The Architects' JOURNAL for December 18, 1958

THE ARCHITECTS' JOURNAL

3329] [Vol. 128

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

ILA	Institute of Landscape Architects. 1, Park Crescent, Portland Place, W.1.	Museum 3473
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 7197
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. 68, Gloucester Place, W.1.	Welbeck 9966
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
JFRO	Joint Fire Research Organisation (DSIR & Fire Offices' Committee). Fire Research Station, Boreham Wood, Herts.	Elstree 1341/1797
LDA	Lead Development Association. 18, Adam Street, W.C.2.	Whitehall 4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1.	Trafalgar 7711
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2.	Gerrard 6933
MOT	Ministry of Transport, Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record, 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers, 10, Storey's Gate, S.W.1	Abbey 5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry. 21, John Adam Street, Adelphi, W.C.2.	Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 58, Portland Place, W.1.	Langham 0064/5
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
NSAS	National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1.	Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5533
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1.	Whitehall 5322/9245
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, E.C.3.	Mansion House 3921
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984/5
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SNHTPC	Scottish National Housing Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5040
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. 34, Berkeley Square, W.1.	Grosvenor 6636

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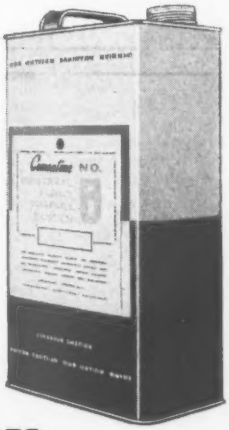

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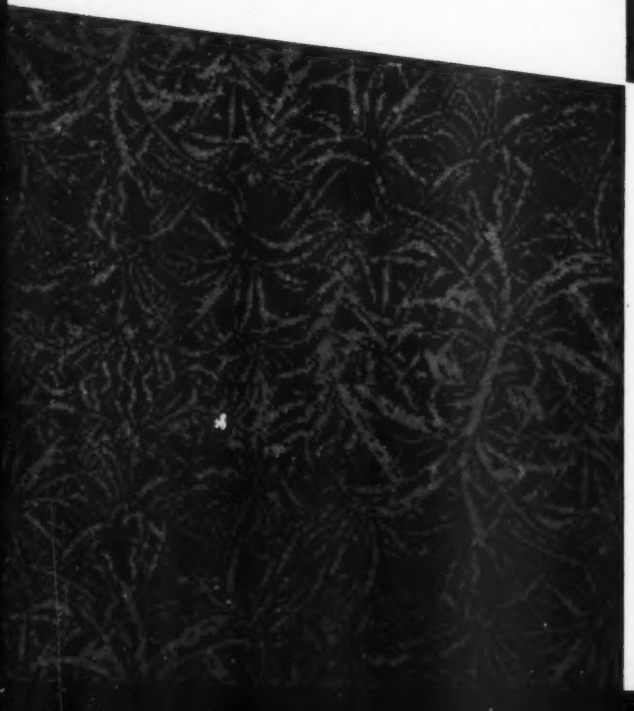

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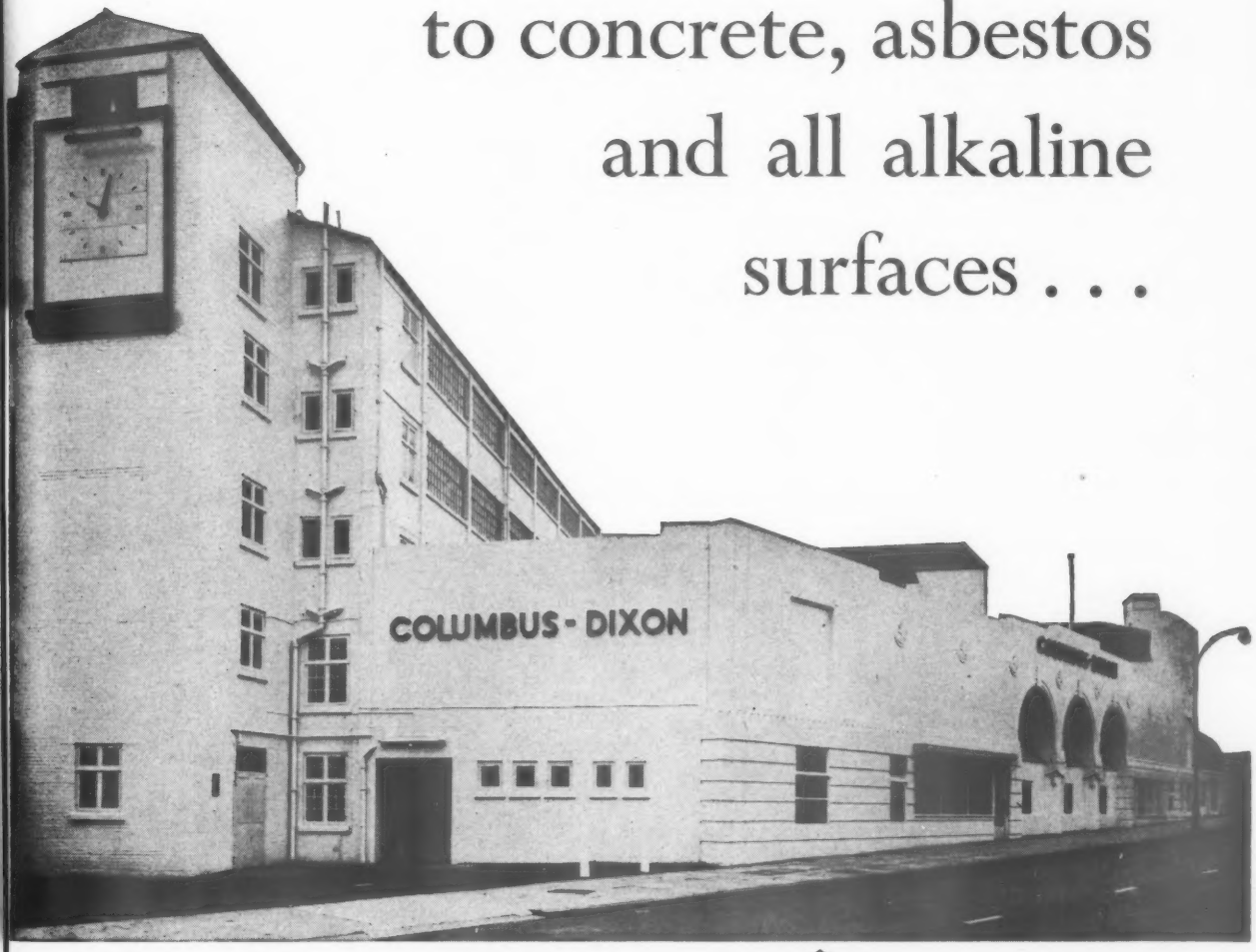

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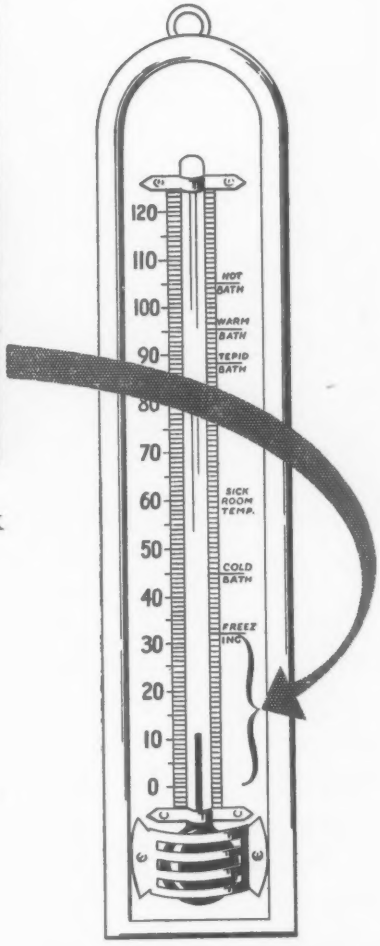
Private house at Grove Estate, Harpenden. Rendered in Sand and Cement. Contractors: Stevenson & Spence Ltd., Harpenden, Herts.



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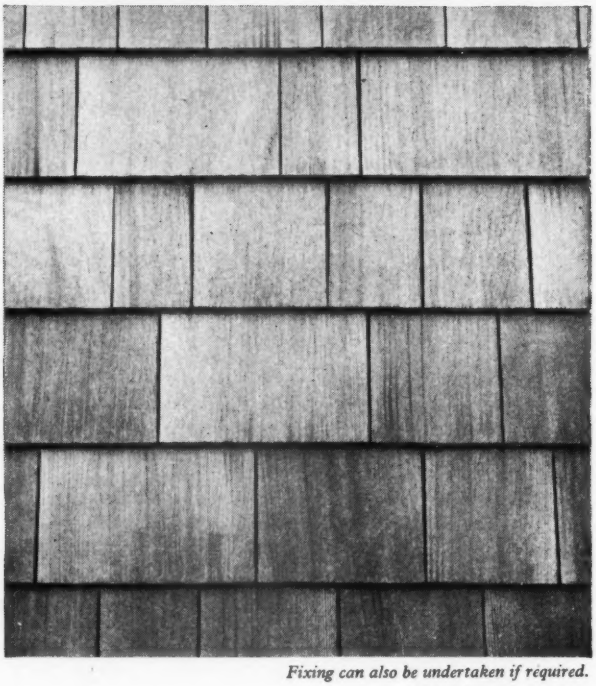

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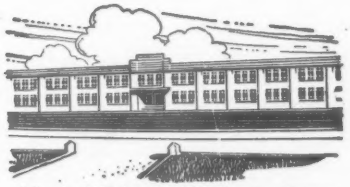
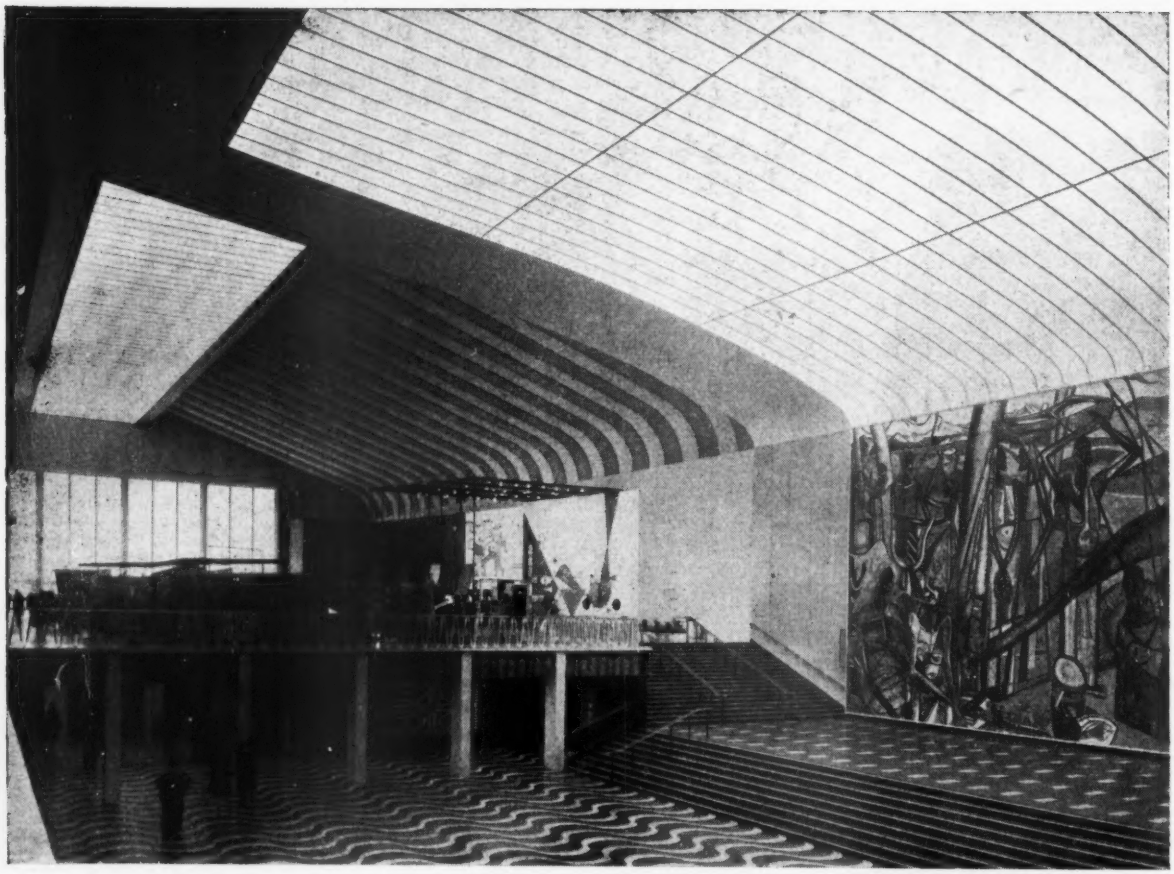


A Standard Maclean Metal Window Installation: Boots Pure Drug Co. Ltd., Airdrie, Lanarkshire Architects: Boots Pure Drug Co. Ltd. *Architectural & Engineering Dept.*



Part of the Belgian Congo Pavilion which incorporates the largest single Lumenated Ceiling installation in Europe. Some idea of the scope of this installation can be obtained by comparing its size with that of the figures in the foreground.

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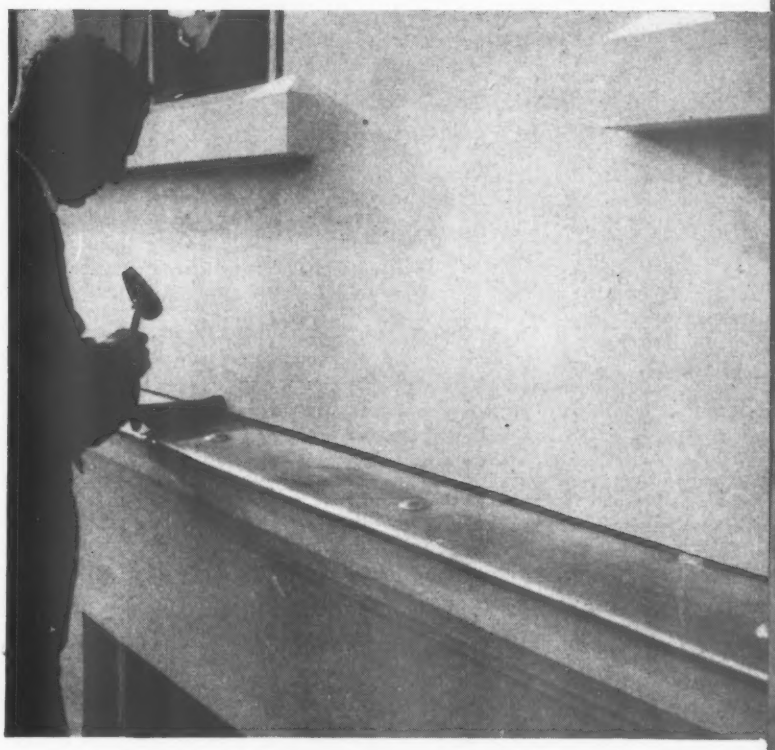
Lead weatherings...



A typical example of lead weatherings for stone-faced buildings.
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B. 153

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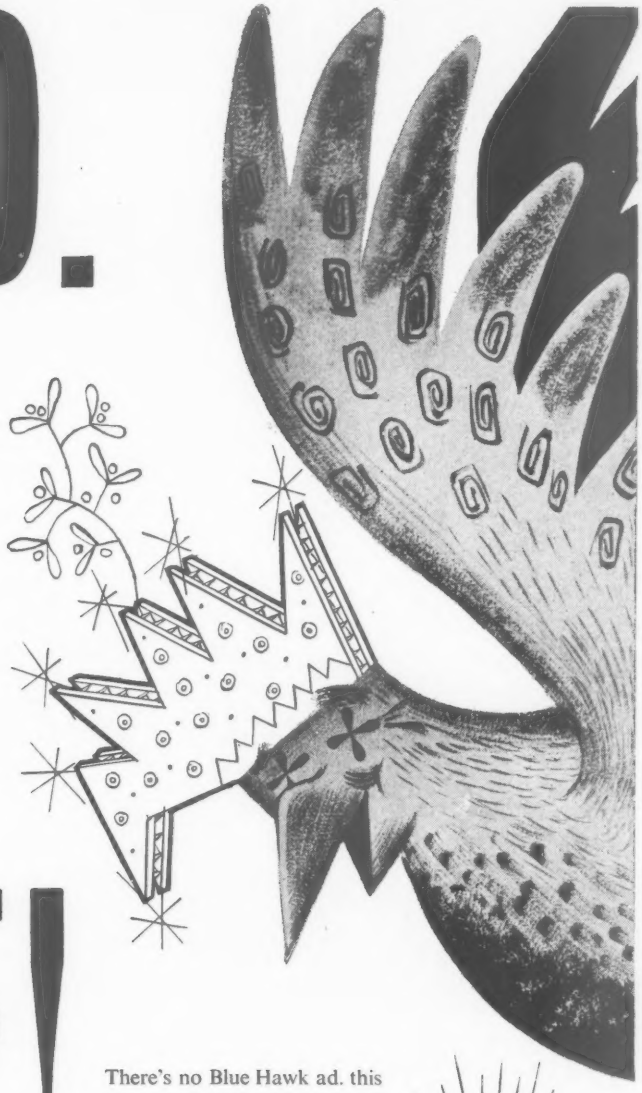

There's no Blue Hawk ad. this issue. The artists can only draw pints; and the copy-writers are busy making last-minute shopping lists.

For once we'll not put a "dry" construction on the affair. The Yule log will avoid the necessity for Thermal Insulation, and now we don't use candles on the Christmas tree, you won't be too worried about fire prevention! Good wishes this Christmas to all our customers—and the few who are not but ought to be.

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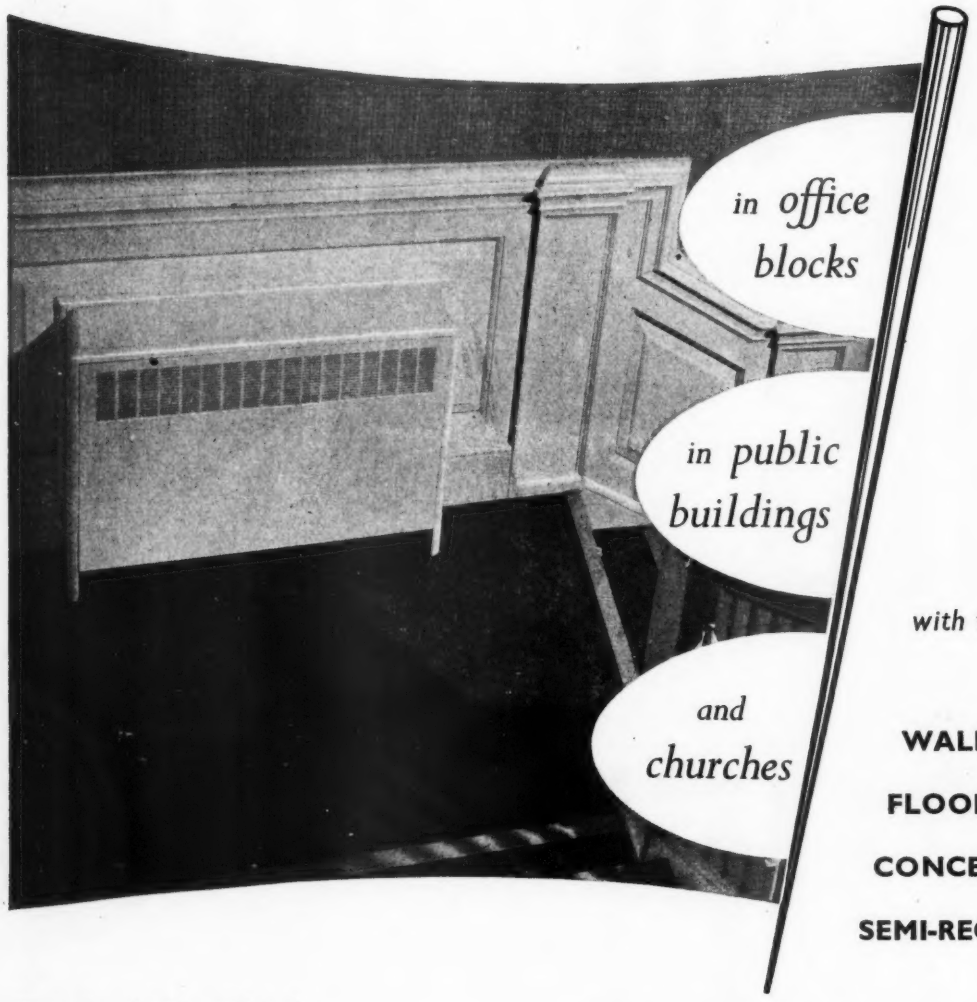

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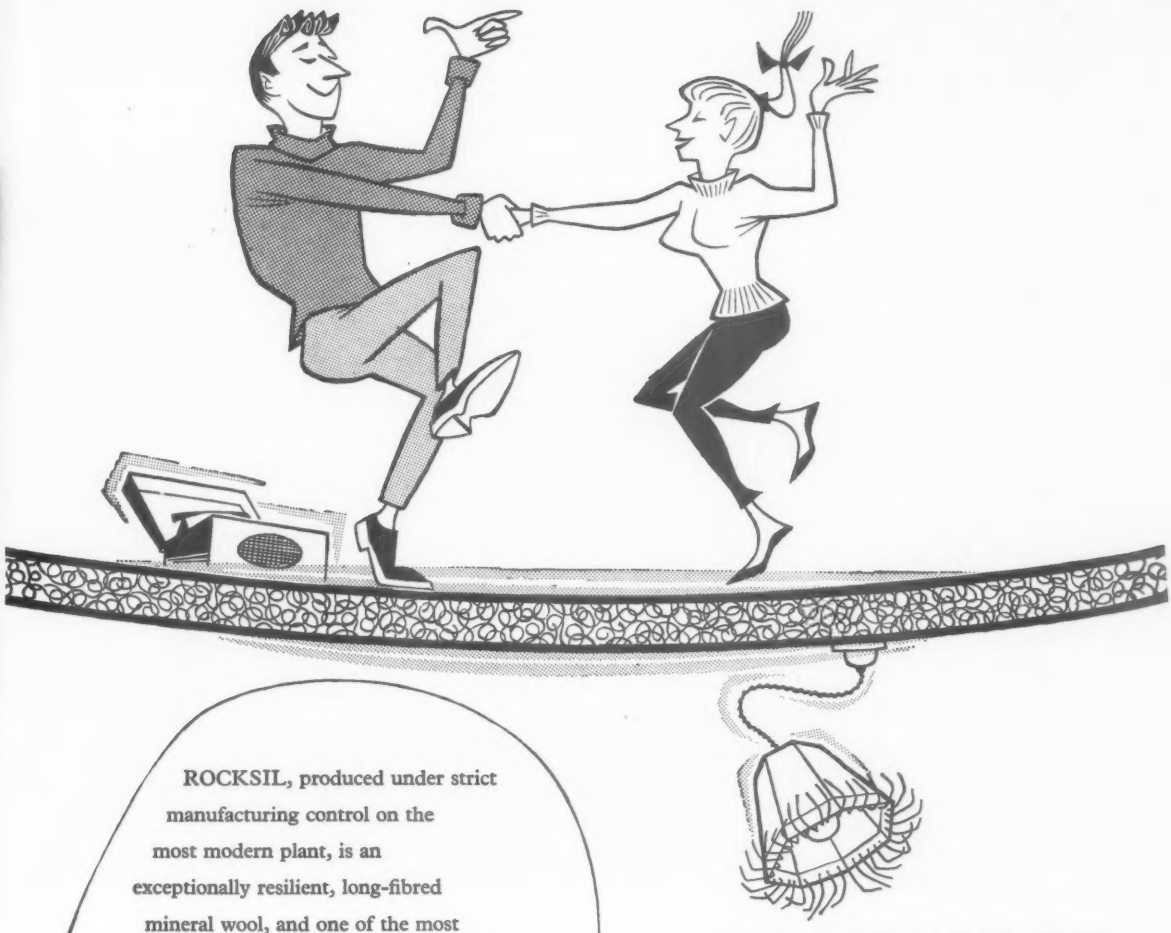

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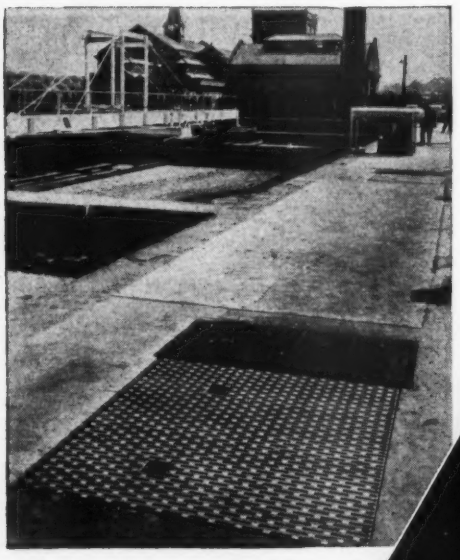

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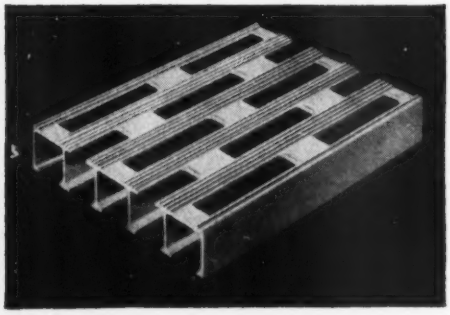

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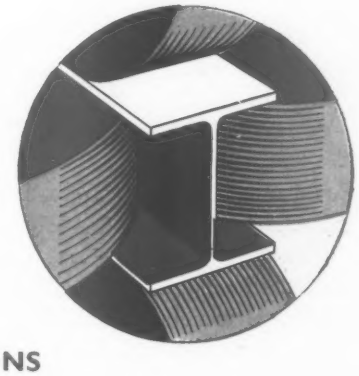

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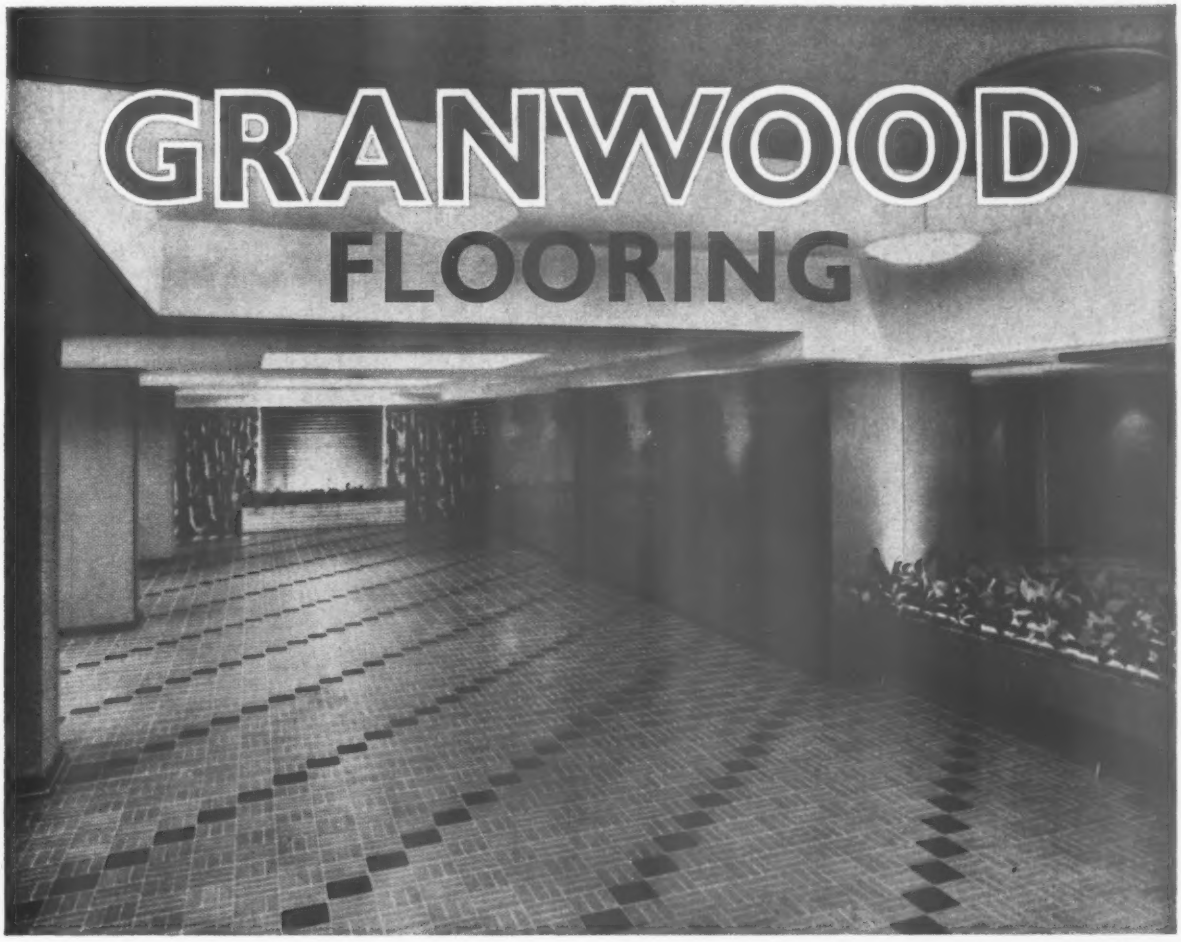


Illustration shows Granwood Flooring in the Banquet Hall, of the Westminster Hotel, Toronto, Canada.

FOR MODERN BUILDING...

- NO EXPANSION OR CONTRACTION
- NO SPLINTERING OR LIFTING
- FIRE AND DAMP RESISTING
- DRY ROT, VERMIN AND INSECT PROOF
- WARM AND SILENT
- CONTAINS NO MAGNESITE
- DOES NOT DISINTEGRATE
- MADE IN EIGHT COLOURS

Please write for fully illustrated leaflet

(Granwood Flooring Co. Ltd. is a member of British Steel Constructions Group of Companies)

GRANWOOD FLOORING CO LTD

RIDDINGS · DERBY Telephone: Loxbrooks 241/2/3 Telegrams: Granfloor, Alfreton

London Office: Bucklebridge House, 87-95 Tooley Street, London, S.E.1 Telephone: HOP 3121

Contrast lends Distinction . . .

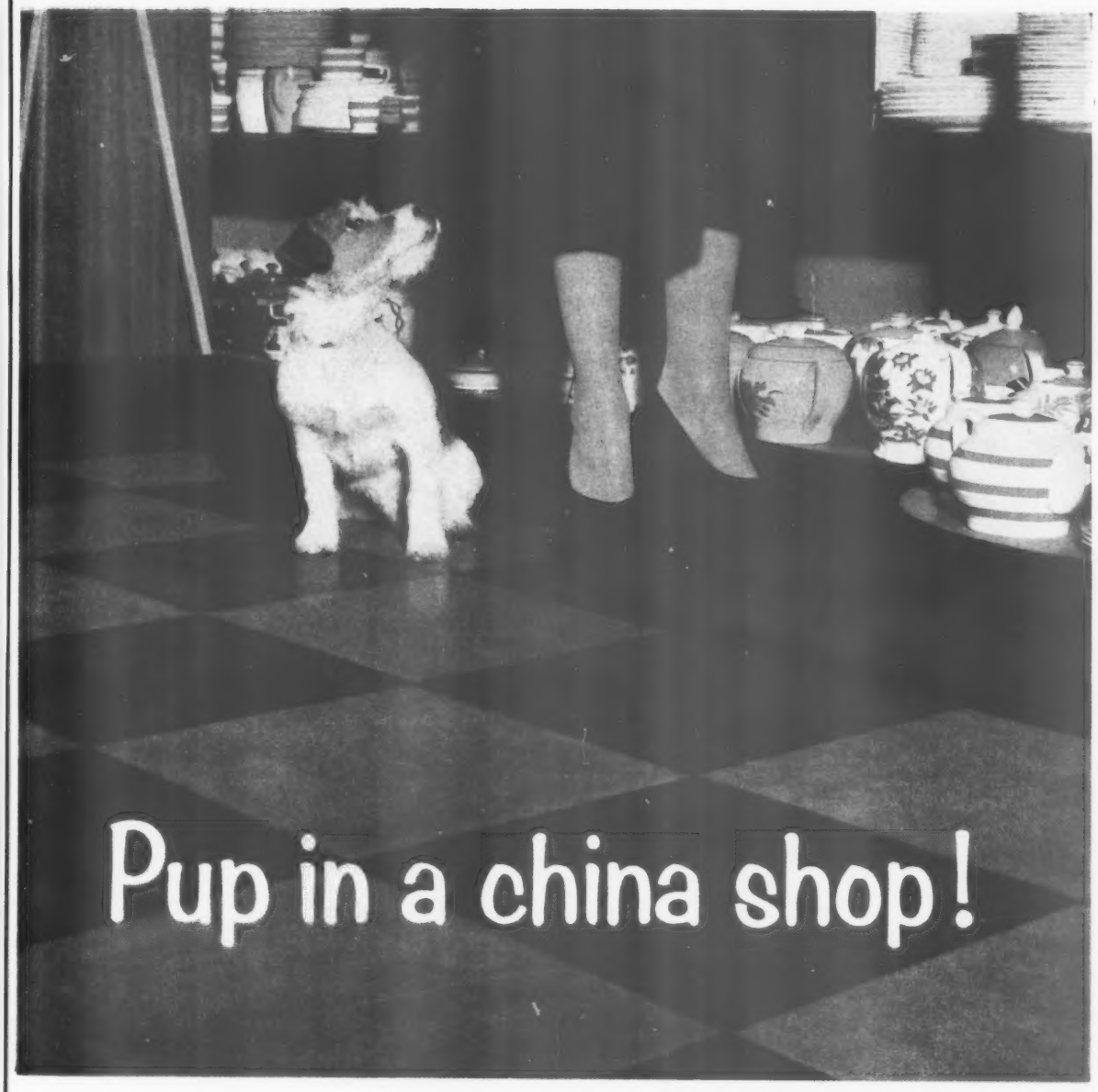
Contrast in brickwork has been used with good effect since Tudor times. Today, its adaptability to the modern idiom is strikingly demonstrated in Gateway House, one of the newest buildings in the City of London. Colourful brick not only allows wide scope for imaginative treatment; it also safeguards the appearance of a building, for good brickwork needs no decorative treatment throughout its long life.

GATEWAY HOUSE, LONDON, EC4
Architects:
Trehearne & Norman, Preston & Partners.

Design in colour—

BUILD IN BRICK

ISSUED BY THE NATIONAL FEDERATION OF CLAY INDUSTRIES, LONDON, WC1



He wants to go, she wants to stay. To him it's dull, to her it's fascinating. Yet what's beneath his paws is well worth looking at . . . one of the magnificent TRINASCOLIN Decorative Floors by Limmer & Trinidad.

These TRINASCOLIN Floors are really something. Not only are they attractive to look at (you can get them in a variety of plain and marbled colours), but they are warm and resilient and superbly comfortable to walk on. And they are produced in several thicknesses.

If you feel, as we do, that the floor of a building should be more than merely a place for your feet, why not write for the Technical Booklets on Limmer & Trinidad Decorative Floorings? Come to think of it, why not write for *all* our descriptive booklets?

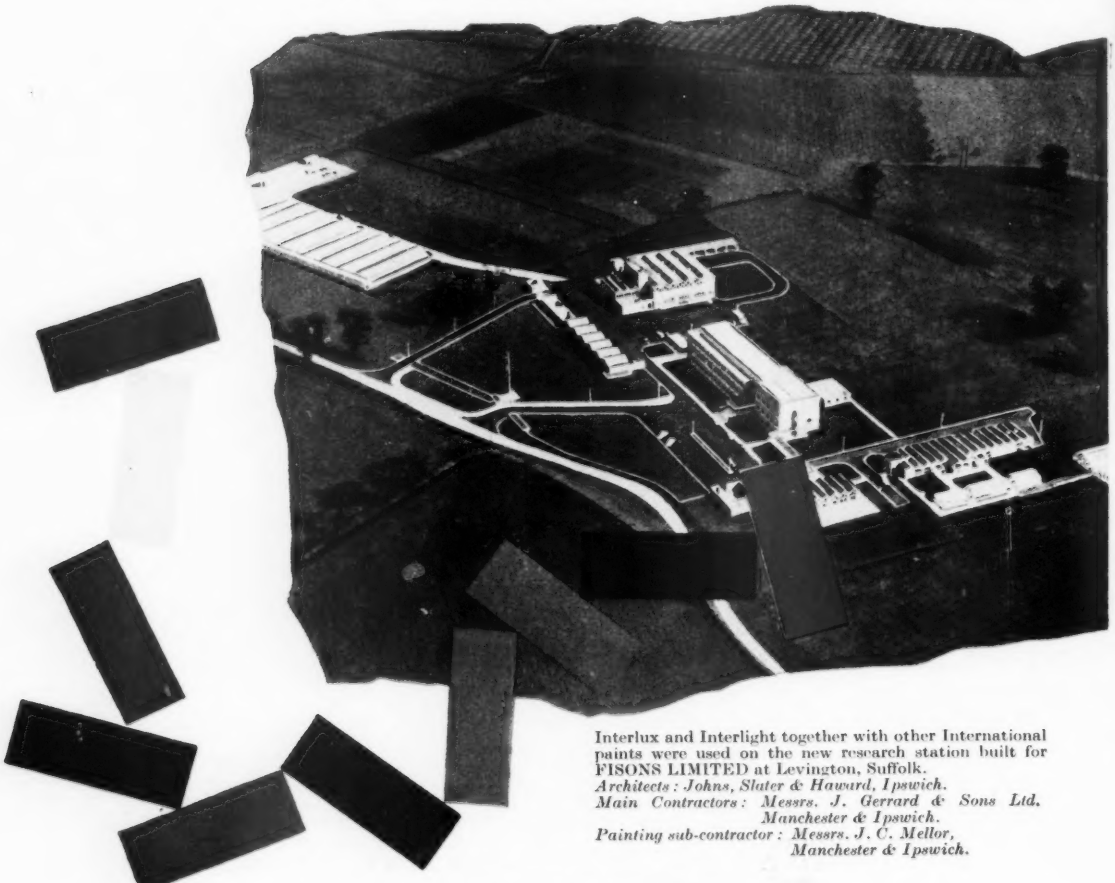
LIMMER & TRINIDAD

DECORATIVE FLOORING

THE LIMMER & TRINIDAD LAKE ASPHALT COMPANY LIMITED, TRINIDAD LAKE HOUSE, 232-242 VAUXHALL BRIDGE ROAD, LONDON, S.W.1

In a growing world...

Today when buildings are springing up all over the country, the demand for high quality paints continues to increase. In formulating special paints for industry, International have combined maximum protective qualities with a planned colour technique. This special attention to colour harmony is designed to promote efficiency by reducing eye-strain and eliminating emotional tension caused by discordant surroundings. Two of the most popular paints in this range are Interlux Gloss Finish and Interlight Emulsion Paint. Full details will be gladly sent on request, and our representatives are always available for consultation.



Interlux and Interlight together with other International paints were used on the new research station built for FISONS LIMITED at Levington, Suffolk.
Architects: Johns, Slater & Haward, Ipswich.
Main Contractors: Messrs. J. Gerrard & Sons Ltd. Manchester & Ipswich.
Painting sub-contractor: Messrs. J. C. Mellor, Manchester & Ipswich.

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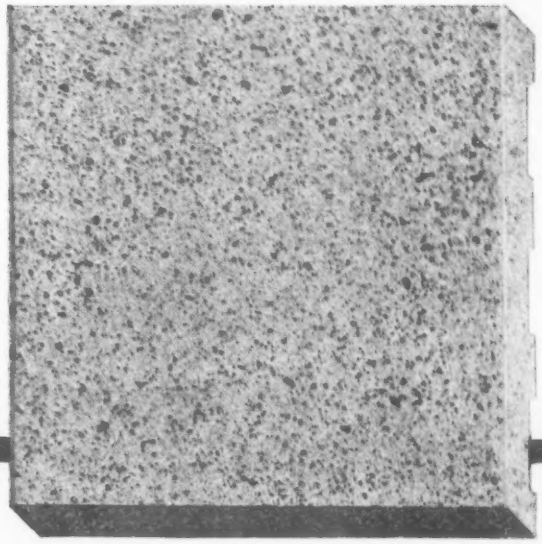
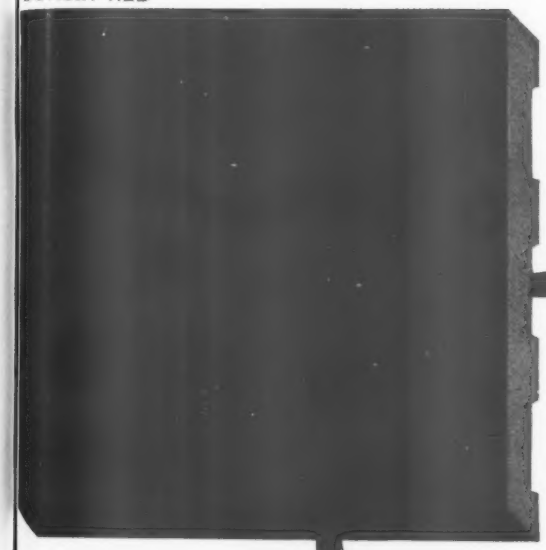
DORSET STONE



DORSET RED



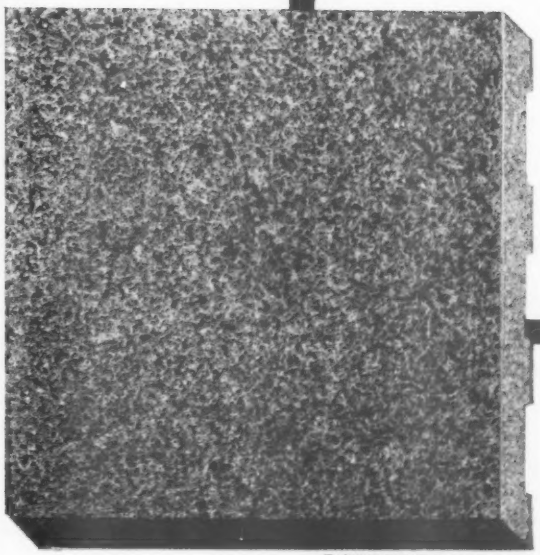
CARTER

FLOORS TO WORK ON

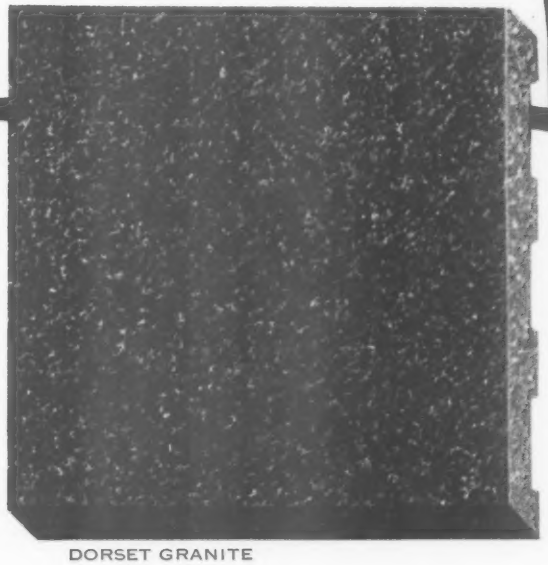
THE DORSET RANGE . . . ROBUST AND RELIABLE

Ceramic Tiles of the Carter Dorset Range are made from the famous Dorset clay, which is renowned throughout the world for its purity and toughness. New production techniques have recently been installed which process this clay into very fine particles, giving the finished tiles high density and uniformity in size and shade.

