

# THE ARCHITECTS' JOURNAL



## standard contents

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

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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Sloane 3158/1601
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Euston 2450
I of Arb.	Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 11, Gower Street, W.C.1.	Museum 9200
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	MARS Group (English Branch of CIAM). Secretary: Gontran Goulden, Building Centre, 9, Conduit Street, W.1.	Mayfair 8641
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. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James's 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
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	Whitehall 8411
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.	Molesley 1380
NSA	National Sawmilling Association, 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
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. 75, Cannon Street, E.C.4.	City 4771
TGC	The Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 69, Cannon Street, E.C.4.	City 4444
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1.	Mayfair 8866
WEDA	Welfare Equipment Development Association. 74, Victoria Street, S.W.1.	Victoria 5783
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford	Oxford 47988

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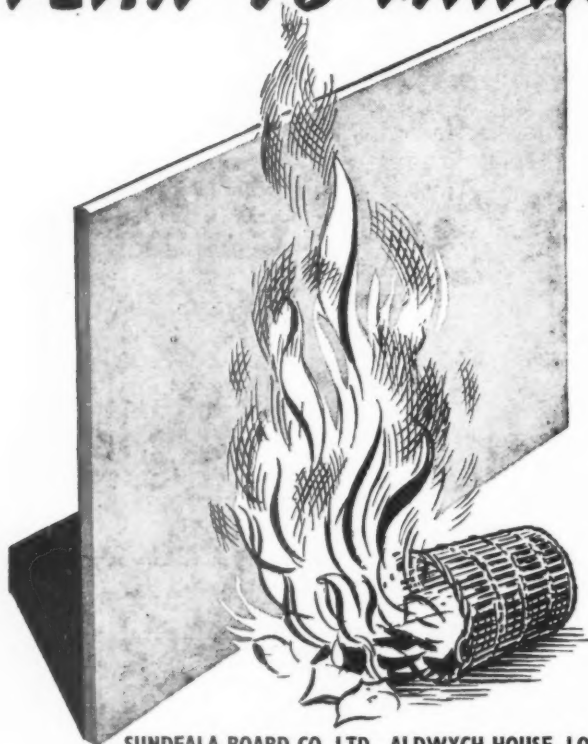
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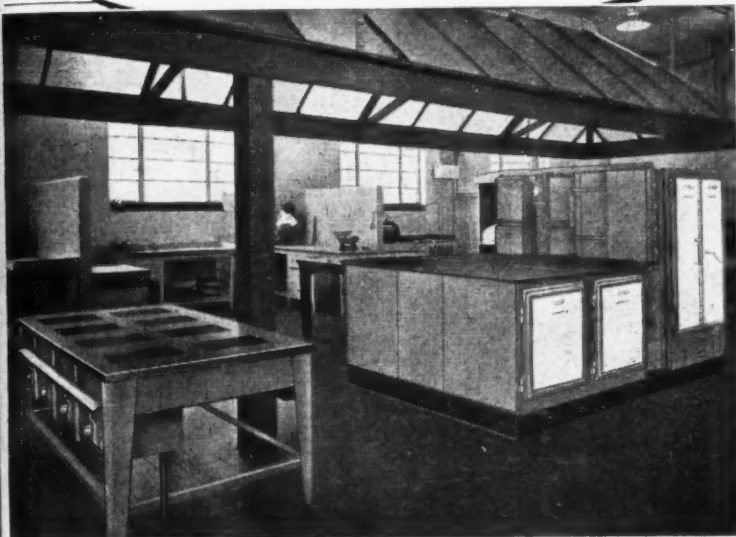


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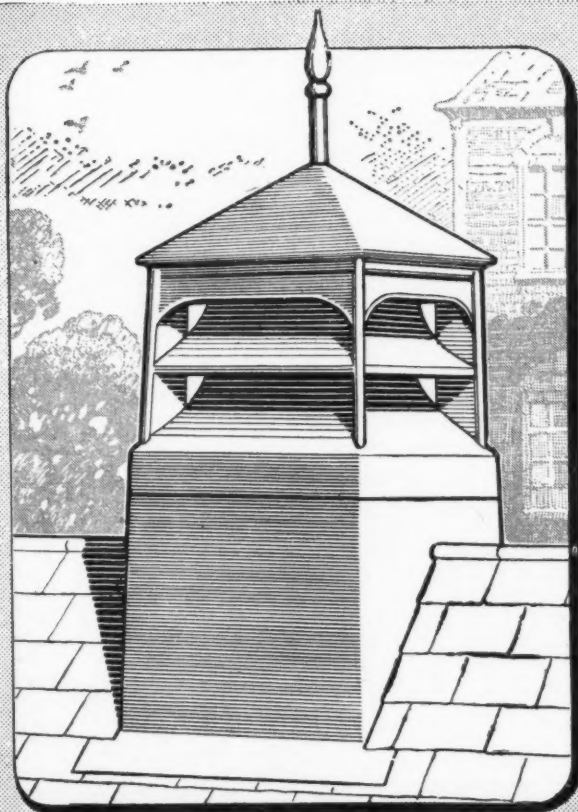
**The Works Canteen  
Kitchen at  
International Combustion Ltd.**

This modern Jackson equipment installed in the kitchen at International Combustion Ltd., Derby, caters for 600/800 people. The total loading is 116.5 kW. This illustration shows a Jackson 8-plate Boiling Table, four No. 7 Ovens, a No. 15 Roasting Oven in addition to other equipment. It is a first-class example of the planning and equipping of a modern canteen kitchen.

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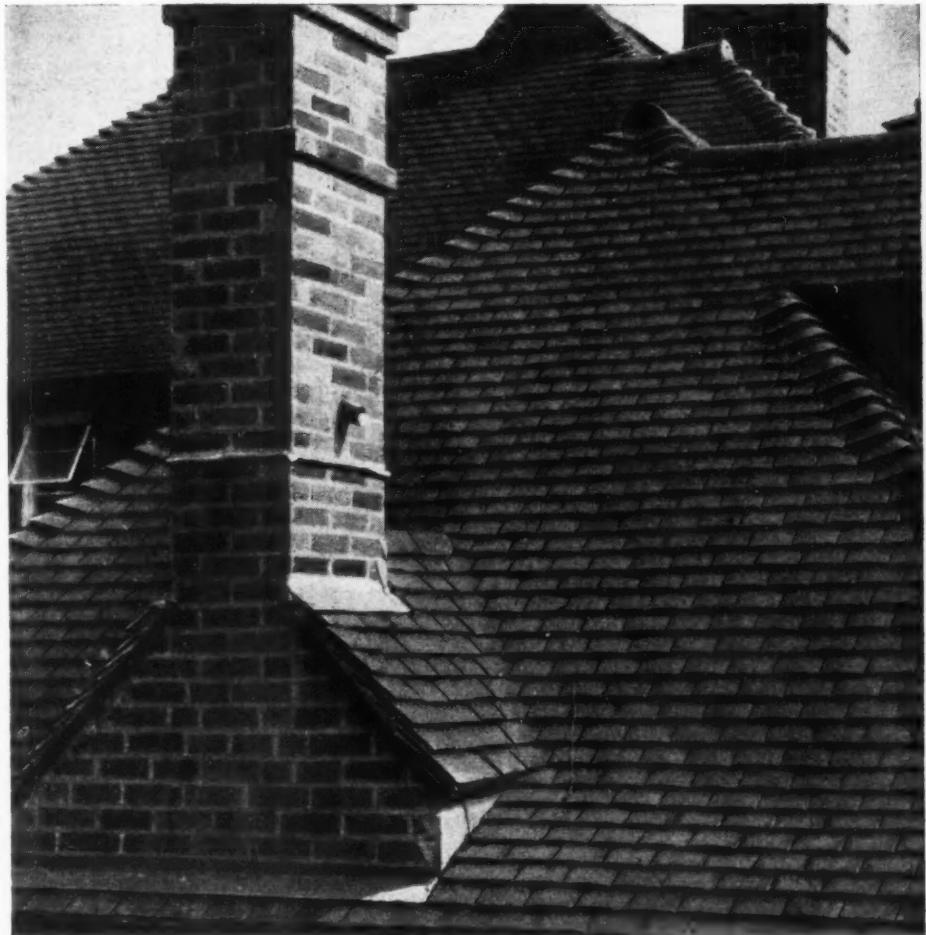
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# Carpet Mounting

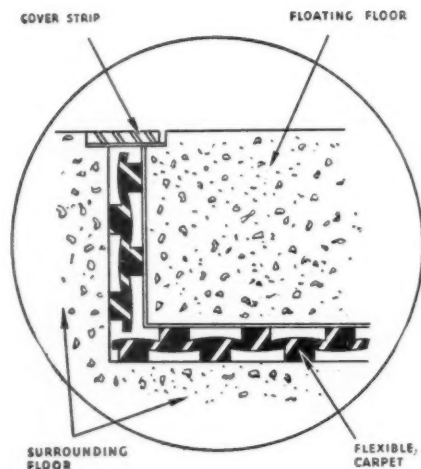
*A new barrier against vibration*

Where it is impracticable individually to mount the feet of instruments or machines, the floor mass itself may be "suspended" on D.S.P. Flexible Rubber Carpets scientifically designed for use under the foundations of mills, power presses, hammers and other heavy machinery, thus preventing the transmission of vibration to the building structure (see drawing).

Conversely, there are applications where it is necessary to isolate delicate instruments from the damaging effects of external vibration.

An interesting instance of this type of installation is the mounting of an entire laboratory floor at the Chester Beatty Research Institute of the Royal Cancer Hospital, London (see photograph). The laboratory contains a large ultra-violet microscope for the examination of tissue: since an extremely high magnification is required and photographic exposure times are of several seconds duration, it is essential that external traffic vibrations be prevented from interfering with the instruments.

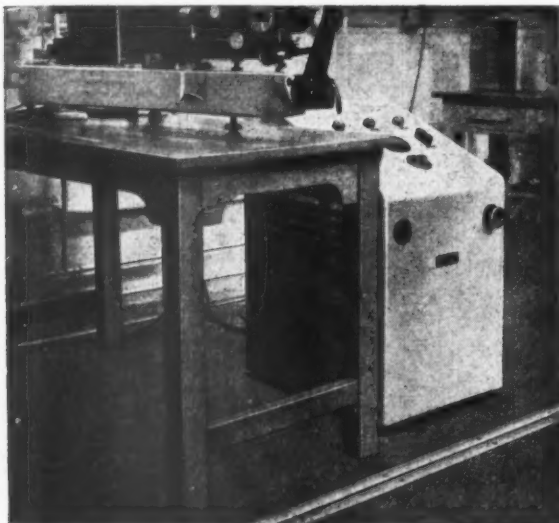
By mounting the floor mass on D.S.P. Flexible Rubber Carpets, interference from external sources has been



effectively reduced and the hospital authorities confirm that photographic blurring has been eliminated.

D.S.P. Rubber Carpets are produced in varying hardnesses to suit the load conditions: specifications for installation purposes will be considered, on enquiry.

ISOLATING MICROSCOPE FROM EXTERNAL VIBRATION



The laboratory floor at the Chester Beatty Research Institute of the Royal Cancer Hospital, London, "suspended" on D.S.P. Carpet Mountings.

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A rubber mill in the Midlands which has for several years been mounted on D.S.P. Carpet Mountings.

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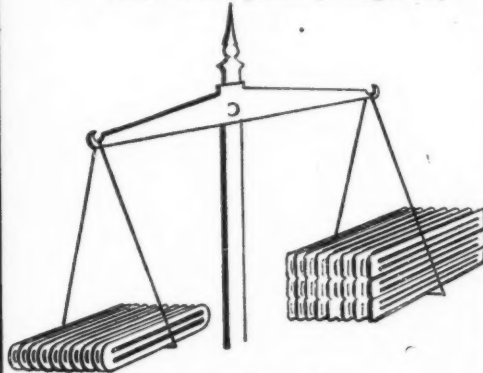
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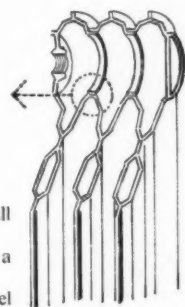
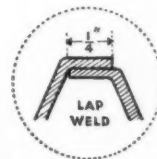
one-third of a cast-iron radiator) handling charges are reduced and erection is simplified and speeded up. Moreover the Gulf Steel Radiator can be hung on any type of wall with Gulf wall brackets without reinforcing. These brackets are supplied free.

3. It heats up more quickly. Room temperature is easily controlled.

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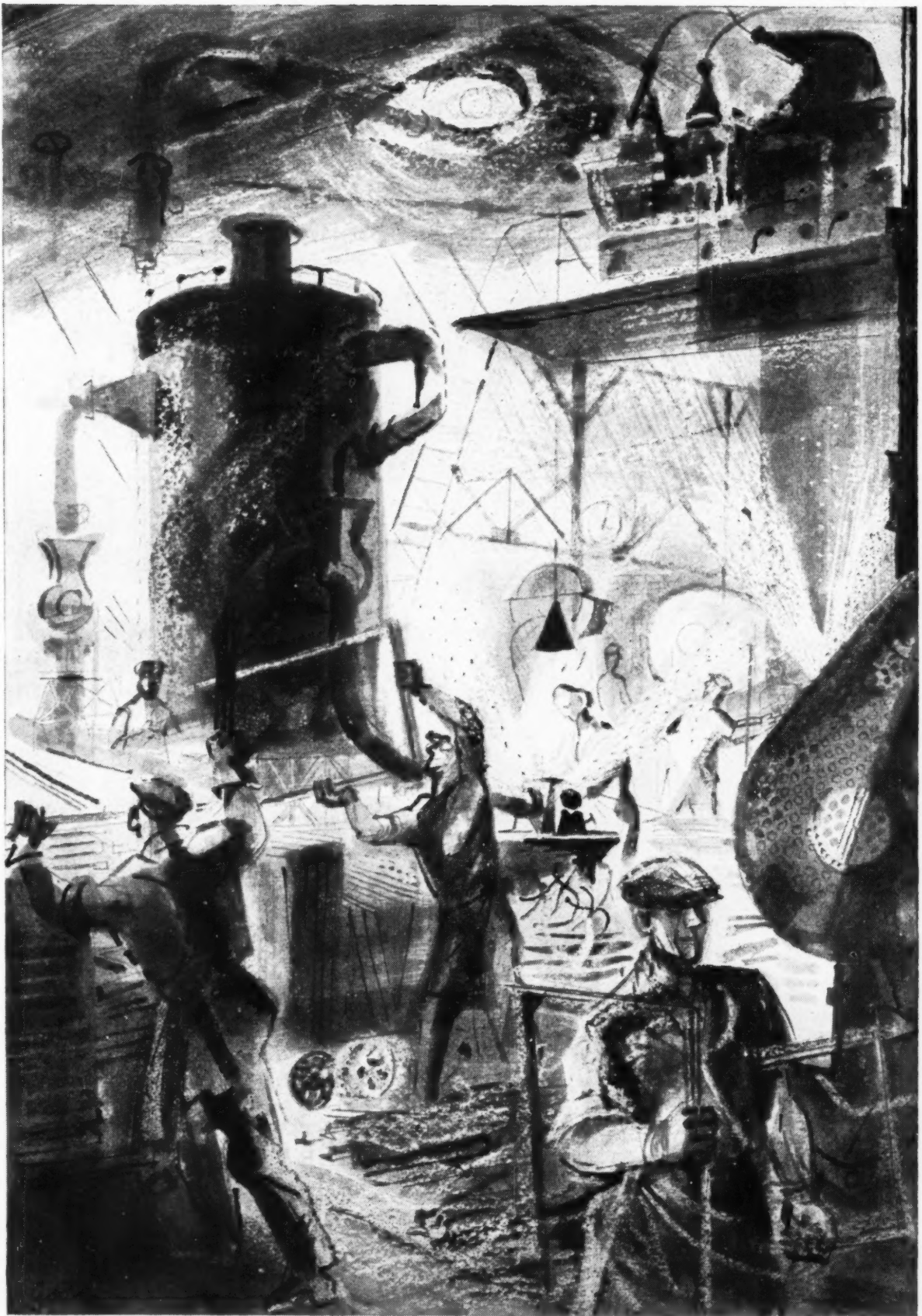
*The tempo of window-making in the Reliance Works, Chester, is suggested by this drawing by Walter Goetz. It is one of a series, "Window Makers at Work," for Williams & Williams Limited.*

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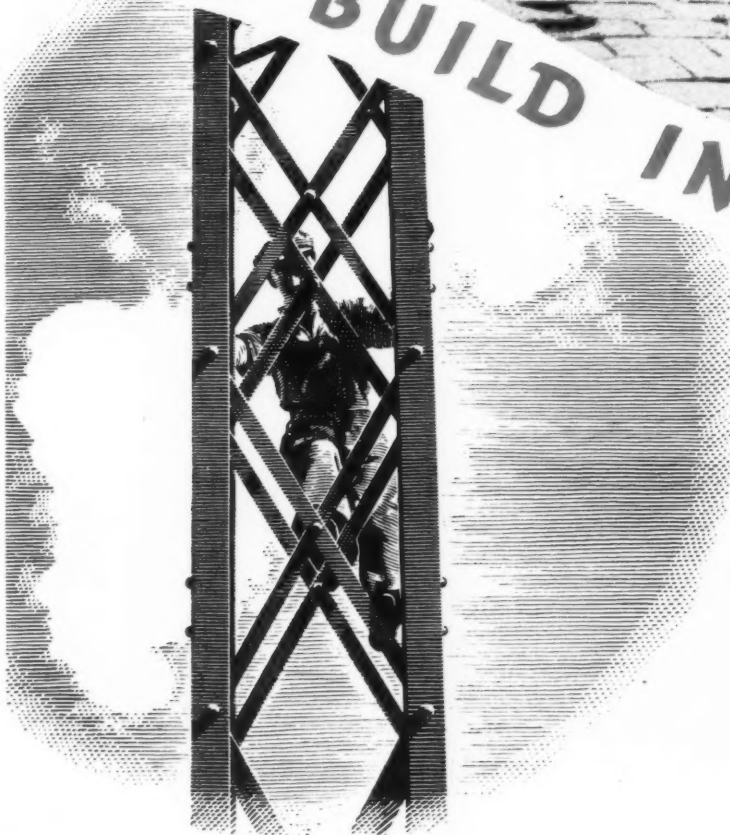
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# Bitumetal in Action

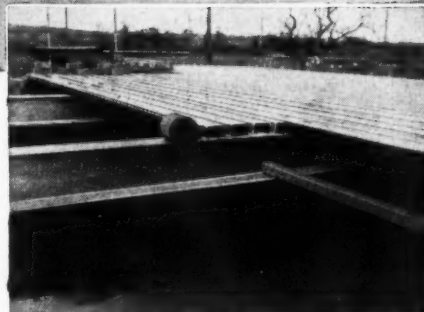
Final phase of installation of Briggs-  
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General view of installation of Briggs Bitumetal Roof showing Aluminium Deck Units. The underside presents a clean, attractive ceiling.

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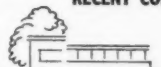
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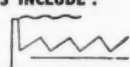
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F.R.I.B.A.  
Kent County Architect.

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Junior & Infants' School,  
Hornchurch, Essex.

Architect:

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Architect:

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Society Bakery.

Architect:

R. K. Lewis, Esq., A.R.I.B.A.  
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Wood's Bakery, Perth.

Architects:

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Railway stations, with their large areas of glazed roofing, were ideal subjects for this new form of structure, as were the many factories springing up in the Industrial age. Another outstanding example of an iron framework was Joseph Paxton's great Exhibition Hall of 1851, which later became world-famous as the Crystal Palace.

Unfortunately, though this was a period rich in technical advancement, the æsthetic properties of many of its great achievements were striking examples of how *not* to do it.

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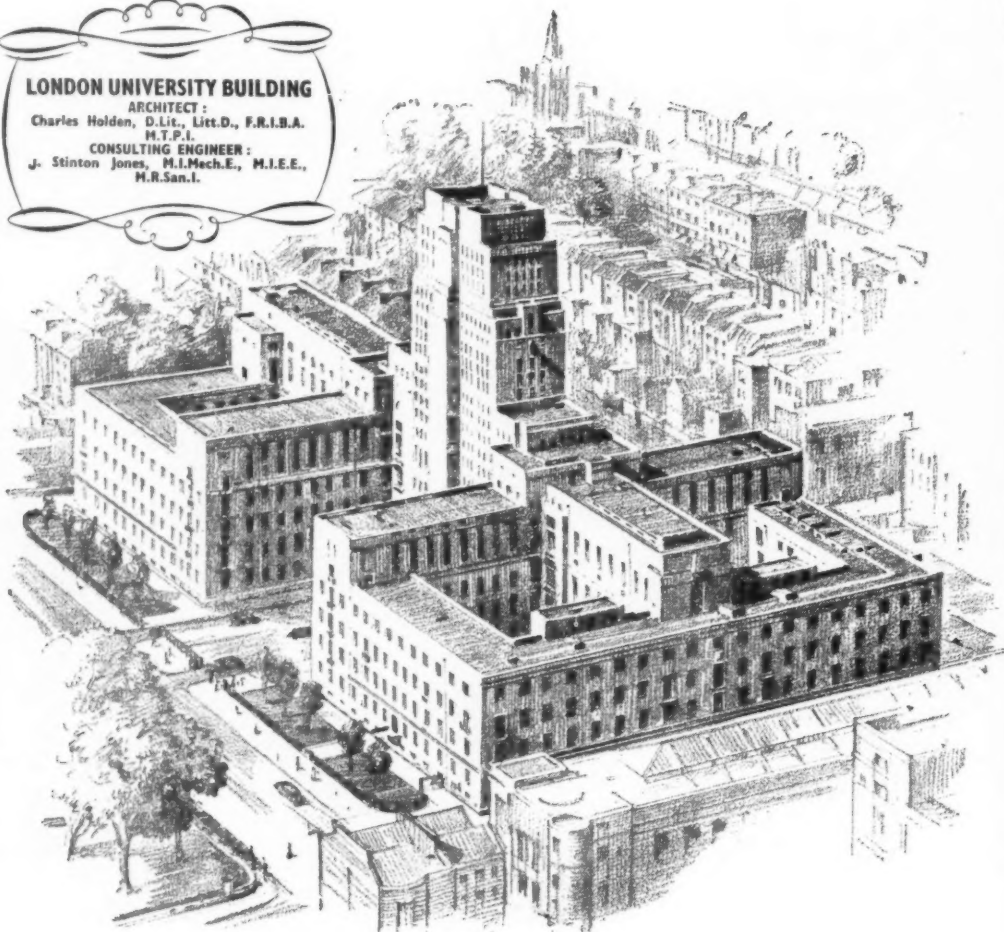
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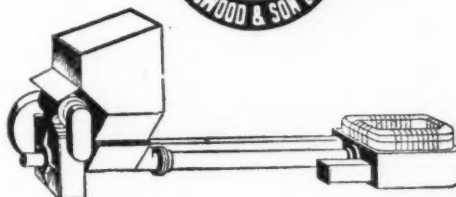


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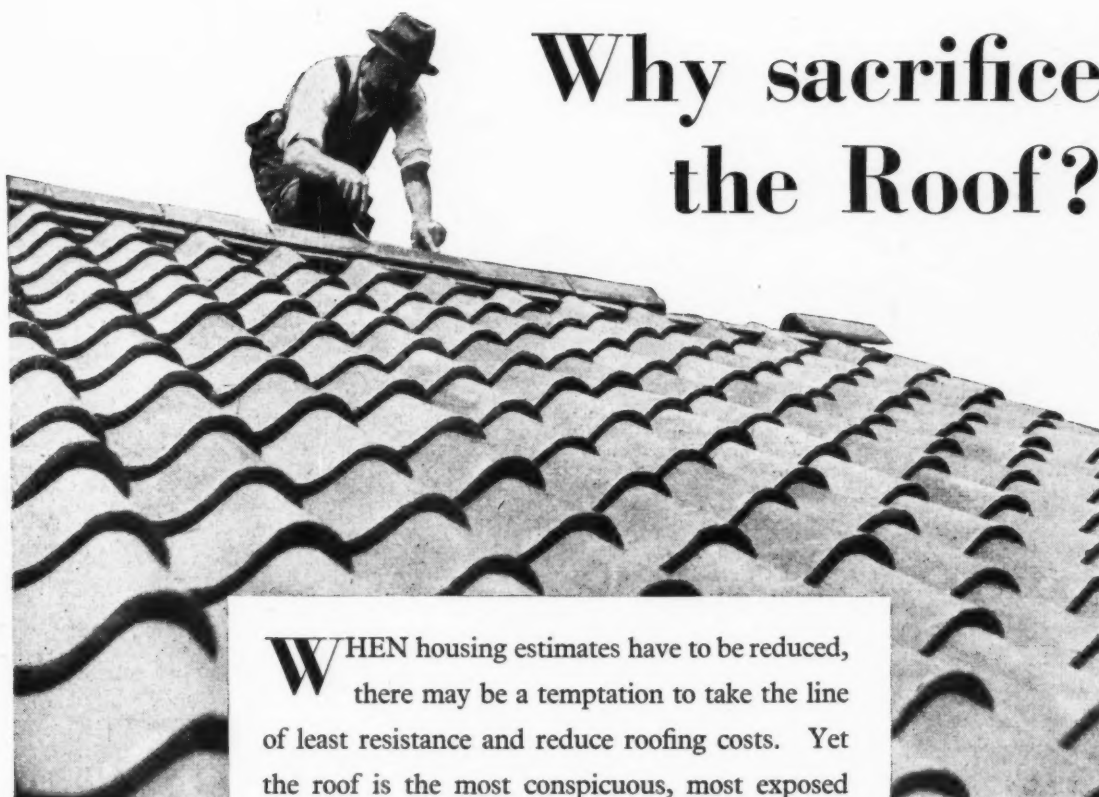
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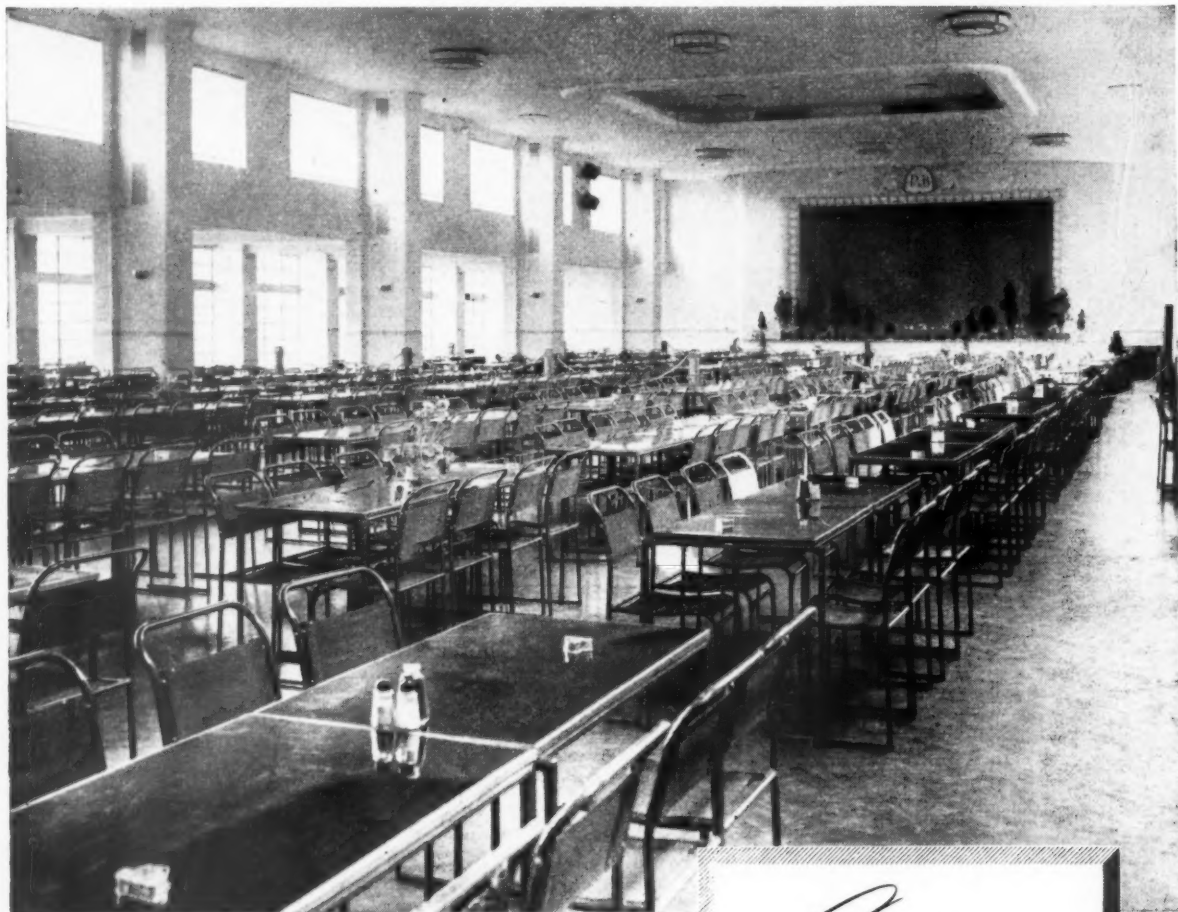
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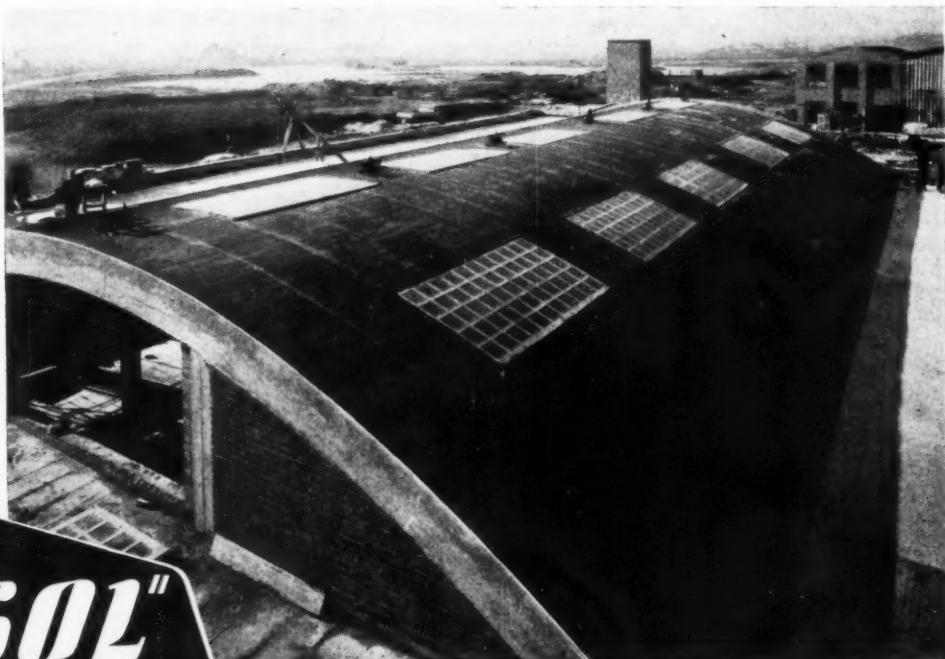


