

THE ARCHITECTS' JOURNAL



standard contents

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

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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	
		Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
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	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 14, Great James' Street, W.C.2.	Chancery 7718
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	Modern Architectural Research Group (English Branch of CIAM) Secretary: Gontran Goulden, Building Centre, 26, Store Street, W.C.1.	Museum 5400
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Saville 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, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey 5111
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. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
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.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, 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
RSI	Royal Sanitary Institute. 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
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
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	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
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. Lincoln House, Turl Street, Oxford.	Oxford 47988

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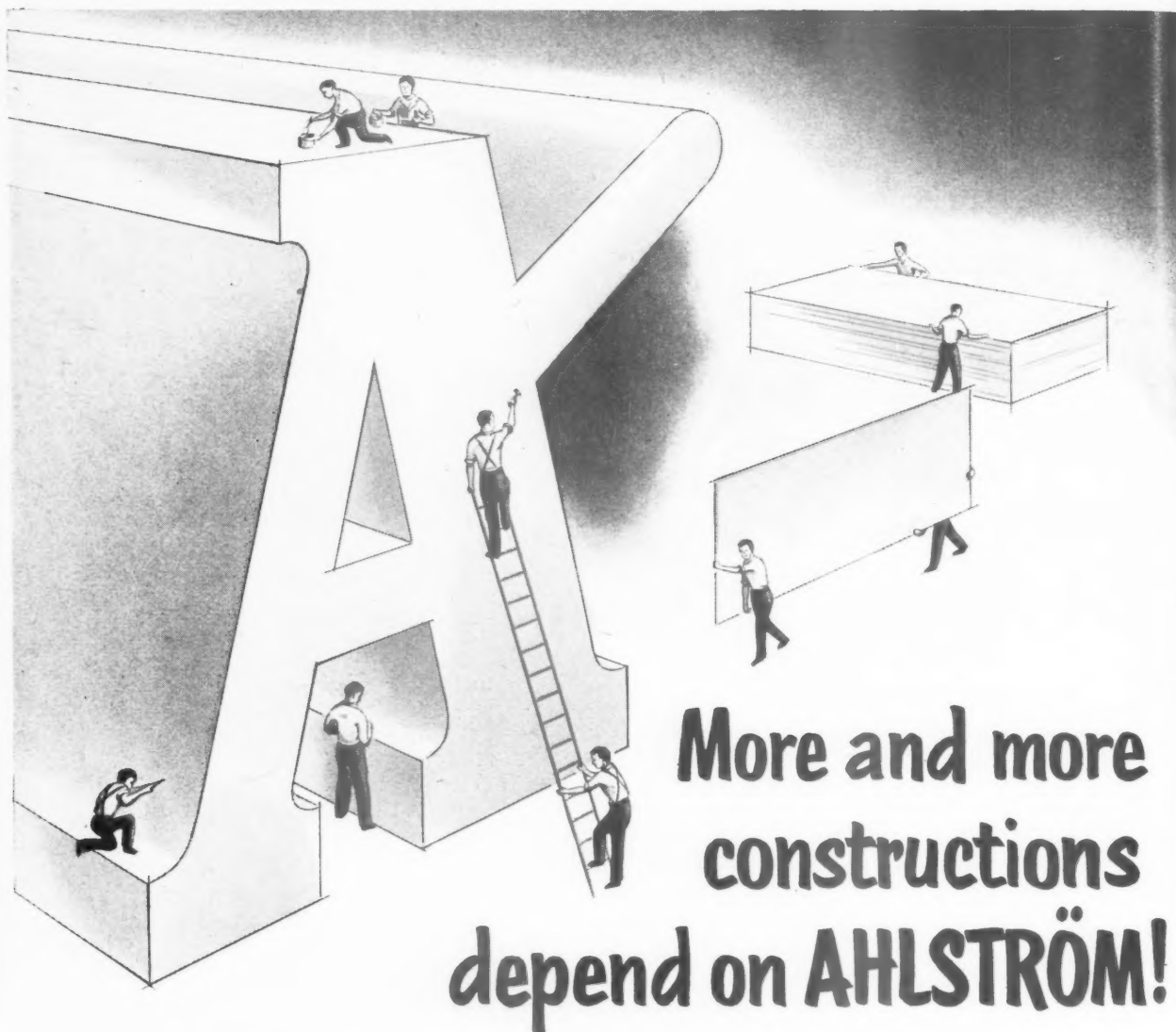
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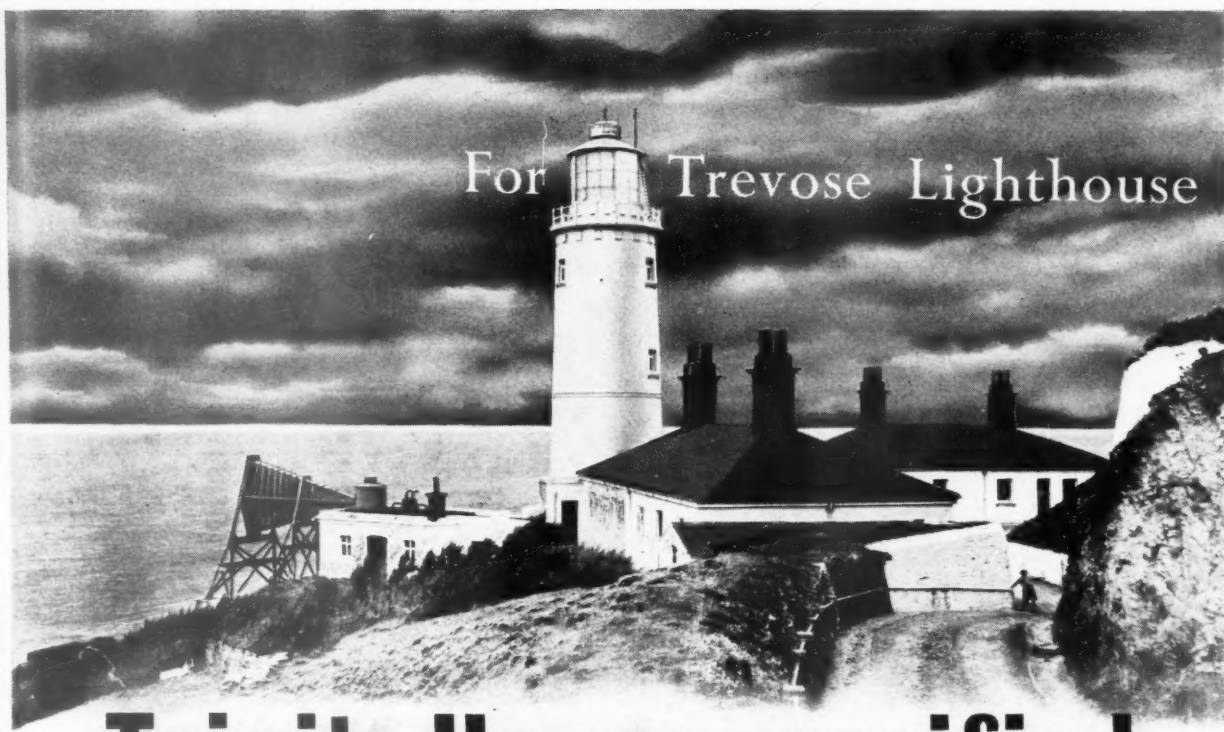
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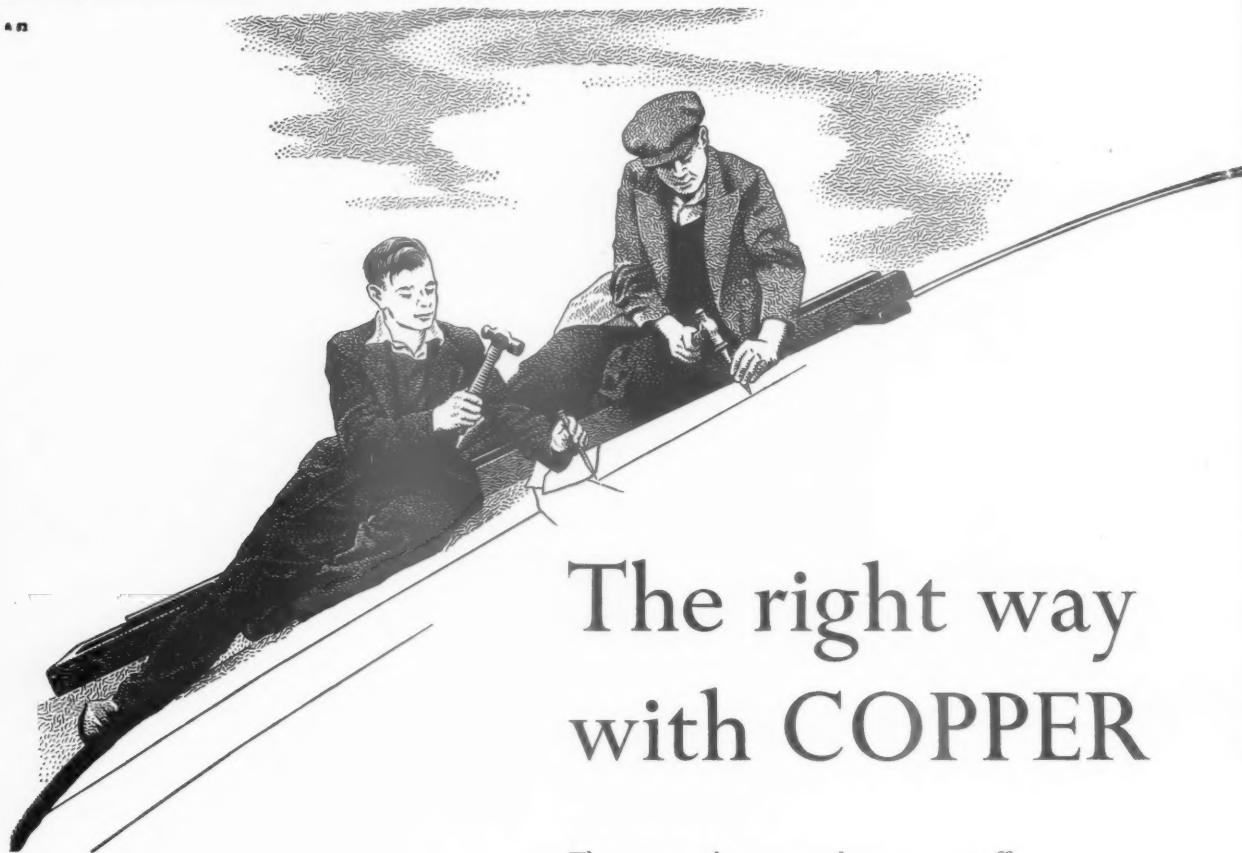
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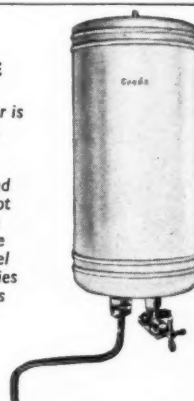
PRESSURE

—models for use where hot water is wanted at more than one tap. Fed from an overhead cistern. Can work in conjunction with solid fuel systems. Capacities: 12, 20, 30, 40, 60 & 100 gallons



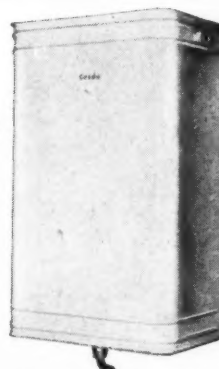
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—for use where hot water is wanted at one point only. No cold water cistern necessary. The general construction is robust and the water container is hot dipped tinned. Styling is simple and clean and the chrome and white enamel of high quality. Capacities 1½, 3, 5, 12 & 20 gallons



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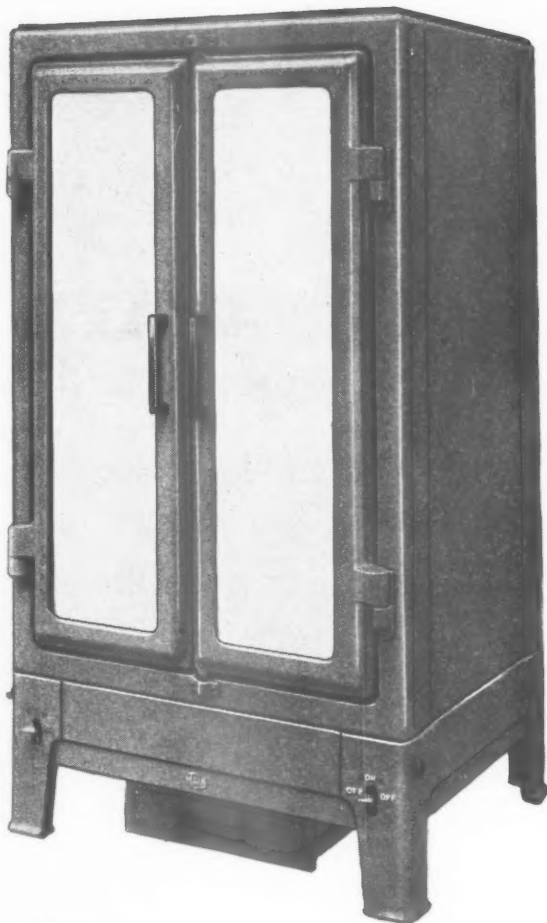
Roasting Oven

that makes the most of every inch of cooking space

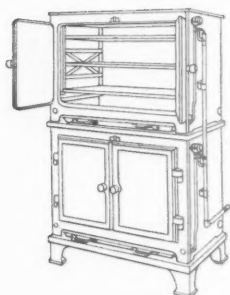
This large Roasting Oven . . . one of an extensive range of Main designs . . . has an interior oven size 30" wide x 30" deep x 48" high. Efficiently heated by two atmospheric burners the oven has enamelled steel linings and is fitted with three grid shelves carried on removable side hangers.

The appliance is strongly constructed, mainly of cast iron, and is finished externally in Dapple Grey Vitreous enamel with white enamelled door panels and bakelite door handles.

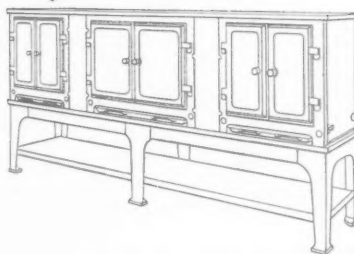
The oven is mounted on enamelled cast-iron feet and the storage pan under the oven is of copper with an enamelled cast-iron front.



other types of roasting oven



A Vertical Battery of two ovens on a short stand.



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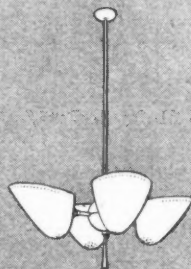


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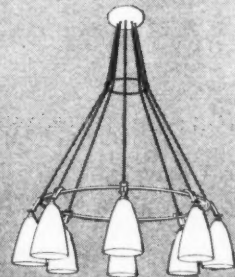
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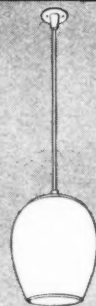
F.V.14 R. Four - light pendant with reflectors, centre body and ceiling plate off-white, remainder satin brass or satin chromium.



F.1224. Eight-light ring pendant with off-white reflectors and satin brass rings and ceiling plate.



F.911. Recessed fitting with anodised aluminium reflector with an off-white glass support, taking a rimpled obscured glass.



U.202. Open base pendant with chromium or coinage bronze suspension.

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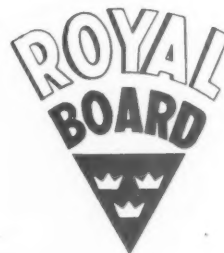
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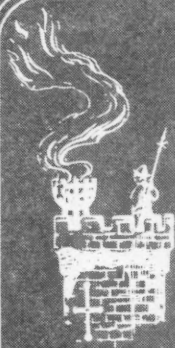
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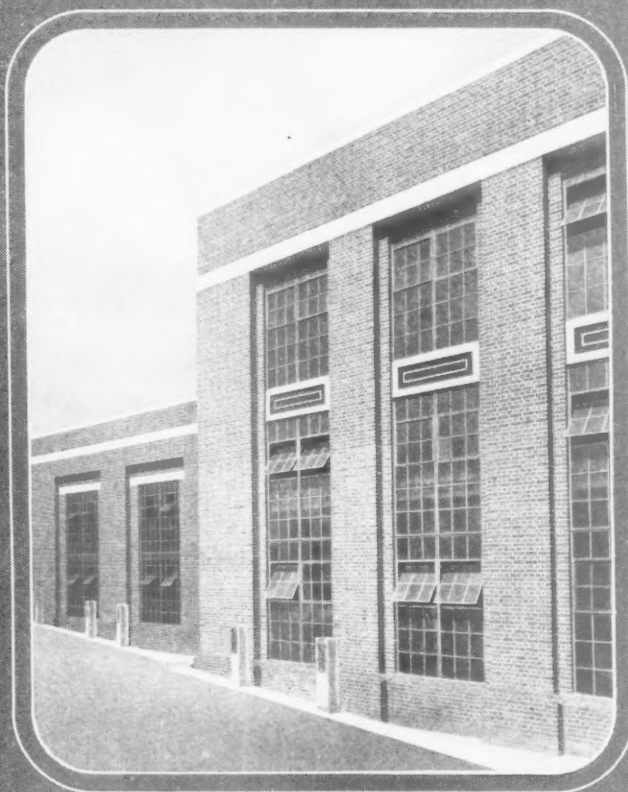


S.12





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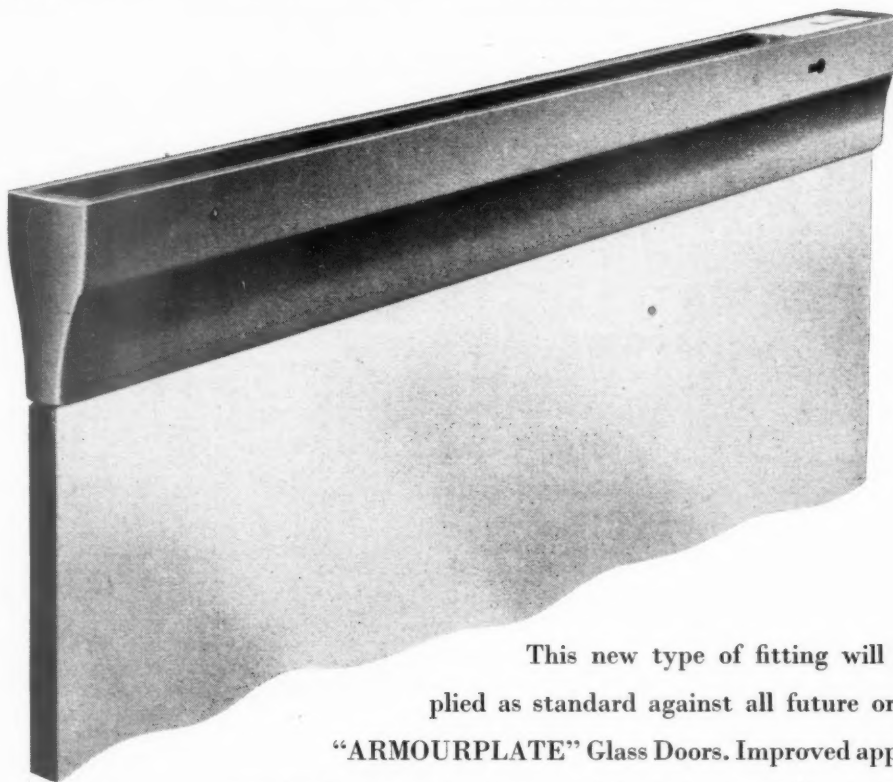
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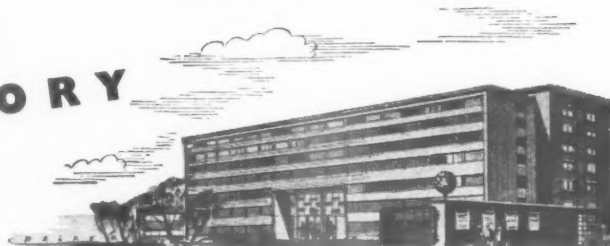
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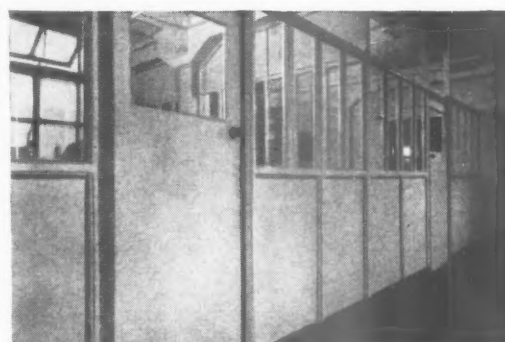
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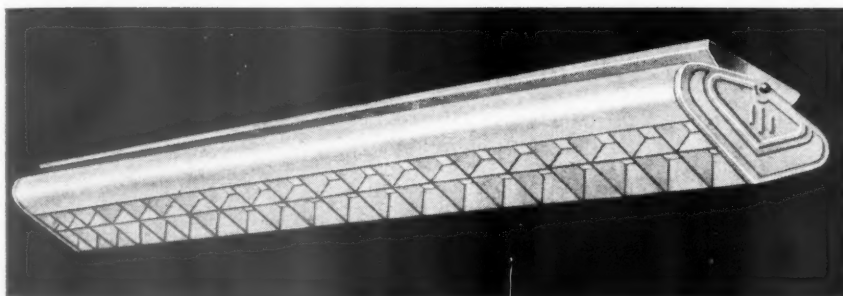
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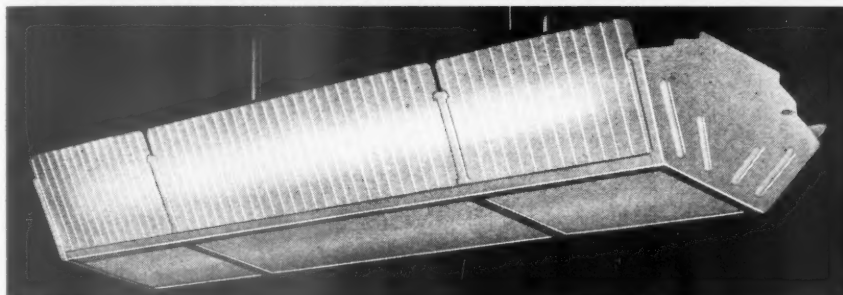
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(Bottom left)

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(Top right)

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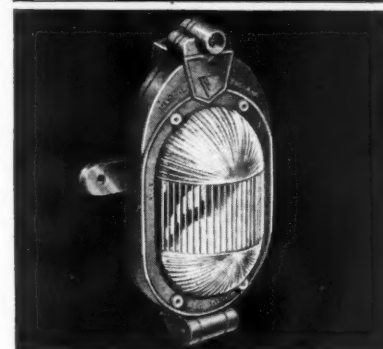
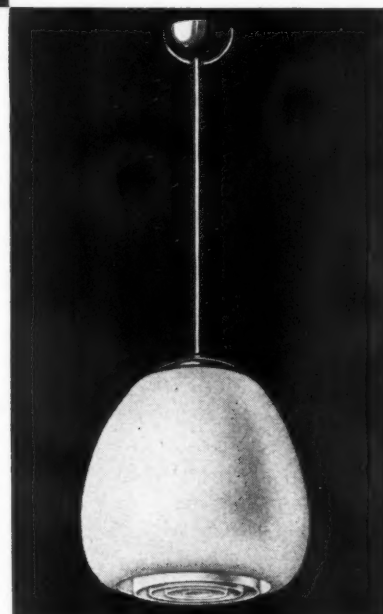
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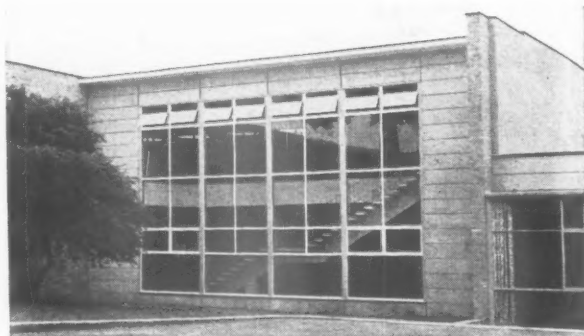
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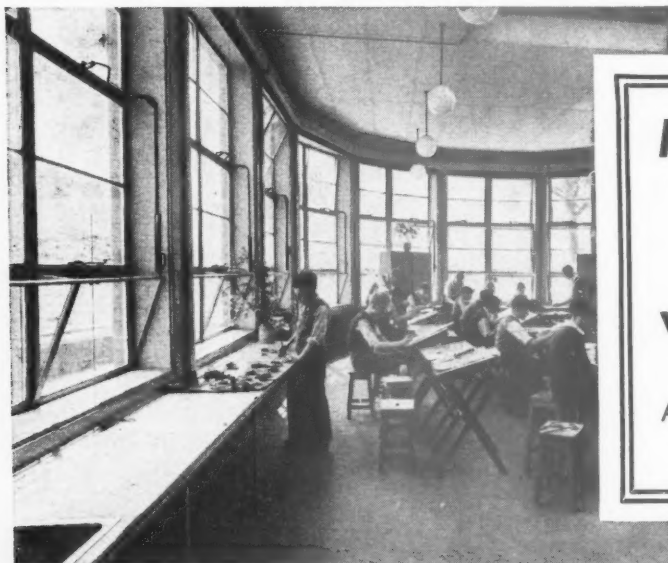
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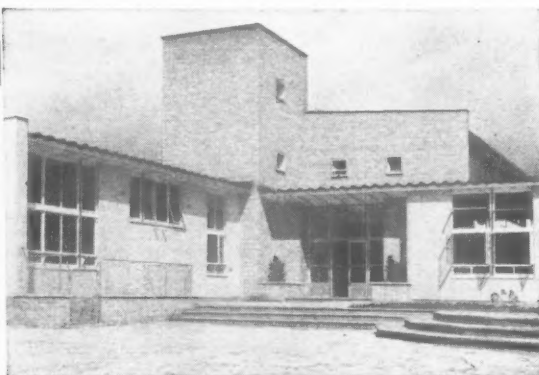
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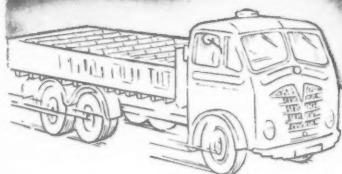
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Architect: D. E. E. Gibson, M.A., A.R.I.B.A., A.M.T.P.I. (Coventry City Architect).
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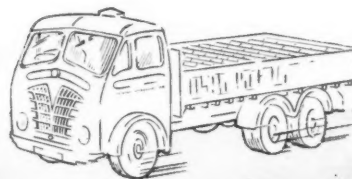
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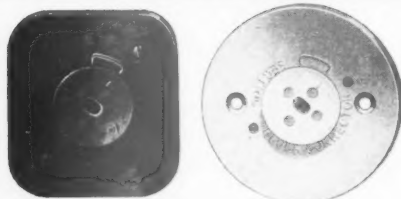
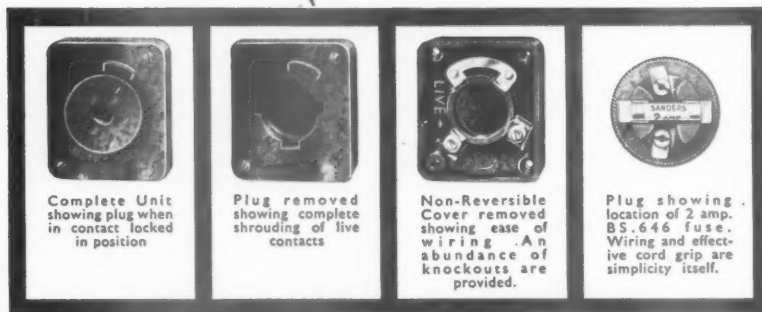
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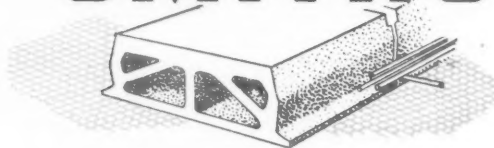
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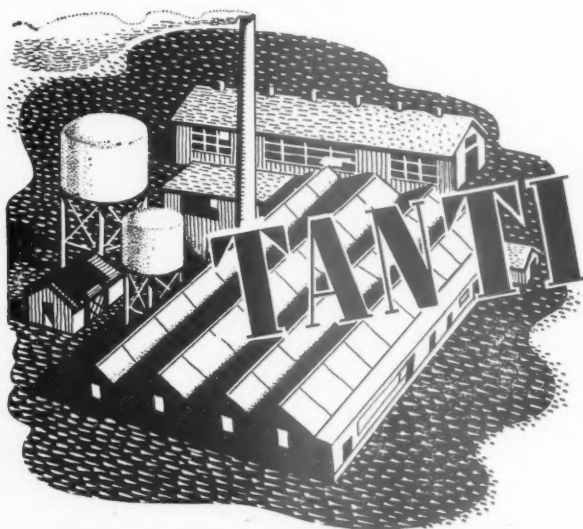
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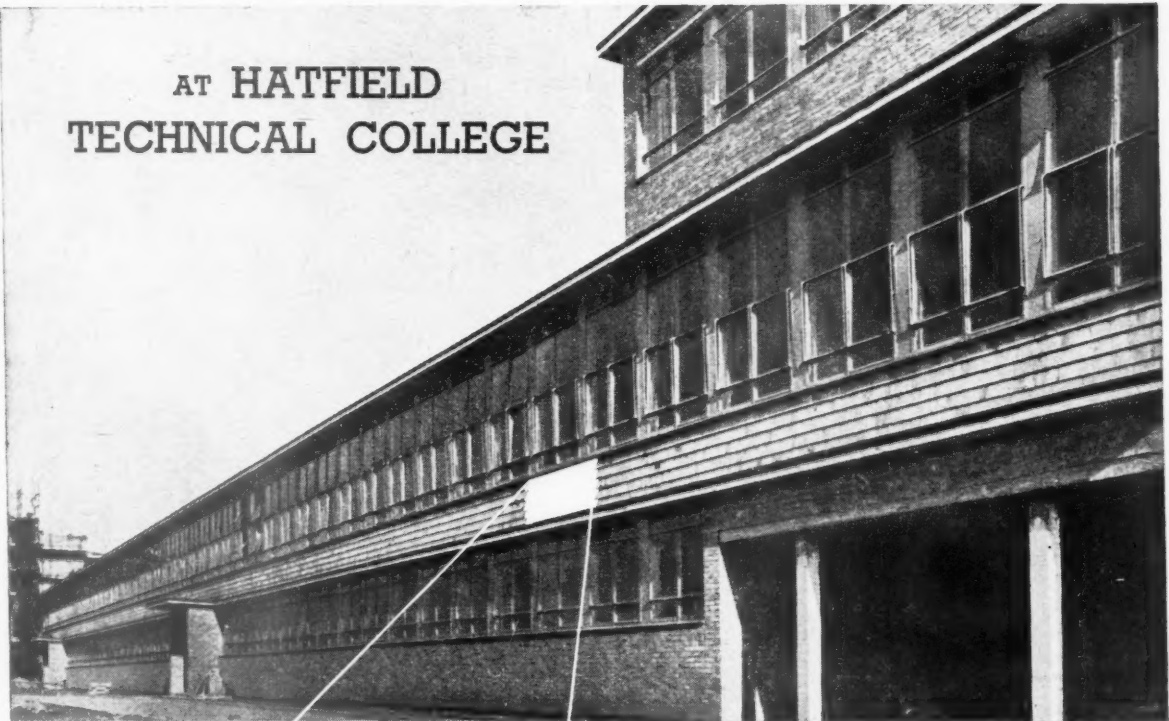
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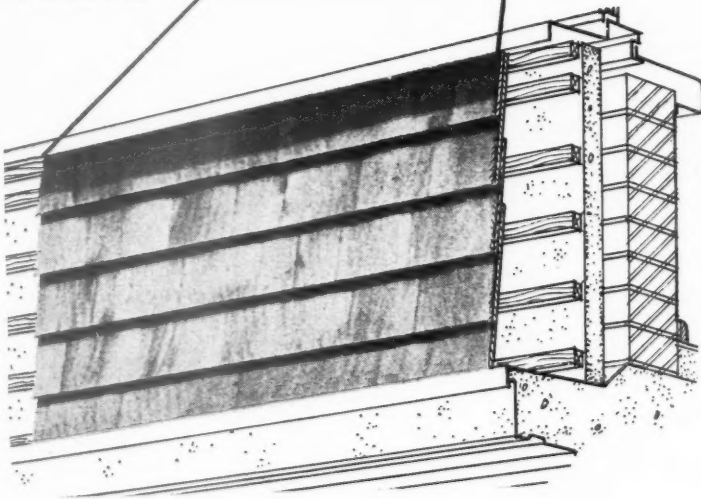
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TECHNICAL COLLEGE



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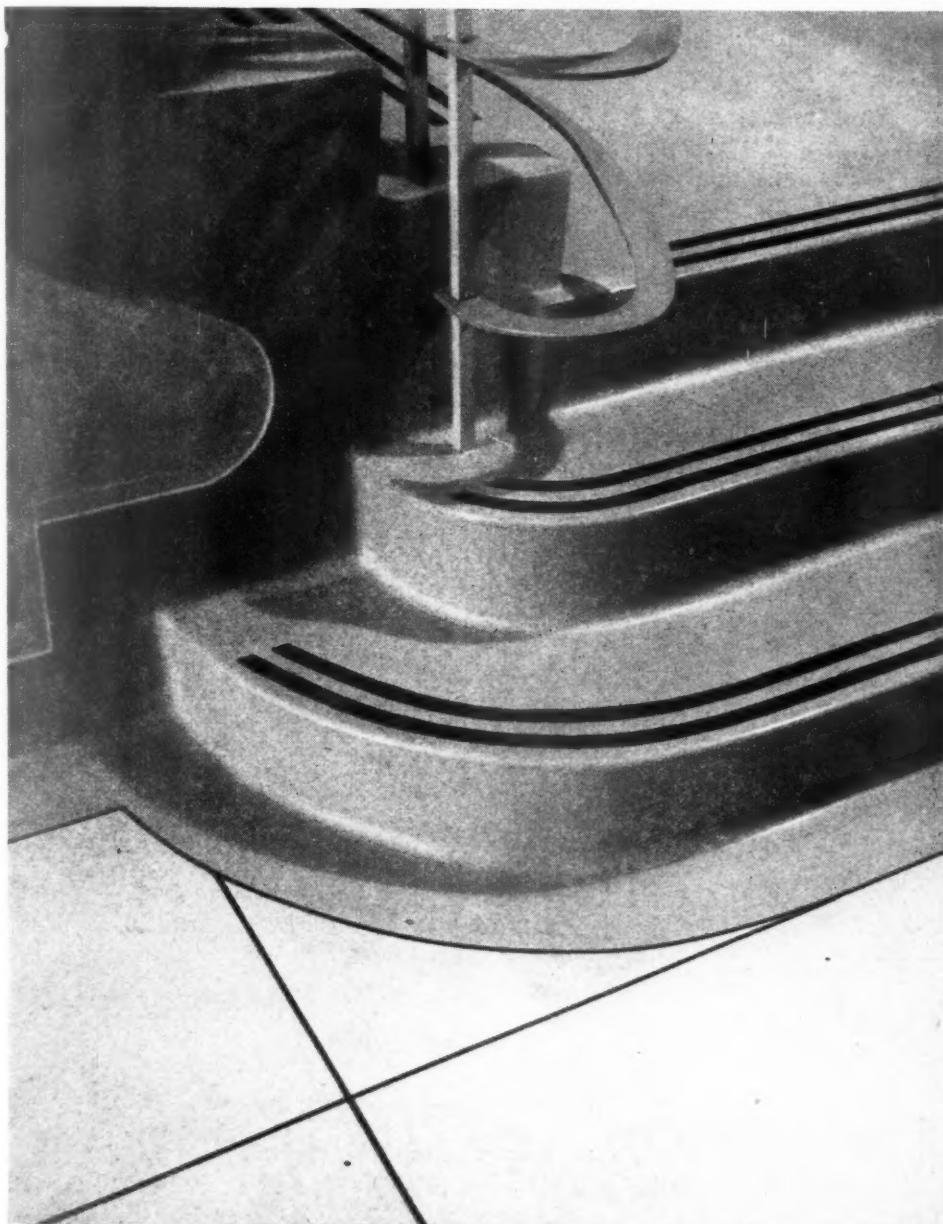
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Paving and Step-casing at the Murex Research Laboratories, Rainham.

