

The Architects' JOURNAL for April 18, 1957

THE ARCHITECTS' JOURNAL



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

standard contents

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

NEWS and COMMENT

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Prices

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CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

*Architectural Appointments
Wanted and Vacant*

No. 3242]

[Vol. 125

THE ARCHITECTURAL PRESS

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S.W.1. 'Phone: Whitehall 0611

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Registered as a Newspaper.

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
ILA	Institute of Landscape Architects. 2, Guilford Place, W.C.1. Holborn 0281
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, Strand, W.C.2. Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1. Museum 7179
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1. Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172
ISE	Institute of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128
LDA	Lead Development Association. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1. Museum 3891
LSPC	Lead Sheet and Pipe Council. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1. Trafalgar 7711
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1. Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1. Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1. Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James' Square, S.W.1. Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2. Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1. Reliance 7611
NAMMC	Natural Asphalt Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1. Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1. Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1. Welbeck 0619
NCBMP	National Council of Building Material Producers. 10, Storey's Gate, S.W.1. Abbey 5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry. 21, John Adam Street, Adelphi, W.C.2. Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1. Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4. Macaulay 4451
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1. Whitehall 1693
NHBRC	National House Builders Registration Council. 58, Portland Place, W.1. Langham 0064/5
NPL	National Physical Laboratory. Head Office, Teddington. Molesey 1380
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3. Mansion House 9383
NSAS	National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1. Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1. Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1. Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1. Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1. Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 5, Old Palace Yard, S.W.1. Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1. Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2. Trafalgar 2366
RSH	Royal Society of Health. 90, Buckingham Palace Road, S.W.1. Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19. Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1. Victoria 2186
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1. Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3. Mansion House 3921
SIA	Society of Industrial Artists. 7, Woburn Square, London, W.C.1. Langham 1984/5
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1. Langham 7616
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4. City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4. City 5040
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1. Whitehall 4341
ZDA	Zinc Development Association. 34, Berkeley Square, W.1. Grosvenor 6636

TUBULAR SCAFFOLDING

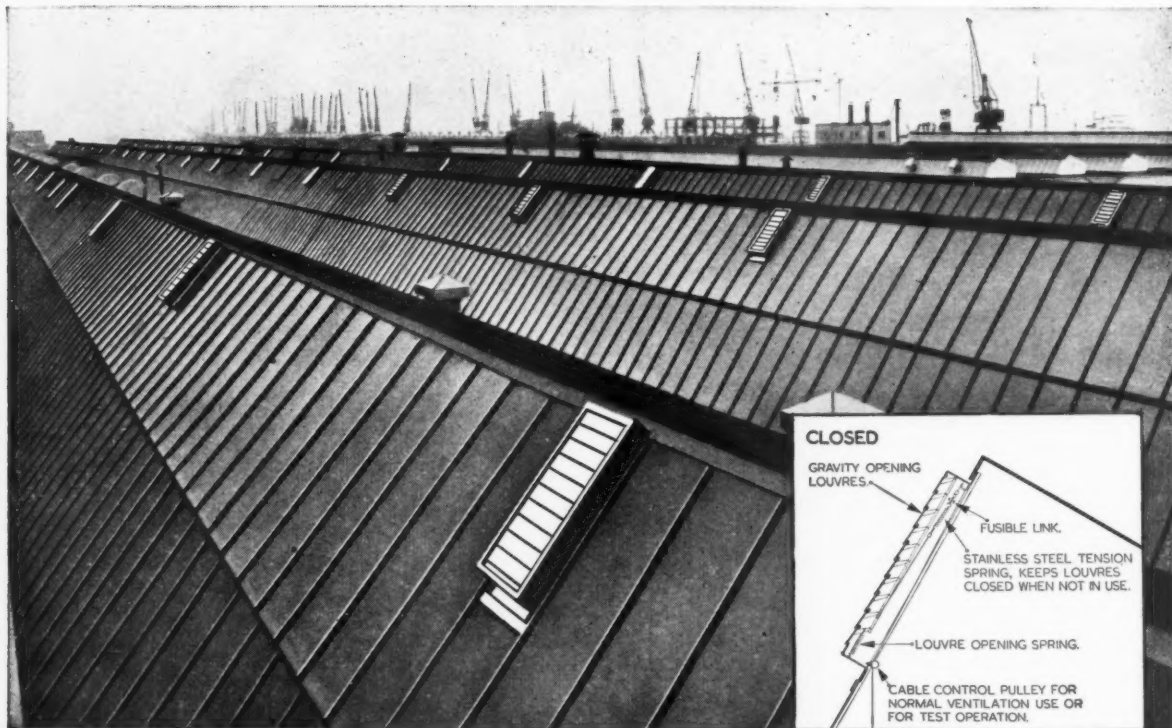
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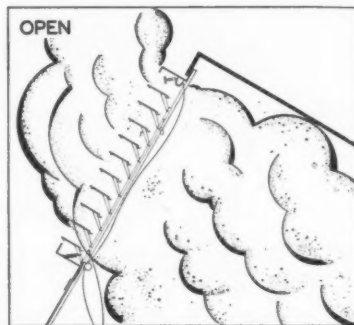
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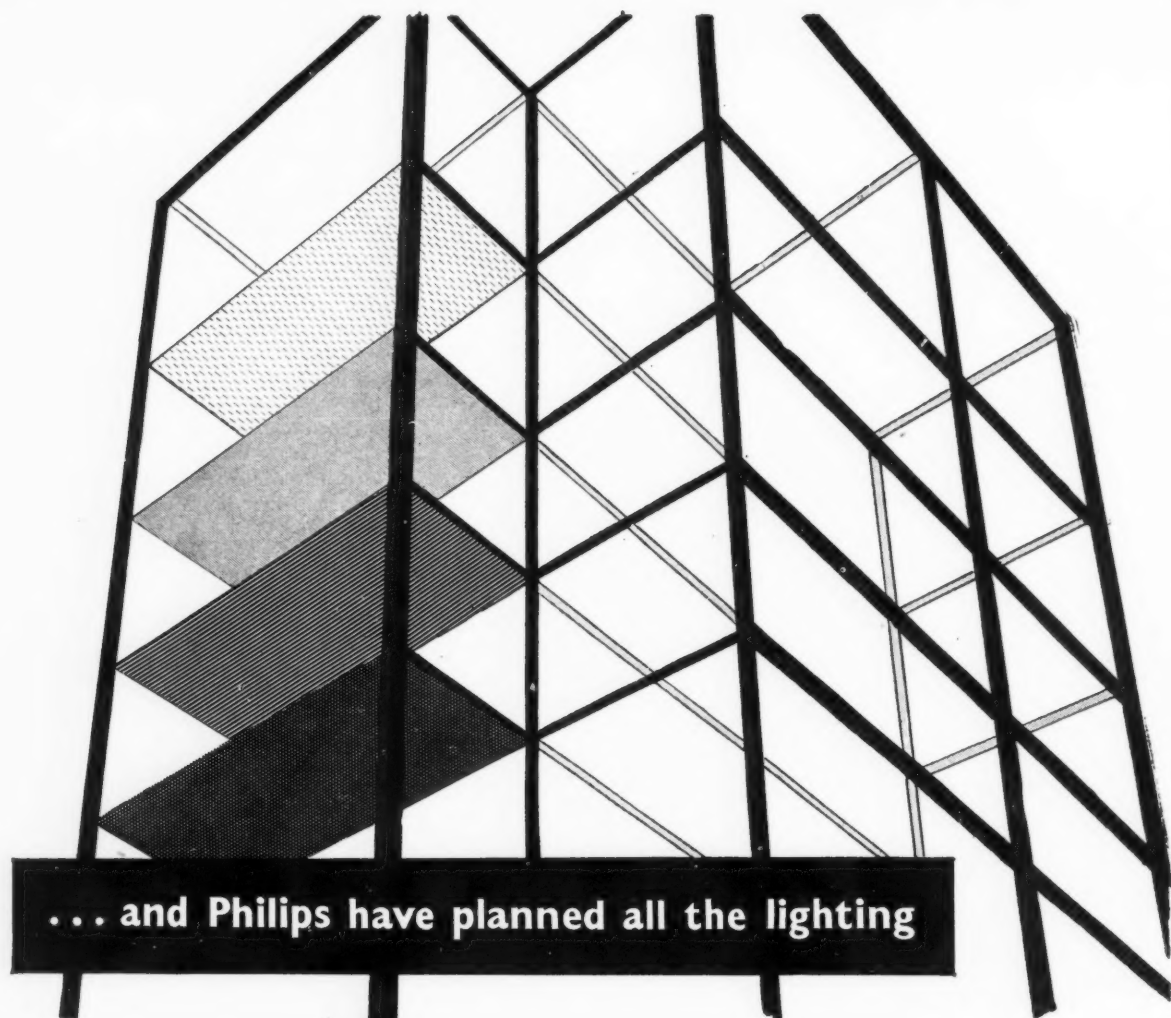
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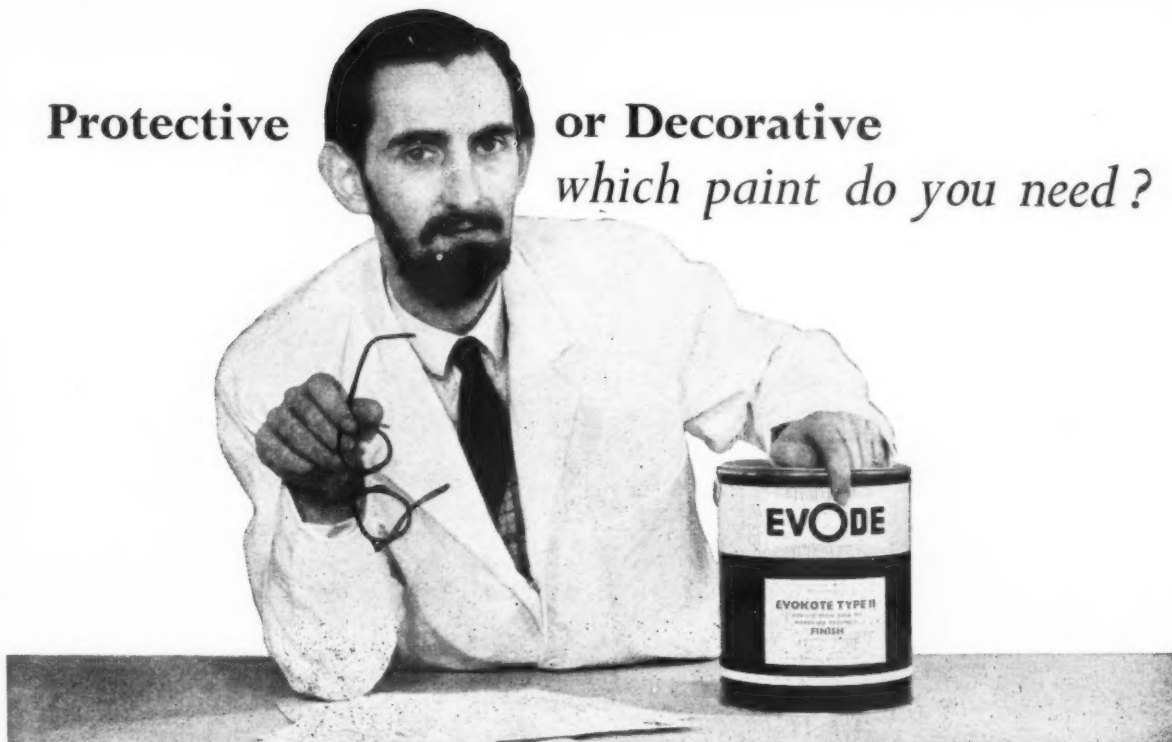
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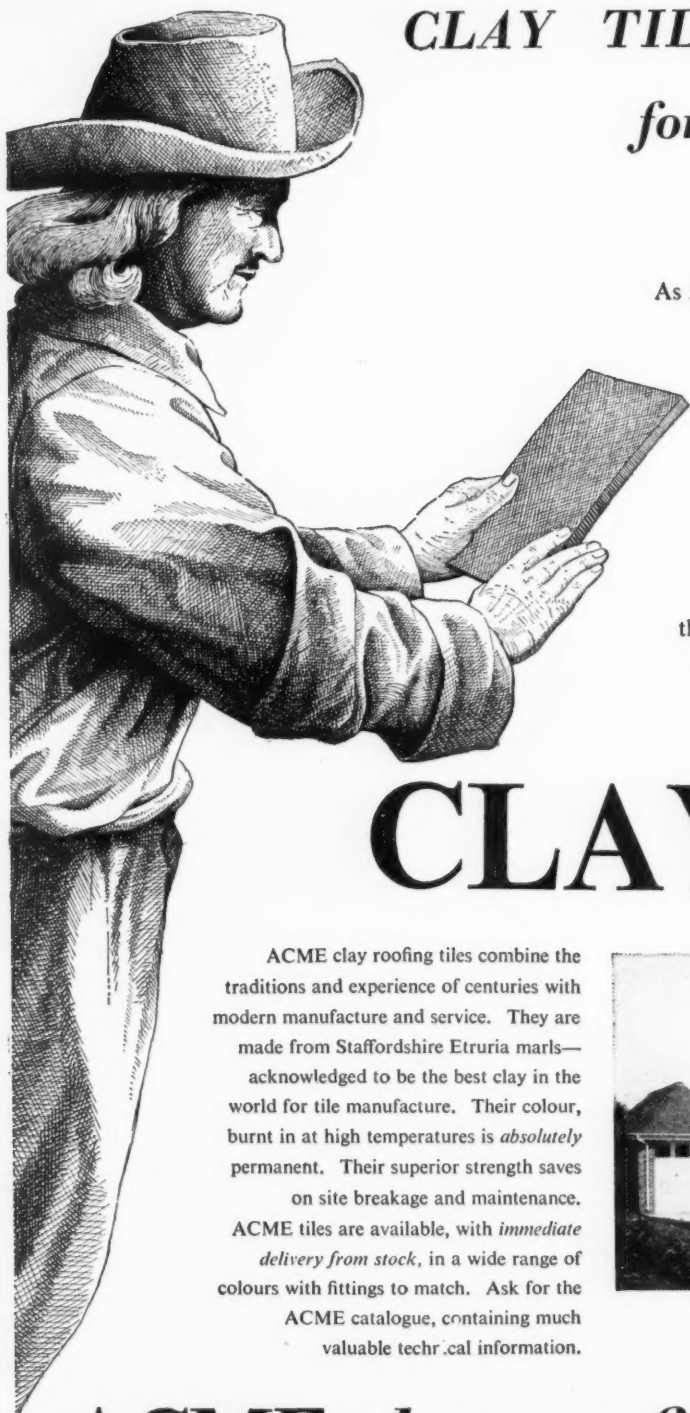
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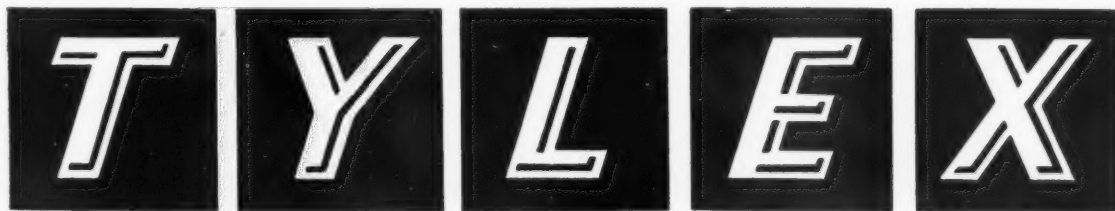
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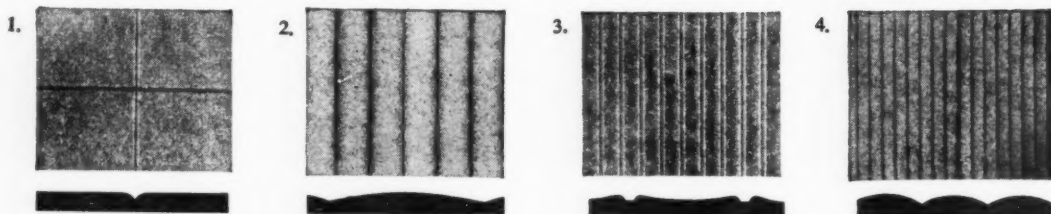
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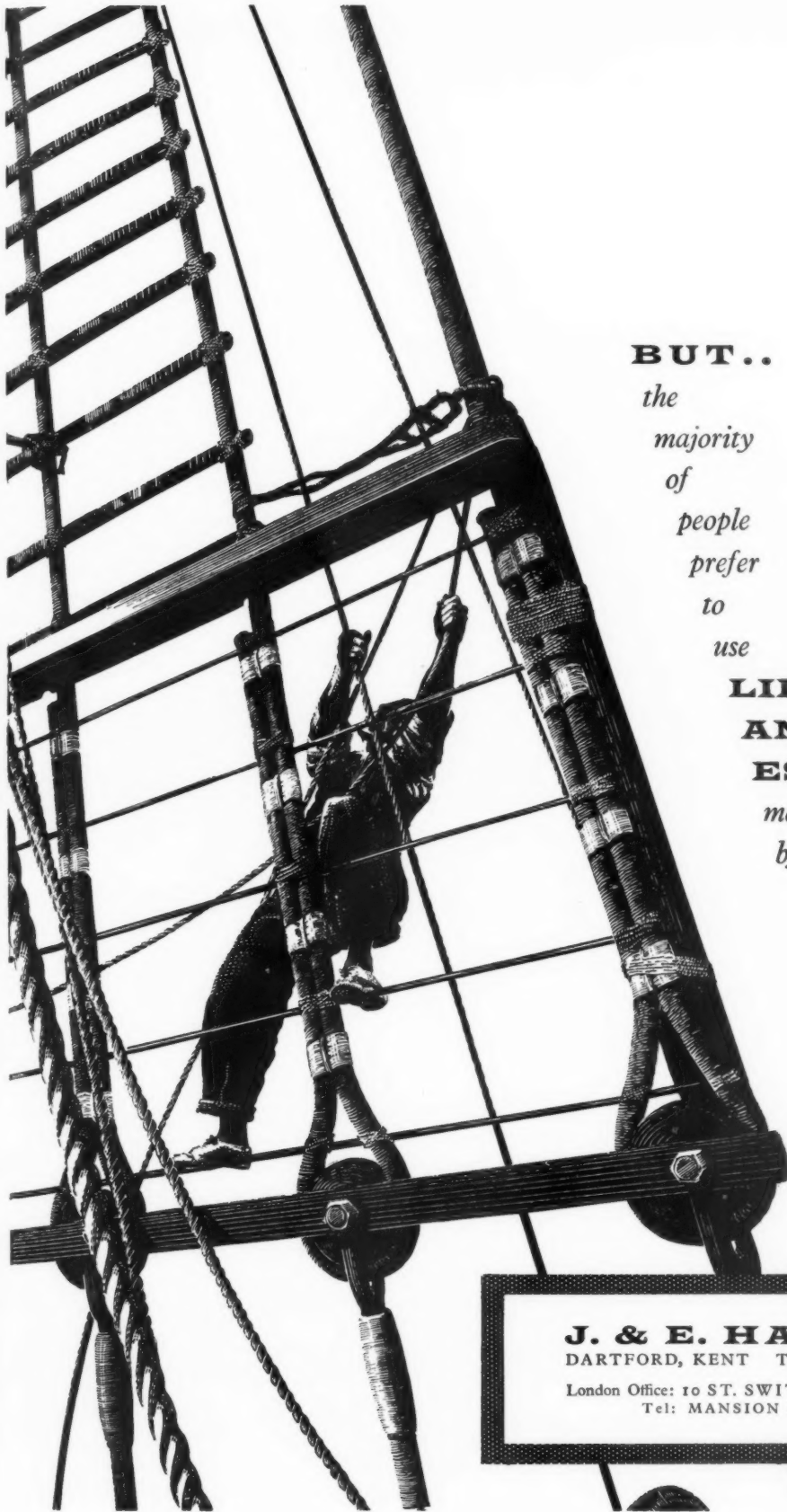
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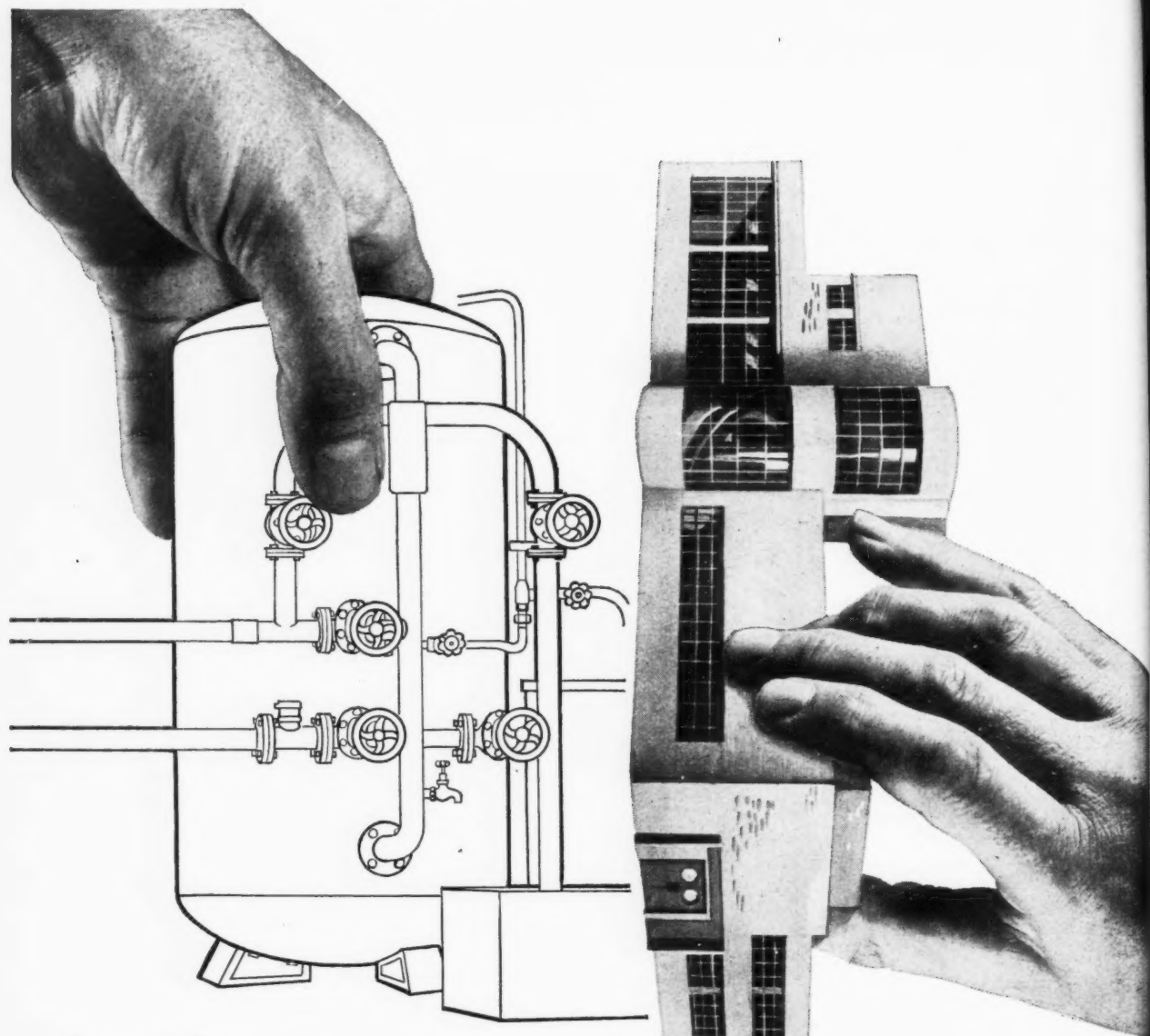
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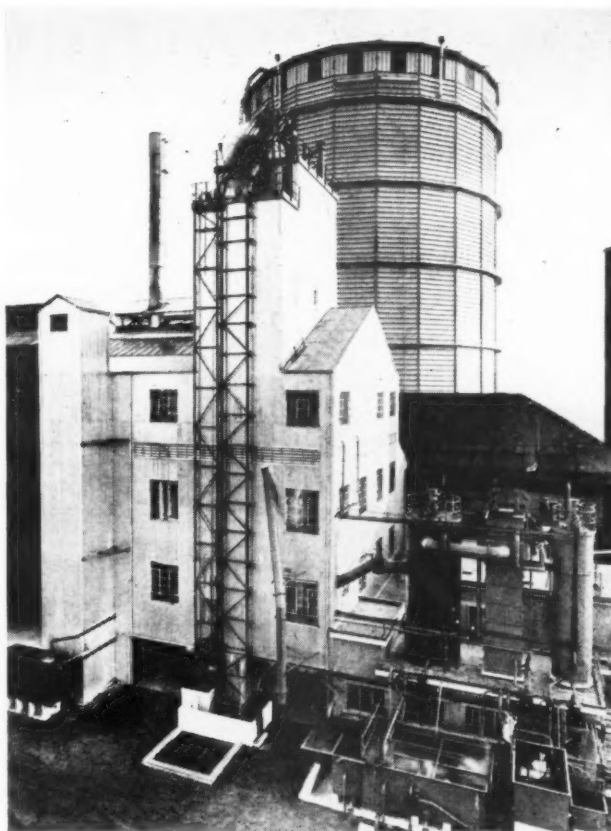
Corrugated aluminium sheet for gasworks

The Complete Gasification Plant at Kensal Green, constructed for the North Thames Gas Board by Woodall-Duckham Construction Co. Ltd., is the first installation in this country to incorporate the Gas Integral system.

For the entire cladding and roofing of the building the roofing contractors, Freeman Morrison Ltd. of London, Newcastle and Liverpool, used 'Rigidal' corrugated aluminium sheeting.

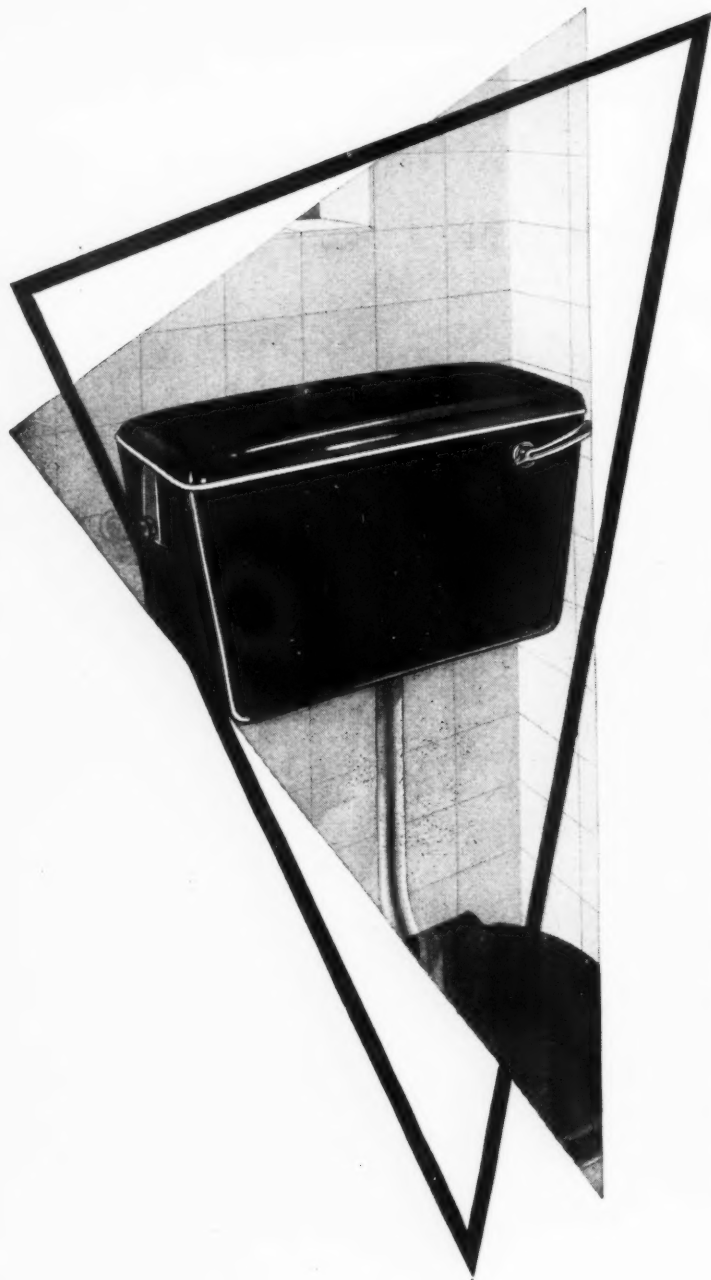
'Rigidal' offers important advantages for industrial installations of this type. It is highly resistant to the action of corrosive vapours and gases and therefore has a long life, even in the most polluted atmosphere. It also retains its clean appearance and needs no painting, so that maintenance is reduced to a minimum.

*Photograph by courtesy of
The North Thames Gas Board and
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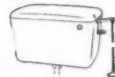
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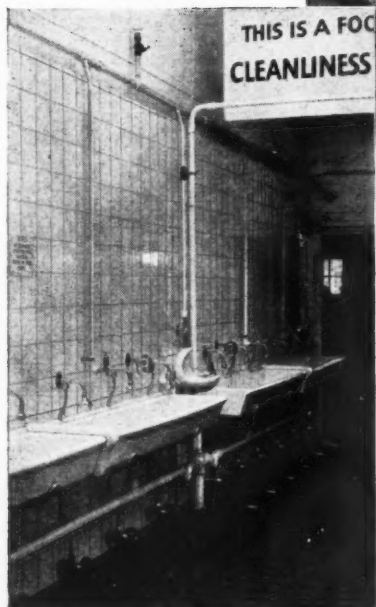
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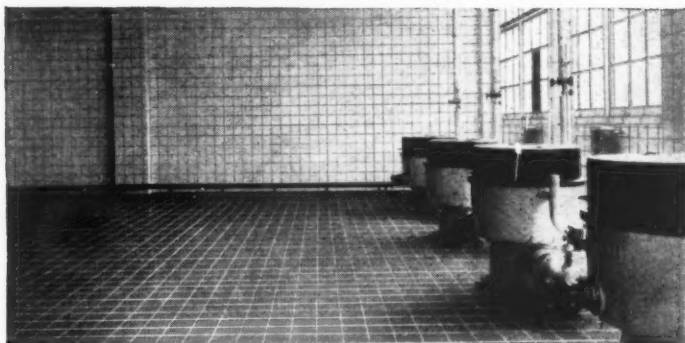
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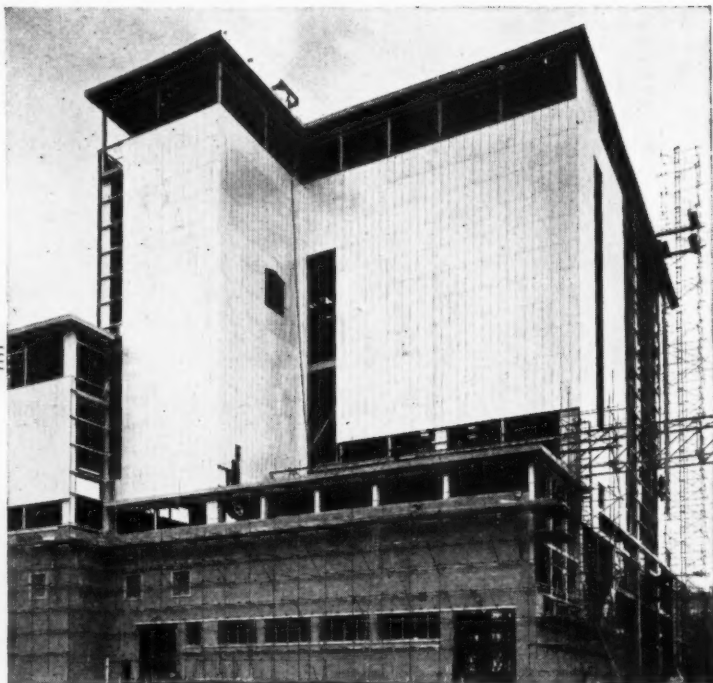
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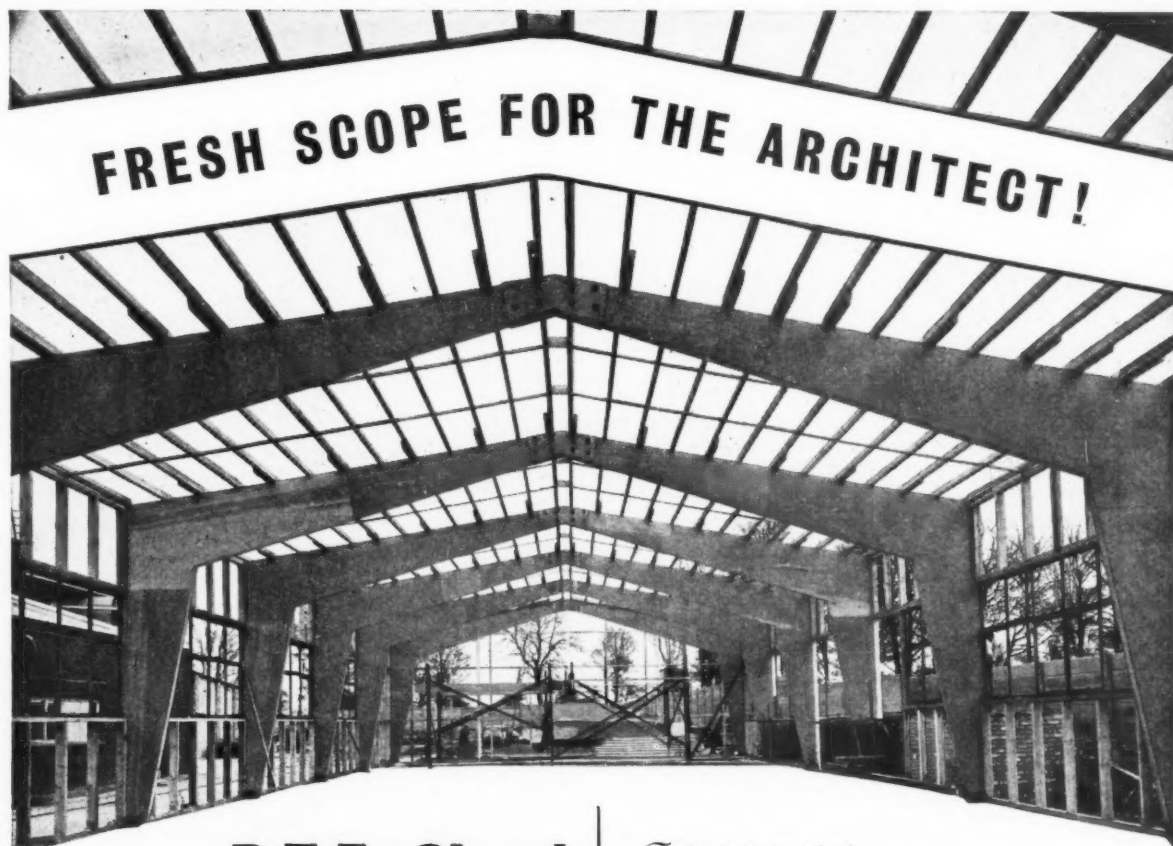
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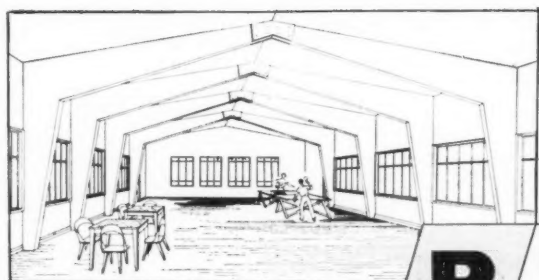
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The photograph shows a new canteen under construction designed by Messrs. Douglas White and Furniss, A/A.R.I.B.A., for A. H. Hunt (Capacitors) Ltd., of New Addington, Croydon (Contractors: R. W. Bowman Ltd.). The rigid frames are three-pin Tudor Arch design in stressed skin plywood and glued laminated timber construction. The canteen is 37 ft. wide x 100 ft. long with arches at 16 ft. 8 in. centres.

