The Architects' JOURNAL for April 2, 1959

THE ARCHITECTS' JOURNAL

standard contents

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

No. 3344] [Vol. 129

THE ARCHITECTURAL PRESS

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Registered as a Newspaper.

★A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to 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' 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. 2, Caxton Street, S.W.1.	Abbey 4813
NBR	National Buildings Record, 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers, 10, Storey's Gate, S.W.1	Abbey5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry. 21, John Adam Street, Adelphi, W.C.2.	Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 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 8813
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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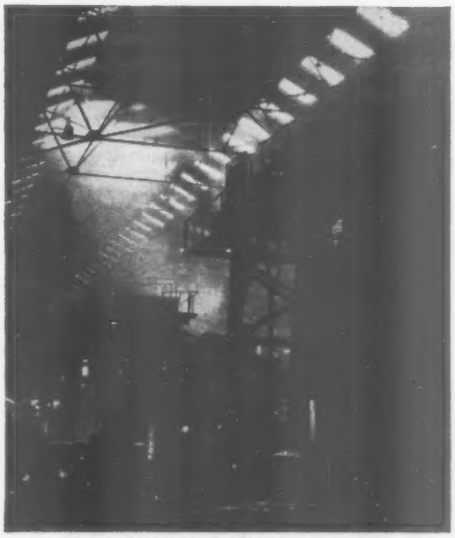

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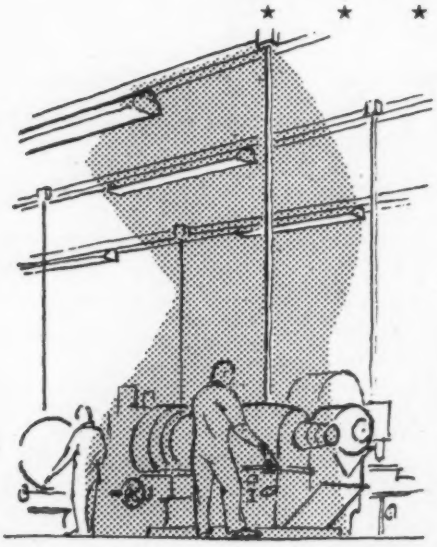

★ 'Power-Line' trunking can be quickly added to one or both sides of Crompton 'New-Line' lighting trunking. The only tool needed is a screwdriver. 'Power-Line' may be used alone to provide ready power to bench drivers.

★ 'Power-Line' is a simple and economic method of providing separate power and lighting circuits, or independent power circuits.

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★ Low Voltage circuits, telephone circuits, etc., can be physically separated from other conductors, with simple take-off at any point.

★ From the specially designed line-taps to the insulated 'snap-on' covers, 'Power-Line' makes for speed of installation, accessibility, and adaption *all along the line!*

★ Power capacity up to 8 x 19/.064 or 12 x 7/.064 conductors.

★ Available now. Standard finish, galvanised.

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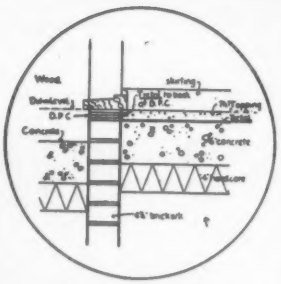
CP ELECTRICAL EQUIPMENT



This detail is taken from the Tretol Specification Sheets, complete sets of which are available on request.

What's inside YOUR sandwich?

Preferences in sandwiches range from genteel triangles to crusty hunks, with a common expectation of something good in the middle. For sandwich membranes in solid concrete floors, Tretol are well versed in the provision of something good (although inedible) in the middle. Tretol Bitumen Membranes have been used for many years, both horizontally and vertically, in tens of thousands of buildings throughout the country. These high grade **bitumen solutions** give protection against moisture and moisture vapour which will last for the life of the building. If your files do not include a set of our membrane specification sheets, we shall be very glad to remedy the omission.

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The General Electric Company and Thermal Insulation

At this manufacturing centre three new open roof bays were lined with ½ inch Insulating Gypsum Plasterboard, reducing the potential heat-loss, by comparison with uninsulated bays, by 14½%. This made possible a reduction in the capital cost of the heating installation, and over a heating season of 200 days allowed a saving of £456 in fuel bills.
The General Electric Company, Witton, Birmingham.

SAFE INSULATION

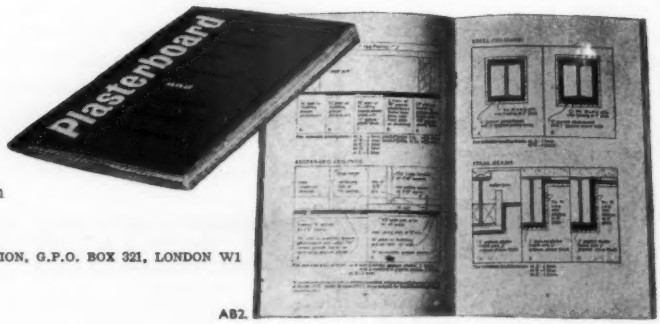
pays for itself

Insulating Gypsum Plasterboard conforms to Section II of B.S.476, having Class 1 surfaces of very low flame spread on both sides. It only costs about 5d. per square foot, and in addition very low fire insurance premiums can be obtained for building linings in this class. At the same time, Insulating Gypsum Plasterboard provides a high degree of thermal insulation. Alternatively, plain plasterboard, which has the same qualities of fire resistance, may be used at a cost of approximately 4d. per square foot.

Gypsum Plasterboard is a first-class building material, being easy to handle, erect and decorate.

IT'S THE CORE THAT COUNTS

All plasterboard has an incombustible core of Gypsum, which contains 20% combined water. During a fire this water is gradually released in the form of vapour, which provides an effective barrier to the fire's progress.



FACTS AND DIAGRAMS

concerning fire resistance and thermal insulation are contained in our free illustrated brochure.
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AB2

FEB *aids for the Architect*

BRICKLAYER

FEBMIX ADMIX
MORTAR PLASTICISER

FEBMIX ADMIX, when incorporated in bricklaying mortar, allows the lime to be omitted or the cement content to be reduced. The improved plasticity and workability also reduce the labour effort in erection and thereby aids in reducing labour cost.

FEBMIX DEHYDRATED
MORTAR PLASTICISER

FEBMIX DEHYDRATED is not offered as a substitute for Febmix Admix, but is an alternative mortar plasticiser for those who prefer a powder additive. Febmix Dehydrated is prepared to exactly the same chemical formulation as Febmix Admix and it has a similar action when used as a plasticiser for bricklaying mortar.

FEBPROOF
CEMENT WATERPROOFING COMPOUND

When waterproofing manholes, etc., the incorporation of Febproof in the mortar ensures the obtaining of a 100 per cent. watertight finish at a cost of under 6d. per cubic foot of mortar.
In addition to waterproofing, Febproof also plasticises and increases strength.

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COLOURLESS TRANSPARENT WATERPROOFING LIQUID

When repointing defective joints in brickwork, ensure that the total area of brickwork is impervious to rain and damp penetration by applying one or two coats of Febsil. Applied by brush or spray, Febsil forms an impervious film that does not change the colour of the brickwork.

FEBTONE
PERMANENT COLOURS FOR CEMENT

FEBTONE is the perfect colouring compound for forming coloured joints in brickwork, for in addition to permanently colouring cement and lime mortars, it also plasticises and waterproofs. Available in a variety of colours, quality is guaranteed by the fact of the Febtone colour conforming to British Standard.

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ANTI-FREEZE COMPOUND

The incorporation of Febspeed Plus in bricklaying mortar allows work to continue under freezing conditions. In addition to its frostproofing action, Febspeed Plus also plasticises and waterproofs.
Febspeed Plus is the only product on the market having the combined property of acting both as a frostproofing agent and a mortar plasticiser.

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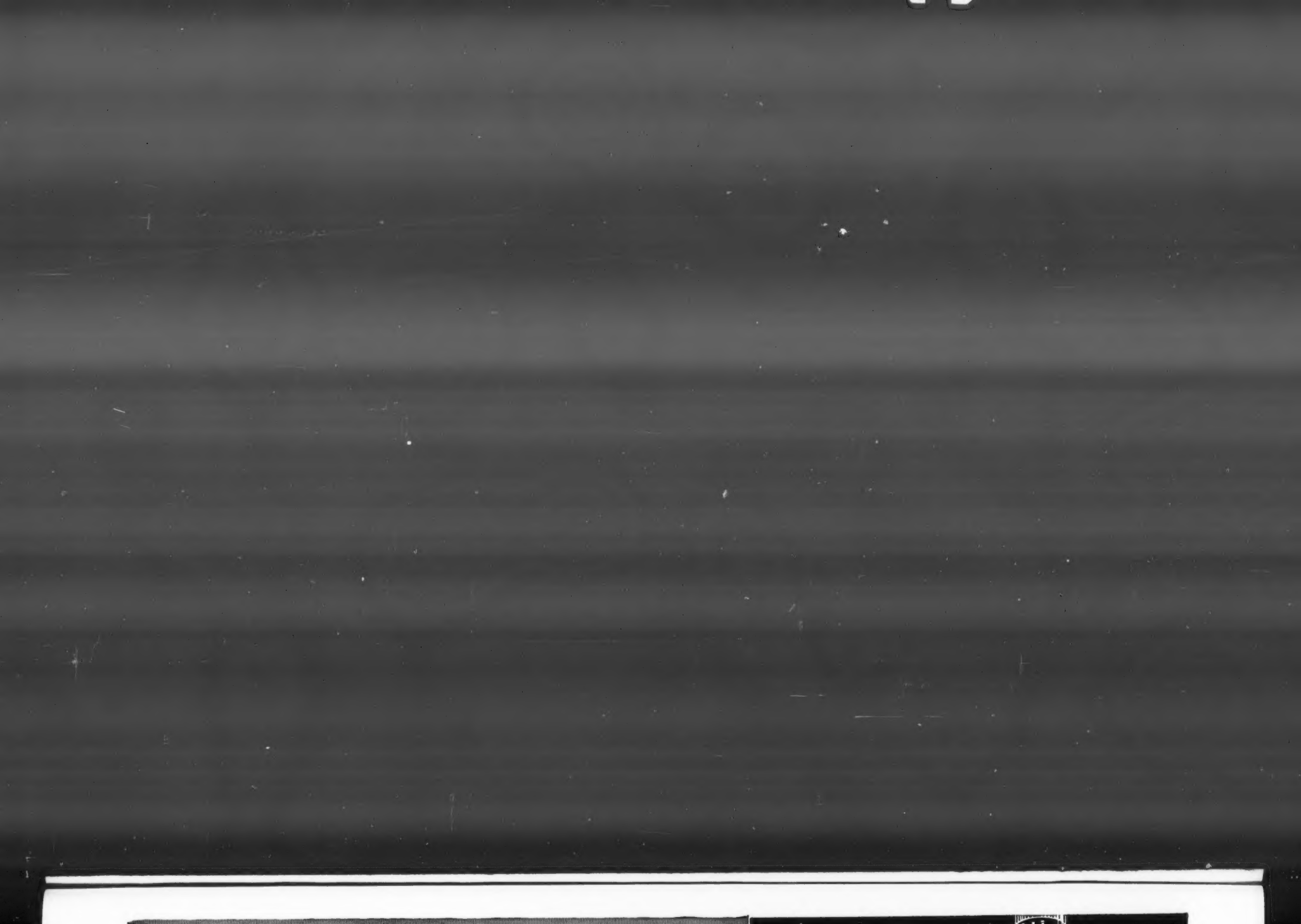
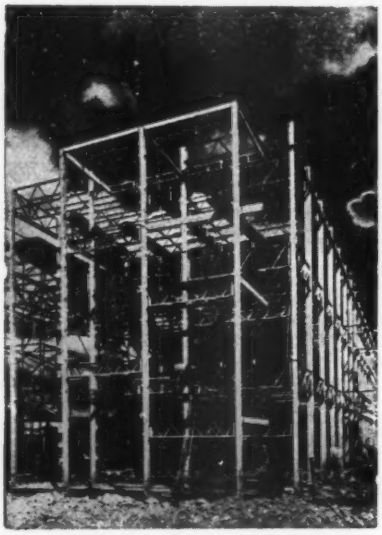
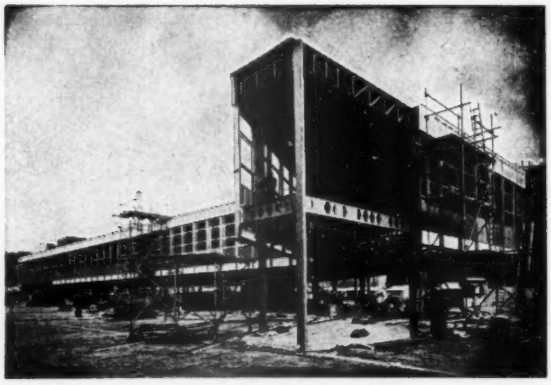


structural steelwork

THE BOWATER PAPER CORPORATION LIMITED. The Architects for the new Office Blocks at both Mersey and Northfleet designed for Lattice Steelwork on a modular grid which allowed service lines to be run between floor and ceiling and gave complete flexibility for internal arrangements.

Architects: Messrs. Farmer & Dark.



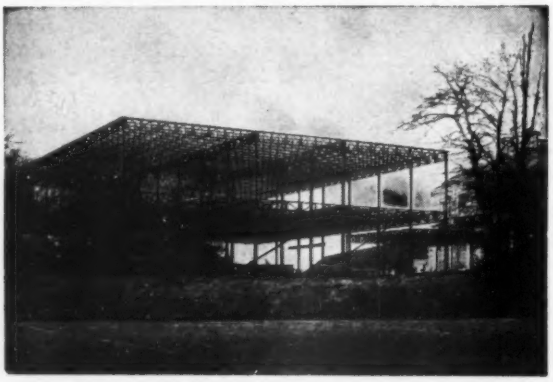


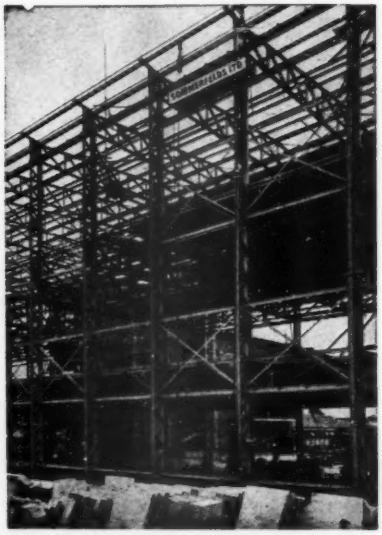
B.E.A. For this B.E.A. Building, speed was the essence of the Contract. Sommerfelds designed the Steelwork and from unloading the first lorry on site to the completion of a 250 ton steelwork erection took three weeks.

General Contractors: Messrs. Richard Costain Limited.

YORK. For the City of York a Grammar School. Sommerfelds designed the Steelwork on a 3ft. 4in. modular grid allowing complete freedom for the Architect to use curtain walling and internal arrangements.

Architect: E. Firth, F.R.I.B.A., A.M.T.P.I., City Architect.





I.C.I. For I.C.I. a Laboratory Block. A multi-storey building with a height to eaves of 44ft. and uninterrupted spans of 50ft. on each floor. Deep Lattice Beams and light stanchions were used with considerable saving in steel requirements.

Architects: Messrs. J. Douglass Matthews & Partners.

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May we floor you now, Sir?

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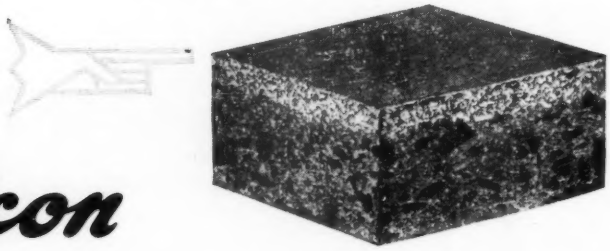
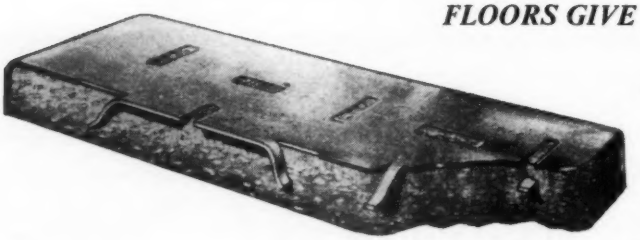
Stelcon floors stand the most brutal treatment,"
our Sales Director was explaining to a
customer only yesterday, "when I tell you that
they are, literally, *steel clad*. That is, we
make them in steel plate form or with a top
surface of steel chippings in concrete!
Really fascinating, isn't it!"



Stelcon

FLOORS GIVE INDUSTRY A FIRM FOUNDATION



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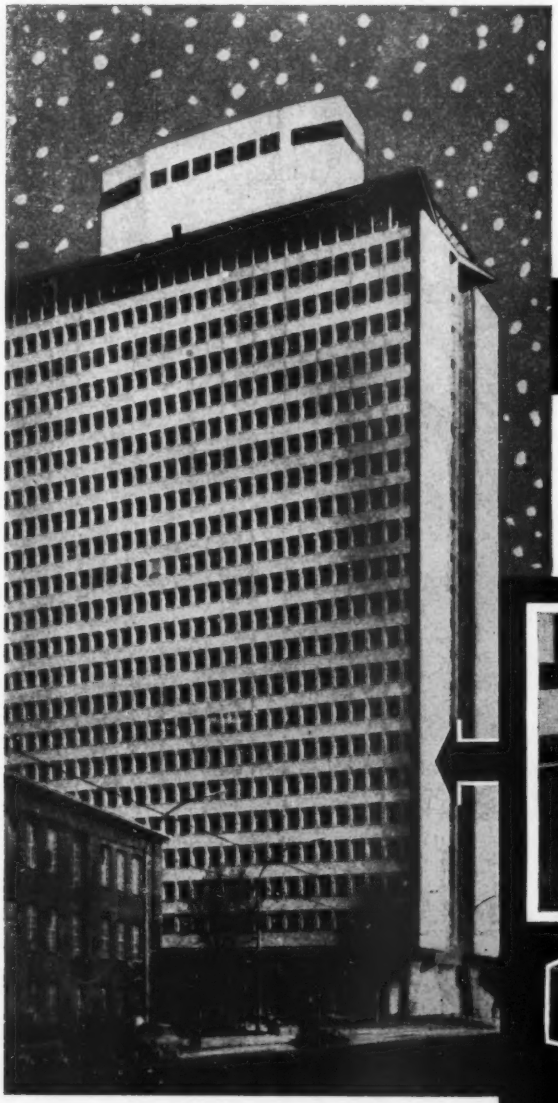
Telephone CHAncery 9541.



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Two Air Conditioning Convectors, surface mounting type.

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Multi-Storey buildings, Hotels, Offices, Administrative buildings, Blocks of flats, Hospitals and Churches.

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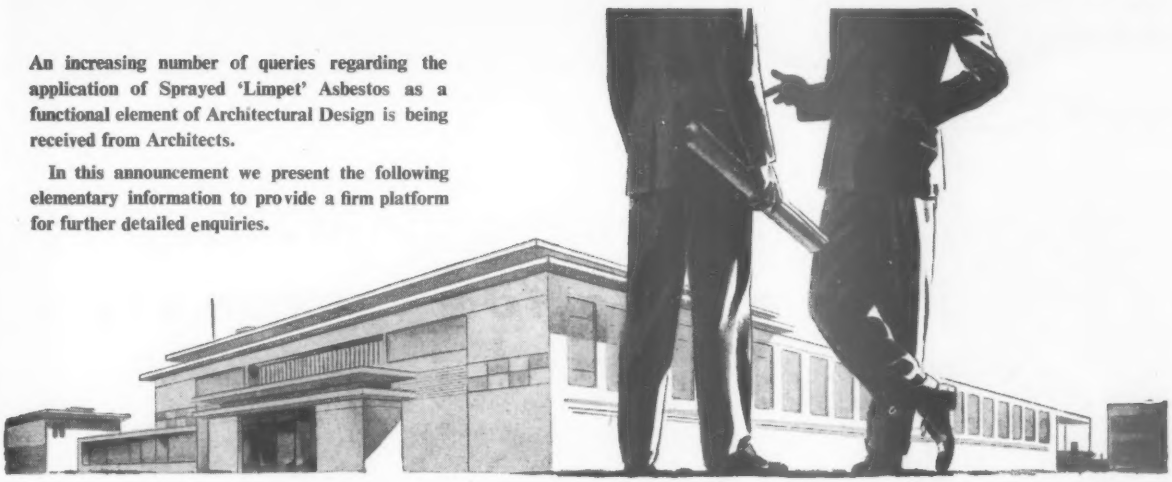
Tel: MUSeum 7890

An increasing number of queries regarding the application of Sprayed 'Limpet' Asbestos as a functional element of Architectural Design is being received from Architects.

In this announcement we present the following elementary information to provide a firm platform for further detailed enquiries.



an architect asks questions about Sprayed 'Limpet' Asbestos by NEWALLS

REGD.

"What do you consider is the major advantage of Sprayed 'Limpet' Asbestos?"

Probably the most important element is that the 'Limpet' process gives intimate surface contact, sealing all joints, covering rivets, irregularities and protrusions in a continuous coat that entirely eliminates air spaces—a significant factor in itself.

"I understand that Sprayed 'Limpet' Asbestos has two insulating properties?"

Correct. In addition to providing a high degree of thermal insulation, it is an excellent material for absorbing sound. Indeed, many firms have specified the process for correcting acoustic distortions alone.

"Being largely Asbestos, I suppose the process gives a measure of fire protection?"

Most certainly! Again, it is often used solely because of its fireproofing properties. In fact, this method was the first to be approved for Class A fireproofing of ships under the 1948 Convention.

"Being porous, isn't the treatment liable to premature rotting where condensation exists?"

On the contrary. Asbestos is chemically inert. It is rotproof, verminproof and undamaged by water. Condensation is diffused preventing dripping and allowing for speedy re-evaporation to the atmosphere from the warm surface of the coating.

"It seems too versatile for words. It's a Thermal and Acoustic Insulant, rotproof and verminproof, fire-resistant, prevents condensation, resists vibration . . . anything else?"

Well. It has been used extensively purely as an anti-corrosion measure on metals subject to severe corrosive conditions, but we'd have to know the particular application you had in mind to give our full recommendations.

"Naturally. And if we did want Thermal and Acoustic Insulation—and Fire protection in one coating—I suppose it would cost the earth?"

Frankly—no. You see, the erection of timber grounds is not necessary. In application there is no cutting to waste, and the density and thickness is controllable to a very fine degree by highly efficient operators. It compares favourably with conventional insulation methods and materials.

Sprayed 'Limpet' Asbestos is a particularly suitable multi-purpose insulant in schools, public buildings and the like. Our considerable experience in this field will be gladly placed at your disposal.

Newalls

NEWALLS INSULATION CO. LTD.
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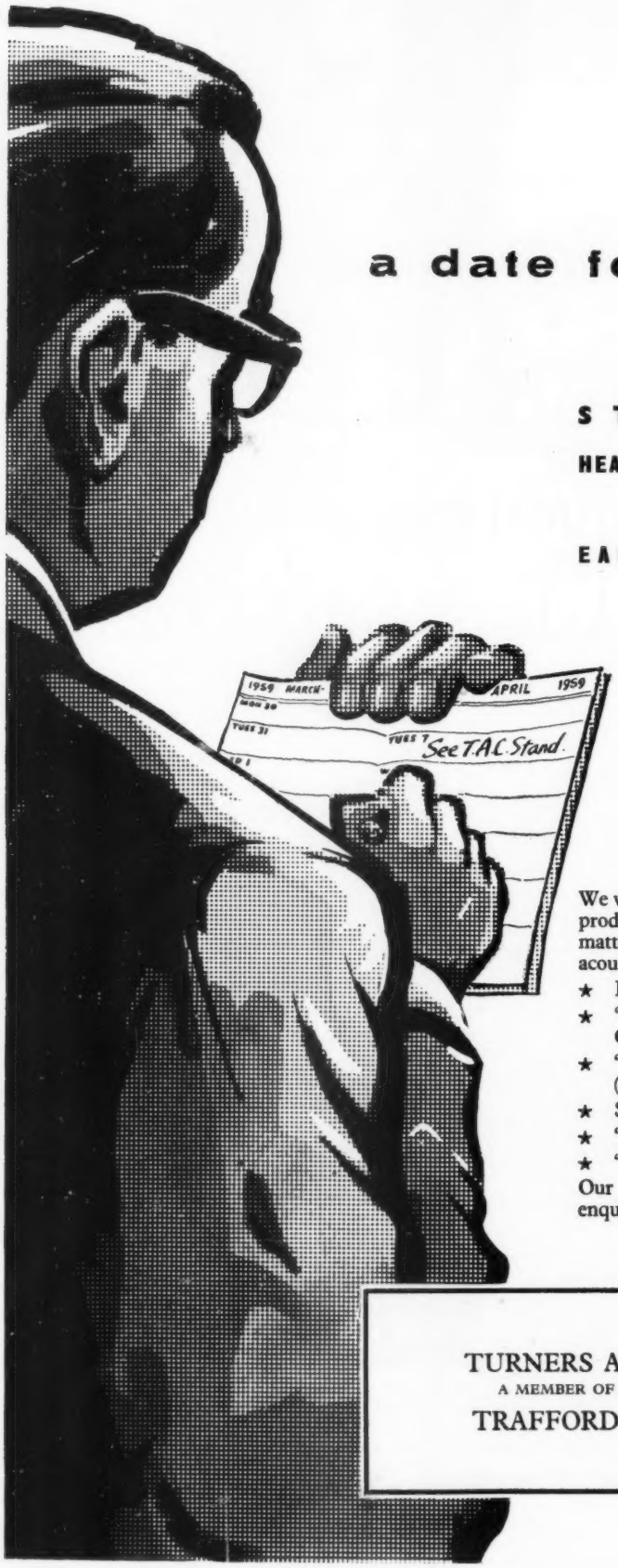
A member of the TURNER & NEWALL ORGANISATION
Offices and Depots at LONDON, GLASGOW, MANCHESTER, NEWCASTLE UPON TYNE, BIRMINGHAM, BELFAST, BRISTOL & CARDIFF.



a date for your diary...

STAND No. 258

HEAT & SOUND INSULATION EXHIBITION

(Factory Equipment Exhibition)

EARLS COURT APRIL 7—17

TAC

We will be exhibiting a range of our asbestos-cement products indicating their great versatility of use in matters of thermal insulation, fire resistance and acoustical correction, including.

- ★ Insulated Double Cladding
- ★ "TURNALL" Combined Sheets (Asbestos-Cement)
- ★ "TURNALL" LARGESPAN Combined Sheets (Asbestos-Cement)
- ★ Sprayed "LIMPET" Asbestos
- ★ "TURNALL" Asbestos Insulation Board
- ★ "TURNALL" Asbestos Ceiling Panels

Our technical staff look forward to receiving your enquiries.

TURNERS ASBESTOS CEMENT CO LTD.
A MEMBER OF THE TURNER & NEWALL ORGANISATION
TRAFFORD PARK MANCHESTER 17

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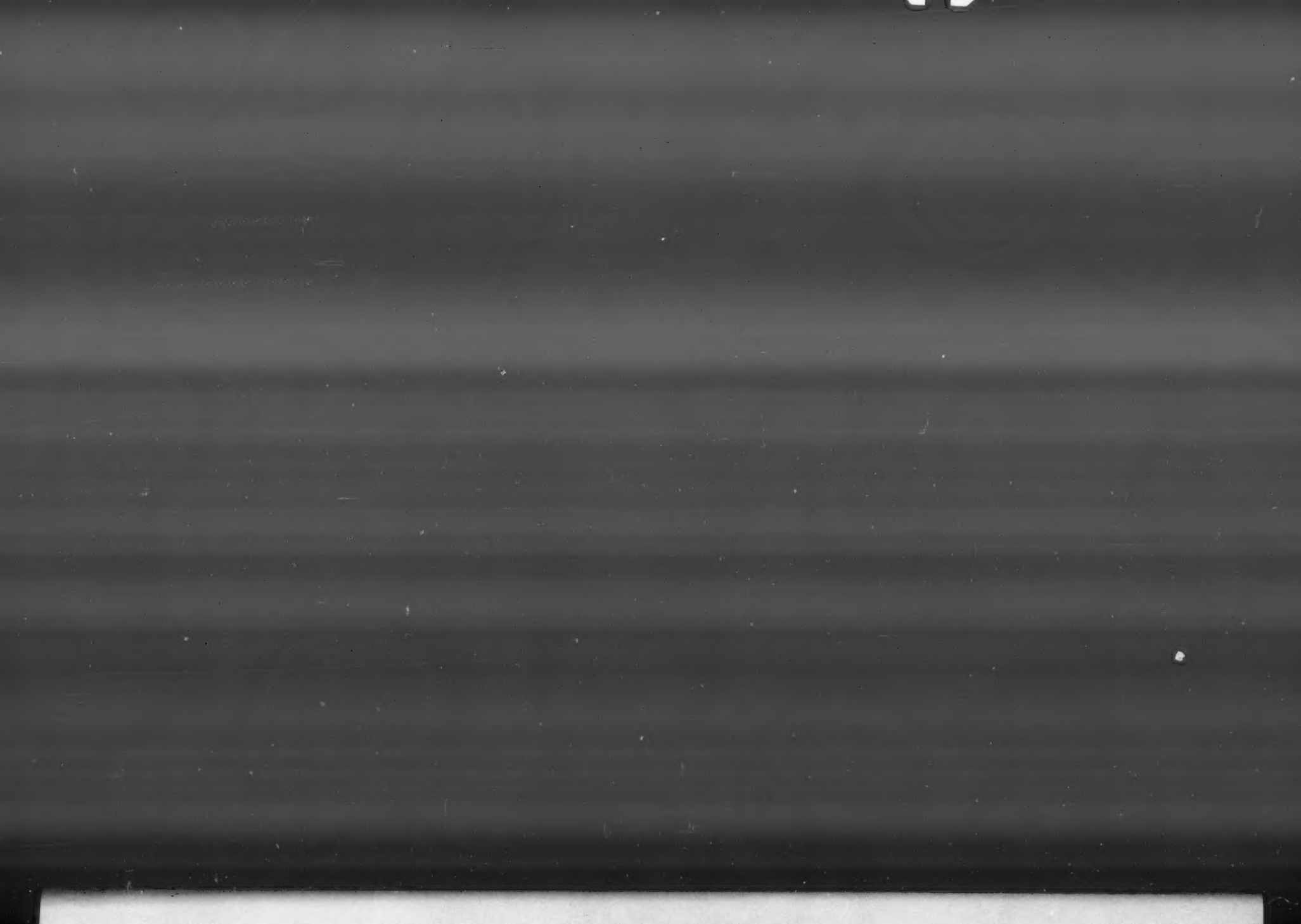
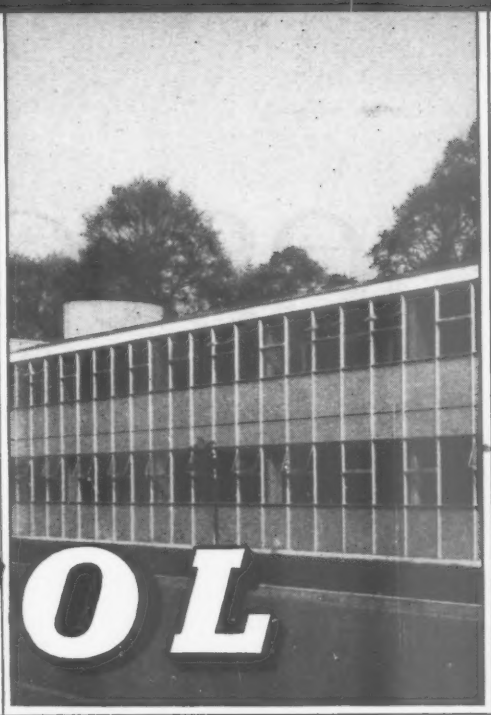


THE ARCHITECTS' JOURNAL
(Supplement) April 2, 1959

Project for: National Physical Laboratory, Teddington.
Architect: A. S. Reid, A.R.I.B.A., of the Chief Architect's Division, Ministry of Works
Contractor: W. E. Chivers & Son.
The C Escol panels shown are in pale grey (B.S.I. 7-078) and those on the north elevation in brown (B.S.I. 3-039) and yellow (B.S.I. 4-055)

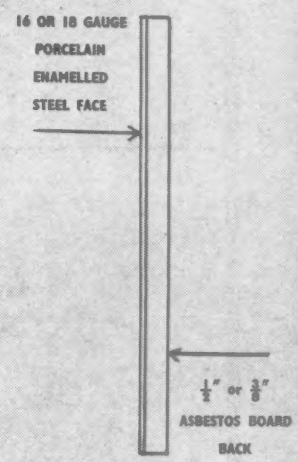


ESCOL

PORCELAIN ENAMELLED STEEL INFILLING PANELS

(Bonding Patent No. 798118)

Stewart and Gray are the patentees and sole manufacturers of ESCOL products. The process has been entirely pioneered and developed in the U.K. for many years, and the Company, which is entirely British and has no connections with foreign manufacturers, are unrivalled leaders in the manufacture of porcelain enamelled steel infilling panels.



ESCOL has been specified at home & overseas for:

SCHOOLS
OFFICE AND FACTORY BUILDINGS
LABORATORIES
NUCLEAR POWER STATIONS
GENERATING STATIONS

RAILWAY STATION BUILDINGS & BRIDGES
AIRPORT INSTALLATIONS
HOSPITALS
CINEMAS
MULTI-STOREY FLATS
SHOPS & STORES

PANEL SECTION TYPE A
Composite panel consisting of 16 or 18 gauge vitreous porcelain enamelled steel sheet bonded to ½" or ⅜" asbestos board. The asbestos backing may also be covered by an enamelled steel sheet or galvanized sheet. Weight: 5 lb./sq. ft. U value: 0.48.

Our experience, gained in 4 years of panel production and backed by our research and development organisation, is at your service.
There is an ESCOL panel to meet your specific requirements

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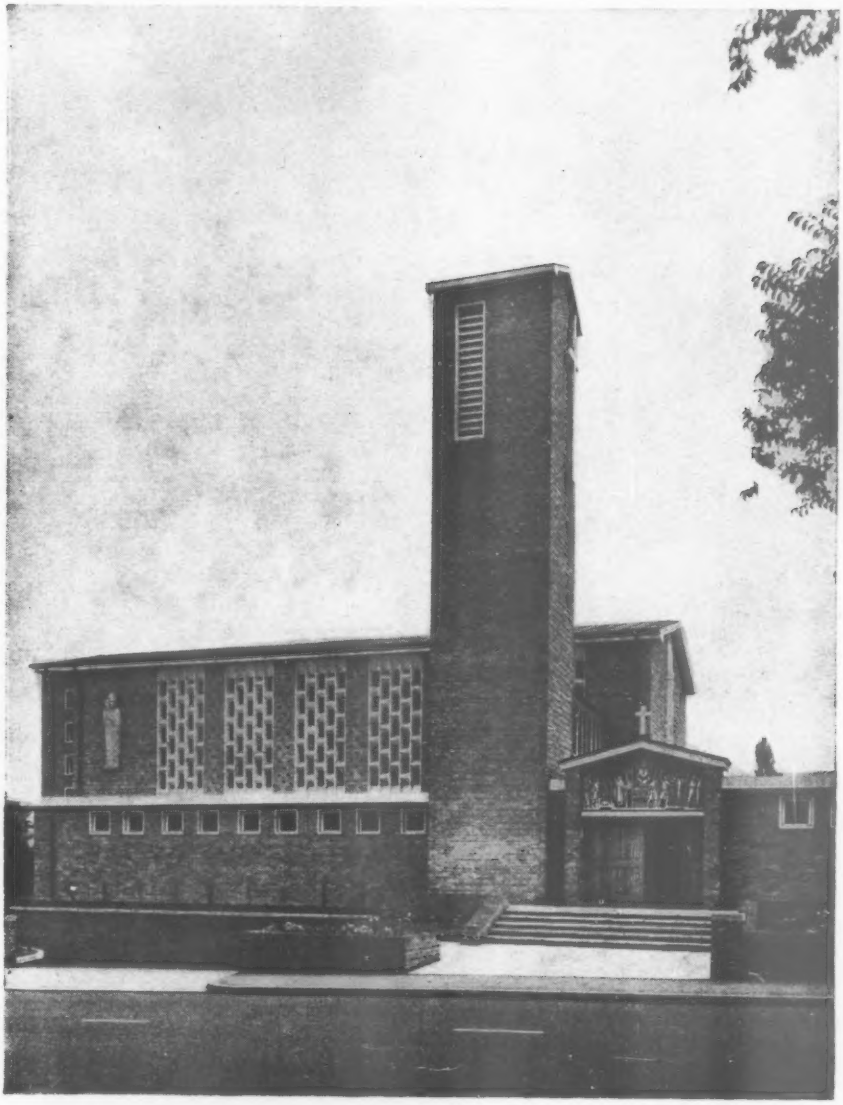

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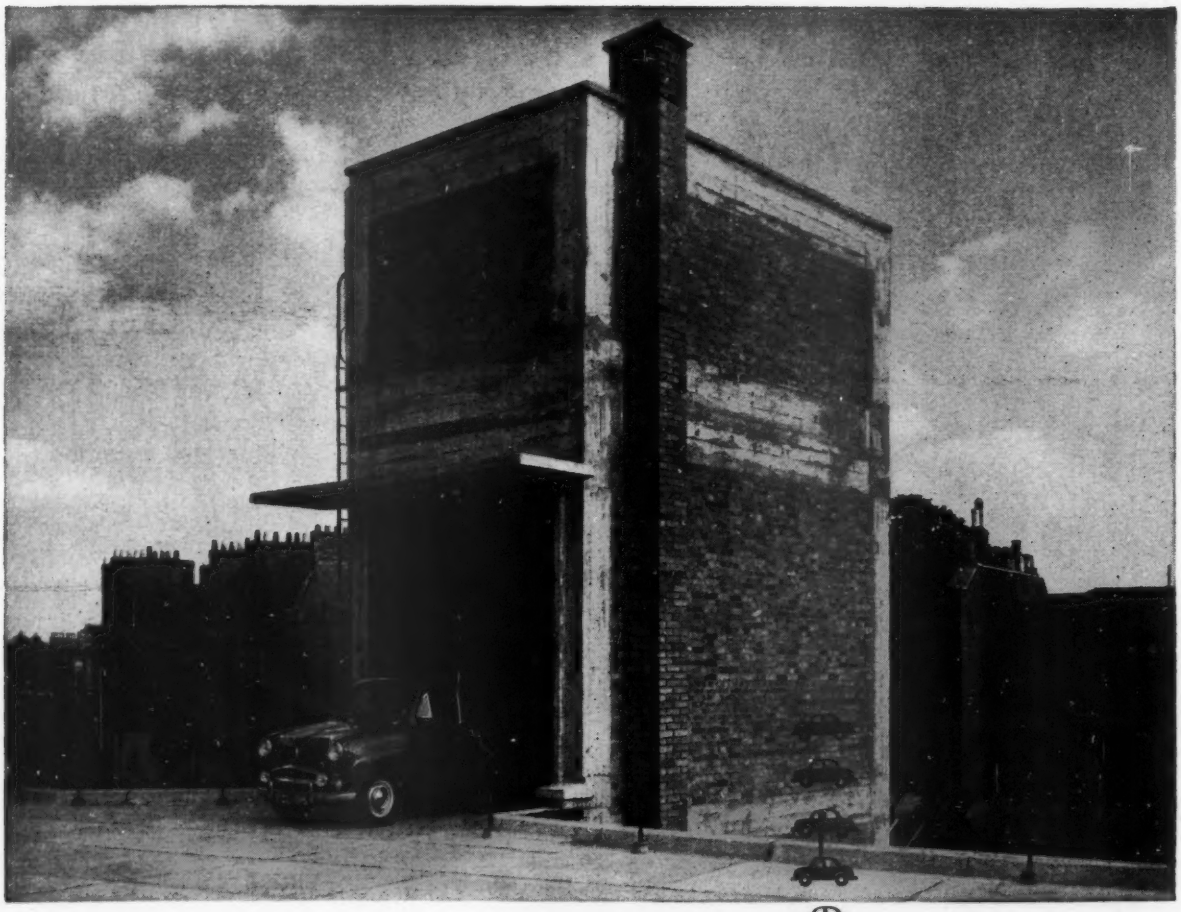

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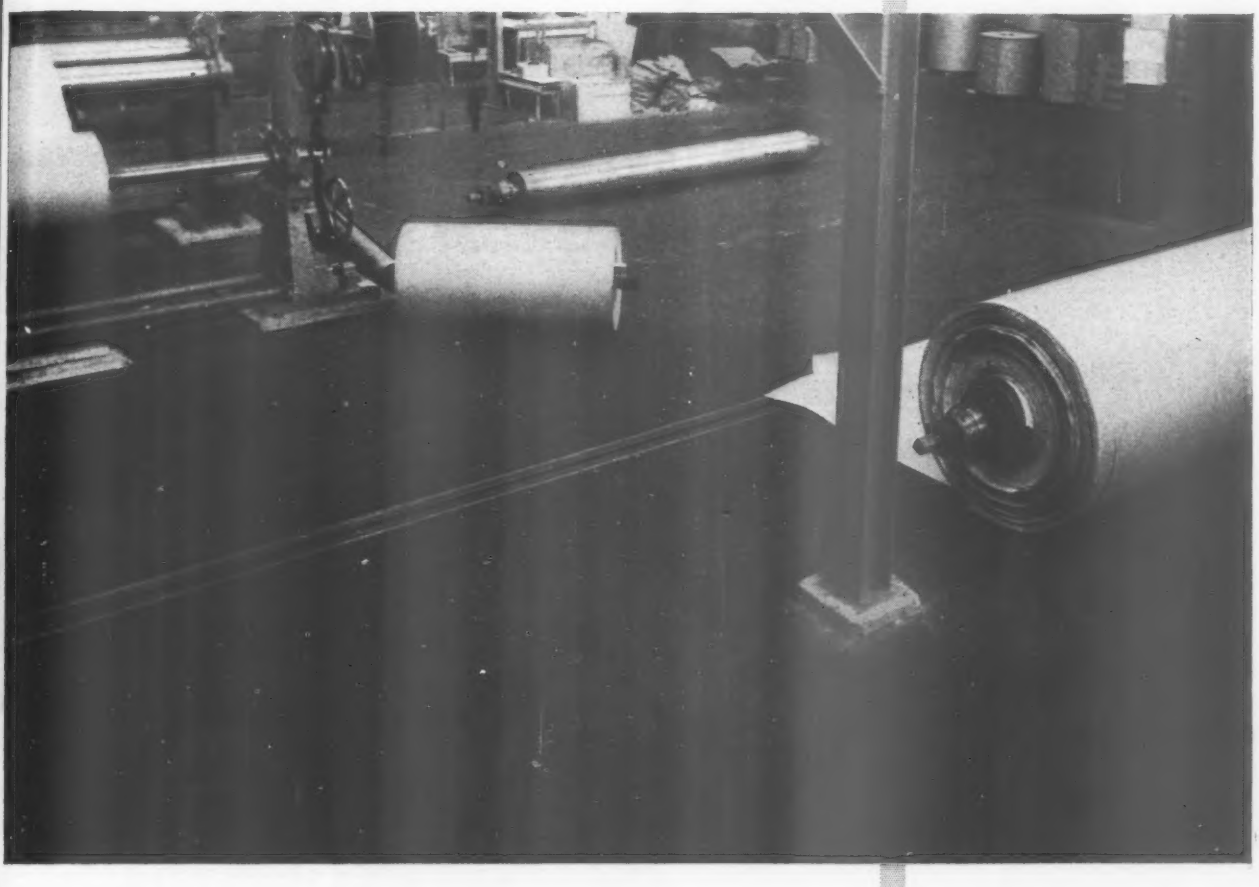
Flintkote flooring in paper mill in Sweden. (Photo. by courtesy of Fiskeby Fabriks A.B.)



