

THE ARCHITECTS' JOURNAL



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No. 3061]

[Vol. 118

THE ARCHITECTURAL PRESS

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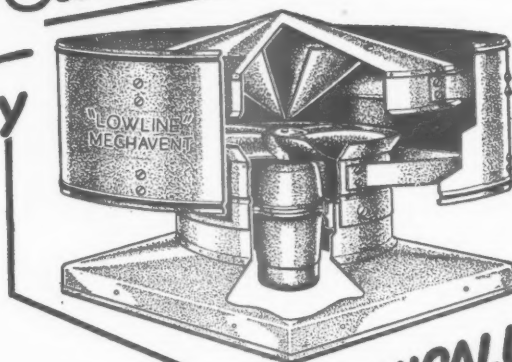
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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Fe one week, Ig to Z the next. In all cases where 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	Museum 1783
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	Museum 7197/5176
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	Abbey 6172
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, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, 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 Asphalt Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 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.	Abbey 4504
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 5051
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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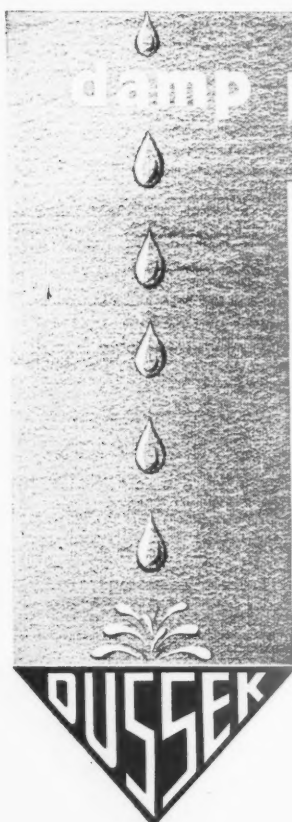
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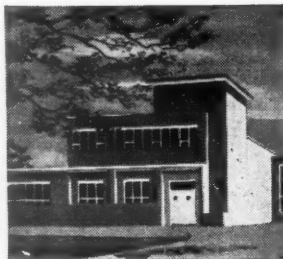
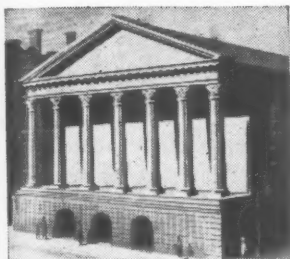
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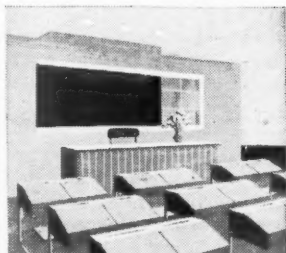
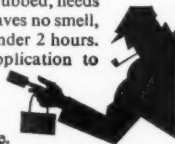
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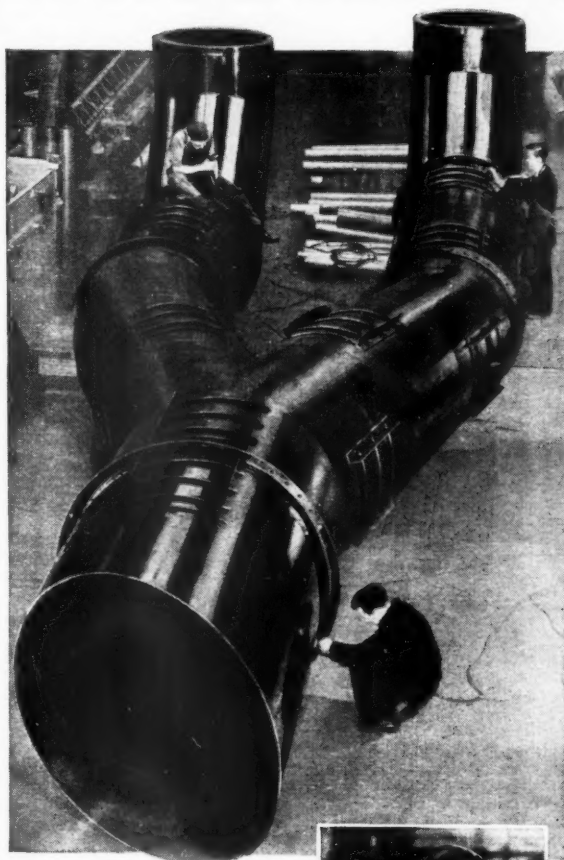
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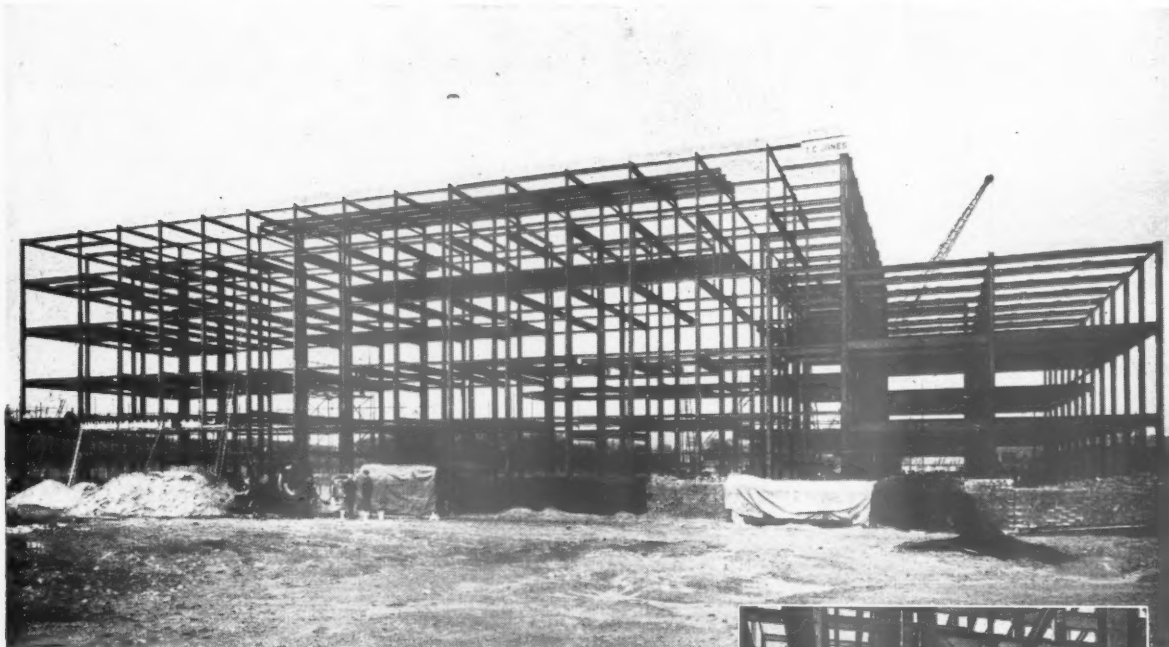
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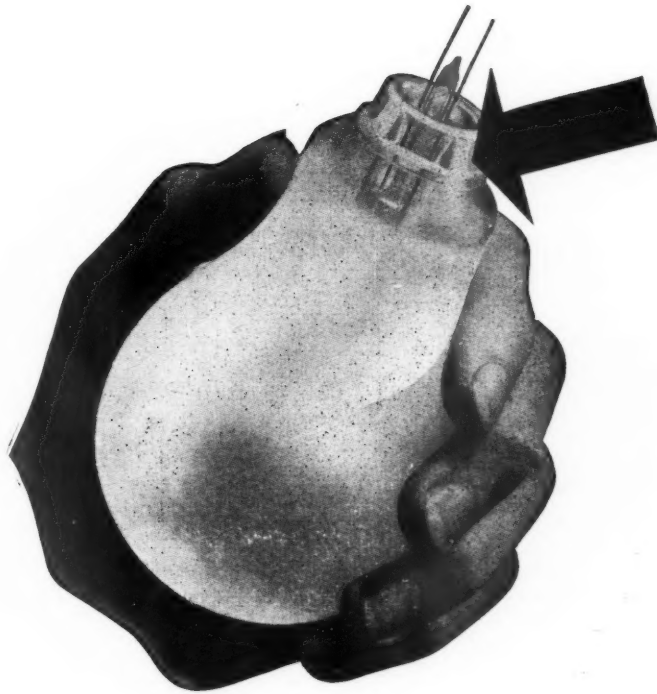
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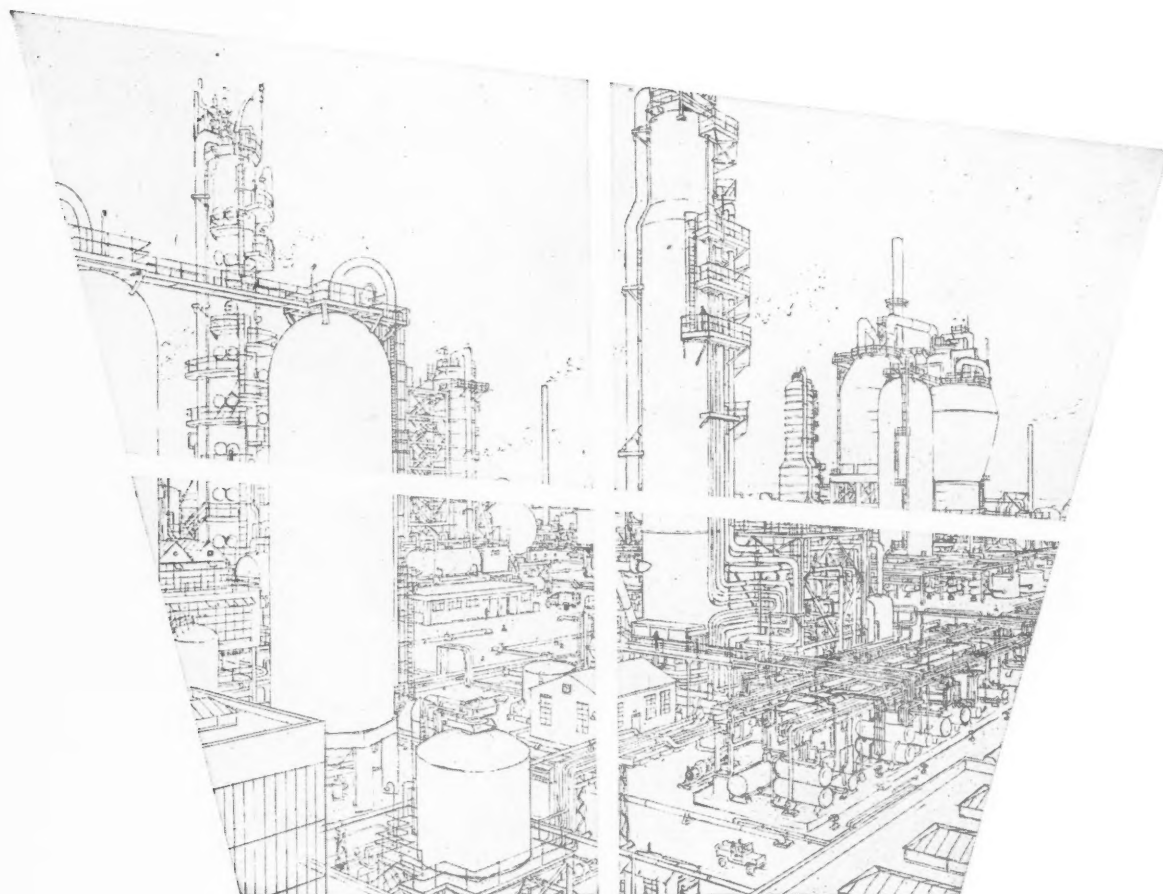
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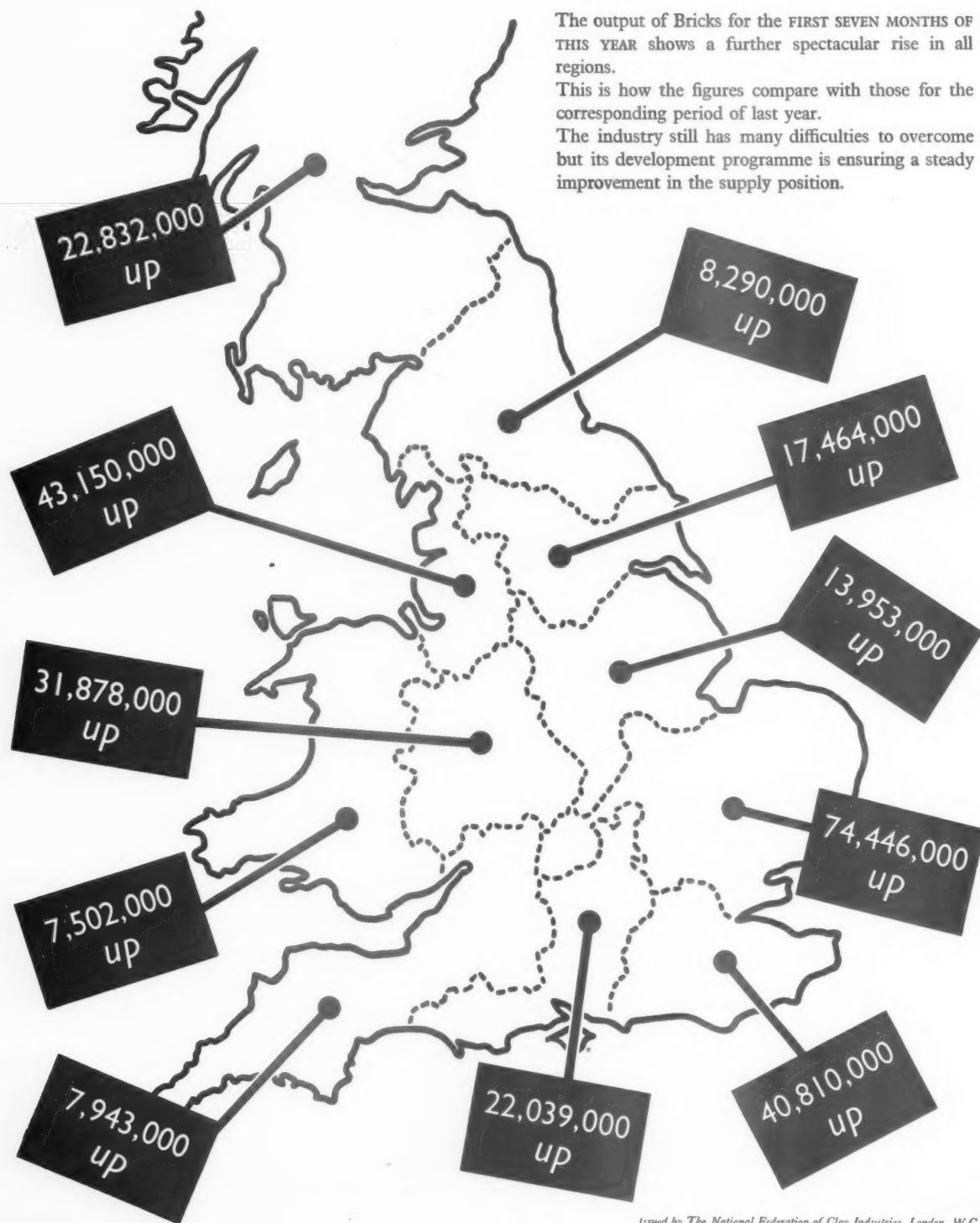
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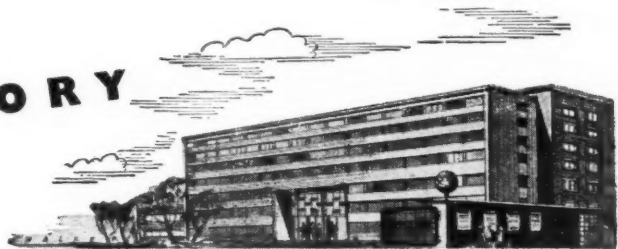
Issued by The National Federation of Clay Industries, London, W.C.1.



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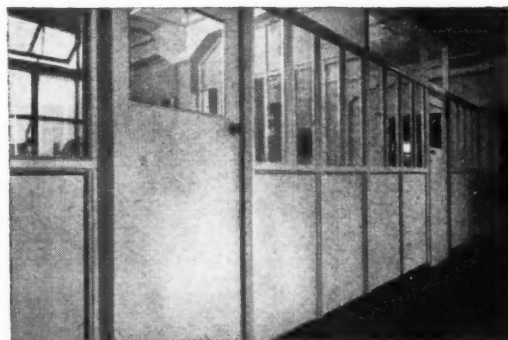
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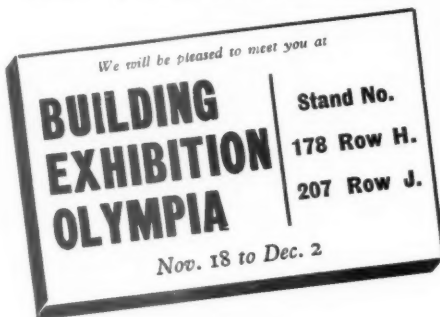


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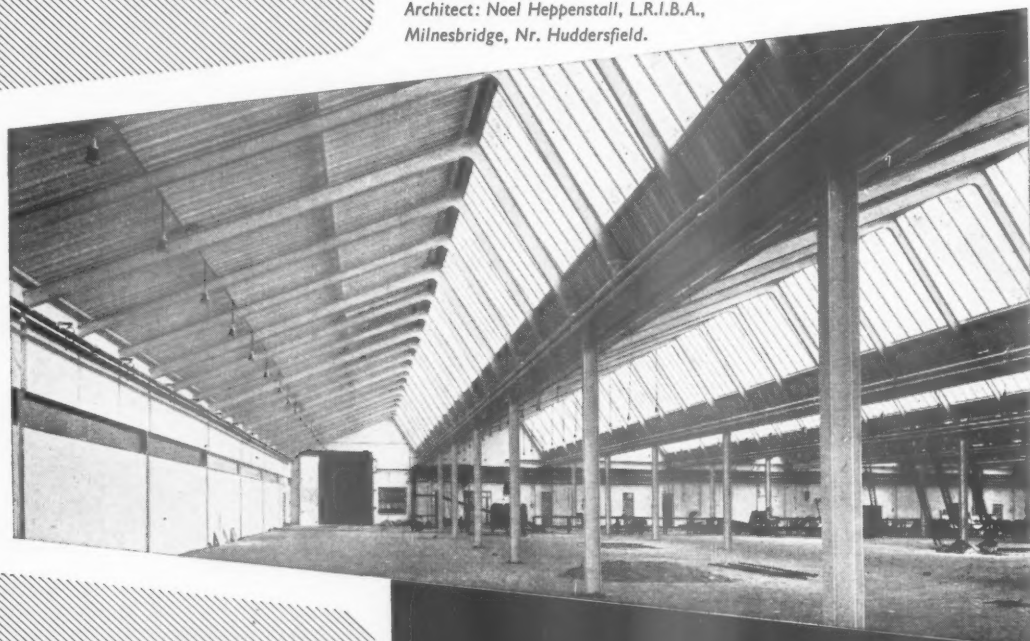
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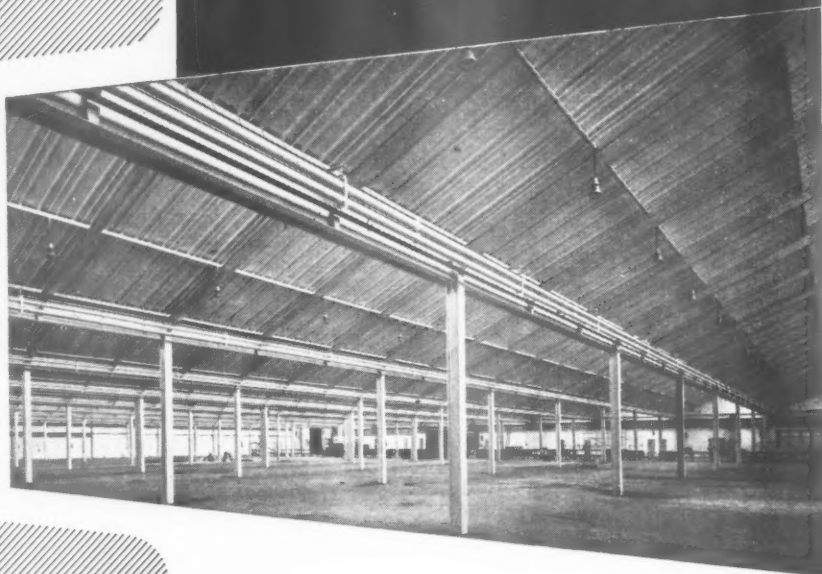


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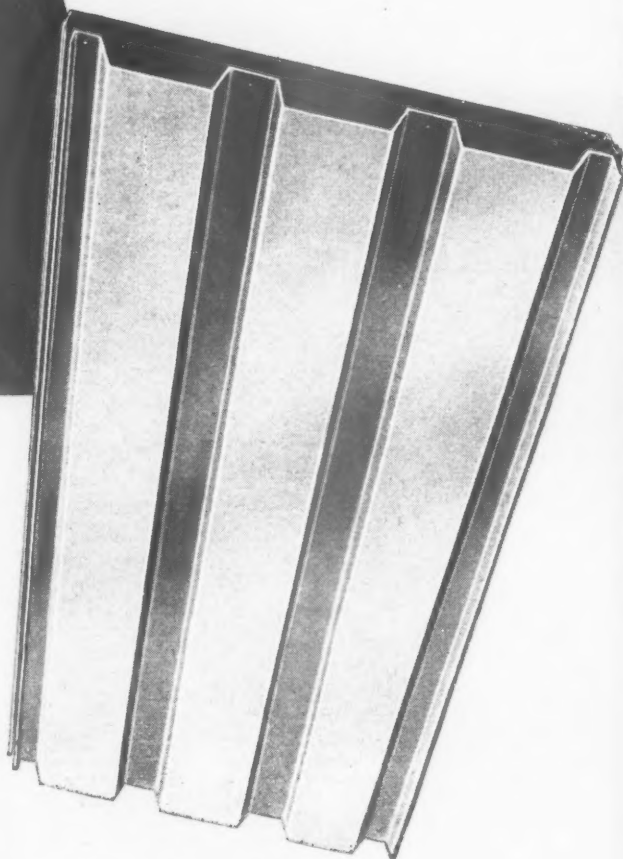


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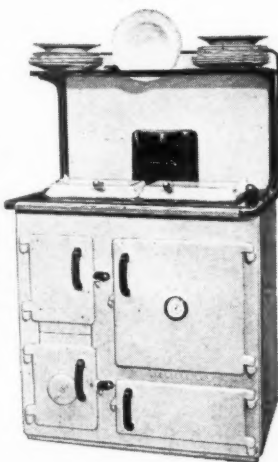
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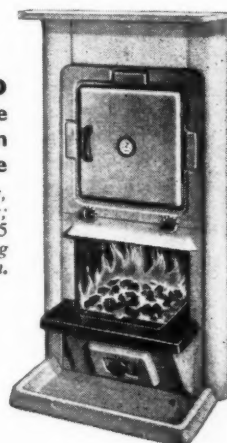
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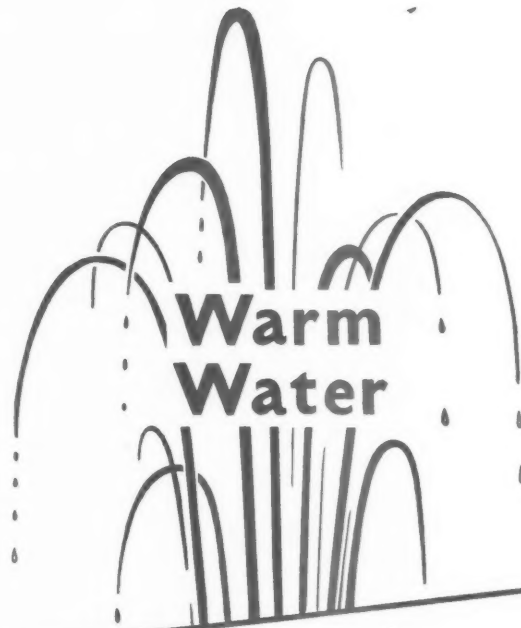
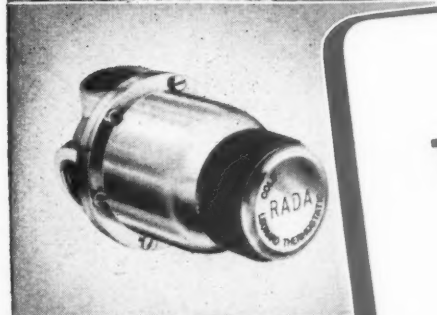
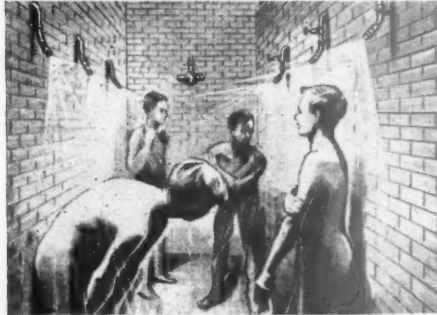
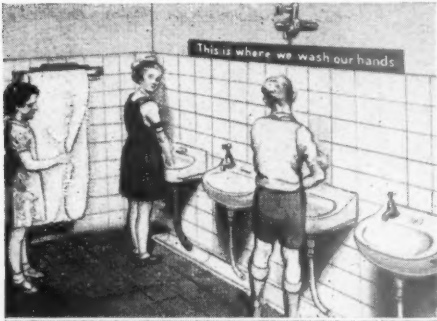
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for AUTOMATIC mixing
of hot and cold water

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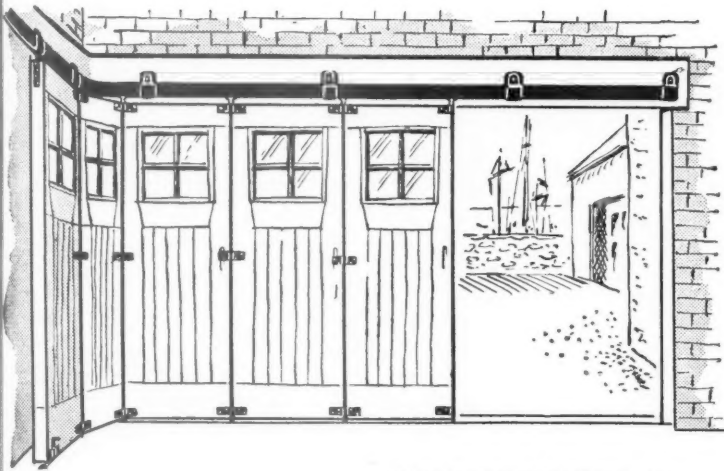
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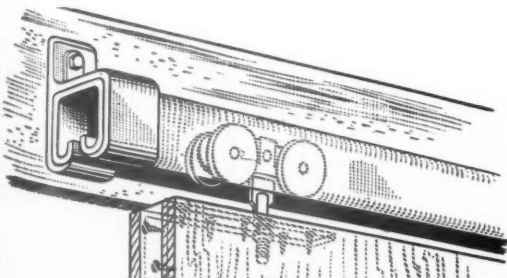
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CENTRE HUNG FOLDING GEAR



STRAIGHT SLIDING GEAR

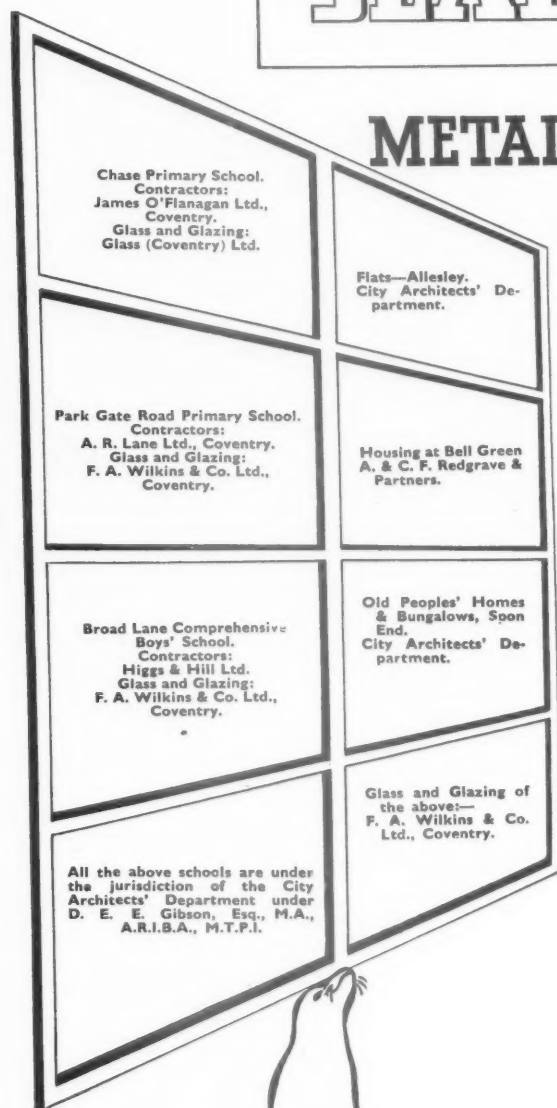
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SEALON

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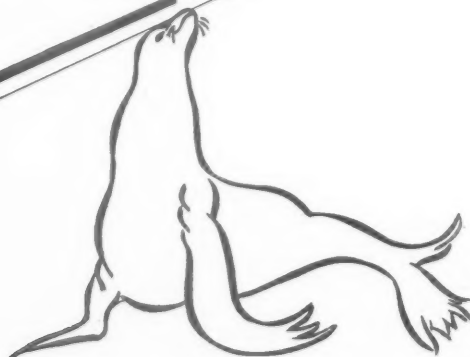
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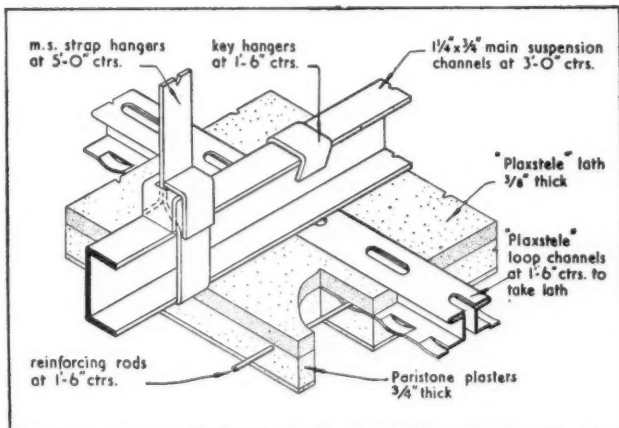
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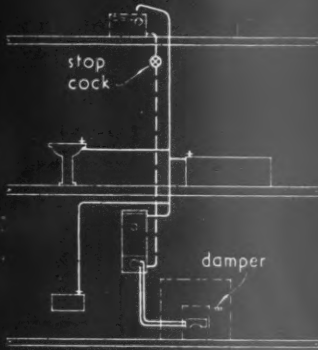


