grades A.P.T. IV/V according to qualifications and experience, to work on a new College of Further Education and other school projects. Applicants must be registered architects, preferably Associate members of the R.I.B.A., and with experience of contemporary school design and construction.

Housing accommodation may be provided if needed.

The appointment will be subject to the National Scheme of Service as adopted by the Council, and superannuable subject to the successful candidate passing a medical examination. Applications, stating full particulars of age, experience and qualifications, present and previous appointments (with dates) together with the names and addresses of two referees should be sent to the Borough Architect, Brendan House, Widnes Road, Widnes, not later than first post Friday, 12th April, 1957. Canvassing directly or indirectly will disqualify.

FRANK HOWARTH,
Town Clerk.

Town Hall,
Widnes.
25th March, 1957. 5826

NATIONAL COAL BOARD

NORTHEASTERN DIVISION

Applications are invited for the following appointments in the Department of the Divisional Chief Architect at Conisborough, Nr. Doncaster:—

QUANTITY SURVEYORS Grade II
Salary Scale: £700 × £30 to £1,000 per annum. Qualifications: A.R.I.C.S.

QUANTITY SURVEYING ASSISTANT, Grade I
Salary Scale: £625 × £25 to £750 and up to £900 per annum in certain circumstances. Qualifications: Preferably Intermediate R.I.C.S. or considerable practical experience.

QUANTITY SURVEYING ASSISTANT Grade II
Salary Scale: £520 × £20 to £615 per annum. Qualifications: Preferably Intermediate R.I.C.S. or studying for such examination.

JUNIOR QUANTITY SURVEYING ASSISTANT
Salary Scale: According to age—£4 5s. per week at 18 to £9 15s. per week at age 25. Qualifications: G.C.E. in five subjects including English, Mathematics, History or Geography.

Full details and application forms obtainable from Hugh Smith, F.R.I.B.A., Divisional Chief Architect, National Coal Board, P.O. Box No. 4, Denaby, Nr. Doncaster. 5819

BURGH OF COATBRIDGE

TOWN PLANNING DEPARTMENT

Applications are invited for ASSISTANTS (three) in the Town Planning Department in Coatbridge at the following salary scales:—

A. & P. I.—£565 to £610 per annum.

A. & P. II.—£595 to £640 per annum.

A. & P. III.—£635 to £680 per annum.

Applicants should be experienced in Local Authority Town Planning and/or architectural work and should have attended a recognised Study Course.

The posts are superannuable and the successful candidates will require to pass a medical examination before appointment.

Applications stating age, training and experience, together with copies of not more than three recent testimonials, should be lodged with the Town Planning Officer, "Redholme," Laird Street, Coatbridge, not later than fourteen days after the appearance of this advertisement.

ALEXANDER S. THOM,
Town Clerk.

Municipal Buildings,
Coatbridge.
27th March, 1957. 5818

**CITY OF BATH
CITY PLANNING & ARCHITECTURAL DEPARTMENT**

Applications are invited for the appointment of a PLANNING ASSISTANT at a salary within Grades A.P.T. I/II (£543 5s.—£691 17s. 6d. per annum) according to qualifications and experience. The post is pensionable and subject to the N.J.C. conditions. The Council are prepared to consider providing housing accommodation.

Applications stating age, education and training, qualifications, experience, present and past appointments (with dates and salaries), and giving the names and addresses of two referees, should be sent to the City Planning Officer and Architect, 7, North Parade Buildings, Bath, by the 16th April, 1957.

JARED E. DIXON,
Town Clerk.

Guildhall,
Bath. 5786

SURREY COUNTY COUNCIL

Applications are invited for appointment of ASSISTANT ARCHITECT Grade VI, £902—£1,107 p.a. plus £30 London Allowance. Must be A.R.I.B.A.

Full details, present salary and three copy testimonials to County Architect, County Hall, Kingston, as soon as possible. 5808

MANCHESTER REGIONAL HOSPITAL BOARD

Regional Architect: H. McMaster, A.R.I.B.A.

Applications are invited for the following posts:—

(a) ASSISTANT ARCHITECTS (2).

(b) ASSISTANT QUANTITY SURVEYOR.

