

THE ARCHITECTS' JOURNAL



standard contents

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

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CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

Architectural Appointments

Wanted and Vacant

No. 3419]

[Vol. 132

THE ARCHITECTURAL PRESS

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Registered as a Newspaper

★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their addresses and telephone numbers. The glossary is published in two parts—A to I in one week. II 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.: J. H. Holden, College of Art, Cavendish Street, Manchester 15	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5533
ABT	Association of Building Technicians. 1, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James's Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 5861
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BASA	British Architectural Students Association. Building Centre, 26 Store Street, W.C.1.	
BC	Building Centre, 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portland Square, W.1.	Wellbeck 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
BE	Building Exhibition. 11, Manchester Square, W.1.	Hunter 1951
BEDA	British Electrical Development Association, 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Glasgow Central 2891
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Chancery 7772
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, S.W.1.	Langham 2785
BRB	Building Research Station. Bucknalls Lane, Watford.	Trafalgar 8855
BSA	Building Societies Association. 14, Park Street, W.1.	Garston 4040
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 0515
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.	Mayfair 9000
CAS	County Architects' Society. C/o S. Vincent Goodman, F.R.I.B.A., Shire Hall, Bedford.	Holborn 3411
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Bedford 67444
CDA	Copper Development Association. 55, South Audley Street, W.1.	Belgravia 6661
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Grosvenor 8811
CPRE	Council for the Preservation of Rural England, 4, Hobart Place, S.W.1.	Trafalgar 8000
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 4280
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Sloane 9116
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Whitehall 0540
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	Regent 4448
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	
FASS	Federation of Associations of Specialists and Sub-Contractors, 14, Bryanston Street, W.1.	Wellbeck 1781
FBBDO	Fibre Building Board Development Organization Ltd. (Fidor), Stafford House, Norfolk Street, W.C.2.	Covent Garden 3008
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	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. 33, John Street, W.C.1. Tel.: Chancery 7583 (6 lines)	
FPC	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.	
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Langham 4341
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Monarch 8888
GG	Georgian Group. 2, Chester Street, S.W.1.	Sloane 4554
HC	Housing Centre. 13, Suffolk Street, S.W.1.	Belgravia 3081
LAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Whitehall 2881
ICA	Institute of Contemporary Arts. 17-18, Dover Street, W.1.	Belgravia 3755
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Grosvenor 6186
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Whitehall 4577
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Temple Bar 7676
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Abbey 5215
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square.	Sloane 8266
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1.	Sloane 1601/3158
		Mayfair 7086

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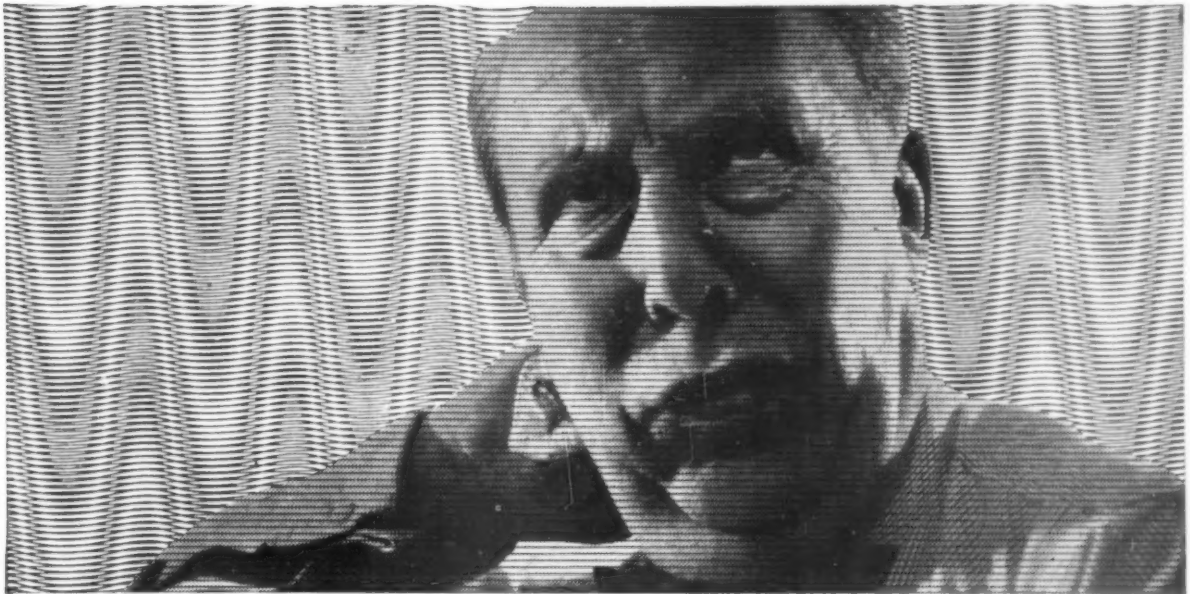
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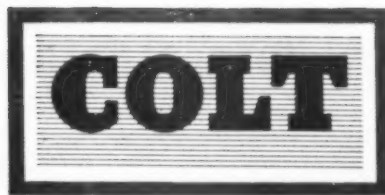
Manufacturers ANDREW MAXWELL DIVISION (The Liverpool Borax Co. Ltd.)
Maxwell House, St. Paul's Square, Liverpool 3.



Problem:

CONDENSATION

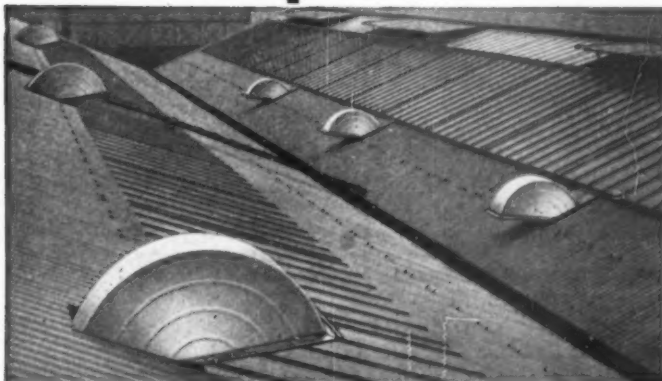
Solution:



Ventilation

Place:

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Maxwell House, St. Paul's Square, Liverpool 3.



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CONDENSATION

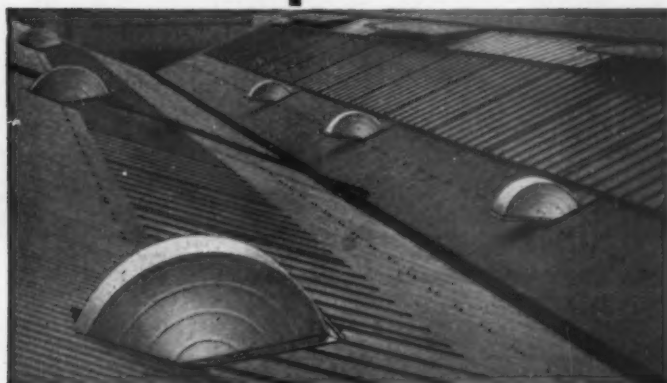
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Ventilation

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Getting down

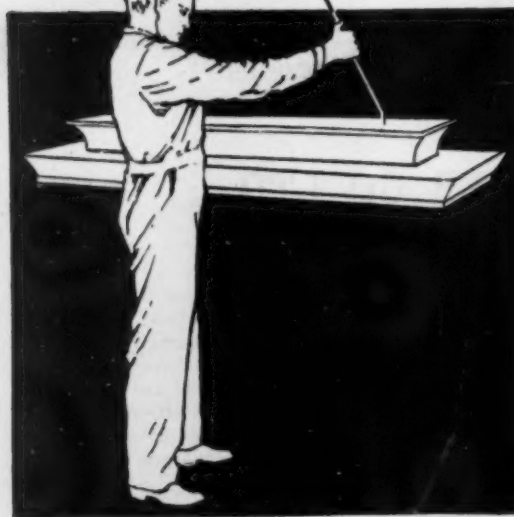
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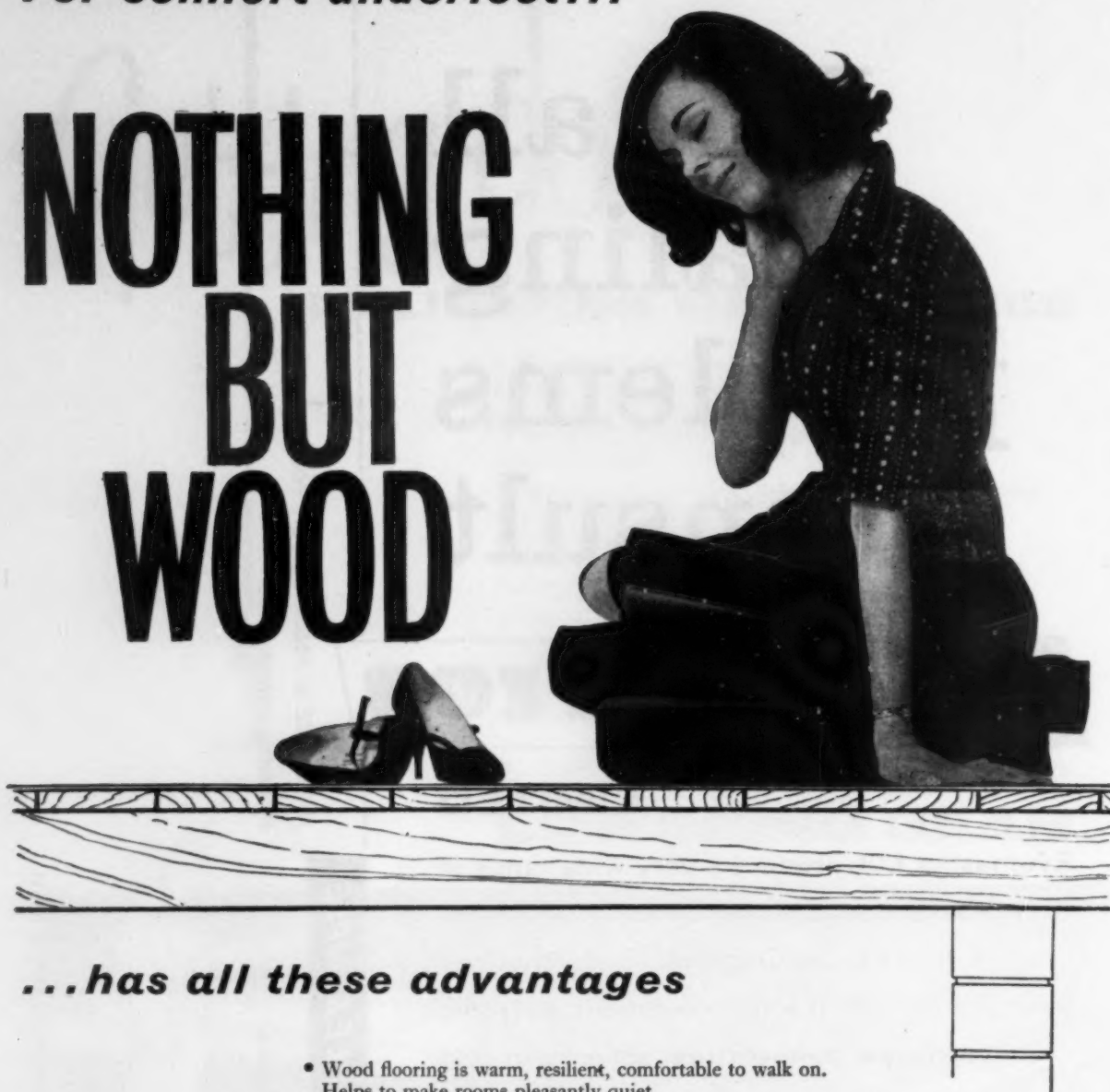
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' . . . if you made a start by whizzing round with those papers at five miles an hour.'

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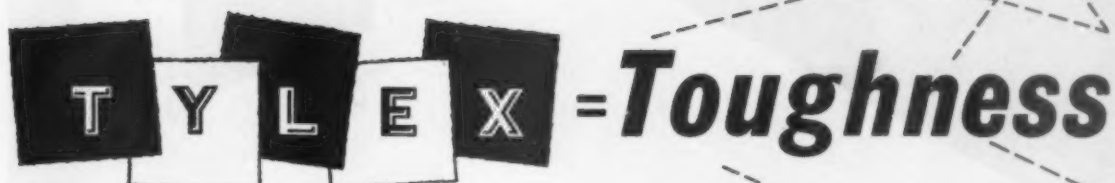


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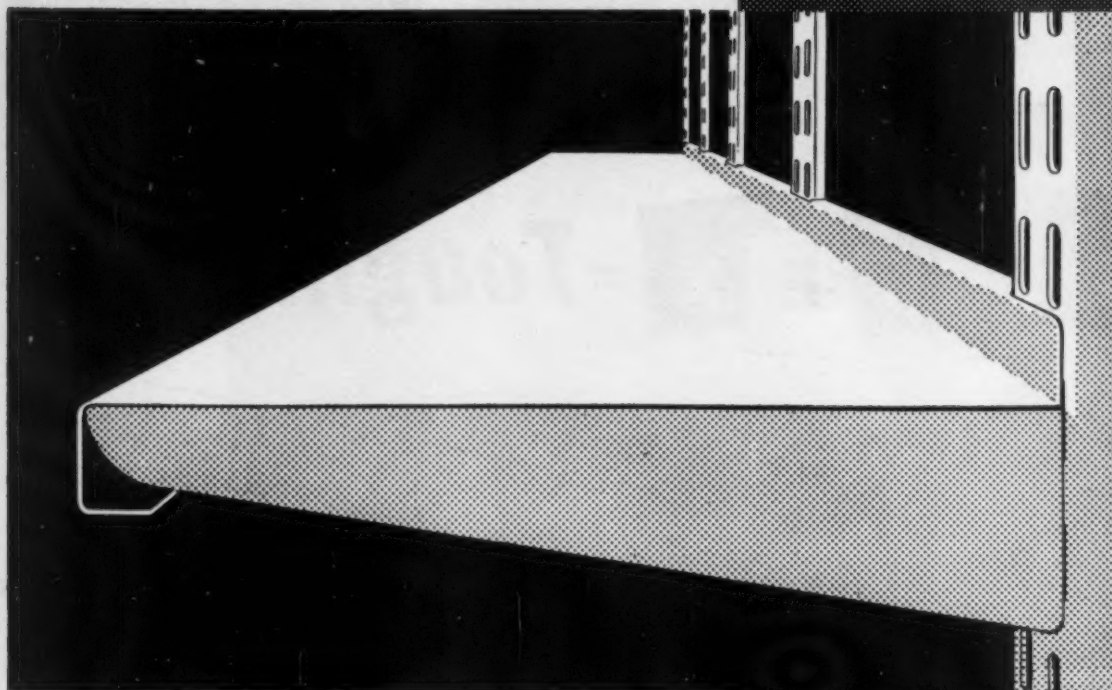
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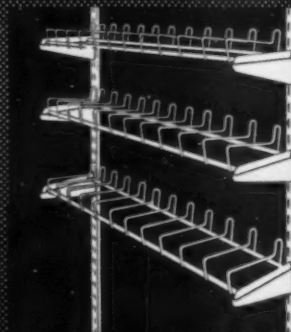
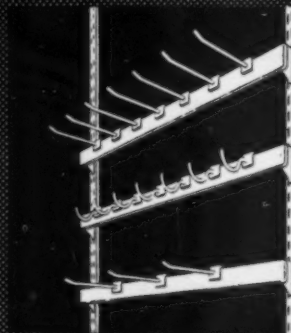
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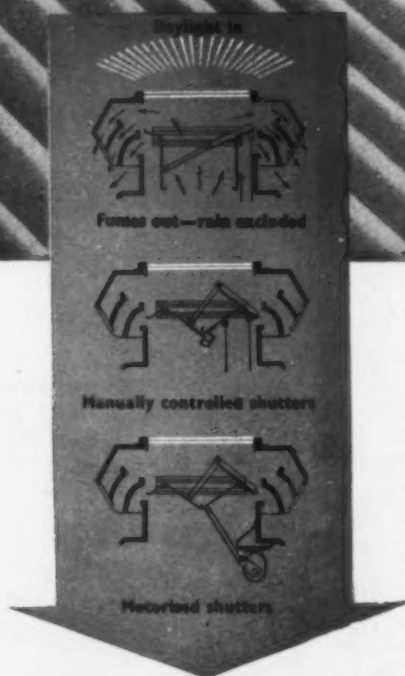
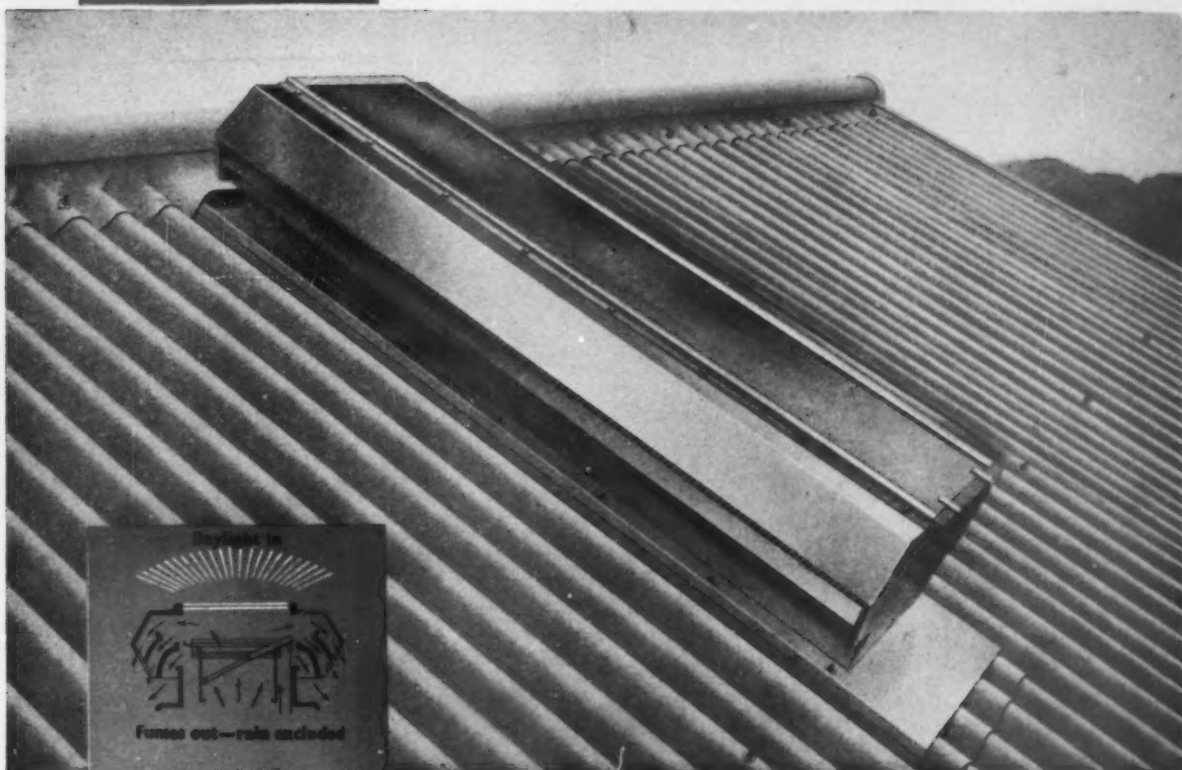
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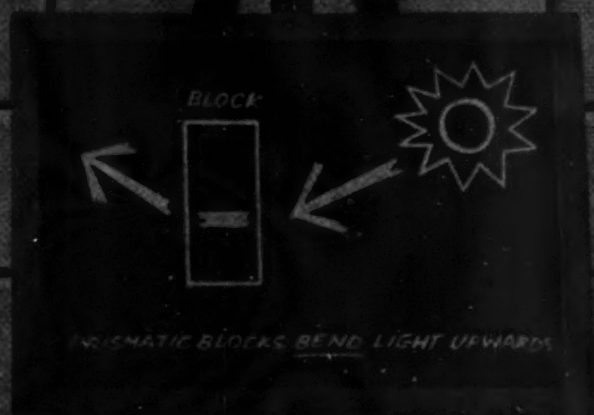
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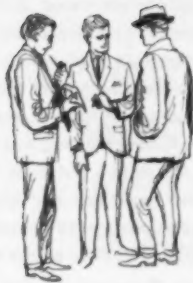
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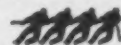
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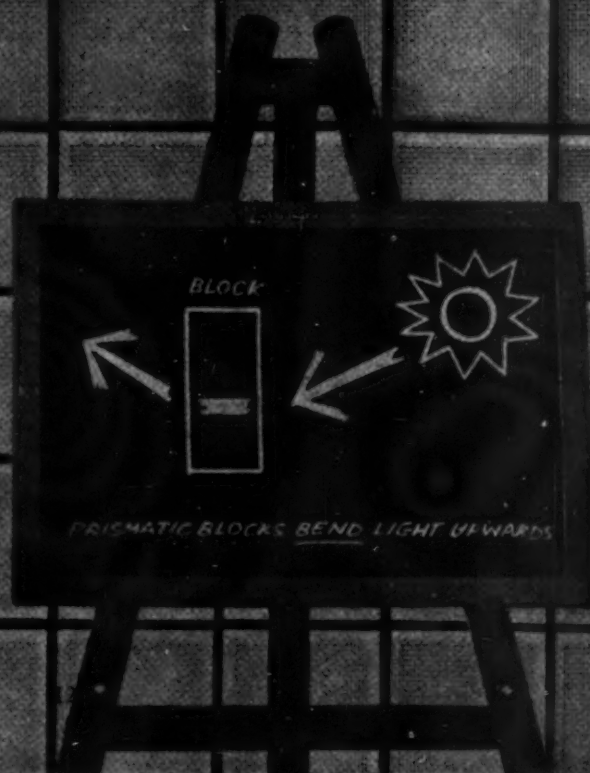
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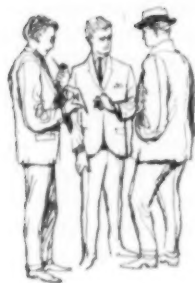
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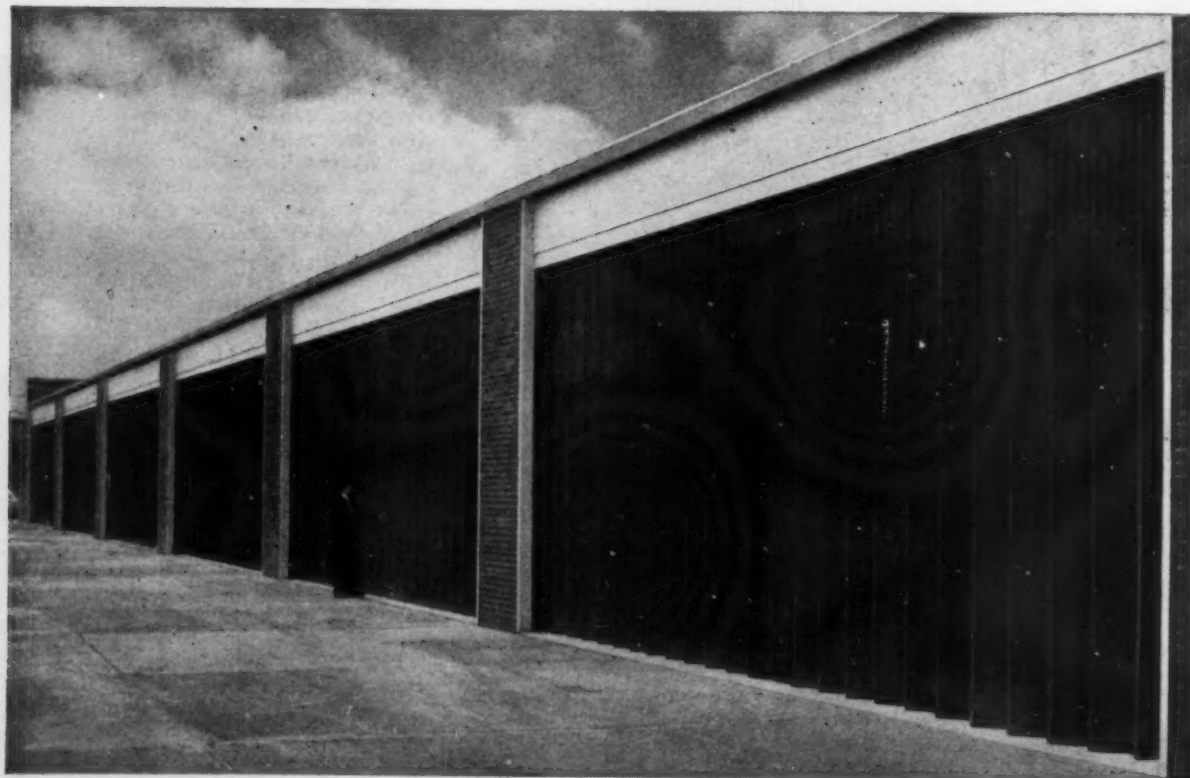


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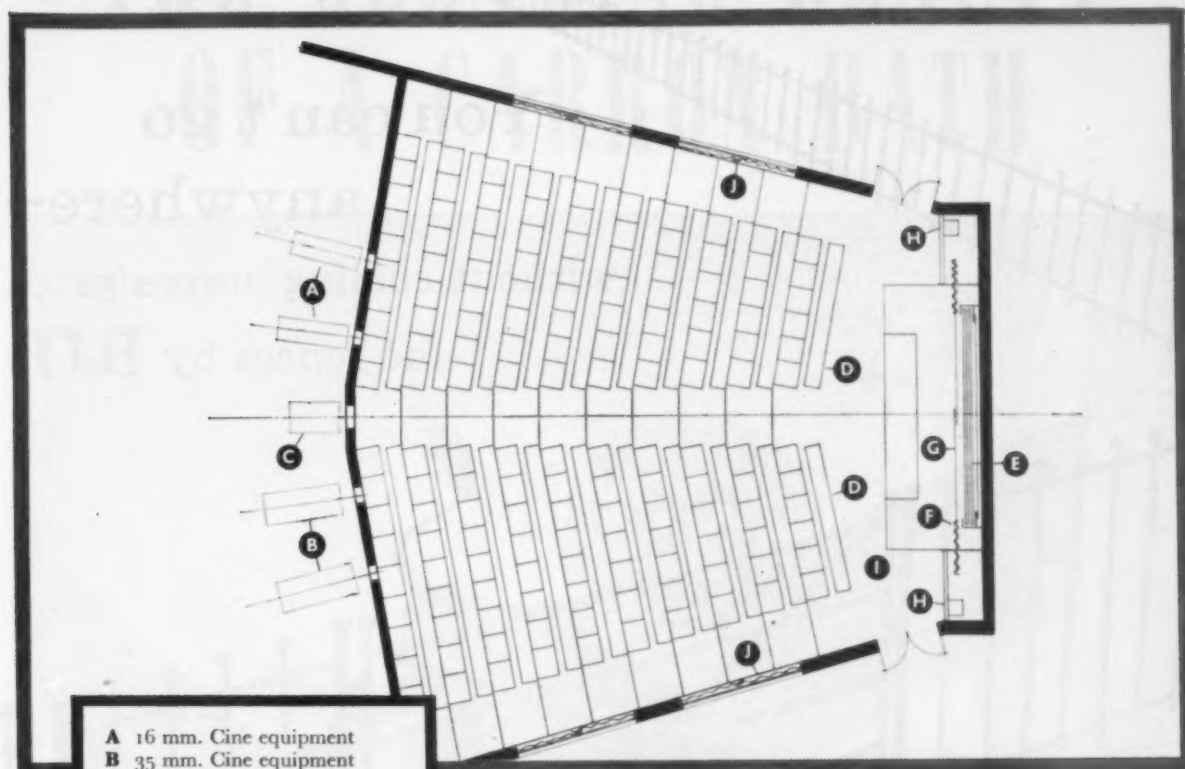
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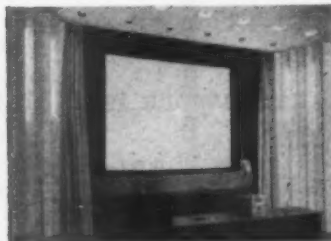
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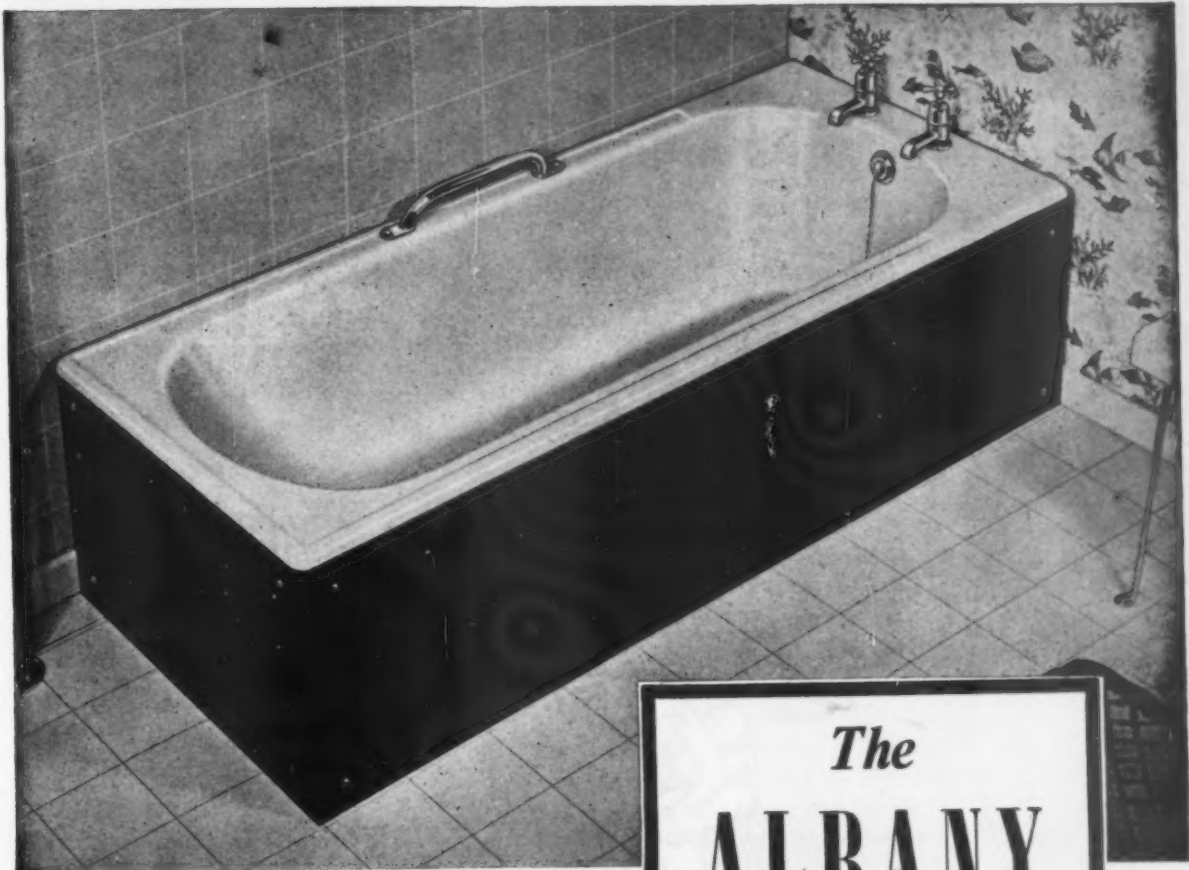


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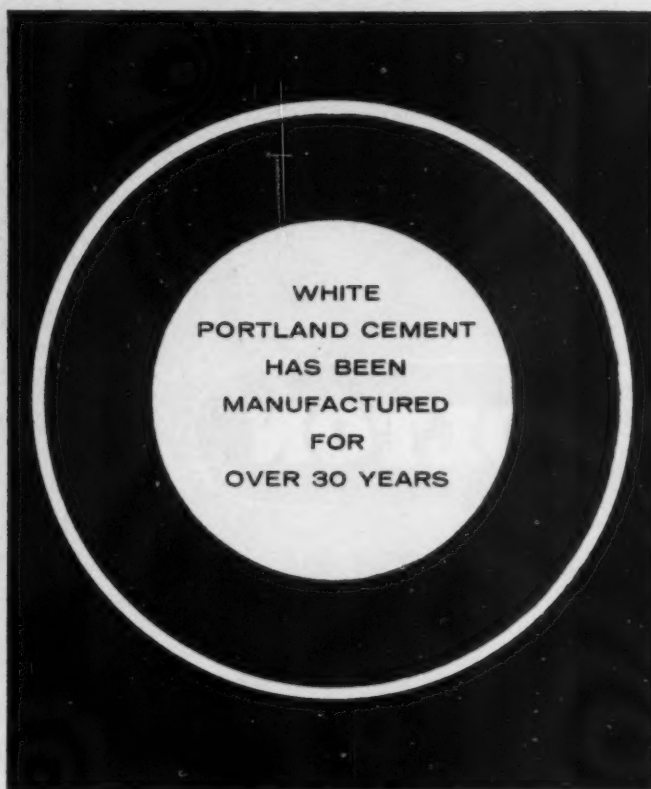
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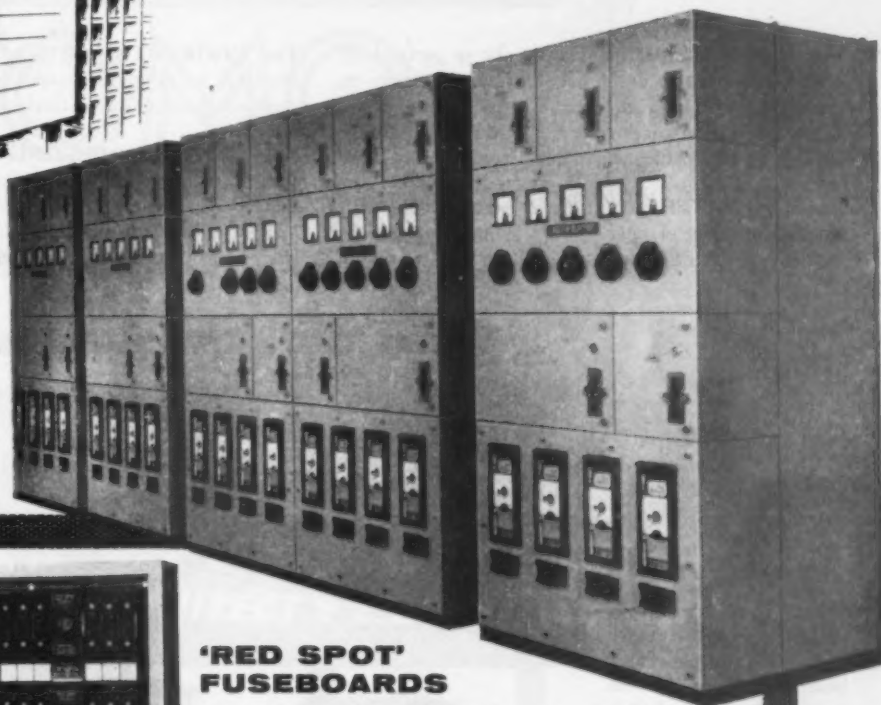
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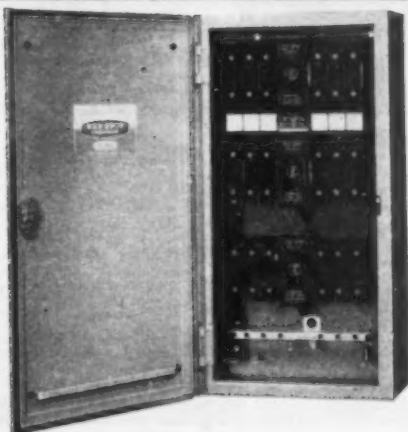
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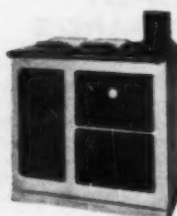
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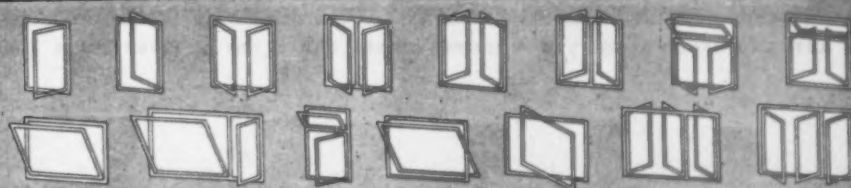
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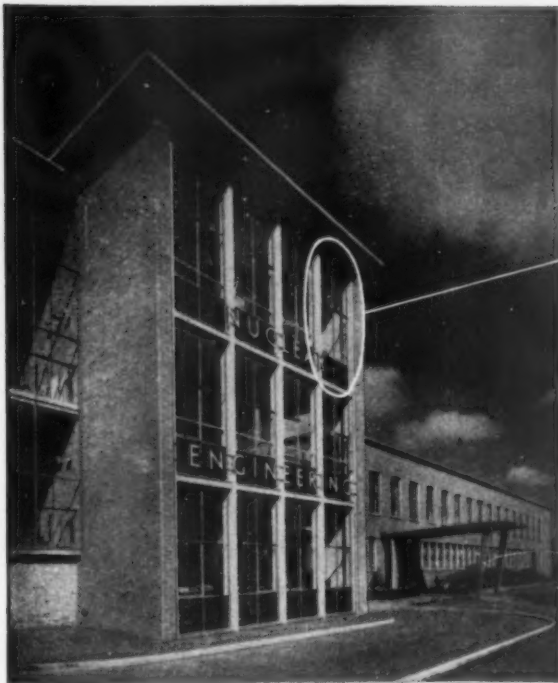


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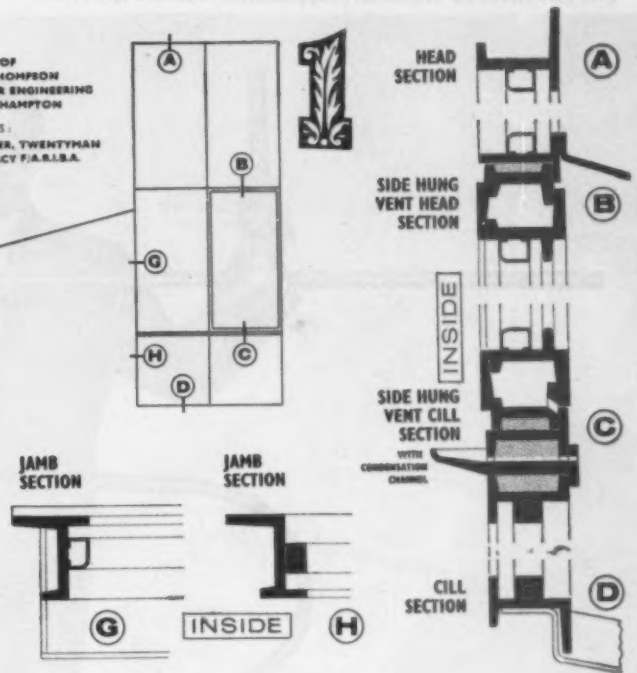
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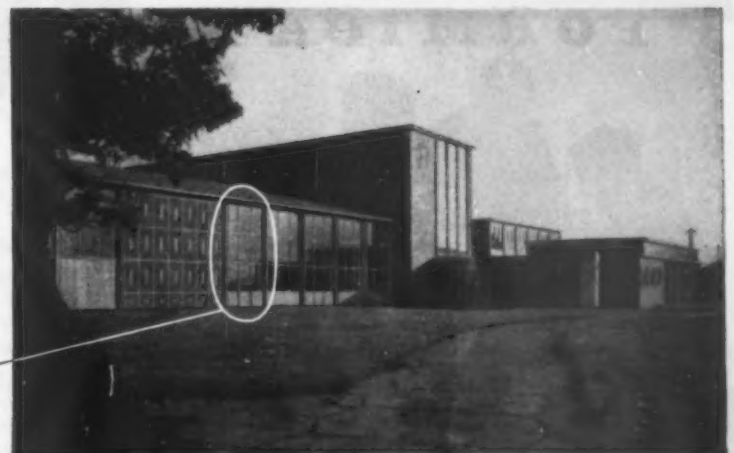
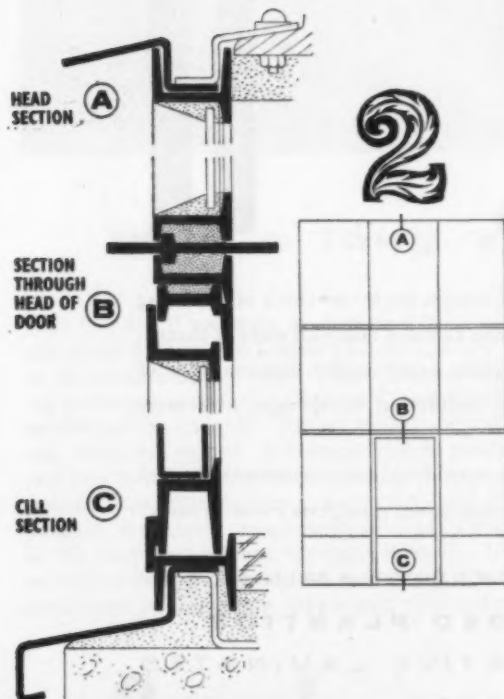
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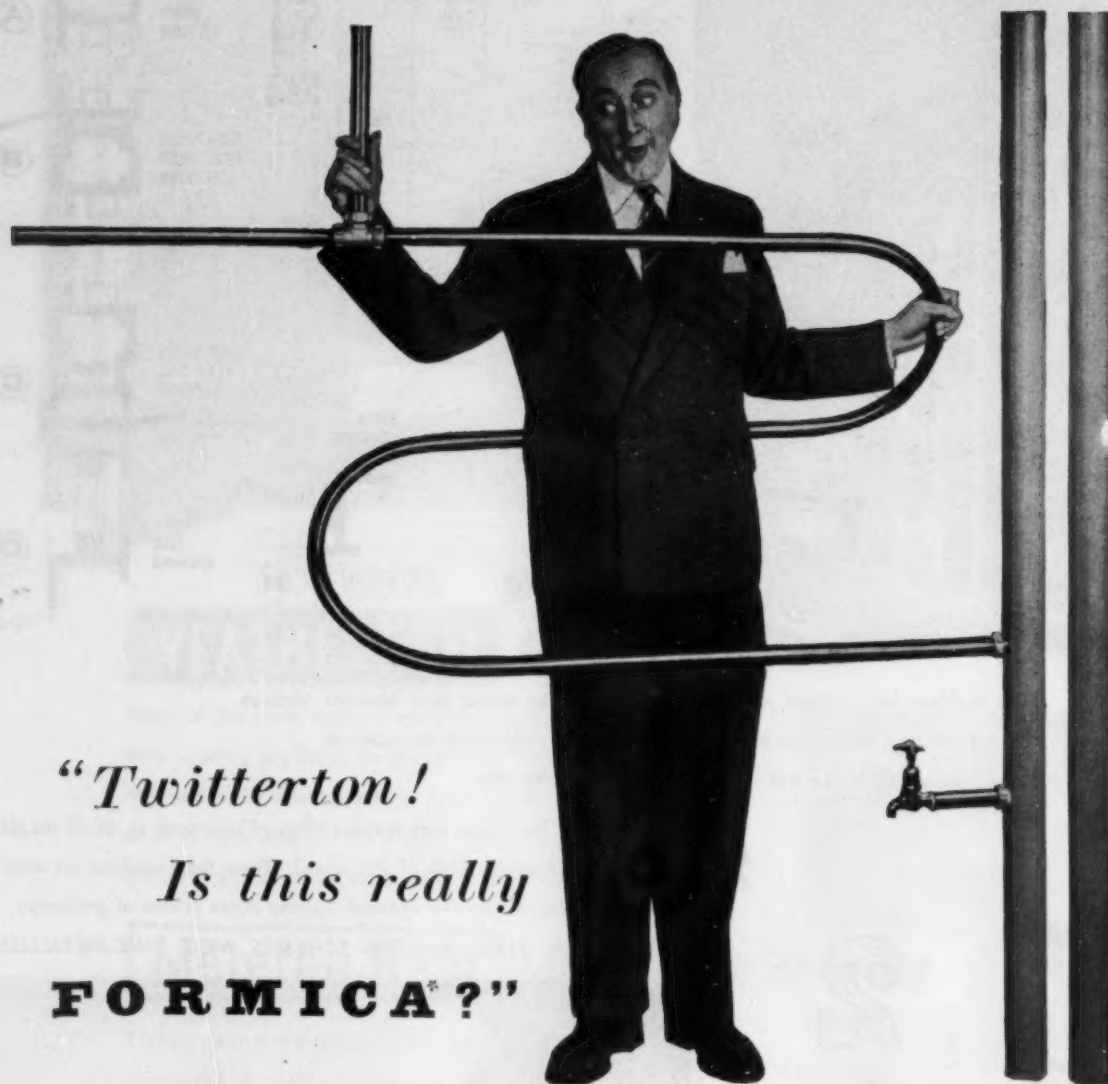