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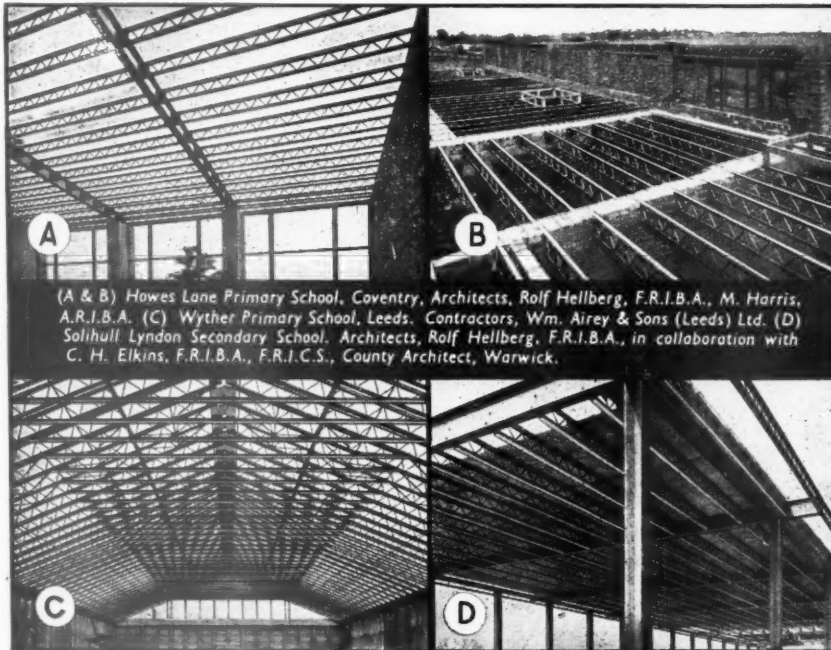
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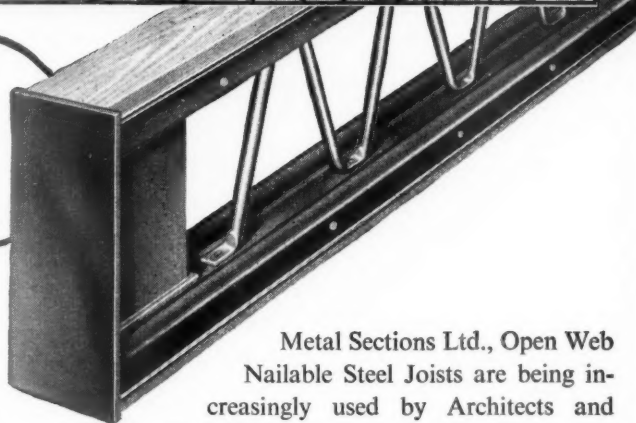
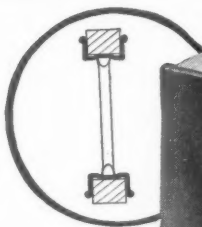
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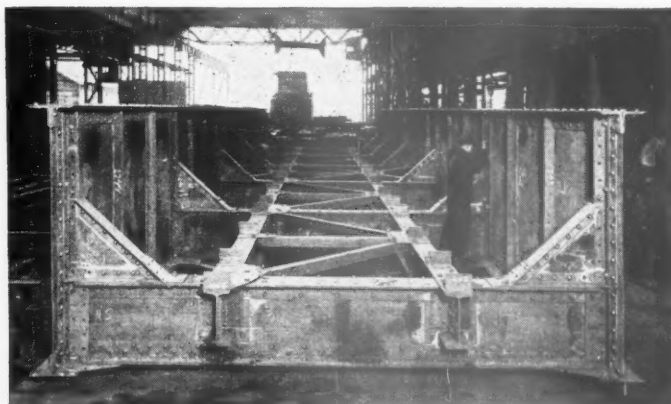
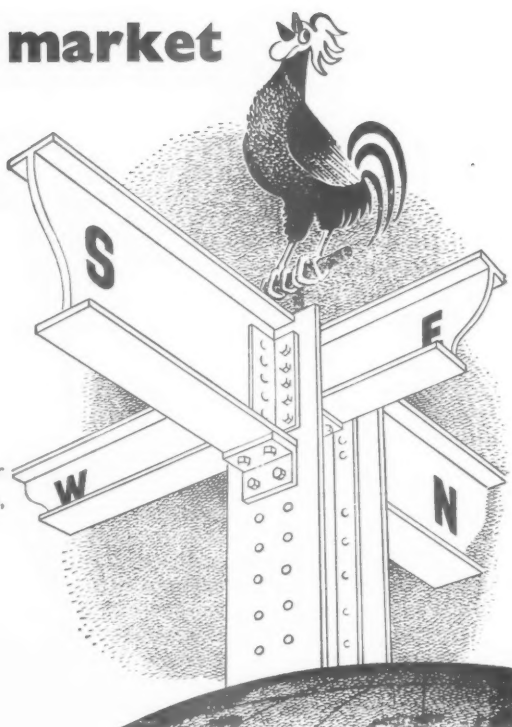
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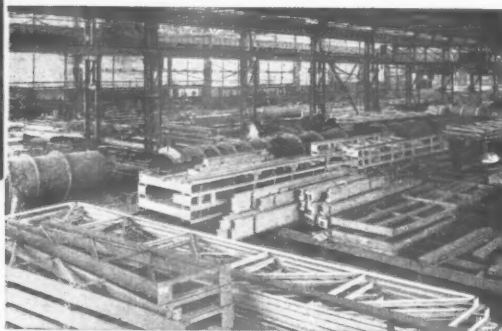
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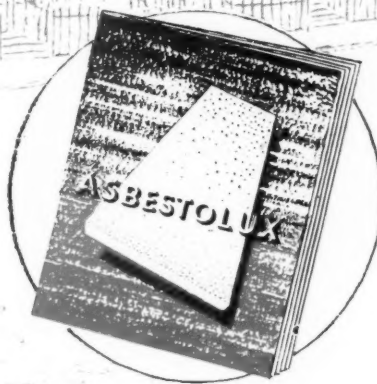
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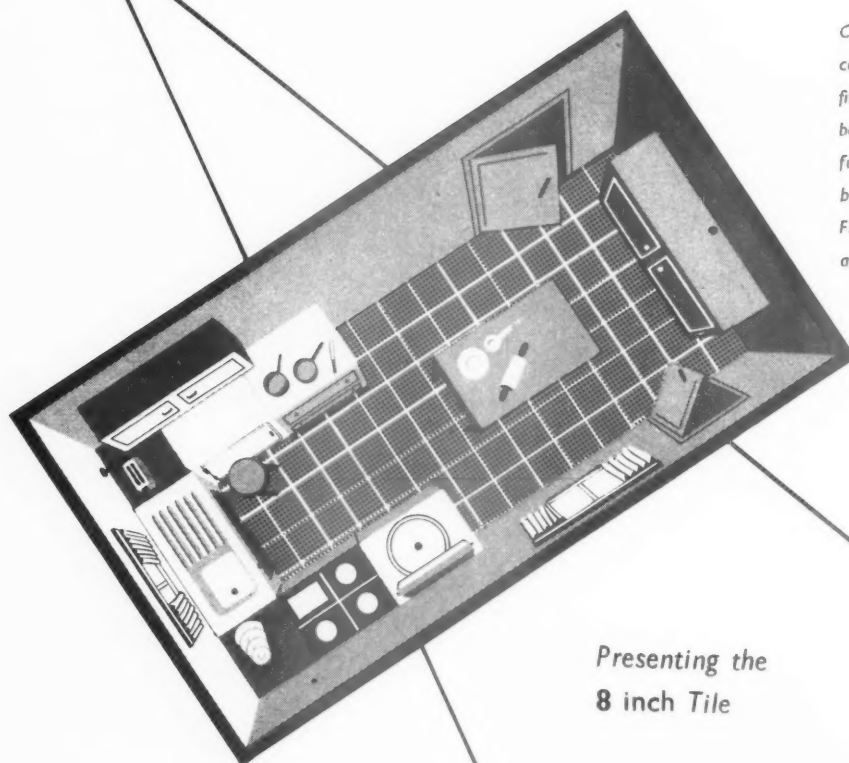
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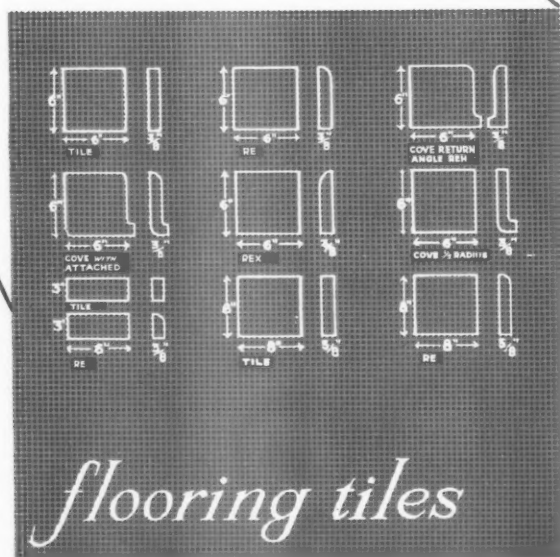


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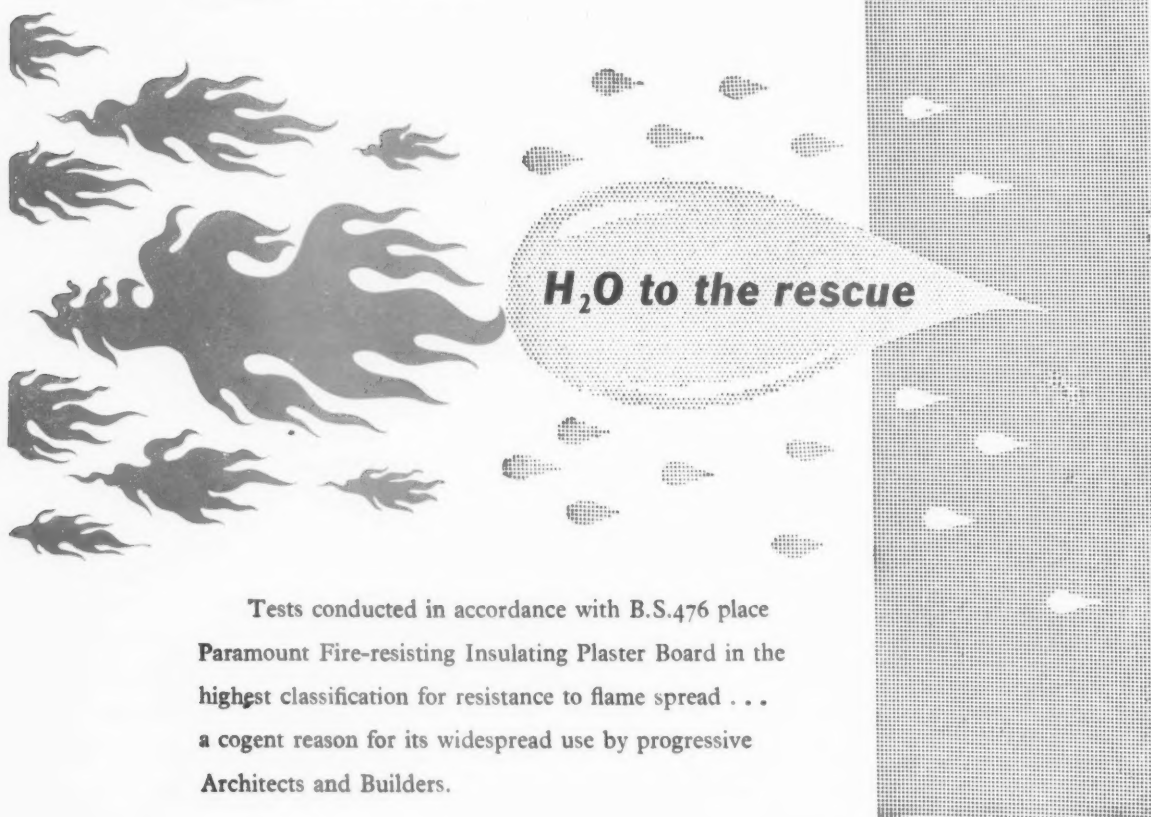
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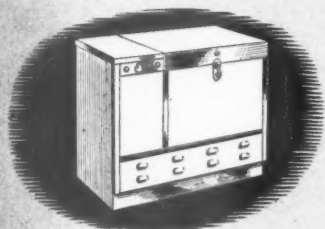


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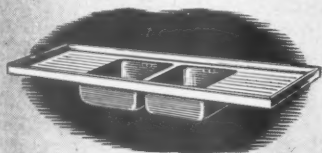




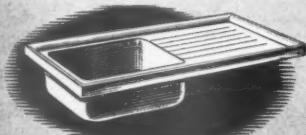
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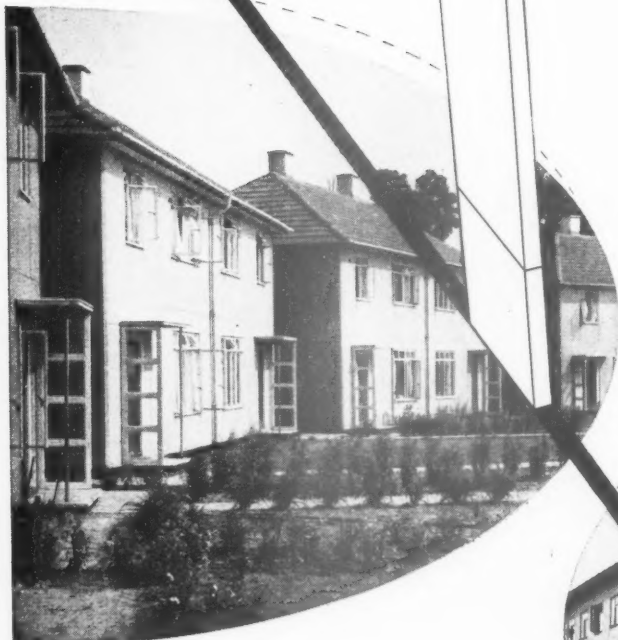
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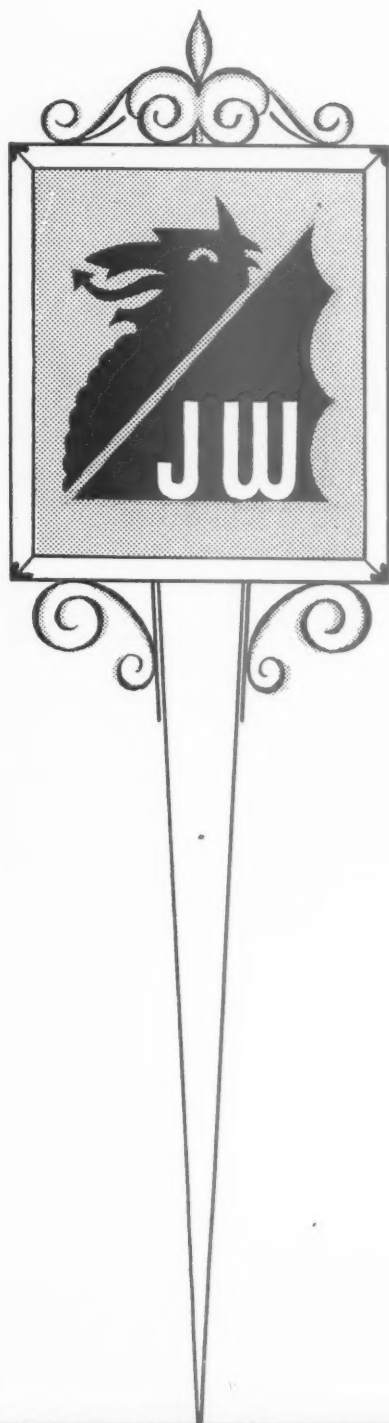
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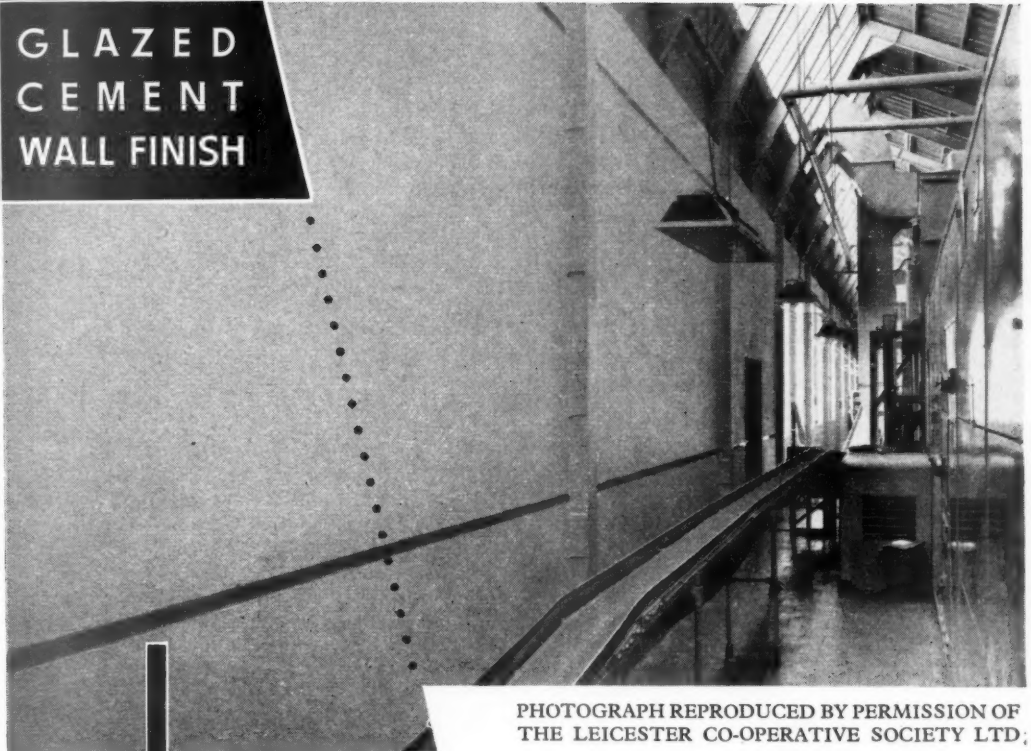
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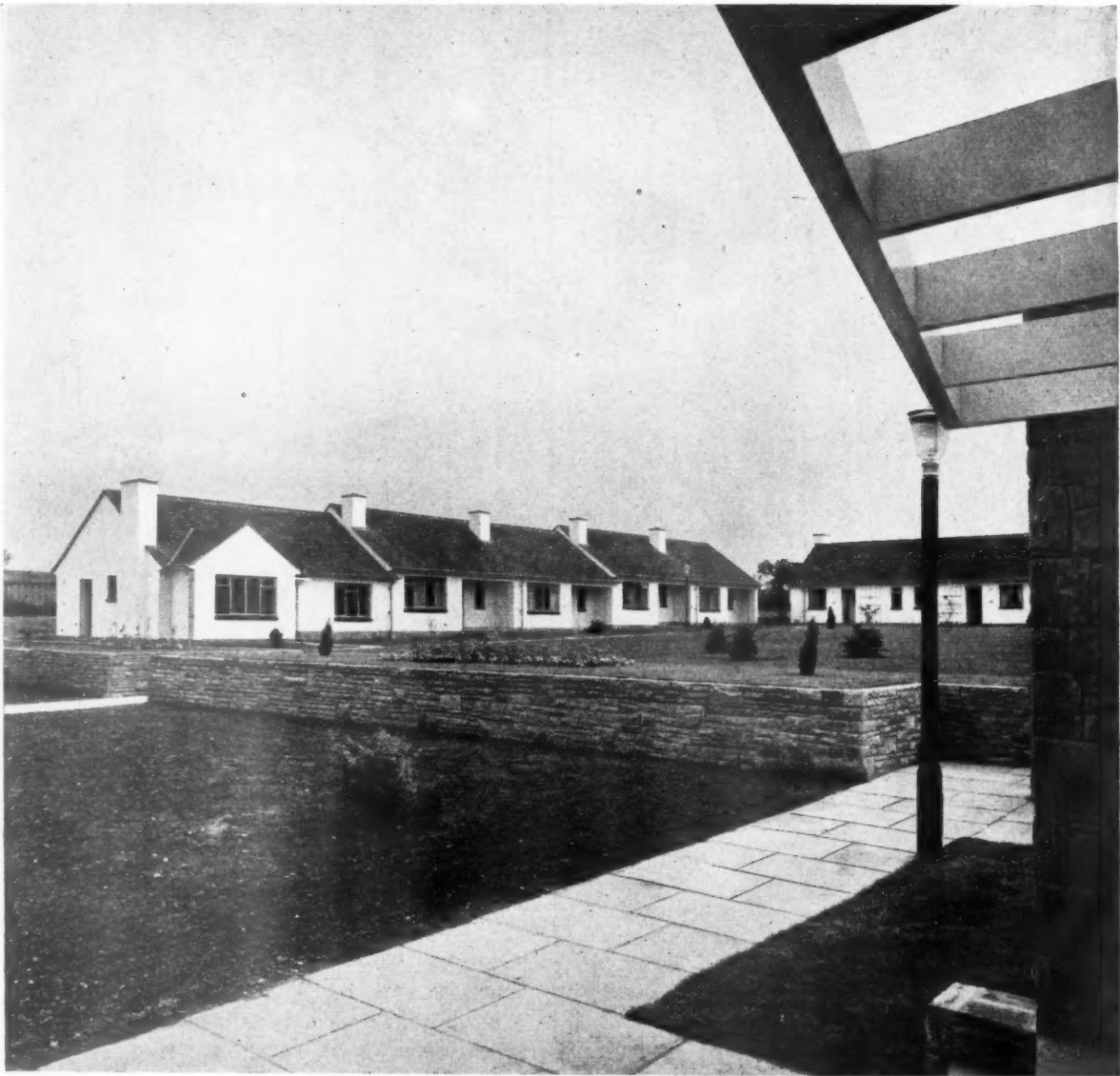
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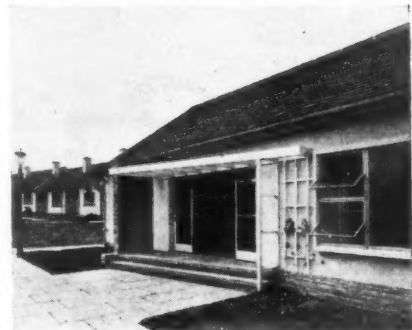
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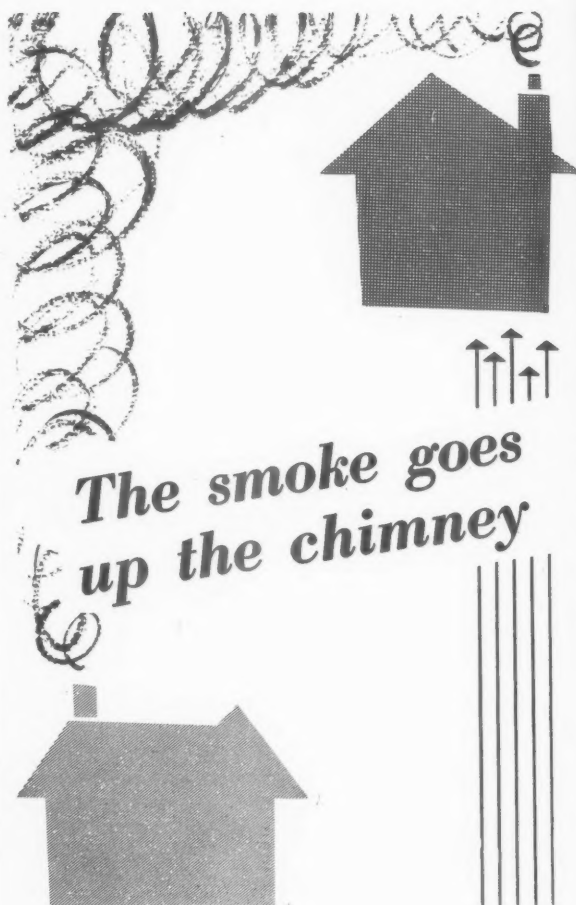


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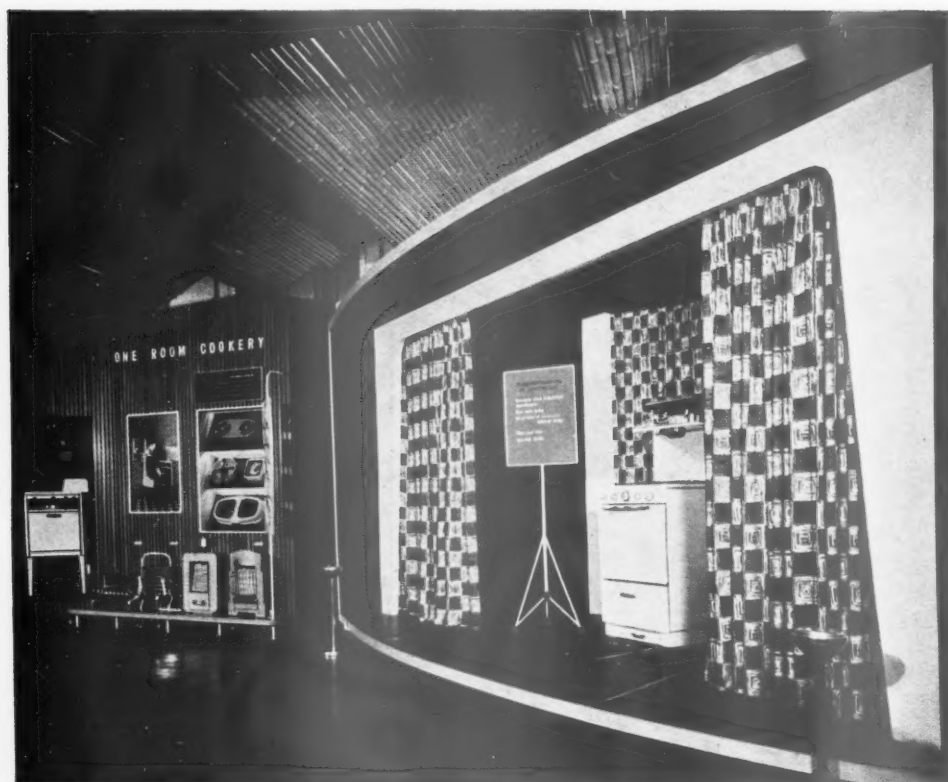


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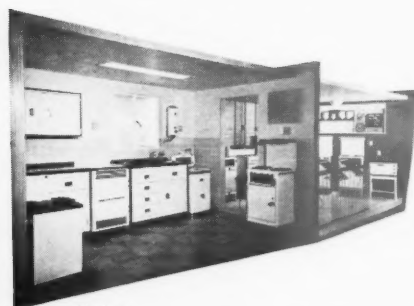
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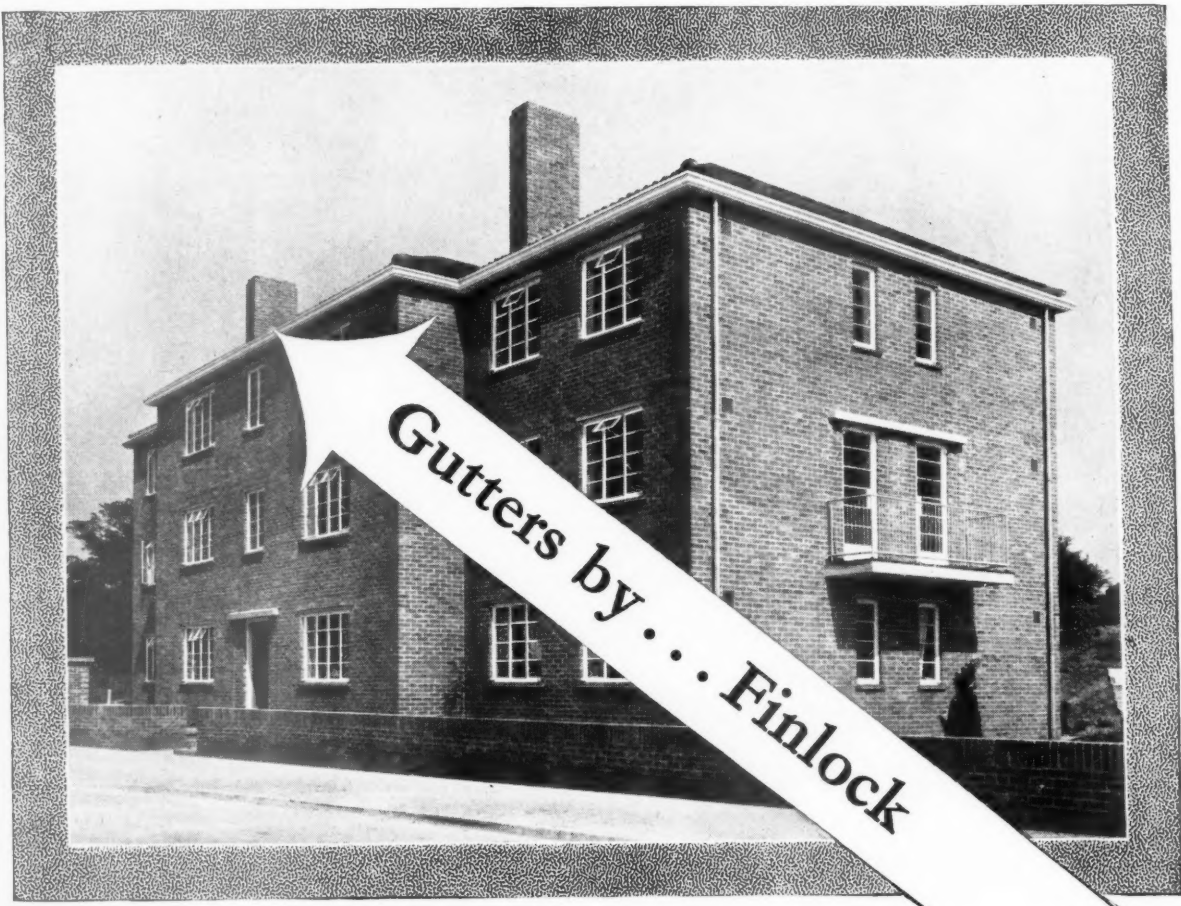
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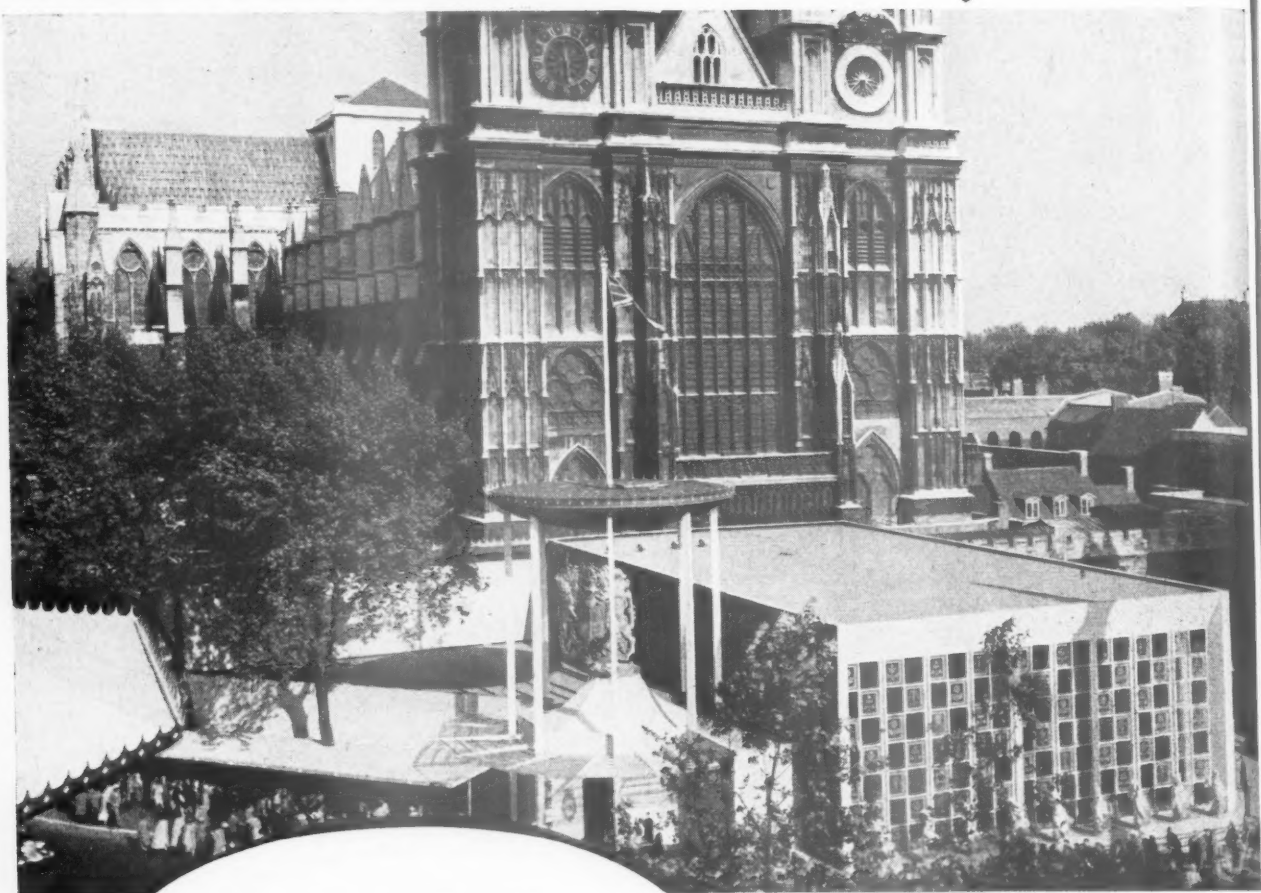
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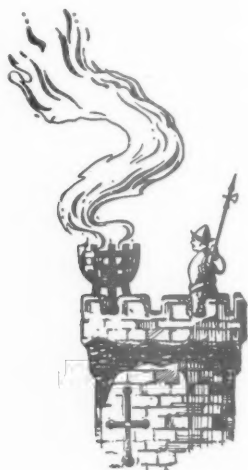
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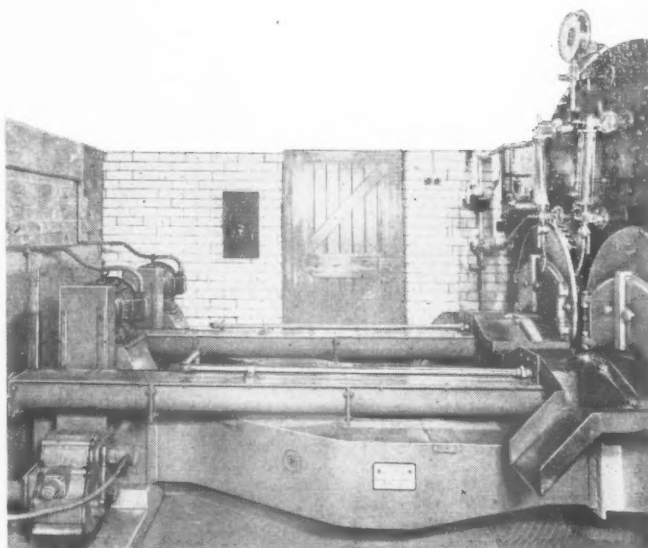
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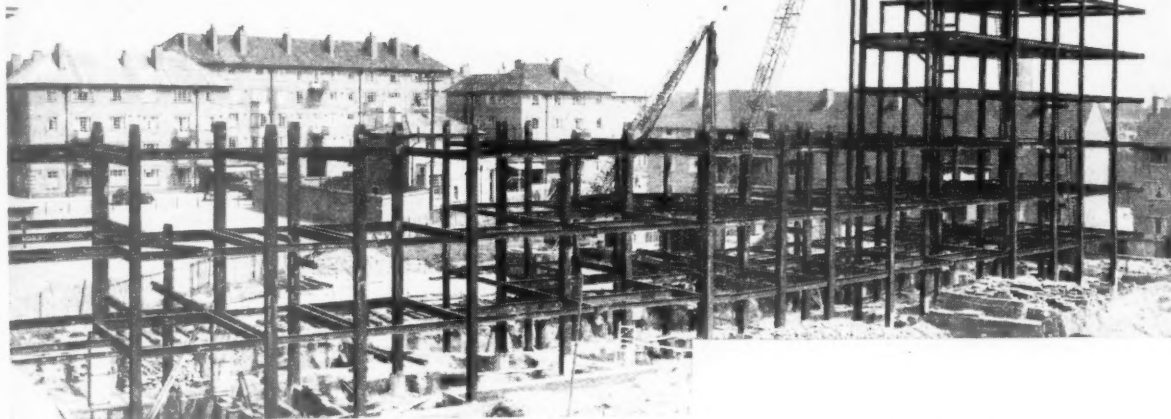
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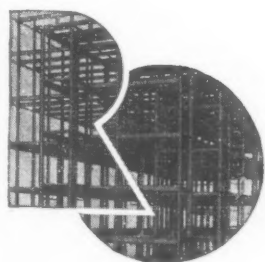
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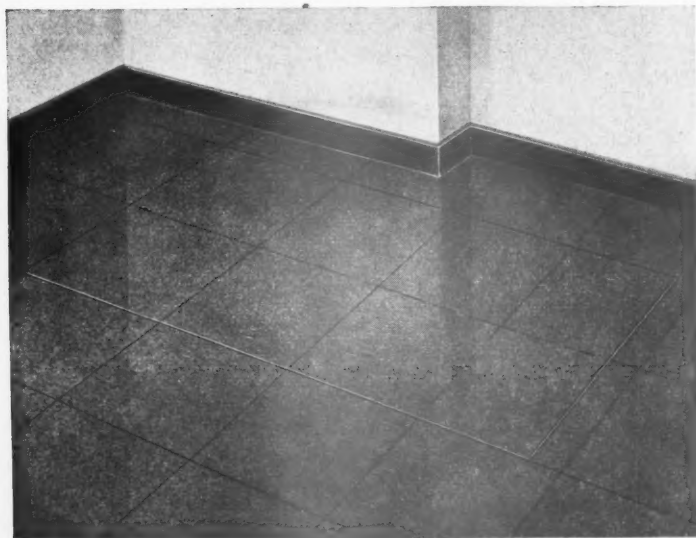