Samples of these tiles will gladly be sent on request



DORSET ROCKFACE



DORSET GRANITE

CARTER TILES LIMITED
Poole, Dorset. *Poole* 125
Carter & Co. London Ltd, 29 Albert Embankment, SE11. *Reliance* 1471
Manchester Office: 27 Brazennose Street, Manchester 2. *Blackfriars* 2098
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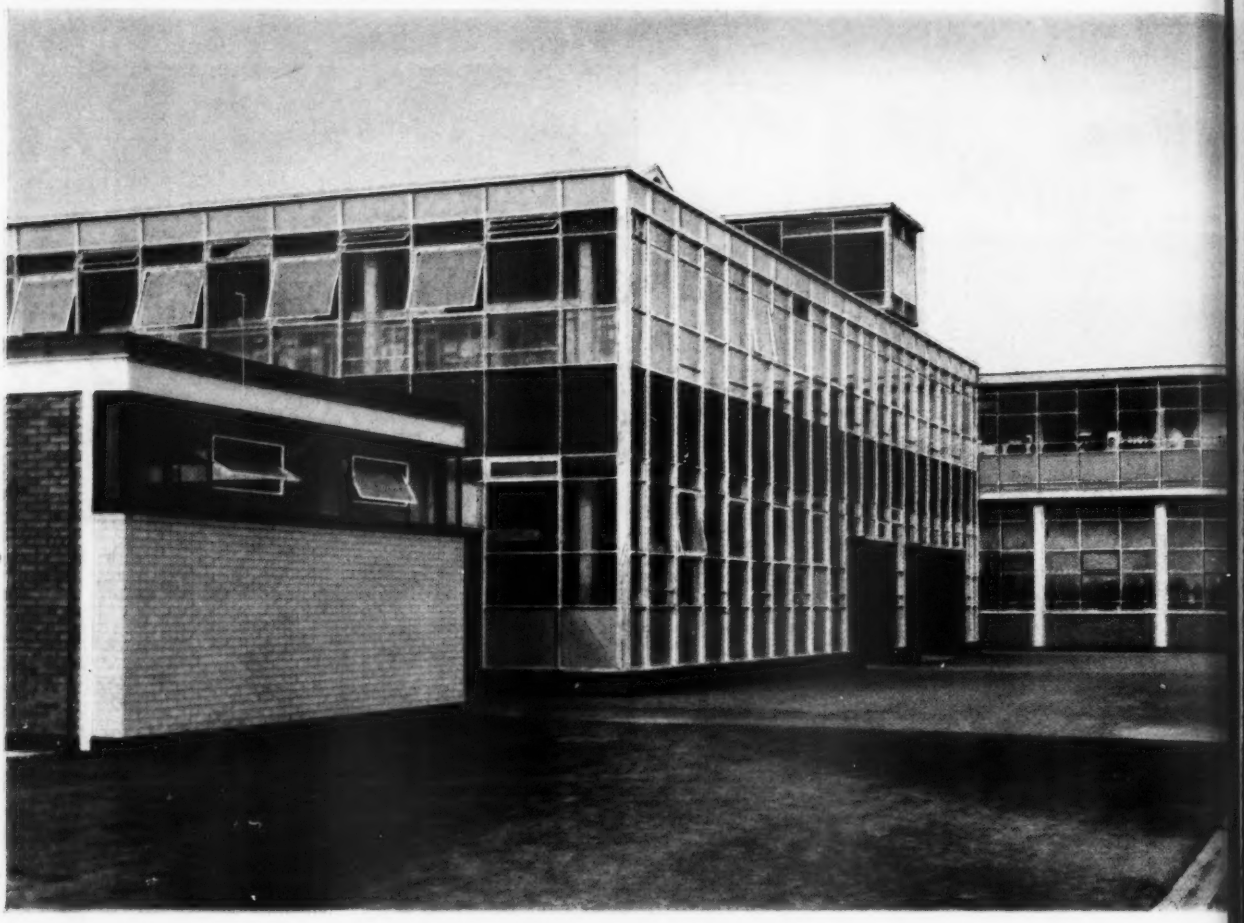
Newcastle-upon-Tyne 2. *Newcastle* 811373.
Carter Tiling Edinburgh, 13 Steads Place, Edinburgh 6. *Leith* 39181



PLASTIC MOULDING BLOCK for MESSRS. ERICSSON TELEPHONES LTD., at BEESTON NOTTS.

Company Architect: F. S. EALES, Dip. Arch. (Nottm.) A.R.I.B.A.
Architect in charge: G. H. SIMPSON, Dip. Arch. (Nottm.) A.R.I.B.A.

'VISTALITE'
CURTAIN WALLING

Timber Curtain Walling can also be supplied.

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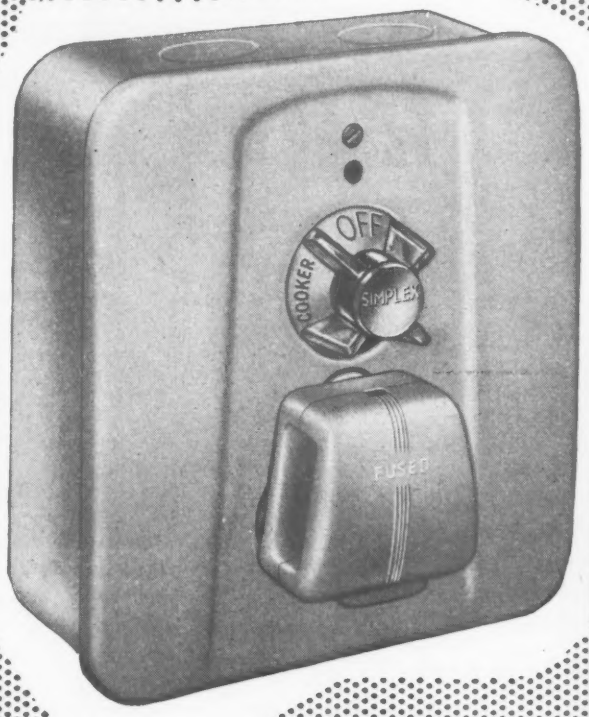


Simplex leadership in domestic electric appliances is further exemplified by this Cooker Control Unit. It's a fine, clean, smoothly contoured job to B.S.1833 dimensions and attractively finished in cream or white as standard or any of the Creda matching colours.

The single rotary control, with four clearly defined positions, operates two independent switches for either individual or combined operation of cooker and auxiliary circuits. Pilot indicating lights are available if required.

Rating: Cooker Switch 30/45 *amp.*
Auxiliary Circuits 13 *or* 15 *amp*

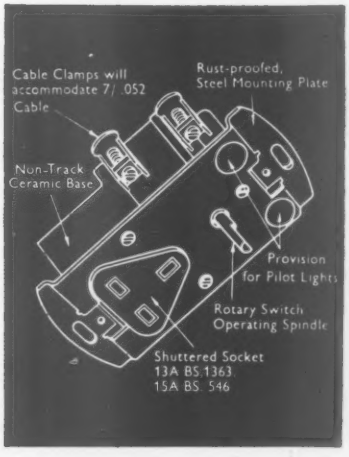
NEW — FROM SIMPLEX

AN ULTRA-SMART

COOKER CONTROL UNIT

AT OUTSTANDING AND

INCOMPARABLE VALUE



22/4[D] 13A
(WITHOUT PLUG)
25/4[D] 15A
(WITHOUT PLUG)
May we send you further details?

Simplex

Contact your nearest Simplex branch at
Alperton, Ashford, Belfast, Birmingham, Bristol, Cardiff, Edinburgh, Gateshead, Glasgow, Leeds, Leicester, Liverpool, Luton, London, Manchester, Norwich, Nottingham, Plymouth, Reading, Sheffield, Southampton.

A TI COMPANY

SIMPLEX ELECTRIC CO LTD · OLDBURY · BIRMINGHAM

AS GOOD AS A SOLID BRICK WALL!

A well known City Chairman once complained to us that intense traffic noise below his windows and excessive audibility between adjacent offices and his own was affecting his efficiency, his privacy and his peace of mind.

We therefore designed and built for him, under a WRITTEN GUARANTEE to solve his problems, sound-proof doors and windows like those illustrated here.

Numerous tests on site and careful laboratory analysis proved that we must reduce the existing sound pressure level of 80 decibels to 35 decibels to achieve the comfort he desired.

So, to fulfil our undertaking, it was necessary to construct each door and window, not only to acceptable dimensions and a high standard of design, but to provide a MINIMUM sound transmission loss of 45 decibels—no less, in fact, than that of a SOLID 4½" BRICK WALL.

Which we very successfully did!

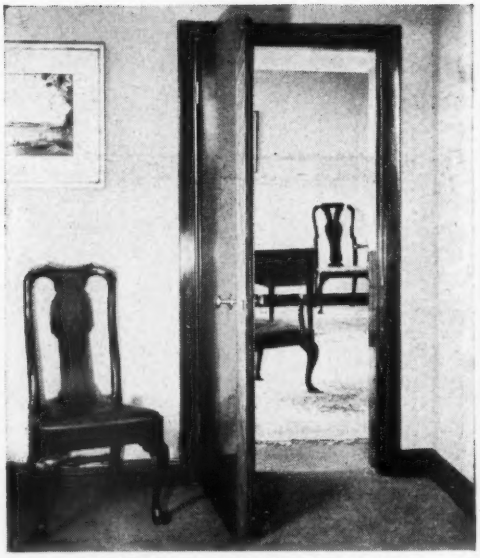


Photo by Courtesy of The Metal Box Co. Ltd.

"Sound-proof communicating door, designed to match existing decor."

These are just two examples of the work of Sound Control Limited, who can analyse, diagnose and cure most problems in sound. No matter what your noise problem may be, we invite you to consult us.

SOUND CONTROL LIMITED

A MEMBER OF THE THERMOTANK GROUP OF COMPANIES

CONTRACTORS IN ACOUSTICS

Photo by Courtesy of The Metal Box Co. Ltd.

"Typical sound-proof window units designed and built to provide the sound transmission loss required."

Colnside Works, West Drayton, Middlesex
Telephone: West Drayton 3685–9 (5 *lines*)

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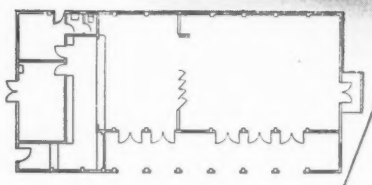
CASE RECORDS FROM THORNS' FILES . . . I

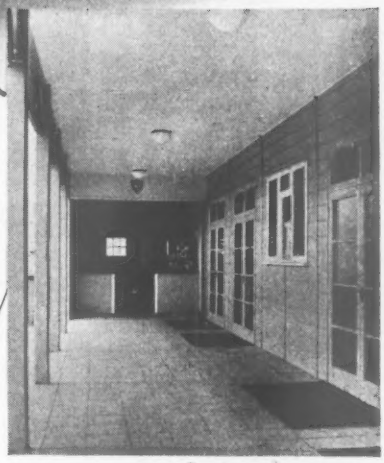
Jobs like this



SPECIFICATION

A building 80' x 40' x 10'9" to eaves, including verandah, plus porch at one end size 10' x 5', Partitions and folding doors, lining, ceiling to verandah, tile flooring and granolithic flooring.

Clear site, excavate and prepare foundations, lay drains, install hot and cold water services, sinks and sanitary fittings, provide electrical installation from new main with all light fittings and electric heating, erect building, fit rain water goods, and decorate throughout.



Photographs by courtesy of Hart's Holiday Club, Leysdown, Isle of Sheppey

demand *versatility... speed... economy...*

This client wanted a club-house building erected at very short notice. THORNS were able to match his requirements closely from their range of standard designs.

Manufacture began at once from existing drawings. By the time the site was ready, an erection team was on hand with the prefabricated sections. Plumbing and electrical services were co-ordinated with the structural work.

In less than two months from the receipt of the order, the building was in use.

The approximate price is available to bona fide enquirers.

THORNS

THORNS' prefabricated buildings, as used at Hart's Holiday Club, are available in basic widths of 10ft., 12ft., 15ft., 20ft., 25ft., 30ft. and 40ft., in any length, and in traditional or modern designs.

THORNS will undertake the complete job, including all sitework; or will erect buildings on a prepared site; or, if desired, will supply the buildings for erection by the client's own labour, with or without Thorns' supervision.

Catalogue of designs and prices on request.

Ask THORNS to quote on *your* job.

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

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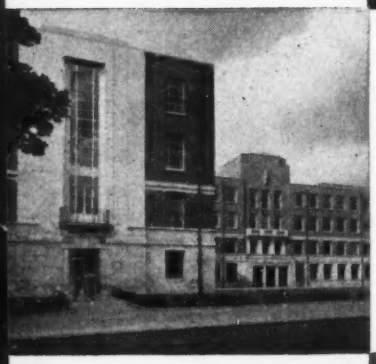
ROYAL TECHNICAL COLLEGE
SALFORD
Architect:
G. Noel Hill

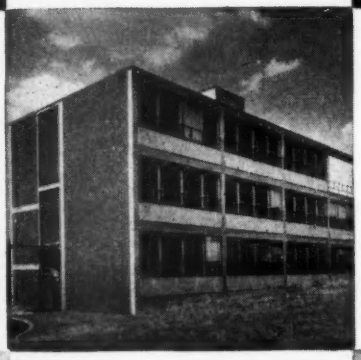
HATFIELD
SECONDARY TECHNICAL SCHOOL
Architects:
Easton & Robertson



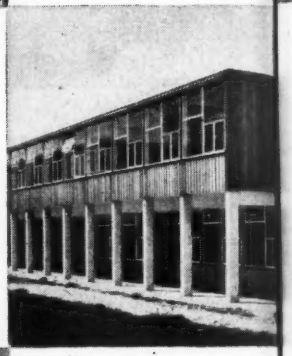
READING TECHNICAL COLLEGE
Architects:
Lanchester & Lodge

WORKINGTON COLLEGE
OF FURTHER EDUCATION
Architect:
John H. Haughan

POOLE COLLEGE
OF FURTHER EDUCATION
Architects:
Elder & de Pierro



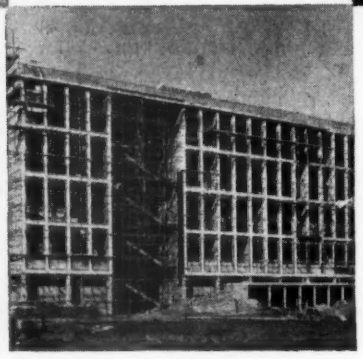
THURROCK TECHNICAL COLLEGE
Architect:
H. Conolly



KEIGHLEY TECHNICAL COLLEGE
YORKS
Architect:
A. W. Glover

BASILDON
FRYERNS COUNTY SECONDARY
TECHNICAL SCHOOL
Architect:
Denis Clarke Hall

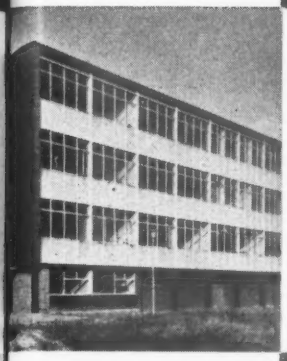
OXFORD
COLLEGE OF TECHNOLOGY,
ART & COMMERCE
Architect:
E. G. Chandler



BOURNEMOUTH
MUNCIPAL COLLEGE
Architect:
John Burton

DUNCAN OF JORDANSTONE
COLLEGE OF ART
DUNDEE
Architect:
James Wallace

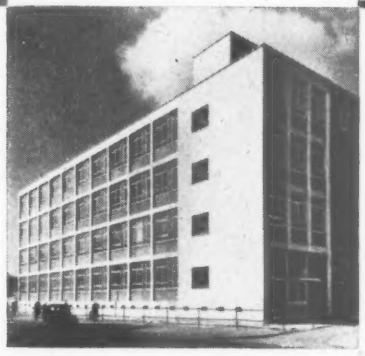
CAMBRIDGESHIRE
TECHNICAL COLLEGE
& SCHOOL OF ART
Architect:
Alister MacDonald



LONGLANDS COUNTY COLLEGE
MIDDLESBROUGH
Architect:
K. J. Caton

N. BEDS. COLLEGE
OF FURTHER EDUCATION
BEDFORD
Architect:
S. Vincent Goodman

QUEEN MARY COLLEGE
MILE END ROAD
Architects:
Playne & Lacey



N.E. ESSEX
TECHNICAL COLLEGE
COLCHESTER
Architect:
H. Conolly

Modern Technical Colleges build with...

R.N. ENGINEERING COLLEGE
PLYMOUTH
Architects Department, M.O.W.

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THE CRITTALL MANUFACTURING CO LTD · BRAINTREE · ESSEX · BRANCHES & DEPOTS THROUGHOUT THE COUNTRY

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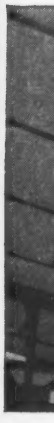


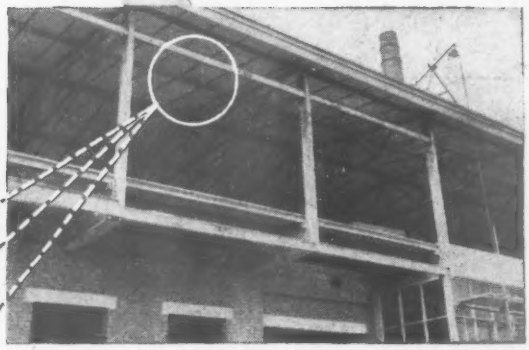
STRET

Pyrodek specified for Bakery

Architects:—
Sanger & Rothwell, A/A.R.I.B.A.

Consulting Engineers:—
S. K. Shufflebotham, M.I.STRUCT.E.

Main Contractors:—
J. & J. Blunn Limited.



A Pyrodek gypsum concrete roof was specified for Parkcake Bakeries' new extensions at Oldham. Unique fire protection, high speed construction, flat dust-free soffit, low maintenance.... This versatile roof construction possesses all these features which are essential for an efficient roof. May we send details? Publication 2.20 will gladly be sent on request.

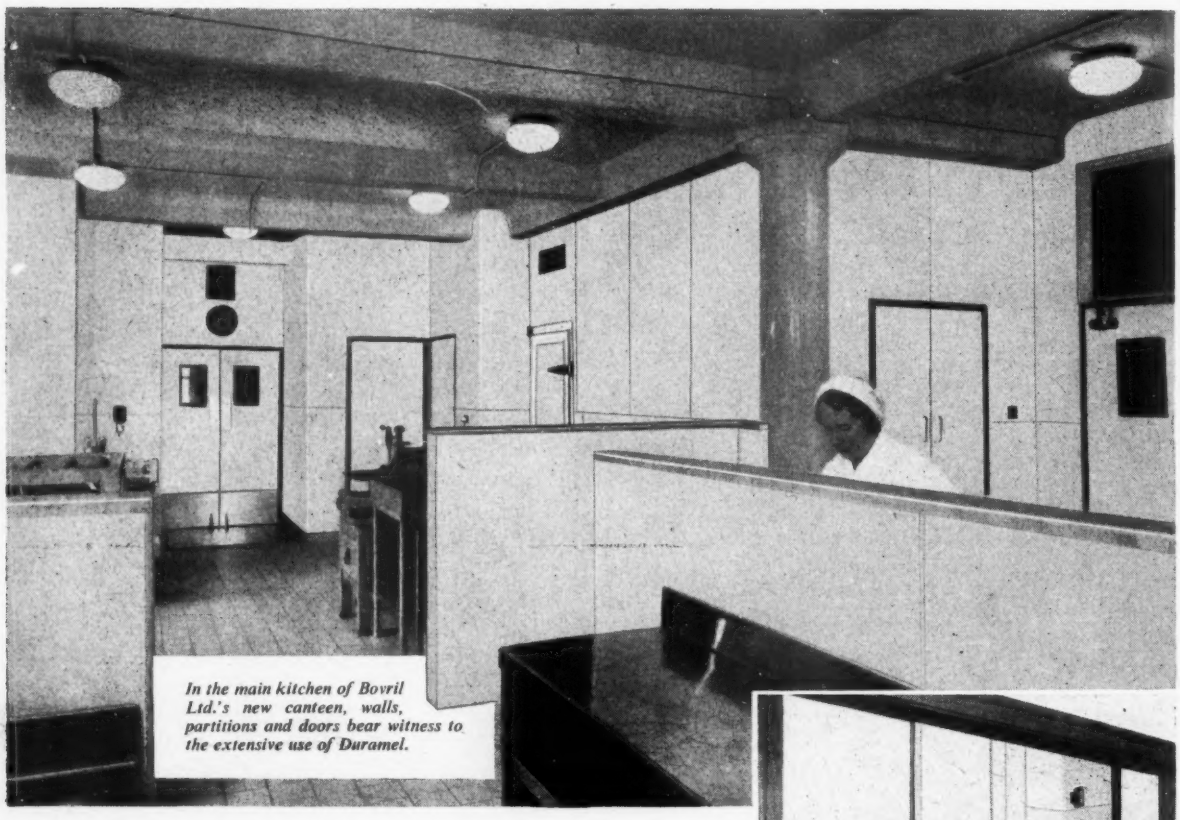
D. ANDERSON & SON LIMITED

STRETFORD, MANCHESTER Telephone: LONgford 4444

OLD FORD, LONDON, E.3 Telephone: AMHerst 9381

BOVRIL LIMITED

save work and wear with Duramel

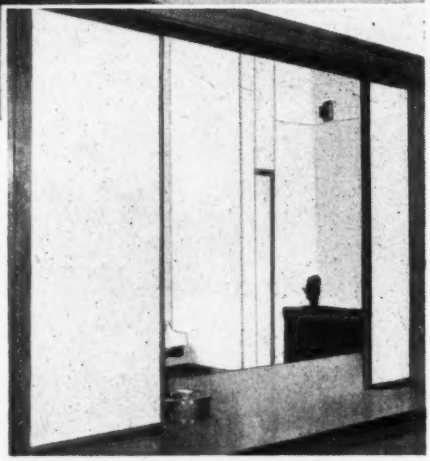


In the main kitchen of Bovril Ltd.'s new canteen, walls, partitions and doors bear witness to the extensive use of Duramel.

The new canteen at Bovril Ltd.'s Central London factory caters for 375. There's no time to waste. No time for unnecessary work. And these famous food manufacturers very properly insist on absolute hygiene.
So they made extensive use of Duramel panels in servery, kitchen and on doors. Duramel resists steam, staining and the common chemical actions caused by foodstuffs. It is thoroughly hygienic and amazingly easy to keep clean. For any kitchen or canteen there is no better choice than Duramel.

Easy to clean : hard wearing

Duramel is not just another plastic. Its melamine surface is permanently bonded *at the factory* to high-grade hardwood plywood. The technique used ensures that these two components are permanently bonded to become virtually one substance. The adhesion problems so often associated with ordinary plastics are thus completely overcome. And since Duramel is delivered ready for use, there are big savings in time, labour and expense.
Duramel is made in three different thicknesses and a wide range of colours and patterns. Your nearest distributor will be delighted to discuss its application to your own particular problems.



Brightness, absolute hygiene and ease of maintenance are among the many advantages of Duramel.

Duramel
THE PLASTIC-FACED PLYWOOD

The Melamine Plastic surface is bonded to first-grade hardwood plywood. It is waterproof, resistant to heat and mild acids, hygienic and wonderfully durable. Supplied in a range of colourful finishes, and plain white.

SIZES : 72″ × 48″, 84″ × 48″, 96″ × 48″, 36″ × 24″, 48″ × 24″.

For the name of your nearest distributor, write to the sole manufacturers :
F. HILLS & SONS LTD., NORTON ROAD, STOCKTON-ON-TEES. TEL: STOCKTON 67141

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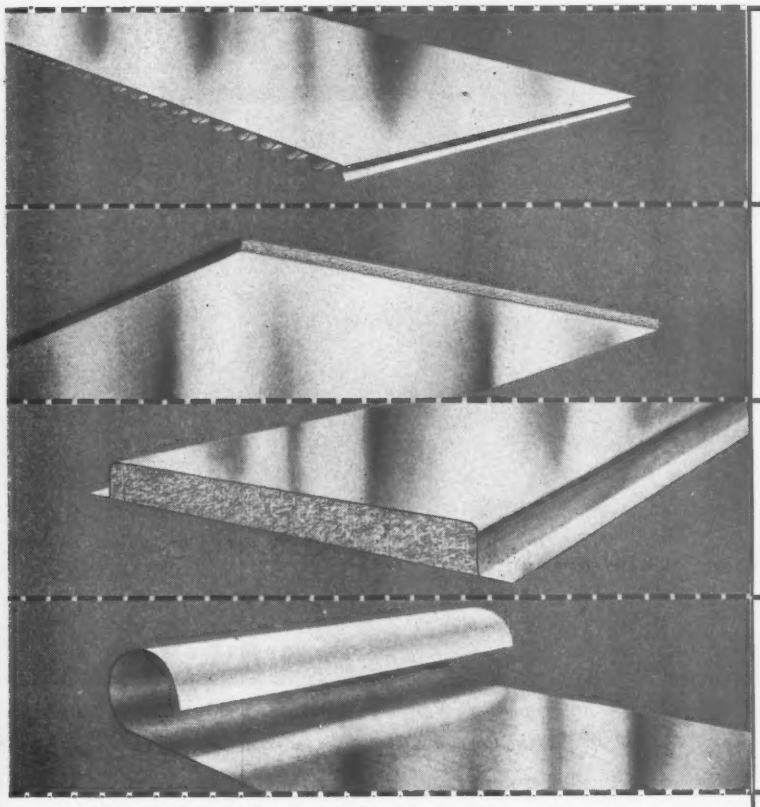
ALUMINIUM FOIL

Four well-proven methods of THERMAL INSULATION



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Air spaces formed by heat-reflecting surfaces of Aluminium Foil.

INSULATING PLASTERBOARD OR HARDBOARD

Aluminium Foil laminated to one side.

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Aluminium Foil enclosing, and providing heat-reflecting surfaces to, fibrous-type insulation.

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Aluminium Foil laminated with strong paper.

UNLINED HARD FOIL

The most efficient forms of Thermal Insulation now incorporate Fisher's Foils. Their heat-reflecting properties afford an increased barrier against the passage of heat. Under normal conditions, the thermal insulating properties of Aluminium Foil can be expected to last indefinitely. Its extremely light weight renders unnecessary additional supporting structure. Aluminium Foil reduces the fire hazard.

–all the better for

FISHER'S ALUMINIUM FOILS

LEADING THERMAL INSULATION SPECIALISTS USING FISHER'S ALUMINIUM FOILS:

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FISHER'S FOILS LIMITED, *Sales Development Dept.,* **EXHIBITION GROUNDS, WEMBLEY, MIDDLESEX**
TELEPHONE: WEMBLEY 6011 CABLES AND GRAMS: LIOFNIT, WEMBLEY (ABC CODE 6TH EDITION)

M-W.119

D O M E L I G H T S

A series of extra large size Rectangular Glass Domes fixed on the roof of St. Helens Technical College.

Architect : Hubert Thearle, F.R.I.B.A., Liverpool.

Contractors : St. Helens Corporation, Building Dept., St. Helens, Lancs.

Because of their permanence and lack of maintenance Seddon Domelights were chosen to provide daylight through the roof of this college. Incidentally, their size is 84″ × 48″

SEDDON

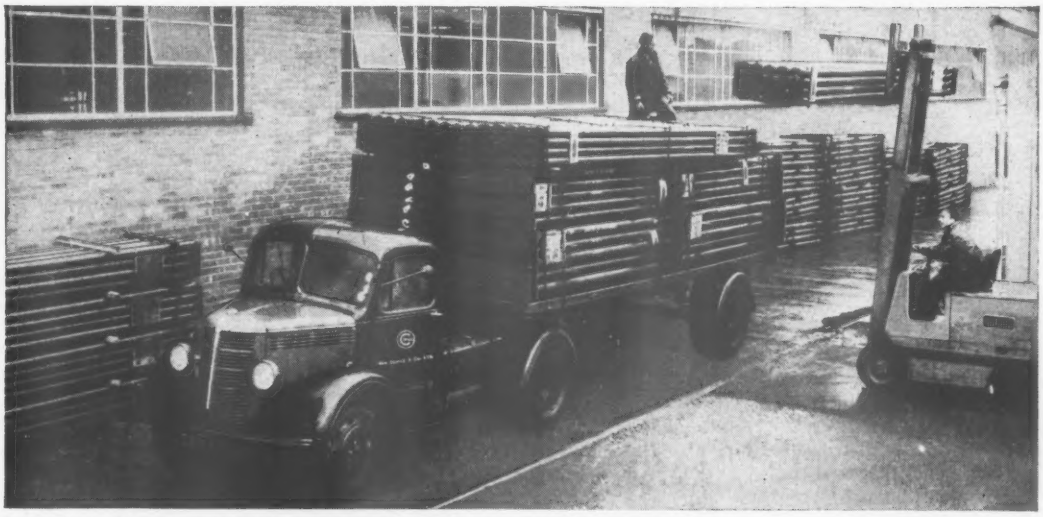
D O M E L I G H T S

R. SEDDON & SONS LTD., ST. HELENS, LANCASHIRE

Telephone : St. Helens 5451/2

Cookes Building *System

* REDUCES COMPLETION TIME AND COSTS



A recently completed contract being loaded at our Rotherham works, prior to delivery to the Docks.

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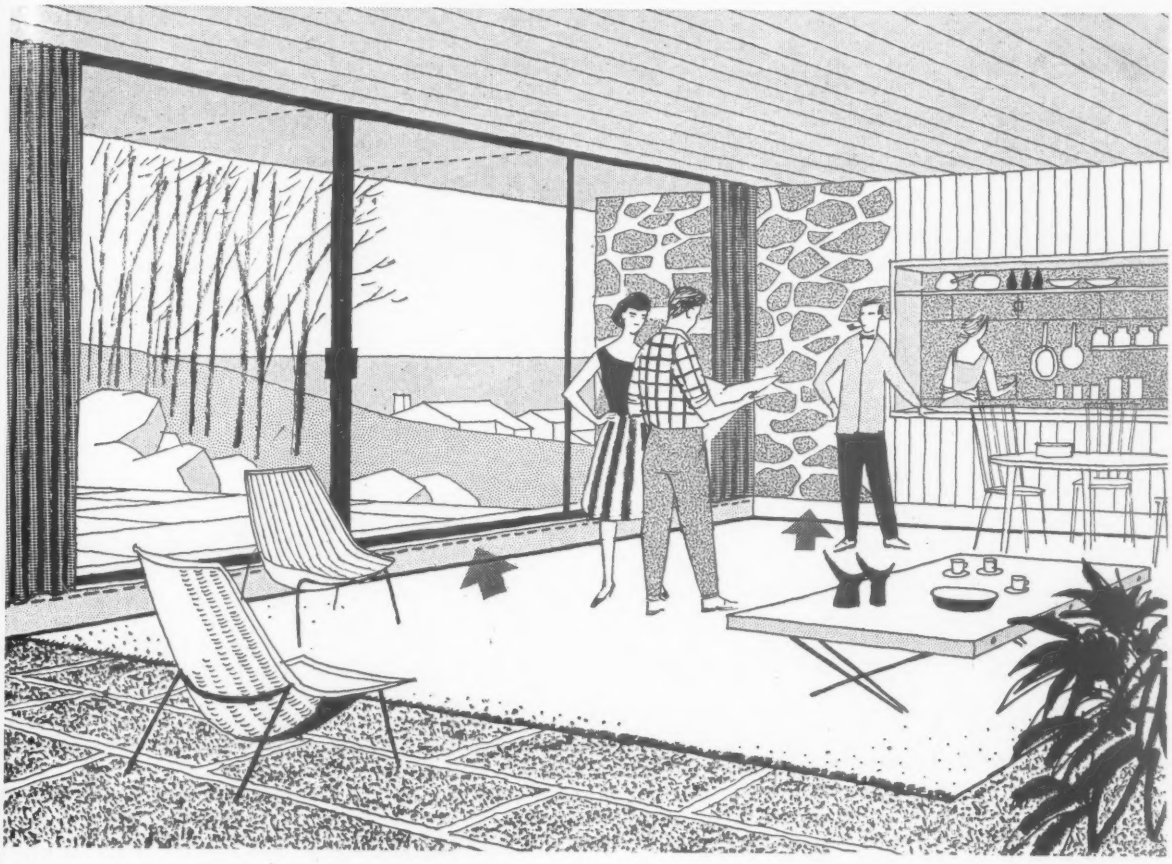
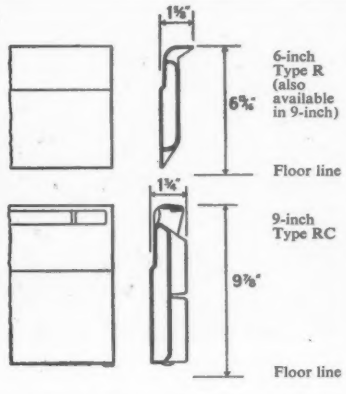
M-W.60

Where heat loss is high





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EVEN in the case of a private house, where normally the cubic space to be heated is in relatively small units, the existence of a large window area in any of these units will appreciably increase the amount of heat required to maintain a steady, equable temperature.

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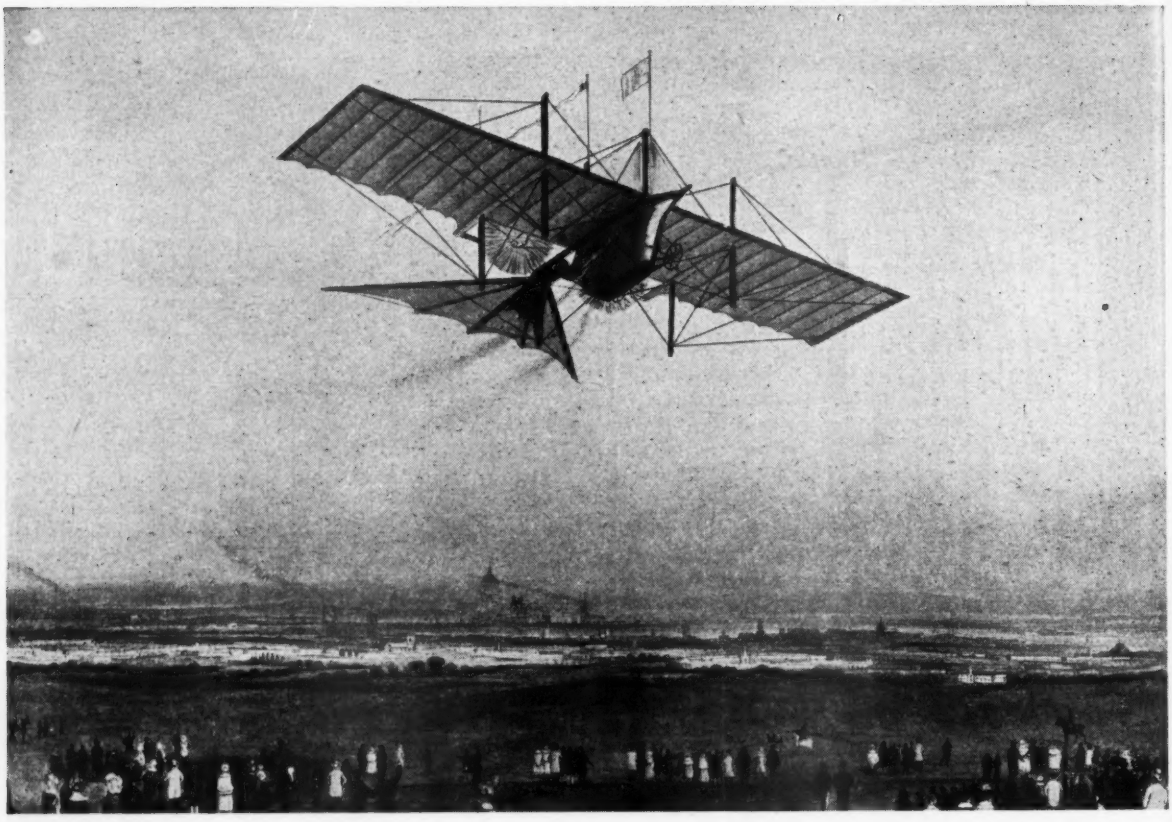

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Architects:
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F. N. James, A.R.I.B.A., and Deputy Architect to National Provincial Bank Ltd
General Contractors:
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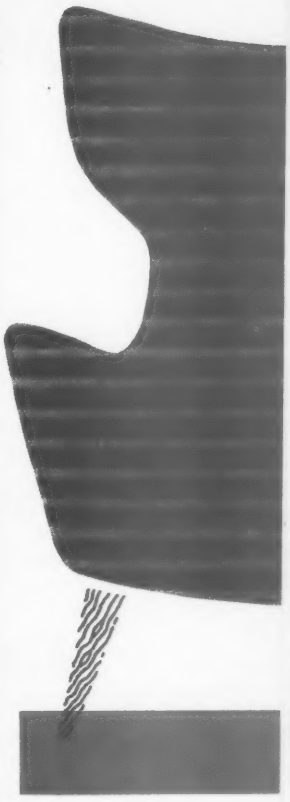

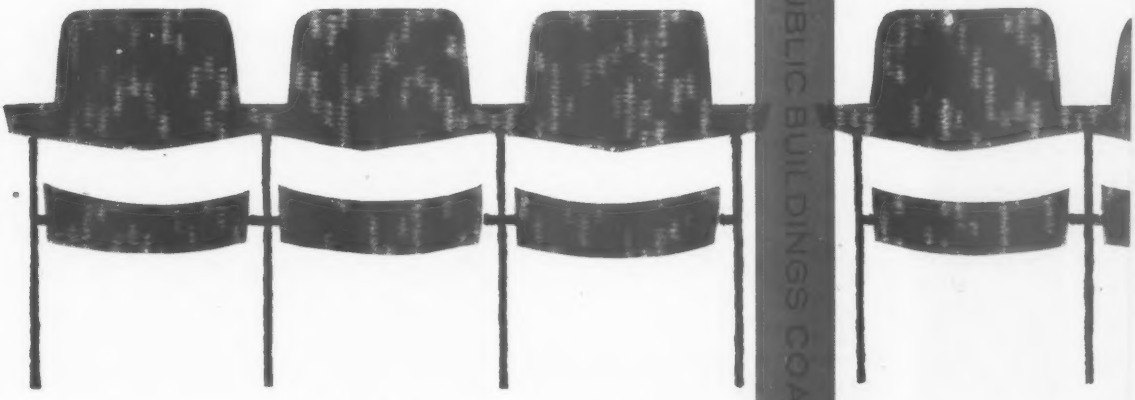

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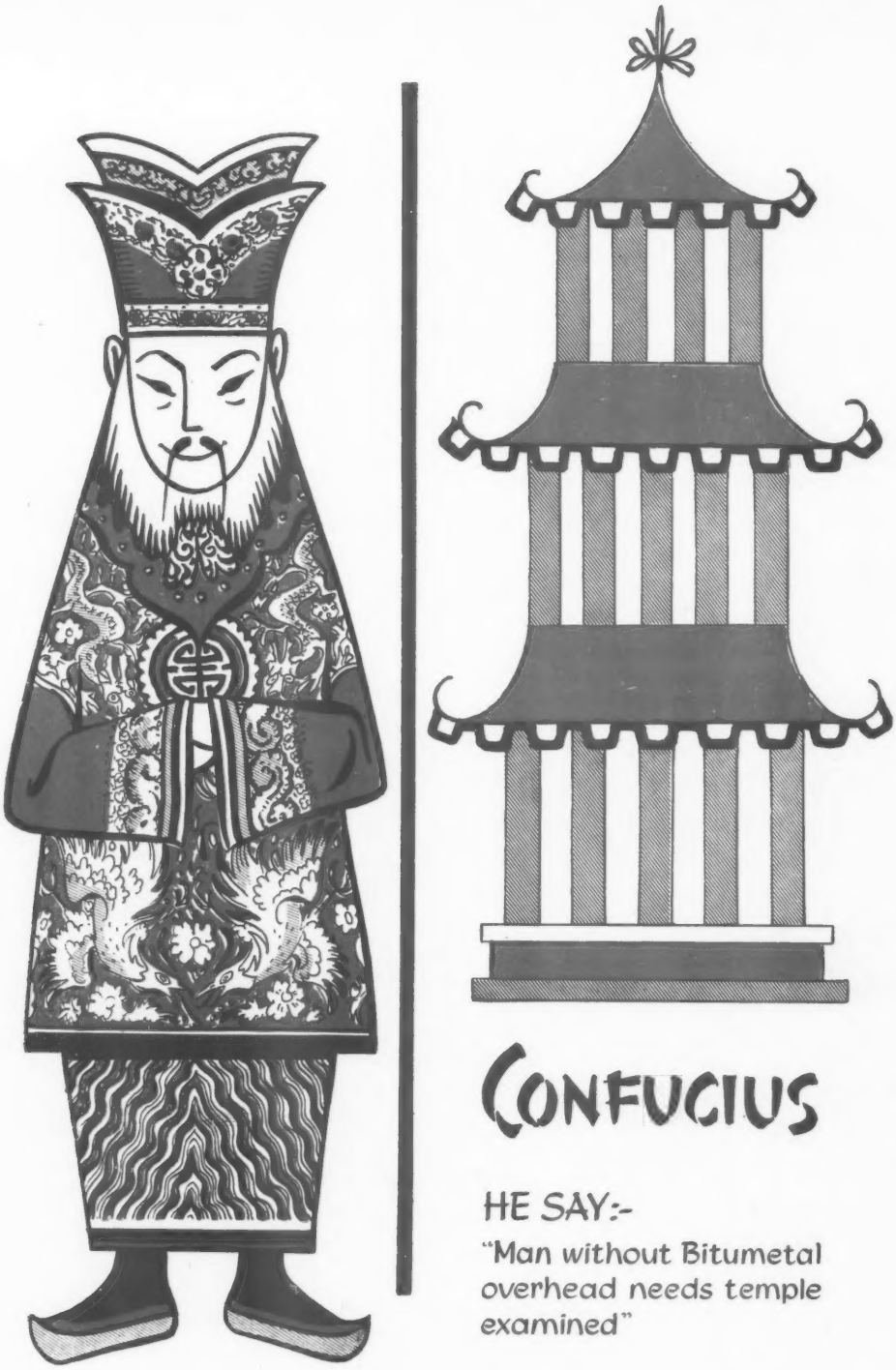