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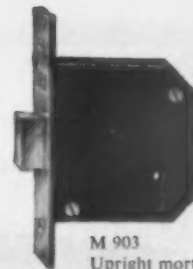
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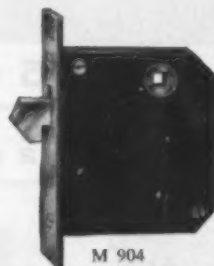
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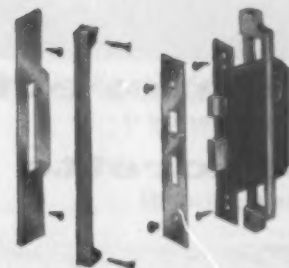
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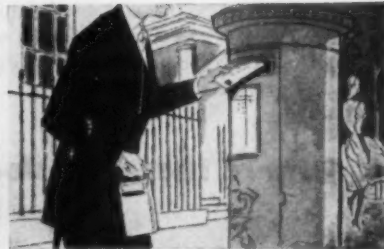
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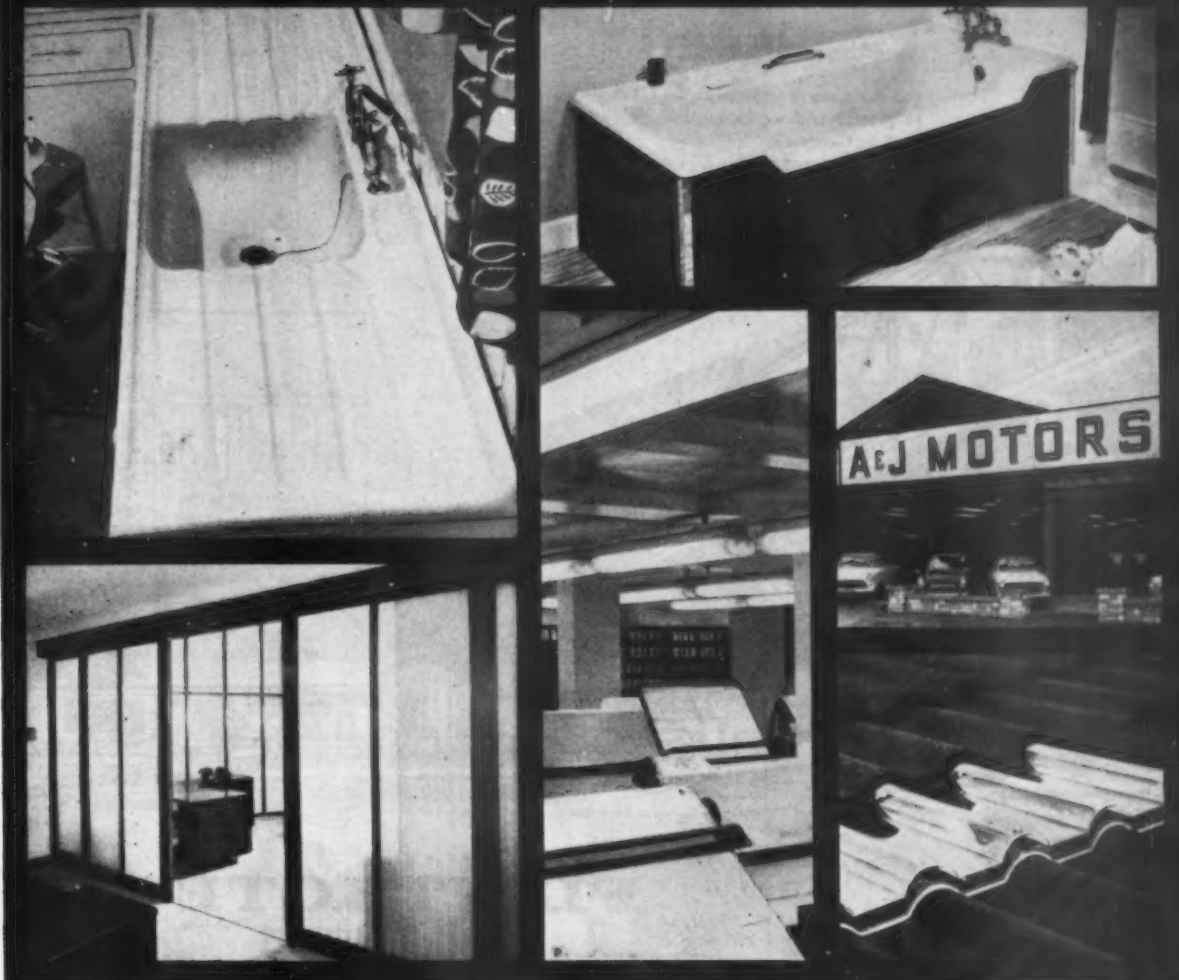


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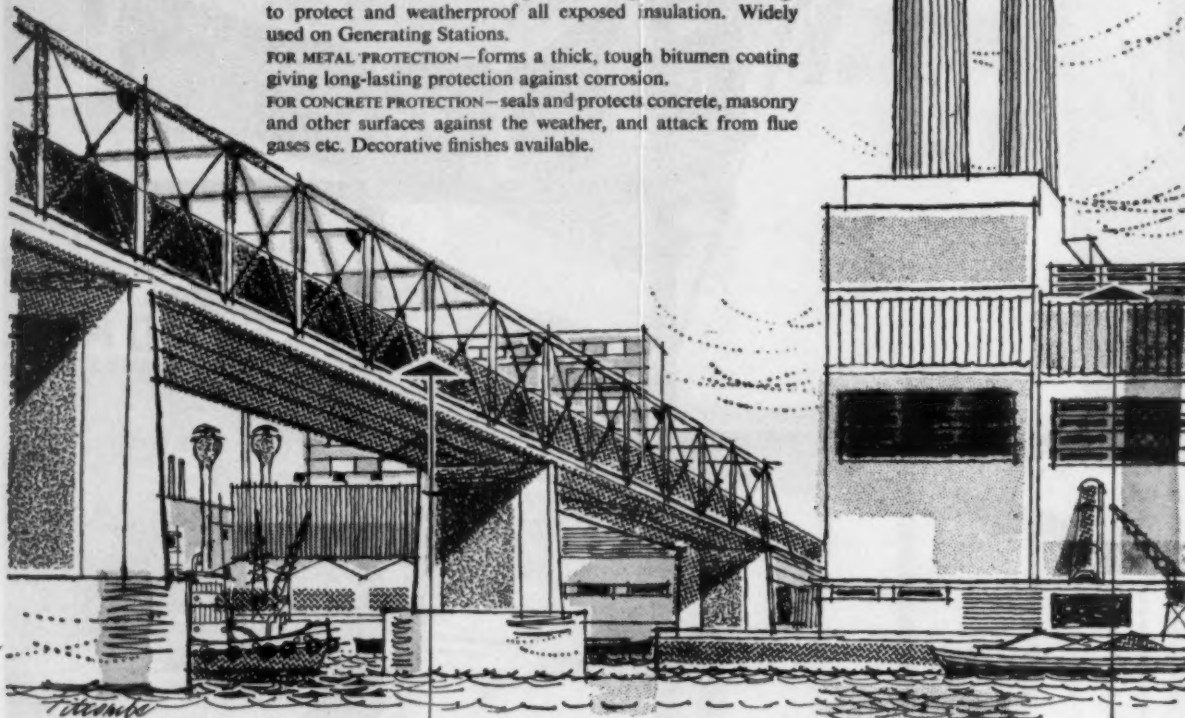
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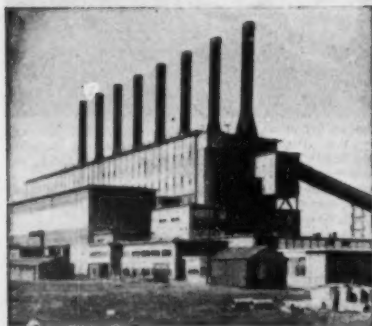
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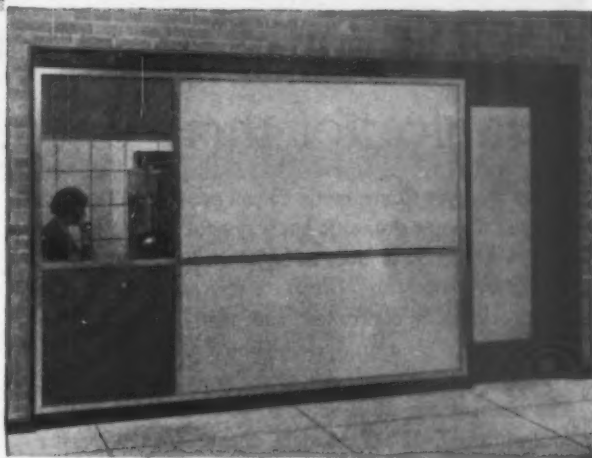
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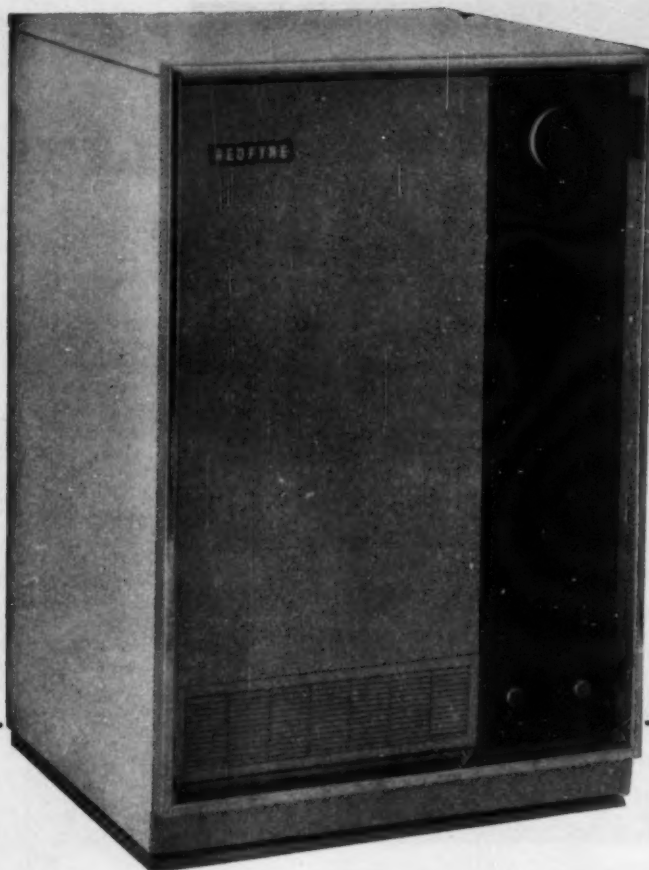
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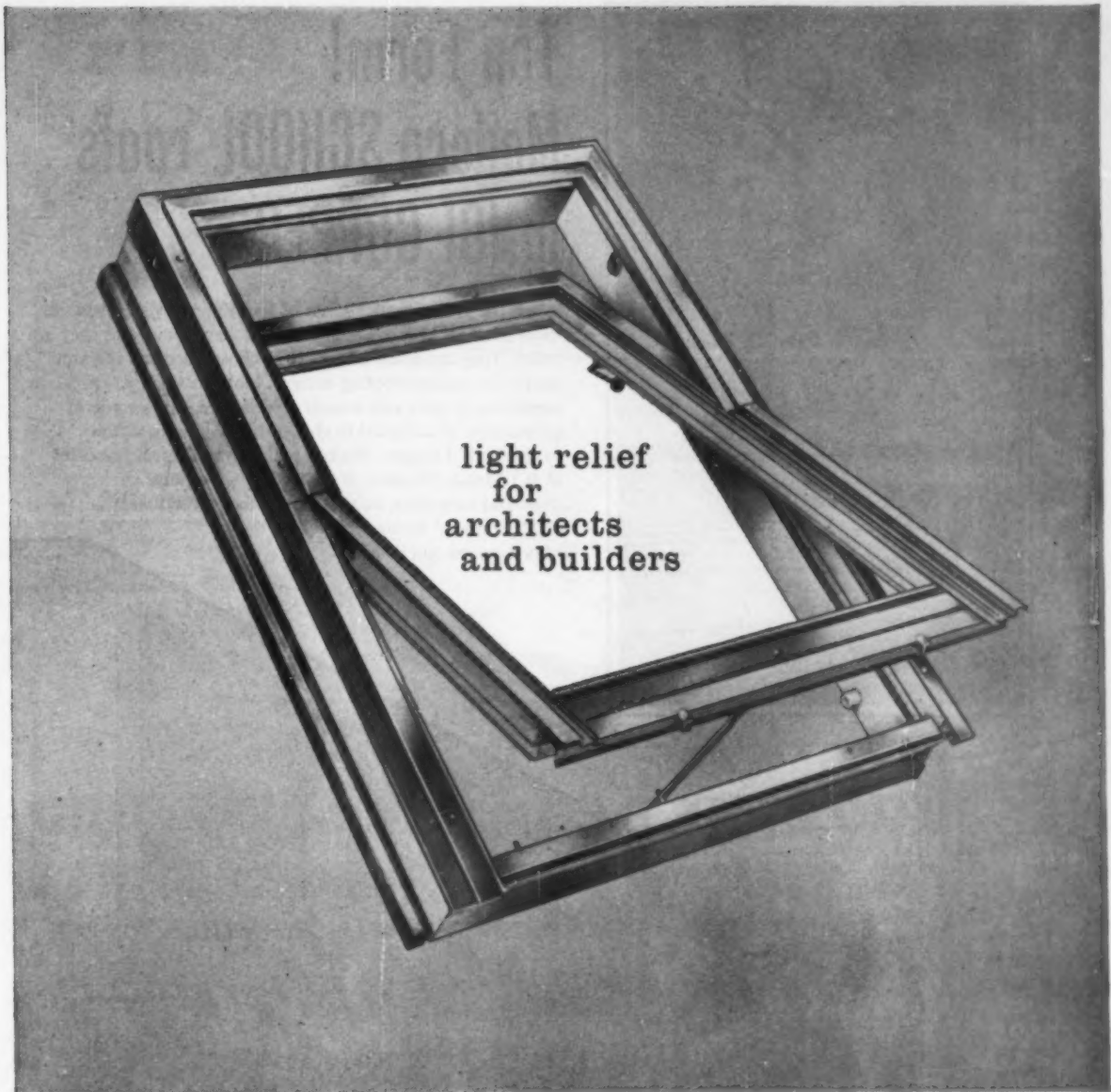
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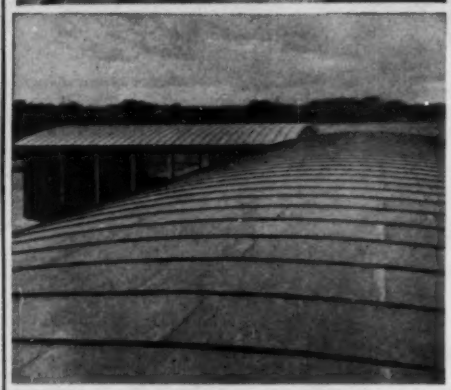
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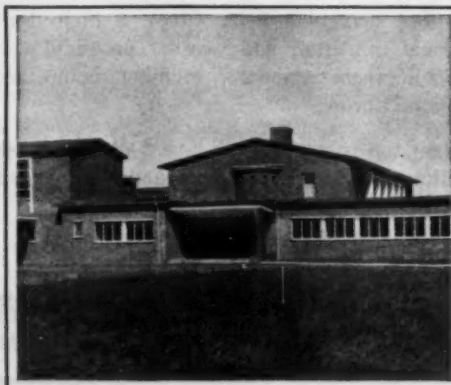
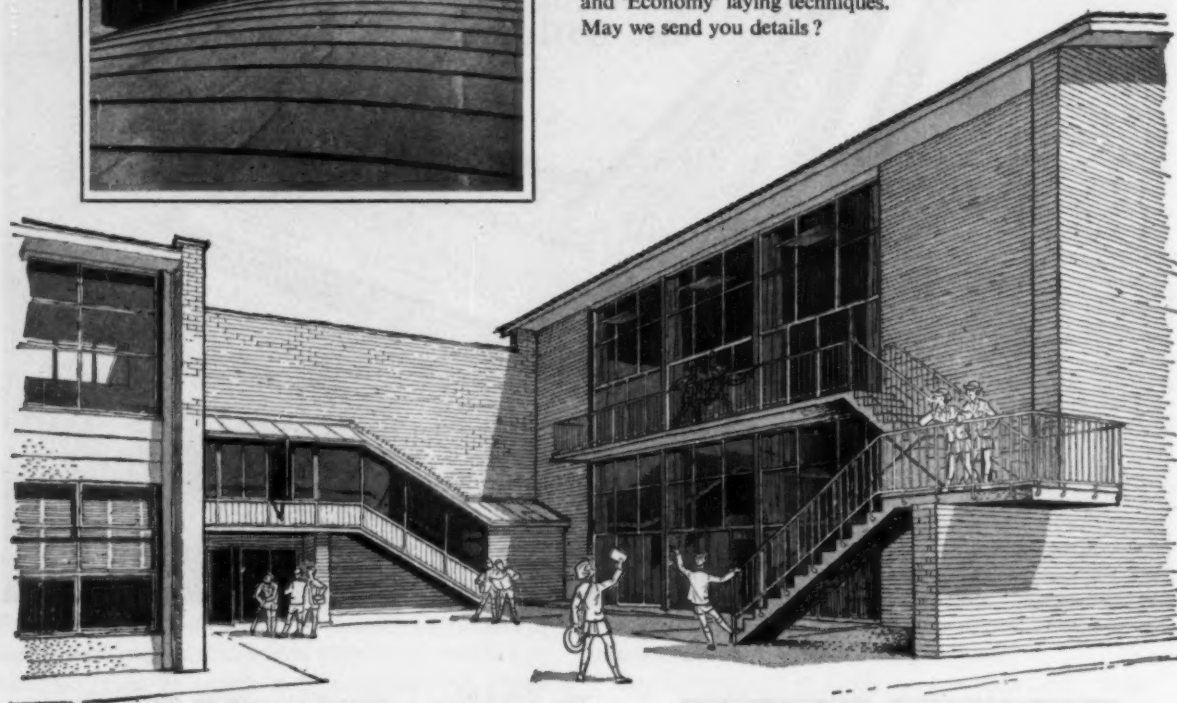
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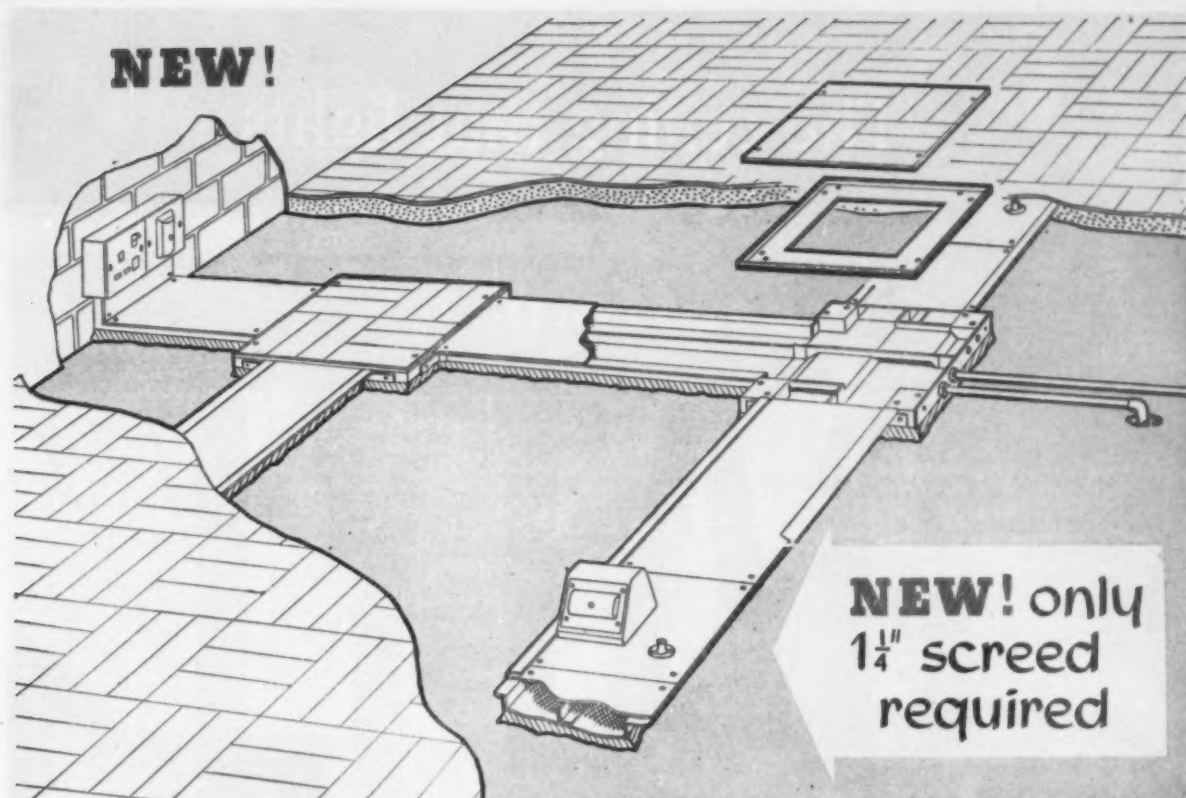
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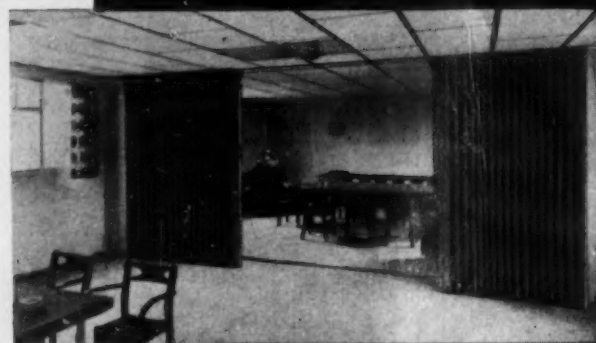
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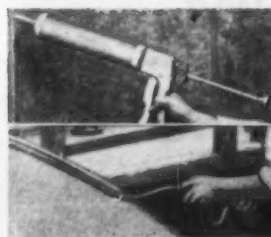
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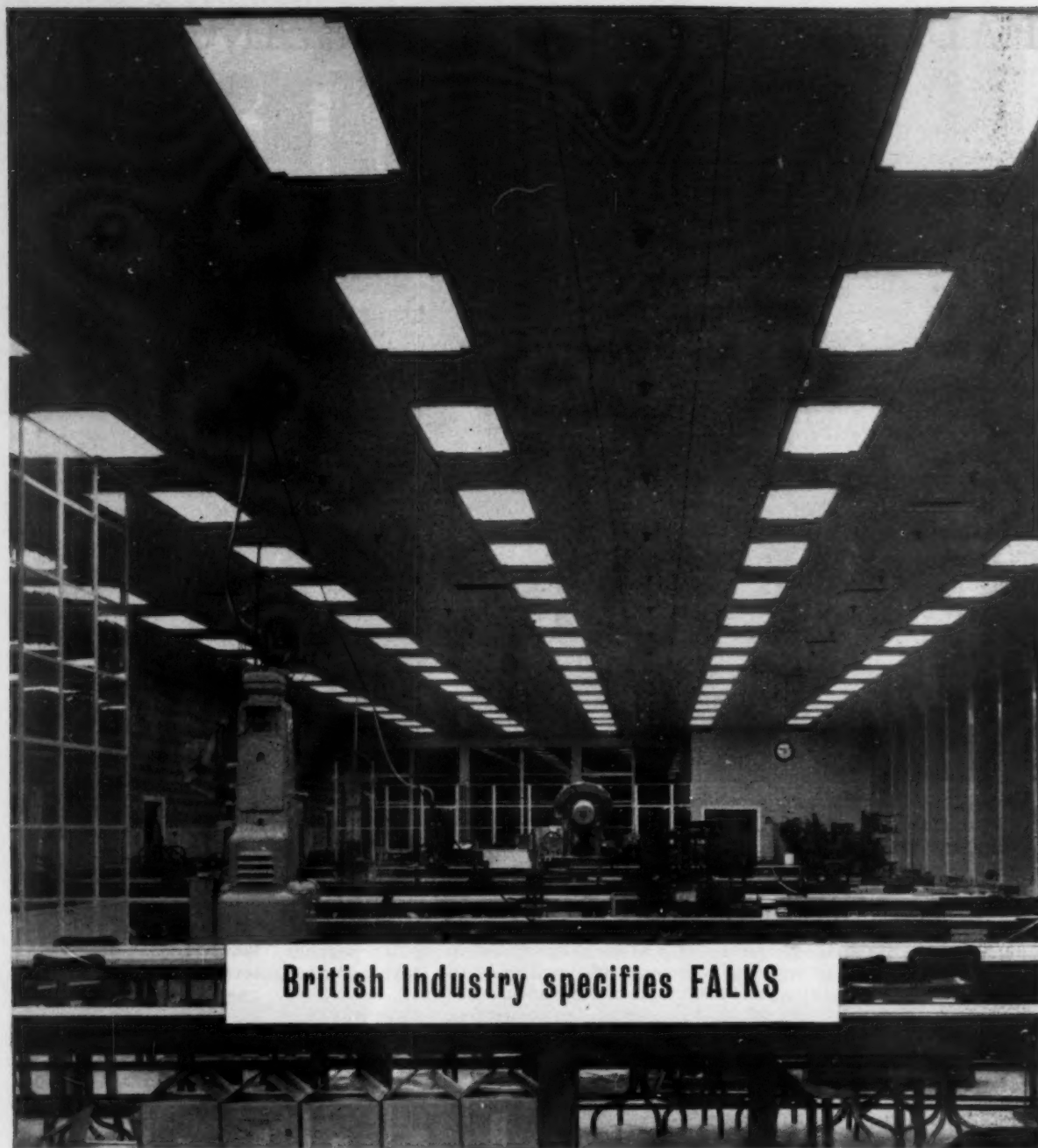
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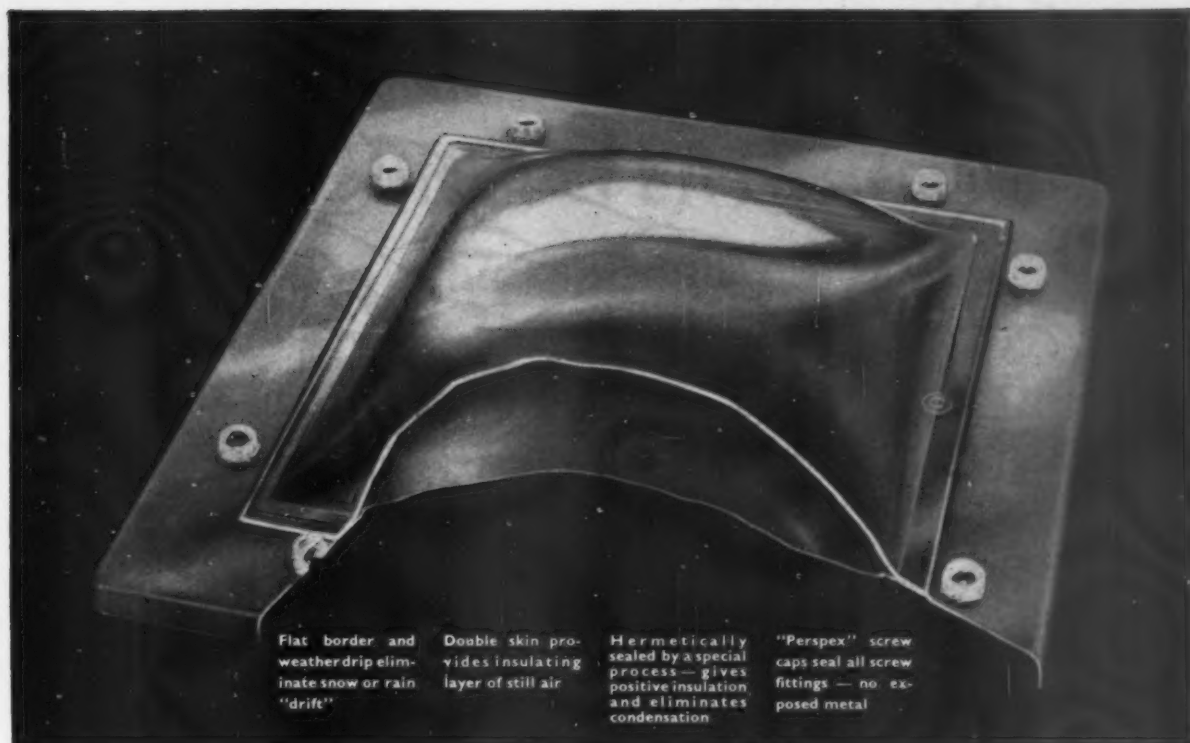
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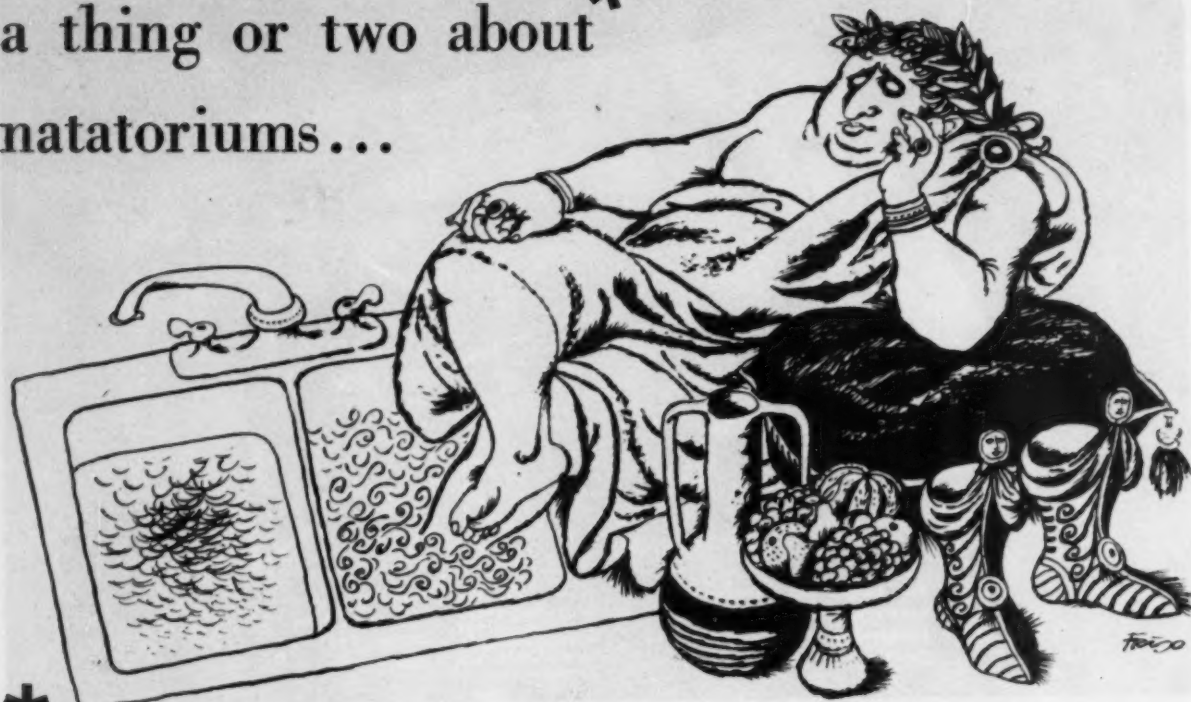


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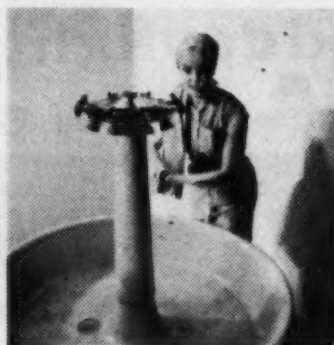
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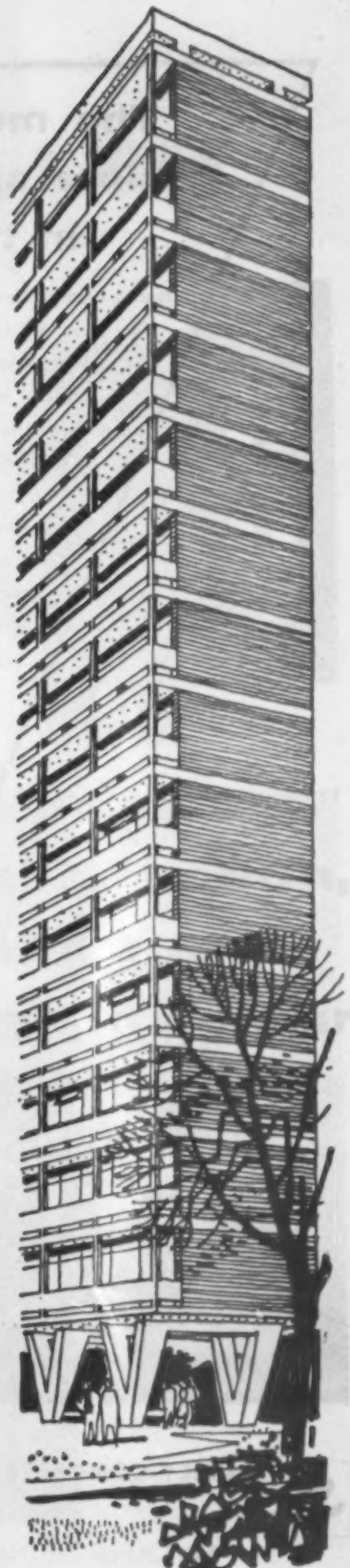
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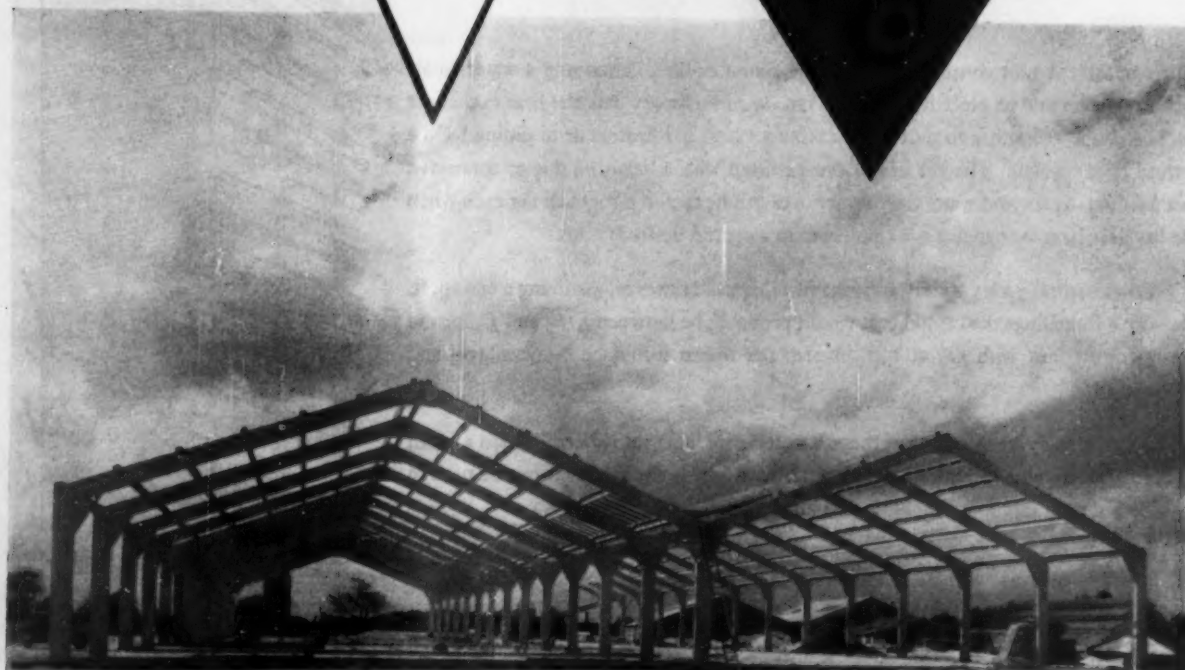
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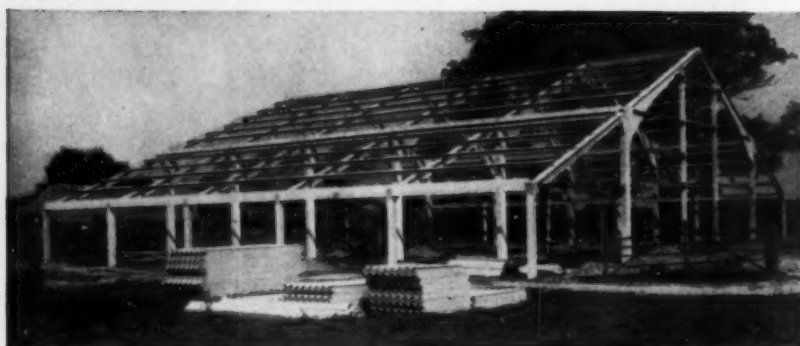
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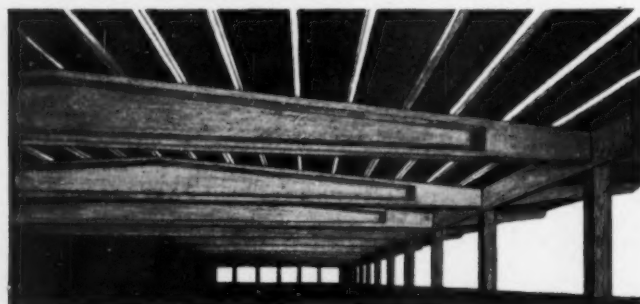


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THE ARCHITECTS' JOURNAL for October 27, 1960

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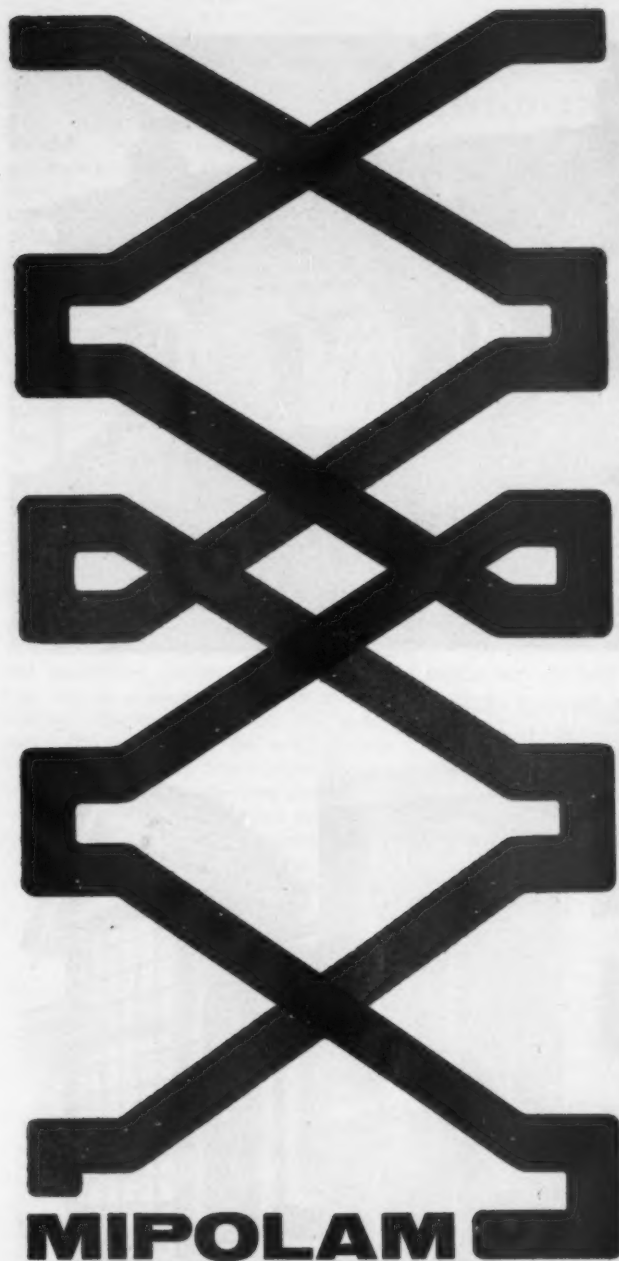
NOT QUITE ARCHITECTURE

Too Brief Chronicle

Journalism, like peace, architecture and other vaguely beneficent, abstract and collective human activities, is indivisible. No paper is an island, and the bell that tolled for the *Chronicle* and the *Star*, tolled for the AJ as well. Told for the AJ in the general and moral sense that John Donne had in mind when he coined the phrase, but . . . it's already tolled for *Architecture and Building* in the literal, funeral sense, and Fleet Street jitters affect a number of papers that serve other relatively minority interests besides architecture.

But the *Chronicle's* case is peculiarly bitter—architecture has lost one of its voices. Not always a loud voice, not always a clear voice, but a voice that, even in its recent ailments, spoke to millions more than all the architectural papers put together. In fact, giving more and more space to Peter Rawstorne over recent months, it promised to become architecture's loudest voice on the pop networks, and quite a lot of people around architecture who vilified Rawstorne for his attack on Gibberd's Liverpool Cathedral should now be suffering mild symptoms of *de mortuis*.

Admittedly, the *Chronicle* never commissioned Corb or the Smithsons to design anything for it, not having an outlet like the *Ideal Home* Exhibition, but it did, in the thirties, sponsor a certain competition—remember?—that led to Denis Clarke-Hall's school at Richmond, Yorks., the first banner raised in the school-architecture revolution, and thus made a bigger difference to the average level of British architecture than all the antics of the paper that has now, with sanctimonious tears, cannibalised its remains (though in fairness to the *Mail*, I must admit that the first I ever heard



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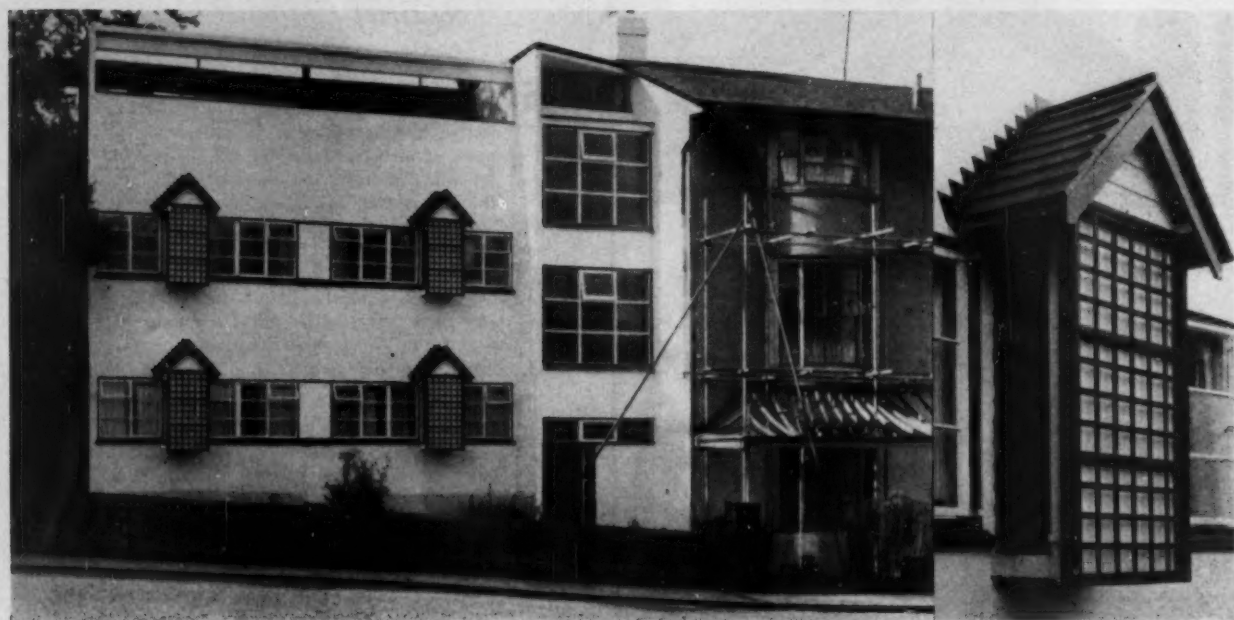
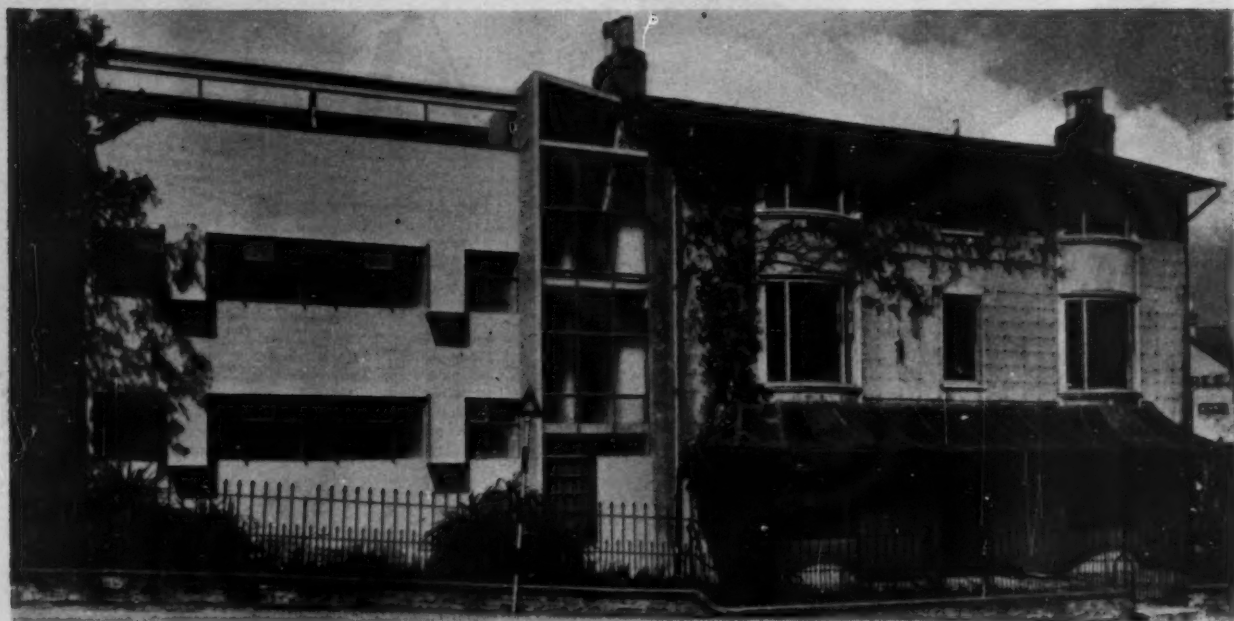
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Cuckoo!