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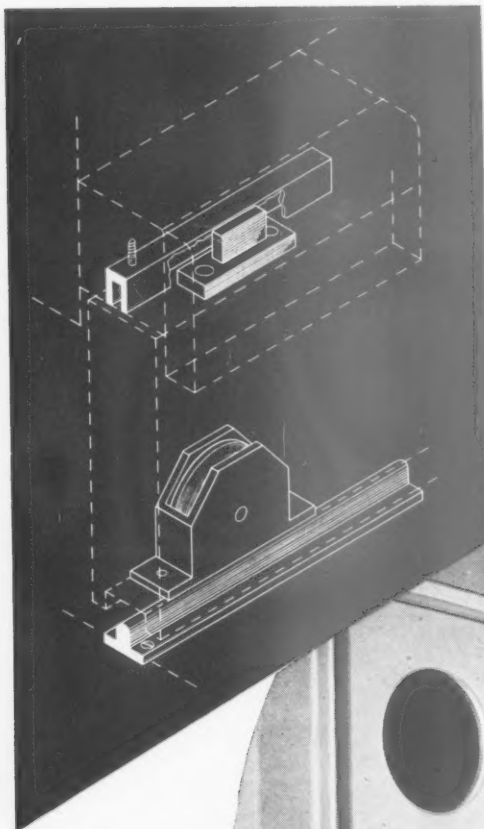
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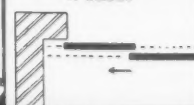


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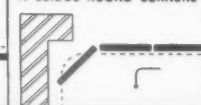
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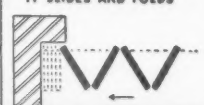
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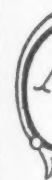
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CAMBRIDGE PRE-VISITED

ASTRAGAL'S mind had barely stopped boggling at the LCC's excellent plans for the South Bank when it was whisked off to Cambridge, to boggle anew at Sir Hugh Casson's scheme for University Development. Not that one expects anything less than exciting from Sir Hugh; but the care and imagination with which he and his partner, Neville Conder, prepared their report to the University are really remarkable. You can see this report, together with sketches, plans and a model, at the Senate House, and even some of the most tradition-bound among you will surely be won over by this scheme—unless, of course, you insist on neo-classical buildings for the University

City, in which case we must part company for the rest of this note.

*

What springs to your mind when you think of Cambridge? Dignified Courtyards? Water-side settings? Serene buildings? Bustle? Bicycles? Quiet lawns? All these things have been remembered by Sir Hugh and his partner, as you will learn from the notes and illustrations in this issue. Let me quote from the report: "Courtyard planning . . . with its continually changing views and intricately arranged building patterns of different sizes, silhouettes, colours and textures, keeps the eye constantly alert and interested." "A Water Square . . . upon this inland site . . . not only sets a mood of serenity for the buildings immediately around it, but will, we hope, be an 'off-stage' presence for the whole of the site—its sudden glitter catching the eye, sometimes perhaps almost unawares, from an upper window or between the shoulders of buildings." "The larger lecture halls and the raised faculty block shall be serene, timeless and almost monumental in feeling, in contrast to the rougher and less sophisticated character of all other buildings." "No attempt is made to hide parked cycles which, when grouped in suitable numbers, in appropriate surroundings, give a feeling of liveliness. Low trees . . . will assimilate their intricacy and linear qualities."

*

And so on; nothing has been forgotten, from the avoidance of monotony within the site, by the use of varying levels and textures, to the relating of the site to other college buildings, so that it may become "more integrated

with the University of the future," a University in which, as Professor Pevsner has pointed out, the "Backs" may become "Fronts." But the *piece de resistance* of this thorough report is a Visual Tour of the proposed buildings. You will get some idea of the effectiveness of this townscape tour (by sketch and word) from the notes based on it on pages 534-535. If presentation alone could sell this scheme to the University, it is as good as bought. It has already been recommended for acceptance by a committee appointed by the University's Building Syndicate. ASTRAGAL adds his own small voice to the recommendation, and takes heart from the knowledge that the site is so placed that no one can raise any objection on the grounds that the proposed buildings would clash with existing ones.

*

Footnote. ASTRAGAL overheard two students of the Cambridge School of Architecture enthusing lyrically over the scheme. Their reason? The proposed School of Architecture will be placed next door to the canteen.

BUILDING IN AMERICA

ASTRAGAL has been looking at a copy of *Building in USA: Post War Architecture*, edited by Professor H. R. Hitchcock and Arthur Drexler, and published by the Museum of Modern Art. It is a beautifully produced book for which a lot of the credit must, of course, go to the photographers, especially to Ezra Stoller, and to Alvin Lustig who designed the book. We are familiar with most of the buildings—though there are a few fresh ones, such as the fine Hodgson house at New Canaan



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Two public rooms on the recently-launched Greek ship, T.S.S. Olympia. Left, the "Atlantic Bar," designed by E. Lazarides (Greek architect) and A. McInnes Gardner. Right, the Winter Garden, the work of the same designers.

by Phillip Johnson—but they are presented with tremendous imagination. The photographs were chosen to reveal and not to conceal the buildings, and the photogravure process gives them an almost third-dimensional quality.

tained—even to the rope border—but the whole affair has been effectively modernized), a nice round self-confident affair by Milner Gray (the pioneer

in the field) and a rather elegant one designed, one is led to believe, to make the bottle look handsome on the dinner table at home.

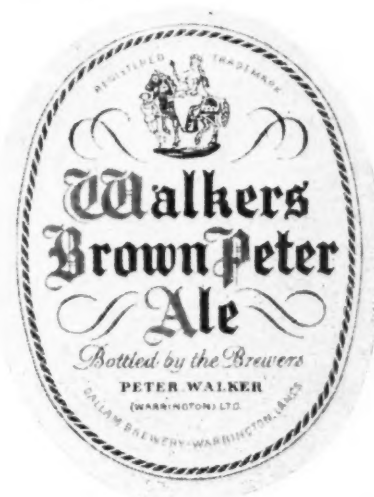
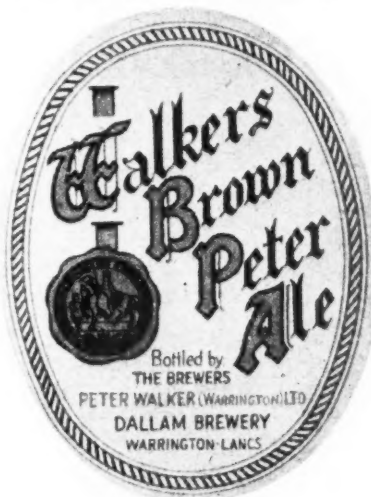
Below, left and right, a label before and after treatment by Edward Bawden. Bottom, left and right, labels by Milner Gray. See note above.

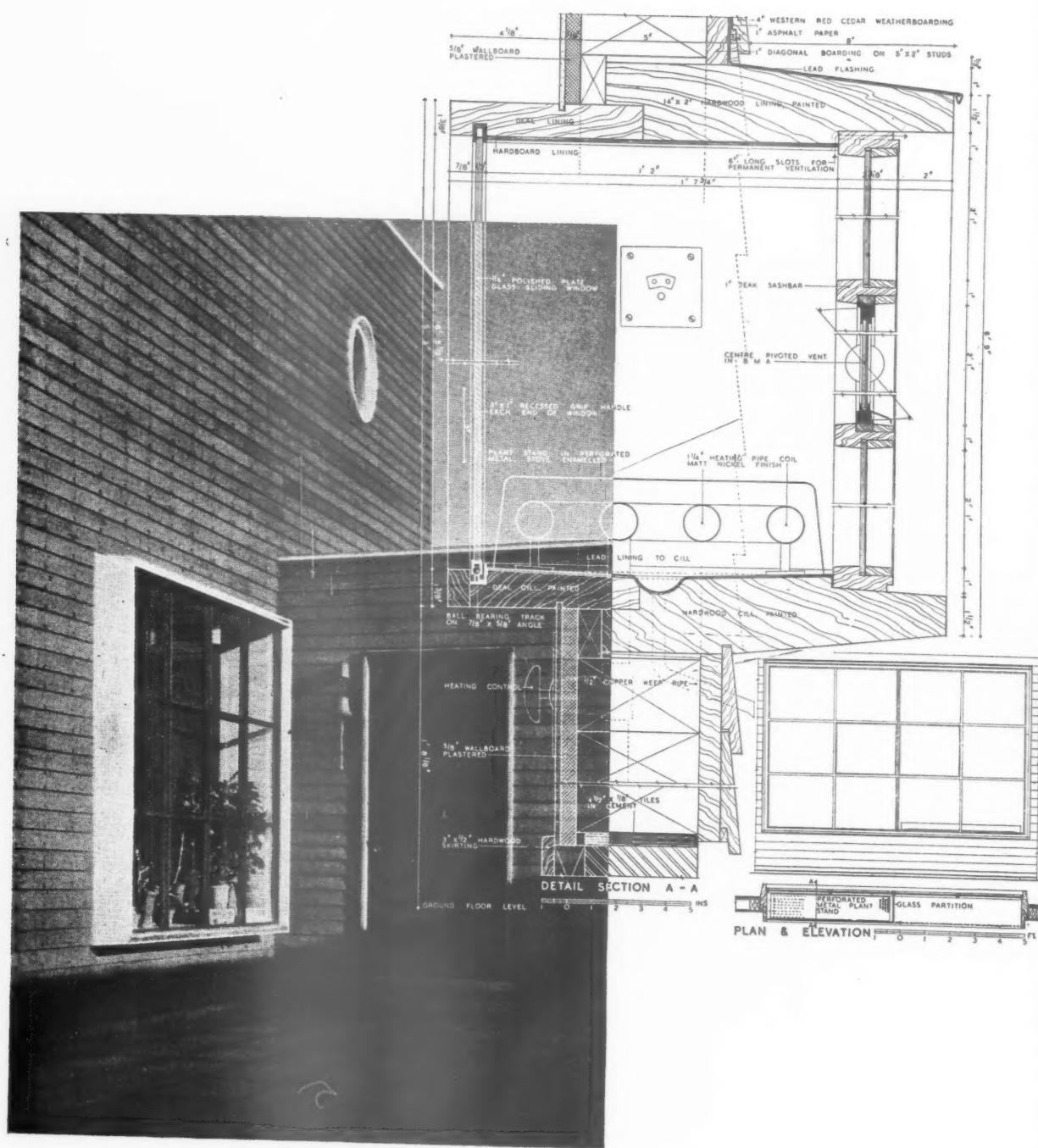
My main criticism is that the plans are too small for legibility and though it is perhaps unnecessary in this type of more popular book to economize in this direction, it should have been possible to make one or two of them clearer.

ALE LABELS

Many consumers of beer complain about the premises on which it is consumed, the vessels into which it is poured, and the containers in which it comes to the bar. The architectural profession has been one of the loudest bodies of complaint, and the profession will have to do most of any improving which is done when economic circumstances permit.

But while very little can be done on the bricks and mortar side, a good deal is being done here and there to improve the appearance of small things, particularly if they are highly expendable things like bottle labels. These have come on tremendously in the last year or so, under the leadership of a few enlightened brewers. But the movement is now spreading. The pictures here show a label craftily reformed by Edward Bawden (you will observe that practically every major feature of the old design has been re-





Working Details

Some of the working details which have been printed in the JOURNAL are published in book form today. This volume of collected details, which is the first in a series to be published by the Architectural Press, contains photographs and drawings on facing pages, 8½ in. wide and 11½ in. deep. It is thoroughly indexed, and is bound so that it will lie flat—and stay flat—when opened. More information is given in the editorial opposite. The drawing

superimposed on the photograph above is, of course, considerably reduced. It shows a double window to the dining room of a house near Halland, Sussex, which was designed by Serge-Chermayeff. The window is in two sections. One half is double glazed with special heating and ventilation to house tropical plants, which stand on a perforated metal plant stand. The other half has single glazing.

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NEARLY A BUYER'S MARKET

As the years go by ASTRAGAL finds himself spending less and less time at the Motor Show, where all the cars he wants are far beyond his pocket and anything under £1,500 (which he cannot afford either) is just so much transport and quite devoid of any excitement. However, it is pleasant to see that a few makes still have things at the front that look like radiators, and some even have old-fashioned gear levers and not yards of bent wire.

In spite of the export drive and the 8-h.p. price war the salesmen remain aloof and disdainful, though if you want to write a cheque for something expensive they will stop fingering their O.E. ties and speak quite tolerantly. Price cuts are always fun for the consumer; one day we might even get some in the building industry. No doubt you are as tired as ASTRAGAL of catalogues with stickers on the cover saying "All prices plus 15 per cent."



PUBLICITY FOR ARCHITECTS?

It is, no doubt, because the Chateau of Versailles is of architectural interest that ASTRAGAL was sent the photograph which appears here. The legend which the manufacturer of the vehicle in the foreground sent with the picture explains that La Camargue "danseuse étoile" of the time of Louis Quatorze has just left Versailles and meets the 1954 model in the park and then (I quote this cold) "Charmée, elle abandonne son carrosse pour se faire enlever par un beau marquis." (Don't pretend you can't read that—even *Punch* has a joke in French every week now. But hang on till young Roderick gets in from school, he can tell you about the car as well.)

Just why the manufacturer of a vehicle which will certainly be able to sell itself on its merits in any market (if reports of its performance are accurate) should need to go to this sort of length to sell his product, is a mystery.

ASTRAGAL

POINTS FROM THIS ISSUE

Proposals for Cambridge University Development	pages 523 and 529
Further refinements for Bucklersbury House	.. .. . page 536
New policy at Liverpool School	.. .. . page 536
The future of Paddington Basin	.. .. . page 537

The Editors

WORKING DETAILS

TOO many architects, when faced with a problem that is new to them, waste time or bungle a job because they do not know where to find the results of experiments that other architects have carried out on the same lines. This is a curious state of affairs and is—to say the least of it—unfair to the client. What man would place himself in the hands of a lawyer, if he thought that his defendant had no access to precedents that might be quoted? What sick man would trust a doctor who wasn't quite sure where he had heard of a similar case, but decided to have a stab—if you will pardon the expression—at the thing, anyway?

The client always expects the professional man to be adept at browsing by the library shelf labelled "What Has Been Done Before." The experience of others does not necessarily provide a ready-made answer to our own problems. (Work would be dull if we expected it to.) But it helps us to conserve our energies. It saves us from wearying ourselves with needless drudgery and gives us a starting point for solving our problems, as well as a stimulus to do the job—for few things are as intellectually stimulating as following the working of someone else's mind.

As most readers will know, the JOURNAL has, for many years, printed Working Detail Sheets, showing how particularly interesting architectural problems have been solved. Some readers may remember that before the war a collection of published details were collected and issued in book form. The book is now out of print, but a new volume* is on sale from today. This volume, which includes a small number of the details that appeared in the earlier book and a very few others that were published in the JOURNAL before 1939, consists mainly of details from post-war issues of the paper. They are classified under nine headings:—Windows, Doors, Staircases, Walls and Partitions, Roofs and Ceilings, Furniture and Fittings, Balconies, Covered Ways and Canopies, and Heating. Succeeding volumes will contain items not only under the same heading, but under additional headings as well; thus the series will provide architects with a gradually accumulating reference library of records of solutions to old and new problems.

* Architects' Working Details. Edited by D. A. C. A. Boyne. (Architectural Press, 21s.)

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0244 GOLD, Jack Brunner, 36 Great Ormond Street, London, W.C.1. 1934
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YOU

The JOURNAL's Guest Editor, Professor Bowen, continues to give results of his enquiry into the state of the architectural profession. (The names shown in the headpiece above were taken at random from the Architects' Register and are not related to the article.)

Guest Editor :

Professor IAN BOWEN

PRINCIPALS AND ASSISTANTS

BY what yardstick can progress in the profession be measured? The purely economic criterion—earnings—has, perhaps, some meaning, as a rough indication of the social function successfully performed by the individual architect, but financial gain is hardly acceptable as the complete equivalent of success. Financial reward sometimes depends more on business ability than on the social or aesthetic value of an architect's work, but there is no known method of measuring aesthetic standards and, certainly, defining such standards is not a job for the economist.

Some of the economic and social factors that affect the architect's career can be described, but the architect is not simply a producer who supplies society with a standard commodity—he has both to originate, and to supervise the processes of production—and his dual function as an artist and a man of affairs makes any simple statement of the factors that make for "success" as difficult as the definition of that term itself.

As a first approximation, it may be assumed that the successful architect is, at least, a principal in his own office, or holds equivalent rank in public employment. (The converse, of course, is not necessarily valid—all principals are not necessarily successful architects.)

Among registered architects, there is, undoubtedly, a higher proportion of principals to assistants in private offices

than in public ones. The figures from our sample are:

	Principals	Qualified, Registered Assistants, (Senior and Others)
	Per cent.	Per cent.
Private Practice	75	25
Local Government	21	79
Central Government	30	70
Commercial Practice	33	67

In interpreting this table, several points must be borne in mind. First, the register of architects does not include all qualified persons, and it is the assistant or junior in a private office who is most likely not to be on the register, since his occupation does not require the official or public designation of "architect." Thus, the table may exaggerate the ratio of principals to assistants in private offices.

Second, it is difficult to define the term "principal" in public offices; the nearest definition does not coincide with that of a principal in private practice. Of our sample, a number of principals had left private practice for public employment, probably bettering themselves financially by doing so, but more than half of them failed to become "principals" in their new employment.

The high ratio of assistants to principals in public offices indicates that many, indeed the great majority, of public architects must be prepared to make a career of being an "assistant." Few of these architects are fully aware of this limitation on their prospects of advancement. Yet the fact that many architects transfer to public practice suggests that these "assistants" are (allowing for the security of public employment) better off financially than many private principals.

The apparently low proportion of assistants to principals in private practice does not necessarily reflect better prospects of promotion in that field. As stated above, our survey may make the proportion seem smaller than it really is; moreover, it is partly a reflection of the small average size of the private office. There are, of course, promotions from time to time in private offices, but assistants in these offices are somewhat pessimistic as to their prospects.

AGE AT PROMOTION

One reason for this pessimism appears to arise from the broad age-distribution of the profession, particularly in relation to the ages at which promotion to a principal's grade would have taken place in the past. In both public and private practice, it would seem, from past experience, that the chances of becoming a principal fall off rather rapidly after the age of 40. In the sample, 89 per cent. of principals in private practice and 73 per cent. of those in public practice reached their higher status as principals at 40 years of age or less. In both kinds of employment, the chances of

promotion seem to have been best for those aged between 25 and 40.

On the whole, architects in private practice have become principals at a somewhat earlier age than those in public offices. Most registered assistant architects in private practice are in the age group 24 to 33 years, which indicates that private practice has had a greater attraction for new entrants to the profession than public practice. This may partly be the result of the fact that there is a greater chance of becoming a principal in private practice than a principal in a public office, although even this chance is small enough to give rise to considerable dissatisfaction.

The main point that emerges is that, so far as past experience is a guide, the chances of becoming a principal do not increase with advancing age, even in public offices, where there is a somewhat greater tendency for promotion to be linked with seniority.

EDUCATION AND PROMOTION

To sum up our conclusions so far: Under the registration system, an architect must have passed the RIBA final examination or its equivalent. His best chances of becoming a principal occur before he is more than 40 years of age. The quickest way to gain his necessary qualification is by full-time study; a combined course of studies usually takes a little longer, and part-time (office-trained) students normally take longest to qualify. It is clear, therefore, that the present regulations favour the school-trained architect.

This conclusion is clear from the evidence that has been set out. It is not to be refuted by the present distribution of principals in the school-trained and non-school trained categories, for the present high proportion of non-school trained principals still reflects the large number that were able to "beat the gun," and become principals without taking RIBA finals.

It is no exaggeration to say that, in one respect, the Registration Act seems to have struck a most serious blow at the development of private practices. The man of talent, struggling to educate himself, and at the same time to earn his way, can no longer practise on his own account until he has taken the qualifying examination. The type of person who might have started a practice very young, and acquired his education part-time, is not encouraged. Under the present system, the older age of qualification for part-time students means that few of them can risk starting a practice on their own, for they are likely to have families by the time they are qualified.

The profession is at present in the odd position, moreover, of having an assistant staff that is, on paper, and on average, more highly qualified than its principals. This, combined with the increased difficulty of attaining a principal's position, seems to lie at the root

* In government offices it is often necessary for assistants to be registered for purposes of salary rating.

of the frustration expressed by so many junior registered architects.

Our survey has shown that the school-trained architect has had, and still appears to have, a better chance of becoming a principal than the part-timer. It is possible, though not perhaps likely, that office-trained finalists may later, with their greater practical experience, make up for their relative disadvantages—some of them individually will certainly do so. But, on average, the school-trained architect seems likely to retain his better chances of economic advancement.

EXPANSION OR CONSTRUCTION

Future opportunities for the economic advancement of architects depend partly on the rate at which principals die or retire, and partly on the rate of

growth in the demand for architects' services. On neither of these points can the sample throw any direct light, and they must, therefore, be discussed on a rather broad basis. It can be seen already that, if the growth of the profession ceased, advancement would depend entirely on the death rate and retirement rate of principals, and that the prospects of advancement for assistants would not be very favourable.

On the other hand, it must be emphasized that the increase in the amount of formal training now required will, in the long run, improve the status of the profession. It may be, as some of our figures suggest, that the economic value of training received has tended to decline (since many of those who have taken it must, perforce, accept subordinate positions for a number of years), and it may be, as

some argue, that the training is not as suitable for those who have to accept subordinate posts as it would be if they were soon to become principals, but the advantages of the undoubted improvement in educational standards in the profession will help to off-set these possible disadvantages.

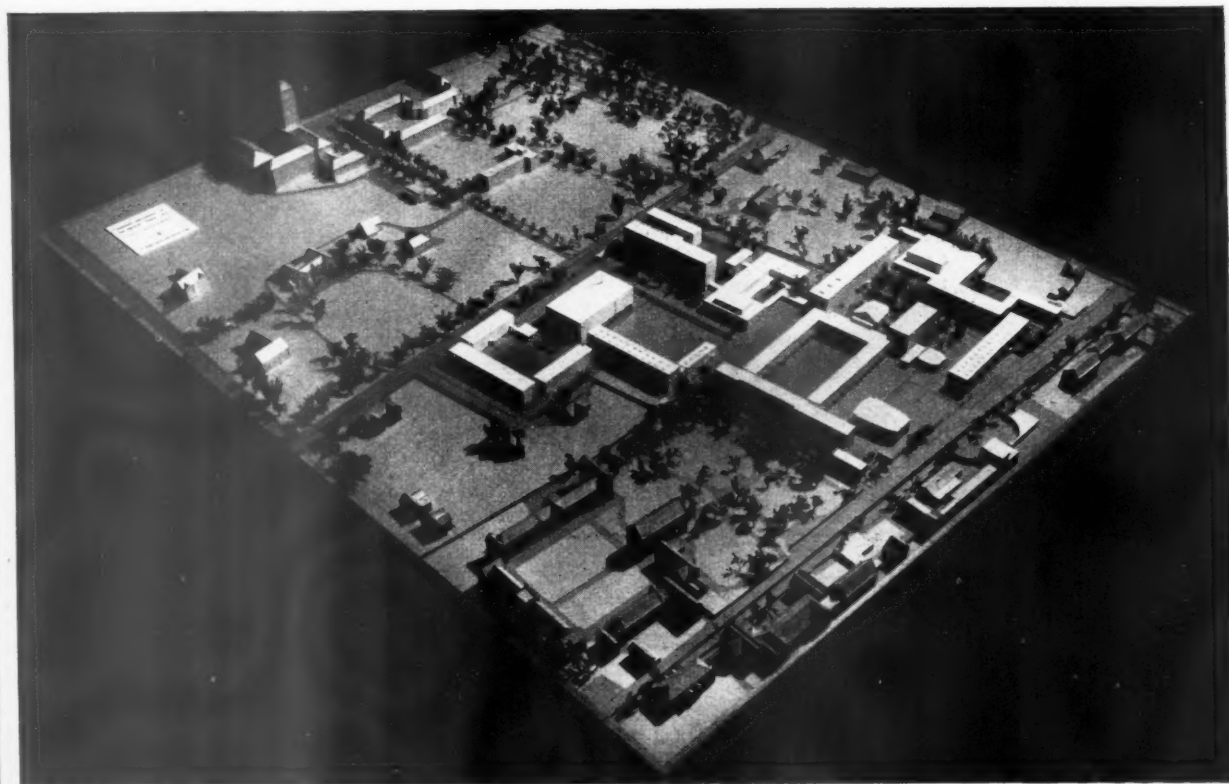
The problem of measuring the extent of overcrowding in the profession is complicated by two facts: first, that the apparent increase in the size of the profession is partly due to increased qualifying and registration amongst assistants (there are more *qualified* assistants, but not necessarily proportionately more assistants with ambition than there were in 1938); secondly, that some assistants who qualify do not register. The first fact tends to exaggerate the extent of the problem; the second tends to underrate it.

PROPOSALS FOR UNIVERSITY OF CAMBRIDGE DEVELOPMENT

On the following pages are details of a scheme prepared by Sir Hugh Casson and Neville Conder for the development of a 13.2 acre site at Sidgwick Avenue, Cambridge. A committee appointed by the Building Syndicate of Cambridge University has recommended that the University should accept the scheme. The architects believe that a secret, walled city—however attractive—

would be out of place here, for no group of Faculties and Lecture Rooms can afford to be too sharply separated from the living stream of University Life. So they rejected the idea of devising a self-centred layout and planned their proposed buildings so that they would be related to the University Library, Selwyn College and Newnham College.

From the south-west. The University Library can be seen to the north. Selwyn College lies to the west and Newnham College to the east.



CAMBRIDGE UNIVERSITY DEVELOPMENT

The notes on this and the following pages are based on the report prepared by Sir Hugh Casson and Neville Conder.

A group of Faculties and Lecture Rooms of this size and complexity demands formality in its setting. This formality has been obtained by a simple and direct layout. Within this controlling framework, however, the buildings are grouped in a coherent, but basically informal—and perhaps even mildly argumentative—manner. This informal grouping permits greater freedom of design to the architects of the buildings. The informality is also an asset in a long-term programme, where needs are likely to change, for alterations can easily be made without undue disturbance of the basic scheme. The site will be developed in four stages over many years, and care has been taken to ensure that the development looks complete and satisfying in itself at each stage.