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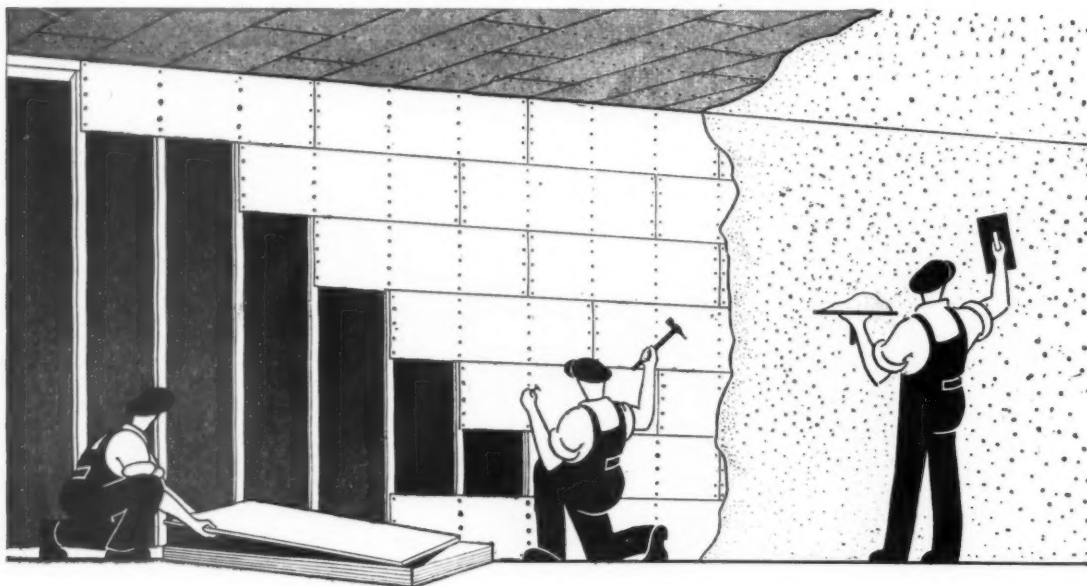
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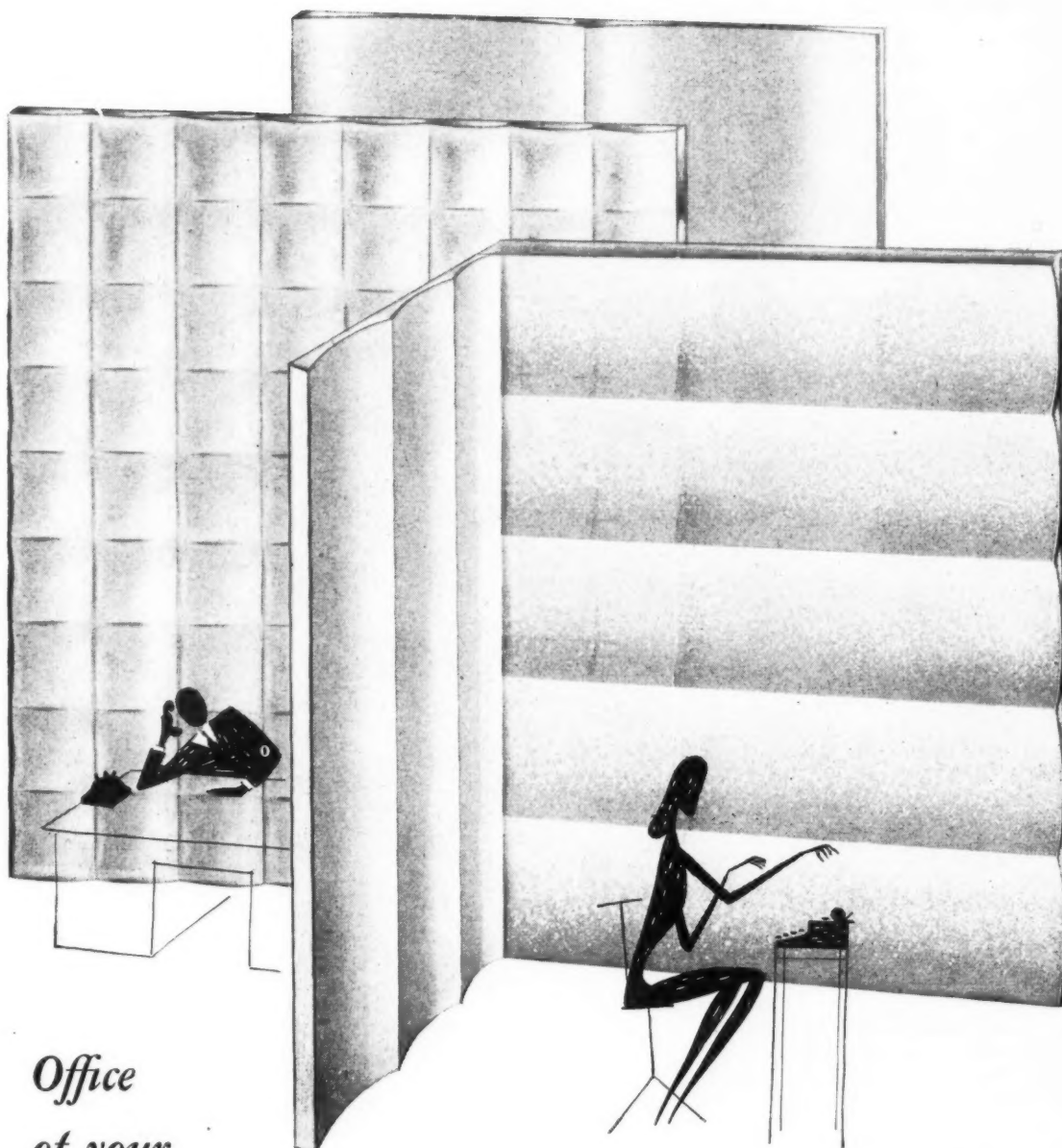
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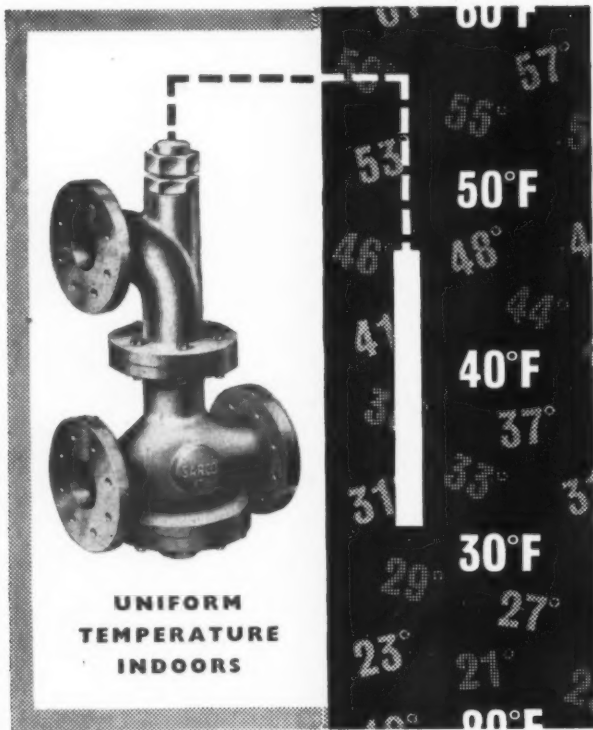
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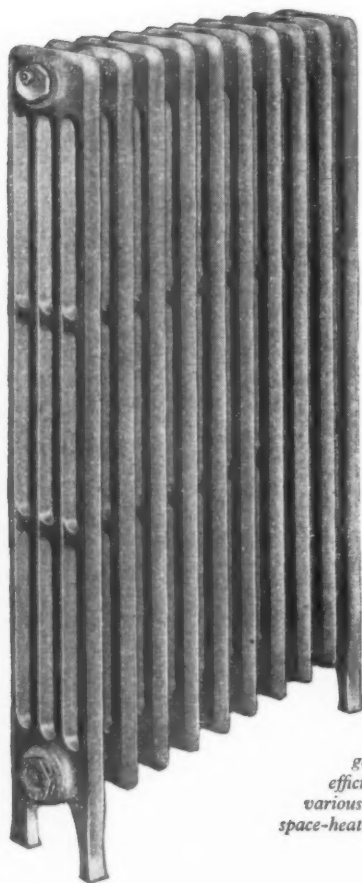
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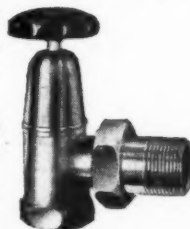


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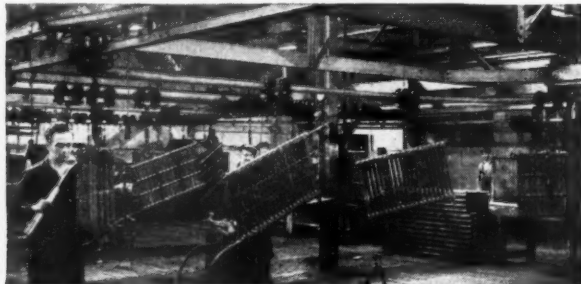
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*Part of the foundry in which the radiator moulds are formed. Photograph shows cores being placed in position.*



*General view of the shop in which cores for Crane radiators are made.*



*Testing the radiators for watertightness at pressure.*

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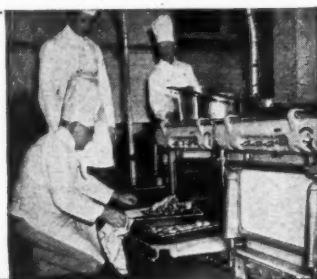
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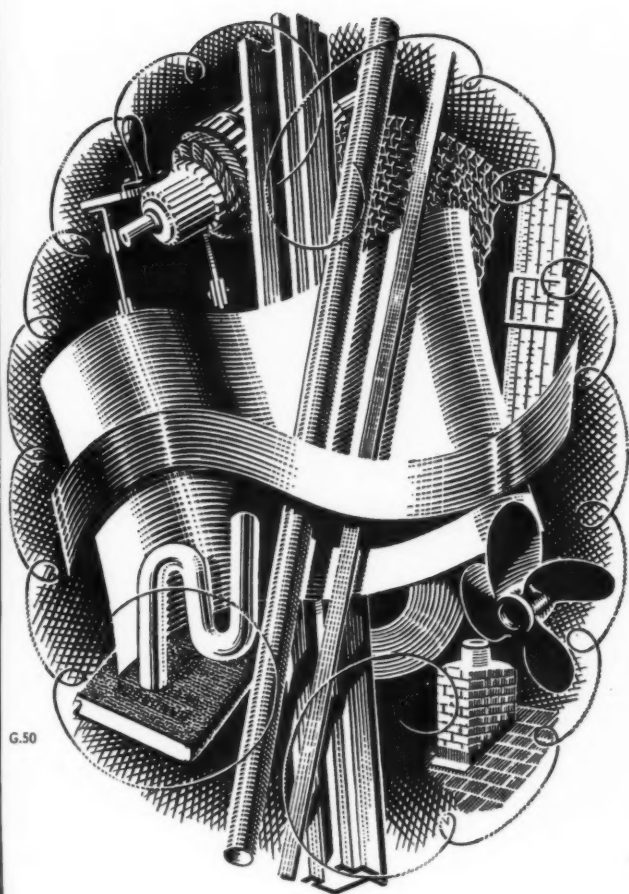
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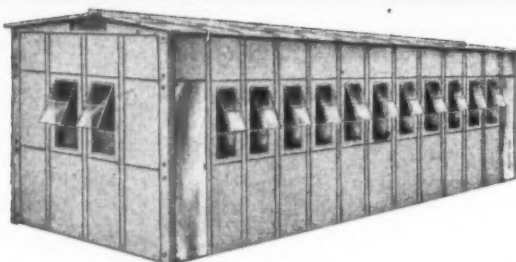


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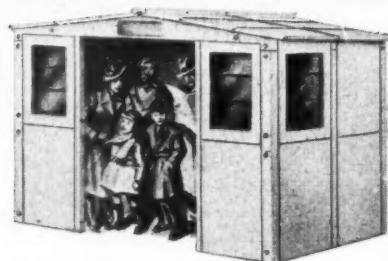


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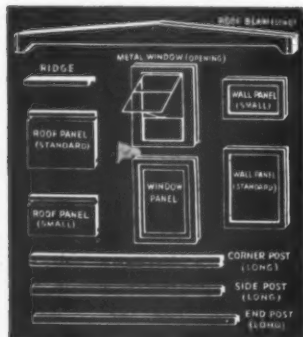


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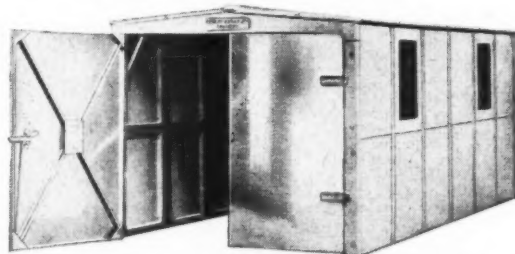
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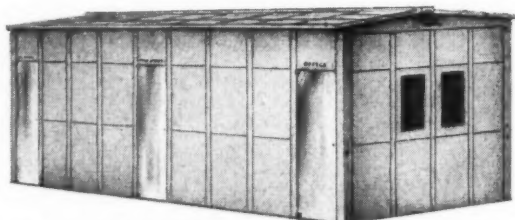
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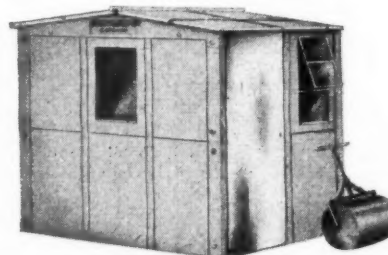
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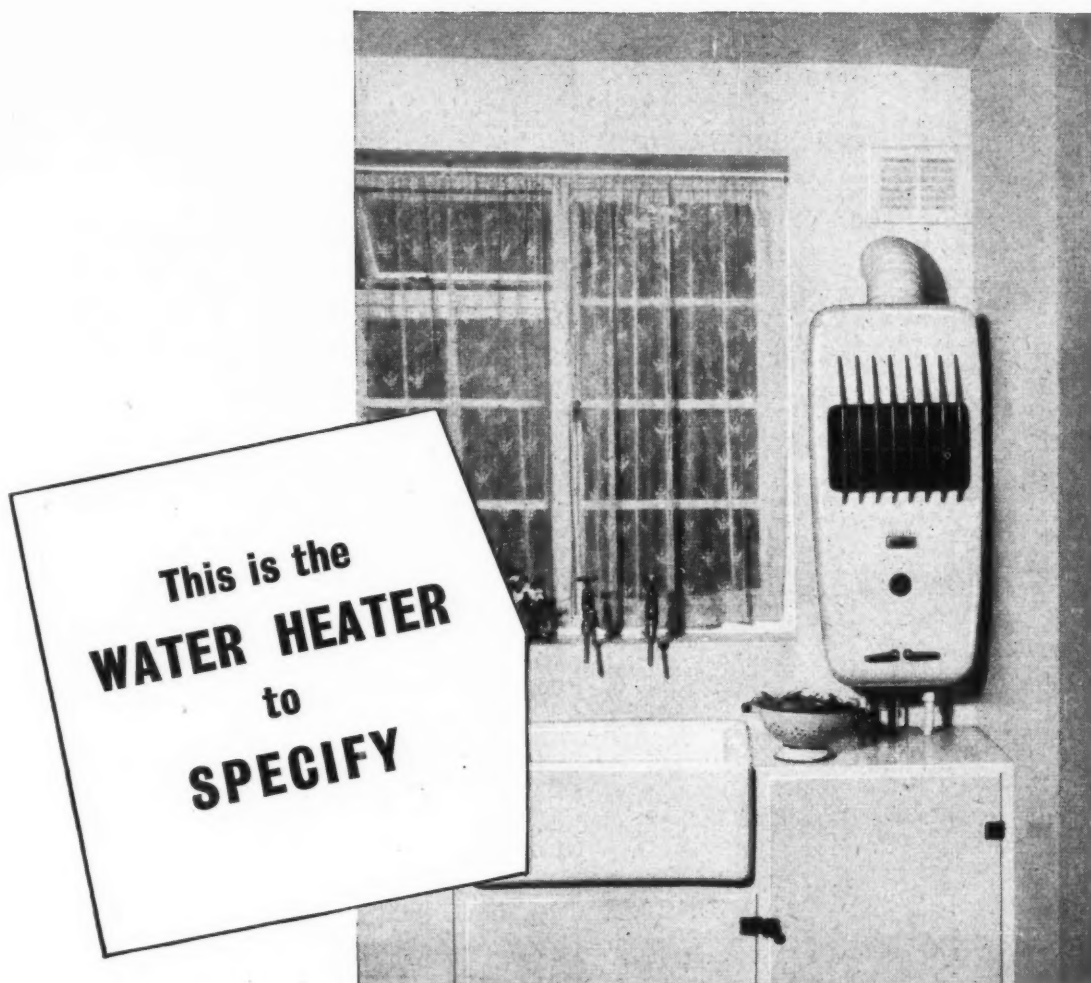
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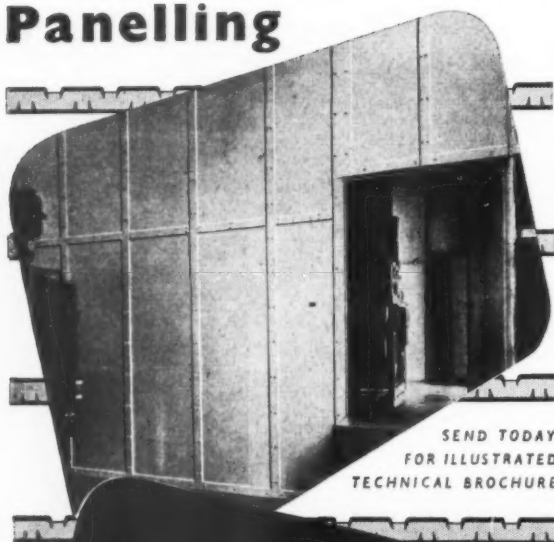
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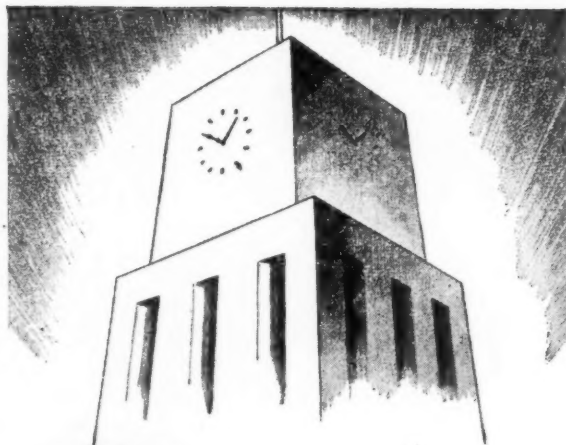


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## BACKWARD MARCH

Those who are interested in the technical developments of the 19th century which developed into a contemporary architecture, should hurry along to Leicester Square to have a look at one of the few ecclesiastical buildings with a cast iron structure before it is too late. The church of Notre Dame de France will soon be in the hands of the wreckers. Unfortunately the cost of reconstructing the building in the original style would be too costly today. I refrain from publishing a photograph of the model of the proposed new church, which one of my spies brought to me after discovering it in the present building. My restraint is due to the fact that this design by Corfiato, Thomson and Partners has not been finalised and I do not wish to excite my readers with-

out cause. However, at the top of page 179 I publish a photograph of the building as it was before being very badly damaged by bombing.

The history of the church is extremely interesting. The site was occupied by the first of the "Panoramas" built by Robert Barker, an impecunious painter from Edinburgh who conceived the idea while languishing in gaol for debt in 1785. The Panorama walls give the church its present form. After more than 70 years of exhibitions of Napoleonic battles and notable discoveries, the collection culminated in 1865 with panoramas of Rome and Naples.

The church was begun in May, 1867, by a Frenchman, Boileau, probably that same architect who, with Eiffel, built the Bon Marché store in Paris in 1876. (His father was one of the pioneers in the use of iron in architecture.) The whole interior of the church with its four slim central columns and its cunningly devised four quadrant shaped galleries, is a notable example of what Siegfried Gideon has called the French "urge to hollow out interior spaces to the greatest extent possible."

## US TRADE UNIONS

Faced with a report\* by a British team sponsored by the TUC on trade unions in America, I started to plough through it from a sense of duty and then found, to my surprise, that it was remarkably interesting and informative. I now know for the first time, the difference between the AF of L and John L. Lewis's CIO, a distinction about which I have always been deplorably ignorant. Perhaps you were too.

\* Trade Unions and Productivity, TU Congress, 2s. 6d.

But what impresses me most is the degree of co-operation which seems to exist between American unions and management. There is the inevitable bargaining for wage rates and conditions of work; that, after all, is the main reason for unions. But a number of them appear to have efficiency experts on their staffs who revise machinery layouts. And the unions themselves sometimes even lend money to firms who are in financial low water, so as to continue to provide employment for union members. This seems an admirable state of affairs and an excellent development from the Works Production Committees started here during the war.

I suspect, however, that it will be a long time before British trade unions consider it their job to advise on major policy rather than wage rates and welfare. And perhaps it will be longer still before managements are prepared to take advice. That is the inevitable result, I suppose, when both parties in a discussion are looked on as "the other side."

## ADVICE TO COMPETITORS

Competition winners must often be disappointed by the reproductions of their work in the architectural journals. The poor quality of some of these reproductions is invariably due to the fact that the originals have been drawn with a very faint pencil and lettering is too small. I know that large lettering spoils the appearance of a drawing, but I don't think any assessor would be unfavourably influenced by a design on which details were printed neatly with ink in  $\frac{1}{4}$ -inch lettering—a suitable size for reduction and block-making.

I mention this matter after being shown photographs of interesting

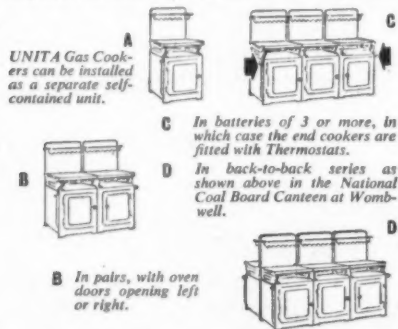


Battery of 6 UNITA Cookers, installed in a National Coal Board Canteen by the Wombwell undertaking of the East Midlands Gas Board.



**F**or efficient  
and economical cooking  
facilities to meet a wide range  
of heavy duty requirements

Parkinson UNITA Gas Cookers are designed for the specialised requirements of Canteens, Hotels, Boarding Houses, etc. Being "unit" designed, further Cookers can be added both simply and rapidly, as catering requirements expand.

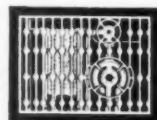


**PARKINSON**

**UNITA**

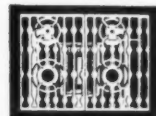
**UNIT GAS COOKERS**

**DIMENSIONS OF SINGLE UNIT COOKER:** Height to Hotplate, 38". Height Overall, 59½". Width Overall, 31½". Door Opening High, 22". Wide, 21". Oven: Wide, 25". Deep, 21". High, 28". HOT-PLATE: Wide, 27½"; Deep, 24".

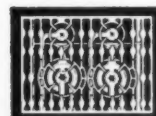


No. 224. Is fitted with one concentric, one single burner and long grill.

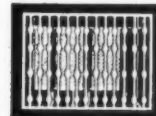
"UNITA" Hotplates meet all requirements.



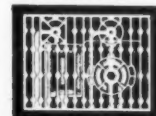
No. 220. Includes two large and two small ring burners and short double grill.



No. 221. Feature: two concentric and two single ring burners.



No. 222. Consists of an all-grilling arrangement.



No. 223. Has one concentric and two single ring burners and short grill.

THE PARKINSON STOVE CO. LTD BIRMINGHAM 9



prize-winning entries for two competitions. Neither set of photographs was good enough for publication. One design was executed too faintly. The other was valueless in black and white form, as the original had an elaborate key in many colours. This, of course, was the fault of the promoters, who stipulated the use of colour wash in the conditions.

\*

Both promoters and competitors should give more thought to the possibility of publication of winning designs. It should be remembered that many unsuccessful competitors who are unable to afford the time to travel to the place where the winning drawings are exhibited, are able to compare the successful work with their own only by means of the published reproductions.

#### ADVICE TO PROMOTERS

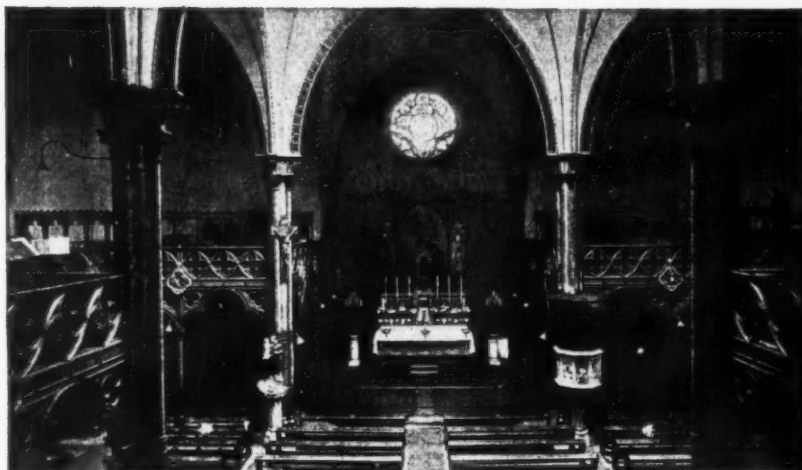
Another great competition, that for Coventry Cathedral, is upon us. How many promising architects, discouraged by the amount of time and drawing that every large competition entails, will ruefully decide to let it go?

\*

Is it beyond the capacity of eminent and experienced assessors to hold an eliminating competition for a sketch design and from it choose a percentage—always an obvious percentage—of those whose drawings show signs of a promising final design? Those chosen would feel they had some chance of a prize and work with greater enthusiasm. Those eliminated would be consoled by knowing that months of work would not be wasted. It is all so obvious, yet conditions formulated fifty years ago are still apathetically accepted. Let ASTRAGAL have your ideas and suggestions, please.

#### BRIDGES

Like most architects, I wouldn't even know where to start with higher calculations, but that doesn't prevent me from being entranced by the delicate feats which engineers produce quite often, I suspect, without worrying too much over aesthetics. It's only when they try to put the art in afterwards that they seem to go haywire, and for this reason one has to have a fairly



*The Church of Notre Dame de France, seen here as it was before the war, is to be reconstructed to a new design. (See note on page 177).*

clear grasp of what the engineer was trying to do before it's really possible to judge any bridge reasonably.

