

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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Finishes and Costs

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Wanted and Vacant

No. 3434]

[Vol. 133

THE ARCHITECTURAL PRESS

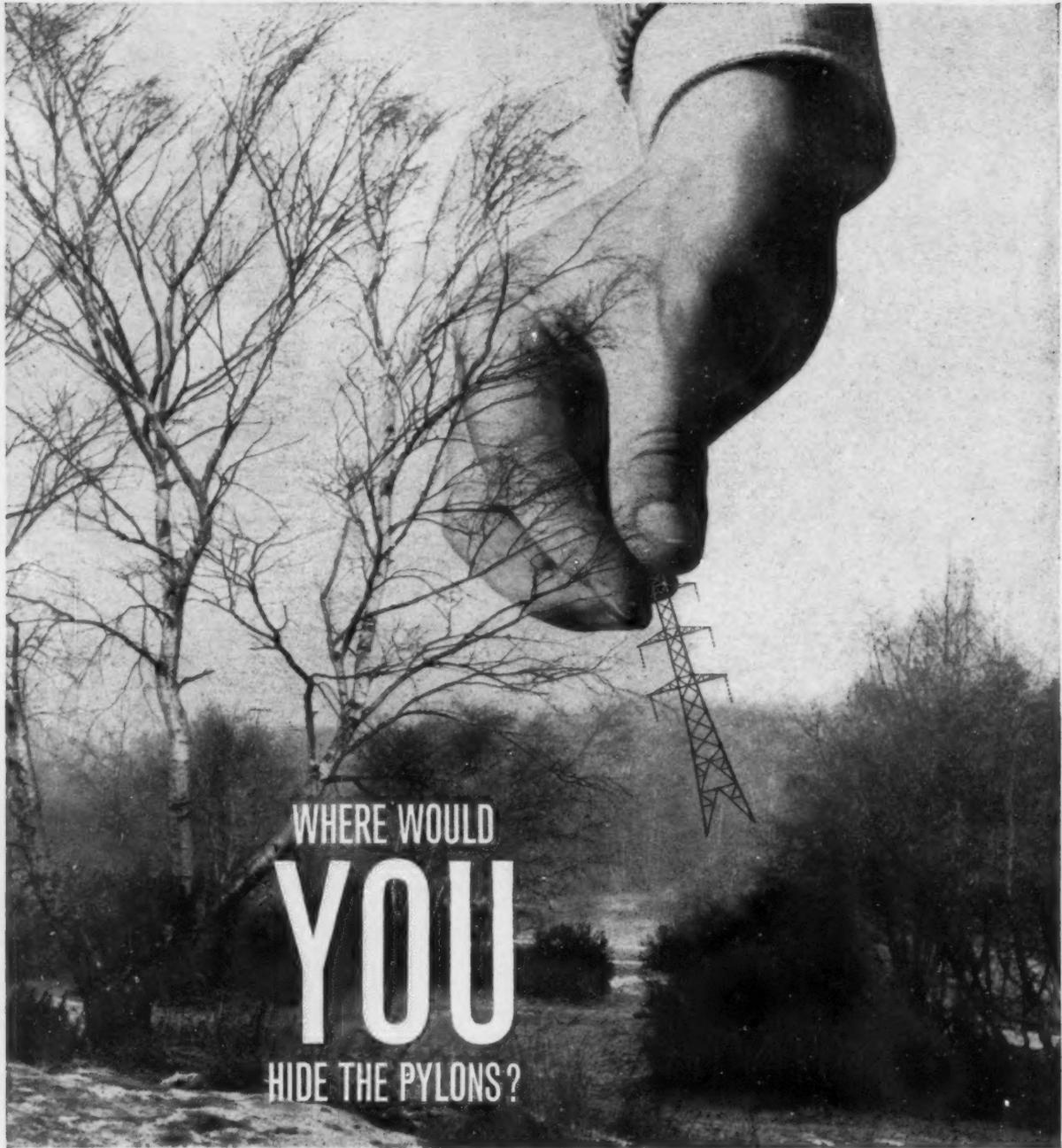
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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their addresses and telephone numbers. The glossary is published in two parts—A to Ii one week, II to Z the next. In all cases where the 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	Langham 5533
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians. 156, Waterloo Road, S.E.1.	Waterloo 5427/8
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.	Museum 5400
BC	Building Centre, 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portland Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
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.	Glasgow Central 2891
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, S.W.1.	Trafalgar 8855
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 4040
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 9000
CABAS	City and Borough Architects Society. C/o S. A. G. Cook, A.R.I.B.A., Borough Architect and Director of Housing, Town Hall, High Holborn, W.C.1.	Holborn 3411
CAS	County Architects' Society. C/o I. Hurst, A.R.I.B.A., County Hall, Dorchester.	Dorchester
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Belgravia 6661
CDA	Copper Development Association. 55, South Audley Street, W.1.	Grosvenor 8811
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Trafalgar 8000
CPRE	Council for the Preservation of Rural England, 4, Hobart Place, S.W.1.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	40, Piccadilly, W.1. Regent 4448
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Associations of Specialists and Sub-Contractors, 14, Bryanston Street, W.1.	Welbeck 1781
FBBDO	Fibre Building Board Development Organization Ltd. (Fidor), 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)	Whitehall 3902
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.	Langham 4341
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17-18, Dover Street, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8265
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square, Sloane 1601/3158	
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1.	Mayfair 7086



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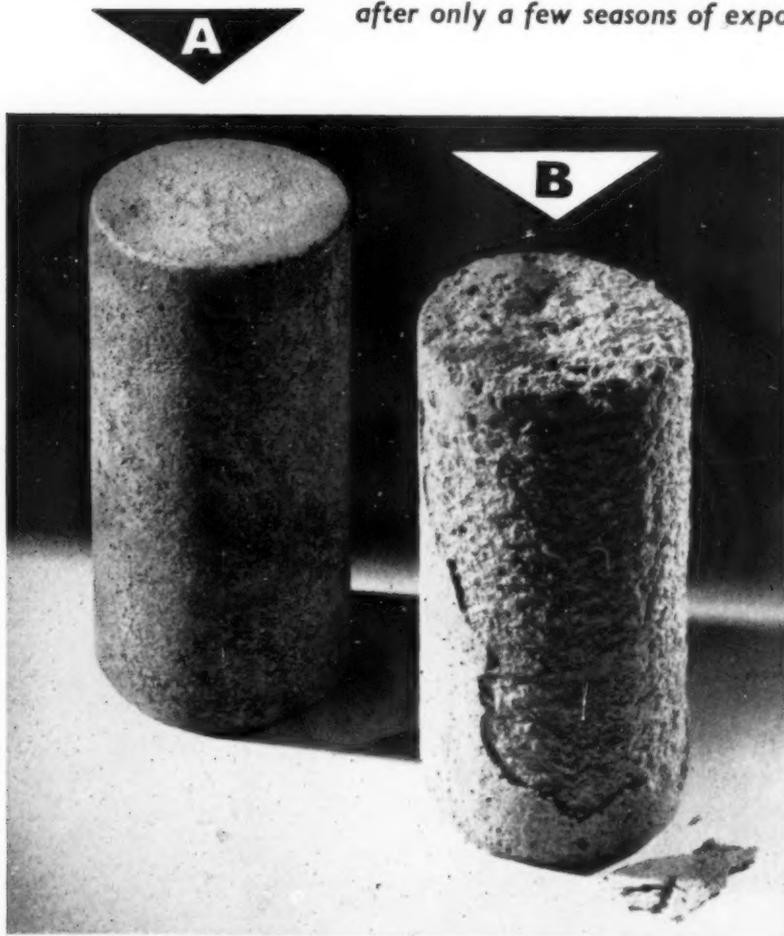
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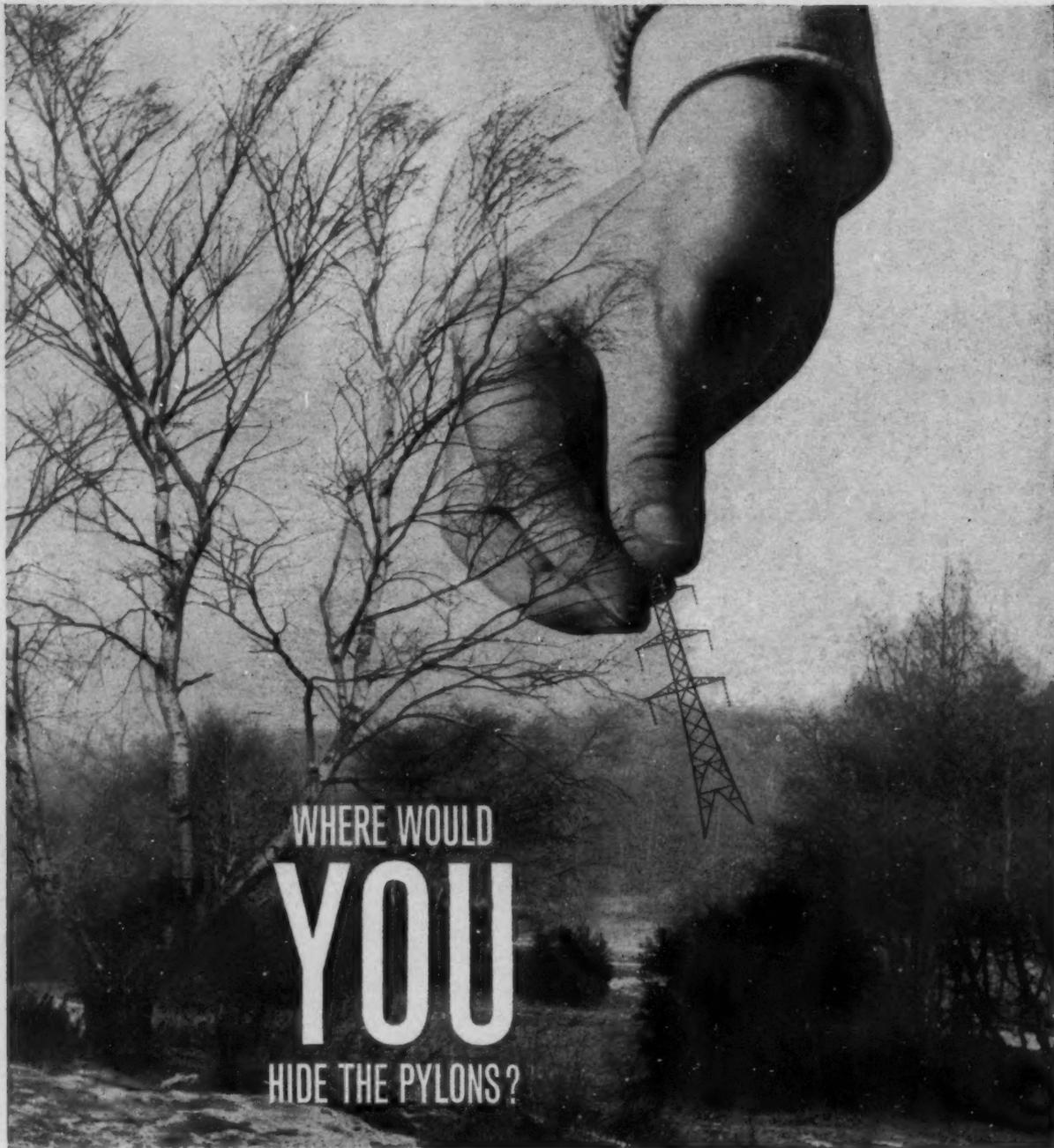
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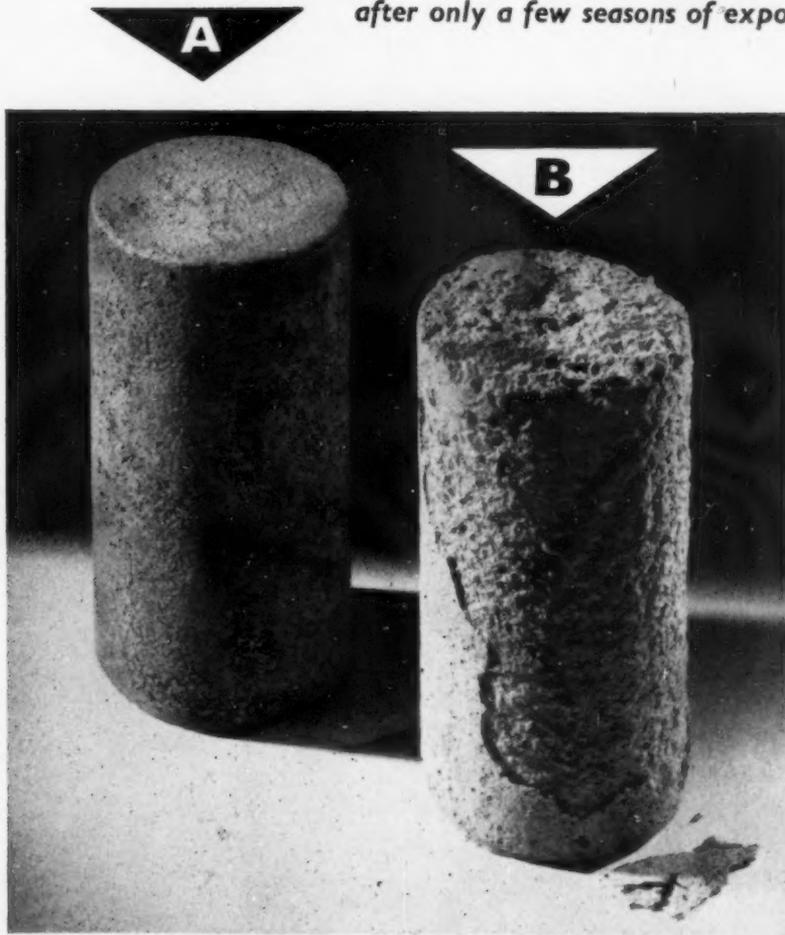
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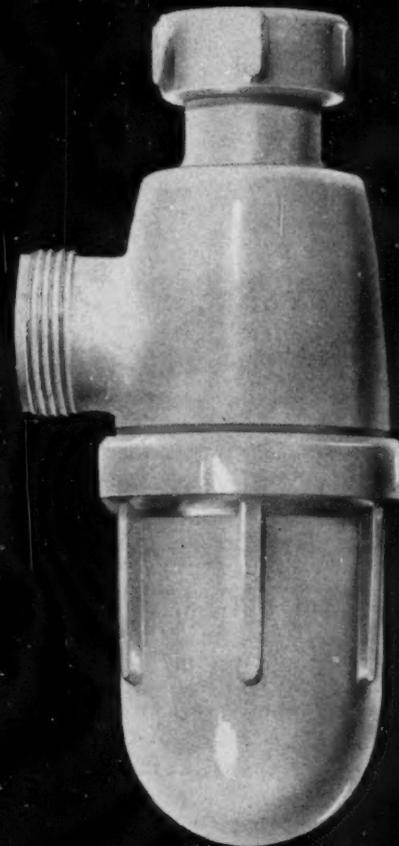
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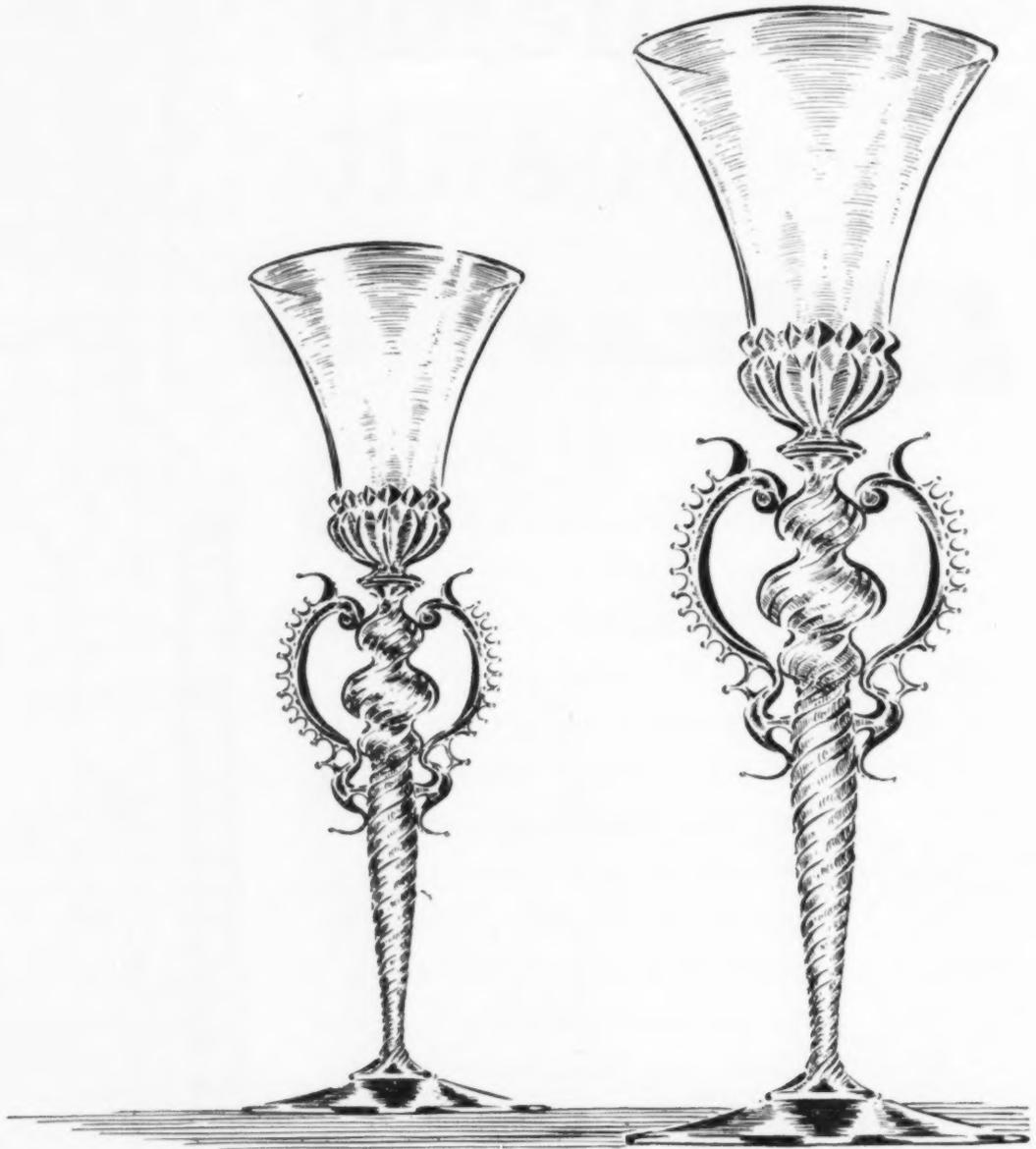
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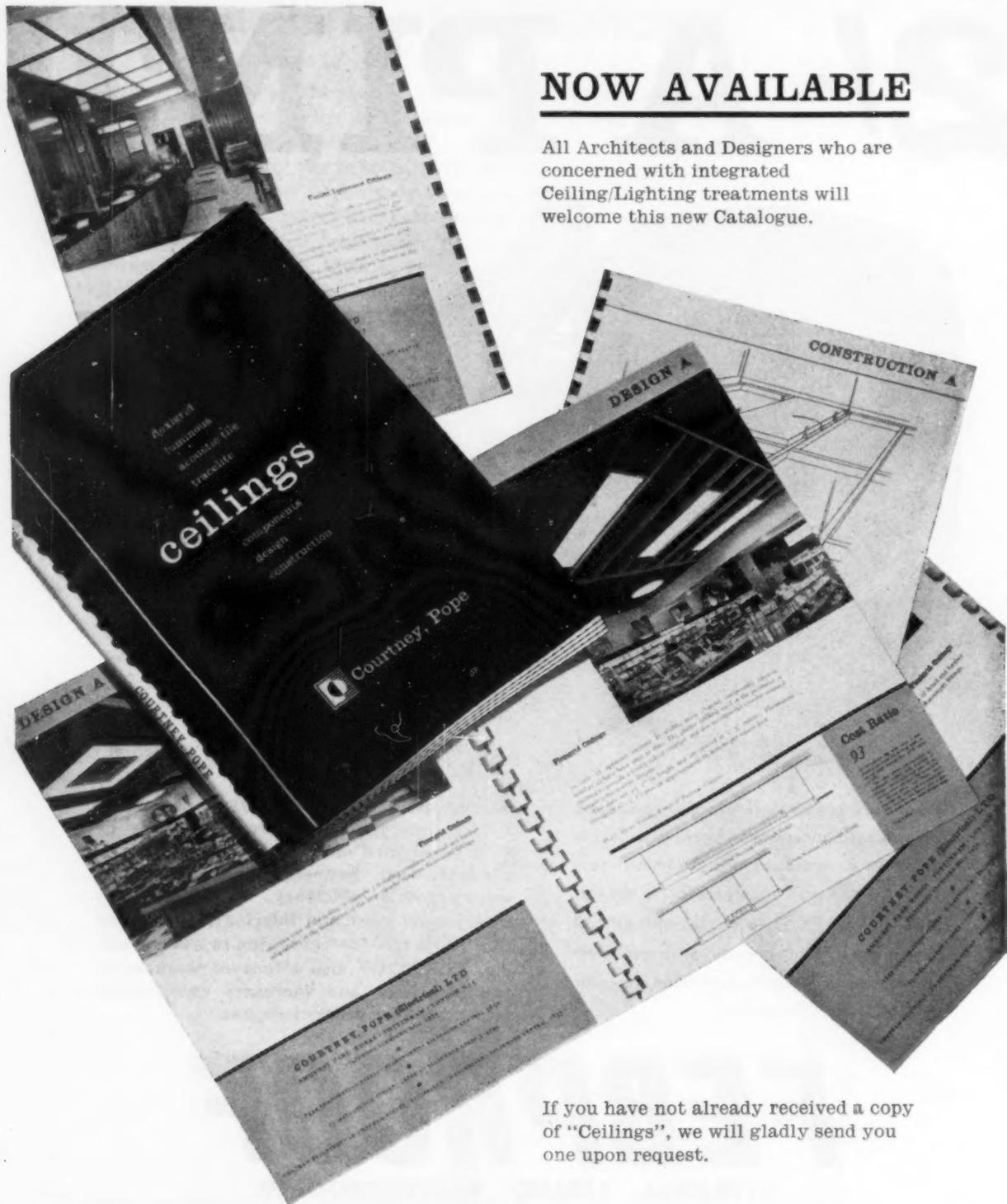
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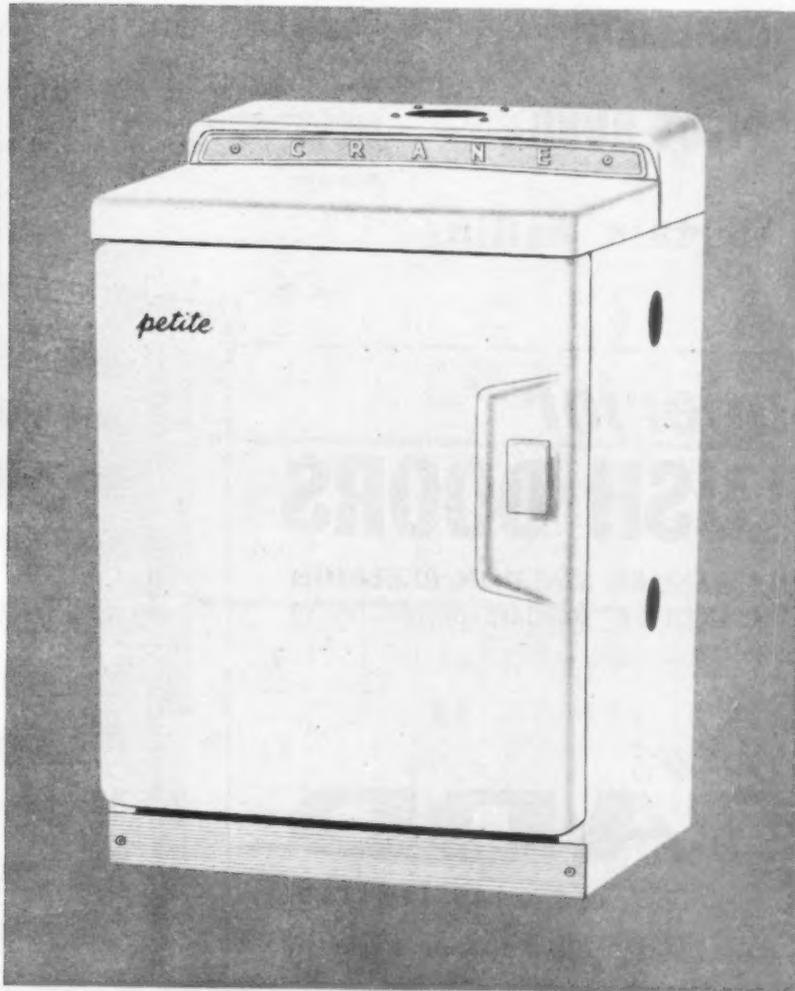
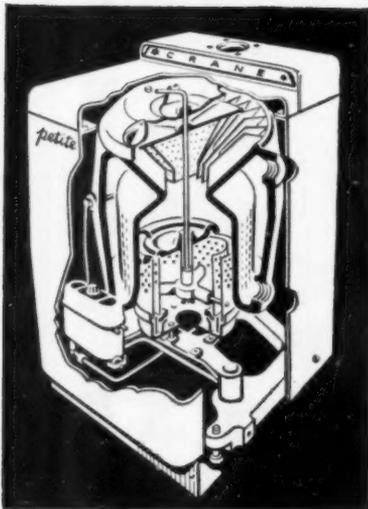
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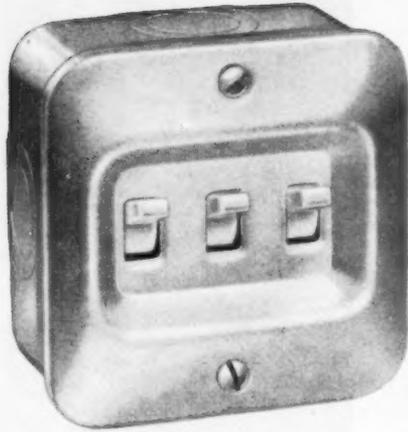
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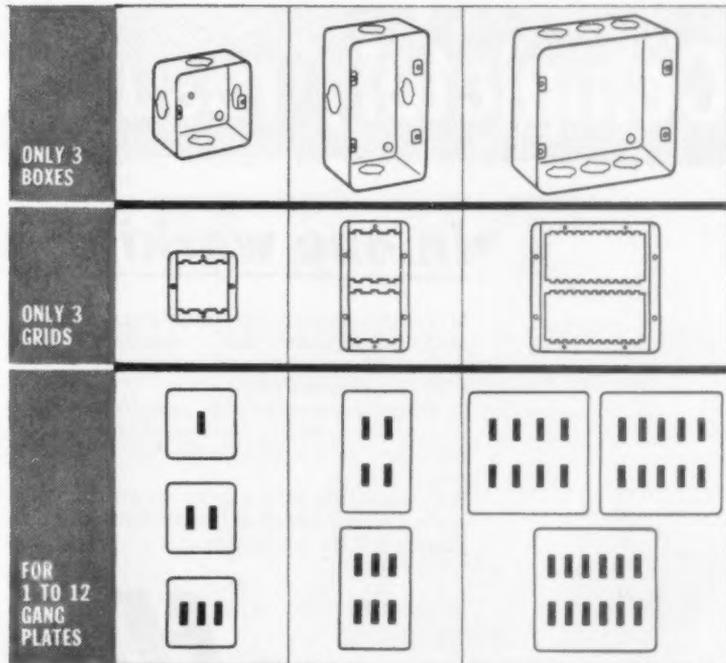
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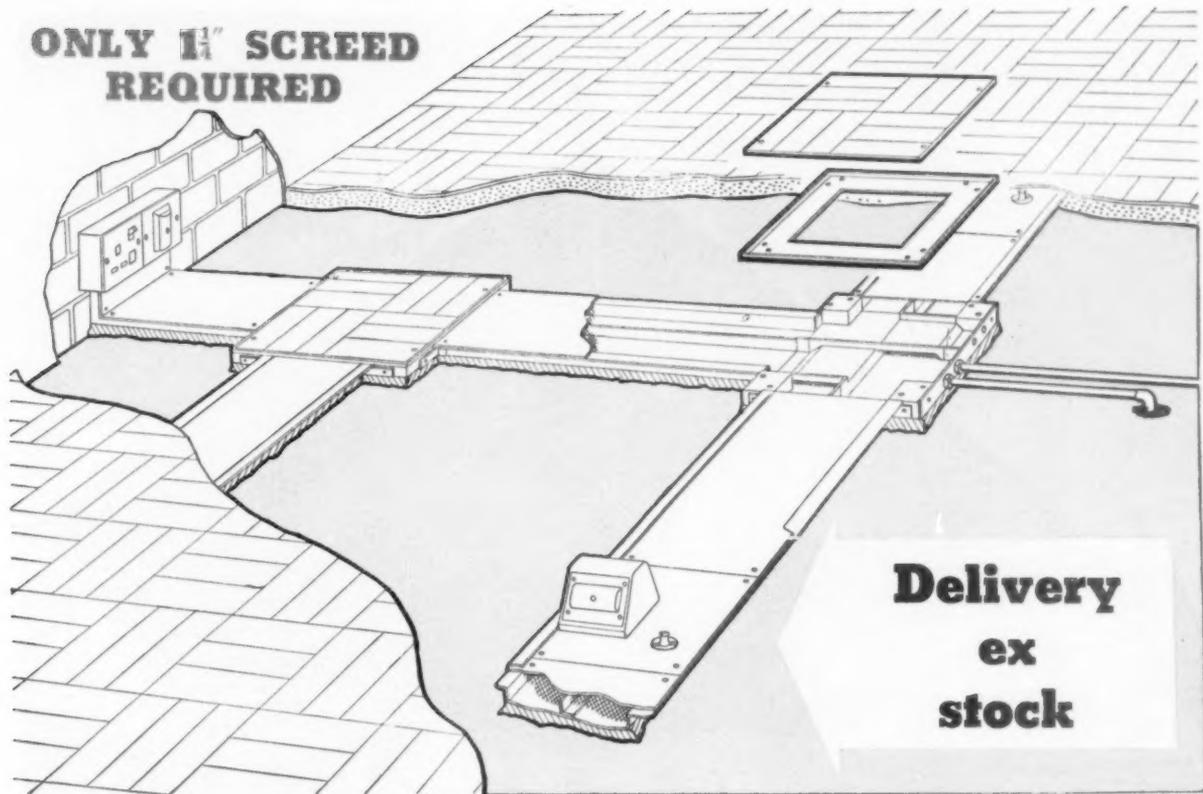
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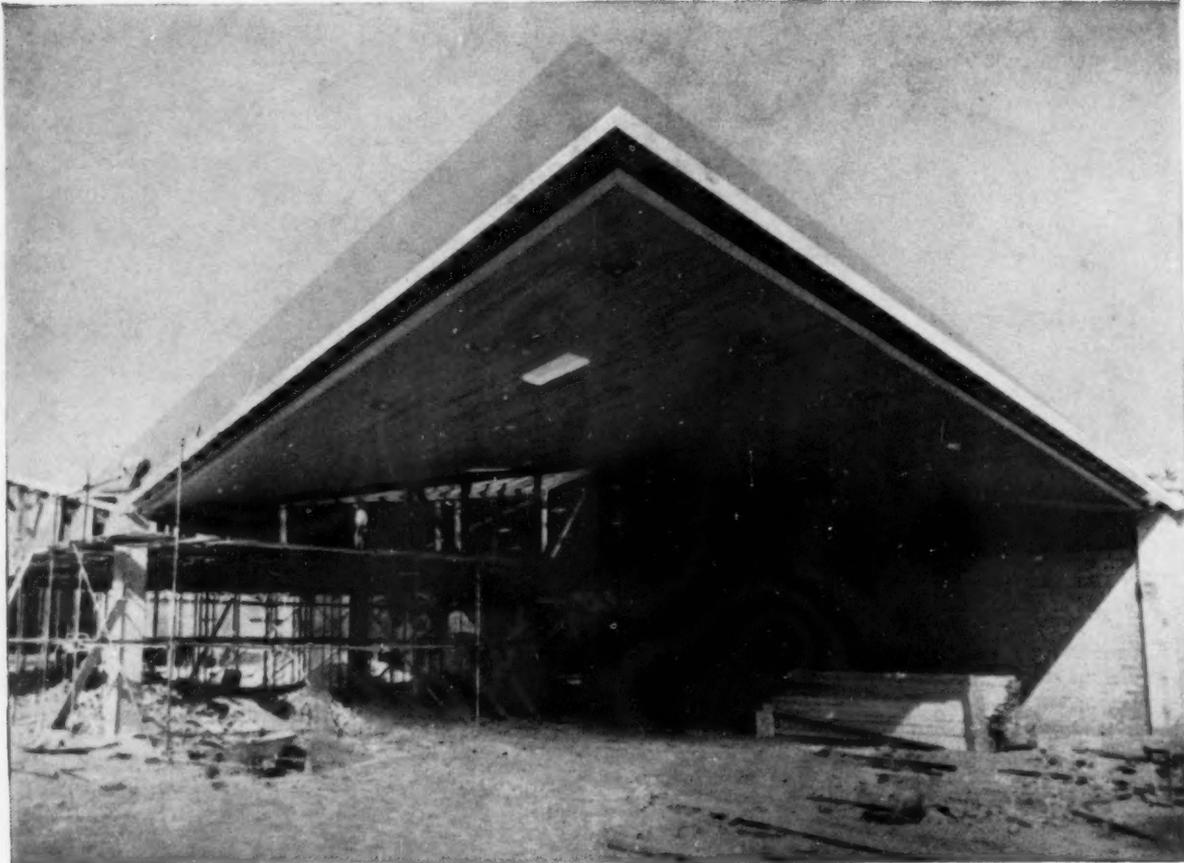


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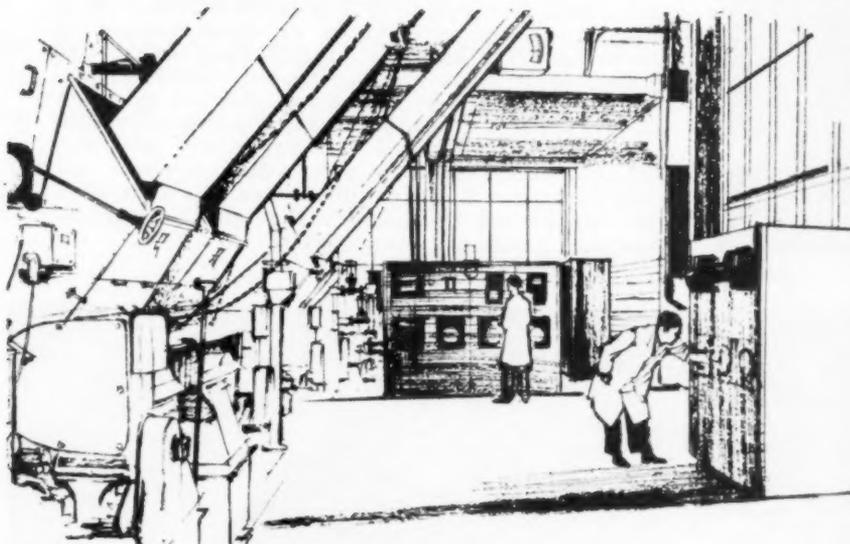


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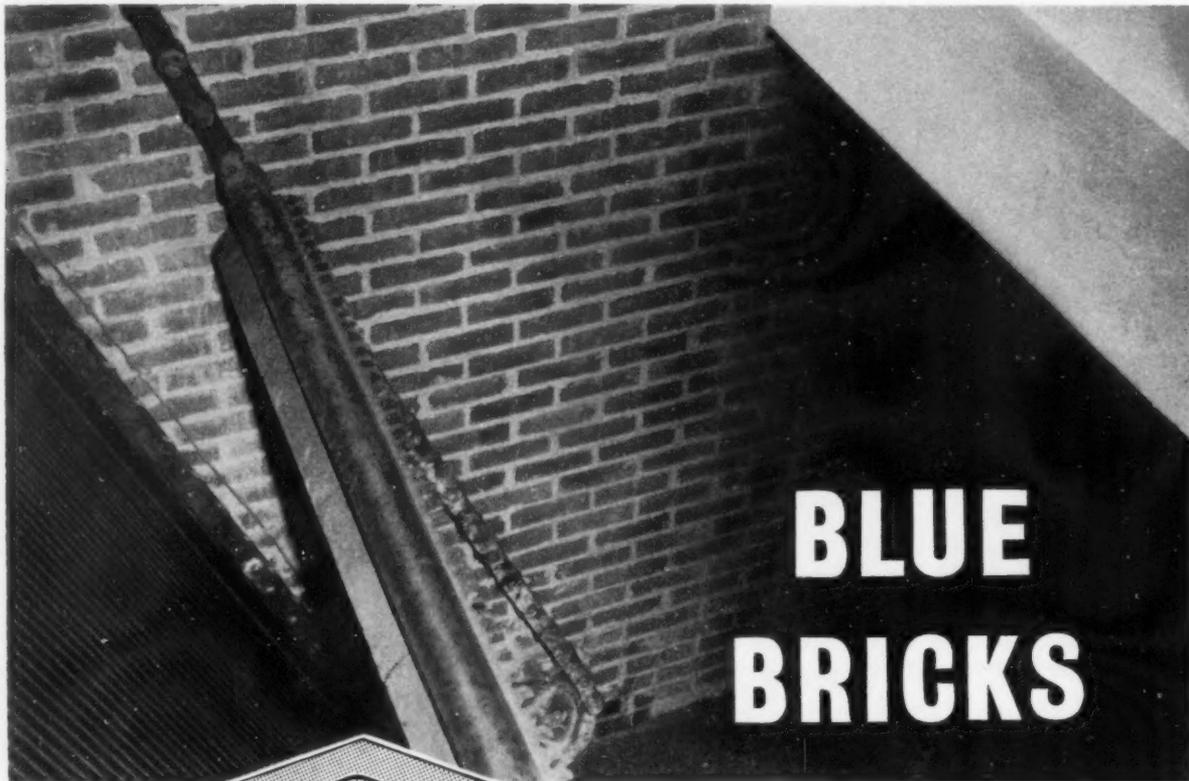
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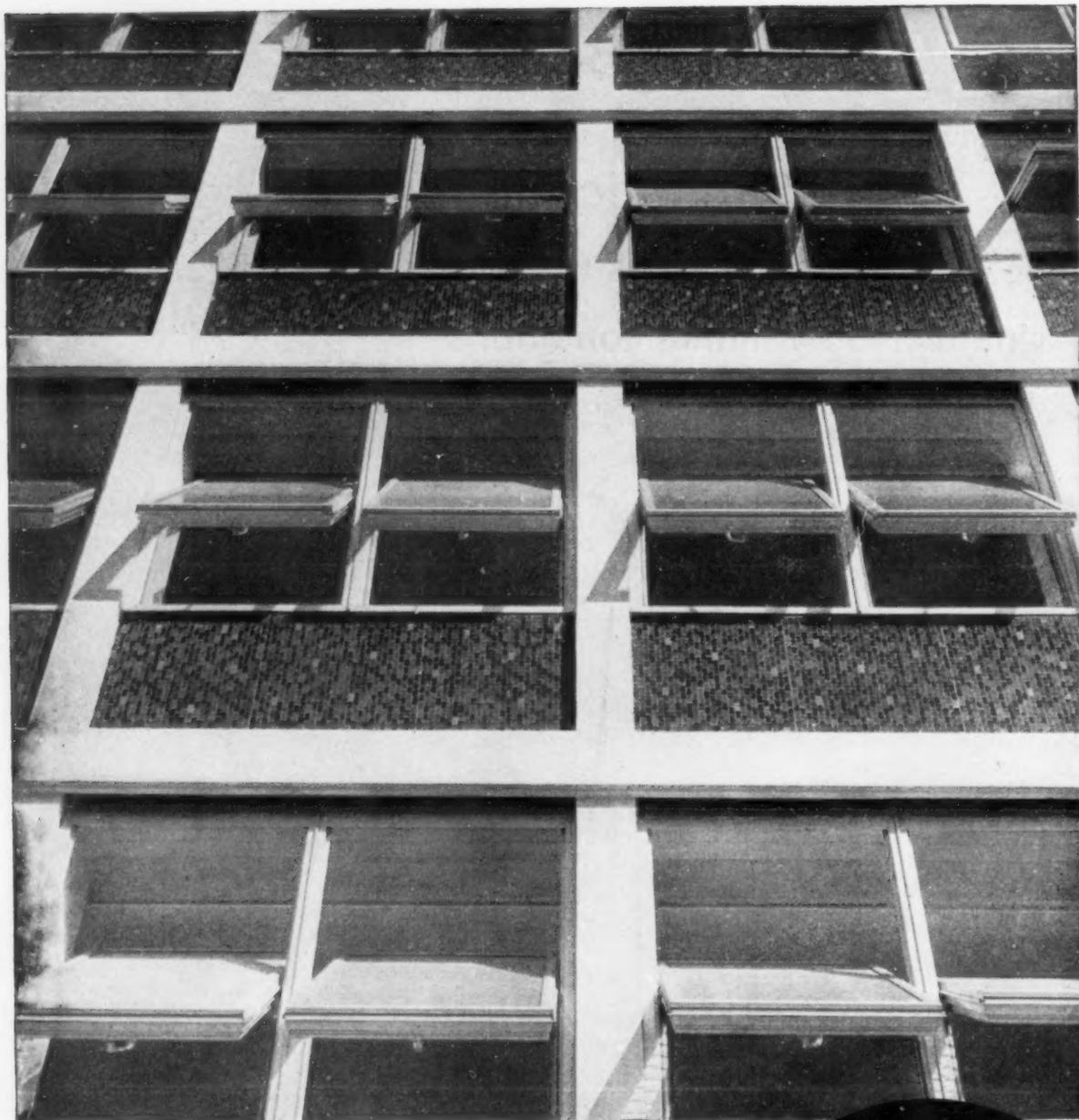
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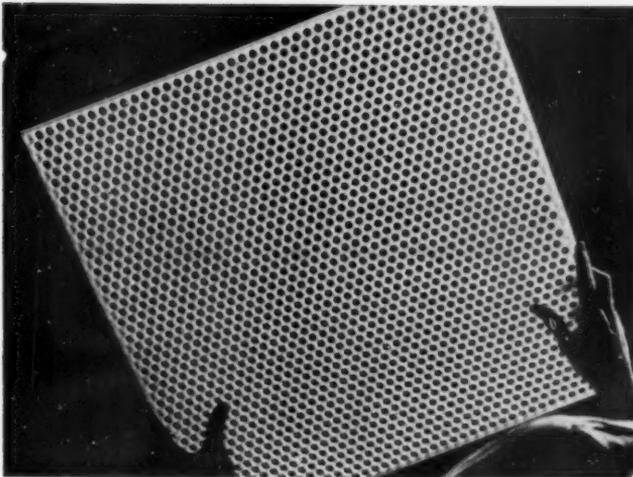
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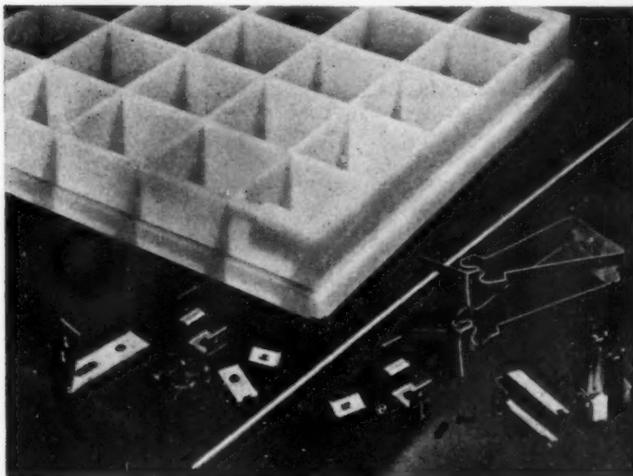
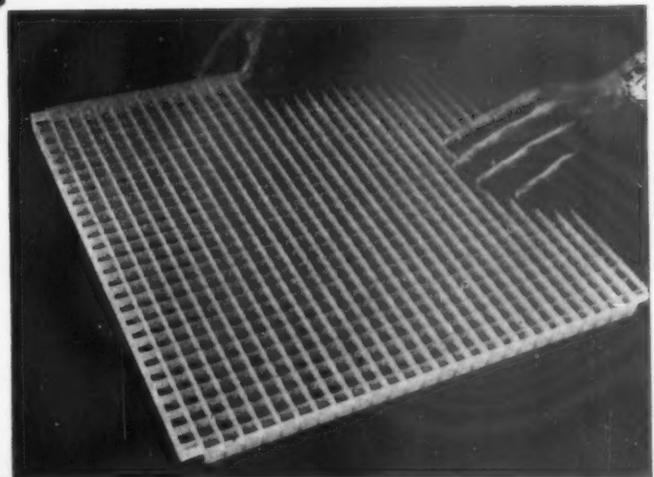
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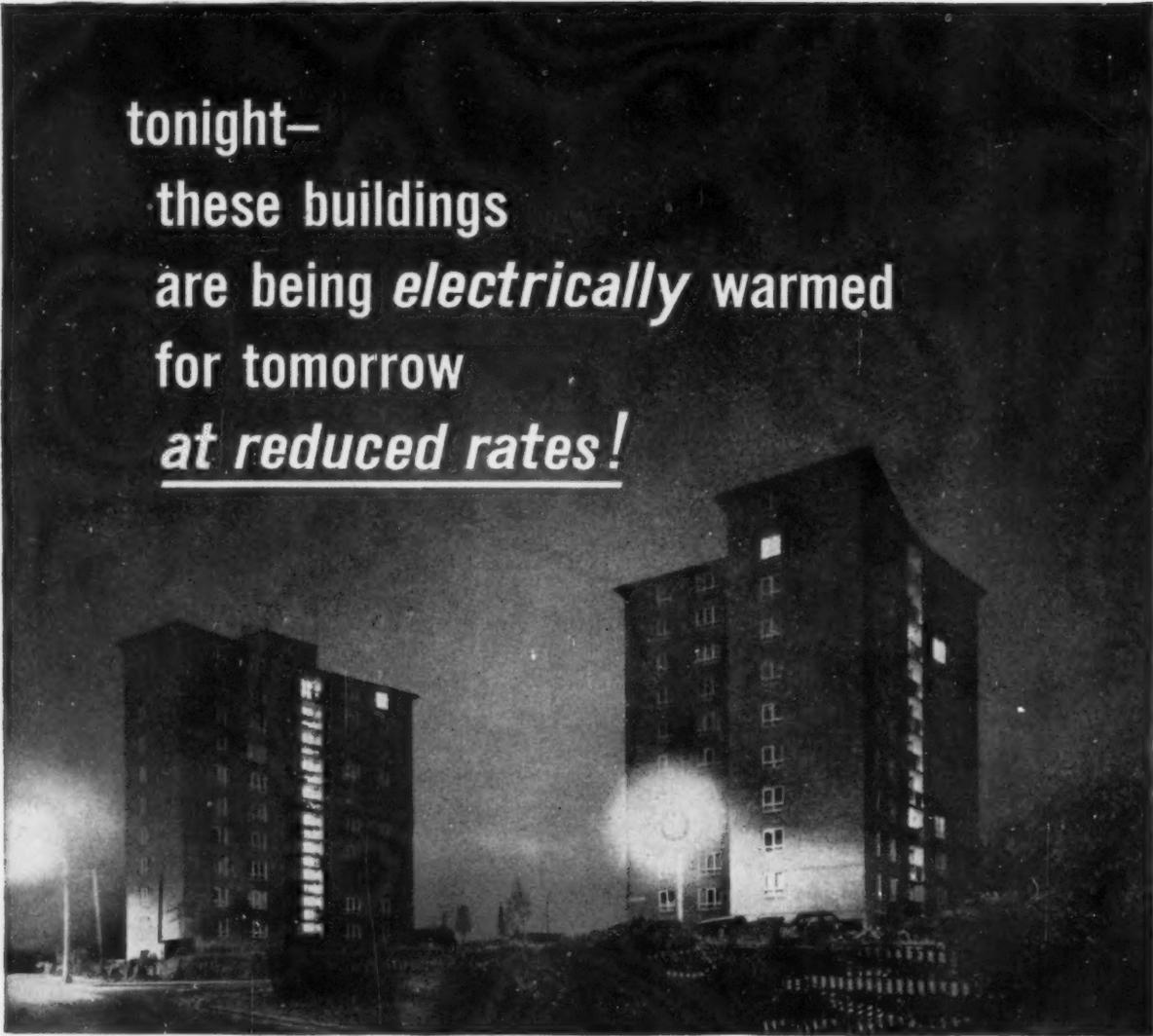
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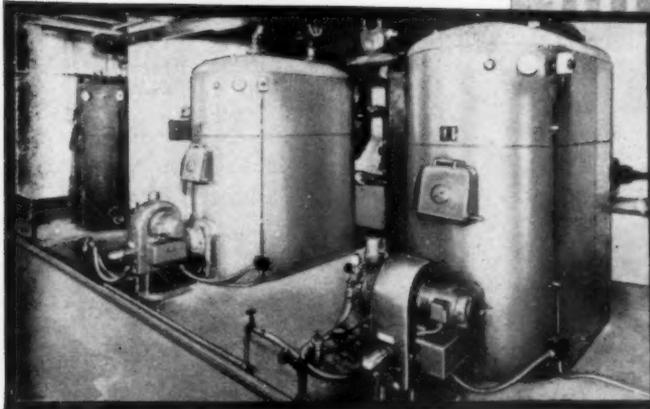
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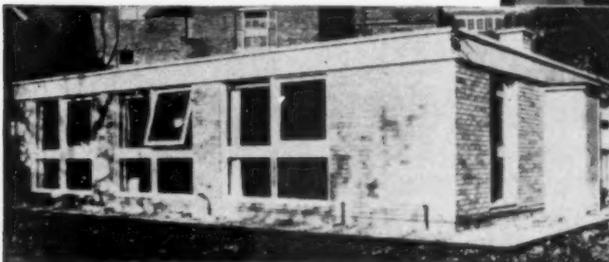
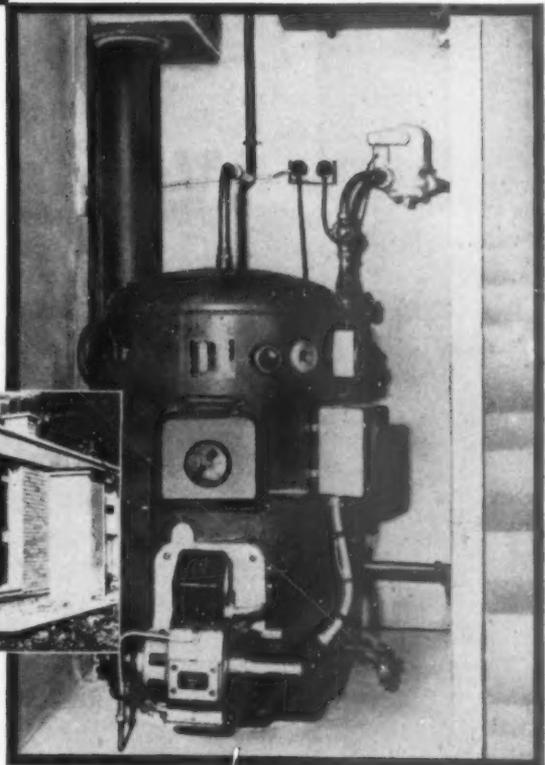
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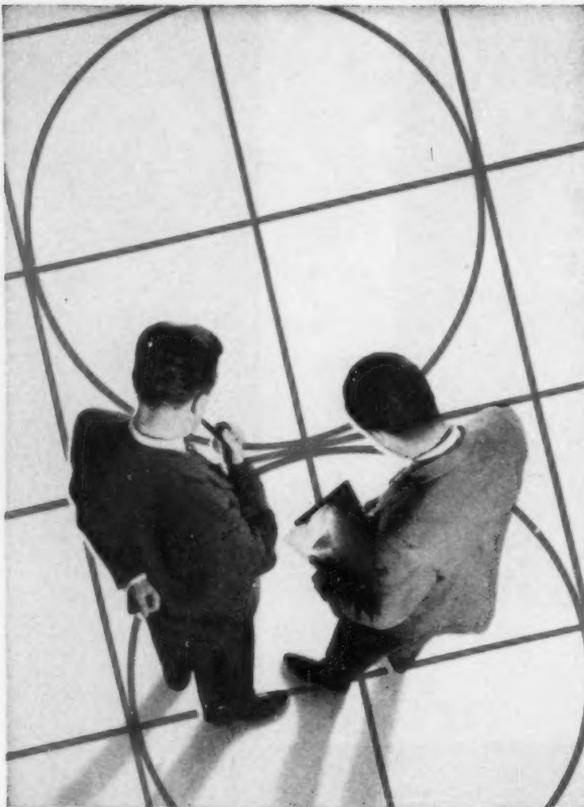
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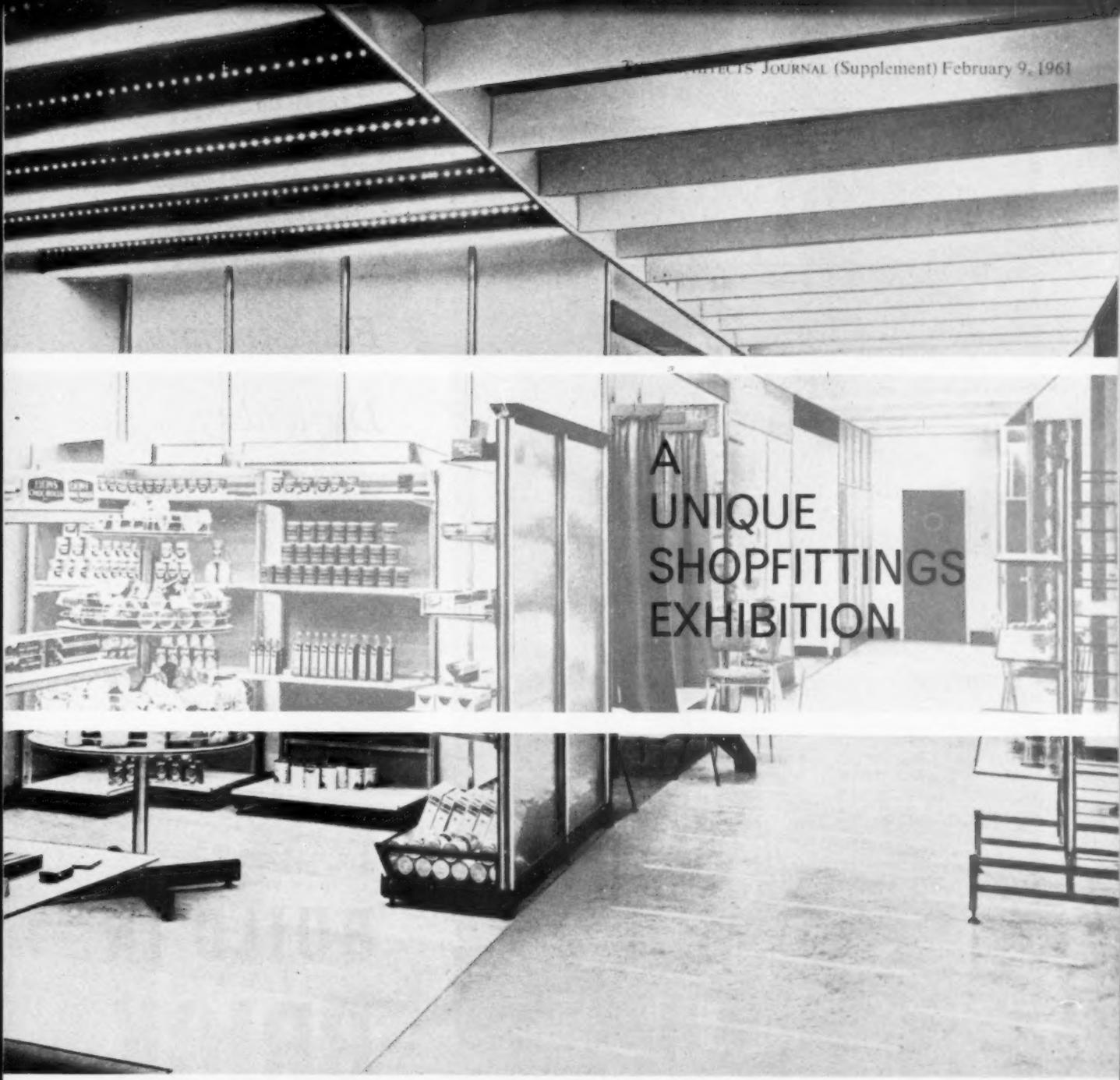
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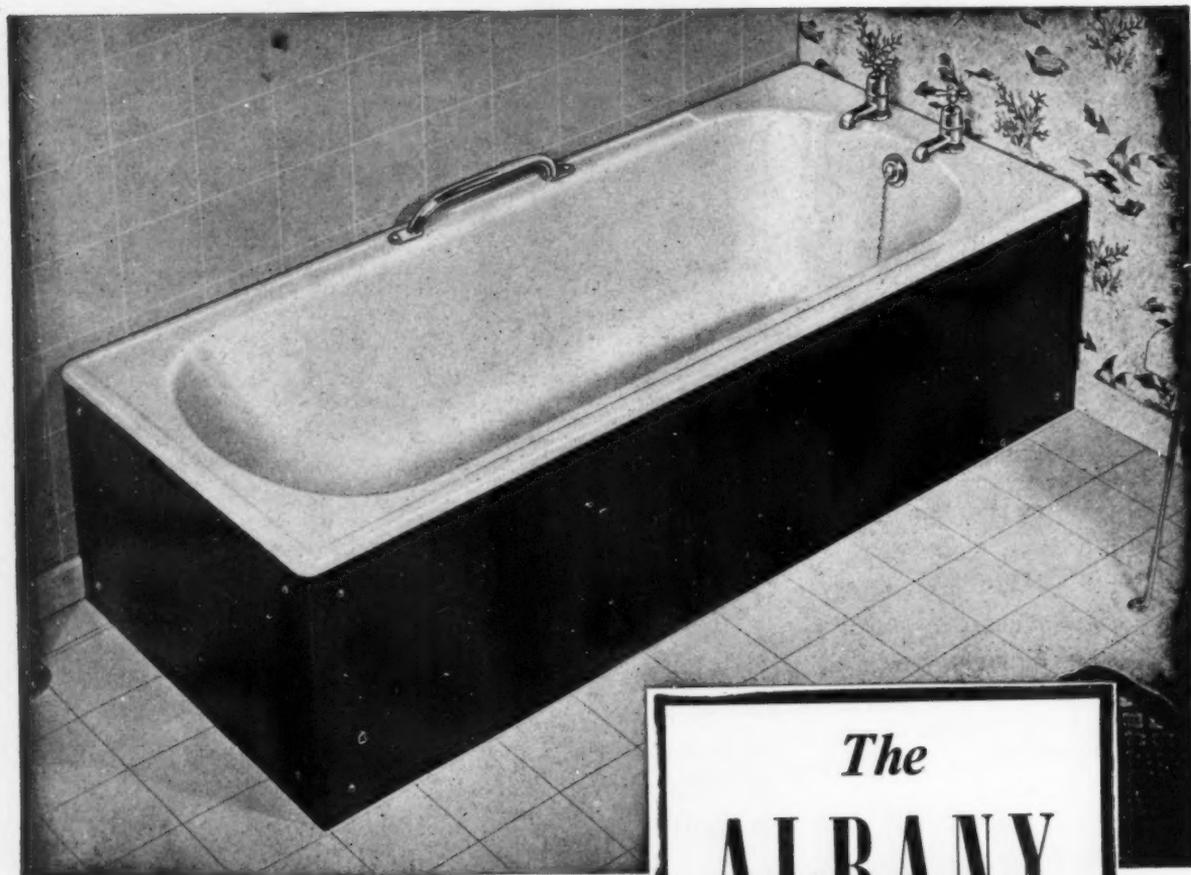
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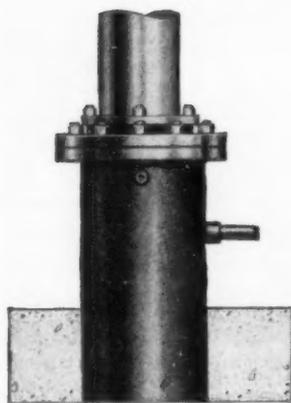
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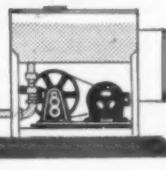
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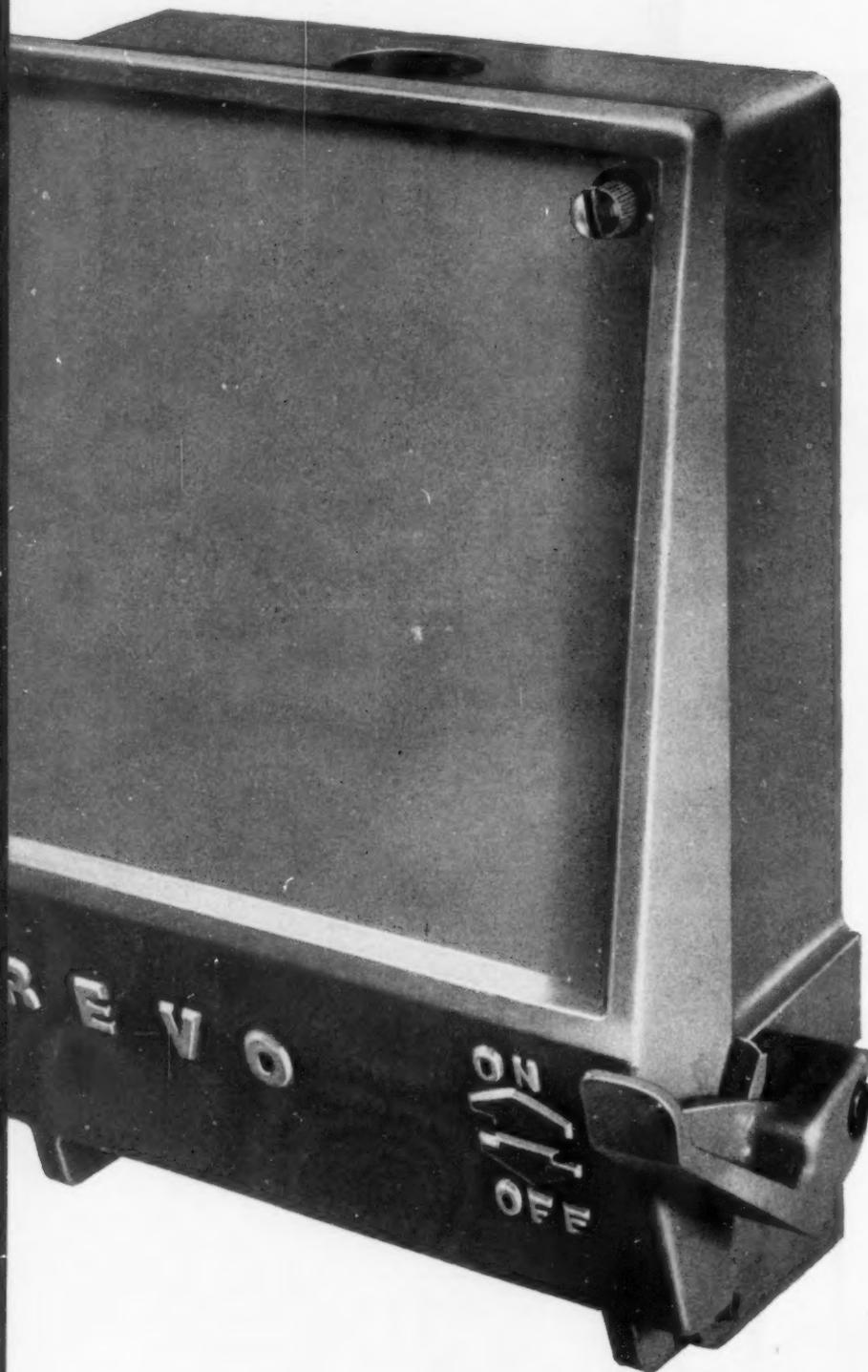