COURTYARD TRADITION

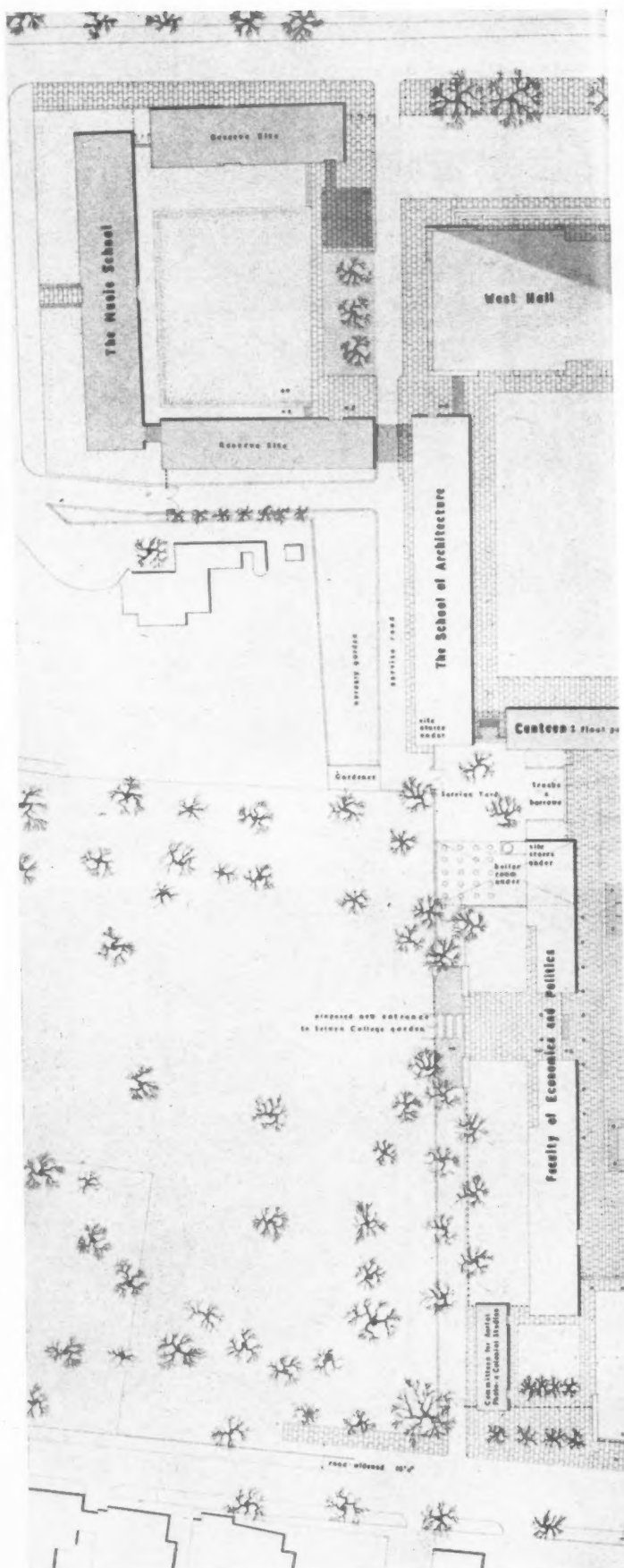
Because the buildings on this site are all similar in function, size and height, it is necessary to prevent them from looking monotonous. Therefore, two principles have been followed. (1) The large lecture halls, which could have been placed in one block, have been "extricated" and carefully dispersed to provide those points of architectural interest which would otherwise be lacking. (2) Courtyard planning, which is traditional to Cambridge, has been adopted throughout the site. This with its continually changing views and intricately arranged building patterns of different sizes, silhouettes, colours and textures, keeps the eye constantly alert and interested and gives the impression that the site is larger than it is.

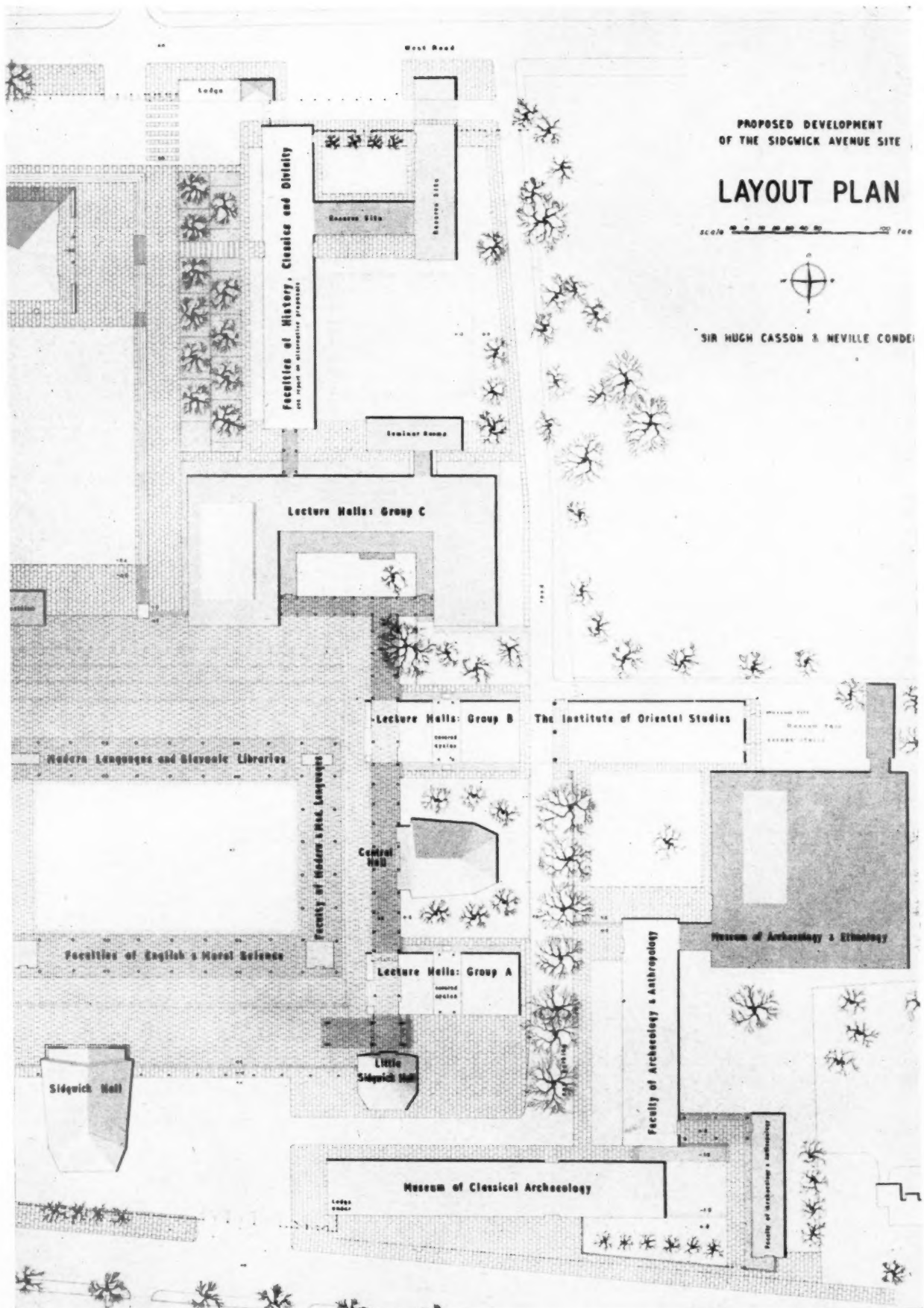
ARCHITECTURAL CHARACTER

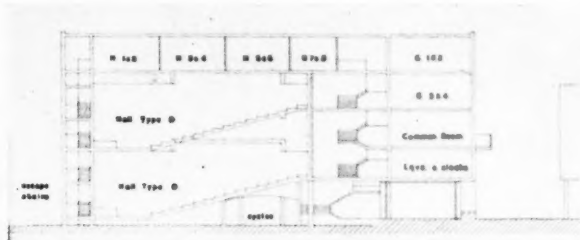
The larger lecture halls and the raised faculty block should be serene, timeless and almost monumental in feeling, in contrast to the rougher and less sophisticated character of all other buildings. The first group might well be faced with stone, crisp in outline, delicate in detail and smooth in texture, while the other buildings, which provide a strong setting for their more delicate neighbours, could exploit the rich texture of brickwork. Most of the buildings that should be light in feeling are used to flank or to punctuate the main visual axis, thus increasing the feeling of "penetrability" through the site.

Lecture Halls

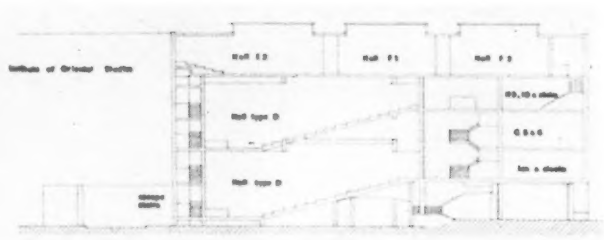
The dispersal of lecture halls over the site is not only aesthetically pleasing but also useful. There are no long internal corridors and there is little like-







Section A-A (includes 2 halls of type D; 2 type G; 8 type H; 1 common room).

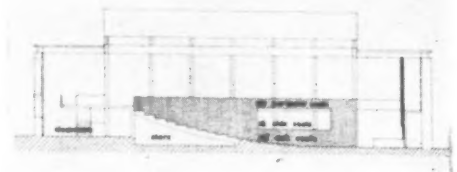


Section B-B (includes 2 halls of type D; 1 type E; 2 type F; 2 type G; 2 type H).

CAMBRIDGE UNIVERSITY DEVELOPMENT

TYPES OF HALL

B : 400 seats
C : 300 seats
D : 250 seats
E : 150 seats
Little Sidgwick Hall : 150 seats
F : 80-100 seats
G : 50 seats
H : 15 seats



Section C-C (69 perimeter seats; 18 side seats; 315 well seats).

likelihood of pedestrians getting into "traffic-jams." In addition, alternative escape stairs are easily arranged.

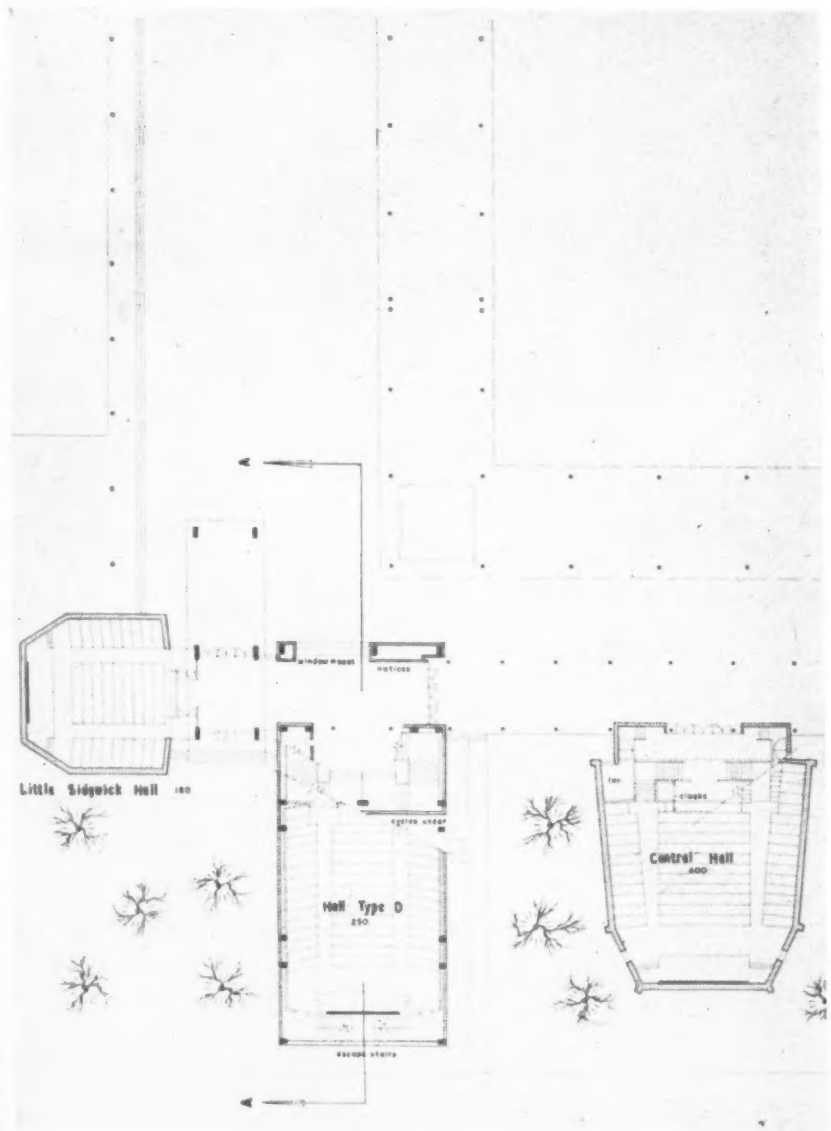
All halls seating more than 100 are tiered. No halls have balconies as the architects wanted to get the best day-lighting conditions for the full length of all rooms. Raked floors are arranged as one continuous upward sweep, so that the audience shall appear to the lecturer as an entity.

Examination Halls

Several of the smaller lecture rooms (Group C on page 531) will be combined for use as examination halls. However, rooms of seminar size are not considered the best to select for this purpose. The ratio of wall-to-floor space is high, and the resultant room shapes are liable to be unpleasant and unsuitable for one or other of the two uses. Furthermore, if corridor walls have to be removable to achieve adequate size and a tolerable shape for the resultant combined hall, the technical difficulties are increased, and the seminar rooms may well have the atmosphere normally associated with temporarily sub-divided office space. It is simpler to arrange for folding walls in one direction only. Taking 3,000 sq. ft. as the optimum size for an examination hall, the architects have selected rooms of the 100-seat and 150-seat sizes for adaptation, so that when they are grouped in threes, only two sets of sliding walls are required to open up a space of suitable size. Halls seating 150 are equipped at the back with counterbalance frames of tiered seating that can be bolted up or down—the underneath surface of the seating forming a presentable wall when the space is used for examinations.

Of the various possible systems considered for the provision of removable walls together with adequate sound insulation, the duplication of two light, sliding folding partitions is selected as

Lecture Hall plans.



the best from the point of view of economy, easy handling and reliability. In the proposals, two partitions are spaced apart to prevent "drumming"; the space between them provides a store for examination furniture when this is not in use. The three halls provided on this system (2/1B Group C, page 531) give usable flat floor areas of 3,250 sq. ft., 2,750 sq. ft., and 2,630 sq. ft.

The 400-seat hall (C-C opposite page) can be adapted for examinations by the use of a system similar to that used for converting public swimming pools into dance halls during the winter months. The auditorium consists of a "well" within a level platform. Posts are inserted in prepared sockets to reduce spans and sections of decking are then laid over the well to give a level floor. This gives a usable floor area of 2,750 sq. ft. in the well area, which can be increased to about 4,200 sq. ft. if the perimeter desks are made to be removable.

Description of Hall

West Hall (1,000 seats) (see page 530) has not been planned in detail, but it is intended that the auditorium shall slope up away from the stage at the west end, with scenery doors opening to the service road. The entrance hall, encased in glass walls, fits under the east end of the auditorium with its floor-level raised only a few inches from the surface of the Water Square.

Sidgwick Hall (400 seats) (see page 531) has not been planned in detail. It is intended that it shall be similar in general form to Central Hall, but with entrance halls and cloakrooms provided on a more generous scale, to allow its use for social occasions in the evening.

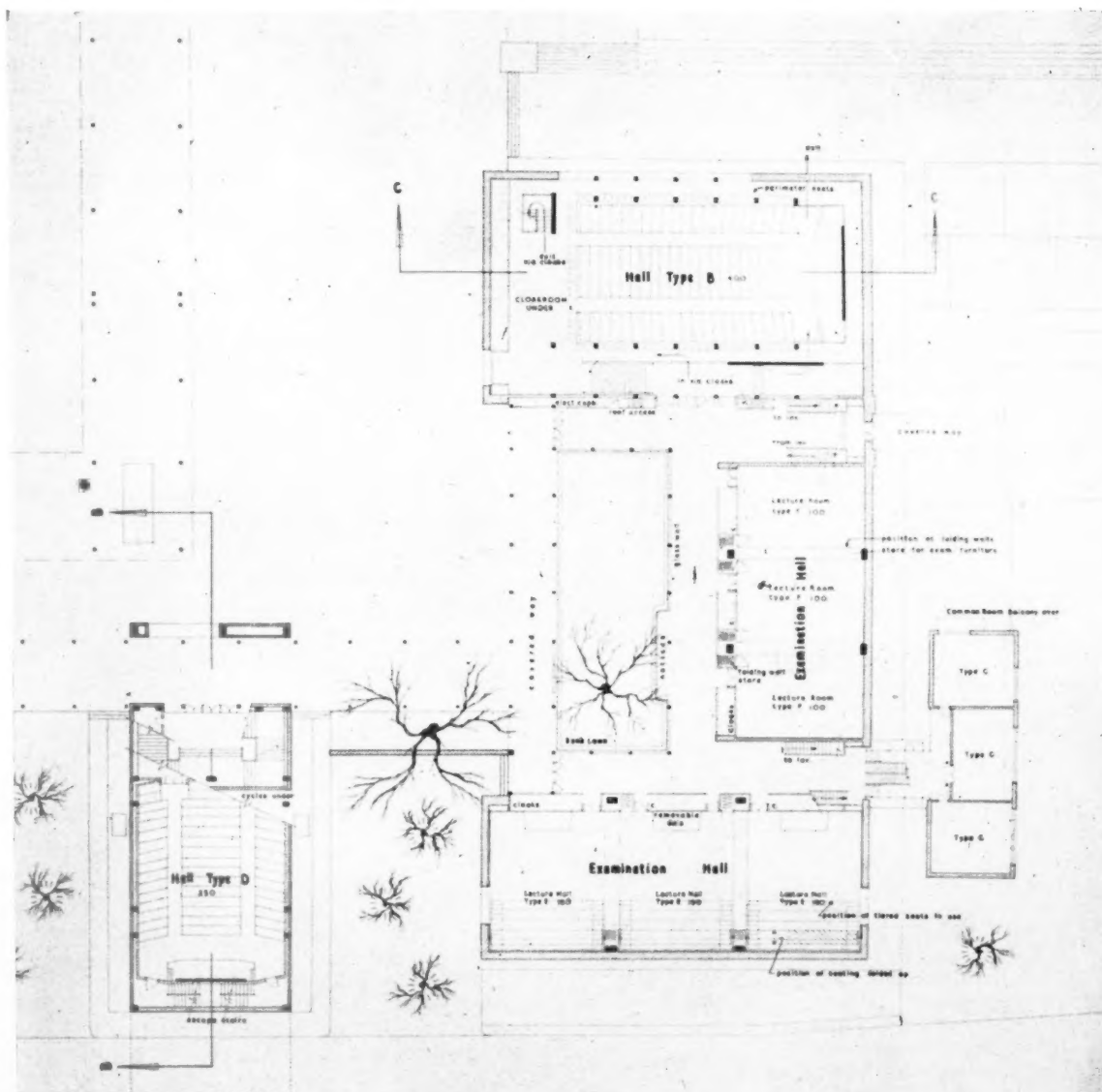
Central Hall (300 seats) is a self-contained building, with its own cloakroom accommodation. The walls are thick, bearing the weight of the roof without a structural frame, and insulating the hall against external noise. High-level, recessed windows in the

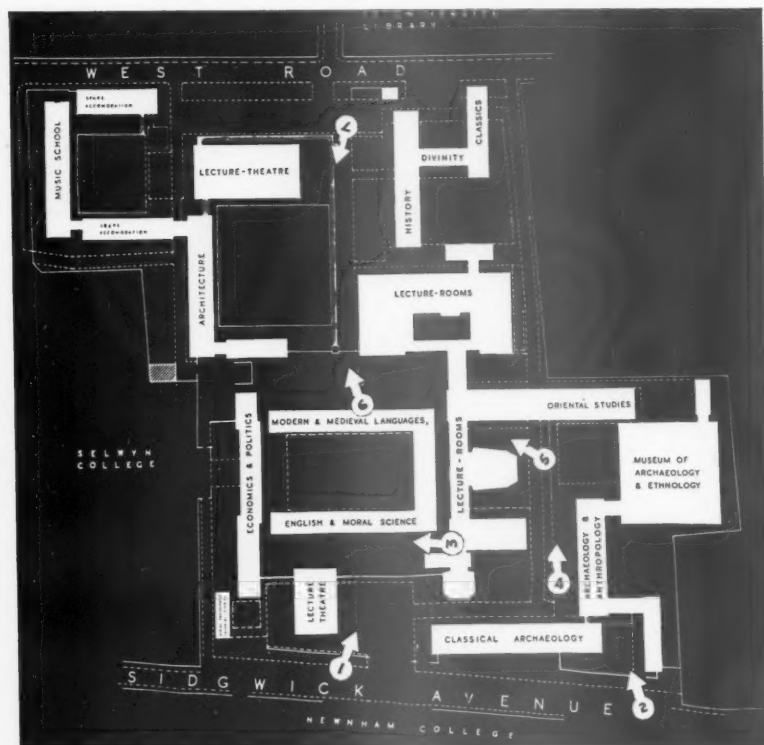
rear part of the hall will be supplemented by top light.

Little Sidgwick Hall (150 seats) is a miniature edition of Central Hall. It shares cloakroom accommodation with the halls in Group A (see page 531) to which it is linked by an enclosed entrance hall.

Halls Group A and B (see page 531). The accommodation contained within these buildings, and within the other composite structures is listed in the key on the opposite page. The structural frames are housed within the two skins of a double wall, and the halls are further insulated from road noises by the arrangement of secondary escape stairs at the east end of each block. The common room on the second floor of Group A has a small balcony and faces west, overlooking the Sidgwick Avenue forecourt.

Group C (see page 531). The special nature of the rooms in Group C has already been described.





Viewpoints for sketches

CAMBRIDGE UNIVERSITY DEVELOPMENT

A Tour of the Site

The sketches shown here have been prepared to show the nature of the layout and not the exact form and appearance of the buildings, for which no design drawings, apart from preliminary planning studies, have yet been prepared.

Sketch 1.—If you approach the site from the west, along Sidgwick Avenue, this is the view you will have as you approach the entrance. It is wide open and dramatic. From the entrance courtyard rise the steps serving the Paved Platform, its surface broken only by the green of the central lawn and the pattern of shadows thrown by the Faculty building poised lightly above it. This three-sided group—the internal proportions of which are similar (on plan) to the main courtyard of St. Catherine's College—presents to the outside world a smoothly sheathed and almost entirely unbroken façade. But the eye can pass beneath and beyond the buildings that close the courtyard and catch a sparkle of the Water Square.

Visual Hint

Sketch 2.—If, on the other hand, you approach the site from the other end of Sidgwick Avenue, you will have an appetite-whetting view before you reach the entrance. Across a miniature lawn and thence through a linking canopy can be seen the Museum of

Archæology and Ethnology, in its setting of grass and shrubs—a visual hint of what lies within the site.

Selwyn College Link

Sketch 3.—If you look towards the Faculty of Economics and Politics from this point you will see that the building is pierced centrally at ground level. This is done to provide a link with the gardens and buildings of Selwyn College, which lie beyond.

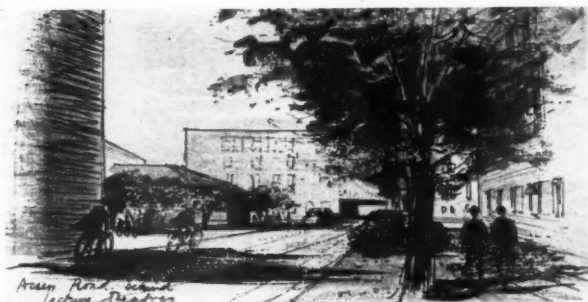
Friendly Bustle

Sketch 4.—This part of the site is likely to be both busy and crowded at certain times of the day. This mood of bustle is emphasized by the architectural character of the buildings and the spaces between them, all of which are kept intimate and friendly. On both sides of the road, beneath the trees, are hard standings for cycles and an occasional car. From here access to the lecture rooms is quick and direct.





3



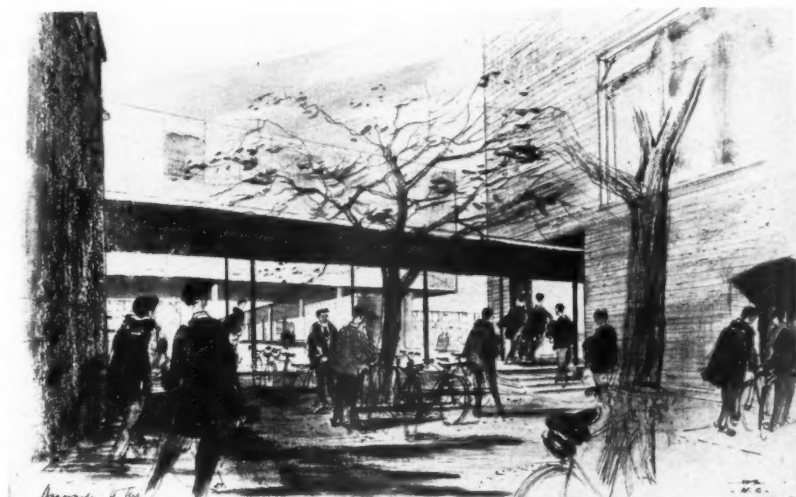
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Platform Approach

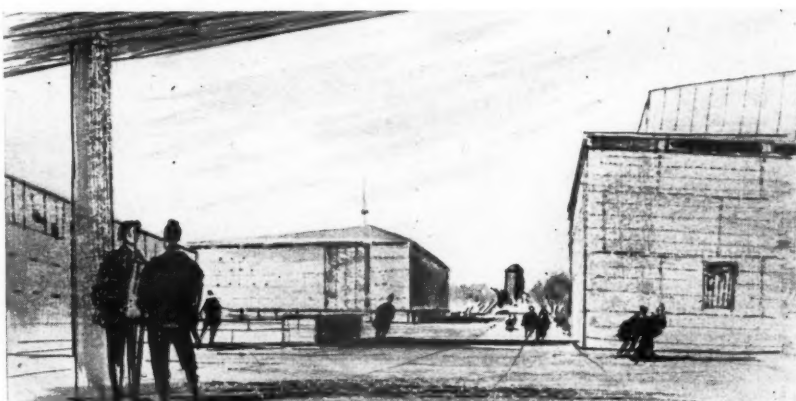
Sketch 5.—From this tree-shaded courtyard, with its atmosphere of activity, a few steps lead up to the Paved Platform.

Water Square

Sketch 6.—On the Paved Platform the surface is hard to the feet and the atmosphere is formal and geometric. From here, at the centre of the site, you can look north over the Water Square towards the Library Tower. The character of the Square is more relaxed in form and larger in scale than the one just passed. The open spaces are more generous—appropriately, for here are some of the largest buildings on the site. Alongside the path which skirts the pool, giant steps descend to the water's edge, facing the afternoon sun. On the other side of the path (right of sketch) marches a formal group of small trees. These are set in a cobbled floor to provide shelter for the parked cycles or the occasional car belonging to those using the building of the Faculty of History, which perhaps rises five storeys from the pavement. This could be the highest building on the site, for here the eye demands an assertive note to contrast with the flat and linear quality of the surrounding lawns, water, and pavement—a point of departure for the visual journey across West Road to the New Library, and a preparation for the powerful scale of that building. Closing the fourth side of the Water Square (background in sketch) is the West Hall, treated (like the town hall in a city square) in architectural isolation, because of its functional and visual importance. The ground floor foyer is placed at water level, the wide windows allowing reflections from the sunlit water outside to weave their perpetually changing patterns across the ceiling.



5



6

Farewell Glance

Sketch 7.—As you reach the northern boundary of the site you can turn back and have this view. The History Building is on your left and—across the Water Square—the low building with windows on to the pool is a cafeteria.



19. 1. 1953



NEWS

LEEDS

Part-Time Chair of Architecture at University

Leeds University Council has decided to establish a part-time chair in architecture in order to qualify for a bequest made in 1933 to endow such a chair. The council has yet to decide on the duties of the holder, who has yet to be appointed. It is stated by the University that the holder may well be a structural engineer. The term of the appointment will be limited to between three and five years. It is intended that the lectures given should be open to the members of the City of Leeds School of Architecture.

LIVERPOOL

New Policy at School of Architecture

Students at the Liverpool School of Architecture entering the advanced part of the course in the fourth year will be allowed to undertake specialist study and research. This was announced by Professor R. J. Gardner-Medwin at the beginning of the present session. For the first term this year students

Above, the shopping centre on the King's Heath Neighbourhood, Northampton. The sixteen shops will serve a population of 5,000 living on a 527-acre site. The net density is 42.52 persons per acre. The standard shop has a frontage of 18 ft., a sales area of 396 sq. ft. and a store of 288 sq. ft. Over the shops there are 2 two-bedroom flats of 790 sq. ft. and 6 three-bedroom flats of 878 sq. ft. and 14 maisonettes of 792 sq. ft. Designed by J. L. Womersley, lately borough architect of Northampton; assisted by Geoffrey Hopkinson, lately deputy borough architect, H. J. Rymill, Ivan Morris and P. C. R. Bryan. The King's Heath Estate will be illustrated fully in a later issue of the JOURNAL

in the fifth year are to choose seminar courses in any two of the following fields of study:—Theory of civic design, theory of landscape design, structural engineering (in relation to architecture), building science, industrial design, workshop production, preservation and repair of ancient buildings, tropical building and housing. As Liverpool draws many students from Asian countries (there are six in the first and second years at present) the last subject will be of special interest. There are plans for developing tropical building and building science studies as post-graduate work. The Liverpool School of Tropical Medicine is very interested in problems of tropical housing. The Faculties of Engineering and Science will work with the School of Architecture in building science studies.



Designs for Bucklersbury House before and after the carrying out of refinements and improvements following criticisms by the RFAC. The design on the right came before the RFAC on October 14; it now has no further comments to make. The model will come before the Court of Common Council on November 19. (The architect is Owen Campbell-Jones.)

MOHLG

Re-sale Restrictions on Houses Lifted

Licences authorizing the construction of new houses or the conversion of existing premises into dwellings are now to be issued without any condition restricting the figure at which they may be sold or let, it was stated by the Minister of Housing and Local Government last week. From December 20, 1953, conditions as to the price and rental imposed in licences already issued and land charges created in accordance with Section 8 of the Act of 1945 will cease to be enforceable and entries in the Land Charges Register will accordingly be cancelled. The authorization does not affect premises subject to the Rent Restriction Acts.

IBC

Exhibition "Lost"

The exhibition of Contemporary Spanish Architecture which was to open at the Building Centre last Tuesday has had to be postponed as the material has not yet arrived in this country.

The entry for the competition for sea-front flats at Dover, illustrated on page 479 of the JOURNAL for October 15, was the work of B. W. Lamb and R. M. Welton, not B. W. Lamb and R. W. Wetton, as stated. The entry illustrated on page 481 was the work of Bruno Newton and Robert Purdew. The contribution of Colin St. John Wilson and Peter Carter to this scheme was of a purely advisory character.

DIARY

President's Inaugural Address and Presentation of London Architecture Bronze Medal. At the RIBA, 66, Portland Place, W.1. 6 p.m. NOVEMBER 3

Indian Students Hostel: Criticism. Chairman, J. M. Richards; speaker, Ralph Tubbs. At the ICA, 17-18, Dover Street, W.1. 8.15 p.m.

NOVEMBER 4

Round the Table. Exhibition at the Tea Centre, 22, Regent Street, S.W.1. (Sponsor: COID.) Weekdays, 10.30 a.m. to 6 p.m.; Saturdays, 12.30 p.m.

UNTIL NOVEMBER 20

Watercolours by Sir Hugh Casson. Exhibition at the AA, 36, Bedford Square, W.C.1. Weekdays, 10 a.m. to 6 p.m.; Saturdays, until 2 p.m.

UNTIL NOVEMBER 20

In 1951 it was decided that since Paddington was so deplorably short of public open space the area bounded by the Regent's Canal, the arm to Paddington and Warwick Avenue, should be compulsorily purchased for that purpose and the buildings on it demolished. In view of objections raised, a public enquiry was held and plans showing what the Paddington Borough Council proposed to do with the space were shown. The compulsory purchase order was upheld and site clearance began. Artists' studios were among the buildings taken down. The site has now been cleared, marking pegs have been put in place and levelling is now in progress. What is happening? On the following pages Kenneth G. Browne, (who did the sketches), and Gordon Cullen show what might happen, and what they would prefer to happen, to this unique open space.

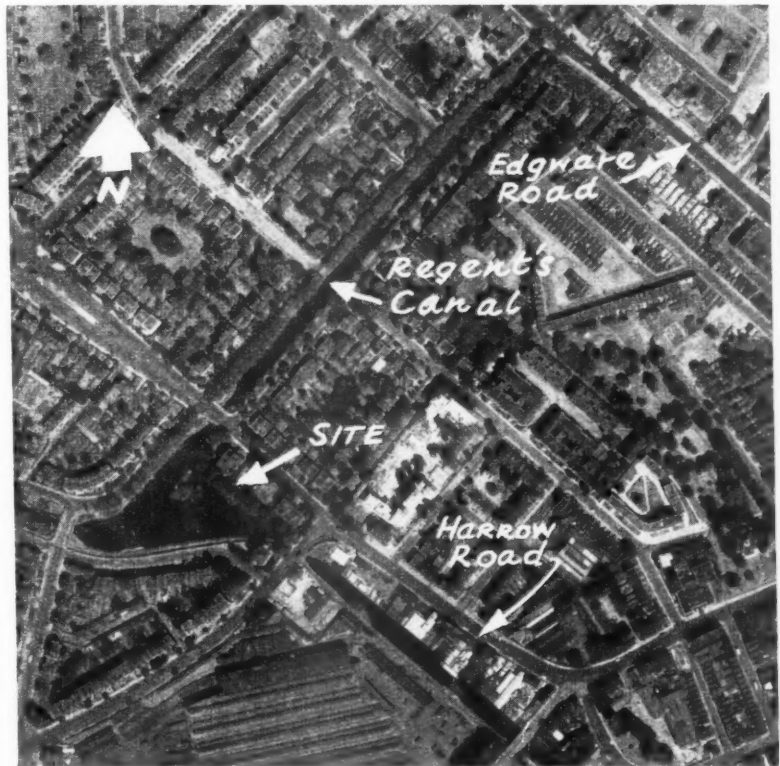
THE FUTURE OF PADDINGTON BASIN

By Gordon Cullen and Kenneth G. Browne

While we are glad that the open space beside Paddington Basin is to be preserved and not built upon, we cannot help wondering how the borough council proposes to develop the site. Is it preparing a standard ornamental garden, complete with kiosk and convenience, or will some imagination be used? We understand that the scheme originally proposed by the borough council was on the lines of the illustration below, right. It is said that this scheme has been slightly revised. But more than a slight revision is necessary. This is quite the wrong approach to the planning of an open space which cannot be matched anywhere else in London.