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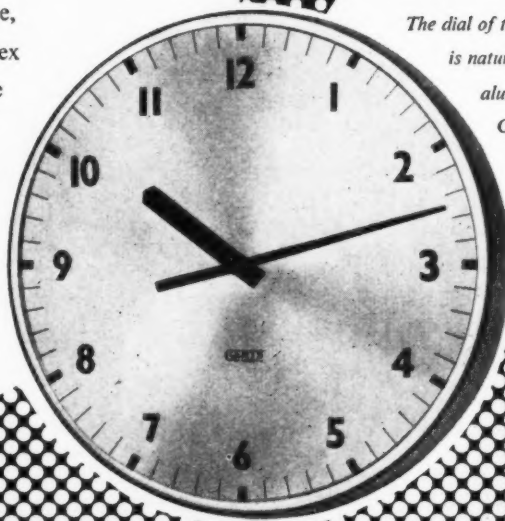
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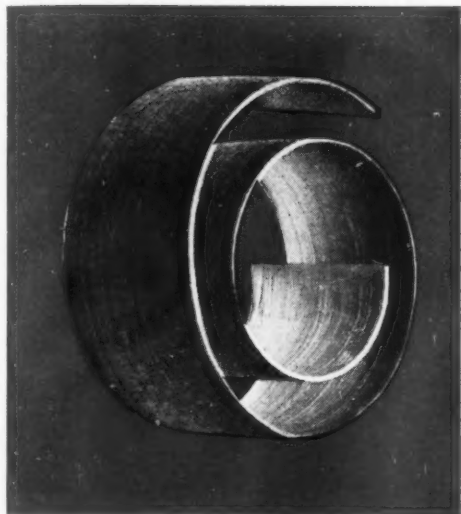
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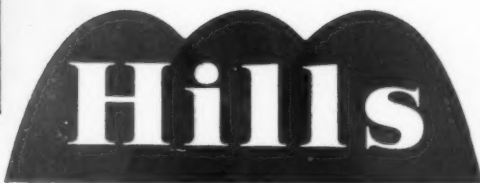
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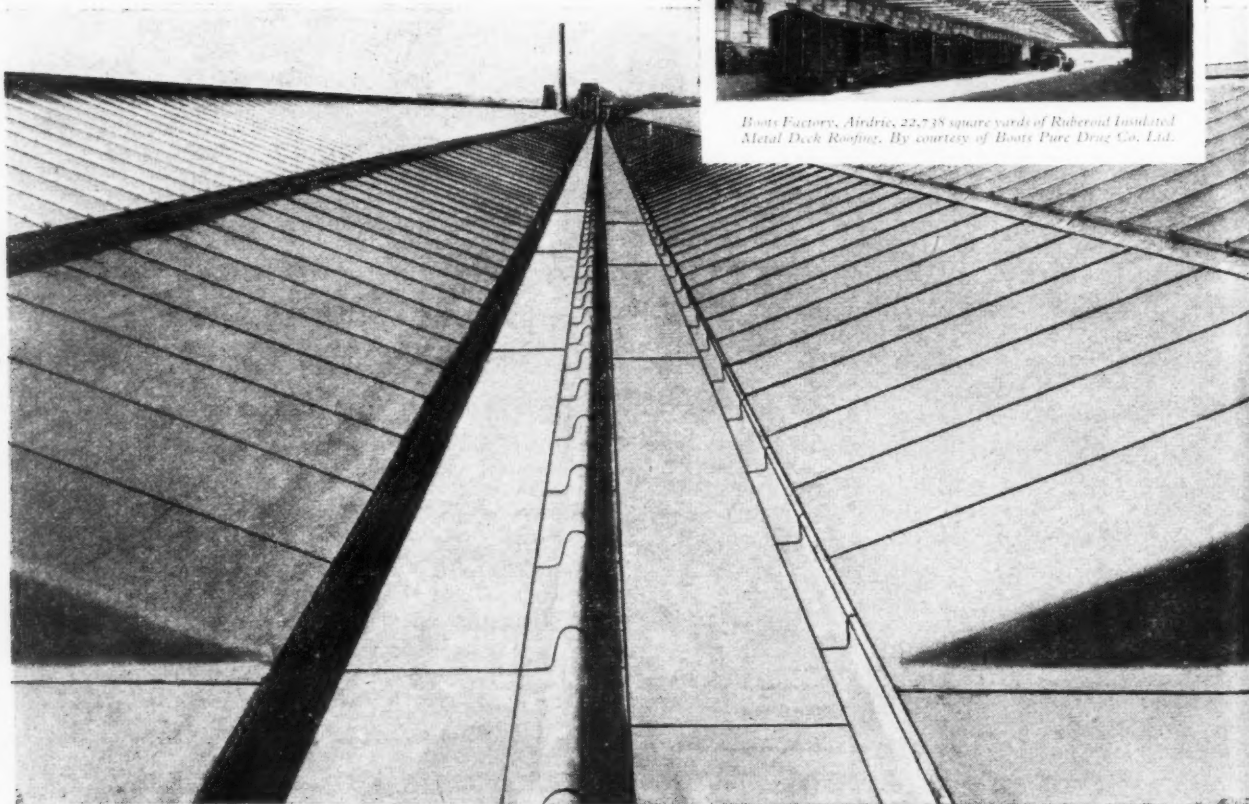
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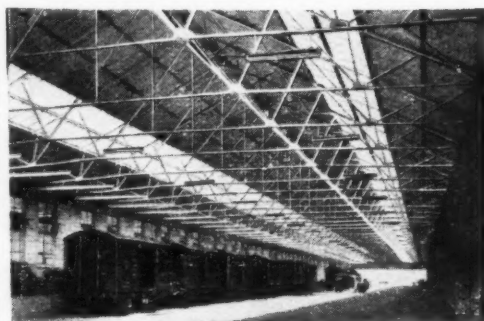
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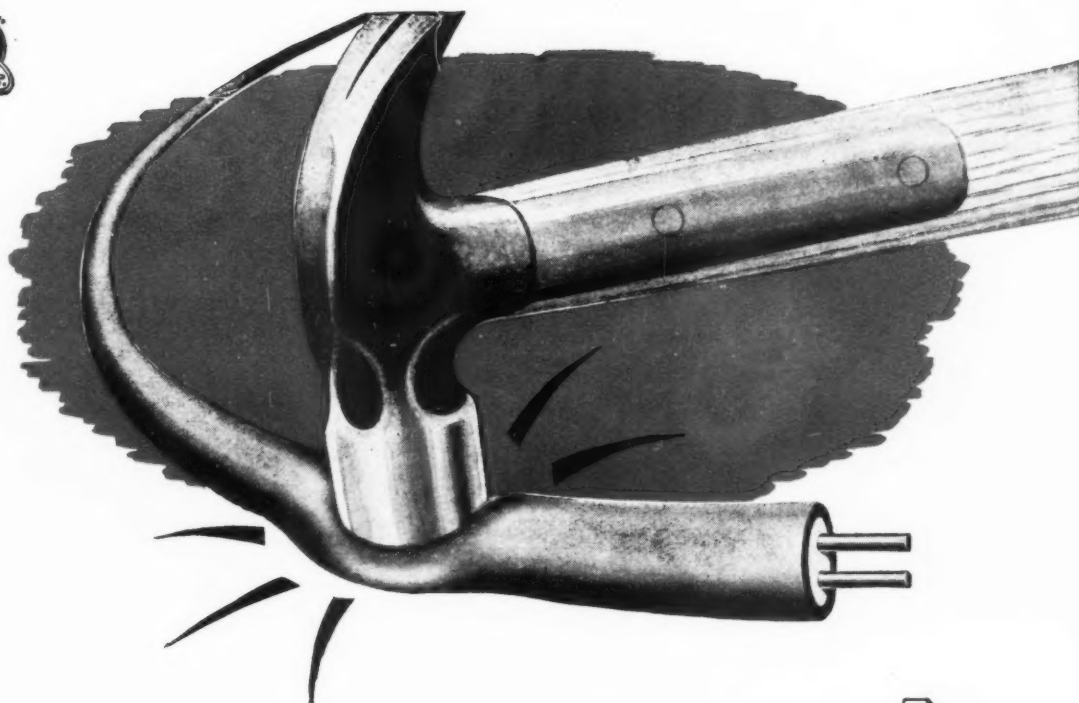
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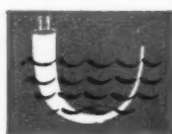
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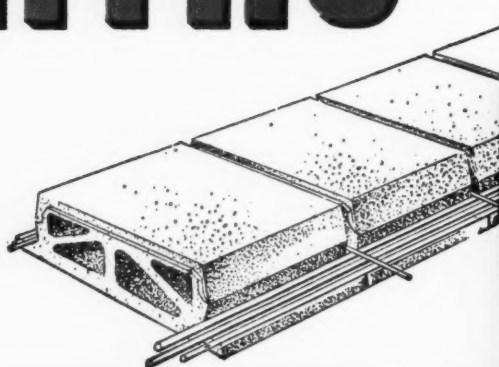


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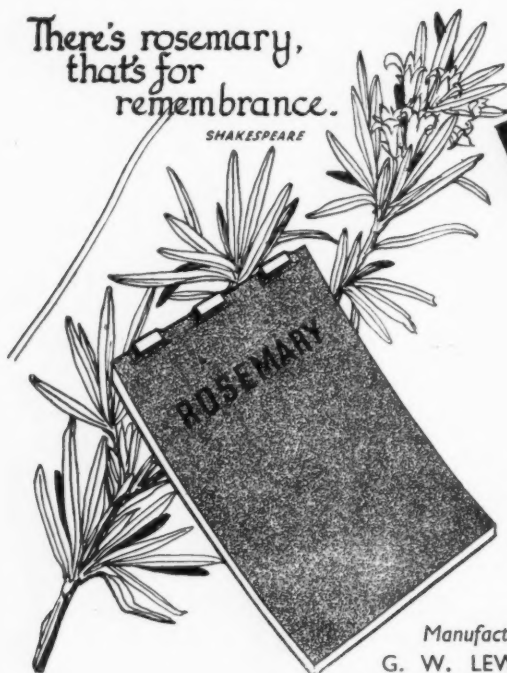
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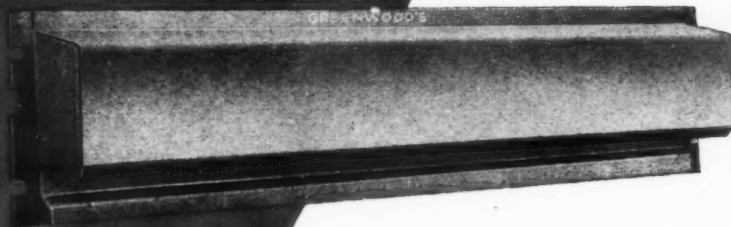
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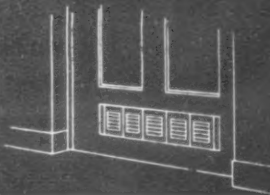
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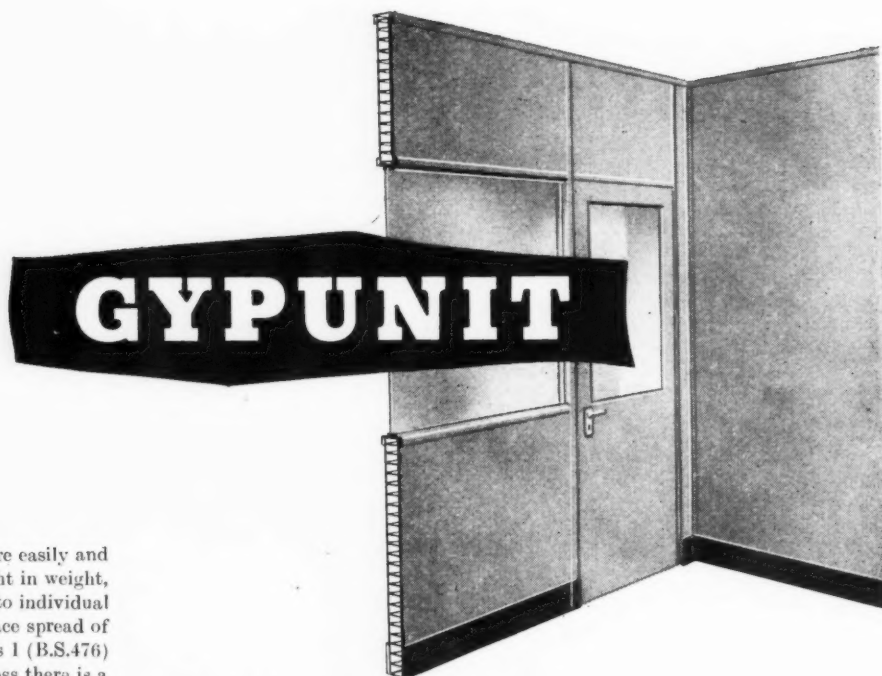
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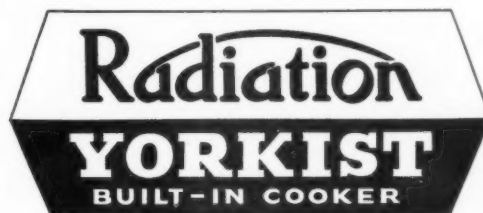
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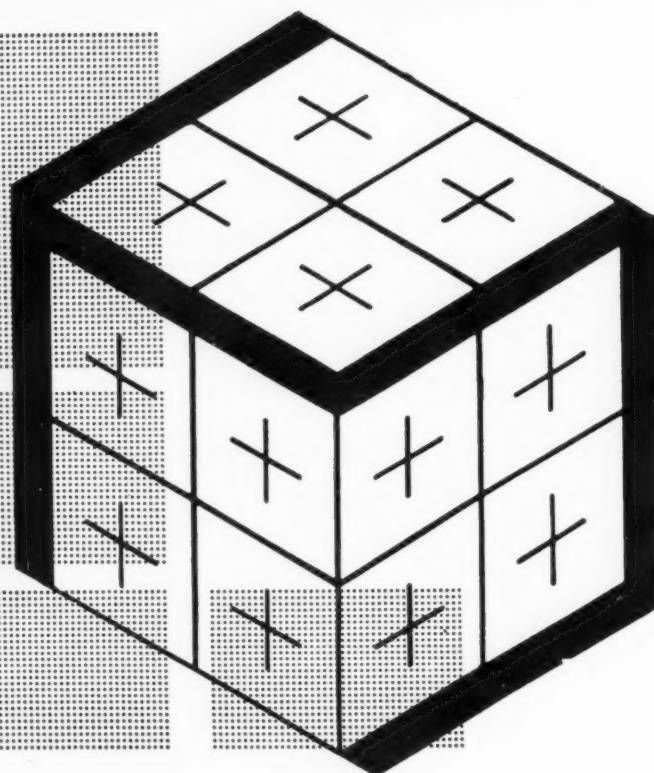
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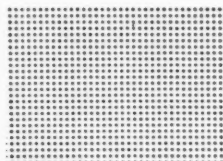


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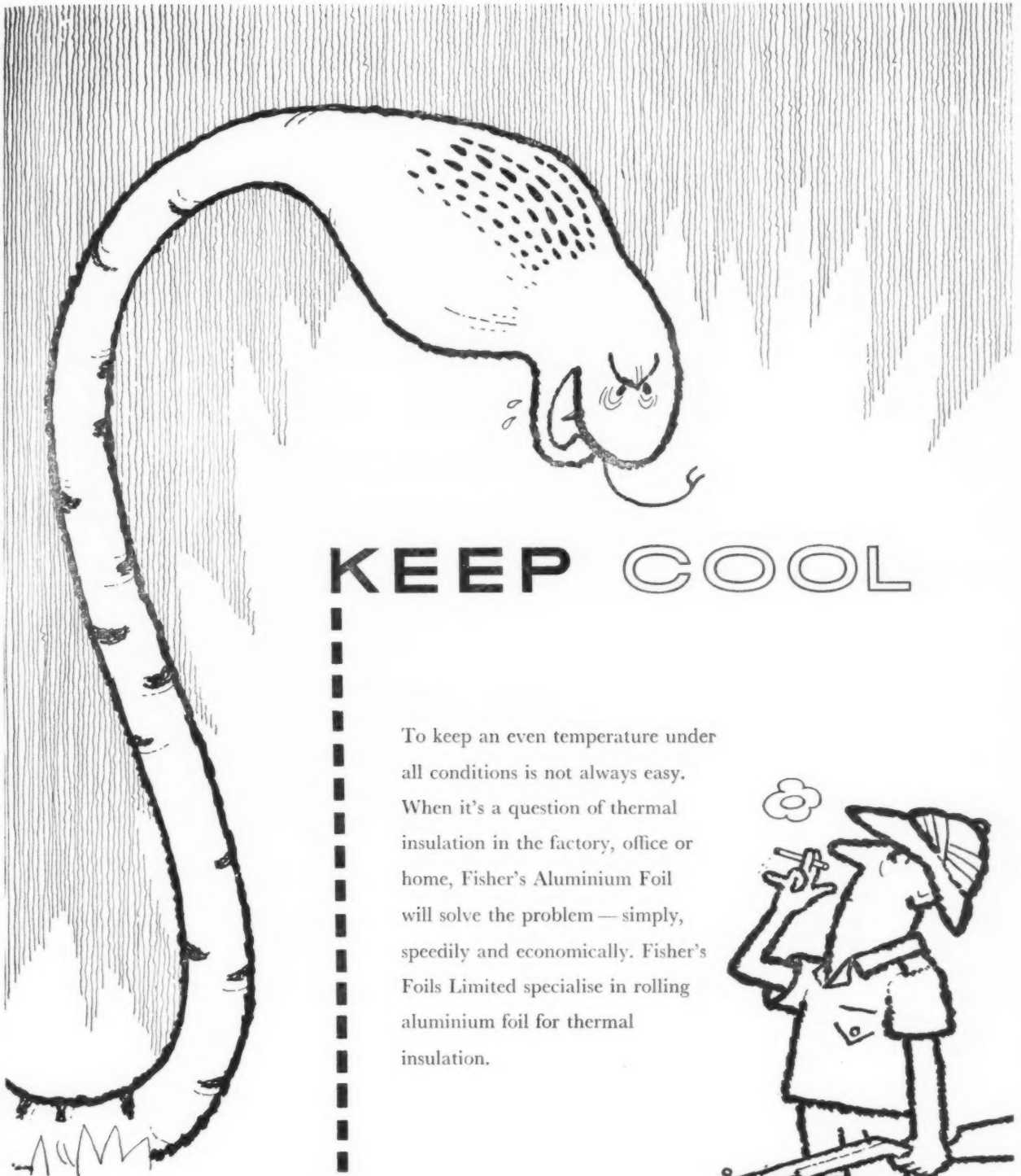


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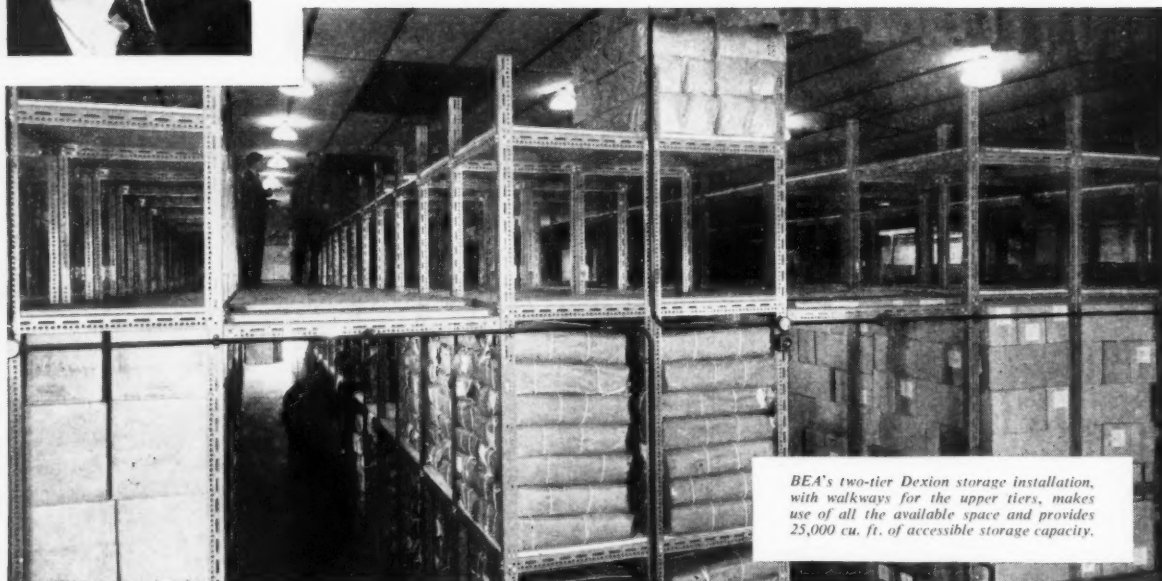
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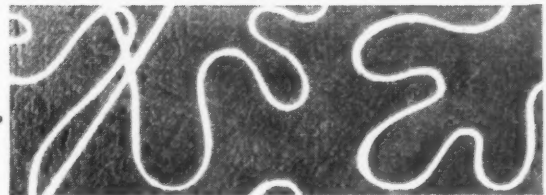
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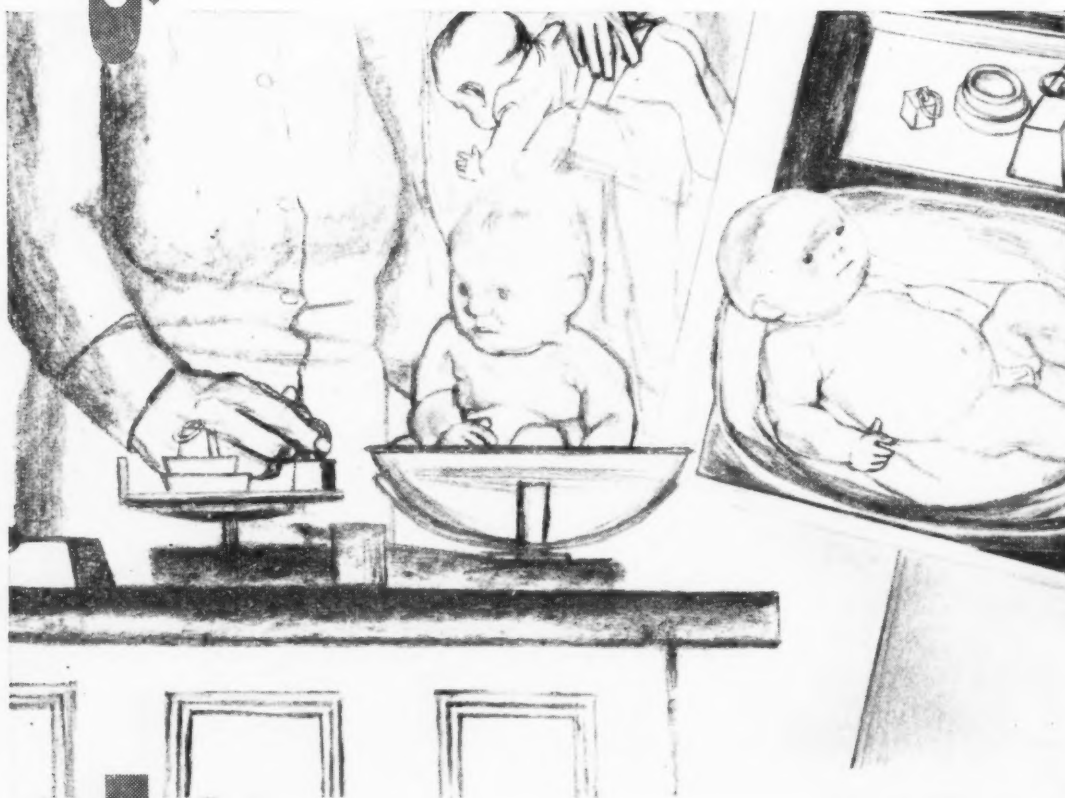


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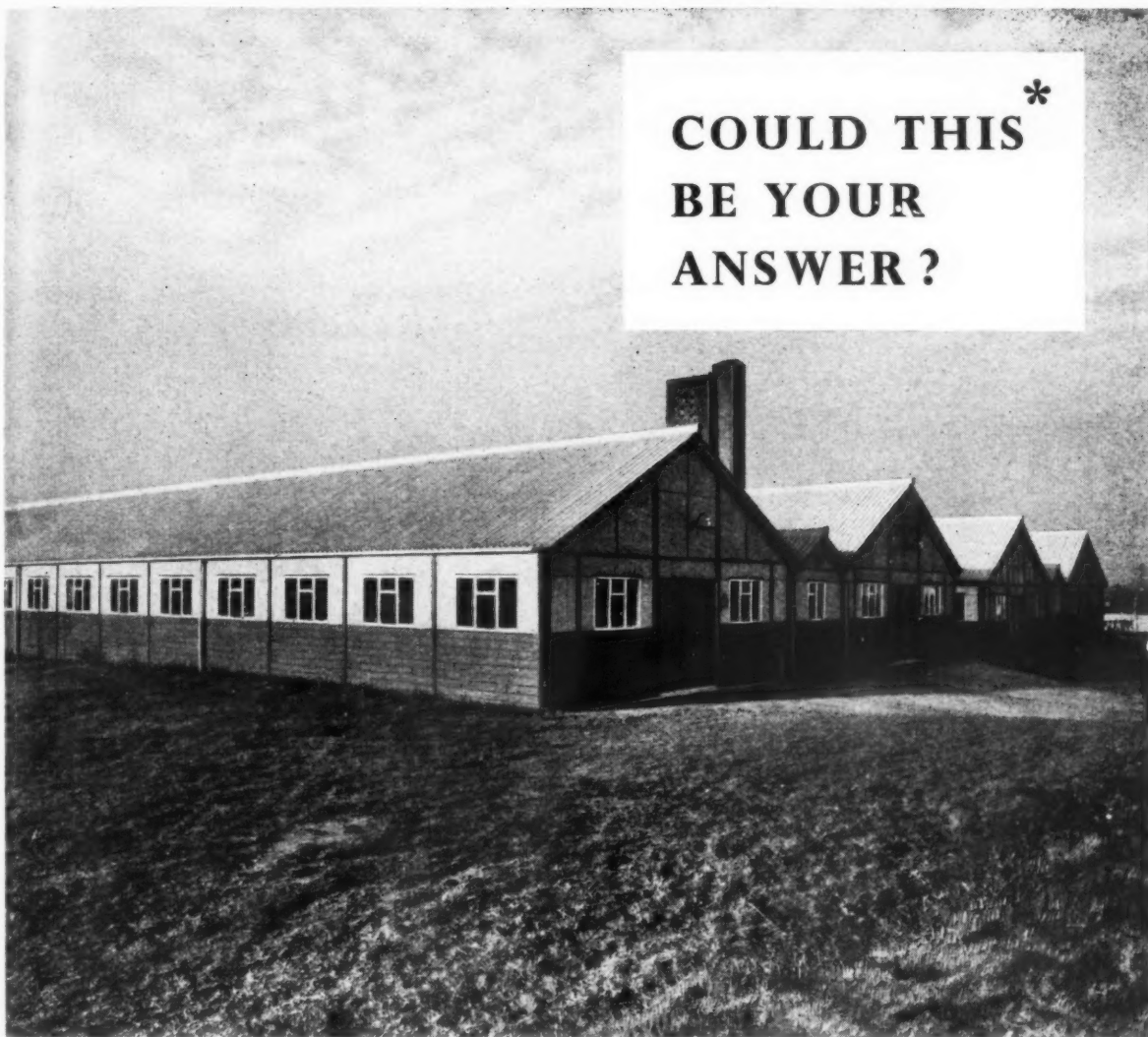
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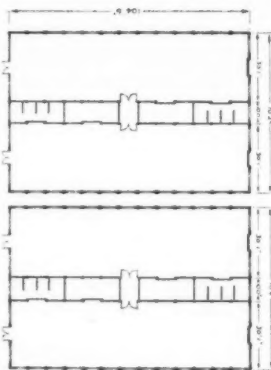
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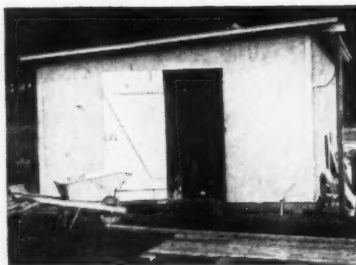
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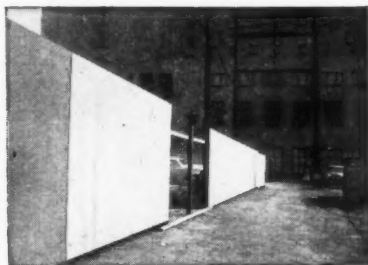
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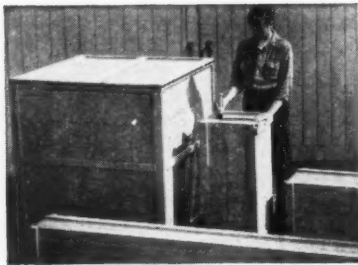


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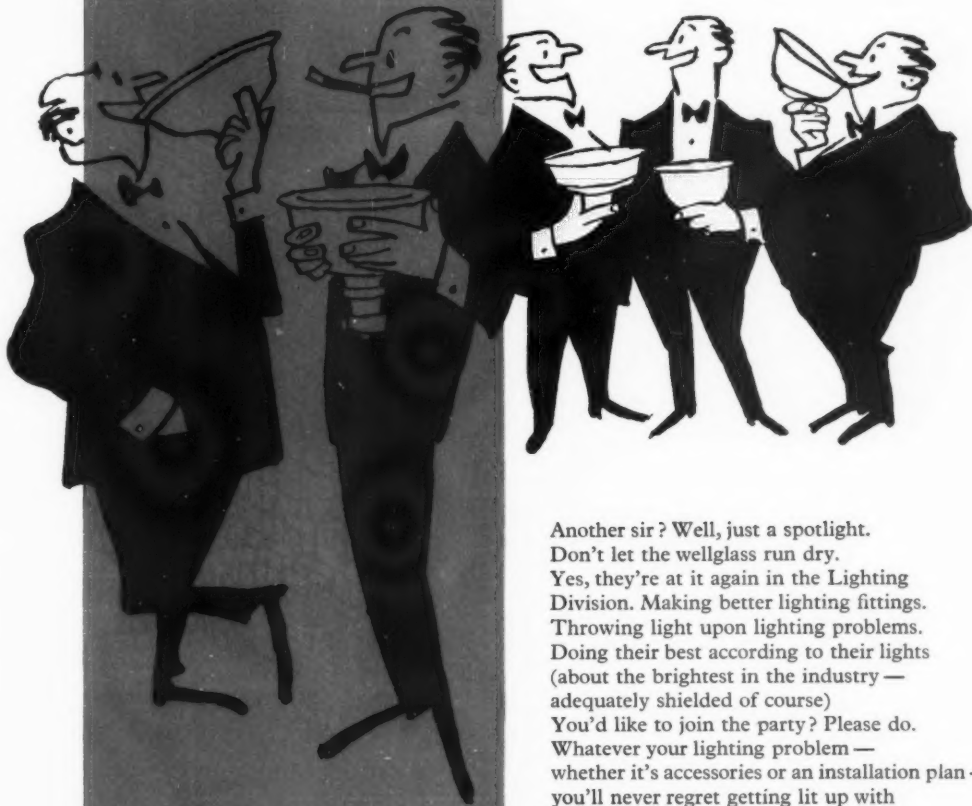
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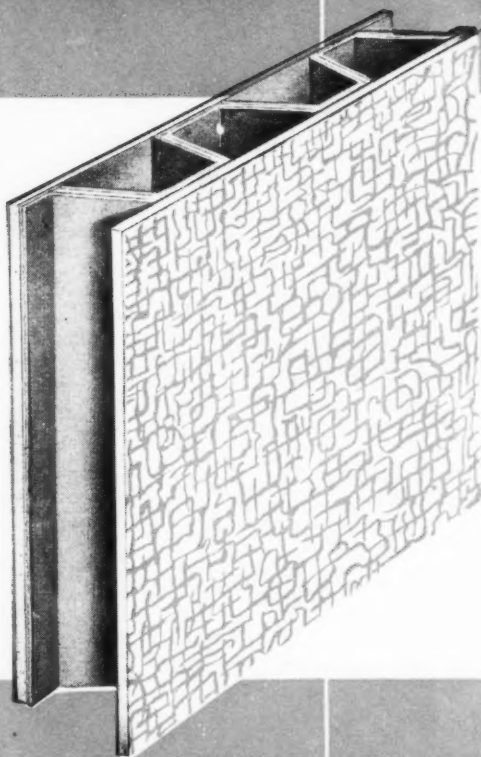
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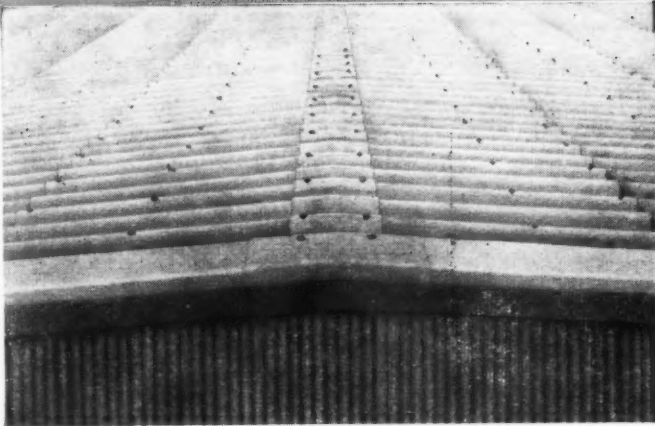
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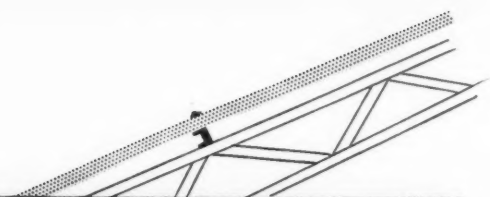
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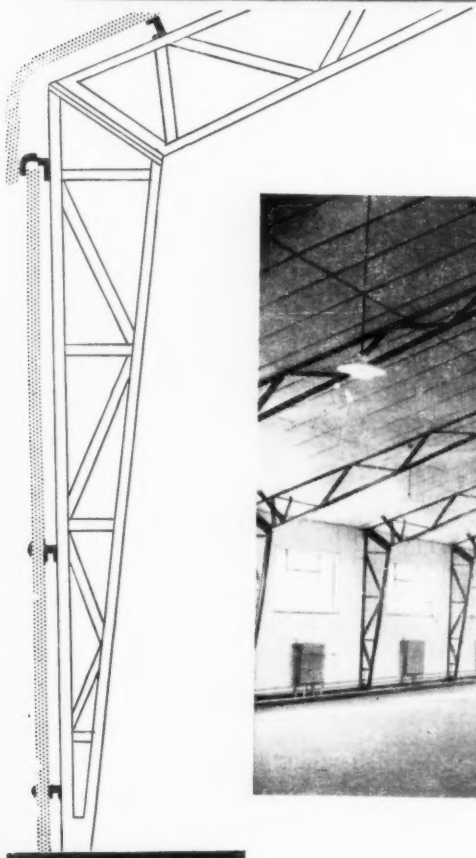
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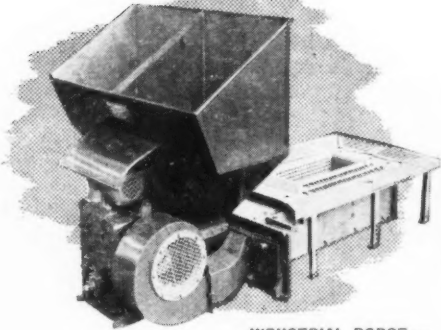
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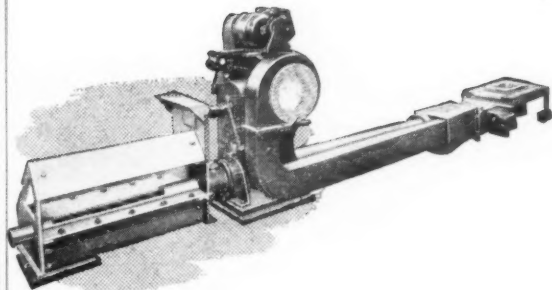
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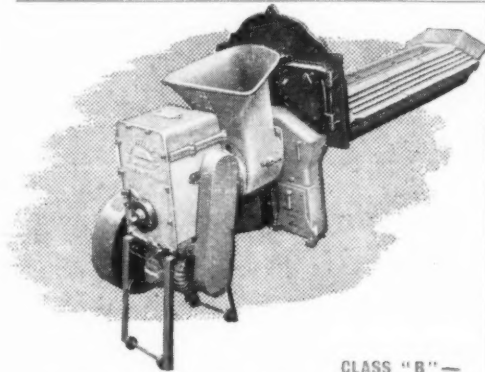
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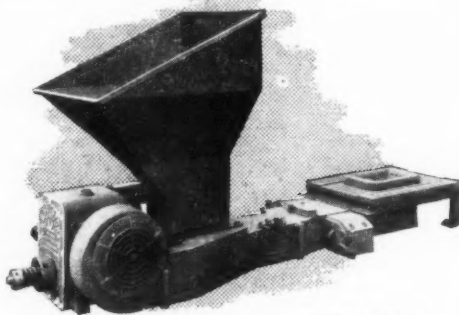
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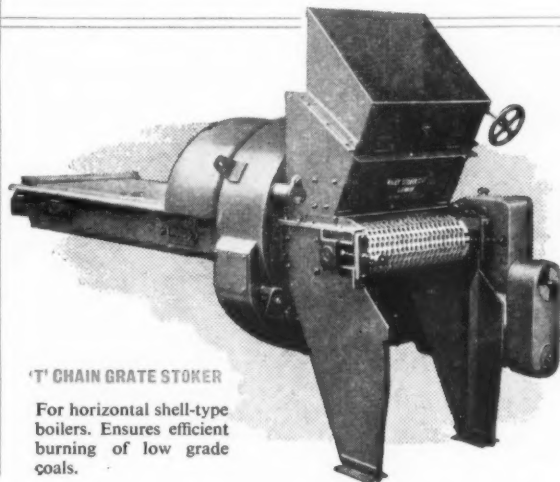
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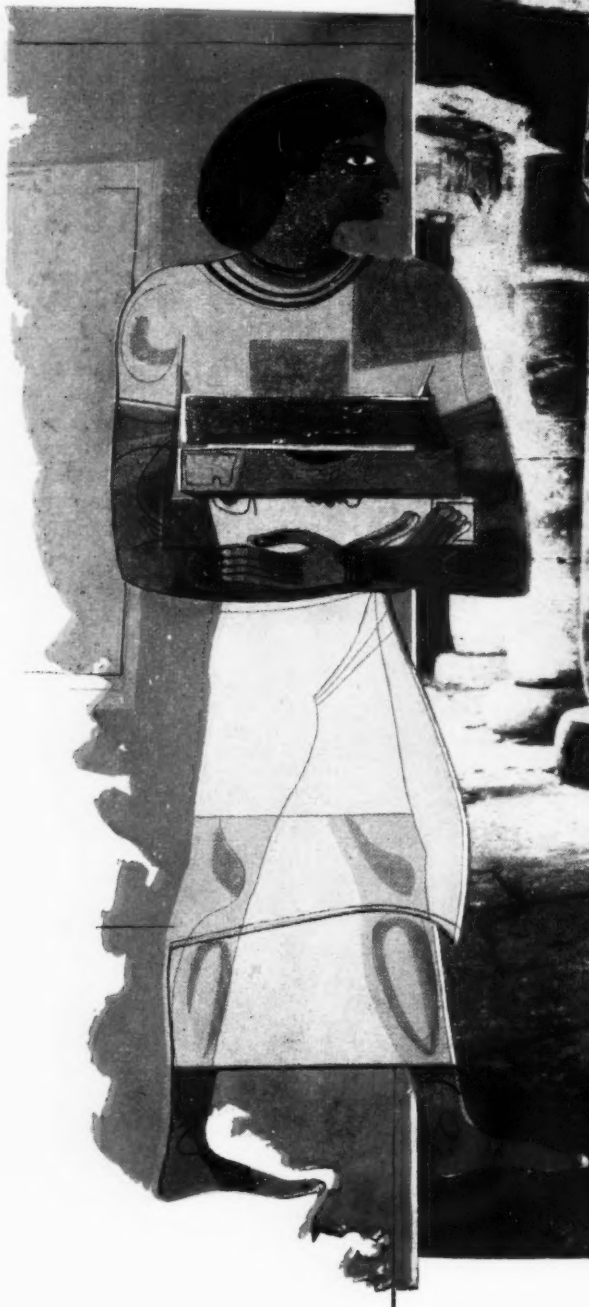
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*The second Hall of Pillars in
the funerary temple of King Sethos I
(B.C. 1312-1298), at Abydos.
Re-excavation of the ruins in 1859
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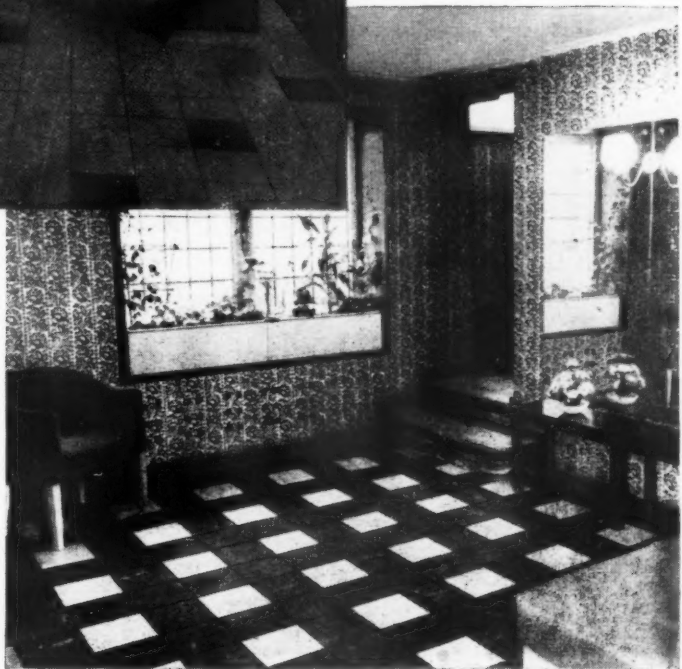
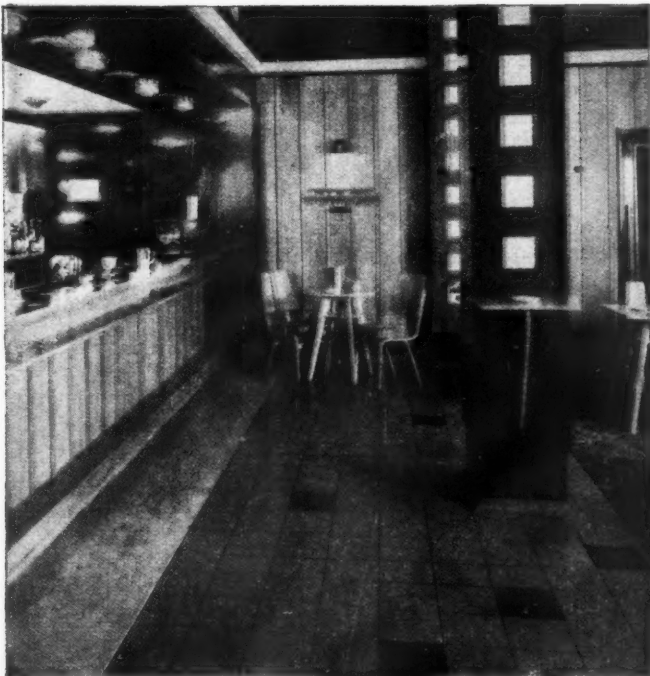


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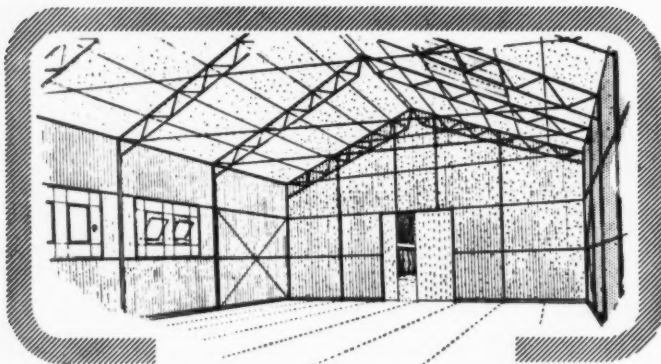
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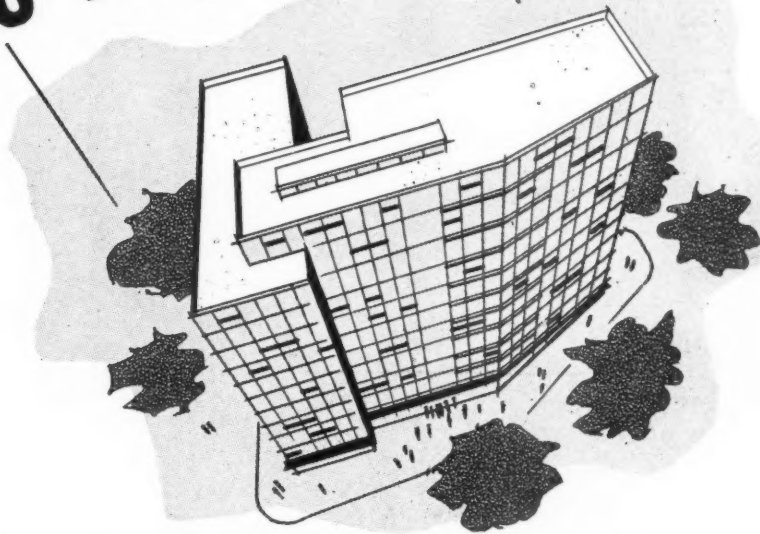
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CRITTALL ALUMINIUM CASEMENTS

This illustration shows the new offices
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Architects: Mence and Moore, A. L.R.I.B.A. The building is fitted with
CRITTALL ALUMINIUM CASEMENTS, DOORS AND SUNBREAKERS



Not every new building poses new problems in the design or construction of windows, but there is a special regard at Crittalls for those that do. It is in tackling the new, the unusual—and the almost impossible—that Crittalls perform an essential part of their service in being better able to provide the better windows for the better buildings for tomorrow.