\*

When I saw that Elizabeth Mock's new book was called *The Architecture of Bridges*,\* I feared it might be no more than a collection of pretty pictures, but remembering her admirable *If You Want to Build a House*, I ought, of course, to have known better. Although she modestly disclaims any technical qualifications, she has enough structural knowledge to

make her comments interesting and informative. Here are bridges from all over the world, the British ones familiar enough, of course, as are the Swiss bridges of the incomparable Maillart, but there are plenty of American ones which were produced in the war years when we were all busy looking at other things. Mrs. Mock, to my surprise, suggests that the costs of labour and materials in the States are so disproportionate that it is only the long span suspension bridges which are designed with real economy of materials.

\* Museum of Modern Art, \$5.00



*This wooden footbridge near Princeton, New Jersey, is included in "The Architecture of Bridges", reviewed on this page. It was designed by Kenneth Kassler, architect and Kraemer Luks, engineer. The tapered curves of the fixed arches are a lucid expression of the transfer of weight and thrust to the concrete abutments.*



## *The Setting for a New Cathedral*

A competition to design a new cathedral for Coventry was announced in the JOURNAL for August 10. The sketch of part of the new shopping precinct, above, and further illustrations on pages 183-185, show clearly the contemporary character of the new buildings which will form the background to the winning cathedral design. They are part of the redevelopment of Coventry's war-damaged central area which is being carried out by D. E. E. Gibson, the City Architect. Readers may remember that Sir Giles Gilbert Scott was originally appointed architect for the cathedral. Differences of opinion on the part of the Bishop of Coventry,

Sir Giles, and the Royal Fine Art Commission as to the treatment of the design, and other factors, led to the resignation of Sir Giles Scott in January, 1947. The Harlech Commission, which was appointed to advise on the future design of the cathedral, recommended in July, 1947, that it be built in the English Gothic tradition and of red sandstone. It is to be hoped that no such conditions will be imposed in the competition. Before the building of the cathedral commences Coventry will possess a city centre boldly contemporary in design which would lie uneasily beside such an anachronism.

One cannot tell by looking, of course, but most examples of current American work seem commendably spare to me, particularly as I assume that, being new, they are designed for future traffic loads.

#### PIPERS AND PAUPERS

Reading the recently published Report for 1949,\* I am reminded that the Ministry is not only the authority which issues licences and operates so many controls, but also still contains the pre-war Office of Works, and is probably the building industry's largest single customer, as it spent last year 11½ million pounds on maintenance and 30 million on new buildings.

\*

Browsing through the various sections, I was surprised to learn that the Ministry also buys pictures and that last year it spent 15 hundred pounds on 100 of them. Bearing in mind that five were John Piper's "large panels" for the Rio Embassy, which, I hope, were considerably above the average of £15 per picture, it doesn't seem to leave notably worth-while prices for the remaining 95, which included "about 20 oil paintings; the rest being water-colours and prints." I am almost persuaded that there are less profitable jobs than being an architect.

#### ARCHITECTURAL FALSEHOODS

On another page a reader rebukes me for commenting adversely on the RIBA Council's decision that the Tite Prize competition programmes shall again be in "the Italian Renaissance manner." He defends the Tite as a laudable means of broadening the students' mind. I see his point but I still maintain that no student worth his salt can get pleasure out of work in which he is merely trying to make a falsehood convincing. Far better that he should be engaged in learning about those little white lies of renovation which have to be perpetrated in order to preserve an honest appearance in an ancient building. I mention this because the SPAB have pointed out to me that the closing date for applications for the Lethaby Scholarship, which helps students to gain knowledge of methods used and approved by the Society in the repair of old buildings, is August 30. Details can be obtained from the Society's secretary at 55, Great Ormond Street, W.C.1.

ASTRAGAL

## The Editors

### NEW TOWNS: THIS YEAR, NEXT YEAR...?

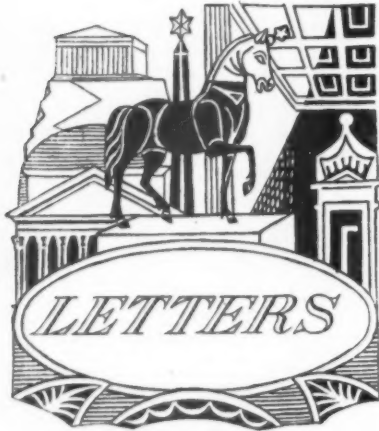
**I**N three or four years, according to C. W. Gibson, M.P., who until recently was chairman of the LCC Housing Committee, all those in urgent need of homes in the LCC Area will have been rehoused. He estimates that 25 per cent. of those on the waiting list for houses can be considered as in urgent need, and, therefore, provided that the current rate of building can be maintained at 16,000 houses a year, presumably the remaining 75 per cent., or 150,000 families, will be housed in about fourteen years. The sites of the 50,000 houses for those families in urgent need have already been secured, or are earmarked, either within the county or in the out-county estates of the L.C.C. There thus remain only two problems to be solved: firstly, slum clearance, and secondly the reduction of the present population of London by 260,000 people. An added complication to the latter task is the fact that according to the Registrar General's estimate the population will have increased by a further 100,000 people within the next twelve years.

The question naturally arises: where are these hundreds of thousands of people to be housed? The answer presumably is in the towns of Brentwood, Letchworth, St. Albans, Slough and Woking, which are to be enlarged to receive Londoners, and, of course, in what is perhaps potentially the most exciting and inspiring architectural experiment of today, the proposed New Towns. These during the past year or so have tended to become stale news. Planning teams have been formed, architects have come and gone, and perhaps the odd photograph has been published of the first few houses to be built, or the first bleak concrete road to have been officially opened. But within the last few weeks general interest has re-awakened. A glance through the pages of Hansard reveals question after question being asked on costs, numbers employed, and progress made in the New Towns. Finally, an article in *The Times* by a special correspondent on London's housing problem aroused letters from readers who fully appreciated the fact that on the policy to be adopted on housing depended the whole future of the New Towns. And not only the future of the New Towns clustered around London, but of the six other designated towns in Great Britain.

It is generally realized, in fact, that the moment has been reached when the Government will have to decide between a policy of doing what is expedient at the moment, or adopting a policy of long term planning. Are we to attempt a "combined operation" to get the New Towns built or are we going to sit back and watch them grow, largely unaided, as did Welwyn and Letchworth? In order to show our readers the present state of the New Towns, *THE JOURNAL* will publish during the next few weeks brief surveys, prepared by Derrick Childs, the architect and town planner, from which we may learn how near they are to providing an immediate solution to our housing problem.

\* HMSO, 1s. 3d.





J. H. Jellett, M.I.C.E.

Q. S.

P. G. Beresford, A.R.I.B.A.

## Dock Terminal: The Engineer Replies

SIR.—May I, as the Docks Engineer whose competence to supervise the design and construction of a large docks building is called in question by ASTRAGAL in your issue of August 3, offer a few comments on his remarks.

The restraints under which Mr. Dromgoole worked were those imposed by the nature of the site and the fact that the dock authorities—for some inscrutable reason!—required that the building should be so constructed as to discharge its functions in the most efficient manner possible. I will not weary you with a detailed exposition of the technical features required for this purpose, but no great feat of imagination is necessary to see that a building which is to handle anything up to 2,000 passengers with 15,000 pieces of luggage, transferring from ships 1,000-ft. long through three different classes of gangways, four different hatches, and a number of other miscellaneous openings, to anything up to five boat trains and six hundred cars, passing through Customs and Immigration formalities *en route*, the whole operation to be completed in a matter of two or three hours, will have to be constructed to a very tight schedule of requirements. It must also be remembered that the plan dimensions of the site and the approaches thereto by sea, rail and road, were already almost exactly determined. Within the restrictions imposed by these circumstances, Mr. Dromgoole was perfectly free to develop the building as he wished.

I note that ASTRAGAL makes only one specific criticism of the external appearance of the building, apart from the implied argument that a building designed by an architect working under an engineer must necessarily be architecturally bad, and that this building is bad for that reason. The specific criticism to which I refer is his complaint that the development of the south end of the building is not matched in any way at the north end. I would therefore mention that the design of the building, and in particular the proposal to develop the south end and leave the north end plain as a means of emphasizing its seaward-looking character, was strongly commended by the Royal Commission on Fine Arts, after a panel of their members, consisting of Messrs. Maxwell Fry,

Edward Maufe, and Knapp Fisher, had visited Southampton and viewed the site from all its aspects, an exercise which I shall be interested to hear that ASTRAGAL has also undertaken. Incidentally, I do not remember that any of these distinguished architects, whom Mr. Dromgoole and I were privileged to meet on that occasion, appeared in the least disconcerted to learn of the administrative arrangements for carrying out the project, whereby the architect would work as an assistant on the Docks Engineer's staff.

What in heaven's name is a "piece of architecture" as distinct from a structure designed to fulfil its proposed functions, and treated to portray them in a decorous and intelligible manner? One calls to mind the whimsies and follies with which our ancestors were wont to ornament the tops of neighbouring hills, as being excellent examples of architecture without purpose.

I have derived both satisfaction and enjoyment from the years during which Mr. Dromgoole and I have collaborated in the design and construction of the New Terminal, and as we have other buildings of purpose to be constructed in these Docks, I look forward with pleasure to further collaboration. I see no reason why there need by any gulf between the professions of architecture and civil engineering, the question as to who is in charge of whom being, in any particular instance, largely a matter of administrative convenience.

There will however always be a gulf between those, whether architects or engineers, whose aim is to produce structures which shall combine to the maximum degree the satisfaction of man's material requirements and the stimulation of his sense of aesthetic appreciation, and those whose aim appears to be defined by ASTRAGAL as the production of "pieces of architecture." I am content to number myself among the former and to enjoy the company of the many distinguished architects whom, I am sure, I shall find there.

Since I commenced to draft this letter, your issue of August 10 has appeared, and I note that, in spite of my careful explanation to your representative, who came to Southampton, of the allocation of duties in the team responsible for this building, you have persisted in announcing me as the designer of the building, a distinction which I would certainly not claim for myself. This misstatement, however, conveniently supports ASTRAGAL's arguments, which are repeated in your editorial and elsewhere.

The allocation of duties, in fact, much more closely approximates that set out in Felix Samuely's excellent article in the same issue, with perhaps a rather more generous share in the architect's hands.

J. H. JELLETT.

Southampton.

[In the official booklet *Southampton Docks Ocean Terminal*, published by the Railway Executive, credit for work on the terminal is given as follows:—"Engineers, architects, contractors, sailors, shipping men and railway experts all added their quota of skilled knowledge to the enterprise, responsibility for technical supervision under the Docks & Marine Manager falling largely on the Docks Engineer, Mr. M. G. J. McHaffie, M.I.C.E., at the beginning, and his successor Mr. J. H. Jellett, O.B.E., M.A., M.I.C.E., with the assistance of many Officers including the Architect, Mr. C. B. Dromgoole, L.R.I.B.A., the Electrical Engineer, Mr. E. S. Ely, M.I.E.E., and the Resident Engineer, Mr. B. J. Donelan, B.E., A.M.I.C.E."—ED.]

## The Quantity Surveyor

SIR.—I read with very great interest the article so ably written by Mr. Davis, published in the JOURNAL of last Thursday week, and was most pleased to note his very mild bleat on the question of the

imposition on the quantity surveyor of the preparation of the specification which is the architect's province, and for which he receives fees. It is time this matter was ventilated and the imposition stopped. Moreover, it is becoming the practice with some architects to expect the quantity surveyor not only to prepare the specification but to deal with quotations for their PC sums. In fact, I am beginning to wonder when they will expect the quantity surveyor to prepare his own details.

I would be interested in the reaction of the client if the quantity surveyor submitted, as he should, an account for professional services for his part of the architect's work. In any case the quantity surveyor has sufficient to do without these extra unpaid duties. My only regret is that Mr. Davis was not a little more severe on the subject.

Q. S.

## The Tite Prize

SIR.—On June 29 ASTRAGAL raised the old argument about the Tite Prize, which is good, but he seems to take a rather narrow-minded attitude towards it, which is a pity.

The point of the prize is that it provides the opportunity for a study of Italian Renaissance architecture, with a visit to Italy as its climax. The competition is now a part of that study, and not an end in itself. This is a good thing, because it ensures that the prizewinner knows a fair amount about the style before he goes on his brief tour.

"Convincing falsehood" is a pointless thing to call the designs, which are really exercises in understanding. There can't be very many students who think that Italian Renaissance has a practical application these days, but, on the other hand, the style has a very fine and practical solution to the problems of its own time. To see how someone else has found the right answer to his own problems is a most illuminating business, as long as you realise that it is his problem and not yours. To "prepare a design in the Italian Renaissance manner" is a very good way of understanding just what snags came in the way of the old architects, and also leads to an appreciation of the masterly strokes with which they avoided the snags. All this study of someone else's work may broaden a student's mind and even help him to think for himself. It may help him to break the awful habit of looking for another man's solution to his own, up-to-the-minute, realistic design problems. He can't very well crib Peruzzi's window details, but might do worse than crib his spirit of perception.

"Laborious effort" is rather a misleading term as well. It is very easy to fall in love with the great Italian buildings, even through a book and at a distance of a thousand miles. If you do, then the labour turns itself into a holiday, and if you don't, then you probably won't compete for, much less win the prize. The work isn't thrown away, either, for it stands the fortunate prizewinner in good stead when he goes to Italy, much more so than any cursory reading of text books could do. He knows what to look for and what he is looking at, and the actual experience of seeing puts all his study into its proper proportion. He finds, maybe, that the stern geometry of the Farnese Palace is really a chunk of solidified sunshine, or that the exquisite Tempetto looks strangely like a baby elephant, caught in its cloister. He finds, certainly, a very lively way of building.

P. G. BERESFORD.

Cyrenaica.

The EDITORS reserve the right to shorten letters from readers. Whenever possible, however, they are published in full.



## REDEVELOPMENT OF COVENTRY'S CENTRAL AREA



## PETERLEE

*Work to begin soon*

The chairman of the Peterlee Corporation, Lord Beveridge, expects that work on the new town will begin in September, or soon after.

A working party of representatives of the MOTCP, the Peterlee Corporation, the National Coal Board, and the National Union of Mineworkers has reconciled long-contested claims in a coalfield where heavy development on the surface and underground mining could lead to subsidence.

The first tenders, due last week, were for road and sewage work for 1,000 houses and the construction of 250 of them. All houses will be semi-detached, but some are planned with two bedrooms and others with three, and there are half a dozen different styles in the three-bedroomed houses alone.

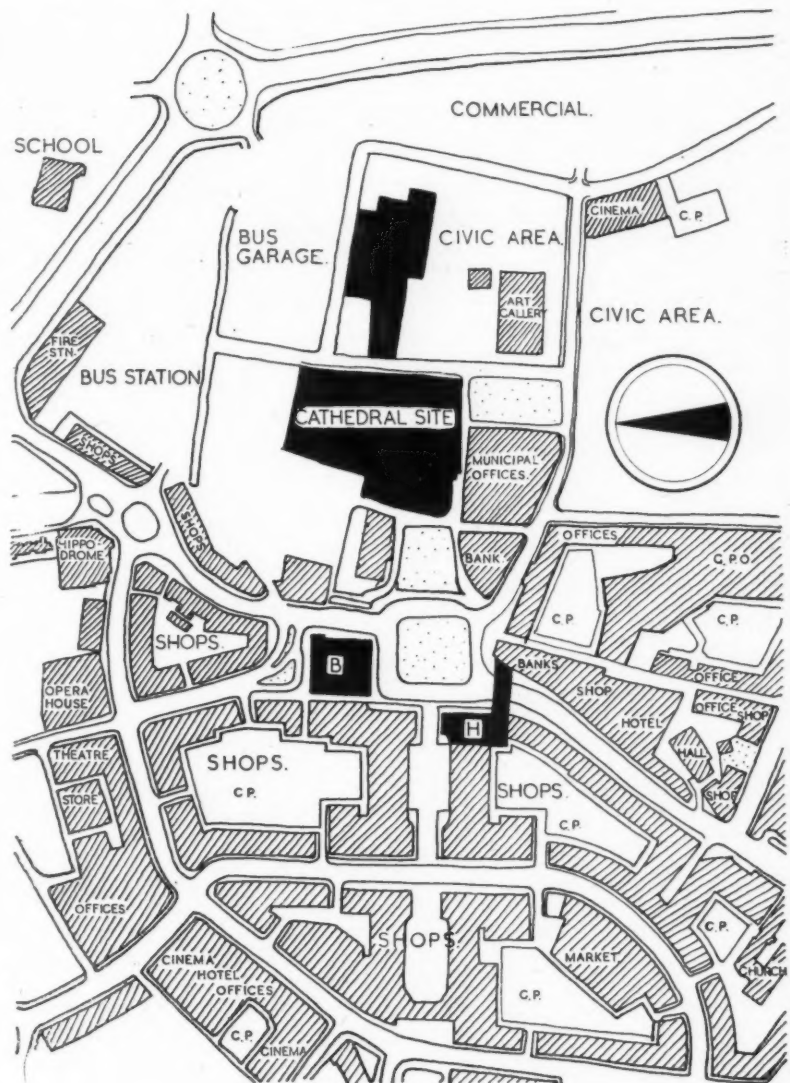
## KENT

*County Plan to Allow for Expansion*

Discussions are taking place between representatives of Kent County Council and seven County District Councils in Kent about the manner in which the county's development plan should affect their areas. The District Councils concerned are those of Faversham, Gravesend, Lydd, Maidstone, Ramsgate, Sittingbourne and Milton, and Tonbridge.

Conversations with the other 49 District Councils in Kent are not being sought because there is substantial agreement between them and the County Council concerning the basis for the development plan, which has to be ready for the Minister of Town and Country Planning by next year.

More than a year ago, the County Council invited local authorities in Kent and the public to study and comment on a set of planning proposals affecting the future of their towns and the amenities of at least 1½ million people. In the light of comments received, the County Council has now told its Planning Committee how the plan should be prepared. The Committee's brief amounts, in effect, to the following, as far as towns outside the Greater London area are concerned:—Enough land should be allocated in every town to provide for the natural increase in the town's population. There should also be enough land for housing in every town to enable overcrowded areas of the town to be thinned out. Certain



Two of the buildings which will stand to the east and west of Coventry's new cathedral are illustrated overleaf and on page 180. Their exact position is indicated on the map of the central area, above. Block H, a block of shops at the head of the shopping precinct, together with Block B, a large department store, which we hope to be able to illustrate shortly, form part of the setting from which the principal view of the cathedral from New Broadgate, the historic and geographic centre of the city, will be obtained. The proposed Central College of Art and Technology will stand almost immediately behind the cathedral to the east. As can be seen from the sketches, the whole environment of the cathedral site will be modern in appearance, and will provide an unique setting in which the cathedral will have to be designed. It is to be hoped that the outcome of the competition for the design of the cathedral (announced in the JOURNAL of August 10) will show that advantage has been taken of this unparalleled opportunity to solve what is perhaps the most difficult design problem confronting the modern architect. So far, the redevelopment of the central area of the city has consisted of the demolition and clearance of a large area in the City Centre for the formation of New Broadgate and a large garden island. The latter was completed in 1948

## REDEVELOPMENT OF COVENTRY'S CENTRAL AREA: THE



Block H from the north-east

and opened on May 5 by Princess Elizabeth, who also laid the foundation stone for Block H, which is the first of those buildings which will enclose New Broadgate on three sides. Block H is being built by the City Council for letting on long-term leases to tenants whose premises were completely destroyed. It consists of a six-storey block, one section forming a bridge of three floors linking the main structure with the existing National Provincial Bank on the other side of Hertford Street. The building provides arcaded shopping to New Broadgate and the shopping precinct. Accommodation will consist of one- and two-floor shops, restaurants and four floors of offices. The basement provides storage, lavatories, heating chamber and an electricity sub-station. The bridge structure consists of two floors of offices with a restaurant and footbridge at second floor level. Construction: reinforced concrete frame, with tanked concrete retaining walls to basement. The bridge structure consists of three deep beams approximately 23 ft. deep and 10 in. wide, perforated with window and door openings, which form the external walls and the central partition wall and from which the restaurant is suspended on 3½-in. diameter steel hawsers. Arcade columns are faced in Hornton stone with granite plinths. Columns on the east elevation are faced with Westmorland green slate, with panels and the windows in travertine. The bridge structure is faced with travertine, and the windows in Westmorland green slate. With regard to services, there is a one pipe system soil drainage: horizontal ducts at upper floors connect with three main vertical ducts, all of which join a horizontal main duct in the basement. This duct also houses the main storm water drain, rainwater pipes being carried internally in the building. Heating is by low pressure hot water from gas-fired boilers in heating panels to ceilings throughout the building. Intake and extract ventilating ducts go to all parts of the basements, to kitchens and restaurants, and lavatories, with a main

ventilating chamber at sixth floor level. Three passenger and one goods lift will serve the building as a whole in addition to any lifts or escalators which the individual tenants might provide. Work on the building commenced in January, 1949. It is now up to first floor level, and is to be completed by April, 1952. The proposed Central College of Art and Technology is sponsored by the Education Committee of the Coventry City Council, as part of their long term policy for providing buildings for further educational purposes to replace and augment the present somewhat inadequate and widely distributed facilities now in use. The site consists of 1.7 acres of land, rather more than half of which was formerly occupied by bomb-damaged property. The main structure of the new building, which will contain the majority of the studios, will be seven floors in height and approximately two hundred feet long by forty feet in width. The main elevations will face east and west respectively and sun glare will be controlled by means of venetian blinds. A three-storey wing accommodating the printing section and canteen facilities is attached at right angles to the north-west end of the main block. Small isolated buildings are to be erected on that part of the site which is now a graveyard and these will be studios for the painting and decorating section, the pottery school and the sculpture classes. Because it has not been possible to accurately forecast the numbers of students likely to attend the various classes, the buildings have been designed to allow considerable flexibility in the size and layout of the numerous studios. To encourage students to see work other than that in which they happen to be specialising, corridors serving studios have been deliberately omitted. In common with other blitzed cities and towns the labour problem in Coventry is acute, so the College has been designed to incorporate in its construction materials which can be fully or partly fabricated away from the site and finally erected by labour imported by sub-contractors. Thus, welded

## THE SETTING FOR THE PROPOSED NEW CATHEDRAL

steel stanchions and beams are to be employed for the frame and, except where heavy machinery has to be supported, the structural floors will be in precast reinforced concrete. Similarly, very large areas of the main façades will be formed by the use of steel window frames of special design, with normal glazing above cills and with obscure double glazing or aluminium faced plywood in panels between cills and window heads of the floor below. The whole will be set some eighteen inches forward of the outside stanchions so that continuous horizontal ducts can be formed under the window cills for the easy installation and concealment of heating pipes, conduit and plumbing. Heating will be provided by convectors except in the main entrance hall and exhibition space, where ceiling panel heating will be used. The boilers in the basement will be automatically fired with solid fuel and they will supply water at low pressure to feed the heating appliances. Three electric lifts will be installed in the main

block for the use of staff and students and one of them will be large enough to accommodate goods, etc. A further electric lift is to be located to serve the caretaker's flat and the canteen kitchen. The whole scheme is estimated to cost £350,000, and the MOE have allotted £100,000 to enable the first contract to be commenced this year, and the MOW have already authorised a starting date of November 15. It has been decided to include the printing wing, main entrance, staff rooms and library in this first instalment. It is intended that, until such time as the whole scheme is completed, temporary use as studio space will be made of the canteen kitchen, canteen, common room, staff rooms and library. Both Block H and the College have been designed by D. E. E. Gibson, the City Architect and Planning Officer, and his Deputy, F. B. Pooley. The Chief Assistant Architect for the College was W. G. Sealey, and for Block H, R. Ash. (Chief Assistant Architect in the development stage, B. Bunch.)

The Central College of Art and Technology from the south-west



towns, which are unbalanced, will need even more land for housing additional population if they are to thrive.

The County Council wants the plan to offer scope for new industries to improve certain towns which at present are not well balanced occupationally or otherwise. In some towns, where the existing balance is good, it thinks that the establishment of new industries should be limited.

## MOH

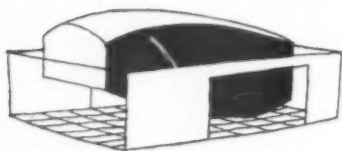
### New Arrangements for Loan Sanctions

The MOH has issued a circular to metropolitan borough councils and the LCC drawing attention to the London Govern-

ment Act, 1950, which received the Royal Assent on July 28 this year. The Act, which comes into force on October 1, transfers to the Minister of Health the loan sanctioning powers of the LCC under section 124 of the London Government Act, 1939. As from that date the Minister will be the sanctioning authority for borrowing

(Continued on page 188)





## DIARY

July 18.—In kitchen area erection of terrazzo partitions in lavatories commenced: glazed wall tiling well advanced.

July 25.—Fixing of metal window frames in corner stair blocks commenced. Also teak cills and surrounds to large window frames started.

August 1.—Fixing of steel work to suspended auditorium ceiling commenced. Glazier started putting in window panes at lower levels.

August 6.—Lower skin to roof complete. Dwarf walls being continued with lining of glass silk insulation and placing of precast units to outer skin commenced.

Construction of wings complete up to 78 level and continuing to ventilation plant rooms, lift, motor and tank rooms and caretaker's flat at 87 level.

Placing of stepping units within auditorium about to be commenced.

Construction of retaining wall to car park and terrace also commenced.

Hadene marble being laid to floors and walls at 28 level, to the foyer, and to the main entrance staircase.

Erection of main external window frames and internal vestibule screens continuing. These are being covered with steel and aluminium casings.

## ROYAL FESTIVAL HALL: 7

Progress report by John Eastwick-Field and John Stillman on aesthetics.

### INTRODUCTION

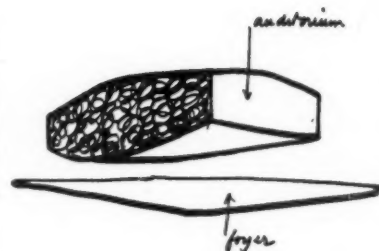
Up till now we have discussed the progress of the work on the site and we have dealt with matters of engineering and building technique. Now

that the carcass is nearing completion, we shall pay more attention in our reports to the practical results of the detailing which has occupied months of intensive work in the Architect's Department, and which has hardly been touched upon in these articles. Before doing this, however, we feel that it is important to reconsider some of the conditions imposed on the architects and to examine the aesthetic ideas from which the whole design has evolved.

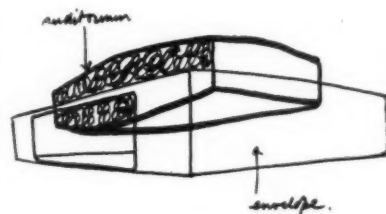
In this article, therefore, we shall consider these aesthetic ideas. In future articles we propose to describe the methods and some of the difficulties which have been involved in putting them into practice.

### CONDITIONS

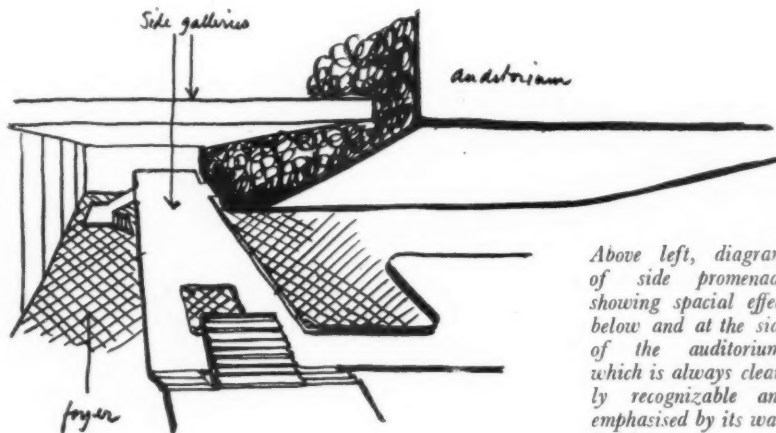
The limitations imposed by the site and the need to provide good access to the building provided certain difficulties. (These matters were touched upon in our article of February 9.) The compact, wedge-shaped form with its access from the sides was designed to overcome these difficulties. Another



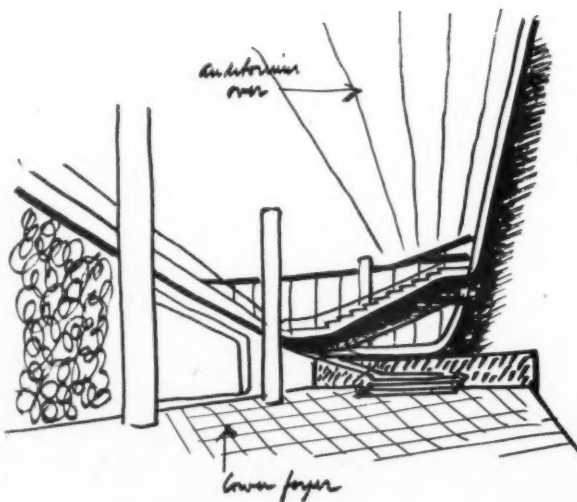
Foyer-auditorium arrangement showing the gain of space at foyer level, which is used for circulation, reception, restaurant, etc.



