The Architects' JOURNAL for June 19, 1958

THE ARCHITECTS' JOURNAL

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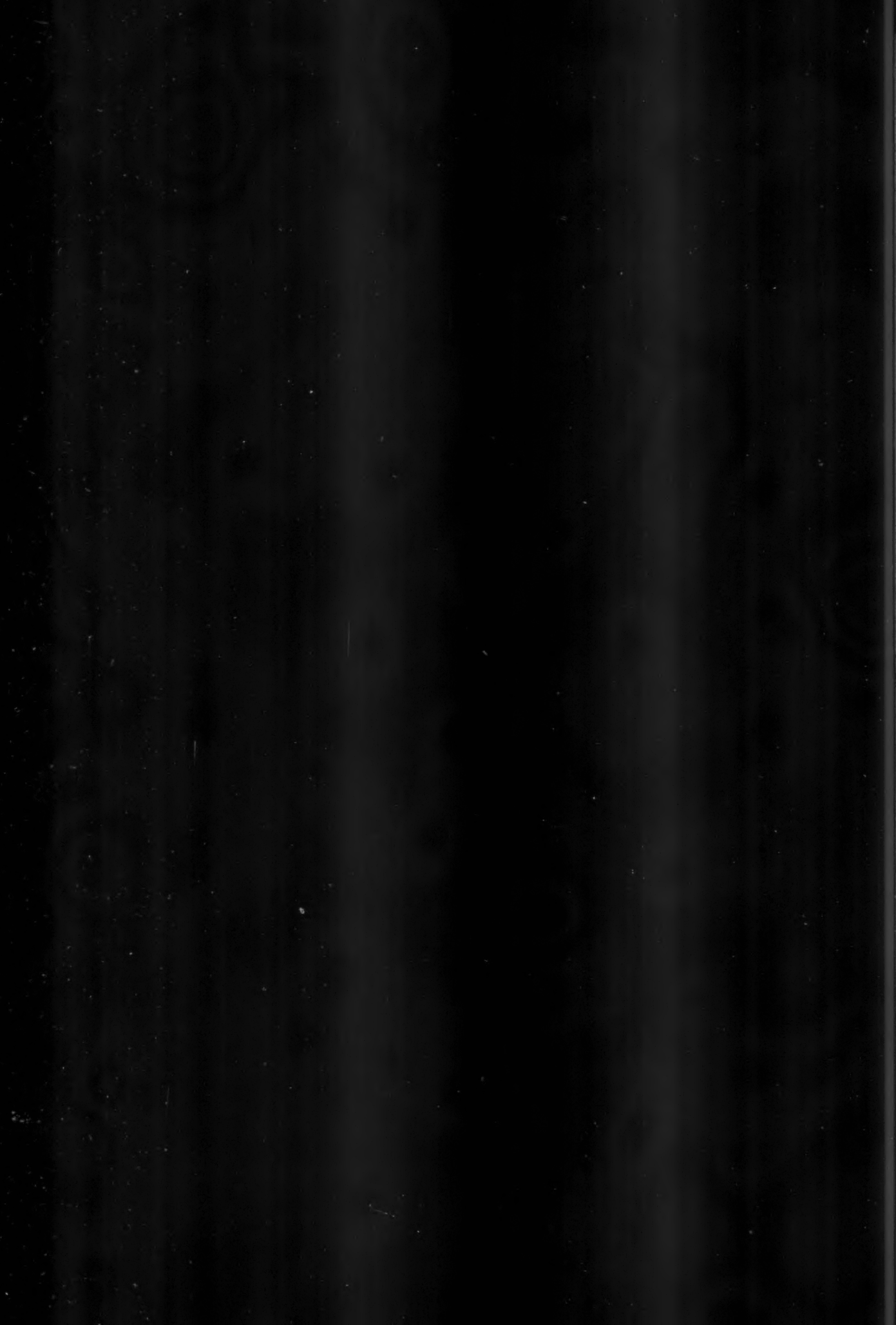
★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ig one week, Ih to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. L. Stevenson, College of Art, Hope Street, Liverpool 1.	Royal 1826
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians. 1, Ashley Place, S.W.1.	Victoria 0447–8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
ARCUK	Architects' Registration Council. 78, Wimpole Street, W.1.	Welbeck 2915
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Whitehall Gardens, Horseguards' Avenue, Whitehall, S.W.1.	Trafalgar 8855
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 4040
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 9000
BTE	Building Trades Exhibition. 32, Millbank, S.W.1.	Tate Gallery 8134
CABAS	City and Borough Architects Society. C/o S. A. G. Cook, A.R.I.B.A., Borough Architect and Director of Housing, Town Hall, High Holborn, W.C.1.	Holborn 3411
CAS	County Architects' Society. C/o S. Vincent Goodman, F.R.I.B.A., Shire Hall, Bedford.	Bedford 67444
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Belgravia 6661
CCP	Council for Codes of Practice. Lambeth Bridge House, S.E.1.	Reliance 7611 Ext. 1284
CDA	Copper Development Association. 55, South Audley Street, W.1.	Grosvenor 8811
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland	
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Trafalgar 8000
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DOT	Department of Overseas Trade. Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Associations of Specialists and Sub-Contractors, 14, Bryanston Street, W.1.	Welbeck 1781
FBBDO	Fibre Building Board Development Organization Ltd. (Fidor), 47, Princes Gate, Kensington, S.W.7.	Kensington 4577
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	Regent 0221
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd., Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4341
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266



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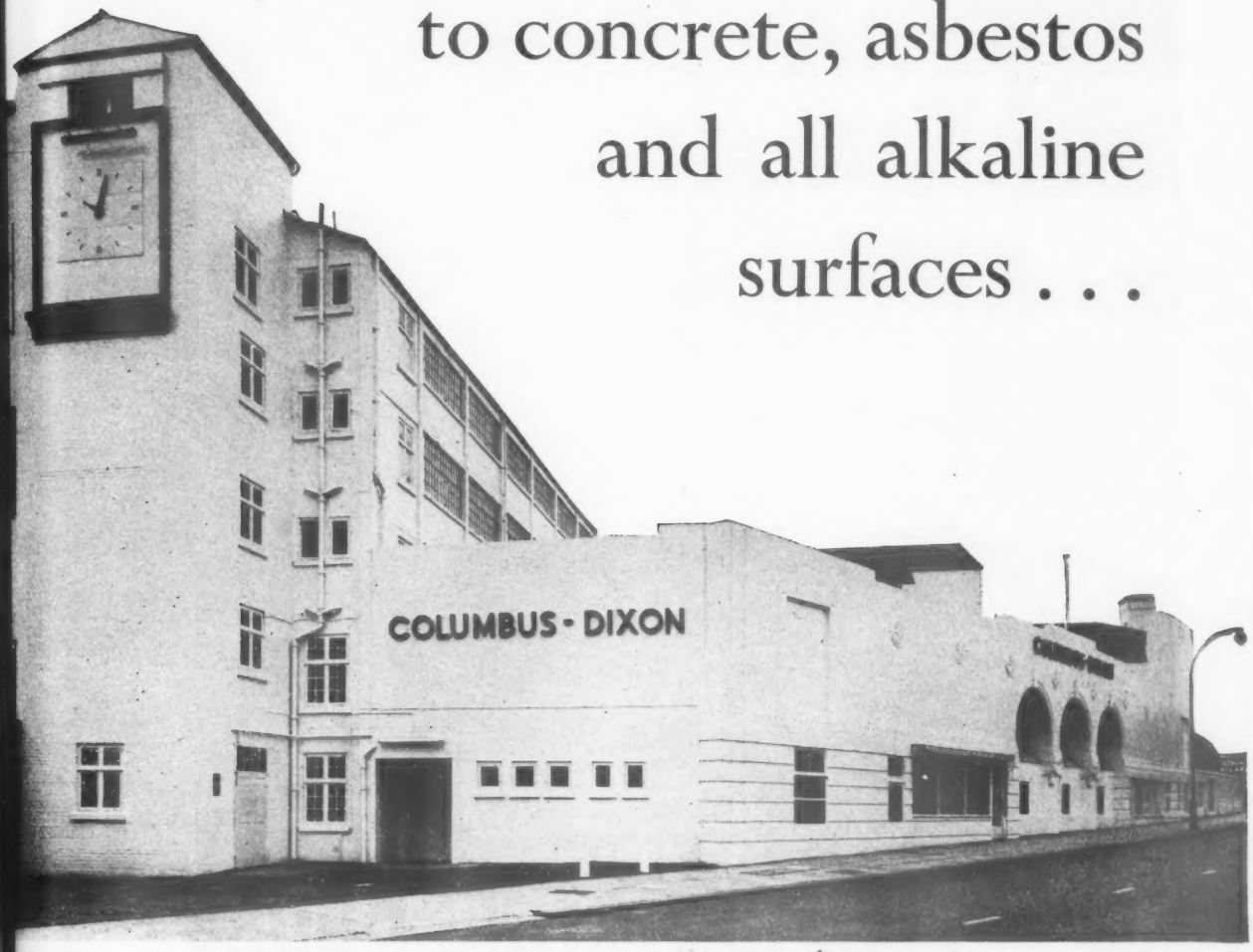

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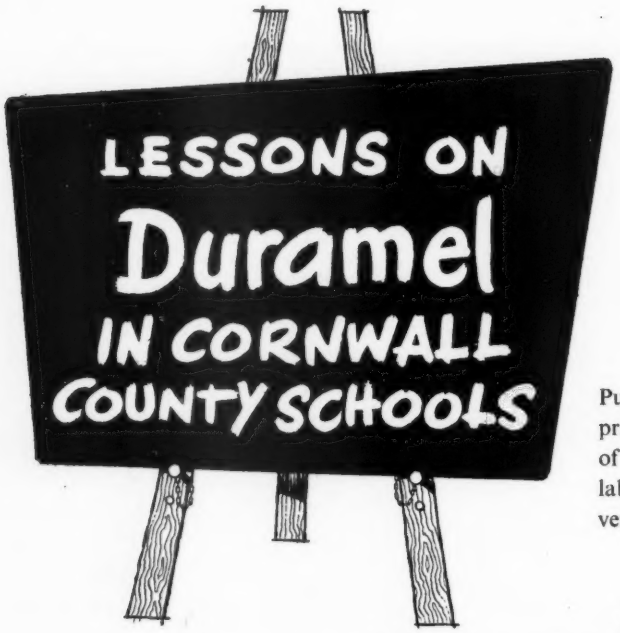

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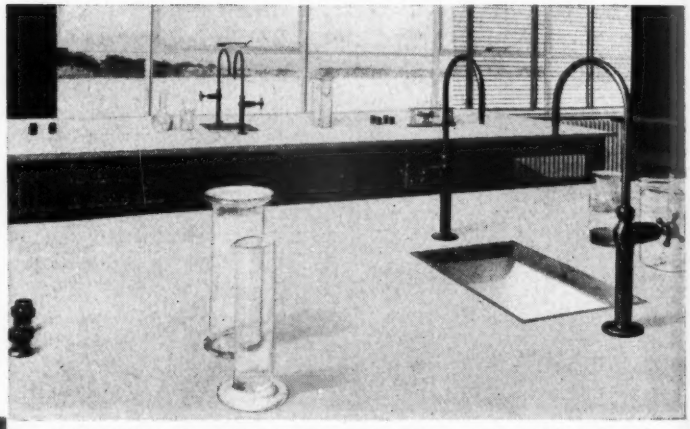

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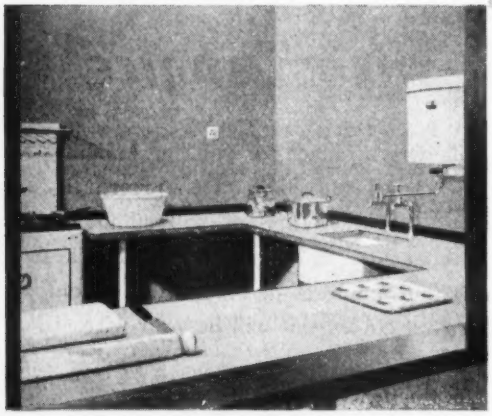

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Surface treated must be perfectly dry to be effective: rain immediately after application is not important.	APPLICATION CONDITIONS	Surface must be perfectly dry; and dry conditions must prevail for two or three hours after application.
Has a slight deepening effect.	EFFECT ON COLOUR OF WORK TREATED	Will not darken or change the colour of the surface in any way.
May be painted at a later date with Cementone No. 6. Ordinary paints should not be used.	LATER TREATMENTS	No difficulty about painting over at a later date.
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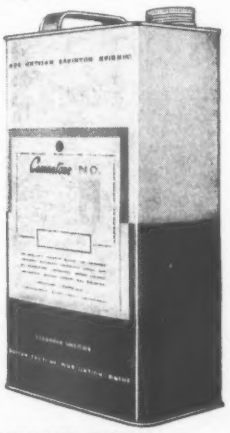

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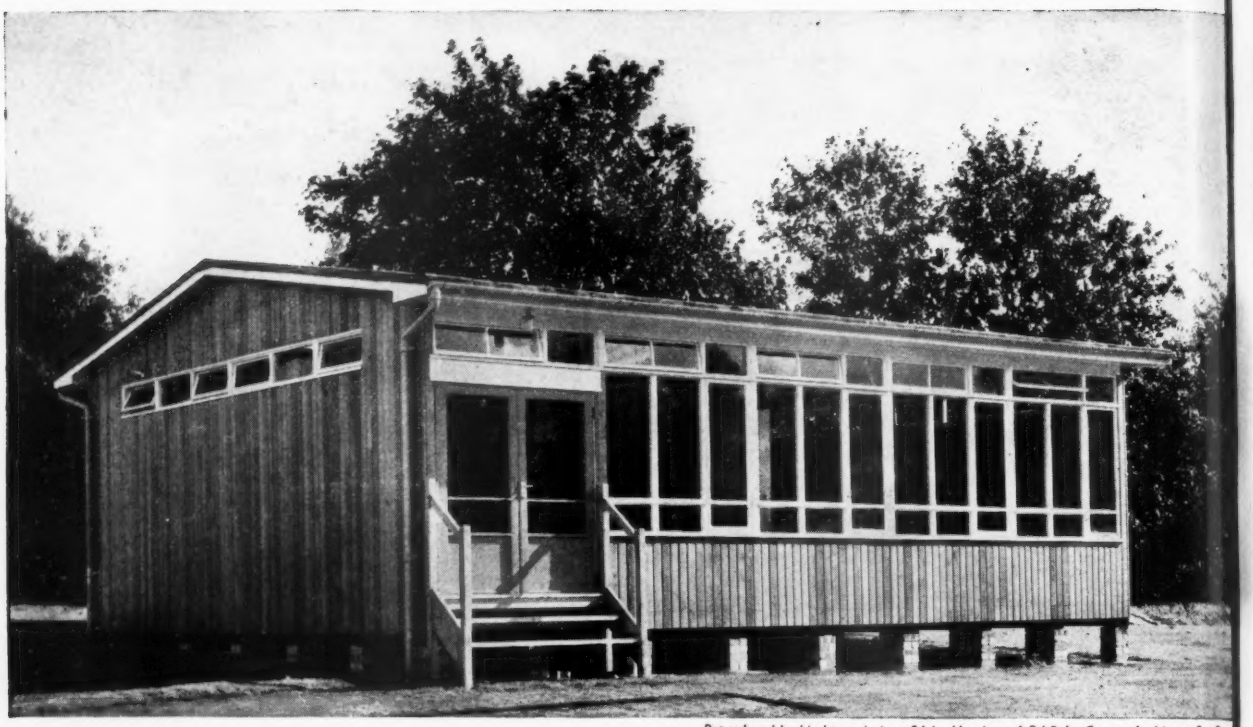

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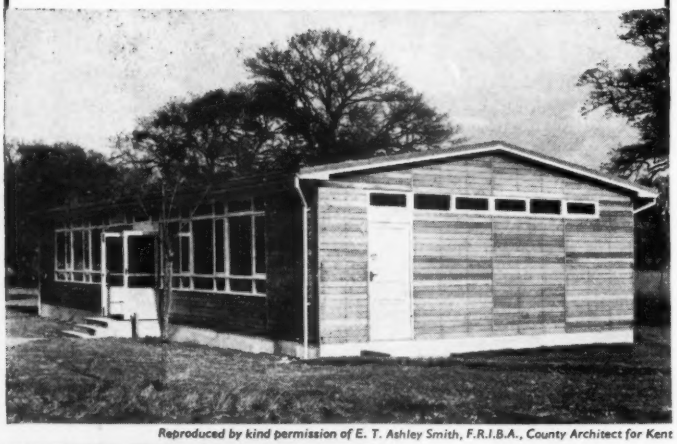

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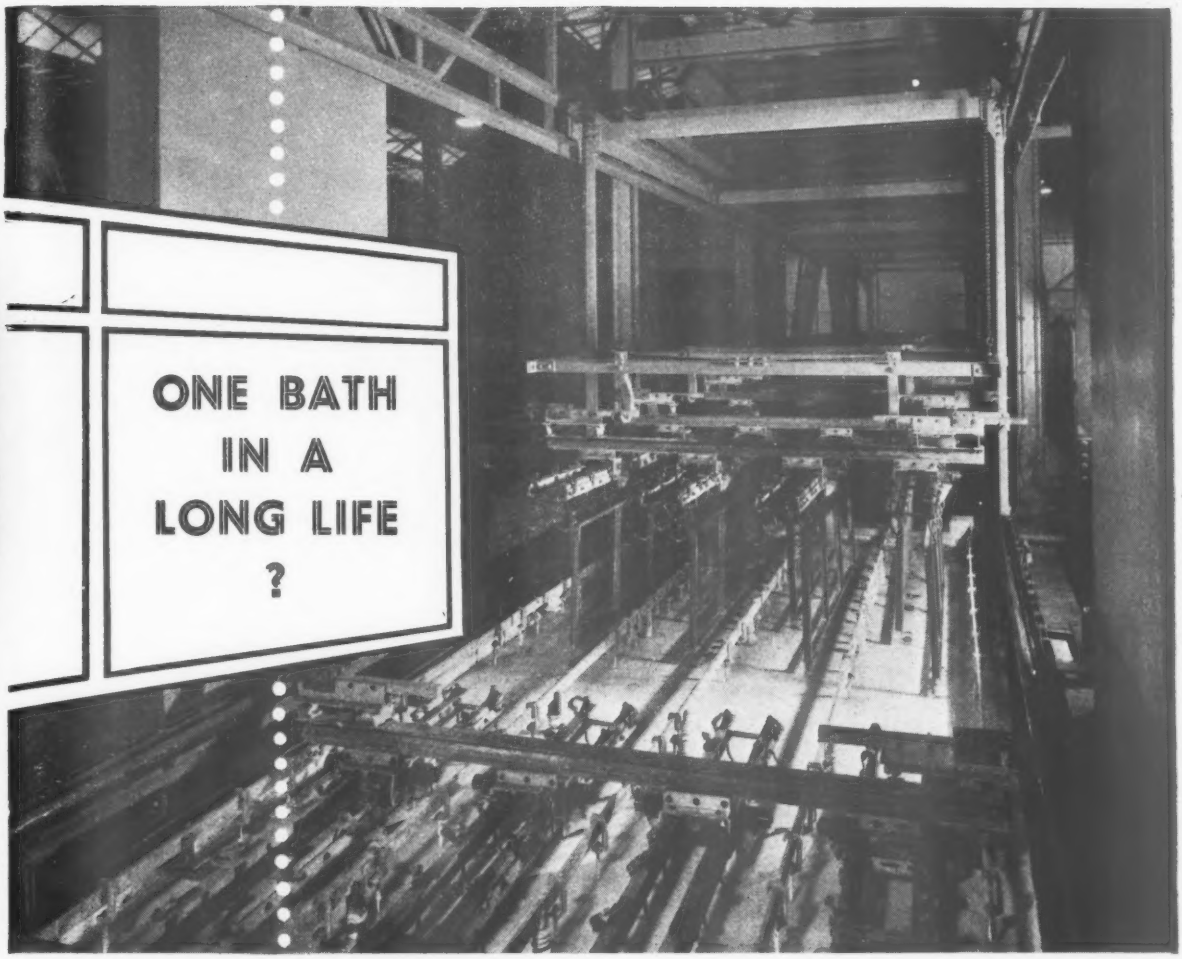

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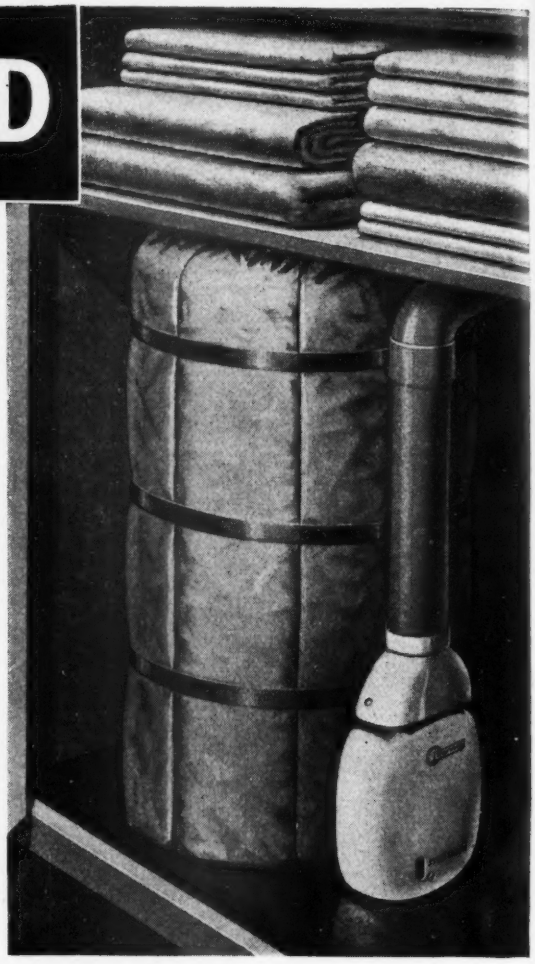

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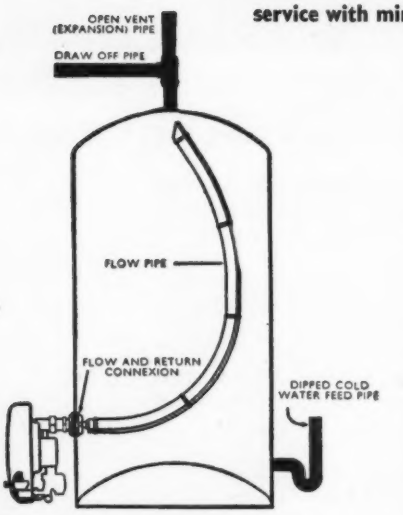

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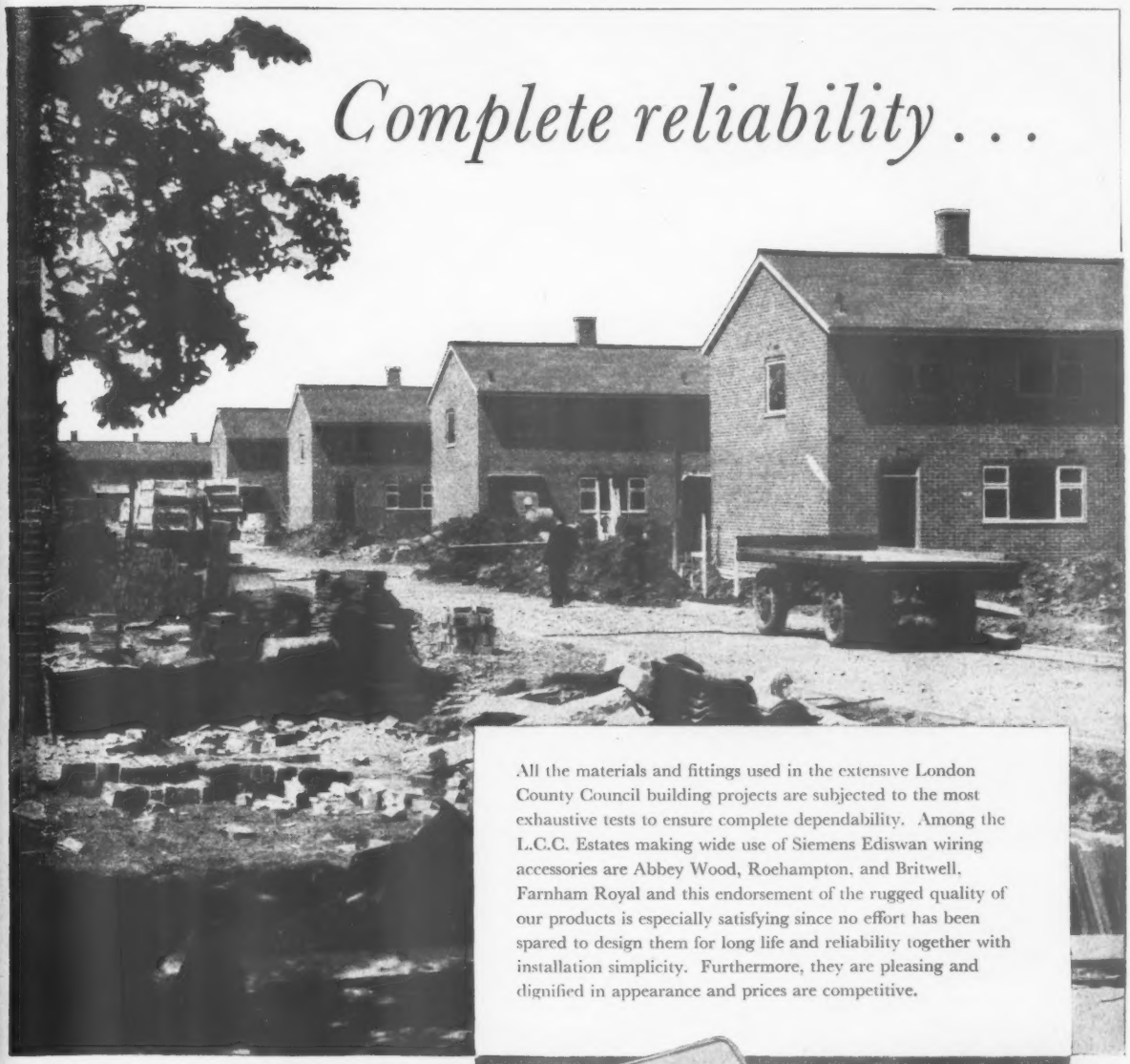

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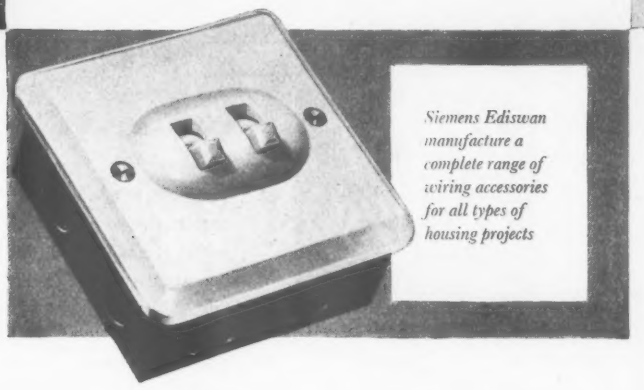

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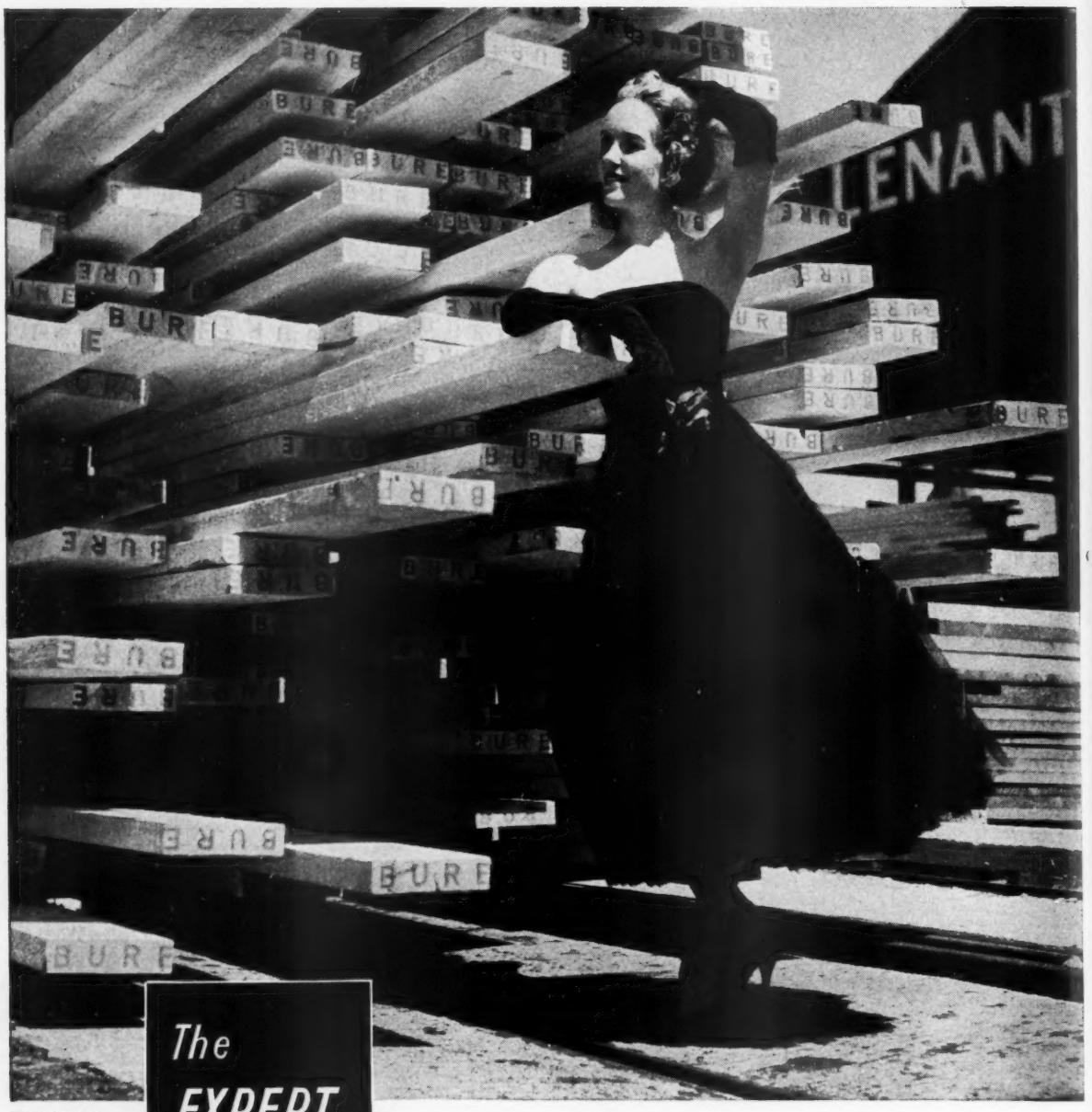

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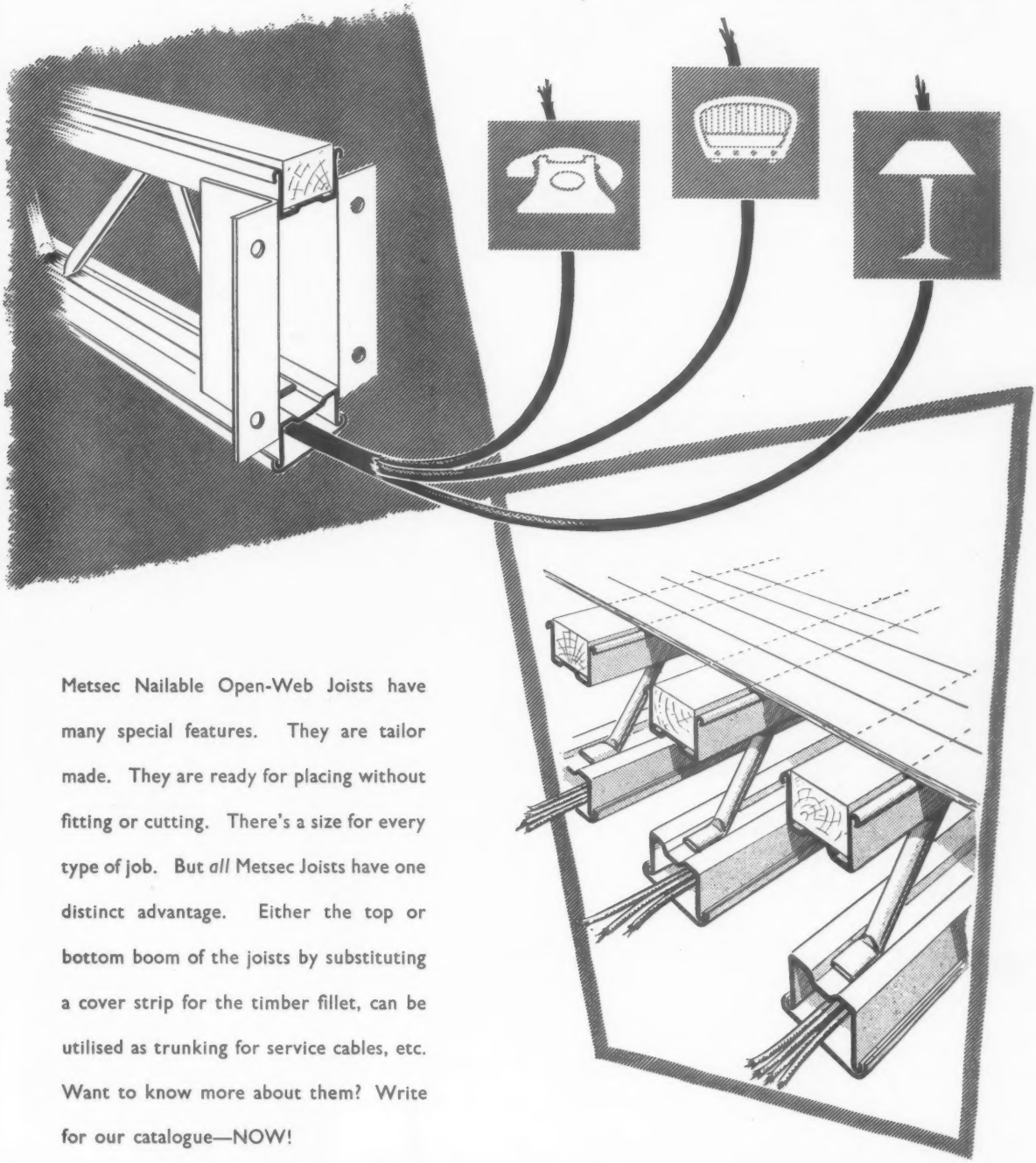

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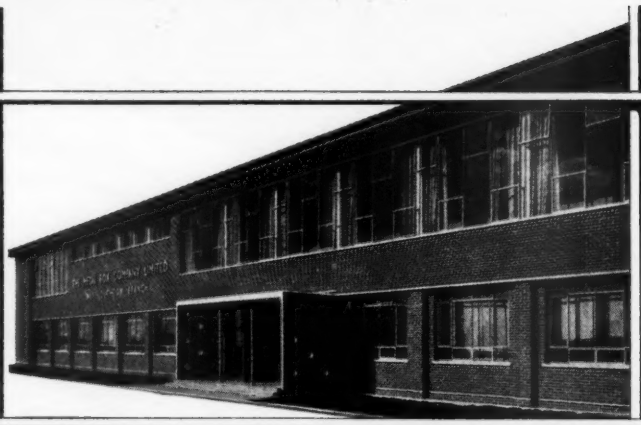

Architects:
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Main Contractors:
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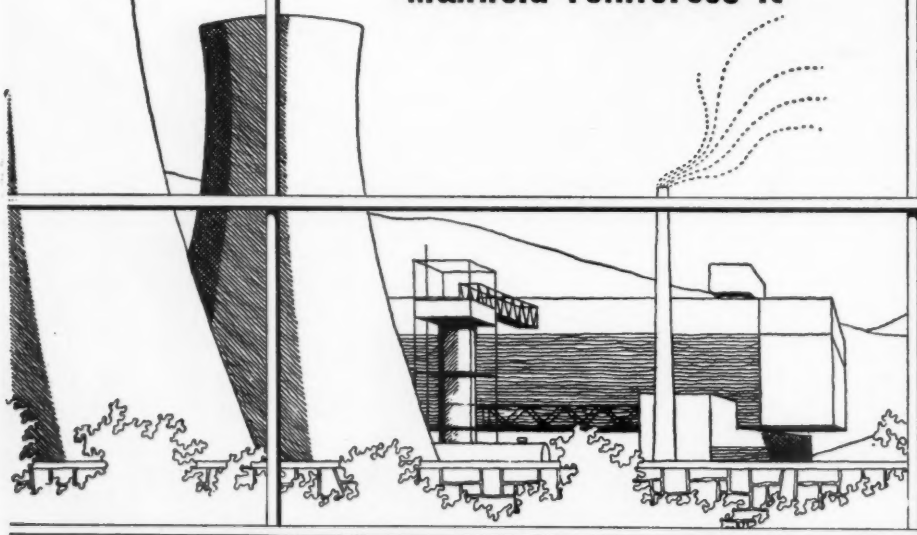

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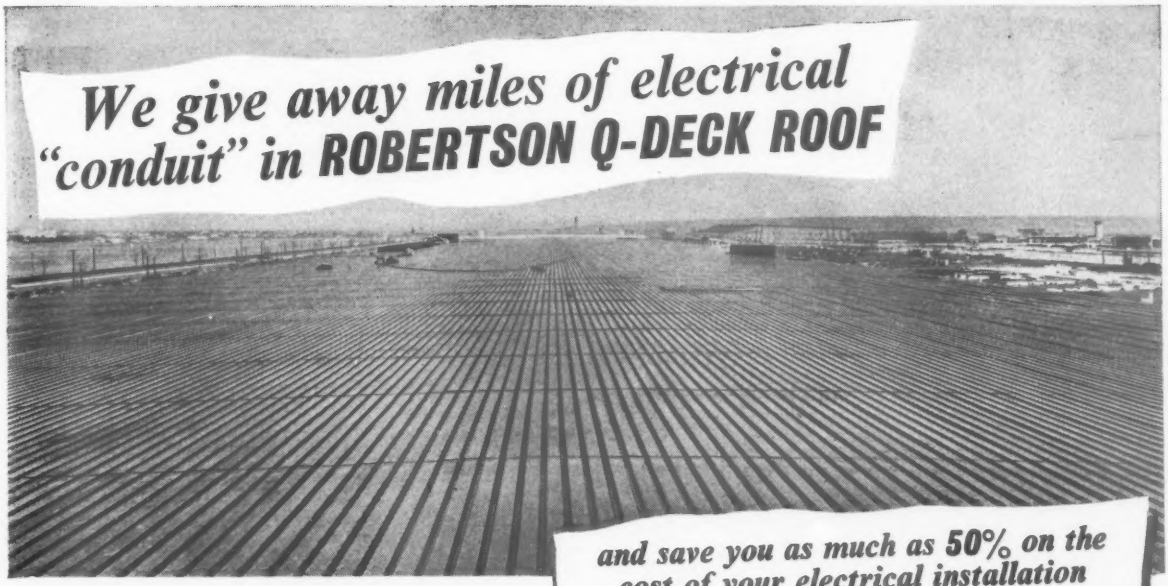

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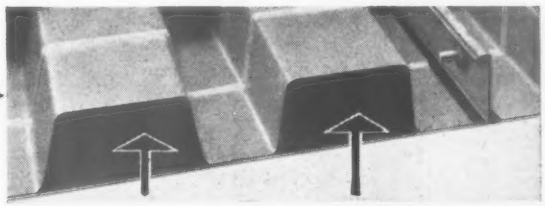
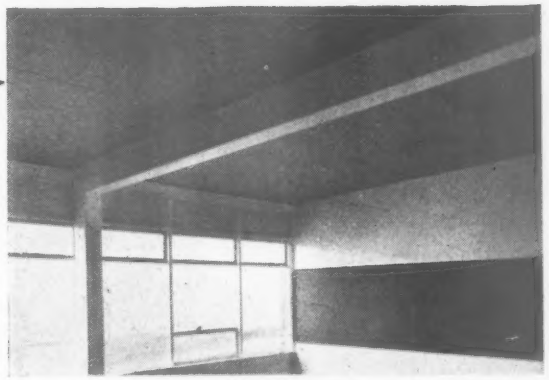
COST—Q-Deck Wiring System by utilising the cells of the roof deck makes conventional conduits unnecessary and so saves material and labour costs both in installing and maintaining the system. The saving can be as much as 50% of the cost of the complete electrical installation.