Intermediate or Final examination qualifications are required and the salaries payable will be according to qualifications within the scales £510—£710 or £680—£985 per annum. Forms of application are obtainable from the Secretary of the Board, Cheetwood Road, Manchester, 8, to whom they should be returned by the 23rd April, 1957. 5814

BOROUGH OF NEWCASTLE-UNDER-LYME

Required:—
(a) ARCHITECTURAL ASSISTANT, A.P.T. IV (£727 15s.—£907 2s. 6d. p.a.)

(b) ARCHITECTURAL ASSISTANT, A.P.T. I (£543—£625 p.a.).

Commencing salaries according to qualifications and experience.

Applicants for (a) must be A.R.I.B.A. and experience in connection with the design of new Schools will be an advantage.

Applicants for (b) are required for Housing and general works.

Housing Accommodation will be provided if required for post (a).

Application forms and conditions of appointment may be obtained from the Borough Surveyor, Lancaster Building, Newcastle, Staffs, and will be returned to him not later than Tuesday, 16th April, 1957.

C. J. MORTON,
Town Clerk.

Town Hall, Newcastle-under-Lyme. 5776

COUNTY BOROUGH OF STOCKPORT

(1) ARCHITECT required (£814 17s. 6d.—£994 5s.).

(2) ASSISTANT ARCHITECT required. Special Grade £707 5s.—£861 or A.P.T. I/II £543 5s.—£691 17s. 6d. depending on qualifications.

Interesting new work on large scale development. Commencing salaries according to age and experience. Local Government experience not essential. Full particulars to Borough Architect, Town Hall, Stockport, by 15th April, 1957, stating age, qualifications, experience, two referees, and if related to member or senior officer of Council. Posts pensionable, subject to medical examination. Canvassing disqualifies. 5780

BOROUGH OF NEATH

APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment. Applicants must have completed a period of training, had not less than two years' subsequent experience in architectural work, have passed the Intermediate Examination of the R.I.B.A., and preferably some parts of the final Examination.

The salary will be Grade A.P.T. III (£656 to £784) and the appointment will be subject to one month's notice on either side; to the Local Government Superannuation Acts 1937 and 1953, and to the passing of a medical examination.

Applications, stating age, qualifications and experience, and giving the names of two referees, must be received by the undersigned not later than 16th April, 1957.

D. KING DAVIES,
Town Clerk.

Town Hall, Neath. 5778

LONDON ELECTRICITY BOARD

CIVIL/STRUCTURAL ENGINEERING ASSISTANT

Applications are invited for the above position in the Construction Branch of the Chief Engineer's Department in Central London.

Applicants should have experience in the design and detailing of reinforced concrete for foundations, framed buildings, etc., or in the design and detailing of structural steelwork for buildings, etc.

The post is graded under Schedule "D" of the National Joint Board agreement and the commencing salary would be dependent on experience within either Grade 4—£850 10s. to £955 10s. p.a. or Grade 5—£755 to £840 p.a. inclusive.

Application forms obtainable from Personnel Officer, 46, New Broad Street, London, E.C.2. Please quote ref. FER/2290/A. 5765

AIR MINISTRY Works Designs Branch requires in London and Provinces **ARCHITECTURAL ASSISTANTS** experienced in planning/preparation of working drawings and details for permanent and semi-permanent buildings. Salaries in London up to £255 p.a. for men and £249 for women. Somewhat lower in Provinces. Starting pay dependent on age, qualifications and experience. Long term possibilities with promotion and pensionable prospects. Five-day week, 3 weeks 3 days leave a year. Liability for overseas service. Normally natural born British subjects. Write stating age, qualifications, employment details including type of work done, to any Employment Exchange, quoting Order No. Borough 1000. 5502

COUNTY BOROUGH OF BOOTLE
Applications are invited for the appointment of an **ASSISTANT ARCHITECT**, Grade A.P.T. III (£656 to £784 2s. 6d. per annum). Preference will be given to those applicants having experience in the design and construction of schools.

Application Forms obtainable from the Borough Surveyor, Town Hall, Bootle 20, Lancs. are returnable by Friday, 19th April, 1957.

HAROLD PARTINGTON,
Town Clerk. 5799

DURHAM COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
QUALIFIED ARCHITECTURAL AND QUANTITY SURVEYING ASSISTANTS Salaries: A.P.T. VI (£902 rising to £1,107 p.a.) and A.P.T. V (£814 17s. 6d. rising to £994 5s. p.a.). Forms and particulars from County Architect, South Street, Durham. Closing date 13th April, 1957. Canvassing members of the Council is prohibited.