The form of the auditorium is still maintained inside its outer envelope.



Above left, diagram of side promenade showing spacial effect below and at the side of the auditorium, which is always clearly recognizable and emphasised by its wall finishes.



Left, view from the lower entrance foyer through the main foyer, showing the shape of the underside of the auditorium.



problem, that of providing easy internal circulation, was again solved to a large extent by the compact form of the plan. The building had to be arranged so that it could meet the needs of a musical festival, but at the same time each unit of the building—the restaurant, meeting rooms, exhibition space, etc.—had to be self-contained and capable of being used and approached independently.

The most important single element was clearly the auditorium. An arrangement of the parts of the plan around and under this element solved problems of circulation from unit to unit in a simple and direct manner. The raising of the auditorium above the foyer allowed an ample and centralized crush space to be provided. The exclusion of external noise will be greatly assisted by the fact that circulation and ancillary units are wrapped around the auditorium.

The use of a raised auditorium poised over, and buttressed by, surrounding accommodation, was not only an original and highly successful solution to the problem of providing easy access, compact circulation and noise exclusion; it also offered opportunities for new æsthetic expression.

### THE EXPRESSION OF THE IDEA

There is no doubt that other solutions could have worked with varying degrees of success; indeed, many were tried out at the sketch plan stage. The shapes of auditoria designed in recent years have been partly influenced by science (e.g., geometric solutions to problems of acoustics), but perhaps almost as much by the designers' ideas of what the scientific shape ought to be. However, the science of acoustics has now developed well beyond the geometric stage. But science cannot yet supply all the data. Therefore, the problem of artistic selection still remains.

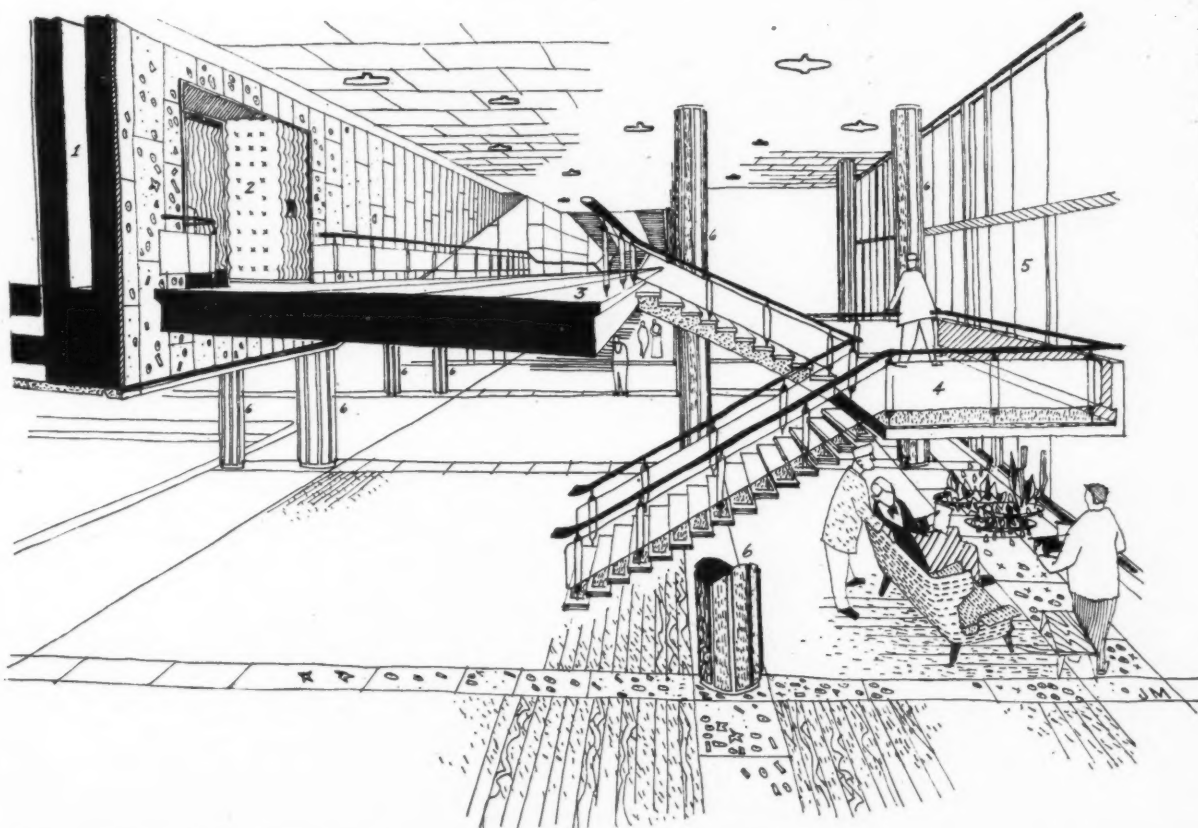
The fan-shaped plan could undoubtedly have been used. It would have had some advantages from the point of view of seating disposition and sight lines. But from the point of view of acoustics it would have had some doubtful characteristics which the rectangular plan avoided.

The modified rectangular plan used for the Royal Festival Hall was preferred to the megaphone type with its insistence on focussing on the orchestra and nothing else. Although a complete view of the entire orchestra is essential it was felt that other as-

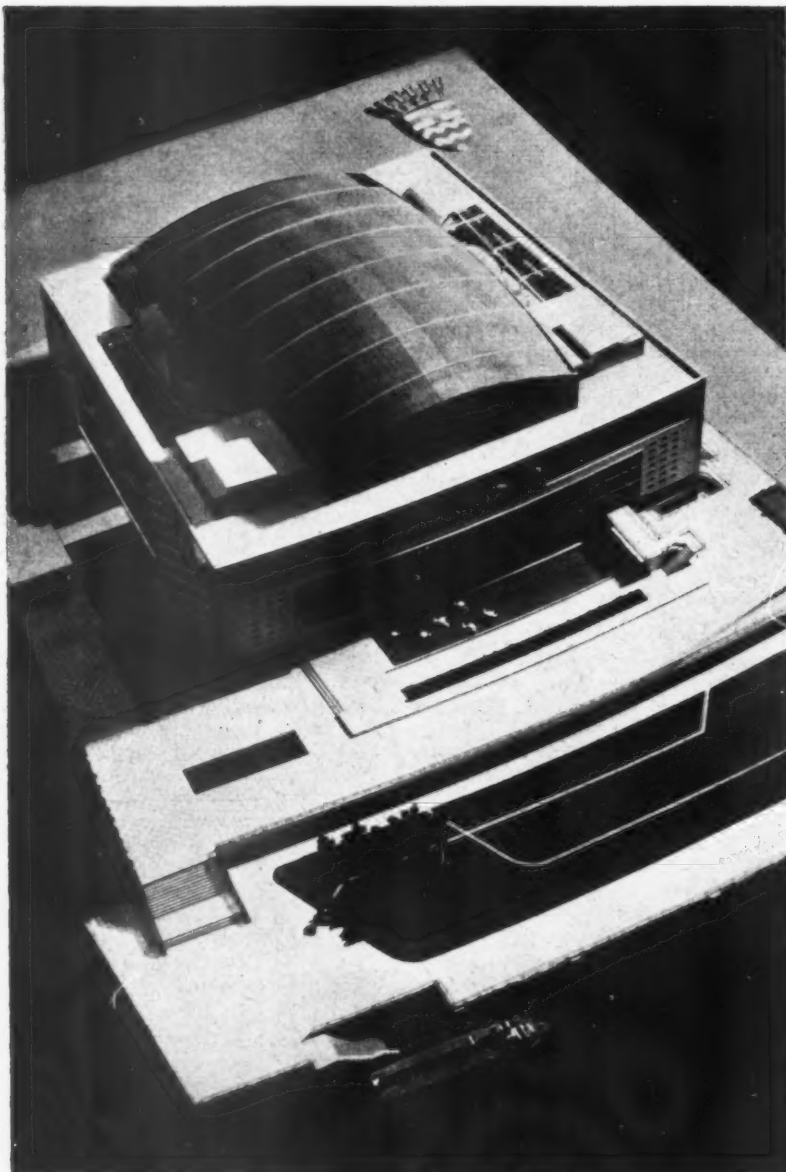
pects of the design must be considered if the atmosphere and character of the concert were to be maintained. It is of some interest to note that this same view is taken by Alvar Aalto, who is now designing a concert hall building at Helsinki.

On the other hand, the main lines of the long section of the Royal Festival Hall are influenced by scientific calculations. The rake of the floor is established by formulae and the reflecting area in front of the orchestra and the orchestra stage was designed after studies of performance had been made in existing buildings. The main internal heights are generally related to the desirable volume.

The shape of the auditorium was consequently established from a study of its internal requirements. It was obvious that its external expression, with the sound-resisting and unpenetrated walls, would be one of massive and solid effect. This solid shape (the main element) is being emphasized by being set in an envelope of ancillary accommodation which, as far as possible, will be an intercommunicating series of spaces, subdivided only by light glazed screens. These spaces will be opened up externally



Perspective sketch by Joseph Mayo of the foyer. This illustrates the use of detail and materials to stress the sculptural quality of the building. 1. The sound-proof wall and 2. A typical door to the auditorium; 3. The promenade which is kept away from the marble faced side of the auditorium; 4. Cantilever staircase; 5. The window wall, and 6. Encased column.



*The model illustrates the basic expression of the design. The symbol used at the head of these articles further emphasises the transparency of the outer envelope, compared with the solid mass of the auditorium.*

by large windows. The auditorium will consequently be a massive form set in a spacious cagework, and, in fact, it will be possible from many points of view to see light through the building under the auditorium. The foyers themselves will present a remarkable series of spacial effects in which the presence of the auditorium shape will always be felt.

From the point of view of composition this building presents a remarkable contrast to the "exploded" type of plan development through

which modern architecture has passed. In contrast to the division of a building into a series of isolated units, this building contains all its elements in a simple spacial volume. Consequently, the Royal Festival Hall has a sculptural quality which the architects have attempted to emphasize by every possible means.

[These notes are the result of discussion on the aesthetic ideas underlying the Concert Hall design which took place between the authors, Dr. J. L. Martin, Deputy Architect to the LCC, and Peter Moro, a senior assistant architect. The sketches have been made by Dr. Martin and the interior perspective by Joseph Mayo.]

by metropolitan borough councils for all purposes.

Each application for the Minister's sanction should be accompanied by a copy of the resolution of the council authorizing the application.

Where the application relates to the acquisition of land, a report by the district valuer will be required. If the acquisition is to be by compulsory purchase, the district valuer's report should be sent in when the Order is submitted for confirmation, or as soon as possible afterwards. District valuers will also be prepared, if requested, to carry out negotiations.

Where applications for sanction made to the LCC under existing arrangements have not been dealt with by October 1, it will not be necessary to make a fresh application to the Minister. Such cases will be transferred by the LCC to the department, and the decision will be issued by the Minister without further formality.

## LEEDS

### *Building Week, 1950*

The Government, the building industry and the associated professions are to combine in presenting another Building Week, to be held in Leeds from September 11-16. It is intended to show the latest developments in building and the ways in which new methods, new materials and machines can raise output and reduce costs; to stimulate recruitment to the industry, particularly of apprentices, and to stress the essential unity of the professions associated with building, and to give prominence to their achievements and their significance in the national economy.

The Leeds exhibition will be larger in scope than that held at Tunbridge Wells last September. A site of 150,000 sq. ft. will be taken over on Hunslet Moor, which is about one mile from the centre of Leeds.

Organizations taking part in the Building Week will include the NFBTE, the NFBTO, the NCBMP and the RIBA.

Displays by Government and industry will show the progress being made with building and rebuilding schemes, the latest developments in building technique and the results of scientific research. New materials as well as new ways of using traditional ones will be demonstrated.

There will be a special section devoted to the traditions of craftsmanship in the industry and the opportunities that exist for boys to learn one of the main building trades. A feature of this section will be a display of examples of work by apprentices and students of technical colleges. Apprentices will also give practical demonstrations of craftsmanship.

## DIARY

*International Congress for Housing and Town Planning.* At City University, Amsterdam. Enquiries to Singel, 453, Amsterdam, C.

AUGUST 27-SEPT. 2

*Industrial Finishes Exhibition.* At Earls Court. Opening August 30, 12 noon. Closing September 7, 4 p.m. Daily 11 a.m. to 6.30 p.m. Open until 9 p.m. on Saturday, September 2, and Wednesday, September 6. Closed on Sunday.

AUG. 30-SEPT. 7

*Town and Country Planning Summer School.* At University of Nottingham. (Sponsors, TPI, 18, Ashley Place, S.W.1.)

SEPT. 6-13

*Building Week.* At Hunslet Moor, Leeds. Sponsored by MOW and building industry. SEPT. 11-16

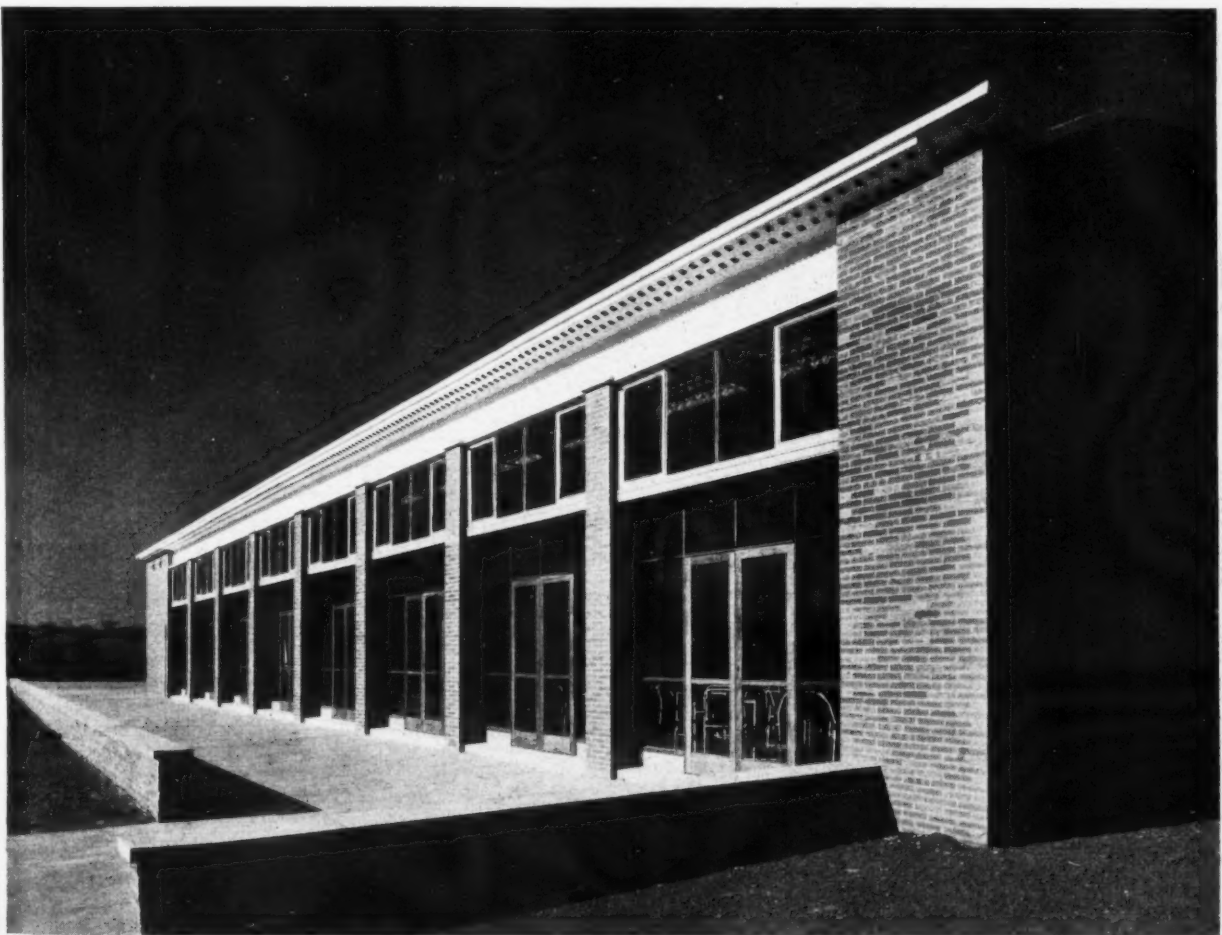
## CANTEEN

at WEST AUCKLAND, COUNTY DURHAM

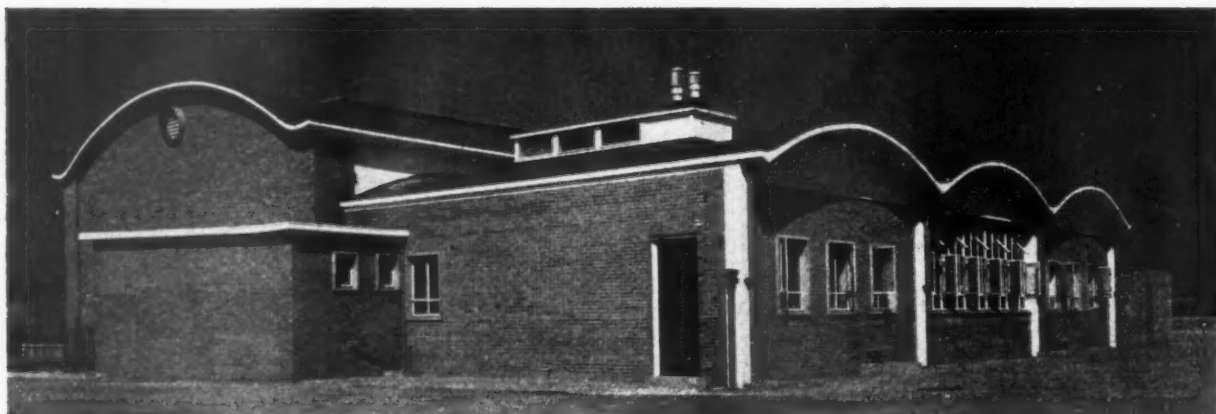
designed by NAPPER and TAYLOR

The canteen for North Eastern Trading Estates, Ltd., is used by employees working on the estate. The general canteen, seating 200 persons, provides meals on a self-service basis. The staff canteen, with table service, seats 52. The canteen is also available for social functions. The building forms part of a proposed community centre, including estate offices, a theatre and recreation rooms.

*West elevation.*







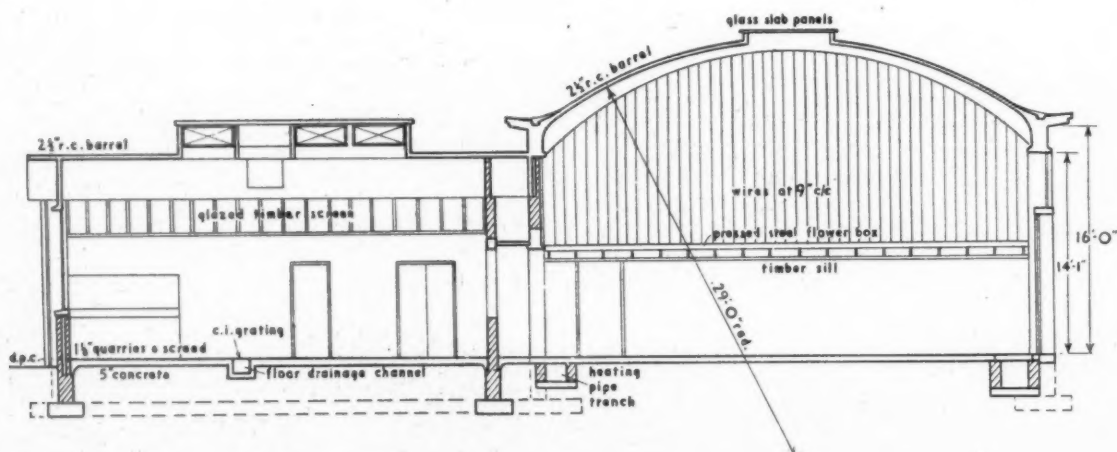
## CANTEEN

at WEST AUCKLAND, COUNTY DURHAM  
designed by NAPPER and TAYLOR

**SITE.**—The ground is composed of fill to a depth of from 17 ft. to 25 ft., which has lain for 20 years. The estimated bearing capacity is  $\frac{1}{2}$  ton per square foot. There is no top soil. The site is level and open to the east and west, and is bounded on the north, east and south sides by estate roads.

**PLAN.**—The two canteens are approached through separate entrance halls, which are flanked by lavatories, at the north and south ends of the building. The kitchen is on the east side of the building and is provided with preparation bays for foodstuffs, store rooms and a cold room. A bar at the south end of the building is designed to serve the staff canteen and a future extension to the building.

**CONSTRUCTION.**—The restricted bearing capacity of the ground has necessitated the use of reinforced foundations and intermediary columns in the length of the barrel. The shortage of steel in the initial stages of planning dictated the form of construction adopted. Floors: sub-floors, concrete; first floor to lavatory block, precast units. External walls: 11-in. cavity construction, brick. Internal walls:  $4\frac{1}{2}$  in. and 9-in. brick. Roof: shell concrete, covered with mineral surfaced felt, lined with  $\frac{1}{2}$ -in. building board. Sills, lintels, transoms, coping, frame to north entrance: artificial stone. Window frames: metal. Entrance doors and doors to west elevation: teak.



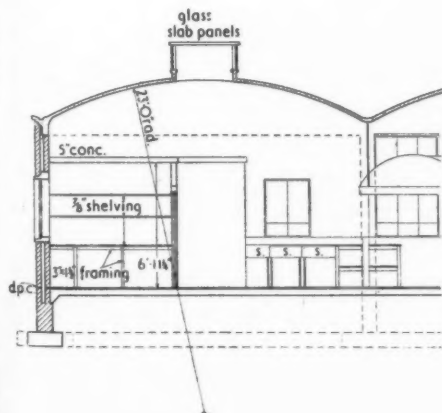
Section through kitchen and canteen [Scale:  $\frac{1}{16}$ " = 1'-0"]



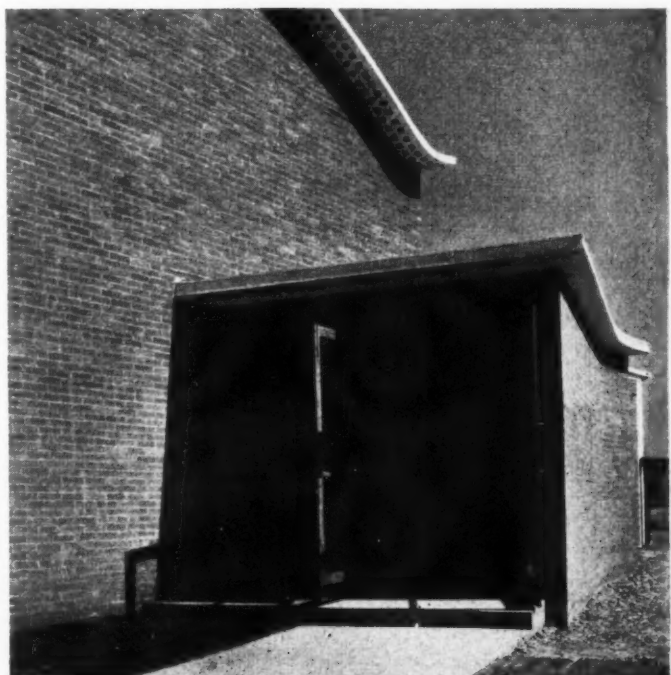
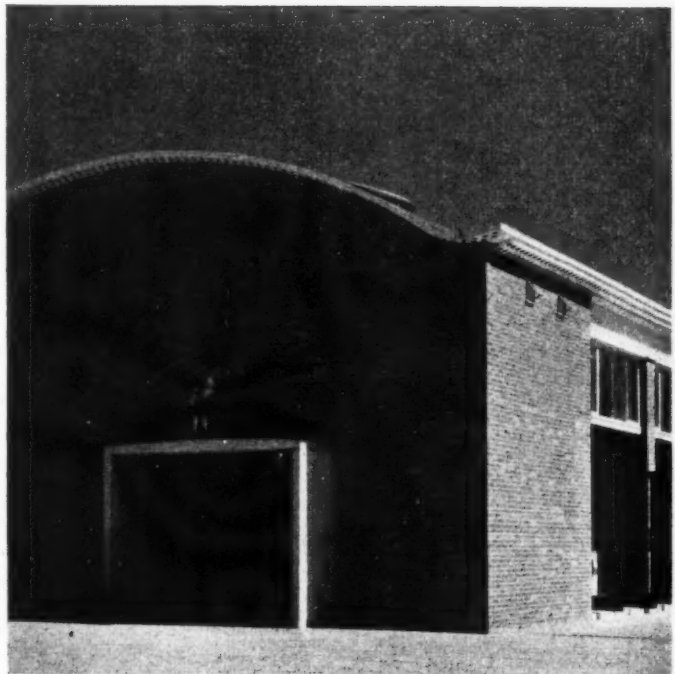
*Left, the canteen and kitchen from the east. On the left is the entrance to the staff canteen. Below right, the north entrance to the canteen. Bottom right, a view of the entrance to the staff canteen.*

**EXTERNAL FINISHES.**—Walls: sand-faced bricks. All external concrete surfaces: painted white. Soffit of projecting eaves: patterned with square counter-sinkings painted deep blue. Fascia to edge beam: patterned with vertical flutings.

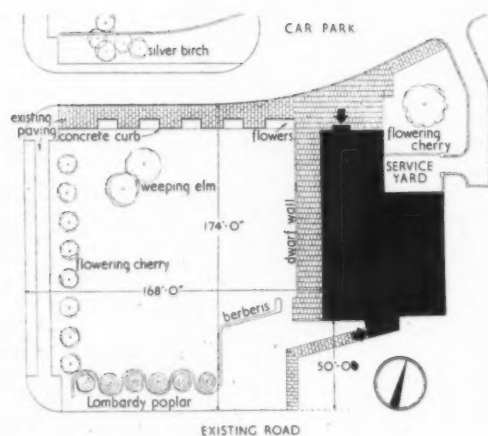
**INTERNAL FINISHES.**—*General and staff canteen.* Floor: synthetic wood block. Walls: plastered, flat oil paint, Quaker grey. Partition wall: plastered, flat oil paint, buff with vertical white stripes; timber sill capping, painted white; metal trough, painted silver grey; wires at 9-in. intervals strung between trough and ceiling. Ceiling: joints



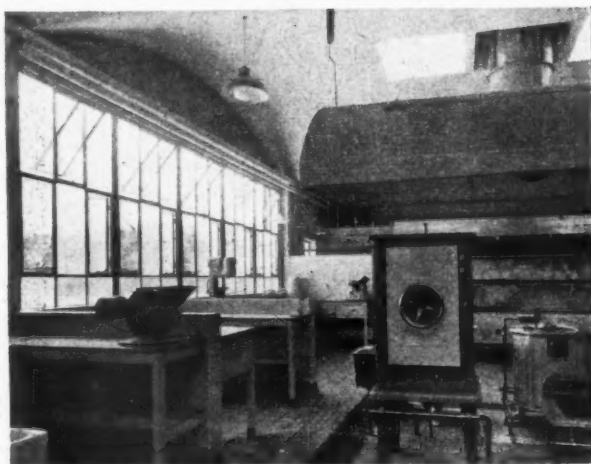
Section through kitchen



Right, the staff canteen. Below, right the kitchen, with meat, fish and pastry preparation counters on the left. Facing page, the canteen looking towards the staff canteen.