FLEXIBILITY—Every cell of Q-Deck functions as a large capacity conduit. With cells at 6″ or 8″ centres according to the type of deck used electrical systems are made fully flexible. No need for expensive chasing of plaster and additional conduits when new lighting points are wanted. Lighting points can be moved and new points can be installed quickly and economically simply by drilling a hole in the ceiling at the position of the new points.



APPEARANCE—Q-Deck wiring keeps the ceiling free of unsightly runs of conduit.
The ceiling remains clean and unspoilt yet complete accessibilty is maintained. Ceiling header ducts are neat in appearance and are necessary only at intervals of about 60 feet. Placed alongside main beams they are quite inconspicuous.



ACCESSORIES—A full range of fittings and accessories, specially designed for use with Q-Deck Wiring System, is available and they can be handled easily by electricians. Accessories include—

Ceiling Header Duct—a rectangular steel duct of pleasing design. Installed on the underside at right-angles to the run of cells, ceiling header duct serves to carry cables and permit easy access to the cells from which lighting points will be fixed. 50 or 60 lighting points can be served by a single header duct.

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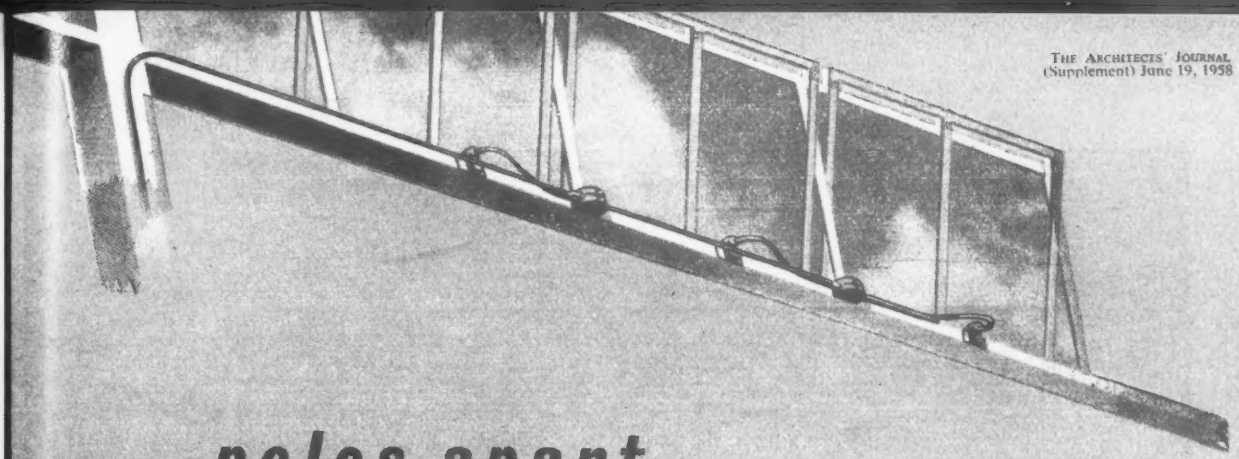

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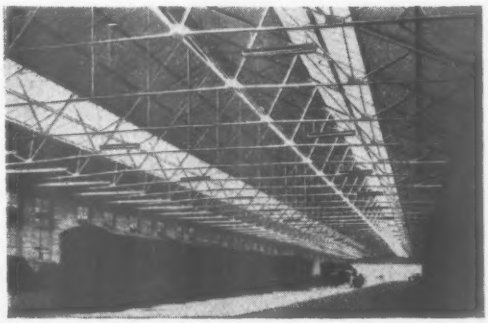

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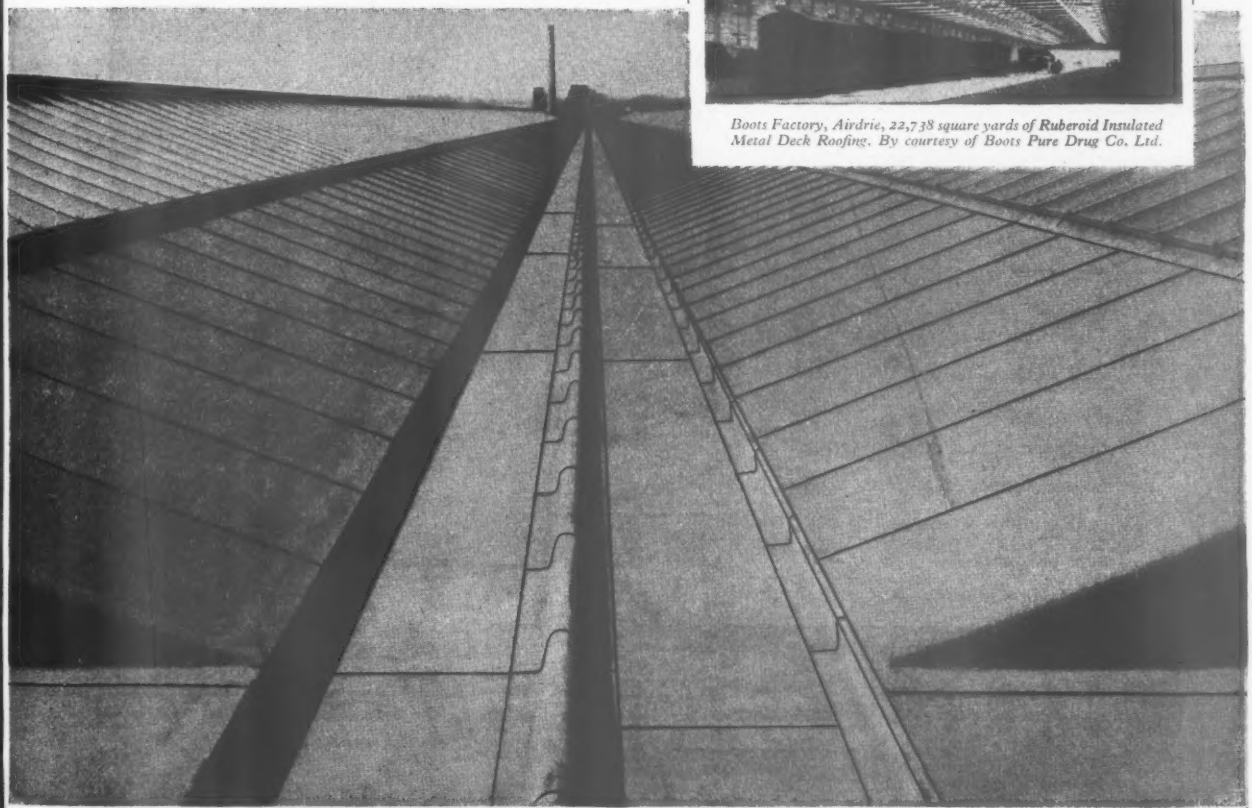

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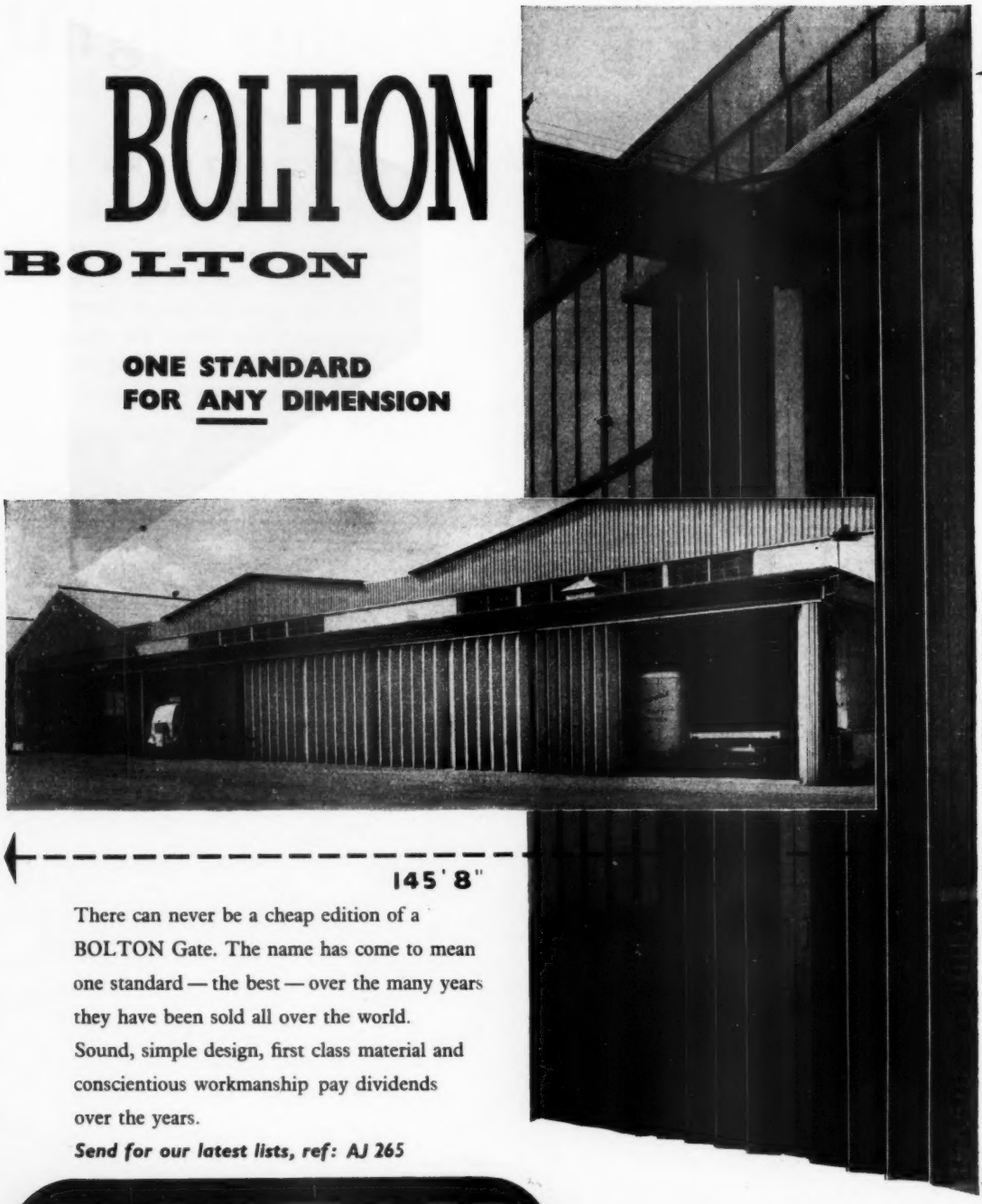

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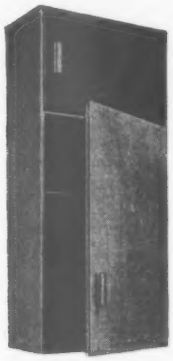

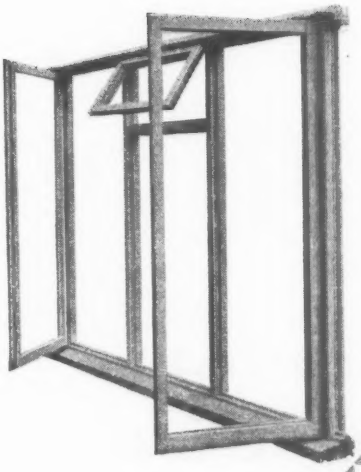

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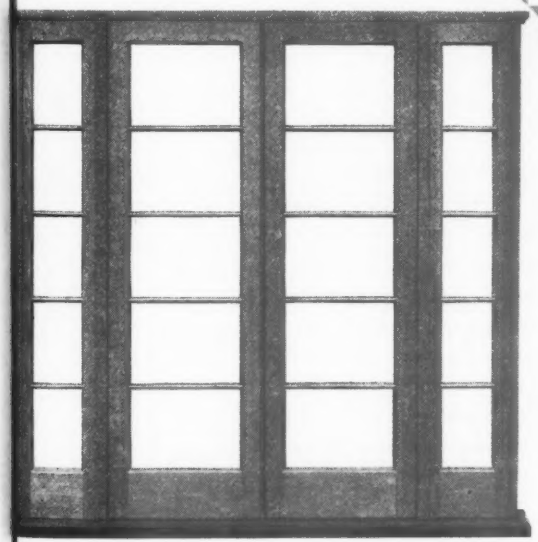

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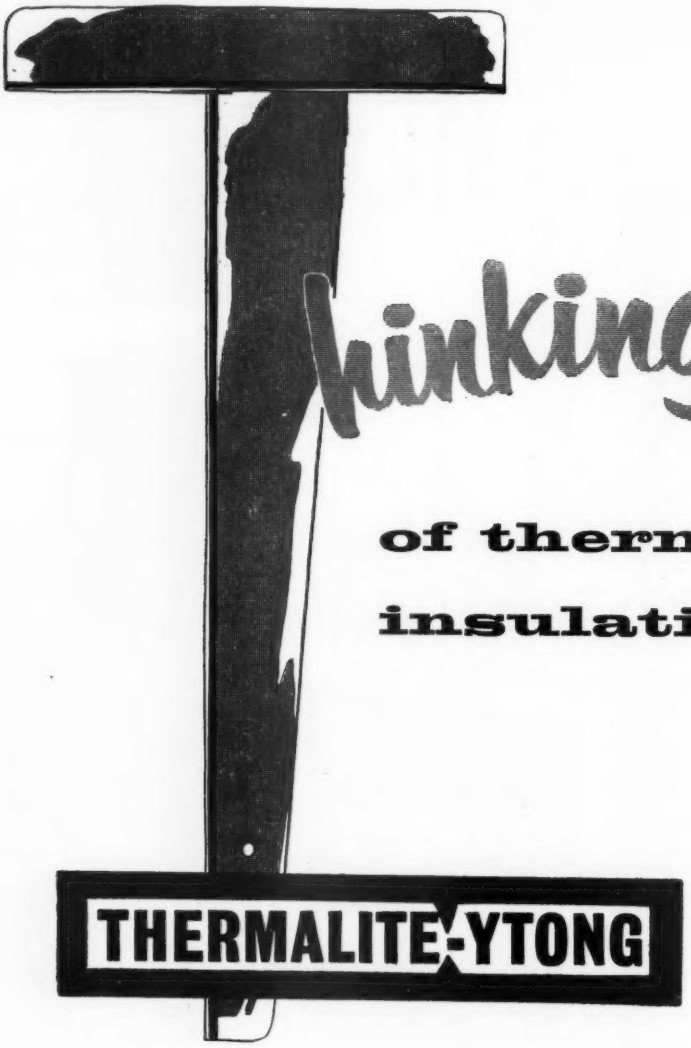

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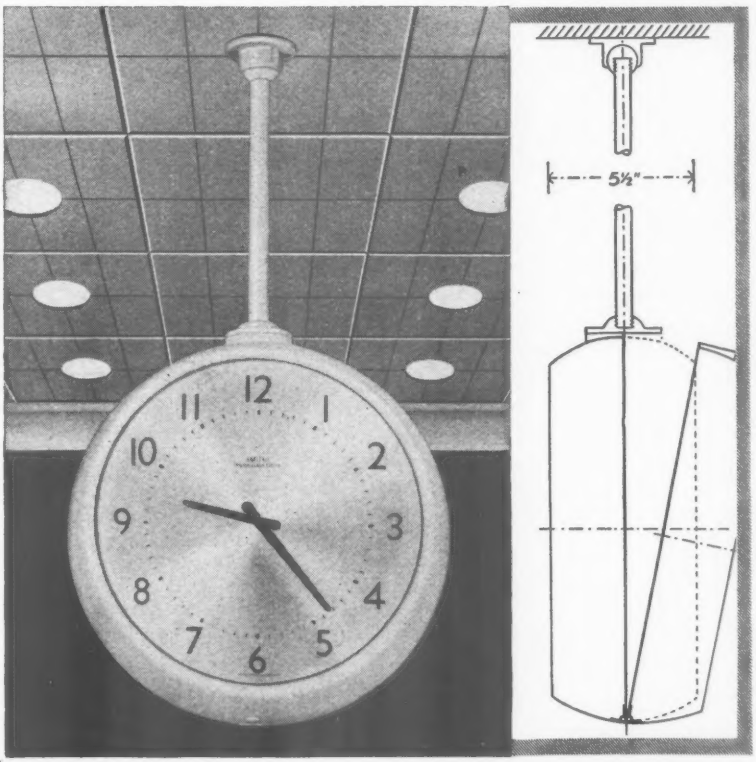

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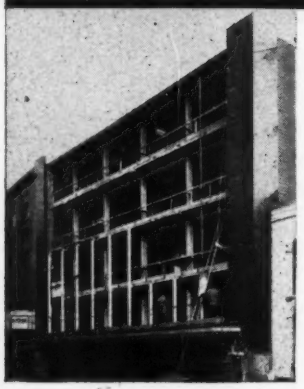

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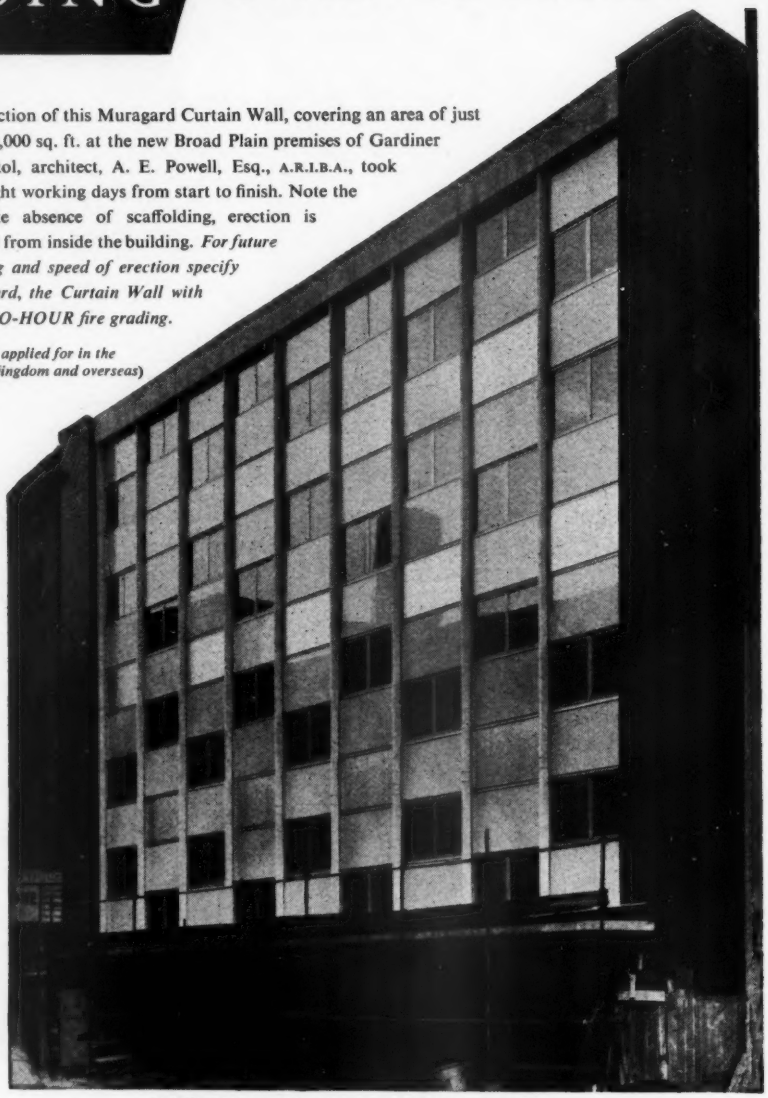

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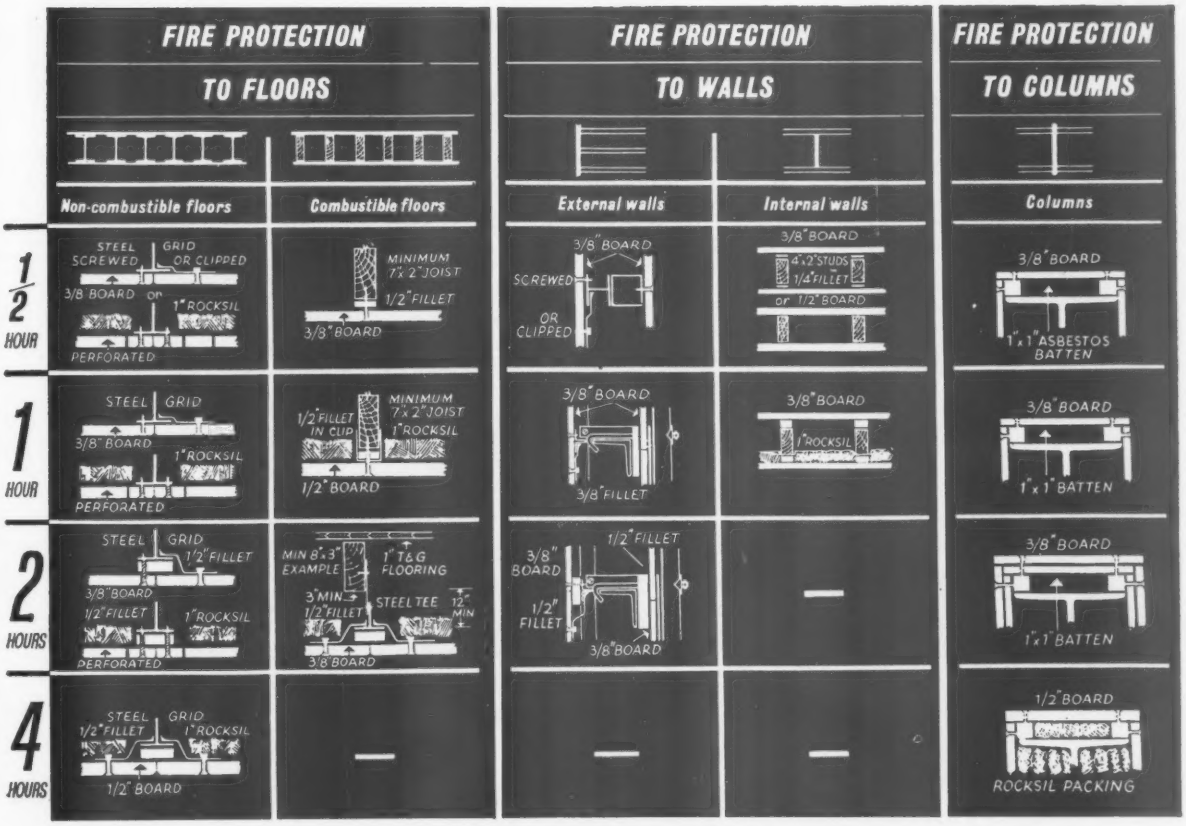

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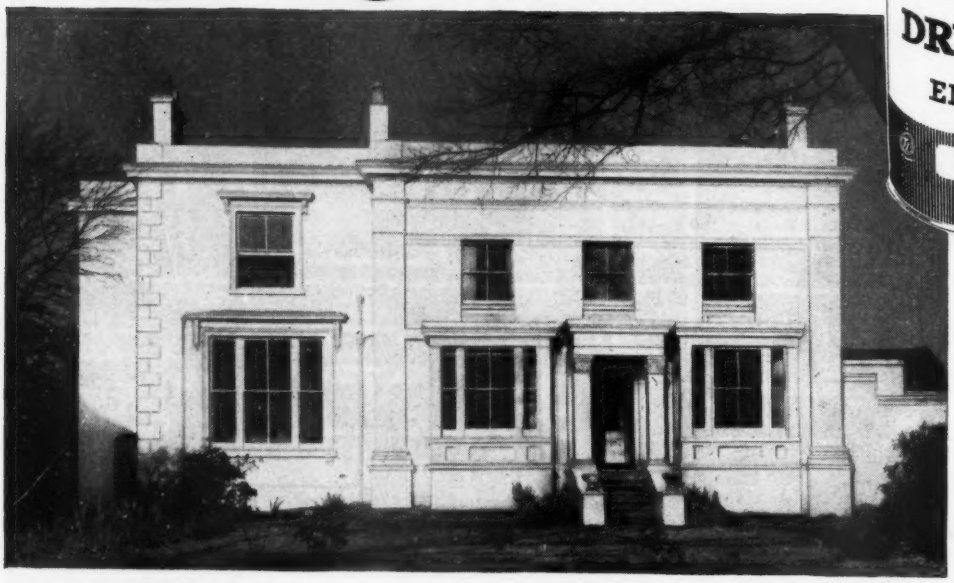

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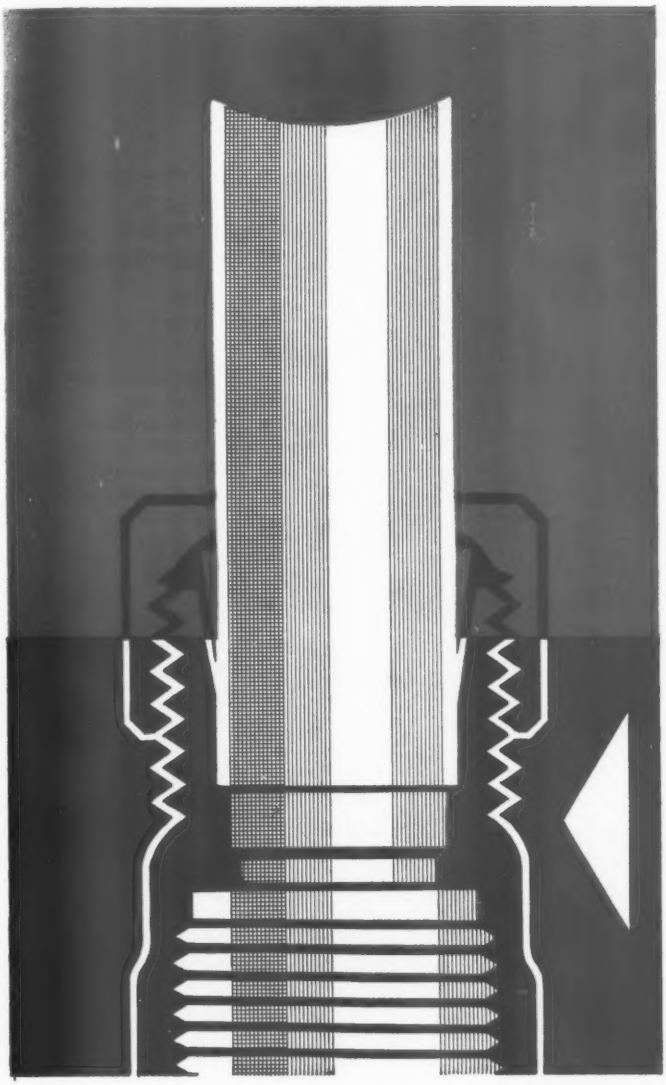

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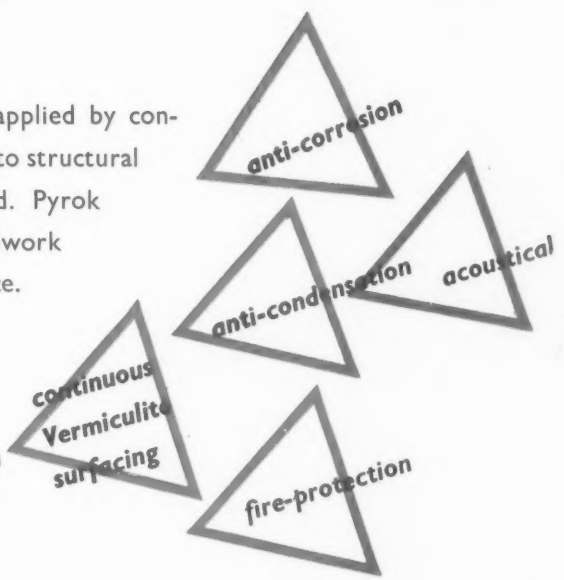

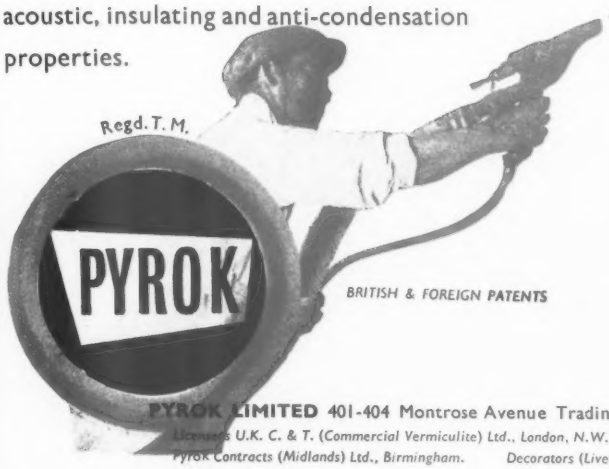

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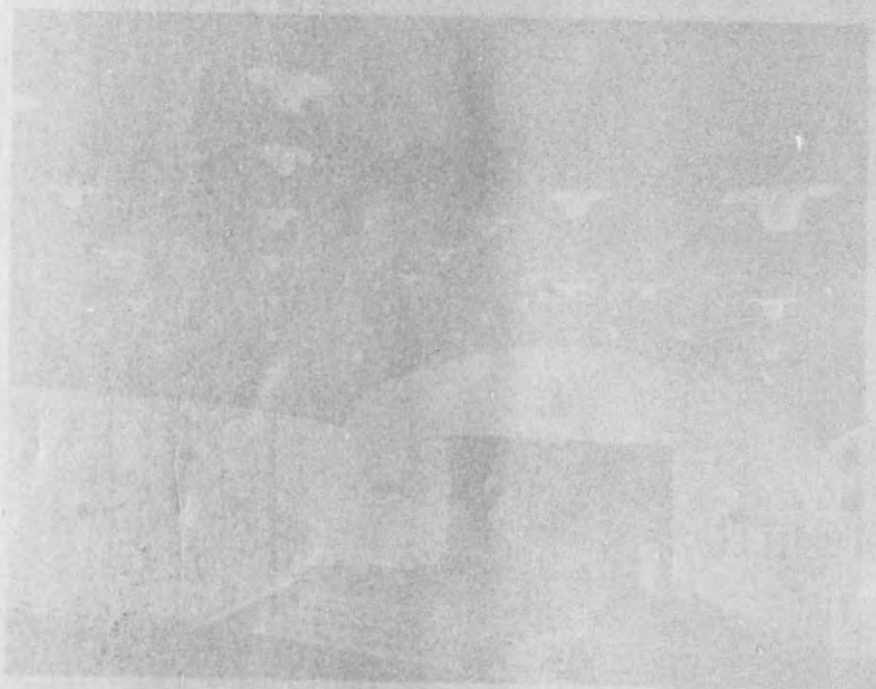

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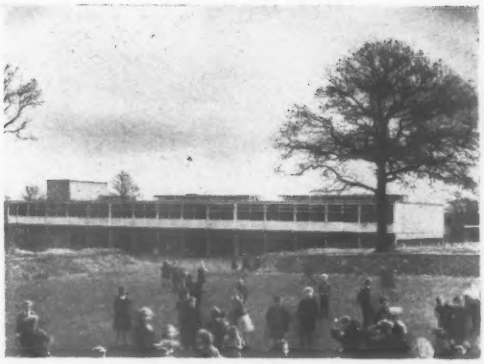
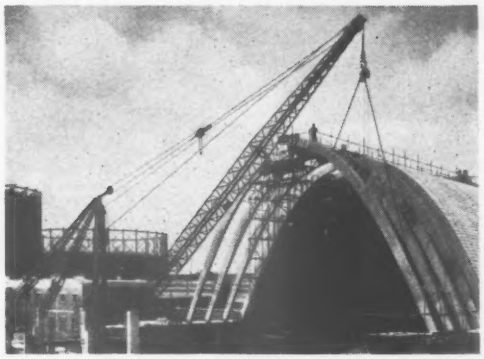
ARCHITECTS: *Read & McDermott, F.R.I.B.A.*
in collaboration with
E.T. Ashley Smith, F.R.I.B.A.
County Architect

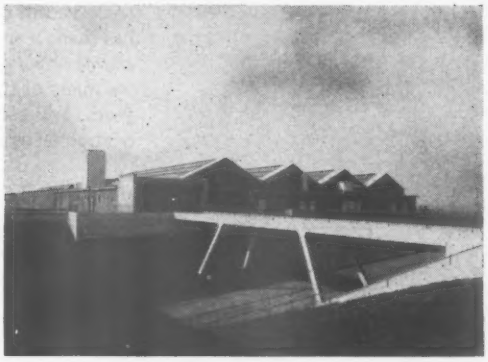


SULPHATE OF AMMONIA STORE
for S.E. GAS BOARD

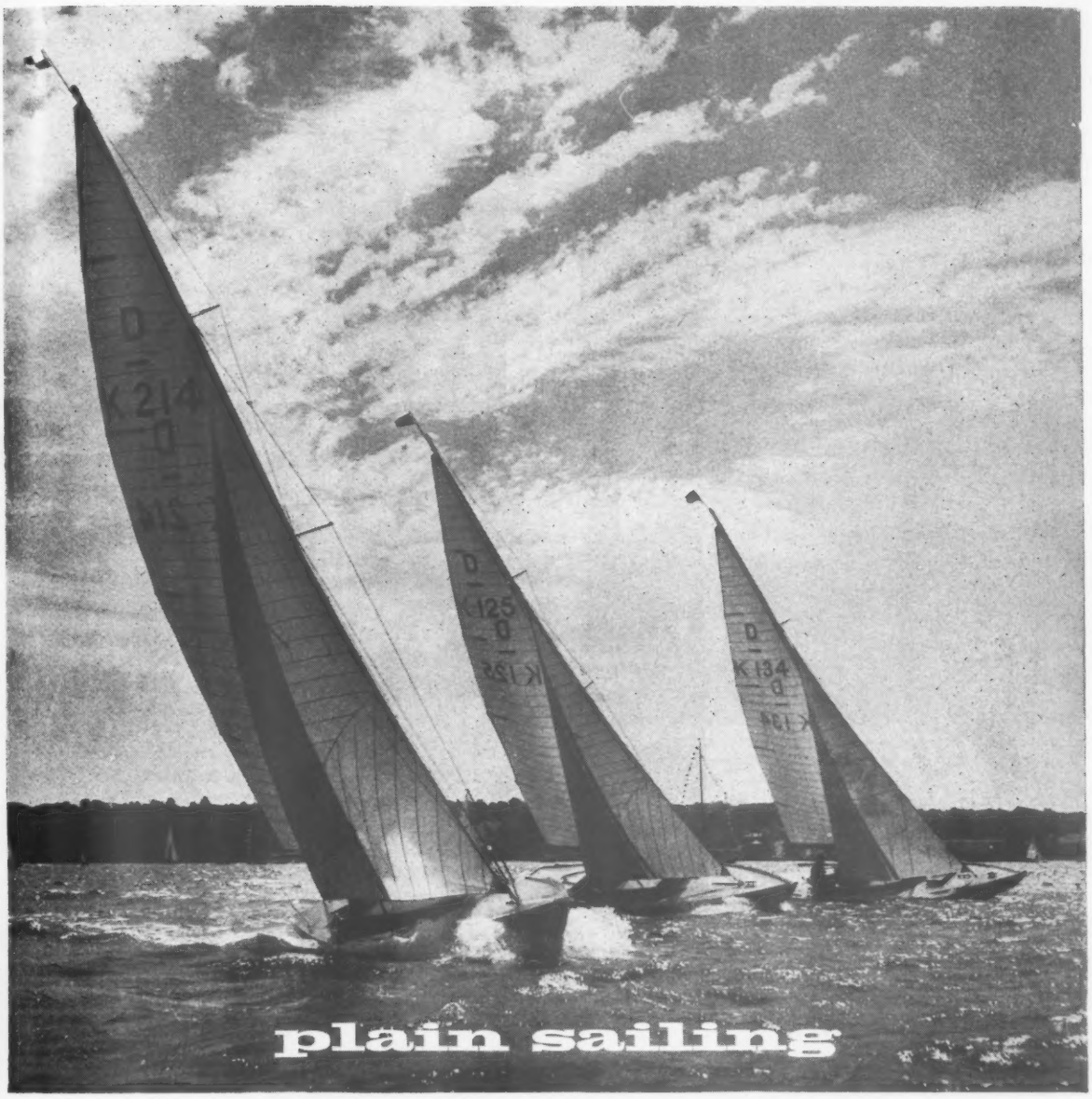


WORKSHOP AND FOOTBRIDGE
for A. REYROLLE & CO. LTD.