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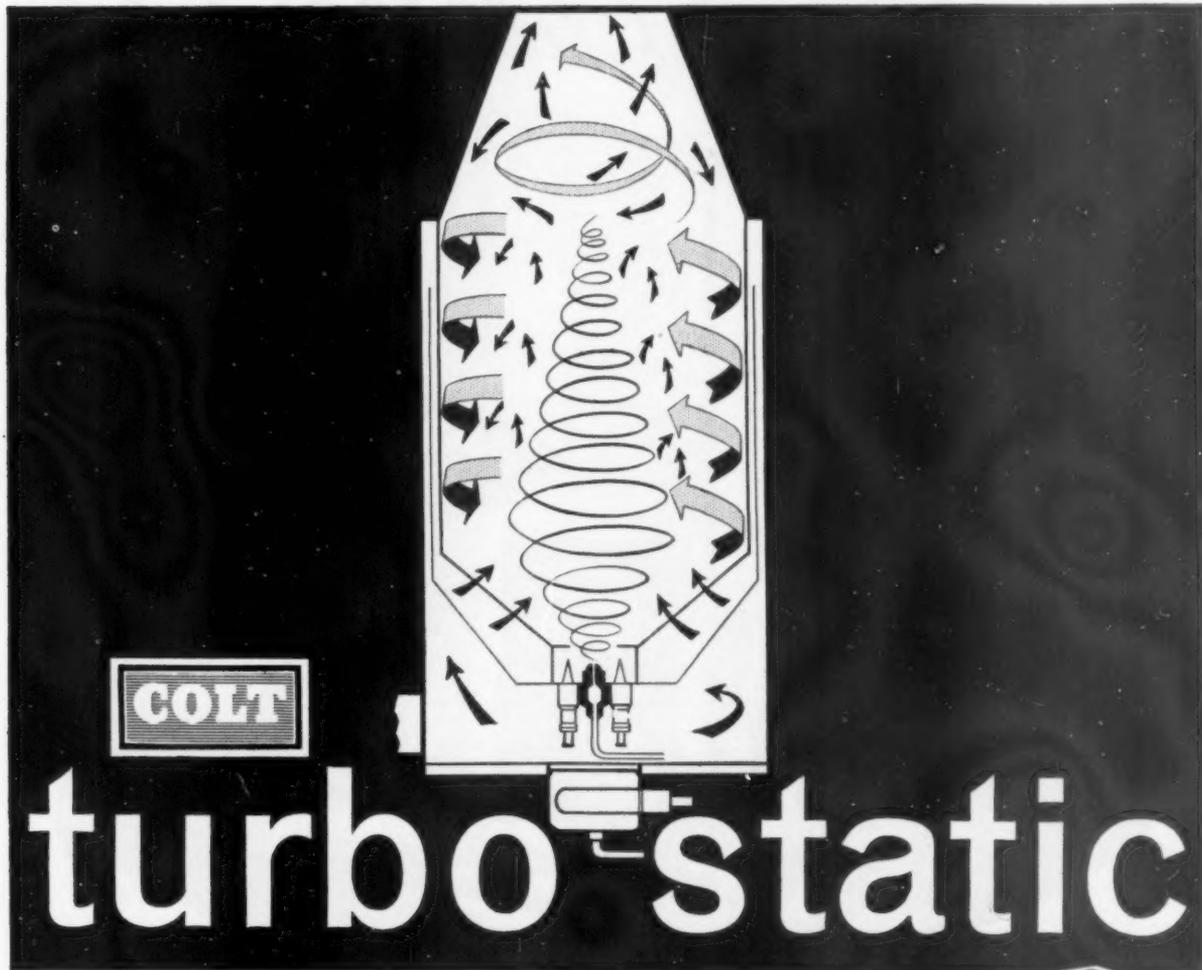
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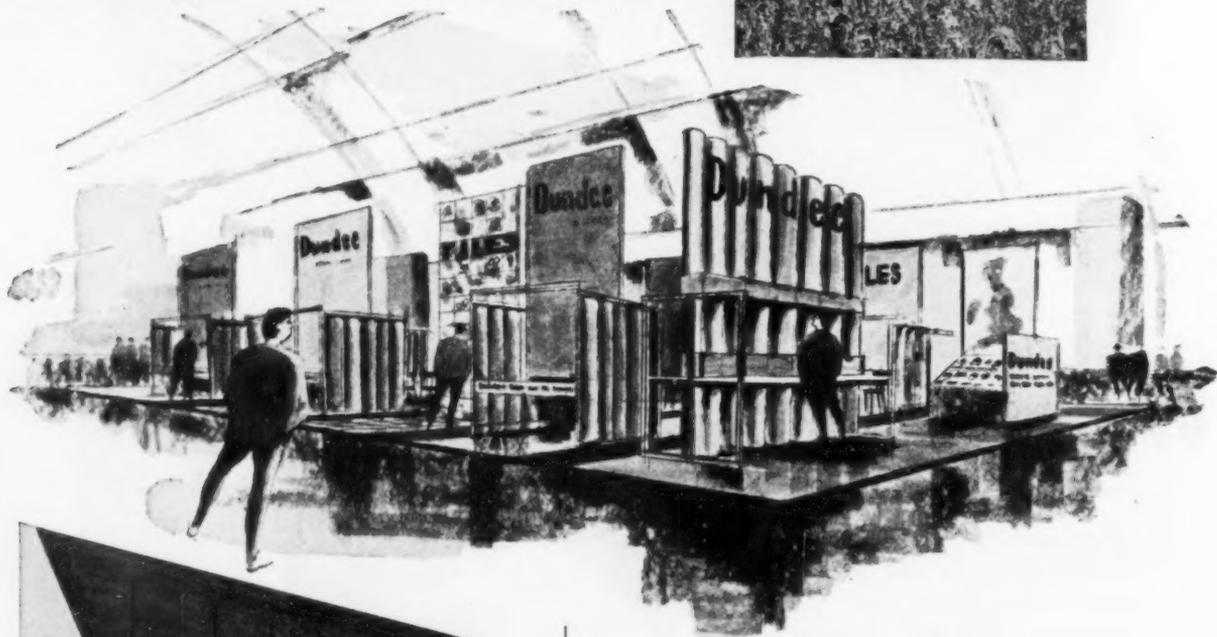
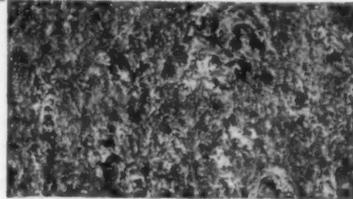
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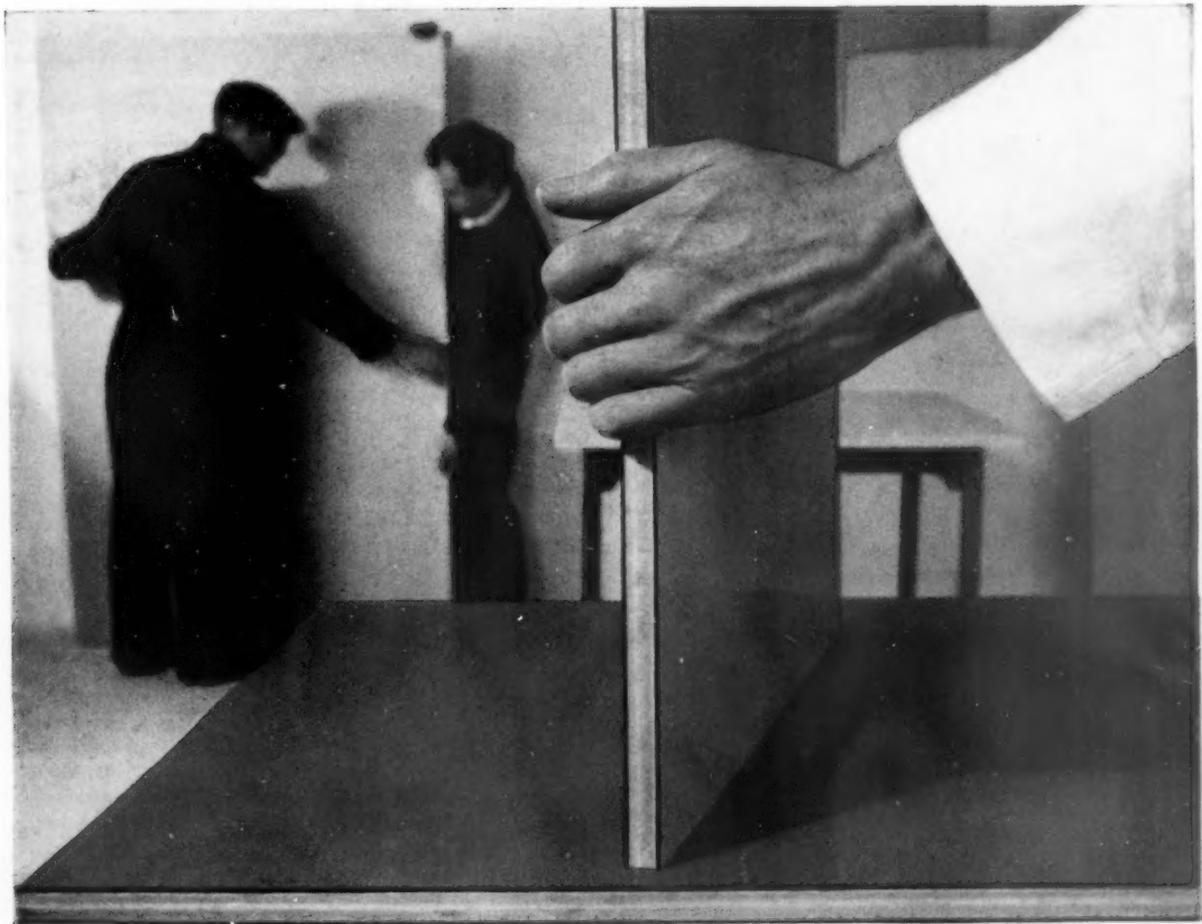
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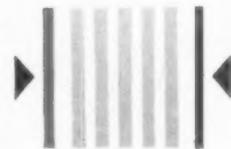


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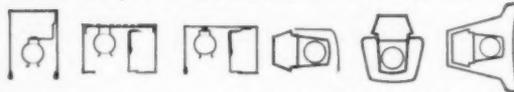


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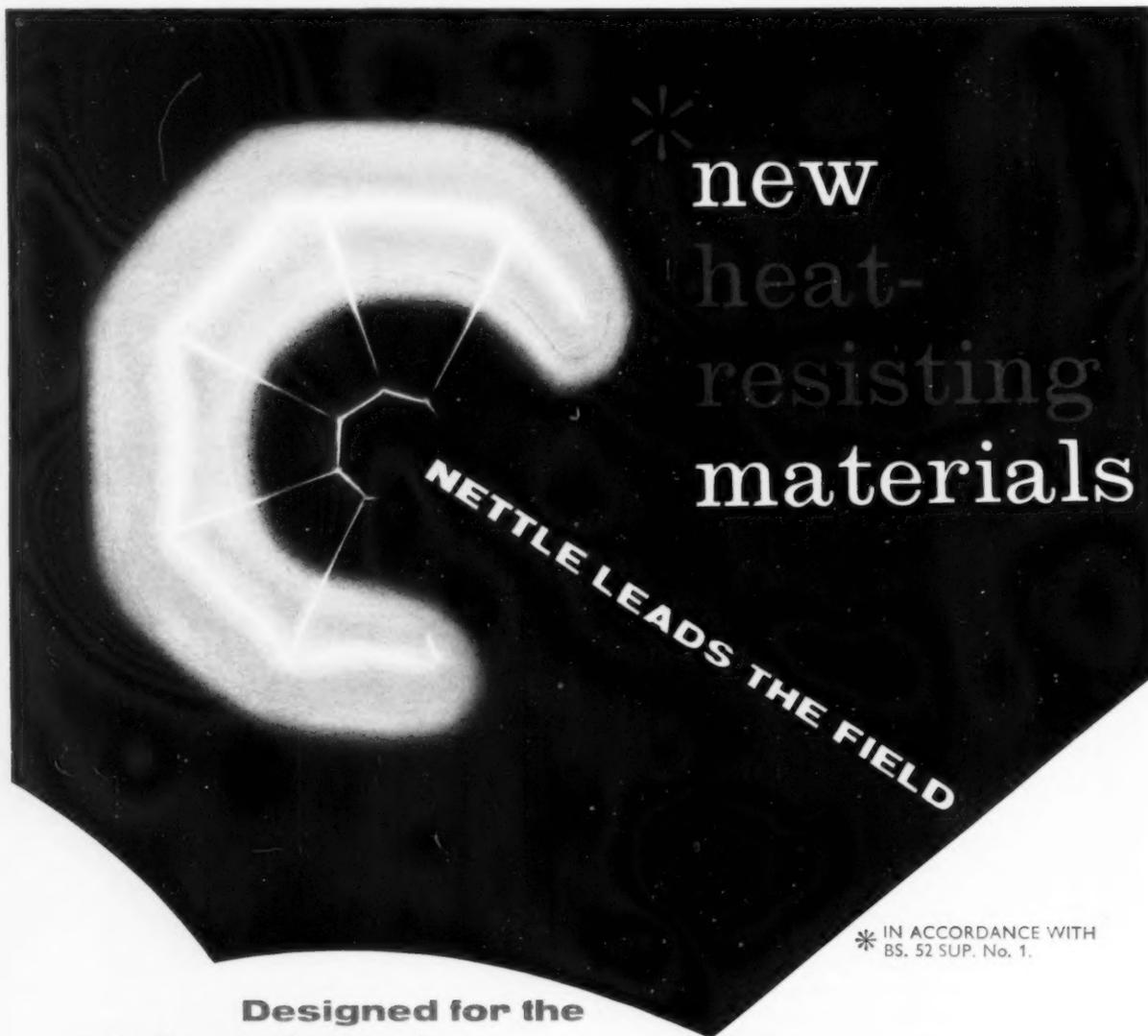
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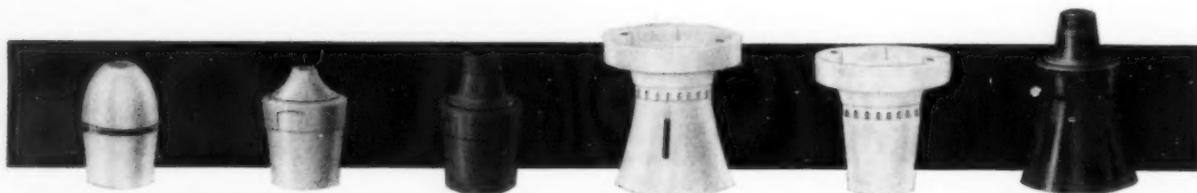
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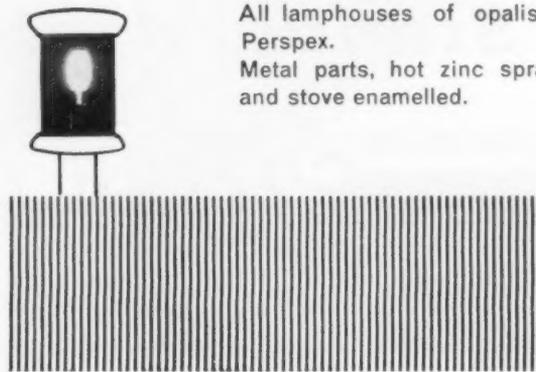
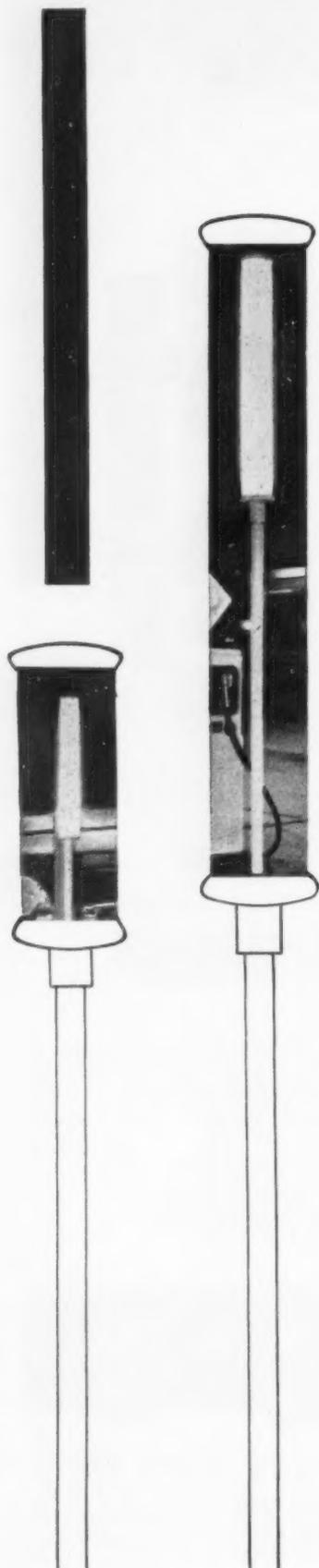
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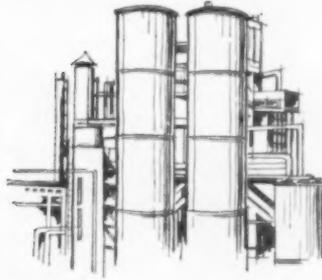
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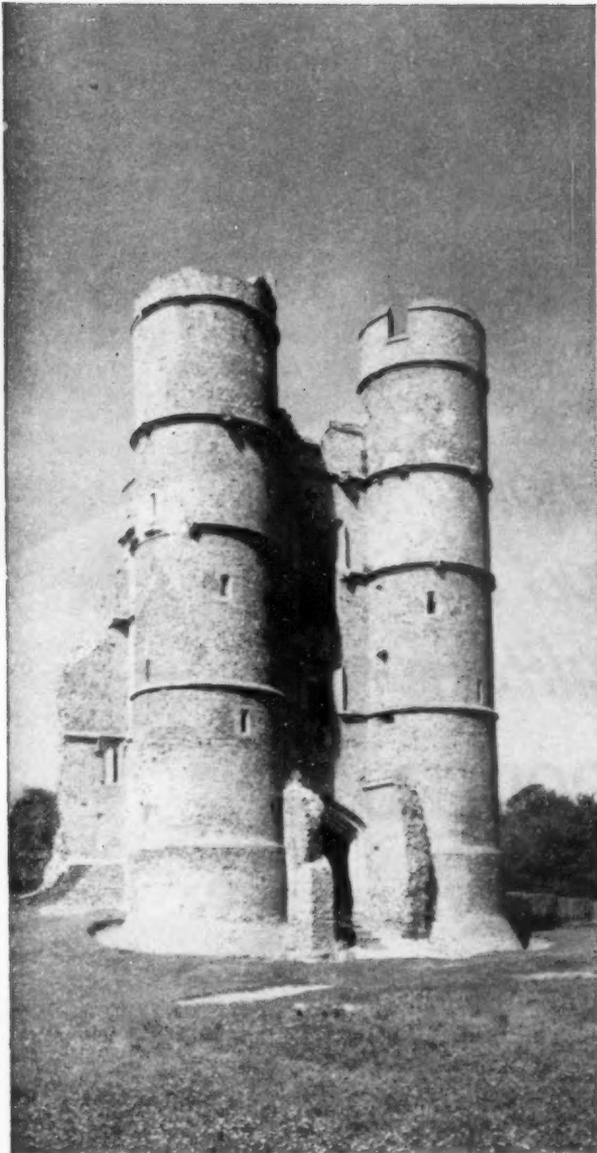
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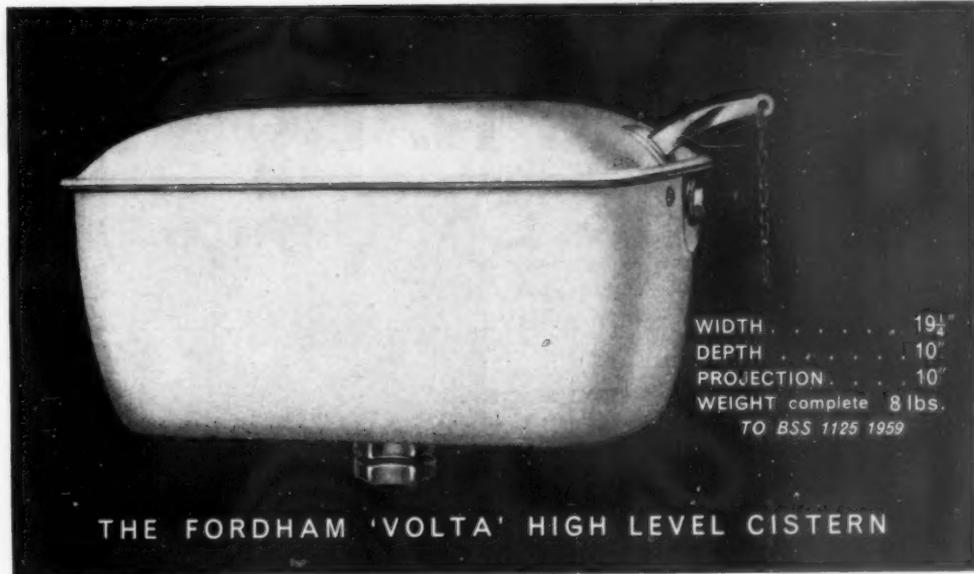
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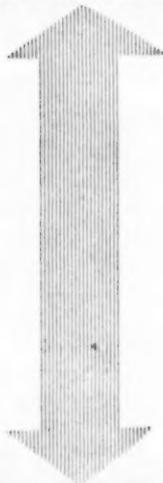


WIDTH 19½"
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 PROJECTION 10"
 WEIGHT complete 8 lbs.
 TO BSS 1125 1959

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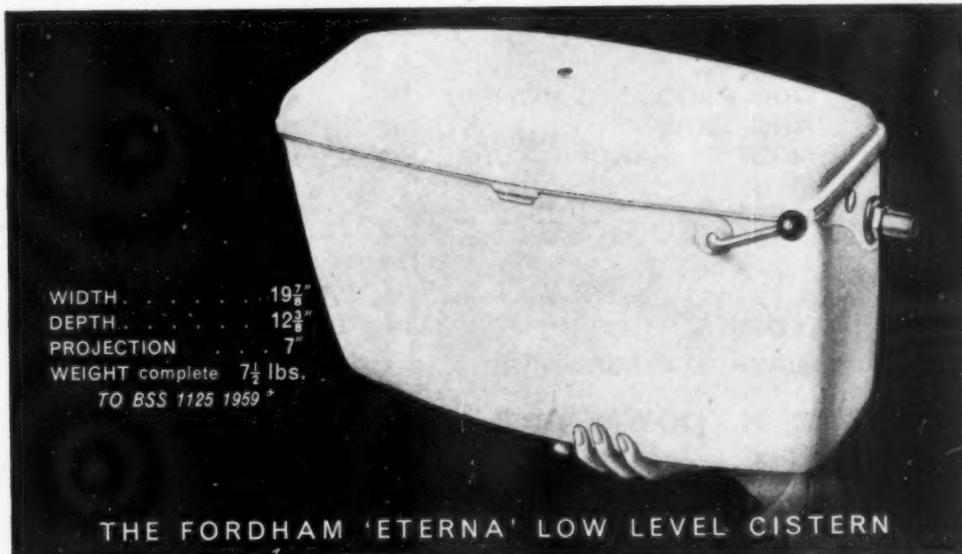
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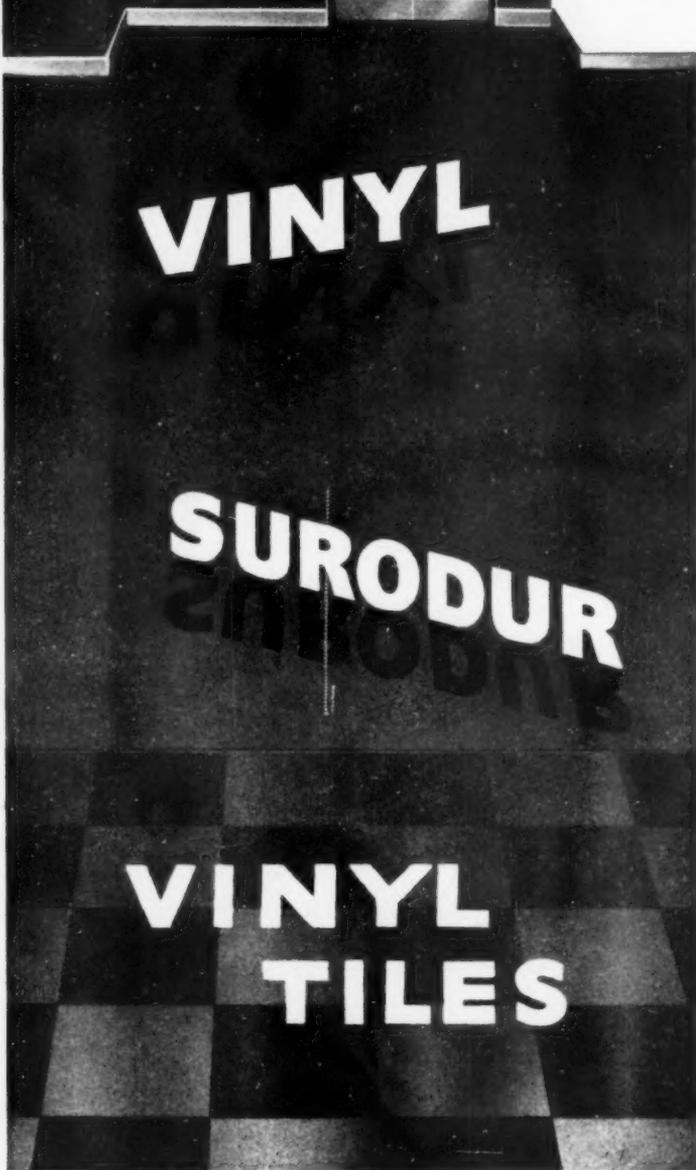
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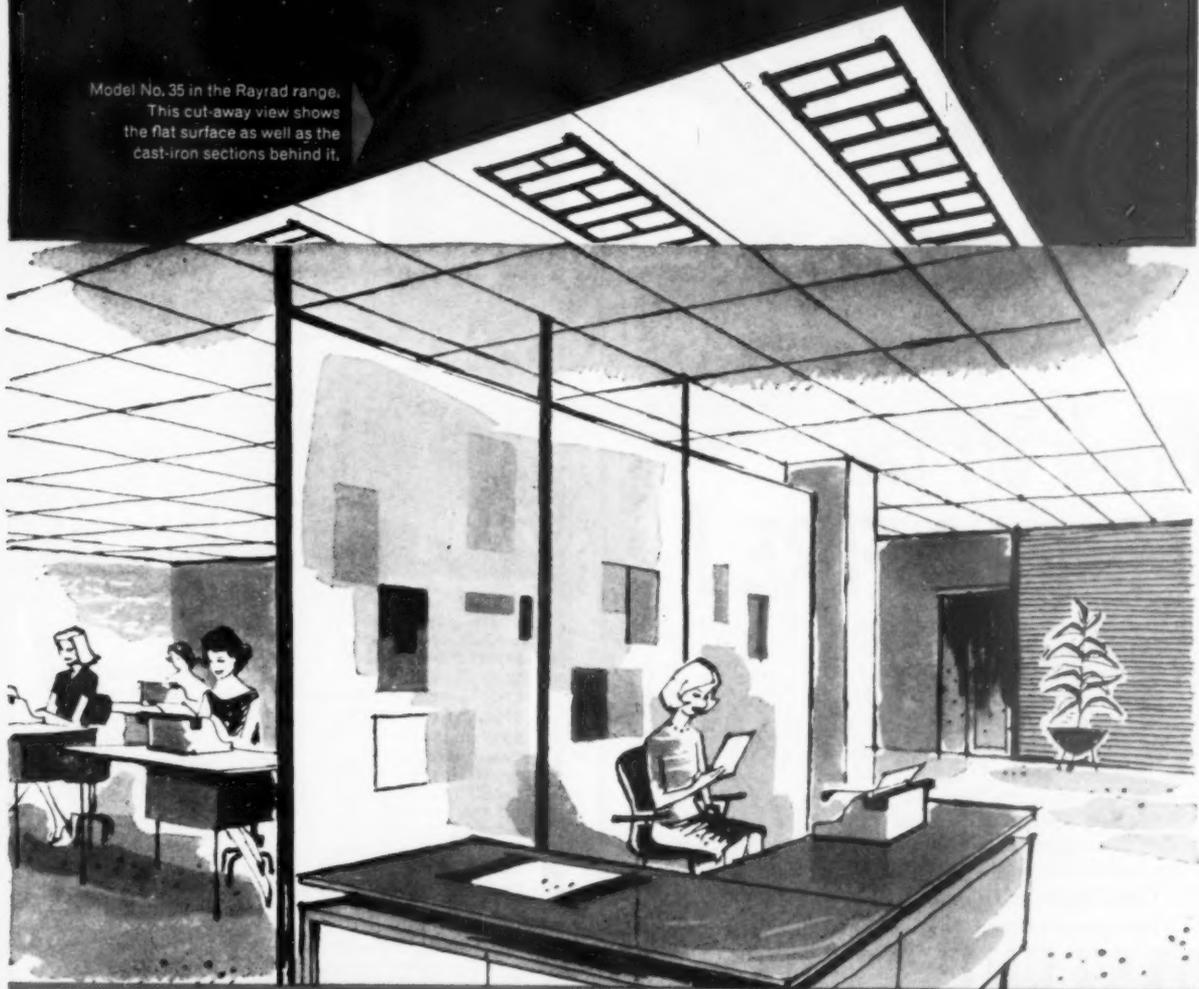


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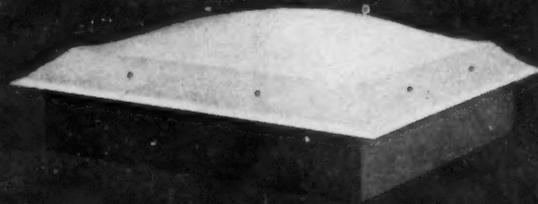
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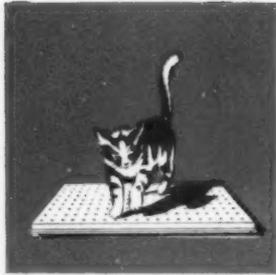
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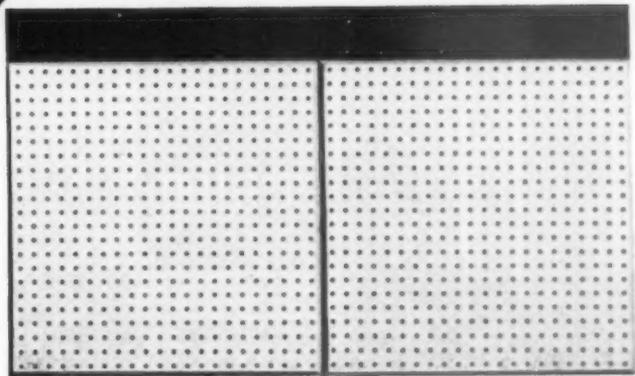
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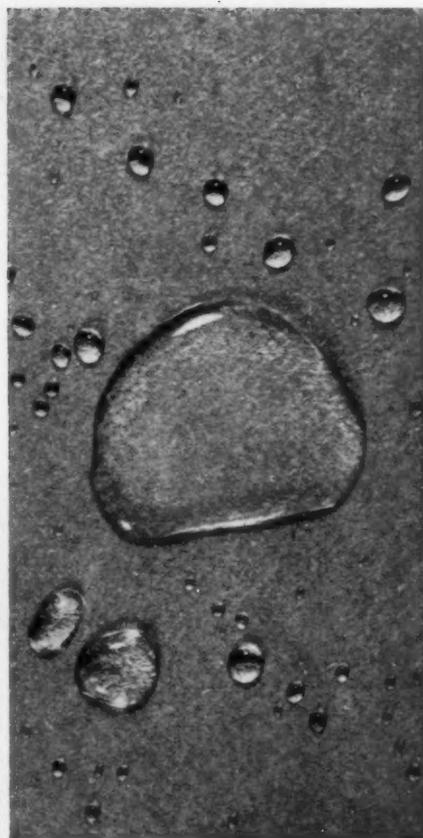
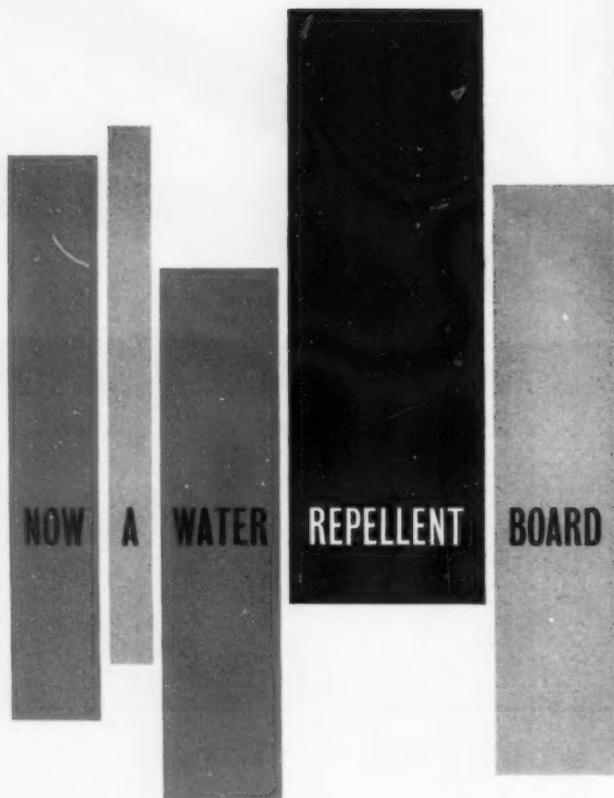
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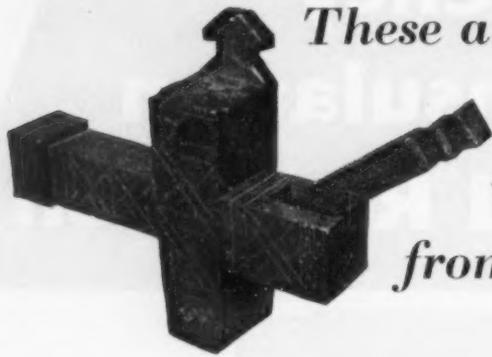
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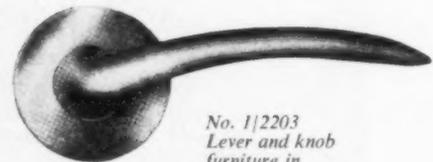
This lock 17 1/4" x 13" is mounted in a wood frame to revolve on a pedestal, and was probably made for semi-flush fixing. The security is provided by a box of wards. Operation is by a key outside and a non-removable handle resembling an elaborate key bow inside. By one turn of either of these the four sliding spring bolts are drawn back and the top and bottom pivoted bolts are tilted. All are retained in these unlocked positions by a hinged spring plate inside. The staple for fixing on the door jamb is not shown. This would be a box-like fitting large enough to accommodate all the bolts and provided with slots through which the pivoted bolts would pass.

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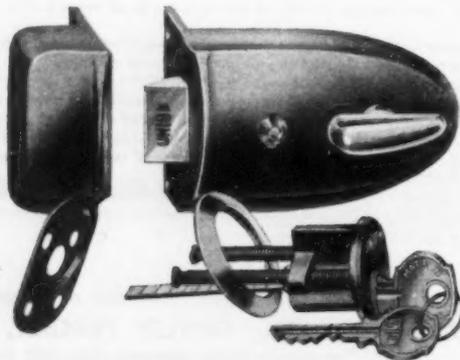
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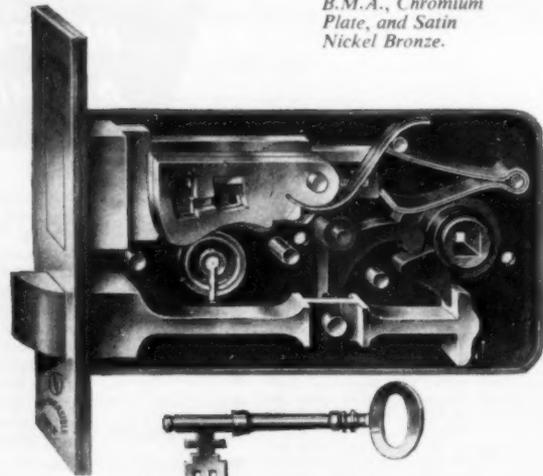
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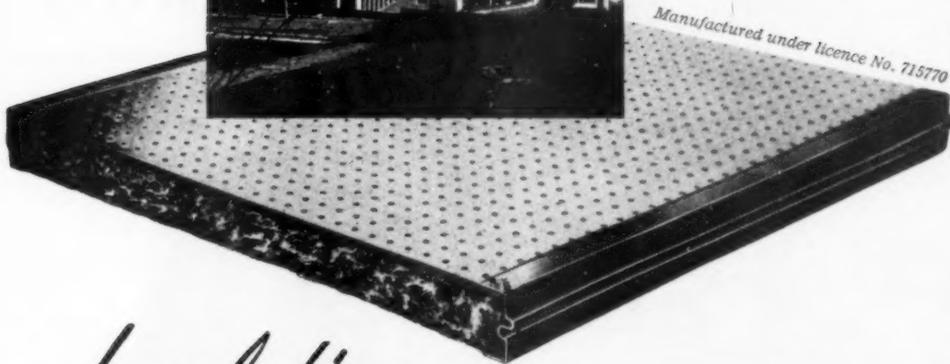


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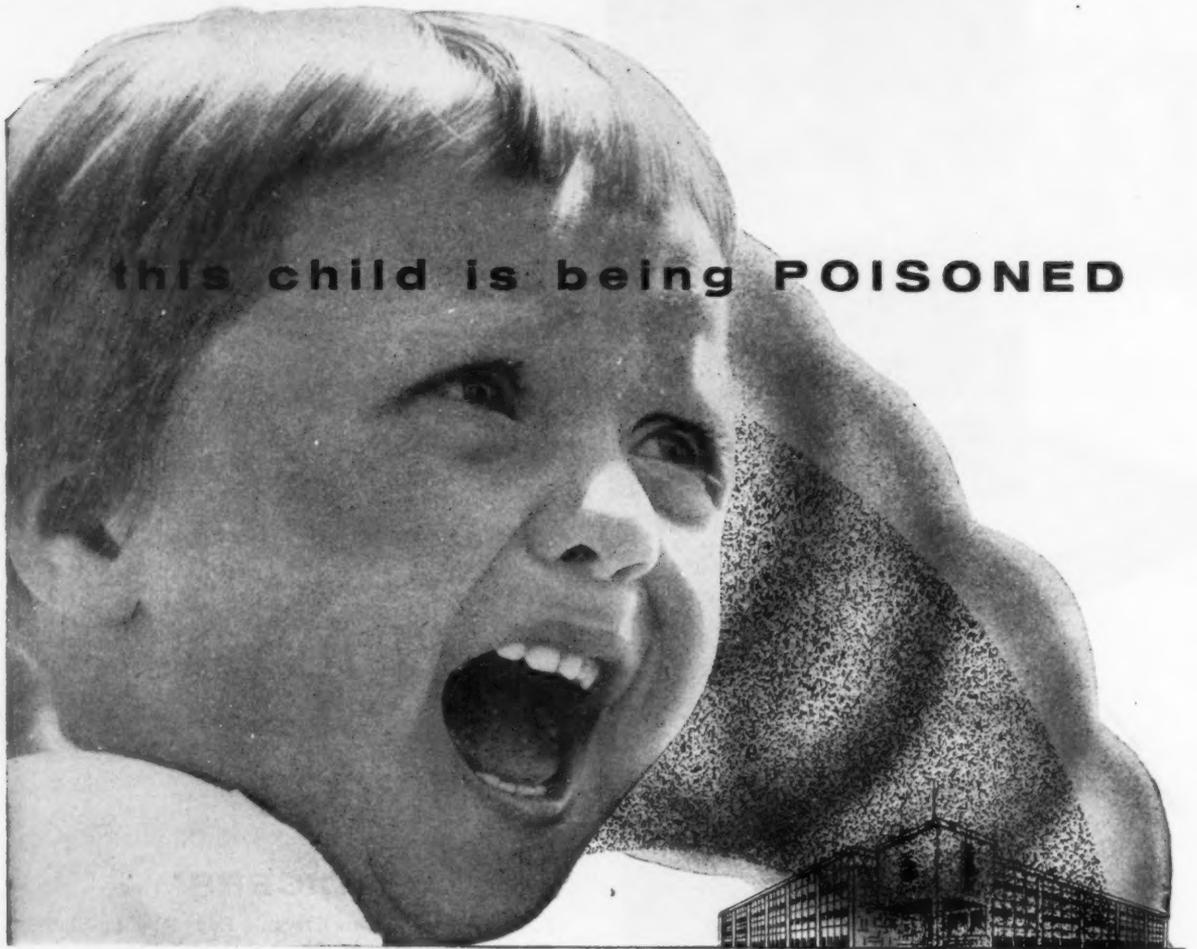
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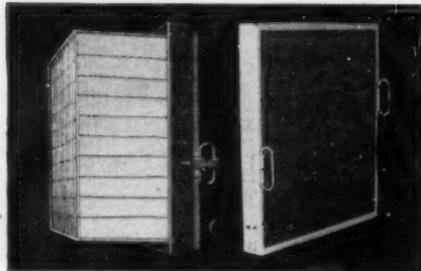
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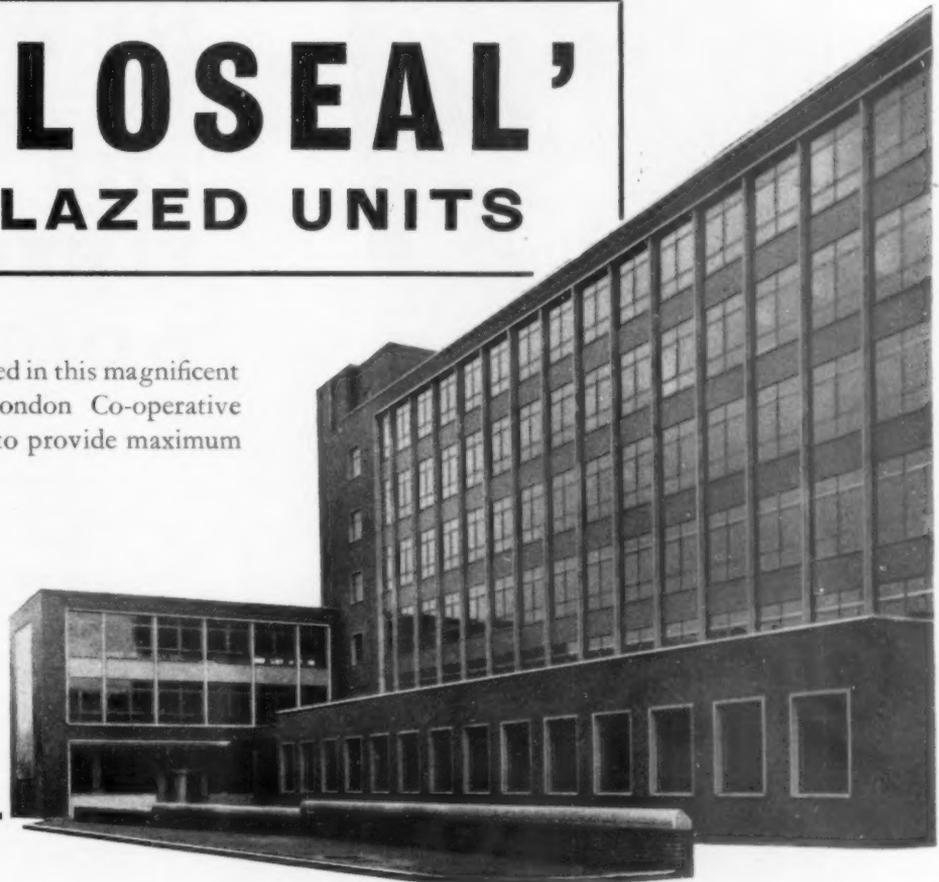


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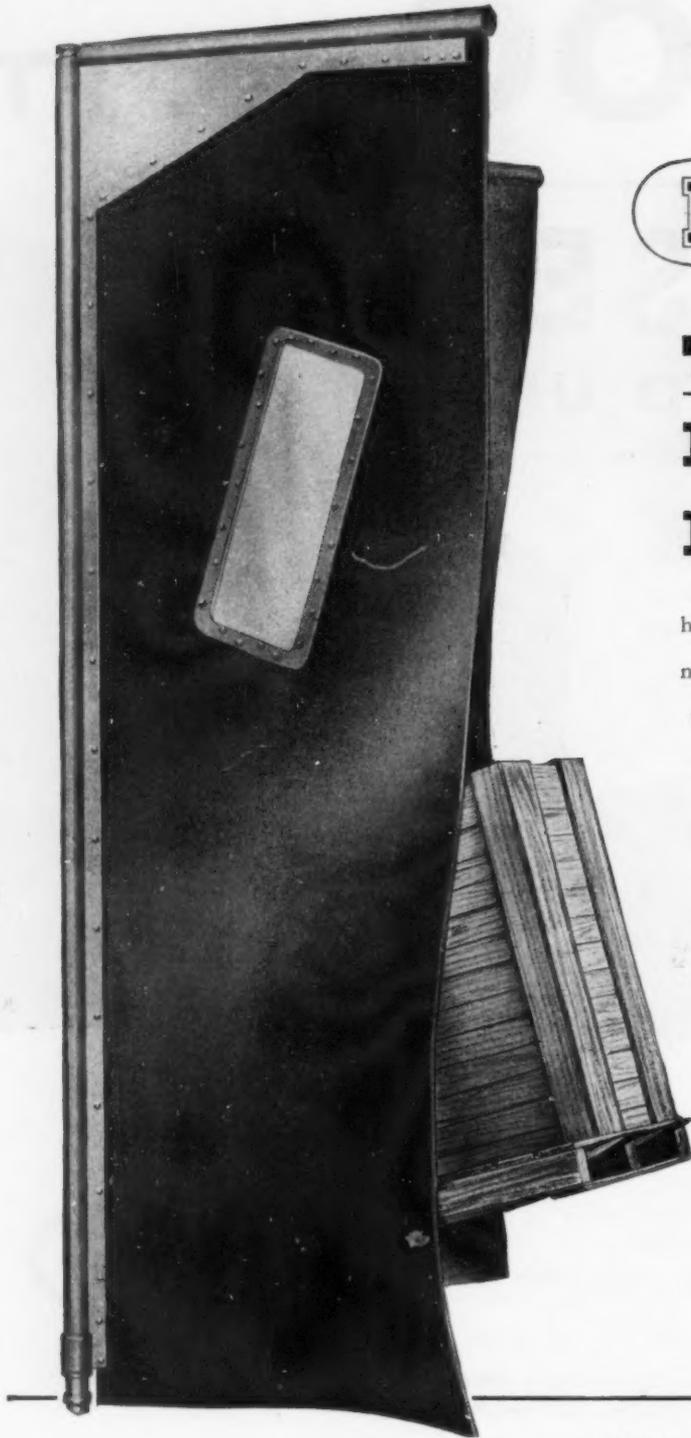
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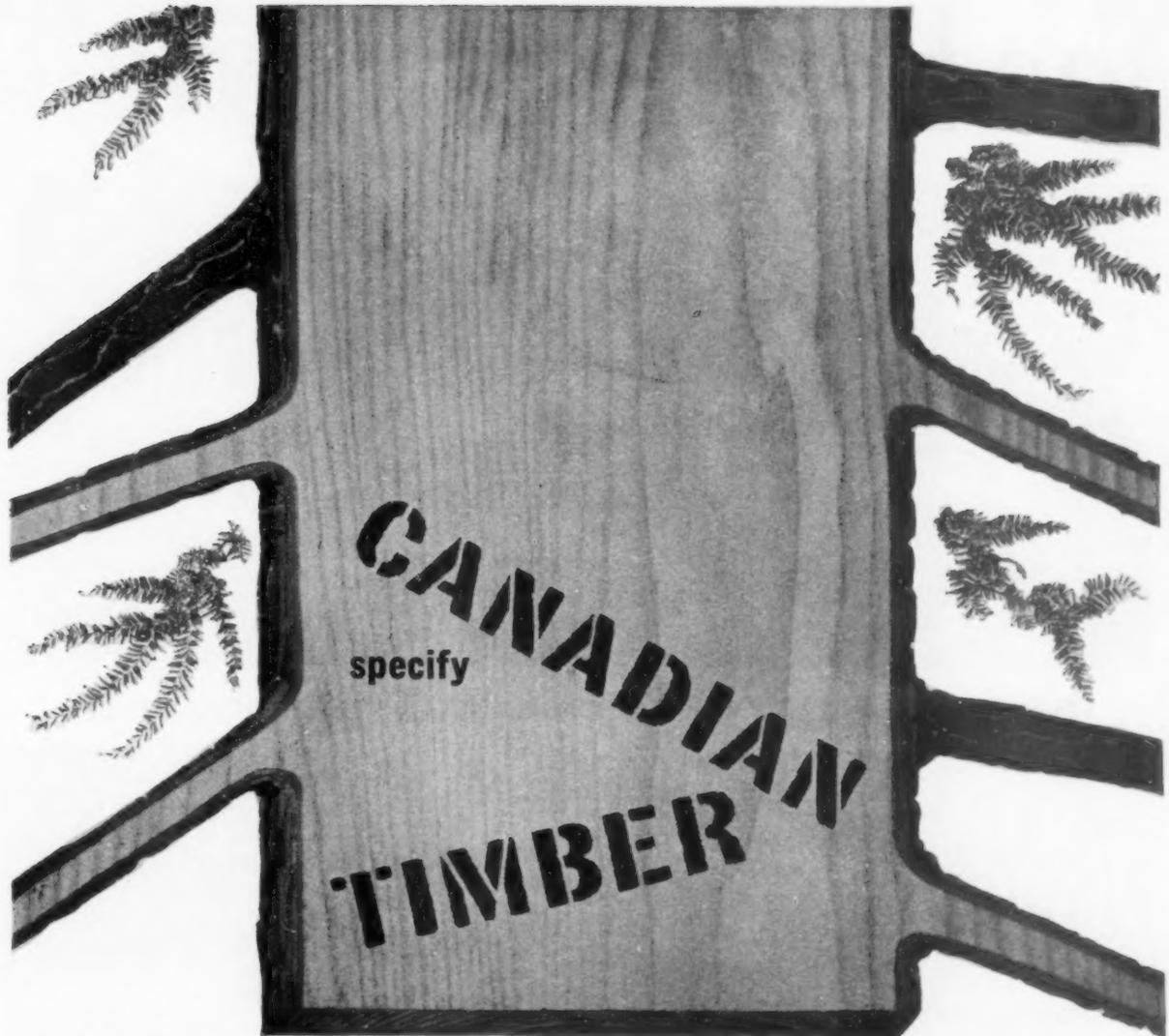
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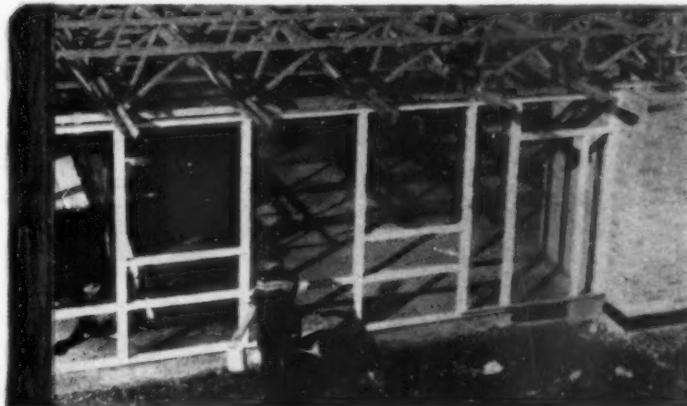
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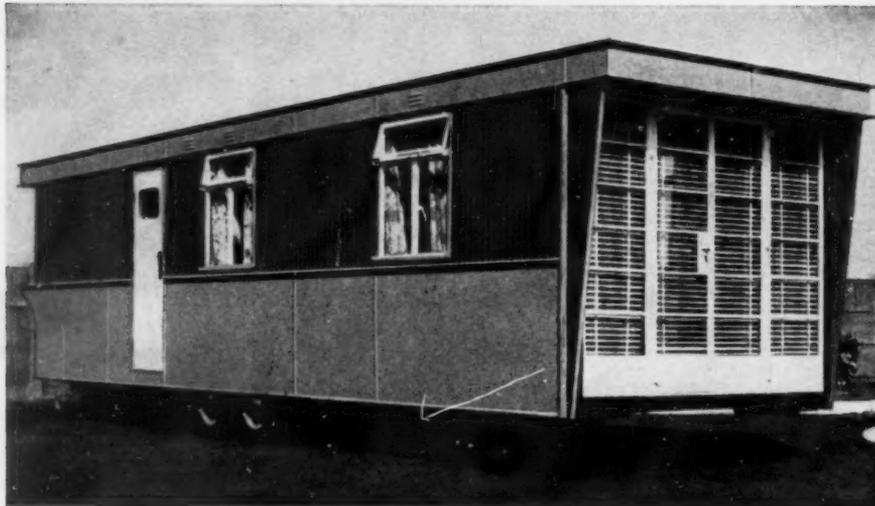
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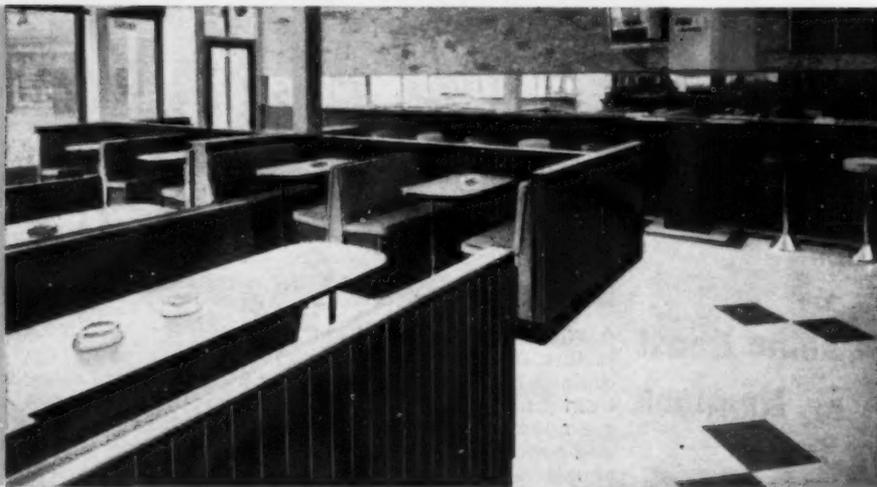
outdoors