Architects : Munby & Smith

Contractors : Holland & Hannen and Cubitts Ltd.

Light Cream Terrazzo paving divided into panels with black ebonite ; with deeper buff Terrazzo border, strings, and treads and risers. Black carborundum non-slip inlay.

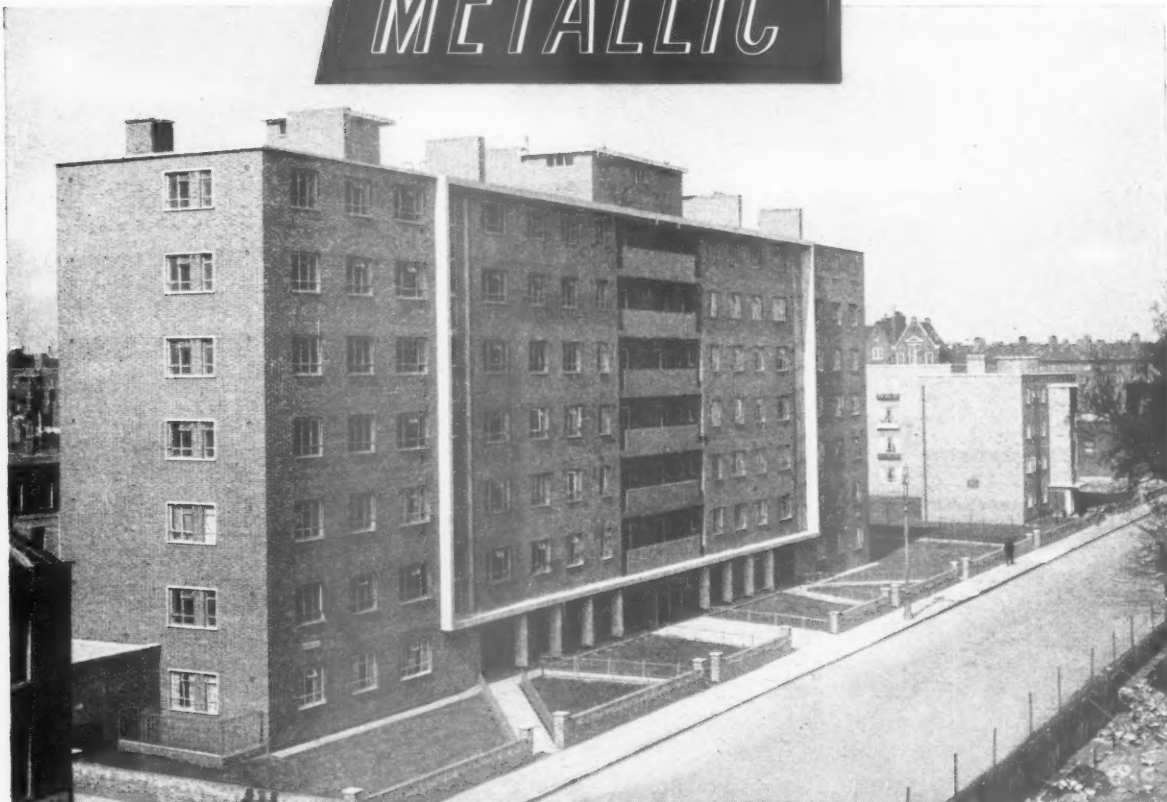


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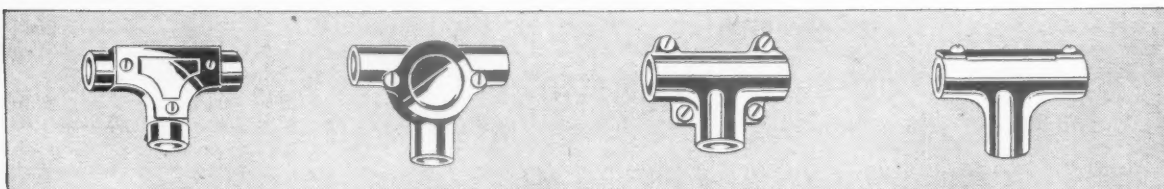
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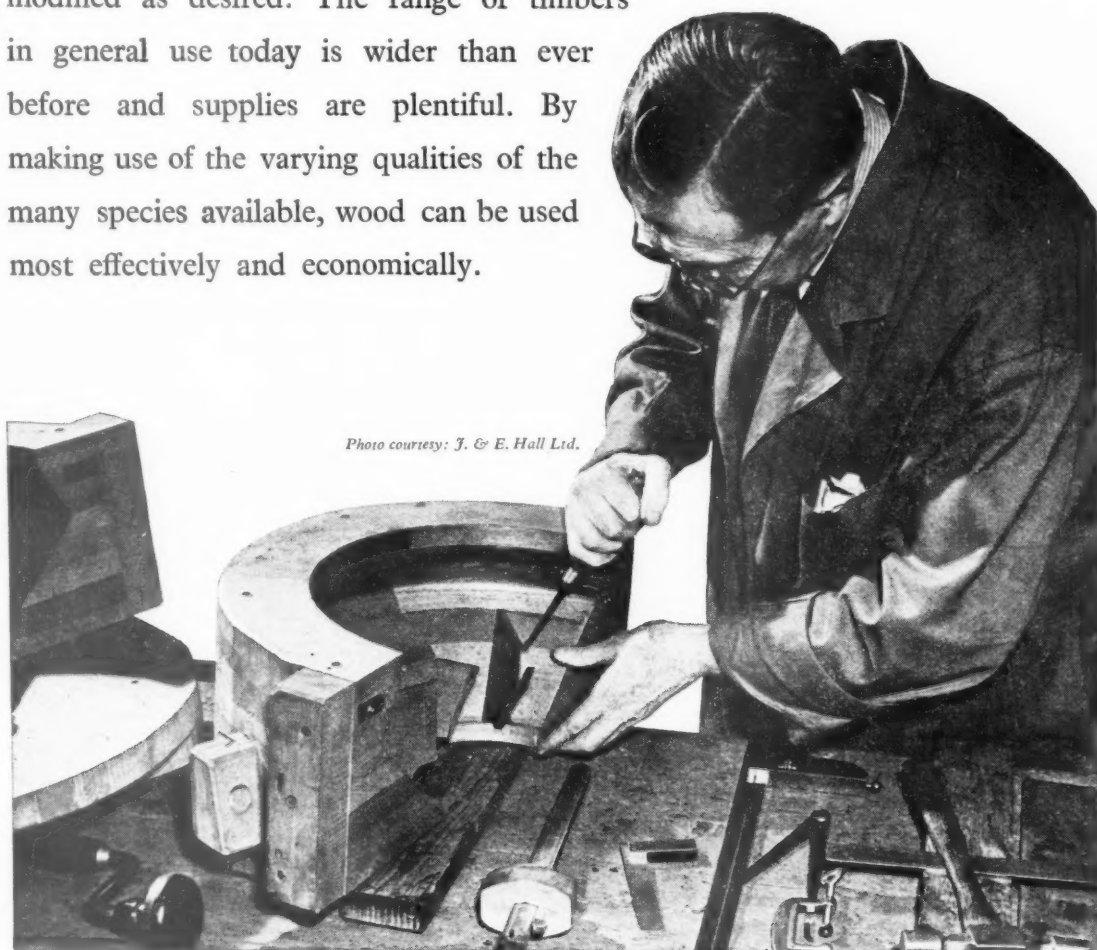


Photo courtesy: J. & E. Hall Ltd.

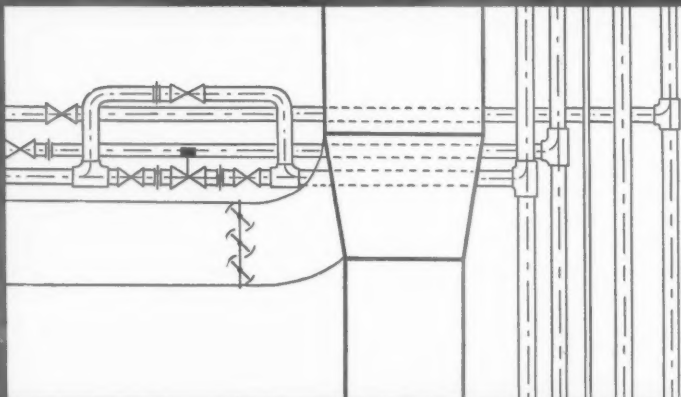
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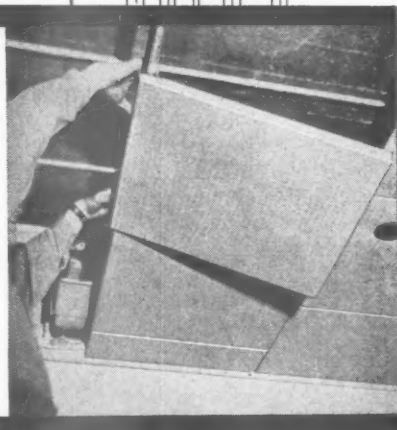
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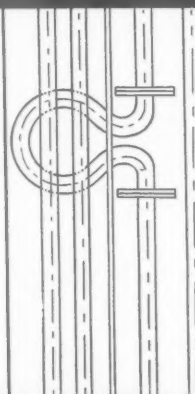
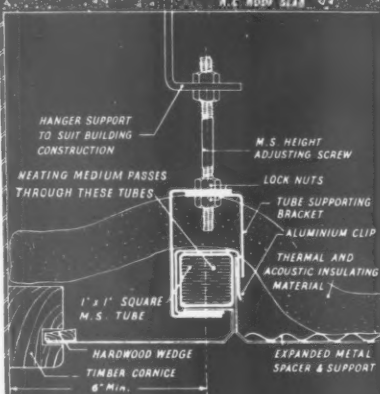
it's warming

A Frenger ceiling does three jobs. *First*: it is a radiant panel heating unit with a very quick response to changes in room temperature. A Frenger is made up of a series of square, perforated, aluminium panels suspended from a grid of pipes linked with the hot water system, and overlaid with a blanket of insulating material.



it's acoustic

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it's concealing

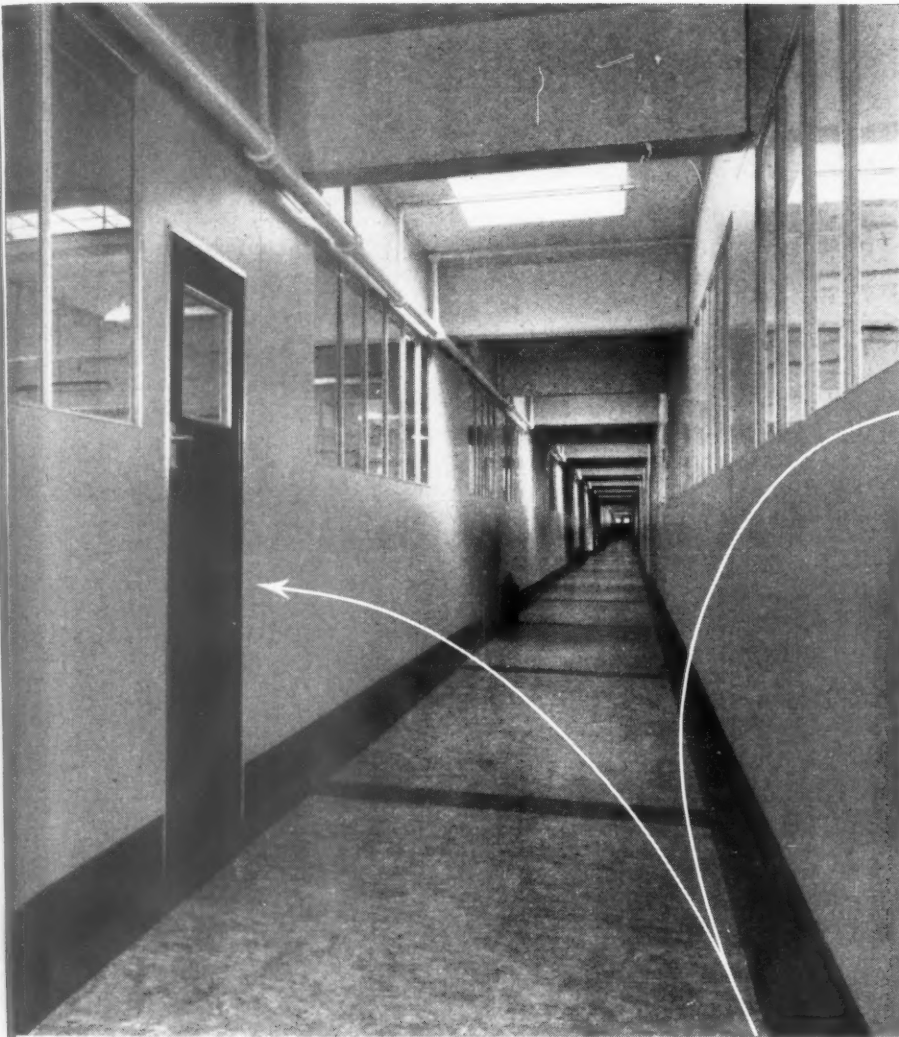
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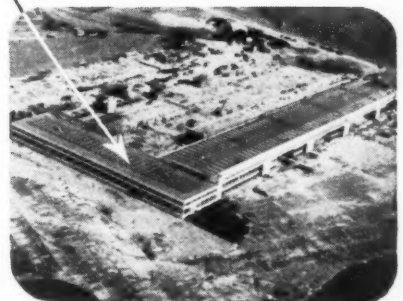
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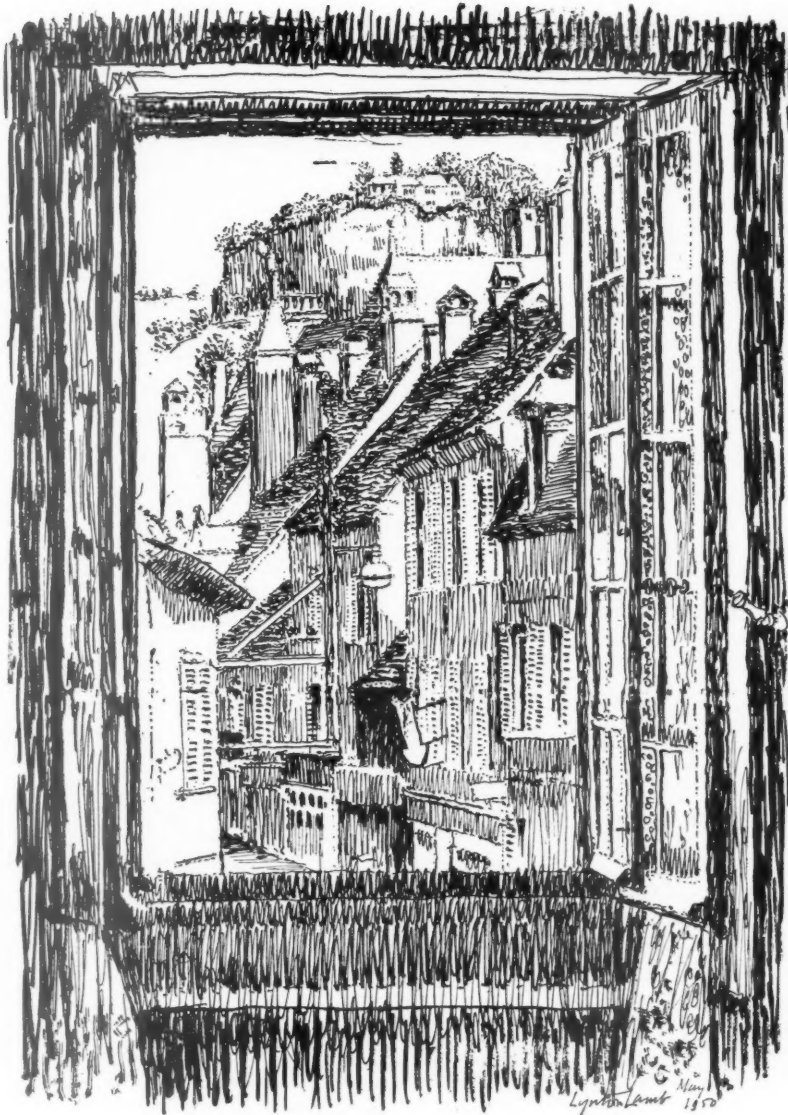
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Ornans from the Hôtel du Jura

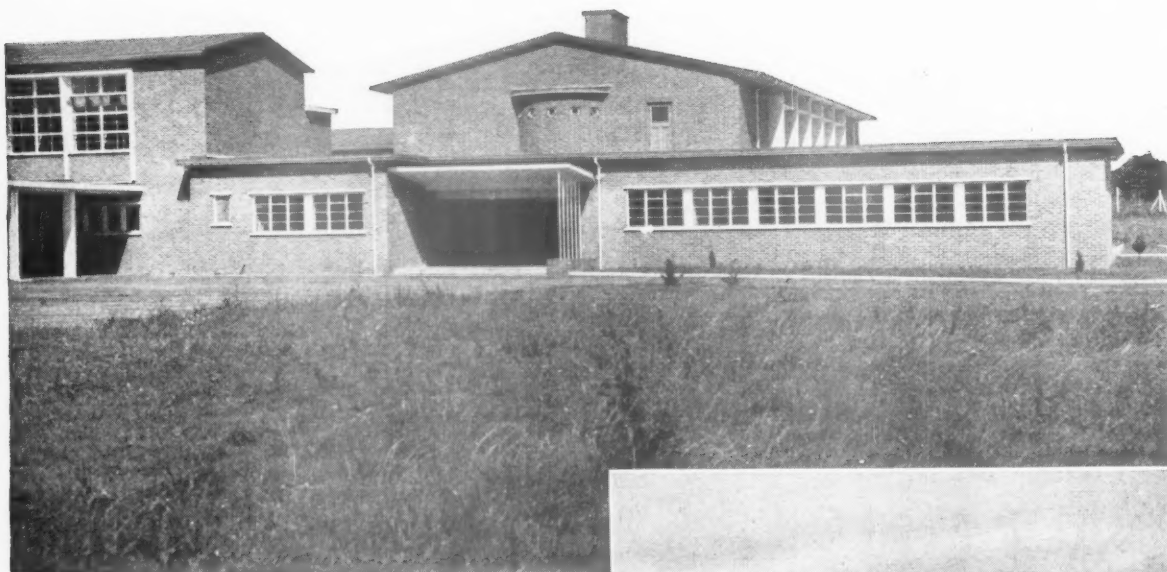
BY LYNTON LAMB

Lynton Lamb's drawing was done from a window of the Hôtel du Jura at Ornans. It evokes memories of a drowsy afternoon in this little French town, when apart from an occasional strident note from the klaxon of the inevitable 'Quatre Chevaux' or the bark of a dog, all was quiet as the town slept off the effects of the wines of the Moselle and the Jura.

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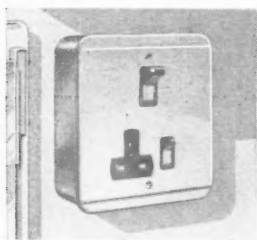
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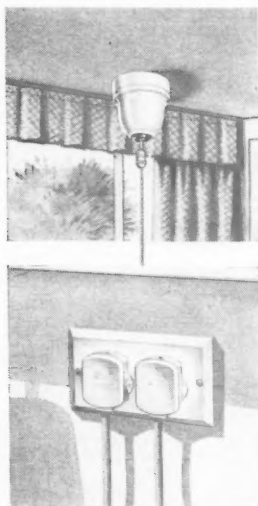
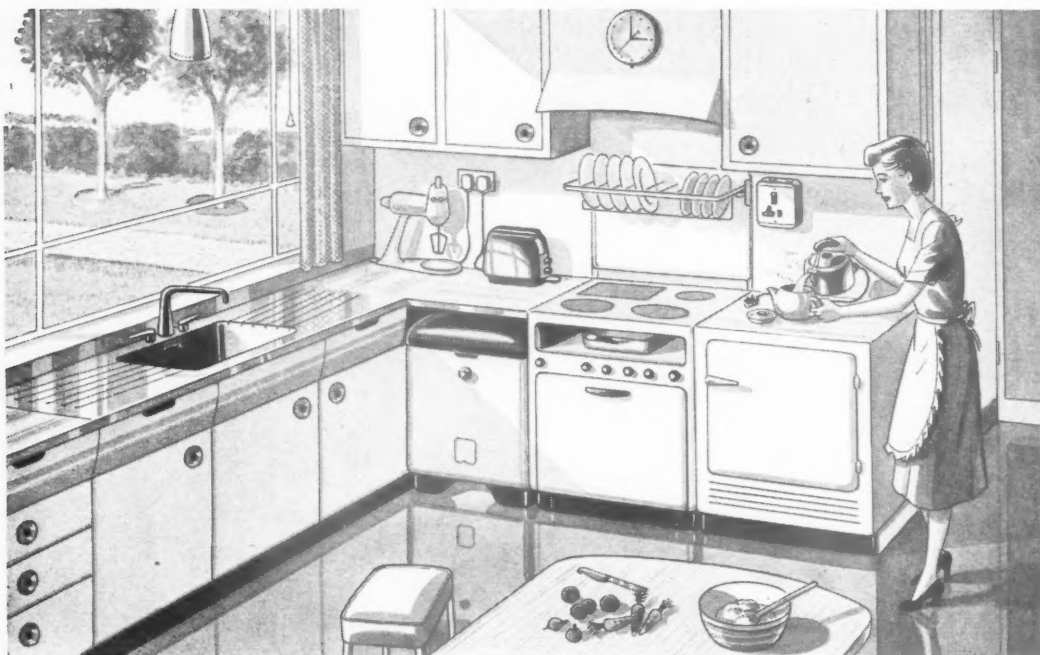
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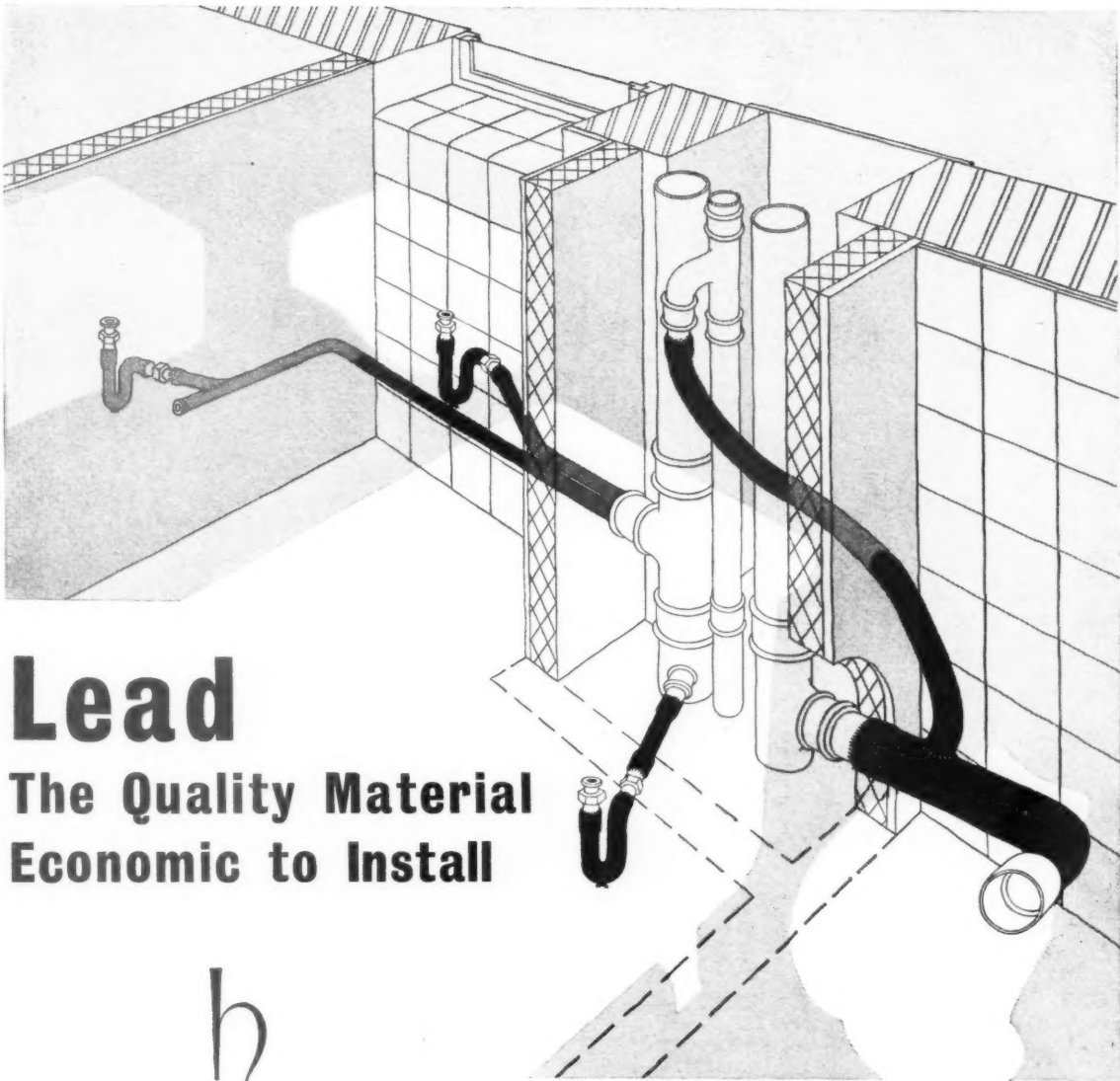
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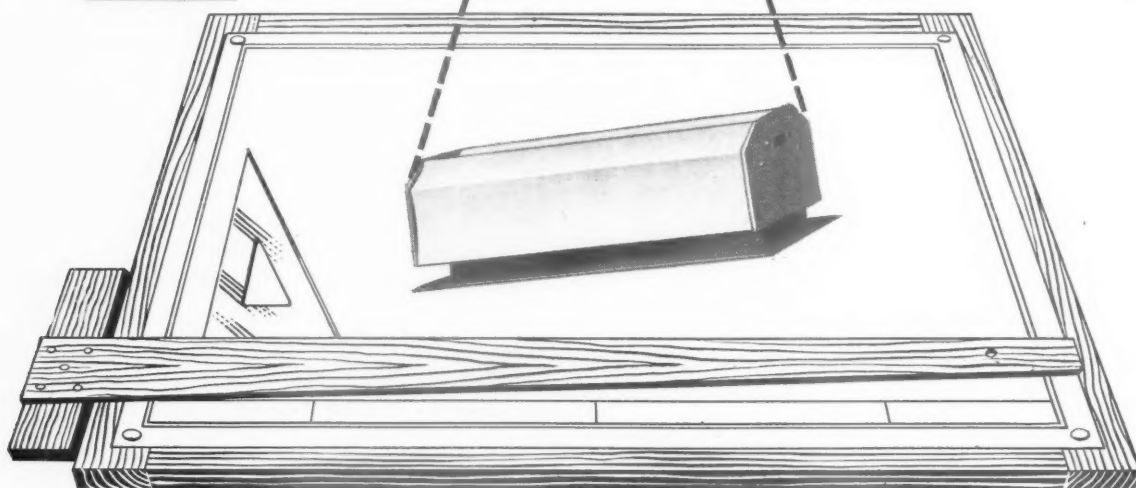
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- 2 GATHER-OVER
- 3 LINTOL

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3 The Lintol has a weir-shaped front and is of sufficient width to afford adequate seating on jambs with all normal fireplace openings. The face of the Lintol is recessed to provide an insulation space at the back of the fireplace surround.



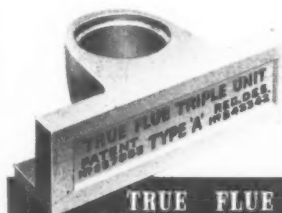
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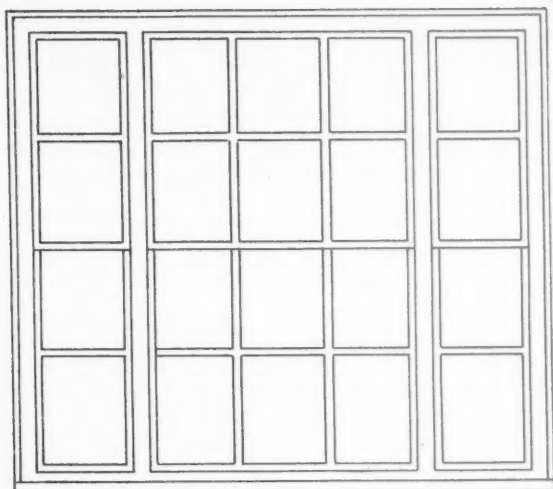
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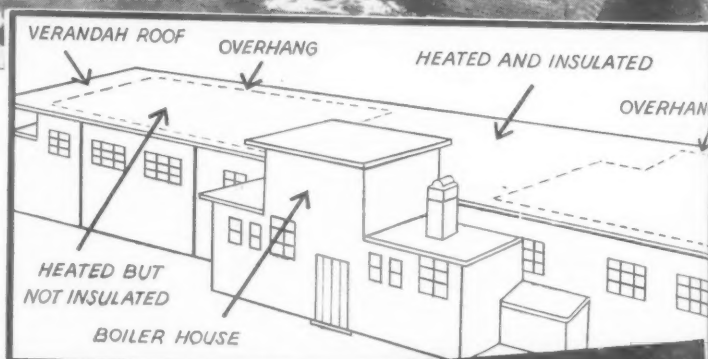
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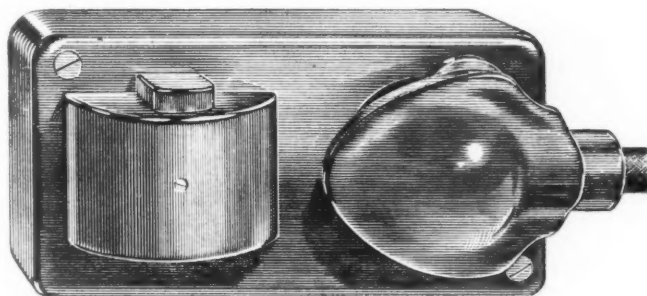
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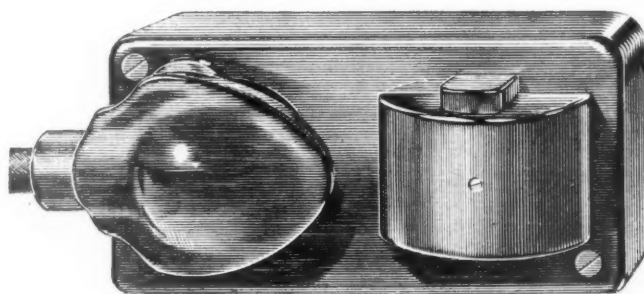
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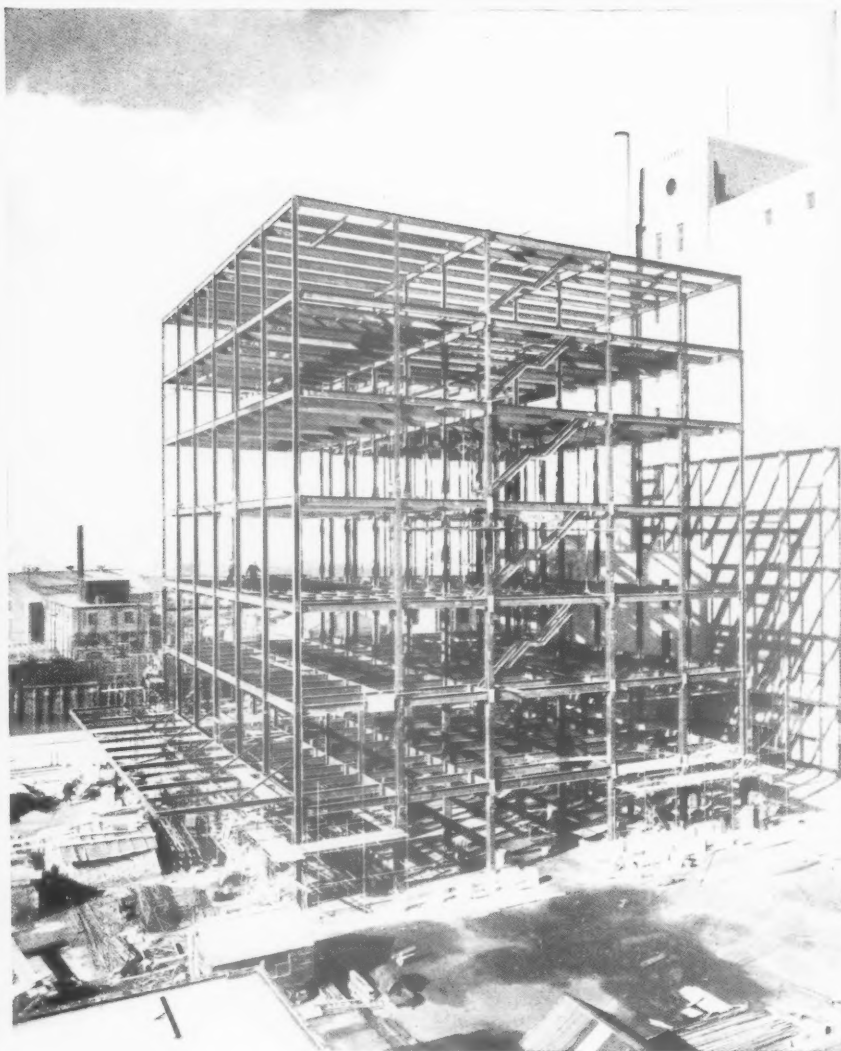
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THE ARCHITECTS' JOURNAL

No. 3024 February 12, 1953 VOL 117

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SEA DEFENCES

ASTRAGAL, who spent a large part of the first flooded Sunday morning counting sandbags and trying to dig very sticky clay with an uncomfortably large spade, is wondering whether sea defences should not be a national rather than a local authority responsibility. Sea-walls are expensive to build and to maintain and far too great a burden for the resources of a rural community's rates. Moreover, the sea is very unpredictable and preservation work in one area may lead to damage in another: e.g., groynes designed to prevent a recurrence of the disastrous 1938 breach in the Horsey area of Norfolk tend to produce greater erosion further south in Suffolk. So then who pays? Obviously local

authorities must pay something, but the majority of the cost should, I think, be a national affair. After all, there are plenty of drag-lines and other large-scale equipment and, although the amount of work is pretty formidable, the cost per mile of wall need not be so very high.

KETCHUM YOUNG

"You'll be hearing more about architecture in 1953, from the men who design the homes, schools and other buildings we use . . . a programme to help architects become more articulate is being launched by—" Monica Bromley of the RIBA? No, no, sir, you misread the accent. Those are the words of the American Institute of Architects, who, not having the equivalent, apparently, of Miss Bromley and the RIBA Public Relations Committee, have signed a contract with Ketchum, Inc., a Pittsburgh public relations firm, to carry out a three-year programme to educate the public in the function of the architect.

Without outside assistance the RIBA, you will recall, have started a similar scheme. A travelling exhibition has been designed titled "Home and Surroundings." The first of a whole series under the general title "The Architect and You", it is being put on view for the first time on February 18 at 66, Portland Place (opening ceremony by Harold Macmillan, Minister of Housing and Local Government) before going on tour. Rumour has it that forty bookings have already been made for the exhibition, so if you want to show the locals your potentialities in a nice modest manner, get on to the RIBA straight away. The second exhibition in the series will be "The small house and the

private licence." Full marks to the RIBA for beating the Yanks to it.

PRESERVATION OF VICTORIAN BUILDINGS

The *Manchester Guardian* is to be congratulated on its campaign against dirty railway stations, and the Chairman of the Railway Executive on his prompt response. He doesn't deny the dirt or the anachronistic nature of many stations, but pleads the lack of capital and materials for rebuilding and also—rather oddly—points to the fact that so many of the stations were designed in the "worst Victorian style."