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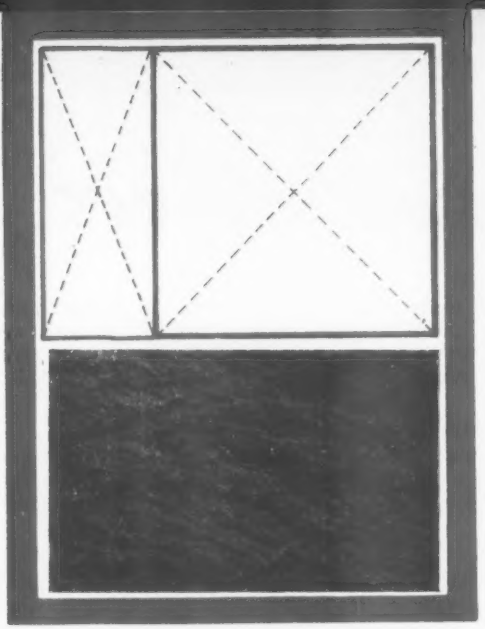

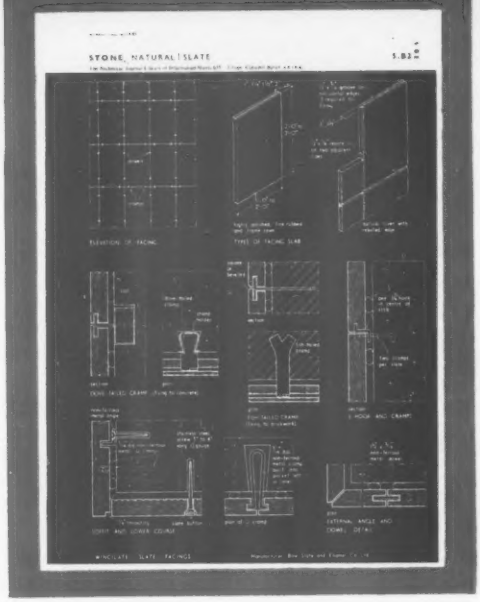

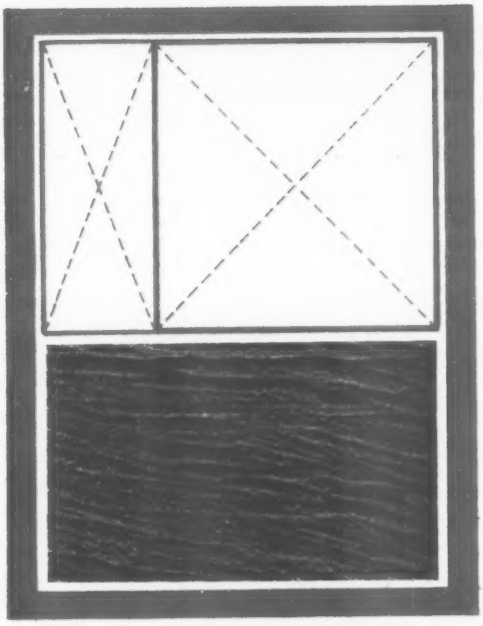

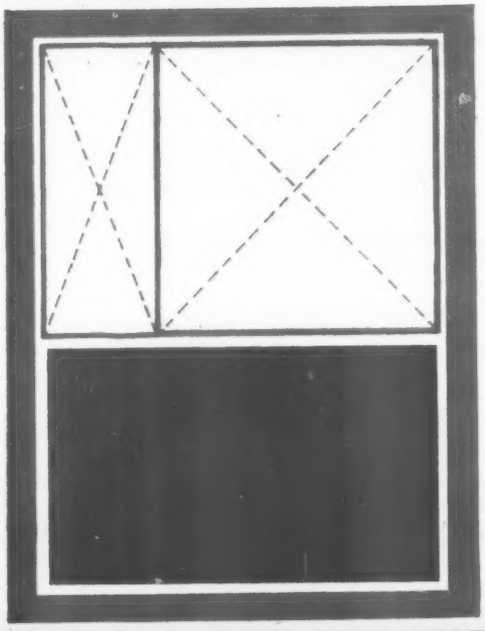

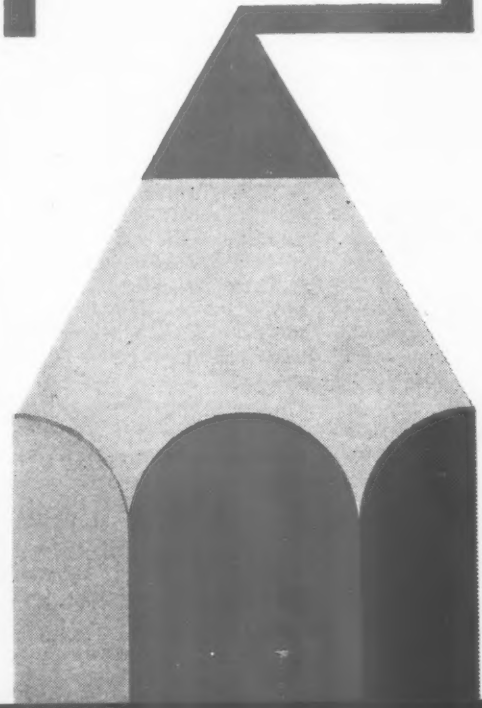

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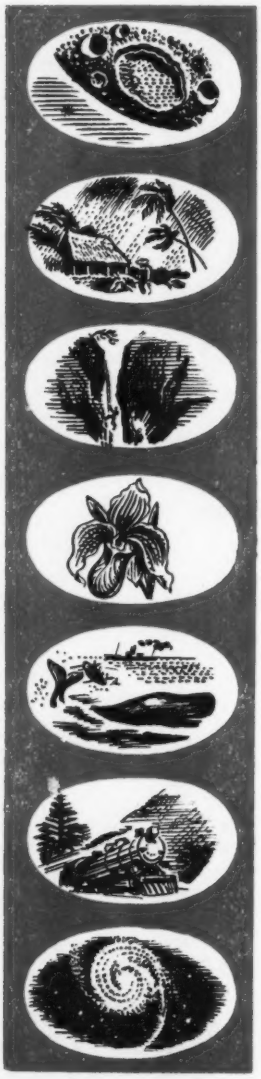

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Only 59 per cent. of the moon's surface is visible from the Earth. The largest known crate is the walled plain Bailly towards the South Pole which is 183 miles across and with walls rising t 14,000 feet. The nearby Newton crater is the deepest crater with a floor 29,000 feet below it rim. The highest of all the lunar mountains are the Leibnitz near the South Pole, which ris to nearly 35,000 feet.

THE HIGHEST RECORDED RAINFALL
The highest recorded figure for any given year was the 905·12 inches at Cherrapunji in 1861, bu for annual average the Cherrapunji figure of 450 inches is surpassed by the 471 inches average over the last forty-four years at Mount Waialeale, Island of Kauai, Hawaiian Islands, which ha the largest rain gauge in the world.

THE DEEPEST CAVE
The deepest explored cave in the world is the Puits Berger, near Grenoble. It is in this cav that the deepest ever cave descent was made in 1956 by three French speleologists who descended to 3,706 feet. Recent tests carried out in the Gouffre Gachtlaggia Bella system in the French-Italia Maritime Alps suggest that there may be there a cave system over 4,300 feet deep.

THE RAREST PLANTS
Hitherto unrecorded plants are discovered each year and there are thus many plants of whic specimens are known in but a single locality. The flecked pink spurred coral-root (Epipogium aphyllum) is usually cited as Britain's rarest orchid, having been unrecorded between 1931 and 1953. The homogyne alpina, recorded by Don prior to 1814 in the mountains of Clova Scotland, was not again confirmed until 1951.

THE LARGEST MAMMAL
The Blue Whale (Balaenoptera musculus) is the largest animal which has ever inhabited th Earth. Specimens have been recorded up to a length of 108 feet and a weight of 131¼ tons They inhabit the colder seas and can maintain a speed of 15 knots. The young can be 25 feet lon at birth and weigh up to 7·14 tons. A blue whale's tongue has been weighed at 3 tons 3 cwt.

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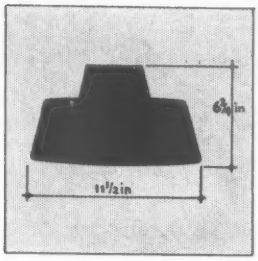
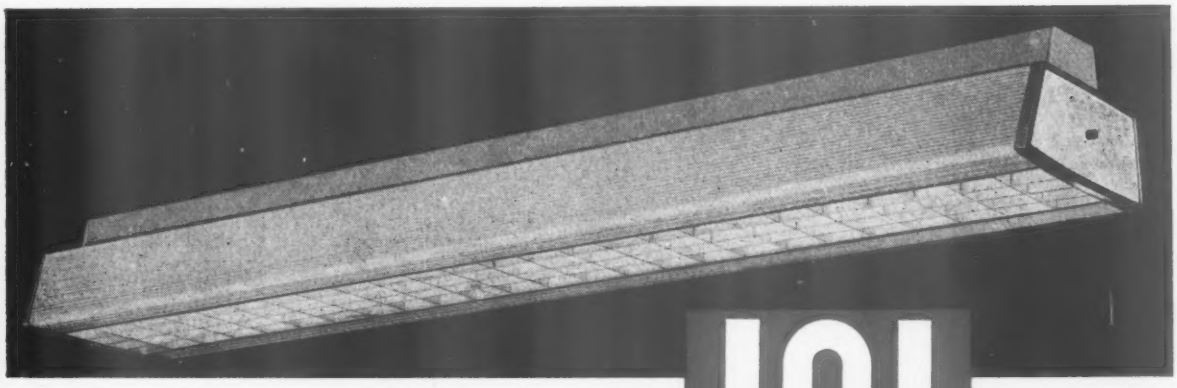


one of many decorative designs

The brilliantly successful G.E.C. 101 range of fluorescent fittings offers a wide choice of designs for every lighting requirement — in executive offices, showrooms, shops and stores, as well as factory areas. They are made for 1½ to 8 ft. single or twin Osram guaranteed tubes, and all employ the famous G.E.C. Basic Channel with its proven advantages of versatility and economy in installation and maintenance.

The fitting illustrated, F41130/1, has sides of reeded 030 'Perspex' and a white louvre. The ends are polished brass with an inset white panel. The top and bottom openings of the 'Perspex' are similar and the enclosure can be used as shown, or inverted.



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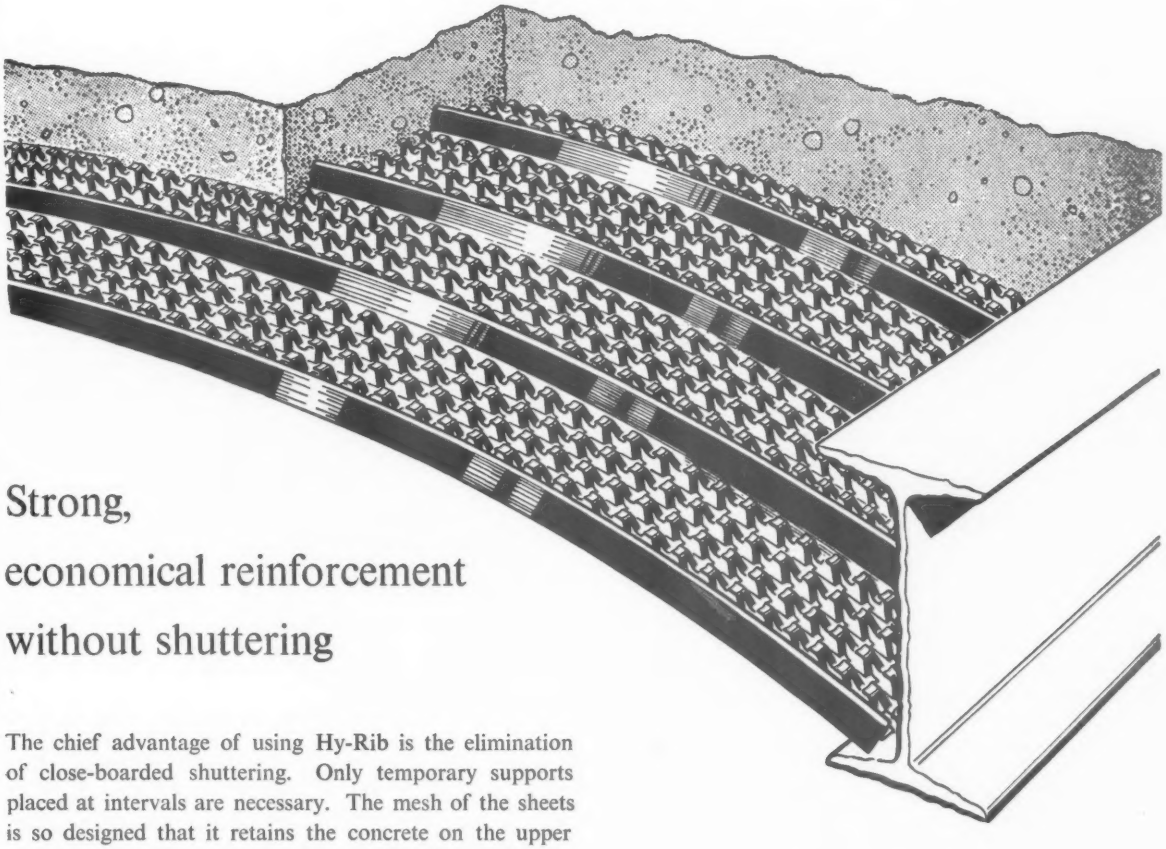

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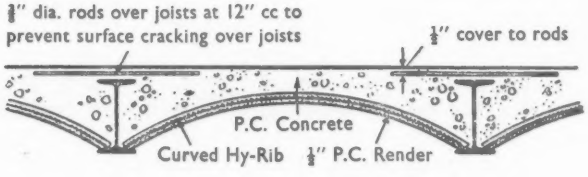

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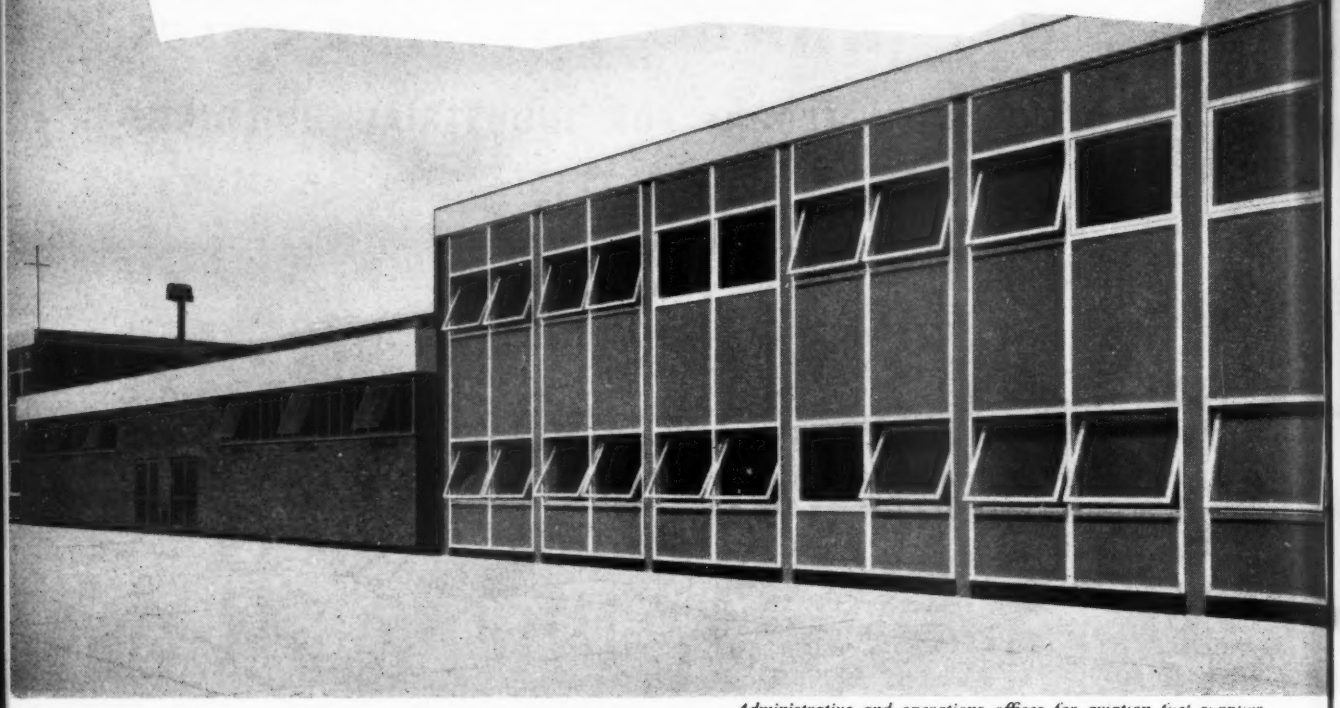

Administrative and operations offices for aviation fuel supplies at London Airport, half of which are occupied by Shell-Mex & B.P. Ltd. and the other by Esso Petroleum Co. Ltd. Architect: Frederick Gibberd, C.B.E., F.R.I.B.A., M.T.P.I.

We think you'll agree that the appearance of these attractive offices at London Airport is enhanced by their TOMO double-glazed WINDOWS. But that's only a small part of the story. TOMO double-glazing also offers excellent thermal-efficiency values, remarkable sound-reduction properties, finely-controlled ventilation and total indoor window-cleaning.

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When you work within whistling distance of aircraft, sound reduction becomes a matter of vital importance. Here TOMO WINDOWS score heavily. The total reduction in sound level depends finally, of course, on the thickness of glass employed and the space between panes. Using 32-ounce glass spaced at 1¾in., TOMO double-glazing gives a reduction of approximately 40 decibels and will, we hope, save Shell-Mex and Esso personnel not a few headaches in the future.

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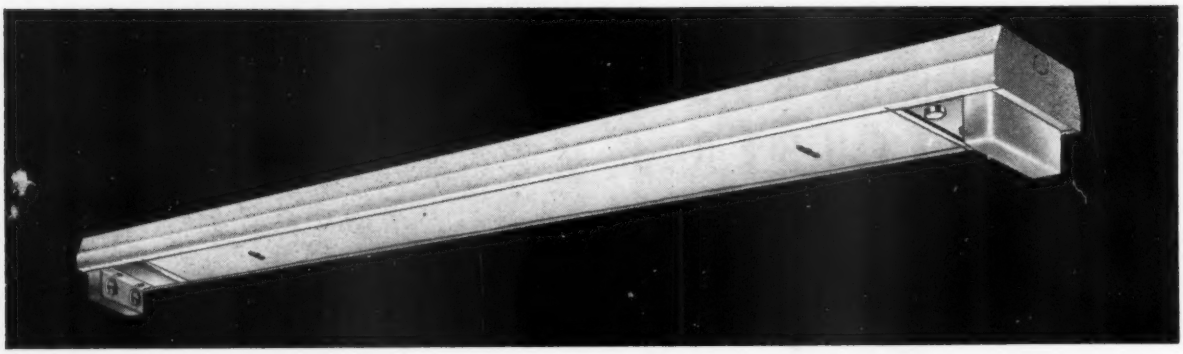

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The **Essex Range** prices are very competitive with those of any fittings of the same standard, but only the **Essex Range** has all the precision built-in refinements such as:—

Detachable control gear tray, quick-fix reflectors and diffusers, heavy duty bi-pin lampholders permitting lamping from one position, no projecting screwheads on spine and many others.

Ask for a copy of the **Ekco Essex Range** Catalogue and see how good fluorescent lighting fittings can be.

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- ***Full range of quick-fix metal and plastic reflectors with open or closed ends.***
- ***Modern diffusers with coloured endplates—quickly detachable for ease of maintenance.***

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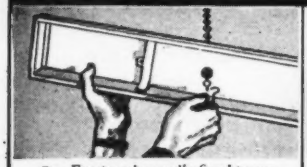
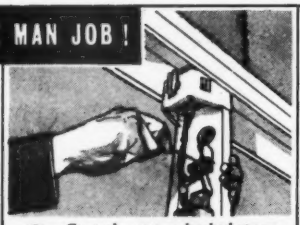


1 *Empty spine easily fixed to conduit, chain, universal suspension or ceiling. The 5ft. spine weighs only 7 lbs.*



2 *Control gear tray hooked at one end into spine, hangs vertically leaving both hands free to make connections. Tray swung into final position and firmly fixed with captive wing nut.*

3 *Ready wired lampholder assemblies slotted into spine. The gear tray and lampholders for the single 80W fitting weigh only 9 lbs.*

4 *Reflector or coverplate attached to fitting by two turn-buttons. Tube(s) inserted into spring-loaded lampholders.*

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THE ARCHITECTS' JOURNAL

No. 3329 Vol. 128 December 18, 1958

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CORBUSIER EXHIBITION, LIVERPOOL

The exhibition of the work of le Corbusier at present showing at the Walker Art Gallery, Liverpool, is one of the most stimulating architectural events to occur in this city since Harvey Lonsdale Elmes was appointed architect for the St. George's Hall. It is stimulating, not in the sense of seeing work never before published, for there is little that has not appeared in the five books, but in seeing so much at one time on a constantly changing scale which makes it impossible to ignore anything.

*

The exhibition was created at Zürich by Boesiger and Katzenstein in honour of le Corbusier's 70th birthday in 1957. The exhibition contains four sections—architecture, painting, sculpture and tapestries. The architectural section contains models, photographs of plans, mounted on 72 large panels, 1·13 by 2·26 m., a measurement according to the modular scale.

*

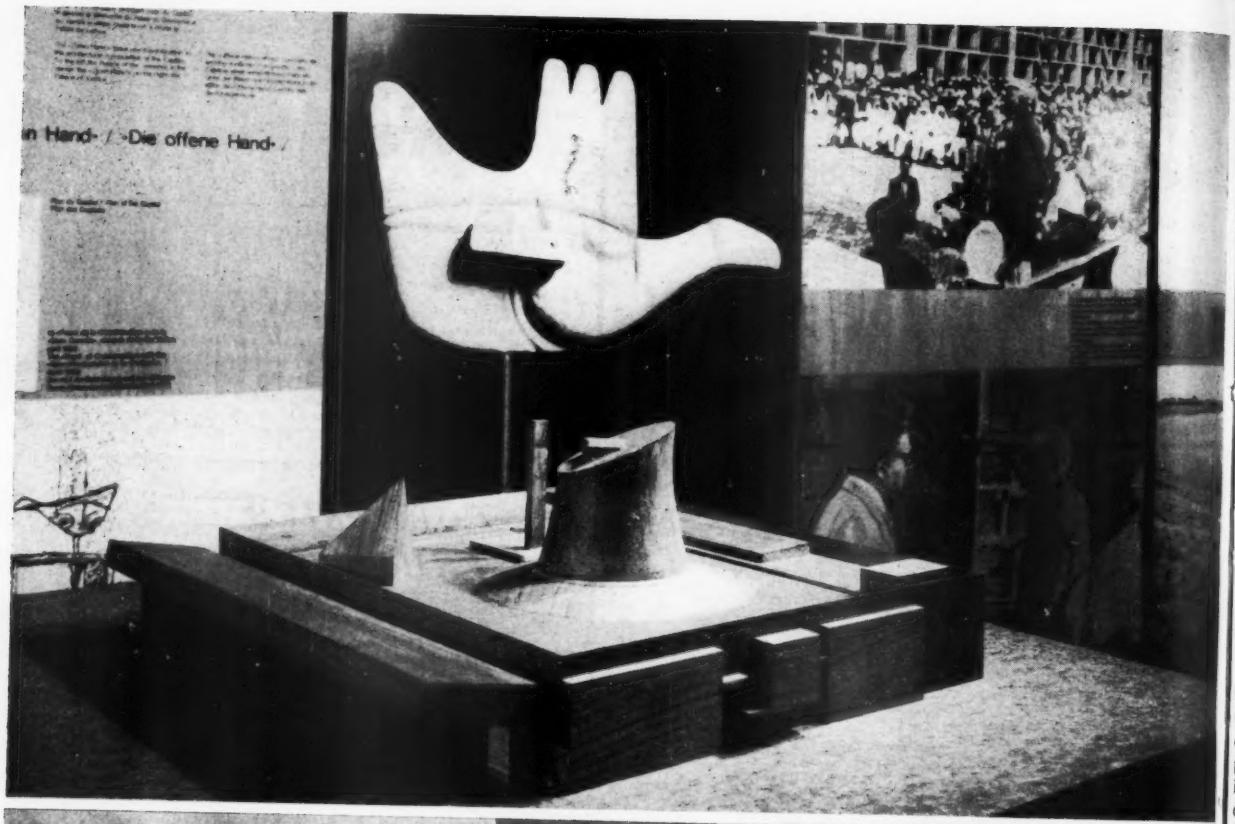
In the past 18 months the exhibition has been shown in Zürich, Berlin (during the Interbau Exhibition), Munich, Vienna, Düsseldorf, The Hague, Frankfurt, Stockholm and Copenhagen, and has been seen so far by 185,000 people. After Liverpool it goes to London, Rome and Milan, and is then planned to go to South America.

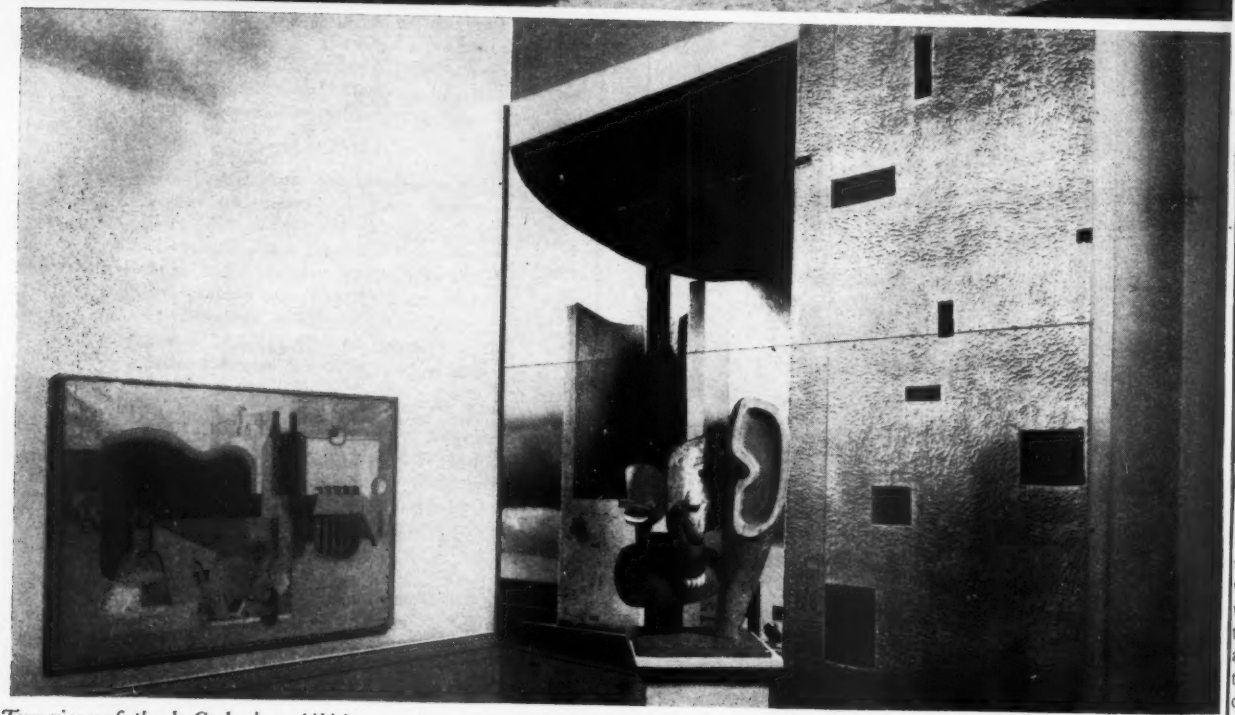
*

Showing only a small part of Corbusier's work, the exhibition is staged in four galleries. In the first Ronchamp, la Tourette, la Sainte Baume and early paintings, The second and main gallery dominated by Chandigarh, contains a series of lithographs, early sketches and Aubusson tapestries. The flanking galleries contain Unités, Museums and town planning projects.

*

Maxwell Fry, opening the exhibition, reflected on the conflict in modern life be-





Two views of the le Corbusier exhibition, on view at the Walker Art Gallery, Liverpool, until January 17. The exhibition is commented on below.

tween art and science, and how in the person of le Corbusier this schism had been resolved. In an impressive moment he described how the plan for Chandigarh was conceived: a group of people in a resthouse in Punjab, with le Corbusier calling on all his immense observation of cities and people, to draw on a single sheet of white paper the basic plan for a new capital. "An exhausting day but at the end, it was there."

*

The exhibition covers work from 1905 to 1956. Architectural models are surrounded by wooden panels on both sides of which are displayed photographs and photostats of diminutive plans and surrealistically overscale, sections and elevations. One feels rather like a weevil caught between the pages of a gigantic *œuvre complet*,

deliberately non-chronological in sequence. The juxtapositioning of Ronchamp with early paintings, Chandigarh with tapestries from Aubusson and Poissy, Garches with Indian weaving, whilst stimulating and impressing that the works exhibited are of one mind, negates the very idea it sets out to clarify. One is left with a total experience of Corbusier, but a total experience is not an analysis. To the lay mind this confusion of elements of the exhibition must be overpowering. One is not helped by the commentary provided, which, by grouping the titles into small neatly dimensioned panels, has on many occasions become separated from the work it is intended to describe. Thus, in a series of small photographs showing a chronological section of his buildings, a minute red dot, which indicates projects already realized, is explained by a key situated 3 in. from the floor in a particularly badly illuminated corner of the exhibition. Interposed amongst the many sub-titles Corbusier's staccato phrases interject in a topography which is far too polite for its content. Letters 6 ft. high would have been more in scale with their message.

*

Corbusier says in the excellent programme which amplifies the exhibition, "the secret of my research must be discovered in my painting" and, whilst providing an insight into the design process, it is apparent in the exhibition that the buildings represent the fulfilment of ideas worked out in his paintings and thereby render the paintings in some sense, superfluous. At the same time they are almost the only part of the exhibition that demonstrates Corbusier's use of colour. It is a pity that the only colour photographs in the main exhibition are limited to a mere half-dozen of Chandigarh and the Maisons Jaoul. A series of fine colour slides, continuous throughout the day in the lecture theatre of the gallery, is a pleasant innovation, but again somewhat marred by the absence of any explanatory text or commentary.

*

Possibly because they have an element of function, the tapestries are more successful. The technique appears more certain, which may be due to the direct interpretation of the design by a craftsman not emotionally involved in the creation of the work of art. Even more than the painting the sculpture is overshadowed by the vast weight of architecture. The exhibition provides only three examples all in wood, and though they are small pieces their stature as wood carvings enables them successfully to hold the corners of the gallery not given over to architectural models.

*

Judged by any standards, however, this is a great exhibition, one of the greatest exhibitions of work of a single genius that we will see in this generation. Liverpool is indeed fortunate that it has had the opportunity of receiving and displaying this architectural *tour de force*.

JAMES O'DONAHUE and COLIN R. WILSON.

The Editors

SHOPPERS' GUIDE

"I CERTAINLY do not mean this book to encourage the use of higher densities or multi-storey buildings where they are not really necessary." So remarks Henry Brooke, the Minister of Housing, in his foreword to *Flats and Houses* 1958, *Design and Economy**, and the book bears him out. For all its progressive air, good layout and fine photographs, the book makes no more attempt to look forward than its predecessors, the Housing Manuals. It shows different ways (and different costs) of developing sites; chiefly ways of avoiding too many high blocks and of providing the maximum number of private gardens. It presents (with cost tables) a selection of slab and tower blocks, of flat and maisonette plans.

What more can the committee-harassed housing architect need than this "shoppers' guide" for the economy budget? We all know that high block dwellings cost more than the two-storey house with fenced-in garden and it is thus quite logical that the Ministry should conserve public money by showing us how to be sparing with the high blocks. But where is the vision that has enabled the MOE to help give us the best schools for the cheapest prices anywhere in the world? The Ministry of Housing has accepted present practice, attempted to codify a method of "choosing the blocks," and forgotten that capital "cost per dwelling" is only part of the cost of providing and maintaining a whole social context. The book ignores site purchase and site development costs, running costs, transport services and communications costs. It omits to account for shops and other communal buildings, so significantly related, economically and socially, to dwellings. There is no discussion of the real limits of density or of whether figures of habitable rooms per acre have any real meaning.

The book is entirely about "design." If it ignores, on the one hand, the social needs round which a "design" is moulded it also ignores, on the other, the techniques by which "designs" are realized. If there is one thing that recent years have taught us, it is that genuinely economical "designs" must be conceived in terms of both technique and organization. A superbly economic plan can be a very costly building.

Within its narrow limits, the MOHLG has worked hard and

* HMSO. 10s.

conscientiously and no doubt for many an architect and housing committee the book will bring guidance and relief as Jack Whittle points out on page 879. Let us hope it will not make life more difficult for those who see a little beyond the routine solution.

TIME FOR A NEW LOOK

If the architectural profession is beginning to renew its interest in town planning it is due as much to Percy Johnson-Marshall, who has maintained an unflagging zest in the face of years of discouragement and difficulties, as to anyone else. The value of his stimulating performance on comprehensive development at the RIBA last week was that he put town planning back on the RIBA map. The initiative of SPUR, which is now preparing an exhibition on urban renewal, the decision of the RIBA to organize a symposium on comprehensive development, the introduction of a course in urban renewal by the York Institute, and the interest aroused by the Boston Manor scheme all point in the same direction.

Architects are playing leading parts in this revival. But the profession as a whole would do well to pay attention to Professor Robert Matthew's comments on Percy Johnson-Marshall's talk. Architects, he said, were too often inclined to forget that town planning was a visual matter; their job was not done when they had satisfied themselves, as the job was to provide a new environment; architects had been too much obsessed by the legal and administrative difficulties behind planning, and had been lukewarm and even hostile towards it. He was disappointed to see how little contribution architects had made to town planning, and his conclusion was that " the time has come when we must take a new look at it."

So it has, and the urgency of taking this new look can hardly be overstated. Percy Johnson-Marshall's view that many more comprehensive development areas are needed in our cities and that the national investment in reconstruction must be greatly increased, should receive the full support of the Institute. It was highly significant that Mrs. Denington, vice-chairman of the LCC Housing Committee positively urged architects to " spread the gospel " in the belief that people are ready to respond to a new vision if it is given to them.

THE DESIGN OF MOTORWAYS

The reluctance of the Minister of Transport to recommend the inclusion of architects in the study groups on urban motorways is deplorable. The Council of the RIBA, and its President, Basil Spence, can count on the whole-hearted support of the profession and of the architectural press in their efforts to change the Minister's mind. Planning is a team job, and the effect of urban motor roads on the cities and in the landscape cannot be understood by the engineer alone: the participation in the team of the architect, the landscape architect, and other planners, is essential if disaster is to be avoided.

SLIDERAMA

I once described Percy Johnson-Marshall, the LCC planner, as the profession's best public relations officer. Robert Matthew put it rather better last week, when he described P J-M as " a sputnik in the planning cosmos, continuously in orbit and emitting energy and a multitude of signals in many directions " which the profession ought to pick up now and again. Mr. Matthew was speaking at the RIBA, where Mr. Johnson-Marshall had just whisked an enthusiastic audience over city growth and reconstruction in many centuries and many continents, with illustrations from three projectors—used either simultaneously or in sequence. Only one mistake was made in this astonishing high-speed performance, which was well rehearsed by the LCC planner-projectionists—an engineer-surveyor-architect team (symbolic of the lecturer's faith in teamwork). The impact it made was reinforced by the pointed and witty verbal captions.

*

This is the right way of using slides. We all know the wrong way. If the RIBA would make film-strips of Mr. Johnson-Marshall's material, it would be more widely used.

HOMELY-SUITE HOME

The new policy publication called " The Future Labour Offers You " is both slick (see Right-wing Press) and

glossy (see Left-wing Press). To the architect it is a disappointment. Although there is a section on "Your Home" (happy family on moquette armchairs in Victorian sitting room) there is nothing on "Your Town" or "Your City." Like the Conservatives, Labour puts home ownership first (100 per cent. mortgages).

*

Slum clearance comes second, and third place goes to the buying and modernizing of old property by local councils. Labour ignores planning, city reconstruction, urban renewal and comprehensive development. It doesn't even list the shortcomings of existing slum clearance procedures. And if you look at the happy schoolgirls who illustrate "Education" you will see that they study in a building of old-fashioned design.

*

Good design isn't the only thing the compilers of this pamphlet don't know about. Isn't it odd, in a pamphlet promising large-scale investment in industry, to show a shovelling proletarian as a symbol of the worker?

SUNDAY PHOTOGRAPHS

Both *the* Sunday papers are a bit erratic in their treatment of design and architecture. There are quite enough lively things happening in the world of building and industrial design to interest the Intelligent Layman. But unlike music, which must have a tiny readership compared with the theatre and cinema columns, design hasn't yet caught on. Is it because the editors feel that the subject can't be dealt with in text alone? Are they only really happy when they can produce those pruned, potted visual guides? Good though this idea is, it would be nice to see more space given to current topics of visual interest.

*

Incidentally, the *Sunday Times* is showing some of the photographs from its picture-history pages at the Building Centre. This display, called "The Shape of Things," suggests a new subject for a *Sunday Times* outline history — photography (though there are a few good pictures). You may not think of photography as an art, but you must admit that for a century past it has had a large cultural impact, whatever I mean by that.

The first designs to receive the award of Guild Marks by the Furniture Makers' Guild. Judging by the prosaic, hand-crafty appearance of the furniture, a dull lot of stuff must have been submitted. The purpose of awarding Guild Marks—a scheme introduced last July—is to "stamp and record for posterity British furniture attaining all-round excellence." Top to bottom, chair and prie-dieu of limed oak, designed by Peter Wayman for Dunn's of Bromley; a drinks cabinet and a circular table by Professor R. D. Russell, for Gordon Russell Ltd. *(see also page 880)*

BARK COMES TO TOWNS

Trees are a neglected element in design. Few people can think of anything more imaginative than an avenue or a shrub-clump. Yet all new towns, as the landscapist Ian McHarg has said, should be tree-belted as soon as their areas are marked out. Woodland not only improves the look of a landscape; it also provides a good barrier, costs little to maintain and can be a marketable crop. I am glad that the MOHLG has called attention to this planning deficiency in a book.* Nearly all good examples are over 100 years old—and not only because the sites have matured. It is obvious that the authors have had to dig deep to get modern illustrations.

*

This paper-back is just the thing for town councillors, inadequately trained architects and all clients. It covers a lot of practical points, gives a fair bibliography (it doesn't pretend to be more than an introduction, with landscaping emphasis to tree-planting) and contains a good list of trees and their characteristics.

*

There is an odd omission. Trees are listed in three categories: large, medium and small—but no dimensions are given. Why? Because, it is stated, conditions of growth vary widely. Fair enough, but I still want to know how high is a small tree.

ARCHITECT'S NOVEL

"Angry Harvest"† is a silly title for a very good novel by the American architect, Hermann Field, and his one-time cell-mate, Stanislaw Mierzenski. While these two were imprisoned for years in Poland, under suspicion of espionage, they kept themselves sane by inventing stories in their only common language, German. Hermann

* Trees in Town and City. HMSO. 7s. 6d.
† Gollancz. 16s.

Field wrote these in exercise books which were handed back to him after the post-Stalin thaw, when he was released.

*

The novel was one of these stories. It is a moving and professionally-written story about occupied Poland, but like all the best novels it is really about people.

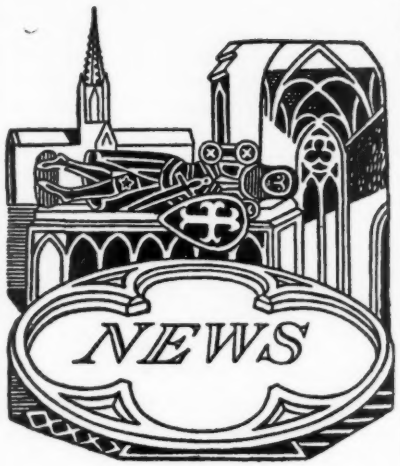
MILESTONE OR MILLSTONE?

Admirers of Ronchamp must make the pilgrimage before it falls down. This startling message comes on the authority of no less a person than Luigi Nervi, quoted by Nikolaus Pevsner, reported in the August issue of the Journal of the New Zealand Institute of Architects. This may seem a roundabout way of getting news, but it should not arouse the same suspicion as Reuter quoting the *Bumf Zeitung's* report from its Ankara correspondent, whose well-informed source close to the Soviet Embassy has unimpeachable authority for saying that news of an uprising in Tibet has been reliably received in Samarkand.

*

It's a good deal better than that. Dr. Pevsner, who seems to have been called upon at short notice to speak to the Wellington District Branch of the NZIA, was asked to comment on Corbusier's latest trends, and referred in his reply to discussions in the committee—to which Nervi came regularly, that prepared the 1957 Milan Triennale: "One suggestion was that as our Triennale since 1937 had had an architectural section we should simply show the development of architecture from last time to now. . . . I said: 'This is an interesting idea, but we have to be careful when we make a survey to show not what we like only, but honestly what has happened. If we do this survey, Ronchamp must appear very prominently because it has had a big influence among the young people. Nervi's argument . . . was very interesting. He said 'This is not architecture. It will collapse—I have been there. Don't worry about this building—it won't stand up.' Now mind you I have not been to Ronchamp. But I would trust Nervi. . . . I answered that this building, whether it stands or not, is a milestone."

ASTRAGAL



RIBA

Architects and Motorways

The Council of the RIBA intends to do everything it can to overcome the reluctance of the Minister of Transport, Harold Watkinson, to insist on architects being appointed to the new motorway study groups being set up in the larger cities. The Minister has refused even to recommend to local authorities that architects should be appointed to these committees. The Council is unanimous in taking a stand on this matter, and Basil Spence, in his conference with the technical press last week, said the appointment of architects was needed to avoid the disaster already experienced from motorways by American cities. Motorways, he said, must be considered as architecture. Concrete ribbons were being thrown ruthlessly across the countryside with an almost Roman abandon, and their connection with the towns was of the utmost importance to architects—not just the bridges, but the roads themselves, the approaches and the landscaping in the broadest possible sense.

