THE ARCHITECTS' JOURNAL

tandard contents

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

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HE ARCHITECTURAL PRESS
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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
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1.	Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institute of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
LDA	Lead Development Association. 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
MARS	Modern Architectural Research Group (English Branch of CIAM). Secretary: Trevor Dannatt, A.R.I.B.A., 71, Blandford Street, W.1.	Welbeck 4713
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers. 10 Storey's Gate, S.W.1.	Abbey5111
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

Bran

Problem No. 7 Intense radiant heat

A case for COLT

An outstanding example of radiant heat is found in a Rolling Mill where white-hot metal is processed at around 1,150°C. The heat given off not only causes acute discomfort to those nearby but if no provision is made for its escape, it is reflected back by the building structure, thus completely surrounding workers with heat radiating surfaces.

Installation of Colt Clear Opening Ventilators is the solution to this problem. Its almost 100% free area permits the immediate escape of radiant heat to the atmosphere, simultaneously permitting the maximum passage of air for either extraction or inlet, depending upon its siting. Natural lighting is also provided whilst the clear opening to the atmosphere has a marked beneficial psychological effect upon the staff. In our work for over 9,000 industrial and commercial concerns we have overcome similar problems in the glass industry, chemical and plastic factories, boiler houses, and in many buildings where high temperature, or molten metal is processed.

Whatever your problem, be it heat, fumes, smoke, steam or condensation, Colt can cure it.

The problem of overcoming intense radiant heat in Rolling Mills has been effectively solved by employing Clear Opening Ventilators as shown inset for a number of leading Companies in the Steel industry such as:—

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Firth Brown Tools Ltd.
Firth-Vickers Stainless Steels Limited
Park Gate Iron & Steel Co. Limited
The Patent Shaft & Axletree Co. Ltd.
The United Steel Structural Co. Limited

COLT

Send for Free Manual on Colt Ventilation to Dept. L.7/3a

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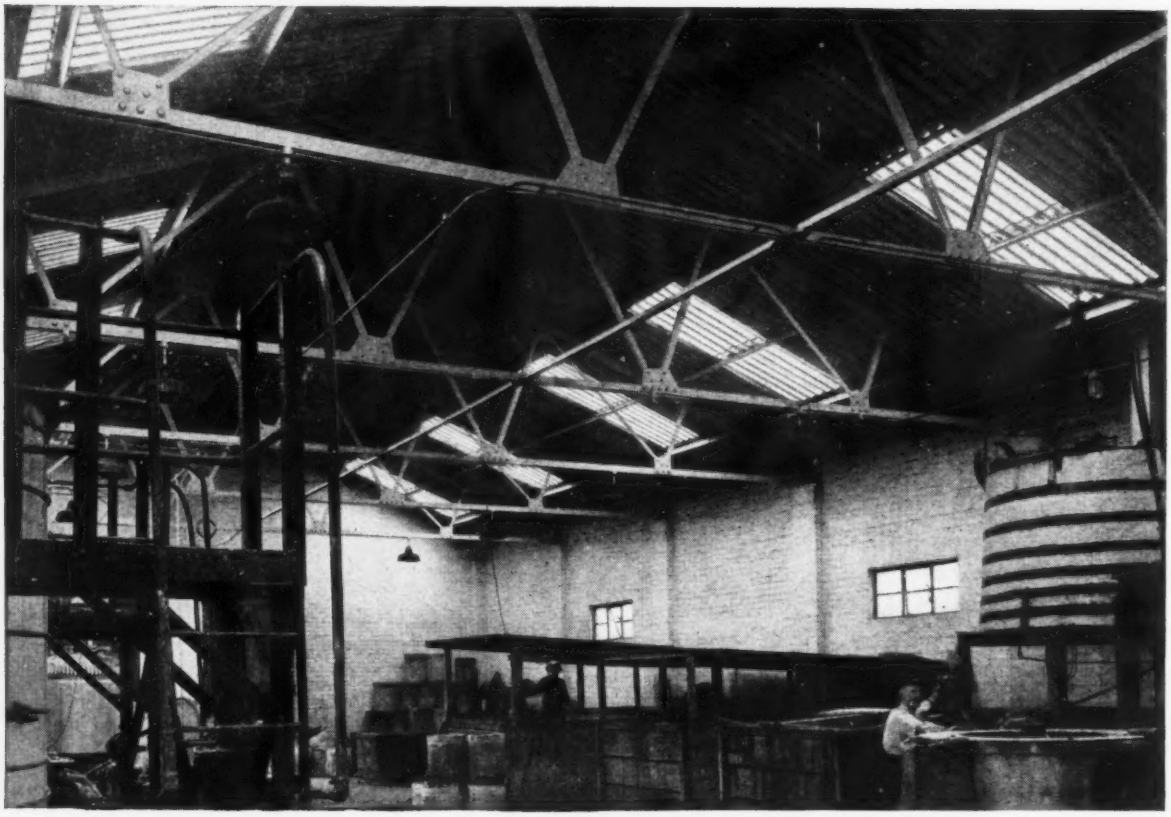
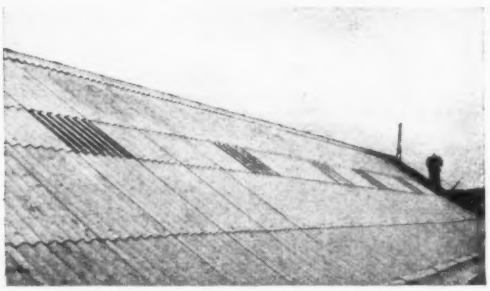
Agents in: Australia, Belgian Congo, Canada, Cyprus, India, Indonesia, Madagascar, Malaya, Mauritius, New Zealand, Pakistan, Portugal, North and South Rhodesia, and South Africa.

G. 393



Corrugated 'Perspex' roof lighting installed in the works of British Dyewood Co. Ltd., Shettleston. Photographs by arrangement with Newton, Robertson & Co. Ltd., Glasgow.

Two words that mean the best roof lighting – **Corrugated 'Perspex'**



CORRUGATED 'PERSPEX' is the answer in all buildings, large and small, where good light conditions are important. Corrugated 'Perspex' acrylic sheet is tough, durable, and gives a very high transmission of daylight. It means good health, good morale and increased efficiency in factories and workshops—as well as reduced lighting costs.

Corrugated 'Perspex' is light, easy to handle and inexpensive to install. It will stand up to weather conditions in any part of the world. It is available in a wide range of profiles. It is not harmed by the corrosive atmospheres in industrial areas.

If diffused daylight is desired, Opal Corrugated 'Perspex' is available. Originally developed for intense light conditions overseas, Opal Corrugated 'Perspex' diffuses daylight evenly and efficiently.

CP. 124

It's as clear as daylight—it must be

CORRUGATED 'PERSPEX'

'Perspex' is the registered trade mark for the acrylic sheet manufactured by I.C.I.

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

In advertisements for some odd reason they mostly seem to depict architects somewhat sombre chaps draped dejectedly over drawing boards.

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Not bad . . . . makes us look human anyway . . . .

That's what I thought. Incidentally that Evo-Stik Impact Adhesive 528 really is remarkable stuff. Do you know I worked out the other day that its ability to bond laminated panels and acoustical tiles on contact is saving us over £100 in time and labour costs on a job we have up north . . . .

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'Impact' Adhesive 528—joining in modern construction

(Regd. Trade Mark)

EVO-STIK

ASPECTS OF ACOUSTICAL ENGINEERING

Why you should employ an Acoustical Specialist

Architectural Acoustics can be roughly divided into three sections—sound absorption, sound isolation and sound control. Industry and commerce is concerned mainly with the first two.

SOUND ABSORPTION

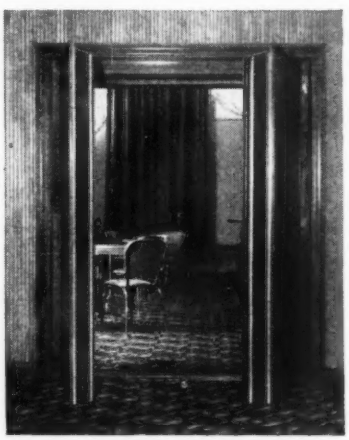
deals with the installation of suitable materials to regulate reverberation time and prevent build-up of sound. The introduction of such materials improves working conditions and increased output results in both office and factory. There is today an extremely wide range of efficient and attractive absorbent materials to choose from.

The illustration above shows a John Dale treatment which has excellent sound absorbing qualities.

DHB/2964

SOUND ISOLATION

is an exceptionally wide subject and a great deal of research has gone into the construction of forms of sound barriers. There has been a great deal of mis-use of materials, particularly with regard to partitions, doors and windows for office and factory. Large sums of money can very easily be spent by firms not giving adequate consideration to the control of transmitted sound. It is imperative when installing materials to consult the qualified Acoustical Engineering Specialist because of the easy misapplication of treatment.



Soundproof doors shown above offer an excellent barrier to noise.

It is essential to ensure correctness of installation for both sound absorption and sound isolation problems. Only by the employment of suitable acoustical materials can this be achieved, because the wrong type or incorrect quantity will not have the rewarding effect which should be derived from it.

SIX POINTS TO NOTE

1. DO NOT USE UNSUITABLE MATERIALS.
2. DO NOT USE ABSORBENT TREATMENT ALONE AS A SOUND BARRIER.

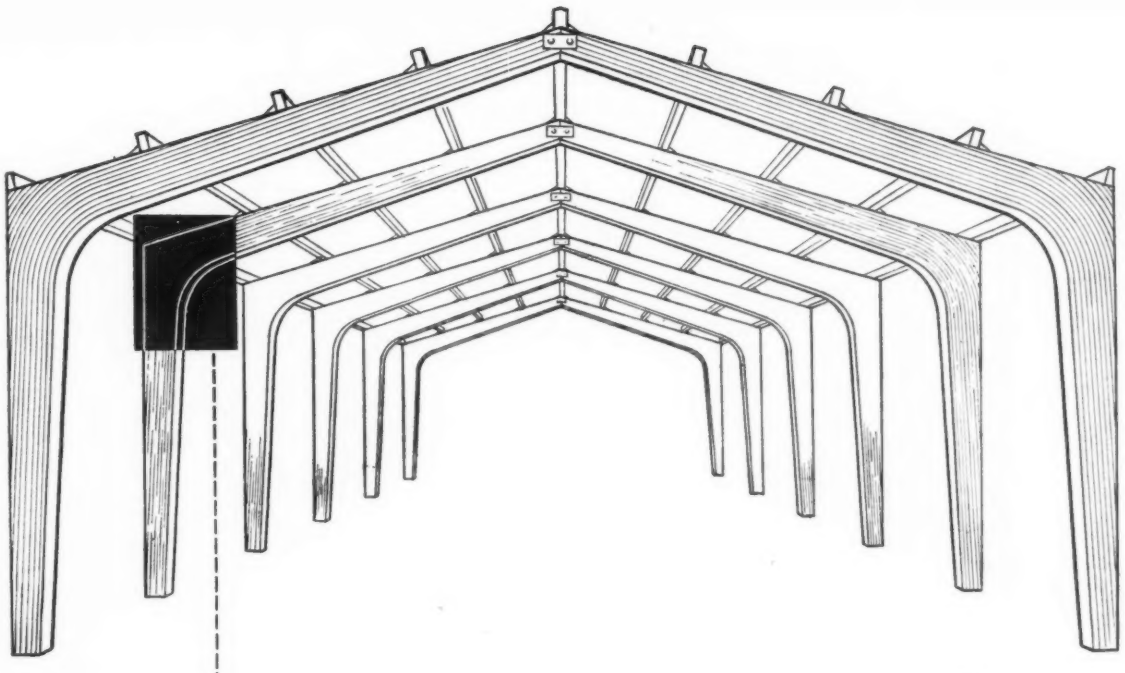
IN ORDER TO AVOID THIS

3. ALWAYS CONSULT THE ACOUSTICAL SPECIALIST.
4. OBTAIN AN ANALYTICAL REPORT ON YOUR PROBLEM.
5. EMPLOY THE ACOUSTICAL CONTRACTOR.

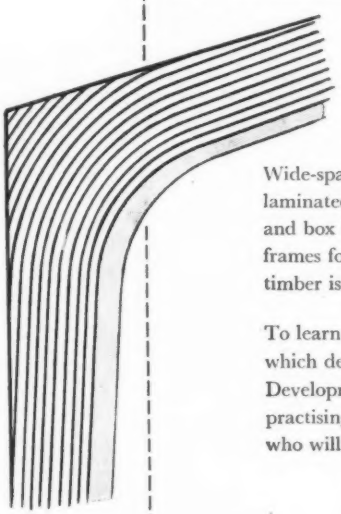
AND REMEMBER

6. THAT JOHN DALE ACOUSTICS DIVISION ARE ACOUSTICAL SPECIALISTS AND CONTRACTORS AND ARE AT YOUR SERVICE AT ANY TIME FOR CONSULTATION.

John Dale Ltd. (Acoustics Division) New Southgate, London N.11. Ent 1272.



Structural design in **TIMBER...**



Wide-span trusses and girders for industrial structures, glued laminated timber arches and frames, plywood portals and box beams for schools and public halls, rigid frames for farm buildings, timber bridges—in all these fields timber is being used with increasing success.

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TD.113

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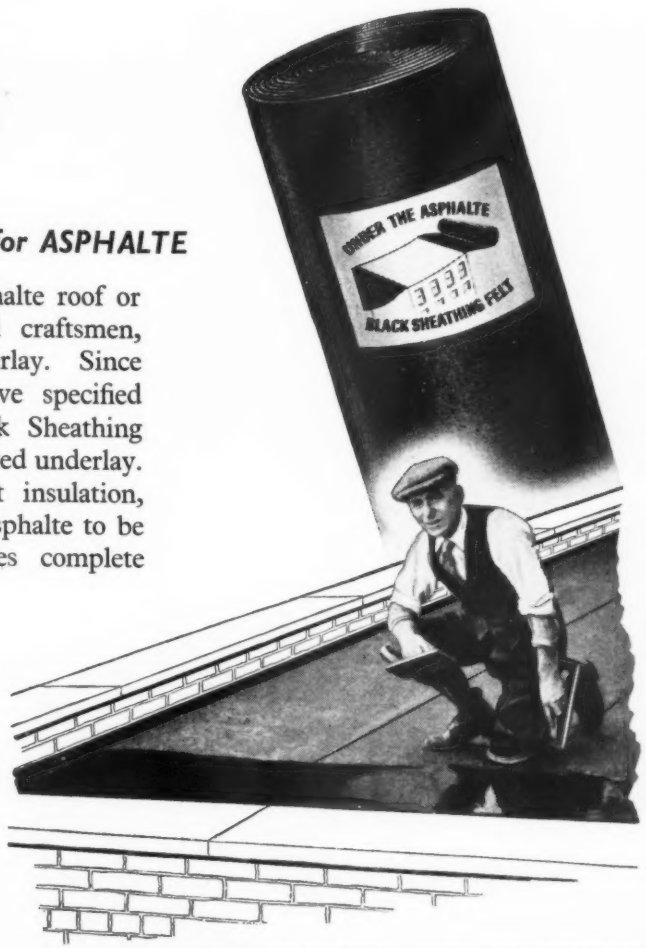

- **PLEASANT TO HANDLE**
- **DOES NOT FRACTURE**
- **DOES NOT ABSORB MOISTURE**
- **DOES NOT SHRINK**

Make sure the Underlay IS BLACK SHEATHING FELT

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Specify, use,

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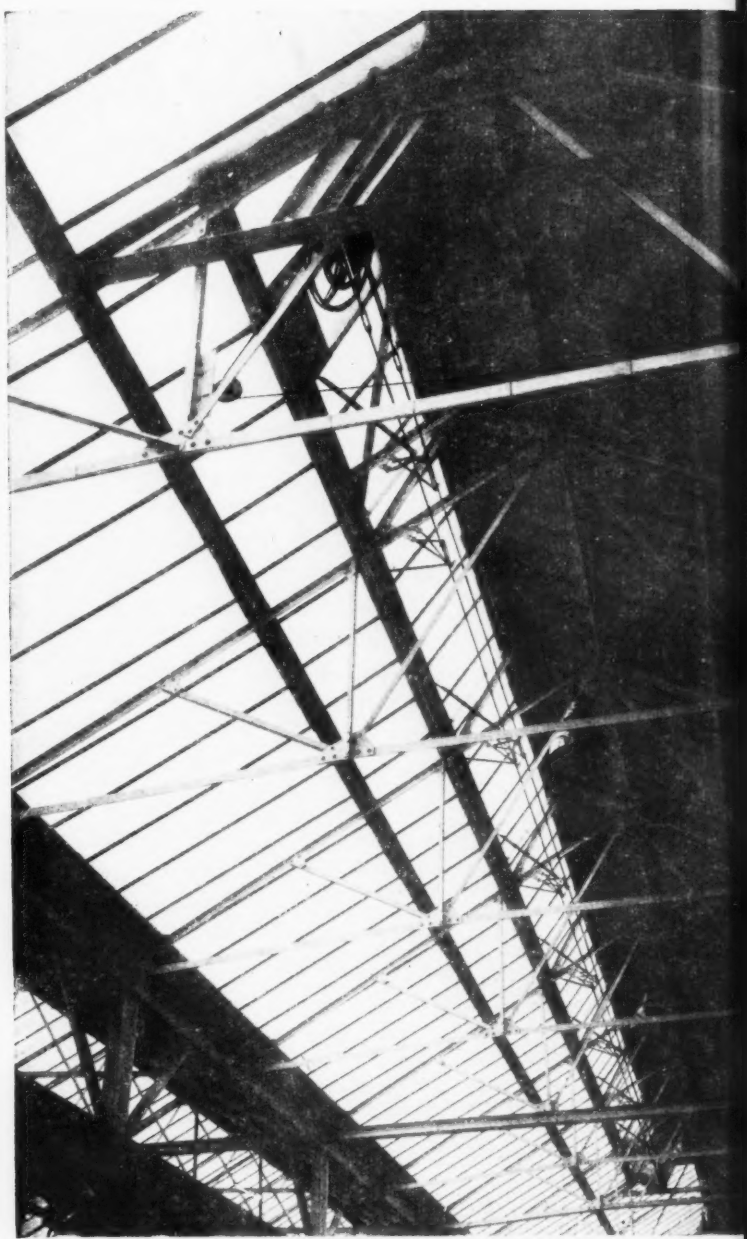
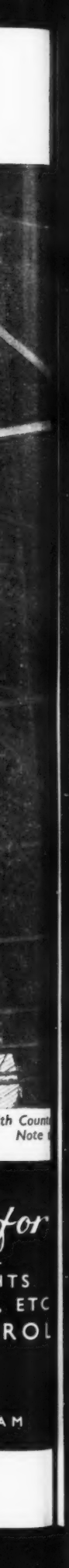
B.S.F./4

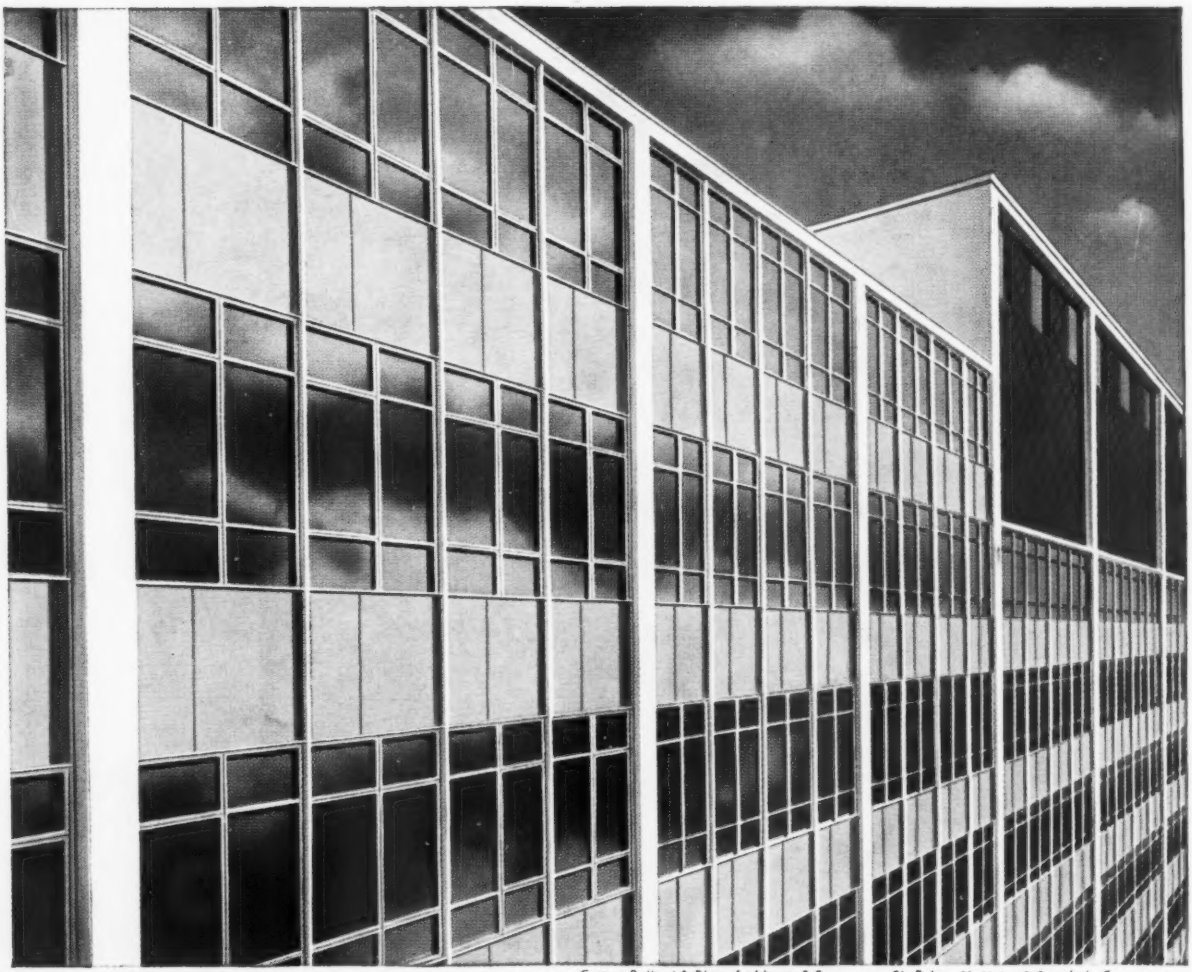
WHERE SIMPLE OR COMPLICATED SCHEMES OF VENTILATION ARE INSTALLED, AND THE OPERATION IS REQUIRED BY REMOTE CONTROL OR OTHERWISE, AND THE WINDOWS HAVE ANY OF THE FOLLOWING CHARACTERISTICS:—

- **OPENING OUTWARDS**
- **OPENING INWARDS**
- **TOP HUNG**
- **HORIZONTAL CENTRE HUNG**
- **BOTTOM HUNG**
- **VERTICAL PIVOT HUNG**
- **SIDE HUNG**
- **HORIZONTAL SLIDING**
- **VERTICAL SLIDING**



The illustration shows One set of Electrically operated Twin Tension Rod Gear with Count Balance Unit operating one continuous opening light, 74' 0" long × 5' 0" deep. Note t Spiral Balance Wheel fitted at the end sprocket.

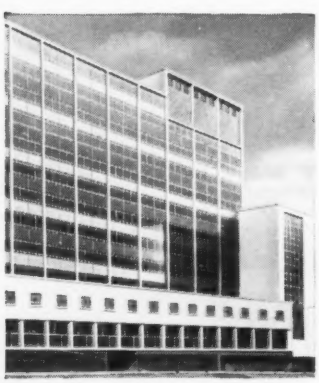




Cotton, Ballard & Blow, Architects & Surveyors. Sir Robert McAlpine & Sons Ltd., Contractors.

HOLOPLAST CURTAIN WALLING

The 'Big Top' is a big job—and Holoplast helps to do it!



A view of the 'Big Top' as it will appear when completed showing the extensive use of Holoplast Curtain Walling.

The advent of steel or reinforced concrete framing has changed traditional architectural design. Exterior walls no longer have to carry the weight of floors and roofing. This has led inevitably to the wide adoption of the curtain walling system, with its great saving in time and site labour. The Holoplast Curtain Walling System leads in this field. The exclusive 'interlocking mullion' design entirely overcomes thermal movement problems and prevents moisture penetration. All infill materials are designed for the job and supplied with it.

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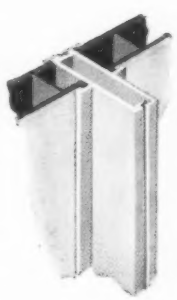

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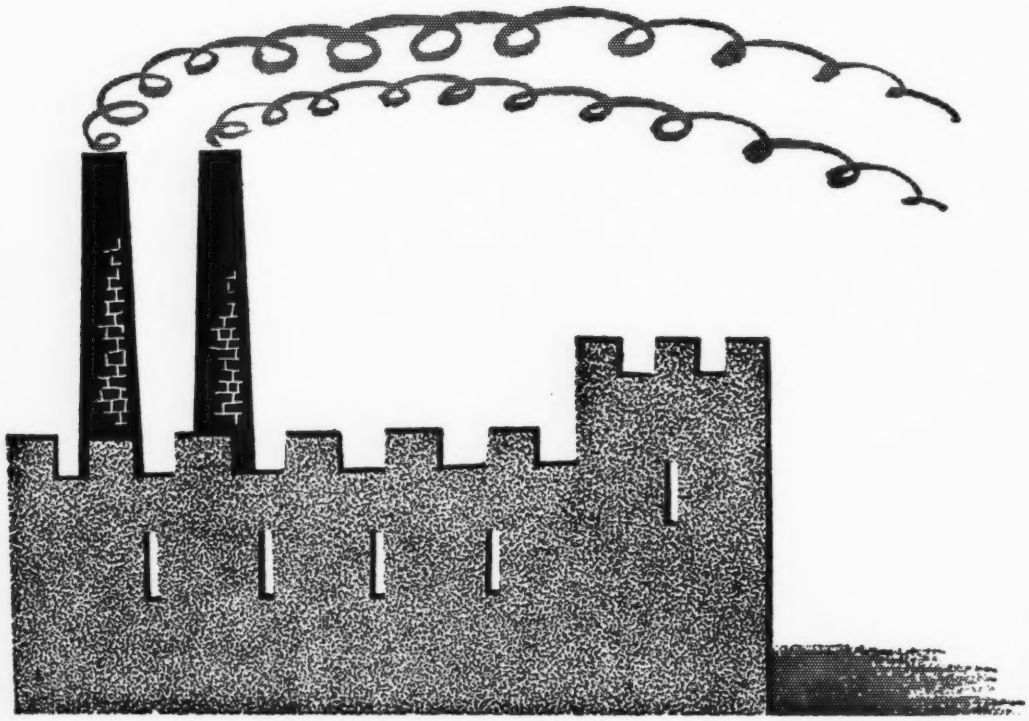
Still in the Middle Ages?



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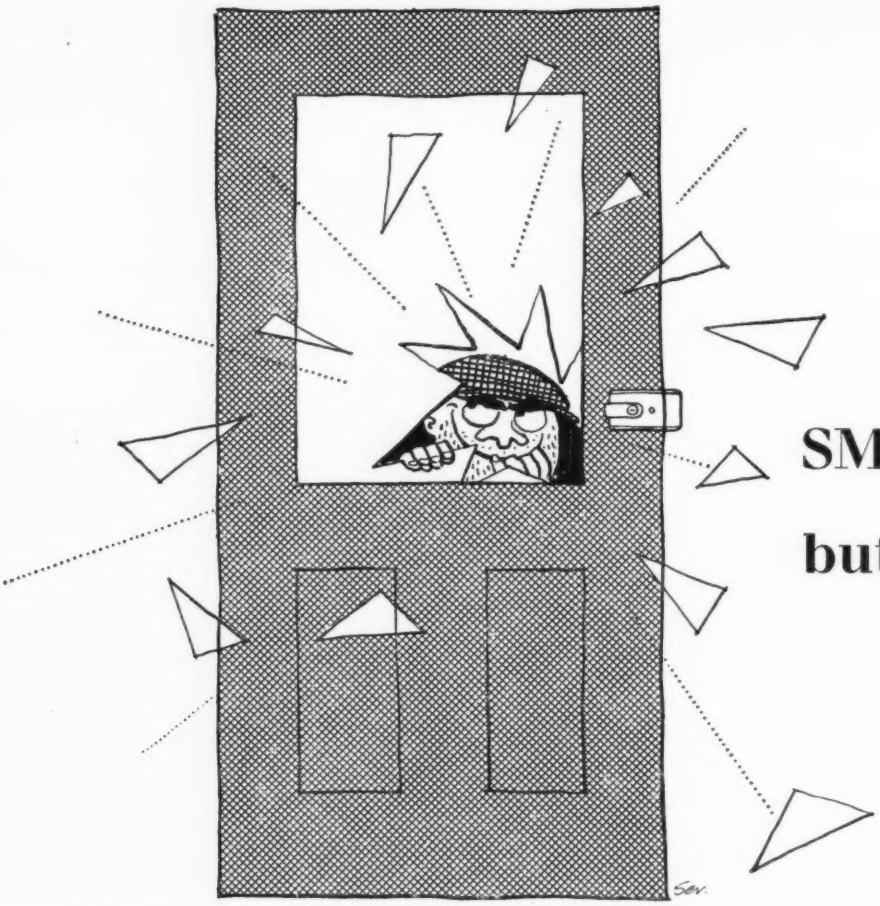
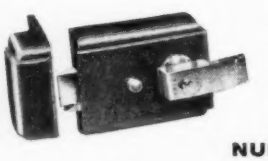
QF7



SMASH...

but no grab!



"Another unsolved case of 'breaking and entering' for the bogies ", says Larry the Latchman, putting his hand through the broken pane to open the door. But Larry is in for a shock ! This latch won't turn, and a jemmy won't force it either. No, here's one crib that can't be cracked because the door is fitted with a Yale Number One Cylinder Automatic Deadlatch — yet another Yale lock that frustrates the uninvited guest.

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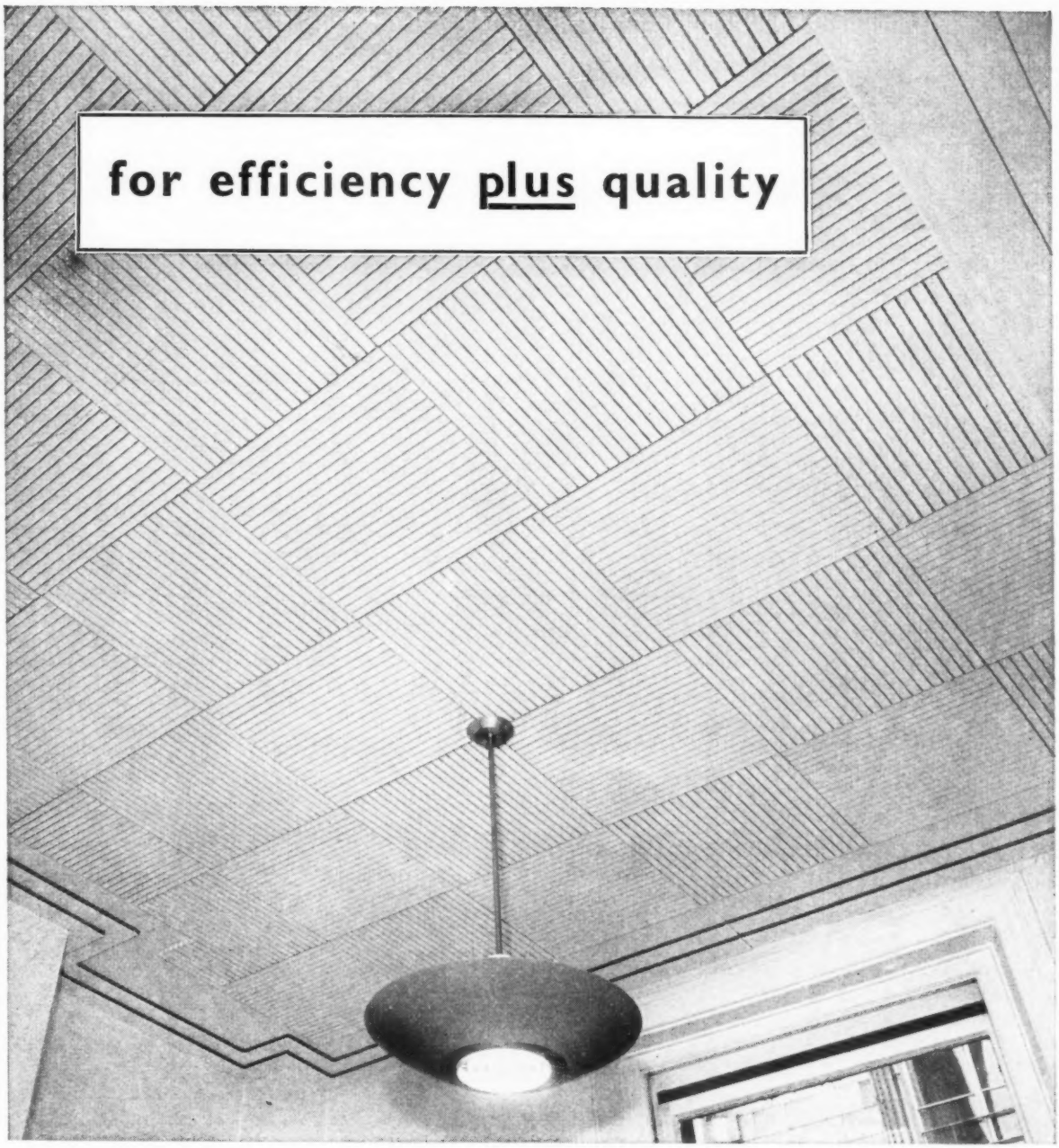

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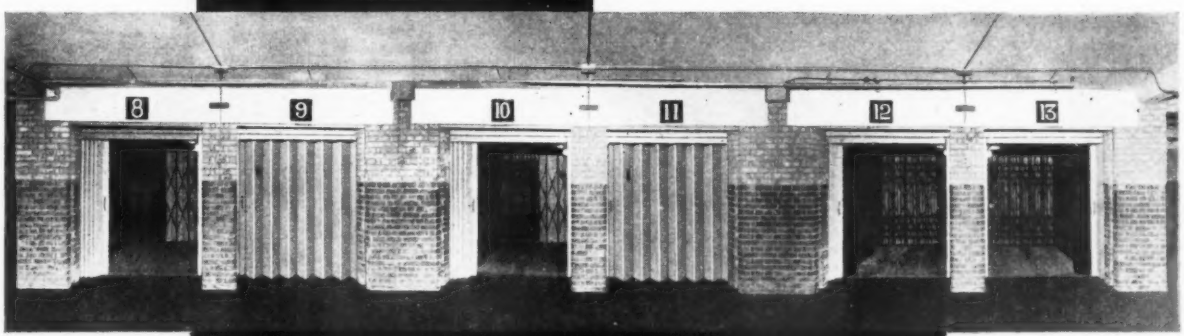
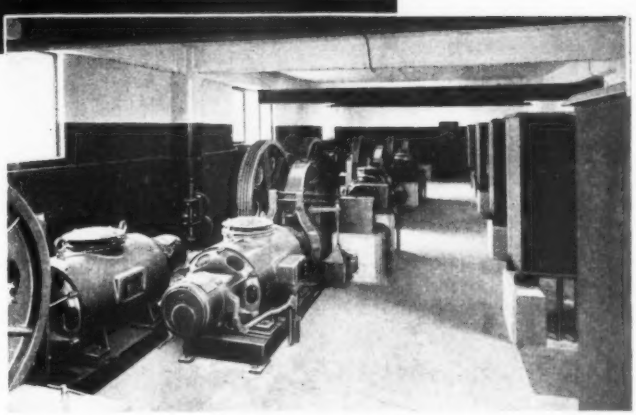


Deliver the goods at New Fresh Wharf

The six lifts illustrated above are installed in a Dry Goods Warehouse. On arrival of a Ship the lifts are in action for 7 to 8 hours continuously. Breaks in running are made only for stopping and starting throughout the 7 to 8 hours daily while ship or ships are alongside the Warehouse. It is estimated that the lifts carry a load of 250 tons per day each during the time of unloading shipments. Bags of Beans, cases of Tinned Foods, Sultanas, Raisins, Oranges and crates of Bananas are some of the commodities carried.



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ECM 60

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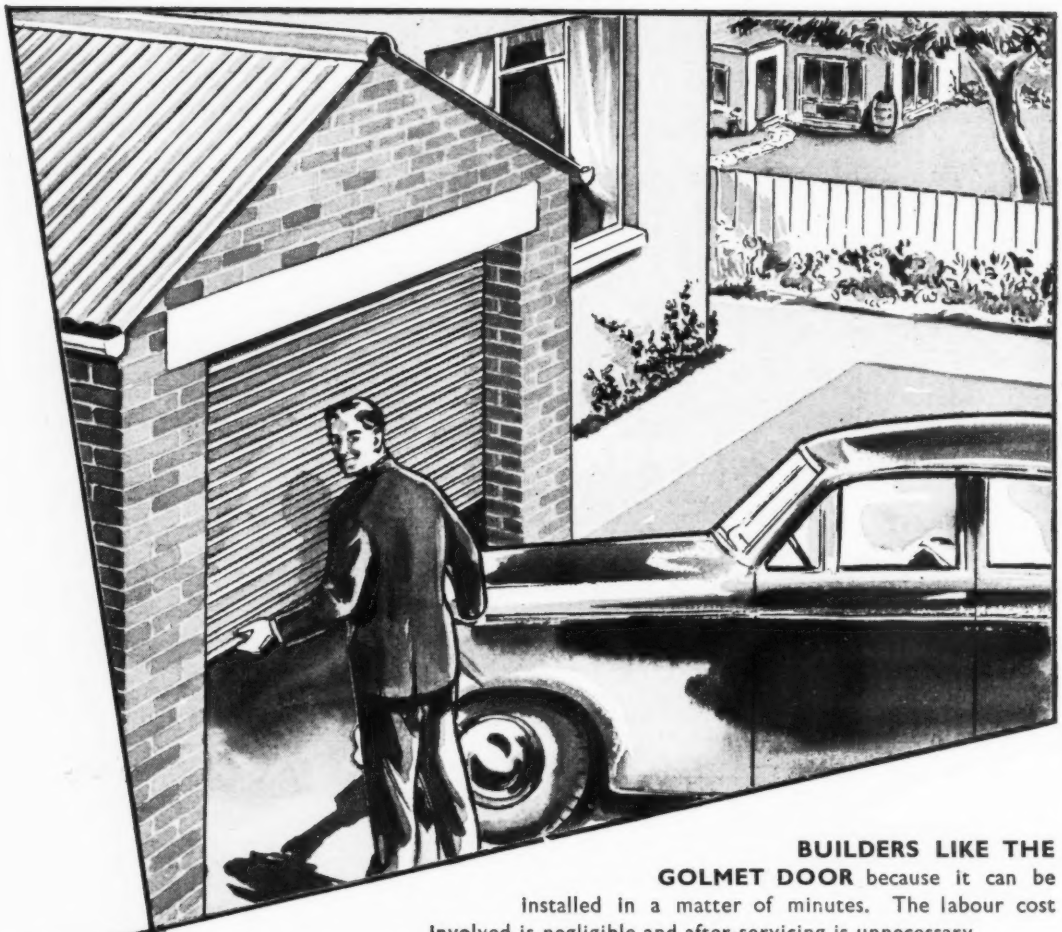
The simple lines blend unobtrusively into the complete frame of the building. The lines are clean and the silver finish extremely attractive.



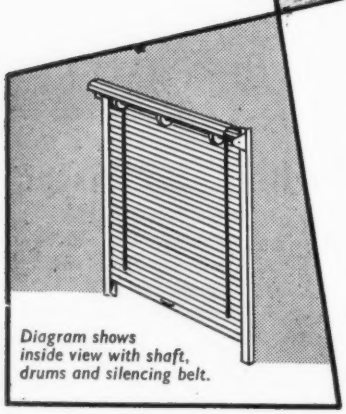


Diagram shows inside view with shaft, drums and silencing belt.

BUILDERS LIKE THE GOLMET DOOR because it can be installed in a matter of minutes. The labour cost involved is negligible and after-servicing is unnecessary.

MOTORISTS LIKE THE GOLMET DOOR because it opens upwards effortlessly, speedily, smoothly—clear of ground obstructions and out of the way of damage. Corrosion-resistant, weatherproof and durable, it retains its smart appearance indefinitely.

FOR ENDURING SATISFACTION SPECIFY THE GOLMET ROLLER SHUTTER DOOR—a high tensile aluminium alloy curtain made of single sheets, suitably riveted, guided by nylon rollers in aluminium side channels. Self coiling, controlled by flat helical counterbalancing springs.

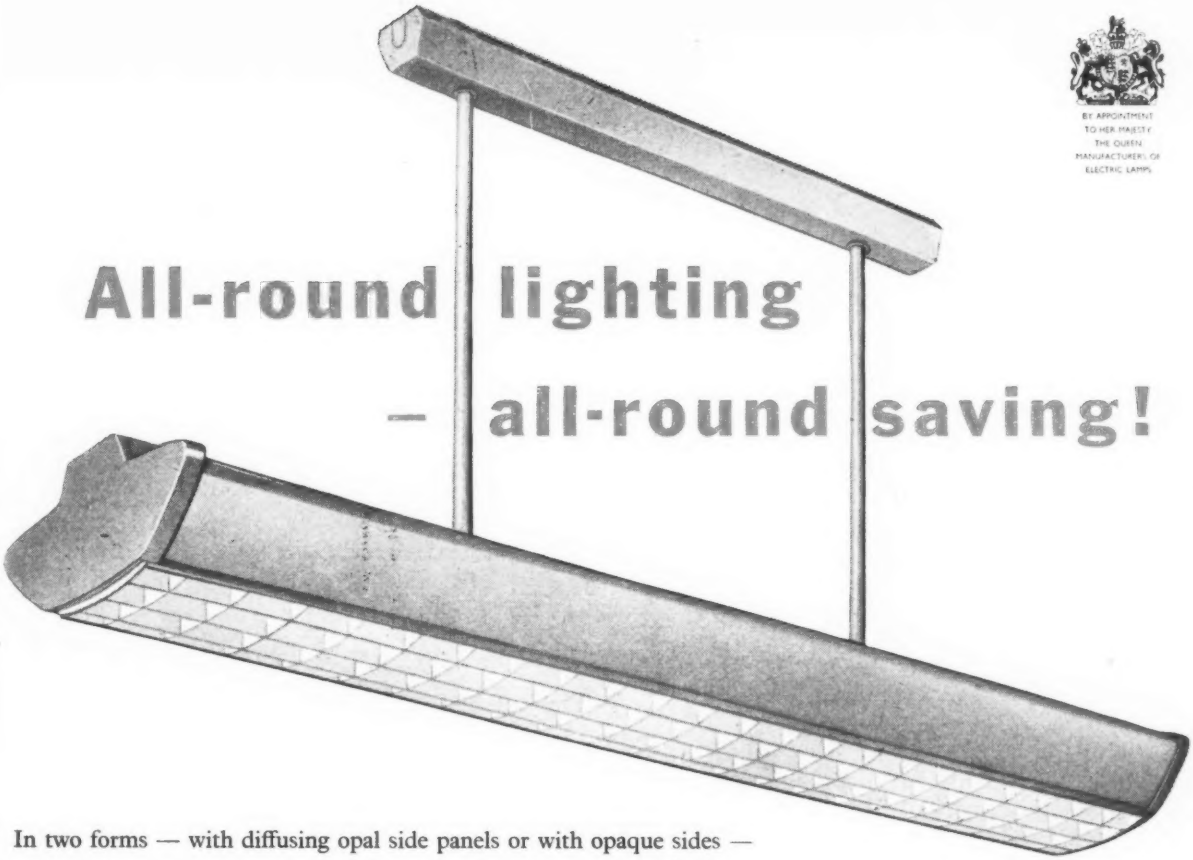
MADE IN ALL SIZES. Full particulars and estimates from :—

GOLMET LTD.
CAERPHILLY, GLAM.

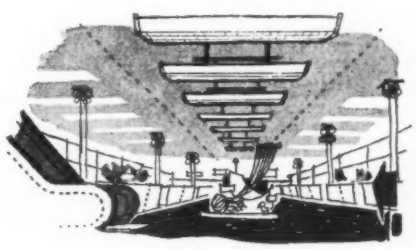
Telephone : Caerphilly 2381/2/3

BY APPOINTMENT TO HER MAJESTY THE QUEEN MANUFACTURERS OF ELECTRIC LAMPS

All-round lighting — all-round saving!



In two forms — with diffusing opal side panels or with opaque sides — the Crompton 'Storelite' pendant has been specially designed for effective and economic lighting of retail premises.



Three 80 w. tubes give as much white light as four 200 w. filament lamps.

Efficient control gear cuts electricity bills.

Fewer fittings cut maintenance costs.

Calculated upward and downward light provides ample glare-free sales area brightness with a pleasing sense of space.

Excellent 'Permawhite' finish completes the story at a surprisingly reasonable cost.

✻ Crompton Lighting Engineers can advise on economy to good effect.

Crompton *'New-Range'*

FLUORESCENT FITTINGS

ELECTRICAL EQUIPMENT

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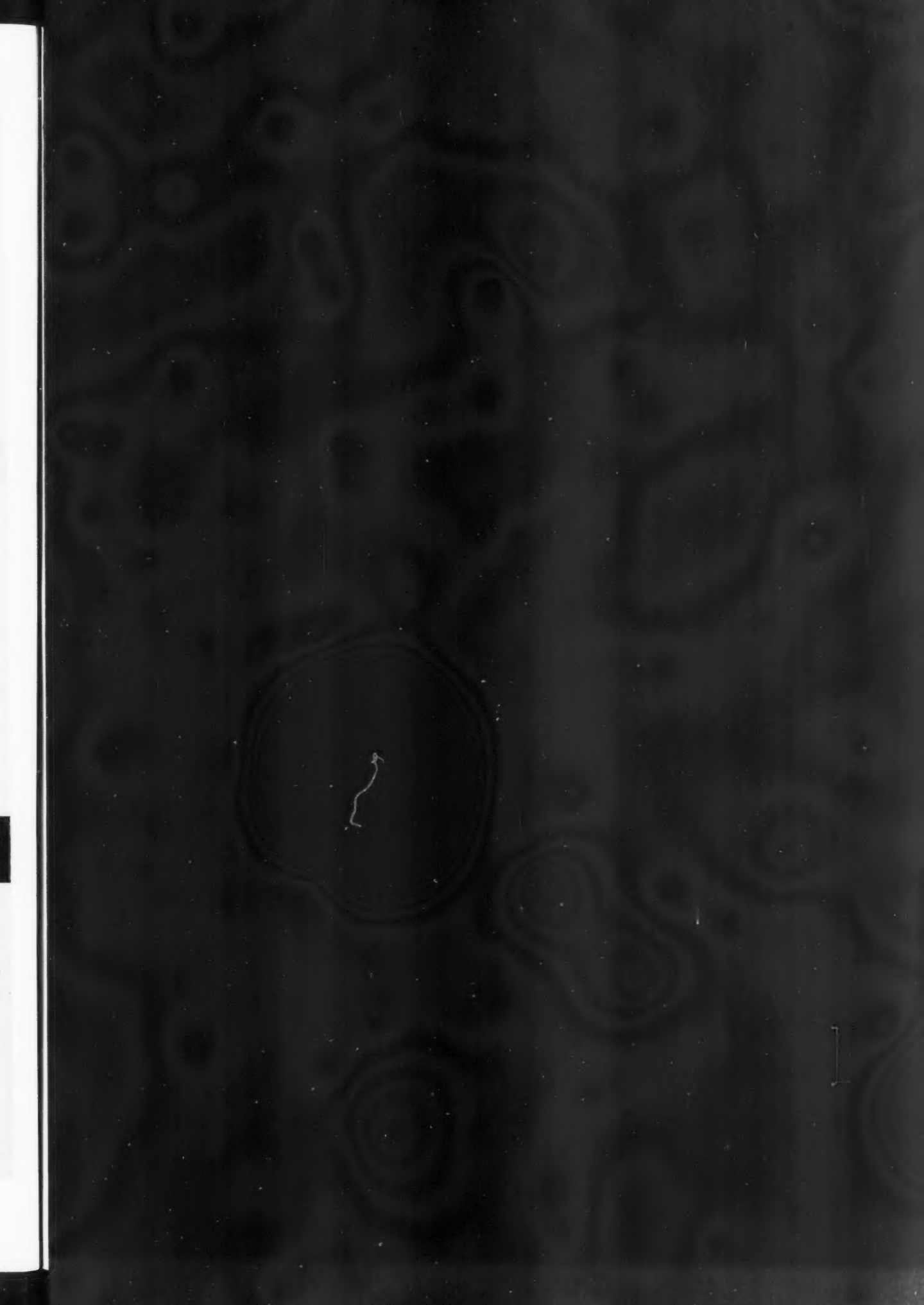
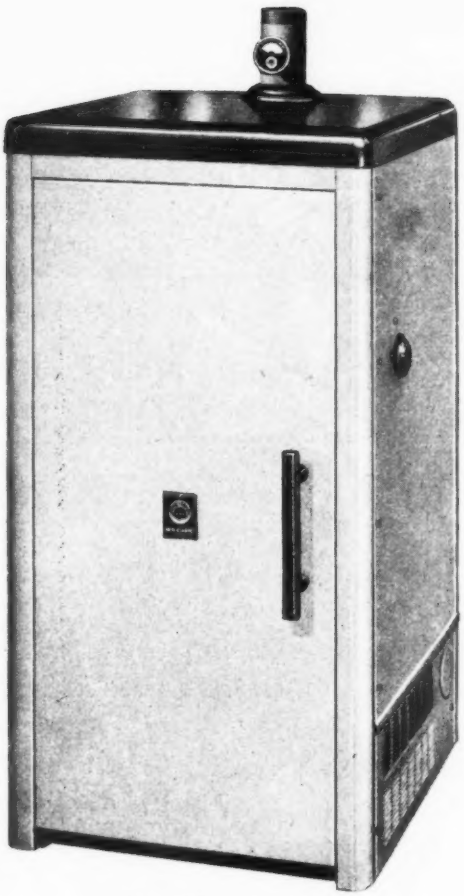




★ *Improved Design*

★ *Thermostatic Control*

The NEW No. 2 *SERIES*

Ideal NEO-CLASSIC Boiler

Following the enthusiasm with which the Ideal No. 1 Series Neo-Classic Boiler was received by the Trade, it was decided to redesign similarly the larger Series. The new model, to be known as the Ideal No. 2 Series Neo-Classic Boiler, incorporates all the special features which have proved so successful in the efficient and economical operation of the smaller No. 1 Series, with the addition that on the underside of the crown of the sections, and also in a part of the flue surface, there have been added fins which increase the heating surface and particularly improve the transmission when the boiler is used with an oil-burner.