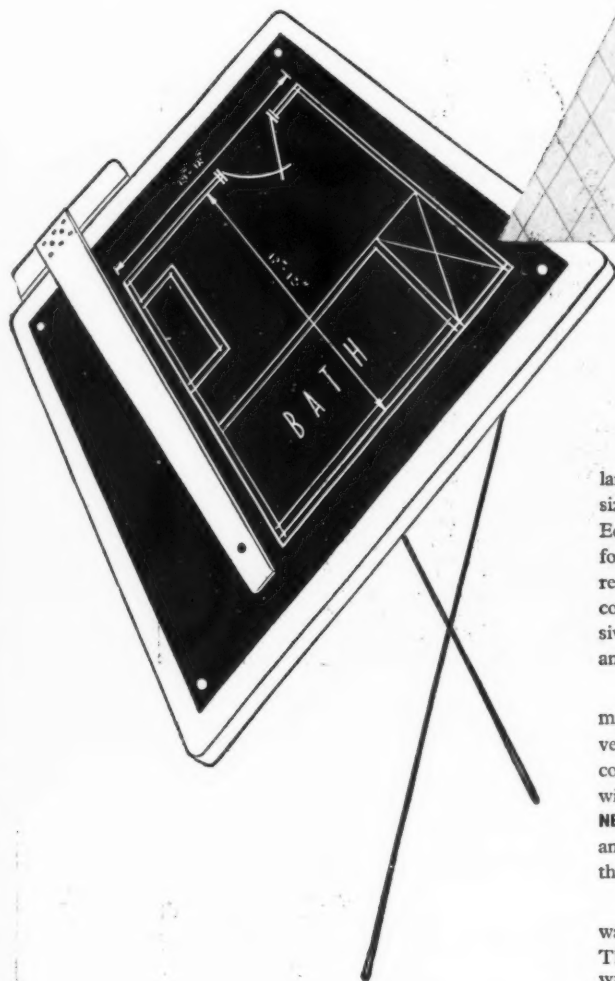
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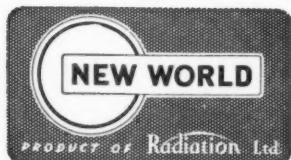
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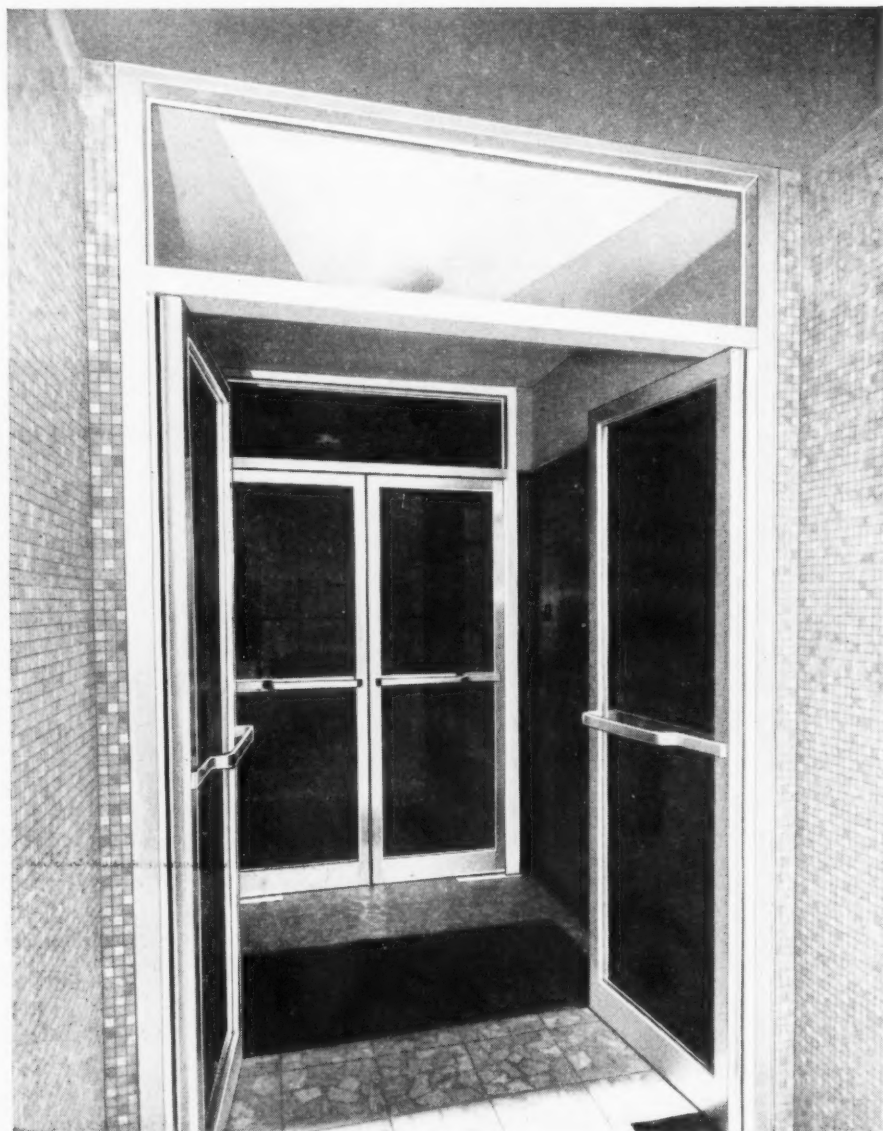
NEW WORLD Storage Water Heaters provide hot water at the same temperature, Summer and Winter alike. They can normally be operated on the existing Gas and Water Services and require a minimum of maintenance.

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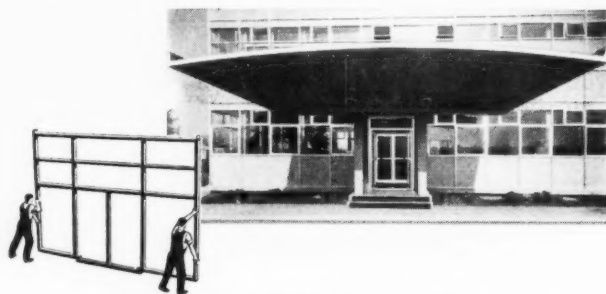
AJAX Entrances are available in combinations of the above finishes, such as black frame with gold doors or gold frame with silver doors enriched with gold glazing mouldings.

Standard Entrances are supplied with doors hung to frames and with furniture and springs fitted, ready for installation and are extremely easy to fix. All fixings are secret.

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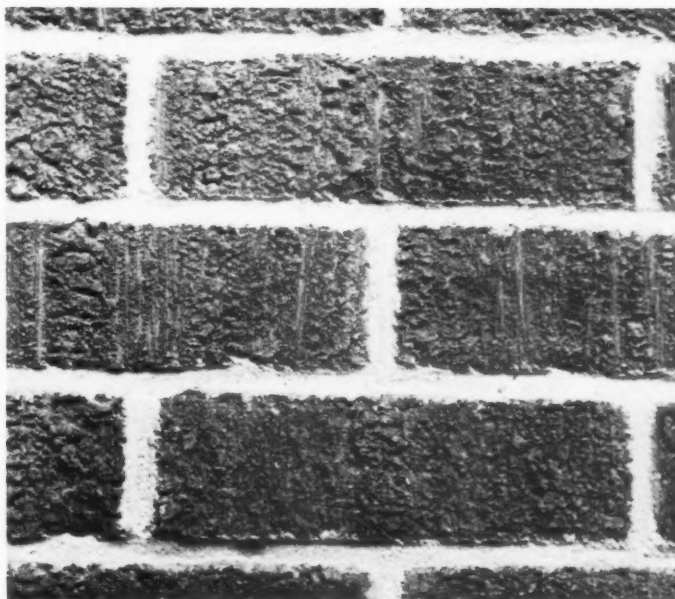
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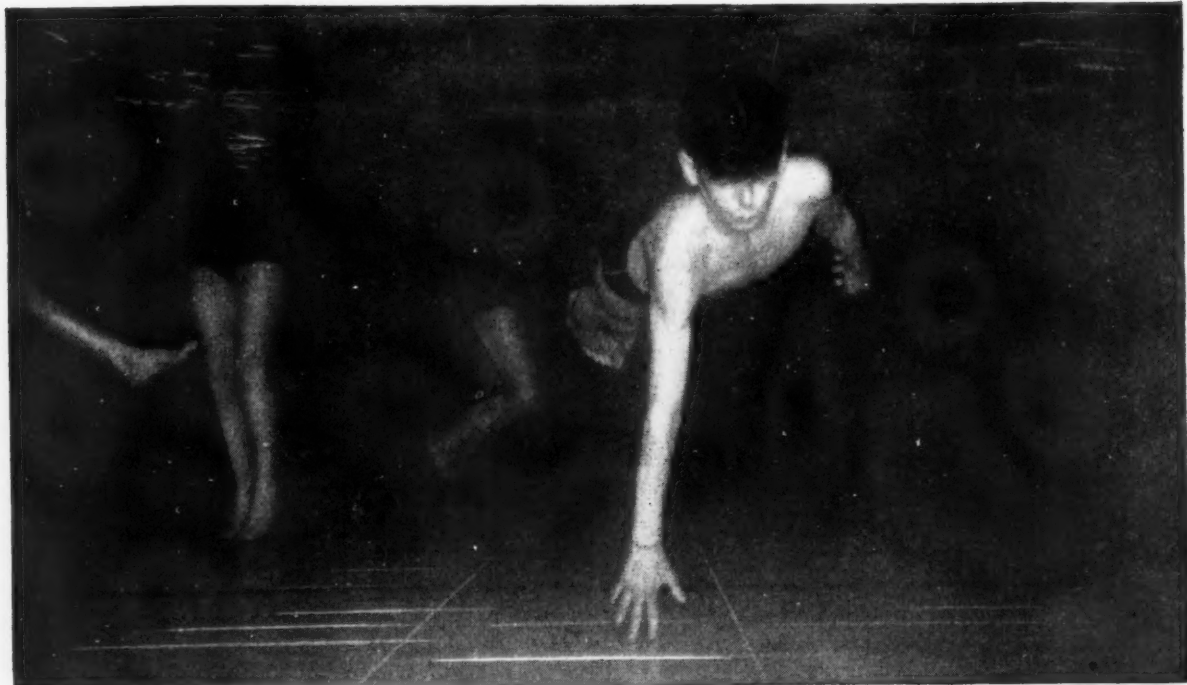
WILLIAMS & WILLIAMS

NEWS SHEET

- a. Williams & Williams 'Wallspan' along the south and east sides of the pool—the infilling is maize and obscured 'Plyglass' and clear glass.
- b. The outside of the 'Wallspan' curtain wall is kept in new condition by frequent washing down—easily carried out from an aluminium ladder running along a monorail at roof level.
- c. BS.500 windows and purpose-made doors on the west elevation.
- d. A Williams & Williams sliding-folding window in aluminium serves as a removable screen between the first floor restaurant and a private gallery at the north end of the pool.
- e. The plant room (from which the photograph through the underwater window was taken) has a 140 ft. run of Aluminex Patent Glazing in the roof... and Standard Industrial Sash to provide light, airy, working conditions for the engineers and maintenance staff.

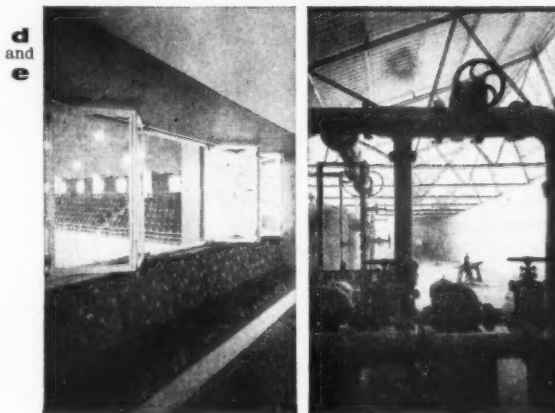
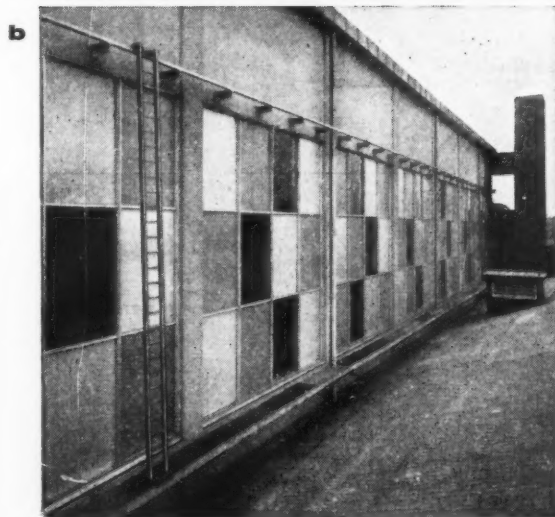
HORNCHURCH (ESSEX) U.D.C.

takes the plunge with Wallspan



New swimming pool for Hornchurch Urban District Council.
Engineer and Surveyor:—Vincent Williams, B.Sc., A.M.I.C.E., M.I.M.U.E.
Chief Architectural Assistant:—D. Percy, A.R.I.B.A.
Contractors for swimming pool:—W. & C. French Ltd.

This photograph was taken through a Williams & Williams window—one of ten made specially for this contract. The rather intricate bronze waterproof sections were designed by us in collaboration with the architect; they are glazed with $\frac{3}{4}$ " plate glass. Through them instructors can watch the underwater prowess of their pupils. Alternatively, the windows can be fitted up to provide special lighting effects for galas. Although perhaps the most exotic item, these windows are a relatively unimportant part of Williams & Williams' contribution to this new pool—which, incidentally, is the first to be completed in England since the War.



Coming to the surface, all is light and colour. Long ranges of 'Wallspan' span two sides. An air-conditioning plant is installed so that no opening lights are needed.

'Wallspan' is also used to clad the front of the building—the north elevation—comprising offices on the ground floor and a restaurant/club room above. Here the infilling is blue 'Plyglass' with BS.990 'Z' Range and aluminium sliding folding windows to provide ventilation.

Fixed 'Z' lights in concrete subframes are installed along the back of the main balcony while a continuous run of 1' 8" module windows linked by tubular mullions gives light and air to the men's dressing rooms below it. The doors at the end of this elevation were purpose-made by Williams & Williams—other glazed doors and pressed steel door frames are used extensively elsewhere in the building.

Nearing its Majority!



This veteran piece of Aluminex roof glazing was installed at Deal Waterworks in 1938. The photograph you see was taken in 1949; the job was inspected in 1956. Throughout its life everything has been against it, from the salt, corrosive atmosphere to enemy shells from France. Nothing has ever been done to it (it was never painted to begin with) and it needs no attention now.

ALUMINEX

WILLIAMS & WILLIAMS

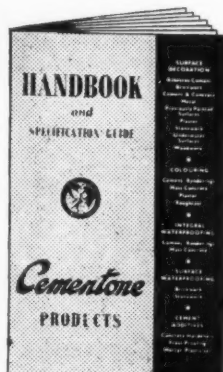
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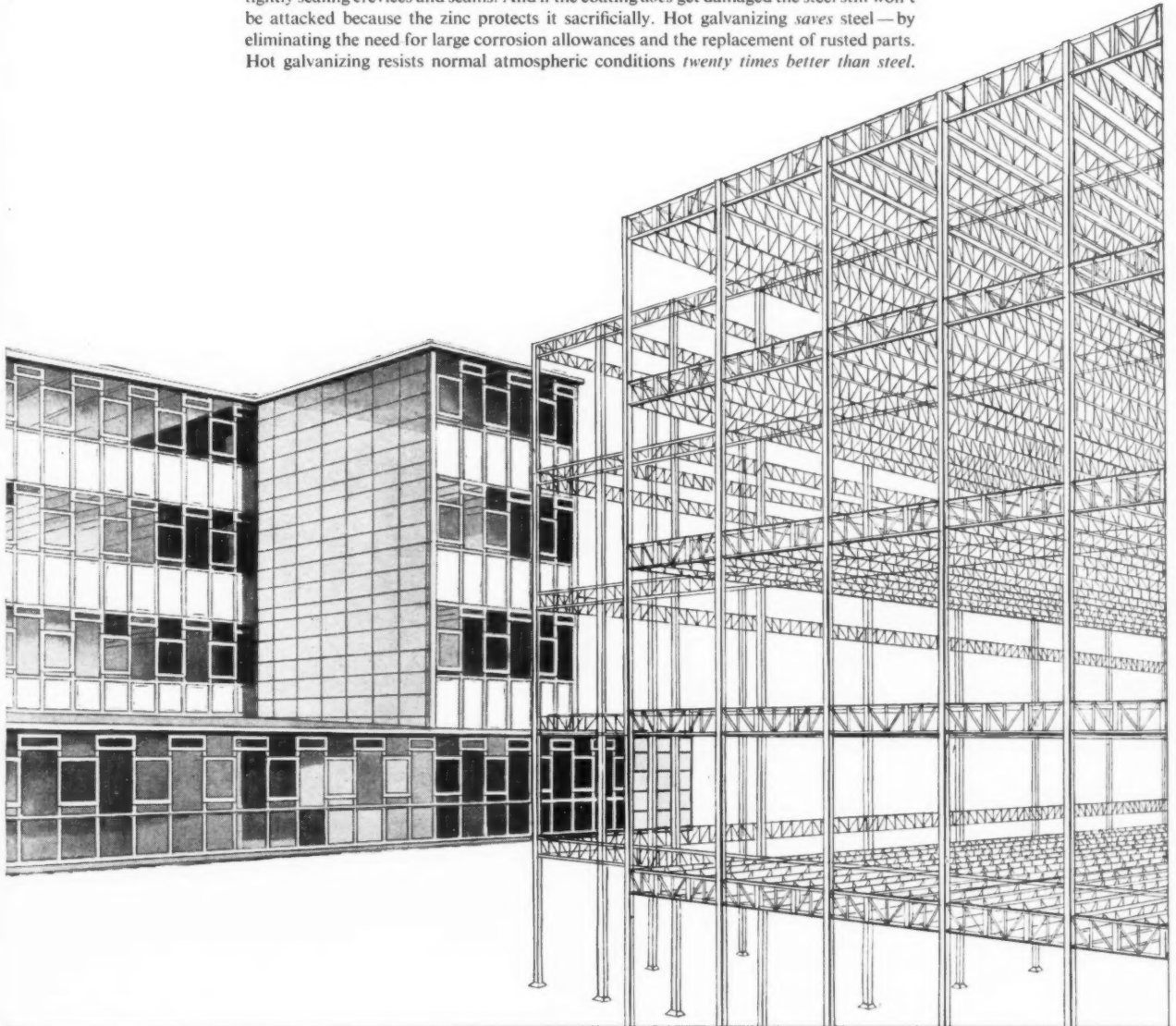
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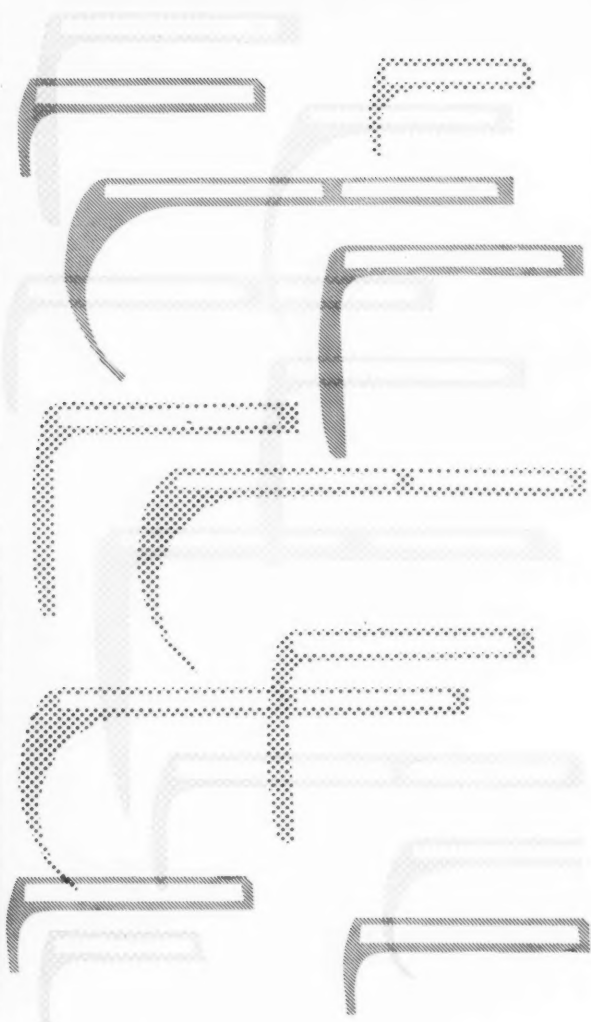


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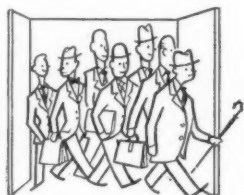
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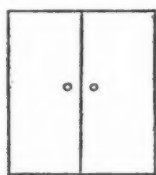
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THE ARCHITECTS' JOURNAL

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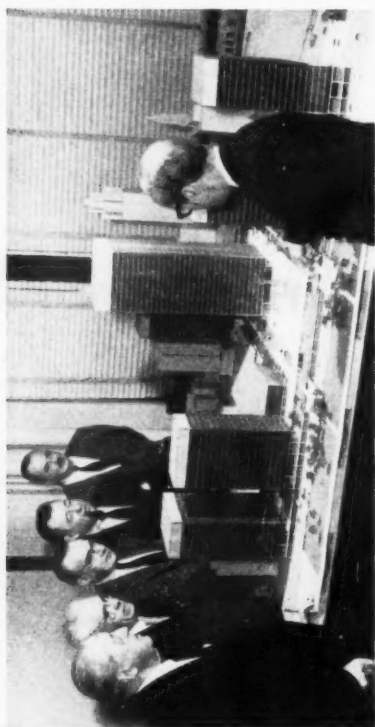
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NOT QUITE ARCHITECTURE

ANOTHER 'INCOMPARABLE MAX'

From "The Great Train Robbery" to "A Girl Can't Help It" the progressive force in the Cinema has been towards technical innovation. The original introvert conception has largely disappeared; it all started perhaps when Al Jolson first "sang" at the Empire or somewhere in the late 'twenties. Then the German and Russian phases and the best of Chaplin suddenly became very distant—after hearing "Al" the intense and the pessimistic prophesied an early death of the cinema, somewhat wrongly perhaps, as seen from now—but that is a point of view. A brash new amalgam of stage and screen took over. The "Ad. Men" kept insisting that "the Cinema had come of age," whatever that meant; today sex appears to have come of age, cleavage rules the Box Office and Jayne Mansfield rules the reels (incidentally, whatever happened to Marilyn Monroe?). Gradually the personal director is disappearing, the wider screen, ready-made stories and scripts and technical "know-how" have broken the small black and white rectangle; many directors adapt themselves, some pursue their lonely "personal" course and some, of course, die...

Max Ophüls pursued a "personal" lonely course, and has just died. Born just after the turn of the century he was a product of the early German cinema, that essentially "architectural" art form. His youthful circle included Von Hofmanstal, Stefan and Arnold Zweig, Hermann Bahr and Arthur Schnitzler, that brilliant if somewhat melancholic coterie dedicated to the Baroque qualities of the



Tintabulation in Chicago

"The Italian navigator has landed in the New World and the natives are friendly." With this cryptic telegram Enrico Fermi, the man who, in 1942, achieved the first self-sustaining chain reaction and thereby initiated the controlled release of nuclear energy, announced his discovery to Franklin D. Roosevelt. A competition for the design of a memorial pavilion to Fermi, to be sited as a focal point in the redevelopment of the Fort Dearborn area of Chicago, was announced last August by the Chicago Joint Civic Committee of Italian Americans and the Chicago Junior Association of Commerce and Industry. The winner of the competition, as announced in the JOURNAL of April 4, was Reginald C. Knight, of Florida, who won a first prize of 5,000 dollars. His design is shown left. The jury who made the award are shown above with the model of the proposed development of Fort Dearborn, designed by Skidmore Owings and Merrill, in which the Fermi Memorial is sited at the foot of the tall block. The jurors are, left to right, Mies van der Rohe, Pier Luigi Nervi, Lancelot Law Whyte, a London physicist, Gordon Bunshaft, John O. Merrill (professional advisor), and Jose Luis Sert. The competition conditions required: an exterior and interior space for exhibitions of science and art; an auditorium seating 300 for music, lectures and films, and facilities for car parking and servicing from below plaza level. The main objective of the competition was to procure a design for a pavilion which "united art and science." In the jury's view the majority of the 355 designs received (including 37 from England) failed because they were too large for the site. Knight's selected design leaves the site open at the pedestrian level, with all auditorium and covered exhibition space at the lower, traffic level. There is a basement for storage and services. The "unifying principle" of the design which so enthused the jury was the use of "vertical tubular bells which are so placed in three rows as to form a satisfactory composition, defining a space and relating it to the surrounding area." Reginald C. Knight has, until now, been little known. However, in the May number of the *Architectural Review* (titled "Machine-Made America" and edited by Ian McCallum), further of his designs will be shown.



dying Viennese scene. The young Ophüls caught and assimilated the virus with all its irony, cynicism and etiolated beauty, and for most of his comparatively short life was its captive. His films, mostly based upon the writings of "the circle" were literate, sophisticated and brilliantly endemic of the time and place—Vienna before the first World War. The scene, of course, has been bowdlerized almost out of existence—the ersatz *gemächlichkeit*, the inevitable court ball—Strauss!., but from time to time Ophüls would come up with a minor miracle of design, lighting, and as it always seemed, of acting.

*

Something of a "rogue director," he constantly clashed with the "Cine-moguls" (what would those boys do without those clashes!) his endemic stylized *métier* was frequently considered dated, this was possibly true, much of the early German influence was still there, visual imagery and lighting still had a predominant part in his work.

*

After making nearly fifty films in Germany and Austria Ophüls spent a year in Hollywood, where he made "Letter from an Unknown Woman" from the novel by Stefan Zweig. Somewhat reminiscent of his earlier "Liebelei," it was a beauty, the beloved pattern was there, Vienna in the snow, the coffee houses, the Prater, the Opera (*Die Zauberflöte*) and the carriages moving over the cobbled streets of the Inner Stadt to the Vienna Woods for the dawn duel. Without Ophüls' touch it could have been trite, sentimental and frankly boring, he made it what is considered by connoisseurs to be something of a masterpiece. His last years were spent in France, where, after "La Ronde" (which to his amazement was "Box Office," though not quite Schnitzler) he finally threw off his filming Guy de Maupassant with remarkable success.

*

Max Ophüls was a truly universal artist and craftsman, for he was given, by reason of his early years in that brilliant circle, a Baroque universality of mind. He could orchestrate a story into terms of film with a touch of genius. His art was of a period, but in the evocation of that period he expressed his status as an artist. Hermann Bahr, the Viennese playwright, admitted in his last years that he had spent most of his intellectual life in the Baroque world of the eighteenth century. Extrovert new worlders might find this odd, but to a Viennese, looking backward is practically a form of progress.

EDWARD PASSMORE

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

The Editors

ARCHITECTURE AND THE BBC

WHETHER architects like it or not, architectural decisions have to be taken by laymen in their capacities as members or officials of Governments or local authorities, as directors of companies, partners in business or private individuals. The was illustrated by two recent debates in Parliament, one in the House of Commons on London housing, the other in the Scottish Grand Committee on Scottish housing. In both debates strong opinions were expressed for and against high buildings and high densities; but some of those who held the strongest opinions seemed to have the least understanding of the architectural or the planning considerations on which alone a sound decision could be reached. A Glasgow M.P., for example, objected to tall buildings in his native city because, he said, Glasgow had narrow streets, and tall buildings would turn it into another New York. He does not seem to know that tall buildings can in fact be used not to create New York corridors but to avoid them, by clearing space on the ground and opening up the streets to light and air. A London M.P., on the other hand, strongly urged the building of "high, obnoxious, blocks of flats." He also described high blocks of flats as "horrible." If he thinks high blocks are horrible, he should not propose to build them, but should be looking for some more acceptable solution: but why should they be "horrible" or "obnoxious"? One cannot help feeling that the views of this M.P. have not taken into account the possibilities offered by modern architecture.

All this suggests that there is a strong case for the exploitation of the visual possibilities of television to stimulate an intelligent interest and a better understanding of architecture and town planning, so that the laymen who have to take decisions know what they are talking about. The curtailment of the BBC's talks on its sound transmissions might not be a loss at all if television were to take their place: for the Third Programme, valuable as it is, has probably failed to reach (and was not intended to reach) a very high proportion of those who should be reached, and it is in any case very difficult to talk about buildings without illustrating them. There is, we think, something here for the BBC and for the Independent Television Authority to consider.



AALTO: SCENE I

Last week can go down in the architectural records as Aalto week. Event after event was Aalto dominated. Sometimes he was merely the guest of honour of the occasion, but mainly the events were occasioned by him. The first, of course, was the award of the Royal Gold Medal and full marks are due to him for producing the best Gold Medal joke since Corb's "horse-brass" effort. His short speech of thanks concluded, near enough—I thank you for this honour, and for the eighteen carats of this medal. The heavy weight of it makes it difficult for me to stand up . . . so I must bow to you.

*

The rest of the ceremony was much as usual, the house comfortably full, but full of what looked like a completely different crowd to that which turned out for Gropius last year, and different again from that which turned out for Corb—every man his own fan club, presumably. Trend-watchers studying the speeches will have noted Basil Spence not including Gropius in a list of the giants of the modern movement (but including Mies, who has still to receive a Gold Medal), Gontran Goulden telling a story about Aalto and Wright, that has been told of nearly every other architect as well, and leaving off the punch-line, which Leslie Martin leapt in to supply. The most

valuable trend, though, was the whole cast of Harper Ellis's speech—an appreciation of Aalto's actual buildings in some detail, instead of routine gush about woodwork, lakes and forests.

AALTO: SCENE II

As has been said so frequently in this column, ASTRAGAL is patiently waiting for the current craze for exhibitions—in the form of photos and phrases on frames—to be superseded by something more fitting the twentieth century. Nevertheless the Finnish exhibition at the RIBA is one of the best of the many the RIBA have held since the war. The panels, with light fittings, are neat, the tall central feature of smoothly shining, heavy wood framing (all built up from small laminations, incidentally, for freedom from warping, one presumes, and not, as someone suggested, because trees are small in the Arctic Circle), a necessary focal point in the Henry Florence Hall.

*

At the crowded opening ceremony (which Aalto missed through arriving a trifle late), the Finnish Ambassador spoke of the international quality of Finnish architecture, and was gently corrected by Richard Sheppard who emphasized the *national* quality of the many excellent designs shown. However, this emphasis on a sort of national rock and timber vernacular can be pushed too far. There seems to be some idea that Finnish architects are happy hicks from out in the sticks, whereas it is perfectly clear when you look at the illustrations in the exhibition, that they are as urbane and sophisticated as the next man, and use their "natural" materials with, at times, almost the knowing ways of the English eighteenth century picturesque.

AALTO: SCENE III

Aalto had been causing mild official alarm by saying blandly that he had not prepared in advance his paper for the RIBA's first annual discourse. But, in the event, despite some language difficulties and with occasional help in finding a word from the audience, all passed off smoothly. He trod firmly on several sensitive feet (modules, building economy, etc.), but only in order to emphasize his ultimate aim in architecture: to give more things to the "little man" in a democracy. His speech will be reported more fully in next week's issue.

. . . SCENE IV . . .

After the discourse Aalto, and ASTRAGAL, and scores of eminent architect-members of the Architecture Club met to have dinner and hear Lord Esher, the president, most ably and amusingly congratulate Aalto on the award of the Gold Medal, appraise his work and point out the value of the small nations (in which category he now firmly placed Britain, with Finland) who put quality first. . . .

. . . SCENE V . . .

The Building Centre held its usual excellent annual lunch last Thursday, and, of course, Aalto was once again amongst the guests. The Centre was proudly celebrating its jubilee year and it was interesting to learn that in that time it has influenced the formation of no less than twenty-three similar centres in other countries. An achievement which director F. R. Yerbury can look on with considerable pride.

. . . SCENE VI AND CURTAIN

There was next a party at the Finnish Embassy in honour of Aalto, and there, of course, the great man was, still being relentlessly followed by ASTRAGAL. The embassy, it was rather disconcerting to discover, had recently been redesigned internally by Hulme Chadwick and not by a Finnish architect—far less by Aalto himself . . . but perhaps ASTRAGAL expects too much. Later the same evening there was the AA's annual reception with over 1,000 guests, amongst whom was, of course (how did you guess?) Aalto. He was greeted by a satisfyingly shattering fanfare blown by trumpeters of the King's Troop of the Royal Horse Artillery. (The AA's President, readers will recall, is a Gunner Colonel.) Everyone in the room froze to attention in a manner which would have warmed the heart of any sergeant-major. The evening was as enjoyable as ever, if slightly quieter than last year. Of the entertainment provided, the best (apart from the satisfaction of seeing photos of various well-known architects *en déshabillé* and under the age of ten) was that produced by a band called the Temperance Seven, a goon-ish group of RCA students who played with solemn but tremendous verve.

CHOIR BLOCKED

The illustration this week is of Epstein's impressive, sixteen-foot

figure of "Christ in Majesty" in position on an oval concrete "block" housing an echo organ and standing on a twenty-five foot high arch over the nave of Llandaff Cathedral. The architect of this supporting "block" is G. G. Pace, who describes it as "interesting in shape in itself and so designed as to heighten the spatial relationships of the interior." It is designed to provide "a definite block in the West-East vista." The theory of preventing the eye from appreciating the whole interior of the cathedral at a glance is interesting, but ASTRAGAL cannot recall any other church where it has been attempted in so powerful and dominating a form. It is odd how much more it seems to dominate than the more familiar and bulkier organ or screen—largely, it would seem, because it stands in isolation.

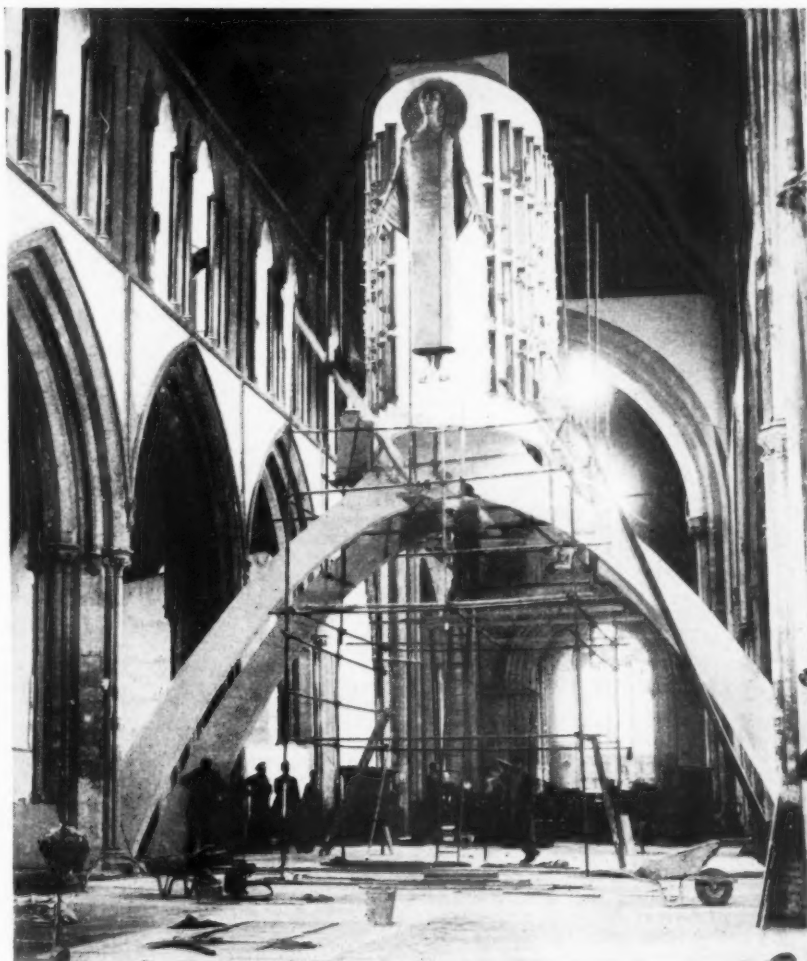
TRADITIONAL OR ELEMENTAL

The RICS committee on elemental bills of quantities has now reported (in the April issue of the *Chartered Surveyor*)—in rather frosty terms. Despite the meagre evidence—"very few (architects or builders) are as yet aware of elemental bills" and the poor response to their request for information—33 letters—the conclusions are a little dogmatic: that there is no general demand among architects for the e.b.q.; that surveyors would take longer (and charge more) to prepare them, and that builders would "prefer to work on the standard type bill."

*

The concluding sections of the report do relax a bit—perhaps the committee recalled the demand for elemental bills at the Norwich Architects Conference and at the crowded Building Centre meeting of last October*—for they say that "new forms . . . and new approaches" should be encouraged. They also announce, significantly, that the committee will remain in being to co-ordinate any further developments.

The committee's reaction to the e.b.q. shows—as one would expect—all the defensiveness and caution of a fundamentally conservative body. The problems and defects of using the traditional bill seem to them far less menacing than the problems in using an e.b.q.—because, although more acute, they are familiar.



The Epstein statue over the nave of Llandaff Cathedral, referred to by ASTRAGAL this week.

ESSENTIAL BACKGROUND NOISE

It has so far been impossible to discover from the BBC what the effects of the economies in sound broadcasting will be on the talks on architecture or planning which have hitherto mainly been carried by the Third Programme. The decision to cut down the number of talks has been taken, apparently, without first attempting to discover how it will work out in detail, and nobody at the BBC, not even those who took the decision, are able to say where the axe is going to fall.

*

Clearly the Light Programme is "out," since it is to become a background noise of "popular music in all its forms" for those who are not really listening to it. How long, one wonders, will it be before TV becomes a background pattern for those who are not really looking at it? The Home service is to be curtailed in time and to have fewer talks, so it is "out," too.

The "essential characteristics" of the Third are to remain unchanged, but as it is to have three hours a night only, beginning at 8, and to concentrate on the longish operas, concerts and plays, the outlook for talks on the Third seems none too bright either.

*

There remains the new Network Three, to be broadcast on the Third wavelength at the awkward time of 6 to 8 p.m. for "special audiences with particular pursuits." These include "the various fields of professional work" as well as "specialized sporting activities"; which of these covers architecture remains to be seen. We shall also discover in due course whether the "unworthy" programmes that are to be dropped include those which attempt to spread a little enlightenment about architecture, building or planning.

*

Of course, television is the obvious medium for anything dealing with a

* See also the announcement of the 2 on page 566.

visual subject like architecture. The BBC's Television Publicity Department has no plans for giving a bit more time to it, although it will continue to be included in the quizzes and intelligence tests of experts in which education has to be wrapped up for the telly. And a series is being planned on "the Englishman's castle" by John Betjeman. That's the only crumb on offer now but, as no detailed decisions have been taken about sound radio, things may not turn out so badly in the end if those who are interested in architecture take the trouble to tell the BBC.

ASTRAGAL

LETTERS

Walter Boissevain,

The Merchant Adventurers of London, Ltd.

G. Grenfell Baines, F.R.I.B.A.

E. W. Wignall, Secretary, CUC

L. R. Chambers, Director-General FIDOR

Mistaken Standards

SIR,—I read your editorial on "Mistaken Standards" (April 4) with great interest and some relief, as although in the manufacture of our products we do in fact follow British Standards as closely as possible, we have not followed BS 1311/1955 with regard to our publications, although we have made a serious attempt to conform.

We found, as you yourselves state, that it was virtually impossible to obtain a satisfactory or pleasing layout within the British Standard size of 11 in. x 8½ in.—and on checking up, find that our catalogue is almost identically the size of the ARCHITECTS' JOURNAL! We are at present planning a new catalogue, and have once again taken this question up with the same result.

As we should like to be in the position of conforming to British Standards in this respect, we sincerely hope that your editorial will result in the Standard itself being changed.

We wonder how the present standard was arrived at, as it does not seem to have been designed with regard to paper cutting size or any known filing system dimensions. Or are we wrong on this point—as one or two architects have taxed us on the question of non-conformity to BS 1311/1955!

WALTER BOISSEVAIN.

Plan Before You Build

SIR,—To remedy, even partially, all the faults of the building process would require a Joint Committee of Archangels. Nevertheless, I do agree that the industry and professions concerned with it ought to devote more time to informing the public, not only of the methods and processes of building, but cost.

The Joint Consultative Committee of ordinary men can probably see the ideals as clearly as your JOURNAL. It is the methods by which these ideals may be achieved that take the time.

The subjects of the last two RIBA con-

ferences surely indicates that our profession is fully aware of the need to evolve the means by which the end may be achieved, and the attendance and interest of allied professions and builders at these conferences serves to demonstrate the seriousness with which all members of the industry are endeavouring to solve their problems.

It is to be hoped that much greater activity at local level will be seen in the near future. The recent action of the Preston Society in staging the Alston Hall Symposium and its plans for a follow-up are examples of the effective work which can be done at a level a little nearer to the site.

G. GRENFELL BAINES.

Preston.

How Much Hot Water

SIR,—In his letter on this subject (AJ, April 4), E. M. Ackery, of the British Electrical Development Association, objects to the increased domestic use of hot water. He questions whether this is in the national interest, and, throwing doubt on the necessity for frequent hot baths, points out that the Desert Rats did not have this luxury. Nor did they have water-closets, which use quite a lot of water: but Mr. Ackery does not suggest economizing in cold water.

He is in effect challenging the publicity which the Coal Utilisation Council gives to solid fuel as an inexpensive means of providing 250-350 gallons of hot water a week.

Let us come right out into the open in this dispute. It is in the interest of the electrical industry (and, for that matter, of the gas side of the gas industry) to persuade the public, and architects who design for their needs, that 150 gallons of hot water per household (i.e., 4 persons) per week is an adequate standard; for at 250-350 gallons a week the use of electrical (or gas) water heating becomes very expensive. It is in the interest of the solid fuel organizations represented by the CUC to suggest that 250-350 gallons should be the design standard, for at that level solid fuel is by far the cheaper means of water heating. The arguments on both sides should therefore be examined very critically.

The weekly standard of 250 gallons of water at 140°F. for a family of four, was laid down not by the solid fuel interests but by the Egerton Committee, whose report proposed this standard "for a total of seven full hot baths per week, for ten washes per day (at a wash basin), for normal washing-up requirements, for ten gallons a week for house cleaning, and for 50 gallons a week for laundry." (Egerton Report, 1945.) The seven baths a week are for the whole family, not for each person.

Subsequent studies by the Building Research Station ("Domestic Water Heating," by J. C. Weston, *Journal of the IHVE*, February, 1950) suggested a design standard of 150 gallons a week when electricity or gas was the means of heating the water, and 250 gallons when solid fuel was used, although in the latter case consumptions of 300-400 gallons were often observed. Now water at 140° which has been heated by solid fuel is indistinguishable at the tap or in the bath from water heated by electricity or gas. The only difference is that, in quantity, it is cheaper, and that is why more is used.

It is no part of the CUC's policy to urge that people should use more hot water than they need. If a household needs only a small amount of hot water weekly, for example if there are no young children (for whom I trust that Mr. Ackery would not object to frequent hot baths), if the members are all out at work, and if clothes are not washed at home, the CUC would certainly advise that the use of electricity or gas for water heating be considered. But if the hot water demands are up to the Egerton level, or above it because of a high standard of cleanliness (a phrase of which no one need be ashamed), the CUC would certainly

recommend the use of solid fuel.

There is no attempt, as Mr. Ackery would suggest, "to dictate on such a personal matter." We are quite happy to see provision made for water heating by both solid fuel and electricity or gas, and for householders to use whichever they find most economical, and what quantity of hot water they desire.