The minute of the Council meeting on January 9 reads as follows:

The Council have been in correspondence with the Ministry of Transport and Civil Aviation in regard to a proposal to set up Committees in a number of the larger cities to study the planning of new motor roads in built-up areas related to the new system of national motorways.

The Council, appreciating that this particular matter concerns the feeding in of traffic from the national motorways into the larger cities and the impact of this traffic on considerations of planning and layout of streets and buildings, have been pressing the Institute's view of the need for bringing in architectural advice on the formation of these Committees. They have reminded the Ministry of the important contribution which the profession, with its knowledge of civic design and town planning, could make to the deliberation of the Committees.

In reply, the Ministry have stated that it was not proposed to give directions on the constitution of the Committees, but to leave it to the local authorities concerned.

On reviewing this correspondence, the Council gave consideration to two separate facets of the overall problem of the planning of modern roadways. In regard to the planning of national motorways, it was felt that much more should be done in relation to landscaping and more appropriate design of structures related to the motorways. It was agreed that the strongest representations possible should be made on these aspects and that the support of the Royal Fine Art Commission and the Institute of Landscape Architects should be enlisted.

In regard to the design of urban motorways, the Council felt that the impact of this new construction on the plan of towns and cities was insufficiently appreciated and that, again, representations on the need for the fullest co-operation of all those technically qualified should be made.

It was agreed to make such representations to the city authorities who were in process of setting up study groups, and that the attention of the Ministry of Housing and Local Government and the Royal Fine Art Commission should also be drawn to the problem.

Higher Pay Means Better Output

The Council has approved a report of the Ad Hoc Committee on salaries and responsibilities of senior architects in local governments of which the following is a summary:

In the summer of 1957 the Ad Hoc Committee carried out a survey of 14 County and 5 other local authority offices, chosen largely at random. The primary purpose was to establish how far the salaries earned by senior architects below Chief Officer and Deputy level corresponded with the responsibilities they held.

Given the great variety in scope, circumstances and personalities that were involved, it was perhaps not surprising that these offices were often more remarkable for their diversity rather than their similarity. At least, however, they share a common salary grading system, and it was accordingly possible to compute (*a*) the average salary per head of architectural staff (including unqualified) and (*b*) knowing output figures, the value of building work done per head of architectural staff.

The average salary in the 14 Counties varied from £800 to £1,070—six Counties being within the range £950-£990, and the overall average working out at £960. (It must be emphasized that these salaries relate to Counties only; and that they have been adjusted to the new scales operating after September, 1957). Their real significance, however, only emerged when related to output; for in no less than seven Counties as the average salary per head of architectural staff consistently declined, so the cost of that office, in terms of salary/output ratio, consistently *increased*. Conversely, at least four offices whose salary was at or above the overall average of £960 showed a consistently low level of costs and a high average value of work per head. Further, in these low cost/high average salary offices the proportion of staff on lettered grades and the top A.P.T. Scales was well above the average.

Two things, therefore, clearly emerged: (*i*) A low overall level of salaries merely makes for low output per person and hence relatively high costs. (*ii*) Greater efficiency, in terms of low cost per £ of work done, can be achieved through the employment of a relatively high proportion of staff in the more senior grades. It is, of course, important to recognize that figures on output and costs are not the whole answer. They evaluate paper efficiency only; they cannot evaluate the quality of work done.

RIBA in Brief

The Council took the following decisions at its meeting on December 9:

A painting of an architectural subject by

John Piper is to be presented to the Institute of South African Architects.

The Council approved a proposal to set up a Joint Liaison Committee with the RICS on cost research consisting, in the first instance, of the Chairman and one other member of the Cost Research Committee of each institution.

Following the decision of ARCUK (See AJ, December 11) it decided that it would not be contrary to the provisions of the RIBA Code of Professional Conduct for architects to form "service companies" that would acquire premises and office equipment, subject to certain conditions. The Practice Committee is to prepare a memorandum on the subject for publication.

The Council has granted £750 towards SPUR's exhibition on urban renewal.

The Leicestershire and Rutland Society of Architects Bronze Medal has been awarded for shops and flats, New Parks Estate, Leicester, designed by Symington, Prince and Pike.

MOHLG

Flats and Houses 1958: Ministry's New Handbook

Flats and Houses 1958 — *Design and Economy** is, as the Minister of Housing and Local Government says in his foreword, a book with a simple idea; it is by no means a simple book. It forms a trilogy with the handbook on *The Redevelopment of Central Areas* and that on *The Density of Residential Areas*, and maintains the high standard set by these two publications. It formulates principles rather than just providing type plans, assesses past experience in high density building, and contributes considerably to the slender fund of knowledge existing on the economics of housing layout. The theory which it develops is based on the premise that the dwelling unit increases in cost as the height of the building increases and that therefore high buildings should be kept to the minimum in a scheme. Using two and three storey houses, four storey maisonettes and tall blocks at net densities of upwards of 80 habitable rooms an acre, it demonstrates convincingly that economic development depends very largely upon layout design. In brief, it advocates cost planning at the outset.

A substantial section of the book is devoted to a cost comparison of tall blocks, four storey maisonettes and three storey flats, which shows that with tall blocks, the larger the block in terms of flats per floor, the cheaper the cost of each dwelling will be. As well as many interesting plans there are several new and valuable tools provided for the architect/planner. They include two ingenious graphs which enable a rapid assessment of the consequences in terms of density of the allocation of dwellings to building types, a Comparative Estimating Guide, facilitating the comparative costing of alternative layouts, and a Sunlight Indicator to supplement the Daylight Indicator previously published in *The Density of Residential Areas*. There is also a most useful interpretation of the LCC code for Means of Escape in Case of Fire as affecting the planning of flats and maisonettes.

In a welcome departure from the Ministry of Housing and Local Government previous policy, the book gives estimated costs for various schemes and different building types. The Comparative Estimating Guide for use at the sketch layout stage of design, is based on provincial tenders approved by the Department in the first half of 1958. These costs are generalizations; and the danger that they will be used by architects as a yardstick to judge their prices cannot be disregarded, but is one which must be accepted. The Ministry, in the introduction and in the general text, have emphasized that the figures are given for comparative estimating. Obviously, buildings can cost less or more than the figures given; the strong influence which layout and composition can have on overall building cost is shown by Chapter I of this study and the continuous reluctance of the Ministry of Housing and Local Government to issue "target" costs for dwellings, as the Ministry of Education does for schools, can be understood. In a matter as complex as high density housing, it is apparent that each job must be considered on its merits and any hard and fast price level could not be fairly applied. Yet there must surely be some way in which Local Authority architects could be given at the outset an indication of the approximate level of expenditure which would be approved and for which they should design. Will the Comparative Estimating Guide become that in practice?

In the Introduction to Chapter IV, Dwellings for High Density, we find in paragraph 124 a clear statement that the Ministry considers economies in tall buildings can be too dearly bought, and nothing is illustrated more clearly in the type plans and cost comparisons which follow. The cheaper blocks would appear to offer less satisfactory living conditions than the more expensive. If savings are possible by mixed development, and tall blocks are to be reduced in number, then there is a strong case for ensuring that those tall blocks which are built do not suffer from undue economy and this may be what the Ministry have in mind.

It is perhaps unreasonable to point to omissions in a book which covers so wide a field as this does. The section on landscaping could have been more developed, particularly with regard to the difficult problems of landscaping areas of redevelopment in cities, and the problem of junk in high density living has not been ventilated. What does a family living in a tall block or high density area do with all the paraphernalia which all families seem to collect? Strict housing management can prevent disorder outside the dwelling, but there is something of the magpie in most of us, and life without a loft must in the end require some compensation. A larger tenants' store than at present provided or the extensive balconies of Basil Spence's scheme at Glasgow may provide an answer.

There is another point which does not appear to have been examined: building cost is only one part of the cost of redevelopment. Indeed, the cheapest scheme to build is not necessarily the cheapest scheme in terms of annual cost to the Local Authority. For instance, if the scheme ranks for subsidy, the additional subsidy payable on tall blocks or the general subsidy payable on one-bedroom dwellings, brings into consideration factors which may work against the acceptance of the advice now given.

There is no doubt, however, that this is a sound, thoughtful book, well illustrated with photographs of familiar and some unfamilar schemes, which all reflect considerable credit on the work performed by the Housing Authorities, and may well stand comparison with the housing work of most other countries. Yet it will not be without its critics. It discourages the frequent use of tall blocks—not because they are considered unsuitable as domestic buildings, but because of their high cost. This advice may appear to encourage a return to the monotony of the inter-war housing layout with blocks of uniform height, just at a time when there are signs that architects are developing an English style for residential development at high densities, but this is not so. In fact, the whole architectural content of the book is in line with the emergence of this style.

Another possible basis of criticism is that if Local Authorities follow the guidance given, then it is inevitable that the number of tall buildings in submitted schemes will be reduced. In this way it may have the effect of retaining the present difference in price between low and high domestic buildings which it was hoped would lessen as contractors gained greater experience in the erection of these blocks. However, cheap tall blocks seem still far off, and although they are not brought nearer by this publication, it may stimulate those contractors geared to this sort of building to make an effort to prove the Ministry wrong. It is anyway by no means certain that high flats cost more than houses because builders are inexperienced. The efforts which have recently been made to discover where the money goes in building high flats have not proved this. There is no indication that the Ministry of Housing and Local Government are against tall blocks as such, and a joint development enterprise by BRS and the Ministry of Housing and Local Government using Central Government (not Local Government) money to find out why tall buildings cost so much is perhaps the next step.

Generally, the significant conclusions, intended or otherwise, which one draws from this book are:

1. That the savings possible by economic planning at the very early stages of layout design dwarf those possible in the buildings themselves.
2. That economy in redevelopment on the lines advocated can only be fully effective if major areas are redeveloped as a whole.
3. That if the principles put forward by this book are to be exploited, the offices of Local Authorities will need the services of an increased number of skilled architect/planners.
4. That the social and architectural basis for layout at high densities is strongly supported by economics.
5. That the limit to economy by planning has been reached in tall blocks, unless the space standards which are generally acceptable are reduced, and there may be a case for increasing them. If tall blocks are to be cheaper, then research in building technique is required.

Excellent as this manual is, its emphasis on cost must not be allowed to blind those who use it to those aspects other than cost which have to be considered when rebuilding outworn towns. If economies in high buildings can be too dearly bought this is no less true of high density layout.

To end, why do we have such long gaps between this sort of publication? This book, which is concerned mainly with the building problems in redevelopment, appears nearly three years after the start of the slum clearance drive, and six years after *The Density of Residential Areas*. Is this an indication of a lack of quality or quantity in the research staff of the Ministry? As the standard of this book proves that it cannot be the former, it is high time that the quantity was increased.

JACK WHITTLE

* HMSO. 10s.

ARCUK

Maintenance Scholarships in Architecture

The Architects' Registration Council of the United Kingdom offer for award in June, 1959, certain Maintenance Scholarships in Architecture for students of British nationality, who could not otherwise afford such training, to enable them to attend Architectural Schools approved by the Council. Particulars and forms of application may be obtained from: The Secretary to the Board of Architectural Education, Architects' Registration Council of the United

Kingdom, 68, Portland Place, London, W.1. The closing date for the receipt of applications is January 31, 1959.

FURNITURE GUILD

First Awards

The Furniture Makers' Guild, which introduced a Guild Mark Scheme earlier this year to encourage "an outstanding degree of excellence" in British furniture, has made its first awards. A jury of six, comprising Sir Hugh Casson, Lucian R. Ercolani, Anthony S. Heal, Edward J. Mold, Edward H. Pinto and Ernest Race, considered the first pieces of furniture submitted under the scheme and awarded Guild Marks to the following:

Bishop's Chair and Prie Dieu (for Tonbridge Parish Church) submitted by Dunn's of Bromley and designed by Peter Wayman; circular table (for a Palace in the Middle East) submitted by Gordon Russell Ltd. and designed by Professor R. D. Russell, and drinks cabinet submitted by Gordon Russell Ltd. and designed by W. H. Russell. The drinks cabinet is produced in limited quantities in the firm's range.

NFBTE

1959 President

The Council of the NFBTE has nominated T V. Prosser (Liverpool) for election as President of the Federation in 1959. Mr. Prosser was President of the Liverpool Federation in 1956. Other nominations by the Council include Mr. D. E. Woodbine Parish as senior vice-president.

Below, a general view of part of the le Corbusier exhibition at the Walker Art Gallery, Liverpool, which was opened by Maxwell Fry last week. Bottom, le Corbusier's design for a museum in Tokyo. The exhibition was brought to Liverpool by a special committee chaired by Councillor W. R. Maylor, with deputy chairman Robert Gardner-Medwin, whose students helped to repair the models prior to the opening. The exhibition will be opening at the Building Centre, London, on February 3.

DIARY

Special General Meeting to Discuss The Profession and the Proposed RIBA Constitutional Changes. At the AA, 34/36, Bedford Square, W.C.1. 6.30 p.m.

DECEMBER 30

Out in the Mid-day Sun. Two illustrated Christmas holiday lectures for boys and girls. By L. M. De Syllas. At the RIBA, 66, Portland Place, W.1. 3 p.m.

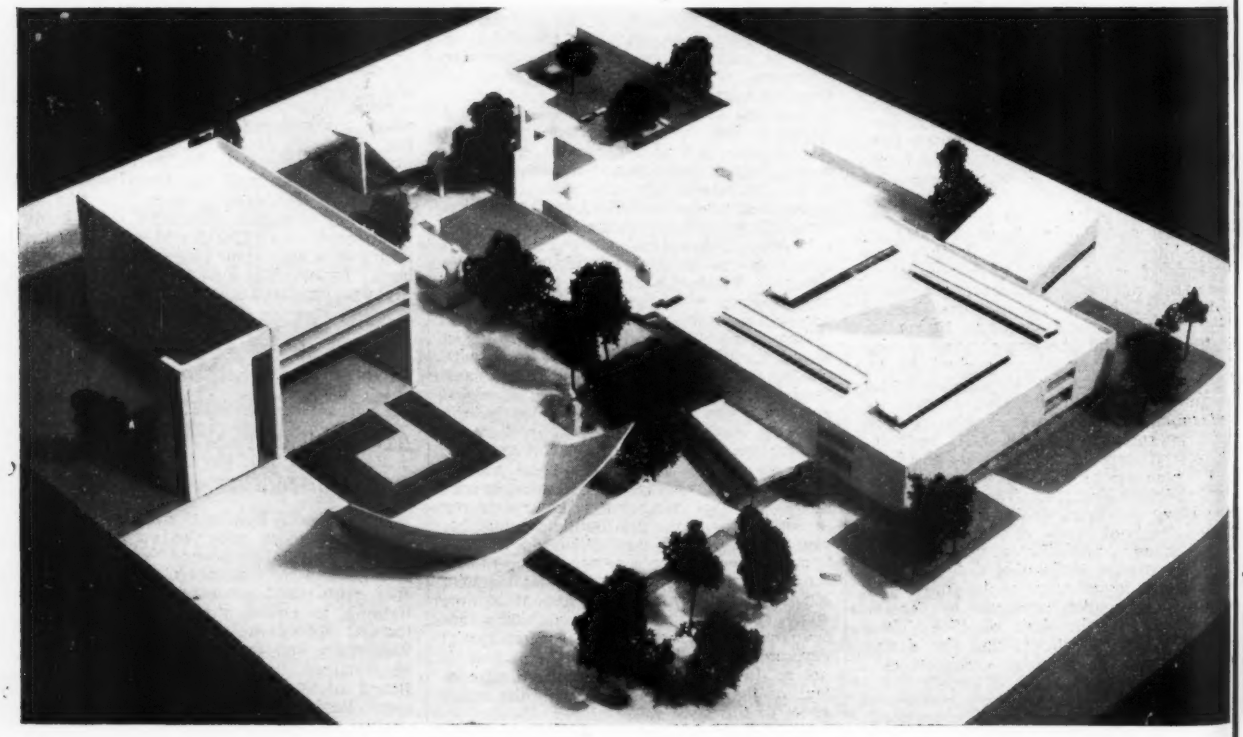
DECEMBER 31 AND JANUARY 2

Special General Meeting to Discuss The Interim Report of the Constitutional Committee. At the RIBA, 66, Portland Place, W.1

JANUARY 6

IUA Congress, Moscow. Talk by Professor Robert Matthew, A. W. Cleeve Barr and Arthur G. Ling. Paul Drake will also describe the Leningrad Students' Congress. At the RIBA, 66, Portland Place, W.1. 6 p.m.

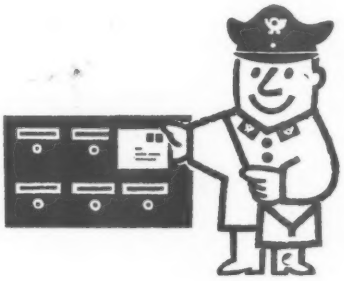
JANUARY 8



FLATS IN BERLIN, 1958

PROBLEMS & TECHNIQUES COMPARED WITH ENGLISH PRACTICE

By J. Eastwick-Field and J. Stillman



3. The Hansa Quarter

Windows and services

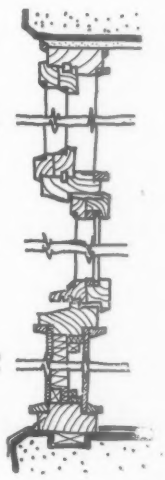
Windows for high blocks of flats are now-a-days expected:
To provide large glass areas for æsthetic reasons,
Not to allow much loss of heat,
To give controllable ventilation,
To be easily cleaned by the tenant from inside,
To be safe—to prevent children from falling out,
To be easy and safe to maintain,
Not to interfere with the curtains,
and, needless to say, exclude the weather and to cost no more than the wall they replace! It is hardly surprising that there is no one solution to these exacting requirements. Even with unlimited money it would be difficult to find one.

On a limited budget one necessarily has to find a compromise and, in doing this one has to choose what one considers to be the most important factors. It is a remarkable fact in Berlin and everywhere on the Continent (excluding Scandinavia) casement windows are used *opening inwards*, which enables them to be easily cleaned, painted and glazed from the inside, though they may get in the way of the curtains if they are widely opened at night. Apparently this factor is of no consequence except in England. We admit that the Continental tradition has been to set the windows on the face, with deep reveals on the inside, and also to have external shutters permitting ventilation whilst still giving protection against the elements (and on the ground floor against intruders).

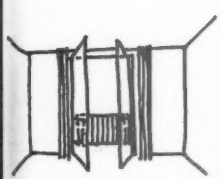
In Berlin (and we have noticed also recently in Paris) the tradition of inward opening windows persists despite the fact that shutters are not always provided, and the walls are no longer thick.

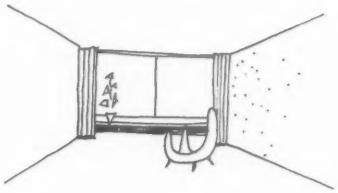
Inward opening windows so admirably solve a number of the most difficult requirements of high blocks of flats that we think they deserve to be tried here. (If we are ignorant of any existing examples, apart from windows on access galleries, it would be interesting to publish details and experience of them.) We know that the exclusion of rain and wind is theoretically less effective when windows open in, but this argument hardly bears examination in the face of evidence from abroad.

With very few exceptions the windows in the Hansa buildings are, as we have said, inward opening casements—always double glazed and made of wood. This kind of window has a limiting size and proportion which obviously influences the architectural character of the fenestration. A typical German casement is 5 ft. high by 2 ft. 2 in. wide. This proportion is not in sympathy with the fashion for very large panes of glass, which are more easily accommodated in sliding or horizontally pivoted sashes. The more practical



Right, details of infilling panels to the south elevation of the Jaenecke and Samuelson block showing (a) *triple-glazed fixed top light* (*openable from continuous balcony on outside for cleaning*) (b) *triple-glazed inward opening casement and* (c) *well insulated sill panel.*





Far left, typical window in modern flats in Paris. Cleaning, glazing and painting all carried out from inside. Curtains and weathering apparently cause no complaint. Left, by comparison, how can one deal with this ?

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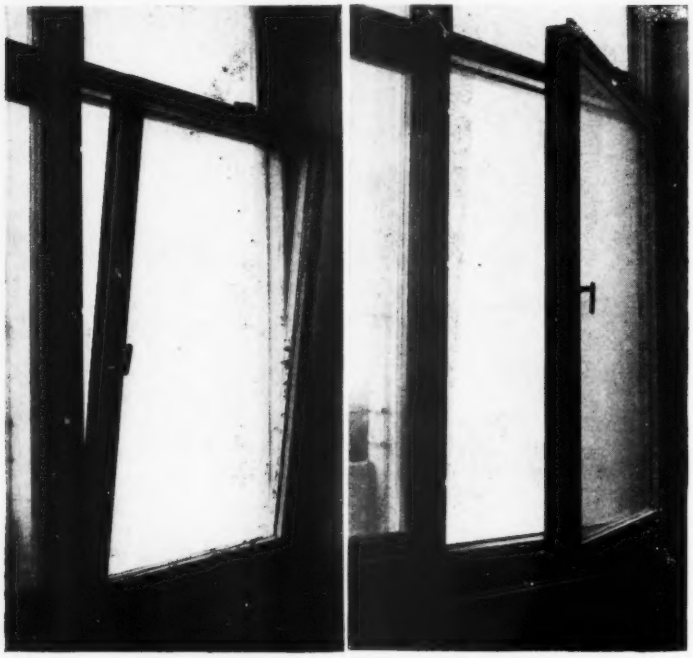
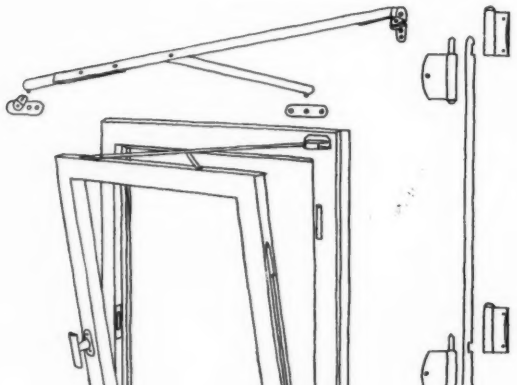


Above and below, fittings designed to enable a window to open inwards—either as a casement or a hopper for night ventilation. Made by Gunther Krebs and Co. Berlin.



and economic casement is in this respect a compromise.

The insistent demand for the unsightly "night ventilator" has to be faced by every architect of housing in this country. We were agreeably surprised therefore to see very few in Berlin, and to find an ingenious but commonly used device for overcoming the problem. This consists of a set of two hinges fixed to a normal inward opening casement window. By operating a lever handle the side hinges are released and hinges in the bottom engage, so that the window will then open as a bottom hung hopper. The one cockspur and folding stay at the top serves both methods of opening.

Not all flats, however, have special provision for night ventilation in the tops of the windows. This makes us wonder whether the demand here has not resulted from our two hundred years' experience of the sash window, which, of course, provides easily controllable ventilation.

This raises the question of whether sash windows do not still make the best windows for high flats. Against their advantages, however, they do have snags—the top is difficult to open unless there are glazing bars, if they are coupled to give sufficient width of window the mullion becomes very large (springs take less space than weights but do not run as smoothly), and finally, unless chains can be afforded there is the nuisance of the cords breaking.

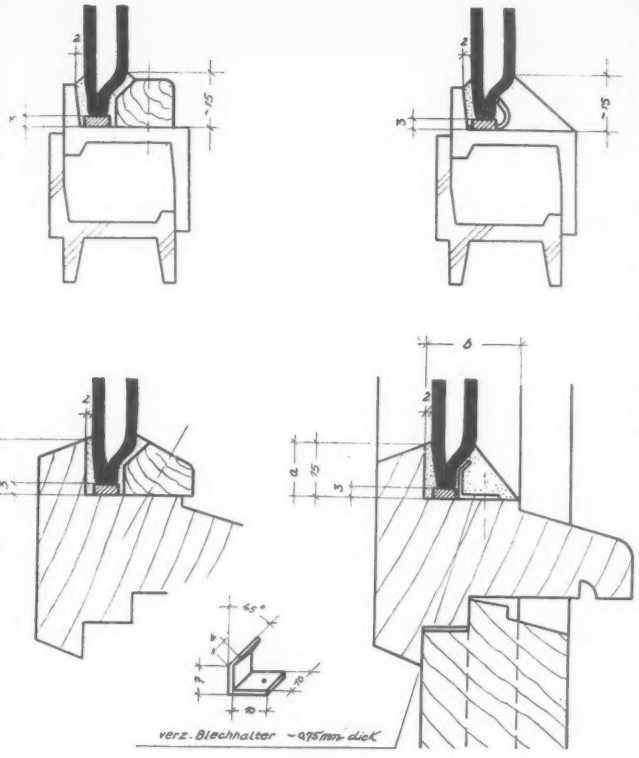
It would appear, therefore, that the solution to improved performance of windows lies in the development of fittings rather than in the return to such traditional windows as the double-hung sash. There is evidence of this in the many patent Scandinavian horizontally pivoted windows now on the market.

Besides the window already described, the Germans have many other useful fittings for doors and windows. For doors to balconies, for instance, a fitting is made which when the door is closed raises the bottom rail and drops it on to a water bar, making a weatherproof seal. Our own manufacturers of door furniture are now trying to improve their patterns to meet the competition of well-designed imports. If they would undertake some development work on window fittings, they could well assist architects to overcome the many difficulties they are now experiencing in designing windows for high flats.

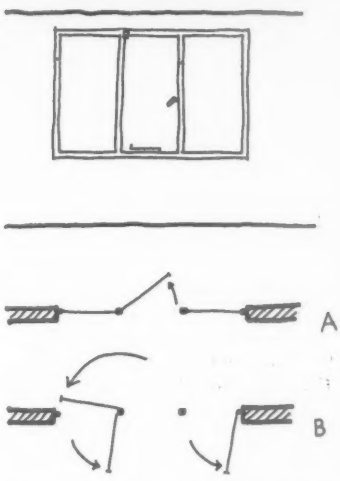
Cleaning and reglazing

It is perhaps worth mentioning at this point that whatever arrangements are made to allow cleaning *and glazing* from the inside, the capital cost will be considerably more than if normal standard domestic windows are used. For one thing, opening lights are of course more expensive than fixed lights, and if all the outside surfaces of the glazing are to be reached in safety from inside, a much higher proportion of opening lights will be required than one would normally expect to provide. In high blocks, the technique of cleaning fixed lights through extended hinges is seldom acceptable unless the casements are quite small.* The original 1 ft. 8 in. wide standard metal

* See LCC report on windows in tall blocks, AJ, July 10, 1958.



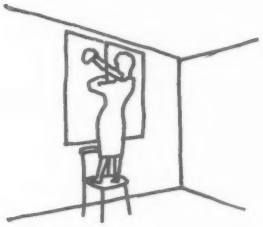
Left, details issued by Messrs. Gado showing the fixing of their patent form of double glass. This glass consists of two sheets with a partial vacuum between but sealed at the edges with a glass to glass weld.



Above, casement window for high flats designed by the authors in collaboration with John Thompson Beacon Windows Ltd. (a) *the centre casement opens outwards for normal use (with a safety catch on the hinge side).* (b) *for cleaning and glazing, the side lights open inwards and the centre casement is opened* 180 *deg. and may be secured to the window frame.*

Right, diagram showing a glazed door to a balcony with threshold details indicating usual arrangement and improvement effected by the use of special hinges which enable the door to drop on to a sill to give airtight seal. The door can also be opened as a large hopper to give ventilation. Made by Gretsch and Co. Stuttgart.

windows are better in this respect than the wider "Z" range, but if the housewife has to stand on a chair to reach the top of the fixed light on the outside, as she does if for instance a 4-ft. high window is used on a 3 ft. 6 in. sill, this cannot be considered safe above 2 storeys. A further disadvantage of this means of cleaning is that it precludes the fixing of kitchen sinks under windows; still the position most favoured by the housewife.

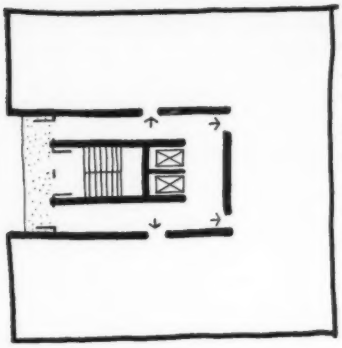


Left, cleaning fixed lights of casement windows from inside. Adapted from excellent sketches in LCC's report on windows in high flats.

If then it is necessary to pay for more windows to open and in addition to pay for more elaborate types of windows and fittings* one wonders whether it would not be economical to rely on regular outside cleaning from cradles. The cost of this would to some extent be offset by the saving on the capital cost of the windows. It must be remembered that cradle rails will most likely have been provided for periodic maintenance of the fabric of the buildings, but the charge would of course have to be borne in the first instance by the Council and not the tenant, which is no doubt a difficulty. This is one of the practical problems associated with housing in urban areas, which needs systematic investigation.†

* Recently both Hopes and Crittalls have considered this problem and have developed interesting new types of windows to meet the demands we have been discussing.

† See also comments of a firm of window cleaners quoted by J. Eastwick-Field in his paper to the Oxford Conference, 1957.



The principle of escape illustrated is adopted in four of the six 16- *and* 17-*storey point blocks at Hansa. This neat and economical arrangement gives natural light and ventilation to both the escape staircase and circulation space. It would be interesting to know whether such an arrangement would be acceptable in London.*

Staircases and escape

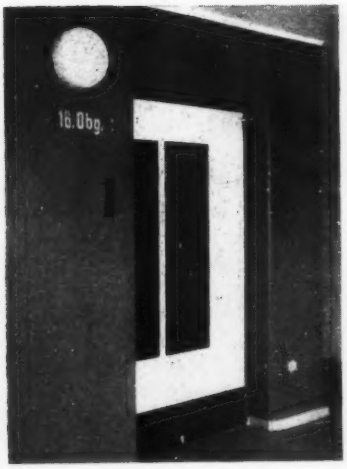
We have already commented on locked front doors to Continental flats and the "inside" character of the circulation spaces. A good deal is spent on the finishes, and this makes the circulation more than just an extension of the outside pavement. Visitors are dealt with by remote control of the entrance doors and postal deliveries by letter boxes grouped at the entrance.

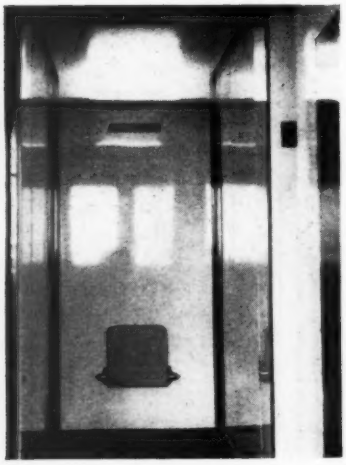
The arrangement of stairs in Berlin is governed by new fire escape regulations which apply to all buildings over 22 metres high, *i.e.* above the eighth floor, which is above the reach of the fire-fighting ladders. There must either be a choice of two staircases for escape or *a single staircase approached through the open air* (see sketch). Four of the six point blocks make use of this arrangement. Risers are commonly 16·6 cm. ($6\frac{1}{2}$ in.) there being 18 risers to a floor to floor height of 3 metres. Treads, which are not controlled, are usually 28 to 30 cm. (11 in. to $11\frac{7}{8}$ in.). Dry rising mains are required and we were told that the Müller-Rehm and Siegmann block had an electric generator in the basement to keep the lifts working in an emergency.

Lifts

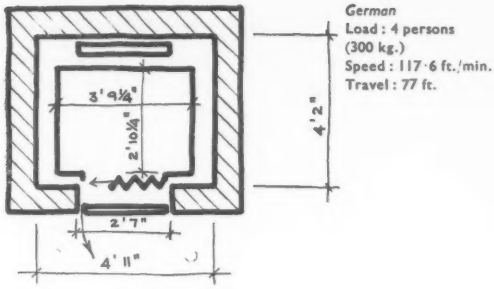
The original development work for high buildings was of course carried out in America during the last century. Taking advantage of rolled steel joists made in 1883 by the Bessemer process, it brought into being the technique of building with a steel framework and in-filling panel walls. Fundamental to this development however was the invention of the elevator in 1859, which for the first time enabled architects to design flats and offices above the previous practical limit of six storeys. Early steam and hydraulic lifts were replaced by electric lifts in the 1890's. These made possible the erection of that astonishing series of skyscrapers which culminated in the famous Woolworth building in 1913 (52 storeys, 792 ft. high) and the Empire State Building in 1931 (85 storeys, 1,250 ft. high). The former was equipped with 29 high speed lifts, two running at 700 ft. per minute.

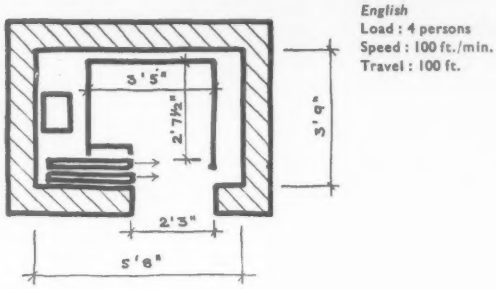
Against these early achievements, there seems little to say about the lifts used nowadays in flats in this country and in Europe. The only limit lifts now impose on the designer is a financial one. Even the most utility designs have a high standard of safety and reliability: at a cost one can have more elaborate controlling systems and very high speeds.





Above left, lift door in the Müller Rehm 17*-storey point block. Two lifts are provided stopping on alternate floors, so that each floor is served by one lift. They measure about* 2·2*m.* (7 *ft.* 2 *in.*) × 1*m.* (3 *ft.* 3 *in.*) *internally* (*designed for* 11 *persons,* 900 *kg. loading* = 17·7 *cwt.*). *The lifts will serve about* 164 *people. The lift door which opens outward is of black and white steel and the wall of blue gloss paint on a textured surface. Above right, the interior of the same lift lined with enamelled steel* (*coffee coloured except for black trim*). *This is undoubtedly smarter than the reeded aluminium which is now popular in England but one of the panels had already been badly scratched, possibly in carrying furniture. The lighting is "indirect" and each lift is provided with a tip-up seat. Below, entrances to flats in the same block. The doors contain spy holes* (*fitted with a magnifying glass*) *and in the side panel, a meter cupboard glazed for reading from outside, a cupboard for deliveries, and a name plate and bell push. All the door furniture in this and most other buildings is in anodized aluminium.*





Left, 4-person standard prefabricated lift made specially for housing schemes by Schindler Lift Company, Berlin. The lifts are held in stock and can be delivered complete at short notice in Germany or abroad. Prices range from DM13,500 (£1,125) to DM17,200 (£1,433) (installed) according to the numbers of floors served. Right, a comparable British lift made by The Express Lift Company. This has automatic sliding doors but a slightly smaller car.

In considering costs the architect must make two decisions about lifts which affect the whole design: should tenants have the choice of two lifts in case one fails, and, how many flats should be served by each lift? In our Council flats the tendency is towards duplicating lifts above seven or eight floors. As regards the number of flats served, C. N. Craig of the Building Research Station in his paper *Factors affecting economy in multi-storey flat design* suggests for reasonable economy in blocks of 12 storeys that at least 30 flats should be served by each lift. These considerations lead architects to abandon plans on the "access in pairs" principle as exemplified by the Gropius building where each lift serves only 15 flats and where tenants have no choice of lifts, and to turn to point blocks or for the greatest economy still to blocks with internal or external corridors. It is interesting to note however that none of the Hansa projects employ narrow external galleries as the sole means of access—a method which we hope will soon be superseded in this country.

The provision of lifts in the Hansa high buildings is shown in the following table:

Architect	*Storeys*	*Flats*	*Lifts*	*Lifts to flats*	*Remarks*
SLAB BLOCKS					
Niemeyer	8	78	2	1 : 39	1 large and 1 small serve 5th and 7th floors only, with stairs to remaining floors
Aalto	8	78	2	1 : 39	Access in pairs. Tenants do not have alternative lift service
Vago	9	59	3	1 : 20	
Gropius	8	61	4	1 : 15	
Jaenecke and Samuelson	10	68	4	1 : 17	Access in pairs but extra access balconies give choice of lifts
POINT BLOCKS					
Müller-Rehm and Siegmann	17*	160	2	1 : 80	Lifts stop on alternate floors (single person flats)
Schwippert	16	61	1	1 : 61	Exceptional in having only one lift
Lopez and Beaudouin	15	90	2	1 : 45	
Hassenpflug	15	76	2	1 : 38	1 large and 1 small
CORRIDOR BLOCK					
Le Corbusier	16	557	3	1 : 186	2 large passenger lifts and 1 goods lift

It will be seen that there has been no standard for the numbers of lifts to be provided. We understood that an assessment would be made of the buildings after they had been occupied for some time, and it is to be hoped that this will include the lift service, and will be published. In particular one would like to know whether the 557 flats in the Unité are adequately served by only two passenger lifts, each about 7 ft. × 5 ft.

An official requirement in Berlin is that at least one of the lifts serving a group of flats shall be large enough to take a bed or stretcher. One lift we measured was 7 ft. 2 in. × 3 ft. 3 in.† and was designed for 11 persons (load of 900 kg. = 17·7 cwt.). This is considerably bigger than our popular eight person "pram lift" which measures about 4 ft. 9 in. by 3 ft. 7 in., with a 2 ft. 9 in. door (load of 10 cwt.) and is, of course, better able to cope with furniture. Have we faced the problem of taking bulky furniture—perhaps even a piano—to the 20th floor?

German lifts seem less standardized in detail than ours. Several different door arrangements are in use, including the total omission of the car door. None of these variations, however, seems to us quite as good as our double automatic sliding doors, although some are no doubt less costly. Details such as the provision of tip-up seats, and of concealed lighting and good colour schemes, were a refreshing change from what we have grown accustomed to.

* A lift serving 17 floors will obviously cost more than one serving 8 but not twice as much.

† There is no BS lift corresponding to this. BS2655 Part 3 includes the following:

	Load	*Speed, ft./min.*	*Platform*	*Well*
4 person, light passenger	600 lb.	100	3' 8" × 3' 1"	5' 8" × 3' 10"
8 person, perambulator	1,200 lb.	100	3' 9" × 5' 2"	6' 9" × 6' 0"
10 person, general purpose	1,500 lb.	150 200 300	6' 0" × 4' 0"	7' 4" × 5' 8"
13 person, general purpose	2,000 lb.	150 200 300	6'4" × 4' 5"	7' 8" × 6' 1"

Internal dimensions of lift cars are slightly smaller than platform dimensions

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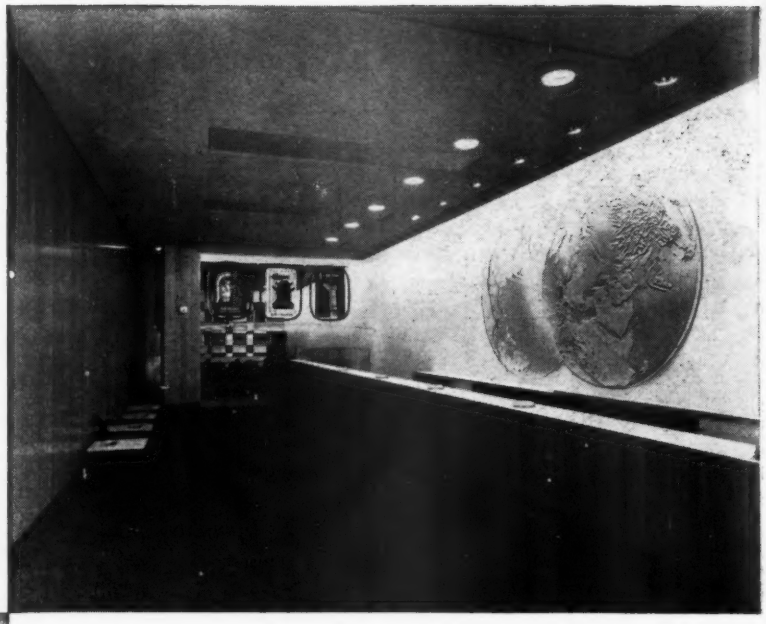

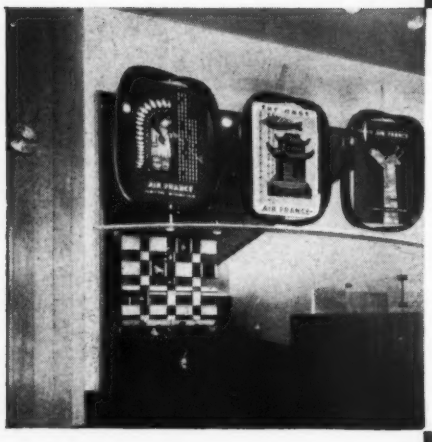

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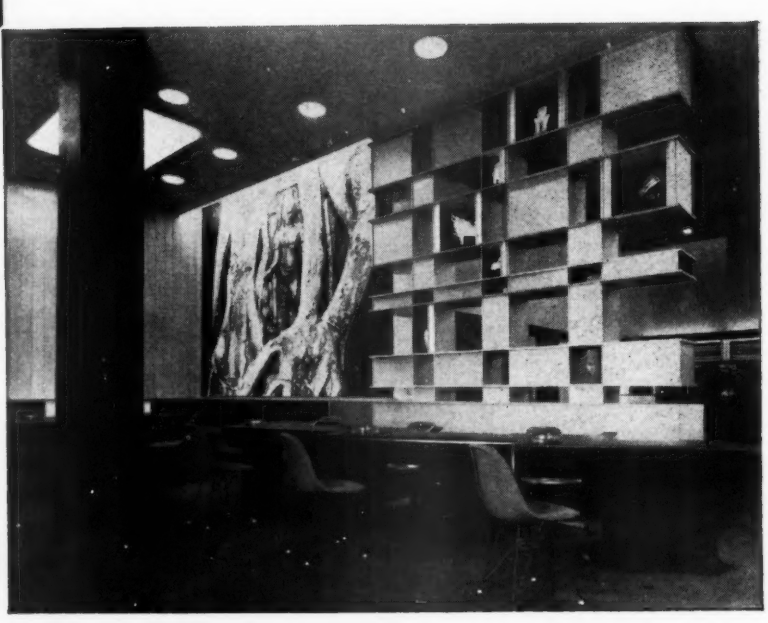
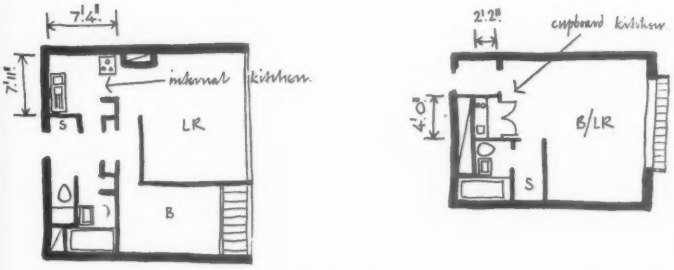


Above, a typical bathroom showing the high standard of fittings and ample glazed tiling.