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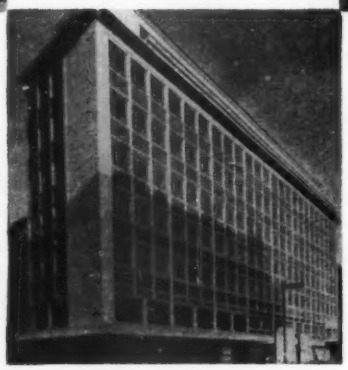

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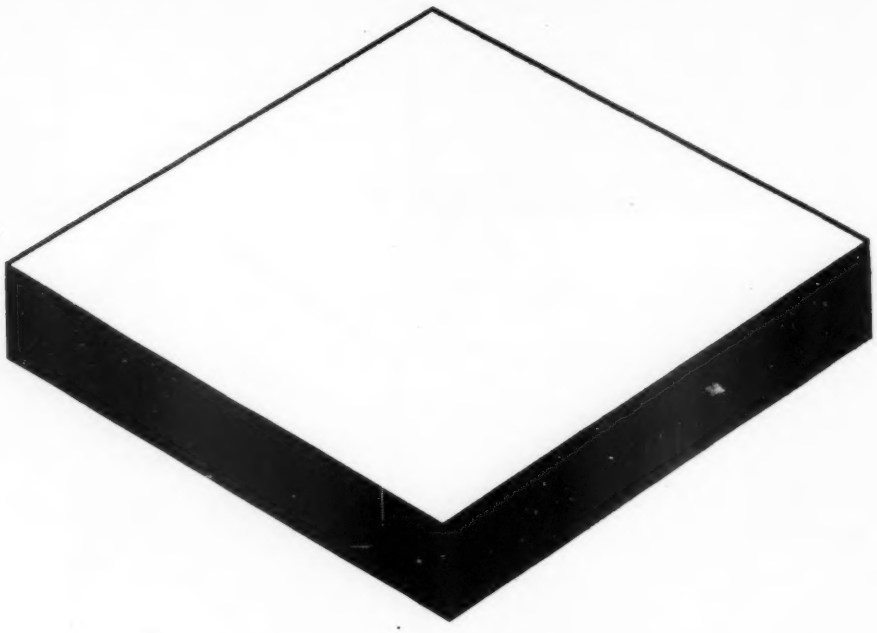

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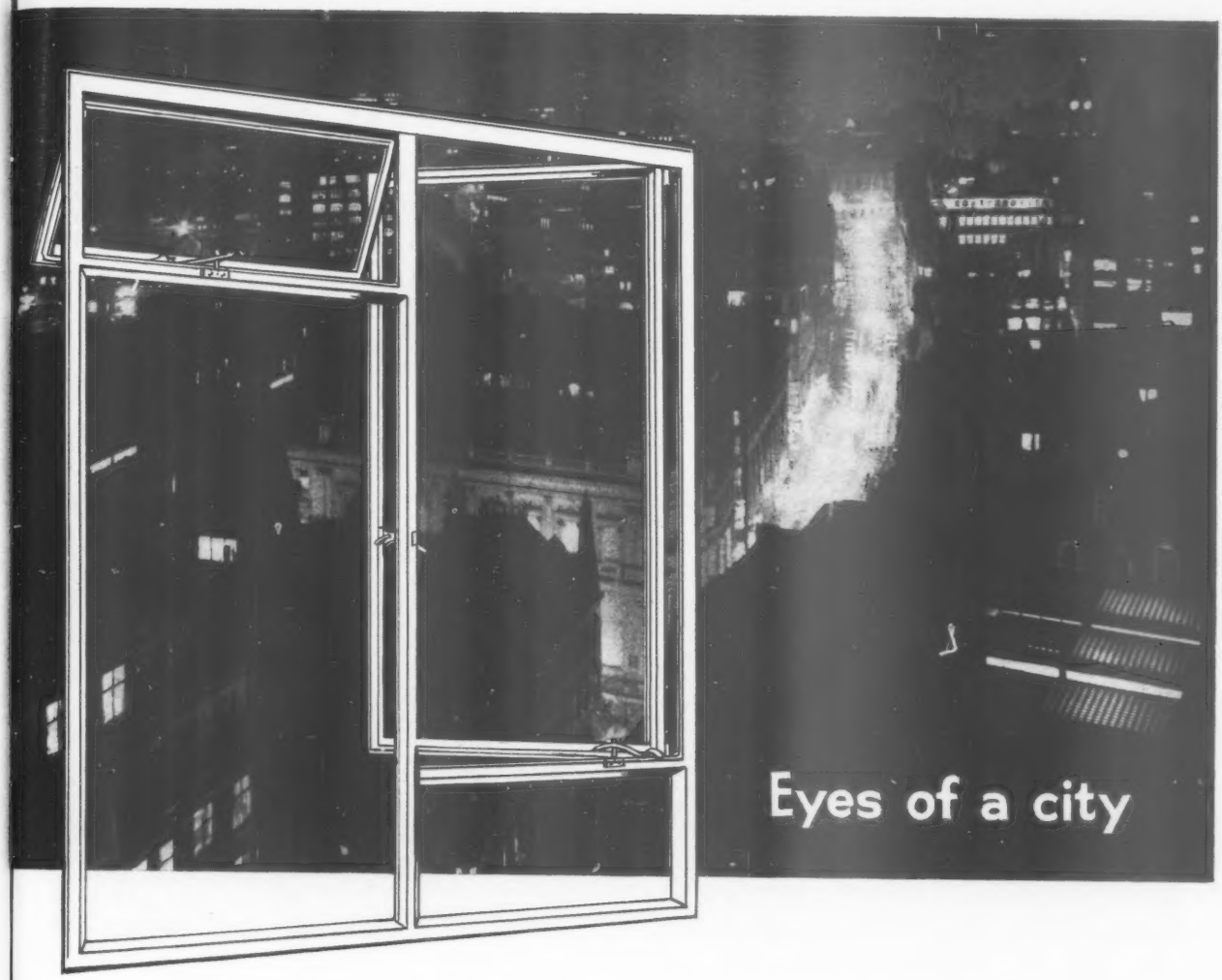

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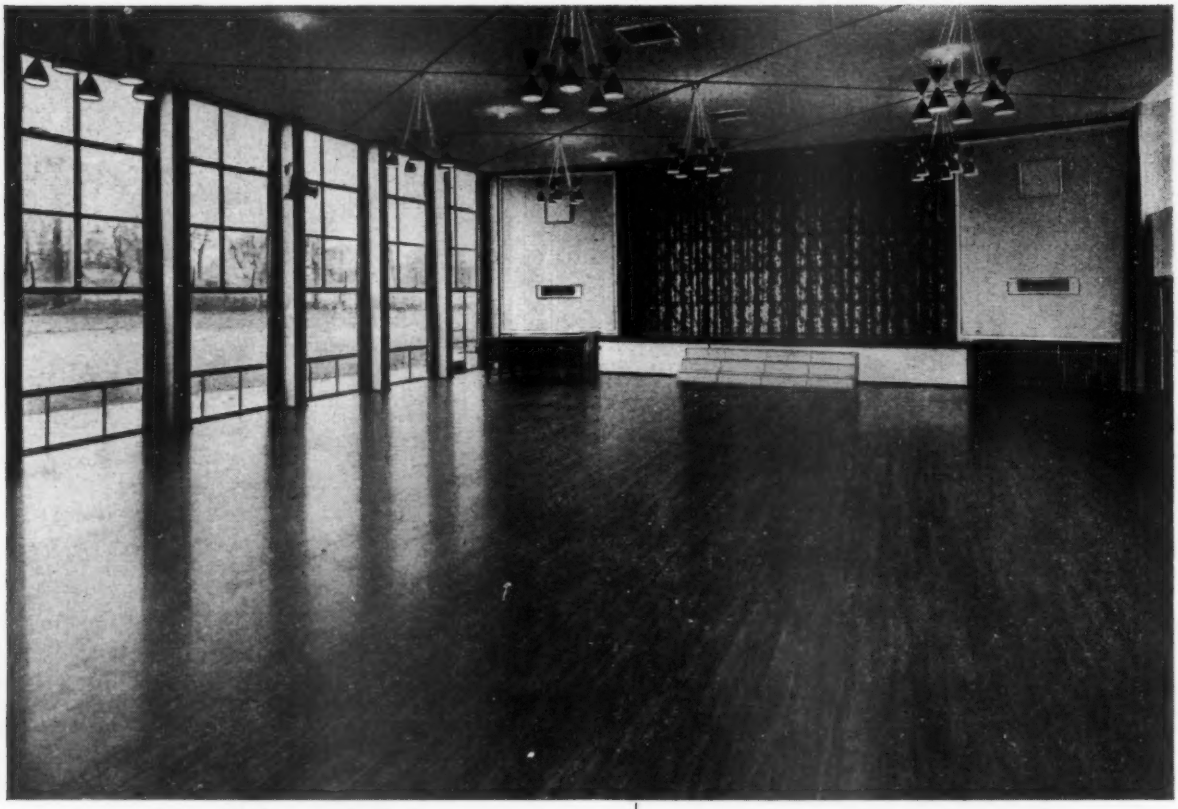

Architect: A. G. Sheppard Fidler Esq., M.A., B. Arch., F.R.I.B.A., A.M.T.P.I., *Birmingham City Architect.*

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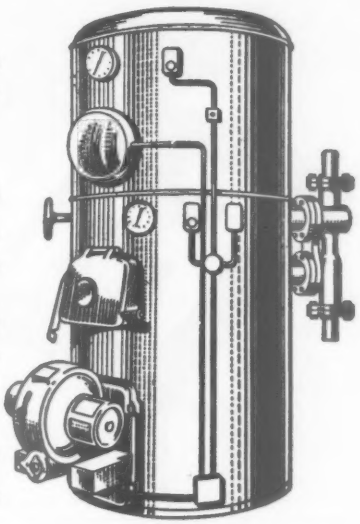

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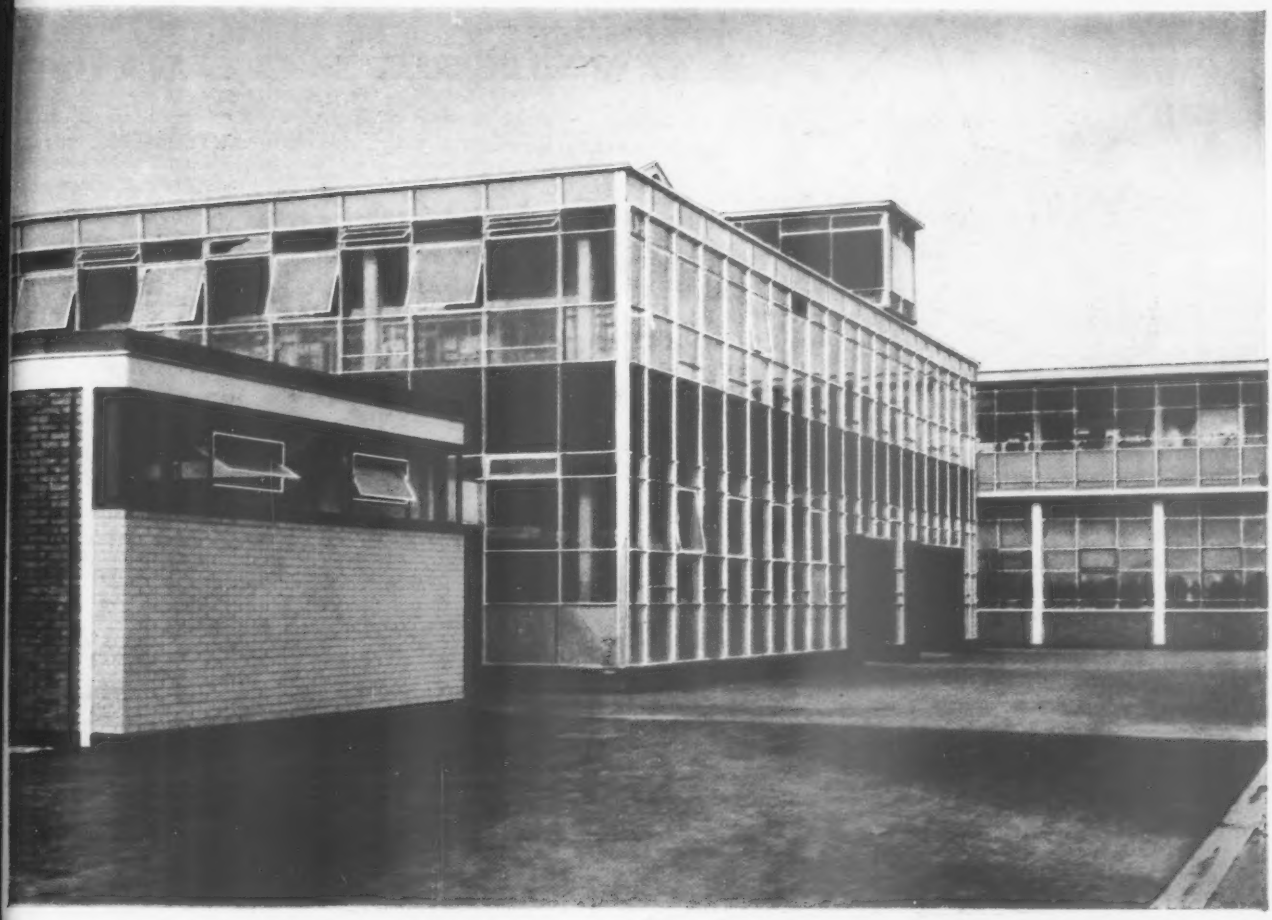

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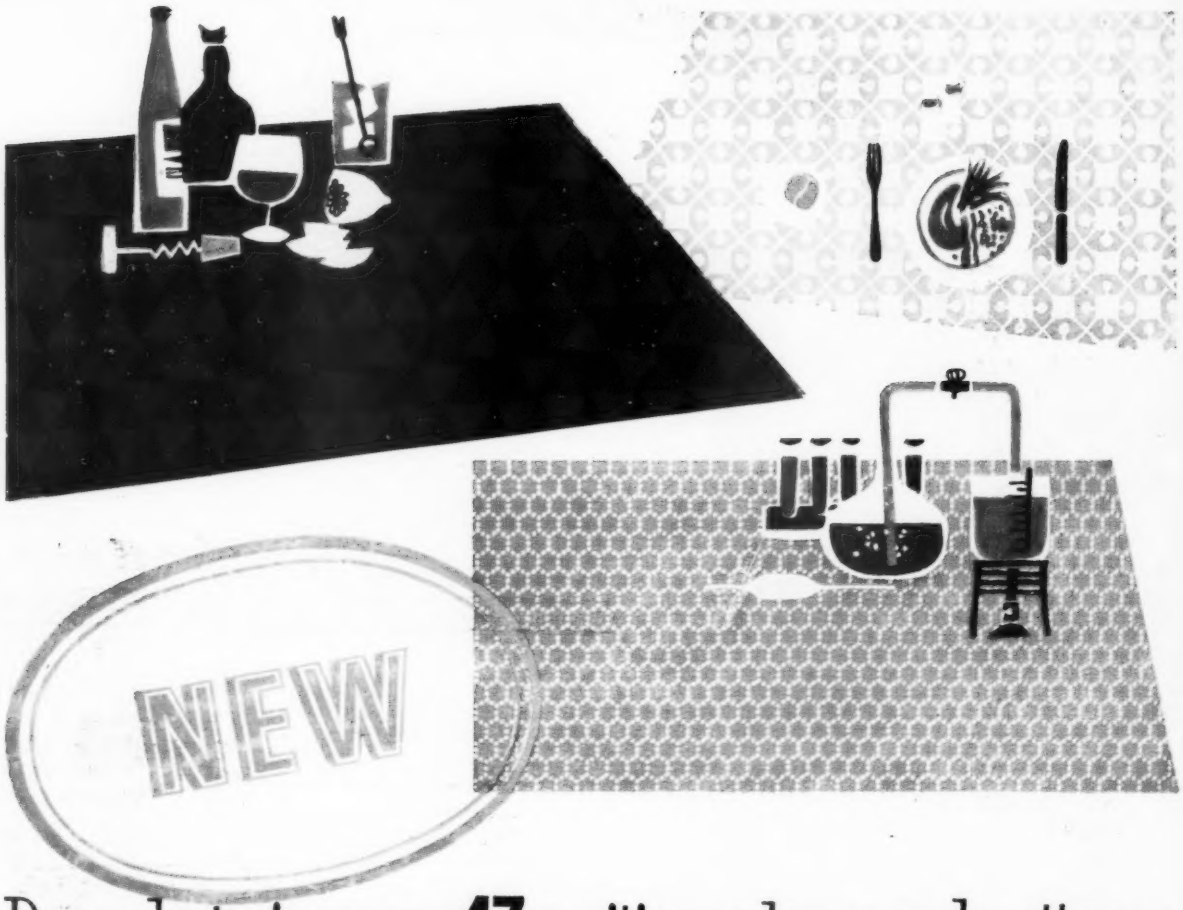

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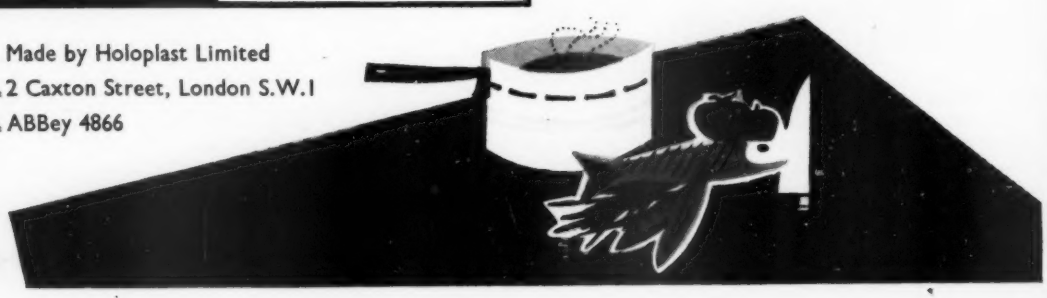

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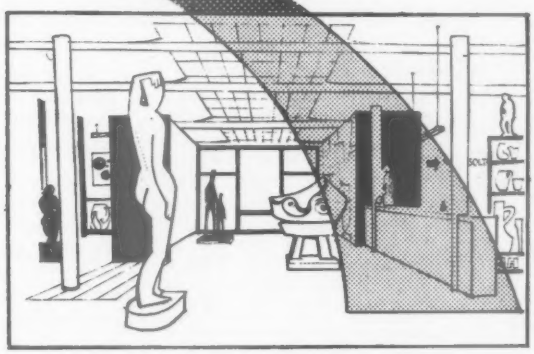

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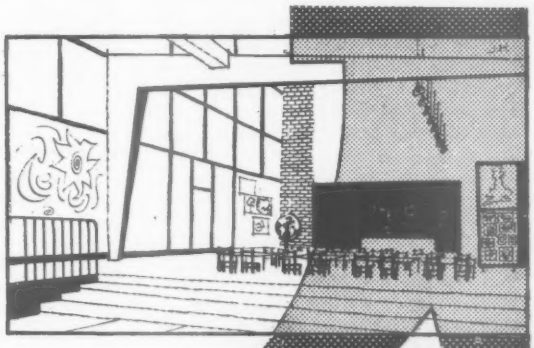

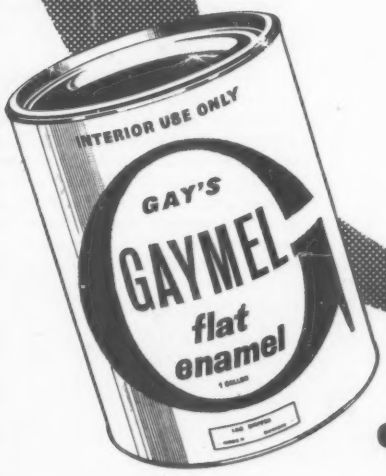

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monthly review by WILLIAMS & WILLIAMS

WILLIAMS & WILLIAMS STANDARD METAL WINDOWS FOR MULTI-STORY FLATS

1 Standard steel windows to BS 990 have been used in two Local Authority schemes which attracted favourable comment during last year.

Berkeley House, Snow Hill, Bath, is the third block of flats to be completed for the Bath Corporation on an 8-acre slum clearance site near the centre of the city. The two previously completed blocks were awarded the R.I.B.A. Bronze Medal for the Wessex Region in 1957. Before clearance, the area was a maze of narrow streets and steeply sloping and stepped alleys with 'industrial-revolution-type' cottages housing about 700 people. By opening up the site and building upwards, room will be found for 1,000 people in the new development.

The construction of the building is a reinforced concrete 'box frame' and owing to the low bearing capacity of the soil the foundations are piled. Walls are cavity and faced in Bath stone rangework 3″ thick. All floors are 'floating' timber floors of boarding on fillets with glass quilt insulation.

Standard steel windows and doors to BS 990 were supplied to the site by Williams & Williams.

The second example is the *Spur Road Estate at Edgware* (for the Hendon Borough Council) which was opened by H.M. Queen Elizabeth the Queen Mother last June. For this scheme Williams & Williams supplied approximately 2,500 hot dip galvanised windows for the six multi-story, point blocks.

Stage 2 of the Spur Road project covers 13 acres. By adopting multi-story planning, only 1 acre of the area is actually built over, the remainder being devoted to roads, paths, children's playgrounds, recreational and parking areas as well as 6½ acres of open grassland extending to the Green Belt.

9 MONTHS FROM START OF SITE CLEARANCE TO PRODUCTION AT NEW BOARD MILL

2 Extensive use of 'Aluminex' Patent Glazing for wall cladding helped to get the new Queensferry Board Mill into production a mere 9 months from cutting the first turf.

Apart from this utilitarian aspect, 'Aluminex' contributes to the appearance of the plant as the illustration of the curved main façade demonstrates.

'Aluminex' is particularly suited to buildings of this kind where maximum natural light is required. Installation of the glazing bars proceeds rapidly and glazing is accomplished by springing aluminium cover strips under fins in the glazing bar. All-aluminium construction, besides its inherent advantages of lightness and freedom from corrosion, permits the use of a complex extruded section provides a better strength-to-weight ratio than would be possible with a simple section and enables weathering and condensation channels to be incorporated in the one member.

EXTENSIVE USE OF WILLIAMS & WILLIAMS ALUMINIUM PRODUCTS MINIMIZES MAINTENANCE CHARGES AT NEW TECHNICAL COLLEGE.

3 The newly completed Reid Kerr College at Paisley is situated in an industrial area experiencing severe atmospheric pollution. In order to avoid a heavy recurrent charge for maintenance, the architect has made wide use of aluminium components—including 'Wallspan' Curtain Walling and no fewer than seventy-six 'Aluminex' Lantern Lights.

Williams & Williams windows—both standard and purpose-made types—have been installed in the 'Wallspan' grid and elsewhere.

The curtain wall has been designed so that the whole of the exterior surface can be cleaned from inside the building.

'ALOMEGA' WINDOWS FOR MINISTRY OF WORKS

4 Williams & Williams 'Alomega' windows were chosen to replace the old wooden sash windows at the Coast Guard Cottages, Lizard Point. All-aluminium: corrosion resistant: never need painting: and designed with built-in weather stripping to keep out even an equinoctial gale over the Atlantic. No weights, pulleys or chains to go wrong either—just a simple, foolproof arrangement of interlocking wedges sliding invisibly in an internal channel in the window jamb.

'Alomega' windows are available in twelve standard sizes at prices keenly competitive with timber sashes. But owing to the method of assembly we can offer purpose made sizes at pro rata prices—up to a maximum perimeter of 19 feet.

WILLIAMS & WILLIAMS
RELIANCE WORKS · CHESTER

Member of the Metal Window Association

---

1 BERKELEY HOUSE, 4 SNOW HILL, BATH

Architects: Snailum & Le Fevre, F/A.R.I.B.A., A.A.Dip., A.M.T.P.I.

Assistant in Charge: R. G. Quick, A.R.I.B.A.

Contractors: J. Long & Sons (Bath) Ltd.

B Point Block, Spur Road, Edgware.
Architects: Hendon Borough Council. Contractors: George Wimpey & Co. Limited.

C *The projected side-hung window (section opposite) has proved very popular for high buildings. When the window is fully opened both sides of the glass are easily accessible for cleaning. Williams & Williams manufacture several types of window which have been specially designed for multi-story buildings. Our representatives will gladly supply further information.*

2 QUEENSFERRY BOARD MILLS

Architects: Ronald S. Biggins & Associates, B/B.ARCH. A/A.R.I.B.A.

3 REID KERR COLLEGE, PAISLEY

for the County of Renfrew Education Committee.

Architect: David L. Baird, B.SC. (ARCH.).

A *General view of the curtain walling installation Williams & Williams 'Wallspan' and windows.*

B *Some of the seventy-six 'Aluminex' Lantern Lights which were installed over the corridors, toilets, etc., serving the practical classrooms in the workshop block.*

4 A *Alomega Sash Window.*

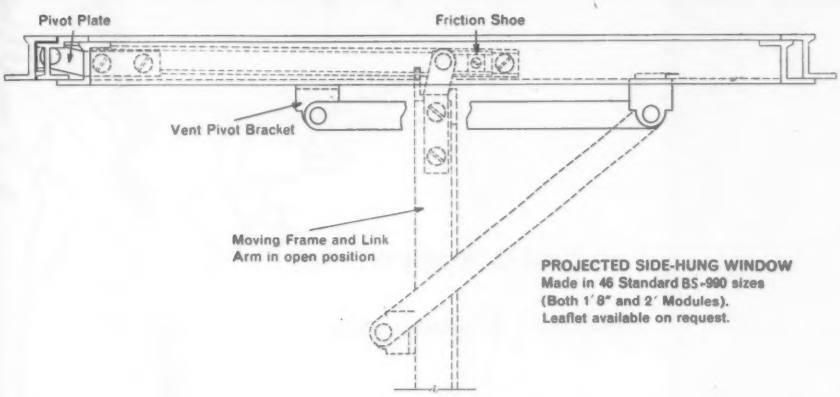
B *Coastguard Station, The Lizard.*

Architect: Ministry of Works.

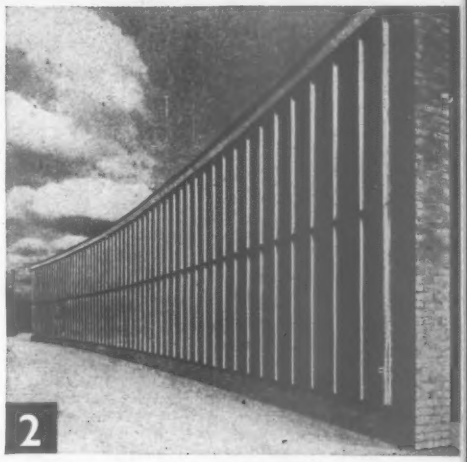
Contractors: John Williams & Co. (Cornwall) Ltd.


1A


1B



PROJECTED SIDE-HUNG WINDOW
Made in 46 Standard BS-990 sizes
(Both 1′ 8″ and 2′ Modules).
Leaflet available on request.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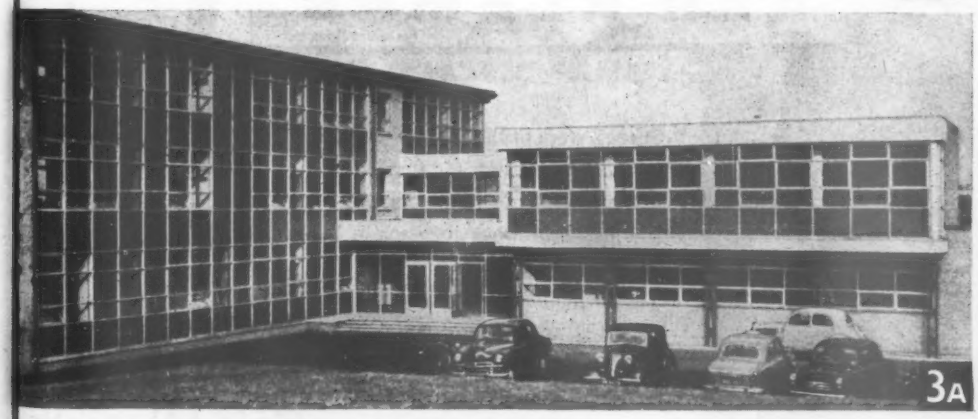
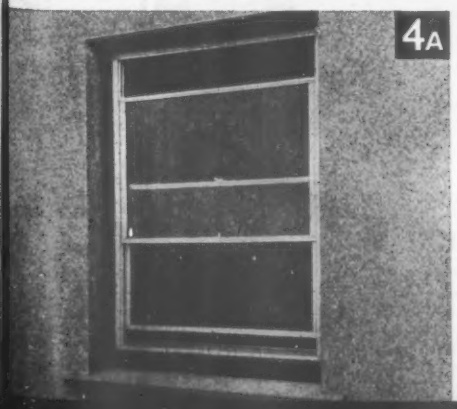

3A


3B


4A

4B

Sir John

would have

been keen on

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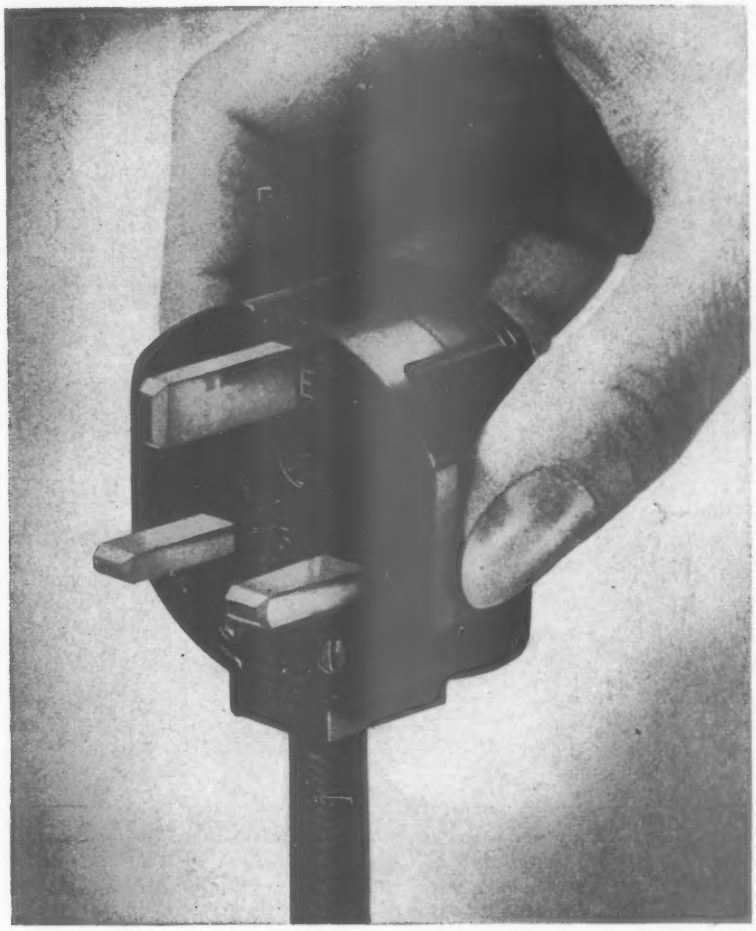

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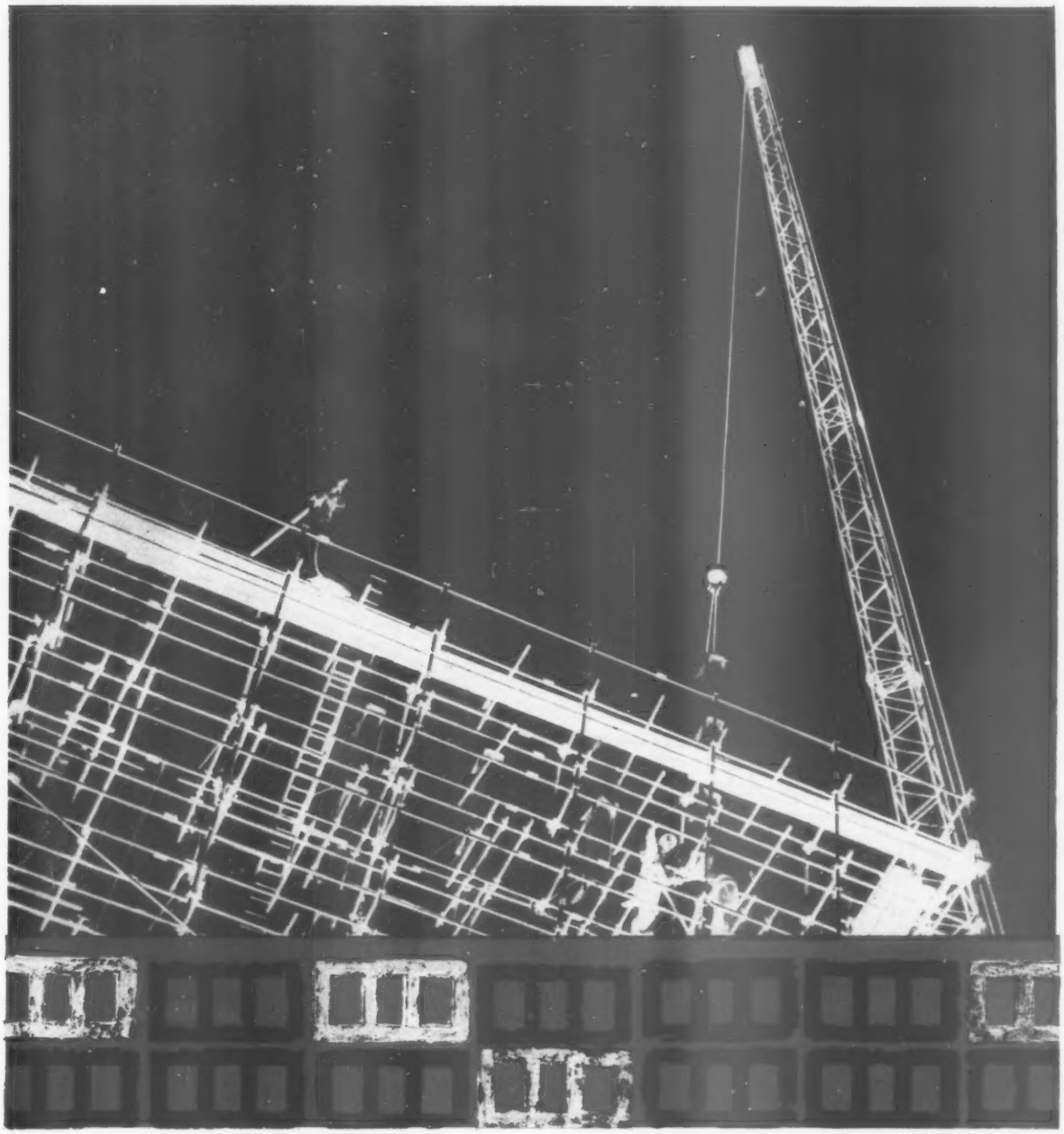

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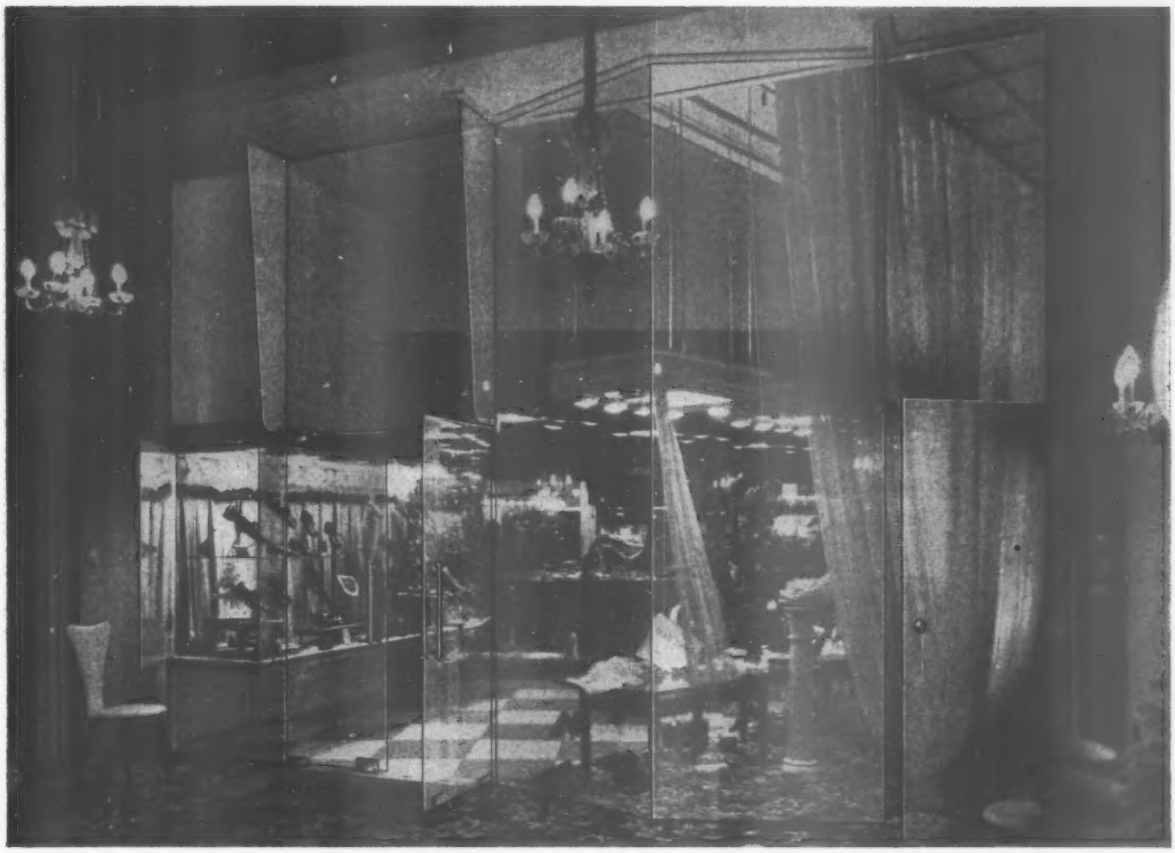