These before and after pictures tell the story of what has happened to what in the thirties was an admired modern house, *The Firs*, Redhill, designed by Basil Ward of Connell, Ward and Lucas, and built in 1935. The building, which comprises four identical flats, had to be an acceptable neighbour to the listed Regency house next door, to which it formed an extension, but no planning permission was necessary for the alterations which have now taken place and so strangely altered the façade. In particular the projecting larders, discretely visible before, are now its most con-

spicuous feature and so startlingly twee with their trellis-work and pitched roofs that one almost expects cuckoos to pop out. Why not consult the original architect when alterations to a well-known modern house are required? The work of this form was the subject of a special issue of the *AA Journal* in November 1956, which described Connell, Ward and Lucas as having "introduced a new language into British architecture at a time when there were hardly any British architects thinking in an uncompromising contemporary vernacular."

about modern architecture was a piece it did to introduce Corb to its readers when his *Ideal Home* project was young).

The man behind the *Chronicle's* interest in architecture (apart from the Cadbury family's belief that culture is good for one) was Sir Gerald Barry, plain Mr. in those days. Among those who served as his architectural correspondents was F. R. S. Yorke, and, a bit later and within the living memory of many still at architecture school, Sir Barry and the *Chronicle* did most of the preliminary softening up of public opinion that *a*, produced the Festival of Britain, and *b*, pretty well settled the form it finally took as the biggest modern movement architectural jamboree since Stockholm 1930—a comparison that even occurred to some Swedes.

And now that the wake is over, how about a small post-mortem on our radical consciences? The *Chronicle*, by word and deed, did as much as anybody to cement the alliance between progressive architecture and progressive politics that most of us still take for granted, whether we marched to/from Aldermaston or not. The subsequent disintegration of the solid phalanx of Men of Goodwill into a loose network of Old Boys is not something dreamed up by people who are still fighting the Spanish Civil War. It is real, the death of the *Chronicle* is part of it. And you, liberal-minded member of what professes to be a liberal profession, probably did your little bit to help kill it.

When you decided that being committedly Left was too exhausting ("If I'm asked to sign another perishing petition I shall scream") and felt that it would be nicer to be a Liberal with a capital L, what paper did you decide to read? The *Chronicle*? Am I kidding? No, it was *The Guardian*, whose advertising has played on your intellectual snobbery with the same persistence, and rather more blatantly, than that other paper works the Top People gimmick. Remember the "Man with the enquiring mind" bit, and the "Let my mind alone" bit, and all the rest of it, subtle as a soap-powder campaign, kidding you that carrying *The Guardian*, folded so that its mast-head showed on the outside, would stamp you as an independent thinker—and all the time you blew your top about the hidden persuaders!

No, that isn't the whole story, and architects aren't particularly to blame, and the men with paper-back minds (have you read that copy of *Pioneers of Modern Design* you rushed out to buy?) don't really exercise so much purchasing power over the Fleet Street Product. Statistically, I expect our record is clean, and it was mass desertions by Ulster Unionists and chair-bottom caners, or someone, that finished the *Chronicle*. It's just the conscience bit that worries me.

REYNER BANHAM

The Editors

LONDON AND LOGIC

THE question to be faced, in examining the Royal Commission's report on Greater London is: Will London and her neighbours be better places to live in than they are now if the scheme goes through?

No other region cries out so loudly for comprehensive, regional, three-dimensional planning, to sort out its traffic problems, rehabilitate its slums, restore its centre to something worthy of a great capital, and stop it sprawling from the English to the Bristol Channel. And for this reason architects and planners are entitled to have a good deal of say in the future organisation of Greater London, because the sort of planning and building we do here makes all the difference to the convenience and pleasure of life for the ten million inhabitants.

The RIBA in its written evidence to the Commission recognised the advantages of a Greater London authority, in fact it considered that it should be larger than proposed—there is nothing either sacred or logical about the 1888 boundary which carved the County of London out of Middlesex. But it urged that the present L.C.C. must on no account be dismantled unless the "most-purpose" local authorities which are proposed to take over many of the L.C.C.'s functions—housing being the most important—were capable of doing the job at least as well as the L.C.C. does it.

Part of the problem, which the Commissioners tried to face in their reorganisation, is: if many of the present functions of the L.C.C. are to be handed over, what size have these new authorities to be, if they are to support skilled staff comparable in quality with the L.C.C.'s?

Torn between achieving practical effectiveness and community feeling, the Royal Commission has compromised by proposing 52 new local councils in Greater London, each covering a population from about 100,000 to 250,000 people. Whether bodies of such a size could either support the size and quality of architectural and town planning staff (and of other experts), whether they could sustain a sufficient volume of work to attract architects of top calibre to apply for jobs with them—whether indeed there are enough architects of top calibre and sufficient experience to carry the responsibilities for leading such work in 52 little-L.C.C.s seems doubtful.

The contrast in the staff position of the present L.C.C., county boroughs and borough councils is revealing: the L.C.C. architect's department comprises over 3,200 people, of which 1,663 are listed as "professional and technical," 322 as "supervisory," and 521 as "administrative and clerical." Of the three county boroughs, only one has an architect's department, and of the present borough councils only six.

The opinion of the RIBA and its expert witnesses before the Commission, Arthur Ling and Percy Johnson-Marshall, was that this size of local organisation could not cope with the responsibilities presented to it: they recommended a minimum size now for the councils of around half a million.

Other professional bodies giving evidence—the London School of Economics for instance—agreed, but the Commissioners treated Ling and Johnson-Marshall almost as hostile witnesses, Mr. Paul Cadbury asking, “Is this a nice simple plan that you would like to see or do you really think that it is practical politics?” and whether people “would be sufficiently interested in planning and architecture . . . to vote every year or every three years for representatives to carry that responsibility to control the staffs who would obviously be doing the skilled work?”

If people are interested in the livability of their homes, nearness to work, safety and freedom for their children, efficient transport, then they are interested in planning and architecture, whether they know it or not.

These facts, however, should have been made clear to the Commissioners by expert witnesses from the L.C.C.'s architects and planners. It was a lamentable decision on the part of the Council that no technical evidence should be given by the people who know most about it, while the leader of the Council, Sir Isaac Hayward, was only prepared to stand pat on the present perfection of the L.C.C. Had this expert evidence been made available to the Commission it could only have strengthened the demand that the splendid machinery established by the L.C.C. must not be dismembered until a better machine has been devised.



NOT A BUMPER SHOW

There's a slight air of apathy about this year's motor show. The industry is blaming the credit squeeze for all its

troubles, but I'm told we're losing export business because of the growing range of American "compacts," so maybe this has something to do with it. Anyway there's hardly anything new from the home market—apart from a Humber with four headlamps and an overstyled sports car from Lea-Francis. But then there's not much from the Continent either, except a sporty Volvo and a big Fiat that could have been made in Coventry.

For once the American stands are the ones to head for (and not for a laugh). The compacts begin to make an impressive showing, both technically and visually. They are particularly neat and tidy and have enough shape on the sides to prevent them from looking flabby and slabby. They seem to be sensible cars, but only tests will tell—and I have a feeling that before I've got around to finding out they will have become the biggest small cars in the world. There are signs that this is to happen. Anyway, tail fins seem to be on the way out, so Mr. Punch will have to find some new car jokes before long.

BE SURE OF SHELLEY

"Hell," said the eloquent Percy Bysshe, "is a city." It must be masochism that sends me occasionally—muttering these words—to the South Bank, to drink coffee in the Festival Hall or to eat—if that is the word I want—in the Riverside Restaurant, among pathetic, decaying memories of the gay, temporary town so many of us loved. Maybe it's just curiosity that drives me there—curiosity about London's apparent pig-headedness over its most exciting building site. Anyway, when I saw the *Observer* had given its week-end review to an article by Sir Hugh Casson on "South Bank Waste Land," I was prepared to enjoy an onslaught by the man who must feel more strongly than anyone else about the neglect of the site. But there was no onslaught—just a sad little article which read like a lover throwing out a few hints in front of his ageing loved one; hints that the dreary old bag could still give him pleasure if she smartened up a little.

Sir Hugh is right, of course, to pull his punches. It's too late now to renew attacks on the Shell building, and few people have the heart even to mention the words "National Theatre." But if something can be done to brighten the place up, however temporarily—by filling pools, removing rust, adding paint and either renewing or destroying things that are just being left to rot—then the South Bank might well have character and life again one day. However atrocious the buildings are when at last they go up, there will still be space between buildings. And if such space is imaginatively used now, there is some chance it will be imaginatively used later on when the site gets more crowded.

SUMMERSON SUMS UP

The febrile intellectualism practised at the ICA has always been too much for me, and I wondered how many people felt as dazed as I did after hearing last week's packed-house discussion on Reyner Banham's *Theory and Design in the First Machine Age*.* I learned a new word—"scientistic" (spoken with a negative undertone, of course); winced at the whimsical abbreviation of Buckminster Fuller to "Bucky" and enjoyed some diverting

displays by the sort of people who always suspect that "avant garde" is a synonym for "left wing."

It was clear that many people present were interested in the Banham book, but the only really good contribution of the evening came from the chairman, Sir John Summerson, who said simply and directly that here was a work of high academic scholarship containing some very interesting points of view.

How anyone tolerates Sir John's lucid prose at the ICA it is difficult to understand. Perhaps the audiences secretly like knowing what speakers are talking about.

GIO PONTIFICATION

This week, as the Triennale closes, Milan gets a present from Britain—its exhibit, the CLASP school. It has been amusing to hear rumours that Italians refuse to believe it is a typical Notts school. And in view of this, it was gratifying to come across the following account of the building, written by Gio Ponti for the *Corriere de la Sera*.

"The incalculable value of this school," says Ponti, "is not only that it indicates a remarkable architectural realisation of an educational programme, but in the solution of the problem in economic and technical terms, faced on a national scale, and in the structure of prefabricated parts which have been created for a programme of production and distribution, and which have resulted in a design of exceptional integrity and validity. This school thus has a strong emotional impact upon those who visit it, not only because it is a model example of a Primary school, but also because it demonstrates what a great modern nation has dedicated to its children, giving them, together with a sense of—how shall I put it?—'national maternal solicitude,' an environment which most families could not provide, especially when both parents have to go out to work. This school from Britain, because it is typical, is a high testimony to the level of civilisation that country has achieved."

BUILDING MATTERS

The Network Three programme,



Two shops for the same firm—above Peter Jones, 1934, designed by Slater and Moberley with Paul Reilly; below John Lewis, by Slater and Wren, just finished. A sad example of progress backwards, or of how much depends on the client's brief? Presumably, the two shops are designed for different publics.

Building Matters, is back again. Like so many discussion programmes it is worthy but dull, there are too many people talking about too many things in too little time. Last week a vast number of topics were dealt with by architect Edward Mills and engineer John Weston, builders Charles Crichton and Ken Pearce and quantity surveyor Andrew Roberts.

Two points are worth taking up—the first to challenge, the second to applaud. Mr. Crichton tried to show that builders were pretty quick at taking up



Two tons of aluminium, sculpted by David Wynne, and newly raised over the entrance of Taylor Woodrow's offices at Southall, Middlesex. ASTRAGAL comments: "This teamwork symbol is always a little disquieting. Who is presumed to be at the other end of the rope: architect, reluctant client, and recalcitrant subcontractors? But it is even more disquieting when the characters pull no more, but stand, emasculated, with Moore-like hollows and curves, in utter vacuity. Perhaps trade marks and sculpture should not be confused."

mechanisation by saying that their capital investment in plant had risen from £13m. in 1949 to £37m. in 1959. Those figures don't really sound impressive when you realise that the annual building turnover in the same period was about £2,000m.

At the end of the broadcast John Weston said something that BRS might take to heart. During the second half of the century, he said, the main building need was going to shift to the underdeveloped countries, so we needed to develop non-traditional techniques which wouldn't pay off here and now but *would* be vital later on.

MORE NIGGARDLINESS

There is "widespread disquiet" about the University Grants Committee, according to John Rosselli who has criticised them in the *Guardian* for being too niggardly. This will come as a surprise if you have been pondering on the disquietingly widespread extravagance of university authorities—classical at Nottingham and modernistic at Birmingham. To me it seems that *more* niggardliness is wanted. At least we need a touch of the MOE's methods in our university building operations. This ministry is the most strait-laced and successful one in charge of local building work.

LE, MIES AND FRANK

Strongly recommended reading, for both lay and professional consumption, is Peter Blake's *The Master Builders**—it's not about Ibsen, not about Holland, Hannen & Cabitt, but about Le Corbusier, Mies van der Rohe and Frank Lloyd Wright, and it gives easy, well-informed reading (Mr. Blake is on the staff of *Architectural Forum*) which runs at about the pace of a *New Yorker* profile; and presents an architecto-biographical study of each of the three masters in turn. Laymen will be able to read it without being blinded by science, architects will find in it a lot of pieces of information they don't know (some of it isn't even in Banham's book). Curiously enough, although Peter Blake comes from Germany and works in America, he is even better on Corb than on Mies or Wright.

ASTRAGAL

* Gollancz, 25s.

LETTERS

David H. C. Pursey, A.R.I.B.A.

N. E. Lansdowne,
Technical Sales Manager, Semtex Ltd.

Spelling Disaster

SIR: I write to draw attention to the following advertisement in a local paper: "Thinking of building? Then consult us for all plan preparation, surveying, specifications, quantities, details and supervision. Schemes prepared for domestic and industrial buildings and alterations. Prompt attention—moderate fees—Box No." I have forwarded a copy of the advertisement to the Architects' Registration Council, but have little hope that anything can be done about it.

Half a dozen more inclusions of this advertisement would, I am certain, spell disaster for my recently established practice, as it is the small contracts for the man in the street that are our life blood at the moment.

DAVID H. C. PURSEY

Worcester

Damp Protection

SIR: We are most interested in the instructive article under Technical Section: *Sand/Cement Floor Screeds*, page 337 of THE ARCHITECTS' JOURNAL for September 1, 1960.

We do feel, however, that we must take issue with the concluding paragraph dealing with waterproofers of solid floors at ground level, as we feel that this paragraph is misleading.

These remarks are not borne out by the Building Research Station Digest No. 86 *Damp Proof Treatments for Solid Floors* which indicate under Table 1 that rubber, linoleum, cork and also vinyl plastic sheeting come under category D requiring a reliable damp protection and Table 2, where the comments on integral waterproofers are "whilst these may improve the resistance of concrete to liquid water penetration they do not materially affect its permeability to water vapour."

This is borne out by our long practical experience in dealing with these types of materials and the incorporation of integral waterproofers would not be accepted by reputable floor contractors as an adequate damp course for these types of products.

N. E. LANSDOWNE

London

The author replies that it was not his intention to recommend the use of waterproofers instead of a proper damp proof course. THE EDS.

NEWS

LCC

Royal Commission

The 400-page report of the Royal Commission on the re-organisation of London's government which was published last week, is the result of three years' work by the Commission and is likely to cause more than three years of argument before any of its root-and-branch proposals for reorganising the Greater London area are adopted. Briefly, its most revolutionary proposals are the abolition of the L.C.C. and the M.C.C., and of the present two-tier government of London.

Instead, it is proposed to set up a Council for Greater London, which would cover considerable areas of Essex, Hertfordshire, Kent and Surrey, which are already built-up areas within London's green belt, and within this area to establish new municipal authorities each covering about twice as great an area as the present London boroughs.

These two authorities would have quite separate responsibilities, the Council for Greater London being the education and planning authority, and taking over from the central government responsibility for roads and traffic. It would also take care of refuse disposal, fire and ambulance services.

The enlarged municipalities would take complete responsibility for housing (within the Greater London plan, however this might be revised by the Greater London Council); for health, welfare and children's services—except the ambulance service; for public health services apart from refuse disposal, for libraries and for roads, other than main roads.

The City of London would become a Greater London Borough but, says the Report, "logic has its limits and the position of the City lies outside them. . . . It has powers, ancient and modern, of its own. It has large funds available to it from the City's Cash, apart from its rate revenue. . . . Guildhall is a building of national fame and the events that take place there are often national events. . . . The presentation of the freedom of the City is one of the highest compliments England can show to distinguished visitors" and "we can think of nothing so stimulating to the sense of history and tradition as the spectacle of the City with its Lord Mayor, Sheriffs, and the attendant ceremonial with the patina of centuries upon it." In short, the City would remain the City.

Other boroughs would be amalgamated to bring about a population of from 100,000 to 250,000 people of each new authority.

At the same time the surrounding home counties would lose a large proportion of their populations and rateable value to the newly enlarged London: Essex would lose 54.5 per cent. of its population and 58.6 per cent. of its rateable value; Surrey, 62 per cent. of population and 66.1 per cent. of

rateable value; Kent would lose 30.4 per cent. of population and 33 per cent. of rateable value; Hertfordshire, 9.7 per cent. of population and 10 per cent. of rateable value. These counties are likely to wage a hard struggle to prevent such decimation.

Most serious, however, for the country as a whole, is the breaking up of the L.C.C., the largest and despite all that is sometimes said about its unwieldiness and bureaucracy, the most efficient local authority in Britain, for a form of organisation that does not seem capable of replacing, let alone improving, the work the L.C.C. has done.

The RIBA put forward, in its written evidence (RIBA Journal, September, 1958) proposals for reforming the government of Greater London but maintaining the present two-tier system, as follows:

1. A regional authority covering the whole of Greater London and including, in respect of planning, such aspects as roads, railways, port facilities, transport, overspill, industrial location and other matters . . . plus overall control of the construction of buildings aimed to achieve a common standard throughout the built-up area.

2. Local where the main task is implementation of detailed plans within the framework laid down at regional level. "At the local level it is considered that the region should be divided into a series of city districts which would be most-purpose authorities with elected councils having responsibility for local government functions including town planning, education, housing and slum clearance and the day-to-day administration of building regulations. They would require to be of such a size and have command of sufficient rateable value to enable them to employ the right calibre of staff. This would mean they would have to be very much larger than the existing Metropolitan Boroughs . . . or the district councils in the Home Counties."

The RIBA's evidence went on: "The Institute strongly maintains that these proposals must be considered together, to be accepted or rejected as a whole. Reorganisation of planning and administration in the Greater London area into regional and local units would be unacceptable unless those authorities, assuming responsibility at the local level, were of adequate size, able, in the case of planning and architectural matters, for instance, to employ first-class architects and planners as is at present the case with the London County Council."

It concluded: "The L.C.C. is outstanding for the contribution it has made in architecture and planning since its formation and in building by-laws has achieved a uniformity of administrative treatment which should at all costs be maintained, indeed extended to the whole of the Greater London area. . . . Either the Royal Commission should consider complete reorganisation as described or else accept the *status quo* as preferable to further disintegration of the larger authorities, particularly the L.C.C. by the delegation of their powers to the smaller ones."

In the evidence given on behalf of the RIBA by Arthur Ling and Percy Johnson-Marshall,

which was published verbatim in the RIBA Journal (June 1960) these proposals were compared with those put forward unanimously by the Royal Commission.

Arthur Ling, for instance, gave chapter and verse for the number of people required economically to be able to support an efficient local government organisation, including an architect's department headed by a first rate architect, and put the number at about half a million. He pointed out that at present there is a department of architecture and planning in only one of the three county boroughs in the Greater London area, and that out of 28 metropolitan boroughs, only six have an architect's department.

At the same time, he calculated that while a nursery school has an "economic size" of population of about 1,000 people, a secondary school needs an economic grouping of 60,000-100,000 people, and a technical college, a catchment area of 600,000.

MOHLG

Advisory Committee

Sir John Summerson, C.B.E., F.S.A., F.R.I.B.A., has taken over the chairmanship of the Advisory Committee on Buildings of Special Architectural and Historic Interest to the Minister of Housing for the duration of Sir William Holford's presidency of the RIBA. Sir William asked to be relieved of the chairmanship but has agreed to remain a member of the committee.

The Minister has appointed as an additional member of the Committee Professor N. Pevsner, C.B.E., PH.D., Professor of History of Art at Birkbeck College, an editor of the *Architectural Review* and editor of the *Pelican History of Art*.

ICE

New Exam Subjects

The Institution of Civil Engineers announce that from October 1962 three new subjects will be introduced into their Institution Examination, Part II: town and country planning, highway design and traffic engineering, and water supply, sewerage and sewage treatment. The syllabus for each subject has yet to be approved by the Council of the ICE.

HOUSING CENTRE

Livability

The first joint meeting arranged by the Housing Centre and Spur on October 18 on "Livability in Towns" was extremely lively and ended in a flood of questions and comments, provoked by Mrs. Mary Smith,

a housing manager who gave us a real "client's brief" for livability, and Walter Bor, deputy planner to the LCC.

Mrs. Smith started with the tenants' point of view, with good and economical housing as the first necessary, and reasonable rents which did not take too large a proportion of the family's income making an important contribution to livability. She also pointed out the positive value of tenants' associations when they helped to establish neighbourly feeling rather than "aggressive attitudes."

Privacy she put first of the problems of high density living, and believed it was obtainable, except for people who adopted an attitude of selfish isolation—"I keep myself to myself." Inside the home, central heating providing warm bedrooms gave privacy to members of the family, so did provision of "granny flats" nearby, while privacy from neighbours could be achieved by correct orientation and planting.

Second, Mrs. Smith placed clean air and open space, with intelligent play areas for children from the beginning—"not bits of land that have been left over." And third, variety—variety of interests, of employment (including employment for women, as working wives have come to stay) and of shops. Traffic segregation, for quiet and safety was her fourth prerequisite for livability, with easy transport to varied entertainment.

Mrs. Smith urged that housing managers should be "brought in" to the planning of new estates from the beginning: at present, she pointed out, they only come in when the architect has finished, yet they may know most about what the consumer wants. Walter Bor introduced his talk with a series of admirable slides, demonstrating what a lot of livable corners there are in London—privacy with high density, as at Golden Lane, play spaces, small squares, shopping precincts (the nearest is at Stevenage) and the full use made of London parks for open air art shows, games and just sitting, confirming his opening shot that in America people are pouring back into city centres, because the suburbs are so boring.

He put forward some key rules for livability in conurbations and major towns, the first of which was: There must be decongestion of the central area, so that it would provide fewer jobs and more homes. Vertical segregation of traffic and pedestrians was an "absolute must"—of which the Barbican scheme is our prototype—he said.

Saying his next point was a controversial one, Mr. Bor said community and neighbourhood structure might be superfluous in small towns (or new towns such as Cumbernauld), but in existing towns it would be denying the facts not to recognise the existence of community structure. The LCC is recognising this—perhaps for the first time?—in the development of the Brandon estate, where rehabilitation is accompanying new housing.

The tendency to move out of city centres has created wasteful, low densities in suburban fringes, and now that the Minister of Housing has introduced the regrettable policy of "jumping green belts" we need a

new density policy—higher density in more desirable areas, and an end of suburban sprawl at 12 to the acre.

Redevelopment in cities must not only bring more homes in the centres, but more varied employment near to people's homes, and only a comprehensive transport system would make it possible to restrict the use of cars—a difficult problem anyhow, and to liberate the pedestrian from smell, noise and danger.

In the interesting discussion which followed, the housing manager responsible for lettings in the Barbican disclosed that people were applying to come and live there from as far away as Brighton.

SCHOOL BUILDING CONGRESS

MOE at Milan

The MOE was strongly represented at the International School Building Congress held to round off the Milan Triennale on October 13 to 16—a very proper result of the British contribution to the exhibition. HM Staff School Inspector Leonard Gibbon spoke on "Children are the subject of education and therefore of school building"; Mary Crowley concentrated entirely on the MOE primary school at Amersham. Starting with a brief historical survey of popular education and how the Industrial Revolution, the growing professional class and the 1870 Education Act had shaped our educational ideas, Mr. Gibbon went on to contrast these with our ideas of primary education today—since "the discovery that children possess a wealth of ability and potentialities that remained undisclosed while the routine of school instruction was too rigidly defined."

After describing some examples of highly successful "activity method" teaching in a village school, Mr. Gibbon went on to discuss primary school design and how the architect and teacher could co-operate more closely and continuously.

"Historically the patrons of school architecture in the United Kingdom have been the Church, the nobility, industry and commerce, and, since 1870, local and central government," he pointed out. "With the exception of the latter, none of these had any great knowledge or experience of the functional requirements of schools. The result was that architects were left to focus their attention of technical things which it was their professional business to understand—on objects and physical standards, on classrooms of predetermined size, cloakrooms, lavatories and drains."

When the State took over, administrators began to tell architects, for example, "that children were liable to damage things—hence the brown-tiled dadoes and cast-iron desks; that their attention easily wanders—hence the windows set high in the walls; that large classes needed a lot of air—hence lofty rooms and expensive volume."

"It is only in recent years," said Mr. Gibbon, "that a few architects have revisited the haunts of their school days and found much to wonder at, remembering the neat rows of desks and the silent unmoving occupants of 30 or 40 years ago, and comparing this memory with the movement and bustle and the pleasant untidiness of what seems a mixture of a playground and a workshop rather than a classroom."

Now close partnership from the start of planning a new school, was required between teachers, architects and administrators: there are still "awkward gaps" between them, which could be overcome by an experienced teacher who could work continuously with the architect, and their shared experience would make it easier to look ahead so that new schools "provide the future occupants with buildings which will not inhibit developing education ideas"—in other words, they must be adaptable.

Mr. Gibbon went on to give a vivid and human picture of the requirements of a modern school, starting from the need to establish "as close a connection as possible between home and school," looking at the school through the child's eye and relating its scale to his size, and recognising what "a kaleidoscope of interest and activities" it is.

The architect was no longer faced by the educationist with a schedule of accommodation—for instance, for mathematics "build me a room of 720 sq. ft." Today the educationist says, "When a boy learns mathematics he reads text-books, works out problems with pen and paper, makes lots of experiments for which he needs materials and tools. Come and watch, and then design a suitable space for what you see happening."

Mr. Gibbon ended with a plea for teachers—and architects—to have freedom to experiment with methods of teaching and design.

REINFORCED CONCRETE ASSOCIATION

Lift Slab Lecture

F. R. Benson, chief engineer of British Lift Slab Ltd., presented a paper on lift slab construction to the Association last week. In 1958 his company took out universal rights from the American patentees to use the technique in this country and about that time he spent some months in America studying the technique.

It is obvious that in the 10 years since Philip Youtz and Tom Slick devised the system in America many refinements have been made and British Lift Slab Ltd., in its two years' activity, is entitled to the credit for several of these. For example, the earliest collars, whereby the concrete floor or roof slab is connected to the column, were crude by comparison with those used today. Mr. Benson's company has experimented with various designs, generally preferring fabricated steel to the

cast steel versions popular in the USA. Another innovation referred to by the speaker is the use of a rebated steel wedge in conjunction with the shear blocks which form the rigid connection between column and collar. The American practice is to weld shear blocks to the column and, as each floor slab is jacked into its final position, make a fillet weld between shear block and collar. Although this is simple in design and construction, it has the serious disadvantage that the jacks cannot be released for further lifting until the shear blocks have been fixed in position and the welds allowed to cool. A rebated wedge inserted over the shear block obviates this as it supports the collar without welding.

At the conclusion of the paper, which included the showing of some slides and a six-minute film on American practice, Mr. Benson answered questions from the audience. One concerned the use of polythene sheet as a separating medium. In his paper, Mr. Benson pointed out that against its advantages this material had a tendency to ruckle, resulting in a shallow corrugated effect on the soffit of the slab. He was asked if tensioning of the polythene would overcome this failing. He agreed that probably it would, but pointed out that it is still one of the most expensive separating media by comparison with the compound types (usually a resin or wax dissolved in a volatile spirit).

OBITUARY

The Earl of Verulam

Lord Verulam, who died on October 13, 1960, at the age of 50, was a man with a quite exceptional range of interests about all of which he knew a great deal and into each of which he threw his abundant energy and enthusiasm.

His interest in architecture led to the building of the rubber factory at Brynmawr, South Wales, the science laboratories at Bryanston and many other smaller projects, not the least of which was the report in the form of sketch plans for the St. Albans and Mid Herts. Hospital (prepared in 1947). He believed in modern architecture even before the war, not because he necessarily preferred the appearance of the resulting buildings or quite understood what architects were trying to do, but because he was determined that a building must serve its purpose in every possible way and considered it a waste of time if it did not. For the pre-war, functionally trained young architect, he was an almost perfect client, full of original ideas, many of them impractical, but stimulating and leading on to fresh approaches, and the few prejudices he had were good ones. Provided the plan worked, the details—by which he was fascinated—were sensible, and the materials durable he was happy. Everything else he left to the architect.

He had a strange way of losing interest once a building was nearly finished, but

this slightly disappointing trait was amply compensated by his enthusiasm for the next project. He was also curiously incapable of giving praise or expressing thanks for work well done, but always in some roundabout way he would let it be known how pleased he was. If he had not been pleased it is doubtful if he would have said so, but there would have been no next project. He had an encyclopaedic knowledge of most building materials—especially metals and plastics—a passion for simplicity combined with a love of complicated mechanism, especially if it saved labour.

He was joint founder in 1940 with E. A. A. Rowse of the Association for Planning and Regional Reconstruction, and later of the School of Planning and Research for Regional Development both of which organisations grew out of the pre-war Architectural Association Planning School. It was typical of Lord Verulam's vision and breadth of mind that in the very darkest days of 1940, when most people were unable to see more than a week ahead, that he was devoting time and energy to planning for a better post-war world. He was made an honorary member of the Architectural Association in 1949.

TCPA

Motorised Living

The keynote speech at last week's TCPA's 1960 Conference at Church House last week on motorised living was given by Colin Buchanan, recently appointed Urban Road Planning Adviser to the Minister of Transport, whose paper, "Transport, the crux of city planning," was a masterly analysis of the problems of evolving a design for motorised living in our cities.

John Hay, M.P., Parliamentary Secretary to the Ministry of Transport, with a useful survey of our national road system and the steps by which it had become a national planning matter; economist Alan Day of London University talked about "car ownership and use," and Frederick Gibberd read a stimulating paper on "The motor car, the town and the village," illustrated with coloured slides.

A summary of these papers will appear in next week's AJ.

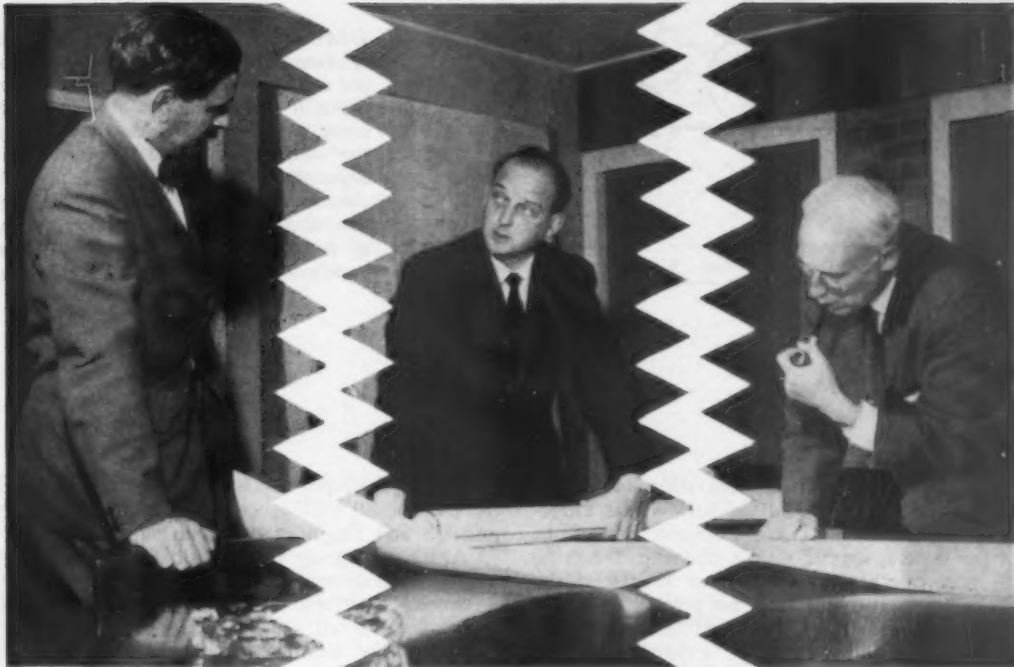
ALL-GAS HOUSE

Competition drawings

Drawings by all the architects who entered for the Scottish Gas Board's All-Gas House competition will be on view in the Sculpture Court of Edinburgh College of Art, Lauriston Place, daily from November 4 to 11, from 10 a.m. to 6 p.m., and from November 7 to 10, until 9 p.m. every evening.

There will also be a display of gas-fired central heating systems and domestic appliances.

Group Working at the War Office



This is the first of four articles describing the Works Directorate of the War Office, where Donald Gibson is now chief architect.

Readers may remember that when Mr. Gibson was a guest editor of the AJ in 1952 a series of articles was contributed by him and his three fellow guests on the organisation of a large public architect's office. He is now the only one in a position to try out their ideas in a large way. He is seen above with job architect Tony Butler, centre, and quantity surveyor Michael Shute, left.

On May 15th, 1952, the AJ published an article contributed by the Guest Editors on the subject of group working. The main points that were made are contained in the following extract.

"Summary. . . . We think that one good form of office organisation has been suggested in which the young architect can help to produce architecture of the best quality and feel at the same time that he is playing a vital part. . . . We think it is not so much a question of size of office (although there is undoubtedly an upper limit) as of organisation. An organisation of small or smallish groups or teams can do the job, provided the organisation of the group, and its responsibilities, are carefully considered. It must have a good leader, and he must be given a generous measure not only of technical, but also of staff responsi-

bility. The closest co-ordination must exist between the chief architect and group leaders. Finally, the physical conditions must not be overlooked. Cut out the large drawing office, see that the group leader is right by his group, and that the chief is not too far away. Each architect, as a group member, must be treated as a responsible professional person, and in being given greater opportunities and freedom, he must also accept greater responsibilities and obligations."

Other points included in the article were that a group should consist of up to ten architects, of mixed ages and abilities; that the group should have a competent leader who was not necessarily the best designer; that the leader should be responsible for day-to-day discipline; and that the team should have close contact with the client.

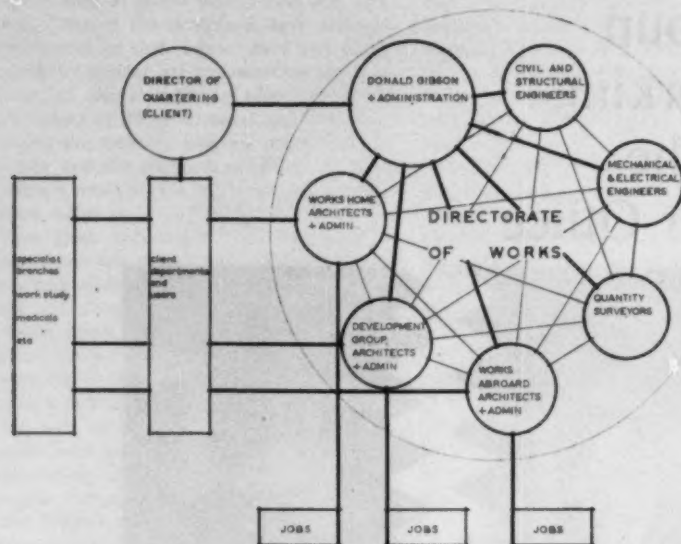


DIAGRAM 1.—This shows the diagrammatic relationship between all branches of the Directorate and their relation with client departments and users. It is important to differentiate between the users, where an individual may occupy a position for only three years or so, and the client departments which can be expected to have a consistent policy. Both have something to contribute to the architect's understanding of his brief. Note the joint responsibility of architect and administrator for jobs at all levels.

It is always fruitful to see what happens when ideas that seem good are put into practice and the new Works Directorate at the War Office under Donald Gibson, one of the co-authors of the article, seemed worth studying. When he took over the post of Director General of Works at the War Office he had a great opportunity for putting the ideas into effect in a big way, for the Department had been given a shining new charter and was to be expanded to the extent that it was virtually a new organisation; but there were great difficulties too because his views on organisation of an architect's office were new to central government, and whatever was done had to be done within the framework of the Civil Service; there was also considerable precedent left over from the old organisation. In the old organisation architects played only a small part, with little authority and little responsibility. R.E. officers, on two- or three-year tours at the War Office, were responsible for policy decisions; civilian architects were responsible for designing the buildings; and R.E. officers on similar tour in Commands were responsible for carrying out the work. Administrators were responsible for the control of expenditure. Various individuals at various times were responsible for briefing and changing the brief. This sort of organisation was fair to no one and had the sad results that could be expected.

The new charter came about this way.

A Committee was set up under Lord Weeks, to make recommendations for an improved organisation and it is interesting to note that one of the members of the Committee was the late David Nenck whose contribution to the progressive administration of the Ministry of Education, was widely recognised. As a result of the enlightened membership of the committee, the Weeks Report reflects an unusually good understanding of the sort of framework within which architects can work most effectively.

Among the points that were made were that:

- responsibility for decisions could be concentrated;
- once decisions had been taken and the project placed in the hands of competent staff, they should be free to carry the project to completion without further reference to higher authority, so long as they keep within the stated terms of reference of the scope and cost of the job;
- at all levels of the organisation responsibility should be shared by technical and administrative staff;

— the works directorate should consist of a group to carry out the normal building commitments, a development group, and QS and Engineer groups in support.

— Army quartering staff should be responsible for stating users' requirements in simple terms;

— control of finance and control of design must be integrated. Since all aspects of design of building are interdependent the architect should take responsibility, and in order to keep in touch with practical building knowledge he must also supervise the work.

Subsequent to this report Donald Gibson was appointed as Director General to be jointly responsible with an Assistant Under-Secretary, William Gerahty, and together they were charged with the task of setting up the Works Directorate and making it function, and it was at about this time that another factor came to the fore.

The Army was becoming aware of its new needs: it was becoming much more a group of technicians. More weapons and more-complicated ones; more vehicles, more electronic equipment; more-specialised forms of training and so on. Higher standard of living in society generally and lower age of marriage were also being reflected in the Army. All these added up to a different kind of soldier, and the need for better accommodation for him, for more and better accommodation for his family and a new approach to his needs when off duty. The man whom the Army now wanted was the man who could get a good job in industry and whose wife wanted as good a home and environment as she could have in a new town.

The better accommodation was required in all Army establishments, in the UK and in places abroad, such as Cyprus, Malta, East Africa and Singapore, where the Army is established to look after Commonwealth and NATO commitments. The Works Directorate had to provide a good environment everywhere and problems were to be tackled in places as different as Hounslow and Hong Kong.

The organisation has been set up to meet these tasks and to make the most of this unique opportunity, with the Weeks Report as the guiding principle and Donald Gibson's views and experience to fill in the details.

The full establishment, which is not yet complete but is slowly building up, is intended to deal with about £10,000,000 of work a year. (This is the long term commitment; currently it will deal with much more than this by

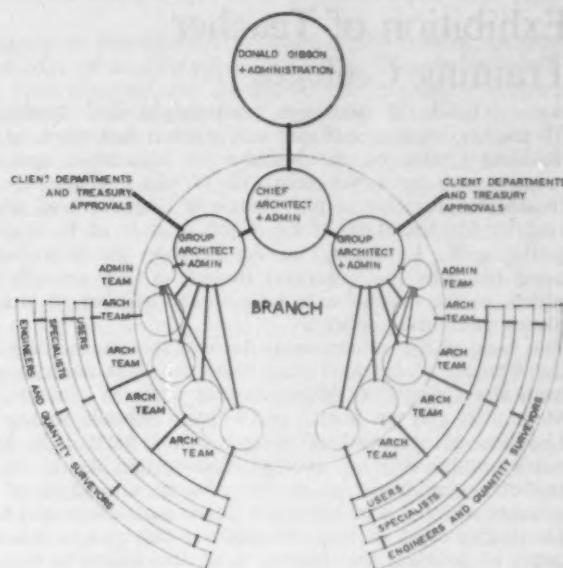


DIAGRAM 2.—This shows the diagrammatic relationship within a branch, Works Abroad, for example. Note the joint responsibility of architect and administration (finance) at top level and the administration team to assist design teams at the design level. When teams have been briefed by group architects they operate almost autonomously. Client and Treasury approvals are sought at group architect level. So far as one particular job is concerned the group architect is the top of the organisation.

commissioning private architects.) On any basis of calculation this means a large staff. On the basis of £40,000 per architect per year (a very efficient office, see Keith Scott's article in AJ of 14.7.60) it means about 250 architects, with supporting engineers and QS in addition. Such size usually means death to lively architecture, as too many large offices show, unless full professional responsibility is delegated to the men actually putting the buildings on the ground. Delegation of course must be carefully arranged so that the benefits of a large and centralised organisation are not lost.

Under the Director General and his administrative partner, the office is divided into six branches, each headed by a professional—three chief architects, two chief engineers, one chief quantity surveyor. Of the chief architects, one looks after all the work in UK, another looks after all the works abroad, and the third heads the development group. Each is partnered by an administrator so that architect and administrator are jointly accountable for the work in their charge. The point of this arrangement is in both partners having a common objective so that they can bring to bear on one problem the sum of professional and administrative skill. Like other partnerships it relies for its success on good personal relations and in practice it works out well. In large organisations complementary skills too often act in opposition to each other with resulting frustration and wasted effort.

The two engineers are concerned respectively with civil and structural, and mechanical and electrical work, and the quantity surveyor with all that would normally be expected plus a major contribution to development.

The day-to-day running of each sphere of architectural work is delegated to two or three group architects, again each with an administrative partner and each partnership is jointly accountable for the functional, architectural and financial success of its projects. Broadly, the group architects carry the responsibility of a principal in a medium sized private practice, or of a county architect in a medium sized county.

When the office is fully established each group architect will have in his charge about four teams each led by a team leader and consisting of 8 or 9 architects. Responsibility for jobs is delegated through the team leader down to the job architects, who are the men who talk to the users.

design the buildings and supervise the erection, and are responsible for seeing that money is properly spent.