Above right, a typical kitchen in the Hansa Quarter showing the double stainless steel sink, electric cooker and refrigerator. The flats are "all electric," no gas being laid on in this area. Refrigerators are built in and paid for as an addition to the rent. Very few flats have separate ventilated larders as required in this country although we did see relatively small ventilated cupboards (about 2 ft. square) in the social housing projects. Above left, an instantaneous electric water heater of a type not used here. Water softening plants are installed in some blocks, which would overcome a possible loss of efficiency if this type of heater were used with "hard" water.



Above left, plan of flat with internal kitchen. Above right, plan showing cupboard kitchen.

Internal bathrooms

All the point blocks and most of the others are planned with internal bathrooms, which generally include the w.c. as well as the bath and basin. Internal bathrooms are not unusual on the continent although the regulations governing the social housing in Berlin do not normally permit them for flats designed for more than three persons.

Knowing that many people consider that artificially lit and ventilated bathrooms are highly objectionable and not to be tolerated even for the sake of the advantages in planning which they give, we were anxious to learn the experiences of the Hansa tenants with these arrangements. We did not have time to see more than a few flats, so that we cannot say more than that in these few the tenants accepted the internal light and ventilation as a matter of course, and had no objections.

We gathered that the ventilation was provided through ducts to fan rooms on the roof, except that in blocks up to 5 storeys high ventilating ducts may be installed without fans.

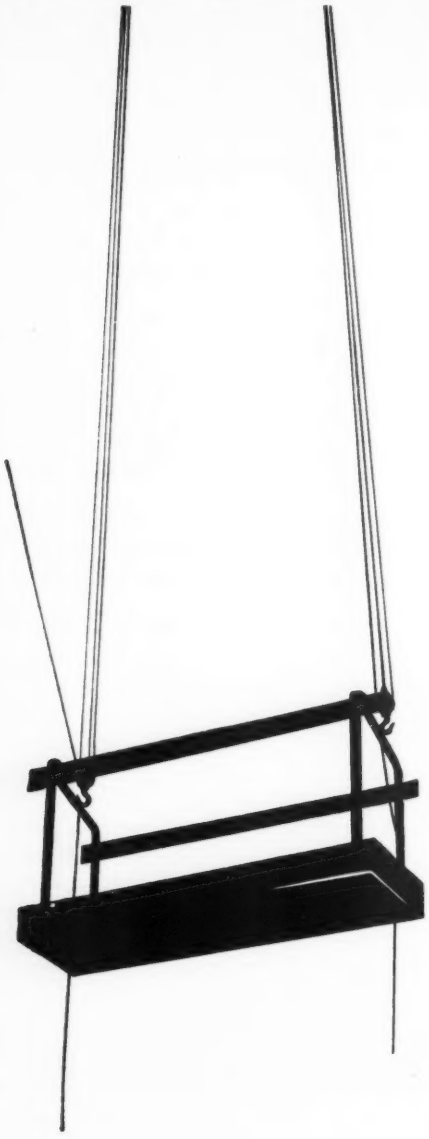
Incidentally, the regulations also say that if no form of night ventilation is provided on the ground floor (for fear of intruders) ducts are to be installed to ventilate bedrooms and kitchens of the ground floor flats, and this is usually arranged through the basement.

It seems clear to us that internal bathrooms are essential for the compact and, therefore, economical planning of high blocks of flats; that this economy could generally be expected to cover the capital and running costs of the simple ventilating plant required; and that such bathrooms and w.c.s are in all essential respects equal to those having windows.

Kitchens

Internal kitchens are less in evidence than internal bathrooms but a number of schemes contain, where the plans demand it, kitchens in L-shaped recesses at the back of living rooms, provided with extract ventilation (*e.g.*, Aalto and Otta Senn) or kitchens divided from the living rooms by counter fitments or partition which make them separate internal rooms (*e.g.*, Schwippert, Hassenpflug, Lopez and Beaudouin, see sketch). Also in Müller-Rehm's block for single persons about a third of the bed sitting rooms have "cupboard kitchens" at the back of living rooms (see sketch). Unfortunately we were not able to obtain any tenants' reactions to these kitchens. However, at no time in our discussions with architects and officials concerned with Hansa did we hear of any complaints.

In discussing this question one must bear in mind that the flats with internal kitchens are mostly small—with not more than one or two bedrooms. In addition as each block has a laundry they do not have the problem of the weekly wash. Finally, it seemed to us that, in the Hansa Quarter at least, the refrigerator has been accepted as a replacement for the ventilated larder. Even where kitchens are planned with long external walls larders are seldom provided. (We did in fact see ventilated cupboards measuring about 2 ft. by 2 ft. in some new family flats in the social



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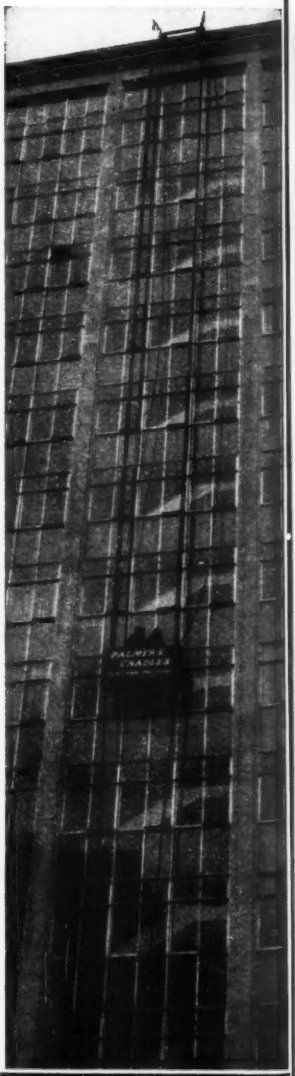

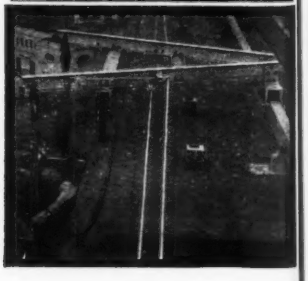

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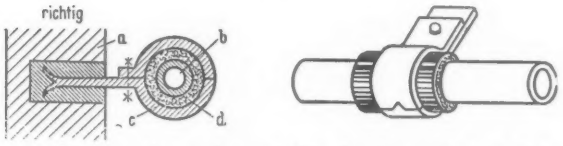
housing.) Refrigerators are provided built-in as they were with our council housing after the War.

Heating

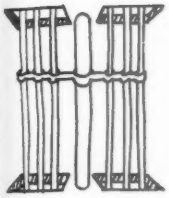
It goes without saying that all the flats in the Hansa district are centrally heated (even though they have flues for stoves in case of emergency: a characteristic they share with flats being erected in France).

For most of the blocks the source of heat is from a power station 2½ kilometres away, and usually the heat is transmitted by radiators. In the social housing schemes where district heating is not available the source is almost invariably oil fired boilers. The heating is not restricted to any one part of the flats: it extends to all rooms and corridors and is calculated to give a temperature of about 70 deg. F. (21 deg. C.).

Only one of the blocks in the Hansa Quarter had a different form of heating. Samuelson and Jaenecke's



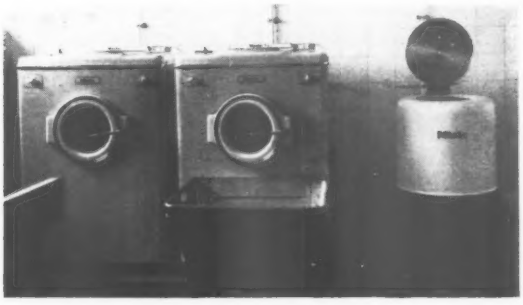
Above, section and perspective showing method of fixing water pipes to reduce noise. Left, diagrammatic arrangement of services duct. The soil pipe (centre) is fixed at floor levels and the water pipes, which make most noise, are bracketed from this. The pipes are wrapped in felt where they are clamped.



flats were heated by floor panels (hot water). Some features of the system are perhaps of interest for comparison with our own practices. Floor temperature 28 deg. C. (82·4 deg. F.) water in the pipes 50 deg. C. (122 deg. F.). The control is central and there are no thermostats in the flats. Presumably the only control the tenant has is to open or close the windows—a matter of some difficulty in the living room which has no opening lights except a french door.

Nevertheless the tenants appear to be well satisfied: indeed they expressed a preference for this kind of heating. Furthermore it cost them less: 3·30 Dm/sq. m. flat per year as against 5 Dm/sq. m.

One of the difficulties of floor heating is that one cannot always obtain sufficient heating surface to give the required temperatures. In this block the problem is lessened by increasing the insulation to three times that of the usually accepted figure, and also by having *triple* glazing. Even so the top floor flats with greater heat losses had radiators to supplement the floor panels.



It is common practice to equip blocks with a communal laundry. The one in the roof of the Jaenecke and Samuelson block contains two washing machines and a spin drier (above) and an ironer (below).

Hot and cold water

We have read recently that several hundred million gallons of water are stored on London rooftops. There are no doubt good reasons for preserving the regulations that require this, but it is also odd that in a great city like Berlin—and in many others—no such storage is demanded. Naturally the task is easier for the architect if the bulky and heavy tanks required for large blocks of flats can be omitted. We have recently seen many not too successful solutions to the aesthetic problem which they present.

We all know, too, of the persistence here of the w.w.p. whereas abroad those who rule over these things are happy with the flushing valve. In the Hansa blocks there were no storage tanks and few w.w.p.s.

Noise from water pipes is often a cause of complaint and in conversations we had with architects in Berlin we found that particular stress was laid on trying to avoid it. The problem is not a new one but in high blocks needing pumped water it becomes specially acute. In the official booklet *Baut Ruhige Wohnungen* we find an obvious enough but very clear directive as to how pipes should be fixed, and we were also told of the method shown, left, in which the water pipes are clamped to the waste pipe with flexible connections—the waste pipe only being rigidly connected to the structure.

Hot water is either supplied from a central source *and metered:* (we confess that we do not know the technical difficulties of metering hot water—but we are still unable or unwilling to do so here though it is done regularly and apparently successfully on the Continent): or it is provided locally at the sink or bath from an *instantaneous* electric heater. These appliances were very neat in appearance and worked well. They do however require soft water and in some districts suitable plant has to be installed.

As distinct from practice here it would be considered an unthinkable waste of money in Berlin to include both gas and electricity in one block. The Hansa Quarter has no gas laid on at all.

Laundry

The illustrations on this page show the installation in Samuelson and Jaenecke's flats and is typical of the provision made: washing machines: spin dryers: iron-

Redfyre Bacboilers provide low-cost water heating in new housing schemes at Aycliffe, Peterlee and Stevenage

A Redfyre Bacboiler supplies ample domestic hot water, and heats one or two radiators as well. (Or it will heat up to four radiators if hot water isn't needed.) Installation is simple and quick and maintenance costs low. Two new Ministry approved Redfyre grates with Bacboilers are now available — the new Hearth Redfyre with sunken grate and underfloor draught; and the Redfyre 60, a new low-cost controlled-burning fire with exceptionally clean modern lines. All Redfyre fires are fitted with 30% chrome, semi-steel bottom grates for longer life.

Bacboilers like this are being installed in new homes at Aycliffe.
Chief Architect: G. A. Goldstraw, O.B.E., B.A. (ARCH.), A.R.I.B.A.

REDFYRE

Full technical information from

NEWTON CHAMBERS & COMPANY LIMITED
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Hopper, chutes and containers are similar to British practice. Here the containers are housed in the basement and hoisted up with an electric winch for collection.

Above, partitioning of lightweight concrete blocks under construction in the recently completed point block by the German architect Gustav Hassenpflug. Note the flat p.v.c. wiring pinned to the wall through the centre, which is plastered over without any extra protection. Below, the end of one of the concrete cross walls in the same block, showing insulating material (bitumen impregnated insulating board) to prevent condensation which might otherwise be caused by the conduction of heat away through the wall at this point.

ing machines. Other blocks had drying rooms but no ironing machines.

There is no question of any alternative system and the German architects are spared the troubles of drying cabinets in individual flats.

Refuse disposal

Dust chutes are standard but as compared with British practice there are some differences in their use. For instance in the Müller-Rehm and Siegmann block of 160 bed-sitting rooms there is only *one* chute. This discharges into the basement where the caretaker changes the bins as necessary. For the twice-weekly collection the bins are lifted by an electric winch through a hatch at the back of the building. None of the point blocks has more than a single chute, but in the Vago and Niemeyer blocks chutes are arranged to allow hoppers to be situated in the individual kitchens. A tenant we discussed this with appreciated the convenience and proved to us that there was no dirt or smell. Several different hoppers are in use including a circular one that is turned over after the refuse is inserted so that the chute remains airtight. We were also informed of a new, if rather Heath Robinson, method of cleaning the chutes. By a system of pulleys and weights a sweep's brush is lowered through the chute from the top whilst at the same time the chute is sprayed with water.

Construction

Although these articles deal with particular problems of design associated with high blocks of flats, it was inevitable that general methods of construction should be discussed. All in all, the German methods did not seem very different from our own, and the standard of workmanship and finishing seemed quite as good.

Efforts are made to avoid scaffolding the whole of a building. The use of climbing scaffolding can make considerable savings in cost provided the construction is designed to permit major fixings to be made from inside. As the high blocks grow upwards the finishing trades follow from the ground floor, and in Berlin the ground floors are finished and occupied first. This is opposite to the normal practice here. It clearly requires good organisation to allow occupancy before the whole block is finished, but is worth while where there are perhaps a hundred flats in a block.

Doors and other components seemed generous in size. A typical flat had 6 ft. 6 in. doors—front door 3 ft. wide, bedrooms and living room 2 ft. 8 in., and kitchen and bathroom 2 ft. 3 in.

One final point: the first tenants are allowed to choose their own wallpaper. Perhaps a small point requiring some extra organisation, but one which must help the occupants regard the new building as their home.

Acknowledgment

The authors wish to thank those who helped them so generously during their visit to Berlin, in particular: Frau Dr. Wolff: Herr Otto Streu; Herr Glimm: Herr Sommers; Fraulein Ruth Asheuer; Herr J. Pickenhagen; Herr Hans Schaefers; Herr Werner Düttmann; Herr Biermann; Schindler Aufzügefabrik GMBH.

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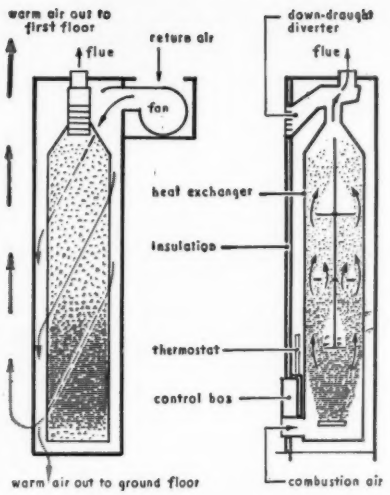

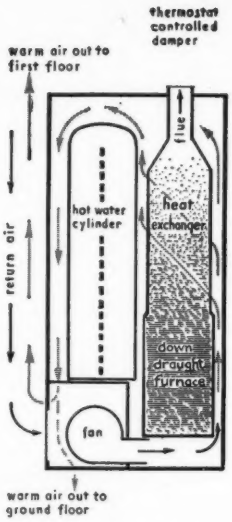

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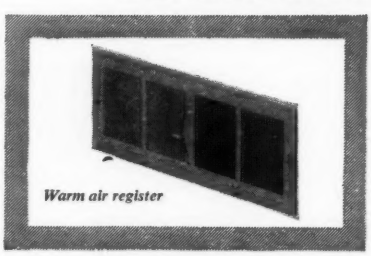

Warm air register

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technical section

THE INDUSTRY

From the industry this week Brian Grant describes an industrial light fitting, a cooking range, window insulation, plastic-covered fabrics, a stop valve and drain cock, a fluorescent light fitting, a system of suspended ceiling lighting and folding partition gear.

Lighting fittings

Four new lists from Falks illustrate commercial fittings, recessed and display types, some good outdoor fittings and standards for pathways and gardens, and an interesting corrosion resistant fluorescent unit for use in chemical works, laboratories and other jobs where aggresive atmospheres are likely to be met. The latter unit has been designed to accommodate one or two 5 ft. tubes, and its sheet steel channel is completely coated with polythene. The reflector is a closed Perspex trough, fixed with nylon bolts and nuts, with a clip on visor in the same material. Control gear is specially protected and suspension is by polythene coated hooks and p.v.c. coated conduit, although for the latter terylene cord is a recommended alternative. This seems a sensible fitting in which considerable trouble has been taken to prevent corrosion. (*Falk, Stadelmann & Co. Ltd.*, 91, *Farringdon Road, London, E.C.*1.)

Large scale cooking

It appears that in the catering industry there is still a demand for an especially robust type of cooking range built on the same lines as the older solid fuel models and with a high boiling top temperature. The adjoining illustration shows Benham's new Hytherm range, which has gas burners specially designed for use under the solid top to give well distributed heat. It has already been installed in several hotels and restaurants in London and elsewhere, and an electrical version will be in production fairly soon. (*Benham & Sons Ltd.*, 66, *Wigmore Street, London, W.*1.)

Insulated windows

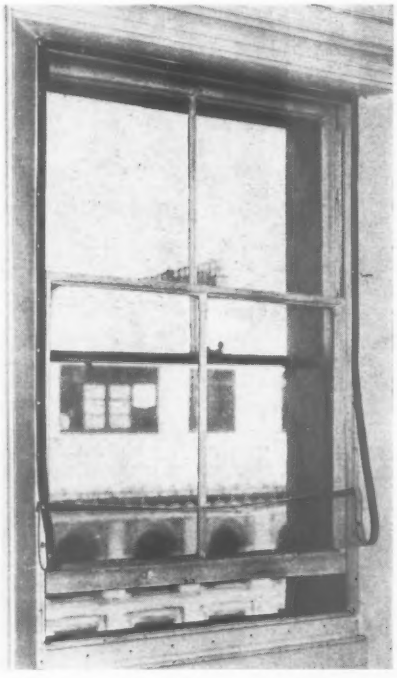
Dohm Limited have recently introduced a system of providing insulated windows by using a sheet of transparent plastic to provide an air space of about 1½ in. The sheets are edged with a fabric binding backed with a sponge sealing strip, and have thumb buttons in the edging to provide a pop stud fixing to screws in the window frame. Price works out at roughly 5s. a square foot, fixed, and the heat lost through the window is claimed to be reduced by about 45 per cent., while a certain amount of sound insulation is also provided. The sheets are flexible and can be removed during the summer for storage, and are, in effect, very much the same as the storm sashes which seem to be usual practice in American houses. The panels are not unduly obstrusive, though on many jobs a somewhat lighter edging strip would be an improvement. The illustration shows how temporary ventilation can be obtained if required. Soap and water should be used for cleaning. (*Dohm Ltd.*, 167, *Victoria Street, London, S.W.*1.)

Plastic coated fabrics

Leaflets and sample patterns from Arlington show Texturide vinyl coated fabric which is made in grades for wall covering and for furnishing. The material is resistant to grease, oil and mild acids and is highly burn resistant. It can also be applied to any wall with a good surface, though new plaster should be given three months to dry out. A similar material, known as Texturtred, is produced for floor coverings. All the patterns are designed by Tibor Reich. (*Arlington Plastics Development Ltd., Arlinghide Works, Eastern Industrial Estate, Harlow, Essex.*)

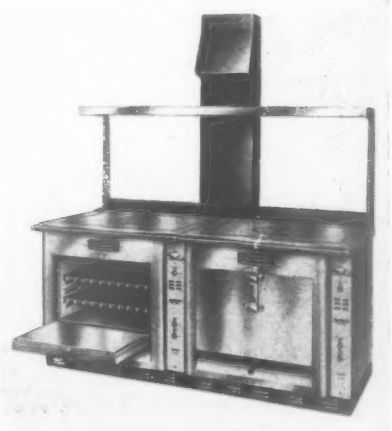
Simpler plumbing

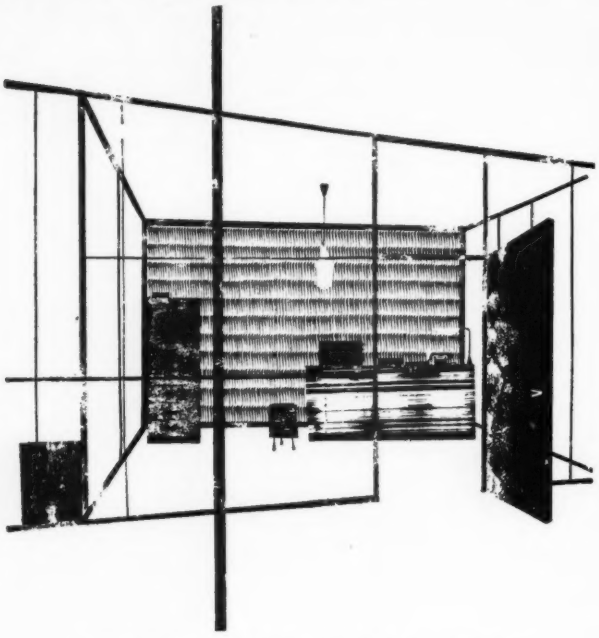
A small but quite useful combined stop valve and drain cock has just been introduced by Yorkshire. When a water system has to be drained the rising main between the stop valve and the ball valve in the cistern generally remains full of water, and is liable to freeze. In the new combined unit the drain cock is immediately above the stop valve, and can be mounted either right or



A window insulated with a sheet o Dohm's transparent plastic.

The gas-fired version of Benham's Hytherm cooking range.





Hayward wallpaper "Deckle" No. 539. Drawing by Audrey Levy.

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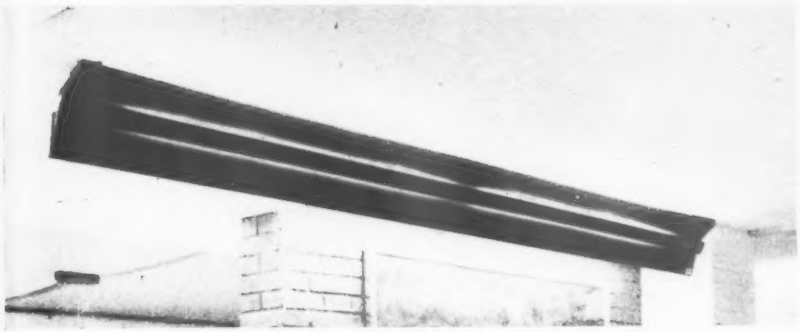


The fluorescent tube fitting designed by K. Sadler for mounting in the angle between the ceiling and wall, now manufactured by Siemens Edison Swan Ltd.

left, so that the whole assembly can be used in any position, vertical or horizontal. (*Yorkshire Imperial Metals Ltd., PO Box* 166, *Leeds.*)

Exhibition fitting in production

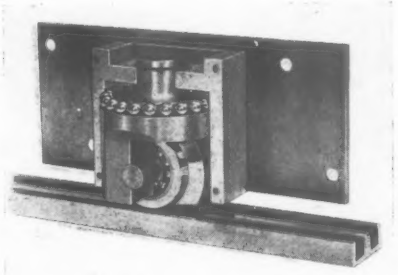
Readers who saw the "Room of Our Own" show at the Design Centre with furniture and equipment by RCA students may remember a lighting fitting made with fluorescent tube and mounted in the angle between ceiling and wall with adjustable louvres top and bottom to control the light. It was designed by Mr. Sadler, and is now being made to order and sold as a Royal College fitting. (*Siemens Edison Swan Ltd.*, 155, *Charing Cross Road, London, W.C.*2.)

Suspended ceilings and lighting

The Tracelite system of lighting is suspended by conduit from the structural ceiling and consists of a series of fittings to take one, two or three fluorescent tubes, 4 or 5 ft. long, and 12-in. square boxes which can either be finished in colour and used purely for decoration, or they may contain tungsten lamps, loud speakers, signalling systems or other devices. Each fitting is suspended by two lengths of conduit, and each box by a single length. Boxes and fittings are connected by lengths of aluminium rod which may be anodised as required and which are secured to the fittings by grub screws in internal sleeves. The layout can be planned on a modular basis with infilling panels suspended from the linking rods. (*Courtney, Pope (Electrical) Ltd., Amhurst Park Works, Tottenham, London, N.*15.)

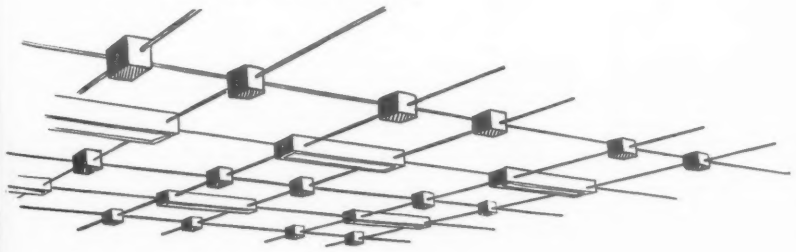
Gear for folding partitions

The illustration below shows Henderson's new College heavy duty rollers for use with partitions up to 18 ft. high. The rollers are fitted with brass wheels running in a brass bottom rail, and have ball bearings to take care of both swivelling and traversing motion. The top guide is a galvanised box section with brass rollers having vertical adjustment to allow for any structural movement. (*P. C. Henderson Ltd., Harold Hill, Romford, Essex.*)



The Henderson College folding partition gear.

The Tracelite system of lighting forms a suspended ceiling.



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.

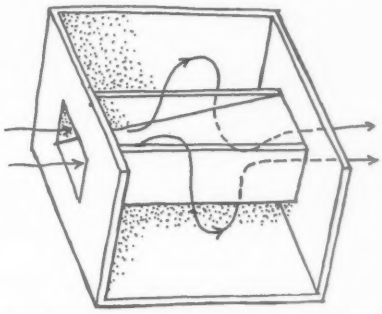
22.92 sound insulation and acoustics

ACOUSTICAL PLENUM CHAMBERS

Acoustical Plenum Chambers. By R. J. Wells. Noise Control, Vol. 4 No. 4. July 1958.

This article describes experiments and measurements made on sound reducing plenum chambers for ventilation systems and gives sufficient data to enable engineers to predict with fair confidence the performance of any such chamber.

Although the subject matter of the article is the main concern of ventilation engineers, architects should be cognisant of the possibilities in this field. Too often the writer has found auditoria, particularly council chambers and conference rooms, in which an altogether too high noise level emanates from the ventilation system, very often with the result that bad hearing conditions are blamed on to the acoustic design of the room which is actually quite guiltless. It would appear that some of the ventilation plant suppliers here are either not aware of the value of sound reducing sections or plenums or are unable to design them.



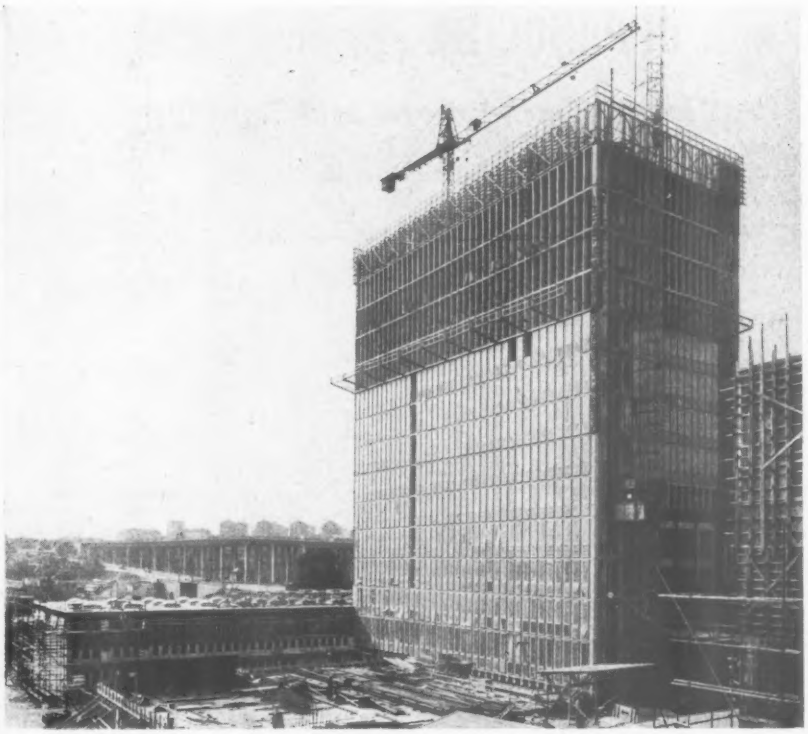
Acoustical plenum chamber giving 20-40 *dB attenuation.* (*Top and near side removed to show construction.*)

Plenums such as that shown are particularly useful for the purpose as they can be designed to give as much as 20 to 40 dB attenuation (depending on the size of the ducts and other physical factors).

It is an important subject of collaboration between ventilation engineer and architect because space must be found for these attenuators, quite separate and additional to the space which will have been allowed for ventilation plant, and they can be very large in size when required for systems handling large quantities of air.

28-STOREY OFFICE BLOCK IN SWEDEN

When the Folksam Building in Stockholm was designed, by Einar Eriksson and Yngve Tegner, in 1955, it was claimed to be the largest office block in Europe. Since then this record has been captured by Milan, while the Folksam still has a good many of its 28 storeys to go. Four storeys beneath both the skyscraper block and the five-storey wing provide 260,000 sq. ft. of garage space—or H-bomb-proof shelter in case of war—and one floor devoted to storage space, a boiler room and printing works. Beneath is a fuel tank capable of holding a year's supply of fuel oil, pumped direct from tankers on the nearby Hammarby canal. The building is of precast concrete with walls insulated with cork and cellular concrete, and clad with thin slabs of Swedish Ekeberg marble, with windows partly double and partly triple-glazed. Each office in the skyscraper is linked to a system of rubbish chutes passing straight into the boiler room, where one boiler will be fired on nothing but waste paper—a rather final way to mislay a letter.



BOOK REVIEWS

Danish Architecture

Two small books recently published by the Danish *Arkitektens Forlag* will make interesting reading (or rather browsing, for they are mainly picture-books) for anyone who is concerned about the present state of architecture in this country, whether or not one likes the buildings illustrated.

The first, *Dansk Form/Danish Design*,* is simply a collection of reprints of articles, mainly on houses but also on sculpture, furniture, pottery, etc., which have appeared in the periodical *Arkitektur*, by the same publisher. The foreword and captions are printed in Danish and English, and it is a pity that the articles themselves are only in Danish, for in this book it is the buildings which are most interesting; the foreword, being addressed to the layman, will seem a little platitudinous to the architect.

The second book, *Contemporary Danish Architecture*,† is an all-English work and attempts to cover a much larger field; there are sections on housing, commercial buildings, buildings for recreational purposes, interiors and furniture, and public buildings (including schools). With such a wide scope the treatment of each item is necessarily meagre, but the book succeeds in its purpose, which is to give the reader a vivid impression of the state of architecture in Denmark. The impression is one of great variety produced by a number of recognizable influences, mainly from Sweden, Switzerland and America, but conditioned by something unmistakably Danish. This is confirmed and clarified by the Introduction, which would have served as an admirable introduction to *Danish Design*; and I intend here to discuss the introduction to one book and the buildings illustrated in the other as being the most significant parts of the two.

Denmark, says Esbjorn Hiort with some humility in the Introduction to *Contemporary Danish Architecture*, has never been a country of innovation; the Danes have been content to borrow from other cultures, and hence their architecture will always be found to have its origin elsewhere. But the manner in which borrowed material has been used is specifically Danish, and, he says, is a result of the following factors:

1. The Danish temperament, to which the evenness of the landscape and the equable climate contribute, dislikes extremes and demands "moderation in all things."

The Dane therefore greets new ideas with some scepticism and his reaction to them is muted.

2. Denmark, being principally an agricultural country, has a strong indigenous building tradition, based on brick and timber, the only building materials avail-

**Danish Design.* Edited by Paul Erik Skriver. DKR 18.00.
†*Contemporary Danish Architecture.* Edited by Finn Monies and Bent Rogind. Text by Esbjorn Hiort. DKR 32.00. Both published by Arkitektens Forlag, Copenhagen.

able in any quantity. Any new architectural influences over the last 800 years have had to be modified to take these materials and the methods which go with them into account; Gothic, for example, remained a wall architecture in Denmark for this reason.

3. The indigenous functional tradition was so strong that Functionalist principles were absorbed without causing any great clash with Academism. The principles as formulated were accepted but there seemed little reason to accept the (for the Dane) largely irrelevant forms which came with them.

So the Danes (with the advantage of having more architects per head of the population than any other country) have gone about developing something peculiar to themselves from the many international ramifications of modern architecture with great deliberation. The results usually avoid the sterility of eclecticism because the Danes do not often "crib"; they allow themselves to be influenced only after they have consciously accepted the values implicit in the objects they consider. Having thus clarified their attitude, they develop the theme for themselves with *consistency*, and it is the quality of consistency born of clarity which is the outstanding merit of the houses illustrated in *Danish Design*. These houses (a number of which are illustrated on pages 894 to 900 of this issue) differ from the bulk of the work shown in *Contemporary Danish Architecture* in that they show marked similarities one to another (the work of Arne Jacobsen excepted) and the features which provide these similarities can be traced to a number of related sources. Superficially it would seem that California (which the Danes acknowledge) is the main source of inspiration, but I doubt whether it is as easy as that and would say rather that the arty sophistication of the typical modern Californian house and the *comparatively* gimmick-free style of these Danish houses have common sources.

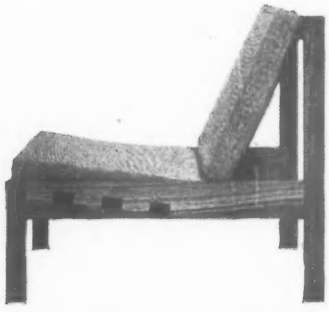
It is difficult, however, to define the sources themselves. The characteristic feature is the transformation of constructional elements into formal elements *as they stand, without recourse to additional make-believe*. A concrete block wall becomes a formal plane; as such it is elongated, but nothing is added, there are no illusions, and it remains a straightforward concrete block wall. A system of beams and purlins, as in Erik Chr. Sorensen's house at Jaegersborg, is exposed and used as a formal system regulating the spatial organisation of the whole house. This is not the "expression of structure" for its own sake, but the formal organization of given constructional elements.

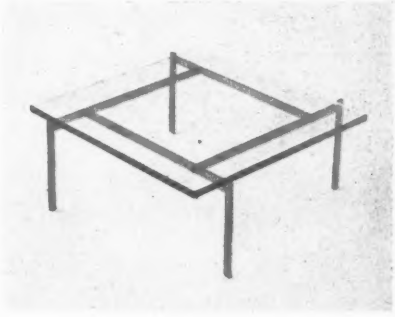
The *type* of formal organization is another matter. It is similar to that explored by some members of the de Stijl group, by Mies van de Rohe up to the Barcelona Pavilion stage, by certain Russian constructivists, and by Frank Lloyd Wright in the between-war years. It represents an attempt to produce an image of the age in which we live; "place" (or in the case of a house, "sheltered place") is seen not as a self-existent thing but as a piece of total, infinite space, defined by planes. Ultimately it is on the validity or otherwise of this image that this kind of architecture must be judged.

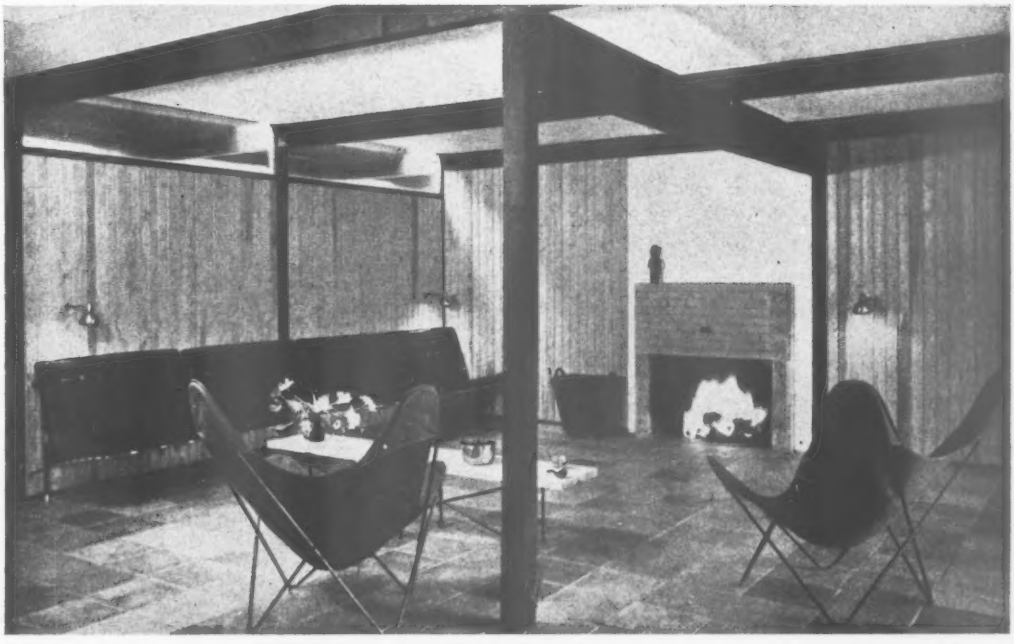
But validity of the image apart, consistency is a virtue in itself and it is here that a comparison with the situation in this country can be made. We are not perhaps so honest about our borrowing as the Danes, not only openly to others but also to ourselves. This lack of clarity leads to indiscriminating borrowing and inconsistency, the result of which is an architecture of the lowest-common-denominator: the British Contemporary Style. Is this an architecture over which we can announce (as has been heard) "The battle of the Modern Movement is won!", because "contemporary" flats, offices, schools, hospitals, churches and houses arise all round us and most of the clients have been stylistically converted?

There are signs of revolt: perhaps the second battle of the Modern Movement will be against its own manifestations.

ROBERT MAGUIRE.

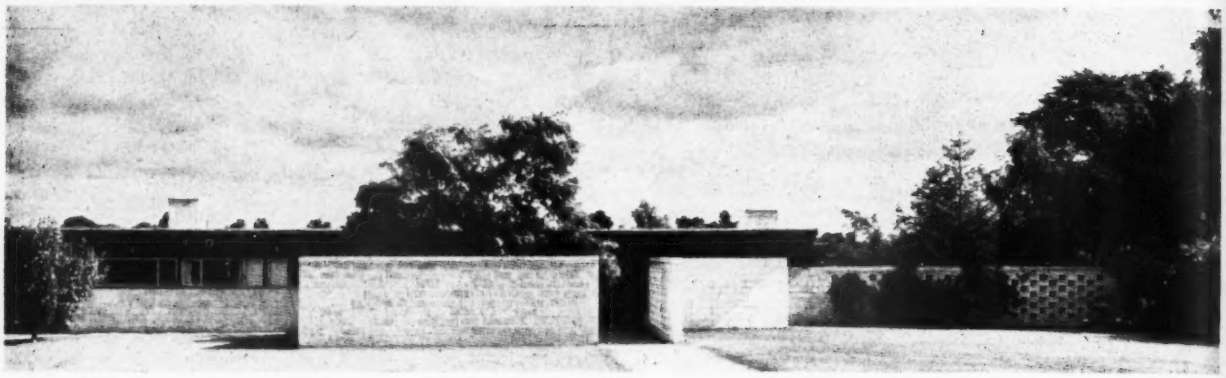


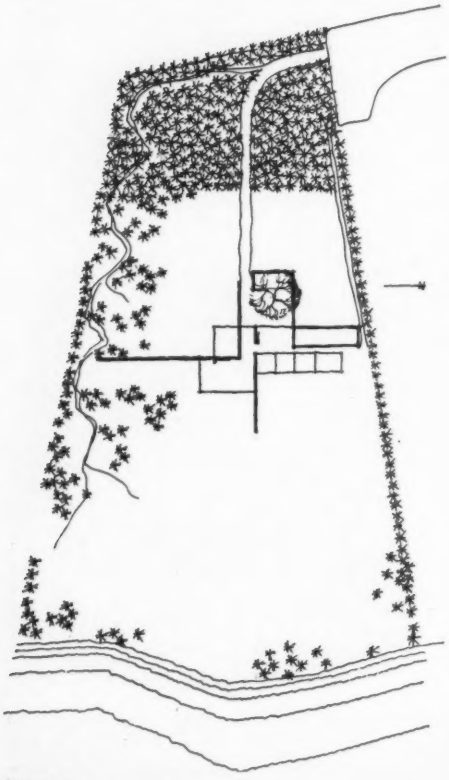




Right, the living room of Erik Chr. Sorensen's own house at Jaegersborg, Copenhagen. Above, entrance and concrete block screen walls, house at Birkerod Lake, designed by Halldor Gunnlogsson and Jorn Nielson. Above, centre, chair in timber with woollen-covered foam rubber cushions, designed by Torsten Johansson. Above, right, low table with glass top and steel frame, designed by Poul Kjaerholm.