Site plan



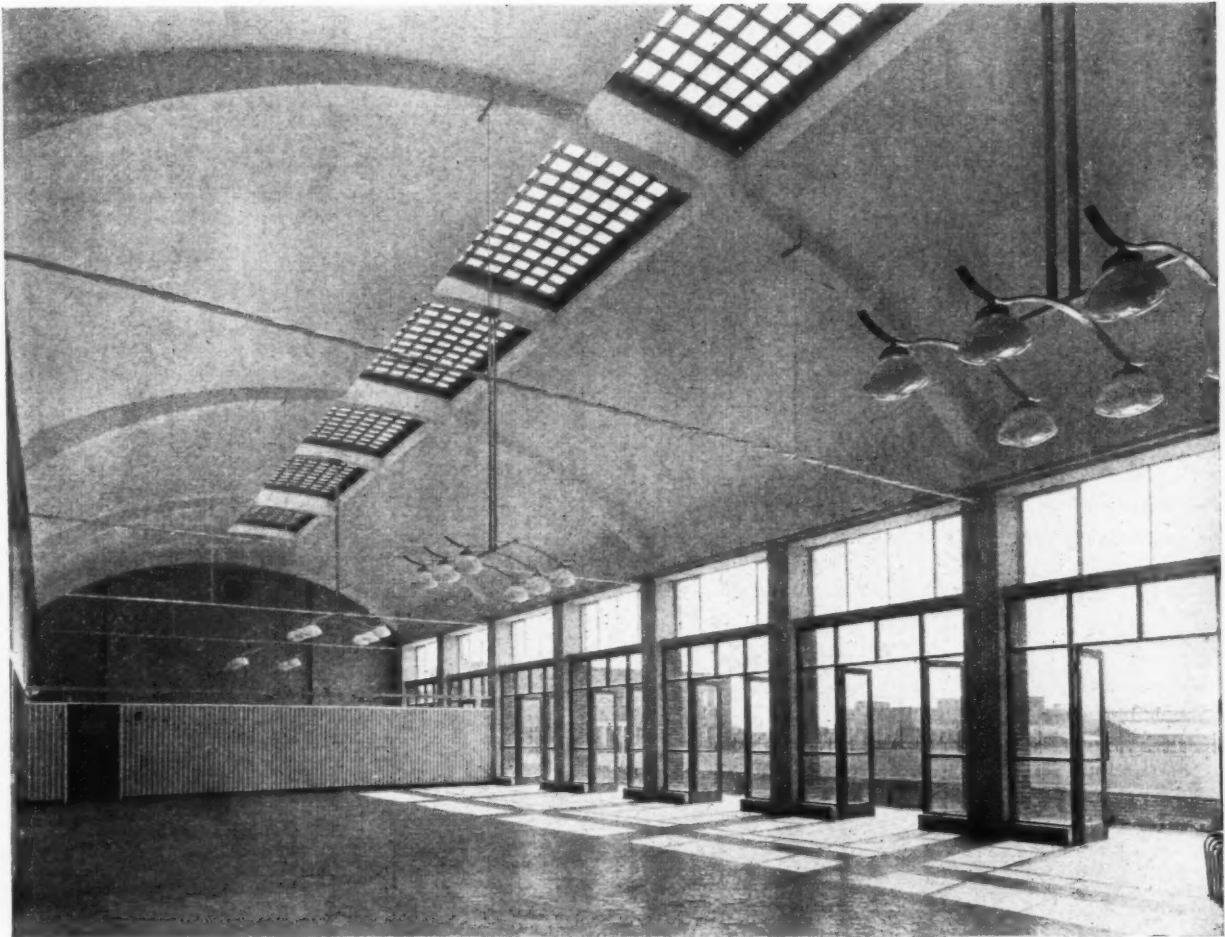
## CANTEEN

at WEST AUCKLAND, COUNTY DURHAM

designed by NAPPER and TAYLOR

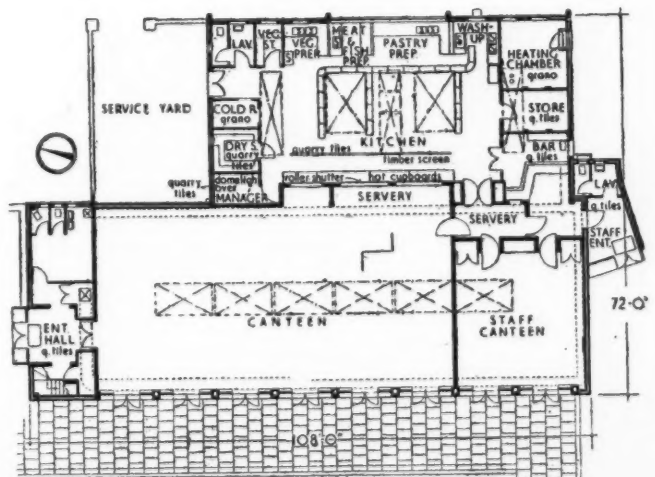
to fibre board covered with scrim cloth, painted white. Doors: nigger brown. Door frames: white. Servery hatches: kingfisher blue. Bar. Floor: public side, synthetic woodblock; serving side, buff quarry tiles. Walls: flat oil on brickwork, smoke grey; one wall painted with vertical white stripes. Ceiling: white. Doors: nigger brown. Door frames: white. Counter: timber; panels, mist grey; beading, white; upper shelf, grey plastic veneer; lower shelf, moss granite linoleum. Staff canteen, entrance and lavatory. Floors: buff quarry tiles. Walls: plastered, flat

oil paint, Quaker grey. Ceiling: plastered, painted white. Doors: kingfisher blue. Door frames: white. Kitchen. Floor: buff quarry tiles. Walls: flat oil paint on brickwork; dado, terra-cotta; above dado, off-white. Benches: tops, sycamore; framing, painted light cream. Doors: nigger brown. Door frames: white. Servery screen: framing, mist grey; panels, nigger brown; beading, white. Frames to glazed screens to boiler room, store and bar; mist grey and white. Cooking canopies and trunking: mist grey. Tiles to preparation areas: light cream, egg-shell glaze. Entrance hall to



general canteen, lavatories and staircase. Floor: buff quarry tiles. Walls: Quaker grey; walls flanking vestibule doors, straw colour. Ceiling: white. Grille to air intake: mist grey. Balustrade: silver grey. Handrail: tubular steel, maroon.

**SERVICES.**—Heating: gas-fired boilers, low-pressure hot water passing to radiators through floor trenches; air passing through heater batteries, passing into canteen through vents in skirting under windows in the west wall. Cooking: by gas. Lighting: cold cathode tubes concealed in continuous metal troughs along both sides of the



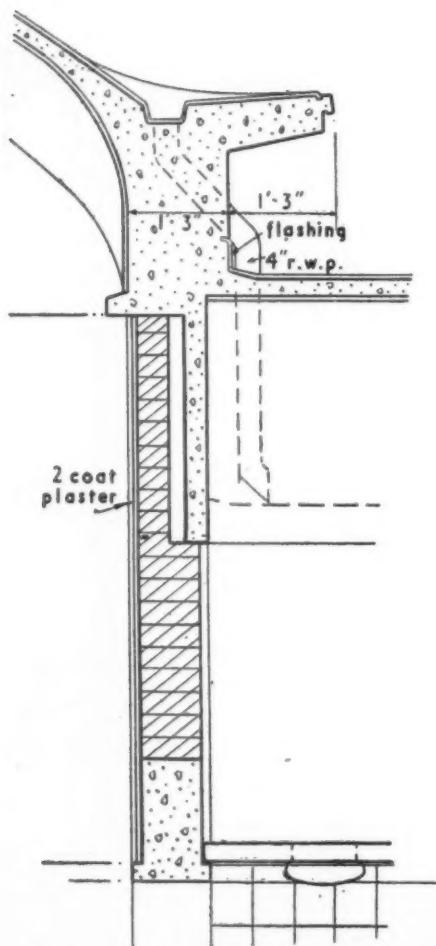
Floor plan [Scale: 1/4"=1'0"]

## CANTEEN

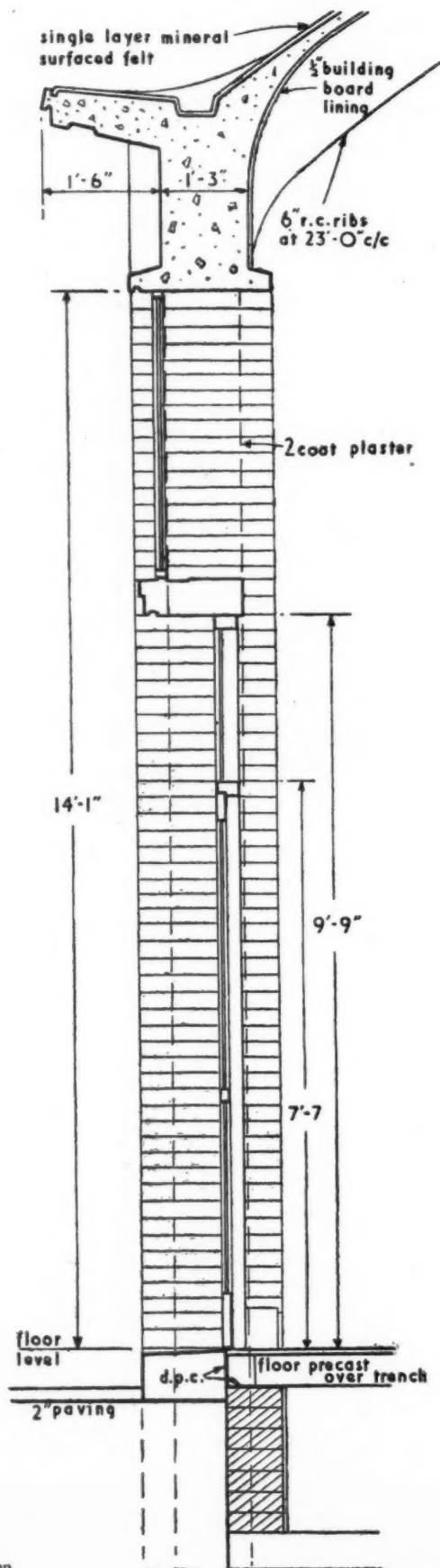
at WEST AUCKLAND, COUNTY DURHAM  
designed by NAPPER and TAYLOR

canteen at the springing of the barrel, wall brackets and suspended fittings with tungsten bulbs. The illumination is, at the most, 15-foot candles at table level. Ventilation is provided by means of ordinary silent axial flow fans.

The general contractors were H. E. Pitt, Ltd. A list of sub-contractors appears on page 200.



Section through east wall of canteen [Scale: 1"=1'0"]



Section through west wall of canteen



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## TECHNICAL SECTION

*The architect today cannot be fully conversant with all the special equipment that he may be called upon to install in contemporary buildings. He needs, therefore, concise information on a variety of subjects, of which Speech Reinforcement Systems, dealt with here by P. H. Parkin of BRS, is typical.*

*This article is intended to be a general guide to architects who have to install a speech amplification system in an auditorium. It does not deal with the technical details of the installation but outlines the principles to be followed.*

### SPEECH REINFORCEMENT SYSTEMS

by P. H. Parkin

The main rules to keep in mind when installing a speech reinforcement system are:—

1. The apparatus should be of a high quality.
2. The speakers should be within a few feet of the microphone(s).
3. It is better if the loud-speakers are situated at the same end of the hall as the speaker, and are above him rather than to one or both sides.

The limitation to this system is the amount of amplification that can be obtained before the system "howls."

4. If this "howling" prevents the loud-speakers being placed close to the platform, a system where the loud-speakers are distributed over the whole audience area can be used but the realism will be poor. That is to say, the sound will not appear to come from the speaker but from the loud-speaker closest to the listener, which will often be behind him.

#### GENERAL PRINCIPLES

First, it should be said that the apparatus should be bought from a reliable firm who fully understand the capabilities—and limitations—of their equipment. The technical quality of the apparatus should not be sacrificed in order to obtain the lowest possible price. The cheapest is often the worst, and as the cost of even the best apparatus is comparatively small, certainly in the case of a new building, any economy

in this respect is false. In what follows it will be assumed that the apparatus is of a high standard and is not producing any noise or distortion of its own.

The main purpose of a speech reinforcement system is, of course, to make the sounds louder for the benefit of those listeners who are too far away from the speaker to hear his voice or to overcome other noises which may be great enough to drown the unaided voice.

There are two main classes of speech reinforcement systems: the high-level and the low-level system. (The word "level" refers to the intensity of the sound and has nothing to do with height above ground.) In the high-level system the loud-speakers which are reproducing the voice are placed close to the speaker himself; in the low-level system several loud-speakers are used distributed more or less uniformly around the auditorium. Which system is the better depends on the circumstances, but before their relative advantages are discussed it is necessary to understand some more of the factors involved.

In the open air and over open flat ground the loudness of the human voice is approximately halved, every time the distance between the speaker and the listener is doubled. This rough rule also holds good if the listeners are seated in an open-air auditorium with a fairly steep rake. If they are seated on the flat, the loudness will decrease even more rapidly with distance. Thus if the front row of a raked open-air auditorium is 10 feet from the speaker, the loudness in the row 20 feet from the speaker will be only half that in the front row. In a row 80 feet from the stage it will only be an eighth as loud as in the front row.

In an ordinary enclosed auditorium the direct sound from the speaker decreases with distance at the same rate as in the open-air, but the direct sound is helped by the sound reflected from the room surfaces, i.e., the reverberant sound. If a steady note is sung, the sound over the whole auditorium, due to this reflected sound, builds up to the same loudness in less than a second. With speech, however, the sounds are rapidly changing and they never have time to build up to a steady state. If the reverberation is short, the reflected sound is usually a help to the speech because it increases the loudness without confusion. But if the reverberation is long, it becomes a hindrance, as the sound is decaying too slowly and each syllable is masked by the preceding syllables still reverberating round the auditorium. There is obviously an optimum time for the reverberation, but further details would be out of place in this article. What emerges from this digression is that the direct sound from the speaker, as distinct from the reverberant sound, should be as loud as possible in order to overcome any distracting effect of the reverberant sound.

With a loud-speaker system we can include in this direct sound the sound coming from the loud-speakers. The loudness of the direct sound can be increased, but only up to a certain limit, set by the "feed-back" or "howl." This is the howling noise which often occurs in badly run systems. If the amplification is increased there is a point where the slightest noise picked up by the microphone is amplified by the system, picked up again by the microphone and re-amplified and so on, until, in a second or two, it has built up into a howl. Now, in a high-level system, where the loud-

speakers are close to the human speaker, and therefore close to the microphone, this feed-back is more likely to occur than in a low-level system, where the loud-speakers are distributed round the auditorium, and this is the main limitation of a high-level system. On the other hand, with this system, the sound is, in general, all coming from the same direction, i.e., from the front. In a low-level system the sound is coming from several positions at once, and this can be very disturbing. For almost half the audience the loudest source of sound will be a loud-speaker behind them, and while the human speaker is obviously in front of them, his voice will be coming from the opposite direction. In other words, the sound will be artificial; or, as the cinema engineers would say, there is no "intimacy."

Some recent German research work by Meyer and Haas\* has thrown a good deal more light on—or, to change to a more appropriate metaphor, has made a good deal more intelligible—the problem of the apparent direction of speech. They have found that, within limits, it is the first sound reaching the ear that determines the apparent direction from which the speech is coming. Suppose we have a high-level system in an auditorium and the loud-speakers are mounted above the human speaker in the same vertical plane; then, due to the difference in distance, the sounds from the human speaker will reach the listeners just before the sound from the loud-speakers. Provided that the loud-speakers are not more than twice as loud as the voice itself, and provided that they are between 10 and 30 feet further away than the human speaker, then all the sound will appear to be coming from the human speaker and the listeners will not be aware that the amplifying system is in use. Thus we can get a much greater sense of realism than where the loud-speakers are at either side of the platform and are slightly nearer to the listeners than the human speaker.

It is amusing to speculate that this "Haas effect" may be due to a development of our hearing system in cave-dwelling times. It was then a matter of life and death to be sure, at once, about the direction of a noise, unfused by subsequent echoes in the cave which were often louder than the first sound.

To sum up: a high-level system with the loud-speakers at the same end of the auditorium as the speaker will give a good sense of realism, particularly if the loud-speakers are placed 10 to 30 feet further from the audience than the human speaker. In cases where a high-level system is not possible, due to feed-back limiting the available loudness, a low-level system can be used with good intelligibility but poor realism.

#### MICROPHONES, AMPLIFIERS AND LOUD-SPEAKERS

There are three main types of microphone: non-directional, bi-directional and uni-directional. A non-directional microphone may be a moving-coil, a crystal or a condenser unit, and, as its name states, it is equally sensitive to sound from all directions. A bi-directional microphone is usually a ribbon unit and is most sensitive to sounds coming from the front or the back. A uni-directional microphone is mainly sensitive to sounds from the front only. Which type is used depends on the circumstances; if the human speakers have to speak from anywhere round a microphone, obviously a non-directional one must be used. On the other hand, a bi-directional or uni-directional microphone can be used to cut down unwanted noise getting to the microphone or, if placed so that the non-sensitive side is towards the loud-speaker, the amplification which is possible before feed-back occurs can be considerably increased.

\* "The Influence of a Single Echo on the Audibility of Speech" BRS Library Communication No. 363, available on request from BRS.

The main requirements of the amplifiers are that they shall have sufficient power available with very slight distortion and that their frequency response shall be correct. It used to be thought that the frequency response should extend over the whole audio range, approximately 30 to 15,000 cycles per second, but modern research is beginning to modify this view. Recent American research by Beranek\* states that the system should have a flat response between 300 and 4,000 c/s., should be 6 decibels down at 200 and at 6,000 c/s., and should fall off rapidly above and below these frequencies. The tone controls which are normally fitted to amplifiers should give something like this effect.

The two main types of loud-speakers are the horn speaker and the cone speaker; the latter is the type always used in radio receivers. They should be of good design and should be able to handle the power adequately without distortion. Which type is used, horn or cone, is largely a matter of opinion and is best left to the decision of the firm supplying the equipment.

#### FUTURE DEVELOPMENTS

An understanding of the "Haas effect" has made it possible to design a high-level system so that the sound appears to be coming from the human speaker. But it has not yet been applied to a low-level system where it is most needed. It might be done by introducing electrical time delays into the amplifying circuit which are a little longer than the time taken for the sound to travel from the speaker to the listener. The sound from the human speaker would then arrive at the listener a fraction of a second before the amplified sound and should determine the apparent direction of the sound. Some experiments on these lines are now being made by the BRS jointly with manufacturers of amplification equipment, and if these experiments are successful the main disadvantage of a low-level system may be overcome.

*Should we increase expenditure on first costs in order to gain long term economies? This article makes a plea for such a policy with regard to metal windows.*

## THE PROTECTION OF STEEL WINDOWS AGAINST RUSTING

The steel window of today constitutes a permanent and usual feature of the building industry. Its evolution from the wrought-iron casement of Tudor times, through the purpose made windows of the last century is undoubtedly due to the impact of modern engineering methods and to a study of problems encountered in building operations. The purpose of this note is to summarise the

position as it exists today and to show that the bogey of rusting can be laid for good with modern methods of rustproofing in manufacture, and with reasonable care in handling on the site.

As a preface to the particular treatment of the subject, it may be remarked that the essence of protection against corrosion lies in the first coating which is applied to the bare metal. Today such coatings will normally be substantial zinc coatings. These have been found satisfactory in standing up to the dual conditions of neglect and careless handling which may occur on site.

BS 990—*Metal Casement Windows and Casement Doors for Domestic Buildings*, published in 1945, carried the following clause:

"All standard windows, doors, sidelights, fanlights, coupling mullions, transoms and weather bars shall be finished by the application of a zinc coating either by galvanizing, metal spraying or sherardising process. Windows finished by hot-galvanizing shall be despatched to the site unpainted. The rustproofing shall be of such quality that it will pass the tests described in BS 729."

The reasons for introducing this clause will be well known to most people who have anything to do with the construction of buildings, viz.: the proneness of painted steel windows to rust. Between the wars, this country saw a great increase in the number of steel windows used and there were three main reasons for this, viz.: (1) the development in England of modern light rolling mills, thus ensuring the availability of accurately rolled steel sections; (2) the application of modern quantity production methods with engineering precision; and (3) the shortages of timber during that period.

#### TENDENCY TO RUST

From an early date the tendency to rust became apparent and attempts were made to prevent the trouble by sending the windows out coated with two baked coats of good quality primer instead of one coat of air-drying cheap material. This was only partially successful, due to the difficulty of thoroughly removing rust before applying the primer, and before the war one or two manufacturers had already turned to other methods of protecting windows from rust, viz.: zinc spraying or galvanizing. The outbreak of war put an end for the time being to this development, but the five years of lack of painting maintenance during this period only served to make it doubly clear that something more than paint was needed if the rusting trouble was to be completely eliminated.

A steel window leaves the factory with two dipped and stoved coats of factory primer which are intended to get it to the site in a rust-free condition. For this to be successful the window must be carefully handled. Upon arrival at the site it should be given a hand-brushed coat of inhibitive primer immediately, and shortly afterwards it should be fixed and given its finishing coats. In practice, this seldom happens. Too frequently the paint film is chipped or chuffed off during transit or is scraped off when pulled over the rough ground of the building site. Often, too, the painted frames are stacked on site in the open waiting for the progress of building operations, and they may stay unprotected in this way upwards of twelve months. Sometimes they lie on the open ground near or actually in the mortar or concrete-making area. Sometimes, during fixing, they get covered with mortar, etc., from the rough trades and plasterers. This mortar is then scraped off and the paint film damaged in the process.

BS 990: 1945

Under these conditions of rough handling and neglect, it became obvious that something much more robust than a paint film

was needed, and BS 990 recognized this in 1945 by specifying three processes for applying a metallic zinc film. Then, and for some time afterwards, it was one thing to specify rustproofing and another thing to supply it, for the industry was woefully short of rustproofing capacity. Today there is enough rustproofing capacity to deal with all the steel windows which are made and the purpose of this article is to say so.

However, it has been apparent that there is still a demand for painted steel in preference to a rustproofed window because its initial price is lower. To recognize this, an amendment (No. 4) was made for BS 990 in September, 1949, from which the following is an abstract:

"In view of prevailing conditions, the following modifications to this BS may be made by agreement between the purchaser and the manufacturer. They have the effect of providing the following alternatives:

(i) Zinc-coated all-steel windows.

(ii) Painted all-steel windows. . . . It should be noted that, in general, and under normal conditions of exposure, zinc-coated steel provides the maximum resistance to corrosion. Purchasers should satisfy themselves regarding the suitability of other types of window to the site conditions."

#### MAINTENANCE COSTS

The painted window is, however, not cheaper than a galvanized window if maintenance factors are taken into consideration. If the argument can be illustrated by reference to an actual house then the cost of ordinary painted steel windows for such a house might well be £35 and the cost of rustproof windows £41 11s. The application of decorative materials to the painted windows on the basis of "cleaning down, applying undercoat and finishing coat" will cost £4 15s. In the case of non-rustproofed windows, this process will probably be carried out at three-yearly intervals, and in the case of rustproof windows the maintenance costs are halved.

In twelve years the galvanized windows will save approximately £2 a house over the corresponding non-rustproofed frames.

So far as the troubles of neglect and rough handling indicated above are concerned, the authoritative work of the Iron & Steel Institute\* has made it clear that the hot-dip galvanized coating of the heavy-duty kind (2 oz./sq. ft.) will stand up to 20 years' exposure or more over large areas of England, and that even in places like Sheffield at least five years' life can be expected. This means that frames can be left on site for a long time and the painting neglected without incurring the expenses of rust removal. From the viewpoint of rough handling, modern research in adapting the hot-dip galvanizing process to windows has produced an adherent, blob-free ductile coating which stands up to the hazards of transit and unloading alike.

In any case, the zinc coating is sacrificial, and even if the coating is damaged, the bared area is protected by the surrounding zinc.†

Now that rustproof steel windows are freely available, it is possible to use them in applications where steel windows have not hitherto been particularly successful, e.g., in industrial buildings and districts engaged in processes where various fumes are involved and/or where maintenance is at a minimum.

In such cases zinc coating plus paint films are of great value. Chapter and verse for many such applications have already been studied for several years and published.†

\* Journal of the Iron and Steel Institute, No. II, 1946.

† Paper read to the Hot Dip Galvanisers' Association at Copenhagen, July, 1950.

\* "Sound System Design for Reverberant Auditoriums," Acoustics Laboratory Massachusetts Institute of Technology, Quarterly Progress Report, Jan.-March, 1950.

# THE WINDSOR FLOOR

Patent No. 544228

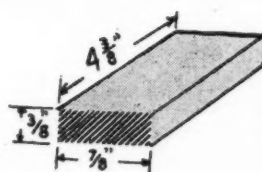
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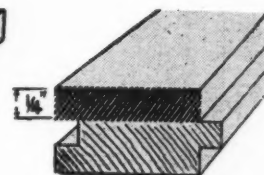
level sub-floor. The price supplied and fixed complete is 25/- to 30/- per yard super, dependent on locality.

The floor is composed of individual strips of seasoned hardwood placed together to form a mosaic panel approximately 18in. square. It is fixed by a special adhesive which retains its elasticity and allows slight play between the surface and the sub-floor.

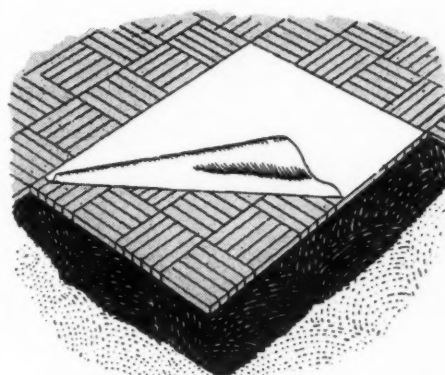
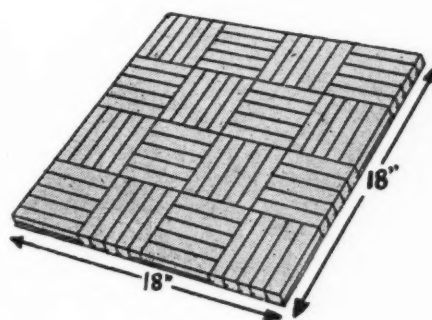
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## INFORMATION CENTRE

### 4.61 planning: urban and rural

#### AMENITIES AT MINEHEAD

*Minehead: The Development of its Amenities Plans and Report.* Thomas Sharp. (Minehead UDC. 1950. 3s. 6d.)

Recently published consultant's report complementing work of local planning authority which is responsible for the general planning of the town and neighbourhood. 20 pp., 16 illustrations.

For this report, Dr. Sharp's terms of reference were "to examine the area of the Urban District of Minehead from the point of view of amenity and landscape, and prepare and submit to the Council a report thereon, together with a development scheme having particular reference to the coastal area."

The proposals are mainly about necessary improvements to the sea-front and are in a form which will be consistent with the present character of Minehead as a comparatively quiet resort.

Probably the most interesting technical problem touched upon is the question of the effect on the foreshore caused by the building of a new sea-wall. Dr. Sharp does not attempt to answer the question, but he does make a strong recommendation that exact knowledge of the consequences of building a new sea-wall should be obtained by making of experiments and having the considered opinions of specialists on the subject.

Apart from this topic, the proposals for new approach roads, stands for coaches and cars, promenades, country footpaths, boating lake and model railway, new amenity buildings and other sea-side attractions appear straightforward both in character and siting. The execution of almost any of these proposals would be a valued addition to the amenities of the town, but as to how many of these proposals the town could reasonably afford in the short term, it is not part of Dr. Sharp's job to say.

### 9.14 design: general

#### SWEDISH HOUSING

*Industribostäder-Company Housing.* Industrial Housing Association (Distributed by Seelig and Co. Stockholm, 1950.)

Introduction in English describes problems and methods adopted for providing houses for small communities serving industrial concerns. 85 pp. plans, some sections and general illustrations.

A brief introduction in English explains the problem of providing industrial housing, especially for small communities of 5,000 population or less. Rental construction is not popular and buying is impossible in most cases because of the high price of houses in relation to wages. Co-operative projects are one way of solving the problem. Some of the workings of co-operatives are briefly explained.

Larger houses for management personnel are also a problem. In small communities these have to be fairly spacious, as they offer the only possibilities for entertainment. They must usually be of the rental type.

Except for the two page introduction the book consists of illustrations of a large number of schemes. Plans are small scale and there are a few outline sections and some interesting layout plans. No details are given and photographs all tend to be general views.

### 11.23 materials: general

#### PRE-CUT MASONRY

*Les Calcaires Tendres Prétaillés.* (Cahiers du Centre Scientifique et Technique du Bâtiment, No. 70, 1950.)

A report on the theory, technique and practice of using preformed limestone masonry blocks, as developed in France.

The first part of the report describes the raw material and the research which has been carried out in order to establish a basis for classification in terms of hardness, density and compressive strength; it also describes the positive qualities of the limestone in question, and discusses its disadvantages.

The second part of the report is concerned with the quarrying and working of the stone, and compares the traditional manual processes with the mechanical methods used in the USA, and with the new mechanization recently developed in France. The plant used in a number of trial factories is described and illustrated in detail. The interest lies mainly in highly mechanized methods of extraction of these soft limestones in the quarry, and line production, equally highly mechanized, of standard sized blocks of stone.

The third part illustrates the standards which have been established for sizes of block and for methods of handling and laying and also discusses the question of costs.

Finally there is a detailed account of some of the modern machinery which is used, and a typical specification for the material which has been described in the report.

On the face of it the report may not appear particularly relevant to architectural practice in this country; and, indeed, it is less likely in the first instance to be of value to architects than to quarryowners, and others concerned in particular with masonry.

It is a fact that the use of natural stone masonry is declining here and that it is almost solely due to Government sponsored encouragement that it is used at all for anything but reconstruction and monumental work. Moreover, although there has recently been an increase in the number of apprentice-masons, the supply of craftsmen still remains low, and the cost of stone high.