*

We thought, when they set up the Nine Elms Museum (what's happened to it, by the way?), that the railways had got past this station. All that is needed is colour, cleanliness and order—plus a certain amount of professional surgery in clearing away post-Victorian junk. The Euston portico—when built—could be seen from the Euston Road across a wide forecourt, so could King's Cross. Mr. Elliot, of the Railway Executive, should get sound professional advice on what is and what is not good in the railway buildings . . . otherwise "cleaning-up" may do as much harm as good.

RIVAL PUBLICATION

Congratulations to editor Paul Pearn of the Plymouth Branch of the Devon and Cornwall Society of Architects on the fifth number of their elegantly produced *Journal*. The new cover is not, perhaps, quite as smart as that of the Truro Branch (praised in this column, January 1) but within it is an article by a group of young students and architectural assistants which shows that the

AVOID
CORROSION

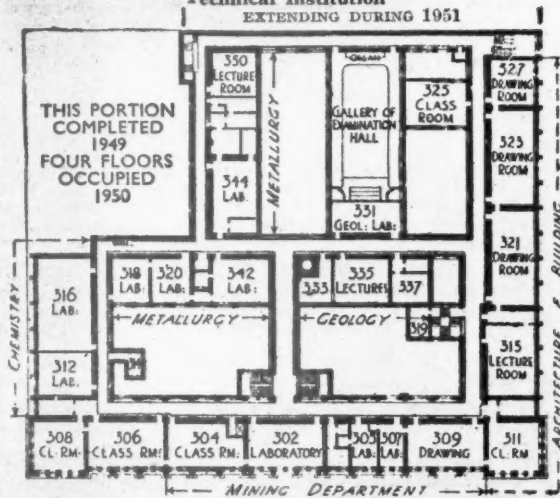


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ARCHITECTURE—Continued
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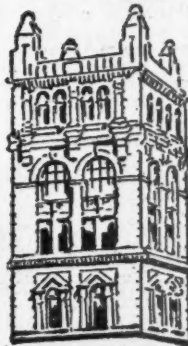
Rooms with odd numbers are to the east of the central staircase;
 rooms with even numbers are to the west.

New Buildings are always going up, and in each there are many features to be admired and deplored. The keen architect will take photographs (Figs. a to d, p. 17) and sketches, even drawings to scale from these which will help him with future designs. To the engineer is given the credit of flourishing while the architecture is at a standstill, but this only applies to large factories and warehouses. The steel house has almost been a failure; many of these have to be rough-cast with cement material to keep the steel from rusting; painting has proved too costly. These are now being sprayed with rough-cast material. The architect does not claim to have had any part in the design of the "steel house"—he hates the shoddy and featureless—yet he has placed on buildings useless domes simply because he thought these were expected by his client (Fig. a, p. 17).

Order in Architecture implies that a building must look like what it is intended for. It must satisfy measurable requirements, such as strength, durability, waterproofness, heat and sound insulation. Standardization, which is the friend of the architect, does not imply that church architecture should be left to the railway architect.

16

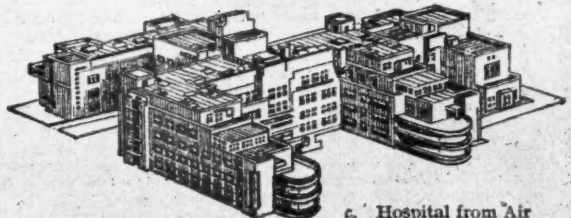
SKETCHES AND PHOTOGRAPHS



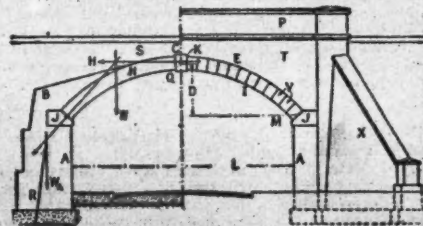
a. Red Sandstone



b. Tower



c. Hospital from Air



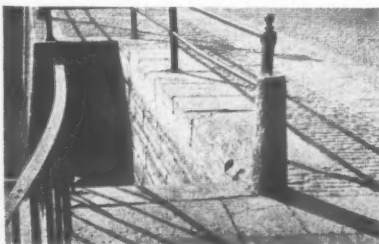
d. Lintel and Arch

A. Abutment; B. Backing; C. Crown; D. Rise; E. Extrados; F. Intrados; J. Springers; K. Keystone; L. Span (clear); M. Springer line; N. Arch ring; P. Parapet; O. Soffit; S. Spandrel space; T. Spandrel wall; V. Voussoirs; X. Wing Wall; W.W. External loads; H.R. External reactions.

17

Astragal, who never opens his Christmas gift diaries except to read the printed matter at the beginning, illustrates two pages from Collins's 1953 diary which is devoted to his readers own subject, for their solemn study.

Architectural Review's constant plugging of floorscape is not without effect. The subject the authors discuss is the future treatment of the Barbican, Plymouth, and, as the photograph from the article, below, shows, they know what qualities to look for. Might not the Plymouth authorities encourage the authors by allowing them to carry out some of their ideas in this, Plymouth's most valuable core?



OXFORD PERAMBULATOR

A half-day visit to Oxford a week or two ago left ASTRAGAL once again with the impressions to be expected in one who knows the other place better—street scenes entirely of stone, buildings too high and too big, and a lack of trees. One knows these are only impressions and not judgments, but they come again as one looks through *Oxford Observed*,* a discourse on Oxford's townscape by Dr. Thomas Sharp, the great expert on that great subject. Discourse seems the right word. It has a Johnsonian touch about it: one expects to be roused by firm statement, firm opinions and the unbending disapprobation of those who have erred. And one is roused.

* *Oxford Observed*. Thomas Sharp. Country Life. Price 12s. 6d.

In this short book Dr. Sharp describes what he feels is the essence of townscape, and then illustrates and analyses Oxford's street scenes during a few walks in streets and colleges. In so doing he is nobly supported by the photographs, for the most part by Dell and Wainwright and Helmut Gernsheim. We have seen some of these before and for once (publishers please note) we are very willing to see them again.

*

In this column there is room only to say that Dr. Sharp agrees about the trees in main streets. He applauds the tree between All Souls and Queen's; and then draws his sword. We catch our breath at the opening words: "It



Dissolution of the Abbey

The sunlight which lights the Westminster Abbey choir walking in procession through the dark cloisters strikes also on the corroding, disintegrating fabric of the cloister itself. The building round which so much of the life and faith of the whole nation, indeed, of the Commonwealth, has gathered, now stands in the gravest danger. Time, weather and the London atmosphere are having their effect and the ceaseless process of gradual disintegration is gaining the upper hand. In some parts of the Abbey the damage is already irreparable. The Surveyor of the Fabric, Stephen Dykes-Bower, has estimated that no less than £400,000 is needed to carry out immediate restoration, and a further £314,000 is required to provide a sufficient income for essential annual maintenance. An appeal has been made by Winston Churchill, the Prime Minister, for one million pounds to enable the Abbey to be cleaned, restored, and maintained, and for the Choir School to be properly endowed. An example of the extreme decay of some of the stonework is shown left; a shaft and springer (restored) in the South Cloister. Such dangerous decay is typical not only in the cloisters but up in the parapets, pinnacles and buttresses. In the latter case some stone has eroded up to four inches deep. Such decay occurs mainly in the Reigate stone in which the Abbey was built, and in the Bath stone in which the 19th century repairs were carried out. Clipsham stone will be used in future.

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POINTS FROM THIS ISSUE

Appeal for funds to repair Westminster Abbey	page 208
Guest Editor : Professor Bowen discusses the size of the profession	page 210
Low standard of thermal insulation in model byelaws attacked	page 212

Executive Editor: D. A. C. A. BOYNE

THE SIZE OF THE PROFESSION

ARCHITECTS need have no fears that the *post-war increase*, in the size of the profession to date, will, by itself, necessarily result in the profession being swamped by hundreds of out-of-work architects. That is one conclusion to be drawn from the first article overleaf by Professor Ian Bowen, the JOURNAL's Guest Editor for 1953, who has undertaken to supervise, over the year, a detailed study of the structure of the profession and to attempt to forecast its future prospects. Any unemployment which occurs now will be due more to the reduction in building work (in other words, the reduction in capital expenditure by the Government) than to the increase in the numbers of the profession. The post-war bulge of students is now on the wane, but, of course, it is possible that this slowly decreasing intake will not keep pace with the decrease in the amount of building. Certainly, as Professor Bowen points out, an increase of less than one per cent. per year in the post-war number of architects over the pre-war number would not appear to be too rapid a rate of growth for what, if public need were the sole criterion, would be a heavily worked profession. But if the supply of work remains static, or actually decreases, then the still inflated architectural schools will pour out, during the next year or so, some hundreds, or possibly a thousand or more, students into a crowded labour market with no work available. It is, of course, in an endeavour to anticipate such a dreadful event that we have asked Professor Bowen to undertake this enquiry into the profession. Not that action can be taken as far as the intake of students is concerned. For five years, at least, the flow cannot be altered. The energies of the profession, in order to alleviate such possible unemployment, would have to be directed towards demanding either more building work, or a greater share in the existing work going on, or even for a more equitable share-out amongst architects of the work available. It is unfortunate that the registration of architects is such a recent act that no accurate and complete picture of "normal" pre-war conditions can be drawn. As Professor Bowen shows, the registration of architects in the 'thirties was interrupted by the war. There is no precedent to establish, therefore, what the ideal size would be of a prosperous profession which was closely related to the

would be better to end here; for, a few yards beyond, murder was done a year or two ago—townscape murder. A row of limes . . ."

Yes, you can all guess the rest. It seems worse in Oxford, for (as Dr. Johnson said when he lost his walking stick in the Western Isles), "Consider, Sir, the value of such a *piece of timber* here."

ARCHITECTS' TIME OF THEIR LIFE

Goodness knows what the public will make of London's latest office block in the West End—the Time-Life Building. ASTRAGAL has had an early view of Michael Rosenauer's big, more-or-less free-standing, block at the corner of Bruton and Bond (streets understood; the house style is catching). The exterior is already familiar to many of you, no doubt, but the interior is going to open a few eyes, for Sir Hugh Casson and his associates—on the inside work—have been able to command a range of expensive materials that most of us have hardly seen since 1939.

No building of the post-war epoch in London, Festival Hall not excluded, can be quite so be-marbled, be-gilded, be-carpeted and be-tooled with leather, and the effect is going to cause some loud arguments, sharpened with the juice of the sour grape. Some of the work will not cause much discussion because it breaks no very new ground—the excellent office designed by Robin Day is not controversial, nor is Cadbury-Brown's sober conference room, nor the Casson office's pleasant cafeteria on the roof.

But when some people see the Entrance-Reception area, with its column-decked curtains by Henrion, and the roses—yes, roses—of Ronald Ferns' carpet, their comments will vary between "poor Hugh, poor Misha" and straight apoplexy. But one or two, as they come down the steps between the walls of Derbydene marble, and go out through the chromium-framed doors, are going to wonder to themselves, seriously, if the boys haven't got something there, and if austerity isn't a frame of mind, rather than a tight budget.

ASTRAGAL

productive capacity of the building industry, or what the rate of intake would have to be to maintain its strength.

This week Professor Bowen shows the *net* growth of the profession. However, next week he will show in detail what the *gross* rate of entry into the profession has been during the past two decades.

FOCUS

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12310 ABERDEEN, David William, 20 Green Moor Link, 1.
3415 ABERDUR, Douglas Watson, Ministry of Works, Clef.
4017 ABLETT, Herbert Kellett, Chief Architect, Development.
5072 ABNETT, William, M.O.W., Storey's Gate, London, S.W.
15799 ABRAHAM, Alfred John, 68 Dean Road, Rhonessay.
10541 ABRAHAM, John George, 80 Hanley Road, Stroud Gt.
6446 ABRAMS, Edward De La Tour, Godstone Court, Godst.
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17310 ACLAND, Lady Anne Stella, "Killerton," Broadclyst, Ex.
22370 ACRES, Peter Millard, "Benmore," Linkside, Bebbington.
502 ACTON, George Raymond, 46 Foregate Street, Worcester.

(Names taken at random from the Register of Architects)

ON YOU

The rate of increase in the size of the profession, and the number of architects in the profession are the first problems which the JOURNAL's Guest Editor for 1953, Professor Ian Bowen, sets out to answer.

Guest Editor:
Professor IAN BOWEN

How Many Architects Are There?

HARD facts about the numbers of architects in the profession, the growth of the profession, and about the numbers taking training to become architects, are directly relevant to any study of the profession's future prospects. These facts I shall try to set out as clearly as I can, for I do not think that even yet they are generally understood.

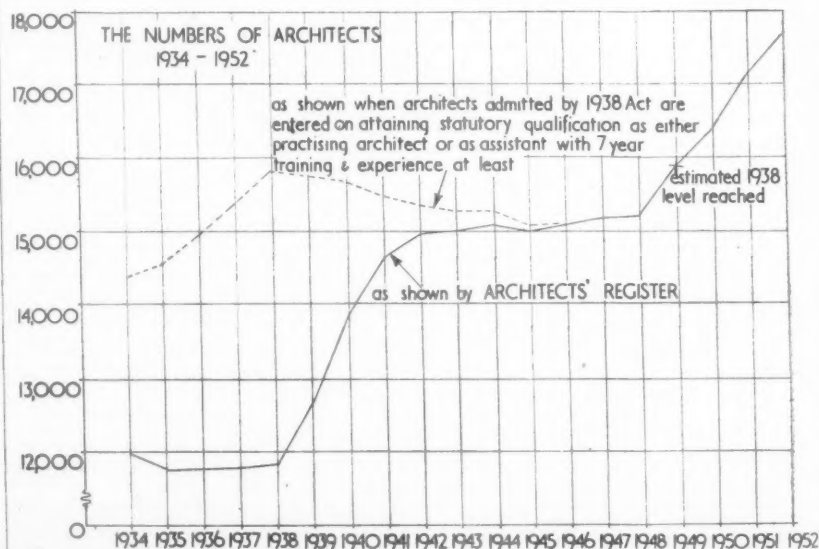
THE PRESENT NUMBER OF ARCHITECTS

If the question "how many architects are there?" is taken to mean "how many architects are there on the Register?", the answer is quite simple, as the names on that register can be counted. There were 17,600 names

(to the nearest hundred) at December, 1952. But this figure does not really tell us very much, unless we can find out exactly what classes of architect it includes, whom it omits, and how it compares with earlier counts of the total.

To take the last of these points first, in 1938 there were only 11,800 names on the register, that is 5,800 less than in 1952. But it cannot be argued that this means that 5,800 extra persons *net* had turned themselves into architects in the intervening period. A part of the net increase was due to registrations by persons who had completed all their training, in one way or another, years before the date at which they actually registered, and a correction ought to be made for this fact before any comparison of different totals is wrongly used to create alarm as to the expansion in numbers.

The correction cannot be made exactly, but some figures can be worked out that give the broad picture, and the result is shown in the accompanying graph. The black line shows the totals on the register for each year from 1934 to 1952; the dotted line indicates what the total would have been if the numbers entering the register (under certain provisions of the Act of 1938) had registered as soon as they were eligible to do so. This gives a very different picture of the growth of the profession.



A graph showing the number of architects from 1934-52. Source: The Annual Register of Architects. Estimates by M. Webb.

According to this calculation, there were 15,800 "architects" in 1938 (*i.e.*, the total of those on the register plus those who could have been on the register in that year but who did not in fact register until a later date). There was, naturally, a fall in the total number of architects in the war to about 15,000 in 1945, and the total did not recover its 1938 value until 1949.

AVERAGE ANNUAL INCREASE

Ever since 1948 the total number of architects on the register has been increasing fairly rapidly, by about 600 or 700 a year (the average from 1948 to 1952 was 625). One question that will have to be answered is how much longer can such a rate of increase be sustained?

First, however, it may be useful to note that at any given date the register may, in a sense, be incomplete. Obviously, the register omits those who do not wish to remain on it, but because a person, for financial reasons or otherwise, is omitted in one year, it does not necessarily follow that he will not renew his attachment to the profession at some later date.

Calculations can be made (their basis will be described in a later article on entry to the profession) which show that there may well be some 900-1,000 persons qualified as architects who at the end of 1952 were not registered. There are a great number of posts which these people might occupy, some still linked closely to the architectural profession, others remote from it. The point is that since the war the schools and colleges have turned out, as will be shown later, an increase in architects eligible for registration greater than the figures shown on the accompanying graph would suggest.

Finally, the total of registered architects is not necessarily quite the same as the total of architects practising in Great Britain. The register includes architects working overseas, and also at home who are not practising. According to the returns made to the Percy Thomas Committee, however, and relating to 1949, only about 2½ per cent. of the registered architects were in "employment other than architecture," a percentage not much different from 1938 (table 4 and paragraph 9 of that committee's report).

BASIS OF THE REGISTER OF ARCHITECTS

So far the facts have been presented in terms of the numbers of architects on "the Register." A different definition would have been membership of the RIBA. In March, 1938, there were about 7,418 members of the RIBA, excluding students and overseas members, and in March, 1950, 10,805, which was some 4,400 and 5,500 less than the numbers on the register in each of those years (at December). The Register therefore represents for our purposes a much more comprehensive count.

The first Act requiring the registration of architects was passed as recently as 1931, and this Act for the first time imposed restrictions in this country on the use of the word "architect." The later Act of 1938 made use of the title "architect" lawful only for those who had fulfilled certain conditions, and had paid a fee which enabled their names to appear on the Register which has been used in this article. The legal consequences of these Acts need not be set out, but the economic point is plain, that for the first time the architectural profession had become a closed one which implied that it must accept, as a profession, much wider responsibility for the sound ordering of its internal affairs than if it had remained open to all comers; in particular it necessarily had to concern itself to a much greater extent than before with the provision of adequate facilities for education and training. The questions today are whether the content of that training is adequate to the rapidly changing world in which the modern architect has to work, and whether perhaps too many people are being trained. Perhaps just because of the danger of its becoming too much a closed shop, the profession has been opened to an increasing flow of entrants.

NO NORM TO JUDGE BY

The statistical consequence of all this is that there is no "normal pre-war period" of any kind with which the present rate of growth of the profession can readily be compared. The total number of registered architects remained fairly stable from 1934 to

1938, but this is rather misleading. The converted total shown on the graph (opposite page) shows that, if later entrants are referred back to their year of reaching sufficient maturity for registration, there was actually a rise in the total of some 1,400 in the first four years, that is a net increase of about 350 a year.

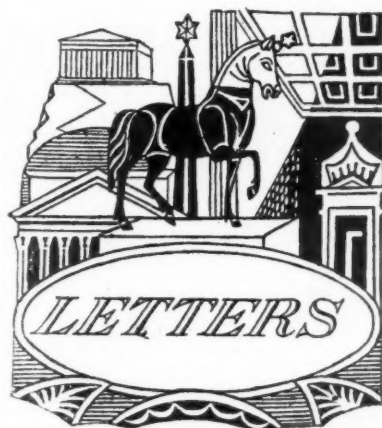
The post-war annual net increase has already been shown to have been much greater than this, which is the outstanding fact that has to be discussed at greater length.

But a comparison of the post-war with the true pre-war figure puts the problem into a different perspective. The 17,600 architects on the register in 1952 represent an increase of only 1,600 on the (converted) total registered or registerable in 1938, that is to say, a net increase in fourteen years of only 10 per cent. This is a very different order of magnitude from the increase of nearly 50 per cent. that is implied by considering the uncorrected figures.

The post-war rate of increase has been perhaps "abnormally" high, that is, higher than could be sustained by a profession that could not be expanded so fast indefinitely. But there has, as yet, been no "normal" period for the organized profession. If it is rightly to be regarded as an expanding profession, then its failure to expand in the war years has to be set off against its more rapid growth in the later period from 1948 to 1952. The present rumours of difficulties in finding employment may, then, be just growing pains or teething troubles. Certainly a growth rate of 10 per cent. in fourteen years (an increase of much less than 1 per cent. in each year on average) would not seem to be impossible to sustain, if the average for the next fourteen years were no higher—which would imply, of course, reducing but not abolishing the current increase.

IS THE RATE OF ENTRY TOO HIGH?

Thus, a first examination of the total numbers in the profession, carried out on lines that have not perhaps been previously fully explored, shows that there is, as it were, a case to answer. We must examine entry to the profession more closely to see whether the present rate of entry is indeed too high. But the figures so far considered certainly fail to prove that entry has yet been unduly rapid up to the end of 1952. All the indications were that the profession needed to be expanded after the war, and it has been allowed to expand slightly. The question is not whether this was a mistaken policy—no one seems seriously to have suggested that it was—but whether the future is bright enough for the present rate of growth to continue.



"Sapper" A County Planning Officer

N. James Rushton, L.R.I.B.A.

H. F. Payne, Secretary, Structural Insulation Association

James A. Spon, A.R.I.B.A.

L. C. Howitt, F.R.I.B.A., M.T.P.I., President of the City and Borough Architects' Society

F. V. Wickham, A.M.I.C.E., Managing Director, Key Engineering Co., Ltd.

Sir George L. Pepler, Honorary Secretary, T.P.I.

Alan Whitehead, M.S.I.A.

Why Architects Are Not Necessary

SIR,—It was with some surprise that I read your leading article under the above heading. I am a member of the I.M.U.E. and could not remember that institution taking any action on the lines you mention, but on searching back through the institution's Journals I find in the January 3, 1952, issue a paragraph which reads as follows:—

"The Council, being aware that some local authorities have from time to time considered the setting up of an independent architectural department, has recently given careful consideration to this problem. The Council considered that members whose normal duties include architectural work and whose authorities are contemplating the setting up of a separate architectural department may require help in making a report to their Councils, and has accordingly drawn up a confidential memorandum setting out the reasons against the formation of a separate architectural department. This document is available to members on application to the Secretary."

The document does not appear to have been circulated as you suggest.

You appear to have treated this subject sensationally, and I wonder whether your comments are correct. I don't see the point of your heading to start with. Surely no one is suggesting that architects are not necessary; what is suggested is that in some circumstances a separate architects' department in a local authority is not necessary.

Again, are the first two sentences of your first paragraph correct? Has the I.M.U.E. considered that the New Towns, the Festival Hall, etc., should be designed by municipal engineers' assistants, or that the distinguished men you name should be assistants? The document relates to a "proposal to create a separate Architectural Department," and would apply only to towns where the local

authority's architectural work is under the control of the engineer and a separate architects' department does not exist. As most (if not all) large towns already have separate departments, the document would not apply to them, and I see no suggestion that where a separate architects' department exists it should be taken over by the engineer.

The work of architects, engineers, surveyors and planners overlaps in certain instances, and it is only to be expected that the representatives of each profession will put forward their cases. Your Guest Editors have recently put forward the case for architects to take responsibility for planning work, and in pressing the case for municipal engineers the I.M.U.E. is doing little more than your Guest Editors did; each side is suggesting that his own profession should be mainly responsible in special instances when two or more professions are working together.

I suggest, too, that you reconsider the last three sentences of your second paragraph; they are unworthy of a journal which caters for a profession.

"SAPPER."

SIR.—The document referred to in your leading article (January 22), issued by the Institution of Municipal Engineers to its members, seems to call for some comment. It contains the statement "Municipal engineering and architectural services have no clear cut dividing line." It has ever been obvious that members of this body have held that view, if most of their activities provide any basis for judgment. It will consequently require small intelligence to appreciate that those so unenlightened must be the least fitted to control a subject of which they so frenziedly cry their ignorance.

JAMES RUSHTON.

London.

Model Byelaws and Thermal Insulation

SIR.—The Ministry of Housing and Local Government has recently published its Model Building Byelaws, which will be used by local authorities throughout the country to bring their own byelaws up to date. This Association has been gravely concerned at the low standard of "thermal insulation" required to fulfil the provisions of Byelaw No. 84. Many of the forms of construction sanctioned—some of which are cited below—fall far short of the modern minimum standards of insulation.

Roofs and Ceilings.—A pitched roof covered with tiles or slates on battens and felt, or, alternatively, a roof which has a thermal transmittance coefficient ("U" value) of not more than 0.42.

Walls.—Of not less than $8\frac{1}{2}$ in. thickness of solid brickwork or blocks. These would have a "U" value of about 0.44 and 0.49 respectively.

Ground Floors.—Of $\frac{3}{4}$ in. nominal thickness tongued and grooved boarding on timber joists (which would have a "U" value of about 0.43), or floors so constructed as to have a "U" value of not more than 0.40.

In comparison, it will be recalled that the technical appendices of the Housing Manual from 1944 onwards (issued by the same Ministry) made the following recommendations:—

Roofs and Ceilings.—The "U" value should not exceed 0.20.

Walls.—"U" values of 0.20 to 0.25 are recommended and 0.30 is suggested as an absolute maximum.

Ground Floors.—The technical appendices state: "The 'U' value for a solid ground floor is 0.15 to 0.20 depending on the finish and this is acceptable. A joisted wood floor with tongued and grooved boarding properly ventilated provides poor insulation as its 'U' value is as high as 0.40. A standard

of not more than 0.30 should be aimed at and to attain this it is necessary to introduce insulating material below the boarding. All experience in results, however, goes to show that the present practice of providing properly constructed solid ground floors is a considerable improvement over the ventilated joisted and boarded ground floors."

In addition, in recent years various official committees have reported, and many official documents have been published, regarding the thermal insulation of houses. All have been unanimous in recommending higher standards of insulation and it is generally agreed that thermal transmittance coefficients in the region of 0.20 are not only desirable, but are fairly easy to obtain with little or no additional cost.

The new byelaw will undoubtedly add greatly to the difficulties of all those—including the Ministries concerned—who are striving to secure reasonable standards of thermal insulation. This Association feels that the publication of this byelaw is a retrograde step and that the Ministry has failed to take advantage of a valuable opportunity of securing a major contribution to the solution of the nation's fuel problems. Finally, there is a serious danger that Local Authorities will, after reading the byelaws, consider that, if its provisions are met, they will be erecting properly insulated houses. This, as has been shown, is far from being the case.

Strenuous efforts were made by this Association and other bodies to obtain a satisfactory alteration to the byelaws when they were issued in draft form, but, unfortunately, these were not successful. It is understood that there will be no revision of the byelaws for ten years, but, having regard to the fact that during that time some millions of houses are expected to be built, it is felt that publicity should be given to this matter now.

H. F. PAYNE.
Secretary, Structural
Insulation Association.

London.

Reviewers' Myopia

SIR.—Since I have, in the past, through your correspondence columns, indulged in some criticisms of ASTRAGAL's opinions, I should like to reinforce his remarks *à propos* the reviews of the "Books of 1952."

ASTRAGAL (AJ, January 22) refers specifically to the criticism of the re-issue of Howard Robertson's *Modern Architectural Design*, but the fact is that your reviewer adopts this doctrinaire attitude towards some of the other works he mentions. One was beginning to hope that there were at least signs that the idea of truth residing only in rigid conformity was beginning to die. Apparently, however, Reyner Banham subscribes to the school of thought which believes that the "Modern Movement" (incidentally, does the use of this term imply that the resurrection men have been at work after Osbert Lancaster's burial service?) is the only one capable of producing buildings, or even details, of any architectural merit, because they have some special moral and aesthetic armament. It seems that this makes it unnecessary to examine any building outside their style; in fact, it appears to be a dangerous deviation.

Frankly, I cannot see much difference between this fanatical concentration upon a narrow field of progressiveness to the exclusion of anything remotely connected with the past and, say, John Betjeman's adulation of the spiky pinnacles of the Imperial Institute (*Daily Telegraph* for January 24) to the exclusion of anything good in the present. Both demand absolute conformity and are, thereby, destructive to creative talent.

It seems to me that this myopic view has also been extended to Mr. Allsopp's "Art and the Nature of Architecture." Indeed, I have the feeling that the reviewer has merely skimmed through this book, because, at first

BUILDINGS



Office block in Hong Kong

This thirteen-storey office block, with shops and showrooms for British Electric Co., Ltd., on the ground floor, and with strong rooms and plant in the basement, was designed by Spence, Robinson and Partners. So far only half the building has been completed.

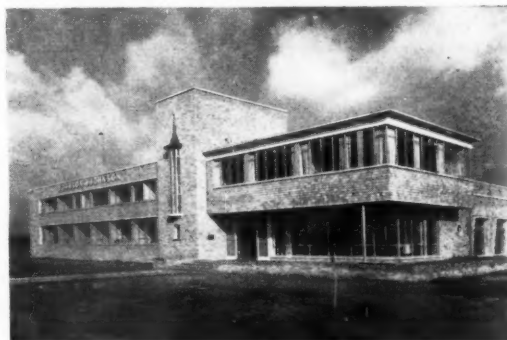


Administration County offices

A council chamber and offices for the County of Merioneth have been built at Dolgelley for £50,000. Designed by Norman L. Jones, county architect, the central block is of local stone and the wings of "Bristol" aluminium unit construction.

IN THE NEWS

Office block on the Slough Trading Estate
These administrative offices for Messrs. Johnson & Johnson, recently opened on the Slough Trading Estate, were designed by John Clifford, Richardson.



Chapel and Cloisters in Stepney

Extensions to the Royal Foundation of St. Katharine, an order concerned with charity and education, in Stepney, London E. 14, were recently opened by the Bishop of London. Below is a view of the west porch of the new chapel; on the left is the back of the cloisters, which connect chapel and chapter house. The extensions were designed by R. E. Enthoven.



R.I.B.A. Bronze Medal Award

Designed by Pick, Everard, Keay and Gimson, this science block for Leicester University was awarded the RIBA Diploma and Bronze Medal for the period 1948-52 for the province of Rutland and Leicestershire. Construction: traditional brick with precast hollow concrete beam floors. Services: hot and cold water, gas, vacuum and compressed air by vertical ducts from basement main control points. Consulting architect: T. S. S. Worthington, of Thomas Worthington & Sons.

glance, one does get the impression of a certain shallowness. But proper attention to the text produces a very different impression, and that is, that in its way this book is of considerable importance. I think it is true to say that a great many of the progenitors of new ideas in architecture (including the "Modernists") did not get the right results because they were not quite sure what reasons they had for getting them at all. Think of all the lines of approach and the confusion is understandable—Sociology, Humanitarianism, Functionalism, the Scientific Technique and so on, and all because architects cannot make up their minds about the real meaning and reason of architecture. Bruce Allsopp has attempted and, to my mind, in some way succeeded in outlining the basic motives and impulses which go to make up architecture in any age and has, moreover, done so in comparatively simple language, which is not so easy as it sounds. Clearly this simplicity has irritated your critic by denying him full opportunity to show off his knowledge of the sort of up-to-the-minute intellectual jargon of which he displays a few samples.

What it boils down to is that Reyner Banham is kicking both authors for not producing a precise *vade mecum* on modern architecture of the What-to-do, How-to-do, and Where-to-do-it variety. Since he knows so much about it one can't help wondering why he hasn't written it himself—or can it be that he has realized that it would be out of date by the time it was finished?

"Facts are fluid and changeable, especially nowadays, so I would teach them to distrust formulae and would impress on them that everything is relative"—so wrote Corbusier.

JAMES A. SPON.

London.

The Guest Editors, 1952

SIR,—At the risk of boring your readers, I must have one final word on your Guest Editors' reply to my letter in your issue of January 22.

They say I have misunderstood their comments on administration and clerical duties; I now say that they have misunderstood the functions of the administrative and clerical division which I said "a fully developed City Architect's Department" might contain. So we both misunderstand one another; and so long as your readers do not believe that "the administration of a building job by the person in charge of the job" is incompatible with the grouping of clerical and secretarial staff to provide those services, and to undertake the thousand and one general duties your Guest Editors ignore, I am quite happy to let the matter drop.

LEONARD C. HOWITT.

Manchester.

[This correspondence is now closed.—ED.]

Fibre Drain Pipes

SIR,—I am interested in an announcement in your journal of November 13, quoting from the *Plumbing and Heating Journal* [U.S.A.], in which it states in an illustrated article on the history and use of bitumen impregnated fibre pipes for house drainage that such pipes have been used in the U.S.A. since 1893, but much more widely used since 1943. You comment that since bitumen impregnated fibre pipe has proved so successful in the U.S.A. it will be interesting to know why they have not been used in England.

I would like to state that the reason has been largely on account of the dollar difficulty, but arrangements have now been made for the British manufacture of bitu-

men impregnated fibre pipes (usually known as pitch fibre), and these will be on the market in England in a matter of months.

F. V. WICKHAM.

Dr. Lanchester

SIR,—In his tribute to the late Dr. Lanchester, ASTRAGAL refers to him as the founder of the TPI. He was indeed a founder, as one of the signatories of the joint letter which led to the formation of that Institute, and he was its ninth and greatly respected President, 1922-23. The members revered him as a founder and Past President, but the distinction of the founder belongs to the first President, the late Dr. Thomas Adams, F.R.I.B.A., F.R.I.C.S., M.T.P.I.

GEORGE L. PEPLER.

Hurlingham.

Architects in Railwayland

SIR,—As a designer who has been given the hospitality of your pages in the past, I feel diffident about criticising the efforts of a profession I honour and admire, but since learning that the Architects' Department of the Railway Executive is engaged in giving advice on items of design from carriage interiors to staff badges, uneasy doubts begin to steal into my mind.

I am sure the gentlemen concerned are doing a good and conscientious job and that they are in many ways more qualified than most to advise on design questions, but is this method the way to achieve a consistent policy in railway design?

With the many committees and executives with which we abound today, unlike the old railway companies with their well defined chief mechanical engineers and carriage and wagon superintendents, we appear to be in danger of falling into a timid school of design safety first. The new standard carriages which seem to bathe internally in a sea of veneer are a case in point. To eliminate mouldings so that a characterless bareness is produced is not necessarily good design and leads one to ask what has happened to all the other materials and finishes we are blessed with today. We used to be more enterprising before the war in making use of them.

Apparently the Architects' Department was responsible for choosing these veneers and also for producing that curious contortion of R which now graces mirrors and carpets. It all looks like the result of committee work, with architect being called in to advise the philistines, the engineers.

The railways represent one of our most continuous traditions in industrial design. It would be a great pity if, in our efforts to secure improvement, we lost the touch of individual responsibility. The great engineer designers, to quote a recent example, Sir Nigel Gresley, knew what the overall conception was to be and saw that they got it. And not only engineers; that titan from the old North Eastern, Frank Pick, set his seal on the design of London's transport in so many ways, that we may well ask where is his like today.

It would be a great pity if the architect in railwayland became a kind of stylist, a man who does you up to look presentable (or so he thinks), for he would be doing the very thing he so deplores in others.

ALAN WHITEHEAD

Thames Ditton.

[See ASTRAGAL's comments on page 206 on the proposed cleaning of railway stations.—ED.]



OBITUARY

C. H. James

Charles Holloway James, R.A., F.R.I.B.A., died at his home in London on Sunday.

He was born in 1893 at Gloucester, and educated at Sir Thomas Rich's School in that city and at Taunton School. After being articled to Walter Bryan Wood, he acted as assistant to Sir Edwin Lutyens and then to Barry Parker and Raymond Unwin. When he returned from the war of 1914-18, in which he lost a leg, he went into partnership with H. R. Thompson, who soon left to take up a position in South Africa, and the late Charles Murray Hennell.

Both C. M. Hennell, who was consulting architect for housing schemes to the county borough of Stoke-on-Trent, and C. H. James had worked at Letchworth, and much of their earlier work in common was at Second Garden City, Welwyn. They were also responsible for Swanpool Garden Suburb, Lincoln; Government subsidy houses, Thorpe Bay, Essex; and the lay-out and design of housing schemes in various parts of the country. After Hennell's death much of James's work was done at Hampstead Garden Suburb.

In partnership with S. Rowland Pierce, Mr. James won competitions for three public buildings—Norwich City Hall, the Hertford County Building and the municipal buildings at Slough. He became A.R.I.B.A. in 1918 and F.R.I.B.A. in 1926, and was elected A.R.A. in 1937.