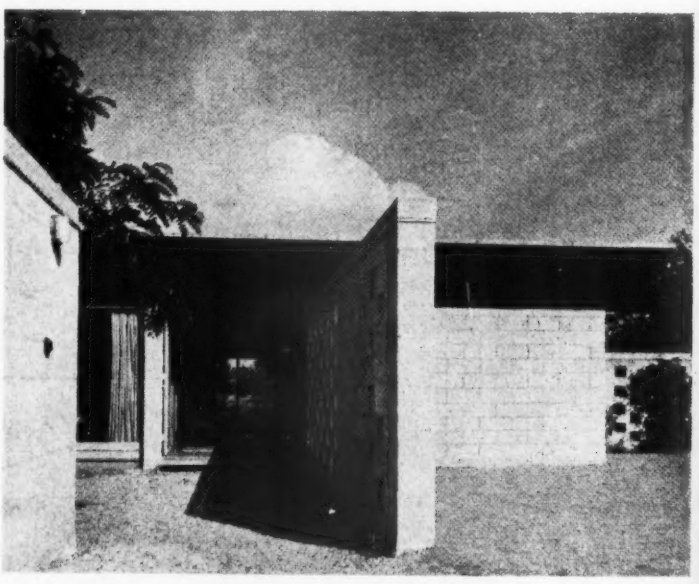
HOUSE ON BIRKERØD LAKE, DENMARK

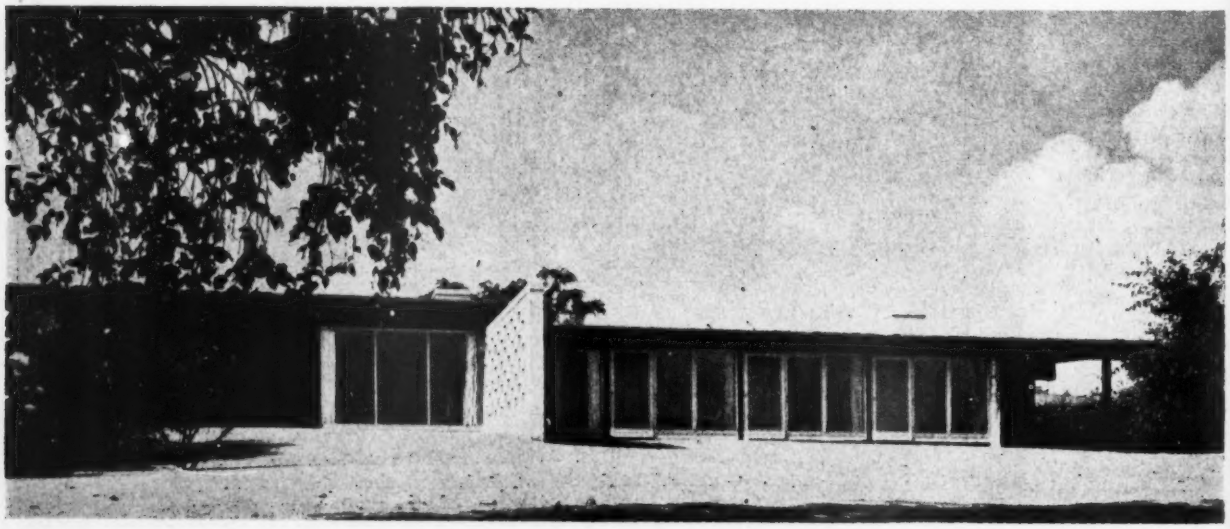


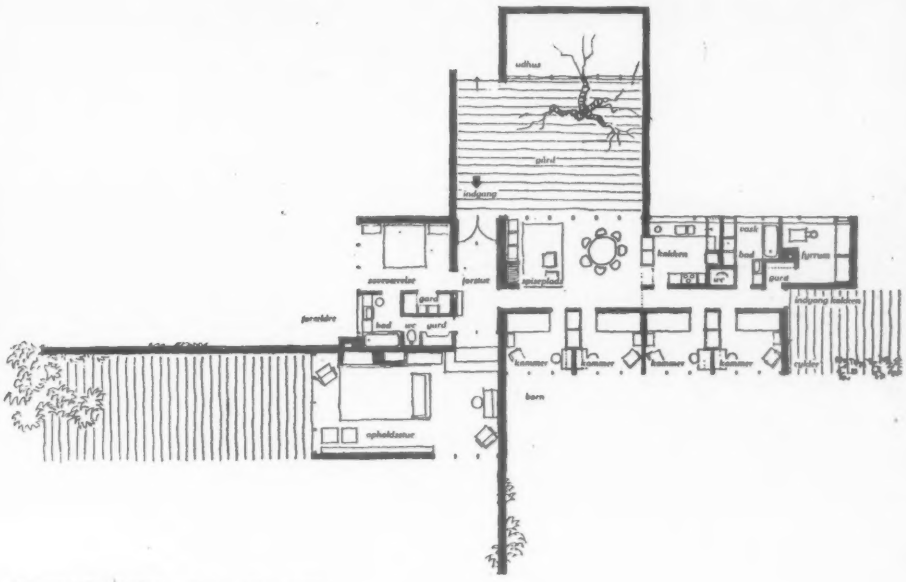


Site plan

This five-bedroom house, of approximately 1,750 sq. ft., was designed by Halldor Gunnlogsson and Jorn Nielsen. The walls are of untreated cellular concrete blocks, some of which are continued into the garden as screen walls. The roof is of timber joists spanning between longitudinal timber beams of varying depths to give a slight pitch.

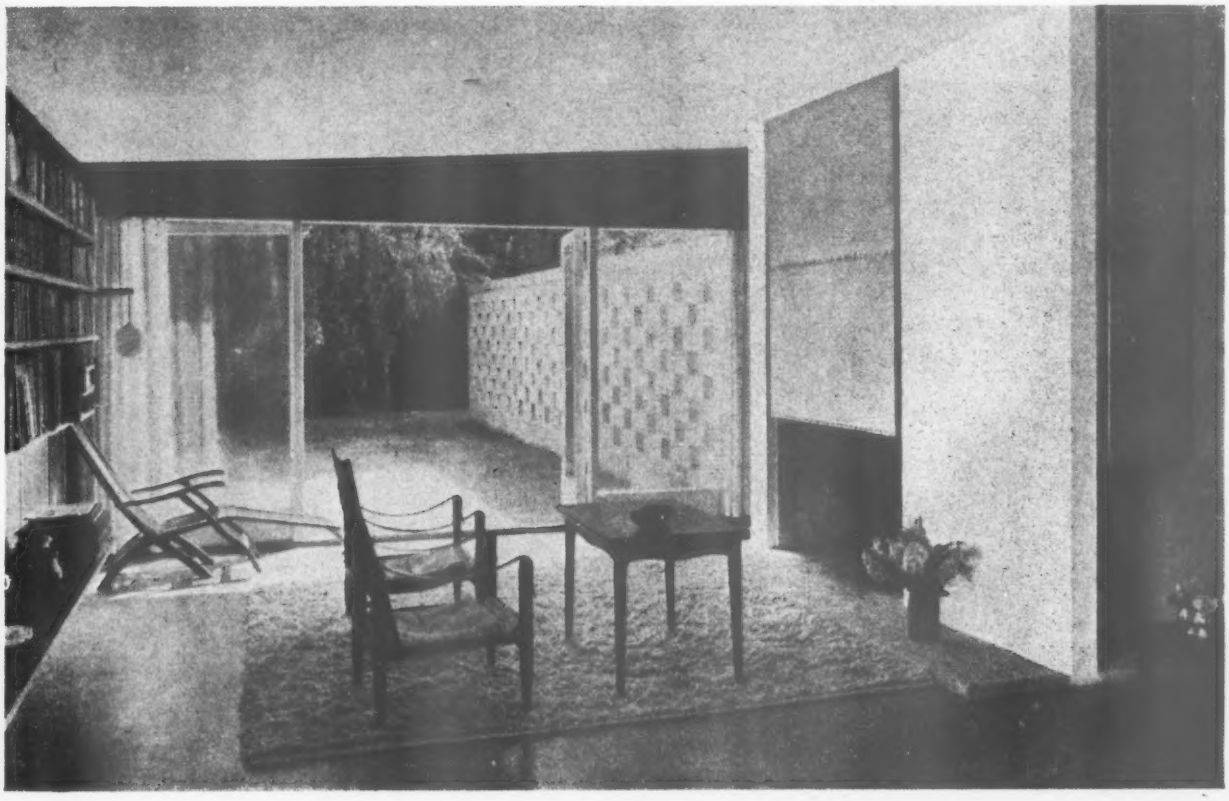




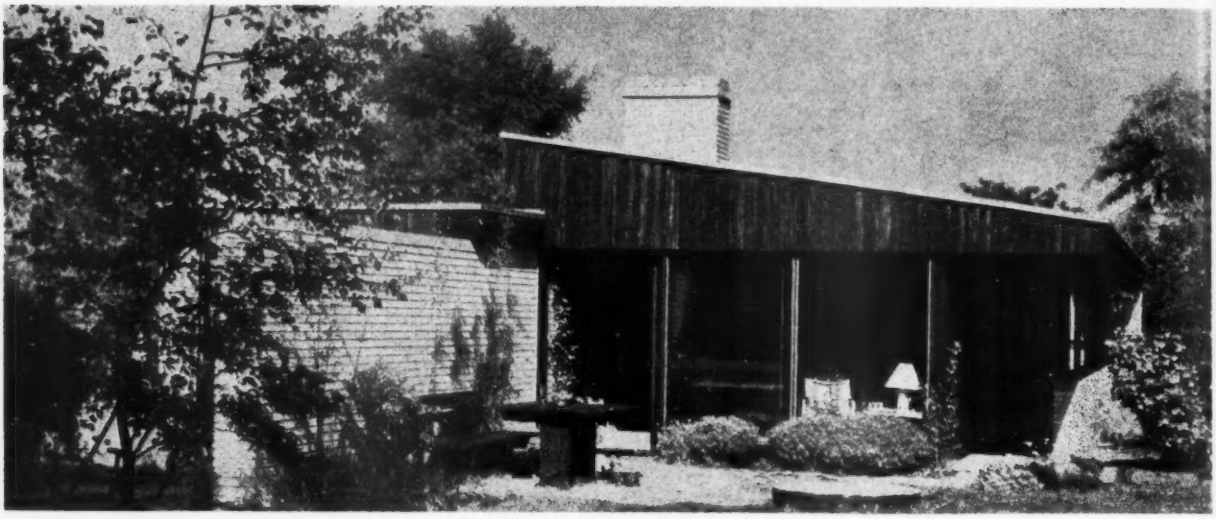


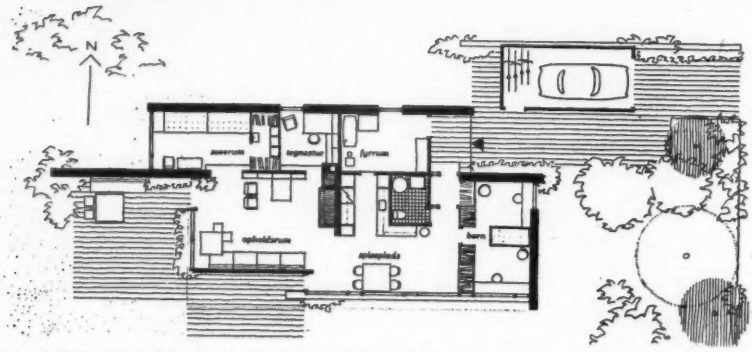
Ground floor plan [Scale: $\frac{1}{8}$" = 1' 0"]

Opposite page: top, the entrance side of the house. Centre, the main entrance, with the courtyard on the left, and a view through the house down to the lake beyond. Bottom, the east side facing the lake; the living room is to the left of the screen wall, the four children's bedrooms to the right. The parents' bedroom, facing south, has its own bathroom and w.c. and is placed adjacent to the living room to provide an exclusively "adult" area. The four identical children's bedrooms, planned as minimum "cabins," face east (one of them can be seen above left, with a view over the lake) and open off a combined dining-playroom which can be supervised from the kitchen. This room faces west into the small courtyard surrounding an existing mature tree. Below, the living room, facing the large south window and the screened terrace. The illustrations of this and the next three houses are reproduced from Danish Design (*Arkitektens Forlag*).



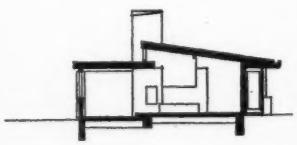
TWO HOUSES AT HJORTEKAER, COPENHAGEN, DENMARK





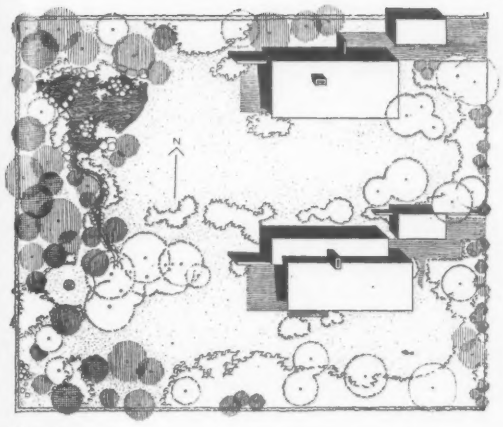
Ground floor plan of Bertel Udsen's own house [Scale: $\frac{1}{24}$" = 1' 0"]

These two houses on one site were designed by Bertel Udsen, the one further south being his own house. No fences separate the two plots, the site being a jointly used open space, but as the landscaping matures the areas close to the houses will become more private. Fair faced brickwork and unpainted timber and plywood are the main structural and finishing materials. Bertel Udsen's own house (approximately 1,200 sq. ft. in area)

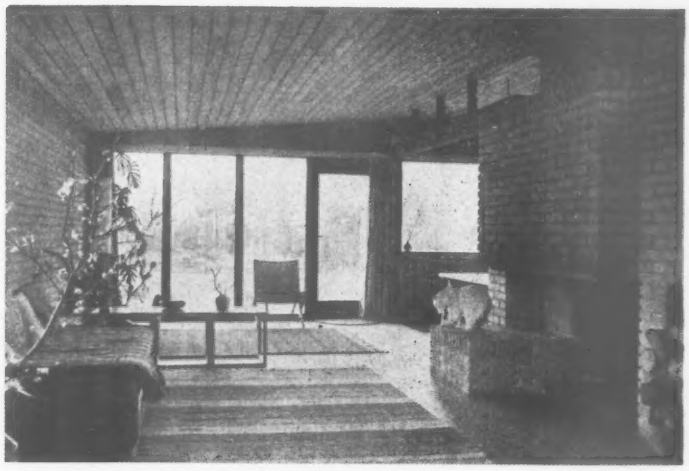


Cross section [Scale: $\frac{1}{24}$" = 1' 0"]

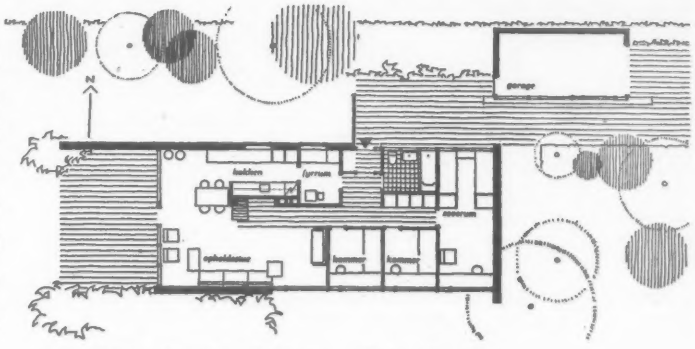
is planned around the living and dining spaces, which are contiguous and serve all the needs of internal circulation. The parents' bedroom and study open off the living space, and a large child's bedroom (divisible into two) off the dining space. Top, the terrace outside the living area, on the west side of the house. Left, the living area looking westwards; the parents' bedroom opens off to the right. Kitchen, bathroom and utility room are placed in the centre of the house,



Site plan

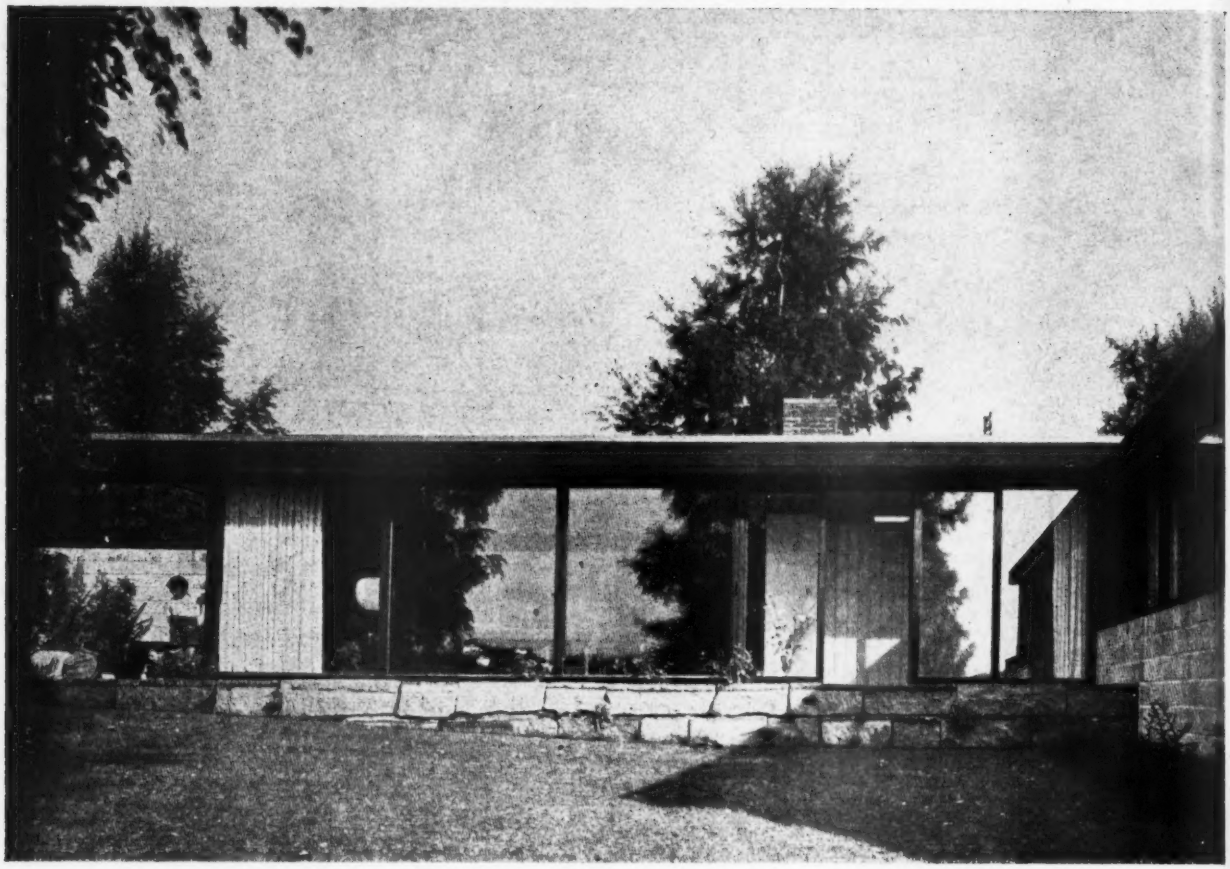


the kitchen and bathroom being clerestory lit. The second house is slightly smaller (approximately 1,000 sq. ft. in area) and more conventional in plan. The western half consists of one large space articulated by the chimney stack to form living and dining areas and a kitchen; the eastern half contains the main entry and a bathroom and three bedrooms opening off a short corridor. Below, the house from the west; above right, the living area looking westwards.

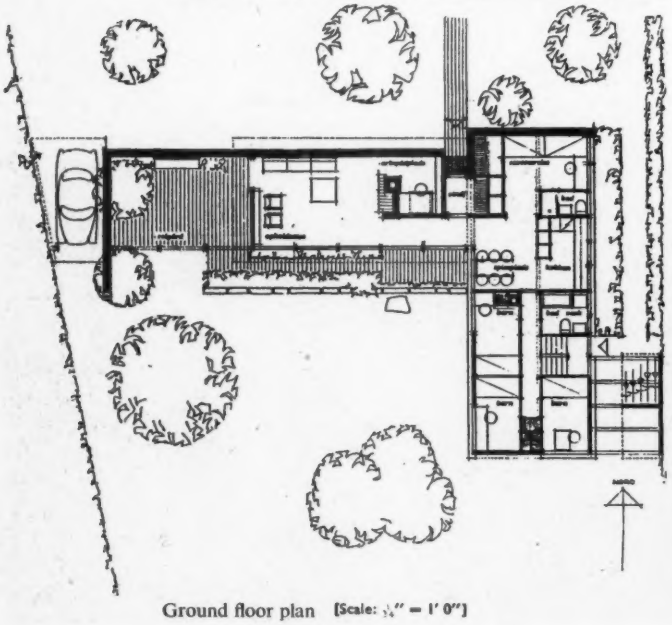


Ground floor plan of smaller house [Scale: $\frac{1}{16}$" = 1' 0"]

HOUSE AT SØLLERØD, COPENHAGEN, DENMARK

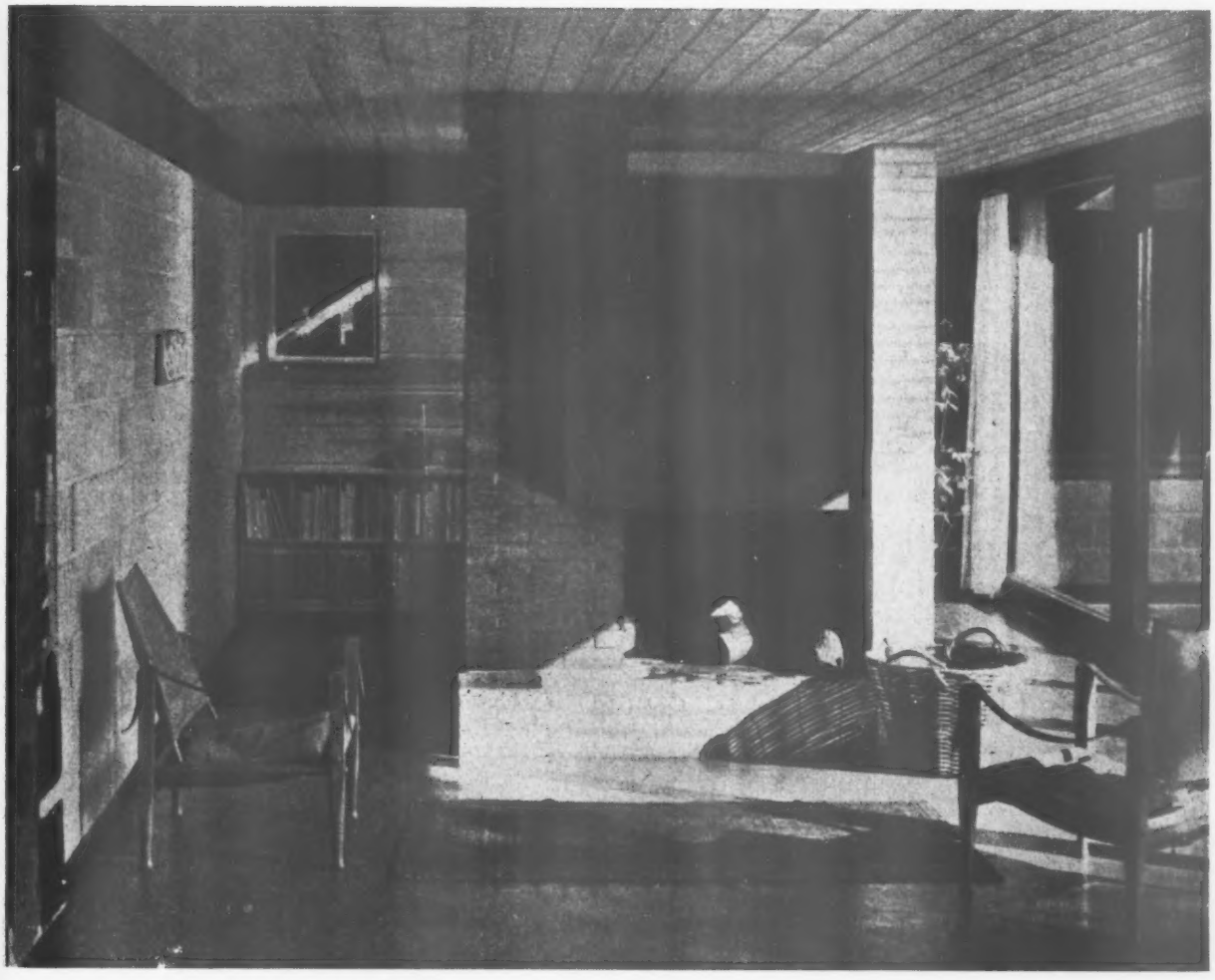


Designed by Gunnar Jensen and Finn Monies for Helle and Finn Monies' own use, this house shows another interesting grouping of rooms. The ground floor (about 1,000 sq. ft. in area) is L-shaped, the west wing containing the living room, a small study, and the entrance lobby. The south wing contains three small children's bedrooms and a bathroom, opening off a "self-contained" corridor, the remainder of the space being dining area, kitchen and parents' bedroom contiguous with one another and with the living room. A stair leads down from the children's corridor to a basement playroom and a boiler room. Below, the main entrance on the north side. Above, the

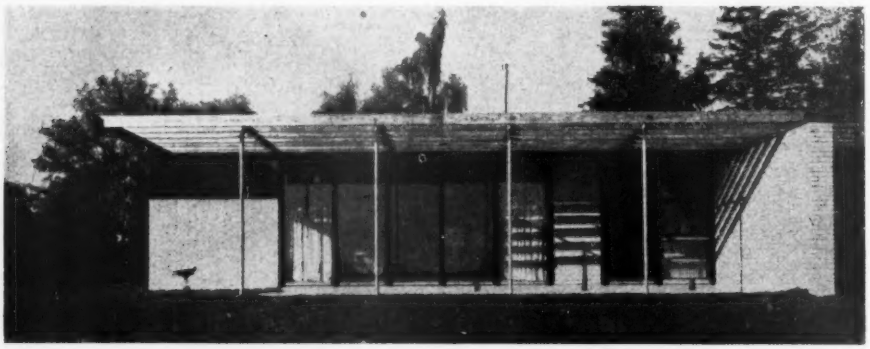


Ground floor plan [Scale: ¼" = 1' 0"]

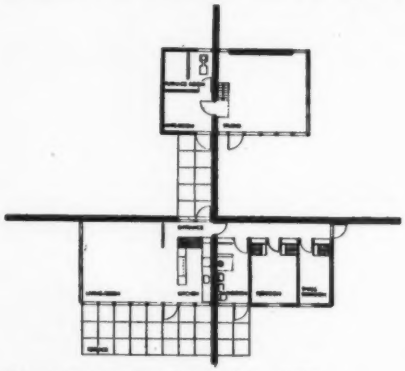
south side of the living room wing, with the terrace on the left. The house is constructed of load-bearing walls of cellular concrete block, left untreated, and timber posts, beams and joists. The exposed framing members are treated with a dark preservative. Block walls are exposed internally and partition walls and ceilings are faced with natural softwood boarding. Below, the living room looking eastwards towards the fireplace. The small study round the back of the fireplace is top lit. Right, view from the dining area looking towards the living room.



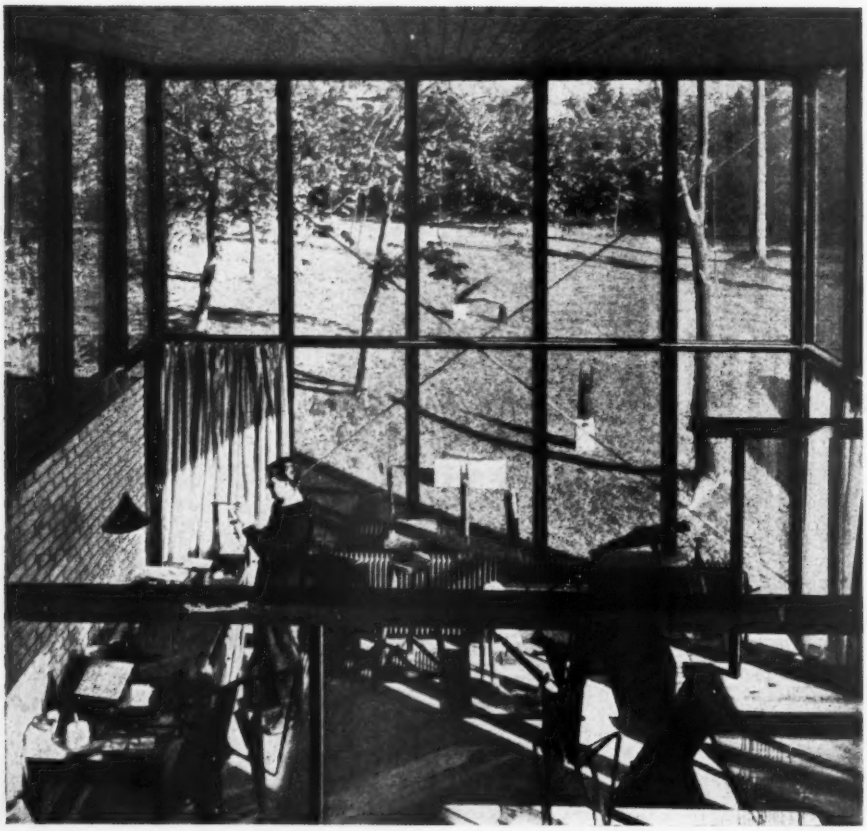
HOUSE AND STUDIO AT HORSHOLM, DENMARK



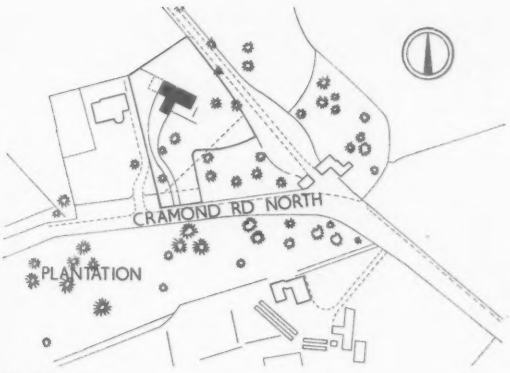
This small house with separate studio was designed by Borge Glahn and Ole Helweg for the sculptor Torsten Johansson. The house is a single-storey structure of only 750 sq. ft.; the studio is a space of two-storey height with a gallery over part of it, the floor area being about 600 sq. ft. The cruciform plan of the brick walls divides the site into four areas each of which is given its own character derived from a clearly defined function: entrance court, living, sleeping, and work. The brick walls are load bearing, as are the timber mullions arranged on a 3-ft. module. The roof is of timber and the ceilings are boarded. Above, the living sector of the house, from the south. Below, the studio from its gallery. Illustrations from Contemporary Danish Architecture (*Arkitektens Forlag*).



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



HOUSE AT CRAMOND, EDINBURGH

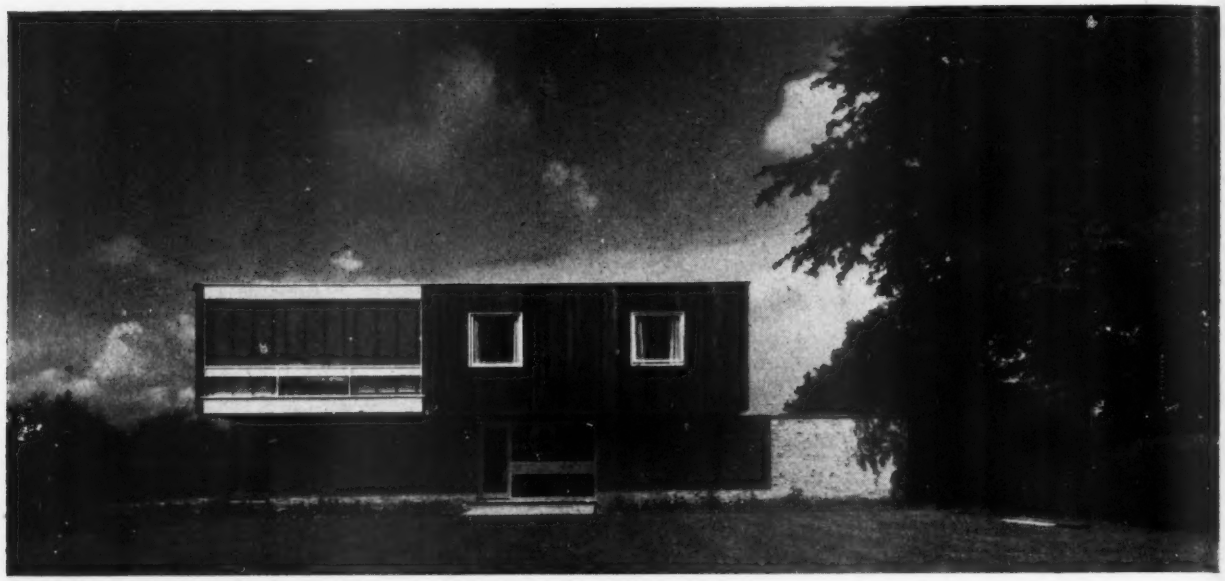


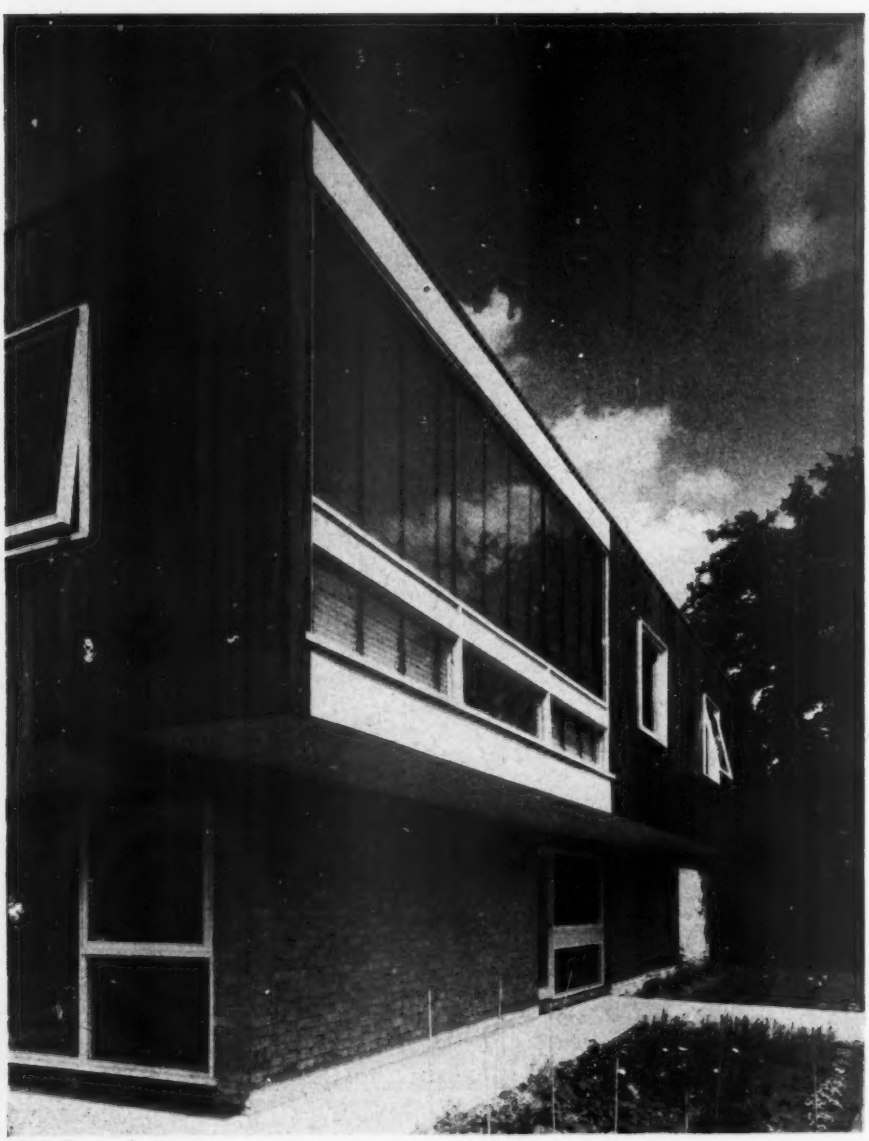
Site plan

This two-bedroom house was designed by Morris and Steedman. The area of the house itself is 1,105 sq. ft., the garage and darkroom wing adding an extra 310 sq. ft. The enclosed garden court and the chimney stack are of local stone; the house structure is a combination of loadbearing brickwork and timber framing. A full description of the house will appear in the JOURNAL *for January 1, 1959. Centre, aerial view from the south. Top left, the north-west corner. The ends of the timber beams which form the primary roof structure can be seen. Above, the fireplace corner in the living room.*

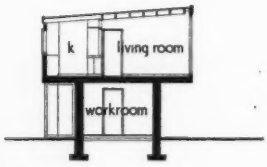
Ground floor plan [Scale: $\frac{1}{8}$" = 1' 0"]

HOUSE AT WILFORD LANE, WEST BRIDGFORD, NEAR N





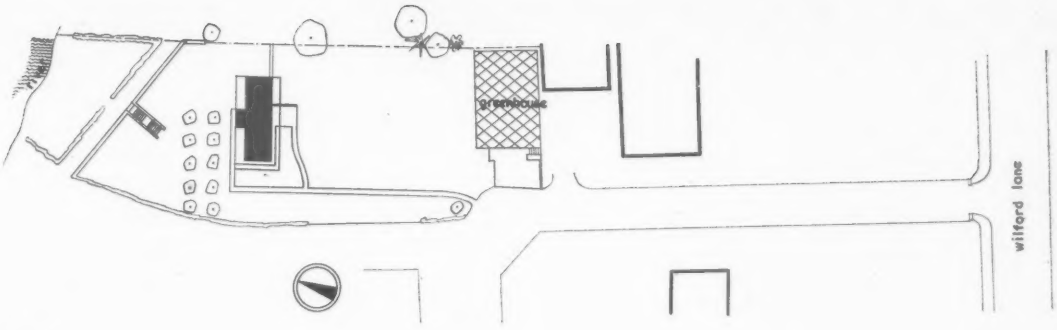
The site of this house, designed by Bartlett and Gray, is part of the garden of a large existing house, already well landscaped. The house has been placed across the width of the garden to take advantage of the aesthetic possibilities of the flat plane of the existing lawn, and to obtain a southerly aspect for the main rooms. Above, the south front and main entrance, from the lawn. The ground floor brick walls are loadbearing, and support a reinforced concrete slab cast on permanent wood wool shuttering. The first floor walls, of insulating blocks covered with mahogany boarding on battens, are built off this



Cross section

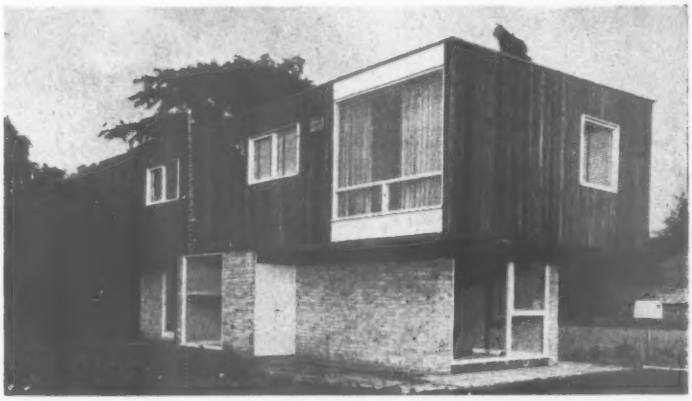
slab. The roof is timber joisted and slightly pitched. Left, the south-west corner. The ground floor is occupied

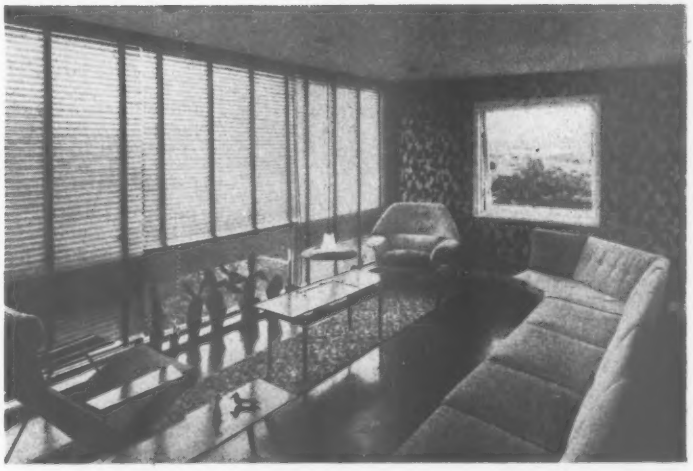
NOTTINGHAM

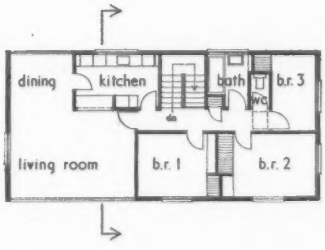


Site plan

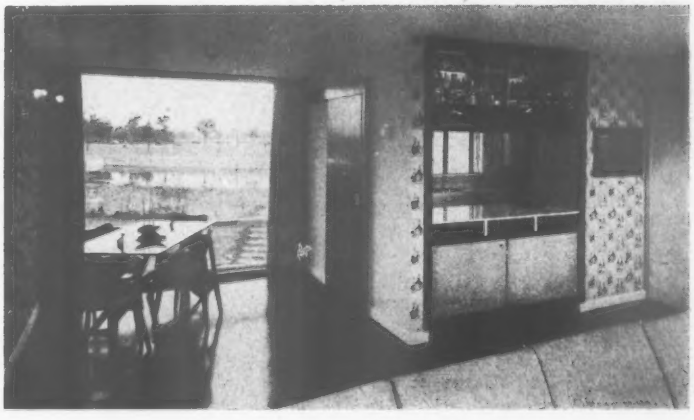
by a large entrance hall, a washroom and a workroom; all the principal rooms are on the first floor, which is cantilevered in three directions. The total area is 1,360 *sq. ft., of which the first floor takes up* 900 *sq. ft. The first floor arrangement is typical of recent "semi-open" planning in this country. Top right, view from the north-west. Centre right, the living room, with venetian blinds to control the sunlight through the large south window which is of plate glass, horizontally sliding without frames. Bottom, right, looking from the living room towards the dining corner and the kitchen. The large window looks out over a river, with a good view beyond. The general contractors were W. R. Bloodworth and Sons, Ltd.*

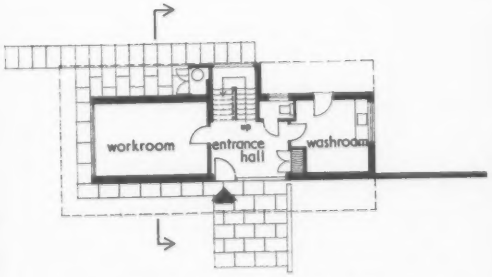






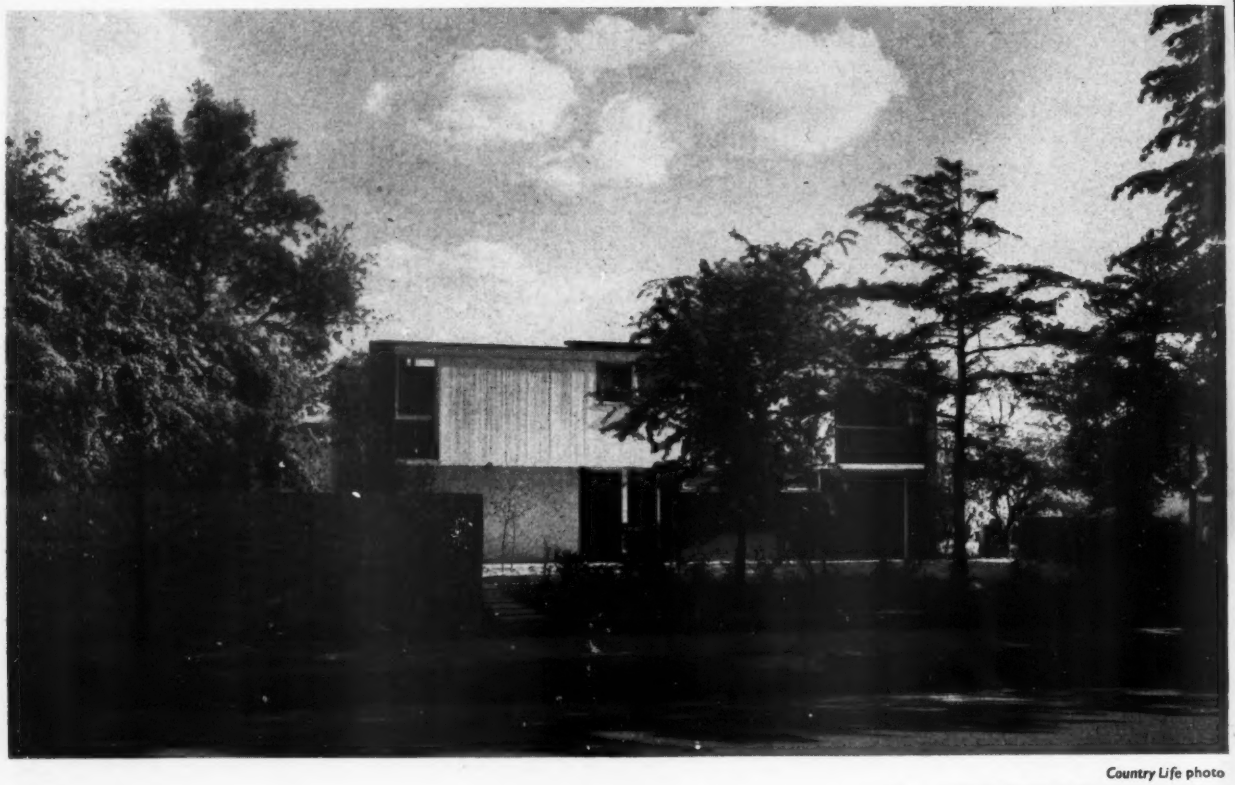
First floor plan



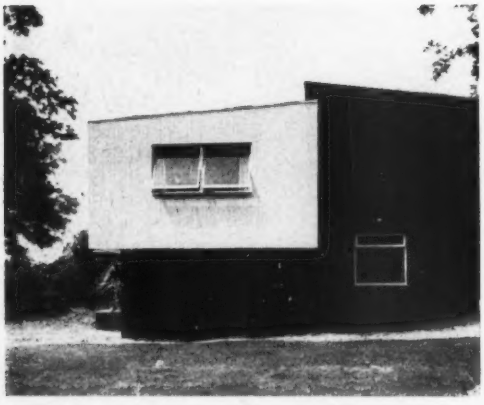


Ground floor plan [Scale: $\frac{1}{24}$" = 1' 0"]