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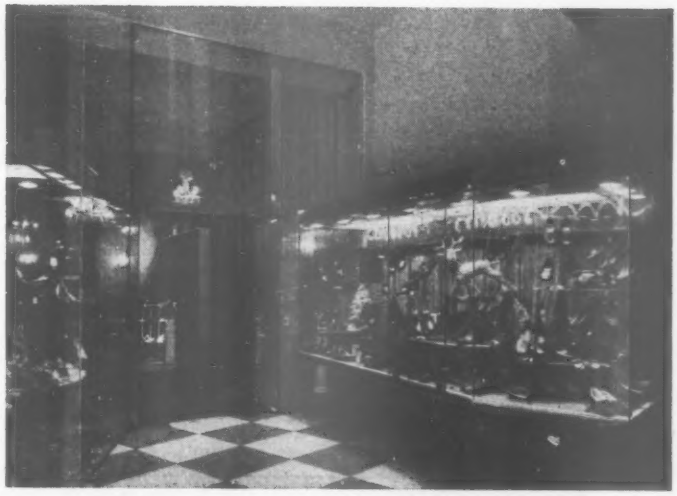

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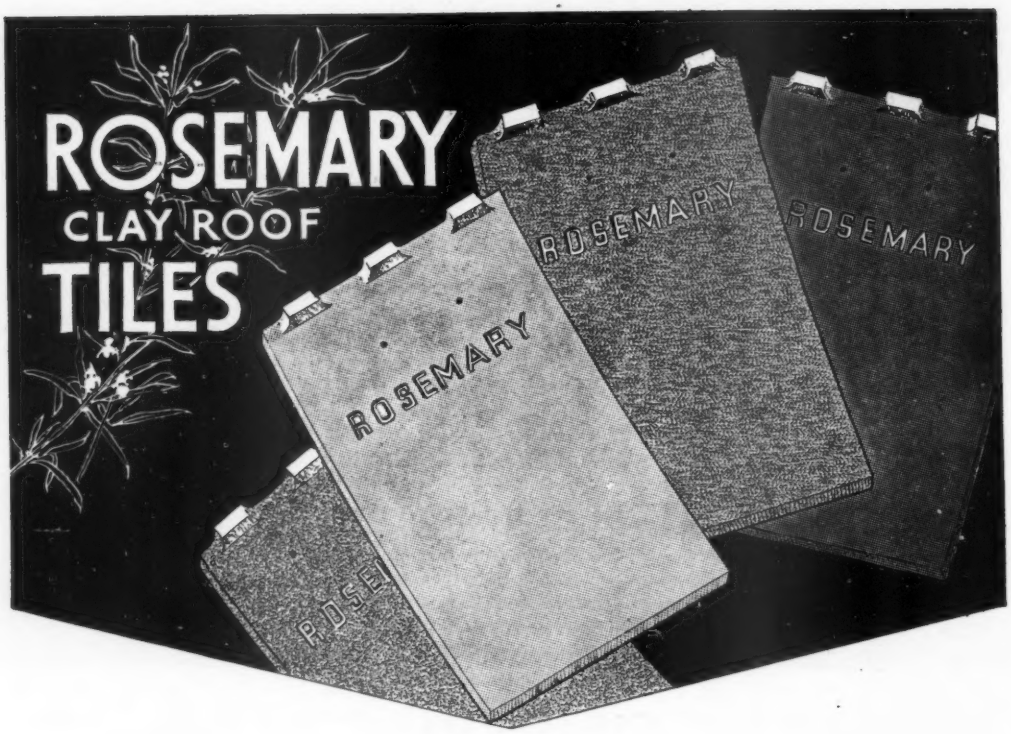

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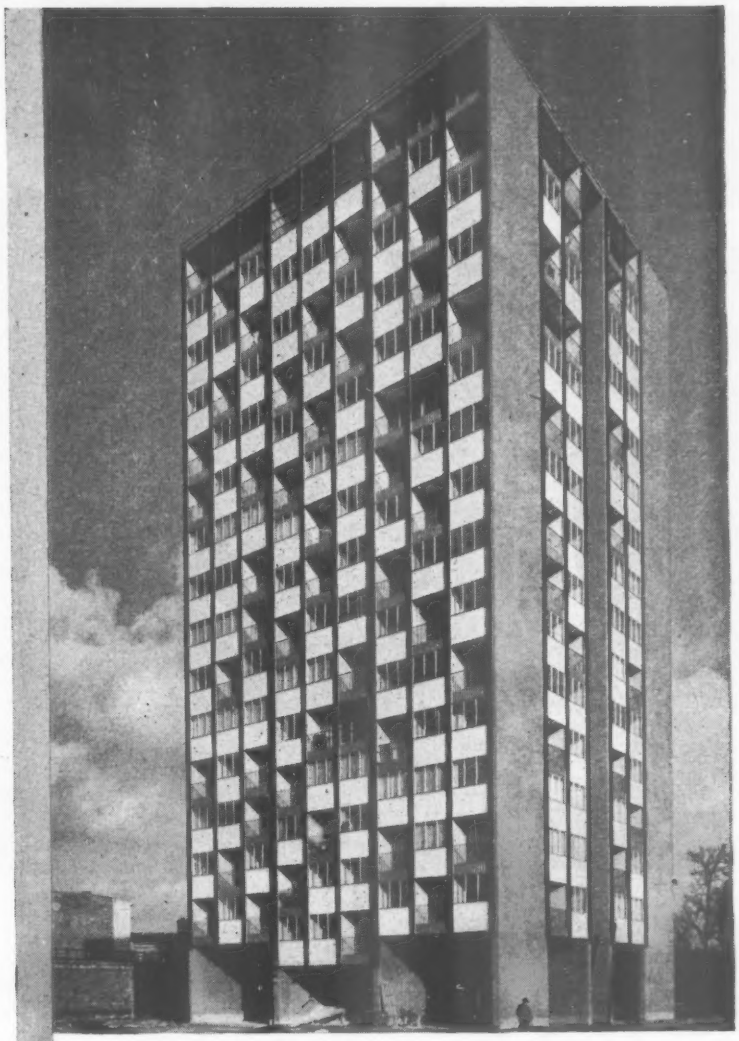

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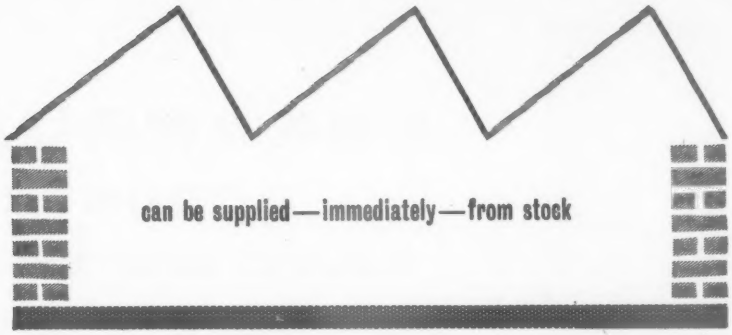

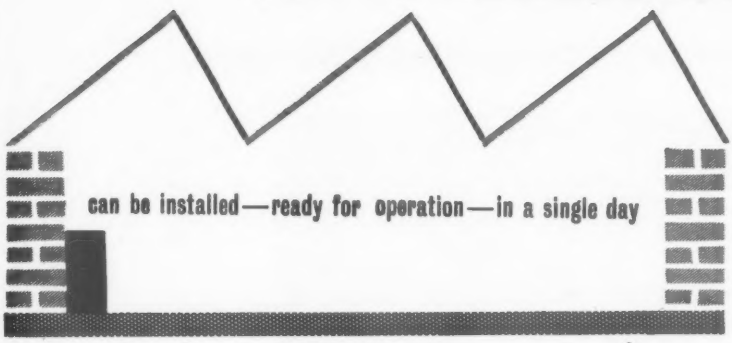

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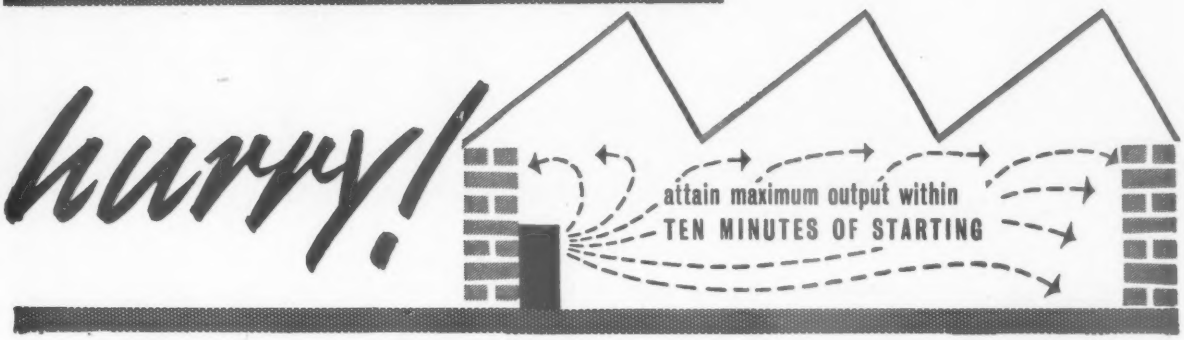
hurry!



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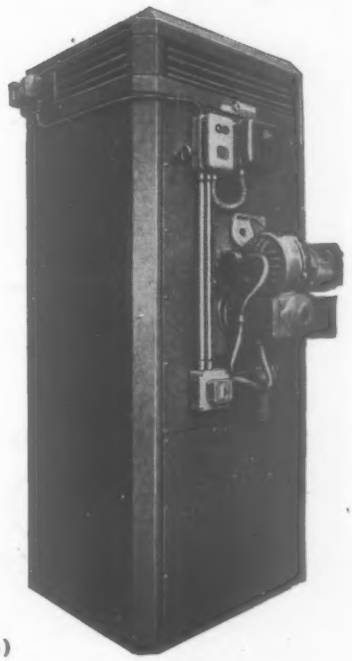

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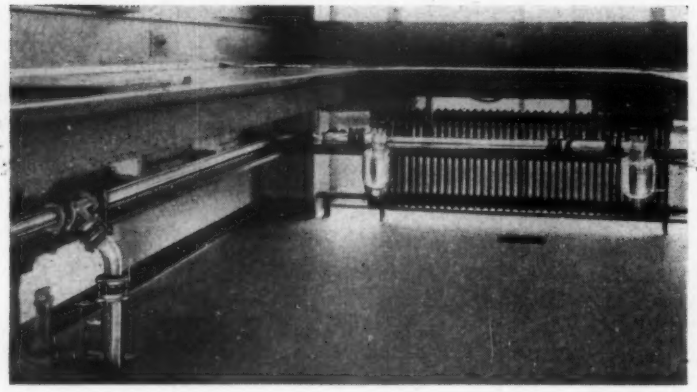

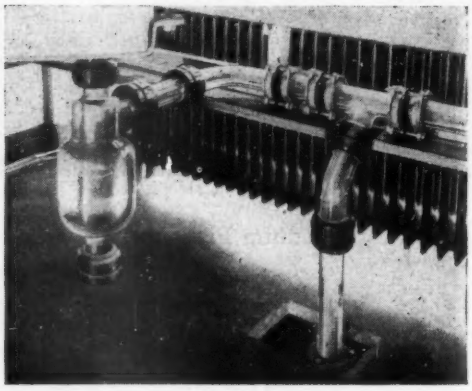

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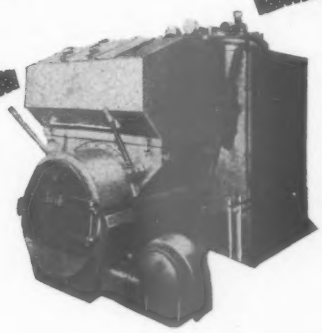

For heating offices, flats, hotels or factories, pre-burner units can be used. A 'SUXE' pre-burner unit is shown here fitted to a sectional boiler.

THERE is available a selection of automatic coke boilers, in a wide range of sizes, which can compete in efficiency with any other system and which operate unattended for long periods. For domestic heating schemes, there are gravity-feed boilers of the highest thermal efficiencies with full automatic stoking and ash removal and with complete temperature control.

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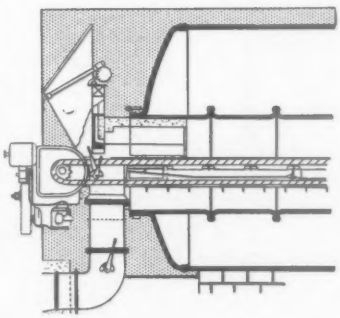
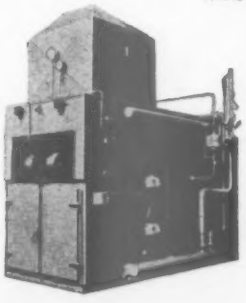


Hard Coke is highly efficient for both horizontal and vertical boilers. Chain grate stokers of special design are available. The cross-section shows an 'OLDBURY' chain grate stoker fitted to a Lancashire boiler.



For large-scale heating automatic coke boilers are available in a wide range of sizes, notable for their efficiency and economy. They operate with the minimum of attention. Shown here is a Redfyre 'EMMA' coke-fired boiler.

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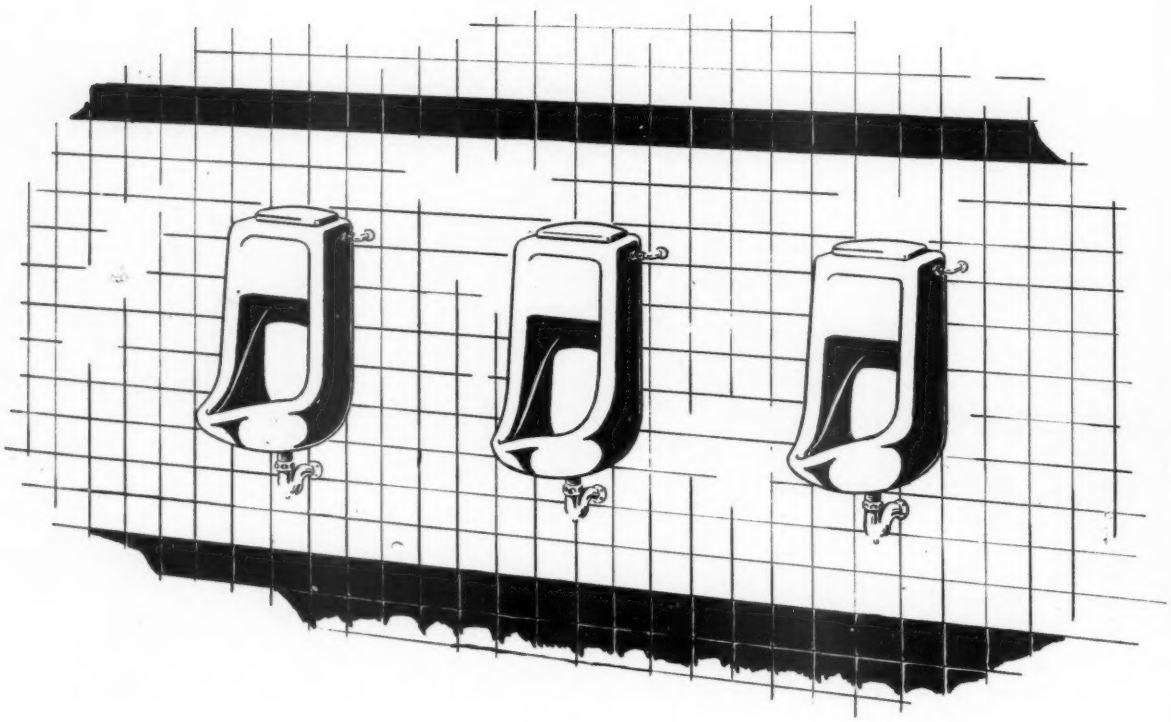
EX1

THE ZETA WALL URINAL



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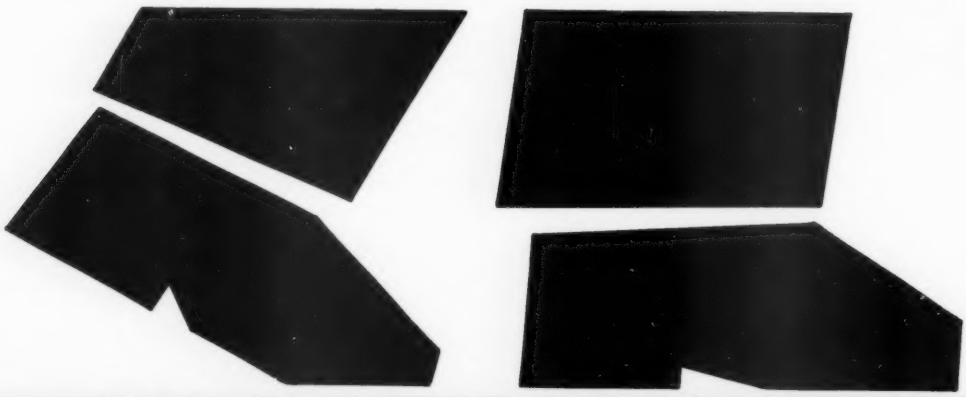

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Glamorock Glaze used dramatically on a corridor floor and wall. The right hand wall is faced with standard Glamorock.

AJ

The Architects' Journal

No 3344. Vol 129. April 2, 1959

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NEWS

VILLA SAVOYE

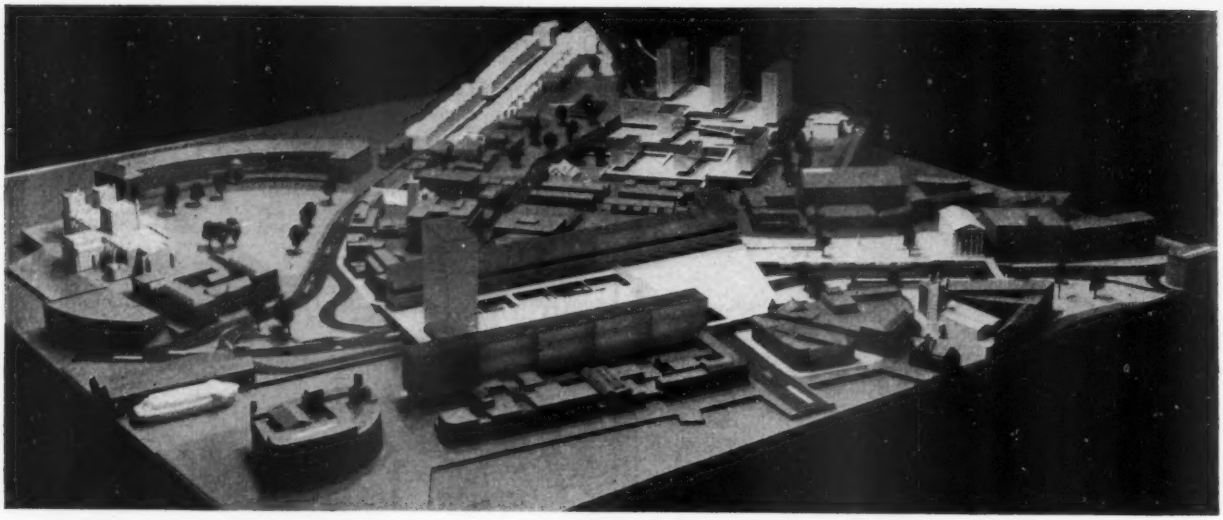
Protests Succeed: Minister Intervenes

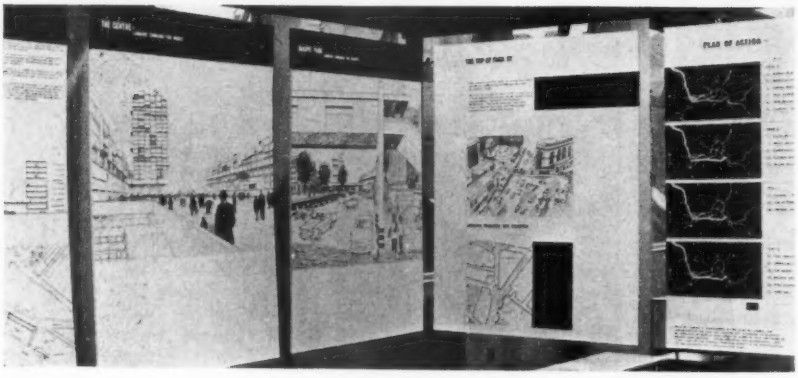
World-wide protests against the threatened destruction of Le Corbusier's Villa Savoye are reported by the *New York Herald Tribune* to have been successful. After forty protests have been received from such institutions as the Museum of Modern Art, New York, the Toronto Art Gallery, the Massachusetts Institute of Technology, Yale University, Walter Gropius and others, André Malraux, the Minister of Cultural Affairs, intervened and said that the villa would be saved "one way or another." He let it be known that he was touched by being appealed to as the keeper of the national heritage. The precise steps being taken by his Ministry have not been disclosed. The villa cannot be declared a historical monument because, under French law, this cannot be done while the designer is alive. But the Minister indicated that it could be assumed that the school which the town of Poissy intended to build on the site would be built elsewhere. The Ministry of Education had endorsed the selection of the site.

BRISTOL

The 'Forum Plan'

On March 16 Lord Silkin opened an exhibition at the Bristol Building Centre of the "Forum Plan" for Bristol. This plan is the work of an independent group of architects (The Bristol Architects' Forum, founded 1956) who put it forward as an alternative to the official plan. As it is the fruit of spare time work, it lacks, inevitably, the statistical background which would be needed before any plan could be put into practice; but the "Forum Plan" is intended to illustrate certain principles. The proposers have little difficulty in showing that it would be more successful than the official plan in solving Bristol's chronic traffic (and human) problems and, despite the higher first cost, give some reason to





Left, the exhibition of a plan for Bristol prepared by the Bristol Architects' Forum. Above, view of model from south-east showing the proposed raised pedestrian precinct over the greater part of the Centre. The tall central block contains shops (at precinct level) surmounted by offices, surmounted by flats. The porticoed building on the extreme right-hand side is St. Mary-on-the-Quay, the Cathedral and crescent-shaped Council House are on the extreme left. The ring road passes under the pedestrian precinct.

believe that in the long run it would prove more economical.

The Forum Plan is comprehensive in its scope, but is perhaps best explained by its proposals for the central area. Wherever possible, the proposers make use of the routes designated in the official plan. They propose, however, a clear distinction between fast moving traffic—whether passing through or to the city centre—and slow moving traffic and pedestrians. In both plans there is a central ring road. In the official plan this is a two-way ring, at street level; and all major points of access to it are marked by roundabouts. As the proposers of the new plan point out, these roundabouts are no longer able to cope with the increased traffic, particularly since the flow is continuously interrupted by pedestrians.

They propose, therefore, to turn the ring into a one-way system (they calculate that it would take four minutes to travel all round it), to do away with the roundabouts and to make the best possible use of Bristol's sharp changes of contour to allow local traffic and pedestrians to pass over or under. The most spectacular application of this idea is at the Centre itself, where they propose a pedestrian platform at the docks end, under which all wheeled traffic would pass. The shops would transfer to this pedestrian level and the additional space beneath would be used for bus stops, taxi ranks and unloading bays.

Apart from this, there is one important change in the routing of the central ring. At present this crosses Queen Square, the bascule bridge (which is liable to be closed at any moment of the day to let shipping pass) and Victoria Street. In the Forum Plan it passes straight down Victoria Street, over Bristol Bridge and down Baldwin Street to the Centre, thus allowing Queen Square to return to normal and evading the mix-up with the harbour.

This plan has the great merit that it accepts the incompatibility of motor-car and pedestrian and offers reasonable prospects to both.

ARCHITECTURE CLUB

Motorways: Hope or Threat?

Motorways by themselves will make little contribution to easing city traffic. This seemed the general conclusion reached by most speakers at the Architecture Club's discussion last week on "Motorways in Cities: a threat or a hope?" Dr. Thomas Sharp spoke first and put an architect-planner's view. He confessed to being bewildered by the immensity of the problem. While motorways could possibly solve today's traffic, in seven years' time motor traffic could be doubled, and quadrupled in twenty years. The majority of vehicles in city centres were there because they wanted to be, they were not just passing through, traffic in city centres is generated there. The relief brought by ring roads was bound to be temporary. He thought that the idea of dividing cities by motorways into precincts, which works in new towns, is nearly impossible to apply successfully in a city like London. It can only be done when rebuilding the city as a whole. Even the idea of first-floor pavements could only work, he thought, if central London was rebuilt. Radial roads only induced traffic to the centres. The only proposal he could make with certainty, he felt, was that it was worse than useless to attempt to solve London congestion by new roads alone. It could only be solved by sub-centralization (such as Boston Manor project) and decentralization (in New Towns). He queried whether the traffic increase could be allowed to go on until it destroyed the city, as in America. The car produced first stagnation, then disintegration. The city, the basis of civilization will be destroyed by one of its utilities. The city is far greater than one of its utilities. The private car should not be allowed to steal space any more than buildings can steal light and air. The private car should have a special licence to be driven in central London and public transport should be increased.

Arthur Ling, city architect and planner of Coventry, agreed with Dr. Sharp that motorways were more a threat than a hope. Russia did not envisage a lot of cars in

city centres, but expected to develop taxis, car-hire service and public transport to the maximum efficiency. The other extreme was the USA, where the steel, motor-car and cement industries encouraged the production of cars and motorways irrespective of the problems created. For England he envisaged motorways following railways on the outskirts of cities, leading to car parks, with subsidized taxis and buses, and specially licensed cars dealing with central area communication. He thought architects had a great part to play in making motorways look and work well.

John Brierley, city engineer of Exeter, was called on to speak next, and largely agreed with the previous speakers. He described the problem as too many vehicles in a limited space over a limited time. Any increased speed obtained on a network of motorways would be lost in cities. He thought more parking space should be provided on the fringe of centres, giving car owners a healthy five to ten-minute walk to work. He emphasized the stupidity of building three-lane roundabouts fed by, say, eight lanes of roads. Hubert Bennett, architect to the LCC, after emphasizing that his views were quite unofficial, pointed out that motorways were inevitable. One per cent. of the total length of roads (1,900 miles) carried 15 to 20 per cent. of the country's traffic. But he agreed that motorways must be carefully related to the framework of cities—which was hard to achieve when planning was under one Ministry and roads under another. Traffic generally was increasing at eight per cent. per year, but at only half that rate in London because conditions were so bad. A ring road in London would cost £7-10 m. a mile, would not function properly until complete, would need radials, and at an annual expenditure of £10 m. (never yet reached) would take many years to build. It would displace the equivalent population of a new town and so create a housing problem. He thought we should stiffen plot ratio standards from London's 5 to 1 nearer to Berlin's 2 to 1, in order to reduce congestion.

C. D. Buchanan, architect, pointed out that the notion that a motor-car was a pernicious influence is not one which commands any interest. Motoring was the most expensive hobby of all time, and cities, indeed every building, were dependent on motor-cars. As a result city centres lost dignity, quiet and convenience. If we were determined to motorize and be civilized we need, he thought, new forms, a new urban environment. But where the existing environment is valued traffic must be controlled. The solution of designing a new environment was an architectural problem before it became an engineering problem.

Lord Conesford, the chairman, in conclusion, pointed out that instead of trying to restrict cars in centres by introducing special licensing, it would be simpler to enforce the present law against parking freely and indiscriminately in the streets. He emphasized that there was no natural right to park and there never had been in all history. He also emphasized the need to make public transport more efficient as a corollary to handicapping the private motorist.

The Editors

INFORMATION FOR THE ARCHITECT

WE are in sight of a solution to the whole problem of filing technical information and building documentation. By a mixture of good fortune, coincidence and hard work, the various ideas which have been studied and developed in Scandinavia and Europe for the International Building Classification* Committee relate closely with the ideas and convictions of Dargan Bullivant the architect appointed by the AJ Research Board in 1957 to complete the late Michael Ventris's work on the problem of Information for the Architect.

Dargan Bullivant is now engaged in writing his conclusions, and his first report of the series appears this week. The implications are that if the International Council of Building ratifies the report of the IBCC on documentation at its next meeting in September, readers and official bodies who follow the recommendations in Dargan Bullivant's articles will be participating not in a wild experiment, but in a practical series of ideas largely tested in the field and launched on an international scale.

There are two simple aspects to the problem of information. One is the dissemination of it in the correct form. The other is the development of systems of classifying, indexing and filing so that the information can easily be found. In six articles Dargan Bullivant will describe in simple, practical terms the steps which professional and learned bodies, as well as individuals, must take so as to introduce order into the chaotic world of technical information.

BRISTOL ARCHITECTS' PLAN

We publish opposite an account and illustration of the "Forum Plan" for Bristol. This is the work of an independent group within the Bristol and Somerset Society of Architects. Architects as a class are uncomfortably aware that the responsibility for re-shaping our cities is ultimately theirs. They also know how complex are the data which are needed before these great re-shuffles can be embarked upon; and that they alone have not the resources to compile them or the competence to interpret them. It is perhaps this second realization which has led architects to give up in despair the great tradition of concern in these matters, begun 50 years ago by Sir Raymund Unwin. This was a mistake. For though they can never be the complete technicians, they must be the instigators. If they and their colleagues the planners do not draw attention to the need, ask the right questions, insist on the right steps to be taken, no one else will. Whatever may be the technical merits or shortcomings of the Bristol Forum Plan, there is no doubt at all that this was a very proper thing for Bristol architects to be doing. We hope that the plan will be given the careful consideration which it deserves, and that the Bristol lead will be taken up by architects in other cities.

* Dargan Bullivant has been working as a member of a special team of IBCC to develop a new filing system for dealing with trade literature as well as technical digests, codes of practice, articles in periodicals, etc. The other members are: L. M. Giertz (Sweden), chairman of IBCC and member of the executive committee of CIB; Dan Fink (Denmark), Molgaard Hanson (Denmark), O. Stack (Czechoslovakia), M. Molé (Yugoslavia), and M. Skorow (USSR).

TATTON BROWN'S APPOINTMENT

W. E. Tatton Brown's appointment as Chief Architect in the Ministry of Health is pleasing for two reasons. The first is that he was the victim of a most embarrassing piece of mismanagement (to use a polite word) in the handling of the appointment of the new county architect for Middlesex recently, when the premature (and inaccurate) announcement of his appointment was released to the Press. It even appeared in the *RIBA Journal* almost on the day that the appointment of Whitfield Lewis to the post was announced.

*

The second is that his work at the Ministry is not to be limited almost entirely to examining the plans of the architects for the hospital boards. He is to be responsible for a design unit, which already exists but is now to be considerably expanded "with the aim of providing up-to-date ideas and guidance to hospital authorities and architects on the planning and design of hospitals and other health service buildings." This is an important step in the right direction.

NOT MUCH OF A FRILL

"House Frills Cut Out—And Put Back Again." Under that heading the *Manchester Guardian* said that Stevenage Development Corporation was spending £45,000 on the restoration of frills it had omitted in a campaign to save £22,500. An interesting story, but not as interesting as the truth. What happened was this. The Corporation decided that if it had to make economies, as government policy demanded, it was better to build three-bedroomed houses of 950 sq ft. with fewer "amenities," than to build 850 ft. houses. Additions, they felt, could always be made later. Their cost plan was designed to save £150 a house. In fact it saved £225. So they decided to spend another £25 on extras like a serving hatch and a ceiling lining in the store. The ultimate saving was £200, and in later contracts the standards have been improved.

*

The Corporation did in fact act very wisely. The government's financial policy too often forces local authorities to make penny-wise economies.

THE BAD AND THE GOOD

The illustrations opposite are taken from the *Journal* of the Town Planning Institute. They were used by a correspondent, Mr. W. Biggs of Ashtead, Surrey, to show how beneficial control by planning officers can be. Mr. Biggs, who is a junior planning assistant to a district council, and is neither an architect nor an architectural student, writes: "the illustrations show the 'bad' as deposited by applicants and our 'solution' to the problem. The 'solutions' shown, without exception, are the results of negotiation. They are not the work of any one person, but a unified effort from within a small office, backed by a critical and consequently inspiring committee and, in some instances, a panel of architects."

*

What Mr. Biggs has succeeded in illustrating is the absurdity of æsthetic control of this kind. ASTRAGAL'S heart bleeds for Mr. Smith, the coal and coke merchant, whose sensible and straightforward sign has been arted up with the result, among other things, that it must have cost twice as much and been twice as hard to read. I am willing to concede that in the first illustration an improvement has been made, but why, in the second, the erection of a large chimney as a "link," or the connection of the two windows with a strip of something should be thought an improvement is a mystery. One wonders, too, how the plan was manipulated to produce a chimney at the point on the exterior elevation where Mr. Biggs and his colleagues thought it ought to go.

HURD INSTINCT (2)

ASTRAGAL may not approve of Robert Hurd's exercise in Scottish neo-baronial at the expense of Emmanuel College, Cambridge, but his address to the Saltire Society on the need to teach an appreciation of architecture as part of social history in the school curricula would seem to be sound commonsense. Certainly he gained the support of the Saltire Society, who unanimously passed a resolution to that effect. There is no doubt that an understanding of architecture is still very inadequately taught, if at all, in schools. Architecture all too often means a boring lecture on gothic by the art mistress, and agonizing attempts to draw the arched complexities of the parish church. If it cannot be taught well as art, how much better that it be dealt with as an exciting aspect of social history.

16 MILL GRINDS SLOWLY

Permanite Ltd. have gone to a lot of trouble to produce a film on the use of asphalt and bituminous felt in building construction. Unfortunately they made the mistake of aiming this seventeen-minute film at "professional and technical societies, colleges, student groups and others," and the result is just as superficial as you might expect it to be with such a large audience in mind. The film suffers from lack of expert advice and a surfeit of appalling buildings.

LOVESOME LIST

No doubt you all carry cards and/or handbooks of the National Trust, the Georgian Group, etc., so that you can reach for culture in the middle of your trivial rounds. An addition for your pocket is *The Gardens of England and Wales*.* This lists 1,177 parks and gardens, tells you when they are open, what you can see and so on. Proceeds go to the National Trust and help retired district nurses.

WELL SPRUNG HEALS!

Heals didn't spend a lot of money submerging themselves in the hurly-burly of the Ideal Home Exhibition. Instead they are putting on their own display—an interesting one, because it shows the rapid popularizing of fashionable designs, some expensive

* *The National Garden Scheme*. 57, Lower Belgrave Street, S.W.1.

and some cheap. You can choose here between fibreglass chairs with crude conical bases (£5 7s. 6d.) and a simple, nine-foot clothes storage unit (nearly £300), both by Nigel Walters. One of the most interesting exhibits is a range of kitchen fitments, wall-hung and based on a 4-in. module. It was designed by Christopher Heal, who uses the braced-box wood-saving construction advocated recently by the Furniture Design Council.

ANOTHER GLOSSY

Is it true that architects look at magazines but don't read the pictures? If so this explains a lot that's wrong with architecture. ASTRAGAL himself is an avid non-reader of many magazines, and the work he has always enjoyed very much, because he could do so with an easy conscience, is *Shinkenchiku*.* Until now this has been a collection of tastefully arranged illustrations, balancing grey rectangles of hieroglyphics. But now the magic is gone. The latest issue appears in English, under the title, *The Japan Architect*, and is even more beautifully laid out than usual. In more than a hundred pages on good paper, with no commercial breaks, you will find some impressive buildings, beautifully photographed and competently drawn. I'm afraid this is a glossy you'll have to read.

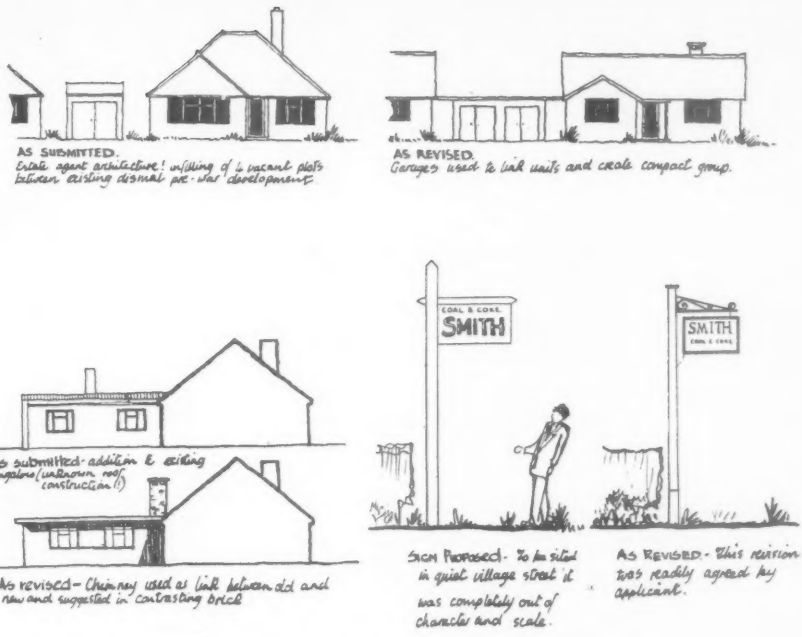
ARCHITECTS' DRIVE CONTINUES

Last week the AJ reported that Harold Watkinson, the Minister of Transport, was asking for the co-operation of architects in the design of motor roads. Since then Mr. Nugent, Parliamentary Secretary to the Ministry, has said it is "desirable that architects should be included" in the membership of motor road committees. He said this in answer to a question raised by the TUC at a meeting of the National Production Advisory Council on Industry. The TUC was jogged into action by the ABT.

*

It is good to see so much support for the RIBA's efforts to get architects represented on the motor road committees. Isn't it now time for the Minister to make his wishes unmistakably clear to the local authorities who have organized these committees?

* Shinkenchiku-sha, 6, Ichome, Takara-cho, Cho-ky, Tokyo. Annual sub. $10.00.



"Before" and "After" Planning Control. See "The Good and the Bad."

THE CODE AGAIN

ASTRAGAL was a little puzzled by part of the letter, published in the AJ two weeks ago, from David Benton, registrar of ARCUK, until he discovered that the printers had left out an important word. Mr. Benton was explaining that although you mustn't form a partnership with a man who has been struck off the register for disgraceful conduct, you can stick to an *existing* partnership if your partner has behaved badly. (The word "existing" was missing from Mr. Benton's letter.)

*

ASTRAGAL'S solicitor offers a piece of advice on this subject. He says that if you think you are not likely to be a rogue, but your proposed partner looks a seedy type, you should have a clause in the partnership agreement which dissolves the partnership immediately your partner is struck off.

PROFESSIONAL RELATIONS

If you don't already think the Code of Conduct is absurd, consider the case of Cotton, Ballard and Blow, architects for the development of the Monico site at Piccadilly Circus. Jack Cotton, the senior partner, is promoting the development. As he is not an architect he is not governed by the Code and is free to work as a developer through other firms and companies—though not, of course, through Cotton, Ballard and Blow. This is one of the consequences of Section 17 of the 1931 Registration Act which allows the butcher or the baker to go into practice as an architect provided the architectural side of his business is superintended by a registered architect.