J. K. HOPE,
Clerk of the County Council. 5794

ALDRIDGE URBAN DISTRICT COUNCIL
ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment at a salary in accordance with Grade A.P.T. III the commencing stage to be appropriate having regard to experience. Housing accommodation will be available if required, and reasonable removal expenses paid. The appointment is subject to medical examination and to one month's notice, and affords an opportunity to gain wide experience with a rapidly developing Authority.

Applications are to be submitted to the undersigned by Monday, 15th April, 1957, together with the names of two referees.

H. G. G. NICHOLS,
Clerk of the Council. 5791

The Council House, Aldridge, Staffs.

COUNTY BOROUGH OF DERBY
APPOINTMENT OF CHIEF PLANNING ASSISTANT

Applications are invited for the above permanent appointment in the Borough Engineer & Surveyor's Planning Department.

Salary in accordance with A.P.T. Grade VI (£902 to £1,107). National Scheme of Conditions of Service, pensionable and subject to medical examination and one month's notice.

Candidates must be Members or Associate Members of the Town Planning Institute and should also be A.M.I.C.E. or A.M.I.Mun.E. or A.R.I.C.S., or A.R.I.B.A., and have considerable experience in planning, preferably in urban areas.

Forms of application and further details may be obtained from Mr. M. L. Francis, F.R.I.C.S., M.I.Mun.E., Borough Engineer & Surveyor, The Council House, Derby, to whom they must be returned, together with the names of at least two persons to whom reference can be made, not later than 9 a.m., 15th April, 1957.

Canvassing will be a disqualification, and the Council cannot assist in the provision of housing accommodation.

G. H. EMLYN JONES,
Town Clerk. 5793

COUNTY COUNCIL OF STIRLING
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(A) **QUALIFIED ARCHITECTS.** Salary Scale £1,150 x £52 10s.—£1,360 per annum. Applicants must hold the A.R.I.B.A., have good experience in contemporary design and construction and will require to work as Senior Architects capable of taking complete responsibility.

(B) **ASSISTANT ARCHITECTS & ASSISTANT QUANTITY SURVEYORS.** Salary Scale A.P. (Va) to VII (£765—£950). Applicants should preferably be Associate Members of the R.I.B.A., or R.I.C.S., with good general training. Grading will be in accordance with experience.

(C) **JUNIOR ASSISTANT ARCHITECTS & QUANTITY SURVEYORS.** Salary Scale A.P. III to V (£635—£780). Applicants should have passed their Intermediate R.I.B.A., or R.I.C.S., and have completed the recognised Apprenticeship. The appointments will be subject to the provisions of the Local Government (Superannuation) Act and successful applicants will require to pass a medical examination.

Applications, stating age, qualifications and experience, accompanied by copies of recent testimonials, should be lodged with the undersigned within fourteen days of the appearance of this advertisement.

JAMES D. KENNEDY,
County Architect. 5753

County Offices, Viewforth, Stirling.

NATIONAL COAL BOARD EAST MIDLANDS DIVISION

Applications are invited for the following appointments in the office of the Divisional Chief Architect, 69, Lower Parliament Street, Nottingham:—

S.V. 723—**QUANTITY SURVEYOR GRADE II.** Salary scale: £700 x £30—£1,000 per annum. Qualifications: A.R.I.C.S.

S.V. 729—**QUANTITY SURVEYING ASSISTANT GRADE I.** Salary scale: £625 x £25—£750 per annum (exceptionally £900). Qualifications: Preferably Intermediate R.I.C.S., although regard will be paid to good practical experience.

S.V. 730—**ARCHITECTURAL ASSISTANT Grade I.** Salary scale: £625 x £25—£750 per annum (exceptionally £900). Qualifications: Preferably Intermediate R.I.B.A., although regard will be paid to good practical experience.

The architectural work of the department covers the design of colliery surface buildings of all types, including workshops, stores, power plants, offices, pithead baths, canteens, medical centres and recreation buildings.

The point of entry into the salary scales of the respective grades will depend on qualifications and experience. The posts are superannuable and superannuation rights under Local Authority and certain other schemes are transferable. Facilities for part time study at the Nottingham School of Architecture may be granted to Assistants in certain circumstances.