Plydek cladding on the 'Housemaster' mobile home, built by Fairholm Products Ltd. This firm says: "Plydek is a great attraction and we are very pleased with it."

the contemporary decorative plywood

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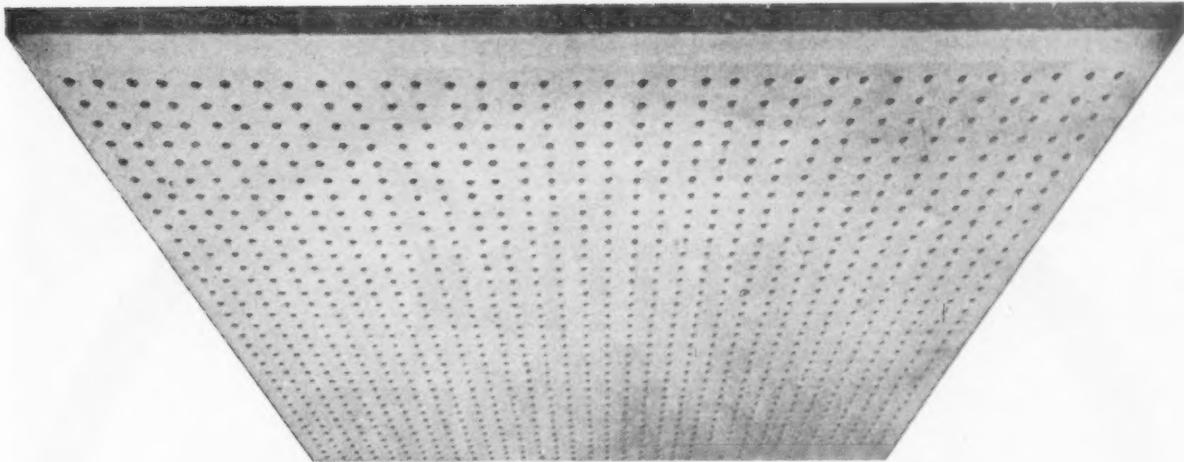
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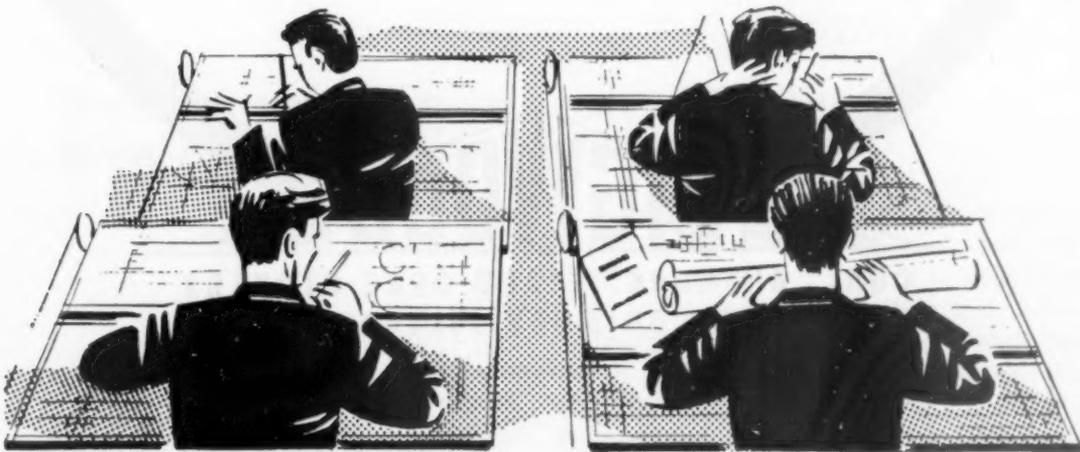
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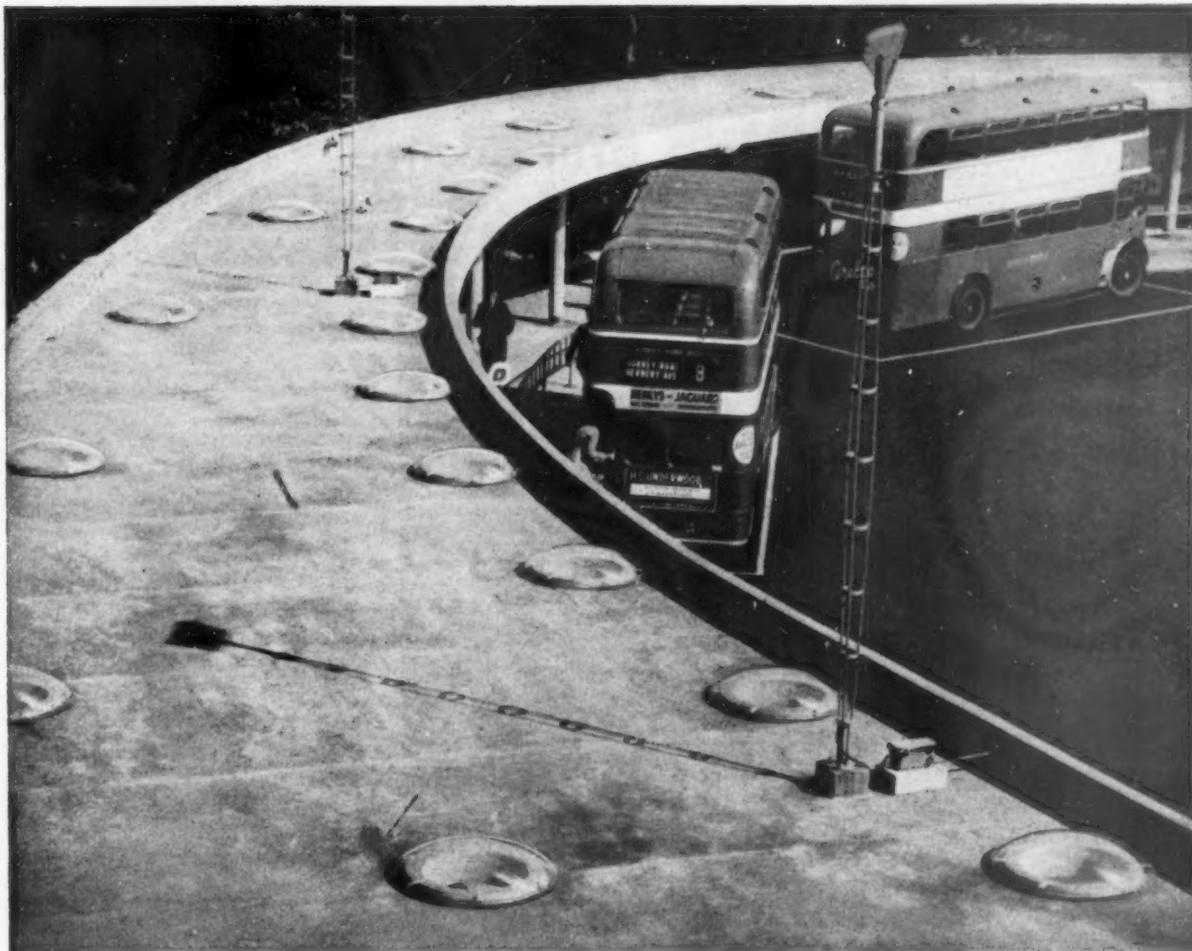
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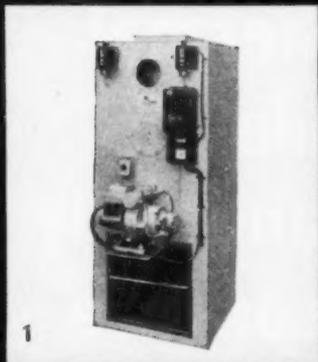
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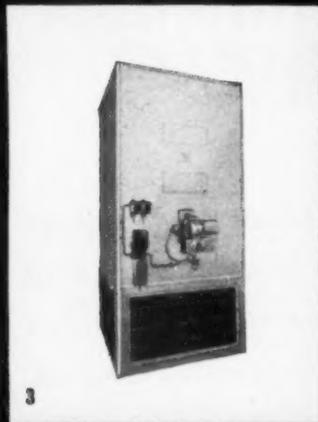
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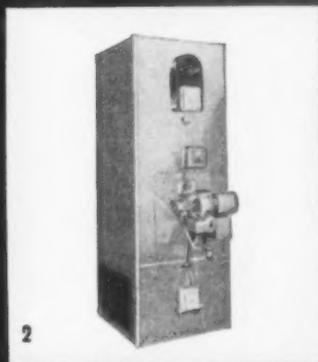
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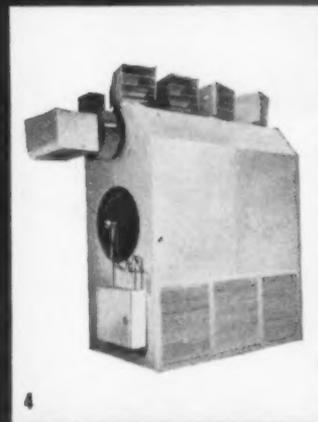
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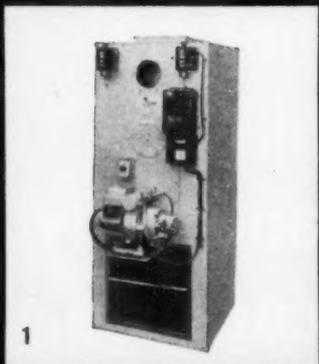
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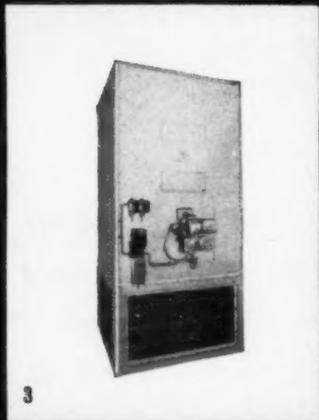
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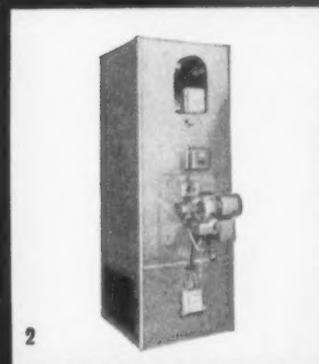
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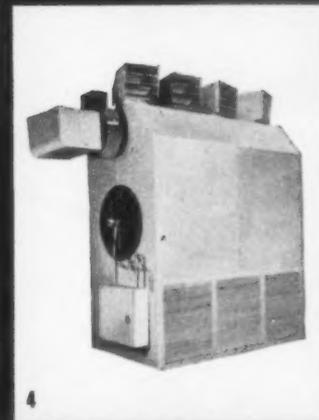
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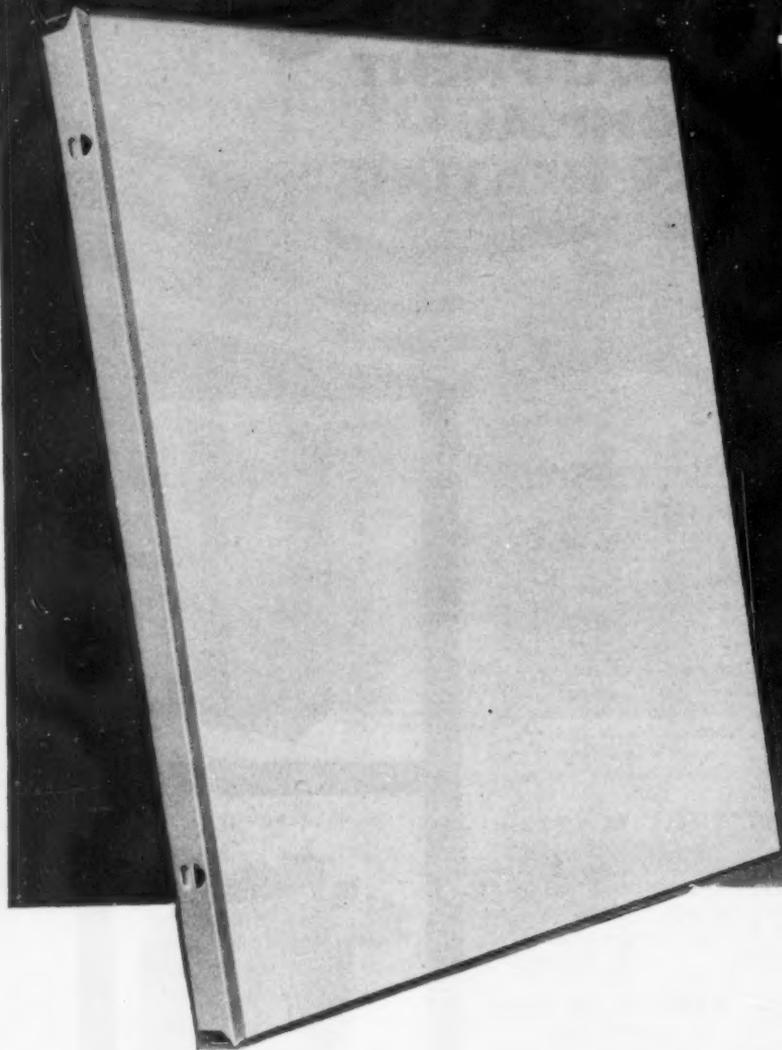
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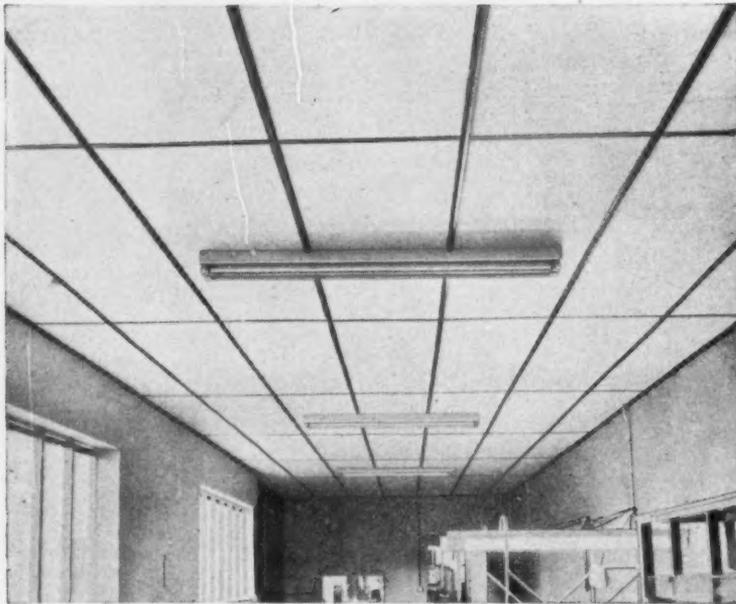
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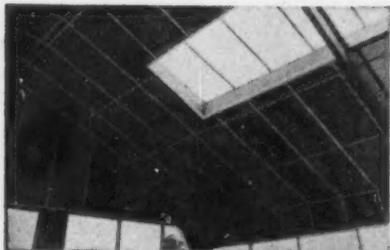
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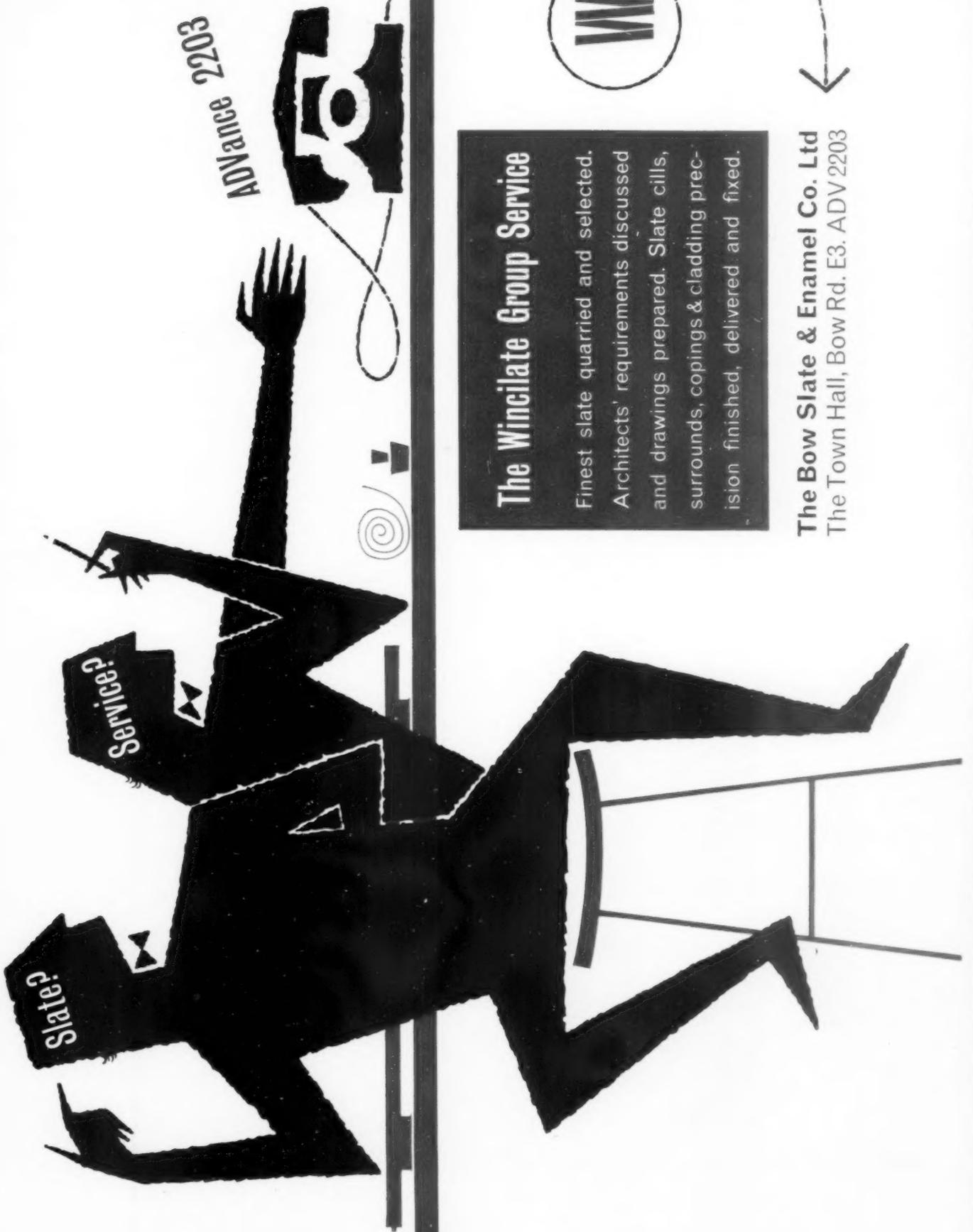


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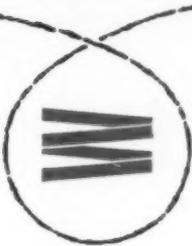
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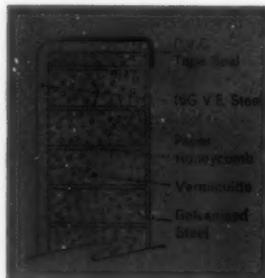
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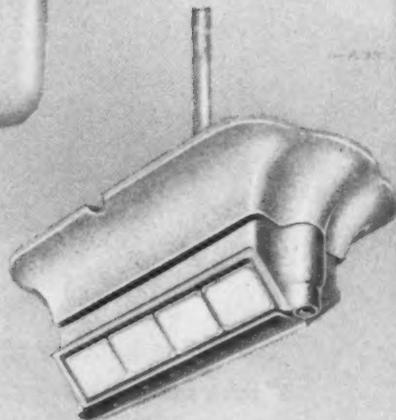
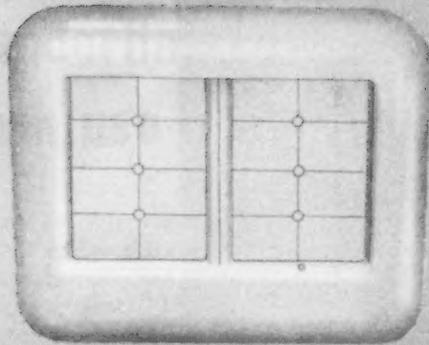
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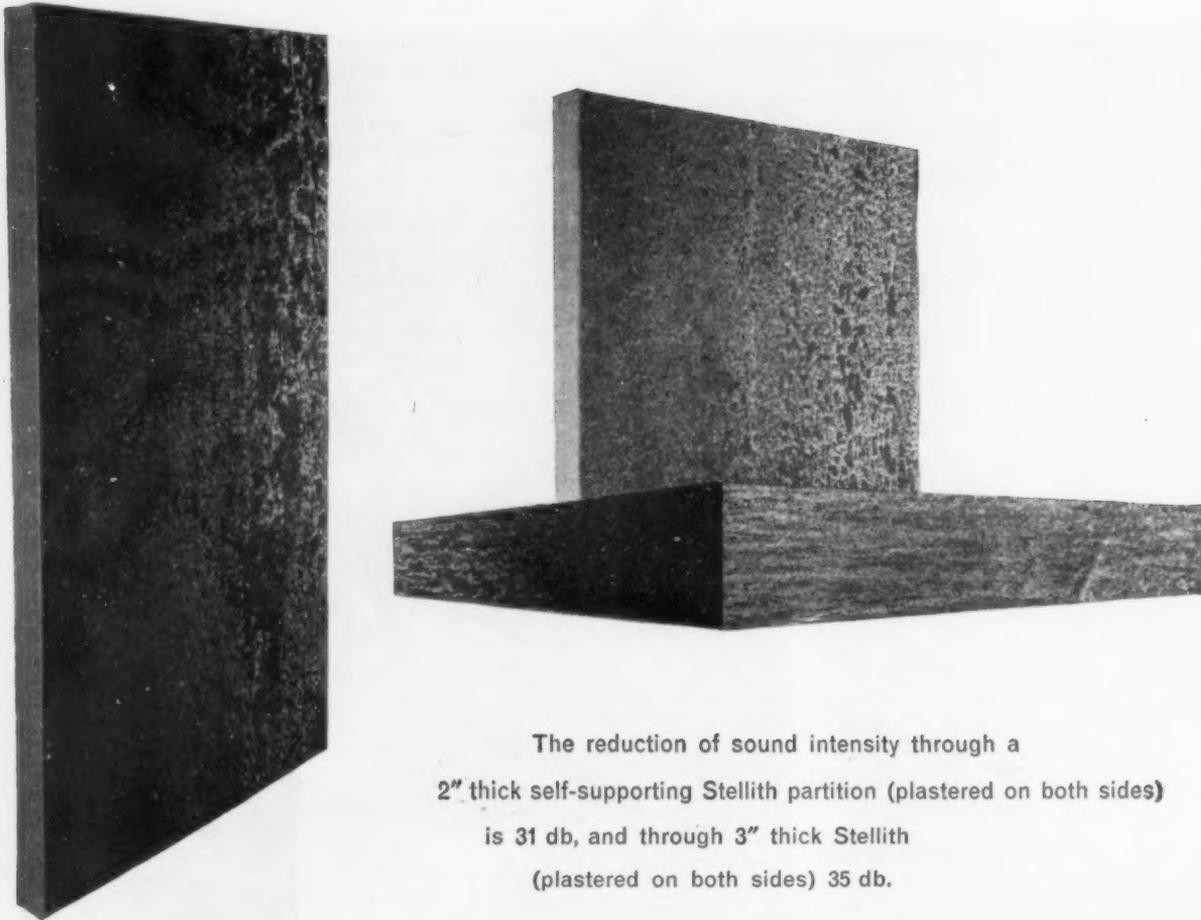


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Architects: Trehearn & Norman,
Preston & Partners
Contractors: Tersons Ltd.

YEOMAN HOUSE (below)
for RODWELL GROUP LTD,
KEW BRIDGE, LONDON, W.4
Architects: Duncan & Partners
Contractors: Tersons Ltd.

MARLAND HOUSE (bottom right)
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163/169 Brompton Road, S.W.3.

Architects: Richard Sheppard, Robson & Partners
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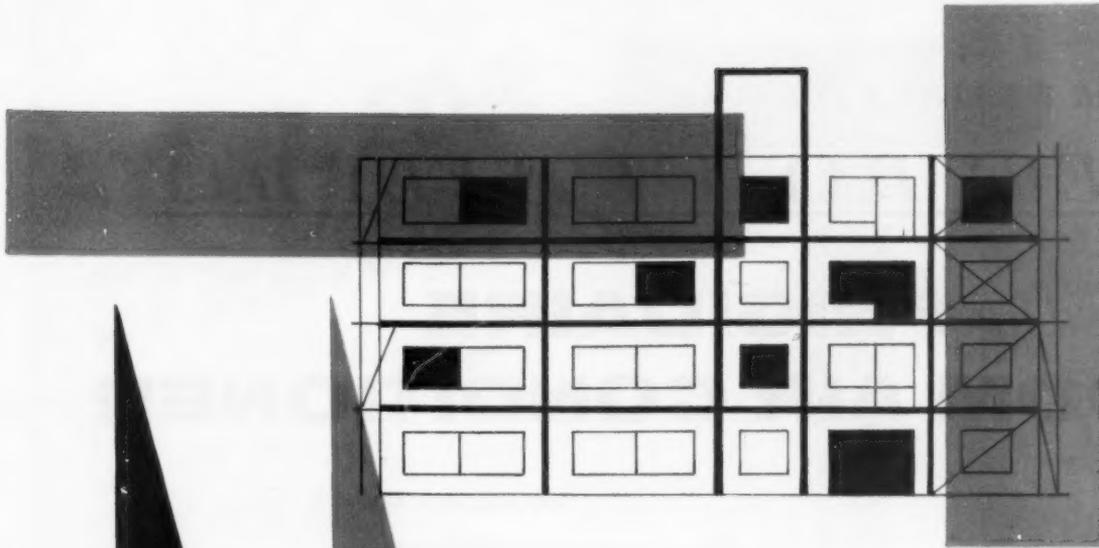
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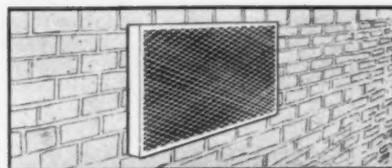


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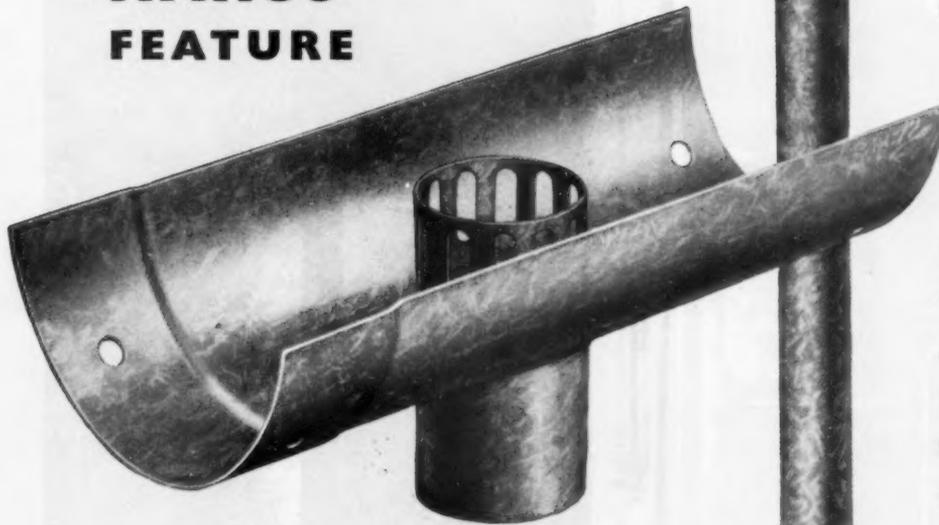
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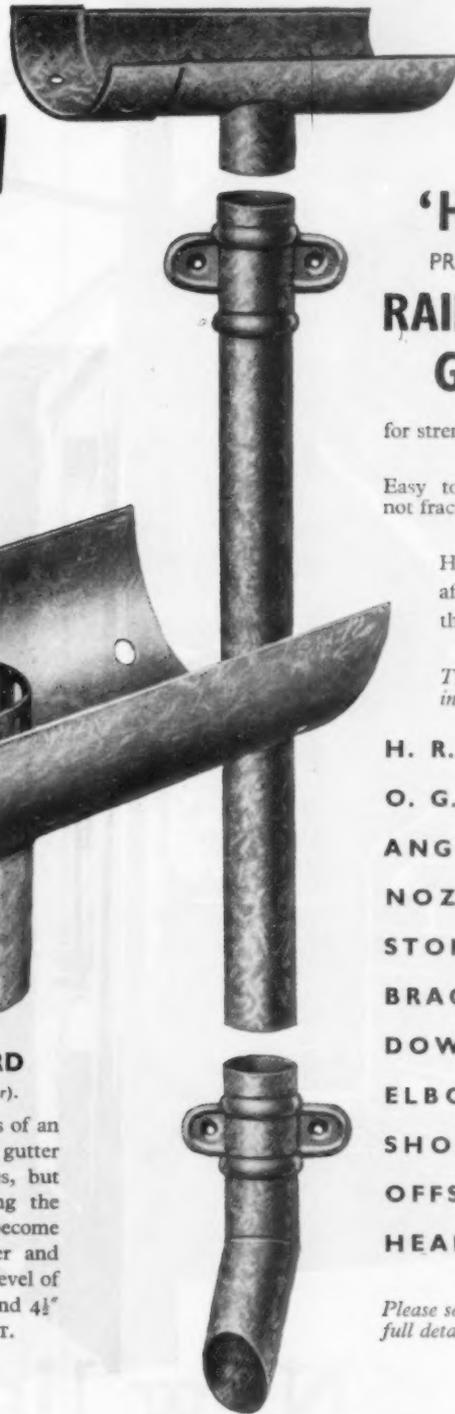
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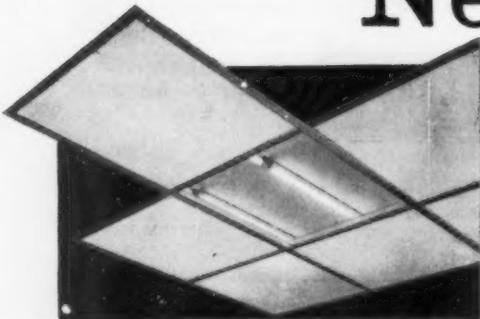
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TGA 134

FUNCTION-DESIGN OR BOTH

How many projects fall down or go off at 'half-cock' due to the incompatibility of these two partners? All too few industrialists know enough about design and many designers could improve their knowledge of the functions in industry.

In the design and furnishing of office buildings, the work to be carried on within their walls must of necessity make certain demands, just as it does in a factory.

The question therefore arises as to whether you as an architect can appreciate those demands and satisfy them. In other words, can you marry the aesthetics of design with functional requirements?

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The Architects' Journal

No. 3434. Vol. 133. February 9, 1961

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NOT QUITE ARCHITECTURE

This Week!

Opening chorus. Lower-case credit titles float across the RIBA. Full-size Silhouettes performing a suitably symbolical dance of the Seven Lamps, with decor by Sir Hugh Casson, and some mobiles. Dead playful but not pretentious.

Candid Camera. A Town Planning Officer walks a tight-rope. (This is a visual thing.)

Commercial. Charming man with smiling teeth, conforming with BSS for interviewers, shows a frankly ordinary woman two models; one is sleek and cedar, the other semi-, and desirable. He asks her which one *She* thinks was architect-designed. She selects the modern one, as arranged, and the interviewer tells her how clever she is, picks up the model for dramatic, high-powered punch-line, and the roof falls in.

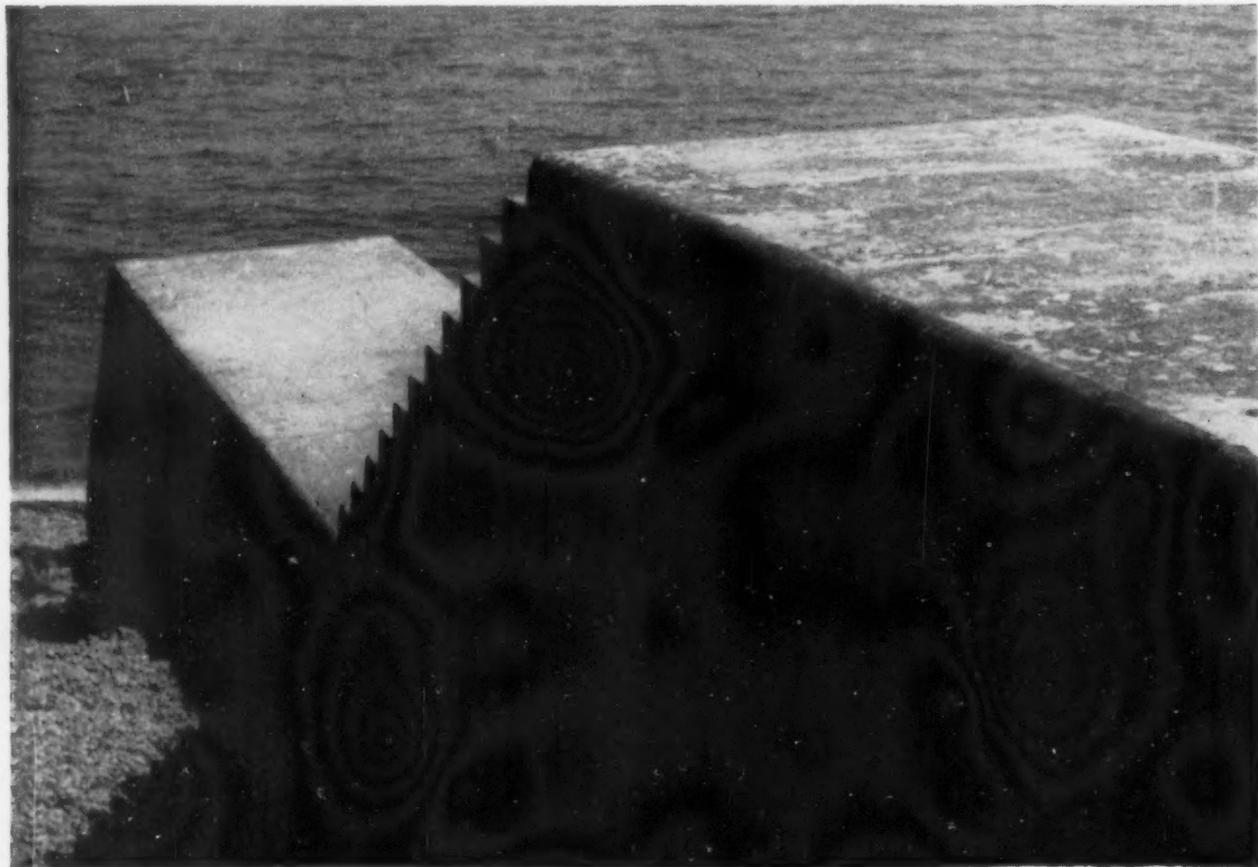
Magic and Mystery. Ciam Canasta makes paper ladder from copy of LCC byelaws. Thus warmed up, he is sealed in a thermo-plastic coffin and taken to Gatwick terminal, from whence he identifies cards selected in the studio from complete set of *Architectural Design* Product Index, using SIB symbols. Audience applaud, because they don't understand the system either.

Singing Commercial. Low-cut swinging blonde gives out with suitably revised pop standards, intended to overcome building

The Functional Tradition . . .

Subtopian Perdition

Two illustrations from Elizabeth Beazley's *Design and Detail of the Space Between Buildings*, which is reviewed by John Eastwick-Field on page 206: below, a breakwater, massive and monumental, expresses the functional tradition where an exposed position makes simplicity and toughness necessary and appropriate. Right, in contrast, a sad effort to pretty up another exposed position requiring toughness if not simplicity. John Eastwick-Field comments on these two pictures that the dramatic photograph below "should hang on the wall as a reminder for anyone tempted to indulge in the apologetic introduction of inappropriate flower pots. . . ."



trade inhibitions regarding new materials, and methods, e.g.

"There's no plumbing like concealed plumbing."

"Standing on the corner, watching all the pre-packed bricks."

Folk Singer: A hairy-chested skiffle refugee who failed Finals and a "Saturday Club" audition, sings:

When I was a young man, fair and gay,
I trod the primrose covered way,

Till I was A.R.I.B.A.,

Then the telephone started ringing,
Hey, Ring-a-ding, ding, ding.

I left the primrose-covered way,

When I was A.R.I.B.A.,

I clung to Art, no time for play,
For the telephone kept on ringing.

Hey, Ring-ding, ding, ding. . .

Now I am a poor man, old and grey,

An F. (Retired) R.I.B.A.,

I shed a tear for yesterday,

But at least they've disconnected the tele-
phone.

Live Action Commercial. Scene is a typical subtopian kitchen. Husband arrives home to find his wife in the arms of another man.

Husband: "What . . .?"

Wife: "But, darling, I can explain . . ."

Husband: "Enough!" (turning to camera in outraged close-up.) "If this is what they mean by all-in service, I am going back to Henry W. Featherstone, Chartered Architect. You're safer with an architect."

Competition Spot. A complete office staff, volunteers from the audience, are given a set of tests to do in 90 seconds, while the compère says stupid things. A small building site has been erected onstage, and the Principal has to discover the defect in materials or workmanship (the answer being that the Foreman has been dropping his paper hankies down the cavity). Meanwhile the Junior Partner is bursting fifteen balloons with a rubber hod, the Typist is trying to rearrange some letters on a magnetic board so as to read "Rome was not built in a Day" when all the time it's "A house is a machine etc.," and the office boy has been despatched to find a left-handed long stand, about this long. It's all madly gay, and they are given the prize regardless, which is a qualified Assistant with 10 years' experience, salary, health stamps, and superannuation paid for 12 months. He is complete with built-in professional liability policy and, in case they don't like his face, they are also given a Victor Sylvester dancing book.

The whole cast sings a final chorus which dissolves eventually into a whirling abstract composition, plastic as Hell (Consultant: Victor Pasmore) and then congeals into *THE END*, just before Dad starts looking for the maintenance guarantee.

ALAN PLATER

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* To preserve freedom of criticism these editors, as leaders in their respective fields, remain anonymous.

The Editors

THE INDUSTRY DROPS A V BRICK

In their December issue our contemporary *The National Builder* blamed the brick manufacturers for their slowness in taking up the new BRS V brick. Only two manufacturers are making this at all and these only on a small scale using adapted plant. *The National Builder* agreed that laying down new plant costs money, but pointed out that in the past, when orders for bricks were low, the manufacturers said they had no money for development; now, when they are in full production, they say they have no time: does this mean that BRS development work on bricks must always be wasted? The National Federation of Clay Industries have now replied to this charge of unresponsiveness by pointing out that the V brick is inherently difficult to make economically, that it is not, as yet, a fully developed product and that its usefulness has not yet been proved to be equal to that of a cavity wall in all exposures and under all loadings.

We are reminded by this reply of a complaint made by brick manufacturers a few years ago apropos of the use of improved perforated clay blocks. They said that, although they manufactured them, architects and builders did not ask for them. The trouble seems to be that, when the brick industry ventures on technical change, it is so slow about it that when in fact a new product is generally available, builders and architects have grown tired of asking for it in vain and have turned to other things. On the whole, builders and architects are more interested in technical improvements than they used to be and quicker, therefore, to take them up; but nothing is more discouraging than to steel yourself to pioneer the use of a new product only to find that you cannot get it. The V brick received great publicity because it seemed so excellent an idea, but the developers of new products must not forget the relationship between publicity, demand and supply. It would be a pity if the V brick can never prove its value simply because brick manufacturers will not make the extra production effort at the right time.



MOW REPOS

The cloud of rumour which has hung over the new residence for the British High Commissioner in Lagos has not been dispelled by the Minister of Works' embarrassed answers to questions in the House of Commons before Christmas and again when Parliament reassembled. The fact that the house, estimated to cost £80,000 is likely to cost about £110,000, coupled with questions about the architect's "experience of designing buildings in the tropics" and the Minister's reference to "certain functional disadvantages which had become evident" in the correction of which the architect had willingly collaborated, have given an impression that the building turned out not to be suited to the climate.

ASTRAGAL has been assured that none of the changes was due to unsuitability to the climate, which is not surprising as the MOW's own experts co-operated on the services. Kenneth Robinson, MP, said in the House, the alterations "were entirely the result of the intervention of the High Commissioner's wife" and the Minister did not contradict that assertion. They included making an upstairs study, adding a wing with a private sitting room and another with more staff rooms, moving a water tower, adding a swimming pool which was not included in the

original brief, and moving the Ladies further from the Gents. There also seems to have been certain refurnishing. Did the architect agree? Well, he didn't kick up a fuss, so it is rather hard on him that a fuss has been kicked up and some of the dust is flying in the wrong direction.

Furnishing is, of course, a matter of taste, if Lord and Lady Head don't like modern, fair enough. It is perhaps right that High Commissioners should have considerable choice in furnishing their private quarters, even though public money is involved. But the public rooms are a different matter: here the prestige of British design is involved and a public servant should be able to adapt himself to official design. In this case, since the furniture was selected (Jo Patrick was consultant) before the High Commissioner and will no doubt outlast his short, three-year, term of office, it does seem that the Ministry of Works has gone rather extravagantly far to please its temporary tenant.

*

Incidentally, I hear that Lionel Brett is lecturing about the building to Dr. Koenigsberger's students of tropical architecture (and AA members) at 36, Bedford Square on March 7.

MORE TEAK THAN ANTIQUE

This year's Furniture Exhibition at Earls Court is not as bad as we might have expected. A year ago the Furniture Development Council was urging us to help the industry to avoid a slump by changing our furniture as often as we normally change a car. This sounded like a warning to the industry to turn over to fashion designing. But in fact, apart from a rash of over-decorated, padded-foam bedroom suites and laminated sideboards, the industry has produced a lot of fairly restrained stuff this year. The ebonised leg with brass spats is on the way out, and very much in is the imitation of the long, low look of Stag or Archie Shine. Both these firms are obviously being watched enviously by the trade because they have found it possible to do even better with good modern ranges by professional designers than they once did with bogus antiques—though they are both running the olde stuff as a sideline.

I know that this cribbing, which results in deformed versions of the originals by John and Sylvia Reid and Robert Heritage, is deplorable—but in a way it is encouraging. If manufacturers are beginning to realise that simple modern designs can pay off, then they may eventually get around to employing their own designers.

*

The Exhibition will be reviewed fully in next week's JOURNAL, but let me just congratulate Misha Black and John Bruckland on the overall display work; the Council of Industrial Design on its un gimmicky showing of kitchen equipment and its excellent representation on BBC television by Philip Fellows; and the *Daily Express* on its extraordinary display of tactlessness. Was it quite kind of this sponsoring newspaper to remind the industry of its predicament by making one of the principal features a Japanese home, with little more than a cushion or two on the floor?

ALL ADS UP

It seems that the Government won't be doing much to help local authorities curb outdoor advertising. Given reasonable time, the Minister of Housing hopes, "clutter will be prevented by voluntary effort." All right then, how about some voluntary effort from the Government, local authorities, the AA and the RAC? Couldn't they cut down on some of their clutter of street signs?

*

It's not only clutter that is the problem: the sheer size and scale of some advertising can disfigure a distinguished street—and, as you may have noticed, some firms are removing small signs and replacing them with large, discordant ones. Only the power of central Government is strong enough to restrain the large commercial interests.

WAITING FOR LEFTISTS

Let me wish good health and a minimum of flu bugs to the Notting-ham Labour Party. It would be a pity if any of its members were absent from the city council (where they have a majority of one) when the future of

the civic theatre is decided. Labour is pledged to support this £370,000 theatre (designed by Peter Moro with advice from Richard Southern) and the Tories are opposing it as extravagant, although some £300,000 is already in trust and the Arts Council wants to make it one of five selected to form "a national theatre of the provinces." It is odd that a building expected to be the most exciting theatre of the century should have such a rough passage; it has only reached its present position after scraping through two other committees on a majority of one each time.

THE ALBERT RICHARDSON HALF-HOUR

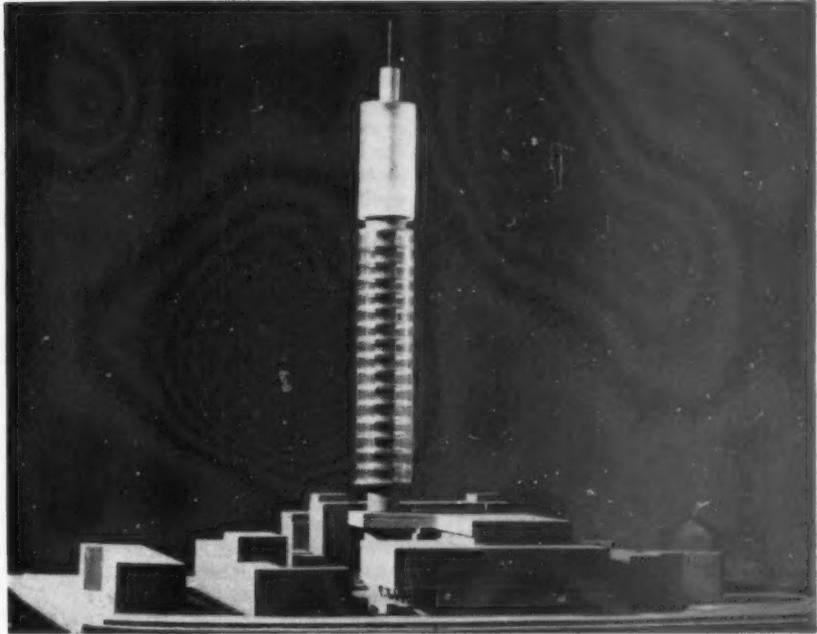
I have often complained that there isn't enough television coverage of architecture, but I think the RIBA overstates its case in the evidence it has submitted to the Pilkington Committee, which is studying the future of sound broadcasting and television. "No effort is spared," says the report, "to make the most difficult scientific problems intelligible to the layman, but no comparable effort is made with architecture and building." Let's face it: architecture and building are *not* as fascinating to the layman as science, and there would be a limit to the number of programmes in which they could be made to seem even moderately interesting.

*

I'm sure the best place for architecture on television is not in one-hour documentaries but in news stories on *Tonight* or *Monitor* (the last of which goes on dodging the subject, as the RIBA points out). If you're interested in the telly approach to design keep an eye on Granada, who are doing a sixth form series on architecture, planning and industrial design. Associated Rediffusion, who have been making a film in Crawley, and ABC's *Bookman* series, which has promised to include architecture in future.

VERTIGO FEATURE

The tower that the MoW Architects' Division has designed to carry television and radio aerials in the Tottenham Court Road area is not, judging from the model, a very satisfactory affair. If we must have a tower of 500 feet high and 54 feet in diameter (and



The proposed Post Office tower off Tottenham Court Road. See "Vertigo Feature".

"Why not Go Japanese in 1961?" asks one of the exhibitions at the Earls Court Furniture Exhibition. And here, as a reminder of how little furniture you need buy from an already depressed industry is one of the *Daily Express* highspots at the Exhibition.



the Post Office say we must because of interference from high buildings) then it would be nice to have something that is not almost perversely top-heavy—with its narrow base and its opaquely-clad top. This tower, with its public observation platform, could have been a really exciting thing to have around.

TOOTH AND CLORE APPROACH

Quote of the week from *The Estates*

Gazette. "What we should hope to see in the new regional centre (of Cambridge) would be a mess of domestic buildings something like the present King's Parade, with some blocks of department stores thrown in for excitement's sake. This can be done only if a lot of developers are encouraged to run riot within the limits of a good three-dimensional plan."

ASTRAGAL

LETTERS

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The 'Chalk, Lime' and Allied Industries Research Association.

Two Tiers

SIR: Thank you for your excellent statement (January 19: page 120) on the two-tier question. Our only regret is that it was in such an inconspicuous position that many of your readers may have missed it. It puts into sober but incisive words all our own half-formed doubts about this proposal—we only hope some of the protagonists of a divided profession will pause long enough in their Gadarene stampede to read it too and to wonder whether they are doing the right thing.

Surely it is time the whole question was brought right out into the open. Let us have full, frank, and public discussion before taking any irrevocable step. We would hate to see an issue which, as you say, will affect the whole structure of the profession for at least 50 years, decided on considerations of short-time expediency, which is what appears to be happening now.

MICHAEL GOOCH
SHEILA GOOCH

Norwich

SIR: Neither your excellent leader of January 6 nor Mr. Rosenthal's letter to which you refer mentions the fundamental fact that the Continental (which means in this case German) "building technician" is not barred from rising to the top of the profession without further examination. In fact there are many ways leading to Rome. The method of training is immaterial. It may be at a university, a building technicians' college, a school of arts and crafts, or even simply in an architect's office.

Some of the best architects have started in some other branch of the arts, e.g., as painters. Many had no "academic" qualification, including those who have been trained at the Bauhaus. Professional standing is judged by personal achievement not by passing an examination. It is true that this system does not protect the public in the same way against phoney architects as the official stamp does in this country, but at least some of the public know what "Architekt BDA" means, i.e., member-

ship of the Bund Deutscher Architekten, a voluntary organisation carefully scrutinising members and pledging them to observe a strict code of professional behaviour. Membership, however, does not depend on an examination.

The position, then, is different in this country. A "second tier" profession here would create an underprivileged class which in fact would do much of the detailing (and not only plumbing schemes) without being properly trained in design. It may prevent the young architect from gaining practical experience in essential technical skills and may tend to cut him off from reality. It will help showmanship, 6B slapdash design and unwarranted professional conceit.

Creative design is indivisible. It comprises all aspects—technical and otherwise—up to the last detail ("God is in the detail"). It was unfortunate though unavoidable that the master builder had to be split up into architect, engineer, quantity surveyor, builder and a number of specialists. You have to be thanked for opposing a further split which, in the long run, can only tend to undermine the position of the architect as the responsible central figure of the building process.

H. J. REIFENBERG

London, S.W.15

SIR: Your readers may be interested in the views of a putative member of the lower tier. Reading the Journal in the natural direction, I came across the Bristol Society's resolution before your editorial and was therefore delighted to find the emotions aroused by the former given such accurate expression and rational justification in the latter.

The resolution is a plea for the *status quo* in the great majority of British architects' offices. The main point of the proponents appears to be that the architect (upper tier) must be given freedom to "concentrate on his primary function of . . . overall design" (for want of a better phrase), see David Beecher's letter (January 26). The results usually hardly justify the effort.

How many assistants (lower tier) remain affiliated to the RIBA because, and only because, of the goal of associateship with its obstructed but clearly marked route? Remove this route, and how many will set up as "consultant building designers," advertising cut fees, or all-in service, and possibly even (perish the thought!) producing better buildings?

C. B. TAYLOR

Thirsk, Yorks.

SIR: Without committing oneself to either of the AJ's alternatives (the "ivory tower" architect or the research team) several things must be said against the two tier profession as conceived by most of its advocates.

Every qualified architect should be capable of giving a client technical competence and that is exactly what most clients expect. The touch of genius which transforms ordinary competent building into imaginative architecture is a luxury that few are willing to pay for. If the two commodities,

design and technique, are separated into professional and sub-professional, it is the designers at 6 per cent who will suffer and the technicians at 10s. an hour who will flourish.

If, however, we are sufficiently concerned about good architecture to want to foist on the lay public our own higher standards of design, we must see to it that of the 20,000 or so professional men available, the public is encouraged, coerced or even forced to choose from the best. Which *are* the best is for the architectural profession to decide. They are most certainly NOT, repeat NOT, as all two-tier advocates to date have assumed, always those who have already succeeded in establishing their own practices, for that merely demonstrates commercial ability and as we have already shown the architectural genius is commercially superfluous.

For those who are reluctant to consider the architect as simply a professional master builder, the practice of several of our more progressive offices (I am thinking particularly of Taylor & Green and Ove Arup & Partners) offers the most promising solution. Fundamentally they are, unlike the typical two-tier office, based upon *mutual* respect between designer and technician or architect and engineer, as the case may be. Such a state of affairs would appear to come about more from a consciousness of one's own limitations than of those of the other fellow; an attitude that is not very evident in the arguments of the two-tier advocates.

May I make two constructive suggestions?
1. That the RIBA award post-graduate honours *by examination only* in Design, Construction and possibly Administration, to form a double or triple bank as opposed to a double-deck profession.

2. That a limit be put on the size of all professional offices. For one man to claim the credit (and fees) for the work of more than a dozen qualified assistants is, like so much from such quarters, nothing but vanity and cupidity.

JOHN BASING

London, N.6

SIR: I write only as the principal in a small private practice—feet firmly embedded in our local clay, far beneath that ivory tower world you describe in your leader of January 26.

You suggest that the unqualified assistant, although economically essential to the small practice, should not be given any technical status on the grounds that this would be cheating our clients.

I feel certain that any "cheating" that may occur is based on the fact that our genuine architectural talents, if any, cannot be made full use of while we are forced to remain bogged down by so much that is Not Quite Architecture.

Our clients should be paying not only for a competent solution to their problems, but for the years of training and experience in design and planning, so, if somebody can be found to work out the falls in their drains, for heaven's sake let us make use of him and recognise the need he fulfils.

The idea that no detailing should be done

by the non-professional, while intellectually pleasing, is surely practical nonsense. Similarly, to suggest that the "second tier" would turn us into a profession of "doodling maestros" is laughable where the small practice is concerned. Surely there is as much danger in the other side of the picture, where architecture may be lost in a sea of administration and petty detail. Give us a chance to sharpen our 6b and the occasional time to glance at a technical magazine or open a "glossy" to see what goes on in that other world.

NOEL J. DORE

Pinner, Middlesex

We have been asked by the Berks, Bucks and Oxon Architectural Association to make clear that the letter from David Beecher published on January 26 was written by Mr. Beecher in his personal capacity and not as President of the Association.

Men who are Changing

SIR: With regard to your reference to this Company in the ARCHITECTS' JOURNAL for January 21, there are two references to which correction should be made:

1. Mr. R. A. Parry is not a director of Second Covent Garden Property Co. Ltd., of which City & Town Buildings Ltd. is a subsidiary.

2. The skeletal design of the tower of the Shrewsbury Market Hall, as shown in the photograph of the model, has not been approved by the Shrewsbury Corporation.

A. H. AUSTIN

London, W.C.2

Stressed Skin Space Grids

SIR: It has been brought to my notice that in the 1961 survey, in the recent issue of your JOURNAL, you discussed my development and testing work on aluminium stressed skin space grids carried out at the Imperial College.

Mention has also been made of two roof structures designed in such systems, one of them being the temporary headquarters building for the I.U.A. Congress.

The comparison of these two structures, which consist of units of similar shape, but having different arrangement of the component pyramids, is concluded with an unexpected and rather surprising statement that one of them is less sound structurally than the other.

Being directly connected with the development of these stressed sheet space structures I feel that I cannot pass this statement unnoticed and should be obliged if you would give me the opportunity to clear this point in print.

Stressed skin space grids can be built in a variety of different types and in various materials, e.g. in aluminium, steel, plastics or plywood. Thin sheets of such materials can be interconnected forming tetrahedra, pyramids of square, pentagonal or hexagonal layouts. Such units can be mass produced, prefabricated and joined together

along their edges and stiffened by tubular elements at their apices.

These systems exhibit a remarkable stiffness, deriving most of their strength from their shape. In consequence they are rather light and can be subject to stress reversal under wind suction.

Only two types of such systems are truly reversible, i.e. their top and bottom layers form a grid of identical layout—these are stressed skin systems of tetrahedra and square pyramids and in these two cases the logical conclusion is that it is structurally immaterial which way the tetrahedra or pyramids of square base are pointed: their flanges will form a grid of the same shape and so will the tubular elements connecting their apices, and it must be left to the architect to decide which way he wants to have his structure.

On the other hand this is no longer true for pyramids of pentagonal or hexagonal layouts. If the latter is used, with the pyramids pointing down, the top layer forms a hexagonal grid and the bottom layer a three-way grid. As the lengths of the members of these grids are different, the grid, which will normally be under compression, should consist of units of smaller lengths in order to obtain a lower slenderness ratio. The orientation of the hexagonal pyramids is thus much more important than in the first two systems, but even so it would be misleading to state that they are less sound structurally, as it is the engineer's task to design their component parts with an adequate factor of safety.

Z. S. MAKOWSKI

London.

Bristol and Liverpool

SIR: I was interested to read the letters you published on January 5 from Mr. John Totterdill (Bristol) and Mr. Colin Rogers (Pinner).

Mr. Totterdill is evidently—and commendably—much concerned with what is to happen to the Bristol city centre. Unlike Liverpool, where the opportunity to lay out imaginatively the devastated and central Lord Street area has been inexcusably missed, it would seem there is still time to ensure that Bristol's core is rebuilt worthily. It is to be hoped the lively (judging by its August memorandum on the need for technical assistants in the profession) Bristol and Somerset Society of Architects are campaigning vigorously to this end. A brief review of mine—*The Builder*, December 9, 1960—on the Liverpool Architectural Society's recent "Architect and Towns" exhibition may possibly have some observations pertinent to Bristol's problem.