ASTRAGAL

DIARY

The Function of the Architect in Society. BASA weekend conference, Trinity Hall, Cambridge. APRIL 4 AND 5

Worship, Architecture and Art in the Church Today. Birmingham University conference at the Norfolk Hotel, Birmingham. APRIL 6 TO 10

French Academic Art, 1779-1789. Talk by Dr. Helen Rosenau, RIBA Library Group, 66, Portland Place, W.1. 6 p.m. APRIL 6

Early Industrial Architecture. Talk by Bryan H. Harvey at the RIBA, 66, Portland Place, W.1. 6 p.m. APRIL 7

Economics of Framed Structures. Talk by L. R. Creasy at the ICE, 1, Great George Street, S.W.1. 5.30 p.m. APRIL 7

Factory Equipment Exhibition. Earls Court. APRIL 7 TO 17

Location of Industry and Population. Talk by Professor J. Sykes. TPI at Livingstone Hall, Broadway, S.W.1. 6 p.m. APRIL 8

Course on Urban Renewal. Institute of Advanced Architectural Studies, York. APRIL 9 TO 14

The problem of information before the architectural profession and the building industry

This is the first of a series of articles which will be appearing at monthly intervals during 1959 on the subject of Information for the architect. They are being written by Dargan Bullivant, the architect appointed by the AJ Research Board in 1957 to complete the late Michael Ventris's work on this subject. In this article Mr. Bullivant presents a synoptic view of the whole problem confronting the industry. In his next article he states the case for a comprehensive information service, and this will be followed in May by an article showing the need for standardization in the presentation of information. Then, in two consecutive articles in May/June he will give full details of a system of classification and notation which must be universally adopted and which can be readily understood and utilized by the practising architect. This will be followed by articles on office methods, on the need for a regional network of small libraries and Information Centres, and on how such libraries should be organized. Finally he will report on the September Conference of the International Council of Building at Rotterdam where the method of classification will be formally proposed.

Contents

The AJ Fellowship: " Information for the Architect "

THE LACK OF ORGANIZED KNOWLEDGE

The ARCHITECTS' JOURNAL Research Board was set up to direct the work of Research Fellows appointed to study urgent problems facing the architectural profession.

The first subject selected for study was " Information for the Architect." The first stage of this subject was covered by the late Michael Ventris and the second stage by Dargan Bullivant.

They spoke with hundreds of architects and visited scores of institutions both in this country and abroad.

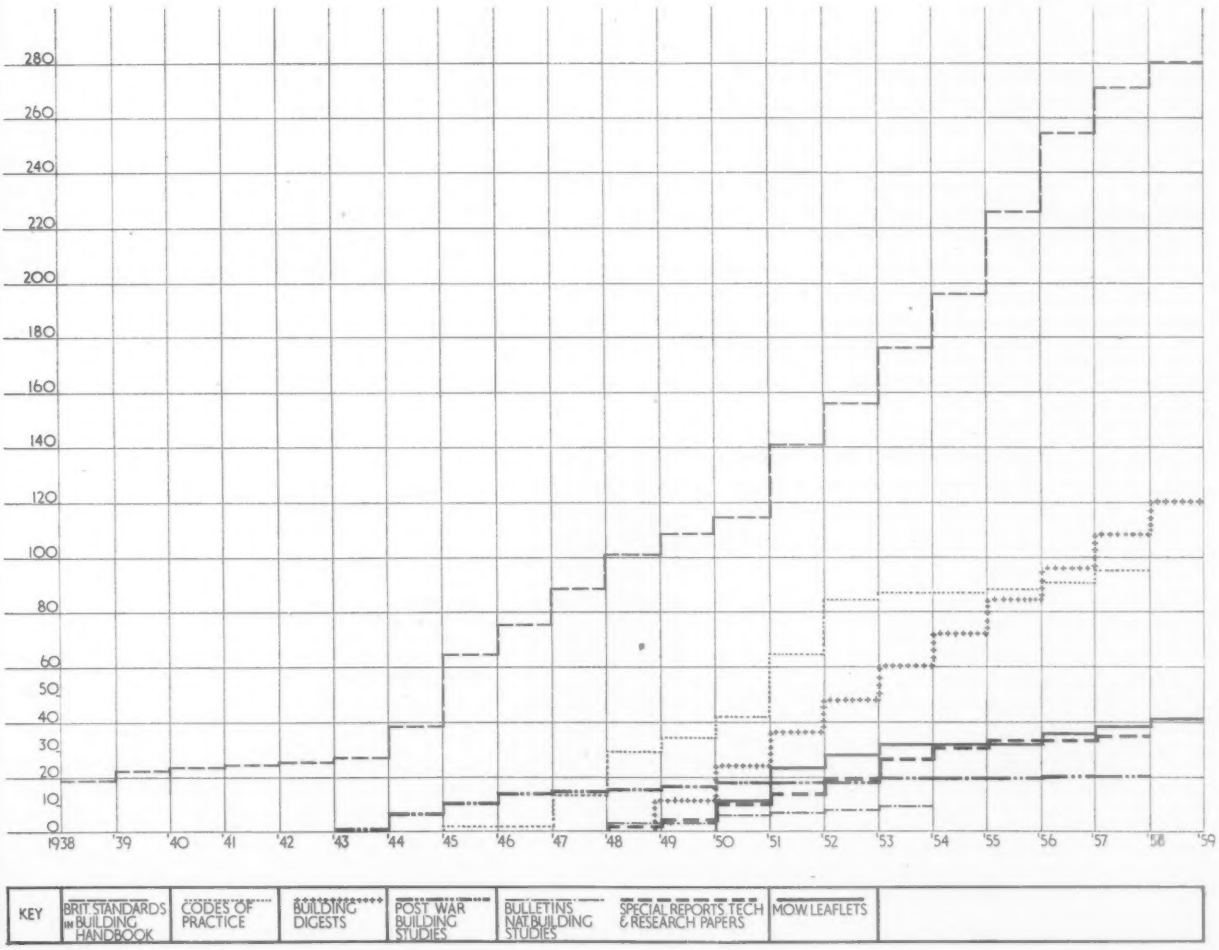
Michael Ventris commenced work by making a survey of the needs of users of information. This was done by visiting a representative sample of architects' offices of different size, to hear the views of architects and study their problems in building a reference system in the office. The first and only report of the Ventris survey is a detailed account of present practice in handling information in the larger architects' offices. The great difficulties encountered in devising a simple workable system in the office at present, and the almost complete lack of the necessary aids to finding information in this country were brought home by this detailed study.

The second stage of the work, which was carried out by Dargan Bullivant, was a study of the methods of disseminating information used in the building field in the other countries of Europe, and also in other professions in this country.

The results of these two studies show without doubt that the methods of disseminating knowledge to architects are totally inadequate to meet the needs of the profession in the future, and that the building and maintaining of a good reference system in the office is almost impossible for most offices at present.

The study of European techniques of disseminating

Fig. 1. The increasing output of publications on building. *Graph showing the steady increase in numbers of Official Publications on building since* 1938. (*The numbers have been corrected to allow for out-of-date or withdrawn publications*).



knowledge in the four Scandinavian countries, Holland and Germany in the building field, and a similar study of the degree of organization and effort used by the professional institutes in engineering in England show how far the provision of information for building lags behind desirable practice. The specific wrongs which are thrown into sharp relief by practice in other countries and other professions are discussed later, but it is necessary at this point to give some facts to establish the main conclusions.

The most simple index of the effectiveness of the generation and distribution of knowledge to users is the quality and usefulness of the information tools *at the architect's drawing board,* the most important pressure point in the building industry. What horse-power of organized knowledge can the practising architect command? The Ventris survey showed that it is very low, far lower than it should be because the organization of a satisfactory office reference system is so difficult. The last 15 years have seen a mounting stream of leaflets and pamphlets from official sources and the technical press, and a flood from the manufacturing industry (see **Fig. 1**) all without a filing home in the office. An estimate of the basic reference for an architects' office is:

40 books (approx.)

1,000 pamphlets (a selection only)

1,000-2,000 trade catalogues for break down (see **Table 1**)

and he has no aids to finding information: indexes, directories, dictionaries, and selected reference lists worth bothering with. All these pamphlets and catalogues are revised from time to time, and in most cases no notice can be sent to the user of revisions and no adequate review of current publications is published. Even if the user were able to collect them all in the first place he almost certainly cannot keep his collection up to date without help from outside the office.

So far as the horse-power of *organized* knowledge at the architects' drawing board, and compared with many of the other countries of Europe, we must be regarded as a technically undeveloped country for the following reasons.

No co-ordinating centre for all Building Information

1. There is no co-ordinating centre for Building Information. For an industry like building which embraces so many different agencies producing information as:

Research.
Design.
Standardization.
Manufacture.
Advertising.
Testing.
Construction.
Maintenance.
Legislation.

In the absence of such a co-ordinating centre inefficiency in the use of knowledge is bound to result. It is not necessary for such a centre to publish all the information, but only to co-ordinate the work of dissemination and to assume the responsibility for communications with the industry. To set the pattern for office filing, to persuade the producers of information to work to it and represent the user's point of view to get what he so badly needs.

No comprehensive Information Service

2. There is no comprehensive published information service which embraces adequately even the results of:

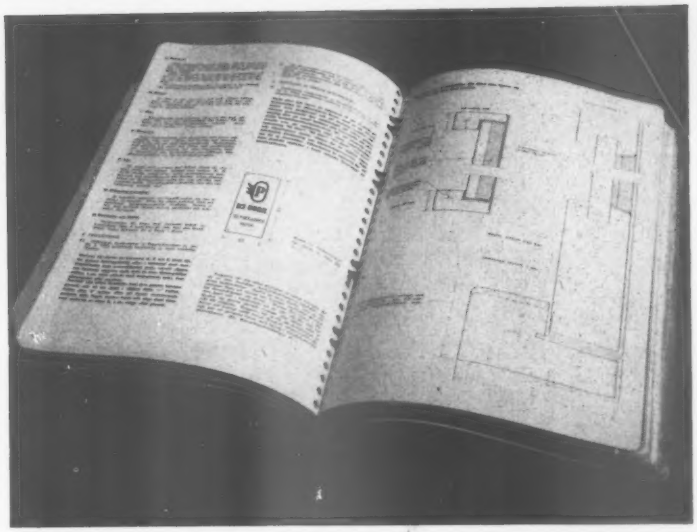
Research.
Design.
Standardization.
Manufacture.

Such services can be seen in Finland, Sweden, Denmark, Norway, Holland and Germany issued from centres with highly skilled staff. These services have, in proportion to the size of these countries, very high circulations **(Figs 2, 3, 4, 5, 6).**

(By Information Service is meant a machinery to deliver the necessary information in a standard format directly to the office ready for filing, as distinct from merely publishing at source and leaving the user to find out the information and get it for himself.)

TABLE OF BASIC REFERENCES FOR AN ARCHITECT'S OFFICE—AN ESTIMATE **TABLE 1**

Directories and Year Books			10
Bye laws and Regulations			30
Building Technology			
BSI			
British Standard Specifications in Handbook No. 3 only		300	
Codes of Practice	Full set	93	
HMSO			
Digests	Full set	114	
Advisory Leaflets (MOW)	Full set	45	
Post-war Building Studies	Full set	33	
National Building Studies (A selection)			
Bulletins 13 / Reports 10		23	
Forest Products Research Lab. (A selection)			
Bulletins 7 / Books 3 / Leaflets 9		19	
Road Research Station			
Tech. Papers and Road Notes (A selection)		5	
Others		5	
Trade and Research Associations.			
M.V. List. 100 of the best		say 25	
Text Books. Technical		20	
Periodical Articles. Technical			
ARCHITECTS' JOURNAL	5 yrs. approx.	136	
RIBA Journal	5 yrs. approx.	24	
Trade Catalogues	approx.	1,000	
		Total	1,842
Architecture			
Books		say 30	
Articles		20	
			50
Building Types.			
HMSO		30	
Articles		60	
			90



Figs. 2, 3 and 4 (above, right and below). The Finnish Building Information Service *is the best example of the ideal information service to be seen in Europe. It was started in 1942 by the Finnish Institute of Architects and is still run by them with a subsidy from the Government. It is a comprehensive service on a subscription basis giving Technical Digests, official Building Standards and edited data sheets on Trade Products; all classified according to the same system. It has a subscription list approximately ten times larger than the architectural profession.*

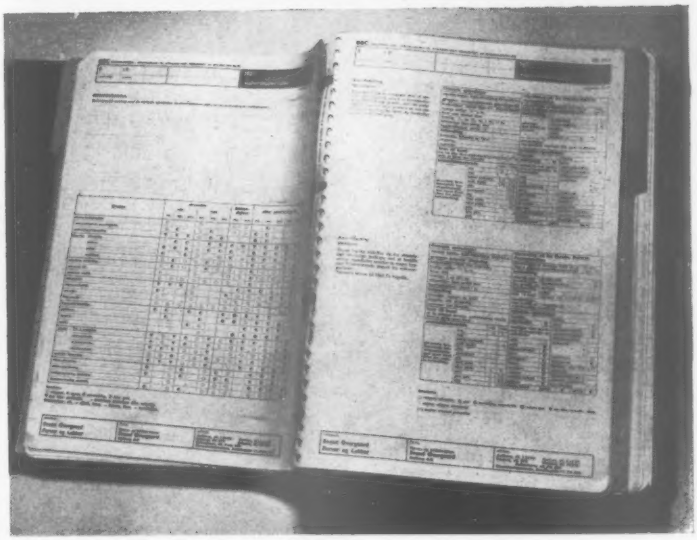


Fig. 5 (above) The Danish Building Book *is edited by the staff of the Department of Building Technology in the Danish Academy School of Architecture. It contains Technical Digests, and edited data sheets on Trade Products. It is a teaching text of importance and is used by the schools of building for training technicians. It is sold by subscription to approximately three times the number of the architectural profession.*

Fig. 6. The Bouwcentrum Documentation Service *published by the Bouwcentrum in Rotterdam includes User Requirements, Studies of Building Types, analyses and reports on existing buildings, reports on functional space elements, Technical Digests, and edited data sheets on Trade Products. The Bouwcentrum sets up special study groups to produce these reports and provides research staff with workshop and exhibition facilities. A recent report is a comprehensive user requirements study for housing prepared under the chairmanship of Van Tijen.*

Fig. 8 (below). *The presentation and format laid down by the International Council of Building. Ready for card indexing.*

351.778.511 Baugenehmigungen

/Baugenehmigung nach/Urteil des HambOVG v. 24.10.1957 - Bf II 05/57. - V. Staatz.
Monatsschrift für Deutsches Recht 12(1958) H.6, S.451.

1. Erstrebt der Kläger eine Baugenehmigung, muß er grundsätzlich eine Verpflichtungsklage erheben. Auf einen Aufhebungsantrag kann er sich nur beschränken, wenn der ablehnende Bescheid eine Ermessensentscheidung zum Gegenstand hat oder wenn hierfür ein besonderes Rechtsschutzinteresse besteht, z.B. weil der Sachverhalt von der Behörde noch nicht unter allen möglichen Gesichtspunkten geprüft worden ist. J.v.Oertzen

Deutsches Baurecht, 1958, Lfg.11, Nr. 2097

351.778.511 Baugenehmigungen

/Baugenehmigungen./ HambOVG,Urteil vom 28.11.1957 - Bf II 75/57.
Monatsschrift für Deutsches Recht 12(1958) H.7, S.548.

1. Ein Bescheid,durch den ein Antrag auf Erteilung einer Baugenehmigung mit sachlicher Begründung abgelehnt wird, ist unabhängig davon anfechtbar, ob das Vorhaben einer Genehmigung bedarf. 2.Die Benutzung eines Grundstückes im Außengebiet als Lagerplatz für gewerbliche Zwecke verstößt gegen § 10 Abs.5 BPVO, ohne daß es darauf ankommt, ob diese Benutzung nach § 3 BauregelVO genehmigungspflichtig ist. 3. § 10 Abs. 5 BPVO regelt die Ausnutzbarkeit von Grundstücken im Außengebiet umfassender als § 3 BauregelVO, da die letztgenannte Vorschrift nur bauliche Anlagen, die ersteingenannte Vorschrift auch andere als bauliche Anlagen (z.B. die Lagerung von Sachen) betrifft. J.v.Oertzen

Deutsches Baurecht, 1958, Lfg.11, Nr. 2098

351.778.53(73) Wohnungspolitik (USA)

Gibbs, Jim: Revision der Wohnungsbaupolitik in den Vereinigten Staaten von Amerika. Vorschläge des"Architectural Forum".
Zeitschrift für das gemeinn. Wohnungswesen in Bayern 48(1958) H.7, S. 371-373.

Verf. stellt fest, daß das Schwergewicht der Wohnungsbaupolitik seit 1947 in dem Bau von Eigenheimen lag. Von 1947 - 1956 wurden 10,3 Mill. Einfamilienhäuser gebaut. Die einseitige Bevorzugung des Eigenheimbaus hat zu einem Auszug der mittleren und oberen Einkommensschichten der Bevölkerung aus den Städten geführt, zum Eindringen unbemittelter, meist farbiger Bevölkerungsteile in das Vakuum u. zur Bildung von Slums. Die bisherigen Programme zur städtebaulichen Erneuerung reichen zur Bewältigung der bestehenden städtebaulichen Probleme nicht aus. Das "Architectural Forum" schlägt daher eine Überprüfung der Finanzierungsmethoden des Eigenheim- und des Mietwohnungsbaus vor, eine stärkere Förderung des öffentlichen Wohnungsbaus vor allem für die farbigen Minderheiten und insbesondere eine Erhöhung der zur Verfügung gestellten Mittel. J.v.Oertzen

Deutsches Baurecht, 1958, Lfg.11, Nr. 2099

351.778.552(492) Wohnungsbau mit öffentlicher Unterstützung (Niederlande)

728.011.2(492) "Wohnungsbau, Grundriß (Niederlande)

Heimans,A.: Enkele kwalitatieve aspecten van de na-oorlogse gesubsidieerde woningbouw. [Nachtrag] (Einige qualitative Aspekte des geförderten Wohnungsbaus der Nachkriegszeit. 8. Zusammenfassung). 2 Darst.
Bouw 13(1958) H.27, S. 676-677, Lit.Ang. f. Teil 1-7

Zusammenfassung der 7 vorhergehenden Aufsätze. Behandelt wurde vorwiegend der Grundriß,der für den Zukunftswert der Wohnung ausschlaggebend ist. Einfamilienhäuser weisen im allgemeinen mehr und größere Räume auf als Etagenwohnungen, aber dafür ist die Zuordnung der Räume bei den letzteren in der Regel besser. In Gemeinden mit 20-100000 Einw. wurden ca. 50 % der Wohnungen in Mehrfamilienhäusern vorgesehen. Der Anteil liegt höher bei größeren und niedriger bei kleineren Gemeinden.Die Küchengröße steht im umgekehrten Verhältnis zur Gemeindegröße.Ohnungen mit jährlichen Mietzuschüssen wurden vorwiegend für Arbeiter, solche mit einmaligen Baukostenzuschuß besonders für den Mittelstand gebaut.

Deutsches Baurecht, 1958, Lfg.11, Nr. 2100 F.Vinck

351.778.541:338.5:34 Mietpreisrecht

Pergande, Hans-Günther: Die Altbaumietenverordnung. Freie Wohnungswirtschaft 12(1958) H.8, S. 335-338.

1. Allgemeines, 2. preisgebundene und preisfreie Wohnungen, 3.die preisrechtlich zulässige Miete, 4. Mieterhöhungen bei baulichen Verbesserungen, 5. Umlagen (Wassergeldumlage, Grundsteuer- und Gebührenmehrbelastungen,Betriebskosten der Zentralheizung, Warmwasserversorgung und Fahrstuhlanlage), 6. Zuschläge (Untermiete, Geschäftsraummiete). H.-W.v.Borries

Deutsches Baurecht, 1958, Lfg.11, Nr. 2101

351.778.541:338.5:34 Mietpreisrecht

Seka,F.: Verordnung über den Mietpreis für den bis zum 31.Dez.1947 bezugsfertig gewordenen Wohnraum. (Altbau-Mietenverordnung - AltVO) vom 23. Juli 1958.
Wohnungswirtschaft und Mietrecht 1958 H.8, S. 113-122.

Die Verordnung,die im Wortlaut wiedergegeben ist,gliedert sich in sieben Abschnitte, von denen den 2. Abschnitt - Mieterhöhungen - nach Umfang und Inhalt die größte Bedeutung zukommt.Zivilrechtliche Wirkungen erlangen die Vorschriften der Verordnung, auch der weiteren Abschnitte (Mietzrabsetzungen, Untermiete, Änderung der Miete in besonderen Fällen etc.), erst durch eine formgebundene Erklärung nach § 18 Bundesmietengesetz. Verf.vereinigt die einzelnen Vorschriften mit kurzen Bemerkungen, in denen er eine Gegenüberstellung mit dem vor Erlaß der Verordnung bestehenden Rechtszustand, der weitgehend durch die Rechtsprechung bestimmt war, vornimmt. Verf.bezweifelt, ob sich die Verordnung stets im Rahmen der Ermächtigung des § 39 Abs. 1 Bundesmietengesetz hält. J.v.Oertzen

Deutsches Baurecht, 1958, Lfg.11, Nr. 2102

351.778.541:338.5:34 Mietpreisrecht

Rechtsgrundlagen, Berechnungen u.Erhebung von Umlagen, Zuschlägen u. Vergütungen neben der Einzelmiete - Neubaumietenverordnung.
Zeitschrift für das gemeinn. Wohnungswesen in Bayern 48(1958) H.7, S. 363-367.

Ausgehend von dem Begriff der preisrechtlich zulässigen Miete untersucht Verf. in einzelnen Umlagen, Zuschläge und Vergütungen, die Bestandteil der zulässigen Miete sein können. Als Umlagen neben der Einzelmiete können die Kosten des Wasserverbrauchs, Betriebskosten der Zentralheizung, Warmwasserversorgung u. des Fahrstuhls sowie ein Ausgleich für Mehrbelastungen durch Grundsteuern und andere öffentliche Abgaben erhoben werden. Die Umlegung muß schriftlich erklärt werden.Neben der Einzelmiete sind Zuschläge für Untermiete und bei Benutzung von Wohnraum zu anderen als Wohnzwecken möglich. Für Nebenleistungen des Vermieters können in besonderen Fällen Vergütungen berechnet werden. J.v.Oertzen

Deutsches Baurecht, 1958, Lfg.11, Nr. 2103

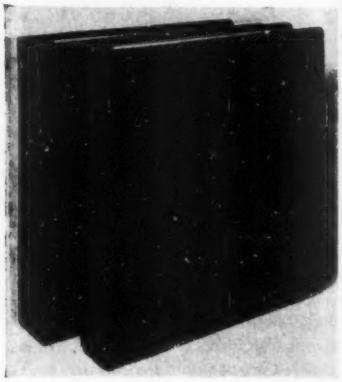
351.785.077:725.381 Reichsgaragenordnung

Kleffner, Walter: Kommentar zur Garagenordnung mit praktischen Lösungsvorschlägen. Vortlaut der Reichsgaragenordnung (RGaO) vom 17. Februar 1939 - Erläuterungen und Lösungsvorschläge - Erlasse der Länder - Muster für Ablösungs- und Erfüllungsverträge.
Berlin: Ullstein 1958. 142 S., 24 Abb. und 13 Taf. DM 9,-.

Ausführliche Darstellung des mit der RGaO zusammenhängenden Fragenkomplexes unter rechtlichen, baulichen und städtebaulichen Gesichtspunkten: Sinn und Wortlaut der RGaO.- Erläuterung des wesentlichen Inhaltes.- Rechtslage u. Rechtsbegriffe. - Schlüsselzahlen. - Gemeindliche Planungsaufgaben. - Beispiele von Einstellplätzen, Garagen und Gemeinschaftsanlagen. - Wirtschaftlichkeit und Finanzierung. - Baugenehmigungsbehörde und RGaO.- Erlasse der Länder. - Vertragsmuster. H.-W.v.Borries

Deutsches Baurecht, 1958, Lfg.11, Nr. 2104

Fig. 7 (left). European reviews of current building information. *Almost all European countries publish a regular review of current publications on building. The presentation and format are to a standard laid down by the International Council for Building (CIB). The countries represented here are Germany, Italy, Austria, Belgium, Switzerland, Sweden, Denmark, Norway, Finland and Spain. The same service exists in France, but it is not shown here. Britain is the most important country without such a service.*



Figs. 9 and 10 (above and below). Swedish building prices information. *Published in loose-leaf form by the joint effort of professional institutes. The system of classification used was established for Specifications, Bills of Quantities and Trade Catalogues and is now widely used in all Scandinavian countries.*

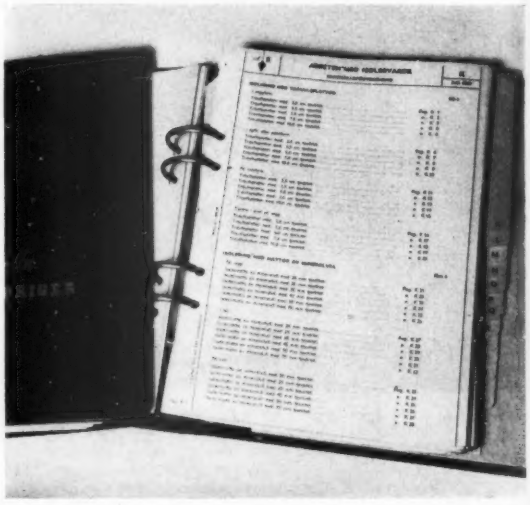


Fig. 11. The American Institute of Architects Building Products Register. *In spite of Sweets Catalogue, the American Bible of Product Information, the growing need for itemised data on products is being met by the establishment of a reference service in tabular form by the AIA.*

Fig. 12. Trade leaflets from one British manufacturer. *Lack of standardization within one firm leads to many sizes of paper being sent out in one mail. All three examples from different manufacturers show six different sizes in one mailing.*

Fig. 13. Lack of standardization by different British Manufacturers. *Since* 1948, *despite an official standard* (*BS* 1311), *defining standard sizes for Trade and Technical Publications, very little conformity has been achieved either in HMSO or trade publications.*

Fig. 14. The A series of standard paper sizes (BS 1311). *The size of paper is standardized in Europe according to a series known as the A series. The general acceptance of this standardization makes improved filing by subjects easier, therefore easier finding of information. The A series was accepted in BS* 1311 *in* 1958 *and is now adopted by the BSI and the RIBA for all their paper work, stationery, duplicated papers and printed papers. The rapid acceptance of this standard is essential.*

No published Review of Current Publications

3. We are the only country in Europe without adequate machinery for reviewing the current crop of published information and presenting the results in a form practitioners can use as a cumulative index. Most countries have had such a service for 5-7 years **(Fig. 7).** The systematic reviewing of new building products in a reference form has been commenced by the American Institute of Architects **(Fig. 11).**

Lack of Standardization of Means

4. In the standardization of the physical means of disseminating knowledge such as paper standardization **(Figs. 12, 13, 14),** loose-leaf methods **(Fig. 15),** hole punching, and acceptance of authoritative classification of subjects we are 10-15 years behind almost all European countries, and America has had an accepted classification for trade products for 38 years. These points are fundamental and all reform depends on their rapid and general acceptance by producers of information.

No regional network of Building Information Centres

5. There is no regional network of small up-to-date highly selective Information Centres with libraries covering trade *and* non-trade information which are accessible to practitioners. There isn't even one library of this kind open to the general user in the whole country. The best examples of such modern intelligence centres are in Denmark, Holland and Sweden: The Danish National Centre for Building Documentation, which is a Department of the Academy School of Architecture, is in Copenhagen **(Fig. 17).** In Rotterdam there is the *Bouwcentrum* and there is the *Svensk Byggjanst* in Stockholm.

Low standard of Visual Presentation

6. The general standard of presentation and organization of information in documents is very low compared with the general standard in Europe. Page layout, illustrations, typography and the mechanics of contents listing, subject indexing, cross referencing and paragraph structure are not frills but essentials for assimilation of documented knowledge for busy people. The hand of the architect is rarely seen in the formulating, drafting and illustrating of the documents he has to use, with the exception of the MOE Bulletins of which all but four out of 16 are written by architects.

The designers' skill in visual organization is clear and strong in all the Scandinavian, Dutch and German publications for building. **(Figs. 18, 19, 20, 21, 22).**

It would be a salutary thing if the realization of the grave deficiencies noted above produced any action. The means of collecting and disseminating knowledge in other countries are not the same as ours, the organizations are different in composition and finance, and their results are certainly different.

Is it possible to contemplate at this stage in our development the setting up of a new organization to tackle the problem? If so who should take the initiative and who should support it, what could it do and last, but not least, who should pay for it?

Fig. 15. Loose-leaf German Building Regulations. *Information about the legal requirements for Building need to be kept up to date regularly in a systematic way. The German Building Regulations printed on loose-leaf coloured paper, classified and thumb-indexed, show a method which was noted and commended by the* AJ *Guest Editors in* 1952 *in their article on Building Controls.*

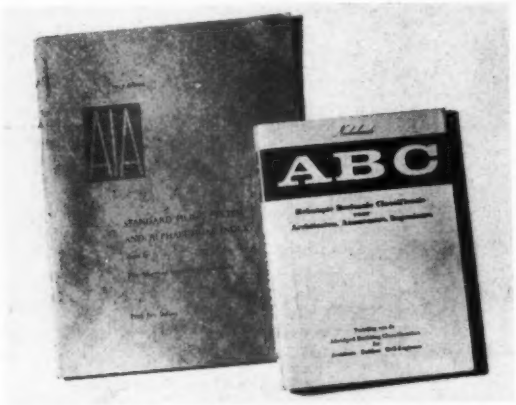


Fig. 16. A published system of classification. *The American Institute of Architects published a standard classification of information to be used by the industry in* 1920. *This has continued in use with revisions up to the present. Information is published with the standard filing number on it. The ABC classification is widely used for technical studies, and periodical articles in Europe.*

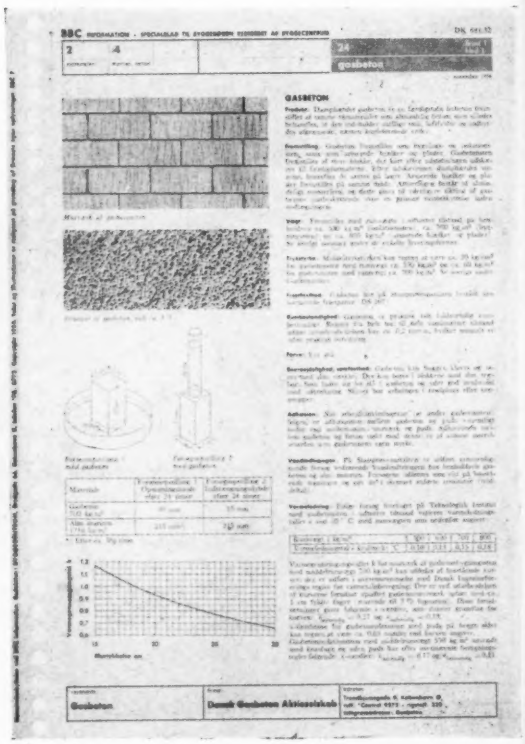
Fig. 17. A modern working library. *The Danish National Centre for Building Documentation is a department of the Academy School of Architecture and provides a service of selected information covering the results of research, building practice and trade products for architects and the building industry. It is an excellent example of what a small selective working library should be. It has a staff of three senior research architects and two librarians.*

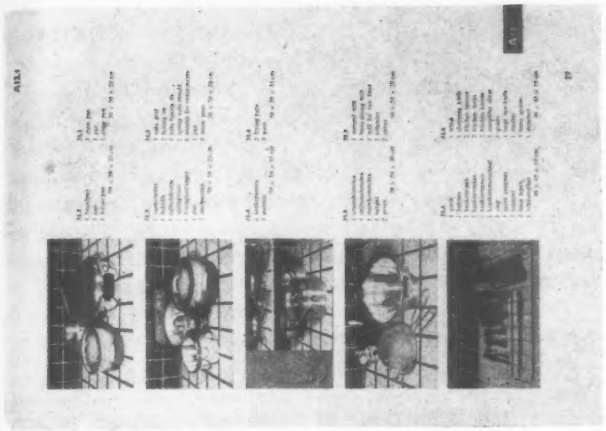
THE NEED TO DESIGN THE PATTERN FOR BUILDING INFORMATION

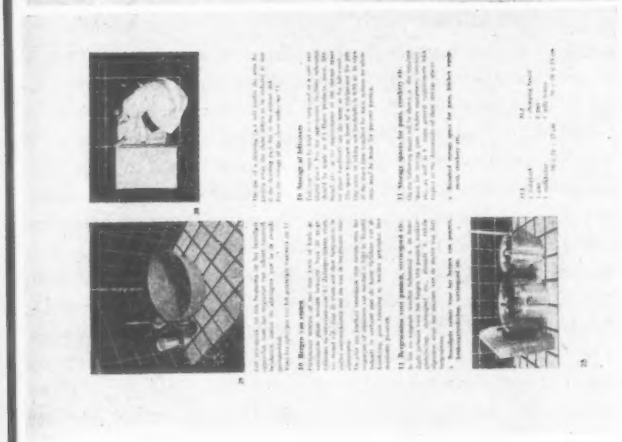
What part could the architectural profession play in initiating such a move and subsequently to support it? There are matters here which should be the concern of the whole industry since much of the building technology and product information is shared, but they concern no section more vitally than the architectural profession. There is at this point in time a unique opportunity to seize the initiative to *design the pattern* for building information in this country. Most of the ideas about information for the building field are dead. There hasn't been an effective new idea since the first MOE Bulletin in 1949.

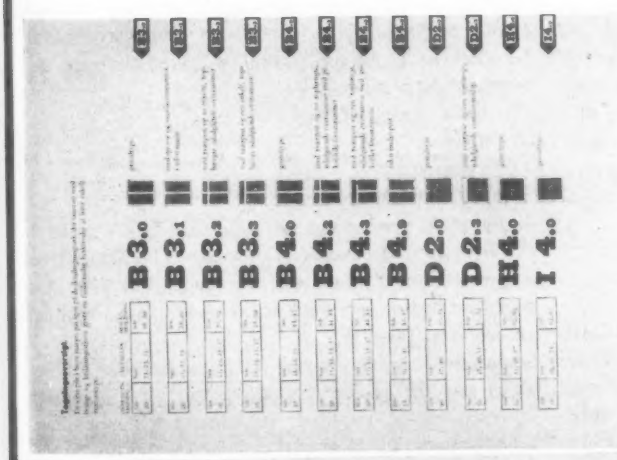
The American Institute is very active in helping its members to get the information they need, a fact noted many times by visitors to American architects' offices. In 1942 in Finland the Institute of Architects took over the role of co-ordinating information for the building field, with the result that Finland can demonstrate the most effective technique for the dissemination of information to be seen in Europe, under the direction of the Finnish Institute of Architects. It may not be unconnected with the fact that Finland has more internationally famous architects for the size of its profession than any other country.

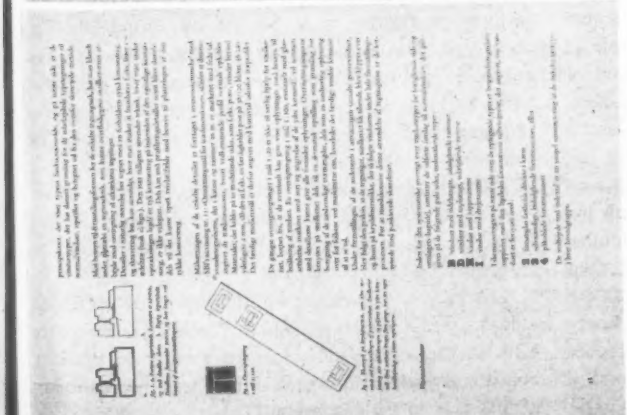
Figs. 18 (below) and 19, 20, 21, 22 (opposite). The presentation of information. *Good typography, drawings and a clear paragraph structure in the text are essential to the assimilation of technical information. (Danish Building Research Digests, and Bouwcentrum reports.)*

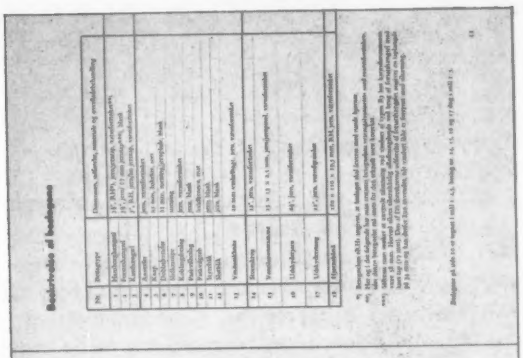


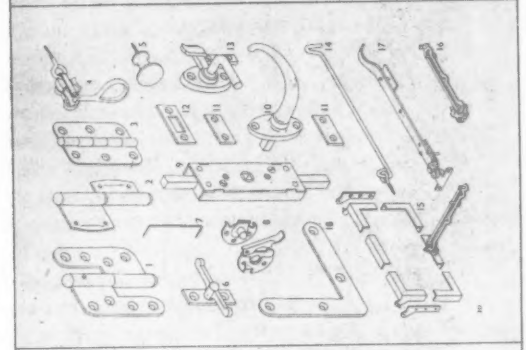


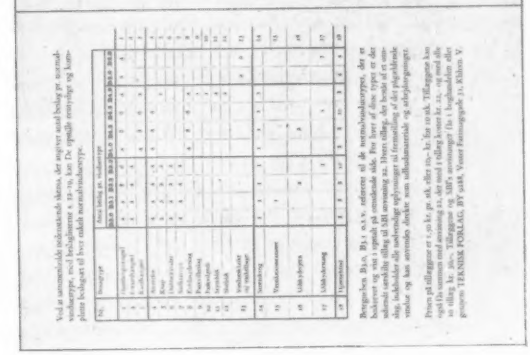


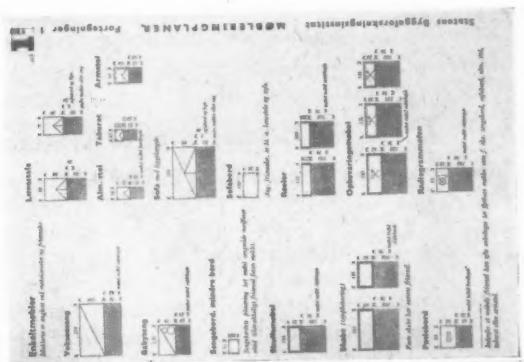


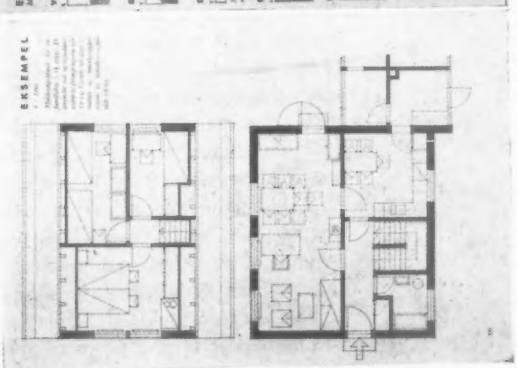












The Architects' Use of Information

THE GENERAL NEEDS OF ARCHITECTS FOR KNOWLEDGE

A profession must be knowledgeable and its knowledge must be organized and up to date and relate to the problems of today, and not of yesterday. The architectural profession needs knowledge as much as any other profession, but it faces difficulties in producing and organizing it for itself. As Llewelyn Davies has said: "Knowledge is the raw material for design, it is not a substitute for architectural imagination, but it is necessary for the effective exercise of imagination and skill in design. Inadequate knowledge handicaps and trammels an architect, limits the achievements of even the most creative and depresses the general level of design."

But it is not the role of a practising architect to pursue knowledge for its own sake, but to use it. His duty is to act so that his client's building is built. In so acting he acquires knowledge by experience. To be sure, he must spare no pains—within the bounds of what is economically reasonable—to add any further available facts that are pertinent. If he has not all the facts (even if there are more facts which might be available if only they could be found, given more time) nothing will excuse his failure to discharge his personal responsibility of exercising judgment and precipitating a decision in time for it to be effective. If the facts are not available because they don't exist or cannot be found, quoting from Ortega, he must "fill in with approximate or probable anticipations." Ensuring that the necessary facts are available requires well organized knowledge not only in the head, but in the reference system of the office since no one can keep all he needs in his head.

THE ARCHITECT'S USE OF KNOWLEDGE

By and large architects are not great readers, at least not without relation to the job they have in hand. They do a certain amount of skimming and hope to remember where to put their hands on the information when they need it. Usually a forlorn hope. Now an architect's real *need* for information on any one subject is very infrequent and is related directly to the time table of his work on a building. He is not thinking about or perhaps even interested in any subject all the time, except design. Any sizeable building needs an architect's attention for three to four years and during this period, for example, he may need information on, say, paint only three times. Firstly when he is writing the specification, then there is a gap of many months, until his second need for the colour schedule, then another need when the paint is being applied to the building. Two things are important from this, firstly the architect needs information for reference purposes to help his memory over the long gaps, and secondly, and most important, any papers, publications and catalogues coming into the office must be fileable so that they can be kept until they are needed. The chances are that even in an office with a large number of separate buildings on hand, no one is interested in the subject at the time it first arrives so it must be kept until someone eventually is interested.