Applications giving age, present salary and full details of education, qualifications and present appointment should be addressed to The Divisional Chief Staff Officer, National Coal Board, East Midlands Division, Sherwood Lodge, Nr. Arnold, Nottingham, within 14 days. Please quote appropriate reference number. 5795

STAFFORDSHIRE COUNTY COUNCIL EDUCATION ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments on the staff of the County Education Architect's Department. Forms of application to be obtained from: The County Education Architect, Green Hall, Lichfield Road, Stafford. Completed forms to be returned by the 17th April, 1957.

ASSISTANT ARCHITECTS: Grades A.P.T. VI (£902—£1,107) p.a.; Grades A.P.T. V (£814—£994) p.a.; Grades A.P.T. IV (£727—£907) p.a.

Applicants should be members of the R.I.B.A. and have drawing office experience, preferably in an Architect's office connected with school buildings.

SENIOR HEATING ENGINEER: Grade A.P.T. VII (£999—£1,230) p.a. Preference will be given to Associates of the Institution of Heating and Ventilating Engineers.

ASSISTANT HEATING ENGINEERS: Grades A.P.T. IV/V/VI (£727—£1,107) p.a. According to qualifications and experience.

QUANTITY SURVEYOR: Grade A.P.T. V/VI (£727—£1,107). Salary according to qualifications and experience. Applicants should be members of the R.I.C.S., or equivalent.

SPECIFICATION WRITERS: Grades A.P.T. II/IV according to qualifications and experience. Salary £609—£907 p.a.

The County are prepared to grant a lodging allowance of 35s. per week to married applicants maintaining a home outside the geographical County for a period of six months; also 3rd class rail travel home bi-monthly during the initial six months.

The County Council are prepared to give consideration to the granting of financial assistance in appropriate cases towards removal expenses.

T. H. EVANS,
Clerk of the County Council. 5801

HUNTINGDONSHIRE COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(a) **SENIOR ARCHITECTURAL ASSISTANT,** A.P.T. IV, £727—£907.

(b) **ARCHITECTURAL ASSISTANT, A.P.T. II-III,** £609—£784.

Further details and application forms may be obtained from the County Architect, County Buildings, Huntingdon. Completed application forms should be returned to the undersigned by Friday, 19th April, 1957.

A. C. AYLRWARD,
Clerk of the County Council. 5815

County Buildings, Huntingdon.

CRAWLEY DEVELOPMENT CORPORATION

Require

(a) **ASSISTANT ARCHITECT (A.P.T. IV/VI)** £728—£1,107.

(b) **DRAUGHTSMEN (A.P.T. I/III)** £543—£784.

(c) **DRAUGHTSMEN (H.G.D./A.P.T. I)** £185—£625.

State post applied for. Application form and further particulars from Chief Architect (Vacant) Broadfield, Crawley, Sussex. To be returned by 30th April. 5812

Architectural Appointments Vacant

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

W. H. WATKINS, GRAY & PARTNERS require qualified ASSISTANTS for interesting hospital work pension scheme in operation. Write or phone, 57, Catherine Place, S.W.1. Victoria 7761. 5495

MANAGEMENT SELECTION LIMITED have been retained to advise on the appointment of a

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for the

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of a company of furnishers and decorators with a world wide reputation for craftsmanship and quality. The company, which is in London, was founded over 100 years ago and has recently been reorganised under a new board of directors.

This appointment carries full responsibility to the board for the efficient and profitable operation of the contracts division—which includes wood-working, building, decorating, fabrics, carpets and furniture sections. There are prospects of a seat on the board. Salary £3,500 with bonus and pension schemes.

Candidates must have general management experience and have been responsible for negotiating large contracts for the construction, decorating or furnishing of business premises and other large public buildings. It is desirable that they should have an arts degree or a qualification in architecture, be in their early 40's and combine a sense of design with sound commercial judgement.

Please send brief details in strict confidence to P. J. R. Fryer, Management Selection Limited, 17, Stratton Street, London, W.1, quoting reference number (YB343). No information will be disclosed to our clients without candidates being told their identity and giving permission. 5802

CROYDON, SENIOR and JUNIOR ASSISTANTS required for interesting and varied work. The former able to manage contracts and the latter with general office experience. Write in both cases giving age, experience and salary required, to George Lowe & Partner, F.A.R.I.B.A., 4, High Street, Croydon. 5451

ARCHITECTURAL ASSISTANT required in West End office. Should have some experience of general procedure, including site supervision, etc., in addition to good standard of draughtsmanship and building construction. State age, experience and salary required. Box 5511.