Mr. Rogers, as a layman, is apparently bothered by the nature of contemporary British architecture and uneasy—as indeed are many of us architects—at the dull sameness, "thought up by the same person," of the buildings of today. Maybe the condition is only a temporary one following the freedom to build differently gained during the past 25 years; it is probably hard for those not now middle-aged to grasp that prior to this approval was given to no

building that was not a pastiche of the past. Now after this precursory period, during which the barriers came down, we have, it seems to me, much yet to do to enliven our building. In this respect, and to give Mr. Rogers a yard stick, full marks must go to the TUC building in Great Russell Street by David du R. Aberdeen which is exceptionally meritorious.

Further to unburden oneself and to avoid the mystique Mr. Rogers deplores—ultimately, of course, any real work of art is beyond analysis—one dares to recommend another building for his appraisal. Belonging to Pinner evidently, he might well visit the church of St. Luke there which was carried out in 1957 by the recently deceased Francis X. Velarde. In it he will see a work of art, in an idiom necessarily different from the TUC headquarters, by one who could also contrive inspired building.

HERBERT THEARLE

Liverpool 1.

Frost Tests

SIR: Mr. Elliott, in his letter in your issue of November 17, following earlier correspondence on his interpretation of test results on the frost resistance of mortars, again evades the only contention that I have made, i.e. that a 1:1:6 cement:lime:sand mortar does not in practice suffer deterioration through frost action, and that it is fully satisfactory in this respect for all normal conditions of use in the U.K.

As sole independent support of his views Mr. Elliott uses his own interpretation of the Building Research Station's intensified exposure test results, on which detailed information remains to be published. Pending such further information it is significant that a 1:1:6 mortar is still recommended by the station in more recent publications (e.g. "The Principles of Modern Building, Vol. I, 1959, and the relevant "Digests"), for work done in all seasons, even under conditions of severe exposure. The Building Research Station has confirmed to us, on enquiry that they have not met with any deterioration of 1:1:6 mortars in practice that was attributable to frost action, except possibly where severe frost was experienced in the first few days after laying, a reservation which was indicated in my original letter.

The question in dispute is not which type of mortar has the greater frost resistance, as Mr. Elliott would have it, but whether a 1:1:6 mortar is likely to disintegrate from frost action in ordinary use. The advertisement of Mr. Elliott's company, which was the cause of this correspondence, distinctly stated that such disintegration could be expected. Nothing he has subsequently written has squarely faced my accusation that in this respect the advertisement was misleading and represented an erroneous conclusion from an ill-designed experiment.

H. H. NEVILLE,

Welwyn.

This correspondence is now closed—The Eds.

NEWS

BRISTOL PROTEST

Architects Appeal to Minister

Bristol Architects Forum, the Bristol and Somerset Society of Architects and the Bristol Civic Society have all appealed to the Minister of Housing and Local Government to stop the piecemeal redevelopment of the city's Wine Street area until plans for comprehensive development have been fully considered.

This is the last shot in a long-drawn-out battle which has been raging in Bristol, with local architects and other citizens (backed by the *Bristol Evening Post*) lined up against the city's Planning Committee and Corporation on the question of Wine Street's future. The Wine Street and Castle Street area is the badly blitzed heart of Bristol, lying alongside the river and within the old city ramparts, which was designated in the Bristol development plan in 1952 for "a public building precinct, where the Guildhall, conference hall buildings, museum, art gallery and library of commerce together with other buildings of a similar nature, will be built."

Since then, enthusiasm for public buildings has steadily waned, while the city's shopping centre has moved to Broadmead, and Wine Street area has continued as a sad-looking blitzed site car park, with only the remains of St. Peter's Church, the St. Mary le Port tower, and parts of the old castle walls left to recall the mediæval centre of Bristol.

It was only when the fact became known that two large areas of the site were to be developed by Norwich Union and the Bank of England—thus making comprehensive development of the area impossible—that the second Battle of Wine Street began, in which local architects have played a very worthy not to say leading role.

Their campaign has taken two forms: in the first place (and here the students were very much to the fore) they appealed to the public to be concerned with the future planning of their own city, calling upon citizens to protest at the secrecy with which the city planners carried on their work and urging that Wine Street must be developed in a worthy manner and not piecemeal by private companies.

Secondly, the Bristol Architects' Forum drew up and presented to the Planning and Public Works Committee an excellently thought out and produced report on the development of the Wine Street-Castle Street area, which outlined the opportunities the site presents, and put forward a draft programme for a comprehensive scheme illustrated with diagrams, including a "Monetary Analysis" of the cost of the scheme and the probable income it would bring in.

They suggested that "the Wine Street development should be towards the growing needs of a modern commercial community for shared facilities and public spaces. . . . For the nucleus of this group we suggest a Museum of Modern Technology, a Regional Library of Technical Information and a Trade Association Centre. . . . Together these would be a unique assembly of information and material on our rapidly advancing and highly specialised industrial life . . . making Bristol an attractive place for trade fairs and industrial conferences." The scheme envisaged would allow for about seven acres of open public space, partly at ground level, and partly on paved decks over car parks designed for some 1,700 cars.

Instead of welcoming the interest shown in the development of the city by local residents, councillors seemed more ready to see a personal attack on their City Planning Officer, and Councillor Gervais Walker rushed to his defence, saying, "How I wish that some of our critics might offer themselves for election to the city council"—which caused the Architects' Forum to announce the next day that they were nominat-

ing a candidate for the municipal elections. Meanwhile the planning committee has adhered to its previous decision that the Bank of England and Norwich Union buildings should proceed according to plan, and that a further site should be allocated for a museum and art gallery, the two first of which are expected to start "before the spring." Hence the new effort of the local people concerned to get the Minister to intervene before it is too late.

IN PARLIAMENT

Extended Powers for Local Authorities?

The Government is "urgently considering the possibility of extending the power of local authorities to defer interest payments," Sir Keith Joseph told the House of Commons on January 31.

He was replying to a question as to what guidance MOHLG had sent to local authorities on the subject of redevelopment of city centres. "This is a subject of great difficulty," he said, "because no two city centres are alike; but the Department is beginning a study of it with a view to seeing what general guidance might be given . . . the Minister of Transport is much concerned and our two departments are in close touch and are collaborating over studies to be initiated."

Asked to appreciate that the central problem for the local authorities was financial—the need "to lay hands on large sums of money in order to get comprehensive development," Sir Keith said there was no "proven need for outside financial help" but deferred interest payments were under consideration.

CENTRAL SCHOOL

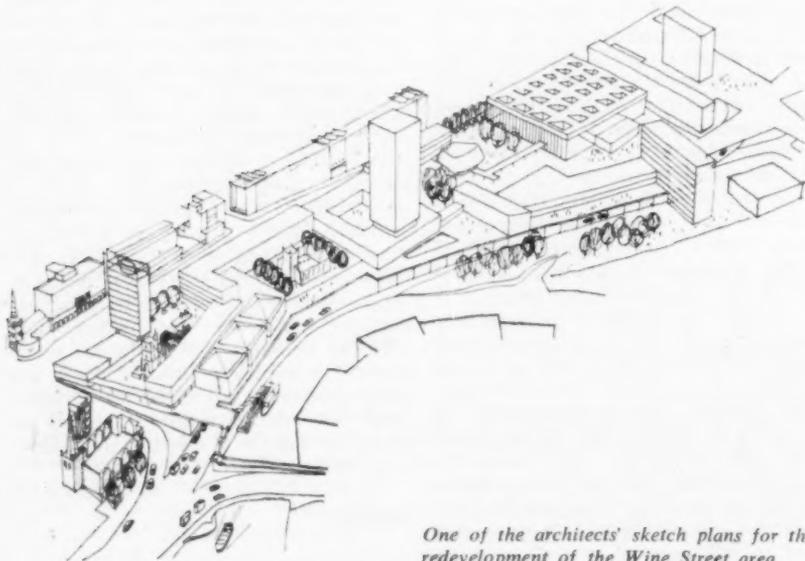
New Principal Appointed

Michael Patrick has been appointed by the LCC as the new principal of the Central School of Arts and Crafts, and will take up his appointment on retiring from the Architectural Association.

RCA

Digital Computers

A paper on the use of the digital computer applied to structural design was presented by Messrs. Munroe and Edwards at a meeting of the RCA on January 18. This was a departure from the usual RCA fare as the subject was not essentially directed to concrete and the stalwarts who provide such pungent practical advice at these meetings were conspicuous by their absence. Judging from the average age of the audience, one suspected that mathematics is trying to make up for experience and the prospect of a future generation of District Surveyors armed with digital computers is rather formidable. The purpose of the paper was



One of the architects' sketch plans for the redevelopment of the Wine Street area

to indicate the way equations are set up to allow the programming of the machine to be prepared. The ensuing discussion allowed those who have used the weapon to give some examples of its successes and the general impression was gained that it is a very valuable tool where mass production in minor variation is required.

RIBA ON THE THIRD

Pevsner and Banham

Broadcast versions of two talks given recently at the RIBA are being given shortly on the Third Programme. This Saturday (February 11), Nikolaus Pevsner discusses to what extent he and other architectural historians are to blame for what he calls the "undisciplined and anti-rational approach" of many architects today; on Sunday, February 12, Rayner Banham presents his belief that the best prospects for the immediate future of architecture lie in an increasing reliance on the human sciences.

ANCIENT MONUMENTS

Amendments needed to the Law

The Council of the Ancient Monuments Society has been studying the statutes relating to Ancient Monuments and Historic Buildings and has come to the conclusion that the following amendments are needed:—

(1) *Clearance Orders.* It has come to light that if a Clearance Order is made under Sections 43 and 44 of the Housing Act, 1957, it cannot be rescinded even though an offer to put the property into good order is received. In the opinion of the Ancient Monuments Society, the law should be amended so as to provide for a power of revocation in such circumstances. It is understood that the need for this amendment is accepted and that an opportunity to amend the law will be sought.

(2) *Closure and Demolition Orders.* The inspectors on whom falls the duty of deciding whether a house is fit for human habitation have no obligation to take into account its architectural or historic interest. In the opinion of the Ancient Monuments Society the inspector should be required, in the case of any building listed under section 30 of the Town and Country Planning Act, 1947, to consult with the Historic Buildings Department of that Council and to draft an order only if the property cannot be adapted to modern standards.

(3) *Dangerous Structure Notices.* The District Surveyors on whom falls the duty of making Dangerous Structure Notices are not in general familiar with old building and have little experience in the repair of such buildings. Their lack of experience in this specialised field sometimes leads them to condemn unnecessarily. The Ancient Monuments Society submits that in the case of scheduled buildings the responsibility should be transferred to the Minister of Works and in the case of listed buildings

to the Minister of Housing and Local Government.

(4) *Local Authorities.* Though local authorities have been given the power to help with the preservation of buildings of historic interest, it is not mandatory and hardly a single authority in the country regards it as a duty. In the opinion of the Ancient Monuments Society the law should be amended so as to impose a duty upon local authorities of securing the preservation of scheduled and listed buildings within their areas, and particularly those in their own possession. It is also for consideration whether local authorities might not be required to set aside annually for this purpose the product of, say, a penny rate.

(5) *Trustees.* In many cases trustees are the owners of buildings of architectural or historic interest, and too often they consider it their duty to sell or demolish and develop the property for the sake of a higher cash return. The Ancient Monuments Society would like to see the law amended to make it clear that trustees have an obligation to keep in good order scheduled or listed buildings in their possession.

(6) *Building Preservation Orders.* As is well known, a Building Preservation Order will not preserve if the owner is resolved to do nothing to preserve; he can be prevented from alteration or demolition, but unless repairs are carried out the building will eventually collapse or be the subject of a Dangerous Structure Notice. It is for consideration whether a Building Preservation Order, at any rate for Grades I and II of the Statutory List, should not include an obligation to keep it in reasonable repair. It is also for consideration that planning authorities and the Minister are frequently unwilling to make a Building Preservation Order, even when it is demanded by architectural or historic interest, because the subsequent refusal of development would attract compensation. In the opinion of the Ancient Monuments Society, compliance with a Building Preservation Order in the case of a scheduled or listed building should not attract compensation or any claim for loss of development rights.

(7) *Advice to Ministers.* There is no statutory obligation upon the Minister of Housing and Local Government to pay any attention to the findings of the Royal Commission on Historical Monuments, though these bodies are by far the best qualified of the statutory bodies to give a judgment on architectural or historic interest. In the opinion of the Ancient Monuments Society, it should be made incumbent upon the Minister of Works and the Minister of Housing to save from demolition or injudicious alteration any structure deemed by a Royal Commission on Historical Monuments to be "especially worthy of preservation." It is also for consideration whether the Royal Commissions, with enlarged staffs, should not be made the sole statutory advisors to Ministers on ancient monuments and historic buildings.

(8) *Estate Duty.* The heavy incidence of estate duty is a serious obstacle to the preservation of the major historic buildings

in private hands. In the opinion of the Ancient Monuments Society, scheduled and listed structures should be put on the same basis as works of art, that is to say, estate duty should not be payable on the death of the owner if the ownership remains in his family.

The Ancient Monuments Society is aware that some of the proposals in this memorandum would increase the charge on public funds, but believes that in any case the public funds available for preserving ancient monuments and historic buildings should be considerably increased.

New Chief Inspector

The Ministry of Works has announced that the present Chief Inspector of Ancient Monuments, P. K. Baillie Reynolds, C.B.E., is to retire on June 30, and will be succeeded by Mr. A. J. Taylor, who is at present assistant chief inspector at the Ministry.

Mr. Baillie Reynolds was a specialist in ancient history; Mr. Taylor has specialised in medieval building history and military architecture. He joined the Ministry in 1935, served in the RAF and became Inspector of Ancient Monuments for Wales on his return to the Ministry in 1946.

MOW

Grants for Buildings

Since their formation in 1953 the Historic Buildings Councils have considered 3,506 applications for aid, and accepted 765 applications to a value of nearly £3,200,000. Last week ten awards were made to the following properties: Gowthorpe Manor, Norwich; Bindon House, Axmouth; The Old Deanery, Salisbury; 1-10 Tory Rank, Bradford on Avon; Tatton Park, Knutsford; the Royal Welsh Yacht Club, Porth-Yr-Aur, Caernarvonshire; Market Hall, Tremadoc; Glamis Castle, Angus; Milne's Court, Edinburgh.

COMPETITION

Triennial Award

The Triennial Award of the Worshipful Company of Tylers and Bricklayers is due for presentation this year, when the company will be presenting a gold medal to the architect of the "building of most merit erected within 8 miles of Charing Cross in brick and tile during the three years prior to the judgment of the award."

A silver medal will be presented to the leading brick and tile craftsman employed on the winning building.

Adjudicators are Sir Edward Maufe, R.A., Colonel W. W. Dove, C.B.E., T.D., D.L., F.S.A., C.C., Mr. John Pym, F.R.I.B.A., and Mr. R. H. Uren, F.R.I.B.A.

Nominations giving the name and address of the building, its architect and builder, and accompanied by one photograph of the building, are invited and must be received by the Clerk of the Company, 6, Bedford Row, London, W.C.1, by March 31.

HOUSING CENTRE

Annual Conference

The subject of this year's Annual Conference, June 21 to 23, at London's County Hall, is "The right accommodation at the right rent and price," and will cover the price of housing, supply, demand and need; value for money; the role of the local authority, private enterprise housing and "the third arm"—charitable trusts, non-charitable associations and co-operatives, etc. The speaker at the opening session will be Mr. D. V. Dennison of the London School of Economics.

BOOK REVIEW

"Design and Detail of the Space between Buildings" by Elisabeth Beazley (Architectural Press, 42s.)

This is an excellent book and it is about a subject that needs attention. The four main headings—Paved Surfaces, Trim of Paved Surfaces, Walls and Fences, and Planning—are divided into subsections (for instance, under Trim of Paved Surfaces there are sections on Edges and Kerbs, Surface drainage, Manhole covers and frames, and so on), and each of these items is first commented on and then described in exceptionally full and authoritative technical detail, in such a way as to be really useful for reference and for specification writing.

The comments are most refreshingly written and Elisabeth Beazley has many pertinent things to say. It is a pleasure to find someone who refuses to be bullied by fashion either in her assessment of design or in her writing, which is delightfully free from jargon. She can be poetic, even when describing the effects of wire

fencing . . .

"The separation of land of differing uses by strands of wire instead of something solid, dilutes the landscape by letting one parcel of ground swim into the next. Mr. Jones's brussels sprouts, the secondary modern school cricket pitch, and the verge of the highway, have no real visual separation. There is nothing strong and defined, the character of one piece of land swills listlessly into the next, and loses its identity in the process."

or blunt as, when referring to iron gratings, her text reads:—

"Uses: obvious."

Some such contrast in treatment generally distinguishes the critical passages from the technical notes, which is sensible since it makes the former interesting and the latter easy to refer to. I hope that the book will in fact be read and referred to by students and by practising architects, and also, especially, by the many others who are responsible for our environment, because I believe there is much to be learnt from it. Although it deals essentially with things which are visual, there is no fear that even the most philistine reader will find the text anything but practical.

The examples chosen to illustrate good design are taken from both traditional and modern details and a cursory glance at the photographs might lead one to suppose that the standard of modern design was relatively high. However, I think one can infer from the text that in general Miss Beazley feels that our forefathers managed better—at least in some periods of history—than we do nowadays in this matter of creating a visually satisfying environment.

On the other hand, she points out, some traditional details which appeal and which have worked in the past are surprisingly not now thought to be satisfactory and are even officially deprecated. She mentions the brick on edge coping (without a d.p.c.) as an example; and the solitary step, of which "there are countless examples . . . which

apparently cause no harm" as another and she suggests that the reason for their not being thought satisfactory may well be only that the materials that are used today have different characteristics from those used formerly—or that the manner in which the detail is employed leaves out of account some simple rule—"an obvious example of where they (single steps) are unsafe is on any invisible line which may topographically mean nothing. . . ."

On the broader issues of planning spaces about buildings it happens that modern conditions tend to disrupt our familiar concepts, and this is particularly true of the motor car. On this subject Miss Beazley says:

"The chief trouble at the root of any planning problem concerning traffic, be it the layout of cities, or the college precinct, or even the bungalow plot, is that the human race, are nearly all schizophrenic where motor vehicles are concerned. Our whole attitude alters once we are in the driver's seat. For myself, anyway, the only really convenient place to park is outside the door, and the only good road is the one which allows for reasonably fast, smooth driving. But we cannot have our cake and eat it. It is understandable that all the qualities which through contrast gave zest to many of our towns and villages in the past, are no longer compatible with modern traffic; a sense of enclosure, of surprise, sudden changes of level, to take a few examples, hardly suggest a smooth flow. But it is an awful warning to see the splendid avenues and boulevards of the grand scale planning of 19th-century Paris choked by the motor car. If planning of these dimensions cannot absorb the traffic by 1960, there is absolutely no hope for us without radical rethinking. Most people know this, but too few believe it."

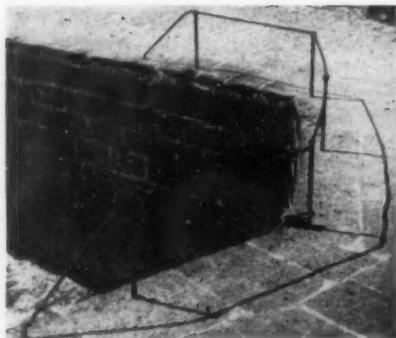
She does not attempt to undertake this radical rethinking, which is beyond the scope of the book, but the reference to traffic gives her an opportunity for including some very useful notes on parking. It is surprising that she nowhere discusses lamp standards and street lights; some of which must be amongst the most hideous objects ever invented.

The book is full of good illustrations: the diagrams are very clear and the photographs are both explanatory and interesting in their own right—some of them are exceptionally good. I was disappointed only that the captions do not always say where the examples come from. The accompanying photographs of handrails old and new and the frontispiece to this issue give an idea of the quality of the illustrations.

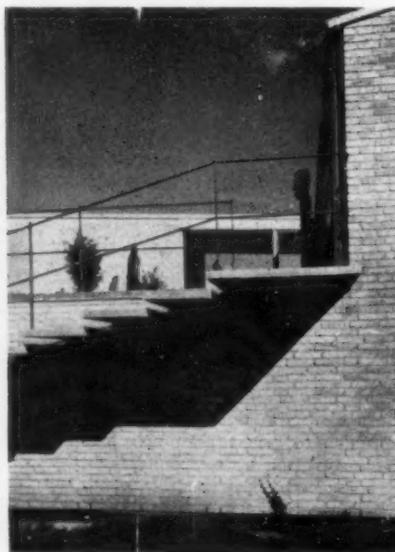
Incidentally, while writing this review I have had occasion to use the index—and that too seems to be good: an obvious asset for a work which can and should be used for reference.

In format, layout and typographical arrangement the book is similar to the Architectural Press's book on Joinery and could in this respect be said to be a "companion" to it. It could not be a better one.

JOHN EASTWICK-FIELD



Handrails, old and new: cantilevered steps of smooth concrete slabs with generous treads and shallow rise, giving easy access to the playing field at a Danish school. And simple iron rails making a perfect foil to the massive masonry of an old wall.

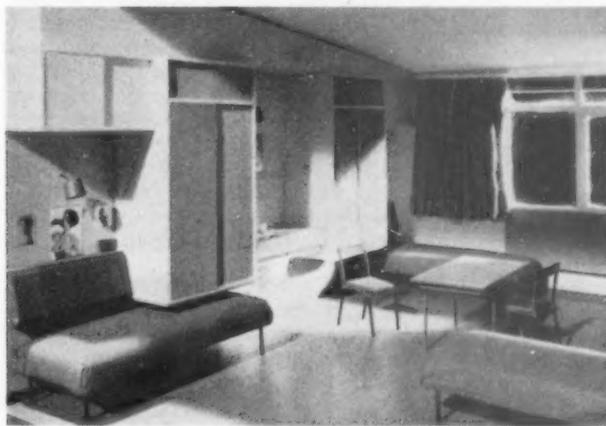


Group Working at the War Office 4

This article is the last of four describing the Works Directorate of the War Office. Previous articles (published AJ October 27, December 22 and January 26) have dealt with the organisation of the office as a whole and the method of group working between architects, quantity surveyors and engineers. This article describes the functions and organisation of the Development Group and some of the work it is undertaking.

A model of the building designed by the Development Group as a pilot scheme and now under construction at Hounslow. It will accommodate 72 single soldiers, four men to a room, with single rooms for corporals, left

A model of the 4-men room. The room contains a wash-basin and a drying cupboard and each man has an "off-the-floor" wardrobe and a storage fitting. During the day, beds are placed under the fittings which incorporate back-rests so that the beds can be used for sitting. At night the beds can be swung round at right angles to the wall, below



How it Began

The Weeks Committee recommended that the Works Directorate should have a Development Group as an integral part of its organisation. They visualised the Group as having a fairly large self-contained staff, capable of carrying out development projects on a wide variety of building types. When Donald Gibson was appointed Director-General he foresaw a possible danger in this—if the Development Group were too self-contained it might tend to become isolated from the rest of the office. It was therefore decided to keep the permanent staff of the Group small, and to build up the development teams with architects seconded from the Works Home and Works Abroad branches. When their projects were completed, the seconded architects would return to their own branch, taking their knowledge and experience with them and new teams would be formed with others. In this way the development attitude of mind would spread and there would be less resistance to the acceptance of the Group's work by the rest of the office.

The first step in setting up the Development Group was the appointment of Roger Walters as Chief Architect (Development). He joined the Directorate in November 1959. There were two immediate tasks; to work out the functions and organisation of the Group and to make a start on some development work. In order to make a start, Clive Wooster was transferred to the Group permanently, from Works Abroad, as Group Architect, and two architects were seconded from Works Home. This nucleus of architects immediately set to work on a pilot development project which is described later in this article.

Functions and Organisation

The aims of development work are to achieve better design and better value for money. These are also the aims of teams in Works Home and Works Abroad branches. But, generally speaking, these teams must work within the existing framework of policy and with conventional

methods of building. They have not enough time to question the fundamental basis of their briefs, nor to develop building techniques which can be applied to schemes other than their own.

The first thing a Development Group must do, is to create one or more "development teams," and give them more time. Time to study human needs in greater detail, to identify tendencies to change, to plot the patterns of living of the future, to evolve new and better solutions in response to these needs; time to work out more rational methods of construction appropriate to a large programme of building; time to develop better ways of estimating and controlling costs. The thing that really matters is to find architects, quantity surveyors, engineers and administrators who believe that for every problem there is always a better solution to be found.

Development Teams

In the Development Group as it is now organised, there may be up to four development teams working at once, at different stages, three on problems of building for the Army in the UK, and one for overseas. Given a field of activity to study and an actual project on which to focus their work, each team starts small, perhaps with two architects and a quantity surveyor. During the initial "investigation" stage the team works closely with people who understand the users' needs, and with an administrator. As possible solutions begin to emerge, the team is augmented by specialist engineers for technical investigation. The writing of the detailed "brief" for the scheme is the *end product* of the investigation stage, and with it are completed a sketch plan, an outline specification and a cost plan. Next comes the "design" stage when, with more architects and quantity surveyors, the scheme is worked out in detail, element by element. The team reaches its maximum size during the "production" (working drawings) stage and reduces again once the job is ready to go to tender. Finally perhaps one architect is left.

running the job on the ground and doing the most important task of writing up the results of the work so that they may be communicated to the rest of the office.

Provision is made for engaging additional skill and experience wherever it may be found, in other branches of the War Office, at the Building Research Station, in other Government departments, at universities, or in industry. Such studies may be physical, economic, sociological, psychological or ergonomic, or in any other field which can add depth and understanding to the work of the development teams.

Development Group Services

The way the development teams work is modelled closely on the pioneer example of the Ministry of Education. But whereas programmes of school building are carried out by local authorities, the Works Directorate carries out its own programme. The Development Group can therefore provide services contributing to the general efficiency and well being of the office as a whole. These services are of two kinds.

Firstly, the Group provides professional time and effort to help the Directorate to work out better office procedures, closer integration between branches, quicker communication of new ideas and experience, and to co-ordinate such things as recruitment policy and relationships with external architects. In these spheres, shared responsibility and joint working with administrators is essential and works well in practice.

Secondly, the Group provides a home for common services such as the Landscape Architect section (an important innovation in a central government office), the technical information service and model makers—services which are available to the Directorate as a whole.

Maintenance

As well as spending, currently, about £20 million a year on new work, the War Office pays out a further £14-£15 million a year on minor works and maintenance. This maintenance work (and the minor works) is done by a world-wide network of civilian organisations loosely linked with the Directorate, and the Directorate has certain responsibilities for seeing that the best value for money is obtained. In the Development Group, and under Charles Atkinson who is a superintending surveyor, there are two small teams, one dealing with maintenance inspection, the other with maintenance development. This is a fortunate arrangement. The maintenance *inspection* team provides the means of feeding back experience on the behaviour of buildings, and on the way they are used, directly to the designers. The maintenance *development* team, which is not yet formed, will work towards the day, however distant, when it may be possible to plan expenditure on maintenance and running costs on a rational basis, comparable with cost planning for new buildings.

Furniture

The Directorate has recently acquired the responsibility for the design aspects of all furniture, furnishings and loose equipment in permanent buildings. In general the Army furnishes its buildings, including a very large number of houses for married soldiers, down to the last piece of cutlery. Expenditure runs at over £3 million a year. In this there is a considerable opportunity to improve the quality of the design, to relate it more closely to the design of the buildings and to obtain better value for the money spent. The professional staff concerned with this work will be part of the Development Group.

The Pilot Scheme

Before the Group had really begun to take shape, the small team of architects referred to earlier were asked to undertake a pilot development project. This was to take the standard barrack block (3-storey, brick and concrete, designed for 108 men) and to see whether it would be possible to build better living quarters for single soldiers, without spending any more money.

The story is too long to tell in detail. Briefly, a scheme was chosen at Eastern Command Headquarters at Hounslow, where accommodation was needed for 72 men. Three ideas were taken from a preliminary study done by A. W. Gear at Wellington Barracks. These were (1) to have four men per room instead of eight, (2) to have a wash basin and drying cabinet in each room, and (3) to have properly fitted storage cupboards instead of loose steel wardrobes. By making the rooms comfortable to live in during off-duty hours, it was possible to omit the "quiet room" which is a feature of the standard design but is seldom used. By this means, and by designing two single-storey blocks for 36 men, and thereby saving circulation space, the overall area of the building was reduced by 20 per cent. It was thus possible to increase the cost per square foot from 54s. 6d. for the standard design (including furniture but excluding external works) to 68s. 11d. for the new design. Within this figure the team have been able to provide the much higher standard of amenity which was being aimed at, without increasing the total cost per man.

No attempt was made to use this pilot scheme for developments in building technology. The buildings have been designed in conventional construction, a tender has been accepted and work has started on the ground.

The First Major Scheme

The Group is just starting on its first large development project which is a "major unit" at Maidstone—in other words a barrack complex for 470 single officers and other ranks and 240 married soldiers and their families. This scheme includes every kind of accommodation for living, working and recreation. It is rather too large to be ideal for development work, but only in this way can the relationships between all the various activities in the soldier's life be studied. It is hoped to start work on the ground in August 1962.

In preparation for this scheme, one architect in the Group has been making a background study of "how the soldier lives," visiting units all over the country, talking to soldiers of all ranks, and building up a picture of the way in which the Army works and how it is likely to change in the future. This will provide a reliable framework so that the detailed investigation of the Maidstone scheme can be seen correctly in its wider context.

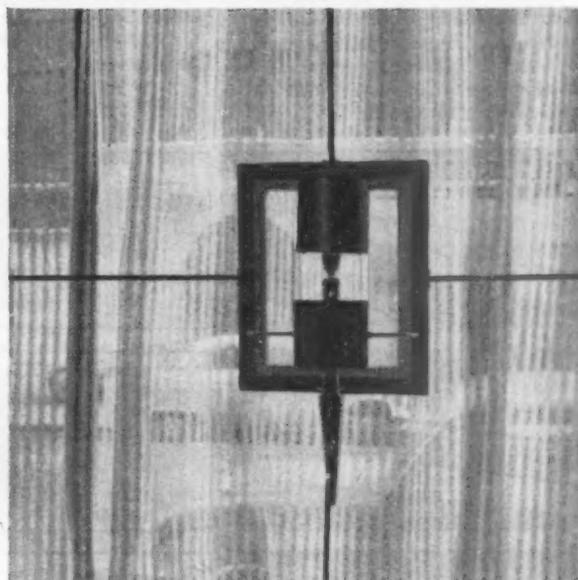
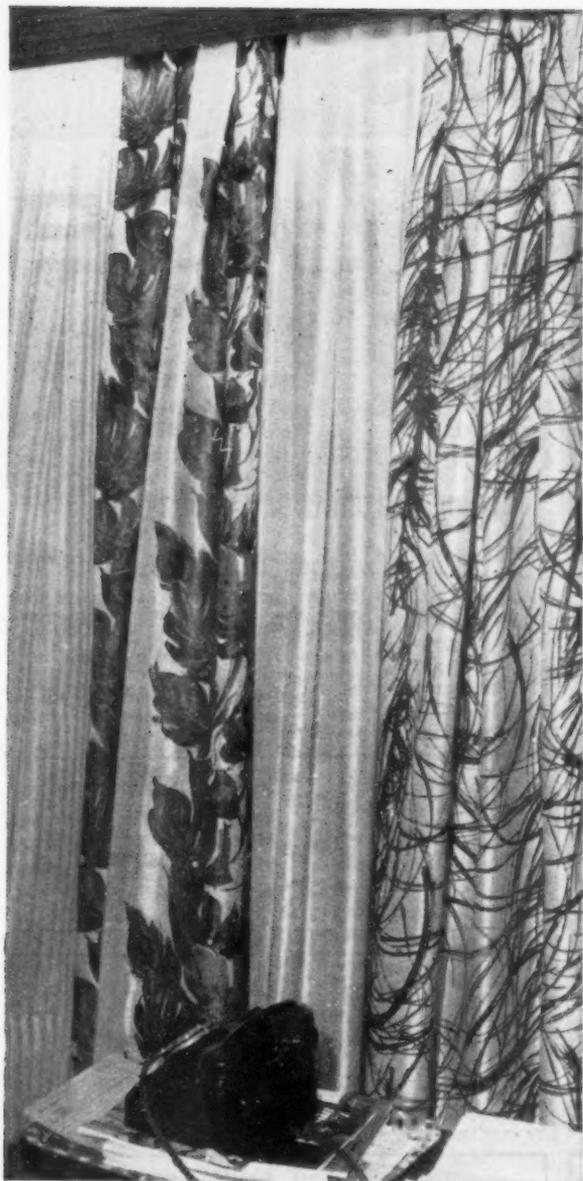
Two architects have been making a study of building technology, assembling information on the present state of development, particularly of industrialised forms of building. The Maidstone job will be used for the development of building methods appropriate to the wide variety of the Army's needs. Some interesting ideas are emerging. The Development Group hopes to take the next step in the steady progress which began at Herts. County Council after the war, and has been carried forward by M.O.E., Notts. County Council and other offices since then.

Another architect is doing a detailed investigation into the design of kitchens and dining rooms, to find out where the Army has got to in this field, and to highlight the key problems which are most worth further study.

The results of all these background studies will be focused on the Maidstone project. In fact it will be the vehicle for six kinds of study; user requirements and planning solutions; building technology; cost control; furniture design; building management; and the study of maintenance.

With the Army's building programme going at such a pace, it is perhaps unfortunate that all this development work could not have started earlier. To make up for this in some measure, it is hoped to engage a firm of private architects to carry out another major unit as a development project, under a special commission. The two schemes will be built at about the same time and will be complementary to one another.

It will be interesting to see how the Development Group in the War Office progresses, and how their experiment in co-operation with a private office works out in practice.



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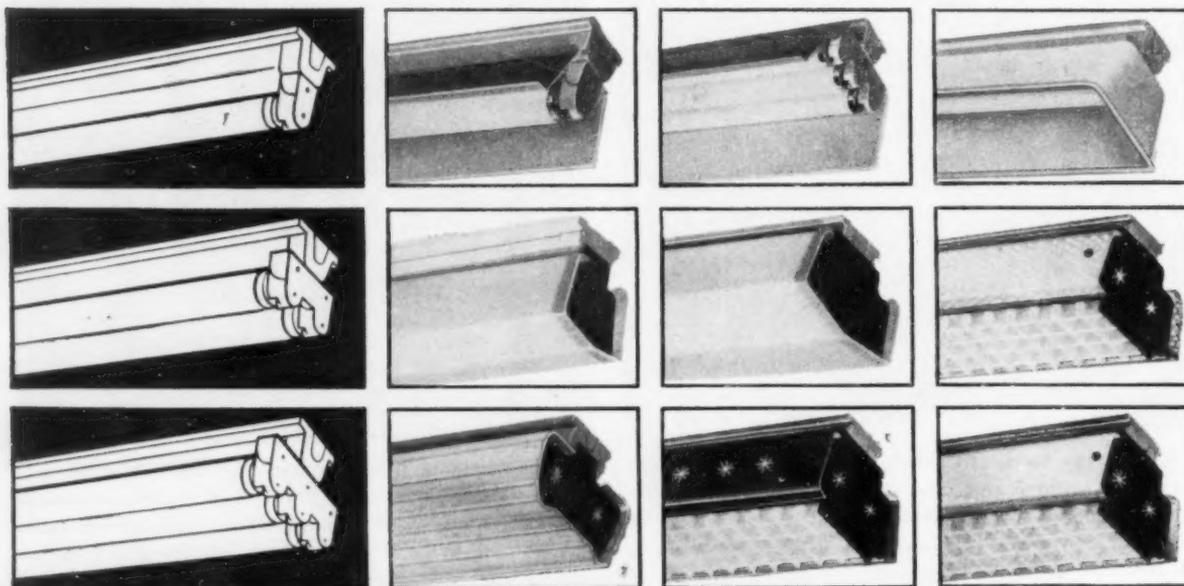
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THE INDUSTRY

This week Brian Grant describes a gas-fired boiler, foam insulation, passenger conveyors, a television aerial, plywood and partitions.

Gas-Fired Boilers

The Potterton range of Diplomat gas-fired boilers has been redesigned for this year, and is now made in four sizes, with outputs of 31, 44, 67 and 100,000 B.Th.U. per hour: prices starting at £50, in standard white or cream, with other colours extra. The units intended for small bore heating include a circulating pump within the casing, a circulation regulating valve and an electric clock control and a switch panel giving a choice of four set arrangements of automatic operation, with hot water and/or central heating on and off twice a day at times which can be selected by the householder. (Thomas Potterton Ltd., 61, Wandsworth High Street, London, S.W.18.)

Foam Insulation

Phenol formaldehyde insulating foam is now being produced by a continuous process in blocks 2 ft. wide and 12 in. thick, being finally sliced horizontally by band saws to the finished thickness required. The material has a K value of 0.24 and is suitable for the core of insulating panels, for insulating underfloor warming systems and dry construction roofing. Density is from 2 to 5 lb. per cu. ft., and the material is non inflammable, and does not melt with intense heat. A granular form is also produced for use as a loose infill.

The same firm is also producing polyurethane foams blown with a fluorinated hydrocarbon gas and having a density of only 1.2 lb. per cubic foot with a thermal conductivity of 0.12. These materials are formed in moulds, not by the continuous

process, and are suitable mainly for the insulation of cold rooms. (Isofoam Ltd., Kingston Wharf, Shoreham, Sussex.)

Passenger Conveyors

Sandvik Steel works have recently introduced a rubber covered steel band conveyor for use with passengers. Two conveyors of this type were installed at last year's Triennale, being set at an angle of 10° and travelling at about 2 ft./sec., roughly 1½ miles an hour. The bands can either slide on the substructure or idle rollers can be used, the deflection of the band being very small even if the rollers are quite widely spaced. (Sandvik Steel Band Conveyors Ltd., Dawlish Road Works, Selly Oak, Birmingham, 29.)

Installing Television

For installing television in hotels and flat blocks it has for some time been usual to provide a central aerial with an amplifier and a series of sockets into which sets can be plugged. The Dumec series of amplifiers and sockets uses a separate aerial for each wave band, with the appropriate accessories, up to 40 outlets being available with the standard equipment, though more can be added if necessary. (Rainbow Radio (Blackburn) Ltd., Mincing Lane, Blackburn, Lancs.)

Structural Plywood

A new booklet by the British Columbia plywood manufacturers describes the manufacture of Douglas fir plywood, the waterproof glue used, in its production, and some of the many end uses for which it is suitable. The booklet deals with all industries, and therefore lists a number of uses in which architects will not be particularly interested, but there are some good notes on the working of the material and a list of available technical publications. (Plywood Manufacturers Association of British Columbia, 4 Carmelite Street, London, E.C.4.)

Internal Partitioning

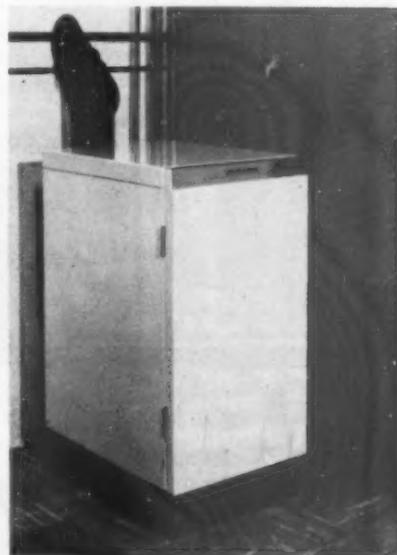
A new leaflet from Robertson Thain introduces the firm's Interwall, a timber framed system of internal partitioning made with a wide variety of surface finishes, including

timber, laminated plastics, p.v.c. cloths and plastic fabrics. Doors, glazed openings and any of the other usual requirements are possible, and any necessary electrical services are run internally. The partitions are produced in flush and panelled versions, and are made from standard panels, 4 ft. wide and 8 or 4 ft. high, but non-standard sizes can be produced. Maximum free standing height is 8 ft. but heights can be up to 20 ft. if the head is supported. Sound reduction figures vary from 20 to 33 decibels, U figures from 0.1 to 0.37, both sets of figures depending on the filling materials used in the panels. (Robertson Thain Ltd., Ellesmere Port, Wirral, Cheshire.)



Interwall internal partition

A new Diplomat gas-fired boiler



Church Tower

designed by Basil Spence & Partners, P.P.R.I.B.A.

description belfry 52' 0" high for Clermiston New Church, Edinburgh. Weight 12½ tons.

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Consulting Engineers: Thos. Harley Haddon & Partners, Edinburgh.

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6. PLANNING: SOCIAL AND RECREATIONAL

radburn planning: a reassessment, 8 Foreign examples, urban applications

Last week Paul Ritter showed foreign examples of the application of the Radburn principle to residential units.* This week he turns to more ambitious schemes abroad where traffic segregation is being applied to a complete urban complex.

SWEDEN

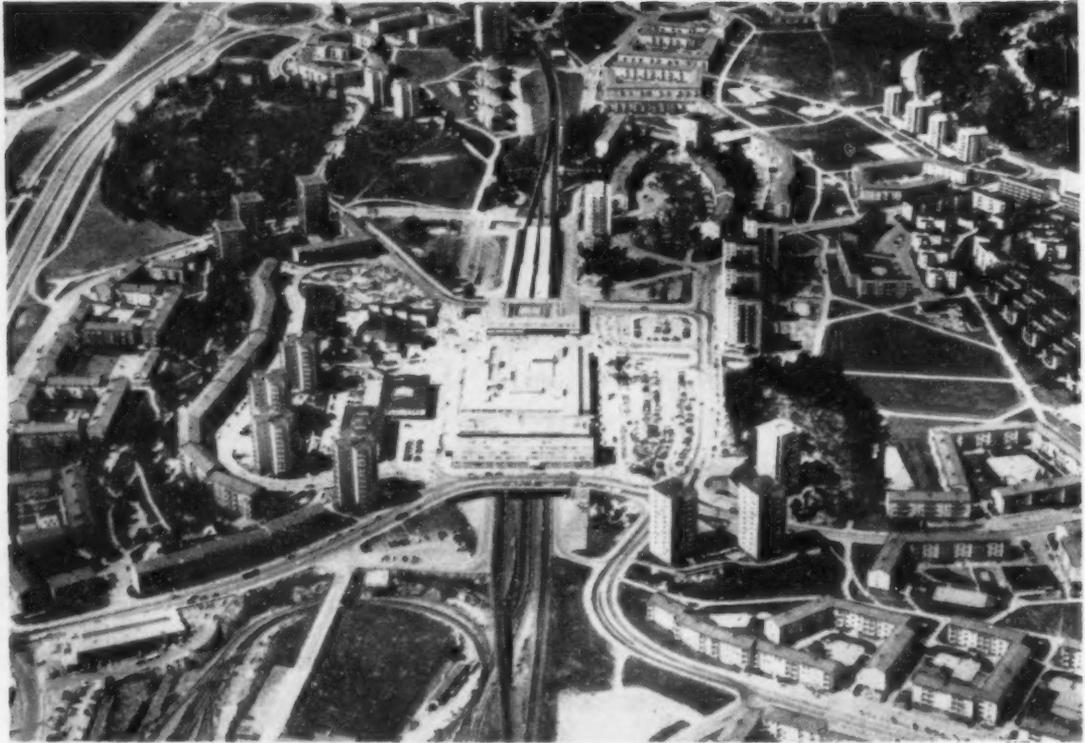
It seems logical to begin an account of large scale Radburn planning abroad with a mention of Vällingby and Farsta, since these are substantially completed and show the first town centres designed and built on the principle of traffic segregation. Vällingby has a population of 24,000, but has been designed as the main centre for five other satellite towns, the six having an aggregate population of 90,000. Neighbourhoods have between 2,000 and 4,000 inhabitants and have their own centres. Vällingby has a garage provision of one car for every five persons and a parking provision at the centre for 600 cars. But this last has already proved insufficient. Although escalators bring passengers from the station below up to shopping level and trains run at five-minute intervals to and from Stockholm, trains have been less used than anticipated.

Though traffic is fully segregated from foot passengers at the centre itself, the footpath access to the centre is not fully segregated. Thus, though there is a pedestrian underpass leading to the centre from the right hand side of the photograph (see over), there is no corresponding underpass on the left and those living in the left-hand superblock have, therefore, to cross a very busy street to get to the centre. Within 1,000 feet of the centre there are only flats, 85 per cent three-storey, and beyond is mixed development.

Farsta is later in date than Vällingby and is a self-supporting community which, by the end of last year, had reached 35,000 inhabitants. The plan endeavours to correct the shortcomings of Vällingby, as regards both pedestrian access and a larger parking area. The latter is partly accommodated beneath the shops, but there remain large, desolate areas above ground.

* Previous articles in this series were as follows: The classic objections, November 10, 1960; Footpath or road access?—a social enquiry, 1, November 17; Footpath or road access?—a social enquiry, 2, November 24; Comparative costs, December 8; Design principles, 1, January 12, 1961; Design principles, 2, January 26; Foreign examples, residential areas, February 2.

technical section



Aerial view of Vällingby

Aerial view of Farsta

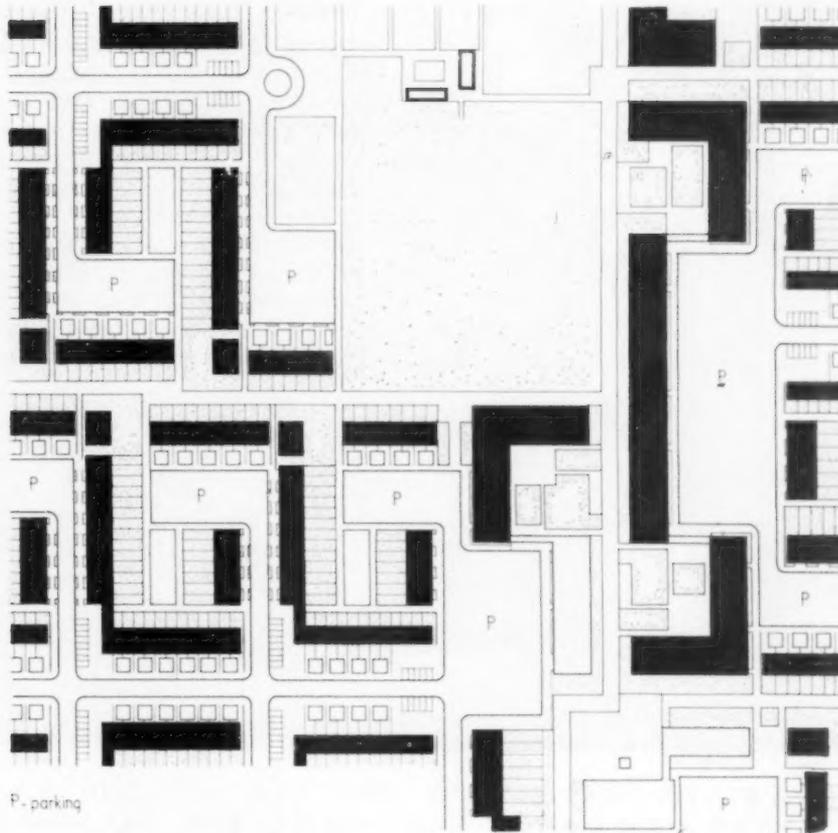


technical section

U.S.A.

Eastwick, Philadelphia

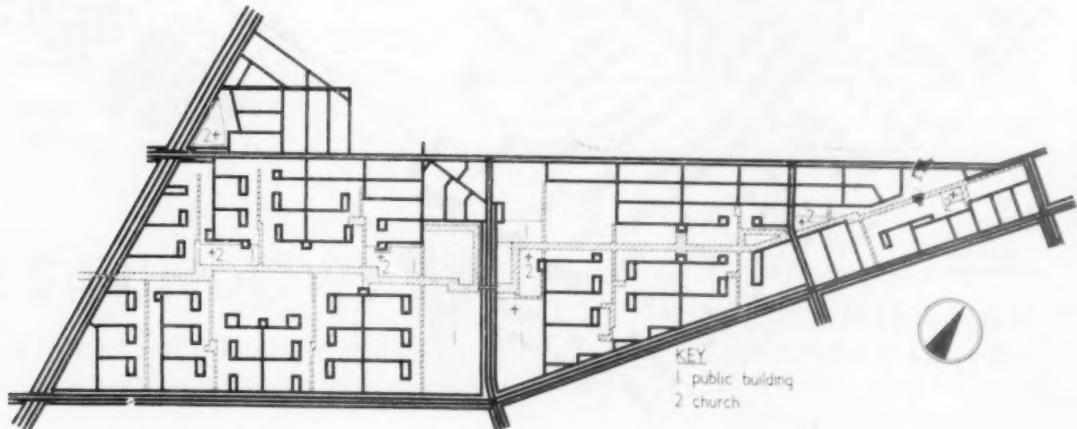
This is a comprehensive redevelopment project sponsored by the Reynolds Metal Company. About 7,500 people are to be rehoused at a density of



Eastwick, Philadelphia. Scale 1 : 3,000. Plan of part of the residential area

23 dwellings per acre with over 100 per cent garage provision. The consultants for the scheme, Doxiadis Associates, propose a pedestrian footpath system down the long axis of the site. The houses face on to the roads in many instances, but each has a direct access to the footpath system. Local regulations limit culs-de-sac to 500 ft. and the consultants have reluctantly put forward an alternative and less satisfactory scheme in which loops are used instead.

Eastwick, Philadelphia. Scale 1 : 12,000. Main pathway areas shaded



technical section

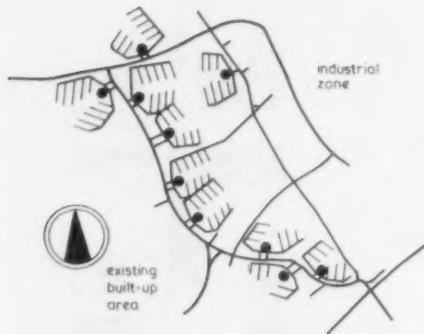


Diagram showing grouping of superblocs and road layout at Cologne new town. The round dots represent shopping centres

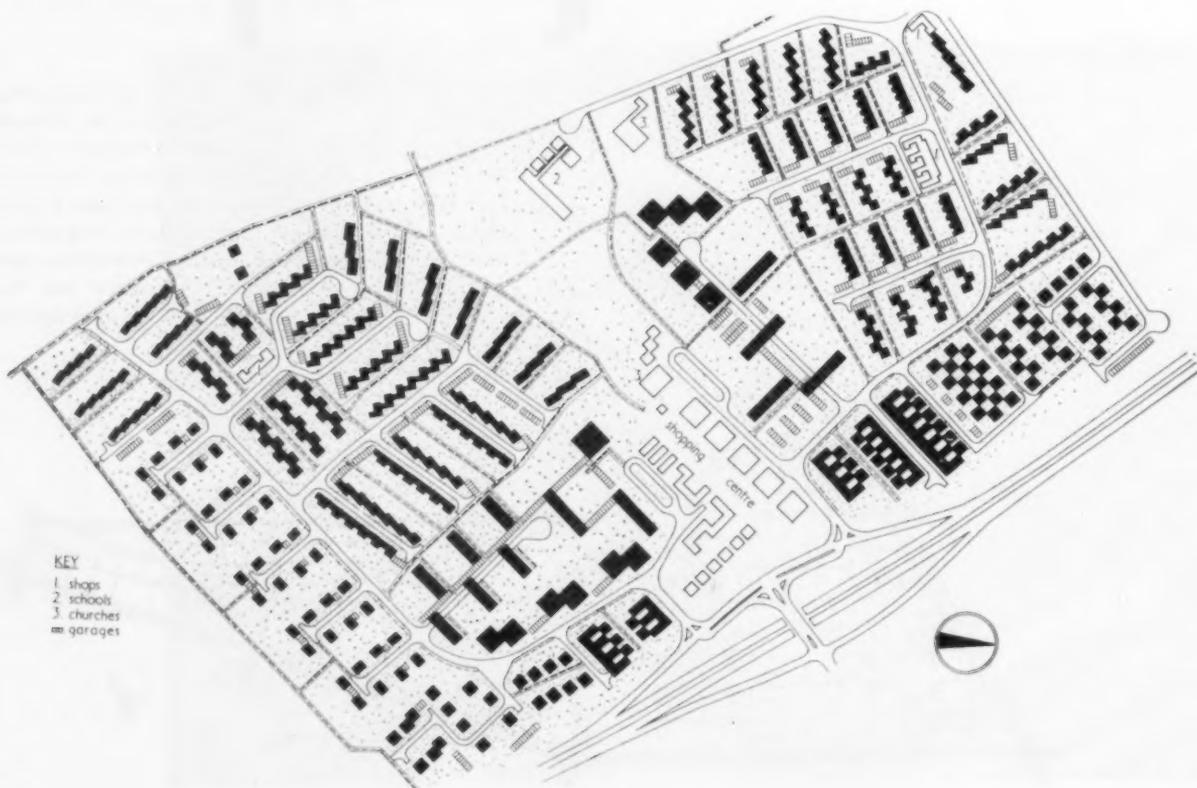
WESTERN GERMANY

Cologne

The city of Cologne has begun the construction of a new town of 100,000 inhabitants with neighbourhood units for between 4,000 and 9,000 persons each, built to a gross density of 55 persons or 15 dwellings to the acre with 50 per cent garage provision. Each neighbourhood unit (or superbloc) has its own pedestrian centre.

Though 100 per cent traffic segregation is aimed at, underpasses are only provided at the crossings of major roads. Local shops are badly positioned along the roads and the indirectness of some path routes suggests that short cuts across roads will be taken in preference.

Plan of typical superbloc at Cologne new town. Scale 1 : 6,000. Main pathways are shown dotted



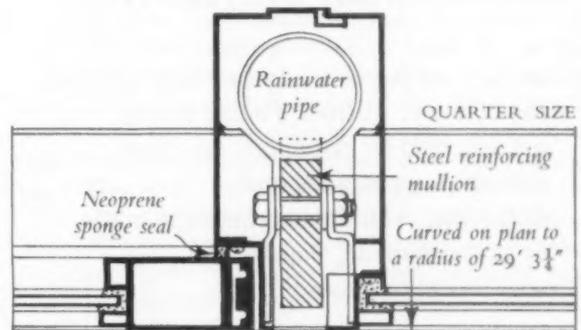
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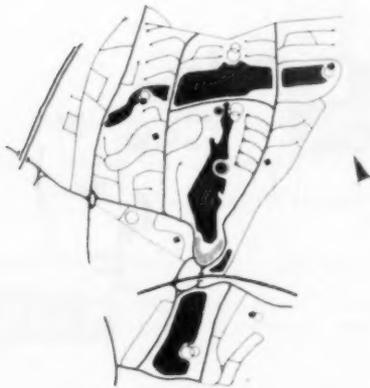


Plan of the northern section of Sennestadt. Scale 1 : 6,000

Sennestadt

This is a new town of 20,000 inhabitants now under construction near Bielefeld to the design of H. B. Reichow. Gross density is nearly 80 persons to the acre, but garage provision is below 50 per cent. Reichow's version of the Radburn idea implies a road system which spreads from within, like the veins of a leaf. The curves are calculated for different speeds. Also, he has no objection to loops. This means that many footpaths have to cross roads. One original aspect of this scheme is the careful differentiation of the road lighting. White light is used in the ring road and at the town centre, yellow on main feeder roads and red on minor access roads.

Diagram showing the road system at Sennestadt, near Bielefeld. The black areas are parkways, the circles and squares, schools



technical section

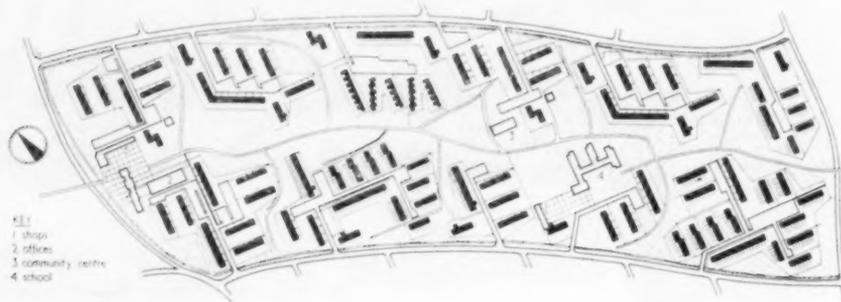
Diagram showing road plan of Neu Winsen



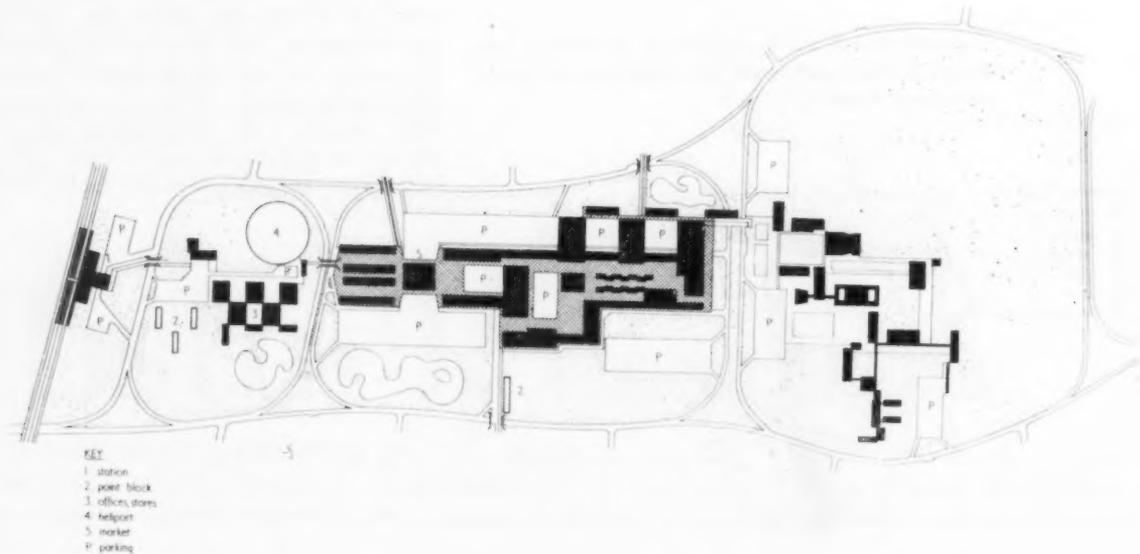
Neu Winsen

This is a new town for 82,000 inhabitants which has been planned near Hamburg by R. H. Rosner and H. H. Meyer. Density is 90 persons net to the acre, and places of work and the open country are both within a 20-minute walk of the residential areas. A linear town centre with traffic circulation at ground floor level and pedestrian circulation on a podium 14 ft. above is enclosed on two sides by fifteen superblocks, each with its own pedestrian centre. The town has 35 per cent garage provision. Full segregation is aimed at but as desire lines differ from path routes it may not be achieved.