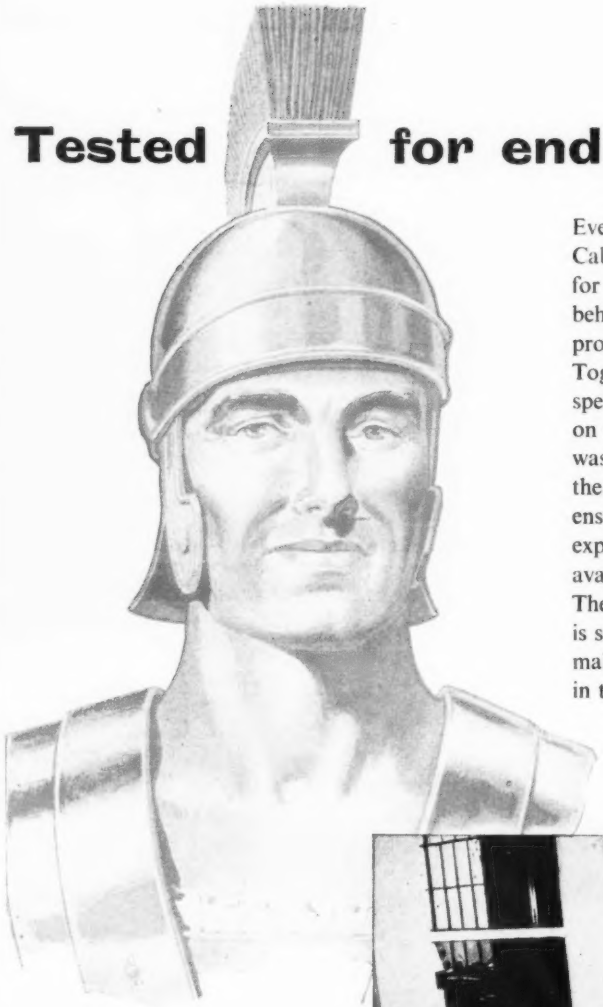
Totally enclosed in an easily cleanable jacket, finished in Black and Cream enamel, the new Neo-Classic Boiler is as attractive in appearance as it is clean in operation. When an enamelled jacket is not required, this can be supplied in plain painted finish, at a reduced price. This boiler is fitted with an easily operated rocking grate and a device *(Patent Pending No. 7124/54)* for dumping incombustible material from the fire-box into the ashpan; ashguides ensure that no ash escapes into the kitchen when the rocking grate is being put to use. Provision is made for the insertion of an Ideal gas-poker to facilitate lighting.

This latest Neo-Classic Boiler, for Central Heating and Indirect Hot Water Supply, is available in six sizes with ratings from 65,000 B.T.U.'s per hour to 135,000 B.T.U.'s per hour and has been designed with Thermostatic Draught Control. A graduated Control Knob is conveniently positioned near the front of the boiler at the top of the right-hand side panel.

If Thermostatic Control is not required, a model with a hand draught control is available. For oil-burning, the boiler will be supplied with both a blank plate in place of the ashpit door to facilitate the fitting of an oil-burner, and a special lift-up pattern fire-door with an observation window of specially toughened glass.

IDEAL BOILERS & RADIATORS LIMITED · IDEAL WORKS · HULL

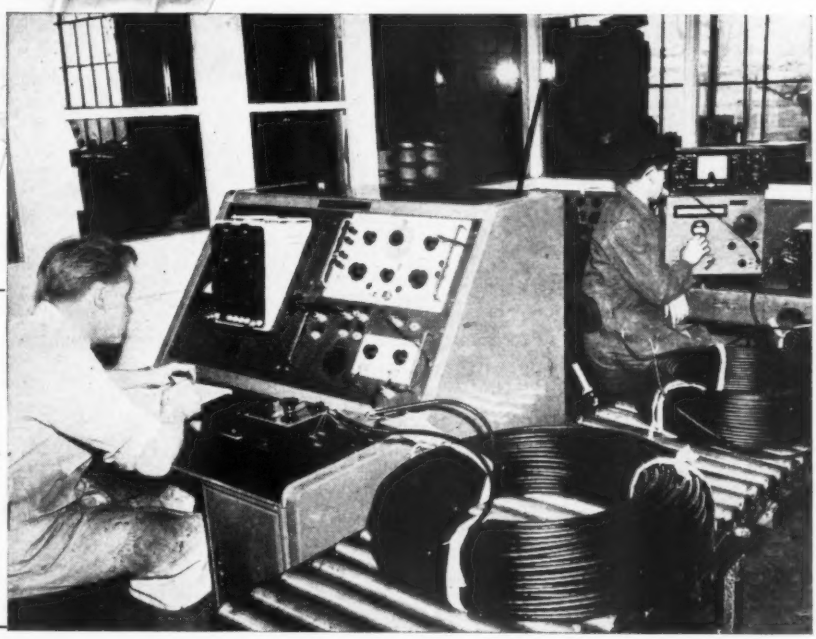
371



Tested for endurance . . .

Every cable made by the sixteen members of the Cable Makers Association is rigorously tested for quality and endurance and has behind it an elaborate and continuous process of research.
Together, the member-firms of C.M.A. spend over one million pounds sterling every year on research and development—none of it wasted by duplication of effort, since one of the C.M.A.'s important functions is to ensure that essential knowledge, data and experience are freely and equally available to all members.
The benefit to cable users of such co-operation is self-evident. It has helped to make Britain the largest exporter of cables in the world.

The Roman Warrior and the letters 'C.M.A.' are British Registered Certification Trade Marks



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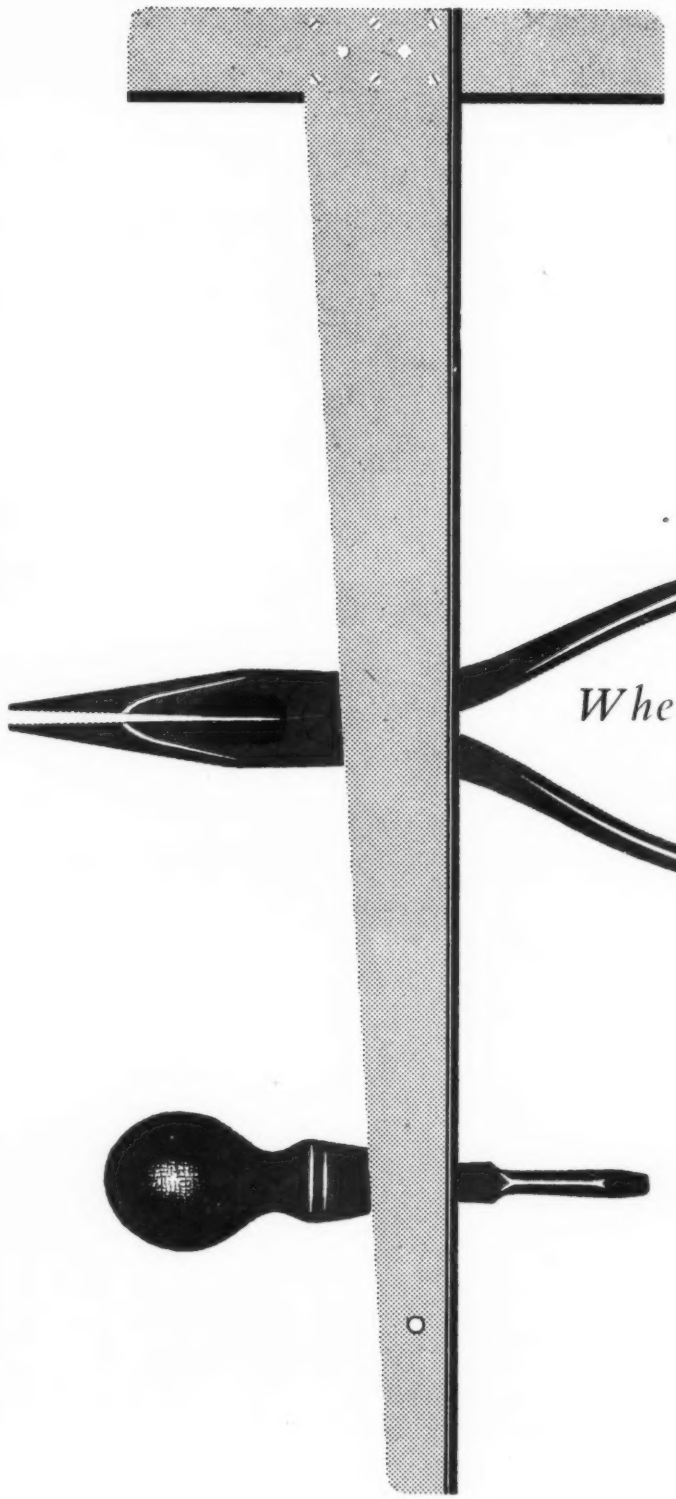

Where does an Architect draw the line?

How much does
an architect
need to know about wiring
installations . . ?
He has to draw the line
somewhere,
and he will often leave the
practical details to the
Electrical Contractor.
But he will need to know
a reliable make of cable
to specify, with a type
to suit every purpose.
For his own safeguard,
it will pay him to remember
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BI Callender's

BRITISH INSULATED CALLENDER'S CABLES LIMITED
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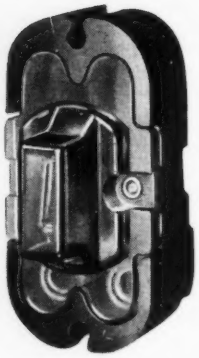
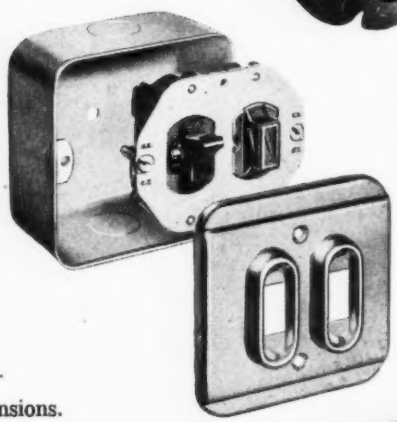
MK GRIDSWITCH RANGE



List No. 4779
Standard neon
indicator unit.

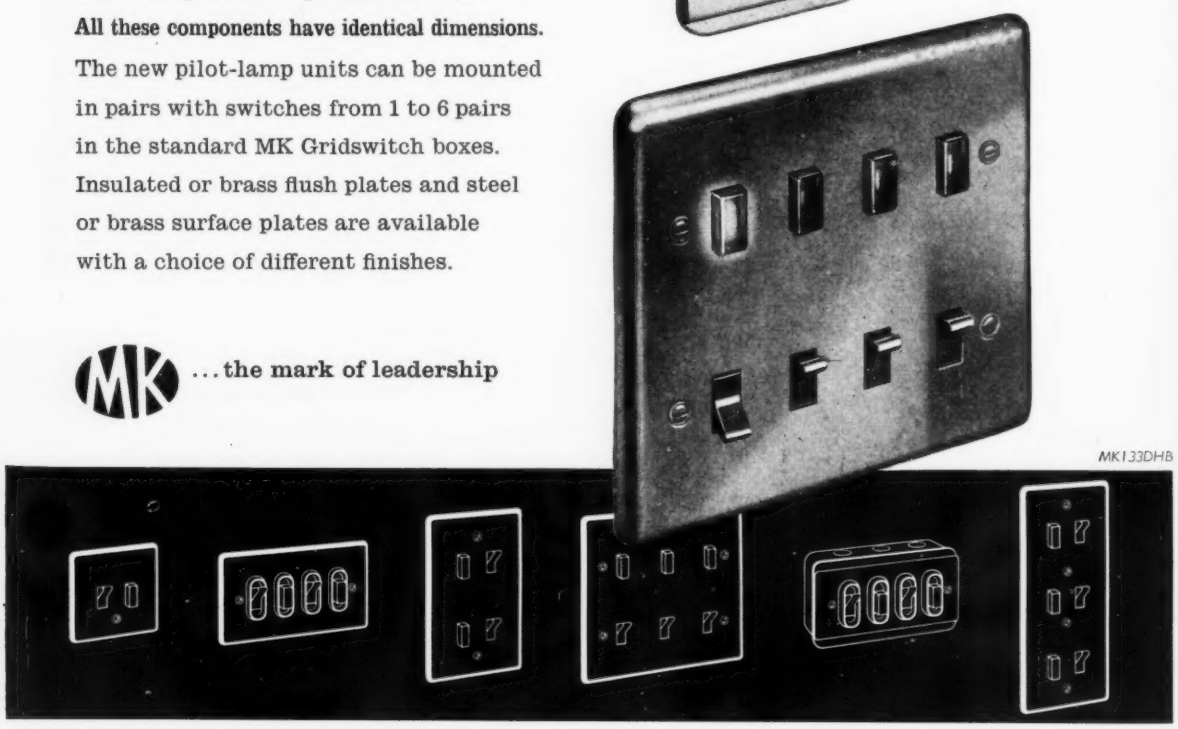
New Pilot-Lamp units

This new MK neon indicator unit gives you pilot-lamp facilities — using standard switch components. It is completely interchangeable with every other Gridswitch component and is designed for mounting on the standard grids. It can be coupled with 5 amp. or 15 amp. Gridswitches. **All these components have identical dimensions.** The new pilot-lamp units can be mounted in pairs with switches from 1 to 6 pairs in the standard MK Gridswitch boxes. Insulated or brass flush plates and steel or brass surface plates are available with a choice of different finishes.



Exploded view showing surface metalclad unit fitted with switch (5 amp. 1 way, 2 way or intermediate, or 15 amp. double pole or single pole) and pilot-lamp unit mounted on two-gang grid.

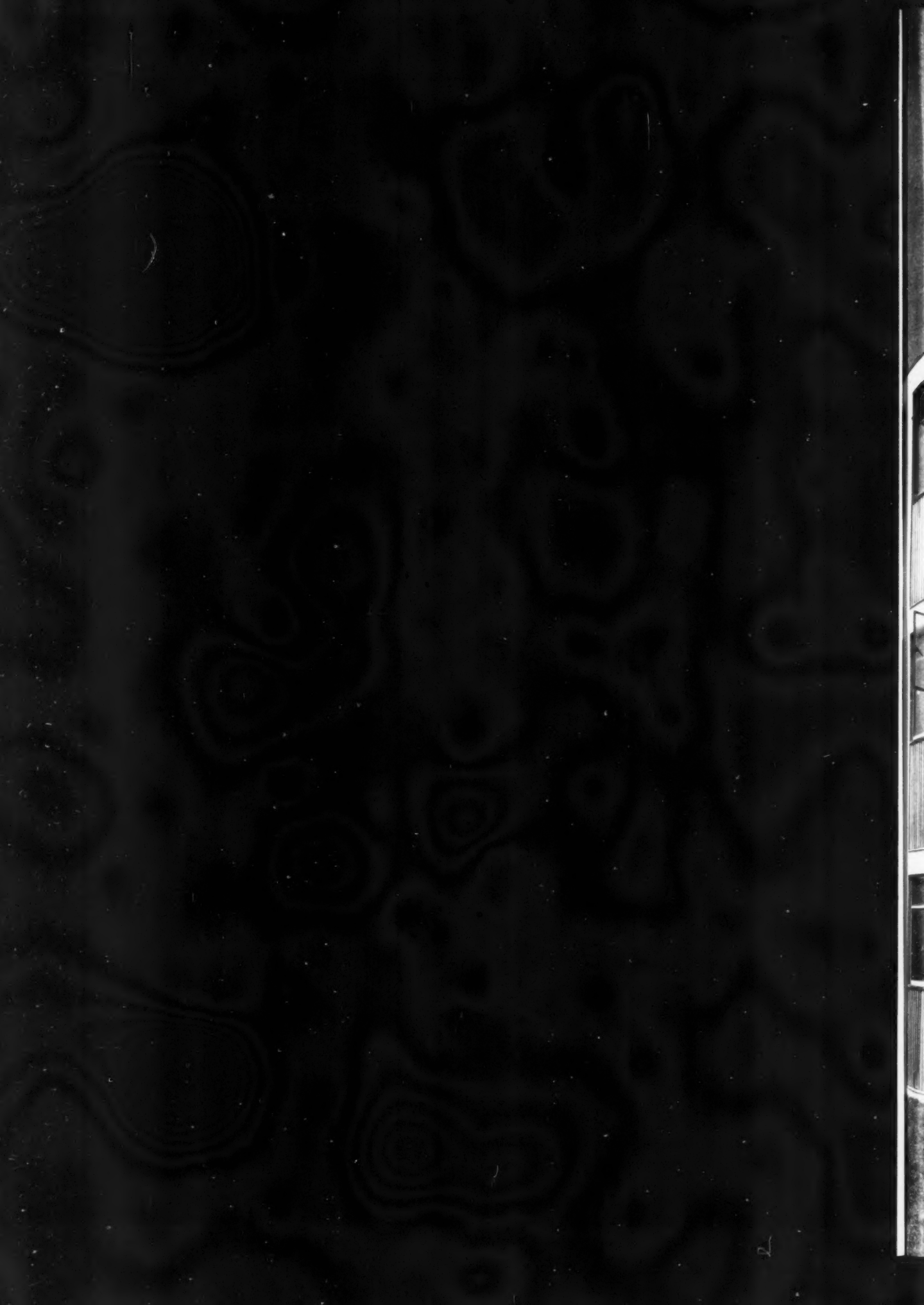
...the mark of leadership

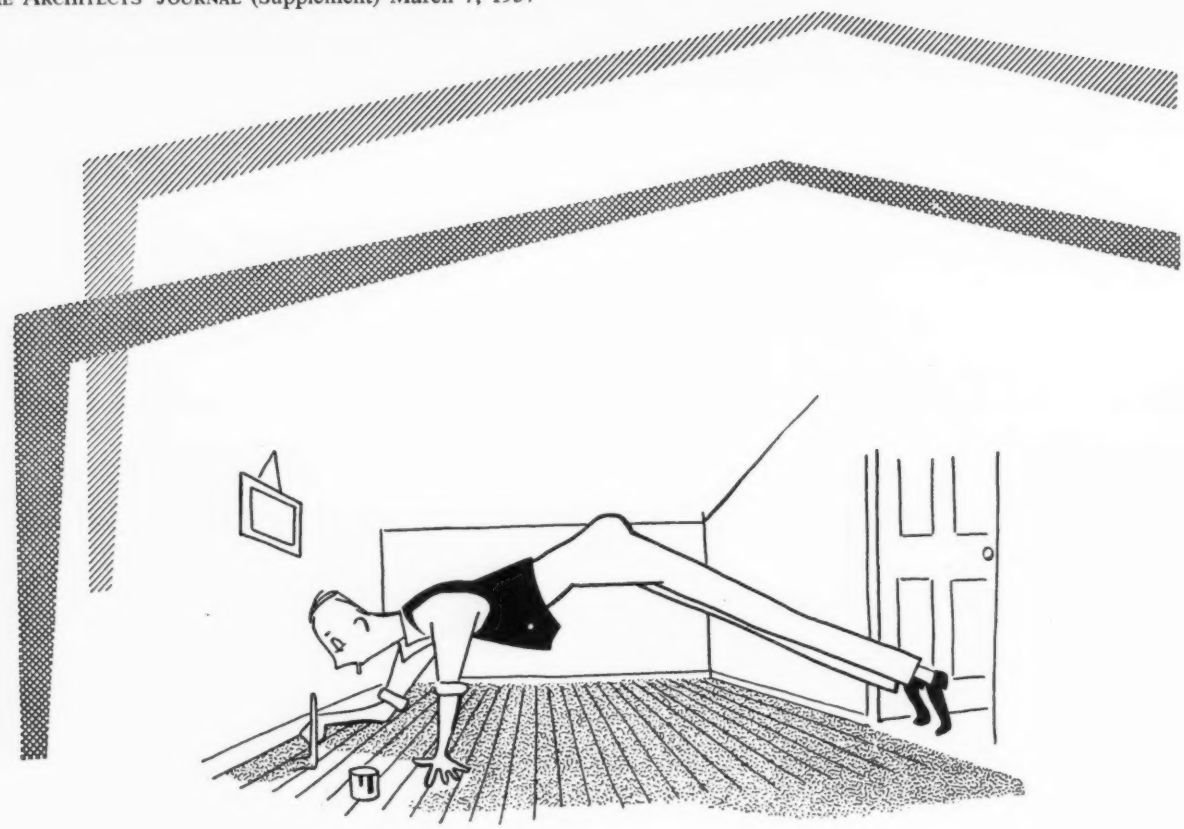


MK133DHB

The neon indicator unit can be fitted in any combination with other Gridswitch components in one to twelve gang surface and flush units. There are three different types of flush plates and two surface types and a choice of finishes is available.

M. K. Electric Limited, Wakefield Street, London N.18 *Edmonton 5151*





Wide Spans — unobstructed floor space

Not an ideal way to paint a room we think, unless the phlegmatic, extended gentleman happens to be your neighbour doing the job for you. Nor do we put this forward as the original inspiration for a portal frame.

What we do say, however, is that when wide spans and unobstructed floor space are the primary requirements, then there is no more reliable, no happier medium than steelwork—preferably BOOTH steelwork.

better build it with **BOOTH** Steelwork

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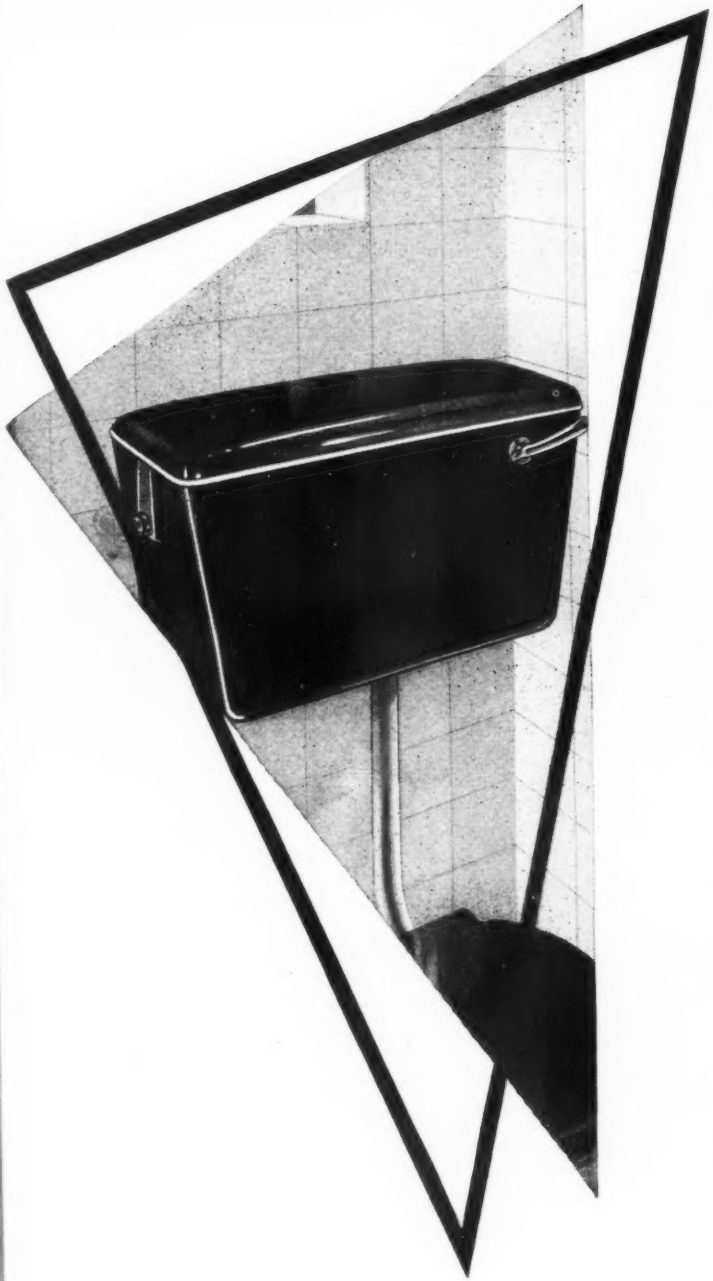
Telephone: BOLTON 1195. LONDON: 26 VICTORIA STREET, WESTMINSTER, S.W.1 *Telephone:* ABBey 7162



The most fitting fitting

In contemporary building, with its trend towards functional design and streamlined efficiency, a most fitting fitting for the toilet is the Lawley 'Britannia' plastic flushing cistern. Smoothly silent in action, unobtrusively pleasing in appearance, this new plastic cistern is ultra-modern, ultra-hygienic, ultra-efficient. A touch of the hand is sufficient for smooth, silent action — first time and *every* time. Seventy-five years' specialised experience backs every Lawley cistern — when you specify Lawley, you know it's as good as it looks!

Our illustrated folder gives details of four Lawley models in plastic, to suit all water regulations. We shall be pleased to forward copies on request.

Lawley

BRITANNIA

One of the oldest and largest cistern makers in the world.

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M-WS

Flats, Grosvenor Estate, Westminster, S.W.
Architects: T. P. Bennett & Son, F/F.R.I.B.A.
Consulting Architect: The late Gilbert P. Scott, A.R.I.B.A., F.R I C.S.

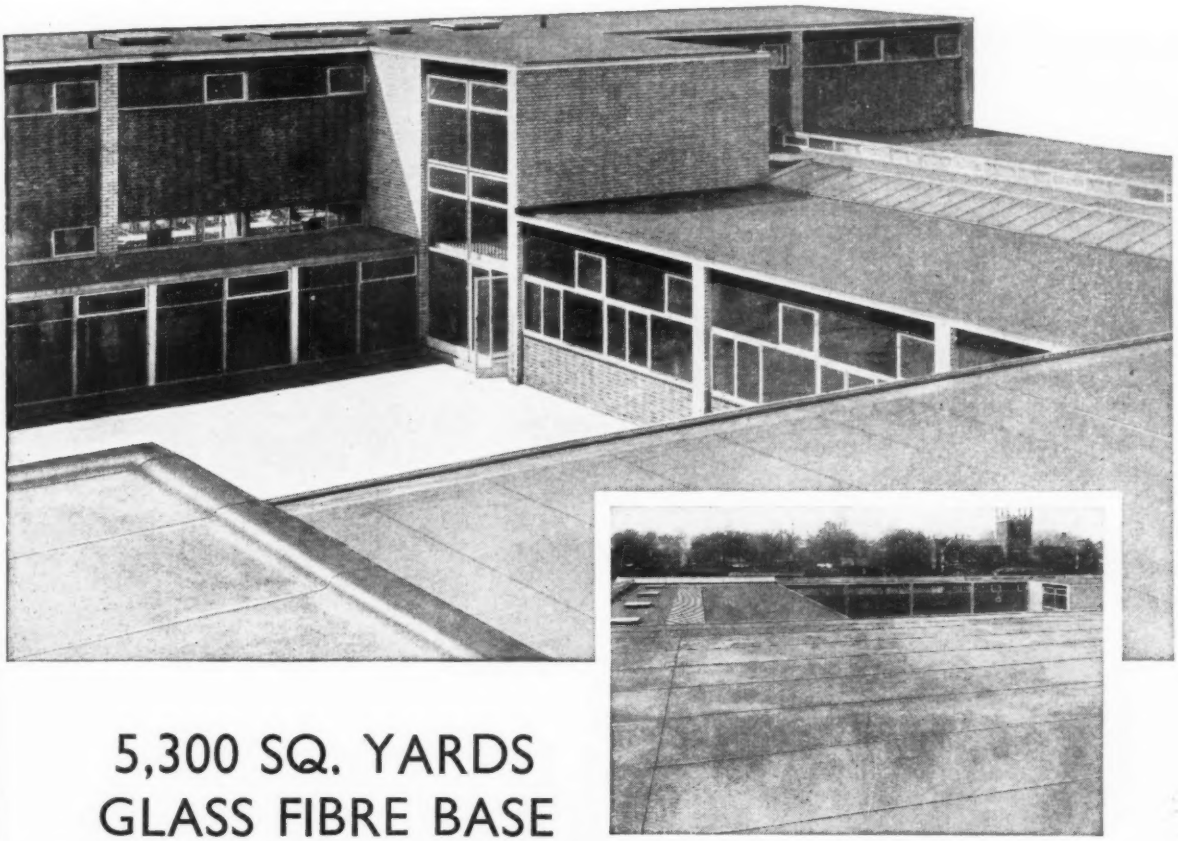
Permanence of finish keeps upkeep down

BUILD IN BRICK

Issued by The National Federation of Clay Industries, Drayton House, W.C.1.

THE LONDON COUNTY COUNCIL'S NEW SECONDARY SCHOOL IN FULHAM

ARCHITECT: RICHARD SHEPPARD & PARTNERS. MAIN CONTRACTOR: GEE WALKER & SLATER LTD.



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NACOFELT ROOFING

IN THREE LAYERS WITH MINERAL SURFACE

CRAFTSMAN-LAID BY

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Glass fibre is chemically inert, completely waterproof, and access of moisture to the felt layers by 'wicking' is impossible. Roofings based on fibre glass felts do not suffer from subsequent blistering or buckling. *Consultation invited on any Felt Roofing problem.*

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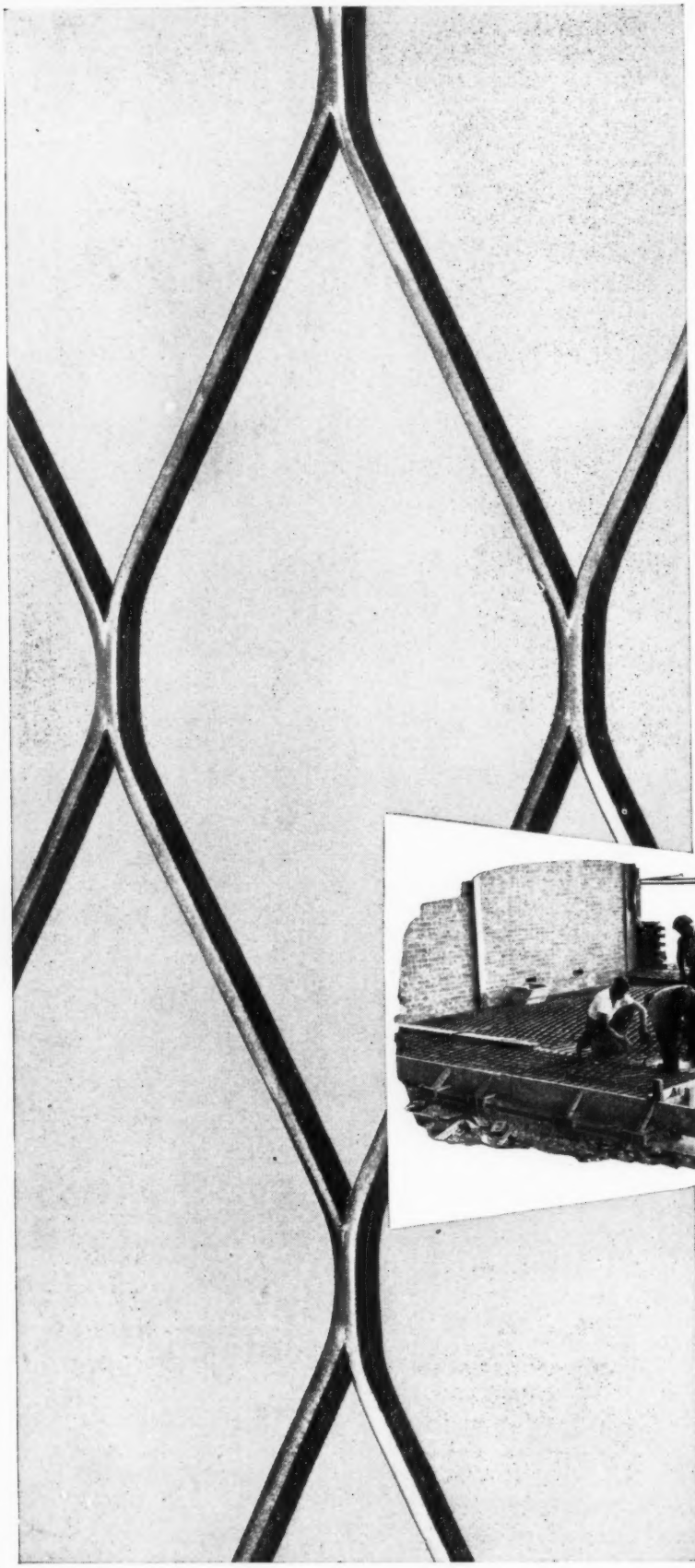
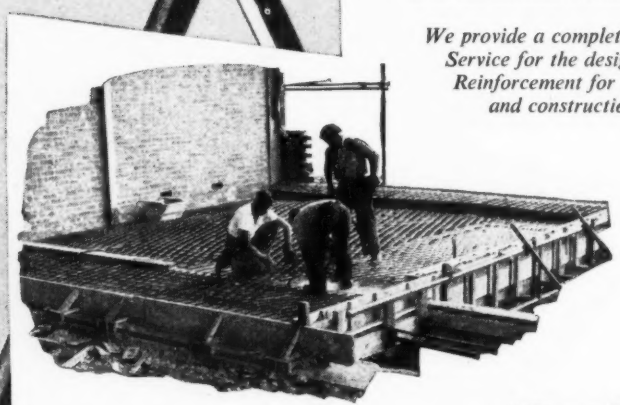


Expamet Reinforcements for concrete

The large range of " Expamet " Reinforcements provides a wide choice to suit all types of concrete construction. There are more than 100 standard variations and weights in " Expamet " Reinforcements from under 2 lb. to over 30 lb. per square yard.

" Expamet " Expanded Steel Sheet Reinforcement; " Expamet " Welded Fabric; Super " Ribmet " and other specialist materials can be adapted to meet reinforcement problems of all kinds, from solid slab decking and hollow floors, to light shell construction such as barrel vault and dome roofs. They are just as effective reinforcing concrete in precast units as in sea defence works.

We provide a complete Reinforcement Service for the design and supply of Reinforcement for all kinds of civil and constructional engineering.



" Expamet " Reinforcements are manufactured to comply with the British Standard 1221

Expamet

Expanded Metal Products

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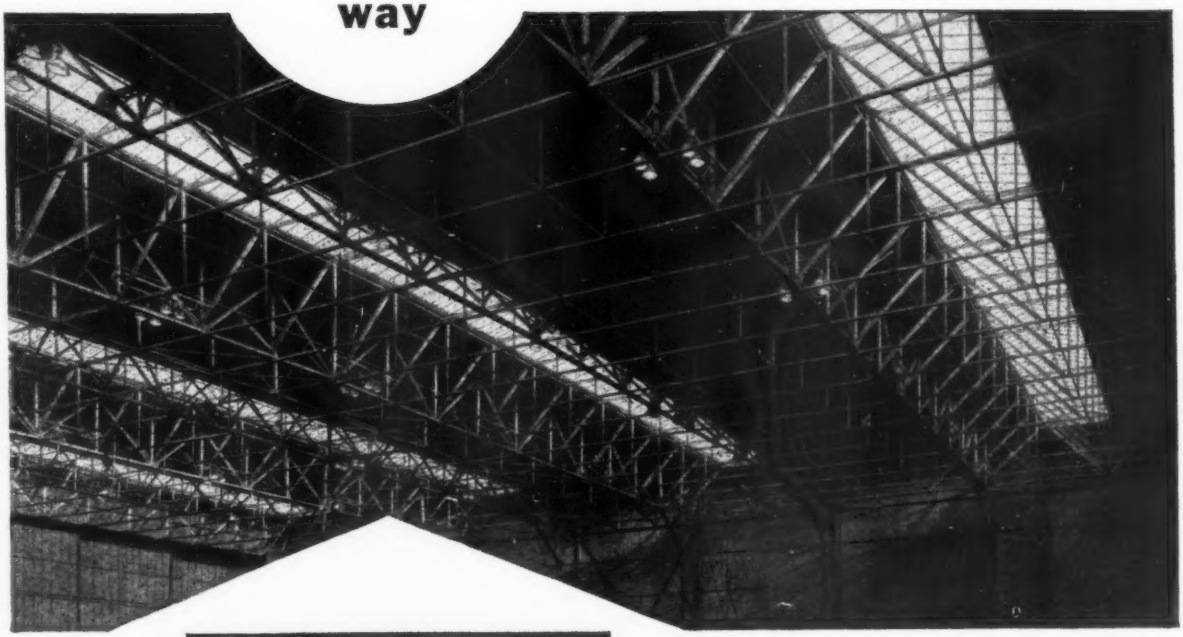

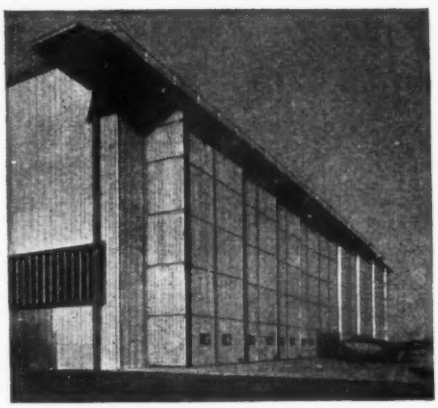

with large Aluminium Structures

Few better examples for the employment of large aluminium structures can be found than aircraft hangars. These buildings require totally clear floor areas combined with very high clearances and the all aluminium hangar illustrated is an excellent instance. Built for the Ministry of Supply, to Ministry of Works specification, it has a clear span of 200 feet through its huge power operated aluminium doors, a clear height of 50 feet and an unrestricted depth of 250 feet. Just another instance of modern building techniques developed through the specialist services of Hawksley SMD — readily available to architects everywhere.

That's the job of

HAWKSLEY SMD

World leaders in Aluminium Structures

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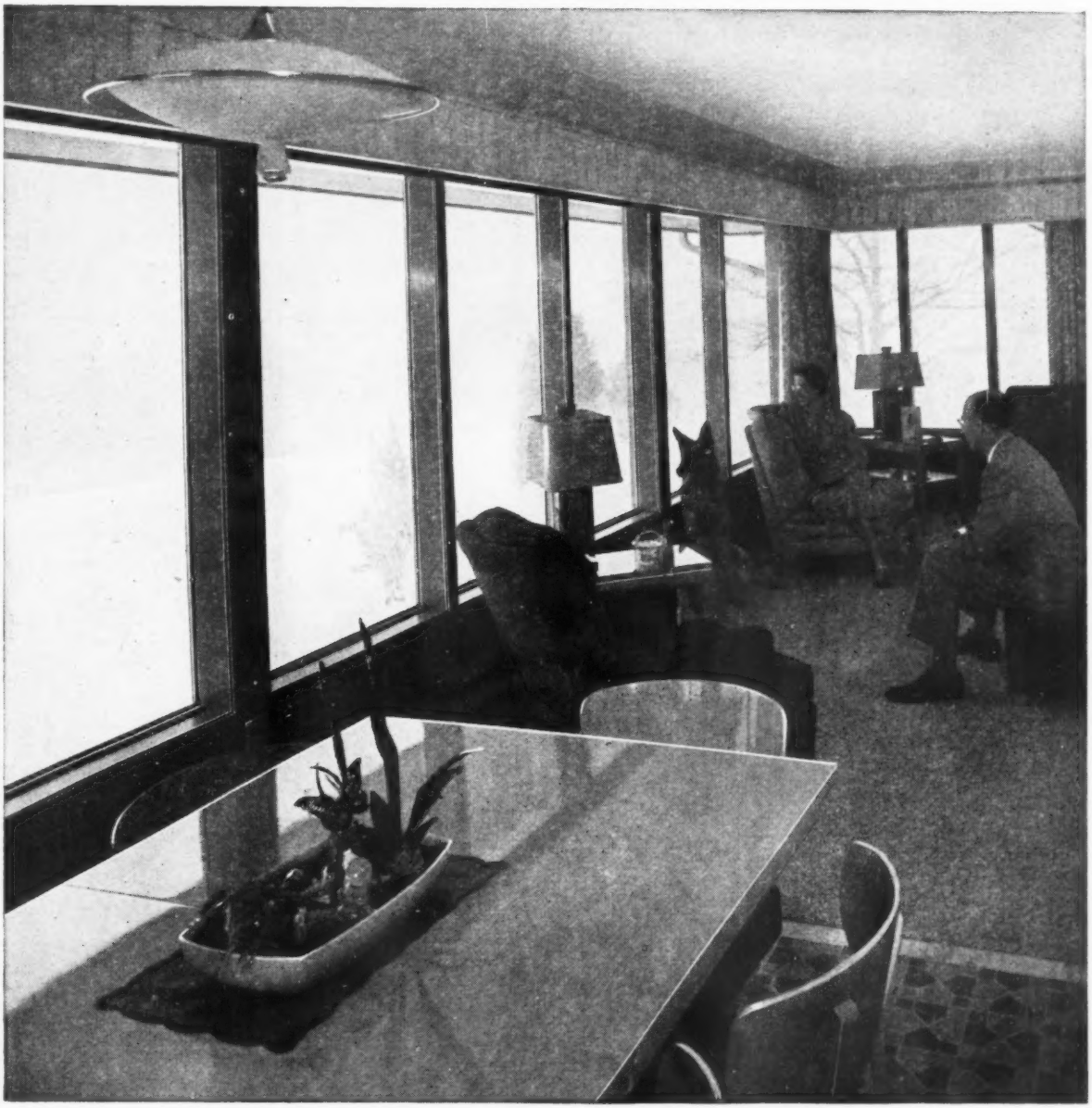

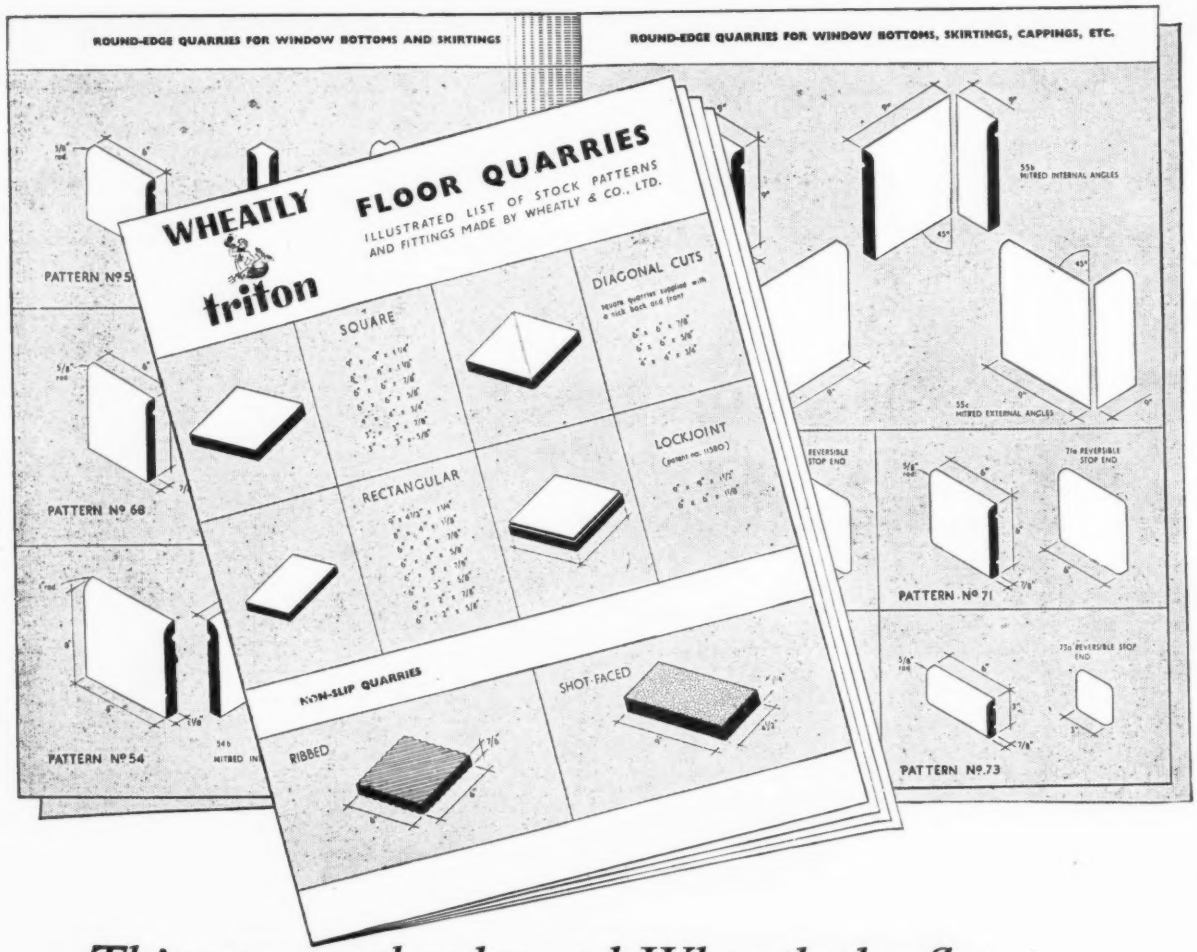

This new and enlarged Wheatly leaflet gives full information for the detailing of

WHEATLY triton

QUARRY FLOORS

Stock patterns and fittings are illustrated by isometric drawings to scale and correct descriptions, key numbers and principal dimensions are included.
The leaflet, which should be of great assistance to architects, replaces the existing Wheatly Floor Quarries leaflet, and illustrates a far greater range of Quarries and Fittings. It has been designed to simplify the problems of detailing in the drawing office and of ordering. A copy will be forwarded on request.

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.