ASSISTANT ARCHITECTS AND SHOP-FITTING DRAUGHTSMEN. Co-operative Wholesale Society, Ltd., invite applications for the following appointments: (1) Assistant Architects capable of preparing working drawings from preliminary details. (2) Shopfitting Draughtsmen with experience in Shop Equipment and modernisation of Interiors.

The posts are pensionable, subject to medical examination. Five-day week in operation. Applications, giving age, details of experience and salary required to W. J. Reed, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 99, Leman Street, London, E.1. 4977

TWO ARCHITECTURAL ASSISTANTS of Intermediate standard required for interesting work in varied practice. Shops, Offices, Flats and Housing schemes, etc. Salary by arrangement. George Watt, A.R.I.B.A., 146, Mostyn Road, Merton Park, S.W.19. LIB 8181. 5431

VACANCIES for ARCHITECTURAL ASSISTANTS, particularly Junior and Intermediate grades. Applicants with knowledge of commercial work and London experience an advantage. Varied practice, five-day week. Lewis Solomon, Son & Joseph, 21, Bloomsbury Way, London, W.C.1. Holborn 5108. 5152

ARCHITECTURAL ASSISTANTS are required in the undermentioned Departments of a rapidly expanding East Midlands Manufacturing concern marketing prefabricated timber roof systems, timber curtain walling and related products.

DESIGN OFFICE (Senior Assistants) The successful applicants will be engaged in the preparation of schemes to Architects' requirements, incorporating the Company's products. As the Department expands it is envisaged that these Senior Assistants will develop their own sections. Minimum starting salary £750.

DRAWING OFFICE (Senior Assistants) The successful applicants will be engaged as Section Leaders in the preparation of working drawings and the supervision of Junior Assistants. Minimum starting salary £700. (Intermediate Assistants)

These Assistants will be engaged in the preparation of working drawings under Section Leaders. Starting salaries from £500.

It is the policy of the Company to extend personal contact with the profession and to send both Design and Drawing Office personnel to advise and discuss projects in Architects' offices at both sketch scheme and working drawing stages. This policy demands of the applicant a high degree of individual initiative and technical ability.

A compulsory superannuation scheme is in operation.

The office, operating on a five-day week, is centrally situated and offers pleasant working conditions.

Both Departments are controlled by Staff Architects and applicants should in the first instance write for forms of application to Box 5705, endorsing their letters "Design" or "Drawing Office" as applicable.

FARMER & DARK have vacancies for an experienced **ASSISTANT ARCHITECT** and **JUNIOR ASSISTANT ARCHITECT** for industrial projects. Five-day week. Applications marked "Confidential" with full particulars and salary required to: Farmer & Dark, Romney House, Tufston Street, Westminster, S.W.1. 5717

ARCHITECTURAL ASSISTANT required for a general practice, chiefly domestic and agricultural work. Intermediate R.I.B.A. standard desirable. Applications from more senior men and women would be considered. Salary by arrangement. Smith-Woolley & Cartners, Collingham, Newark, Notts. 5714

ASSISTANT ARCHITECT approximately intermediate standard required in Consulting Engineers Architectural Group site office, Berkeley Power Station, Glos. Please reply to Box No. 699, Glovers, 351, Oxford Street, London, W.1. 5716

ARCHITECTURAL ASSISTANT wanted for responsible position in small busy West End office. At least intermediate standard with ability in design and working drawings. Holiday arrangements respected. Reply, stating age, qualifications and salary required to Box 5718.