Plan of a typical superblock, Neu Winsen. Scale 1:12,500

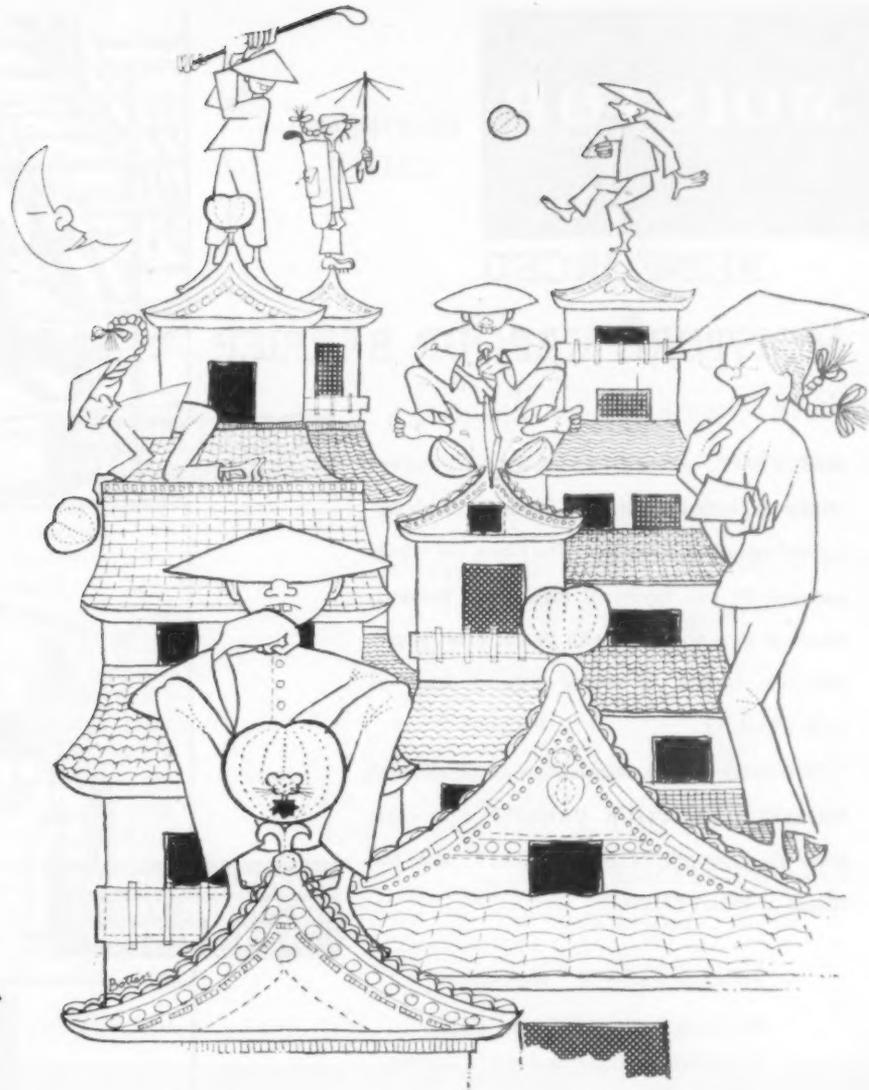


Plan of the city centre at Neu Winsen. The cross hatching represents the upper level pedestrian centre, with car parking beneath. Scale 1:12,500



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has
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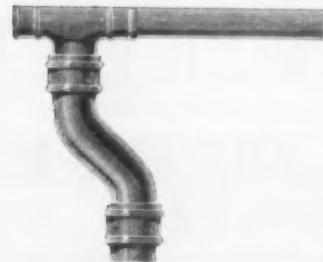
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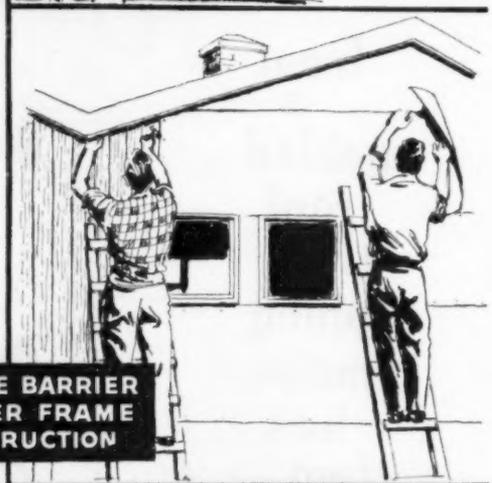
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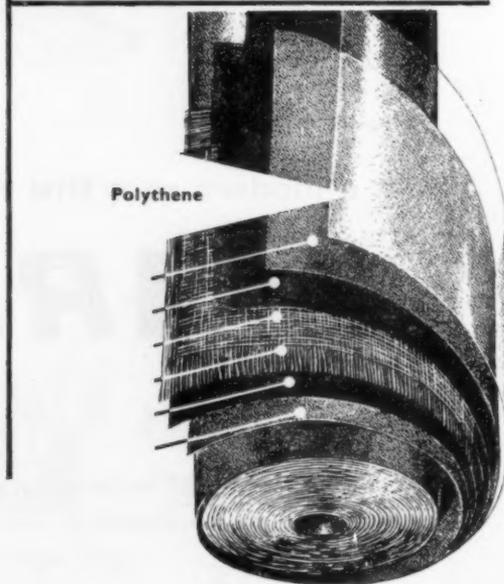
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TILES AND SLATES**



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IN TIMBER FRAME
CONSTRUCTION**



Computer Building

Worthy Down

Winchester

The design of a building to house an electronic computer raises many problems not normally met with. The formal and ordered concept which has resulted here from the resolution of these problems has been interpreted through the medium of a system of prefabricated building components. The very different character of this building from the schools which have previously been built using the system cannot be explained only by different user requirements. A fundamentally different approach to architecture is evident here

designed by D. E. E. GIBSON, DIRECTOR-
GENERAL OF WORKS, THE
WAR OFFICE

in association with ROBERT MATTHEW & JOHN-
SON-MARSHALL

senior architect PETER NEWNHAM

job architect MICHAEL KEYTE

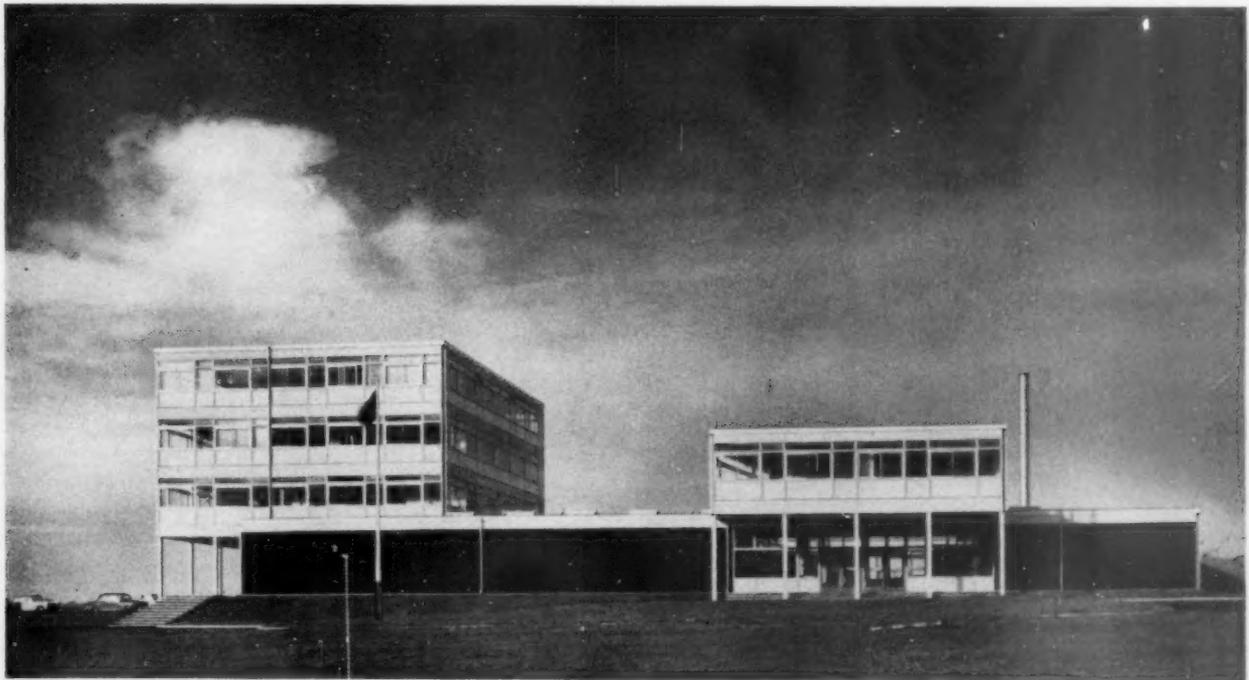
quantity surveyors FRANKLIN & ANDREWS
consultants

heating and air conditioning L. J. FOWLER

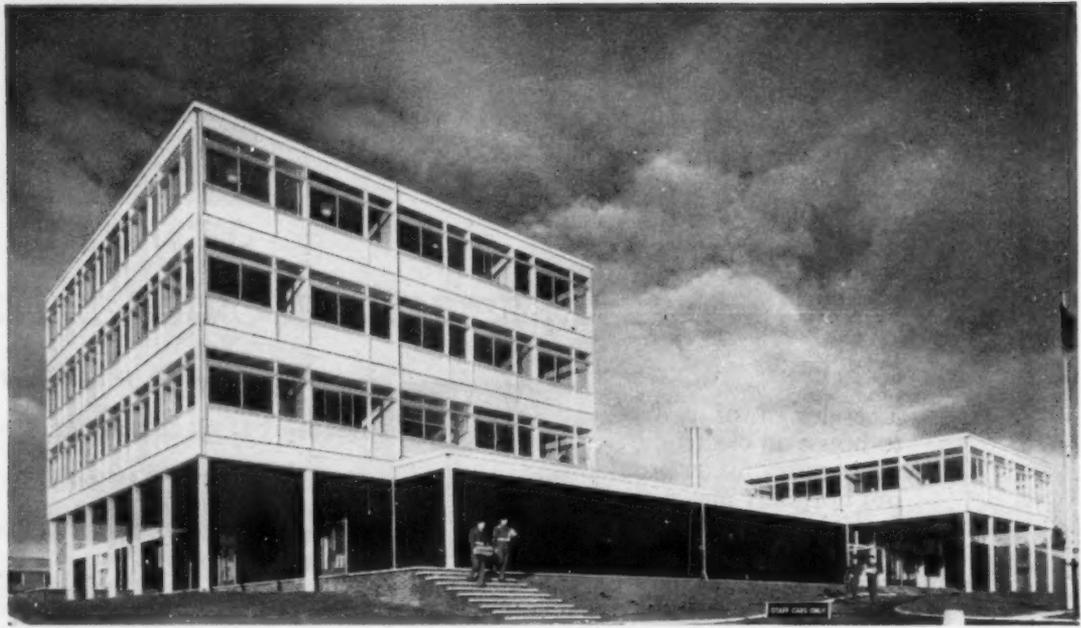
electricians C. MACKECHNIE JARVIS &
PARTNERS

landscaping SYLVIA CROWE

The building seen from the south across the playing-fields



building study—2nd series



The mainly solid ground floor walls are clad with weatherboarding painted black, the upper floors with various infillings in the standard timber frames. The 2 ft. 0 in. structural depth of upper floors and roofs is expressed throughout with precast concrete slabs



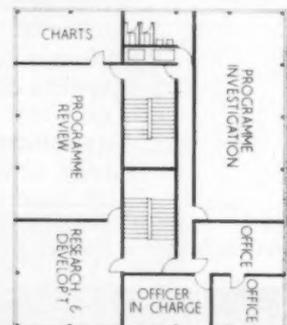
First floor plan, HQ block
[Scale: 1/4" = 1' 0"]



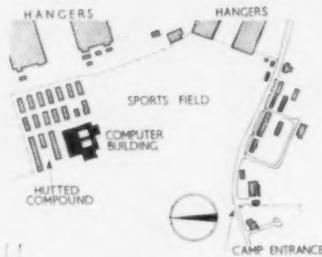
First floor plan



Second floor plan



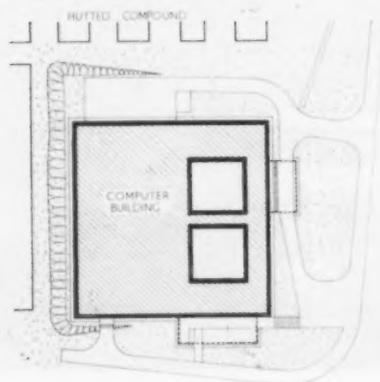
Third floor plan



Block plan

Site layout

[Scale: 1/8" = 1' 0"]



APPRAISAL: The interest this new building arouses is inspired not so much by the unusual nature of the client's brief, as by the way in which a solution has been found within the discipline of a prefabricated system devised for very different purposes.

It was obviously only a question of time before wider applications were made of a system with many inherent advantages besides the specific one of flexibility to cope with ground movement. The maximum use of prefabricated components, together with a high degree of component standardisation, means that bulk pre-ordering is possible, with a consequent saving of overall time. In addition, the elimination or strict limiting of many trades normally employed in traditional construction is particularly valuable now that the volume of building over the country often results in shortages of tradesmen and consequent delays in completion.

The schools built using CLASP have been characterised by an organic grouping of elements in which carefully

controlled relationships between the spaces create a deceptive and usually successful feeling of informality. The flexibility possible within the 3 ft. 4 in. modular discipline has been fully exploited. Where these schools have been less successful is in their equally flexible and often quite arbitrary use of external cladding components. The resultant visual confusion lessens the effect of the carefully related spaces and seems contrary to the initial conception. It will be interesting to see what happens now that a different team of architects, facing a very different human problem, have taken up the same kit of parts to attempt a solution.

Worthy Down, the new headquarters of the Royal Army Pay Corps, is a disused airfield a few miles from Winchester. The broad, open sweep of the downs is an exhilarating characteristic of this part of the English countryside, and offers a fine natural setting for any building. The approach road skirts the south of a gently sloping meadow, and the new computer building is first seen obliquely from the southwest, at the top of the meadow and silhouetted against the sky.

Even from a distance the direct and bold massing is immediately apparent, and the building makes a strong impact. It affords just the right degree of contrast with the broad and simple lines of the ground, and effectively masks the rather dreary assembly of huts typical of most War Department sites. The generally clean overall effect becomes more evident as one approaches the building, and the crisp

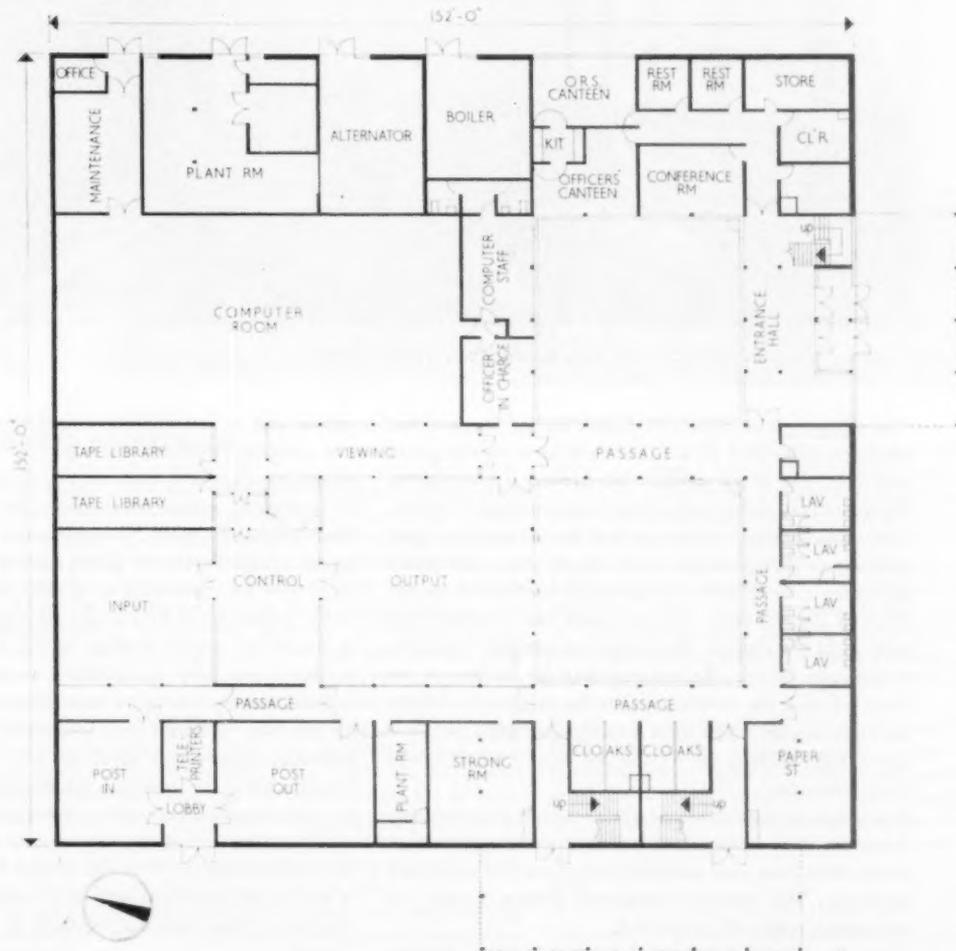
detailing is most effective. So strong in one's mind is the connection between CLASP and informal planning that at first one completely forgets that this too is a CLASP building. The impression is one of extreme sophistication achieved through deliberate restraint. There is a calm and ordered relationship between the major masses of the building which is impressive.

The choice of cladding materials underlines this. Floor and roof slabs are expressed by single lines of precast concrete cladding units faced in white Derbyshire spar. Solid walls on the single storey portion are faced in weatherboarding finished with a matt black textured paint. Against this the elegant CLASP rainwater pipes are an embellishment rather than an eyesore. The two and four storey portions are glazed on all four sides, and one pattern of panel has been used throughout. All timber frame members are painted white or pale grey.

But no system of standardised building components can go more than a certain way towards realising an architectural conception.

It is not surprising, therefore, that a close examination of the exterior does not afford the same satisfaction as seemed to be promised while the building was being approached. The fascias are thin and insubstantial, the crispness of outline and detail is marred by poorness of execution, by the necessary insertion of hand-worked lead flashings, by the clumsy application of copper lightning conductor strips.

Ground floor plan [Scale: 1/4" = 1' 0"]



building study—2nd series



Porte-cochère at main entrance, with headquarters block above

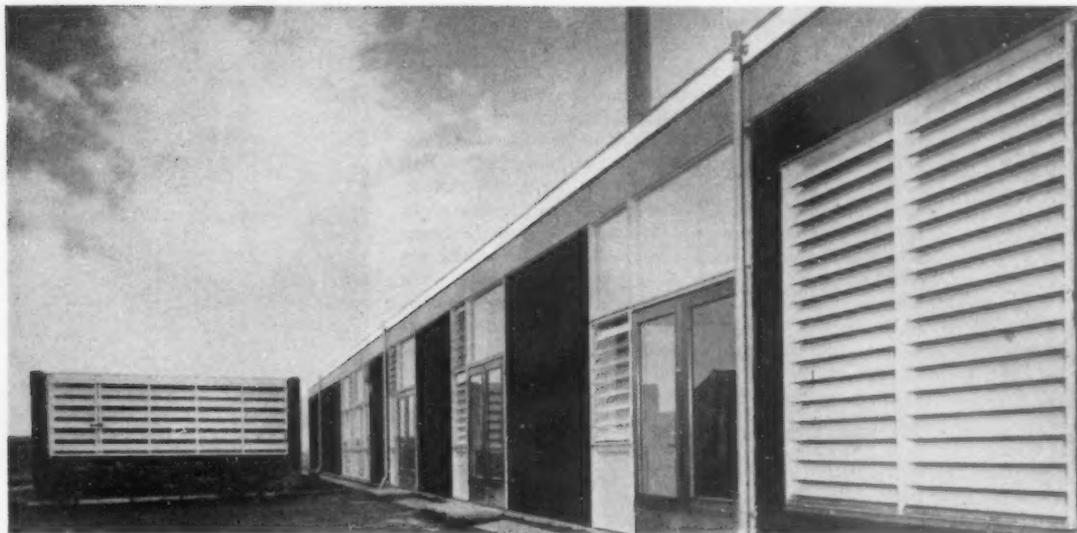
The rainwater pipe detail, so elegant on the single storey structure, looks (and is) a rather nasty mess on the glazed wall of the four storey portion. But to bring it down internally would presumably have created a non-standard condition. The carefully balanced relationship of the two and four storey elements to each other and to the single storey one would have been so much more satisfactory in execution if the first floors of the two taller elements could have oversailed the roof of the low element. But again, non-standard conditions would have arisen. To accommodate the flashing to the low-level roof the cladding panels on the higher element are made shorter. The effect is unfortunate when seen from below, and doubly so when (as in this case) it can be viewed from above also.

The projecting porches are most successful, and convincingly define the main entrances. The deceptively simple sitework details have been most carefully worked out and are wholly admirable. The approach carriageway passing through the main porch is beautifully handled.

Internally most of the detailing is standard to the CLASP

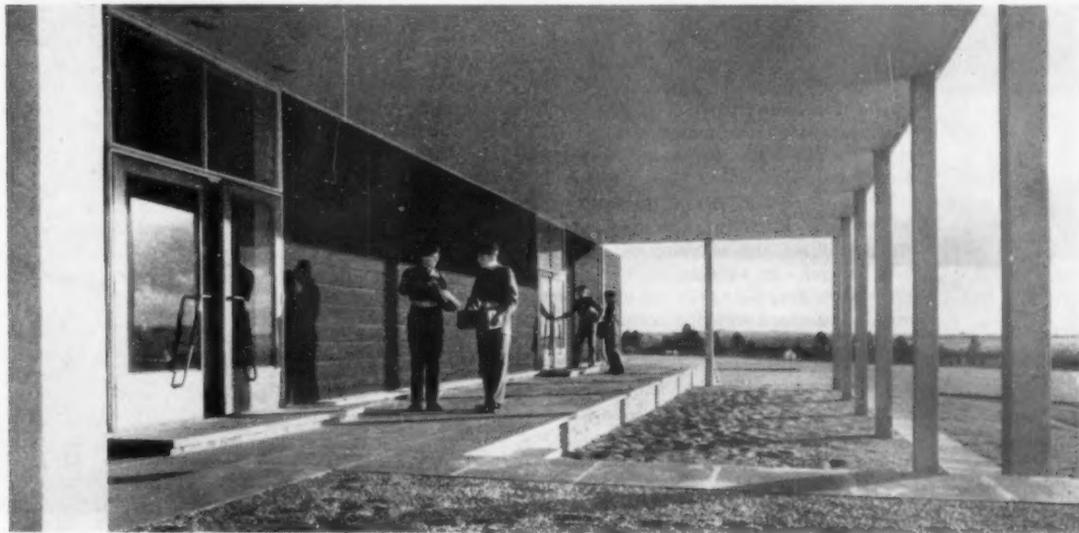
system, and is competent and inoffensive, if a trifle dull. The planning is ordered and logical, if not inspired. As a circulation diagram: it works very well, but the opportunity for interesting spatial relationships has not been taken. What frequently spoils the atmosphere is the fact that, though a large number of glazed screens divide the spaces, all of these are made solid up to table height.

The requirements of the complex plenum system necessary to ensure the proper working of the computer elements prohibited windows or rooflights in certain areas. The artificial working conditions thus created are humanised by the provision of a high level of artificial illumination from fluorescent light sources suspended over an ingenious deeply iouved ceiling. In addition, the flooding of natural light into the two internal courts, containing planted pools, opens up long controlled views out of the working areas. But the detailing of the glazed screens makes it impossible to see into the pools themselves unless one is quite close to the window. This intended amenity is thereby reduced in value.



On the east side of the building is the service yard, screened from the main approach road by the oil storage tank housing. The various plant rooms and computer maintenance bay open on to this yard

Secondary entrances for staff under the four-storey tower



CLIENT'S REQUIREMENTS

The Royal Army Pay Corps are completely reorganising their methods of accounting the pay of other ranks; a large electronic computer will be used to calculate and print the pay slips of all other ranks in this country. This processing is complex, because the RAPC provide the individual soldier with a service very similar to the normal bank account, rather than a mere weekly payment. In addition to the computer itself, which occupies 10 per cent of the total floor area, a considerable amount of space was required for ancillary mechanical and electronic handling of the accounts. When the building is in full operation later this year, punch cards will arrive by post every day from regimental pay offices throughout the country. These cards will be checked and verified, and every day the status records for all other ranks will be brought up to date in the form of coded impulses on magnetic tape. The tapes will be fed through the computer, which will calculate and print the pay slips, ready for sorting and dispatch back to the pay offices.

In addition, conventional office space was required for ancillary clerical work, and for programmers who prepare and revise the calculation processes of the computer. Offices were

required for a small headquarters staff, and ancillaries such as stores, rest-rooms, a small canteen and a conference room.

It was emphasised that the computer requires a very closely controlled environment in terms of temperature, humidity and cleanliness, and that experience in the USA appears to show that in using such machines (at a cost of about £350 per hour) more time is lost through failures of air conditioning than any other cause. It was also stressed that, in view of the financial saving in adopting this method (the cost of the building about every three months), it was imperative that the building be ready before delivery date of the computer.

During the briefing stage it became clear that, since the RAPC use of the machine would occupy roughly eight hours per day, it would probably be employed for other purposes on a shift basis. The project would, therefore, need to be designed for possible expansion at a later stage of both computer and ancillary processing areas.

SITE

The site is on a disused airfield which was laid out during the first World War and was recently handed over to the War

building study—2nd series

Office. The building was required to be sited in relation to an existing hutted compound which was the best existing office space available on the site. The south-west corner of this compound was chosen, overlooking the adjacent playing-fields, so that advantage could be taken of aspect and of fine, long-distance views in these directions. This siting places the building so that it becomes an important feature of the landscape as seen from the approach road to the camp. The massing was developed so that the main single-storey block will tie in with and mask the hutted compound, while the four-storey block will punctuate the skyline in contrast to the bulk of existing hangars and other buildings. Landscaping will be developed within this broad pattern, the grass of the playing fields being allowed to sweep up to the building without interruption.

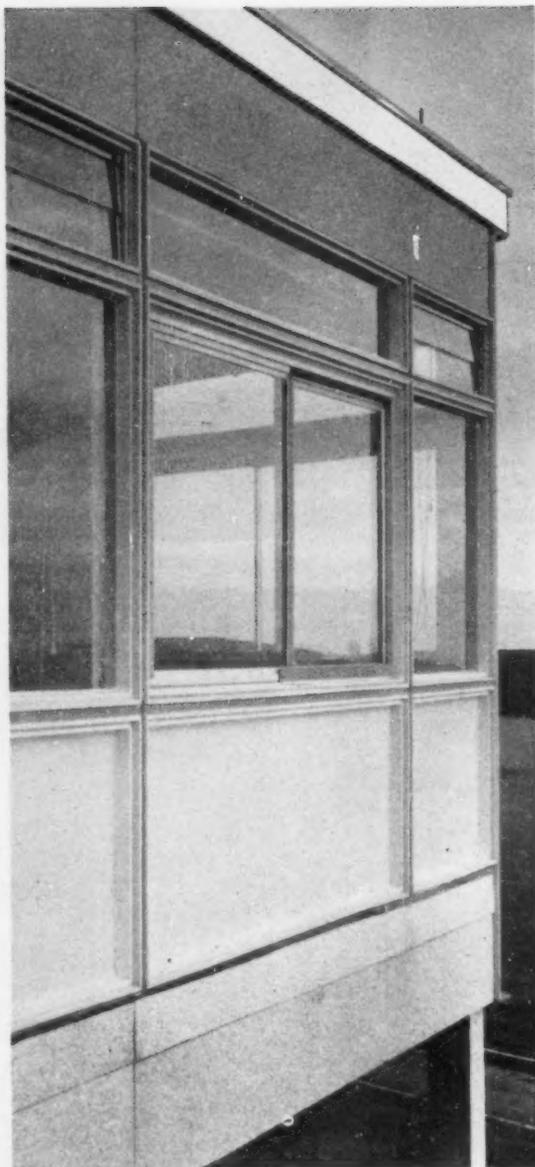
PLANNING

By the end of the briefing stage it became apparent that for the computer room and the associated processing areas, what was required was basically a sophisticated type of factory for the electronic and mechanical processing of accounts, rather than conventional office space. This has been provided in a 150 ft. by 90 ft. ground floor block of linear plan to facilitate extension in terms of four main types of accommodation; postal and storage area, input/output area, computer room, maintenance and plant rooms. A viewing room is centrally placed in this block so that visitors may see the whole process without interfering in any way with it.

Most of the office accommodation has been placed above ground floor level for quiet, privacy, and to take advantage of the view with a maximum working depth of 20 ft. from the windows. The main four-storey block houses all ancillary clerical and other work. This is arranged on three levels, with the day-to-day work associated with the computer on the first floor, long-term programming on the top floor, and shared facilities, such as typing and punching, on the second floor between. In addition there is a small headquarters suite on the first floor over the main entrance. This is not directly concerned with the computer, and could therefore be planned separately. It projects out to form a *porte-cochère*. Cloaks, stores and canteens occupy the remainder of the ground floor, grouped round two internal courtyards.

At an early stage it was decided that it was essential to minimise the cost of the air conditioning plant, and the main process area must be without windows or rooflights. It was nevertheless considered that this space should provide the best possible working conditions within this limitation, that the building was for human occupation just as much as for machines. To this end, despite severe cost limits, a high level of about 50 lumens per square foot has been provided, to avoid any sense of deprivation. The courtyards were included with the specific intention of providing limited views of the exterior at a reasonably low level of brightness even on a sunny day. These courtyards are laid out as ponds with islands of planting. The original intention was that the ponds should be used for disposal of the heat load from the computer by means of sprays, but at a later stage it was decided that because of their enclosed nature this method would not be reliable.

Thanks to a relatively long briefing stage, while the details of the process were finalised, it was possible to develop the air conditioning and structure together so that the two were completely compatible without the use of special components. It was also possible to study the apparently intractable problem of maintaining the required temperature in the computer room, while disposing of large quantities of hot air given off by the machines. The system finally adopted (after study of other installations, chiefly abroad, and their comparative failures) aims at providing the best possible working conditions without excessive draughts, in addition to meeting the functional requirements of the machine. CLASP was specifically chosen for this project with the primary aim of providing a building of suitable quality within



Typical detail of external cladding used on all upper floors, a combination of fixed glass, horizontal sliding aluminium sashes and adjustable glass louvres, together with vitreous enamel panels below sill level, all in standard timber frames

fifteen months of the finalisation of the brief. Completion on time was possible largely because pre-ordering within the CLASP procedure meant that all major components arrived on site within a few weeks of starting on site. In particular, the steelwork was delivered to a nearby railway goods yard before the contract was signed.

Within the vocabulary of CLASP, it was the specific intention of the architects to develop a design as far as possible in character with the modernisation programme represented by the introduction of this computer, and with the reorganisation of Works Directorate of the War Office.

SUMMARY

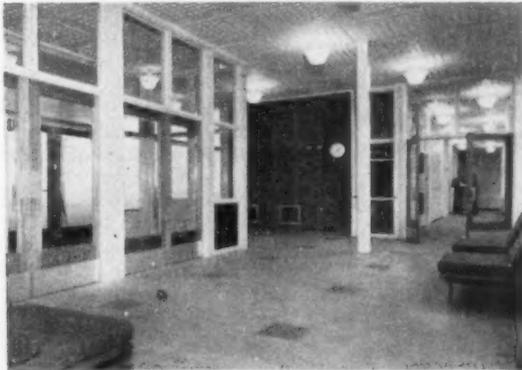
Ground floor area: 19,300 sq. ft.
 Total floor area: 29,900 sq. ft.
 Type of contract: Government CCC/Works/r.
 Tender date: October 1959.
 Work began: November 1959.
 Work finished: September 1960.



The west side, with turn-round for postal delivery and despatch in the foreground

The main entrance hall

Standard staircase in the main entrance hall



The main ancillary office accommodation is in the four-storey tower. This is the first time that CLASP has been extended from three to four storeys



building study—2nd series

Tender price of foundations, superstructure, installation and finishes, including drainage to collecting manhole:

£156,953.

Tender price of external works and ancillary buildings, including drainage beyond collecting manhole: £5,817.

Total: £162,770.

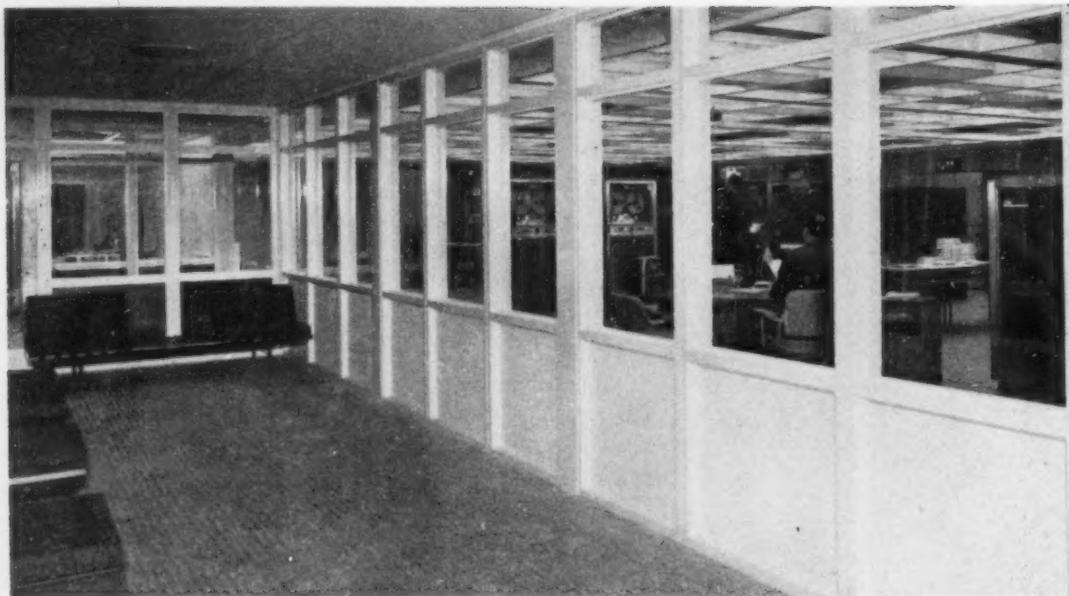
COST ANALYSIS

Based on tender. (AJ revised elemental breakdown in use from November 10, 1960.)

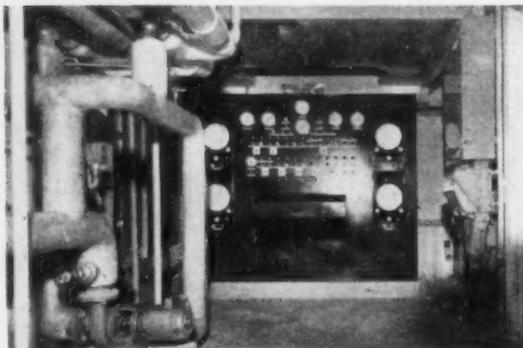
	<i>Cost per sq. ft.</i>	
	s d	
Preliminaries and insurances	2 8½	
2.6 per cent of remainder of contract.		
Contingencies	2 5½	
Provision greater than is normal for CLASP since final details of plant and equipment were not available at tender stage.		
Work below lowest floor finish	4 8½	
Excavations, breaking up of existing unstable concrete hard standing, hardcore fill, 5-in. reinforced concrete slab. Heavily loaded columns carried on concrete piers where slab is on fill. Cost includes special sub-floor for computer room of 1-in. blockboard panels on open web steel joists: 334 sq. yds., 87s. 9d. per sq. yd.		
STRUCTURAL ELEMENTS		
Frame	9 9½	
4½-in. square steel stanchions generally cold-formed, but hot rolled tube where heavily loaded. Upper floors, latticed cold-formed beams at 3 ft. 4 in. centres. Roofs, similar beams at 10 ft. 0 in. centres. Diagonal wind-braces in cold-formed steel. Dowel plate fixing to site slab, plate bolted at external corners. Cost includes steel angle droppers at internal corners, cladding rails at window heads and sills, and 4-in. × 2-in. eaves channels.		
Upper floors	1 0½	
1½-in. tongued and grooved softwood boarding spanning 3 ft. 4 in. spiked to 6-in. × 1½-in. bearing plates fixed to blocking pieces in top chord of steel beams: 1,053 sq. yds., 29s. od. per sq. yd.		
Roof	4 2½	
Prefabricated timber deck units, formed of ¾-in. boarding on 4-in. × 2-in. and 5-in. × 1½-in. joists, 10 ft. 0 in. × 6 ft. 8 in. or 6 ft. 8 in. square, finished with 3-layer 2-ply felt and granite chippings; cost includes upstands, gutter, timber fascia and aluminium rainwater downpipes: 2,213 sq. yds., 48s. 3d. per sq. yd. Similar finishes carried on asbestos cement decking: 230 sq. yds., 68s. od. per sq. yd.		
Rooflights	4	
Steel-framed lights on timber kerbs with plywood internal linings. Cost includes glazing, and rod-operated gear for opening lights. Two fixed and 22 opening rooflights: 42 sq. yds., 236s. per sq. yd.		
Staircases	2 4½	
Cold-formed 7-in. × 4-in. box-section steel strings with brackets carrying hardwood treads.		
Hardwood-boarded half landings and softwood-boarded landings carried on steel channels fixed to enclosure beams between stanchions. Hardwood handrail on mild steel balustrades or brackets. One 12 ft. 0 in. high by 4 ft. 6 in. wide. Two 32 ft. 0 in. high by 4 ft. 6 in. wide.		3 2½
External walls		
Softwood weatherboarding backed with building paper on timber studding in prefabricated frames fixed between stanchions, 1-in. glass wool thermal insulation and inner lining of aluminium foil-backed plasterboard: 526 sq. yds., 74s. 3d. per sq. yd. Cladding to 2 ft. 0 in. structural depth of upper floors and roof in precast concrete slabs, spar finished with similar thermal insulation: 336 sq. yds., 67s. per sq. yd. <i>In situ</i> terrazzo casings to <i>pilotti</i> , 58 yd. run, 42s. od. per yd. External corner casings, flashings, etc.		
Windows and external doors		5 6
Prefabricated softwood frames in a limited range of sizes assembled on site into structural bay sizes prior to fixing, with various types of infill. Unit costs include sills, blind boxes, associated fibrous plaster casings to intermediate stanchions, and glazing. Horizontal sliding aluminium sashes in aluminium frames and timber sub-frames: 320 sq. yds., 206s. od. per sq. yd. Adjustable ¼-in. glass louvres in metal clips pivoted on metal frames and timber sub-frames: 98 sq. yds., 152s. 3d. per sq. yd. Fixed 24-oz. and 32-oz. glass in timber frames: 398 sq. yds., 64s. 4d. per sq. yd. Vitreous enamel panels with insulation board backing in timber frames, with inner lining of plasterboard behind heaters and asbestos cement sheeting elsewhere: 342 sq. yds., 153s. 6d. per sq. yd. Glazed hardwood doors in timber frames: 2 single, 9 pairs double: 444 sq. ft., 24s. 5d. per sq. ft.		
Partitions		5 7½
Precast and self-finished fibrous plaster partitions, generally 6 in. thick, with fibrous plaster panels covering stanchions and diagonal steel bracing: 1,760 sq. yds., 61s. 6d. per sq. yd. Prefabricated timber-framed screens, including glazing and low-level panel infilling with asbestos cement sheeting; glazed hardwood doors: 18 single, 25 pairs double: 502 sq. yds., 125s. od. per sq. yd. Metal-faced plywood screens to w.c.s: 43 sq. yds., 65s. od. per sq. yd.		
Internal doors		9½
Hardwood veneered flush, softwood frames, hardwood architraves, including glazed laylights over to ceiling level: 59 single, 3 pairs double: 1,664 sq. ft., 12s. 9d. per sq. ft. Two pairs flexible translucent plastic doors: 39 sq. ft., 82s. 6d. per sq. ft.		
Ironmongery		9
Satin chrome lever handles, mortice locks, overhead and floor springs, pull handles, push plates and kicking plates.		
Total of structural elements: 33s 7½d		
FINISHES AND FITTINGS		
Wall finishes		0½
White glazed wall tiling as splashbacks: 12 sq. yds., 51s. 6d. per sq. yd.		



Internal court with four-storey tower beyond



Centrally placed viewing area; this is unlit to minimise reflection in the glass, above

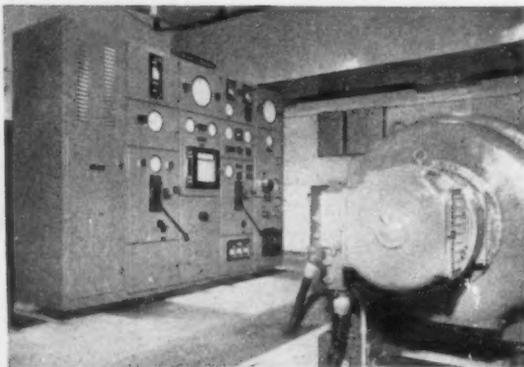


Air-conditioning plant room, showing control panel, left

The alternator which converts the normal supply to 60 cycles per second to feed the computer, together with its associated switchgear, lower left

Detail of louvred ceiling in computer room and input-output area, bottom left

Circulation area on the ground floor. Quiet floor finishes and sound-absorbent ceilings have been used throughout such areas to minimise creation and spread of noise, below





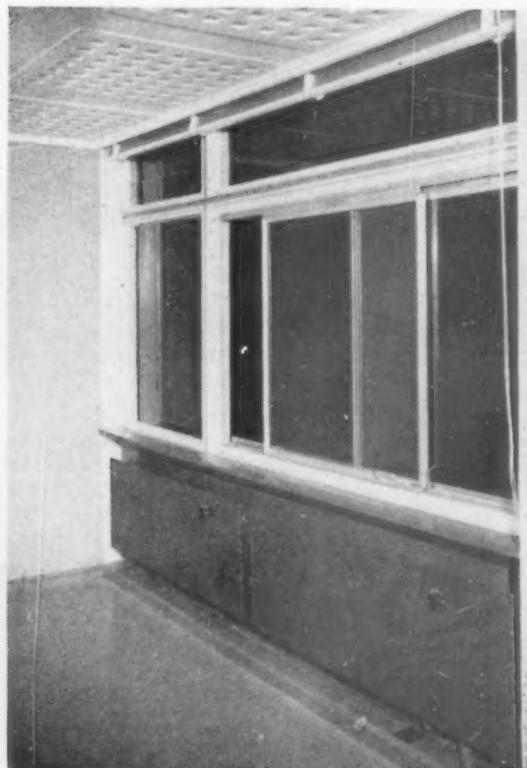
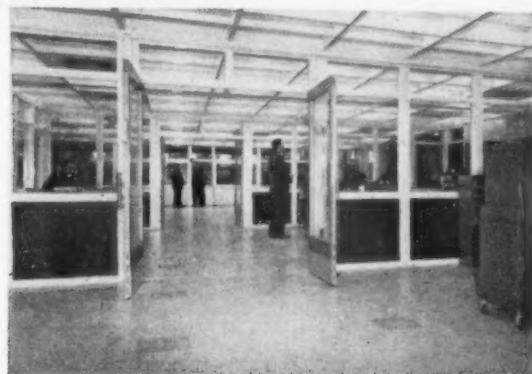
The computer itself is a series of units linked together by under-floor cables, and controlled from a central desk, left

The input area, with various machines for processing punch cards before the information is transferred to magnetic tape, below

One of the larger offices in the four-storey tower. These are designed to a maximum depth of twenty feet from windows, lower left

General view of input-output area looking south, bottom

Detail of windows used throughout on upper floors. The skirting is brought forward under the heaters to accommodate telephone and power outlets in a convenient position off the floor, bottom right



building study—2nd series**Floor finishes**

Felt-backed linoleum tiles glued to blockboard panels; 334 sq. yds., 30s. 4d. per sq. yd. Similar tiles on screed: 774 sq. yds., 37s. 9d. per sq. yd.
 Studded rubber tiles on screed; 441 sq. yds., 48s. 0d. per sq. yd.
 Rubber sheeting with sponge latex backing including hardboard underlay on sanded board flooring: 1,013 sq. yds., 55s. 0d. per sq. yd.
 Granolithic; 172 sq. yds., 20s. 8d. per sq. yd.
 Metal-angled frames to matwells, screed and linked rubber matting: 22 sq. yds., 78s. 10d. per sq. yd.
 Thermoplastic tiles; 267 sq. yds., 21s. 0d. per sq. yd.
 Costs include hardwood skirtings.

Ceiling finishes

Plasterboard sheeting, generally perforated, carried in aluminium extrusions on hangers, with 1-in. glass wool thermal insulation: 1,177 sq. yds., 35s. 9d. per sq. yd.
 Perforated fibrous plaster panels on bearer and filler beams; 925 sq. yds., 50s. 3d. per sq. yd.
 Louvre system over computer room and associated areas, plasterboard on timber framing at 3 ft. 4 in. centres carried on hangers, with additional removable chipboard louvres; cost includes wood wool lining to roof decking above for thermal insulation and sound absorption; 689 sq. yds., 48s. 6d. per sq. yd.
 External soffits of multi-storey blocks, asbestos cement sheeting nailed to timber bearers; 226 sq. yds., 25s. 9d. per sq. yd.

Decorations

Oil paint on softwood, polish on internal hardwood, emulsion paint generally on walls (except oil paint in kitchen), black textured paint on external weatherboarding
 Emulsion paint to walls and ceilings.

Fittings

Benching and cupboards in output room and kitchen, hatch and bench in messengers' room, cloak fittings, notice boards, venetian blinds.

Total of finishes and fittings: 11s 2½d

SERVICES**Sanitary fittings**

White glazed fireclay lavatory basins	17
" " " w.c.s	12
" " " urinals	5
" " " sink	1
Stainless steel sink and drainers	1
Chromium-plated fittings and plastic water waste preventers	

Waste, soil and overflow pipes

Preformed copper wastes to ranges of lavatory basins, copper overflows, cast iron soil and vent pipes.

Cold water services

Galvanised steel storage cisterns dispersed through the building, rising main and supply in copper. Temporary booster pump to supply, until camp mains supply is reorganised.
 34 draw-off points.
 Includes ¼d. builder's work.

Heating, hot water and air conditioning

Accelerated low-pressure hot water system serving

forced warm air units in circulation areas, thermostatically controlled, and in offices continuous runs of gilled tubes under sills behind vertical panels, with individual baffle controls.

Two sectional cast iron oil-fired boilers and 2 ft. 0 in. diameter steel flue.

Indirect cylinder with immersion heater for hot water supply to kitchen, remainder of hot water supplied by local electrically heated copper storage cylinders.

Heating and hot water service, including boilers, covering 1,900 sq. ft. of floor area at 6s. 1½d. per sq. ft.

Air conditioning system covering computer room, tape libraries and maintenance bay designed to provide strictly controlled ambient conditions for electronic equipment, while removing large quantities of heat given off by units of the computer in the form of hot air. Two separately controlled air streams are fed into the computer room. One is into the void under the floor and is supplied direct to the machines by grilles underneath them in the floor panels. A second stream at a lower temperature is discharged from overhead diffusers generally into the room to control air temperature. Extract is by the void over the open louvred ceiling, which acts as a buffer space where hot air given off by the machines can collect before being extracted by peripheral ducts. The plant has been designed to reduce possibility of stoppage to a minimum. Many major items of equipment are therefore duplicated, with a system of automatic changeover to standby. The failure of any unit is indicated immediately on the control panel which also records conditions in the computer room.

Total refrigerant capacity	72 tons
Design temperature limits	65-80 deg. Fahr.
Relative humidity limits	40-60 per cent
Dust filtering limit	5 micron
Heat load from computer	320,000 B.t.u. per hour

4,300 sq. ft. of floor area air conditioned at 157s. 6d. per sq. ft.

9½ Mechanical ventilation supplying input-output area by overhead diffusers, ceiling void over louvres forming return duct in winter, with extract fans for use in summer. Cost includes cooling sprays on roof for use in hot weather. System provides ten air changes per hour and dust filtering down to 5 micron size.

6,000 sq. ft. of floor space mechanically ventilated at 8s. 0d. per sq. ft.

3 Includes builder's work at 1s. 0½d. per sq. ft.

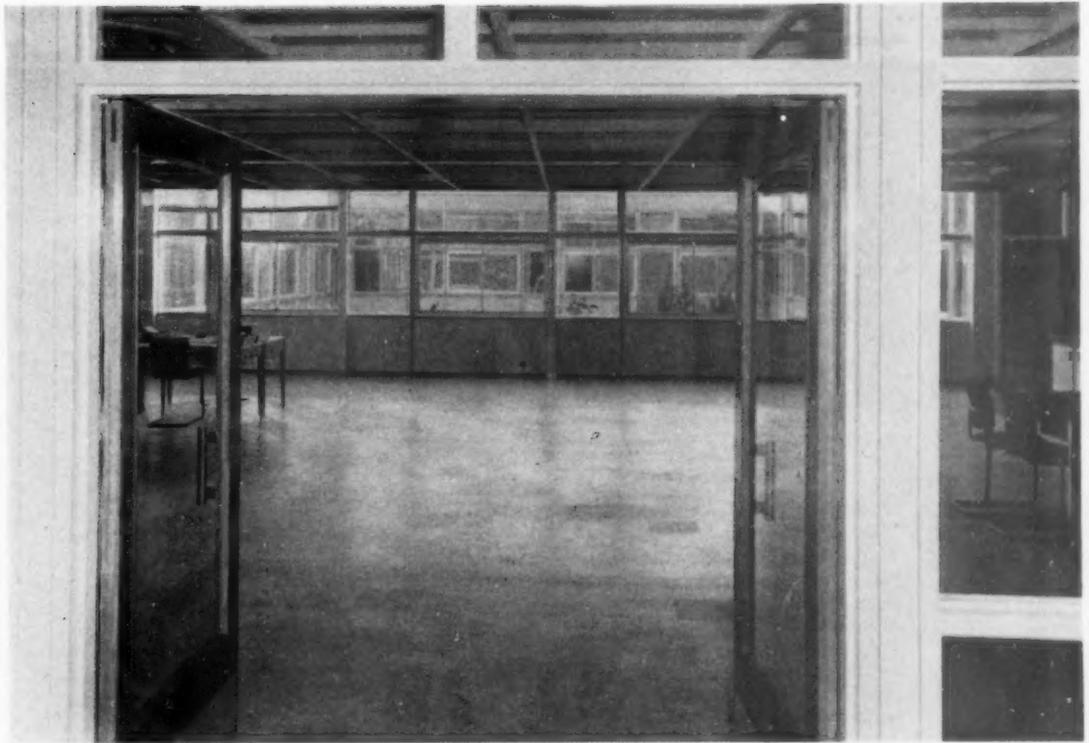
Electrical installation

Installation includes permanent fluorescent lighting to a level of about 50 lumens per sq. ft. in the computer room and associated areas where daylight has been excluded. Bare tubes are hidden from normal angles of view by ceiling louvres.

	<i>s. d.</i>
Main switchboard	1 4½
Main distribution through building	10½
13-amp. supply to 165 power points	5½
Lighting supply to 480 points	7½
Light fittings and lamps	2 9½
Supply to computer	6
Distribution to plant, water heaters, etc.	9
Emergency lighting	2½
Telephones to 56 outlets	3½
Smoke detection system with 77 detector heads and alarm bells	1 4½
Lightning conductors	4
Builder's work	3½

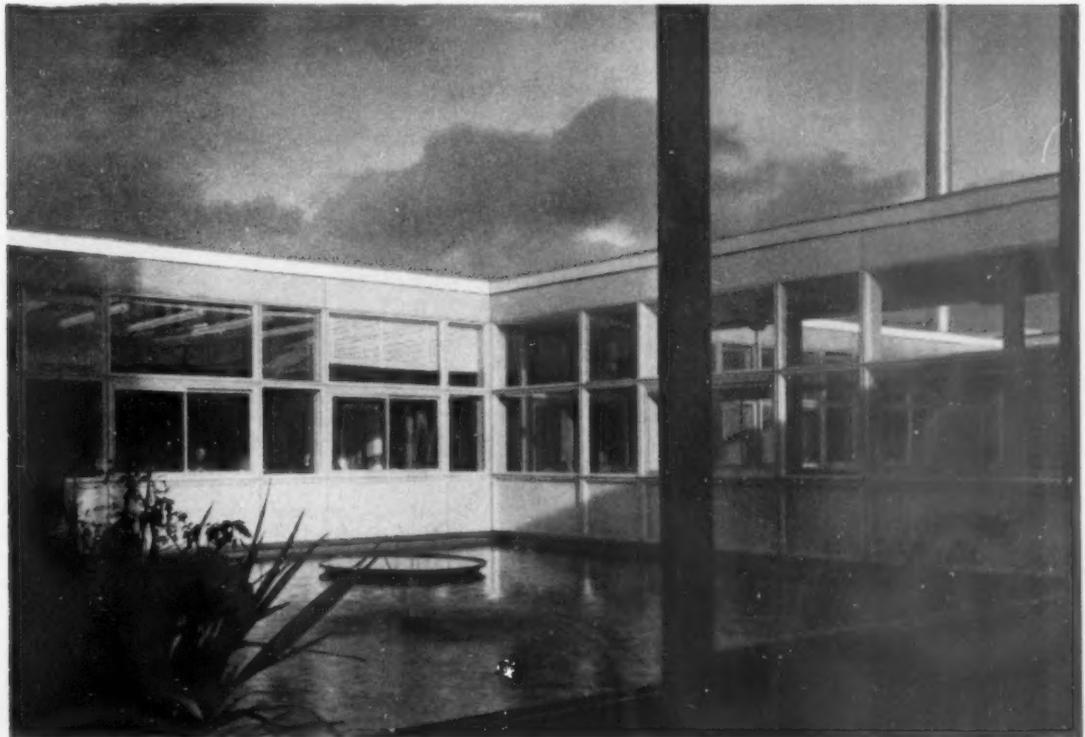
31 10½

9 9½



View south from the input-output area towards an internal court on a bright day. This limited visual contact with the exterior will become of greater interest as the planting develops. The internal courts and the high level of illumination in this part of the interior were designed together so as to provide some relief to the artificially lit environment, avoiding as far as possible any sense of deprivation, above

One of the internal courts, below



Special services

Alternator set supplying power at 60 cycles per second to the computer, maximum output 250 KVA, derived from a rotary frequency changer driven by a synchronous induction motor.

	s.	d.
Alternator set	4	1½
Switchgear, voltage regulator and other ancillaries	2	8½
Builder's work		0½

Drainage

Separate system, generally pitch fibre pipes, cast iron under building.

Total of services: 50s 3d**External works**

	s.	d.
Electrical supply cable		10
Drainage connections		2½
Water connection		0½
Roads, paths, landscaping	2	8

Because vehicular access is required to three sides of building, in siting, advantage was taken of an existing concrete road on south and west sides which has merely been resurfaced.

Landscaping has been treated simply, to allow the grass of the sports field to run directly up to the building. In contrast, the internal courts will be richly planted with material chosen to give variety and interest throughout the year.

Total net cost per square foot of floor area:

£156,953 (net cost, excluding external works)
29,900 sq. ft. (measured inside external walls) = **104 11½**

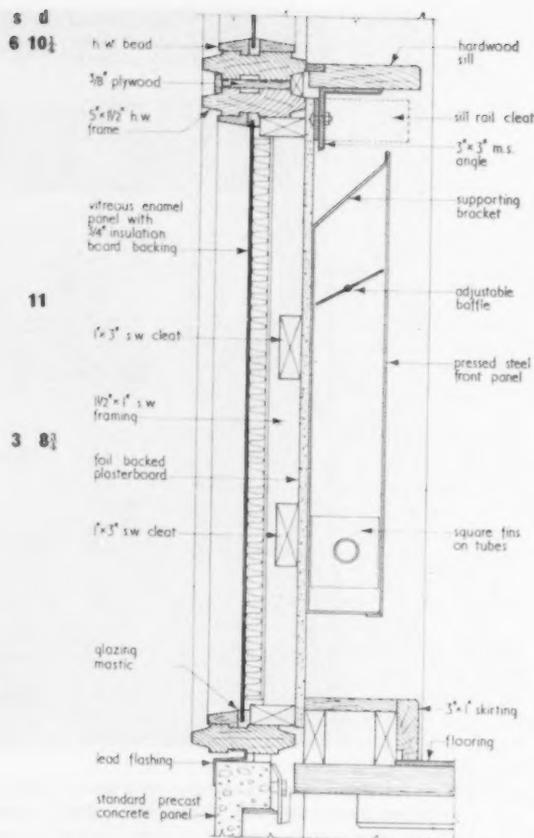
COST COMMENTS

This is a most comprehensive and valuable analysis, the very model of what is desired. It repays careful study. Of course the building is designed for a special purpose and in many respects it is not therefore possible to make direct comparisons either in whole or in some of its parts with other published cost analyses. The fact remains however that most of the figures are very useful. The price equivalent per square foot is supplemented by further valuable information.

Further examination suggests that the long briefing stage was used to produce not only a satisfactory solution to the client's technical needs, but to consider strict economy. Air conditioning cost 157s. 6d. per sq. ft. on the area covered. This averages 20s. 4d. per sq. ft. of the whole building. Mechanical ventilation cost 8s. 0d. or 1s. 7d. per sq. ft. on the whole. Abnormal electrical work cost at least 1s. 6d. Specialist equipment and extra contingencies about 8s. 4d. If these are deducted from the total we are left with a building costing 73s. 3d. per sq. ft. This compares very favourably with many office buildings.

The Laboratory at Duxford (AJ, January 14, 1960), for example, was a highly specialist building which cost 132s. 6d. The omission of all similar non-comparable elements still shows this computer building to have been very carefully considered in terms of cost.