Where dictation does come in is where, in the house design, no provision is made for heating water by solid fuel, only electrical or gas water heaters being allowed; for then the householder who wishes to economize in running costs may be forced to reduce his hot water consumption below either the Egerton standard or such higher standard as he might himself adopt if given full freedom of choice.

E. W. WIGNALL.

The Jaguar Fire

SIR,—The letter from C. Thain in your issue dated March 21 raises some interesting points regarding the Jaguar Factory fire.

While agreeing with much of what Mr. Thain says about roof structures generally, I would suggest that his conclusions regarding the Jaguar fire, insofar as they lay emphasis on the lining of the roof with fibre insulating board rather than on the inflammable nature of the bituminous roofing itself, are incorrect.

Within a few days of the fire, I myself visited the Jaguar Factory, together with the chairman of my technical committee, and through the good offices of the management of the factory and the chief officers of the Coventry fire service was able to obtain first hand information regarding the probable sequence of events during the fire.

It was abundantly clear that the prime factor contributing to the rapid spread of the fire was the high bitumen content in the roof covering and flashings. It was apparent that this had melted and run ahead of the progress of the fire and naturally involved the fibre board lining as well as scattering over the whole area.

A technical information sheet issued by the Fire Protection Association in connection with the Jaguar fire is of particular interest. The title of this sheet is "spread of fire by bituminous roof coverings," and in it the Fire Offices' Committee emphasise the disadvantage of bituminous roof coverings from the fire protection point of view. They quote the example of the largest recorded industrial fire which has ever taken place, the fire at the General Motors Factory at Michigan where the bituminous roofing became ignited, melted and the fire spread over practically the entire plant. In that case there was no fibre insulating board lining, a fact which speaks for itself.

Fibre insulating board is one of the most widely used and efficient insulating materials for the lining of buildings, but like any other material it should be used properly. When applied to existing roofs, it naturally has to be added underneath the structure and it is advisable to break up air spaces by fire stops and similarly not to leave open ends.

Where the fire risk is high, as when fibre insulating board is used to line a roof with a high bitumen content, treatments are readily available which give a Class I spread of flame rating to fibre insulating board.

The necessity of proper structural precautions against fire, including fire breaks in large spaces, and for care in the storage and handling of inflammable contents of buildings, is applicable whatever materials are incorporated in linings or roof construction.

London.

L. R. CHAMBERS.



RIBA

Alvar Aalto receives Royal Gold Medal

The royal gold medal of the Royal Institute of British Architects was presented to Alvar Aalto on Tuesday, April 9, before an enthusiastic and crowded gathering, which included Mrs. Aalto, the Finnish ambassador, and Morton Shand who recognized Aalto's work in the 1930s. Professor J. Leslie Martin, who presided, said that if Alvar Aalto had any doubts about the merits of the award they would have been removed by the size of the audience and the appreciation it had shown. "Members of the Institute," he said, "are very proud indeed to offer this tribute to a very great architect."

The first speech of tribute was made by Sir Howard Robertson, who described Alvar Aalto's reputation as unique, because it was questioned neither by the traditionalists nor by the contemporaries. "We all like his work. The battles which rage around some architects do not seem to rage around him. I think the reason is that his design is essentially his own. Both in conception and in his approach to construction he is a national individualist, and he also has a craftsman's sensibility. He is really a maker of trends rather than a follower of trends. What has appealed to me very much in Aalto's work is his design where he uses timber. I remember some early exhibition work of his in Paris which had peculiar qualities of lightness, delicacy and strength, and it was quite an eye-opener to me. Latterly I have seen pictures of roofs which suggest the same sense of structure, and also of adventure."

"As is the custom of this Institute the recommendations for awards are in general, I think, always in relation to established reputations. With Aalto we have the root of the reputation already firmly established, but I suspect that the finest flower of his work is in bud at this very moment. I have read that he has a vast programme of new work in progress to add to his past achievements, and that is a delightful thing for a royal gold medallist to have, for so many gold medallists are practically on the point of death when they get the award."

Professor Basil Spence spoke of the immense pleasure it gave him to add his tribute to an architect who had had a very strong effect on his own attitude to building. "This evening," he said, "the RIBA is giving to Alvar Aalto the royal gold medal, the highest compliment that we architects can pay to any architect." Aalto was in the company of giants—Frank Lloyd

Wright, who stood for vitality and strength, and organic structure, le Corbusier, who championed the machine aesthetic, and van der Rohe, who offered the module clearly defined. But Aalto stood for humanity, and the belief that architecture was really a background for human activity. Along with the other Scandinavians he displayed a genius for making architecture gentle and kind to the touch. He had a genius for scale with human beings, an appreciation of beautiful materials clearly used, and he stood for freedom, freedom of thought. There was no lack of style in Alvar Aalto's work in this age when people said we lived in a stylistic vacuum.

The award to Alvar Aalto when he was still in his 'fifties was hailed by Gontran Goulou as a welcome and timely break with tradition. Aalto was Finnish, a vigorous, independent and lion-hearted nation. Highly honoured in his own country—a member of the Finnish Academy—he was an acknowledged leader in world architecture; internationally famous, no one could call him an architect of the international school. "He seems to have a deeper feeling for the ground on which he puts his building, the site, the landscape and the gardening than almost any architect I know. His detailing is immensely painstaking, and this can be seen not only in his buildings, but in his furniture. He was one of the first designers to appreciate the possibility of laminated timber for furniture, and to make it a commercial success."

"We recognize him for a great master," said T. B. Harper Ellis. "We can study his work closely, and try to find out the genius of his approach, what raises it so far above the rut solution. Looking at his plans one knows that he has solved the analysis of the problem before attempting any physical planning. From this emerges the conceptual idea that is sustained throughout." Cedric Price (a student of the AA school) said that Aalto's mastery of form, sense of materials and complete understanding of the human not only stimulated but satisfied the senses, the intellect and the imagination. He hoped that the ceremony would bring to the eyes of the public the contribution made by this great man. Alvar Aalto, after being presented with the medal by Professor Martin, said: "I am

doubly grateful for this unusual honour. The medal of the Royal Institute means for me the greatest award for the large field of architecture, planning, construction and all the arts covered by this architectural field, the mother of all the arts. My highest gratitude goes to Her Majesty the Queen who, on the proposal of the Royal Institute, has given it to me. My thoughts go back to the time this medal was first presented, the time of Victoria. In spite of the argument against the architecture of the 19th century, it gave us the pioneers of our work today. I thank you for this occasion, and for all the 18 carats. The heavy weight makes it difficult for me to stand up. It weighs me down, but it may be good for my soul. I bow to you and thank you." (Loud applause.)

President's World Tour

Kenneth M. B. Cross, the President of the RIBA, and C. D. Spragg, the Secretary, have now arrived in Melbourne for the Royal Australian Architectural Convention. At the meeting of the Council of the Royal Australian Institute of Architects on April 3 Mr. Cross was elected a Life Fellow of the RIBA, and Mr. Spragg was elected their first Honorary Associate. Both were presented with Diplomas of Membership.

Mr. Cross and Mr. Spragg left London by air on March 20, and arrived in Singapore on the following day for a four-day visit. They were greeted on arrival by the president of the Institute of Architects of Malaya, H. L. Bloomfield, and other members of the Council. They were impressed on a drive through the city by the spate of building which has been going on since the war, and continues today, and by the temples and the crowded streets of the Chinese quarter through which they were taken by a party of Asian members of the Institute, led by Ho Kok Hoe. On the 23rd Mr. Cross visited Johore, and in the evening he was the guest of honour at the annual dinner and dance of the IAM at the Singapore Swimming Club. The toast to the RIBA was proposed by Mr. Bloomfield and replied to by Mr. Cross. G. E. Magnay, vice-president of the IAM, proposed the

Professor J. Leslie Martin presents the RIBA Royal Gold Medal to Alvar Aalto, who was sponsored by Sir Edward Maufe (left) and Sir Howard Robertson.





G. E. Magnay (left) President-elect of the Institute of Architects of Malaya, toasting Kenneth M. B. Cross, President of the RIBA, who was guest of honour at the I.A.M. dinner at Singapore. On the right, Eric Gardner, President of the Federation of Malaya Society of Architects.

guests, and Professor A. Oppenheim, vice-chancellor of the University of Malaya, replied. Mr. Bloomfield emphasized the need for maintaining a high standard of professional morality in these days of fierce competition, particularly when the country was approaching nationhood. Mr. Cross expressed his and Mr. Spragg's gratitude for the tremendous hospitality and welcome extended to them. The president, Eric Gardner, the hon. secretary, G. Meehan, and other members of the Council of the Federation of Malaya Society of Architects came to Singapore for this occasion, as there was not sufficient time for Mr. Cross and Mr. Spragg to visit Kuala Lumpur. On behalf of the FMSA, Mr. Gardner presented them with a silver cigarette box made by Malayan craftsmen.

On the following day Mr. Cross and Mr. Spragg visited the office of the Architect of the Public Works Department, where Ken Rundle showed them a plan and a model of the Singapore Airport, part of which is already built, and took them over a new nurses' quarters and school. Stanley Woolmer took them to the top of a 14-storey block of flats, from which they could see the progress being made with a new town for the Singapore Improvement Trust. With Mr. Bloomfield the party then visited the University where new buildings are under construction.

At a joint meeting of the Councils of the IAM and the FMSA the organization of the profession in South-East Asia and architectural education were discussed. There was agreement on the principles put forward by the RIBA on education and examination overseas and the closer association of all the overseas allied societies. Later the president and secretary were entertained at the Chinese Club, and the Singapore Arts Society.

On their arrival in Perth, Western Australia, on March 26, the president and secretary were met by Marshall Clifton and E. G. Sier, president and secretary of the Western Australian Chapter of the Royal Australian Institute of Architects. On the following day they were shown over the School of Architecture at Perth Technical College by Mr. Bolland and members of the staff. The course is for five years: until recently the first two years were full-time, the remainder part-time, but now the first three years are full-time. The programme in Perth included a formal welcome by the Lord Mayor and council, and the presentation of the RIBA Architecture Bronze Medal to A. E. Clare, principal architect of the Public Works Department, at the nurses' quarters buildings of the King Edward Memorial Hospital for Women. Mr. Cross unveiled a plaque and presented a replica of the medal to the Minister of

Works. Before taking the plane to Adelaide the president and secretary were entertained by a large gathering of members of the Western Australia Chapter, at which E. G. Warne spoke of his long association (as official RIBA corresponding member of the Royal Western Australian Institute of Architects) with Mr. Spragg, who replied.

At Adelaide, where they arrived on March 28, the president and secretary were met by L. C. Bruer, acting vice-president of the South Australian Institute of Architects, J. S. Hall, vice-president, and Professor R. A. Jensen. The arrangements included a lunch by the SAIA, a visit to the Waite Agricultural Research Institute, a visit to the University buildings, and inspection of the work of the students at the School of Architecture with Gavin Walkley and Professor Jensen.

The party reached Melbourne on March 31, where they were met by W. Race Godfrey, president of the Royal Australian Institute of Architects, and Harry Winbush, president of the Royal Victoria Institute of Architects.

TOWN DEVELOPMENT ACT

Increased Grant Refused by Minister

The seriousness of the difficulties, mainly financial, that are hampering the policy of decentralizing population and industry from the congested cities was put before Henry Brooke, the Minister of Housing, by a deputation last week from London, Birmingham, Bristol, Glasgow, Liverpool and Newcastle-upon-Tyne. The background to the meeting was the relative failure of the Town Development Act, 1952, which set out to encourage arrangements between "exporting" and "receiving" authorities for the development of towns in the "receiving" areas. The LCC, which has made four agreements, is the only authority that has succeeded in using the Act at all, and then only because it has given financial guarantees to the small towns. The deputation said that the main difficulty was financial: because of the high costs and rates of interest, few authorities of receiving areas were prepared to undertake schemes under the Act.

Mr. Brooke rejected the deputation's main request, for an increase in the rate of grant. (This is 50 per cent. for water and sewerage schemes, and a subsidy of £24 per house from the government, plus £8 provided jointly by the government and the exporting authority for 10 years.) He held out

hopes, however, of concessions that would go some way to relieving the anxieties of the receiving authorities. His department would bear in mind the need for their contribution to be made as early as practicable in the period of heavy burden before there was any appreciable return. If final costs exceeded the estimate, and there was a reasonable explanation of the excess, the grant would be recalculated to take account of the excess. And he stood by the earlier assurance about the possibility of government grant towards the cost of overspill when the exporting authority's contribution ceased at the end of the initial 10 years.

These possible concessions do not, however, remove the main difficulty, which is that the small and financially weak receiving authorities have to carry the whole of the risk, and have to make a substantial financial contribution which cannot be determined in advance when the commitment is made. In particular, they cannot know what the rates of interest or building costs are going to be; the assurance about final costs exceeding the estimate applies, apparently, to water and sewage, not to housing for which the subsidies are fixed. If the receiving authorities fix economic rents, they can safeguard their rates, but the result may be to discourage city dwellers from moving out. Moreover, high rents for Town Development houses create two rent levels in the town, one for the local inhabitants and one for the newcomers. If the rents are equalized, the local inhabitants object to subsidizing town development out of the rents. Local authorities are reluctant to do anything that will increase the rates, as this makes town development very unpopular, and may cost the councillors their seats.

TPI

Gold Medal, 1957

Lewis Mumford is to receive the Town Planning Institute's Gold Medal for 1957. It will be presented to Mr. Mumford on June 27, at the Livingstone Hall, Westminster, S.W.1.

ILA

Landscape in Industry

A conference on "The Landscape of Industry," sponsored by the Institute of Landscape Architects, is to be held at Kings College, University of Durham, on September 6, 7 and 8. Enrolment forms, which give details of fees, can be obtained from the Secretary, ILA, 2, Guildford Place, W.C.1.

DIARY

Exhibition of Finnish Architecture. At the RIBA, 66, Portland Place, W.1. Monday to Friday 10 a.m.-7 p.m. Saturday 10 a.m.-5 p.m. (Closed from 12.30 p.m., April 18, to 10 a.m., April 24.) UNTIL MAY 2

Cost Control in Building. Course at the Regent Street Polytechnic School of Architecture, in collaboration with the A.J. 1, *The Need for Cost Control*, by J. M. Austin Smith, A.R.I.B.A. (April 30). 2, *Cost Analysis*, by James Nisbet, A.R.I.C.S. (May 7). 3, *The Elemental Bill of Quantities*, by Clifford Nott, A.R.I.C.S., and Ivan Tomlin, A.I.B.E. (May 14). *Cost Planning I*, by G. Grenfell Baines, A.R.I.B.A., A.M.T.P.I. (May 28). 5, *Cost Planning II*, by John Wilkinson, A.R.I.B.A., and Arnold Towler, A.R.I.C.S. (June 4). 6, *Symposium*, with all speakers (June 18). All lectures start at 6.30 p.m. and will be held at the Portland Hall, Polytechnic Extension, Little Titchfield Street, W.1. Applications (enclosing 11s. registration fee) to the Registrar, The Polytechnic, 309, Regent Street, W.1.

CRITICISM

by J. M. Richards

WAREHOUSE and OFFICES at NOTTINGHAM

designed by J. M. AUSTIN-SMITH and PARTNERS

The building I am discussing in this article is also the JOURNAL'S building of the week. Readers will find it illustrated and described on pages 581-592, and under the heading "clients' brief" they will find the programme the architect was given. So there is no need for me either to repeat this or give a detailed factual description of the resulting building. I can come straight to personal comment.

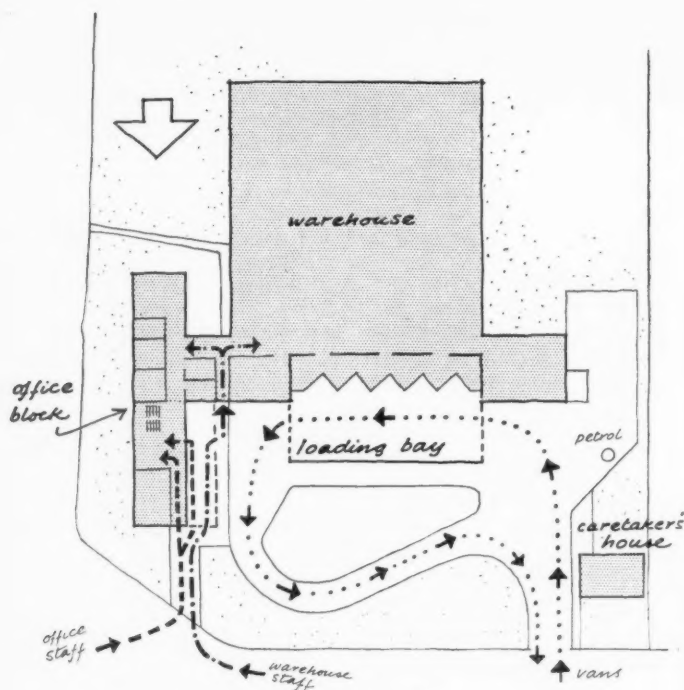
This is a case where critical comment must not fail to mention the setting, which is a very commonplace housing estate on the edge of Nottingham. Along one

side of a curving road a number of sites have been allocated to industry, for no apparent reason and in contradiction to the usual principles of use-zoning. There are the familiar furnishings: shabby prefabs, dreary semi-detached houses, a poorly designed roundabout, roads dominated by the more horrible pattern of concrete lamp-standards: not a scene of which Nottingham can be proud. The only thing that gives character to the site of the building under review is a row of well-grown trees along the east side, but I understand that many of these are due to be cut down in the interest of a road-widening scheme. They fringe a country lane which is to become an important road. It looks as if it should be possible to double its width by running another track outside the existing line of trees, leaving these to stand between the two tracks and allowing the latter to take divergent levels, but this kind of imaginative landscaping one has given up expecting from local authority road engineers.

From the general scene of squalor—existing and threatened—it is a relief to turn to this group of warehouse and office buildings. They are thoughtfully planned and, on the whole, admirably designed in detail—a first-rate illustration of how much a commercial firm has to gain by employing an architect on the kind of project which is still too often built without one. It is especially a relief to find that the architect has been able to get away from the dreary convention whereby the industrial portion of such a group of buildings is pushed into the middle of the site and the office portion built along the road frontage, partly screening it from view. Not only does this often lead to dishonest expression—to the offices

The north side of the buildings, taken from the road.





Circulation diagram

being dressed up as though to draw attention away from utilitarian buildings not fit to be looked at—but such a plan impedes later expansion. The plan of these Nottingham buildings, with the warehouse and its covered loading bay fronting the road and the office block at right-angles, facing across the driveway and joined to the warehouse by a short link containing the warehouse staff entrance, leaves room for both warehouse and offices to expand southwards (away from the road), while each preserves the right relationship to the other. The warehouse serves a chain of large grocery shops, and on its west side there is room for the later addition of a bacon-preparation department and chilled store-rooms connected with it.

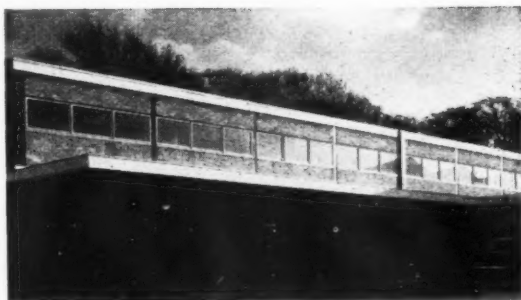
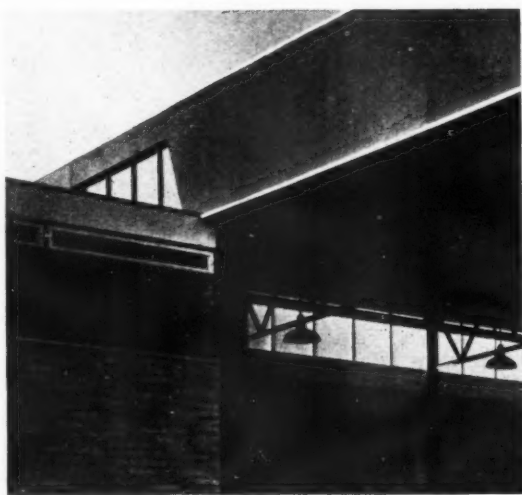
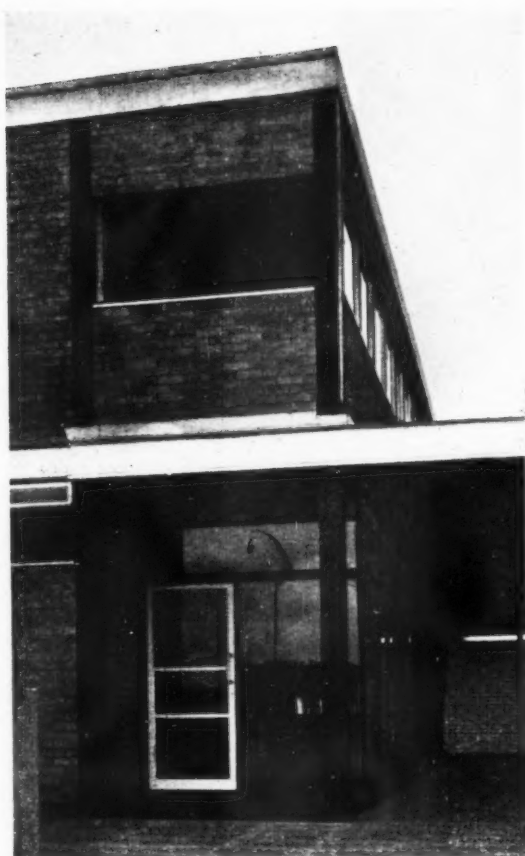
Circulation largely determines the planning of a group of buildings like this: the circulation of motor-vans delivering goods to the warehouse and removing goods from it, and the arrival and departure of warehouse and office staff and the representatives who visit the offices. The motor-van traffic seems to work admirably, the vans entering the loading bay at one end and leaving from the other, and then travelling across the front of the building back to the main gateway—see diagram. The loading-bay is roofed in and screened by a glazed wall, and the two ends can be closed by means of electrically operated shutters, so that it serves as a lock-up garage at night and at week-ends. The staff reach both warehouse and offices from a pedestrian gateway near the north end of the office building, which means that the warehouse staff walk past the office doors and close to the glass wall of the reception hall on their way to work, a point that might be criticized, though I suppose the answer would be that a warehouse employs so few men (compared with a factory) that this is not important.

Inside, however, great pains have been taken to separate warehouse and administrative staff, and the circulation works well and simply. The first floor of the office building is allocated wholly to the administrative offices; the ground floor half to administration (entrance, buyers' offices and a waiting area for visiting salesmen) and half to the warehouse staff, with a pass-door connecting the two halves. In the warehouse half, which is approached from the staff entrance in the link building, are locker-rooms, lavatories and a canteen. The latter is a most pleasant room with large windows giving a view of grass and trees (including a solitary tree near the corner of the warehouse, which improves the view a great deal and which I hope no future extension need disturb). But why is there no egress direct from the canteen into the open, so that the staff using it can stroll out on to the grass in fine weather, instead of being imprisoned behind glass?

The planning of the rest of the office block is straightforward, the only point I would criticize being the provision of a second entrance, which does not seem to be used, at the north end, requiring a corridor of its own. Could not the space this corridor takes up have been more usefully given to the offices? The staircase hall with its waiting area is particularly successful; the view through it from outside the entrance to the trees beyond is delightful, the steel and mahogany staircase is beautifully detailed and the handling of space altogether most satisfactory. Upstairs the offices open off a corridor along the west side which insulates them from the noise of vans turning out of the loading-bay. They are agreeable rooms, exceptionally well lighted, but would it not have been easy to provide cross-ventilation as well as cross-lighting? The glass panels that form the upper part of the corridor partition are fixed; they could have been hinged or louvred.

As to the exterior treatment of the office building, this strikes me as unusually neat and graceful, based on a straightforward expression of its reinforced concrete frame construction. The vertical members of the frame are faced with oiled slate—which has a very pleasant matt surface—and the horizontal members are painted white. This style of architecture requires the utmost precision of detail, and here it gets it, except at a couple of points: the aluminium capping above the roof beam gives a rather uneven finish to the top of the building (this is perhaps more a matter of craftsmanship than of design, though would not a finish that lapped over the edge of the beam ensure a crisper line and protect the face of the beam from the weather?); and the junction of the roof of the entrance canopy with the north end of the building is clumsily detailed. It can be seen in the top photograph opposite and is simply, and quite legitimately, a wooden member fixed to the side of the building, but it does not terminate cleanly and therefore confuses the lines of the structure, an effect that is aggravated by the light colour of the flashing over it.

The canopy generally is, however, a very successful element in the design. Besides protecting the office entrance and leading the eye beyond it towards the



warehouse staff entrance, it ties the whole group of buildings together visually. Its colour (black painted steel channels supporting it, and a ceiling of brown polished wood) adds liveliness just where it is wanted, which the planting designed for the terrace it shelters will enhance.

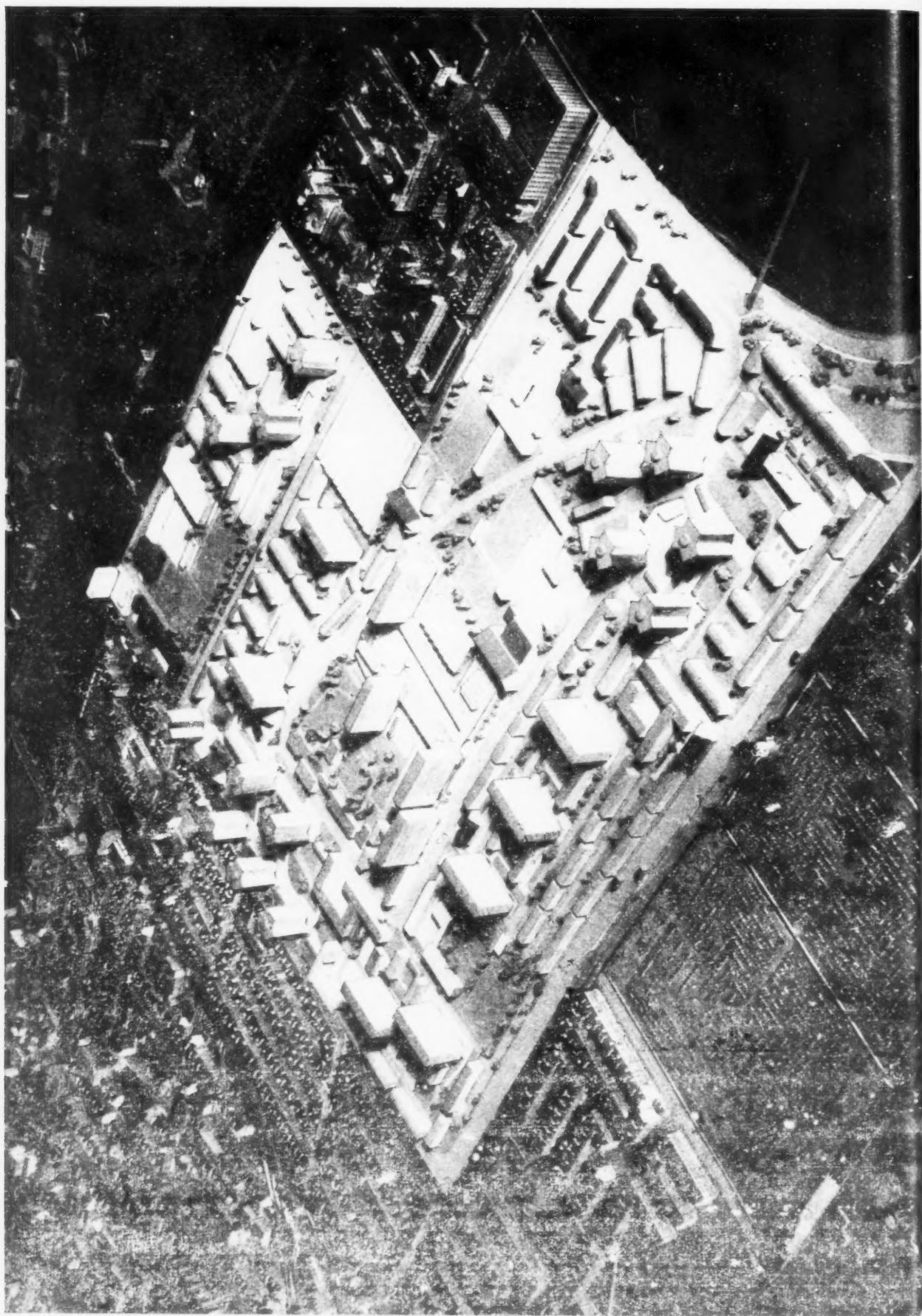
There is one more point of detail on the office building I find unsatisfactory: one of the vertical members of the frame appears to stand forward and in front of the roof beam. It is in fact a casing for outside pipes—a fairly neat way of concealing them, I suppose, but do not the architects now regret the way it breaks into the clean shape of the structure?

As to the warehouse, there is not much to be said about its planning, since a warehouse simply requires space with the minimum interruption, and this has been achieved by a welded steel frame of economical design, providing a north light roof to which more bays can be added if required. The north lights give good all-over illumination and ensure that no direct sunlight falls on perishable stores. Illumination after dark is from fluorescent tubes neatly laid along the sloping roof-members. The warehouse manager's office overlooks the loading platform; in the same position on the other side is a store for empty cases. Externally, the warehouse expresses its structure and character straightforwardly. Again it is neatly finished, one particularly successful detail being a recessed brick course running round the building to define the level of the main warehouse floor and loading platform, beneath which a slightly darker brick has been used. This would have been more effective if the brick had been darker still.

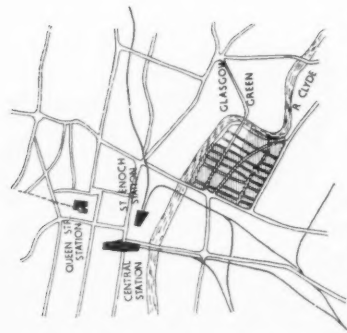
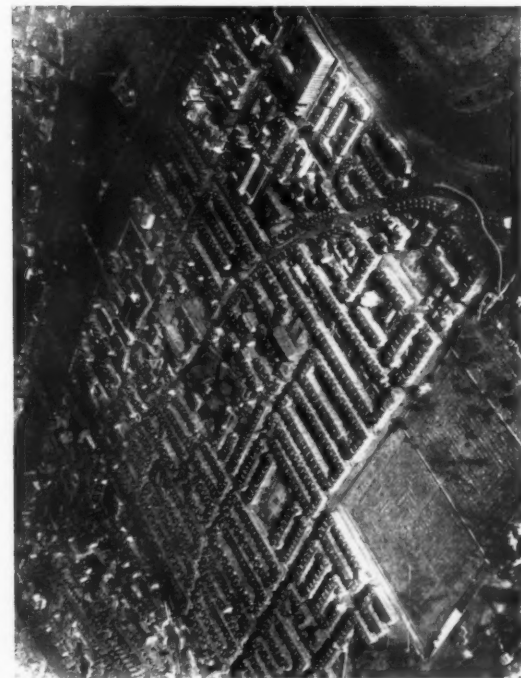
The glazed screen in front of the loading-dock—in the most literal sense a curtain wall—is admirable in scale and colour. The only criticism I have to make of this side of the warehouse is that the strips of glazing that have been inserted high up over each end of the loading-dock confuse the lines of the structure somewhat, the more so because they are at an angle—see detail photograph alongside. There is already clerestory lighting into the loading space above the warehouse roof, and if more light was needed on this side (that is, if standing vans cut off too much of the light from the glazed screen wall) would not glazed panels in the asbestos roof have been simpler?

Finally, a word must be said in praise of the lettering. The name spaced across the fascia above the glazed screen just mentioned is far less fussy and obtrusive than most lettering displayed on buildings of this kind, and the style of lettering chosen for doors, etc., inside the office building—a lower-case, based, I imagine on an enlarged printer's face—has real distinction as well as decorative quality.

Left, three details criticized in the accompanying article: top, the roof of the canopy returned along the side of the office block (see also picture on page 567); centre, side lighting into the loading bay; bottom, projecting pipe-casing coinciding with one of the vertical structure members and breaking the top horizontal member.



PLAN FOR THE GORBALS



Plan of Glasgow, with the Gorbals area shaded.

The use of tall blocks of flats, up to 15 storeys high, and the adoption of a residential density of 164 persons to the acre, are central features of the comprehensive development plan for parts of the Gorbals and Hutchesontown wards of Glasgow. Under the plan the worst slums in the Gorbals will be swept away. The plan was prepared in the corporation of Glasgow architectural and planning department (Archibald G. Jury, city architect and planning officer, R. E. Nicoll, principal planning officer.)

Glasgow has long been notorious for a slum problem of a magnitude that is unequalled in Europe, and scarcely exceeded anywhere in the world. If it is deplorable that 12 years have passed since the end of the war before a major attack on the associated problems of slum clearance and reconstruction in Glasgow has begun, it is nevertheless satisfactory to know that a beginning has now been made in the redevelopment scheme for part of the Gorbals-Hutchesontown area. A plan for the comprehensive development of this area was approved by the Secretary of State for Scotland in February, 1957. Since then the corporation have agreed to the proposal

made by the City Architect and Planning Officer, Archibald G. Jury, that Professor Robert Matthew and Professor Basil Spence be appointed as consultants for the detailed designing work in the first five-year programme, in association with the Architectural and Planning Department. In approving the scheme the Secretary of State was careful to point out that he did so in principle only. Details and Compulsory Purchase Orders will require his further approval.

The area of comprehensive redevelopment is the eastern part of the Hutchesontown-Gorbals wards, which lie on the left bank of the river Clyde at a bend

Above left, an air view of the Gorbals-Hutchesontown area, showing the Clyde bridges linking it with central Glasgow. Extreme left, a typical back court, and left, Waddell Street, showing the four-storey tenements in which people live 458 to the acre in one and two-room flats.





... OLD PEOPLES' HOSTEL

(GOODWINS ROAD • KING'S LYNN)



Architect: C. H. Thurston, Esq., L.R.I.B.A., F.R.I.C.S.,
County Architect, 25, Thorpe Road, Norwich.
Contractors: Oliver Staines & Son, Station Street, Swaffham.

For the prevention of rising dampness in the floors of the above hostel, the County Architect specified the inclusion of 4% of 'PUDLO' Brand waterproofer to the cement in a 1.2.4. mix. The finishing screed 1" to 1½" thick will receive various patent floor tiles.

'PUDLO' Brand waterproofer, of the same composition, is also specified in the reinforced waterproofed concrete floor to the boiler house, and in the 2 to 1 waterproofed cement rendering to the walls of this structure. Write for the latest booklet containing specifications for all cement waterproofing work.



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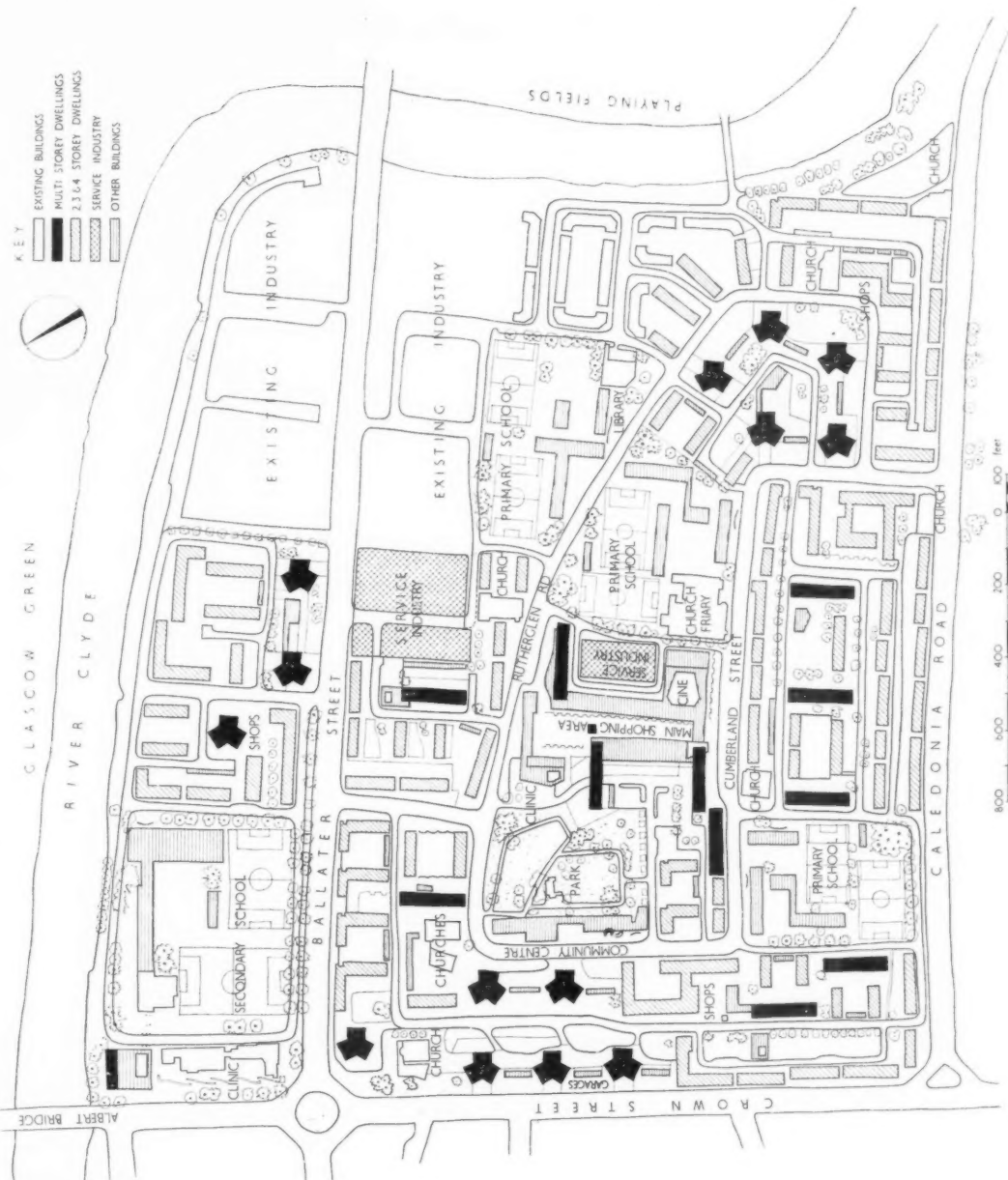
KERNER-GREENWOOD & COMPANY LTD., KING'S LYNN, NORFOLK

in the river. The central area of the city lies on the opposite side of the river, and to the north. The area of comprehensive development is 111 acres (of which 22½ acres already belong to the corporation and 80½ acres are now liable to compulsory purchase).

It was developed between 1850 and 1890 to provide working-class housing of the lowest order. Four-storey stone tenements are laid out in hollow squares containing "back-courts," which are ostensibly drying greens, but (as the illustration shows) are neither green nor dry but merely squalid. The streets run approximately north-south and east-west on a rigid grid, cut across diagonally by Rutherglen Road, a main traffic route. The area contains an indiscriminate mixture of residential, industrial and commercial uses. There are over a hundred industrial commercial concerns, but only two employ more than 100 persons. There are an enormous number of small shops, 444 in all (of which 50 are vacant) or one shop for every 60 people, and 48 public houses. There are no less than 8 schools (1 secondary, 5 primary and 2 special) on sites whose combined area is only 6 acres. This fantastic degree of congestion is, if anything, excelled by the congestion of the population of 26,860, who live at an average net density of 458 persons to the acre.

Of the 7,605 dwellings in the area 6,905 are incapable of being put in a sanitary condition. They are individually small, 87 per cent. being of 1 or 2 rooms only, 33 per cent. being back-to-back. Only 3 per cent. have baths, and 22 per cent. have internal water closets, the remainder sharing external w.c.s situated off the common staircase, three families on an average sharing one w.c.

This area is, unfortunately, typical of a large part of the city. More than half of Glasgow's 1,085,000 inhabitants live in four-storey tenements in the older central districts at an average density of 450 persons to the acre. In some parts the density is as much as 750. Unfortunately, also, Glasgow's prewar housing development was mostly in two-storey housing schemes at densities of no more than 50-60 persons to the acre, and even in the new tenements now being built in housing schemes near the outskirts



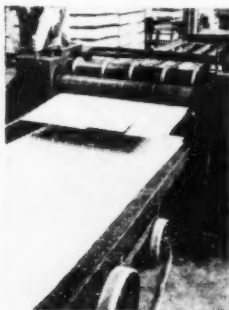
Layout plan

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against **RUST**

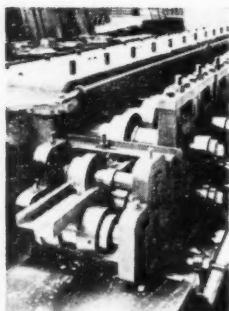
1

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Zinc-coated steel sheet (ZINTEC) is produced by electrolytically deposited high-purity zinc on the steel sheet base, which is electrolytically degreased and pickled prior to coating.

CUTTING ZINTEC SHEET
TO DOORFRAME SIZES



Zinc-coated steel sheet is today universally recognised in industry as one of the most practical and efficient bases for under-paint protection.

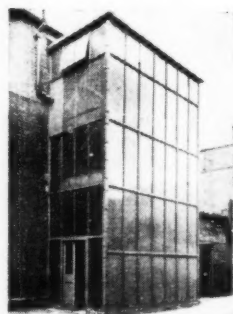
FORMING ZINTEC INTO
DOORFRAME PROFILES

2

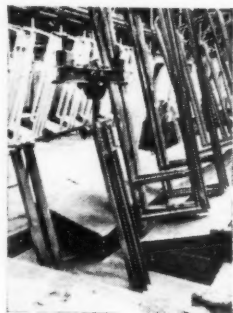
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The newly galvanized surface of this dental surgery entrance was brush painted ONE COAT of CALCIUM PLUMBATE PRIMER and LEFT FOR 3½ YEARS WITHOUT ANY DETERIORATION OF THE PAINT SURFACE.