Architects might do well, therefore, to consider whether some distinction should not be made between traditional masonry, and the type of stone block walling which would be made possible by the use of the methods described in the report. If they were prepared to accept a measure of standardization and to co-operate with those quarry-owners who were able and willing to install the necessary machinery, stone might again become a possible choice of material, even for "low-cost" work.

In this country The Bath and Portland Stone Co. have already developed methods of quarrying on similar lines, and Bath stone, which is the only stone that lends itself to treatment on the necessary scale, has been used in new housing at Bath in a similar manner to that described in the report.

The processes can be economical only when used on a large scale, but if there were sufficient demand, the cost to the consumer could be reduced to within practical limits.

The shortage of stone masons need not affect the issue, because at least the smaller sized blocks can be bedded in mortar, just as a concrete block, and the work can be undertaken by bricklayers.

### 14.31 materials: concrete

#### INFLUENCES ON CONCRETE

*Influences on Concrete.* A. Kleinlogel. Translated from the German (Einflüsse auf Beton) by F. S. Morgenroth. (Frederick Ungar Publishing Co., New York, June, 1950. \$7-50.)

Translation of a very well known textbook, published in pre-war Germany in a number of editions. Covers the mechanical, chemical and other effects on cement, mortar, concrete and reinforced concrete. An encyclopaedic dictionary of considerable value to the practising architect, engineer and builder. 281 pp., 48 figures.

Like other books of Professor Kleinlogel, this one, too, has obviously been written to be of direct use to the busy man, who looks for a quick answer to his practical problems in design and construction. Concrete technique is still comparatively new and, while specific effects and influences have been described in detail in a tremendous volume of literature in many countries and languages, the architect or engineer would have to waste a lot of time when trying to find the answer to any particular problem arising in his daily work. Some items picked at random, out of the many hundreds listed in alphabetical order, may give some idea of the wide scope of this book. Ice and ice pressure, the effects of frost and cold weather, aluminium in contact with concrete, sewage effects on concrete; then the effects of various fluids in storage tanks, e.g., boiling water, mineral oils, milk, beer, and of certain solid matter in contact with concrete, such as coal and coke in bunkers and silos, sugar, salt and even Sauerkraut! The mechanical effects are covered in detail, including items such as bond between steel and concrete, concrete and concrete, shrinkage, repairing of cracks, vibration and vibrated concrete. The wear of mortar and concrete is of special interest to architects; interesting data and a few graphs cover the subject and it is clearly stated that there is no relationship between resistance to wear and the other properties of concrete. This volume should be a great help as a book of reference. While its contents can never completely cover the vast field which is still steadily expanding, a tremendous amount of valuable facts and figures has been compressed into its pages.

### 18.54 construction: theory

#### WOODEN REINFORCING BARS

*Tests with Wood Reinforcing Bars.* (Engineering News Record [USA], May 4, 1950, p. 42.)

Concrete reinforced with wood in place of steel. Tests by Bridge Department in Hungary's Ministry of Transport.

The same Young's modulus was assumed for concrete and wood in designing the test beams. 5,000 lbs. per sq. in. compressive stress was allowed for the concrete, and 2,000 lbs. per sq. in. for the silver fir reinforcing bars, which were prevented from slipping by the use of steel stirrups. Wood reinforced concrete has even been used in actual structures, e.g., a 30 ft. by 13 ft. caisson in which a 70 per cent. saving of steel is claimed. Precast concrete piles up to 25 ft. long for a quay wall in Budapest were found less liable to breakage in driving than steel reinforced piles.

### 18.55 construction: theory

#### TIMBER WORKING STRESSES

*Determination of Working Stresses.* Phillip O. Reece. (Constructional Research Bulletin, No. 6, TDA, 1950.)

The strength properties of timber are dependent on its organic growth and some other

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factors which are discussed in this brochure. Chemical composition, specific gravity, moisture contents, slope of grain and various kinds of natural defects determine the mechanical properties. Basic stresses are recommended in tabulated form, for a great number of timber species. While the subject of working stresses may be of little interest to architects, the comparison of the various kinds of timber should be very useful to him. (20 pp., 21 illus.)

### 23.132 heating and ventilation

#### NATURAL VENTILATION OF HOUSES

*The Fundamentals of Natural Ventilation of Houses.* J. B. Dick. (JHVE, June 1950, Vol. 18, No. 179.)

Paper describing laws governing ventilation and illustrating them by experimental results at the Building Research Station.

This paper is primarily for the scientist and research engineer engaged upon ventilating problems, but it will be read with interest by those architects who take a special interest in these matters. It is a very valuable contribution to the literature on the subject.

It does not lend itself to compression without excessive loss; those interested will prefer to study it in its entirety.

### 23.133 heating

#### AMERICAN DOMESTIC RADIANT SKIRTING HEATING INSTALLATIONS

*Radiant Baseboards—the Modern Heat.* Frank R. Brophy. (Plumbing and Heating Journal [USA], May, 1950.)

Article concerning Radiant Skirting Heating, chiefly from the "sales" angle.

*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

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A.J. 24.8.50

This article is by the sales manager of an American heating firm which specializes in skirting heating, and he naturally boosts his own products. Nevertheless, the advantages of this type of heating are now becoming recognized in this country, and the article contains interesting information for those who think of trying it.

The following main points are made:—

1. A skirting heating system gives well-distributed heat, both vertically and horizontally. In the former case, temperature gradients of no more than 2° to 3° are usual. An actual test at the University of Illinois, with outside temperature 0° F., gave this gradient:—

3" above floor: 71.1° F.  
30" above floor: 72.0° F.  
60" above floor: 72.9° F.  
3" below ceiling: 72.9° F.

A total differential of only 1.8° F.

2. Design of systems and erection follows conventional lines and makes use of standard piping, fittings and tools. Controls are those of a normal radiator system.

3. There is no interference with the layout of furniture or hangings. Dummy skirting sections can be supplied to match heating sections, giving uniform appearance. They can be installed in existing or new work.

4. They are suitable for use with hot water, one- or two-pipe systems, gravity or accelerated, or with steam. They can be combined with conventional radiators or convectors.

5. Low costs are claimed, when installed on the "series loop" principle, there being a saving of 50 per cent. on labour and fittings. In this system the skirtings themselves are used as part of the main.

NOTES

This system is explained in IBR Guide 5 on Baseboard Heating Systems.

Information is given concerning such heating systems in the textbook of "Heating, Ventilating and Air-Conditioning Fundamentals." (See 23.131:17.8.50.)

A recent experimental skirting heating installation has been made in corporation houses at Ipswich.

### 26.74 services and equipment: miscellaneous INSECT DAMAGE TO LEAD

*Lead and Beetles.* Frank Herod. (The Plumbing Trade Journal, June, 1950. 1s.)

Report on damage to lead by insects.

Four cases of damage to lead by insects are discussed.

In the first, a lead lined tank was penetrated. The casing of the tank was of Northern European softwood, and the insect responsible for the damage was probably the giant wood wasp. The same insect was found to be responsible in the case where, at a colliery, 12 lb. chemical lead was stored on baulks of timber, and probably also in a further case of damage to a lead lined tank in Scotland, and in another, in Ireland, where foreign lead was used, which was supplied rolled round a wooden pole.

The insects, which are common in Northern European forests, lay their eggs in the soft part of trees, and the larvae feed on the wood for as long as three years. They do not eat the lead, but bite their way out through it.

There is also evidence of damage to lead on church roofs, where it is laid on oak boards attacked by the Death Watch Beetle.

### 26.75 services and equipment: miscellaneous LIGHTNING PROTECTION

*Lightning Protection of Buildings.* Major E. H. W. Banner. (RIBA Journal, July, 1950.)

Explanation of how lightning occurs, general protection requirements and useful detail points.

This four-page article gives an excellent explanation of the physics of lightning discharges and then deals with matters of more direct interest to architects. The fallacy of using the old bush type terminals is mentioned, the zone of protection is defined as a cone of height equal to radius of base and materials, and design for conductors and earth terminations are discussed. There are a number of useful practical points mentioned and the article is generally useful, though it does not attempt to cover all the ground as fully as the Code of Practice on lightning protection.

### 26.76 services and equipment: miscellaneous CAST-IRON PIPE FITTINGS FOR FIRE PROTECTION INSTALLATIONS

*Cast Iron Pipe Fittings for Sprinklers and other Fire Protection Installations.* BS 1641:1950. (British Standards Institution. 2s. 6d.)

New BS, covering cast iron pipe fittings for fire installations.

This BS covers sizes, shapes and materials for these fittings; types of screw-thread to be employed; manufacturing tolerances; and tests to be applied.

*This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.*

## QUESTIONS AND ANSWERS

### 3030 DOMESTIC HEATING: HOT WATER SYSTEMS

**Q** I have recently had installed in a house a modern open/close form of stove with back boiler. This is coupled to radiators only as follows: upper boiler connection to vertical pipework eventually leading to radiators; return from radiators is made to a tee and thence to boiler. Also connected to the tee is further pipework which suggests connection to cold water supply tank. Thus, there is no storage tank but direct circulation only. Additional water as required is fed to the system through the extra pipework at the tee. I should be pleased to have your comment upon the suitability of such an arrangement for small domestic radiators; would you advocate a separate cold water feed tank to ensure that lime deposit is a minimum?

**A** If the general cold water feed tank to the house is the one that is coupled to the return connection of the boiler there should be no particular objection unless the boiler is over-stocked and you get boiling, or near to boiling water. In this case you are apt to displace the water in circulation and send it out through the vent pipe drawing in fresh water from the feed, which in time increases "furring."

To be absolutely free from this trouble and if the water in your district is very hard, I would suggest a separate tank which, in any case, is the ideal arrangement as it allows the water to circulate without the deposition of "fur" from fresh water.



## Announcements

Messrs. Graham Dawbarn and R. F. Lloyd Jones have taken into partnership Frank Rutter as from April 1, 1950. The associate members of the firm are Alick Low, Herbert Wilson and Raymond Pidgeon.

Mr. F. S. Drake, of Culford Road, Dalston, N.1, has been appointed an architect in the Public Works Department, Tanganyika. He was born at Hackney, and educated at the Grocers' Company School and Northern Polytechnic Architectural Department, where he was awarded a diploma in architecture. Last year he obtained his Associateship of the RIBA.

As from September 29, 1950, Messrs. John Grey & Partner, chartered architects, 56, Oakley Street, Chelsea, S.W.3, will be practising from 17, Buckingham Street, Strand, W.C.2 (tel.: Trafalgar 3787).

Messrs. Hening & Chitty, architects and townplanners, of 20, Gower Street, London, W.C.1, have changed their telephone numbers to Museum 8577, 8578 and 8579.

Messrs. J. M. Austin-Smith and Partner, A./A.R.I.B.A., A.A.DIP. (Mr. J. M. Austin-Smith and Mrs. I. L. E. Austin-Smith), have moved their offices from 30E, Pembroke Villas, W.11, to 29, Sackville Street, Piccadilly, W.1. (tel.: Grosvenor 5987), and will be pleased to receive trade catalogues, etc.

Mr. C. D. Ostick, DIP.ARCH., A.R.I.B.A., A.M.T.P.I., and Mr. A. B. Williams, B.A.R.C.H., A.R.I.B.A., A.M.T.P.I., have entered into partnership and commenced practice under the

style of Ostick and Williams, chartered architects and planning consultants, at 12-14, Corporation Street, Belfast, where they will be pleased to receive trade catalogues, etc.

Messrs. Ansell & Bailey (Arthur Bailey, O.B.E., F.R.I.B.A.) have moved from 5, Verulam Buildings, Gray's Inn, to 12, Gray's Inn Square, W.C.1. Mr. Bailey will continue to reside at 5, Verulam Buildings, Gray's Inn.

Messrs. Montagu Evans & Son (Montagu Evans, M.C., F.R.I.C.S., F.A.I., M.INST.R.A.; M. Basil Evans, M.B.E., F.R.I.C.S., F.A.I., M.INST.R.A.; T. J. Nardecchia, B.S.C.(LOND.), A.R.I.C.S., A.A.I.), of London, announce that as from August 1 they have taken into partnership David Steven, L.R.I.B.A., and Conrad Richard Mallett, A.R.I.C.S., A.A.I. The head office of the firm at 21, Brunswick Square, W.C.1, and the branch offices at 12, Doughty Street, W.C.1, and 58, London Road, Redhill, Surrey, will continue to function. The firm have, however, opened a special rating department at 441, Bloomsbury Square, W.C.1, to deal with rating valuations under the Local Government Act, 1948.

The Brightside Foundry & Engineering Co. Ltd., Sheffield, announces that Mr. W. S. Richards has been appointed a director.

Sealocrete Products Ltd. have asked us to call attention to the fact that Sealocrete Double Strength Premix solution was incorporated in the granolithic pavings laid by Messrs. A. C. V. Telling (Southampton) Ltd. in the Southampton Ocean Terminal building (illustrated in the AJ on August 10). Those parts of the flooring where the solution was not incorporated were treated by the contractors, Messrs. Staverton (Builders)

Ltd. with Sealocrete Concrete Surface Dressing.

Messrs. Dimplex Ltd. has recently appointed Mr. T. E. Green, of Manchester, as its northern representative.

## Buildings Illustrated

*Canteen for North Eastern Trading Estates Ltd., West Auckland, County Durham.* (Pages 189-194.) Architects: Napper & Taylor. Consulting Heating, Ventilating and Electrical Engineers: Cairns & Byles. Reinforced Concrete Engineers: L. G. Mouchel & Partners. General Contractors: H. E. Pitt Ltd. Sub-contractors: Bricks, Eldon Brick Co. Ltd.; artificial stone, Crossley & Sons Ltd.; tiles, Commercial Marble & Tiles Ltd.; roofing felt, The Ruberoid Co. Ltd.; glass, Elders, Walker & Co. Ltd.; block flooring, "Durablock" (Terradura Ltd.); central heating, The Brightside Engineering Co. Ltd.; electrical, North of England Electrical Engineering Co. Ltd.; plumbing, G. Waine; sanitary fittings, Shanks & Co.; door furniture, N. F. Ramsay & Co. Ltd.; metal windows, The Rustproof Metal Window Co. Ltd.; rolling shutters, Hardy & Stewart; plaster, R. Banks; metalwork, Selborne Engineering Co. Ltd.; motif over main entrance designed and executed by J. M. McChyne, D.A.(Edin.), A.R.B.S.; foundation stone, C. S. Ormerod Ltd., lettering by L. C. Evetts, M.A., A.R.C.A.; roof lights, Lenscrete Ltd.; precast floor, Kingston Concrete Products Ltd.; domelights, Pilkington Bros.

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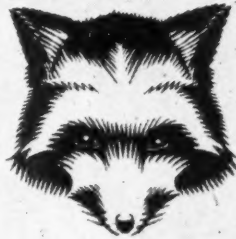
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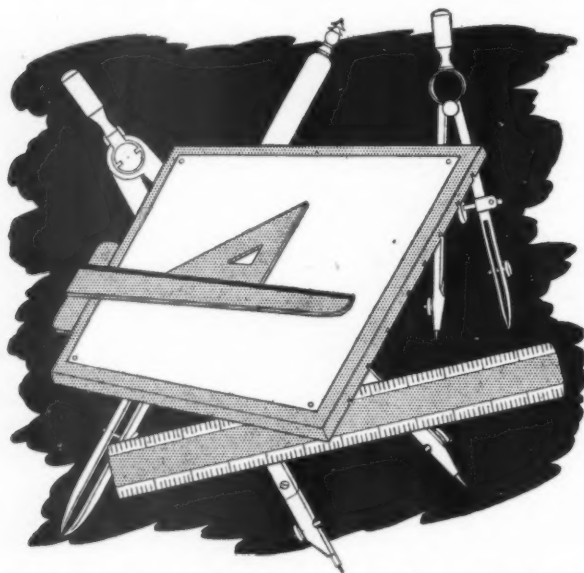
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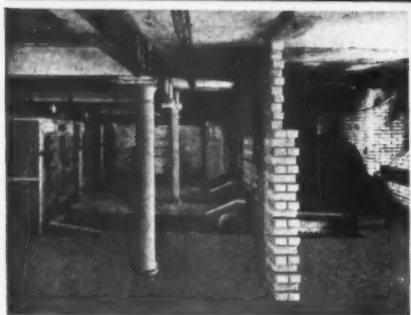
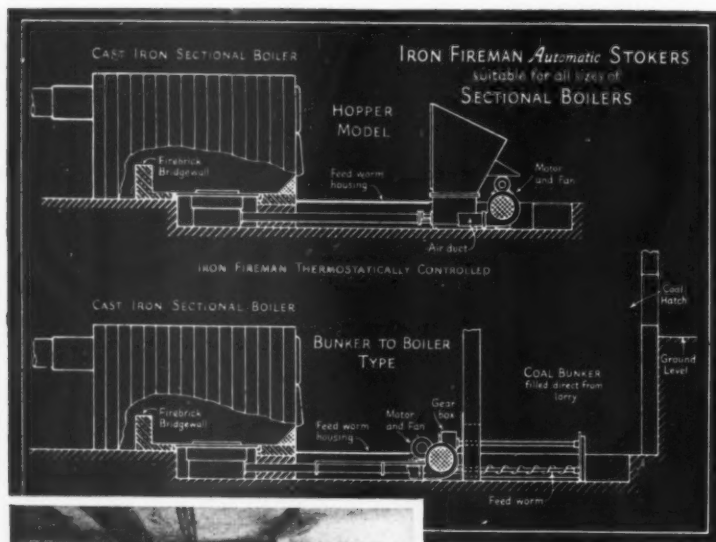
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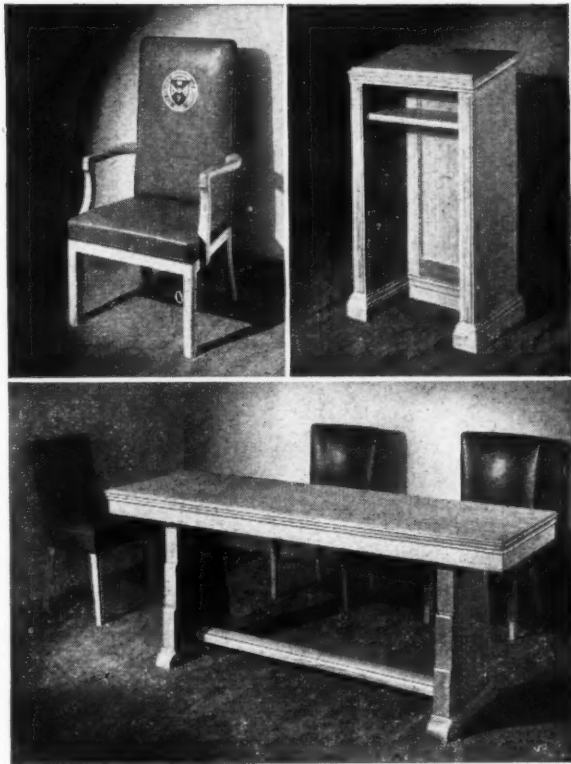
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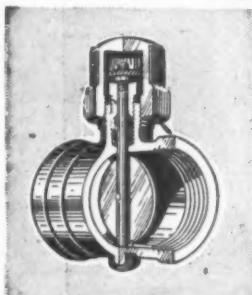
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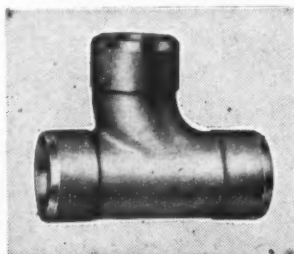
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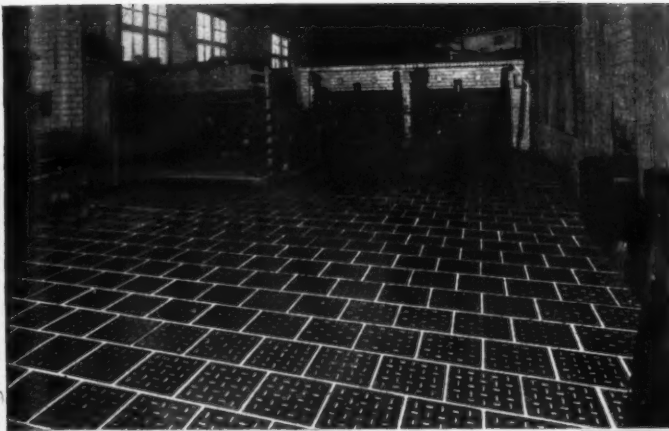
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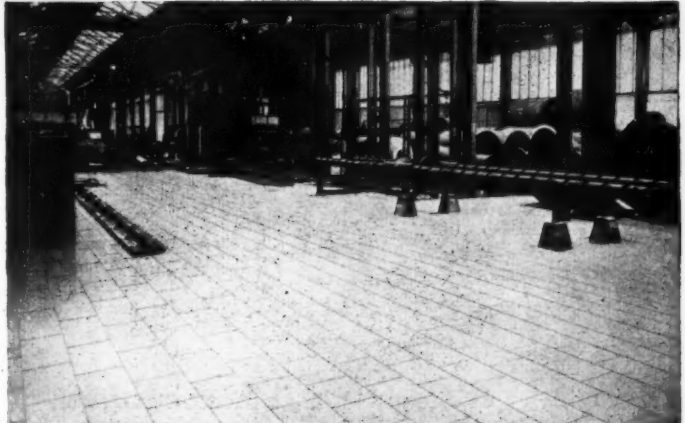


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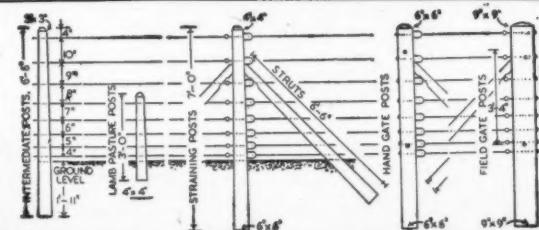
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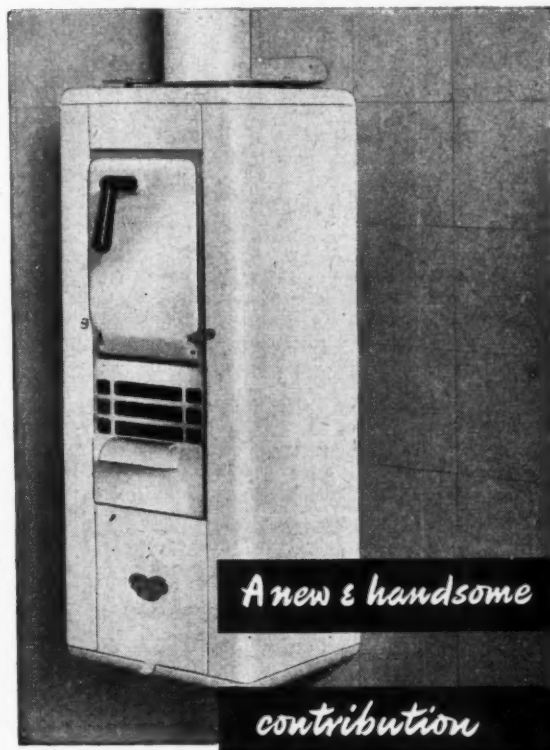


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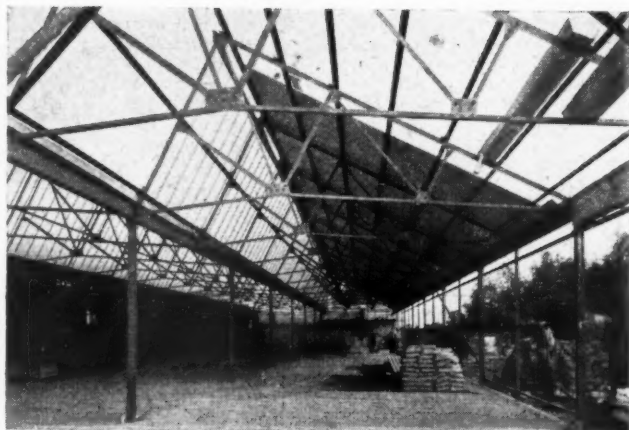
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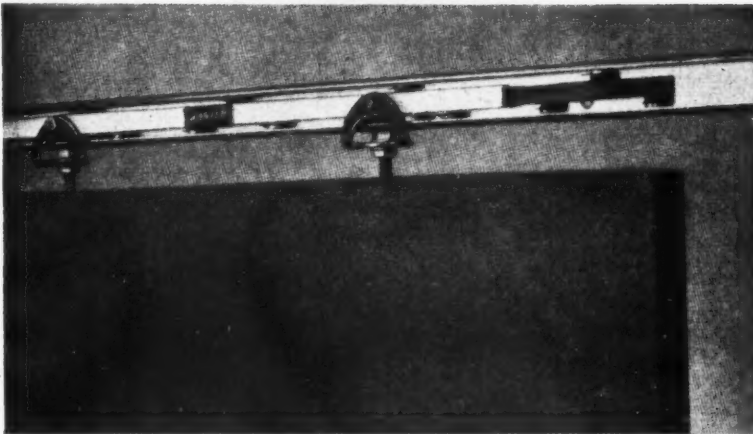


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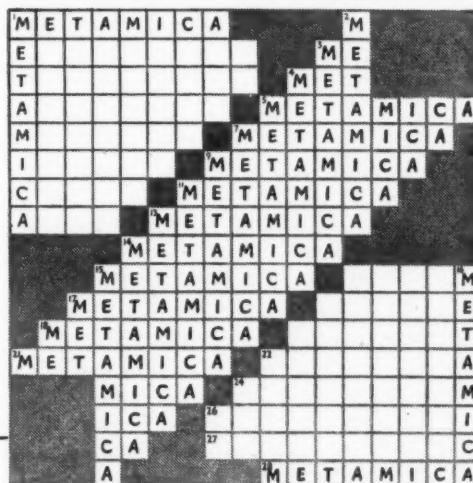
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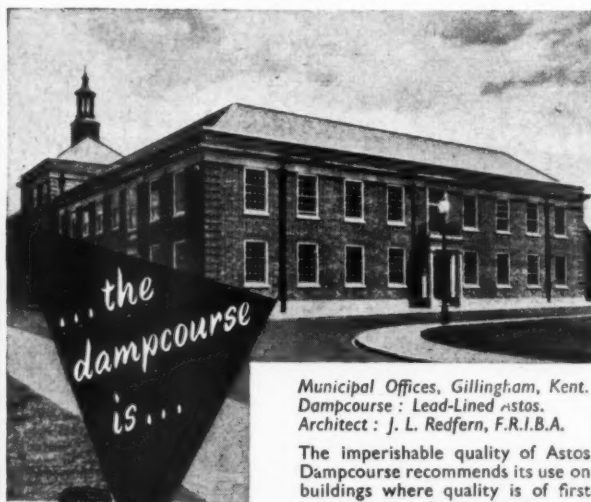
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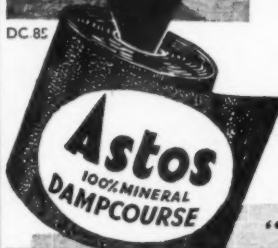
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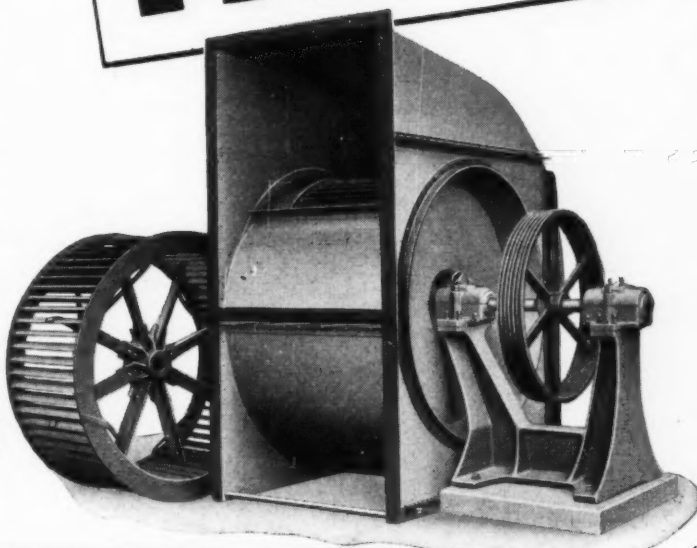
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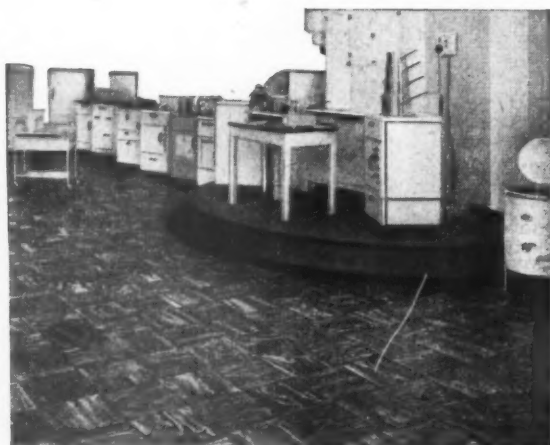
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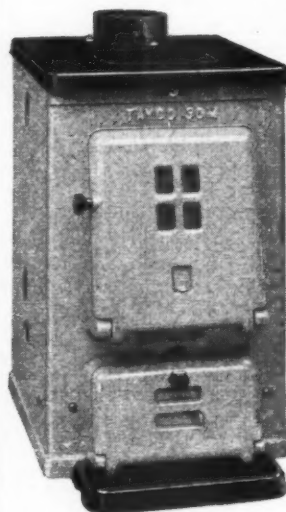
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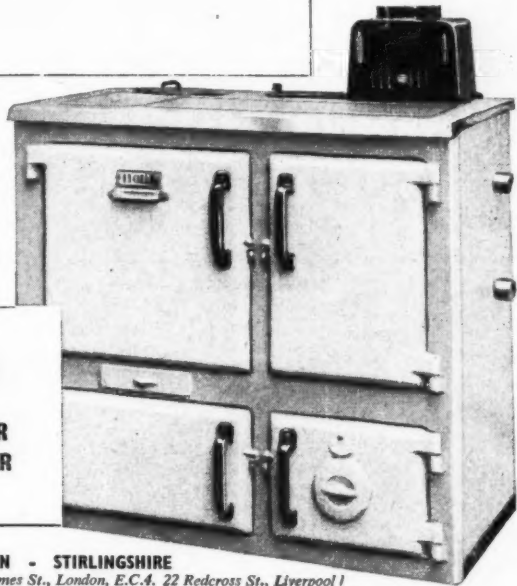
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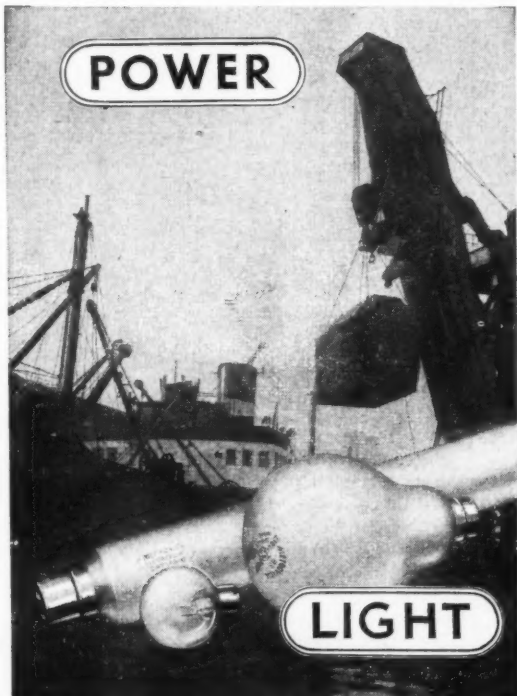


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## CLASSIFIED ADVERTISEMENTS

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

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

## Public and Official Announcements

25s. per inch; each additional line. 2s.