The eight-man team is the working unit, operating virtually as a small private office, but being within a large organisation there are advantages. The architects will generally work with the same QS and engineers and they can get to know each other's method of work and general objectives; the work can be programmed jointly. All the domestic administration is done for them and there are specialists, such as landscape architects and model makers, who can be called upon to advise or do a particular job of work. There is also a library run by a professional librarian. Diagrams 1 and 2 express this organisation in diagrammatic form.

It might be asked how this form of organisation can work within the Civil Service and the Army hierarchy. On paper the organisation is very little different from any other; the differences lie mainly in the joint responsibility of professionals and administrators and in the degree of delegation. If the upper levels of architects did not delegate, there would be bottlenecks and the architects doing the jobs would be frustrated and unproductive. In later articles the effect of full delegation will be seen in the work that is produced. The Army, of course, does understand professional delegation and the early assumption of responsibility; battles could not be won if it did not (Battle of Waterloo-Eton). Generally there is no difficulty in working with the Army for it respects people who know their business, regardless of status. Newcomers to the War Office have found that the popular conception of a colonel at the War Office is as wrong as the colonel's conception of an architect.

The present staff includes architects from LCC, Herts., Coventry, Nottingham, MOE, etc., and this is a point that promises well for the future. Britain has been acclaimed world leader in the design of schools and in systems of prefabrication (*The Times* leader 27.7.60), and it has also established a reputation for housing. The offices that have done this work and have established this reputation are now providing staff for the War Office, and it will be surprising if with a good leader, a good set-up and well-trained architects, some good architecture does not come out of the War Office during the next few years.

The next article will look more closely at the work of a team.

Exhibition of Teacher Training Colleges

An exhibition of drawings, photographs and models of 37 teacher training colleges was opened last week at the Building Centre by the Minister of Education, and will remain open until November 12. It was arranged by the Board of Education of the Church of England (and organised by the Secretary of the Council of C of E Training Colleges, R. J. Harvey) to demonstrate the contribution being made by the Voluntary Bodies, as they are officially styled, to the current expansion in the number of student places in training colleges.

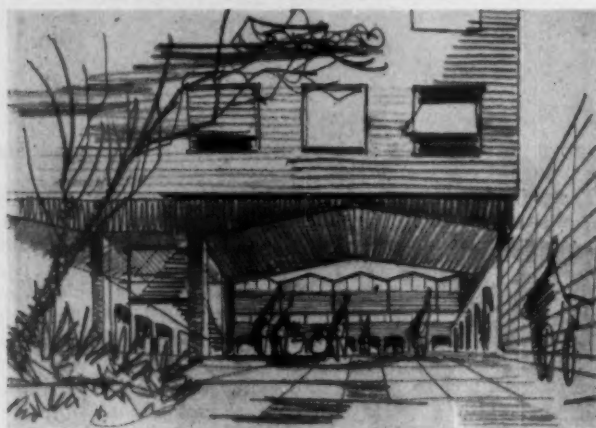
The bulk of the exhibition is devoted to new buildings by the Church of England, but there are also contributions from the Church of Wales, Roman Catholic Church, the Methodists and the British and Foreign Schools Society.

The general standard of design is not flatteringly high, but no worse than an average cross-section would be for any other building type in this country, and three of the schemes which are of particular interest are illustrated here. The background to this exhibition is the current national target of doubling the number of student places in training

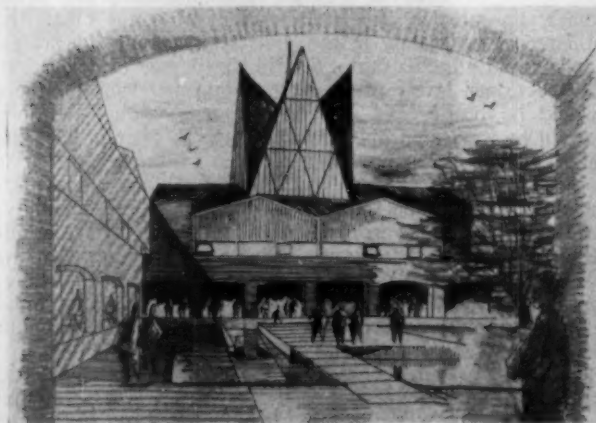
colleges, from 25,000 to 50,000 by 1965. This crash programme is required because of both the very critical shortage of teachers and the decision of MOE, effective this autumn, to increase training from two years to three. The bulk of these extra places is being provided by local authorities, but this exhibition shows that the Voluntary Bodies are playing their part. For instance, the C of E exhibits alone represent 3,000 more student places. And the recent increase of MOE grants for such buildings from 50 to 75 per cent has been a considerable impetus.

In general the designs illustrate extensions to existing buildings, the only notable exception being the project for a new college at Canterbury, illustrated below. The major problem in such extensions is not only to increase the number of places, but to provide improved accommodation, which must reflect two important changes in teaching methods.

First, there is a much greater emphasis on the small tutorial group, with the need, ideally, for each tutor to have his own room for this purpose. Second and more obvious is the much greater bias towards science and practical subjects, with a requirement for properly equipped laboratories and workrooms. It is interesting that the Church of England have decided that all their student teachers, whatever other subjects they may subsequently specialise in, shall from now



View into the chapel quadrangle beneath the arts block



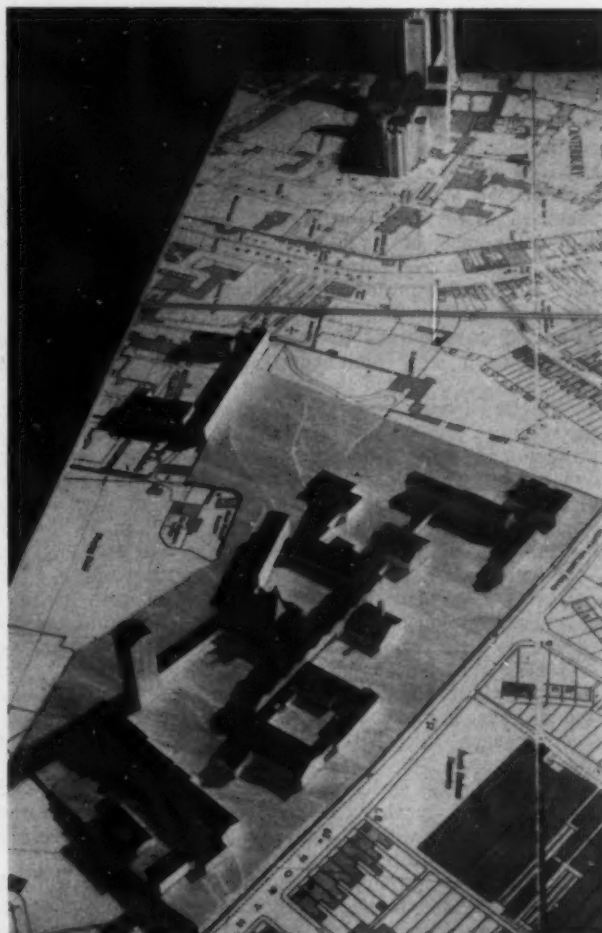
The chapel quadrangle

CANTERBURY

This design for an entirely new training college for the Church of England is the winning design by Robert Matthew and Johnson-Marshall for a limited competition, the result of which was announced a few weeks ago. This is the first time that the

scheme has been seen in public, and the architects point out that it will be refined and developed in detail before construction starts. The scheme is based upon a simple breakdown into hostels for women to the west, those for men on the east, with the central communal accommodation grouped

together between. The architects have taken account of two important features of the site, that there are fine views of the Cathedral down a slight slope to the west, and that when the existing buildings have been demolished, there will be exposed a large basement area. The chapel has been



The sketch model, showing relationship with St. Augustine's College, beyond on the left, and with the Cathedral

on have a basic grounding in the sciences.

Extensions bring the practical problems of increasing such service accommodation as kitchens and boiler houses.

The exhibition shows that there is often the more intractable one, in both visual and planning terms, of adding to existing buildings which are set pieces of high Victorian Gothic, Edwardian Baronial or the like. Usually these buildings have been conceived as three-dimensional, timeless statements, no account whatever having been taken of possible future growth and development.

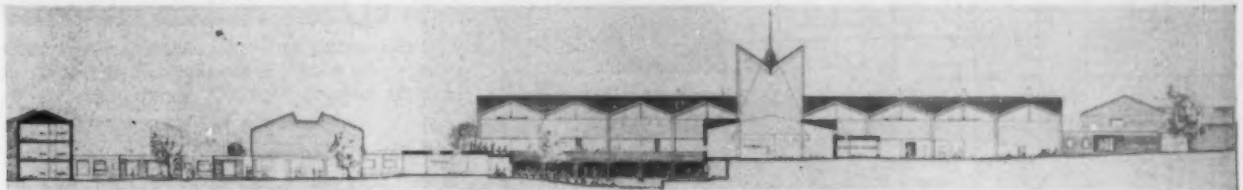
In one or two cases this has led to a rather nervous technique of stylistic camouflage: for instance, at Salisbury, in the admittedly difficult situation of adding to a building in the Close. Some others present a watered-down version of the same idea. This sort of design can all too easily lead to expensive structures and it is possible that architects working within strict MOE cost limits can only achieve their particular brand of architecture at the expense of good internal fittings, finishes and equipment.

It is obvious that the Churches have relied for the design of some of their colleges on architects who have been responsible for altering and maintaining their ecclesiastical buildings, and who have perhaps only limited experience of educational design. However, there seems to be a growing

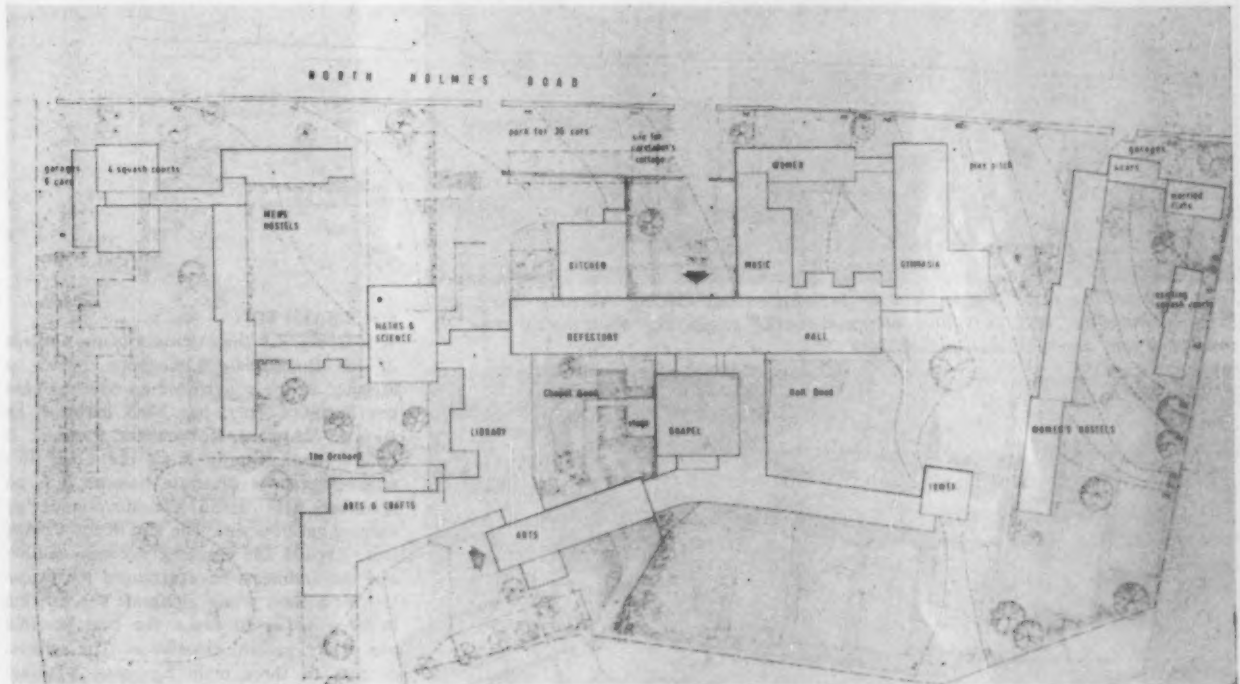
tendency to commission architects with a more intimate knowledge of educational needs, and a more forward-looking, even experimental, attitude to the planning of training colleges. It is evident in the design of the better current work on show, that the lesson has been learnt, and that the mistake of planning in a too-rigid form has been avoided. In most cases a relatively loose and free type of planning has been adopted to allow for future growth, though there are one or two notable exceptions which are regrettable.

Only one doubt can be expressed about the policy behind this expansion of teacher training colleges; that the basic need has been largely created by the failure to increase the size of the universities, both by expanding the existing ones and by creating more new centres of higher learning. No training college can provide an environment to match that of university life. This is no fault of the Voluntary Bodies, nor directly of the MOE.

In their projects the Church of England had very much in mind both this deficiency and what future developments in the creation of new universities are likely to be. If such towns as Canterbury and Norwich do become centres of higher learning, they will have teacher training colleges on the spot which can be incorporated. This is already a possibility with the projected University of York.



Section looking north through chapel and library, with chapel quadrangle between formed from an existing basement



Block plan showing general disposition of communal centre, faculty blocks and hostels, laid out to form a series of courts

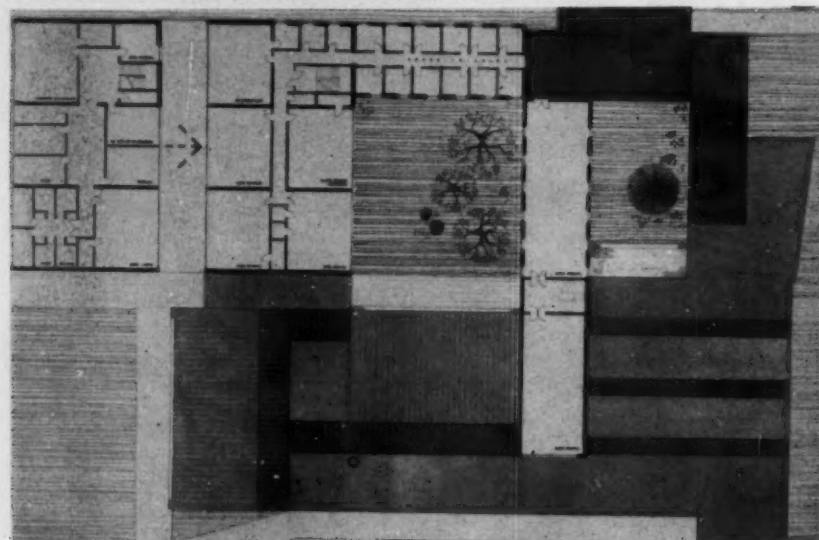
chosen as the central feature of the plan, and it has been placed on the eastern lip of the basement to take full advantage of the view. The basement itself has been developed as a sunken quadrangle, laid out so that it can be used as an open air theatre with water separating the stage from the audience. The planning for the teaching accommodation has been upon a faculty

basis, with the library in a key position so as to be as accessible as possible. Tutorial rooms are linked in with the teaching spaces, and placed in juxtaposition with tutors' flats, so that a tutorial system similar to that at the major universities can develop. The entrance court is on the north side of the building, and round it are grouped the kitchen, refectory and hall. The blocks on

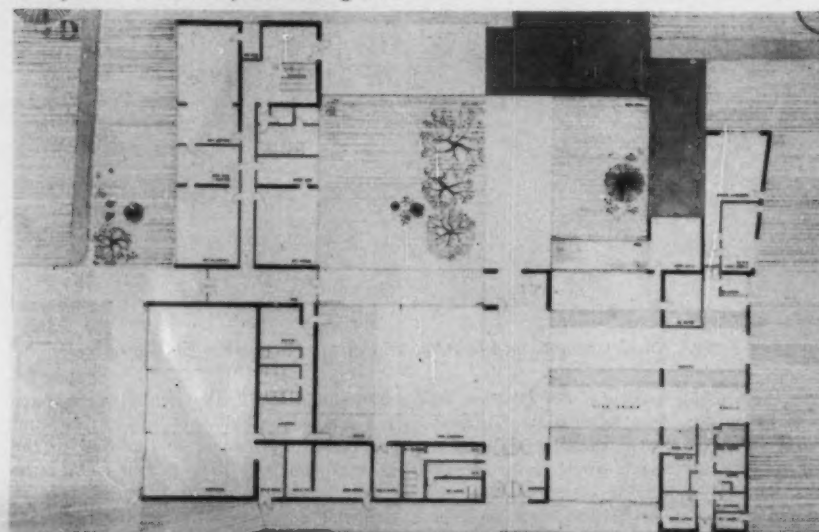
the south side of the central area have been splayed on plan, not only to open out the core of the college to the view of the cathedral, but also to align this part of the scheme with the existing college of St. Augustine to the south-west. Generally the planning has been carefully developed to allow not only for building in stages and future extensions, but also for some



Southampton: model of the extension, with existing buildings beyond



First and second floor plans, showing tutorial rooms linking teaching block and existing building, and first-floor common-rooms projecting northwards over the courtyard and assembly-hall-dining area



Ground floor plan, showing kitchen and dining on the west, gymnasium and changing rooms on the east, with the assembly hall between opening southwards directly on to the internal court, which is closed on the east side by the three-storey teaching block

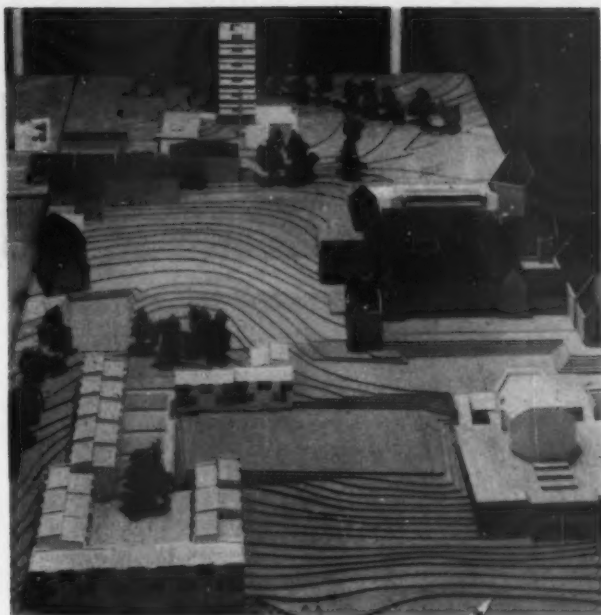
Canterbury (continued)

faculty blocks to have different internal layouts as educational needs change. Care has also been taken in the design of the residential accommodation to develop some variety, both in the design of the individual study bedrooms, and in the different blocks housing them. With this in mind, the scheme includes an eleven-storey tower for women on the east side. The building, which is designed for 400 students, is estimated to cost approximately £560,500; it will be fully completed in 1964.

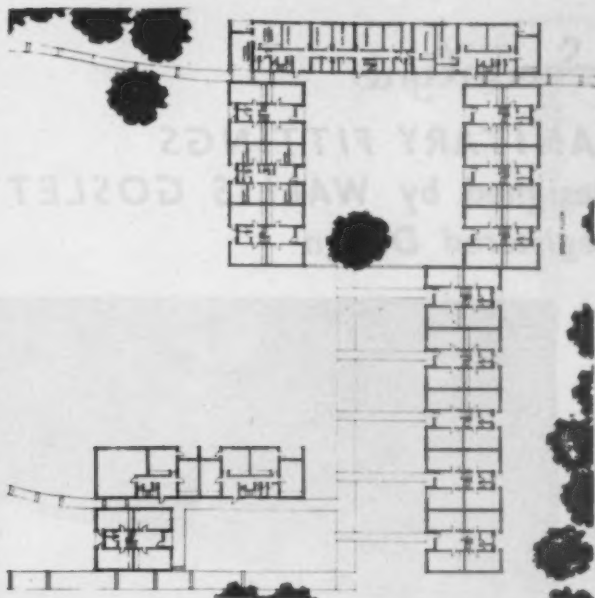


SOUTHAMPTON

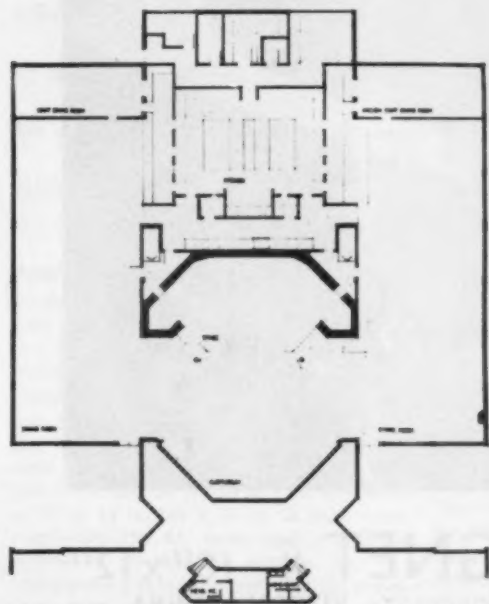
This scheme for the extension of the College of the Immaculate Conception, which is attached to the convent of La Sainte Union des Sacrés Coeurs, has been designed by Richard Sheppard, Robson and Partners. It differs fundamentally from the other two schemes that we illustrate because it is on a rather tight urban site surrounded by existing development. The aim of the scheme is to expand the teaching accommodation, and the architects have arranged the extension as a tight group alongside the existing building so as to make the best possible use of the present circulation. The scheme consists of three main elements, a three-storey teaching block to house practical rooms, science, maths. and music, a new gymnasium and assembly hall, together with boiler house and cloakrooms, and a single-storey block for kitchen and dining-room, designed so that the whole student body can dine at one sitting. In addition the scheme includes an extension, which is not illustrated in the exhibition, to provide a further 35 study-bedrooms to the existing hostel, which is at some distance from the teaching area.



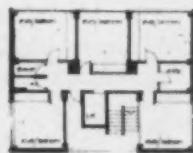
Carmarthen: model showing extensions: women's hostels in foreground, communal block on the right, and residential eleven-storey block for men beyond the existing buildings



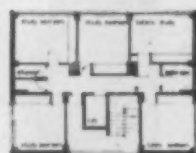
Ground floor plan of women's hostel



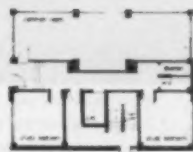
Ground floor of communal block, with central auditorium, dining rooms on either side and kitchen behind the stage



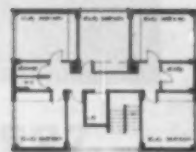
2nd, 4th, 6th, 8th floors



10th floor



Ground floor



1st, 3rd, 5th, 7th, 9th floors

Men's hostel: top left 2, 4, 6, 8th floors; top right 10th floor; bottom left ground floor; bottom right 1, 3, 5, 7, 9th floors

CARMARTHEN

Trinity College at Carmarthen was founded in 1848 by the National Society of the Church of England with an original intake of 22 students. At present it houses 300 students, who receive instruction in both English and Welsh, and under the current MOE programme of expansion it is to be enlarged to 475, the extensions and adaptations being designed by Architects' Co-Partnership. The scheme not only aims at meeting functional requirements, but also

at creating by the extensions a unified design within which there can be a sympathetic environment for the existing buildings. These are rather widely dispersed, and in a mixture of different styles. The extensions include an eleven-storey reinforced concrete-framed hostel for men, and a group of two-storey hostels for women in load-bearing cross-wall construction. There is also a new communal block which will provide in one compact group a new hall together with dining-rooms and kitchen, which

will be in load-bearing brickwork with timber beams and columns. In addition there is a three-storey teaching block, a single-storey unit for science and pottery, and certain ancillaries such as a new boiler house. The conversions include the creation of a new library, and generally bringing the existing teaching accommodation up to present-day standards. The estimated cost is £320,000 and the scheme is planned to be completed in June 1962.

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THE INDUSTRY

This week Brian Grant describes a set of bathroom fittings, an adhesive for tiles, recent activities of the Gas Council, overhead gear for doors, and a suspended ceiling system.

Bathroom Fittings

Froys have recently introduced a bathroom suite consisting of a 5 ft. 6 in. bath, lavatory basin and w.c. with low-level cistern which sells complete for just under £40 in a choice of four colours. This price includes taps for bath and basin, a front panel for the bath (end panels extra) and all other traps and fittings, including a black seat and cover for the w.c. The standard basin is 22 by 16 in. but a 25 by 18 in. version costs only 25s. 8d. more, and a pedestal instead of brackets is another 56s. 6d. Designs are pleasantly simple and the prices seem more than reasonable. (*W. N. Froy & Sons Ltd., Brunswick Works, Hammer-smith, London, W.6.*)

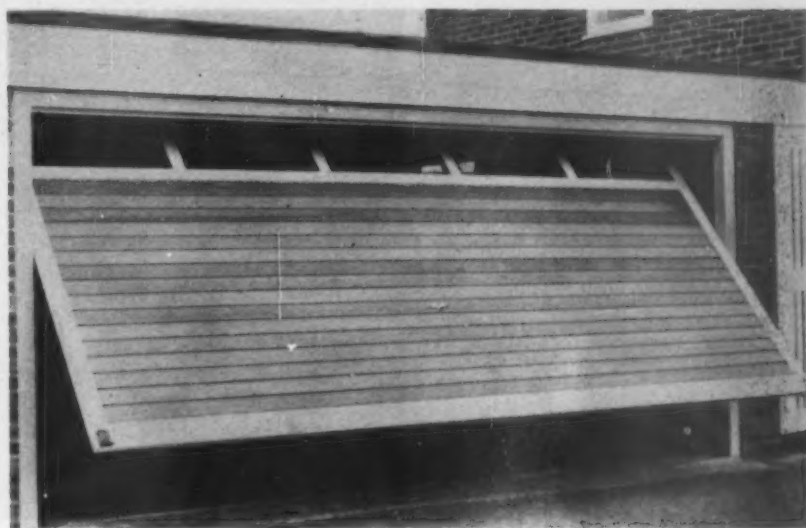
Tile Fixing

The fixing of ceramic tiles by adhesives is now generally accepted as an efficient and economical method. While rubber based adhesives are to be preferred because of their resilient bond, one drawback has been that they are restricted to use on walls which are thoroughly dry. This obstacle has now been overcome, for Richafix is now available in a new Green Seal grade which can be applied either to dry walls or new cement or plaster which has not dried out. Although it is made from rubber it is non-inflammable, and the manufacturers claim that it is

probably the easiest of all adhesives to apply to a wall. (*Richard Tiles Ltd., Tunstall, Stoke-on-Trent.*)

Gas Council Activities

The Gas Council's exhibit at the Building Centre has been completely re-designed and now has a special section devoted to house heating by gas, with examples of small bore and warmed air installations, and it is interesting to see that a simple warm air system with three outlets can cost as little as £80 installed, while personal loans can be made with interest rates as low as 5 per cent. The Council has also just published in book form the ten gas supplements which the AJ has published during the last four years. The subjects cover domestic heating and hot water, flues, domestic heating with coke, domestic kitchens, catering, communal laundries and installation practice. Changes which have taken place since the first supplement was published have been noted on an addendum sheet at the start of each supplement. The whole thing is bound in loose leaf form so that further supplements can be added as time goes on. (*The Gas Council, Murdoch House, 1, Grosvenor Place, London, S.W.1.*)



Henderson 325 overhead gear

Overhead Gear for Large Doors

The illustration above shows Henderson's type 325 overhead gear designed for doors up to widths of 17 ft. and 325 lb. weight. Doors are spring counterbalanced and tension bracing is supplied with the gear to stiffen up the wider doors. Price complete is £34. (*P. C. Henderson Ltd., Tangent Works, Harold Hill, Romford, Essex.*)

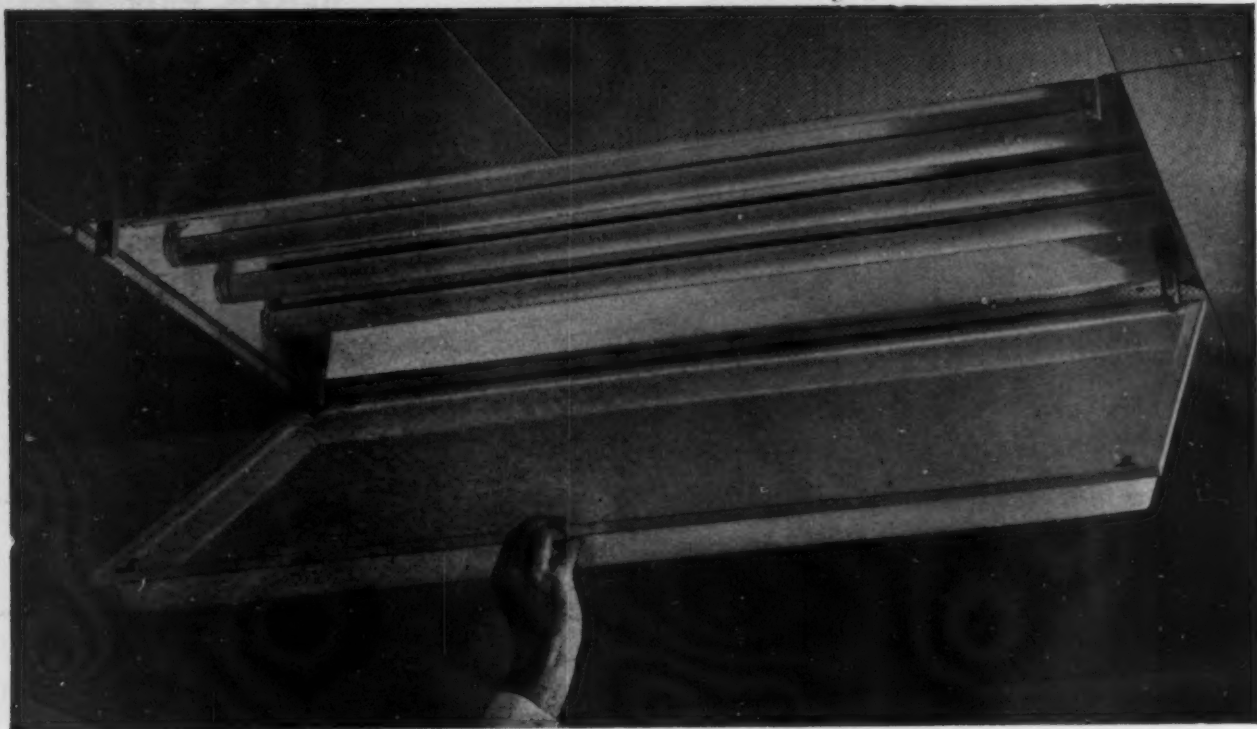
Suspended Ceilings

Burgess Products have recently evolved a fireproof suspended ceiling combined with thermal insulation. The ceiling is built up with a series of plain metal pans which slip into concealed tee bars, each pan containing a 1-inch thickness of insulation. All the pans are individually detachable and can be stove enamelled to BS colours. Ceilings of this type can be supplied and fixed at prices from 39s. a square yard, including all trimming at edges. The ceilings have a fire rating of 2 hours, and at present the pans are made in only one size, 2 ft. square, but 24-in. by 12-in. and 40-in. by 20-in. sizes are to follow later. (*Burgess Products Co. Ltd., P.O. Box 11, Hinckley, Leics.*)

ALLOM

HEFFER

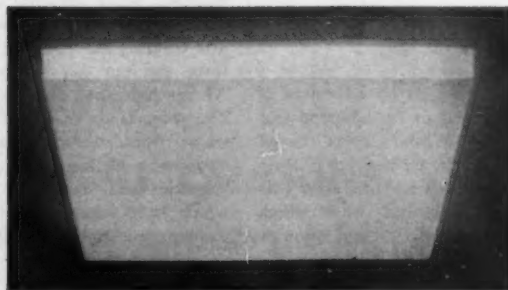
AND COMPANY LIMITED



The recessed fittings illustrated are made in various sizes and incorporate a completely new method of securing simple maintenance by means of the Allom Heffer patent locking device (Patent Application No. 32933/59) which provides:

- A positive method of opening and shutting on a pull-push principle.
- Hinging on either side of the fitting when fully clear of the ceiling.
- Complete detachment of the diffuser when required.

Apply for Brochure series 707

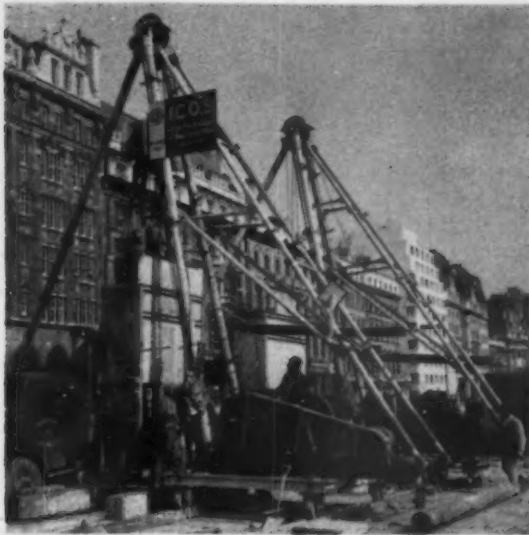


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SFB File No. (13)

UDC No. 69-022.2

Deep Retaining Walls without Pile Driving



Two Italian ICOS rigs at Hyde Park Corner

The main technical interest of the LCC's road improvement scheme at Piccadilly (Chief Engineer, J. Rawlinson; Chief Architect, Hubert Bennett) is the use of a patented Italian method (named Icos Veder) of forming the deep retaining walls for the pedestrian underpasses without driving piles. The use of this method was prompted by the need not to drive piles too near to St. George's Hospital, but it is the opinion of the contractors (a consortium of Cubitts, Fitzpatrick and Shand) that the method could be adapted for general use. At Hyde Park Italian craftsmen are being used, but the material which provides the key to the technique—bentonite

—is quarried at Redhill.

In principle the Icos Veder method is the construction of a cast *in situ* impervious concrete wall by means of special excavating equipment using bentonite-water suspension for the stabilisation of the excavated side walls of the trench.

A brief description of the method at Hyde Park Corner is as follows:

1. A trench 3 ft. 6 in. to 4 ft. deep and with a finished width of 20 in. is excavated along the line of the side wall of the underpass and the sides of the trench are faced with 4 in. to 6 in. of concrete.
2. A 16-ft. section of the trench is then filled with a bentonite-water suspension and with a special clamshell bucket the trench is excavated down to approximately 40 ft. (See photograph.)
3. When a 16 ft. long section has been excavated to the required depth, prefabricated reinforcement cages are lowered into the trench and concrete is poured through a tremie pipe from the bottom upward and displaces the bentonite-water suspension into an adjoining section where excavation is in progress.

Excavation for the underpass follows the completion of sections of the Icos walls.

Steel struts are inserted as excavation proceeds. These struts are positioned at carefully selected levels to give the minimum interference with the following construction and preloaded to ensure that there is no movement of the ground.

Cranes lower specially adapted 10RB excavators with shortened jibs into the underpass excavations to loosen the stiff London clay, which is then removed by grabbing cranes working at road level.

INFORMATION
CENTRE

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

10.194 design: building types

Building Boys' Clubs. (Published by the National Association of Boys' Clubs, 17, Bedford Square, London, W.C.1. 3s.)

This is a fifteen-page cyclostyled booklet intended primarily for those who found and run boys' clubs; but it is so comprehensive and clear a document that an architect will find it very useful. It gives excellent background information on how to estimate the

size of a club and thence what it will cost, both to build and to run. The attitude of MOE with regard to grants and the procedure to be followed is knowingly described. Advice on design is limited to a block plan and an invaluable check list. If all clients' projects were set down on paper so simply and so fully, the architect's job would be much easier.

(95)

725-8

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8. SURVEYING & SPECIFICATION

site investigation, 1

On November 5, 1959, we published an article by Geoffrey Williams, a structural engineer, on The Foundations of Tall Buildings. This week the same author contributes the first of two articles on site investigation. In it, he is concerned with such questions as what information is wanted, how much of this can be obtained without sinking trial or bore holes, and how many bore holes should be sunk. In his second article he will turn to the different techniques which may be adopted.

This article is concerned with Site Investigation in the sense of investigating the geological and mechanical properties of the ground under a site so far as they affect the structural design of a building. It does not deal with the topographical surveying of the site, nor with the investigation of town planning restrictions, easements, or the supply of water, gas, electricity; drainage or other services.

Some form of site investigation is always necessary when any building work is contemplated which involves foundation construction or increases the loads upon existing foundations, because nature is infinitely variable, and the ground conditions under no two sites are ever precisely the same. In many cases unfavourable subsoil conditions can increase the cost of a building considerably—sometimes to the point where the whole project is uneconomic. Sometimes when a site is to be purchased for building, it is desirable to consider the subsoil conditions briefly before the purchase is completed to ensure that no very expensive foundation conditions are present.

Later, of course, much more detailed information is required to enable the foundations of the building to be designed in detail with the minimum risk of delays and increased costs arising through unexpected conditions being found after construction has commenced, or of foundation failures occurring under the completed building.

The whole point of the site investigation is to provide information for the foundation designer, who will usually be the engineer responsible for the entire

building structure, and it is logical and desirable that he should supervise the investigation as it proceeds. Sometimes site investigations are made by specialist firms of boring and soil testing contractors working under very little supervision, even before the engineer has been appointed, and when they have finished the results are handed to the engineer. This procedure can be wasteful because tests are done which the engineer is not particularly interested in, and sometimes no information is obtained on matters that are of great interest to him. For an important site investigation, the engineer should issue a specification of his requirements with a bill of approximate quantities and obtain tenders from a restricted list of contractors, all of whom he knows and trusts. A proper contract can then be let based on an accepted form of contract, which will usually be the standard Civil Engineering contract. The extra work in drawing up the specification is small, and it ensures that the engineer's requirements have been properly thought out, whilst tenders from different contractors can be properly compared because they are all based on performing the same amount of clearly defined work. The Civil Engineering form of contract offers ample scope for varying the actual quantity of work done as the investigation proceeds, while still enabling the final cost to be kept under control.

Sometimes a specialist firm of site-investigation contractors will include recommendations for the design of the foundations in their report. This may be satisfactory for very small jobs, but in the case of a building of any size the foundations can rarely be conceived without a close consideration of the superstructure as a whole, as well as the subsoil conditions, and to achieve the most economical foundation requires close collaboration between the architect, the structural engineer and the quantity surveyor. For large buildings it is usually inadvisable to separate the design of the foundation from the structural design of the superstructure.

Information required

The detailed list of the information required from the site investigation will be different for every job, but its general nature will be the same for most building projects, and in most cases some measure of information is required about the following matters:—

1. The nature of the underlying soils and their mechanical properties insofar as they will influence the design and the construction of the foundations and basements of the building.
2. The level and nature of the groundwater and whether or not the site is liable to flooding.
3. Remnants of past development beneath the surface of the site that will impede the new work, including old foundations and disused services, which may or



"Calyx" designed by Joyce Storey. [M]1078 shown reduced in scale.

A new collection of machine printed wallpapers has just been compiled by the London Office of The Wall Paper Manufacturers Limited 19/21 Mortimer Street, W.1. and is now available through wallpaper suppliers. Many prominent designers are associated with this collection among them Lucienne Day, Jacqueline Groag, Terence Conran, Joyce Storey and William Gear.

Modus wallpapers, because machine printed, are moderate in price, and in order to increase their usefulness to Architects and Interior Designers all these papers have been treated with a special protective coating.

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technical section

may not be disconnected.

4. Sources of material suitable for filling to raise parts of the site, or places where surplus excavated soil can be deposited. This will usually apply to the development of extensive sites, and not to individual buildings in towns.

The magnitude of the investigation that is required will differ from one project to another, depending both on the size and importance of the building to be erected, and on the difficulty of the subsoil conditions. Sometimes the investigation can be limited to confirming that the conditions beneath a site are generally similar to those under neighbouring sites where comprehensive investigations have been made before, and the first step in any site investigation should be to gather together all the information that has been obtained previously about the subsoil in the neighbourhood.

There are several sources of such previous information, but some information about any area in Great Britain will be found in the records and publications of the Geological Survey. Geological maps to a scale of 1 inch to 1 mile are published for the whole of Great Britain, and large-scale maps to a scale of 6 inches to 1 mile are published for the London area and the more important mining areas. Most of the other important areas of the country have been surveyed to a scale of 6 inches to 1 mile but not published, however, and the unpublished manuscript sheets for England, Scotland, and Wales can be consulted at the Geological Museum in London, whilst those for Northern Ireland can be inspected at the Geological Survey Office in Belfast. Frequently the strata revealed in previous site investigations, well borings and excavations are annotated on these manuscript sheets, and they may be of great assistance when a site is under preliminary consideration.

The Geological Survey also publish various reports, handbooks and memoirs which give useful background information about a region, but do not often contain much detailed information that is of immediate use to the foundation engineer. They are, however, worth consulting when one has little previous experience of the region concerned.

In towns the local authority is frequently a useful source of general preliminary information about a site, and the building inspector will usually have his own ideas on the type of foundations that is required! Useful information can also be obtained from architects, engineers or contractors who have been concerned with other work nearby, and occasionally written records of work done nearby or on the same site in the past can be consulted. However, information obtained from all such sources must be considered critically, and it is a matter of judgement in each case how much reliability may be placed upon it. Obviously written records made at the time are better than verbal recollections, and recollection of recent jobs is more reliable than recollection of jobs done long ago. Also more reliance can be attached to in-

formation given by a technically trained or experienced person than by a layman. The condition of old buildings in the neighbourhood is also worth considering, because if they show signs of settlement it will indicate that foundation conditions might be difficult. The converse is not necessarily true because they may be founded on piles.

When all the available information has been obtained from all such sources, the engineer will usually have formed a preliminary opinion about the problem, and will have some idea of how thorough a site investigation is required and what form it should take.

Number and Depth of the Borings

It is difficult to lay down rules for the number and depth of the borings required on any particular project. These will depend on many factors, including the magnitude and the importance of the project, the information that is known about the site from previous records, and whether or not the surrounding area is known to be one of difficult foundation conditions. However, with this in mind, a few very tentative suggestions might be made.

As a general rule, if no special considerations arise, the site investigation should extend sufficiently deep to include all the ground that will be significantly affected by the new building. At a depth below an isolated footing equal to about 1.5 times the breadth of the footing, the pressure in the ground will have fallen to about 20 per cent of the pressure immediately under the footing, and it may be assumed that unless the soil below this depth is unusually soft, it will have little effect on the foundation. If there are a number of footings close together their effect will be additive so that they will have an appreciable effect to a greater depth than 1.5 times the breadth of any one of them. The extreme case arises when the footings are so close together as to constitute almost a raft under the entire site, when it follows that the pressure in the ground will not have fallen to 20 per cent of the average pressure under the foundations until a depth of 1.5 times the breadth of the building. Of course if the building is to have a basement the above depths must be measured below the bottom of the basement. Thus we may derive a first very broad rule—that in the case of a building with small, widely separated foundations, such as a shed, the site investigation rarely needs to extend deeper than 1.5 times the width of an individual footing, whilst in the case of a building on a raft or having isolated foundations very close together, such as a tall block of flats or offices, the site investigation should extend to a depth of 1.5 times the width of the tall part of the building, unless a stratum is encountered which is known to be very strong and to lie upon other strong soils or rock extending to a great depth. Many other buildings will fall between these extreme cases. The depths which are of concern in different types of foundation are illustrated in Fig. 1. On sites where there are soft strata near to the

Information for Architects

Truscon REFERENCE SHEET
PRECAST CONCRETE STRUCTURAL FLOORS

Truscon REFERENCE SHEET
PRECAST CONCRETE STRUCTURAL FLOORS

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Truscon Type 1 Floor Unit

Purpose made precast concrete units of channel section. In-situ end filling is retained by metal end caps supplied with the units (Fig. 1).

Detailed working drawings, showing the placing of the units and ancillary fittings (Fig. 6) are supplied for each job.

Estimates are given for supply and fixing and for supply only.

LOADING

The Truscon Type 1 unit is designed to carry superimposed loads on floors and flat roofs in accordance with chapter V, CP.3 (1952). Additional loads such as equipment, walls, and loads in excess of chapter V, CP.3 (1952) may be carried by means of $\frac{1}{2}$ width units, additional in-situ reinforced concrete between spaced units, or by the addition of a structural topping. Superimposed loads of over 3 cwt. per sq.ft. have been carried in this way.

WEIGHT

The absence of a bottom slab gives the Type 1 unit exceptional lightness—compared with a solid slab a saving of weight as great as 60%—enabling reductions to be made in the size of the supporting structure and foundations.