THE IMPORTANCE OF AN OFFICE FILING SYSTEM FOR REFERENCE

A well organized office filing system is essential for an architect for the reasons above: that information has to be stored till it is wanted and when it is wanted no time can be spared for searching. The large number of pamphlets and the scatter of information in periodicals make the mechanics of building an efficient system and, equally important, keeping it up to date too involved for the majority of offices. This was made quite clear in the Ventris survey. The methods of library technique for scanning the field, receiving large numbers of documents from several sources, indexing the subject, the author, the publisher, or the manufacturer and trade name and the filing, shelving of leaflets, pamphlets, and books cannot be used properly unless there is a full-time librarian. The majority of offices will never have a full-time librarian **(Table 2).** Such facts as exist suggest that a librarian becomes an economic possibility in offices with between 20-30 architects.

The basic library of:

40 books

1,000 pamphlets

1,000-2,000 trade catalogues

really needs one person full-time to keep in order in the disorganized conditions of today. The alternatives at present are: to have the documents, but with little organization, or not have them and manage without as best you can.

Some useful guidance can be given for the smaller office and the production of efficient aids to finding information are required, but clearly the machinery for disseminating information intended for the architectural profession must be greatly simplified. The loose pamphlet is the wrong unit for office use. The emphasis in future must be shifted from the pamphlet form to loose leaves of standard size for filing. An office reference system based on files should make the following possible:

1. The collation by subject and the comparison of information from different sources, whether they are Research, Standardization, Practical Experience, or from the Producing Industry.

2. The minimum number of filing units in use in an office, so that the handling of Technical Reference Files in the office from place of storage to drawing board and back to storage is simple, and the possibility of loss kept to the minimum.

THE BROAD STRUCTURE OF THE ARCHITECTS KNOWLEDGE

The broad structure is shown in **Table 3.**

It seems certain that some co-operative action will be needed in the near future to deal with the machinery of distribution and organization of information for use in the office, but first it is necessary to look at the organization of production, and the means of communicating this knowledge to the user at present devised.

THE SIZE OF ARCHITECTS OFFICES — TABLE 2

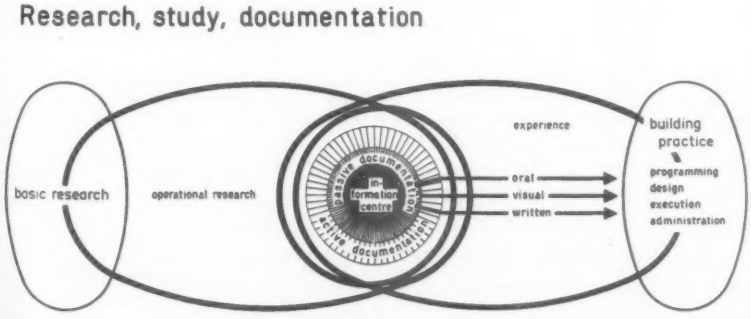
(excluding offices neither public nor private—e.g., industrial undertakings). Based on a survey made by Pritchard Wood and Partners and used by Michael Ventris to select his sample of offices to be visited.

Number of Registered Architects	Public	Private	Together
	Per cent.	Per cent.	Per cent.
1–5	14	40	54
6–10	7	8	15
11–20	11	2	13
21 and over	15	3	18

BROAD PATTERN OF KNOWLEDGE FOR BUILDING — TABLE 3

Functional Requirements (users' needs).
—The facts for planning and design about the life and work of the building.
Data—dimensions and space relationships.
Legal Requirements
Physical Requirements (comfort, safety and efficiency)
Data—Basis of judgment or computation.
desirable and statutory standards.
Technical
—Design, Computation, Characteristics, Properties, Performance, Dimensions for methods of construction and manufactured products.
materials
components
structural elements
services
landscape
Data—available products, properties and performance
Economic
—cost distribution in buildings. Basis for design comparison of
materials
components
structural elements
services
landscape
Data—comparative prices of materials and components supplied and fixed, with associated costs.
Operational—mechanization, organization, programming for design.
Management—office organization, programming, costing.

Fig. 23. Research, study, documentation (*Van Ettinger and L. Giertz*). *The growth of research linked with experience must generate knowledge which is organized effectively for use by practitioners to be of value.*



The Production of Knowledge

THE GROWTH OF KNOWLEDGE IN THE BUILDING FIELD

We can see that the growth of knowledge in the whole building field in the past 10 years has been great. A quick glance at the build up of the basic documents currently available in an architect's office will confirm this **(Fig. 1).** Whether most offices have anything like this amount is another matter. It is inconceivable that the rate of production of new knowledge will not continue at an increasing rate in view of the pattern of expanding research.

There are, broadly speaking, three overlapping methods of producing knowledge: **(Table 4)**

Basic research.

Development work.

Experience.

These three methods must result in the production of effective documents if the results are to be communicated on the wide scale which is necessary.

The agencies concerned in the production of knowledge and the architect's rôle is shown in **Table 5.** All three methods work to build up the sum total of knowledge available, and all three methods are at work on the broad subject groups required in building **(Table 3).**

The rate of growth has been fastest in technical studies due to the application of scientific research. A brief glance at the agencies concerned here is necessary, taking first those bodies concerned with Technical Studies of the Means of Producing Buildings **(Table 6),** and then those concerned with Functional Studies, and Economic Studies, of Buildings.

TECHNICAL STUDIES

DSIR. The principal sections concerned with building.

The Building Research Station and the other principal sections which produce information in the building field are well known, but the existence and scope of the Research Associations may not be so familiar.

Co-operative Research Associations in the Government Scheme

" A research association is essentially a voluntary body set up by a group of firms to study their common scientific and technical problems. Its work is managed

METHODS OF BUILDING UP KNOWLEDGE **TABLE 4**

A. *Basic Research*
"The powerful tool for the development of theory with a body of principles that interrelate and explain facts and phenomena."—Dr. Lea of Building Research Station.

B. *Development Work*
This is directed strongly towards practical action, working through the *technique of study* to collate existing knowledge—placing the elements of this knowledge in new and fruitful conjunctions.

C. *Experience*
The testing ground is the erection of a building and the completed building in use.

AGENCIES FOR THE PRODUCTION OF KNOWLEDGE IN THE BUILDING FIELD **TABLE 5**

Methods	*Agency*	*Architect's role*
A. Basic Research	DSIR Research Associations Ministries Universities	Functional studies and user requirements
B. Development Work	DSIR, Ministries Universities Large Private Practitioners Local Authority Offices Trade Development Association	Planning technique of buildings and sites. Constructional design. Component and equipment design
C. Experience	The Architectural and Quantity Surveying Professions and Builders	Active collection of information and assessment of end products

THE MAIN BODIES PRODUCING TECHNICAL KNOWLEDGE IN THE BUILDING FIELD **TABLE 6**

NAME	TOTAL INCOME
DSIR	
Principal Sections Concerned With Building.	*1958-59*
Building Research Station, Garston, Nr. Watford.	£516,608
Forest Products Research Lab., Princes Risborough.	£135,706
Joint Fire Research Organisation, Elstree. (Joint Establishment with Fire Offices Committee).	£91,269
Road Research Laboratory, Harmondsworth.	£448,227
Research Associations. (Receiving grant from DSIR roughly proportional to the income they raise independently. "Research for Industry" HMSO)	*1956-57*
The British Cast Iron Research Association	£197,871
Chalk, Lime and Allied Industries Research Association	£22,880
British Ceramic Research Association	£196,316
The British Coal Utilisation Research Association	£359,818
The British Coke Research Association	£113,375
The British Electrical and Allied Industries Research Association	£361,816
Research Committee of the Furniture Development Council	£22,595
British Glass Industry Research Association	£56,749
Heating and Ventilating Research Council	£10,664
British Iron and Steel Research Association	£614,404
British Non-Ferrous Metals Research Association	£169,457
Research Association of British Paint, Colour and Varnish Manufacturers	£83,295
Research Association of British Rubber Manufacturers	£91,591
The Timber Development Association	£50,219
British Welding Research Association	£157,444
TOTAL INCOME	£2,508,494

by a Council elected by the members and composed mainly of leading personalities in the industry."

In the HMSO publications "Research for Industry" published in 1958 it is stated that there are now 39 associations receiving grants from the Department of Scientific and Industrial Research; they are not all connected with building, of course. The total income of these associations has grown from £1·8 million in 1946 to £6 million in 1957 (of which approximately £1½ million is in the form of grants from DSIR).

"As the work of the research associations develops, their liaison with industry through information and advisory services grows in scope and importance. In recent years 14 associations have received Conditional Aid grants to develop these services and in particular to experiment with new techniques of communication." (From report *Research for Industry*, published by HMSO.)

There are 15 Research Associations, with a gross income of £2½ million, which deal with information of interest to architects and builders, but none deal solely with building information. It may well be that they have some difficulty in what information is needed and how and in what form to direct it to the building industry. They mostly all handle their own publications.

FUNCTIONAL STUDIES AND ECONOMIC STUDIES

The increasing mastery of technical means must be expected to create the need for Research and Development work in other spheres besides the special Research Station as such. Architects, quantity surveyors

TRADE DEVELOPMENT ASSOCIATIONS (FINANCED BY THE TRADE) **TABLE 7**

All are concerned with informing the user about their products.

General
National Council of Building Material Producers. Rural Industries Bureau.

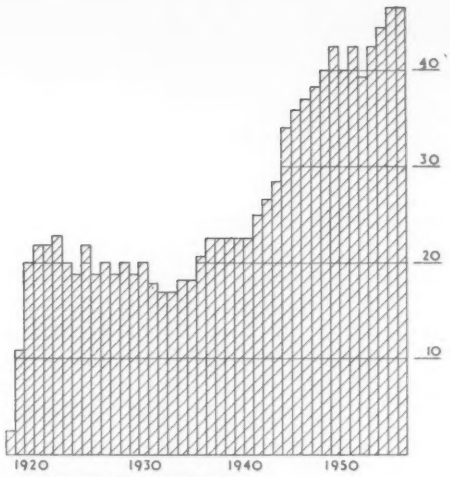
Materials
British Wood Preserving Association. Natural Rubber Development Board. British Plastics Federation. Natural Asphalte Mine-Owners and Manufacturers Council. Federation of Coated Macadam Industries. Sand and Gravel Association (at C and CA Research Station). Cement and Concrete Association. British Cast Concrete Federation. Reinforced Concrete Association. National Federation of Clay Industries. British Ironfounders Association. Aluminium Development Association. Lead Development Association. Copper Development Association. Zinc Development Association. Vitreous Enamel Development Council.

Components
Pitch Fibre Pipe Association. Fibre Building Board Development Organisation Ltd. Gypsum Plasterboard Development Association. Linoleum Manufacturers Association. Federation of Clinker Block Manufacturers. British Door Association.

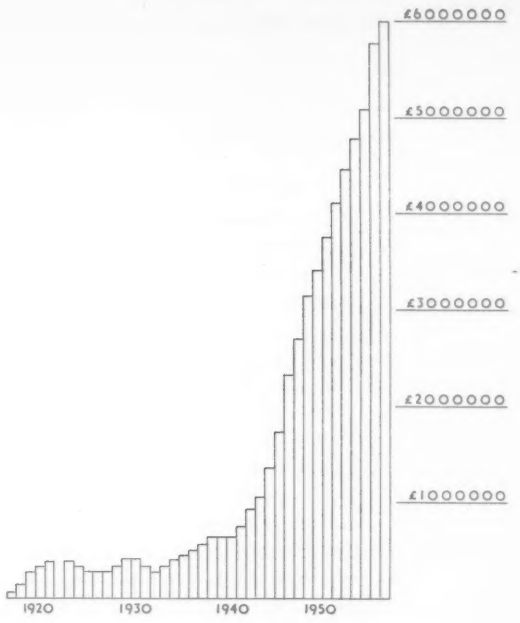
Services Installations
Gas Council. Coal Utilisation Joint Council. Mechanical Handling Association. Electric Lamp Industry Council, British Electrical Development Association. Lighting Equipment Development Council.

Fixtures, Equipment, Furniture
English Joinery Manufacturers Association. School Furniture Manufacturers Association.

Physical Requirements of Buildings
Structural Insulation Association. British Lighting Council Fire Protection Association.

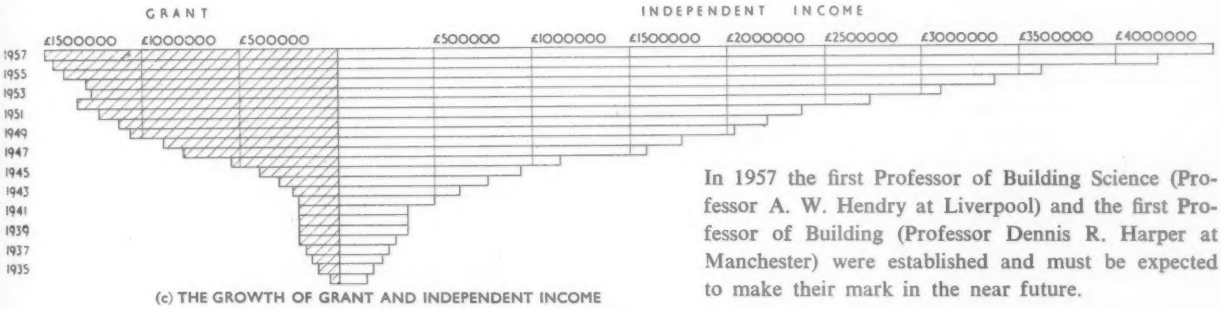


(a) NUMBER OF ASSOCIATIONS



(b) COMBINED INCOMES OF ASSOCIATIONS

Figs. 24-26. The growth of research associations. *A research association is essentially a voluntary body, set up by a group of firms to study their common scientific and technical problems. They receive grants from the Department of Scientific and Industrial Research roughly proportional to the income they raise independently.* (*From* Research for Industry. *HMSO.*) *Adjustments should be made to* (*b*) *and* (*c*) *to take into account the change in the value of money.*



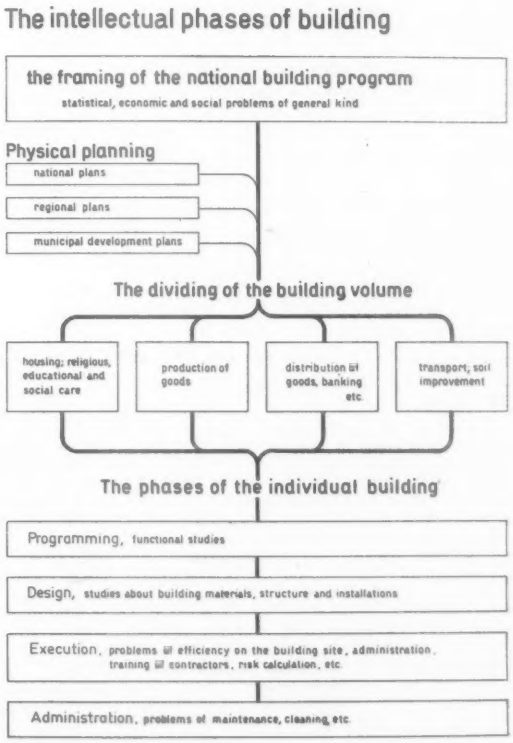
(c) THE GROWTH OF GRANT AND INDEPENDENT INCOME

and builders will find increasing scope for this kind of work. In due course a further increase in knowledge must be expected here, depending on the educational framework now being explored for the future. At the important conference on architectural education held in April, 1958, at Oxford, the conference "endorsed the policy of developing post-graduate courses which enlarge the range of specialized knowledge and will advance the standards of teaching and practice." Professor Sir Leslie Martin, Chairman of the Conference, had this to say in his report:

"The advancement of knowledge is not merely an ornament to a profession—it is its duty. This is the means by which the competence of the profession as a whole can be advanced. It is essential to improvement in both teaching and practice that a limited number of people should, at some time, devote themselves to advanced post-graduate study and research. Work of this kind is steadily increasing in volume. In addition to the main centres where it has developed, the BRS, the Ministry of Education and the Nuffield Foundation, important developments are now taking place in universities in which this type of work may become progressively more established."

A Housing Research team is to be set up early in 1959 in a newly created post-graduate department of architecture under Professor R. H. Matthew at Edinburgh University and two live projects are planned. In 1957 the first Professor of Building Science (Professor A. W. Hendry at Liverpool) and the first Professor of Building (Professor Dennis R. Harper at Manchester) were established and must be expected to make their mark in the near future.

Fig. 27.



The Dissemination of Knowledge as Information

THE MEANS OF DISSEMINATION

What channels of communication have we to deal with this increase in knowledge? Summarized briefly they are:

Schools.

Courses, symposia, lectures.

Conferences, discussions, study groups.

Personal contacts, and consultations, co-operative work.

Films.

Documents of various sorts, books, reports, standards, codes, regulations, periodicals.

All these methods are used and all are valuable, and are constantly being improved and made more effective. The most important method of communication by far is through documents. All auditive methods, courses, conferences and personal contacts are *very* expensive in the demands they make on the small number of those who have knowledge to transmit, and the small circle of contacts involved. Courses, conferences, consultations are all valuable and necessary exploratory and auxiliary methods of disseminating knowledge. They can never be the main channel.

Of all the means of communicating knowledge in the form of information the written word is the most important, *provided* always that the whole process of production, distribution, storage and use is efficient. This is the core of the problem.

TYPES OF DOCUMENTS

The broad groups at present are:

Books

Books are becoming very difficult to compile, or to find suitable authors for. They often lack comprehensiveness because of the large field, or present the limited view point of a single author, and have a small printing quantity 1,500 to 3,000 in most cases. They are out of date very quickly, having to be reprinted often.

TYPES OF DOCUMENTS, PUBLICATIONS AND DISTRIBUTION **TABLE 8**

Type	*Publication*	*Distribution*
Books	Individual publishers	Sale
Pamphlets DSIR	HMSO	,,
BRS Digests	,,	Distribution to architects
Ministries	,,	,,
BSI Codes and Standards	BSI	Sale
BSI Handbook loose-leaf	,,	Subscription
Institutes, Professional	Individually	Sale
Research Associations	,,	Free
Development Associations	,,	,,
Catalogues Manufacturers	,,	,,
Periodicals	Individual publishers	Subscription

Pamphlets

Pamphlets, although often excellent in a limited field, the large number of producers, with different methods of distribution (free on request, free distribution, sale, or subscription) make it difficult to know of the sources and keep up to date. They are almost impossible to handle in the office unless they belong to a binder properly designed to take them, like the MOE Bulletin and the BSI Building Handbook. Although they need to be collated according to subject, it is very difficult to do because of the many non-standard sizes **(Fig. 13).**

Catalogues from manufacturers and contractors

Almost impossible to handle in the office due to lack of standardization of format, size and presentation. Generally they have a low level of information, are changed and get out of date fast.

Periodicals

Periodicals contain some of the most valuable material which is difficult to use in the office because of lack of standardization of format, and of size, and because of the habit of not starting articles on right-hand page consistently. There are very inadequate annual indexes. Copies are not available a very short time after publication. The very large number of periodicals in the building field is shown in **Table 9.**

WEAKNESSES IN THE DISSEMINATION OF KNOWLEDGE AT PRESENT

Scatter

Useful information appears in far too many places for the user to deal with. For example, the information published by the Building Research Station, apart from 60 Digests, in the last five years has consisted of 348 articles in 131 different periodicals. Only a small fraction of this was, of course, meant for architects. **(Table 10).**

Very little collation or marshalling of basic information

This is due to the separation of the functions of Research, Development, Standardization and Production between different organizations. This may be unavoidable, but the need for them all to handle the distribution and publicity of their documents themselves *may not be.* It is often necessary to muster at the drawing board several documents from different sources. For example, the information on Damp-proof membrane materials appears in the Housing Manual, a BRS Digest, a British Standard and a number of trade leaflets. It is not possible to get the full story since all are incomplete in some way. All four, being written from a limited point of view or with a limited object, must be examined. This can rarely be done in practice; there are many examples of this kind. What is needed is an organization to review scattered information and present a synoptic view and a working reference.

BRITISH PERIODICALS OF SOME INTEREST TO PRACTITIONERS IN BUILDING **TABLE 9**

Compiled from those taken by the MOW, BRS, and RIBA Libraries.

A. Architecture and Design.
Architect and Building News. Architect and Surveyor. ARCHITECTS' JOURNAL. Architectural Association Journal. Architectural Design. Architectural Review. Architecture and Building. Architecture Illustrated. Ark. Art and Industry. Burlington Magazine. Bristol and Somerset Society of Architects. Cambridge Review. City Press. Design. House and Garden. RIBA Journal. Journal of the Society of Architectural Historians. Journal of the Society of Industrial Artists. Official Architect and Planning Review (Architecture and Planning). Devon and Cornwall Society of Architects Journal. Studio. Journal of the Institute of Registered Architects. West Yorkshire Society of Architects. South Wales Institute of Architects. Architectural Prospect. Royal Society of Arts Journal. Industrial Design.

B. Landscape and Planning.
Journal of the Institute of Landscape Architects. Journal of Commons, Open Spaces and Footpaths Preservation Society. Playing Fields. Town and Country Planning, Journal of Town Planning Institute. Town Planning Review. Journal of Planning and Property Law. Bulletin of Selected Appeal Decisions. Planning Outlook. Regional Plan Association (Bulletins). Planning and Civic Comments. Planning.

C. Surveying.
Journal of the Land Agents' Society. Journal of the Chartered Auctioneers and Estate Agents' Institute. Incorporated Auctioneers' Journal. Chartered Surveyor. Surveyor. Estate Gazette. The Quarterly Surveyor. Surveyor and Municipal and County Engineer. Crown Agents' Review.

D. Engineering
British Constructional Engineer. Chartered Civil Engineer. Chartered Mechanical Engineer. Civil Engineering and Public Works Review. Civil and Structural Engineers Review. Consulting Engineer. Journal of the Engineers Guild. Journal of the Institute of Municipal Engineers. Journal of the Junior Institute of Engineers. Royal Engineers Journal. Structural Engineer. Engineer. Engineering. Engineers Digest. Institution of Civil Engineers Proceedings. Institution of Municipal Engineers Proceedings. Concrete and Constructional Engineer. Society of Engineers Journal and Transactions.

E. Building
Builder. Keystone. Master Builder. Master Builders Journal. National Builder. Building Industries and Scottish Architect. Journal of the Institute of Clerks of Works of Great Britain Inc. Prefabrication. Contract Journal. Faculty of Building Review. House Builder. Institute of Builders Journal. The Operative Builder. Municipal Journal. Contractors Record.

F. Specialist
Royal Society for the Promotion of Health Journal. Institution of Electrical Engineers Journal. International Lighting Review. Light and Lighting. Combustion Boiler House and Nuclear Review. Heating and Air Treatment Engineer. HRF Bulletin. Heating and Ventilating Engineer. Industrial Heating Engineer. Journal of the Institution of Heating and Ventilating Engineers. FPA Journal. Fire Protection Review. Electrical Review. The Electrical Age. Illuminating Engineering Society Transactions. Journal of the Institute of Fuel. The Record (Institute of British Decorators and Interior Designers). Plumbing Trade Journal. Cleaning and Maintenance. Fire Surveyors Bulletin. Fuel Efficiency. Industrial Heating Engineer. Steam Engineer. Water and Sanitary Engineer. Chemical Engineering. Fire. Modern Transport. Motor Transport. Water and Water Engineering. Electrical Times. British Institute of Radio Engineers Journal. Electrical Engineering Abstracts. Electrical Engineering. Fuel Abstracts. Decorator. Geotechnique. Institution of Electronics Proceedings. Institution of Mechanical Engineers Proceedings. Institution of Sanitary Engineers Journal. Lighting Service. Plumber. Royal Society for Promotion of Health Journal. Royal Institute of Public Health and Hygiene Journal. Water and Sewage Works. Modern Refrigeration.

G. Products.
Wood. Woodworkers Journal. The Roofing Contractor Reinforced Concrete Review. Painting and Decorating. Plastics. British Clayworker. Building Equipment News. Building Materials (Components and Equipment). Building Materials Producers Weekly Information Sheets. TDA Quarterly. Timber Technology. Stone Information Sheets. Concrete Quarterly. Magazine of Concrete Research. Brick Bulletin. Journal of the Iron and Steel Institute. Light Metals Bulletin. ZDA Abstracts. Aluminium Courier. Aluminium News. Carpet Review. Furnishing. Jute and Canvas Review. Building Materials Digest. Light Metals. Metal Industry. Nickel Bulletin. Oil and Colour Chemists Association Journal. Paint Manufacture. Research Association of British Paint, Colour and Varnish Manufacturers. Rubber Abstracts. Rubber Developments. Society of Glass Technology Journal. Tin and its Uses. Zinc Bulletin.

Lack of standardization of the means of handling information

There is little support as yet for the standardization of size, and for hole punching and no authoritative classification accepted and published for the producers of information to use, as is done in other countries.

Lack of aids to finding information

Essential aids to finding which are not generally available of sufficiently high standard are:

The index of subjects in DSIR publications on building.

An adequate dictionary of Building Technology.

A comprehensive directory of Sources of Information.

A comprehensive directory of Manufacturers' Names, Trade Names and Products.

As a matter of fact the most useful "aid to finding" is published by the Southern Federation of Building Trades Employers for its members.

No adequate machinery for collecting and publishing the results of experience

Research and Development must be balanced against the published results of experience. The establishment of more Study Groups with a proper outlet from the results of their work is required. The *Bouwcentrum* work is valuable here.

No adequate machinery to tap the resources of the professions

The rôle of the professional institute should include the organization and publishing of the results of work done by and on behalf of its members. The activities of the Engineering Institutes is interesting in this connection. See the table of expenditure on information services to members which are well-presented monographs and are available in fileable form. The Institute of Electrical Engineers produces 150 papers a year this way. This is achieved at the cost of £1 10s. to £1 15s. per member per annum. **(Table 11.) (Fig. 28).**

THE STORING AND USING OF INFORMATION BY PRACTITIONERS

Faults to be remedied

The over-riding aim to establish in future must be to promote the use of knowledge in practice, by presenting to the practitioner in the building field the information he needs at the moment he needs it. It can only be achieved by a massive co-operative effort and the emergence of a new organization representing

ANALYSIS OF ARTICLES IN PERIODICALS PRODUCED BY BRS 1953-57 TABLE 10

As an example of the scattering of information taking place analysis of Annual Reports shows information published by BRS has appeared in 131 periodicals in five years.

	57	56	55	54	53
Acta Crystallographica	1				
Royal Society of Arts Journal	1		2		
Education Abstracts	1				
The Chartered Surveyor	12	1	2	1	
The National Builder	4	1	1		
Claycraft	1	1		1	
Brick Bulletin	1				
Ziegelindustrie	1				
Transactions of the British Ceramic Society	3	4		3	1
Electrical Times	1				
Royal Society of Health Congress Proceedings	1				
Royal Institute of British Architects' Journal	2	4	4	5	3
Institution of Heating and Ventilating Engineers' Journal	2	1	3	4	4
The Builder	7	2	7	6	5
THE ARCHITECTS' JOURNAL	5	4	5	5	
Chemistry and Industry	4		1		1
Food Manufacturing	1				
Floors (suppl. to Building Materials)	3				
The Illuminating Engineer	4				
Nature	1	1			1
Ergonomics	1				
Engineering	1	1		2	2
The Plumber	1			1	
Keystone	1				
The Engineer	1				
Royal Institute of Chemistry Journal	1				
Proceedings of International Conference on Soil Mechanics and Foundation Engineering	2				
Journal of Institution of Water Engineers	2		1		
The Magazine of Concrete Research	1	2			1
Concrete Construction Engineer		1			
The Times		1			
Cement and Lime Manufacturing		1			
Journal of the Registered Plumbers' Association		1			
Journal of Industrial Economics		1			
Times Science Review		1			
Journal of the Iron and Steel Institute		1			
Housing Centre Review			2		
Bristol Evening Post			1		
Compte Rendu 27th Congres International de Chimie Industrielle			3		
British Engineer			1		
Silicates Industr.			1		
British Housing and Planning Review			1		
Penguin Science News			1		
Architectural Design			2		1
Conference on Correlation between Calculated and Observed Stresses and Displacements in Structures			3		
Plumber and Decorator			1		
Annales de L'Institute Technique du Batiment et des Travaux Publics			1		
Advanc. Sci.			1		
Prefabrication			1	5	
House Builder			1		
Woodworker			1		
Byggnadsvarldcn			1		
Journal of Psychology			1		
Byggmasteren			1		
British Trade Journal and Export World			1		
Proceedings, Institution of Civil Engineers			2	2	2
Journal of the Institute of Clerks of Works			1		
Fuel Efficiency			1		
The Scotsman			1		
Technique			1		
Noise Control			1		
Journal of the Institution of Municipal Engineers			1		1
Journal of Plumbing Trades Union		1	1		
The Decorator			1		
Reinforced Concrete Review			1		
The Structural Engineer			1	2	2
The Manchester Guardian				1	
Transactions of the Illuminating Engineers Society			1	3	
Architect and Building News				3	
The Surveyor				3	
Nirman				1	
UN Housing and Town and Country Planning Bulletin				3	
Proceedings, Conference on Tropical Architecture				2	
Architecture and Building				1	
Civil Engineering and Public Works Review				1	
Meteorological Magazine				1	
Water and Sanitary Engineer				1	
Plumber				1	
Parthenon				1	
Architectural Review				1	
Contractors Record				2	
Tidskrift for Ljuskultur				2	
Time and Motion Study				1	
Manager				1	
Annali di Chimica				1	
Paint				1	
British Construction Engineer				1	
Cement, Lime and Gravel				1	
Building Materials Digest				1	
Proceedings, International Council for Building Studies and Documentation				3	
Proceedings, Symposium on Concrete Shell Roof Construction	1				
Light and Lighting	1	1	1	1	
International Congress on acoustics	1				
Financial Times	2	1	1	1	
Building Materials	1				
Journal of Applied Chemistry	1				
The Scotsman Monthly Review	1				
International Association for Bridge and Structural Engineering Publications	1	2			
Town and Country Planning	1		1		
Cost Accountant	1				
Symposium on Bond and Crack Formation in Reinforced Concrete. Proceedings	1				
Journal of Scientific Instruments	1	1		3	1
Geotechnique	1	1	2	1	3
Institution of Public Health Engineers Journal	1				
International Hotel Review	1				
Annales d'Optique Oculaire	1				
Journal Optical Society (America)	1	1		1	
Quarterly Journal Royal Meteorological Society	1		1		
Clay Min. Bulletin	1				
Municipal Journal		2		7	2
Ophthalmologica		2			
RILEM Symposium on the Field Observation of Structures		2			
Journal of the Institute of Fuel		3			
Architects Year Book		1			
British Cast Iron Research Association Conference		1			
Contract Journal		3		1	3
British Clayworker		1			1
Modular Quarterly		1			
British Chemical Engineering		1			
Acustica				1	1
Association of Rural District Council Surveyors Journal				1	
Journal of Industrial Economics				1	
Journal of Royal Sanitary Institute				2	
Civil Engineering				1	
Weather					1
The Illuminating Engineer (USA)					1
Indian Concrete Journal					1
Ideal Home Magazine					1
Cement and Lime Manufacture					2
British Constructional Engineer					1
130 publications	87	54	70	95	42

Total number of articles published 348

ANALYSIS OF EXPENDITURE ON PUBLICATIONS BY ENGINEERING INSTITUTES **TABLE 11**

Institution	Corporate membership	Non-corporate membership	Total annual expenditure	Expenditure on publications		Subsidy from annual budget		
				Salaries	Printing and distribution	Subsidy from budget	Per cent of total expenditure	Per head of total membership
			£	£ s. d.	£ s. d.	£ s. d.		
I.E.E.	22,952 (1.5.58)	21,365 (1.5.58)	205,604	20,000 0 0 (approx.)	90,516 0 0	34,577 0 0		
I.MECH.E.	26,741 (31.12.57)	21,218 (31.12.57)	195,501	18,806 5 10	84,183 7 3	72,255 11 7	37%	£ s. d. 1 10 0
I.CIV.E.	14,544 (31.12.57)	7,308 (31.12.57)	149,585	10,055 3 0	51,248 0 0	38,240 15 5	25·5%	1 15 0

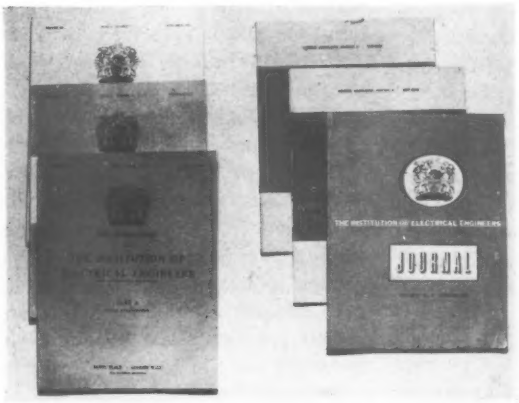


Fig. 28. The publications of the Institute of Electrical Engineers. *The Institutions of Civil, Mechanical and Electrical Engineers have all developed large-scale information services. Informative articles or reports are all published separately so that they can be filed. News and council business is published in a house journal. Corporate action by Institutions has produced a large output of high quality material.*

users of information. To achieve this aim the following will be necessary:

1. To give practitioners a pattern of office reference filing, according to which they can arrange their collection of informative documents.
2. To encourage the publishers to edit their documents to fit into that same pattern.
3. To encourage the producers of knowledge to entrust their results to editors who accept the pattern.

The pattern for office reference filing by practitioners should be made possible through the standardization of:

Format

Only two types of documents are really manageable in the practitioners' office—books, and papers for filing, *not* pamphlets, which are unmanageable.

Size of documents

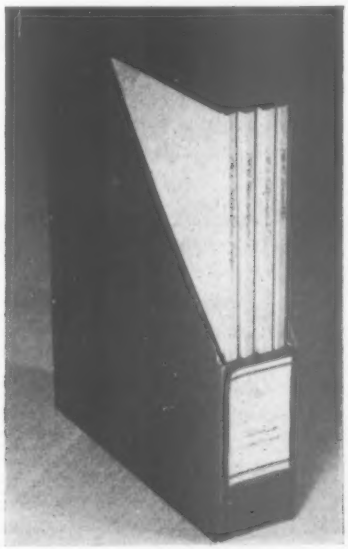
This is basic for all improved filing. The preferred size for most papers is A4 in the International "A" series now accepted and used by the BSI and other organizations in this country.

Classification

This is of the same fundamental importance as size and the acceptance of one agreed classification would enable the references to be printed on all documents, simplifying office work considerably.

Modern filing equipment

The wide acceptance of the above would make possible the use of modern filing equipment in a far more efficient way than is possible at present.



Figs. 29 and 30. Filing equipment (*Standard Swedish Equipment*). *Simple equipment with one file for one subject. One box with a group of subjects is easy to handle in the office.*

The Need for Co-ordination of Effort and Standardization of Means

A PROPOSED BUILDING INFORMATION COUNCIL

The picture which emerges from these studies by the two ARCHITECTS' JOURNAL Research Fellows on "Information for the Architect" has shown the following:

The increasing size of research effort which is aimed at producing new knowledge in the building field.

As a consequence, there is a continuous release of new possibilities for development work and with this the need for further work of standardization and codification, all producing more documents.

There is an increasing output of documents from many sources, DSIR, Research Associations, Development Associations, Periodicals, and Trade Literature.

There are great difficulties in the way of finding, obtaining, filing and using the great number and variety of information documents needed in the practitioners' office. As the majority of offices are small, they will never have the help of a librarian and must rely on a good filing system, easily maintained with ready-made indexes and directories of sources made available from outside the office.

There is a very small feed-back of knowledge from practice and experience into the common pool of information. In this respect we are far less well organized than the field of engineering. There will be an increasing need in the future to organize the knowledge gained by experience and study and publish it as an Information Service or as Proceedings similar to the Engineering Institutions.

The need of the future must surely be for a far greater co-ordination of effort in disseminating knowledge. Judging from experience in other countries the necessary co-ordination can best be brought about by the setting up of an organization to represent users of information and to act for them in co-operation with producers of information.

Such a *Building Information Council* would need to be strongly supported by the RIBA, the ICE, the RICS, and the NFBTE, since many of the problems are common to all. It would also need the active support of the Research Associations, Development Associations and Building Material Producers and have close links with DSIR and the Trade Press.

An essential requirement of such a Council would be its foundation as a non-profit making body set up to give service through objective, unbiased information. The composition of the Council must ensure that.

Two organizations of this kind in Europe which are worth close study are the *Svensk Byggjanst* and the *Bouwcentrum*. The *Svensk Byggjanst*, Stockholm, was founded in 1934 by a number of technical societies and associations for research and development work, by the Association of Engineers and Architects and by the periodical *Byggmastaren*.

This organization, which possesses a library, an exhibition and an inquiry office, acts as the one organization in Sweden responsible for the distribution of information in the building field and undertakes the work of putting over the results of research on behalf of the State Committee for Building Research (SNB). It publishes a review of current publications with abstracts, and one of the best building catalogues of products and building machines in Europe. This is fully edited by the centre, not by advertising agents, and contains a high standard of objective information based on tests. There are two similar centres in Goteborg and Malmo, and small centres served with information and indexes from the centre are planned.

The *Bouwcentrum* in Rotterdam was opened in 1949 as the centre of information for the building field, and has quickly developed an unrivalled reputation as an International Centre. In addition to the usual services of exhibition and inquiry service, the *Bouwcentrum* acts as a co-ordinating body for the dissemination of publications on all subjects in the building field, functional studies of buildings, technical and physical problems of building, execution and management. Its publications are of a high standard, and notable amongst recent publications in English is a functional study of housing. It acts as a co-ordinating centre to initiate research and studies, forming study groups of practitioners which are provided with technical staff and facilities for research and experiment, and undertaking to publish results of this work in an established information service with an established distribution by subscription. Thus the complete chain of research, study, experiment, publication and dissemination is achieved by one organization.

The principal difference between these centres and our Building Centre in England, which was established before either of the two mentioned, is that it has a much more limited activity. Svensk Byggjanst and Bouwcentrum are both national centres, with the job of putting over the results of research to the building industry and collecting and publishing objective information on all subjects. The exhibition of products and answering inquiries is only one part of the job.

In the light of the experience of these two organizations, it is now necessary to examine more closely a possible programme for a Building Information Council in the UK.

THE PROGRAMME FOR A BUILDING INFORMATION COUNCIL

What has been said previously has stated the case for co-ordination of effort in tackling the problem of information for the field of building.

The programme for such an effort would include the following:

General

To set the pattern for organizing the dissemination of

information in a form that is most helpful to the users, and to represent a users' or consumers' point of view to all producers of information.

To co-ordinate the efforts of all those producers of information who are members and to provide practical means of dissemination to reduce the present waste of effort caused by scattering.

To collect and publish the results of experience from all practitioners in the field of building, and to publicize and disseminate such publications as are produced by member organizations from time to time.

It does not seem necessary that a Building Information Council should act as a central publishing organization for all information as was envisaged in the '30s, although the central distribution of publications as a service would be necessary.

The setting up of regional information centres

Regional Centres of several kinds will be required in the future in Regional bodies, Universities, Technical Colleges and large offices. Some may need to give an inquiry service, and others may just need to organize the best material and possess first-class indexes for the inquirer to use himself to find what he needs.

These centres will need at least:

A full set of official publications.

A small selection of periodicals to save space.

First-class, classified, subject and author indexes in five-year blocks.

The indexes require skill and expense too great to manage locally, but could be done centrally on cards. Periodical material is best dealt with by the use of micro-films on classified cards, of the carefully selected periodical articles kept in the central organization. Micro-film cards can be sent out in batches to be filed, can be easily read by a cheap new viewer and can be enlarged to provide copies very cheaply. In a small local centre the user could quickly look through all the best periodical material on any subject and get copies immediately without writing away. The equipment for such a service has only recently been produced and made available, but it is already in use in several European countries.

Improving the quality and usefulness of publications

Great improvement is needed to ensure:

Direct, simple, descriptive language in technical publications.

The use of standard terminology.

Visual presentation for technical papers, articles, digests, advisory leaflets and trade catalogues.

Contents and data of high standard.

To ensure this the following guidance to producers of information is necessary:

A guide to authors such as is published by the Institute of Electrical and Mechanical Engineers.

Up-to-date glossaries of terms.

An exposition of the principles of visual presentation, such as was published by the F. W. Dodge Corporation for the producers of catalogues in the American Sweets Service.

A detailed study of the contents of catalogues and the data required by users on different products. Such a study was carried out by the *Svensk Byggjanst* to ensure the high standard of its comprehensive building catalogue.

To encourage and promote standardization of documents

The most important points being:

Paper size .. .. for satisfactory filing.