ARCHITECTURAL ASSISTANT, with drawing office experience required for small general practice. Salary range £500-£600. R. Jelinek-Karl, F.R.I.B.A., 22, Chancery Lane, W.C.2. 5703

YOUNG QUALIFIED ASSISTANT ARCHITECT with office experience required to assist with new building schemes throughout the country. Capable designer. Interest in contemporary shopfitting an advantage. Willing to travel. Applications, stating age, qualifications and experience, to Staff Architect, Prices Tailors Ltd., Cardigan Crescent, Leeds, 4. 5700

ARCHITECTURAL ASSISTANT of Intermediate standard with office experience capable of preparing working drawings and details. Interest in contemporary shopfitting an advantage. Applications, stating age, qualifications and experience, to Staff Architect, Prices Tailors Ltd., Cardigan Crescent, Leeds, 4. 5701

INTERMEDIATE ASSISTANT required. Interesting work of contemporary nature. Salary up to £850 p.a. according to capabilities. Apply Morris de Metz, F.R.I.B.A. City 4086. 5676

WANTED in London Office of A.R.I.B.A. engaged on work for Housing Company. **ARCHITECTURAL ASSISTANT**, Intermediate R.I.B.A. standard. Experience in preparation of Sketch Designs, Working Drawings and Specifications essential. Salary according to experience and capabilities. Box 5675

QUALIFIED ASSISTANTS required, thoroughly experienced in provincial town practice. Salary £300 to £1,000. F. J. Lenton & Partners, Stamford and Grantham. 5667

JUNIOR ASSISTANT with approximately two years' drawing office experience required for Architect's Dept., primarily for extension of modernisation programme. Commencing salary £400-£450 p.a. depending on experience and ability. Travelling in Gt. Britain. Five-day week. Canteen facilities. Write with full details posts held education, age National Service, to Mac Fisheries Ltd., Architects Department, 10/12, Little Trinity Lane, London, E.C.4. 5743

ARCHITECTURAL ASSISTANT required for small general practice in Yorkshire near Leeds and Doncaster. Write giving particulars of age, experience and salary required. Box 5742.

INTERMEDIATE ASSISTANT required. Interesting work of contemporary nature. Salary up to £850 p.a. according to capabilities. Apply Morris de Metz, F.R.I.B.A. City 4086. 5722

QUALIFIED LADY ASSISTANT, some experience, interested business administration, busy practice, required deputy senior partner, good salary and prospects. Box 5720.

TAKE-OFF. Applications are invited from experienced and suitably qualified persons in an R.I.C.S. approved office. Salary on the scale £850-£1,005, inclusive of L.W., with placing according to age, qualifications and experience. The post is superannuable, subject to medical examination. Five-day week in operation. Applications, stating age, experience, qualifications and salary required to: W. J. Reed, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 99, Leman Street, London, E.1. 5512

ASSISTANT ARCHITECTS required in busy and varied practice with Offices, London, West Riding of Yorkshire and Middlesbrough, as follows: (a) Senior Architects to be Associates of the R.I.B.A., with considerable experience, preferably in schools, commercial or industrial work. Salary £1,000 per annum, according to experience. (b) Qualified Assistant Architects with minimum two years' office experience. Salary £650-£750 per annum, according to experience. (c) Assistant Architects, Inter/Final standard. Salary £550 to £650 per annum, according to experience. Pension Scheme in operation and good prospects for promotion. Apply, with full particulars, to J. G. L. Poulson, Chartered Architect, 29, Ropergate, Pontefract, Yorkshire. 5617

ASSISTANT wanted for small private practice. Write brief details to T. A. Bird, 13, Welbeck Street, W.1. 5715

JUNIOR ARCHITECTURAL ASSISTANT required in small busy office in Central London. Write full details and salary required to Box 5745.

MANCHESTER.—Vacancy exists in private office for an **ASSISTANT ARCHITECT**. Scope for design, initiative, and responsibility at all stages from sketch plan to final account. Age 25/35. Salary £600-£950. Car allowance.—Box 5605.

TWO ARCHITECTURAL ASSISTANTS required in St. Albans office. Intermediate standard—contemporary outlook preferred but not essential—for working on large building projects. Salary by arrangement. Write giving full details of experience, etc., to Box 5540.