ARCHITECTS: *Cackett, Burns Dick and MacKellar*



FWS



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Specially designed to meet insurance requirements, this lock under test has withstood a pressure of 4,800 lbs – 4,400 lbs *more* than is required by British Standards Specifications (Performance tests for Locks, No. 2086, 1956).
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'KEY cut my drain laying costs by 28%'

says Major J. H. HACKETT

Director of Hackett (Builders) Limited, Norwich

'A job which would have taken several weeks by traditional methods was completed in under a week with Key Pitch Fibre pipes', says Major J. H. Hackett, of Hackett (Builders) Limited. 'In this time, the entire main sewage pipe to a new estate was laid by a team of only three men. Labour costs for laying and jointing were cut from 1/2d. to 1¾d. per foot run. The need for concrete bedding was completely eliminated. With performance at least the equal of best quality materials used by former methods, Key pipe gave me an overall saving of at least 28% on the job'.

Key Pitch Fibre pipes, which were supplied to Hackett (Builders) Limited by Robert R. Ruymp & Son Ltd., Norwich, through B. Finch & Co. Ltd., Essex, (Key distributors), are cutting costs on all the building sites of this company. They are also providing a far more effective answer to the problems of an area with exceptionally bad conditions of loose earth and subsidence. This modern form of drainage could bring equivalent or even greater advantages in performance, economy and speed of laying in your own building projects.

FULLY APPROVED

Key pipes comply with the requirements of B.S. 2760, 1956, and carry the B.S.I. 'Kite' mark.

NO CRACKING THROUGH SETTLEMENT

The resilience of pitch fibre pipes eliminates cracking under normal conditions of earth settlement, making bedding concrete unnecessary.

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2, 3, 4, 5 and 6 in. sizes. 4 and 6 in. diameters are supplied in 8 ft. lengths, other diameters in 5 ft. 6 in. lengths. Easily coupled to conventional drainage fitments.

Major J. H. Hackett handling Key Pitch Fibre pipe on one of the building sites of his company.

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500 feet per hour is a modest rate for laying Key Pitch Fibre pipes and the simple jointing system ensures 'all weather' laying. With no cement to dry out, completed drains can be tested and trenches backfilled immediately. When you add laying costs to pipe costs, together with other site advantages, KEY means an overall economy compared with other drainage systems.

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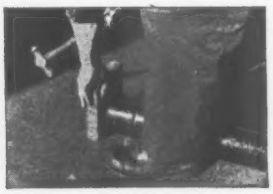
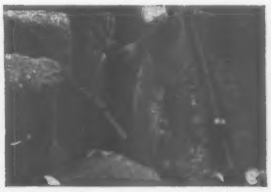


TAP IT



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IN ANY WEATHER!

Get to know more about KEY PITCH FIBRE PIPES

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Aluminium foil insulation gives the greatest advantages

High efficiency

Whilst aluminium foil is a poor radiator, it is a very good reflector of heat. When an airspace (itself a good thermal insulator) of not less than 0.75 inches across is faced with aluminium foil it becomes three times as effective. In hot weather radiation of solar heat is greatly reduced, and in cold weather, heat losses are brought to a minimum.

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Tests over periods of up to 10 years have shown no appreciable deterioration in the thermal insulation properties of aluminium. If protected from prolonged exposure to moisture, foil insulation can be expected to last indefinitely.

Low costs

Foil used for thermal insulation is usually between .00035 and .00078 in gauge, and because of its light weight makes for most economical thermal insulation productions.

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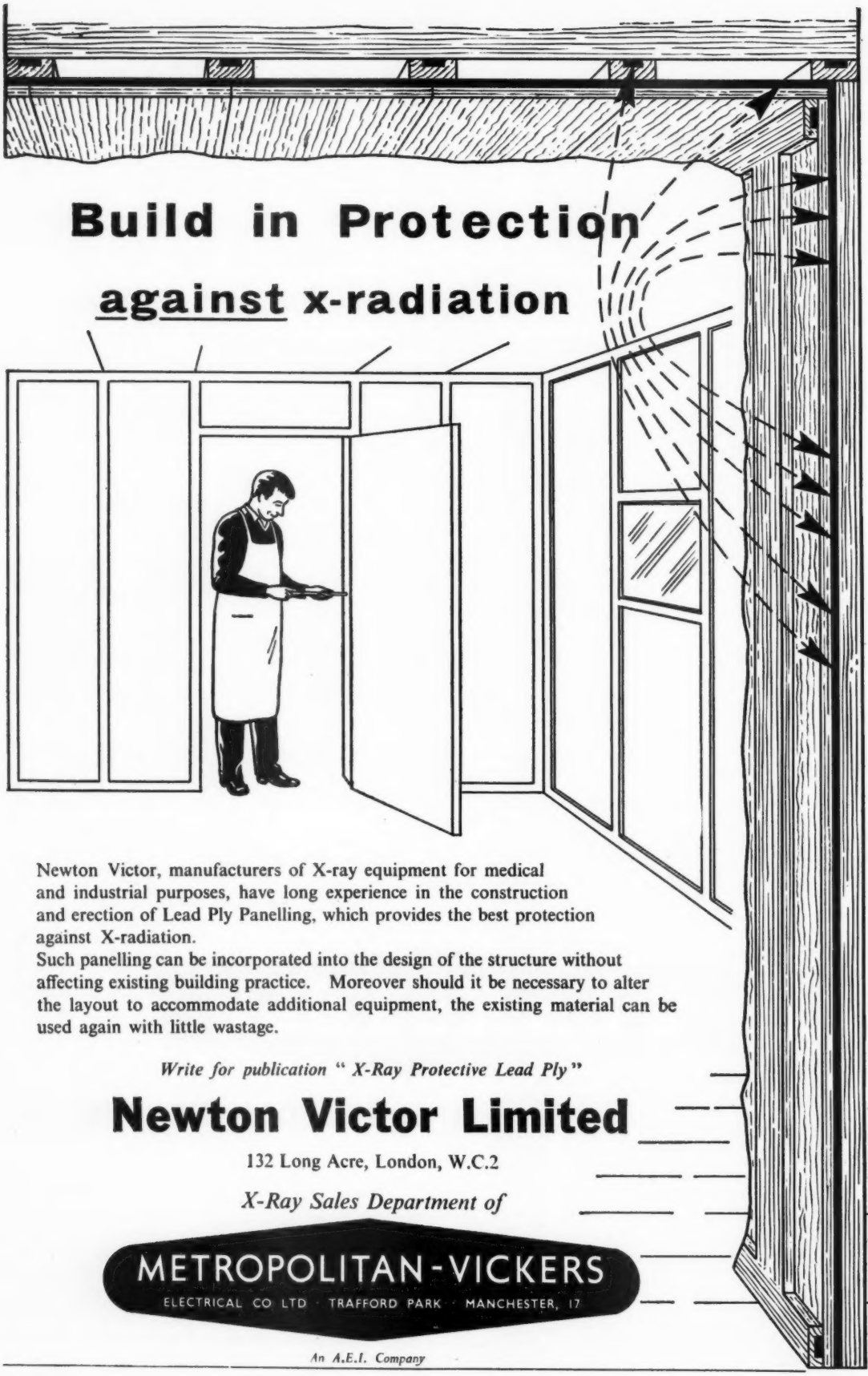

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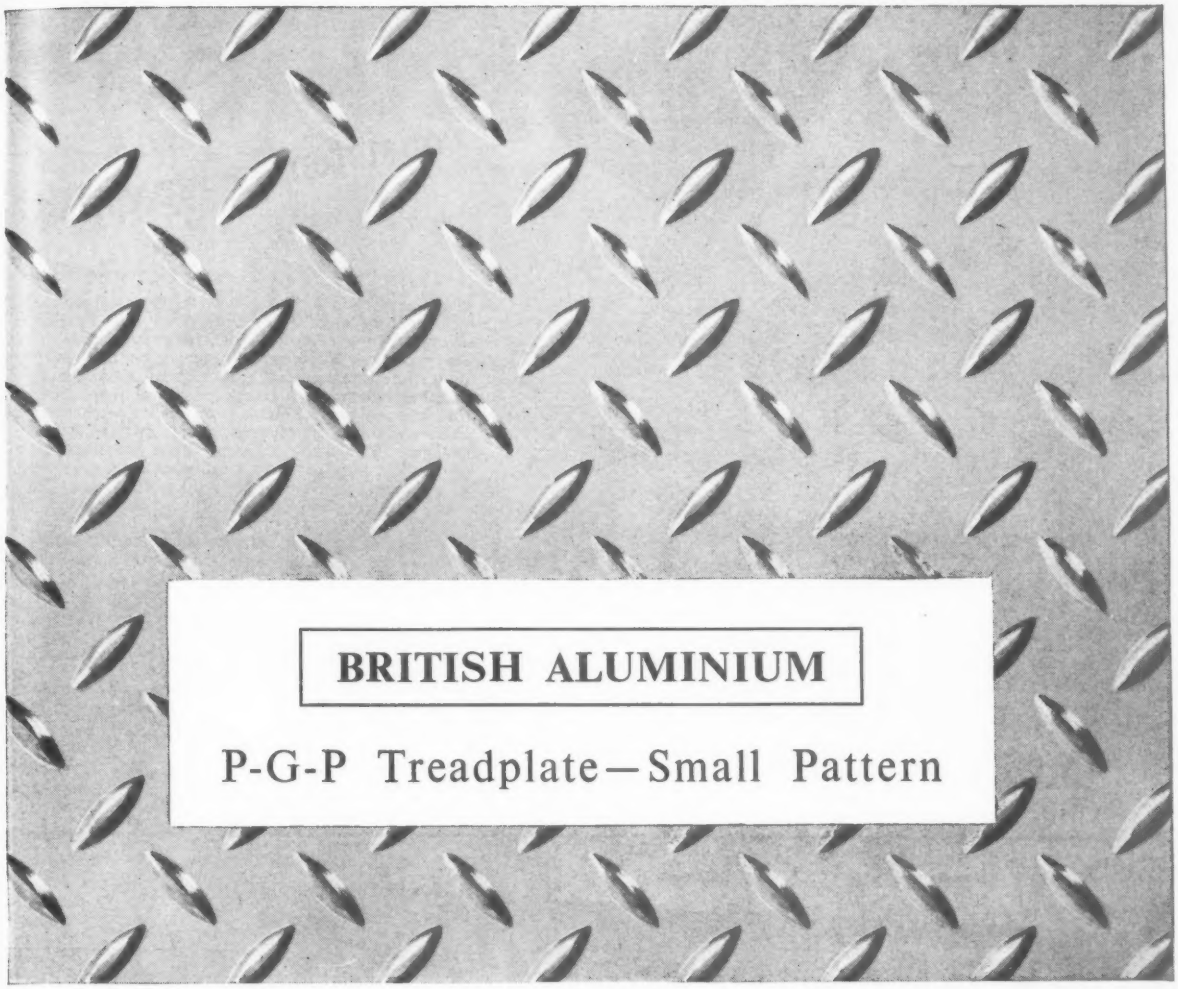

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BA Positive-Grip-Pattern (P-G-P) Treadplate is now available in this small, neat design, shown full size above. It has been added to the Company's range of Treadplates and is particularly suitable for use on kickplates, bulkheads and flooring in passenger transport vehicles where a light small-scale pattern is required. It does not hold dirt and is as easy to clean as the larger P-G-P pattern. Full particulars, including recommended thicknesses to cover many applications, are given in Publication L.36, which will be sent on request with a sample.

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AP208

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Sub Contractors: Firmin & Collins Ltd

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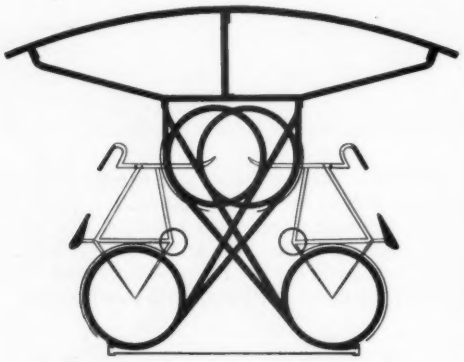

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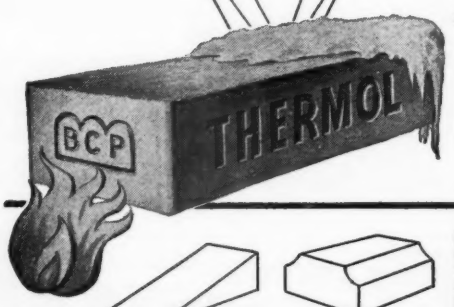

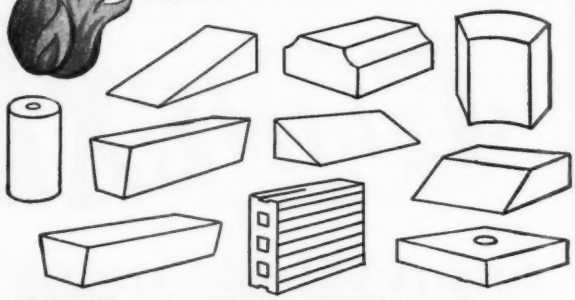

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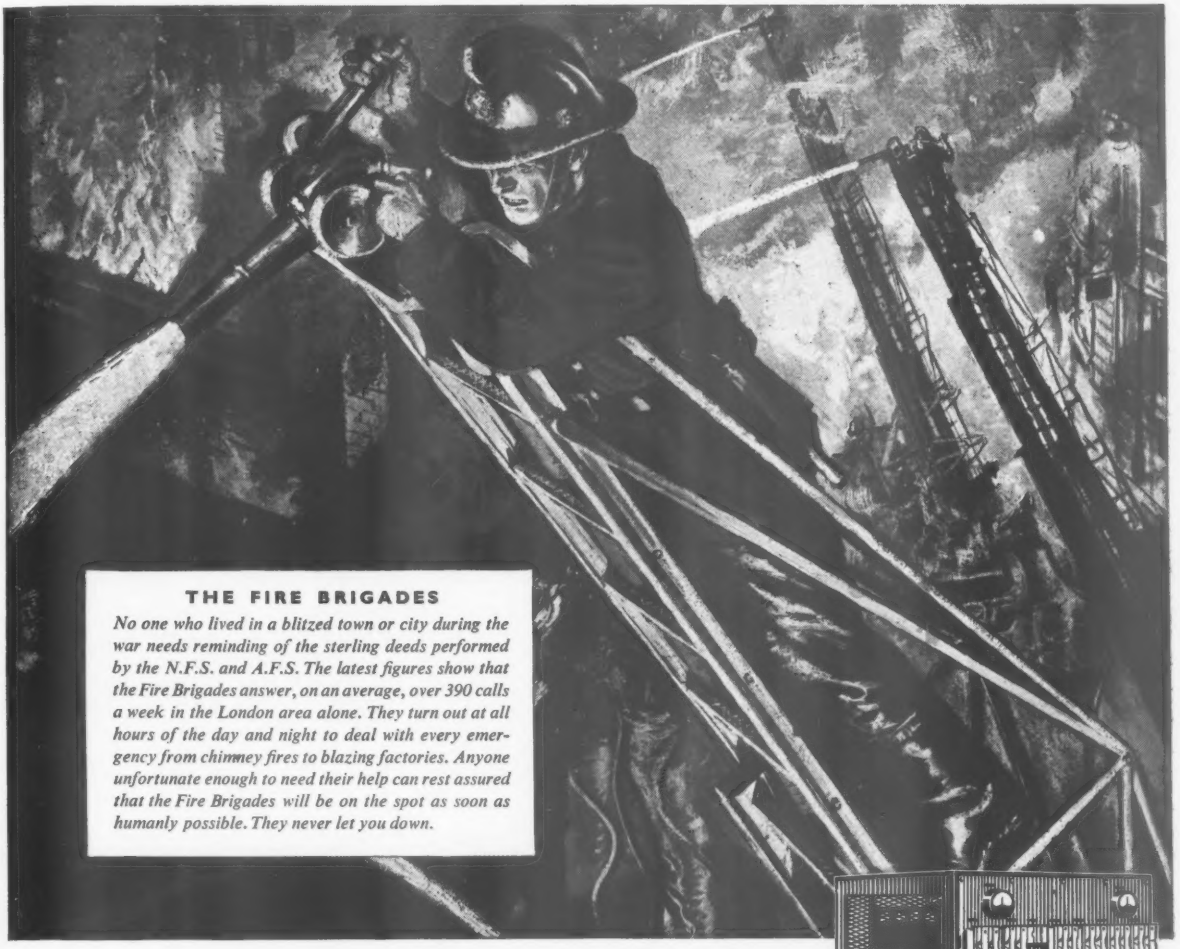

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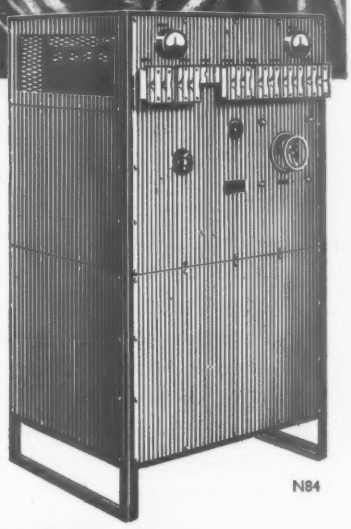
No one who lived in a blitzed town or city during the war needs reminding of the sterling deeds performed by the N.F.S. and A.F.S. The latest figures show that the Fire Brigades answer, on an average, over 390 calls a week in the London area alone. They turn out at all hours of the day and night to deal with every emergency from chimney fires to blazing factories. Anyone unfortunate enough to need their help can rest assured that the Fire Brigades will be on the spot as soon as humanly possible. They never let you down.



N84

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These amiable characteristics brought him to the notice of "Jelly" Jones, the celebrated safe-breaker. For he too loves old things—untraceable bank-notes and all small and portable valuables. So he paid a visit (after dark) to Curio Corner.

No burglar was ever more disappointed. In the cluttered showroom, looking quite at home between a Jacobean armoire and a Regency rent table, stood a very new Chubb safe. "Jelly" Jones crept softly away.

"Not much harm done," said Cabriole-Quint to the police complacently next morning. "I long ago learned that there is nothing so worthless as an antique safe. Now excuse me —I must get some of the latest Chubb window catches."

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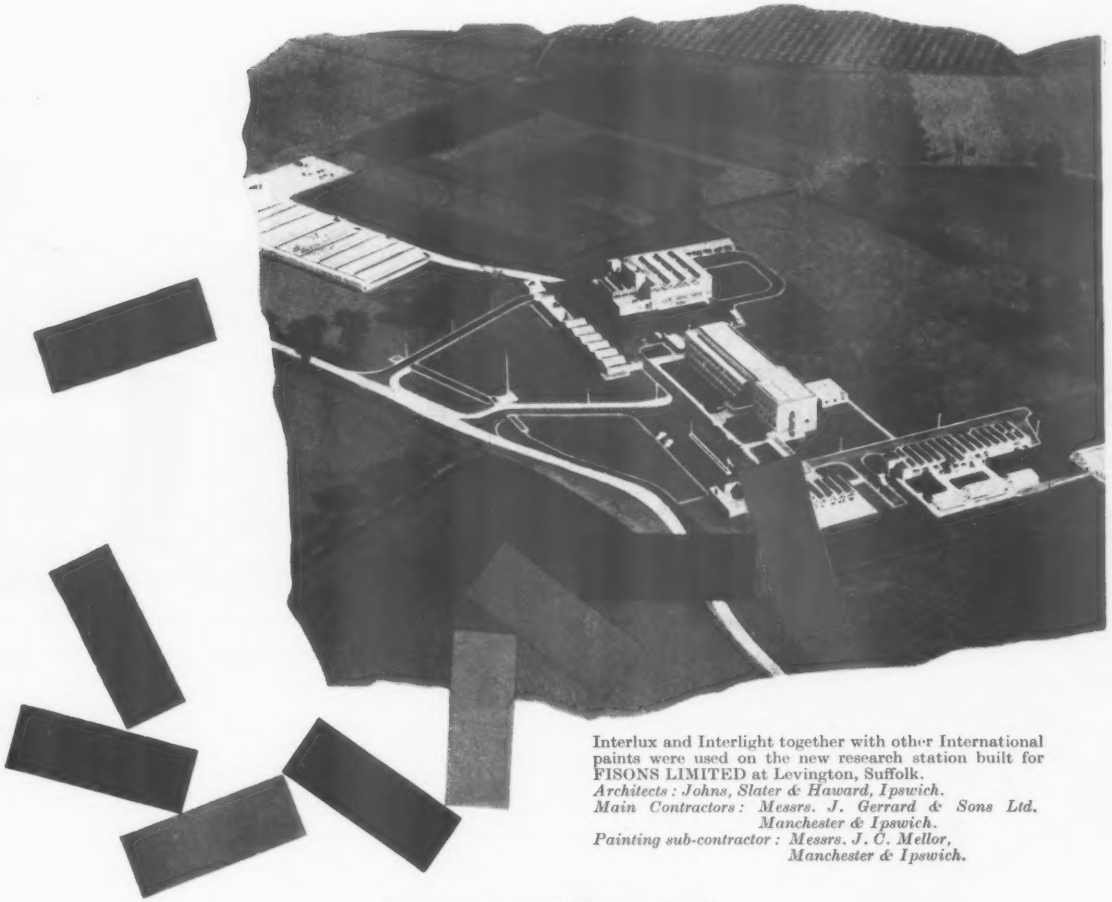

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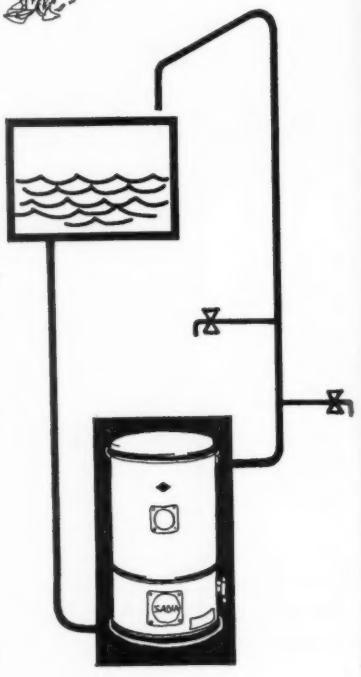

SPECIALISTS IN HOT WATER BY ELECTRICITY SINCE 1923

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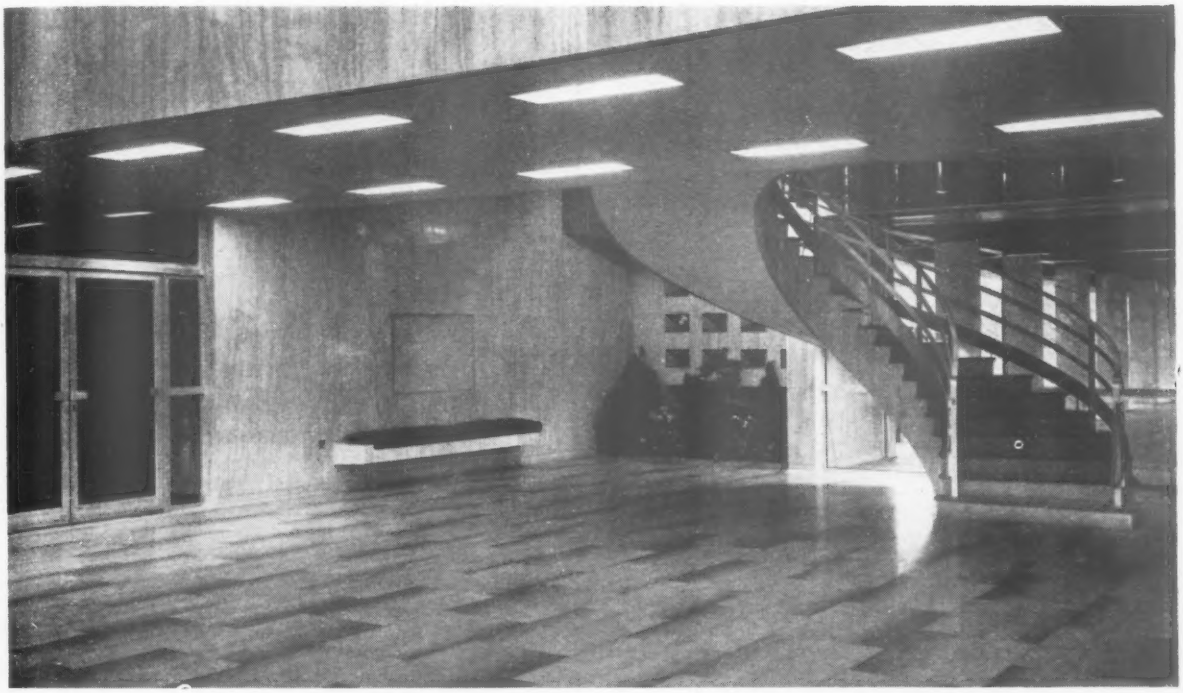

Entrance Hall and Staircase
Paving and treads are in Ondeggiante marble. Walls, aprons, risers and string are all in Florentine Travertine (Rapolano Chiaro), filled face

MODERN ARCHITECTURAL USE OF MARBLE AT THE WOOD GREEN CIVIC CENTRE
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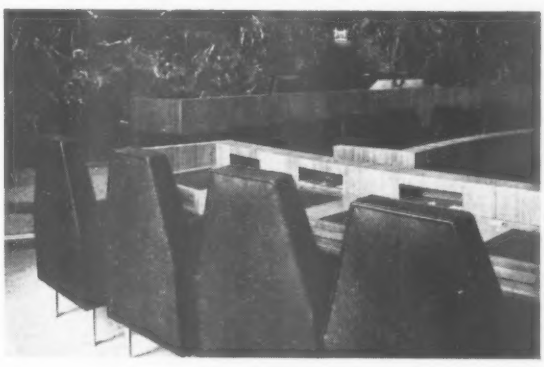
Mayor's Dais in the Council Chamber
The lining is in Issorie Green Marble



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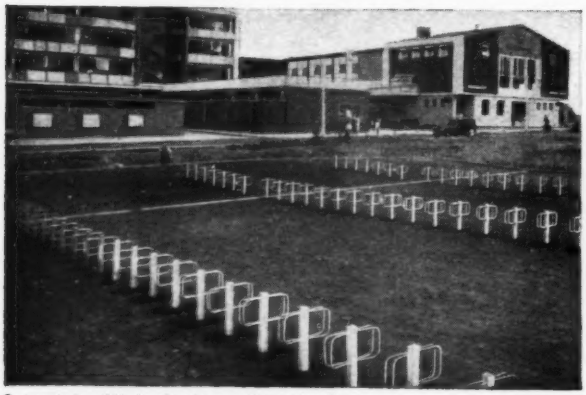

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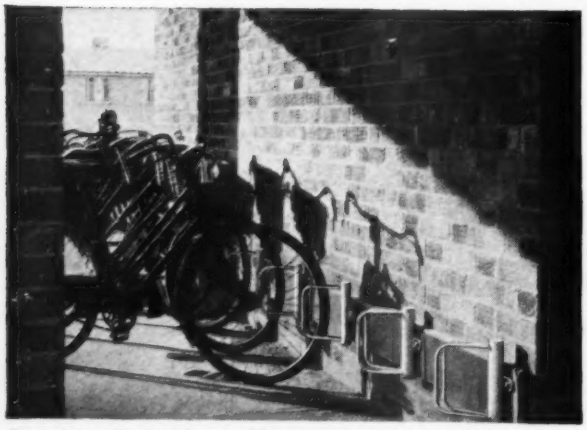

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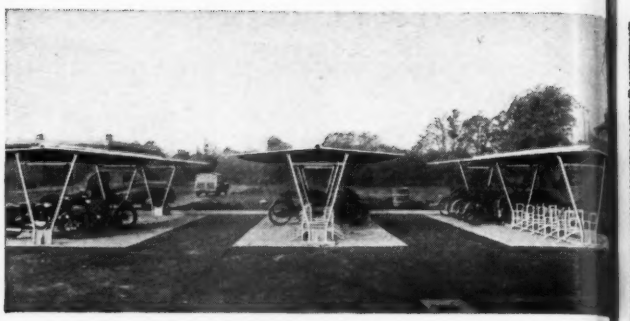

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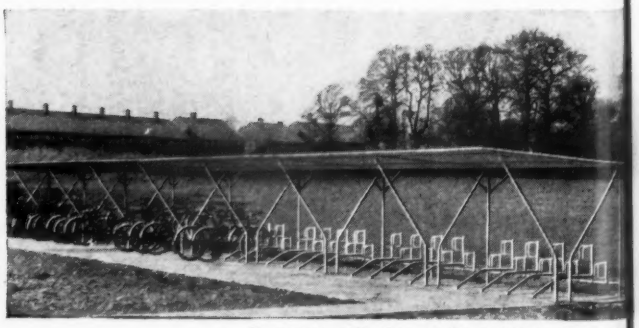

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THE ARCHITECTS' JOURNAL

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NOT QUITE ARCHITECTURE

DON'T BE A SQUARE, BOT

Mine is not blood that boils easily, but all my gauges went over the red line and my fusible plug blew out on reading the following letter from the Board of Trade which has been circulated recently to a number of British architects.

Dear Sir,

The British Embassy at Baghdad recently asked us if we could obtain some photographs of unusual architectural work or designs produced by British architects. The object was to show how our architects can compete with the adventurous designs of some of the foreign architects whose ultra modern conceptions excite and interest the Iraqis.

In recent times the contract for the New Baghdad University has gone to Gropius, the Opera House to Frank Lloyd Wright, the Iraq Development Board's building to Gio Ponti, and Le Corbusier is reported to be in the running for another big building in Iraq.

Extensive capital developments are going forward in Iraq and the local taste for exciting architecture can get support from the large income from oil production which the country enjoys.

Our enquiries have brought in a large number of photographs from many architects but only a small proportion of them have an exciting, bizarre or unconventional character which might stir the Iraqis.

The Technical Editor of *Architectural Design* has suggested that we might ask you whether you can add anything of an experimental character to our collection. We have plenty of photographs of modern square blocks of flats and office buildings but want rather to get away from these with the atmosphere of curving, sweeping forms of concrete and exotic conceptions. The New York airport building and the Jinnah mausoleum are probably the kind of thing to capture the imagination of the Iraqis.

We would be grateful therefore, if you will consider whether you can add something to our collection of photographs.

It is possible that, if we can provide an impressive display the Embassy might arrange a small exhibition in Baghdad.

Yours faithfully, etc.

One hardly knows what to admire most in this piece of studied crassness: perhaps the unadulterated cultural colonialism comes first—the hurt tone that the Iraquis should go out and buy the kind of architecture that they want, instead of accepting the kind that we like to hand out to them, spending

The Apotheosis of the Curtain Wall

The Seagram building, New York, designed by Mies van der Rohe and Philip Johnson, is now finished. Rarely has so much money been lavished on a prestige building with such restraint. The shining skin which sheaths this conventional steel-framed structure consists of grey tinted glass —and bronze. Mullions, window frames and spandrel panels are all bronze, which the architects hope will weather to a matt black. Shown clearly in the photograph is the open forecourt which the clients, by dint of going high, have bequeathed to Park Avenue strollers, and on the left, the rather odd squat blocks, described by Robin Boyd as " the bustle at the back." The sheer mass of this superbly executed and finished building can be judged more from the four-storey houses nestling in the shady background, than by the human figures strolling in the sun. On the right is that earlier exercise in curtain walling and rising high: Lever House.

all that lovely lolly from their oil-wells on "foreign architects."

*

But even more wit-chilling is the attitude to architects and architecture that is revealed. Try transposing it into automotive terms: have you any photographs of cars with tail-fins? If the BoT really believe that people like Corb get jobs in the East because their work is "Bizarre," "exotic," "unconventional," one can only hope that their small exhibition gets the razz it deserves, and perhaps some Iraqui will spare a couple of minutes to explain to them that world-class architects like Gropius and Frank Lloyd Wright would still get big commissions out there even if they only designed "square blocks of flats and office buildings."

*

The BoT should get off its square kick right away, and remember the case of Herman Muthesius, who was sent by another government (Germany) sixty years ago to find out why another country (England) was producing architecture that was all the rage. Muthesius really got in there and dug about, and came up with a report on English domestic architecture so thorough and so right that even Lethaby had to admire it. And as a consequence Germany got the Deutscher Werkbund, Peter Behrens, the Bauhaus, Gropius, the Barcelona pavilion, Mies . . .

*

Of course, there is a point here; the fruits of Muthesius's research were launched at the heads of men who were prepared to understand, and architects of the right calibre to put his discoveries to work, whereas we have to ask ourselves (*a*) whether there would be any point in submitting such research to the BoT, and (*b*) with such honesty as we can muster, whether we have any architects who are competitive with the Big Four.

*

It isn't tail-fins that sell Cadillacs rather than Rolls-Royces to oilfield sheiks, but the fins are the identification symbol of a product that gives them more of what they need. A Rolls with even a Comet tail-assembly still couldn't give them that, any more than a City office block wrapped in hyperbolic paraboloids would. As we stand at the moment we have Rolls-Royce architects of experience, and Lotus architects with the tail-fins of imagination, but no architects with the Cadillac combination of experience and imagination that a Corb or a Frankie can offer. Instead of wringing its hands when the unquestionably great get the showpiece jobs, the BoT had far better do some close research on the ground to make sure that we don't miss the jobs we really can do.

REYNER BANHAM

The Editors

PAYING THE PROFESSION

ASTRAGAL points out, overleaf, that the average architect's salary today, in the best paid county office, is £1,080 a year. The American Institute of Architects, according to this month's *Forum*, has discovered that nearly half its members' annual net incomes are less than $10,000, and about 20 per cent. earned less than $6,000. To turn these figures into pounds sterling it is necessary to divide by 2·80, but a more realistic figure in terms of equivalent purchasing power is achieved by dividing by five. This gives figures of £2,000 for half the AIA's membership, and £1,200 for 20 per cent. It is disturbing to see that income levels which alarm the AIA are nevertheless well above an average income for one of our best-paid offices. It is hard to know why the profession's income is so low. Is it due to a deliberate devaluing of the profession on the part of the old guard at the RIBA who were prepared to allow a low academic level of entry so long as they got cheap assistants? Or is it due to the fact that the percentage rate for fees is too low at 6 per cent? The proposals arising from the RIBA's conference on education, and the fact-finding now being undertaken by Gordon Ricketts, the Secretary of Professional Relations (see, incidentally, the announcement of a further enquiry into the amount of work coming into, and being done by, architects' offices announced in this month's *RIBA Journal*) may go some way to answering these points.