THE TRUE CANAL SCENE

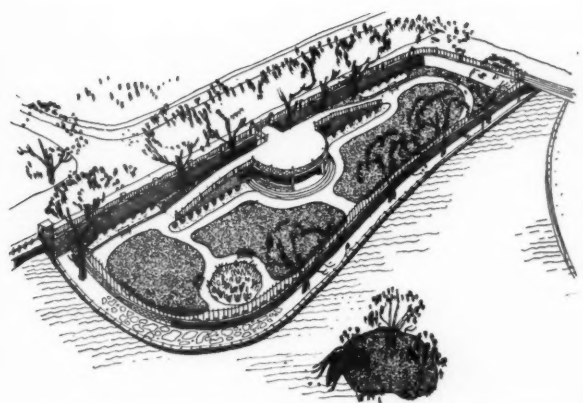
It is the true canal scene—"London's Venice," in the words of Robert Browning. At this point the Grand Union Canal widens out and the site, with its adjacent small island, is held in a fork where the canal divides; an arm



Aerial view of site.



A recent view showing the site cleared and levelled, ready for marking out.



A typical lay-out of the kind that Paddington Borough Council has had in mind for the site.

extends down to Paddington Basin, and the canal proper continues as the Regent's Canal. The scene is busy with the movement of barge traffic. Should such a site be rubber-stamped with the familiar paths, bedded flowers, shrubs and heavy, all-enclosing railings?

RESTORATION OF VITALITY

In built-up areas the presence of water is something to be prized not squandered. When, moreover, the water is "live", not purely ornamental, as in the case of a canal, there are additional attractions. A canal forms a visible link with all kinds of widely separated places, conjuring up pictures of the countryside through which it has passed, whilst the barge traffic provides an unhurried activity unusual and welcome to the town scene: an invitation to loiter.

The type of development we favour and illustrate on pages 539 and 540 would have as its main aim the restoration of vitality to Paddington Basin. Mooring and repair facilities should be provided for canal craft used for pleasure; the Basin should become a London centre for those who spend their spare time afloat on the canals of England. But the site would not be monopolized by the boating centre. It would provide just that degree of busy-ness, that "men at work" atmosphere, which Londoners find so conducive to lounging, watching and relaxing. (Incidentally, last summer two converted narrow boats, which were successfully operated on regular sightseeing canal cruises from this spot showed that the public would welcome such a scheme.) In addition the risk of drowning would be minimized (no small consideration in view of a recent accident); a proper quay, with attendant and moored boats, would be much safer than the present crumbling bank.

ARTISTS' STUDIOS

Apart from the quay, repair yard and ships' chandlers, the area would be planned with public sitting and strolling space and might have playground facilities for children. In addition, a block of artists' studios—with a north aspect and an entrance at road level—could replace those demolished in the site clearance. The flats that are now being built would serve to screen the site from the industrial area nearby.

It may be argued that this scheme would be more costly than a standard public garden. Certainly the initial outlay would be expensive, but the artists' studios, chandler's yard and pleasure-barge quay would bring in money, whereas the public garden alone would be a complete liability. Even if a scheme of this nature cannot be carried out immediately, whatever is done now should act as a foundation for eventual development on the lines we have suggested. We must not have just another rubber-stamp park.



Looking west from the towpath south of the site. Compare this with the view of 1849 on page 540.



The site from the west. The flagpole marks the island. In the foreground is a converted narrow boat now used for pleasure trips.



Looking from the bridge, at the north-west end of the site, towards Edgware Road.



1849



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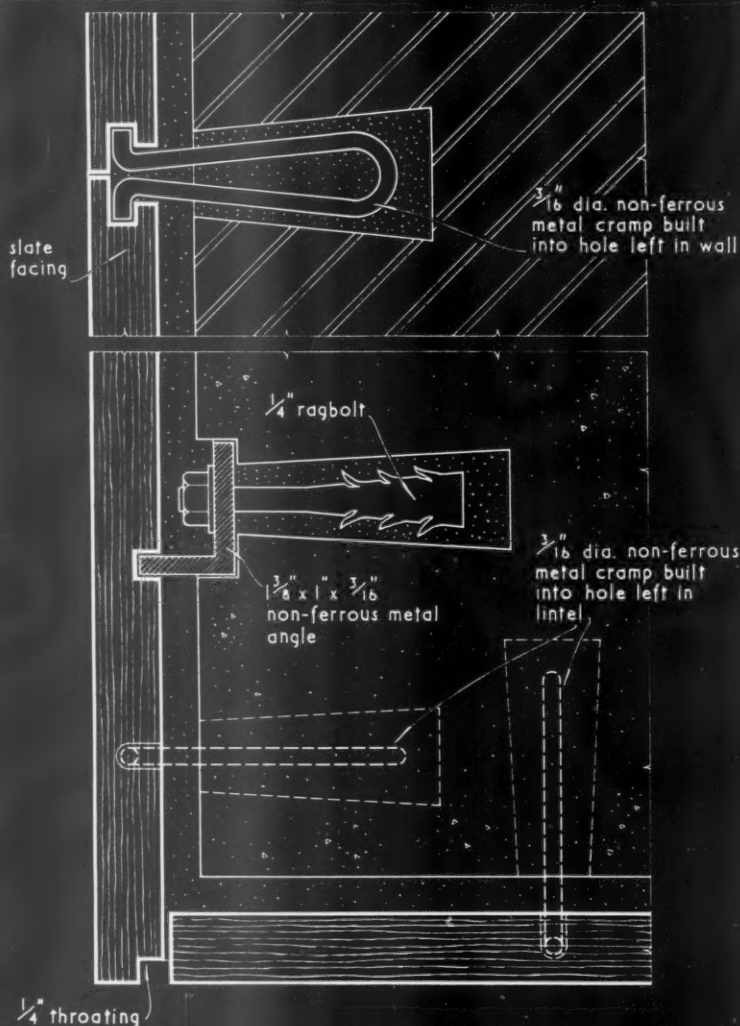


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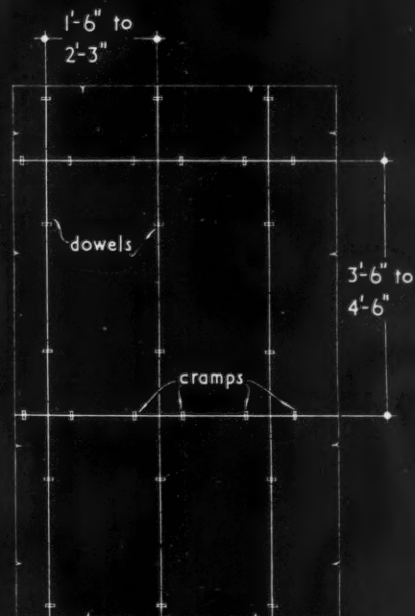
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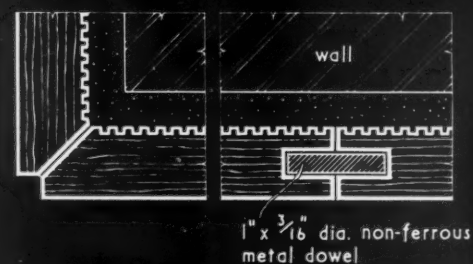
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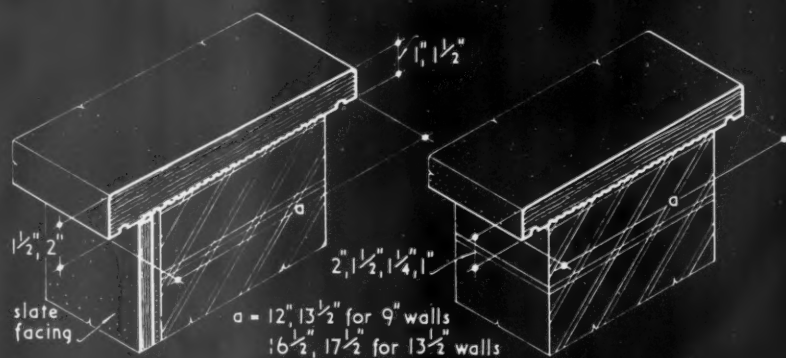
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SLATE FACING.



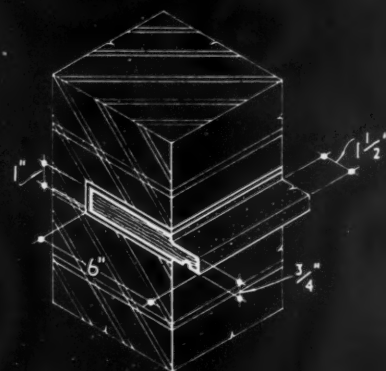
ELEVATION.



SECTION THRO' EXTERNAL ANGLE AND
VERTICAL JOINT.



STANDARD SLATE COPINGS.



SLATE CREASING.

5.B1 · WINCILATE · SLATE FACING, COPINGS AND CREASING

This Sheet describes the use of slate for wall facing and illustrates standard copings and creasing. Sheet 24.Z1 describes Wincilate slate window sills and their use with various types of window.

Material

Slate is a particularly suitable material for facing walls as, unlike many other natural stones, it can be obtained in slabs only $\frac{3}{4}$ in. thick. It is chemically inert and non-porous and does not warp, shrink or rot, qualities which also recommend it for copings and creasings, as it reduces the need for damp-proofing.

Facing

Sizes of slabs: For ease of handling it is recommended that slabs should be from 3 ft. 6 in. to 4 ft. 6 in. long and 1 ft. 6 in. to 2 ft. 3 in. wide. Larger sizes may be obtained if required.

Fixing: The drawings on the face of the Sheet show the principles of fixing slate facings, although many design variations are possible.

The slabs are held by non-ferrous metal cramps, grouted into prepared holes in the supporting structure. The cramps are inserted at the horizontal joints in the slabs and in vertical joints where additional support is needed, as in the soffit detail shown in the drawing on the face of the Sheet. Vertical joints are otherwise supported and aligned by non-ferrous metal dowels as illustrated. After the slabs are secured, the space behind should be grouted with 1 : 3 cement/sand mortar to form a solid bedding. The backs of the slabs are scored to provide a key for the mortar.

Where the lower edge of the facing does not receive direct support from the structure, the lowest course of slabs should be supported by a non-ferrous metal

angle, ragbolted into the wall. The drawing on the face of the Sheet shows this method of supporting slabs over an opening.

Soffit: On surfaces where the slabs are hung horizontally all joints should be amply supported by cramps.

Weathering: Where there is a set-back in the surface to be faced, the slabs should be bedded on the horizontal projection with a slight fall, to act as a weathering, the underside of the outer edge being provided with a $\frac{1}{4}$ -in. check throating where it is jointed to the vertical slabs below.

Standard Copings

The drawings on the face of the Sheet show the standard slate copings, which are available in lengths up to 7 ft., weathered or flat. A throating is provided under each long edge of all copings and the undersides are scored to provide a key for bedding.

Creasing

This is designed, as shown in the drawing, for setting $4\frac{1}{2}$ in. into the wall and the thickness of the front edge is $\frac{3}{4}$ in., so that it may be used with Wincilate slate sills.

Compiled from information supplied by :

The Bow Slate and Enamel Company Limited.

Address : British Railways Bow Depot, Old Ford Road,
Bow, London, E.3.

Telephone : Advance 2203-5.

GLASS FIBRES GENERAL DATA

8.EI

The Architects' Journal Library of Information Sheets 440. Editor: Cotterell Butler, A.R.I.B.A.

REVISED 29.10.53

TYPE	DESCRIPTION	nominal thickness inches (uncompressed)	STOCK SIZES OR QUANTITIES	nominal density lb/cu. ft.	thermal conductivity B.Th.U./sq. ft./in./°F.	APPLICATIONS
quilt, light	glass wool mat stitched between treated kraft paper	$\frac{3}{4}$	rolls: 15 yd. long x 1 yd. wide	5	0.25	for sound insulation of floors, walls, partitions and ceilings
medium	as for quilt, light	1	rolls: 15 yd. long x 1 yd. wide	5	0.25	as for quilt, light (for hotels, schools, institutes etc.)
heavy	as for quilt, light	$1\frac{1}{4}$	rolls: 10 yd. long x 1 yd. wide	5	0.25	as for quilt, light (for hospitals and places where a high degree of sound insulation is necessary)
house insulation	mat of felted glass wool fibres	4	rolls: 6 yd. long x 12 in., 14 in., 16 in., 18 in. wide	$1\frac{1}{2}$	0.30	for thermal insulation of roof spaces and attics: material laid between joists
loose wool	glass fibres in loose form	—	bags: 14 lb., 28 lb. bales: about 36 lb.	3	0.26	for cavity packing
bitumen-bonded mat	glass wool mat lightly bonded with bitumen	1	rolls: 10 yd. long x 33 in., 36 in., 42 in., 48 in. wide or cut to suit joist spacing	3	0.25	for thermal insulation of walls, ceilings and floors in both prefabricated and traditional constructions: for sound insulation in concrete floating floors
bitumen quilt	bitumen-bonded mat enclosed in treated kraft paper	$\frac{3}{4}$	rolls: 10 yd. long x 1 yd. wide	3	0.25	as for bitumen-bonded mat
resin-bonded semi-rigid slab	glass wool mat lightly bonded with resin: made in three densities	$1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$	sizes within the limits 72 in. x 42 in.	$2\frac{1}{2}$ (type 250) $4\frac{1}{4}$ (type 425) 6 (type 600)	0.25	for thermal or sound insulation

FIBREGLASS-INSULATING MATERIALS.

Manufacturer: Fibreglass Limited.

8.E1 ·FIBREGLASS· INSULATING MATERIALS

This Sheet supersedes Sheet 8.E1 published 24.1.52. It describes the general properties of Fibreglass insulating material. The table on the face summarises the primary characteristics of the various forms in which the material is available.

Material

Fibreglass consists of glass drawn into flexible fibres and is entirely inorganic, non-hygroscopic, unaffected by moisture and will not rot or cause corrosion of any surface with which it may come in contact. It offers no sustenance to vermin and is non-inflammable.

Thermal Conductivity

National Physical Laboratory tests have been carried out on this material. The thermal conductivity figures quoted on the face of the Sheet are based on these tests. Copies of the actual reports may be obtained from the manufacturer.

Applications

Detailed applications of this material will be dealt with on subsequent Sheets.

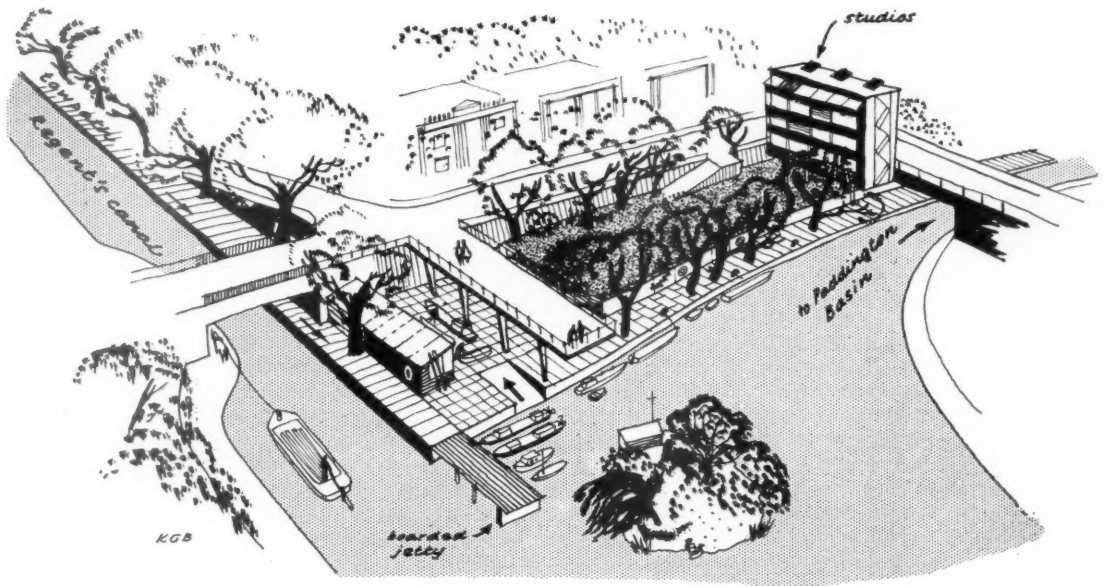
Trade Name

The word 'Fibreglass' is a trade mark.

Compiled from information supplied by :

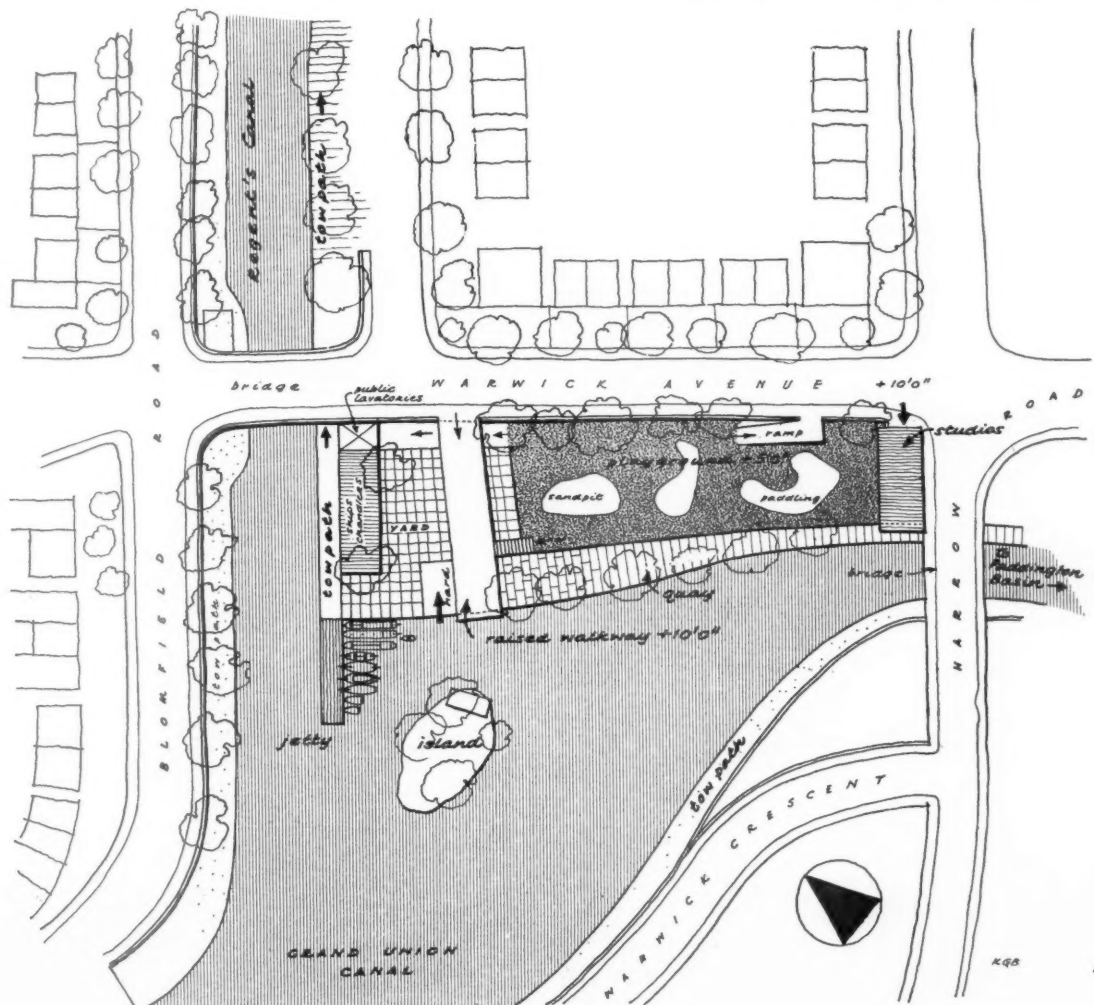
Fibreglass Ltd.

Head Office : Ravenhead, St. Helens, Lancs.
Telephone : St. Helens 4224.
Telegrams : Fibreglass, St. Helens.
London Office : 63-65, Piccadilly, W.1.
Telephone : Hyde Park 2115.
Telegrams : Fibreglass, Piccy, London.
Glasgow Office : 136, Renfield Street, Glasgow, C.2.
Telephone : Douglas 2687.
Telegrams : Fibreglass, Glasgow.
Manchester Office : 11, Piccadilly, Manchester, 1.
Telephone : Blackfriars 8863.
Birmingham Office : Piccadilly Arcade, New Street, Birmingham, 2.
Telephone : Midland 0464.
Newcastle Office : 16, Dean Street, Newcastle-upon-Tyne.
Telephone : Newcastle 20938.
Dublin Office : 21, Merrion Square North, Dublin.
Telephone : Dublin 67060.



Above, a view of the site from the west, with suggested treatment.

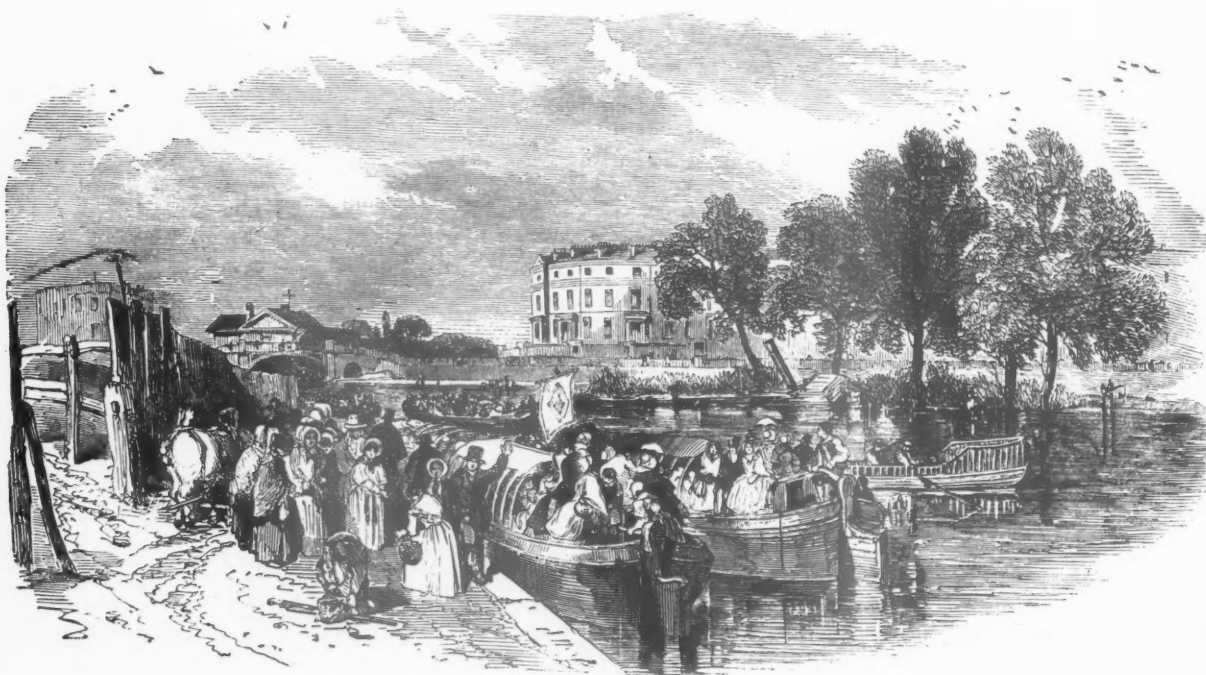
Below, a plan of the site, which is 400 ft. long.





The proposed layout, looking north-west, showing the raised walkway connected to the road, and the narrow-boat moorings.

Below, pleasure canal boats sketched at Paddington basin in 1849. (Reproduced from the Illustrated London News.)



ASSEMBLY HALL

at SECONDARY SCHOOL, HEADSTONE LANE, HARROW, MIDDLESEX
designed by JOHN and ELIZABETH EASTWICK-FIELD, assistant architect, A. BAYNES
in collaboration with C. G. STILLMAN, county architect
consulting structural engineer, F. J. SAMUELY, quantity surveyors, CRUMP and TRINICK

The Blackwell school was designed originally as a comprehensive secondary school, but while under construction it was changed to a secondary modern school for 900 pupils. The classrooms, practical rooms and dining rooms were occupied before the assembly hall and administrative block, illustrated here, were begun. The brief given to the private architects for these phase II buildings included the suggestion that the assembly hall, administration block and gymnasium (not illustrated here) should be designed to act as a foil to the standard construction of classrooms and to add variety to the scheme.

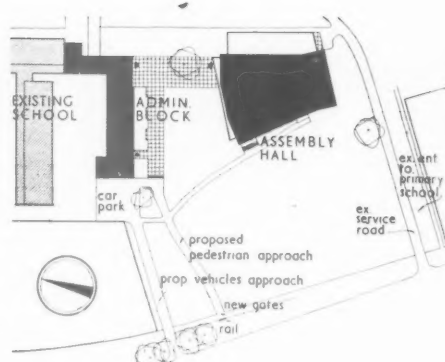
The assembly hall from the south.



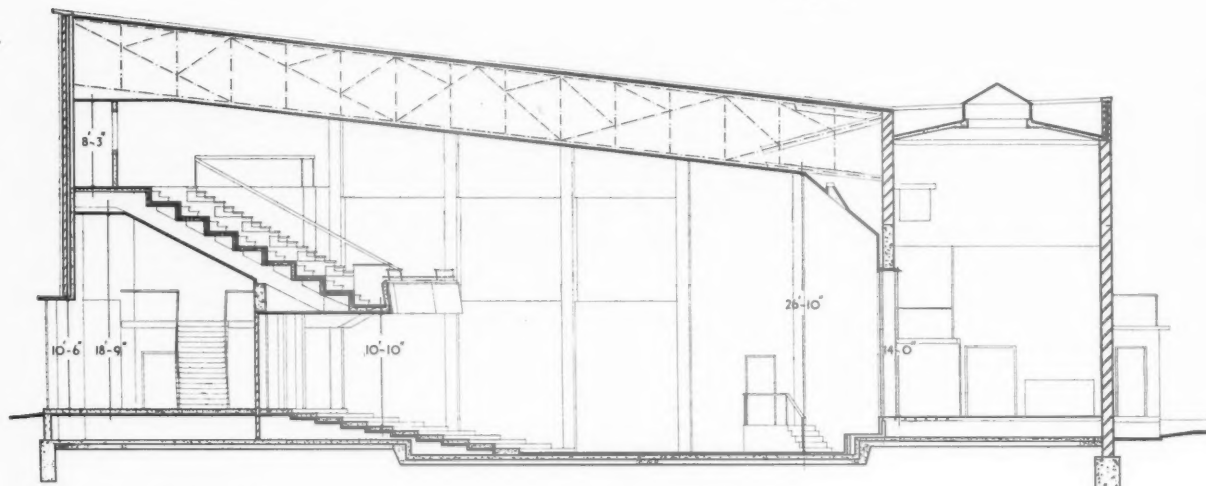
ASSEMBLY HALL

at SECONDARY SCHOOL,
HARROW, MIDDLESEX
designed by JOHN and
ELIZABETH EASTWICK-
FIELD

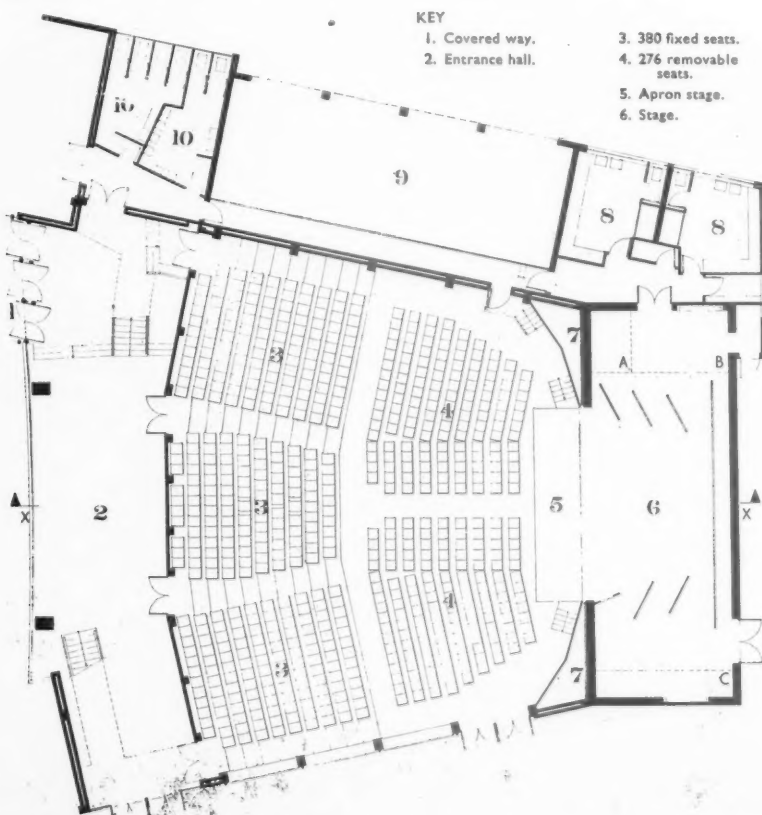
CONSTRUCTION.—Walls of load-bearing brick-work, piers in Staffordshire blue engineering bricks. The side wall piers are post-tensioned with two high tensile steel rods running in tubes through the centre of each pier. This was done to avoid the use of sectional steel or concrete requiring shuttering, and to keep the piers slender. They are 18 in. by 13½ in. by about 35 ft. high. Tensioning was carried out by the Lee McCall system and is thought to be the first instance of post-tensioning of brick piers. The balcony consists of r.c. beams spanning



Site plan



Section X-X [Scale: 1/8" = 1' 0"]



Ground floor plan [Scale: 1/32" = 1' 0"]

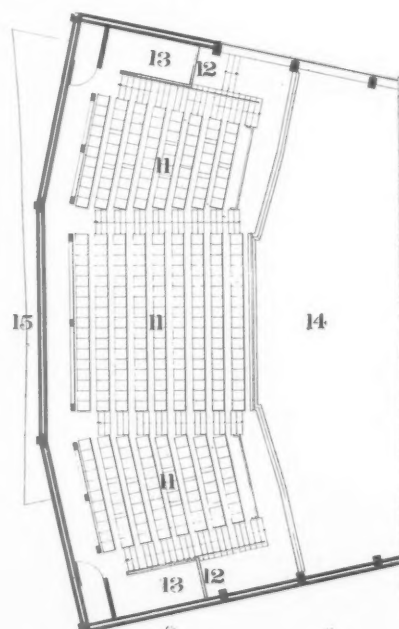
KEY

1. Covered way.
2. Entrance hall.

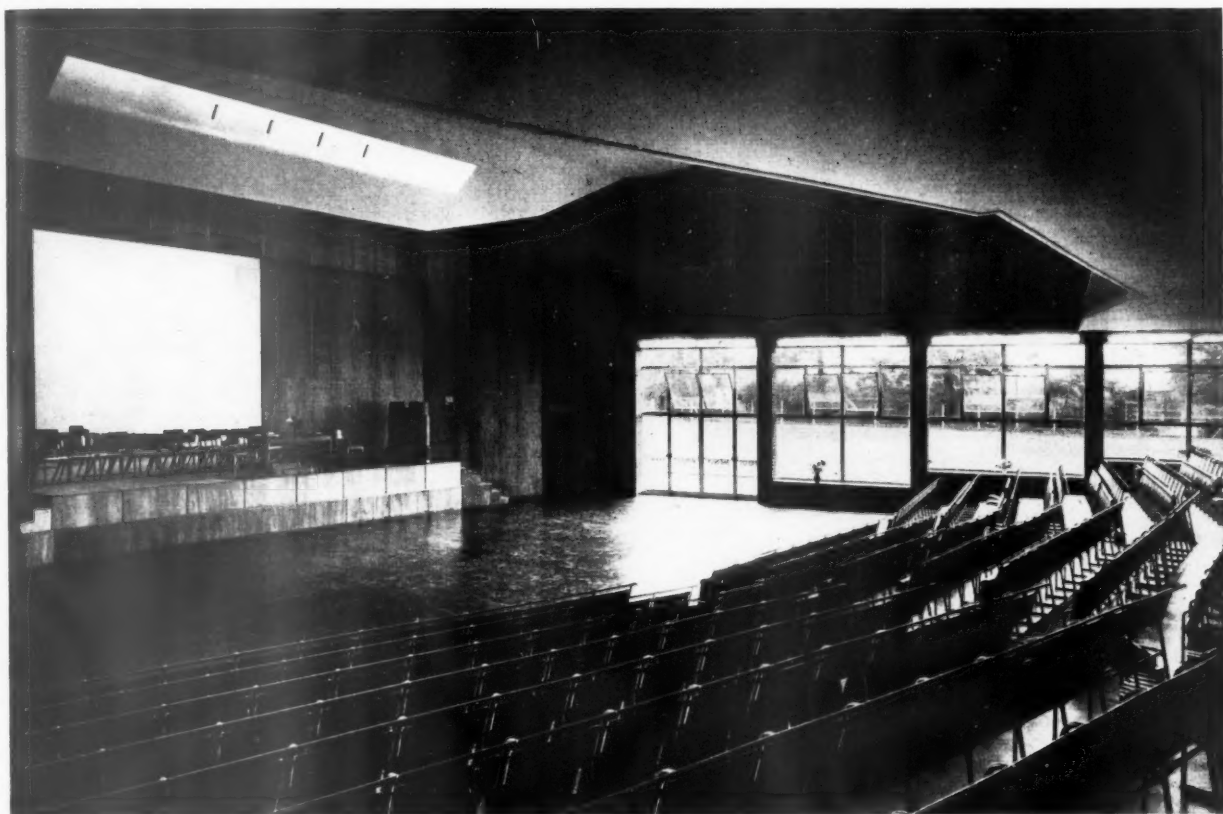
3. 380 fixed seats.
4. 276 removable seats.
5. Apron stage.
6. Stage.