SERVICES

The open soffit of Type 1 units allow the installation and servicing of plumbing, electrical conduits, drainage, lighting, etc., within the thickness of the structural floor, achieving the least possible depth from floor finish to ceiling (Fig. 5). Holes for services can be provided in the top slabs of units—openings up to 16" square being blocked out at works; holes, up to 3" diameter can be cut on site.

FINISH

The tops of the units are roughened to receive a screed. The soffits, being cast on steel moulds, have a smooth surface, and require little further treatment when no ceiling is required.

QUALITY

The concrete, reinforcing steel and workmanship comply with the requirements of CP.114 (1957).

Figure 1: Sections of Type 1 units.

Maximum spans for various superimposed loads and unit depths

Unit depth	11" top slab		2" top slab	
	80 lb/sq.ft.	100 lb/sq.ft.	150 lb/sq.ft.	200 lb/sq.ft.
5"	11' 0"	10' 10"	11' 2"	10' 0"
6"	13' 0"	13' 0"	13' 10"	11' 7"
7"	13' 0"	14' 6"	13' 11"	13' 4"
8"	14' 6"	16' 4"	14' 10"	13' 4"
9"	18' 6"	17' 4"	15' 8"	14' 2"

Table 1: Loading table for full width units.

NOTES:
 In Table 1 an additional 20 lb/sq.ft. has been allowed for finishes.
 A $\frac{1}{2}$ width unit of 9" depth will span 21' 6" with a superimposed load of 60 lb/sq.ft. or 18' 6" with a load of 100 lb/sq.ft.

Unit depth	Wt./sq.ft. with grouting	Wt./sq.ft. run unit only
5"	30 lb.	36 lb.
6"	33 lb.	40 lb.
7"	37 lb.	43 lb.
8"	40 lb.	46 lb.
9"	44 lb.	50 lb.
11"	41 lb.	47 lb.
13"	44 lb.	52 lb.
14"	46 lb.	54 lb.
16"	49 lb.	57 lb.
18"	52 lb.	60 lb.

Table 2: Dead weights.

Fire Resist. in hours	Top slab thickness of precast unit	Top treatment	Ceiling construction	Fire test Report No.
4	11"	1" sand/cement screed	1" Gypsum plaster on HV-RIB Lathing	FROSI 483
2	11"	1 1/2" sand/cement screed	1" Gypsum plaster on metal lathing	estimate
	2"	2" sand/cement screed	none	estimate
	11"	1 1/2" sand/cement screed on 1" steel roof on	1" Gypsum plaster on 1" plaster board on timber battens	estimate

Table 3: Fire resistance.

Truscon

Henceforth Truscon will present technical information concerning their products and services in the form of reference sheets to British Standard A4 size. The first three sheets, dealing with Truscon precast floor units, are now available on request from Truscon Limited, 35/41 Lower Marsh, London S.E.1. WAT 6922

technical section

surface, and a pile-foundation will be required, the bottom of the piles should be taken as the underside of the foundation, and the borings should extend for a depth of up to 1.5 times the width of the pile group beyond the probable depth of the piles themselves, unless a stratum is encountered which is known to be very thick and reliable. Sometimes this

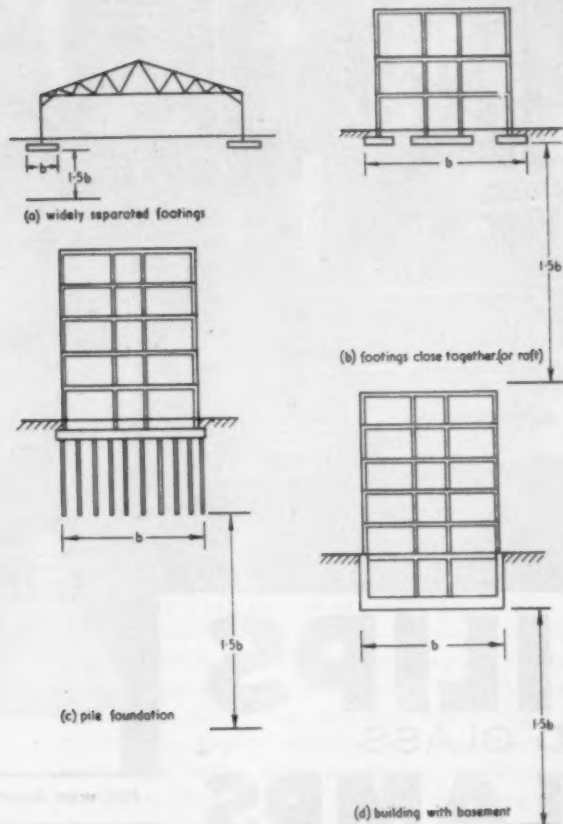


Fig. 1. Depths of borings required in typical instances

requires very deep borings, but it is the only way of ensuring that the piles will not be bearing on a relatively thin layer of strong material which is underlain by further soft strata. This condition arises when there are alternating beds of soft clay and sand or gravel, when it is possible to drive piles through soft clay to a layer of gravel where they will appear to have a high carrying capacity, without it being known that there are further beds of soft clay beneath the gravel which will eventually compress and cause the building to settle.

Frequently it is unnecessary to bore to the full depth suggested above because a hard stratum is encountered which is known to be very thick—for instance the bedrock, or in the London area, the London Clay. The borings may then be terminated after they have penetrated several feet into the hard stratum to prove that no mistake has been made in identifying it. It

is particularly important to prove bedrock by drilling into it for a few feet because the boring may only have reached a boulder which has a considerable thickness of soft soil below. This will necessitate the use of a rockdrill, and it is desirable to use one of the types of drill that recovers a core of the rock so that it can be identified geologically. Drilling into rock is more expensive than boring into soft ground, but in many cases it becomes necessary, because it is not uncommon to mistake boulders for bedrock, and the results of this error can be very serious.

The bedrock should always be proved by boring beneath important foundations in localities where it is known to be fissured or cavernous—some local byelaws make this mandatory.

The number of borings required on a particular site must be judged initially by what is already known about the locality. Frequently it becomes apparent as the work proceeds that fewer or more borings may be required than was originally envisaged, and for this reason it is desirable for the engineer to keep in close contact with the site while the borings are being made.

As a very general rule, it is not often necessary to make borings closer together than 100 feet apart, and on many sites they can be much farther apart. However, on sites where the subsoil is found to be very variable, it may be necessary to make borings at closer intervals, although it is rarely necessary to make them at intervals of less than 50 feet.

Other observations of importance on particular sites
In certain parts of the British Isles the ground contains chemicals, particularly sulphates, which will attack normal Portland cement and cause concrete to deteriorate. Such chemicals are frequently found in the clays of southern and eastern England including the London Clay, the Gault Clay and the Oxford Clay, and also in factory areas where the ground has been contaminated by industrial waste. When the project includes an important quantity of concrete to be in contact with the ground, as with a piled foundation, it is advisable to have chemical analyses made of samples of the soil and the groundwater to be sure that it is not necessary to use special cements. In factory areas, stray electric currents sometimes exist in the ground and they may cause rapid corrosion of metal pipes. Special equipment is available for investigating such currents when they are suspected.

When the project involves the construction of deep basements and foundations close to existing buildings it will be necessary to obtain particulars of their foundations, to decide whether or not they will require underpinning. Sometimes sufficient information can be obtained from records, but in many cases it will be necessary to excavate trial holes adjacent to the foundations to expose them. Obviously this must be done cautiously and under the close control of a competent person. If water seeps into the trial holes

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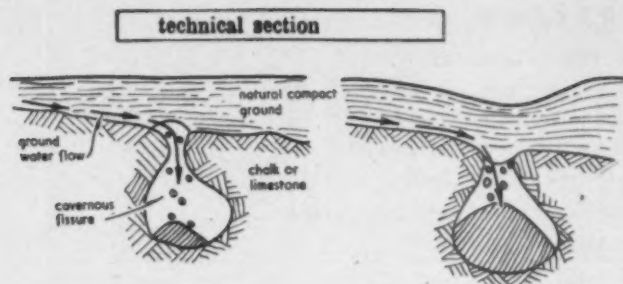


Fig. 2. Typical formation of sinkhole in chalk or limestone

and has to be removed, care must be taken not to draw fines from beneath the foundation. Such trial holes should be carefully backfilled as quickly as possible. Even if records are available of the foundations of an old building it may be advisable to examine them to ensure that they have not deteriorated. In various places special local features will require investigation during the site investigation. In this article it is only possible to mention some of the more common cases, others may well arise during the preliminary investigations and have to be investigated fully.

With low-lying sites the possibility of flooding must always be borne in mind. Usually sufficient information about the incidence and depth of past floods can be obtained from the Local Authority and from local inhabitants, but various works may alter the incidence of floods in the future. Usually the local River Board or Drainage Authority can advise on this.

When considering sites near to the coast, or tidal rivers in South East England, including the London Area, the possibility of extraordinarily high tides must be borne in mind. These were discussed at length in the Waverley Report* which shows that circumstances could arise when extensive flooding would occur along the River Thames, among other places, in Central London. Architects would be well advised to think of this when considering such sites, particularly if the proposed buildings are to have deep basements, and several buildings recently erected in London have been provided with means of excluding possible floods.

In all coastal areas the possibility of coast erosion must be considered. The local authority, who will usually be the Coast Protection Authority under the Coast Protection Act of 1949, will be able to advise on this to some extent. Coastlines with cliffs of chalk or clay should be approached with particular caution, and also localities where there are steep clay slopes immediately behind the beach, such slopes being particularly liable to slips.

In mining, and particularly coalmining areas, the question of mining subsidence always arises, both from new workings and from the collapse of old abandoned workings. Usually the best person to

advise on the likely amount of subsidence is a consulting mining engineer practising in the locality. There are accepted techniques available for designing foundations to resist the effect of mining subsidence if its probable magnitude is known.

Another form of subsidence occurs in areas where there is chalk or limestone overlain by a layer of soil of up to about 50 feet thickness. Much of the chalk and limestone contains caves and fissures formed by water dissolving and removing the rock, and if these holes extend to the surface of the rock the soil above may slowly subside into them, causing local subsidence of the ground surface. The rate of subsidence is very variable, and movement may cease entirely for many years and then suddenly start again.

It is very difficult to detect such sinkholes because they are usually quite small, and it is a matter of luck whether or not a boring penetrates one. Any area on chalk or limestone should be treated suspiciously if the surface of the ground contains shallow local depressions, sometimes less than one foot in depth, for no obvious reason. Sinkholes are usually very serious because it is expensive to construct a foundation to bridge over them or to penetrate to their bottom, while if one suddenly appears under an existing building, more than ordinary underpinning is required because the seat of the trouble is so deep in the ground.

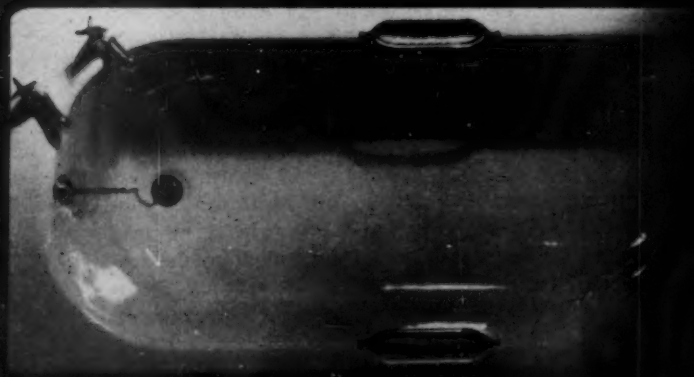
Finally, it should be remembered that eventually the tenderers and the contractor will all be interested in the results of the site investigation, indeed when planning the investigation the engineer should include obtaining any information which will be important to the contractor even though it may be irrelevant so far as the design is concerned. Sometimes, where there is to be a deep basement, or it is known that a piled foundation will be required, little attention is paid in the site investigation to the upper layers of soil. The contractor will frequently be interested in these upper soils however, to decide for instance to what extent he must build temporary roads or temporary foundations for plant, how much temporary support his excavations will require, and what measures must be taken to keep the excavations dry.

It seems both fair and prudent to make all the information obtained in the site investigation available to tenderers, unless of course there is a special reason for making part of it confidential. Rather than relying on descriptions of the soil, which can be misunderstood, it is better to make disturbed samples in sealed jars available for inspection by the tenderers. Usually it is wisest for the architect or the engineer not to attempt to interpret the results in any way, but merely to state to tenderers that these are the records of the borings and the results of the laboratory tests as supplied by the boring contractor and the testing laboratory respectively, who should both be named, and that it is for each tenderer, when preparing his tender, to decide how he shall interpret them and how much he shall rely on them.

* Report of the Departmental Committee on Coastal Flooding, May 1954, H.M.S.O. Cmd. 9165.

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NURSES' HOME

for MATERNITY HOSPITAL,
BELLSHILL, LANARKSHIRE

designed by GILLESPIE, KIDD & COIA
staff I. METZSTEIN, I. G. ROGERS
in association with FORBES MURISON, chief architect,
and ROBERT T. CUNNINGHAM,
deputy chief architect, to the
Western Regional Hospital Board,
Scotland

quantity surveyors MACKINTOSH & ROBERTSON
consultants, heating and lighting RAMSAY & PRIMROSE

STB File No. (98)

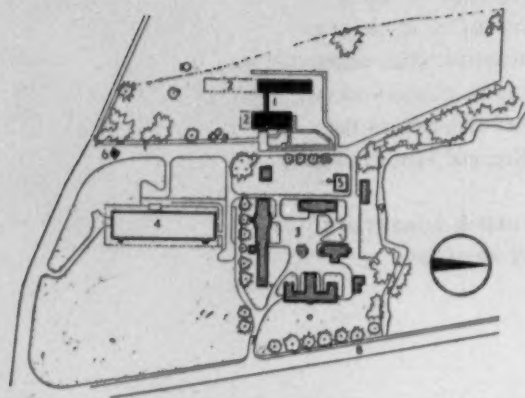
UDC No. 728.54

View from the north-east, with day unit in foreground.



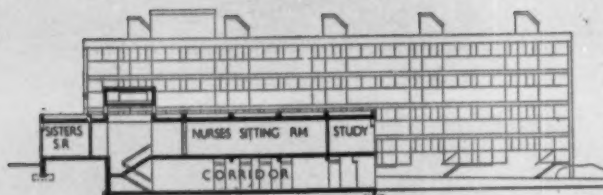
This nurses' home for Bellshill Hospital, Lanarkshire, marks something of a departure in both the style and the planning of buildings of this type, and is interesting to compare with the nurses' home at Edinburgh's Western General Hospital (AJ September 18, 1958).

building illustrated



Site plan

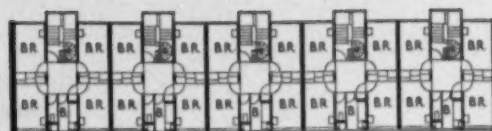
1. Nurses' home
2. Future extension
3. Existing hospital buildings
4. New hospital block, under construction
5. New boiler house, at design stage
6. Main entrance
7. Pedestrian way
8. North road
9. Shrub burn
10. Disused railway embankment planted with young spruce and fir



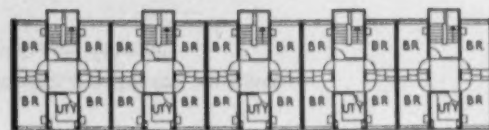
Longitudinal section



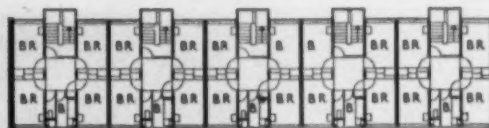
Cross section



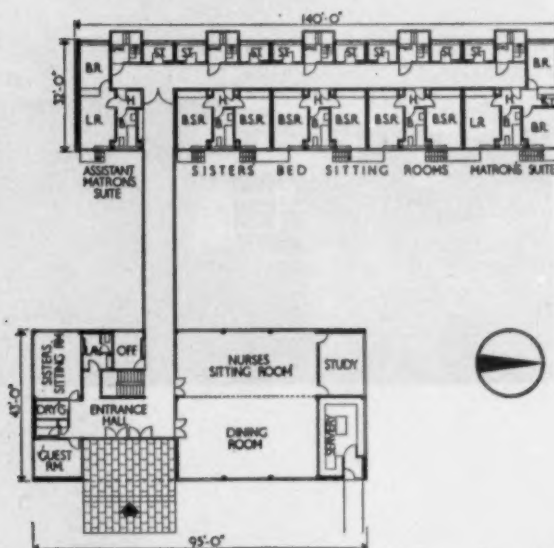
Third floor plan



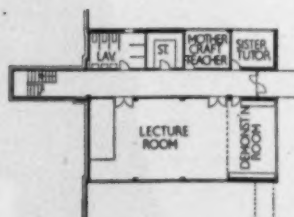
Second floor plan



First floor plan



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



Basement floor plan



The linking corridor between the day and night units follows the natural slope of the ground. Glazed areas are much reduced in the night unit

APPRAISAL: This nurses' home at Bellshill Hospital, Lanarkshire, is something of a new departure in institutional buildings. Usually such buildings breathe a flavour of institutionalism into the surrounding air, combining a smugly conventional appearance with an air of cheeseparing discomfort which often is a direct reflection of an extremely tight budget.

Bellshill is a welcome departure from all these dismal characteristics. It is a striking building, its planning represents some new thinking on the institutional theme, and it is excellently furnished, by the architects, in key with its clean, modern design. This has been made possible by an unusually generous budget.

It is an interesting building and visually it makes a forthright statement, a little crudely expressed in places but still a notable work of architecture. The enlivening effect of the glass spandrel panels and the absence of all but the boldest modelling on the facades is a welcome relief from current trends and seems peculiarly appropriate to the cold, clear light of a Lanarkshire landscape.

A number of shortcomings in the execution of the design—largely due to careless detailing—have come to light in use, and "consumer reactions" to some of these ought to be made known, because it is something of a tragedy when such a clearly articulated concept falls short for such reasons. Torch-bearing architecture simply cannot afford this sort of thing, and for this reason the non-working details of the building are quoted and should be taken to heart.

Noise. The clients' brief and planning aims emphasise the need for a high standard of sound insulation generally, and the architect's design was governed by the need to reduce noise by separating areas with differing functions. In particular the sleeping quarters were designed for quiet, as vertical units, instead of in rows along a corridor. The staircases of the night unit are intended to be carpeted, apart from the quarry tiled edges, and the architect's idea was that nurses on night duty should sleep in separate bays from

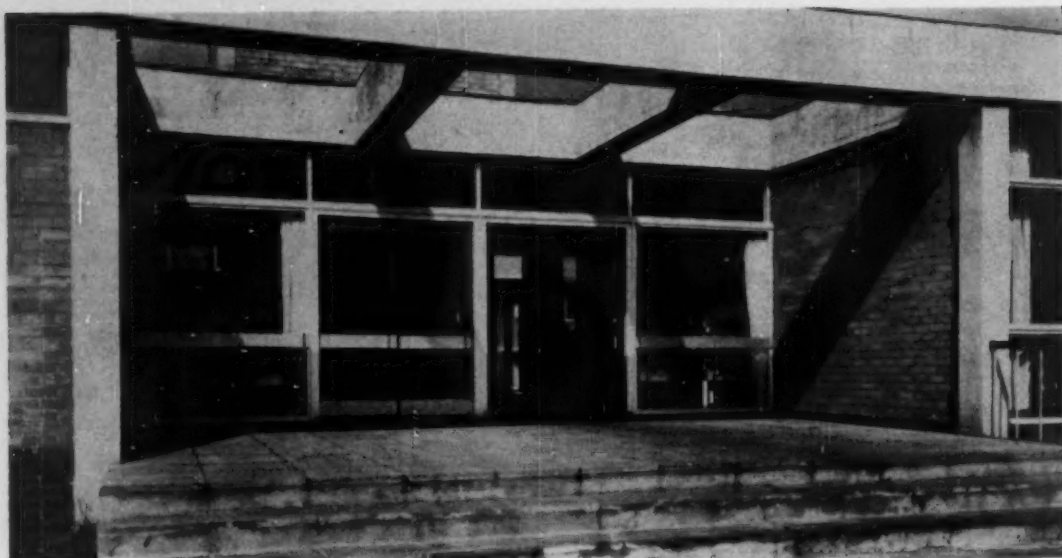
those on day duty, so as to minimise traffic and noise in these areas during the day. This idea, which would have involved either nurses moving into special bedrooms when they were on night shift, or the hospital authorities working out nurses' duty rosters in fours, according to which landing and which bay of the night unit they sleep in, appears not to have been carried out. But the main failure of the attempt to provide quiet bedrooms for shift workers is the failure of insulation between the bedrooms themselves, where, the matron says, "You can hear them put down a hair-grip," and many nurses made the same complaint. The back-to-back storage units built into the bedrooms are the source of this trouble, and as the drawing shows 2 in. \times 1 in. framing with $\frac{1}{4}$ -in. ply on both sides (page 625), this is hardly surprising. Presumably it is for reasons of noise that no points are provided in the nurses' rooms for gramophones or wireless sets: instead earphones for radio have been provided, which, however, are unpopular and not very much used, since one cannot move around doing odd jobs, as the girls would normally do, while listening to the radio.

Heating: There has been a number of complaints of the heating in this building, where for example the television room was too cold to use last winter, even with the carpet rolled back to let the heat from the floor percolate more quickly. (A temporarily blocked valve in the heating system was to blame for this, the architect says.)

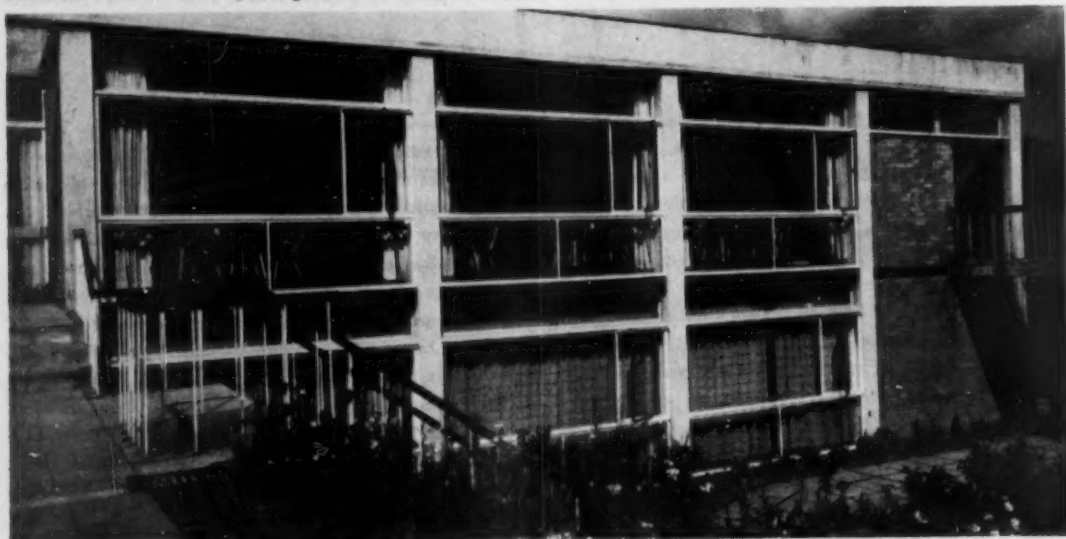
Similar complaints of the sisters' sitting-room have been made—that although it faces south it is a cold and cold-looking room, with two complete walls of glass and the other two painted white. As this room is in the day unit and the sisters' bedrooms are at the opposite side of the building, the room is only used for short periods after meals. Pupil midwives have a sitting-room finished in the same way, which always gives the appearance of being "open for inspection".

On the other hand, the matron's room suffers from over-

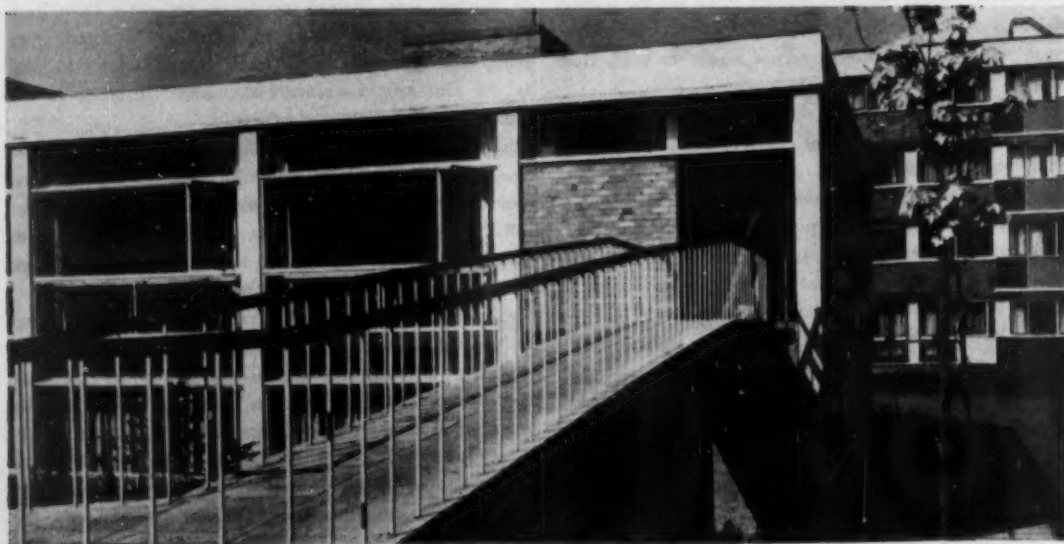
building illustrated



The main entrance in the day unit. Extensive staining already mars the beams and steps and suggests poor workmanship



A natural hollow on the site is occupied by the teaching accommodation at the lower level of the day unit



Detail of the fly-over access ramp to the servery at high level in the day unit

heating. It is directly over the calorifier, which is noisy, and it also gains tremendously from solar heating in the summer, as indeed all the south facing, glass-walled rooms are likely to do. The architect recognises that there is some heat transmission through the floor of this room, but believes the problem can be overcome. The temperature of other rooms comes up to the standard laid down by the Department of Health, and whether this is too low for some people's comfort or not, the room temperatures are what they were designed to be. Of solar heating through the glass walls in summer it is pointed out that the curtains are intended to be used "as adjustable walls" to control the amount of light and heat entering, and some of the interior photographs show the curtains being used in this way.

Ventilation: There are complaints of ventilation too, however. The only means of ventilation is by opening one-half of the standard metal windows, which are fitted with friction pivots, and in stormy and rainy weather they let in wind and rain. In the dining-room and elsewhere sliding windows above are provided (for times when the pivot windows cannot be used), but these are out of reach and difficult to open and shut. In exceptionally bad weather with intense rain and gale-force winds, rain has been blown up over the check ledges of some of the casement windows. This weather also caused flooding through the entrance doors, where double doors forming a draught lobby are clearly needed. (It was reported by the matron that when she protested about rain coming into the hall an architect replied, "But it's the weather, Miss Bramley," which seems both sad and comic.) The weather also causes the outside doors to the lower corridor in the day unit to have to be covered not only with a curtain, but a heavy blanket as well, and both coverings are blown back 12 in. to 18 in. with both doors locked, even when the wind is not by any means at gale force.

Storage: This is a complaint made of both the nurses' rooms and common-rooms in the day unit. Wardrobes and drawer space are inadequate. There are 20 inches of hanging space in the wardrobe with a hat shelf above, the remaining 12 ins. of cupboard space being filled by six 4½-in. drawers and some shelves, and at ceiling level there are two cupboards, which, however, cannot be reached by most nurses without a pair of steps. In fact a number of the staff store quite a few belongings in trunks on the ground floor.

In the utility rooms facilities are provided for washing, ironing and cooking, but not for the drying of clothes when washed; towel rails provided on wash hand basins and in bathrooms are not large enough to spread a bath towel, which again, makes drying difficult, particularly in winter. There is also a general shortage of storage space for such things as deck chairs, garbage bins, etc. It is only fair to remark, however, that storage space seems to be one of the perpetual problems of modern buildings. And that although the present matron of Bellshill Nurses' Home was not in on the consultations that went on between the architects and the Board of Management before it was built, her

predecessor was, and a quite exceptional amount of consultation seems to have gone on at that stage.

It must also be said that despite critical comments, the staff appreciate both the style and the general concept of the building, and appreciate the effort that has been made to attain a more domestic and less institutional atmosphere. As the accompanying photographs make clear, there are many fine features, and among those particularly appreciated are the teaching department, the kitchens and utility rooms near the bedrooms, the bright and sunny atmosphere, the hand basins in every bedroom, the dining-room (except for the ventilation difficulty), and the fact that the whole thing favourably impresses one's visitors. Where it falls short is through insufficient consideration of its working details—small but irritating things, like draining boards that don't drain. If the same clear thinking responsible for the initial concept had been consistently applied to its detailing and fitting out, this would have been an outstanding building of its kind.

CLIENTS' REQUIREMENTS

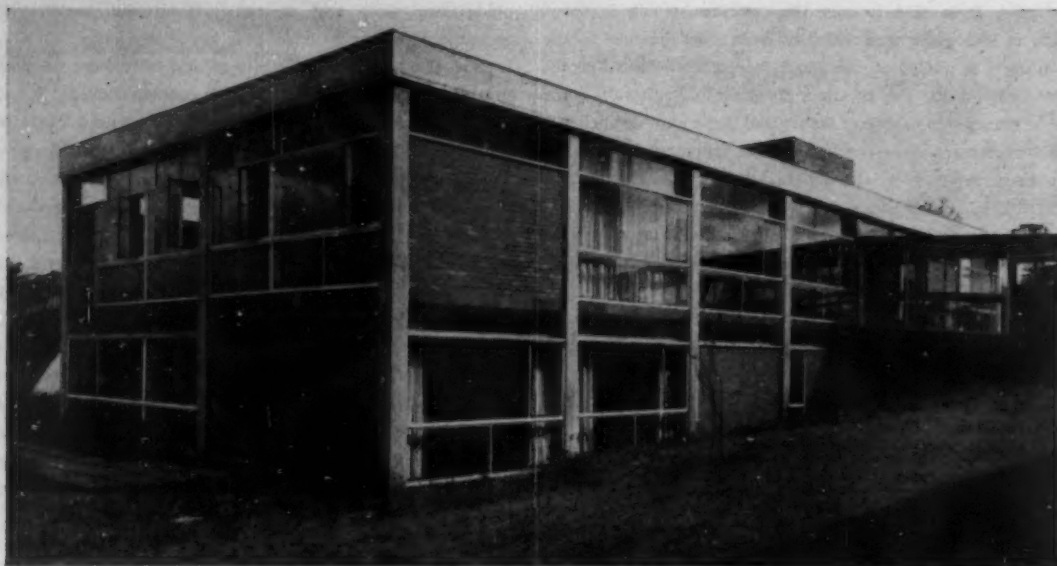
The clients required bedrooms for 60 nurses, bed-sitting-rooms for six senior staff and small flats for the matron and assistant matron, with the usual ancillaries. Day accommodation, including dining-room, nurses' sitting-room (capable of being combined), television room, sisters' sitting-room, visitors' room, servery and office. A small teaching unit with its own lavatory and cloak accommodation, conveniently related to the day accommodation, but capable of being used directly from the outside, was required. Particular emphasis was placed upon the need for noise segregation, because of shift working, and it was asked that the Home should avoid an institutional atmosphere and provide a very high standard of accommodation. It was also laid down that the sleeping accommodation should be capable of being doubled and the day accommodation suitably extended in the future.

PLANNING AIMS

The plan derives its form from the requirement for noise segregation, a domestic atmosphere and the provision for future extension, and from the nature of the site and the relationship of the new building both to the existing hospital layout and the projected new hospital block. The resulting design separates the accommodation in two linked blocks, which form self-contained day and night units, and seeks both to express the functional requirements and to clarify the purpose of these units. The nurses' bedrooms are grouped, four per floor, round the access staircase, this plan being intended to create a series of domestic scale "flats," which incidentally make day and night duty segregation easy. The day unit is of contrasting scale and character, to provide a more sophisticated background to daytime activity.

The layout of the block exploits the long, narrow, east-west vista, with adjoining disused railway embankment, and the block will eventually form an enclosing element in the hospital layout.

building illustrated



The day unit from the north-west shows the relatively complex permutations of opaque and transparent infill to the concrete frame. The room on the north-west corner of the upper floor is the television room



*Left :
The corridor on the lower floor of the day unit. Lecture and tutors' rooms open out of it on the right*

*Below left :
The lecture room. The back wall is of facing brick, visible around and between the various elements of the blackboard and storage fittings which cover it*



*Below right :
The nurses' dining-room, with hardwood floor and flush panel partitions. The finishes here and in the nurses' sitting-room, which can be entered through the sliding wall panels on the left of this picture, are all of similarly high standard*



Day Unit

SUMMARY

Ground floor area: 3,820 sq. ft.
 Total floor area: 6,790 sq. ft.
 Type of contract: Scottish National Building Code.
 Separate trades, variable wages and materials.
 Tender date: March, 1955.
 Work began: September, 1955.
 Work finished: October 1958.
 Final contract price of foundations, superstructure, installations and finishes: £29,447.
 Final contract price: External works, including drainage, and ancillary buildings: £2,525.
 Total: £31,972.

Preliminaries and insurances

Contingencies—nil.

Work below ground floor level
 Normal mass concrete foundations.

STRUCTURAL ELEMENTS

Frame or load-bearing element
 In situ r.c. columns, beams, floor and roof slabs.

External walls
 12-in. cavity, external leaf grey facing brick, with inner leaf of 3-in. hollow clay blocks.
 solid wall 0.6574
 Ratio: $\frac{\text{solid wall}}{\text{floor area}} = \frac{0.6574}{1}$

Windows
 Steel sashes and pressed metal sills.
 windows 0.585
 Ratio: $\frac{\text{windows}}{\text{floor area}} = \frac{0.585}{1}$

External doors
 Hardwood frame, fully glazed.
 doors 0.0163
 Ratio: $\frac{\text{doors}}{\text{floor area}} = \frac{0.0163}{1}$

Upper floors
 Span: 13 ft. 4 in.
 Area: 2,240 sq. ft.
 Superloads: 60 lb. per sq. ft.

Staircases
 1 concrete staircase finished with terrazzo.
 Width: 3 ft. 6 in.
 Total rise: 10 ft.

Roof construction
 R.c. bedded 2-in. woodwool slabs and 1-in. asphalt.
 Area: 3,438 sq. ft.

Rooflights
 Nil.

Glazing
 32-oz. 1-in. polished plate and glass bricks.

Total of structural elements: 37s 7½d

PARTITIONS AND FITTINGS

Internal partitions
 Type of partition Area of each type
 Brick 2,400 sq. ft.
 Clay block 270 sq. ft.
 Terrazzo 126 sq. ft.

Internal doors (with screens)
 22 flush panel single doors.
 5 pairs double, hardwood frame, fully glazed.

Ironmongery
 Swedish lever furniture. Union locks and latches.

Fittings
 Servery units with cupboards and drawers.
 Storage fitting in Home Sister's office.
 Storage units with blackboards and one unit with sink in teaching rooms.

Total of partitions and fittings: 8s 10d

FINISHES

Floor finishes
 Type of finish Area in sq. ft. Price per sq. yd.
 s d
 Quarry tiles 430 33 0
 Terrazzo 86 30 0
 Cork 1,311 22 2
 Thermoplastic 2,396 20 4
 Woodblock 1,676 37 6

Wall finishes
 1-in. plaster. Plywood panelling.
 Tiling to ceiling level in lavatories and servery.

Ceiling finishes
 1-in. plaster on concrete soffits.

Roof finishes
 1-in. asphalt on woodwool slab insulation.
 Area, 3,438 sq. ft.

Decorations
 3 coats emulsion finish, matt white, to plaster work.
 Varnish to internal and external woodwork of doors, panels, etc.

Total of finishes: 9s 10d

SERVICES

External plumbing
 All plumbing is within building. 3-in. copper downpipes cast into 12-in. r.c. columns.

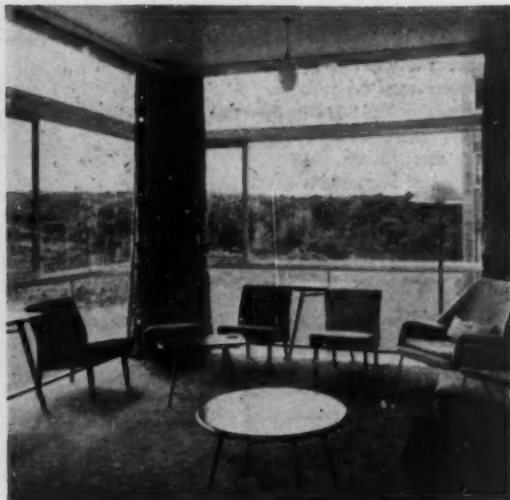
Hot and cold water installation
 Cold water tank on roof. Hot water supply from calorifier in underbuilding of night unit.

Sanitary fittings
 Type of fitting No. of each type
 W.c.s 4
 Wash hand basins 5
 Sinks 3

building illustrated



The nurses' sitting-room. The curtains are drawn against excessive sun



The sisters' sitting-room, on the south-west corner of the day unit, has two fully glazed (but not double glazed) outer walls, facing south and west



Closer view of the north-east elevation of the night unit, showing the link with the day unit on the left

Heating and ventilation

Hot water under-floor heating, from existing coal-fired boiler which serves hospital.
 Temperature: 65° F. Floor temperature, 75° F.
 Natural ventilation giving 1½ air changes per hour.
 U-value of walls: 1.0 where fully glazed. 0.2 where brick cavity and clay block.
 U-value of roof: 0.18 plaster, concrete, insulation and asphalt.

Electrical installation

Mild steel conduit, boxes, etc., tungsten lighting throughout.

Type of point	No. of each type
Light points	64
13-amp.	17
Clocks	8
Radios	3

Total of services: 13s 9½d

7 3 Drainage

Rainwater and surface water discharged into nearby stream.
 Soil and waste connected to main sewer.

Other external elements

External water mains	1½
Site clearance	3
Car park	4½
Roads and paths	1 0½
Site levelling	1 9½

Cost per sq. ft. of floor area:

£29,447 (net cost excluding drainage and external works)

6,790 sq. ft. (measured inside external walls) = 86 8½

Night Unit

SUMMARY

Ground floor area: 4,218 sq. ft.
 Total floor area: 17,724 sq. ft.
 Type of contract: Scottish National Building Code.
 Separate trades, variable wages and materials.
 Tender date: March 1955.
 Work began: September 1955.
 Work finished: October 1958.
 Final contract price of foundations, superstructure, installations and finishes: £71,155.
 Final contract price of external works: £7,223.

Total: £78,378.

Preliminaries and insurances**Contingencies—nil.****Work below ground floor level**

Normal mass concrete foundations.

STRUCTURAL ELEMENTS**Frame or load-bearing element**

12-in. cavity brick cross walls with intermediate 6-in. in situ reinforced concrete cross walls.

External walls

Brick cavity wall and infill panels.

$$\text{Ratio} \frac{\text{solid wall}}{\text{floor area}} = \frac{0.0527}{1}$$

Windows

Steel sashes and pressed metal sills.

$$\text{Ratio:} \frac{\text{windows}}{\text{floor area}} = \frac{0.3094}{1}$$

External doors

Steel-framed glazed doors in infill panels.

$$\text{Ratio:} \frac{\text{doors}}{\text{floor area}} = \frac{0.0193}{1}$$

Upper floors

R.C. concrete slabs.
 Span of each type 8 ft. 6 in.
 Area of each type 16,800 sq. ft.
 Superloads 40 lb. per sq. ft.

Staircases

In situ reinforced concrete stairs. Tread and riser finished with tiled edges and carpet.
 Five staircases 3 ft. 6 in. wide; total rise 24 ft. 3 in.

Roof construction

Reinforced concrete; 4,560 sq. ft.

Glazing

32-oz. ½-in. polished plate.
 Roughcast glass to infill panels.
 Georgian wired polished plate to internal parts.

Total of structural elements: 23s 0½d

PARTITIONS AND FITTINGS**Internal partitions**

Brick 5,130 sq. ft. Clay block 1,860 sq. ft.

Internal doors (with screens)

155 flush panel single doors. 3 pairs double hardwood frame, fully glazed.

Ironmongery

Swedish lever furniture.

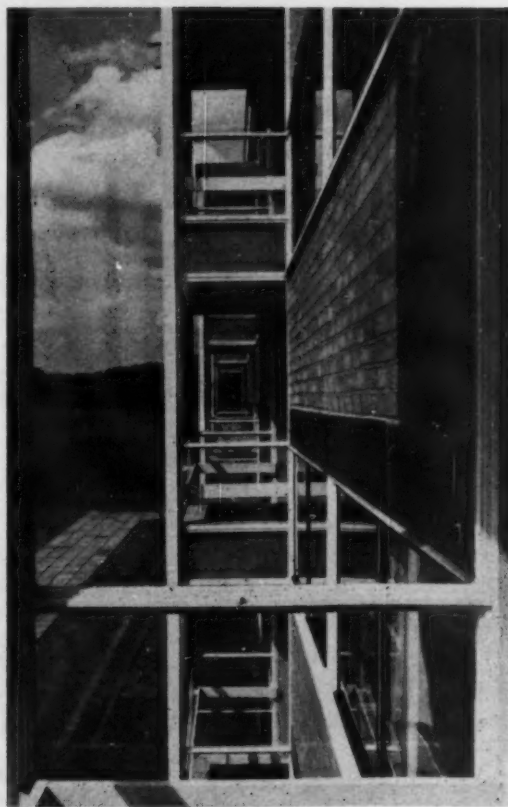
building illustrated



The cantilevered landings and stairs to bedroom floors of the night unit



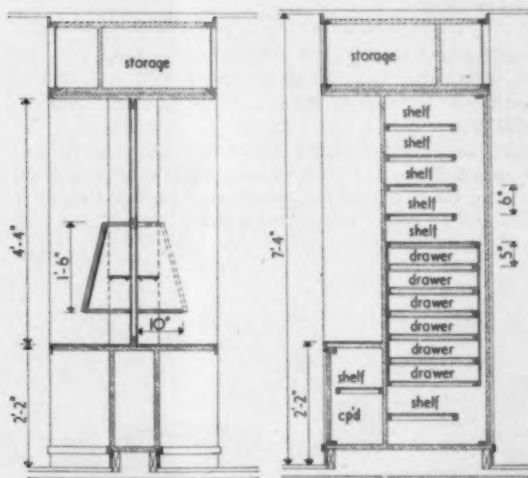
A close-up of one of the projecting staircases shows how clearly it expresses the vertically organised "bays" of accommodation, as opposed to the more usual horizontally arranged corridors



Interesting views are obtained from the half-landings of the cantilever staircases



A typical bedroom fitting, consisting of dressing-table, wardrobe and high-level storage



Two sections of the wardrobe shown in the photograph above

Fittings

Wardrobe-dressing-table units forming division between bedrooms.
Storage units in utility rooms.
Stores shelves.

Total of partitions and fittings: 10s 3½d

FINISHES

Floor finishes

Type of finish.	Area in sq. ft.	Price per sq. yd.
Hardwood strip	1,018	37s. 6d.
Cork tiles	2,123	22s. 2d.
Quarry tiles	788	33s. 0d.
Thermoplastic tiles	1,705	20s. 4d.

Wall finishes

¾-in. plaster on brick and hollow clay.
Plywood panels.
Wall tiling to ceiling height in w.c.s, bathrooms and utility rooms.

Ceiling finishes

½-in. plaster on concrete soffits.

Roof finishes

¾-in. asphalt on woodwool insulation slabs.
3,672 sq. ft.

Decorations

Plaster work: 3-coat emulsion with matt finish.
Plywood and doors: clear varnish.
Steel windows: 3 coats oil paint.

Total of finishes: 11s 7½d

SERVICES

5 7

External pumping

Single stack system in internal ducts.

Hot and cold water installation

Cold water tank on roof.
Hot supply from calorifier under building.
Copper supply pipe fully lagged throughout.

building illustrated

Sanitary fittings

Type of fitting.	No. of each type
W.c.s	16
Wash basins	77
Baths	15
Sinks	12

Heating and ventilation

Heating from radiant panels under sills to bedrooms.
Natural ventilation giving $1\frac{1}{2}$ air changes per hour.
U-value of walls: 0.2 brick, cavity and breeze block.
U-value of roof: 0.18 plaster, concrete, woodwool and asphalt.

Electrical installation

Mild steel conduit, boxes, etc. Tungsten lighting throughout.