MOHLG

Macmillan Costs

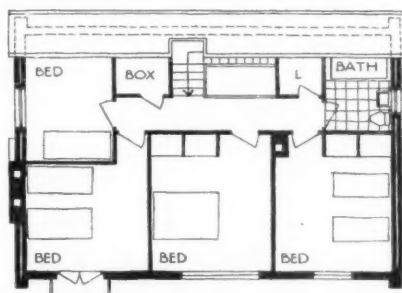
In the course of a speech to the Society of Housing Managers in London, Harold Macmillan said: "Local authorities have readily taken up the ideas behind the People's House. We are now taking the ideas a stage further and exploring the possibilities of saving on land, roads and services by devising even more economical forms of layout and building. I hope it will be possible to publish, in the course of the next month, the report of a committee who have been considering, under the chairmanship of Sir Donald Bailey, means of increasing speed and efficiency in the construction of house interiors."

"With the cost of building so high, however, it is not even sufficient to concentrate upon getting new houses used to the best advantage. We must do what we can to see that the large stock of existing houses is put to their best use. A great deal of hardship can be alleviated at very little cost if the families concerned and their landlords co-operate in the exchange of tenancies. I have asked a sub-committee

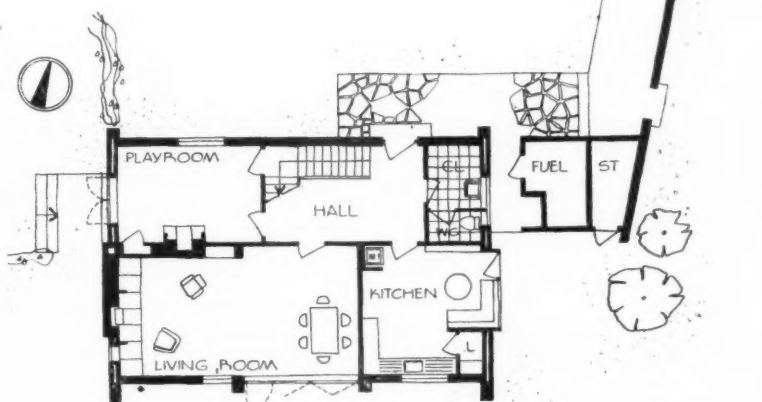
HOUSE AT LEATHERHEAD, SURREY



This house in Surrey, seen from the south-west in the photograph above, and from the south-east below, was designed by Ralph Tubbs. The construction is of 11-in. cavity brickwork, finished externally with Uxbridge flint lime bricks or colour-washed rendering, and internally with plaster and distemper. Partitions are of 4½-in. brick or breeze. The ground floor is of 5-in. site concrete and the first floor precast hollow concrete. The area is 1,530 sq. ft. excluding the garage, and the cost £2,592, including garage, sheds and garden wall.



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



of my Central Housing Advisory Committee to consider further the ways and means of securing the better use of houses by means of exchanges. Many people in family houses have seen their children grow up and leave to set up home for themselves elsewhere. The parents stay on in a house which is now too big because a move to a smaller house holds unknown snags and only uncertain advantages. The trained housing manager can very probably dispel their uncertainties, smooth out the difficulties and minimize the upheaval of the move. Other families living in large houses would like

to move to a small bungalow of their own but are put off by the seeming complications of getting one built. Here again some simple advice by the local authority can make their road easier and encourage their enterprise."

TCPA

Summer School in Bristol

The organizing committee of the TCPA Summer School announce that the 1953 School will be held at Bristol from Septem-

ber 6 to 12. The subjects for the main lectures provisionally selected are: (1) Re-development of city centres; (2) Re-development in France; (3) Population movements into the outer suburbs of large cities—measurement and prediction; (4) How far can a development plan assist rural development?; (5) Economical housing layout.

The provisional subjects selected for the Subject Discussion Groups (which are held each day and which are distinct from the Discussion Groups on the main lectures) are: (1) Nature conservancy; (2) Townscape;

(3) Community centres; (4) Technical aspects of comprehensive development; (5) Transport and shopping centres.

The University of Bristol have made available lecture hall facilities and residential accommodation has been reserved. The procedure adopted in previous years of allotting most of the places to local planning authorities, the central government departments concerned, teaching establishments and consultants will be followed at this school. Any applications from those who do not come within these categories will be dealt with by drawing lots if there are places available at the closing date for the receipt of applications. The inclusive fee is £8 8s. 0d. which covers admission to all sessions of the School, food, residential accommodation and gratuities, and a copy of the Report of the proceedings. The fee for non-residents is £3 3s. 0d. Applications must be received not later than May 20.

DIA

Test of Public Taste

An exhibition of two furnished rooms will open in Charing Cross Underground Station on February 25. The rooms will be furnished by Phoebe de Syllas, one with proven popular furniture and the other with contemporary pieces. The cost of each room will be the same. The object is to test public taste. Visitors will be asked to vote for the room they prefer. The results will be analysed and published after the exhibition closes on March 21.

FRANCE

People's Houses

France is to have a "people's house." When announcing this recently, M. Pierre Courant, Minister of Reconstruction, called the scheme the "Three x Three." Dwellings built under this scheme—to minimum standards and maximum simplicity—will have three rooms (kitchen: living room and bedroom plus shower: wc, wash-basin and sink). They will take three months to build and will be financed by three credit groups (Land Credit, Municipality and Family Allotments). Each house will have an area of fifty-five square metres and will cost £1,500 to £1,700 per house, for resale on 70 per cent. mortgage, repayable over twenty-five years at £3 per month.

M. Courant has said that he hopes architects "will appreciate that they are Frenchmen, as well as being architects," and will therefore accept his standard plan (single storey, semi-detached, with space for a fourth room to be added later) in the national interest.

M. Courant hopes to raise the house-building figure to 9,000 per month by the beginning of July this year. (Last year's figure was 6,600 per month.) He hopes too that the figure will be 10,500 per month by October this year; 14,000 per month in 1954, and 18,000 in 1955. This means that 240,000 dwellings would have been completed by the beginning of 1956.

The scheme is now being discussed by an "interministerial council" and will probably be accepted without many important changes.

One reaction to the Minister's announcement is the decision by the Comité Interprofessionnel du Logement to hold a competition for the design of a scheme for 2,000 three-room-plus-kitchen dwellings and with central heating. These dwellings will be for the workers whose employers belong to the Comité Interprofessionnel du Logement, or those who can pay a deposit of £500 down—the rent to be between £3 to £6 per month or repayments over a period of twenty-five years. They will be built in the Paris area.

IUA

Third Assembly

The Third Assembly & Congress of the International Union of Architects will take place at Lisbon from September 21 to 28. This was decided by the Union's executive committee at a meeting held in Paris earlier this month.

Although the United Kingdom Committee of the Union has not yet appointed any delegates, it is hoped in Paris that C. H. Aslin will act as chairman of the section discussing school construction, and that Professor Gordon Stephenson and F. R. S. York will be *rapporteurs* of the working groups dealing respectively with Town Planning and Industrialization of Building.

According to provisional plans (which have not yet been finally approved), there will be eight working groups, organized on the following lines:—(1) *The Formation of the Architect*. Theme: The Qualification of the Architect. (2) *The Position of the Architect in the Community*. Theme: The Status of the Architect. (3) *The Relationship between the Architect and the Engineer*. Discussion on the respective rôles of the Architect and the Engineer and on their collaboration. (4) *The Synthesis of the Plastic Arts*. Discussion on the collaboration between Architects and Artists (painters, sculptors, interior decorators). (5) *Town Planning*. Theme (a): The Status of Town Planning. Theme (b): Standardization of Symbols used in Town Planning. (6) *Dwellings*. Theme: The Housing Requirements of a Family. (a) Shelter. (b) Housing. (c) Space-economy relations. (7) *School Construction*. Theme: How to satisfy the urgent need for School Buildings. (8) *Industrialization*. Theme (a): The Relationship between Architects and Contractors. Theme (b): Modular Co-ordination.

A number of well-known European architects have been asked to take part in these discussions, but no further details are yet available.

BRITISH COUNCIL

Architect in Middle East

Anthony Minoprio, who is visiting Kuwait to advise the Sheikh on town planning, is breaking his outward journey to lecture for the British Council this week in Lebanon, Syria and Iraq and to meet architects and town planners. In Beirut and Baghdad he will lecture on "Recent Town Planning in Britain and Contemporary British Architecture."

SCOTTISH BC

18,000 Visitors a Year

At the fifteenth AGM of the Scottish Building Centre, held in Glasgow on Thursday, January 29, Colonel G. Gardner-McLean, who was in the chair, stated that, during 1952, the many activities carried on in the Centre had been successfully maintained and developed. The extent of both public interest in the Centre, and the Centre's usefulness to everyone interested in building materials and appliances could be judged, the Chairman pointed out, by the fact that more than 18,000 people visited the Centre during the year. The number of enquiries dealt with by the technical staff exceeded 9,000.

The Centre has been increasingly recognized as an ideal place for the meetings of technical societies. The provision of accommodation for these functions without charge is another way in which it has been possible to implement the fundamental aim

of the Building Centre which is to be as widely useful as possible. This aim has been further realized in the close co-operation which exists with local schools of architecture and building, particularly in relation to exhibits of students' work in the Centre.

RIBA

Spence to Criticize Students

Basil Spence will criticize the drawings submitted in competition for the RIBA prizes and studentships, 1953-1954. His criticisms will be made at a meeting to be held in February, 1954.

YORK

Architectural Course

No more applications can be considered for the course on "The Care of Churches," which is to be held in York from April 9 to 16. The sponsors, York Civic Trust, announce that there are still a few vacancies for the General Course from March 23 to April 4. Applications should be sent to the Secretary, St. Anthony's Hall, York.

DIARY

History of Furniture Design. 24 illustrated lectures at the L.C.C. Technical College for Furnishing Trades, Pitfield Street, N.1. Fee for course (payable to principal of the college) is 15s. Tuesdays at 7 p.m. (began November 11. No lecture April 7).

Community Planning in Undeveloped Countries. Talk by Dr. O. Koenigsberger. Dipl. Ing., at the Student Planning Group, 28, King Street, W.C.2. 6.30 p.m.

FEBRUARY 12

Industrial Design in Britain and America. By Gordon Russell, Director of COID, at Dartmouth House, 37, Charles Street, Berkeley Square, W.1. Sir Thomas D. Barlow in the chair. Non-members should apply for tickets to Miss M. Leaf. 8.30 p.m.

FEBRUARY 12

Housing Aspects of the Census. Talk by Miss Mary P. Newton. At the Housing Centre, 13, Suffolk Street, Haymarket, S.W.1. 6 p.m.

FEBRUARY 17

Accident Prevention Group for Building & Engineering Contractors. Sir George Barnett, HM Chief Inspector of Factories, will attend the inaugural meeting of the above, to be held at the Safety, Health & Welfare Museum, Horseferry Road. 2.30 p.m.

FEBRUARY 18

Home and Surroundings. The first in a series of travelling exhibitions under the general title of *The Architect and You*, to be opened by Harold Macmillan, MP, at the RIBA, 66, Portland Place, W.1. Weekdays 10 a.m.-7 p.m., Sat. 10 a.m.-5 p.m.

FEBRUARY 18-28

Outdoor Advertising in this Country is Excessive and Bad. Forum, members of the team being H. H. Jackson, A.M.T.P.L., A.M.I.M.U.E., Frank Clark, A.I.L.A., Ian McCallum, A.R.I.B.A., G. S. Campbell, H. G. Ellinger. To be held at The Student Planning Group, 28, King Street, W.C.2. 6.30 p.m.

FEBRUARY 19

An Architect in China. F. Skinner, A.R.I.B.A. At Conway Small Hall, Red Lion Square, Southampton Row, W.C.1. 7 p.m.

FEBRUARY 20

Annual Exhibition of Photographs by AA Members. At 36, Bedford Square, W.C.1. Mon. to Fri. 10 a.m.-6 p.m., Sat. 10 a.m.-1 p.m.

UNTIL FEBRUARY 20

TECHNICAL COLLEGE

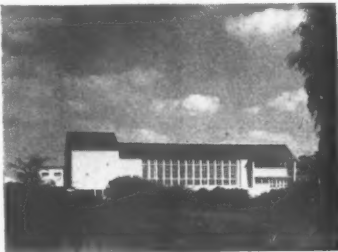
for the HERTFORDSHIRE COUNTY COUNCIL

designed by EASTON and ROBERTSON

structural engineer, FELIX J. SAMUELY

consulting engineers (services), E. A. PEARCE and PARTNERS

quantity surveyors, GARDINER and THEOBALD



Block 1 from the west.

The Hatfield Technical College occupies part of a 90-acre site to the east of the Barnet By-Pass and was designed for the Hertfordshire County Council. The college is for 800 to 900 students, of which 300 to 400 will be full time. It is expected that ultimately there will be some 4,000 to 5,000 day and evening students, although some will attend for one day a week only.

Block 2 from the south. Sculpture by Barbara Hepworth.





SITE.—The part of this site nearest to the by-pass slopes quite steeply and is not entirely suitable for a large building layout, but this disadvantage has been overcome by the use of a two-storey block facing the by-pass, with one-storey blocks forming workshops, gymnasias, etc., to the east. One of the

chief considerations of layout was the sharing of certain facilities between the college and the secondary technical school, now being built.

PLAN.—The classrooms are orientated a few degrees east of south and a large engineering and

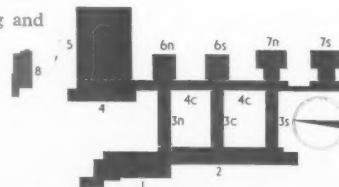
Above, steps leading to the main entrance from the south-west. The plan of the college in bas relief is by Trevor Tennant.

TECHNICAL COLLEGE

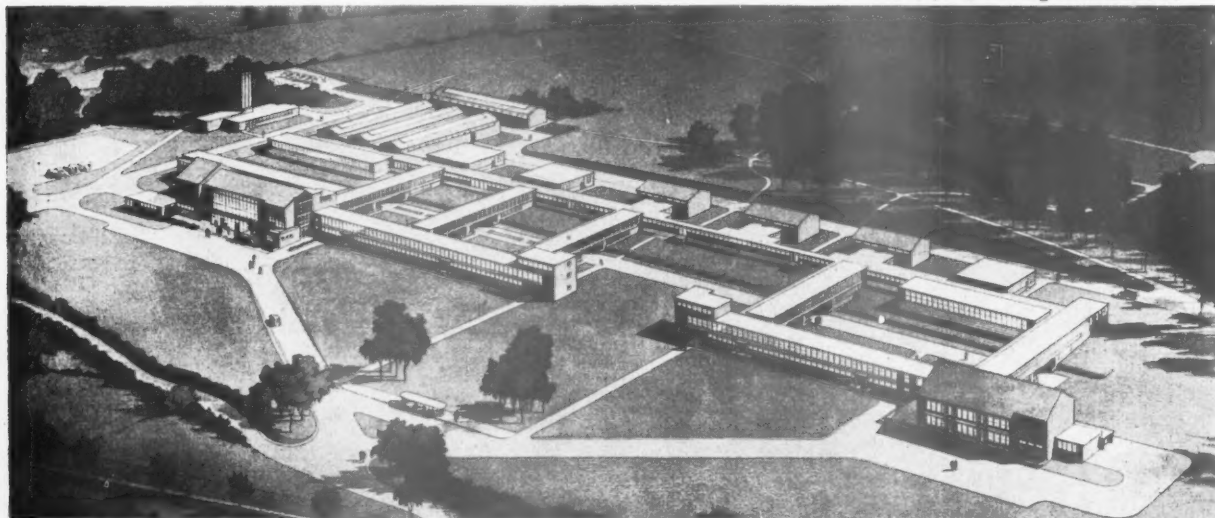
at HATFIELD, HERTS

designed by EASTON and ROBERTSON

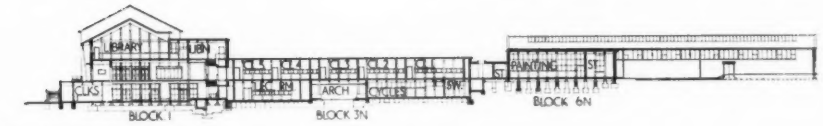
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|-----------------------|-------------------|
| KEY | 4C Corridor. |
| 1 Assembly. | 5 Engineering. |
| 2 Administration. | 6N, 6S Workshops. |
| 3N, 3C, 3S Classroom. | 7N, 7S Gymnasias. |
| 4 Drawing studio. | 8 Boiler house. |



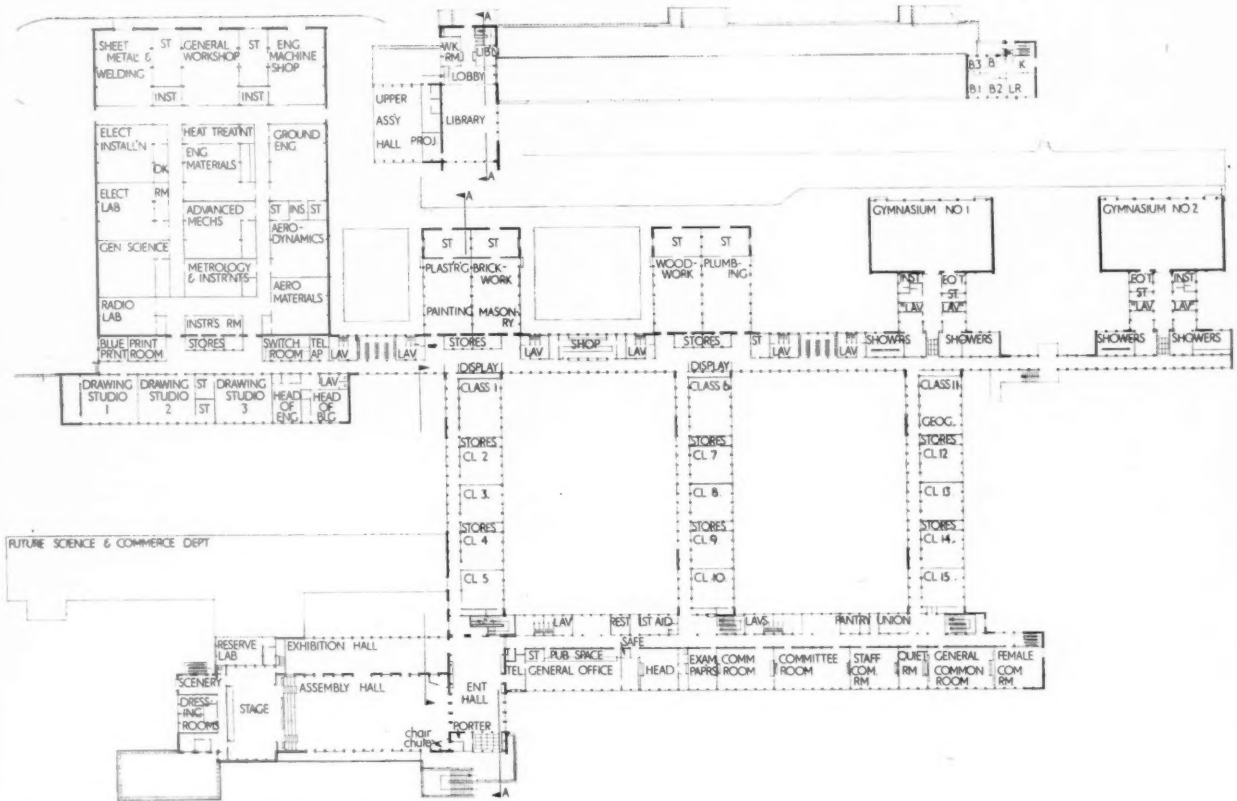
Key plan, showing block numbers



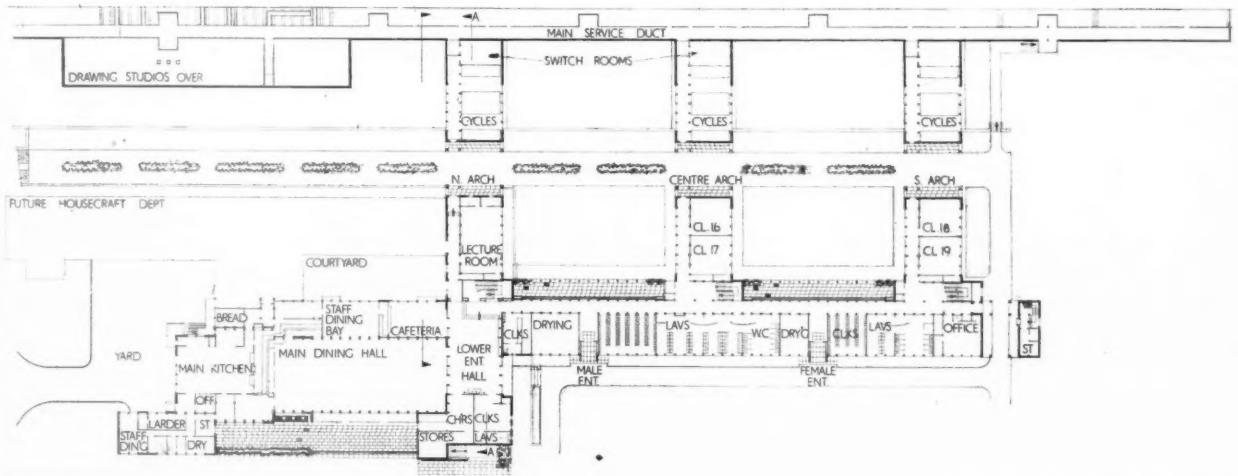
Perspective view of the site from the south-west; on the right, the secondary technical school, now under construction.



Section A-A



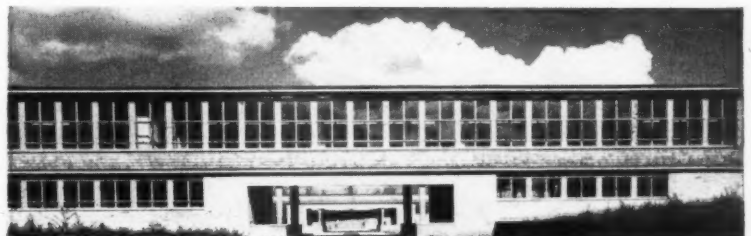
Upper ground floor and first floor plans [Scale: 1/4" = 1' 0"]



Lower ground floor plan

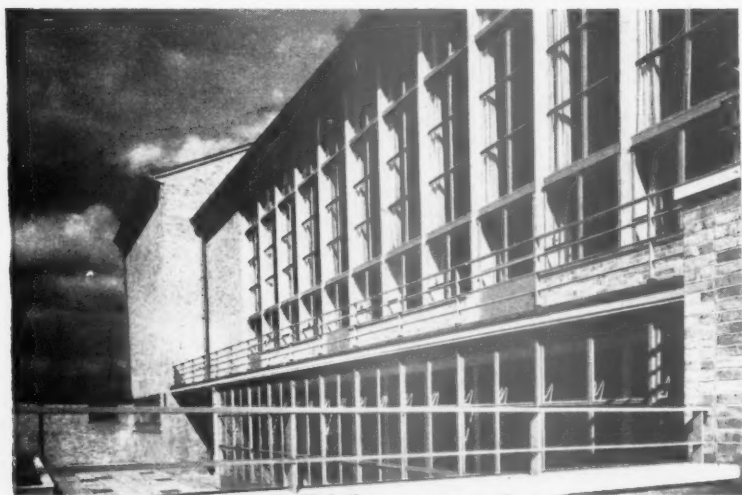
building section is sited where it causes least disturbance to the classrooms, and where it can be easily serviced. As the assembly hall, which has a completely equipped stage, is required for independent use, it is placed in a separate block together with the dining hall and library. The dining room caters for 300 in two sittings and is supplemented by a cafeteria and a staff dining bay. The main kitchens

Classroom block 3s, from the south.





Left, block 1, containing assembly, dining and entrance halls and library, from the south-west. Centre left, west windows of assembly and dining halls.



Above, the assembly hall from the stage. Right, the assembly hall stage.

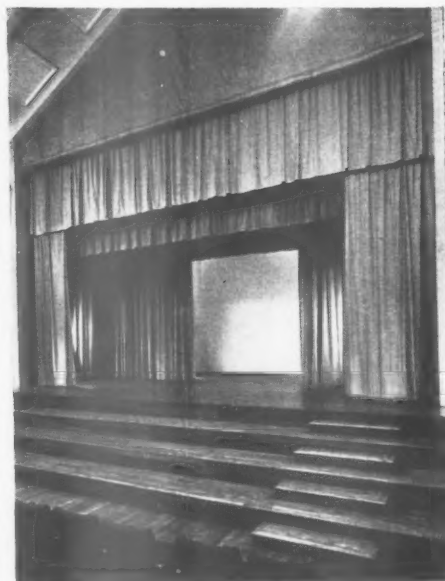
TECHNICAL COLLEGE

at HATFIELD, HERTS.

designed by EASTON and ROBERTSON

will be accessible to the main science wing, which will incorporate a domestic science section. This wing forms stage 2 of the present programme. Two main courts, which are intended to give some of the feeling of college quadrangles, are linked by a walkway under the three classroom blocks.

CONSTRUCTION.—The architects, with their consulting structural engineer, devised a system of prefabricated concrete members to allow economies in material and the maximum amount of work off the site, because bricks, steel, timber and labour were in short supply when the building was authorised. A major problem that arises when a precast concrete frame is used is that of the connections. If the connections are grouted, erection is held up while the grout is being poured and cured, cranes are left idle, etc. If, however, the units have only mechanical connections, there is a danger that the building loses its overall rigidity. In this building the compromise, which has proved very successful, consists of mechanical connections between the units, by means of steel only, strong enough for erection purposes and capable of taking a moment. This avoids additional wind braces and is strengthened afterwards by *in situ* concrete poured independently of the actual erection and contained by precast units, so no timber shuttering is required. It became apparent at an early stage that this type of construction would only be successful if there were a very high degree of standardization and non-standard units were the exception. The scheme is based on a 5-ft. 6-in. grid with a high degree of



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WORKING DETAIL

LIGHT LOUVRES SCHOOL IN FRESNO, CALIFORNIA

David H. Horn and Marshall D. Mortland, architects

ROOFS AND CEILINGS : 5



The ends of the steel roof beams, cased in timber, extend to form supports for the redwood louvers.

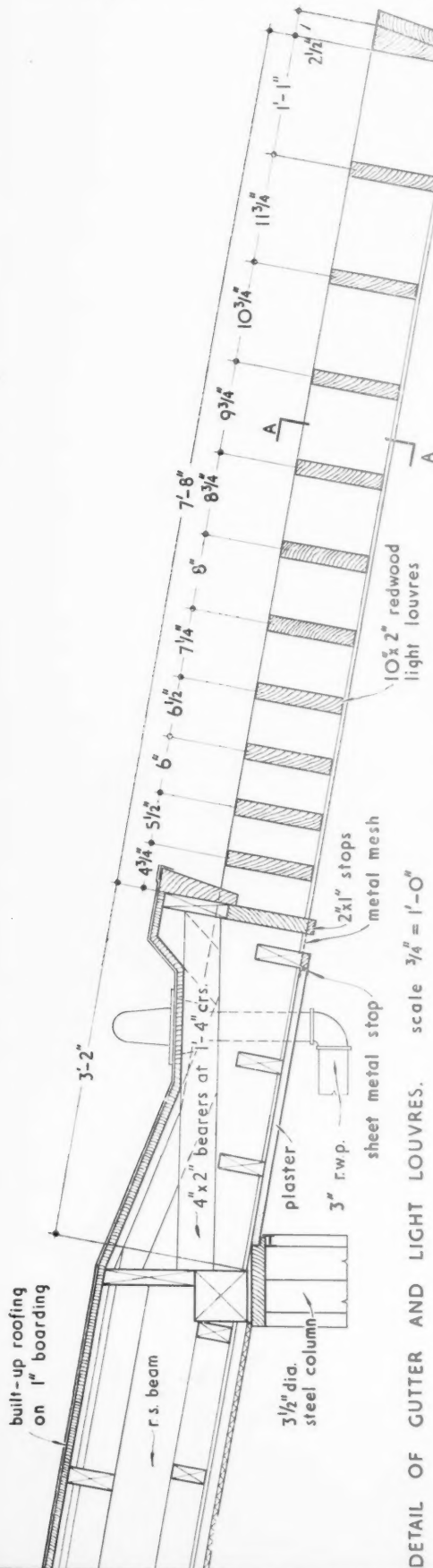
Photograph: Julius Shulman

WORKING DETAIL

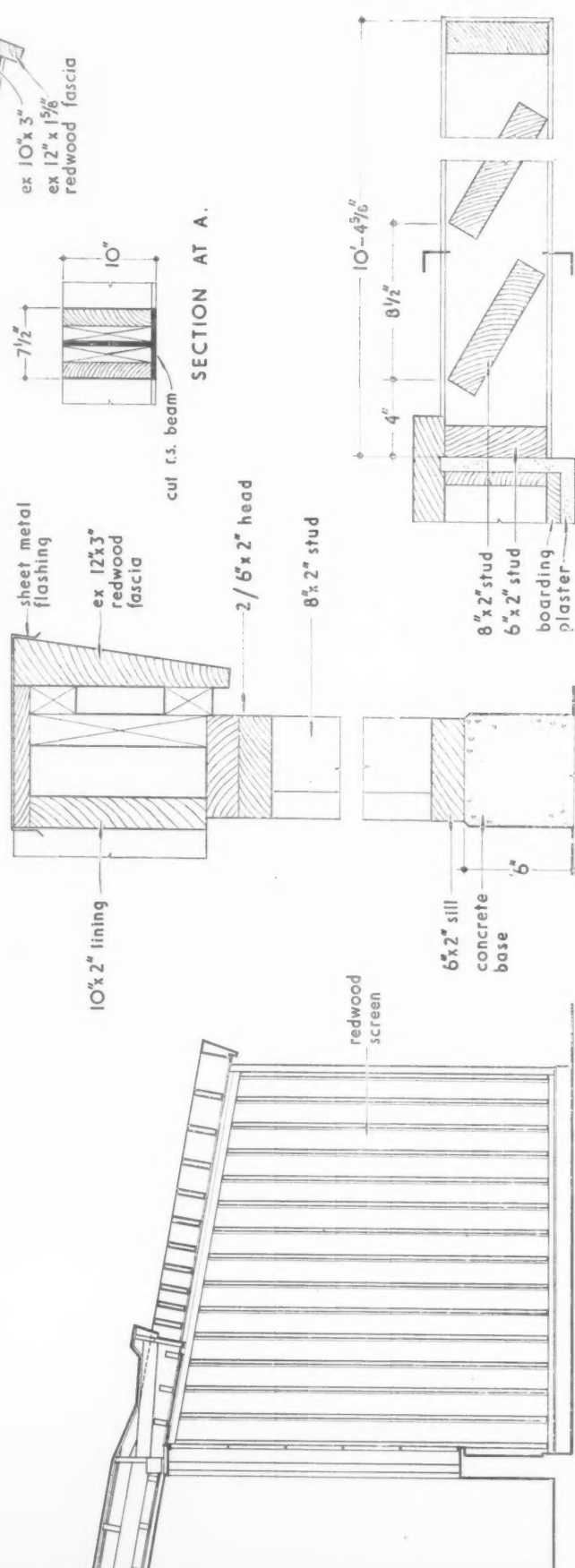
LIGHT LOUVRES: SCHOOL IN FRESNO, CALIFORNIA

David H. Horn and Marshall D. Mortland, architects

ROOFS AND CEILINGS: 5



DETAIL OF GUTTER AND LIGHT LOUVRES. scale 3/4" = 1'-0"



SECTION. scale 1/4" = 1'-0"

SECTION AND PLAN OF SCREEN. scale 1 1/2" = 1'-0"

SECTION AT A.

WORKING DETAIL

DOORS: 13

ENTRANCE DOORS: TECHNICAL COLLEGE AT WILLESDEN

C. G. Stillman, Architect to the Middlesex County Council



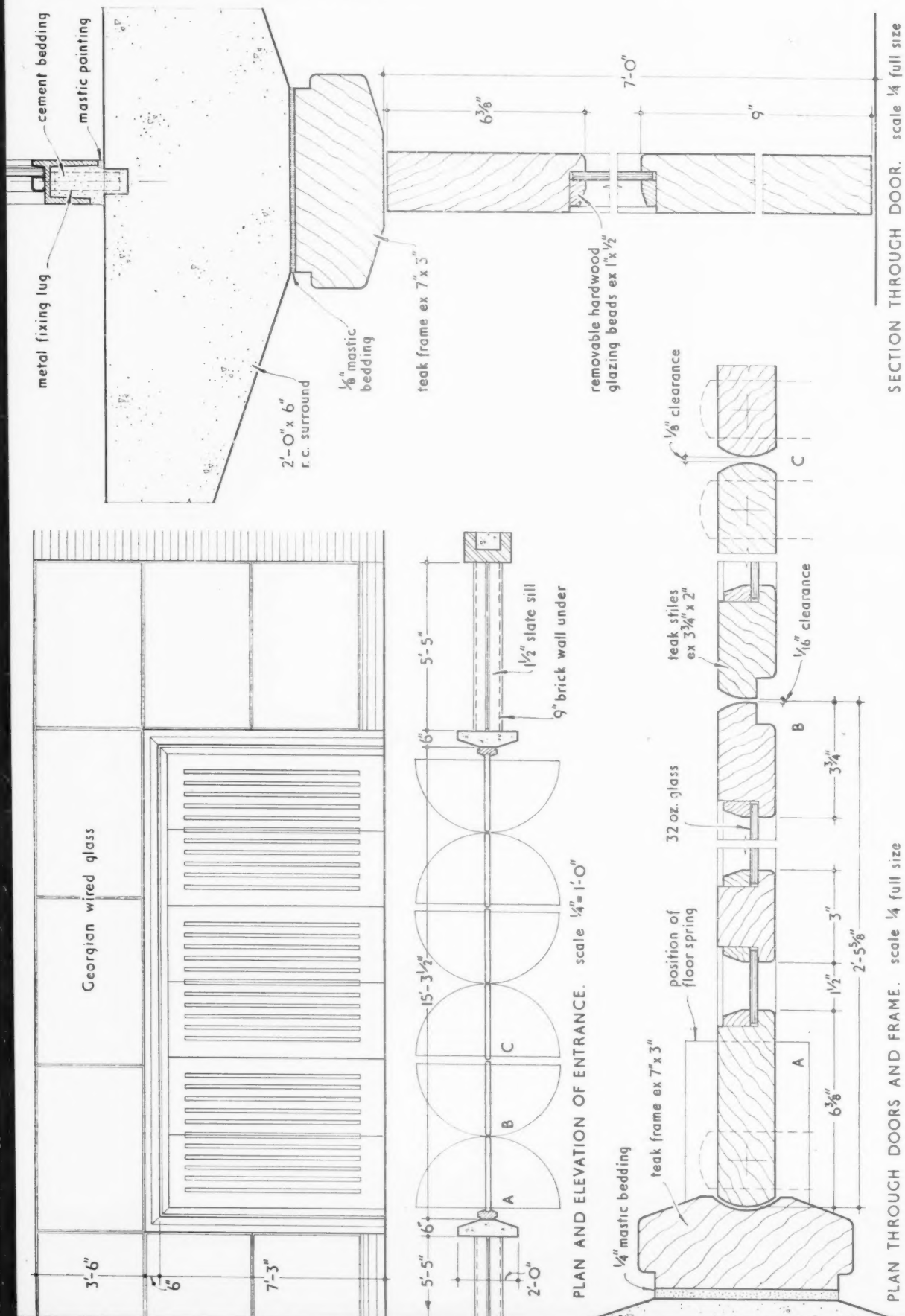
There is no framing between the pairs of doors, which are in teak with narrow vertical strips of glazing.