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Further details on List Nos. 254 and 337 from
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densities do not exceed 100 persons to the acre. When the housing schemes now under construction are completed in 1958-9 there will be no large undeveloped sites left within the city. Glasgow has, in fact, squandered on low-density housing the limited amount of housing land available within the constricted Clyde Valley, and it is a tragedy that reconstruction of the central areas was deferred until the sites to which the population from slum clearance areas could be decanted had been used up.

Because the overspill problem is so acute it is proposed to redevelop the central areas with mixed development to a density of about 150 rooms or 164 persons to the acre, which is considered by the corporation to be the maximum consistent with good living conditions. This will create an overspill of from 250,000 to 300,000 people which cannot be accommodated within the Clyde Valley. Overspill of this magnitude raises very big industrial problems, as much of Glasgow's industry is connected with shipbuilding or heavy engineering and cannot be moved. It is hoped to accommodate the overspill in new or expanded towns. One new town, East Kilbride, is partly built (although it has taken very little overspill from Glasgow) and another, Cumbernauld, has been designated. These, clearly, can only accept a fraction of the overspill, so that the shortage of sites inside Glasgow and outside seems likely to make reconstruction a painfully slow process unless some more drastic solution can be adopted.

When the area has been developed at a density of 164 persons to the acre only 10,179, or approximately 40 per cent., of the existing 26,860 people living in the area will be rehoused within it: the remaining 60 per cent. constitute the overspill. Apart from churches, a clinic, a library, a police station and some recently built corporation tenements and some school premises, the whole area will be cleared, leaving a flat site devoid of natural features apart from the River Clyde, on the farther side of which is Glasgow Green, one of the city's principal parks. The river bank will be partially cleared and opened up, but as can be seen from the map, there are substantial factories including a modern co-operative bakery situated near the bend of the

river; these cannot be moved and are not included in the C.D.A. The river is not navigable at this point.

Through traffic will be diverted by closing Rutherglen Road for part of its length, and closing the road along the river bank, so that all through traffic has to pass round the periphery of the area, along Crown Street, an arterial road, and Ballater Street or Calton Road which are sub-arterial roads. Shops and other properties fronting these roads will have access from the rear. The greater part of Rutherglen Road will be retained as an internal road. It is unlikely that buses will enter the area, as no dwelling will be more than 300 yards from a main road, and roads within the area have therefore been kept to a minimum. It is hoped that by isolating the area in this way, providing a traffic-free local shopping and community centre within the area, the existing close neighbourhood feeling will be retained and the tendency to use the facilities of the city centre reduced. In the redeveloped area 62.1 acres will be allocated for housing, 19 acres for schools (1 secondary and 3 primary), 2.9 acres for service industry, 3.4 acres for the shopping and commercial centre, 6.3 acres for community facilities (including the existing churches), 12 acres for roads and car parks, and 5.5 acres for open space. All industry, other than service industry, will be removed. In the provision of open space the scheme seems to be open to criticism, as no park is in fact provided in addition to the small disused cemetery that is there now. This decision is justified by the argument that Glasgow Green is not very far away, but the left bank of the Clyde is almost totally lacking in open space and it seems a pity not to provide for it. It is to be hoped that as the provisional layout is developed this defect may be corrected to some degree by more effective use of the community open space around the blocks of flats. It is intended that approximately 50 per cent. of the housing will be in blocks of 10 storeys or over, the maximum height envisaged at the moment being 15 storeys. The map indicates a relatively high proportion of houses with gardens. This seems surprising in an area whose present inhabitants have no

gardens, and which is being developed at 164 persons to the acre, a density at which it would seem preferable to go boldly for high development without any gardens at all and so as to provide the maximum of useful community open space—a commodity that is going to be in very short supply for those who are in tall flats. There is, however, no settled policy here: small gardens are being provided for 20 per cent. of the 96 houses now under construction, but this ratio may be varied in the light of experience. The layout provides for 57 shops, 9 public houses, one cinema, a community centre, banks and offices.

As so large a proportion of the people are to live in flats the siting of the blocks is of first-rate importance. The aim in preparing the scheme was to use existing roads and services as far as possible. Subsoil conditions had a strong influence, and apparently precluded siting tall blocks by the river where they would have had superb views over Glasgow Green and given an exciting view when seen from the Green. Slab blocks have so far as possible been placed with their axes running north-east and south-west. While the planners consider it satisfactory to place high blocks overlooking open space, there is no policy decision to this effect. The intention is to provide 1 garage for 15 houses, and at 164 persons to the acre it may be difficult to provide more: but as Glasgow is no longer the depressed area it was, this is surely a very low provision when one looks to the future. It prompts the query whether garages could not be provided underground or in the basements of tall buildings.

In general, the proposals would transform the area out of all recognition, and completely for the better. In detail, it seems questionable whether the layout at the density adopted makes the best use of the land, or provides either the necessary community open space, or contrasting small-scale intimacy and large-scale openness; that one would like to see. In view, however, of the fact that the scheme has still to be developed in detail judgment on these aspects must be reserved until firm proposals have been made. The proposals are programmed over a 20-year period, and the cost is estimated at approximately £13 million.



**“No jokes
about
Admirals
please . . .**

To a man in my position dignity is essential—dignity with perhaps a dash of colour. Similar considerations apply to the décor of the foyer—especially the floor which is one of the first things patrons notice. And incidentally my advice to architects and people who design floors is—‘always insist on rubber flooring.’ It’s easier for my charladies to clean, keeps its colours longest and stands up to really rough treatment. It’s quiet underfoot too and that’s very important in a place like this . . .”

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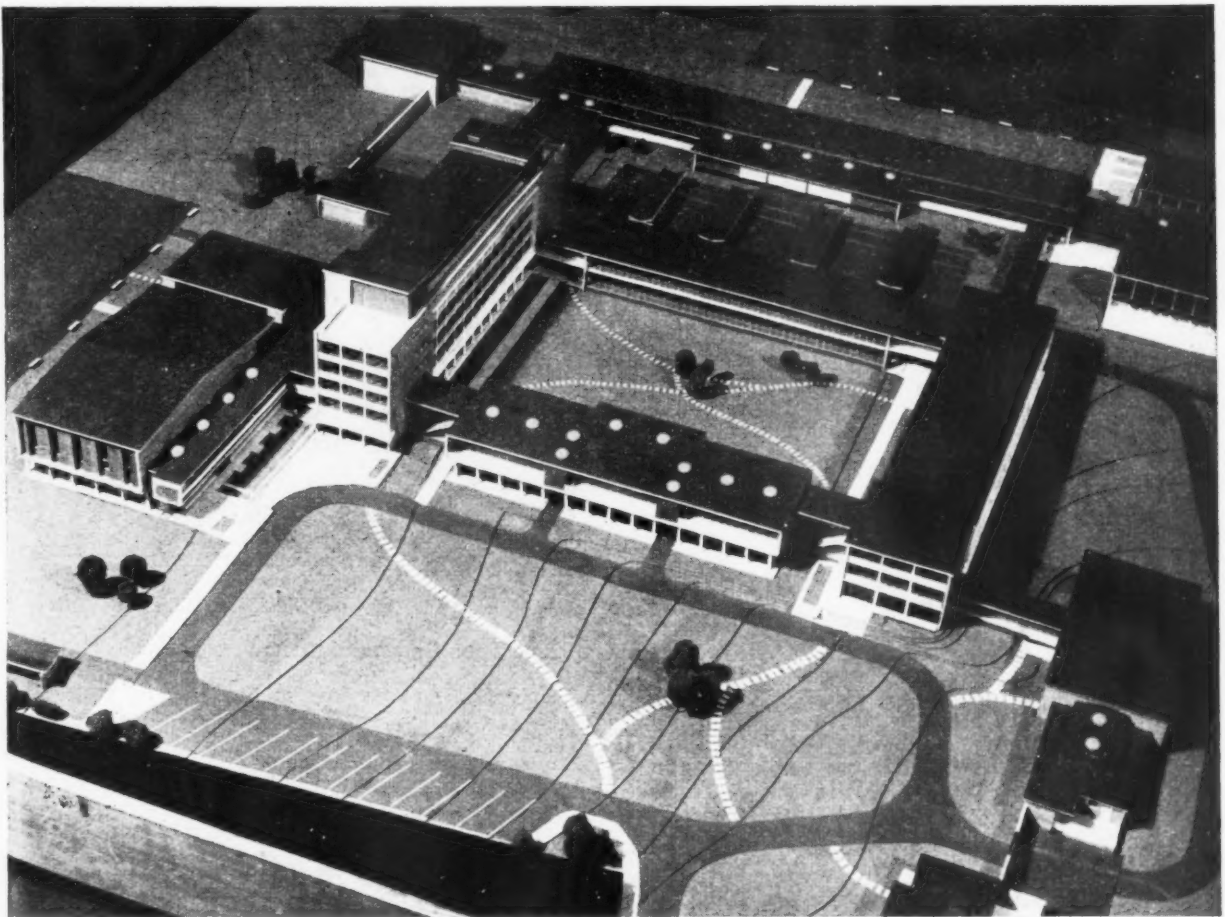
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Methodist Church at Ramsgate

The new Methodist Church on the corner of Hardres Street and Broad Street, Ramsgate, right, was designed by Foster and Barber. The Church, which has been built on a very restricted site, is planned on a south-east to north-west axis, with the altar at the north-west end, flanked by tall organ grilles. The final cost was £23,163. Cost per ft. super, 103s. 4½d. and per ft. cu. 3s. 11½d.

Secondary School at Leeds

Foxwood County Secondary School, below, is a form of comprehensive school for 1780 boys, designed by Charles Pike and Partners. The lower school is housed in the three-storey block on the right of the model and the middle and senior schools are in the six-storey block. The buildings can be operated as separate units or collectively according to educational development. In addition to the usual teaching accommodation, there is a large single-storey workshop block on the north side and provision was also made for the teaching of agriculture. It is intended that this school will be used as a music centre for the Leeds area. The building will be completed in 1959 and the contract amount was approximately £550,000. The structural engineers are Ove Arup and Partners, the heating and mechanical consultants Edward Pearce and Partners, and the general contractors F. Shepherd and Son Ltd.

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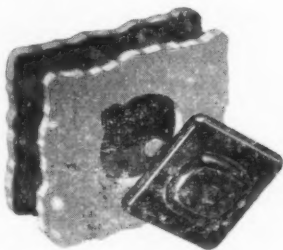
CON 8

THE INDUSTRY

From the industry this week Brian Grant reviews two new pieces of electrical equipment, an electrical clothes drying cabinet and three new cookers.

ELECTRICAL EQUIPMENT

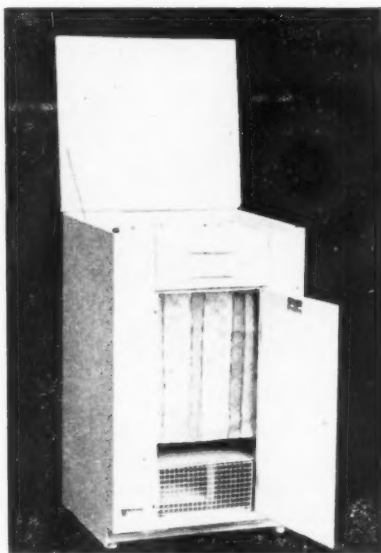
The increasing use of hollow partitioning has made the fixing of switches and sockets rather more complicated, as there is no simple method of providing a fix for the boxes. The photograph below shows a solution which has recently been evolved by Volex Electrical Products: this does away altogether with the box, a metal cross-piece being used in conjunction with the switch screws. A hole is cut in the par-



The Volex boxless fixing switch.

tion, with ears to take the ends of the strip, and after the switch has been wired up the whole assembly is inserted bayonet fashion into the hole and the switch screws tightened. The crosspieces are quite cheap, and are also made for fixing 13 amp sockets.

Another device is a twin conversion unit for use with 13 amp sockets to convert a single



The Victor clothes drier, Major model, with the equivalent of 10 feet of clothes line.

into a twin outlet. Fixing is simple, and the price, 29/4 a dozen in brown, is less than the cost of the average twin adaptor. This, and other fittings, are illustrated in a recently issued catalogue. (Volex Electrical Products Ltd., Salford 6, Manchester.)

CLOTHES DRIERS

The photograph above shows the new Victor clothes drier which is fitted with six plastic rods giving the equivalent of 10 feet of clothes line. Heating can be by gas or electricity, and the prices are £28 2s. 8d. and £32 18s. 8d. for the two models, both prices including purchase tax. The electric model has two 750 watt black heat elements, the low surface temperature of which prevents the clothes from being scorched. A two way switch allows a single element to be used for airing, and the cabinet is available with a stainless steel top as an extra. (The Victor Manufacturing Co. Ltd., New Line Works, Greengates, Bradford, Yorks.)

THREE NEW COOKERS

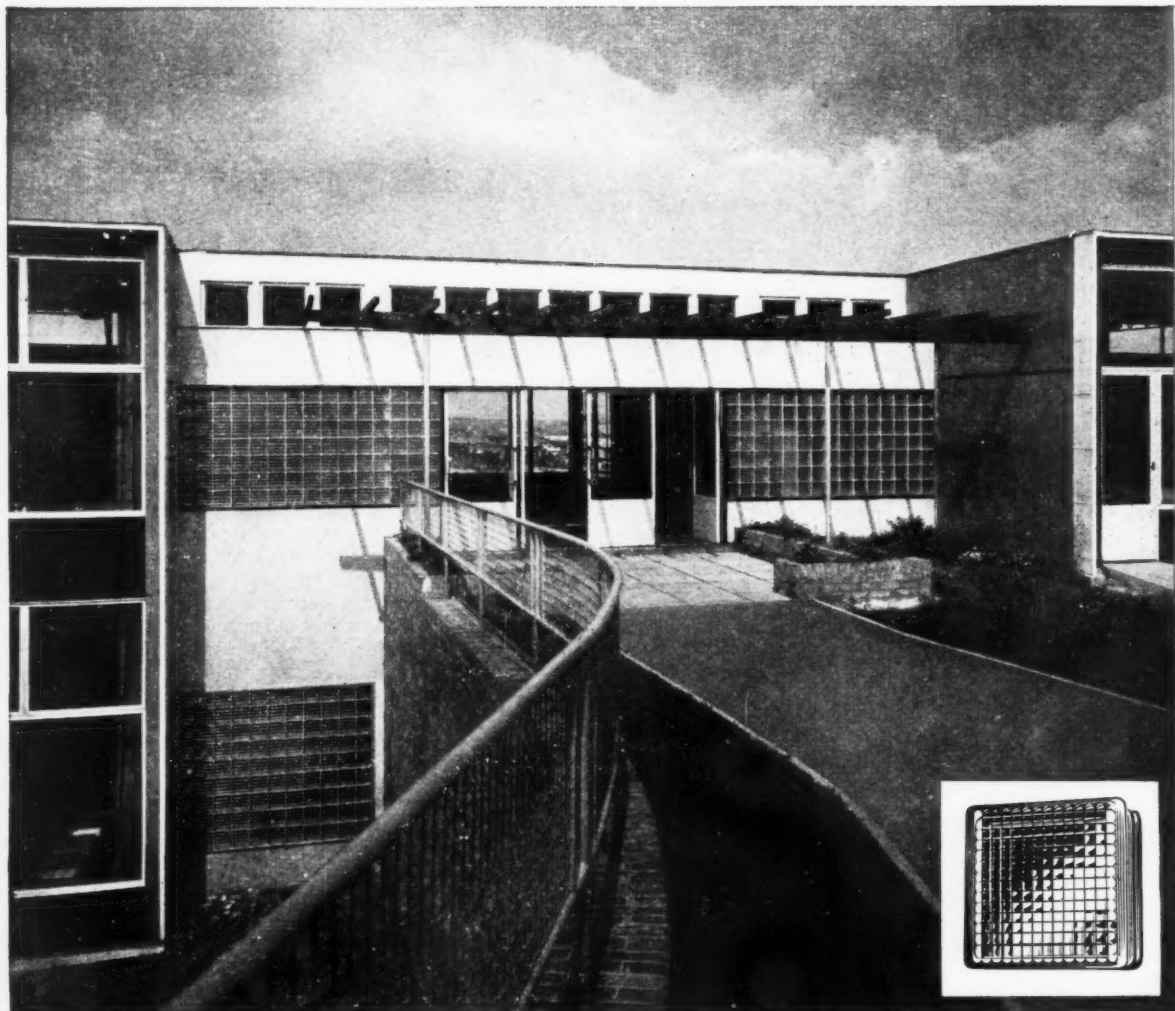
There were several new cooker designs on show at the Ideal Home Exhibition, one

of which, the General Gas Appliances cooker with automatic lighting oven, has already been referred to in these notes. At the top end of the price scale is the Cannon Double De Luxe. A large model having two ovens, two warming drawers beneath them and a hot plate with four large and two small burners, as well as a high-level grill which folds away. This cooker is 42 in. wide but there are no particular installation difficulties as it is delivered in two halves, each the width of the normal domestic cooker, and these halves are bolted together on site, the central joint being covered by specially designed facing plates. The price is about £130, and there is a further model in which a second grill is mounted above the splash-back. (Cannon, G. A., Ltd., Deepfields, Bilston, Staffordshire)

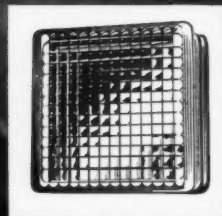
The new Falco Royal model at a price of 83 guineas is a standard sized automatic cooker providing a maximum of boiling capacity and a large oven and grill. There are two 8-in. and two 6½-in. boiling plates, one of the larger boiling plates and also the oven being controlled by the electric timer unit which is now so usual on electric cookers. The standard finishes are white, cream and blue or green. (Allied Iron-

The Cannon Double De Luxe cooker, incorporating two large ovens, two warming drawers and a 6-burner hot-plate.





Architects: Mairet & Wood, A.R.I.B.A., in collaboration with S. H. Loweth, F.S.A., F.R.I.B.A., Kent County Architect.



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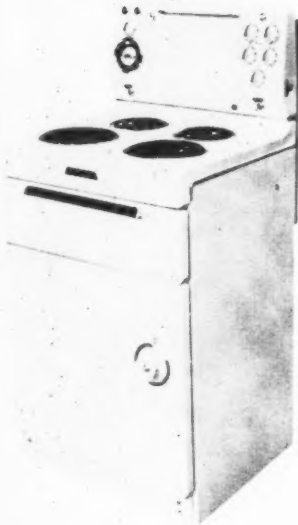
For further information on the use of glass in building consult the Technical Sales and Service Department at St. Helens, Lancs. Telephone: St. Helens 4001; or Selwyn House, Cleveland Row, St. James's, London, S.W.1. Telephone: Whitehall 5672-6. Supplies are available through the usual trade channels.

PILKINGTON BROTHERS LIMITED, ST. HELENS, LANCs.

"ARMOURPLATE", "INSULIGHT" and "VITROLITE" are registered trade marks of Pilkington Brothers Limited.



technical section

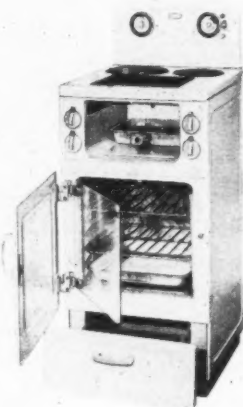


The new Falco-Royal cooker with four boiling plates.

founders Ltd., 28 Brook Street, London, W.1.)

Another new model is a revised version of the G.E.C. Quality cooker which has a full view glass inner door to the oven. The door is made of heat-resisting toughened glass and will not steam up while at the same time giving a clear view of the food inside the oven. Another new feature is a roomy storage drawer fitted to the base of the cooker. Thermostatic control is provided for the oven and a Simmerstat in one of the 8-in. boiling plates. (*The General Electric Co. Ltd., Magnet House, Kingsway, London, W.C.2.*)

The revised G.E.C. Quality cooker, showing the heat resisting glass inner door.



7 PRACTICE

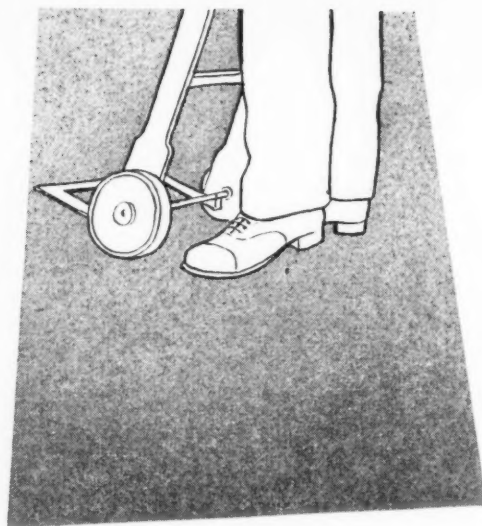
standardized quantities and mechanized billing

"Machine production" has been a familiar phrase with architects ever since the functionalist nineteen thirties—but always with reference to building methods. This week we present a possibility of its application in the professional sphere—the mechanical production of bills of quantities. The author, H. M. Stafford, F.I.A.S., F.I.A.R.B., a Q.S. in local authority practice, presents his five-year investigation of the standard draft bill and of the method of using this for punched-card machine printing of bills for specific jobs.

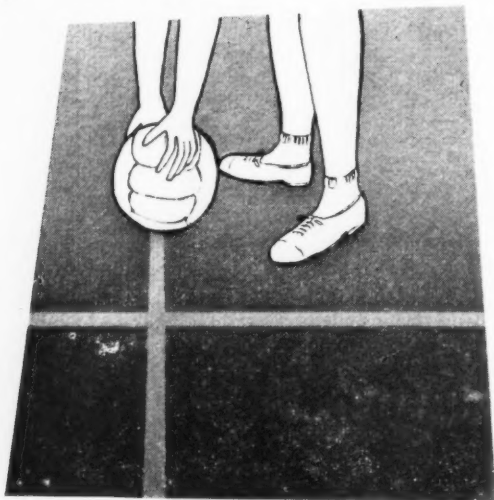
Many quantity surveyors at some moment in their careers have the idea that they would like to produce a universal bill of quantities to embrace all and every description of labour and materials likely to be encountered in their practice. The idea is usually dismissed after a few minutes' reflection on the formidable nature of the task. It is only the thought of the mass of data required to produce such a document which causes dismay, but awareness of the difficulties likely to be encountered in finding a reasonable standard specification for type and quality of materials and for methods of construction upon which to base the production. The advantage of a universal bill is the immense saving of time and labour in abstracting and billing which results to the surveyor from having readily available before him precise standard descriptions for all measured work and these descriptions pre-arranged in the recognized order and sequence accepted by the profession. The need for time-saving methods in quantity surveying was given a note of urgency by the Productivity Team in their Report in the following words:

"The British system has been criticized on account of the time required for the preparation of the bills by the quantity surveyor in the detail specified in the Standard Method of Measurement. The responsible organizations in Britain might, in the team's view, examine the possibility of simplifying the present system."

In recent years the problem of a standard specification has been alleviated to a marked degree by the publication of a comprehensive range of British Standards for building materials and of British Standard Codes of Practice for methods of construction. The extent of the typical items required in a universal bill may reasonably be restricted to the total



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technical section

Item		Wall Tiling	£	s.	d.
A	Yards	Sup 6" x 6" x 3/4" white glazed wall tiles and bedding in cement sand mortar (1 : 2) and jointing in white cement as described.			
B	Feet	" 6" x 6" x 3/4" do in narrow widths.			
C	"	" 6" x 6" x 3/4" do in small quantities.			
D	"	" 6" x 6" x 3/4" cream glazed wall tiles and bedding in cement sand mortar (1 : 2) and jointing in coloured cement as described.			
E	"	" 6" x 6" x 3/4" do in narrow widths.			
F	"	Run Raking cutting on 3/4" white glazed tiles.			
G	"	" Extra for rounded edge tiles (B.S. Fig. 2 R.E.).			
H	"	No. External mitres (R.E.X.).			
I	"	" Internal mitres (R.E./Sq.H.).			
J	"	" Do. for beaded angle tiles (B.S. Fig. 3.5650, 14" bead).			
K	"	No. External mitre (5650/50).			
L	"	" Internal mitres (5650/51H).			
M	"	" Do. for coved angle tiles (B.S. Fig. 3.6651).			
N	"	No. External mitres (6651/H.50).			
O	"	" Internal mitres (6651/51).			
P	"	" Do. for 6" x 14" external angle beads (B.S. Fig. 4.50).			
Q	"	No. External corners (50/50 S).			
R	"	" Internal mitres (50/51 S).			

Typical page from the author's standard draft bill (see also page 579).

number of items envisaged by the Standard Method of Measurement of Building Works. Preliminary clauses are also largely delimited by the scope of the RIBA Standard Form of Building Contract.

A Standard Draft Bill of Quantities

The task, therefore, which at one time seemed impossible to achieve does by these considerations enter the bounds of possibility. Sufficiently so, indeed, to encourage the writer to attempt the preparation of a universal bill under the title of *A Standard Draft Bill of Quantities*. The "terms of reference" taken in the preparation of this document were as follows:

(a) To standardize, by detailed reference to British Standards and Codes of Practice, the descriptions of the more usual items contained in a Bill of Quantities.

(b) To illustrate, by means of actual items in the Standard Draft Bill, the correct method of measurement, as prescribed by the Standard Method of Measurement of Building Works.

(c) To indicate, by example, the generally accepted order or sequence of trades, sections within trades, and specific items in the normal Bill of Quantities.

The completed work extends to over 250 printed foolscap pages and is sufficiently extensive in scope to cover the building work normally executed by a large local authority. The document was produced in four parts, as follows:

Part 1. *Preliminaries and trade preambles, etc.*

Part 2. *Specialist preliminaries and trade preambles.*

Part 3. *British Standards and Codes of Practice classified in trades.*

Part 4. *Draft Bill—all trades.*

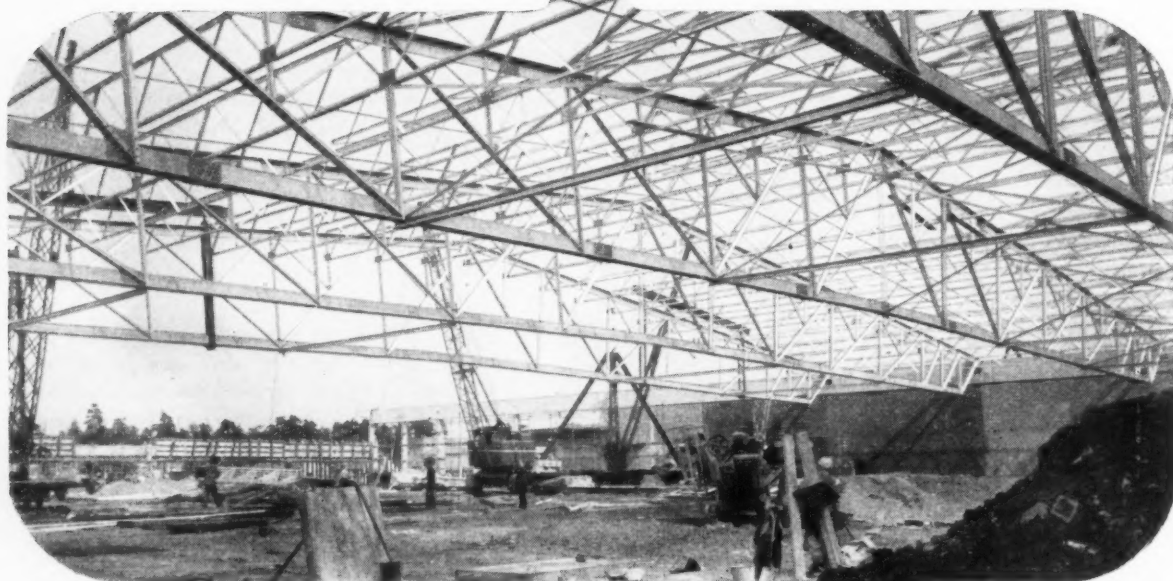
This scheme was adopted in order to facilitate the reproduction of any one part separately, as required. Brief notes on the four parts are given below.

Part 1. *Preliminaries and trade preambles:* The Preliminaries were prepared by reference to Section II. Preliminaries of the *Standard Method of Measurement of Building Works* (which henceforth we will refer to as "SMM") and to the RIBA Standard Form of Building Contract (Local Authorities). The trade preambles were prepared by making a most exhaustive study, over many months, of the British Standards available for building materials, together with the Codes of Practice published to date. In the billing of the Preambles an attempt was made to enter the descriptions of materials first, followed by combinations of material, and then by directions, scope of prices, etc. This sequence was maintained with each set of Preambles. The order of trades follows that of the SMM. The preambles had to be compiled to meet all likely types of work and, in consequence, are quite extensive in their scope. For instance, the preambles for "Roofing" comprise complete preambles for (i) Slating, (ii) Tiling, (iii) Roman Tiling, (iv) Asbestos, together with notes extending the scope of this section to cover Asbestos Cement Slating, Concrete Tiles and Pantiling. The preambles for "Plumber" cover types of pipe such as lead, copper, steel, iron, asbestos and polythene. "Painter" preambles provide for preparatory treatment and priming for most types of new surface including plaster, "Keenes," steel and iron, aluminium, copper, lead, zinc, wood and various types of fibreboard and there is a completely separate section describing the preparation of all types of existing surfaces for painting.

Part 2. *Specialist preliminaries and trade preambles:* Two specimen sets of Preliminaries were prepared, one for Nominated Sub-Contractors, and one for Nominated Suppliers: both were compiled in the light of the directive regarding Standard Conditions of Tender for Nominated Sub-Contractors and Nominated Suppliers published in the *Journal* of the RICS for July, 1951. The preambles for specialist work were compiled similarly to the general Trade Preambles by detailed reference to the British Standards

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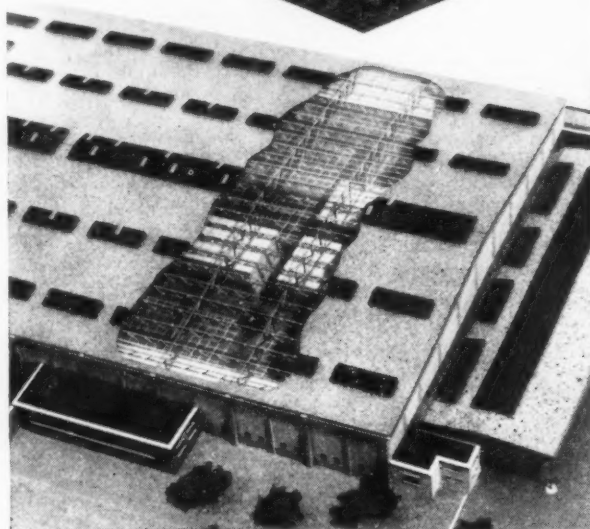


Warehouse for Messrs. S. P. D. Ltd., Woking. Consulting Engineers—Frederick S. Swan & Partners.

General Contractors: W. & C. French Ltd.

One of the first considerations for this large warehouse was unrestricted floor space throughout the entire area.

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technical section

Item	Feet	Run	Do. for 6" x 1 1/2" internal angle beads (B.S. Fig. J.51).	£	s.	d.
S						
T			No. External sires. (51/50 S).			
U			" Internal corner (51/51 S).			
V			" Internal beaks (6651/515).			
W	"	"	6" x 6" x 1/2" white glazed wall tiles and bedding in cement sand mortar (1 : 2) and jointing in white cement as described in widths not exceeding 3".			
X	"	"	6" x 6" x 1/2" do in widths exceeding 3" but not exceeding 6".			
Y	No		Cut and fit white glazed tiling around small pipes.			

Continuation of the standard draft bill.

and Codes of Practice available. With the aid of these Standards and careful research into specialist work it has been found possible to measure and specify in the Bill many items formerly included as P.C. sums, thereby giving the general contractor direct responsibility for ordering the execution of the work to accord with his own progress scheme, and consequently avoiding the many delays caused by late nomination. The specialist preambles cover, in detail, such work as terrazzo, magnesite, wood-block, composition-block, thermo-plastic tile, linoleum, cork tile, rubber flooring, various types of felt-roofing and roof deckings, suspended ceilings and cast-stone.

Part 3. British Standards and Codes of Practice classified in trades: A library of British Standards and

Codes of Practice relating to building has been created in the office and all revisions and amendments are carefully made and the library extended as new standards are published. To encourage the use of these documents it was decided to make an inventory of all titles and then to classify them into the normal trade order of the SMM. By this means the surveyor, when billing a particular trade, can have before him a list of all BS relating to that trade. It has proved, in every way, a most convenient classification.

Part 4. Draft Bill—all trades: The Draft Bill was compiled on the lines indicated in the terms of reference. This, in fact, amounted to "billing" (i.e. writing in bill form) practically the whole of the items in the SMM. The order of trades, sections within trades, and specific items, follow the order generally accepted by the quantity surveying profession, allowing for slight variations of local practice. Reference was made to the *sequence* of items in the Standard Method of Measurement, and in BS 685 *Sequence of Trade Headings, etc.* It is certain that standardization of item sequence is of great assistance to the estimator for whom a Bill of Quantities is primarily designed. It is also of real value to anyone using a Bill of Quantities, in that it makes possible the rapid location of particular items. The publication of a BS on *Sequence of Trade Headings, etc.*, gives recognition to the value of specifying items in sequence, and, if possible, in standard sequence. Although, in practice, there are certain exceptions to the rule, the order of billing used is briefly explained as follows:

The Bill is divided into Trades, and each Trade subdivided into Sections. Within each Section items are grouped in order of cubes, supers, runs and numbers. Within each group the items are further classified, items of labour being placed before items of labour and material, and, within these two classes, the cheapest items appear first. Typical pages from the Bill are shown on page 577 and left.

The experimental Standard Draft Bill was taken into use in actual office work, and was found to give a marked saving on the time normally spent in drafting particular bills of quantities. The Standard Preliminaries and Preambles in Sections 1 and 2 are produced in bulk, and, when billing, the ready printed sheets are extracted by the surveyor, amended in ink as required, and incorporated into the draft of the particular Bill being prepared. Each surveyor keeps a copy of Section 4—the "Draft Bill—All Trades"—for use as a model to determine rapidly the order and description of items when abstracting and billing measured work. This process has now been tried over a period of some three years and the experience gained and the successful outcome of the experiment have generated an ambition to proceed further in the search for time- and labour-saving methods in the preparation of bills of quantities. Section 4 of the Standard Draft Bill, contains not less than 1,500 typical descriptions of measured work, and these have been found to cover most of the requirements of many particular bills. The number of descriptions of

technical section

measured work contained in particular bills has been found to vary tremendously—as an example, one of the bills for two schools each costing over £200,000 contained 860 items whilst the other contained 2,250 items.

Mechanization of the "working-up" process

The exciting possibility which arises if a universal set of descriptions of measured work can be devised is that the whole of the squaring of dimensions, abstracting and billing, that is the whole of the "working-up" process in a quantity surveyor's office can be done by mechanical means. The process would be something like this:

1. Each item description in the Standard Bill is given a Code Number.
2. The taker-off, either during the process of taking-off or when his taking-off sheets are complete will run through them and insert the appropriate Code number from the Standard Bill at the side of each item. This process could equally well be done by the worker-up. In time the Code Numbers will become familiar as do items to anyone using the W.D. Schedule.
3. From this data the bill can be prepared mechanically.
 - (a) Cards are punched with the item Code No. and the dimensions from the taking-off sheets. These punched cards would then be completely checked through.
 - (b) The dimensions on the cards would then be mechanically "squared" (converted into cubes, supers, etc.) by similar means and checked.
 - (c) The cards would then be mechanically "sorted" to bring all like-coded cards together (*i.e.* abstracted).
 - (d) The cards would then be fed into the machine which would "reduce" the figures and arrive at summary totals for each item Code No.
 - (e) These summarized cards would then go through the machine with the set of "master cards" compiled from the Standard Bill, each having a standard description thereon.
 - (f) The bill would then emerge ready printed from the machine.

These step-by-step mechanical operations have been discussed with experts in the field of punch-card machine accounting and absolute assurance has been given that the process would present no difficulty whatsoever to their already existing machines. Any doubts about this aspect of the problem can therefore be dismissed.

What still remains to be done

Where further experiment and research will be necessary is in the Standard Draft Bill itself. As it is today, the Draft Bill is a model and was prepared to this end. To illustrate this we may take the items for copper pipe fixed to brickwork. In the Standard Bill, descriptions for this particular fixing are given in two typical items, *i.e.* a typical description for $\frac{1}{2}$ in. dia.

19G pipe and one for 1 in. dia. 18G pipe. These two items were considered sufficient to indicate the correct manner of describing copper pipe fixed to brickwork. Similar items are included for other types of fixing. To use the Standard Bill as a basis for coding in preparation for automation it will be necessary to expand it at this point to cover such other diameters of copper pipe fixed to brickwork as are likely to be required. Similar expansion will be necessary at other points as, for example, to give further 5 ft. stages in excavation and a wider range of concrete floor slab thicknesses. The process of expansion, however, must not be speculative and a period of time must now elapse during which bills of quantities for particular jobs can be carefully and methodically compared with the Standard Bill to observe exactly where expansion will be required. By this means the number of non-standard items can be reduced to a minimum and if any remain or are encountered in certain bills they can be dealt with by creating for the particular bill a supplementary coding.

If the idea of automation commends itself to the profession it may be possible without any great loss of detail to make agreed adjustments to certain methods of measurement. For example, precast reinforced concrete lintols which now occupy so much space by being billed in feet run for each section area might be grouped and/or given in feet cube with reinforcement measured separately. Modifications of this kind to methods of measurement would greatly assist the introduction of automation. A private installation of the machines for automation would be costly. The prodigious speed at which the machines work will mean that probably five or more bills can be prepared in the time normally taken to prepare one. If bills were turned out at this rate the installation would make high profits for the owner but if it were allowed to be idle for a week at a time then losses would accrue. Smaller offices would therefore have to avail themselves of the services of the machine-accounting depots already established in the larger towns which undertake all types of work on an hourly charge basis.

The possibilities attendant upon the foregoing developments are vast. Having prepared a set of punched cards representing a job they may be sorted and reassembled in any given order to aid cost-analysis or for any other purpose simply by passing them through a machine. This fact should be of great interest in view of the present discussions on "elemental bills." By a similar process all manner of cross-checks can be put upon the work of the taker-off.

It is reasonable to conclude, therefore, that in the already established Standard Draft Bill of Quantities and the now possible future developments into the field of automation which derive therefrom we have not only an attractive labour-saving device but a highly effective reply to the demand from the Productivity Team and others for the more rapid production of bills of quantities in professional offices.

building illustrated

OFFICES and WAREHOUSE

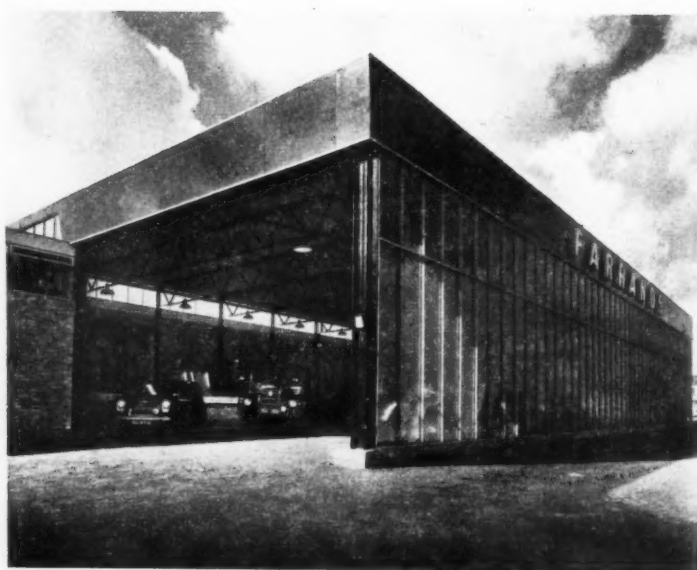
in WIGMAN ROAD, NOTTINGHAM; designed by J. M. AUSTIN-SMITH and PARTNERS partner-in-charge P. J. LORD; assistant architects R. SCOTT BROWN and P. C. HARRISON quantity surveyors YOUNG and BROWN

This week the JOURNAL analyses a second warehouse and office block (the first, for H. J. Heinz & Co. Ltd., at Cardiff, was illustrated on March 28, 1957). This block was built some three miles from the centre of Nottingham for Frank Farrands Ltd., retail grocery and provision merchants. The building has been planned for future extension both of the offices and of the warehouse. Apart from black and white, only one applied colour (dark blue) has been used externally, and this is confined to two large doors. This has resulted in the visual integration of blocks differing fundamentally in structure without losing their sparkle or interest.

Viewpoint 1: Offices on the left and warehouse on the right, from Wigman Road



building illustrated





Site plan, showing photographic viewpoints

Viewpoint 2 (above left): the pedestrian entrance with covered access to the offices and cloakrooms serving all other departments. The office block is basically a reinforced concrete frame construction with non-loadbearing brick panels and metal windows providing enclosure. Horizontal frame members are exposed and painted whilst vertical members are faced with thin slabs of black slate. All opening lights and external doors are painted white whilst the remaining framework is painted black. Viewpoint 3 (extreme left): a general view from the north-east, with the projecting canopy to the office block on the left and the loading bay to the right. The two open ends of the loading bay are opposite to one another, each fitted with a mechanically operated roller shutter to provide garage security. This facility was specifically requested by the client in view of the fact that a separate garage was not included in this instalment. Viewpoint 4 (left): the west end of the loading bay as seen from the main entrance to the office block. The continuous glazed wall to this bay is made of Georgian wired obscured glass panels set in unpainted aluminium patent glazing. A brick plinth runs along the bottom of the wall and the deep fascia above the glazing is of large panels of external quality plywood, expressing the depth of the trusses behind, painted black with white enamelled pressed metal letters superimposed. The flat roof to the bay is made up of asbestos trough units, spanning between welded steel trusses at 10-ft. c.c.s. and finished with bituminous felt.

analysis

CLIENT'S BRIEF : his stated requirements

The provision of a grocery warehouse and administration offices both capable of extension to accommodate future needs. A caretaker's house was also required to be contained within the site. The loading bay to be enclosed, which would provide garage security until the garage block had been built. No complete manufacturing processes involved.