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: EMPLOYMENT REGISTER, WREN PARK, WYRLEY, Leic. : Uplands 0935. 991

## NORTH THAMES GAS BOARD.

Applications are invited for the following appointment in the Architects' Section of the Chief Engineer's Department of Westminster: SENIOR ARCHITECTURAL ASSISTANT, minimum starting salary £650 per annum.

Applicants, who must be Registered Architects and should be studying for or have passed the Final Examination of the R.I.B.A., should be capable of preparing working and detailed drawings and specifications, and supervising and controlling the work on contracts. Experience in design and planning of industrial buildings would be an advantage.

The appointment is of a permanent nature, and pension arrangements will be discussed with short list candidates.

Applications, stating age, qualifications, and particulars of previous appointments held, must be submitted to the Staff Controller, North Thames Gas Board, 30, Kensington Church Street, London, W.8, quoting reference 957. 4341

## SURREY COUNTY COUNCIL.

## COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT QUANTITY SURVEYOR, Grade VI, at a commencing salary of £595 per annum, rising by annual increments of £20/25 to a maximum of £660 per annum, plus London allowance of up to £30 per annum, according to age.

Preference will be given to applicants who are Members of the Royal Institution of Chartered Surveyors (Quantity Surveying) and who have adequate experience in the preparation of Bills of Quantities, site measuring, and in settlement of final accounts.

Full details of past and present appointments should be given.

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, full details of experience accompanied by three recent testimonials, should be addressed to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, to reach him not later than the 11th September, 1950.

Canvassing, either directly or indirectly, will disqualify a candidate from consideration. The Council will be unable to provide any housing accommodation, and the successful applicant will be required to make his own arrangements in this direction.

## DUDLEY AUKLAND.

Clerk of the Council.

County Hall, Kingston-upon-Thames. 697

## URBAN DISTRICT OF FELTHAM.

## APPOINTMENT OF (a) CHIEF ARCHITECTURAL ASSISTANT (ESTABLISHED STAFF);

## (b) ARCHITECTURAL ASSISTANT (UN-ESTABLISHED STAFF).

Applications are invited for the above-mentioned appointments in the Engineer and Surveyor's Department in the following grades of the Administrative, Professional and Technical Division of the National Scales:—

(a) Chief Architectural Assistant: Grade V(a) —Commencing salary, £550 per annum, rising by annual increments of £20 to a maximum of £610 per annum, plus the appropriate London "weighting."

(b) Architectural Assistant: Salary in accordance with the Scales for Architectural Assistants approved by the Council. The salary for a Registered Architect will be in accordance with Grade V, commencing at £520 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £570 per annum, plus the appropriate London "weighting."

Preference will be given to Registered Architects who have had previous experience in the Department of an Engineer and Surveyor to a local authority. The appointments will be subject to (i) the National Scheme of Conditions of Service, (ii) the successful candidates passing a medical examination, and (iii) one month's notice in writing on either side.

Forms of application may be obtained from the undersigned, to whom they should be returned, accompanied by copies of two recent testimonials, not later than 8th September, 1950.

Canvassing will disqualify, and applicants must disclose in writing whether, to their knowledge they are related to any member of or the holder of any senior office under the Council.

M. W. COUPE,

Clerk of the Council.

Council Offices, Feltham, Middlesex. 4993

## LONDON COUNTY COUNCIL.

Applications are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £680 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Management will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats), and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.13). Canvassing disqualifies. (816) 4558

## COUNTY BOROUGH OF WEST HAM. THOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.

Applications are invited for the following posts on the permanent establishment of the Department of the Borough Architect and Planning Officer in connection with the Reconstruction Programme of the Borough.

The Department is undergoing considerable expansion with a view to the early completion of the Development Plan, the layout of new neighbourhoods, and large scale works comprising Housing, Education, and Public Buildings. The work to be done therefore covers the widest possible range in this badly-blitzed area and calls for imagination and enthusiasm.

## ARCHITECTURE:

## TWO SENIOR ASSISTANT ARCHITECTS.

A.P.T. VIII (£685 × £25—£760). Applicants should be A.R.I.B.A., having considerable experience in large Housing and Education works and Public Buildings, and being able to take complete charge of Contracts.

## FOUR SENIOR ASSISTANT ARCHITECTS.

A.P.T. VII (£635 × £25—£710).

## ONE ASSISTANT ARCHITECT. A.P.T. V/VA (£520 × £15 × £15 × £20—£570) (£550 × £20—£610).

Applicants for these posts should be A.R.I.B.A. or Registered Architects, and have had experience in large Housing and Education works and should be able to supervise contracts.

## FOUR ARCHITECTURAL ASSISTANTS.

A.P.T. I/III (£390 × £15—£435) (£420 × £15—£465) (£450 × 15—£495).

Applicants should have had at least 3 years' practical experience in an architect's office, preferably on Housing, Education, or Public Buildings.

## PLANNING:

## SENIOR ASSISTANT PLANNING. A.P.T. VIII (£685 × £25—£760).

Applicants should be A.R.I.B.A. and A.M.T.P.I., and should be experienced in work in a Reconstruction Area, the preparation of a Development Plan, and detailed layouts for Areas of Comprehensive Redevelopment.

## SENIOR ASSISTANT PLANNING. A.P.T. VII (£635 × £25—£710).

Applicants should be A.M.T.P.I., and preference will be given to those possessing a further qualification. Knowledge of development control and the administration of the Act and Orders is essential. Experience in negotiations with developers, industrialists, etc., will be an advantage.

## ASSISTANT PLANNING. A.P.T. VI (£595 × £20 × £20—£660).

Applicants should be A.M.T.P.I., and preference would be given to those possessing an additional qualification. Should be experienced in work in a Reconstruction Area and assisting on Development Plans and detailed layouts for areas of comprehensive redevelopment.

## ASSISTANT PLANNING. A.P.T. V/VA (£520 × £15 × £15 × £20—£570) (£550 × £20—£610).

Applicants should possess a recognised planning or architectural qualification, and have had office experience, preferably on comprehensive redevelopment.

## TWO PLANNING ASSISTANTS (a) and (b).

A.P.T. I/III (£390 × £15—£435) (£420 × £15—£465) (£450 × £15—£495).

Applicants for post (a) must have had at least 3 years' experience in the control of development and the general routine of a Planning Department.

Applicants for post (b) must have had at least 3 years' experience of detailed work in the preparation of layout and Development Plans.

## ADMINISTRATION:

## SENIOR ADMINISTRATIVE ASSISTANT.

A.P.T. III (£450 × £15—£495).

Applicants should have had considerable experience in a Local Government Architect's office, with knowledge of Committee work, contract procedure, Housing and Education returns, etc.

London allowance in addition to salary scales, viz.:

16-20 years, £10 p.a.

21-25 years, £20 p.a.

26 years and over, £30 p.a.

Applications are also invited for the following Temporary appointment:—

CLERK OF WORKS. £10 per week, inclusive.

Applicants should have had considerable experience in large contracts, and preferably on the erection of flats.

The office is situated within 20 mins. on the tube from Central London.

Application forms (returnable by Saturday, 9th September), may be obtained from the Borough Architect and Planning Officer, Thomas E. North, F.R.I.B.A., 70, West Ham Lane, Stratford, E.15. 630

## URBAN DISTRICT COUNCIL OF WELLINGBOROUGH. ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments:—

QUANTITY SURVEYING ASSISTANT, at a salary in accordance with Grade V of the A.P. and T. Division of the National Scales (£520-£570).

Applicants should have had experience of housing schemes and should be competent to take responsibility for the preparation of Bills of Quantities, Estimates, Measurement of Works on Site, preparation of Interim Certificates and final accounts.

Previous experience with a local authority will be an advantage, and preference will be given to applicants holding a recognised qualification.

Housing accommodation will be provided if required.

ARCHITECTURAL ASSISTANT, at a salary in accordance with Grade III of the A.P. and T. Division of the National Scales (£450-£495).

Applicants should have had general Architectural experience (with particular reference to Housing), and should be good draughtsmen, possess a sound knowledge of building construction, and be capable of preparing working drawings and details under supervision.

Preference will be given to applicants holding a recognised qualification.

Appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and the National Scheme of Conditions of Service. The successful candidates will be required to pass a medical examination.

Applications, giving particulars of experience and qualifications, the names of two persons to which reference can be made, and accompanied by a copy of one recent testimonial, to be sent to the Engineer and Surveyor, Council Offices, Swanspool, Wellingborough, by Monday, the 4th September, 1950.

W. G. PALMER,

Clerk of the Council.

Council Offices, Swanspool, Wellingborough. 614

## THE LANCASHIRE COUNTY COUNCIL. ARCHITECT'S DEPARTMENT.

Experienced and qualified Architects, with a flair for design, are invited to apply for vacant positions, with commencing salaries of £685, rising to £760 per annum, to assist on a school building programme which includes technical colleges.

Application forms obtainable from the County Architect, County Offices, Preston, to be returned by the 16th September, 1950. 607

## BOROUGH OF SLOUGH.

## BOROUGH ENGINEER'S DEPARTMENT. APPOINTMENT OF ASSISTANT ARCHITECT.

Applications are invited for the permanent appointment of Assistant Architect on Grade A.P.T. V, of the National Scales, at a commencing salary of £520 per annum, rising on satisfactory service by two annual increments of £15 and one of £20 to a maximum of £570 per annum. Applicants must be Registered Architects, and preference will be given to those who have had experience with a Local Authority.

Applicants must give details of age, marital state, qualifications, present and previous appointments, with dates, technical training and experience, whether related to any member or senior officer of the Council, and the names of two architects to whom reference can be made.

The appointment will be subject to (i) the provisions of the Local Government Superannuation Act, 1937; (ii) the National Scheme of Conditions of Service; (iii) the satisfactory passing of a medical examination by the successful candidate, and (iv) termination by one month's notice on either side.

A Flat will be available for the successful candidate.

Applications, in sealed envelopes, endorsed "Assistant Architect, Grade V," must reach the undersigned not later than noon on Monday, 28th August, 1950.

Canvassing, directly or indirectly, will disqualify.

NORMAN T. BERRY,

Town Clerk.

Town Hall, Slough. 615

August, 1950.

BRACKNELL DEVELOPMENT CORPORATION (Bracknell, Berks) invites applications from suitably qualified persons for the following appointments:—

(1) PLANNER. Salary £750 × £50—£900.

(2) ARCHITECT (Housing). Salary £550 × £40—£750.

Applicants for (1) should be Corporate Members of the T.P.I. and also have a sound knowledge of town planning, with particular reference to the problems of new town development.

Applicants for (2) should be Corporate Members of the R.I.B.A., and an additional town planning qualification will be an advantage. They should have had experience of the design of house types and the layout and construction of large housing developments.

The successful applicants will work under the direction of E. A. Ferriv, B.Arch., A.R.I.B.A., A.M.T.P.I., Chief Architect to the Corporation.

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

Applications, giving full particulars of the candidate's age, qualifications and experience, together with the name of two persons to whom reference can be made, must reach the General Manager, Bracknell Development Corporation, Farley Hall, Binfield, Bracknell, Berks, on or before 31st August, 1950. 637



# DURHAM COUNTY COUNCIL. ARCHITECT'S DEPARTMENT. APPOINTMENT OF ARCHITECTURAL ASSISTANTS AND QUANTITY SURVEYING ASSISTANTS.

Applications are invited for the appointment of Architectural Assistants and Quantity Surveying Assistants in the following grades, in accordance with the National Joint Council for Local Authorities, Administrative, Professional, Technical and Clerical Services Scales and Conditions:—

Grade A.P.T. VIII, £685-£760.  
Grade A.P.T. VII, £635-£710.  
Grade A.P.T. VI, £595-£660.  
Grade A.P.T. V, £520-£570.  
Grade A.P.T. IV, £480-£525.  
Grade A.P.T. III, £450-£495.  
Grade A.P.T. II, £420-£465.  
Grade A.P.T. I, £390-£435.

The persons appointed will be required to pass a medical examination, and the appointments are subject to the Local Government Superannuation Act, 1937.

Canvassing will disqualify, and a candidate who is related to a member or a senior officer of the Council must disclose this fact in his application.

Applications, giving particulars of age, experience and qualifications, previous and present appointments, etc., and giving the names of three persons to whom reference can be made, should be forwarded at once to Mr. G. R. Clayton, F.R.I.B.A., County Architect, Court Lane, Durham, and in any case not later than Monday, 4th September, 1950.

J. K. HOPE,

Clerk of the County Council.

Shire Hall, Durham.

2nd August, 1950.

## METROPOLITAN BOROUGH OF SOUTHWARK.

### PERMANENT APPOINTMENTS—BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited from suitably qualified persons for the following permanent appointments:—

(a) ARCHITECTURAL ASSISTANT. Grade A.P.T. VII (£665×£25-£740; less £10 under 26 years).

Applicants must be Associates of the Royal Institute of British Architects or possess an equivalent qualification. The person appointed will be required to act as leader of a design group engaged upon various schemes.

(b) ASSISTANT QUANTITY SURVEYOR. Grade A.P.T. III (£480×£15-£525; less £10 if under 26 years).

Applicants must have passed the Intermediate Examination of the Royal Institute of Chartered Surveyors or possess an equivalent qualification. The duties are in connection with working up quantities for various schemes.

The appointments are subject to the Council's Conditions of Service, to the provisions of the Shoreditch and Other Metropolitan Borough Councils (Superannuation) Acts, 1922-37, to the passing of a medical examination, and to one month's notice on either side.

The Council cannot provide or assist in the provision of housing accommodation for successful applicants.

Application forms obtainable from me should be returned, endorsed with the appropriate position, not later than noon on Monday, 4th September, 1950.

Canvassing in any form will disqualify.

D. T. GRIFFITHS,

Town Clerk.

Southwark Town Hall, Walworth Road, S.E.17.

8th August, 1950.

## COUNTY BOROUGH OF EAST HAM.

### BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited for the undermentioned appointments:—

SENIOR ARCHITECTURAL ASSISTANT (Grade A.P.T. VI). Salary £596 to £660 per annum.

ENGINEERING ASSISTANT (Grade A.P.T. V). Salary £520 to £570 per annum.

ESTIMATOR (Building Works) (Grade A.P.T. VI). Salary £520 to £570 per annum.

The appropriate London weighting is paid in addition to the above salaries, and salaries in excess of the minima of the grades may be paid according to the qualifications and experience of successful candidates.

The Council will be prepared to consider applications for a subsistence allowance in appropriate cases from persons appointed should they be unable to obtain suitable housing accommodation.

Full particulars of the duties, terms and conditions of appointment and form of application (which must be returned by Monday, 4th September, 1950) may be obtained from the undersigned.

Canvassing will disqualify.

H. A. EDWARDS,

Town Clerk.

Town Hall, East Ham, E.6.

## BOROUGH OF POOLE.

### APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the post of Architectural Assistant (Education), in the Borough Engineer's Department, at a salary in accordance with Grade V of the A.P.T. Division of the National Scale of Salaries (£520-£570). Further particulars of the appointment, together with forms of application, may be obtained from the undersigned, to whom completed applications should be forwarded by the 7th day of September, 1950.

WILSON KENYON,

Town Clerk.

Town Clerk's Office, Poole.

## DENBIGHSHIRE COUNTY COUNCIL.

### COUNTY ARCHITECT'S DEPARTMENT.

The above County Council invites applications for the under-mentioned appointments in the County Architect's Department, Wrexham, viz:—

(a) ONE ASSISTANT ARCHITECT. A.P.T. Division, Grade VI.

Salary £595-£660 per annum.

Preference will be given to Associates of R.I.B.A.

Applicants must have had a thorough training in architectural design and construction of Modern School buildings, and other works carried out by Local Authorities.

(b) ONE ASSISTANT ARCHITECT. A.P.T. Division, Grade V.

Salary £520-£570 per annum.

Preference will be given to Members of R.I.B.A. or Registered Architects.

Applicants must have had sound experience in Architectural design and in the preparation of working drawings, with full understanding of Modern School construction.

(c) TWO JUNIOR ASSISTANT ARCHITECTS. A.P.T. Division, Grade III.

Salary £450-£495 per annum.

Preference will be given to applicants who have passed the Intermediate R.I.B.A. Examination.

Applicants must be capable of preparing working drawings and details for modern buildings.

(d) ONE SPECIFICATION WRITER. A.P.T. Division, Grade IV.

Salary £480-£525 per annum.

Applicants for post (d) must have had Architectural and Quantity Surveying experience and possess a thorough knowledge of current Building Practice and Materials. They must be fully capable of preparing detailed Specifications for Building and Painting Works of all descriptions in connection with County Council properties, and be able to prepare enquiries and deal with Provisional Sum Items in connection with new building projects. The successful applicant will also be required to assist generally in the Quantity Surveyor's Department.

The appointments will be subject to termination of one month's notice in writing on either side, and also to the provisions of Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination and to reside in such place in the County as the County Council may direct.

Applications, giving age, qualifications and particulars of present and previous appointments, and accompanied by copies of three recent testimonials, to be sent to me, the undersigned, in a sealed envelope, endorsed with a description of the post applied for, by not later than the 31st day of August, 1950.

W. E. BUFTON,

Clerk of the County Council.

County Offices, Ruthin.

4th August, 1950.

## COUNTY BOROUGH OF GREAT YARMOUTH.

### EDUCATION COMMITTEE.

#### SCHOOL ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointment on the permanent staff in the Department of the Schools Architect, Mr. F. Jackson, A.R.I.B.,

JUNIOR ASSISTANT ARCHITECT. A.P.T. Grade III (£450×£15-£495). Candidates should have had good architectural training and general experience, and be capable of preparing detail and working drawings.

Previous local authority experience is not essential. Appointment will be terminable by one month's notice on either side, and is subject to the provisions of the Local Government Superannuation Act, 1937.

Canvassing will be deemed a disqualification, and candidates must disclose any relationship to any member of or holder of any senior office under the Council. Candidates who fail to do so will be disqualified or if appointed liable to dismissal without notice.

Applications, stating age, qualifications, experience, and giving details of past and present appointments, together with copies of two testimonials, must be delivered to the undersigned not later than the 7th September, 1950.

D. G. FARROW,

Chief Education Officer.

Education Office, 22, Euston Road.

Great Yarmouth.

11th August, 1950.

## STEVENAGE NEW TOWN.

Applications are invited from suitably qualified persons for the temporary appointment of CLERK OF WORKS, to supervise the erection of 112 flats and ancillary buildings at Stony Hall, Sish Lane, Stevenage (Architects, Messrs. Yorke, Rosenberg and Mardell), at a salary of £600 per annum.

The duration of the contract is likely to be 18 months to 2 years, and the appointment will be terminable by one month's notice on either side. While in the first instance this appointment is for the duration of one contract only, it may lead to a permanent appointment for a suitable candidate.

The selected candidate may at his own option contribute to a Local Government Superannuation Fund, or an Assurance Scheme.

Relationship to any member of the Corporation or staff must be disclosed by applicants.

Housing accommodation for married applicants should be available early next year, but no promise or assurance can be given in this connection.

Canvassing, directly or indirectly, of members or staff of the Corporation will disqualify.

Forms of application may be obtained from the Chief Administrative Officer, Stevenage Development Corporation, Aston House, Aston, near Stevenage, and should be returned not later than 1st September, 1950.

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## COUNTY BOROUGH OF SMETHWICK. BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments at salaries in accordance with the National Scales as indicated:—

(a) ARCHITECTURAL ASSISTANT. A.P.T., Grade VI, £595-£660.

(b) ARCHITECTURAL ASSISTANT. A.P.T., Grade V, £510-£570.

(c) CHIEF TOWN PLANNING ASSISTANT. A.P.T., Grade VII, £635-£710.

(d) TOWN PLANNING ASSISTANT. A.P.T., Grade IV, £480-£525.

(e) QUANTITY SURVEYOR. A.P.T., Grade VI, £595-£660.

(f) SENIOR ENGINEERING ASSISTANT. A.P.T., Grade VI, £595-£660.

Candidates should possess, in addition to general experience of the duties applicable to the several appointments, the particular experience and qualifications specified below:—

(a) Design of houses, flats and other Municipal buildings, preference being given to Members of the Royal Institute of British Architects.

(b) Comprehensive experience of architectural work and suitable qualifications.

(c) Experience of survey, design and development, and Corporate Membership by examination of the Town Planning Institute and/or the Institution of Civil or Municipal Engineers.

(d) Preference will be given to candidates who have passed the Intermediate Examination of the Town Planning Institute.

(e) Preparation of Bills of Quantities, estimates for building works, checking of Interim Valuations, and settlement of Final Accounts. Candidates must be suitably qualified.

(f) Candidates should be Corporate Members by examination of the Institution of Municipal Engineers and/or the Institution of Civil Engineers.

The appointments are subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Act, 1937, the passing by the successful candidates of medical examinations, and to termination by one month's notice on either side.

Applications, suitably endorsed, stating age, marital condition, details of education and qualifications, present and previous appointments, and particulars of experience, together with copies of two recent testimonials, should be addressed to the Borough Engineer and Surveyor, The Council House, Smethwick 40, to reach him not later than 7th September, 1950.

E. L. TWYBCROSS,

Town Clerk.

The Council House, Smethwick, 40.

8th August, 1950.

## LONDON COUNTY COUNCIL.

### ARCHITECT'S DEPARTMENT.

Applications are invited for positions of ARCHITECT, Grade III (£550-£700) and TECHNICAL ASSISTANT (up to £580) for work on new housing, schools, and other public buildings. The positions are superannuable. Candidates for Grade III positions should possess professional qualifications. Application forms from the Architect (A.R./P.8), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (384)

3914

## BOROUGH OF CHELMSFORD.

### SENIOR ARCHITECTURAL ASSISTANT (GRADE A.P.T. VI).

Applications are invited for the appointment of Senior Architectural Assistant, at a salary in accordance with Grade A.P.T. VI. Applicants must be suitably qualified and experience in the design and construction of houses and flats, and have had administrative experience.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and will be terminable by one month's notice on either side. The selected applicant will be required to pass a medical examination. A house will be available for the successful applicant, if required.

Applications, stating age, qualifications, experience, present and previous appointments (with salaries), together with the names and addresses of two referees, are to be delivered to the Borough Engineer, Surveyor and Architect, Municipal Offices, Duke Street, Chelmsford, not later than Wednesday, 6th September, 1950. Applicants must state whether to their knowledge they are related to any member of or holder of any office under the Council.

B. A. FRANCIS,

Town Clerk.

Municipal Offices, Duke Street, Chelmsford.

18th August, 1950.

## COUNTY BOROUGH OF MIDDLESBROUGH.

### EDUCATION COMMITTEE.

#### ARCHITECTURAL STAFF.

Applications are invited for posts of ASSISTANT ARCHITECTS and ARCHITECTURAL ASSISTANTS, in the Education Architect's Sub-Department, of the Education Offices, offering excellent opportunities in the design and construction of modern school buildings.

The posts are at grades of salary within the range A.P.T. IV, to A.P.T. VI, and in the case of a senior appointment housing accommodation can, if necessary, be provided by the Authority.

Forms of Application and Conditions of Service may be obtained from the Director of Education, Education Offices, Woodlands Road, Middlesbrough, to whom they should be returned not later than Monday, 11th September, 1950.

R. C. PARR,

Town Clerk.

652



**BOROUGH OF REDCAR.  
APPOINTMENT OF ARCHITECTURAL  
ASSISTANT.**

Applications are invited for the above-mentioned permanent appointment on the staff of the Borough Engineer, Surveyor and Water Engineer, at a salary in accordance with Grade A.P.T., III (£450-£495). The appointment will be subject to the terms of the National Joint Council's Scheme of Conditions of Service, to the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applicants should be experienced in the preparation of designs, working drawings, specifications, quantities and estimates for Architectural and Housing Works, and preference will be given to those who have passed the Intermediate Examination of the Royal Institute of British Architects.

Applications, stating age, qualifications and experience, and accompanied by three copies of recent testimonials, and appropriately endorsed, are to be delivered to R. Hilton, Esq., A.M.I.C.E., Borough Engineer, Municipal Buildings, Redcar, Yorks., not later than noon on Saturday, 2nd September, 1950.

Canvassing, directly or indirectly, will disqualify.

**H. CALDWELL,**  
Town Clerk.

Municipal Buildings, Redcar.  
August, 1950. 657

**SHEFFIELD REGIONAL HOSPITAL BOARD.**  
Applications are invited for the following permanent appointments in the Architectural Division of the Headquarters' Staff of the Board:—

(a) SENIOR ASSISTANT ENGINEER. Salary £750-£900 per annum. Applicants should be Members of the Institute of Mechanical Engineers or the Institute of Heating and Ventilating Engineers, and have a wide experience of the design and operation of hospital hot water, ventilating, laundry and kitchen installations, including the preparation of technical reports and the supervision of contracts.

(b) SENIOR ASSISTANT ARCHITECT. Grade A.P.T., VIII, £6-5×£25-£760 per annum. Applicants must be Members of the Royal Institute of British Architects and have had experience in the design and construction of hospitals and be capable of carrying out and advising on large building contracts.

(c) ASSISTANT ARCHITECT. Grade V, £520-£570 per annum.

Applicants must have a good, general experience and ability in design and construction. Preference will be given to Members of the Royal Institute of British Architects.

(d) ASSISTANT QUANTITY SURVEYOR. Grade V, £520-£570 per annum.

Applicants should preferably be Members of the Royal Institute of Chartered Surveyors (Quantities Sub-Section), and be experienced in the preparation of detailed estimates, Bills of Materials, Specifications, valuation and settlement of accounts.

Appointments will be subject to the National Health (Superannuation) Regulations, 1947, and will be terminable by one month's notice. Applications, stating age, qualifications, present position and past experience, together with the names of three referees, should be addressed to the Secretary, Sheffield Regional Hospital Board, Fulwood House, Old Fulwood Road, Sheffield, 10, not later than 18th September, 1950. 656

**COUNTY BOROUGH OF WOLVERHAMPTON.**

Applications are invited for appointment as ARCHITECTURAL ASSISTANT in the office of the Superintendent of Educational Buildings. Salary in accordance with Grade A.P.T., II (£420×£15 to £465 per annum).