WORKING DETAIL

ENTRANCE DOORS: TECHNICAL COLLEGE AT WILLESDEX

C. G. Stillman, Architect to the Middlesex County Council

DOORS: 13





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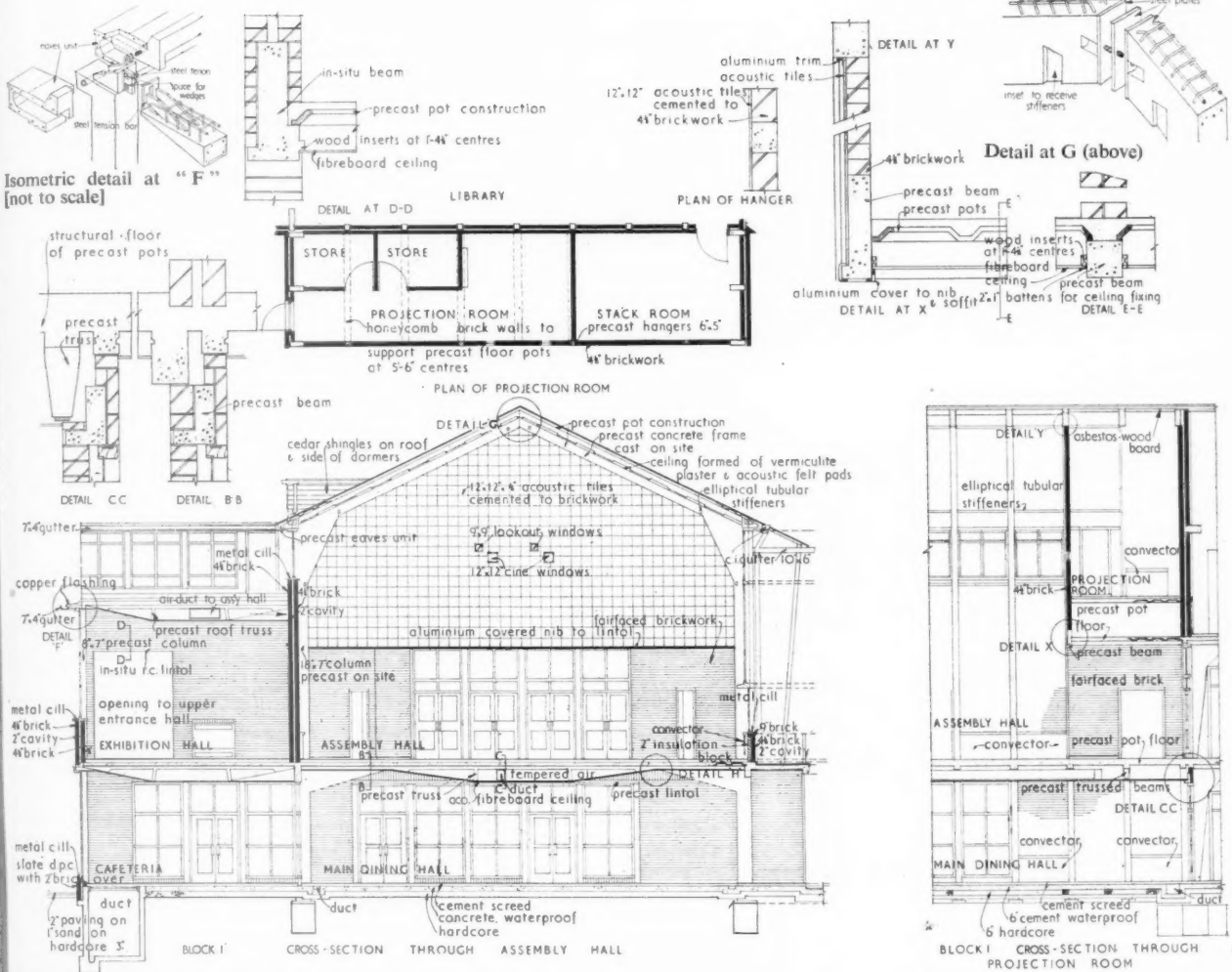
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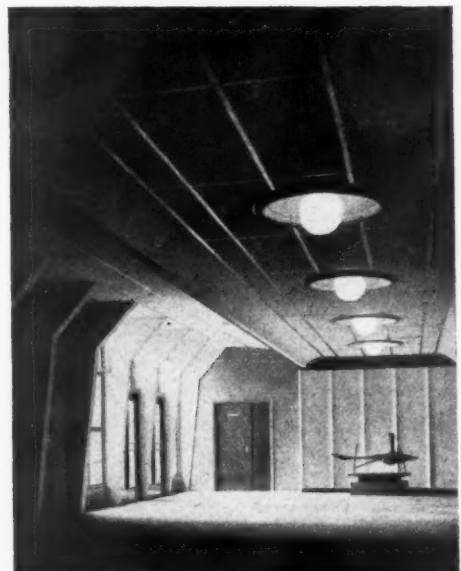
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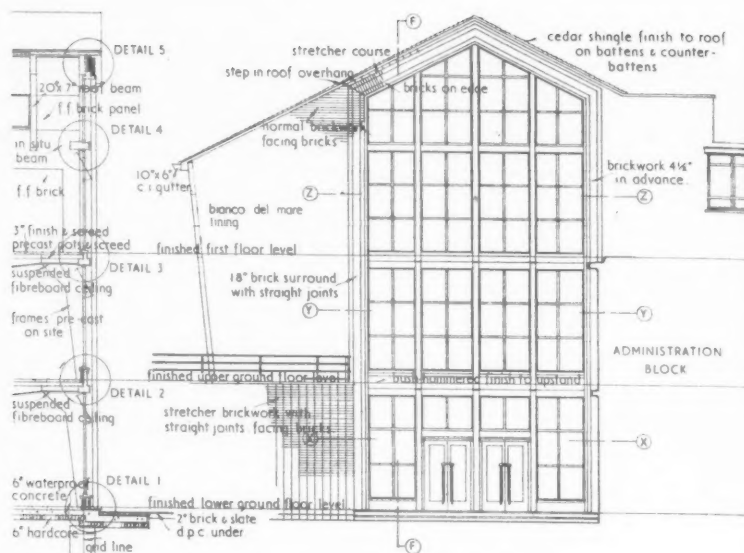
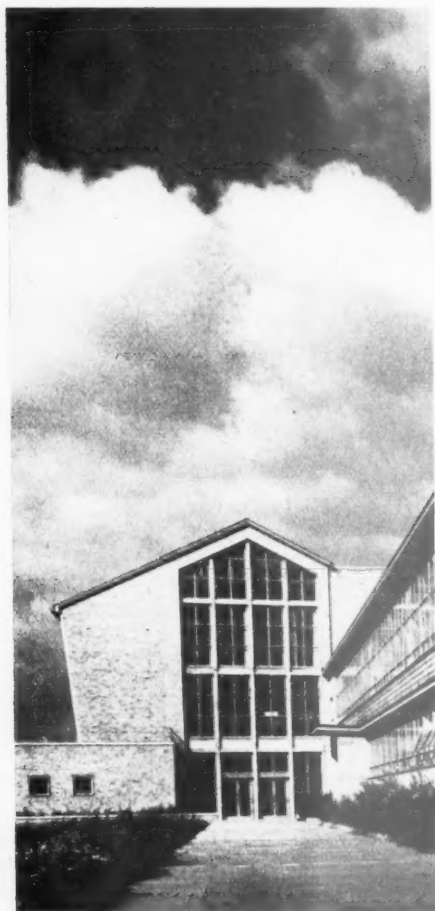


Details of Assembly Hall (Block I) [Scale: 1/4" and 1/8" = 1' 0"]

Below, the exhibition hall at upper ground floor level. Below right, sculpture by Reg Butler in the lower entrance hall.

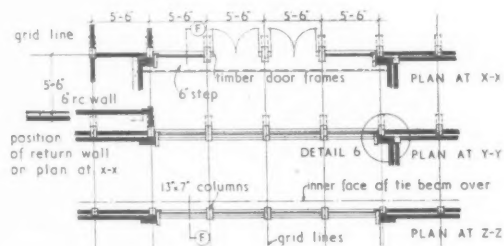
repetition; this dimension has proved satisfactory for planning and construction. Prefabricated RC stanchions, floor pots and RC roof trusses, with exposed steel tension members, were all specially





Section F-F and elevation of south window of block 1 [Scale: 1/8" = 1' 0"]

Left, the south facade of block 1, with entrance to lower ground floor. On the right is the administrative and cloak-room block.

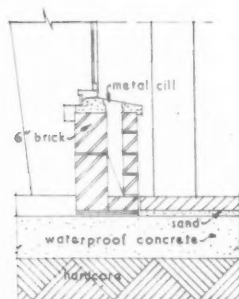


Plans of entrance and window

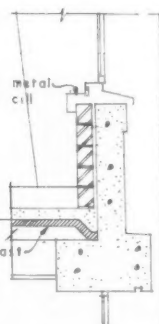
TECHNICAL COLLEGE

at HATFIELD, HERTS.

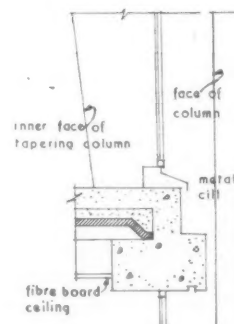
designed by EASTON and ROBERTSON



DETAIL 1

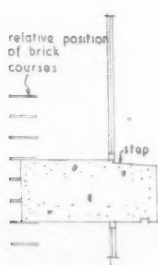


DETAIL 2

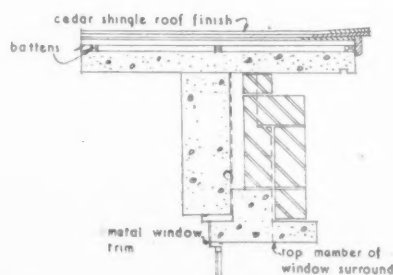


DETAIL 3

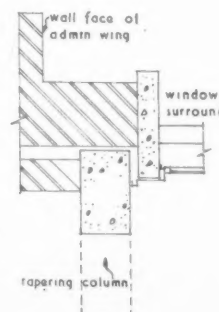
Details of entrance and window on south facade of block 1



DETAIL 4



DETAIL 5



DETAIL 6

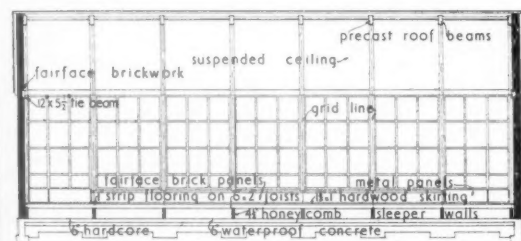
Details of window [Scale: 1/4" = 1' 0"]



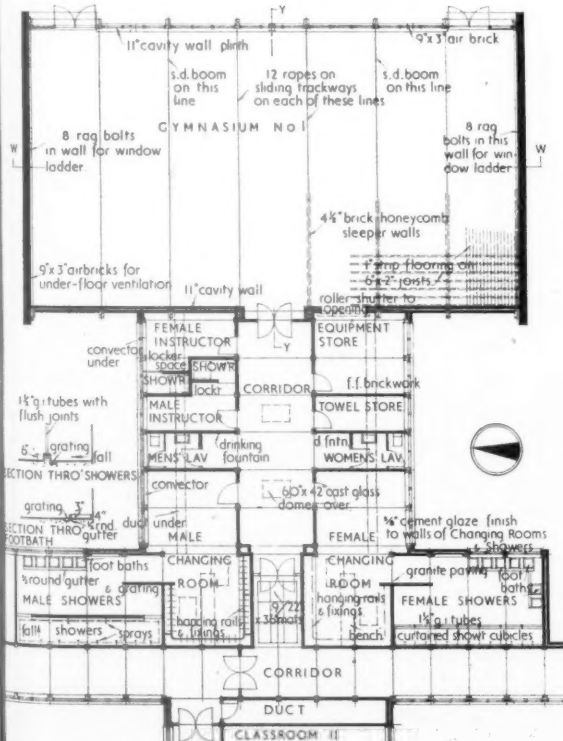
Above, the library. Right, a waiting bay off a first-floor corridor. The painting is by Ben Nicholson.



designed and a minimum number of types were used. Ceilings follow the line of the tension members. The strength and stability of the stanchions and trusses were tested in a prototype and then manufactured in bulk. Meanwhile a separate foundation



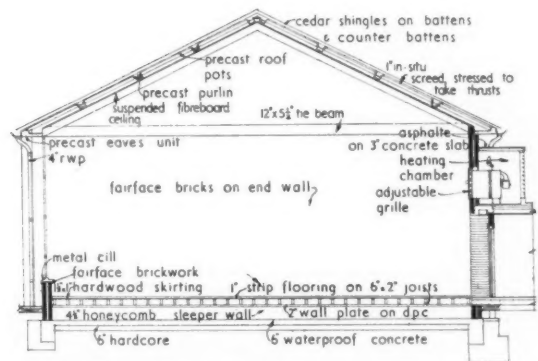
Section W-W



Plan of gymnasium No. 1 [Scale: $\frac{1}{4}$ " = 1' 0"]

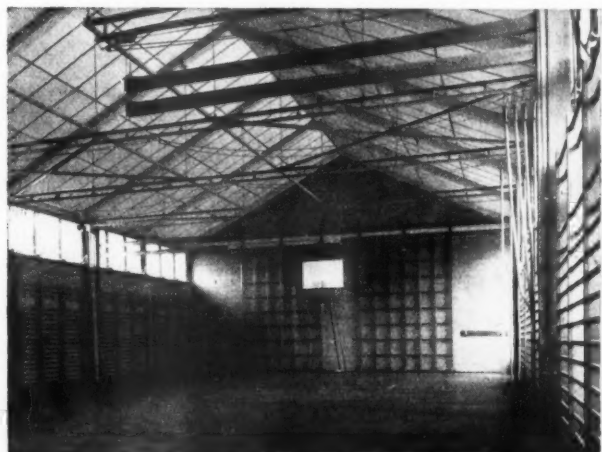
contract was in operation to save time.

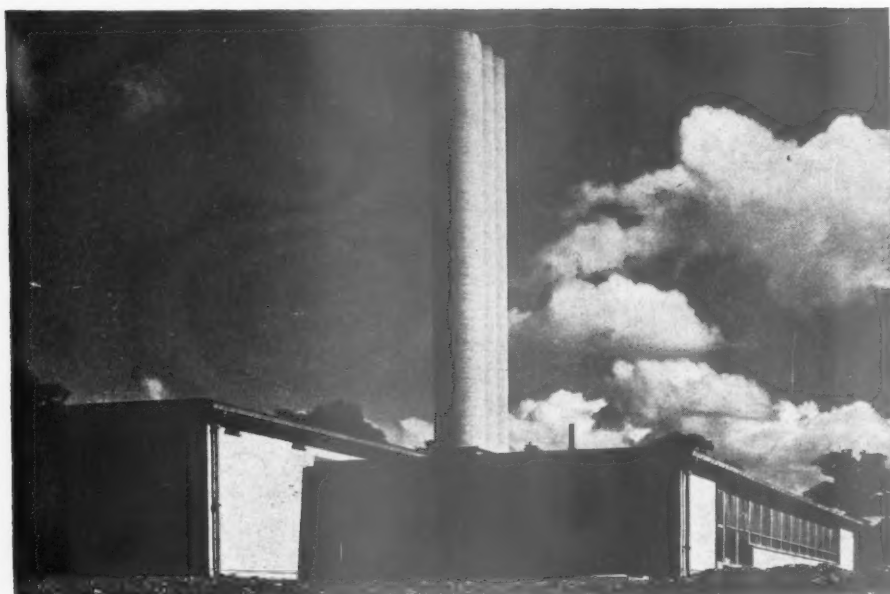
FINISHES.—When brick supplies improved, bricks were introduced in certain places as cladding, but the original method of cladding the spandrel walls between the long rows of windows with light slabs faced



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

One of the gymnasias.





Left and bottom right, two views of the boiler house from the south-west. The steps close the walkway running under the classroom blocks on a north-south axis. The boiler house will also serve the future secondary technical school.

TECHNICAL COLLEGE

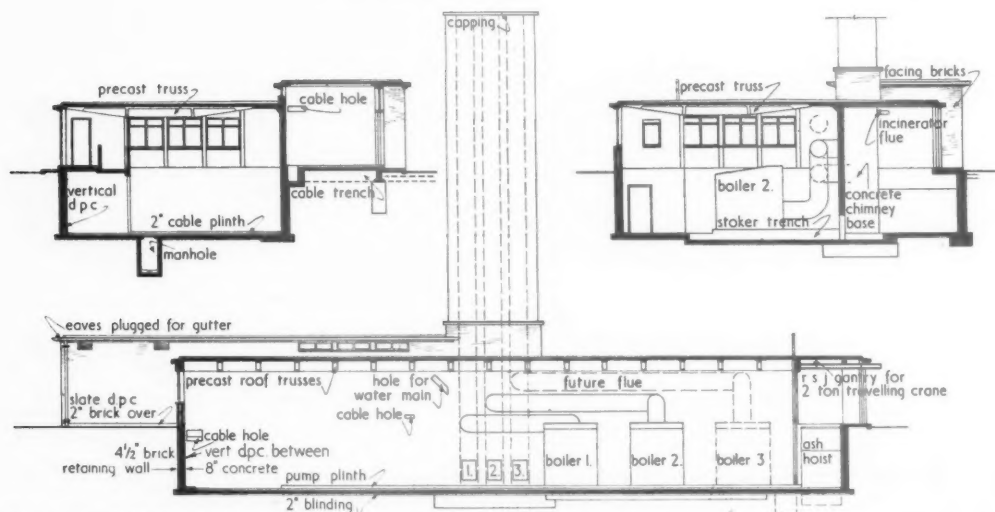
at HATFIELD, HERTS.

designed by EASTON and ROBERTSON

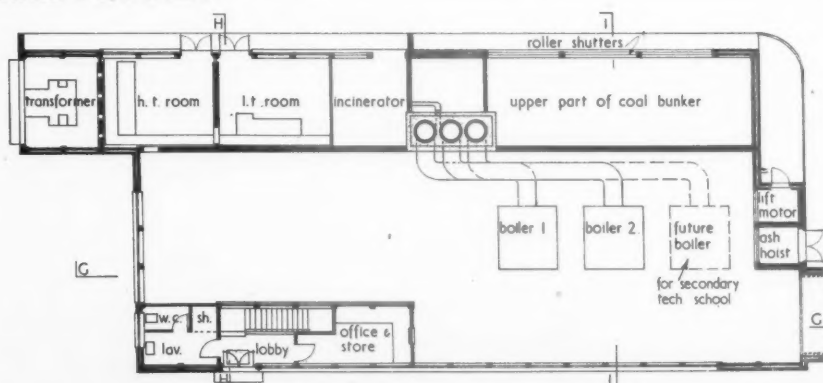
with cedar shingles was retained. Assembly hall and gymnasium roofs are covered with shingles. Externally, painting has been kept to a minimum and internally is mainly confined to stanchions and beams. The colour scheme is generally in fairly subdued tones.

SERVICES.—The main hot water heating is by convectors in the corridors and floor heating in the classrooms, with various types of unit heaters in workshops and other large spaces.

The general contractors are Gilbert-Ash, Ltd. For sub-contractors, see page 234.



Sections G-G, H-H and I-I



Plan at entrance level [Scale: $\frac{1}{4}$ " = 1' 0"]



TECHNICAL SECTION

Mr. Bevan complained in Parliament recently that our annual expenditure on repairs to houses had risen, from 1948 to 1952, by far less than our expenditure on new houses; compared with the latter, it had, in fact, dropped by 28 per cent. The figure for 1952 is, however, still over 80 per cent. of our annual expenditure on new houses, and we may well ask, is it not too *high*?

For some years, landlords throughout the country have been saying that, if it were not for the Rent Restriction Act, they would spend far more on repairs. But Mr. Marples, in his reply to the House, implied that if we spent a higher proportion on repairs we would not be getting "good value for money."

How can we be sure that, if we are to make the best use of our limited resources, the present proportion is the optimum? In trying to find an answer to this question, we are not helped by the fact that, since 1949, MOHLG has not included, in its now monthly returns, a separate figure for the number of men engaged on repair and maintenance work.

8 ESTIMATING measured rates

This week's
special feature

Current prices for measured work prepared by Davis, Belfield and Everest, Chartered Quantity Surveyors. Prices are for work executed complete and are for an average job in the London area. All prices include overhead charges and profit for the general contractor.

PRELIMINARIES

To all valuations for measured work add for Preliminaries, Water and Insurances, according to the nature of the job (say) 10%

EXCAVATOR

Excavation

N.B.—The following prices are applicable to hand excavation in heavy soil.

Surface digging, 6" deep	per yard super	1/-
Ditto, 12" deep	"	1/11
Excavating not exceeding 10' 0" deep to reduce levels	per yard cube	7/9
Excavating not exceeding 5' 0" deep to form basement	"	8/8
Ditto, exceeding 5' 0" and not exceeding 10' 0" deep ditto	"	12/7
Excavating not exceeding 5' 0" deep to form surface trenches	"	10/7
Ditto exceeding 5' 0" deep and not exceeding 10' 0" deep ditto	"	14/6
Excavating not exceeding 5' 0" deep to form basement trench, commencing 10' 0" deep	"	20/2

EXCAVATOR—(continued)

Disposal

Returning, filling and ramming around foundations	per yard cube	3/5
Wheeling excavated soil not exceeding 100 yards and depositing	"	3/10
Ditto and spreading and levelling	"	5/-
Ditto, ditto, and consolidating to make up levels under floors and pavings	"	6/4
Filling into lorries and carting away	"	12/1

Planking and Strutting

Planking and strutting to sides of surface or basement excavation not exceeding 5' 0" deep	per ft. super	-/6½
Ditto not exceeding 10' 0" deep	"	-/8
Planking and strutting to sides of surface trenches not exceeding 5' 0" deep (both sides measured)	"	-/2
Ditto not exceeding 10' 0" deep (ditto)	"	-/3

CONCRETOR

Concrete (Basic Prices)

Portland cement concrete 1 : 3 : 6 with 1½" coarse aggregate in foundations and masses exceeding 12" thick	per yard cube	65/7
Ditto 1 : 2 : 4 with ¾" coarse aggregate ditto	"	66/2

CONCRETOR—(continued)

Add to Basic Prices for:—

Working around rod or mesh reinforcement	per yard cube	3/10
Being in beds less than 12" thick (6"-12")	"	1/11
Ditto less than 6" thick (4½"-6")	"	5/10
Being in small quantities not exceeding 3' cube	"	15/5
Being in suspended floors and roofs	"	11/7
Being in walls not exceeding 6" thick	"	19/4
Ditto exceeding 6" but not exceeding 12" thick	"	13/6
Ditto exceeding 12" thick	"	9/8
Being in lintels, beams, etc., not exceeding 72 sq. in. sectional area	"	28/11
Ditto exceeding 72 and not exceeding 144 sq. in. sectional area	"	23/2
Ditto exceeding 144 sq. in. sectional area	"	19/4
Being in columns not exceeding 72 sq. in. sectional area	"	36/8
Ditto exceeding 72 and not exceeding 144 sq. in. sectional area	"	28/11
Ditto exceeding 144 sq. in. sectional area	"	23/2

Formwork

Close boarded formwork and supports to soffits of floors not exceeding 12' high	per yard super	14/11
Ditto to vertical faces of walls (both sides measured)	"	15/-
Ditto to sides and soffits of lintols and beams	per foot super	2/2
Add to any of the above for wrot formwork and rubbing down concrete	per yard super	2/6

Reinforcement

½" to 1" diameter mild steel rod reinforcement, hooked, bent and tied at intersections as required and fixing in concrete	per cwt.	51/3
½" diameter ditto	"	55/5
¾" diameter ditto	"	68/3
Steel wire mesh fabric reinforcement to B.S. 1221, weighing 4.71 lb. per yard super, well lapped at joints and embedded in concrete	per yard super	3/3½
Ditto weighing 9.32 lb. per yard super ditto	"	6/3

BRICKLAYER

Common Brickwork

	Flettons	Rough stocks
Reduced brickwork one brick thick in cement-lime mortar (1 : 3 : 9)	per yard super 28/5	33/9
Add to the above:—		
If in cement mortar (1 : 3)	" -/2	-/2
If circular on plan to flat sweep	" 4/6½	4/10
Ditto to quick sweep	" 9/1	9/8
Half brick wall in cement lime mortar (1 : 3 : 9)	" 15/5	18/1
Ditto built fair and pointed both sides with a neat flush joint	" 17/4	20/-
One brick wall built fair and pointed both sides with a neat flush joint	" 33/6	38/11
11" hollow wall with 2" cavity and galvanized iron twisted ties	" 33/6	38/10

Engineering Brickwork

	Lingfield Engineering Wirecuts	Blue Pressed bricks
Reduced brickwork one brick thick in cement mortar (1 : 3)	per yard super 41/5	72/10
Half brick wall in cement mortar (1 : 3)	" 22/4	38/4
Ditto built fair and pointed both sides with a neat flush joint	" 24/3	41/-
One brick wall built fair and ditto	" 45/8	77/7

Sundries

Extra for internal fair face and flush pointing	per yard super	1/1
Horizontal damp-proof course of two courses of slates and bedding and pointing	per foot super	3/6
Ditto of hessian base bitumen well lapped at joints	"	-/10½
Fixing only metal window, size 1' 8" × 4' 0", including cutting and pinning lugs to brickwork, bedding frames and pointing in mastic one side	each	7/11
Ditto, 3' 3" × 4' 0" ditto	"	12/4
Ditto, 8' 6" × 4' 0" ditto	"	21/9

BRICKLAYER—(continued)

Partitions

	2"	2½"	3"	4"
Clinker concrete solid partition blocks to B.S. 492 and setting in cement mortar	per yard super 7/5	8/9	10/2	12/7
Hollow clay partition blocks to B.S. 1190, keyed on both sides and ditto	" 8/7	9/6	10/10	-
Moder hollow partition blocks, keyed on both sides and ditto	" 18/8	19/10	21/-	25/8

Facings

	White glazed facings p.c. 1,360/- M for stretchers 1,260/-M for headers and pointing with white cement
Extra over common brickwork built with bricks p.c. 108/- M for facings as described, and pointing with a neat weathered joint:—	Ordinary facings, p.c. 231/6 249/4 M. M.
To solid wall in Flemish bond	per yard super 13/6 14/10 81/2
To cavity wall in stretcher bond	" 11/1 12/- 67/-
To ditto in Flemish bond with snapped headers	" 13/2 14/4 -
Half brick wall in facings in stretcher bond built fair and pointed one side with a neat weathered joint	" 25/4 26/3 -
Ditto pointed both sides	" 26/4 27/3 -
One brick wall in facings built fair and pointed one side	" 47/4 49/3 -
Ditto pointed both sides	" 48/3 50/2 -
Brick on end flat arch in facings 4½" on soffite and 9" high and pointing	per foot run 2/11 3/- -
Brick on edge coping to 9" wall with two courses plain tiles under, laid breaking joint, two cement angle fillets and pointing	" 5/- 5/1 -

ASPHALTER

Tanking

	To B.S. 1097	To B.S. 1418
Horizontal asphalt tanking in three thicknesses on brick or concrete	per yard super 20/-	31/-
Vertical ditto	" 24/8	34/8

Roofing

	To B.S. 988	To B.S. 1162
¾" asphalt flat in two thicknesses on and including felt underlay	per yard super 14/5	24/2
¾" asphalt skirting 6" high with angle fillet at bottom and rounded top, turned into groove	per foot run 2/4	2/11
¾" asphalt fascia 6" high with solid water check roll at top and under-cut drip at bottom	" 4/3	4/9

DRAINLAYER

Trenches and Beds

N.B.—The following prices are applicable to hand excavation in heavy soil, only requiring planking and strutting for depths of 3' or more.

Excavate trenches for 4"-9" pipes, including planking and strutting, filling in and ramming, and wheeling and spreading surplus:—		
For each 12" in depth, for trenches not exceeding 3' 0" deep	per yard run	3/1
Ditto for trenches exceeding 3' 0" and not exceeding 5' 0" deep	"	4/5
Ditto for trenches exceeding 5' 0" and not exceeding 10' 0" deep	"	7/2
6" concrete (1 : 3 : 6) bed and benching for pipes	per yard run	4" 8/10 6" 10/3
6" ditto and surround	"	14/4 17/2

DRAINLAYER—(continued)

			3"	4"	6"
12/7	Clayware butt-jointed land drains and laying in trench	per foot run	-4½	-5½	-9½
	"Seconds" quality glazed stoneware socketed drains and laying and jointing in trench	"	4"	6"	9"
	"British Standard" quality ditto	"	2/1	2/10½	4/10
25/8	Extra on "Seconds" quality for bends	"	2/5	3/6	5/11
	Ditto "British Standard" quality ditto	each	3/1	4/8½	13/9
	Extra on "Seconds" quality for equal single junction	"	4/-	5/11	17/6
	Ditto "British Standard" quality ditto	"	5/4	7/11	17/1½
	Cast iron socketed drains to B.S. 437 and laying and jointing in trench	"	7/9½	9/8½	21/6
	Extra for short radius bend (Fig. No. 4)	per foot run	10/8	16/5	31/9
	Extra for single junction (Fig. No. 18)	each	21/4	40/-	117/8
		"	38/11	75/8	223/7
	<i>Fittings, etc.</i>				
				4"	6"
	Glazed stoneware trapped gulley with galvanized grating and outlet and setting in concrete	each	22/8	42/1	
	Ditto with vertical inlet ditto	"	28/2	47/7	
	Cast iron trapped gulley with high invert, grating, and 4" outlet and setting in concrete	"	54/8	—	
	Ditto with vertical inlet ditto	"	62/-	—	
	Glazed stoneware intercepting trap with inspection arm, stopper and chain and fixing in manhole and jointing to drain	"	71/10	83/8	
	Brown glazed stoneware half round straight channels and bedding and jointing in cement mortar	per foot run	1/10	2/9	
	Ditto ordinary channel bend and ditto	each	5/6	7/9	
	Cast iron coated single seal manhole cover and frame to B.S. 407 Grade C and setting frame in cement and cover in grease	"	24" × 18" 24" × 24"	69/10	
	Galvanized ditto	"	75/6	109/9	
	PAVING				
	Cement and sand (1:3) floated screed to receive pavings	per yard super	3/4½	1" 4/-	1½" 4/6
	Ditto trowelled smooth to receive linoleum	"	3/8½	4/4	4/10
	Cement and sand (1:3) paving trowelled hard and smooth	"	3/9½	4/5	4/11
	Granolithic paving (1:2½) laid on concrete	"	1" 1½" 6/2	1½" 7/-	1½" 7/10
	½" Red composition paving to B.S. 776 laid on prepared screed	per yard super			16/-
	½" Terrazzo paving (Portland cement and spar aggregate) laid on prepared screed	"			37/2
	Extra for white or cream cement	"			5/3
	½" Rubber flooring in all colours, laid on prepared screed	"			51/-
	½" × 12" × 12" Rubber tile flooring ditto	"			41/6
	10" × 12" × 12" Cork tile flooring (brown shades) laid in mastic on prepared screed, surfaced and polished	per yard super			40/8
2/11	1½" Hard red paving bricks p.c. 404/6 per M. laid flat on prepared bed in cement mortar	"			21/11
	1½" Ditto laid herringbone	"			23/10
4/9	6" × 6" Red quarry tile paving to B.S. 1286 laid on prepared screed with straight joints	per yard super		8" 21/1	7" 23/9
	6" × 6" Buff quarry tiles as last	"		23/4	26/3
	2½" (Finished) Gravel path laid on prepared bed, well watered and rolled to cambers and falls	"			2 9
	MASON				
	Portland stone and all labours in pilasters, and quoins	per foot cube			37/1
3/1	Ditto in jambs, lintols, etc.	"			39/8
4/5	Ditto in arches	"			47/9
	Ashlar av. 6½" on bed with plain dressed face	per foot super			21/3
7/2	Portland stone or artificial stone to B.S. 1217:—	Port-land			Arti-ficial
6"	4½" × 4" Sill, sunk, weathered, throated and grooved for water bar, set and jointed in cement mortar	per foot run		7/5	4/1

MASON—(continued)

MAISON—(Continued)		Port-land	Arti-ficial
9" × 3" ditto	per foot run	8/7	6/2
2" × 12" Coping, weathered and twice throated, set and jointed as last	"	7/9	5/2
3" × 12" Ditto	"	10/11	7/8
5" × 12" Saddle back coping twice throated, set and jointed as last	"	18/-	12/3
0" × 12" Ditto	"	19/7	15/3
SLATER, TILER AND ROOFER			
<i>Slate</i>		20" × 10"	16" × 10"
Best Bangor slates to B.S. 680 laid with 3" lap, each slate nailed with two stout copper nails	per square	246/9	233/8
Ditto hung vertically to dormer cheeks and gables	"	256/3	246/9
<i>Tiles</i>		Hard made	Machine made
Best sand faced plain (ribbed) tiles to B.S. 402, 10½" × 6½" laid to a 4" gauge with each tile in every fourth course nailed with galvanized nails	per square	174/-	164/-
Ditto hung vertically to dormer cheeks and gables to 4½" gauge with each tile nailed with galvanized nails	"	171/11	162/9
Berkshire hand made sand faced red pantiles 14½" × 10" laid to 2½" head and 1½" side laps, each tile in every third course nailed with galvanized nails	per square	162/9	171/8
Ditto to mansard slopes	"	171/8	162/9
Bridgwater hand made Double Roman red sand faced tiles 16½" × 14" laid to 3" laps, each tile in every course nailed with galvanized nails	"	131/3	102/8
Concrete plain (ribbed) tiles to B.S. 473, 10½" × 6" laid as before described for plain tiles	"	102/8	107/8
Ditto hung vertically to dormer cheeks, and gables, ditto	"	107/8	81/4
Concrete interlocking tiles 15" × 9" laid to 3" lap, each tile in every third course nailed with galvanized nails	"	81/4	90/3
Ditto to mansard slopes ditto	"	90/3	
<i>Asbestos Cement</i>			
6" Corrugated asbestos cement sheeting fixed to wood roofs with galvanized drive screws and washers with a side lap of 1½ corrugations and an end lap of 6"	"	87/2	93/5
6" Ditto but fixed vertically	"	93/5	3/5
Add to both last if fixed to steel purlins or sheeting rails with galvanized hook bolts	"	3/5	
<i>Felt</i>			
Reinforced bituminous roofing felt laid with 3" laps and nailed to rafters at 18" centres with galvanized clout nails	"	Two layer	24/11 Three layer
One-ply bitumen felt to B.S. 989 laid on concrete. Each layer bedded in hot bitumen	per yard super	8/8	11/6
CARPENTER			
<i>Carcassing</i>			
Softwood, sawn and fixed, in plates, sleeper joists and lintols	per foot cube	15/2	17/10
Ditto in floor and ceiling joists	"	18/8	18/6
Ditto in stud partitions	"	18/8	18/8
Ditto in rafters	"	18/8	18/6
Ditto in purlins and struts	"	18/8	18/6
Ditto and framing in ridge	"	18/6	
Ditto in hip and valley rafters including cutting rafters to sizes	"	20/8	
<i>Battening and Boarding</i>			
¾" × 1½" Battens nailed to softwood for 20" × 10" slates to 8½" gauge	per square	29/11	31/6
Ditto 16" × 10" slates to 6½" gauge	"	37/10	39/11
Ditto 10½" × 6" tiles to 4" gauge (4½" for vertical hanging)	"	60/4	57/9
Ditto 14½" × 10" pantiles to 12" gauge	"	21/-	21/6
Ditto 15" × 9" concrete interlocking tiles to 12" gauge	"	21/-	21/6
Roof boarding in batten widths close jointed and fixed to flat or sloping roofs	"	112/-	139/6
Ditto tongued and grooved and prepared for felt roofing including furring to falls	"	165/6	194/6

CARPENTER—(continued)

		Roof Slopes	Mansards
Sawn gang boarding fixed to joists in roof	per foot super	1/24	1/6
Wrot and crosstongued eaves soffit	"	1/11½	2/3
6" Wrot and grooved eaves fascia planted on	per foot run	-10½	1/-½

Wall and Ceiling Boards

		Verti- cally	Soffites
½" Fibre board to B.S. 1142 fixed with galvanized flat headed nails to soft- wood	per yard super	6/3	6/4
½" Asbestos cement flat sheeting to B.S. 690 fixed as last	"	6/-	6/4½
½" Ditto	"	7/2	7/6

JOINER

Floors and Skirtings

(All thicknesses stated are nominal)

Plain edge softwood flooring in batten widths nailed to floor joists	per square	140/6	156/9	189/-
Tongued and grooved ditto	"	150/-	166/9	200/-
1" Double grooved and tongued and grooved wood block floor laid herringbone with two-block border, set in hot mastic composition on prepared screed and wax polished :-				
Swedish softwood	per yard super	27/4		
European Beech	"	33/7		
English Oak	"	46/3		
European Oak	"	41/9		
Burma Teak	"	45/8		
Softwood skirtings with splayed or molded top edge, planted on (per inch sectional area)	per foot run	-2½	-2½	
Extra for grounds plugged to brickwork	"	-8		

Windows in Softwood

Rebated and molded softwood fanlights and casement sashes divided into squares for glass	per foot super	1½"	2"
Extra for hanging	each	6/7	6/7
Cased frames with 6" x 3" Oak sill and 2" molded double hung sashes including pulleys, line and weights	per foot super	—	10/-

N.B.—The above prices are for purpose made joinery. Standard pattern casement windows and double hung sashes and frames to B.S. 644 are cheaper.