- A. Lighting platform over.
- B. Fan chamber over.
- C. Fly gallery over.
7. Sliding panels.
8. Dressing room.
9. Cycle store.

10. Lavatories.
11. 303 fixed seats.
12. Exit.
13. Platform over exit doors.
14. Auditorium under.
15. Line of canopy.



Balcony plan



the vestibule and cantilevered over the rear of the hall. The stage roof is of in situ r.c. stressed skin construction. The hall roof is of strawboard decking carried on steel trusses. Two main trusses run parallel from front to back of the hall and there are secondary trusses at right-angles to these.

FINISHES.—Facing bricks are London stocks. Floor finishes: linoleum stuck to screed in vestibule and stepped part of hall floor, muhuhu hardwood blocks on flat hall floor, parana fine strips on stage and granolithic in cloakrooms. Side walls of the hall are finished 1-in. woodwool, rear walls $\frac{1}{2}$ -in. perforated fibreboard tiles, proscenium opening panels of $\frac{1}{2}$ -in. elm veneer plywood, cellulosed, stage walls are fair-faced brickwork. Ceilings are plastered. Windows are purpose-made steel.

GENERAL.—As steel was scarce when the architects started work they decided to use load-bearing brickwork combined with precast r.c. floors and roofs. The only steelwork used is in the roof construction of the assembly hall. The architects were told that the hall would probably be used as follows. In school hours:— for morning assembly of up to 1,100 pupils and staff, for group activities of 50 to 100 pupils for 2 or 3 hours per day, for films on approximately 10 occasions per year and for dress

rehearsals on about 10 occasions per year. In the evenings: by the school for clubs and societies, frequently, for school plays and films for parents on about 12 evenings per year and for inter-school competitions and festivals on another 12 occasions. Also in evenings by the public for plays, music, dancing and meetings on 30 occasions per year and also for meetings, whist drives, rehearsals, etc., attended by members of local societies. It was known at the outset that the school would specialize in drama, music and dancing, and it was considered important to meet as nearly as possible the often conflicting requirements of these activities.

DESIGN.—The conception of the hall was based largely on the following three principles:

(1) Where as many as 960 seats have to be provided in a school hall, it is essential to have ramped seats for at least half this number if all the audience are to be able to see and hear properly what is going on at the front of the hall. (2) A flat area of 1,800 sq. ft. is sufficient for dancing and free activity for one or two classes during teaching periods, and the rear part of the ground floor may therefore be ramped. (3) A wedge-shaped plan and the inclusion of a balcony enable the farthest seats to be kept within a reasonable distance from the stage, but if a formal stage arrangement is to be used at any time, excessive



Top, auditorium looking towards the stage. Above, two views of the entrance hall.



Top, from the north-west; on the left the covered way linking assembly hall and administration block. Centre, roof terrace over ground floor cycle stores and cloakrooms on east side of assembly hall. Above, school dramatics, using the portable stage boxes. Left, free movement taking place on the level area in front of the stage. Floor heating coils are used in the hall and vestibule and the whole of the roof space acts as a ventilating duct. There is a fan chamber over the stage.

ASSEMBLY HALL

at SECONDARY SCHOOL,
HARROW, MIDDLESEX
designed by JOHN and
ELIZABETH EASTWICK-
FIELD

width is a disadvantage, particularly near the front, and the shape must be fairly symmetrical.

Care was taken to plan the hall in such a way as to enable it to be filled and emptied quickly; in particular the staircases were arranged so as to lead to the front and lower part of the balcony rather than to the back of it, so as to avoid lengthy staircases. On the steppings a fixed tip-up chair was used. There was then no light and cheap tip-up chair on the market and a new pattern was specially designed by the architects, in collaboration with the manufacturers.

Sliding wooden screens conceal the stage, but leave an ample forestage. These screens not only provide a hard reflecting background for speech and

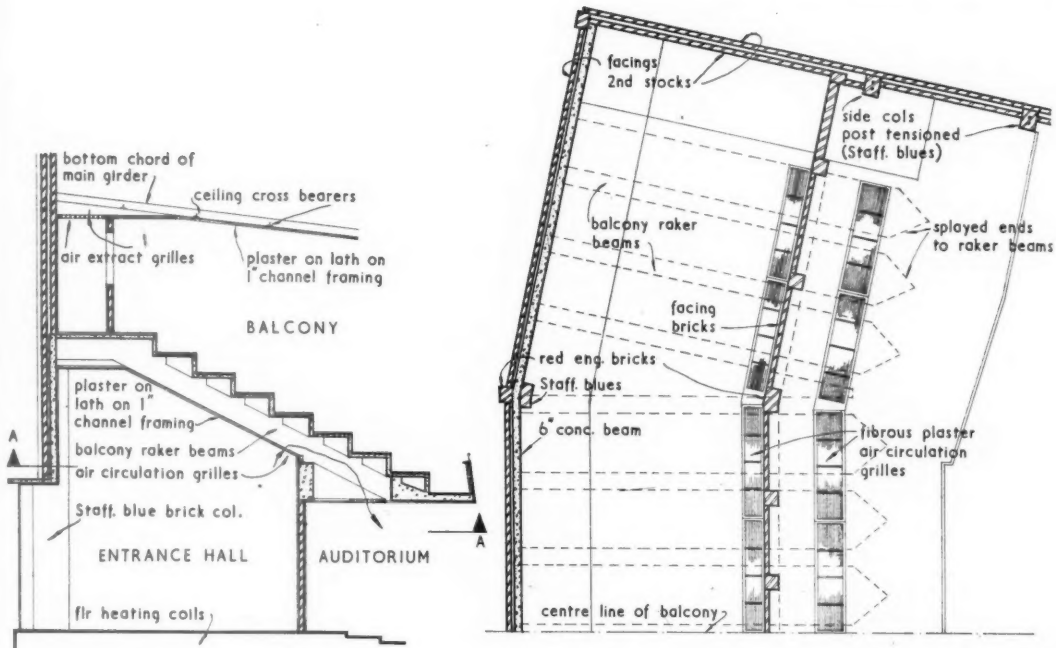
music, but also give a more satisfactory appearance than an empty stage or drawn curtains. The steppings are raised enough to allow most of the flat part of the floor to be seen from the seats. A display of dancing, for instance, could be held on this floor in front of the closed proscenium doors. Boxes are provided, which can be arranged in a number of different ways for formal or informal drama, or for making a temporary stage for concerts.

THE STAGE.—The architects received valuable help in the detailed design of the stage, including stage scenery and lighting, from the Planning Advice Department of the Arts Council of Great Britain. The stage, including the wings, is 20 ft. deep and 56 ft. in width and the proscenium opening 28 ft. wide and 14 ft. high. The stage is 26 ft. 6 in. high. This height is insufficient for flying all the scenery, but it does allow the scenery and lighting to be hung from a grid, and borders to be flown.

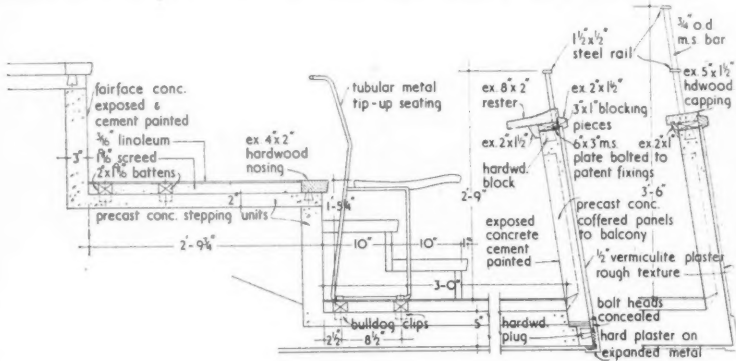
STAGE LIGHTING.—The stage, although designed to the minimum dimensions recommended by amateur drama specialists, is nevertheless large compared with stages of most other schools, and the cost of providing what is considered a useful but minimum amount of stage lighting equipment is in the region of £600. It was decided therefore to provide under the contract only a switchboard and wiring, leaving the school to buy the actual fittings.

ACOUSTICS.—Hope Bagenal was consulted on the acoustic treatment of the interior of the hall. The ultimate choice of a wedge-shaped—rather than rectangular—plan meant that more absorbents than usual were required to avoid return-focusing of sound waves in the front of the hall. It resulted in a fairly low reverberation time. This, however, was not a disadvantage, since in a school hall it is better to have a low reverberation time which enables speech to be heard clearly, than a longer reverberation time which would give music more singing tone, but would make speech less intelligible.

In contrast with most theatres, which have walls unpierced by windows, surfaces broken up by tiers, boxes and mouldings, upholstered chairs and thickly carpeted floors, it was difficult in this hall to find sufficient wall space for the required acoustic absorbents. It was decided therefore to use materials of high absorbing capacity on the side and rear walls, and to make the ceiling and panels beside the stage, hard reflectors. The side walls are panelled in 1 in. woodwool slabs nailed to 3 in. by 1 in. battens fixed to the brickwork, and the rear walls are finished



Section on centre line and plan A-A of underside of balcony [Scale: $\frac{1}{2}$ " = 1' 0"]



Section through steps, seating and balcony front, and, on right, front at gangways [Scale: $\frac{1}{4}$ " = 1' 0"]



Above right, the auditorium seen from the stage. Below, the underside of the balcony under construction. Below right, r.c. beams which carry the precast concrete stepping units, seen extreme right.

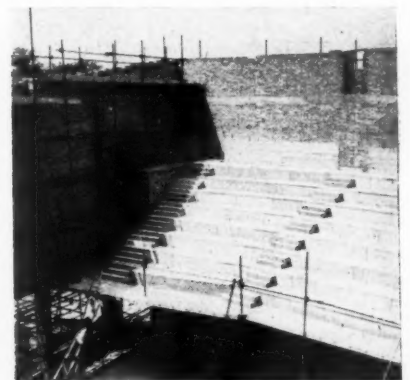
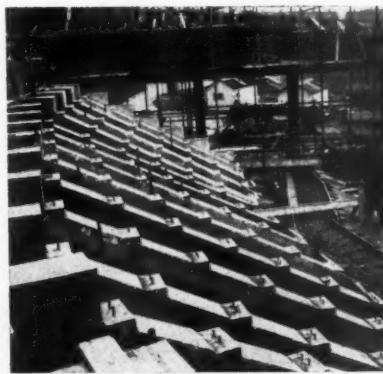
with perforated fibreboard tiles stuck direct to the brickwork. The balcony front is plastered in vermiculite plaster, and like the rear walls, it is shaped in such a way as to prevent the concentration of returning sound waves to the front of the hall.

The calculated reverberation times, with a full

audience, are as follows:

Frequency c.p.s.	125	500	2000	4000
RT in seconds	1.35	0.9	0.85	0.8

LICENSING.—The hall has been designed so as to meet the requirements of the entertainments





Left, the entrance hall of the administration block. The light fitting and the ceiling design in dark red, yellow and grey-green were designed by the architects. Below, the covered way which links the assembly hall to the administration block.

ASSEMBLY HALL

at SECONDARY SCHOOL, HARROW, MIDDLESEX

designed by JOHN and ELIZABETH EASTWICK-FIELD

licensing section of the County Engineer's Department, for the issue of an annual music dancing licence and an occasional stage play licence. These requirements are mainly concerned with the layout of seating and the dimensions of steppings and gangways, the width and provision of exits, emergency lighting and exit signs, the design of electrical

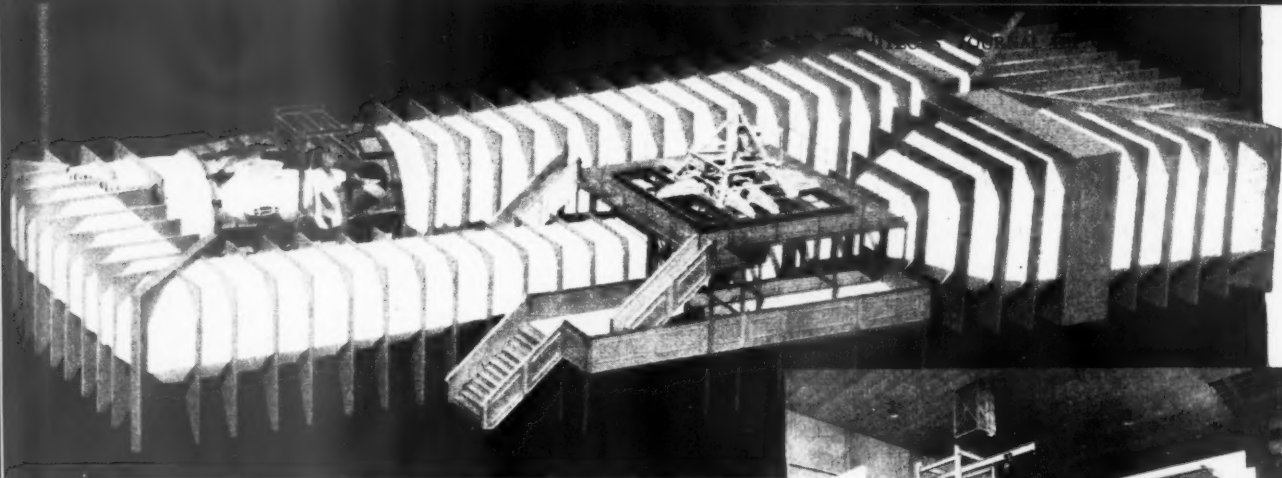
and ventilating equipment and the provision of fire appliances.

General contractors, Anglo-Scottish Construction Co., Ltd. For sub-contractors, see page 552.



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A PLYWOOD WIND-TUNNEL

The wind-tunnel at the College of Aeronautics, Cranfield, covers a floor area of 7,500 sq. ft. and its circuit length is 300 ft.; the main section is large enough to admit a double-decker 'bus, and the cross section is chiefly octagonal although it changes to circular at one part.

Since the size is so great as to make it impossible to photograph the whole installation, the above illustration is taken from a scale model.

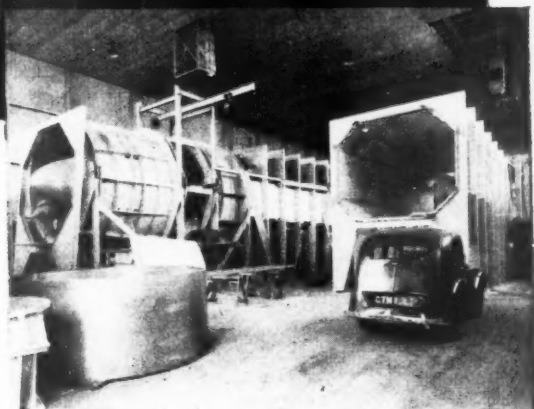
The other views show: (2) the partly built tunnel, with transition from circular to octagonal shape; (3) a corner, showing part of the tunnel completed; (4) looking along the aligned frames before the walls were fitted.

Flexoply $1\frac{1}{2}$ -inch laminated packings were bolted to the alloy frames and to these packings were screwed Flexo .11-ply shell panels, beech-mahogany-beech, a total of 1-inch thick. The accuracy demanded was such that all frames were set up by theodolite, and the coarsest tolerance in this 300ft. long structure was plus or minus $\frac{1}{8}$ in.

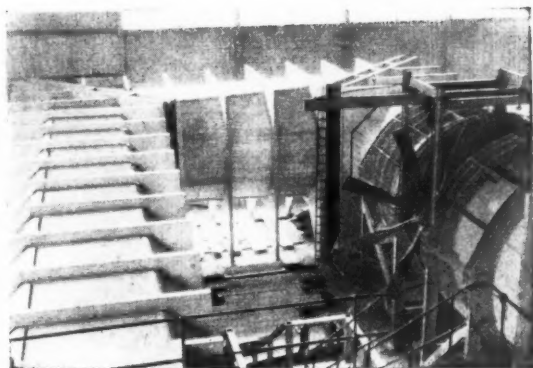
Much of the plywood had to be moulded in order to effect the transitions in cross-section, nearly 12,000 sq. ft. of Flexo plywood, weighing more than 20 tons, were used, and secured by more than 50,000 screws.

In laminating the Flexo plywood, $2\frac{1}{2}$ tons of 'Beetle' adhesives were used, and the illustrations are reproduced by permission of the Ministry of Works.

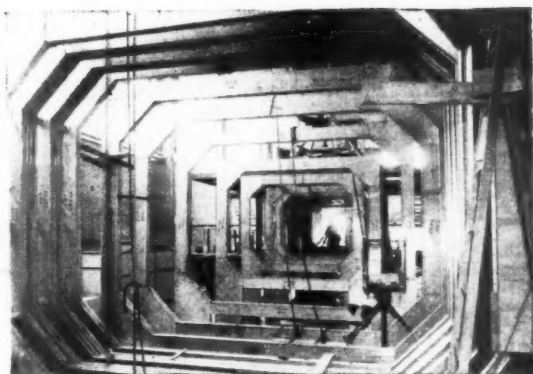
Ministry of Works photographs; Crown copyright reserved.



2



3



4

FLEXO

INDUSTRIES

FLEXO PLYWOOD INDUSTRIES LTD., SOUTH CHINGFORD, LONDON, E.4.

Telephone: Silverthorn 2666 (7 lines)

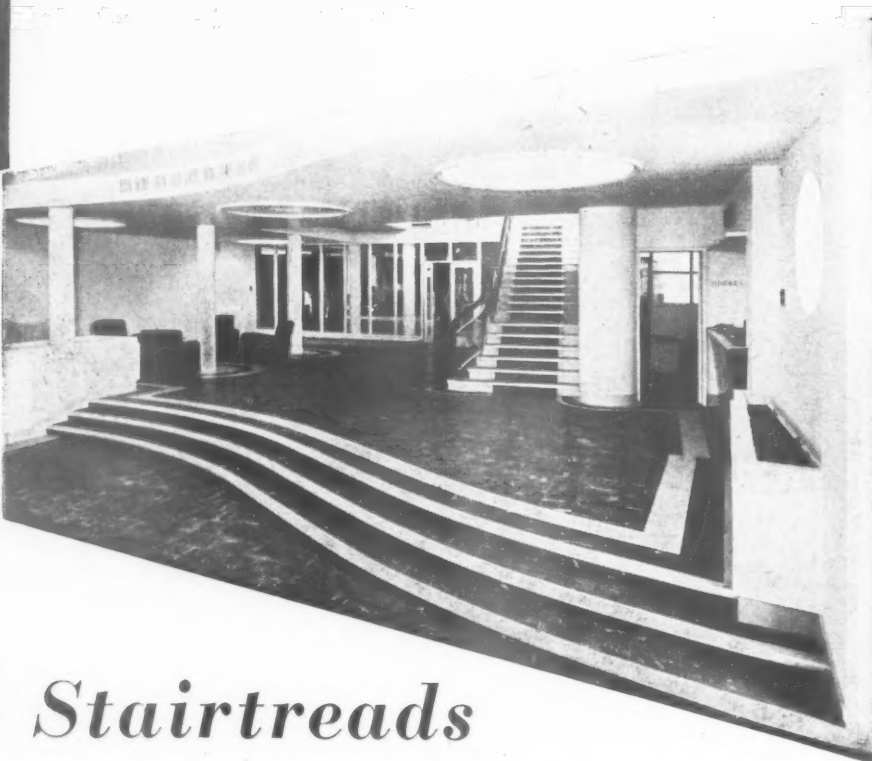
(Associated with Cork Manufacturing Co. Ltd.)



Ferodo Stairtreads at Bentalls' Kingston-on-Thames

*Lea Valley Growers Association,
Waltham Cross.
Flooring Contractors: Semtex Ltd.
Architect: Howard Leicester F.R.I.B.A.*

In any setting



FERODO *Stairtreads* *are unobtrusively safe...*

**BUILDING TRADES
EXHIBITION—OLYMPIA
November 18th—December 2nd.
STAND 55**

Ferodo Stairtreads obey the dictum that governs all ready-made fittings which must take their place in an overall design—they are completely functional yet merge into their surroundings.

Never do they intrude... Never do they jar the eye.

The only obvious thing about them is the high degree of safety they provide; a firm, reassuring foothold, edged with the quiet gleam of the aluminium nosing, gently indicating the edge of the step.

Ferodo Stairtreads wear so well too, standing up to years of continual use and needing only a quick wash or brush down to look as if they had been fitted the day before.

Send for samples and a copy of our Stairtread Catalogue No. 888.

TWO NEW COLOURS

In addition to red, green, grey, blue and white composition and brown fabric, Ferodo Stairtreads are now available in black and brown compositions.

FERODO *non-slip Stairtreads*

TECHNICAL SECTION

Once again the UK has demonstrated its unwillingness to participate fully in the work of the UNO (Economic Commission for Europe) Housing Sub-Committee. The recent session of the sub-committee, held in Geneva, was noteworthy for the attendance of delegates from 21 European countries, including the USSR, Poland, Roumania, Yugoslavia and Hungary, yet the UK was not represented.

This is particularly regrettable in view of the excellent contributions which the UK has, on various occasions in the past, made towards the work of the sub-committee—contributions which have frequently earned us tributes from other delegations.

At the session referred to, the sub-committee adopted a programme of work for its three working parties—on the Development of Housing Policy; the Cost of Building; and Housing and Buildings Statistics—and an important discussion took place on the subject of rent policy. Practically every delegation took part in this discussion, and a set of conclusions were drawn up and adopted.*

This is a subject which has been much studied and argued about in the UK and it is, therefore, most unfortunate that there were no UK delegates present. Their contributions to the discussion would have been extremely welcome and valuable, and if they could have taught more than they could have learnt, this would have been all the more reason for attending.

* A summary of these conclusions will appear in next week's JOURNAL.

8 ESTIMATING materials' prices

Current prices for measured work will appear on Nov. 19. Prices of materials and measured work last appeared in the JOURNAL on Aug. 6 and Aug. 20, 1953, respectively.

Current rates of wages and market prices of materials prepared by Davis, Belfield and Everest, Chartered Quantity Surveyors. Rates for measured work will be published in the JOURNAL for Nov. 19. The most recent of Professor Bowen's analyses of fluctuations in the prices of building materials appeared on April 23.

Rates of Wages last rose on February 2, 1953 and are now as follows:—

<i>LONDON DISTRICT</i>				<i>Craftsmen</i>	<i>Labourers</i>
Within 12 miles radius	..	..	..	3s. 8d.	3s. 2½d
From 12-15 „	„	..	..	3s. 7½d.	3s. 2d.
<i>LIVERPOOL and DISTRICT</i>				3s. 8d.	3s. 2½d.
<i>GRADE CLASSIFICATIONS</i>		<i>A</i>	<i>A¹</i>	<i>A²</i>	<i>A³</i>
Craftsmen	..	3s. 6½d.	3s. 6d.	3s. 5½d.	3s. 5d.
Labourers	..	3s. 1d.	3s. 0½d.	3s. 0d.	2s. 11½d.

(continued on page 548)

This week's
special feature

THE COLD STAYS OUT — THE HEAT STAYS IN



Here's the secret

"INSULIGHT" Double-Glazing Units are the practical answer to a big problem in heat conservation — namely, heat losses through window glazing.

They combine the functions of both window and thermal insulator. Each unit consists of two panes of glass separated by a hermetically sealed cell of dry air. The double glass, with the air-space between, reduces heat losses by as much as 50%.

'INSULIGHT'

double - glazing units

Consult the Technical Sales and Service Department at St. Helens, Lancs., or Selwyn House, Cleveland Row, St. James's, London, S.W.1. Telephones: St. Helens 4001; Whitehall 5672-6. Supplies are available through the usual trade channels. "INSULIGHT" is the British registered trade mark of Pilkington Brothers Ltd.

SPECIAL NOTE

Make sure that your frames are of sufficient width. Details can readily be obtained from Pilkington Brothers Ltd., or your window frame manufacturer.

"INSULIGHT" Double-Glazing Units are relatively less expensive when bought in large pane sizes.

PILKINGTON BROTHERS LIMITED

ST. HELENS, LANCs.



DG.2

Prices vary according to quality and the quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

CONCRETOR

Cements

Portland to B.S. 12, 6 tons and over	per ton	95/-
Rapid hardening to B.S. 12, 6 tons and over	"	103/-
Aquacrete water repellent, 6 tons and over	"	127/6
Aluminous to B.S. 915, 1 ton lots	"	299/6
Snowcrete, 1 ton lots	"	255/6

Above prices include for delivery to Charing Cross in non-returnable paper bags or cotton sacks.

Aggregate and Sands, etc. (Full Loads)

$\frac{1}{2}$ " (Down) Washed, crushed and graded shingle to B.S. 882, Table 2	per yard cube	18/3
$\frac{1}{4}$ " Ditto	"	17/3
$\frac{1}{2}$ " Sharp washed sand to B.S. 882, Table 3	"	20/10
Brick hardcore	"	9/6

(For Sands for Bricklaying and Plastering, see respective trades)

Floor Blocks

Floor blocks, 12" x 12"	per 1,000	693/-	936/-	1,081/-
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Reinforcement

Home trade maximum basis price for mild steel rods to B.S. 785, $\frac{1}{2}$ " diameter and upwards, ex mills delivered to station or siding	per ton	£32 18 0
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Extras for:—

Under $\frac{1}{2}$ " to $\frac{3}{8}$ " diameter	"	£1 7 0
Ditto $\frac{3}{8}$ " and over $\frac{1}{2}$ " diameter	"	£1 14 6
$\frac{1}{2}$ " and over $\frac{1}{2}$ " diameter	"	£2 2 0
$\frac{3}{4}$ " and over $\frac{1}{2}$ " diameter	"	£2 9 6
$\frac{1}{2}$ " and over $\frac{3}{4}$ " diameter	"	£2 17 0
$\frac{3}{4}$ " and over $1\frac{1}{4}$ " diameter	"	£3 4 6
$1\frac{1}{4}$ " diameter	"	£3 12 0
Under $1\frac{1}{4}$ " to $1\frac{1}{2}$ " diameter	"	£5 2 0

Fabric Reinforcement

Steel wire mesh fabric to B.S. 1221, Part A, per yd. super	16.35 lb.	9.32 lb.	4.71 lb.	1.83 lb.
	7/9 $\frac{1}{2}$	4/6	2/3 $\frac{1}{2}$	1/6 $\frac{1}{2}$

BRICKLAYER

Common Bricks

Third stocks	per 1,000	127/4
Rough stocks	"	163/4
Mild stocks	"	207/10
Sand limes	"	110/6
Phorpres pressed Flettons	"	110/-
Belgian	"	212/6

Facing Bricks

Hand-selected sand limes	per 1,000	145/9
Phorpres rustic Flettons	"	135/-
Stocks, first hard	"	254/10
Stocks, second hard	"	238/10
Southwater pressed sandfaced reds	"	285/-
Dorking pressed sandfaced multicoloured facings	"	239/6

Engineering Bricks

Lingfield engineering wirecuts. Grade 'B'	per 1,000	218/6
Southwater engineering No. 2 (second quality red pressed)	"	282/6
Blue pressed bricks to B.S. 1301	"	501/-

Glazed Bricks

White, Ivory or Brown, 9" x 2 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " delivered London stations.	Best quality.	£ s. d.
Headers	per 1,000	63 0 0
Stretchers	"	64 0 0
Seconds quality, above prices less 10%.		

BRICKLAYER (continued)

Limes and Sands

†Lime, greystone, to B.S. 890	per ton	110/6
†Lime, chalk, ditto	"	110/6
*Lime, hydrated, ditto	"	123/-
Washed pit sand to B.S. 1200	per yardcube	20/10

* Including paper bags.

† Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

Sundries

10 s.w. gauge galvanized butterfly type wall ties to B.S. 1243	per 1,000	85/6
Wall ties, galvanized, 8" x $\frac{3}{4}$ " x $\frac{1}{2}$ ", to B.S. 1243	per cwt.	85/-
Damp proof course slates: Imported Welsh		
Size 14" x 9"	per 100	43/- 77/-
" 14" x 4 $\frac{1}{2}$ "	"	21/- 34/6
Hessian base bitumen damp course to B.S. 743	per yard super	5/1
	9" x 3" 9" x 6" 9" x 9"	
Terra-cotta airbricks	each	1/3 2/6 6/-
Galvanized cast-iron airbricks	"	3/2 5/3 7/10
Galvanized cast-iron hit-and-miss ventilators	"	3/1 6/1 7/10
Wall reinforcement supplied in standard rolls containing 25 yards lineal		
† 2" wide black japanned	per roll	3/4
† 2 $\frac{1}{2}$ " wide black japanned	"	4/2
† Greater widths pro rata 2 $\frac{1}{2}$ " price, carriage paid on orders of £7.		

Discount for quantities.

Partitions, etc.

Clinker concrete, solid to B.S. 492	2" 2 $\frac{1}{2}$ " 3" 4"	
	per yard super	3/5 4/- 4/8 5/10
Hollow clay to B.S. 1190 (keyed)	"	4/3 4/6 5/-
Moler (keyed)	"	13/- 13/9 14/6 17/6
Building blocks (keyed):—		
6 cavity	per yard super	6/7
Normal quality woodwool slabs	1" 1 $\frac{1}{2}$ " 2" 2 $\frac{1}{2}$ " 3"	
Minimum delivery, square yards,	500 400 325 275 250	
per yd. super	5/- 6/6 8/- 9/2 10/3	

PAVIOR

2" coarse gravel for paths	per yard cube	22/3
$\frac{3}{4}$ " fine ditto	"	23/9
Clean granite chippings to B.S. 1201, Table 4 (in 5-ton loads)	per ton	44/9
Red quarry tiles 6" x 6" x $\frac{1}{2}$ ", to B.S. 1286	per yard super	13/3
Ditto 6" x 6" x $\frac{1}{2}$ ", to B.S. 1286	"	11/-
Buff quarry tiles, 6" x 6" x $\frac{1}{2}$ ", to B.S. 1286	"	16/6
Ditto 6" x 6" x $\frac{1}{2}$ ", to B.S. 1286	"	14/-
Hard red paving bricks, 2"	per 1,000	452/6
Ditto 1 $\frac{1}{2}$ "	"	427/6

DRAINLAYER

Clay Land Drain Pipes to B.S. 1196

Pipes in 12" lengths	3" 4" 6"	
	per 1,000	199/- 261/- 541/-

Salt Glazed Stoneware Pipes and Fittings

The following percentages to be added to the Standard List prices.