It is significant that the *Forum* is also perturbed, as we are over here, at the method of paying for architects' services, and an article in the current number lists the various alternatives available in the USA to the normal method of receiving a percentage of the cost of construction. Some method of relating fees to actual design and supervision costs has long been desired and looked for over here. Would it be too much to hope that when the RIBA has compiled more information on design costs, indications may appear of alternative methods of payment which would be more satisfactory for the architects and more likely to win the confidence of the client, and which could be experimented with in parallel with the present system?

ACADEMICISM AT BRS

The publications of BRS have (apart from Digests) become so rare that the appearance of a new one is quite an event. Last week saw the publication of Special Report No. 27 in the Nation Building Studies entitled *A short history of the structural fire protection of buildings particularly in England.* The author is Dr. S. B. Hamilton who, readers may remember, also gave us Special Report No. 24 in the same series which was entitled *A note on the history of reinforced concrete work in buildings* two years ago. This new volume like its predecessor by the same hand, is a first-rate addition to the history of building technology. Nevertheless, its publication raises the

question "is BRS really using her manpower to the best advantage?" Dr. Lea, the Director of BRS, in his introduction to it, suggests that this study is an essential background to the research on structural fire protection now being carried out by JFRO; but the very banal nature of Dr. Hamilton's conclusions shows that, however fascinating his study, it does not really add to our *practical* knowledge of structural fire protection. This carping is to suggest not that Dr. Hamilton has done a bad job (he has done an excellent one) or even that the job was not worth doing, but only that it would seem to be a task more fittingly done by a University than by a Building Research Station—particularly in times like the present when building research staff (particularly of the calibre of Dr. Hamilton) is so desperately short of our needs.

DISTINCTION IN ARCHITECTURE. . . .

John Summerson, the quiet, scholarly curator of the Soane's Museum, has been given a Knighthood. This honour, which follows his CBE by only a few years, is a proper reward for scholarship and brilliant writing. No doubt he is already a marked man at Portland Place. Or have they forgotten there that the Royal Gold Medal was instituted for bestowal upon a "distinguished architect—a man——of Letters." ASTRAGAL offers his congratulations.

. . . . AND IN BUILDING

Congratulations too to Peter Trench, managing director of Bovis, who becomes director of the NFBTE in March of next year. Mr. Trench reached his present position only five years after starting at square one, which is remarkable in an industry where a seat on the Board is most easily reached by a careful choice of parents. His directorship of the NFBTE could be very influential. A man with such practical experience of all the trades and professions (including architects) that go to make a building could do a lot to stop the internal bickering which prevent the industry from being as efficient as it should be.

*

Mr. Trench may well have a long struggle against indifference and established ideas; let us hope he sticks at it for long enough to sort out some of the nastier tangles.

SCHOOL IN REVOLT

A petition signed by the overwhelming majority of the students at the Bartlett School, calling for an independent investigation into the classical system of architectural education practised there, is published in our news columns. ASTRAGAL hopes that University College will not resist this proposal, and that the Board of Architectural Education and the College will be able to co-operate in holding it. Whatever the merits of the dispute, such a gulf between teachers and taught is evidence that something is very wrong. The most disturbing aspect of the whole affair is that the students have refused to give any information about their complaints because, apparently, they are afraid of reprisals if they go outside the university. Such a state of affairs cannot make architects any too happy about bringing more schools into the universities, as the Oxford conference proposed.

THIRD-CLASS DISCUSSION

When Charles Eames, the American designer, was here a few weeks ago, he was recorded for the Third Programme. The record went on the air the other day, billed as a discussion, but it proved to be more like a Press conference. Each of Mr. Eames' fellow-speakers plugged a different line in their questions. Bruce Archer, of the Central School, wanted answers about the mental disciplines of design; Basil Taylor, of the Royal College, threw in questions of broad policy (Designers versus Stylists), and David Pye tried talking at a more superficial level—probably just right for Third Programme listeners—about such things as Mr. Eames' use of decorative symbols.

*

Something for everybody, in fact—except for Charles Eames himself, who was continually having to change both tack and gear: a pity that one had the impression of a concentrated mind being dissipated in a fine spray. One thing is certain: the BBC will not be able to do this to Buckminster Fuller. Watch your *Radio Times:* Mr. Fuller is an Experience.

A WHINNY IN CAMBRIDGE

As you will have read, an appeal has been made for £3½ million to endow a college at Cambridge University. It would have 600 undergraduates, 200 research students and fellows; it would occupy a 40-acre site, and it would be called Churchill College, after Sir Winston, who is said to have thought the thing up. Why pick on Cambridge, an overcrowded city and the biggest university (apart from London, which is too scattered to count) in the country? That is what Dr. Tillyard, the Master of Jesus, wants to know. He says that the proposal to found the college "tacitly assumes such a process may go on forever without regard to the increase of size involved—an assumption of far greater moment than the foundation of a single new college, and I believe it to be pernicious."

*

Most people who love and value the city and university of Cambridge will agree with this. A fully-endowed residential college would be much

more valuable to one of the red-brick universities. Cambridge, like Oxford, needs no such shot in the arm, but could gain by the presence of another, younger, university, anxious to challenge its supremacy in the field of science. Cambridge can, of course, vote against Churchill College but, in the words of a *Cambridge Review* correspondent, "by Jingo if you do, you're against the light, against the funds, against Sir Winston too." A pity, because Sir Winston owes allegiance to no university and is said to deplore monopoly.

BUCKS ONE UP

Fred Pooley, the Buckinghamshire County Architect, has boldly republished criticism of his work in an excellent illustrated report of his department's achievements (considerable) and failures. The criticism is an analysis of the Slough Technical College, which first appeared in the JOURNAL.

*

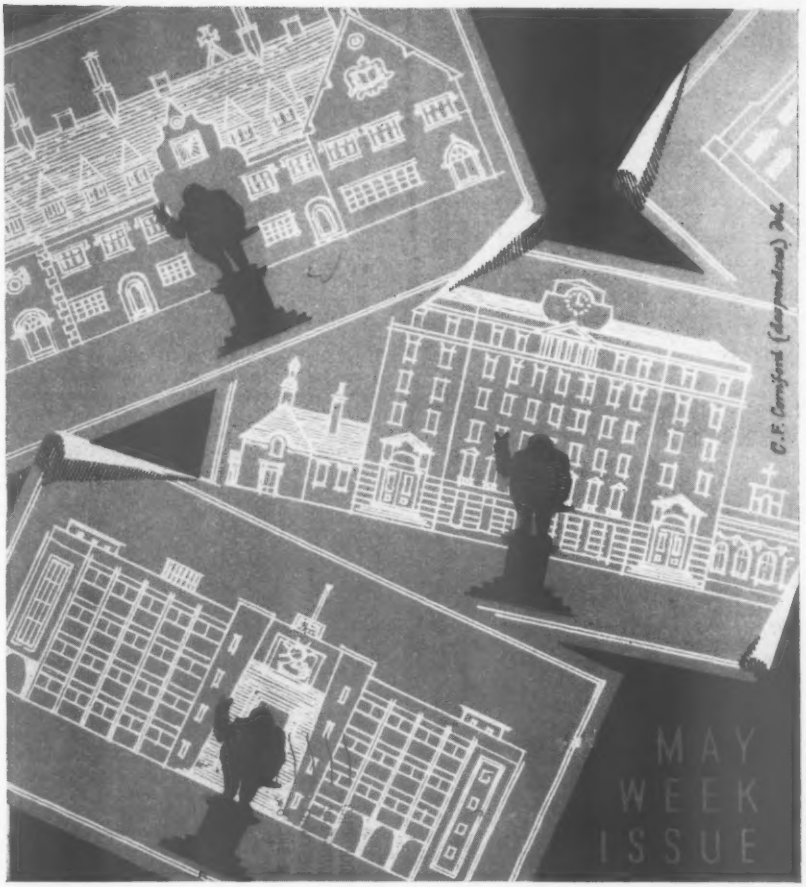
The thing that interested me most in this report was Mr. Pooley's calculation that in four years the architectural services have cost four per cent. of the value of the work done, including overheads. The department has been responsible for remarkable economies in school construction—including a saving of about £45,000 on a single 600-pupil secondary modern school.

*

The County Council has been sufficiently impressed by all this to raise salaries to the highest level in the country: qualified men (excluding the architect and deputy) now average £1,080 a year. These increases are, no doubt, an economy in the long run. And incidentally one is reminded of how much scope there is for higher salaries in the local authorities and the larger private firms. A private firm of the same size as the Bucks county office would be earning more than £70,000 a year in fees. Since the assistants would be paid less than those at Bucks, it seems to follow that the principal would take £20,000 a year. If the County Council distributed even half the savings on the scale fee in salaries, its staff of forty-four would enjoy a rise of 18 per cent.

*

When such comparisons are made between private and public practice, invariably to the disadvantage of the former, cries go up that the figures are faked or that overheads are not properly accounted for. Has any local authority ever dared to publish a full breakdown of its accounting, and can any private architect claim to have exposed fallacies in any such accounts he has seen?



Above is the frightening cover of the May issue of the Cambridge Review, showing three imaginary elevations for the proposed Churchill College (referred to by Astragal below), which is signed: C. F. Cornford (despondens) delt. The artist has depicted just the type of buildings for which our senior universities have acquired a reputation: massive neo-georgian, quaint Cotswold tudor (see Nuffield College) and commercial architects' moderne. *While the artist's representation of the pseudo historic styles is masterly, it is notable that he is much less sure of himself when handling bastard-modern. But then, so are the professional practitioners of it.*

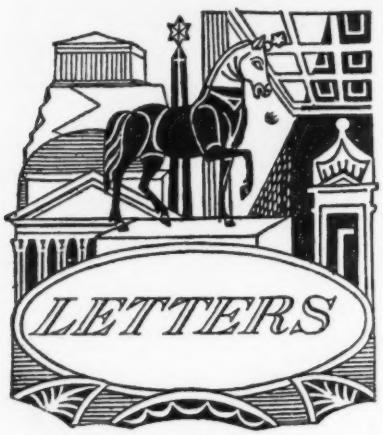
PLANNING VEGETATES

Covent Garden market is not to be moved, but its neighbourhood is to be replanned by the LCC, who really wanted the market taken away and had suggested that a new site could be made by building over King's Cross railway sidings. The Runciman Committee, which rejected this last proposal, wanted to keep Covent Garden market, but to ease things a little by having another market in north-west London. The final decision has been taken by the Minister of Agriculture. Why he should plan central London, and why we need a market at this point, remain unexplained.

*

The LCC should now get in first with its neighbourhood proposals (the government hopes these will provide better settings for the Opera House and St. Paul's church), so that the market is properly integrated in the overall plan. If this neighbourhood is the entire area bounded by Kingsway, the Strand, Charing Cross and New Oxford Street, the LCC has a wonderful opportunity. But will it be allowed the money and the compulsory powers to apply modern planning techniques (such as multi-level circulation), and to plan comprehensively for mixed development?

ASTRAGAL



F. S. Clater, A.R.I.B.A.

J. Smith, F.R.I.B.A.

W. Home, A.R.I.B.A.

C. H. Simmons, A.R.I.B.A.
County Architect, Salop.

W. W. J. Trollope, L.R.I.B.A.

Frederick Hill, F.R.I.B.A., A.M.T.P.I.

G. A. D. Hammond, A.R.I.B.A.

H. Owen Luder, A.R.I.B.A.

A. W. Whalley, M.I. Struct. E.
of Taylor, Whalley & Spyra, Consulting Civil Engineers.

An Objectionable Practice

SIR,—I was indeed interested in the letter "An Objectionable Practice" by a County Planning Officer published in the JOURNAL of June 5, and brought it to the notice of the Council of the Essex, Cambridge and Hertfordshire Society at their meeting on June 6 last. I suggested that all PROs in the society's area might circulate a copy of this letter to the clerks of all district councils within their chapter's area.

May I suggest that all chapter PROs in the whole of Great Britain send a copy of this letter to all the district councils in their areas and so obtain the widest possible publicity this letter so rightly deserves?

F. S. CLATER.

Colchester.

SIR,—I can only find the following words adequate to describe "A County Planning Officer" whose letter appeared on June 5:

"A man of courage and integrity raises his voice in the Wilderness."

More strength to his elbow.

J. SMITH.

Heckmondwike.

SIR,—A continual thorn in the architect's side is the preparation of plans for buildings by unqualified persons. Part of this problem is work carried out by Local Authorities' own staff in their spare time with all its unfair and partially client-deceiving advantages.

As it appears that the RIBA stand very little chance of obtaining agreement at a governmental level to issue a directive to local authorities insisting that all plans approved under building byelaws and town planning must be signed by a qualified architect, I suggest the following might be taken as the target. I propose that the RIBA should circularize each and every local authority in the country with a formal communication setting out the evils of this state of affairs and the advantages gained by the remedy.

The various aspects have been so well aired in your columns and, indeed, are so sensitively felt by a considerable body of architects, that there is no need to list them here. Surely, such a communication cannot but fail to receive the serious consideration of local councils, who usually have considerable reverence for established bodies in our community.

It may be that after due deliberation of this problem—and I wonder how many councils have discussed it—the appeal may be rejected by many. There are certainly a few that do think on parallel lines these days and we might be astonished by the increase in supporters if this approach is made. However, no harm whatsoever can emanate from an authoritative communication which as far as I know has not been tried before.

This is a particularly practical way in which the RIBA can try to improve our qualified service to the public by ensuring fundamentally that service meets up with the public in the first instance in all those cases where it is missing at the moment.

W. HOME.

North Harrow.

Oswestry College

SIR,—Your comments about Oswestry College in last week's JOURNAL have I think the essence of good criticism, in that some of them probe the points where in fact we had difficulties at design stage.

However, the critic does not always know what went on "over the hill." Had the teaching block been given its only real alternative of an east-west aspect, two-thirds of the teaching area would have lost a magnificent prospect over superb country towards the Bredon Hills; whilst the remainder would have had the undeserved penance of a council house estate to the west. In our choice we put only three classrooms and some drawing offices to the north, with at least some serenity of outlook, which in my opinion, overrides our sometimes dogmatic approach in siting only for the sun.

The "book-end" method of approach was adopted for several reasons. In our Shropshire vernacular of brickwork and painted wood, we think that too much curtain-wall can become rather boring. Load-bearing construction at these points also enables an easier transition from one block to another, and also when considering an internal treatment of concealed plumbing and service systems for cloakrooms and lavatories and staircases, it provides a much easier medium. In this respect I feel you have only looked at the outside of the building.

Originally these walls were designed with a veneer of riven slate and very slim detailing at window openings, and had they been built like this, I feel you might have surveyed them with a smooth sigh of approval, albeit the backing would still have been load-bearing. (Brickwork, being cheap in Shropshire, always teases the logic of curtain-wall and panel construction.) But this was before we had explored the devices of cost analysis. The tenders killed it, and so there were swift changes of detailing on the same basic construction.

Personally, I do not find the windows so uncomfortable as to deserve the space devoted to them in your article. Let me also dissuade you in your assumption that the aluminium channel-strips were put there to simulate "false" panels. They are simply to limit any possible crazing on expansion cracks in the rendering.

Although I think you have here searched out one of the weaker elements of this design the point, in its context of the whole building, is a very small one and the real impact of what you say lies in the fact that had we at that time been able to cost-analyse the design before tender, I think we should not have arrived at the same result.

It would perhaps be pedantic to write about some of the smaller points in your publication, although I feel sorry you did not dwell more on the technical solutions to a very interesting workshop building and its cost, in relation to the teaching block and other colleges you have dealt with. I agree with you when you comment on architect's control of the specialist services. For the architect to take more control over specialist costs poses a tough problem, but basically I feel it will only be solved when the specialist feels the architect has become the man from whom he need no longer guard his secrets so jealously.

C. H. SIMMONS.

Shrewsbury.

Obvious Remedy

SIR,—We are faced with the prospect of too many architects. The democratic remedy is obvious. Eliminate the 50 per cent. who cannot afford a full-time day training—that is, those with the guts.

W. W. J. TROLLOPE.

London.

Private Architects' Society?

SIR,—A few years ago a number of private architects promoted the establishment of a private architects' society. This resulted in the Royal Institute of British Architects' Council issuing a solemn statement that such groups would "tend to divide the profession."

As the same thing does not seem to apply to the forthcoming local government architects' society, I presume that there is now no bar to the formation of a private architects' society, which I for one would be happy to join.

FREDERICK HILL.

Birmingham.

A Perpetual Annoyance

SIR,—A perpetual annoyance to the salaried architect in the Local Government field is that nearly all posts are advertised with RIBA membership as a prerequisite. This necessitates the continual payment of fees, not usually claimable against income tax (or anything else), for which, in the provinces at least, no visible return is ever made.

One of the first duties, therefore, of the Local Government Architects' Society should be to induce Local Authorities to recognize Registration as an acceptable qualification in lieu of membership of a somewhat monopolistic institute. In this eventuality I shall be interested to note whether the RIBA will continue to "offer its good offices and make available accommodation."

G. A. D. HAMMOND.

Aberdeen.

County Hall Extension

SIR,—I feel I must raise my voice above the clamour raised by Mr. Hiorns and J. M. Richards about the County Hall extension.

In my view the existing front of the York Road frontage to County Hall does not merit a passing glance. It is, in effect, nothing more than a watered down version of the original Ralph Knott facades to the original building. It is neither beautiful, nor was it architecturally progressive, and as such I feel the LCC were correct in their decision not to extend the existing facade. Had they done so I am quite sure a greater storm of protest would have arisen in which the AJ's voice would have been loud and clear. If the LCC are to be criticized, then it is for not being adventurous enough to depart completely from the feeling and massing of the existing block. I am quite sure the only way to have improved on the present design would have to be something quite startling as the solu-

tion. That would not have included the "lining" up of roofs, heights, windows, etc., so beloved by town planners today, and often accepted by them as the answer to most problems.

Finally, to say the LCC has had an unbroken record of exemplary work is pure nonsense. It is not so very long since the JOURNAL were themselves primarily responsible for drawing attention to the unfortunate standard of LCC Housing Design. If the County Hall extension is the worst the LCC can produce, then things are not quite as bad as some of us may think.

H. OWEN LUDER.

London.

Crediting Engineers

Sir,—Being regular subscribers to the JOURNAL, we have noticed your efforts to bring about a closer collaboration between architect and engineer; indeed, you have patted yourselves on the back from time to time on the progress achieved—but, alas! in the May 29 article on the Brussels Exhibition, search as one would for mention of engineers' work in collaboration with architects on the pavilions and buildings, one could find only three engineers mentioned as against 38 architects. Surely, the source of information which revealed the architect would also have revealed the engineer?

The U.S.S.R. is rightly taken to task for the lack of understanding between architect and engineer, but the British Journal goes further—the engineer is almost completely ignored, yet the Exhibition Buildings have a predominant engineering aspect.

In the engineering journals in this country, due acknowledgment is made of the architect in all articles, although the themes are engineering problems and calculations. Surely the architectural press can afford to return the compliment?

A. W. WHALLEY.

London.

The Technical Editor replies: I agree with our correspondent. We set out with the intention of giving engineers' as well as architects' names, at least on those pavilions which were evidently of engineering interest, but met with unexpected difficulty. No list of engineers was to be got from the authorities, and though we asked for the engineer's name and for the key engineering drawings where these were likely to be significant, we seldom received either. In the circumstances we decided that it would be less invidious to omit engineers' names altogether; though, on reflection, this was probably a wrong decision.

DIARY

Local Government Architects' Society. Inaugural meeting at the RIBA, 66, Portland Place, W.1. 6.30 p.m. JUNE 20

New Towns for Old. Talk by Andor Gomme in the BBC Children's Television Series on Architecture and Design "Stop and Look." 5.30 p.m. JUNE 20

Brasilia. An exhibition of photography and a model of the new capital of Brazil. At the ICA, 17, Dover Street, W.1. Monday to Friday 10 a.m.-6 p.m. Saturday 10 a.m.-1 p.m. UNTIL JUNE 28

Brasilia: An Achievement. Illustrated talk by P. Johnson Marshall; chairman, H. E. Senhor A. B. L. Castello-Branco, Brazilian Minister-Counsellor. At the ICA, 17, Dover Street, W.1. Admission 3s. (members 1s. 6d.). 8.15 p.m. JUNE 25

Redevelopment: Progress with Slum Clearance Schemes. HC Annual Conference at the Conference Hall, County Hall, S.E.1. Applications (HC members 30s., non-members £3) to the Secretary, HC Trust, 13, Suffolk Street, S.W.1. JULY 2 TO 4

BARTLETT SCHOOL

Students' Petition

Serious discontent among the students of the Bartlett School of Architecture (which forms part of University College, London) is reflected in two documents which have reached this journal from a former pupil at the school. The first is a letter which, apparently, has been sent by the students to all Bartlett graduates in an attempt to enlist their support for an independent investigation into the classical system of architectural training practised there, and to obtain evidence of the effect of this training when graduates go into practice. The letter reads:

"As a result of general dissatisfaction with the principles of architectural education applied in the Bartlett School, the enclosed petition was sent to the Provost of the College, in the hope of initiating an independent investigation into the workings of the School.

"The students of this School feel that in connection with this petition and its consequences, it would be valuable for them to be aware of the feelings of ex-members of the Bartlett.

"I would be grateful if in the light of your greater experience of architectural thought and practice, you could inform me of your views on this matter."

The second document is the petition referred to in the above letter, and is as follows:

"For many years now there has been a growing feeling of dissatisfaction amongst the students of the Bartlett School of Architecture and the architectural profession in general, with the classical system of architectural training practised at the School.

"The approach of the School is considered to be outmoded and incompatible with present-day architectural thought and practice.

"We, the undersigned, would advocate a thorough and impartial investigation into the present running of the School, and would further recommend some radical form of reorganization of the staff and of the curriculum.

"Signed by 108 of the 110 members of the Second, Third, Fourth and Fifth Years. It was not thought expedient to include members of the First Year, in view of their comparative inexperience of the course."

The JOURNAL has been informed by the secretary to the Board of Architectural Education that a complaint lodged by the students of the Bartlett School is being considered by the officers of the Board, but has not yet been brought before the full Board.

HONOURS LIST

John Summerson Knighted

A knighthood for services to architecture has been conferred on John Summerson, the curator of Sir John Soane's Museum, in the Birthday Honours. Others who have been honoured include:

C.B.E. S.A. Findlay, general manager Scottish Special Housing Association, S. I. Hitchens, artist, R. Lessing, president National Society for Clean Air, W. A. Macfarlane, chief executive National Industrial Fuel Efficiency Service, L. A. Sayce, superintendent, Light Division, National Physical Laboratory, C. Parkes, government architect, New South Wales.

O.B.E. T. G. W. Boxall, head of research department, London Brick Co. Ltd., L. A. Hackett, general secretary National Association of Almshouses, T. A. Lloyd, architect and planning consultant, chairman Council for the Preservation of Rural Wales, R. Menzies, assistant chief quantity surveyor, Ministry of Works, S. P. Simcocks, deputy chief quantity surveyor, Air Ministry, E. G. Thorp, borough engineer and surveyor, Slough, E. C. Ashton, architect, Adelaide, S. Australia, S. M. Siddall, architect-in-chief to government of South Australia.

M.B.E. H. E. Gibbs, senior executive officer, Ministry of Housing, L. W. Langham-Hobart, assistant architect, public works department, Basutoland.

BUILDING PLANT EXHIBITION

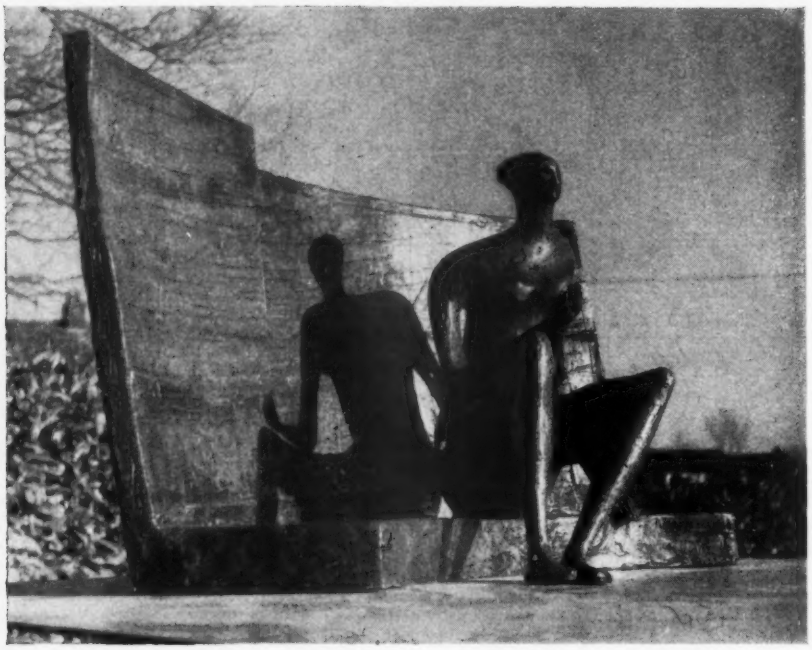
Some Valuable Lessons

Apart from the official visits by officers of the local society, it is unlikely that many architects visited the Building Plant Exhibition (writes Denys Hinton). This is a pity since there were many valuable lessons to be learnt there about the profession and its relations with the building industry.

At the most superficial level it was stimulating to see an exhibition with a minimum of frills and making use solely of building equipment for its visual impact. Three or four tower cranes, a large collection of brightly coloured diggers and working models of diesel engines are all "naturals" for exhibition and the total effect in this 175,000 sq. ft. of Edgbaston is one which a good many "designed" exhibitions attempt but never achieve. Only the DSIR pavilion, with its prim lettering and coy injunctions about packaging bricks, remind the visiting architect of his own preconceptions about display.

What do all these enormous machines stand for? Does the average architect know anyhow? We blame the building industry for its inflexibility and its unwillingness to accept change, but architects really know very little about tower cranes, excavators and conveyors. To talk to some builders on their own ground—and they were in a strong majority at Edgbaston—you would think that architects knew nothing about anything else either. Such contempt has to be heard to be believed.

The most encouraging thing about this exhibition is that it showed the growing interest of the industry in scientifically designed capital equipment whose use can only make building operations quicker, cheaper, and more efficient. A few years ago a builder who wanted a tower crane had to buy one in France or Germany and ship it in himself. Now there are a number of firms in this country eager to sell him one. All this contains an awful warning to architects; if we do not catch up with building "knowhow" we shall not only fail to regain the builder's respect, but will also lose that of our clients. This could lead to only one thing—the relegation and perhaps complete disappearance of the architect from the building team.



One of two recent works by Henry Moore on show at the Marlborough Gallery in Bond Street is this figure seated in front of a fragment of curved wall, a by-product, if no more, of the problem which will face him in the sculpture he has been commissioned to make for the Unesco building in Paris, where he will also have to place a figure in relation to architectural elements.

THERMAL INSULATION

Consultation on Byelaws

In reply to a question by Gerald Nabarro, M.P., the sponsor of the Thermal Insulation (Dwellings) Bill, J. R. Bevins, the Parliamentary Secretary to the Minister of Housing and Local Government, made a statement on government policy in the Commons last week. He said:

While there is general agreement that the aims of greater fuel economy in domestic heating and warmer houses should be actively pursued, the local authority associations thought that thermal insulation could not satisfactorily be divorced from other aspects of house building and ought not to be made the subject of separate regulations. The government share this view. As Mr. Nabarro knows, the insulation of houses is in fact already dealt with in building byelaws made under the Public Health Act, 1936. Mr. Henry Brooke, who has been in close touch with the Ministers of Power and of Works, now proposes again to consult local authority and professional associations on the question whether the standard adopted in the byelaws should not be raised. If it appears that the byelaw standards should be raised, he will most certainly ask local authorities to strengthen their byelaws on this point straight away.

Mr. Nabarro asked how soon Mr. Brooke hoped to complete his further negotiations with the representative bodies of the local associations. Mr. Bevins replied: "Further discussions with the local authorities will start almost at once. If they are in agreement that the standard of the byelaws ought to be raised, we shall take the necessary action to that effect."

HOUSING

A Further Decline

The number of houses completed in Great Britain in the first four months of 1958 fell by 12,424 compared with the same period in 1957, from 99,428 to 87,024. Completions in April numbered 21,710 (11,811 by public authorities, 9,899 by private builders). In England and Wales private builders (9,649) completed substantially more houses than the public authorities, whose total (9,121) was made up of 8,631 by local authorities, 135 by housing associations and 355 by government departments.

"No Slums in 20 years"

Mr. Henry Brooke, the Minister of Housing and Local Government, predicted that there would be no slums in 20 years if the present drive went on unchecked, when he spoke last week at the annual meeting of the National Federation of Housing Societies. He also said that he had been puzzled that tenanted houses were so seldom the subject of applications for improvement grants, in spite of the obvious advantages to owners. He wished to see much greater use made of improvement grants where property was let, for this was one of the best and most economical ways of raising living conditions.

BUILDING OPERATIVES

Shorter Hours Claim

In his presidential address to the annual conference of the National Federation of Building Trade Operatives, James H. Mills denied that the workers' side had made any attempt to resist inevitable changes in the industry, but accused the employers of clinging to outmoded practices. Fears that a rising standard of living for those employed in it would ruin the industry had, he said, proved groundless, and it was extraordinary that the employers had refused to agree to a special committee of the National Joint Council to study the introduction, by stages if necessary, of a 40-hour, five-day working week. It was clear that they must press for a gradual reduction of working hours.

Mr. Mills was also strongly critical of demarcation disputes between the building unions, and suggested that a group of building trade unionists examine not only questions of demarcation arising from changes of practice, but also more fundamental issues with a view to closer unity. The examination could consider the centralization and unification of union policy, to enable their minds to be directed to the coming changes in the industry.

BERKSHIRE

Planning and Building Conference

Berkshire County Council arranged a Planning and Building Conference on Wednesday afternoon, June 11, the aim of which was to discuss how best to improve the standards of design and layout of new houses and housing estates in the County, writes a correspondent. The meeting was attended by representatives of the architectural profession in Berkshire, the building industry, and various interested bodies, such as the Civic Trust and the CPRE. All 23 members of the County Planning Committee were there too: it made one wonder how they could ever agree, even on a compromise. In fact, despite the admirable lead given by Berkshire in calling such a meeting, the discussion degenerated into a parochial affair in which builders asked, for instance, why no decisions had been taken by the Planning Committee about their pet plans for as much as six months. There were some admirably wise comments from a member of the Council for Visual Education, to which, unfortunately, nobody seemed to listen.

No one could disagree with the introductory talk by the Assistant County Planning Officer, Mr. Porri, stressing the need for more attention to site planning, care to ensure harmony between buildings and their setting.

Clifford Culpin's equally unexceptionable paper emphasized the need for professional guidance. But one shared the bewilderment of a questioner who asked "How shall we know a good architect from a bad?" Mr. Culpin's answer was for builders to take note of the results of a forthcoming national competition for small house designs; the prize winning plans would be available for builders to use for a small fee. The competition was expected to draw entries from leading members of the architectural profession, and the winners really should be "winners." This does prompt the observation that however good the individual type plans and designs of dwellings may be, the results can be chaotic if they are used and sited in an unimaginative way—real train-smash planning.

The main constructive suggestions made at the meeting were:

(*a*) that no plans should be considered by the Planning Authority unless they included all details of existing natural features on the site.

(*b*) that the County Planning Authority should do all they could to enlighten local planning committees, which came under heavy fire. Such advice as these local bodies generally have is given by the Borough or District Surveyor, who may be an expert on sanitary engineering; but what they need is visual guidance from a man trained as an architect and employed as a consultant.

(*c*) that local authorities should do more to encourage builders to include in their schemes more public spaces, grass verges, trees, etc., by accepting responsibility for such spaces which all have agreed are of great amenity value.

FACTORY FOR PHARMACEUTICAL PRODUCTS AT SLOUGH, BUCKINGHAMSHIRE

This factory at Slough for Aspro-Nicholas Ltd., designed by J. Douglass Mathews and Partners, is for the manufacture of pharmaceutical products. It has a production area of 56,100 square feet which is totally artificially lit and ventilated, the only external glazing consisting of small view windows at low level in the external walls. It is to be the subject of an analytical article in a later issue of the JOURNAL.

IN BRIEF

Work Study Film

As a result of the initiative of the London Building Productivity Committee the first work study film in the building industry is now being made by Basic Films Ltd. with funds made available by the British Productivity Council, a substantial grant by the NFBTE, and subscriptions contributed by its various constituent bodies. Members of the London Master Builders' Association have made their sites available. Among the bodies represented on the London Committee is the RIBA.

"My Ideal School"

The Council for Visual Education is offering prizes and certificates to children in three age groups for essays on "My Ideal School, Its Design and Decoration." The closing date is November 1, 1958, and enquiries should be addressed to W. A. Yerbury, Essay Competition Hon. Secretary, CVE, 13, Suffolk Street, London, S.W.1. The subject of last year's competition was "The House I Would Like to Live in." The outstanding entry was from 14-year-old Charles Scott Coventry of Alloa, a spastic child who has made a close study of old buildings, is a member of the Clackmannan Society, and gave his ideas about the way a house in the High Street should be reconstructed.

RICS Office-Bearers

The office-bearers of the Royal Institution of Chartered Surveyors for 1958-9 will be: president, Francis George Fleury; senior vice-president, J. L. Postlethwaite; vice-presidents, J. D. Trustram Eve, E. C. Strathon and R. Charles Walmsley; hon. secretary, E. Harold Palmer.

More Universities?

J. E. S. Simon, the Financial Secretary to the Treasury, was asked in the Commons last week by Mr. Moss whether several new universities would not have to be built to cope with the increased number of students in 1965-70. Mr. Moss suggested that existing plans were based on the assumption that there would be 124,000 students by 1965 and 136,000 by 1970, whereas the Association of University Teachers stated that the number would be 145,000, and would require the construction of five new universities the size of Manchester University. Mr. Simon replied that the Chancellor had not excluded an increase in the programme if economic conditions permitted. Mr. Simon thought that the Association of University Teachers was based on the view that no university should exceed 4,500 places. This view was not shared by the government, nor by many educationists.

Scholarships

The British Institution Fund offers scholarships in painting, sculpture, architecture and engraving of £100 a year for two years, travelling scholarships of up to £100, and a special biennial prize of £200 for architecture. Candidates in architecture must submit an original design for a bandstand to be sited in a public park. Copies of the regulations may be obtained from the Secretary, Royal Academy of Arts, Picadilly, London, W.1. The closing date is October 14, 1958.

Nuclear Disarmament

An Architects' Group for Nuclear Disarmament has been formed. The secretary is Thomas Kay, Flat 6, 37 Westbourne Terrace, London W.2. Its first activity will be to participate in a march to central London from Turnham Green, on Sunday, June 22, at 2 p.m.

THE PROBLEM OF TECHNICAL INFORMATION

A Single Authoritative Standard Index System

Eric L. Bird, Technical Research and Education Officer, The Building Centre, gave the following paper at the RIBA last night. After describing the demand for information, and the vast extent of the information available, he suggests that the building industry must tackle the total problem in a realistic way. As a first step he proposes that an ad hoc *committee might agree to a single, authoritative, standard index system.*

Before 1914 there was no problem of information in the building industry. In the matter of building techniques a few well-thumbed construction books, such as Mitchell, or Jaggard and Drury, plus the experience of the head draughtsman or foreman, sufficed with what were still mainly traditional methods of building. The infrequent new materials were produced by the commercial traveller, or seen at the biennial visit to the Building Trades Exhibition. Most planning requirements were to be found in established textbooks, such as Felix Clay on schools, and Cross on swimming baths. As for economy in structure and planning, nobody bothered much about that when building costs were one shilling or so per cubic foot. Those halcyon days, which I recollect from my time as a junior in an architect's office, are now no more than a pleasant memory.

This strikingly contrasting position of today hardly needs describing; it is all too familiar. New techniques clamour continuously for our attention. The Building Research Station, with its split personality, tries hard to establish some fixed landmarks for our guidance in the fog of new techniques while performing its primary function of adding energetically to that fog. As for new building products, in the past six months the Building Centre has noted 111, or five every week. New types of building, involving elaborate studies of planning and structural requirements, are being increasingly demanded by the building public. Old types of building are undergoing meticulous re-examination; for example, the Ministry of Education, in changing from a restrictive body to a propulsive one, has revolutionized school building; in hospital design, the Nuffield Trust has finally shaken off the mantle of Florence Nightingale.

How are the workaday practitioners in building—that is to say, the architects, surveyors and builders—keeping up in this technological race? The short answer is "they are not." Some adhere to the old well-tried methods with ever-diminishing hope of getting them well-executed and at reasonable cost; others grasp at new ideas, new methods or new materials, often to find subsequently that performance falls short of promise, or that new methods and materials are haunted by unanticipated gremlins.

The reason for this present state of affairs is that none of us has enough time to read. Even those, like myself, whose job it is to keep abreast of developments, can do no more than skim odd bits of information off the vast stream of reading matter as it flows by. We cannot get into or keep in our heads more than a small amount of it.

It is now clear that, if the individual practitioner as the unit and the industry as a whole are to have at command the best and latest information of all kinds relating to building, some kind of concerted co-operative effort must be substituted for individual sporadic scramblings. Information must be so collected and classified that finding and using it is both easy and quick. This is no simple task.