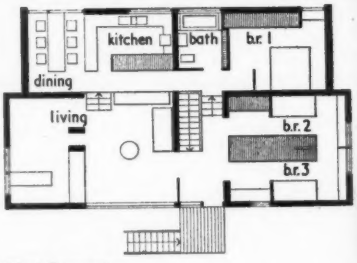
HOUSE AT BLACKHEATH PARK, LONDON, S.E.3



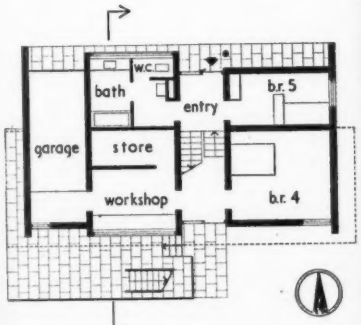
Country Life photo



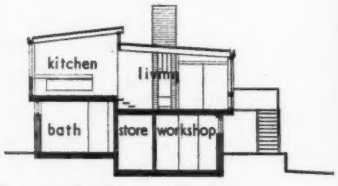
Designed by Peter Moro for himself, this house is approximately 2,200 sq. ft. in area, including garage. Above, the north side of the house from the road. Below, the south side facing the garden, with stairs down from the first-floor landing. Left, the west end. The site has a gentle fall away from the road to the south, and both ground and first floors are planned with a drop of a few feet across their



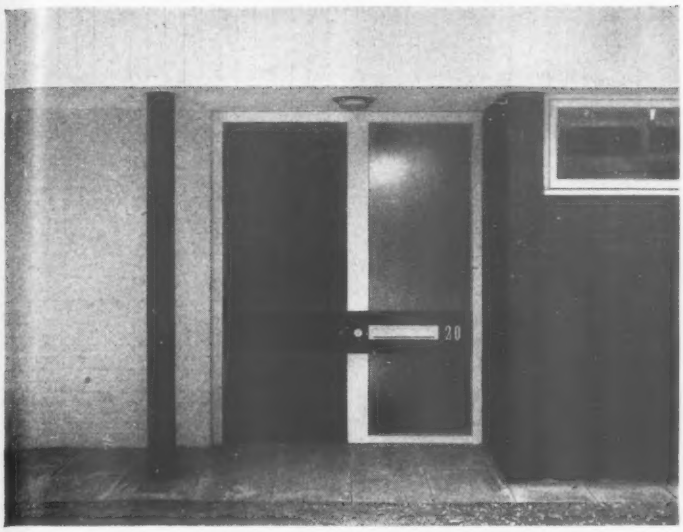
First floor plan

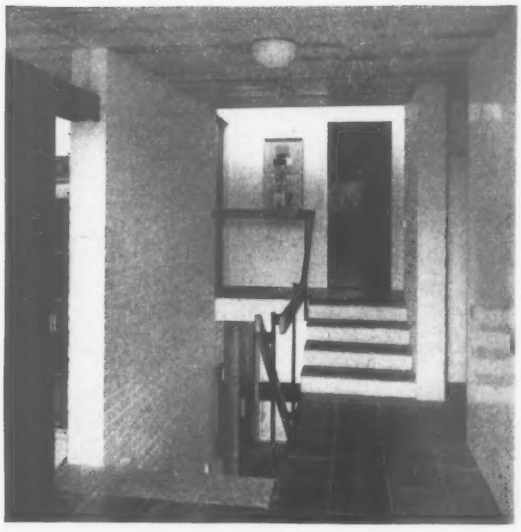


Ground floor plan [Scale: $\frac{1}{24}$" = 1' 0"]



Cross section [Scale: $\frac{1}{24}$" = 1' 0"]

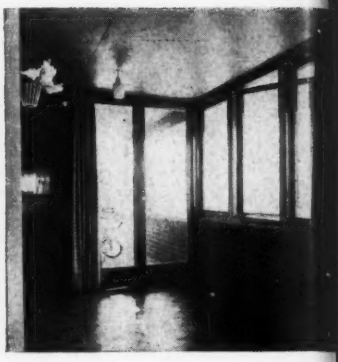


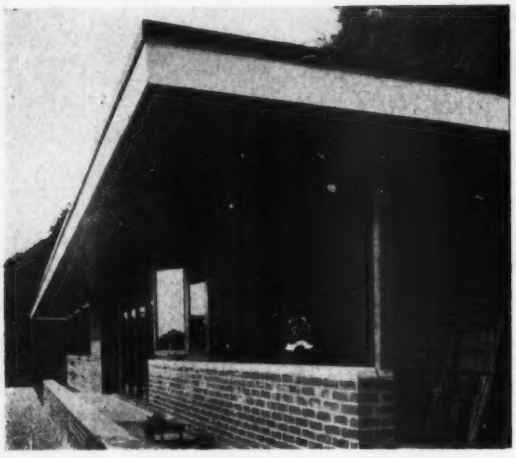


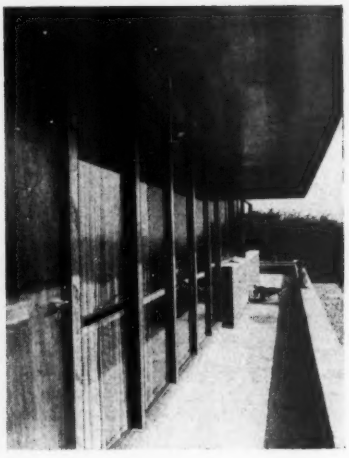
length. All the main rooms are situated on the first floor; living, dining and kitchen areas are planned as one large space divided between the two levels. The ground floor and part of the first floor have load-bearing brick walls, the remainder of the first-floor construction being timber framed and cantilevered, with an external cladding of painted softwood vertical boarding. Internally, wall finishes are painted fair-face brickwork, natural softwood boarding, and plaster painted or papered. The first-floor ceilings are also of softwood boarding. The main entrance on the north side, above, opens on to the upper level of the ground floor, reducing the rise of the stair to the first-floor living room level. This stair arrives at a large landing, above right, off which a sliding door opens to the living room (to the left of the photograph). The upper level of the first floor is lit by a clerestory. Below, the living room, seen from the kitchen area. The general contractors were Leslie Bilsby Ltd.

Country Life photo

HOUSE AT WHITCHURCH, OXFORDSHIRE

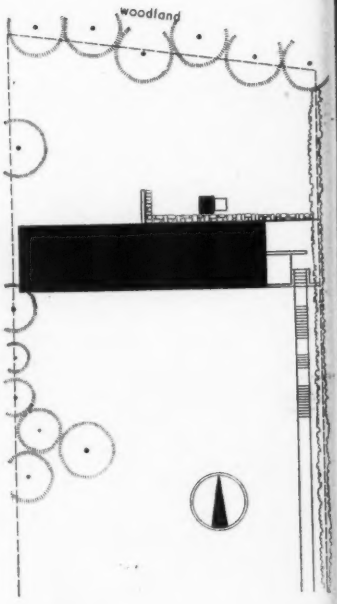






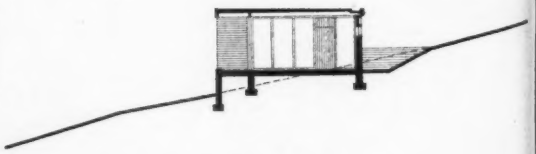
east boundary. The photograph was taken before any landscape treatment was carried out. Far left, looking along the terrace from the east. Left, the main entrance and the living room windows, looking eastwards. Above, a corner of the dining area, which is one step higher than the rest of the living space. The general contractors were E. Carter and Sons.

This house, designed by Stillman and Eastwick-Field (associate in charge, Ralph Smorczewski) stands high on a ridge overlooking the Thames valley, with a background of beech trees. The steep slope of the site and the extensive view to the south indicated a long narrow house cut back slightly into the hillside, with all rooms facing south. About a third of the house (total 1,110 sq. ft.) is given over to a large living and dining area (with an enclosed kitchen) separated from the entrance lobby only by a glazed screen. The four bedrooms, bathroom and study are more tightly planned at the west end. The construction is partly of load-bearing brick walls, which extend as screen walls to the terrace at the east end, and partly of timber framing. The timber joisted roof has a soffit of natural plywood inside and out. Top left, view from the south. The house is approached from the road at the bottom of the ridge by a stepped path along the

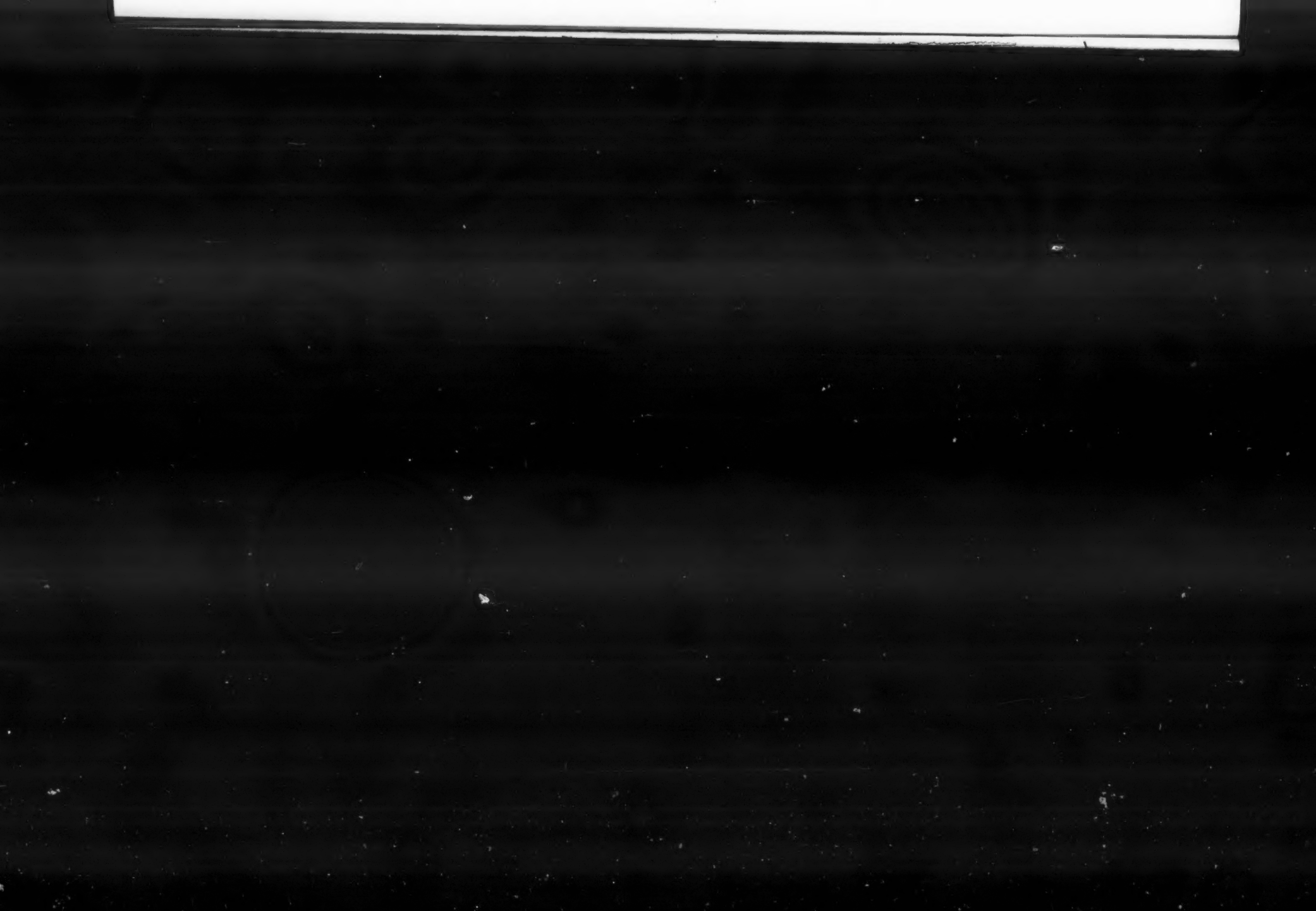


Site plan

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



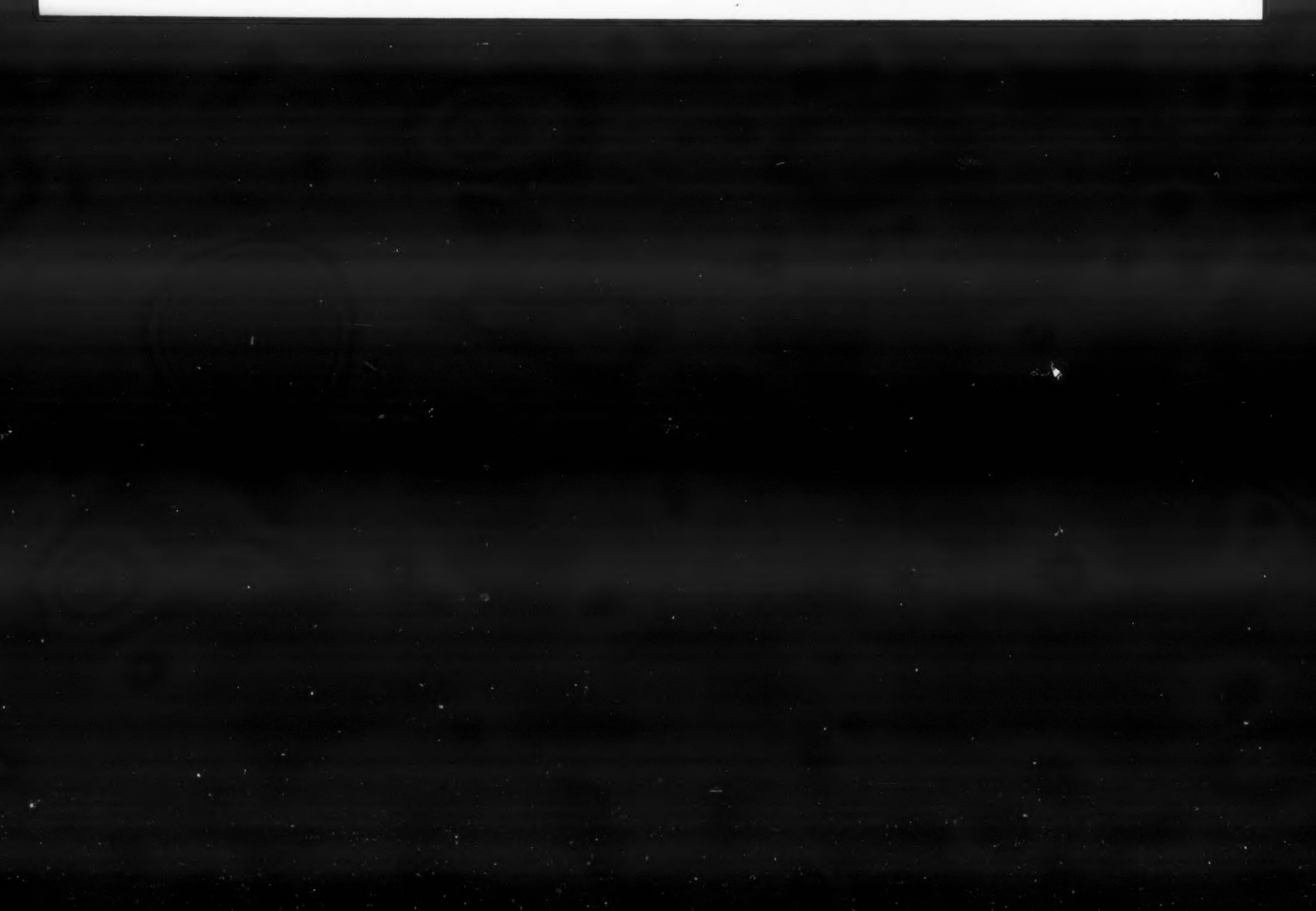
Cross section [Scale: $\frac{1}{16}$" = 1' 0"]



46.Z ALPHABETICAL INDEX TO DEC. 4, 1958 (FLO-OL)

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

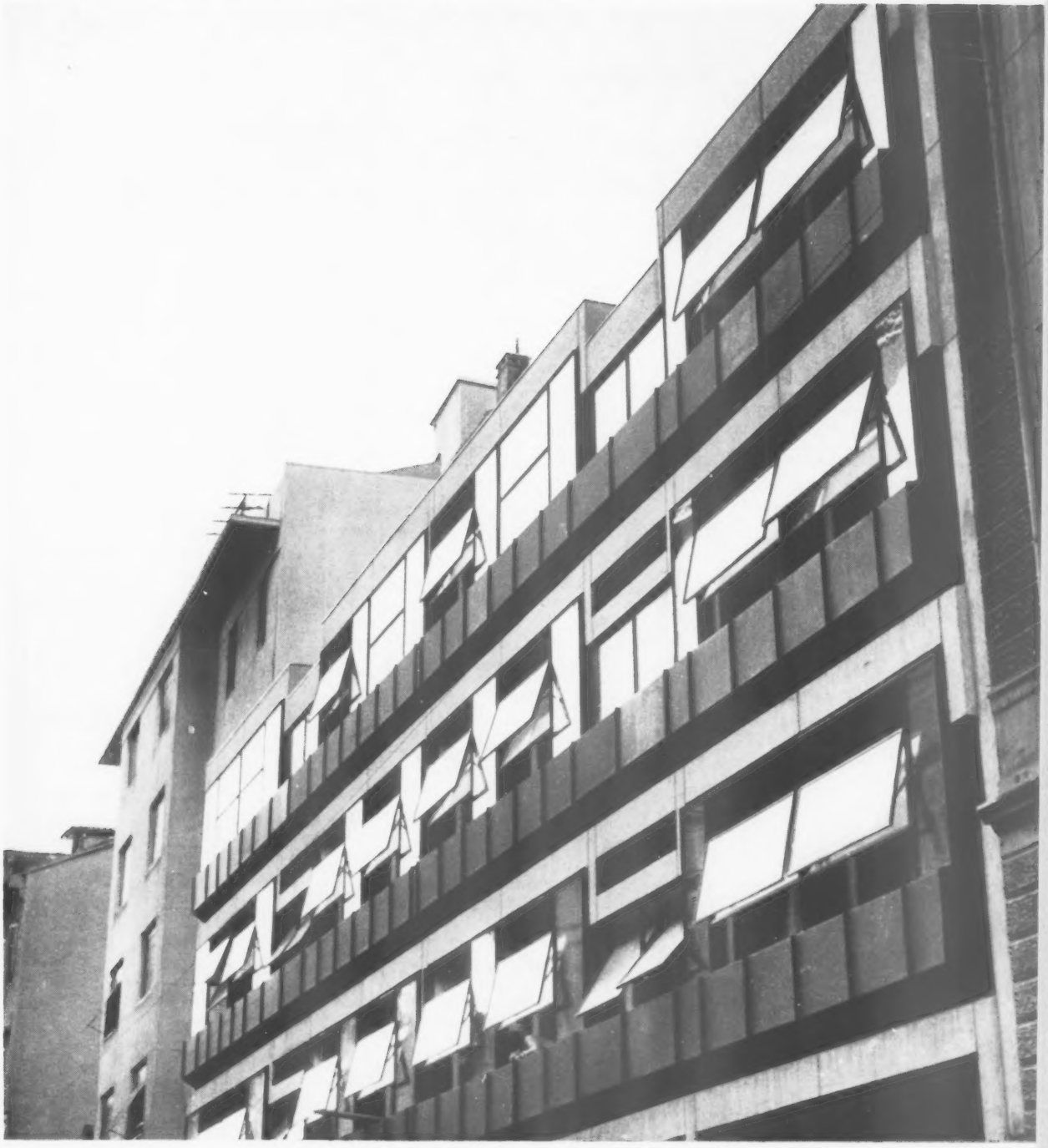
46.Z ALPHABETICAL INDEX TO DEC. 4, 1958 (OR-STA)



working detail

CURTAIN WALL: FLATS AND OFFICES IN TRIESTE

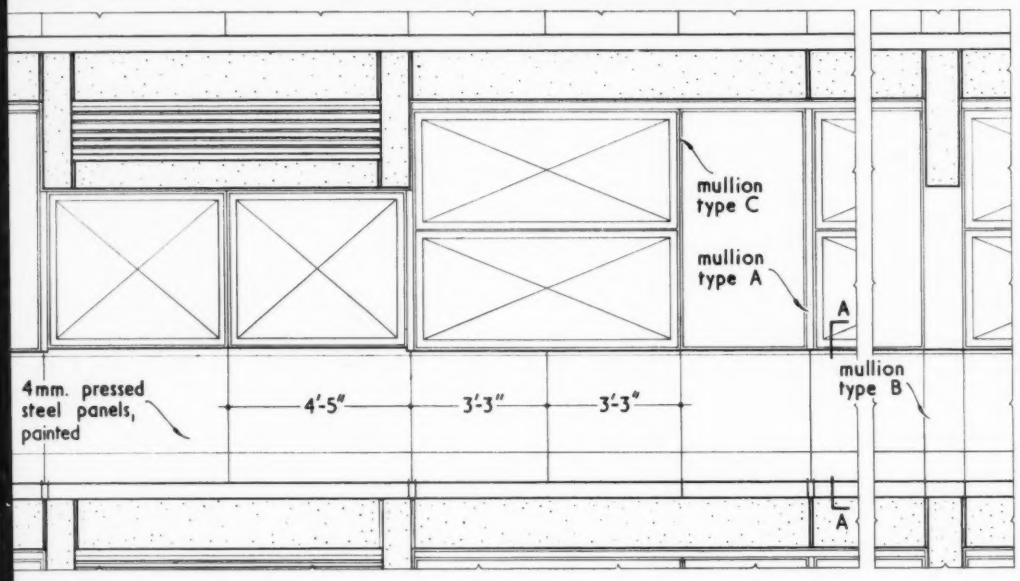
Gino and Nani Valle, architects. (*Material supplied by John and Margaret Richards*)



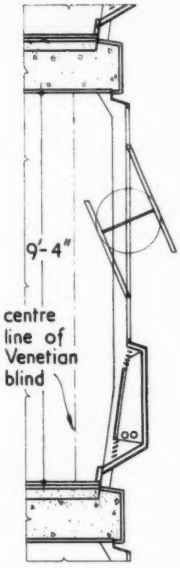
These perimeter heating ducts and the cranked mullions supporting them were designed to ensure that the heating pipes did not foul partitions between offices. Note also the use of coupled sliding projecting windows to give maximum ventilation.

CURTAIN WALL: FLATS AND OFFICES IN TRIESTE

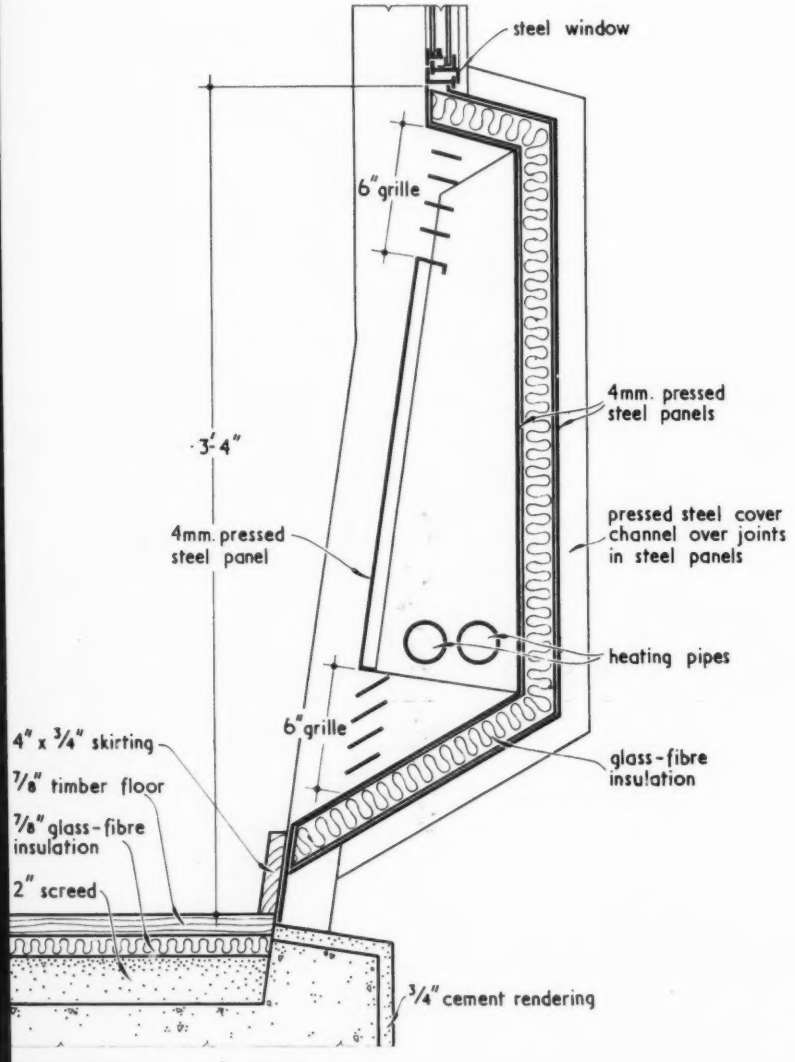
Gino and Nani Valle, architects. (*Material supplied by John and Margaret Richards*)



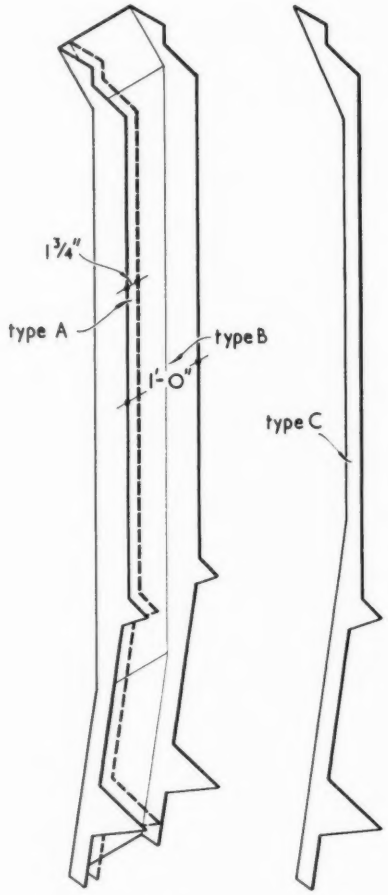
ELEVATION. scale 1/4"=1'-0"



SECTION.



SECTION A-A. scale 1½"=1'-0"



types A and B. type C.

ISOMETRIC VIEWS OF PRESSED STEEL MULLIONS.
scale 1/2"=1'-0"

note: figured dimensions in feet and inches are approximate

RINTERS' SHOWROOM IN THE BUTTER MARKET, IPSWICH

A display centre, designed by Gordon Michell, has been opened recently by W. S. Cowell Ltd., the well-known printing firm, in Ipswich, where "the Press in the Butter Market" has been a flourishing concern for 140 years. The Centre is on the first floor of the six-storey printing works built there after the war, and is intended to enable visitors and clients to examine the range and quality of Cowell's work in book production and picture reproduction. Left, the entrance, with a sea-horse, Cowell's emblem, in metal above. Below, the main conference room; the large central

PRINTERS' SHOWROOM IN IPSWICH continued

table was designed by the architect with a removable top under which is a glass display cabinet. The curtains, designed by John Piper, are sound absorbent and can be drawn to divide the centre in two when a meeting is in progress. Beyond, a well-lit display board illustrates some outstanding examples of the firm's work. On right, some of the specially designed bookshelf-and-drawer units, the drawers containing print specimens. The General contractors, Gower & Howlett.

Announcements

PROFESSIONAL

Richard Clarke, A.R.I.B.A., has now moved to Flat 3, 42, Norwood Avenue, Southport, Lancs.

T. Randal Hill & Partners, quantity surveyors, of Barton-under-Needwood, Burton-on-Trent, have opened a branch office at Dial House, 4, Dial Street, Warrington, and would be glad to receive samples and trade catalogues. Walter Gott, A.R.I.C.S., will be in charge of the Warrington branch.

The main office of Graham Pegg, A.R.I.B.A., has now moved to 27, Hall Quay, Gt. Yarmouth (telephone Gt. Yarmouth 3173).

D. A. W. Lovejoy, M.A., A.R.I.B.A., Dip.T.P., A.M.T.P.I., A.I.L.A., and P. & D. T. Myers, A.A.Dip., A.R.I.B.A., Dip.Arch., Dip.T.P., A.R.I.B.A., have opened a joint branch office at 1, Wellesley Parade, Caterham, Surrey (telephone Upper Warlingham 3351), and, as architects, town planning consultants and landscape architects, will be pleased to receive relevant trade catalogues, etc.

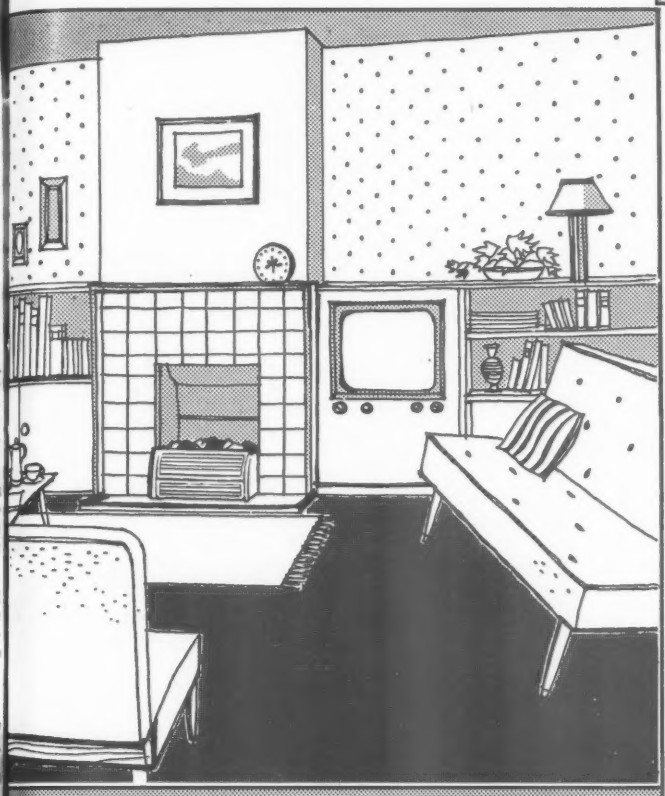
Derek Phillips, A.R.I.B.A., has changed his address to 1, Bovington Green, Hertfordshire. He will continue to practise as an architect and consultant to architects and the lighting industry from this address.

The Department of Economics in the School of Agriculture, Cambridge would like trade literature and cost lists, relevant to a research project in farm design, to be sent to J. B. Weller, A.R.I.B.A.

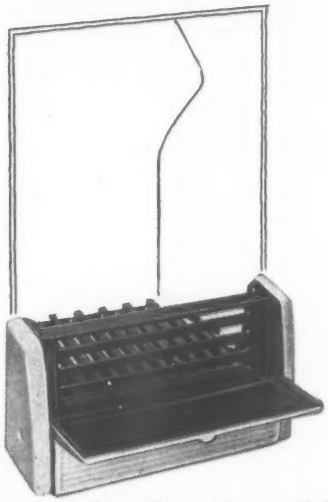
TRADE

Industrial Asphalts Co. Ltd. has now changed its name to The Flintkote Co. Ltd.

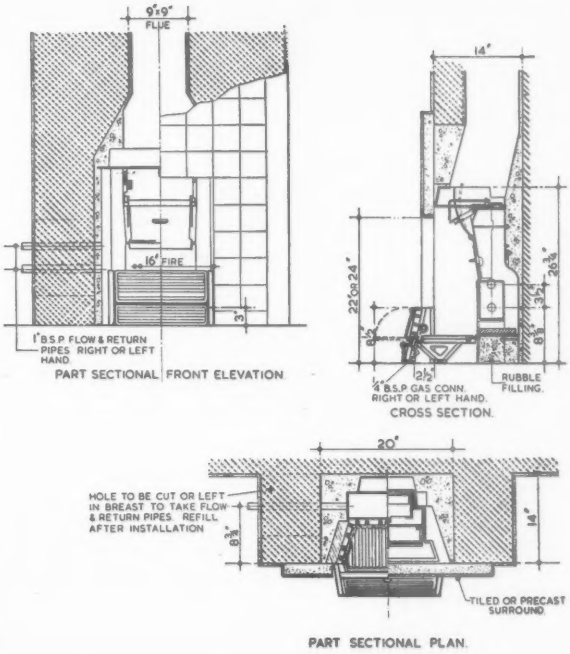
The Trussed Concrete Steel Co. Ltd. has now changed its name to Truscon Limited.



The LOWBURN 16" Drop Front Fire



The Lowburn Drop Front Fire conforms to B.S.S.2845:1957.



High radiant efficiency at low level

plus full domestic water heating when a back boiler is installed

Even a very small quantity of fuel will keep a Lowburn Drop Front Fire going, and give a bright cheerful blaze. That's because the Lowburn's drop front lies level with the bottom grate when lowered, thus ensuring that radiant heat is directed at lower level into the room.

Accurate control, and subsequent economy, is ensured by the close fit of the machined ashpit door and drop front. The ashpit door slides on machined pins to adjust the rate of burning.

The fire is continuous burning, but a front extension is required if a back boiler is fitted. The fire will burn all smokeless fuels as well as coal. Gas ignition is optional.

A variable throat restrictor, to sit on top of Milner back brick, can be supplied for the non-boiler model.

Space heating capacity of the Lowburn Drop Front Fire is 1,750 cu. ft. When the fire is installed with our back boiler flue set and throat restrictor, it will heat rooms up to 1,750 cu. ft., provide domestic hot water from a 30-gallon storage cylinder, and heat a towel rail. Alternatively, the boiler will heat up to 45 sq. ft. of radiation surface.

A combined throat restrictor and damper is available for brick-built boiler flues.

Colours available include primrose, birch grey, blue, cream mottle, mushroom or black vitreous enamel, or an Alisheen finish in copper or black.

For more details of the Lowburn Drop Front Fire, write to Allied Ironfounders.

ALLIED IRONFOUNDERS LTD

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

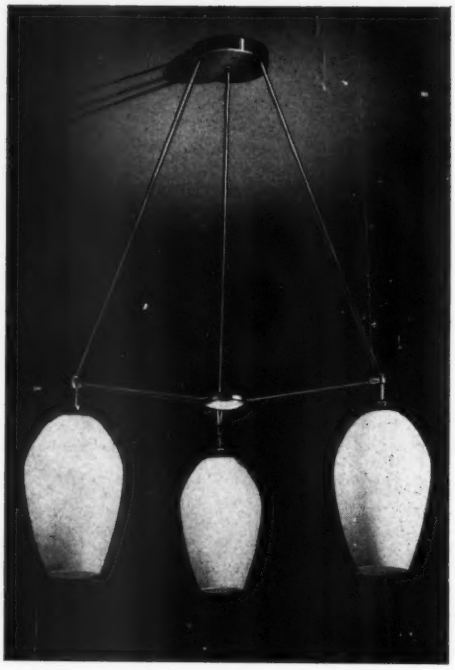
28 Brook Street, London, W.1

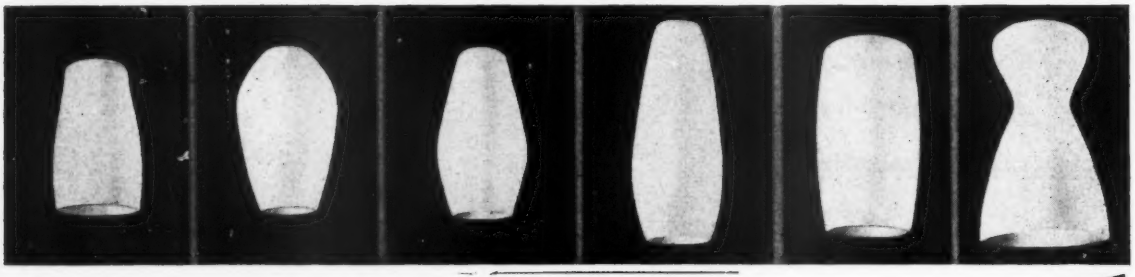
Satina

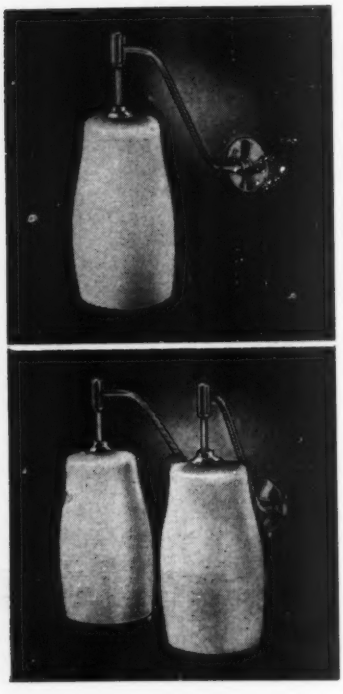
A range of lighting pendants with wall brackets to match, available with satin etched, white, opal or pink glass.

British Design

British Manufacture







Hailwood & Ackroyd Ltd.

18 LOWNDES STREET
LONDON, S.W.1

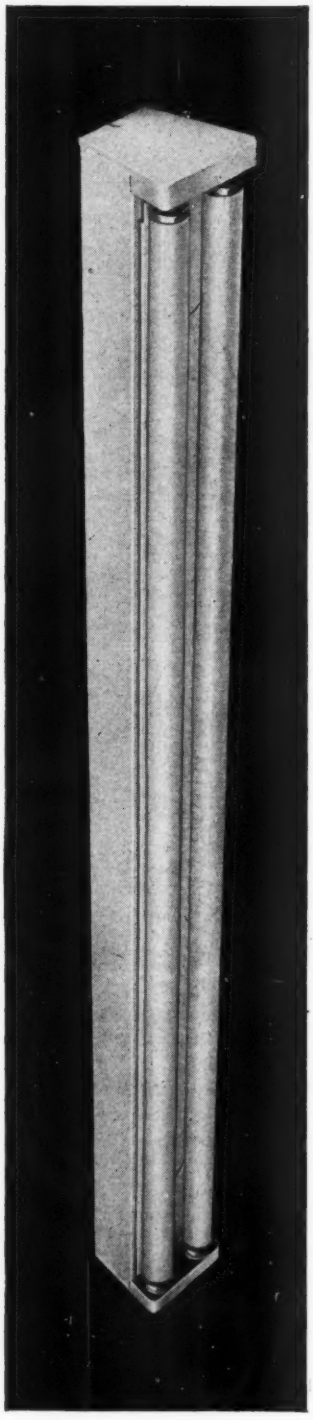
TELEPHONE: SLOANE 0471-2

Please send for Catalogue

FALKS Introduce

the new adaptable "SUMMIT" Range

(SERIES I INDUSTRIAL FITTINGS)



In introducing the "Summit" range of fluorescent lighting fittings, Falks have made *adaptability* the keynote of their design. Adaptability is achieved by using one basic channel, with provision for altering not only the appearance but also the lamping, the control gear and the suspension of the fitting. The ideal lighting fitting indeed!

SPECIFICATION

Basic Channel Special Section 20 s.w.g. *zinc-coated steel*; provides for cover plate and reflector fixings and embodies internal and external wiring channels.

Cover Plate Secured by *quick release fasteners*; Provision for easy access to starter switches without removing cover plate.

End Plates Die-cast aluminium alloy secured by threaded studs.

Lampholder Brackets Two sizes, single and twin lamp; triple lamp.

GENERAL FEATURES

Lamping Generally, all models are available for 5 ft., 4 ft. and 2 ft. lamp lengths in single, twin and triple lamp arrangements.

Control Gear Starter or quickstart.

Material & Finish *Zinc-coated sheet steel throughout; etch primed and finished stove enamelled egg shell off-white.* (Reflectors glossy white).

Suspension— Variable centres, for ½", ⅝" or ¾" diam. conduit. Keyhole slots are provided for direct ceiling fixing.

Interchangeability By using all the combinations of number and size of lamps together with type of fitting, over 70 different assemblies can be achieved in this series, each with starter or quickstart control gear.

Erection Whether by direct fixing or chain or rod suspension, erection is effected in the simplest way possible.