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SPRINGFIELD TILERIES · TRENT VALE · STOKE-ON-TRENT
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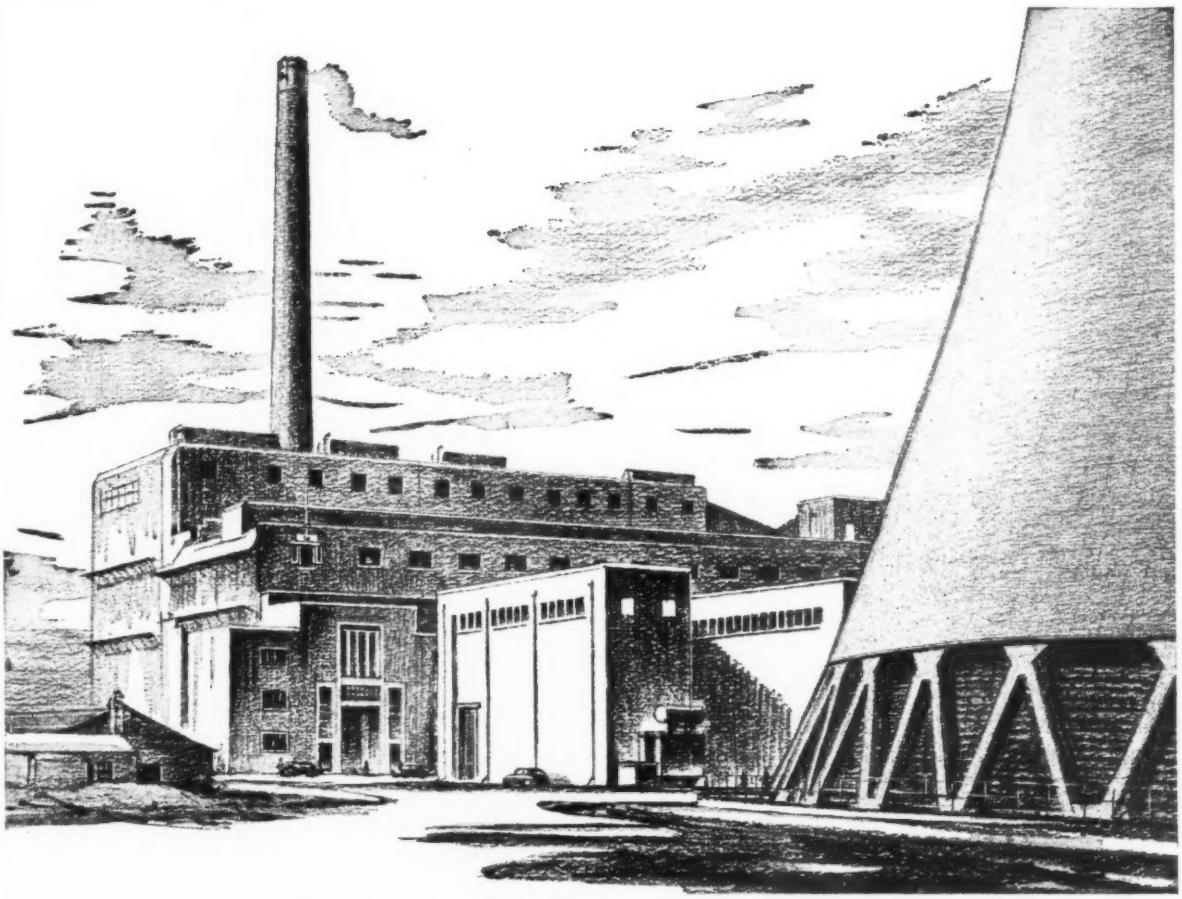
LANDMARKS IN STEEL



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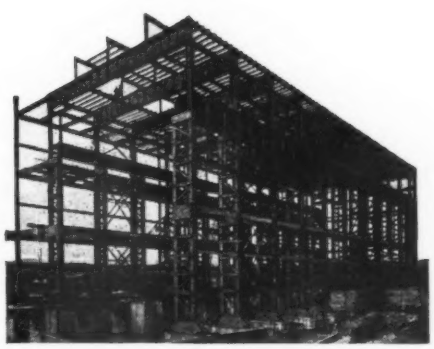

EDWARD WOOD & CO LTD
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Illustrations by courtesy of the Central Electricity Authority North West, Merseyside and North Wales Division.
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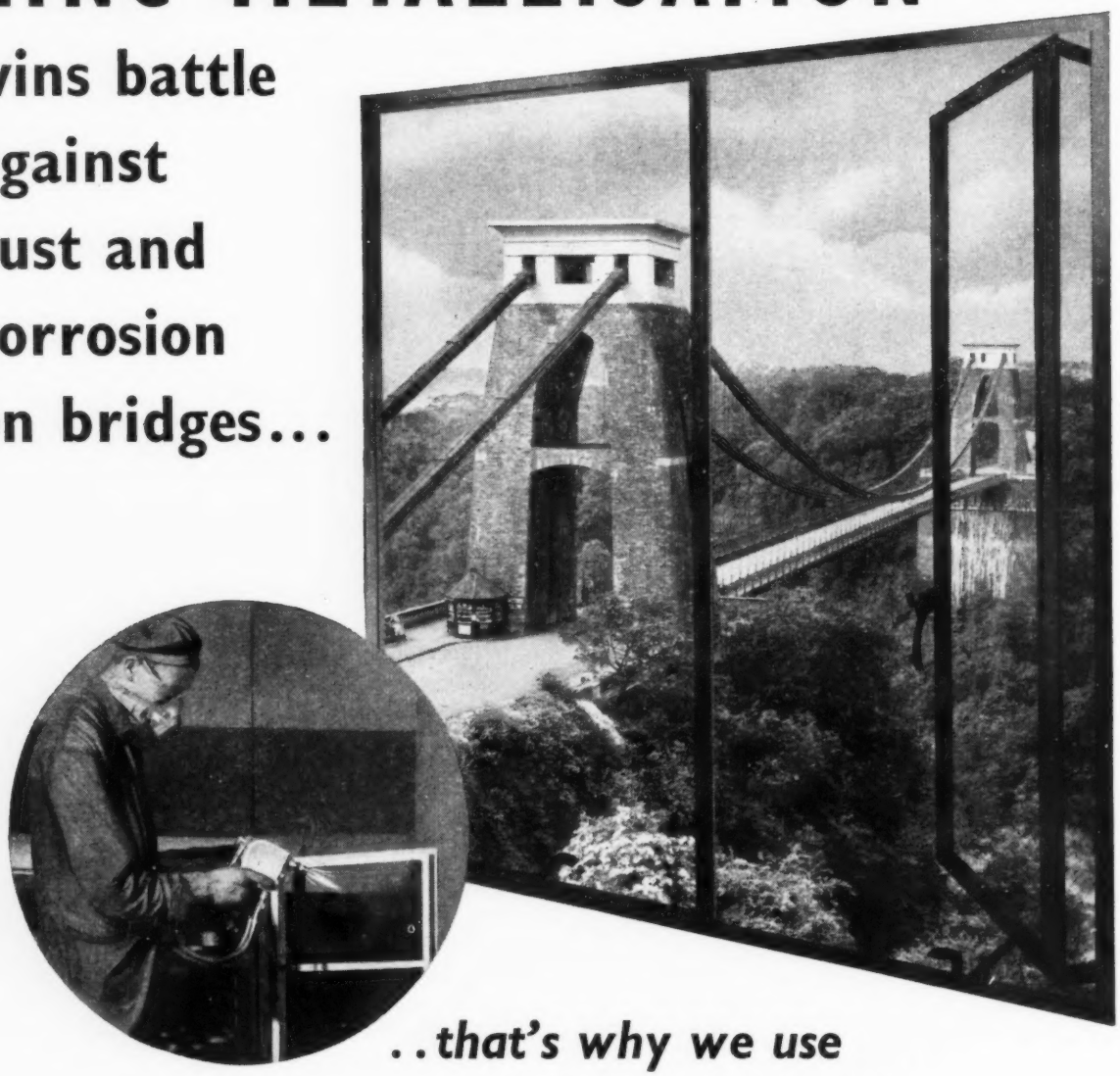
ZINC METALLISATION

wins battle against rust and corrosion on bridges...



..that's why we use it for windows!

Research has conclusively proved that the most efficient method of giving steel permanent protection against rust and corrosion is by the application of a film of zinc to its surface. There are, of course, several ways of doing this, and the one adopted for Beacon Windows is similar to that used recently for the Clifton Suspension Bridge.*

Each assembled window is shot-blasted at high pressure to remove all scale, grease and dirt. Upon its meticulously clean and slightly roughened surface the molten zinc (99.5% pure) is deposited by means of an oxy-propane flame gun. Finally, the zinc-clad window is passed through a bath of zinc-chromated primer and then stoved at a controlled temperature of 400°F.

All Beacon Windows now carry a printed guarantee that they have been rust-proofed by the John Thompson Zinc Metallising Process. This is your safeguard and you can depend upon it.

Contract recently carried out by Bristol Metal-Spraying & Welding Co. Ltd.

BEACON METAL WINDOWS

Member of the Metal Window Association

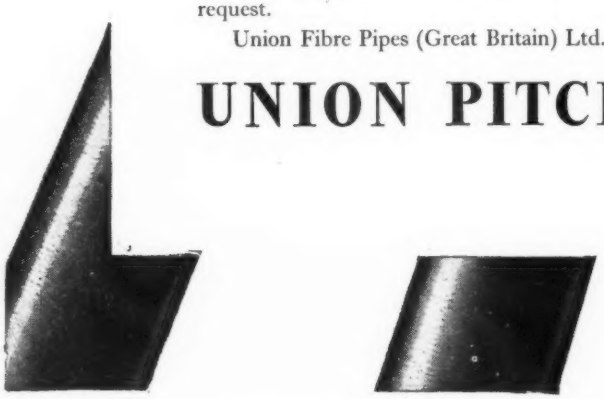
JOHN THOMPSON BEACON WINDOWS LTD · WOLVERHAMPTON

THERE ARE MANY SOUND REASONS WHY it pays to use Union Pitch Fibre Pipes and not least of them is the time and money saving method of jointing. No composition of any kind is required (and nothing therefore can be left in the pipe to form an obstruction). Instead, Union Fibre Pipes have accurately machined ends with a 2° taper and the joint is formed by driving the ends into a similarly tapered coupling. Result: a joint which has a very low hydraulic resistance to flow, a joint that is completely watertight, a joint that is impervious to root action. And not only are individual joints made more quickly and easily: there are fewer of them to be made in a given length of pipe line, because Union Fibre Pipes are supplied in 8 ft. lengths. Technical literature giving the detailed story of this 'revolution in piping' will gladly be sent on request.

Union Fibre Pipes (Great Britain) Ltd., Tolpits, Watford, Herts. Telephone: Gadebrook 4551

UNION PITCH FIBRE PIPES

save time and money



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light, strong and easy to handle—

"UNDULITE"

made by **Ashdowns**

"UNDULITE" is made in standard sized sheets to nest with standard pitches of other materials, and it can be cut, sawn, drilled, clipped or even nailed with ordinary tools to suit your particular requirements. For further details, please write for a copy of our illustrated folder *Delivery of standard profiles ex stock. Send for free samples now. Before use it is always advisable to consult your local bye-laws.*

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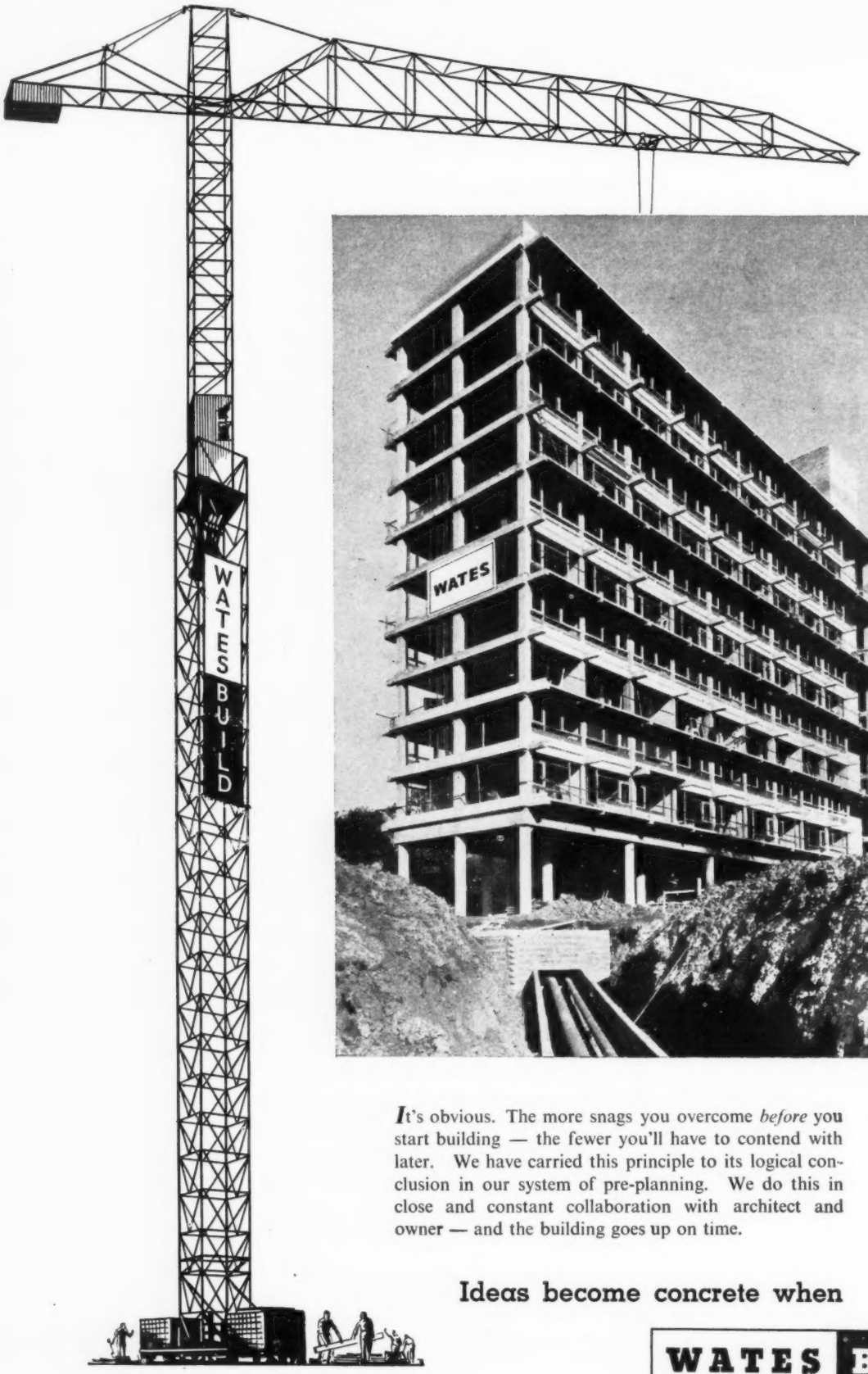

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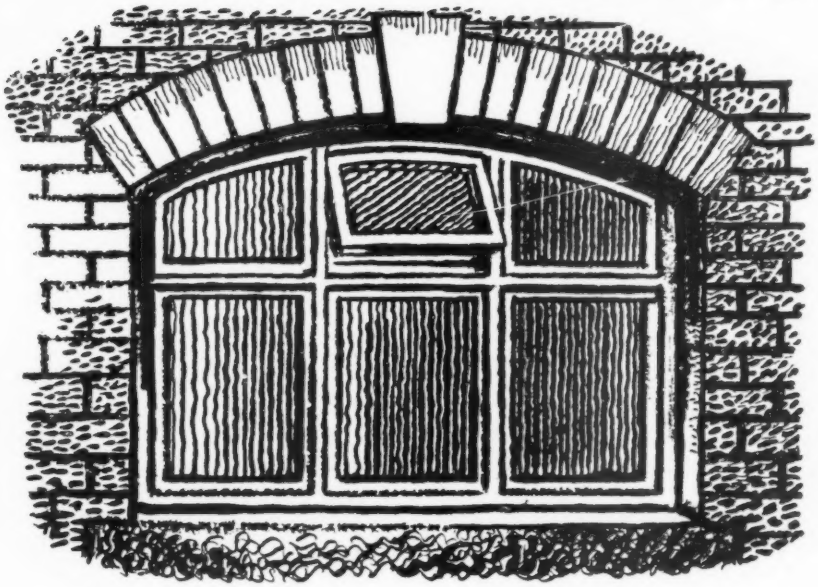

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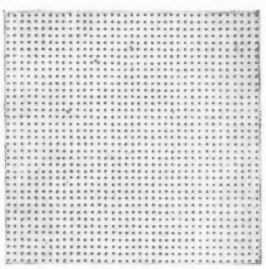

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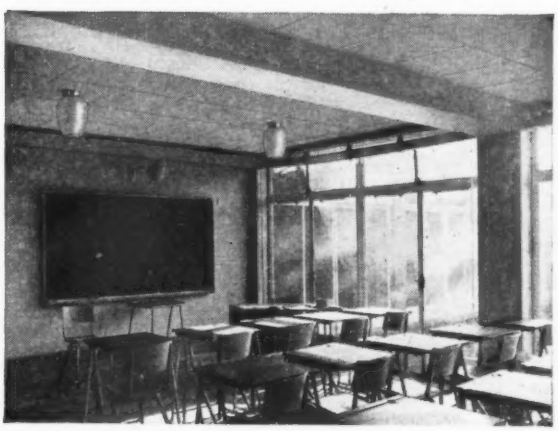

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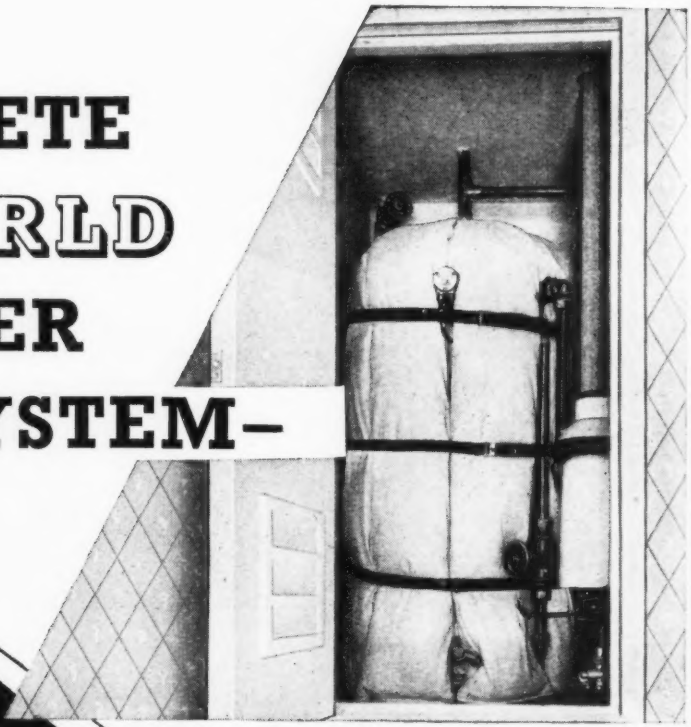

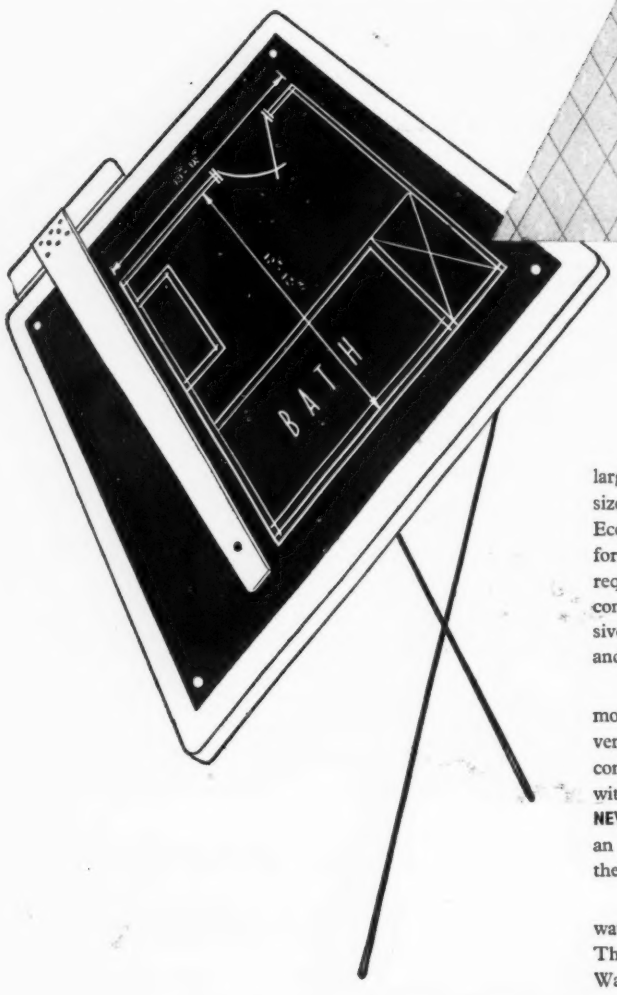

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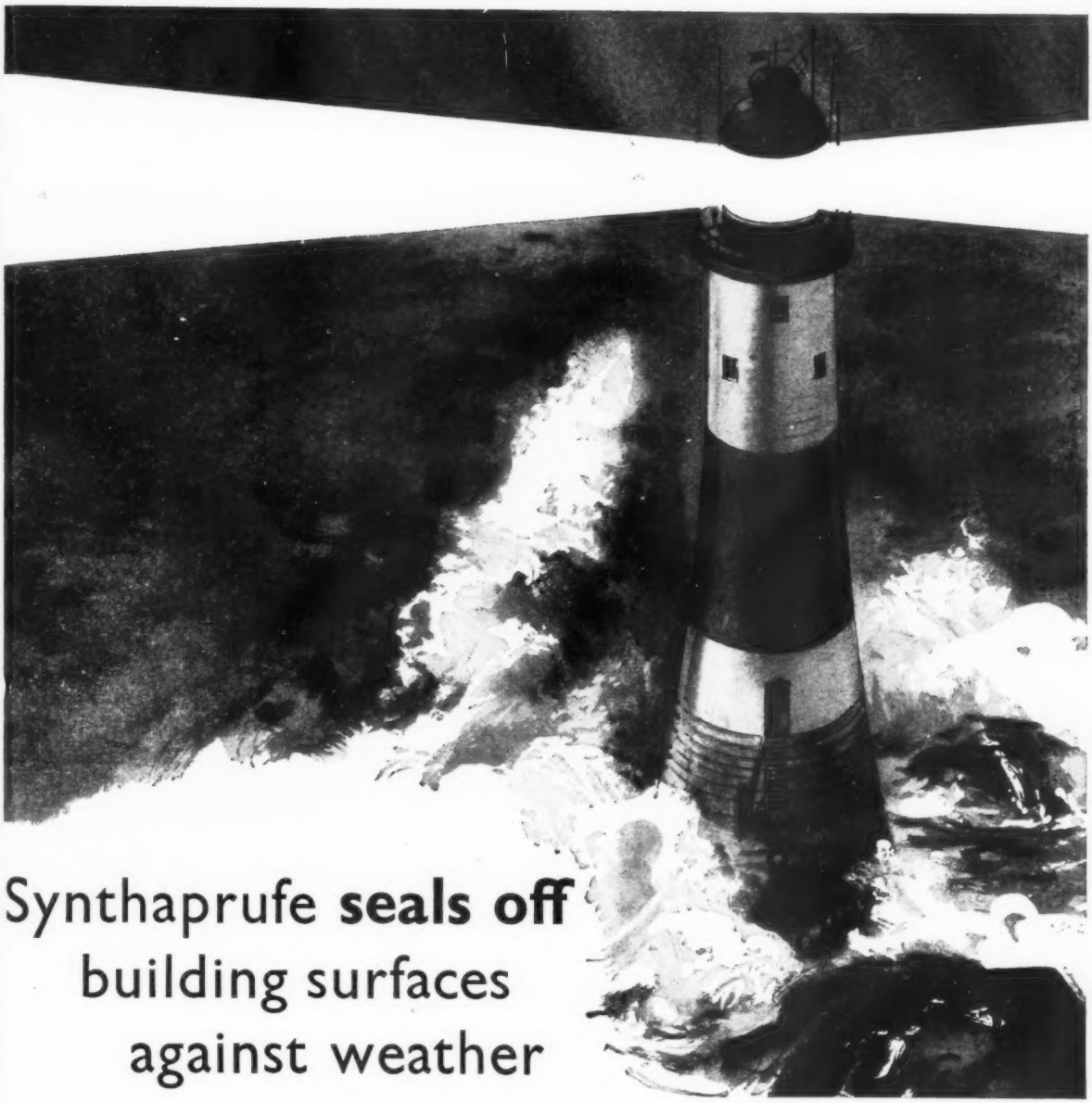

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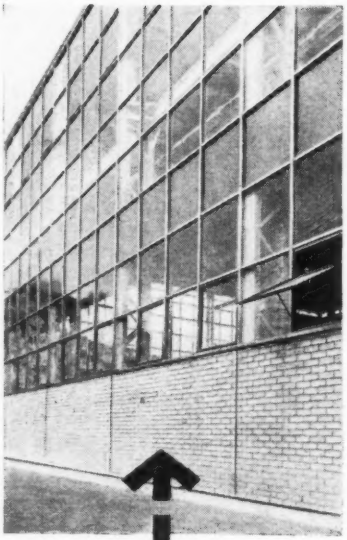

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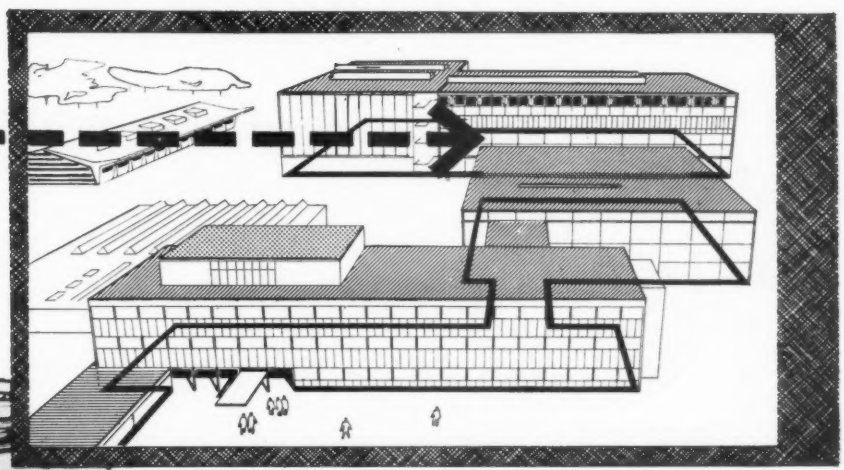

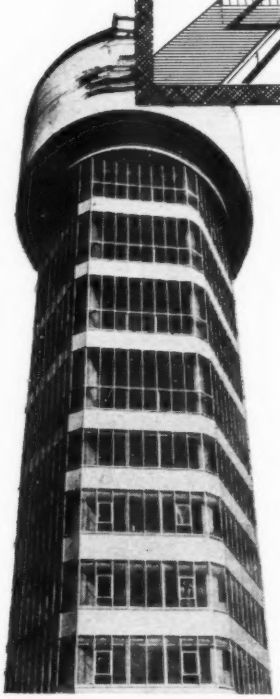

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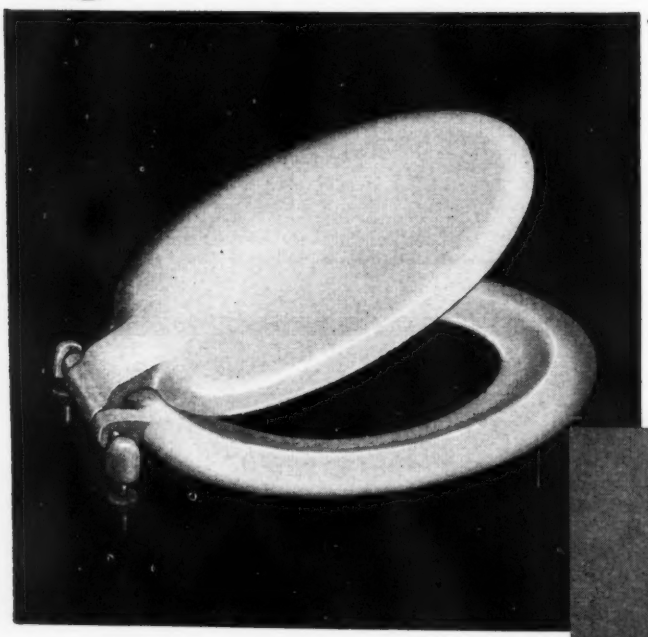

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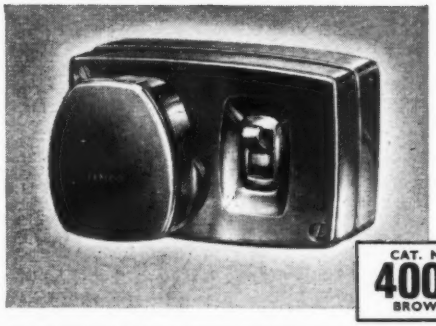

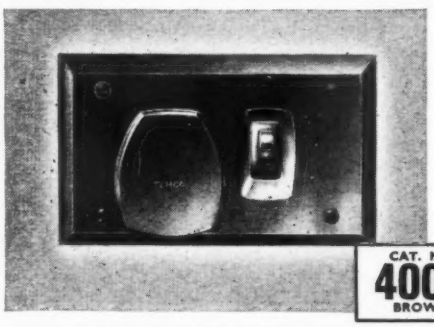

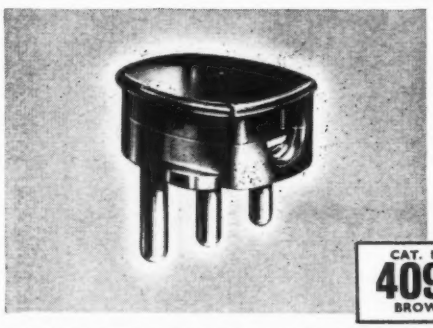

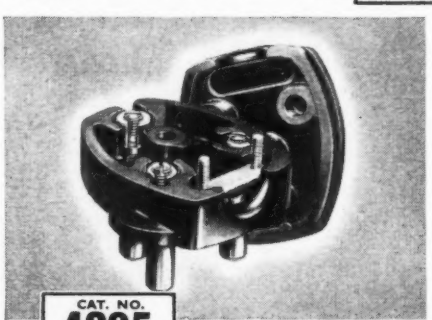

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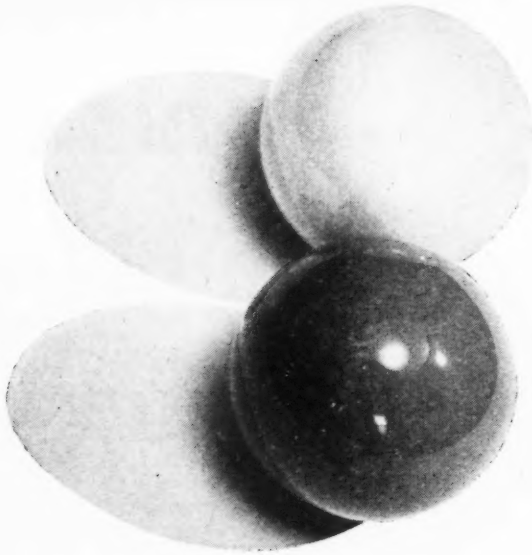

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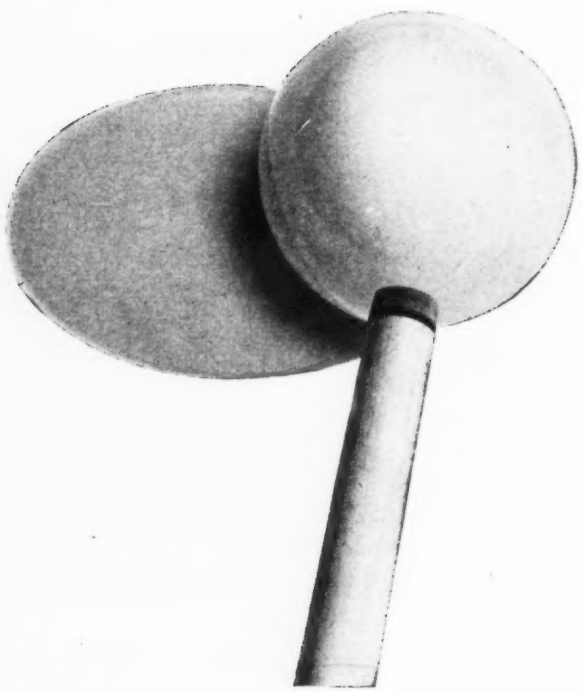

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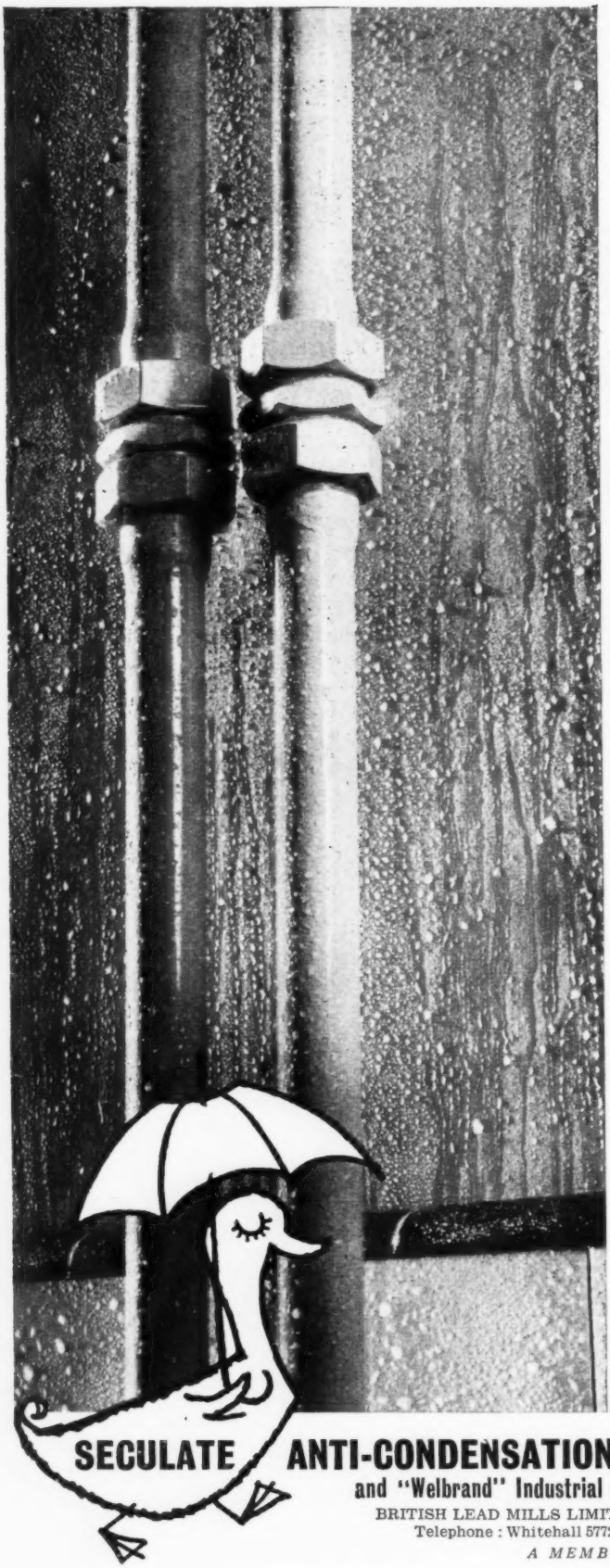

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EUROPE—GILES—SWITCH ON

The period when English architecture enjoyed the widest, liveliest and most intelligent lay support was not the Eighteenth Century, but the heyday of the Gothic Revival in the Nineteenth. Peter Ferriday, diligent researcher and spritely narrator, recounts the rise and fall of **The Revival**, its personalities and their opinions in a lively first essay in the ARCHITECTURAL REVIEW for March. Equally lively, in its own way, is the theme of Robert Melville's study of **Giles,** the celebrated cartoonist of the *Daily Express*, who is also one of the shrewdest and most observant architectural draughtsmen of our time. Observation of an equally disenchanted kind characterises J. M. Richards' survey of post-war reconstruction in Europe—the plain average facts of **Europe Rebuilt,** not the few, over-publicised masterpieces. However, two such masterpieces do appear in this issue, the brilliant new Stadt Theater at Münster in Germany, and Franco Albini's subterranean treasury-museum for Genoa Cathedral. Other recent buildings illustrated include Richard Neutra's Gemological Institute at Brentwood, California, a school, police housing, laboratories and a garage. A new solution to the traffic problem is dealt with by Gordon Cullen, with a plan to **Switch ON**, and Andor Gomme, editor of the *Cambridge Review*, contributes an analysis of density-analysis techniques. In *Skill*, the REVIEW's monthly survey of interiors, building techniques and industrial design, there are new entrance halls for offices, a printing works and a departmental store, followed by surveys of currently available kitchen storage equipment, and of clothes-drying techniques.

FINLAND—PLYMOUTH BARBICAN—ANTISUBTOPIAN

Finland will be in the news in April with the award of the Royal Gold Medal to Alvar Aalto, and the exhibition of Finnish architecture at the RIBA. As a background to these events, 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 Reyner Banham, and an extensive survey of recent Finnish buildings. In the same issue, Gordon Cullen considers the plight of the **Plymouth Barbican,** overlooking Sutton Harbour—a live neighbourhood-centre that local planning powers-that-be seem determined to destroy by a subtopian combination of rule-of-thumb demolitions and dead-head preservations instead of dealing with the area as a whole and as a going concern that only needs an overhaul of its technical equipment. At the small-scale end of urban design, Nicolete Grey contributes a first essay on the character and function of **Street-Lettering,** and Robert Maguire completes his survey of paving materials in *Skill*. An electric-fire whose adaptability could revolutionise the future of room heating; a note on the work of the distinguished Italian designer, Gio Ponti, who will be the subject of an exhibition at Liberty's in April; and some observations on the growing revolution of French taste in furniture, by Robert Browning, are among other aspects of the useful arts in this issue. Newly completed buildings illustrated include factories by Ove Arup and 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,** a study of the present state of US architecture in terms of its two currently outstanding features, the contribution made by the industrial production of standard components, and the contributions made by individual architects working outside the field of industrialised building. Compiled, annotated, explained and assessed by the REVIEW's executive editor, Ian McCallum, on the basis of his recent experience of US Architecture in its native setting, **Machine Made America** will scrutinise the aesthetics and the technics of curtain walling 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 architectonic ideas without which the industrial contribution may prove sterile and short-lived. And finally it will atempt to fit both contributions into the *matrix* of the wider scene of world architectural development in this century and of American culture in the age of mass-production.

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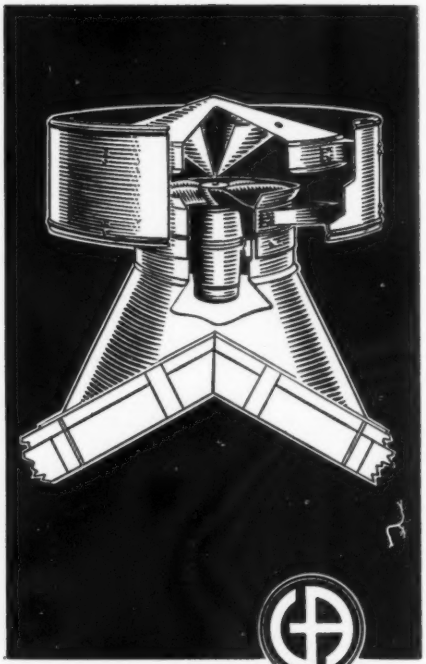

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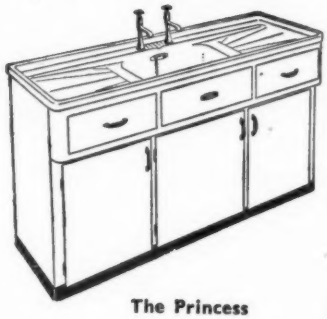

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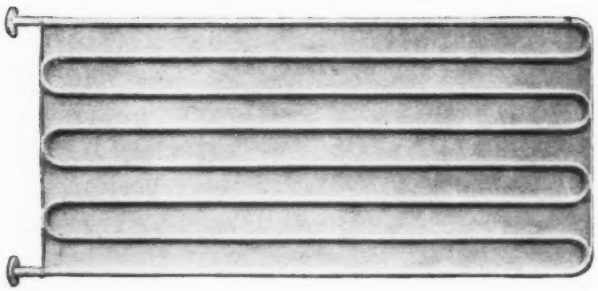

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THE ARCHITECTS' JOURNAL

No. 3236 Vol. 125 March 7, 1957

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She looked at me down thirty years of patient resignation and said:

"I'm afraid if you haven't seen an actual operation there's not much use in discussing the subject further."

I hurriedly tried to recover the situation:

"But, Sister, you made your point with, if I may say so, crystal clarity."

She was flannel proof.

"If you are supposed to be planning our new operating theatres you had better come and see us in action. Tomorrow afternoon, then."

She rustled away, accompanied by the jingle of the inevitable bunch of keys, leaving me to ponder apprehensively over what lay in store for me on the morrow. In any case, I didn't much like that "supposed to be."

*

Inexorably tomorrow afternoon came. I was greeted by the starchly whited bosom.

"Well, we're just in time," said she, and led me up the stairs to the students' viewing gallery. With tightly closed eyes I peered over into the operating theatre below. Summoning up what little courage I had left, I took a quick look and saw —nothing. Some time elapsed before I realized that a deep sepulchral gloom pervaded all. Sister was whispering to me that perhaps I could now appreciate why it was necessary to black-out theatres, how else, she queried, could the genito-urinary surgeon see inside the un-

British Pavilions for Brussels

This is the British contribution to the first post-war international exhibition, which will be held in Brussels from April to September, 1958. It consists of two pavilions linked together by courtyards. The UK Government Pavilion, shown on the right of the photograph above, was designed by Howard V. Lobb and John Ratcliff, of Howard V. Lobb and Partners. The main entrance, seen on the extreme right of the picture, beyond the small pavilion for the use of Royalty and other distinguished visitors, leads into a hall composed of three crystal-shaped spires. The display in here will be designed "to satisfy the general interest of the Continental visitor in British pageantry." The next hall, in the foreground of the picture, is the Hall of Technology. From this visitors will pass through a "Commonwealth gallery" to a walled courtyard (centre of picture) where the massed flags of Commonwealth countries will be flying. Beyond this will be "tree courtyards" where visitors will see freely-placed displays on the theme "The British People." To the extreme left of the picture is the inn that is part of the British Industries pavilion, designed by Edward Mills. This pavilion, with the inn in the foreground, is shown in the photograph on the left. It has been redesigned (see original on page 360) because of budget cuts. More details of the British pavilions and their designers are given on pages 358-361. Foreign pavilions are shown on pages 362-365.

fortunate patient with his cystoscope?*

Presently the unmistakable sound of an eminent surgeon's cursing arose from the darkness below.

"The light on the end of the tube has gone out, it always does," announced Sister in a tone of voice which quite clearly swept all electro-experts on to the rubbish heap.

Cinema-wise, one's eyes had got used to the dark, and I could identify the eminent one awkwardly perched on a sterilized stool in the corner of the theatre, discussing in a desultory fashion the finer points of growing roses.

We left the technicians struggling with the recalcitrant light.

*

"What I really wanted to show you was this," said the starched one, and led me to the gallery of the adjoining theatre.

There a very different scene was on view . . . lights, hundreds of people (well, perhaps fifteen), machines, dials, tubes, wires, bustle, and a vivid pair of striped pyjama trousers. These items of apparel encased the ample posterior of another type (sometimes my medical vocabulary fails me) of eminent surgeon.

"Why pyjamas?" "Because," says my mentor, "this surgeon prefers his own silk as opposed to the regulation cotton."

She didn't add that he also rather fancies himself in them, but I got the impression that she could have, had she known me better.

"Here," says fancy-pants, swinging round to us rubber-necks in the gallery, "we have the heart."

Could it possibly be that that palpitating thing in his gloved hand was a human heart, and if it were, could it really be attached to a living person under all those green covers, and (Mother always said I couldn't concentrate) if it were, what sex was it?—the patient, I mean, not the heart, or, come to think of it, perhaps I meant both.

*

As it happened she (the owner of the thing in the surgeon's grasp) turned out to be female, young and pretty at that. I took her out several times after she recovered, but somehow I never seemed to make any headway, and the affair finally dwindled away. The girl didn't have a heart.

LESLIE CREED

* A thin tube with a light bulb the size of the head of a match at its end.

The Editors

FREE ARCHITECTS FROM CONTROL OF ELEVATIONS

"I AM so afraid that with this control (of architecture), even by the highest in the land (I refer to the Royal Fine Art Commission) we are repressing all experiment and all excitement in architecture." Thus spoke Dame Evelyn Sharp, permanent secretary of the Ministry of Housing and Local Government, at the RIBA's dinner last week. Here is official support of the argument put forward in the JOURNAL of February 21 that the attempt of planners and planning committees to control elevations does more harm than good. For all the good achieved by this public control in preventing appalling designs from being built, nevertheless a great deal of shabby, non descript subtopian work is permitted and an appalling amount of time is wasted. It had not escaped Dame Evelyn that architects have done "superbly well" in designing schools (where the planner's control is slight or non-existent) and very indifferently in, for instance, office building where planning control is strong.

The planner's real job, that of creating an environment in which the country's and the individual's needs are efficiently and sympathetically catered for and encouraged, should not be allowed to degenerate into a sterile checking of roof lines and fenestration. The danger in the present implementation of the 1947 Act is not only that architectural experiment is discouraged, as Dame Evelyn Sharp pointed out, but that planning committees and planning officers can spend their time arguing on design details (which are relatively simple matters) and neglecting the really big problems of *planning*. In order to enable planners to have more time for the more important aspects of their work, the Minister might well consider allowing, for an experimental period, the work of architects (but not engineers or surveyors, and least of all builders) to be free from elevational control. The saving in time would be enormous, and the standard of design would not, on average, deteriorate, but improve.

BLOOMSBURY'S REPRIEVE

Leslie Martin's appointment to replan the London University precinct in Bloomsbury is the best news for a long time. Londoners in general and architects in particular have been in despair at the way the University's building schemes have been eating away at Bloomsbury—one of the text-book examples of enlightened planning—without anything resembling a comprehensive plan that would allow a modern equivalent of the old Bloomsbury to be created. There doesn't even seem to be any co-ordination between the University itself and one of its constituent parts, University College, which is also doing a lot of building.

*

Such an appointment should of course have been made years ago—immediately after the Abercrombie plan for London had listed Bloomsbury among the precincts requiring special treatment; no doubt everyone assumed the University would work to a plan. Prof. Martin's will be a task of rescuing what he can. At least he starts with a good knowledge of London planning problems, gained at the LCC. Good luck to him.

LOST WAX

If the current show at the ICA proves anything, it proves that whatever colour you paint an ugly old glass case from a museum, it still looks like an ugly old glass case. Just how these museum cases come to be at the ICA is easily explained. They contain some very valuable native bronzes from East Africa that couldn't be given the open display treatment, but just how an exhibition of African bronzes comes to be at the ICA, remains a puzzle. Not that ASTRAGAL is complaining—some of the exhibits would be terrific anywhere—but the presence of such far-from-contemporary art does seem a bit of a waste of the Institute's gallery space.

*

However, a rude, and possibly apocryphal, bird does whisper an explanation of sorts. The gimmick that holds this show together is that all the exhibits were made by the cire-perdue process, the traditional lost wax technique of Africa, a technique that is very highly regarded by some sculptors around the ICA, not merely because it is a bit brutal, but also because it is not—unlike the sensational "thin shell" process—the monopoly of Reg Butler, better known to you as the AJ's former Technical Editor.

EDUCATING ARCHI.

Last week, the new president of the NFBTE, L. A. Walden, was let loose among members of the technical Press at a conference held at the Federation's headquarters in New Cavendish Street. Most of the questions directed at him were deftly caught by Stanley Hearder, Director of the NFBTE. "Why don't we hear more about pre-planning?" "Well, people don't want to give it publicity until they are sure of their facts." "Why does it cost more to build flats than houses?" "Well, it always has—though the Scots seem to have some know-how about it." "Is the Board of Building Education getting on with its job of educating architects?" . . . The NFBTE couldn't allow such an inaccurate question to pass (though during the meeting one or two brickbats were hurled without restraint at the architect). And then someone asked the 64,000 dollar question. My spy didn't hear what it was, but he said the answer went on for some time. "The green belt is too tight . . . if *they* want houses they must give us the land . . . it's the fault of the planners, the lunatic fringe of the RIBA . . . the long-haired gentlemen are winning, the practical ones are losing . . . it's the fault of those people who write letters to *The Times* and get themselves knighted. . . ."

*

My spy tells me that he enjoyed this "meet-the-president party" enormously and that he is only sorry he did not realize invective would be worn.

THE RFAC

The report* just issued is the first the Royal Fine Art Commission has produced for two years, so it is not surprising that it contains references to any number of controversies that have divided the architectural world recently: the proposed Hyde Park boulevard ("such encroachments on the Royal Parks . . . would set a dangerous precedent"); St. Paul's precinct ("modifications"—to the Holford scheme—"have been suggested and have been referred to the Commission by the Minister of Housing and Local Government. The Commission believes they would destroy the coherence of the scheme and that it must remain the work of one man"); the Government's plan to demolish the Imperial Institute ("this secrecy was quite unnecessary and undesirable"); New Zealand House ("the tower would look quite incongruous as seen from points in St. James's Park and the Mall"); the new American embassy in Grosvenor Square ("the existing scale must be preserved . . . the winning design was accepted by the Commission"); the Oxford road problem ("it has opposed a relief road through the University Parks and views with grave concern the possibility of a road across Christ Church Meadow. Such a measure should only be adopted in the last resort, and even then only as part of a properly conceived scheme for the whole Meadow"); and the Robertson building, for Shell offices, on the South Bank ("The Commission expressed the hope that the architectural treatment of the building would be made lighter than in the design submitted").

*

Not all architects will agree with all these views. ASTRAGAL'S own reactions are: Hyde Park, yes, but pre-

* Fourteenth Report of The Royal Fine Art Commission: 1955 and 1956. H.M.S.O. Comd. 70. Price, 1s.

cedent isn't the best argument; St. Paul's, emphatically yes; Imperial Institute, secrecy certainly indefensible, value of present compromise doubtful (as indeed the Commission acknowledges); New Zealand House, no—you can't preserve the *status quo* for reasons like this when high buildings are bound to come; Oxford, Meadow road best but must, as the Commission says, be properly landscaped; Shell building, agreed, but ASTRAGAL would have put it more strongly.

*

There are, of course, a large number of other matters mentioned in the report—sufficient, I think, to allay the fears I know some architects have that the Commission is only there to stop people doing things. The amount of useful advice given to local authorities on roads and road-lighting, new bridges and the siting of various types of buildings, for instance, is impressive. Not that the advice is always taken, but that isn't the Commission's fault.