The foundations are normal. They seem to range between 4s. 6d. and 5s. 6d. for this size of building. The frame, external walls, windows and doors, add up to 26s. 6d. This element, in comparable buildings analysed in the last two years, ranges from 18s. 2d. to 30s. 7d. The internal finishings of course reflect some of the special needs. 2s. 0d. per sq. ft. for decorations is a figure which is frequently seen in these analyses.



Section through sill, heating and skirting [Scale: ¼" = 1' 0"]

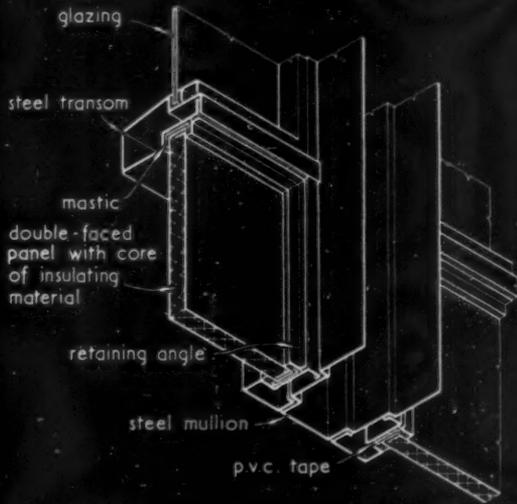
Beyond this, comparisons are misleading. The demand for computers, whether housed in new buildings designed wholly for their benefit, or whether incorporated in a section of a new general office block, will grow. This cost analysis will serve at least to help with the preparation of approximate estimates. In particular, it draws attention to and expresses a value for many items which might otherwise get overlooked in the preliminary stages.

CONTRACTORS

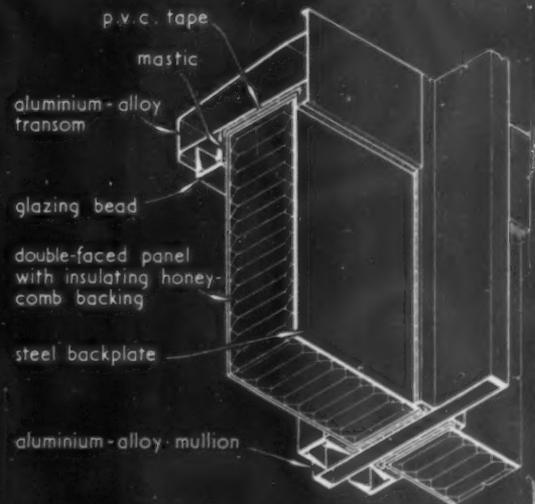
General contractors: Charles R. Price. *Sub-contractors and suppliers—Steel components:* Brockhouse Steel Structures Ltd. *Heating, hot water service, air conditioning plant, mechanical ventilation system:* Weatherfoil Ltd. *Electrical installation:* Troughton & Young Ltd. *Alternator:* Crompton Parkinson Ltd. *Concrete cladding and plinth units:* Naybro Stone Ltd. *Vitreous enamel panels:* Edward Curran Engineering Ltd. *Timber window frames and external doors:* Gee, Walker & Slater Ltd. *Glass lowvre frame units:* N.V. Appleton Ltd. *Horizontal aluminium sliding windows:* Quicktho Engineering Ltd. *Metal frames to rooflights:* Hills (West Bromwich) Ltd. *Internal flush doors:* Allan Brothers Ltd. *Ironmongery:* Wilkes Berger Engineering Co. Ltd. *Preformed copper wastes:* Econa Modern Products Ltd. *Sanitary fittings:* Buxton Dawson Ltd. *Smoke detection system:* Minerva Detector Co. Ltd. *Sheet rubber flooring:* Fitchett & Woolacott Ltd. *Studded rubber tiles:* Rubber Ware Ltd. *Linoleum tiles:* Barry, Ostlere & Shepherd Ltd. *Thermoplastic tiles:* Marley Tile Co. Ltd. *Asbestos cement decking:* Turners Asbestos Cement Co. Ltd. *Felt roofing:* William Briggs & Sons Ltd. *Plasterboard:* The British Plasterboard (Manufacturing) Ltd. *Glass fibre insulation:* Fibreglass Ltd. *Acoustic blanket:* W. Keynon & Sons Ltd. *Asbestos cement sheeting:* Cape Asbestos Co. Ltd. *W.c. partitions:* Venesta Ltd. *Precast plaster partitions:* Bellrock (Southern) Ltd.

WALL FINISHES | METAL

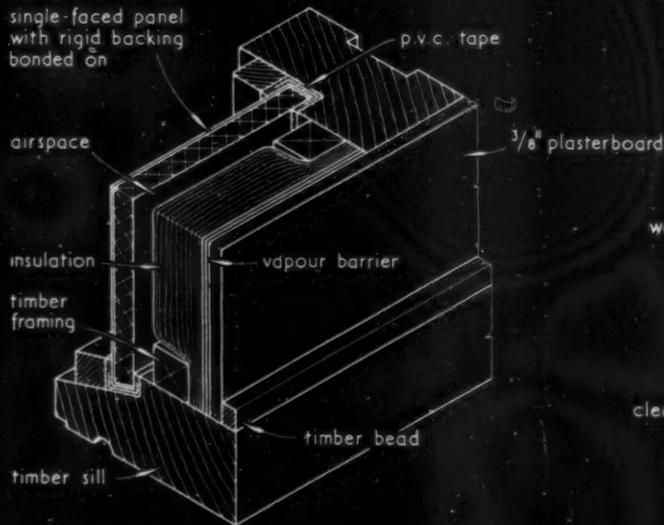
The Architects' Journal Library of Information Sheets 805. Editor: Cotterell Butler, A.R.I.B.A.



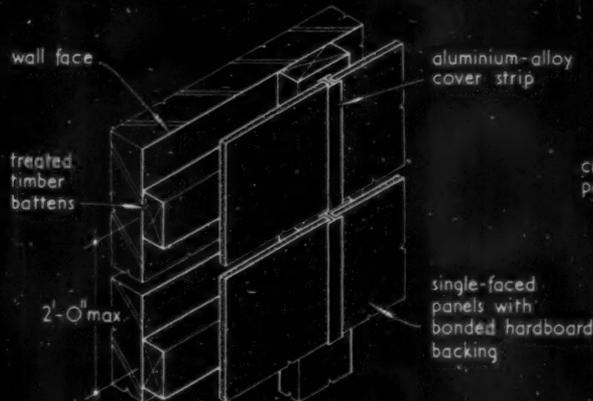
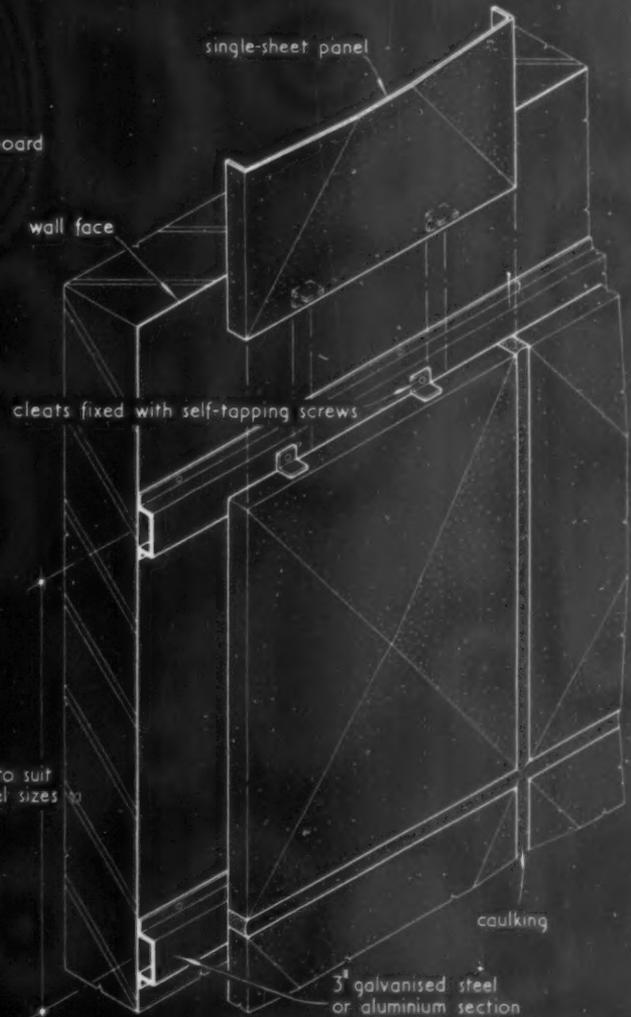
double-faced panel in metal framing: fixed from inside



double-faced panel in metal framing: fixed from outside



single-faced panel in timber framing
TYPICAL APPLICATIONS TO CURTAIN WALLING.



TYPICAL METHODS OF FACING SOLID WALLS.

VITREOUS-ENAMELLED PANELS FOR CURTAIN WALLING AND WALL FACING

Compiled from information supplied by: The Vitreous Enamel Development Council

19.H2 VITREOUS-ENAMELLED PANELS FOR CURTAIN WALLING AND WALL FACING

This Sheet describes vitreous-enamelled metal panels which may be used, alone or backed with various insulating materials, for infilling of curtain walls or for facing.

Material

Vitreous enamel is a glass coating bonded to a metal base by fusion at temperatures ranging from 1,000° to 1,500° F. The metal may be steel, aluminium, copper or cast iron. The resultant surface has the hardness of glass and the panel has the strength of the base material. The finish is unaffected by rain, frost, snow and sun and will withstand all types of atmospheric attack to which building materials are normally subjected. The coating is applied after fabrication so that panels of almost any shape can be made.

The Vitreous Enamel Development Council (Architectural Division) has drawn up specifications and standards covering the manufacture of vitreous-enamelled panels.

Types

Double-faced panel: This can be mechanically assembled and consist of two interlocking trays fastened together, e.g. with non-corrodible screws, or it can be a composite bonded panel. The exterior surface is vitreous-enamelled and the interior surface may be similar or it may be galvanised steel or plain aluminium. The space between the two sheets of metal is filled with insulating material, which may be any of the usual types, e.g. fibreboard, asbestos board, chipboard, glass fibres, metal or impregnated paper honeycomb, lightweight concrete, foamed polyurethane.

Most manufacturers produce several types of panel, but may not use all the available backing materials; therefore, they should be consulted before the core is specified. The core materials can provide U values down to 0.1 for the panels. Depending upon the core materials, the panels also satisfy B.S. 476 with regard to fire resistance and in some instances render a separate fire-stop wall unnecessary. Vapour barriers can be incorporated in the panel or applied independently to a back-up wall. Embossed panels can be produced to give surface modelling to the facade of the structure if required.

Single-faced panel: Rigid material is bonded to the back of the vitreous-enamelled sheet, the type of backing used determining the fire-resisting or thermal-insulating value of the panel. The backing contributes to resisting wind pressure where panels are large and the greater rigidity of this type over the single sheet simplifies its safe fixing.

Single sheet: This is used, without any backing material, to provide a waterproof, decorative and easily maintained facing that is not part of the structural wall.

Sizes

The maximum dimensions of the panel are generally determined by the size of the furnace and equipment used by the enameller and also by the standard sizes of the backing material. The maximum sizes of a steel panel are normally 8 ft. 0 in. by 4 ft. 0 in. Panels with an area of approximately 12 sq. ft. are more economical. Larger sizes are available for aluminium.

Fixing

The panels may be fixed by the normal method of glazing beads, e.g. aluminium channel, timber bead, etc. The panels are previously bedded in mastic. Other mechanical fixing methods evolved by the various manufacturers of curtain walling systems are also suitable.

For facing solid walls, treated timber battens or light metal sections should be fixed as grounds for levelling uneven surfaces and providing positive fixing points for securing the panels.

Colours

Although vitreous-enamelled panels are normally supplied to B.S. 2660, 101 range, and to the Munsell range, almost any other colour can be produced. Two or more colours, any geometric design and sign lettering can be fired into the panels during the enamelling process.

Finishes

The panels may be finished full gloss or semi-matt (eggshell) and may also be textured.

Maintenance

Except in the most heavily polluted atmospheres the panels require washing down not more than twice a year. For interior applications, an occasional wash down with soapy water is all that is required.

Further Information

The Technical Committee of the Architectural Division of the Vitreous Enamel Development Council is prepared to advise on all architectural applications of vitreous-enamelled panels including design, fixing, suitable adhesives, mastics and sealants, backing materials, etc., and these are constantly reviewed in relation to new developments in the building industry. The following companies are members of the Vitreous Enamel Development Council, Architectural Division:

Alcan Industries Limited, Banbury, Oxfordshire.
Armstrong Cork Company Limited, Kingsbury, London, N.W.9.

*Blake Vitreous Enamelling Limited, Oakenshaw Works, Clayton-le-Moors, Accrington, Lancashire.

*Edward Curran Engineering Limited, Hurman Street, Cardiff, Glamorgan.

*Elm Works Limited, Summerstown, Tooting, London, S.W.17.
Ferro Enamels Limited, Wombourn, near Wolverhampton, Staffordshire.

*Jury Holloware Limited, P.O. Box No. 12, Brierley Hill, Staffordshire.

Richard Thomas and Baldwins Limited, 47, Park Street, London, W.1.

*The Rustless Iron Company Limited, Keighley, Yorkshire.
The Steel Company of Wales Limited, Abbey Works, Port Talbot, Glamorgan.

*Stewart and Gray Limited, Paisley Works, Swains Road, Tooting, London, S.W.17.

John Summers and Sons Limited, Hawarden Bridge Steelworks, Shotton, Chester, Cheshire.

*Vitreous Enamellers (Slough) Limited, Venture Works, Mill Street, Slough, Buckinghamshire.

* Manufacturers of architectural vitreous-enamelled panels.

Compiled from information supplied by:

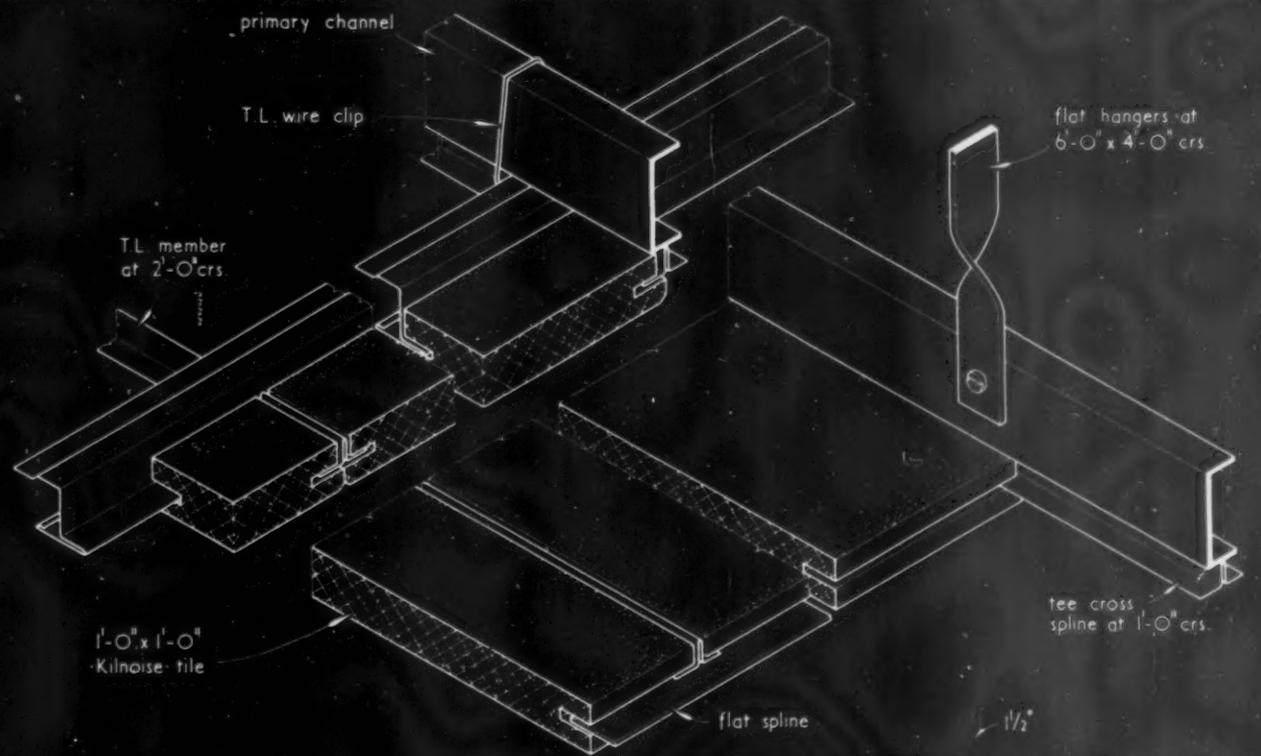
Vitreous Enamel Development Council

Address: 28, Welbeck Street, London, W.1.

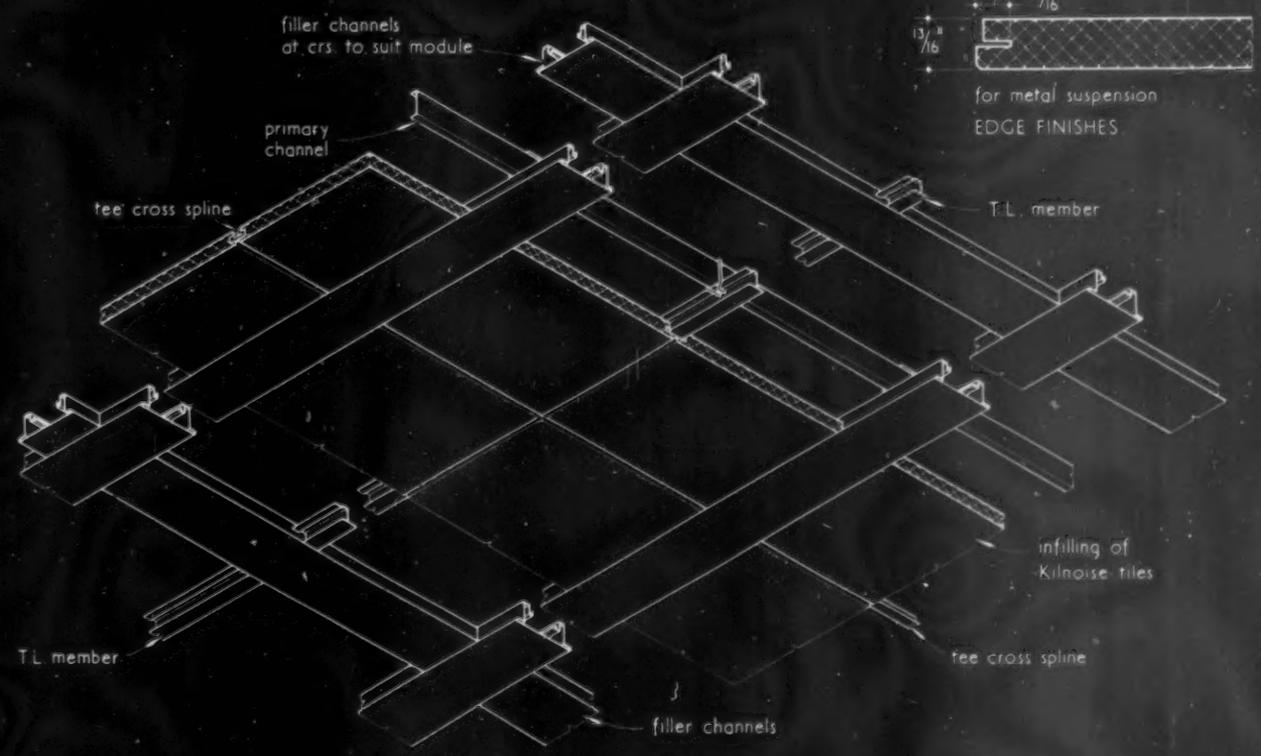
Telephone: Hunter 2237.

ACOUSTICS | PRODUCTS

The Architects' Journal Library of Information Sheets 806. Editor: Cotterell Butler, A.R.I.B.A.



FIXING BY T.L. SYSTEM



TYPICAL APPLICATION TO MODULAR CEILING

27.C4 · KILNOISE · CELLULAR ACOUSTIC TILES

This Sheet describes Kilnoise acoustic tiles. The drawings on the face give details of the tiles and show how they may be fixed by the TL metal suspension system. They may also be fixed by adhesive if required.

Description

The tiles are of all-mineral composition, the main ingredient being partially-calcined dolomite. The cellular structure makes the surface of the tiles naturally sound-absorbent: tiles with one striated surface are available as an alternative to the standard pattern. The edges of all tiles are kerfed and as shown, either rebated for fixing by the metal suspension system or splayed to give a tight joint when the tiles are fixed by adhesive.

Size and Weight

The tiles are 12 in. by 12 in. or 24 in. by 12 in. by $\frac{1}{8}$ in. thick and weigh 1.3 lb./sq. ft.

TL Metal Fixing System

Kilnoise tiles may be fixed by any fixing system utilising good quality members protected against corrosion. The TL system which is supplied by the manufacturer is illustrated on the face of the Sheet and briefly described below.

Primary channel: The main fixing members are 1½ in. by ½ in. by 18 gauge electro-galvanised cold rolled steel channels, available in lengths of 10 ft. 0 in., 12 ft. 0 in. and 20 ft. 0 in. and weighing 0.39 lb. per ft. run. They are fixed at 6 ft. 0 in. maximum centres. They may be used as supporting rails between structural members, in which case it is advisable to bolt two together, either back-to-back or in a box section.

TL member: These are 1½ in. by ½ in. by 25 gauge electro-galvanised cold rolled steel to the profile shown on the face of the Sheet. They are available in lengths of 8 ft. 0 in., 10 ft. 0 in. and 12 ft. 0 in. and weigh 0.2 lb. per ft. run. They are fixed at 2 ft. 0 in. centres by means of the 12 gauge TL steel spring-wire clips illustrated. TL members are joined by a splicer of channel section which pushes into the ends of the members and requires no other fixing.

A modified member is available for trimming at openings where the full flanges of the TL member might be undesirable.

Tee cross spline: These are ¾ in. by 7/16 in. by 25 gauge and are 1 ft. 11 7/8 in. long. They are fixed at 1 ft. 0 in. centres to carry the transverse edges of the tiles. The ends of the tees are supported by the flanges of the TL members.

Flat spline: The remaining edge of the tiles is supported by a flat spline of hardboard or 17 gauge galvanised steel. It is 7/8 in. wide and may be 11 1/4 in. or 4 in. long. The 4 in. spline is entirely adequate to support the tile, but the longer one is recommended where it is desired to exclude light or dust.

Filler channel: A filler channel 1 1/8 in. high by 3 1/4 in. wide by 24 gauge is available in 8 ft. 4 in. lengths for providing a dividing strip for ceilings designed on a module. It also provides a flush rigid member to receive a wedged or jack-loaded partition. It may be used to carry electric services. A coupling which pushes into the ends of the channel is available for

joining adjacent lengths. 12-gauge steel spring-wire clips are supplied to secure the filler channel to the primary channel. A typical assembly illustrating the use of the filler channel is shown in the drawing on the lower face of the Sheet.

Fixing by Adhesive

The tiles can be applied by adhesive to plaster, plaster-board, timber boarding, concrete, hollow blocks, asphalt and painted surfaces as well as to timber or metal battens and metal decking: the manufacturer should be consulted for details.

Sound Absorption

The following table gives the result of tests carried out at the National Physical Laboratory on Kilnoise tiles fixed in different ways.

Type of ceiling		Reverberation absorption coefficients for frequency bands in region (c/s):				
		250	500	1,000	2,000	4,000
Mechanically suspended		0.55	0.80	0.70	0.80	0.80
Applied by adhesive to solid backing	Tiles unpainted	0.25	0.60	0.95	0.85	0.85
	Tiles cross-sprayed 3 coats water-bound distemper	0.25	0.60	0.95	0.85	0.80

Thermal Insulation

The tiles give a *k* value of 0.65 B.t.u./sq. ft./hr./deg. F. per 1 in. thickness.

Fire Resistance

The tiles have been tested by the R. H. Harry Stanger Laboratory and are non-combustible in accordance with Section One of B.S. 476: Part 1: 1953.

A ceiling of the tiles suspended by TL members at 12-in. centres was tested by the J.F.R.O. and gave one hour's protection to steel beams. Two hours' protection can be provided by laying 1-in. Rocksil mineral wool over the tiles during erection.

Finish

The tiles are available in a range of pastel colours and white. They may be painted with water-bound or emulsion paints, but any paint that seals the pores must not be used.

Further Information

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

Compiled from information supplied by:

William Kenyon and Sons (MetaMica) Limited.

Address: Dukinfield, Cheshire.

Telephone: Ashton-under-Lyme 1614-7 and 3673-6.

London Office: 50, Bloomsbury Street, London, W.C.1.

Telephone: Museum 6363.

Glasgow Office: 203, West George Street, Glasgow, C.2.

Telephone: Central 0555-7.

working detail

WALLS AND PARTITIONS: 107

PANELLED WALL: OFFICES IN LONDON, W.1

C. H. Elsom and Partners, architects



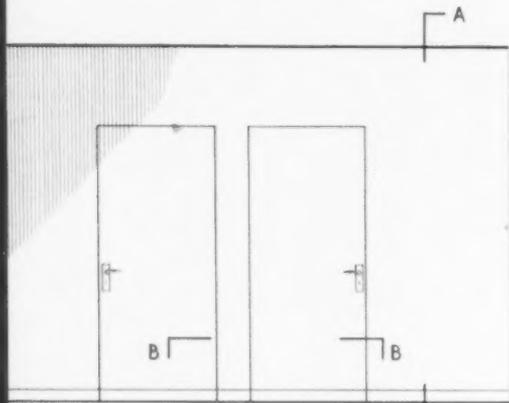
This is yet another version of the incorporation of visually frameless doors in a panelled wall, this time in reeded mahogany.

working detail

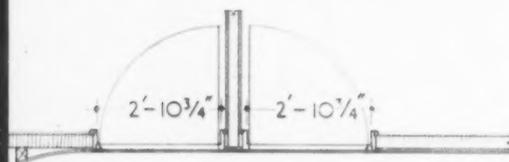
WALLS AND PARTITIONS: 107

PANELLED WALL: OFFICES IN LONDON, W.1

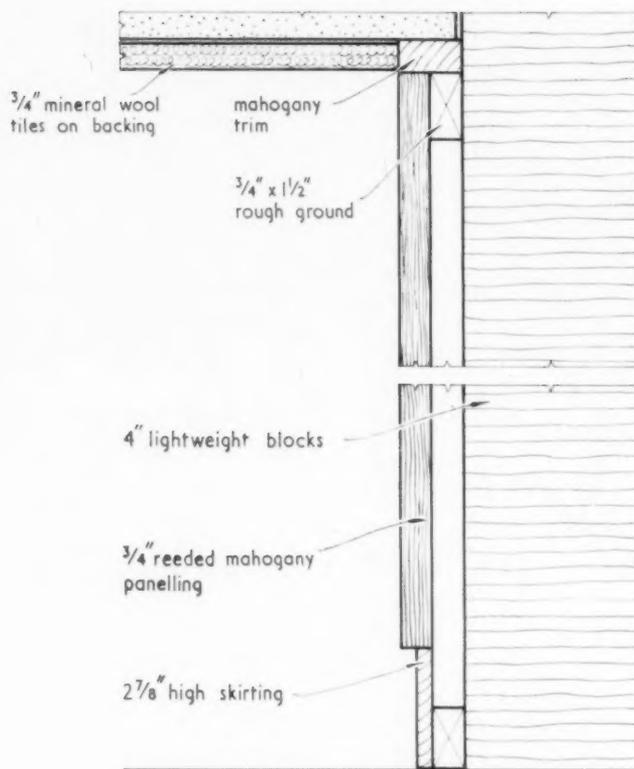
C. H. Elsom and Partners, architects



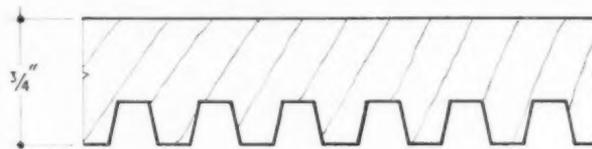
ELEVATION. scale $\frac{1}{4}'' = 1'-0''$



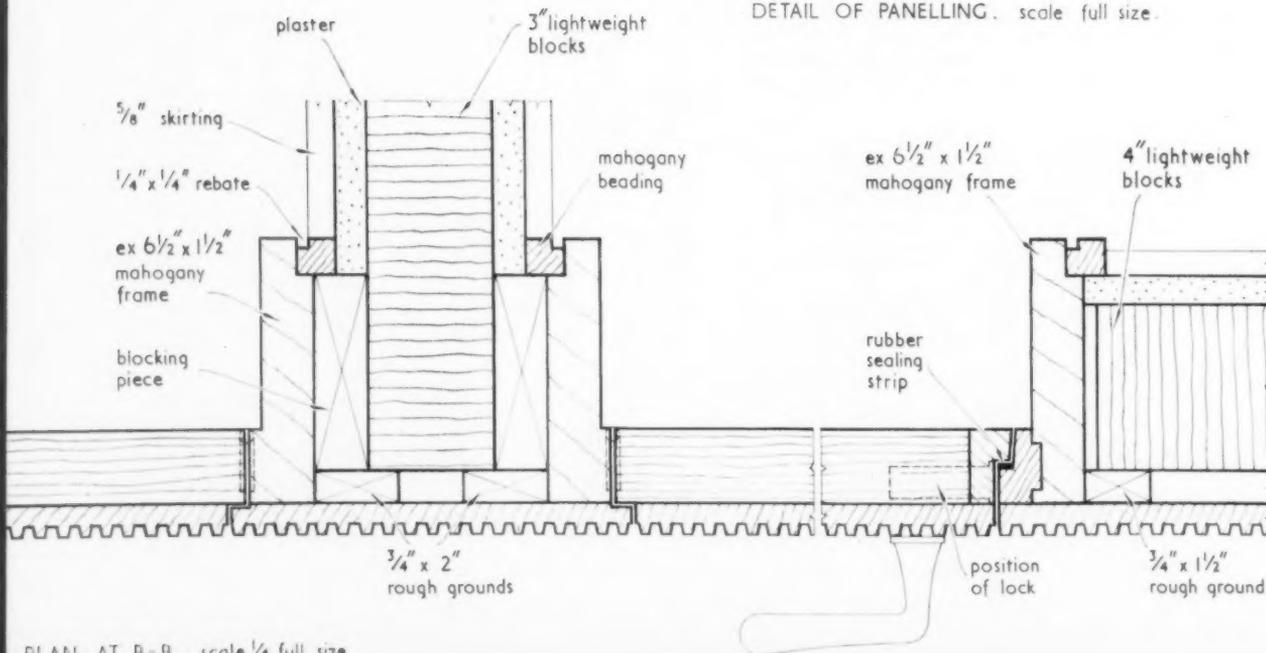
PLAN. scale $\frac{1}{4}'' = 1'-0''$



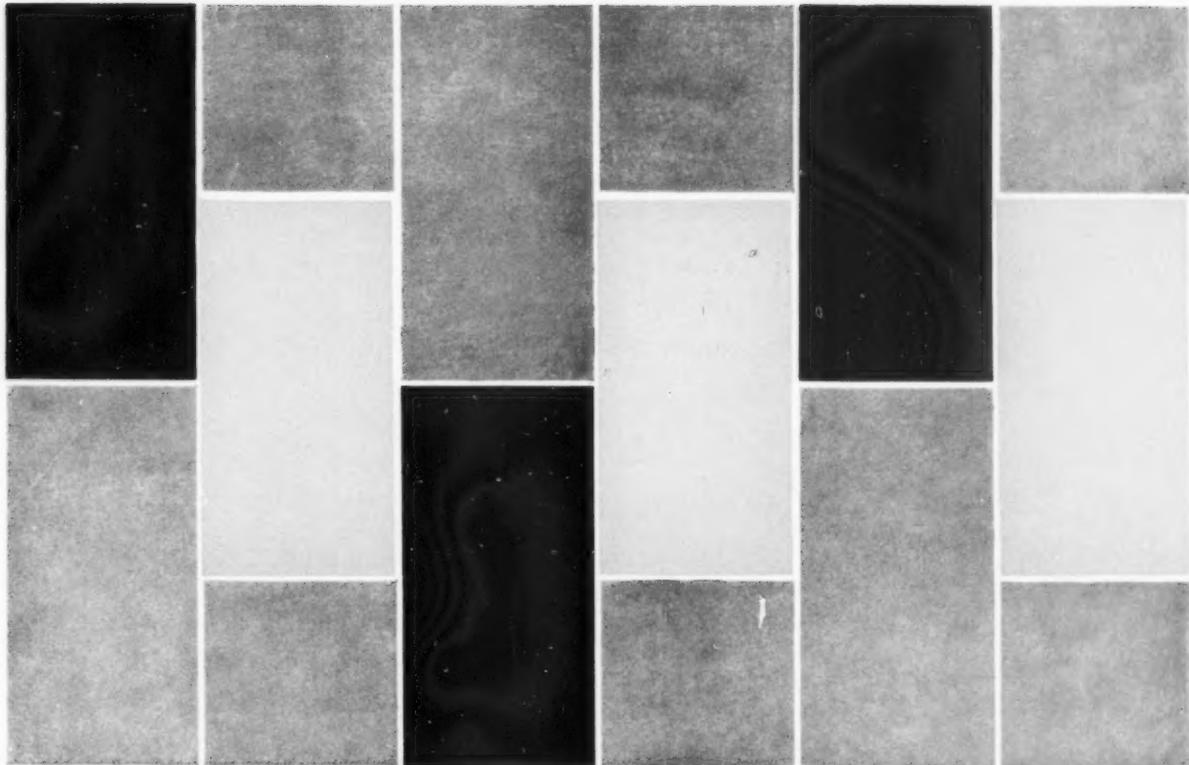
SECTION A-A. scale $\frac{1}{4}$ full size



DETAIL OF PANELLING. scale full size.



PLAN AT B-B. scale $\frac{1}{4}$ full size



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Complete technical information is available on request from



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Contractors: George Wimpey & Co. Ltd.

DORMAN LONG

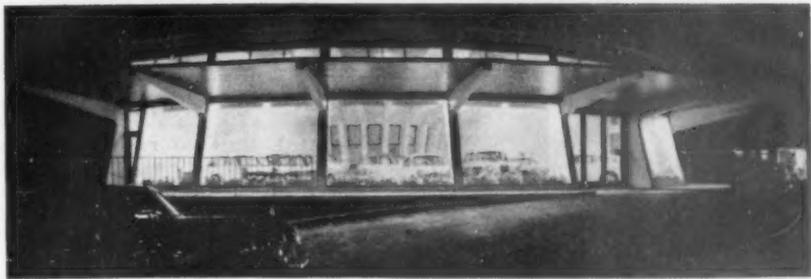
DORMAN LONG (Bridge & Engineering) LTD.

DORMAN LONG (Steel) LTD.

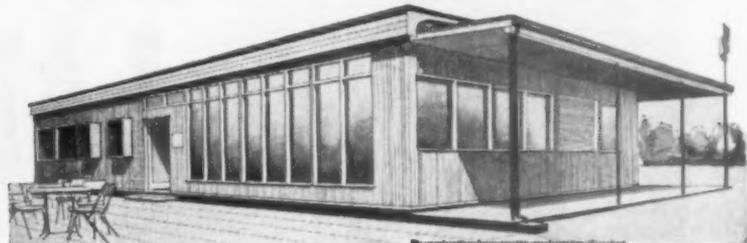
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Announcements

PROFESSIONAL

Baker & Wilkins, chartered quantity surveyors have opened a branch office at Trinidad. The resident manager, Roy Hewitt, will be pleased to receive trade literature at P.O. Box 113, Port of Spain, Trinidad.

Alan Vaughan-Richards, A.R.I.B.A., has now ceased to be an associate partner of Architects' Co-Partnership and is practising from Private Mail Bag 2458, 77 Brickfield Road, Ebute, Metta, Lagos, Nigeria. Architects Co-Partnership are continuing their Lagos practice at Private Mail Bag 2115, 1 Regis Aine Street under the direction of John Jordan, A.R.I.B.A.

H. Owen Luder, A.R.I.B.A., has taken into associateship Dennis Drawbridge, A.R.I.B.A., and Rodney Gordon, A.A.Dipl., A.R.I.B.A. The practice continues as H. Owen Luder, A.R.I.B.A. (Telephone: VICToria 2171.)

All offices of Donald Harwin & Partners, architects and surveyors, are now at 8 Queen Anne Street, Portland Place, London, W.1. (Telephone: MUSeum 0119 and 0110.)

TRADE

The London Adhesive Co. Ltd. have formed a technical development office under the chief chemist, A. A. J. Scott. Technical information sheets are being prepared and the

first series based on materials used in the building industry can be obtained from Mr. A. A. J. Scott, London Adhesive Co. Ltd., Arlington Avenue Works, Arlington Avenue, N.1.

The British Electrical and Allied Industries Research Association has appointed L. Gosland, B.Sc.(Eng.), M.I.E.E., Deputy Director in addition to his position of Research Manager. C. G. Garton, M.I.E.E., F.Inst.P., and E. W. Golding, O.B.E., M.Sc.Tech., M.I.E.E., M.Am.I.E.E., have been appointed Assistant Directors and will continue as Head of the Materials Department and Head of the Rural Electrification Department respectively.

Chalfont Aluminium Roofing Supplies Ltd., a subsidiary of Freeman, Morrison Ltd., of Newcastle, has arranged for its roofing products to be readily available "off-the-shelf" in centres throughout the country. Centres have been opened in London, Birmingham, Bristol, Manchester, Newcastle and Glasgow and as well as stocking aluminium roofing components, is equipped to advise builders on latest developments.

Trust Houses Ltd. announce that Nelson Foley, A.R.I.B.A., A.L.L.A., has joined the company. J. Hopwood, F.R.I.B.A., retires on 31st May. On 1st June D. G. Millett, F.R.I.B.A., will be appointed Chief Architect (Outside Projects) and Mr. Foley will be appointed Chief Architect.

S. W. Farmer & Son Ltd. have appointed N. D. Bindon, H. V. Greenwood, and D. A. Sansom as Executive Directors. H. S. McKee has been appointed Company Secretary.

D. J. C. Lingard has been appointed Sales Manager of Permanite Limited, of 455, Old Ford Road, London, E.3.

Rentokil Ltd., of Leatherhead, Surrey, has become Rentokil Products Ltd. to distinguish it from the pest control servicing companies which form the Rentokil Group.

P. B. Cow & Co. Ltd. have formed a new subsidiary, P. B. Cow (Li-Lo) Ltd., to handle the sales of all consumer products of the P. B. Cow Group (P. B. Cow & Co. Ltd., Acme Stampings Ltd., London Moulders (Plastics) Ltd. and Sorbo Ltd.

British Bitumen Emulsions Ltd. have formed a subsidiary company which will trade under the style Plycol Ltd. The company (a member of the I.B.E. Group) will market and service all products previously handled by the Industrial Sales Department.

A merger has been arranged between the Bath and Portland Stone Firms Ltd. and South Western Stone Co. Ltd. For the time being each company will continue to trade in its own name.



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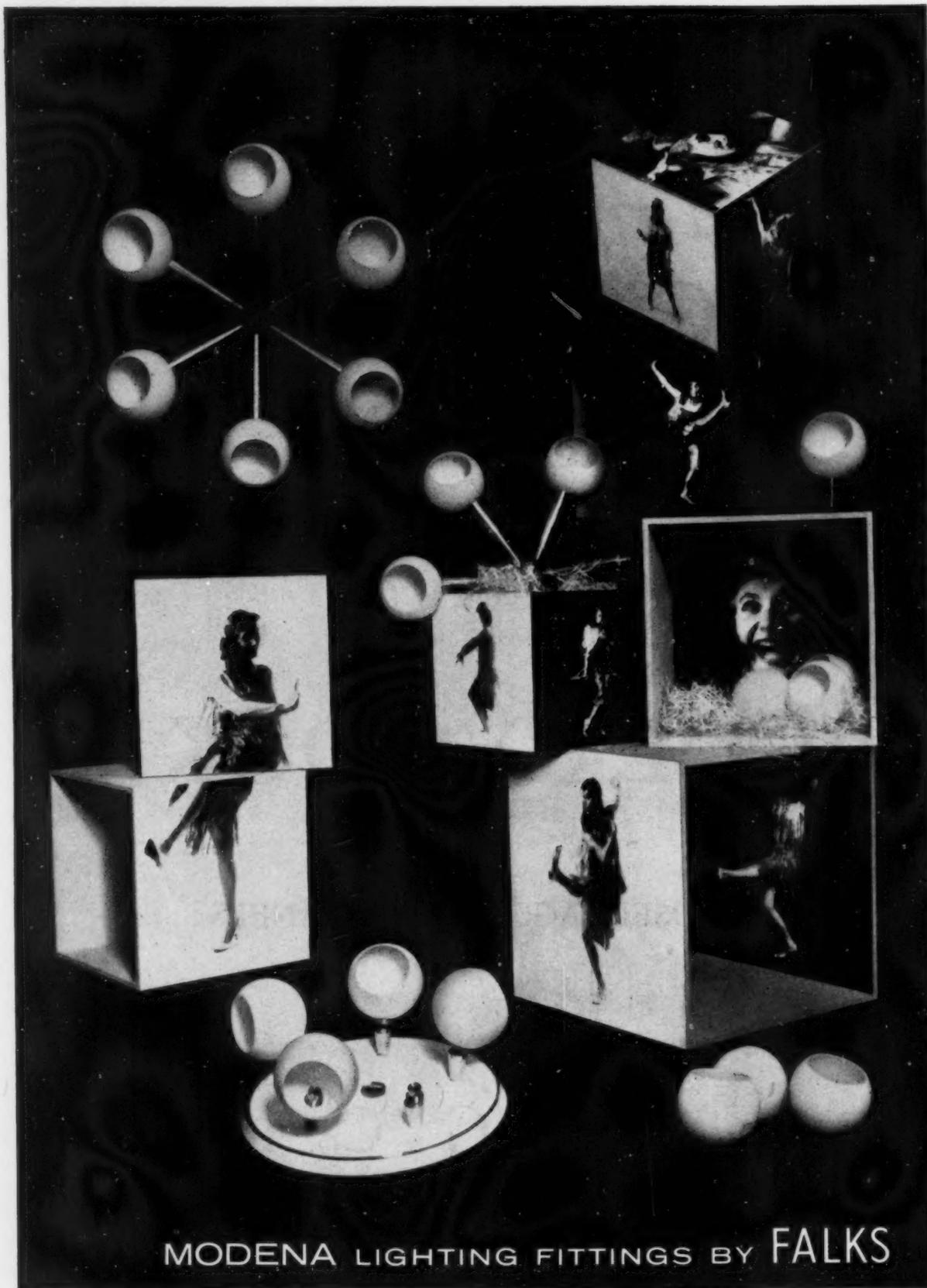
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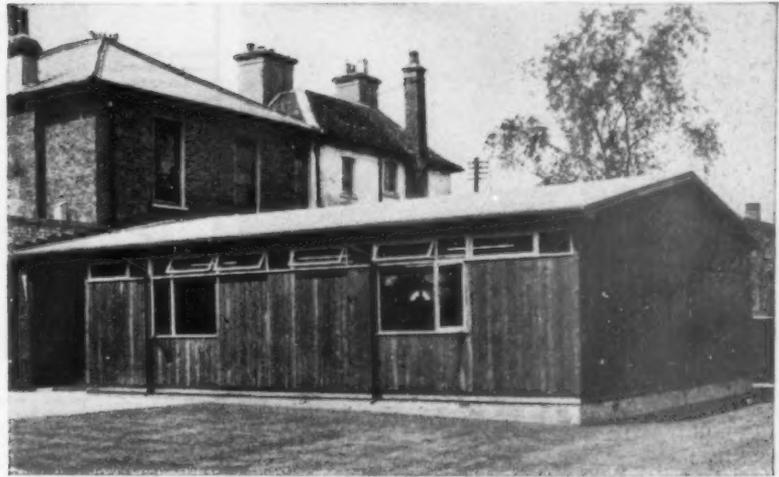
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Offices

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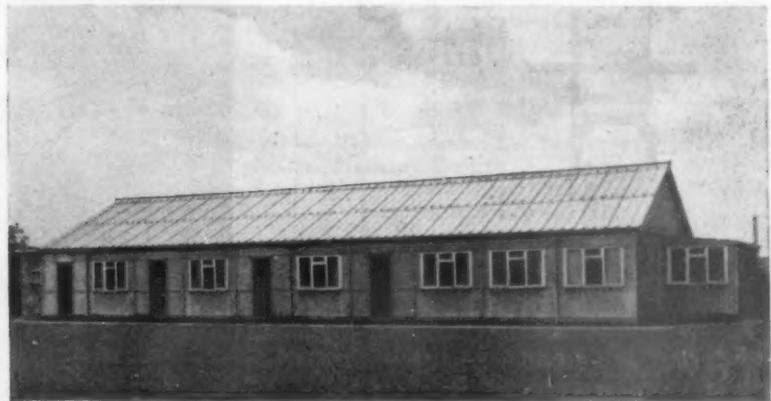
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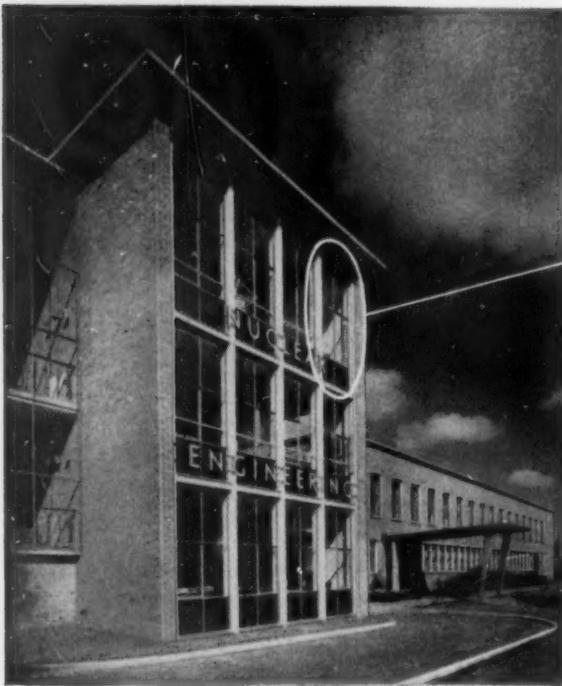
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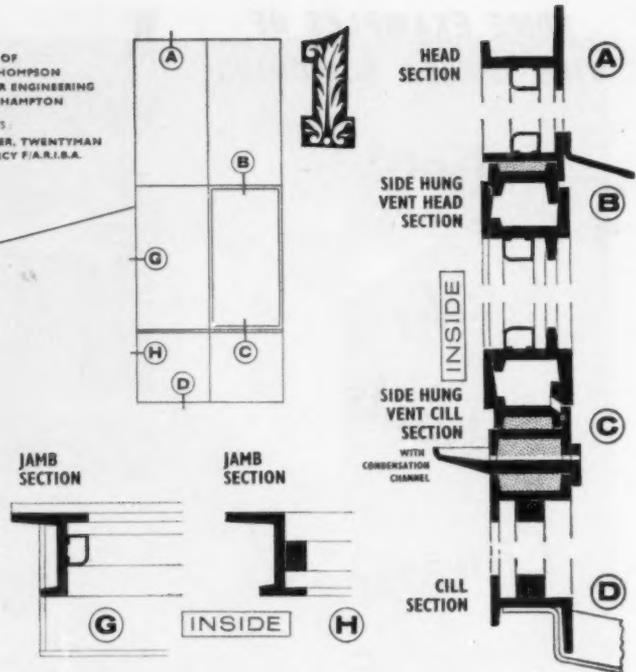
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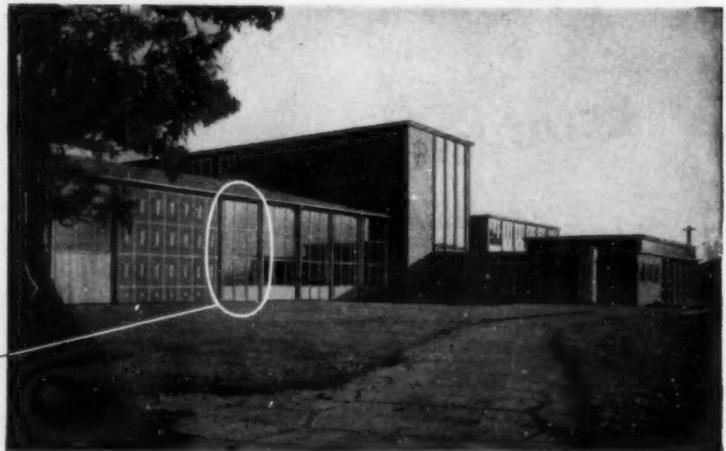
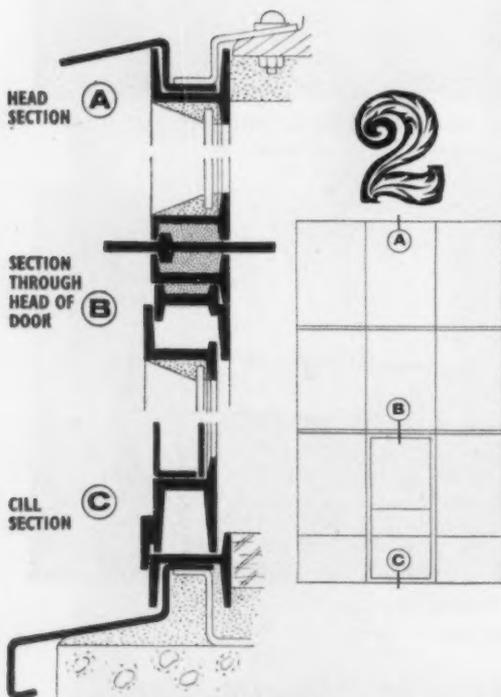
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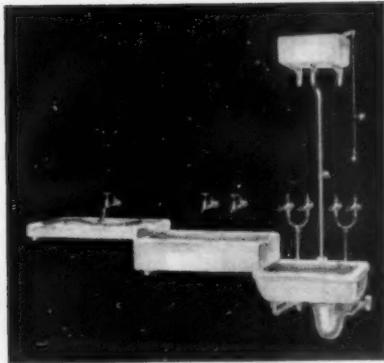