Applicants should have had experience in an Architect's office and in routine drawing office duties, and should be capable of preparing working drawings and details, specifications and surveys.

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

Applications, stating age, present salary and position, qualifications and experience, accompanied by copies of two testimonials and the names and addresses of two persons to whom reference can be made, should be addressed to the Director of Education, Education Offices, Wolverhampton, and endorsed "Architectural Assistant." Latest date for receiving applications, Thursday, 31st August.

**J. BROCK ALLEN,**  
Town Clerk.

651

**THE WEST OF SCOTLAND AGRICULTURAL COLLEGE.**

The Governors invite applications for the newly created post of ASSISTANT ADVISORY OFFICER in the Farm Buildings Department.

Candidates should have suitable architectural or surveying qualifications, with some experience of Farm Buildings technique.

The person appointed will be eligible for admission to a superannuation scheme. Salary scale, Grade III (Int.), £485×£225 (approx.)—£780.

Conditions of appointment and application forms are obtainable from the undersigned, with whom applications should be lodged not later than 9th September, 1950.

**N. B. BAIN,**  
Secretary.

6, Blythswood Square, Glasgow. 664

**ROYAL BOROUGH OF KINGSTON-UPON-THAMES.**

**BOROUGH SURVEYOR'S DEPARTMENT.  
APPOINTMENT OF ARCHITECTURAL ASSISTANT.**

Applications are invited for the appointment of an Architectural Assistant, at a salary in accordance with Grade VA of the A.P.T. Division of the National Scale of Salaries, £550, rising by three annual increments of £20 to £610, plus London weighting (£30). Preference will be given to candidates who are Associates of the Royal Institute of British Architects.

The appointment is a permanent one and will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination. The appointment is subject to one month's notice on either side.

Applications, stating age, qualifications and experience, and accompanied by copies of not more than three recent testimonials, must be sent in a sealed envelope endorsed "Architectural Assistant," so as to reach the undersigned not later than noon 14th September, 1950.

**A. W. FORSDIKE,**  
Town Clerk.

Guildhall, Kingston-upon-Thames. 669

**COUNTY COUNCIL OF DURHAM.  
COUNTY PLANNING DEPARTMENT.**

Applications are invited for the following permanent appointments in the County Planning Department:—

(a) TWO PLANNING ASSISTANTS. Grade Va, A.P.T. (£550-£610).

(b) TWO PLANNING ASSISTANTS. Grade III, A.P.T. (£450-£495).

Applicants for—

(a) Must have passed the Final Examination of the Town Planning Institute or some other recognised professional institute.

(b) Must have qualifications to carry out research work and preparation of specialised reports in connection with the County Development Plan.

The appointments are subject to such conditions of the National Scheme of Service as have been adopted by the Council; to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination by the Council's Medical Officer; to termination by one calendar month's notice in writing on either side. Canvassing, either directly or indirectly, will disqualify, and applicants must disclose, in writing, whether to their knowledge they are related to any member or senior officer of the Council.

Applications, stating age, whether married or single, and giving full particulars of qualifications, experience, and present salary, and the names of three persons to whom reference may be made, must be delivered to the County Planning Officer, 10, Church Street, Durham, by the 2nd September, 1950.

**J. K. HOPE,**  
Clerk of the County Council.

Shire Hall, Durham. 664

**ST. PANCRAS BOROUGH COUNCIL.  
APPOINTMENT OF ASSISTANT ARCHITECT (GRADE VII).**

Applications are invited for the above appointment in the Borough Engineer and Surveyor's Department, on a salary scale of £635×£25-£710, plus London weighting, according to age. Candidates should be Associate Members of the Royal Institute of British Architects or Registered Architects. Forms of application, which may be obtained from the undersigned on receipt of a stamped addressed foolscap envelope, must be received by the 9th September, 1950.

**R. C. E. AUSTIN,**  
Town Clerk.

St. Pancras Town Hall, Euston Road, N.W.1. 671

**HAMPSHIRE COUNTY COUNCIL.  
PLANNING DEPARTMENT.**

Applications are invited for the post of AREA PLANNING OFFICER, in the County Planning Officer's Department. The officer will be in charge of an outstation at Basingstoke, and under the general direction of the County Planning Officer, and will be responsible for the preparation of the Development Plan and for Development Control in the North-East Area of the County. The salary scale is £850-£1,000 per annum.

The qualifications required are Corporate Membership of the Town Planning Institute, and preferably also Corporate Membership of the Royal Institute of British Architects, or the Institution of Civil Engineers or the Royal Institution of Chartered Surveyors.

Previous experience in a similar capacity in a Government or Local Government Planning Department would be an advantage.

The appointment is pensionable and is subject to a satisfactory medical report. The officer appointed will be required to keep a car and will receive travelling allowance on the County scale for the time being in force.

Applications, stating age, education, qualifications, previous experience, and present position, together with a copy of one testimonial and the names and addresses of two persons to whom reference may be made as to professional ability and character, and endorsed "Area Planning Officer," must reach the County Planning Officer, Litton Lodge, Clifton Road, Winchester, not later than 15th September, 1950.

**G. A. WHEATLEY,**  
Clerk of the County Council.

The Castle, Winchester. 667

**COUNTY BOROUGH OF DONCASTER.  
EDUCATION COMMITTEE.**

**EDUCATION ARCHITECT'S SECTION.**

Applications are invited for an ARCHITECTURAL ASSISTANT in the above section, at a commencing salary of £595 per annum, rising by annual increments of £20, £20×£25 to £660 per annum (A.P.T., Grade VI). Housing accommodation will be available if required.

Applicants should have passed the Final Examination of the R.I.B.A. or its equivalent, and should have had some practical office experience, preferably of contemporary school buildings.

The successful applicant will be appointed to the staff of the Chief Education Officer and work under the direction of the Education Architect (W. W. Thomas, A.R.I.B.A.).

The appointment will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937. The successful applicant will be required to pass a medical examination.

Applications, suitably endorsed, giving age, qualifications, past and present appointments, with full details of experience, together with the names of two referees, must reach the undersigned not later than one month after the appearance of this advertisement.

**V. H. HOSKIN,**  
Chief Education Officer.

Education Office, Doncaster. 672

August, 1950.

**IMPERIAL WAR GRAVES COMMISSION.**

Applications are invited from suitably qualified candidates for the post of SENIOR SUPERINTENDENT OF WORKS, Tunisia Area, in the Western Mediterranean District.

All candidates should be under 50 years of age, have had experience in carrying out constructional work abroad, and have some knowledge of the country. A knowledge of French is desirable, and membership of the Institution of Civil Engineers or Royal Institute of British Architects or Royal Institution of Chartered Surveyors would be an advantage. Salary scale £625×£25-£750 per annum, plus Foreign Service allowance, at present at the rate of about £455 per annum for a married man accompanied by his wife, £435 per annum for a married man unaccompanied by his wife, or £230 per annum for a single man.

Applications to be addressed to Appointments Officer, Imperial War Graves Commission, Wooburn House, Wooburn Green, Bucks. 688

**HEMEL HEMPSTEAD DEVELOPMENT CORPORATION.**

**ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointments:—

(1) SENIOR TECHNICAL ASSISTANT.

Salary in the scale £550×£30 to £750, according to age and experience. Applicants should have had experience in quantities and builders' pricing, and be capable of preparing bills of quantities for housing and large buildings. Associate Membership of the Royal Institute of Chartered Surveyors (Quantities) will be an advantage.

The appointment will entail supervision of costs, measurement estimates, and general accounting for a large Architects' department.

(2) ASSISTANT ARCHITECTS.

Salary in the scale rising to £350 at age 23, or £400×£25 to £525, according to age and experience. Preference will be given to applicants who have passed the Intermediate Examination of the R.I.B.A. or T.P.I.

(3) CLERK OF WORKS.

Salary in the scale £460×£20 to £600, according to age and experience. Applicants must have had extensive experience in (a) large housing contracts, or (b) steel construction and re-inforced concrete.

The appointments will be subject to the Development Corporation's staff rules and conditions of service, in particular to one month's notice of termination on either side.

Contributory superannuation with an opportunity of entering or continuing in Local Government Superannuation Fund will be provided.

It is hoped to provide housing accommodation in due course to the successful applicants, if required.

Applications, giving full particulars of age, qualifications and experience, together with names of two persons to whom reference may be made, and endorsed "Architect," should reach the undersigned not later than 8th September, 1950.

**W. O. HART,**  
General Manager.

Westbrook Hay, Hemel Hempstead, Herts. 687

**BOROUGH OF BILSTON.**

Applications are invited for the appointment of SENIOR ARCHITECTURAL ASSISTANT in the Borough Architect's Department.

Salary A.P.T., Grade VI (£595-£660).

The appointment will be terminable by one month's notice on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937, and the passing of a medical examination.

Housing accommodation may be made available if required.

Applications, stating age, professional qualifications and experience, with not more than three testimonials (copies only), to be sent to the Borough Architect, Mr. W. G. Lofthouse, M.B.E., A.R.I.B.A., 20, Wellington Road, Bilston, not later than Wednesday, 13th September, 1950.

**A. M. WILLIAMS,**  
Town Clerk.

Town Hall, Bilston. 686

16th August, 1950.

**CITY OF BRADFORD.  
CITY ENGINEER AND SURVEYOR'S OFFICE.  
APPOINTMENT OF TECHNICAL STAFF  
(PLANNING AND ARCHITECTURAL).**

Applications are invited for the following appointments in accordance with the National Scales of Salaries, on the grades indicated:—

(a) Post No. 15: SENIOR PLANNING ASSISTANT. A.P.T., VII. £635-£710.

(b) Post No. 16: SENIOR PLANNING ASSISTANT. A.P.T., VI. £595-£660.

(c) Post No. 122: ARCHITECTURAL ASSISTANT. A.P.T., VI. £595-£660.

(d) Post No. 55: JUNIOR PLANNING ASSISTANT. A.P.T., I-IV. £390-£525.

(e) Post No. 57: JUNIOR PLANNING ASSISTANT. A.P.T., I-IV. £390-£525.

Where more than one grade is shown for any post, successful candidates will be appointed on the appropriate grade, depending on their qualifications and experience, and strictly in accordance with the National Scheme of Conditions of Service.

In addition to general planning, engineering or architectural experience, applicants for the various posts should preferably have had particular experience as shown below, should preferably hold a recognised engineering, architectural or surveying qualification, and must hold the qualifications indicated.

(a) Must be A.M.T.P.I., should preferably hold an engineering degree, and must be A.M.I.C.E. or A.M.I.Mun.E. In addition to engineering and survey and research experience they should have taken a responsible part in the preparation of development plans.

(b) Must be A.M.T.P.I. and A.R.I.B.A., and in addition to architectural and general planning experience should have taken a responsible part in the preparation of development plans.

(c) Must be A.R.I.B.A. and should have had experience in the design of houses, flats and shops and the layout of housing estates. They must have sound design ability and be experienced in the preparation of working and detail drawings.

(d) Control of Development. Inter. T.P.I. (Grades III and IV).

(e) Preparation of Development Plans. Inter. T.P.I. (Grades III and IV).

The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Intending applicants must apply to the City Engineer and Surveyor for form of application (quoting post No.), which form, together with details of experience and accompanied by not more than three testimonials, should be received by the undersigned not later than the 7th September, 1950.

Canvassing will disqualify, and an applicant who is related to a member of, or a senior officer of, the Council must disclose the fact in his application.

No assistance can be given in the provision of housing accommodation.

W. H. LEATHAM,

Town Clerk.

Town Hall, Bradford. 691

**BOROUGH OF LEYTON.  
BOROUGH ENGINEER AND SURVEYOR'S  
DEPARTMENT.**

**APPOINTMENT OF TWO SENIOR ARCHITECTURAL ASSISTANTS AND ONE SECOND GENERAL ENGINEERING ASSISTANT.**

Applications are invited for the established appointments of:—

(a) TWO SENIOR ARCHITECTURAL ASSISTANTS (Grade A.P.T. VI).

(b) ONE SECOND GENERAL ENGINEERING ASSISTANT (Grade A.P.T., IV).

Candidates must possess suitable qualifications.

Canvassing will be a disqualification, and candidates must disclose in their application whether they are related to any member or senior officer(s) of the Council.

Applications, stating age, details of qualifications and experience, with copies of three recent testimonials, should be delivered to the Borough Engineer and Surveyor, Town Hall, Leyton, E.10, not later than 31st August, 1950.

D. J. OSBORNE,

Town Clerk.

Town Hall, Leyton, E.10.

14th August, 1950. 684

**BOROUGH OF SCUNTHORPE.  
BOROUGH SURVEYOR'S DEPARTMENT.  
TECHNICAL STAFF.**

Applications are invited for the following permanent appointment:—

ASSISTANT ARCHITECT, Grade III. £450-£495.

Housing accommodation will be provided if necessary.

Applicants for the appointment should have passed the Intermediate of the Royal Institution of Chartered Surveyors, and have had experience in the preparation of plans and specifications for general building construction work.

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

Applications, stating age, present appointment, qualifications and experience, and giving names of two persons to whom reference may be made, should be delivered, suitably endorsed, to reach the undersigned not later than Tuesday, the 12th September, 1950.

W. P. ERRINGTON,

Town Clerk.

Municipal Offices, 34, High Street, Scunthorpe.

14th August, 1950. 679

**CITY OF STOKE-ON-TRENT.  
CITY ARCHITECT'S DEPARTMENT.**  
Applications are invited from suitably qualified persons for the following appointments to the permanent staff:—

(a) SENIOR ASSISTANT ARCHITECTS. Salary A.P.T. Div., Grade VII. £635-£710.

(b) ASSISTANT ARCHITECTS. Salary A.P.T. Div., Grade VI. £595-£660.

(c) ARCHITECTURAL ASSISTANTS. Salary A.P.T. Div., Grade III. £450-£495.

(d) ASSISTANT QUANTITY SURVEYORS. Salary A.P.T. Div., Grade VI. £595-£660.

The selected applicants will be required to pass a medical examination, and the appointments will be subject to the provisions of the Local Government Superannuation Act, 1937.

Previous experience of Local Government work is not essential.

Suitable housing accommodation can be made available to the successful candidates for appointments (a), (b) and (d).

Applications, giving date of birth, particulars of training, experience, etc., with copies of two recent testimonials, should be received by J. R. Pigott, F.R.I.B.A., City Architect, Kingsway, Stoke-on-Trent, endorsed with the title of the appointment applied for, not later than Tuesday, 12th September, 1950.

HARRY TAYLOR,

Town Clerk.

Town Hall, Stoke-on-Trent.

17th August, 1950. 696

**METROPOLITAN BOROUGH OF  
PADDINGTON.  
HOUSING DEPARTMENT—ARCHITECTURAL  
SECTION.**

Applications are invited for the under-mentioned appointments, which are subject to the National Joint Council's Service Conditions, the Council's Superannuation Acts, and to one month's notice on either side.

(a) ASSISTANT ARCHITECT (ONE). A.P.T. VI/VII (£595-£710 p.a., plus London "weighting").

Candidates must be Registered Architects, preferably Associates of the Royal Institute of British Architects, and have had experience in architectural design and construction of general Municipal work, including multi-story flats, or similar experience with private firms of Architects.

(b) JUNIOR ARCHITECTURAL ASSISTANT. A.P.T., I (£390-£435 p.a., plus London "weighting").

Applicants should be preparing for the Intermediate Examination of the Royal Institute of British Architects, be used to preparing working and detail drawings, and be good draughtsmen. The commencing salary will, in each case, be at an appropriate point within the grades indicated, dependent upon the qualifications and experience of the successful candidates.

For appointment (a), forms of application and conditions of appointment are obtainable from the undersigned.

For appointment (b) there is no application form, but candidates must indicate their age, qualifications, present and past appointments (with dates and salaries), experience, and names of three referees.

Last day for receipt of applications (both appointments) is Saturday, 16th September, 1950.

W. H. BENTLEY,

Town Clerk.

Town Hall, Paddington, W.2.

24th August, 1950. 701

**BOROUGH OF BARKING.  
BOROUGH ENGINEER AND SURVEYOR'S  
DEPARTMENT.**

Applications are invited for the position of TOWN PLANNING ASSISTANT, Grade A.P.T. V, £520-£570 per annum, plus appropriate London weighting.

Candidates must have had Town Planning experience and the possession of suitable qualifications will be an advantage.

Forms of Application and Conditions of Appointment may be obtained from the Borough Engineer and Surveyor, Town Hall, Barking, Essex, and should be returned to the undersigned not later than the 11th September, 1950.

E. R. FARR,

Town Clerk.

Town Hall, Barking.

14th August, 1950. 700

**DERBYSHIRE COUNTY COUNCIL.  
COUNTY PLANNING DEPARTMENT.  
APPOINTMENT OF PLANNING ASSISTANT  
(A.P.T., Grade IV).**

Applications are invited from those with experience of statutory planning or related work for a permanent appointment of Planning Assistant, A.P.T., Grade IV, in the Area Planning Office at Bakewell.

Candidates should have passed the Intermediate Examination of the Town Planning Institute and/or the Royal Institute of British Architects.

The appointment will be subject to medical examination, the Council's General Conditions of Service, and the Local Government Superannuation Act, 1937.

Canvassing, either directly or indirectly, will be deemed a disqualification, and candidates are required to disclose whether or not they are to their knowledge related to any member or senior official of the Council.

Applications, stating age, qualification and experience, accompanied by one recent testimonial and the names of two persons to whom reference can be made, should be addressed to and reach the County Planning Officer, 31, Bold Lane, Derby, not later than 4th September, 1950.

MAURICE J. HELLIER,

County Planning Officer.

680

**TIMBER DEVELOPMENT ASSOCIATION.  
LTD.  
APPOINTMENT OF A STRUCTURAL ENGINEERING ASSISTANT IN THE RESEARCH AND DESIGN DEPARTMENT OF THE ASSOCIATION.**

Applications are invited for the appointment of a Structural Engineering Assistant, at a salary not exceeding £600 per annum. The successful applicant will be required to join the Association's Staff Superannuation Scheme if invited to do so.

Applicants should be qualified Structural Engineers who have had experience in the design of framed structures. The successful candidate will be engaged upon the design and development of timber structures, but, in the first instance, a knowledge of timber is not essential.

Applications, stating age, qualifications, experience, and salary required, should be addressed to the Director, Timber Development Association, Ltd., 75, Cannon Street, London, E.C.4, and must be received not later than Friday, 8th September, 1950.

695

**COUNTY BOROUGH OF WOLVERHAMPTON.  
TOWN PLANNING STAFF.**

Applications are invited for the following appointment in the Department of the Borough Engineer and Planning Officer:—

SENIOR PLANNING ASSISTANT, Grade A.P.T., IV or V (£480-£525 or £520-£570), according to qualifications and experience.

Applicants should have had good general planning experience, and preference will be given to a candidate who holds an appropriate qualification.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, to the passing of the necessary medical examination, and to one month's notice on either side.

Housing accommodation will be made available to the successful applicant, if required.

Applications, together with one testimonial and two names for reference, should reach the undersigned in suitably endorsed envelopes not later than Monday, 4th September.

J. BROCK ALLON,

Town Clerk.

Town Hall, Wolverhampton.

17th July, 1950. 699

**HINCKLEY URBAN DISTRICT COUNCIL.  
SURVEYOR'S DEPARTMENT.  
APPOINTMENT OF SECOND ARCHITECTURAL ASSISTANT.**

Applications are invited for the above appointment at a salary within Grade A.P.T., III, or Grade A.P.T., IV, according to experience and qualifications.

The person appointed will be engaged mainly in preparing designs, specifications, etc., for houses and flats.

The appointment will be subject to the N.J.C. Scheme of Conditions of Service, to the provisions of the Local Government Superannuation Act, 1937, and will be terminable by the giving of one month's notice on either side.

Applications, stating age, experience, etc., accompanied by copies of two testimonials, should reach the undersigned not later than 4th September, 1950.

Canvassing in any form will be deemed a disqualification, and applicants must disclose relationship to any member or senior officer of the Council.

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

J. G. S. TOMPKINS,

Clerk of the Council.

16, Station Road, Hinckley, Leicestershire.

12th August, 1950. 693

**BRACKNELL DEVELOPMENT CORPORATION  
(Bracknell, Berks.) require a MODEL  
MAKER on the Chief Architect's Staff.**

Applicants must have had a good and varied experience in architectural and topographical model making, and be able to translate drawings and develop all types of reproductions. Precision work will often be necessary, good draughtsmanship is essential, and architectural training will be considered an advantage.

The post will be temporary in the first place, but there is the possibility that after a period of satisfactory service the post may be permanent and superannuable.

Applications, giving full particulars of the candidate's age, education and experience, salary required, and the names of two persons to whom reference can be made, must reach the General Manager, Bracknell Development Corporation, Farley Hall, Binfield, Bracknell, Berks., on or before 9th September, 1950, marking the envelope "Model Maker."

685

**CITY OF PLYMOUTH.  
APPOINTMENT OF CITY ARCHITECT.**

Applications are invited for the appointment of City Architect, at a salary of £1,600, rising to £1,750 per annum. The appointment will be terminable by three months' notice on either side, is subject to the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

Forms of application and particulars of the terms and conditions and duties of the office may be obtained from me. Applications must reach me not later than the 16th September, 1950.

Canvassing, directly or indirectly, will disqualify, and applicants must disclose in writing if they are related to any member or senior officer of the Council.

COLIN CAMPBELL,

Town Clerk.

Town Clerk's Office, Pounds House, Plymouth.

25th August, 1950. 698



# LEEDS REGIONAL HOSPITAL BOARD.

Applications are invited for the post of SENIOR ASSISTANT ARCHITECT on the Headquarters Staff of the Board. Salary in accordance with Grades A.P.T., VII-VIII, £635-£760 per annum. Candidates, who must be registered Architects with recognised architectural qualifications, must have had considerable experience in hospital design and construction.

The appointment will be subject to the National Health Service (Superannuation) Regulations, 1950, to such Terms and Conditions of Service as may be laid down from time to time, and the successful candidate (if not already in the National Health Service) will be required to pass a medical examination. The appointment will be terminable by one calendar month's notice on either side.

Applications, stating age, qualifications, experience and present salary, together with the names of two referees, should be forwarded to the Secretary, 29/31, Eastgate, Leeds, 2, by not later than Saturday, 16th September, 1950.

Canvassing in any form, either directly or indirectly, will disqualify.

## Partnership and Financial

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

**PARTNERSHIP.**—Architect in private practice in North of Ireland urgently requires Partner for small but rapidly growing practice; must be qualified and be prepared to pay a sum for partnership. Box 649.

**ECONOMICS GRADUATE.** 5 years' town planning, national and local government experienced industrial and social research, wishes contact interested Architect with view to Partnership, planning consultants; could provide premises; town planning qualifications; keen interest landscape architecture. Full particulars Box 666.

**OLD-ESTABLISHED** Practice in two Somerset towns has Partnership for Sale. Box 676.

## Competition

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**COVENTRY CATHEDRAL. ARCHITECTURAL COMPETITION.**

The Reconstruction Committee invite architects who are British subjects practising in the United Kingdom, the British Commonwealth and Eire, to submit designs in competition for a proposed new Cathedral, Chapel of Unity and Christian Service Centre to be erected on a site in the centre of Coventry.

The Royal Institute of British Architects have nominated Sir Percy Thomas, LL.D., D.L., P.P.R.I.B.A., Mr. Edward Maufe, R.A., M.A. (Oxon), LL.D., F.R.I.B.A., and Mr. Howard

Robertson, M.C., A.R.A., F.R.I.B.A., S.A.D.G., to act as Assessors. Premiums of £2,000, £1,500 and £1,000 will be paid to the authors of the designs placed 1st, 2nd and 3rd, respectively.

The Schedule of Conditions and particulars of site, etc., will be ready for issue about the beginning of October, and in the meantime intending competitors should make application to Captain N. T. Thurston, M.C., Secretary to the Reconstruction Committee, 22, Bayley Lane, Coventry, enclosing a deposit of two guineas, which will be returned upon receipt of a bona fide design or upon the return of the Competition documents within one month of receipt of the Answers to Questions.

The latest date for application for the Conditions is 30th October, 1950, and the closing date for the receipt of designs the 2nd July, 1951.

N. T. THURSTON,

Secretary to Coventry Cathedral Reconstruction Committee.

22, Bayley Lane,  
Coventry.  
27th July, 1950.

4963

## Tenders for Contracts

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**COUNTY OF LINCOLN—PARTS OF LINDSEY.** Proposed SUPERINTENDENT'S HOUSE and TWO INSPECTORS' HOUSES, Town Hall Square, Scunthorpe.

Contractors desirous of tendering for the above Houses should submit their names to the Architects, Messrs. Charles B. Pearson & Son, F.R.I.B.A., 18, Dalton Square, Lancaster, not later than Wednesday, 30th August, 1950.

Bills of Quantities and Specification will be sent to intending Tenderers. Plans may be seen at my office during normal working hours, or at the offices of the Architects, or the Clerk of Work's Office on the site.

The acceptance of any Tender is subject to the approval of the Home Office, and the Council do not bind themselves to accept the lowest or any Tender.

HERBERT COPLAND,

Clerk of the Council.

County Offices,  
Lincoln.  
2nd August, 1950.

4984

**COUNTY BOROUGH OF READING.**

**TO BUILDERS AND CONTRACTORS.**

The Corporation of Reading invite Tenders for the works of conversion of "Warren House," St. Peter's Avenue, Caversham, into a Hostel for Aged Persons.

The General Conditions and Drawings may be inspected at the office of the Borough Architect, Town Hall, Reading, and copy of the Bills of Quantities, Form of Tender and endorsed envelope obtained on application to him, accompanied by

a cheque (made payable to the Borough Treasurer, Reading) for two guineas, which will be refunded upon the receipt of a bona fide Tender.

Tenders must be delivered to me at my office not later than 12 noon on Friday, the 15th September, 1950.

No tender will be considered unless enclosed in the endorsed envelope provided and sealed but not bearing any name or mark indicating the sender.

The Corporation do not bind themselves to accept the lowest or any tender.

G. F. DARLOW,

Town Clerk.

Town Hall, Reading.  
August, 1950.

670

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**ARCHITECTURAL ASSISTANT** required. Inter. standard, for general practice; must be good draughtsman, with experience in detailing of building work, joinery, etc. Reply, stating age, experience and salary required, to R. Jelinek-Karl, L.R.I.B.A., 22, Chancery Lane, W.C.2.

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## Architectural Appointments Wanted

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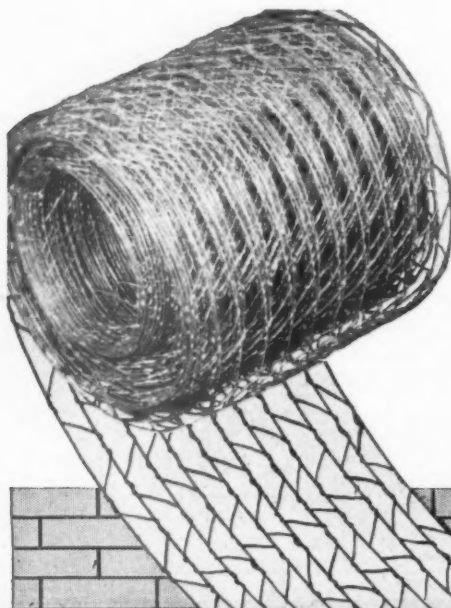
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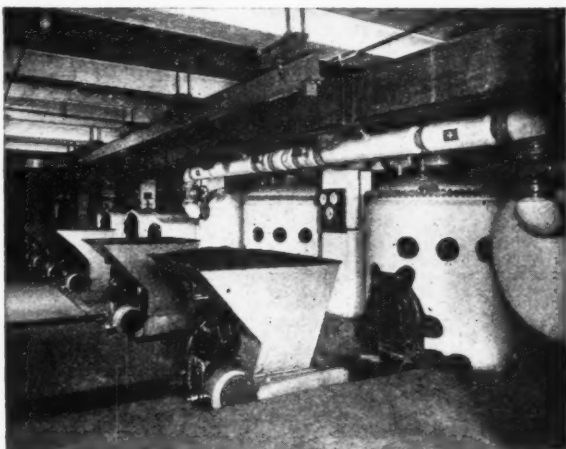
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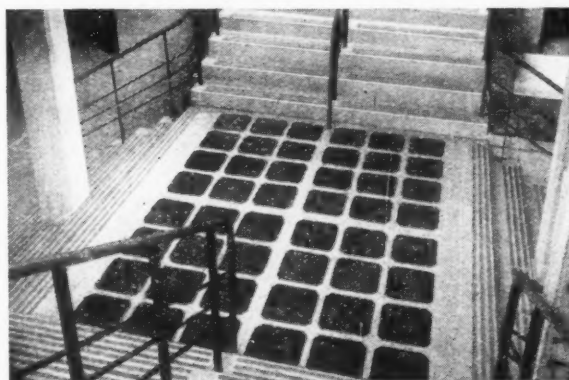
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