*

And lest the Commission be thought always to be fighting losing battles (as it is, in many of the cases reported on), let me mention the case of Durham, where the Commission "thought that a proposal by the County Council to erect a large block of offices on the hill overlooking the city would be damaging in its effect, particularly on views of the cathedral. The Commission was told that there was no practical alternative, but after further discussion at Durham (*i.e.*, after members of the Commission had gone over the ground) "another solution of the problem" (*i.e.*, another site) "was found, and this has been accepted by the County Council."

DINNER FOR ARCHITECTS

The RIBA dinner—the fifth since the war—was, ASTRAGAL learns, very enjoyable—it had all the ingredients of success: good speeches, good food and drink, and good company. President Cross, proposing the health of the Government, asked for more petrol ("we like to see our work"), less taxation, and spoke of the contribution the RIBA could make in helping the expansion and development of allied societies and architectural schools overseas—for which he proposed an overseas conference in order to achieve co-ordination and to strengthen friendships.

*

Dame Evelyn Sharp's reply was drily witty and excellent. She spoke at short notice in place of her Minister, Henry Brooke, who was unable to come because of the death of his mother. The main point of her speech—the failure of public control of architecture—is commented on in this week's leading article. She claimed, surprisingly enough, to have written speeches to this effect for no less than six Ministers—which, if it doesn't prove how rapidly Ministers change, proves her intelligence and perception. Sir William Holford proposed that most difficult of toasts, the Guests, with great facility, fitting the various characters neatly and appositely into an imaginary pediment; and Sir John Cockroft, director of the Atomic Energy Research Establishment, replied. Unlike so many eminent people on these public occasions, who usually preface their remarks by saying that they know nothing about architecture, Cockroft spoke of work done with Sir Edward Maufe at Cambridge, and with sculptors Eric Gill and Charles Wheeler. He asked for architect-engineer collaboration over the siting and designing of nuclear power stations, and spoke of the "tremendous challenge" for buildings for scientists and technologists which "should represent the modern age and not the past." Which is fair enough.

WACHSMANN'S HONEYCOMB STRUCTURES

The opposite approach to the grand conception in architecture is the careful worrying out of details. A master of such an approach is Professor Konrad Wachsmann of Ulm University and IIT, Chicago, who made a second visit to the AA last week (at the students' request) to talk about further developments in his work. The principal subject was the now famous project for an easily transportable, simple to erect, aeroplane hangar—a gigantic space-frame made from tubing and a 20-direction coupling. He also showed slides of a prefab., designed by the General Panel Corporation, which was to be erected by five men in a day. These schemes are the logical result of letting loose Germanic thoroughness and efficiency amongst American technology. Magnificent and fascinating though the results may be, and instructive, too, in that they anticipate developments which will inevitably come—if in a rather different form—Professor Wachsmann's work is handicapped by the fact that architects, builders and public are almost bound to be out of sympathy with the products of his meticulously precise approach. He concluded a two-hour talk by showing Charles Eames's stimulating film "Communication."

GORDON DRAKE

I have just been reading a book about the work of Gordon Drake, who died tragically at the age of 34, in 1952. He belonged to a generation of architects whose career was upset by the war. He only built a few timber houses in California, yet since his death his name has become something of a symbol. He is a sort of James Dean of the post-war, crazy-mixed-up generation of architects in the fast-growing regions of the American West coast.

*

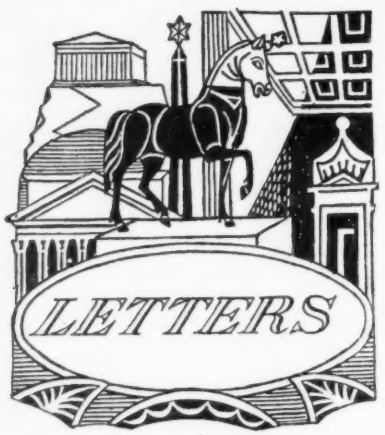
The book, which is called "California Houses of Gordon Drake,"* illustrates the best of his work—houses that are cheap, small and unassuming, but epitomize the indoor-outdoor, open-plan look which has become so much a part of the mystique of modern living associated with America in general, and California in particular. There are, perhaps, great qualities about these houses, but to ASTRAGAL, a non-Californian barbarian, they are just variations of the Bay-Region style—very charming and climatically enviable. They belong very much to their generation and locale.

*

The blurb in this little book is positively blush-making. It seems that Gordon Drake "appreciated most—the green grass, a breeze across a body—an untainted blue sky." And the authors try our patience strongly by philosophizing in a sickly way: "Each bit of human experience recognized, and found valuable, and passed on, is one more piece among the many millions of pieces in the total pattern of the relationship between man, his shelter and his environment." That, as you were about to say, will do.

ASTRAGAL

* Chapman & Hall, Ltd. for Reinhold Publishing Corporation, New York. Price 52s.



Ian Nairn
Editor of "Outrage" and "Counter-Attack"
Sir Frederic J. Osborn
Chairman of Executive, TCPA
Mary Scully
Anon
W. Home, A.R.I.B.A.
R. Baden Hellard, A.R.I.B.A.
S. W. Smith
Uncial

Outrage: Counter-Attack

SIR,—Referring to your technical article of last week, I should like to make the following comments.

The only reason we showed Georgian and Victorian schemes was that there were not any modern ones that were both dense and urbane in the way we needed. We were making a case for the high-density terrace house as a genuine house-and-garden way out of the *impasse* of the average housing estate. A *committee* might go for Oxhey rather than Regent's Park: would the people themselves?—not always the same thing. Elizabeth Denby has an impressive set of reactions from people actually living in these London terraces—many of them due for clearance—which we were unable to publish for lack of space.

As for choosing good modern examples away from London—just try finding them. London is indeed a "special case," the case where there is at least some good housing of every sort.

Elizabeth Denby was not using her figures to say that overcrowding didn't exist, she was demonstrating how wickedly careless the conurbations and big county boroughs had been with the land available: showing that in spite of local congestion—which was not denied—the towns as a whole were under-developed: partly through absurd housing estates and partly through the scattered pieces of undeveloped land—which incidentally add up to a big total, as you can see in any Outer London journey. Her figures clearly showed that even a small increase in density of the huge pre-war estates would have housed most or more of today's overspill, and there, quite seriously, is part of the solution. I know estates with roundabouts big enough to hold a shopping centre, and ribbon-evasion estates with the service road so far back from the main road that another terrace with back gardens could be fitted in between them, facing inwards. In many cases, as the NFBTE are suggesting, it is going to be easier (and possibly cheaper) to redevelop a bit of pre-war planning on the outskirts than to tamper with the centre and then house the overspill somewhere else. If you made a town of, say, Kingstanding or the Bilborough estate at Nottingham, you might well get *under*-spill.

People are being driven from the centre not by congestion but by the wrong sort of redevelopment. Again, Elizabeth Denby has plenty of unpublished evidence to show that what working class families really wanted was the type of building they had before—a house and garden, cosily planned and near their work—which was the alternative we were proposing. If you rehouse entirely with flats, then naturally the big families will want to leave.

The idea of the overall green belt is just what I do mean. Housing claims are staked out already by the boroughs, *i.e.*, they have from 10 to 20 years' warning to be careful with their land. I think that all the rest of the housing can be incorporated inside the existing village and town patterns. Obviously all industrial development in the country couldn't be stopped, but if it had to be considered much more carefully it would be no bad thing, and obviously the restrictions wouldn't apply to agricultural buildings.

Public opinion wouldn't be alienated if it was made clear enough that the point was to save the countryside for all, and if it could be seen to apply to services, Boards and Ministries just as much as to private individuals.

My suggestions for control of basic land use in county boroughs by counties is really only Regional Planning put another way. I did mean *basic* land use—just simply how much is to be town and how much countryside. I ought to have suggested regional planning authorities as an alternative: I thought it would be easier to co-ordinate existing authorities than to create yet another, but events look like proving me wrong. I don't care what it is called as long as we get it.

I suggested remote control for decentralization because from what I've seen of local government politics any other system will be rigged. The JOURNAL'S Specialist Editor (Planning) almost admits the need for it in saying "when . . . it becomes necessary to move some overspill beyond the zone controlled by the regional planning authority." My point is: who but a central body can decide and control where it *is* to go? If there were a true national plan, then the local authorities could be trusted to implement it, but that comes to the same thing.

A Plan for Planning was some sort of attempt to look at the planning system from the outside and build up a layman's solution based on commonsense principles. It is obviously not the only possible plan, and I ought to have made the alternatives clearer; it is certainly *a* possible plan: and given the two extra weapons—intensified villages and high density urban terraces with gardens—with which to beat our chronic housing disease, it would work.

IAN NAIRN.

London.

The Privacy Distance

SIR,—I have just read the excellent report in your issue of January 24 of the TCPA conference at which I spoke on housing densities. In that talk I didn't so much argue for any specific density as try to show laymen (and remind technicians) what densities of 12 to 15 houses an acre imply in component dimensions. Your report queries my minimum "privacy distance" of 70 feet between rows of houses. Why, you ask, should this be regarded as "inviolable?" Of course, any such dimension is a matter of judgment: as to the normal feelings of occupiers, and as to whether these feelings are based on realities or on mere fashions or whims. As a housing manager I found that at less distances, with a row of windows opposite on two floors, people using their rooms feel too much under observation from a wide range of angles. One odd overlooking window or two at 50 or 60 feet, though not good, doesn't matter so much, since you can dodge observation from it. A row of windows is like a theatre gallery; you feel you are on the spot, under the limelight.

And, by the way, your cartoonist might note that the "privacy distance" has nothing to do with a propensity to prance about naked or to study others doing so. Curtains are drawn when these innocent desires arise. It has to do with a dislike of disclosing all one's little family habits and ways of living to inquisitive neighbours—what time we come down to breakfast, who comes down first, whether the husband washes the dishes, whether the wife feeds the baby in the kitchen or the living-room, whether she works all the time or sits down for a rest, and all sorts of other things of great interest to the research-minded.

Sir Raymond Unwin regarded 70 feet as the minimum distance both for privacy and because in certain aspects it just permits of the sun peeping over two-storey roofs at mid-day in mid-winter. It is interesting that in the housing estate at San Basilio, Rome, which the Architectural Correspondent of *The Times* held up as a model of "urbanity" and a lesson to English planners, the general distance between facing rows of terraces is at least 85 feet.

FREDERIC J. OSBORN.

London.

We Left Subtopia

SIR,—We went from our neat, soul-destroying little house to the dilapidated, no doubt substandard, residential quarter of Bristol. We lived in Subtopia for nine months and during that time, to move as rapidly as possible was our one ambition. In Subtopia our only visual star lay in a little church pinnacled against the sky overlooking an enormous area, partly of industrial straggle, partly over as yet unruined countryside, and partly over a vast mass of uniform little houses creeping round valleys and hills like an insidious cancerous growth, bereft of trees and colour.

Overnight we plunged into a new world. With inward trepidation I faced the problems of living in a top-floor flat in a three-storeyed house. These flats were not self-contained and each was occupied by a family and two children. I refused to allow myself to think too closely upon the troubles involved with three women, six children ranging in age from 18 months to seven years, and heaven knows how much washing, muddy shoes, coal buckets from the basement, and the probability of our baby throwing all her toys through the banisters, not to mention the eternal trek up and down the stairs in this generous heart-warming Victorian house.

From the time we moved in I treasured each moment as if it were my last, for it all seemed so precious after our previous experiences. Gradually all the members of the household became valued friends. The children shared the old walled-in garden, making a cycle track of the path round the lawn. The boys developed a "mine," and were always digging for gold. Even the basement had its fascination, a Limbo-like place filled to overflowing with things none really wanted, but couldn't bear to throw away!

Here, indeed, was richness no Corporation could understand; in fact the Housing Officer even went so far as to imply an apology when he first offered us the flat.

Many people commiserated with us upon the house not being self-contained, unable to recognize its value. We all lived absolutely independently, and went to considerable lengths to respect each other's privacy. On the other hand, we used to "sit in," and take care of each other's children, and so as parents enjoyed exceptional freedom.

In this house we hadn't one convenience considered essential in Subtopia, but we had large rooms, large windows, lovely tree-top views, church bells, the Downs, and the stimulating atmosphere and interests of a thriving university town. We were all happy, hard-working, unfrustrated, and life held colour and interest.

I have been asked why I thought these particular conditions were ideal. It is essential for the families concerned to belong to similar professional or business status, to belong to roughly the same social background, income group and to have similar standards of behaviour. The Housing Officer interviewed my husband, which resulted in our sharing a house with two doctors. Collectively, we were all able to enjoy a high standard of accommodation with space and pleasant surroundings, which individually not one of us could afford. Good sense was shown in the tolerance of children's and domestic noise, and the large garden was free for all ages to enjoy—in fact, it was ideal.

Do I recommend this manner of living for general application? With impartial selection and similar thought, this system could be applied in these days, when so many large properties fall into disrepair, and surely, this would dovetail with Ministry grants for repair and conversion.

We should like to have spent at least ten years in that house, and it was entirely due to outside reasons that we were able to enjoy it for only two years.

Perhaps the key point in this particular set-up lies in the fact that the incentive and opportunity was there for a full and rich life providing we were willing to accept the responsibilities of co-operating, and the final result was worth the effort to achieve, whereas the detailed planning for separate self-contained existences gave no scope, and the inevitable result was complete isolation in Subtopia.

MARY SCULLY.

Bristol.

Off-the-Peg Design

SIR,—I wonder if you have considered publishing details of the better type of "off the peg" houses that are for sale? (*e.g.*, Eric Lyons's Ham Common received a lot of publicity). I have been looking for a house for some months now (not having enough capital to build my own) and amongst all the rubbish I have found only one or two examples which might interest people in my own position. The architectural merit lies in the houses incidentally, and never in the layout.

If you thought there was anything in the idea, your magazine could act as a sort of Design Centre; persons responsible could be invited to submit schemes for "display." In order not to antagonize the RIBA I suppose it would be necessary to limit your material to architect-designed schemes—although this doesn't necessarily mean much.

You could, perhaps, be striking a blow against Subtopia—shaming the speculative builder and providing a valuable service to readers.

ANON.

[Our columns are always open as a "design centre."—ED.]

Not Insulated

SIR,—It seems incredible that not more than 10 per cent. of new industrial building in the past six years was of insulated construction. When the Private Members Bill was introduced in the House recently this was the claim made. The object of the Bill is the compulsory insulation of all new industrial buildings.

The sum total wastage of fuel through heat losses must be very large indeed, even allowing for possible exaggeration in the claims. In view of the established value of insulated construction, this situation seems particularly nonsensical. We cannot afford such inefficiency in our running costs of industry. The problem at one time was the large areas of glass involved in industrial projects. This, of course, has been solved for some considerable time now by insulated glass or double glazing.

Maintenance is a factor often neglected in building as problems are not usually highlighted for a number of years: running costs must, however, reveal themselves immediately.

Professor Gropius in his recent book "The Scope of Total Architecture" reckons that 90 per cent. of building in the USA is carried out without the employment of the services of an architect. One wonders what percentage applies to industrial building in this country or if architects' and civil engineers' advice is disregarded in this particular.

W. HOME.

Middlesex.

Rate Increases

SIR,—In answer to H. J. D. Yardley's letter (January 24), and by way of an encore to the article of December 6, we attach a table giving the information, for what it is worth!

Discussions with a rating surveyor suggest that the guiding principle that the rating surveyor uses when assessing the value of central heating for the rating assessment is "what is, in his opinion, the gross value of the finished property"—*i.e.*, what rent would the tenant reasonably expect to pay for the accommodation provided. He would argue that if a central heating system had been installed this would have cost more than the normal fire and boiler installation, and therefore the tenant would reasonably expect to pay more rent.

On a rateable value of £40 for the house discussed in the original article, the probable altered assessment as a result of these considerations would be as shown, but the introduction of a central heating system at no greater cost—indeed at less cost—than the conventional is a problem which sets a precedent for rating considerations, and therefore there can be no answer based on general experience.

ADDENDA TO TABLE 4

Scheme	1	2	3	4	5
Rateable Value	£40	£42/10	£40	£42/10	£40 (£39?)
Addition to running costs at rate of 15s. in £	Nil	£1/17/6	£1/15	£1/17/6	Nil (15s.?)

In fact, this assessment would be made as a result of a survey by a rating surveyor, and it is quite probable that unless the provision of an under-floor heating system was pointed out to him he would not know of its existence and in the absence of other apparent means of heating he might conclude that the house was without means of heating other than by electric fires, etc., and this might persuade him to reduce his gross valuation.

The moral would seem to be to make sure this survey is carried out in the summer and the thermostat is covered by a picture!

Allowance for these figures has been made in Column 5, though we do not seriously suggest this latter course.

R. BADEN HELLARD

Abercrombie's Plea

SIR,—It is a pity that more notice is not taken of Sir Patrick Abercrombie's plea for a national plan. Once again an architect has shown the way and the RIBA or the architectural press should support him by setting up a Commission of eminent architects like Sir Hugh Casson, Sir William Holford and Sir Patrick himself, to enquire into the question and to establish once and for all, whether or not, there should be a national plan. They could take evidence and publish the proceedings with their recommendations.

We understand that the Ministry planners do not want a National Plan, but that is probably because most of them are research types without much planning experience, and therefore afraid to tackle a creative job.

All the arguments which justified a town plan are valid for a National Plan. Local government authorities have been required to make town plans but the central government seems to dodge its share.

S. W. SMITH.

London.

A Capital Offence

SIR,—Why is there a craze among architects for lower case letters? I have been having a struggle with section lines marked on a drawing in small italic letters. A stencil was evidently used, but the "a" looks less like "a" than what I discovered eventually was a "b" upside down! I spent some time turning the drawing round (there was no indication which way the section lines faced except by reading the letters), and then decided to compare the "symbols," which is all I can call them, with those written under the relative sections. Having fixed them, I found that on further reference I was constantly getting mixed, so in the end had to cross out the printed letters and put good bold capitals in myself.

Would somebody say why there is this craze for small letters? Are they more beautiful than capitals, or is there an economic urge to simplify the manufacture of typewriters? Or is it, perhaps, a reaction from the straight lines of the cubists? I went into a newly-finished post office the other day for a postal order and had to look through a lot of small writing to find the proper part of the counter.

I would suggest, in all seriousness, that architects' working drawings are prepared for *use*, by consultants, quantity surveyors, builders and clerks of works: they have no other purpose, and if architects do not make them serve their purpose, they are not doing their job. Their users are busy people, often given less time than they ought to have, and a little consideration is due to them. Most of them do not appreciate so-called "art," and have no time to do so, if they wanted to: nor do they want to be "educated." Their concern is for the business they are running, the job they have to do. The word "functional" was at one time all the rage. If anything ought to be functional, surely working drawings should be! What the users want is something quickly read. Lettering can be bold and legible and at the same time well-designed.

What at first seemed to be a prank of the votaries of beards and corduroy cladding has been adopted by intelligent architects and become a positive nuisance.

May I add to my castigation north points on which the north is doubtful, minute serial numbers on drawings which cannot be read whilst still in the drawer, and broken lines no thicker than ordinary lines, in which the twiddly bits are so far apart that the breaking is easily overlooked. They have all wasted my time and, no doubt, that of many others. A pound of legibility is worth a ton of draughtsmanship! Schools please note!

UNCIAL.

London.

CRITICISM

by J. M. Richards

CHURCH HALL at TOLWORTH, SURREY
designed by KENNETH WOOD

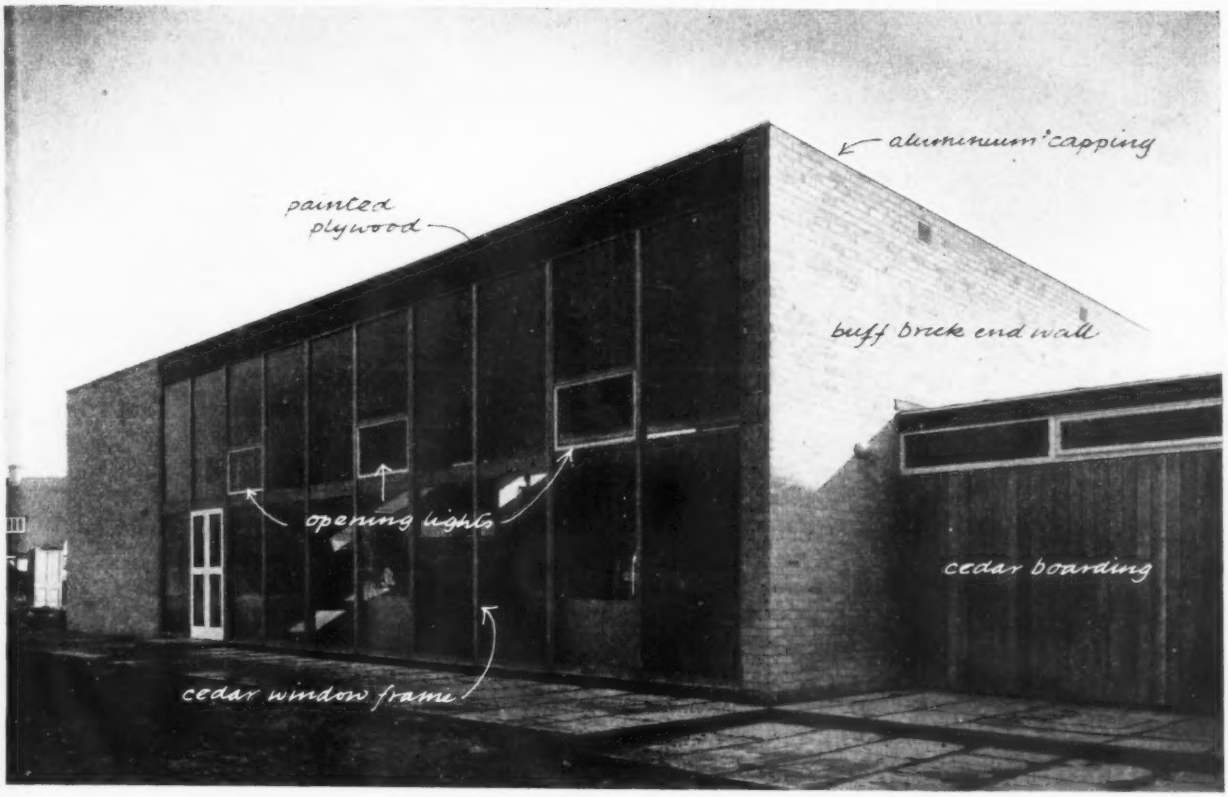
For this week I have chosen a quite modest little building, but one that illustrates some of the questions of principle that architects—particularly architects with local practices—are always having to make up their minds about. The programme was to add a hall (for social and entertainment purposes) to an existing church in a typical south London residential area.

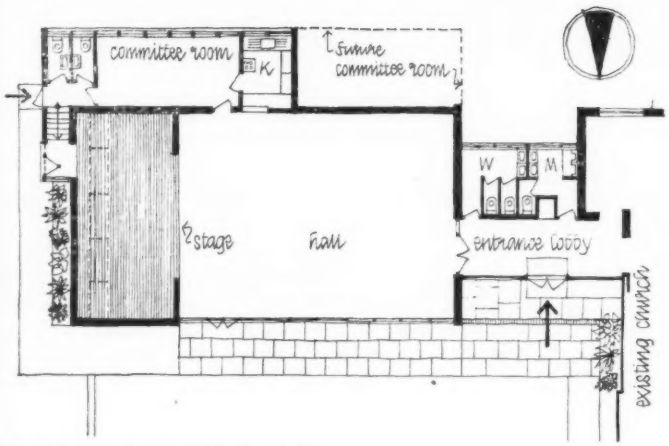
The site is surrounded by a very ordinary building estate semi-detached houses and the church, built in the 1930's, is equally ordinary: in style more Jacobean than anything else, in character altogether too fussy and pretentious for its somewhat diminutive scale and in material a rather unattractive dark red brick. There was therefore nothing to be said for imitating the adjoining buildings, and the architect has quite rightly let his new building make its own contemporary statement. But, also quite rightly, not in too loud a voice. He has kept the exterior very simple. He has also made his roof line up with the eaves-line of the church.

The plan is so straightforward as to call for no comment. It consists of a rectangular hall with stage at one end and a link with the church, which is also the entrance hall, at the other. Lavatories open off this link, and an annexe at the side of the hall contains a small kitchen (with serving hatch into the hall), a couple of committee rooms (which can also be used as dressing-rooms when dramatic performances take place in the hall) and lavatories adjoining these. Steps lead up from the annexe to provide a back-stage entrance. Near this is the service entrance to the building, with a loading-dock for stage-properties.

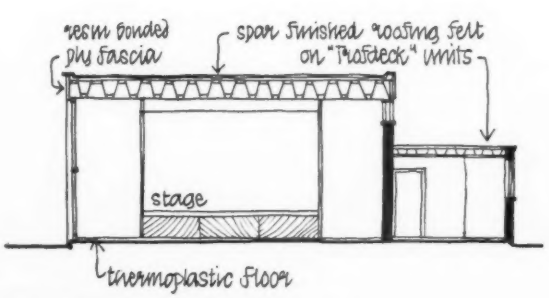
The planning was thus not really the problem. The problems that need discussing come under three headings: structure, maintenance and architectural character, the second being unusually important in this case because churches are always short of funds and cannot afford the kind of building that needs money spent on it afterwards. But to begin with structure. This consists of load-bearing brick walls (11-in. cavity) and a roof of plywood trough units spanning the long way of the building and using the beam that forms the proscenium of the stage as an intermediate support. The dark strip above the glazed wall (in fact a plywood fascia, painted very dark green) indicates the depth of the trough roof. The fact that it might be taken for a lintel without any abutment is not, I think, anything to worry about. We mustn't judge one kind of structure by the rules of logical expression that apply to another.

The window-wall is framed in cedar, and is self-supporting except for steel flats inserted for stiffening between the two members of the double mullions. If moisture penetrates to these will they rust? The cedar is left untreated, only the opening portions (an escape door and two horizontally pivoted lights) being painted white. These and the dark fascia above are the only parts of the exterior that will need periodic repainting, since vertical cedar boarding is used externally on the entrance-hall link and on the end of the building by the stage entrance, and this will simply change colour from the present reddish brown to a silver grey. Inside, the wall-surfaces are pine boarding in the entrance-hall, and fair-face brickwork and wallpaper (either side of the proscenium) in the hall. The hall is lighted not only from the big window but by clerestory windows above the roof of the annexe on the opposite side. Artificial lighting is from fluorescent tubes set behind grilles in the flat ceiling, which is composed of squares of hard-board painted off-white. There are also wall light-fittings at either end designed chiefly to provide sparkle and some variation of lighting intensity, required by the different uses to which the hall will be put. The hall is centrally heated by radiators, using the existing boiler-room of the church. The cost of the building was just under £9,000, not including chairs and curtains.





Ground floor plan [Scale: $\frac{1}{16}$" = 1' 0"]



Section through hall looking towards stage
[Scale: $\frac{1}{16}$" = 1' 0"]

So much for the facts. As to comment, the structure seems to be reasonable and economical, and to provide an interior space which may not have much character but can be counted on, I suppose, to derive sufficient character from whatever is happening in it. The simplicity outside I have already commended, together with the choice of materials to reduce maintenance costs. For this style of architecture an air of precision is absolutely essential, and this is achieved by the neat aluminium capping at the top of the wall, by the slender proportions of the window members and by the juxtaposition externally of a number of taut, smooth planes of timber, brick or glass, without much variation in depth—even the brickwork is flush-pointed. One small point I would criticize is that the escape door stands out too much from the frame in which it is set, perhaps through being clumsily sub-divided.

As to architectural character, that partly derives from the choice and treatment of materials which I have just described. But only partly. I wrote rather glibly at the beginning of this article about the building making "its own contemporary statement," and I must now discuss what that means, if anything. To an architect I suppose it means that, instead of relying on reminiscences of the past or using customary ways of doing things just because they *are* customary, he must exploit present-day techniques in so far as they are applicable and economic and must rely on the aesthetic idiom that has largely been derived from such techniques. No doubt

Church hall at Tolworth, from the north.

readers could improve on this definition, but the point is that it is an architect's definition. To the layman a contemporary design is one that uses an awful lot of glass. He has been given every reason to believe this is so, although often the modern architect's fondness for glass is fully justified. But I would question whether it is justified in this case.

The hall, as I understand it, is to be used, in the evenings, mainly for meetings, concerts and theatrical performances, during which it will surely be necessary to draw curtains across the glazed side wall. It will also be used for dances, when I suppose a side wall that leaves the interior in full view from the road will not be a disadvantage and may even add gaiety to the neighbourhood. In the daytime it will be used for meetings and other gatherings, which again will not want to take place in full public view, and I believe the committee-rooms will serve as a mid-week clinic, and the same applies to those waiting to attend the clinic or on their way to it.

In spite of the fact that the building faces north, I cannot believe so large an area of glass is needed just for daylighting, and the gay effect during dances hardly seems to be enough to justify the obvious disadvantages of having a wall of glass that will in practice be nearly always concealed behind curtains.

These disadvantages are: the cost of curtaining so large an area (or can the architect show that glass plus curtains is cheaper than an opaque screen-wall ? If so, the name curtain-walling takes on an interesting new meaning); heat losses through the glass; sound-transmission through the glass (both ways); the false architectural character given by the use of glass as a cliché, not as something arising from the needs of the building.

Which brings me back to the starting-point of this argument, and to the question I hope the architect will answer: can he justify this all-glass wall on functional grounds ? Or does he, perhaps, think it not necessary to do so ?

What readers think

Here are more letters from readers about the first article in J. M. Richards's series. The article about a primary school at Hornsey, was published on February 14 and the architect, H. T. Cadbury Brown, replied on February 21.

SIR,—H. T. Cadbury Brown contends that our lack of sunlight prohibits the use of bright colours (February 21). I am rather surprised that he should support what is a popular superstition. To design grey buildings for a grey climate is to invite drabness.

When I visited Nantes the town looked pretty much like Liverpool or Manchester on a dull day in November. The Unité, with its gay slabs of colour, was a welcome relief; in fact, the colour helped to make up for the lack of sun, and gave life to the building seen against a rain-filled sky.

On the other hand, many of our post-war housing schemes, which may look quite well in sunshine, are gloomy and forbidding in rain or fading light because of the overall greyness of their materials.

Mr. Cadbury Brown also shares the belief that light colours " show the dirt," which attitude is responsible for the green and brown of suburbia and the equally infamous corporation green. The truth is, of course, that whatever colour you paint a building, it will become dirty in time, and that very often dirty-white paint looks better than dirty-grey paint.

I am not suggesting that bright colour and good architecture are synonymous, but that they are often complementary.

ALAN TURNER, A.R.I.B.A.

London.

SIR,—Although agreeing with J. M. Richards that on the available evidence the Cadbury Brown school is well conceived and detailed, I think the photographs of the finished article illustrate the æsthetic limitations of the skeleton frame and stretched membrane type of achitecture—namely, the dull and almost shoddy façades that result particularly where bright colours or contrasting materials are not employed. This must be particularly so on dull days without sun in industrial or semi-industrial areas.

Architecture employing these methods would appear to be more interesting in theory and on the drawing board than it is in reality. The merits are, of course, lightness and its resultant economy, but I cannot help thinking that curtain walling on a large scale is more suitable for industrial buildings.

PHILIP DOD, A.R.I.B.A.

Liverpool.

SIR,—If the critical discussions can continue as they have started, I see this series as the most valuable contribution to the dissemination and provocation of ideas since the early and lively days of CIAM.

It is not only that the dreadful era of sterility in architectural journalism must be killed and hustled to the grave. There could not have been anyone who was really satisfied with the muzzling of creative comment which has for donkey's years pervaded the architectural magazines. The monotonous repetition of insignificant facts without opinions which form little more than extended captions to the photographs against which Mr. Cadbury Brown wisely warns us, must end. All this has had little to do with the proper appreciation of architecture.

The motoring papers discuss styling, technical details, performance, economy and other practical matters and also carry out searching and highly-critical road tests, usually with impartial correctness and objectivity, drawing comparisons with similar and commercially competitive models. They have even on occasions gone so far as to condemn a particular model or some aspect of its design without, so far as I know, being brought into the courts. The example of the motoring press is not an isolated case. For years there has been outspoken comment and criticism of paintings, films, books, sculpture, and even that most commercial of activities—advertising. Why have architects been so sensitive and inhibited about criticism? Is it perhaps because we have become "professional gentlemen" who are above that kind of thing? And yet, how hot under the collar we get when the gutter press lets fly at us. Are we too small-minded to take it?—frightened of what our clients might think? Jealous of self-inflated views of our rightness in all matters of taste and opinion? Anyway, Mr. Cadbury Brown clearly is none of these things and we should be properly thankful for him and for his courage to have Mr. Richards's first arrow flighted at him, albeit the tip was blunt and the range long. Yet Mr. Richards struck the target. Was it the target he aimed at?

The really important achievement of "Criticism," as I see it, is not that Mr. Richards gave his views of a certain school but rather that his comments brought the architect himself into print. Not only is it important to hear Mr. Cadbury Brown's answers to the criticisms levelled at his building—they were more convincing and revealing than the criticisms—but, particularly from his introductory remarks, we now all know, like and understand Mr. Cadbury Brown, his work and his concept of architecture, the better.

Mr. Richards has been set a new target and a difficult one. One that has been made difficult by the perception, the sensitivity, and the logic of his first victim. He must provoke, as subtly, other architects. Architecture may not be something in books; concrete *is* concrete; and glass *can* be seen through—these things we should know. And yet, it is not possible to see all buildings except through the press. The press must not only tell us that it is concrete; we must be able to "feel" it and know it. I feel that now I know something worthwhile about the school at Hornsey which I should not have known through the conventional and traditional treatment of the "glossies." Although I have not yet seen Mr. Cadbury Brown's school, if I say that I can smell it, I hope he will understand me.

DAVID J. DUPREE, A.R.I.B.A.

London.

MORE LETTERS

(*continued from page* 349)

Pull Up the Ladder . . .

SIR,—We were most interested to read ASTRAGAL'S report (February 14) on the suggestion by a chief architect that his four team captains should share the responsibilities and salary of the former deputy, and were astonished to see that three of the four possible participants had rejected the idea.

Apart from the financial aspect, which must surely have placed the four of them very close to the deputy's salary level of £2,000 a year, it seems to us that the idea would have considerable practical advantages.

We feel sure that there must be numerous deputies who "never would be missed," and who frequently provide nothing more than an administrative stumbling block, though, of course, we realize that the question is one of principle, and not of personalities.

But it seems to us that team captains are, in effect, deputies already, and are usually much more closely in touch with the jobs which are to be piloted through committees than is a deputy.

Finally, we were somewhat amused by the great confidence (not to say conceit), together with a distinct suggestion of "Ring the bell, Jack!", implied in the attitude of the three dissenters.

FOUR LOCAL GOVERNMENT ASSISTANTS.

London.

How to Encourage Experiment

SIR,—I am astonished that ASTRAGAL (February 21) should consider that the Inland Revenue Department's action in the case of Mr. Gardiner of Bristol is "strange." Not only are such experiments in more efficient heating taxed, but so also is the ordinary householder who decides that he will purchase modern and more efficient smokeless heating appliances. To illustrate this, I give below the incidence of purchase tax on gas fires in relation to their space heating efficiency and I ask you, sir, if anything could be more absurd?

Gas Fire	Overall Efficiency (Maker's Claims) %	Purchase Tax £ s. d.
Radiant Fire No. 1	44	3 11 10
Radiant Convector No. 2	54	5 1 2
Radiant Fire No. 3	70	11 18 7

The tax is, of course, based on cost and it is inevitable that the manufacturers' cost increases with the output performance of the appliance. On the other hand, there is no logical reason why tax should be based on cost rather than on weight or colour, if indeed smokeless fires must be taxed at all.

H. R. HILL

Technical Director, Bratt Colbran Ltd., Wembley.

LOCAL GOVERNMENT

Proposed Overhaul of Structure

An announcement that may ultimately have far-reaching effects on architects and planners, particularly those employed by local authorities, was made in the House of Commons last week by Henry Brooke, the Minister of Housing and Local Government (writes a correspondent). He said that he hopes to have a major local government Bill ready to present to the House next session, covering both reorganization and finance. This means that an overhaul of the structure and finance of local government may, for better or for worse, be on the statute book by the summer of 1958.

The occasion for the Minister's statement was a private Bill promoted by Stockton-on-Tees, a non-county borough, to give it county borough status which would, among other things, have transformed it into a planning authority, and made it entirely responsible for education. The Bill was defeated, as such Bills always are, and the futility of the debate was well illustrated by one member who alleged that all the borough members in the House were speaking from briefs supplied by Stockton, and all the county members from briefs supplied by the Co. of Durham, which bitterly resisted the idea of losing a large chunk of its rateable value. The animosity engendered on these occasions between the borough and the county representatives, although they belong to the same party, has to be heard to be believed, and is symptomatic of the local jealousies and vested interests that stand in the way of any serious reform of local government.

The amount of time that can be consumed by trivialities in local authority offices was illustrated by David Jones, the member for West Hartlepools, who produced correspondence in which the Medical Officer of Health for the County of Durham, and the county architect, objected because the Medical Officer of Health for Stockton had placed an order, apparently in some emergency, for the replacement of a lavatory cistern in the nursing school. "That kind of thing is bound to cause difficulty, by its very nature," observed Mr. Jones, and whichever way he meant it one could not fail to agree.

Mr. Brooke's announcement also means that within the next 12 months there will be a serious debate about the rival merits of the Government's own plans for the reorganization of local government structure and finance, and the plans now being discussed by the Labour Party.

"Forget About Densities and Press for Reforms"

One of the earliest contributions to this debate was made last week by Derek Senior, local government correspondent of the *Manchester Guardian*, to the Town and Country Planning Association. He appealed to the TCPA and the new movement for urban renewal recently launched by Arthur Ling and the Association of Building Technicians, to forget about their differences on density and combine to press for a reform of local government. Those who despaired of dispersal from the great cities, he said, and advocated the replacement of Victorian villas and inter-war "semis" by high flats knew in their hearts that it was not the right way to do the job. But they knew it was the only way of doing it in present circumstances entirely within their own local government boundaries. He feared that the TCPA, by indiscriminate attacks on the high density movement, might make the very different points of view represented in it solidify. The more responsible advocates of the "go it alone" school still recognized that dispersal of overspill would be the best and most suitable way of making room for urban renewal. Their point of difference was that they would not let urban renewal wait upon dispersal, because they saw no prospect of dispersal being carried out at an adequate pace. They were thus driven to defend high densities and to attack low densities, and to dismiss dispersal as escapism from urban renewal. If the TCPA asserted that dispersal was the only means to urban renewal, the more responsible advocates of urban renewal, too, would find themselves driven to join the lunatic fringe who were denouncing dispersal as bad in itself.

He could not ask the TCPA to soft pedal its campaign against high densities, but he could ask it to join with the more responsible urban renewal people in pressing for local government reform—for there lay the hope of dispersal and of urban renewal at decent densities. If we concentrated on setting up planning authorities which embraced both the outworn centres and reception areas beyond the green belts, dispersal would become the cheapest and best way of securing urban renewal—and Arthur Ling's new association would have every incentive to affiliate to the TCPA.

FIRE

Insufficient Attention to Danger Warnings?

The clear implication that insufficient attention had been paid to warnings about the fire danger in factories from bituminous roof coverings and untreated insulation boards was contained in questions put in the House of Commons last week by Maurice Edelman, a Coventry M.P., who has taken an active interest in the fire at the Jaguar car factory. Mr. Edelman, who put questions both to the Home Secretary, R. A. Butler, and to the Parliamentary Secretary to the Ministry of Labour, Robert Carr, instanced two warnings: one, a warning given by the Chief Officer of the Coventry Fire Brigade to the Jaguar company, and another, a similar fire at the Nash-Kelvinator factory at Crewe in September, 1956, which should, Mr. Edelman seemed to think, have led the Home Office to have recommended new safety measures.

Mr. Carr, who announced as long ago as May 18 last year that the Government was considering the desirability of new regulations to make the fireproofing of untreated insulations in factory structures, said that he was not yet able to make a statement on the outcome. Mr. R. A. Butler, the Home Secretary, confirmed that in November, 1956, the Chief Fire Officer of Coventry gave to the Jaguar Motor Company, at its request, a comprehensive report about fire risks and precautions in the factory, which referred to the fire hazard of the roof attributable partly to the nature of the roof lining. Mr. Edelman said that the roof consisted of R.P.N. sheeting and insulating board which, he said, were recognized as two of the greatest hazards in roofing materials for spreading fires. "Has not the cause of several major fires in the last few years arisen from these untreated boards?" he asked. "As practically all of the former shadow factories in Coventry are constructed in precisely this way, will you not give the matter your very urgent attention?" Mr. Carr replied that the matter was being given urgent attention, but added that the interest of the Factory Inspectorate in fire prevention was a relatively new one. A report on the whole matter was being urgently prepared.

Gerald Nabarro, whose Bill to make heat insulation in new factories compulsory gives him a special interest in this matter, was told by Mr. Carr that a most detailed report on the cause of the Jaguar fire was being obtained, and he promised to consider Mr. Nabarro's request that it be published. Mr. Edelman asked if the fact that no action was taken, after the Coventry Fire Brigade had given a solemn warning about the very serious hazard from the soft insulation board lining used in the factory, was not due to confusion as to who should take responsibility for acting on this advice: but Mr. Carr said he could not substantiate this without looking into the matter. In reply to a question about the Nash-Kelvinator fire, Mr. Butler admitted that no advice was issued by Government Departments as a direct result of this fire, but a great deal of guidance, both about fibreboard and about roof coverings, had been made available by various departments in their publications, by fire brigades and by voluntary bodies such as the Fire Protection Association.

RIBA

Bronze Medal for Berks, Bucks and Oxon

The RIBA announce that they will award a Bronze Medal for a building of outstanding merit completed in the province of the Berkshire, Buckinghamshire and Oxfordshire Architectural Association during the four-year pediod ending December 31, 1956.

The award will be made by a Jury of Assessors, as follows:—RIBA representative to be appointed; H. M. Colvin, M.A., Fellow of St. John's College, Oxford; J. Greaves, Berks Society; R. W. Cave, Oxon Society; Hilton Wright, Berks Society.

Nominations should be delivered to Arthur J. Miller, 21a, King's Road, Reading, not later than Saturday, February 23, 1957, and should include the following information: (*a*) Address of building. (*b*) Photographs and/or drawings of building, with brief description. (*c*) Name and address of architect. (*d*) Name and address of owner.

There is no special nomination form. Please mark packages with the words "Bronze Medal."

LCC

Revisions to London Building Acts

The Town Planning Committee of the LCC report that they propose to set up an advisory committee to review the London Building Acts and the by-laws; and in particular, to examine the powers and datus of district surveyors and the rights of appeal available to a builder or owner and the procedure for obtaining a waiver of the by-laws. This second subject for examination has been prompted by the increase in the number of building techniques and by the need.

Hasten the process whereby the building owner can get a more prompt decision on whether or not any technique he may propose will be admissible. The advisory committee is to consist of twenty persons, among them being a representative of the RIBA.

NFBTE

Annual Report

A correspondent writes:

As one might expect, the credit squeeze, petrol rationing and Suez form major preoccupations in the seventy-ninth annual report of the NFBTE. Prospects for 1957 are gloomily discussed and the section on "Labour Relations" is noticeably tougher than in previous years.

Last year was a fairly good one for the builders. The total value of all work was 12 per cent. more than in the year before, which, allowing for the 5 per cent. rise in materials and labour costs, means a physical increase of about 6 per cent. Less housing was built, but industrial and other work rose by about one third and work for public authorities (excluding housing) rose by about one fifth.

But firms in rural areas are beginning to report a shortage of work and the value of factories projected for 1957 is about 7 per cent. less than last year. The report adds that architects and quantity surveyors seem to have less on hand. To help with the forecasting of prospects, two schemes are announced. One by the MOW who will collect information from builders, and one by the Joint Consultative Committee of Architects, Quantity Surveyors and Builders who will collect (confidential) information from RIBA Council members, on the value of work they have in hand.

The Federation have apparently been prodding the Government about petrol rationing and, as a result, the MOW have set up a small committee representing the builders, manufacturers and suppliers, which, in turn, will prod the Ministries of Fuel and Transport. A more ominous consequence of Suez is the recommendation to NFBTE members to put in their tenders a clause that "the tenderer cannot guarantee the regular progress of the works" and reserves the right "to include in the contract such special conditions as the particular circumstances may require." A casualty of the international crisis is the postponement by the MOW of their experiments in excluding the fluctuations clause for a number of contracts up to £100,000 in value.

The industry has a bad record for accidents. Earlier in the year the Chief Inspector of Factories said that the builders "were not facing up to their responsibilities in the matter of accident prevention" and quoted the fatality rate of 1.23 as compared with 0.27 in factory industries for the year 1954. The main causes mentioned in the report are that the regulations are often not properly observed by employers, and the "opposition of workers to safeguard which they think may interfere with their method of working or bonus earnings."

The Joint Contracts Tribunal reports that on the proposed revisions to the standard form of contract they have received 1,400 suggestions from 134 bodies or individuals. These are receiving "preliminary consideration" in "frequent meetings" of the tribunal.

On more long-term issues, the NFBTE report gives the following points: The Joint Consultative Committee of Architects, Quantity Surveyors and Builders is soon to issue a pamphlet "indicating the desirability of allowing sufficient time for the proper preparation of each stage of a building operation." This plea for pre-planning will be sent to industrialists, financial organizations, Chambers of Commerce, Government Departments and the Nationalized Industries. It is "hoped that the document will be supported by the architects, surveyors and builders employed in each individual case." One can only comment that the document would carry more weight if it quoted the extra cost of inadequate preparation. (This pamphlet will be reviewed next week.)

Under "Labour Relations" the report says that the various building union conferences of 1956 "showed no disposition to face up to the real needs of the situation." In a paragraph on "automation"—the theme of the NFBTO presidential address last year—the report bluntly remarks that the real threat to employment "arises rather from the high cost of building, to which one of the main contributory factors is the effect of higher wage payments than are justified by production." In their 1955 report the Federation announced that they had commissioned D. N. Chester, Warden of Nuffield College, to investigate the effect of modern technique and practice on the National Working Rules. This year they say, the report will shortly be under consideration. This independent enquiry should be of great interest, and we hope the Federation will not confine publication to their own members.

The section on education and training is perhaps the most interesting. It reveals an industry not only attempting to train younger men for the future, but trying quite hard to catch up with technical progress in numerous courses and training schemes for those whose apprenticeship is behind them. There is much more activity here than in the architectural world. There are day-release, block-release and "sandwich" courses—especially at the newly-designated colleges of advanced technology. But training for management is the main preoccupation of the report. An enquiry is being made into the future needs for such training, and into plans for its further development.

The long-awaited survey of education by the Board of Building Education is apparently ready for publication. We hope it will be available for all to read.

The NFBTE report also contains the report of the Federation of Registered House Builders. Pressure brought to bear on the previous Minister of Housing by this organization has had potentially dangerous effect. Apparently he said that steps to safeguard the countryside surrounding towns and villages will only be taken "where there is a clearly-established need" (whatever that means).

This report also confesses that the design of private enterprise housing is "frequently the subject of adverse criticism in technical and other journals" and goes on to stress that it is the FRHB policy to encourage "where possible" the employment of qualified architects. The last sentence in the paragraph expresses the hope that it may be found possible to agree a scale of charges "which will be regarded as economically practicable by both architects and builders." We suggest that the FRHB studies its own report on the American attitude to this question. (See the JOURNAL'S leading article of August 2, 1956.)

OBITUARY

Pembroke Wicks

A correspondent writes:

Although it was only as recently as 1938 that the final Registration Act became law, so closing the profession except to those admitted to it who fulfil the requirements of the Act, there are few practising architects today who knew the struggles, controversies and high tempers that raged in the years before and during the passage of the Acts through Parliament. Exhausted, and somewhat embarrassed by what had been achieved, an old profession which had enjoyed freedom as individuals, or limited restrictions within the "local rules" of some old and some new voluntary societies of their own making, found itself re-born into something rigid and controlled set about amidst the formalities, powers and dignities of the Statute Book. For the RIBA long-established in its own right, the Acts, welcomed on the one hand, on the other needed much reorientation of mind on finding ourselves officially not the only pebbles on the beach. For those who had not enjoyed membership of that body there was some elation at finding themselves fraternising on an equal footing and equally compelled to comply with the power of Parliament.

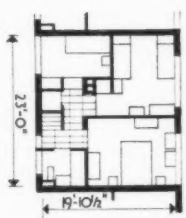
Such changes in the lives of corporate bodies must inevitably present problems, administrative and personal, of pride and jealousies—factors which in life so often take long to level out and become harmonized. Yet today, comparatively so soon after such upheaval, there remains little of these early difficulties and Registration has become as much a part of our professional lives as the art and science of architecture itself. Few people contributed more to the solution of this revolution than Pembroke Wicks, whose sudden death on February 27 has focused the eyes of the profession on those laymen who serve it.