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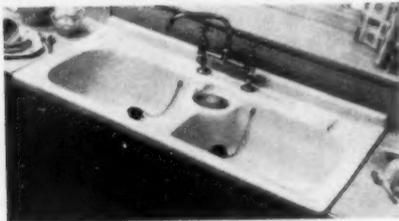
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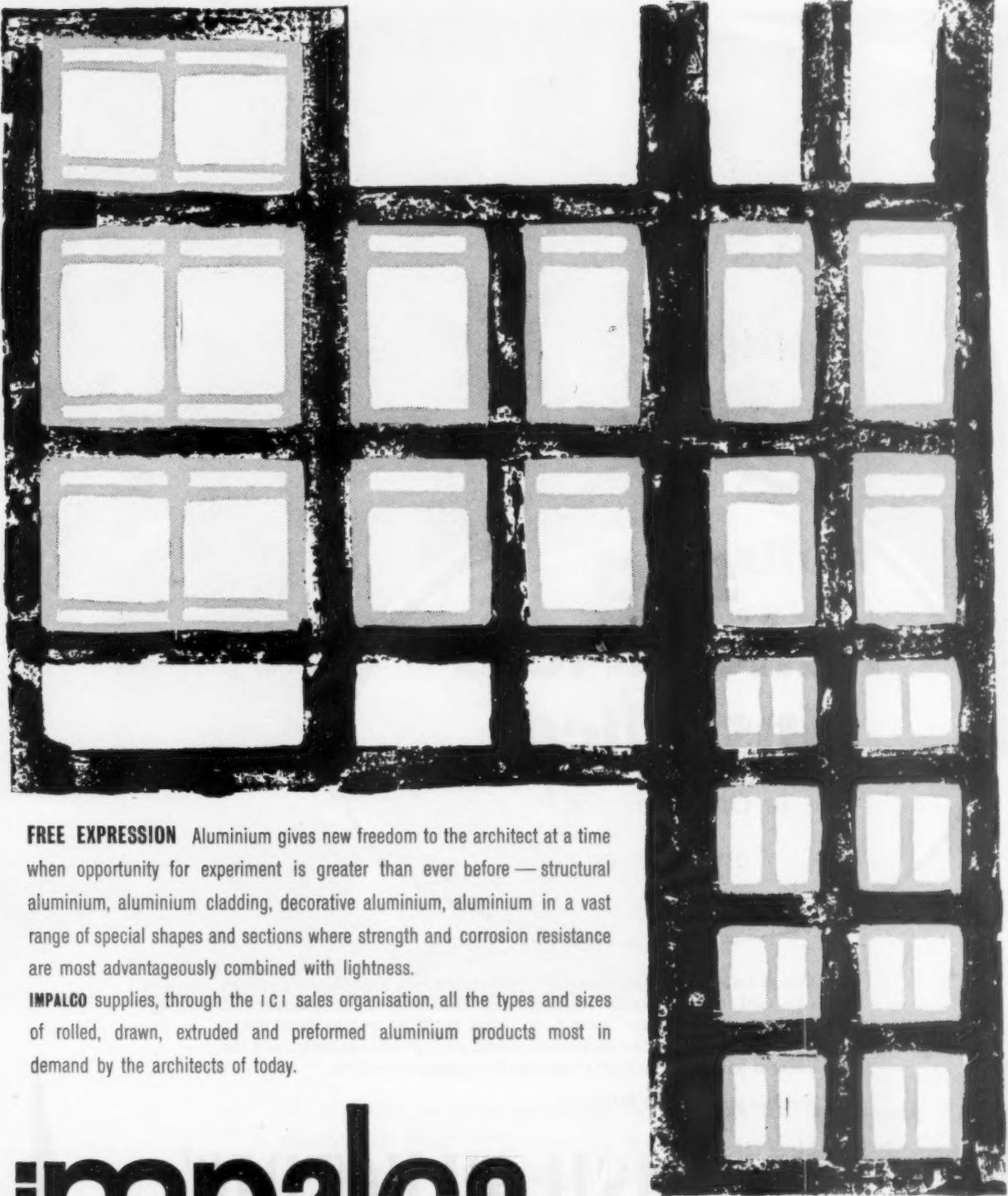
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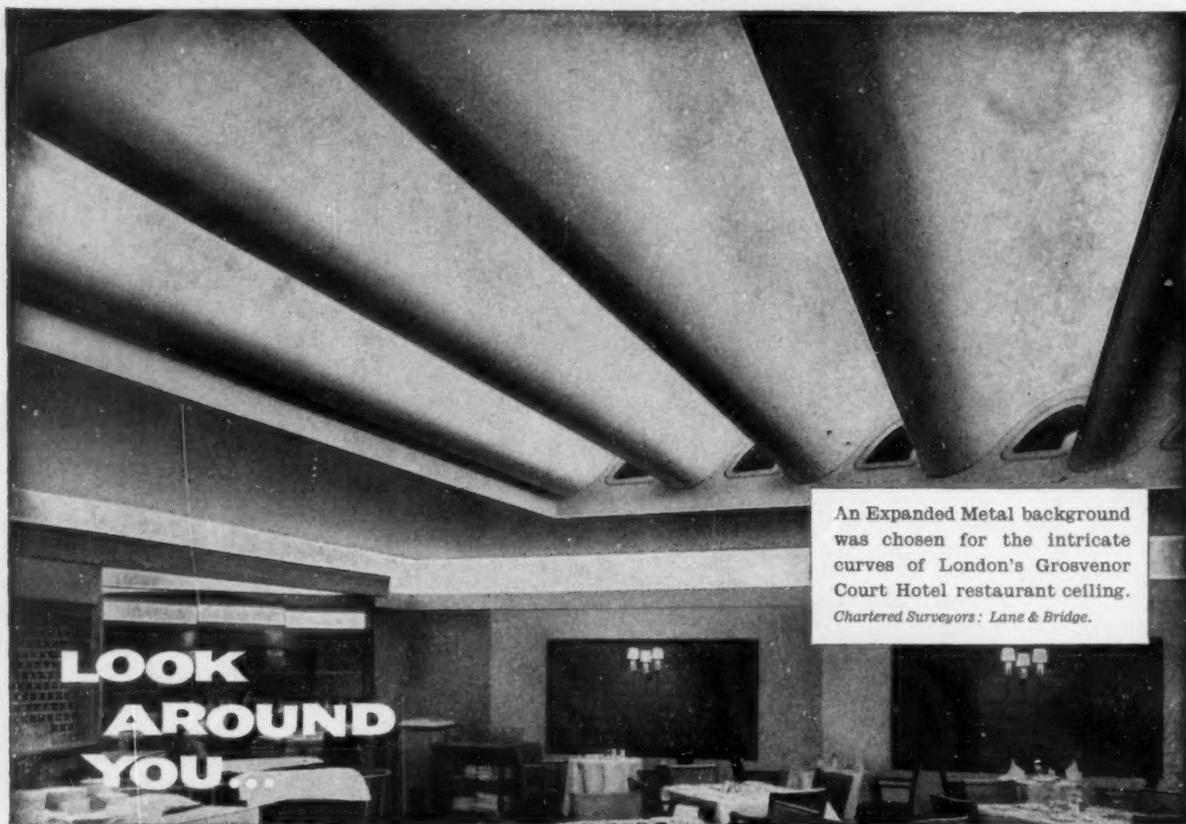
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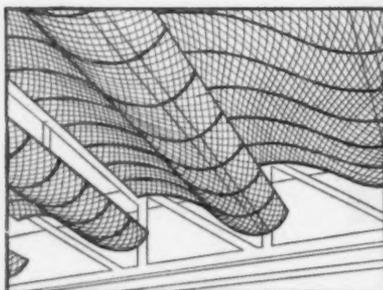
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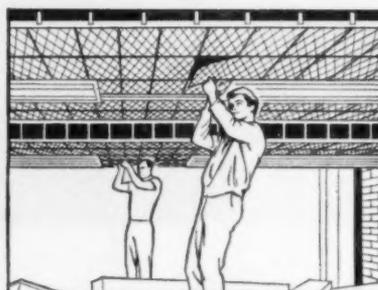
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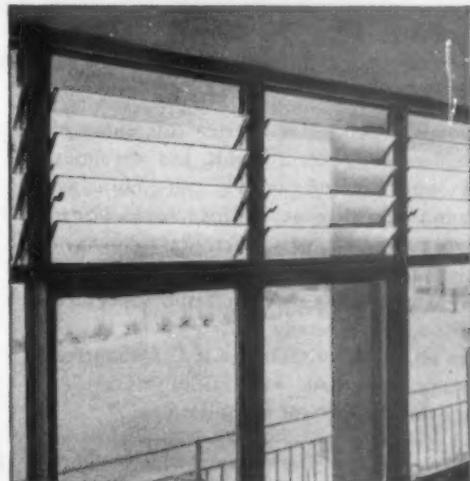
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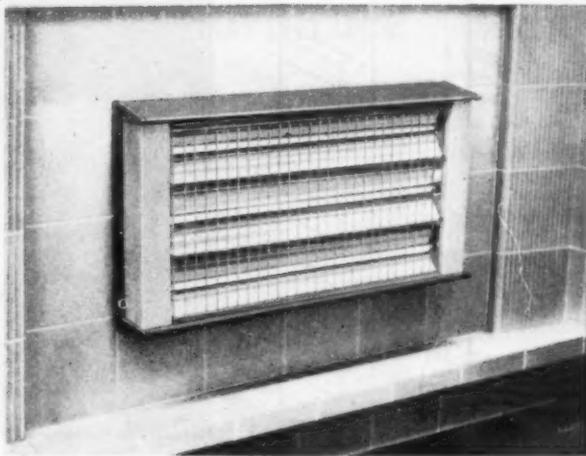
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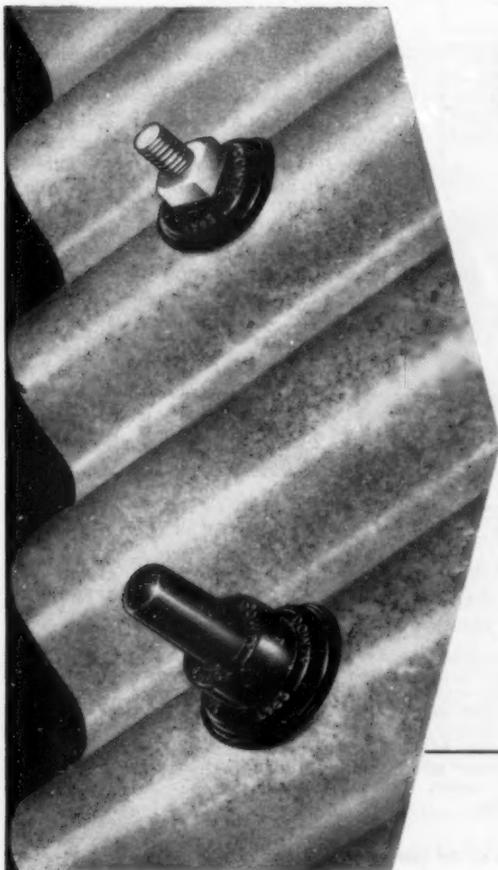
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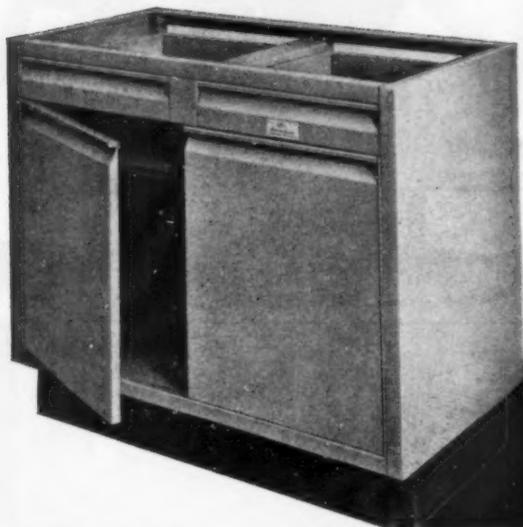
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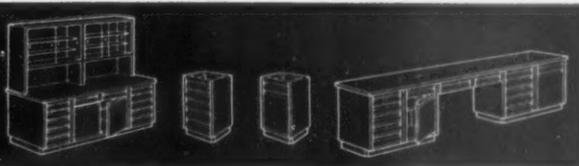
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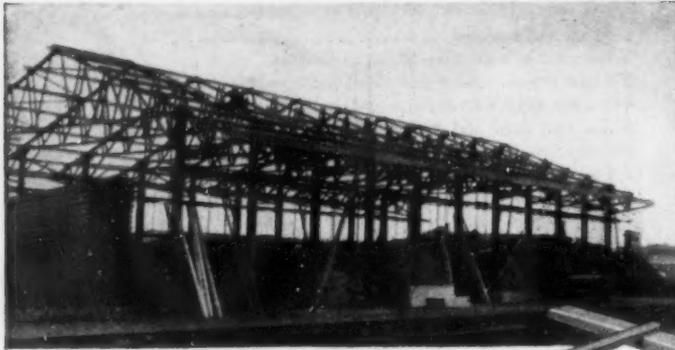
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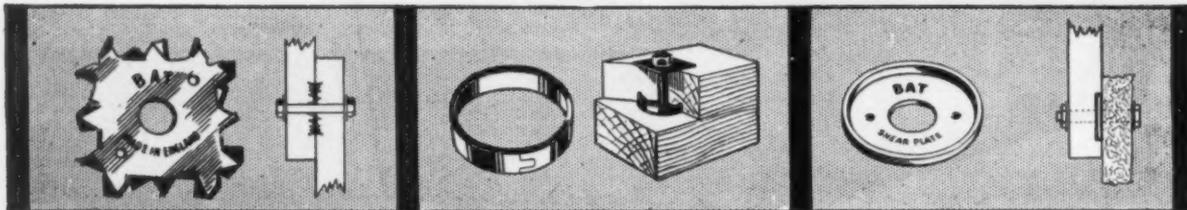
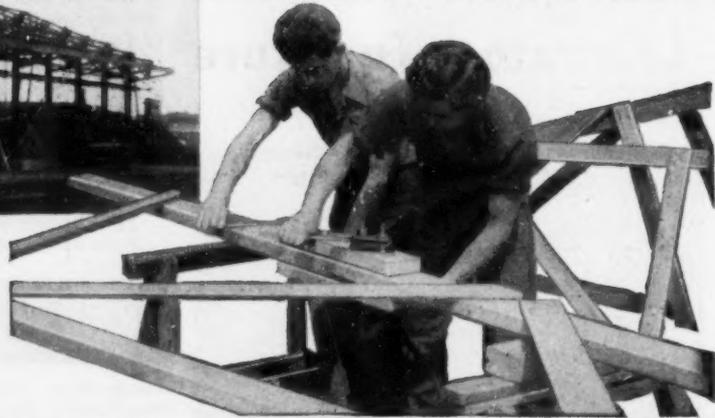
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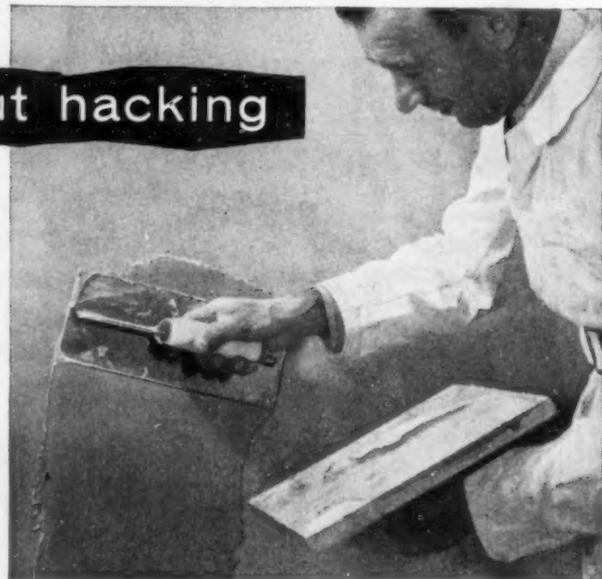
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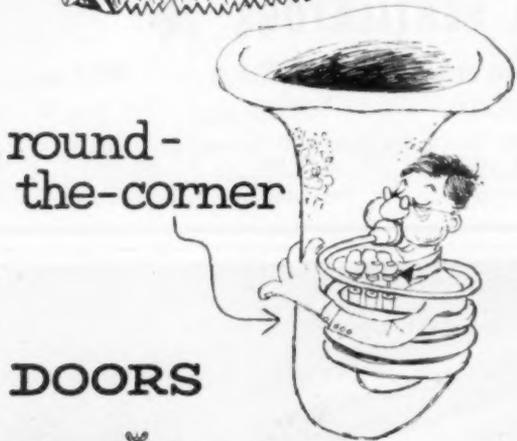
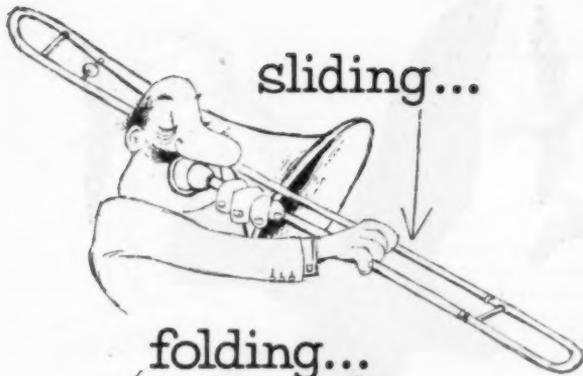
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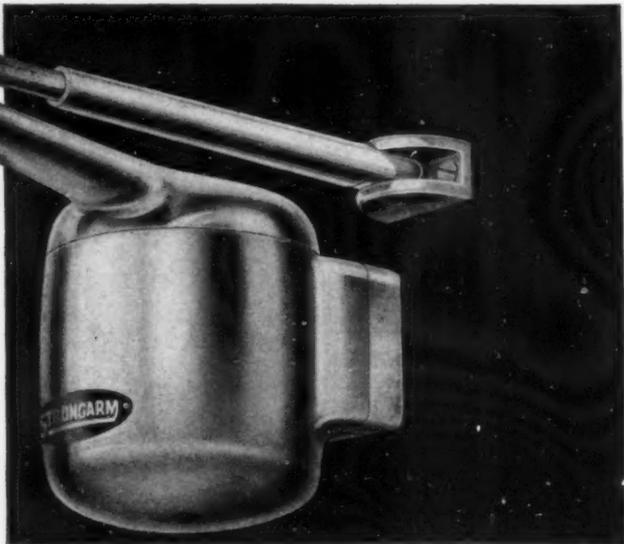


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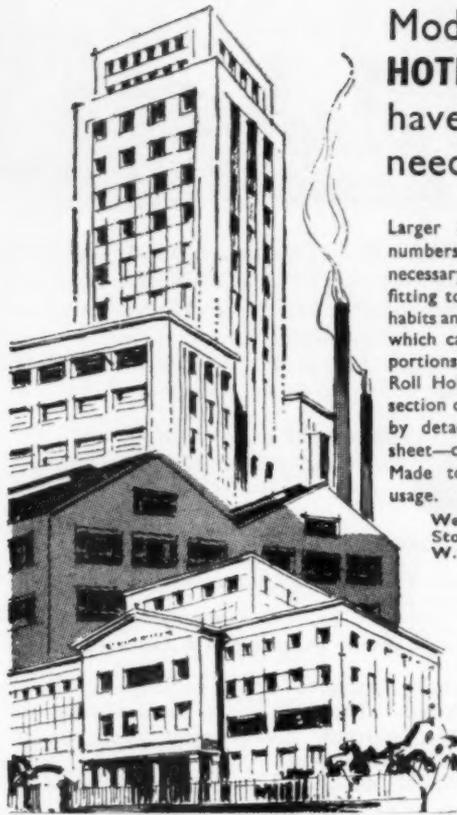
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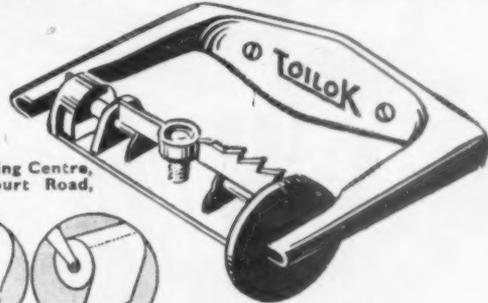
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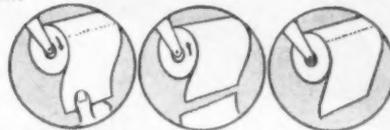
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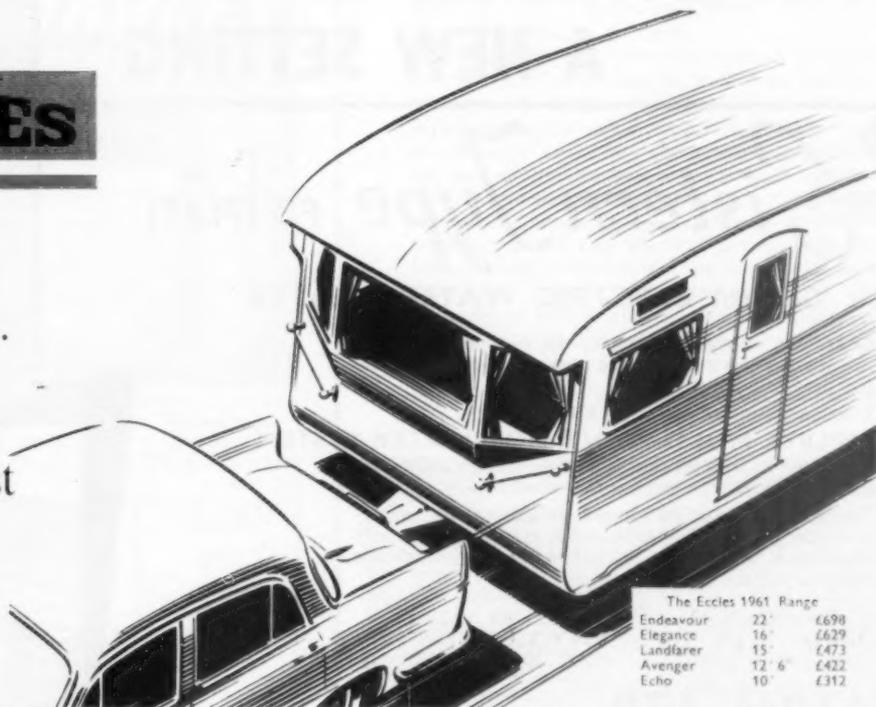
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Photograph of Gleadless Valley
Estate by courtesy of the
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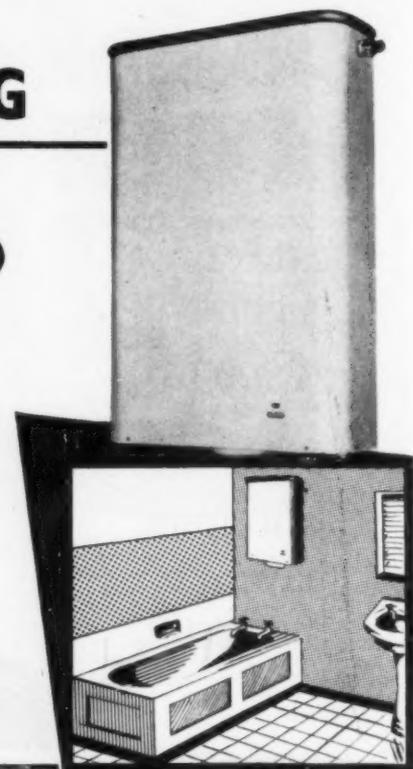
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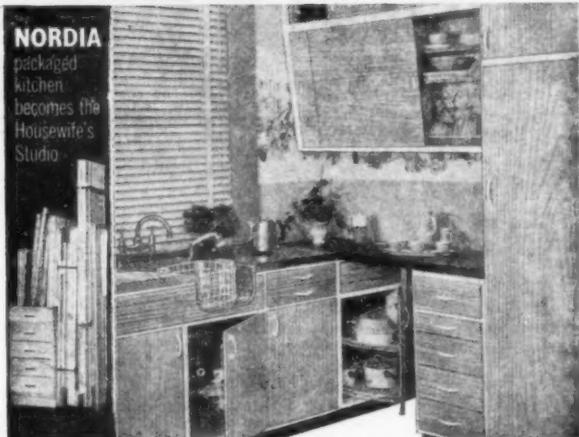
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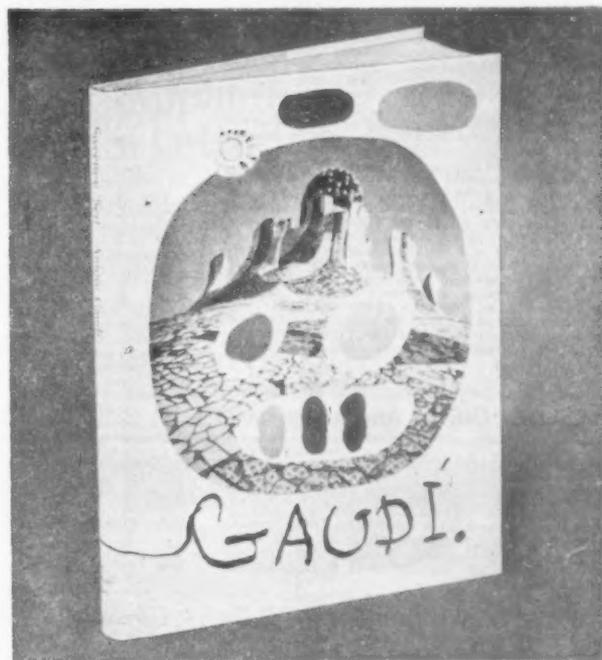
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ANTONI GAUDI

by Josep Lluís Sert & James J. Sweeney

In recent years there has arisen a widespread interest in the work of the great Spanish architect Antoni Gaudí. For too long Gaudí was regarded merely as an eccentric, an outsider: the true importance of the contribution he made to architecture was misunderstood; and art historians failed to allocate to him his rightful place in the historical development of the Modern Movement.

Writing with detachment and without prejudice, the authors trace Gaudí's life and work from his days as a student to his death in 1926. The picture which emerges is that of a wholly sincere architect-builder who lived only for his chosen work; one who quickly freed himself from the then accepted imitative styles to build in accordance with his own personal and highly original principles. The authors lay stress on Gaudí's constant reference to nature, his preoccupation with structural principles, his habit of making models which showed him exactly what loads and stresses his buildings would have to bear. A dramatic collection of photographs in monochrome and colour, together with many detail drawings, show that Gaudí's work richly deserves the attention it is now receiving.

Size 11¼ × 8½ ins. 184 pages. 184 half-tone illustrations, 13 in full colour. 73s. 6d. net. Postage 2s.



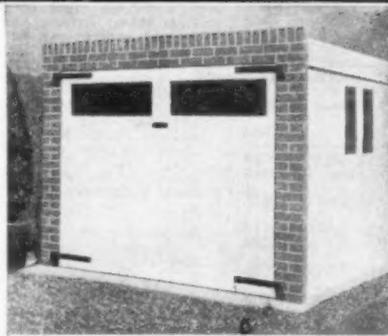
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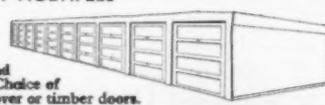
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Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

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 (i.e. 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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Commencing salary, which is dependent upon age, quals, and exp., ranges from £745 (age 25) to £925 max. in Grade III. There are pension prospects and also opportunities of advancement to numerous posts in the higher grades, vacancies which as a rule are filled by promotion of Grade III staff, viz.:-

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Applicants who must be natural born British subjects should write stating age, quals, and exp. to Manager (PE2), Ministry of Labour, Professional & Executive Register, Atlantic House, Farringdon St., London, E.C.4. Candidates selected will be interviewed in Air Ministry, London, and certain expenses reimbursed. Only applicants selected for interview will be advised.

5349

WORCESTERSHIRE COUNTY COUNCIL

Applications are invited for the following posts:
(1) **SENIOR ASSISTANT ARCHITECT**, Scale Grade "A" (£1,365-£1,565). Candidates should be A.R.I.B.A. and have had considerable experience of school design and running large contracts.

(2) **ARCHITECTURAL ASSISTANT**, Grade A.P.T. III (£950-£1,140). Candidates for this post should have passed the Intermediate R.I.B.A. Examination.

(3) **ARCHITECTURAL ASSISTANT**, Grade A.P.T. II (£815-£960).

Application forms should be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester, not later than 17th February, 1961. (1,211) 5559

BOROUGH OF SOLIHULL

APPOINTMENT OF ASSISTANT QUANTITY SURVEYORS

Applications are invited from Quantity Surveyors with suitable qualifications and experience for appointment as Assistant Quantity Surveyors in the Architect's section of the Borough Surveyor's Department at a salary in accordance with A.P.T. Grade IV (£1,140-£1,310 per annum) commencing according to experience.

The Borough, which has a population of approximately 90,000 and which is still expanding rapidly, is an Excepted District for education and in April, 1961, is assuming delegated powers for health and welfare services. It has also been recommended for County Borough status by the Local Government Commission for England. There is a considerable programme of varied capital work on hand and to be undertaken in the future.

Each appointment will be subject to a satisfactory medical report, the Local Government Superannuation Acts, the National Scheme of Conditions of Service and to one month's notice in writing on either side.

In appropriate cases the Council will assist in the provision of housing accommodation and half the removal expenses will be paid. Applications, giving full particulars as to age, qualifications and past and present experience, together with the names and addresses of three referees, should be submitted to the Borough Surveyor, 90, Station Road, Solihull, not later than Friday, 17th February.

W. MAURICE MELL, Town Clerk.

The Council House, Solihull. 5606

BOROUGH OF SOLIHULL

APPOINTMENT OF SENIOR ASSISTANT ARCHITECTS AND ASSISTANT ARCHITECTS

- Applications are invited from Architects with suitable qualifications and experience for the under-mentioned appointments:-
(a) **SENIOR ASSISTANT ARCHITECTS**, A.P.T. Grade V (£1,310-£1,480).
(b) **ASSISTANT ARCHITECT**, A.P.T. Grade III-IV (£960-£1,310 p.a.). Commencing salary according to experience.
(c) **ASSISTANT ARCHITECT**, A.P.T. Grade I-II (£645-£960 p.a.). Commencing salary according to experience.

The Borough, which has a population of approximately 90,000 and which is still expanding rapidly, is an Excepted District for education and in April, 1961, is assuming delegated powers for health and welfare services. It has also been recommended for County Borough status by the Local Government Commission for England. There is a considerable programme of varied capital work on hand and to be undertaken in the future.

Each appointment will be subject to a satisfactory medical report, the Local Government Superannuation Acts, the National Scheme of Conditions of Service and to one month's notice in writing on either side.

In appropriate cases the Council will assist in the provision of housing accommodation and half the removal expenses will be paid.

Applications, giving full particulars as to age, qualifications and past and present experience, together with the names and addresses of three referees, should be submitted to the Borough Surveyor, 90, Station Road, Solihull, not later than Friday, 17th February.

W. MAURICE MELL, Town Clerk.

The Council House, Solihull. 5603

COVENTRY

Applications are invited for the following Architectural posts:-

(a) **EDUCATION**, A.P.T. V (£1,310-£1,480). To be a member of Group working on an interesting variety of school building projects.

(b) **CENTRAL AREA**, A.P.T. V (£1,310-£1,480). A.P.T. I, II or III (£645-£1,140). Point of entry according to qualification and experience. Central redevelopment works such as multi-storey shops, flats, offices, car parks and central bus-stops.

Housing accommodation in approved circumstances or 95 per cent. advance for house purchase. Removal expenses loan. Five-day working week.

Application forms from Department of Architecture and Planning, Council House, Earl Street, returnable by 23rd February. 5604

WEST SUFFOLK COUNTY COUNCIL

APPOINTMENT OF DEPUTY COUNTY PLANNING OFFICER

Applications are invited from Corporate members of the Town Planning Institute for the appointment of Deputy County Planning Officer. Post pensionable. J.N.C. Scale "C," £1,560-£1,825 per annum, five-day week, car allowance, appointment subject to medical examination. Staff house may possibly be available.

Forms of application from the County Planning Officer, Shire Hall, Bury St. Edmunds, to whom they should be returned by 28th February, 1961.

ALAN F. SKINNER, Clerk of the West Suffolk County Council.

Shire Hall, Bury St. Edmunds. 5613

METROPOLITAN BOROUGH OF BATTERSEA

Applications are invited for the following permanent appointments:-

(1) **ONE ASSISTANT ARCHITECT**-A.P.T. Grade III.

(2) **THREE ARCHITECTURAL ASSISTANTS** and **TWO DRAUGHTSMEN**-A.P.T. Grade I.

(3) **TWO ASSISTANT BUILDING SURVEYORS**-A.P.T. Grade II.

(4) **ONE ASSISTANT BUILDING SURVEYOR**-A.P.T. Grade I.

(5) **ONE JUNIOR ASSISTANT BUILDING SURVEYOR**-General Division.

Salary ranges:-

A.P.T. Grade III-£960-£1,140 per annum.

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A.P.T. Grade I-£645-£815 per annum.

General Division-£260-£780 per annum.

London weighting payable in addition-£40 per annum (at age 25 or over) for grades below A.P.T. III, £45 per annum for Grade A.P.T. III.

Commencing salaries will be according to qualifications and experience. Local Government experience is not essential.

For appointment:
(1) Applicants should be Registered Architects or have passed the Final R.I.B.A. Examination and have had several years' through office experience.

(3) and (4). Preference will be given to applicants who are taking examinations of the Royal Institution of Chartered Surveyors (Building Sub-division).

Appointment (5) is for an office junior and offers opportunity to train as a Building Surveyor. The appointments are subject to the Local Government Superannuation Acts 1937-1953. Further particulars and application forms obtainable from the Borough Engineer and Surveyor, Town Hall, Battersea, S.W.11. Closing date 20th February. 5644

BOROUGH OF REDCAR

RE-ADVERTISEMENT. APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT GRADE A.P.T. IV

Applications are invited for the appointment of Senior Architectural Assistant from persons qualified by examination for Associateship of the Royal Institute of British Architects.

Housing accommodation will be made available and the Council will consider the payment of removal expenses and the travelling expenses of the successful candidate and his family.

Applications on forms obtainable from me are to be submitted to me on or before Tuesday, 21st February, 1961.

HUGH CALDWELL, Town Clerk.

Municipal Buildings, Redcar. 5573

METROPOLITAN BOROUGH OF WOOLWICH

ASSISTANT ARCHITECT

Applications are invited for the above permanent appointment in the Borough Engineer's Department. Salary within Grade A.P.T. III (£960 to £1,140) plus London weighting. Superannuation scheme.

Applications, stating experience, qualifications and age, and giving names of two referees, to Town Clerk, Woolwich, S.E.18, by 15th February, 1961. 5575

CWMBRAN NEW TOWN

MONMOUTHSHIRE

Applications are invited from suitably qualified Architects for the undermentioned posts. The programme of future work includes large scale residential development of new areas, the New Town Centre and a variety of smaller projects.

(a) **SENIOR ASSISTANT ARCHITECT**, Grade V, £1,310-£1,480. Candidates must be Associates of the R.I.B.A. with suitable office experience.

(b) **ARCHITECTURAL ASSISTANT**, Grade II/III, £815-£1,140. Candidates should have passed the Intermediate Examination of the R.I.B.A. and have had some office experience, particularly in the preparation of working drawings.

The posts are superannuable and Conditions of Service are similar to those in Local Government. Housing accommodation is available to rent or purchase if required.

Applications, stating age, experience, details of present and former employment (together with applicable salaries), and the names and addresses of two referees, must reach the undersigned by first post on Monday, 20th February, 1961.

J. C. P. WEST, ESQ., A.R.I.B.A., M.T.P.I., Chief Architect.

Cwmbran Development Corporation, Victoria Street, Cwmbran, Mon. 5606

CITY OF ROCHESTER

ARCHITECTURAL ASSISTANT GRADE A.P.T. III/IV (£960-£1,310)

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

Candidates must be Associates of the Royal Institute of British Architects, and have a good general experience. The commencing salary will be according to qualifications and experience.

Housing accommodation available if required. Approved removal expenses paid after one year in appointment.

Applications, with details of age, qualifications, education, and experience, including past and present appointments, together with the names of two referees, should be delivered to James A. Peel, Esq., A.M.I.C.E., M.I.Mun.E., City Surveyor, 66, Maidstone Road, Rochester, not later than Wednesday, 15th February, 1961.

PHILIP H. BARTLETT, Town Clerk.

Guildhall, Rochester. 5535
23rd January, 1961.

CARLTON URBAN DISTRICT COUNCIL

APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment at salary in accordance with Grade IV of the A.P.T. Division of the Scales of Salaries of the National Joint Council commencing at £1,140 per annum and rising by annual increments to £1,310 per annum the point of entry to be determined having regard to the experience of the applicant.

Applicants must be Associates of the R.I.B.A. or Registered Architects. The appointment will be subject to the provisions of the Local Government Superannuation Acts 1937 to 1953, the National Scheme of Conditions of Service and the satisfactory passing of a medical examination.

Applications, stating age, qualifications and details of experience, together with the names of three referees, should be forwarded to the undersigned by 10 a.m. on Tuesday, 14th February, 1961.

Housing accommodation will be made available if required and removal expenses will be paid by the Council.

A. E. F. WALKER, Clerk of the Council.

Council House, Burton Road, Carlton, Nottingham. 5539
23rd January, 1961.

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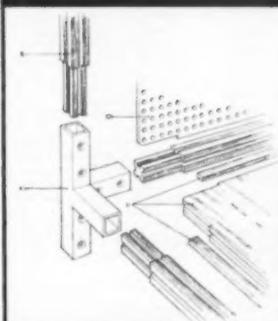
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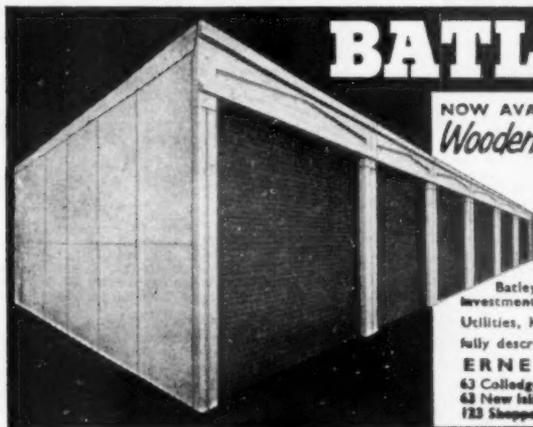
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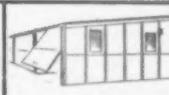
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**COUNTY BOROUGH OF OLDHAM
BOROUGH ENGINEER & SURVEYOR'S
DEPARTMENT
APPOINTMENT OF SENIOR ASSISTANT
ARCHITECT**

Applications are invited for the post of Senior Assistant Architect, Grade A.P.T. V (£1,310 to £1,460 per annum).

Applicants must be A.R.I.B.A. or hold a Diploma in Architecture of a recognised University, and preferably have wide experience in Local Authority work.

The Department can offer varied and interesting experience on programmes of redevelopment in both central and urban areas and on major building works.

The appointment is subject to the N.J.C. Conditions of Service and the Local Government Superannuation Acts. The commencing salary could be offered near the top of the Grade to candidates with suitable experience and qualifications.

Housing accommodation is available if required. The Council operate a five-day week.

Applications suitably endorsed, together with the names of two referees, should reach me not later than Wednesday, the 15th February, 1961.

A. L. HOBSON,
Borough Engineer & Surveyor.

75, Union Street, Oldham. 5537

ZETLAND COUNTY COUNCIL

Applications are invited for the following appointments in the Architect's Department of the Council, viz.:-

- (a) DEPUTE COUNTY ARCHITECT. Salary Scale £1,248 x £63 (4)-£1,500 in Range "A" of the Scheme for Chief Officials.
- (b) ASSISTANT ARCHITECT. Salary within Scale for Professional Assistants (£850-£1,150).

Candidates for both appointments must be Registered Architects and should have had wide experience in the preparation of sketch plans, working drawings and details. Preference will be given to candidates who have had Local Government experience in the planning and supervision of school projects, and who are conversant with the Scottish Education Department's regulations for school planning. Both appointments are superannuable. Housing accommodation will be considered.

Applications, stating age, experience and qualifications, and accompanied by copies of two recent testimonials, must be lodged with the undersigned by 18th February, 1961.

JOHN N. SINCLAIR,
County Clerk

County Buildings, Lerwick, Shetland. 21st January, 1961. 5531

CITY OF PETERBOROUGH

Applications are invited from qualified Architects with Local Government experience for the appointment of a SENIOR ASSISTANT ARCHITECT in Grade IV, A.P.T.

Housing accommodation, if desired, will be provided.

Forms of application from the City Engineer, Town Hall, Peterborough, closing date for applications 16th February, 1961.

C. PETER CLARKE,
Town Clerk.

Town Hall, Peterborough. 5572

ADMINISTRATIVE COUNTY OF LEICESTER

- (a) PRINCIPAL ASSISTANT ARCHITECTS, £1,410-£1,565.
- (b) CHIEF ASSISTANT ARCHITECT, £1,310-£1,450.
- (c) SENIOR ASSISTANT ARCHITECTS, £1,140-£1,310.

Candidates for (a) must be members of the R.I.B.A., have had sound experience and be capable of acting as Group Leaders on an extensive programme of education buildings. For (b), candidates must be members of the R.I.B.A., have had considerable office experience and be capable of taking charge of contracts from inception to completion, and for (c) should be members of the R.I.B.A., have had office experience and be capable of taking charge of small contracts.

Lodging allowance and removal expenses may be paid to a married man. Apply by Thursday, 16th February, 1961, on forms obtainable from County Architect, 123, London Road, Leicester. 5583

**CHESTER RURAL DISTRICT COUNCIL
ASSISTANT ARCHITECT**

Applications are invited for the above appointment in the Architects' Department at a salary within A.P.T. Grade III.

Applicants should have good general experience particularly in connection with housing schemes. Preference will be given to candidates who have passed the Intermediate examination of the Royal Institute of British Architects.

Housing accommodation may be made available if required. A five-day week is in operation.

The appointment will be subject to: (a) The National Scheme of Conditions of Service, (b) The Local Government Superannuation Act, (c) One month's notice in writing on either side.

Applications stating age, qualifications, particulars of experience, together with the names of two referees must be received by the undersigned by Tuesday, 28th February, 1961.

G. A. MORGAN,
Clerk to the Council.

5795

**LANCASHIRE COUNTY COUNCIL
TANT COUNTY ARCHITECT, Senior Officers' Scale "G" (£2,240-£2,565).**

The successful applicant will be required to lead one of two Divisions of the Department, containing a number of architectural groups dealing with a comprehensive building programme in all its phases. The Assistant County Architect will also be concerned with co-ordination of his work with that of other technical staff groups within the Department, and should possess a keen sense of architectural design, together with a sound knowledge of contract management.

Application forms and relevant details from the County Architect, P.O. Box 26, County Hall, Preston, returnable by 20th February, quoting reference A/AJ 5717

STEPNEY M.B.C.

Requires SENIOR ARCHITECTURAL ASSISTANT, £1,185-£1,355. Permanent post. Must be registered architect and possess suitable architectural qualifications; and have had considerable experience in design, construction and the administration of large building contracts, preferably with a local authority. Forms of application and other particulars from Town Clerk, 227 Commercial Road, E.1. Closing date 25th February, 1961. 5711

**PADDINGTON BOROUGH COUNCIL
BUILDING SURVEYING ASSISTANT
(£855-£1,000 (if over 25)-A.P.T. II)**

Starting salary according to qualifications and experience which should include repair, adaptation and conversion of civic and residential properties. Candidates should be capable of preparing plans, specifications, costs. Five-day week. Applications stating age, qualifications, present and past appointments, names of two referees should reach me by 20th February, 1961 (quoting A.521).

W. H. BENTLEY,
Town Clerk.

Town Hall, Paddington Green, W.2. 5710

**PADDINGTON BOROUGH COUNCIL
ASSISTANT ARCHITECT (£1,005-£1,355)
(starting salary according to experience)**

A.R.I.B.A. Candidates should have experience in design and supervision of building works and knowledge of local authority requirements. Five-day week. Applications stating age, qualifications, experience, posts held and names of two referees should reach me by 14th February, 1961 (quoting A.522).

W. H. BENTLEY,
Town Clerk.

Town Hall, Paddington, W.2. 5709

CITY OF PORTSMOUTH

Applications are invited from candidates with Intermediate A.M.T.P.I. or equivalent for appointment of DEVELOPMENT ASSISTANT, A.P.T. Grade III (£960-£1,140), commencing salary according to experience.

Applicants should have a comprehensive knowledge of Town Planning and experience in Development Control.

Consideration will be given to the provision of housing accommodation for successful applicant. Application forms, obtainable from City Development Officer, 1, Western Parade, Portsmouth, to be returned by 6th March, 1961. 5695

**ROYAL BURGH OF DIMERIES
DEPUTY BURGH ARCHITECT**

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

The appointment, within the Salary Scale £1,235-£1,390 (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, and the names of two referees, should be lodged with the undersigned not later than 16th February, 1961.

GEORGE D. GRANT,
Town Clerk.

Municipal Chambers, Dumfries. 31st January, 1961. 5783

**BOROUGH OF RAWTENSTALL
APPOINTMENT OF CHIEF ARCHITECT**

Applications are invited for the above permanent appointment at a salary within A.P.T. IV (£1,140-£1,310 per annum). Applicants should be members of the R.I.B.A.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service and the termination by one month's notice by either side. Housing accommodation will be available.

Applications including names and addresses of two referees should reach the undersigned not later than Saturday, the 25th February, 1961. Canvassing will disqualify. Any relationship to members or senior officers of the Council must be disclosed.

COLIN CAMPBELL,
Town Clerk.

Town Hall, Rawtenstall, Rossendale, Lancs. 26th January, 1961. 5694

**NOTTINGHAMSHIRE COUNTY COUNCIL
COUNTY ARCHITECTS DEPARTMENT
APPOINTMENT OF FURNITURE DESIGNER**

Applications are invited from suitably qualified persons for the post of Furniture Designer. The duties involve the design of furniture for Schools and other Buildings, and the person appointed will have an opportunity of working in conjunction with a Furniture Production Unit maintained by the County Council.

The salary will be within Grades A.P.T. III/IV, the range of which is £960 to £1,310 per annum. Application forms are obtainable from W. D. Lacey, County Architect, County Hall, West Bridgford, Nottingham, to whom they should be returned as soon as possible. 5699

**CITY OF ST. ALBANS
CITY ENGINEER AND SURVEYOR'S
DEPARTMENT
APPOINTMENT OF TOWN PLANNING
ASSISTANT**

Grade A.P.T. V (£1,310-£1,480)

Applications are invited for the above permanent superannuable post. Candidates must be corporate members of the Town Planning Institute. Considerable experience of development control is essential—experience in preparing Town Maps will be an advantage. Housing accommodation available. Applications, with the names of two referees, should be submitted to me by not later than 16th February, 1961.

B. V. ENTWISTLE,
Town Clerk.

38, St. Peter's Street, St. Albans. 5698

**OXFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECTS DEPARTMENT**

Applications are invited for the positions of GROUP ARCHITECTS (salary J.N.C. scale "C," £1,560-£1,825) to work on an interesting and varied building programme. The appointments are superannuable and subject to medical examination. Applications on forms to be obtained from the undersigned, to be returned by 24th February, 1961.

ALBERT E. SMITH,
County Architect.

Park End Street Offices, Oxford. 5697

**OXFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECTS DEPARTMENT
ASSISTANT ARCHITECTS, A.P.T. IV-V
(Salary scale £1,140-£1,480)**

Starting salary according to experience. Applications are invited from qualified architects to work on an interesting and varied building programme. The appointments are superannuable and subject to medical examination.

Applications on forms to be obtained from the undersigned to be returned by 24th February, 1961.

ALBERT E. SMITH,
County Architect.

Park End Street Offices, Oxford. 5696

Applications are invited for the post of ASSISTANT ARCHITECT in the Office of the Architect, Eastern Region, British Railways, at King's Cross Station. The office is engaged on a wide range of interesting buildings and gives responsibility for design, administration and site supervision to those with ability. Applicants should be qualified or have passed the Intermediate examination, with some years' practical experience. Salary range 1945-£1,020 per annum. Modern working conditions; five-day week. Rail travel concessions. Apply in writing to the Architect, Eastern Region, British Railways, King's Cross Station, N.1. 5707

**BOROUGH OF FLINT
APPOINTMENT OF
ARCHITECTURAL ASSISTANT**

Applications are invited for the appointment of Architectural Assistant in the Borough Engineer and Surveyor's Office. The salary will be within A.P.T. II with progression to A.P.T. III on the successful applicant possessing or obtaining a suitable Final qualification.

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

The post offers scope for interesting work on a varied programme including Redevelopment Schemes, Branch Library, Public Conveniences and Municipal Housing.

Housing accommodation will be provided if required.

A five-day week is in operation. Applications stating age, training, qualifications, details of previous and present appointment and experience and present salary, together with copies of two recent testimonials, should reach the undersigned not later than 12 noon on Monday, the 20th February, 1961.

Canvassing in any form will disqualify.

WILLIAM McINTYRE,
Town Clerk.

Town Hall, Flint. 31st January, 1961. 5692

**BOROUGH OF EALING
ARCHITECTURAL ASSISTANT 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 from Borough Engineer, Town Hall, Ealing, W.5.

A. J. COPE BROWN,
Town Clerk.

5753

CITY OF MANCHESTER

APPOINTMENT OF CITY ARCHITECT

Applications are invited from persons holding the necessary qualifications for the position of City Architect.

Salary £4,225 rising to £4,675.

Conditions of appointment and application forms, returnable by 6th March, 1961, obtainable from the Town Clerk, Town Hall, Manchester, 2, 5689

BOROUGH OF SCUNTHORPE

(Population—63,500. Area—7,895 acres; E.V.—£1,562,541)

Applications are invited for the following appointments in the Borough Engineer and Surveyor's Department:—

- (a) SENIOR ASSISTANT ARCHITECT—Grade A.P.T.III/IV (£960—£1,310 p.a.).
- (b) ASSISTANT QUANTITY SURVEYOR—Grade A.P.T. II (£815—£960 p.a.).
- (c) SENIOR PLANNING ASSISTANT (Re-development)—Grade A.P.T.III (£960—£1,140 p.a.).
- (d) PLANNING ASSISTANT (Development Control)—Grade A.P.T.III (£815—£1,140 p.a.).

Commencing salaries will be fixed in the appropriate grade according to qualifications and experience. Applicants for post (a) should be qualified architects and have a good experience of Architectural practice and procedure but Local Government experience is not essential; for post (b) experience in site measurement, interim valuations and taking off quantities for building works is required; for posts (c) and (d) previous experience in redevelopment and development control work respectively in an urban area is essential. The population of the Borough continues to expand rapidly and an extensive programme of capital works is planned. Opportunity for valuable architectural and planning experience also exist in conjunction with a comprehensive Redevelopment Scheme now being prepared for the Central Area of the Borough.

Housing accommodation available, if required, approved removal expenses reimbursed in full, 5-day working week.

Applications, stating age, details of present and past appointments, training, qualifications and experience, together with the names of two persons to whom reference may be made, should be sent to F. J. Bower, Esq., Borough Engineer and Surveyor, Borough Surveyor's Department, Laneham Street, Scunthorpe, on or before Friday, 17th February, 1961. 5720

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

HOSPITAL BUILDING PROGRAMME

APPOINTMENT OF SURVEYING STAFF

SENIOR ASSISTANT QUANTITY SURVEYOR (Ref. 889). To specialise in estimating for all types of work including cost control of major works. Applicants must be corporate members of the R.I.C.S. (Quantities Sub-Division) with wide general experience in the profession and a sound knowledge of the economics of modern building techniques.

ASSISTANT QUANTITY SURVEYOR (Ref. 889). To be thoroughly experienced in taking off, abstracting and billing of quantities, measurement of work in progress and settlement of final accounts and to have a keen interest in cost control.

QUANTITY SURVEYING ASSISTANT (Ref. 890) for working up bills of quantities and final accounts, measuring on site and taking off for small works. Preference will be given to those prepared to take an interest in cost control.

BUILDING SURVEYING ASSISTANT (Ref. 891) for assisting in surveys of hospital sites and preparation of working drawings and specifications under supervision for works of a minor character.

Applicants for post of Assistant Quantity Surveyor must be corporate members of the R.I.C.S. Applicants for Surveying Assistant posts should have passed the Intermediate Examination of the R.I.C.S.

Salary scales:
Senior Assistant Quantity Surveyor £1350—£1650
Asst. Quantity Surveyor £ 945—£1360
Surveying Assistants £ 645—£ 940

Commencing salary above minimum in Assistant Surveyor and Surveying Assistants grades, subject to certain conditions.

Posts are permanent and superannuable, 5-day week. There is a scheme of financial assistance to students preparing for professional examinations.

Apply, stating age, qualifications (with dates) and experience, with names of two referees, to Secretary, North West Metropolitan Regional Hospital Board, 40 Eastbourne Terrace, W.2, quoting appropriate reference number by 20th February. 5756

WEST SUFFOLK COUNTY COUNCIL

Applications are invited from suitably qualified persons for the post of JUNIOR ARCHITECTURAL ASSISTANT within A.P.T. Grade I (£645—£815).

N.J.C. Service Conditions; post non-seniorable, medical examination.

One day per week will be allowed for study at a recognised school of architecture.

Application forms obtainable from The County Architect, 13, Westgate Street, Bury St. Edmunds, Suffolk, to be returned as soon as possible. 5653

LONDON ELECTRICITY BOARD

ARCHITECTURAL DRAUGHTSMAN

Applications are invited for the above position under the supervision of an Architect in the Chief Engineer's Department in Central London (Waterloo).

The post is graded under Schedule "B" of the National Joint Board Agreement, as Grade 13, Class BX, and the commencing salary will be in the range of £780 to £1,065 per annum, inclusive of London Allowance.

Application forms obtainable from the Construction Engineer, Lesco House, Stamford Street, London, S.E.1. Please quote ref. PER/IV/3162/A. 5557

CITY OF OXFORD

CITY ARCHITECT AND PLANNING OFFICER'S DEPARTMENT

Applications are invited for the following posts:—

- ARCHITECTURAL ASSISTANTS, A.P.T. Grade III/IV (£960—£1,140) (£1,140—£1,310).
- SENIOR ARCHITECTURAL ASSISTANT, A.P.T. Grade V (£1,310—£1,480).

Suitable housing accommodation, if required, will be provided by the Council for the above posts.

Applicants must be Members of the Royal Institute of British Architects, should have several years' experience and 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 are essential. Assistants are encouraged to control their own contracts from sketch design onwards. The Senior Architectural Assistant will be engaged mainly on educational work in the first instance.

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—25th February, 1961.

HARRY PLOWMAN, Town Clerk.

Town Hall, Oxford. 5758

CITY OF CARDIFF

CITY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

- (a) SENIOR ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade IV, £1,140—£1,310.
- (b) QUANTITY SURVEYING ASSISTANT, A.P.T. Grade II, £815—£960.
- (c) SENIOR ASSISTANT ARCHITECT, A.P.T. Grade 3/4, £960—£1,310.
- (d) ARCHITECTURAL DRAUGHTSMAN, Miscellaneous Grades I-VI, £450—£825.

General Conditions of Appointment may be obtained from the UNDERSIGNED.

Applicants for Appointments (a) and (c) should have passed the Final Examination of the R.I.C.S. and R.I.B.A. respectively.

Applications stating age, qualifications and details of experience, together with the names of two persons to whom reference can be made, should be delivered to me not later than the 20th February, 1961.

S. TAPPER-JONES, Town Clerk.

City Hall, Cardiff. 5737
January, 1961.

BOROUGH OF WATFORD

Applications are invited for the following appointments:—

- ASSISTANT ARCHITECT—Salary within Grade A.P.T. IV (£1,065—£1,220).
- ARCHITECTURAL ASSISTANT—Salary within Grade A.P.T. II/III (£765—£1,065).

Commencing salaries will be commensurate with experience and ability and housing accommodation may be made available.

Applications to the undersigned as soon as possible.

F. C. SAGE, Borough Engineer.

Town Hall, WATFORD, Herts. 5764

SOUTH-EASTERN ELECTRICITY BOARD

ARCHITECTURAL ASSISTANTS—Surveyor's section, Headquarters. Salary £890 × £30—£1,010 under N.J.C. Grade IV. Applications are invited for two vacancies for Architectural Assistants, with experience in the preparation of working and detail drawings for offices, stores, workshops, garages, showrooms and electricity substations. Applicants should be at intermediate level of an appropriate professional body. Post is superannuable. Applications, quoting A.J. and naming two referees, to the Surveyor, Seaboard, 10 Queen's Gardens, Hove 3, Sussex, by 20th February, 1961.

GEORGE WRAY, Secretary.

5701

BINGLEY URBAN DISTRICT COUNCIL

ARCHITECTURAL ASSISTANT

Applications are invited for the permanent position of:—

ARCHITECTURAL ASSISTANT

A.P.T.II £815—£960

Preference will be given to candidates who have the Intermediate Examination, Royal Institute of British Architects and who have had training and experience in housing design and development, and general architectural work.

The appointment will be terminable by one month's notice on either side, and will be subject to the provisions of the Local Government Superannuation Acts.

Applications stating age, qualifications, training and experience, and details of past and present appointments, accompanied by copies of two recent testimonials, or the names and addresses of two referees, should be forwarded, endorsed "Architectural Assistant," to the undersigned, on or before Tuesday, 14th February, 1961.

Housing will be made available, if required. F. M. DUNWELL, Clerk of the Council. 5708

BOROUGH OF ROMFORD

Applications are invited for appointments in ARCHITECTURAL ASSISTANTS in the Architect's Section of the Borough Engineer & Surveyor's Department, within the salary range £560—£1,185.

Preference will be given to those who have passed the Intermediate R.I.B.A. Examination or who are probationers, but consideration will be given to intending probationers who have already had experience in an Architects Office.

Varied and interesting projects in hand or planned, offer exceptional opportunities for experience.

The Council will assist in appropriate cases with the provision of housing accommodation and the payment of reasonable removal expenses.

Full particulars and conditions of the appointments may be obtained on application to the Town Clerk, Town Hall, Romford, to whom completed applications must be sent by the 24th February. 5765

AIR MINISTRY Works Designs Branch

requires in LONDON and PROVINCES, ARCHITECTURAL ASSISTANTS with adequate training and drawing office experience. O.N.C. (Building) an advantage. Work includes site layouts, sketch plans, working drawings and details for variety of technical and domestic buildings in permanent and semi-permanent construction. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 18 days' paid leave per year initially. Overseas tours for which special allowances granted.

Salary: In London ranges from £895 (age 25)—£980 p.a., somewhat lower in Provinces. Commencing salary dependent on age, qualifications and experience. Applicants, who must be natural born British subjects, should write (quoting Kings Cross O.N. 897) to Air Ministry, W.G.4, Lanco House, Theobalds Road, London, W.C.1, or to any Employment Exchange giving age, details of training, qualifications, full particulars of former posts held and copies of any testimonials. Candidates selected will normally be interviewed in London and certain expenses reimbursed. 5634

DEVELOPMENT GROUP

DIRECTORATE OF WORKS—WAR OFFICE

There are vacancies for professional staff in the newly formed Development Group in the Directorate of Works, War Office, at Chessington, Surrey (Director-General: Donald Gibson, C.B.E., F.R.I.B.A.).

- (1) SENIOR GRADE ARCHITECT (£2,130—£2,442). To lead a small team concerned with building management, office procedure, communications and publications within the Directorate.
- (2) MAIN GRADE ARCHITECT (£1,496—£2,000). To assist the Senior Grade Architect above. Both these architects will also be involved in the Group's development projects.
- (3) MAIN GRADE ARCHITECTS (3 posts) (£1,496—£2,000).

To be members of teams working on the Group's development projects.

- (4) FURNITURE DESIGNER (£1,428—£1,652). To assist the development teams in the study of user requirements and to prepare designs for built-in furniture and fittings for a wide range of activities.
- (5) MAIN GRADE LANDSCAPE ARCHITECT (£1,496—£2,000).

To be a member of the Landscape Architect team concerned with the layout and planning of building projects in the U.K. and overseas.

- (6) LEADING DRAUGHTSMAN (LANDSCAPE) (£980—£1,145).
- To be a member of the Landscape Architect team.
- (7) MAIN GRADE SURVEYOR (£1,496—£2,000).

To be a member of a small team concerned with the development of improved methods for estimating and controlling expenditure on minor works and maintenance, in the U.K. and overseas.

For further information on these vacancies, including qualifications and experience required and conditions of service, please write to Roger T. Walters, A.R.I.B.A., A.M.I.Struct.E., Chief Architect (Development), War Office, Chessington, Surrey, stating the post in which you are interested. 5636

**EASTERN REGIONAL HOSPITAL BOARD
SCOTLAND**

Applications are invited for the following posts:
(a) ASSISTANT ARCHITECT £305-£1,310.
(b) ARCHITECTURAL ASSISTANT £225-£900.
Applicants for post (a) must be Registered Architects by examination preferably having some experience of the design and construction of modern public buildings.

Applicants for post (b) must be of R.I.B.A. Intermediate standard with some practical experience.
Starting salaries according to age and experience.

Applications stating age, training, qualifications, past and present appointments, experience and the names and addresses of three referees should be sent to The Secretary, Eastern Regional Hospital Board, Vernonholme, Riverside Drive, Dundee, not later than 18th February, 1961. 5649

**UNIVERSITY OF DURHAM
KING'S COLLEGE
NEWCASTLE UPON TYNE, 1**

The Council of King's College invite applications for a Lectureship in Architecture. The Lecturer will be primarily responsible for the teaching of advanced construction. He will supervise the practical work in the final year of the course leading to the Bachelor of Architecture.

The commencing salary will be determined at a suitable point on the Lecturers' Scale (£1,050-£1,350) according to the qualifications and experience of the successful applicant. F.S.S.U. and Child Allowance.

Further particulars may be obtained from the Registrar and Secretary of King's College to whom applications (12 copies), together with the names and addresses of three persons to whom reference may be made, should be addressed so as to reach him not later than March 9th, 1961. 5637

**HARLOW DEVELOPMENT CORPORATION
Architect Planner FREDERICK GIBBERD, C.B.E.,
F.R.I.B.A. M.T.P.I.**

Executive Architect: VICTOR HAMMETT, B.Sc.,
A.R.I.B.A., Dip.T.P., A.R.I.C.S., A.M.T.P.I.
STAFF VACANCIES

Applications are invited for ARCHITECTURAL ASSISTANTS, Grade II (£815-£960) and ASSISTANT ARCHITECTS, Grade III (£960-£1,140) for work on Housing, Industrial, Commercial and Special Projects, including all types of dwellings, multi-storey flats, bungalows, etc., factories, warehouses, laboratories, shops, multi-storey offices, maintenance depots, and neighbourhood units; Health Centres and Community buildings.

There is unlimited scope for enthusiastic and able Assistants. Houses available for sale or to rent.

Applications, giving full details of training, qualifications and experience, together with names of two referees, to the General Manager, "Terlings," Harlow, Essex, within 10 days. 5639

**WESTERN REGIONAL HOSPITAL BOARD
SCOTLAND**

Vacancies exist for Assistant Architects in the Chief Architect's Department. Previous hospital experience not essential. Salary scale £905 x £35 (1) x £45 (6) x £50 (2)-£1,310.

Applicants must possess full professional qualifications. All posts are subject to National Health Service conditions and are superannuable.

Applications, stating age, qualifications and previous experience together with names of three referees should be sent to Secretary, Western Regional Hospital Board, 351 Sauchiehall Street, Glasgow, C.2. 5646

**CUMBERNAULD NEW TOWN
ARCHITECTS and ARCHITECT-PLANNERS**

who want to make a contribution to the design of this New Town will be considered for the following jobs:-

ASSISTANT ARCHITECTS (A.R.I.B.A. required),
£645-£1,670.

ARCHITECTURAL ASSISTANTS (Intermediate
R.I.B.A. required), £645-£1,670.

ASSISTANT PLANNING OFFICERS (A.R.I.B.A.,
A.M.T.P.I. required), £1,140-£1,670.

Salary placed according to qualifications and experience. Variety of work including high density housing of all types, industry and other town development.

Housing provided if required. Five-day week. Application forms, which should be returned completed not later than Monday, 27th February, 1961, may be obtained from the General Manager, Cumbernauld Development Corporation, Cumbernauld House, Cumbernauld, Glasgow. 5640

BOROUGH OF LEYTON

**(in the County of Essex)
COMMITTEE FOR EDUCATION
APPOINTMENT OF ARCHITECTURAL
ASSISTANT**

Applications are invited for the permanent appointment of Architectural Assistant, Grade A.P.T.III £960-£1,140 per annum, plus London Weighting. The successful applicant will be employed by the Essex County Council and will work in the School Architect's Section of the Borough Engineer & Surveyor's Department, Town Hall, Leyton, E.10. Five day week is operated.

Details and forms of application from the Borough Education Officer, Education Offices, Kirkdale Road, Leytonstone, E.11, to whom they should be returned within fourteen days from the appearance of the advertisement. 5761

**CUMBERNAULD DEVELOPMENT
CORPORATION**

There is a variety of projects in the development of the New Town which offer excellent experience and for which staff are required as follows:-

(a) ASSISTANT QUANTITY SURVEYORS
(Grade B) (Ref. Q.S.2).

Scale A.P.T. VI (£1,305-£1,565).

A.R.I.C.S. required.
To take charge of major projects from pre-planning stage to final account, working in close co-operation with the Group Architect. Experience in cost analysis and cost planning required; or to take charge of a section responsible for the production of Specifications and Schedules of Quantities and which also provides assistance for the agreement of Claims for Payment and the preparation of Final Accounts. Experience of the Scottish Mode of Measurement including specialist trades required.

(b) TWO MEASURING SURVEYORS
(Ref. M.S.2).

Scale A.P.T. III (£960-£1,140).
Must have wide experience of re-measuring and recording measurements on major building contracts based on the Scottish Mode of Measurement.
The Chief Quantity Surveyor is a member of the R.I.C.S., and the office is recognised for examination purposes.

Housing provided if required. Five-day week. Application forms, which should be returned completed not later than Monday, 27th February, 1961, may be obtained from the General Manager, Cumbernauld Development Corporation, Cumbernauld House, Cumbernauld, Glasgow. 5641

CUMBERNAULD NEW TOWN
ARCHITECTS (A.R.I.B.A.) (landscape qualification desirable for one of the posts) are required for the team which is now being built up for the design of the town centre. This is proposed as a comprehensive multi level project involving all central area uses, including housing, with vehicular access and car parking at ground level and a series of pedestrian platforms above. The scheme is one of the first of its kind in the world and only those with first class ability and a belief in the principles involved should apply.