Doors in Softwood

Framed ledged and braced doors filled in with 1" T. & G. and V- jointed boarding and hanging	per foot super	1½"	1½"	2"
Four-panel door, square both sides and hanging	"	5/1	5/9	5/9
Ditto molded one side	"	5/8	6/4	6/4
Ditto molded both sides	"	6/2	6/11	6/11

N.B.—The above prices are for purpose made doors. Standard panelled doors to B.S. 459 are cheaper.

1½" Standard flush doors 2' 6" x 6' 6" internal pattern... each 116/-
2" Ditto external pattern " " 124/3

Linings, Frames, etc., in Softwood

Window and door linings etc. (per inch in sectional area)	per foot run	Sectional area Up to 6" 6" to 12"	
Frames wrought all round and framed (ditto)	"	-4	-3½
Mullions, transoms and cills (ditto)....	"	-3½	-3½
Moldings, architraves, etc. (ditto)	"	2" to 4" 4" to 6"	
6" Window boards with rounded nos- ings, tongued at back and including bearers	"	-3½	-3½
9" Ditto	"	Thickness	
		1"	1½"
	"	3/2	3/4½
	"	3/6	3/9½

Shelving and Fittings in Softwood

Shelving of 2" slats spaced 1" apart on bearers (measured separately)	per foot super	2/8	2/11
Shelving on ditto	"	2/5	3/-
Crosstongued shelving on ditto	"	3/-	3/7
Shelving 9" wide on ditto	per foot run	1/8½	2/1
2" Shelf bearers plugged to walls	"	1/-	1/2
The following in framed up cupboard fittings :-			
T. & G. & V-jointed back	per foot super	2/1	2/5
Crosstongued top, bottom shelf or division	"	3/1	3/7½
1½" Flush cupboard doors	"	7/1	
Labour rebate or groove	per foot run	-3½	

JOINER—(continued)

Labour cross-grain	per foot run	-4½
1" x 2" Bearers screwed on	"	-6

N.B.—The above prices are for purpose-made cupboard fittings. Standard pattern kitchen fittings to B.S. 1195 are cheaper.

IRONMONGERY

		Soft- wood	Hard- wood
3" Steel butts (medium quality)	per pair	4/11	6/1
4" Ditto (ditto)	"	6/8	8/-
Double action floor springs and top centres including filling boxes with oil P.C. 149/3	each	181/6	187/4
Overhead check action door springs. P.C. 66/8	"	84/3	87/10
6" Barrel bolts. P.C. 5/6	"	7/8	8/2
Cupboard locks. P.C. 8/2	"	12/3	13/4
Norfolk latches. P.C. 5/6	"	10/5	11/10
Cylinder night latch. P.C. 15/11	"	22/11	24/9
Mortice latch. P.C. 9/4	"	14/8	16/1
Rim lock. P.C. 10/-	"	14/3	15/4
Mortice lock. P.C. 15/2	"	22/1	23/11
Door furniture. P.C. 24/-	per set	27/6	27/10
Sash fasteners. P.C. 9/-	each	11/8	12/3
Casement fasteners. P.C. 7/11	"	10/-	10/5
Casement stays. P.C. 11/6	"	14/-	14/4

STEEL AND IRONWORKER

Structural Steelwork

The following prices are for Basic sections only. Prices for other sections vary roughly in proportion to the price of the steel ex mills—see "Current Market Prices of Materials."

		£	s.	d.
R.S.J.—in steel framed structures hoisted and fixed complete	per ton	60	6	6
Riveted compound girders including plates and rivets	"	64	15	9
R.S. Stanchions including caps, bases, cleats, etc.	"	65	7	3
Riveted compound stanchions ditto	"	67	14	6
Riveted roof trusses with flat and angle members, plates, cleats, etc., 30' span	"	94	0	0
Ditto 40' span	"	92	0	0

Sundries

Simple wrot iron balustrades fixed complete (excluding mortices etc.)	per cwt.	11	10	6
Bolts with heads, nuts and washers and fixing	"	11	1	9

PLASTERER AND TILE FIXER

24 gauge expanded metal lathing and fixing to softwood soffites	per yard super	5/1
--	----------------	-----

Lime and Gypsum Plaster

Three coat lime and two coat Sirapite or similar Gypsum plaster :-		Lime	Sirapite
On brick walls and partitions	per yard super	5/11	4/7
On concrete soffites including hacking	"	6/11	6/7
On soffite of E.M.L. (measured separ- ately)	"	6/-	7/2
On and including wood laths, to soffites	"	11/11	—
½" Gypsum plasterboard fixed to softwood soffites, in accordance with manufacturer's instructions, scrimmed and finished with setting coat of suitable plaster	per yard super	7/5	
Plaster moulded cornice or cove (per inch in girth)	per foot run	-4½	

Cement Rendering

Rendering in Portland cement lime sand (1:1:6) and setting in Keenes cement on brick walls and partitions	per yard super	5/9
Portland cement and sand (1:3) plain face trowelled smooth on ditto	"	5/3
Portland cement and sand (1:3) screed for tiling on ditto	"	2/9

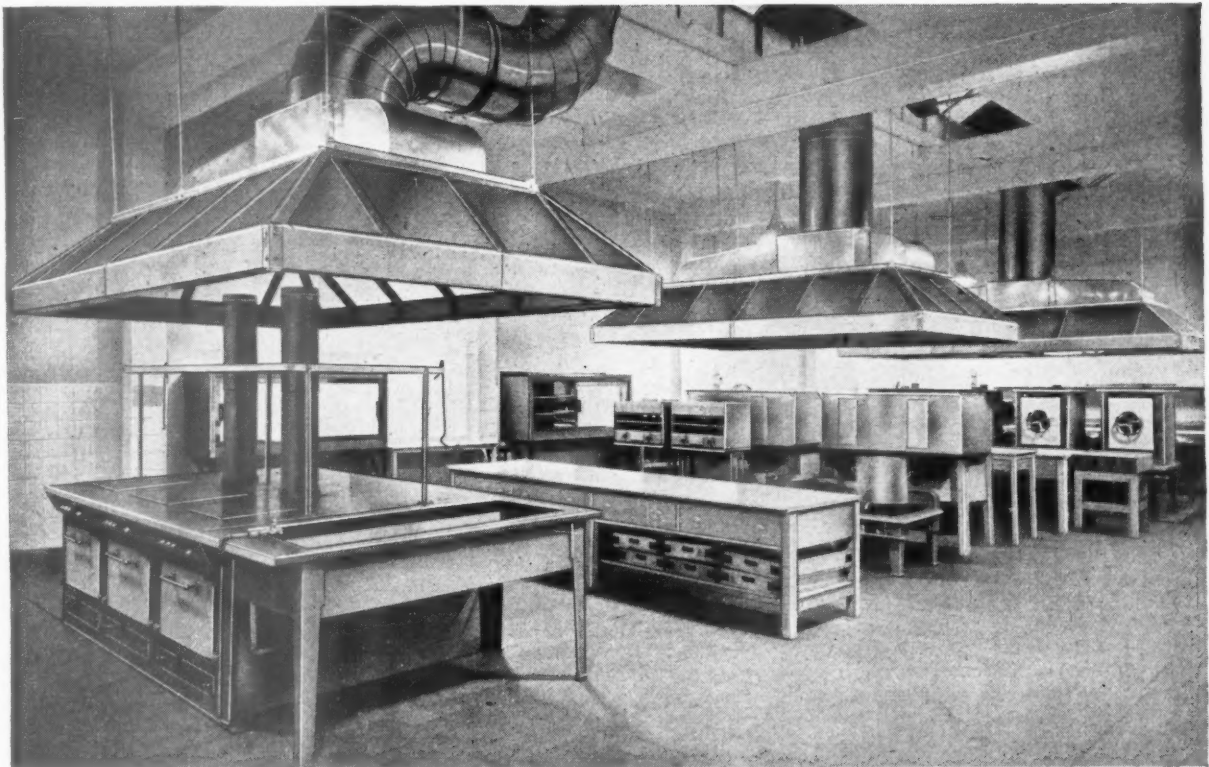
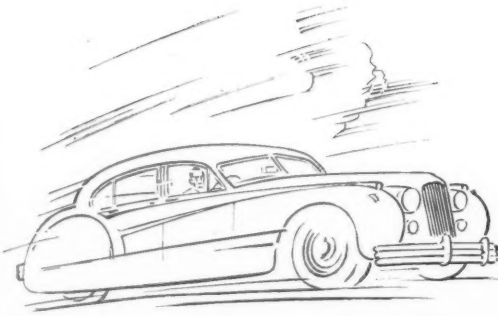
Wall Tiler

6" x 6" x ½" Standard quality white glazed wall tiles set and jointed on prepared screed	per yard super	36/9
Ditto eggshell matt or glossy glazed enamelled	"	46/6

EXTERNAL PLUMBER AND COPPERSMITH AND ZINC WORKER

		Flats	Gutters, Stopped flash- ings, etc.	flash- ings
Milled sheet lead and labour	per cwt.	210/-	210/-	219/6

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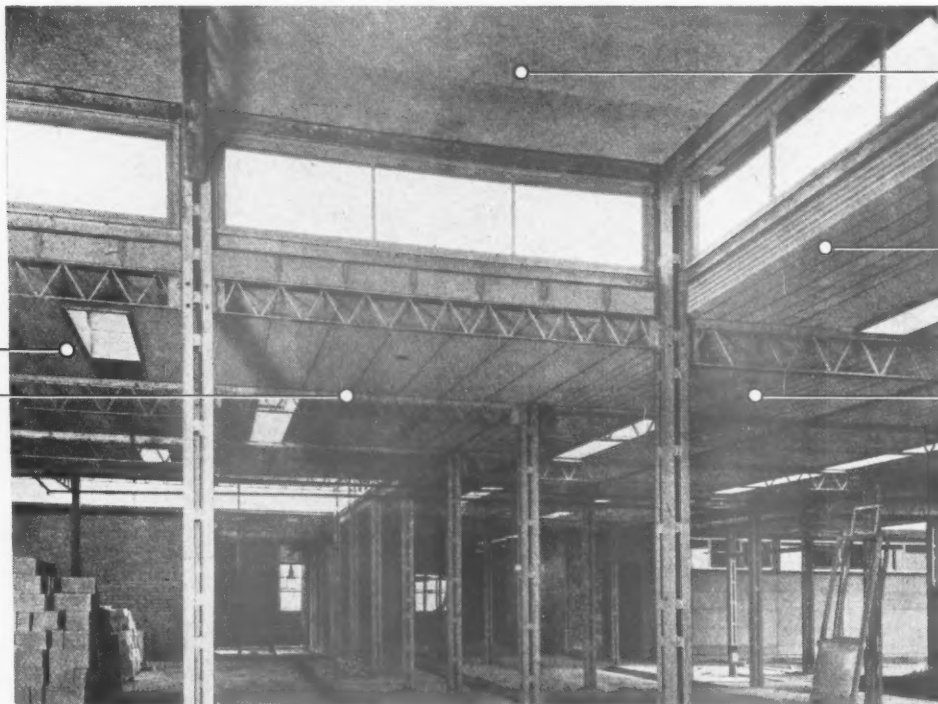
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BISON FLOORS AND ROOFS IN HERTFORDSHIRE NEW SCHOOLS

TYPICAL ARRANGEMENT ON HILLS FRAME



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Welwyn Garden City.

C. H. Aslin, Esq., C.B.E., F.R.I.B.A.
County Architect, Hertfordshire.

Contractors: Ekins & Co. Ltd.,
Hertford.

BISON slab with smooth soffit which,
when pointed, will be ready for
distemper, giving suitable finish for a
store or workshop.

Special BISON units to take
standard roof light fittings.

Light Point. Conduits are buried
in screed on top of BISON slab.

BISON slab keyed to receive plaster.

Wood wool sheets fixed to cross-
battens, which are nailed to grounds
cast in the soffit of the Bison units.

Schools completed since the war in which BISON units were used now number
657, with a further 181 at present being built!

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SPECIALISTS IN PRECAST FLOORS SINCE 1919

EXTERNAL PLUMBER AND COPPERSMITH AND ZINC WORKER—(continued)

		Flats	Gutters, Stepped flash- ings, etc.	flash- ings
24 S.W.G. sheet copper and labour	per foot super	5/4	6/3	6/5
23 S.W.G. sheet copper and labour	"	6/5	6/8	6/11
14 gauge zinc and labour	"	3/5	3/8	3/11

Rainwater Pipes and Gutters

		3"	4"
Cast iron medium section ($\frac{3}{8}$ " metal) R.W. pipes and jointing and fixing to walls with pipe nails and distance pieces or holderbats (cutting and pinning holderbats measured separately)	per foot run	5/-	5/-
Pressed steel R.W. pipes and ditto	"	24 G.	20 G.
Asbestos cement R.W. pipes and ditto	"	3/11	3/4
Cast iron half round eaves gutter and jointed and fixed with brackets to fascia	"	2/11	3/8
Ditto O.G. ditto	"	3/1	3/11
18 Gauge pressed steel half round ditto	"	2/8½	3/9
Ditto O.G. ditto	"	3/3	4/5½
Asbestos cement half round ditto	"	2/4	3/9½

Soil and Ventilating Pipes

		3"	4"
Lead soil, waste and ventilating pipes (17 lb. per yard for 3" and 22.8 lb. per yard for 4" diameter) fixed to walls with lead tacks and brass screws	per foot run	11/9	16/4
Medium or heavy section cast iron soil, waste and ventilating pipes with caulked joints, fixed to walls, with pipe nails and distance pieces	"	Heavy 5/1½	Med-ium 4/9

INTERNAL PLUMBER**Lead Pipes**

Prices are based upon the following weights per yard.

		$\frac{1}{2}$ " lb.	$\frac{3}{4}$ " lb.	1" lb.	1½" lb.
Supply	.....	7	11	16	21
Distributing	.....	6	9	12.5	16
Flushing and overflow	.....	3	5	7	9
Waste and ventilating	.....	—	—	—	7
Supply pipe in trench (measured separately)	per foot run	4/1	6/2	8/8	11/6
Ditto fixed to walls and ceilings	"	4/6	6/9	9/5	12/8
Distributing pipe fixed to walls and ceilings	"	4/-	5/11	7/10	10/1
Flushing and overflow pipe ditto	"	2/8	3/11	5/2½	6/10
Waste and ventilating pipe ditto	"	—	—	—	5/11
Joints to fittings	each	5/3	6/3½	6/8	7/6
Bends	"	—	—	—	1/11
Branch joints	"	6/7	7/8½	8/2½	9/6½

Steel Tubes and Fittings

Galvanized steel tubes to B.S. 1387 Class C with screwed joints in red lead as supply pipe laid in trench (measured separately)	per foot run	2/1	2/4½	2/6½	3/4
Ditto Class B ditto fixed to walls and ceilings as supply, distributing, waste pipe, etc.	"	1/11	2/4	2/6	3/11½
Joints to fittings	each	3/9	4/4½	5/4	6/3½
Bends	"	—	—	3/3	4/9
Tee, equal or reducing	"	2/3	2/6½	3/2	4/-

Copper Tubes and Fittings

Prices are based upon the following gauges:—

		$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	1½"
Supply	.....	18	17	16	16
Distributing, waste, etc.	.....	19	19	18	18
Copper tubes to B.S. 1386, as supply pipe laid in trench (couplings and trench measured separately)	per foot run	2/1	3/-	4/3	6/3
Ditto to B.S. 659 as distributing, waste pipes, etc. fixed to walls and ceilings. Couplings measured separately	"	2/1	2/8	3/9	4/6

INTERNAL PLUMBER—(continued)

Brass compression type couplings—copper to copper	each	4/11	5/11	8/2	10/5
Ditto bends	"	6/7	7/9½	11/1	14/1
Ditto tees	"	8/7	9/9½	15/1	21/5

Sanitary Fittings

Fireclay sinks 24" × 18" × 10" including cutting and pinning brackets to tiled wall. P.C. 75/-	each	£ s. d.	4 16 0
Combined metal sink and drainer 42" × 18" × 8½" to bearers (measured separately). P.C. 330/-	"	18 11 9	
Fireclay lavatory basin 25" × 18" with taps and towel rail bracket including screwing brackets to tiled wall. P.C. 138/6	"	8 5 0	
Rectangular cast iron porcelain enamelled bath 5' 6" long, with taps, and panels to side and one end fixed to framing (measured separately) P.C. 390/6	"	23 9 3	
Fireclay w.c. pan with trap, plastic seat, high level cistern and flush pipe, including screwing pan to floor and cistern brackets to backboard. P.C. 200/-	"	12 12 3	
Ditto with low level cistern. P.C. 240/-	"	14 17 6	

GLAZIER

		To wood	To metal
18 oz. Ordinary quality sheet glass and glazing with putty in squares not exceeding 4 ft. sup.	per foot super	1/-	1/1
24 oz. Ditto and ditto	"	1/1½	1/3
32 oz. Ditto and ditto	"	1/7½	1/8½
½" Figured, rolled, and cathedral—untinted and ditto	"	1/4	1/5
½" Rough cast and ditto	"	1/7½	1/8½
½" Wired cast and ditto	"	1/9½	1/10½
½" Georgian wired cast and ditto	"	1/9½	1/11
½" Georgian wired polished plate and ditto	"	6/1½	6/3
½" Polished plate (glazing quality) and ditto	"	5/10	6/-

PAINTER**Whitening, Distemper and Paint on Walls**

Prepare and twice whiten plastered walls and ceilings	per yard super	1/1½
Prepare and twice distemper with washable distemper on plastered walls and ceilings	"	1/8½
Ditto on brick or concrete	"	2/3
Prepare, prime, and paint two coats oil colour on plastered walls and ceilings	"	4/7

Paint on Metal

		Basic price	Add for each additional coat
Prepare, prime, and paint one coat oil colour on general surfaces	per yard super	2/11	1/4
Ditto metal casements	"	4/6	1/11½
Ditto members of roof trusses	"	3/8½	1/8
Ditto balustrades one side	"	4/6	1/11½
Ditto bars, etc., not exceeding 6" girth	per yard run	-/9	-/4
Ditto small pipe	"	-/9	-/4
Ditto large pipe	"	1/6	-/8

Paint on Wood

		Basic price	Add for each additional coat
Knot, prime, stop and paint one coat oil colour on general surfaces of woodwork	per yard super	3/3	1/4
Ditto on skirtings, rails, frames, etc., not exceeding 3" girth	per yard run	-/5	-/2
Ditto ditto for each additional 3" in girth	"	-/4½	-/2
Ditto on sash squares one side	per dozen	3/9	1/6
Ditto on large sash squares one side	"	6/10	2/9

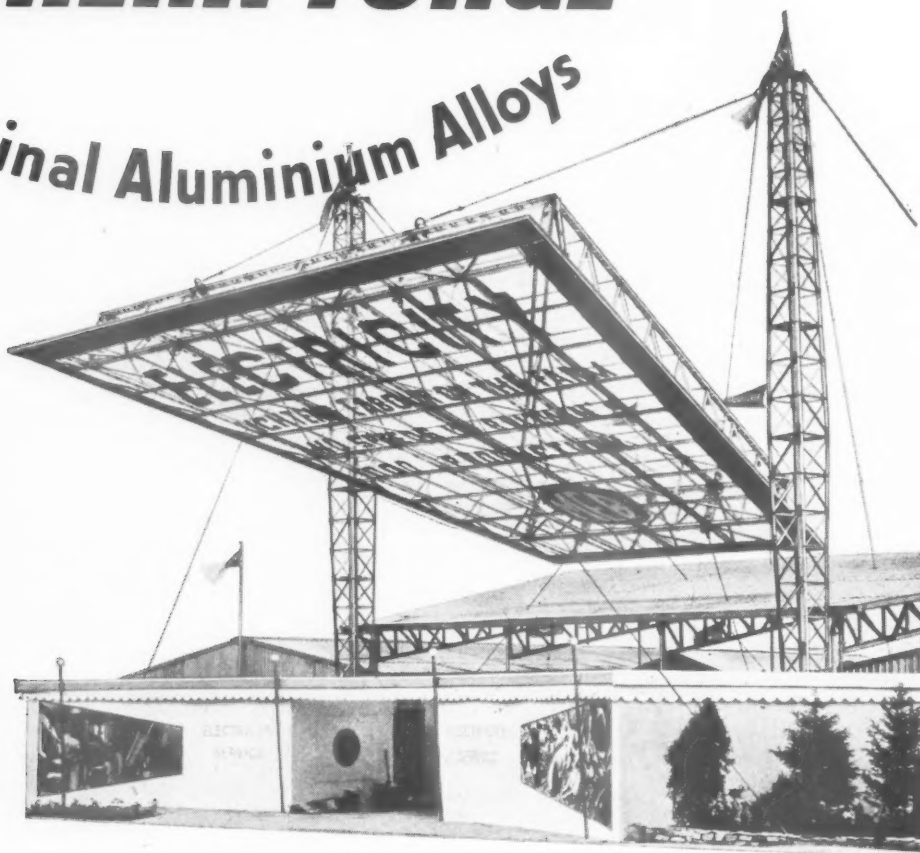
Stain and Varnish on Wood

Prepare, size, stain and twice varnish on general surfaces of woodwork	per yard super	3/8
Ditto on skirtings, rails, frames, etc. not exceeding 3" girth	per yard run	-/6
Ditto ditto for each additional 3" in girth	"	-/5

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Below is the second part of our anonymous correspondent's analysis of the new model byelaws (his first article was published in the JOURNAL Jan. 8, 1953). He deals now with the new fire resistance requirements and compares them with the requirements of the new LCC byelaws. They represent, he says, a great advance in byelaw procedure and should assist in the development of new systems of construction.*

FIRE RESISTANCE AND THE NEW MODEL BYELAWS

As a result of representations made by the RIBA, the BSI issued in 1932 BS 476, which lays down the standard test methods for the structural fire protection of buildings. In 1936 the Fire Offices Committee's Fire Testing Station was opened at Elstree and BRS undertook structural research there, until in 1947, the Joint Fire Research Organization of DSIR and FOC was formed.

SIMILAR TO NEW LCC BYELAWS

In 1942 a committee was set up jointly by the Building Research Board and the Fire Offices Committee to examine the problem of Fire Grading of Buildings. It is on the first part of the report of that Committee (Post-War Building Study No. 20†) that the new byelaws are based. Many architects may find strange the form of the new byelaws, but they are similar in principle to those to be found in many American building codes during the past 20 years and, so far as this country is concerned, similar to a series of regulations for the fire protection of structural steelwork that the LCC issued in 1938 but which, owing to the war, has not been extensively used. They are also similar to the fire resistance clauses in the new LCC byelaws that were recently issued.

In my first article on the new model byelaws I said that the new freedom they gave to architects depended largely on the fire resistance clauses. It is not often realized how many of the old byelaws related to fire protection requirements; the main "wall" clauses were as much concerned with fire protection as with structural strength and scattered throughout the old document were clauses demanding "adequate" fire resistance. Appropriate "functional" clauses relating to fire protection were, therefore, essential if we were to dispense with the old. It should be noted, however, that existing practice should not be

affected by the new treatment; the old wall thicknesses all satisfy the new standards, with a large margin.

THE ONLY INCREASE

Perhaps the only increase is in the standard of protection for large multi-storey warehouses, but it merely involves, for example, an extra $\frac{1}{2}$ in. on the former thickness of concrete protection on steelwork. This is more than counterbalanced by the reduced requirements for offices and flats.

A direct contrast is the change in the requirements for the protection of structural steelwork in domestic buildings [in the old model, byelaw 29(2)(c)]; here there is, in general, a relaxation both of height limitation and of the thickness of concrete required.

MORE SPECIFIC DEFINITION OF "FIRE RESISTANCE"

It should be noted that in the new byelaws the term "fire resistance" is used with a specific meaning, instead of in the loose way it was used in the old byelaws. A clear grasp of the term in its limited sense (*i.e.*, the time a structural element resists the effects of fire in the BS test for fire resistance) will make the byelaws much simpler to understand. For example, the concept of a wall having a different fire resistance on each side, as in byelaw 32(2), is difficult to appreciate after such long acquaintance with solid brick walls that have the same resistance whichever side is tested; but a wall that is not homogeneous will, clearly, behave differently on each side.

THE NEW CLAUSES: SMALL HOUSES

The separation of byelaws dealing with small houses from the remainder is a wise step; we may one day have separate byelaws for various kinds of building.

Byelaw 35 lays down standards of protection against the risk of fire spread between houses. It is a modernized version of the old Byelaw 26, combined with the wall clauses of the old byelaws. It provides a comprehensive clause covering all types of wall construction used for houses. Traditional walls of solid or cavity brickwork or blocks are not affected

by this (a point brought out by Byelaw 33), and the byelaw really controls non-traditional forms of wall construction. The separation required between the walls of adjacent houses is related to fire resistance against external fire and the combustibility of the external cladding or structure.

PARTY WALLS

Byelaw 36 is of special interest in that it refers to a wall "separating small houses." The 9-in. party wall is no longer the only acceptable form of construction. In its place we are now required to provide a wall "of a fire resistance of 1 hour." Reference to Schedule 4 shows that 9-in. brickwork will easily satisfy this, but we find, in fact, that a wall of 3-in. clinker blocks would also satisfy it. However, fire resistance is not the only functional principle involved, and a wall of 3-in. clinker blocks would hardly provide adequate structural strength or sound insulation.

Another important feature of this byelaw is that it permits the erection of a terrace of timber-clad houses with a brick party wall between each pair of houses, provided this is carried up above the roof and out beyond the external wall. Under the old byelaws timber-clad houses could be erected only singly or in pairs.

The remaining paragraphs of this byelaw relate only to light non-traditional construction. They have no bearing on the traditional brick house and are modernized versions of the old Byelaw clause 26(5).

Byelaw 37 (dealing with roofs) contains the curious words "where practicable." Thus has the Ministry recognized that the sagging of roofs is no easy problem to solve.

FLOORS

Byelaw 38 lays down a standard for floors in small houses. It is the standard of the traditional floor with timber joists, open boards, and 2-coat lath and plaster ceiling (though curiously this is omitted from the schedule), and, therefore, will not affect traditional construction. Again, this byelaw is primarily applicable to non-traditional construction. Section 3 of it lays down the standard for internal load-bearing walls, and permits methods of test less stringent than those in BS 476.

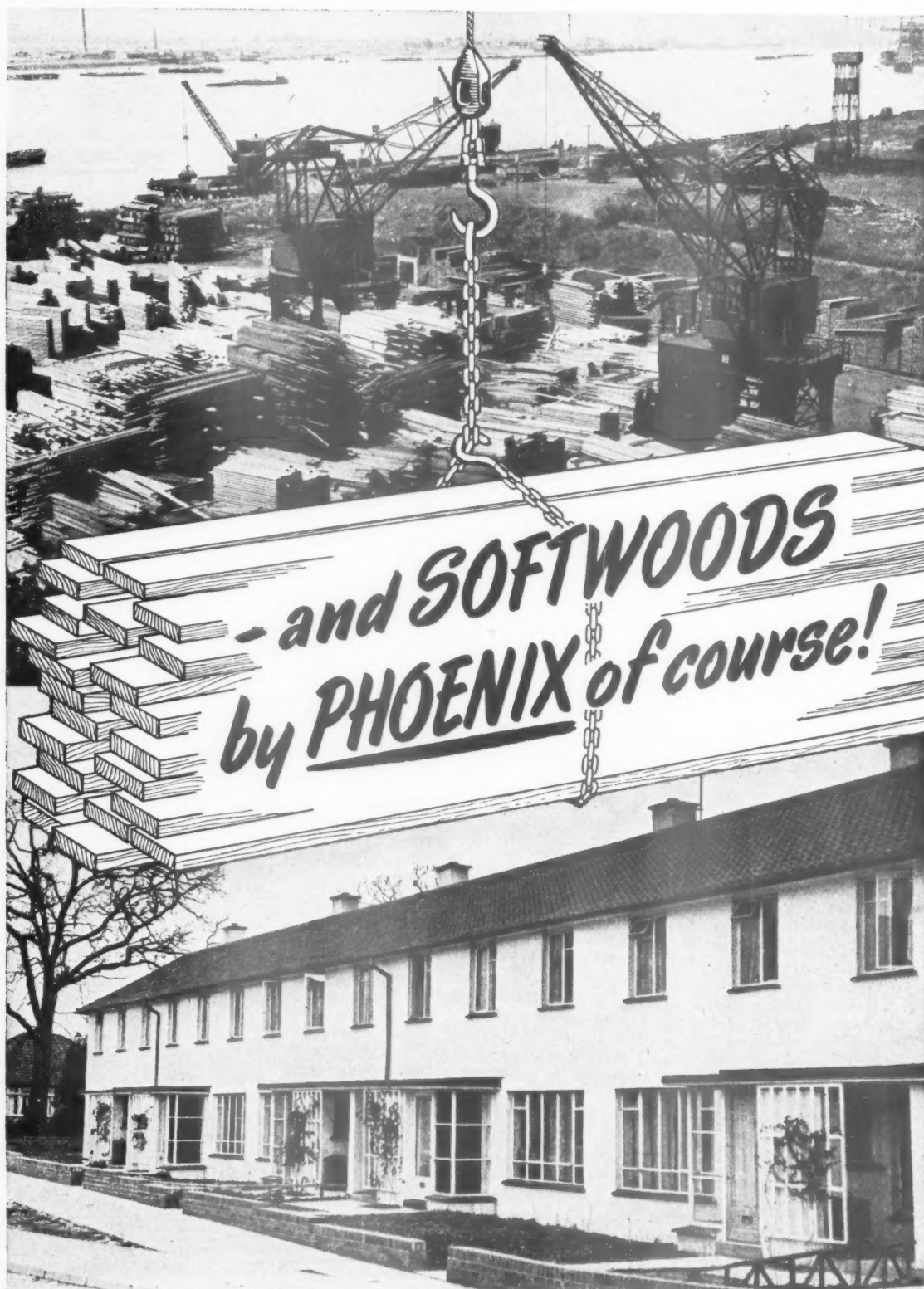
These clauses need not concern those who build traditionally; they lay down standards for non-traditional building—standards to which most non-traditional houses already built conform, for the clauses consolidate Fire Grading Committee and Housing Manual recommendations.

OTHER BUILDINGS

The next group of byelaws (39-42) releases the architect from the bondage

* MOHLG has pointed out to us that, whereas on January 8 we stated "it is a pity that Clause 79 (2) requires that openable windows be provided even where there is a system of mechanical ventilation," there is, in fact, a proviso (ii) that states "this paragraph shall not apply . . . to any room for which adequate ventilation is provided by mechanical . . . means."

† HMSO, 1946, 1s. 6d.



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of 9-in. incombustible material for external walls, for the first clauses in these byelaws simply demand a 2-hour fire resistance for external walls, with certain further relaxations set out in the following clauses. This is one of the most important changes in the byelaws and, like the standard for small houses, introduces a very desirable freedom of treatment for external walls. Complete incombustibility of the materials used in the wall is demanded. This may seem onerous but, presumably, if the 2-hour standard is satisfied by incombustible materials, additional combustible linings can be used since they do not form part of the wall. There may be considerable controversy over the interpretation of these clauses.

FRAMED BUILDINGS

Of the other byelaws of this group, 41 is the most important, for in this there is a relaxation of the standard for external walls of certain domestic buildings of frame construction—an important step towards economy and freedom of design in flat construction. It is conditional on sufficient separation—not an onerous requirement in the light of present day planning. Architects will probably find that the separation required by this byelaw will have already been met if they follow the recommendation of paragraph 14 of

the foreword relating to daylighting standards.

SINGLE-STOREY DOMESTIC BUILDINGS

Byelaw 40 represents a relaxation in the requirements for single-storey domestic buildings; a modernized version of the old byelaw 26, it relates to domestic buildings other than small houses. A proviso to this byelaw and a similar proviso to byelaw 42, introduces the concept of the "division," familiar to architects accustomed to building in London under the Building Act, limiting the capacity of divisions to 250,000 cu. ft.

FIRE-SEPARATION WALLS

The next group of byelaws relates to walls that are intended to act as fire separation structures between buildings or parts of buildings. Presumably these walls include party walls, but some confusion may arise here because "party walls" suddenly appear in the third schedule for the first time. The standards are satisfied by normal brick construction and the only new requirements are: in paragraph 6, that the separating wall must be carried up above the roof in certain cases (this is perhaps hardly new), and, in paragraph 4, requirements relating to the protection of openings. There is likely to be much debate as to the interpretation of this byelaw with respect to party walls.

Byelaw 45 is important for it establishes the standard for fire separation between flats in a building. Here again architects should remember that structures that provide adequate fire protection do not always provide adequate sound insulation.

FIRE RESISTANCE STANDARDS FOR MULTI-STOREY BUILDINGS

The next byelaw covers a very wide field, for it establishes fire resistance standards for the interior construction of all multi-storey buildings. A full discussion on it would need a whole book. The table corresponds closely to that in Byelaw 9.02 of the new LCC byelaws, but the differences are important. The table in the model byelaws covers all buildings; that in the LCC byelaws deals only with buildings not exceeding 250,000 cu. ft. in capacity. But so far as the byelaws do relate to similar buildings, the similarity is to be welcomed, for it is a step towards a universally applicable series of byelaws for the whole country.

Architects will naturally ask: are the requirements set out in the table restrictive or stringent? This can be best answered by considering a few examples—a block of flats, an office and a shop.

A 5-storey block of flats, with a floor area up to 2,500 sq. ft. on each storey, can be built with T-and-G boarded

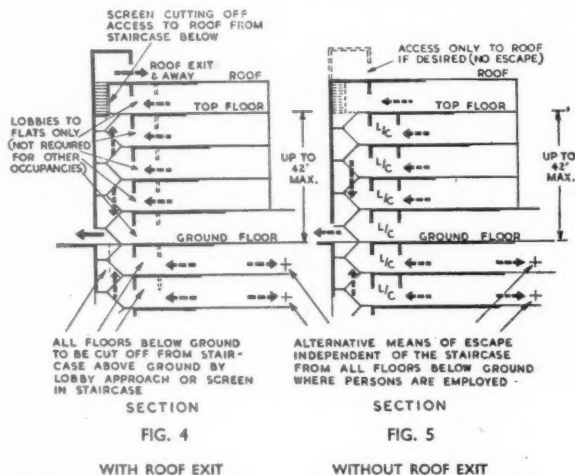


FIG. 4

FIG. 5

WITH ROOF EXIT

WITHOUT ROOF EXIT

L-C indicates "Lobby" or "Corridor Approach"—see para. 203 and Figs. 8 and 9.

In the case of flats the hall of each flat will serve as a "lobby."

In buildings of single occupancy the roof exit may be approached through a room, provided the room is cut off from the staircase by a self-closing fire-check door.

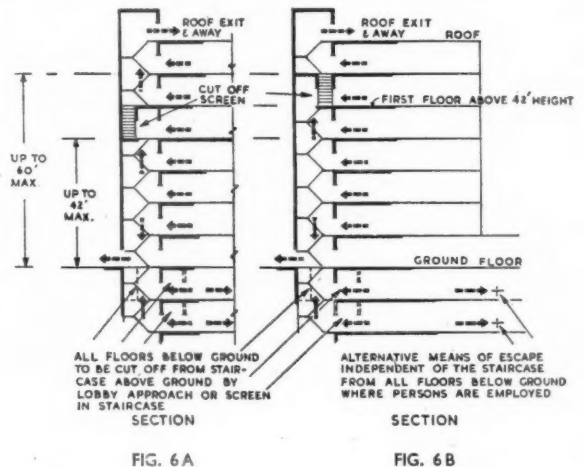


FIG. 6A

FIG. 6B

SCREEN BELOW LEVEL OF FIRST FLOOR
ABOVE 42 FT. HEIGHTSCREEN ABOVE LEVEL OF FIRST FLOOR
ABOVE 42 FT. HEIGHT

OCCUPANCY	TYPE OF CONSTRUCTION	MAXIMUM FLOOR AREA ON ANY ONE FLOOR ABOVE GROUND FLOOR	MAXIMUM TOTAL POPULATION ABOVE GROUND FLOOR
Not involving sleeping or abnormal risks	1, 2 and 3	4,000 sq. ft.	250
	4	2,500 sq. ft.	150
	5	1,000 sq. ft.	50
Involving sleeping risks*	1, 2 and 3	4,000 sq. ft. or 4 Flats	250
	4	2,500 sq. ft. or 4 Flats	150

* Not applicable to blocks of flats approached by external balconies.