Classification .. for simple handling in the office.

Hole-punching .. for standard equipment.

Loose-leaf methods for keeping papers up to date.

This would be especially valuable for Bye-laws and Codes of Practice. The German Building Regulations are published in loose-leaf form.

To publish aids to finding information

The following aids are essential and none exist in an adequate form:

A catalogue of basic references for the office in classified order.

An up-to-date glossary of terms for building.

A subject index to all Government publications on building.

A full directory of organizations in the building field:

Who they are,

What they do,

What they publish

A full directory of building materials producers.

An index of names and addresses of the firms.

An index of product names, *e.g.* plaster, gypsum.

An index of trade names, *e.g.* "Sirapite."

To review the most useful current publications and publish a ready-reference guide

To set up a machinery to review new publications and periodical articles as they appear and present a brief summary and appraisal in a form that allows a cumulative index to be kept easily.

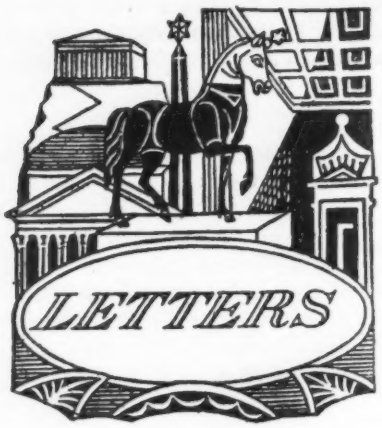
This problem was examined carefully by a study group of architects who met together with the AJ Research Fellow for a period of six months. They concluded that such a review would be a valuable service not adequately provided for at present. The most important point being the skill and discrimination used in selecting the publications. The basic work of noting new publications is done by the RIBA and MOW libraries, but a selection of only the most valuable references for practitioners needs to be made.

Some future problems

The wider establishment of tests for materials and components, and publicity for the tests which may be required by the purchaser.

To explore the possibility of a consumers' organization to test and publish the results of tests on materials and components.

The possibilities of improving the quality and reducing the price of teaching texts by a co-ordinated approach to each subject. The Danish loose-leaf Building Book and the Swedish four handbooks called Building, both published since the war, show what can be achieved by a co-ordinated effort.



Geoffrey E. Dunn
Managing Director, Dunns of Bromley

Michael Haskoll, Student R.I.B.A.

John H. Brown, A.R.I.B.A.

"Architecto-Organistic-Plasto-Whatnot"

Alan E. Anderson, Student R.I.B.A.

F. J. Press, L.R.I.B.A.

Students' Supplement—BASA

SIR: I was delighted to read that you are to devote a certain amount of space for use by the British Architectural Students' Association. In my opinion, this is the best thing you have done for years.

GEOFFREY E. DUNN.

Bromley.

SIR: I find John Outram's article "The Architect as a Designer" (AJ, March 19) so comprehensive and sweeping as to defy generalized comment. It is possible to sympathize with his desire to examine the complete range of influences within which the modern designer must work, and his sensible attempt to set down these influences together with the apparent contradictions they contain. However, his refusal to sum up, even if that meant using "a few crisp phrases," is probably the most telling point he makes, for to do this he would have to thread his way through to some basic conclusions.

This is a "modern" attitude which some designers and theorists adopt. They complain of the complexities of the problem and are unable to systemize their beliefs, so that their method of design necessarily becomes tortuous and woolly.

Since something is always changing, the suddenness of change which John Outram writes about is constantly with us. Unless we have faith in ourselves and draw conclusions these changes will leave us further and further behind.

We must seek out the common factors of these contradictions, and the only way we can do this is to formalize them into ideas which may be "crisp" but are at least definite enough to be recognizable.

MICHAEL HASKOLL

London.

SIR: Congratulations on your first BASA Supplement to the AJ (March 19).

Are you claiming any journalistic record for printing such a concentrated collection of worthless reading in so few pages? Seldom, no, never, can bewildered readers have been subjected to such a searching demand on their intelligence in their futile efforts to discover either the meaning or useful purpose of this supplement.

One can only assume, that in desperation an overcrowded profession is trying to discourage architectural students from progressing any further in their studies, by leading them to believe that there is more in architecture than even the AJ can print.

JOHN H. BROWN

Ramsgate.

SIR: It would be most helpful if the students of BASA would provide a glossary of difficult or unintelligible terms, so that their articles may be comprehended by less erudite readers. For example, may we know what is meant by the following:

1. Autonomous feedback systems;
2. Perhaps this longing for rationalism of form can be supplied by topology and the ever widening fields of intuitive geometry;
3. The value-structure of his fabrication-group;
4. The rejection of an atomistic-deterministic philosophy in favour of a concept of reality of the interconnective "Gestalt" type;
5. An ad-maddened mass-telly society jiving wildly under its polychromatic plastic city-skin;
6. This ideologic, socio-plastic diagrammatic way.

Alternatively, could the articles be written in English?

ARCHITECTO-ORGANISTIC-
PLASTO-WHATNOT

London.

SIR: The very interesting new student feature published last week is a welcome innovation in your JOURNAL. It is a pity, however, that the basically simple ideas displayed therein should be cluttered up and successfully hidden by a mass of irrelevant gibberish.

Many of the points discussed by the contributors are sensible and show intense imagination. If the articles following are of the same standard they will be excellent. That is, if they are not again obscured by pseudo-modern art language.

ALAN E. ANDERSON

Sheffield.

Rugby Town Hall

SIR: ASTRAGAL in his comments regarding Rugby Town Hall (AJ, March 12) repeats two completely untrue statements, and I should like to correct his remarks as follows:

1. The plans are not 20 years old. The whole scheme has been revised and completely new drawings prepared within the last 18 months.
2. The Borough Engineer's Drawing Office is not overcrowded at the moment and the new accommodation for this purpose is not smaller but larger.

He also prints out of context two quotations from a short speech of mine. This is, of course, a favourite trick of journalists and as usual it completely distorts the full meaning of what was actually said.

No one in Rugby has ever stifled criticism of this scheme and if ASTRAGAL wishes as an architect to give your readers the benefit of his views he could have consulted his brother architects (the eminent firm appointed on the suggestion of the RIBA) and seen the detailed drawings, and perspective of what in my opinion are far from being a group of "Dreary" buildings.

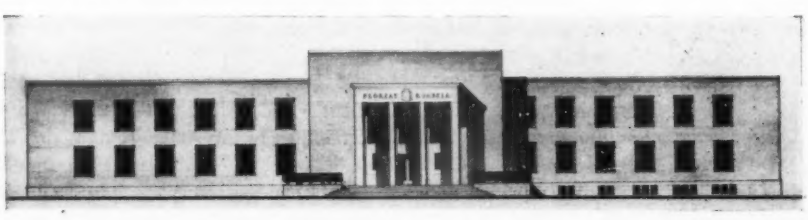
He apparently prefers to hurriedly endorse the views of a young municipal engineer (a former employee of Rugby Corporation) an expert I believe on Sewage Disposal Plants.

F. J. PRESS

Rugby.

The Editors reply: ASTRAGAL did not assert as a fact that the plans were 20 years old, or that the accommodation for the drawing office would be less: he reported, truthfully, that this had been said, and is glad to publish Mr. Press's correction. To help readers to judge the merits of the dispute we again publish the perspective.

The design for Rugby Town Hall referred to by Mr. Press.



technical section

THE INDUSTRY

Brian Grant describes a thermostatically controlled mixing valve, a burglar alarm and venetian blinds.

Mixing valves

A new type of water mixing valve has a thermostatic control by which the required outlet temperature can be set on a dial, and this is maintained by a control element filled with alcohol instead of the more usual bi-metal strip. Provided that the temperature of the hot water supply is high enough, the outlet temperature remains constant irrespective of temperature and pressure variations in the hot and cold supplies. The current range is produced in sizes from ½ to 1½ inches, the smallest, with outlet stopcock and unions costing about £15, though considerably less in quantities. (*Belco Manufacturing Co. Ltd., 63 Ebury St., London, S.W.*1.)

Burglar alarms

Judging by press reports burglars find it comparatively easy to clean out a house while the family is glued to the television set. It would seem, therefore, that a reasonably priced alarm bell should sell in quite large quantities. Priced at only 7 guineas, with five protective switch units, the Ringo alarm is mains operated through a transformer, and it is recommended that the alarm units should be fitted to all ground floor doors. If upper floors and windows are also to be protected extra switch units cost only 4s. each. All of them work on the closed circuit principle, so that the breaking of the contact operates the alarm bell, and there is also a short delay unit for fitting to the front door so that when the owner returns he has a chance to switch the system off before the alarm bell rings. The system has ben designed mainly with the domestic user in mind, but there seems to be no reason why it should not be equally suitable for the small shop or factory. (*Maestrovox Ltd., Electron Works, Willow Avenue, Uxbridge, Middlex.*)

Venetian blinds

In the new Sunway Vevo venetian blind the usual tapes are replaced by cords of thin Terylene with a breaking load of about 120 lb., about the same as for tapes. The advantage is that the cords are almost invisible, there are no tapes to keep out light, and the thinness of the cords allows the slats to be properly cleaned. The firm makes blinds in a number of colours, all of which can have matching cords. I am told that quite a lot of the public like a really virulent blind with no two slats the same colour, but I hope no architect will allow a client to get away with this sort of thing. (*Venetian Vogue Ltd., Slough, Bucks.*)

8 ESTIMATING

current wage rates, market prices and measured rates

There was a 1d. per hour wage increase in February which has led to a small increase (mostly in the larger items) in the measured rates. On the materials side, there have been increases in stock bricks, metal windows and glass, and another decrease in asphalt. There has also been some increase in the price of roofing materials, but since competition is still keen, this has not affected the measured rates. Tenders for roofing are, if anything, slightly lower.

Wage rates

Rates of wages rose on February 2, 1959, and are now as follows:

	Craftsmen	*Labourers*
	s d	s d
London District		
Within 12 miles radius	4 10½	4 4
From 12 to 15 miles radius	4 10	4 3½
Liverpool and District	4 10½	4 4
Grade classifications		
A	4 9	4 2½
A1	4 8½	4 2

Market prices

Prices are given for the major items in each trade, they are intended as average prices and include delivery in the outer London area. They do not include overhead charges and profit.

Measured rates

Prices are for work carried out in the Outer London area and include 10% to cover overhead charges and profit except in the case of work which would be carried out by specialists when 5% has been allowed.
The prices given in italic represent the total value of the materials included in the measured rates, including an allowance for waste and 10% for overhead charges and profit.
The cost of labour included in the measured rates (including its proportion of overhead charges and profit) can be ascertained by subtracting the prices in italics from the prices in heavier type.

Abbreviations

Inches: in. Feet: ft. Yards: Y. Yards cube: YC. Yards super YS. Feet cube: FC. Feet super: FS. Ton: T. Feet run: FR. Thousand: M. Square: Sq. Number: No. Hundredweight: C. Pound: lb. Gallon: Gal.

Preliminaries

To all estimates based on prices for measured rates add, if required, for Preliminaries, water, insurances, etc., depending on the nature of the job.

Price changes

* Shows changes in market prices and measured rates since the last issue (December 25, 1958).

Ascot and the Se-Duct make history

Ascot and the new Se-Duct system of vertical duct flueing made architectural history on October 27th, 1958, when a block of 160 new flats was officially opened at Anne Street, Gateshead.

Built for the Gateshead Corporation, the flats are the first multi-storey dwellings to be constructed with the Se-Duct replacing traditional flues for high efficiency room-sealed gas appliances such as the Ascot 727 water heater. As a result, improved layout and considerable savings in capital installation costs have been achieved.

Thanks to the Se-Duct system, full heat services from high efficiency gas appliances are available at the Anne Street flats at a low running cost comparable with that of a solid fuel system. These comprise 160 Ascot 727 'multipoints' and 30 Ascot 503/2 sink water heaters, as well as gas fired drying cabinets, cookers, radiant/convector fires and washboilers

Diagram shows how the Se-Duct is planned into a multi-storey building, and how the various types of sealed gas appliances can be arranged.

Borough Engineer & Surveyor & Town Planning Officer
G. F. WINTERS, A.M.I.C.E.

Regd. Trade Mark
ASCOT

A350

ASCOT GAS WATER HEATERS LIMITED, 255 NORTH CIRCULAR ROAD, NEASDEN, N.W.10

technical section

EXCAVATOR

		s	d
Market prices			
Carting away, up to 8 miles	YC		
Hand loaded		7	0
Machine loaded		6	0
Hardcore	YC	10	0
Ashes	YC	11	6
Measured rates			
Hand excavation and disposal			
NB: the following are applicable to excavation in heavy soil.			
Excavating over site to remove top soil and vegetable matter, 6 in. deep	YS	1	3½
As above, 12 in. deep	YS	*2	7
Excavating over site to reduce levels and getting out	YC	*10	4
Excavating for basement and getting out	YC		
Depth up to 5 ft.		*11	7
Depth between 5 & 10 ft.		*16	10
Depth between 10 & 15 ft.		*22	0
Excavating surface trenches and ditto	YC		
Depth up to 5 ft.		*14	3
Depth between 5 & 10 ft.		*19	5
Depth between 10 & 15 ft.		*24	7
Excavating basement trenches and ditto	YC		
Commencing 5 ft. below existing ground level		*19	5
Commencing 10 ft. below existing ground level		*24	7
Commencing 15 ft. below existing ground level		*29	9
Wheeling surplus excavated material not exceeding 100 yards and depositing	YC	*5	2
Add to last for:			
Roughly spreading and levelling	YC	1	6½
Spreading, levelling and consolidating to make up levels	YC	*3	4
Returning, filling-in and well ramming excavated material around foundations	YC	*4	7
Loading surplus material into lorries and carting to tip. not exceeding 8 miles	YC	*14	10
Excavating from spoil heaps selected top soil, wheeling not exceeding 100 yards, and spreading, levelling and consolidating, not exceeding 6 in. to receive turf	YS	2	3
Mechanical excavation and disposal			
Excavating for shallow surface excavation and loading into lorries or dumpers (using ⅜ yd. cube excavator)	YC	3	0
Excavating for surface excavation and removing, spreading and levelling not exceeding 200 yds. (using 6 yd. cube scraper)	YC	2	11
Removing excavated material and depositing, not exceeding 200 yds. (using 3 yd. cube dumper)	YC	2	2
Planking and strutting			
Planking and strutting to sides of surface or basement excavation	FS		
Depth up to 5 ft.			8
Depth up to 10 ft.			10
Depth up to 15 ft.		1	0
Planking and strutting to sides of surface and basement trenches	FS		
Depth up to 5 ft.			2
Depth up to 10 ft.			3½
Depth up to 15 ft.			4
Hardcore, etc.			
Hardcore filled-in in layers, each layer well rammed	YC	*20	7
		13	*9*
Bed of ditto, 4-in. thick	YS	3	5
		1	*6½*
Ash filled-in in layers, each layer well rammed	YC	21	4
		15	*10*

CONCRETOR

		s	d
Market prices			
Portland cement, 6 tons and over	T	113	6
Rapid hardening, 6 tons and over	T	124	0
¾-in. down, washed, crushed and graded shingle	YC	16	0
1½-in. ditto	YC	15	0
Sharp sand	YC	19	6
⅝-in. diam. mild steel rods to BS 785 delivered station	T	859	0
⅜-in. ditto	T	921	6
Measured rates			
Portland cement mass concrete in foundations etc.	YC		
1 : 12, 1½-in. " all-in " aggregate		*57	0
		35	*9*
1 : 3 : 6, 1½-in. aggregate		*66	7
		45	*3*
1 : 2 : 4, ¾-in. aggregate		*74	3
		53	*0*
1 : 1½ : 3, ½-in. aggregate		*77	0
		55	*9*
Add for: Working around rod or mesh reinforcement	YC	*5	2
Walls not over 6-in. thick	YC	*25	10
Walls 6-in. to 12-in. thick	YC	*18	2
Walls over 12-in. thick	YC	*12	11
Columns not over 72 sq. inches	YC	*49	2
Columns 72 to 144 sq. inches	YC	*38	9
Columns over 144 sq. inches	YC	*31	0
Suspended floors and roofs not over 4½-in. thick	YC	*20	8
Suspended floors over 4½-in. to 6-in. thick	YC	*18	1
Suspended floors over 6-in. to 12-in. thick	YC	*15	6
Beds not over 4½-in. thick	YC	*10	4
Beds 4½-in. to 6-in. thick	YC	*7	8
Beds 6-in. to 12-in. thick	YC	*2	7
Hollow tile floor of clay tiles 4-in. thick at 15-in. centres laid on formwork (measured separately), nibs filled in with concrete (1 : 2 : 4) and finishing top of tiles with bed of concrete 1½-in. thick including tamping around reinforcement (measured separately)	YS	*17	7
		10	*2*
Ditto, but tiles 8-in. thick	YS	*27	1
		17	*9*
Sundries			
Finishing concrete with trowelled face to receive linoleum	YS	1	3½
Applying horizontal damp-proof membrane of Synthaprufe in three coats to surface of concrete and blinding with sand to form key	YS	*5	10
		4	*1*
Supplying floor clips (p.c. 6d. each) and fixing	No.	1	1
Formwork			
Formwork including strutting easing and striking:			
Vertical faces of foundation	YS	*18	10
		9	*8*
Vertical faces of wall	YS	*19	5
		7	*0*
Soffite of floors not over 12-ft. high	YS	*19	3
		8	*8*
Sloping soffite of stairs	YS	*23	3
		9	*5*
Sides of columns	FS	*2	6
			10½
Sides and soffites of lintols and beams	FS	*2	8
		1	*0*
Add to the above for wrot formwork including rubbing down concrete	YS	*2	7
Reinforcement			
⅝-in. diameter mild steel rods, hooked, bent and tied and fixing	C	*68	10
		52	*2*
½-in.	C	*74	3
		54	*1*
⅜-in.	C	*81	0
		55	*10*

A Bilston ATLANTA will be perfect...

54" 60" 66" 61" 72"

WE HAVE AN EXHIBIT AT THE BUILDING CENTRE
26 STORE STREET WC1

NOW WHICH SIZE?

It's no problem! Whether the plan allows for a small or large bathroom, there is a Bilston Atlanta that will fit. Selected for the Design Centre, the Atlanta is made in five sizes. Every home owner will enjoy the bath that has the famous Bilston finish and durability, and the skilful design that makes the Atlanta the safest, most comfortable bath of all. The Atlanta costs no more than an ordinary bath.

A BILSTON BATH

All this with the ATLANTA-

Flat bottom
the Atlanta flat bottom helps to prevent slipping . . . ensures comfort. Particularly suitable where a shower is to be fitted.

Safety
the low sides make the Atlanta safer for young and old. It can be fitted to give an overall height of only 16".

Taps
can be fitted centrally, or on either corner to facilitate installation and maintenance.

Fittings
the Atlanta is supplied with or without overflow . . . with or without hand grip. The feet can be adjusted to accommodate all types of trap, including the Bilston "Wasteflo" pre-fabricated waste, trap and overflow unit. *Also available with the Bilston O.P. Hand Grip specially designed to meet the needs of the elderly or infirm.*

Colours
the Bilston range includes white or the exact colour required for any decorative scheme.

BILSTON—the bath *SPECIALISTS*

- Atlanta
- Magna
- Cresta
- Marina
- Mermaid
- Bermuda

Bilston Foundries Ltd. Bilston, Staffordshire. Illustrated literature is available on request

technical section

Concretor continued

		s	d
½-in.	C	*94	10
		60	7
Steel wire mesh fabric weighing 4·32 lb. per yd. super and laying in concrete	YS	4	1
		3	5
Ditto weighing 6·57 lb. per yd. super	YS	6	0
		5	3
Ditto weighing 9·32 lb. per yd. super	YS	8	5
		7	4
Precast concrete			
Precast concrete (1 : 2 : 4) finished fair on exposed faces and hoisting setting and jointing:			
4½-in. × 6-in. lintols reinforced with one ½-in. rod	FR	2	9½
		2	3½
4½-in. × 9-in. ditto with two ½-in. rods	FR	4	3
		3	5½
Piling			
Reinforced pre-cast concrete piles, approximate prices for supplying, unloading, pitching and driving			
12-in. × 12-in. up to 30 ft. long	FR	35	0
14-in. × 14-in. up to 50 ft. long	FR	41	0
Sheet steel piling, ditto	T	1165 to 1230	0 0

BRICKLAYER

Market prices

Soft sand	YC	17	6
Hydrated lime	T	102	6
Plain Flettons	M	118	0
Second hard stocks	M	*315	0
Lingfield Engineering wire cuts Grade B	M	260	0
Hessian base damp-course to B.S. 743	YS	5	8
Damp course slates, 14"x 9"	100	76	3
Wall ties, galvanised	100	17	9
Partitions			
Clinker concrete, solid	YS		
2½-in.		4	4
3-in.		5	6
4¼-in.		7	0
Thermalite-Ytong	YS		
2½-in.		7	0
3-in.		8	5
4-in.		11	0
Hollow clay	YS		
2½-in.		4	8
(6 cavity) 3-in.		5	5
(ditto) 4-in.		6	10
Normal quality wood wool slabs	YS		
2-in.		8	10
2½-in.		10	2
3-in.		11	5

		s	d
Measured rates			
Reduced brickwork in cement lime mortar, Lingfields in cement mortar	YS		
Flettons		*33	6
		17	3
Second stocks		*54	9
		38	5
Lingfield Grade B		*51	11
		33	3
Half brick wall ditto	YS		
Flettons		*18	6
		8	2
Second stocks		*29	1
		18	10
Lingfield Grade B		*28	3
		16	1
11-in. hollow wall with 2-in. cavity and wall ties	YS		
Flettons		*38	2
		16	9
Second stocks		*59	4
		38	0
One brick wall built fair and pointed both sides.	YS		
Flettons		*40	3
		17	3
Second stocks		*61	6
		38	5
Lingfield Grade B		*57	7
		33	3
Sundries			
Extra over common brickwork for internal fair face and flush pointing	YS	1	5
Horizontal damp proof course of two courses of slates and bedding and pointing	FS	*4	2
		2	4
Horizontal damp proof course of hessian base bitumen	FS		11
			9
Facings			
Extra over ordinary brickwork with bricks P.C. 118s. per 1,000 for facings as described			
To solid wall in Flemish bond	YS		
Facings P.C. 250s per M		*15	11
		9	7
Facings P.C. 350s per M		*23	3
		16	11
Facings P.C. 450s per M		*30	6
		24	2
To cavity wall in stretcher bond	YS		
Facings P.C. 250s per M		*13	2
		7	4
Facings P.C. 350s per M		*18	8
		12	11
Facings P.C. 450s per M		*24	3
		18	5
Half brick wall in facings built fair and pointed on one side	YS		
Facings P.C. 250s per M		*30	6
		16	0
Facings P.C. 350s per M		*36	1
		21	6
Facings P.C. 450s per M		*41	7
		27	1

		s	d
Partitions			
Clinker concrete solid partition blocks and setting in cement lime mortar	YS		
2½-in.		*10	8
		5	5
3-in.		*12	11
		6	10
4½-in.		*16	0
		8	9
Thermalite-Ytong ditto	YS		
2½-in.		*12	9
		8	6
3-in.		*15	1
		10	3
4-in.		*19	2
		13	4
Hollow clay ditto	YS		
2½-in.		*10	9
		5	6
(6 cavity) 3-in.		*12	10
		6	9
(ditto) 4-in.		*15	10
		8	6
Wood wool slabs ditto	YS		
2-in.		14	1
		10	6
2½-in.		16	4
		12	2
3-in.		18	6
		13	9

DRAINLAYER

Market prices

Salt glazed stoneware pipes and fittings. " Best " quality:

Ordinary pipes	FR		
4-in.		1	7½
6-in.		2	5½
9-in.		4	4½
Bends	No.		
4-in.		4	10½
6-in.		7	3¾
9-in.		19	9
Pitch fibre pipe	FR		
3-in.		1	10¾
4-in.		2	6
6-in.		5	0¾
Cast iron s. and s. pipe to BS 437	YR		
4-in.		28	2
6-in.		41	3
9-in.		77	3
Spun iron s. and s. pipe to BS 1211, Class B	YR		
4-in.		13	3
6-in.		*21	4
9-in.		*35	10

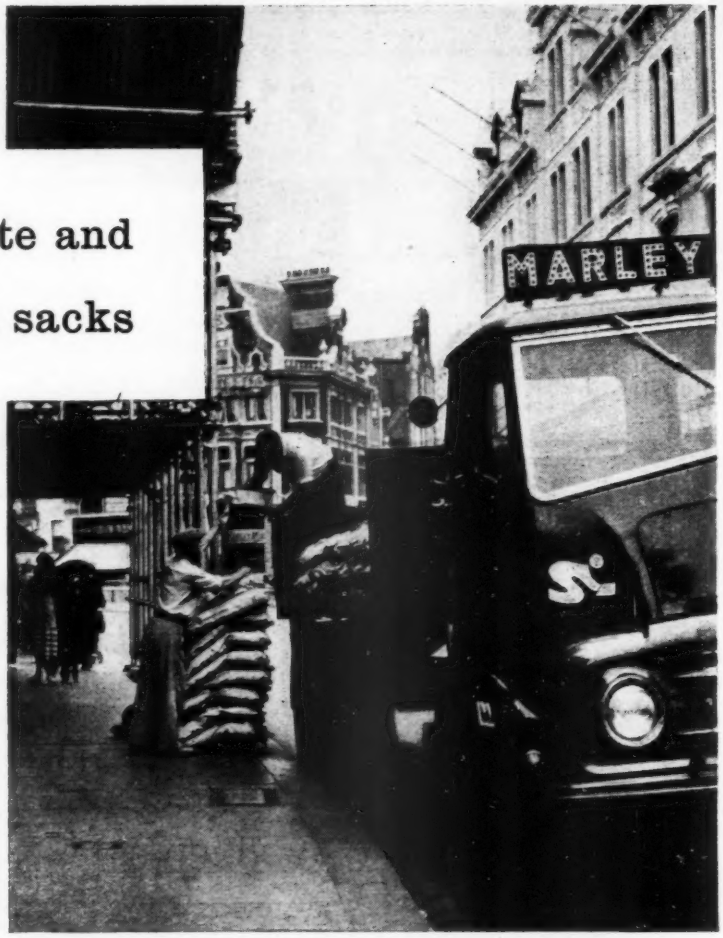
Measured rates

Trenches and beds

Excavate trenches by hand in heavy soil, including planking and strutting, part returning, filling and ramming and wheeling and spreading surplus, for pipes 4-in., 6-in. and 9-in. dia.	YR		
Average depth of trench	3-ft.	*17	3
	4-ft.	*23	0
	6-ft.	*39	9
Excavate trench as last but by mechanical trencher	YR		
Average depth of trench	3-ft.	*13	1
	4-ft.	*17	11
	6-ft.	*32	6
	9-ft.	*53	9

Ready-to-use concrete and mortar dry mixes in sacks

All the extra convenience plus absolute consistency yet GILBERT-ASH LTD. prove an actual saving



Gilbert-Ash Ltd. have already used over 150 tons of MarleyMix ready-to-use concrete and mortar mixes while carrying out the extension of shop premises at Richmond.

MarleyMix was originally chosen for all the concrete and mortar work because of the inaccessibility of the site, which lay behind existing premises—with sole means of access through a gown shop! The use of MarleyMix—apart from allowing this difficulty to be overcome—has ensured complete consistency in the highest quality and strength of the concrete and mortar. Yet these advantages have not cost anything —*in fact a saving of* 5/3 *per cubic yard has been achieved on the coarse concrete and approximately* 9d. *per yard super on the brick-laying mortar.* These figures take into account the total cost otherwise involved in the separate purchase, transport and handling of sand, aggregate and cement.

When materials storage is limited, specify MarleyMix. The mixes, in sacks of approximately 1 cwt. capacity, need nothing but the addition of water. Absolute control of ingredients ensures consistency and overcomes all the variations which occur with site mixing.

Marley Mixes include:

FINE CONCRETE
for all fine finish work.

COARSE CONCRETE
for infilling, path bottoming and similar work.

CEMENT MORTAR
for rendering over brickwork in contact with the earth. Cement screeding. Drainage work and general purposes.

BRICKLAYING MORTAR
with water-repellent qualities and excellent bond to bricks. Consistent colour of pointing is assured.

RENDERING/PLASTER UNDERCOAT
a cement-lime-sand mix, easy to apply, with good bond to wall and water-repellent qualities.

MARLEYMIX ready-to-use dry mixes in moisture resisting multi-walled paper sacks.

Deliveries can be pre-arranged to any required schedule
The Marley Tile Company Ltd.
Stifford Road, South Ockendon, Nr. Romford, Essex. South Ockendon 2201

A **MARLEY** *product*

MM/9/7

technical section

Drainlayer continued

		s	d
6-in. concrete bed and benching for 4-in. pipes	YR	*9	3
		5	5
As above, for 6-in. pipes	YR	*10	9
		6	4
6-in. concrete bed and surround for 4-in. pipes	YR	*15	0
		8	10
As above, for 6-in. pipes	YR	*18	1
		10	8

Stoneware drains

" Seconds" quality salt glazed stoneware drain pipes and laying and jointing in trench

	FR		
4-in.		2	5
		1	8
6-in.		3	6
		2	6
9-in.		5	9
		4	7

" Best " quality salt glazed stoneware drain pipes and laying and jointing in trench

	FR		
4-in.		2	9
		2	0
6-in.		3	11
		2	11
9-in.		6	6
		5	4

Extra over " Seconds " quality pipes for:

Bend	No.		
4-in.		3	9
		3	3
6-in.		5	6
		4	11
9-in.		16	0
		15	4
Single junction	No.		
4-in.		6	6
		5	0
6-in.		9	4
		7	6
9-in.		*20	2
		18	0
Double junction	No.		
4-in.		10	10
		8	4
6-in.		15	7
		12	6
9-in.		*30	8
		27	1

Stoneware gullies

Salt glazed trapped gully with galvanized grating including setting gully on and surrounding with concrete and jointing to drain No.

6 in. × 6 in. grating 4 in. outlet		*26	5
		22	2
9 in. × 9 in. grating 6 in. outlet		*48	11
		43	6

Grease and mud gully 9-in. diameter with 4-in. outlet galvanized bucket and grating and setting gully on and surrounding with concrete and jointing to drain No. *92 0

80 10

Road gully with 6-in. outlet including setting on and surrounding with concrete and jointing to drain No.

15-in. dia. 30-in. deep		*108	7
		85	8
18-in. dia. 48-in. deep		*216	6
		178	7

	s	d
Pitch fibre drains		
Pitch fibre drain pipes and laying and jointing in trench FR		
3-in.	2	3
	2	1½
4-in.	2	11½
	2	9½
6-in.	5	10
	5	8
Extra over pitch fibre pipe for 45° bend No		
3-in.	16	3
	15	4
4-in.	22	8
	21	10
6-in.	44	3
	43	3
Cast iron drains		
Cast iron spigot and socket drain pipes and laying and jointing in trench FR		
4-in.	13	1
	11	0
6-in.	19	1
	16	4
9-in.	36	4
	30	7
Extra over cast iron pipes for bend No.		
4-in.	*30	10
	24	7
6-in.	*72	2
	62	10
9-in.	*184	7
	168	6
Spun cast iron spigot and socket drain pipes and laying and jointing in trench FR		
4-in.	7	6
	5	4
6-in.	*11	7
	8	9
9-in.	*20	9
	14	10
Cast iron gullies		
Cast iron gully trap with high invert and setting on and surrounding with concrete and jointing to drain No.		
4-in.	*45	4
	36	6
6 in.	*110	8
	97	8
9 in.	*245	8
	228	3

ASPHALTER

Measured rates

Damp proof course and tanking

		s	d
½-in. vertical damp proof course in two thicknesses on brick or concrete	YS		
	BS1097	17	10
	BS1418	*23	8
½-in. horizontal damp proof course in one thickness on brick or concrete	YS		
	BS1097	*11	0
	BS1418	*15	3
Vertical tanking in three thicknesses	YS		
	BS1097	*25	9
	BS1418	*32	7
Horizontal tanking in three thicknesses	YS		
	BS1097	*18	5
	BS1418	*28	5

Roofing

½-in. flat laid to falls in two thicknesses on and including felt underlay	YS		
	BS988	*13	1
	BS1162	*21	0
6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove	FR		
	BS988	*2	1
	BS1162	*2	7
6-in. fascia with solid water check roll at top and undercut drip at bottom	FR		
	BS988	*4	2
	BS1162	*4	9

PAVIOR

Market prices

Granite chippings, ¼ in. to dust	T	49	8
Buff quarry tiles, 6 in. × 6 in. × ⅞ in.	YS	21	11
2-in. Neolite paving	YS	13	11

Measured rates

Cement and sand floated screed to receive pavings	YS		
¾-in.		*4	1
		2	3
1-in.		4	11
		2	11
1½-in.		*5	7
		3	5
Cement and sand paving trowelled hard and smooth	YS		
¾-in.		*4	7
		2	3
1-in.		5	5
		2	11
1½-in.		*6	1
		3	5
Granolithic paving laid on concrete	YS		
1-in.		7	5
		5	4
1½-in.		9	6
		7	0
½-in. red composition paving laid on prepared screed	YS	16	6
⅝-in. terrazzo paving laid on prepared screed	YS	38	4
⅛-in. rubber flooring and laying in rolls	YS	39	5
¼-in. rubber flooring and laying in rolls	YS	63	0
5/16-in. cork tile flooring, 12 in. × 12 in. and fixing with mastic and including polishing	YS	*39	5
⅛-in. thermoplastic tile flooring and laying-on screed	YS	12	0
		to	
		21	0
⅛-in. coloured linoleum and fixing with mastic to cement screed or boards	YS	*26	0

technical section

Pavior continued

		s	d
⅛-in. coloured linoleum and fixing with mastic to cement screed or boards	YS	*20	6
⅞-in. buff quarry tiles laid on prepared screed	YS	*37	4
⅞-in. blue black quarry tiles laid on prepared screed	YS	*35	6
2-in. Neolite paving laid on prepared bed, in random sizes and mixed colours	YS	*20	3
		16	*1*
12 in. × 12 in. anchor steel plates laid complete	YS	59	6

MASON

Market prices

Stone in blocks in truckloads at stations in the London area:

		s	d
Beer	FC	9	0
Portland	FC	9	2
Woodkirk Blue building quality	FC	17	11
Broughton Moor slate in blocks at stations in the London area	FC	65	0
Marble in blocks at works: Dove	FC	70	0
Roman stone	FC	70	0

Measured rates

			s	d
Stone and all labours in pilasters and quoins	FC	Portland	*54	10
		Beer	*52	3
Jambs	FC	Portland	*57	3
		Beer	*54	6
Lintels	FC	Portland	*58	3
		Beer	*55	6
Arches	FC	Portland	*67	6
		Beer	*64	3
Ashlar average 7-in. on bed with plain dressed face	FS	Portland	*31	6
		Beer	*30	0
Extra for each additional 1-in. thickness	FS	Portland	*3	6
		Beer	*3	4
4½ in. × 4 in. sill sunk, weathered, throated and grooved for water bar, set and jointed in cement mortar	FR	Portland	*10	2
		Beer	* 9	8
		Artificial	4	10
4 in. × 12 in. coping, weathered and twice throated	FR	Portland	*20	3
		Beer	*19	3
		Artificial	11	9

Marble and slate

		s	d
¾-in. Dove marble lining and fixing on brick backings	FS	38	10
¾-in. Roman stone lining	FS	38	10
¾-in. Broughton Moor slate lining	FS	35	9

SLATER, TILER AND ROOFER

Market prices

		s	d
Welsh slates, best quality 16-in. × 10-in.	M	*1116	0
20-in. × 10-in.		*2050	0
Best hand made sand faced plain tiles, 10½-in. × 6½-in.	M	*337	0
Grey corrugated asbestos cement sheets	YS	7	0

Measured rates

		s	d
16-in. × 10-in. best Welsh slates laid 3-in. lap	Sq.	*300	0
20-in. × 10-in. best Welsh slates, 3-in. lap	Sq.	*400	0
Westmorland green slates in random sizes laid 3-in. lap	Sq.	*550	0
Best hand made sand faced plain tiles, 10½ in. × 6½ in. laid to a 4-in. gauge	Sq.	215	0
Best hand made sand faced plain tiles, 10½ in. × 6½ in. hung vertically to 4½-in gauge	Sq.	240	0
Berkshire hand made sand faced red pantiles, 14½ in. × 10 in. laid 2½-in. head and 1½-in. side lap	Sq.	206	0
Grey corrugated asbestos cement sheets fixed to wood roofs	Sq.	123	0
Grey corrugated asbestos cement sheets fixed vertically	Sq.	133	0
Cedarwood shingles laid 5-in. gauge	Sq.	*240	0
Metal roof decking and fixing with hook bolts, finished with ½-in. insulation board and three layers self finish felt roofing 18 gauge for spans up to 10 ft.	YS	62	0
20 gauge for spans up to 8 ft. 6 in.		54	6
Two layer one ply bitumen felt and fixing with bitumen to concrete or boarding	YS	10	2
Three layer bitumen felt	YS	13	8
Patent ribbed aluminium roofing and fixing to purlins	Sq.	297	6

CARPENTER

Market prices

		s	d
Softwood, carcassing quality	Std.	1800	0
Softwood, joinery quality	Std.	2200	0
½-in. fibre board	Sq.	46	6
⅛-in. standard hardboard	Sq.	41	0
⅜-in. insulating gypsum wallboard	YS	3	3

Measured rates

		s	d
Softwood and fixing in plates, sleeper joists and lintels	FC	*15	0
		13	*1*
In floor and ceiling joists	FC	*17	5
		13	*1*
In stud partitions, purlins and struts	FC	*19	7
		13	*1*
In hip and valley rafters	FC	*22	3
		13	*1*

Battening and boarding

		s	d
Slate or tile battens 1½ in. × ¾ in. and nailing to fixing for	Sq.	*38	3
16-in. × 10-in. slating to 6½-in. gauge		32	0
20-in. × 10-in. slating to 8½-in. gauge		58	9
10½-in. × 6½-in. plain tiling to 4-in. gauge		22	0
14½-in. × 10-in. pantiles to 12-in. gauge			
S.E. boarding in batten widths close jointed and fixing to flat or sloping roofs	Sq. ¾-in.	*116	9
		82	*9*
	1-in.	*143	0
		109	*0*
T. & g. boarding in batten widths close jointed and fixing to flat or sloping roofs	Sq. ¾-in.	*147	9
		105	*3*
	1-in.	*181	3
		138	*9*
¾-in. wrot and cross tongued eaves soffit	FS	2	3
		1	*0*
¾-in. × 6-in. wrot and grooved eaves fascia p.o.	FS	10	
		6	

Wall and ceiling boards fixed to softwood

		s	d
½-in. fibre board	YS	6	9
		5	*0*
⅛-in. hardboard		5	10
		4	*5*
⅜-in. insulating gypsum wallboard		5	9
		4	*0*
7/16-in. asbestos cement flat sheeting		8	8
		4	*11*
½-in. asbestos cement flat sheeting		10	5
		6	*8*
2-in. Stramit, showerproof quality fixed to joists with butt joints		15	9
		11	*6*

JOINER

Measured rates

Floors and skirtings

		s	d
Tongued and grooved soft wood flooring and nailing to joists	Sq. ⅞-in.	*166	0
		126	*6*
	1-in.	*183	9
		144	*0*
1-in. nominal double grooved t. and g. Swedish softwood			

technical section

Joiner continued

		s	d
block flooring set in mastic and polished	YS	29	5
European beech	YS	32	7
African Muhuhu	YS	36	9
Burma teak	YS	38	10

Moulded skirtings, 3-in. to 6-in. sectional area planted on (per inch in sectional area) FR

Softwood	3½	
	2½	
Oak	9	
	7½	

Extra for grounds plugged to brickwork FR

Softwood	9	
	2	

Windows

2-in. rebated and moulded sashes divided into squares FS

Softwood	3	9
Oak	11	3

Extra for side hanging Each

Softwood	2	10
Oak	4	3

Doors

2-in. framed, ledged and braced doors, filled in with 1-in. T and G and V jointed boarding and hanging FS

Softwood	6	4
	5	7

Four panelled door square both sides and hanging FS

Softwood	6	7
	5	10
Oak	20	0
	19	0

1½-in. Standard flush door, hardboard faced size 2 ft. 6 in. × 6 ft. 6 in. and hanging No.