The practitioner is the man who matters—the qualified man at his desk or on the job. Any co-operative system must therefore have as its basic aim that of providing the practitioner with an answer, or set of answers, to a problem, or set of problems as soon as possible after he is confronted with it. And those answers must be in a form which he can both understand and use. The form and mechanism of any information service is entirely subsidiary to these twin aims. Any system of bibliographies, classification or *documentation*—call it what you will—which fails in some measure to meet fully those aims, fails in its effectiveness.

There is no simple solution to what is a complex of problems. Many people are working on sections of it. But I believe that the building industry as a whole outght to examine the problem *in toto* and attempt to organize it, so that the well-intentioned efforts of persons and bodies shall operate with a common purpose in an agreed system towards the basic aims I have defined. If this is not done, the situation will become progressively more confused and the industry, as it were, drag its technological feet to an ever greater extent because nothing will stop the scientists and engineers—and indeed, the architects—from producing more and more ideas, techniques and new building materials.

My main purpose in this paper is to examine the overall problem of information and suggest some methods by which co-ordinated effort can be achieved. For this I shall first look at some items in isolation.

Education

While I believe that one begins to learn about building when one becomes a student

or apprentice and ceases to learn only when in the grave, crematorium or ABS Homes. I shall not discuss the specialized problems of education up to the stage of qualification. These problems are the urgent concern of those who know far more about them than I do. They have been discussed recently at a high-level conference organized by the RIBA.

On the question of student education I would only offer the opinion that a knowledge of science in the entrant to the building industry is becoming increasingly desirable if he is to grasp readily the newer techniques, and be able to assess the performance of materials and structural forms. He needs to know the language of science and to have something of a scientific outlook.

As for post-graduate education, most of us learn as we go along, partly by occasional reading, but mostly by trial and error or success. There is, however, a growing realization of the need for short post-graduate courses and some have been or are in process of being organized. Having seen such courses in operation at the York Institute of Architectural Study, I am strongly convinced of their usefulness.

I am informed that the organization of post-graduate courses is one of the chief functions of the recently-formed Yerbury Foundation.

While it is hard to draw a dividing line between education and an information service, I am limiting this paper to the needs of the man at his desk or on the job.

Scope of demand for information

Those architects who have given thought to the problem of information not unnaturally regard it mainly in terms of their own needs. In the Building Centre, where we receive some 120,000 inquiries a year, we find, roughly, that about 35 per cent. come from architects, 15 per cent. from surveyors, 25 per cent. from builders and builders' merchants, 5 per cent. from Government departments and the offices of nationalized industries, and 20 per cent. from the public and Press.

Within the industry and within sections of the industry, the pattern of demand for information is widely varied. For example, some architects are concerned solely with special kinds of new building; other architects and some surveyors with the maintenance of old buildings; builders want information on methods and plant; quantity surveyors on costs. At one time or another, any single person seems to require information in most of the different branches. Therefore, I suggest that any information service, or any classification system devised for such a service, should cover the needs of the industry as a whole. I am not suggesting that all this information can, or should, come from a single source; indeed, I think such an idea to be impracticable; but I do wish to emphasize here the enormous range of information and the variety of demand for it.

A single source of information?

That there should be a single source of information for the whole industry is an idea that commends itself to the tidy minds of architects. It has already been considered. In 1934 I attended in the RIBA a series of meetings of representatives of all sections of the industry under the Chairmanship of Sir Raymond Unwin, to consider the setting up of such a single "umbrella" information service. The proposal died a natural death when some of the harder-headed business men present calculated that, to be effective over the whole country and in the whole industry such a service would then cost at least £100,000 a year to run. The idea was not the mere provision of what has become known as *documentation*, which we already have in various forms and about which I shall speak, but a service staffed with competent, and therefore highly paid, technical officers, located in a series of regional offices, who would be aware of all the sources of information and what they produce and who could collect, organize and interpret it, in readily usable form. I feel that such a service is likely to remain a dream.

Present sources of information

Sir Raymond Unwin's committee listed the then existing sources of information to the practictioner and discovered that they numbered more than one thousand. Today they are probably more. Here are some of the principal groups:

The Department of Scientific and Industrial Research. The four sections of DSIR most concerned with building are the Building Research Station, Forest Products Research Laboratory, Joint Fire Research Organization and Fuel Research Station. The contributions of others, such as the National Physical Laboratory, are mostly canalized through BRS, which is the only one dealing exclusively with building.

There are also 41 industrial research organizations which are recognized and grant-aided by DSIR. Providing information on buildings are the research associations concerned with cast iron, ceramics, coal, coke, electricity, iron and steel, non-ferrous metals, paint, rubber and welding. Again, much of this work is canalized through BRS.

Other Government Departments. These include the Ministry of Works, Ministry of Housing and Local Government, Ministry of Education, Ministry of Health, Ministry of Agriculture and Fisheries (farm buildings), and the Royal Botanical Garden at Kew (planting).

Professional and Industrial Societies. The RIBA and the RICS advise their members on professional practice and operate library services. Members of the RIBA are familiar with their library, but I suggest that many of them have little grasp of the scale of its operations; for example, that it makes an average of 15,000 loans a year.

The National Federation of Building Trades Employers provides advice on contract procedure for its members, represents them on wages and working conditions on the National Joint Council for the Building Industry and is the authority on the statistics of building. It also operates the Building Advisory Service in which its member firms are advised, for a fee, on the organization of their businesses. I understand this service is proving very successful. As part of the same service, courses on such matters as cost, accounting, and work study are run for the personnel of member firms. These courses, I am informed, are open to architects.

In addition to these key organizations, there are several dozen societies, institutions and propagandist bodies which provide information by means of periodicals, pamphlets, lectures or individual advice on various specialized items. I select a few at random: The Town Planning Institute, The Institute of Landscape Architects, The Architectural Association, The Institution of Structural Engineers, The Institute of Builders, The Housing Centre, the Society for the Protection of Ancient Buildings, The Central Council for the Care of Churches, The Nuffield Trust, The Royal Society for the Promotion of Health, The Rural Industries Bureau and the Fire Protection Association.

The Trade Development Associations. The aim of these is primarily propagandist for a particular material, but many wisely take the view that the best form of propaganda is to ensure that their materials are rightly used; for this they have set up technical information services and in some cases research laboratories. The principal ones are the Cement and Concrete Association, the Timber Development Association, Coal Utilisation Council, Gas Council, Electrical Development Association and the associations concerned with copper, lead, zinc and aluminium. These perform a valuable service. It would be to the advantage of other associations of manufacturers, as well as of the building industry, if they followed this excellent example. To be really useful, such advisory bodies must be staffed by competent technical officers, as are those I have mentioned by name; they must not be a mere form of advertising.

The British Standards Institution. I need do no more than mention British Standards and Codes of Practice, because they have become an information service to the industry which is now recognized as indispensable. The work of the BSI is really a co-operative effort by the industry itself because the Standards and Codes are prepared by committees of specialists drawn from appropriate sections.

The Building Centre. The information service of the Building Centre is the largest in any industry in the country. It is not, as some people imagine, limited to the products of exhibitors, though naturally copies of the leaflets of manufacturers who are not exhibitors cannot be sent to inquirers for the simple reason that the Building Centre has not got them. However, some 2,000 manufacturers are represented in single or group exhibits. Most of the inquiries are about materials and equipment, but a great many are on building techniques. Some of these can be

answered by giving the inquirer a pamphlet, such as the appropriate BRS *Digest;* others are transferred to the body most likely to provide an answer and in this, the Building Centre is content to act as a post office. Often, an answer concerned with a technique is obtained by the Building Centre staff telephoning an individual specialist in a Government department, professional society, trade association or commercial concern. The Scottish Building Centre and the Bristol Building Centre are independent organizations, but all three bodies work in close and friendly co-operation.

Trade Periodicals. The building industry is remarkably well served by its trade press. Unlike many other specialist press groups, it is almost entirely free from what might be termed "advertisers' bias." Its technical articles, illustration of current buildings, news of legal changes, costs, etc., and its advertisements, provide a continuous supply of information to the practitioner.

There are, however, several hundred periodicals which provide information on one or another item which is useful to the practitioner, but few practitioners take more than half a dozen periodicals in their offices, though I know one architect's office which takes thirty-three. An example of the kind of useful article which is liable to bypass the architect is a recent one on electrical floor heating in an electrical periodical which was a thorough statement on this important new technique. These articles may be listed in bibliographies, but I suggest they rarely reach the man who wants to specify or install the matters they cover. I discuss bibliographies later in this paper.

Exhibitions. The Building Exhibition has long been an important source of information on materials and techniques, though today its mere size makes a single visit inadequate and rather wearisome. To get the best out of it an individual needs to study one of the guides issued by the technical press and firmly visit those stands which look most promising. The random visitor is liable to miss a great deal. The Building Plant Exhibitions organized by the Ministry of Works deal with a field of information which is not covered by the Building Exhibition at Olympia.

Annual Textbooks. Mention should be made of annual publications, such as Specification and the price books. The idea of the reference book which is revised periodically is one which might be extended to other fields. In passing, I recommend it to the BRS.

Trade Literature. This term is today used for the heterogeneous collection of catalogues, pamphlets and leaflets issued by manufacturers and hopefully sent by them through the post or made available at exhibitions and at the Building Centre. I have a great deal to say on this matter in this paper, but here merely note that many builders' merchants' catalogues are excellent productions and much used in the offices of architects and builders, especially in the provinces.

Many practitioners have but the vaguest notion of the existence of these hundreds of sources of information and what they provide. There is quite an art in finding and using correctly the appropriate source for a particular inquiry, an art which the inquiry staff at the Building Centre have taken several years to master. The extent of this vagueness among inquirers is shown by the appreciable number of inquiries received by various information services, which should rightly be sent to another. For example, BRS receives inquiries on trade products and the Building Centre on techniques which require a scientific answer.

I do not pretend that the list of sources I have given is at all complete. I hereby offer a general apology for errors of omission and incorrect nomenclature and for failing to mention many of the services performed by these bodies.

Classes of information

Let us now look from a different viewpoint at the information provided by the sources I have listed, namely that of broad classification. There are, I think, five main groupings, namely (1) User, (2) Techniques and Materials, (3) Methods and Equipment, (4) Costs and (5) Legal Requirements. Though there is some overlapping, each of these calls for a different approach and a different type of organization. I will now discuss these individually.

User Requirements. These, which are peculiar to the architect, should be considered from the viewpoint of the man who is designing a type of building with which he is unfamiliar. He needs to be provided with a complete dossier of information on space requirements, planning arrangements, appropriate structural forms, specialized equipment and basic economic factors, together with some examples for study.

This sounds rather idealistic but is not, I think, beyond achievement if the architectural profession gets down to the job of organization. It also sounds like the synopsis of a book, but today publishers are disinclined to publish specialist books with limited sales and, with many types of building, development is so rapid that books become quickly out of date. The kind of dossier to which I refer would need to be frequently revised in order to be up to date.

The RIBA Library produces excellent special bibliographies on types of building. These have a defect in being largely non-selective and moreover, the task of absorbing the meat from them involves a lengthy stay in the library and laborious working through of as many as 100 references, which is difficult, if not impossible for the provincial architect, I am not decrying the excellent work of the library staff in producing these bibliographies; they are the necessary first stage in the compilation of a dossier which each architect is now expected to produce for himself, and which I am here suggesting might be a collective service. What is wanted is that each bibliography should be tackled by a competent architect who can boil out the essential facts from the mass of verbiage which a bibliography represents, and present them in a standardized format. These dossiers should be printed or photocopied, and made available to architects, who may wish to have them on their desks for many weeks. The RIBA Professional Text and Reference Book Committee are active on this matter of user studies and the Council have agreed a provisional programme put up by the Committee. It is my personal opinion that a full service of user studies would be ultimately beyond the capacity of an RIBA Committee in requiring the paid services of staff or specialists, though this is no reason why the Committee should not make a start, as they have done. Other bodies which are concerned with specific types of building might be encouraged to co-operate. One body, the Ministry of Education, already produces an excellent series of user studies on school buildings in its Bulletins.

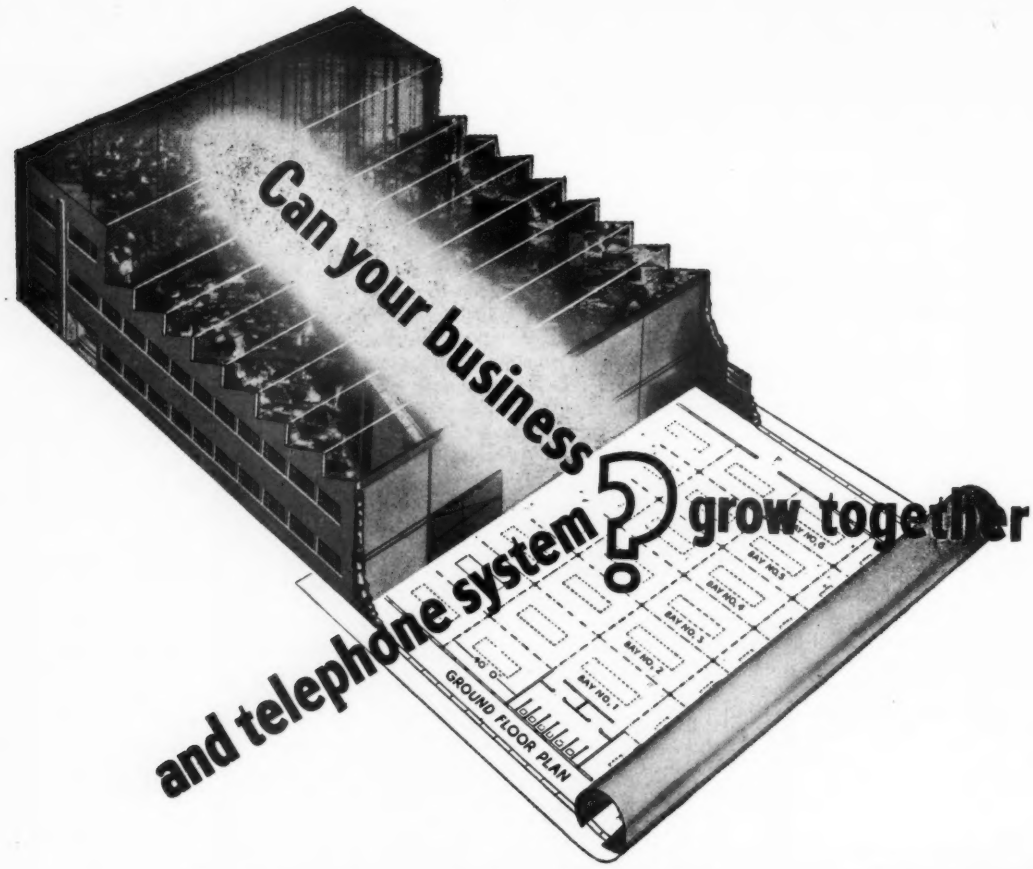
Techniques and Methods. Techniques include such things as acoustics, lighting, comfort conditions, insulation, insolation (often confused with insulation), structures and services. Some of these, like acoustics, are more or less established and can be covered by books. But in many others there is continuous development. At present this newer information must be searched for in DSIR publications, Codes of Practice, and articles by specialists in periodicals.

Methods include site organization, management and the economics of equipment such as tower cranes, rising formwork, precasting and types of prefabrication. Information on these is even more dispersed and hard to find than that on techniques.

Here again, there is continuous development and some sort of compiled dossier seems desirable. Lists of references and abstracts, such as the Building Science Abstracts, issued by BRS have, like the RIBA Library bibliographies, but limited use, because they involve excessive labour on the part of the inquirer. Unlike user studies, questions of techniques and methods are the concern of the whole industry.

Materials and Equipment. The practitioner can obtain information on materials and equipment much more easily than on user requirements and techniques, and the volume of demand is very much greater. This is the special province of the Building Centre, and of the Scottish Building Centre and the Bristol Building Centre. There are also the trade product cataloguing and filing systems such as the Architects' Standard Catalogues, Classifile and Specifile. Moreover, the manufacturers are only too keen to acquaint practitioners with their products.

A primary need in this group is standardization of trade literature, mainly in size, but also in format. The Competition for Manufacturers' Trade and Technical Literature, held last year jointly by the RIBA and the Building Centre, and being repeated this year, is undoubtedly a move towards



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this desirable end. It has revealed that many manufacturers were quite unaware of the need for standardization, or indeed, of the existence of BS 1311, and some still are. Nor do many of them realize the extent to which the architect is irritated by confusion of technical information and sales promotion advertising in the same item of literature. If they can be persuaded to separate the two into (*a*) technical information leaflets, of standard size, to be filed for reference, and (*b*) a sales promotion leaflet to be looked at and discarded, they will be conferring a boon on the architects and builders who specify and purchase their products, and indirectly on themselves. In this country we have a long way to go before we reach the position of the United States building industry with its Sweett's Catalogue.

It is not, I think, within the province of an information service on materials and equipment to influence in any way the choice of the practitioner. It is a firm rule in the Building Centre that the staff shall not recommend one item as against another. By doing so the officer concerned would be assuming some degree of responsibility for an item over whose manufacture, installation and conditions of service he can have no control. The same applies, I think, to any body which sets out to approve materials or items of equipment in respect of performance except where, as in the case of solid fuel and gas appliances, there are research organizations equipped and staffed to conduct full trials. Otherwise, responsibility for selection must rest with the architect, surveyor or builder. However, the American Institute of Architects are now studying the question of issuing trade products with some kind of approval certificate. This is a bold venture, which we should watch, though I think the US libel laws are far less menacing than ours. Also we have this matter to some extent covered by the British Standards Institution, whose scope is much greater than that of the US Bureau of Standards. A great deal of useful information on materials and equipment emanates from the various sections of DSIR, in particular from BRS; this information mostly covers performance. It suffers from the great handicap that a Government body cannot mention trade products by name, whereas the building industry tends to think in trade names rather than in generic terms. Plasters are an instance of this, the practitioner finding difficulty in relating the terms used in BRS publications on this subject to the brands of plaster with which he is familiar. It is unlikely that a Government research body will embark on the perilous course of discussing trade products by name, but a move towards circumventing this difficulty has just been started by the BRS who are beginning to state in some of their publications that the names of the makers of the products discussed can be obtained from the Building Centre.

Costs. Costs are as yet hardly amenable to handling by an information service. What might be called day-to-day costs of materials and labour are handled very well by the price books, such as Laxton's and Spon's, and by regular publication in the weekly trade periodicals.

The subject of cost analyses is rather outside the scope of this paper, but I note that there is nothing like unanimity of opinion among architects and quantity surveyors, on both the machinery for compiling them and their value when compiled.

Nevertheless, the more the industry can become cost conscious, in particular its architectural section, the better for both the industry and the building public; I think that is generally agreed. All I am concerned with here is with pointing out that this is a fruitful field for a co-operative information service, but one that is difficult to cultivate.

Legal Requirements. Included in this group are contract administration, relevant Acts of Parliament and the regulations of Government departments, the bye-laws of local authorities and case law.

In contract administration there is a shining example of co-operation between the various sections of the industry in the Joint Tribunal on the Standard Form of Contract. This body, without whose labours contract administration would be chaotic, runs its own information service in the form of revised editions of the RIBA Form of Contract, and sees that each revision as it is made, is issued to the technical Press.

There is no kind of information service on the multifarious requirements of Government departments and local authorities, though books by legally qualified authors, Practice Notes in the *RIBA Journal*, and similar notes in other periodicals, do serve to keep the practitioner to some extent informed.

As regards local authority bye-laws, the general adoption of the Model Building Bye-laws of the Ministry of Housing and Local Government and of the Department of Health for Scotland has done much to ease the life of the practitioner, though there are still some authorities, notably the London County Council, who have individual requirements. There is no such codification in the requirements of many public service bodies, notably the water undertakings.

In addition, there are numerous Acts of Parliament. and regulations made under them, which control building and which are administered by different Government departments. The Ministry of Housing and Local Government, for example, establishes housing standards, and deals with slum clearance, as well as some other matters. The Ministry of Education sets standards of school accommodation. The Ministry of Health covers hospital requirements through the Hospital Boards. The Home Office controls safety requirements. The Ministry of Labour and National Service administers the Factories Act. A recent newcomer is the Ministry of Power, which has had thrust upon it the question of factory insulation. Fortunately, at the moment, we are free of the Ministry of

Works on licensing

On all these matters the individual practitioner can obtain copies of the relevant Acts and Regulations from HM Stationery Office, or, in the case of public service authorities, from the individual authorities. But there is no central co-operative organization which watches these multifarious requirements on behalf of the individual practitioner and issues information on them. I am informed by architects who have had to design an unfamiliar type of building in an unfamiliar region, that the time taken in collecting all the relevant legal data can be very great.

Co-operative effort versus individual effort

I hope I have made clear in the foregoing outline that the information which is available to the industry is enormous in amount and coverage, that the demand for it is large and wide-ranging, and that much of it is not used because it is unorganized, unpublicized and hard to find.

Hitherto, we have been accustomed to approaching this matter on an individualistic basis, being hardly conscious of the vast aggregate waste and duplication of effort by the industry thus involved. I think the time has come when the various sections of the industry, either collectively or individually, as is appropriate, might well consider organizing co-operative effort on a much greater scale than in the past, in much the same way as it has done in the British Standards Institution and the Joint Tribunal on the Standard Form of Contract.

Some of the larger offices of architects, surveyors and builders have already established for themselves small-scale information services covering some or all of the groups of subjects I have described. I visited and studied one such recently and I was impressed with its efficiency and usefulness. But such a service is beyond the financial capacity of the smaller architect, surveyor and builder. He it is who is most liable to drag his technological feet or to fall into unperceived legal pitfalls, and who would benefit most from a better information service, though all the units in the industry, large as well as small, would benefit.

Extending standardization

There are some indispensable first steps. I have already mentioned the standardization of trade literature. Could standardization of size not be extended to all the pamphlets and leaflets issued by Government departments and other bodies ? The British Standards Institution are proposing to do this with their publications and papers, and they, above everyone else, ought to set an example. The Germans have not only done so, but extended standardization of size to office notepaper. In Scandinavia standardization of size is now complete in all publications dealing with building, including periodicals. One of the handicaps to efficient filing of articles cut from British periodicals is their variation in page size. This is something the publishers of trade periodicals might consider, though doubtless they will dislike the idea. A little pressure from the industry might help.

Classification systems

Since 1920 the American Institute of Architects have had a standard filing system, which to quote its sub-title, is "For filing information on the materials, appliances and equipment employed in construction and related activities." We in this country have available several classification systems and indexes, all doubtless compiled with great labour, and serviceable. If we had a single, complete, authoritative system, as have the Americans, extended to cover the five groups of information I have outlined, we should have at least a basis for creating order in the present disorder. If such a system were established, the producers of all technical literature could *print* the appropriate reference number on each pamphlet, trade information sheet or technical article, reducing filing to the simplest operation. It may be that two systems are needed, one for trade literature and one for technical publications and books. I shall not say more on this subject because it has been thoroughly studied by Dargan Bullivant, who succeeded the late Michael Ventris as AJ Research Fellow for 1957. Mr. Bullivant has kindly let me see a copy of his report which is to be published by the ARCHITECTS' JOURNAL. He makes clear that it is a highly technical matter and one not to be rushed at. Not the least important problem is the devising of a system which the ordinary filing clerk can use and which does not call for skill in librarianship.

Documentation

Earlier in this paper I said that the basic aim must be to provide the practitioner with an answer or set of answers in readily usable form. In recent years there has grown up a vast international study of what is known as documentation, with committees to co-ordinate it. I ask one question about it. How far does it fulfil my stated basic aim of providing the practitioner with an answer or set of answers in readily usable form? I am afraid that so far it has not, though it may have proved very useful to librarians to find their way about the mass of printed matter with which they have to deal. To me, it seems at present to do little more than provide super-bibliographies.

In all this business of information there is great danger that the needs of the practioner in building, who usually wants a simple answer to what he conceives to be a simple question and who wants that answer quickly, may be overlooked in the establishment of complex machinery which is aimed at ensuring that no technical document in any European language is overlooked.

Study of office filing systems

Study of this subject of information ought to start with the user, that is to say, in the office of the architect, surveyor and builder. He is the consumer and it is good practice to study his needs first, and then to suit the article to them, rather than the other way round. I have referred before to one efficient office information service that I have visited, and there are others. From the men and women who operate these services much useful data on demands and methods could probably be obtained. But the needs of the smaller office where a full-time information clerk cannot be afforded must not be overlooked, because those needs are the greater; the larger offices manage well enough at present.

Limitations of an information service

No information service can be expected to be able to answer all the questions all the time. Nor is it a substitute for ignorance and technical incompetence on the part of the inquirer, though, with the somewhat average standards of technical competence prevailing at present in the industry, an information service must be to some extent educative. The true function of an information service is to act as a help to the practitioner, attempting in some measure to do for him what he has not the knowledge, skill and, above all, the time to do for himself. But no information service can or should attempt to do the practitioner's job for him. He must remain the creative designer or executant.

Nor should an information service be regarded as a useful weapon with which occasionally to beat a client, architect, surveyor or builder. All information services develop a sixth sense which causes them to take avoiding action when they suspect that an inquiry is to be so used. BRS have a system for this kind of thing, which has two chief features. First, they decline to send someone to look at a failure except when they think it is likely to be of use to them in a research programme. Second, they warn the inquirer that they will seek only the facts about the failure and that their findings may prove embarrassing to him.

Formulating questions

The practitioner must know or be taught to know how to formulate his requirements—how to ask a question. All information officers have abundant experience of cases where an inquirer has not thought out what he really wants to know, or in some cases, does not know. On this I quote R. C. Bevan, Chief Information Officer of the Building Research Station: "It is often more difficult to frame an inquiry than to answer it. As much care should be given to framing a question as is expected in the answer."

Mr. Bevan's dictum applies as much to preliminary inquiries about the requirements of a forthcoming project as about failures. The officer trying to answer the question can hardly be told too much about the circumstances of use of the structural form, material or item of equipment under discussion. The more abundant and clear the information given, the more precise can be his reply. Efficiency in an information service is a two-way affair; the more the inquirer knows how to use it, the better it becomes.

Reporting back

It is, or could be, a two-way affair in another sense. The industry tries out forms of structure and materials, but very little of the resulting experience comes back into general circulation. Few practitioners trouble to report back to an information service on how far a suggestion or item of advice has proved successful, though they may complain when it has not. Some years ago BRS established a corps of honorary observers to report on failures and successes in the field, but it proved unfruitful, and was abandoned. In 1950, the Ministry of Works, established a Technical Information Service, partly to gather field experience but mainly to advise architects and builders on technical aspects of new projects and on failures. Twelve Regional Technical Information officers were appointed and much good work has been done, though recently the Treasury have been busy with an axe on this service and the regional officers are being reduced in number. I think such a service can be valuable, especially to the smaller practitioners, but who should organize it and who should pay for it is not for me to say.

Technical interpreters

It seems platitudinous to say that an officer who dispenses information on building should possess technical knowledge of building, but some do not. It is not enough for him to hand out stock answers or the leaflet he hopes will be the most appropriate. He should be, or have available, a person who can grasp and interpret the technical needs of an inquirer, which in building are not infrequently complex and abstruse.

In the Building Centre it has long been realized that the officers must to some extent be specialists in one or another branch of materials and equipment. The library of the Fuel Research Station is mainly staffed with scientists and engineers. It would, I suggest, add to the efficiency of the RIBA Library if its staff included at least one person trained as an architect and who could deal with the more complex technical inquiries. The same applies, perhaps, to other specialist libraries. This is not an unkind reflection on my friends who are expert librarians, but merely a suggestion for improving the efficiency of the service they provide.

Conclusion

In this rambling paper I have tried first to indicate the extent of demand for technical information of all kinds. Secondly, I have attempted to show in outline how much information is available and of what types. Thirdly, I have suggested that the industry ought to tackle the total problem in a realistic way. Fourthly, I have added a few random thoughts on some details.

I have not examined more than superficially the methods by which a better information service or services might be established. Much labour, and thought still needs to be expended on this. Certainly I do not suggest the setting up of some super-organization by the industry. But, as a first step, an *ad hoc* committee representing the whole industry might agree to a single authoritative standard index system. Thereafter pressure by the representative institutions of the industry aimed at getting all producers of the technical, periodical and trade literature which it uses to adopt BS 1311 standard size should be relentlessly maintained. Otherwise, improvement should be sought mainly in the existing services, for which I have made a few suggestions, with the addition of user-requirement dossiers by the RIBA. And perhaps eventually joint action with other bodies regarding costs and legal requirements.

technical section

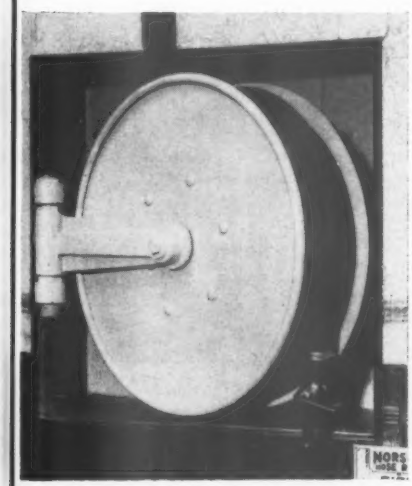
THE INDUSTRY

From the industry this week Brian Grant describes a new type of folding door, a fire hose reel which turns on automatically and a non-tear paper towel.

Folding doors

Averys have recently started to make a folding door which has been designed by A. H. Girling, whose name should be familiar enough to owners of cars with brakes which stop them. The door is made up with lengths of aluminium Venetian blind strip (coloured as required) which are fixed to both sides of a sheet of plastic faced holland. The photograph provides most of the necessary explanation, and the door can be made in any width up to 9 ft. The doors open concertina fashion, and are suspended from runners in a track at the head: they are quite compact, as a 6 ft. wide door folds away into a width of 6 in. The standard door is not restrained at the bottom, and as a result it is by no means draughtproof, while it would also flap to a certain extent on a breezy day with the windows open. These disadvantages apply, of course, to almost all concertina type doors, but this model has the advantage of being comparatively cheap, £16, including fittings, for a 6-ft. 6 in. by 3 ft. door. (*J. Avery & Co. Ltd.*, 81, *Great Portland Street, London, W.*1.)

The Norsen fire hose reel by John Taylor, Dunford & Co., Ltd.

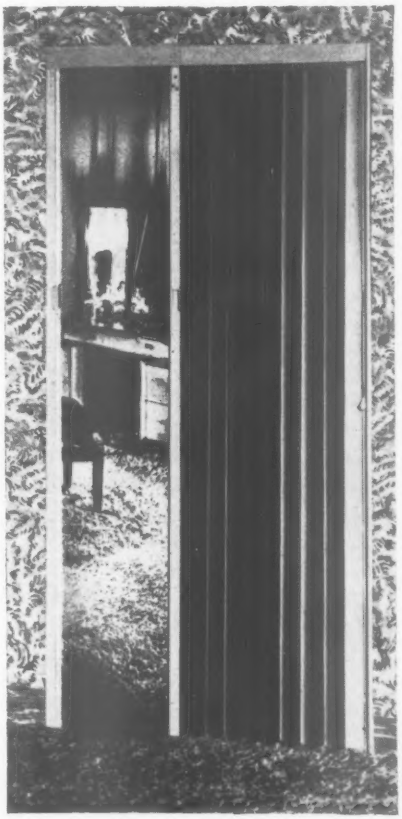


Fire hose reels

A fire hose reel which automatically turns on the water as soon as a length of hose is pulled out is the Norsen. The reel is housed flush with the wall face on a bracket which is hinged so that the reel can be swung through a full 180 degrees. The standard recess is 26 in. square and 9 in. deep for a reel to take 60 ft. of hose, or 11 in. deep for 120 ft. A door to the recess can be decorated to match the wall if the reel must be disguised. The main water supply can be brought up at the back of the recess and there is no need for any pipework to show on the wall face. Quite a number of authorities maintain that all fire fighting equipment should be immediately obvious to the public, but a few building owners prefer to pretend that fires never happen. Ever seen a lifeboat in a shipping advertisement? (*John Taylor, Dunford & Co. Ltd., Dunford House, Barrack Road, Newcastle on Tyne*, 4.)

Paper towels

The ordinary paper towel suffers from the fact that it has almost no strength when wet and therefore tears very easily, so that there is a natural tendency to use several towels when one should be enough. A unit of the large Reed Paper Group is now producing a range known as Hi-Dri, made from resin impregnated kraft paper, which does not fluff and which can be used wet or dry. They are recommended for use in industry as an alternative to cloths for wiping down machinery or removing excess oil, and they are also a very efficient alternative for tea cloths in canteens or restaurants, for even when wet they can still be used as dish cloths or for wiping down floors and tables. The ordinary tea cloth is comparatively expensive to buy and launder and is often a source of infection in restaurants, whereas these towels cost about 1s. for seven. The manufacturers will provide the towels in 250 ft. rolls and also supply the necessary cabinets (see illustration). (*Kimberly-Clark Ltd.*, 11, *Grosvenor Gardens, London, S.W.*1.)



Above, the new Avery folding door, made up of strips of aluminium. Below, the Hi-Dri paper towel container, using a stronger, non-tear towel.

technical section

19 CONSTRUCTION : DETAILS
thermal insulation of factory roofs

On January 1, 1959, the Thermal Insulation (Industrial Buildings) Act comes into force and thereby provides a new, but (in all probability) not high, hurdle for the architect to jump over. To help him cope with this situation, John Read and Cecil Handisyde have gathered as much relevant fact as possible and, with the assistance of Messrs. Yeoman and Edwards, quantity surveyors, give comparative cost, U value, and flame spread classification of all the chief alternative roof insulation systems at present in use in this country.

The coming into force in January, 1959, of the Thermal Insulation (Industrial Buildings) Act will have important repercussions on the detailed design of many factory buildings and will make it essential for architests to be able to advise their clients on the best way to combine compliance with the Act with economy in the building.

The Act merely states the Industrial Buildings shall be adequately insulated. It leaves the Minister of Fuel and Power to decide the standards required. The Minister's regulations have not yet been published in their final form, but if they follow draft proposals they will have the broad effect of accepting roofs with a U value of 0·3 or better for the solid parts of the roof, with no restrictions on glazed or open portions. Lower standards will be permitted on a sliding scale according to the internal design temperature of the building. The effect of using the sliding scale of permissible values would be to accept a U value of 0·4 for a building heated only to 60 deg. F. What happens if a building is " designed " for 60 deg. F. and happens to register 70 deg. F. on a day when an inspector arrives is not specified ! There are certain exemptions. such as buildings in which the space heating is derived entirely from the manufacturing processes carried on therein. Existing buildings, and those commenced before January, 1959, will also be exempt from the regulations, but it seems quite likely that many of these will be brought up to the improved standard when industrialists realise more clearly, from examples in new buildings, how much advantage there is to them in providing proper insulation.

The general problem of thermal insulation in factories

Thermal insulation is only one of several things affecting the loss of heat from a factory. Other factors are:

(i) The shape and size of the building—to some extent controllable by the architect.

(ii) The degree of exposure.

(iii) The average temperature maintained within the building—A point to which not all factory managers pay enough attention. A temperature of 5° higher than is needed for comfort can mean a very serious increase in heating costs.

(iv) The number of air changes—Some air change and movement is essential for comfort but leaky building can involve such a big heat loss that the effect of insulation can be almost lost. Factories with large open doorways are a real problem.

To the client it can be explained that the need to provide insulation does not necessarily involve him in a more costly factory. Any cost of insulation can be partially or may be wholly balanced by a reduction in the initial cost of heating plant since if the heat loss is cut the size of boilers can be less, the sizes of pipes may be less, and the number or size of radiators, unit heaters or other heat transfer systems can also be reduced.

Other advantages may result from thermal insulation: the comfort condition in a building, which is not quite the same thing as the temperature, should be improved and the need for redecoration due to pattern staining will also sometimes be reduced though this does depend upon the detail design of the insulated parts. A third advantage, which may be a very considerable one, is that summer conditions may be very greatly improved by the reduction in heat transmission, though it must be appreciated that the improvement due to insulation may be over-ridden if there is much direct sunlight through windows or very poor air movement due to insufficient ventilation in the summer.

Economical design to include insulation

An actual example of insulation treatment to a building is stated to have given the following result :

Insulated area in sq. ft.	Cost of insulation and fixing	Reduction in capital cost of heating plant	Annual fuel cost saving	Net saving over 25 years
20,000	£750	£3,145	£847	£19,335

Clearly if anything like this result can be obtained the requirements of the Act will benefit the factory owner as well as economising in the national fuel costs and also improving comfort conditions for the operatives throughout the year.

To arrive at a proper comparison of the merits of various roof shapes, waterproofing methods and insulation materials and methods, there are many things to consider, amongst which are the following :

Nature of Occupancy: may determine shape of roof, need for exposure of roof structure for purposes of fixings for services, etc. Special processes affecting type of daylighting, *e.g.* northlight or anti-sun monitors. Need to reduce solar heat transmission. Need to provide special fire protection. Need for dust-free construction.