Type of point.	No. of each type.
Light points	299
13-amp	43
Radios	68

Total of services: 20s 5½d

Drainage

Fireclay main drains at sides of building.
Soil and waste joins drain from day unit before connecting to main public sewer.

Other external elements

Water mains
Site clearance
Car park
Roads and paths
Site levelling

Cost per sq. ft. of floor area:

£71,155 (net cost excluding drainage and external works)

17,724 sq. ft. (measured inside external walls)

COST COMMENTS

Preliminaries appear to be higher than might be expected but

th contract took three years in all to complete. This time will account for some of the overheads, but the latter also allow for variation in wages and materials, the day unit taking a larger proportion of these increases than the night unit, which was completed first.

Windows. The windows in both day and night units are described as steel sashes and pressed metal sills, but they are considerably different in detail, design and cost:

Night unit: 5,484 sq. ft. for £4,907 = 17s. 11d. sq. ft.
Day unit: 3,971 sq. ft. for £4,040 = 20s. 4d. sq. ft.

Upper Floors. Spans and superloads reflect the cost of construction, which work out per square foot of suspended floor area at 5s. 11d. for the night unit in comparison with 6s. 8d. for the day unit.

Floor Finishes.—The night unit has 3-in. thick screeds accounting for the rate 6s. 1½d. sq. ft. floor area, when none of the floor finishes exceeds 4s. 2d. in cost.

General.—Examination of the plan shape of the two buildings shows the following external perimeter ratios:

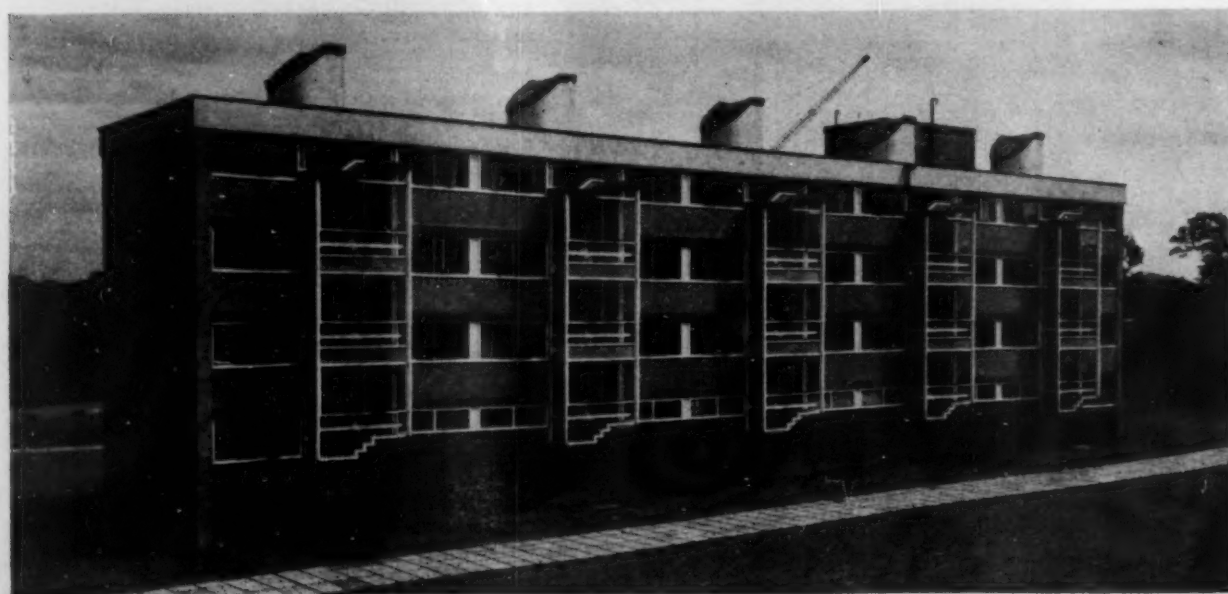
	Day unit	Night unit
Windows	0.6574	0.5027
Walls	0.585	0.3094
Doors	0.0163	0.0193
	1.2587	0.8314

These differences are reflected in the cost of these elements for each block, showing the value of ratios as a guide in cost planning.

The electrical installation shows proportionately in cost how the division of floor area into smaller units affects lighting requirements, the day unit having one light fitting per 106 sq. ft., the night unit one fitting per 59 sq. ft.

CONTRACTORS

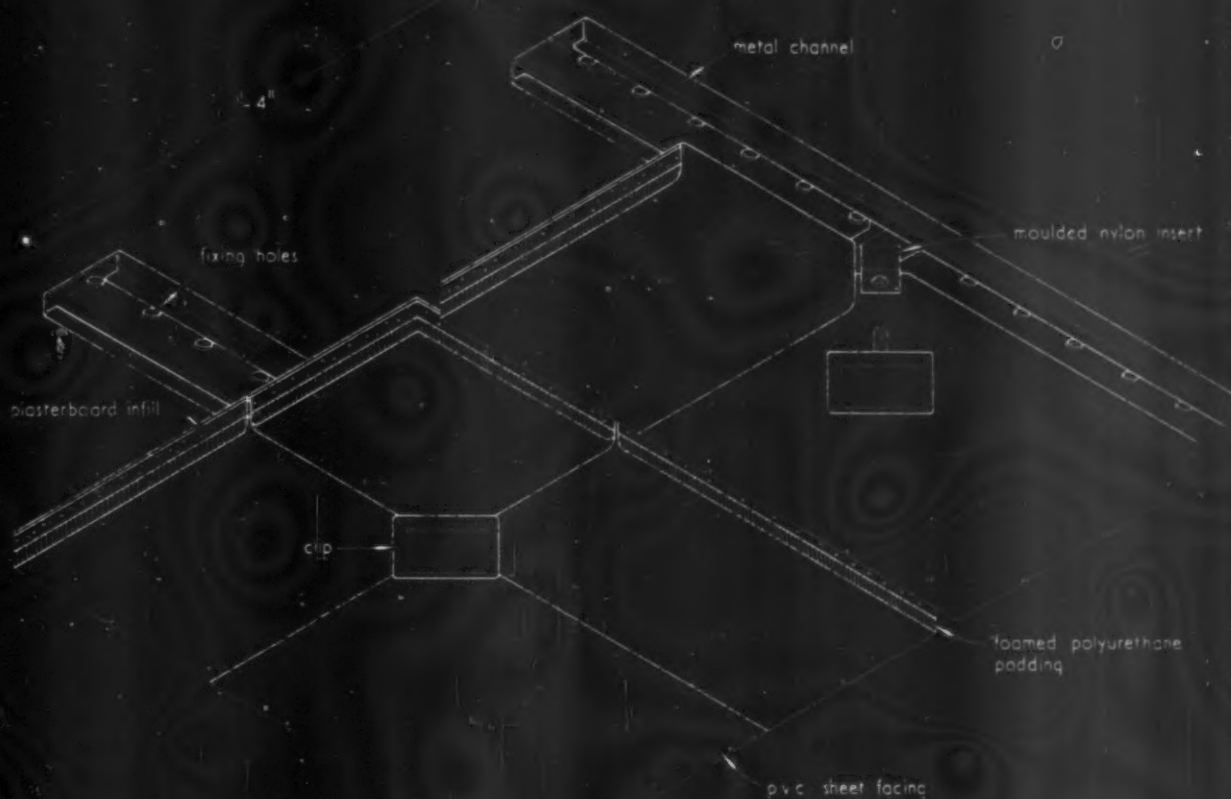
Building and joinery: J. C. Burns & Co. Ltd. **Glazing:** G. & J. Rae Ltd. **Plumbing:** David Kirk Ltd. **Plaster work:** Williamson Brothers Ltd. **Tile and terrazzo:** Galbraith & Winton Ltd. **Asphalt:** Scottish Speedwell Co., Ltd. **Metal windows:** Henry Hope & Sons Ltd. **Floor finishes:** Rowan & Boden Ltd. **Heating installation:** Brightside Engineering Co. Ltd. **Electrical installation:** Campbell Douglas & Co. Ltd. **Painting:** George Law & Son.



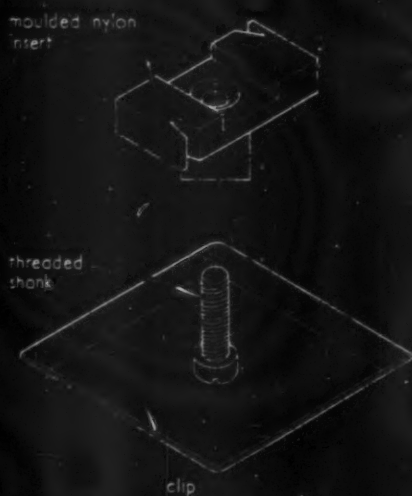
CEILINGS | COMPOSITE | PANELS

22.G1

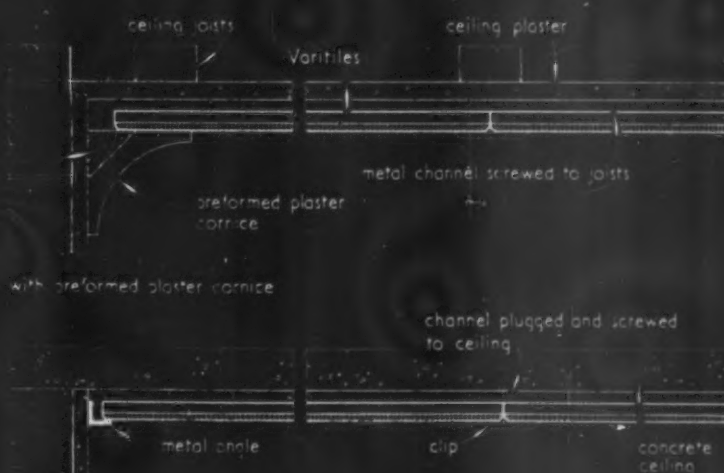
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GENERAL ASSEMBLY OF COMPONENT PARTS



SKETCH OF INSERT AND CLIP



TYPICAL FIXING DETAILS

BLUE HAWK VARITILES CEILING AND WALL PANELS

Manufacturers: The British Plasterboard (Manufacturing) Ltd

building illustrated

Sanitary fittings

Type of fitting.	No. of each type
W.c.s	16
Wash basins	77
Baths	15
Sinks	12

Heating and ventilation

Heating from radiant panels under sills to bedrooms.
Natural ventilation giving $1\frac{1}{2}$ air changes per hour.
U-value of walls: 0.2 brick, cavity and breeze block.
U-value of roof: 0.18 plaster, concrete, woodwool and asphalt.

Electrical installation

Mild steel conduit, boxes, etc. Tungsten lighting throughout.

Type of point.	No. of each type.
Light points	299
13-amp	43
Radios	68

Total of services: 20s 5½d

Drainage

Fireclay main drains at sides of building.
Soil and waste joins drain from day unit before connecting to main public sewer.

Other external elements

Water mains
Site clearance
Car park
Roads and paths
Site levelling

Cost per sq. ft. of floor area:

£71,155 (net cost excluding drainage and external works)

17,724 sq. ft. (measured inside external walls)

COST COMMENTS

Preliminaries appear to be higher than might be expected but

th contract took three years in all to complete. This time will account for some of the overheads, but the latter also allow for variation in wages and materials, the day unit taking a larger proportion of these increases than the night unit, which was completed first.

Windows. The windows in both day and night units are described as steel sashes and pressed metal sills, but they are considerably different in detail, design and cost:

Night unit: 5,484 sq. ft. for £4,907 = 17s. 11d. sq. ft.

Day unit: 3,971 sq. ft. for £4,040 = 20s. 4d. sq. ft.

Upper Floors. Spans and superloads reflect the cost of construction, which work out per square foot of suspended floor area at 5s. 11d. for the night unit in comparison with 6s. 8d. for the day unit.

Floor Finishes.—The night unit has 3-in. thick screeds accounting for the rate 6s. 1½d. sq. ft. floor area, when none of the floor finishes exceeds 4s. 2d. in cost.

General.—Examination of the plan shape of the two buildings shows the following external perimeter ratios:

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3½

2½

3½

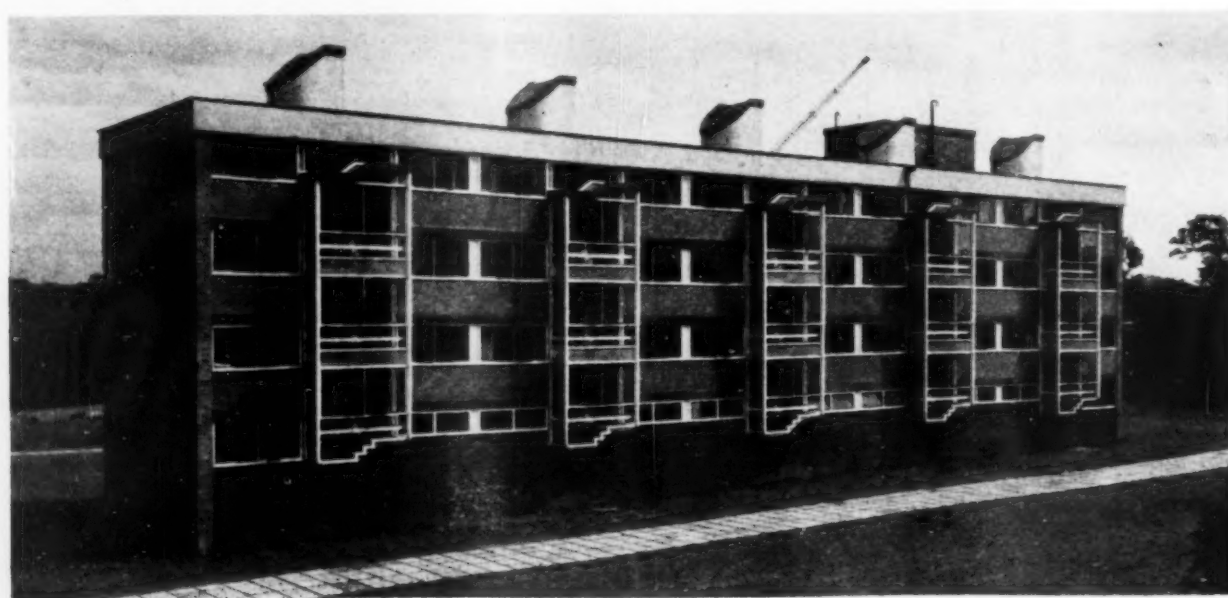
1 2½

1 4½

CONTRACTORS

Building and joinery: J. C. Burns & Co. Ltd. **Glazing:** G. & J. Rae Ltd. **Plumbing:** David Kirk Ltd. **Plaster work:** Williamson Brothers Ltd. **Tile and terrazzo:** Galbraith & Winton Ltd. **Asphalt:** Scottish Speedwell Co., Ltd. **Metal windows:** Henry Hope & Sons Ltd. **Floor finishes:** Rowan & Boden Ltd. **Heating installation:** Brightside Engineering Co. Ltd. **Electrical installation:** Campbell Douglas & Co. Ltd. **Painting:** George Law & Son.

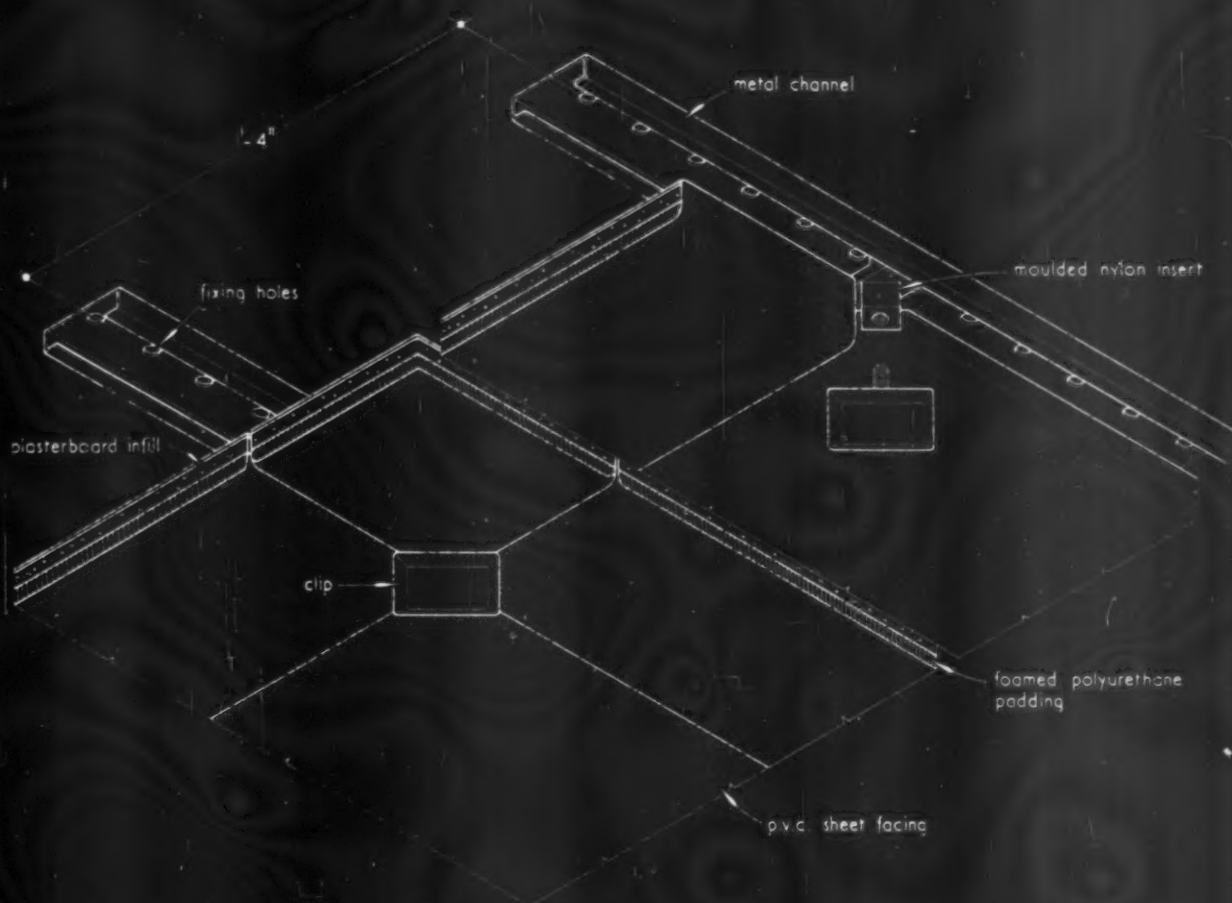
80 3½



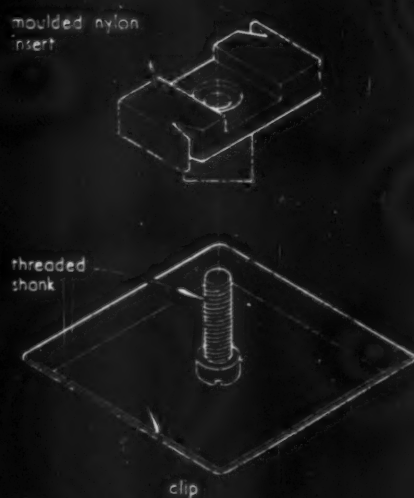
CEILINGS | COMPOSITE | PANELS

22.G1

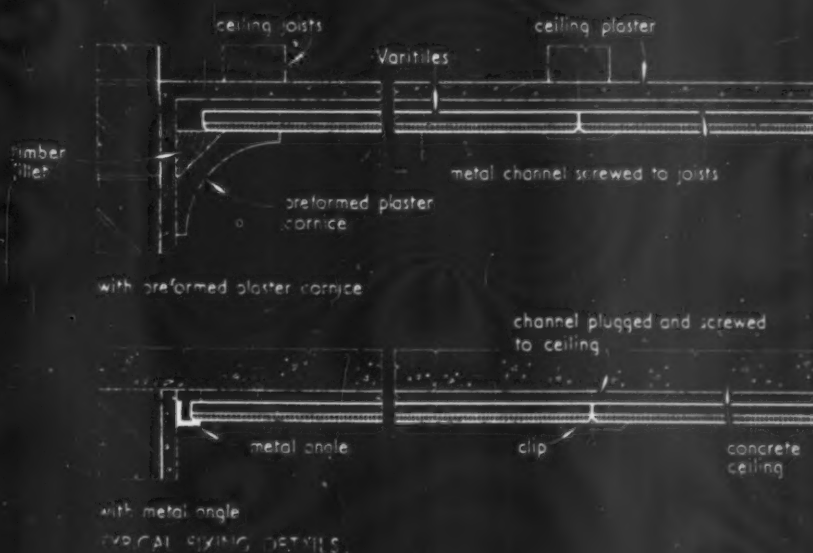
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GENERAL ASSEMBLY OF COMPONENT PARTS



SKETCH OF INSERT AND CLIP



TYPICAL FIXING DETAILS

22.G1 BLUE HAWK VARITILES CEILING AND WALL PANELS

This Sheet describes Varitiles, which are composite panels of plasterboard and foamed polyurethane, with a p.v.c. finish, for facing ceilings and walls. The fixing system is simple, consisting of clips which fit into channel members screwed to the supporting surface. The panels are easily cut, are demountable and cleaned by wiping with a damp cloth.

Material and Construction

The panels consist of $\frac{3}{8}$ -in. plasterboard faced with $\frac{3}{8}$ -in. foamed polyurethane and finished with sheet p.v.c. The p.v.c. sheet is bonded with adhesive and carried over the edges to the back.

Fixing Components

Channels: These are of $1\frac{1}{8}$ in. by $\frac{1}{8}$ in. by 20 gauge rust-proofed mild steel section as shown in the drawing on the upper face of the Sheet. $\frac{1}{8}$ -in. fixing holes are provided at 1-in. centres.

Fixing clip and insert: The clip which holds the corners of the panels is of metal as shown, with a threaded shank; an alternative clip in rigid p.v.c. is obtainable. The clip screws into a moulded nylon insert which clips in the channel section.

Size

The tiles are 1 ft. 4 in. square by $\frac{9}{16}$ in. thick.

Fixing

Where tiles are to be fixed to a ceiling, a means of supporting them at the edges must first be provided; for example, a metal angle section, timber moulding or preformed plaster cornice. The tiles should be set out from the centre of the room, in both directions if possible, in order to obtain a uniform width at the perimeter: where cut tiles are necessary at the perimeter they should not be less than 4 in. wide (or 5 in. if a cove cornice is used). The channel sections must be fixed at exactly 1 ft. 4 in. centres and a spacer bar should be used to ensure this. They are fixed to the ceiling joists across their run with galvanised or other rust-proof screws: concrete ceilings must be drilled and plugged to take the channel fixings. The clips are screwed into the nylon inserts as far as they will go and the inserts then snapped into the channel by sliding them in lengthways and then turning the clip in a clockwise direction: the cut-out corners of the insert make it possible for them to pass the flanges of the channel and once in, they are retained by the lips of the channel and can be pushed along to the required position. The clips are then unscrewed

sufficiently to permit insertion of the tiles. Where tiles are to be cut a sharp pointed knife should be used. A tolerance of $\frac{1}{16}$ in. less than the width required should be allowed and the tile cut through from the front to the plasterboard and down the sides in line to act as a guide. The tile is then turned over, cut across the back using a straight-edge and snapped in two. The cut edge can be smoothed with glass-paper or a planing tool if required. The final tightening of the clips should be left until all the tiles are in place; over-tightening should be avoided.

Thermal Insulation

The thermal conductance of Varitiles when fixed direct to an existing ceiling is 0.55 and with an air space of $\frac{1}{8}$ in. or more between them and the supporting surface, 0.49.

The following comparisons show how the U value of typical constructions can be reduced by the addition of Varitiles fixed below the ceiling.

(a) Pitched roof, tiles on battens, felt, plasterboard, ceiling: U = 0.43.

With Varitiles: U = 0.24.

(b) Pitched roof, tiles on battens, felt, insulating plasterboard ceiling: U = 0.23.

With Varitiles: U = 0.16.

(c) 6-in. concrete roof, finished asphalt: U = 0.55.

With Varitiles: U = 0.28.

Finish

The panels are available in a wide range of patterns and plain colours and in black or white.

Maintenance

The p.v.c. surface is easily maintained by wiping with a damp cloth. It is not adversely affected by petrol, but is damaged by the concentrated fumes of trichloroethylene.

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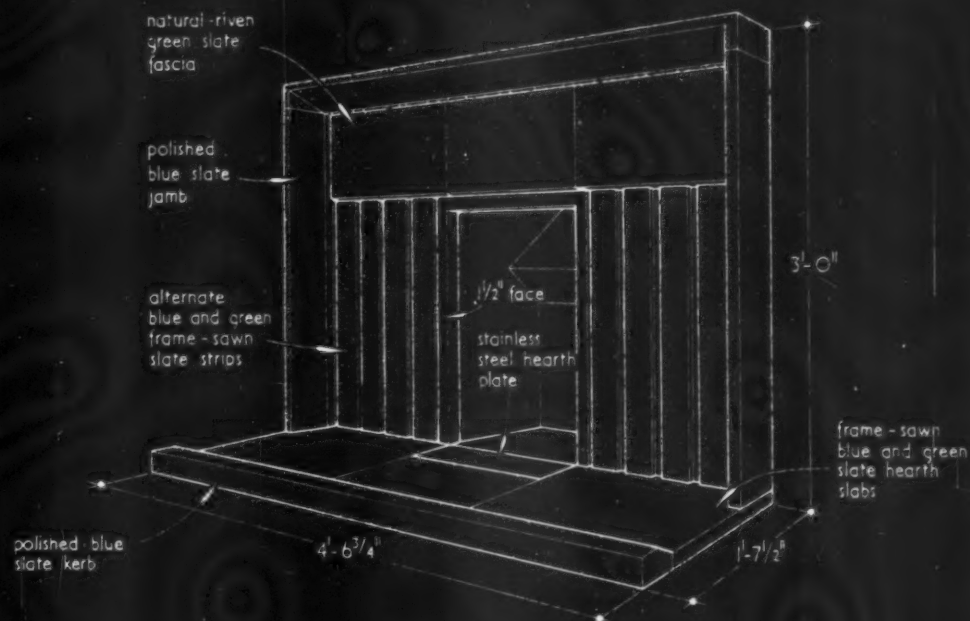
The British Plaster Board (Manufacturing) Limited

Address: Ferguson House, 15-17, Marylebone Road, London, N.W.1.

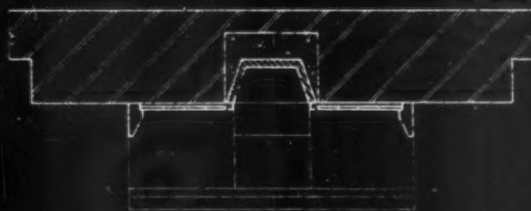
Telephone: Hunter 4021.

SPACE HEATING | UNITS | SOLID FUEL

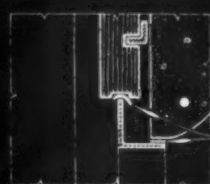
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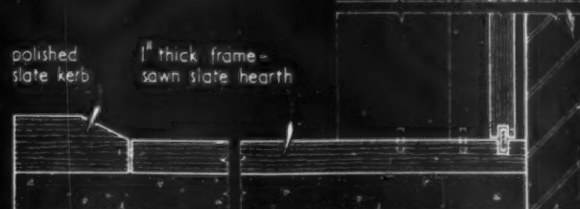
PERSPECTIVE SKETCH OF TYPICAL FIREPLACE



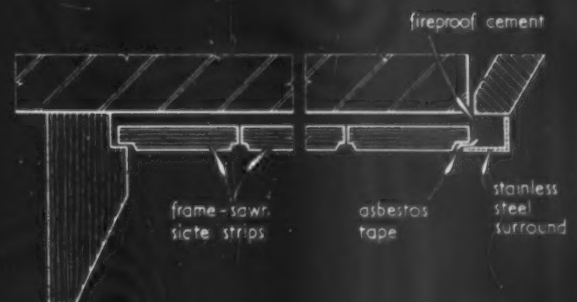
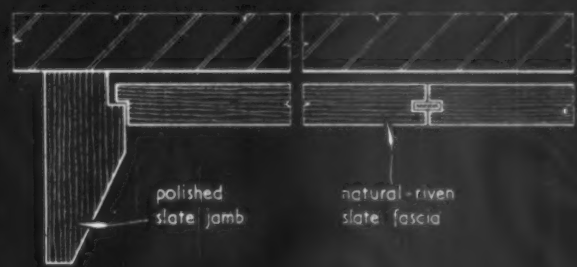
PLAN AND SECTION THROUGH TYPICAL INSTALLATION



SECTION THROUGH HEAD OF FIRE OPENING



SECTION THROUGH FIREPLACE



SECTIONS THROUGH JAMB

29.B4 ·SLATEKRAFT· SLATE FIREPLACES

This Sheet describes Slatekraft fireplace surrounds. Slate slabs are used in conjunction with stainless steel trim to suit standard firebacks. The design illustrated on the face of the Sheet is obtainable as shown or it may be modified both in size and design to suit particular requirements.

Material and Construction

The surround is made up of finest Welsh blue and Westmorland green slate specially selected and carefully fitted. Several textures and finishes have been used with the two colours as follows:

Natural riven green: a heavily-textured surface produced by the natural cleavage of the slate.

Frame sawn green } a close vertically-ribbed texture.
Frame sawn blue }
Polished blue: a fine polished surface (normally used for sills).

The stainless steel trim can be supplied in satin finish or polished. A stainless steel hearth plate is fixed at the front of the fire opening to protect the slate.

The stainless steel trim is in one piece and the slate is protected from intense and sudden heat by asbestos tape as shown in the drawing on the face of the Sheet. The fascia is normally made up in three pieces doweled together. The vertical strips on either side of the fireplace have chamfered rebates at the joints and are doweled to the fascia and rebated to the jambs of the surround. The head of the surround is stooped on both ends so that it is supported on the jambs, and head and jambs are doweled together. The front kerb slopes to the level of the hearth, as shown, and is doweled to it. When fixed together the entire fireplace unit is quite rigid.

Sizes

The design illustrated is 3 ft. 0 in. high by 4 ft. 6½ in. wide by 1 ft. 7½ in. deep overall. The stainless steel trim is 1½ in. wide on the face and is fabricated for a standard fire opening 1 ft. 6 in. wide by 1 ft. 10 in. high. It can also be made for a 1 ft. 4 in. fire opening with corresponding reduction in the width of the slate surround. Different types of stainless steel trim

(coved or angle wing design) may be used which increase the overall width of the complete fireplace by 1 ft. 2 in.: with these types, however, an additional set back of 4½ in. in the fire recess is required.

Fixing

Fireplaces can be supplied for fixing by the builder or supplied and fixed by the manufacturer. In the former case, in addition to the slate components, the stainless steel trim, hearth plate, and all necessary dowels are supplied.

Applications

The design illustrated is suitable for normal coal fire or smokeless fuel heating. The fire opening may be closed with a stainless steel plate to take an electric panel fire. Hearth ventilators can be accommodated where convector heating is required.

Maintenance

Occasional washing with soap and water is all that is necessary to keep the slate clean: abrasives should not be used. A good quality furniture polish, used very sparingly, may be used if desired.

Further Information

The manufacturer can supply components for specialised detailing of any design of fireplace. Other Slatekraft products include standard copings, sills, window surrounds, facing, etc.

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John Fletcher and Dixon Limited

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Telephone: Advance 6001.

Works: Caernarvon, North Wales.

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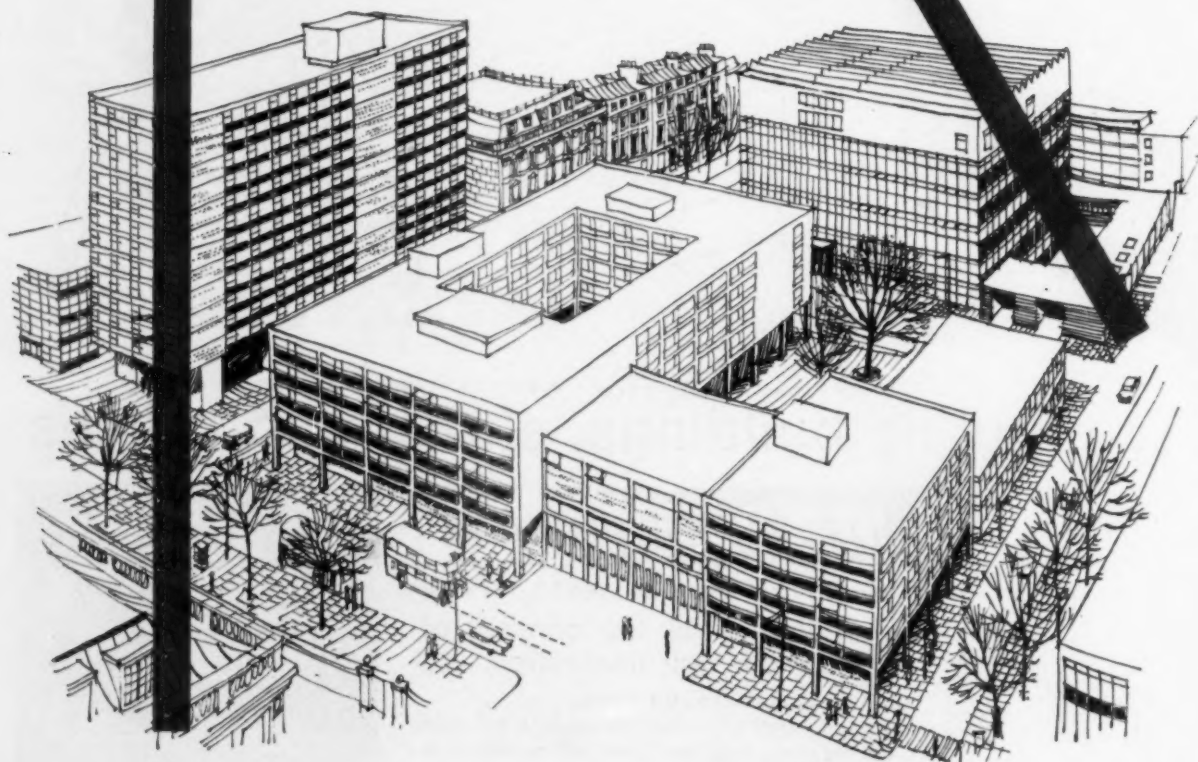
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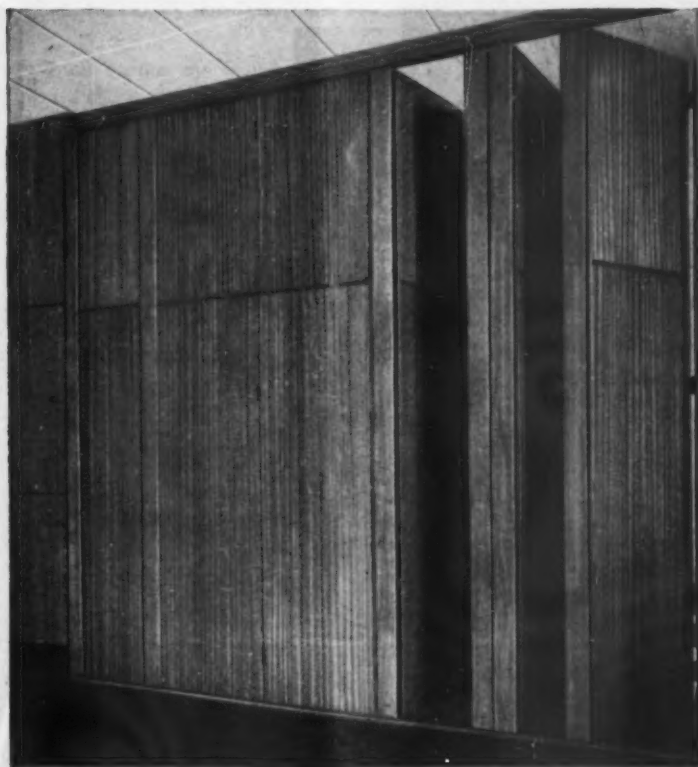
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Notting Hill Gate

The Notting Hill Gate development scheme is now well under way, and this week we illustrate the first part to be completed, an office block costing about £100,000 for United Lubricants Limited, which started construction in December 1958, and which the firm occupied a few days ago. The architects were Cotton, Ballard and Blow.



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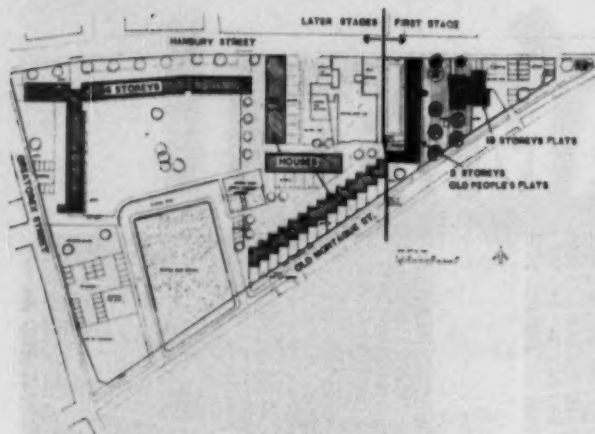
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Housing for Stepney



A 19-storey block of 73 flats has started construction at Hanbury Street and Old Montague Street, Stepney (designed by Hubert Bennett, chief architect L.C.C.). This is the first stage of developing a $5\frac{1}{2}$ -acre site, where the LCC plans to

provide a mixed development of 210 dwellings, including 3 terraces of 2-storey houses, a 2-storey block of old people's dwellings (on left of model) and a 6-storey block of flats and maisonettes, and to exclude vehicles from the area.



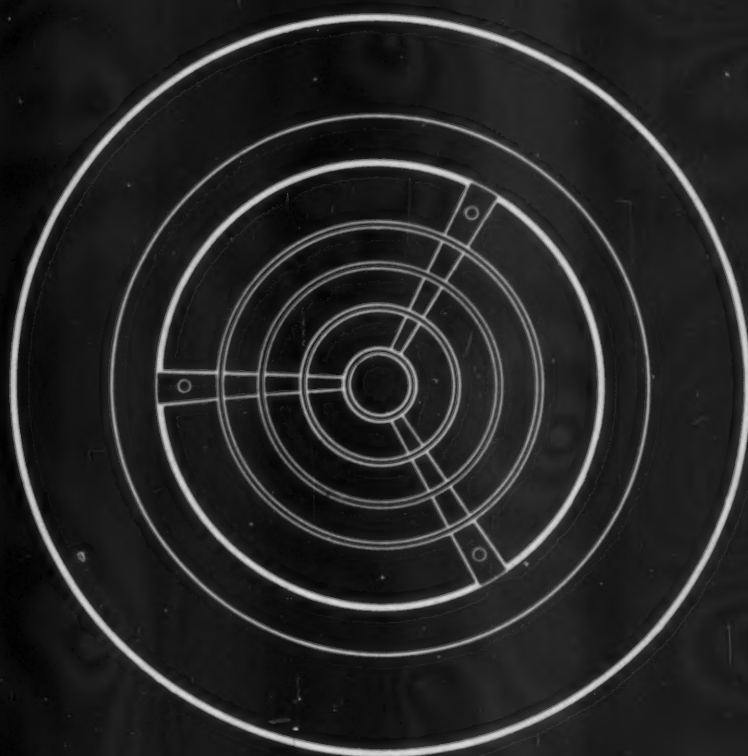
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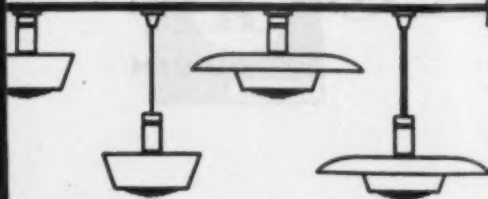
MA

A comprehensive leaflet giving full data and prices is available on request.

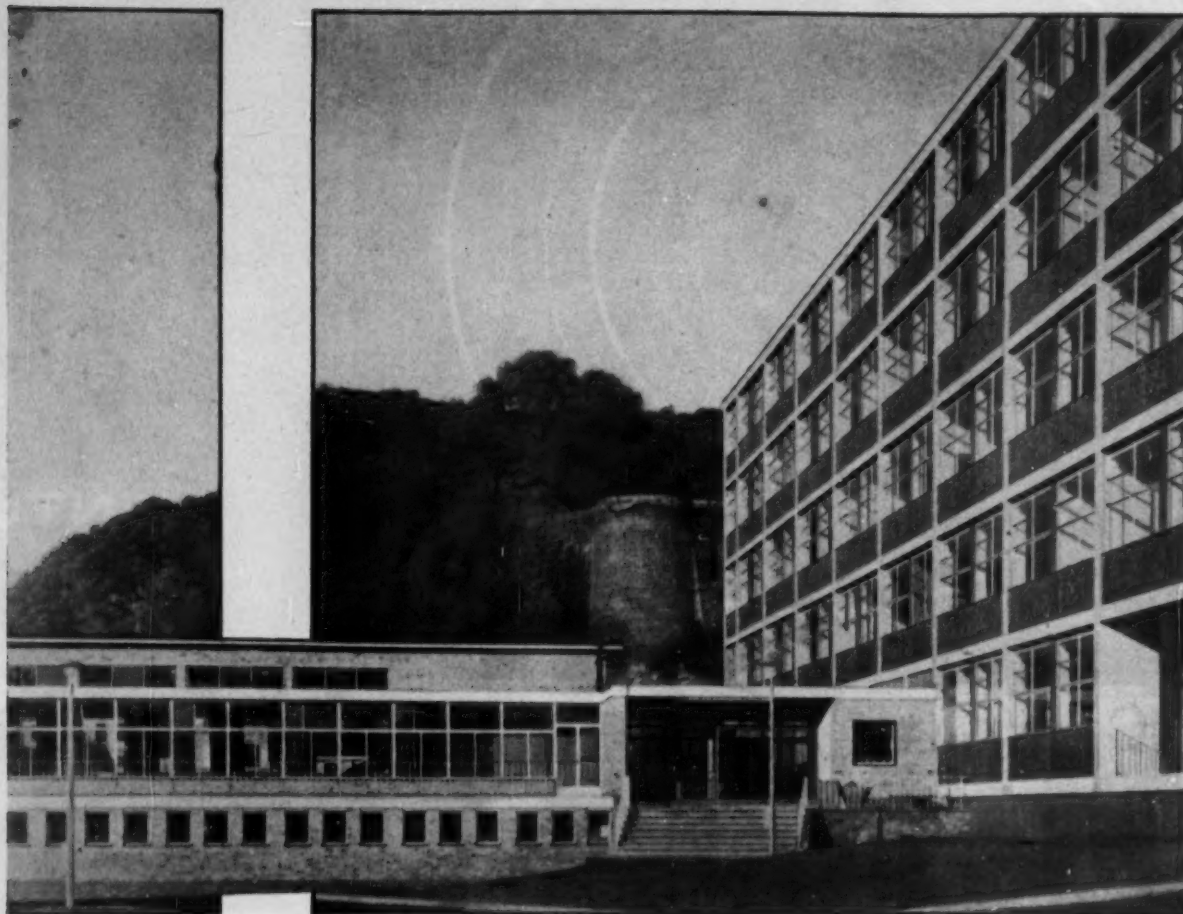
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R. M. Finch, Esq., O.B.E., M.I.C.E.

Chief Architect, J. R. Sketchley, A.R.I.B.A., Dip. T.P., A.M.T.P.I.

Architect-in-charge, D. R. M. Mason, Dip. Arch. (Leeds), A.R.I.B.A.