SITE : topography, surroundings, access, planting

22-ft. fall from south-west to north-east of site with roads bounding the north and east and a railway cutting on the south-west. Surroundings—suburban estate development. Access from Wigan Road (N.N.E.). No secondary access allowed by town planning. A well developed tree belt to south-east side of site but no existing planting on the site considered worthwhile retaining. The scheme has catered for landscaping site in the future.

PLAN : general appreciation and relation of units

Warehouse—to provide good general lighting conditions and avoid direct sunlight. North light bays were decided upon which, in addition, provided an unimpeded floor space and the possibility of bay extension to the south-west. Administration block.—Long narrow block capable of linear extension. Warehouse and administration block form an "L" shape with vehicular access and parking in the contained space. The east side of the administration block will run parallel with a new major road to be constructed. It was necessary to order all steelwork in advance but as the client did not finalise his requirements for the administration block in time for this to be done a simple reinforced concrete solution was sought.

MAIN CONSTRUCTION : general appreciation

Warehouse, loading bay and boiler house in steel with the administration block in reinforced concrete. The steelwork in the warehouse area, together with the patent glazing and asbestos roof and wall cladding went out to tender at the end of March, 1955 under one tender. Quoting from the invitation to the four tenderers "It is the intention to allow a flexibility in the basic types of construction and in the forms of detailing and sections used to enable forms of construction most suited to the production methods of the tenderers to produce more economic schemes. Tenderers are encouraged to submit priced alternatives: the architects do not bind themselves to accept the lowest tender but wish to find a balance between a clean and efficient structure and economy. The steel grid is fixed by planning requirements. All variations must occur within this grid and within the schedule of requirements following. Other than the three suggested schemes, all alternative schemes must give sizes and types of structural members together with typical details for the joints, etc." It was further suggested that the tenderers should investigate the possibilities of alternatives first with the architects.

Three basic schemes were produced as alternatives: (a) a tubular structure with a very light steel content; (b) a welded steel frame with beams in the north light giving no chords, and (c) the normal roof truss. As a rule each of the tenderers returned two prices. The winning scheme was a variation on the normal north light truss structure, substituting a bent knee frame for the truss, which was felt to give the cleanliness of structure required, at a price which was measurable against a slightly lower price for the normal north light truss. A tubular scheme was extremely competitive. Prices were obtained on rates per ton and lump sum with rates per 100 sq.ft. for asbestos and rates per sq.ft. for glazing.

analysis

	Offices		Warehouse	
cost per sq. ft.	s	d	s	d
preliminaries and insurances	3	2½	2	3½
contingencies	3	11½	2	9½

STRUCTURAL ELEMENTS

Work below ground floor level	4	2½	8	0½
Stanchions, mass concrete, pad				
Walls: mass concrete, strip.				
Administration block: infill panels, reinforced concrete, edge beam.				
Reason: Site within area of previous mining subsidence. Administration block structurally two units 60-ft. long.				
Boiler house and link structurally separate from warehouse.				
External walls and facings	3	4½	1	5½
Warehouse: asbestos cement, wired obscured glass set in aluminium patent glazing, self finish.				
Administration block and warehouse: facing brickwork.				
Administration block only: slate facing to columns, oiled and exposed edge beams fairfaced, painted.				
Temporary asbestos cladding and insulation board lining.			6	3½
Frame or load bearing element	6	4½	6	2½
Steel columns and beams in part of warehouse, 20-ft. span at 10-ft. spacings.				
Steel bent knee frames in warehouse, 20-ft. span at 10-ft. spacings.				
Steel valley beams and columns in warehouse, 30-ft. span at 20-ft. spacings.				
Steel lattice beams in warehouse (loading bay), 50-ft. span at 10-ft. spacings; reason: uninterrupted floor area required.				
Reinforced concrete columns and edge beams with in-situ concrete floor between, in administration block, 25-ft. span at 15 ft.				
spacing; reason: providing a level ceiling with no beams projecting beneath.				
Upper floor construction	2	9½		
Prestressed concrete slab: concrete and clay pots, upper surface to receive screed, soffit to receive plaster.				
Reason: slab calculated to take light partitioning on any point.				
Staircases	2	11		
Open tread: timber treads and handrail with steel vertical supports and strings, painted. Armour plate glass balustrade, wood waxed.				
Roof construction	7	3½	5½	
Prestressed composite slab in administration block, concrete and clay pot, 3 ply min. bit. felt on vermiculite screed.				
Asbestos sheet in warehouse, fairface to north light, felted finish on screed elsewhere.				



covered glass set in aluminium patent glazing with asbestos ventilating cords set within the glazing to each bay.

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

building illustrated

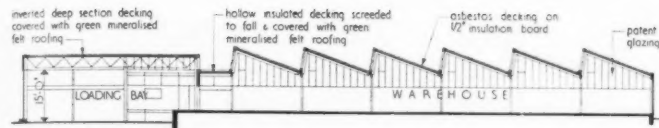
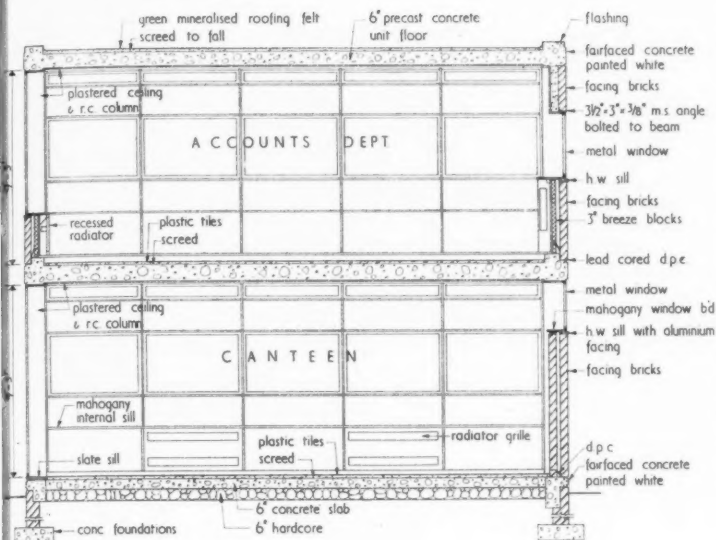


Viewpoint 7: Looking towards the south-west end of the office block with the permanent side of the warehouse seen on the left. The accounts department is housed on the first floor with the small canteen below. The two white bands running around the block at first floor and roof level are the expressed faces of the in situ concrete edge beams which are painted white. The roof is finished with bituminous felt and the eaves turn-up capped

with an aluminium trim. The columns are faced with thin slabs of black slate and the spandril walls are in facing brickwork with a plastered breeze inner skin. The link between the office block and the warehouse contains the locker rooms and serves both warehouse and administrative staff. The opening lights are clearly defined on this elevation and are, in all cases, horizontal centre hung on friction pivots.

analysis

Offices	Warehouse
s	d

Section B-B [Scale: $\frac{1}{4}'' = 1' 0''$]Section C-C [Scale: $\frac{1}{4}'' = 1' 0''$]

Viewpoint 8: the warehouse block as seen from the south-east with the office block on the right. Large trough sectioned asbestos panels have been used to clad the temporary end of this block whilst the permanent side, expressing the north light bays, is enclosed with brickwork and patent glazing above. The treatment of the verges has been resolved most satisfactorily by the fixing of a deep painted softwood fascia which accentuates the characteristic rhythm of a north light structure. The asbestos is undecorated and the fascia painted white. No rainwater pipes appear externally as they are taken down inside the warehouse at one end of the truss valleys.



Types of roof construction

Warehouse	Loading Bay
Asbestos and northlights	Flat Asbestos decking
14,640 sq. ft.	7,822 sq. ft.
Offices	Link Block
Prestressed concrete slab	In situ concrete
3,114 sq. ft.	614 sq. ft.

Roof lights

Ventilating type: preformed metal trim, clear glass, painted.
Areas: Warehouse 4,332 sq. ft., offices, 36 sq. ft.

Windows

Horizontal centre pivot in administration block: steel section galvanised and painted.
Fixed: in warehouse, aluminium patent glazing, self-finish.

External doors

Glass in administration block, steel section, painted frames.
Solid in boiler house, ply faced, painted, louvred.
Mechanically operated in warehouse, steel (roller), painted.

Glazing

Clear in administration block: $\frac{1}{4}$ -in. plate in lower panes, 32 oz. elsewhere.
Wired and obscured in warehouse: $\frac{1}{4}$ -in. patent glazing.
Toughened clear in stair.

PARTITIONING

Internal partitions

Hollow clay blocks (211 sq. yds.), sand lime bricks, plastered, or fair face (426 sq. yds.).
Cost of partitions in sand lime facing bricks included under wall finishes.

Screens

Half glazed in administration block, timber frame, painted; reason: capable of demounting and re-use.
Glazed in warehouse, steel and glass, painted.
Wired in warehouse, steel and wire mesh, galvanised; reason: security for small stores.

W.c. doors and partitions

Prefabricated in lavatories, metal faced plywood, painted.

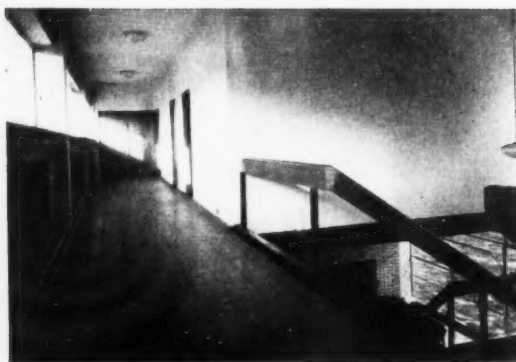
Internal doors

Solid doors generally, ply faced solid core, painted.

Ironmongery to internal doors

Door furniture in administration block, satin nickel bronze—stainless steel kicking and push plates.
Warehouse: black ebonized.

building illustrated



Left: the entrance hall on the ground floor of the office block. A relatively spacious waiting area occurs on the left, the ceiling to which is finished with perforated acoustic tiles. The fair-face brickwork behind the staircase is in sand limes with a waxed hardwood member dividing the brickwork below from the plastered area above. The floor finish is in thermoplastic tile with a change in colour occurring within the staircase and waiting areas. The ceiling, running adjacent to the main entrance glazing on the right, is finished in the same veneered ply panelling as occurs to the soffit of the covered way outside the entrance. The staircase, leading to additional administrative accommodation on the first floor, is made up of welded steel sections with lightly stained and polished solid hardwood string facings, handrails and treads. Treads are out of $1\frac{1}{2}$ -in. hardwood spanning approximately 4-ft. between m.s. angle cleats welded to the web of the steel channel string. Above: looking down from the first floor towards the waiting area adjacent to the main entrance of the office block. All furnishings were selected by the architect. The free standing staircase, described elsewhere, has armour plate glass panels between painted m.s. balusters. Below left: looking along the first floor corridor towards the board room end of the office block with the staircase leading to the entrance hall below. Plastered surfaces are decorated with emulsion paint with the spandril wall behind the radiators on the left expressed in an assertive red. All the hardwood members within the staircase have been lightly stained and wax polished with the steel sections painted black.

analysis

FINISHINGS

	Offices s d	Warehouse s d
Floor finishes	4 9	9½
<i>Cost per sq. yd. s. d.</i>		
Thermoplastic waxed tile 9 in. × 9 in. in administration block (500 yds.)	31 0	
Waxed wood block in board room (40 yds.)	61 10	
Granolithic in warehouse (2,075 yds.)	6 9	
Quarry tile 6 in. × 6 in. in lavatories and kitchen	42 6	
Wall finishes	1 4½	8½
Administration block: exposed reinforced concrete frame, painted. Generally: sand lime bricks, fairface; reason: no decoration maintenance. Warehouse: asbestos, painted; reason: temporary ends only. Administration block: plaster, painted.		
Ceiling finishes	1 7½	
Warehouse: fibre board, painted; reason: heat insulation. Loading bay: asbestos, fairface. Administration block: plaster, painted. Warehouse: asbestos insulated deck, fairface; reason: heat insulation		
Decorations	2 4½	9½
Walls and ceiling generally: emulsion, grey and white, N8. Steelwork, warehouse: oil, primer red, 7.5 R 3/12. Metal windows in administration block: oil, fixed windows, black; opening windows, white. Exposed reinforced concrete frame in administration block: emulsion, white. Doors and frames generally: oil, blue 2.5 PB 3/8. Roller shutters in loading bay: oil, blue 2.5 PB 3/8. Panels in corridors in administration block: emulsion, red, 7.5 R 5/16. Radiators generally, oil, painted black.		

FITTINGS

Cloak rooms	1 0½	
Individual lockable cabinets in male and female locker rooms: pressed steel, stove enamel; reason: security.		
Kitchen equipment	9½	
Hot closet grille and boiling plate in canteen; reason: snack meals only.		
Other fittings	9½	1½

SERVICES

	Offices s d	Warehouse s d
Plumbing: external	2	1
Flashings and eaves trim generally: aluminium, self finish. R.w.p's on canopy: steel 3-in. diameter, stove vitreous enamel (black).		
Rain water disposal		
By sump (external) in administration block: cast iron r.w.p's, painted. By gutter (internal) in warehouse: asbestos gutter, 6-in. cast iron r.w.p's, painted. Reason: special rectangular section r.w.p. used to roof of offices and located on face of stanchion.		
Plumbing internal: waste disposal	3½	
Both trapped and untrapped from lavatory basins in administration block and warehouse: copper. Reason: untrapped wastes into floor channel from two lavatory basin ranges. Copper required by local authority throughout.		
Cold water storage	3 4	2½
Sectional steel tank above boiler house, 2474 gallons (actual); reason: to cater for needs of first stage of future extension.		
Plumbing: sanitary fittings	1 2	0½
W.c's: heavy vitreous china, white glazed. Lavatory basins: heavy vitreous china, white glazed. Drinking fountain and urinals: earthenware, white glazed.		
Heating installation: heat exchanger type	3 6½	3 6½
Steel section. Radiators in administration block: painted. Pressed metal unit heaters in ware- house: enamelled. Convactor in administration block and Blown convactor in waiting area.		
Boiler type and capacity		
Oil fired sectional cast iron in boiler house, 1,183,000 B.Th.U's, automatic from oil storage tank.		
Water heater type: hot water installation	8½	0½
Multi-heater in kitchen and lavatories, gas; reason: avoids excessive pipe runs if water heated by boiler.		
Drainage: type of system		
Separate generally: salt glazed except under roadways and link block in which cases cast iron used.		

analysis

Gas installation

Heaters: meter in boiler house store and heaters in lavatories and kitchen.

Electrical installation, source and fitting type

Fluorescent in warehouse: 10 lumens, exposed tube.

Tungsten in administration block and warehouse offices: 16 lumens, translucent globe.

Wiring and switching types

P.v.c. in administration and warehouse: screeds and wall chases. 13-amp. outlets in both blocks: iron clad, flush plastic.

Power supply type

400/415 volts 3 phase: switch room in warehouse, distribution boards in cleaners' stores.

Paved areas

Blocks: island and pedestrian way, pre-cast concrete. Access road and parking, tarmac.

SPECIAL ACOUSTICAL TREATMENT

Sound absorption material

Ceiling to waiting area: perforated fibre tiles.

Reason: waiting area used often for travellers up to 16-20 in number.

Sound insulation

No special provision made as no major noise worries are involved in this scheme.

total net cost per sq. ft. of floor area	Offices		Warehouse	
	s	d	s	d
	75	0 $\frac{1}{4}$	41	9

Unallocated items based on combined areas of offices, warehouse and cottage

Paved areas	1	7 $\frac{1}{4}$
Grassing		4 $\frac{1}{4}$
Boundary walls and fencing		9 $\frac{1}{4}$

FIRE

Structural precautions

Hydrant provided within the site together with hand appliances. No further precautions required to be taken.

Planning precautions

Warehouse disconnected from Administration Block. Access for fighting on all sides of all blocks. Means of escape: normal. Reasons and comments: no high fire load involved.

Offices		Warehouse	
s	d	s	d
1	5		1

2	7 $\frac{1}{4}$	1	10 $\frac{1}{4}$
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REFUSE DISPOSAL

By container. Type of refuse: paper mainly. Waste recovery: container store. Reasons and comments: little waste involved.

TIME SCHEDULE

Drawings	Tender date	Contract signed
Design: June 1954		
Working: March 1955	27.9.55	4.11.55
Work commenced	Work completed	Type of contract
14.11.55	3.11.56	RIBA (Lump sum)

Comments: Weather delays, together with steel delays at mills.

RATIOS

Area of solid wall	Warehouse =	0.352
Total floor area	Offices =	0.595
Area of windows	Warehouse =	0.1305
Total floor area	Offices =	0.435
Area of ext. doors	Warehouse =	0.0547
Total floor area	Offices =	0.02505

STATEMENT SHOWING BREAKDOWN

Areas in sq. ft.	Warehouse	Office	Total
Floor	22,400	7,100	29,500
Glazing	2,920	3,097	6,017
Doors	1,224	178	1,402
Solid	7,881	4,225	12,025
Roof: Glazing	4,332	36	4,368
Solid	21,900	3,560	25,460

N.B.—Floor area of caretaker's cottage 1,223 sq. ft.

COST SUMMARY

Work above ground floor level:	£63,170
Foundations and basement:	£10,409
External works:	£6,801
Gross total price:	£80,380

Prices per sq. ft. floor area

Cottage:	£2,781	= 45s. 5 $\frac{1}{4}$ d.
Offices:	1,223 sq. ft. £24,519	= 75s. 0 $\frac{1}{4}$ d.
Warehouse:	6,548 sq. ft. £46,274	= 41s. 9d.
External works:	22,151 sq. ft. £6,801	= 4s. 6 $\frac{1}{2}$ d.
	29,922 sq. ft.	

analysis

CARETAKER'S COTTAGE

at the OFFICES and WAREHOUSE in NOTTINGHAM
designed by J. M. AUSTIN-SMITH and PARTNERS

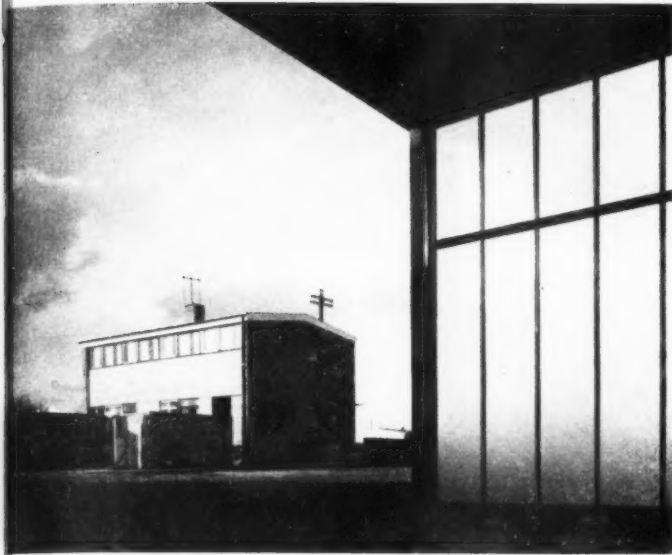
CLIENT'S BRIEF and PLAN

The client required a caretaker's house with four bedrooms and small garden to rear with a normal standard of finish. There is a large living dining room with back boiler water heating and electric immersion booster. Kitchen and w.c. downstairs, four bedrooms and separate w.c. and bathroom upstairs.

MAIN CONSTRUCTION

Strip foundations. Brick load bearing cross walls. Aluminium roof laid on 2-in. wood wool slabs with timber joists spanning between cross walls.

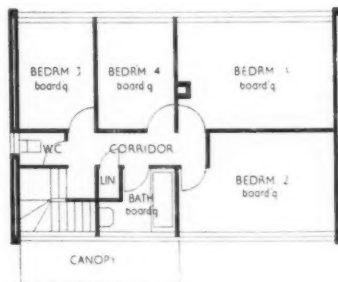
	cost per sq. ft.	s	d
preliminaries and insurances	1	11	
contingencies	2	4	1



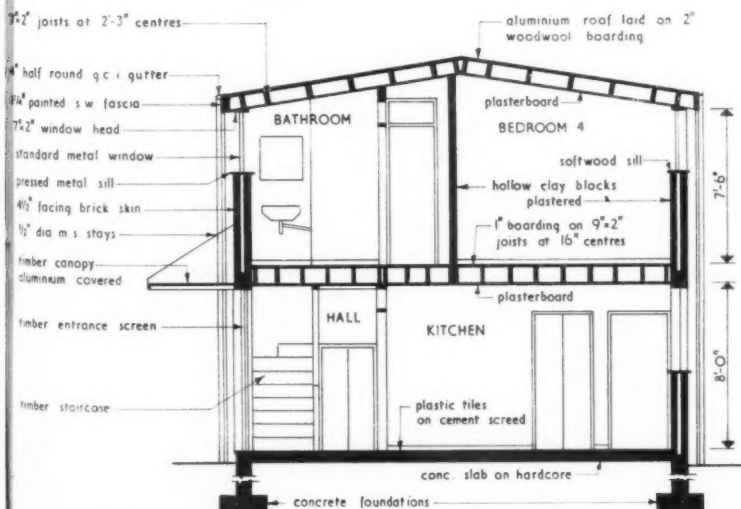
Viewpoint 9: the four bedroomed caretaker's house which stands adjacent to the vehicular entrance to the site as seen from the west end of the loading bay.



Ground floor plan, caretaker's cottage
[Scale: $\frac{1}{8}'' = 1' 0''$]



First floor plan



Section A-A [Scale: $\frac{1}{8}'' = 1' 0''$]

Work below ground floor level 2 3

Strip foundations. Brick load bearing cross walls. Aluminium roof laid on 2-in. wood wool slabs with timber joists spanning between cross walls.

Work below ground floor level 2 3

Strip foundations. Sub-soil clay.

External walls and facings 5 8 1

Fairface brick work. Slate thresholds on ground floor.

Frame or load bearing element

$4\frac{1}{2}$ -in. brick cross walls. 4-in. concrete ground floor.

Upper floor construction 1 0 1

9-in. \times 2-in. timber joists with 16-in. centres with tongue and grooved boarding.

Staircases 4 1

Timber staircase. Meter and coat cupboard under.

Roof construction 7 4 1

7-in. \times 3-in. joists at 2-ft. centres. 2-in. wood wool slabs with 22 SWG aluminium with welts and standing seams.

Windows 1 11 1

Standard metal windows.

External doors 4

Special metal pieces over first floor bedroom partitions.

Glazing 8 1

Standard E.J.M.A. doors. Special screen to entrance.

Internal partitions 7 1

32 and 24-oz. glass.

Screens

3-in. hollow clay pot, plastered.

analysis

	s	d
Internal doors	1	3½
EJMA standard flush.		
Ironmongery to internal doors	1	4½
Satin nickel bronze—Swedish.		
Floor finishes	4	4½
9-in. × 9-in. thermoplastic tile, ground floor, ground floor.—living room, hall kitchen. Granolithic to stores, porch and cupboard. First floor T and G boarding.		
Wall finishes	1	5½
Plaster generally. Tile splash back behind kitchen fittings. Painted, emulsion paint. One wall of the living room papered.		
Ceiling finishes	1	5½
Plaster, board painted.		
Decorations	1	8½
Walls and ceilings emulsion paint. Metal windows, doors and frames, oil paint. Generally, black and white. Fireplace wall in living room, papered. Doors painted light blue, 7.5B 6.6.		
Other fittings		9½
Kitchen equipment		—
EJMA cupboards.		
Plumbing		5½
External, cast iron. Internal, copper generally. All generally as warehouse.		
Back boiler with under hearth ventilation, with 35-gallon hot water cylinder with immersion heater.		
Waste disposal		7½
Cold water disposal	4	1
Gas installation		4
Sanitary fittings	1	4½
Electrical installation	1	4½
total net cost per sq. ft. of floor	45	5½

COST COMMENTS

Offices and Warehouse

The analysis break-down into the office administration and warehouse block clearly emphasises the different distribution of costs for each section. The analysis of the office block, with its compact accommodation, normal finishings and standard office fittings, will compare favourably overall with similar buildings of the same function. The warehouse section with large uninterrupted areas and a minimum of decorative finishes gives a fairly low cost per square foot, the bulk of the money being spent on the frame together with the enclosing walls and roof.

The special requirements for foundations on account of previous subsidence, and the equal apportionment of cost of the heating installation between both blocks because of the central boiler installation should be noted. So should the feature made of the staircase in the office block and the requirements of the warehouse for external roller shutter doors. Both items have a relatively high cost per square foot, which should be considered individually and not taken as a normal indication of costs for these elements.

Caretaker's Cottage

It is revealing to have the total cost (under £3,000) of this straightforward house broken down into elements, in contrast to large schemes where considerable sums of money might be expended in any element without unduly affecting the overall analysis. Of the total carcass cost the roof construction has proved the most expensive; in finishings, the ironmongery is almost as expensive as the doors, and the plumbing installation cost appears high considering the compact planning of the services. From further examination of this analysis together with the drawings, it is quickly appreciated *a*, how the costs have been allocated, *b*, that any unusual ideas can be quickly thrown up into sharp relief and *c*, whether true value for money has in fact been obtained.

SITE ORGANIZATION

Site labour and equipment: General foreman and trades foremen. Tractor and scraper for excavation and face shovel for removal off site. Considerable use was made of ready mixed concrete.

Sub-letting: Plastering and Tar Mac paving.

Job management: Both progress charts and incentive payments were carried out. The contracts manager visited the site weekly or more frequently as conditions demanded. Liaison by telephone and weekly reporting.

CONTRACTORS

Clerk of works: R. S. Moulton. *General contractors:* W. J. Simms & Son & Cooke. *Sub-contractors—Reinforced concrete:* Costain Concrete Co. Ltd. *Bricks:* M. McCarthy & Sons Ltd. *Stone:* Bow Slate Co. Ltd. *Special roofing, patent glazing:* Boulton & Paul Ltd. *Tiles:* Carter & Co. *Partitions:* Steel Bracketing & Lathing Ltd. *Wood block flooring:* R. W. Brooke & Co. Ltd. *Structural steel:* Boulton & Paul Ltd. *Asbestos roofing and cladding:* Boulton & Paul Ltd. and Harold Shaw Ltd. *Patent flooring:* R. W. Brooke & Co. Ltd. *Granolithic flooring:* Pro-dorite Ltd. *Central heating:* James Combe & Son Ltd. *Gas:* Ascot Gas Water Heaters Ltd. *Electric wiring:* Berkeley Electrical Engineering Co. Ltd. *Electric light fixtures:* G. Forest and Falk Stadelmann & Co. Ltd. *Staircase:* Kingsmill Metal Co. Ltd. *Ventilation:* Colt Ventilation Ltd. *Plumbing—water tank:* Braithwaite & Co. *Structural Ltd. Kitchen fittings:* Benham & Sons Ltd. *Door furniture:* W. N. Froy & Sons Ltd. *Casements:* Williams & Williams. *Domelights:* T. & W. Ide Ltd. *Gates and fencing:* A. J. Binns Ltd. *Roller shutters:* Haskins. *Sanitary fittings:* Stitsons Sanitary Fittings Ltd. *Lightning conductor:* W. J. Furze & Co. Ltd. *Furniture:* Heals (Contracts) Ltd. *Petrol pump and tank:* Avery Hardoll Ltd. *Venetian sun blinds:* Danura Ltd. *Cloakroom fittings:* W. B. Bawn & Co. Ltd. *Neon signs:* L. V. Pannell. *Paint:* T. & W. Farmiloe Ltd. *W.c. cubicles:* Venesta Ltd. *Special metalwork:* Weller Gauge & Welding Co. Ltd.

Patent glazing: Standard Patent Glazing Co. Ltd.

Asbestos decking: Universal Asbestos Co. Ltd.

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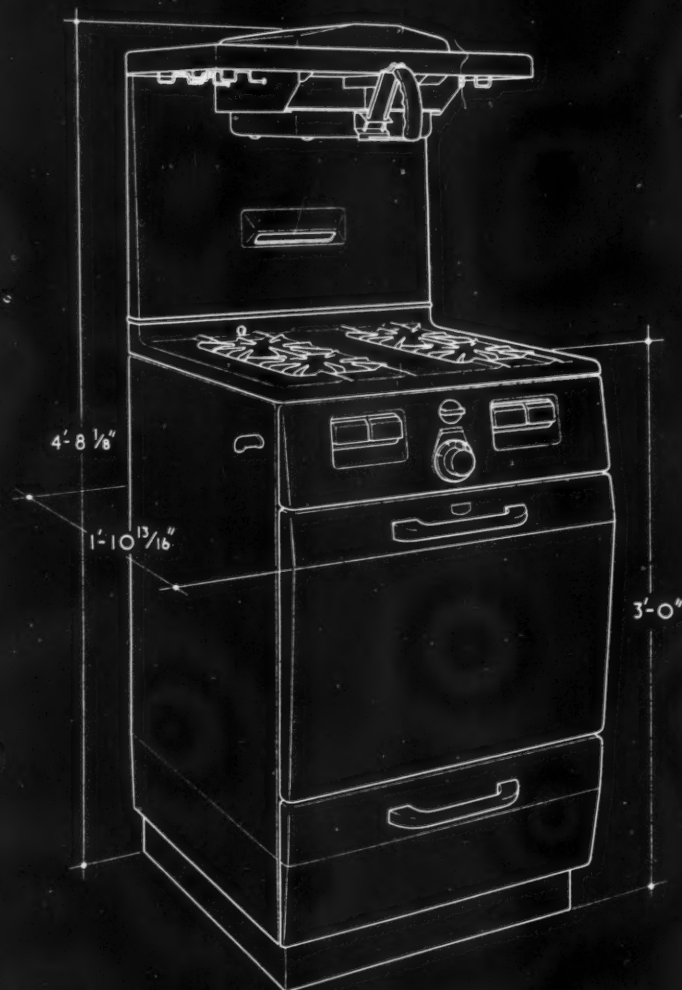
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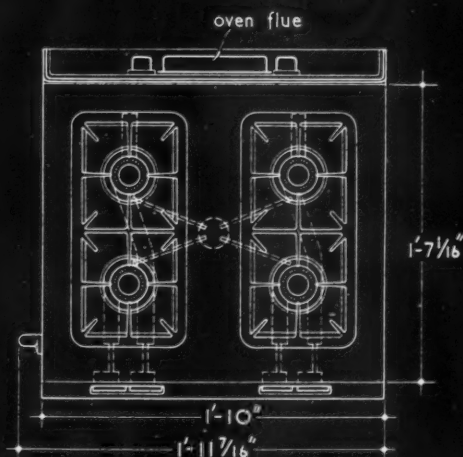
COOKING GAS

The Architects' Journal Library of Information Sheets 615. Editor: Cotterell Butler, A.R.I.B.A.

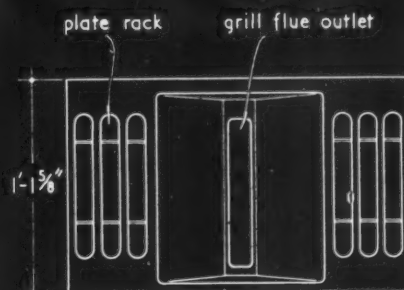
31.C2



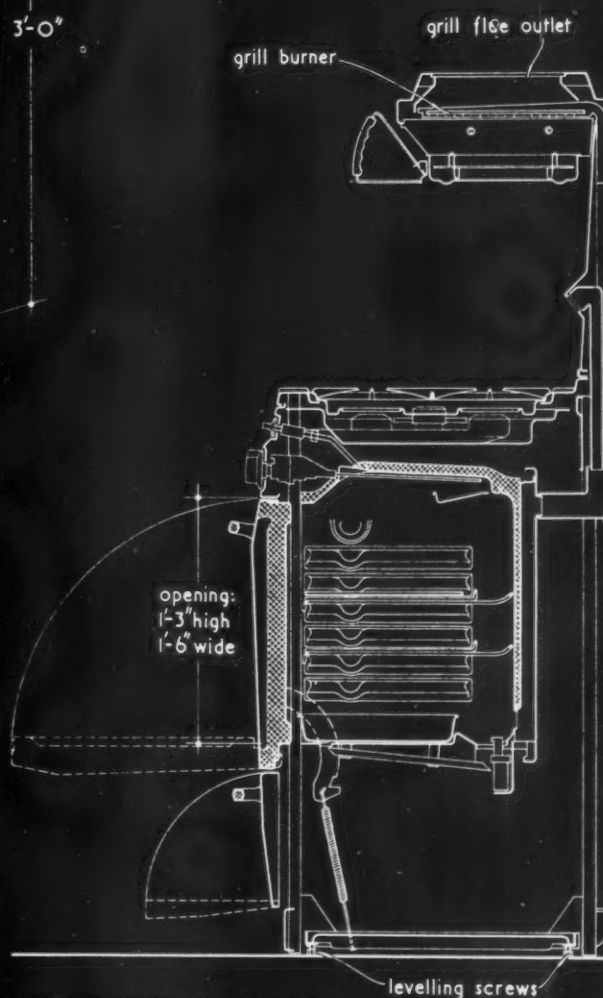
PERSPECTIVE SKETCH OF COOKER.



PLAN OF HOTPLATE.



PLAN OF GRILL.



SECTION THROUGH COOKER.

31.C2. ·RENOWN SIX· GAS COOKER

This Sheet describes the Renown Six gas cooker. The drawings on the face show the general appearance, a vertical section through the cooker, and plans of the hotplate and eye-level grill.

Construction

Hotplate: This is of pressed steel with two cast-iron interchangeable and reversible open-type pan rests.

Hotplate burners: There are four boiling burners in two interchangeable pairs. Each hotplate burner is fitted with an automatic flash ignition device. There are two spillage trays, one beneath each pair of burners.

Oven: The linings are of sheet steel with shelf supports pressed in (six positions). The burner is fitted at the back and has 30 flame ports. Flash tube ignition is provided from a hole at front of the oven. Two chromium-plated wire trays, meat tin and cake tray are supplied. The door is of the drop type with adjustable spring loading; the oven door is sealed by special stainless steel strips. The oven is insulated with glass fibre and aluminium foil at sides, top, back and door.

Storage compartment: This has a removable baseplate, reversible, with finger-hole back and front, and spring-loaded drop type door.

Plinth: This is an extension of the channel steel supports of the cooker with angle iron stays at the bottom. Side and front panels are sheet steel.

Eye-level grill and plate rack: The burners consist of two rows of 18 flame ports with two heat-resisting sheet steel frets and expanded metal beneath them. The grill has a pressed sheet steel cover with integral plate rack for 6 plates and top flue. A pressed aluminium grill pan with wire mesh grid is supplied.

Splashplate: This is of pressed sheet steel with canopy flue outlet for oven at centre.

Fittings

Tap controls: These are spring-loaded, with brass bodies and plastic handles.

Thermostat: This is of the rod type combined cock and thermostat and has a dial setting.

Lighter connection: A chromium-plated lighting torch with plastic handle is supplied and a $\frac{1}{4}$ -in. B.S.P. elbow is fitted to the left-hand side of the cooker.

Governor: The cooker is fitted with a $\frac{1}{2}$ -in. Parkinson 150 DA governor to maintain a constant pressure to the burners.

Fixing

The position chosen for the cooker should be well lighted and free from draughts. The cooker should be fitted flush against the wall and should not be placed beneath a shelf or overhanging cupboard as this will become stained from the grill flue outlet. The minimum distance between the grill flue outlet and any overhead projection must be 1 ft. 8 in. unless special precautions are taken to prevent overheating.

Gas supply: This should be not less than $\frac{1}{2}$ -in. B.S.P. It can be fed directly into the governor at a height of 2 ft. 8 $\frac{1}{2}$ in. from the floor or taken up to the governor through one of the holes, at either side of the cooker, 4 in. from floor level.

Finish

The cooker is available in white or cream vitreous enamel with black pan rests. The grill pan handle is in black plastic and hotplate tap handles may be in cream, white, red, blue or green.

Compiled from information supplied by:

The Parkinson Stove Company Ltd.

Head Office: Terminal House, Grosvenor Gardens, S.W.1.

Telephone: Sloane 0111 (4 lines).

Telegrams: Disc, Sowest, London.

Works: Stechford, Birmingham 33.

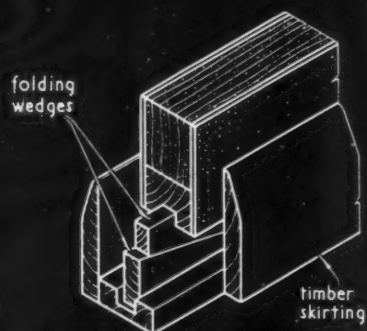
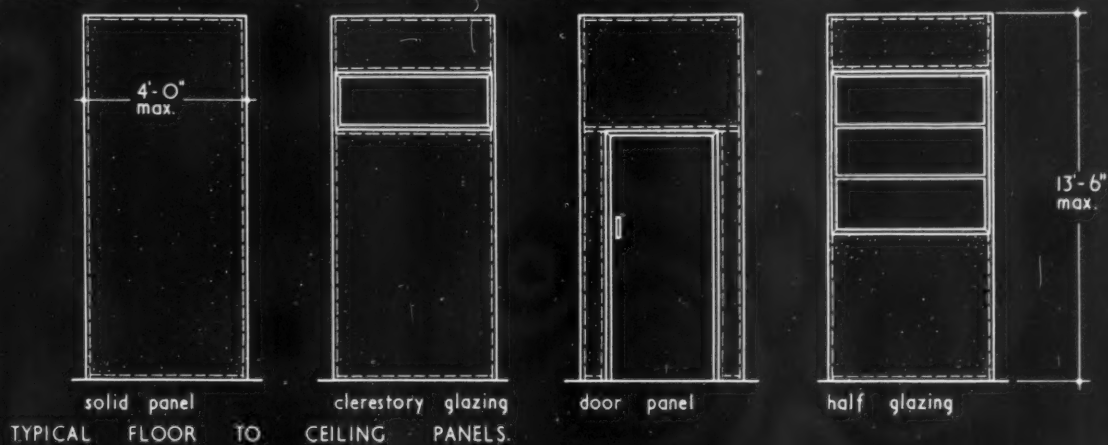
Telephone: Stechford 2253-9.

Telegrams: Appliance, Birmingham.

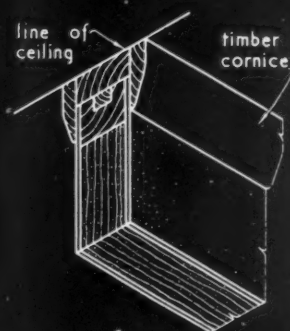
PARTITIONS BUILDING BOARD

21.E3

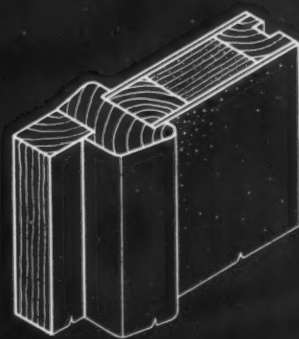
The Architects' Journal Library of Information Sheets 616. Editor: Cotterell Butler, A.R.I.B.A.



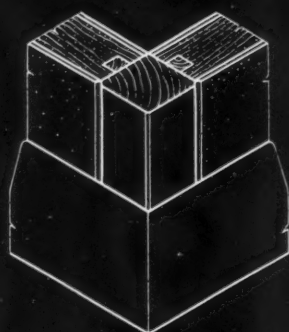
FLOOR FIXING.



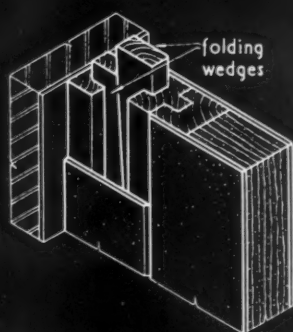
CEILING FIXING.



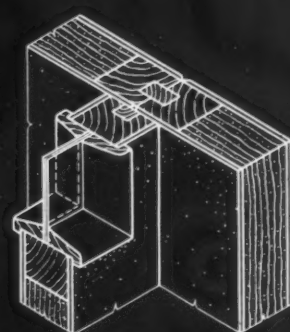
DOOR FRAME.



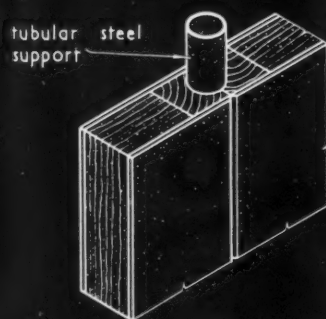
CORNER JUNCTION.



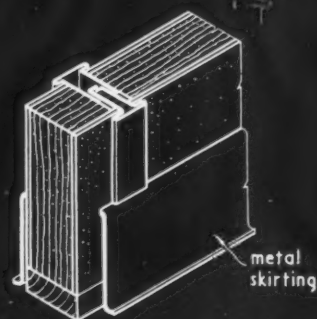
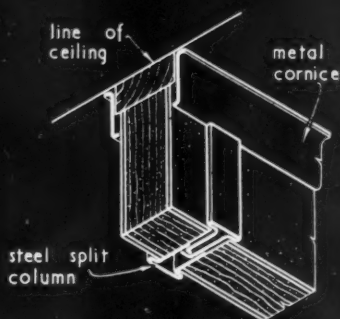
FINISH AT WALL.



THREE-WAY JUNCTION.



ALTERNATIVE TYPES OF SUPPORTING FRAME. (see notes on reverse of Sheet.)



21.E3 · FLUSHFORM · MOVABLE UNIT PARTITIONING

This Sheet describes Flushform movable unit partitioning, the form of its construction and method of assembly.

Construction

The panels consist of a solid core of compressed flax fibres, bonded with synthetic resin, between two $\frac{1}{4}$ -in. sheets of hardboard. The edges of the hardboard are chamfered to give vee-joints between panels. The core is replaced by softwood members along all edges to give a base for fixing.