Pembroke Wicks was born in 1882, the son of an author, and had spent a life in high positions of confidence and service in the administrative legal field before becoming Registrar of ARCUK in 1936, the second person to hold the appointment. A barrister by profession, he had served in a personal capacity such men as Lord Carson, Lord Curzon of Kedleston, Sir Austen Chamberlain and Lord Beaverbrook. He had been an Assistant Secretary in the Cabinet Office, and in the difficult period in our relations with Ireland during the 1920s, he had been Secretary of the Political Section of the Unionist Party. He was a man of that calibre of professional servant who, working unobtrusively behind the scenes, had no regard to personal gain or position, yet without whom policies cannot be made, nor policy makers achieve their objectives.

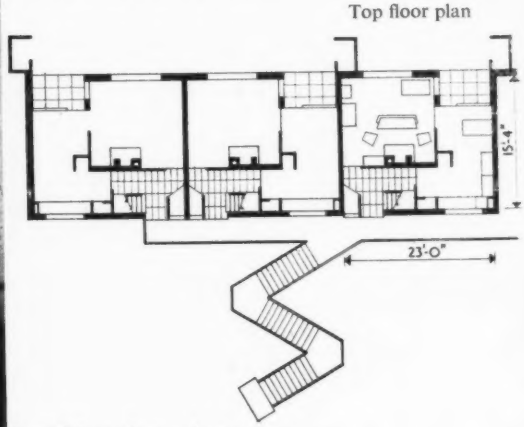
This high level of service and experience he brought to our profession at a difficult and critical time. Those architects who have served on the Registration Council know something of the value of his wisdom and guidance. Yet there was more than that. Superficially an austere and formal man, beneath a kindly man with many surprising and varied interests—rivers, river craft and animals—with a great sense of human understanding, of integrity and service and perhaps the careless appearance portrayed a little by contrast the efficiency and clarity of his mind. Every architect today—and architects to come—owe much to this man behind the scenes. Pembroke Wicks understood us and without pomposity upheld the dignity and status of the profession during a period when it could easily have been reduced by the initial wide requirements of the Registration Acts.

DEMONSTRATION HOUSING SCHEME AT MUIRHOUSE, ED

A demonstration group of maisonettes and old people's houses at Muirhouse, Edinburgh, has been opened by the Department of Health for Scotland. The houses were designed by T. A. Jeffryes, chief architect and technical planner, Department of Health, R. Woodcock, deputy chief architect, R. M. W. Young, senior architect, Miss J. M. Blanco-White and J. Robin, architects in charge, and A. Abbott, assistant architect. The architects co-operated from the earliest stages with the owners, Edinburgh Corporation; the consultant engineer, T. H. Haddow; consultant quantity surveyors, Phillips, Knox and Arthur; nominated contractor, George Wimpey & Co. Ltd. There are two 4-storey blocks containing 12 3-bedroom maisonettes for families and two smaller groups of flats for single old people and bungalows for couples. The general view, above, shows a maisonette block in the background, a bungalow (left fore-



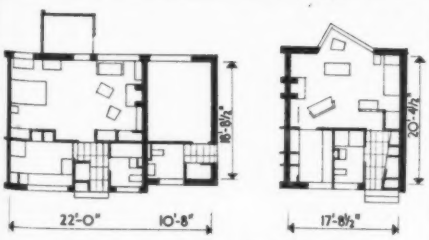
Top floor plan



Second floor plan, maisonettes

EDINBURGH

ground) and flats (right foreground). The illustration, opposite, centre, shows the hedge and trees retained in landscaping. Drying cupboards are provided, but tenants hang their washing (opposite, bottom) in the back gardens of the maisonettes. The upper maisonettes are approached by an outside stair (below), electrically heated to melt snow or frost, and an open access balcony (bottom). Slender brick walls of uniform thickness, 11-in. external and 9-in. cross walls, carry a concrete floor and balcony at second floor level. Costs: 4-storey maisonettes (867 sq. ft.) £1,640; bungalows for two people (441 sq. ft.) £1,270 8s. 0d.; flats for single people (380 sq. ft.) £1,105. (See note on right).



Floor plan two person house — Guest house — Floor plans single person house

TIMBER

Monopoly Report Ignored

Complaints that the recommendations of the Monopolies Commission in its report on the supply of imported timber have not been complied with by the traders concerned are to be referred by the President of the Board of Trade to the Commission for investigation. The report recommended that the agreements and undertakings by traders on the approved lists to deal only with each other should be abrogated, and should not be replaced by any other arrangements or undertakings having similar effects.

SCOTLAND

Experiment in Housing

Michael Laird writes:

The demonstration housing scheme at Muirhouse—illustrated on the left—is reached from Edinburgh through one of the most purely-subtopian approaches imaginable. Certainly it is encouraging to discern the clear rectilinear form of the maisonette blocks upstanding on the site, which rises away from the "prefabs"—and their corrugated iron clad ancillaries—clustered together in the forest of gibbets giving lamplight to Muirhouse suburb. The scheme benefits considerably from the immediate proximity of the few remaining forest trees in the area, and generally the landscape design does make the best use of these features.

Yet, stylistically speaking, the scheme is disappointing. The detail design is rather dashing and usually successful, but there is perhaps a negative sterility about the character of the maisonette blocks, which make the dominant mass from every aspect. One wishes for the quite refreshing sculptural qualities of the single-person house block to have been somehow reflected in these visually-more-important four-storey maisonettes. But the design standard of these old person houses is of a high order and their every detail, chimney stacks for example, is consistent in this respect.

The maisonettes are incisive and clear but somewhat banal by comparison, and their immediate approaches, by very open stair and access balcony, seem unnecessarily exposed, naked and bleak as well. This may seem harsh criticism of what sets out to be the best demonstration housing scheme in Scotland; but so it has to be. Comparatively, it is extremely good, and the real value of this exposition will be more properly appreciated when the final costs are available. Now, one has to remember that this represents the combined efforts of many experts over a considerable period and that, in these ideal circumstances, only the best—the very best—is good enough.

In Scotland, the people are tough but the climate is rough. This last must be the major premise for design. At Muirhouse we have an outside stair, an exposed access balcony, and single glazing on a wide frontage (23 feet) in spite of these conditions. Cost is all important, yet the excellently utilitarian maisonette plans are hardly satisfactory in their resolution with the appropriate structural precepts: 9-in. brick cross-walls are not loadbearing, and it seems uneconomic to use walls of this thickness, which is the minimum for sound insulation, and not to use them to carry some of the load; partitions are necessary divisions on both floor levels, but they do not align with one another, and either floor beams or special design means are therefore required; the cheapest common brick should be normal to four-storey domestic buildings, but a high proportion of more expensive high-strength bricks were necessary at pre-selected points, requiring the most careful calculation by an expert consultant engineer. Surely these considerations are of prime importance in a demonstration of the "design and construction of houses for local authorities."

There should be no mistake, however, about the excellence of the internal design, or of the low-cost furnishing suggestions made by the Council of Industrial Design (Scottish Committee). The kitchen-dining room to living-room arrangement is ingenious and splendid in its effects. Details are *par excellence*: "pegboard" covers to pipe ducts adjoining sink and cooker, single-stack and frost-proof plumbing, and outside filling, with inside access, to fuel stores. Worthy attention has been paid to these more fundamental utilitarian aspects of design. It is well rewarded.

In the houses for older persons, there are many admirable features which make them particularly appropriate for their purpose. The sun porch proves itself beyond any doubt. It is extremely warm (from solar heat only) and has been achieved at very low cost. Also, special efforts have been made in designing for safety in these houses; no slippery floor finishes or even slight changes in level, kitchen fittings grouped so that hot liquids need not be carried across the room, no high-level fitments and a safety valve ensuring no risk in the operation of a slot gas meter.

It is in the broader aspects of design, however, that we feel any doubts about the maisonettes. For any scheme demonstrating this type of house to local authorities, one would have wished for simpler constructional means, underbuilding costs to be quoted, inside stair and sheltered access balcony (to be achieved with no increase in quoted cost by economy through clearer resolution of plan with structural form), and adequate hanging space in every bedroom. This may lay undue emphasis on possibly adverse features, some of which may be simply matters of opinion, but they do seem important in a demonstration scheme for local authorities.

The scheme will be helped enormously by the completion of the landscape design. This promises well and may be a most useful feature of the exercise. Refuse bins, children's play, and even tenniquoit enthusiasts have been well provided for, and already there is evidence that the tenants appreciate these facilities. Generally speaking thoughtful amenities abound both inside and out, so that the Department of Health architects are to be congratulated. In this way, the arrangements could hardly be better.

DIARY

Exhibition of French Architecture. At the RIBA, 66, Portland Place, W.1. Monday to Friday, 10 a.m.-7 p.m. Saturday, 10 a.m.-5 p.m. UNTIL MARCH 23

Sweden and Ralph Erskine. By M. J. S. Andrews. At the AA, 34, Bedford Square, W.C.1. 6.15 p.m. MARCH 13

The Way Ahead for the Fabricator. Paper by E. D. Hinchcliffe. Modular Society meeting at the RSA, John Adam Street, W.C.2. 7.30 p.m. MARCH 18

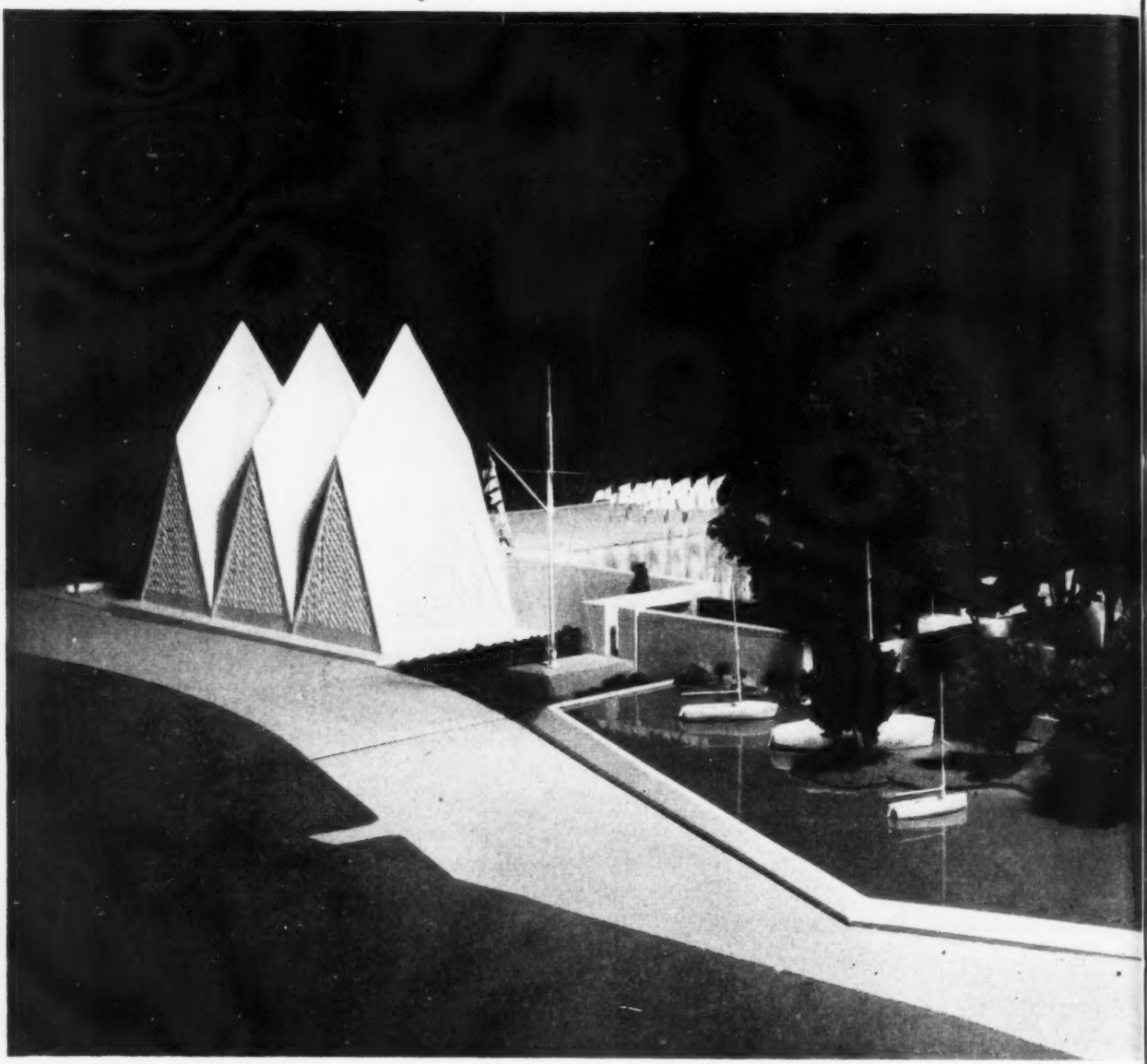
Are Science and Art Divergent? Talk by Maxwell Fry. Chairman: Sir Alexander Carr-Saunders. At the ICA, 17, Dover Street, W.1. 8.15 p.m. Members 1s. 6d. Guests 3s. MARCH 21

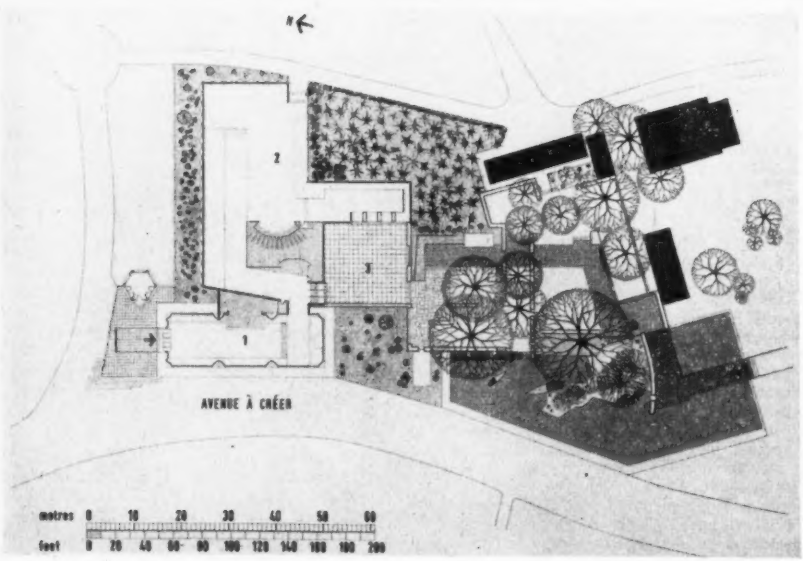
Office Blocks and the Multivalence of Architecture. Talk by Erno Goldfinger. Chairman: Howard Samuel. At the ICA, 17, Dover Street, W.1. 8.15 p.m. Members 1s. 6d. Guests 3s. APRIL 2

Protection and Repair of Historic Buildings. General Course at York Institute of Architectural Study, York. APRIL 2-11

The Care of Churches. Course at York Institute of Architectural Study, Micklegate, York. APRIL 11-16

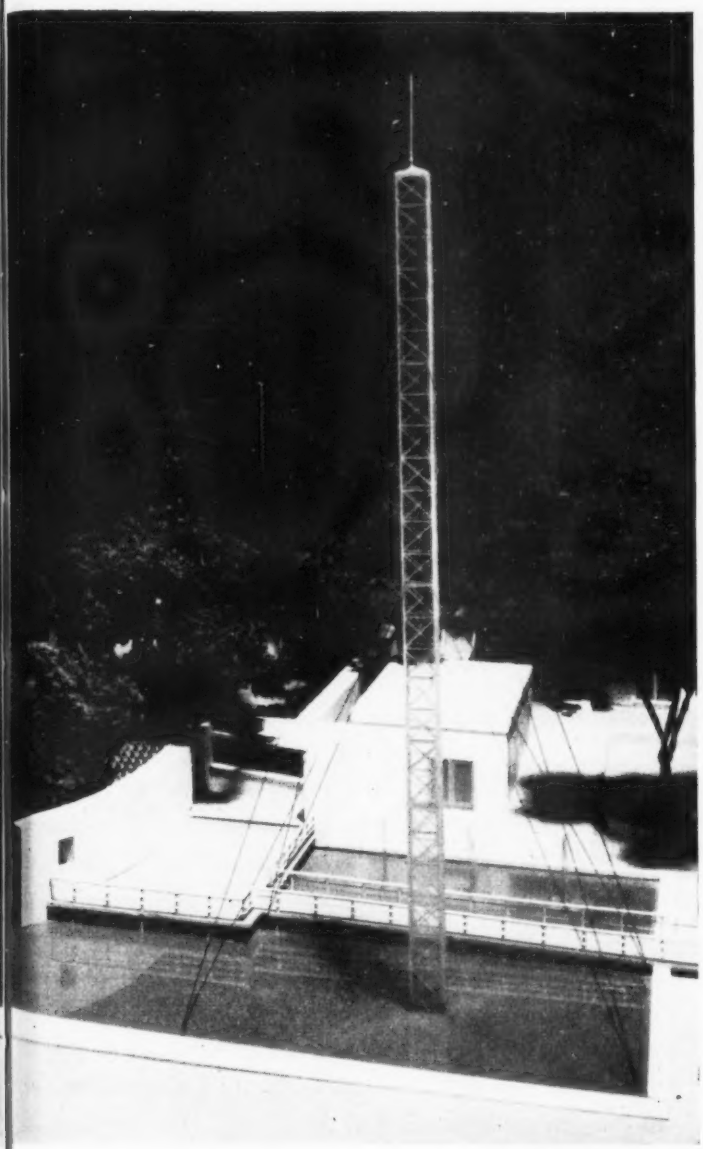
BRUSSELS 1958 EXHIBITION: THE OFFICIAL BRITISH PA

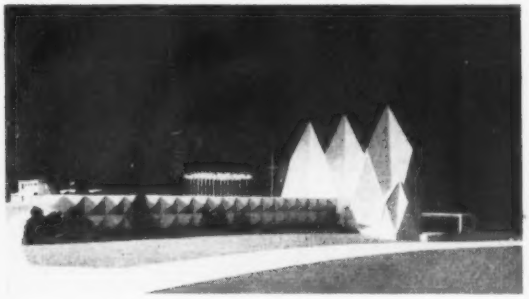




This is the design for the official British Pavilion for the Brussels 1958 *Exhibition which Howard Lobb and John Ratcliff prepared to the exhibition story requirements provided by the chief display designer, James Gardner. The story sequence required first a large and lofty entrance hall* (1 *on plan*). *The architects have designed a structure—the Crystalline Hall —composed of three crystal-shaped spires. It is set on a low podium flanked by a flight of steps which lead the visitor to a wide illuminated canopy which marks the entrance* (*see photograph, bottom right, opposite page*). *Beyond the canopy will be situated a small pavilion for the use of royalty and other distinguished*

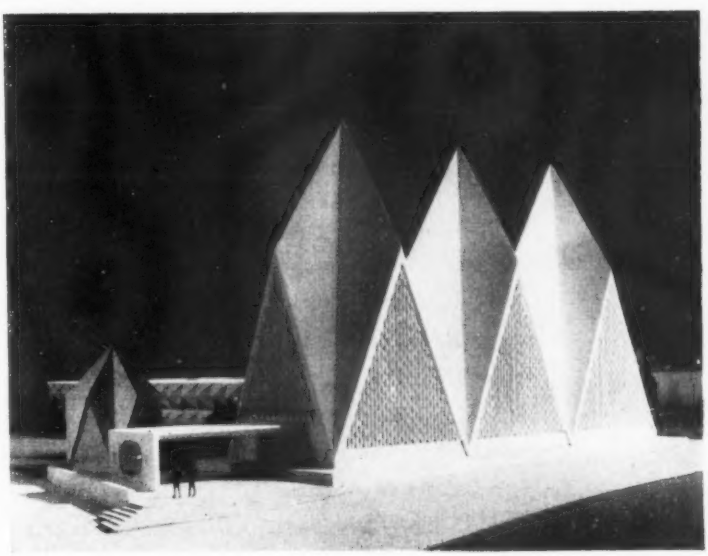
PAVILION DESIGNED BY HOWARD LOBB AND JOHN RATCLIFF



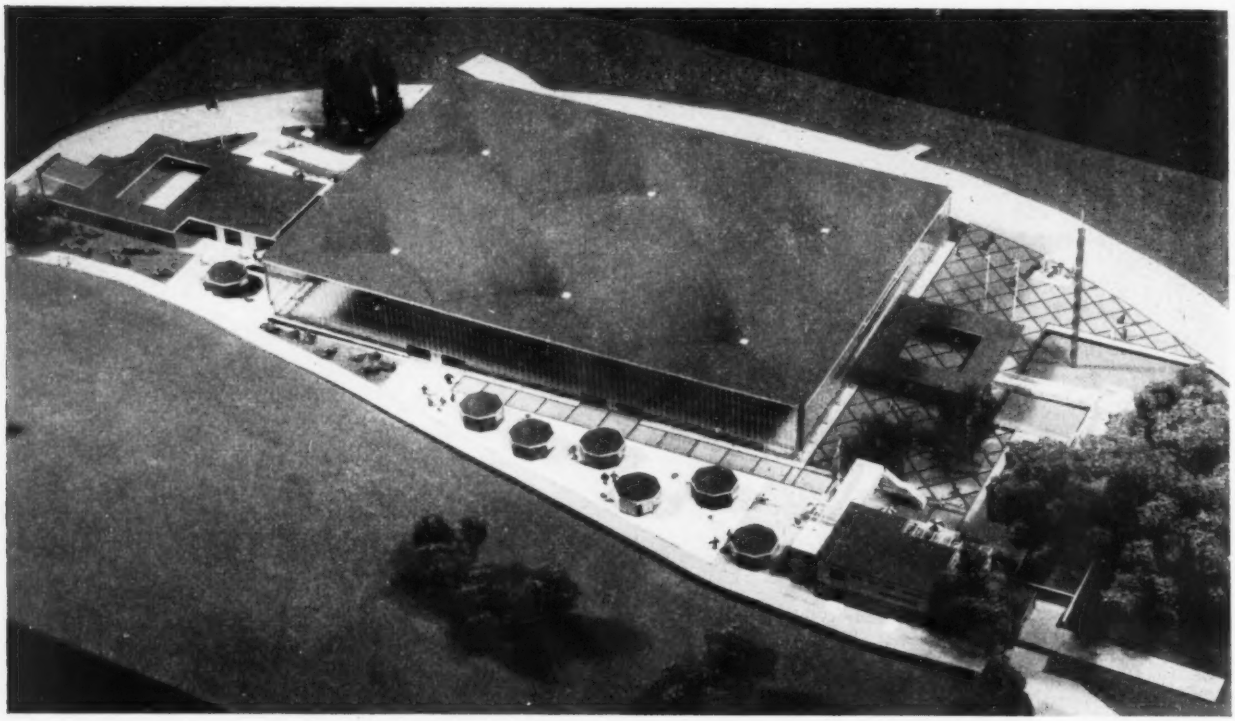


will have an exceptionally wide-spanned roof consisting of a space-frame in light steel tube, prefabricated in units which will be simply bolted together and hoisted. This is a new proprietary system of construction, the units of which will be hired for the exhibition and afterwards returned. Suspended ceilings at various levels will be fixed on the underside, though portions will be left exposed so that the structure can be seen. The roof decking will consist of slabs of reeds, treated with a fire-retardant, which will act as insulation and also support the outer roof surface of bituminous sheeting and white spar. The walls will be of simple cavity building blocks screened on the inside by the exhibits and covered outside with a series of flat four-sided pyramids made of plywood in harmony with the shape of the Crystalline Hall. Visitors will pass from this hall into a walled courtyard (3 on plan) where the massed flags of Commonwealth countries will be flying from tall masts. From this they will move to the tree courtyards (beyond the lake in the large photograph). Sub-section designers: a design group from Royal College of Art (under Sir Hugh Casson); Beverley Pick and Gordon Bowyer. Landscaping consultant for British site, G. P. Youngman. Consulting engineer for British pavilions, F. J. Samuely. *(See page 344 for further details.)*

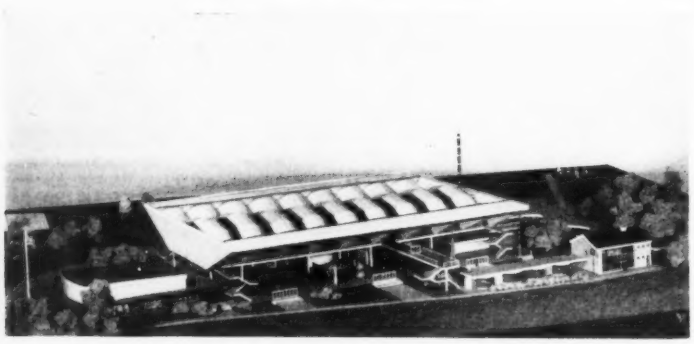
visitors. In design and construction this will be a miniature version of, and act as a foil to, the Crystalline Hall. The three spires will be constructed of flat triangular units of stressed-skin plywood, each consisting of two skins of ¼-in. external quality plywood with 6-in. softwood spacers between. These units will be bolted together and hoisted in pairs, the weight being taken on steel shoes at ground level. The whole thin-skinned structure will thus be self-supporting. The triangular infilling wall panels will be of similar timber structural construction but of a section which both enriches the surface and gives stiffness. Numerous small coloured glass eyelets inserted between the spacers will provide the required subdued internal light. Each of the spires will be 37 ft. by 37 ft. on plan and 69 ft. high from floor level. The hall will be 111 ft. long. The next hall—the Hall of Technology (2 on plan)—



BRUSSELS 1958 EXHIBITION: EDWARD MILLS DOES BUDGET-CUT



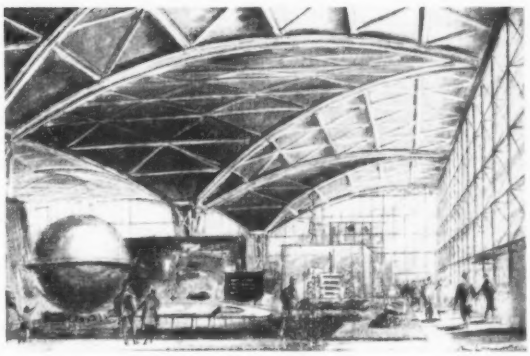
On the same site as Howard Lobb's official British pavilion at the Brussels 1958 Exhibition will be the British Industries pavilion, designed by Edward Mills and Partners. This pavilion, shown above and opposite, is a modified version of the one designed by the same firm last year. The earlier scheme, shown below, had galleries

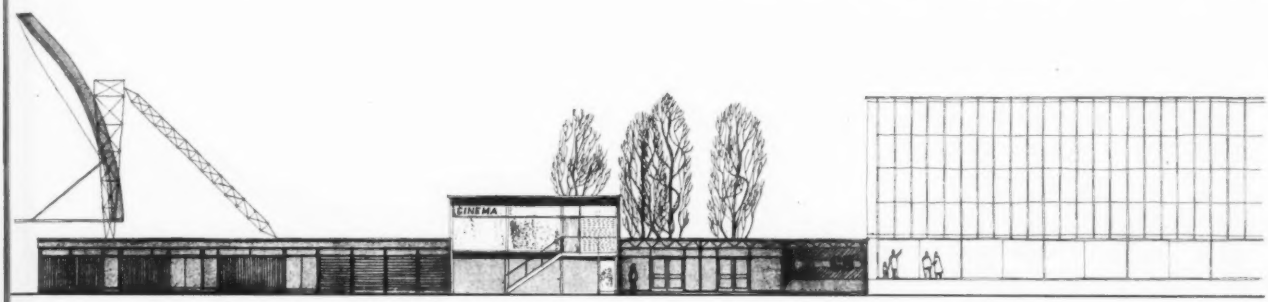


in its more elaborate roof structure. The modifications in design had to be made because of budget cuts. In addition to the hall, which contains 60,000 sq. ft. of exhibition space, there will be an exhibition annexe and an inn. The inn, seen in the foreground of the top photograph, stands in an open courtyard which is situated between the Industries' pavilion and the official pavilion. The exhibition annexe (see elevations opposite) will contain a bar, exhibitors' club, a small trade cinema and an area for light refreshments, in addition to some 7,000 to 8,000 sq. ft. of open exhibition space. On the west side of the site six shops will be provided for the sale of high-quality British goods; the whole of this area will be paved and landscaped. A small amount of office accommodation will be provided in the main building over the principal entrance, together with enquiry bureau, etc. The main pavilion will be constructed with a steel frame, the entire roof structure being supported on six columns forming an umbrella-like structure taking the lightweight roof (see sketch of interior on opposite page). The external walls will be completely of glass with a curtain wall system especially designed in glue-laminated timber, stiffened by light-steel, lattice wind braces. The first 8 ft. of these external walls will be glazed with large sheets of plate glass "of a shop-window nature," with smaller panes above. The display area at the south end of the main pavilion will be constructed with a light steel frame of standard components and clad with a variety of materials such as precast concrete slabs, vitreous enamel steel sheets, patent glazing, etc. A television mast will be sited in the ornamental pool. The inn will be built of traditional materials such as brick, timber boarding and canvas panels. Lighting will form an integral part of the design both by day and by night. Adjacent to the main entrance at ground level will be the electrical switch rooms, transformer building, etc., which will have a glazed wall, so that the machinery and

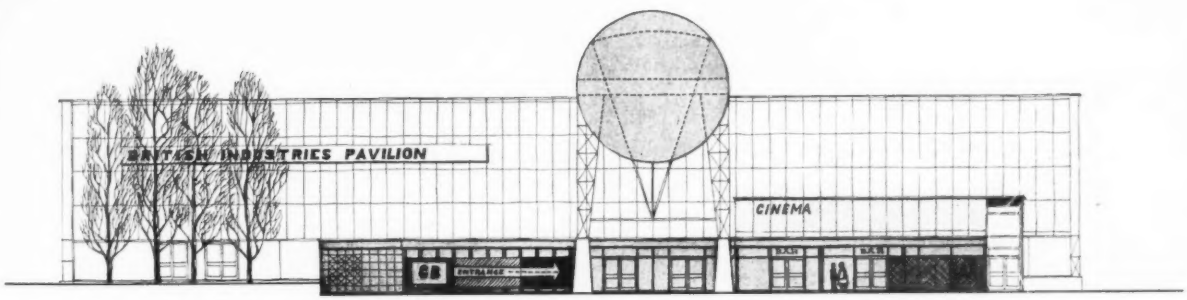
REVISIONS TO INDUSTRIES PAVILION

equipment can be viewed from outside the building. The Co-ordinating architects for the entire British site are Howard V. Lobb and John Ratcliff, of Howard V. Lobb and Partners, and the co-ordinating designer is James Gardner. Resident architect for the British pavilions: M. J. Blower. Display designers for British Industries Pavilion, John Lansdell, assisted by Arthur Braven.

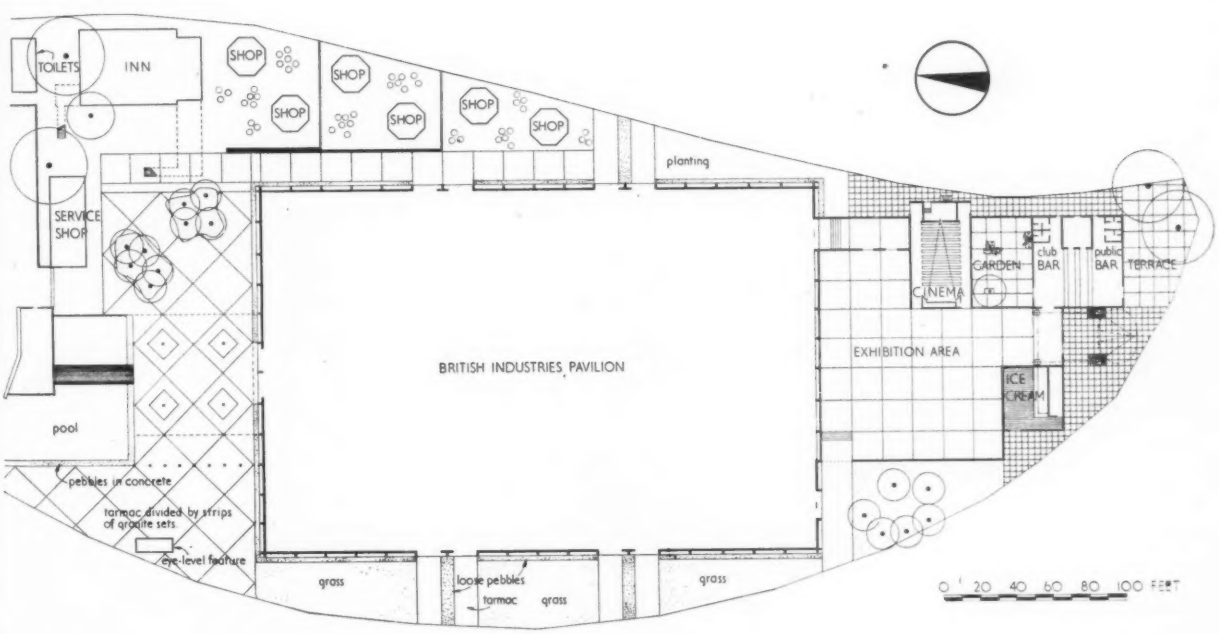




Part of east elevation

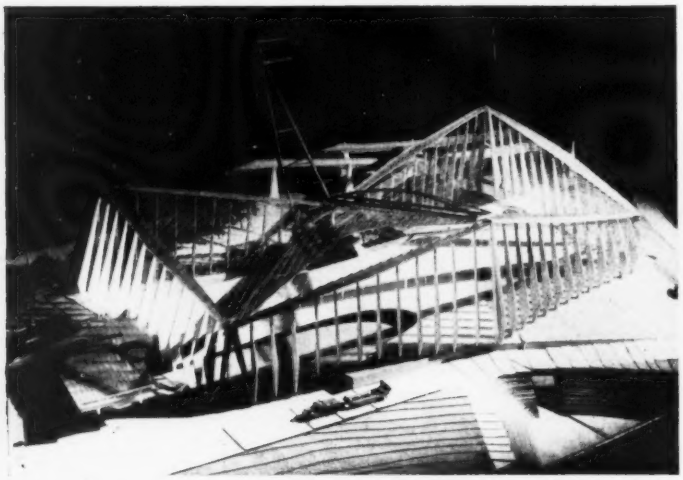


South elevation

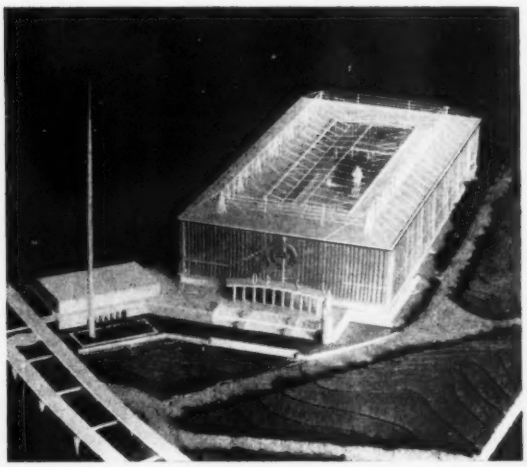


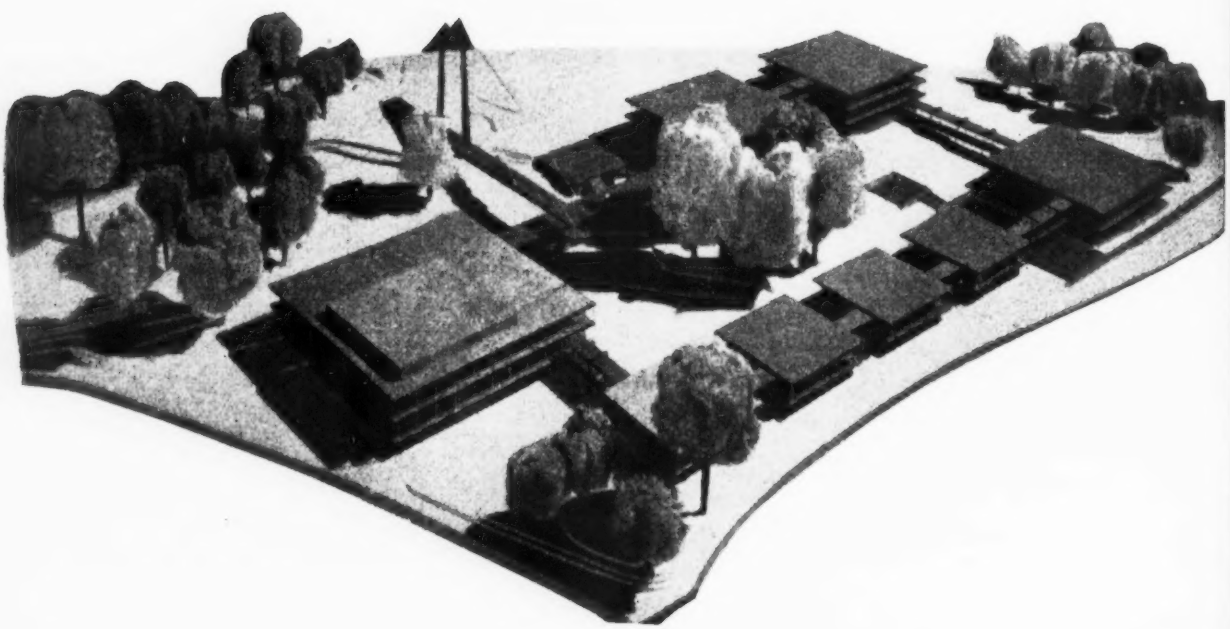
Floor plan

BRUSSELS 1958 EXHIBITION: PAVILIONS FROM

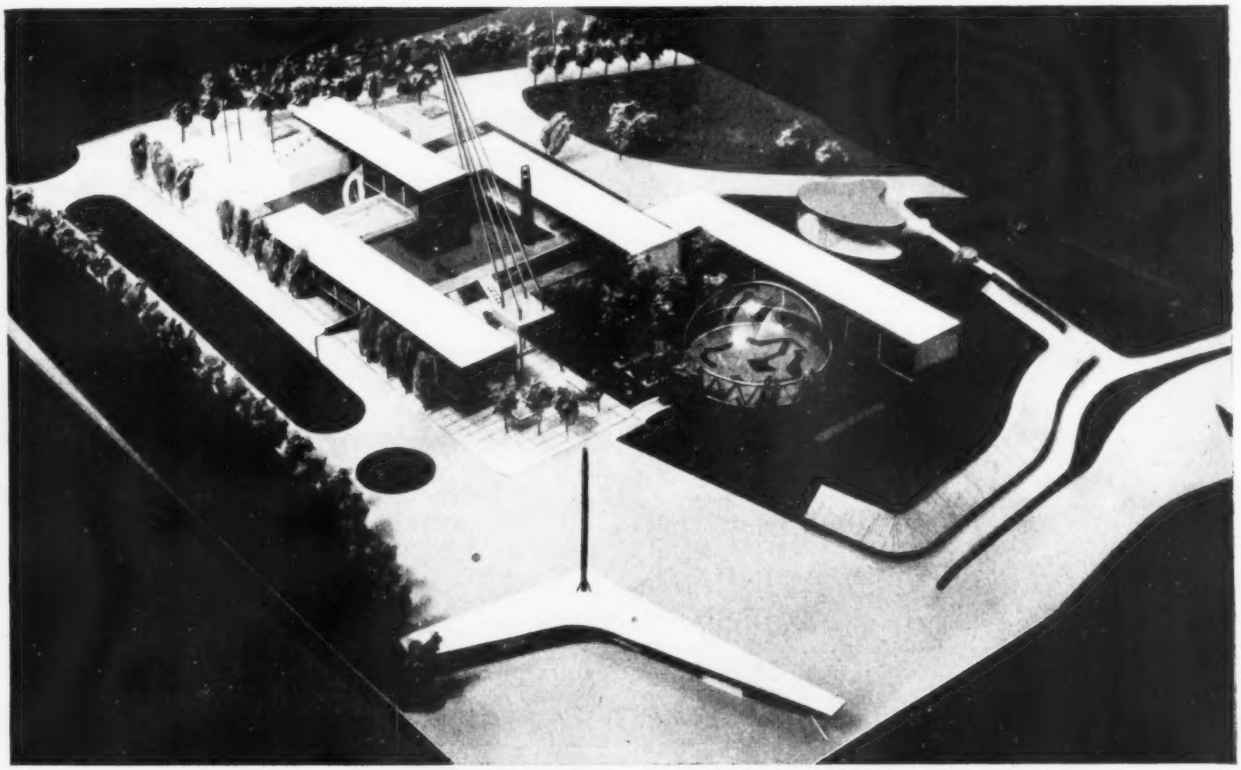


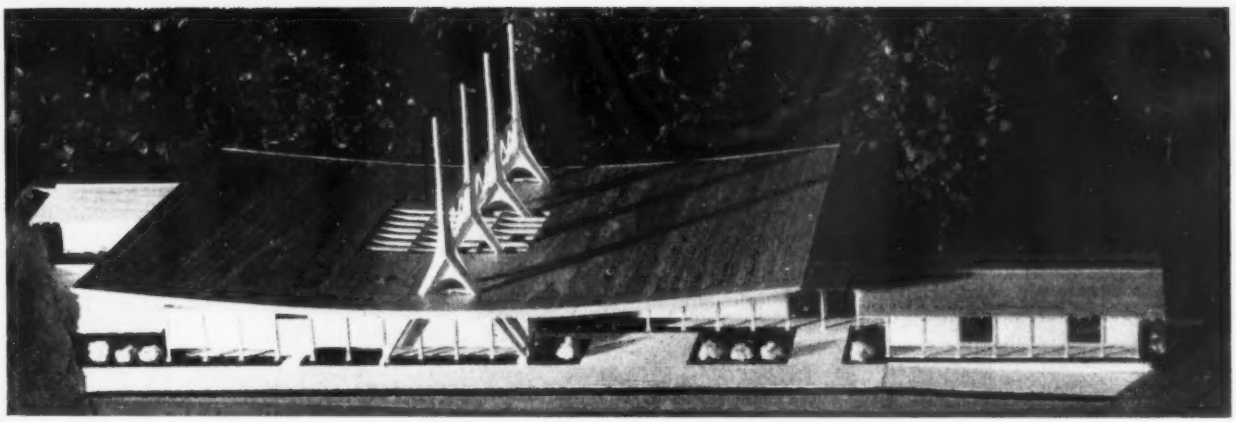
Left, the French pavilion: architect, Guillaume Jillet. Below, the Russian pavilion: architect, Alexander Bordeski. Below left, the American pavilion: architect, Edward Stone. The German pavilion, below, was designed by Egon Eiermann and Sepp Ruff. Mr. Eiermann says that it will express "an idea of universal interest . . . what is known as 'joie de vivre.' In the face of . . . dangers and catastrophies which menace the world following the invention of means of destruction . . . a movement is leading to the creation of a new form of lightness, delicacy and grace." Opposite page: top, the Netherlands pavilion: architect, G. Bakema; centre, the Japanese pavilion: architect, Kaunio Mayekawa; bottom, Exhibition site plan.



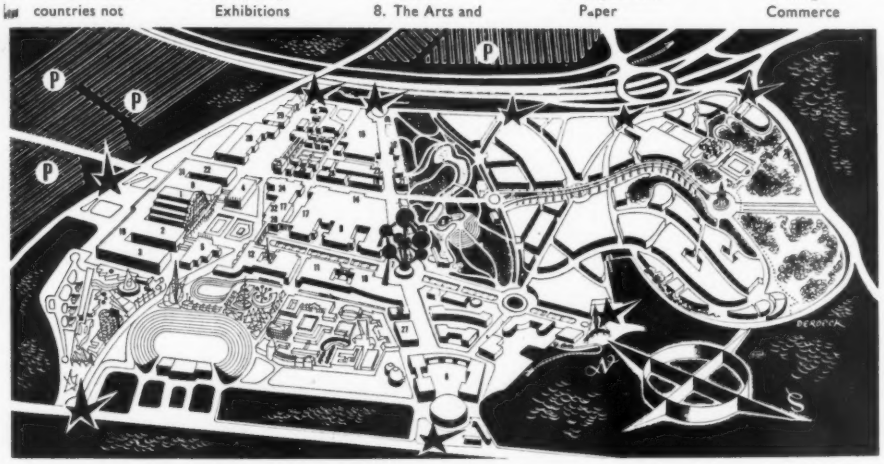


FRANCE, RUSSIA, AMERICA, GERMANY, HOLLAND AND JAPAN

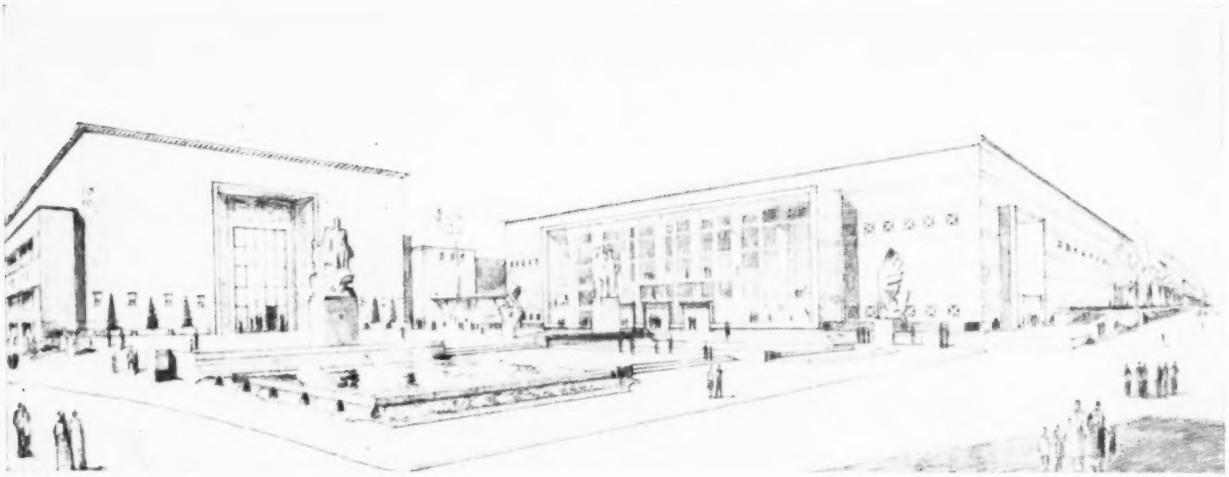


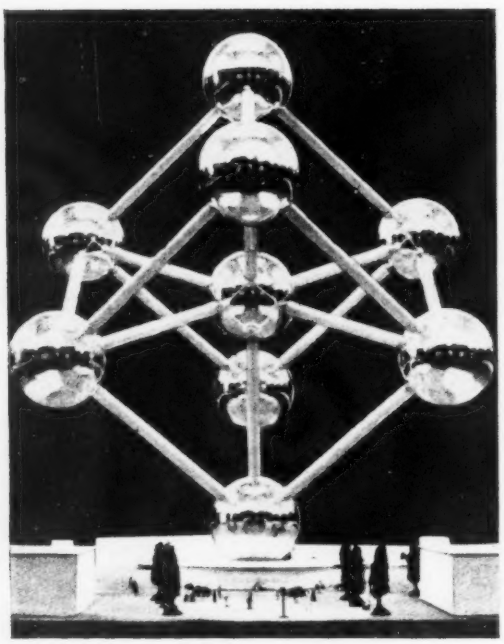


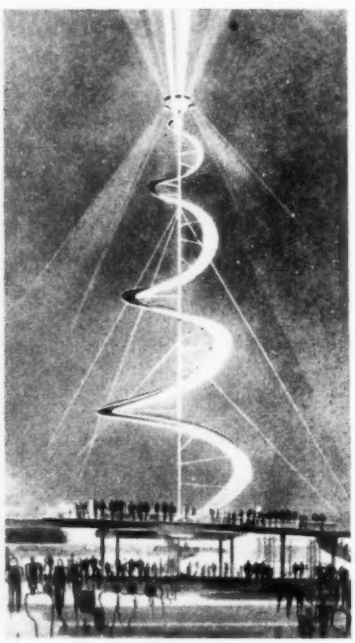
1. The reception hall for visitors
2. Hall of Science
3. Exhibitors from countries not officially represented
4. Theatre
5. Temporary Exhibitions
6. Hall of International Co-operation
7. Science
8. The Arts and Press. Social economy. Health
9. Graphic arts. Paper
10. Education and Teaching. Professional training Commerce
11. Petroleum
12. Gas, electricity, water power
13. Nuclear energy
14. Mines. Open-cast Mines, Quarries. Limestone Industry. Civil Engineering. Buildings and Housing
15. Agriculture. Horticulture. Stock breeding.
16. Forestry. Hunting and Fishing
17. Air and Water. Chemical Industries
18. Metallurgy and Metal Manufactures
19. Glass, Ceramics, Pottery
20. Diamond Industry. Luxury articles. Trimmings and novelties. Loan Societies. Insurance
21. Timber Industry
22. Textile Industry. Leather and Hides. Clothing Trade. Prevention of Accidents
23. Refrigeration
24. Foodstuffs
25. Tobacco
26. Town Planning
27. Postal Service and Telecommunications
28. Land transport. Aviation
29. Sea and River transport
30. Research and Control Organizations
31. Touring and travel. Sports and games
32. Hall of Fashion



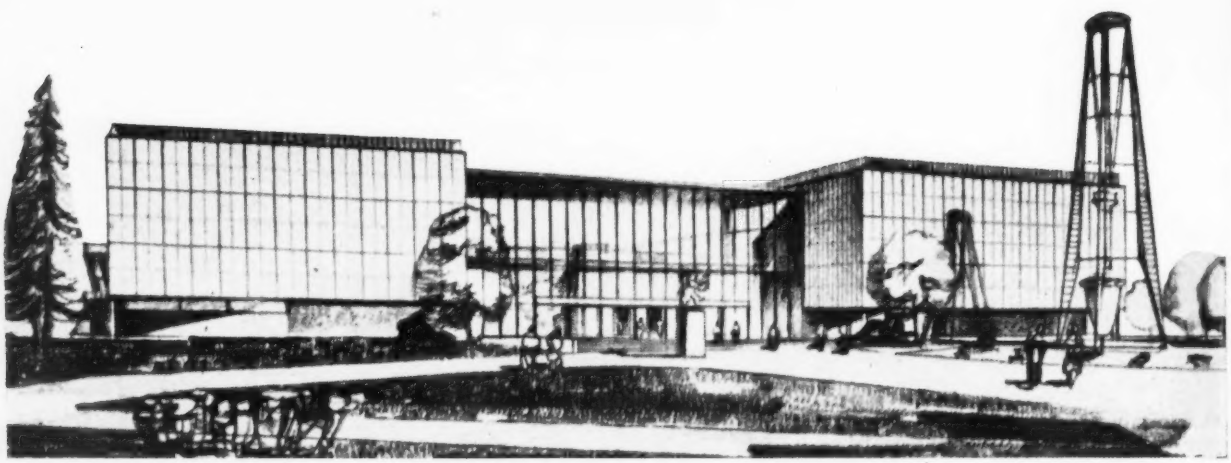
BRUSSELS 1958 EXHIBITION: MORE PAVILIONS





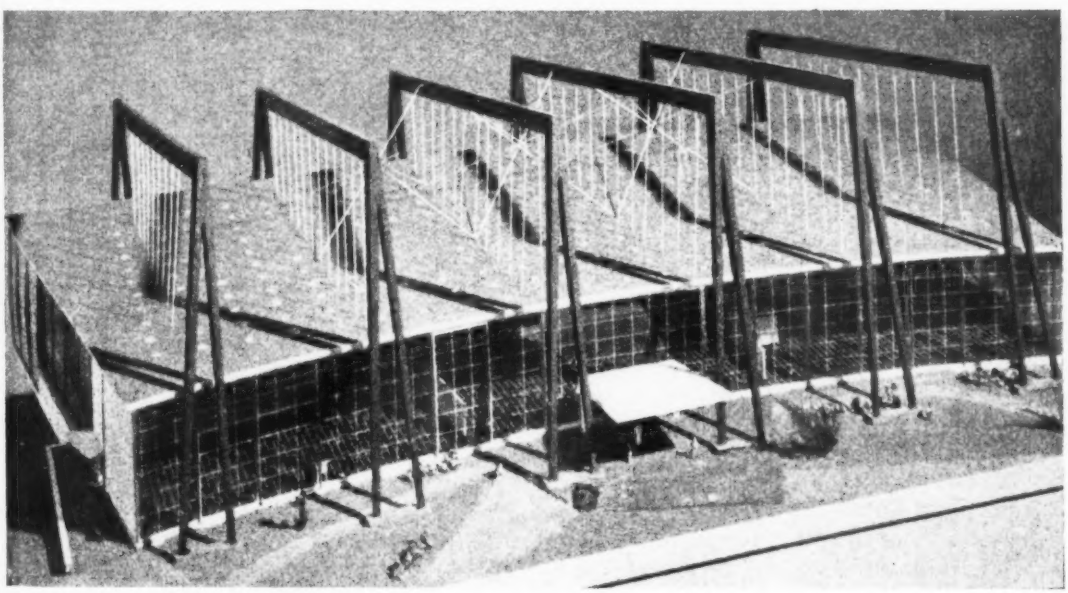


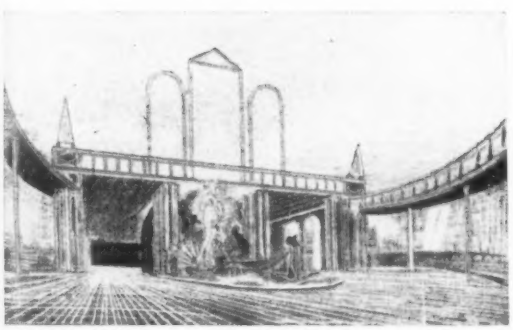
Above, the Belgian Hall 7: architects, Robert Puttemans, Charles Malcause and Prudent Leanen. Engineers, Verdeyen and Moenart. Extreme left, the Exhibition's vertical feature, called the Atomium. Initial design, A. Waterkeyn, civil engineer: architect, A. Polak; advisory engineers, Beckers and Joukoff. Lower spheres, 129 ft. high. Top "look-out" spheres, 258 ft. high. Weight of structure, 1,200 tons. Left, Belgian town planning pavilion: architect, E. Rulels. Below, Czech pavilion: architect, Frantisek Cubr.