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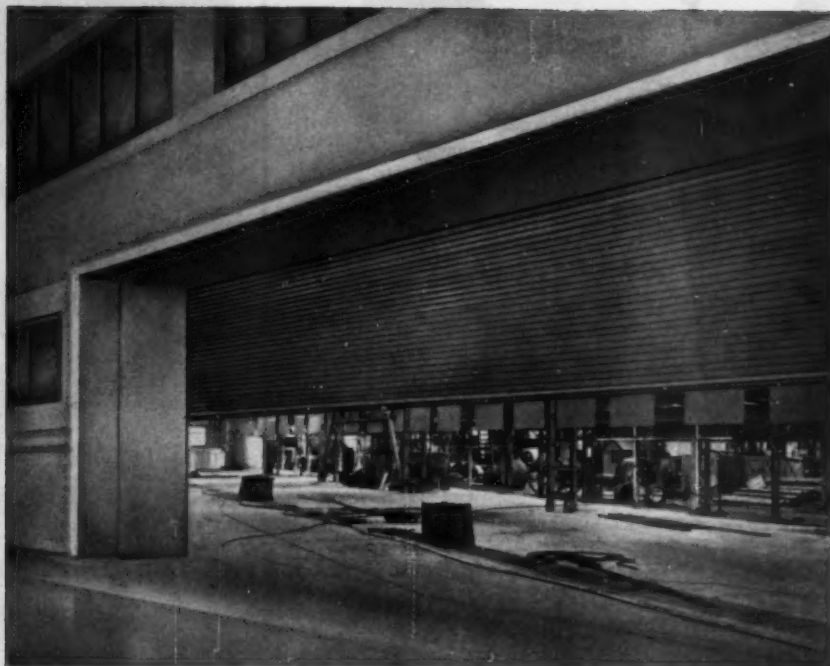
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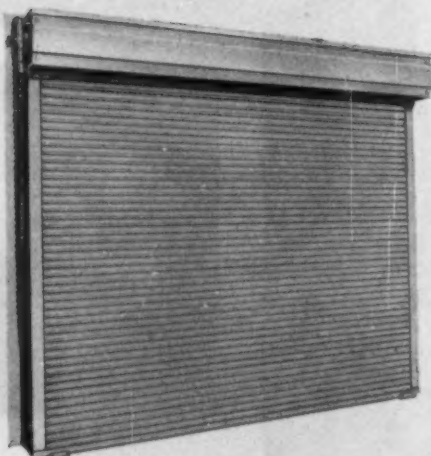
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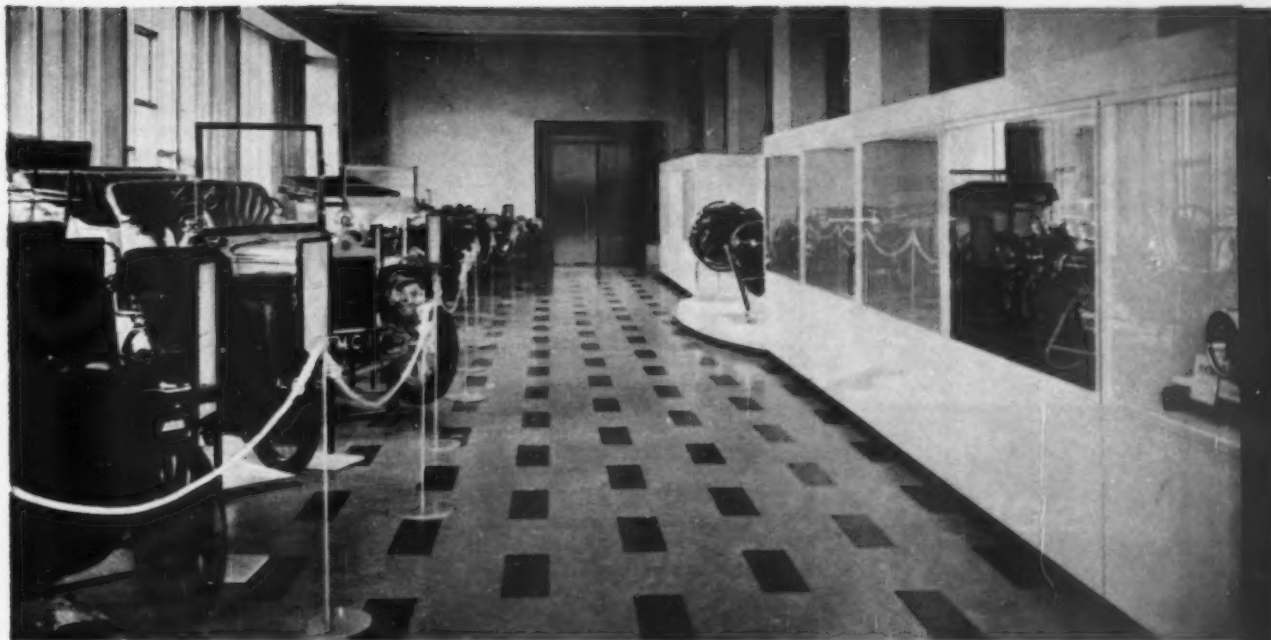
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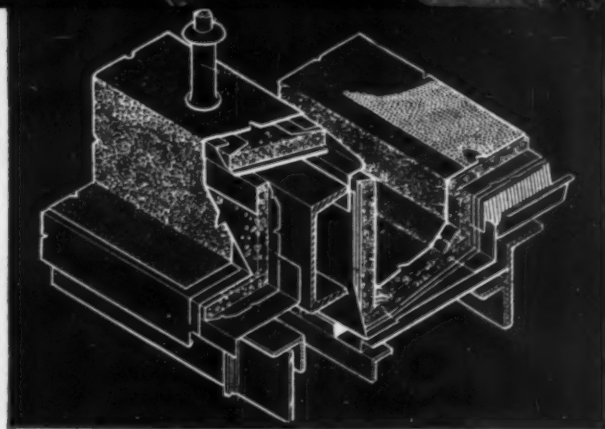
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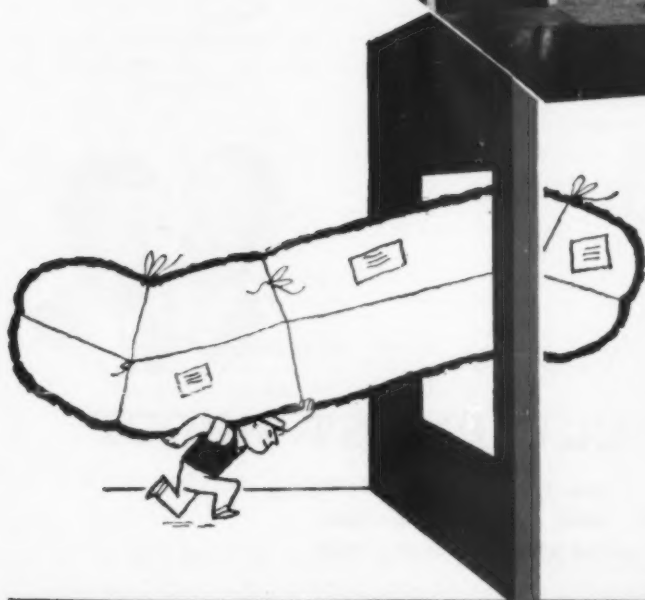
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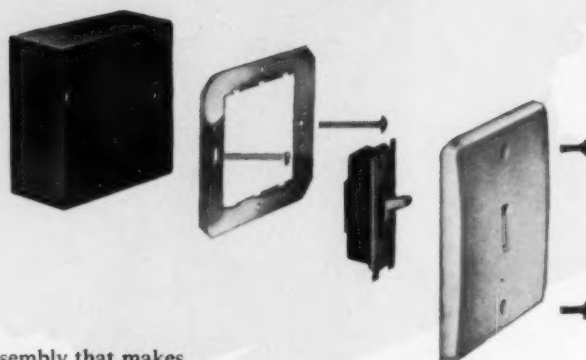
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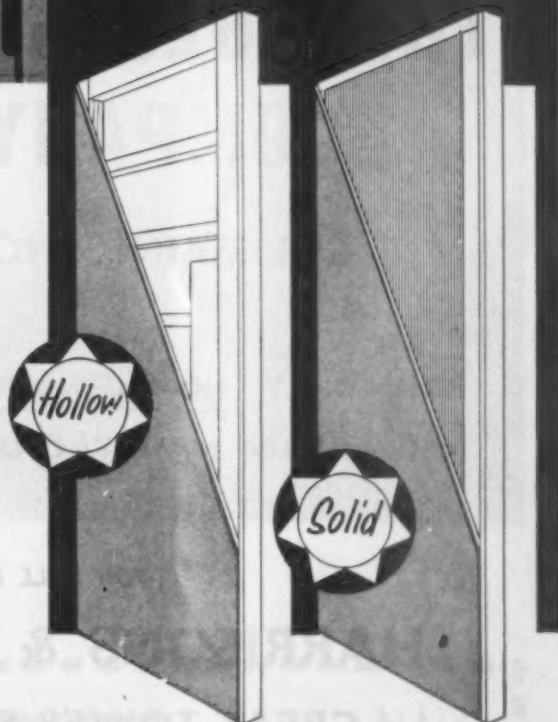
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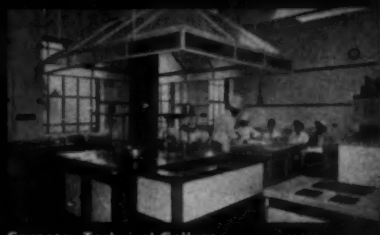
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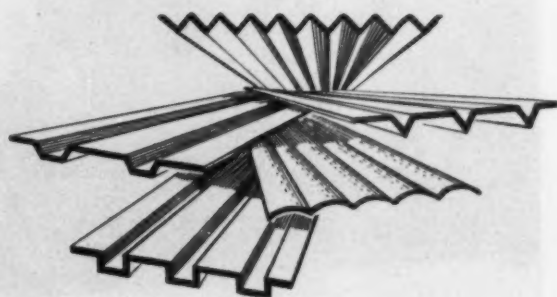
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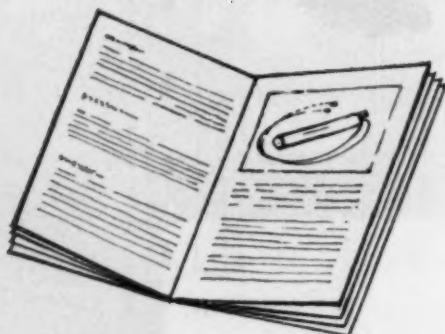
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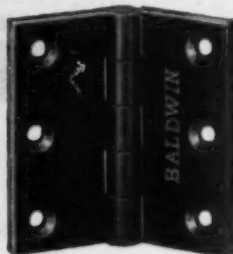


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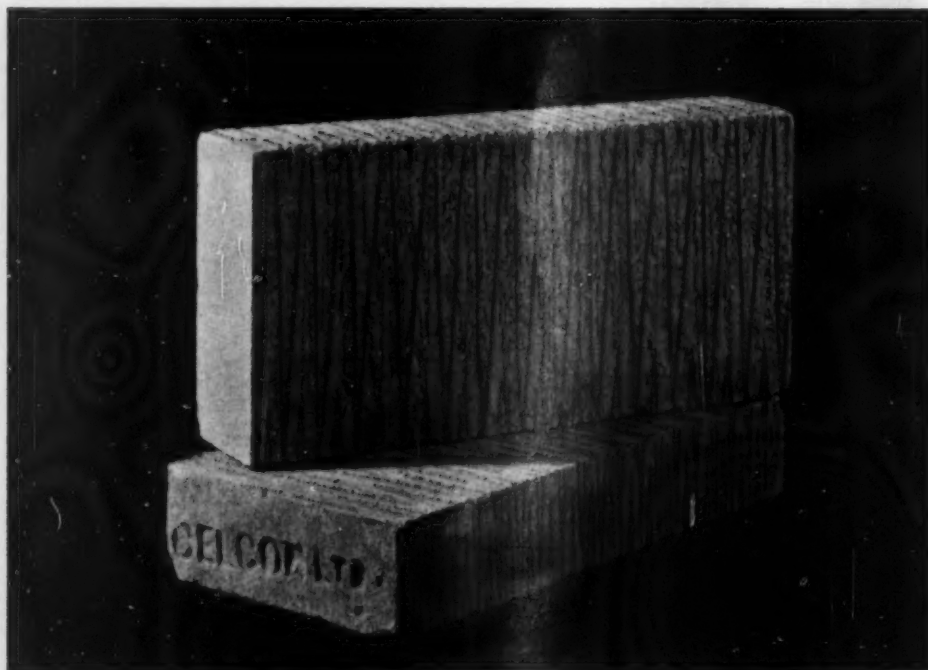
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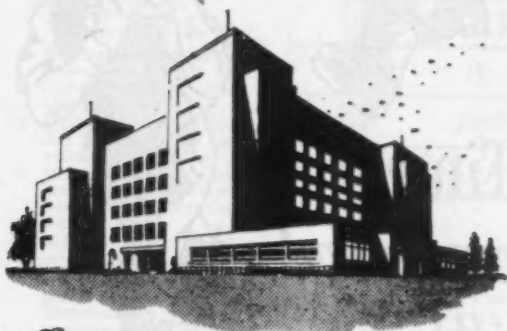
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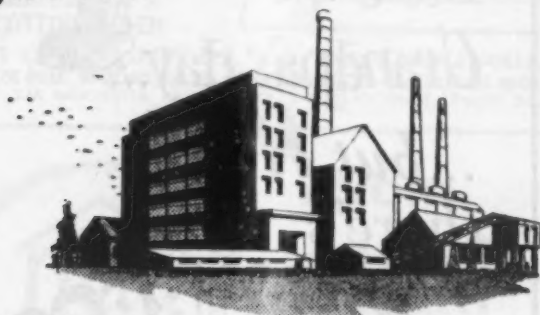
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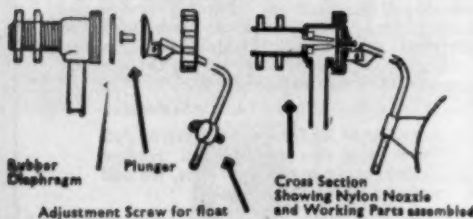
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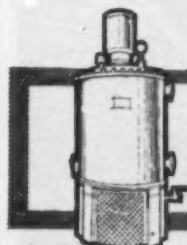
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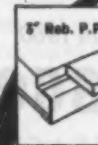


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The finished columns are 62ft. in length; they are made of three separate units cruciform in section, which taper from 1ft. 5in. at the base to 2ft. 10in. at the cap. To provide for $\frac{1}{16}$ in. plastic joints between sections the units had to be finished with great accuracy. All faces were ground to a smooth matt finish.

ARCHITECTS who require high grade concrete products are asked to send their enquiries to WOOLAWAY CONCRETE PRODUCTS LTD., who specialise in such work and in the production of decorative concrete panels.

WOOLAWAY CONCRETE PRODUCTS LTD. have recently been awarded a contract to make the fins for the Guild Chapel adjoining COVENTRY CATHEDRAL.

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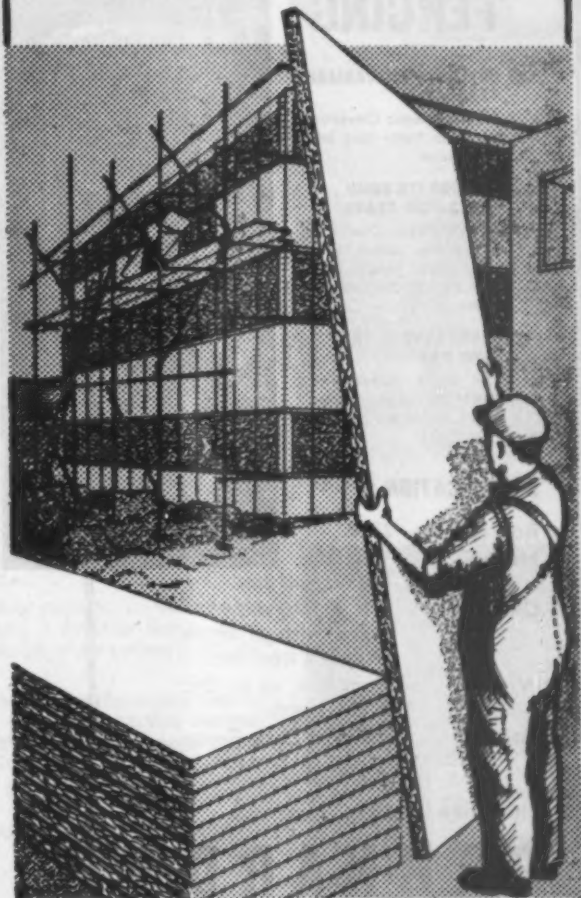
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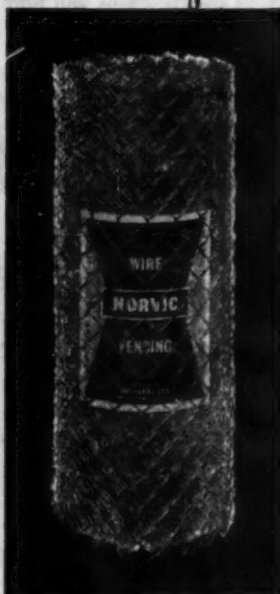
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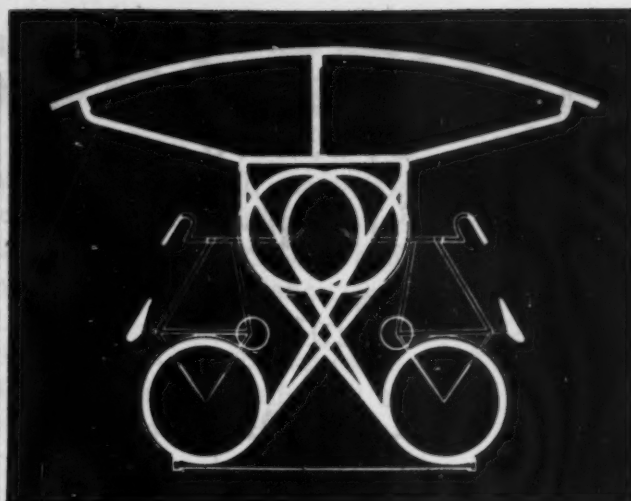
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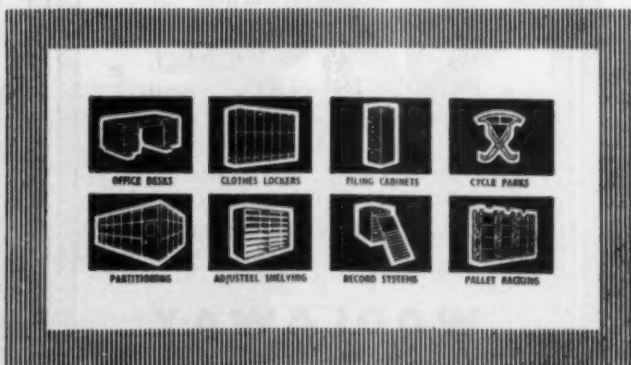
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building materials by CECIL C. HANDISYDE, A.R.I.B.A. Foreword by A. H. MOBERLY.

This book provides up-to-date information on building materials in a form most useful to architectural students and practising architects. In addition to traditional materials, Mr. Handisyde deals with the many new materials which have come into use during the last twenty-five years, and takes full account of the very considerable amount of recent scientific research which has been brought to bear on both old and new materials. He examines thoroughly those problems of increasing concern to architects today—to what extent will alternative materials provide comfortable buildings, buildings that are warm and quiet and reasonably secure against fire, as well as being weatherproof and strong enough for their purpose.

Size: 9 in. by 6 in. Containing 342 pages including 62 diagrams and halftone illustrations. Third edition, 30s. net, postage 1s. 5d.



structure in building by W. FISHER CASSIE, PH.D., M.S., F.R.S.E., M.I.C.E., M.I.STRUCT.E., and J. H. NAPPER, M.A., F.R.I.B.A., A.M.T.P.I. Foreword by W. A. ALLEN, B.A.R.C.H., A.R.I.B.A.

Steel, concrete, aluminium alloys, etc., have revolutionised structural design, and although this field is largely an engineering one, today it is essential for the architect to understand something about it. No attempt is made in the book to give the formulae and methods of analysis and design used by the structural engineer; rather it provides the architect and student with mental pictures of how structures behave, for without the ability to 'feel' how forces act and react in the support of buildings, the architect cannot hope to put into practice the spatial conceptions of present-day architecture.

The book fills a gap in the literature on structural design and provides the architect with all the information he needs about systems of construction, their character, possibilities and limitations, to enable him to produce designs for new buildings with economy and imagination.

Size: 9 in. by 6 in. Containing 268 pages including over 150 diagrams and halftone illustrations. Second impression, 30s. net, postage 1s. 4d.



building elements by R. LLEWELYNDAVIES, M.A., F.R.I.B.A. and D. J. PETTY, M.B.E., M.A., A.R.I.B.A. Foreword by W. A. ALLEN, B.A.R.C.H., A.R.I.B.A.

This book deals with the structural elements of which a building consists, its walls, roofs, floors, windows, etc., and explains the functional requirements a building has to meet. It then describes how these requirements are met in the actual design of the various structural elements.

The book is divided into two parts, the first of which contains chapters on the requirements of building elements under the headings of Design and Expression; Weather Exclusion; Thermal Insulation; Sound Insulation; Fire Protection. In Part 2 chapters deal with the principal kinds of External Walls; Internal Walls; Roofs; Floors; Stairs; Flues and Fireplaces; Windows and Doors; which are in current use, and show how far and in what way, each of these elements fulfils the requirements described in Part 1.

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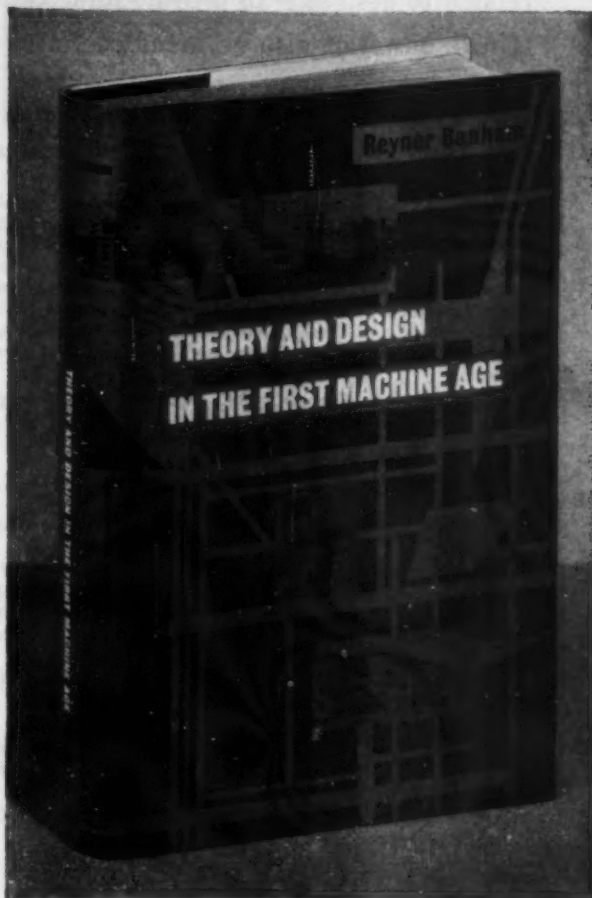


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Advertisements should be addressed to the Advertisement Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post Friday morning for inclusion in the following Thursday's paper.

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

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

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Application forms and further particulars may be obtained from The County Architect, County Buildings, Huntingdon; completed forms should be returned to the undersigned as soon as possible.

A. C. AYLRARD,
Clerk of the County Council.

County Buildings,
Huntingdon. 3246

LANCASHIRE COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT
SENIOR ASSISTANT ARCHITECTS, N.J.C.
Scale "E"-£1,320 to £1,485 (now under review) according to experience, and covered by Lancashire County Council Superannuation Scheme.

The Governors of Salford College of Advanced Technology are proceeding with a major expansion of the College. This project is to be of advanced design, offering opportunity for experience in the design of buildings to meet the needs of pioneer scientific processes, which are estimated to cost £3,000,000.

The team for this scheme will work with Messrs. Ove Arup & Partners, Structural Consultants, and will include Quantity Surveyors and Mechanical Engineers. The team will work in the County Architect's Office at Preston.

On completion of the project, Architects will be engaged on a wide variety of new buildings for the Lancashire County Council.

Application Forms and details of appointment from:— The County Architect,
P.O. Box 26,
County Hall,
Preston,

returnable by 4th November, 1960, quoting reference A/J. 3699

COVENTRY REDEVELOPMENT

Applications invited for the following Planning Division appointment:—

SENIOR GROUP PLANNING OFFICER
(Redevelopment Plans) Scale "B", £1,305-£1,485 per annum (plus approx. 12½ per cent revised scale awaited).

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Application forms from Department of Architecture and Planning, Council House, Earl Street, returnable 14 days publication. 3795

COUNTY BOROUGH OF PRESTON

APPOINTMENT OF ASSISTANT ARCHITECT
(Salary A.P.T. IV, £1,140-£1,310)

Applications are invited for the above-mentioned appointment in the Borough Surveyor's Department. Candidates must be Registered Architects and Corporate Members of the R.I.B.A.

The programme of works is large and varied and the appointment affords opportunities for good experience, particularly in educational buildings.

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

Forms of application can be obtained from the undersigned, to whom they must be returned, completed, not later than Tuesday, 8th November.

W. E. E. LOCKLEY,
Town Clerk

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COUNTY BOROUGH OF SOUTHAMPTON
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited for the following appointments:—

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(b) ASSISTANT ENGINEER, Grade A.P.T. III/IV (£960-£1,310). Applicants must be graduates of the Institution of Civil Engineers or hold the Testamur of the Institution of Municipal Engineers, or an engineering degree, with experience in the design and construction of sewage disposal works. Commencing salary according to qualifications and experience.

(c) ENGINEERING ASSISTANT, Grade A.P.T. II (£815-£960). Must have completed professional training, passed the Intermediate examination of a recognised engineering institution and have had subsequent experience in a Municipal Engineer's office.

The appointments are subject to the N.J.C. conditions of service, with housing accommodation available in approved cases, and approved removal expenses reimbursable up to a maximum of £50.

Apply on application forms obtainable from the Borough Engineer and Surveyor, Civic Centre, Southampton, returnable by not later than Monday, 7th November, 1960. 3791

BEDLINGTONSHIRE URBAN DISTRICT COUNCIL

ASSISTANT ARCHITECT

(Male or Female)

Applications are invited for the undermentioned appointment in the Surveyor's Department.

Assistant Architect. Salary in accordance with Special Grade commencing at £880 per annum. Applicants must have passed the Intermediate Examination of the Royal Institute of British Architects, or its equivalent, and have had considerable experience in architectural work, particularly housing and shop redevelopment. Housing accommodation will be made available in approved circumstances.

Applications accompanied by names of three referees to be delivered to the undersigned not later than Friday the 4th November 1960.

F. S. FORSTER,

Clerk to the District Council.

Council Offices,
Bedlington,
Northumberland.
10th October, 1960. 3762

LONDON ELECTRICITY BOARD

ARCHITECTURAL ASSISTANTS

Applications are invited for the above positions in the Chief Engineer's Architect's Section at Lesco House, Stamford Street, S.E.1.

Applicants should be studying for, or have passed, the Intermediate Examination of the R.I.B.A., be capable draughtsmen and have had several years' experience in an architect's office.

Salary within the range £940-£1,065 p.a. incl. Application form obtainable from the Personnel Officer, 46 New Broad Street, E.C.2, to be returned completed within 14 days of the publication date of this notice. Please quote ref. PER/V/2997/A. 3744

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Applications are invited from Qualified Architects, preferably with experience in Redevelopment work.

The appointment, within the salary scale £1,140-£1,228 (i.e. £100 in excess of Admin. Grade D of the N.J.C. Scheme) will be subject to the Town Council's Superannuation Scheme and N.J.C. Conditions of Service, and the successful applicant will require to pass a medical examination.

If required, the tenancy of a Council house will be given to the successful applicant.

Applications, stating age, qualifications and experience, together with copies of three recent testimonials, or the names of three referees, should be lodged with the undersigned not later than 2nd November, 1960.

GEORGE D. GRANT,

Town Clerk.

Municipal Chambers,
Dumfries.
12th October, 1960. 3753

METROPOLITAN BOROUGH OF GREENWICH

APPOINTMENT OF

SENIOR ARCHITECTURAL ASSISTANT

Applications are invited from suitably qualified persons with experience of multi-storey building, for appointment in the Borough Engineer and Surveyor's Department, at a salary of £890 to £1,190 per annum (including London weighting). The commencing salary will be according to qualifications and experience.

The successful candidate will be given opportunities for designing schemes and bringing them through to completion, as part of a varied and imaginative building programme in historic Greenwich.

Application forms obtainable from the Town Clerk, Town Hall, Greenwich, S.E.10, returnable by noon on Wednesday, 2nd November, 1960.

G. C. TURK,

Town Clerk.

Town Hall,
Greenwich,
S.E.10. 3754
October, 1960.

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FOUR ARCHITECTURAL ASSISTANTS

Within scale A.P.T. IV according to experience (£1,185-£1,355 inclusive). Must have recognised architectural qualifications.

JUNIOR ARCHITECTURAL ASSISTANT

A.P.T. I (£645-£815 plus London weighting). Full particulars and forms of application obtainable from Borough Engineer, Town Hall, Ealing, W.5.

Closing date 31st October, 1960.

E. J. COPE-BROWN,

Town Clerk.

3719

BUCKS COUNTY COUNCIL

Applications are invited for the following appointments in the County Architect's Department:—

ASSISTANT COUNTY ARCHITECT, J.N.C.

Scale "D", £1,530-£1,755 p.a.

ASSISTANT ARCHITECT, J.N.C. Scale "C",

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

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B. POOLEY,

County Architect.

County Offices,
Aylesbury,
Bucks. 3768

BOROUGH OF ENFIELD

Borough Engineer and Surveyor's Department

(Non-County Borough in the County of Middlesex)

Population 109,700. Area: 12,406 acres.

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£815-£950 per annum plus London weighting.

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A.P.T. I, £645-£815 per annum plus London weighting.

The commencing salary will be fixed at points within the scale commensurate with qualifications and experience.

There is a large varied programme of work, including the redevelopment of Clearance Areas and other areas scheduled for Comprehensive Development.

Housing accommodation may be made available in appropriate cases. The Council is also prepared to consider 100 per cent. advances to successful applicants for house purchase within the Borough.

Saturday mornings are normally free from duty.

Application forms, obtainable from H. D. Peake M.Sc.(Eng.), M.I.C.E., Borough Engineer & Surveyor, 7 Little Park Gardens, Enfield, Middlesex, must be delivered to the undersigned not later than Monday, 7th November, 1960.

CYRIL E. C. R. PLATTEN,

Town Clerk.

Public Offices,
Enfield, Middx. 3772

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Write at once for an interview, stating age, present appointment and salary, details of qualifications and experience, and the names of two referees.

R. F. BROOKS GRUNDY,

General Manager.

CORBY DEVELOPMENT CORPORATION,

Spencer House,

Corby, Northants. 3864

**BOROUGH OF ALTRINCHAM
ARCHITECTURAL ASSISTANT**

(Special Grade £340-£1,145)
Applications are invited from suitably qualified persons for the above appointment in the Borough Surveyor's Department.

The appointment will be subject to the National Joint Council's Conditions, the Local Government Superannuation Acts 1937 and 1963, to one month's notice on either side and to the passing of a medical examination.

Applications, stating age, qualifications and experience, with the names of two referees, should be delivered to me not later than Friday, 4th November, 1960.

Consideration will be given to the provision of housing accommodation.

Candidates must disclose whether they are related to any member or senior officer of the Council.

Canvassing will disqualify.

E. GRAHAM THOMAS
Town Clerk.

Town Hall,
Altrincham.
October, 1960. 3770

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Apply naming two referees to Secretary, 10 Augustus Road, Birmingham, 15, as soon as possible. 3790

**LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT**

SENIOR ASSISTANT ARCHITECTS—N.J.C.
Scale 'B.' £1,320 to £1,485 (now under review) according to experience.

Applications are invited from experienced, registered architects to deal with a wide variety of buildings, including Magistrates' Courts, Police Training Schools and Technical Colleges.

Application forms and details of appointment from:—The County Architect, P.O. Box 26, County Hall, Preston, returnable by 4th November, 1960, quoting reference A/AJ. 3691

**UNIVERSITY OF THE WITWATERSRAND,
JOHANNESBURG
DEPARTMENT OF ARCHITECTURE AND
QUANTITY SURVEYING**

Applications are invited for appointment to a vacant post of **LECTURER IN ARCHITECTURE**. The successful candidate must be, or must undertake to become, a member of the Institute of South African Architects and must have good experience of architectural practice. Teaching experience will be an added recommendation, and the appointee must be able to lecture on aspects of architecture concerned with design and construction and to conduct practical studio work in design.

Duties are to be assumed early in 1961, on a date to be arranged.

The salary will be according to the scale £1,230 x 60—£1,710. A commencing salary above the minimum notch may be paid on the grounds of special qualifications or experience. In addition, the University is at present authorised to pay an annual vacation savings bonus of up to £60 in September each year.

Membership of the University Institutions Provident Fund is compulsory and involves a contribution at the rate of 7% of the substantive salary. Membership of the University Staff Medical Aid Fund is compulsory in the case of an officer who is found eligible in accordance with the rules of the Fund.

Further particulars and information as to the method of application should be obtained from the Secretary, Association of Universities of the British Commonwealth, 36 Gordon Square, London, W.C.1.

Applications close, in South Africa and London, on 30th November, 1960. 3939

**CITY OF OXFORD EDUCATION COMMITTEE
COLLEGE OF TECHNOLOGY**

Applications are invited for the post of **LECTURER IN CONSTRUCTION** for work with students of Architecture, Building and Quantity Surveying. Applicants should be associates of the R.I.B.A. preferably with School training, and have had good professional and some teaching experience.

Salary on Burnham Technical Scale: £1,370 x 435 to £1,550 per annum. Increments above the minimum of the scale may be allowed for approved professional experience.

Further particulars and application form (stamped addressed envelope) can be obtained from the Principal, College of Technology, Headington Road, Oxford, to whom applications should be returned by November 11, 1960. 3938

**BOROUGH OF TAUNTON
ARCHITECT'S DEPARTMENT**

Applications are invited for the following appointments in the Borough Architect's Department.

1. **ASSISTANT ARCHITECTS**
Grade APT IV (£1,140-£1,310 p.a.)
2. **ASSISTANT ARCHITECTS**
Special Grade (£340-£1,145 p.a.)
3. **ARCHITECTURAL ASSISTANTS**
Grade APT II-III (£815-£960-£1,140 p.a.)
4. **ARCHITECTURAL DRAUGHTSMAN**
(General Division (£260-£630 p.a.))

The Council have an interesting programme of estate development and redevelopment schemes, including flatted accommodation, groups of shops, old people's accommodation, market offices and other ancillary buildings.

The staff appointed will work in small self-contained teams and will be responsible for the design, construction and management of projects.

Facilities will be given to persons wishing to take an approved part time study course with the intention of obtaining qualifications.

The posts are superannuable, subject to medical examination, and to National Conditions of Service. Applications stating age, present position, and salary qualifications, experience and names of two referees to be sent to C. Bacon, F.R.I.B.A., Borough Architect, Flock House, Station Road, Taunton, within 14 days of the appearance of this advertisement.

Housing accommodation will be made available to suitable applicants if required.

K. A. HORNE
Town Clerk.
3940

LANCASHIRE COUNTY COUNCIL

PLANNING ASSISTANT (Development Control) required at ST. ANNES-ON-SEA. Work provides scope for initiative in preparing detailed schemes of new estate development in an area which includes holiday resorts and rural landscape.

Applicants should be studying for or possess a recognised qualification in architecture, surveying and/or town planning. The commencing and maximum salary, within range £645-£1,145 per annum, will be according to qualifications and experience. Car allowance.

Applications, stating age, qualifications, present appointment, experience and two referees, to the County Planning Officer, East Cliff County Offices, Preston, by the 1st November, 1960. 3882

**COUNTY COUNCIL OF ESSEX
ASSISTANT ARCHITECTS**

Continuing development of the County offers experience on large scale public buildings with opportunities to design and supervise for:—

1. **SENIOR ASSISTANT ARCHITECT**, A.P.T.D. Grade V, salary not exceeding £1,480.
2. **ASSISTANT ARCHITECTS**, Special Grade, salaries not exceeding £1,145.

Development includes homes for the aged, colleges, libraries, schools and other public buildings.

Application forms from H. Conolly C.F.E., F.R.I.B.A., County Architect, County Hall, Chelmsford, Essex (state post for which form is required), returnable with copies of three testimonials by 10th November, 1960. 3878

**BOROUGH OF MANSFIELD
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT**

Applications are invited from suitably qualified persons for the following vacancies in the Borough Engineer and Surveyor's Department (Architects' Section).

- (a) **JUNIOR ARCHITECTURAL ASSISTANT**, Grade A.P.T. I, £645-£815.
- (b) **QUANTITY SURVEYING ASSISTANT**, Special Grade, £840-£1,145.
- (c) **TRACER-DRAUGHTSMAN** (ARCHITECTURAL AND CIVIL ENGINEERING), General Division, £260-£630.

The commencing salary in each case will depend on age and qualifications and experience.

Applications, stating age, training, qualifications, present and past appointments and experience and the names of three referees, should be sent to the Borough Engineer and Surveyor, Carr Bank, Mansfield, appropriately endorsed to arrive not later than Monday, 7th November, 1960.

A. C. SHEPHERD
Town Clerk.

Carr Bank,
Mansfield. 3845

**COUNTY BOROUGH OF DERBY
BOROUGH ARCHITECT'S DEPARTMENT**

- (a) **SENIOR ASSISTANT ARCHITECT**, A.P.T. Grade IV (£1,140-£1,310 per annum). Qualifications: A.R.I.B.A.
- (b) **SENIOR ASSISTANT ARCHITECT**, Special Grade (£840-£1,145 per annum). Qualifications: A.R.I.B.A.

- (c) **JUNIOR ARCHITECT**, General Division (£220-£630 per annum). Qualifications: Probationer R.I.B.A.

- (d) **ASSISTANT ARCHITECT**, A.P.T. Grade I (£645-£815 per annum). Qualifications: Intermediate R.I.B.A.

- (e) **SENIOR QUANTITY SURVEYOR**, A.P.T. Grade IV (£1,140-£1,310 per annum). Qualifications: A.R.I.C.S. (Quantities) with appropriate experience.

- (f) **SENIOR QUANTITY SURVEYOR**, A.P.T. Grade III/IV (£960-£1,310 per annum). Qualifications: A.R.I.C.S. (Quantities) with appropriate experience.

- (g) **JUNIOR QUANTITY SURVEYOR**, General Division (£220-£630 per annum). Qualifications: Student Member R.I.C.S. with previous experience in Quantity Surveyor's Office.

- (h) **ASSISTANT QUANTITY SURVEYOR**, A.P.T. Grade I (£645-£815 per annum). Qualifications: Intermediate R.I.C.S. with good experience in working up Bills of Quantities and Final Accounts, measuring on site and taking off for small works.

- (i) **JUNIOR HEATING ASSISTANT**, General Division (£220-£630 per annum) or A.P.T. Grade I (£645-£815 per annum) according to qualifications.

Commencing salary according to qualifications and experience. Permanent superannuable appointments, subject to one month's notice and to medical examination. National Conditions of Service.

Forms of application obtainable from and to be returned to the Borough Architect, The Council House, Corporation Street, Derby, not later than THURSDAY, 10th NOVEMBER, 1960.

N. S. FISHER
Town Clerk.
3851

14th October, 1960.

**COUNTY BOROUGH OF EAST HAM
BOROUGH ENGINEER'S DEPARTMENT**

Applications are invited for the following temporary appointments:—

- SENIOR ASSISTANT ARCHITECTS—Grade IV**, £1,185-£1,355.

Salaries in excess of the minimum may be paid according to qualifications and experience. The appointments are for work on a new Technical College and are expected to be for a period of not less than two years.

Further details and application forms, returnable by 4th November, 1960, from the Town Clerk, Town Hall, East Ham, E.6. 3881

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LANARK
COUNTY
COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

The Council have decided that all Architectural Work of an Educational and Public Building Nature will in future be undertaken by the County Architect. Consequently a considerable reorganisation and expansion of the County Architect's Department at Motherwell is envisaged, creating a large number of vacancies for

ARCHITECTS AND ASSISTANTS

Salaries ranging from
£1,650 to £605

according to qualifications and experience.

The vacancies include a considerable number on salary range £1,450-£1,600 and afford opportunity to qualified Architects to apply their ability and knowledge to progressive design and modern construction techniques.

A Superannuation Scheme is in operation and a five-day week is under consideration.

Consideration given to applicants' housing requirements.

Applications to County Clerk,

P.O. Box No. 1, Glasgow. 3859

CHESTERFIELD RURAL DISTRICT COUNCIL
CHIEF ASSISTANT ARCHITECT

J.N.C. SCALE B (£1,480-£1,570)

Applications are invited from Architects who are corporate members of the Royal Institute of British Architects for the above appointment in the department of the Engineer and Surveyor, Mr. J. B. Wikeley, M.Eng. M.I.C.E., Barrister at Law, from whom further particulars may be obtained.

The Council have various interesting works in hand as well as a substantial housing programme.

An essential user car allowance up to Class II will be paid and the Council will reimburse removal expenses. Housing accommodation will be provided in appropriate cases.

Applications with the names of three referees should be sent to the Clerk of the Council, Rural Council House, Saltergate, Chesterfield, by Monday, 14th November, 1960.

H. O. HAWKINS,

Clerk of the Council.

Rural Council House,
Saltergate,
Chesterfield. 3861

LANCASHIRE COUNTY COUNCIL

SECTIONAL PLANNING OFFICER required at LIVERPOOL, A.P.T. IV (£1,140-£1,310).

Candidates should possess a recognised qualification in architecture, civil engineering, surveying and/or planning. Experience in the preparation of town maps and schemes for areas of comprehensive redevelopment is essential and candidates should possess a sound knowledge of town and country planning legislation.

Applications, stating age, qualifications, present appointment, experience and two referees, to the County Planning Officer, East Cliff County Offices, Preston, by the 1st November, 1960. 3883

SOMERSET COUNTY COUNCIL

COUNTY PLANNING DEPARTMENT

Applications are invited for three vacancies for SENIOR PLANNING ASSISTANTS, Survey and Development Plan Section, Headquarters. Salary £840-£1,145, starting point according to qualifications and experience. Applicants should have passed the Final Examination of the Town Planning Institute or similar Institution, and have had experience in a planning department, particularly in the preparation of Town Maps, architectural work or the carrying out of statistical and economic surveys.

Application forms obtainable from the undersigned must be returned by 7th November, 1960.

R. W. DALE,

County Planning Officer.

41, Upper High Street,
Taunton. 3876

CITY OF OXFORD
CITY ARCHITECT AND PLANNING
OFFICER'S DEPARTMENT

Applications are invited for the under-mentioned posts:-

ARCHITECTURAL ASSISTANTS, Special Classes A.P.T. IV (within the range £840-£1,145/£1,140-£1,310).

The successful applicants must be members of the Royal Institute of British Architects and should have several years' experience, possess a wide knowledge of modern methods of construction and contract procedure, and must be capable of carrying through contracts from sketch stage to completion with minimum supervision. A high standard of design ability and a keen interest in contemporary architecture is expected. Assistants are encouraged to control their own contracts from sketch design onwards.

Suitable housing accommodation will be made available, if required, in connection with the above appointments. Five-day week.

The appointments will be subject to the National Conditions of Service and the successful candidates will be required to pass a medical examination.

Application forms to be obtained from the City Architect and Planning Officer, Town Hall, Oxford. Closing date 11th November, 1960.

HARRY PLOWMAN

Town Clerk.

Town Hall,
Oxford.
14th October, 1960. 3877

DEPARTMENT OF MUNICIPAL AFFAIRS
AND SUPPLY
PROVINCE OF NEWFOUNDLAND, CANADA
APPOINTMENT OF SENIOR PLANNING
ASSISTANT

Applications are invited from suitably qualified and experienced persons for the above appointment in the Provincial Planning Division of the Department of Municipal Affairs and Supply in St. John's. The appointment will be contractual for a period of two years and subject to satisfactory service will be established at the end of that time. Salary will be within the salary scale \$5,390 x \$100-\$5,830.

Duties will include the preparation of Municipal and Regional Plans including detailed designs for communities and districts throughout the Province, and the control of development in accordance with various provincial regulations.

The office is situated in St. John's but some travelling within the Province will be required.

Candidates must have appropriate professional qualifications in Town Planning together with considerable practical post graduate experience. Experience in public relations and ability to address meetings of different types is very necessary.

Conditions of service, full details of which are available on request, provide free passage of applicant and family to St. John's.

Applications, giving full details of candidate's age, education, professional qualifications, appointments held, professional experience, together with the names of two referees, should be sent to J. T. Ailston, Director of Urban and Rural Planning, Department of Municipal Affairs and Supply, Confederation Building, St. John's, Newfoundland. Apply to CROWS AGENTS, 4, Millbank, London, S.W.1, for application form and further particulars, stating age, name, brief details of qualifications and experience, and quoting reference M2B/5112/AE. 3842

LEEDS REGIONAL HOSPITAL BOARD

Applications are invited for the post of ASSISTANT CLERK OF WORKS (BUILDING) in connection with the construction of a new multi-storey reinforced concrete framed general hospital at Huddersfield (500 beds approximate cost £3,500,000). The building work commenced this year and it is anticipated that site works will continue until 1962/63.