	*42	7
	31	1

Linings and frames

Window and door linings, 6-in. to 12-in. sectional area (per inch sectional area) FR

Softwood	4	
	3	
Oak	9	
	8	

Frames wrot all round and framed (per inch sectional area) FR

Softwood	3½	
Oak	8	

Mullions, transomes and sills (per inch sectional area) FR

Softwood	4	
Oak	9	

Mouldings, architraves, etc. 4-in. to 6-in. sectional area (per inch sectional area) FR

Softwood	4	
	3	
Oak	10½	
	9½	

6-in. window boards, 1-in. thick with rounded nosing tongued at back and including bearers FR

Softwood	3	2
	1	9
Oak	5	8
	3	8

Shelving and fittings

¾-in. shelving of 2-in. slats spaced 1-in. apart on bearers (measured separately) FS

Softwood	2	6
	1	11

¾-in. solid shelving on bearers FS

Softwood	2	4
	1	11
Oak	4	8½
	4	1½

2-in. shelf bearers plugged to wall FR

Softwood	7½	
	5½	
Oak	1	2½
	1	0

Staircases

1-in. treads and ¾-in. risers tongued together on and including framed carriages FS

Softwood	4	9
	3	8
Oak	14	0
	12	5

1½-in. × 11-in. wall string plugged to brickwork FR

Softwood	4	7
	3	7
Oak	11	11
	10	5

1¼-in. × 9-in. outer string FR

Softwood	3	6
	2	11
Oak	7	4
	6	6

Ends of treads and risers housed to strings No.

Softwood	1	4½
Oak	6	6

2½-in. × 3-in. moulded handrail FR

Softwood	3	2
	2	7
Oak	6	8
	5	9

1½-in. × 1½-in. square balusters FR

Softwood	8½	
	6½	
Oak	1	4
	1	1

Framed ends to balusters No.

Softwood	7	
Oak	9½	

IRONMONGER

Market prices

As prices for ironmongery vary so greatly depending upon the type and quality required, no prices are quoted here

Measured rates

The rates which follow are for fixing only and are inclusive of profit

		s	d
3-in. steel butts	Pr.		
to softwood		*4	7
to hardwood		*6	1
Double action floor springs	No.		
to softwood		*23	0
to hardwood		*30	7
6-in. barrel bolts			
to softwood		2	1
to hardwood		2	9
Cupboard locks			
to softwood		*4	4
to hardwood		*5	9
Cylinder night latch			
to softwood		*7	2
to hardwood		*9	7
Mortice latch			
to softwood		*5	9
to hardwood		*7	8
Mortice lock			
to softwood		*7	2
to hardwood		*9	7
Casement fastener			
to softwood		*1	9
to hardwood		*2	4
Casement stays			
to softwood		*1	9
to hardwood		*2	4

STEEL & IRONWORKER

Market prices

Structural steel joist sections, basis sizes, ex mills	T	812	6

Extras for other than basis sizes vary between 10s. and 70s. per ton

Measured rates

Rsj in steel framed structures hoisted and fixed complete	T*	1625	0
Riveted compound girders including plates and rivets	T*	1915	0
Rs stanchions including caps, bases, cleats etc.	T*	1885	0

Metal windows including cutting and pinning lugs to brickwork and bedding frames in cement mortar No.

Domestic type 4 ft. high to BS 990

Type ND2F 3 ft. 3¼ in. wide		*94	6
		78	1
Type HD2F 3 ft. 3¼ in. wide		*101	9
		85	5
Type ND11F 6 ft. 6½ in. wide		*162	0
		133	1

"Z" range, 4 ft. high

Type ZND1 2 ft. 0¾ in. wide		*64	1
		53	2
Type ZND4F 6 ft. 0¾ in. wide		*163	6
		134	7

PLASTERER

Market prices

Plastering sand	YC	19	6

Plaster to BS 1191

technical section

Plasterer continued

		s	d
Class B in loads of 4 tons to 5 tons 19 cwt.	T		
Browning	160	9	
Fibred browning	163	9	
Board finish	160	9	
⅜ in. plaster lath, over 600 yds.	YS	2	5
¼ in. × 6 in. × 6 in. cream glazed wall tiles	YS	27	8

Measured rates

Metal lathing

No. 24 gauge expanded metal lathing and fixing	YS		
To softwood soffits		*6	10
		4	3
To metal		*7	7
		4	3

Lime plaster

Render float and set on brick walls and partitions	YS	*7	2
		2	2
R.F. and S. on concrete including hacking	YS	*8	10
		2	2
R.F. and S. on expanded metal lathing	YS	*7	3
		2	3

Gypsum plaster

Render in cement-lime-sand (1 : 1 : 6) and set in gypsum plaster on brick walls and partitions	YS	*5	9
		1	10
Render in gypsum fibred browning-sand (1 : 1½) and set in gypsum on concrete soffits including bonding coat	YS	*9	3
		3	5
Render and set on expanded metal lathing including pricking up coat	YS	*3	9
		3	9

Plaster board

⅜-in. gypsum plaster lath fixed to softwood soffits finished to receive plaster	YS	4	11
		3	0
Gypsum board finish setting coat on last	YS	4	3
		1	1

Plain face

½-in. Portland cement and sand (1 : 3) plain face trowelled smooth on brick walls	YS	6	7
		1	10

Tyrolean rendering

Render in cement, lime sand (1 : 1 : 6) and finishing with three coats patent coloured mix preparations applied with hand operated machine	YS	*10	1
		2	4

		s	d
Sprayed "Limpet" asbestos Approximate prices for sprayed "Limpet" asbestos on the following surfaces to the thickness shown for quantities of 1,000 yds. super. Normal pressed finish. New concrete soffits and beams	YS		
½-in.		14	5
¾-in.		19	8
1-in.		21	9
New structural steelwork	YS		
½-in.		16	6
¾-in.		21	9
1-in.		23	10
Extra over the above prices for coloured texture finish	YS	3	5

Wall tiling

6 in. × 6 in. × ⅜ in. standard quality white glazed wall tiles set and jointed on prepared screed	YS	49	10
Egg shell matt or glossy glazed enamelled tiles	YS	61	8

EXTERNAL PLUMBER

Market prices

Sheet lead, 3½ lb. and upwards, in quantities of 5 cwt. to 1 ton	C	*112	0
Copper sheeting, 23 gauge, in 1-ton lots	C	336	0
Zinc sheeting, 14 gauge, in 1-ton lots	C	109	0
Aluminium sheeting 20 SWG C			
Super purity		513	4
Commercial quality		326	8
Cast iron rainwater and soil goods			
Medium weight pipe to B.S. 416 and B.S. 460 in 6 ft. lengths	No.		
2½-in.		18	10
3-in.		21	0
4-in.		26	10
Half round gutter in 6 ft. lengths	No.		
3½-in.		7	11½
4-in.		10	4
6-in.		16	11

The above are Standard-List prices plus 22½%.

Measured rates

Milled sheet lead	C		
Flat roofs		*195	0
Gutters and flashings		*195	0
24 SWG copper sheet	FS		
Flat roofs		5	11
Gutters and flashings		5	11
23 SWG copper sheet	FS		
Flat roofs		6	8
Gutters and flashings		6	8
14 gauge zinc	FS		
Flat roofs		3	5
Gutters and flashings		3	5
20 SWG super purity aluminium	FS		
Flat roofs		5	3
Gutters and flashings		5	3
20 SWG commercial quality aluminium	FS		
Flat roofs		4	0
Gutters and flashings		4	0

Rainwater gutters and pipes

½-in. cast iron half round eaves gutter jointed and fixed to fascia with brackets	FR		
4-in.		3	6
		2	3
6-in.		5	2
		3	7
18 gauge pressed steel half round eaves gutter	FR		
4-in.		3	2
		1	11
6-in.		4	3
		2	8
Asbestos cement half round eaves gutter	FR		
4-in.		2	11
		1	7
6-in.		4	2
		2	7
Aluminium half round eaves gutter	FR		
4-in.		3	9
		2	6
Cast iron medium section rain water pipes jointed and fixed to walls with pipe nails	FR		
3-in.		5	10
		4	5
4-in.		7	4
		5	7
Pressed steel	FR		
3-in.		4	5
		3	0
4-in.		6	3
		4	7
Asbestos cement	FR		
3-in.		3	9
		2	3
4-in.		4	10
		3	1
Aluminium	FR		
3-in.		5	2
		3	8
4-in.		6	11
		5	2

Soil and ventilating pipes

Lead soil, waste and ventilating pipes (15 lb. per yd. for 3-in. and 19 lb. per yd. for 4-in. diameter) fixed to walls with lead tacks	FR		
3-in.		*11	5
		8	4
4-in.		*15	3
		10	2
Cast iron soil, waste and ventilating pipes with caulked joints fixed to walls with pipe nails	FR		
3-in. heavy		7	1
		5	2
4-in. heavy		8	8
		6	5
Asbestos cement soil and ventilating pipe fixed to walls with holder bats	FR		
3-in.		3	10
		2	4
4-in.		4	11
		3	2½

technical section

INTERNAL PLUMBER.

Market prices

		s	d
Lead pipe in quantities of 5 cwt. to 1 ton	C		
	BS 602	*114	3
	BS 1085	*121	3
Polythene tubing, heavy gauge, in quantities of 500 to 999 ft.	per 100 ft.		
	¼-in.	112	6
	½-in.	152	0
	1-in.	193	6
Steel tubes to B.S. 1387 medium weight galvanised	FR		
	¾-in.	0	9
	1-in.	1	1
	1¼-in.	1	5
	1½-in.	1	8

The above are Standard List prices less 38½%.

Galvanised malleable fittings. Bend	No.		
	1-in.	2	9½
	1¼-in.	4	2½
	1½-in.	6	0
Tee	No.		
	¼-in.	1	0
	¾-in.	1	4¾
	1-in.	2	0
	1¼-in.	2	9½
	1½-in.	4	0

The above are Standard List prices less 23½%, less 6½% plus 40%.

Copper tubes to B.S. 659	FR		
	¼-in.	*0	11½
	¾-in.	*1	4
	1-in.	*2	0½
	1¼-in.	*2	5½

The above are calculated on a basic price of 2s. 3½d. per lb. plus C.T.A. extras.

Measured rates

Lead pipe to BS 602

Main supply and laying in trench (measured separately) at the following sizes and weights in lbs.

	FR		
½-in.	7	*3	9
		2	10
¾-in.	11	*5	7
		4	4
1-in.	16	*7	10
		6	5
1¼-in.	28	*13	3
		11	0
1½-in.	35	*17	0
		13	9

Main supply fixed to walls and ceilings

	FR		
½-in.	7	*4	4
		2	11
¾-in.	11	*6	3
		4	5
1-in.	16	*8	7
		6	6
1¼-in.	28	*14	0
		11	1
1½-in.	35	*18	4
		13	10

Distributing pipes fixed to walls and ceilings

	FR		
½-in.	4	3	2
		1	9
¾-in.	5	3	8
		2	2
1-in.	7	*4	9
		3	0
1¼-in.	9	5	8
		3	11
1½-in.	12	*7	4
		5	2

Flushing and warning pipes fixed to softwood

	FR		
¾-in.	4	3	5
		1	7
1-in.	5	*4	4
		2	0
1¼-in.	6	*5	5
		2	5
1½-in.	7	*5	11
		2	10

Waste pipes and fixing to softwood

	FR		
1¼-in.	6	*5	5
		2	6
1½-in.	7	*5	11
		3	0

Joints to fittings	No.		
½-in.		6	3
		1	5
¾-in.		7	1
		2	2
1-in.		7	7
		2	11
1¼-in.		8	4
		3	8
1½-in.		9	1
		4	4

Extra for:	Bend No.		
1¼-in.		2	9
1½-in.		3	10

Branch joints	No.		
½-in.		7	11
		1	5
¾-in.		9	1
		2	2
1-in.		9	7
		2	11
1¼-in.		11	3
		3	8
1½-in.		12	10
		4	4

Polythene tubing to B.S. 1972

Heavy gauge as supply pipe laid in trench (measured separately)

	FR		
½-in.		1	8
		1	4
¾-in.		2	1
		1	9
1-in.		2	7½
		2	3

Heavy gauge as supply or distributing pipe fixed to walls

	FR		
½-in.		2	9
		1	7
¾-in.		3	4
		2	2
1-in.		3	11
		2	9

Galvanised steel tubing to B.S. 1387

Heavy weight with screwed red lead joints as supply pipe laid in trench (measured separately)

	FR		
½-in.		2	9
			10
¾-in.		3	2
		1	0
1-in.		3	4
		1	5
1¼-in.		3	10
		1	10
1½-in.		5	0
		2	2

Medium weight tubing fixed to walls

	FR		
½-in.		2	8
			10
¾-in.		3	1
		1	0
1-in.		3	3
		1	3
1¼-in.		3	9
		1	8
1½-in.		4	11
		2	0

Extra for malleable iron:	Bend No.		
1-in.		5	2
		3	1
1¼-in.		7	4
		4	6
1½-in.		9	6
		6	7

	Tee No.		
½-in.		3	2
		1	1
¾-in.		3	6
		1	6½
1-in.		4	1
		2	2
1¼-in.		5	7
		3	1
1½-in.		7	0
		4	5

Copper tube

Copper tube to B.S. 1386 as supply pipe laid in trench (measured separately) to the following size and gauges

	FR		
¼-in.	18	2	1
		1	5
¾-in.	17	2	11
		2	2
1-in.	16	3	11
		3	2
1¼-in.	16	5	2
		4	3
1½-in.	15	6	9
		5	7

Copper tube to B.S. 659 as distributing pipe fixed to walls

	FR		
¼-in.	19	2	1½
		1	3½
¾-in.	19	2	7
		1	9
1-in.	18	3	6
		2	8
1¼-in.	18	4	4
		3	3
1½-in.	18	5	1
		3	11

Extra for brass compression fittings joining copper to copper	No.		
Coupling ¼-in.		5	1
		3	3
¾-in.		6	4
		4	0
1-in.		8	11
		5	10
1¼-in.		*11	2
		7	7
1½-in.		*15	3
		11	0
Bend ¼-in.		6	4
		4	6
¾-in.		7	11
		5	6

technical section

Internal plumber continued		s	d
1-in.		11	4
		8	3
1¼-in.		14	2
		10	6
1½-in.		23	1
		18	11
Tee ¼-in.		*9	4
		6	1
¾-in.		*10	10
		7	0
1-in.		*15	10
		11	4
1¼-in.		*21	6
		16	5
1½-in.		*32	1
		26	5

GLAZIER

Market prices

Sheet glass cut to size	FS		
24 oz.		*0	10⅞
32 oz.		*1	5½
⅛-in. Polished plate glass, glazing quality in plates not exceeding:	FS		
2 ft. super		4	3
5 ft. super		5	3
45 ft. super		6	3
100 ft. super		6	9
Rolled plate glass	F3		
⅛-in. rolled plate		*1	1⅛
¼-in. Georgian wired		6	0

Attention is drawn to reduction in certain glass prices offered by manufacturers for acceptance of specified minimum quantities of one size and substance delivered to one address at one time

Measured rates

Glazing to wood

Ordinary quality sheet glass and glazing with putty in squares	FS		
24 oz. O.Q.		*1	6
32 oz. O.Q.		*2	1
⅛-in. rolled plate glass		*1	8
⅛-in. rough cast glass		*2	1
Prismatic glass		*3	0
¼-in. wired glass		*2	5
¼-in. Georgian wired plate glass		8	4
¼-in. Polished plate glass (glazing quality) in plates 5 to 45 ft. super		8	7

Glazing to metal

Add to above rates 1d. per ft. super			

Sundries

Hacking out broken sheet glass	FS	1	3
Black ribbon velvet and bedding to edge of glass	FR		8

Double glazing

Insulight units of two skins of glass with lead spacers and glazing with mastic for beads (supplied). In panels 15 to 20 ft. super	FS		
32 oz. sheet		10	1
¼-in. polished plate		21	4

Patent glazing

Patent glazing with rolled steel lead capped bars for 8-ft. spans and glazing with ¼-in. Georgian wired cast	FS	4	8
Aluminium alloy patent glazing	FS	4	10½

PAINTER

Market prices

Washable distemper	C	120	0
Emulsion paint	Gal.	45	0
Hard gloss paint:	Gal.		
Undercoat		46	0
Finishing		46	0

Measured rates

On walls and ceilings YS

Twice whiten plastered ceilings	1	5
		3
Two coats distemper on plastered walls or ceilings	2	3
	1	1
Two coats distemper on fair-faced brick or concrete walls	2	8
	1	3
Two coats emulsion paint on walls or ceilings	2	10
	1	8
Frepare, prime and apply one coat oil colour on plastered walls	3	10
	1	9
Add for each additional coat	1	8
		10

On metal

Prepare, prime and apply one coat oil colour on general surfaces	YS		
Basis price		3	7
		1	6
Add for each additional coat		1	8
			10
On metal casements	YS		
Basis price		*5	9
		1	6
Add for each additional coat		2	6
			10
On bars, angles etc., not exceeding 6-in. girth	YR		
Basis price			11½
			3
Add for each additional coat			5
			2
On small pipes	YR		
Basis price			11½
			3
Add for each additional coat			5
			2
On large pipes	YR		
Basis price		1	11
			6

		s	d
Add for each additional coat			10
			3½
Prepare, prime and apply one coat heat-resisting paint on heating surfaces of radiators	YS		
Basis price		4	2
		1	4
Add for each additional coat		1	10
			8

On wood

Knot, prime, stop and apply one coat oil colour on general surfaces	YS		
Basis price		4	0
		1	7½
Add for each additional coat		1	8
			10
On work not exceeding 3-in. girth	YR		
Basis price			6
			1½
Add for each additional coat			2½
			1
For each additional 3-in. girth	YR		
Basis price			5½
			1½
Add for each additional coat			2½
			1

Stain and varnish

Prepare, size, stain and twice varnish on general surface of woodwork	YS	4	4
		1	8
On work not exceeding 3-in. girth	YR		7
			1½
For each additional 3-in. girth	YR		6
			1½

Oiling and polishing

Twice oiling general surfaces of hardwood with linseed oil	YS	2	8
		1	2
On work not exceeding 3-in. girth	YR		3
			1
For each additional 3-in. girth	YR		3
			1
Staining and wax polishing general surfaces of hardwood	FS	1	1
Staining bodying-in and fully French polishing on general surfaces of hardwood	FS	2	8

Papering

Preparing and sizing walls and hanging plain lining paper	Piece	*10	10
		3	3
Hanging wall paper, p.c. 10s. per piece	Piece	*20	9
		12	9
Hanging border p.c. 1s. per yd.	YR	1	9
		1	3

working detail

ASBESTOS-CEMENT GARDEN WALL: HOUSE IN BERLIN

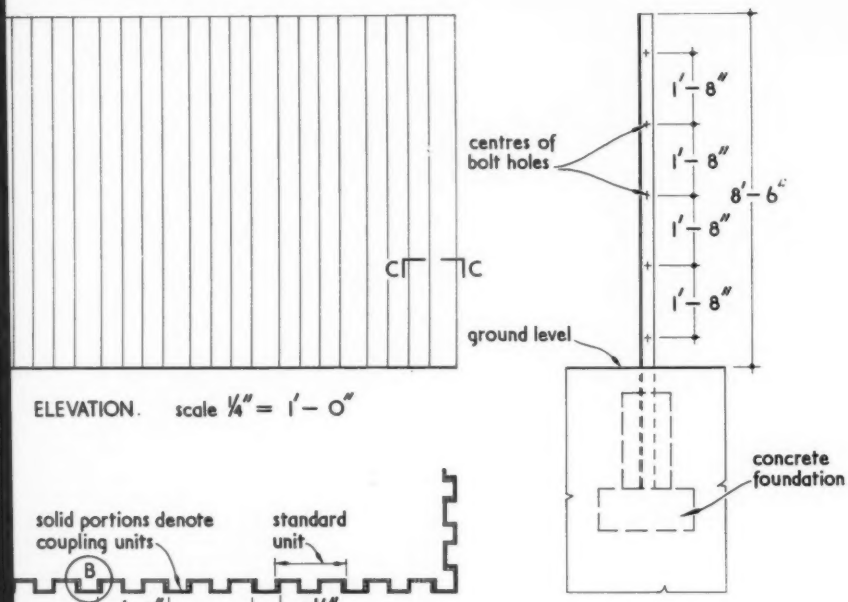
Eduard Ludwig, architect (material supplied by Ferenc Lantos)

This asbestos-cement wall is made from standard 11 *ft.* 6 *in. lengths of square-section corrugated sheeting, bolted together along their length and secured in in-situ concrete foundations.*

working detail

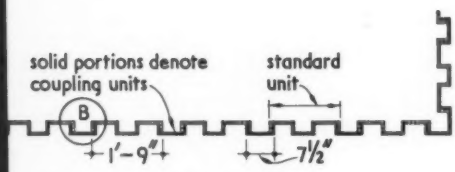
ASBESTOS-CEMENT GARDEN WALL: HOUSE IN BERLIN

Eduard Ludwig, architect (material supplied by Ferenc Lantos)

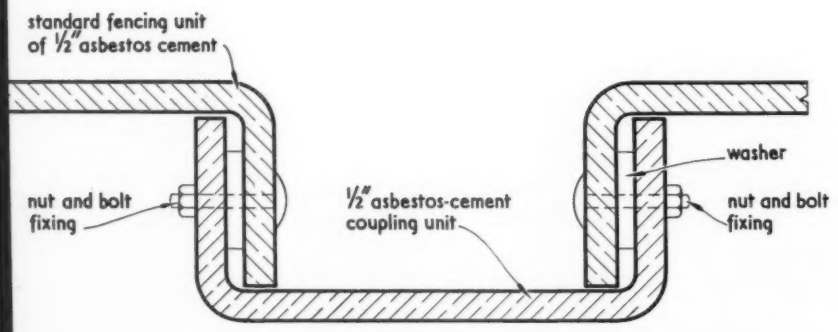


ELEVATION. scale ¼" = 1'-0"

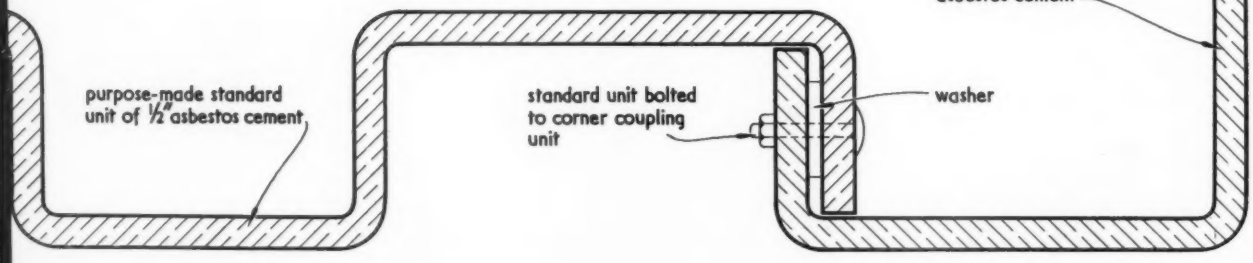
SECTION A—A.



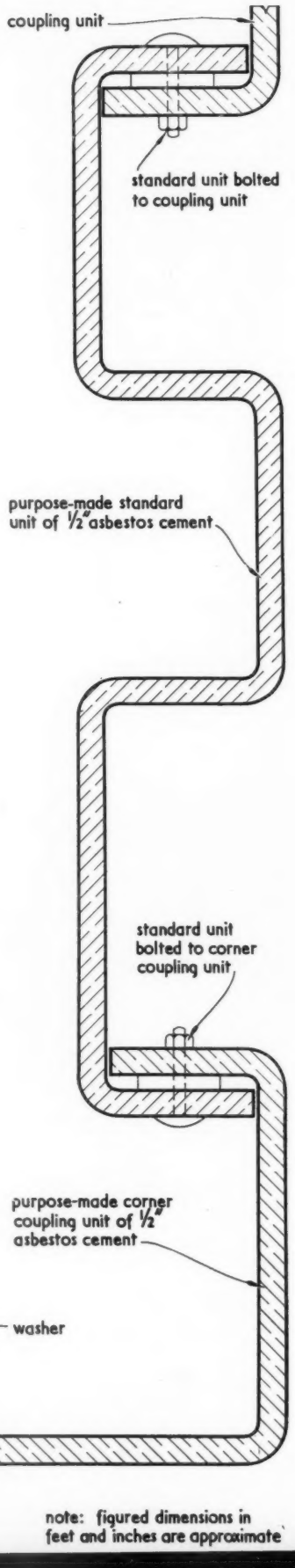
PLAN. scale ¼" = 1'-0"



PLAN AT B. scale ⅜ full size



PLAN AT C—C. scale ⅜ full size

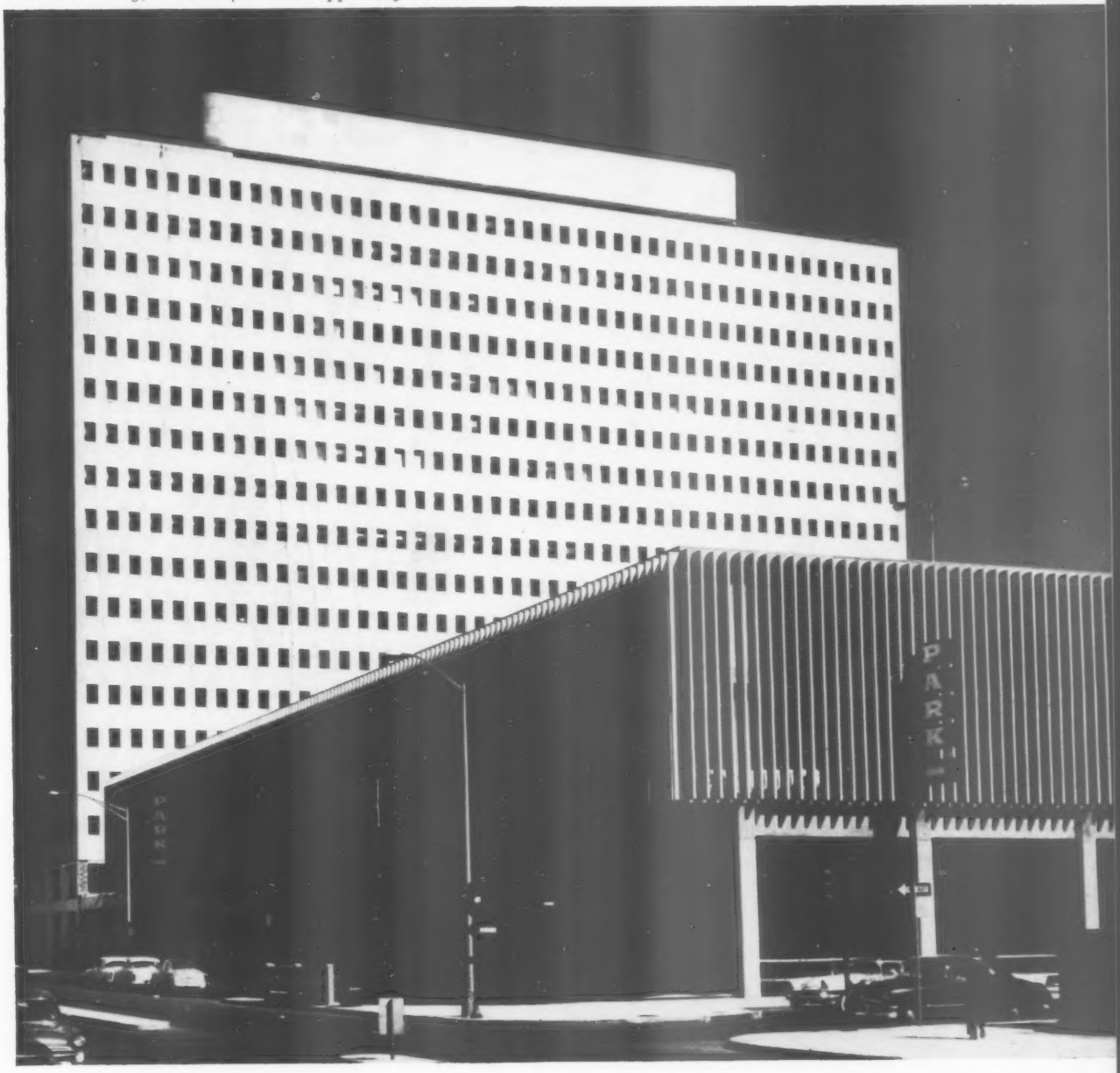


note: figured dimensions in feet and inches are approximate

working detail

LOUVRED WALL: CAR PARK IN PHILADELPHIA, PENNSYLVANIA

Vincent G. Kling, architect (material supplied by William H. Roberts)

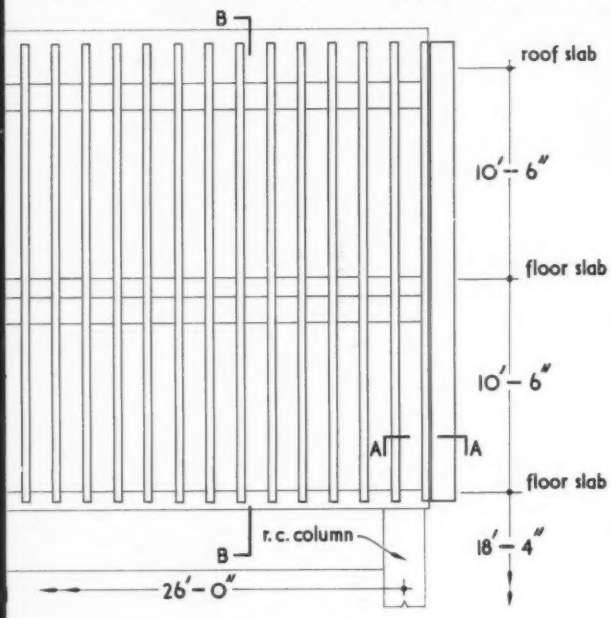


The louvre seems a good form of siding for mass parking: it gives a sufficient degree of protection, lets fumes out and provides a three-dimensional screen against untidiness. The blades of this two-storey version are of artificial stone, each being cast in two parts, dowelled together on the site.

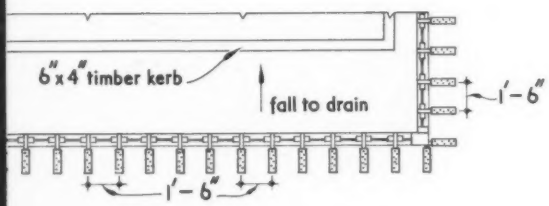
working detail

LOUVRED WALL: CAR PARK IN PHILADELPHIA, PENNSYLVANIA

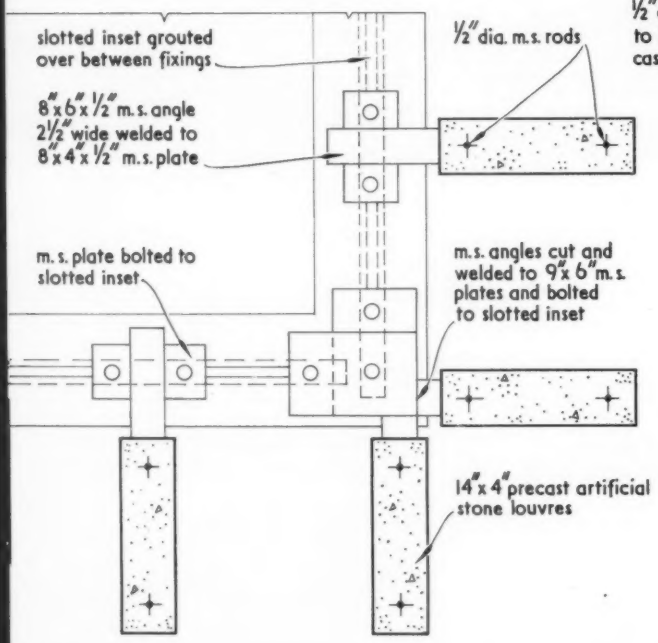
Vincent G. Kling, architect (material supplied by William H. Roberts)



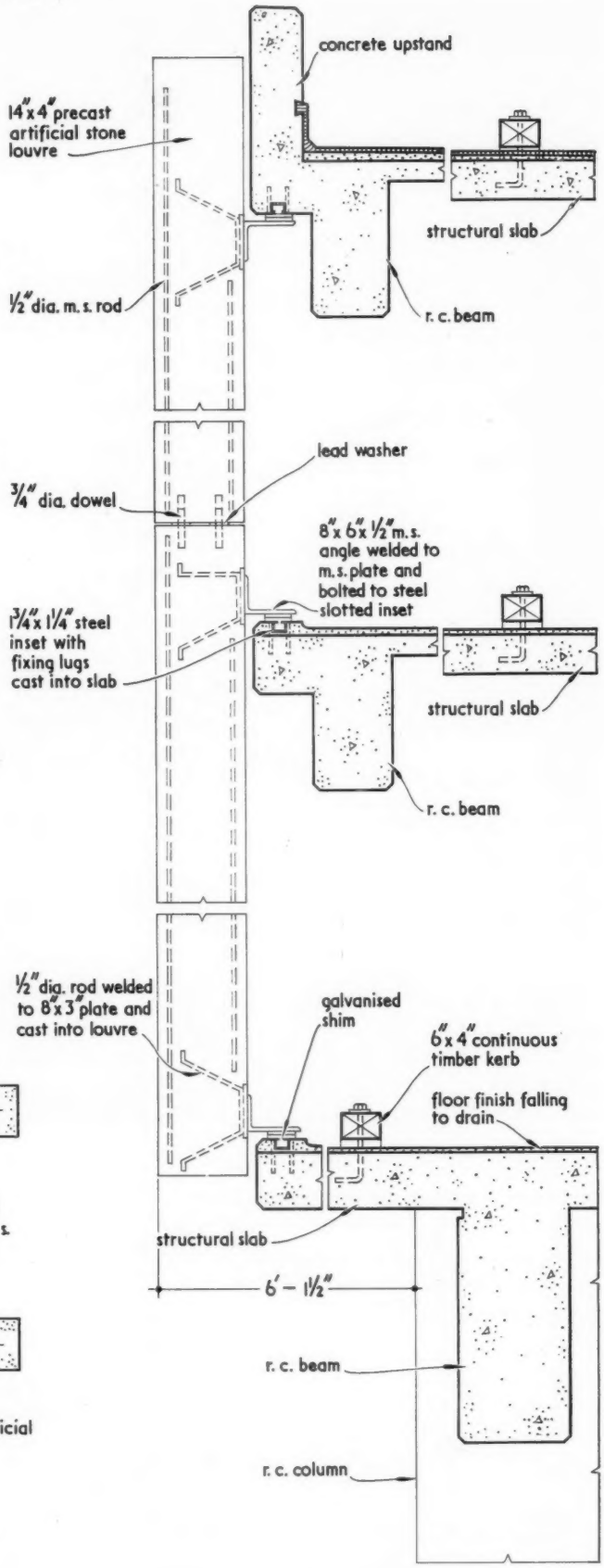
ELEVATION. scale 1/8″ = 1′ – 0″



PLAN. scale 1/8″ = 1′ – 0″



PLAN AT A – A. scale 1″ = 1′ – 0″



SECTION B – B. scale 1/2″ = 1′ – 0″

Architects: Norman & Dawbarn.

Broughton Moor Green Stone is ideally suited for use both as internal and external facing, and remains sound for centuries. It can be supplied in a variety of beautiful finishes, including frame sawn, sanded, fine rubbed or naturally riven. It was these characteristics which caused it to be chosen for the Roderic Hill Building, Imperial College. Broughton Moor Light Sea Green Slate with a finely rubbed finish was used as external cladding between windows on the above contract and the same slate with a frame sawn finish was used for the plinth course.

A section of Broughton Moor Stone, showing the highly polished finish. Finely rubbed, naturally riven, sanded and frame sawn finishes are also supplied, and technical pamphlets showing typical methods of fixing are available, as follows: 1. Flooring. 2. Facings. 3. Coping. 4. Cills. 5. Riven Face Slabs.

The BROUGHTON MOOR Green Slate Quarries Ltd

CONISTON · THE LAKE DISTRICT · LANCASHIRE

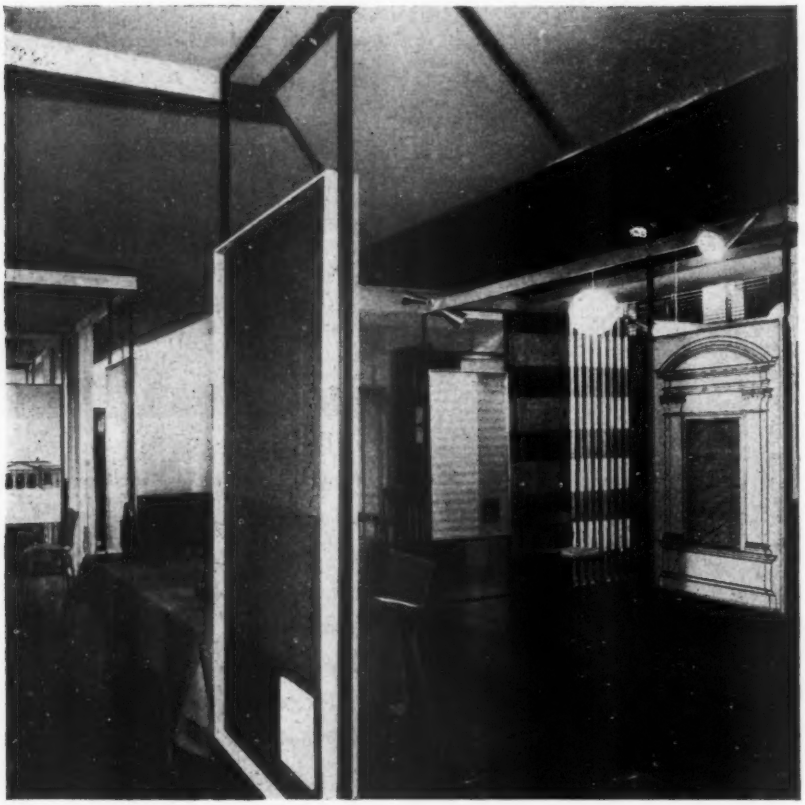
Telephone: Coniston 225/6

OFFICES FOR THE AUTOMOBILE ASSOCIATION IN MANCHESTER

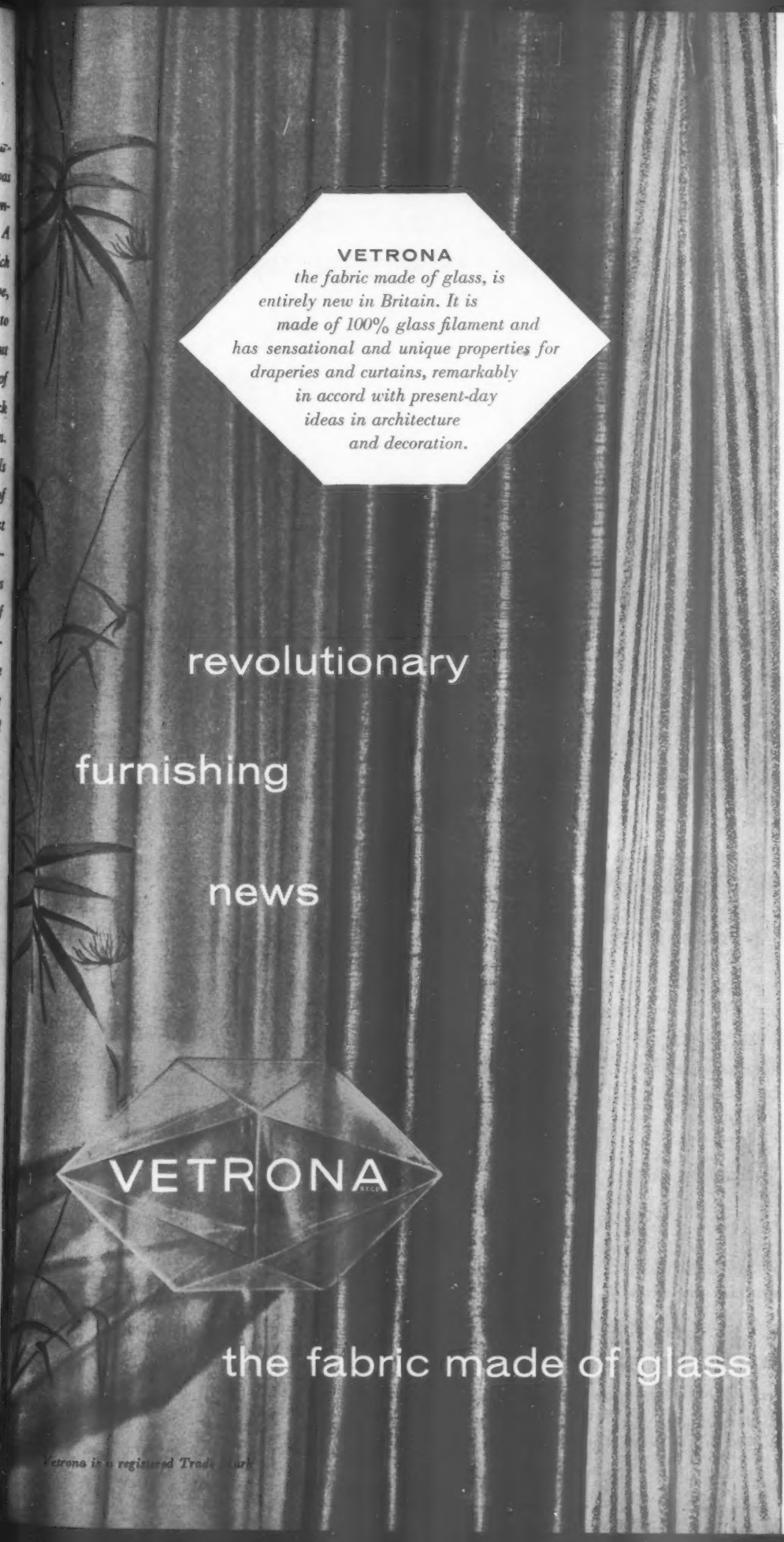
The Automobile Association, which has recently extended its Leicester Square head office in the classical style of the original

building, has made a sharp break with traditional architecture in its new office at York Street, Manchester. This well proportioned curtain wall building, seen here in a view of the exterior and of the reception office, was designed by Stephenson, Young and Partners. The general contractors were J. Gerrard & Sons, Ltd.