AND A "VERTICAL FEATURE"

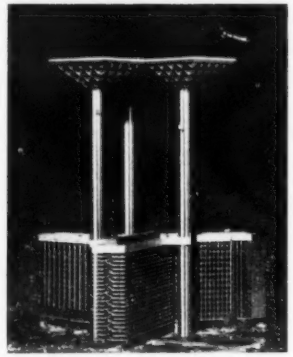
Right, the Vatican pavilion: architect, Paul Rome. This "City of God," as it is called, will consist of a church (seen here) and exhibition displays (showing the church at work) surrounded by a high "city wall." Below, the pavilion of the European Coal and Steel Community: architects, R. Maquestieau and E. De Latte. Bottom left, the Belgian luxury goods pavilion: architect, Jules Clement. Bottom right, the Belgian Hall of Fashion: architect, Philibert Schomblood.





THE GLASS AGE SKYPORT

By J. S. Shapiro



The drawings below are of details of "Skyport One," a scheme prepared by architect James Dartford at the request of Pilkington Glass Age Development Committee, which includes G. A. Jellicoe, Edward Mills and O. V. Arup. J. S. Shapiro, who has contributed to the JOURNAL *on problems of planning for helicopters, and who advised Mr. Dartford on this scheme, writes about it below.*

Mr. Dartford has borrowed the main propositions about the marshalling of scheduled vertical flight operations from the framework presented in the JOURNAL and elsewhere by myself. The pattern of flying based on principles essential for the safety of public services must clearly govern the design of the architectural facilities as rigorously as if the vehicle moved on rails. We are dealing with the provision of round-the-clock, all-weather services of high density and frequency. Since the "rails" are invisible and so often overlooked, the basic principles may be worth summarizing.

The "network navigation" principle rests upon the complete reliance on a non-visual radio or radar navigational aid system. This allows the pilot to find the "final approach space" above the landing spot. It also allows him to follow a prescribed progress within the pattern of navigational co-ordinates in *time* as well as in space. It is this which distinguishes a vertical flying machine, thanks to its ability to fly at zero speed, much as a train or bus can slow down in obedience to the demands of traffic control. The "funnel approach" principle is the segregation of a definite space above the landing spot as the "final approach space." Its corollary is that no two aircraft in flight are ever allowed inside the same funnel.

These principles have vital architectural consequences. They permit a turn-round frequency of about one movement every five minutes from a single "platform"; or about three movements every six or seven minutes from three adjacent "platforms." Beyond three, the number of adjacent spaces suitable as landing platforms ceases to increase the permissible frequency without violating the above principles or demanding much more elaborate approach aids.

In so far as Skyport One exemplifies a three-platform conception, it remains within the category of the "network navigation" and "funnel approach" pattern in common with the architectural solution of Colin Wilson, presented in these pages (October 25, 1956). Another common feature is the town planning aspect. Neither project demands any space on the ground, which could otherwise be made available for alternative town planning purposes.

This conception itself is fundamental. It is rooted in the belief that any solution of the traffic congestion problem which in itself consumes space on the ground (*e.g.* more and wider roads, parking space and structures) creates as many problems as it solves and so forms part of a vicious circle.

Although the thesis of vertical aviation has suffered criticism in aviation (and even helicopter) circles, it can hardly be doubted that vertical aviation is coming.

Indeed, the main criticisms which have prevented immediate steps being taken towards the provision of helicopter sites in cities stem from the fear of noise, the uncertainty about the pattern of safe flying and the size of the flying machines. The last two, in architectural terms, boil down to the size of the operating platform.

One school of thought contends that, in this age of automation, it is absurd to doubt the ability of control and communication engineering to devise flight guidance apparatus so precise and reliable that operation from narrow roof sites is as practical and safe as railway services. It is believed, moreover, that importance of frequency of services will outweigh any advantages of making helicopters of larger size than 30-40 seats. The ability of the aeronautical designer to produce economic flying machines within a reasonable noise standard is postulated.

With these assured, the narrow elevated site becomes possible. The roof site is thus released from any association with a specific type of building or structure. The resulting almost unbelievably low cost and freedom of choice for the location of the many sites needed in every large city would amply repay all the efforts made to overcome the initial difficulties. The typical architectural solution along this avenue of tailoring the vertical flying machine to the needs of cities is the single platform.

In simple terms, the problem is to erect *large* operating sites without sterilization of ground.

The main starting point is the problem of natural light among the conflicting requirements. If we ignore it, we create warehouses and garages which cannot pay for themselves. We may, perhaps, solve the problem of natural light with the help of one of the oldest technical inventions, the use of glass. Speaking loosely, we might visualize a platform made of a glass structure strong enough to land on and yet transparent enough not to obstruct natural light to a cluster of buildings underneath (each narrow enough for its own access to the light passing through the platform). It is to the credit of Mr. Dartford's independence of mind that he chose to solve the problem of natural light in one fell swoop with many other problems and so progress further than anyone had dared towards releasing the aeronautical designer from the irksome ties with the earth.

Accepting this tall order, there arose a tall structure. Accepting the tall structure, the geometry and sculpture are sound. Without wallowing in "functional" fanaticism, mushrooms are fundamentally beautiful as well as strong, though some are more beautiful than others.

The height itself is typical only and subject to enough variation to make it fit into any future skyline, unless, as one is sometimes led to believe, skylines should be seen but never foreseen.

A final question-mark must be the closing note. As a major contribution to our lives on a scale which would even remotely justify Skyport One, vertical aviation must either be non-luxury or astronomically subsidized, in other words, improbable and perhaps even unnecessary. Cost is the essence of the enterprise, but no guess was ventured.

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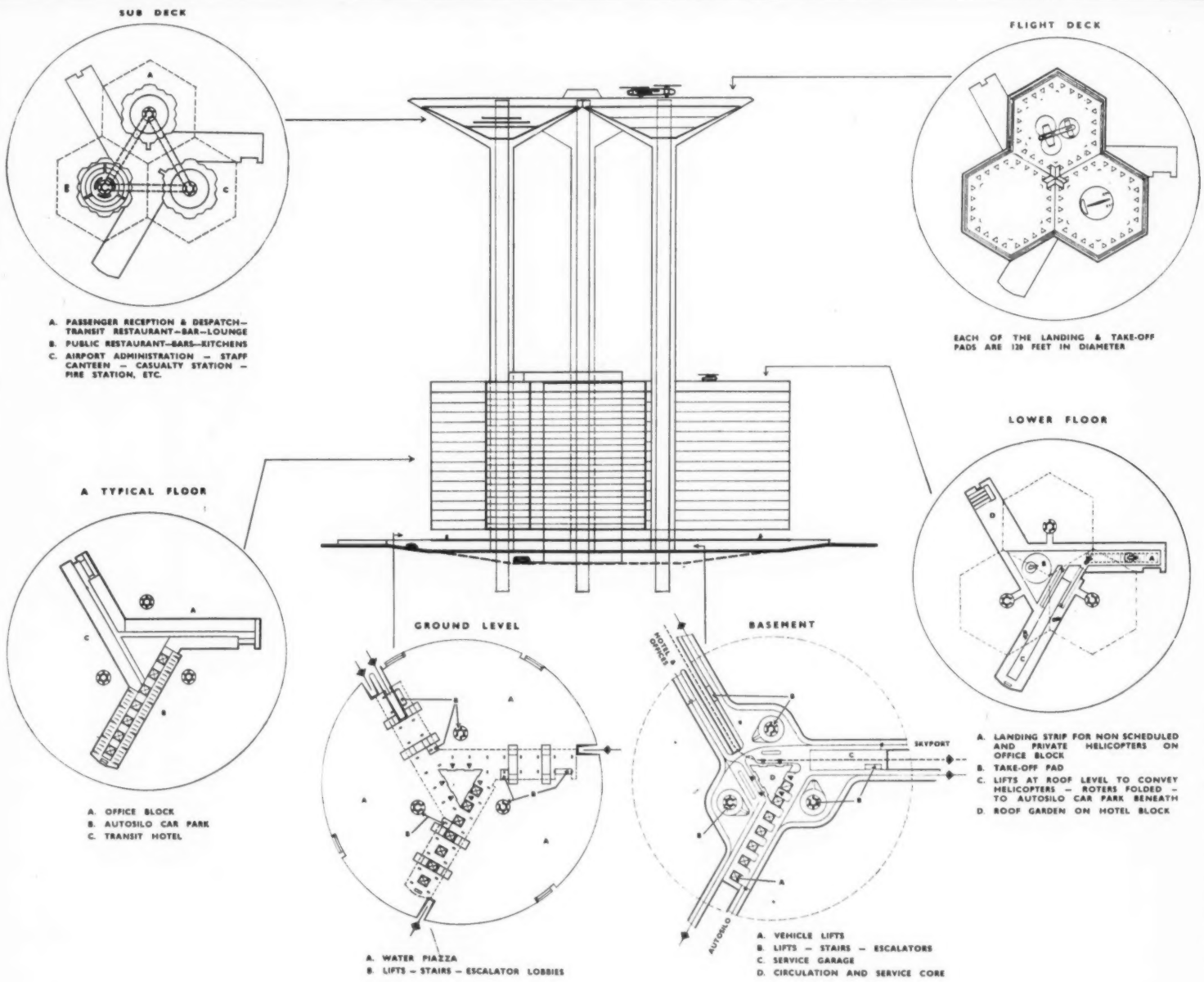
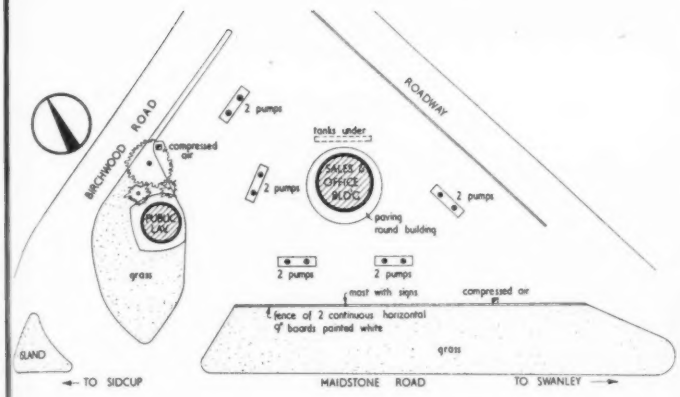
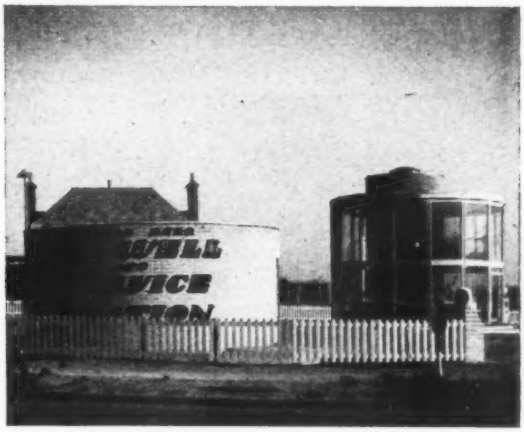


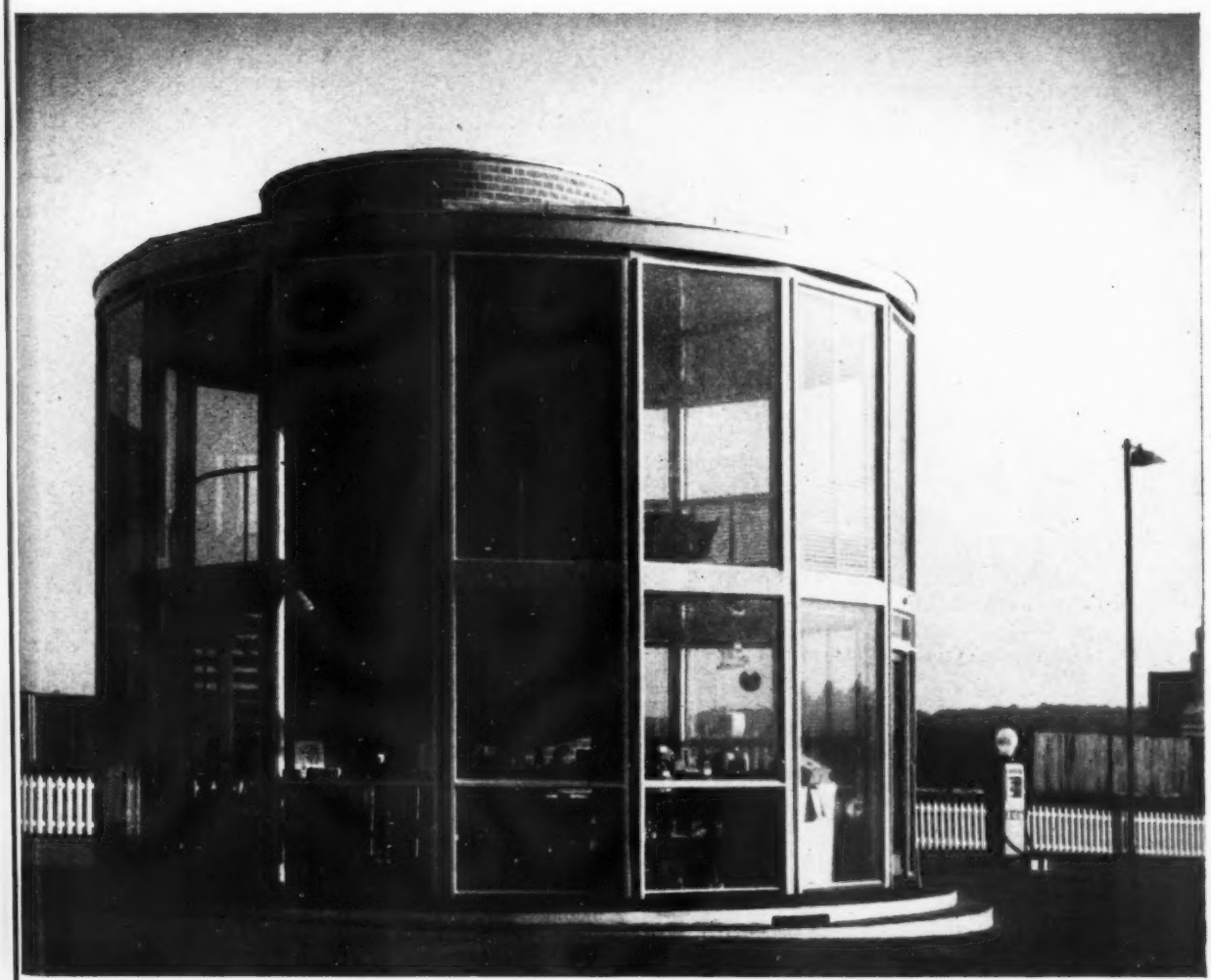
OILWELL FILLING STATION AT SWANLEY, KENT



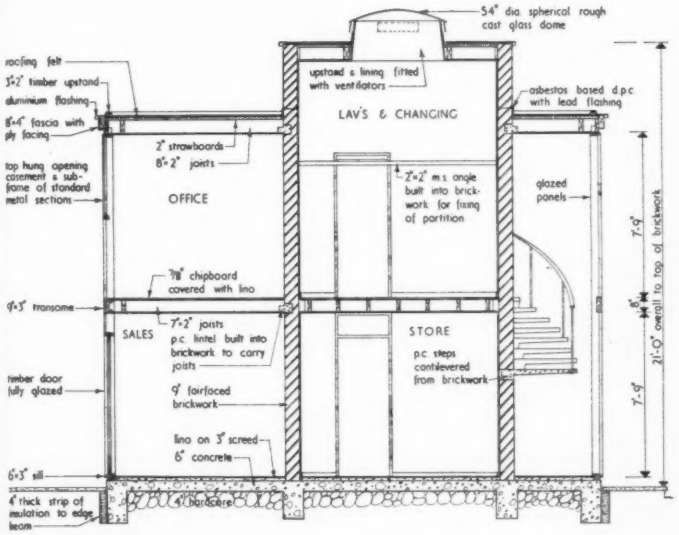
Site plan



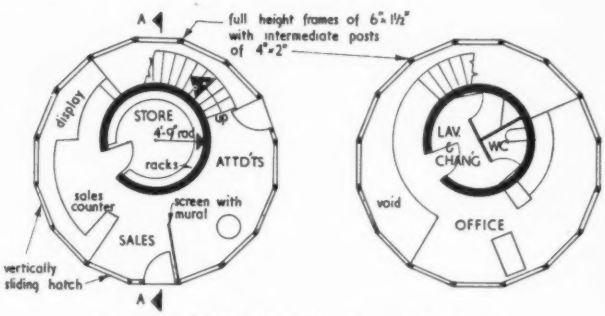
The unusual layout of the Oilwell Filling Station, Swanley, Kent, with its round administrative building in the centre of a three-cornered site, was worked out by the client. The architects, John Burkett, Gordon Sheere and R. W. Wilkinson (assistant, Mrs. Susan Walker), were asked to design buildings that would be as exciting as possible, yet economical, with all-round vision from the staff rest room and manager's office. The main element in the two-storey administration building (below) is a central brick drum, within which there is storage space on the ground floor and lavatory accommodation above. The outer glass-clad framework of 6-in. by 3-in. timber posts,



OILWELL FILLING STATION AT SWANLEY continued

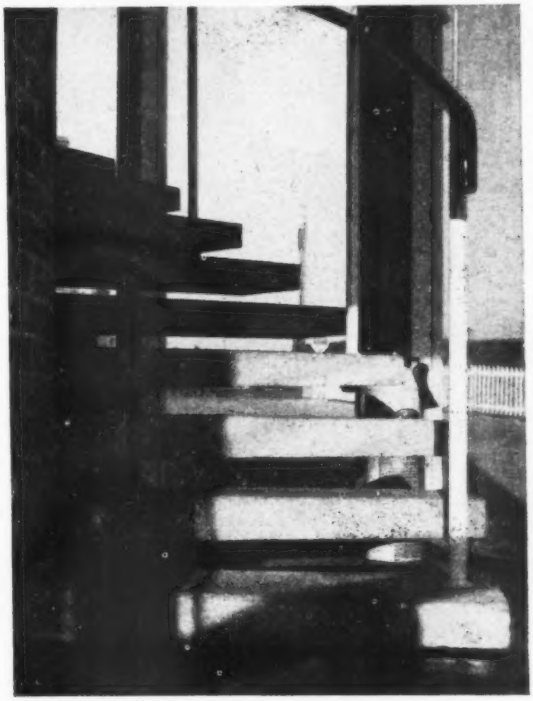


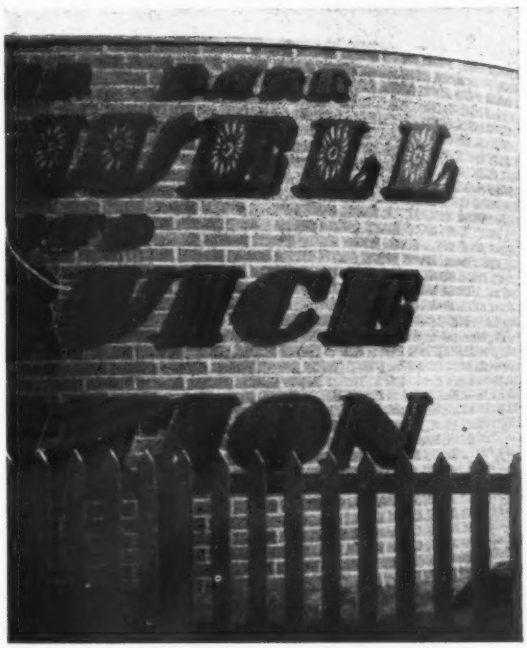
Section A-A [Scale: $\frac{1}{8}$" = 1' 0"]

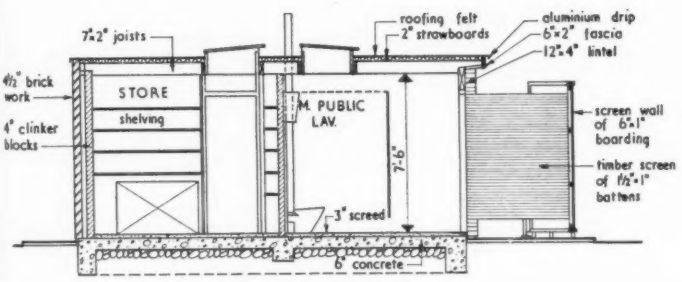


Ground and first floor plans [Scale: $\frac{1}{16}$" = 1' 0"]

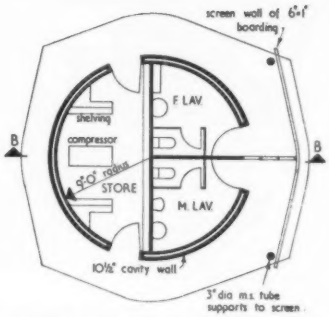
to which pre-fabricated timber window frames are bolted, is supported from the drum by the floor and ceiling joists. The sales counter and staff rest room are on the ground floor. The office is on the first floor, reached by a stair (above right) of r.c. steps cantilevered from the drum. Fluorescent lighting shines on the drum and ceiling. The one-storey brick building contains public lavatories and a basement store. A close view is seen right. Total cost, including site work and tanks, was £9,145. The building alone cost approximately £5,000.







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



Ground floor plan, store and lavatory block [Scale: $\frac{1}{16}$" = 1' 0"]

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THE INDUSTRY

From the industry this week Brian Grant describes a support for installing services, a new method of radiant heating, a new Holoplast panel for interior use, and a reinforcement for floor surfaces.

INSTALLING SERVICES

The arrangement of proper supports for cable runs and pipework is always something of a problem, largely because so many factories need alterations from time to time. A simple and effective device is the Unistrut, which consists of a U section having inturned edges. With this channel are used special nuts with backing springs: the nuts themselves are rectangular, having slots across the short ends, the slots engaging with the inturned edges of the channel so that the nut does not turn when fixing bolts are tightened. Nuts for fixing a new series of clips can be added anywhere in existing installations and a number of fittings have been standardized, including simple cable and conduit brackets, cable trough supports, angle brackets, pipe rollers and clamps. The fixing channels are produced in lengths from 3 in. up to 20 ft. and are made in 12- on 16-gauge steel. The system is being used by the B.B.C. at the new Wood Lane Television Centre. (*Sankey-Sheldon Ltd.*, 46, *Cannon Street, London, E.C.*4.)

RADIANT HEATING

The Raystrip method of radiant heating introduced by Copperad has now been extended and is now offered as a completely prefabricated system, ready for erection, or as a kit of parts for site assembly or for additions to existing pipe coil heating installations. The system is intended mainly for use overhead with the radiant face downwards and the back insulated, but can also be mounted vertically, or inclined, close to walls. The system can be used with either steam or hot water, and typical rates of heat emission vary from 160 B.Th.U. per ft. run of installation with water at 160 degrees F. to 1,000 B.Th.U. or more with steam at 150 lb. (*Copperad Ltd., Colnbrook, Bucks.*)

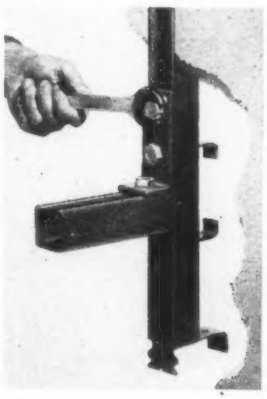
NEW HOLOPLAST PANELS

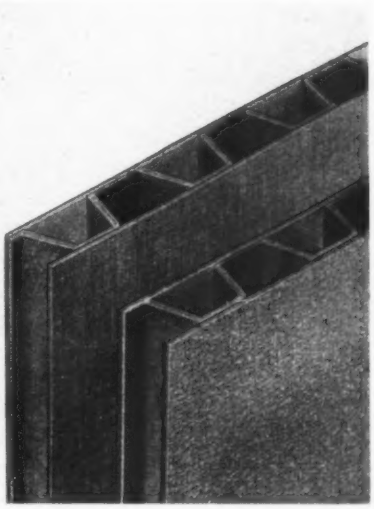
Holoplast Ltd. have just announced a new panel for interior use, known as type 75, since that is the angle of the internal web. The older type of panel, in which the ribs are at right-angles to the surface, is now to be known as type 90, and remains as before, while the new panel is faced with hardboard and the internal webs are made of resin-treated Weathertex fibreboard having angular corrugations: see illustration. Type 75 is about 25 per cent. cheaper than the older type 90, but is the same thickness (1⅝ in.), size (8 ft. by 4 ft.), and weight (2 lb. per sq. ft.), so that either type can be used in Holoplast's standard aluminium extrusions. The new panel is available in the same range of colours and patterns as type 90: this includes six standard stove enamel finishes and 44 melamine-surfaced Decorplast colour and pattern combinations, as well as applied veneers. For sound insulation the panel cavities can be filled with a variety of materials, including mineral wool or woodwool strips. (*Holoplast Ltd.*, 116, *Victoria Street, London, S.W.*1.)

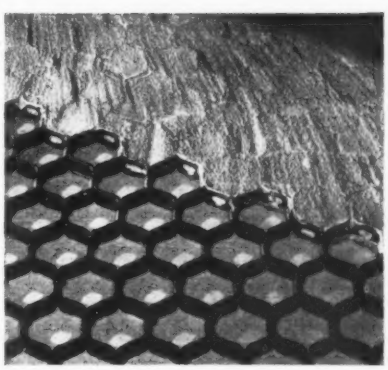
WEAR-RESISTING FLOORS

Hexmetal consists of a grid of steel strip on edge formed into a hexagonal pattern which is used to reinforce floor surfaces. Concrete, granolithic, refractory materials or asphalt can be used as a filler, and when existing floors have to be repaired the thickness is increased by 1 in. only, no breaking up of the surface being necessary. Standard mats of reinforcement 10 ft. by 3 ft. are produced, and can easily be laid round existing plant.

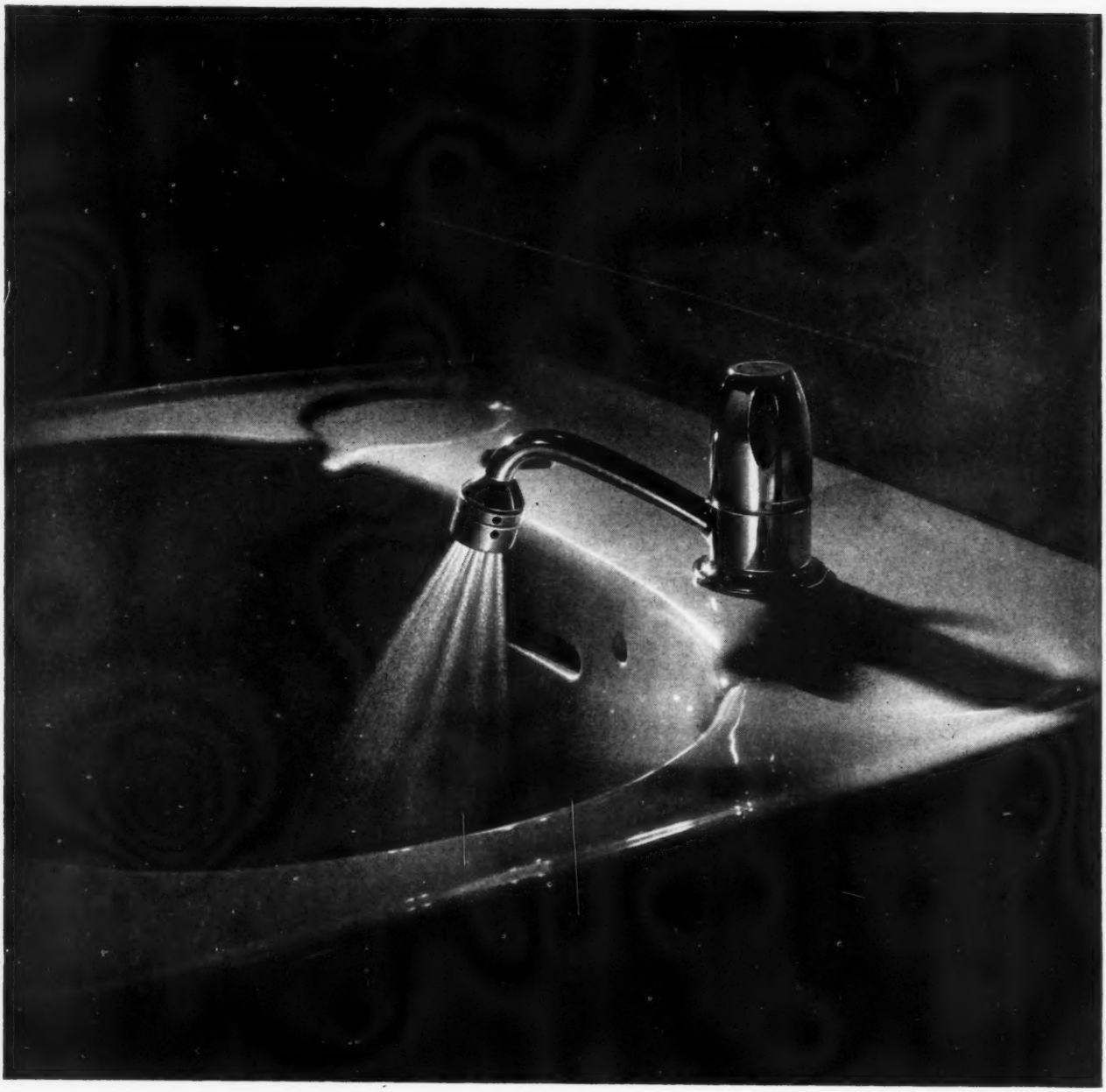
The same material is also widely used to reinforce the refractory linings of flues, ashpits and other types of plant in the chemical and oil industries. (*Causeway Reinforcement Ltd.*, 66, *Victoria Street, London, S.W.*1.)







Top right: the Unistrut support, for carrying cable runs and pipework. Makers: Sankey Sheldon Ltd. Above right: the new, type 75, Holoplast panel, with ribs at 75 deg. angles. Right: the Hexmetal steel strip grid for reinforcing floor areas. Makers: Causeway Reinforcement Ltd.



Fast falls the water table . . .

In this well watered isle of ours there is already a water scarcity and likely to be a famine. The Building Research Station has found that, in an office block, a staff of one thousand uses sixteen thousand gallons of hot and six thousand gallons of cold water every week for washing their hands. A startling amount. To save half of this there has been designed a new tap, a mixing tap, that will give either 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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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.

18.187 construction: theory
ULTIMATE LOAD DESIGN

Structural Design for Ultimate Loads. (The Builder. 11.1.57 pp. 104-105.)
Contribution on the basis of the ultimate load and plastic design, of interest to architects and engineers.

This article presents in quite simple form the position which has been reached in methods of structural design based on comparison of the load causing failure of a structure with the actual load to be carried in service.

An introduction is made by explaining the early basis of design on the elastic theory. Experience has shown that structures so designed are safe and that their deflection within the range of working loads can be predicted with reasonable accuracy. What cannot be calculated by the elastic theory is the load causing failure and therefore the true factor of safety. Work leading up to the prediction of failure loads in concrete is oulined and refers to C. S. Witney upon whose work the proposals in the Draft Code C.P. 114, referring to failure loads, have been made. The difference between ultimate load method and plastic design is explained.

Ultimate-load methods refer to the strength of a particular member. The load factors refer to the amount by which the working loads are increased and thus determine the ultimate bending moment a member must be designed to resist. In the draft Code C.P. 114 a load factor of 2 is used for the steel reinforcement and 3 for the concrete. The reason for specifying a higher load factor for the concrete crushing is the extreme undesirability of this form of failure. Plastic design goes a good deal further in trying to give the entire structure the same collapse load, assuming in both steel and concrete that collapse will not occur before a sufficient number of virtual hinges have been formed to render the structure unstable.

19.203 construction: details
LIFT SLAB TECHNIQUE

Heaviest Lift—Slab forms Roof. (Engineering News-Record [U.S.A.] 22.11.56 p. 25)
Latest report on lift-slab shows even greater achievement with the raising of a 32,600 sq. ft. area weighing 1,466 tons in New Jersey. Flanked by two 1,000 ton slabs it provides the roof for a factory. It was cast on the floor and lifted 26 ft. by jacks on to 24 steel columns on a 40-ft. grid *i.e.*, the slab is approx. 80 ft. wide by 400 ft. long. Columns were sized to permit the heavy slab to be lifted without any horizontal bracing and to assure lateral stability in the completed structure. Collars weighing 600 lbs. cast in the slab are welded to the column heads. The lift slab technique provided a cheaper answer than in situ concrete on 26 ft. high formwork.

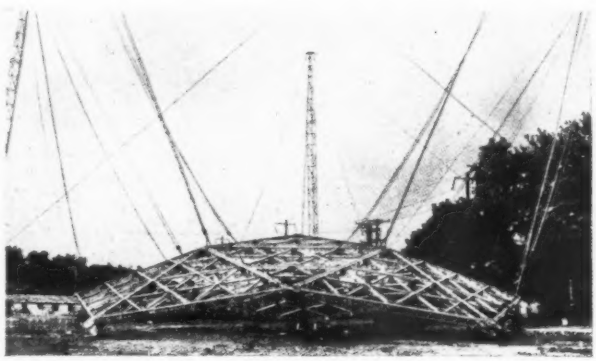
19.204 construction: details
STEEL ROOF

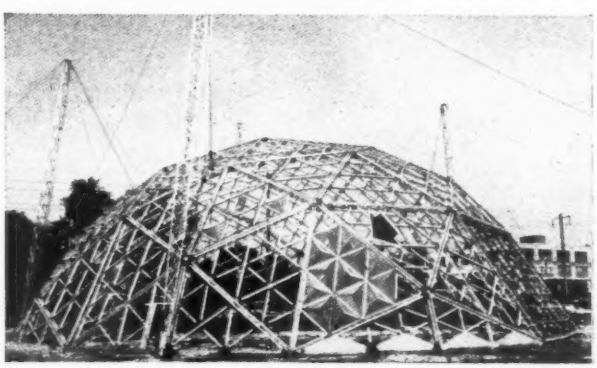
Record Span for Light-Gauge Steel. (Engineering News-Record [U.S.A.] 16.8.56 p.33)
Light gauge steel arches span 100 ft. to provide the roof over an arena of a 262 × 200 ft. sports coliseum in Arizona. This is believed to be the largest span in light gauge steel. The galvanised metal was formed into sections which were curved both longitudinally and transversely and bolted together to form the corrugated arch. Each section was crimped transversely also for added stiffness. Viewed from on top the roof gives the impression of an enormous corrugated iron sheet bent into the form of a barrel arch. Vermiculite plaster 1½-in. thick was applied to the underside after erection for acoustic and thermal insulation. The arch is supported along its edges on the roof framing cantilevered over the seating areas.

20.233 construction: complete structures
ALUMINIUM PREFAB DOME

Dome built in reverse—Top first. (Engineering News-Record [U.S.A.] 4.10.56 p. 29)
Largest Buckminster Fuller dome yet constructed for use as hanger or repair shop, interesting to architects and engineers.

The first dome of this type was the Ford Rotunda dome mentioned in an article on Aluminium in the JOURNAL in 1953. The new dome follows the original pattern and comprises 80 plane triangular trusses of aluminium extruded sections measuring about 22 ft. on each side. The main triangles are subdivided into 16 smaller triangles each framing a shallow pyramid of glass fibre bonded with polyster resin. Adjacent trusses are jointed at the corners by bolts and gusset plates. The dome is designed for 20 p.s.f. and 150 m.p.h. wind and several





Two stages in the erection of the Buckmaster Fuller dome. Left, the completed top of the dome being raised so that the lower panels can be added, below left. The arrow indicates the infilling pyramid of resin-bonded glass fibre. See note above.

heavy point loads slung from inside.
The erection sequence was unusual in that the contractor used five gin poles around the site and, starting with the five centre panels, raised each lift a little further from the ground so another ring of triangular frames could be added. Assembly requires 30 men for 2½ days and the dome can be dismantled and flown elsewhere in two cargo planes. Dome diameter is 117 ft. and rise 46 ft.

24.203 lighting
CHURCH LIGHTING

The Lighting of Churches. (Light and Lighting. June, 1956.)
A useful series of well illustrated articles on the lighting of old and new churches. Comprises a brief historical review by Manford Belmore; an explanation of the lighting engineer's approach to the lighting of new churches by M. W. Peirce and J. M. Waldram; the architect's approach by Edward D. Mills; and the re-lighting of old churches by D. W. Tyrrell. Examples of recent British and foreign examples of church lighting are included. Altogether a most useful review of the problem.

25.126 water supply and sanitation
PLUMBING

Plumbing in Building. Sydney Webster. (B. T. Batsford Ltd. 25s.)
This little book, by a lecturer in building construction at the LCC School of Building, Brixton, is certainly the best that we have had so far: it is up-to-date (including such things as the LCC's regulations for single-stack plumbing, and the use of pitch fibre pipes) and is fully illustrated with clear, usually well-dimensioned and sympathetic drawings. An immense amount of information is gathered in a very small space, gathered from Codes of Practice, British Standards and trade catalogues, and it is presented in a logical way. Perhaps its chief fault is that the descriptions, though accurate and terse, are not always illuminating. Too little care is given to the sequence of mental operations which an architect must go through in order to plan, say, a hot water system or a drainage system in detail. Again, the rules for pipe sizing are taken from the Copper Development Association's Handbook (*Copper Pipe Line Services in Building*). But whereas the original description was as clear as the intricacy of the subject will allow, that given here is too compressed for those unfamiliar with the mystery. The author is also inclined to take a rather high-and-dry unhelpful attitude where alternative methods or materials are involved: he does not give those indications, which are so valued by the architect, of when to use which. One small point of detail: the sizes of the BS. sizes of 80-, 50- and 30-gal. cisterns appear to have been given wrongly. Nevertheless, this is a publication which will come in very useful in the office.

1 SOCIOLOGY
private balconies in flats and maisonettes

What do people *do* with the buildings architects design for them? This question, which is implicit in every class of building, is posed in a particularly urgent way in housing where small-scale units are repeated a great number of times. Unfortunately, social surveys of the use made of architect-provided facilities are all too rare. Special interest, therefore, attaches to the recent report of the LCC's Director of Housing on the use of private balconies in flats and maisonettes. This report, which we print virtually in full as this week's technical article, was based on enquiries made among 258 tenants in flats and maisonettes in different parts of London by the LCC's sociologist, Margaret Willis.

In order to analyse the use people make of their balconies it is important to distinguish between the different uses and to make some estimate of the relative importance of each. The investigation showed that the most popular use of the balcony was for *drying the washing*: over half the households visited used the balcony regularly for this and less than one-fifth never hung washing there. The next most popular use was for *sitting*: about 40 per cent. sat on their balconies quite often, and only about 20 per cent. never did so. After this came *children's play*: in flats where there were children under 5, 40 per cent. played regularly on the balcony, though 25 per cent. never did so; *putting out the pram*: most of the families who had babies used the balcony for this (though one or two could not get the pram through the door); *putting out plants:* four-fifths of those who were provided with window boxes used them, though only a third of those who were not provided with one took the trouble to make one for themselves; lastly there were a number of minor uses such as *putting out the birds* (i.e. budgerigars), *storing* things like the mangle, extra fuel, pram, etc., *letting extra air into the room* by opening the balcony door, *shaking mats* and *odd jobs* like sawing wood or mending a bicycle, etc.

Drying of washing
The extent to which the balcony is used for the drying of washing is considerable. Most tenants either use a clothes horse or put up one or more lines from one end of the balcony to the other so that the clothes hang below the balustrade. It is clear that the majority of families wash

technical section

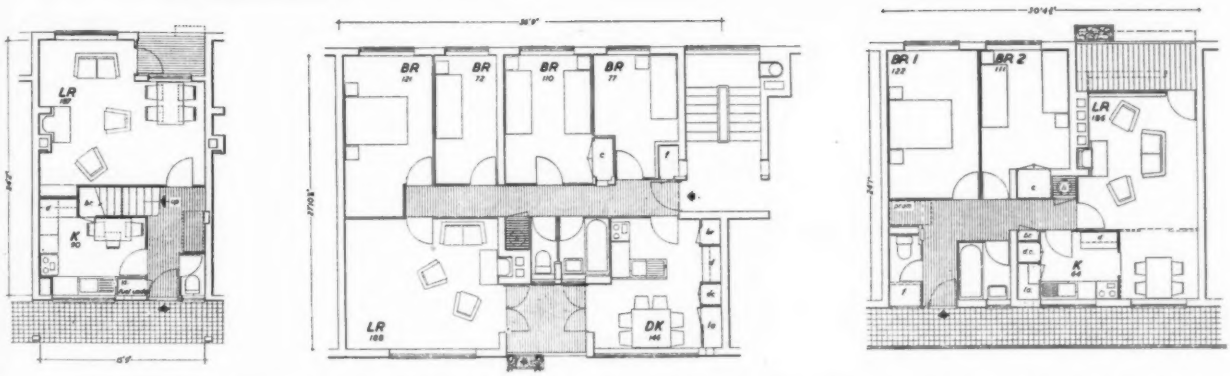


Fig. 1 (above left). Ground floor plan of LCC's 4-storey maisonettes, type MA.A4. According to the survey reviewed here, tenants do not like this plan arrangement because the balcony is recessed into the living room and they like their living room to be "squared off." Fig. 2 (centre). Plan of LCC's staircase-access flat for use in 3-storey blocks, type SA.G5. This arrangement, which gives access from both living room and kitchen, seems to be popular with tenants. If they have to choose access from one or the other they prefer access from the kitchen. Window boxes are, on the whole, a success, and are used by four-fifths of those who are provided with them. Fig. 3 (above right). Plan of LCC's balcony-access flat for 3- or 5-storey blocks, type BA.H3. This plan, in which the balcony extends to the full width of the living room, is popular because it makes it easy for the housewife to clean her living-room windows. Provided balconies are at least 3 ft. 6 in. wide, the demand is for length rather than width. (Scale of plans: $\frac{1}{16}$ in. = 1 ft.)

at least some "bits and pieces" during the week apart from their main wash, and that the balcony provides a convenient and useful outdoor drying space close to the home.

On the whole there was little relation between the amount the balcony was used and the alternative drying facilities available. All these facilities have some limitation as, for example, the restricted times that a communal laundry can be used by any particular tenant, the "drag down" the stairs where tenants in four-storey maisonettes have a garden separated from the home, and the expense of drying cabinets when these are installed in each flat.

There is some indication that the smaller families tend to use the balconies rather less for washing than the larger families, and those with young children use the balcony rather more frequently than those without, but even so, the amount of use on estates with similar size and type of families varies considerably. No doubt more important factors are whether the wife is at work all day and what sort of opinions are held about the appearance of washing drying on the balcony. Critical opinion was strongest amongst those whose flats face the main road, and those who regard any sort of washing on the balcony as "slummy."

There is no indication that the size of the balcony restricted its use for washing, although a few housewives wanted it longer to take more washing and others wanted it wider so that the clothes would not flap against the side. Recessed balconies have the advantage of protection from the rain, although open types of front on projecting balconies give more air and sun on the clothes and, therefore, facilitate drying.

Sitting

About 40 per cent. of the total households visited made frequent use of the balconies for sitting—"in the nice weather." About 20 per cent. never sat there, and the reasons given were generally personal ones, e.g., no time, usualiy go out, etc.

The size of the balcony seemed to be a factor determining the use made of it for sitting. The two largest balconies (approximately 76 square feet and 48 square feet) were used the most, and of the four smallest ones (approximately 24 square feet) two were little used for sitting. However, there was no direct correlation between size and use for sitting, as other factors also play a part.

Most people seem to take out chairs, including armchairs, from their sitting room, and only a few have deckchairs. When the balcony is particularly large it can become an outdoor room, and families who had this balcony were taking out a table as well as chairs and having their meals there. Some of the people who said they would like their balcony wider gave as the reason that they wanted more room for chairs and to seat more people "when they have company," but this was mainly amongst the people who were already keen "balcony sitters." Only a small minority said they did not use the balcony for sitting because it was too small, and these were mainly those with large families.