Ease and speed of construction: may influence choice

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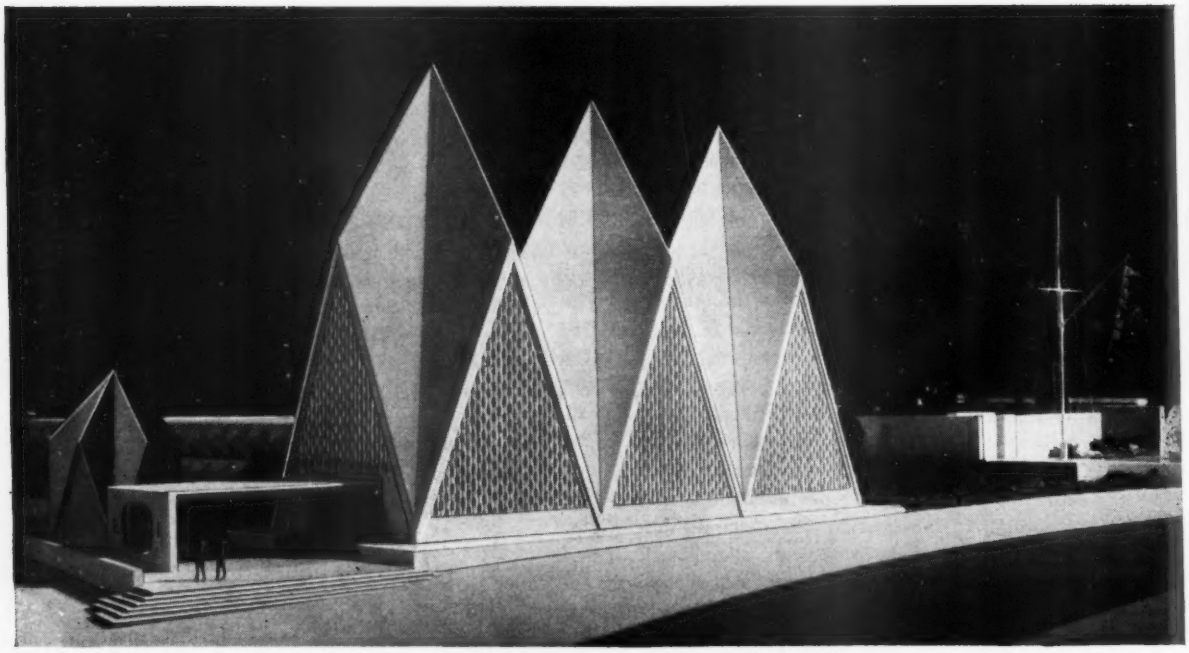

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TABLE I: ADVANTAGES AND DISADVANTAGES OF MAIN METHODS OF INSULATION

	Advantages	*Disadvantages*
Sandwich	Choice of internal skin not necessarily determined by insulation properties and unlikely to be affected by condensation. Independent support for insulation unnecessary Cheaper combustible types of insulation may be used without fire risk.	If inner skin joints not sealed a vapour barrier may be necessary to prevent saturation of insulation layer by penetrating water vapour. Loss of insulation value of cavity. No fire protection to structure.
Over-purlin	Often integral with the roof cladding needing no independent support.	Danger of condensation within the material No fire protection to structure.
Under-purlin	Increased insulation due to cavity. If fire-resistant insulation used then structure may be protected.	Extra cost of special framing. Danger of trapped moisture within the cavity causing deterioration of material. Fire spread risk if back of lining not fire resistant.
Sprayed internal finish	Protection agaipst fire of complete roof structure in addition to insulation	Difficulty of satisfactory decoration. Saturation problem in high humidity conditions. Wet process may be less convenient than dry.

of material and method, especially as between wet and dry types.

Ease of decoration and reduction of maintenance: possible advantage of self-finished materials. Reduction of areas to be decorated. Simple surfaces only to be redecorated. Reduction of probability of pattern staining and therefore need for frequent redecoration.

Acoustics: the varying value of sound absorption.

Condensation: the risk of condensation and the possible need to guard against trapped moisture.

Costs: discussed in detail below.

Table 1 lists some of the advantages and disadvantages of the main methods of insulation.

Cost comparison

After considering all the above points, cost will probably be the final determining factor. For a complete cost comparison the following points should be taken into account:

1. cost of main structure,
2. cost of insulation,
3. cost of decoration,
4. cost of maintenance,
5. any special effect on general building cost resulting from the construction, such as entry time or special inconvenience,
6. the effect on reduction of cost of heating installation,
7. the effect on annual heating costs.

Of these items (4), maintenance cost, is difficult to evaluate, but broadly one can put it on the credit side. Item (5) is unlikely to be serious, but a sensible appraisal could only be made in looking at any individual job as a whole. Items (6) and (7) should be costed by a heating expert. There are tables and charts which purport to give quick answers, but there are considerable pitfalls in their use by the average architect. What is important is that heating engineers should give much more advice on this matter instead of merely accepting an architect's building regardless of its possible shortcomings. Proper co-operation between architect and engineer should produce a sensible relationship between cost of insulation and cost of heating. For example, the labour cost in placing any type of insulation may be considerable, but the doubling of the amount of insulation might add very little more than the cost of the material itself. The heating engineer may therefore be able to show that in some cases it will be well worth while to insulate to more than the minimum standards required by the Act.

It is with the first three of the above items that the architect will be most directly concerned on the drawing board, and to help at this stage the tables on pp. 939-942 set out likely comparative costs for a variety of combinations of construction and insulation.

The effect of thermal insulation on fire risk

In large unbroken areas of new industrial buildings there is probably relatively little risk to the occupants, but damage to the structure can be very considerable and damage to contents may be very much greater in actual cost than the value of the building. If there is serious damage to either structure or plant the loss of output may be the most serious factor of all.

There are two broad aims in considering fire risk. First the need to prevent a rapid spread of fire and second to prevent collapse of the structure. Both are related to the use of insulating materials and at the same time both are also likely to be affected by ventilation.

What is quite clear is that the use of any lining material which allows of a rapid spread of flame across its surface will inevitably lead to greater risk. The Act deals with this by empowering the Minister to make regulations limiting or prohibiting the use of materials having a rapid spread of flame risk.

The Act does not refer to the collapse of structure risk. Here there are two somewhat divergent schools of thought. While all would agree that to add "fire protection" to the structural frame would greatly reduce the risk of a collapse, others feel that the cost of such protection may not be justified if other means of controlling the fire are provided and there seems to be some justification for believing that a good deal can be done in this respect by arranging for easy release of heat and smoke through the roof, possibly by means of heat operated vents.

So far as the Act is concerned the fire risk side is confined entirely to limitations on the type of material to be used: the intention being to prevent the use of materials with a high spread of flame risk.

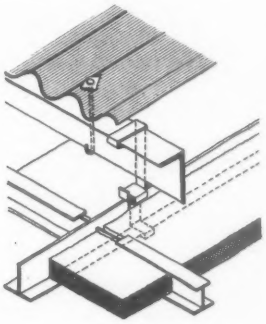
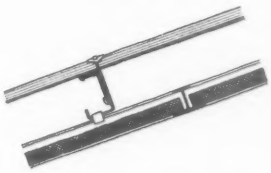
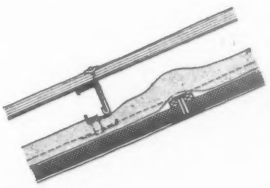
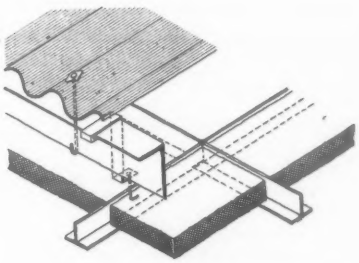
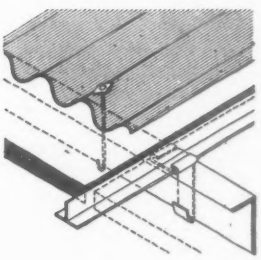
Operation of the act

The Act will be operated by plans being deposited for approval by the Local Authority and there is a right of appeal to the Minister. Presumably in London, where there is no obligation to submit plans for prior "Byelaw" approval, some special arrangements for deposit and approval will have to be made.

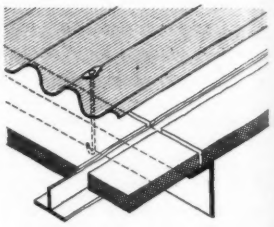
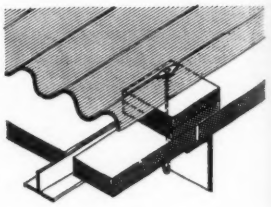
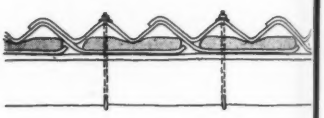
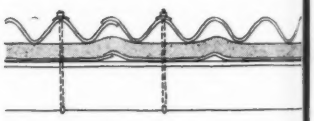
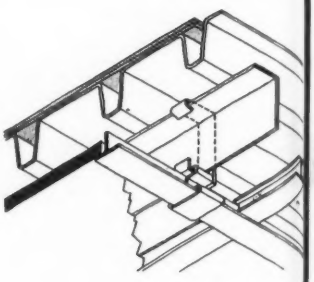
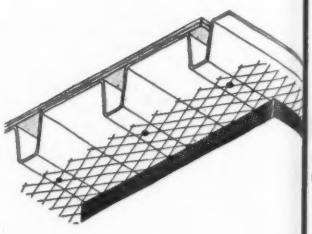
technical section

TABLE 2: COMPARATIVE COSTS OF COMBINATIONS OF CONSTRUCTION AND INSULATION

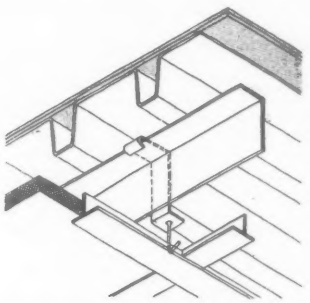
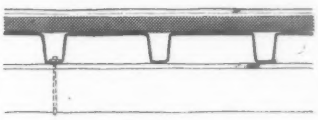
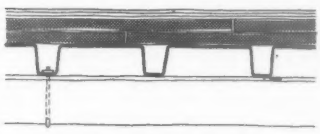
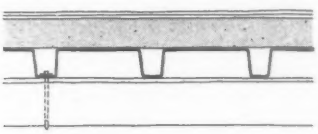
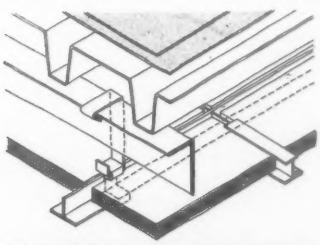
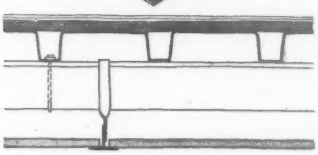
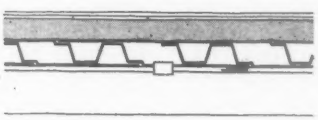
Note: 1, Prices are based on costs late in 1957 but are meant only to indicate likely comparative costs. 2, Prices per sq. yd. refer to areas measured on the slope, for sloping or curved roofs, and do not include any extra for ridge and eaves finishings.

Weatherproof Cladding (cost per sq. yd. of roof on slope)	Thermal Insulation	U value of insulated roof through cladding	Average U value of 30 per cent. single-glazed roof (U value of glazing—1·0) (measured on slope)	Average U value of 30 per cent. double-glazed roof (U value of glazing—0·5) (measured on slope)	Cost per sq. yd. of applied insulation (1,000 sq. yd.) s d	Comments	Application
A. Sloping roofs 25%-35% glazed							
Corrugated asbestos cement 11s. 6d. sq. yd. Bitumen protected metal, 22s. 11d. sq. yd. or Corrugated aluminium, 16s. 10d. sq. yd. (on angle purlins at about 4 ft. 6 in. centres) U = 1·0–1·4	UNDERPURLIN INCLUDING CAVITY GREATER THAN ¾ in.*					* Useful for concealing structure and services.	
	1. ½-in. insulating fibreboard	·28–·32	·51–·55	·36–·40	22 1	Class 4 flame spread. Many alternative metal fixing systems available. Choice dependent on cost, appearance and thickness of lining.	
	2. Ditto with 1 coat intumescent paint underside	·28–·32	·51–·55	·36–·40	24 7	Class 1 flame spread.	
	3. Ditto, with single-sided aluminium foil stapled to back	·27	·48	·33	26 6	Class 1 flame spread. Recommended for solar insulation.	
	4. Combined aluminium foil stapled to ⅜-in. plasterboard	·22	·45	·30	25 6	Class 1 flame spread. Combined foil is one layer corrugated aluminium on one layer flat. Good solar insulation.	
	5. ¾-in. glass wool quilt on ½-in. asbestos fibreboard	·22	·45	·30	29 1	Class 1 flame spread. Lightweight and incombustible combination.	
	6. ¾-in. insulating gypsum plasterboard	·38	·51	·36	21 3	Class 1 flame spread. Polished aluminium foil as finish to upper surface of plasterboard. Recommended for solar insulation.	Application as 3 and 4
	7. 2-in. compressed strawboard	·20	·43	·28	27 4	Class 3 flame spread: can be reduced to Class 2 by 2 coats distemper. Susceptible to fungal attack in humid conditions.	
	8. 2-in. woodwool slab	·20	·43	·28	29 7	Class 1 flame spread. woodwool possibly susceptible to fungal attack in humid conditions.	
	OVERPURLIN EXPOSED*					* More speedily erected	
	9. 2-in. compressed strawboard	·22	·45	·30	21 0	Longer hook bolts for asbestos cement sheeting.	
	10. 2-in. woodwool slab	·22	·45	·30	23 3	Ditto.	

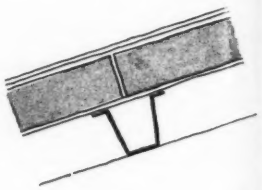
technical section

Weatherproof Cladding (cost per sq. yd. of roof on slope)	Thermal Insulation	U value of insulated roof through cladding	Average U value of 30 per cent. single-glazed roof	Average U value of 30 per cent. double-glazed roof	Cost per sq. yd. of applied insulation (1,000 sq. yd.)	Comments	Application
	11. ½-in. insulation fibreboard (without cavity)	·31–·36	·51–·54	·36–·39	13 8	Class 4 flame spread. Special hook bolts for asbestos cement.	
	12. ½-in. insulation fibreboard (with cavity)	·28–·32	·49–·51	·34–·36	15 3	Class 4 flame spread. Special hook bolts for asbestos cement.	
	13. Ditto, with intumescent paint	·28–·32	·49–·51	·34–·36	17 9	Class 1 flame spread.	
Combined over purlin sandwich (on purlins at 7 ft. 6 in. centres)	OVERPURLIN SANDWICH 1-in. bitumen bonded glass wool on flat asbestos cement sheets						
	14. Type (1)	·17	·42	·27	39 8	Prices for complete sandwich.	
	15. Type (2)	·17	·42	·27	39 8	Prices for complete sandwich.	
	OTHER TYPES						
	16. 1-in. asbestos fibre spray	·26–·32	·47–·51	·32–·36	21 9	Available in colour. Normally Class 1 flame spread but in certain textile processes there is danger of fine fluff adhering to rough texture, rendering it partly inflammable.	
Metal decking with 2 layers bituminous felt (on angle purlins) 46s. sq. yd. U = 1·0	UNDERPURLIN INCLUDING CAVITY GREATER THAN ¾ in.					Unless decking has flat upper surface, or if fire protection for under-surface required, most metal deckings are best suited to sandwich type insulation which also affords a level surface for the felt.	
	17. ¾-in. insulating gypsum plasterboard	·30	·50	·35	21 3	Metal fixing system similar to (1). (Plain Ts and strap hangers)	
	18. 1½-in. thick vermiculite concrete sprayed on expanded metal	·33	·52	·37	31 8	Class 1 flame spread. Useful where sound absorbence desirable. Reduces risk of deck collapsing in case of fire exposure.	

technical section

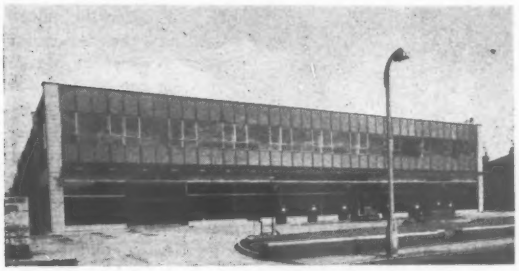
Weatherproof Cladding (cost per sq. yd. of roof on slope)	Thermal Insulation	U value of insulated roof through cladding	Average U value of 30 per cent. single-glazed roof	Average U value of 30 per cent. double-glazed roof	Cost per sq. yd. of applied insulation (1,000 sq. yd.) s d	Comments	Application
	19. 2-in. compressed strawboard	·19	·43	·28	27 4	Good surface for decorating.	
	SANDWICH BETWEEN DECKING AND FELT						
	20. 1-in. corkboard	·21	·44	·29	11 2	Class 1 flame spread.	
	21. 1-in. insulating fibreboard	·25	·47	·32	10 2	Two ½-in. layers with lapped joints.	
	22. 2-in. woodwool slab	·22	·45	·30	10 6		
	23. 2-in. compressed strawboard	·22	·45	·30	12 1		
	OTHER COMBINATIONS						
	24. ½-in. expanded polystyrene on ½-in. asbestos fibreboard	·20	·43	·28	32 8	Backing inert and lightweight (Jablite).	
	25. ½-in. wood or cane fibreboard above decking. ½-in. asbestos fibreboard below deck	·24	·46	·31	29 7	Class 1 flame spread. Good fire resisting combination, particularly if metal fixings concealed.	
Asbestos cement cavity decking with two layers bituminous felt, 46s. sq. yd. U = ·47	SANDWICH BETWEEN DECKING AND FELT					Strongly fire resisting cladding presenting flat easily decorated underside and upper surface suitable for all types of insulation.	
	26. 2-in. vermiculite screed	·24	·46	·31	17 10		
	27. 2-in. foamed slag	·30	·50	·35	7 4		
	28. ½-in. corkboard	·26	·47	·32	7 2		
	29. 1-in. insulating fibreboard	·22	·45	·30	10 2	Two ½-in. layers with lapped joints.	
	OTHER METHODS						
	30. ½-in. asbestos sprayed on underside	·27–·30	·48–·50	·33–·35	14 5	Easily damaged if accessible	
	INSULATION AS DECKING						
Two layer bituminous felt 10s. 2d. sq. yd.	31. 2-in. woodwool slabs in tee bearers at 2 ft. 0 in. centres (on purlins at 2-ft. 0-in. centres) and ½-in. screed	·24	·46	·31	26 2	V-type pressed metal purlins present better appearance than angle purlins (Andersons)	

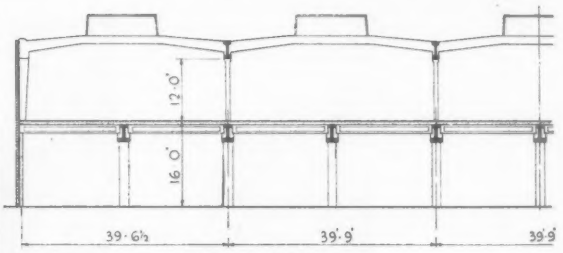
technical section

Weatherproof Cladding (cost per sq. yd. of roof on slope)	Thermal Insulation	U value of insulated roof through cladding	Average U value of 30 per cent. single-glazed roof	Average U value of 30 per cent. double-glazed roof	Cost per sq. yd. of applied insulation (1,000 sq. yd.) s d	Comments	Application
	32. 2-in. strawboard in tee bearers at 4-ft. 0-in. centres (on purlins at 2-ft. 0-in. centres)	·24	·46	·31	19 2	Takes less super loading than woodwool at 2-ft. 0-in. centre supports but adequate for most industrial roofs.	
B. Flat roofs 25%-35% glazed							
Metal decking with two layers bituminous felt on angle purlins. 46s. sq. yd. U = 1·0	UNDERPURLIN 33. ½-in. insulating gypsum plasterboard	·30	·50	·35	21 3	See 17-32.	
	34. 1½-in. vermiculite concrete sprayed on Expamet	·33	·52	·37	33 3		
	35. 2-in. compressed strawboard	·19	·43	·28	27 4		
	SANDWICH 36. 1-in. corkboard	·21	·44	·29	11 2		
	37. 1-in. insulating fibreboard	·25	·47	·32	10 2		
	38. 2-in. woodwool slab	·22	·45	·30	10 6		
	39. 2-in. compressed strawboard	·22	·45	·30	12 1		
	OTHER COMBINATIONS 40. ½-in. expanded polystyrene on asbestos fibreboard	·20	·43	·28	32 8		
	41. ½-in. wood fibreboard above decking. ½-in. asbestos fibreboard below	·24	·46	·31	29 7		
Asbestos cement cavity decking with two layer bituminous felt. 46s. sq. yd. U = ·47	SANDWICH 42. 2-in. vermiculite screed	·24	·46	·31	17 10		
	43. 2-in. foamed slag screed	·30	·50	·35	7 4		
	44. ½-in. corkboard	·26	·47	·32	7 2		
	45. 1-in. insulating fibreboard	·22	·45	·30	10 2		
	OTHER METHODS 46. ½-in. asbestos sprayed on underside	·27-·30	·48-·50	·33-·35	14 5		
Two layer bituminous felt. 10s. 2d. sq. yd.	INSULATION AS DECKING 47. 2-in. woodwool slabs in tee beams at 2-ft. 0-in. centres (on purlins at 2-ft. 0-in. centres and ½-in. screed).	·24	·46	·31	26 2		
	48. 2-in. strawboard in tee bearers at 4-ft. 0-in. centres (on purlins at 2-ft. 0-in. centres)	·24	·46	·31	19 2		
4-in. concrete slab + ½-in. screed and two layer roofing felt. 44s. 2d. sq. yd. U = ·61	UNDERSLAB 49. 1-in. asbestos spray	·21	·41	·29	21 9	If accessible is easily knocked away	
	50. ½-in. insulating fibreboard as permanent shuttering with ½-in. insulating fibreboard under	·24	·43	·31	11 7	Class 4 flame spread, but Class 1 with intumescent paint. Joints lapped.	
	51. ¾-in. insulating plasterboard nailed to 2-in. × 1½-in. battens	·25	·44	·32	12 1	Good solar insulation	
	52. 2-in. woodwool as permanent shuttering	·24	·43	·31	6 1		
	SANDWICH BETWEEN SLAB AND FELT 53. 1-in. insulating fibreboard	·24	·43	·31	10 2	Two ½-in. sheets with joints lapped.	
	54. 1-in. corkboard	·20	·40	·28	11 2		
	55. 2-in. vermiculite screed	·25	·44	·32	17 10		
	56. 3-in. foamed slag screed	·21	·41	·29	10 0		
C. Curved roofs 25%-35% glazed							
4-in. concrete with two layers bituminous felt and ½-in. screed. 51s. sq. yd. U = ·61	UNDERSIDE 57. 1-in. asbestos spray	·21	·44	·29	21 9	Incorporates decoration but messy to apply. Useful for sound absorbence.	
	58. 2-in. vermiculite spray	·25	·47	·32	31 6	Ditto.	
	SANDWICH BETWEEN FELT AND CONCRETE 59. 2-in. vermiculite screed	·25	·47	·32	19 0	Incorporates normal screed if required. Easy to apply.	
	60. 3-in. foamed slag screed	·21	·44	·29	11 6		

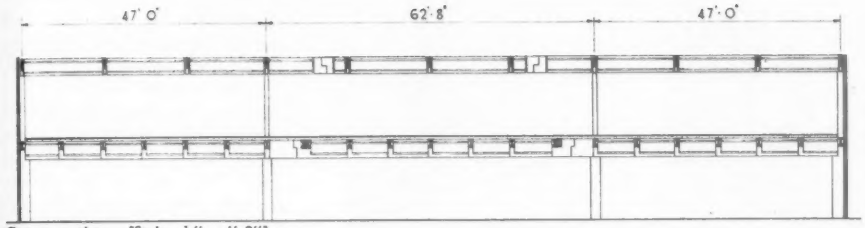
structure study

SHOWROOM, FACTORY AND GARAGE AT SOUTHAMPTON





Part long section [Scale: $\frac{1}{32}$" = 1' 0"]



Cross section [Scale: $\frac{1}{32}$" = 1' 0"]

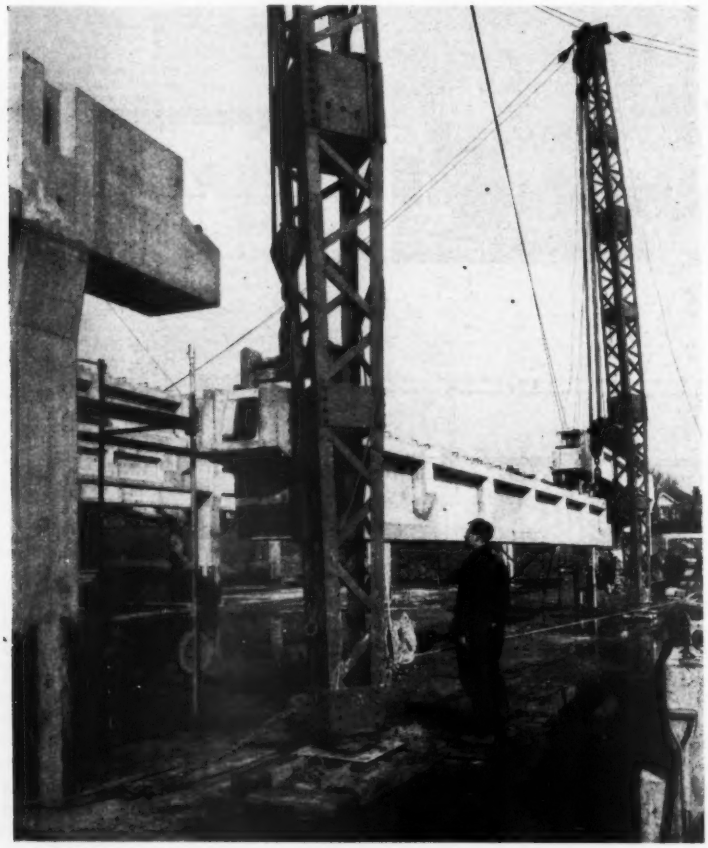
In this new building for R. F. Seward at Southampton the beams are constructed from conveniently short precast units, none exceeding 2 tons in weight, prestressed together with "Gifford Udall" cables in "Ductube" ducts, and an interesting feature is the introduction of simple welded steel frames for the monitor construction. The building was designed by the late W. S. Macintosh, the consulting engineer was E. W. H. Gifford, the general contractors Sadler & Company, and Reed & Mallik Ltd. were subcontractors for the structural frame.

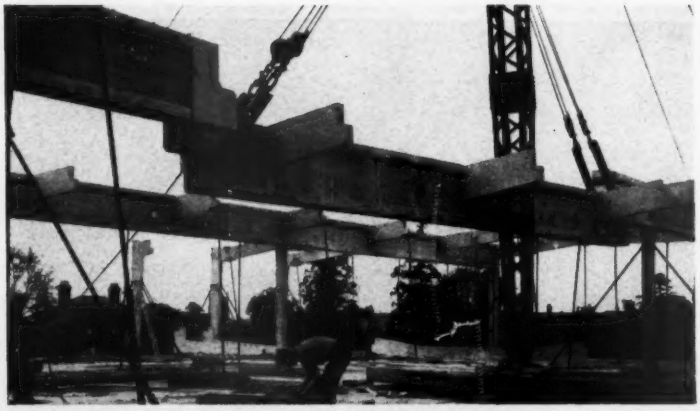
The building is a two-storey structure, 200 ft. long and 158 ft. 6 in. wide, with the narrow side fronting on to the road (top left). The length of the building is divided into five bays—two end bays 39 ft. 6½ in wide and three bays 39 ft. 9 in. wide. At ground floor level the end bay of the building, across the full frontage, is occupied by a showroom. The remainder of the ground floor serves as a garage and the whole of the first floor will be used as factory space. The garage space is spanned by main beams supported on external columns and two lines of internal columns (below). The columns form three bays across the width of the building of 47 ft., 62 ft. 8 in., and 47 ft. and are at 19-ft. 10½-in. centres.

The prestressed I-section main beams are 3 ft. 10½ in. deep overall and were precast in units 7 ft. 9 in. long, each having a diaphragm at one end with caulked mortar joints between units. The centre span consists of a 52-ft. 8-in. beam built up in this way and suspended between 5-ft. cantilevers from the side spans. At the points of suspension there are 3-in. diameter mild steel rollers

structure study

SHOWROOM, FACTORY AND GARAGE AT SOUTHAMPTON: continued





between the halved ends of the beams, and the prestressing cables are arranged to resist the bending and shear stresses in the halving.

The beams were assembled and jointed on the ground floor slab and lifted into position with two erection masts. Some of the cables in the cantilevered and suspended beams were stressed before lifting, the remaining cables being tensioned after the secondary beams and floor panels had been placed.

The I-section secondary beams, which are supported on brackets formed on the diaphragms of the main beams, have a total depth of 2 ft. 1 in. and are at 7-ft. 10-in. centres.

To provide bond with the *in-situ* topping of the floor slab the tops of the main beams are castellated and the secondary beams are transversely ridge-tamped. The slab is of composite construction: precast soffit panels 3 in. thick with projecting reinforcement, span between the secondary beams and are covered with 2 in. of *in-situ* concrete with mesh reinforcement.

The end bay, which serves as the showroom, is spanned by main beams of the same size which run at right angles to the main beams over the other bays and are carried on independent columns in order to reduce sound transmission from the rest of the structure.

The main roof beams are of I-section with an overall depth of 3 ft. 4 in. and were precast in 15-ft. lengths. The central suspended portion was reduced to 41 ft. 2 in., the cantilevers being increased accordingly and they were assembled on the finished floor slab and raised by means of a single erection mast (left).

The diaphragms which project 5 ft. 9 in. on each side of the main roof beams at 15-ft. intervals carry the suspended double-cranked central sections of the secondary beams, which are 2 ft. deep at the haunches and 1 ft. 6 in. deep at mid-span. These sections are 31 ft. 2 in. long over the two end bays and 29 ft. 1 in. long elsewhere. Each external column has a cantilevered head which projects 3 ft. 9 in. to form a halved joint with the secondary beams and although these columns were precast and prestressed all other columns in the building are of *in-situ* concrete.

The halved joints eliminate temporary supports and the profile of the cranked beams has been so arranged that a single prestressing cable, anchored at the external columns, is used for the full 200 ft. length of the building.

Precast reinforced concrete purlins support wood wool slabs laid on pressed steel "tees" and covered with bituminous felt (left). Welded steel frames for the monitor roof lights are bolted to the secondary roof beams.

Viewport 1: The south and east fronts seen from Montague Square.

building illustrated

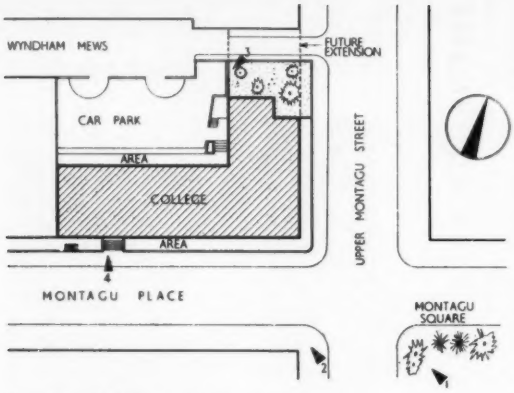
THEOLOGICAL COLLEGE

in MONTAGUE PLACE, LONDON W.I.

designed by F.R.S. YORKE, E. ROSENBERG and C. S. MARDALL J. R. PENOYRE, associate; J. S. P. VULLIAMY, architect in charge; consultants (structural) CLARKE, NICHOLLS and MARCEL; quantity surveyors VEALE and SAUNDERS

The Jews College in Montague Place provides accommodation for about 20 residential students and day-time teaching facilities for about 70, and houses a famous library. Rooms for widely differing purposes and varying greatly in size presented a difficult planning problem on the restricted site.

Viewport 1: *The south and east fronts seen from Montague Square.*



Site plan with photographic viewpoints

The site is at the corner of two streets of good quality Georgian houses with four and five storeys, in an area of London famous for its terraces and squares but already marred by some modern development which pays little heed to this character. In the Jews College the architects have paid careful attention to the preservation of the street line, storey heights and scale of the surroundings, even though this may have meant forfeiting some of the opportunities for a more "exciting" modern building afforded by the schedule of accommodation. For the latter includes rooms of widely different functions, character and size—the kind of programme which carries the temptation to over-articulate. The building is thus an L-shaped block following the original building line, with a standard column spacing of 9 ft. used as a simple planning grid for large and small rooms.

Externally the road frontages of the building are divided into three horizontal divisions which correspond to those of the neighbouring terrace houses in Montague Place. The ground floor and basement are clad with Portland stone (lining up with the rendered facing on the terrace houses, see viewpoint 2, left). Above this the building is brick faced but the first, second, and third floor windows are linked together with a stone surround, to provide some affinity with the corresponding storeys of the terrace houses. The houses have a rendered string course at fourth floor sill level, a feature which contributes much to the scale of the district, and at this level the Jews College building has a long horizontal slot "cut" into the south facade, forming a terrace to the fourth floor flat. In addition to these measures the western-most bay of the building has been given windows of similar proportion to the adjoining house, to make an easier transition from classical fenestration to the closely-spaced modern windows.

Such respect for existing character is without doubt most salutory, and the only question to be asked is whether in paying it the architects have not been obliged to compromise to the extent of producing a slightly confused and indeterminate character in the new building. The north elevation facing the mews viewpoint 3 (right) gives the key to what must be the architect's real views on the matter of outward expression of the structure and plan—exposed columns with windows clear between them, and brick apron panels beneath. This direct and uncompromising formula has been applied to all floors at the back of the building. At the front, however, it appears as a framed-up "feature" in the centre of the facade, being separated from the rest because of the town planning considerations mentioned. Used in this way it becomes meaningless, since it gives the impression that only part of the building has a structural frame, an impression emphasised by the rather mannerist brick "beam" over the fourth floor balcony which is supported not by columns but by cantilevers, some of which protrude from the cedar boarded two-storey wall of the squash court.

Viewpoint 4 (right) shows the main entrance, which has steps of precast terrazzo spanning the basement area, glazed doors and a sidelight of afrormosia, and faience tiling to the reveals designed by Paul Feiler.

building illustrated

A further set of doors, to be seen above left, form a draught lobby to the entrance hall. The joinery throughout the building is very simple and detailed in a way which is most sympathetic to the strong character of afrormosia. On the right of the photograph are the lift doors, call-button panel and entrance to the enquiry office, designed as a complete joinery unit. The next photograph, below, taken from the same point but turning through a right angle, shows the main stair. This is constructed of reinforced concrete with terrazzo treads and risers; the floor of the entrance hall is also of terrazzo. The vertical balusters are fixed to the side of the stair carriage, an arrangement which obviates the usual troubles of fixing into the cantilevered end of a tread, gives a firmer handrail, and makes cleaning easier. Behind the stair is the totally glazed wall which extends the whole height of the stairwell. The ample light obtained from this is used on the upper floors to light part of the internal corridors through a glazed screen on each landing (above). These screens are also of afrormosia and have double doors of unequal width, which give the required minimum total opening for fire escape but provide one door of a sensible width for normal traffic.

Second flo

First floo

Ground f

Basemen

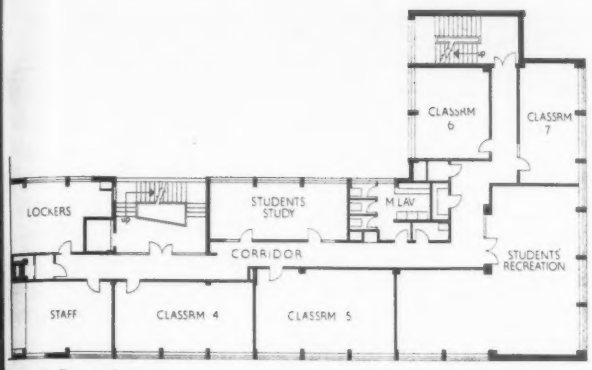
analysis

CLIENT'S REQUIREMENTS

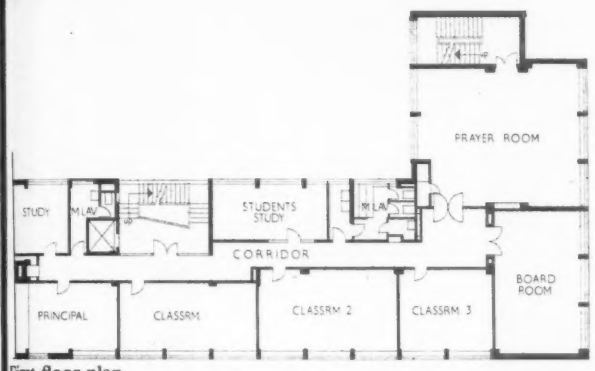
A building was required which would house (*a*) a famous library; (*b*) a small residential college for about 20 students; (*c*) classrooms for teaching a daytime total of 60 to 70 students; (*d*) a synagogue; (*e*) administrative offices, a board room and academic staff rooms; (*f*) two flats, for a warden and a caretaker; (*g*) a squash court.