TRAVELLING EXHIBITION OF FABRICS



This exhibition of fabrics by Timo Sarpaneva, the famous Finnish designer, was designed and constructed by Conran Contracts in Woolland's of Knightsbridge. A travelling exhibition was designed which would not only be original and inexpensive, but also easily transported and adaptable to a variety of sites in stores throughout Britain. The basic construction consisted of 1 in. square steel stove enamelled black frames, held in position by horizontal 3½ in. × 1 in. timber members. The display panels fixed within the steel frames consisted of information panels, photostats of the best exhibition work of Timo Sarpaneva, photostats of 18th century engravings of windows and fabric held in tension. 9-ft. lengths of fabric on display were draped over the horizontal timbers. Conran Fabrics Limited are British distributors of the fabrics in the exhibition, all of which are 5 ft. wide and retail at 21s. per yard.



VETRONA
has long life!

It won't rot, shrink, sag, stretch, fade, or run. Neither mould, moth, salt air, sun, bacteria, nor atmospheric degradation will harm it.

VETRONA
is easy to keep clean!

It can't absorb dirt any more than a crystal can, so needs little cleaning. Wash lightly in soap-suds or detergent, rinse, and hang up. It dries in minutes with no creases, is never ironed.

VETRONA is fireproof!

It is permanently non-combustible. There is no need for periodic flame-proofing.

VETRONA is translucent!

It filters and reflects light, giving unique translucency without loss of warmth or privacy, needs no lining.

VETRONA is varied!

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VETRONA
has great advantages!

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We invite inquiries :-
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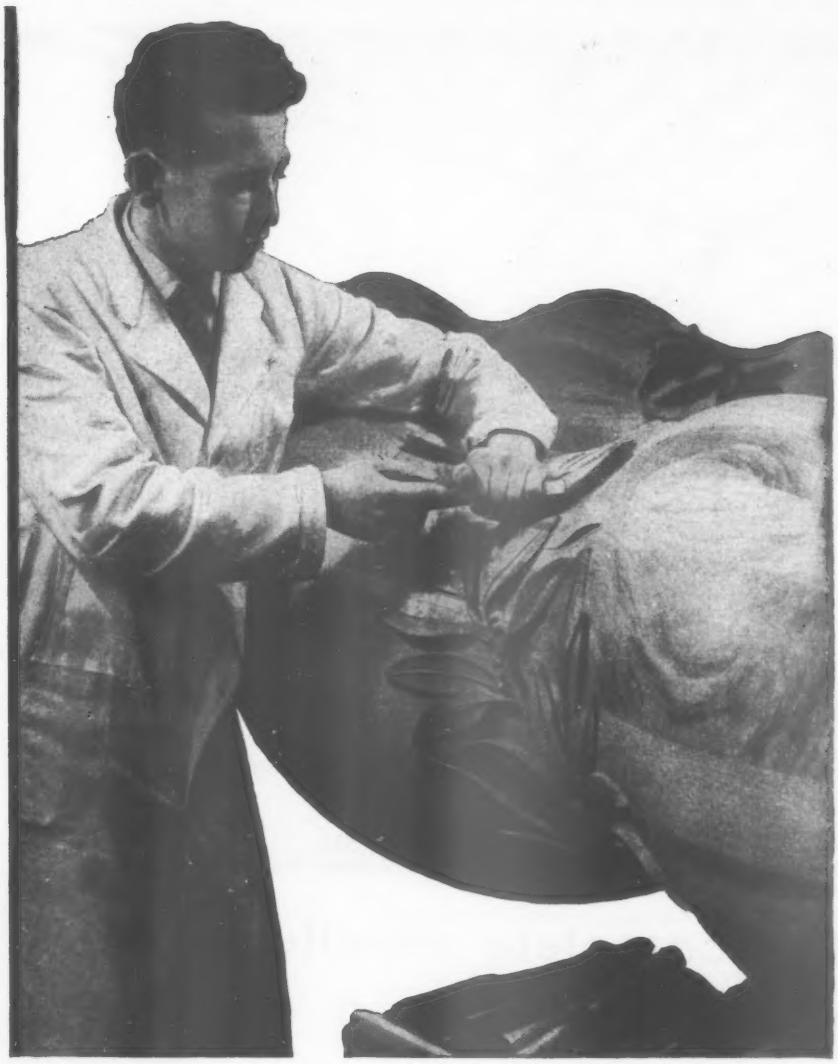
Trees aren't big enough



Wood carving of a column for the new altar canopy of St. Paul's Cathedral.

Architects: S. E. Dykes Bower, M.A., F.R.I.B.A., and Godfrey Allen, M.A., F.R.I.B.A.

Contractors for the woodwork: Rattee & Kett Ltd., Cambridge.

Solid timber is rarely obtainable in the dimensions needed for work such as this—the carved columns for the new altar canopy of St. Paul's Cathedral. But it does not matter, because Aerolite resin glue is used to glue the wood sections permanently into a homogeneous whole, so that the material can be worked upon just as if it were solid timber.

There are four of these columns supporting the new altar canopy, each 15 ft long, and the glue had to withstand all stresses imposed by turning, cutting the spirals and carving. And now that the canopy is finished, Aerolite forms an integral part of the columns and of most of the decorative woodwork, withstanding if need be any moisture and bacteriological attack that might arise throughout the years.

Aerolite is used wherever wood is employed, for miniature modelling, boat-building, furniture, flush doors and joinery, chipboard and the largest timber structures.

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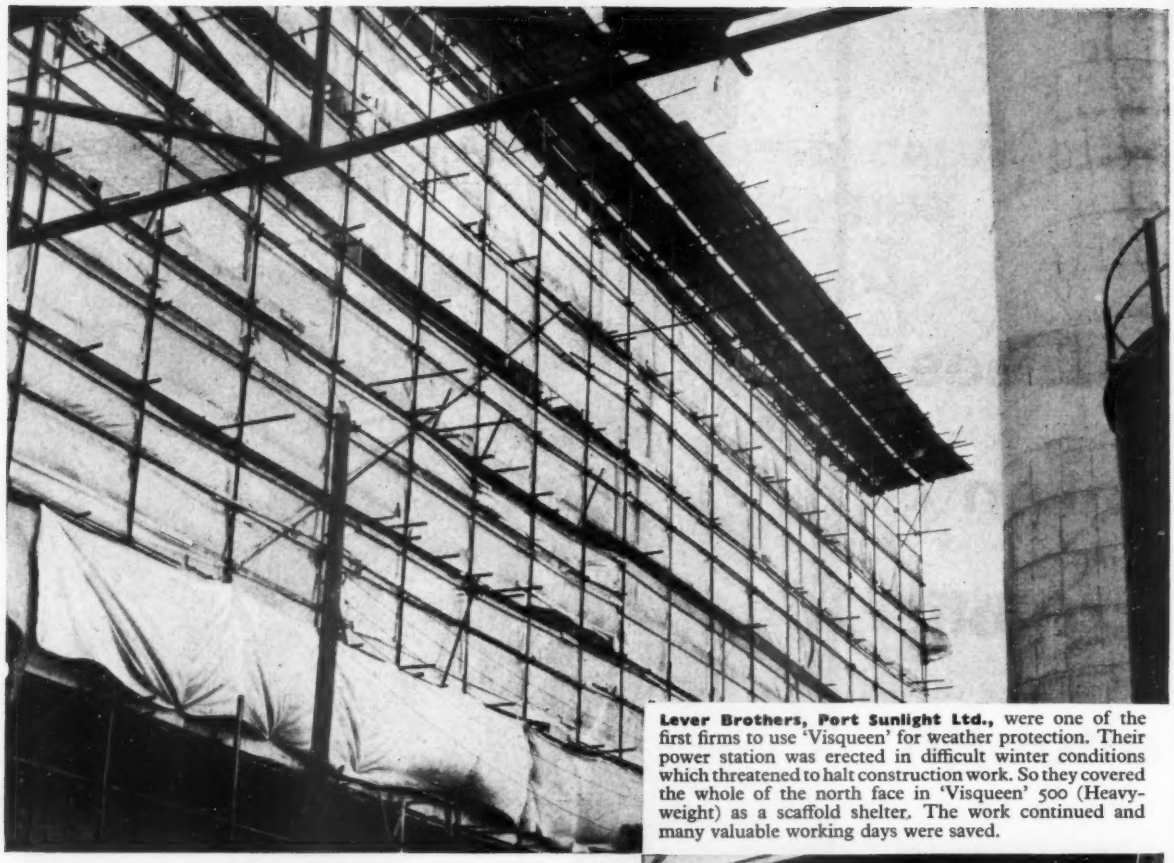


Lever Brothers, Port Sunlight Ltd., were one of the first firms to use 'Visqueen' for weather protection. Their power station was erected in difficult winter conditions which threatened to halt construction work. So they covered the whole of the north face in 'Visqueen' 500 (Heavy-weight) as a scaffold shelter. The work continued and many valuable working days were saved.

For complete on-site weather protection go-ahead builders use **VISQUEEN film**

TRADE MARK

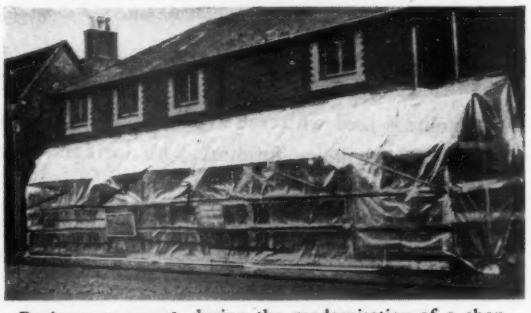
INSURE against delays caused by bad weather conditions by using 'Visqueen', the ideal *cover* for men, materials and equipment. 'Visqueen' is tough, waterproof, light and flexible. It will not rot and is unaffected by ice and snow.

Get the benefit of full daylight with transparent 'Visqueen' and use the heavyweight black sheeting for site tarpaulins (special securing rings available).

For an illustrated brochure, samples, prices and the address of your nearest 'Visqueen' stockist, write to the address below:

BRITISH VISQUEEN LIMITED · STEVENAGE · HERTS · TEL: STEVENAGE 1310.

Gilbert Ash Ltd. used 'Visqueen' during the construction of a new canteen at the English Electric factory in Stevenage. Temporary glazing enabled plastering, electrical fittings and wooden flooring to be completed on schedule unaffected by bad weather and without risk of damaging specially fabricated expensive plate glass.



Business as usual during the modernisation of a shop front. The 'Visqueen' lean-to shelter provided effective protection against rain and snow. Inside the transparent shelter alterations were carried out in good light. Normal trade was unaffected as the premises remained warm and draught-proof.

BV126

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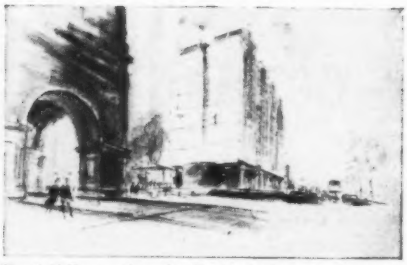
MARCH



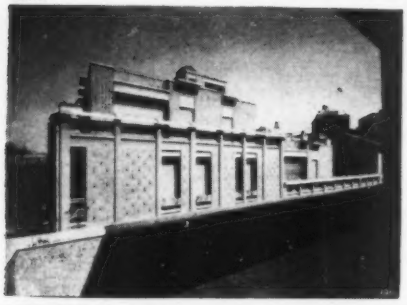
Royal College re-housed: Sir Hugh Casson's impression of the view along Kensington Gore, past the Albert Hall, to the proposed new building for the Royal College of Art Architect: H. T. Cadbury Brown.

High Knightsbridge: a night view of the Bowater House office block by Guy Morgan and Partners, another stage in the transformation of the London scene.

Swiss Mushrooms: entrance canopy to the Tiefenbrunnen bathing beach by Josef Schütz, an example of indivisible landscaping/architecture from Ian Nairn's article on recent work in Switzerland.

APRIL

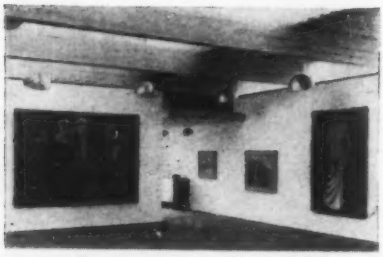
Neoliberty: a recent house in Milan by Figini and Pollini, discussed in Reyner Banham's article on the 1910 Revival in Italy, and the current retreat from Modern Architecture there.



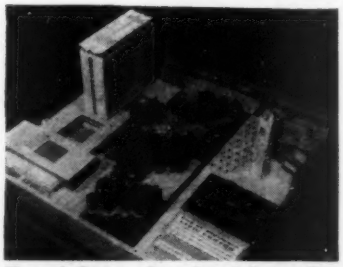
Without proscenium: the stage and amphitheatre of the Festival Theatre, Stratford, Ontario, designed by Rounthwaite and Fairfield, from Richard Leacroft's article on the open stage.

Eastbourne Terrace: right, one of the tall blocks from Cecil Elsom's street-long redevelopment scheme on bombed sites at the side of Paddington station.

MAY

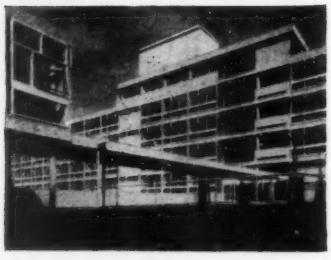


Art Galleries: a room in the Louisiana museum of modern art (Architects: Bo and Wohlert) outside Copenhagen, from a survey of recent trends in art gallery design in this issue.



Plymouth Centre: Stage One of the new Civic centre for Plymouth (Architects: G.A. Jellicoe and Partners)—a multi-stage development whose townscape possibilities are explored in an article by Kenneth Browne.

Garrett Green Comprehensive School: Wandsworth one of a contrasting pair of new comprehensive schools in the 2,000-pupil class, designed by the Schools Division of the L.C.C. Architect's Department.



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.

AIR MINISTRY WORKS Design Branch requires in LONDON and PROVINCES ARCHITECTURAL ASSISTANTS experienced in planning/preparation of working drawings and details for permanent and semi-permanent buildings. Salaries in LONDON up to £1,055 p.a. for men and £1,008 p.a. for women. Somewhat lower in provinces. Starting pay dependent on age, qualifications and experience. Long term possibilities with promotion and pensionable prospects. Five-day week, three weeks three days' leave a year. Liability for overseas service (for men). Normally natural born British subjects. Write stating age, qualifications, employment details including type of work done to any Employment Exchange quoting Order No. Borough 250. 3537

COUNTY BOROUGH OF READING
Applications invited for the appointment of ASSISTANT ARCHITECTS who have passed Parts I and II, R.I.B.A. Final or Special Final Examination or their equivalent and have had at least five years' experience. Salary range £750 × £40 — £1,030, according to experience. Posts permanent and appointment subject to N.J.C. Conditions. Housing accommodation will be considered.—Applications, stating age, qualifications and experience, together with names and addresses of two referees, to Borough Architect, P.O. Box 17, Town Hall, Reading, not later than 14th April, 1959. 3528

BOROUGH OF ENFIELD
BOROUGH ENGINEER'S DEPARTMENT
Applications are invited for established posts within the Grades shown:—
(*a*) ARCHITECTURAL ASSISTANT—A.P.T. I & II (£575—£845 per annum).
(*b*) ARCHITECTURAL ASSISTANT (MAINTENANCE)—A.P.T. I (£575—£725 per annum).
A London Weighting allowance of £10—£30 per annum, according to age, will be paid in addition to the above salaries. The commencing salary will be in accordance with qualifications and experience.
Saturday mornings are normally free of duty.
Application forms, returnable by the 8th APRIL, 1959, to be obtained from H. Deryck Peake, M.Sc.(Eng.), M.I.C.E., "Percy House," 7 Little Park Gardens, Enfield, Middx.
CYRIL E. C. R. PLATTEN, LL.B.,
Town Clerk.
Public Offices,
Enfield, Middx. 3527

COUNTY BOROUGH OF GREAT YARMOUTH
SCHOOLS ARCHITECT'S DEPARTMENT
Applications are invited from Associate Members of the R.I.B.A. for two SENIOR ASSISTANT ARCHITECTS within Special Scale (£750—£1,030).
Candidates must have a thorough knowledge of school design and construction.
Housing accommodation will be available to the successful candidate if married. Assistance with removal expenses will also be made in suitable cases.
Full details of present and past appointments, age, qualifications and experience, together with the names of two referees, should reach The Schools Architect, 22 Euston Road, Great Yarmouth, by Monday, 13th April, 1959.
D. G. FARROW,
Chief Education Officer.
22 Euston Road,
Great Yarmouth. 3525

STREET URBAN DISTRICT COUNCIL
ARCHITECTURAL ASSISTANT
(Special Scale — £750—£1,030)
Appointment in the ENGINEER AND SURVEYOR'S DEPARTMENT. Salary according to qualifications and experience.
Preference will be given to Registered Architects with experience in all aspects of the erection of Council houses. A direct labour force is employed.
Provision of housing accommodation considered.
Applications, naming two referees, to the undersigned not later than 6th April, 1959.
B. E. WALTERS,
Clerk of the Council.
Council Offices,
Street, Somerset. 3538

GLOUCESTERSHIRE COUNTY COUNCIL
APPOINTMENT OF ASSISTANT COUNTY ARCHITECT
Applications are invited for above appointment (Grade C. £1,385—£1,620 p.a.). Applicants must be qualified members of the R.I.B.A. and have held a responsible architectural position with a major local authority for a number of years.
The main duties include general co-ordination of the four Architectural Divisions, Heating & Lighting Engineer's Section, and Building Surveyors and responsibility, after programming, for production of all building works within the Council's Budget. The position offers considerable scope for an Architect of initiative and drive.
Post superannuable; J.N.C. Conditions of Service; is subject to satisfactory medical examination, and appointment determinable by three months' notice on either side.
Applications stating age, qualifications, present and previous appointments and experience, together with names of two persons for reference must reach COUNTY ARCHITECT, SHIRE HALL, GLOUCESTER, not later than 8th April, 1959.
GUY H. DAVIS,
Clerk of the County Council. 3534

NEW TOWN HALL, MILNGAVIE, DUNBARTONSHIRE
The Provost, Magistrates and Councillors of the Burgh of Milngavie invite Architects registered under the Architects (Registration) Acts and resident in Great Britain to submit in competition designs for a new Town Hall at Mingavie.
Assessor: William A. P. Jack, Esq., F.R.I.B.A., F.R.I.A.S.
Premiums: £600, £400, £200.
Last day for questions: 30th April, 1959.
Last day for submitting designs: 30th June, 1959.
Conditions may be obtained on application to: The Town Clerk, 3, Buchanan Street, Milngavie, Glasgow, Deposit £2 2s. 3556

DEVON COUNTY COUNCIL require SENIOR ARCHITECT (£750 × £40—£1,030) and ARCHITECTURAL ASSISTANT (£725—£845). Full and interesting programmes of Schools and other County Buildings. Previous Local Authority experience not essential.
In approved cases, loans for house purchase and removal expenses are available—also lodging allowance for married officers while seeking accommodation.
Particulars and Application Form, returnable by 10th April, 1959, from County Architect, 97, Heavitree Road, Exeter. 3558

SURREY COUNTY COUNCIL
Applications invited for following appointments:—
1. ASSISTANT ARCHITECT GRADE IV, £1,025—£1,175 p.a. plus £30 p.a. London Allowance. Must be A.R.I.B.A.
2. ASSISTANT ARCHITECT GRADE II, £725—£845 p.a. plus £30 p.a. London Allowance. Must be of good general training, pref. given those who have passed Inter. R.I.B.A.

Full details, present salary and 3 copy testimonials to County Architect, County Hall, Kingston, as soon as possible. 3381

CITY OF SHEFFIELD
CITY ARCHITECT'S DEPARTMENT
Enthusiastic young ARCHITECT required urgently to assist with a major redevelopment scheme for a large Training College. The whole project, costing £750,000, comprises multi-storey residential hostels, with assembly hall, dining-rooms and recreational facilities, together with improvements to existing teaching accommodation.
Salary according to experience within the Special Classes Grade—£750 to £1,030 per annum.
Applications, stating age, education and training, qualifications, present and past appointments (with dates and salaries), experience and the names of two persons to whom reference may be made, should reach me not later than Monday, 13th April, 1959.
JOHN HEYS,
Town Clerk.
Town Hall,
Sheffield, 1. 3570

COUNTY BOROUGH OF BURNLEY
Applications are invited for the under-mentioned appointments in the Borough Engineer and Surveyor's Department:—
(*a*) SENIOR ARCHITECTURAL ASSISTANT, Special Grade (£750—£1,030).
(*b*) ARCHITECTURAL ASSISTANT, Special Grade (£750—£1,030).
Applicants for appointment (*a*) must hold appropriate qualifications and must have had considerable experience in Municipal work. The commencing salary for a suitable applicant would be at or near the top of the grade.
Applicants for appointment (*b*) should preferably hold appropriate qualifications but the successful candidates may be placed in the A.P.T. Grade range up to and including Special Grade according to qualifications and experience.
Provision of housing accommodation may be considered if required.
Forms of application may be obtained from the Borough Engineer, 22-24, Nicholas Street, Burnley, to whom they should be returned not later than Saturday, 18th April, 1959.
C. V. THORNLEY,
Town Clerk. 3590

METROPOLITAN BOROUGH OF HAMPSTEAD
Require the following staff in the Housing Architect's Department:—
1. ARCHITECTURAL ASSISTANT (Temporary). Grades A.P.T. I/II—Intermediate R.I.B.A. (£575—£845); Special Grade, Final R.I.B.A. (£750—£1,030); plus London Area weighting.
2. JUNIOR ARCHITECTURAL ASSISTANT (Temporary). Grade General Division Q (£230—£700, plus London weighting). Commencing salary according to qualifications and experience.
Successful candidates will be required to work in one of two teams engaged in the conversion of property, area re-development, and the design and construction of new flats and houses. Applications, giving age, training, experience, previous appointments and the names of three referees, to the Town Clerk (AJ), Town Hall, Haverstock Hill, N.W.3, by 21st April, 1959. No housing provided. 3581

STATES OF GUERNSEY
PUBLIC WORKS DEPARTMENT
Applications are invited for the permanent and pensionable post of ARCHITECTURAL ASSISTANT at a salary of £835 per annum rising by three annual increments to £940.
Applicants must be Associate members of the Royal Institute of British Architects and capable of preparing working and detailed drawings and specifications and supervising work.
Particulars of pension arrangements are obtainable on application.
Applications, stating age, qualifications, experience, present and previous appointments and salary, together with copies of two recent testimonials, should be delivered to the States Supervisor, States Office, Guernsey, Channel Islands, not later than Monday, 13th April, 1959. 3582

LONDON COUNTY COUNCIL
PARKS DEPARTMENT
LANDSCAPE ARCHITECTS for designing and laying out new parks and open spaces. Good experience in preparation of working drawings and specifications and supervision of contract work essential. Up to £1,090 according to qualifications and experience.
Also LANDSCAPE ARCHITECTURAL ASSISTANTS. Salary up to £860.
Apply Chief Officer, Parks Department (AI/AL), County Hall, Westminster Bridge, S.E.1. (Room 402, WATerloo 5000, Ext. 8076.) (472.) 3588

LONDON COUNTY COUNCIL
QUALIFYING EXAMINATION FOR THE OFFICE OF DISTRICT SURVEYOR
An examination for Certificates of Proficiency to perform the duties of District Surveyor will be conducted in London in the week commencing 12th October, 1959. The minimum age limit for candidates is 25.
Possession of this certificate is necessary for appointment to positions as District Surveyor (Salary scales £1,850 to £3,050 a year) or as Assistant District Surveyor (Salary scale £1,245 to £1,482 10s. a year, plus allowance £59 a year).
Apply to the Architect to the Council (AR/ED/RWF), County Hall, Westminster Bridge, S.E.1, for application forms and further particulars. (657.) 3589

CITY OF BRADFORD
ARCHITECTURAL ASSISTANTS
Applications are invited for the following superannuable appointments in the City Engineer and Surveyor's Department, on the grades indicated:—
(*a*) ARCHITECTURAL ASSISTANT. Post 123. Grade A.P.T. I (£575—£725).
(*b*) DRAUGHTSMAN. Post 59. Grade A.P.T. I (£575—£725).
Candidates for (*a*) should have had experience in Architectural design and have passed the Intermediate Examination of the appropriate professional body and had experience in general architectural work.
Applicants for (*b*) should be suitably qualified and have experience of maps and plans to ordnance survey scales, preferably engineering or architectural experience.
All applicants should have completed their National Service. No housing accommodation can be provided by the Corporation.
Applications on form to be obtained from the City Engineer and Surveyor, Town Hall, Bradford, 1, together with three testimonials, must be received by the undersigned by the 13th April, 1959.
W. H. LEATHEM,
Town Clerk.
Town Hall,
Bradford, 1. 3596

BOROUGH OF WILLESDEN
BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT
Applications are invited from suitably qualified and experienced persons for the following permanent appointment:—
ASSISTANT ARCHITECT within Special Grade (£750—£1,030 p.a.).
London weighting, maximum £30 p.a., is payable in addition to the above salary.
The Council is unable to assist with housing accommodation.
Forms of application and conditions of appointment may be obtained from the Borough Engineer & Surveyor, Town Hall, Dyne Road, Kilburn, N.W.6. Applications to be returned to the undersigned not later than 9 a.m. on Monday, 20th April, 1959.
(signed) R. S. FORSTER,
Town Clerk. 3605

SOMERSET COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments on the established staff, viz.:

(*a*) SENIOR ASSISTANT ARCHITECTS—A.P.T. Grade IV (£1,025—£1,175).

Applicants for posts in this grade must be Associate Members of the Royal Institute of British Architects with a good standard of design ability and a sound knowledge of modern methods of construction and be capable of handling projects from sketch plans to completion.

(*b*) ASSISTANT ARCHITECT—Special Grade (£750—£1,030).

Applicants must have passed Parts I and II of the R.I.B.A. final or special examination or the equivalent at one of the recognised schools of architecture. Commencing salary will be within the grade dependent upon candidate's qualifications and experience.

(*c*) ARCHITECTURAL ASSISTANT—A.P.T. Grade I (£575—£725).

Applicants must have passed the Intermediate Examination of the Royal Institute of British Architects.

All appointments are subject to the usual conditions of Local Government Service. Applications, accompanied by the names of two persons to whom reference can be made, should reach the undersigned not later than Friday, the 10th April, 1959.

R. O. HARRIS, F.R.I.B.A.,
County Architect.

Park Street,
Taunton.
21st March, 1959. 3622

SENIOR ARCHITECTURAL DRAUGHTSMAN

Our Architectural Section does a large, varied and interesting range of work.

It is situated in a locality which is rural, yet only five miles from the City of Cardiff.

To help maintain our standards in serving over 600,000 consumers, we need a Senior Architectural Draughtsman who has obtained or is studying for membership of the R.I.B.A.

The salary will be £790—£890 and applications to our Personnel Officer at St. Mellons, Cardiff, will receive careful and prompt consideration.

THE SOUTH WALES ELECTRICITY BOARD.

(Closing date for applications—Saturday, 18th April, 1959.) 3572

KENYA BUILDING CENTRE

The Ministry of Works, Kenya, are in the process of creating a Building Centre to serve the Colony.

Manufacturers and Agents of all forms of Building Materials are invited to forward Trade Catalogues, Literature and prices, together with samples of their products for display purposes.

Please address information to:—
Secretary for Works,
TECHNICAL LIBRARY (BUILDINGS),
Ministry of Works,
Private Bag,
NAIROBI,
Kenya Colony. 3571

LIVERPOOL REGIONAL HOSPITAL BOARD

Applications invited for following posts on the staff of the Regional Architect, T. Noel Mitchell, B.Arch., F.R.I.B.A.:—

SENIOR ASSISTANT QUANTITY SURVEYOR. Salary £1,050 to £1,245 p.a.

ASSISTANT ARCHITECT. Salary £730 to £1,055 p.a.

ARCHITECTURAL ASSISTANT. Salary £545 to £765 p.a.

DRAUGHTSMAN. Salary £445 (at age 21 or over) to £660 p.a.

Salary scales at present under review. Starting salary dependent on age and/or experience.

All posts subject to N.H.S. (Superannuation) Regulations.

Applications, stating post applied for, age, qualifications, details of present post and salary, previous appointments and names and addresses of three referees (two technical), to reach me by 10th April, 1959.

VINCENT COLLINGE,
Secretary to the Board.

55, Castle Street,
Liverpool, 2. 3633

WILLENHALL U.D.C.—DEPUTY ARCHITECT

Applications are invited for this post at a commencing salary within the range of £1,025—£1,175, Grade A.P.T. IV, according to qualifications and experience; previous Local Government experience is not essential. The post is subject to the National Scheme and Conditions of Service, the Local Government Superannuation Acts, and one month's notice on either side.

The Council have in addition to their normal housing programme, schemes for Shopping Centres and other civic buildings.

Applications, giving details of age, education, qualifications, experience, previous employment, and the names of two referees, are to reach the Clerk of the Council, Town Hall, Willenhall, Staffs, by 17th April, 1959. 3634

HERTFORDSHIRE COUNTY COUNCIL
DEPUTY COUNTY ARCHITECT

Applications invited for the above appointment on the salary scale at present £1,905—£2,115 (proposed, but subject to approval, £2,670—£2,935), plus travelling and subsistence expenses. Applicants must be members of the Royal Institute of British Architects.

No application forms will be issued. Applications giving the names of three referees to reach the Clerk of the County Council, County Hall, Hertford, by 17th April, 1959. 3583

ESSEX COUNTY COUNCIL
ILFORD COMMITTEE FOR EDUCATION

Applications are invited for the appointment to the following posts in the Education Architect's Section of the Borough Engineer's Office:—

(*a*) SENIOR ASSISTANT ARCHITECT, A.P.T. Grade III—IV (£845—£1,175 per annum).

(*b*) ASSISTANT ARCHITECT, A.P.T. Special Grade (£750 × £40—£1,030 per annum).

(*c*) ASSISTANT ARCHITECT, A.P.T. Grade I (£575 × £30—£725 per annum).

Plus appropriate London weighting in each case.

The posts are superannuable and subject to medical examination.

Commencing salaries will be fixed within the grades according to experience.

Applicants for posts (*a*) and (*b*) must be Associates of the R.I.B.A. and have suitable experience in the design and development of school buildings.

Applicants for post (*c*) must have passed the Intermediate R.I.B.A. examination or its equivalent at a recognised School of Architecture.

Applications should be made on a form to be obtained from and returned to the Borough Engineer and Surveyor, Town Hall, Ilford, together with copies of not more than three recent testimonials, within 14 days of the appearance of this advertisement. 3645

NEWCASTLE REGIONAL HOSPITAL BOARD
REGIONAL ARCHITECT'S DEPARTMENT

During the next two years the Board plans to spend several millions on hospital developments and larger programmes are being planned to follow. The present building programme includes a wide variety of projects, ranging from houses to hospitals, and (since a large hospital resembles a small town) affords ample opportunity for gaining both general and hospital experience simultaneously.

The following posts in the Regional Architect's Department are at present open to applicants. The salary-scales quoted include interim increases pending completion of a current Health Service review of salaries.

(*i*) ASSISTANT ARCHITECTS (4). Salary £730 × £25 (2) × £30 (2) × £35 (5) × £40 (1)—£1,055.

Applicants should be registered architects and have had experience of the planning and construction of public buildings. The commencing salary will be fixed within the Grade by reference to relevant experience and to age.

(*ii*) ARCHITECTURAL ASSISTANT. Salary £545 at age 21 × £20 (3) × £25 (4) × £30 (2) to £765.

Applicants should have passed the Intermediate Examination of the R.I.B.A., or an examination recognised by the Institute as equivalent, and some practical experience is desirable.

The commencing salary within the grade will depend upon the applicant's age and practical experience, but will not exceed £605.

(*iii*) ARCHITECTURAL DRAUGHTSMAN. Salary £445 × £25 (5) × £30 (3)—£660.

Applicants should have had previous experience in an architect's drawing office and be neat and quick draughtsmen.

Evening study facilities are available at King's College of Durham University in Newcastle.

Applications, stating age, qualifications, past and present appointments, present salary and details of experience and training, together with the names of three referees (of whom at least two should be architects) should be forwarded to the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6, not later than 16th April, 1959. 3637

AUSTRALIA
GOVERNMENT OF QUEENSLAND
VACANCIES FOR ARCHITECTS AND QUANTITY SURVEYORS

Applications are invited for appointment to the following positions in the Department of Public Works, in Queensland. Age limit 45 years.

SENIOR ARCHITECT (General). Salary range: A£2,001 minimum, A£2,221 maximum.

SENIOR ARCHITECT (Design). Salary range: A£2,001 minimum, A£2,221 maximum.

ARCHITECT, Division I (General). Salary range: A£1,846 minimum, A£2,021 maximum.

ARCHITECT, Division I (Design). Salary range: A£1,846 minimum, A£2,021 maximum.

STRUCTURAL DESIGNER. Salary range: A£1,846 minimum, A£2,021 maximum.

ARCHITECT, Division II. Salary range: A£1,571 minimum, A£1,721 maximum.

ARCHITECT, Division III. Salary range: A£1,221 minimum, A£1,521 maximum.

QUANTITY SURVEYOR, Division I. Salary range: A£1,746 minimum, A£1,921 maximum.

Application form and further details may be obtained from the Agent-General for Queensland, 409/410, Strand, London, W.C.2. 3646

METROPOLITAN BOROUGH OF CAMBERWELL
ASSISTANT ARCHITECTS
(BOROUGH ARCHITECT'S DEPARTMENT)

The Council have vacancies for Assistant Architects with a salary range of £755 to £1,205 inclusive of £30 London weighting (Grades A.P.T. II or III or IV of the National Scales). Grade and commencing salary according to qualifications and experience. The work of the Department includes design and construction of public buildings, housing estates, including multi-storey construction. Application form from Town Clerk, Town Hall, S.E.5. Closing date Monday, 13th April, 1959. 3624

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. 24/40.

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 13th April, 1959. 3613

NORFOLK COUNTY COUNCIL
APPOINTMENT OF PLANNING ASSISTANT
A.P.T. Grade I (£575—£725 p.a.)

Applications are invited for the above post at Norwich. The Department is expanding and is embarking upon a most interesting programme of work. Preference will be given to candidates who possess Intermediate qualifications in Planning, Architecture, Engineering or Surveying, or an appropriate University Degree.

The appointment will be subject to the N.J.C. conditions of service, and applicants may be required to provide a car, for which standard allowances will be payable. Applications (no forms), including the names of two referees, should be submitted to the undersigned by 18th April, 1959.

R. I. MAXWELL,
County Planning Officer.

41/43, Thorpe Road,
Norwich. 3619

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for PLANNING ASSISTANTS. Duties include investigation of development proposals, surveys, report writing, preparation of data for Public Inquiries. Starting salaries up to £860 according to experience and qualifications. Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council (Ref. AR/EK/11/59), County Hall, S.E.1. (186.) 2917

BUILDING SURVEYORS

Vacancies in Building Regulation Division and District Surveyors' Service for work in connection with applications under London Building Acts, and Bylaws. District Surveyors' offices are located in Metropolitan Boroughs and work involves negotiations with developers and supervision of works in progress. Up to £860 with starting rates according to qualifications and experience. Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council, L.C.C. (AR/EK/28/59), County Hall, S.E.1. (541.) 3436

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for ARCHITECTURAL ASSISTANTS, starting salary up to £860. Full and interesting programme of houses, flats, schools and general buildings.

Application form and particulars from The Architect to the Council, County Hall, S.E.1, quoting AR/EK/14/59 (256). 3040

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited for the post of ASSISTANT QUANTITY SURVEYOR. Salary range £679—£811, according to age, qualifications and experience. Duties embrace Housing, Town Centre and Industrial Buildings. Superannuation schemes, medical examination. Housing available. Apply by 20th April, 1959, giving age, education and qualifications, experience and appointments held (with dates), and names of two referees, to General Manager (Q.S.), Bracknell Development Corporation, Farley Hall, Bracknell, Berks. 3636

PERTH AND KINROSS JOINT COUNTY COUNCIL require ASSISTANT ARCHITECTS—one on Grade A. & P. VII (£945—£1,025) to act as Project Leader of an extension scheme to the County Offices, and two on Grade A. & P. V/VI (£770—£955) with placing according to experience. Applicants should hold the A.R.I.B.A. A house may be available if required. 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 18th April, 1959. 3638

LONDON COUNTY COUNCIL
PARKS DEPARTMENT

ARCHITECTURAL ASSISTANTS. Good Draughtsmen with experience of preparation of working drawings and specifications and supervision of contract work. Salary up to £860. Apply Chief Officer, Parks Department (AI/A), County Hall, London, S.E.1. (WATerloo 5000, Ext. 8076.) (473.) 3587

BERKSHIRE COUNTY COUNCIL

ASSISTANT QUANTITY SURVEYOR, Grade IV, £1,025—£1,175. Applicants should be capable of taking off for large projects, and preference will be given to Associates of the R.I.C.S.

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, 14th April, 1959. 3626

Architectural Appointments Vacant

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

SENIOR ASSISTANT required of Intermediate/Final standard in Croydon office. Varied practice of interesting work. Good draughtsman and sound knowledge of construction essential, together with ability to manage jobs. Five-day week. Salary according to experience. Apply George Lowe & Partner, 4, High Street, Croydon 3608/9. 2611

ARCHITECT'S ASSISTANT required for the London Office of a firm of Architects with interests throughout the country. Must be of Intermediate R.I.B.A. or R.I.C.S. standard. Superannuation scheme. Apply to: Cotton, Ballard & Blow, 5, Baker Street, London, W.1. WELbeck 3364. 2818

ARCHITECTURAL firm in Home Counties with varied practice, require ASSISTANTS. Intermediate, qualified, or at that standard. State experience and salary required to Box 3089.

MORRIS DE METZ, F.R.I.B.A., requires experienced ASSISTANTS for large scale projects. West End Office. Salary up to £950. Telephone CITy 4086 or HUNter 1051. 3133

ARCHITECTURAL ASSISTANTS required in West End Office. Large interesting contracts just commencing. Salaries around £900. Box 3134.

ARCHITECTS' co-partnership require ASSISTANTS for working drawings and detailed design. Salary according to experience. Write 44 Charlotte Street, London, W.1, or telephone Langham 5791. 3265

W. H. WATKINS, GRAY & PARTNERS require ASSISTANT for interesting hospital work, pension scheme in operation. Write or phone, 57, Catherine Place, S.W.1. Victoria 7761. 3300

ARCHITECTURAL ASSISTANTS required. Starting salary £915 per annum. Glasgow office, five-day week. Schools, Offices, etc. State Experience. D. Harvey & A. Scott, 2, Lynedoch Place, Glasgow, C.3. 3368

ARCHITECTURAL ASSISTANTS required. Starting salary £750 per annum. Glasgow office, five-day week. State experience. D. Harvey & A. Scott, 2, Lynedoch Place, Glasgow, C.3. 3369

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