OCCUPANCY	TYPE OF CONSTRUCTION	MAXIMUM FLOOR AREA OF ANY ONE FLOOR ABOVE GROUND FLOOR	MAXIMUM TOTAL POPULATION ABOVE GROUND FLOOR
Not involving sleeping or abnormal risks	1, 2 and 3	2,500 sq. ft.	250

Above and left, four of the diagrams from the recently published Post-War Building Study No. 29 (Fire Grading of Building). Figs. 4 and 5, single-staircase buildings not higher than 42 ft. to top floor level. Figs. 6A and 6B, single-staircase buildings not higher than 60 ft. to top floor level—alternative positions for cut-off screen separating staircase to floors above 42 ft. from staircase below.

floors and a plaster ceiling (sound insulation excepted). A 10-storey block would need a floor of 1-hour fire resistance, attained, for example, by a normal hollow-tile floor; steelwork would need protection of 1 in. of concrete, 1 in. of plaster on metal lathing, $\frac{1}{2}$ in. of gypsum plaster on $\frac{3}{8}$ -in. plasterboard, or any of the other items set out in Table C (p. 69 of the 4th Schedule) that afford 1 hour protection. Any other form of protection not specifically mentioned in the Schedule but which on test gives the same protection could also be used. Similar construction is now suitable for office blocks, although, in both cases, it has been common practice in the past to require 2 in. of concrete around steelwork.

A large department store would, presumably, come in the "warehouse" class not used wholly or predominantly for storage and, assuming it exceeded 75 ft. in height, 250,000 cu. ft. in capacity or 7,500 sq. ft. in floor area, 2-hour construction would be needed. This would be provided by ordinary reinforced concrete construction, steelwork with 2 in. of concrete protection and a hollow-tile floor rather thicker than that needed for the offices or flats, but no thicker than that commonly used.

Architects will need to study the table carefully, particularly if they intend to

use any of the newer systems of construction. A similar approach to structural fire protection is to be found in Bulletin No. 7 of the MOE, dealing with Fire Protection in Schools, and it is evident that every effort is being made to establish these fire requirements on a sound functional basis.

MISCELLANEOUS REQUIREMENTS

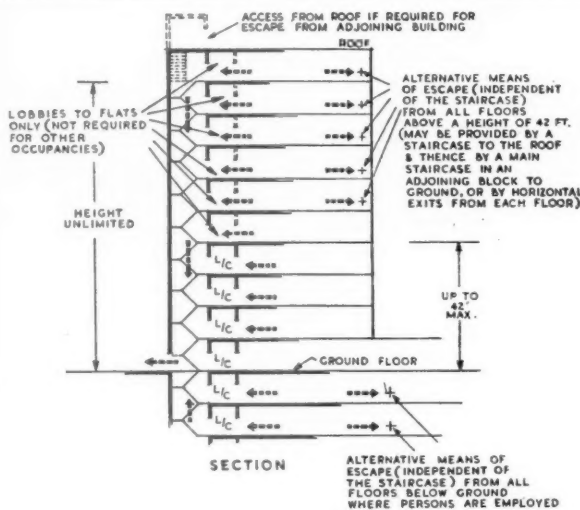
There remain a few more byelaws concerned with fire resistance. Byelaw 47 deals with problems that arise in hollow walls of combustible materials. There has been some recent practical experience of the danger of the rapid spread of fire in walls of this kind, but the practical treatment of the problem can only be worked out separately for each case. Solutions that depend on bridging the cavity may raise problems of damp penetration through external walls.

Byelaw 48 is very important to architects, as it affects fenestration. Here again, however, we see the advantages of the functional treatment, for the byelaw simply requires suitable provision to prevent spread of fire. The first "deemed to satisfy" paragraph may be found confusing. It should be realized that an "opening" is, in fact, any part of the external wall not of the required

period of fire resistance. A more important question is whether long staircase windows will be permitted. Since there are no floors separating storeys within the staircase enclosure, it is difficult to see how it would be possible to apply the restriction. The LCC byelaws include a similar clause, but in these it is applicable only to openings above the ground storey, and the staircase window is, therefore, permitted. These relaxations should be introduced into the model byelaws.

Byelaw 50 is the last byelaw with which we are concerned in this article; it relates to fire protection requirements of roofs. It is a re-statement of the old Byelaw 78 and would, but for one curious feature, help to make clear the real purpose of the list of coverings that will be familiar to most architects. In the first clause of this byelaw there is no mention of domestic buildings generally, though one finds specific mention of a house exceeding 36,000 cu. ft. Drafting appears to be at fault here.

So far as the actual list is concerned, there are two notable additions, as compared with the list in the old byelaws—aluminium and asbestos-based roofing felt. With this latter material there are no restrictions as to the type of base on which it may be laid, as there are with organic-based felts.



L-C indicates "Lobby" or "Corridor Approach"—see para. 203.
In the case of flats the hall of each flat will serve as a "lobby."

OCCUPANCY	TYPE OF CONSTRUCTION	MAXIMUM FLOOR AREA ON ANY ONE FLOOR ABOVE GROUND FLOOR	MAXIMUM TOTAL POPULATION ABOVE GROUND FLOOR
With or without sleeping risks but not involving abnormal risks	1, 2 and 3	4,000 sq. ft. or 4 Flats*	250

* Not applicable to blocks of flats approached by external balconies.

Above, Fig. 7, (from PWBS No. 29, by permission of HMSO) single staircase buildings of "unlimited" height. Right, Figs. 8 and 9, lobby approach and corridor approach in single staircase buildings, and maximum travel distances for "dead end" areas. This publication will be reviewed in a forthcoming issue of the JOURNAL.

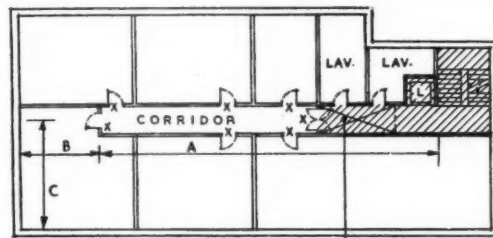


FIG. 8
SUB-DIVIDED FLOOR

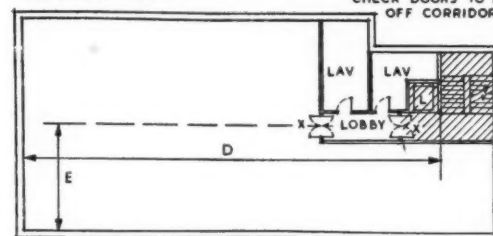


FIG. 9
OPEN FLOOR

Area shown hatched to be bounded by partitions having the grade of fire resistance required for vertical shafts—see Part 1 of Report, Paras. 143 and 144.

No rooms other than lavatories may open out of this area.

"X" indicates self-closing fire-check doors which should be provided to all doors other than lavatory doors opening out of the lobby or corridor. (If the corridor is itself cut off from the staircase by a lobby, self-closing fire-check doors are not necessary to rooms opening out of corridor.)

DIMENSION	TYPE OF CONSTRUCTION	
	1, 2 and 3	4 and 5
A	60 ft.	—
A+B+C	100 ft.	60 ft.
D+E	100 ft.	60 ft.

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Technical College, Roe Green Lane, Hatfield, Herts., for the Hertfordshire County Council. (Pages 217-224.) Architects: Easton & Robertson, F./P.R.I.B.A. Structural engineer: Felix J. Samuely, B.Sc.(ENG.), A.M.I.C.E., M.I.STRUCT.E. Consulting engineers (services): E. A. Pearce & Partners. Quantity surveyors: Gardiner & Theobald. General contractors: Gilbert-Ash Ltd. Sub-contractors: pre-cast concrete units, Holland & Hannen and Cubitts Ltd.; heating and hot water services, G. N. Haden & Sons Ltd.; electrical services, T. Clarke & Co. Ltd.; specialist joinery, Norbury Joinery & Cabinet Works Ltd.; windows, metal doors,

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Announcements

T. F. A. Manning, B.A. (ARCH.), A.R.I.B.A., has opened an office at 8, The Green, Richmond, Surrey, where he will be pleased to receive trade catalogues.

Robert McKinstry, B.A.R.C.H. (L'POOL), A.R.I.B.A., has opened a private practice at 58, Rugby Road, Belfast, Northern Ireland, where he will be pleased to receive trade catalogues.

H. A. C. Masters, A.R.I.B.A., has opened a private practice at North Farm, Stanton, Fitzwarren, Swindon, Wilts., where he will be pleased to receive trade catalogues. (Tel.: Stratton St. Margaret 3264.)

Vincent Burr, L.R.I.B.A., has taken into partnership his two associated architects, Edmund G. Harker and John J. Hickie, registered architects. His firm will now be known as Vincent Burr & Partners. The practice will continue to be carried on at 85, Gower Street, W.C.1.

Jackson & Edmonds, architects and surveyors, now have their principal office at 116, Colmore Row, Birmingham 3. (Tel: Birmingham Central 7982-4.)

John R. Harris A.R.I.B.A., A.A.DIPL., has removed his office from 40, George Street, W.1, to 38, Queen Anne Street, W.1. (Tel: Museum 4445.)

William C. Cassé, L.R.I.B.A., F.I.A.S., has taken over the practice of Pratt, Blount & Cooper, of 174, High Street, Acton, W.3, as from December 24, 1952. (Tel: Acorn 0860.)

Cecil Ogden & Son, architect & surveyors, have removed their office to 1, Market Street, Lutterworth, Rugby. (Tel: Lutterworth 321.)

Denys Hinton, A.R.I.B.A., A.A. DIPL. (HONS.) has commenced practice at 10a, St. Mary's Road, Leamington Spa, Warwickshire (Tel: Leamington Spa 3032) where he will be pleased to receive trade catalogues.

Correction

The colonnaded shops at Canterbury, shown in our frontispiece on January 8, were erected by Ravensett Properties Ltd., whose architect's are Ardin & Robbins. L. Hugh Wilson, the city architect and planning officer, points out that his job was to co-ordinate the street picture.

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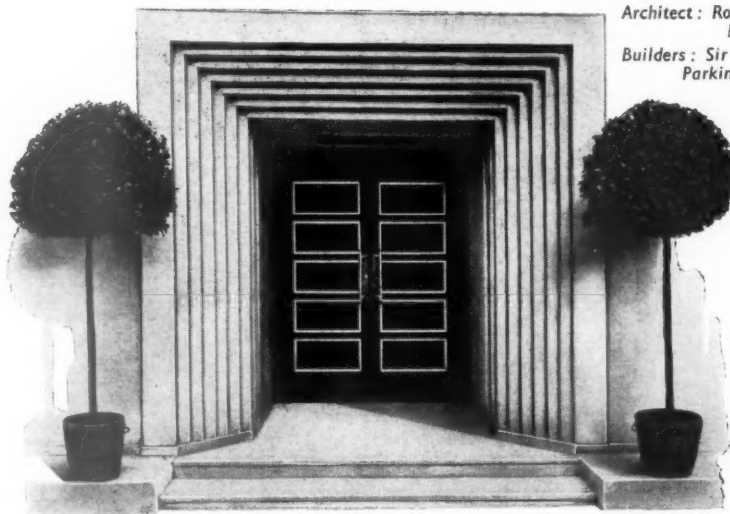


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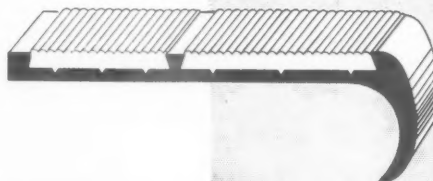
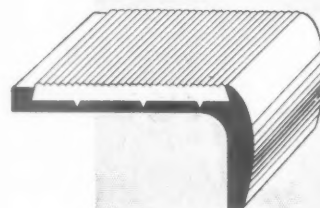
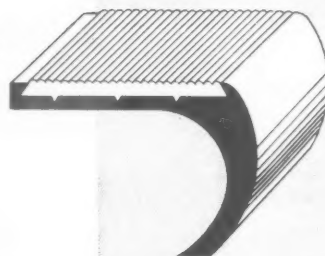
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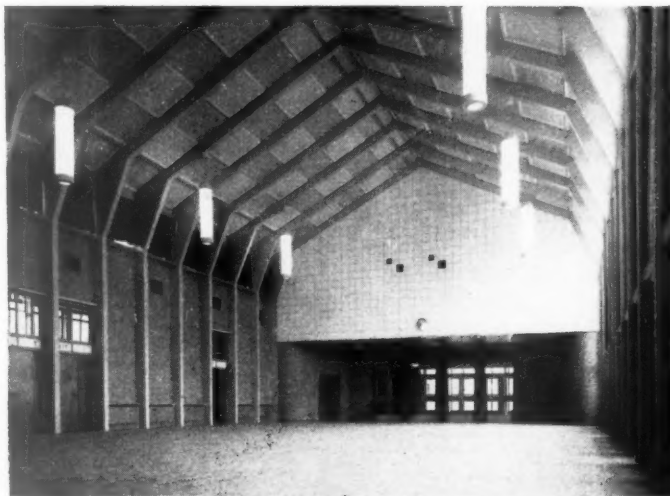
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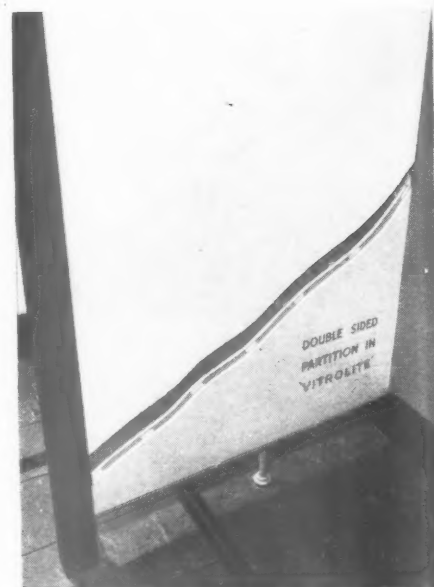
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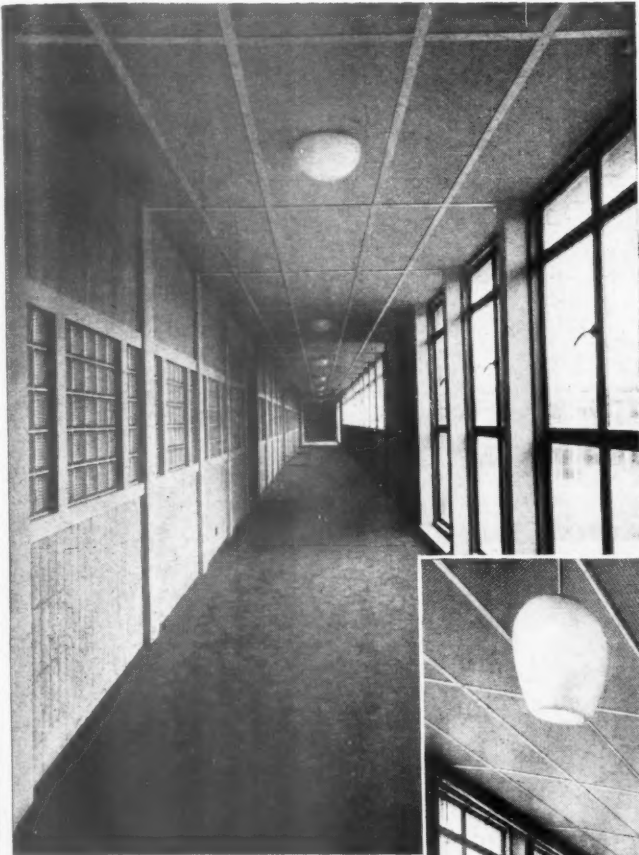
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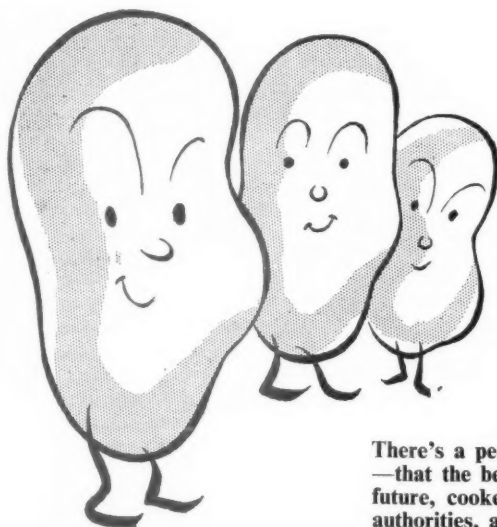
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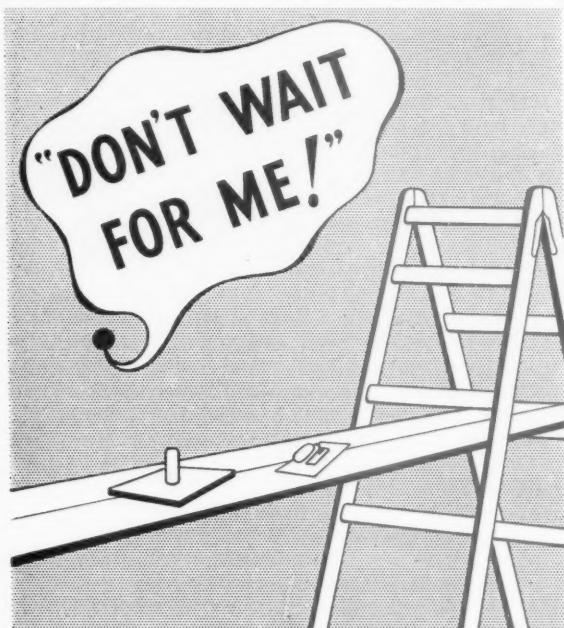


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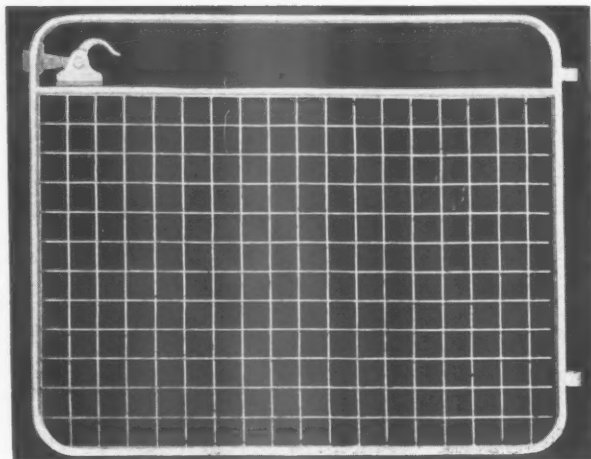
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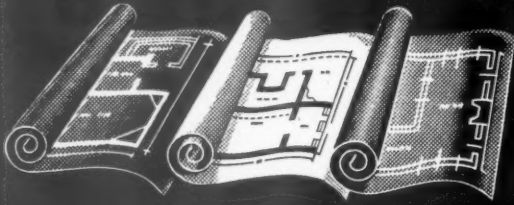
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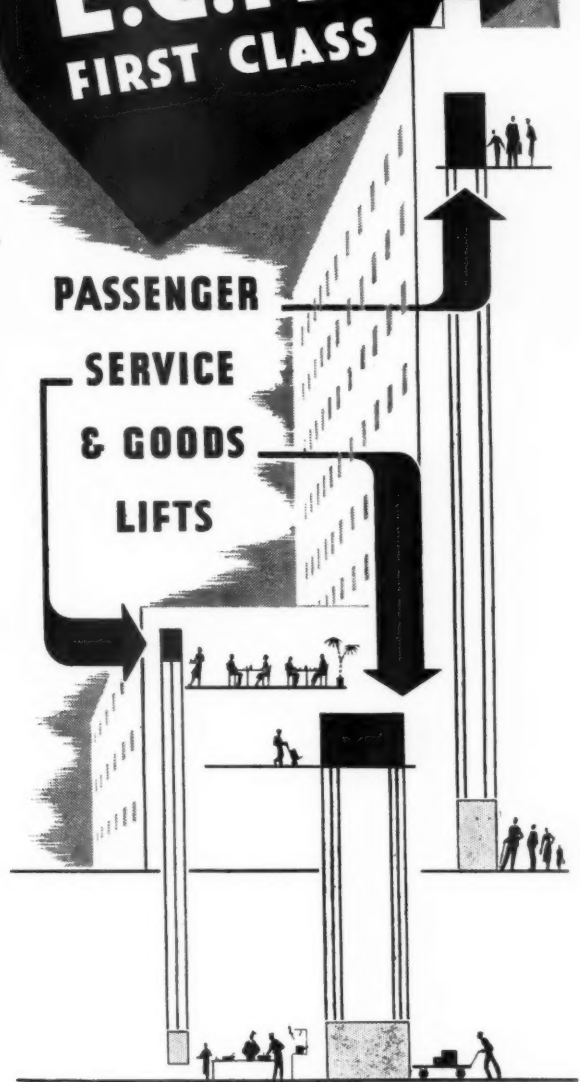


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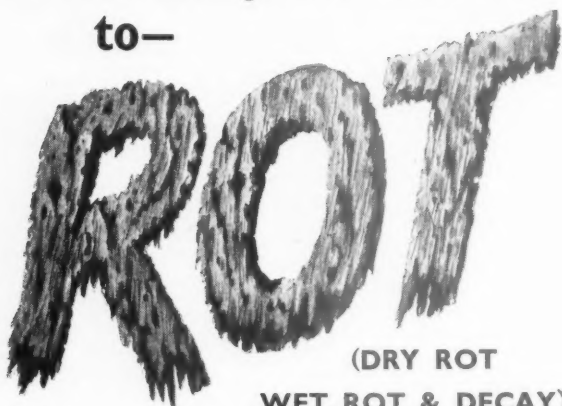
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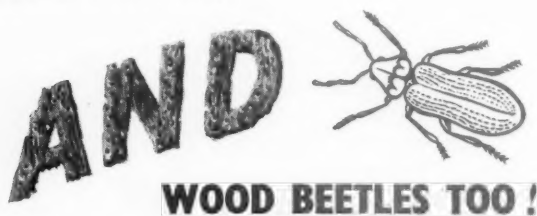
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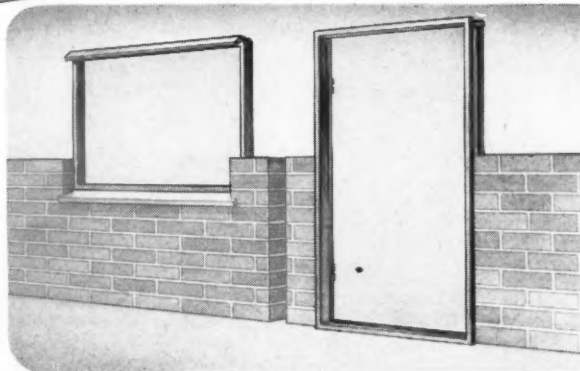
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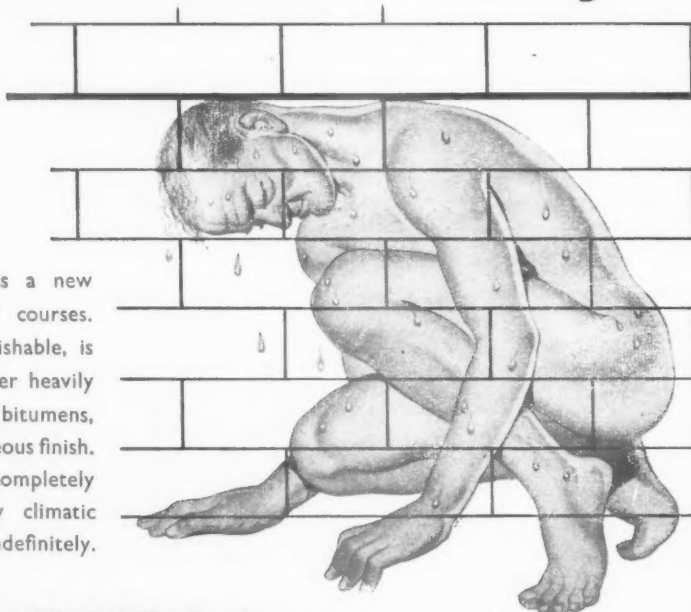
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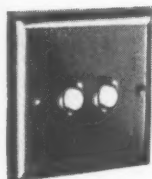
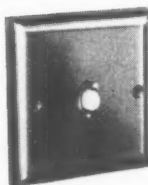




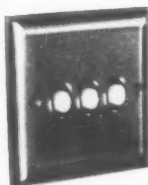


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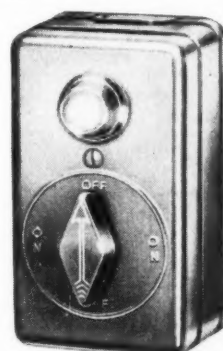
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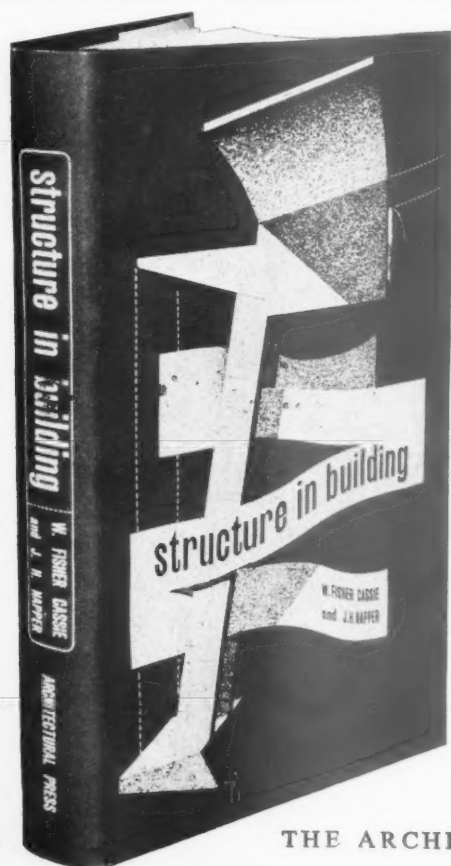
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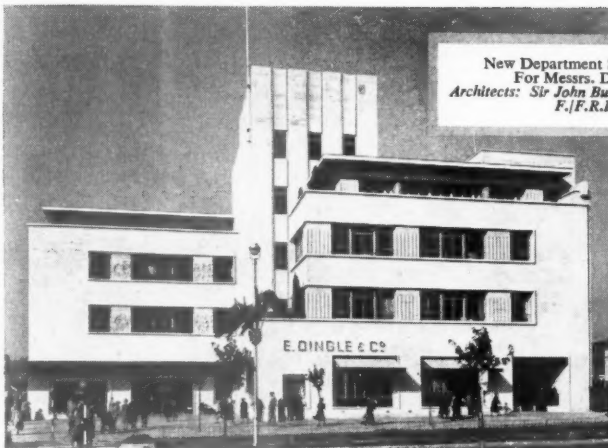
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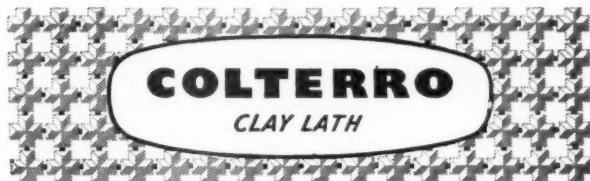
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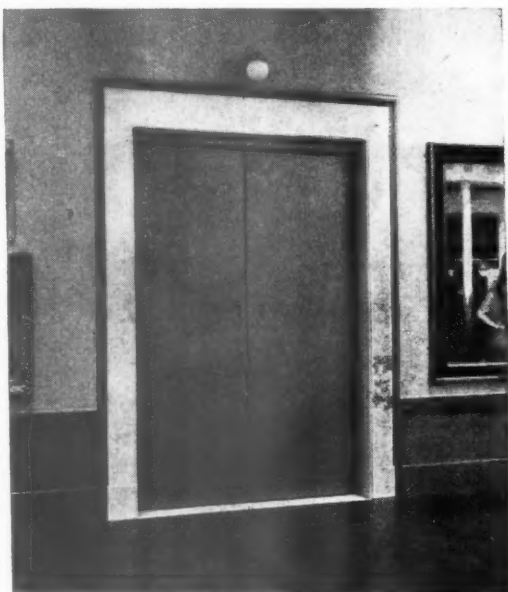
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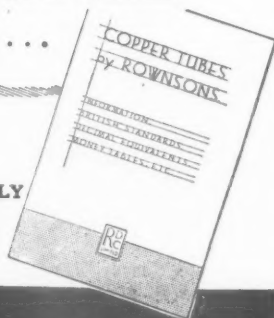
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

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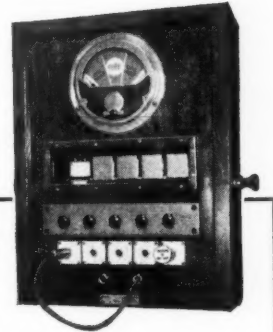
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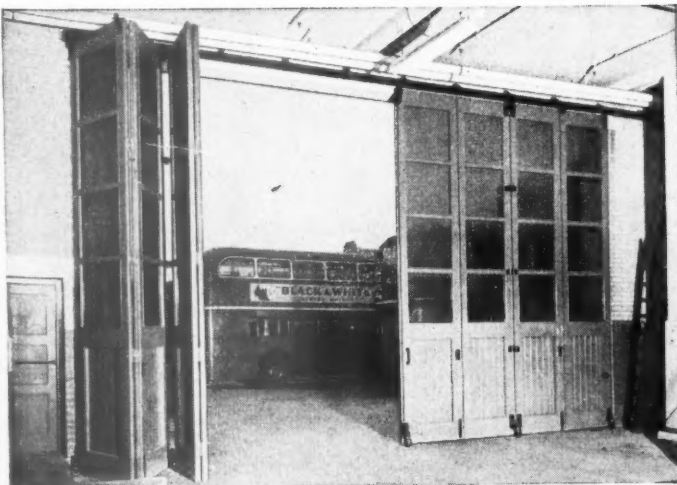
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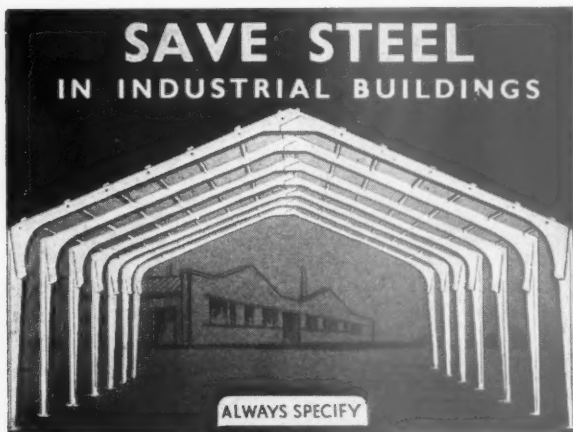
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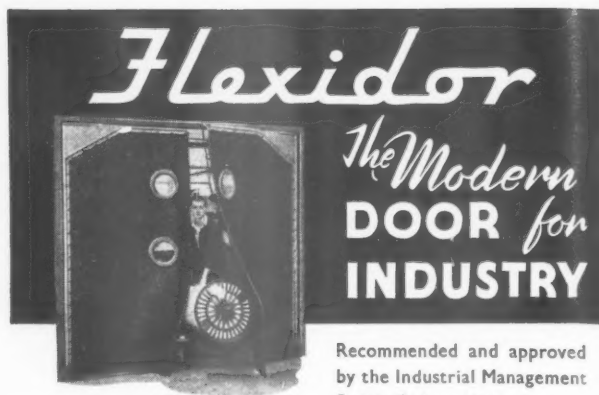
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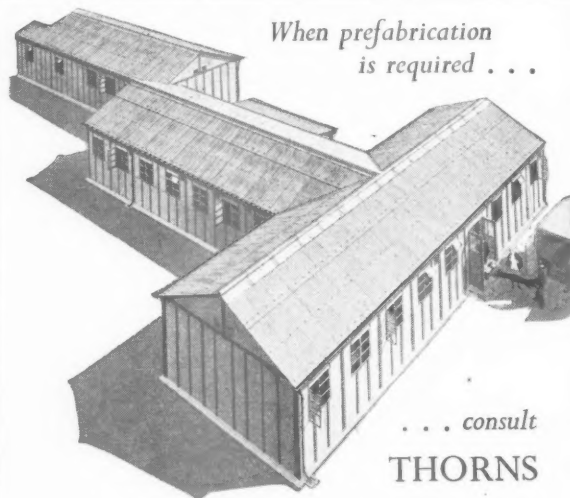
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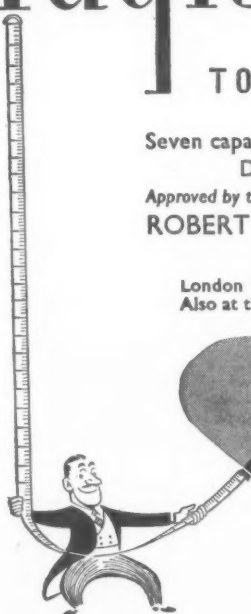
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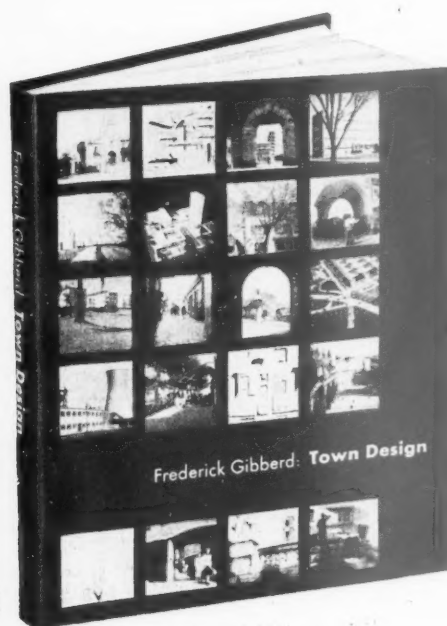
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With this new book Mr. Gibberd fills a gap in existing town-planning literature by providing the first major work to deal, in a comprehensive and thoroughly practical way, with town design as an art. In addition to the original contribution it makes to the subject, this book will be found indispensable as a reference book by architects, engineers, surveyors, town planners, local authorities and all who have any interest in, or influence over, the appearance of the urban scene. It is arranged in four parts dealing with (1) DESIGN OF THE COMPLETE TOWN; (2) CENTRAL AREAS; (3) INDUSTRY; (4) HOUSING. Each part is illustrated by plans, diagrams and photographs, and is followed by a section in which are analysed in detail typical building groups from all over the world.



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Part one DESIGN OF THE COMPLETE TOWN: The Town and its Raw Materials. The Master Plan. *Analyses*: Guildford Master Plan (G. A. Jellicoe); Exeter Master Plan (Thomas Sharp); Harlow New Town Master Plan (Frederick Gibberd); Crawley New Town Master Plan (Anthony Minoprio).

Part two CENTRAL AREAS: The Town Centre. Civic Spaces. Shopping Centres. *Analyses*: Pisa, Piazza Del Duomo; Venice, Piazza and Piazzetta San Marco; Florence, Piazza Della Signoria; Florence, Piazza Annunziata; Ciboure, the Church Square; Taormina, Sicily, Piazza San Agostino; Lansing, Michigan, State Capitol (Smith, Hinchman and Grylls); Harlow New Town, Civic Centre (Frederick Gibberd); Amsterdam, Kalver Straat; Poplar, Lansbury Market; Linda Vista, California, Shopping Centre (Earl F. Giberson and Whitney R. Smith); Coventry, Central Square and Shopping Centre (Donald E. E. Gibson); Nuneaton Town Centre (R. C. Moon and Frederick Gibberd).