Membership of Institute of Clerks of Works and ability to keep site records would be an advantage.

Salary scale £600/£750 per annum (which, with overtime, could be in the region of £1,000 per annum).

Applications, stating age, qualifications, previous experience, together with names and addresses of two persons to whom reference may be made, to the Secretary, Park Parade, Harrogate, by not later than 12th November. 3879

BOROUGH OF ILFORD

BOROUGH ENGINEER'S DEPARTMENT
APPOINTMENT OF ARCHITECTURAL
DRAUGHTSMAN

GRADE MISC. IV (Male or Female)

Applications are invited for this appointment. Salary £625-£685 plus London weighting. Commencing salary according to qualifications and experience. Maximum paid to suitable applicant. Five-day week. Candidates should be competent draughtsmen and be capable of preparing working drawings under supervision. Appointment permanent, superannuable and subject to medical examination.

Form of application obtainable from Borough Engineer, Town Hall, Ilford, should be returned by Monday, 7th November, 1960. 3880

HEMEL HEMPSTEAD DEVELOPMENT
CORPORATION

VACANCY No. 25.

Applications invited for appointment of SENIOR ARCHITECTS for period up to two years. Grades A.P.T. V £1,310-£1,480, A.P.T. IV £1,140-£1,310 and A.P.T. III £960-£1,140, according to qualifications and experience. Corporation's limited life will be taken into account in fixing starting salary.

Applicants should have passed Final R.I.B.A. Examination. Experience in design and execution of housing, neighbourhood shops, office blocks or industrial buildings desirable.

Conditions of service similar to those in Local Government, Local Government Superannuation Scheme. Housing accommodation.

Applications, endorsed "Vacancy No. 25," giving age, education, qualifications and experience and names of two business referees, to reach General Manager, Westbrook Hay, Hemel Hempstead, by 4th November. 2836

CORPORATION OF LONDON

CITY SURVEYOR'S OFFICE

Applications invited for permanent staff appointments:

ARCHITECTURAL AND BUILDING DIVISION
SENIOR ASSISTANT ARCHITECT: Candidates must have passed Final R.I.B.A. and be capable of preparing sketch schemes for the design of a wide variety of buildings. Salary up to £1,400.

ARCHITECTURAL ASSISTANT: Candidates should either be studying for or have passed Intermediate R.I.B.A., possess a sound knowledge of building construction and ability to prepare detailed and a in. scale drawings. Salary up to £1,095.

Applications, with relevant particulars, including names and addresses of two referees, to The City Surveyor, Guildhall, London, E.C.2, within 14 days. 3835

CITY OF PERTH

Applications are invited for the following posts in the Burgh Surveyor's Department.

(1) SENIOR DEPUTY BURGH SURVEYOR (ENGINEER). Salary scale £1,300 x £50 to £1,500 per annum. Applicants must be Associate Members of the Institution of Civil Engineers and/or the Institution of Municipal Engineers. Preference will be given to those candidates who also possess Town Planning qualifications.

(2) ASSISTANT ARCHITECT. Salary Scale for Professional Assistants (£795 x £35 to £1,075 per annum) with placing on the scale according to qualifications and experience. Applicants must be Associate Members of the Royal Institute of British Architects.

(3) BUILDING INSPECTOR. Executive Division Grade III (£735 x £20 to £795 per annum). Applicants should have considerable experience and preferably possess a recognised qualifications as a Building Inspector or Clerk of Works.

Full details of the above posts may be obtained from the Burgh Surveyor, 16, Tay Street, Perth, with whom applications must be lodged within 14 days of this advertisement. 3831

MINISTRY OF HEALTH: HOSPITALS

RESEARCH AND DEVELOPMENT UNIT

Applications are invited from registered ARCHITECTS (men and women) for four (two Main, two Basic Grade) unestablished posts in London for a period of at least twelve months. Applicants should have experience of client architect briefing, collaboration with engineers, manufacturers, or research organisations in the development of new techniques or specialist services, and of design cost data. No previous hospital building experience necessary.

Duties include examination of current schemes and collation of past and current experience in planning, design, construction and building costs of hospital and other health buildings; the production of Hospital Building Notes and the design of buildings for development purposes.

Salary (Main Grade) £1,325-£1,780, (Basic Grade) £830-£1,300. Commencing salary dependent on age, qualifications and experience. Five-day week.

Applications (two copies) stating nationality, date of birth, qualifications, experience, present appointment and three referees, to the Director of Establishments and Organisation, Ministry of Health, Savile Row, London, W.1, by 11th November, 1960. 3829

HORNCHURCH URBAN DISTRICT COUNCIL
ENGINEER AND SURVEYOR'S DEPARTMENT
APPOINTMENT OF ARCHITECTURAL
ASSISTANT

Applications are invited for the appointment of Architectural Assistant, Grade A.P.T. IV (£1,140-£1,310), with a passage equivalent to London "weighting." The commencing salary will be fixed according to the ability and experience of the successful candidate. Housing accommodation will be provided if required.

Candidates for this post should have passed the Final Examination of the R.I.B.A. and, in addition to general architectural work, the duties will include work on plans for the redevelopment of the central area of Hornchurch and the erection of a civic centre.

Forms of application can be obtained from the undersigned, to whom completed forms should be returned not later than noon on Monday, 7th November, 1960.

P. L. COX,

Clerk of the Council.

Council Offices,
Billet Lane,
Hornchurch, Essex. 3921

CITY OF SALFORD

Applications are invited from appropriately qualified persons for the following posts in the Department of the City Engineer & Surveyor (G. Alexander McWilliam, B.Sc., A.M.I.C.E., A.R.I.C.S., M.I.Mun.E.).

TWO ASSISTANT ARCHITECTS, Grade A.P.T. V (£1,310-£1,480 per annum).

TWO ASSISTANT ARCHITECTS, Grade A.P.T. III/IV (£935-£1,310 per annum).

JUNIOR ASSISTANT ARCHITECT, Grade A.P.T. I/III (£645-£1,140 per annum).

The posts will form the nucleus of a team of about 30 professional assistants which, under the leadership of a Principal Architect, will be responsible for extensive schemes on housing and central redevelopment including designs of 20 storey blocks of flats and new shopping precincts.

Candidates should possess exceptional design ability. The commencing salary will be dependent upon qualifications and experience.

Housing accommodation may be provided in approved cases.

The posts are subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service, Standing Orders of the City Council, the passing of a medical examination, and are terminable by one calendar month's notice. A five-day week is in operation.

Applications, indicating the post applied for, and stating age, education, qualifications and details of experience, together with the names of two referees, should be sent to the City Engineer and Surveyor, Town Hall, Salford, 3, Lancs, to arrive not later than Monday, 14th November, 1960.

R. RIBBLESDALE THORNTON,

Town Clerk. 3905

**CITY OF WORCESTER
APPOINTMENT OF ARCHITECTURAL
ASSISTANT**

Applications are invited for this appointment within Salary Scale A.P.T. I (£645-£815 per annum). The appointment is superannuable and subject to a medical examination.

Housing accommodation will be offered if necessary, and the Corporation are prepared to make a contribution towards removal expenses. (Casual) User's Car Allowance will be applicable.

Applications, stating age, present and previous appointments and experience, together with the names of two referees, are to be sent to the City Engineer and Surveyor, 22, Bridge Street, Worcester, by Tuesday, 1st November, 1960.

BERTRAM WEBSTER,
Town Clerk.

Guildhall,
Worcester. 3894

CITY OF SALFORD

Applications are invited from appropriately qualified persons for the following post in the Department of the City Engineer & Surveyor (G. Alexander McWilliam, B.Sc., A.M.I.C.E., A.R.I.C.S., M.I.Mun.E.).

SENIOR PLANNING ASSISTANT, Grade A.P.T. IV (£1,140-£1,310 per annum).
The Department is undertaking programmes of redevelopment and urban renewal and the post will afford a wide variety of interesting experience. The commencing salary will be dependent upon qualifications and experience.

Housing accommodation may be provided in approved cases.

The post is subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service, Standing Orders of the City Council, the passing of a medical examination, and is terminable by one calendar month's notice. A five-day week is in operation.

Applications, stating age, education, qualifications and details of experience, together with the names of two referees, should be sent to the City Engineer and Surveyor, Town Hall, Salford, 3, Lancs., to arrive not later than Monday, 14th November, 1960.

R. RIBBLEDALE THORNTON,
Town Clerk. 3904

**AUSTRALIA
THE UNIVERSITY OF NEW SOUTH WALES,
SYDNEY**

LECTURER-SCHOOL OF ARCHITECTURE
The University invites applications for appointment to the position of LECTURER IN THE SCHOOL OF ARCHITECTURE.

Salary: £A1,743 range £A2,443 per annum. Commencing salary according to qualifications and experience.

Applicants must be registered architects and possess a degree, diploma or equivalent qualifications and be eligible for membership of R.I.B.A.

The successful applicant will be responsible to the Head of the School for the syllabus and conduct of the subject, descriptive geometry, and to co-ordinate the activities of other members of the staff concerned with the subject. In addition he may be required to lecture and conduct studio work in general architectural subjects such as building construction, architectural drawing and, desirably but not necessarily, the early grades of theory of structures.

Subject to passing a medical examination, appointee will be eligible to contribute to the State Superannuation Fund.

Appointee will be eligible for 12 months' study leave on full salary after six years' service. First-class ship fares to Sydney of the appointee and his family will be paid.

Four copies of applications, including the names of two referees, should be lodged with the Agent General for New South Wales, 56, Strand, London, W.C.2, and a copy forwarded by airmail in an envelope marked "University Appointment" to the Bursar, University of N.S.W. Box 1, Post Office, Kensington, New South Wales, Australia, before 2nd December, 1960. 3895

**BOROUGH OF ROWLEY REGIS
BUILDING DEPARTMENT**

Applications are invited for:
(a) QUANTITY SURVEYOR, A.P.T. III (£960-£1,140).

(b) ARCHITECTURAL ASSISTANT, A.P.T. II (£815-£960).

For (a) Applicants must be experienced in preparing estimates, bills of quantities, checking interim and final accounts.

(b) Applicants should be experienced in housing and other architectural works normally undertaken by a Local Authority.

Applications, stating age, qualifications and experience, together with two recent testimonials, should be sent to the undersigned not later than Friday, the 11th November, 1960.

JOHN HILTON,
Town Clerk.

Municipal Buildings,
Old Hill,
Staffs. 3897
October, 1960.

**AMENDED ADVERTISEMENT
COUNTY BOROUGH OF DARLINGTON
DEPUTY BOROUGH ARCHITECT**

Applications are invited for the above appointment. Salary within the range £1,715 x £20 (5) = £1,965.

The Department has a large programme including Secondary and Primary Schools, Housing, Welfare Schemes, Municipal Offices, Markets and Central Redevelopment. Preference will be given to candidates experienced in this class of work and who are members of the R.I.B.A.

Application, giving full particulars of age, qualifications, present appointment with salary, previous appointments with dates, and name and address of three referees, to be received by E. A. Tornbohm, A.R.I.B.A., A.M.T.P.I., Borough Architect, Central Buildings, Darlington, not later than 10th November, 1960.

3901

**DUMFRIES COUNTY COUNCIL
ARCHITECTURAL ASSISTANT**

Applications are invited for the post of Architectural Assistant in the County Architect's Department. Requisite qualifications, A.R.I.B.A. Salary £900 x £35 to £1,075 per annum. In addition £120 per annum and a mileage allowance in respect of use of car when authorised is payable. The post is superannuable and the successful applicant may, if appropriate, avail himself of the Council's Car Purchase Scheme. Rented Council house may also be made available. Local Government experience not essential. Applications, stating age, qualifications and experience, with the names and addresses of not more than three referees, to be lodged with the undersigned by 3rd November, 1960.

LESLIE T. CARNEGIE,
County Clerk.

County Buildings,
Dumfries. 3886
15th October, 1960.

**ALDRIDGE URBAN DISTRICT COUNCIL
ASSISTANT ARCHITECT**

Applications are invited for this appointment on Grades A.P.T. III or Special; starting point dependent on qualifications and experience. Applicants must be capable of preparing and supervising schemes in the Council's Housing Programme.

Housing accommodation will be provided and the candidate's removal expenses paid.

The Urban District has a current capital works programme of approximately £1,000,000. Housing Programme 400 houses annually.

Aldridge is expanding by approximately 3,000 persons per annum; estimated present population 48,000. School facilities are excellent.

Applications to be received not later than 7th November, 1960.

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

Council House,
Aldridge,
Staffs. 3917

**CITY OF BIRMINGHAM PUBLIC WORKS
DEPARTMENT**

MECHANICAL AND ELECTRICAL SECTION
Applications are invited for the following posts in the Design Office.

(a) SENIOR ENGINEERS (HEATING AND VENTILATING), A.P.T. IV (£1,140/£1,310 p.a.).

(b) ASSISTANT ENGINEER (HEATING AND VENTILATING), Special Grade (£840/£1,145 p.a.).

Applicants must be Associate Members of the Institution of Heating and Ventilating Engineers, or hold the Higher National Certificate in Mechanical or Electrical Engineering (with five years' experience).

Duties undertaken in this office include the design of mechanical, electrical and heating services and installations in Civic Buildings, municipal offices, multi-storey flats and other dwellings, car parking garages, fire and police stations, schools, baths, salvage destructor plants, pumping stations, etc.

Applicants must have had experience in the design, specification and supervision of contracts associated with the above work.

The appointments are permanent, superannuable, subject to a medical examination and terminable by one month's notice on either side.

Applications, endorsed with the heading of the post applied for, stating qualifications, age and experience, together with the names of two persons to whom reference may be made, should reach the undersigned not later than 19th November, 1960.

Canvassing disqualifies.
HEREBERT J. MANZONI,
City Engineer and Surveyor.

Civic Centre, Birmingham, 1. 3912

**COUNTY COUNCIL OF NORTHUMBERLAND
COUNTY ARCHITECT'S DEPARTMENT**

Vacancies exist on the permanent staff of this Department for ASSISTANT ARCHITECTS.

Applicants who have passed (a) the R.I.B.A. Final or (b) the Intermediate Examination are required in connection with the County Council's Building Programme. The programme, which is of considerable size and importance, provides work of a varied and interesting nature in various parts of the County of Northumberland and gives scope in the field of modern design and building construction.

Salary according to qualifications and experience will be on either A.P.T. Special Grade £840-£1,145 per annum for fully qualified architects or on a scale not exceeding £960 per annum, with the prospect of promotion to higher grades within the Department on qualifying.

The appointments will be subject to the provisions of the Local Government Superannuation Acts and successful candidates will be required to pass a medical examination.

Forms of application can be obtained on request and should be submitted to the undersigned at the address stated below not later than fourteen days from the date of this advertisement.
C. C. BROWN,
County Architect.

30-32, Great North Road,
Newcastle upon Tyne, 2. 3916

**ARCHITECTS
UNIVERSITY GRANTS COMMITTEE**

University Grants Committee require unestablished ARCHITECTS to work as members of small team engaged on design of university hall of residence. Applicants must be registered Architects, previous office experience desirable but not essential. Salary range: £830-£1,300 (London) p.a. Forms from Ministry of Labour, Technical and Scientific Register (K), 26, King Street, London, S.W.1. Quoting J.309/OA. 3928

**BOROUGH OF EALING
DRAUGHTSMAN for Civil Engineering Work,
Miscellaneous Grade V, £725-£800 inclusive.**

Full particulars and application forms obtainable from the Borough Surveyor, Town Hall, Ealing, W.5. Closing date 31st October, 1960.

E. J. COPE-BROWN,
Town Clerk. 3730



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FOR HARDER WEAR**

For factory and other floors exposed to heavy traffic, impact and corrosion, Accrington 'Nori' Paving Bricks may be specified with the utmost confidence. Made from the same material as the famous Accrington Engineering Bricks. Samples on request.

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**ACCRINGTON 'NORI'
PAVING BRICKS**

BOROUGH OF EALING
BUILDING SURVEYOR, A.P.T. III, £1,005-£1,185 inclusive. Must hold appropriate qualification of the Institution of Municipal Engineers or Royal Institution of Chartered Surveyors.
Full particulars and application form from Borough Surveyor, Town Hall, Ealing, W.5.
Closing date: 14th November, 1960.

E. J. COPE BROWN,
Town Clerk.
3909

COUNTY BOROUGH OF SOUTH SHIELDS
ASSISTANT ARCHITECTS
Applications are invited for the above appointments in the Borough Engineer's Department. Applicants must be suitably qualified and the salary paid will be in accordance with Grade A.P.T. IV (£1,140-£1,310).

Housing accommodation will be made available to successful applicants if necessary and they will be required to pass a medical examination for Superannuation purposes.
Application forms are obtainable from the Borough Engineer, Town Hall, South Shields, and should be returned to him not later than 10 a.m. Friday, 11th November, 1960.

R. S. YOUNG,
Town Clerk.
3931

BOROUGH OF HARROW
Applications are invited for the following appointment in the Borough Engineer and Surveyor's Department:—QUANTITY SURVEYING ASSISTANT, A.P.T. Grade II (£815 to £960 p.a., plus London "weighting"), the point of commencement according to qualifications and experience.

Applicants should have passed the Intermediate Examination of the R.I.C.S. or I.Q.S.
The Council cannot provide housing accommodation but a contribution towards removal expenses will be considered.

The appointment is subject to the Local Government Superannuation Acts; and the National Joint Council's Scheme of Conditions of Service.

Application forms, obtainable from me, should be returned to me not later than Saturday, 12th November, 1960.

DAVID PRITCHARD,
Town Clerk.

Town Clerk's Department,
Harrow Weald Lodge,
Harrow, Middlesex. 3925

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
Applications are invited from qualified ARCHITECTS of initiative, keen on design and modern constructional methods, to work on a large and varied programme.

Permanent staff appointments within the salary range £1,310-£1,460 (A.P.T.V) starting point according to experience.

Application forms and details of appointment from the County Architect, P.O. Box 26, County Hall, Preston, returnable by 4th November, 1960, quoting reference A/AJ.

LANCASHIRE COUNTY COUNCIL
TRAINEE ARCHITECTS AND
QUANTITY SURVEYORS

There are vacancies in the County Architect's Department for Trainee Architects and Quantity Surveyors. The office offers a wide scope for young men of the right calibre who wish to take up a professional career.

The applicants should be between the ages of 16 and 21 and should apply immediately for further details to the County Architect, P.O. Box 26, County Hall, Preston. 3755

Architectural Appointments Vacant
1s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

ARCHITECTURAL ASSISTANTS required for interesting work on new Colleges. One senior and one Junior. Good salaries according to ability. H. V. Ashley & Winton Newman (Holborn 2804.) 2828

WEST END OFFICE requires ASSISTANT ARCHITECTS of Final and Intermediate standards for interesting industrial projects in Home Counties. Good salaries offered to men with initiative and ability. Bonus Scheme, five-day week, holiday arrangements honoured. Box 3039.

ARCHITECTURAL ASSISTANTS required in busy Bloomsbury office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving particulars of age, qualifications, experience, etc., to Box 910, c/o 7, Coptic Street, W.C.1. 2815

LEWIS SOLOMON, KAYE & PARTNERS, rapidly expanding practice require ARCHITECTS and ASSISTANTS with initiative and competence to work on major design projects in the London area. These projects include Comprehensive Development Schemes, Hotels, Schools, Offices, and Luxury Flats. Good salaries according to ability and experience, luncheon vouchers, five-day week, and excellent working conditions. Write to Holborn Circus, Tavistock House, W.C.1, or telephone CITY 8811, quoting SLB in both instances. 7790

BASIL SPENCE & PARTNERS require qualified and experienced ARCHITECTS to fill positions of responsibility on a major building programme. Write to 48, Queen Anne Street, W.1, stating experience and salary required. 9934

BIRMINGHAM.—Clifford Tee & Gale, F.R.I.B.A., require experienced SENIOR ASSISTANTS and INTERMEDIATE STANDARD ASSISTANTS for interesting industrial and commercial work in a congenial atmosphere.

There are also vacancies for ASSISTANTS who are particularly interested in Service installations for these types of buildings.

Five-day week. Three weeks' holiday after qualifying period. Profit-sharing scheme. Pension scheme.

Please apply to Mr. B. G. Cox, F.R.I.B.A., 43 Frederick Road, Birmingham, 15. Tel.: EDGBaston 3676. 2088

ARCHITECTS with busy practice in Brighton require ASSISTANTS with practical experience for varied work. Salary up to £750 per annum. Five-day week, pension scheme, etc. Box 5848.

EXPANSION into additional offices creates space for one or two more ASSISTANTS, both Senior and Intermediate. Salaries, according to experience, will be generally well up to or above average. There are pension and profit-sharing schemes besides other benefits. We have a tremendous variety of work offering excellent prospects and full responsibility to Senior Assistants and great opportunities for development to Intermediates. Write or phone HUN 1711, ref. KAM, for an appointment to see the office, meet people and discuss joining us. Beard, Bennett, Wilkins & Partners, 101, Baker Street, London, W.1. 3605

RONALD WARD AND PARTNERS invite applications from ARCHITECTS, Senior and Junior. Long-term prospects. Scope for initiative and responsibility in interesting commercial, industrial and civic projects in British Isles, West Africa and Australia. Salaries commensurate with ability. Non-contributory Pension and Life Insurance schemes. Five-day week. Pleasant offices. Apply 29, Chesham Place, Belgrave Square, London, S.W.1. Tel.: BEL-gravia 3561. 2969

£1,000 (£2,000 p.a.) will be paid to experienced competent ARCHITECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box 3560.

£850-£1,400. ARCHITECTS with imagination and designing ability required to assist with large and important new developments in the central London Area. Telephone or write—Trohearne & Norman, Preston & Partners, 43, Kingsway, W.C.2. HOLBORN 4071. 2186

SENIOR ASSISTANTS required immediately. Salary by arrangement. Theo. H. Birks, 38, Portland Place, London, W.1. LAN. 7236. 1484

MONRO AND PARTNERS require ARCHITECTURAL ASSISTANTS of Intermediate/Final R.I.B.A. standard in their London, Watford, and Glasgow Offices for work on interesting industrial and commercial projects. Salary range £800-£1,000 p.a. Non-contributory Pension Scheme. Five-day week. Apply in writing to 32, Clarendon Road, Watford. 9600

SENIOR ASSISTANT required by Harker & Hall, F.R.I.B.A., in their office in Warwickshire. Good salary, with scope for initiative and responsibility. Write Longdon House, High Street, Knowle, or telephone Knowle (Birmingham) 3502. 2141

INTERMEDIATE to Final ASSISTANTS required immediately. Salary according to ability and experience. Theo. H. Birks, 38, Portland Place, London, W.1. LAN. 7236. 9739

SIR JOHN BURNET, TAIT & PARTNERS have vacancies for ARCHITECTURAL ASSISTANTS of all grades. Salaries ranging from £1,000 to £1,500 per annum. Luncheon vouchers. Pension and Medical schemes (non-contributory). Telephone LANGHAM 3826 for appointment. 2113

ARCHITECTURAL ASSISTANTS of all categories required for busy City office engaged in industrial and commercial work. Good working conditions. 5-day week, luncheon vouchers. Salary by arrangement. Please contact Eric Firmin & Partners, Tavistock House, Holborn Circus, W.C.1. Tel.: CITY 8811. 2692

A PROGRESSIVE and expanding building and civil engineering organisation requires the services of an ARCHITECTURAL ASSISTANT in their Housing Division. Applicants should be experienced in the design and execution of working drawings in connection with Housing and Flat Development Schemes. Permanent and progressive position. Pension and Luncheon Voucher Schemes. Salary according to ability and experience. Write or phone Percy Rilton Ltd., Rilton House, 54-55 Uxbridge Road, Haling, W.5. Tel. EALING 7777. 2068

SIR GILES SCOTT, SON & PARTNER require ARCHITECTURAL ASSISTANT, qualified or unqualified, with practical experience. Interesting and varied practice. Salary up to £1,000 plus luncheon vouchers. Write 9 Gray's Inn Square, W.C.1, or telephone CHANCERY 8387/8. 2469

ARCHITECTURAL ASSISTANT required, with at least two years' office experience. Apply in writing to Thomas Mitchell & Partners, 20, Bedford Square, London, W.C.1. 7282

CITY OFFICE requires ASSISTANTS for industrial and commercial work. 5-day week, luncheon vouchers. Salary £1,200 p.a. 2691

SIR GILES SCOTT, SON & PARTNER require a SENIOR ASSISTANT with good general experience in practical supervision of work and also in administration. Varied work including schools, hostels, churches, office buildings, municipal buildings, etc. Five-day week, luncheon vouchers, and salary in accordance with experience. Please apply in writing to 9, Gray's Inn Square, London, W.C.1. 2710

ASSISTANTS required urgently in expanding Practice. Plenty of scope with opportunities of varied site experience. Initiative encouraged. Write giving particulars and experience and salary required. Box 3563.

ASSISTANT ARCHITECTS required for staff on a new office opening in Southampton for work on interesting projects including University War Department and Ecclesiastical programmes. Juniors also required. Apply stating age, qualifications, experience and salary required to Robert Potter, F.R.I.B.A. & Richard Hare, R.Arch., A.R.I.B.A., De Vaux House, Salisbury. 3167

M. H. HUBBARD FORD, F.R.I.B.A., requires immediately—Intermediate and Junior ASSISTANTS to work in his London office on interesting projects. Salary by arrangement. Please telephone GROSvenor 6806/9 for interview. 3584

ON OFFER. A variant works programme. Occasional Travel.

Five-day week.
Annual Bonus.
Non-contributory Pension Scheme.
A base in Ealing.

A secure job with a Multiple Company. Caravan facilities. Wanted: Keen Young Intermediate Standard Assistants. Apply for appointment, stating age, experience and salary required. Box 3538.

ELIE MAYORCAS requires ARCHITECTURAL ASSISTANTS with a minimum of three years' office experience in this country. Write, giving brief particulars of architectural education and experience, and salary required, to: 13, David Mews, Baker Street, W.1. 3595

BOOTH, LEDEBOER AND PINCKHEAD require ASSISTANTS in the salary range £750-£1,250. Apply 17-20, Mason's Yard, Duke Street, St. James's, S.W.1. Tel.: TRAFALGAR 3116. 3116

RESPONSIBLE position vacant in congenial City Office. Salary by arrangement, reviewed annually. London voucher scheme. Applicants of Intermediate to Final R.I.B.A. standard (at least two years' office experience) should ring MET. 8511 or write Beely and Pazel, 41, Cloth Fair, E.C.1. 3281

ASSISTANT with several years' office experience and accustomed to preparing working drawings from sketches, required immediately by West End Architects. Should be interested in supervising the work and have a sound knowledge of construction. Write for interview to Box 3571.

WATKINS, GRAY & PARTNERS, 57 Catherine Place, S.W.1, require ASSISTANTS of Intermediate standard for work on large hospital projects. Excellent opportunities for those seeking first hand experience in this most interesting and rapidly developing field. Luncheon vouchers and pension scheme in operation. Write giving full particulars. 3673

WILLIAM RYDER requires ASSISTANTS in the salary range £800 to £1,100 according to age and experience. Hours 9.30 to 5.30. Five-day week. Apply in writing to 21 Bruton Street, Berkeley Square, W.1. 3676

REEMA CONSTRUCTION LTD. ARCHITECTS and DRAUGHTSMEN are required in a young and expanding office for work on a wide variety of projects including multi-storey flats, halls, swimming pools, office buildings and housing. We design and build in pre-cast concrete units and need men who are anxious to apply their knowledge to the problems of prefabrication. We would expect to pay a salary of £1,000 for newly qualified architects and correspondingly more for those with some experience. Applicants should telephone or write to: R. H. Ball, A.R.I.B.A., A.A.Dipl., Chief Architect, Reema Construction Ltd., Milford Manor, Salisbury. Telephone No. Salisbury 5141. 3663

NORMAN & DAWBARN require an ASSISTANT in their Wolverhampton office. This position could afford useful experience of small and medium size jobs in a small but expanding office, with possibility of later transfer to London office or overseas if desired. Minimum two years' previous office experience preferred. Working conditions are good, five-day week, three weeks' annual leave, lunch vouchers. Please write or phone to 7 Portland Place, London, W.1. LANGHAM 8011. 3649

HOWARD V. LOBB & PARTNERS require ASSISTANT ARCHITECTS. Salaries would be between £750 and £1,250 per year. Please write to 20 Gower Street, London, W.C.1. 3640

SOUTHAMPTON. Senior and Junior ARCHITECTURAL ASSISTANTS required for interesting contracts in the Southern Counties. Apply with details of experience and salary required to E. M. Galloway & Partners, F.R.I.B.A., 10 Portland Street, Southampton. 3666

Central Electricity Generating Board

DESIGN AND CONSTRUCTION DEPT.

Headquarters, London, S.E.1. ARCHITECTURAL SECTION

Applications are invited from Fellows or Associates of the R.I.B.A. and the I.L.A., and others suitably qualified by training and experience, for the following posts in the Architectural Section. The Board's Architect is M. H. Shephard, B.Arch., A.R.I.B.A., and the Board Member with responsibility for architecture and amenity is Sir William Holford, M.A., F.R.I.B.A., P.P.T.P.I.

The section is responsible for giving advice to the executive departments on the architectural aspects of the Board's activities, which include the construction of new power stations, ancillary buildings, switching stations and transmission lines, and furnishes guidance to and maintains close liaison with the Executive Architects dealing with individual major projects.

For posts (a) and (c) previous experience within the Industry will be an advantage.

(a) ASSISTANT ARCHITECT (Materials and Standards)

To assist the Architect and in particular to advise on materials and standards of building construction and to maintain liaison with the Building Research Station. SALARY WITHIN THE RANGE £2,025-£2,230 P.A.

(b) LANDSCAPE ARCHITECT

This is an entirely new post and will require considerable initiative. The first task of the Landscape Architect will be to establish a policy for maintenance of the Board's schemes on power station and other sites of major development. He will be required to assist the Board's Architect with the co-ordination of the Board's landscape work in connection with major projects. SALARY WITHIN THE RANGE £1,450-£1,890 P.A.

(c) ARCHITECTURAL ASSISTANT (Projects)

The first requirement is exceptional draughtsmanship and the ability to give general assistance with detailed development of projects involved in the design of power stations and ancillary buildings. SALARY WITHIN THE RANGE £1,335-£1,670 P.A.

(d) ARCHITECTURAL ASSISTANT (Technical Records)

To take charge of technical records, drawings records and the section library with responsibility for setting up a system of filing and recording all data used by the section. Draughting ability is required and some architectural qualification, at least to intermediate standard, would be an advantage. SALARY WITHIN THE RANGE £740-£815 P.A.

● Applications, stating age, qualifications, experience, present position, salary, and indicating post applied for, to the PERSONNEL OFFICER, 24/30, HOLBORN, LONDON, E.C.1., BY 17th NOVEMBER. Envelopes should be marked "Confidential Ref AJ/350".

ENGLISH ELECTRIC

invite applications for an appointment as an

ARCHITECTURAL ASSISTANT

The Company offers interesting and varied work in connection with current expansions, to a man with intermediate RIBA who can utilise his initiative and work with the minimum of supervision.

The Works is situated in rural surroundings; canteen facilities and transport facilities to the Leicester area are available.

Enquiries giving details of age, qualifications, experience and current salary should be addressed to the Technical Staff Officer, Dept. G.P.S., English Electric House, Strand, London, W.C.2, quoting reference AJ 1919A.

ARCHITECTS ASSISTANT ARCHITECTS

A leading firm of London Consulting Engineers have vacancies in their Architect's Department (Chief Architect: Mr. K. A. Brundle, F.R.I.B.A., A.A. Dipl.) for work in a wide and interesting field of Industrial Projects. These are permanent and pensionable positions; five-day week, luncheon vouchers.

Applications, stating qualifications, experience and present salary should be sent in confidence, to the

Personnel Manager,
W. S. Atkins & Partners,
158 Victoria Street, London, S.W.1

SCHERRER & HICKS, 19 Cavendish Square, W.1. require immediately several **ASSISTANTS** of Intermediate to Final standard. Salary £700-£1,000. 3652

FIRST ASSISTANT required to help two busy partners and secretary. Intermediate or qualified. Ring **HOLBORN** 5101. 3644

A SMALL expanding practice in Hampstead carrying out varied and interesting projects requires the services of a qualified **ARCHITECT**, aged 25/30, also an **Intermediate standard ASSISTANT**, with drive and initiative, willing and able to accept responsibility, in return for the fitting rewards of a progressive practice. Will applicants kindly write details of age, experience and salary required to: Kenneth C. Saunders, Esq., "Lymington House," 341 Finchley Road, London, N.W.3. 3678

ASSISTANT ARCHITECT
A QUALIFIED and imaginative Assistant Architect (A.R.I.B.A.) is required for an architect's department offering an interesting and varied industrial experience. The post is pensionable with all the welfare and social amenities of a large industrial concern. Please send details of qualifications, age and approximate salary required to Men's Employment Officer, Personnel Department, G.K.N. (Screw Division), Heath Street, Birmingham, 18. 3667

CLIFFORD CULPIN & PARTNERS, who have a wide variety of interesting work, require two experienced **ASSISTANTS** in their London office. Must be capable of taking initiative and responsibility. Write giving brief particulars to 39 Doughty Street, W.C.1. **CHANCERY** 5395. 3698

WELLS, HICKMAN & PARTNERS require **ARCHITECTURAL ASSISTANTS**. Salaries £700 to £1,000 according to ability and experience. Please ring **Terminus** 1464 for appointment. 3682

RICHARD SHEPPARD, ROBSON & PARTNERS require **ASSISTANTS of Intermediate and Final standard**; salary range £750-£1,000 according to ability. 5 Southampton Place, W.C.1. **CHANCERY** 4261. 3592

WELL established firm of London Architects require experienced, qualified or unqualified, staff for their new Eastbourne office age 20/35. Salary £500-£1,100 according to age and experience. Gunton & Gunton, Empire House, St. Martin's le Grand, E.C.1. 3589

CHIPPINDALE & EDMONDSON have vacancies for **ASSISTANTS of all grades** in their new Darlington office. Commencing salaries ranging from £600 to £1,200 per annum. Interesting individual work. Five-day week. Apply in writing to 37a Tubwell Row, Darlington. 3588

SENIOR ASSISTANTS required for small office with interesting and varied work. Green, Lloyd & Son, 5 Pickering Place, St. James's Street, S.W.1. Whitehall 9226. 3585

ARCHITECT'S ASSISTANT. Responsible post as team leader in busy office 18 miles from London. Flat available. Tooley and Foster, Buckhurst Hill, Essex. Tel. BUC 2211. Write or ring. 3622

£1,200. PLUS profit sharing. PLUS pension scheme. PLUS housing accommodation or car. PLUS hard work in expanding office. South Yorkshire, for keen and energetic young **ARCHITECT** with good personality. Box 3797.

NO INDUCEMENT OFFERED except adequate reward in exchange for enthusiasm and diligence by capable **ARCHITECT** possessing imagination (Sheffield area). Box 3798.

KATZ & VAUGHAN require a **SENIOR and INTERMEDIATE ASSISTANT**. Phone REG. 5401. 3799

BROMLEY Architects require **Intermediate standard ASSISTANTS** immediately, for work on large commercial and residential schemes. Telephone Robert J. Wood & Partners, RAVensbourne 9788. 3702

QUALIFIED ARCHITECT required by London firm to work in their Nigerian office. Varied and interesting projects, good salary, pleasant location and conditions. Apply: J. E. K. Harrison, F.R.I.B.A., Eagle House, High Street, Wimbledon, S.W.18. Tel.: WIM. 4244. 3701

BREWERY COMPANY, Manchester area, requires **SENIOR ASSISTANT** as deputy to Principal. Good design and sound technical ability essential. Excellent conditions, contributory Pension Scheme. State age, qualifications, experience and salary required to Box 3716.

ASSISTANT ARCHITECTS required for staffing a new office opening in Southampton for work on interesting projects including University War Department and Ecclesiastical programmes. **JUNIORS** also required. Apply stating age, qualifications, experience and salary required to Robert Potter, F.R.I.B.A., & Richard Hare, B.Arch., A.R.I.B.A., 62, The Avenue, Southampton. 3729

OPPORTUNITY offers for qualified **ASSISTANT** interested in cost-conscious contractor-proof contemporary architecture, to join expanding practice in Eastern Scotland, busy with University, Hospital, Home Office, Local Authority and private work. Basic salary plus a guaranteed share of the firm's profits; prospect of association. Free holiday home on sea-coast available. Gaudie, Wardie, Wright & Needham, 1, High Street, Dundee. 3731

LOUIS DE SOISSONS, PEACOCK, HODGES, ROBERTSON & FRASER require competent **ASSISTANTS**, both senior and junior, in their Exeter Office. Applications, giving details of age, training and experience, should be submitted to 12, Baring Crescent, Exeter, as soon as possible. 3696

MISHA BLACK requires **SENIOR ASSISTANT** for general architectural work and interiors. Design ability essential and capacity to handle jobs. Salary £900-£1,000. Reply in writing to Design Research Unit, 37, Duke Street, London, W.1. 3721

DESIGN RESEARCH UNIT requires **ASSISTANTS** for general architectural work, exhibitions and interiors. Good design sense essential and some office experience. Salary £700-£900 according to experience. Reply in writing to Design Research Unit, 37, Duke Street, London, W.1. 3722

GOLLINS, MELVIN, WARD & PARTNERS require **ARCHITECTURAL ASSISTANTS** for their Sheffield Office to work on interesting University projects. Five-day week, quarterly bonuses and pension scheme. Write: 281, Glossop Road, Sheffield 10, or telephone Sheffield 29922, for an appointment. 3723

ARMSTRONG & MACMANUS have vacancies for competent **ASSISTANTS** with initiative. Prospects and salary according to ability. Please write 28, Gloucester Place, W.1. or telephone WEIbeck 2273 for appointment. 3750

ARCHITECTURAL ASSISTANTS
LICHFIELD office has vacancies for two **INTERMEDIATE ASSISTANTS**. Salary £650-£950 according to experience. Telephone Lichfield 265 or write to:-

CLIFF & JUKES
5, MARKET STREET,
LICHFIELD,
STAFFS. 3749

CHIPPINDALE & EDMONDSON
REQUIRE FOR THEIR BRADFORD AND DARLINGTON OFFICES THE FOLLOWING STAFF:

1. **ASSISTANT ARCHITECTS** with at least two years' office experience after qualification.
2. **ARCHITECTURAL ASSISTANTS**, all grades. The offices have a five-day week, pension scheme and luncheon vouchers. Applications to Chippindale & Edmondson, Empire House, Piccadilly, Bradford, Endorse the envelope "Private Staff". 3760

WELL KNOWN firm of Architects, with offices both in London and on the South Coast, require **ASSISTANT ARCHITECTS** of all grades. High salaries paid for a five-day week, with Luncheon Vouchers and other benefits. Reply stating age, experience and qualifications, to Box 3865.

YOUNG ARCHITECT or ARCHITECTURAL DRAUGHTSMAN required to prepare attractive sales schemes for SECO buildings. Please apply in writing giving experience and salary required. Selection Construction Co. Ltd., 25 Margaret Street, W.1. 3866

ASSISTANT ARCHITECT required by Harker & Hall, for responsible position in their London Office, 13, Welbeck Street, W.1 (WEL 0961). 3765

OXFORD Office requires **ASSISTANT ARCHITECT** to fill position of responsibility. Salary and interview by arrangement. Details to Box 3751.

ARCHITECTURAL ASSISTANTS required of Intermediate standard. Plenty of opportunities for responsibility and administration of contracts, large and small. Facilities given for study of design at London Schools. Salary commensurate with experience. Box 3748.

POWELL & ALPORT require an **ASSISTANT** in their Croydon office to work on industrial and domestic developments. Salary by arrangement. Write giving brief details. Box 3747.

NEW West End practice requires enthusiastic **ASSISTANT** to undertake jobs with the minimum of supervision. Salary by arrangement. J. S. Routley & Partners, 7, Carlisle Street, W.1. GERRard 9904. 3745

EXPERIENCED ARCHITECTURAL ASSISTANT required for busy West End office. General practice but mainly office and commercial projects. Bernard Gold & Partners, 4/6, Savile Row, W.1. REGent 7651. 3743

URGENTLY REQUIRED-ARCHITECTURAL ASSISTANTS and DRAUGHTSMEN, all standards, but must be able to work with minimum supervision. Small but extremely busy West End Office. E. Norman-Bailey & Partners, Ring VICTORIA 7088 for appointment. 3738

FARMER and DARK have vacancies for:-

ASSISTANT ARCHITECTS
JUNIOR ASSISTANTS

Wide variety of interesting projects both here and abroad; including Schools, Offices, Laboratories, Factories, Power Stations and Military Establishments.

Please write or telephone:-Romney House, Tufton Street, S.W.1. ABBEY 6311. 3774

INTERMEDIATE to Final Standard. Design-conscious expanding practice engaged large-scale commercial projects requires **ARCHITECTURAL ASSISTANTS** with initiative and perspective ability. Good salaries according to capabilities. Five-day week. L.V.A. Raymond Spratley & Partners, 9, Hertford Street, Park Lane, W.1. GBO 1532. 3787

BUSY private practice has vacancy for **ARCHITECTURAL ASSISTANT**, preferably car driver. Pleasant office and working conditions. Five-day week. Scope for initiative and responsibility on varied and interesting works including Domestic, Commercial, Industrial and Ecclesiastical, over wide area of the country. Commencing salary according to experience and ability up to £1,600. Please apply giving fullest details to A. R. Laine, Deacon & Laine, 65, Golding Road, Bedford. 3769

BOURNEMOUTH-Jackson & Greenen, Hinton Buildings, have immediate vacancy for **SENIOR ASSISTANT**. Work including Schools, Banks, Offices, Flats, Hospital work and Shops. 3771

SENIOR ARCHITECTURAL ASSISTANT required to join Group Architect's Department of a large industrial concern in the Midlands. Previous industrial experience an advantage. Fully qualified. Minimum salary £1,200 p.a. Five-day week, Pension Scheme. Three weeks holiday after qualifying period. Apply in first instance, stating age, experience and salary required, to Box 3776.

ARCHITECTURAL ASSISTANT (Intermediate) required in private practice near Chipping Norton, Oxon. Exceptionally varied work, capable of surveys, working drawings, details, specifications. Car driver. Office experience, salary required, status. Accommodation might be arranged. Box 3786.

DENYS LASDUN & PARTNERS require qualified and experienced **ARCHITECTS** to fill positions of responsibility. Salaries from £1,100 p.a. according to ability and experience. Write to 3, Albany Terrace, N.W.1. or telephone HUNter 1822 for an appointment. 3792

ASSISTANT required Intermediate to Final Standard, five-day week. Write with full particulars to Reginald H. Gallanough & Partners, 54, Queen Anne Street, London, W.1. 3810

SECURE YOUR FUTURE IN YOUR PROFESSION

ARCHITECT'S ASSISTANTS required by Westminster Bank. Commencing salary range from £550 to £950 with good prospects. Modern London drawing office. Favourable house mortgage rates. Luncheon club. Sports club and other social activities. Pension scheme. Fare for interview refunded. Write stating age, experience and salary required to:-The Architect, Westminster Bank Limited, Post Office Court, 19, Lombard Street, E.C.3. 3812

W. S. HATRELL & PARTNERS require **ASSISTANT ARCHITECTS** (Intermediate Standard). Write or telephone to 21, Cleveland Place, London, S.W.1 (Whitehall 4076); 1 Queen's Road, Coventry (Coventry 26446); 15, Piccadilly, Manchester, 1. 3807

WALLIS GILBERT and PARTNERS ALSO NEED STAFF URGENTLY. 5, Cromwell Road, S.W.7. KENington 1450. See page 100. 3814

ARCHITECTURAL ASSISTANT required in National Developers' design group. Age, qualifications immaterial BUT real experience and practical outlook essential. Salary £850-£950. Five-day week. Sense of humour an advantage. Box No. 3818.

EXPERIENCED ARCHITECT'S ASSISTANT required in well established provincial office. Fully qualified preferred although not absolutely essential. Possibilities of Partnership if satisfactory. State full particulars in confidence to Box 3902.

BRIGHTON & HOVE. Experienced **ASSISTANTS** in all grades required. Details please to: H. Hubbard Ford & Associates, 51 Church Road, Hove, 3, Sussex. 3905

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3873

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