	Orders for 2 tons and over	Orders under 2 tons 100 pieces upwards	Orders under 2 tons less than 100 pieces
Seconds Quality	67 $\frac{1}{2}$ % less 15%	97 $\frac{1}{2}$ % less 15%	107 $\frac{1}{2}$ % less 15%
Best Quality	67 $\frac{1}{2}$ %	97 $\frac{1}{2}$ %	107 $\frac{1}{2}$ %
British Standard Quality	67 $\frac{1}{2}$ % + 10%	97 $\frac{1}{2}$ % + 10%	107 $\frac{1}{2}$ % + 10%
Tested Quality	67 $\frac{1}{2}$ % + 37 $\frac{1}{2}$ %	97 $\frac{1}{2}$ % + 37 $\frac{1}{2}$ %	107 $\frac{1}{2}$ % + 37 $\frac{1}{2}$ %
British Standard Tested	67 $\frac{1}{2}$ % + 47 $\frac{1}{2}$ %	97 $\frac{1}{2}$ % + 47 $\frac{1}{2}$ %	107 $\frac{1}{2}$ % + 47 $\frac{1}{2}$ %

Cast Iron Drain Pipes and Fittings

Socket and spigot pipes to B.S. 437:—					
Weight per 9 ft.	Size	9 fts. each	6 fts. each	4 fts. each	3 fts. each
1	1 17 4"	60/3	43/10	34/5	26/4
2	0 1 6"	89/6	60/-	54/4	43/4
3	3 21 9"	164/-	137/6	115/9	88/10

WILLIAM
MALLINSON
& SONS LTD

for
Hardwoods
Veneers
Armourply
Plywood Products

130-150 HACKNEY ROAD • LONDON • E2

TELEPHONE: SHOREDITCH 7654 (10 lines)

BUILDING EXHIBITION • OLYMPIA • NOV 18 - DEC 2
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Are you planning **LARGE SCALE CATERING?**

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Free Booklet



This 28-page booklet is a complete step-by-step guide to planning and equipping large-scale kitchens for schools, hospitals, hotels, restaurants, industrial and institutional canteens. Send now for your copy (ref. no. AA.33) to be sent free of charge and remember that our Advisory and Planning Departments are always at your service.



JAMES STOTT & CO. (ENGINEERS) LTD., Vernon Works, Oldham, Lancs.

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Standard
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DRAINLAYER (continued)

Tonnage Allowances:—

Orders up to 2 tons nett.

	4"	6"	9"
*Bends (short radius) as Fig. No. 4 each	6/3	13/-	40/-
*Single junctions as Fig. No. 18	11/-	22/6	69/-
*Intercepting traps as Fig. No. 33	30/-	50/-	123/-
*Gullies ordinary trapped "P"	14/6		
*Extra for 4" vertical back inlet	4/3		
*Grease gully trap	121/-		

* These prices are subject to 12½% plusage.

Channels in Brown Glazed Ware.

Standard list + same discounts as "Best" quality salt-glazed Stone-ware pipes.

White Glazed Channels

Orders under £30, makers list value. Standard list + 10%.

Manhole covers and frames

	Size of load	Unit price
C.I. coated double triangular manhole cover and frame, 22" dia. clear opening to B.S. 497, Grade A	35 tons	175/5
C.I. coated circular manhole cover and frame, 22" dia. clear opening to B.S. 497, Grade B.	5 tons	93/5
	Size of load	Single seal Double seal
Coated manhole cover and frame to B.S. 497, Grade C, 24" × 18" each	1 ton	32/- 45/8
Galvanised ditto, 24" × 18" each	1 ton	57/6 80/9
Coated manhole cover and frame, to B.S. 497, Grade C, 24" × 24" each	1 ton	48/11 73/-
Galvanised ditto, 24" × 24" each	1 ton	89/2 126/6

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrapped, random sizes	per foot cube	11/4
Add for blocks to dimension sizes	"	1/4 (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2' 6" long)	"	12/8
Templates with sawn beds, sawn one edge,	"	14/8
Price f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 4-ton loads)	"	57/2

Bath stone in random blocks

Monk's Park	per foot cube	6/8
St. Aldhelm Box Ground	"	7/8
Delivered on rail at South Lambeth station.		

Portland stone in random blocks, average 20 feet cube

Whitbed	per foot cube	7/5
Delivered on rail at Nine Elms Station.		

Artificial Stone to B.S. 1217

4½" × 4" Sill, sunk, weathered, throated and grooved	per foot run	3/-
9" × 3" Ditto	"	4/6
2" × 12" Coping, weathered and twice throated	"	4/-
3" × 12" Ditto	"	6/-
5" × 12" Saddleback coping, twice throated	"	9/-
6" × 12" Ditto	"	10/-

SLATER, TILER AND ROOFER

Slates

£ s. d.

16" × 10" Best Bangor Slates to B.S. 680	per 1,000 actual	50 9 3
20" × 10" Ditto	"	78 10 9

SLATER, TILER AND ROOFER (continued)

Tiles

Hand-made sandfaced 10½" × 6½" red roofing tiles	per 1,000	322/-
Machine-made sandfaced best red tiles with continuous nibs, 10½" × 6½"	"	289/-
Bridgwater hand made red sandfaced pantiles, in 6 ton loads	"	818/-
Bridgwater hand made red sandfaced Double Roman tiles, in 6 ton loads	"	1,126/6
Concrete plain tiles, 10½" × 6½"	"	159/-
Ditto interlocking tiles, 15" × 9"	"	457/-
Ditto Double Roman Tiles	"	800/-

Asbestos-cement

*6" corrugated sheets, grey	per yard super	5/6
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*Prices are for minimum two-ton loads, and are subject to 2½% discount.

Felt

Reinforced roofing felt to B.S. 747	per yard sup.	1/7
Roofing felt (1-ply bitumen) to B.S. 747, Part I	"	1/6
Bituminous hair felt to B.S. 747, Part II	"	2/9

CARPENTER AND JOINER

Wall boards

½" Imported Fibre board	5,000 to 15,000 sq. ft.	
(per 100 sq. ft.)		41/6
½" Imported Hardboard (per 100 sq. ft.)		45/-
¾" Imported Hardboard (per 100 sq. ft.)		65/-
* ¾" Semi compressed asbestos cement flat building sheets, grey	per yard super	2/11
* ½" Ditto	"	3/11
*Prices are for orders of 2 tons and over. Subject to 5% trade discount.		

Sundries

"Sisalkraft" standard grade	per yard sup.	-/10½
"Sisalkraft" subsoil grade	"	-/6½
"Sisalation" single sided	"	1/10½
"Sisalation" double sided	"	2/10
* Fibre glass Bitumen-bonded	"	1/11½

* Price is for orders value £5 and over.

Timber

Softwood for Carpentry (average price)	per std.	£90
Softwood for Joinery (ditto)	"	£100
Tongue and Grooved Softwood Flooring (ditto)	"	£100
*First Quality European Oak	per ft. cube	25/- to 40/-
*Teak	"	40/- to 80/-

* Prices vary considerably depending on specification.

Standard Panelled and Glazed Wood Doors to B.S. 459, Pt. I

Type 4 size 2' 6" × 6' 6" × 1½"	each	34/3
Type 2 × G size 2' 6" × 6' 6" × 2"	"	41/6
Type 4 × G size 2' 6" × 6' 6" × 2"	"	47/6

In lots of from 1 to 11 inclusive.

Wood Windows

N 26 V size 1' 5¼" × 2' 6¼"	each	23/2
N 26 V size 4' 0¼" × 2' 6¼"	"	46/4
N 40 V size 1' 5¼" × 4' 0¼"	"	26/4
3 40 V size 5' 11¼" × 4' 0¼"	"	81/11
4 40 V size 7' 10¼" × 4' 0¼"	"	103/-

In lots of from 1 to 20 inclusive

Kitchen Units

No. 1 size 3' 6" × 2' 8" × 1' 7"	each	178/-
No. 2 size 3' 6" × 2' 8" × 1' 7"	"	123/5
No. 4 size 2' 8" × 1' 9" × 1' 7"	"	109/2
No. 5 size 3' 10" × 1' 9" × 1' 7"	"	94/10
No. 7 size 6' 6" × 1' 9" × 1' 7"	"	142/10

Prices include for tops and plinths.

In lots of from 1 to 15 inclusive.

Cut out sub-floor draughts...
put in *MARLEY* floors

There's nothing like-MARLEY



The Marley Tile Company Ltd., London Road, Riverhead, Sevenoaks, Kent. Telephone : Sevenoaks 2251
Scotland: Bishopbriggs 1093. Wales: Pencoed 376. N. Ireland: Belfast 24447. Eire: Dublin 51794

STEE

Basis p

Extra

9" x

3 1/2"

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STEEL AND IRONWORKER

Basis price for rolled steel joist sections,
in 10 ft. to 50 ft. lengths ex mills per ton £ s. d.

Extra for sizes :—

9" x 7" .....	.....	Add per ton	5 0
3½" x 3½", 5" x 4½", 6" x 4½", 10" x 8", 12" x 8", 14" x 8", 16" x 8", 18" x 6", 18" x 7", 18" x 8", 20" x 6½", 20" x 7½" .....	.....	.....	10 0
10" x 4½", 12" x 5" .....	.....	.....	15 0
4" x 2½", 5" x 3", 22" x 7", 4½" x 4½" .....	.....	.....	1 0 0
3" x 3", 4" x 3", 5" x 2½" .....	.....	.....	1 5 0
4" x 4", 6" x 3" .....	.....	.....	1 10 0
4½" x 1½", 24" x 7½" .....	.....	.....	2 0 0
4" x 1½" .....	.....	.....	3 0 0
3" x 1½" .....	.....	.....	3 10 0

Basis price for angles .....	.....	ex mills per ton	29 9 6
" " " tees .....	.....	" "	29 9 6
" " " solid steel columns .....	.....	" "	31 9 6

All delivered Station or Siding.

PLASTERER

Plaster and Cement

	1-ton loads	6-ton loads
Thistle (browning) to B.S.1191, Class B per ton	149/9	126/6
Gypstone to B.S.1191, Class B	101/-	} ex Works, Kent.
Paristone (haired) to B.S.1191, Class B	103/6	
Ditto (unhaired)	101/-	
Sirapite (coarse) to B.S.1191, Class C	146/3	124/6
Ditto (fine) to B.S.1191, Class C	154/3	132/6
Keene's Pink to B.S.1191, Class D	195/3	
Keene's White to B.S.1191, Class D	200/9	
Cullamix (Tyrolean Finish), 1-ton lots and upwards	per ton from 182/9	to 216/3

Sundries

Sharp washed sand to B.S.1198 .....	.....	per yard cube	20/10
Cow Hair .....	.....	per cwt	97/6
Expanded metal lathing, 9' 0" x 2' 0" x 3/8" mesh x 24 gauge .....	.....	per yd. sup.	2/6½
25 to 149	150-299	300-599	Over 600
1" Plasterboard (base board) yards	2/9	2/5	2/4
per yard super	2/9	2/5	2/3
1" Insulating wallboard, yards	3/7	3/5	3/3
per yard super	—	3/7	3/3
Galvanized lath nails 14 G .....	.....	per cwt.	117/-
Hessian Scrim cloth in 100-yard rolls, 3½" wide .....	.....	per roll	7/9

Wall Tiles

The following prices are subject to 22½ per cent. addition :—	
Standard quality white glazed 6" x 6" x 3/8" per yard super	18/6
Cream glazed 6" x 6" x 3/8"	20/6
Eggshell or glossy glazed 6" x 6" x 3/8"	26/3

PLUMBER

Lead and Copper

3½ lb. and upwards milled sheet lead in quantities of 5 cwts. to under 1 ton in sheets to B.S.1178	per cwt.	129/3
Hot rolled copper sheeting in 1-ton lots (4' x 2' sheets), to B.S.899	23 wire gauge, per ton	321 5 0
Ditto	24 wire gauge, "	324 15 0
Zinc sheeting in 1-ton lots	14 gauge	104 15 0

Cast Iron Goods

Percentage Adjustment on List No. 3200 A.B. 1/5/52.

Rainwater Goods (painted or unpainted)	Plus 7½%
Soil goods (coated or uncoated)	Plus 7½%

Mild Steel Rainwater Goods

	Standard List
Gutters	Less 25%
Pipes and Fittings (" ")	Less 25%

Asbestos-Cement Rainwater Goods

The following prices are subject to 12½% trade discount.
Orders over £30 are subject to 17½% trade discount.

Rainwater Pipes.

	2"	2½"	3"	4"	6"
2' 0" lengths	3/6	3/9	4/6	6/6	12/- each
3' 0" "	4/6	5/-	5/9	8/-	16/- "
4' 0" "	5/6	6/-	7/-	10/-	20/- "
6' 0" "	7/-	7/6	9/-	12/-	24/- "
8' 0" "	9/-	9/9	11/6	16/-	32/- "
10' 0" "	11/-	12/-	14/-	20/-	40/- "

PLUMBER (continued)

Gutters.

Short lengths of gutter up to 2' 0" charged as 1 yard; from 2' 0" to 4' 0" as 1½ yards, and over 4' 0" as 2 yards.

Half round gutters	3"	4"	4½"	5"	6"	8"
per yard run	2/4	2/9	2/10	3/4	4/8	5/9

INTERNAL PLUMBER

Lead pipe (basis, weights) in coils 5 cwts. to under 1 ton,

up to 4" bore to B.S.602	per cwt.	130/6
Light lead pipe ditto	per cwt.	132/-

Drawn lead traps with brass screw eye, to

B.S.504	1"-6 lb.	1½"-6 lb.	1½"-6 lb.	2"-7 lb.
S. trap 1½" seal	each	5/10	6/5½	7/8½
P. trap 1½" seal	"	4/7	5/-	6/3
Extra for 3" deep seal "S" trap	"	1/3	1/5½	1/8
Extra for 3" deep seal "P" trap	"	-/10	1/0½	1/8

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Fittings and tubes ordered in long random lengths are subject to the following trade discounts :—

Tubes :	½" to 4"	Fittings :	
Class B	18½%	Lightweight	plus 3½%
" C	6½%	Heavyweight	plus 11%
Galvanized Class B	1%	Galvanized :	
" " C plus 15½%		Lightweight	plus 15½%
Galvanized malleable fittings		Heavyweight	plus 22½%
Less 46½% plus 35%			
Copper tubing to B.S. 659 and 1386. Basic price per lb.			2/3½

GLAZIER

Sheet Glass, cut to size (ordinary glazing quality), to B.S.952, Section A

18 oz.	per foot super	-/5½
24 oz.	"	-/7½
32 oz.	"	1/-

Polished Plate Glass, ordinary substance, approximately ¼", to B.S.952, Section A.

In plates not exceeding :	Glazing quality	Selected glazing	Silvering quality
2 ft. super	per foot super	3/7	4/3
5 ft. super	"	4/5	5/2
*45 ft. super	"	5/1	5/9
*100 ft. super	"	5/6	6/9

* Extra sizes, i.e., plates exceeding 100 ft. super or 160 in. one way, or 96 in., both ways at higher prices.

1" figured rolled and cathedral, to B.S.952, Section B—standard patterns, white	per foot super	-/9
3/16" or 1/4" rolled plate, patterns, white	"	1/-
3/16" or 1/4" rough cast, patterns, white	"	1/-
1/4" Georgian wired cast, patterns, white, Section D	"	1/2½
1/4" Georgian wired polished plate, Section D	"	4/10
1/4" wired cast	"	1/2

Attention is drawn to reductions in certain glass prices offered by manufacturers for acceptance of specified minimum quantities of one size and substance delivered to one address at one time.

PAINTER

White ceiling distemper	per cwt.	29/-
Washable distemper	per cwt. from	112/-
Primer, general purpose	per gallon	33/6
Ready mixed white lead paint	"	60/-
Flat oil paint	"	41/-
Emulsion paint	"	44/-
Hard gloss paint :		
Undercoat	"	42/-
Finishing	"	46/-
White Portland cement paint	per cwt.	71/-

Paul Davis
F.R.I.C.S., F.I.Arb.

Readers requiring up-to-date information on building products and services may complete and post this form to the Architects' Journal 9, 11 and 13, Queen Anne's Gate, S.W.1

ENQUIRY FORM

I am interested in the following advertisements appearing in this issue of "The Architects' Journal." (BLOCK LETTERS, and list in alphabetical order of manufacturers names please.)

Please ask manufacturers to send further particulars to:—

NAME

PROFESSION or TRADE

ADDRESS

AP 29.10.53

Buildings Illustrated

Assembly Hall and Administration Block, Blackwell Secondary Modern School, Headstone Lane, Harrow, for the Middlesex County Council. (Pages 541-546.) Architects: John and Elizabeth Eastwick-Field, B.A., A.A.R.I.B.A. Assistant Architect: A. Baynes, A.R.I.B.A., in collaboration with C. G. Stillman, F.R.I.B.A., County Architect. Consulting Structural Engineer: F. J. Samuely, B.Sc., A.M.I.C.E., M.I.STRUCT.E. Heating, ventilating and electrical services designed by County Engineer's Dept. Quantity surveyors: Crump & Trinick. General contractors: Anglo-Scottish Construction Co. Ltd. Sub-contractors and suppliers: heating, William Freer Ltd.; electrical, G. W. Franklin & Son Ltd.; suspended ceilings, W. H. Colt (London) Ltd.; balustrades, Light Steelwork (1925) Ltd.; sanitary ware, Adamsez Ltd.; stock bricks, Cement Marketing Co. Ltd.; paint, Leyland Paint & Varnish Co. Ltd. Assembly Hall: steelwork to roof James Bros. (Hamworthy) Ltd.; windows, Williams & Williams Ltd.; woodblock floor, Horseley Smith & Co. (Hayes), Ltd.; linoleum floor, Marbolith Flooring Co. Ltd.; roofing, Neuchatel Asphalte Ltd.; roof decking, Stramit Boards Ltd.; precast concrete, Holland & Hannen and Cubitts Ltd.; seats, Cox & Co. (Watford) Ltd.; glass, James Clark & Eaton Ltd.; stage electrical equipment, The Strand Electric & Engineering Co. Ltd.; stage scenery, The Hall Manufacturing & Supply Co. Ltd.; duct covers, Broad & Co. Ltd. Gymnasia and Administration Block: reinforced concrete construction, Holland & Hannen and Cubitts Ltd.; wood floors, Vigers Bros. Ltd.; wood windows, D. Burkle & Sons Ltd.; metal windows, Henry Hope & Sons Ltd.; gym equipment, Educational Supply Association Ltd.; floor and roof units (Bison), Concrete Ltd.; sprayed vermiculite ceilings (Pyrok), C. & T. Painters Ltd.; asphalt, Neuchatel Asphalte Ltd.; felt roofing, William

Briggs & Sons Ltd.; rainwater goods, Vitreflex Ltd.; changing room equipment, Cloakroom Equipment Ltd.; asphalt resin tiles, Armstrong Cork Co. Ltd.; 6-in. rug-faced clay blocks, London Brick Co. Ltd.; "Stonite" rendering, Callow & Keppich.

Announcements

H. Geoffrey Round, A.R.I.B.A., is now in private practice at 53, Oxford Street, Weston-super-Mare, where he will be pleased to receive trade catalogues and technical literature (Tel.: Weston-super-Mare 617).

The Cement Marketing Co. Ltd. is making a 16 mm. sound colour film "The Manufacture of Portland Cement" available for loan. The film has been made by Vista Films Ltd. for The Blue Circle Group of Companies. The film opens with pictures of the Group's central research laboratories at Stone, near Greenhithe, and sequences are shot in a number of the twenty-six cement works belonging to the group. The film goes on to show the methods of winning raw materials; it follows through the various processes—mixing the limestone and clay, or chalk and clay, with water into cement slurry, storing and testing the slurry, feeding the slurry into the huge rotary kilns where drying, decarbonating and calcining takes place transforming the slurry into cement "clinker." The red hot clinker is seen passing into coolers, and afterwards to clinker stores from where it is conveyed to the mills (at which stage a small proportion of gypsum is added) and ground to become Portland cement. It is then conveyed to storage silos from where it is loaded into bulk delivery vehicles or fed to the packing plant. The film will be loaned, free of charge, to interested borrowers on application to:—Publicity Department, The Cement Marketing Co. Ltd., Portland House, Tothill Street, S.W.1. Application should be made well in advance of the booking date.

50 Enlightened Years

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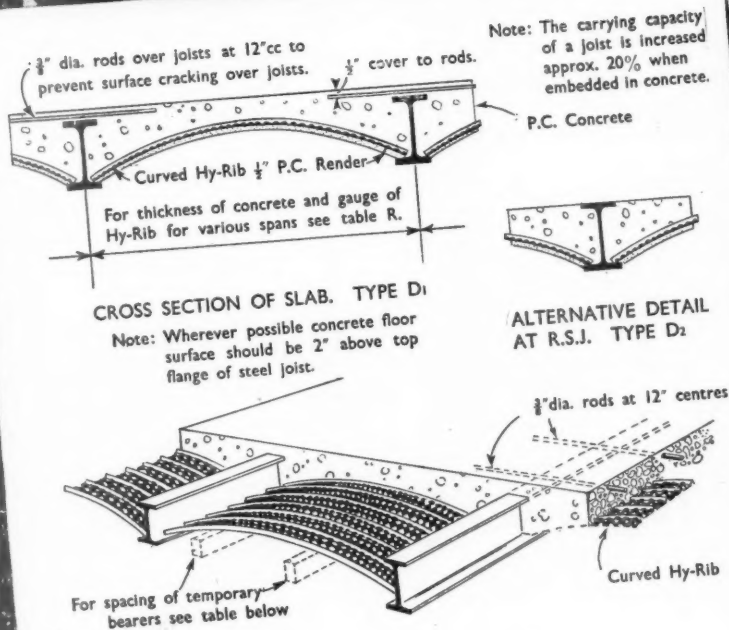
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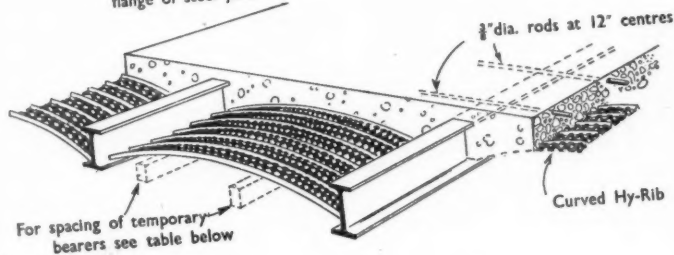
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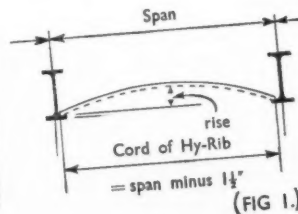
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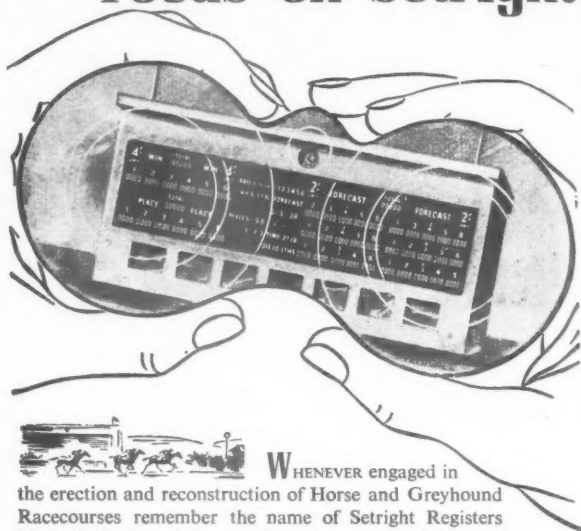
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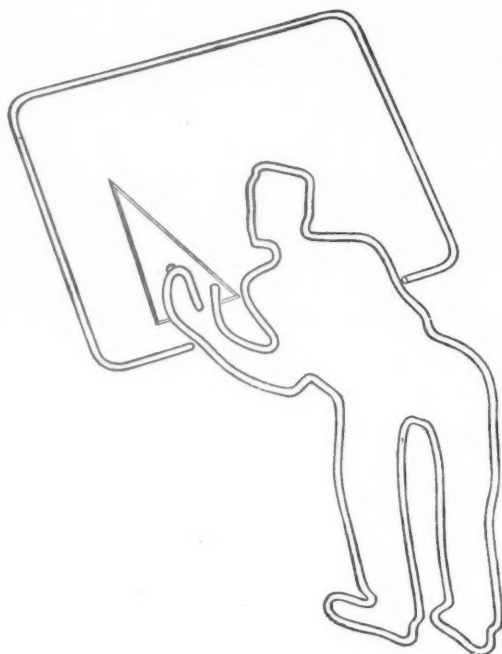
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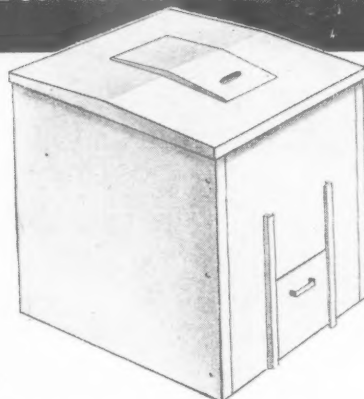
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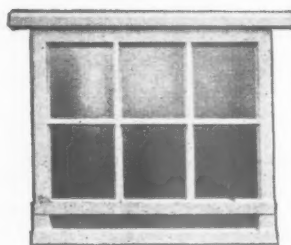
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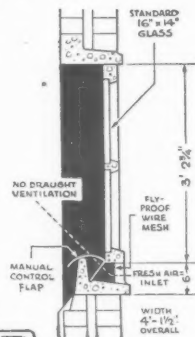
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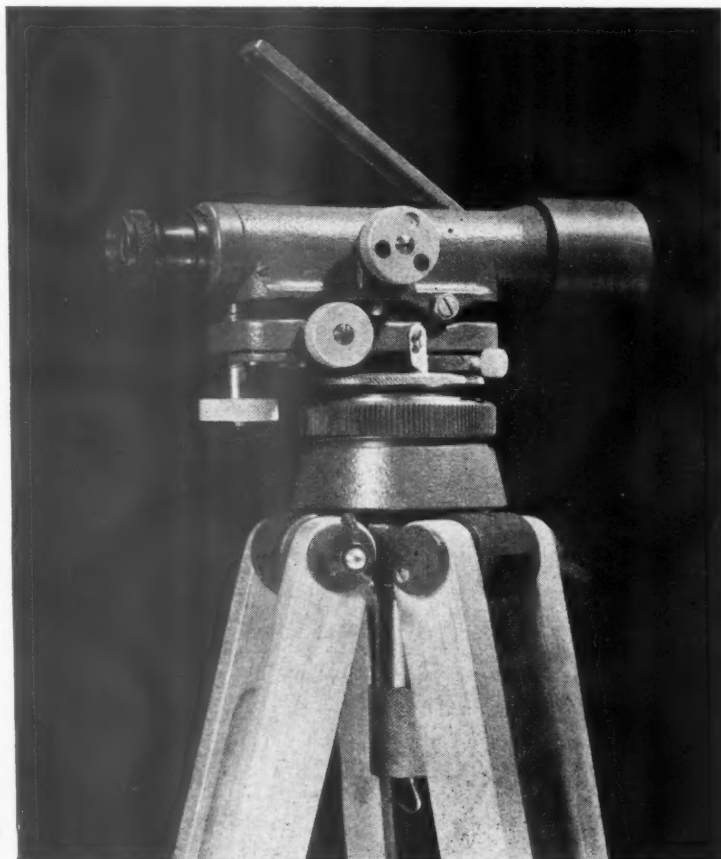
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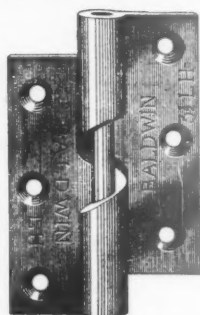


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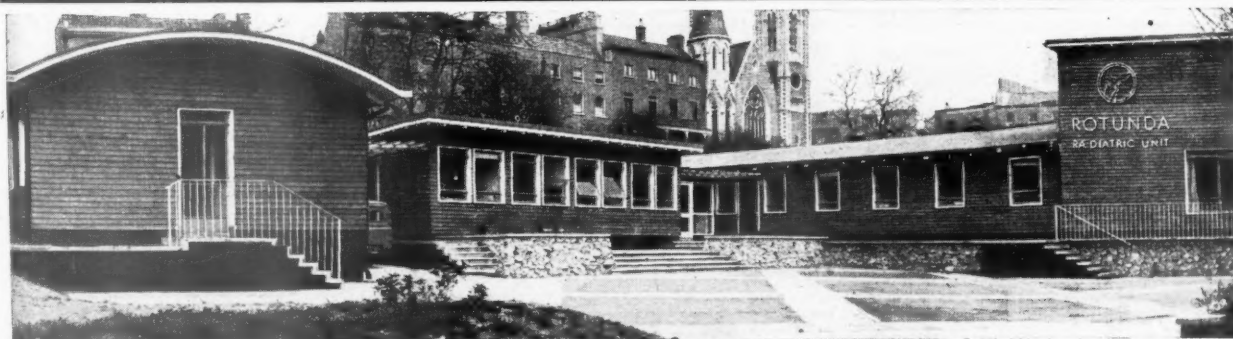
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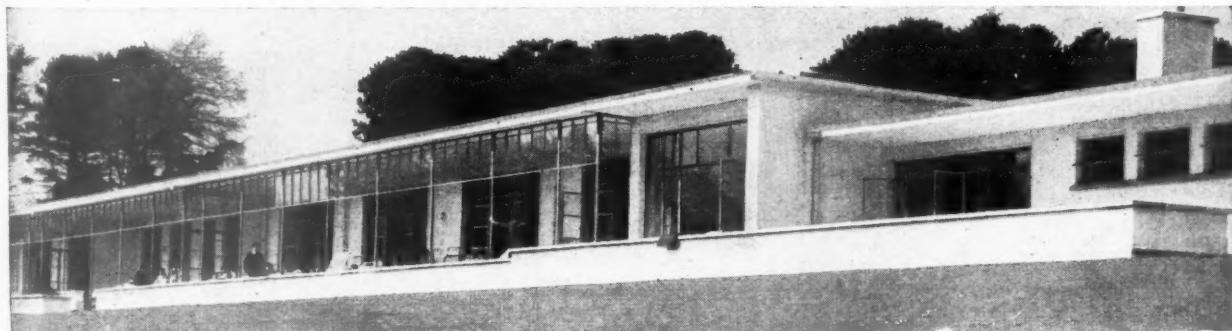
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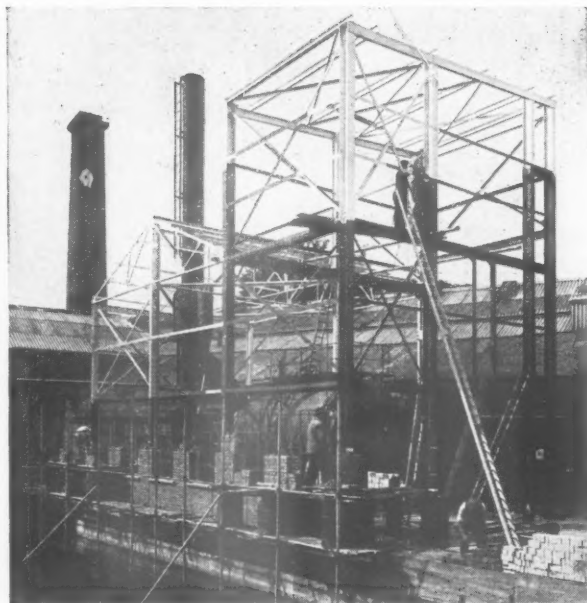
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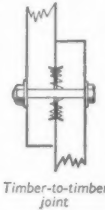
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Applications, giving age, qualifications and particulars of present and previous appointments, and accompanied by copies of three recent testimonials, to be sent to the undersigned, by not later than the 6th day of November, 1953.