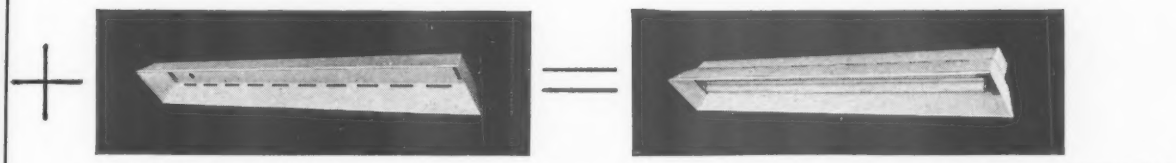
FALKS SUMMIT RANGE

was shown at the

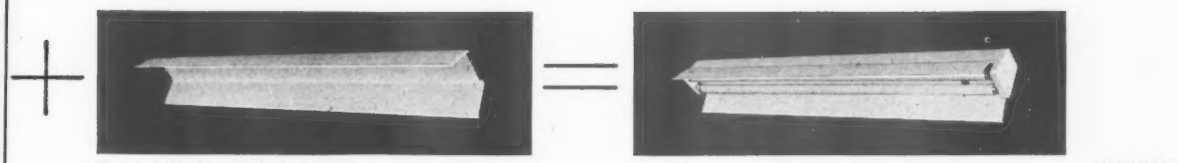
1958 Electrical Engineers (A.S.E.E.) Exhibition

at Earls Court

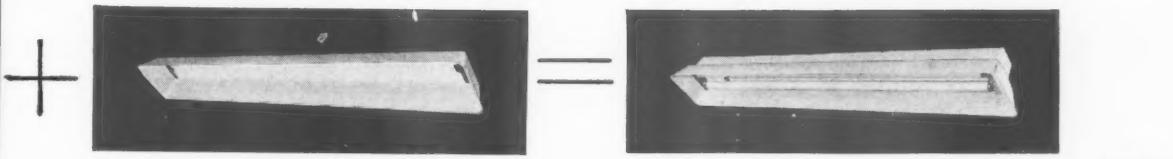
Metal Reflector, open ended — CHILTERN



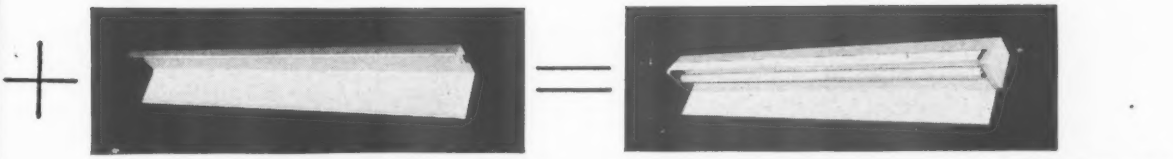
Metal Reflector, closed ended — COTSWOLD



Perspex Reflector, open ended — CHEVIOT



Perspex Reflector, closed ended — MENDIP



BLACKBOARD I
(Open-ended)

BLACKBOARD II
(Closed-ended)

Write for full details and price list

Designed by R. F. Steward, L.S.I.A. of Falks.

For other ranges of Falks Fluorescent Fittings write for

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Catalogue 813

Leaflet P.2723

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FALK, STADELMANN & CO. LTD

LIGHTING ENGINEERS AND MANUFACTURERS OF LIGHTING FITTINGS

91 FARRINGDON ROAD, LONDON, E.C.1 & BRANCHES Tel: HOLborn 7654

LONDON SHOWROOMS: 20-22, MOUNT STREET, PARK LANE, W.1

Tel: MAYfair 5671

AP 63

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.

AIR-MAIL SERVICE available on request: *In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.*

Public and Official Announcements

30s. per inch; each additional line, 2s. 6d.

BOROUGH OF EALING
ARCHITECTURAL ASSISTANT, A.P.T. IV, £1,055—£1,205 inclusive.
Full particulars and application form from Borough Surveyor, Town Hall, Ealing, W.5. Closing date 29th December, 1958.
E. J. COPE-BROWN,
Town Clerk.
Town Hall,
Ealing, W.5. 2279

HOLLAND COUNTY COUNCIL invite applications for the following appointments:—
(*a*) ASSISTANT QUANTITY SURVEYOR—Grade A.P.T. IV, £1,025—£1,175 p.a.
(*b*) QUANTITY SURVEYING ASSISTANT—Grade A.P.T. II, £725—£845 p.a.
(*c*) ARCHITECTURAL ASSISTANT—Special Grade, £750—£1,030 p.a. or Grade A.P.T. III, £845—£1,025 p.a. (according to qualifications).
The appointments will be subject to the provisions of the Local Government Superannuation Acts, the N.J.C. Scheme of Conditions of Service, and a medical examination.
The County Council would consider making a contribution towards the cost of removals.
Forms, obtainable from the County Architect, should be returned to the Clerk of the County Council, County Hall, Boston, Lincs., by 31st December, 1958. 2267

EBBW VALE URBAN DISTRICT COUNCIL
ARCHITECT'S DEPARTMENT
PROPOSED CIVIC CENTRE
Applications are invited for the Appointment of ASSISTANT ARCHITECT on the Temporary Staff of the Architect's Department—Salary Special Grade (£750 × £40 to £1,030). The point of entry in the Grade will be fixed in accordance with the experience of the successful applicant.
Applicants for Appointment should be A.R.I.B.A.
The appointment will be made in connection with the preparation of a Scheme for a Proposed New Civic Centre.
The appointment will be subject to the provisions of the Local Government Superannuation Acts and National Conditions of Service.
The successful applicant will be required to pass a Medical Examination and the Appointment will be subject to one month's notice in writing on either side.
Applications stating age, qualifications, and experience together with the names of two referees should be sent to the undersigned not later than the 31st December, 1958.
Applicants must state in their applications whether, to their knowledge, they are related to any Member of the Council or Senior Officer under the Council.
Housing accommodation will be provided if required.
Canvassing disqualifies.
HOWARD J. WILLIAMS,
Clerk of the Council.
Council Offices,
The Walk,
Ebbw Vale, Mon. 2297

PEMBROKESHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
APPOINTMENT OF ASSISTANT ARCHITECTS GRADE III A.P. & T. DIVISION (£845 to £1,025 p.a.)
Applications are invited for the above mentioned established posts. Applicants must be members of the R.I.B.A. by examination or have equivalent academic qualifications with experience of contemporary architecture and structural design.
The appointment will be subject to the National Scheme of Conditions of Service, the Local Government Superannuation Act and a satisfactory medical examination.
Forms of application can be obtained from Lt.-Col. Walter Barrett, M.B.E., A.R.I.B.A., County Architect, County Offices, Haverfordwest, and should be returned, duly completed, to the undersigned not later than December 27th, 1958.
H. LOUIS UNDERWOOD,
Clerk of the County Council.
County Offices,
Haverfordwest.
1st December, 1958. 2265

NATIONAL COAL BOARD
SOUTH WESTERN DIVISION
Invite applications for the post of ARCHITECT, Grade 2, in the Architect's Branch of the Divisional Production Department, Cambrian Buildings, Mount Stuart Square, Cardiff.
The successful applicant will be responsible for the preparation of sketch plans and working drawings of a variety of buildings, together with some duties of an executive nature.
Applicants must be Associates of the Royal Institute of British Architects.
Salary scale: £815 × £30—£1,125 per annum.
Please quote Staff Vacancy No. 402/40.
Full particulars of age, qualifications, experience and positions held together with details of present post and salary should be sent to the Divisional Chief Staff Officer, National Coal Board, Cambrian Buildings, Mount Stuart Square, Cardiff, by 22nd December, 1958. 2301

BOROUGH OF EALING
Erection of 110 Flats and 12 Maisonettes in 15 Blocks, Northolt Park Estate
Tender Documents obtainable from Borough Surveyor, Town Hall, Ealing, W.5, upon payment of £5, returnable on receipt of a *bona fide* Tender.
Closing date noon, 22nd January 1959.
E. J. COPE-BROWN,
Town Clerk.
Town Hall,
Ealing, W.5. 2305

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
Vacancies for ARCHITECTURAL ASSISTANTS, starting salary up to £860. Full and interesting programmes of houses, flats, schools and general buildings.
Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council (EK/52/58), County Hall, S.E.1. (2168.) 1949

BEESTON AND STAPLEFORD URBAN DISTRICT COUNCIL
ARCHITECTURAL ASSISTANTS
Applications are invited for the following posts:—
ARCHITECTURAL ASSISTANT, A.P.T. Special Grade, £750 × £40—£1,030.
JUNIOR ASSISTANT, A.P.T. I, £575—£725. Commencing salary according to qualifications and experience.
Applications, accompanied by the names and addresses of two referees, should be forwarded to the Surveyor, Town Hall, Beeston, Nottingham, as soon as possible.
H. D. JEFFRIES,
Clerk of the Council. 2294

LANCASHIRE COUNTY COUNCIL
Applications are invited from qualified architects of initiative, keen on design and modern constructional methods, to work on a large and varied programme.
The posts, which are permanent, are within the salary range of £750—£1,030, starting point according to experience.
Application forms, obtainable from the County Architect, P.O. Box 26, County Hall, Preston, to be returned by Monday, 5th January, 1959. Ref. A/AJ. 2344

BOROUGH OF STRATFORD-UPON-AVON
APPOINTMENT OF SENIOR ASSISTANT ARCHITECT
Applications are invited for the above appointment at a salary within the grade recommended for special classes of officers, *i.e.* £750 × £40—£1,030 per annum. Candidates should be suitably qualified and have had at least five years' experience, including the period spent on theoretical training.
The appointment will be subject to the National Scheme of Conditions of Service of Local Government Officers, to the provisions of the Local Government Superannuation Acts, and to the successful candidate passing satisfactorily a medical examination. The appointment will be terminable by one month's notice on either side.
The Council will, if necessary, be prepared to consider the provision of housing accommodation.
Forms of application may be obtained from the undersigned, to whom completed forms should be returned not later than Monday, 22nd December, 1958.
P. C. SMART, M.I.C.E.,
Borough Engineer & Surveyor.
Municipal Offices,
Stratford-upon-Avon.
28th November, 1958. 2243

UNIVERSITY COLLEGE OF SWANSEA
MAINTENANCE SURVEYOR
Applications are invited for the above position in the College Registry at a salary on the scale £725 to £985. Commencing salary according to age, qualifications and experience. Membership of the F.S.S.U., and the Children's allowance scheme.
Candidates should have a good knowledge of the building trade and be experienced in surveys, specifications and estimating for building maintenance and small new works. Some experience is desirable in the checking of interim and final accounts for major capital works.
Preference will be given to candidates who have reached Final Examination standard of the R.I.C.S. (building), or who possess the H.N.C. (building), but applications from candidates with equivalent qualifications will be considered.
Further particulars may be obtained from the Registrar, University College, Singleton Park, Swansea, to whom applications (3 copies) must be sent by January 3rd, 1959. 2348

COUNTY BOROUGH OF SOUTH SHIELDS
PRINCIPAL ASSISTANT QUANTITY SURVEYOR
Applications are invited from suitably qualified persons for the above appointment in the Borough Engineer's Department, salary in accordance with Grade A.P.T. IV (£1,025 × £50—£1,175).
Housing accommodation will be made available to successful applicants if necessary.
The selected applicants will be required to pass a medical examination for the purposes of the Superannuation Scheme.
Application forms are obtainable from the Borough Engineer, Town Hall, South Shields, and should be returned to him not later than 10 a.m. on Thursday, 8th January, 1959.
R. S. YOUNG,
Town Clerk. 2343

COUNTY BOROUGH OF SOUTH SHIELDS
PRINCIPAL ASSISTANT ARCHITECTS
Applications are invited from suitably qualified persons for the above appointments in the Borough Engineer's Department, salary in accordance with Grade A.P.T. IV (£1,025 × £50—£1,175).
Housing accommodation will be made available to successful applicants if necessary.
The selected applicants will be required to pass a medical examination for the purposes of the Superannuation Scheme.
Application forms are obtainable from the Borough Engineer, Town Hall, South Shields, and should be returned to him not later than 10 a.m. on Thursday, 8th January, 1959.
R. S. YOUNG,
Town Clerk. 2342

CITY OF CARDIFF
CITY ARCHITECT'S DEPARTMENT
APPOINTMENT OF SENIOR ASSISTANT QUANTITY SURVEYORS
Applications are invited from qualified and experienced Quantity Surveyors for the appointment of Senior Assistant Quantity Surveyors, A.P.T. Grade IV, £1,025—£1,175 per annum.
General Conditions of Appointment may be obtained from the undersigned.
Applications, accompanied by the names and addresses of three referees, and endorsed "Senior Assistant Quantity Surveyor—A.P.T. Grade IV," must be delivered to me not later than 29th December, 1958.
S. TAPPER-JONES,
Town Clerk.
City Hall,
Cardiff.
December 1958. 2353

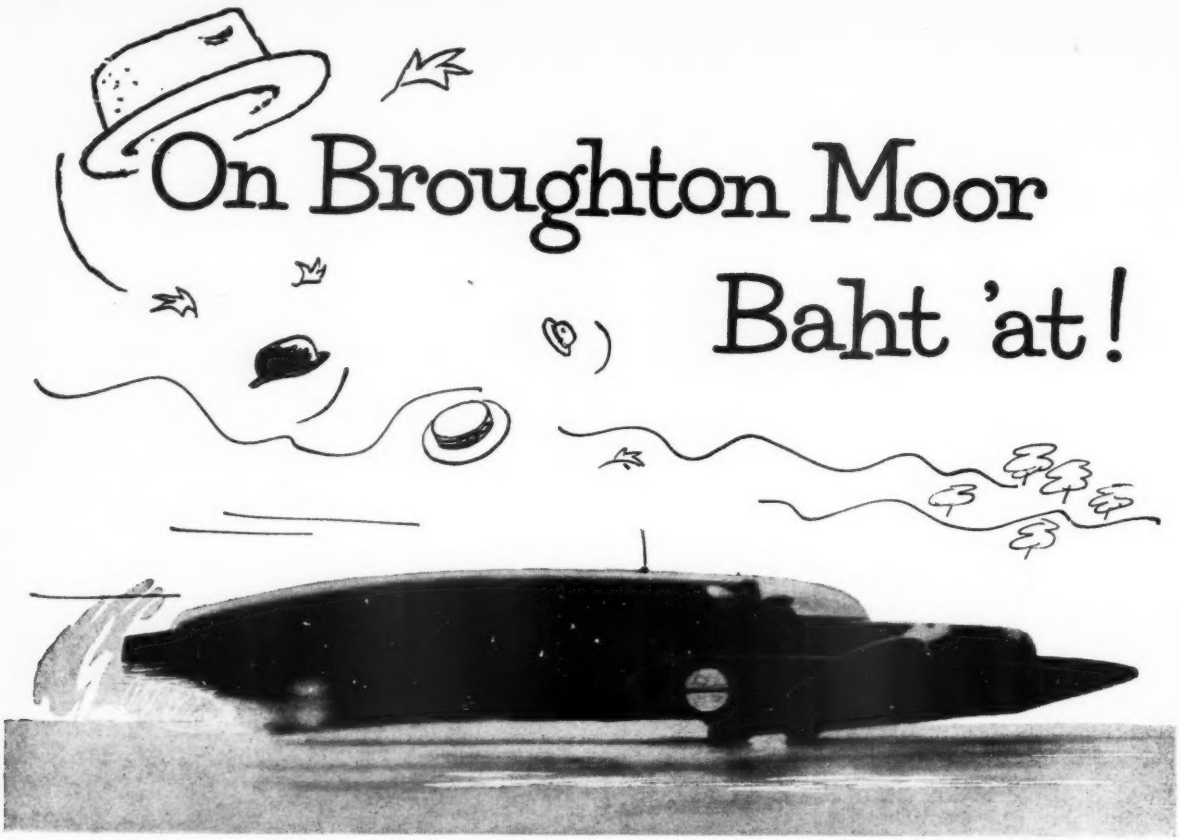
COUNTY BOROUGH OF SOUTHAMPTON
BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the following permanent positions:
(*a*) ASSISTANT PLANNING OFFICER, Special Grade (£750—£1,030) for research, planning statistics, survey, with appropriate University or planning qualification.
(*b*) ASSISTANT PLANNING OFFICER, Special Grade (£750—£1,030) for development control, with planning qualification. Experience and architectural qualification an advantage.
(*c*) PLANNING ASSISTANT, Grade A.P.T. II (£725—£845).
(*d*) ASSISTANT ARCHITECT, Special Grade (£750—£1,030).
(*e*) ARCHITECTURAL ASSISTANT, Grade II (£725—£845).
Applicants should possess appropriate qualifications and should state their housing needs.
Application forms from the Borough Architect, Civic Centre, Southampton, returnable by 31st December, 1958. 2333

DURHAM COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
ARCHITECTURAL ASSISTANTS. Salary—Special Grade (£750 × £40—£1,030 p.a.). Forms and further particulars from the County Architect, South Street, Durham. Closing date 23rd December, 1958. Canvassing members of the Council is prohibited.
J. K. HOPE,
Clerk of the County Council. 2319

HEREFORDSHIRE COUNTY COUNCIL
SENIOR ASSISTANT ARCHITECT required on A.P.T. IV (£1,025 to £1,175 per annum). Must be A.R.I.B.A.
Superannuated post, subject to medical examination and one month's notice either side. Travel and subsistence payable to married men in certain cases for limited period.
Application forms from County Architect, Bath Street, Hereford, to be submitted by 29th December, 1958. 2358

BOROUGH OF MAIDENHEAD
JUNIOR ARCHITECTURAL ASSISTANT
Applications invited for above appointment. Salary A.P.T. Grades I-II. Housing accommodation available. Conditions from Town Clerk, Guildhall, Maidenhead. Closing date 6th January, 1959. 2295

PERTH AND KINROSS JOINT COUNTY COUNCIL require ASSISTANT ARCHITECTS for work on New Schools and other Building. Salary scale £820—£955 with placing. Applicants should hold the A.R.I.B.A. and have had some experience since qualification. A house will be available. Particulars of appointment and forms of application from the County Clerk, P.O. Box 15, County Offices, York Place, Perth. Applications to be lodged by 31st December, 1958. 2323



HATS off to Donald Campbell on the banks of Coniston Water (perhaps " hats off " is a sensible precaution, in any event, with the jet-blast whistling from his 248 m.p.h. Bluebird). A stone's throw away the Broughton Moor Green Slate Quarries blast the famous Light Sea Green and Olive Green stone which graces noble buildings everywhere. Hats are off, too, to many an architect who has imbued his design with the green beauty of the Lake District, petrified everlastingly in Broughton Moor Green Slate.

The Imperial College of Science and Technology, London. Architects: Norman & Dawbarn.

Broughton Moor Light Sea Green and Olive Green Stone is used with great effect for external and internal facings, cills, copings, floorings, shopfronts, etc. Please send for technical pamphlets and samples. Recent buildings whose beauty has been preserved for posterity by Broughton Moor Green Slate:

BARCLAYS BANK. D.C.O., OLD BROAD ST., LONDON, E.C.2.
Ley, Colbeck & Partners.

NEW OFFICE BLOCK (SITE OF OLD HOLBORN RESTAURANT).
H. Fitzroy Robinson & Hubert Bull.

IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY, SOUTH KENSINGTON.
Norman & Dawbarn.

HOTEL LEOFRIC, COVENTRY.
W. S. Hattrell & Partners.

RUTHERFORD TECHNICAL COLLEGE, NEWCASTLE-ON-TYNE.
City Architect, Newcastle-on-Tyne.

NATIONAL LIBRARY OF SCOTLAND, EDINBURGH.
Reginald Fairlie & Partners and M.O.W.

J. SAINSBURY LTD., NEW STORE FRONT, DRURY LANE, LONDON.
Hooper, Belfrage & Gray.

COMPTER HOUSE, WOOD ST., LONDON, E.C.2.
Ronald Ward & Partners

THE BROUGHTON MOOR GREEN SLATE QUARRIES LTD

CONISTON, THE LAKE DISTRICT, LANCASHIRE. CONISTON 225/6

BOROUGH OF RICHMOND (SURREY)
APPOINTMENT OF SENIOR ASSISTANT ARCHITECT

Applications are invited from qualified Architects for the appointment of Senior Assistant Architect at a salary in accordance with the Special Grade (£750—£1,030) plus London weighting.

Applications should be delivered to the Borough Engineer and Surveyor, Hotham House, Heron Court, Richmond, Surrey, not later than 3rd January, 1959, giving the names of three referees and stating relationship if any to Members of the Council or Senior Officers.

Canvassing prohibited. No assistance can be given with housing.

CLIFFORD HEYWORTH,
Town Clerk.

Town Hall,
Richmond,
Surrey. 2329

BOROUGH OF FINCHLEY
TEMPORARY ARCHITECTURAL ASSISTANT
HOUSING DEPARTMENT

Salary within Special Grade (£750 × £40—£1,030) for a qualified architect, or within A.P.T. I (£575 × £30—£725) for one with R.I.B.A. Intermediate only. London weighting additional.

Candidates must have had practical office experience (preferably on Local Authority Housing work) in the preparation of working drawings and detailing.

The National Scheme of Conditions of Service and the Local Government Superannuation Acts apply and medical examination required.

Applications, stating age and full particulars of qualifications and experience, with the names of two referees, to the Borough Housing Officer, The Avenue, Finchley, N.3, by first post on the 31st December, 1958.

R. M. FRANKLIN,
Town Clerk.

Municipal Offices, N.3. 2349

ENFIELD BOROUGH COUNCIL

Contractors wishing to submit a TENDER for the building of the first stage of the proposed CIVIC CENTRE at Enfield, Middlesex, are invited to apply, not later than noon on the 22nd December, 1958, to the Town Clerk, for permission to tender. Only those Contractors should apply who are capable of executing a contract for about £200,000 in reinforced concrete construction involving the use of a de-watering system for foundation work. Contractors must state in their application whether or not they are prepared to submit a fixed price tender.

If necessary a selection will be made from the applicants and the tender documents will be issued about the beginning of January, 1959.

The Council does not bind itself to accept the lowest or any tender.

CYRIL E. C. R. PLATTEN,
Town Clerk.

Public Offices,
Enfield, Middlesex.
8th December, 1958. 2325

COUNTY BOROUGH OF STOCKPORT
CHIEF ASSISTANT (REDEVELOPMENT)
Salary £1,295—£1,515

Applications are invited for the appointment of a Chief Assistant for the preparation of plans for the redevelopment of the central area of the town at a salary in accordance with J.N.C. Scale C, £1,295—£1,515 per annum.

Applicants should hold a planning qualification and an additional qualification in Architecture, Civil Engineering or Surveying will be an advantage.

The appointment is to the permanent staff and will be subject to National Conditions of Service, Superannuation Acts and to the passing of a medical examination. The appointment will be terminable by one month's notice on either side.

Applicants must disclose if related to any member of the Council or to any senior officer.

Applications, stating age, qualifications, experience, present and past appointments, together with copies of two recent testimonials, should reach the Borough Engineer and Surveyor, Town Hall, Stockport, not later than Monday, 19th January, 1959. 2320

EDUCATION DEPARTMENT OF WESTERN AUSTRALIA
TECHNICAL EDUCATION DIVISION

Applications are invited for the following position:

HEAD OF DEPARTMENT OF ARCHITECTURE
PERTH TECHNICAL COLLEGE

Applicants must be qualified for Associate Membership of the Royal Australian Institute of Architects or equivalent Institute. Town Planning qualifications will be an advantage.

The College Associateship in Architecture is recognised by the R.I.B.A. as well as the R.A.I.A. as meeting the examination requirements for Associate Membership.

The Head of the Department of Architecture is fully responsible to the Principal of the College for the conduct of his Department.

Annual salary range, £2,105—£2,275 Australian Currency.

Applications must be made on the prescribed form T.E.1 which can be obtained from the Agent General for Western Australia, Savoy House, 115/116, Strand, London, W.C.2, from whom further particulars including those of travel arrangements are also available. All applications must be submitted in duplicate and accompanied by a recent photograph on or before the 30th January, 1959. 2311

CITY OF BIRMINGHAM
PARKS DEPARTMENT
APPOINTMENT OF DRAUGHTSMAN

Applications are invited from suitably qualified persons for the above-mentioned appointment. The salary is in accordance with Miscellaneous Division Grade VI (£705—£765 per annum).

Applicants should have a contemporary outlook and be able to prepare all the necessary drawings and specifications for minor building works. Living accommodation may be made available to the successful applicant.

Applications with full particulars and the names of two referees must reach the undersigned not later than the 31st December, 1958.

G. E. E. ROSS,
General Manager.

Parks Department,
Civic Centre,
Birmingham, 1. 2339

SURREY COUNTY COUNCIL

Applications invited for appointment of ASSISTANT ARCHITECTS, Special Grade, £750—£1,030 p.a., plus £30 p.a. London allowance. Must be A.R.I.B.A.

Full details, present salary and three copy testimonials to County Architect, County Hall, Kingston, as soon as possible. 2310

BERKSHIRE COUNTY COUNCIL

Three ASSISTANT ARCHITECTS, Special Grade, £750—£1,030. Candidates should have had good architectural training and be experienced in planning, design and construction. Preference will be given to Associates of the R.I.B.A.

ASSISTANT QUANTITY SURVEYOR, Grade IV, £1,025—£1,175. Applicants should be capable of taking off for large projects.

Application forms and further particulars can be obtained from J. T. Castle, A.R.I.B.A., A.M.T.P.I., County Architect, Wilton House, Parkside Road, Reading, to whom they should be returned not later than Tuesday, the 6th January, 1959. 2336

THURROCK U.D.C. (Engineer & Surveyor's Department) require ARCHITECTURAL ASSISTANT. Salary A.P.T. I/II: £575—£845 p.a. Good architectural experience is necessary. Applicants must be capable of preparing working drawings in all categories and should have passed the Intermediate Examination of the R.I.B.A. The Council have interesting projects in hand, including an Indoor Swimming Bath. Appointment pensionable. Applications, stating age, qualifications, and experience, and quoting three referees, to the Clerk of the Council, Council Offices, Grays, Essex, by 29th December, 1958. Canvassing disqualifies. Relationship with Members or Senior Officers of the Council must be disclosed. 2318

CORPORATION OF LONDON
REQUIRE

ASSISTANT—Permanent Staff—in the Architectural and Building Section of the CITY SURVEYOR'S DEPARTMENT. Applicants must have passed the Intermediate R.I.B.A., or Intermediate R.I.C.S. Neat and accurate draughtsmanship, and sound knowledge of building construction, essential. Salary up to £880 per annum, dependent upon experience and qualifications. Applications in writing, stating age, qualifications and experience, with names of three referees, to City Surveyor, Guildhall, London, E.C.2, within 14 days. 2316

OXFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following:—

(*a*) ASSISTANT ARCHITECTS, Special Grade (£750—£1,030).
(*b*) ASSISTANTS (Architectural or Building Surveyors), A.P.T. Grade I (£575—£725).
(*c*) ASSISTANT (Quantity Surveyor), A.P.T. Grade III (£845—£1,025).
(*d*) ASSISTANT (Quantity Surveyor), A.P.T. Grade II (£725—£845).
(*e*) ASSISTANT (Quantity Surveyor), A.P.T. Grade I (£575—£725).
(*f*) QUANTITY SURVEYOR'S ASSISTANT, Misc. Grade V (£625—£685).
(*g*) JUNIOR ASSISTANT (Building Surveyor), Gen. Division (£200—£450 or £230—£560).

Applicants for appointments (*a*) and (*c*) must have passed a suitable professional final examination, (*b*), (*d*) and (*e*) must have passed the appropriate Intermediate Examination, and for (*f*) must have experience in abstracting, billing, interim valuations and final accounts.

Applications giving two referees and one recent testimonial, must give details of qualifications, education, experience, age and relevant particulars, must reach the County Architect, Park End Street Offices, Oxford, not later than the 30th December, 1958.

GERALD GALE BURKITT,
Clerk of the Council.

County Hall,
Oxford. 2334

Architectural Appointments Vacant

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

SENIOR ARCHITECTURAL ASSISTANT required with experience of Housing, Shop and Flat Development. Capable of taking full control of interesting proposals. Write with full particulars including salary to R. H. Gallannaugh, L.R.I.B.A., 54, Queen Anne Street, London, W.1. 2083

INTERMEDIATE ASSISTANT with office experience required London Office, varied work. Preference given to applicants actively studying for Final. Study time allowed by arrangement. Box 1825.

A COMPETENT ASSISTANT, with several years' experience and capable of working with little supervision, required in Branch Office, Birmingham, engaged on a varied and interesting programme of commercial projects. Applications, giving full particulars and salary required, to: G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester, 4. 1874

ASSISTANT required in busy West End Office. About Intermediate level. Write stating age, experience and salary desired. Box 2081.

TREHEARNE & NORMAN, PRESTON & PARTNERS have vacancies for SENIOR and JUNIOR ASSISTANTS. Salary according to experience and qualifications. Apply: 85, Kingsway, W.C.2. (HOL. 4071.) 2171

ARCHITECTURAL ASSISTANTS, preferably of Intermediate standard, are invited to apply for posts in the Architect's Department at Ericsson Telephones Limited, Beeston, Nottingham, to work with group architects on a programme of modern industrial building.

Starting salary will be in accordance with qualifications and previous experience, but it will be helpful to know salary expected by applicants.

The department at present works a five-day week. Good canteen facilities are available. Participation in superannuation fund after qualifying period.

Please write, stating age and giving full details of training and experience, to the Personnel Manager. 2224

R. J. BESWICK & SON, F.R.I.B.A., 10, Victoria Road, Swindon, Wiltshire, have vacancies for ARCHITECTURAL ASSISTANTS. Salaries in accordance with qualifications and experience. Apply in writing or telephone SWINDON 2857. 2227

BRETT, BOYD & BOSANQUET require a qualified ASSISTANT with administrative ability for their Oxford Office. Applications giving qualifications, experience and salary sought to 60 St. John Street, Oxford. 2258

KATZ AND VAUGHAN have vacancies for Senior and Intermediate ASSISTANTS. Varied work. Phone REGent 5401 or write 208a, Regent Street, W.1. 2252

ARCHITECT. Two qualified ASSISTANTS required by West End Architect. Good salary and prospects for artistic merit. Write stating qualifications and salary required and when available to Box 2280.

ARCHITECTURAL ASSISTANTS of Intermediate standard required in London Office. Wide and varied practice. Pleasant working conditions. Box 2217.

ROBERT MATTHEW & JOHNSON-MARSHALL, F./A.R.I.B.A., have vacancies in their London office for architects with two-five years' qualified experience. Apply in writing to: 24, Park Square East, London, N.W.1. 2269

EXPERIENCED SENIOR ASSISTANT required early in 1959 in busy general practice in Western Home Counties. Must be fully capable of handling a variety of types of job throughout under Partners' direction. Good design sense essential. Post is permanent with good prospects. Salary £800 p.a. upward depending on ability. Bonus scheme in operation. Own car an advantage. Write Box 2263.

COUNTRY ARCHITECTS with old established and increasing practice require additional ARCHITECTURAL ASSISTANT. Commencing salary up to about £700 per annum according to ability and experience. Write in first instance to Box 2262.

ARCHITECTS' co-partnership require qualified ASSISTANT with experience for University work. Write 44, Charlotte Street, W.1, or telephone Langham 5791. 2261

ARCHITECTURAL ASSISTANTS, Intermediate standard, required in Architect's Department for work in connection with flat, maisonette, shop and housing developments throughout the country. Applicants must be competent draughtsmen with contemporary outlook. Pension scheme in operation. Apply The Secretary, Davis Estates Ltd., 346/350, Kilburn High Road, N.W.6. 2259

FIELD AND SHAW, 40, Station Road, North Harrow (Tel. HARrow 7502), require LADY ASSISTANT, Intermediate standard, good and speedy draughtsmanship. Work varied but largely housing. 923

VERSATILE ARCHITECT required in sizeable private practice in Chelmsford/Southend area, Essex. Age 30-35 years with experience of housing, layout and job supervision. Quality of drawing and presentation essential. Applications to Box 2299.

ARCHITECTURAL ASSISTANT required. Intermediate standard. Interesting and varied practice covering Industrial, Hospital, Domestic and Commercial work. Five-day week. Three weeks annual leave. Apply in writing, stating age, experience, salary required and any other relevant information, to E. William Palmer & Partners, Chartered Architects, 8, The Town, Enfield, Middlesex. 2308

ARCHITECT required on the permanent staff of a rapidly expanding organisation in the East Midlands which is embarking on a development scheme. The successful applicant will be expected to accept full responsibility for the design of all types of industrial building. This is a key appointment offering considerable scope for rapid advancement to a man with initiative, drive, and ability. Send full particulars of training, experience, and present salary to Box 2302.

ARCHITECTURAL ASSISTANTS, Intermediate standard, required in Cirencester and Swindon. Applications, stating experience and salary required, to: Eric Cole & Partners, Dyer Street House, Cirencester. 2312

ASSISTANT required, Intermediate or Final standard. Send full details to D. Garth Pepperell, A.R.I.B.A., Chartered Architect, 25, Clare Street, Bristol, 1. 2300

CHIEF ASSISTANT required for Architect's Practice in St. Albans. Possibility of working partnership subject to satisfactory service. Write giving particulars to Box 2326.

ARCHITECTURAL ASSISTANT, Intermediate standard, required for private practice in Rochester. Salary range £450 to £650, according to experience. Apply, stating age and experience, to George E. Clay & Partners, A/A.R.I.B.A., 10, New Road, Rochester, Kent. 2303

ARCHITECTURAL ASSISTANT required in the Chief Architect's office of a large Multiple retail firm with offices in London. Five-day week, pension scheme, dining room. Applicants should state age, qualifications, experience and salary required. Box 2309.

ARCHITECTURAL ASSISTANTS, preferably with office experience, required immediately for work on large and interesting projects. Vacancies occur in the following salary scales:—Intermediate standard, £450—£650; Final standard, £700—£850. Five-day week, pension scheme, good prospects. Head office of firm: Southsea, Hants. Box 2304.

SHEPHERD, FOWLER & MARSHALL, 15, St. James' Row, Sheffield, require Intermediate or Final ASSISTANTS for interesting and varied work in extensive general practice. High standard of draughtsmanship and construction required. Five-day week. Salary range up to £900 per annum. 2314

INTERMEDIATE STANDARD ARCHITECTURAL ASSISTANT with domestic and industrial experience, etc., required for appointment early in the New Year, by Building Contractors and Development Company, South Bucks. Write in confidence, giving full details including age and expected salary, to Box 2313.

SIR GUY DAWBER, FOX & ROBINSON require JUNIOR ASSISTANT with one year's experience and SENIOR ARCHITECTURAL ASSISTANT with Final and two years' experience. No Saturdays, luncheon vouchers. Write, giving full particulars and salary required, to 122, Wigmore Street, W.1. 2306

ARCHITECTURAL ASSISTANT required by small, modern firm. Intermediate to Final standard. Salary according to competence. Apply Godsmark & Miller-Williams, 37a, Tubwell Row, Darlington, Co. Durham. 2321

ARCHITECTURAL ASSISTANT, Intermediate standard, required for Architect's Practice in St. Albans. Salary by arrangement. Write giving particulars to Box 2327.

BBC invites applications for three vacancies on its Architectural Staff, based in London. Candidates must be students R.I.B.A. with at least two years' office experience. Starting salary £705, rising by annual increments to £1,005. Good prospects of promotion. Requests for application forms to Engineering Recruitment Officer, Broadcasting House, London, W.1, quoting Ref. E.278 AJ. 2328

ARCHITECTURAL ASSISTANT
of Intermediate R.I.B.A. standard
required by
CADBURY BROTHERS LIMITED

TO work on a varied and interesting programme. Experience in industrial and commercial building design desirable. Five-day week, attractive working conditions and amenities, Pension Scheme. Provision of housing accommodation will be considered for suitable applicants. Salary according to qualifications and experience. Write, stating age, qualifications, experience and salary required, to Chief Architect, Cadbury Brothers Limited, Bournville, Birmingham. 2330

INTERMEDIATE and Final standard ASSISTANTS required. Minimum two years' office experience. Salary according to ability. Theo. H. Birks, 38, Portland Place, W.1. LAN. 7236. 2324

LIVERPOOL—SENIOR and JUNIOR ASSISTANT required for small, busy practice with varied work on hand, especially hospitals and industrial. Excellent prospects and good opportunities for taking responsibility. Congenial working conditions. Salary by arrangement, depending upon age and experience. Please write, giving full particulars. Box 2361.

ASSISTANT required for preparation of perspectives and model making with a high standard of drawing and craftsmanship. Apply Ronald Fielding, A.R.I.B.A., Aldwych House, W.C.2. CHAncery 8201. 2332

SMALL PROPERTY DEVELOPMENT COMPANY, South London, requires the part-time services of young ARCHITECT for planning supervision and taking out quantities. State age, experience, qualifications and salary required. Box 2331.

YORK—ARCHITECTURAL ASSISTANTS required for busy general practice. Commencing salary commensurate with experience. Applicants should apply, stating age, training, qualifications and experience, to Needham, Thorp & White, 5, High Petergate, York. 2335

ARCHITECTURAL ASSISTANTS required by Sir William Halcrow & Partners for Architect's Department. Final standard. Salary arranged according to age and experience. Apply, giving particulars of age, qualifications and experience, to E. J. D. Mansfield, A.R.I.B.A., Sir William Halcrow & Partners, 47, Park Lane, London, W.1. 2338

BRACKNELL DEVELOPMENT CORPORATION

APPLICATIONS are invited for the post of ARCHITECT, salary range £1,139—£1,366. Applicants must be Corporate Members of the R.I.B.A. Superannuation schemes, medical examination. Housing available. Apply by 29th December, 1958, giving age, education and qualifications, experience and appointments held (with dates and salaries) and names of two referees to General Manager (A), Bracknell Development Corporation, Farley Hall, Bracknell, Berks. 2317

COUNTRY Office (Surrey) requires ARCHITECTURAL ASSISTANT, Intermediate, for expanding practice. Salary according to experience. Car allowance. Five-day week. Box 2345.

ARCHITECTURAL ASSISTANT required for varied work on housing and industrial building. 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 Shepperdson & Dixon, 2, Museum Street, Ipswich. 2355

ARCHITECTS' ASSISTANTS, Intermediate standard, required for Luton and Norwich Offices. State age, qualifications, experience and salary required. Apply: Messrs. Chanlin & Burgoine, Chartered Architects, 4, Cathedral Close, Norwich. 2354

YOUNG, progressive Baker Street firm require ASSISTANTS with Intermediate and three years' experience, for varied work particularly on private housing and estate layout. Write with details of age, experience and salary required, to Box 2359.

JUNIOR ARCHITECTURAL ASSISTANT required by Public Property Company developing estates of houses and blocks of flats in London and the Home Counties. Experience in housing design and estate layout desirable. Good draughtsmanship essential. Write, giving full details of age, education and career to date in chronological order, together with salary earned in each appointment, to Ref. 0020/232, Land & General Developments Ltd., 8/9, Berkeley Street, London, W.1. 2350

NEWLY QUALIFIED ARCHITECT wanted. Messrs. Tooley and Foster, Midland Bank Chambers, Buckhurst Hill, Essex. 2351

INTERMEDIATE ASSISTANTS required for Architect's Office, London. Salary £600 to £800. Industrial and commercial projects. Scope for initiative and responsibility. Box 2340.

Architectural Appointments Wanted

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

EXPERIENCED ASSOCIATE, 30, desires post in small practice, Central London or Essex. Salary by arrangement. Box 2298.

ASSOCIATE, Dip. Arch., public school, 12 years' experience, in responsible position, requires appointment with good opportunities in this country or overseas. Box 2346.

ARCHITECT, A.R.I.B.A. (Dipl.), 38, widely travelled Far East, sound knowledge tropical building methods, free now to consider overseas employment. Box 2347.

TEAM of three Assistants, having just completed working on £½ million contract, now seek short or long term appointment as a group working in or out of Architect's Office. Salary by negotiation. Box 2357.

FELLOW, 40, wide experience in Private Practice, Nuclear and Industrial Architecture, seeks remunerative change, preferably in South England. Box 2352.

Other Appointments Vacant

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

REPRESENTATIVE, already calling on Architects and Builders, to carry line of Terrazzo and Allied Products. Write giving full particulars and terms required. Box 2307.

JUNIOR DRAUGHTSMAN with knowledge of building construction. Troup & Steele, 14, Gray's Inn Square, W.C.1. 2322

ASSISTANT TECHNICAL EDITOR, full time or part time, required by THE ARCHITECTS' JOURNAL. Applicants must have had at least three years' experience in architectural or engineering practice or in building. Applications, stating age, qualifications, present salary and whether full or part-time employment is sought, should reach the Secretary, THE ARCHITECTS' JOURNAL, 9-13, Queen Anne's Gate, S.W.1, by December 8th, 1958. 922

CO-OPERATIVE WHOLESALE SOCIETY LTD. ARCHITECT'S DEPARTMENT, MANCHESTER
SENIOR SHOPFITTING DESIGNER required, experienced in shop equipment and modernisation of interiors. The position calls for the preparation of layouts and perspectives with a modern approach to store fitting problems. The post is pensionable, subject to medical examination. Five-day week in operation. Applications giving age, details of previous experience and salary required to G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1, Balloon Street, Manchester, 4. 2242

IMPERIAL CHEMICAL INDUSTRIES LIMITED, requires a REPRESENTATIVE to advise clients on colour treatment of factories and other large buildings. Applicants must have had Art and/or Architectural training and possess outstandingly good colour sense with ability to convey ideas clearly and enthusiastically to others. Good presence and speech are essential. Age 25-35. Salary according to age and experience. Pensionable post. Apply, giving full particulars of experience, to the Staff Officer, Imperial Chemical Industries Limited, Paints Division, Wexham Road, Slough, Bucks. 2341

WEST AFRICAN BUILDING RESEARCH INSTITUTE
LIBRARIAN

THERE is a vacancy for a Librarian (man or woman) to control the Institute's special library service and to assist with the advisory service to the building industry. Probable initial posting: Accra: but officers of the Institute may be required to serve anywhere in West Africa.

Candidates should have a degree in a science or technicological subject or a professional qualification in architecture or engineering; also two years' experience in a library or advisory service and experience of technical writing: Library qualification desirable. Post is on contract/gratuity terms for two tours of 15-24 months each. Consolidated salary in scale £1,080—£2,080. Outfit allowance £60. Generous home leave on full pay. Free passages for officer, wife and up to three children. Quarters available at low rental. Further particulars and application form obtainable from Director of Recruitment, Colonial Office, London, S.W.1, quoting BCD. 197/487/02. 2315

Services Offered

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

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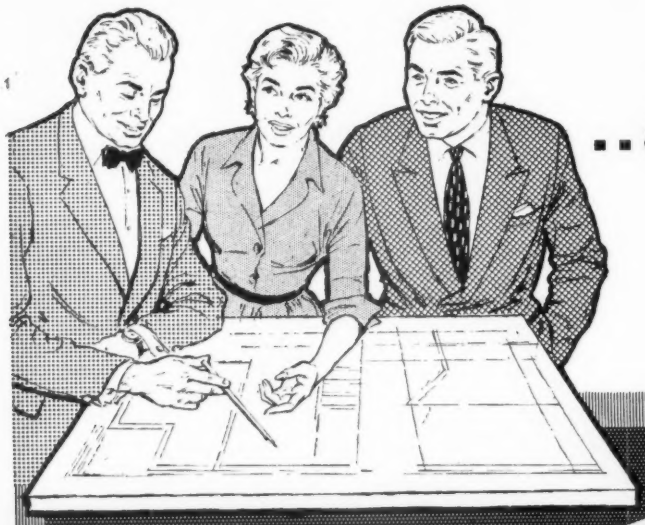

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