The posts offer salaries within the range £960-£1,670, and placing will be according to qualifications and experience.
Housing will be provided if required and there is a five-day week.
Application forms, which should be returned completed not later than Monday, 27th February, 1961, may be obtained from the General Manager, Cumbernauld Development Corporation, Cumbernauld House, Cumbernauld, Glasgow. 5642

CARSHALTON URBAN DISTRICT COUNCIL

(Population 62,000)
ENGINEER AND SURVEYOR'S DEPARTMENT
ARCHITECTURAL SECTION (Two vacancies)
ASSISTANT ARCHITECT (A.P.T. Grade III).
Salary starting within the range £960-£1,140, plus London "Weighting".

Candidates must have passed Final R.I.B.A. or equivalent. Experience offered on design and supervision of multi-storey housing, public buildings, old people's dwellings, etc.

ASSISTANT ARCHITECT (A.P.T. Grade II).
Salary starting within the range £815-£960, plus London "Weighting".

Candidates must have passed Inter. R.I.B.A. or equivalent. Experience offered on design and supervision of new houses and public buildings. Pleasant working conditions. Canteen facilities. Five-day working week. Good train service from Central London.

Applications on forms obtainable from the undersigned to be returned within fourteen days of the date of this advertisement.
C. H. DURRANT,
Clerk of the Council.

District Council Offices,
The Grove,
Carshalton, Surrey. 5729

**SPALDING RURAL DISTRICT COUNCIL
ARCHITECTS DEPARTMENT**

ARCHITECTURAL ASSISTANT required.
Salary A.P.T.II of the National Scale (£815 to £960). Superannuation. Medical Examination. House available. One half of removal expenses paid.
Must be competent draughtsman with sound knowledge of construction and detailing.
Application with names of two referees to the Clerk of the Spalding Rural District Council, Priory Road, Spalding, not later than 17th February, 1961.

G. S. ASHWORTH,
Clerk of the Council.
5678

Municipal Offices,
Rotherham,
February, 1961. 5760

BOROUGH OF SWINDON

ARCHITECTURAL ASSISTANT
Applications are invited for the above appointment in the Borough Architect's Department at a salary within A.P.T. Grades III/IV (£960-£1,310), according to experience.

Applicants must have passed the Final Examination of the Royal Institute of British Architects. The Department is engaged in a large and varied programme of development, including housing schemes, neighbourhood shopping centres, civic works and industrial buildings.

Housing accommodation and assistance with removal expenses may be offered.
Applications, on forms to be obtained from the Town Clerk, Civic Offices, Swindon, must be returned by 21st February, 1961. 5678

Applications, stating age, education, qualifications and experience, together with the names of two referees, should be sent to A. H. Turner, A.M.I.C.E., Borough Engineer, High Street, Hemel Hempstead, Herts., not later than Monday, the 27th February, 1961.

Canvassing will disqualify, and applicants must state whether to their knowledge they are related to any member or senior officer of the Council.
C. W. G. T. KIRK,
Town Clerk.

Hemel Hempstead, Herts.
31st January, 1961. 5744

**DEVON COUNTY COUNCIL
ASSISTANT DIVISIONAL PLANNING
OFFICER**

DARTMOOR NATIONAL PARK
Applications are invited for the above post at Exeter on A.P.T. IV (£1,140-£1,375) with essential car user allowance. Should be A.M.T.P.I. but architectural or landscape qualification with some planning experience will be considered. House purchase and removals loans are available. Form of application, giving further details and returnable by 20th February, 1961, from County Planning Officer, "Bellair," Topsham Road, Exeter, Devon. 5747

**HEMEL HEMPSTEAD BOROUGH COUNCIL
SENIOR ARCHITECTURAL ASSISTANT
A.P.T. GRADES III-IV (£960-£1,310)**

Applications are invited for the appointment of a Senior Architectural Assistant in the Borough Engineer's Department at a salary within A.P.T. Grades III-IV of the National Joint Council's Scales.

Candidates should possess the Final qualification of the Royal Institute of British Architects, in which case the salary payable will be within Grade IV (£1,140-£1,310).

It is anticipated that housing accommodation will be made available to the successful applicant. The appointment will be subject to the Local Government Superannuation Acts, to the National Conditions of Service from time to time in force, and to the passing of a medical examination and will be terminable by one month's notice in writing on either side.

Applications stating age, education, qualifications and experience, together with the names of two referees, should be sent to A. H. Turner, A.M.I.C.E., Borough Engineer, High Street, Hemel Hempstead, Herts., not later than Monday, the 27th February, 1961.

Canvassing will disqualify, and applicants must state whether to their knowledge they are related to any member or senior officer of the Council.
C. W. G. T. KIRK,
Town Clerk.

Hemel Hempstead, Herts.
31st January, 1961. 5744

**CITY OF SHEFFIELD
APPOINTMENT OF SENIOR ASSISTANT
ARCHITECTS**

GRADE A.P.T. V £1,310-£1,480

Applications are invited from qualified architects for posts on the permanent staff of the City Architect, Mr. J. L. Womersley. Vacancies exist in the Housing, Education and General Sections of the Department.

The Housing Section is engaged on large scale schemes of redevelopment and there are excellent prospects of further work on challenging schemes of urban renewal.

The Education and General Section is responsible for an expanding and interesting programme of important civic buildings including colleges, schools, libraries, art galleries, old people's homes, fire and police stations, health centres, etc.

COMMENCING SALARIES WITHIN THE ABOVE GRADE ACCORDING TO QUALIFICATIONS AND EXPERIENCE. A five day week is in operation and the posts are superannuable.
Applications stating age, education and training, qualifications, present and past appointments (with dates and salaries) experience and the names of two persons to whom reference may be made should reach me not later than 28th February, 1961.

JOHN HEVS,
Town Clerk
5754

**COUNTY BOROUGH OF ROTHERHAM
SENIOR ASSISTANT ARCHITECT**

Applications are invited for the appointment of a Senior Assistant Architect-A.P.T. V (£1,310-£1,480).

The department has a varied and interesting programme of architectural work and candidates are required to be Associate Members of the R.I.B.A. with good general experience in design and construction. The commencing salary in the grade will be according to capabilities and experience.

Housing accommodation will be available if necessary.
Applications to be endorsed "Senior Assistant Architect" stating age, qualifications and details of experience, together with names of two referees, should be received by me not later than Wednesday, 1st March, 1961.

Canvassing will disqualify.
JOHN S. WALL,
Town Clerk.

Municipal Offices,
Rotherham,
February, 1961. 5760

NORTH THAMES GAS BOARD

An ARCHITECTURAL ASSISTANT is required in the Architectural Section of the Chief Engineer's Department at Westminster, S.W.1.

Applicants should be suitably qualified and capable of preparing working drawings and specifications and supervising the work on contracts. Experience in design and planning of industrial buildings would be an advantage.

Starting salary, depending on qualifications, will be within the range of £865 to £1,050 per annum in the Administrative, Professional and Technical Grades 3-9 and the successful candidate will be required to join the Staff Pension Scheme.

Applications stating age, qualifications and experience, should be sent to the Staff Controller, North Thames Gas Board, 30 Kensington Church Street, W.8, quoting reference AJ/963. 5676

**CHEADLE RURAL DISTRICT COUNCIL
APPOINTMENT OF ARCHITECTURAL
ASSISTANT**

Applications are invited for the above appointment in the Engineer & Surveyor's Department, the salary will be within A.P.T. Grade II (£315-£360).

The appointment will be subject to the provisions of the Local Government Superannuation Acts, the passing of a medical examination and one month's notice on either side.

A car allowance will be made on the casual users scale.

Applications, stating age, qualifications, present and previous appointments and experience, together with the names of two referees, should reach the undersigned not later than Tuesday, 28th February, 1961.

H. W. HENSON,
Clerk of the Council.

Council Offices,
Leek Road,
Cheadle,
Staffordshire.

5757

**LANCASHIRE COUNTY COUNCIL
PLANNING ASSISTANT required at MAN-
CHESTER.** Commencing and maximum salary according to qualifications and experience within range £645-£1,310 per annum.

Applicants should be studying for or possess a recognised qualification in architecture, surveying, engineering and/or town planning.

Applications giving age, qualifications, present appointment, experience, etc., and two referees to the County Planning Officer (S), East Cliff County Offices, Preston, by the 20th February, 1961.

5736

**ALDRIDGE URBAN DISTRICT COUNCIL
(1) ARCHITECTURAL ASSISTANT.
(2) ENGINEERING ASSISTANT.**

Applications are invited for these appointments at salaries in accordance with Grade A.P.T. III (£960-£1,140 per annum). Housing accommodation will be available if required and reasonable removal expenses paid. These appointments offer an opportunity to gain wider experience with a rapidly developing authority. Applications to be submitted by the 18th February, 1961, together with the names of two referees.

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

The Council House,
Aldridge,
Staffs.

5769

**CITY OF CARLISLE
CITY SURVEYOR'S DEPARTMENT
BUILDING SURVEYOR**

Applications are invited for the above post on a salary grade up to A.P.T. III (£960-£1,140 per annum), according to qualifications and experience. Applicants must be able to deal with all types of property and small building work, including adaptations, alterations and additions. They should have a good practical knowledge of building and be able to prepare the necessary plans, specifications and estimates for the work.

Applications, stating age, married or single, qualifications, present and past appointments, salary and experience, to be received by the City Surveyor not later than 20th February 1961.

H. D. A. ROBERTSON,
Town Clerk.

Carlisle.

5686

**BOROUGH OF REIGATE
SENIOR ARCHITECTURAL ASSISTANT
REQUIRED**

SALARY A.P.T. III-IV (£960-£1,310)

Commencing salary according to qualifications and experience. Applicants are required to have passed Parts I and II of the R.I.B.A. final or special final examination, and should have experience in design of buildings, estate development and conversion of properties into flats. Housing accommodation provided if necessary for married man. Application forms from Borough Surveyor, Town Hall, Reigate, to be returned by 20th February, 1961.

HEBER DAVIES,
Town Clerk.

Town Hall,
Reigate,
January, 1961.

5693

**LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT**

Architectural and topographical model maker required (up to £950). Previous experience essential and applicant should be able to work from architect's plans and elevations on wood, card, metal and Perspex. Form, returnable by 25 February, from Architect (EK/A 327/2), County Hall, S.B.I.

5724

**COUNTY BOROUGH OF EAST HAM
HOUSING DEPARTMENT
APPOINTMENT OF ARCHITECTURAL
ASSISTANT**

Applications are invited. Salary in accordance with Grade A.P.T. III (£960-£1,140 per annum), plus London Weighing.

Applicants should have had experience of the construction and supervision of the erection of Housing Schemes.

Further particulars and application forms (returnable by 1st March, 1961) from the Town Clerk, Town Hall, East Ham, E.6.

5771

**ELSTREE RURAL DISTRICT COUNCIL
APPOINTMENT OF ASSISTANT ARCHITECT**

Applications are invited for the above appointment in the Department of the Engineer & Surveyor, on work in connection with the design of housing (including estate layout and multi-storey flats) and other general architectural schemes.

Salary in accordance with Grade A.P.T. III of the National Salary Scales (£960-£1,140 plus London weighting, £45). Appropriate car allowance.

Candidates should have passed the Final examination of the R.I.B.A. or equivalent.

Housing accommodation, if required, and consideration given to payment of proportion of approved removal expenses.

Relationship to any Member or Officer of the Council must be disclosed and canvassing directly or indirectly will disqualify.

Application forms to be obtained from the Engineer & Surveyor at the address below and to be completed so as to reach that Officer not later than Friday, 24th February, 1961.

A. LANCASHIRE,
Clerk of the Council.

Council Offices,
Shenley Road,
Boreham Wood,
Herts.
27th January, 1961.

5667

**MINISTRY OF HOUSING AND LOCAL
GOVERNMENT - PLANNING OFFICERS.** Five pensionable posts in London for men and women, normally at least 35 on 1.1.61 but well-qualified candidates aged 30-34 will be considered.

Candidates must be corporate members of the Town Planning Institute, with at least three years' recent practical experience in town and country planning. They must also be registered Architects, corporate members of an appropriate professional body, or have at least a second class honours degree (or equivalent) in an appropriate subject. Duties cover all aspects of planning, e.g. development plans, new towns, planning standards, publications, landscape and advertisement control. Salary scale £1,425-£1,835. Starting salary may be above minimum for candidates aged 35 or over. Promotion prospects. Write Civil Service Commission, 17 North Audley Street, London, W.1. for application form quoting S/5260/61. Closing date 7th March, 1961.

5654

**BOROUGH OF SUTTON AND CHEAM
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT**

Applications are invited for the following appointments in the Architects' Section:

(a) ASSISTANT ARCHITECT, Grade A.P.T. III-IV (£960 to £1,310 per annum), plus London "Weighting" of £45 per annum. Commencing salary will be according to ability and experience, entry into Grade A.P.T. IV being conditional upon obtaining the appropriate examination qualification.

(b) DRAUGHTSMAN, Grade A.P.T. II (£815 to £960 per annum), plus London "Weighting" of £25 or £40 per annum. Experience of general architectural work required.

Work is of a varied nature, comprising public and industrial buildings and comprehensive redevelopment, including multi-storey flats.

The Council may consider the provision of housing accommodation where appropriate.

The appointments, which are terminable by one month's notice in writing on either side, are on the permanent staff of the Corporation, each subject to the provisions of the Local Government Superannuation Acts, 1937-53, and to the National Scheme of Conditions of Service. The successful candidates will be required to pass a medical examination.

Forms of application may be obtained from Mr. C. Needham, M.I.C.E., M.I.Mun.E., A.M.I.Struct.E., Borough Engineer and Surveyor, to whom they should be returned accompanied by copies of two recent testimonials, not later than 28th February, 1961, endorsed "(a) Assistant Architect, Grade A.P.T. III/IV" or "(b) Draughtsman, Grade A.P.T. II," whichever applies.

Applicants must state whether they are related to any member or holder of any senior office under the Borough Council. Canvassing in any form will disqualify.

ARTHUR PRIESTLEY,
Town Clerk.

Municipal Offices,
Sutton,
Surrey.
January, 1961.

5687

**UNIVERSITY OF BIRMINGHAM
CLERKS OF WORKS**

Clerks of Works are required for buildings due to start shortly as part of the University Development Plan. Starting salary will be within the range of £950 to £1,200 according to qualifications and experience. Option of Pension benefits. Further particulars from the Secretary, The University, Edgbaston, Birmingham 15. Closing date for applications 28th February, 1961.

5735

Applications are invited for the appointment of SECTIONAL ARCHITECT. Applicants must be Associate Members of the R.I.B.A. with good experience of architectural practice, good design ability and must have previous experience in a responsible position. Salary in the range £1,600-£1,875. Apply in writing giving age, particulars of experience and qualifications to the Architect, British Railways, Eastern Region, King's Cross Station, N.1.

5730

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

Applications are invited from qualified Architects for the posts of PRINCIPAL ASSISTANT ARCHITECT, Grade A.P.T. V (£1,310-£1,480), who will be expected to lead a group on varied work, and an ASSISTANT ARCHITECT on Grade A.P.T. III-IV (£960-£1,310).

The appointments are superannuable and subject to medical examination. Previous local government experience not essential. Commencing salary, in each case, will depend upon experience and appropriate qualifications.

Applications, giving age, full details of qualifications and experience, and naming two referees, should be received by me by 27th February.

PHILIP S. KENNISON,
Town Clerk.

5774

Competition

36s. per inch; each additional line 3s.

**BURGH OF MOTHERWELL AND WISHAW
NEW CIVIC CENTRE**

THE Town Council of the Burgh of Motherwell and Wishaw invite Architects resident in the United Kingdom to submit designs for a Civic Centre, to include Public Halls, Municipal Offices and Shopping Development.

Assessor: A. G. Sheppard Fidler, M.A., B.Arch., F.R.I.B.A., A.M.T.P.I.

The competition will be run in two stages, the six successful competitors in the first stage taking part in the second stage. Each of these six competitors will receive the sum of £500, and the premium for the design placed first will be £1,000 (to be merged with the fee).

The last day for submitting designs in the first stage is 1st June, 1961.

Last day for questions is 1st April, 1961.

Conditions may be obtained from the Town Clerk, Town Hall, Motherwell, Deposit £1 is.

An applicant for the Conditions must state his registration number.

ALEXANDER MCINTOSH,
Town Clerk.

Town Hall,
Motherwell,
24th January, 1961.

5652

Architectural Appointments Vacant

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

ARCHITECT has vacancies for ARCHITECTS in both Senior and Junior capacities. Group working in operation on large and small projects consisting of Cinemas, Bowling Centres, Studios, Shops, Offices, etc. Salaries in accordance with ability. Canteen facilities and Free Staff Pension Scheme. Applicants should have initiative, aptitude in design and construction, and should write or phone to C. J. Foster, R.I.B.A. Architect to Associated British Picture Corporation Ltd., 50/54, Beak St., London, W.1. GER 9234.

5680

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

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.: BELGRAVIA 3361.

2960

ASSISTANT ARCHITECTS required for staff in 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., De Vaux House, Salisbury.

3167

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

9824

£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 9360.

SENIOR ASSISTANTS required immediately. Salary by arrangement. Theo. H. Birks, 38, Portland Place, London, W.1. LAN 7236. 1496

BOOTH, LEDERBER AND PINCKHEARD 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 1866.

3119

MINISTRY OF WORKS
HOME COUNTIES REGION

require in
READING

for work of widely varying and interesting nature

**LEADING ARCHITECTURAL
ASSISTANTS**

Applicants must have achieved inter-R.I.B.A. standard, have good design ability and knowledge of modern building construction, and be capable of exercising leadership and supervision coupled with high quality individual work.

Salary range £930—£1,085 p.a. Starting salary will normally be £930 p.a. but may be higher for applicants with exceptional experience and qualifications.

ARCHITECTURAL ASSISTANTS

of inter-R.I.B.A. standard with keen, modern outlook. Salary range £560 (age 21) to £930 p.a. Starting pay according to age and/or qualifications.

GENERAL: Equal pay. 5-day week. 3½ weeks' leave per annum. Good prospects of promotion and permanency. Non-contributory pension scheme.

APPLICATIONS: stating age, training and experience to R. P. Mills, A.R.I.B.A., Superintending Architect, Ministry of Works, Whiteknights, Reading.

Cadbury's

require

ARCHITECTURAL ASSISTANTS

of Final or Intermediate R.I.B.A. standard either for a post at their **Bournville Factory** or for a post at their new factory at **MORETON, WIRRAL CHESHIRE** for work on a varied and interesting programme.

Experience in industrial and commercial building design desirable.

Five day week, attractive working conditions and amenities, pension scheme.

Salary according to qualifications and experience.

Applications stating age, qualifications and salary required should be addressed to

**Chief Architect,
Cadbury Brothers Limited,
Bournville, Birmingham.**

ARCHITECT

RICHARD COSTAIN LIMITED require an Architect preferably A.R.I.B.A. to take complete charge of the Design and Development Office in their Middle East Company. This Company operates in a wide and interesting field covering both Building and light Civil Engineering, calling for initiative and commercial ability.

The appointment entails the reorganisation of an existing office in London and the control of subsidiary development groups overseas. It will be necessary to visit these overseas groups. A clear understanding of the commercial issues involved in a self-supporting business and in obtaining work for it are essential. The successful candidate will require considerable drive and an ability to impart enthusiasm and team work resulting in high quality, accurate and well presented work. Starting salary in the region of £2,000 per annum.

Apply to:—

The Personnel Manager (ME/1),
111, Westminster Bridge Road,
S.E.1.

COUNTY BOROUGH OF EAST HAM

ARCHITECTS

*Applications are invited for the following
temporary appointments:—*

**Senior
Assistant Architects**

Salary £1330 - £1500

Salaries in excess of the minimum may be paid according to qualifications and experience. The appointments are for work on a new Technical College costing more than £700,000 and are expected to be for a period of not less than two years.

**Further details and application forms returnable
by 17th February 1961 from the Town Clerk,
Town Hall, East Ham, E.6.**

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

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 7551. 3742

C. H. ELSOM & PARTNERS need experienced ARCHITECTS for a wide range of public and commercial projects. VICTORIA 4304. 10, Lower Grosvenor Place, W.1. 4271

SENIOR ASSISTANT ARCHITECTS required immediately for a wide variety of interesting work. Applicants should be experienced in all aspects of modern building design and construction. Attractive remuneration to right men capable of working on own initiative under ideal conditions for self expression. Preference given to men over 45 years of age although all applications will be considered on merit irrespective of age. Applications should be made in writing to Kenneth F. Masson, Esq., A.R.I.B.A., Chief Architect, S.C.W.S. Ltd, Architectural Division, 76, Morrison Street, Glasgow, C.5. 4153

URGENTLY required; SENIOR ASSISTANT capable of supervising contracts and also preparing sketch plans and first class presentation drawings. Please write, giving particulars and salary required, to Box 5457, or telephone MAYfair 3112 to arrange interview.

EXPERIENCED ASSISTANTS required by Architects for responsible positions in West End office. Salaries: £1,000 to £1,500. Apply Box 5461.

A RCHITECTS JUNIOR ASSISTANT required, a good draughtsman, detailer, Intermediate standard. Please write stating age, experience and salary to: F. W. BECH & E. CURNOW COOKE, Chartered Architects, 15, DIX'S FIELD, EXETER. 5456

LICESTER. SENIOR ARCHITECTS AND ASSISTANTS required for general practice. Appropriate salary paid. Apply by telephone or in writing for an interview to Herbert, Son & Sawday, 18, Friar Lane, Leicester. Tel. 56476. 5307

BRYAN & NORMAN WESTWOOD & PARTNERS require ARCHITECTS and ASSISTANTS. Salaries up to £1,200. Apply to 21, Suffolk Street, S.W.1. Trafalgar 1106, or 5, Balfour Road, Weybridge, Surrey. 6088. 5281

YOUNG Architects interested in rebuilding and modernising licensed premises are invited to apply to fill a vacancy for a SENIOR ASSISTANT in the Architect's Department of a London Brewery Company. The applicant would be required to design, produce working drawings and specifications, supervise works through all stages to completion, carry out surveys of existing buildings, check builders' accounts, etc. Superannuation. Write stating age, qualifications, if any, experience, and salary required. Box 5435.

A VACANCY occurs in the West End Branch of large provincial Architectural Practice, for an ASSISTANT at Intermediate standard. The post offers considerable scope on varied projects. Five-day week. Luncheon Vouchers. Write giving particulars of age, experience and salary required to Box 4135.

A QUALIFIED ARCHITECTURAL ASSISTANT required immediately in Home Counties office. Successful applicant will have the opportunity of working on widely varying industrial, commercial and housing schemes. Five-day week. Write full particulars to Box 4136.

INTERMEDIATE to FINAL STANDARD.

Expanding practice engaged large scale commercial projects requires ARCHITECTURAL ASSISTANTS with design and supervision initiative. Good salaries according capabilities. Five-day week. L.V.s. Raymond Spratley & Partners, 9, Hertford Street, Park Lane, W.1. GRO 1532. 4306

SENIOR ARCHITECTURAL ASSISTANT required in busy West End office. Good salary and prospects for keen and energetic young man. Apply in writing to Maurice Sanders Associates, 24, Harley Street, W.1. 4959

SOUTHAMPTON. - ASSISTANT of Intermediate standard required for interesting contracts in the Southern Counties. Apply with details of any previous office experience and required salary to E. M. Galloway & Partners, F.A.R.I.B.A., 10, Portland Street, Southampton. 4865

ERNO GOLDFINGER requires several qualified ASSISTANTS with at least 2 years' experience to take part in a growing programme of interesting work which includes large office buildings, central developments, Local Authority housing, schools and private houses. Good salaries and scope for men with sound knowledge of construction. Phone HYDE Park 5657. 5084

A RCHITECTURAL ASSISTANT, about Intermediate standard, required for general practice in North Devon Office. Would have full charge of branch office. Box 5019.

A RCHITECTS in Watford and London require capable ASSISTANTS with at least 3 years' office experience for work on interesting commercial and industrial projects. Salary range £800-£1,200 per annum. Non-contributory pension scheme. Apply Box 5148.

BLACKPOOL Pleasure Beach; ARCHITECTURAL ASSISTANT required to work at Blackpool under general direction of Howard V. Lobb & Partners, London. Minimum two years' office experience. Salary about £800 depending on experience. Interesting design and practical experience, with long-term appointment. 5199

A RCHITECTURAL ASSISTANTS required for interesting work, including schools and hospitals, in Croydon office. Commencing salaries offered: £900-£1,150 for Associates, £600-£850 for students, according to age and experience. Five-day week and annual bonus. Write to George Lowe & Partner, 79, George Street, Croydon. 5197

QUALIFIED ARCHITECTS looking for some really interesting new work should apply in writing to George, Trew and Dunn at their new offices, 50, Eastbourne Terrace, W.2. 5205

THERE is more to it than drawing, you know! Are you kept pinned to the Drawing Board day in, day out? If so, we can offer you much greater scope in gaining all-round experience and carrying through the varied duties of an ARCHITECTURAL ASSISTANT. Responsibility positively encouraged. Write telling us your experience with the usual particulars; it may well be to your mutual advantage (Box 5168), or telephone MAYfair 9554.

A SSISTANT ARCHITECTS required by J. Kenneth Lindy & Partners. Good salaries, varied practice. Every opportunity for initiative and responsibility. 24, St. Mary Axe, E.C.3, or telephone Avenue 6153. 5144

A RCHITECTURAL ASSISTANT required, with good general experience for varied work mainly industrial and commercial. Write, giving experience and salary required, to Howell, Freeman & Batten, Chartered Architects, Reading. 5134

A SSISTANT required, at least Intermediate standard, to start early summer. L. H. Bond & R. W. Read, 44, Castlegate, Grantham, Lincs. 5130

A RCHITECTURAL ASSISTANTS of all A grades urgently required. Salaries by arrangement. Bonus, Pension Schemes in operation. Schools, industrial, commercial, hospital and domestic work. Write to Firth, Son & Blackburn, A.A.R.I.B.A., Broadway House, Crakenedge Lane, Dewsbury. 5279

BIRMINGHAM. We need a young ARCHITECT, either qualified or in training, with a good sense for clean and straightforward design. There is plenty of scope for the right man. Top salary according to experience. Apply: J. Alfred Harper & Son, 63 Temple Row, Birmingham. 5280

CHIEF ARCHITECT of Expanding Architects Department of established Building and Development Company requires SENIOR ARCHITECTURAL ASSISTANTS at new headquarters building in Basing, for work on industrial and commercial projects. Keenness and experience essential. Good salaries paid. Five-day week. Luncheon vouchers. Pension scheme available. Please state age, experience and salary required to Box 5361.

EXPERIENCED ASSISTANT ARCHITECTS required. City Office. Salaries to £1,450 per annum. Varied interesting practice. Every opportunity for responsibility and initiative. Box 5340.

FRY, DREW & PARTNERS have vacancies for qualified and experienced ASSISTANTS on very interesting new work including residential development and industrial headquarters in U.K. and development in the Mediterranean. Salaries from £1,000 upward for suitable applicants. Apply 63, Gloucester Place, W.1 (WEL 3318). 5486

A SSISTANTS of Intermediate Standard required in busy provincial office. Contemporary outlook welcomed. Opportunity given to handle contracts from inception to completion. Facilities given for study at London. Schools one day per week, if required - fare and fees paid. Salary £750-£900 according to ability - Hare & Pert, A.A.R.I.B.A., 29, Elm Street, Ipswich. 5477

COOK, CULLING & ILLINGWORTH require experienced ASSISTANT ARCHITECT for busy industrial practice. Pleasant conditions. House available. Apply: Meeting Lane, Gold Street, Kettering. 5384

MUNBY SMITH & HAMPTON require ASSISTANTS in all grades up to Final. Telephone Kensington 6221. 5466

NORTH & PARTNERS, Chartered Architects, Maidenhead, seek Two New ASSISTANTS:-

(1) Partner's Personal Assistant for general Architectural and administrative duties.

(2) Experienced Architectural Assistant/Architectural Draughtsman for main Drawing Office.

Five-day week, Pension Scheme, etc. State age, experience and salary required. 5492

SENIOR ARCHITECT required for executive position to take charge of architectural department of expanding building company in Bristol area. Work consists mainly of new factories, flats and housing projects. Must be fully qualified and have high standard of design. Good salary and prospects. Box 5396.

ROBERT MATTHEW & JOHNSON-MARSHALL have vacancies in their London office for Architects at all levels of experience for a variety of interesting jobs. Apply to Robert Matthew & Johnson-Marsnal, 24 Park Square East, N.W.1. 5491

DEVON.-SENIOR ARCHITECTURAL ASSISTANT required for varied and progressive practice. Write to Antony Lamb, A.R.I.B.A., A.M.T.P.I., Ottery St. Mary, Devon, 1. 5393

EXPANDING practice urgently requires SENIOR ASSISTANT capable of handling complete contracts. Salary according to ability. Dalling and Partners, Chartered Architects, 14, Bloomsbury Square, London, W.C.1. CHANCERY 4725. 5378

A RCHITECTURAL ASSISTANT required in varied and interesting Practice, minimum Intermediate stage, with office experience. Write with full details of education and experience to: J. M. Porter & Co., The Estate Office, Colwyn Bay. 5380

A RCHITECTURAL ASSISTANT required. Post Intermediate standard with good office experience. Scope for initiative and responsibility. One day off a week for study. Please write giving full details to:- D. Plaskett Marshall & Partners, 59, Gordon Square, W.C.1. 5382

E. R. COLLISTER & ASSOCIATES require:

A RCHITECTURAL ASSISTANTS of Intermediate to Final standard. Applicants will be required initially to work in our Chelmsford office but they should be prepared to work in our London or overseas offices when required. Applications should be addressed to: 41, Buckingham Palace Road, London, S.W.1, giving details of experience and salary required. 5419

A RCHITECTS

SENIOR QUALIFIED ARCHITECTS required by West End Architects with Provincial and Overseas practices. Responsible positions leading to Associate Partnerships. Salary £1,600 to £2,000 p.a. according to ability and experience. Write Box 5412.

EXPANDING and progressive development organisation requires the services of an Intermediate ASSISTANT for work in connection with housing and flat development schemes. Experience in layout, planning and design and the preparation of working drawings. Salary according to experience and ability. Pension and luncheon voucher schemes. Apply in writing or telephone for appointment: Chief Building Surveyor, Percy Bilton Ltd., 54/58, Uxbridge Road, Ealing, W.5. Telephone number: EALING 7777. 5411

SENIOR ARCHITECTS required to take charge of sections of Drawing Office of busy London Architects. Applicants must have had previous similar experience and only those confidently capable of designing and carrying out projects from sketch plans to completion of contracts need apply. Special consideration will be given to those applicants who have had experience in civic design and comprehensive developments. There are excellent prospects for the right persons as Junior Partnerships would be considered after a satisfactory probationary period. Applications (which will be treated in strictest confidence) should be in writing, stating age, experience, qualifications and salary required to:-

W. Rosell Orme & Partners, 55, Manchester Street, London, W.1. 5413

EDWARD D. MILLS & PARTNERS require additional staff at varying levels for a variety of new work including housing, schools, industrial and churches. Enthusiasm and initiative important. Five day week. Write giving full details to 211 Richmond Buildings, Dean Street, London, W.1. 5197

CROYDON. Varied and interesting experience offered in progressive and growing practice to experienced ASSISTANT and JUNIOR. Five-day week. Please write or telephone: L. A. Macintosh & Haines, A.A.R.I.B.A., 33-35 High Street, Croydon, CRO 5780/9992. 4884

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EXPERIENCED and confident ARCHITECTS required to fill positions of responsibility in a growing and varied practice with industrial and commercial work throughout the southern half of the country. Applicants must have initiative as well as architectural ability to carry through contracts up to £100,000, working directly with Principals but with minimum supervision. Apply in writing to Thomas Mitchell & Partners, 20, Bedford Square, London, W.C.1. 5418

A SSISTANTS required, capable of carrying out work from design stage to completion with minimum supervision. Tel. Victoria 7088 for appointment. 6578

TWO SENIOR ASSISTANTS required. Salary in accordance with experience. Please apply to F. G. Prizzell, A.R.I.B.A., 80, Portland Place, W.1. LANGham 1732. 4943

ARCHITECTS JUNIOR ASSISTANT required, good draughtsman, detailer, Intermediate standard. Please write, stating age, experience and salary, to: R. Jelinek-Karl, F.R.I.B.A., 6, Buckingham Street, W.C.2. 5714

ARCHITECTURAL ASSISTANTS, Intermediate standard with some office experience, required in the Brighton office of a young, expanding practice. Five-day week. Salary around £900. Write to Box 5716.

ASSISTANT required for small Office with interesting and varied work. Salary £1,000/£1,250.
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Telephone Whitehall 8926. 5706

KENTISH Men or Men of Kent—why work in London when you can join our Chatham office and have more time at home. However, should you prefer "the bright lights," you can work at our West End office. Post vacant—Senior and Qualified, for those who wish and are capable of working on "Architectural and Town Planning" projects. We are now re-expanding—join whilst the opportunity exists. Apply in writing, stating age, qualifications, experience and salary required. Halpern and Associates, Cumberland Chambers, 7, Edgware Road, London, W.2.

PROGRESSIVE opportunities for ARCHITECTS ASSISTANTS are offered by Westminster Bank. Commencing salary £850 to £1,500 with good prospects. Modern London drawing office, favourable house mortgage rates, luncheon club, sports club and other social activities, pensions scheme, fare for interview refunded. Write, stating age, experience and salary required to: The Architect, Westminster Bank Limited, Post Office Court, 10, Lombard Street, E.C.3. 5708

PLAYNE & LACEY require experienced and enthusiastic ARCHITECTURAL ASSISTANTS. Salary range £900—£1,050. Write 19, Queen Anne's Gate, Westminster, S.W.1, or ring WHI 2552 for interview. 4859

LOUIS DE SOISSONS, PEACOCK, HODGES, ROBERTSON AND FRASER require experienced ASSISTANTS for work on a wide range of projects; good salaries will be offered to suitable applicants. Applications, giving details of age, training and experience, should be sent to 12, Baring Crescent, Exeter. 5688

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NEWCASTLE UPON TYNE
ARCHITECTS required, all grades, salaries up to £1,200 p.a. Five-day week, staff pension scheme, car allowances. To work on large programmes of schools, multi-storey flats, housing, shopping and development schemes, etc. Write or phone: Waring & Nettis, 36, Jesmond Road, Newcastle upon Tyne, 2. 5691

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ASSISTANT ARCHITECT with experience and/or interest in schools and multi-storey flats. Write ERIC LYONS, MILL HOUSE, BRIDGE ROAD, HAMPTON COURT, MIDD. 3562

ARCHITECTS of associateship or Final standard with a minimum of five years' office experience required to form nucleus of expanding Group working on industrial, commercial and development projects throughout the British Isles. Successful applicants will be in charge of sections and will be responsible for the preparation of sketch schemes, working drawings, etc., and the supervision of contracts.

ASSISTANTS of Intermediate R.I.B.A. standard with office experience to work on the preparation of working drawings and details from sketch design stage, and generally assist in the smooth running and administration of the various projects. Posts are permanent and carry a contributory superannuation benefit. Five-day week and canteen facilities. Applications in writing to P. A. Smith, Technical Manager, Lowton Construction Company, Limited, Lowton St. Mary's, Warrington, Lancs. Tel.: LEIGH 73121. 5682

OCCASIONAL assistance required at Ham Common office. 1-gn. hr. Experience essential. Hours by mutual arrangement. Phone Kingston 2014. 5778

BIRMINGHAM
POTTER & ASSOCIATE, F/A.R.I.B.A., require SENIOR ASSISTANTS A.R.I.B.A. and Inter level JUNIOR ASSISTANTS, ARCHITECTURAL DRAUGHTSMEN. Apply to 3, Vicarage Road, Edgbaston, Birmingham, 15, or phone EDGBASTON 5771. 5746

ARCHITECTS
ALISON & HUTCHISON & PARTNERS have a number of vacancies in their Edinburgh office. Work includes many large scale interesting projects, consisting of Hospitals, Technical Colleges, Schools, Multi-storey Housing, Swimming Pools and Central Area Re-development Schemes. Excellent scope exists for persons of initiative and ability, preferably with experience in some of the above fields. 5-day week and Staff Pension Scheme in operation. Salaries up to £1,800 per annum. Applications, giving full details of qualifications and experience, to 4 Rothesay Terrace, Edinburgh 3. 5745

PUBLIC Property Company engaged in commercial development throughout the Country require additional senior and intermediate grade ASSISTANTS. Permanent, progressive positions, with good prospects in an expanding organisation for keen and capable men. PENSION SCHEME. Write or telephone—
Town & Commercial Properties Ltd.,
Mr. S. M. Haines, Esq.,
25 Grosvenor Street, W.1.
HYDE PARK 3841. 5740

BOOTS, ASSISTANT ARCHITECTS, ARCHITECTURAL ASSISTANTS. During the coming years, in addition to the vast programme of rebuilding or extending our retail branches, new industrial projects will be commenced. The Architects Department, headed by Mr. C. St. C. Oakes, M.B.E., F.R.I.B.A., is responsible for the whole of this work which, besides retail premises, includes laboratories, office buildings, warehouses, chemical and other production units and ancillary buildings. Vacancies exist with this Department for Assistant Architects and Architectural Assistants to work on industrial projects. These positions are permanent and pensionable and a five-day week is in operation. Applications should be sent, giving full details, to the Personnel Manager, Boots Pure Drug Co. Ltd., Station Street, Nottingham, quoting reference No. A.J.2. 5739

BRISTOL Architects opening new branch office in April require the following professional staff: AN ARCHITECT with at least 5 years' practical experience of carrying out duties from interviewing client, preparing working drawings and supervising work on site, at a salary in the range of £1,500 p.a.
2 ASSISTANT ARCHITECTS, preferably having passed the intermediate examination, at a salary in the range of £850 p.a. In both cases, a larger sum will be paid for exceptional capabilities. These positions offer great scope for advancement, and applicants should be keen and anxious to improve their status in the profession. The firm offers a 5-day week, Luncheon Vouchers, and holiday arrangements for this year will be honoured. Apply in the first instance to Gotch & Partners, 26, Regency Square, Brighton. 5702

GOUGH COOPER & COMPANY LIMITED require an ASSISTANT ARCHITECT
Experience in domestic design and estate layout an advantage. Excellent opportunity for a qualified man seeking a position of responsibility in an expanding office. Salary £1,150 p.a. rising to £1,250 after probation. Pension Scheme. Staff canteen. Apply in writing to:
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Gough Cooper & Co. Ltd.,
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VACANCIES exist in large provincial practice with offices in Peterborough and Spalding for the following:

- (1) ARCHITECTURAL ASSISTANT, male or female, qualified, with few years' office experience. Able to work on own initiative and take responsibility. Salary up to £1,150 to suitable applicant.
 - (2) ARCHITECTURAL ASSISTANT, male or female, qualified, having recently left college, office experience not essential. Salary up to £900.
 - (3) JUNIOR ASSISTANTS, Intermediate/Final standard with 2/3 years' office experience. Salary up to £800.
- The work is of a varied and interesting nature, pension scheme in operation. Assistance will be given with accommodation in appropriate cases. Apply in writing with full details to:—
Ruddle & Wilkinson, F/L/A.R.I.B.A.,
Long Causeway Chambers,
Peterborough. 5406

ATCOST (FACTORIES) LIMITED, Chief Architect Mr. Donald Tucker, A.R.I.B.A., need keen Architectural staff in the grades listed below, for both our Southern and Midlands Divisions.

The positions offer excellent opportunities in a very progressive building team, where closest co-operation between all technical departments is encouraged to produce well-designed, functional, and economical industrial buildings, group working on projects employed.

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- (b) ARCHITECTURAL ASSISTANTS Inter R.I.B.A. standard, but all-round ability more important.
- (c) Experienced BUILDING DRAUGHTSMEN to work on all aspects of various projects handled by the Groups.

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TOP grade ARCHITECTS and ASSISTANTS required urgently for Midland offices. Applicants must have a progressive outlook and be willing and able to accept responsibility. Salary range £700—£1,400. Further particulars on application. Box 5662.

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SCHERRER AND HICKS, 19, Cavendish Square, W.1. require ARCHITECTURAL ASSISTANTS of intermediate standard with some office experience. Interesting work on school projects. Five-day week. L.V.s. 5416

DOLPHIN DEVELOPMENT CO. LTD. have vacancies for ARCHITECTURAL ASSISTANTS AND DRAUGHTSMEN

CONVERSANT with design and layout of private enterprise housing estates and flats. These appointments are for head office, have prospects for promotion and are pensionable. Salary according to experience and qualifications. Apply in writing, giving brief details to: Housing Construction Manager, Dolphin Development Co. Ltd., Duncan House, Dolphin Square, S.W.1. 5252

SCHERRER AND HICKS, 19, Cavendish Square, W.1. require recently qualified ARCHITECT with some office experience. Interesting work on school projects. Five-day week. L.V.s. 5417

POULTON AND FREEMAN are expanding their office and have vacancies in the following categories:

1. SENIOR ASSISTANT ARCHITECTS age 30 and over, good designers, able to initiate sketch schemes with a partner and to control work in the Drawing Office and on site.
2. ASSISTANT ARCHITECTS age 25 and over for detail design work in collaboration with the Senior Assistants.
3. ASSISTANTS, post Intermediate standard, to help in the Drawing Office.

The office has some interesting and varied work in hand on schools, hospitals, commercial and industrial buildings, and other topical work including a sports centre for a New Town. Responsibility will be given to staff who merit it. We offer salaries in the range £850-£1,500 p.a. with three weeks annual leave, luncheon vouchers. Poulton and Freeman, F/R.I.B.A., 6a Wyndham Place, London, W.1. Tel.: AMBassador 2211. 5506

£800-£1,600 ARCHITECTS AND ASSISTANTS with experience and ability to run Church, School and Industrial projects from sketch design to completion. Five-day week and pension scheme. Write or phone: Weightman & Bullen, 76 Rodney Street, Liverpool 1. 5522

£800-£1,500. ARCHITECTURAL ASSISTANTS required in Essex office (10 miles from London). Five-day week, varied and interesting projects. Prospects of promotion to Associate Partner. Apply Box 5505.

ROBERT MATTHEW & JOHNSON-MARSHALL require ASSISTANTS at all levels to work in their Edinburgh and Dundee offices on major Hospital, University and Power Station projects. £700-£900 for recently qualified Assistants; £1,000-£1,500 for higher grades. Apply to 31 Regent Terrace, Edinburgh, 7. 5509

ARCHITECTURAL ASSISTANTS with some experience required to work in design/construction groups on interesting redevelopment schemes in Birmingham and other cities throughout the United Kingdom. Good opportunities in an expanding practice with offices in Birmingham and London. Progressive salary scales. Holiday in accordance with service, minimum two weeks. Luncheon vouchers, five-day week. J. Seymour Harris & Partners, 3/4, Greenfield Crescent, Five Ways, Birmingham, 15. 5509

INTERMEDIATE standard, office-trained ASSISTANT required immediately for small expanding office. Very varied programme of work and congenial atmosphere. Ability to work on own initiative essential. Salary by arrangement. Apply: Raymond J. Cecil, Dip.Arch., A.R.I.B.A., 5 Mill Street, Hanover Square, W.1. MAYfair 6574. 5519

ERIC G. V. HIVES AND SONS require ARCHITECTURAL ASSISTANTS of Intermediate/Final R.I.B.A. standard in their London and Reading offices, for varied work of contemporary nature. Good salaries. Apply in writing to 46, Queen's Road, Reading. 5515

AN experienced ARCHITECTURAL ASSISTANT required immediately for established firm on South Coast for planning and detailing of modern factories and commercial development. An interesting and progressive position awaits the right individual. Write stating age, experience and salary required to Messrs. Thomas, Jolly, Grant & Kelsey, 25 Kent Road, Southsea, Hants. 5514

SENIOR ASSISTANT ARCHITECTS required for responsible positions in progressive Manchester Office. ARCHITECTURAL ASSISTANTS also required. Intermediate standard or above. Salary by arrangement. Box 5565.

LONDON Building Surveyors Architectural Department require JUNIOR for general duties. Age 17-18. Good prospects for advancement. Write Box 5632 or ring MET 8001 for appointment.

ASSISTANTS in all grades required for long established and expanding Architectural practice in Yorkshire on public and private work. Many interesting projects in hand. Should have contemporary outlook and preferably be car drivers—car provided. Housing accommodation will be provided. Apply giving full particulars and salary required to Dyson, Cawthorne and Coles, 25 Regent Street, Barnsley. 5558

ARCHITECTURAL ASSISTANTS, all grades, required for interesting and varied work on large and medium sized schemes—comprehensive redevelopment, hotels, shopping centres, cinemas, theatres, flats, etc. Salary commensurate with ability and qualifications. Apply to James A. Roberts, A.R.I.B.A., Lichfield House, Smallbrook Ringway, Birmingham 5. 5511

DEPUTY STAFF ARCHITECT required by City firm of Surveyors, age 30-40. Apply giving full particulars and salary required to Box 5566.

QUALIFIED ASSISTANTS in salary range £1,000 p.a. required in expanding Notting-ham practice. Excellent prospects for right man. Apply in writing to Henry J. Mein, A.R.I.B.A., 26 Clarendon Street, Nottingham. 5561

RILEY & GLANFIELD need an experienced ASSISTANT able to take responsibility for work on Churches and halls, public houses, factories and schools. Salary to be agreed. Telephone CHAnery 7328. 5549

MANCHESTER city office wants experienced young Senior and Intermediate grade ASSISTANTS urgently. Salary by arrangement on a very attractive scale for the right people, plus profit sharing bonus. Varied and interesting work for those who are conscientious and eager to take responsibility. In writing: Bernard Taylor & Associates, 22 Dickinson Street, Manchester 1. 5547

J. CARTER JONAS & SONS, Chartered Surveyors, Cambridge, require an ARCHITECTURAL ASSISTANT in their Design Department to work on an expanding programme of interesting work including housing, farm buildings, and large scale redevelopment projects of wide variety. Experience in the preparation of working drawings and an interest in design are essential. Salary within the range £800-£900 depending on experience. Applicants please telephone, or write, to:—R. W. Whitehouse, Dir. Arch. (Birm.), A.R.I.B.A., Staff Architect, J. Carter, Jonas & Sons, 12-13 Benet Street, Cambridge. Tel.: Cambridge 53776. 5532

S. W. MILBURN & PARTNERS require SENIOR AND JUNIOR ARCHITECTS AND ARCHITECTURAL ASSISTANTS at Sunderland and Cardiff, to work on major hospital schemes and other varied works. Salaries according to qualifications and experience. Please make applications in writing, stating age, qualifications and experience, to 9, The Esplanade, Sunderland, Co. Durham. 5523

NORTH HARROW office requires Intermediate/Final ASSISTANT. Experience of housing development and industrial work an advantage. Kindly write or telephone Field & Shaw, Chartered Architects, 40 Station Road, North Harrow, Tel.: Harrow 7502. 5527

SENIOR ASSISTANTS required for work on large Hospital programme, excellent opportunities for the right men, salary £1,000-£1,400. Luncheon Vouchers and five-day week. Write giving full particulars to W. H. Watkins, Gray and Partners, 57, Catherine Place, S.W.1. 5535

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Permanent appointments with good progressive salaries for the right men are immediately available at Head Office.

Five-day week. Pension Scheme available. Similar appointments are also available in our Regional Offices for applicants preferring to work in the Midlands or North of England areas.

Applicants should write to: George Wimpey & Co., Ltd., (E. V. Collins, Chief Architect), 27, Hammersmith Grove, London, W.6. 5554

COMPETENT ASSISTANTS required, large industrial buildings—London and Home Counties. Salary and bonus according to experience and ability. Five-day week; excellent opportunities. Howard Kelly and Partners, Chartered Architects, No. 11, Duke Street, W.1. Welbeck 3995. 5534

£850-£1,200 ASSISTANTS AND ARCHITECTS required within this salary range on a variety of projects including schools, universities and T.V. studios. Qualification in landscape architecture an advantage which would affect salary. Large progressive office offering outstanding opportunities for people of ability, both at home and overseas. Excellent working conditions, five-day week, three weeks' annual leave, lunch vouchers, bonus scheme and generous sick pay provision. Write or telephone Norman & Dawbarn, Architects & Consulting Engineers, 7, Portland Place, London, W.1. LANGham 8011. 5527

WOLVERHAMPTON, Norman & Dawbarn require an ASSISTANT in their Midlands Office. This position could afford useful experience of small and medium size jobs in a young but expanding office, with possibility of later transfer to London Office or overseas if desired. Minimum of two years' office experience required. If qualified, four years if intermediate. Excellent working conditions, five-day week, three weeks' annual leave, lunch vouchers. Write or telephone 7, Portland Place, London, W.1 (LANGham 8011), or Heanton House, Salop Street, Wolverhampton (Wolverhampton 27837). 5528

INTERMEDIATE or Finals Standard ARCHITECTURAL ASSISTANTS required for contractor's architectural department in West End office. Permanent, superannuation and bonus. Write in confidence, stating age, experience and salary required to Box 5519.

ARCHITECTURAL STAFF:

(a) ARCHITECTS of considerable ability to join a team just about to commence the design of a new Broadcasting Headquarters in the Midlands. Also required:—

(b) Experienced STAFF with ability in high quality detailing for project just starting in design stage for the new Headquarters for a Canadian Company in the Midlands. And:—

(c) Intermediate standard ARCHITECTS are invited to join staff for work on a most interesting project in detailing a newspaper building. Applications, endorsed "Appointment (a), (b) or (c)," to be sent to John H. D. Madin, 83/85, Hagley Road, Five Ways, Edgbaston, Birmingham, 16, as soon as possible. 5523

OPPORTUNITY FOR FRUSTRATED INTERMEDIATE ASSISTANT WITH INITIATIVE AND IMAGINATION, UNABLE TO FIND POST OFFERING FREEDOM IN DESIGN OR CHANCE TO TAKE CHARGE OF PROJECTS. WRITE OR PHONE: NICHOLSON AND RUSHTON, 2 NEW SQUARE, LINCOLN'S INN, W.C.2. HOLBORN 2095. 5510

OLD ESTABLISHED London Architects require ASSISTANTS capable of carrying out substantial commercial or school projects with some supervision. Telephone Mr. Shail, Mayfair 2549 for appointment, or write Box 5515.

PLAYNE & LACEY require experienced and enthusiastic SENIOR ARCHITECTURAL ASSISTANT for work on University project. Salary range £1,200 to £1,500. Write 19 Queen Anne's Gate, Westminster, S.W.1, or ring WHI 2552 for interview. 5517

ARCHITECTURAL ASSISTANTS. The Architects Department of a large industrial organisation requires Senior and Junior Assistants to work on a variety of interesting projects. The offices are modern and spacious and situated in pleasant rural surroundings in South-East England. Permanent appointments with progressive salaries are offered to suitable applicants, within the range £780-£1,200. Five-day week, three weeks' annual holiday, non-contributory pension scheme. Applications, which will be treated in strict confidence, giving details of age, qualifications and experience, should be addressed to Box 5509.

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ARCHITECTURAL ASSISTANTS, Intermediate standard, required by Architects in Barnet, Herts. Write stating office experience and salary required. Apply Box 5592.

GEORGE CALVERLEY & SONS (CONTRACTORS) LTD. require an ASSISTANT ARCHITECT. Applicants should have experience in Industrial and Multi-storey Flat Developments.

The appointment is a permanent one in a rapidly expanding office and the applicant will be given every opportunity for advancement. A Pension Scheme is in operation for those wishing to make a career with the Company.

Apply in writing with details of experience and present salary to James L. Heap, A.R.I.B.A., Chief Architect, George Calverley & Sons (Contractors) Ltd., Evington Valley Road, Leicester, Tel.: Leicester 36595. 5577

INTERMEDIATE TO FINAL ARCHITECTURAL ASSISTANTS REQUIRED. APPLY IN WRITING, GIVING FULL PARTICULARS AND SALARY REQUIRED (APPLICATIONS TREATED IN CONFIDENCE) TO MR. J. F. NORRIS, CHARLES E. WARE & SON, 20, RICHMOND ROAD, EXETER. 5587

ENFIELD Architects require qualified ASSISTANT. Please write for an appointment, giving details of experience and salary required to Dennis E. Pugh & Associates, Nicholas House, River Front, Enfield, Middx. 5589

ARCHITECTURAL ASSISTANTS required for most interesting and varied work. Salary grades ranging from £550 to £1,350. Five-day week. Excellent working conditions in new building. Pension Scheme and three weeks' holiday. Paid overtime. Car allowance. Apply Gordon Payne and Preece, Grosvenor House, Gloucester. 5591

ARCHITECTURAL ASSISTANTS required with practical experience. Varied practice including contemporary work. Salary £700-£1,100 (plus L.V.s.), according to qualifications and experience. Please write, giving full particulars, to Sir Giles Scott, Son & Partner, 9 Gray's Inn Square, W.C.1. 5601

JUNIOR ARCHITECTURAL ASSISTANTS required. Salary range £750-£1,250 p.a. depending upon experience. Write with fullest details of experience. Box 5602.

INTERMEDIATE and **FINAL ASSISTANTS** required immediately, salary range £800 to £1,200. Experienced in planning of Flats and Commercial properties essential. Box 5713.

ARCHITECTS AND ARCHITECTURAL ASSISTANTS are invited to apply for posts in the Architects Department at Ericsson Telephones Limited, Beeston, Nottingham. Starting salary will be according to ability, qualifications and previous experience.

Only applicants with an enthusiastic approach to new ideas and progressive design, and willing to accept responsibility will be considered.

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

Please write stating age and giving full details of training and experience to the Personnel Manager. 5700

LEWELLYN SMITH & WATERS require ASSISTANTS in the following categories: DESIGNERS to prepare and develop sketch designs for every type of work. Imaginative outlook and good sense of detail essential. £1,000-£1,250.

JOB ORGANISERS to take charge of jobs; able to control drawing office and site work and deal with Consultants and Specialists. £1,000-£1,250.

ASSISTANTS interested in working on a wide range of projects. Good opportunities for young men of ability. £700-£1,000.

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Write: 103 Old Brompton Road, S.W.7. (KEN 4477). 5777

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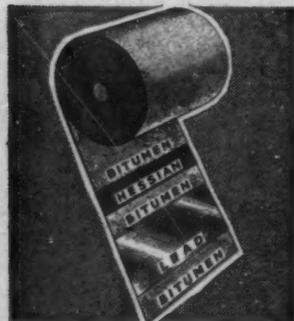
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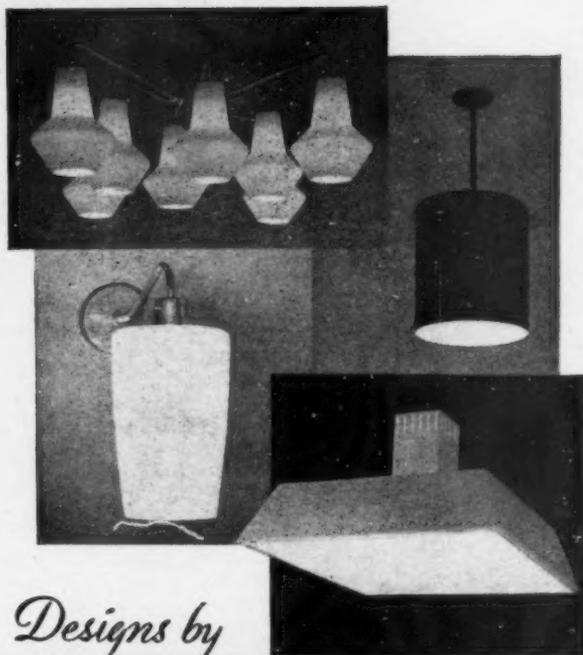
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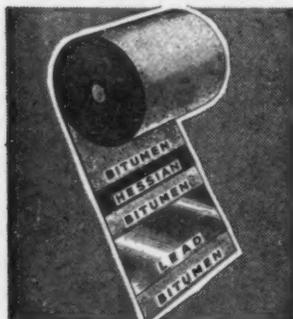
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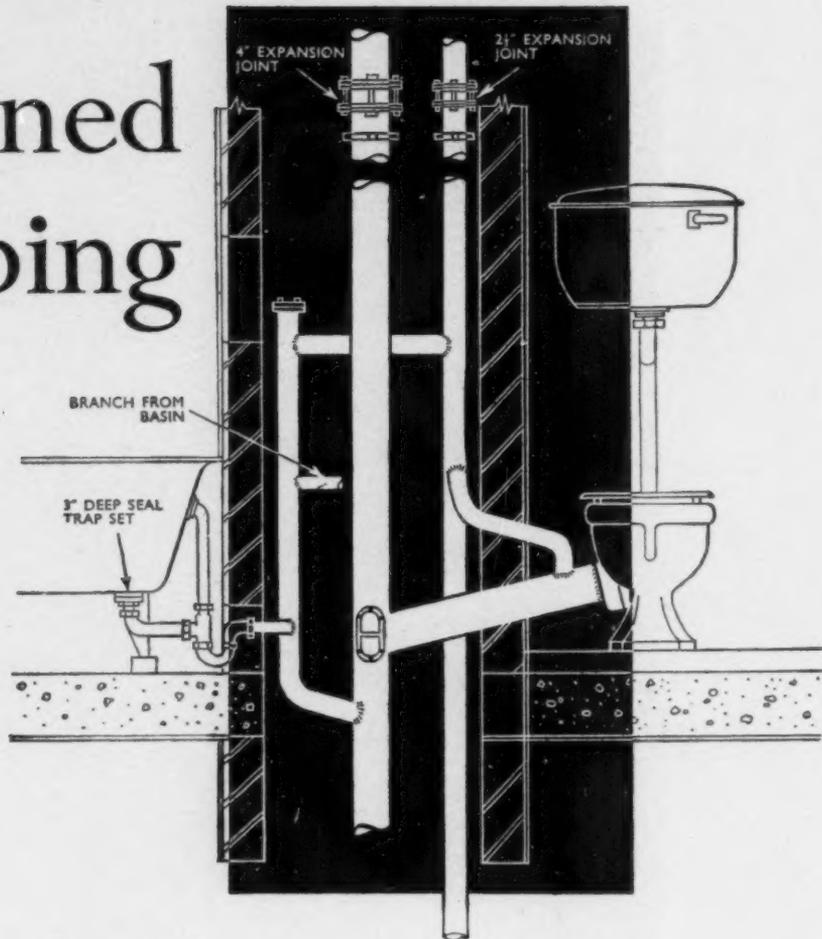
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