PLANNING AIMS

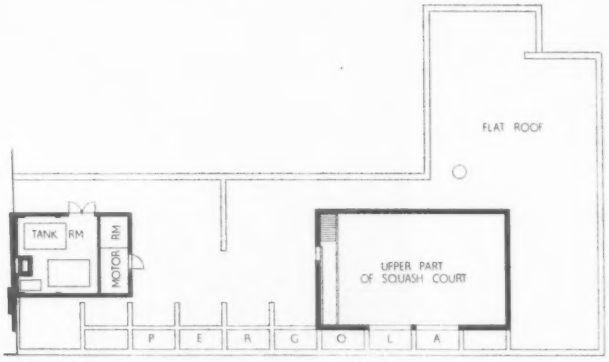
The Planning Authority laid down certain specific requirements and the area over which building could take place was determined by the corner site and by various daylight factors. The plan adopted aimed at combining the various needs of the client into a rational whole, and it seemed logical to group these different needs on different floors with the library on the ground floor and basement. Living quarters were restricted to the upper two floors, and the teaching area, synagogue, recreation and board rooms occupied the two intermediate floors.



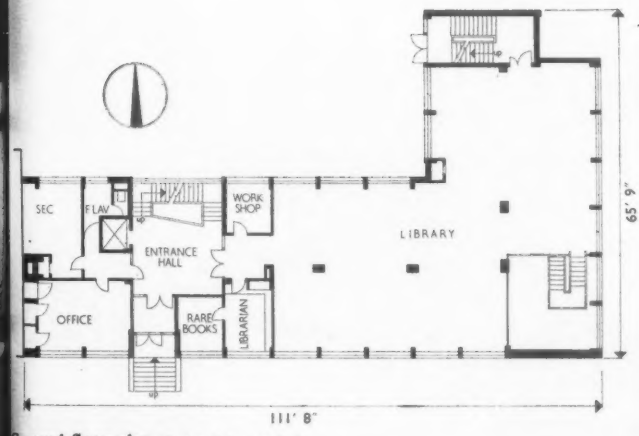
Second floor plan



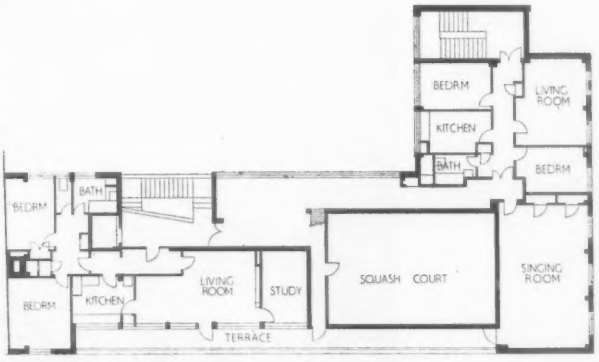
First floor plan



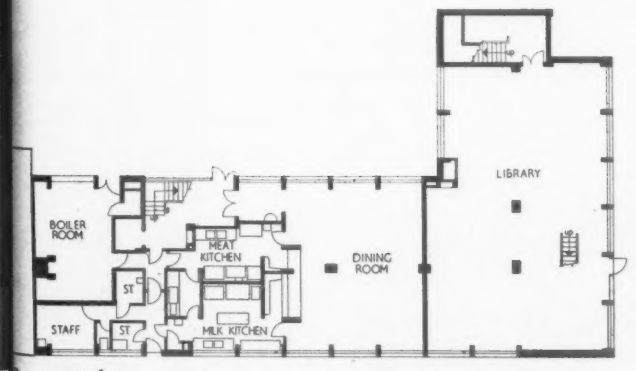
Roof plan



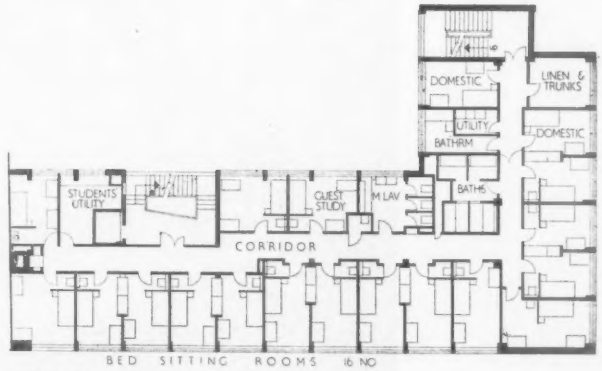
Ground floor plan [Scale: $\frac{1}{32}$" = 1' 0"]



Fourth floor plan



Basement plan



Third floor plan

building illustrated

The main space on the ground floor is the library (left), which had to accommodate one of the largest collections of Jewish books in the world. Part of the basement is also given over to this; there is a large two-storey well at the south-east corner through which passes a stair linking the two floors (below). This stair has an unusual structure, consisting of welded steel box-section strings below which the treads are slung. It will be the subject of a Working Detail in a later issue of the JOURNAL. *The south wall of the two-storey part of the library is to receive a large mural, by Jacob Bornfriend; at the time of going to press, however, this was not completed. The curtains for the college were designed by Harold Cohen.*

Also in the basement, but with access from the main stair, are the dining room and kitchens. The dining room (above) receives south light from windows giving on to the wide basement area, and on the north side looks out on the lower ground level at the back of the building, and so does not suffer from its position in the basement. The centre part has a suspended ceiling of Douglas fir slats.

The servery hatch (below) is divided into two parts which correspond to the "meat" and "milk" kitchens, which are self-contained to conform with Jewish law.

analysis

	cost per sq. ft.	s	d
	preliminaries and insurances	7	6½
	contingencies	2	3

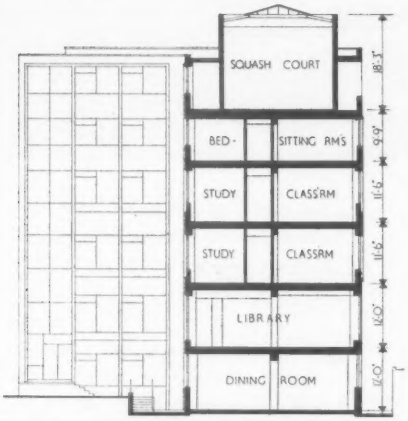
Work below ground level 3 2

The basement is in ground already excavated, and no piling was necessary, the foundations consisting of r.c. pad and strip footings. The approximate depth was 3 ft.

STRUCTURAL ELEMENTS

Frame or load-bearing element 7 2

R.c., h.p. slab, spanning front/centre/rear. On the centre spine, r.c. continuous beam. On the perimeter, p.c. non-structural downstand beam, to speed erection. R.c. columns are at 9-ft. centres externally and 18-ft. centres on central spine.



Cross section through squash court [Scale: ⅛" = 1' 0"]

External walls (including flue) 7 6½

Primarily 11-in. cavity construction. Facing, brick. South and east columns and facings of Portland stone, north and west column nibs in p.c. concrete with exposed aggregate.

Ratio: $\frac{\text{solid wall}}{\text{floor area}} = \frac{0{\cdot}84}{1}$

Windows 8 8

Galvanized steel set in timber sub-frames.

Ratio: $\frac{\text{windows}}{\text{floor area}} = \frac{0{\cdot}29}{1}$

External doors 3½

Fully-glazed solid hardwood. Doors from the staircases are of steel, forming part of the window units.

Ratio: $\frac{\text{doors}}{\text{floor area}} = \frac{0{\cdot}01}{1}$

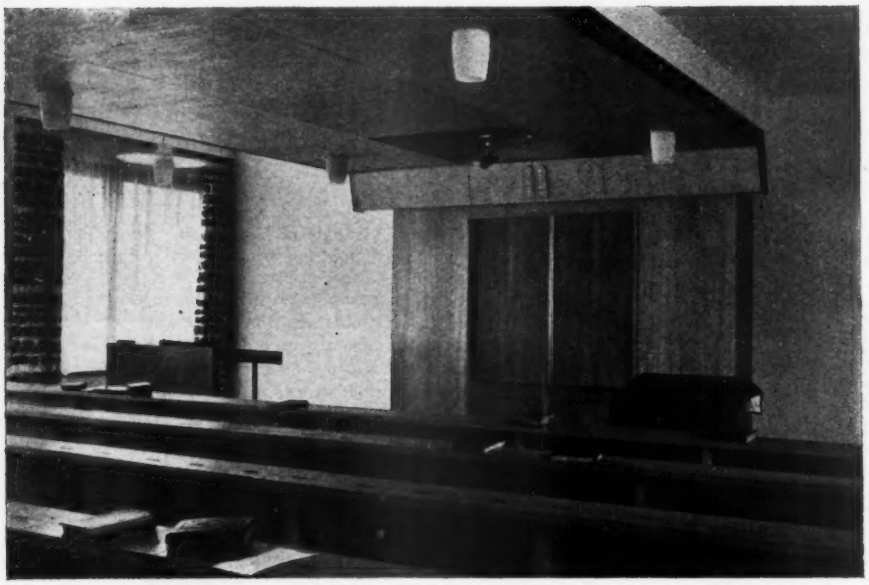
Upper floors 7 2

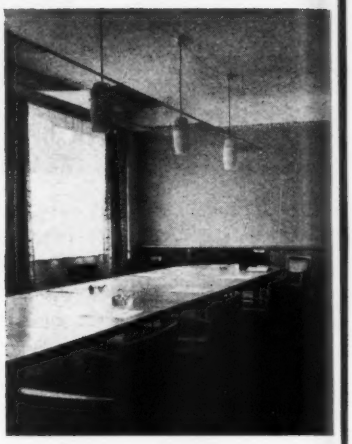
All 12-in. hollow pot r.c. Span of each type, 15-16 ft.
Area of each type: constant at approx. 4,400 sq. ft.
Superloads, varying, according to use, from 60 to 180 lb.

Staircases 2 7½

All *in-situ* r.c. principal stair finished terrazzo; secondary, granolithic.
Number of staircases: 2, plus 1 for communication within the library.
Widths: 3 ft. 6 in. (2 ft. 9 in. in library).
Total rise: 125 ft.

building illustrated

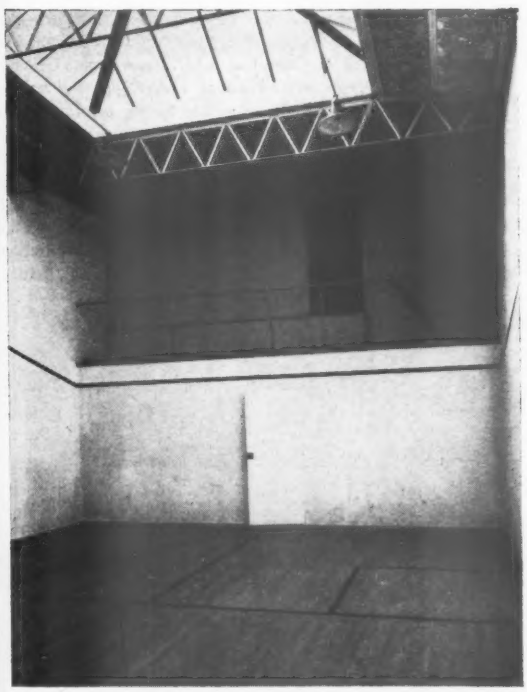




The prayer room on the first floor (a small synagogue) is shown above. The Ark is panelled in chestnut and Israeli olive wood and has sliding doors. The suspended ceiling which extends down the centre of the room is of ash veneered plywood, and the seating is of oak. The adjacent room is the boardroom, which has one wall (on the right of the photograph below) panelled in chestnut veneered plywood. The lighting fitting was specially designed but makes use of standard open glass shades. Top right, another view of the boardroom, looking towards the window on the east wall. On the second floor, at the south-east corner, is the students' recreation room, which is large and L-shaped. Right is a view of the south leg of the room, with furniture specially designed by the architects.

The students' bed sitting-rooms, on the third floor, are remarkably well fitted out with cupboards, shelves, and other equipment. The lavatory basin is shielded from the rest of the room by a timber screen which forms a head for the bed.

The last photograph shows the squash court on the fourth floor; the spectators' balcony also forms an access to the roof, reached by the door in the top centre of the photograph.



analysis

	s	d
Roof construction	1	3
Rooflights 1 dome-light to internal bathroom. 1 p.g. light to squash court. Total area: 204 sq. ft.		2½
Glazing Internally, ¼-in. g.w.p.p., g.w.c. and cast for doors and screens. Externally, 3/16-in. and 26-oz., with grey plyglass panels to first and second floor windows.	1	3
Total of structural elements	36	2

PARTITIONING AND FITTINGS

Internal partitions Type of partition, 4½-in. brick.	2	3
Screens To main staircase enclosure only, hardwood (afrormosia) and glazed with ¼-in. g.w.p.p.		7½
Internal doors Ply-faced solid core, painted and polished in certain cases. Number of single doors: 99. Number of double: 17.	1	3
Ironmongery (including fixing) Satin-chrome finish.		8½
Fittings Principally in the synagogue: Ark in chestnut and Israeli olive wood veneers; seating, oak. Servery counter in dining room in Douglas fir and oak.	1	3
Total of partitions and fittings	6	0½

FINISHINGS

Floor finishes 6 7½

Type of finish	Cork tiles	Polyvinyl sheet	Oak block	Muhimbi strip
Area in sq. yd.	720	900	329	8·3 squares
Price per sq. yd.	28s. 9d.	29s. 2d.	46s.	380s.

Wall finishes Generally plaster. Tiling in kitchens. Self-coloured plaster to squash court.	4	6½
Ceiling finishes Plaster. Acoustic tiles. Suspended ceilings in ash veneered ply and in Douglas fir.	2	3
Roof finishes 3-ply felt laid on 1-in. cork and screed to falls, finished ½-in. granite chippings. Area: 4,400 sq. ft.		11½
Decorations Mainly 3 coats emulsion on wall surfaces and 2 coats on ceilings. 3 coats gloss paint on external timber and 2 or 3 coats internally.	4	10½
Total of finishes	19	2½

analysis

SERVICES

	s	d
External plumbing		2¾
There are no external r.w.p.s, all are internal c.i. Flashings are either 5-lb. lead or mineral-spar felt, according to location.		
Hot and cold water installation	4	6½
An oil-fired boiler produces hot water through a calorifier. (All internal heating, hot and cold water, plumbing and drainage services were carried out by one sub-contractor).		
Sanitary fittings		7¾

Type of fitting:	L.b.	Sinks (inc. cleaners)	Baths
No. of each type:	34	8	7
Type of fitting:	Urinals	W.c.'s	
No. of each type:	18-ft. run	14	

Heating and ventilation	10	2½	
2 oil-fired boilers, of 904,000 B.T.U.'s each. Radiators generally. Ceiling panels in library, synagogue and Council room, convectors in staircase enclosure. Extract vent to kitchen and internal bathrooms only.			
Gas installation		¼	
No points. Provision of supply only.			
Electrical installation	4	0¾	
Normal lighting, 13-amp ring mains and 30-amp for cookers and kitchen supply.			

Type:	Light	13 amp.	30 amp.
No. of each type:	348	162	8

Lifts	3	4¾
100 ft. per min., 8-passenger lift. Car veneered in straight-grained oak. Car door faced in leather on inner side.		
Total of services	23	1
Drainage		5½
Earthenware externally. C.i. under building		
Other elements	4	8½
External works: Macadam-faced car park; treatment of existing, dilapidated vaults; external railings in galvanised steel		
Cost per sq. ft.: £127,325 / 26,500 sq. ft. =	96	1

SUMMARY

Ground floor area: 4,300 sq. ft.
Total floor area: 26,500 sq. ft.
Type of contract: Bovis system
Tender date: Not applicable
Work began: May 1, 1956
Work finished: August 17, 1957
Billed price of foundations, superstructure, installations and finishes: £126,000
Final contract price: £127,325
Billed price of external works and ancillary buildings: £6,000
Final contract price: £6,250
Total: £132,000

COST COMMENTS

This cost analysis is based upon a system of contract arising from a form of negotiated tender. As a result therefore of the pre-planning and co-ordination between architect, contractor and quantity surveyor, the analysis can be expected to show a fairly true and accurate distribution of costs.

Some of the benefits to be gained from the maximum use of contractor's plant and organization can be seen in the cost of the structural elements, particularly the frame at 7s 2d per sq. ft. of floor area. A further consequence of this form of contract can be seen in the short contract time—less than 16 months to completion. Other elements calling for comment:

Foundations (3s 7d per sq. ft.): the reason for the relatively small proportion spent on this item is that the basement was already excavated and no piling was necessary.

External walls: these have been constructed economically at a unit cost of $\frac{7s\ 6\frac{1}{2}d}{0{\cdot}84}$ = 9s per sq. ft. of wall excluding internal decoration. Note that the use of an existing wall on one flank has affected the cost of this element.

Windows: these appear to be inexplicably expensive at a unit cost of $\frac{8s\ 8d}{0{\cdot}29}$ = 29s 10d per sq. ft. of window, without glass and decorations.

Fittings: relatively little seems to have been spent on this item. It would appear that the cost of wardrobes and other bedroom furniture is not included in the contract.

Finishes: with floor finishes at an average cost of 6s 7¼d per sq. ft., including screed, and all finishes taking nearly 20 per cent of total cost, a pretty fair idea can be obtained of the high standard of internal appearance.

CONTRACTORS

General contractors: Bovis Ltd. *Sub-contractors: Ironmongery:* H. & C. Davis. *Electrical work:* B. French Ltd. *Tiling and tile mural:* Carter & Co. (London) Ltd. *Terrazzo:* Zanelli (London) Ltd. *Steel windows:* Aygee Ltd. *Metal work, balustrades and staircase in library:* Wessex Guild Ltd. *Sanitary fittings:* Stitson's Sanitary Fittings Ltd. *Block and strip flooring:* Hollis Bros. Ltd. *Cork floors:* Jos. F. Ebner (1953) Ltd. *Roofing:* William Briggs & Sons Ltd. *Fire protection:* Associated Fire Alarms Ltd., Read & Campbell Ltd. *Flush doors:* Gliksten Doors Ltd. *Roller shutters:* Haskins Ltd. *Light steel trusses:* R. Smith (Horley) Ltd. *Heating, hot water, ventilation and plumbing:* R. J. Audrey Ltd. *Duct covers:* Broads Manufacturing Co. Ltd. *Portland stone:* South Western Stone Co. Ltd. *Lift:* Keighly Lifts Ltd. *Curtains:* Heal's Contracts Ltd. *Furniture:* Stafford Furniture Ltd. Russell Furniture Ltd. Hille of London Ltd. *Purpose-made furniture:* Lord Roberts Workshops. H. Ventress. *Light fittings:* Merchant Adventurers of London Ltd. Fredk. Thomas & Co. Ltd.

working detail

ROOFS AND CEILINGS: 48

ROOF: BRAZILIAN PAVILION, BRUSSELS EXHIBITION

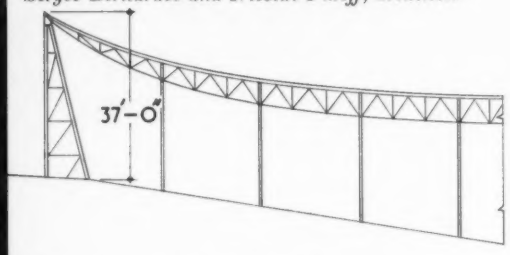
Sergeo Bernardes and Nicolai Fikoff, architects

The "hanging roof" is a deceptive structure in that the corner towers do not carry the weight of the roof (as the plan suggests) but only the horizontal wind loads. Note the thickening of the concrete roof along the ends, where the reverse wind loads are greatest.

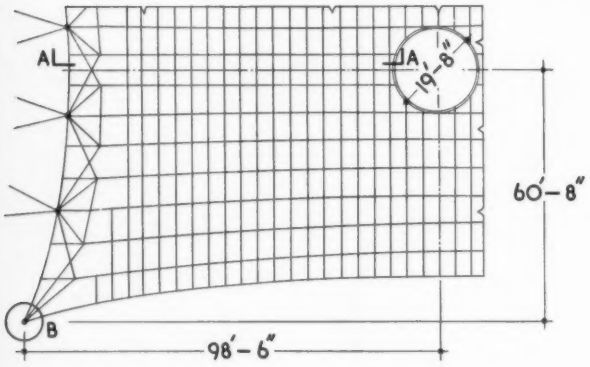
working detail

ROOF: BRAZILIAN PAVILION, BRUSSELS EXHIBITION

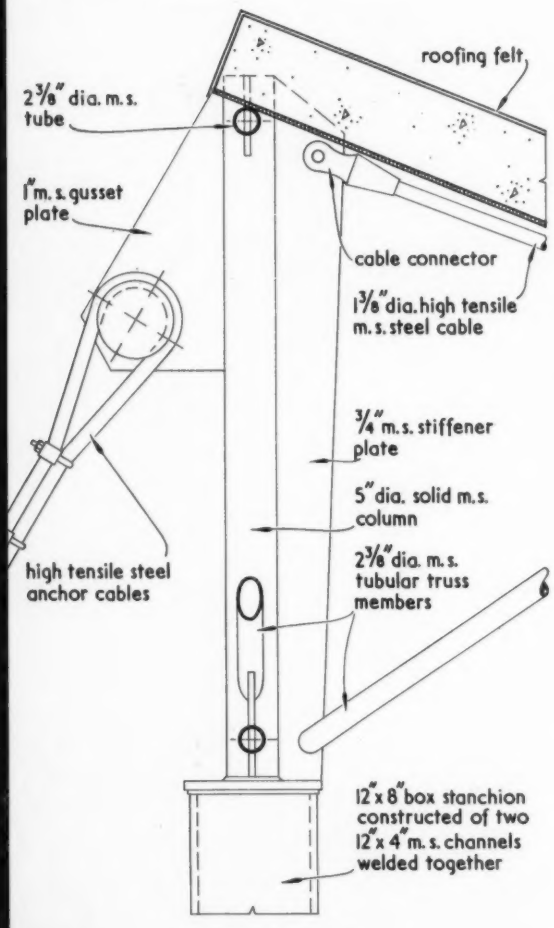
Sergeo Bernardes and Nicolai Fikoff, architects



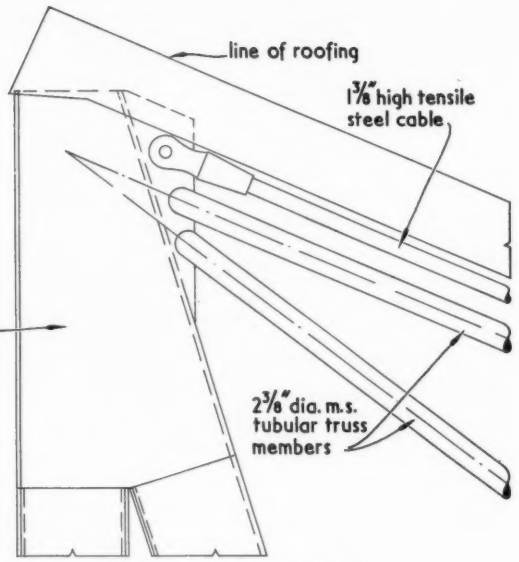
ELEVATION. scale 1" = 40'-0"



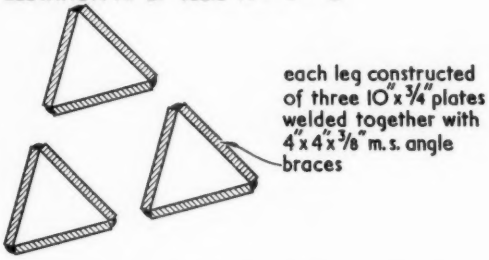
PLAN. scale 1" = 40'-0"



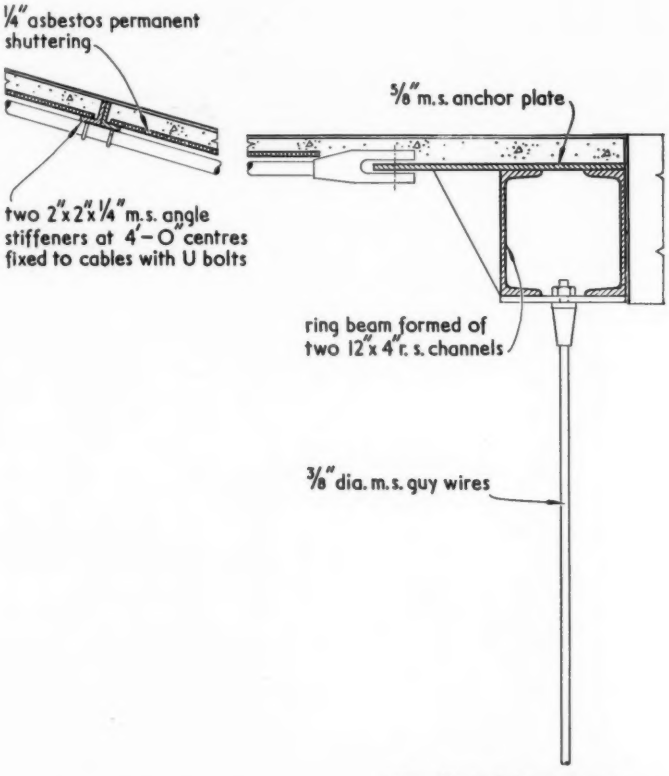
SECTION A–A. scale 3/4" = 1'-0"



ELEVATION AT B. scale 3/4" = 1'-0"



PLAN AT B. scale 3/4" = 1'-0"



note: figured dimensions in feet and inches are approximate

working detail

ROOF: SPINNING FACTORY IN SLIGO

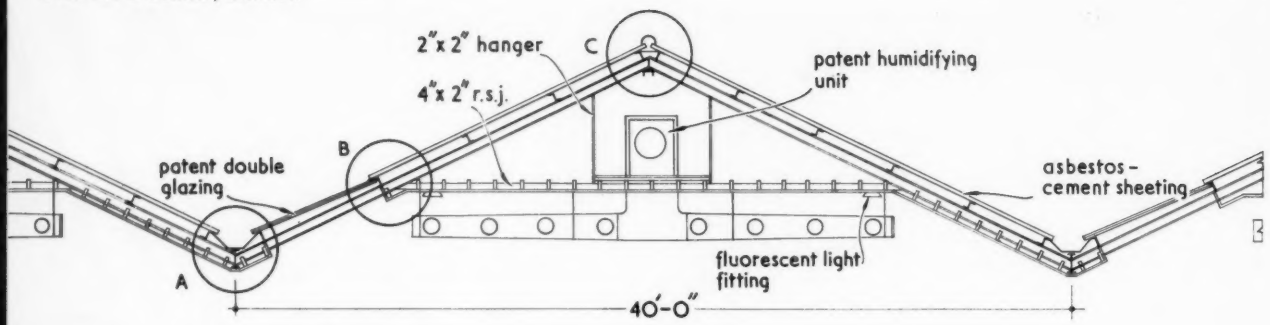
Brendan O'Connor, architect

There are two points to notice about this roof to a cotton spinning factory: first, the use of a system of folded steel slabs tied at midheight to give an uninterrupted span of 140 *ft., and second (and this is use of a material which would not be allowed in England), painted tongued-and-grooved boarding to provide not only added warmth but an impression of warmth.*

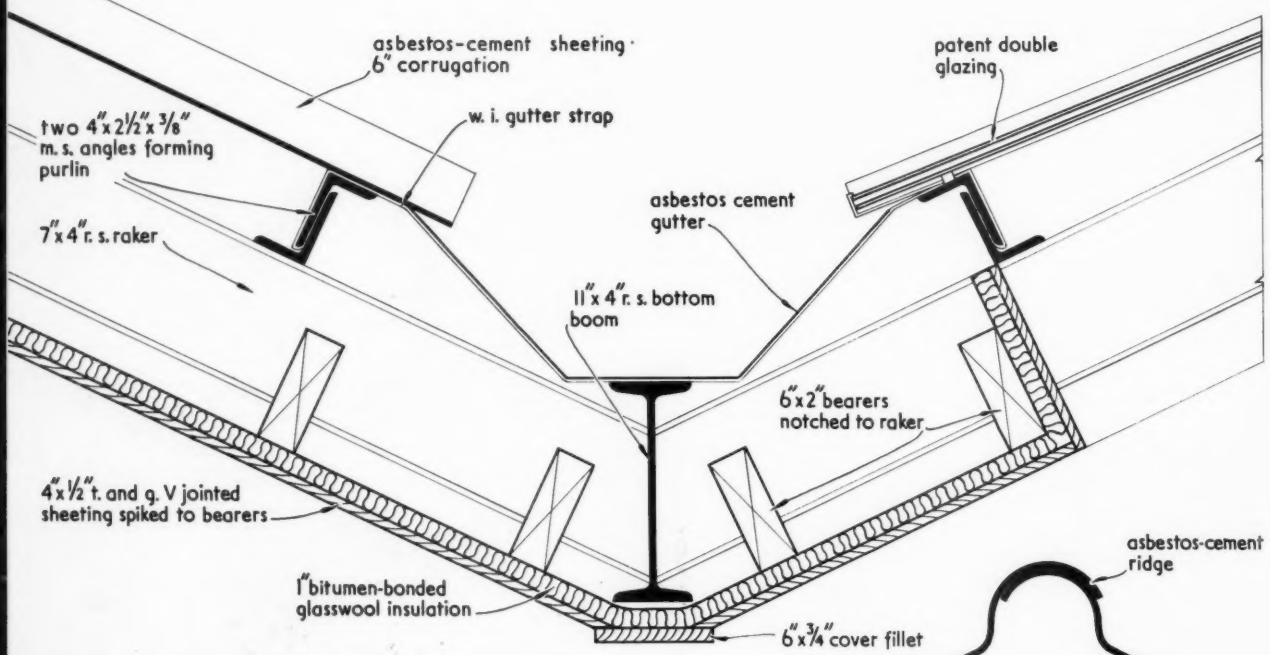
working detail

ROOF: SPINNING FACTORY IN SLIGO

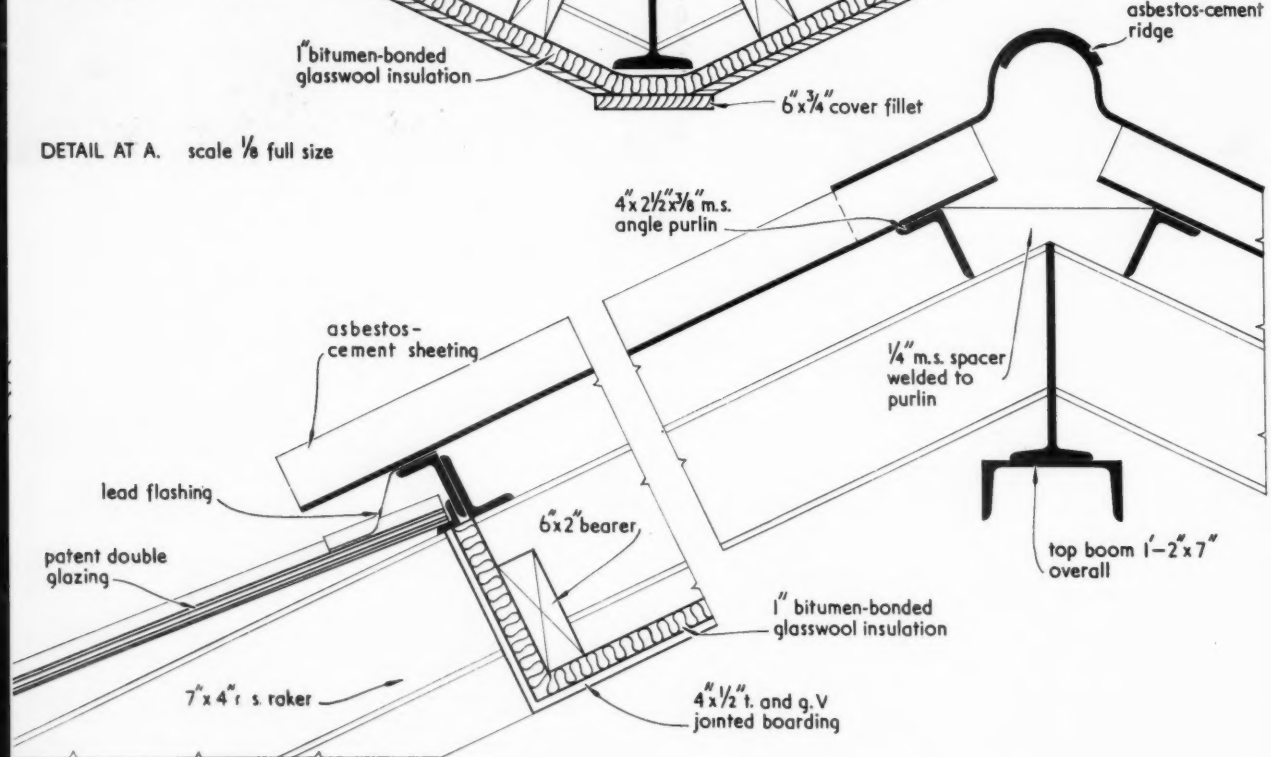
Brendan O'Connor, architect



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



DETAIL AT A. scale 1/8 full size



DETAIL AT B. scale 1/8 full size

DETAIL AT C.

XISTIN
WALL.

A

B

C

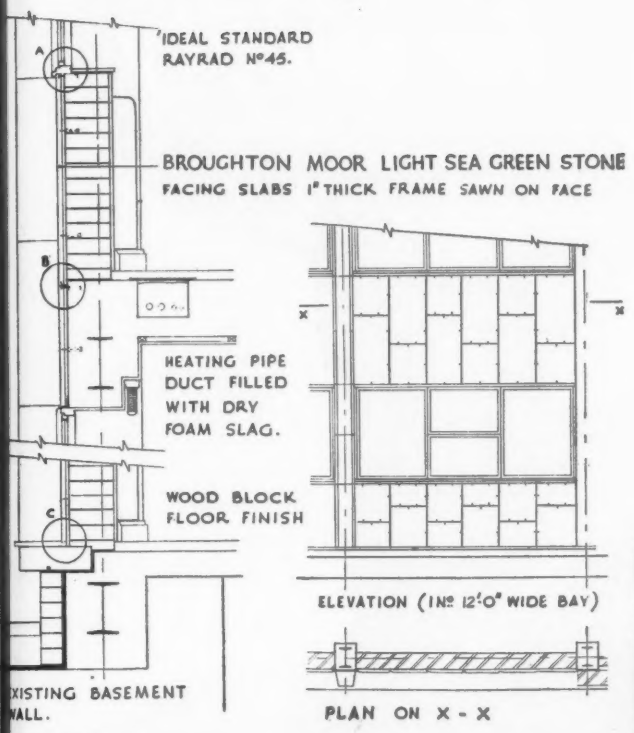
Met
Slab
from
supp

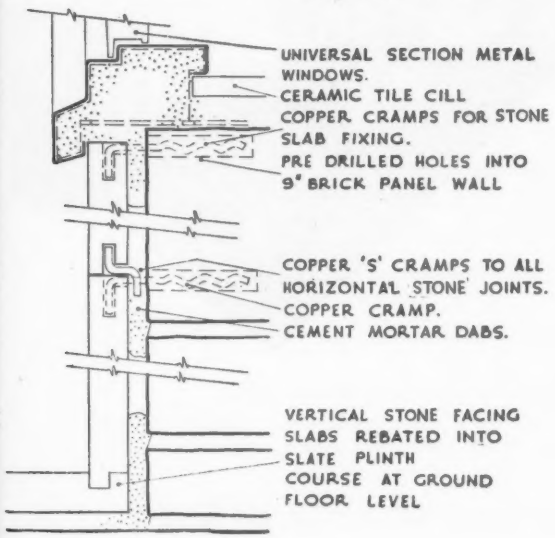
BROUGHTON MOOR LIGHT SEA GREEN STONE

FRAME-SAWN FINISH

New Central Police Headquarters, Hull

(Architects: Messrs. Priestman & Lazenby)

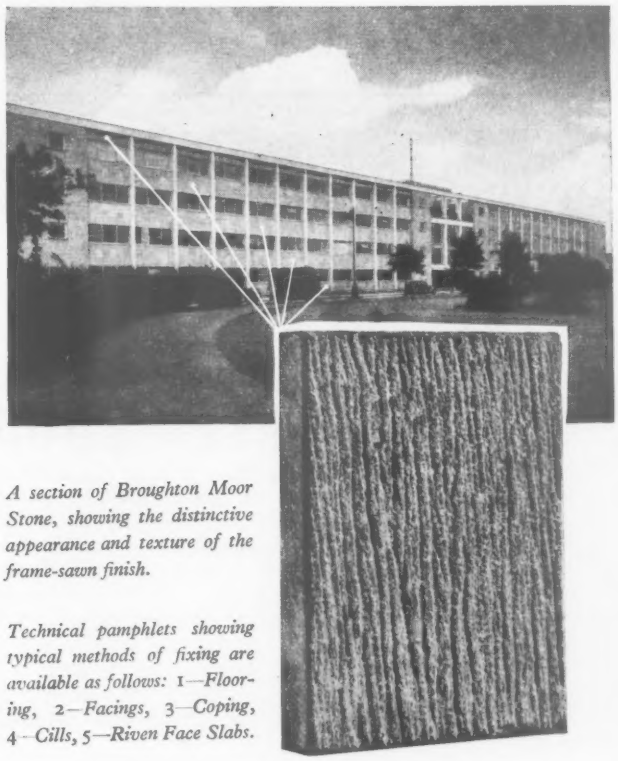




Method of fixing Broughton Moor Light Sea Green Stone Slabs, with frame-sawn finish, 1" thick, and in sizes ranging from 3' 6" x 2' 0" to 2' 0" x 2' 0". Approximate area of slabs supplied—12,500ft. sup.