Other factors determining the amount a balcony is used are related to the degree of privacy expected by the tenants. For this reason a recessed balcony with a solid front is more popular with those tenants who are concerned with privacy. On the other hand a projecting balcony with an open railing or mesh on three sides has no privacy and two-thirds of the tenants who never sit on the balcony gave lack of privacy as the reason. Intrusion on privacy comes from the following sources: flats directly opposite or at right angles with balcony access, private balconies too near their neighbours, and people passing by in a street which is fairly near. Ground floor balconies are more often criticised because of lack of privacy.

The new face of Plymouth

It is a fine thing to watch the centre of Plymouth rising from the bomb craters into an inspiring modern city, and Richard Costain Limited are proud to be engaged in building this new department store and office block at the very heart of things. On completion it will be occupied by Lloyds Bank and by Pophams Limited.

The architects are Easton and Robertson, chartered architects, Bedford Square, London.

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4 PRINCESS PLACE, NOTTE STREET, PLYMOUTH
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technical section

Other factors influencing the use of balconies are aspect and prospect. The sun on the balcony in the afternoon and evening is the most desirable and some of the tenants on one estate whose balconies faced south-east gave the lack of sun as a reason for not sitting there in their free time in the latter part of the day. The view from the balcony influences some people and probably accounts for the many people who sit on their balconies where they had a view of the main road (not too near), and for the fewer number where the outlook was " depressing " (old buildings, derelict site, etc.).

Children's play

The balcony's value as a place for play is limited because the older children generally prefer to go into the grounds where they have more room and can meet their friends, while the younger children are often not allowed to play on the balcony because their mothers fear they will climb over. For these reasons almost half of the households with children under 15 years do not use the balcony for play.

However, more of the younger children under 5 years make use of the balcony and about three out of four play there at least occasionally. The following factors are likely to encourage mothers to let their younger children play more often on the balcony—(*a*) some kind of wire mesh front so that the children can see down without climbing up (railings and/or a gap between the floor and the front are not popular because toys, etc., are dropped through); (*b*) a balcony opening off the kitchen so that the mother can keep an eye on the children while she is working and also because any mess the children might make is not walked into the sitting room; (*c*) no promontories or likely hand- or foot-holds for climbing, e.g., drain-pipes, lips to a metal front, etc. In no more than two or three cases was the height of the front considered too low, the other factors, as listed above, are more conducive to worry and accidents.

A good sized balcony is more likely to encourage children to play there although it often happens that an access balcony is more popular because it is long enough to tricycle or run up and down. Another factor influencing the use of the private balcony is the type of play the children engage in—with perhaps parental influence—and activities such as reading, playing ludo or dominoes, can be done on a balcony where space is restricted.

The height at which a family lives influences to some extent the attitude of the mother towards letting a young child play freely or not on the balcony, although it is often related more to her temperament, i.e., whether she worries or not and zeal for child care, than the height at which they live. However, about one-third of the under 5 year olds play on the balcony " occasionally " and this often means only when mother has time to sit with them.

Little opinion was obtained on the advantages and disadvantages of recessed or projecting balconies for play. The former looks safer and is sheltered from wind or rain, but noises can come through into the flat below, whereas a projecting balcony enables a child to see more, but can be a nuisance to neighbours below when things are dropped or blown down.

POPULARITY OF BALCONIES

Attitude to balcony

In this survey just over two-thirds of the households visited thought a balcony was " a good idea " and they were glad to have one. A balcony provides a private outdoor space which a family knows is there if they wish to use it even if they only go and stand on it occasionally " to get a spot of air." It also helps to prevent that " closed-in " feeling that comes from flat life, and the housewife finds it handy particularly for drying the washing in the fresh air and sunshine. To a few the balcony is a substitute garden and they grow many plants in tubs and boxes. The popularity of the balcony varies on different estates, ranging from an almost unanimous appreciation to a very critical " not much use " attitude by two-thirds of the tenants on one estate.

Balcony or additional space in the flat

A balcony plays a limited part in the amenity of a flat partly because the climate is against frequent sitting or sunbathing and partly because of the inevitable restriction of size as compared with a garden. Therefore, when the question was asked whether a balcony or additional space in the flat was preferred, the answer depended, in the majority of cases, on whether they had adequate sized rooms, not on how useful was the balcony; in consequence the usual answer was in favour of the balcony because " the rooms were large enough."

There were two important exceptions to this. One was where the kitchens were small and had " working space " only, for although on this estate the balconies were popular with 73 per cent. and most of the families were small, nevertheless, about eight out of ten wanted a bigger kitchen and would give up a balcony to have it. This is mainly because a kitchen large enough to eat in is considered very important so that at least breakfast and the midday meal can be taken there and the mess kept out of the sitting room.

The other exception was when the balcony was recessed into the living room, for many housewives would rather have the space in the room so that it could be " squared off." The present shape makes it inconvenient for carpeting, curtaining and placing the furniture. Of the three estates visited with this type of plan about four-fifths of the families wanted the balcony projected so as to have a regular shaped room.

Balcony or garden

The upper maisonettes in a four-storey block have both a balcony and a garden. Of the three estates visited the tenants were asked to make a choice between the two; on two of the estates there was a small majority who preferred a garden and the other estate had a large majority who preferred a balcony. Preference seemed to depend rather more on the popularity of a garden especially for growing flowers and vegetables than on their opinion of the balcony—which in all cases only had an average or rather less " favourable " score. Evidence shows that to people who are not keen on

gardening, an isolated plot of land can be a nuisance and it would be preferable for people to choose to have a garden or not, providing there are adequate and convenient facilities for drying the washing elsewhere.

DESIGN OF BALCONIES

Size

The size of the balconies visited ranged from approximately 24 sq. ft. to 76 sq. ft. Only on three estates were two-thirds or more of the tenants satisfied with the size. On the whole the criticism of size for extra use was more often made by the families who liked a balcony and were already using it than by people not using it very much at all.

Proportions

Many of the tenants said they would have liked their balcony to have been longer. Where a balcony was small the demand was more often for extra length than extra width. There was a widespread wish for a balcony going the length of the living room windows which would not only give more room but particularly—and this need was stressed—it would aid the housewife when cleaning her windows. Less comments were made on the depth, although there were criticisms where this was less than 3 ft. 6 in.

Projection

On the whole, people had no strong feelings about the projection or recession of their balcony except where it cut into a living room and made it an " L " shape.

Most people on the estates preferred what they had already got, although the recessed balconies were a little more popular, mainly because they were thought to be safe (that is, they will not drop off) and more private. The majority of those people with projecting balconies were also satisfied though to a slightly less extent, some households wanting more privacy and a few, more shelter from the weather. Some people gave appearance reasons saying that a recessed balcony was neater and " looked nicer."

Front

The majority of people (from 60 per cent. to 80 per cent.) on each estate preferred the type of balcony front that they already had, whether this was railings, solid or glass. There seemed to be no evidence that one or other type was more popular. Glass has the advantage of allowing in the light, sun, and at the same time giving some privacy, it can be cleaned and is thought " classy " by a few people, but the drawbacks mentioned were that it can be broken or cracked—which was a worry where there were children—and it was difficult to clean. Railings or wire mesh enabled children to look down and give a better view from the balcony and the living room, they also give plenty of light and sun but the disadvantages are lack of privacy and more exposure to wind and rain. Brick or metal fronts give privacy and protection but the balcony has less light and sun, e.g., for plants and washing.

Location

Three estates were visited where the balcony opened off both the living room and the kitchen. The 68 tenants were asked which room they would prefer if the balcony could only open off one of them. The overwhelming majority (60 or 88 per cent.) chose the kitchen as this was the room from which they went on to the balcony most frequently. In fact a number said that the balcony door from the living room was permanently locked or they had put furniture across it.

It is significant that the three most popular balconies have openings on to the balcony from both the living room and kitchen. The kitchen on the sunny side is generally liked because the wife is most often in that room during the day and if it becomes too stuffy it is possible to open the balcony door. The disadvantages are a too warm larder and where the kitchen and living room are separated there is the additional distance to carry food (the balcony often becomes a " short cut ").

However, where a kitchen with a balcony was on the less sunny side opinion was more in favour of the living room balcony because it had more sun for washing and more warmth for sitting and growing plants.

A bedroom opening on to a balcony was of little value in the opinion of tenants who had one.

CONCLUSIONS

The results of the survey showed the following:

(i) The most popular uses for a private balcony are for drying the washing and for sitting (four-fifths of the households make some use of the balcony for these purposes) but it is of limited value for children's play.

(ii) The most *frequent* use was for drying the washing and over a half of the households did so regularly, the majority having lines below the top of the balcony front. (Most of the washing consisted of odd amounts done during the week and so was not influenced by the main laundering and drying facilities provided on the estate.)

(iii) Where the living room and kitchen both opened on to the balcony, the entry from the kitchen was preferred by a large majority showing the popularity of the balcony for utility purposes. The three balcony types most favoured by the tenants had this plan.

(iv) A balcony which is recessed into a living room making it " L " shaped was generally disliked.

(v) Most balconies were considered too small by a third to four-fifths of the tenants, depending on the size of the balcony, the composition of the families and the extent they desired to use it.

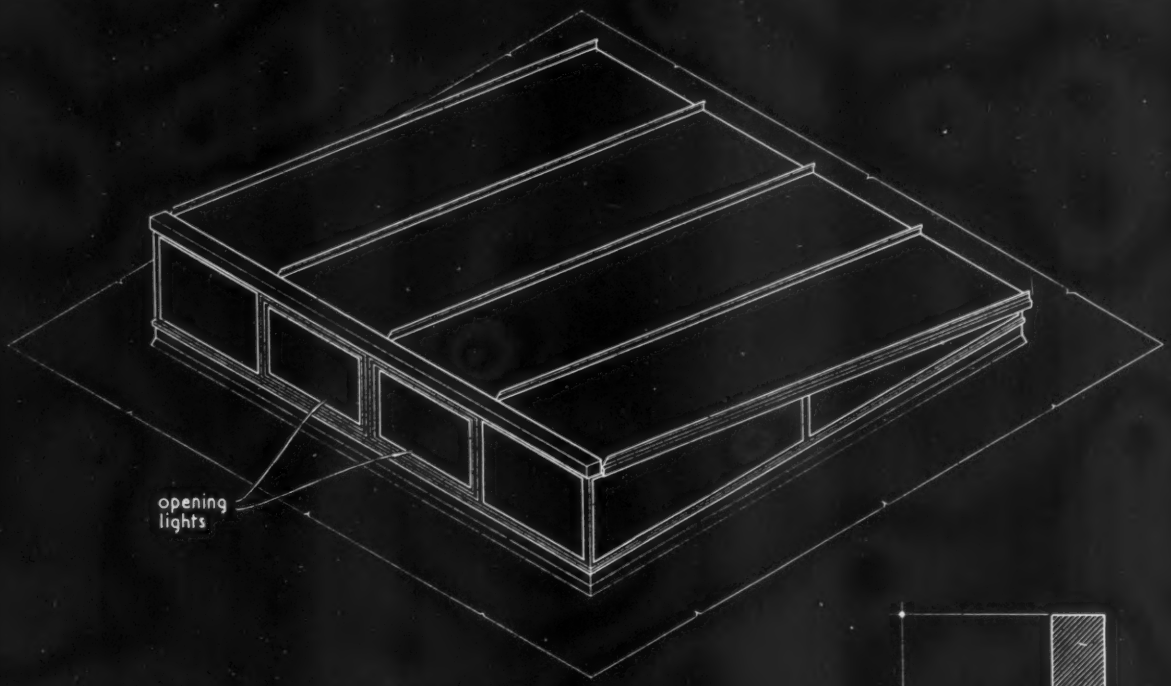
(vi) A longer balcony was more in demand than one of greater width. A balcony running along the length of the living room windows was frequently requested, particularly so as to facilitate the cleaning of the windows.

(vii) On the whole a balcony was preferred to additional space in the flat, the exception being where there was a working kitchen.

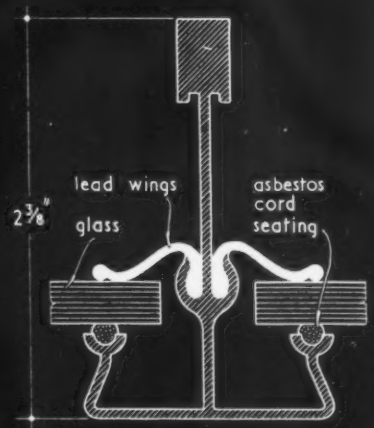
(viii) A window box built into the balcony encouraged people to grow flowers, helped those who were unable to make a suitable box of their own and lessened trouble from unsuitably located and makeshift efforts.

ROOFLIGHTS METAL

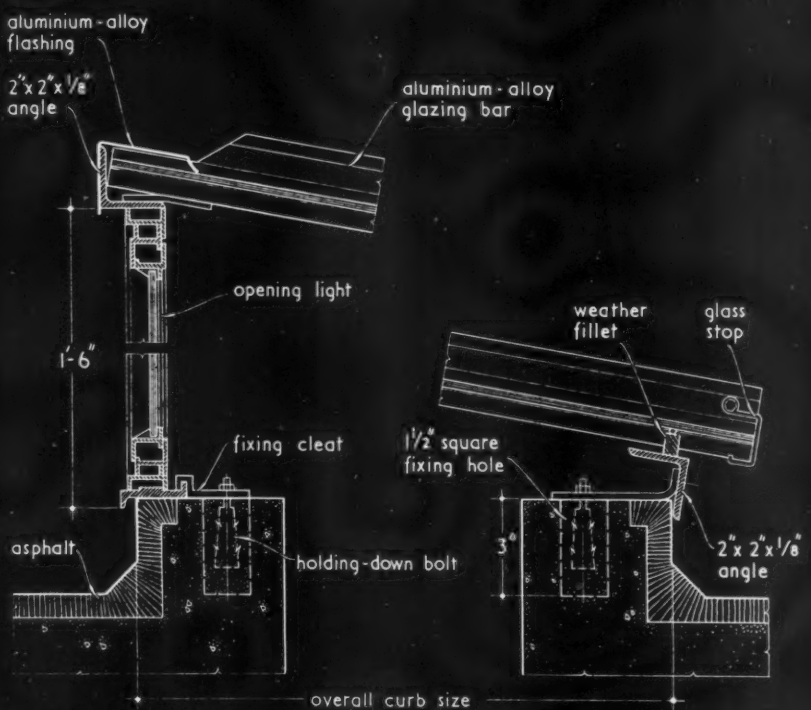
The Architects' Journal Library of Information Sheets 609. Editor: Cotterell Butler, A.R.I.B.A.



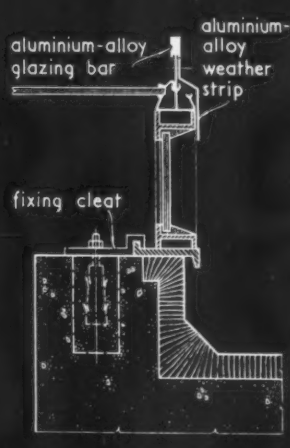
ISOMETRIC SKETCH OF TYPICAL LANTERN LIGHT.



F.S. DETAIL OF ALUMINIUM-ALLOY GLAZING BAR.



LONGITUDINAL SECTION.
TYPICAL FIXING DETAILS.



SECTION THRO' SIDE.

HEYWOOD'S ALUMINIUM SINGLE-PITCH LANTERN LIGHTS. Manufacturer : W.H.Heywood and Co. Ltd

24.J3 HEYWOOD'S ALUMINIUM SINGLE-PITCH LANTERN LIGHTS

This Sheet describes Heywood's single-pitch lantern lights which are constructed in aluminium alloy. The drawings on the face show details of construction, the method of fixing, and an isometric sketch of an 8 ft. 0 in. by 8 ft. 0 in. lantern light of this type.

Material and Construction

The entire framing of the lantern light, including opening portions, glazing bar, angle head and sill, is in aluminium alloy. Unless otherwise specified the lantern lights are fitted with ¼-in. Georgian wired cast glass.

Lantern lights are supplied with opening portions, horizontally centre-pivoted, which are situated in the front vertical framing. These may be fitted with spring catches for opening by cord or pole, portable long-arm or remote control gear. For lantern lights exceeding 12 ft. 0 in. in length, opening portions can be supplied to meet requirements.

Sizes

The table below gives the standard sizes of the lantern lights measured overall finished curb as shown on the drawing on the face of the Sheet. The length can be up to any size required, but standard lengths are 4 ft. 0 in. to 12 ft. 0 in. in 2-ft. increments.

Type	Size overall finished curb		Number of opening lights*
	Length	Width	
S.P.L 44	4 ft. 0 in.	× 4 ft. 0 in.	1 single pane
64	6 ft. 0 in.	× 4 ft. 0 in.	1 ,, ,,
84	8 ft. 0 in.	× 4 ft. 0 in.	1 double ,,
104	10 ft. 0 in.	× 4 ft. 0 in.	2 ,, ,,
124	12 ft. 0 in.	× 4 ft. 0 in.	2 ,, ,,
46	4 ft. 0 in.	× 6 ft. 0 in.	1 single ,,
66	6 ft. 0 in.	× 6 ft. 0 in.	1 ,, ,,
86	8 ft. 0 in.	× 6 ft. 0 in.	1 double ,,
106	10 ft. 0 in.	× 6 ft. 0 in.	2 ,, ,,
126	12 ft. 0 in.	× 6 ft. 0 in.	2 ,, ,,
48	4 ft. 0 in.	× 8 ft. 0 in.	1 single ,,
68	6 ft. 0 in.	× 8 ft. 0 in.	1 ,, ,,
88	8 ft. 0 in.	× 8 ft. 0 in.	1 double ,,
108	10 ft. 0 in.	× 8 ft. 0 in.	2 ,, ,,
128	12 ft. 0 in.	× 8 ft. 0 in.	2 ,, ,,

* If required lantern lights can be supplied without opening lights.

Fixing

The concrete curb should be provided with holes 1½ in. square by 3 in. deep to receive holding-down bolts. The fixing holes are spaced at 2 ft. 0 in. centres beginning 1 ft. 0 in. from each end.

Further Information

The manufacturer maintains a technical advisory department available to answer questions dealing with this subject generally.

Standard lantern lights are delivered from stock. Where they are supplied in purpose-made sizes, delivery time is extended, as also where remote control gear or portable long-arm are required.

Compiled from information supplied by:

W. H. Heywood & Co. Ltd.

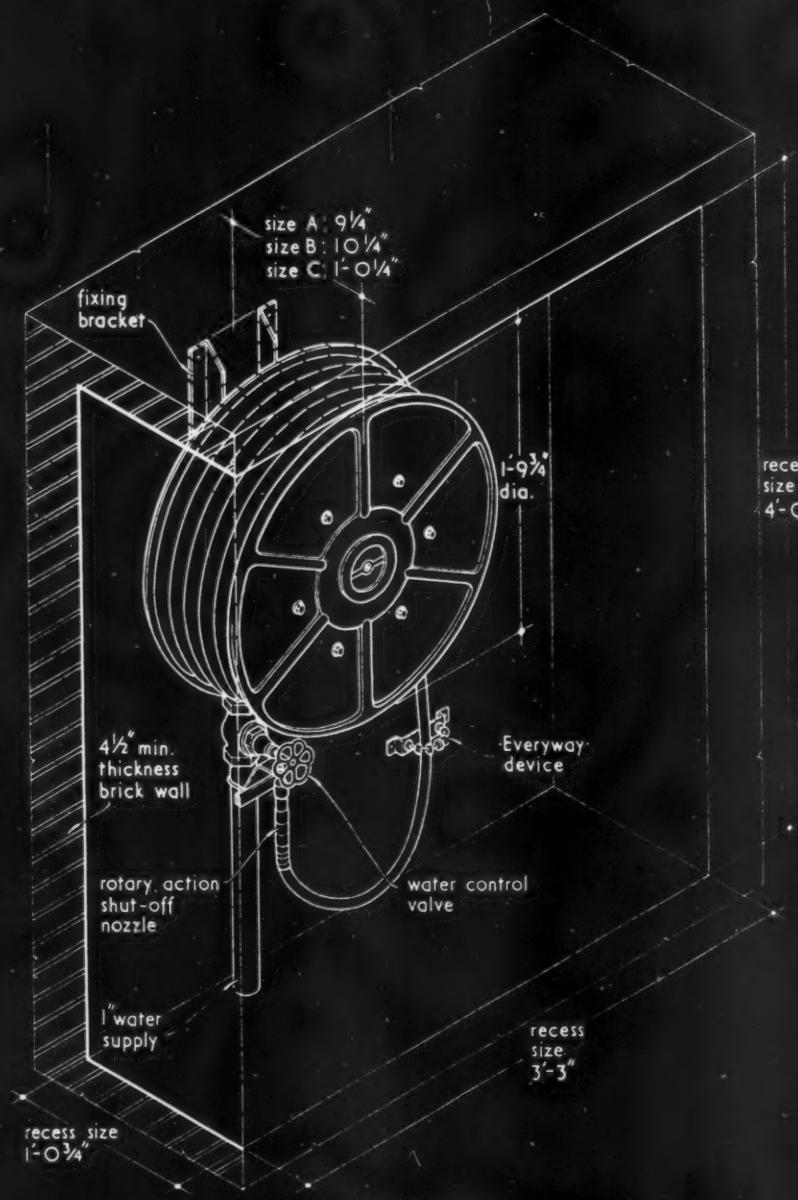
Head Office: Bayhall Works, Huddersfield.
Telephone: Huddersfield 6594 (5 lines).
Telegrams: Glazing, Huddersfield.

London Office: Hope House, Great Peter Street, S.W.1.
Telephone: Abbey 1077/8.

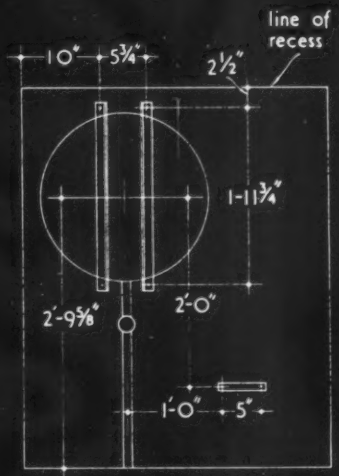
Branch Offices: Belfast, Birmingham, Bristol, Coventry, Dublin, Glasgow, Leicester, Liverpool, Manchester, Newcastle-upon-Tyne, Nottingham, Plymouth.

FIRE PROTECTION UNIT EQUIPMENT

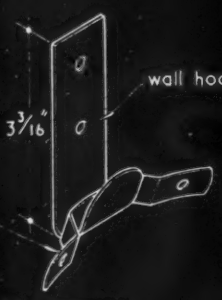
The Architects' Journal Library of Information Sheets 610. Editor: Cotterell Butler A.R.I.B.A.



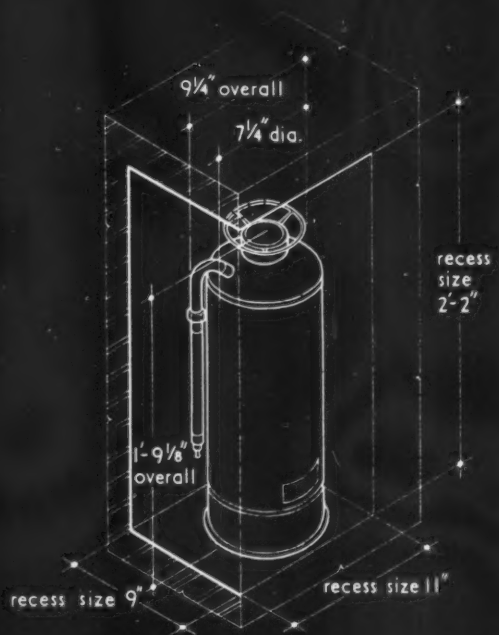
ISOMETRIC VIEW OF MODEL O HOSE-REEL.



front elevation showing critical dimensions for fixing Model O hose-reel



method of fixing C.S.I. Conquest extinguisher to wall



ISOMETRIC VIEW OF C.S.I. CONQUEST EXTINGUISHER.

PYRENE EVERYWAY MODEL O HOSE-REEL AND C.S.I. CONQUEST FIRE EXTINGUISHER.

Manufacturer: The Pyrene Company Limited.

36.B1 ·PYRENE· FIRE APPLIANCES

This Sheet describes two types of fire appliance—the ·Pyrene Everyway· Model O hose-reel and the ·Conquest· portable soda-acid fire extinguisher. The drawings give the dimensions of the recesses to accommodate both types together with critical dimensions for fixing.

·Pyrene Everyway· Model O Hose-reel

Typical applications: Theatres, schools, hospitals, municipal and industrial buildings.

Principle: The reel, complete with hose, is mounted on a spindle which is fixed to a wall bracket. The water supply passes through the back centre of the reel and through the hose. The hose is controlled by an ·Everyway· device which permits it to be run out in any direction. The end of the hose is fitted with a rotary-action shut-off nozzle.

Operation: Open water control valve, lift nozzle from bracket and pull off hose as far as necessary towards the fire. Open nozzle and direct jet to base of flames. Close nozzle to save unnecessary water damage when fire has been extinguished.
When the hose-reel is not in use the main water control valve should be kept *closed*, in which position it locks the nozzle into its bracket.
After installation, or after use or test, shut off the water at the nozzle, wind hose back on to reel, replace nozzle in bracket and shut off the main control valve.

Construction

Side discs: Pressed steel.

Brackets: Mild steel, Parkerized.

Water fittings: Gunmetal or brass.

Bolts: Mild steel, Parkerized.

Piping between valve and reel: Steel.

·*Everyway*· *device:* Nylon rollers.

Hose: Two-braid corrugated in lengths of 60 ft. to 100 ft. of 1-in. bore, or 60 ft. to 120 ft. of ¾-in. bore.

Finish

The standard finish of the side discs is fire-red cellulose, but they can be supplied primed one coat ready for site painting to any desired colour. The hub plate and nozzle are chromium-plated.

C.S.1 Model ·Conquest· Soda-Acid Fire Extinguisher (2 gallons capacity)

Typical applications: Theatres, schools, hospitals, municipal and industrial buildings.

Principle: When extinguisher is inverted, chemical reaction takes place and a powerful fire-fighting jet is instantly released. With this design there is no possibility of seeping—*i.e.*, a gradual oozing out of the solution.

Operation: Lift extinguisher from wall hook and turn it upside down. The jet can be directed at any angle by means of the flexible hose provided. Unnecessary water damage may be avoided simply by turning the extinguisher the right side up again, when the fire has been extinguished.

Construction

The container is constructed from 18 s.w.g. mild steel sheet, lead-coated inside and out, with bottom dome in 16 s.w.g. and top dome in 14 s.w.g., (in accordance with B.S. 138: 1948) and tested to 350 lb. pressure per sq. in. Approved by the F.O.C.

Finish

The standard finish is fire-red cellulose, with blue and gold transfer with operating instructions clearly shown in bold lettering.

Other Types of Soda-Acid Fire Extinguisher

*Model C.S.*12*:* Similar to C.S.1 model but capacity 10 pints.

*Model C.S.*53*:* Break-bottle type, cylindrical, plunger operated.

*Models C.S.*55 *and C.S.*57 *water* (*gas-expelled*) *type:* Operated by striking knob.

*Model C.S.*50*:* Break-bottle type, operated by a knocker on the side of the extinguisher.

F.O.C. Requirements

Portable chemical fire extinguishers having an aggregate water capacity of 2 Imperial gallons for each 250 sq. yd. or part thereof but not less than 4 Imperial gallons (*e.g.*, two 2-gallon capacity extinguishers) on each floor: the water capacity of an extinguisher to be not less than 1 Imperial gallon and not more than 3 Imperial gallons.

Note A: Chemical fire extinguishers include both the soda-acid type (*e.g.*, ·Conquest·) and the foam type (*e.g.*, ·Phomene·). The soda-acid extinguisher is advised for all ordinary fire risks, and the foam type where oil and spirits are involved.

Note B: Special liquid or dry powder extinguishers (*e.g.*, ·Pyrene· fire extinguishers) are approved by the committee as an alternative to ordinary portable chemical fire extinguishers for rooms containing electrical apparatus only and rooms in which inflammable liquids are used or stored (see F.O.C. Scale of Allowances).

Compiled from information supplied by:

The Pyrene Company, Ltd.

London Office (Sales and Service Department): 9, Grosvenor Gardens, S.W.1.
Telephone: Victoria 3401/2.
Telegrams: Pyrenextin, Sowest, London.
Works: Great West Road, Brentford, Middlesex.
Telephone: Ealing 3444 (17 lines).
Telegrams: Pyrene, Brentford.

working detail

COVERED WAYS AND CANOPIES: 21

CANOPY OVER ENTRANCE: TOWN HALL AT RODOVRE DENMARK

Arne Jacobsen, architect (material supplied by Michael Sadler)

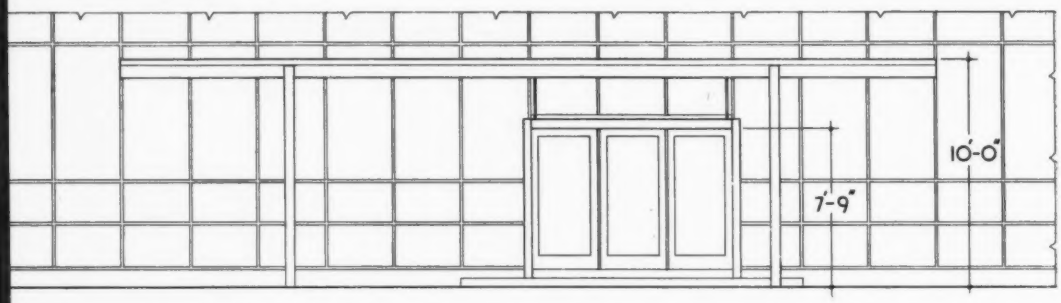
Both canopy and awning are framed in m.s. channels mitred and site-welded, and both are welded to r.s. sections. These sections are stopped off directly below the line of the aluminium flashing and are stiffened at the head by m.s. braces scribed between the flanges and welded. All steel is sand-blasted, zinc-sprayed and primed with zinc chromate before erection, and surface defects are painted over with pulverised zinc paint. The small projections below the front edge of the canopy near the corners are socket outlets for loud speakers.

working detail

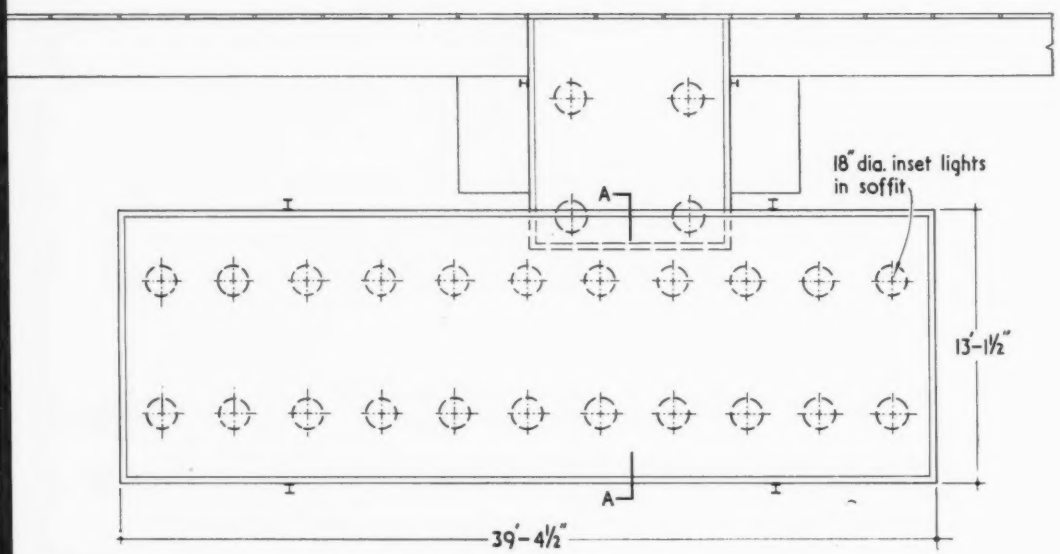
COVERED WAYS AND CANOPIES: 21

CANOPY OVER ENTRANCE: TOWN HALL AT RODØVRE DENMARK

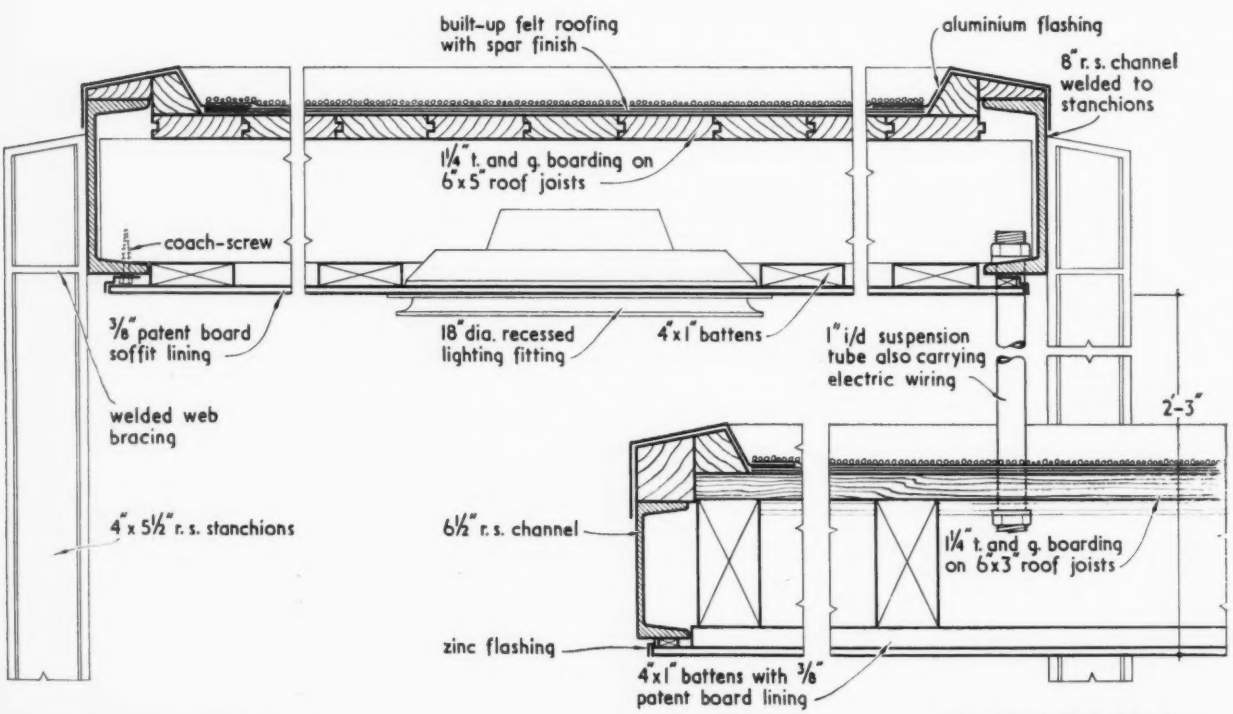
Arne Jacobsen, architect (material supplied by Michael Sadler)



ELEVATION. scale 1/8" = 1'-0"

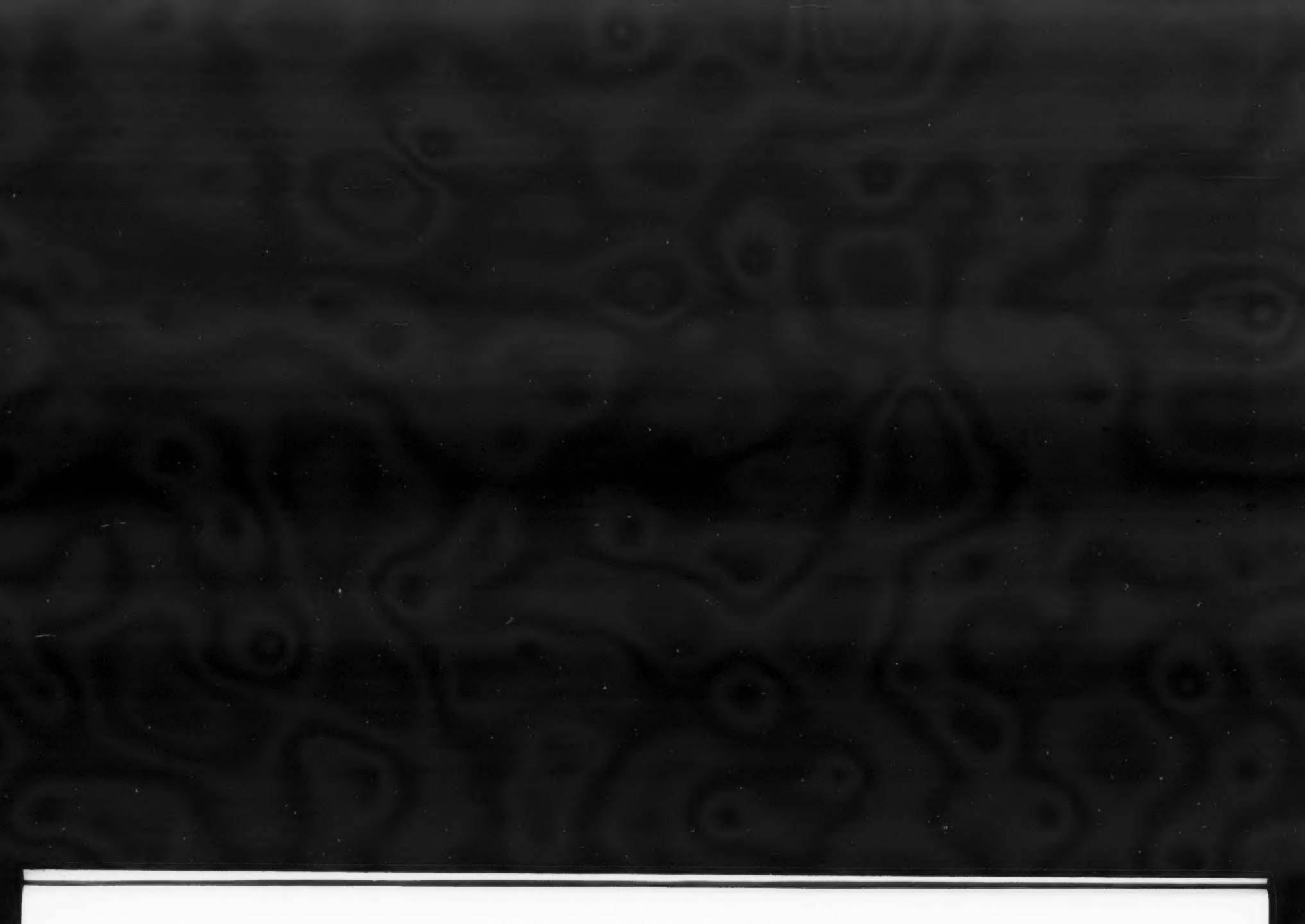


PLAN OF CANOPY. scale 1/8" = 1'-0"



SECTION A-A. scale 1½" = 1'-0"

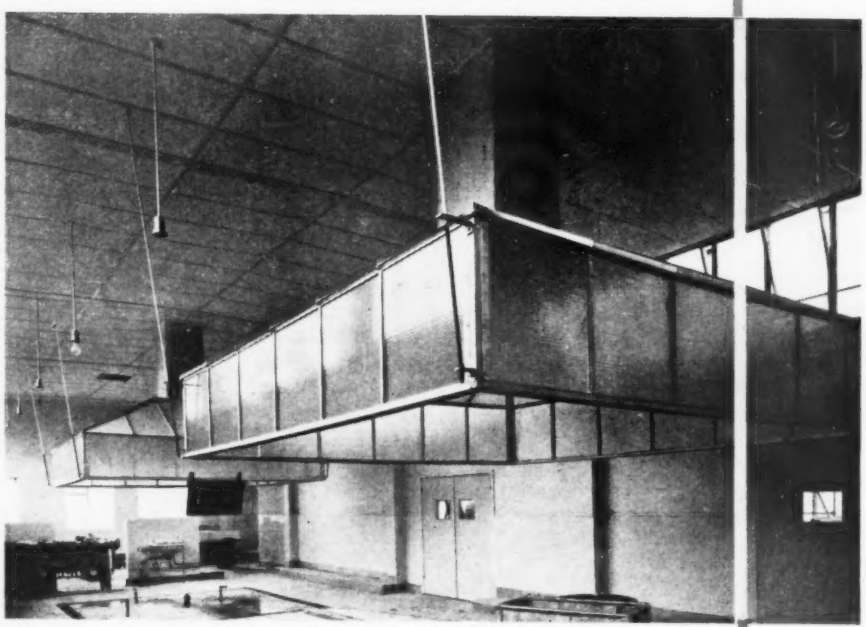
note: figured dimensions in feet and inches are approximate



SUSPENDED CEILINGS BY

DRAFTSELE LIMITED
INSULATION DIVISION

Specialists in . . **SUSPENDED CEILINGS, THERMAL AND STRUCTURAL INSULATION, ACOUSTICAL CORRECTION AND SOUND DEADENING**



Architects: Messrs. Cackett, Burns, Dick and MacKellar, Newcastle upon Tyne.
Contractors: Alex. Anderson (Contractors) Ltd., Newcastle upon Tyne.

Pictured here is a typical ceiling installation in a works canteen kitchen for Messrs. A. Reyrolle & Co. Ltd., of Hebburn-on-Tyne. The ceiling is carried out in ¼" "ASBESTOLUX" Panels. Alloy "T's" suspended from roof purlins at 6' 0" centres. Panels fixed with the "MeTcO" "U" CLIP Metal Fixing System. "ASBESTOLUX" is not affected by dampness; it prevents condensation and is incombustible.

Draftsele Limited (Insulation Division) are equipped to undertake contracts of any size for the installation of suspended ceilings in any part of the United Kingdom. A preliminary consultation can be arranged on request without obligation.

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Durham
Glamorgan
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DRAFTSELE LIMITED (INSULATION DIVISION) 44, DEAN STREET, NEWCASTLE UPON TYNE, 1.

Obituary

Robert F. Wilson, Art Director of the British Colour Council, died on February 10, 1957. He has held this appointment since 1931 and in his capacity was responsible for the inauguration of services to the colour-making and colour-using trades which now have wide recognition, and for the British Colour Council Dictionary of Colour Standards which was issued in 1934. In 1938 he produced the Horticultural Colour Chart standardising colour terms for horticultural use and based on his own theory of colour. It was on the basis of these two reference works that work was undertaken for the production of the British Colour Council Dictionary of Colours for Interior Decoration produced in 1949. This dictionary was planned as a work of reference for dyers and colourists and to provide a basis for colour research. This work is now in use in over 40 countries. During the second world war Mr. Wilson's advice was sought on the correct use of colour and lighting in factories and offices to relieve strain caused by nervous disorders resulting from wartime conditions. Following the issue of the first edition of *Colour and Lighting in Factories and Offices* in 1946, Mr. Wilson prepared very many colour and lighting schemes for factories, offices, hospitals and laboratories throughout the country. For the last five years he concentrated mainly on consultancy work of this kind and had recently written a book, the publication of which is expected shortly.

Correction

It was incorrectly stated in the JOURNAL for February 7 that F. R. Bottle assisted C. F. Epril & Associates, architects for the new furniture showrooms of the Times Furnishing Co. Ltd., at Southend-on-Sea. They were in fact assisted by Murray Simons, A.R.I.B.A. The general contractors were Bovis Ltd. Their name was inadvertently omitted from the list of contractors and sub-contractors.

Announcements

PROFESSIONAL

Patrick Horsbrugh is now collaborating in Canada with Project Planning Associates Ltd., 40, Irwin Avenue, Toronto 5, a firm of consultants concerned with regional development, landscape conservation, urban and industrial undertakings, town-planning and architecture. Until June his address will be c/o Department of Civic Design and Landscape Architecture, University of Illinois, Urbana, Illinois.

McCutcheon and Wilkinson, L/A.R.I.B.A., have moved their Ballymena office to 34, High Street, Ballymena, N. Ireland (telephone 6433/4).

Bridgwater and Shepheard, F./A.R.I.B.A., announce that they have taken Gabriel Epstein, A.A.DIPL., A.R.I.B.A., into partnership.

Arthur Lindsay, A.R.I.B.A., has taken into partnership Max Gerlach, M.A.A. The practice will continue from P.O. Box 1648, Accra, as Arthur Lindsay and Max Gerlach.

H. Werner Rosenthal, DIP.ING., A.R.I.B.A., has moved to 30B, Wimpole Street, W.1 (telephone Hunter 0607).

Guy H. Nicholls, L.R.I.B.A., F.I.A.A.&S., has entered into partnership with Eric G. Moodie, B.SC., A.R.I.B.A. They are practising from 4, St. Giles' Street, Northampton (telephone, Northampton 144).

Michael Laird and W. J. C. Redpath, A/A.R.I.B.A., A/A.R.I.A.S., are dissolving their partnership of June 30. Mr. Laird will continue his practice from 11, Randolph Place, Edinburgh (telephone Edinburgh 33969) and Mr. Redpath will practice abroad.

Following the death of L. H. Fewster, L.R.I.B.A., the practice will be continued by his partners in the name of L. H. Fewster and Partners from 22, Conduit Street, W.1 (telephone Mayfair 3111 and 9554).

Collcutt and Hamp, F/A.R.I.B.A., announce that from March 18 their address will be 86, Prince Albert Road, Regents Park, N.W.8 (telephone Primrose 5157).

Farms and Partners, F/F.R.I.B.A., have moved to 24, Welbeck Way, W.1 (telephone, Welbeck 6543).

Austin O. Cole, A.R.I.B.A., has moved to 51, Newnham Road, Cambridge (telephone, Cambridge 55101).

TECHNICAL SECTION INDEX FOR 1956

An alphabetical index covering special article and Information Centre items published in the Technical Section during the twelve months ended December 31, 1956, is being prepared. Readers who wish to have a copy—it is free of charge—should complete the form below and post it to the Technical Editor, THE ARCHITECTS' JOURNAL, *not later than March 11, 1957. This form will not be acknowledged.*

Please send me the Information Centre Index for 1956:

Name
(Block letters)

Address
(Block letters)

AJ 4 3.57

TRADE

H. Newsum Sons and Company Ltd., of 238, High Street, Lincoln (telephone Lincoln 612), have appointed E. A. Straker, A.R.I.B.A., and R. E. Rosser, A.R.I.B.A., as Staff Architects in charge of the extended technical service facilities now available for Trofdek roofing and Wall-pak timber curtain walling.

D. Meredew Ltd. announce that W. J. Craigen has been appointed Sales Manager following the retirement of F. Hunter.

John Thompson Water Tube Boilers Ltd. announce that C. J. Howard has been appointed Managing Director following the retirement of W. R. Edwards, M.I.MECH.E.

Midland Silicons Ltd. have moved their North Eastern Area Sales office to 5/7, New York Road, Leeds, 2 (telephone Leeds 26768).

W. H. Heywood & Company Ltd., Patent Glazing and Thermal Insulation Engineers of Bayhall Works, Huddersfield, announce the appointment of Charles Thompson, B.A., as the firm's Scottish Manager at 5, Newton Place, Glasgow, C.3 (telephone Douglas 6393/4). Prior to this appointment Mr. Thompson was in charge of Heywood's Newcastle Office at 57, Cathedral Buildings, and has been succeeded by Charles Crossman, who has in turn been transferred from Bristol Office. R. C. Jenkins, a senior technician has taken over the Bristol area and will operate from the established office at Cornwall House, The Promenade, Clifton (telephone 38649). The Company has now opened a new Midlands Office at Queens Chambers, 6, Boldmere Road, Sutton Coldfield, in the charge of Dennis Hadfield, B.SC., Birmingham Manager.

The Institute of Plumbers Ltd., of 81, Gower Street, W.C.1, have altered their title to "The Institute of Plumbing."

J. E. Lesser & Sons Ltd., of Green Lane, Hounslow, Middlesex, manufacturers of "Blaby" Steel Structures and "Middlesex" Prefabricated Timber Buildings, announce the appointment of F. S. West A.M.I.STRUCT.E., who is in charge of the Prefabricated Steel section at their Hounslow premises.