The panels are designed as complete floor-to-ceiling units out of which doors and glazing openings can be cut as required, and all the drawings on the face of the Sheet, with the exception of the lower three, apply to this type of assembly. However, where it is desired to build up each unit, e.g. with separate panels above and below an area of glazing, there are two alternative types of metal supporting frame available. The first drawing at the bottom of the Sheet shows a tubular steel frame which is housed in the edge member at panel junctions and is particularly suitable for providing conduits. The second and third drawings show a split column in 20g. steel into which the edges of panels are inserted and which can be adjusted in width for differing thicknesses of panel. The partitioning can be easily taken down and re-erected if required. Service ducts can be provided, so arranged that panels are interchangeable.

Sizes

The panels can be obtained in sizes up to 4 ft. 0 in. wide by 13 ft. 6 in. high, in thicknesses of 1 to 3 in.

Properties

The density of the core material can be varied as required to give specific sound and thermal insulation values.

The outer surfaces of the panels have the "spread of flame" classification of standard hardboard.

Fixing

The drawings on the face of the Sheet show fixings at ceiling, floor and walls, corners and junctions,

and openings, for the complete floor-to-ceiling units. The timber edge members can be supplied grooved as required to take a loose tongue. In the three-way junction, the loose tongue to take the intersecting part of the partition is screwed to the straight-jointed panels.

Where panels are used with the tubular metal supports, the edges are provided with $\frac{1}{2}$ -round grooves. The supports are housed in the core of the panel, giving a flush surface finish. Ceiling and floor treatment can be as for the floor-to-ceiling units already described. The split-column type of framing is used in conjunction with metal cornice and skirting as shown in the drawings. Alternatively, a plastic skirting is available which butts the flanges of the columns, so that individual panels can be removed without dismantling the whole assembly.

Finish

The partitioning panels can be left untreated or they can be finished to order in a variety of finishes, e.g. stove-enamelled in any colour or texture, covered with Vynide, etc.

Further Information

The manufacturer maintains a technical advisory department which is available to give advice and assistance and to prepare detailed drawings for architects. Special lead-protected panels for X-ray rooms are available, the lead being incorporated within the core so that the appearance of the partition is unaffected.

Compiled from information supplied by:

Firmin and Collins Limited.

Address: Dover Road, Northfleet, Kent.
Telephone: Gravesend 4844/5.

STAIRCASE: SHOP IN ROTTERDAM

J. H. van den Broek and J. B. Bakema, architects (material supplied by John Noble)



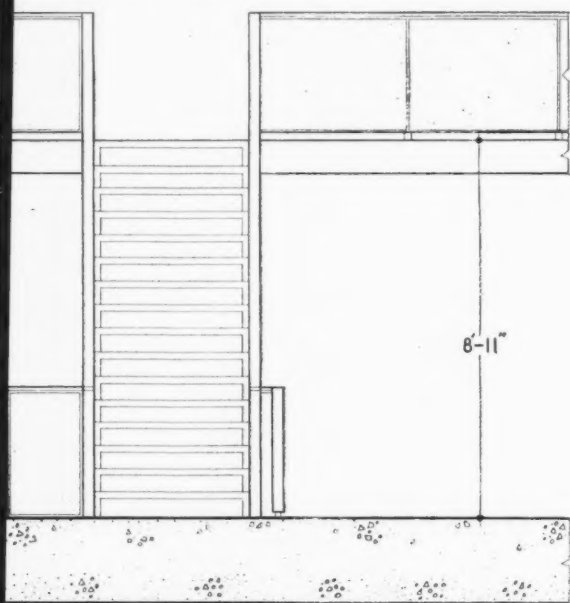
This detail shows an interesting variation of the glazed balustrade in which the sheets of glass are held in a mild steel frame, with beads of the same material. In order to present (as far as possible) the regular geometric form of the sheets, each length of balustrade is formally dissociated from its neighbours, the line of the string being deliberately broken and the newels carefully articulated to express this break. It is to be noted, however, that the lengths of balustrade are provided with a physical link to give extra stiffness. The precast concrete stepped treads have a ground granite finish.

working detail

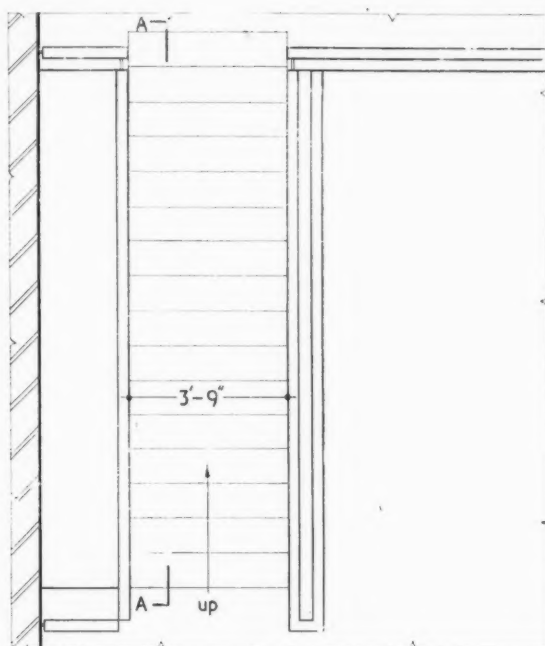
STAIRCASES: 30

STAIRCASE: SHOP IN ROTTERDAM

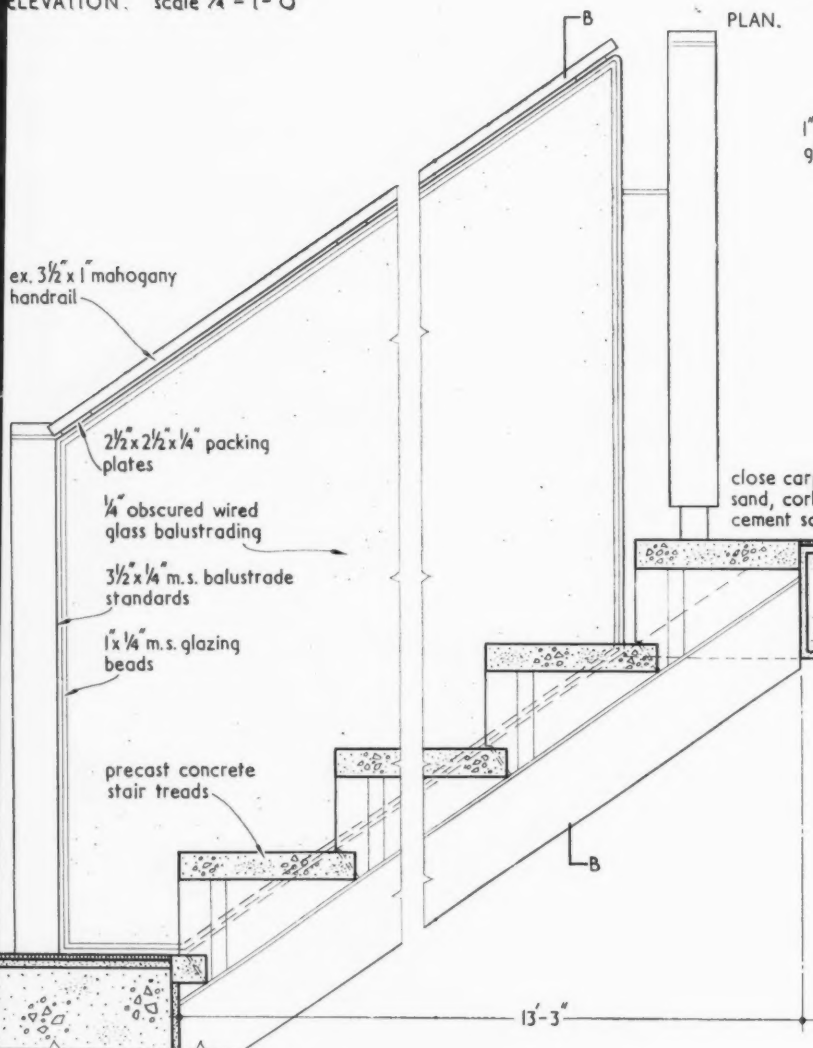
H. van den Broek and J. B. Bakema, architects (material supplied by John Noble)



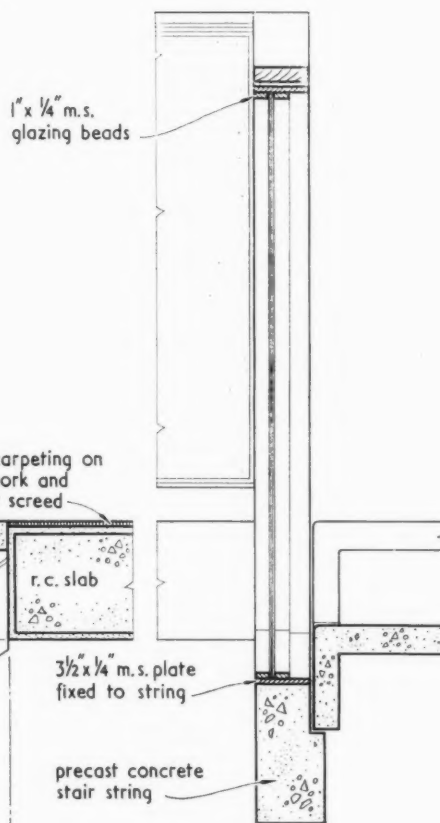
ELEVATION. scale $\frac{1}{4} = 1'-0''$



PLAN.

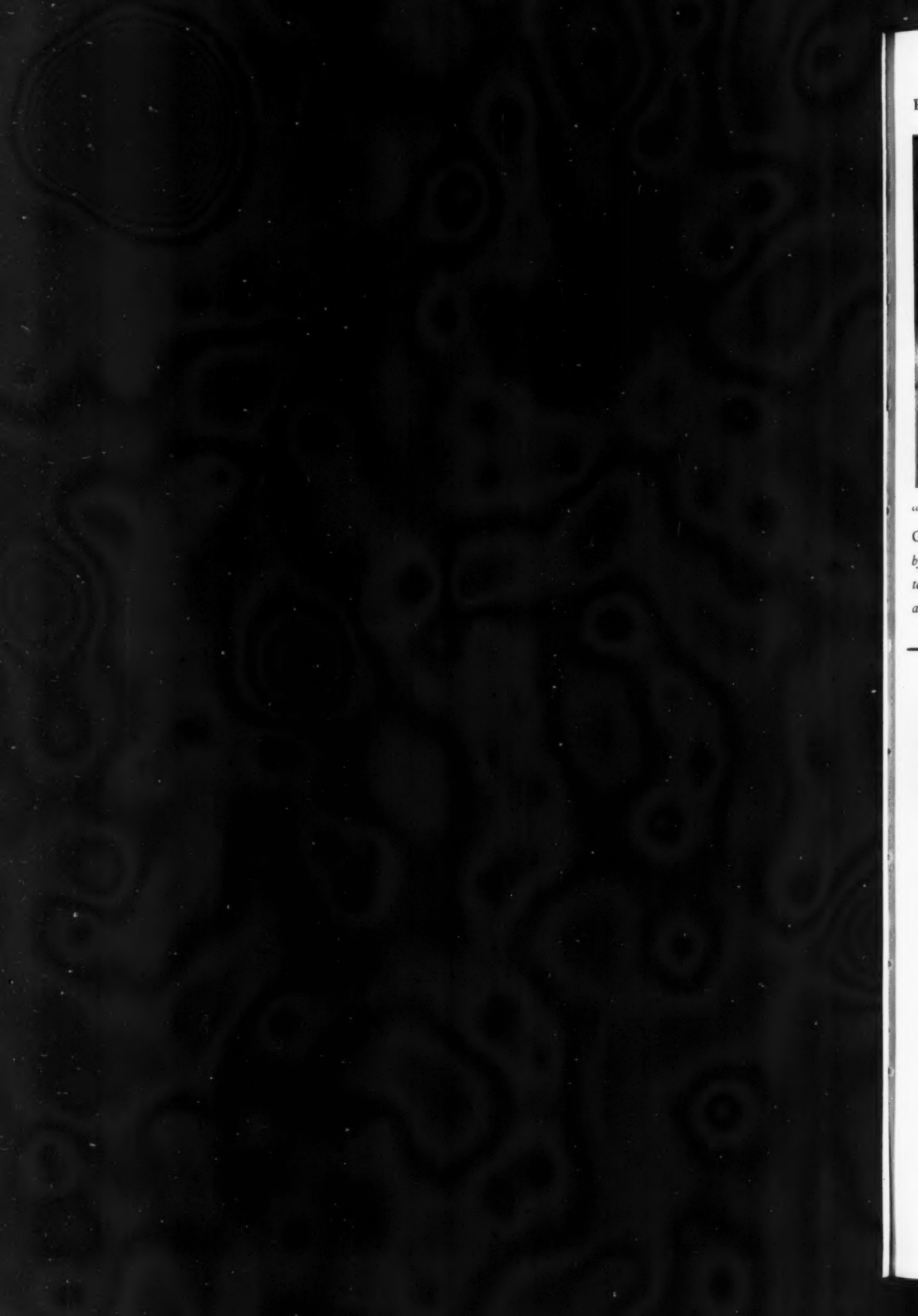


SECTION A-A. scale $1'' = 1'-0''$

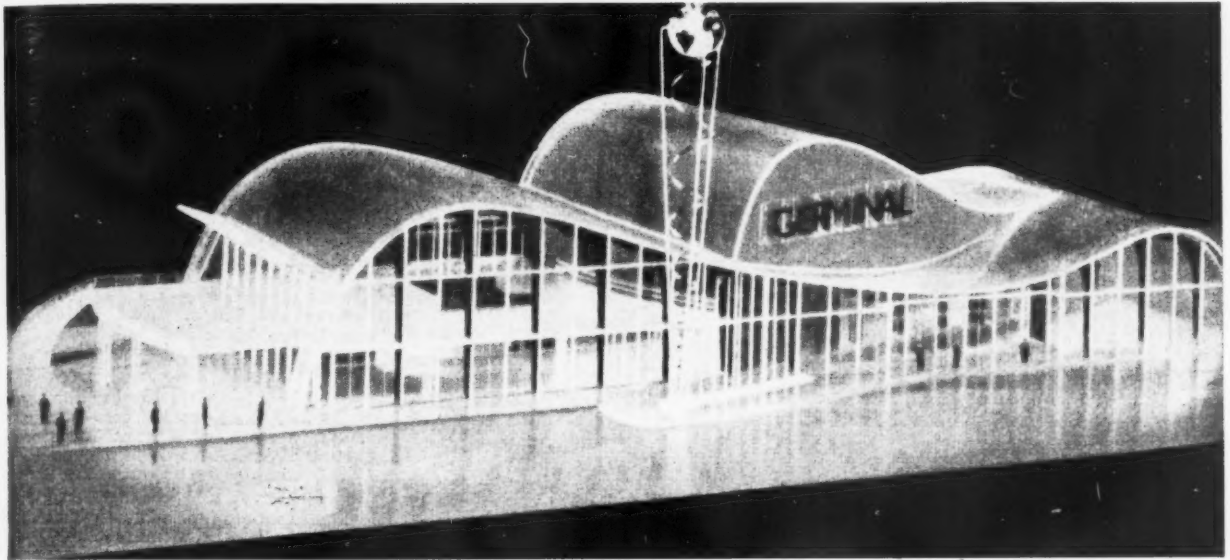


SECTION B-B
scale $1'' = 1'-0''$

note: figured dimensions in feet and inches are approximate



PAVILIONS AT THE BRUSSELS 1958 EXHIBITION



"Man and Socialism" is the theme of the Pavilion to be erected at the Brussels Exhibition in 1958 by the Belgian socialist weekly *Germinal*, designed by Victor Bourgeois. The main hall, in the shape of an elongated trapezoid, will illustrate socialist efforts in Belgium by means of diagrams and photographs. The restaurant, on the left-hand section of the pavilion, is on two levels, extended by a sheltered terrace on the ground floor and a covered balcony above. The materials used will be wood, reinforced concrete, polyester and transparent acrylic sheet for the roof, walls of bakelite honeycomb and facings of red anodized aluminium.

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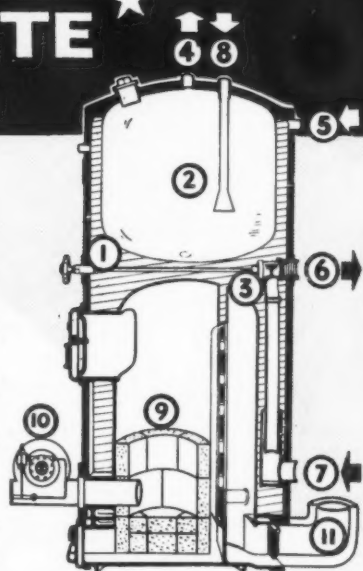
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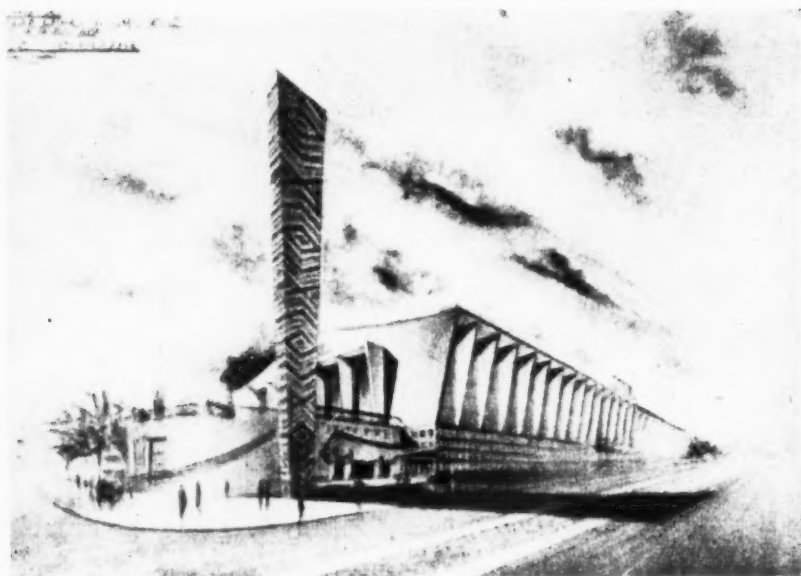
1. Central Heating water heated by correct design fire box
2. Indirect Cylinder in DIRECT contact with boiler
3. Accurate control of central heating separate from domestic supply
4. Pipes to domestic taps
5. Expansion connection
6. Pipes to Central Heating at the required temperature
7. Central Heating return pipes
8. Cold water supply for clean domestic hot water
9. Correctly designed fire box for maximum efficiency
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PAVILIONS AT THE 1958 BRUSSELS EXHIBITION

continued



The Protestant missions in the Belgian Congo will have a pavilion designed by P. Camane in the Congo and Ruanda-Urundo section of the 1958 Brussels Exhibition. In the main part of the pavilion the activities of the missions will be illustrated by models and photographs; there will be a small hall for film shows and lectures.

Announcements

PROFESSIONAL

Adamson, Gary & Adamson, L/F/F.R.I.B.A., announce that H. E. D. Adamson, F.R.I.B.A., has retired from the firm, and that D. M. B. White A.R.I.B.A., DIP.ARCH., is entering into the partnership. The firm will continue to practise under the same name from 11, Portman Street, W.1 (telephone Welbeck 7966) and Boot Lane, Dinton, Bucks (telephone Stone 358).

R. D. Russell, R.D.I., F.S.I.A., has taken into partnership Marian Russell, A.R.I.B.A., A.A.DIPL., F.S.I.A., Ian Hodgson, A.R.I.B.A., and R. H. Leigh, A.R.I.B.A., A.A.DIPL.; the firm will be known as R. D. Russell and Partners and will practise from the Royal College of Art, Prince Consort Road, S.W.7 (telephone Knightsbridge 2441 and 1661).

TRADE

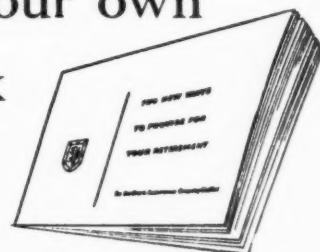
The British Aluminium Co. Ltd. announce that M. J. J. Richards has been appointed manager of the London branch sales office at Park Avenue, North Circular Road, N.W.10, from May 16, in succession to W. J. Allen.

Philips Electrical Ltd. announce that their Birmingham branch has moved to 107-108, Lionel Street, Birmingham, 3. The company's Midlands Regional headquarters will continue to function separately at 28, Ludgate Hill, Birmingham, 3.

Correction

On page 511 of the AJ for April 4, the address of Sanders & Forster Ltd. was given wrongly: this should have been 3 Buckingham Palace Gardens, London, S.W.1.

If you have to provide for your own retirement—here's a book that will help you.



The 1956 Budget brought good news of tax concessions for those who have to make their own retirement arrangements. 'The Northern' have devised two new plans to make the most of these important new tax reliefs.

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your copy from the nearest Northern Office, or from your Insurance Broker, or simply fill in this coupon.

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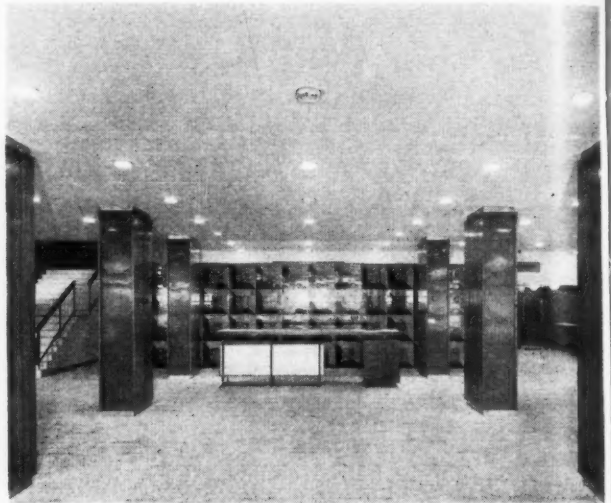
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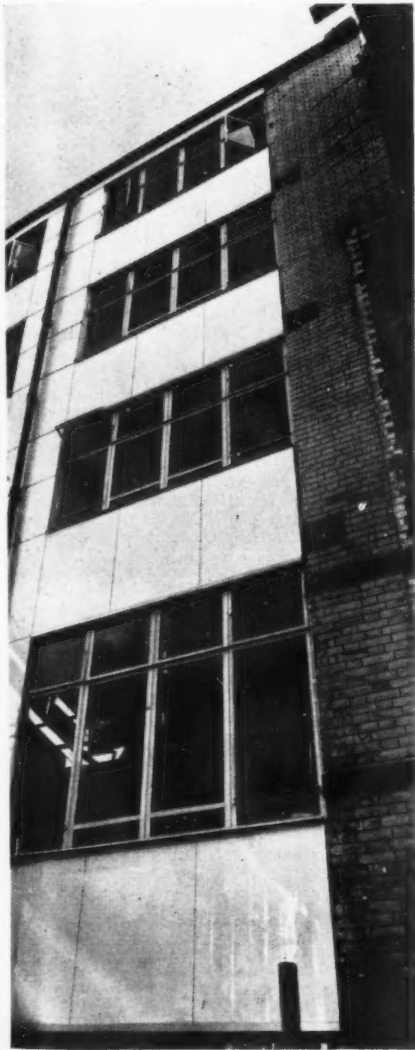


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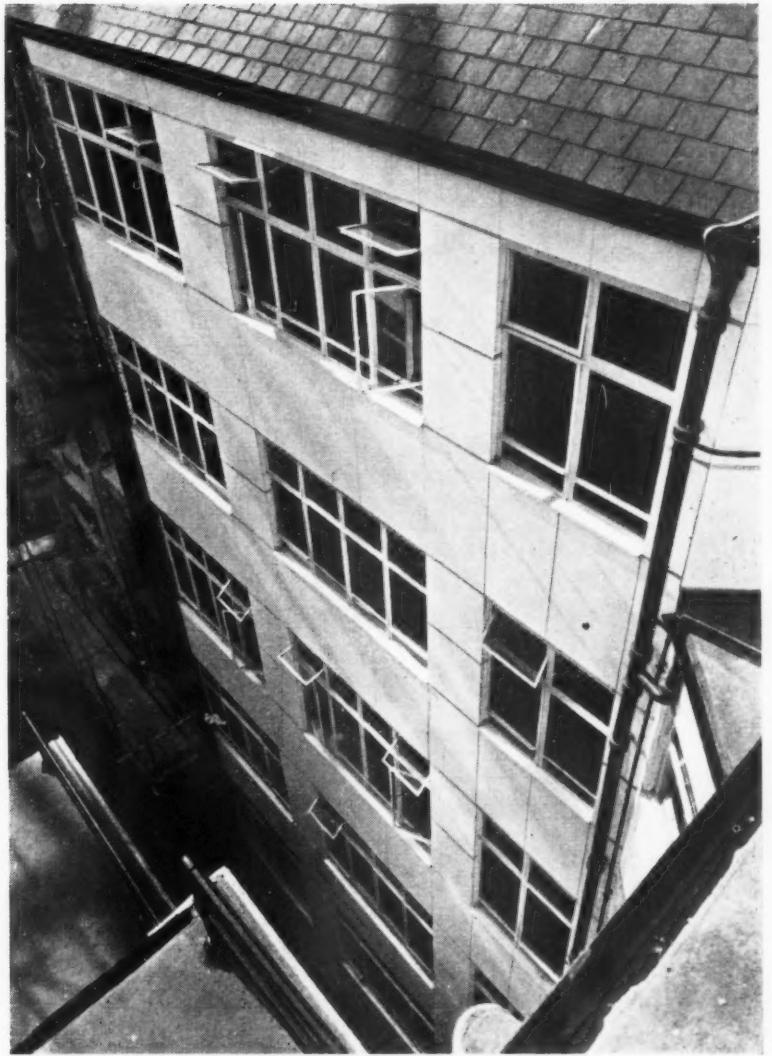
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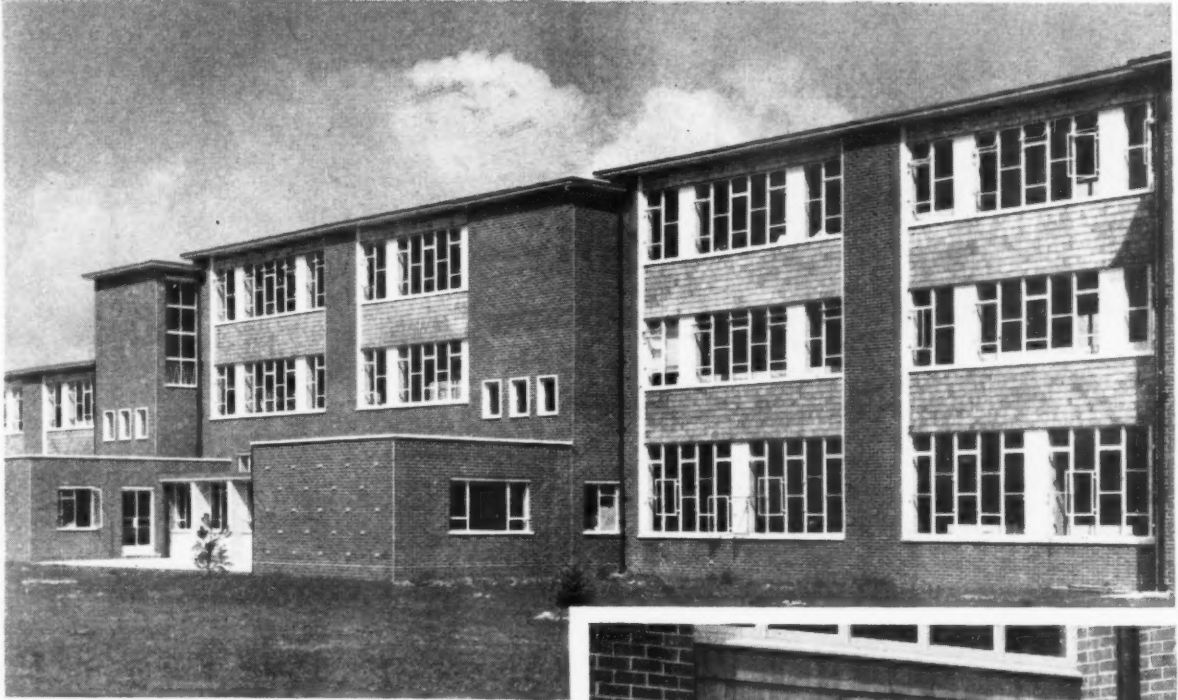


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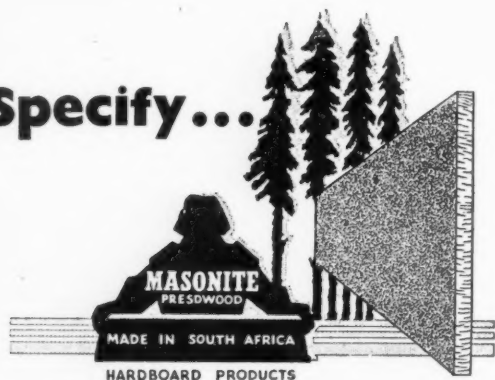
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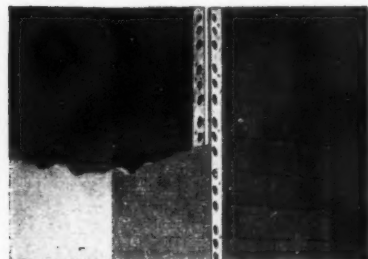
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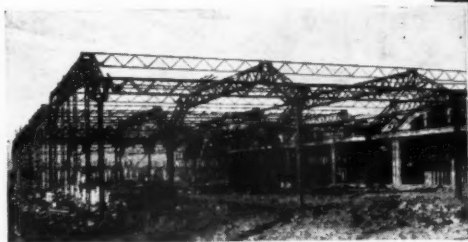
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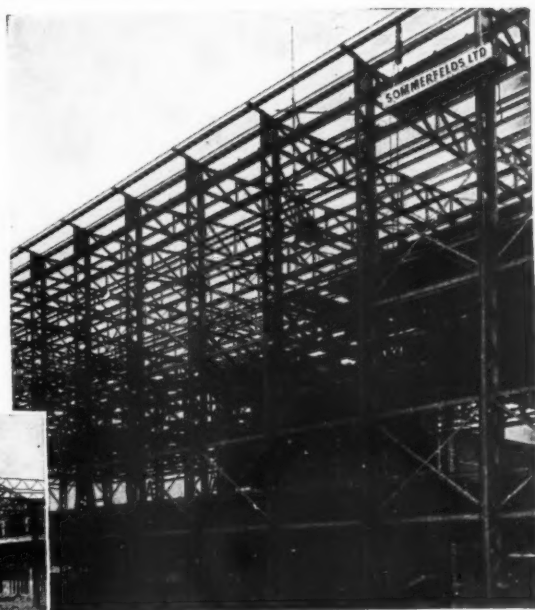
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M.T.P.J., Executive Architect: Victor Hammett,
B.Sc., A.R.I.B.A.



Architect: Messrs. J. Douglas Mathews & Partners

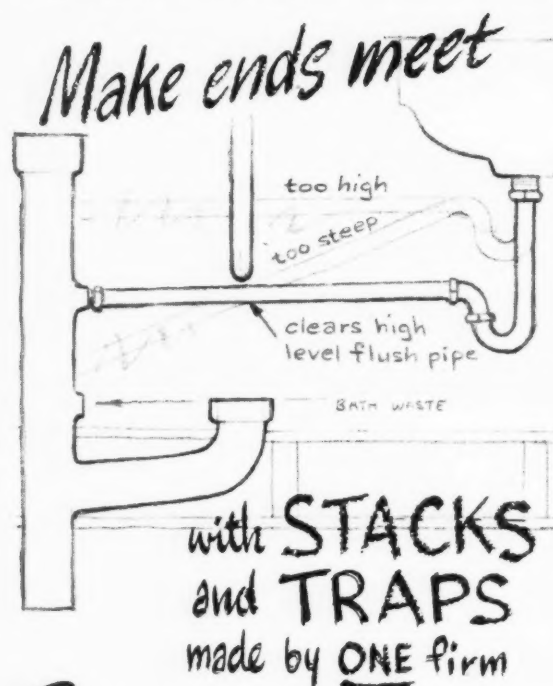
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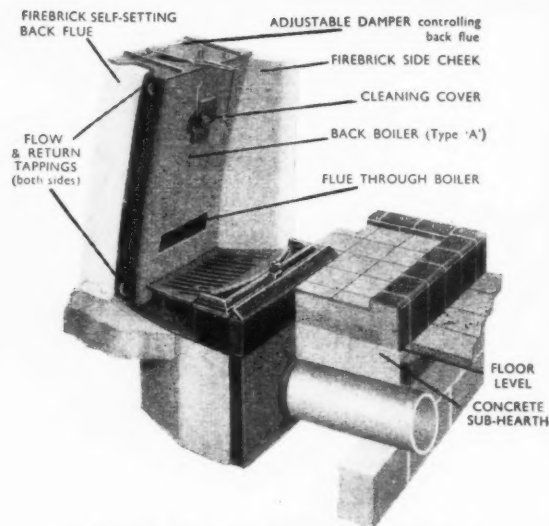
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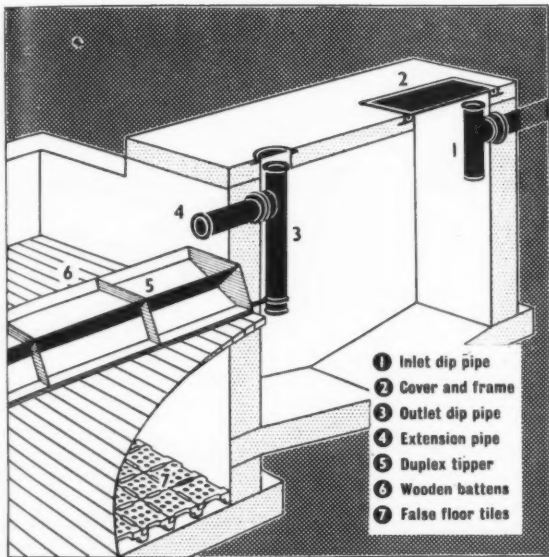
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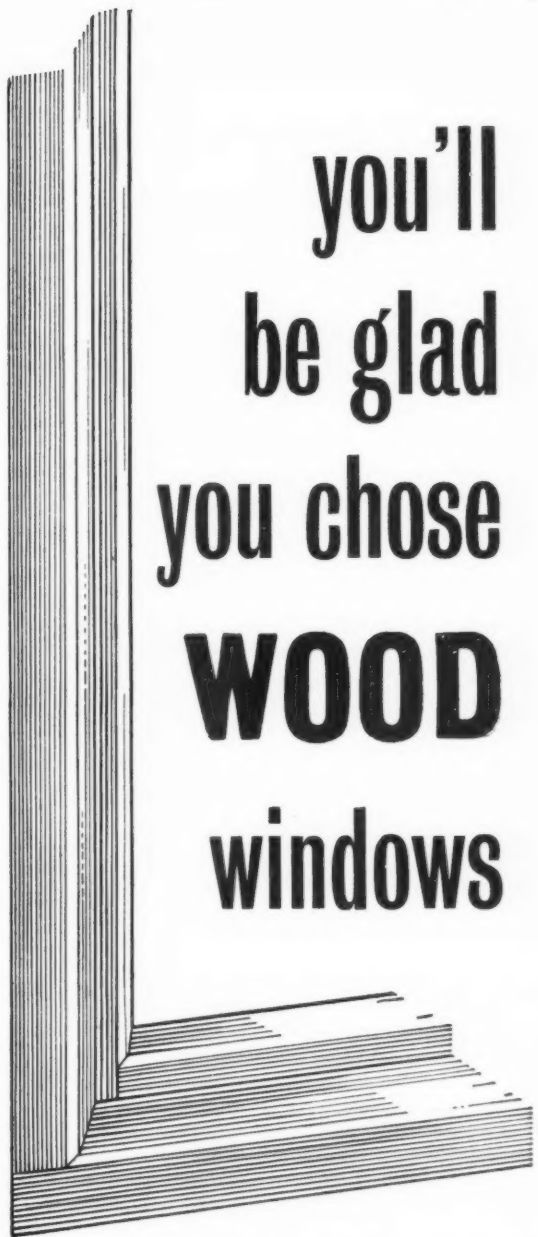
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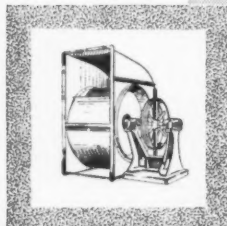


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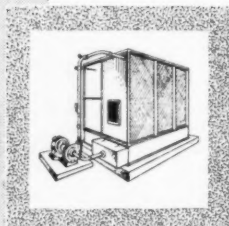
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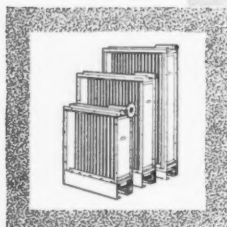
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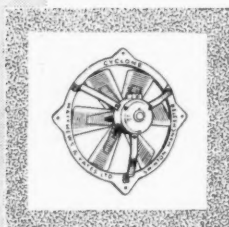
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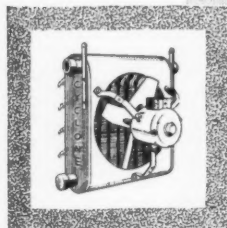
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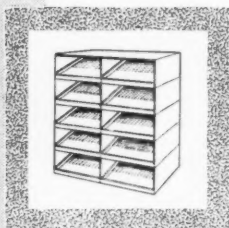
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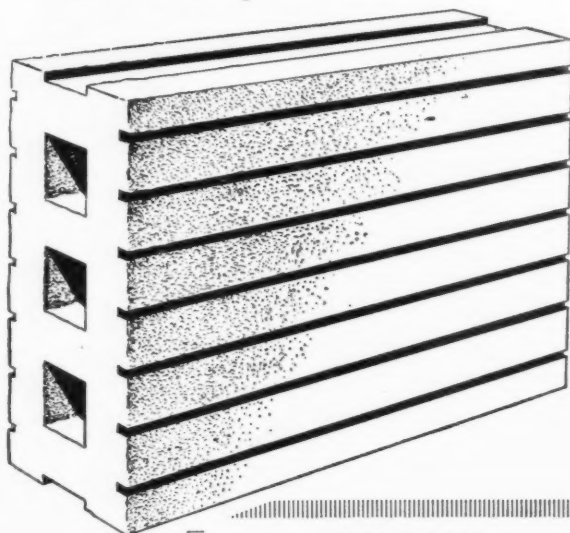
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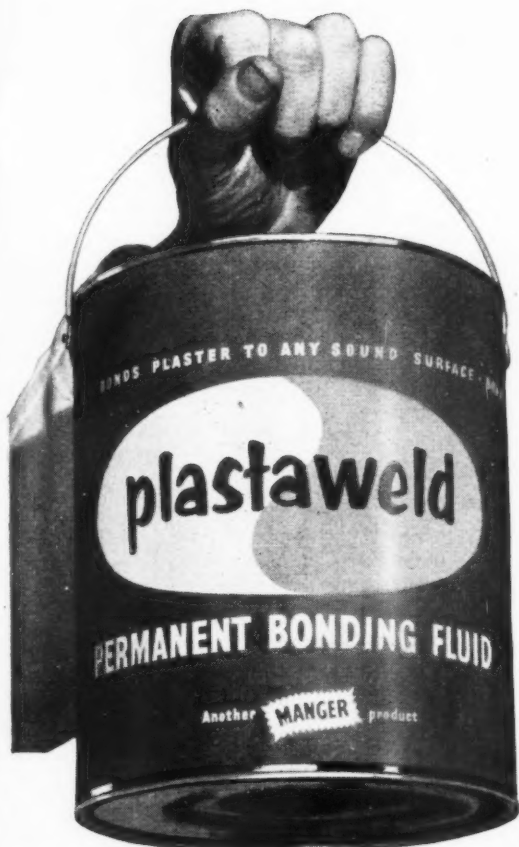
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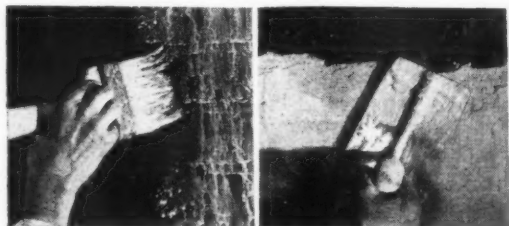


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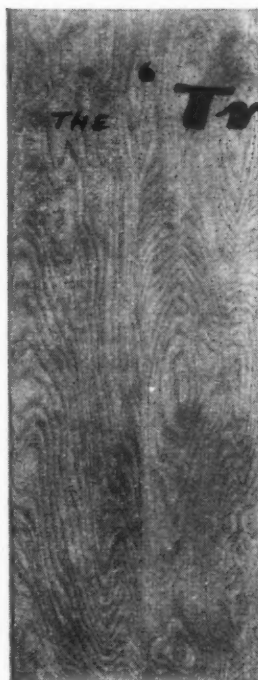
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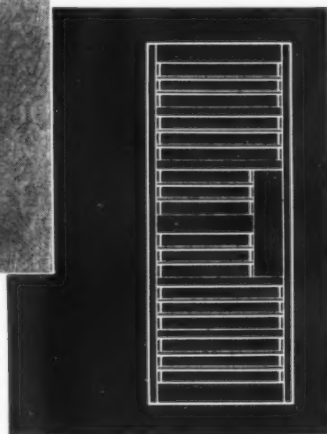
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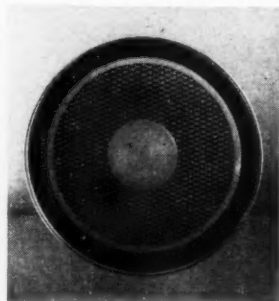
FINLAND PLYMOUTH BARBICAN ANTISUBTOPIAN

Finland will be in the news in April and so the REVIEW will publish a study of the rise of Modern Finnish architecture and Aalto's relation to it—the relationship of *The One and the Few*—by



School at Kulosaari, by Jorma Jarvi.

Reyner Banham, and an extensive survey of recent Finnish buildings. In the same issue, Gordon Cullen considers the plight of the **Plymouth Barbican**, a live neighbourhood-centre that local planning powers—that-be seem determined to destroy by a subtopian combination of rule-of-thumb demolitions and preservations. At the small-scale end of urban design, Nicolette Gray contributes a first essay on the character and function of **Street-Lettering**, and Robert Maguire completes his survey of paving materials in *Skill*. A revolutionary electric fire is described, and buildings illustrated include factories by Ove Arup and



Electric fire, by Kenneth Browne.