HARROW Office requires **ASSISTANTS**. One Intermediate standard, experienced working drawings, surveys, etc. One Junior, with some experience.—Please write full particulars, including salary required, to Field & Shaw, 40, Station Road, N. Harrow, Middx., Chartered Architects. 5721

ARCHITECT.—David Carr & Stuart Matthew require **ASSISTANTS**, of Senior and Intermediate standard.—Apply in writing, giving particulars, to 14, Lynedoch Place, Edinburgh, 3. 5806

ASSISTANT ARCHITECT required. Preferably A.R.I.B.A., with at least 5 years' office experience. Salary according to qualifications and experience.—Melling & Ridgeway, Chartered Architects, 13, St. James' Row, Sheffield, 1. 5805

ARCHITECT OR ARCHITECTURAL ASSISTANT is offered a post with Talbot Brown, Panter & Partners, Chartered Architects, Wellington, Wellingborough. 5809

TRIPE & WAKEHAM require **ASSISTANTS**. Intermediate standard, or recently qualified with minimum 3 years' office experience. Salary by arrangement.—Telephone Welbeck 7744, 15, Fitzhardinge Street, Manchester Square, W.1. 5810

SENIOR ARCHITECT required by National Contractors for working in conjunction with Consulting Architects and company's own Engineering Design Office for preparation of architectural drawings for major Industrial Developments. Permanent, pensionable position.—Full particulars, including experience, age, etc., to Box 5804.

ARCHITECTURAL ASSISTANT, of Intermediate standard, required in Central London Office. Varied and interesting work. Possibility of some travel.—Apply in writing, stating experience, qualifications, age, and salary required, to Box No. 788, c/o Charles Barker & Sons, Ltd., Gateway House, London, E.C.4. 5813

EXCELLENT prospects are offered to an **ASSISTANT** required to deal with interesting and varied Contracts in South Wales Architect's office. Salary commensurate with experience, with good prospects of advancement for a man of ability. Only first-class and fully experienced men should apply, giving details of age, experience, etc., to Box 5817.

VACANCIES exist for one or more **JUNIOR ASSISTANTS** (R.I.B.A. Intermediate standard).—Applicants should apply in writing to T. Alwyn Lloyd and Gordon, F.A.R.I.B.A., 6, Cathedral Road, Cardiff, stating training, experience and salary required. 5816

ARCHITECTURAL ASSISTANT, and **JUNIOR**, for office in Reading area. Applicant must have knowledge of School lay-out, conversions and general office routine, particulars and salary required.—Box 5807.

ARCHITECTURAL ASSISTANTS (THREE) required for Outer London Office. Opportunity for good experience. Ability to work on own initiative essential.—Dawe, Carter & Partners, 33, Clarendon Road, Watford. 5825

HASKER & HALL, L.F.R.I.B.A., require **ARCHITECTURAL ASSISTANT**, with 4 to 5 years' office experience.—Write or telephone, giving full particulars, including age and salary, to 13, Welbeck Street, W.1 (Welbeck 0061). 5824

INTERMEDIATE standard ARCHITECTURAL ASSISTANTS required to join an Architectural Group, whose offices adjoin Victoria Station. The work includes designing and detailing for industrial projects.—Please apply in writing, stating qualifications, experience, and salary required, to Box 705, Glovers, 351, Oxford Street, London, W.1. 5788

ARCHITECT required in Central London office with first-class design ability, but with practical approach.—Write, giving full particulars and salary required, Box 5797.

QUALIFIED ARCHITECT required for **WALVIS BAY, S.W. Africa**. Salary £90 monthly plus half-yearly bonus. Two year contracts. Write for details, quoting ONS 92/1, to O.T.S., 5 Weldon Crescent, Harrow, Middx. 5829

TREHEARNE & NORMAN PRESTON & PARTNERS have vacancies for **SENIOR and JUNIOR ASSISTANTS**. Salaries according to experience and qualifications.—Apply 85, Kingsway, W.C.2. (HOL. 4071.) 5771

ARCHITECTURAL ASSISTANT, Intermediate standard, required in West End offices for Overseas work. Hospital and Commercial work. Good salary and bonus. Opportunity for responsibility.—Box 5787.

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ARCHITECTURAL ASSISTANTS required. Intermediate standard, in both Liverpool and Wrexham offices. Scope for use of own initiative, and varied experience, including hospital, ecclesiastical, industrial, domestic and general work. Good draughtsmanship essential.—Apply, giving full details, including salary required, to Spence Atkinson, Anthony Clark & Partners, at either Martins Bank Building, Water Street, Liverpool, 2, or 41, Regent Street, Wrexham. 5784

ASSISTANT required. Final standard. Small general practice in Bristol. Flat can be made available.—Apply, stating age, full particulars, and salary required.—Box 5783.