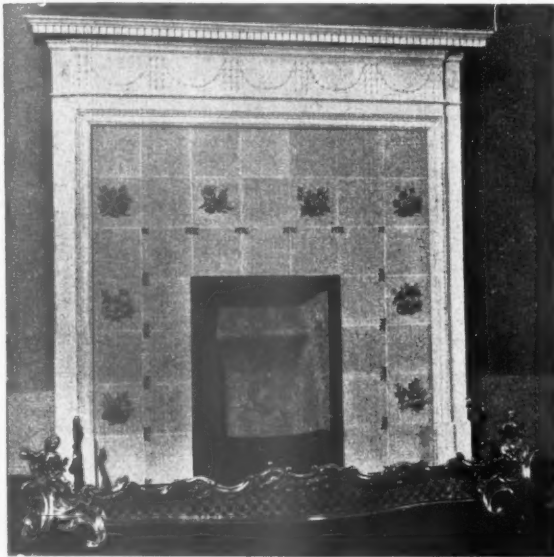
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County Durham, Team Valley Trading Estate (consulting architect, Prof. W. G. Holford); Knutsford Industrial Estate (Yorke, Rosenberg & Mardall); Crawley New Town Industrial Estate (A. G. Sheppard Fidler).

Part four HOUSING: The Neighbourhood. Layout with Houses. Layout with Flats. Dwellings on Steep Sites. Mixed Housing Development. *Analyses*: Bath, Queen Square, The Circus and the Crescent (John Wood the elder, and John Wood the younger); Bath, Landsdown Crescent (John Palmer); Hampstead Garden Suburb (Barry Parker and Raymond Unwin in consultation with Edwin Lutyens); Sidmouth, Mixed Housing Development; Hackney, The Somerford Estate (Frederick Gibberd in association with G. L. Downing, Borough Engineer and Surveyor); Zürich, Katzenbach Estate (Sauter and Dirler); Harlow New Town, Mark Hall Neighbourhood (Neighbourhood plan: Frederick Gibberd and Frank Booth; Housing Units: Area 1, Harlow Design Unit; Area 2, Fry, Drew and Partners; Area 3, Frederick Gibberd); Stockholm, flats at Grondal (Backström and Reinius).

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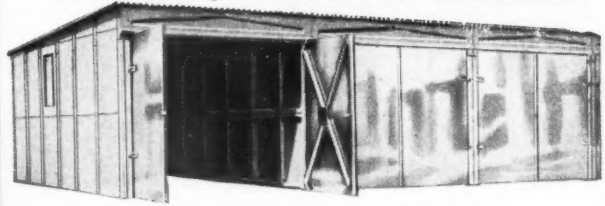


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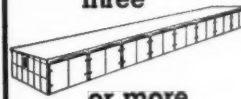
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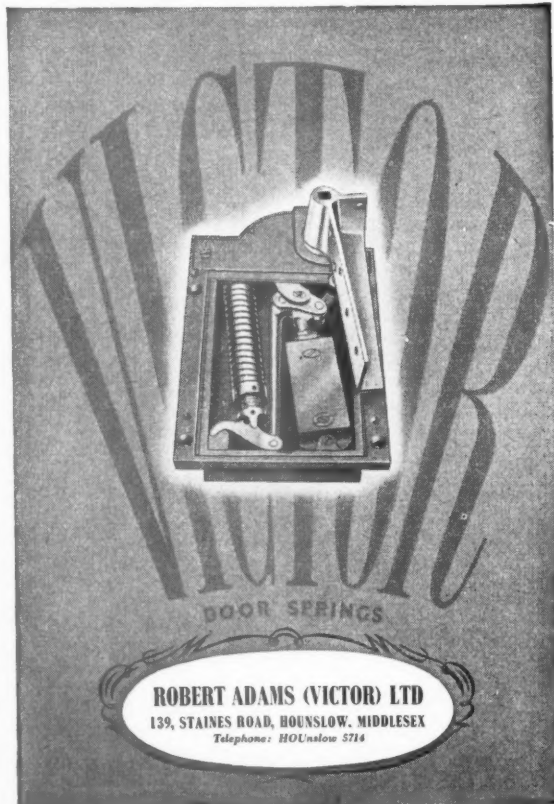
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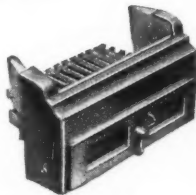


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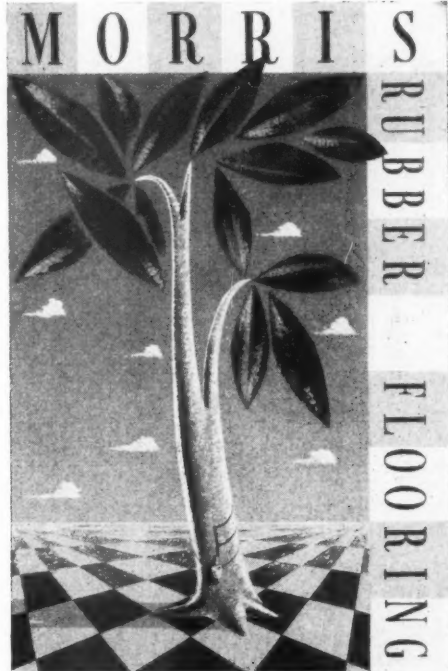
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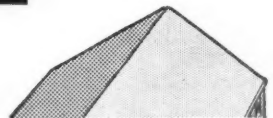


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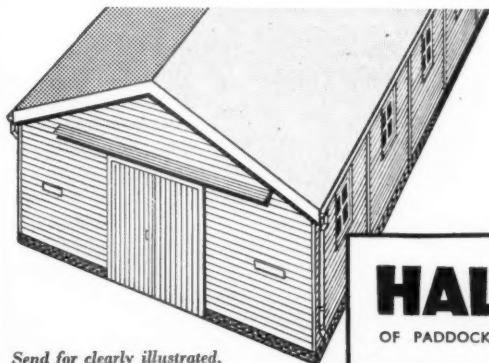
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(d) ASSISTANT ARCHITECT (£710-£225 (3)—£785 p.a.).

(e) ASSISTANT ARCHITECT (£670-£220 (2) × £25-£735 p.a.).

Candidates should preferably have been trained at a recognised School of Architecture, and have had experience in School design and construction.

(f) ARCHITECTURAL ASSISTANT (£495-£115 (3)—£540 p.a.).

Candidates should preferably have attended a full-time course of Architecture and have passed the R.I.B.A. Intermediate Examination or its equivalent at one of the recognised Schools of Architecture.

These appointments are superannuable and subject to medical examination.

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

Further particulars and form of application may be obtained from the County Architect, County Offices, Aylesbury, to whom applications must be delivered by 28th February, 1953. 8184

URBAN DISTRICT OF EAST BARNET. ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments:—

(1) ASSISTANT ARCHITECT (Unestablished Staff), Grade A.P.T. IV (£555-£600 per annum, plus London weighting).

(2) ENGINEERING ASSISTANT (Established Staff), Grade A.P.T. III (£525-£570 per annum, plus London weighting).

(3) DRAUGHTSMAN (Established Staff), Grade A.P.T. I (£465-£510 per annum, plus London weighting).

Application forms may be obtained from the Engineer and Surveyor, Town Hall, Station Road, New Barnet, Hertfordshire, and must be returned to him by not later than Monday, 2nd March, 1953. 8176

COUNTY COUNCIL OF THE COUNTY OF STIRLING.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for two posts of CHIEF ASSISTANT to the County Architect, at a salary of £900 rising by annual increments of £25 to £1,000 per annum. Applicants must possess A.R.I.B.A. qualifications, with administrative experience and ability to organise and supervise technical staff. The appointment will be subject to the County Council's general conditions of service and the successful applicants will require to undergo medical examination for admission to the County Council's Superannuation Scheme. Copies of the conditions of appointment detailing the duties to be performed may be obtained from the undersigned.

Applications, giving full particulars of the candidate's age, qualifications and experience, together with copies of not more than three testimonials, must be lodged with the undersigned within fourteen days of the publication of this advertisement.

JAMES D. KENNEDY, County Clerk.

County Offices, Viewforth, Stirling. 8119

BRACKNELL DEVELOPMENT CORPORATION (BRACKNELL, BERKS.).

Applications are invited for the following appointment:—

ARCHITECT GRADE III—Salary £835 by £50 to £985.

Applicants must be corporate members of the R.I.B.A. and should have had considerable experience in housing work, including administration of contracts.

The appointment will be superannuable under the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

The Corporation cannot at present offer housing accommodation but in approved cases subsistence allowance may be paid to married men until accommodation has been obtained locally, for a maximum period of six months.

Applications, giving full particulars of the candidate's age, qualifications and experience, together with the names of three persons to whom reference can be made, must reach the General Manager, Bracknell Development Corporation, Eley Hall, Binfield, Bracknell, Berks., on or before the 20th February, 1953, in envelopes marked "Architect Grade III." 8148

CAMBRIDGESHIRE COUNTY COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT, GRADE V-VI (£595-£645-£670-£735).

Applications are invited for the above appointment.

Applicants should be Registered Architects or fully qualified Architects and Members of the Royal Institute of British Architects, and should have had experience in design and construction of all types of public buildings.

Applications, stating age, qualifications and experience, accompanied by one recent testimonial, and the names and addresses of two referees, should be sent to the Clerk of the County Council, Shire Hall, Cambridge, not later than Thursday, 19th February, 1953.

The appointment is subject to one month's notice on either side, and to the provisions of the local Government Superannuation Act, 1937.

The selected candidate will be required to pass a medical examination.

CHARLES PHYTHIAN,

Clerk of the County Council.

Shire Hall, Cambridge.

26th January, 1953. 8135

SURREY COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT, Grade III, at a commencing salary of £525 p.a. rising by annual increments of £15 to a maximum of £570 p.a., plus London allowance of up to £30 per annum, according to age.

Applicants must be of good general training and give full details in their applications, and preference will be given to applicants who have passed the Intermediate Examination of the Royal Institute of British Architects.

The appointment will be subject to the provisions of the Local Government Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, should be sent to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 21st February, 1953.

Canvassing, either directly or indirectly, will

disqualify a candidate from consideration.

The County Council will be unable to provide any housing accommodation, and the successful applicant will be expected to make his own arrangements in this direction.

W. W. RUFF,

Clerk of the Council, County Hall, Kingston-upon-Thames. 8175

RURAL DISTRICT COUNCIL OF CHELMSFORD.

HOUSING AND ESTATES DEPARTMENT.

Applications are invited for the undermentioned temporary appointments:—

(a) ARCHITECTURAL ASSISTANT.

(b) TECHNICAL ASSISTANT (Housing).

Applicants for appointment (a) must be experienced in building construction, had a good architectural training in housing and estate development, and be able, with the minimum of supervision, to prepare sketch plans, working drawings and details. Candidates should have had previous experience with a Local Authority, and preference will be given to applicants who have passed, or are about to take, the Intermediate Examination of the R.I.B.A.

Applicants for appointment (b) must have had considerable experience in field work and the supervision of housing contracts, estate road construction, laying of sewers, etc. Duties will also include negotiations with Service Companies for the laying of all main services, etc. Applicants must be at least 30 years of age. A travelling allowance in accordance with the National Joint Council Scale will be paid to the person appointed, who will be required to provide and maintain a motor car.

Salaries for both appointments will be in accordance with A.P.T. Grade II (£495-£540) of the National Scales of Salaries for Local Authorities.

Applications in candidate's own handwriting, stating age, present position, salary, qualifications and experience, and giving the names and addresses of two referees, to be made to the Estates Manager at this office not later than 28th February, 1953.

C. R. PLUMTREE,

Clerk of the Council.

Council Offices, New London Road,

Chelmsford.

5th February, 1953. 8174

THE LONDON HOSPITAL, Whitechapel, E.1.

Vacancy exists for JUNIOR ARCHITECTURAL ASSISTANT. Salary: £415-£415-£505 p.a., plus London weighting.

Applications, giving age, present salary, and particulars of experience, should be sent to the Surveyor. 8162

MIDDLESEX COUNTY COUNCIL—COUNTY ARCHITECT'S DEPT.

ASSISTANT ARCHITECT, Registered, A.P.T. VIII (£790-£865 p.a. incl. £10 less if under 26).

Appointment at grade minimum. Established, pensionable subject to medical assessment and prescribed conditions. Application forms from County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, stamped addressed footscap envelope, to be returned by 21st February (quoting L.690 A.J.). Canvassing disqualifies. 8161

NATIONAL COAL BOARD SCOTTISH DIVISION. Applications are invited for the following appointments at Headquarters in Edinburgh:—

ARCHITECTS, Grade I. Salary scale: £900 × £35-£1,200.

ARCHITECTS, Grade II. Salary scale: £600 × £25-£650 × £30-£900.

The point of entry into the relative scale will depend on the qualifications and experience of the successful applicants.

The National Coal Board is at present engaged on a programme of development of buildings for the Mining Industry in the Scottish Division, and the work offers unlimited scope to Architects interested in Contemporary Industrial Architecture.

Applicants must be Associate Members of the R.I.B.A. and have had considerable experience in the handling of large scale contracts.

Applicants for Grade I appointments should have had experience in the control of staff. The posts are superannuable, and the successful applicants will be required to pass a medical examination.

Applications, supported by two recent testimonials and giving full particulars of age, education, qualifications and experience (in chronological order), present post and salary, should be forwarded to the Establishments Officer, 1, Eglinton Crescent, Edinburgh, 12, within 7 days. 8152

COUNTY BOROUGH OF SOUTHAMPTON requires under N.J.C. service conditions:

ARCHITECTURAL ASSISTANT, salary £525-£570 (A.P.T. III). Should have had experience in Local Authority Housing and should have passed the R.I.B.A. intermediate examination.

Apply, with copies of two testimonials, to the Borough Engineer, Civic Centre, Southampton, by Tuesday, 24th February, 1953. 8188

NEWCASTLE REGIONAL HOSPITAL BOARD. APPOINTMENT OF DEPUTY REGIONAL ARCHITECT.

Applications are invited for the appointment of Deputy Regional Architect, on the permanent establishment of the Board's Headquarters Staff, at a salary of £1,125, rising by annual increments of £50 to £1,325 per annum.

Applicants must be Registered Architects and Associate Members of the Royal Institute of British Architects. Good administrative and architectural experience is an essential qualification, as is also ability to supervise technical staff efficiently and possession of an intimate

knowledge of the design and construction of all types of hospital buildings.
The successful applicant will be expected to deputise whenever necessary in respect of the whole range of the Regional Architect's duties and responsibilities.

The conditions of service will be as laid down by the Whitley Council, and the appointment will be subject to superannuation and be terminable by one month's notice from either side. The successful applicant will be required to pass a medical examination before the appointment is confirmed.

Applications should furnish full details as to age, training, qualifications, past and present appointments, present salary and professional experience, together with the names of three referees, and should reach the Secretary to the Board not later than Friday, the 27th February, 1953.

Dunira, Osborne Road,
Newcastle-on-Tyne, 2. 8191

COUNTY BOROUGH OF BURTON-UPON-TRENT.
ARCHITECTURAL STAFF—GRADES VI AND IV.

Applications are invited for appointments (subject to satisfactory medical examinations) of ASSISTANT ARCHITECT and ARCHITECTURAL ASSISTANT, on the established staff of the Borough Engineer and Surveyor, for work on the educational programme. Salary: Grades A.P.T. VI (£670-£735) and A.P.T. IV (£555-£600). Applications, giving age, education, qualifications, experience, appointments held and present salary, and the names of two referees, to be received by the Borough Engineer and Surveyor, Town Hall, Burton-upon-Trent, by Friday, 20th February, 1953.

H. BAILEY CHAPMAN,
Town Clerk. 8155

Town Hall, Burton-upon-Trent.
31st January, 1953.

MIDDLESEX COUNTY COUNCIL, COUNTY PLANNING DEPT.

DRAUGHTSMAN required. Salary, A.P.T. I (£495, rising to £540 p.a. if 26 years or over). Duties include preparation of plans and maps. Town planning experience desirable. Established subject to medical assessment and prescribed conditions. Application forms from County Planning Officer, 10, Gt. George Street, S.W.1, to be returned by 27th February (quoting L.701 A.J.). Canvassing disqualifies. 8190

BOROUGH OF TOTTENHAM.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
Applications are invited for the vacant estab-

lished post of SURVEYING ASSISTANT, at a salary in accordance with Grade A.P.T. II, III or IV of the National Scales, i.e., £495-£540, £525-£570 or £555-£600, plus London weighting allowance of £10 to £30 p.a., according to age.

Candidates should have a technical knowledge equivalent to the standard of the Intermediate Examination of the R.I.C.S. (Sub-Division III—Building), and be able to carry out surveys for alterations and maintenance of buildings. Experience of valuation work would be an advantage.

The Council are unable to offer housing accommodation to the successful candidate.

Form of application, general conditions of service and further particulars may be obtained from the Borough Engineer, Town Hall, Tottenham, N.15, and applications must be delivered not later than Tuesday, 24th February, 1953.

M. LINDSAY TAYLOR,
Town Clerk. 8168

CITY OF WAKEFIELD.
CITY ENGINEER'S DEPARTMENT.
TOWN PLANNING ASSISTANT—GRADE A.P.T. I (£465-£510).

Applications are invited for the above superannuable appointment from persons with experience in a Town Planning office, and preference will be given to Student Members of the Town Planning Institute.

Applications, endorsed "Town Planning Assistant," stating age, qualifications, present and previous appointments and details of experience, together with the names of two referees, should be sent to me not later than the 27th February, 1953. Canvassing will disqualify.

W. S. DES FORGES,
Town Clerk. 8167

Town Hall, Wakefield.
3rd February, 1953.

BOROUGH OF ILFORD.
APPOINTMENT OF TEMPORARY CLERK OF WORKS (ROADS AND DRAINAGE WORKS).
BOROUGH ENGINEER'S DEPARTMENT.

Applicants must have had considerable experience in the supervision of roads and sewer construction and be capable of measuring up for interim and final payments.

Salary Grade A.P.T. II, viz., £495 by £15 to £540 per annum commencing at £495, plus London Weighting, which is £30 per annum at age 26 or over.

The appointment will be superannuable and subject to one month's notice on either side, to the National Conditions of Service and to medical examination.

Forms of application, obtainable from the Town Clerk, Town Hall, Ilford, should be submitted by the 28th February, 1953.

Canvassing directly or indirectly is forbidden and would disqualify a candidate. 8186

NORTHAMPTON COUNTY BOROUGH.
DEPARTMENT OF BOROUGH ARCHITECT AND TOWN PLANNING OFFICER.

(1) SENIOR ASSISTANT ARCHITECT (TOWN PLANNING) A.P.T. VI (£670-£735).
(2) ASSISTANT ARCHITECT (SCHOOLS) A.P.T. VI (£670-£735).

Particulars of above appointments and forms of application, to be returned by 25th February, may be obtained from the Borough Architect's Department, Guildhall, Northampton.

Candidates must be Registered Architects and, for appointment (1), should hold a planning qualification.

C. E. VIVIAN ROWE,
Town Clerk. 8187

CITY OF NOTTINGHAM.
CITY ENGINEER'S DEPARTMENT.
Applications are invited for the appointment of:

ARCHITECTURAL ASSISTANT.
Grade A.P.T. III (£525-£570).

Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects or had good drawing office experience.

The appointment is subject to the Local Government Superannuation Acts, and the successful candidate will be required to pass a medical examination.

Applications are to be made on forms to be obtained from R. M. Finch, Esq., O.B.E., M.I.C.E., City Engineer and Surveyor, Guildhall, Nottingham, to whom they should be returned not later than 4th March, 1953.

T. J. OWEN,
Town Clerk. 8189

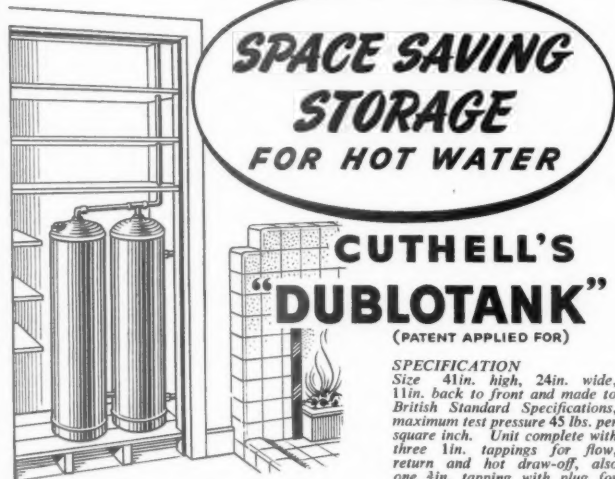
The Guildhall, Nottingham.

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
ARCHITECT. Grade I (£1,002-£1,143) for Housing Division (two storey house development and layout). A.R.I.B.A.

Particulars with application form, for return by 27th February, from Architect, AR/EK/H.1/3, County Hall, S.E.1. (107) 8192

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
ARCHITECTURAL ASSISTANTS (up to £696) for Historic Buildings Section.

Application form, for return by 2nd March, from Architect, AR/EK/HR/2, County Hall, S.E.1. (108) 8193



SPECIFICATION
Size 41in. high, 24in. wide, 11in. back to front and made to British Standard Specifications, maximum test pressure 45 lbs. per square inch. Unit complete with three 1in. tapplings for flow, return and hot draw-off, also one 3/4in. tapping with plug for secondary return if required.

The "Dublotank" is designed to fit into narrow fireside cupboards and only needs a wall depth of 11in. In its standard form the "Dublotank" is extremely strong and is suitable for a working head of up to five flats.

- Low initial cost. Costs only a few shillings more than ordinary circular tank of equal capacity and strength.
- Designed to fit any fireside cupboard, thus giving higher efficiency because of short flow and return.
- Suitable for installation in buildings with head of water up to 5 flats.
- Is supplied with standard immersion heater boss and plug.

Approved by Water Depts. of Edinburgh and Glasgow.

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Advances increased to 90 per cent. of the controlled selling price.

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Particulars from:—

The Secretary

A.B.S. INSURANCE DEPARTMENT

66 Portland Place, London, W.1

Tel: LAngham 5721

HUYTON-WITH-ROBY URBAN DISTRICT COUNCIL.

JUNIOR ARCHITECTURAL ASSISTANT, GRADE A.P.T. III (£325-£350). Applications are invited for the above-mentioned appointment in the Architect's Department. Candidates must have passed or have been exempted from the Intermediate Examination of the R.I.B.A., and must possess the necessary experience laid down by the National Joint Council for Local Authorities.

- The appointment will be subject to:
- (1) The National Scheme of Conditions of Service.
 - (2) The provisions of the Local Government Superannuation Act, 1937.
 - (3) The Standing Orders of the Council.
 - (4) The successful applicant passing a medical examination.
 - (5) Termination by one calendar month's notice on either side.

Applications, stating age, qualifications, present and past employment, and details of experience, together with the names of two referees, to be sent to the undersigned by the 20th February, 1953.

Canvassing, either directly or indirectly, disqualifies.

Relationship to any member or officer of the Council must be disclosed.

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

Council Offices, Huyton.
9th February, 1953. 8194

Competition

6 lines or under, 12s. 6d.; each additional line, 2s.

THE UNIVERSITY OF SHEFFIELD ARCHITECTURAL COMPETITION.

The University of Sheffield invites Architects resident in Great Britain to submit, in competition, designs for certain buildings to be erected on sites within the central area of the University, together with a lay-out and sketch elevations for other buildings also to be located within that area. Assessors: Sir Percy Thomas, O.B.E., P.P.R.I.B.A., Mr. F. R. S. Yorke, F.R.I.B.A., and Mr. Gerard Young, J.P.

Premiums: (1) £5,000; (2) £3,000; (3) £2,000. Last day for submitting designs: 31st October, 1953.

Last day for questions: 14th March, 1953. Conditions may be obtained on application to: THE SECRETARY, Architectural Competition, The University, Sheffield.

Deposit: £2, which will be returned on receipt of bona fide designs, or return of Competition documents at least four weeks before date of submitting designs. 8139

Architectural Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

ARCHITECT'S ASSISTANT, school trained, above Inter. R.I.B.A. standard, required for small country practice. Capable designer. Details, references and salary required, to Cecil Ogden & Son, 1, Market Street, Lutterworth, Rugby. 8141

ASSISTANT required with office experience, small London office, with varied practice, contemporary design. Must be quick, neat draughtsman, with sound practical knowledge. Good prospects for keen man. Salary: £500 p.a. Write, giving full particulars, Box 8144.

SENIOR ARCHITECTURAL ASSISTANT required, in Essex, with a view to Partnership. Office eighteen miles from London, electric train service. State experience and salary required. Box 8181.

REQUIRED, two keen assistants, one with three years' and one with two years' minimum office experience. Salaries £550 and £450 respectively plus generous profit-share. Clifford Culpin & Partner, 3 Southampton Place, W.C.1. 8177

EXPERIENCED SENIOR ASSISTANT, with first-class constructional ability, required. Write, stating experience, salary required, to Louis de Soissons, A.R.A., & Partners, Midland Bank Chambers, Welwyn Garden City, Herts. 8164

ARCHITECTURAL Staff required by London Firm of Architects: (a) **SENIOR QUALIFIED ASSISTANT**; (b) **ASSISTANTS**, R.I.B.A. Intermediate standard, preferably those having some experience of surveying and levelling. Apply by letter, stating experience, age, and salary required. Box 8165.

ARCHITECTURAL ASSISTANT required in the London Co-operative Society Works Department, Whitta Road, Manor Park, E.12. Applicants should have reached Intermediate R.I.B.A. standard and have had experience in the layout and design of commercial and industrial buildings. The successful candidate will be required to pass a medical examination and, after a short probationary period, to participate in the Society's staff pension scheme (contributory). Commencing salary £496 per annum (inclusive). Write to Staff Office (A3), 54, Maryland Street, London, E.15. 8163

SENIOR ARCHITECTURAL ASSISTANT required for work first in London and subsequently in South Wales. Must be prepared to control the detailing of a large scale contemporary industrial project. Salary, £650-£750, according to ability. Box 8160.

ARCHITECTURAL ASSISTANT required immediately, with practical experience for general practice. Salary: £400 to £500 p.a. Apply H. N. Jepson & Partners, Midland Bank Chambers, Nuneaton. 8158

JUNIOR ARCHITECTURAL DRAUGHTSMAN. Wanted to work under supervision in country practice in North Essex. Write, stating salary required, experience, etc. Box 8157.

NAAFI requires two qualified ASSISTANTS, within the Architects' Branch at Headquarters, Claygate; a sound knowledge of working drawings essential for a variety of interesting work. Reply in first instance in writing, giving full details, to Director of Works and Buildings, NAAFI, Esher, Surrey. 8156

ARCHITECTURAL ASSISTANT required by a London firm of designers, manufacturers and exporters of prefabricated houses. Work entails detailing components in steel and timber, house designs and perspectives. Journeys overseas envisaged. Write, stating age, experience and present salary. Box 8154.

ARCHITECTURAL ASSISTANT required in Reading. Intermediate or higher standard. Housing and industrial experience. Salary by arrangement. Write Box 8169.

JUNIOR ASSISTANT, of Intermediate standard, required by Architect in West End, specialising in housing. Box 8173.

ARCHITECTURAL ASSISTANT required, R.I.B.A. Intermediate standard, preferably with knowledge of industrial design. Write, stating age, experience and salary desired, to E.M.A., Cadbury Brothers, Ltd., Bournville, Birmingham. 8170

ARCHITECTURAL ASSISTANT required, with some surveying experience. Inter. standard at least, for general Town and Country practice near Derby. Full particulars to Box 8171.

ARCHITECTURAL ASSISTANT required immediately for small general practice, about R.I.B.A. Intermediate standard, with office experience. Must be good draughtsman, with knowledge of preparing sketches and working drawings. Principally domestic and factory work. Apply in writing, with brief details of experience, salary and age, to Booth & Booth, Leighton House, Potters Bar, Middx. 8172

SENIOR ARCHITECTURAL SURVEYOR required in the Architect's Department of Boots Pure Drug Co., Ltd., for liaison work with the Company's Estate Department. The work includes the inspection and measured survey of properties in England, Wales and Scotland, with reports upon their structural condition; the preparation of plans for and the reading over of leases, conveyances and other legal documents—dilapidations, levelling, estimating property insurance valuation, negotiations with local authorities, property owners, and so on. Good knowledge of building practice and law, and especially of London Building Acts, is essential. Considerable travelling by train is involved from the headquarters in Nottingham. Reply to The Chief Architect, Boots Pure Drug Co., Ltd., Station Street, Nottingham, clearly stating name, age, whether married or single, qualifications, full details of experience and positions held, and salary required, in that order. The post will be permanent and pensionable after a minimum of six months' satisfactory service. 8196

Architectural Appointments Wanted

SENIOR ASSISTANT (32) requires responsible situation in small office. Central or South London preferred. 15 years' comprehensive experience. Box 637.

ARCHITECTURAL DRAUGHTSMAN AND ASSISTANT (29), with experience in working drawings of domestic and industrial properties, requires post in Architect's office. Box 642.

ARCHITECT seeks position as Senior Assistant in the London Area; age 36; 19 years' experience. Box 648.

DESIGNER DRAUGHTSMAN seeks position in London or Home Counties. Long experience in first class offices. Commencing work immediately. Box 655.

SOUTH OR WEST ENGLAND. Assistant preparing Final requires post. Office trained general practice, levelling, etc. Car driver. Box 655A.

ASSISTANT, Final Standard, requires post in Redhill Croydon area. Three years' school training and three years' office experience. Sutcliffe, 35, Somers Road, Reigate, Surrey. 8180

ASSISTANT, available March, requires position, having prospects, with Architect, where contemporary outlook, initiative, enthusiasm and experience is appreciated and scope to design allowed. Kindly reply Box 656.

JUNIOR ARCHITECTURAL ASSISTANT, (22), evening student, 3 years' office experience, seeks post in London office engaged on Catholic Church work. Box 8179.

ARCHITECT, 25 years' experience, desires permanent responsible position, experienced, factories, licensed premises, hospitals, housing and commercial buildings, working drawings, specifications, quantity surveying, general administration, etc. Birmingham and Warwickshire Area preferred. Box 654.

ARCHITECTURAL ASSISTANT (27, female), school trained, Finals standard, requires post in Home Counties as from mid-March. Box 652.

BOURNEMOUTH district—A.R.I.B.A., 7 years' office experience, requires Junior or Senior appointment or Partnership. Box 650.

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Southwark, S.E.1

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STUDENT R.I.B.A. (woman, 22, 4 years' school training and 2½ years' comprehensive office experience, requires post in London or N. Surrey. Last 6 months as Chief Assistant in small general office. Box 651.

ARCHITECT (A.R.I.B.A.), over 20 years' experience in industrial work, shops and offices. University training. West Country preferred, but not essential. Salary £800 p.a. Box 649.

ASSISTANT R.I.B.A., Final standard, requires post with a future. Part school trained, office experience, since 1947, in most types of building, including surveys, specifications, etc. Box 653.

Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

SECRETARY/BOOKKEEPER required, female, for Architect's office in Maidenhead. Full details to Box 8151.

DRAUGHTSMAN/DESIGNER required as senior assistant in drawing office dealing mainly with interior fittings, counters, etc. Must be able to draw to scale and produce perspectives, etc. Situation near Waterloo/London Bridge. Write stating age, experience, and salary required, to Box 8178.

JUNIOR DRAUGHTSMAN required for finished drawings under supervision. Experience of interiors useful, but not essential. Box 8159.

Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.

DUPLICATING AND TYPEWRITING, Bills of Quantities, Specifications, etc. All grades of Office Staff supplied. Trinity Bureau, 50, Bedford Street, Strand, W.C.2. TEM. 3002. 7606

SENIOR EXECUTIVE seeks responsible sales and administrative position in progressive company. Extensive personal connections with architects, Government Departments, and local authorities. Excellent references. Box 7880.

SURVEYING and Levelling of Building Sites and Measured Drawings undertaken by experienced Surveyor at moderate charges. Box 6683.

TYPEWRITING AND DUPLICATING, Specifications, Bills of Quantities, etc., promptly and efficiently executed at reasonable charges. Miss Garnett, Southlands, Wadhurst, Sussex (Tel. 394). 8153

SURVEYING and Levelling of Sites, Bills of Quantities, Variation Accounts, Survey of Buildings and Reports. Qualified Surveyor. LIV. 1839. Box 8195.

For Sale or Wanted

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The Incorporated Association of Architects and Surveyors will hold examinations at Intermediate and Final grades in the following Sections during the week beginning 8th June, 1953:—

Architectural.
Quantity Surveyors.
Building Surveyors (Municipal).
Building Surveyors (Non-Municipal).
Land Surveyors.

The Final examinations in the above sections have now been sub-divided into two parts, and candidates may elect to take one part only.

Direct Final examinations for candidates who are 35 years of age or over, with ten years' approved professional employment, will also be held in the Surveying Sections only. A Direct Final examination in two parts will also be held in the Fire Surveyors' Section.

The examinations will be held in London, and at selected provincial centres. Applications from candidates for permission to sit, made on the prescribed form, must be received not later than Monday, 16th March, 1953.

Full information on application to the General Secretary, I.A.A.S., 75, Eaton Place, London, S.W.1.

N.B.—It has been found necessary to depart from the usual practice of holding the examinations in May owing to the Whitsun holiday and the Coronation.

Notice is also given that the Association no longer conducts a Preliminary examination. Information as to the requisite standard of education will be supplied on request. 8026

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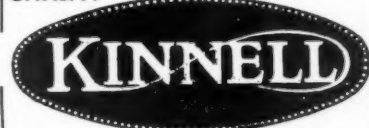
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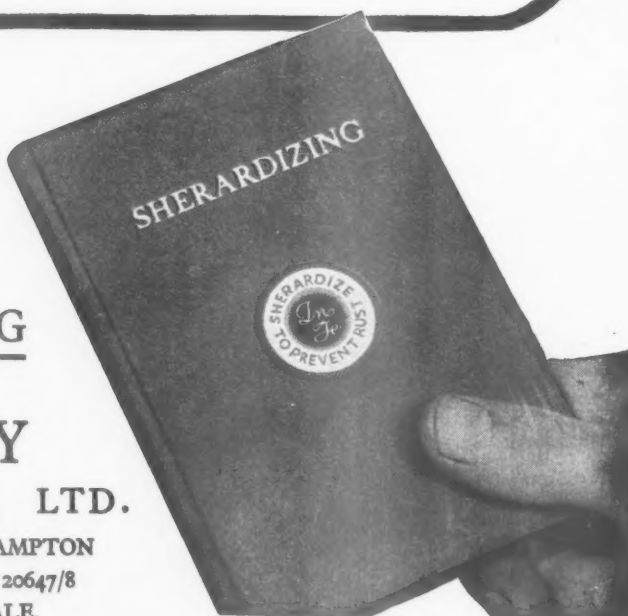
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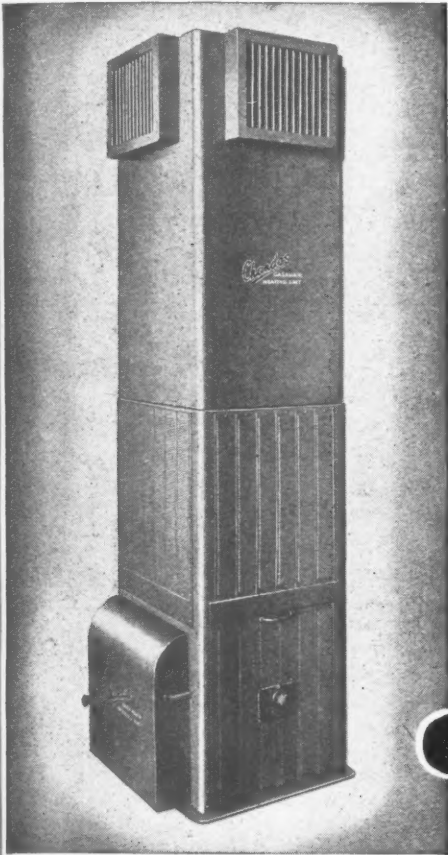
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