Broughton Moor Green Stone is ideally suitable 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 facing of this impressive building.

Fixing is normally effected by means of non-ferrous cramps and dowels, grouted into drillings in the stone, and brickwork or concrete. The method of fixing employed in this instance is shown here.

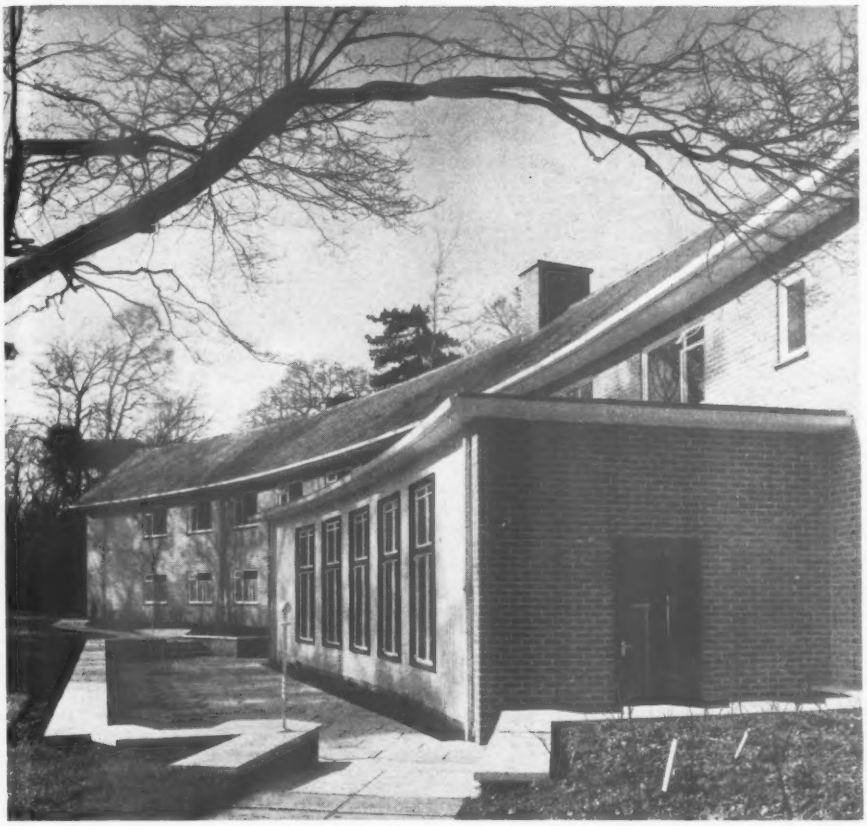


A section of Broughton Moor Stone, showing the distinctive appearance and texture of the frame-sawn finish.

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

HOMES FOR OLD PEOPLE AT HALL GRANGE, CROYDON



Extension and conversion of Hall Grange, Croydon, by which a large two-storey house in well wooded grounds has been converted into Methodist Homes for the Aged, has recently been completed by Paul Mauger, Gavin, Mathers, and Mitchell. The Homes are seen, left, from the south, with the new, large common room opening on to a paved terrace in the foreground, and fine trees behind. The new extension is larger than the original two-storey house and contains 27 bed sitting-rooms, the common room, matron's room, bathrooms, lavatories, tea-making rooms and a small laundry. Shallow stairs, continuous handrails, a lift, grab-rails in bathrooms and lavatories, and bells by baths and beds are provided to make life easier and safer for the residents.

Announcements

J. Douglass Mathews & Partners announce that they have taken into associate partnership E. J. Hill, A.R.I.B.A., Dip. Arch. (Dunelm).

Parker & Browne, Chartered Quantity Surveyors, of Bank Chambers, 329, High Holborn, London, W.C.1, have opened a branch office at 185/6, High Street, Guildford, Surrey (telephone: Guildford 69183).

The Nuralite Company Ltd., of Gravesend, Kent, have appointed two new representatives to the Northern region. They are A. E. Arris, 39, Milford Gardens, Brunton Park, Newcastle-upon-Tyne, and K. Burdett, of 46, Hunter House Road, Sheffield 11.

McCalls Macalloy Ltd. announce that their film "Cadeby Bridge" showing the construction of a prestressed reinforced concrete bridge at the NCB Colliery at Cadeby, near Doncaster, is available for general release to all societies and technical institutions wishing to show the film at their forthcoming meetings.

John Esau, R. Grace, A.M.I.E.E., and J. Munford have now joined J. A. Crabtree & Co. Ltd. as sales-engineers.

Albi Willesden Ltd., have appointed H. D. Page as Assistant General Manager.

Armour Chemical Industries Ltd. have taken over the business of the Chemical Division and the Armour Laboratories, hitherto part of Armour & Co. Ltd.

A. J. Orbell, who is in charge of the North Western European Department of the Overseas Division, Expandite Limited, left on June 12 to visit Holland and Germany.

The Croft Granite, Brick and Concrete Co. Ltd. have now moved their London Office from 7, Victoria Street, S.W.1, to larger premises at 128/136, High Street, Edgware, Middlesex. The telephone numbers are Edgware 0076, 0077, and 1246 and the telegraphic address has changed to "ADAMAGRAN, EDGWARE."

The Limmer & Trinidad Lake Asphalt Co. Ltd. announce that W. J. Snelling, after more than 55 years in the service of the company, has retired from the Board on reaching the age of 70. He will remain a Director of certain subsidiary companies. The Board has appointed the Company's General Manager, G. C. F. Palmer, to be a Director.

A new Redfyre Products Development Centre has been set up by Newton Chambers & Co. Ltd. of Thorncliffe, near Sheffield. The Centre is located in the Company's recently constructed engineering development building and is run by N. A. Hetherington, Design and Development Engineer.

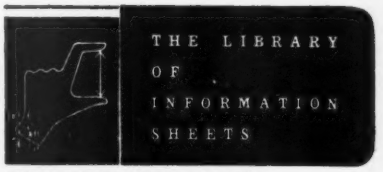
Dorman & Smith Ltd. announce that A. R. Gale, M.INST.B.E., has been appointed London Manager. Mr. Gale succeeds R. Speirs, M.I.E.E., M.AMER.I.E.E., who is leaving the company to take up another appointment. Dorman & Smith Ltd. have also appointed Thomas Roland & Partners as agents for Essex, Norfolk, Suffolk and Cambridge. They are to handle all the distribution servicing of Dorman & Smith, switchgear, miniature circuit breakers, lighting fittings and distribution fuse boards and the supply of H. R. C. cartridge fuse links. They will also act as agents for the domestic and industrial electrical accessories marketed by D. S. Plugs Ltd.—another member of the Dorman Smith Group of companies.

The offices and showrooms of the North-East Region of Philips Electrical Ltd. have been moved to 72, Wellington Street, Leeds 1. The trade counter and stores have moved to adjacent premises at 2, Britannia Street, Leeds 1. The new telephone number for all departments is Leeds 36141.

The new telephone number of Walter Carson & Sons Ltd. is Battersea 8811.

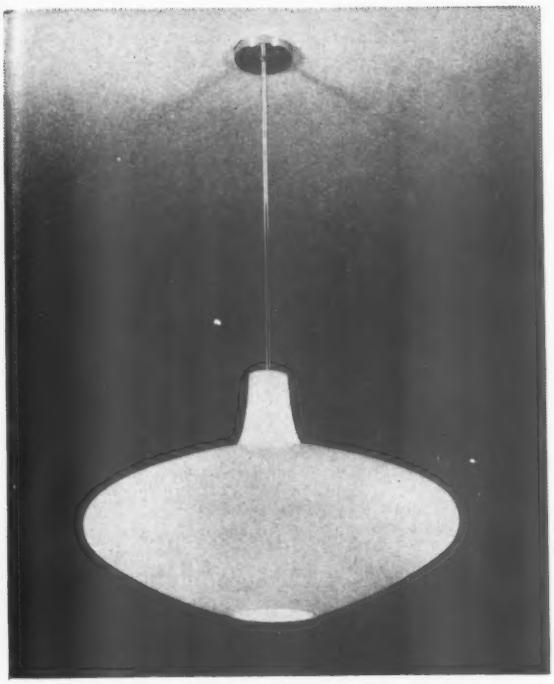
British Insulated Callender's Cables Ltd. opened on June 2 its new Birmingham store and sales offices at 67-77, Holloway Head, Birmingham 1. They have also appointed J. Floweth to the position of Nottingham Branch Manager. His appointment follows the retirement of M. H. Healey.

Leaderflush (Doors) Ltd. have appointed Wm. Coulthard & Co. Ltd., Crown Works, Crown Street, Carlisle (Carlisle 21387/8) to act as sole distributors of Leaderflush doors for Cumberland and Westmorland.



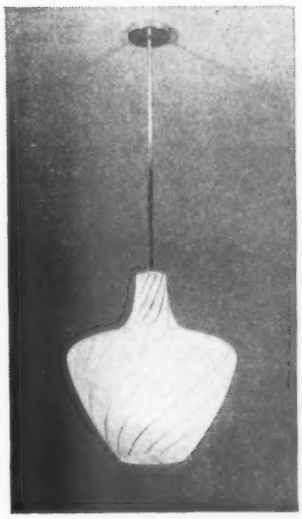
26.E1 *REFERENCE BACK*

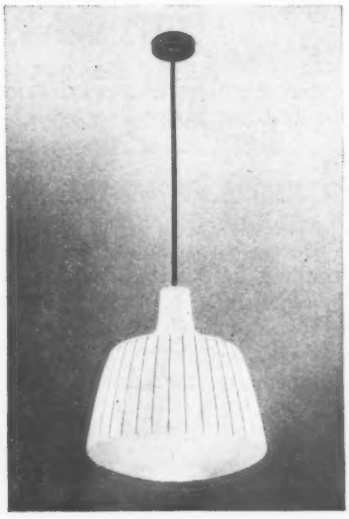
Readers are asked to note that on the reverse of the Sheet, heading "Sizes," the first two entries in the table under "Max. load subject to length" should be amended to 45 *and* 70 *respectively.*

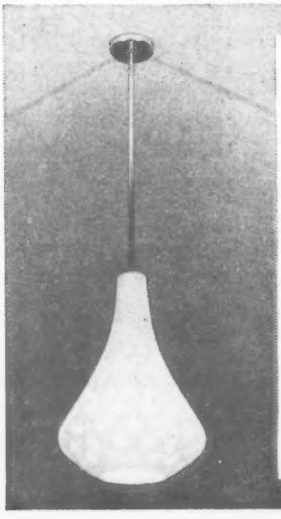


interesting new fittings

in decorated glassware







Top **A.521**
White flashed opal glass, satin finished 20 in. diameter.

Left **A.535**
Obscured glass with alternate mauve and white spirals 12 in. diameter.

Centre **A.528**
White flashed opal with alternate black and yellow lines 12¼ in. diameter.

Right **A.547**
White flashed opal with bubble decoration 10¼ in. diameter.

Normal overall length supplied 3 ft.

These new designs by Troughton & Young are the latest additions to the MONDOLITE range of lighting fittings and consist of four basic shapes available in plain flashed opal glass, plus a selection of decorative effects. All glassware is open at the bottom to allow re-lamping, and to prevent the accumulation of dust and insects. Lamp size up to 200 watt. The glassware is easily removed for cleaning without the aid of tools. Suspensions are available in satin black or polished brass.

Write for leaflet ref: TYL 14/AJ

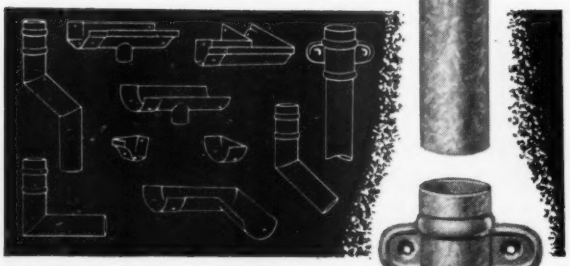
TROUGHTON & YOUNG

TROUGHTON & YOUNG (Lighting) LTD., *The Lighting Centre,* **143 Knightsbridge, London, S.W.1.**
Phone: KENsington 3444. *and at 46 Rodney Street, Liverpool 1.*

Ref. RFW. 24

Strong, Durable, will not fracture

'Harco' Rainwater Goods in light gauge pressed steel to B.S. 1091-1946 and hot-dip galvanized after manufacture by the 'Harco' process, are easy to handle, long lasting and resist impact. The complete range includes H.R. and O.G. Gutters, Angles, Nozzles, Stop Ends, and Brackets, Rainwater Pipes, Elbows, Shoes, Offsets and Heads.



'HARCO'

LIGHT GAUGE PRESSED STEEL

RAINWATER GOODS

Send for List AJ 793

G. A. HARVEY & CO. (London) LTD.
WOOLWICH ROAD · LONDON · S.E.7
Telephone: GREenwich 3232 (22 lines).

Harvey

No Bond so Binding!

Uni-Bond

MARRIES ANYTHING TO ANYTHING

A few of the many materials which

UNI-BOND

will Bond each to one another

Asbestos	Earthenware	Plastic boards and laminates
Bricks	Fabrics	Porcelain
Building Materials	Furniture	Roofing Tiles
Carpets	Glass	Rugs
Cement	Gypsum	Sacks
Canvas	Hardboard	Slates, Stone
Ceramics	Leather	Table tops
China	Linoleum	Wallboard
Cloth	Masonry	Wood, etc.
Concrete	Metals	
Cork	Paper	
	Plaster	

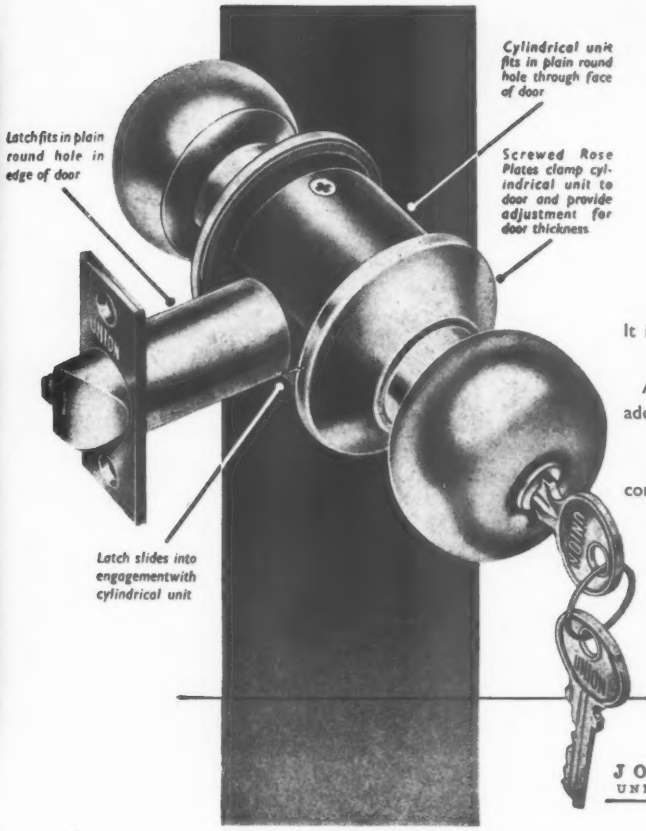
THERE IS NOTHING ELSE NEARLY AS GOOD AS UNI-BOND

More and more Uni-bond, the multi-purpose Bonding Agent, is being used by Joiners, Plasterers, Painters, Decorators, in floor laying, tile glazing and, in fact, everywhere where timber, steel, hardboard, bricks, tiles and a hundred other materials require permanently filling, bonding or cementing together. In handy cans, no mixing or heating, clean in use and finish, Uni-bond is waterproof, resists oil and petrol, cannot crack or craze.

BACKED BY MONEY-BACK GUARANTEE

Write today for full details to Dept. "E":

THE LIQUITILE SUPPLY CO.
48 HIGH STREET
CAMBERLEY, SURREY
Telephone: CAMBERLEY 2263



UNION

KNOBSETS

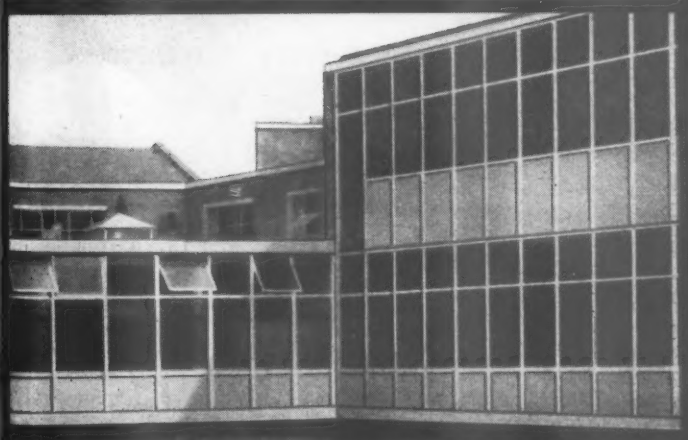
It is with considerable and justified pride that we present these UNION Knobsets, and we hope that you, the Architects and Builders, to whom this advertisement is addressed, will be able to make use of them, not only in new buildings, but when renovating older property of all kinds. The special features which they offer in comparison with the conventional locks and furniture include ease of fixing and simplicity and lightness of operation. We hope also that you will find the external appearance suitably pleasing, as well as being modern. We shall be pleased to send you a leaflet on request.

Obtainable only Builders' Hardware Merchants.

JOSIAH PARKES & SONS LTD
UNION WORKS WILLENHALL · STAFFS ENGLAND
BUSH HOUSE, LONDON · JOHANNESBURG, SOUTH AFRICA
ENGLISH OWNED AND CONTROLLED
EST. 1840

54.57.

Building the modern way with Curtain Walling



This modern drawing office block, recently completed in the Midlands is one of many typical applications for the Templewood Hawksley Curtain Walling System. All the curtain walling grid sections and spandrel panels are constructed of aluminium.

The building was constructed by Kelvin Constructions, and the curtain walling was made by Templewood Hawksley.

That's the job of

TEMPLEWOOD HAWKSLEY

WORLD LEADERS IN ALUMINIUM STRUCTURES

TEMPLEWOOD HAWKSLEY LTD., SLOUGH, BUCKS. TELEPHONE SLOUGH 22212 MEMBER OF THE HAWKER SIDDELEY GROUP

Unusual restoration problem at Harrow School

THE Old Speech Room at Harrow School is being entirely resurfaced with new bricks specially kilned to give superior weathering qualities, while retaining the original colour and texture. This highly skilled brick-skinning operation was made necessary by excessive spalling of the old brick and stonework.

It entails, among other things, cutting back the old brickwork to a depth of 4½ inches and executing the jointing to a carefully maintained specification.

These measures were advised by the surveyors, Messrs. Weatherall, Green and Smith, under whose direction the work is being carried out.

Part of the completed building. The inset photograph shows: right, the ruinous condition of the old brickwork and left, work cut back ready for resurfacing.

CLASSIFIED ADVERTISEMENTS

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

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.

Public and Official Announcements

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

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for (1) **ARCHITECTS, Grade III**, starting salary up to £1,090 a year. (2) **ARCHITECTURAL ASSISTANTS**, starting salary up to £860.

Full and interesting programme of Houses, Flats, Schools and General Buildings.

Application form and full particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council, The County Hall, S.E.1, quoting Ref. AR/EK/21/58. (799) 9375

BOROUGH OF SCUNTHORPE
ASSISTANT ARCHITECT

Applications are invited for the appointment of **ASSISTANT ARCHITECT**, to work under the direction of the Chief Assistant Architect in the Borough Surveyor's Department.

The salary payable will be in accordance with the Special Grade (£750—£1,030 per annum), and the commencing salary will be fixed within the Grade according to experience and qualifications. Candidates should be qualified by Parts I and II of the R.I.B.A. Final Examination.

The work will be of an interesting and varied character in an expanding town with a population of nearly 60,000.

Housing accommodation will be available if required.

Applications, stating particulars of training and experience, and giving the names of two referees, should reach the undersigned not later than Wednesday, 25th June, 1958.

T. M. LISTER,
Town Clerk.

Municipal Offices,
34, High Street,
Scunthorpe.
31st May, 1958. 9640

CITY OF BRADFORD
CHIEF TOWN PLANNING ASSISTANT

Applications are invited for the superannuable appointment of **CHIEF TOWN PLANNING ASSISTANT** (Post No. 7), at a salary in accordance with Grade A.P.T. V (£1,175—£1,325); *commencing salary in accordance with experience and qualifications.*

The successful candidate will be in charge of the Town Planning Section of the City Engineer and Surveyor's Department, and should have experience in the control of current development, a sound knowledge of the Town and Country Planning Acts and Regulations, and experience in preparing evidence in connection with Appeals. He should be A.M.T.P.I., and preference will be given to candidates who, in addition, are A.M.I.Mun.E./A.M.I.C.E.

Candidates 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 30th June, 1958.

W. H. LEATHEM,
Town Clerk.

Town Hall,
Bradford, 1. 9638

THE UNIVERSITY OF LIVERPOOL

Applications are invited from honours graduates in Science, Engineering or Architecture, for two posts as **ASSISTANT LECTURER** and **LECTURER** in the Department of Building Science. The salary range for an Assistant Lecturer will be £700—£850 per annum; the initial salary for a Lecturer will be within the range £900—£1,350 per annum, according to qualifications and experience.

Applications, stating age, academic qualifications and experience, together with the names of three referees, should be received not later than 28th June, 1958, by the Registrar, from whom further particulars of the conditions of appointment may be obtained. 9699

BUCKINGHAMSHIRE EDUCATION COMMITTEE
HIGH WYCOMBE COLLEGE OF FURTHER EDUCATION

(*Principal*: W. J. DAVIES, J.P., B.SC.)

Required for 1st September, 1958, **LECTURER** to teach Interior Design. It is hoped that by arrangement with the County Architect the College will have opportunities of undertaking live interior decoration projects on County buildings.

Salary will be paid in accordance with the appropriate Burnham Report, *i.e.* £1,200 × £30 rising to a maximum of £1,350.

Further details and forms of application may be obtained from the Principal at Queen Alexandra Road, High Wycombe, to whom completed application forms should be returned within 10 days of the date of the appearance of this advertisement. 9697

NORTHERN IRELAND HOUSING TRUST
ARCHITECTS AND QUANTITY SURVEYORS

The Trust invites applications for the following posts:—

(*a*) ARCHITECTS
(*b*) QUANTITY SURVEYORS

on scales ranging from £683—£1,049. Placing will be in accordance with qualifications and experience.

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

Assistance in obtaining housing accommodation may be given to successful married candidates.

Applications, giving age, education, qualifications and experience, including present post and salary, should be made to the General Manager, Northern Ireland Housing Trust, 12, Hope Street, Belfast, not later than 24th June, 1958.

For post (*a*) mark envelope 33/66.
For post (*b*) mark envelope 35/65. 9723

CITY OF BELFAST
PLANNING ASSISTANT, CLASS I

Applications are invited for the above post in the City Surveyor's Department.

Applicants must be Corporate Members of the Town Planning Institute and should hold additional recognised qualifications in Architecture, Engineering or Surveying. Preference given to candidates having experience in the office of a Local Planning Authority, particularly in slum clearance and redevelopment work.

Salary scale: £970×7/40—£1,250 per annum.

Commencing salary determined by qualifications and experience. Superannuation contributions of approximately 6% of remuneration are payable. Reciprocal pension arrangements exist between Belfast Corporation and certain Public Authorities.

Canvassing will disqualify.

Application form, etc., may be obtained at Room 39, City Hall. Completed applications must reach the undersigned by Saturday, 5th July, 1958.

JOHN DUNLOP, *Town Clerk.*

City Hall, Belfast, P.O. Box 234.
12th June, 1958. 9722

LINDSEY COUNTY COUNCIL

ONE ASSISTANT QUANTITY SURVEYOR, Special Grade £750—£1,030. Applicants should be A.R.I.C.S. In special circumstances consideration will be given to starting salary above minimum of the grade.

N.J.C. Conditions of Service. Canvassing will disqualify. Candidates must disclose in writing whether to their knowledge they are related to any Member or Senior Officer of the Council.

Applications giving age, qualifications, experience, present post and salary, and the names of at least two persons to whom reference can be made to be sent not later than 27th June, 1958, to the County Architect, County Offices, Lincoln. 9700

NEWCASTLE REGIONAL HOSPITAL BOARD

ASSISTANT ARCHITECT—Grade £700—£1,015. (P. H. KNIGHTON, M.B.E., A.R.I.B.A., *Regional Architect*)

In connection with a large new hospital project, the Board invites applications for the above permanent (superannuable) appointment on the Headquarters' Staff of the Regional Architect in Newcastle.

Applicants must be Registered Architects. The commencing salary, within the Grade £700 × £25 (3) × £30 (1) × £35 (6)—£1,015, will be fixed by reference to relevant experience and to age.

The post offers opportunity for gaining all-round general, as well as hospital, experience and for doing good-class work in an expanding department.

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 of the Board, Benfield Road, Newcastle-upon-Tyne, 6, not later than 4th July, 1958. 9733

BOROUGH OF MAIDSTONE
APPOINTMENT OF SENIOR ASSISTANT ARCHITECT IN BOROUGH SURVEYOR'S DEPARTMENT

Applications are invited from qualified Architects to fill the above vacancy in the Architectural Section, at a salary in accordance with the "Special Grade," commencing at £910 and rising to £1,030, subject to satisfactory service.

Applicants should have had experience in a senior capacity, and the post offers good opportunities to those seeking to augment such experience.

The appointment will be subject to the National Scheme of Conditions of Service, the Local Government Superannuation Act, 1953, the passing of a medical examination, and one month's notice on either side. Canvassing will disqualify. Where circumstances warrant, consideration will be given to the provision of housing accommodation.

Applications, on forms to be obtained from the Borough Surveyor, must be sent to the Borough Surveyor, Palace Avenue, Maidstone, not later than the 8th July.

T. SCHOLES,
Town Clerk.

13, Tonbridge Road,
Maidstone.
19th June, 1958. 9721

CITY OF LEEDS
CITY ARCHITECT'S DEPARTMENT

Post No.

1. **ASSISTANT ARCHITECTS.** Grade A.P.T. III. Scale £845—£1,025.
2. **ASSISTANT ARCHITECT.** Grade A.P.T. II. Scale £725—£845.
3. **ARCHITECTURAL ASSISTANTS.** Grade A.P.T. I. Scale £575—£725.
4. **ASSISTANT QUANTITY SURVEYORS.** Grade A.P.T. III. Scale £845—£1,025.
5. **ASSISTANT QUANTITY SURVEYOR.** Grade A.P.T. 1. Scale £575—£725.
6. **ASSISTANT SURVEYOR (LAND).** Grade A.P.T. III. Scale £845—£1,025.
   Candidates for Post 6 should have planning experience, preferably of central area re-development for housing purposes.
7. **ASSISTANT SURVEYOR (LAND).** Grade A.P.T. I. Scale £575—£725.
8. **CLERK OF WORKS.** Grade A.P.T. I. Scale £575—£725.

Applicants are asked to clearly indicate the post for which they wish to be considered.

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

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

Application forms may be obtained from the City Architect, Priestley House, Quarry Hill, Leeds, 9, to whom they should be returned together with copies of three recent testimonials, by 12 noon on Thursday, 26th June, 1958.

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

R. A. R. LIVETT,
City Architect.

Priestley House,
Quarry Hill,
Leeds, 9.
6th June, 1958. 9698

ARCHITECTURAL ASSISTANTS
required by
MINISTRY OF WORKS

For employment in London and Provinces on design and detailing work on construction and maintenance of all types of public buildings.

Salary Range £550 (age 21) to £870 p.a. London (slightly less elsewhere).

Five-day week; 3½ weeks annual leave initially. Starting pay according to age, qualifications and experience. Good prospects of promotion with salaries of £1,015 p.a. and above.

Opportunities for permanent posts leading to pensions (non contributory).

Interviews at Regional Offices where possible. Applicants should be of Inter. R.I.B.A. standard. State age, training and experience to Chief Architect, Ministry of Works, Abell House, John Islip Street, S.W.1. 9720

EAST ANGLIAN REGIONAL HOSPITAL BOARD

ARCHITECTURAL ASSISTANT. Candidates must have passed Intermediate Examination of R.I.B.A. or equivalent. Salary £525 (at 21 or over)—£730 per annum; entry point may be fixed above minimum but will not exceed £605.

Applications stating age, qualifications, experience and details of present position with names of three referees to Secretary of Board, 117, Chesterton Road, Cambridge, by 5th July, 1958. 9735

COVENTRY

ARCHITECT—Special Grade (£750 × £40—£1,030), additional £26 on salary up to £795. Salary within grade if appropriate. Appointment in RESEARCH GROUP on Technical Information and Research work in connection with wide building programme. Housing accommodation may be available. Loan for removal expenses if required. Application forms, etc., from City Architect and Planning Officer, Bull Yard, Coventry, returnable 10 days publication. 9734

CITY OF LANCASTER
ASSISTANT QUANTITY SURVEYOR

Applications are invited for the above post in the City Engineer's Department on N.J.C. Special Grade. Candidates must have passed Final R.I.C.S. (Quants.).

Applications, stating age, present post and salary, qualifications and experience (with dates) and names of two referees, to reach L. Lyons, Esq., B.Sc., City Engineer, Town Hall, Lancaster, not later than 10 a.m., Tuesday, July 1st, 1958.

Housing accommodation may be made available to person appointed if required.

J. D. WADDELL,
Town Clerk.

Town Hall,
Lancaster.
10th June, 1958. 9711

COUNTY BOROUGH OF WALLASEY
APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited from qualified architects for the position of Architectural Assistant, Special Grade (£750 × £40—£1,030). Commencing salary according to capabilities and experience, and favourable consideration given to the provision of housing accommodation. Conditions of appointment and forms of application obtainable from Borough Architect, Town Hall, Wallasey, to whom they should be returned by 28/6/58.

A. G. HARRISON,
Town Clerk. 9736

SHEFFIELD REGIONAL HOSPITAL BOARD
Amended Advertisement
ARCHITECTURAL DIVISION
APPOINTMENT OF PRINCIPAL ASSISTANT ARCHITECT

Applications are invited from Registered Architects who have passed the requisite examinations, for an appointment as Principal Assistant Architect (Scale II), within the salary scale £1,150—£1,420 per annum.

The person appointed must have had wide experience in a senior capacity, preferably in hospital work, and will be responsible to the Regional Architect for all hospital building schemes in the area allocated to him, which may include major projects.

Applications giving full details of training, experience, qualifications, etc., to be submitted to the Secretary to the Board, Fulwood House, Old Fulwood Road, Sheffield, 10, not later than the 28th June, 1958. 9712

HAMPSHIRE COUNTY COUNCIL

SENIOR PLANNING ASSISTANT required in the South-West Area Planning Office at Lyndhurst, Special Grade (£750—£1,030). Candidates should have passed the final examination of the Town Planning Institute or a related professional institution and/or possess an Architectural qualification, and have had planning experience with a Local Authority. The appointment is pensionable and subject to a satisfactory medical report. In approved cases the County Council assist with removal and other expenses.

Applications, stating age, education, qualifications and experience, together with a copy of one testimonial and the names of two referees, should reach the Clerk of the County Council, The Castle, Winchester, by 10th July. 9710

CORPORATION OF LONDON

Applications invited for temporary appointment for three years of ARCHITECTURAL ASSISTANT in the Housing Section of City Engineer's Department.

Salary £1,275 p.a. rising after one year's satisfactory service to a maximum of £1,325 p.a.

Candidates suitably qualified must have had experience in Local Authority housing improvements works.

Medical examination; local act superannuation.

Applications with names of two referees to: The City Engineer, Guildhall, London, E.C.2, by 7th July, 1958. 9743

COUNTY BOROUGH OF PRESTON

Applications are invited for the appointment of a SENIOR ASSISTANT ARCHITECT (A.P.T. Special Grade £750—£1,030) in the Borough Surveyor's Department. Candidates must be registered architects and corporate members of the R.I.B.A., having had at least five years' experience in the design and erection of educational and public buildings, also housing and flats.

The National Scheme of Conditions of Service and Local Government Superannuation Acts apply to this appointment, and the successful applicant will be required to pass a medical examination.

Forms of application, obtainable from the undersigned, should be returned completed not later than 30th July, 1958.

W. E. E. LOCKLEY,
Town Clerk.

Municipal Building,
Preston. 9744

CUMBERNAULD NEW TOWN

ARCHITECTS and PLANNERS are required in the office of L. Hugh Wilson, Chief Architect and Planning Officer, for a variety of interesting projects including high density housing development and the pedestrian central area of this hilltop town.

There are vacancies for:—

GROUP ARCHITECT (Ref. A.1). Salary Scale £1,226—£1,454.

ASSISTANT ARCHITECTS, Grade B (Ref. A.2). Salary Scale £1,034—£1,366.

ASSISTANT ARCHITECT, Grade D (Ref. A.4). Salary Scale £631—£811.

ASSISTANT PLANNING OFFICER, Grade B (Ref. P.2). Salary Scale £1,034—£1,366.

ASSISTANT PLANNING OFFICERS, Grade C (Ref. P.3). Salary Scale £844—£1,029.

A.R.I.B.A. required for *all* posts except Assistant Architect, Grade D, for which Inter-R.I.B.A. necessary.

A.M.T.P.I. required additionally for planning posts.

Starting salary according to experience. Assistance with housing in appropriate cases. 5-day week.

Write, quoting reference number of post, to the General Manager, Cumbernauld House, Cumbernauld, by Glasgow, for application form, to be returned by Monday, 7th July, 1958. 9742

ZETLAND COUNTY COUNCIL

Applications are invited for the appointment of QUANTITY SURVEYOR in the County Architect's Department. Salary in Administrative and Professional Division, Grade VI to VII, which ranges from £865 to £1,000 per annum. Actual salary will be fixed later according to qualifications, age and experience of successful applicant. The appointment is superannuable and applications, stating age, experience and qualifications, and accompanied by copies of two recent testimonials should be lodged with the undersigned by 15th July, 1958.

JOHN N. SINCLAIR,
County Clerk.

County Buildings,
Lerwick, Shetland.
12th June, 1958. 9741

ZETLAND COUNTY COUNCIL

Applications are invited for the appointment of DEPUTY COUNTY ARCHITECT to the Council. Candidates, who must be Registered Architects, should have had wide experience in the preparation of sketch plans, working drawings and details. Preference will be given to Candidates who have had Local Government experience in the planning and supervision of school projects, and who are conversant with the Scottish Education Department's regulations for school planning. Salary Scale £1,026 7s. 6d. rising by annual increments to £1,262 12s. 6d. in Range "A" of the Scheme for Chief Officials. The appointment is superannuable and applications, stating age, experience and qualifications, and accompanied by copies of two recent testimonials, must be lodged with the Subscriber by 15th July, 1958.

JOHN N. SINCLAIR,
County Clerk.

County Buildings,
Lerwick, Shetland.
12th June, 1958. 9740

NORTHERN POLYTECHNIC, HOLLOWAY, LONDON, N.7

The Governing Body invite immediate applications for appointment to the following posts in the Department of Architecture as from September, 1958:—

(*a*) STUDIO INSTRUCTOR. Salary scale £1,200 × £30 × £1,350 plus London Allowance.

(*b*) ASSISTANT STUDIO INSTRUCTOR. Salary scale £650 × £25 × £1,025, together with allowances in accordance with the Burnham Award. Commencing salary according to age, qualifications and experience.

Applicants must be Associates R.I.B.A. by examination and have had at least three years' professional experience after qualification; in addition, the Studio Instructor should have had teaching experience in a Recognised School.

Apply, stating appointment in which interested, for form of application and further particulars to the Clerk to the Governors. 9739

Architectural Appointments Vacant

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ARCHITECTS' ASSISTANTS required immediately. Intermediate/Final standard. Salary according to experience. Five-day week. Staff Pension Scheme. Application in writing, giving full details of age, experience and salary to Personnel Department, British Home Stores, Ltd., 129, Marylebone Road, London, N.W.1. 9589

CO-OPERATIVE WHOLESALE SOCIETY LTD. ARCHITECT'S DEPARTMENT, MANCHESTER

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Please write stating age and giving full details of training and experience to the Personnel Manager. 9628

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ASSISTANTS required immediately.—Write, stating experience and salary required, to Phillip Cranswick, A.R.I.B.A., A.M.T.P.I., 36, Sackville Street, London, W.1. 9656

ASSISTANT ARCHITECTS required. Applicants should be A.R.I.B.A.'s, with at least three years' office experience; some school training, and an interest in interior design an advantage. Permanent and superannuated appointment.—Apply, Benskin's Watford Brewery, Ltd., P.O. Box 105, Watford, Herts. 9655

ARCHITECTURAL ASSISTANT required in West End practice. Salary up to £900, according to experience.—Please reply with full details to Box 9652.

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ARCHITECTURAL ASSISTANTS at Intermediate and Final standards required immediately. Holidays allowed this year. Applications in writing only to J. Brian Cooper, F.R.I.B.A., 38, Highfield Road, Edgbaston, Birmingham 15. 9729

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