POWELL AND MOYA require **ARCHITECTURAL ASSISTANT**, preferably school trained, with some practical planning experience. Able to work on early planning stages of hospitals. Salary about £525, according to ability.—Write, giving full details, 36, Great Smith Street, London, S.W.1. 5779

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VACANCIES exist for **ARCHITECTURAL ASSISTANTS**, to work on a variety of industrial, commercial and housing projects under congenial office conditions, at Welwyn Garden City.—Please apply in writing, giving full details of age and experience, to Box 5775.

G. M. VICKERS, F.S.A., Dipl.Arch., A.R.I.B.A., requires an **ASSISTANT**. Intermediate standard.—Write or phone 68, Great Russell Street, W.C.1. Holborn 3658. 5772

SENIOR ARCHITECTURAL ASSISTANT required for commercial work.—Reply, stating age, experience and salary required, to Hill & Allum, F.R.I.B.A., A.R.I.C.S., 21, Carlton Crescent, Southampton. 5758

TWO ARCHITECTS' ASSISTANTS required in City Architect's Department. Salary range £600-£800, with good prospects of future advancement.—Apply, stating age, details of experience and salary required, Box 5757.

ARCHITECTURAL ASSISTANT, with office experience, capable of preparing working drawings and specifications, required immediately in busy private practice for varied and interesting works.—Deacon & Laing, 9, St. Paul's Square, Bedford. 5751

EXCELLENT opportunity for **ARCHITECT**, A.R.I.B.A., age approx. 30/35. Assistant to Senior Architect in substantial manufacturing concern. Head office, London. Experience of industrial buildings and layout essential, with interest in allied problems of negotiations, valuations, building insurance, rating and taxation.—Reply to Box 5750, stating age, experience and salary.

SENIOR and JUNIOR ASSISTANTS, with office experience, wanting to work in a varied country practice, should apply to Brett, Boyd & Bosanquet, Watlington Park, Oxford, stating age, qualifications, experience and salary. 5749

SENIOR ARCHITECTURAL ASSISTANT required by United Dairies, Ltd. Applicants to state age and experience in the preparation of surveys, sketch plans and working drawings, and to be able to supervise work in progress. Apply in writing, stating qualifications and salary required, to Chief Architect, United Dairies, Ltd., 31, St. Petersburg Place, W.2. 5747

J. M. AUSTIN-SMITH & PARTNERS require an **ARCHITECTURAL ASSISTANT**, at or above R.I.B.A. Intermediate standard, with not less than 3 years' continuous office experience, for interesting and varied work, with opportunities for taking responsibility and supervising work in progress. Salary will be according to age and length and type of experience.—Apply by telephone to Regent 6183, or to 29, Sackville Street, London, W.1. 5767

ARCHITECTURAL ASSISTANT required in Architect's Dept. Head Office of large Organisation in West End. Opportunity for a keen young man, neat draughtsman, with some experience and interest in shop premises. 5-day week, excellent staff canteen.—Particulars and salary required to Box 5746.

WEST END Architects require ASSISTANT with about 2 years' experience since qualifying. Write stating experience and salary required to Box 5828.

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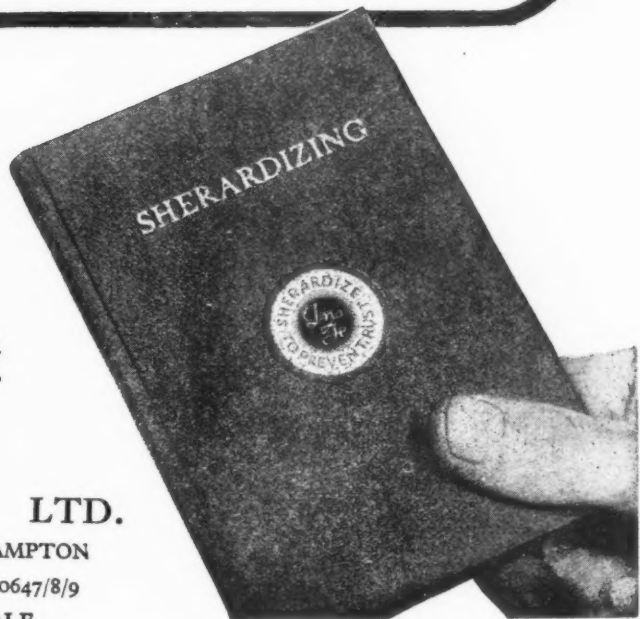
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