Partners, and W. S. Milburn and Partners, while a never-completed dream, **Sir John Soane's Triumphal Bridge**, is discussed by Dorothy Stroud. Lastly, but by no means least, April will see the inauguration of the **ARCHITECTURAL REVIEW's Counter Attack Bureau**, whose first case-study will be the replacement by Semi-dets. of terrace housing at Princetown.

AMERICA

A *personnage* assembled from scraps of American advertisements and spitting ticker-tape on the cover of the May **ARCHITECTURAL REVIEW** will announce the theme of a special issue on **Machine Made America**, compiled explained and assessed by the REVIEW's executive editor, Ian McCallum, whose previous foray into the American scene caused raised eyebrows and raised voices when its results appeared in print as a special issue of the REVIEW under the title *Man Made America*, this new survey, based on a study



The Seagram Building, New York.

of architecture rather than the wider scene of land- and townscape, will scrutinise the aesthetics and the technics of the curtain wall as an example of what happens to one of the cherished dreams of the Modern Movement when it finally becomes commercially practicable, and becomes part of the available syntax of architecture. After this it will survey the diverse, original stimulating and experimental work of individuals and individualists from Coast to Coast, a body of work that is the *genetrix* of architectonic ideas without which the industrial contribution may prove sterile and short-lived.

Machine Made America will conclude by attempting to fit both industrialist and individualist into



Concrete shell church by J. Johansen.

the *matrix* of the wider scene of world architectural development in this century and of American culture in the age of mass-production.

COUNTER ATTACK GROTESQUE OLIVETTI

Ian Nairn, of *Outrage* fame, will contribute a first essay on the aims and objectives of the newly-formed **Counter-Attack Bureau**, to the June issue of the

ARCHITECTURAL REVIEW, and make proposals for positive anti-Outrage policies for the threatened suburban village-centres of Ewell, Colnbrook and Huyton. Two widely diverse Italian subjects to be discussed in the same issue will be the grotesque statuary and architecture of the Orsini garden at Bomarzo, considered iconographically by Dr. S. Lang, and the impressive and



Subtopian Mess at Colnbrook.

intelligent record of patronage in architecture, the arts, and design, of **Adriano Olivetti**, considered biographically by Georgina Masson. New buildings in this issue will be as different in type and place as the **Golden Lane** development by Chamberlin, Powell and Bon, and the **Museum at Accra** by Drake and Lasdun; the old buildings of the month will be **Balmes House**, Hackney, a forgotten, but representative piece of artisan mannerism which will be described and discussed by Priscilla Metcalf, and those in **Halifax Street**, Sydenham, another threatened area that comes within *Counter-Attack's* purview. *Skill* features of the month include a broad survey of food-preparation equipment, and in *Miscellany* Robert Melville contributes, as



Golden Lane, by Chamberlin, Powell and Bon.

usual, his column of off-beat opinions on the world of art-galleries and exhibitions.

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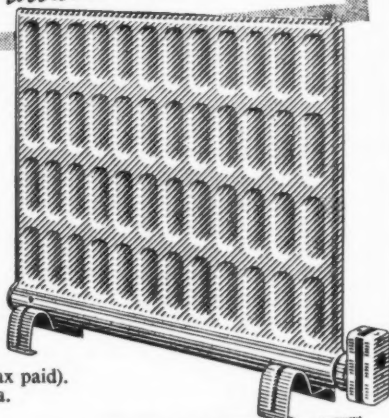
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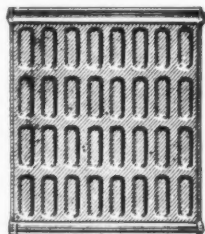


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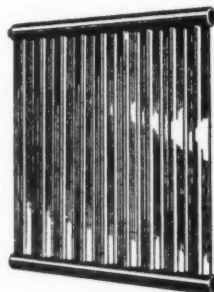
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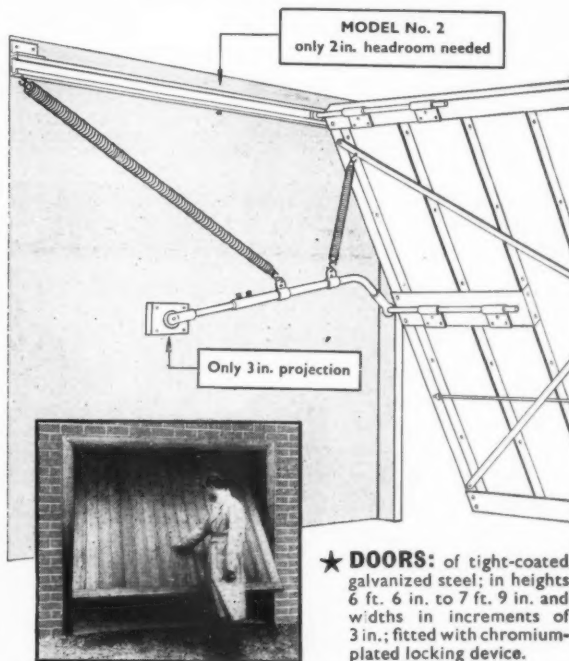
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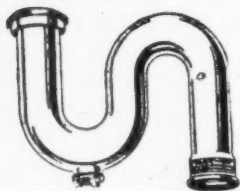
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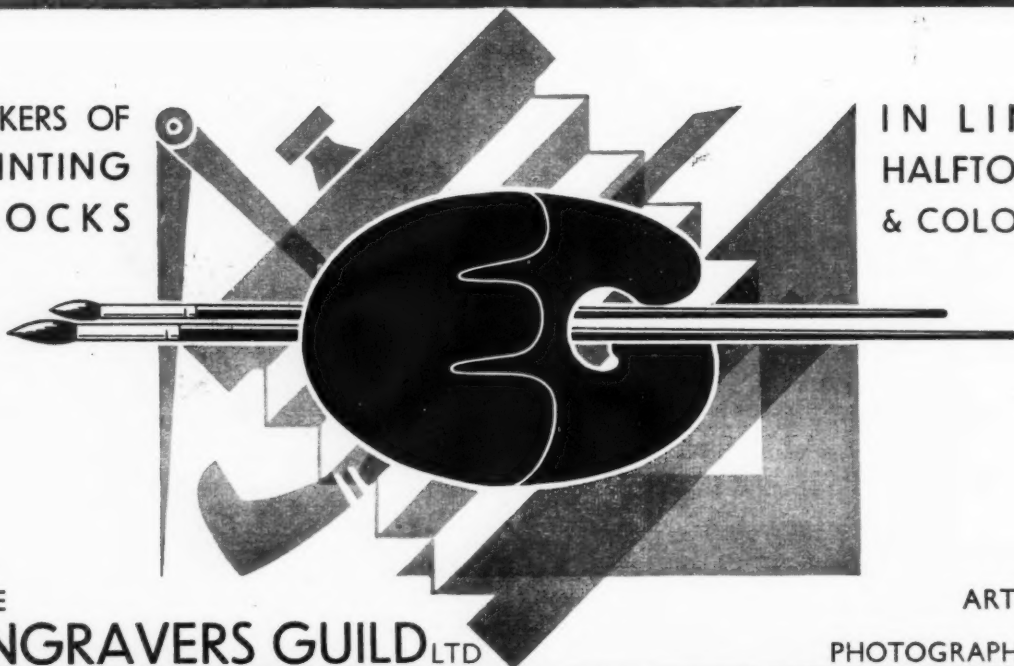
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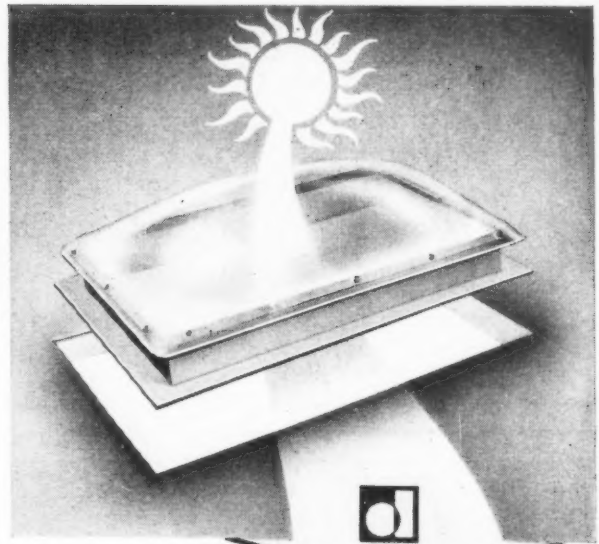


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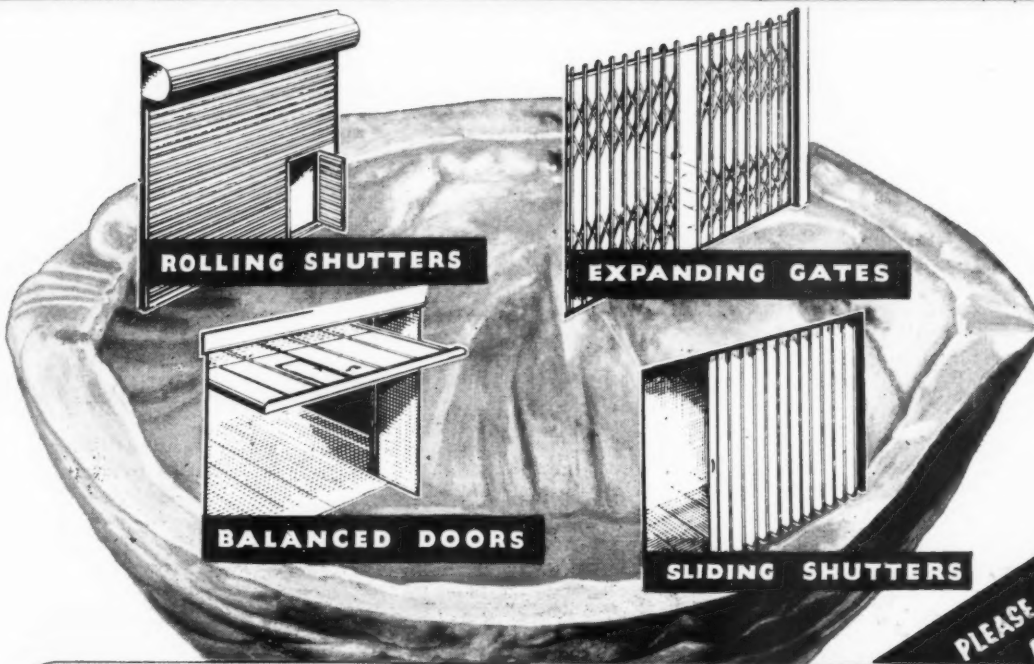
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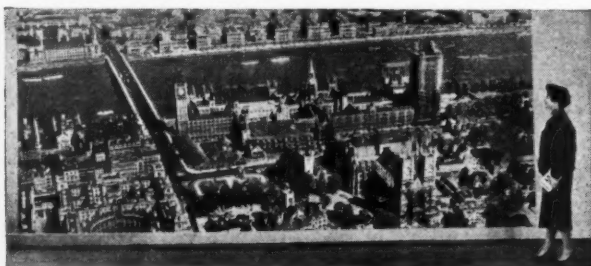
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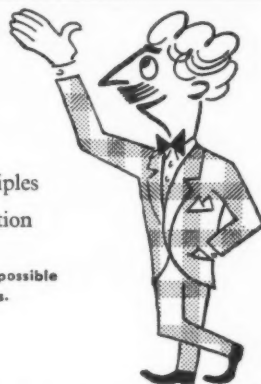
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NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

SENIOR ASSISTANT ARCHITECT

Applications are invited from Associate Members of the R.I.B.A. for the post of Senior Assistant Architect. The Board are engaged on a number of new building projects including a new hospital at Welwyn.

Salary scale £975 × £35 (1) × £30 (5)—£1,160 plus £40—£50 London weighting. Applicants must have had considerable experience in design and construction, preferably in hospitals and associated buildings.

Apply, giving age, qualifications and experience, together with names of two referees, to Secretary, North West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, by 6th May, quoting reference 531. 5942

COUNTY BOROUGH OF SOUTHEAST-ON-SEA BOROUGH ARCHITECTS' DEPARTMENT

Applications are invited for the under-mentioned posts of:

ASSISTANT ARCHITECT, Special Classes Grade, £707 5s., by annual increments of £30 15s. to £861 per annum.

ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. IV, £727 15s., by annual increments of £35 17s. 6d. to £907 2s. 6d. per annum.

QUANTITY SURVEYING ASSISTANT, salary scale rising to a maximum of £476 12s. 6d. or £589 7s. 6d., according to qualifications.

Candidates must be suitably qualified and experienced.

The appointments will be subject to the provisions of the Local Government Superannuation Acts and the National Joint Council's Scheme of Conditions of Service so far as adopted by the Council. Medical examination.

Applications, stating age, qualifications and experience, with the names of two referees, should be submitted to the Borough Architect, 30, Alexandra Street, Southend-on-Sea, forthwith.

Canvassing will disqualify. Any candidate who is related to a member or officer of the Council is required to disclose the fact.

ARCHIBALD GLEN, Town Clerk. 5849

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Required: HEAD OF THE SCHOOL OF ARCHITECTURE, to commence duty in September, 1957, or as soon as possible thereafter.

The School conducts a Five Year Diploma Course and is recognised for exemption from the Intermediate and Final examinations of the R.I.B.A.

Candidates should possess a Degree or Diploma of a recognised School of Architecture. The Head will be expected to organise the instruction throughout the School and to undertake some lectures and studio instruction.

Permission to engage in private practice is normally granted to members of the College staff.

Salary: Grade III Burnham Technical Scale, £1,600 × £50—£1,750.

Further particulars and application forms, to be returned within fourteen days of the date of this issue, will be supplied by the Chief Education Officer, Guildhall, Kingston upon Hull. 5903

BOROUGH OF HARROW

Applications are invited for the under-mentioned appointments in the Department of the Borough Engineer and Surveyor:

(a) ARCHITECTURAL ASSISTANT, A.P.T. Grade III. Salary £656—£784 2s. 6d. per annum, plus London "weighting."

Candidates should have passed the R.I.B.A. Intermediate Examination.

(b) TECHNICAL ASSISTANT (MAINTENANCE), A.P.T. Grade III. Salary £656—£784 2s. 6d. per annum, plus London "weighting."

Applicants must have sound technical experience in building trade subjects, be experienced in the preparation of estimates and reports, in dealing with accounts and in the supervision of repairs, alterations and decorations of schools and other municipal buildings.

Both appointments will be subject to the provisions of the Local Government Superannuation Acts.

The Council is unable to assist in obtaining housing accommodation.

Forms of application may be obtained from me, to whom they should be returned, not later than Saturday, 27th April, 1957.

D. H. PRITCHARD,

Town Clerk.

Town Clerk's Office, Harrow Weald Lodge, Harrow, Middx. 5884

BOROUGH OF WISBECH BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment, Grade A.P.T. III (£656—£785). Applicants should have good general experience, and preference will be given to those possessing the Intermediate Examination of the R.I.B.A. Consideration will be given to the provision of housing accommodation (to rent) if required. Further particulars and form of application (to be returned by 1st May) are obtainable from the undersigned.

J. THOMPSON, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor.

Exchange Square, Wisbech, Cambs. 5896

AIK MINISTRY Works Designs Branch requires in London and Provinces ARCHITECTURAL ASSISTANTS experienced in planning/preparation of working drawings and details for permanent and semi-permanent buildings. Salaries in London up to £925 p.a. for men and £849 for women. Somewhat lower in Provinces. Starting pay dependent on age, qualifications and experience. Long term possibilities with promotion and pensionable prospects. Five-day week, 3 weeks 3 days leave a year. Liability for overseas service. Normally natural born British subjects. Write stating age, qualifications, employment details including type of work done, to any Employment Exchange, quoting Order No. Borough 1000. 5602

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

Applications are invited for two appointments as ASSISTANT ARCHITECT on the permanent staff of the Board. The commencing salary (fixed by reference to relevant experience and to age) will be on a scale rising to £985 p.a., plus London allowance of £40 p.a. Applicants must be Associate Members of the Royal Institute of British Architects, and capable of preparing working and detailed drawings and specifications and supervising work on individual projects. Experience of hospital planning and construction an advantage. Application forms may be obtained from the undersigned at 11a, Portland Place, W.1, and must be returned by not later than 27th April, 1957.

E. G. BRAITHWAITE, Secretary. 5901

BIRMINGHAM REGIONAL HOSPITAL BOARD ARCHITECTURAL STAFF APPOINTMENTS

(Donald A. Goldfinch, E.R.D., F.R.I.B.A., Dip.T.P., Architect to the Board)

(a) SENIOR ASSISTANT ARCHITECT: £975—£1,160. Applicants must be registered architects having passed requisite examinations.

(b) TWO ASSISTANT ARCHITECTS: £680—£985. Applicants must be registered architects having passed requisite examinations.

(c) ARCHITECTURAL ASSISTANTS: £510—£710. Required to give technical assistance to professional officers. Inter-R.I.B.A. or equivalent essential.

(d) ASSISTANT QUANTITY SURVEYORS (THREE): £680—£985. Final R.I.C.S. or recognised qualifications of I.Q.S. or I.A.A.S. and experience in taking off and preparing bills of quantities and settling final accounts essential.

(e) QUANTITY SURVEYING ASSISTANT (ONE): £510—£710. Inter-R.I.C.S. or equivalent essential.

(f) ASSISTANT SURVEYOR (BUILDING): £680—£985. For extensive surveys of existing hospital properties and preparation of record plans. Required to build up record library of some 250 hospitals located in counties of Warwickshire, Staffordshire, Worcestershire, Shropshire and Herefordshire. Consideration given to applicant's wishes in regard to location of office within region. Applicants should be corporate members of the Royal Institute of Chartered Surveyors (Buildings Division) and neat and expeditious draughtsmen with sound experience in measurement and plotting of building surveys to all scales.

(g) SURVEYING ASSISTANT (BUILDING): £510—£710. To assist in survey of existing hospital buildings and preparation of record plans. Intermediate R.I.C.S. (Buildings Division) essential, must be neat draughtsman with experience in measurement and plotting of surveys to all scales.

All appointments superannuable. Apply naming two referees to Secretary, 10, Augustus Road, Birmingham, 15. 5358

HUYTON-WITH-ROBY URBAN DISTRICT COUNCIL

ASSISTANT ARCHITECT—GRADE IV

(Salary £727—£907)

Applicants should have had a sound architectural training and several years' office experience. The person appointed will be required to assist with the design of new type houses, flats, shops and Community Centres.

Housing accommodation will be considered.

Applications stating age, qualifications, experience, present position and salary together with the names of two referees must be sent in envelopes endorsed "Assistant Architect" to: The Architect, Architectural and Housing Department, "Grasscroft," Archway Road, Huyton, Lancs, by the 30th April, 1957.

H. E. H. LAWTON, Clerk of the Council. 5911

Council Offices, Derby Road, Huyton.

BOROUGH OF PORT TALBOT APPOINTMENT OF JUNIOR ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of a Junior Architectural Assistant in the Borough Engineer's Department. Salary to be in accordance with A.P.T. Grade 1 (£545 5s.—£625 15s.). Candidates should have had drawing office experience.

The appointment is subject to the provisions of the S.J.C. Conditions of Service and will be terminable by one month's notice on either side.

Applications, stating age, experience and accompanied by names of two referees should reach the undersigned not later than 30th April, 1957.

W. KING DAVIES, Town Clerk.

Municipal Buildings, Port Talbot. 5948

LONDON ELECTRICITY BOARD CIVIL/STRUCTURAL ENGINEERING ASSISTANT

Applications are invited for the above position in the Construction Branch of the Chief Engineer's Department in Central London.

Applicants should have experience in the design and detailing of reinforced concrete for foundations, framed buildings, etc., or in the design and detailing of structural steelwork for buildings, etc.

The post is graded under Schedule "D" of the National Joint Board agreement and the commencing salary would be dependent on experience within either Grade 4—£250 10s. to £395 10s. p.a. or Grade 5—£350 to £440 p.a. inclusive.

Application forms obtainable from Personnel Officer, 46, New Broad Street, London, E.C.2. Please quote ref. PER/2290/A. 5765

BOROUGH OF WARWICK APPOINTMENT OF CHIEF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment from persons possessing as a minimum qualification the Associateship of the Royal Institute of British Architects. Salary will be on Grades A.P.T. III to A.P.T. IV (£566—£907 2s. 6d.) according to qualifications and experience. The appointment is permanent, and subject to the Local Government Superannuation Acts, Scheme of Conditions of Service of the National Joint Council, one month's notice on either side and the passing of a Medical Examination. The Corporation will give assistance with regard to housing accommodation.

Warwick is a Town of great historic interest and Architectural beauty, and the position offers excellent opportunities to any person interested in the type of work which has to be carried out in such a Town.

Applications stating age, qualifications, training and experience must be delivered to the undersigned with the names of three Referees before First Post on Monday, 6th May, 1957. Canvassing will disqualify and applicants should disclose relationship with any member or Senior Official of the Council.

HECTOR SETON BROWN, A.M.I.C.E., A.M.I.W.E., Borough Engineer & Surveyor.

25, Jury Street, Warwick. HSB/Len. 5943

METROPOLITAN BOROUGH OF LEWISHAM TWO SENIOR ASSISTANT ARCHITECTS

Salary scale £824 17s. 6d. rising to £1,260 per annum (A.P.T. V-VII plus London Weighting). Applicants must be Corporate Members of the R.I.B.A. or possess a University degree in Architecture. Particulars and form of application from the Town Clerk, Lewisham Town Hall, Catford, S.E.6. Closing date 29th April, 1957. 5917

CITY OF LEEDS EDUCATION COMMITTEE LEEDS COLLEGE OF TECHNOLOGY

Cookridge Street, Leeds, 2

Principal: C. CHAW, M.Sc. (Tech.), F.R.I.C.

Applications are invited for the post of LECTURER IN BUILDING. Applicants should be corporate members of the R.I.B.A. or of the Institution of Structural Engineers and should have had appropriate industrial experience. They should be able to offer the subjects of building construction, working drawings, and detailing up to an advanced standard.

Burnham Salary Scale: £1,200 × £30—£1,350 a year.

Further particulars and forms of application, to be returned at the latest by the 8th May next, may be obtained by sending a stamped addressed foolscap envelope to the Principal of the College.

GEORGE TAYLOR, Chief Education Officer. 5919

METROPOLITAN BOROUGH OF BATTERSEA BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited for the permanent appointment of ASSISTANT QUANTITY SURVEYOR Grade A.P.T. IV (£727 15s. to £907 2s. 6d.). London weighting is payable in addition: 21s. and under 26—22s. 6d. and over £30 p.a. Applicants should have experience in taking off and preparing bills for new works and alterations and preference will be given to Corporate Members of the Royal Institution of Chartered Surveyors (Quantities sub-division) or who have attained the Final examination standard.

Previous experience in local government will be an advantage but is not essential. The point of entry within the grade may be fixed above the minimum. Application forms from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date 24th April. 5922

AYCLIFFE DEVELOPMENT CORPORATION
ARCHITECTURAL ASSISTANTS
 (New Towns Grade A.P.T. IV—£728 to £907 p.a.)
 Applications are invited for two posts as Architectural Assistants from persons who have had at least three years' varied experience. Preference will be given to applicants who are approaching the Final standard of the R.I.B.A. Appointment subject to N.J.C. Conditions, superannuation, medical examination and one month's notice in writing on either side.
 Housing accommodation if necessary.
 Applications stating age, qualifications and experience together with names of two referees to arrive not later than Saturday, 4th May, 1957.
A. V. WILLIAMS,
General Manager.

Newton Aycliffe,
 Nr. Darlington,
 Co. Durham. 5956

WESTERN AUSTRALIA
STATE PUBLIC SERVICE
TOWN PLANNING DEPARTMENT
SENIOR PLANNING OFFICER (Permanent)
 Salary Range: £42,015—£42,765 (gross) per annum on current basic wage.
 Qualifications: Recognised Degree or qualification in Town Planning supplemented by additional recognised Degree or qualification in Architecture. At least five years' experience in a town planning office or an office carrying out town planning work of both a regional and local nature.
 Duties: Second-in-charge of the Town Planning Department under the Town Planning Commissioner where the duties involve work in connection with the implementation of a regional plan for the Metropolitan Region of Perth and Fremantle; regional planning problems in the remainder of the State; detailed planning schemes and planning projects in the Metropolitan Region and country areas; development control in the Metropolitan Region and subdivisional control throughout the State.
 Transport: A reasonable amount will be allowed for transport of appointee and dependent family to Western Australia provided bond is entered into to serve State for a period of at least three years.

Conditions of Service: Superannuation benefits, long service leave (three months after each period of seven years of continuous service), liberal sick leave concessions and other general conditions of service applicable to permanent officers under Public Service Act.
 Further particulars available from Official Secretary, London Agency.
 Applications in duplicate stating age, qualifications, marital status and experience should be addressed by 31st May, 1957, to Official Secretary, Western Australian Government Agency, Savoy House, 115-116, Strand, London. 5960

FULHAM BOROUGH COUNCIL
ASSISTANT ARCHITECT A.P.T. III OR IV
BOROUGH ARCHITECTS' AND HOUSING DEPARTMENT. £686/£814 2s. 6d. or £757 15s./£937 2s. 6d. p.a. including £30 p.a. London weighting, according to qualifications and experience. The work will be primarily concerned with the lay-out and design of housing schemes comprising multi-storey dwellings. Application form from Town Clerk, Town Hall, S.W.6. Closing date 29th April. 5966

COUNTY BOROUGH OF WOLVERHAMPTON
SENIOR PLANNING ASSISTANT required in Borough Engineer's Department. Salary grade IV (£727 15s.—£907 2s. 6d. per annum) or Special Grade (£707 5s.—£861 per annum) according to qualifications and planning experience.
 N.J.C. conditions of service, one month's notice on either side. Medical examination. Superannuation post. Housing accommodation will be provided in suitable cases.
 Applications stating age, training and experience, naming two referees, to Borough Engineer, Town Hall, Wolverhampton, by 24th April, 1957. 5957

LONDON COUNTY COUNCIL
QUALIFYING EXAMINATION FOR THE
OFFICE OF DISTRICT SURVEYOR
 An examination for certificates of proficiency to perform the duties of district surveyor will be conducted in London in the week commencing 14th October, 1957. The minimum age limit for candidates is 25.
 Possession of this certificate is necessary for appointment to positions as District Surveyor (salary scales £1,500 to £2,900 a year) or as Assistant District Surveyor (salary scale £1,240 to £1,466 a year).
 Subsequent examinations will be held annually. Apply to the Architect to the Council, (AR/ED/CTB), County Hall, Westminster Bridge, S.E.1, for application forms and further particulars. (631). 5913

EAST RIDING OF YORKSHIRE COUNTY COUNCIL
 Applications are invited for the appointment of an ASSISTANT QUANTITY SURVEYOR on the permanent staff of the County Architect.
 The salary will be in accordance with Grade II of the N.J.C. Scales (£609.17.6—£691.17.6).
 Applications giving particulars of qualifications, experience, age, past and present appointments with salaries, together with the names of three referees, should be sent to the County Architect, County Hall, Beverley, not later than Friday, 26th April, 1957.
THOMAS STEPHENSON,
Clerk of the Council. 5952

BOROUGH OF SWINDON
APPOINTMENT OF CHIEF ASSISTANT PLANNING OFFICER, A.P.T. GRADE VII
 Applications are invited for the above appointment in the Department of the Borough Surveyor and Planning Officer. The successful applicant will take charge of the Planning Section of the Department consisting of a staff of 10. The section is responsible for the preparation of development plans, housing and industrial layouts, Central Area redevelopment and development control.
 The rapid growth of the town under the Town Development Act (present Borough Population 76,000—projected T.M. Area population 104,000) gives scope for varied and interesting work.
 Applicants must be Corporate Members of the Town Planning Institute with preferably a second allied qualification, and should have considerable experience in the problems of urban development and redevelopment.
 Housing accommodation is available.
 Applications on forms obtainable from the Town Clerk, Civic Offices, Swindon, must be returned by 6th May, 1957. 5958

BOROUGH OF TAUNTON
ASSISTANT ARCHITECT
 Applications are invited for appointment of Assistant Architect in the Housing Architect's Department, A.P.T. Grade for Special Classes of Officers. Salary scale £707 5s. to £861 per annum. Consideration will be given to housing accommodation if required.
 Superannuation post, subject to medical examination, and to National conditions of service.
 Applications, stating age, present position and salary, qualifications, experience and names of two referees to be sent to C. Bacon, F.R.I.B.A., Borough Housing Architect, Flock House, Station Road, Taunton, by 23rd April, 1957.
 Canvassing will disqualify.
K. A. HORNE,
Town Clerk. 5932

BUCKS COUNTY COUNCIL
 Applications are invited for the appointment of a qualified STRUCTURAL ENGINEER in the County Architect's Department, salary £907 p.a. This post offers good prospects to applicants with experience in design and detailing of reinforced concrete and steel structures.
 A weekly allowance of 25s. 0d. and return fare home once every two months may be paid for six months to newly appointed married officers of the Council unable to find accommodation.
 Applications, on forms to be obtained from F. B. Pooley, County Architect, County Offices, Aylesbury, must be returned by 6th May, 1957. 5959



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**WORCESTERSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT**

Applications are invited for:
1. Appointment of ASSISTANT ARCHITECTS, Grade A.P.T. IV (£727 15s. to £907 2s. 6d.) on the permanent staff to deal with Education and general contracts.

2. BUILDING INSPECTOR, Grade A.P.T. II (£609 17s. 6d. to £691 17s. 6d.) to deal with all repair, maintenance and minor alterations in a section of the County under the supervision of a senior architect. Applicants must be familiar with pricing and specification writing for painting, decoration and small alteration work.

The Council provide a limited amount of staff accommodation and the successful candidates can apply for this.

Forms of application should be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester, not later than 30th April, 1957.

**CITY OF PLYMOUTH EDUCATION
COMMITTEE**

**PLYMOUTH AND DEVONPORT
TECHNICAL COLLEGE**

Principal: JOHN GRAYMORE, M.Sc., Ph.D., F.R.I.C., F.C.S.

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Principal: MR. L. DUCKETT, M.C., A.R.C.A.

Required for September next, a full-time Head of the Department of Architecture and Building. Candidates should hold the Associateship of the Royal Institute of British Architects. In addition to the teaching of Architecture, they should be qualified to teach Building Construction or Building Quantities to building students, to the standard of the Higher National Certificate in Building. Experience in Architectural practice is essential.

Salary in accordance with the Burnham Technical Report, Grade II, Heads of Department, (£1,400 by annual increments of £50 to £1,600).

Further particulars and application forms (returnable within 14 days of this date) on receipt of s.a.e. from Andrew Scotland, Director of Education, Cobourg Street, Plymouth. 5918

**DOWN COUNTY COUNCIL (N.I.)
SENIOR ASSISTANT ARCHITECT
PLANNING DEPARTMENT**

Applications are invited for the position of Senior Assistant Architect in the above Department (Grade VI-1902 x £41-£1,107). The successful applicant will be employed chiefly on the design and supervision of a programme of building for the Down County Health and Welfare Committees and Library Committee, but may be required, from time to time, to carry out duties in connection with the preparation of the planning scheme for the County. Applicants must be associates of the Royal Institute of British Architects and it will be an additional advantage if candidates have passed the final examination of the Town Planning Institute. Preference will be given to ex-service candidates possessing the necessary qualifications and experience. The appointment is subject to the provisions of the Local Government Officers' Superannuation Act N.I. 1950 (contribution rate 6%) and to the Council's conditions of service.

Applications, with copies of two recent testimonials or the names of persons to whom reference could be made, should be lodged with the undersigned not later than Tuesday, 30th April, 1957.

J. H. HARVEY,

Secretary to the Council.

Courthouse, Downpatrick.

8th April, 1957.

COUNTY BOROUGH OF SWANSEA

BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the post of ASSISTANT ARCHITECT. Salary Special Grade, £707 5s. and £30 15s.-£861. Applicants must have passed Parts 1 and 2 of the Final Examination of the R.I.B.A. and have had at least two years' general experience in an Architect's Office. The commencing salary within the grade will be in accordance with ability and experience.

Candidates must be under 45 years of age, unless in Local Government service.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, and may be terminated by one month's notice on either side. The successful candidate will be required to pass a medical examination. Housing accommodation will be available, if necessary.

Forms of application may be obtained from the Borough Architect, The Guildhall, Swansea, whom they must be returned not later than Saturday, 27th April, 1957.

Canvassing disqualifies.

T. B. BOWEN,

Town Clerk.

The Guildhall,
Swansea.

6th April, 1957.

COVENTRY CORPORATION REQUIRE

PLANNING OFFICER, A.P.T. IV (£727-£907)
Sound knowledge of development plan survey and research work and ability to initiate and carry through survey projects. Some knowledge of compulsory purchase procedure and similar administration procedures in implementing central reconstruction projects desirable, also ability in design work.

Housing accommodation, also loan towards removal expenses, may be available.

Application forms, etc., from City Architect and Planning Officer, City Yard, Coventry, returnable within 10 days publication. 5933

CITY OF EDMONTON, ALBERTA

Three qualified PLANNING ASSISTANTS are required in the Town Planning Department at a salary between \$3,500 and \$4,750 per annum, according to qualifications and experience. Applications giving details of training, qualifications and experience should be sent to the undersigned.

Edmonton with a population of 230,000 is the fastest growing City in Canada, increasing by some 14,000 persons per year. The staff consists of a Town Planner, Deputy Town Planner, two Assistant Town Planners, six Planning Assistants and Draughtsmen, etc.

The positions advertised offer a good opportunity for the successful candidates to engage in positive Town Planning, in good working conditions, and there are possibilities of advancement.

W. R. BROWN,

A.M.I.Mun.E., A.M.T.P.I., Assoc.T.P.I.C.,
Town Planner.

City Hall,
Edmonton,
Alberta.

5923

**BOROUGH OF FARNWORTH
ARCHITECTURAL ASSISTANT**

Applications are invited for the appointment of Architectural Assistant in the Borough Engineer's Department, at a salary in accordance with A.P.T. Special Grade (£707 5s. to £861 per annum). Applicants should have passed Parts I and II of the R.I.B.A. Final. Special Final or their equivalent.

The appointment is permanent and subject to the provisions of the Local Government Superannuation Act, 1937, the National Joint Council's Scheme of Conditions of Service, the passing of a medical examination and to one month's notice on either side.

Applications, on forms to be obtained from the undersigned, to be returned to me not later than 3rd May, 1957.

THOMAS HITCHEN,

Town Clerk.

Town Hall,
Farnworth, Lancs.

5955

Architectural Appointments Vacant

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

ASSISTANT ARCHITECTS AND SHOP-FITTING DRAUGHTSMEN. Co-operative Wholesale Society, Ltd., invite applications for the following appointments: (1) Assistant Architects capable of preparing working drawings from preliminary details. (2) Shopfitting Draughtsmen with experience in Shop Equipment and modernisation of Interiors.

The posts are pensionable, subject to medical examination. Five-day week in operation. Applications, giving age, details of experience and salary required to W. J. Reed, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 99, Leman Street, London, E.1. 4977

TRING, HERTS. SENIOR ASSISTANTS required for work on Contemporary Schools, Churches and prefabricated forms of construction, being developed in the U.K. and Overseas. Write to: Woodroffe, Buchanan & Coulter, F.R.I.B.A., Architects, 41, High Street, Tring, or telephone Tring 2083 for an appointment. 5838

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ARCHITECT'S DEPARTMENT,
LONDON**

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ASSISTANTS, to work on a variety of industrial, commercial and housing projects under congenial office conditions, at Welwyn Garden City.—Please apply in writing, giving full details of age and experience, to Box 5775.

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ASSISTANT wanted for small private practice. Write brief details to T. A. Bird, 13, Welbeck Street, W.1. 5715

ARCHITECTURAL ASSISTANTS (THREE) required for Outer London Office. Opportunity for good experience. Ability to work on own initiative essential.—Dawe, Carter & Partners, 33, Clarendon Road, Watford. 5825

HASKER & HALL, L.F.R.I.B.A., require ARCHITECTURAL ASSISTANT, with 4 to 5 years' office experience.—Write or telephone, giving full particulars, including age and salary, to 13, Welbeck Street, W.1 (Welbeck 0051). 5824

TWO ARCHITECT'S ASSISTANTS required in City Architect's Department. Salary range £600-£800, with good prospects of future advancement.—Apply, stating age, details of experience and salary required, Box 5757.

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SPENCE & PRICE, 26, St. Mary's Place, Newcastle upon Tyne 1, require an ASSISTANT of near-Final standard with some years' office experience in working drawings and details. Salary range between £550 and £650, depending on experience. Interesting work in hand and the right man (or woman) could anticipate a likelihood of permanency and of further advancement in due course. Apply in own writing giving full details of experience. 5886

SCHERRER & HICKS, 19, Cavendish Square, W.1, require ARCHITECTURAL ASSISTANT, Intermediate standard. Variety of work including industrial buildings, research laboratories, schools and housing. Salary by arrangement. Telephone Museum 1105 for appointment. 5837

WANTED. ARCHITECTURAL ASSISTANT, qualified and with experience in responsible position, required immediately as Chief Assistant for important building, London, from sketch designs to completion in 1961. Salary £1,000. Sir Hugh Casson, H. T. Cadbury-Brown, Robert Gooden, Associated Architects. Reply for interview appointment, stating age, experience, to H. T. Cadbury-Brown, 17, Clarges Street, London, W.1. 5833

ASSISTANT ARCHITECTS required for varied practice. City centre. R.I.B.A. and Intermediate standard. Apply in writing to Oxley & Bussey, 91, Pinstone Street, London, E.1, Yorks. Envelope to be endorsed "Assistant Architect." 5852

COMPETENT ASSISTANT required in Architect's Department. Good opportunity for capable man, five-day week, and Superannuation Scheme in operation. Applications giving details of age, qualifications, experience and salary required to H. M. Robinson, F.R.I.B.A., George J. Mason Ltd., 68, Bradford Street, Birmingham. 5836

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ARCHITECT'S ASSISTANT required. Salary £700-£900 per annum. Write stating qualifications and experience to Richard Brown, Architects, 123, Victoria Road, Darlington. 5879

ARCHITECTURAL ASSISTANTS may be required for interesting work in London from early June with opportunities for overseas later. Lunch vouchers, five-day week, pension scheme. Applications giving full particulars of experience and salary required to Box 5878.

TWO ASSISTANTS required by a busy Manchester office to work on the detailing of school projects. Experience and an ability to work quickly will be considered more important than academic qualifications. For the Senior post the salary will be £1,003 per annum and for the Junior post £750 per annum. Box 5882.

ASSISTANT required, pre-Intermediate standard, with several years' office experience to work on commercial and industrial projects.—Details to Jack E. Dalling, L.R.I.B.A., 53, St. Martin's Lane, W.C.2. Covent Garden 2942. 5946

HARRY S. FAIRHURST & SON require a SENIOR ASSISTANT ARCHITECT, with qualifications and a number of years' office experience, to work in Manchester. The scope of work is varied, and salary would be proportionate to experience and ability.—Apply in writing, including age and other particulars, to 55, Brown Street, Manchester, 2. 5945

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ARCHITECTURAL ASSISTANTS required. State age, experience and salary required.—Hurley Robinson & Son, 6 Cherry Street, Birmingham 2. 5953

ARCHITECTURAL ASSISTANT having had at least 3 years' previous experience required. H. S. W. Stone & Partners, Chartered Architects, 20 The Crescent, Taunton, Somerset. 5962

ARCHITECT with varied practice requires capable ASSISTANT. Good draughtsman with knowledge of construction.—Reply, with details of age, experience and salary expected, to A. W. J. Mullins, L.R.I.B.A., 78, Thoro'fare, Woodbridge, Suffolk. 5939

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A SENIOR and JUNIOR ARCHITECTURAL ASSISTANT required by busy West End Practice. Knowledge of commercial and industrial work with London experience advantageous. The Senior Assistant should be capable of taking control of jobs.—Write, stating commencing salary required, to Newman, Levinson & Partners, 9, Mansfield Street, London, W.1, or telephone LAngham 9253/4. 5947

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NORMAN & DAWBARN invite applications from ASSISTANTS, with at least 3 years' office experience.—Write to 7, Portland Place, W.1. 5920

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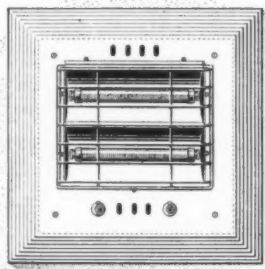
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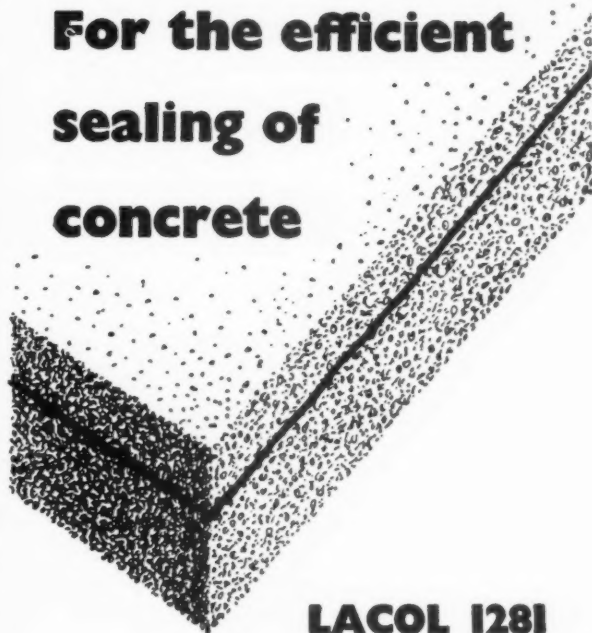
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