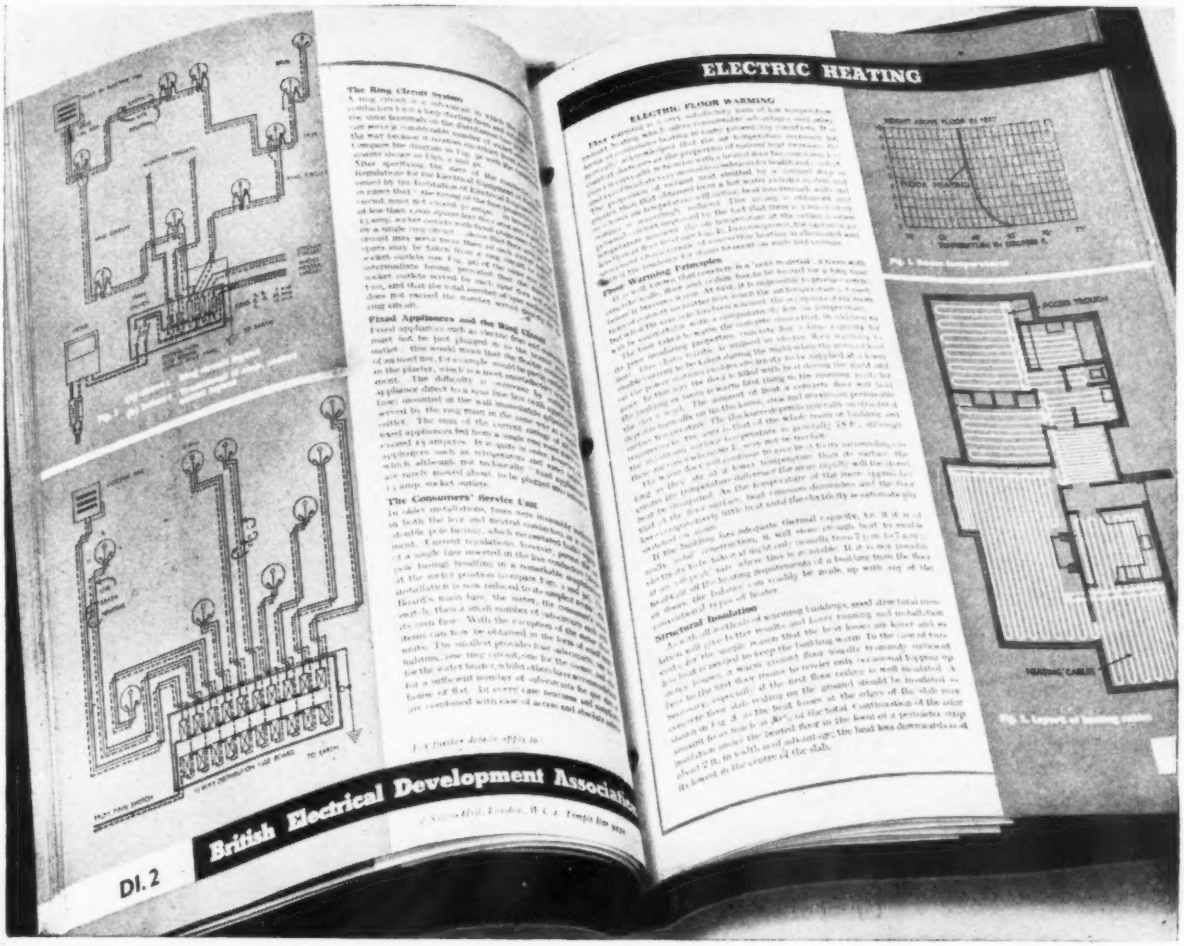
Enfield Cables Ltd., announce the following re-arrangement of their Sales Organization in Scotland from the beginning of the year. Glasgow Branch is re-named Scottish Branch and A. B. MacLean, who remains in charge of the Branch, is now known as "Manager—Scottish Branch." Edinburgh Branch now operates as a depot directly under the control of the Manager—Scottish Branch. Aberdeen depot is now closed as the result of this re-arrangement.

Aygee Ltd., of Century House, 100, Westminster Bridge Road, S.E.1, announce that James A. Oliver has been appointed Sales Director.

F. Hills and Sons Ltd., manufacturers of "Duramel" plastic faced plywood, announce the appointment of Rowe Brothers and Company Ltd., of 39-45, Victoria Street, Bristol, 1, as an accredited distributor to cover Gloucester, Bristol, Somerset, Wilts, Hants, Berks, Oxford, Hereford and South Wales. They will be pleased to supply information and samples.

Prices Tailors Ltd., of Cardigan Crescent, Kirkstall Road, Leeds, 4, announce that D. Greenwood, B.ARCH., A.R.I.B.A., has been appointed Staff Architect.

Williams & Williams Ltd. announce that R. E. Rudge has been appointed Export Sales Manager in succession to E. T. MacEwan, who retired at the end of last year.



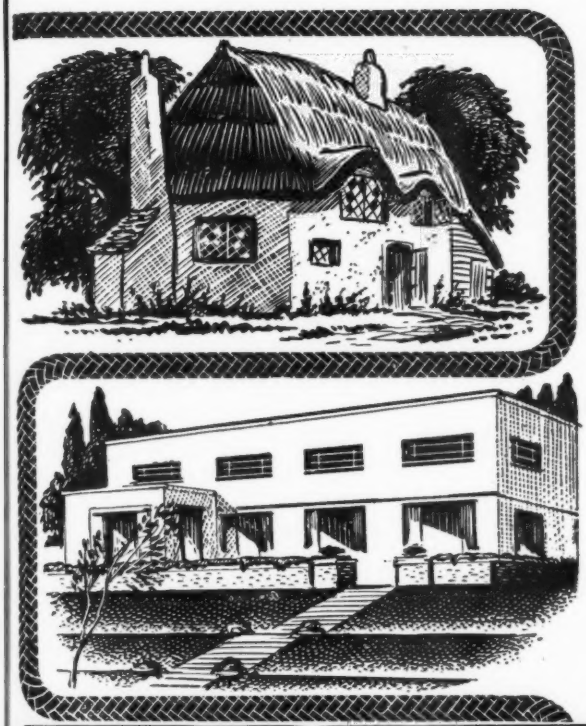
Have you got this?

These sheets, when first published in the architectural and building press, aroused great interest. And now, collected together, you have at your fingertips detailed and up-to-date information about the latest electrical techniques, appliances and methods of installation.

The subjects covered include: Cooking (domestic, canteen and hotel, cafeteria); Installations (socket outlets and plugs, wiring circuits, I.E.E. regulations); Kitchen Planning (domestic); Lighting (principles, lamps and light fittings, domestic interiors, kitchens, fluorescent lamps, mirrors, industrial interiors, lighting in schools); Refrigeration (domestic); Space Heating (floor warming, thermal block storage heaters, domestic); Water Heating (self-contained types, self-contained in conjunction with solid fuel, direct immersion heater systems, indirect immersion heater systems); Symbols and Glossary.

E.D.A. will send all their electrical data sheets in a loose-leaf Binder or individual sheets as required. Please write under business heading to:

The British Electrical Development Association
2 Savoy Hill, London, W.C.2.



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All cables are made to the appropriate British Standard Specification.

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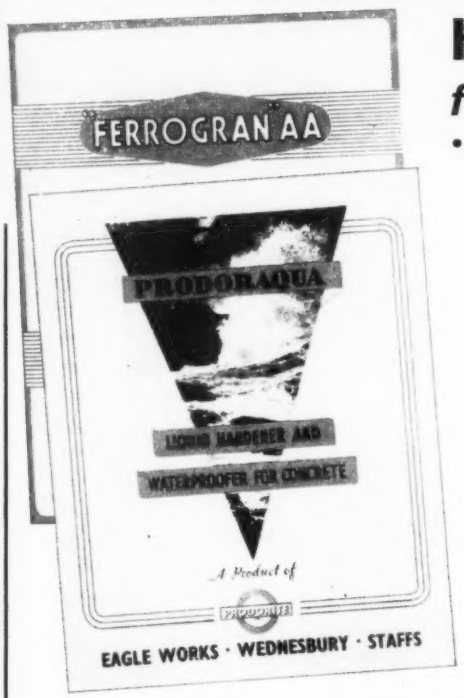

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Ferrogran AA is incorporated in the final ½" to 1" of granolithic or concrete work. Ferrogran AA undergoes a slow chemical change resulting in an increase in volume, which effectively seals any pores in the concrete mix, thus imparting great hardness and excellent water-proof properties to the finished work.

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Prodoraqua is a liquid hardener and waterproofer which after considerable research and extensive tests has been found to be the perfect medium for producing Portland cement concrete of water-proof, oil-proof and non-dusting qualities.

CAN WE SEND YOU BROCHURES ON THESE CONCRETE & GRANOLITHIC IMPROVERS ?

HEAD OFFICE: **EAGLE WORKS, WEDNESBURY**
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TELEPHONE: ABBEY 3816 (5 LINES)

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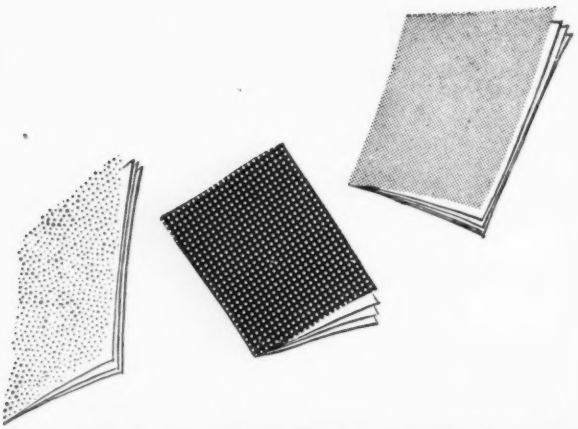
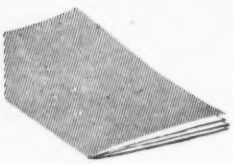


Smokeless Coke . . .
. . . For Smokeless Heat



Anticipating the Nation's demand for clean air, the Area Gas Boards work unremittingly to make constant quality coke both easy to light and to keep alight. From them specialised information booklets* are yours for the asking, as is the expert advice of their Coke Departments.

- ★ **Coke-fired Central Heating Plant**
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- ★ **Coke-fired Domestic Appliances and their application**

The Gas Council's comprehensive official handbook, 'Coke Burning Appliances', price 12/6, should be in the hands of all concerned with fuel service in the modern home.

THE GAS COUNCIL

COKE DEPARTMENT
1 Grosvenor Place,
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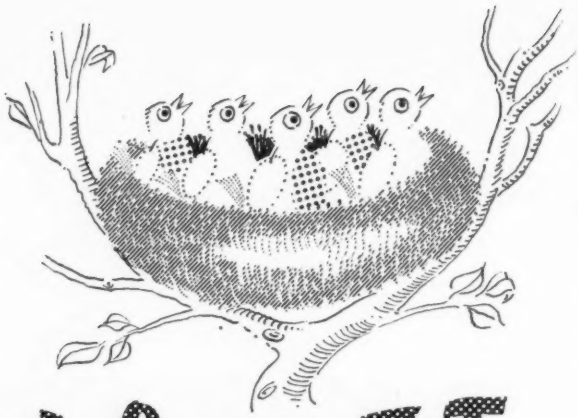

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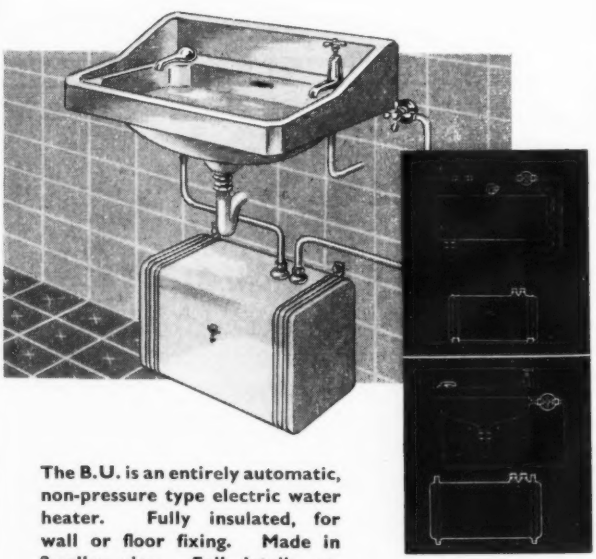
The Heatrae U.B. Electric Water Heater is designed specifically for filling the ***usually wasted*** *space under a sink. It is ideally suitable for hotel bars or anywhere in fact where space above a sink is limited.*



The B.U. is an entirely automatic, non-pressure type electric water heater. Fully insulated, for wall or floor fixing. Made in 2-gallon size. Full details can be obtained from our leaflet DED post free on request.

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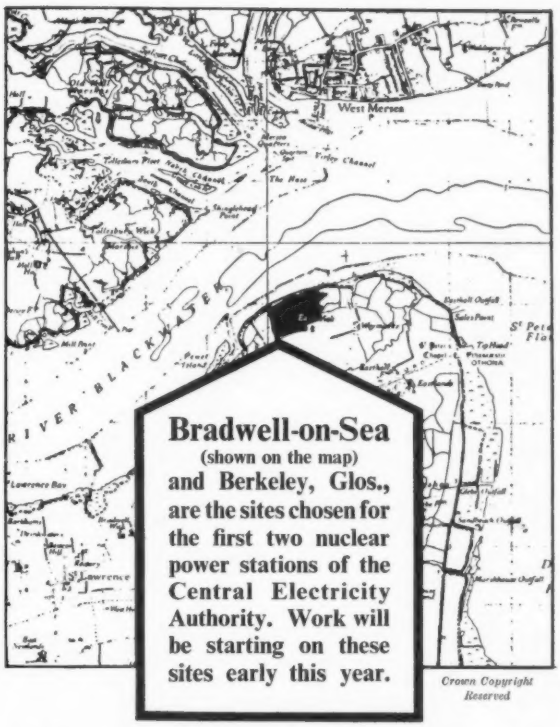
Manufacturers of: Electric Water Heaters, Oil Heaters, Immersion Heaters, Urns, Towel Rails, Airing Cupboard Heaters, Flame-proof Heating Apparatus, Breakfast Cookers, Electric Fires, Food Trolleys, Warming Plates, Air Heaters, etc.

Electricity from Nuclear Energy



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.

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CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

COUNTY BOROUGH OF ROCHDALE

Applications are invited from Corporate Members of the R.I.B.A. for the appointment of CHIEF ASSISTANT ARCHITECT as the Head of the General Architectural Section of the Borough Surveyor's Department. The salary will be Grade VII (£999 7s. 6d.—£1,230 per annum × £46 2s. 6d.). The commencing salary will not necessarily be the minimum figure, and will be fixed according to ability and experience.

The appointment will be subject to the National Scheme of Conditions of Service, the Local Government Superannuation Acts, and to passing a medical examination.

Canvassing is prohibited and applicants must disclose whether they are related to any member or senior official of the Council.

Housing accommodation will be provided by the Council in appropriate circumstances.

Applications, stating age, qualifications, training and experience, together with the names and addresses of two persons to whom reference can be made, and endorsed "Chief Assistant Architect," must be delivered to the Borough Surveyor, Town Hall, Rochdale, not later than 9 a.m. on Monday, 25th March, 1957.

K. B. MOORE,
Town Clerk.

5453

BIRMINGHAM REGIONAL HOSPITAL BOARD
ARCHITECTURAL STAFF APPOINTMENTS
(Donald A. Goldfinch, E.R.D., F.R.I.B.A., Dip.T.P., Architect to the Board)

(*a*) SENIOR ASSISTANT ARCHITECT: £975—£1,160. Applicants must be registered architects having passed requisite examinations.

(*b*) TWO ASSISTANT ARCHITECTS: £680—£985. Applicants must be registered architects having passed requisite examinations.

(*c*) ARCHITECTURAL ASSISTANTS: £510—£710. Required to give technical assistance to professional officers. Inter-R.I.B.A. or equivalent essential.

(*d*) ASSISTANT QUANTITY SURVEYORS (THREE): £680—£985. Final R.I.C.S. or recognised qualifications of I.Q.S. or I.A.A.S. and experience in taking off and preparing bills of quantities and settling final accounts essential.

(*e*) QUANTITY SURVEYING ASSISTANT (ONE): £510—£710. Inter-R.I.C.S. or equivalent essential.

(*f*) ASSISTANT SURVEYOR (BUILDING): £680—£985. For extensive surveys of existing hospital properties and preparation of record plans. Required to build up record library of some 250 hospitals located in counties of Warwickshire, Staffordshire, Worcestershire, Shropshire and Herefordshire. Consideration given to applicant's wishes in regard to location of office within region. Applicants should be corporate members of the Royal Institute of Chartered Surveyors (Buildings Division) and neat and expeditious draughtsmen with sound experience in measurement and plotting of building surveys to all scales.

(*g*) SURVEYING ASSISTANT (BUILDING): £510—£710. To assist in survey of existing hospital buildings and preparation of record plans. Intermediate R.I.C.S. (Buildings Division) essential, must be neat draughtsman with experience in measurement and plotting of surveys to all scales.

All appointments superannuable.

Apply naming two referees to Secretary, 10, Augustus Road, Birmingham, 15. 5358

BOROUGH OF BLYTH
BOROUGH ENGINEER'S DEPARTMENT

Applications are invited for the appointment of a JUNIOR ARCHITECTURAL ASSISTANT. The salary for the appointment will be Grade II of the A.P.T. Division £609 17s. 6d. per annum rising to £691 17s. 6d. per annum by annual increments of £20 10s.

Candidates should hold the Intermediate Examination of the R.I.B.A.

The appointment is subject to the Local Government Superannuation Acts, the Scheme of Conditions of Service of the National Joint Council, one month's notice on either side and the passing of a medical examination.

Applications endorsed "Junior Architectural Assistant" stating age, qualifications, training and experience, must be delivered to the undersigned, with names of two referees not later than 21st March, 1957.

Canvassing will disqualify, and applicants should disclose relationship with any member or official of the Council.

The tenancy of a house will be offered to the successful candidate if desired.

EDWIN W. CARTER,
Town Clerk.

"Dinsdale,"
Marine Terrace,
Blyth,
Northumberland. 5509

COUNTY BOROUGH OF WEST HAM
BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT
RE-ADVERTISEMENT

Applications are invited from ARCHITECTS and PLANNERS for permanent appointments at salaries shown (including maximum London Allowance):—

DEPUTY GROUP ARCHITECT (3 posts), Grade V, £844 17s. 6d.—£1,024 5s. p.a.

ASSISTANT ARCHITECT (2 posts), Grade IV, £757 15s.—£937 2s. 6d. p.a.

ASSISTANT PLANNING OFFICER, Grade V, £844 17s. 6d.—£1,024 5s. p.a.

ARCHITECTURAL ASSISTANT, Grades I/II, £573 5s.—£721 17s. 6d. p.a.

PLANNING ASSISTANT (2 posts), Grades I/II, £573 5s.—£721 17s. 6d. p.a.

The County Borough has an extensive reconstruction and slum clearance programme, and offers varied and interesting work.

Application forms and details from the Borough Architect and Planning Officer, Thomas E. North, O.B.E., F.R.I.B.A., Dist.T.P., M.T.P.I., 70, West Ham Lane, Stratford, E.15, returnable by 19th March, 1957. 5400

COUNTY COUNCIL OF ESSEX
COUNTY PLANNING DEPARTMENT

Applications invited for following posts:—

1. PLANNING ASSISTANT A.P.T. Grade I (£543.5.0d.—£625.5.0d.) in Survey and Development Plan section at Romford. Applicants must be experienced draughtsmen.
2. PLANNING ASSISTANT A.P.T. Grade I (£543.5.0d.—£625.5.0d.) at Braintree. Applicants should have had architectural drawing experience and possess some knowledge of housing layouts and design.

Appointments subject to Superannuation.

Applications in own handwriting to County Planning Adviser, Broomfield Place, Broomfield, Chelmsford, by 18th March, 1957. 5515

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

Applications are invited for the following appointment on the permanent staff of the Regional Architect.

ASSISTANT ARCHITECT

The commencing salary (fixed by reference to relevant experience and to age) will be within the scale £680 × £25 (3) × 30 (2) × 35 (1) × 30 (1) × 35 (3)—£985 p.a. plus London Allowance.

Applicants must be Associate Members of the Royal Institute of British Architects and capable of preparing working and detailed drawings and specifications and supervising work on individual projects. Experience of hospital planning and construction an advantage.

Application forms may be obtained from the undersigned at 11a, Portland Place, W.1, and must be returned by not later than 16th March, 1957.

E. G. BRAITHWAITE, *Secretary.*

5514

SHARDLOW RURAL DISTRICT COUNCIL

The above Council invite applications in the Surveyor's Department for a JUNIOR ARCHITECTURAL ASSISTANT. Salary range £184 10s.—£512 10s. according to experience. Applicants should have previous architectural experience and have completed National Service. The post will be superannuable and subject to medical examination.

Applications stating age, present salary, details of training and experience, together with names of two referees, should be submitted to the Surveyor, Shardlow R.D.C. not later than 23rd March, at the address below.

F. CLAYTON,
Clerk to the Council

4, Full Street,
Derby.
28th February, 1957. 5500

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies exist for ARCHITECT/PLANNERS (salaries up to £817). Tasks include 3-dimensional planning within London's eight major Comprehensive Development Areas (including Stepney/Poplar, the South Bank, and Elephant and Castle) and other Redevelopment Areas.

The work includes the preparation of comprehensive layouts covering all the important areas of new public and private development throughout the County, and covers the whole field of planning technique.

Particulars and application form from Architect (AR/BK/ATP/1), County Hall, S.E.1. (907)

4543

COUNTY BOROUGH OF SOUTHAMPTON
BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the following permanent appointments:—

CHIEF CLERK OF WORKS, A.P.T. Grade IV (£727—£907).

Applicants should be fully qualified and experienced in the supervision of all trades of major building contracts and familiar with the administrative procedure of local government. The present staff of the section is 12 in number.

DISTRICT BUILDING INSPECTOR, A.P.T. Grade III (£656—£784).

Applicants should be experienced and hold a recognised Building Inspector's Certificate.

Both posts require the use of a car for which an Essential User Car Allowance is payable.

Applicants should state their housing needs.

Application forms from the Borough Architect, Civic Centre, Southampton. Closing date 15th March, 1957. 5468

BOROUGH OF HENDON
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited for the following appointments:—

ASSISTANT ARCHITECT, Grade A.P.T. V, £845—£1,025 (including London weighting).

ASSISTANT ARCHITECT, Grade A.P.T. III/IV, £686—£938 (including London weighting).

Salary in excess of the minimum may be paid according to qualifications and experience.

Applicants for the post in Grade A.P.T. V must be Associates of the Royal Institute of British Architects.

The Council is prepared to consider assisting suitable applicants in obtaining housing accommodation.

The appointment will be subject to:—

(*a*) The provisions of the Local Government Superannuation Acts.

(*b*) The National Scheme of Conditions of Service.

(*c*) The satisfactory passing of a medical examination.

Applications stating age, qualifications and experience, together with the names and addresses of two referees, must be delivered to the Borough Engineer and Surveyor, Town Hall, Hendon, N.W.4, not later than the 21st March, 1957.

Dated this 25th day of February, 1957.

R. H. WILLIAMS,
Town Clerk.

Town Hall,
Hendon,
N.W.4. 5492

COUNTY BOROUGH OF
BARROW-IN-FURNESS
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT
APPOINTMENT OF CHIEF ARCHITECT

Applications are invited from qualified architects with wide municipal experience for the post of Chief Architect on Grade A.P.T. VII (£999—£1,230 per annum). The commencing salary will be fixed within the grade.

A car allowance in accordance with the N.J.C. scales will be paid.

It is possible that the Council will allocate a Corporation house, subject to the merits of the case being satisfactory to the interviewing Committee.

Full details of the post, conditions of appointment and application forms may be obtained from the Borough Engineer and Surveyor, to whom completed forms must be returned not later than Monday, 18th March, 1957.

LAWRENCE ALLEN,
Town Clerk.

Town Hall,
Barrow-in-Furness. 5481

SURREY COUNTY COUNCIL
KINGSTON SCHOOL OF ART
Knight's Park, Kingston-upon-Thames, Surrey
Telephone Kingston 2295 and 5591
DEPARTMENT OF ARCHITECTURE

Consequent upon the recognition of the Diploma Course in Architecture by the Royal Institute of British Architects the following new appointments are open:—

1. SENIOR LECTURER. Candidates for this post should be well qualified professionally, have had varied practical experience and some previous architectural school teaching experience. Ability to lecture in any of the subjects taken in the examinations will be an additional qualification.

2. PART-TIME STUDIO INSTRUCTORS on a basis of three seven-hour days weekly. Applicants should be well qualified professionally and be capable of instructing in any subject up to the level of the Intermediate Examination of the Royal Institute of British Architects. Previous teaching experience will be an additional qualification.

3. PART-TIME LECTURER IN SENIOR CONSTRUCTIONAL SUBJECTS.

Salary for part-time appointments in accordance with the rates approved by the Education Committee.

Application forms and further particulars, including details of part-time rates of salary, may be obtained upon receipt of a stamped addressed envelope, from the Registrar, School of Art, Knight's Park, Kingston-upon-Thames, to whom the application should be returned within 21 days of the appearance of this notice. 5479

NATIONAL COAL BOARD
NORTH EASTERN DIVISION

Applications are invited for the following appointment in the Department of the Divisional Chief Architect at Conisbrough near Doncaster:—

ARCHITECTURAL ASSISTANT Grade I

Salary scale: £625 × £25—£750 and up to £900 per annum in certain circumstances.

Qualifications: Preferably Intermediate R.I.B.A. or considerable practical experience.

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 near Doncaster. 5458

HERTFORDSHIRE COUNTY COUNCIL
HATFIELD TECHNICAL COLLEGE

Principal: Dr. W. A. J. Chapman, M.Sc.(Eng.)

Full-time LECTURER required September 1st to develop the Architectural Section. The work will include some teaching in building construction to Higher National Certificate Courses. Candidates should be graduates or Associate Members of the R.I.B.A. with good industrial and teaching experience in a similar capacity.

Salary: £1,200—£1,350 per annum.

Further particulars and application form from the Registrar. 5517

UNIVERSITY OF NOTTINGHAM
BUILDINGS DEPARTMENT
ARCHITECTURAL ASSISTANT required. Candidates must have reached Intermediate R.I.B.A. standard. Commencing salary £650 to £700 per annum. Pension scheme. Form of application and conditions of appointment from the Registrar, Mr. H. Pickbourne. 5390

COUNTY BOROUGH OF OLDHAM
APPOINTMENT OF ARCHITECTURAL ASSISTANT
Applications are invited for the above appointment within the salary range of £707 5s.—£861. Experience in the redevelopment of clearance areas will be an advantage.
The National Conditions and Local Government Superannuation Acts apply. Housing accommodation available if required.
Applications suitably endorsed and naming two referees should reach me not later than Thursday, the 14th March, 1957.
A. L. HOBSON,
Borough Engineer and Surveyor.
75, Union Street, Oldham. 5449

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
Assistants required for building control work in BUILDING REGULATION DIVISION to examine applications under the London Building Acts and analogous legislation with regard to compliance with the Council's constructional and fire-guarding standards.
Starting salaries up to £817 according to qualifications and experience.
Particulars and application form from the Architect (AR/EK/BCW/3), County Hall, S.E.1. (139) 5182

DERBYSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
Vacancies for ARCHITECTS, A.P.T. Grade VI, salary £902 rising to £1,107 per annum. National Joint Council conditions of service. Pensionable posts. Canvassing disqualifies. Details and application forms from F. Hamer Crossley, Dipl. Arch. (Liverpool), F.R.I.B.A., County Architect, County Offices, St. Mary's Gate, Derby. 5467

COUNTY BOROUGH OF SUNDERLAND
Applications are invited for:—
SENIOR ASSISTANT ARCHITECTS—A.P.T. GRADE V (£814 17s. 6d.—£994 5s.).
Commencing salaries according to qualifications and experience.
Particulars of these appointments obtainable from the Borough Architect, Grange House, Stockton Road, Sunderland.
Applications to be received at my office at the Town Hall, by March 22, 1957.
Canvassing will disqualify.
G. S. McINTIRE,
Town Clerk.
5531

COUNTY BOROUGH OF BOURNEMOUTH
BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the appointment of TWO ARCHITECTURAL ASSISTANTS, salary grade A.P.T. II, £609 17s. 6d.—£691 17s. 6d. p.a.
Candidates must have had some experience after passing the Intermediate Examination of R.I.B.A. Successful candidates will be appointed at present salary if within the incremental scale.
Application forms and further particulars from Borough Architect, Town Hall, Bournemouth. Completed applications to reach me by 10 a.m., 23rd March, 1957.
A. LINDSAY CLEGG,
Town Clerk.
5475

BOURNVILLE VILLAGE TRUST
APPOINTMENT OF DEPUTY TO CHIEF ARCHITECT
Applications are invited for the above position. The person appointed will be concerned with the development of the Bournville Estate and with Architectural work for other bodies.
Candidates must be Associates of the R.I.B.A. and Registered Architects. They should have good all-round experience of Architectural practice, be good designers and thoroughly competent to deal with schemes from sketch stage to final account. Administrative ability and a good knowledge of housing and estate development are necessary.
The post carries a good starting salary and membership of a Pension Scheme. There are good prospects.
Forms of application may be obtained from the Chief Architect and should be returned together with not more than three recent testimonials by 1st April to the Chief Architect, Bournville Village Trust, Estate Office, Weoley Park Road, Birmingham, 29. 5470

CITY OF OXFORD
CITY ARCHITECT AND PLANNING OFFICER'S DEPARTMENT
CHIEF PLANNING ASSISTANT. Salary within the range £999 10s. to £1,230 per annum to take charge of the Planning Section of the Department. Candidates must have had a wide experience of Town Planning practice and be qualified members of the Town Planning Institute; additional qualifications an advantage. Car Allowance (Essential User) on the Council's Scale. Housing accommodation provided for the successful applicant, if required. Permanent, pensionable post; medical examination.
Forms of application and conditions of appointment from The City Architect and Planning Officer, Town Hall, Oxford, to whom completed forms must be returned by 23rd March, 1957.
HARRY PLOWMAN,
Town Clerk.
Town Hall,
Oxford. 5508

CHISLEHURST AND SIDCUP URBAN DISTRICT COUNCIL
Area 8,957 acres. Population 87,000.
APPOINTMENT OF ASSISTANT QUANTITY SURVEYOR
Vacancy in Quantity Surveyor's Section of Engineers and Surveyor's Department. Salary A.P.T. III (£655—£784 2s. 6d. plus London weighting). Housing if required. Preference to approved Intermediate examination qualification.
Applications with age, full details of experience, past and present employment and names of two referees, to Clerk, Sidcup Place, Sidcup, Kent. Closing date 16th March, 1957. 5506

LANCASHIRE COUNTY COUNCIL
SECTIONAL PLANNING OFFICERS, salary A.P.T. Grade VI (£902—£1,107), required at the Divisional Planning Offices at LIVERPOOL and MANCHESTER.
Candidates should possess a recognized qualification in architecture, civil engineering, surveying and/or planning. Considerable experience in the preparation of Town Maps and schemes for areas of comprehensive redevelopment is essential and candidates should possess a sound knowledge of town and country planning legislation.
Applications, stating appointment applied for, giving age, qualifications, present appointment, experience and two referees to the County Planning Officer, East Cliff County Offices, Preston, by March 25 1957. 5532

KINCARDINE COUNTY COUNCIL
Applications are invited for appointment as a PLANNING ASSISTANT in the office of the County Architect and Planning Officer Stonehaven. Salary scale A. and P. VII and VIII, £875 to £1,005. Applicants must have the A.M.T.P.I. qualification or equivalent. Medical examination under Superannuation Scheme. Applications, including the names of three referees, should be lodged with the undersigned not later than March 23.
JOHN SLEVIN,
County Clerk.
33, Evan Street, Stonehaven.
March 1, 1957. 5520

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE
CITY ARCHITECT'S DEPARTMENT
The City Architect will be pleased to receive applications for the following established posts in the Quantity Surveying Section of his Department:—
(*a*) SENIOR QUANTITY SURVEYOR, A.P.T. Division, Grade V (£814 17s. 6d.—£994 5s. per annum).
(*b*) SENIOR ASSISTANT QUANTITY SURVEYOR, A.P.T. Division, Grade IV (£727 15s.—£907 2s. 6d. per annum).
The above posts will be subject to the provisions of the Local Government Superannuation Acts, 1937-1953, and to one month's notice on either side. Successful candidates will be required to pass a medical examination.
Applications, stating position applied for, age, particulars of training, qualifications, experience, present and past appointments, together with the names and addresses of two persons to whom reference may be made, should be addressed to George Kenyon, A.R.I.B.A., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle-upon-Tyne, 1.
JOHN ATKINSON,
Town Clerk.
Town Hall, Newcastle-upon-Tyne, 1.
March 1, 1957. 5521

LONDON COUNTY COUNCIL
Vacancies for ARCHITECTS, Grade III (up to £987) and ARCHITECTURAL ASSISTANTS (up to £818) for widespread construction programme which includes houses, blocks of flats, schools of all types and various public and industrial buildings. Application forms and particulars from Architect (AR/EK/A/1), The County Hall, S.E.1. (1189) 5498

EAST KILBRIDE DEVELOPMENT CORPORATION
Applications are invited for the post of SENIOR ARCHITECT (Grade I)—Salary Scale £1,295 per annum rising by annual increments of £55 to £1,515 per annum. Applicants should be fully qualified and experienced architects capable of directing and supervising a section of the building work of the Corporation. They should have experience in the design and construction of residential areas, industrial and commercial works, and the handling of large contracts. The commencing salary will be in accordance with qualifications, experience, etc. The appointment is subject to the Corporation's Conditions of Service and Superannuation Agreement. Medical examination. A house or flat will be made available if required. Application forms from the General Manager, Torrance House, East Kilbride, to whom they should be returned not later than March 27, 1957. Canvassing, directly or indirectly, of the members of the Corporation will constitute an absolute disqualification. 5519

COUNTY BOROUGH OF SOUTHAMPTON
BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the following permanent appointments:—
(*a*) SENIOR QUANTITY SURVEYOR, Grade IV—V (£727—£994).
(*b*) ASSISTANT QUANTITY SURVEYOR, Special Grade (£707—£861).
Candidates should possess appropriate qualifications and state housing needs.
Application forms from the Borough Architect, Civic Centre, Southampton. Closing date 18th March, 1957. 5507

Architectural Appointments Vacant

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

ASSISTANT ARCHITECTS AND SHOPFITTING 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

TAKER-OFF. Applications are invited from experienced and suitably qualified persons. 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. 5157

ARCHITECTURAL ASSISTANTS required, London. Salaries £500—£650. Write: W. Leslie Jones, High Street, Great Missenden, Bucks. 5362

EXPERIENCED ARCHITECTURAL ASSISTANT required by Architects with general practice in Barnet, Hertfordshire. Apply Box 5423.

A HARD Working, social minded Public School man is required as a SENIOR ASSISTANT in a small but busy West of England practice. If suitable might lead to partnership. Box 5485.

SENIOR and JUNIOR ARCHITECTURAL ASSISTANT required for small office in Bath area. Box 5465.

ARCHITECT'S ASSISTANT required for varied work on housing, office and industrial building. Some travelling involved. Applicant should be in early twenties with at least two years' experience in an architect's office and capable of undertaking projects with a minimum of supervision. Write giving full particulars of experience and salary required to Personnel Manager, Schweppes Ltd., Connaught Place, W.2. 5473

ARCHITECTURAL DRAUGHTSMAN required to work in London for exhibition and showroom work. Must be neat, accurate and quick with good knowledge of construction. Salary by arrangement. The post is permanent and pensionable. Applications should be made to Sven M. Sternfeldt, L.R.I.B.A., Messrs. Pilkington Brothers Ltd., Glass Manufacturers, 29/30, St. James's Street, London, S.W.1 5491

ARCHITECTURAL ASSISTANTS of Intermediate Standard required in West End office for hospital and commercial work. Salary £600, or by arrangement. Luncheon Vouchers. Apply Box 5493.

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

ARCHITECTURAL DRAUGHTSMAN experienced in complete working drawings from sketch plans for small private practice covering all types of work except ecclesiastical. Salary fully commensurate with ability. A. V. Farrier, A.R.I.B.A., 7 Thornton Hill, S.W.19. 5484

ARCHITECT also STUDIO MASTER at school of Architecture requires ASSISTANT now studying for intermediate. Office in S.W.1 district. Opportunity for good experience and assistance with study. Time provided for attending architectural school. Box 5466.

ASSISTANT required by Architect starting new business in central London district. Salary £7-750. Box 5464.

TAYLOR WOODROW CONSTRUCTION LTD., require ARCHITECTURAL ASSISTANT with R.I.B.A. Intermediate, and contemporary outlook. Good salary, commensurate with experience, pension & sickness scheme. Canteen facilities. Apply Personnel Manager, Ruislip Road, Southall, Middlesex. 5469

MANCHESTER architect requires another ASSISTANT in his small office having contemporary outlook to cope with expanding practice. Now has 1 senior assistant and a secretary. Plenty of hard and interesting work for keen person. Box 5463.

CAPABLE SENIOR ASSISTANT required to take control of small but expanding office in the North East. Varied and interesting work. Good prospects for a man with ability and initiative. Staff pension scheme. Salary according to ability. Box 5462.

ROBERT MATTHEW & JOHNSON-MARSHALL have vacancies in their Edinburgh office for experienced JUNIOR ARCHITECTS at salaries up to £750 per annum, and in their London office for recently qualified JUNIOR ARCHITECTS at salaries up to £650 per annum. Applications should be marked "Confidential," and addressed to 31, Regent Terrace, Edinburgh 7, or to 24, Park Square East, London, N.W.1. 5444

ASSISTANT ARCHITECTS required. Work includes hospitals, a technical college, flats, a ship interior and university work. Applicants should apply to Pite Son & Fairweather, 6, Queen Anne's Gate, Westminster, S.W.1, giving particulars of qualifications, experience and salary required. 5460

ARCHITECTURAL ASSISTANTS required for work in Home Counties and North-west England. Salary about £800 p.a. according to qualifications and experience. Full hotel expenses met five day week. Apply by letter in first instance to Raglan Squire & Partners, 3, Hobart Place, S.W.1. 5459

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

WANTED. JUNIOR ASSISTANT for busy practice. Capable working drawings from sketch plans. Write giving particulars and salary required to: Meredith & Partners, 6, Victoria House, Goodmayes, Essex. 5420

ARCHITECT. Excellent opportunity for recently qualified A.R.I.B.A. for interesting work in busy general practice. Manchester area. Box 5426.

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

WEST COUNTRY firm of Chartered Architects, shortly opening additional branch office, have vacancy for ASSISTANT of Intermediate to Final standard, able to work largely on own. Unfurnished flat available at economic rent. State age, experience, salary required, etc., to Box 5435.

SCHERRER & HICKS, 19, Cavendish Square, W.1, require an ARCHITECTURAL ASSISTANT of Intermediate standard, experienced in working drawings and details. Write stating age, experience and present salary. 5442

ENERGETIC ASSISTANT required for small office. Intermediate or Final standard with good office experience. Salary £600—£700 per annum. Interesting work at home and abroad. Write or telephone, Alan S. Raimes, A.R.I.B.A., 6, Holborn Viaduct, E.C.1. City 4201. 5411

ARCHITECTURAL ASSISTANTS required for University and Hospital work. Good salary, dependent on experience. Non contributory pension scheme after probationary period. Three weeks holiday a year, and a five-day week. Reply, stating experience and age to: Thomas Worthington & Sons, 178, Oxford Road, Manchester, 13. 5395

ARCHITECTURAL ASSISTANT required immediately for small busy general practice in W. Riding of Yorkshire. Salary approximately £500—£600 according to experience. Write giving details of qualifications and experience to Box 5405.

SENIOR ASSISTANT required for small busy S. Yorkshire office. Reply stating qualifications, experience and salary required to Box 5404.

GOLLINS, MELVIN, WARD & PARTNERS have a vacancy for a school-trained ASSISTANT interested in colour and model making. 5-day week, quarterly bonuses. Telephone WELbeck 9991. 5401

N.E. SCOTLAND. Opportunity for recently qualified Architect as ASSISTANT in varied general practice. Write Box 5324.

ARCHITECTURAL ASSISTANT required, with about four to five years' office experience. Write or telephone giving full particulars, including age and salary, to Hasker & Hall, Architects, 13, Welbeck Street, W.1 (WELbeck 0051). 5306

ARCHITECTURAL ASSISTANT required in Wembley. Experience in design and construction of industrial buildings and office blocks. Write stating age, experience and salary required to Box No. 5305.

ARCHITECTURAL ASSISTANTS wanted for private practice in Ipswich, Intermediate standard and Juniors required. Applicants should reply, in writing, with full details including age and previous experience, to Box No. 5326.

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. 3152

NORMAN & DAWBARN require ARCHITECTURAL ASSISTANTS at R.I.B.A. Final standard, or qualified, with not less than 5 years' continuous office experience. Salaries in the range of £750 to £850 according to age, also length and type of experience. Applications stating age and details of career should be made in writing to Norman & Dawbarn, 7, Portland Place, London, W.1. 5474

SENIOR ASSISTANT ARCHITECT required in busy London Office. Must be experienced in Commercial work and capable of carrying through new works to completion and Alterations and Extensions. Thorough knowledge of Specification writing, contract procedure and site supervision essential. Apply stating experience and salary, Box 5476.

RATIONALISED BUILDING. ARCHITECT required to take charge of the design work in a rapidly expanding Company with a new approach to the organisation of building. Applicants should be qualified and have had at least 4 years' practical experience. A high standard of design ability is essential. Salary £800 to £1,000 according to experience. Applications in writing to A. H. Anderson Ltd., 66, Victoria Street, S.W.1. 5477

SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS required for Cotswold Office with varied practice. State age, qualifications, experience and salary required. Pyle & Saint, Chartered Architects, Thomas Street House, Cirencester, Glos. 5480

ARCHITECTS' Co-partnership require QUALIFIED ASSISTANTS with experience. Write 44, Charlotte Street, W.1, or telephone Langham 5791. 5482

NORTH AFRICA. Required in Tripoli, an experienced CHIEF ASSISTANT to undertake working drawings from sketch plans. Work is of a varied and interesting character. Initial tour 12 months. Salary £1,000 p.a. Local income tax 8%. Preferably single person. Forward full particulars to Box 5483.

ASSISTANT ARCHITECTS required by British Transport Hotels and Catering Services, located London. R.I.B.A. qualifications or equivalent degree preferable. Salary according to age and experience. Vacancy also for JUNIOR ARCHITECTURAL ASSISTANT. Applicants should have completed their National Service and have had some training in either an approved Architectural School or Architect's office. Apply in writing, giving full personal details to Officer for Personnel, Hotels and Catering Services, St. Pancras Chambers, London, N.W.1. 5472

DRAUGHTSMAN (WORKS ENGINEERING). A vacancy exists in a light engineering firm in the Ilford area for a draughtsman with factory layout experience. Practical building, electrical or mechanical knowledge would be an advantage but a good mechanical draughtsman would be accepted. A technical background of at least Ordinary National Certificate standard would be desirable, although not essential. Write giving full details of experience, qualifications, age and salary, to Box 5513.

ARCHITECTURAL ASSISTANT

IS required in the Architectural Section of the Chief Engineer's Department, Runcorn, of the General Chemicals Division, Imperial Chemical Industries Limited. The successful applicant will be employed on the design of amenities, offices, canteens and laboratory buildings. Applications are invited from persons holding either a Degree or a Diploma in Architecture, and preference will be given to Associates R.I.B.A. with at least one year's experience since qualification. Pension Fund and Profit-Sharing Schemes. Where necessary assistance can be given to married men in connection with house purchase and removal expenses. Apply giving details of age, qualifications and previous experience, quoting reference (AA16) to:—

STAFF MANAGER,
IMPERIAL CHEMICAL INDUSTRIES LIMITED,
GENERAL CHEMICALS DIVISION,
CUNARD BUILDING,
LIVERPOOL, 3.

5488

ARCHITECTURAL ASSISTANTS required by the National Coal Board (Welfare Branch) for their Divisional Headquarters in Edinburgh. Assistants Grade I—Salary £625 × £25 — £750. Qualifications—Inter R.I.B.A. with 3 years' subsequent practical experience or equivalent. Assistants Grade II—Salary £520 × £20 — £615. The point of entry will depend on qualifications and experience. The work involved covers a wide and interesting field, including Pithead Baths, Medical Centres, Canteens and Social Centres. Applications, giving full details of age, education, qualifications, experience, present post and salary, to Divisional Chief Staff Officer, National Coal Board, 3, Eglinton Crescent, Edinburgh, 12. 5516

TWO ARCHITECT'S 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 5503.

CITY ARCHITECTS require ASSISTANT, Intermediate standard, with office experience. Five-day week. Phone London Wall 3825. 5502

WANTED. ASSISTANT for small City Office. Direct responsibility. Salary £500—£650. Tel. CEN 5766, or write Box 5501.

TAKER-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

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.

ASSISTANTS required by busy West End Architects. Apply stating age and qualifications to Box 5510.

F. W. WOOLWORTH & CO. LTD.—Architects Department—Kensington District Office. Applications are invited for the following appointment:—

ARCHITECTURAL ASSISTANT of Intermediate R.I.B.A. standard, capable of carrying out survey, preparing sketch schemes, working drawings and details.

The appointment is permanent and pensionable. Five-day week. Dining room facilities. Application stating age, experience, qualification and salary to District Architect, F. W. Woolworth & Co. Ltd., 26/40, Kensington High Street, London, W.8. 5529

ARCHITECTURAL ASSISTANTS all grades required. Pleasant working conditions. Five-day week. Luncheon vouchers. Write: J. Seymour Harris & Partners, 4, Greenfield Crescent, Birmingham 15. 5524

ARCHITECTURAL ASSISTANT required by NYASALAND GOVERNMENT P.W.D. on contract for tour of 24-36 months in first instance. Fixed salary of £1,100 a year. Gratuity at rate of 10% of total salary drawn. Outfit allowance £30. Free passages. Liberal leave on full salary. Candidates, preferably single, should have passed Intermediate R.I.B.A. and have had a minimum of 5 years' experience in an Architect's office. They should be good draughtsmen with sound knowledge of construction and be capable of carrying out site surveys including topographical work. Experience of architecture in tropical climates an advantage. Write to the Crown Agents, 4, Millbank, London, S.W.1. State age, name in block letters, full qualifications and experience and quote M2B/42207/AG. 5504

ARCHITECT required by Concrete Limited, manufacturers of Bison Floors and Frame Structures, as sales representative in the Birmingham area. Requirements: Professional qualification, preferably by degree, with sound knowledge of modern building construction, to be able to discuss with architects and engineers the best use of the company's services and products; good education and social background essential; pleasant personality; willingness to work hard and use initiative; age 27 to 30.

Architects only are invited to reply.

Remuneration by salary and commission. Car. Expenses. Life assurance and pension and participation in the company's Share Bonus Scheme.

Applications will be confidential and should give complete details of education, training, experience, hobbies, etc., and enclose recent photograph or snap (returnable). Interview in Birmingham.

Mark envelope "A" in top left-hand corner and send to:—Concrete Limited, 16, Northumberland Avenue, London, W.C.2. 5530

GUILDFORD. ARCHITECTURAL DRAUGHTSMAN required to assist Partner in preparation of working drawings, specifications, surveying, etc.—Apply stating experience and salary required to Angus McDonald & Partners, 156, High Street, Guildford. 5523

JUNIOR required to train as an Architect, preferably straight from school and must have G.C.E. at ordinary level, at least, including English and Mathematics.—Applications to Alan A. Briggs, F.R.I.B.A., 10, Fleet Street, London, E.C.4. 5522

ARCHITECTURAL ASSISTANT of Intermediate standard required for a small busy office in Kensington. Write stating experience and salary required. Box 5505.

DRAUGHTSMEN (Architectural) required in the Architects' Department of a large North Lincolnshire Steelworks for work on expansion and development projects, embracing a wide variety of office, laboratory and industrial buildings.

Applicants should be competent draughtsmen with a sound knowledge of modern building techniques.

The positions are permanent for suitable applicants and amenities offered include pension scheme, facilities for sports and numerous social activities, etc.

Applications, giving age, experience and salary required, should be made in writing to:—Employment Officer, Appleby-Frodingham Steel Company, Scunthorpe, Lincs. 5525

Architectural Appointments Wanted

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

COMPETENT ARCHITECTURAL ASSISTANT seeks post in London office. Five years' office experience and part finals. Please write Box 5497.

ARCHITECTURAL ASSISTANT available immediately for part-time post in London area. If both sides satisfied leading to full-time employment. University graduate (1951). Experience: factories, offices, block of flats, perspective, R.C. detailing. All letters answered. Box 5499.

LADY ARCHITECTURAL ASSISTANT, 29 years, wishes post in City architect's office; Intermediate R.I.B.A.; 2½ yrs. office experience. Salary £600 p.a. Write Box 5496.

Other Appointments Vacant

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

TOWN PLANNER/ARCHITECT, fully qualified, urgently required in West Indies. Apply Box 5489 giving details.

QUANTITY SURVEYOR required, experienced to interim or approaching final standard, or qualified, for Grimsby branch office. Extensive architectural and engineering work. Apply with details, salary, availability, etc., to Wm. Saunders & Partners, 24 Castlegate, Newark-on-Trent. 5494

TECHNICAL ASSISTANT (Estate) required in Manchester Office. Applicants must be members of a recognised professional institute with experience of management of scattered properties of all types but mainly industrial. Sound knowledge of property law, leases, dilapidations, valuations for purchase and rent, rating, and office administration required with ability to initiate action in such matters and to handle them with limited supervision. Salary range £945 to £995 per annum. Applications giving age, experience and qualifications to Divisional Manager, British Road Services Limited, North Western Division, 47, Corporation Street, Manchester 4. 5478

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