W. B. BURTON,

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P. D. WADSWORTH,

Town Clerk.

The Council House, Dudley. 9805

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COUNTY COUNCIL OF HUNTINGDON.

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Candidates must have passed the Associate Membership examination and be Corporate Members of the Royal Institute of British Architects.

The person appointed will be required to have had considerable experience in the design, construction and maintenance of County Buildings including Schools, Police, and Public Health properties, together with administrative duties.

The position will be subject to the terms of the Local Government Superannuation Act 1937 (as amended by the Act of 1953) and the person appointed will be required to pass a medical examination.

The appointment will be terminable by three calendar months' notice in writing on either side.

Applications giving the names of three referees and stating age, present position and salary, technical qualifications and examinations and details of experience, are required to be submitted so as to reach the undersigned by not later than first post on Monday, 16th November, 1953.

Canvassing in any form will be prejudicial to the applicant.

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A. RONALD CLARK, A.R.I.B.A., A.M.T.P.I.,

County Architect.

County Offices, Lincoln. 9821

ST. GERMAN'S RURAL DISTRICT COUNCIL. ENGINEERING ASSISTANT.

Applications are invited for the appointment of Engineering Assistant in the Engineer and Surveyor's Department. Salary commencing at £575, increasing by three annual increments of £15 to a maximum of £520.

Applicants to have passed the Intermediate Examination of the Institution of Municipal Engineers or hold an equivalent qualification. Candidates should have had considerable experience in preparation of main drainage and sewage disposal schemes, and experience in works of water supply will be an advantage.

The appointment will be subject to the N.J.C. Conditions and the Local Government Superannuation Acts, and to one month's notice on either side.

An essential user allowance (up to 10 h.p.) is attached to this appointment, where the successful candidate provides his own motor car.

Applications, stating age, qualifications, present and past appointments, together with names of two referees, must be sent to the undersigned by the 2nd November, 1953.

WILFRID L. BROAD,

Clerk of the Council.

Council Offices, Lower Port View, Saltash, Cornwall. 9749

9th October, 1953.

COUNTY BOROUGH OF SWANSEA.

LOCAL EDUCATION AUTHORITY.

TO BUILDERS.

Tenders are invited for the erection of a new Infants' School at Clase, Swansea. Drawings and General Conditions of Contract may be inspected at the Borough Architect's Office, The Guildhall, Swansea, to whom application by builders wishing to tender should be made with a deposit of £5 on or before Saturday, 7th November, 1953. Bills of Quantities, when ready, will be issued only to those who so apply. The deposit will be refunded after delivery of a bona-fide Tender (not subsequently withdrawn) and the return of all documents.

Tenders must be delivered to me on or before the date stated in the Form of Tender, and in accordance with directions to be issued.

No guarantee is given that the lowest or any other Tender will be accepted.

T. B. BOWEN,

Town Clerk.

The Guildhall, Swansea. 9792

20th October, 1953.

BOROUGH OF CHESTERFIELD (Architects' Department) requires, under N.J.C. Service Conditions, ASSISTANT QUANTITY SURVEYOR.

salary £525-£570 (A.P.T. III). Applicants should possess the Intermediate Examination of the Royal Institution of Chartered Surveyors (Quantities Section). Post-nominal, Medical examination. Apply, giving age, education, appointments held (with dates and salaries), and names of two referees, to Borough Engineer and Surveyor, Town Hall, Chesterfield, by 7th November, 1953. Canvassing disqualifies.

RICHARD CLEGG,

Town Clerk.

Town Hall, Chesterfield. 9794

LONDON COUNTY COUNCIL.

ARCHITECTS' DEPARTMENT.

STRUCTURAL ENGINEER (£1,027 to £1,168) required to investigate new structural techniques and experimental methods with special regard to multi-storied buildings. Application form, for return by 30th November from Architect (AR/EK/SEH/5), County Hall, S.E.1. (1146) 9796

SKEGNESS URBAN DISTRICT COUNCIL.

ARCHITECTURAL ASSISTANT, GRADE V

(£595-£645).

Applications are invited from suitably qualified persons for the appointment of Architectural Assistant in the Engineer and Surveyor's Department.

The appointment will be subject to the National Scheme of Conditions of Service the provisions of the Local Government Superannuation Acts and the passing of a medical examination.

Applicants should have had experience in the preparation of plans, designs, details and specifications for the architectural work normally undertaken by an Urban Authority, including the preparation of quantities.

Applications stating age, qualifications, experience, etc., together with copies of two recent testimonials, to be delivered to the undersigned not later than 14th November, 1953.

IVOR M. CULPE,

Clerk to the Council.

Town Hall, Skegness. 9836

22nd October, 1953.

BOROUGH OF RICHMOND (SURREY).

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT on the established staff of the Borough Engineer and Surveyor at a salary in accordance with A.P.T. Division, Grade II, of the National Scale of Salaries, i.e., £495-£540 per annum, together with appropriate London area weighting according to age.

The appointment is subject to the provisions of the National Scheme of Conditions of Service and the Local Government Superannuation Act.

Applicants should have passed the Intermediate Examination of the R.I.B.A. or hold some other Diploma in architecture, and should have had experience in an architect's office.

Applications, stating age, qualifications and experience, with particulars of present and previous appointments, should be delivered, together with the names of two referees, to the undersigned not later than Monday, 9th November, 1953.

Canvassing will disqualify. Candidates shall, when making application, disclose in writing whether to their knowledge they are related to any member of the Council or senior officer.

The Council is unable to assist in the provision of housing accommodation.

CLIFFORD HEYWORTH,

Town Clerk.

Town Hall, Richmond, Surrey. 9797

HAYES AND HARLINGTON URBAN DISTRICT COUNCIL.

SENIOR ARCHITECTURAL ASSISTANT.

Applications are invited for the permanent appointment of Senior Architectural Assistant, in the Department of the Engineer and Surveyor, at a salary in accordance with A.P.T., Grade V, i.e., £595 p.a., rising to £645 p.a., plus London "weighting," amounting to £20 p.a. at age 21-25 years and £30 p.a. at age 26 years and over. The commencing salary for the appointment is in accordance with the minimum of the scale.

Preference will be given to applicants who have passed the Intermediate Examination of the R.I.B.A. and who have had experience of housing work with a local authority.

Forms of application may be obtained, upon receipt of a stamped addressed envelope, from the Engineer and Surveyor, Town Hall, Hayes, Middlesex, to whom completed applications must be returned by 9th November, 1953. The envelope containing a request for a form of application should not be endorsed.

A. E. HIGGINS,

Clerk of the Council.

9807

BOROUGH OF HEYWOOD.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

SENIOR ARCHITECTURAL ASSISTANT.

Applications are invited for the above-mentioned permanent appointment in the department of the Borough Engineer and Surveyor, at a salary in accordance with Grade V (£595-£645) of the Scale of Salaries.

Applicants must have passed the Final of the R.I.B.A. Examination, or hold an equivalent qualification, and must have had considerable experience in housing, general architectural work, quantities and final accounts.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, to the National Joint Council's Conditions of Service, and to one month's notice in writing on either side.

The successful applicant will be required to pass a medical examination.

Applications, stating age, qualifications and experience, accompanied by copies of three recent testimonials and appropriately endorsed, should reach the undersigned not later than Monday, 9th November, 1953.

W. R. PARKER,

Town Clerk.

Municipal Buildings, Heywood. 9806

16th October, 1953.

BOROUGH OF CROSBY.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

ARCHITECTURAL ASSISTANT.

Applications are invited from persons holding an appropriate qualification for the above appointment. Salary in accordance with the National Scale of Salaries, viz., A.P.T. IV (£555 to £600).

Applications, on forms obtainable from the undersigned, to be delivered not later than noon on Friday, the 6th November, 1953.

HAROLD O. ROBERTS,

Town Clerk.

Town Hall, Waterloo, Liverpool, 22. 9802

NATIONAL COAL BOARD, East Midlands Division.

Architects' Department, Nottingham.

REQUIRE EITHER

QUANTITY SURVEYOR, Grade II, £600 × £25-

£650 × £30-£900. Must be Corporate Member of R.I.C.S. Or

QUANTITY SURVEYING ASSISTANT, Grade I, £525 × £25-£650, exceptionally to £800.

Candidates should have passed Intermediate R.I.C.S. with not less than 3 years' subsequent practical experience. The appointment is temporary—minimum period of two years. Grading and salary according to qualifications and experience.

Applications, stating age, education, qualifications, experience, present appointment and salary, to Secretary, N.C.B., East Midlands Division, Sherwood Lodge, Arnold, Notts., 14 days after publication date. Mark envelopes "S.V. 262. Original testimonials should not be sent. 9825

BOROUGH OF HORNSEY.

TEMPORARY ARCHITECTURAL ASSISTANT required for Borough Engineer and Surveyor Department, A.P.T.V. (£625-£675 including London Weighting). Commencing salary according to experience.

Further particulars from Borough Engineer and Surveyor, Town Hall, Crouch Road, N.S. to whom applications are to be returned by 12th November, 1953.

H. BEDALE,

Town Clerk.

9846

COUNTY COUNCIL OF NORTHUMBERLAND.

COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for post of JUNIOR ASSISTANT ARCHITECT, A.P.T., Grade II (£495-£515-£540 per annum), on the permanent staff of the Department.

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

Application, stating age, qualifications and previous experience, accompanied by recent testimonials, should be forwarded to the County Architect, County Hall, Newcastle-upon-Tyne, within 10 days of the date of this advertisement.

9824

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.

Applications are invited for the following positions within the Division:—
CIVIL ENGINEERING DRAUGHTSMEN, Construction Department. (Vacancy No. 22/53.)

Candidates should have experience in design and detail of reinforced concrete structures, piled and slab foundations for heavy plant, culverts, cable subways, etc., for general building construction drainage and sanitation schemes, associated with office and administrative buildings.

The salary will be in accordance with Grade 5 (£567-£571 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

ENGINEERING DRAUGHTSMEN (MECHANICAL), Construction Department. (Vacancy No. 44/53.)

Senior Draughtsmen are required in the Mechanical Section of the Construction Department at North Wilford Power Station. Candidates should have experience in one or more of the following:—

(i) Design and layout of Power Station equipment, including Turbo-alternators, boiler plant, coal and ash plant, and general station auxiliaries.

(ii) H.P. and L.P. steam and feed pipework. Condensing plant and feed heating systems.

(iii) Conveyor plant, coal handling systems, and material handling of station auxiliary equipment.

Salary and conditions of service will be in accordance with the National Joint Board Agreement, Grade 5 (£567-£571 per annum) and Grade 6 (£433-£567 per annum) of Schedule D, according to experience.

ENGINEERING DRAUGHTSMEN (ELECTRICAL), Construction Department. (Vacancy No. 61/53.)

Candidates should have experience in the preparation of layouts and diagrams for the installation of E.H.T. and L.T. Switchgear, transformers, E.H.T. and L.T. cables; knowledge of protective gear systems would be an advantage.

The salary will be in accordance with Grade 5 (£567-£571 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

The above positions will be pensionable within the provisions of the British Electricity Authority and Area Boards Superannuation Scheme.

Applications should be submitted on the official form, which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned to the undersigned by the dates stated. Please quote Vacancy Number.

L. F. JEFFREY,

Divisional Controller.

9795

SURREY COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT MAINTENANCE SURVEYOR, Grade IV, at a commencing salary of £555 p.a. rising by annual increments of £15 to a maximum of £600 p.a., plus London Allowance of up to £30 p.a. according to age.

Preference will be given to applicants who have passed the Intermediate examination of the Royal Institution of Chartered Surveyors (Building Sub-Division) and they will be required to prepare specifications, schedules of dilapidations and detailed estimates for general maintenance works.

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 7th November, 1953.

Canvassing, either directly or indirectly, will disqualify a candidate from consideration.

W. W. RUFF,

Clerk of the Council.

County Hall, Kingston-upon-Thames.

9814

STEPNEY M.B.C. require Three Architectural Assistants (Unestablished). Experienced in preparation of design, lay-out, working drawings, detailed specifications for housing schemes, etc. Must hold appropriate professional qualifications. Salary according to qualifications and experience, up to Grade A.P.T. VI (£670-£735 plus L.W.A.). Apply Borough Engineer, at Nos 227/233, Commercial Road, E.1.

9815

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

COLLEGE OF ART AND CRAFTS.
Principal: Meredith W. Hawes, A.R.C.A., N.R.D. BIRMINGHAM SCHOOL OF ARCHITECTURE.

Director of the School of Architecture: A. Douglas Jones, Dip.Arch.(Lpool), F.R.I.B.A. Applications are invited for the appointment of a FULL-TIME LECTURER in Architecture to begin duty on 1st January next or as soon after as possible.

Salary, in accordance with the Burnham Scale for Grade "B" Assistants in Establishments of Further Education, at present £490 by £25-£765 with additions for approved qualifications, training and professional experience. Breadth of vision, technical competence and enthusiasm are of the greatest importance.

Forms of application may be obtained from the Principal, College of Art and Crafts, Margaret Street, Birmingham, 3, on receipt of a stamped addressed foolscap envelope and must be returned not later than ten days after the appearance of this advertisement.

E. L. RUSSELL,

Chief Education Officer.

9813

BUCKS COUNTY COUNCIL.

Applications are invited for the following appointments on the staff of the County Architect:—

(a) BUILDING MAINTENANCE SURVEYOR.

Salary in accordance with A.P.T., Grade VI, £670-£735 p.a. Applicants should possess a sound knowledge of all building trades, should have had considerable experience in a similar capacity with a local authority, and should preferably possess some recognised professional qualification. The successful applicant will be required to reside and work in the High Wycombe area.

(b) ASSISTANT ARCHITECT.

Salary in accordance with A.P.T., Grade V, £595-£645 p.a. The successful applicant will be required to work on a large and interesting building programme, including traditional and new building techniques.

The 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.

Applications on forms giving further particulars of the appointment are obtainable from Mr. F. B. Pooley, County Architect, County Offices, Aylesbury, and returned by 9th November, 1953.

9822

BURGH OF MOTHERWELL AND WISHAW.

HOUSING AND TOWN PLANNING DEPARTMENT.

Applications are invited for the appointment of two ARCHITECTURAL AND PLANNING ASSISTANTS. Applicants should have experience in contemporary design and be capable of preparing sketch plans and perspective drawings.

Preference will be given to candidates who have had training in a recognised School of Architecture. The salary shall be in accordance with grade A.P.T. L, i.e., £460 rising by three annual increments of £15 to £565 per annum, with placing on the scale according to experience and training. The appointment shall be subject to the Town Council's superannuation scheme and the successful candidates shall require to pass the prescribed medical examination.

Applications giving full details should be submitted to the Director of Housing, Motherwell House, High Road, Motherwell, on or before 4th November, 1953.

ALEXANDER MCINTOSH,

Town Clerk.

9835

TOWN HALL, MOTHERWELL.

22nd October, 1953.

MIDDLESEX COUNTY COUNCIL, COUNTY ARCHITECT'S DEPT.

ASSISTANT ARCHITECT required, A.P.T. V (£595-£645 p.a., plus London weighting). Established, pensionable, subject to medical assessment and prescribed conditions. Must be Registered Architect and have general architectural experience, particularly of adaptation and extension works. Application form from County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1 (stamped addressed envelope foolscap), to be returned by 9th November (quoting M.629 A.J.). Canvassing disqualifies.

9804

DERBY CORPORATION.

BOROUGH ARCHITECT'S DEPARTMENT.

ASSISTANT ARCHITECT, Grade VI. Salary £670 to £735 per annum, commencing at £670 and national conditions of service.

Qualifications: Must be Associate R.I.B.A. Permanent staff appointment, subject to one month's notice and pensionable subject to medical examination.

Form of application obtainable from and to be returned to the Borough Architect, The Council House, not later than 16th November, 1953.

Canvassing disqualifies.

E. H. NICHOLS,

Town Clerk.

9838

LANCASHIRE COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments on the permanent staff:—

(a) ASSISTANT LAND SURVEYORS, A.P.T., Grade V (£595-£645).

(b) SENIOR ASSISTANT QUANTITY SURVEYOR, A.P.T., Grade VII (£710-£785).

Application forms, to be returned by 21st November, 1953, obtainable from the County Architect, County Hall, Preston.

9823

CRAWLEY DEVELOPMENT CORPORATION require (a) JUNIOR ASSISTANT ARCHITECT, £465-£605 per annum, and (b) DRAUGHTSMAN, £350-£465 per annum.

Applicants for (a) should have reached the R.I.B.A. Intermediate Examination standard and be experienced in architectural practice and for (b) should be capable draughtsmen; experience in an architectural office would be an advantage. Contributory superannuation.

Application forms and particulars to be obtained from Chief Architect (Vacancy), Broadfield, Crawley, Sussex and returned by 16th November, 1953.

C. A. C. TURNER,

Chief Executive.

9837

STEVENAGE DEVELOPMENT CORPORATION require in the Chief Architect's Department an experienced ARCHITECTURAL DRAUGHTSMAN. Salary: Corporation's Clerical Division Scale, £470-£515.

Housing accommodation available in due course in an appropriate case.

Applications, giving details of experience and names of two referees, should be sent to the Chief Administrative Officer, Aston House, near Stevenage, Herts., not later than Monday, 9th November, 1953.

9803

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 is, or the employment is, exempted from the provisions of the Notification of Vacancies Order, 1952.

ASSISTANT required for large general Architectural Practice with offices in Maidenhead. Some experience in specification writing essential. Salary £300 to £500, according to experience. Box 9835.

VACANCY arises for Articled Pupil (Architectural or Building Surveying) in City firm. Box 9468.

SENIOR ARCHITECTURAL ASSISTANT required by a Property Company in Uganda, East Africa; must be able to take charge of drawing office and be responsible for site surveys, the preparation of working drawings, specifications and details, etc. Hard furnished housing will be available and the successful candidate, subject to medical examination and contract, will be entitled to the following conditions:—

Free medical attention and return passages (not exceeding three adult fares) upon commencement and after each tour of three years, with three months paid home leave at termination of tour (six months if contract is to be renewed) and 14 days non-cumulative local leave per annum. A voluntary 10 per cent. Provident Fund Scheme will be available. Applications, giving full professional and domestic details and stating salary required should be addressed to:—The Secretary, Consolidated Properties Ltd., P.O. Box 442, Kampala, Uganda.

9799

ASSISTANT ARCHITECT, R.I.B.A. Final Standard, required immediately for West Country Practice. Applicants should have good experience and a contemporary outlook. Please give details of age, education, experience and salary required and enclose an example of recent work. Box 9800.

ARCHITECTURAL ASSISTANT required for working drawings and details. Sound knowledge of construction. Not less than five years' office experience. Knowledge of church design an advantage. Salary £555-£600. Apply R. Fairlie & Partners, 7, Ainslie Place, Edinburgh, 3.

9811

SENIOR ARCHITECTURAL ASSISTANT required, full experience in preparation of Working Drawings, Details, and supervision of office and Industrial Buildings in the London Area. Good knowledge of construction and design essential. Apply in writing giving full particulars of qualifications, age, experience and salary required to Box 9829.

FULLY QUALIFIED ARCHITECTURAL ASSISTANT required immediately for work on interesting contemporary project. Full details to Robert Potter, F.R.I.B.A., 21, The Close Salisbury, Wiltshire.

9810

ASSISTANT required for general practice in North Devon, knowledge of housing an advantage. Salary £500 per annum. Box 9768.

SENIOR ARCHITECTURAL ASSISTANTS required with all round experience for London office. One required for office at Weston-super-Mare with experience of housing. Apply with full particulars of salary required, etc. Only men with first class experience need apply. B. H. Gallannaugh, L.R.I.B.A., 12, Grafton Street, W.1.

9832

GEOGE WIMPEY & CO., LTD., invite applications for the following appointments in connection with Multi-Storey Flats and Maisonettes:—(1) **SENIOR LEADING ASSISTANTS** in Architects' Department. Duties will involve responsibility in connection with preparation of sketch designs and working drawings. Salary £800 upwards according to qualifications and experience. (2) **SENIOR ARCHITECTURAL ASSISTANTS**. Duties will include preparation of working drawings and details. Salary range £650 to £800 according to experience and ability. Permanent appointments available, with good prospects. Write, giving brief particulars of qualifications and experience, and clearly stating for which appointment application is made, to the Staff Architect, 27, Hammersmith Grove, W.6. 9830

ARCHITECTURAL DRAFTSMAN required, inter standard, for Multiple Shop Co., London. Experienced, surveys, working drawings & in details. Canteen, permanency after qualifying period, state age, past experience and salary required. Box 9818.

EXPERIENCED QUALIFIED ARCHITECT. A.R.I.B.A. required preferably with A.R.I.C.S. degree or experience in quantity surveying, to take complete charge of technical development in connection with a new Patented Aluminium Roofing. Excellent salary and long term prospects. Age no barrier for competent applicant. First class references will be required. Applications to S. W. Ronald & Co. (London) Ltd., 329, High Holborn, London, W.C.1. Tel: HOLBORN 237. 9808

CO-OPERATIVE WHOLESALE SOCIETY LTD. ARCHITECTS' DEPARTMENT, LONDON.

ASSISTANT ARCHITECTS required of Intermediate R.I.B.A. standard, capable of preparing sketches, working drawings and details under supervision of Senior Architects.

The appointment is permanent and offers prospects of up-grading.

Successful candidates will be required to undergo medical examination for compulsory superannuation scheme.

Applications stating age, experience, qualifications and salary required to W. J. Reed, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 99, Leman Street, London, E.1. 9831

ARCHITECTS Department, F. W. Woolworth & Co. Ltd., require the following assistants: (1) **ARCHITECTURAL** of Intermediate Standard or equivalent. (2) **QUANTITY SURVEYOR** or **BUILDERS' ESTIMATOR**. Excellent working facilities, staff dining arrangements, 5-day week. Pension Scheme for suitable personnel. Apply Staff Architect, F. W. Woolworth & Co., Ltd., 47/49 King Street, Dudley, stating age, experience and salary required. 9834

JUNIOR UNQUALIFIED ASSISTANT wanted, aged 18/20, for West End Architect's office, good prospects, free lunch. Applicants should state where educated and present employment. Salary according to age and experience. Box 9839.

JUNIOR ARCHITECTURAL ASSISTANT required for medium sized general practice in West End. Applicants should be approaching Intermediate R.I.B.A. standard. Write, stating age, experience, and salary required. Box 9773.

SENIOR AND JUNIOR ARCHITECTURAL ASSISTANTS required for Norwich private practice. Varied works in progress throughout Norfolk, Suffolk, Essex, and in London. Reply in writing, giving full particulars of qualifications, if any, age, previous experience, and salary required. Box 9701.

ARCHITECTURAL DRAFTSMAN required by The Bahrain Petroleum Co., Ltd. Applicants up to 40 years of age must be capable of rapidly producing study-drawings and perspective sketches of buildings, structures, landscaping features, etc. Knowledge of plumbing, sewers and general town planning an advantage. The commencing salary will be in accordance with qualification and experience. The Company providing free board, lodging and medical attention. The position is permanent with paid home leave every twenty-four or thirty months. Living costs are low and there is a kit allowance and pension scheme. Apply with full particulars of qualifications and experience to Box 9841.

ARCHITECTURAL ASSISTANTS. Simon-Carves Ltd., have several vacancies for architectural assistants interested in reinforced concrete industrial structures. The main fields covered are coal preparation plant, coke ovens, chemical plant and power stations. The work offers excellent experience and good scope. A Pension Fund and D.O. Bonus Scheme are in operation. Apply, giving age and details of experience, to Staff & Training Division (Ref. S.H. 14), Simon-Carves, Ltd., Cheadle Heath, Stockport, Cheshire. 9752

QUALIFIED ASSISTANT required in busy medium sized office in the Midlands. Experience in design of industrial buildings essential. State age, qualifications, and salary required. Box 9778.

DRAFTSMAN, SHOPFITTING.—Preference man with Art School Training. Reply before end October, stating age and shopfitting experience, to Managing Director, A. Edmonds & Co., Ltd., 91, Constitution Hill, Birmingham. 9700

ARCHITECTURAL ASSISTANT required immediately in busy practice, North-East. Good draughtsman, experienced in surveys, sound construction and detailing. Salary according to experience. Full particulars, Box 9716.

Architectural Appointments Wanted

SENIOR ASSISTANT (45), A.A. trained. Registered Architect. Wide general experience, mainly London. Excellent testimonials. Responsible position required, London or Sussex. Gilbert, The Chase, Albourne, Hassocks, Sussex. Phone Hurslipport 2165. 793

A.R.I.B.A., Dip.Arch. (36) seeks senior position in contemporary London office where there is scope for technical and constructional knowledge. Box 9809.

ARCHITECTURAL ASSISTANT. Finals next year, requires permanent position. Guildford/Working area, used to full supervision, sketch to contract, drawings, specifications, etc. Excellent testimonials. Car owner. Box 795.

LIVERPOOL B.Arch. A.R.I.B.A. (26) woman. 2½ years' good experience contemporary and traditional. Co-operative, cheerful, serious worker. Good testimonials. Position required in London office. Box 797.

SENIOR ASSISTANT desires post, London or S.W. vicinity. Experienced surveys, sketches to complete working drawings. Site supervision, reporting, etc. Industrial, domestic and licensed premises. Salary £600-£700. Box 9844.

STUDENT R.I.B.A., two years full time school, four years comprehensive office experience. N.S. completed seeks responsible post on contemporary work in south. Car driver. Minimum starting salary £500. Box 798.

A.R.I.B.A. D.A. Edin. (25), 3 years' office experience, seeks position, either permanent or temporary, in London office. Please reply to: Elizabeth Evans, 38, Chelmsford Road, Dublin. 796

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 Social 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, 1962.

EXECUTIVE required by well known Paint Manufacturers for Architectural Department. Knowledge of paint and architecture an advantage. Pension scheme in operation. Offices in West End. Age 25 to 45 years. Particulars to Box 9842.

LADY TRACER, Westminster area, on professional side required. Previous experience of civil engineering work helpful. Would be working with a small group of lady tracers. Age under 30 preferred, but experience and ability the major points—not age—on which selection and salary will be considered. Please send details to Box 9817.

MANAGER (aged 35-40) for new Regent Street Showroom displaying Metal Sink Units and complete Kitchens. Used to making quick free-hand sketches whilst interviewing, and possessing knowledge of plumbing and building detail necessary for discussion with Architects and General Public. Apply, stating age, salary required, previous experience, and any qualifications, to Secretary, Wallis & Co. (Long Eaton) Ltd., Nottingham Road, Long Eaton, near Nottingham. 9801

OPPORTUNITY occurs for applicant over 35 with interest in raising standards of design in industry. Energy, understanding of industrial production processes and organising ability essential; close association with Scotland and/or Scottish industry will be added advantage. Commencing salary £900-£1,000, according to qualifications. Written applications, giving outline of career, to Establishment Officer, Council of Industrial Design, Scottish Committee, 95 Bothwell Street, Glasgow, C.2. 9798

THE CO-OPERATIVE WHOLESALE SOCIETY, LTD., invite applications for the appointment of a **JUNIOR STRUCTURAL ENGINEERING ASSISTANT** on the staff of the Manchester Architect's Department.

Applicants should have experience in detailing structural steel or reinforced concrete with design qualifications to Higher National Certificate standard or equivalent.

The appointment is permanent, with prospects of promotion. Successful candidate will be required to undergo a medical examination for entry into a compulsory Superannuation Scheme.

Applications, stating age, experience, qualifications and salary required, to be addressed to G. S. Hay, Esq., A.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester. 9751

DESIGN VACANCY.—W. M. de Mayo requires experienced ASSISTANT DESIGNER, fully conversant with exhibition and showroom design. Must be capable of executing colour visuals, complete working drawings, and brief specifications. Experience of Typography and Display Design an advantage. Permanent, interesting opening for keen, industrious and imaginative man. Send specimens, with full details of experience and salary required, to Miss A. Boden, 33, Jubilee Place, S.W.3. Applications will be treated as confidential. 9754

A GROUP of companies specialising in the actual manufacture, sale and distribution of rubber and plastic flooring of all types with a separate contracting organisation for laying these floorings, as well as carpets, linoleum, etc., require a Commercial Manager with a thorough knowledge of the flooring trade to administer these companies. Applicants must have experience of executive control and administration and be capable of maintaining and developing the selling organisation to a level of high efficiency. Write with full particulars of qualifications, salary required, etc., to Box 9828.

EXPERIENCED CLERK OF WORKS required to supervise erection of school buildings for Gold Coast, West Africa. Salary £1,200 per annum, with first class return passage, and free accommodation. Tour in the first instance two years, with paid leave at the rate of six days for each completed month of service. Please reply giving details of experience to Box 9833.

For Sale or Wanted

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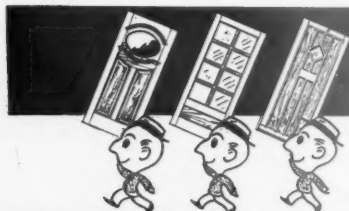
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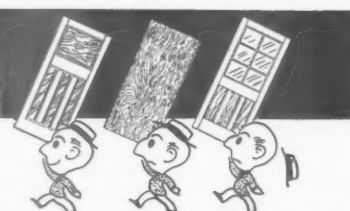
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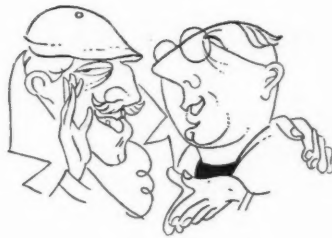
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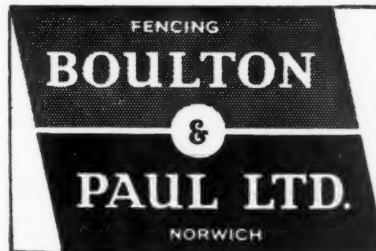
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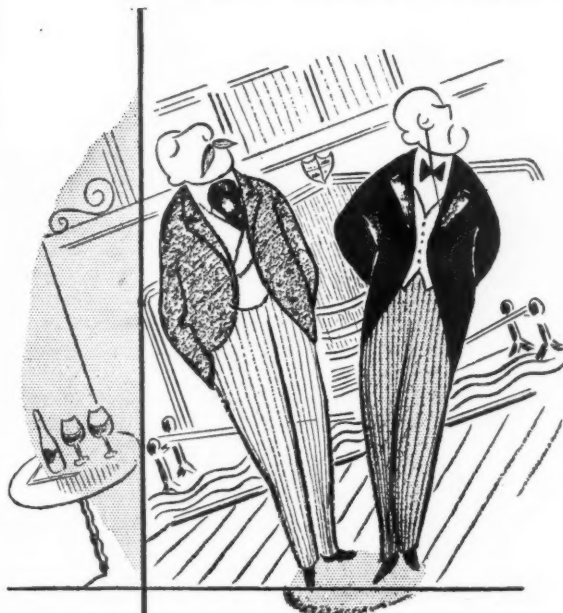
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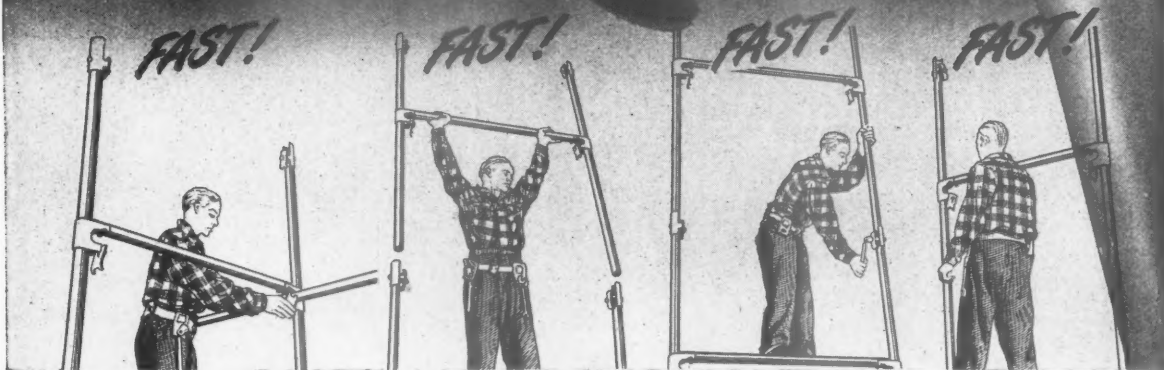
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