# ARCHITEC



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

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

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No. 30461 [VOL. 118 PRESS THE ARCHITECTURAL 9, 11 and 13, Queen Anne's Gate, Westminster, S. W. 1. 'Phone: Whitehall 0611

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IGE IHVE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1. Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.
	Sloane 3158/1601

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Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2. 7 ILA I of Arb Museum 1783

Temple Bar 4071 Strand, W.C.2. Temple Bar 4071
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Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851
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Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128
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Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.
Whitehall 7364/4175 IOB IR IRA ISE TWA LIDC

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Modern Architectural Research Group (English Branch of CIAM)
Gontran Goulden, Building Centre, 26, Store Street, W.C.1. Museum
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Ministry of Education. Curzon Street House, Curzon Street, W.1.
Ministry of Health. 23, Saville Row, W.1.
Ministry of Housing and Local Government. Whitehall, S.W.1.
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94-98, Petty France, S.W.1. Abbey 1010
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S.W.1. Abbey 1359 NPL NSA NSAS NT

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Reinforced Concrete Association. 94, Petty France, S.W.1. Abbey 4504

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Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.
Royal Society. Burlington House. Piccadilly, W.1.
Royal Society of Arts. 6, John Adam Street, W.C.2.
Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.
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Society of British Paint Manufacturers. Grosvenor Gardens House,
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Scottish National Housing. Town Planning Council.
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Society for the Protection of Ancient Buildings, 55 Great Ormond Street, W.C.1,
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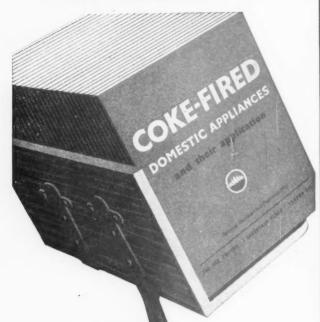
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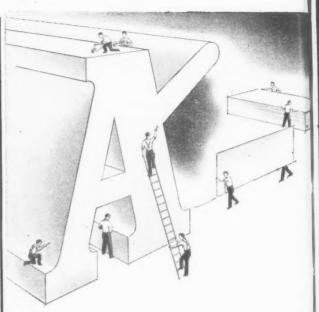
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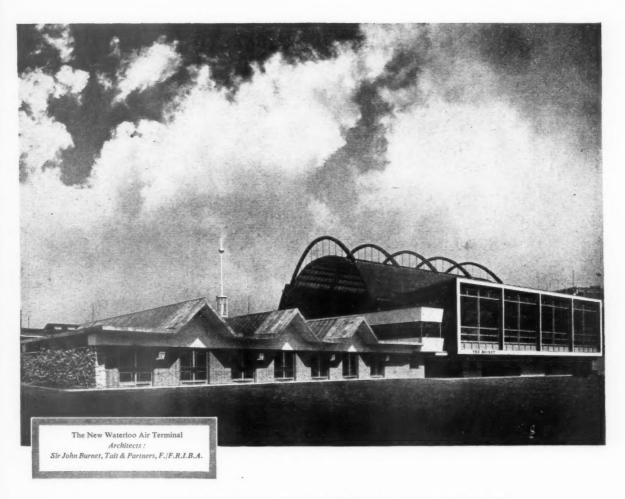
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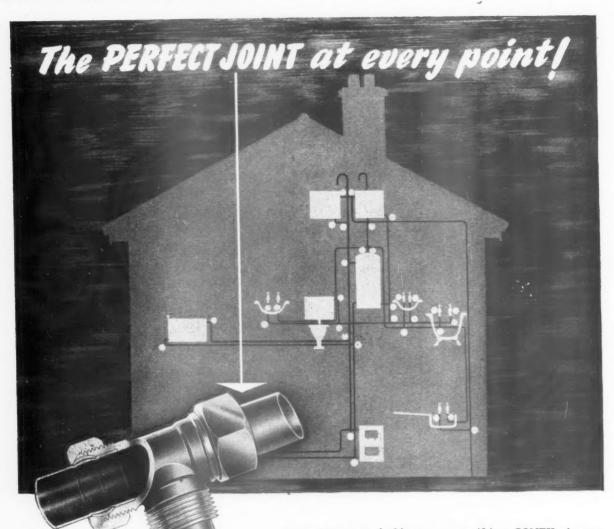
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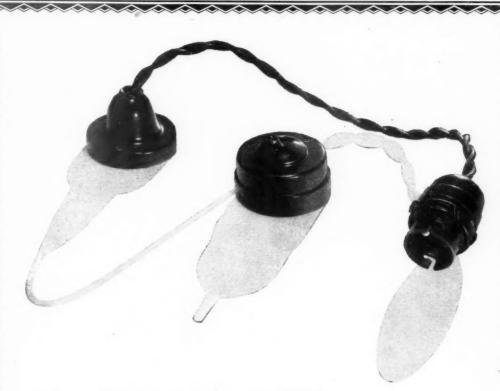
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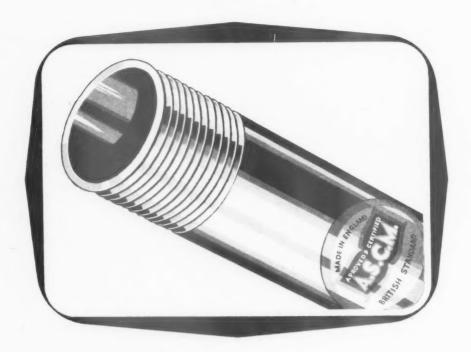
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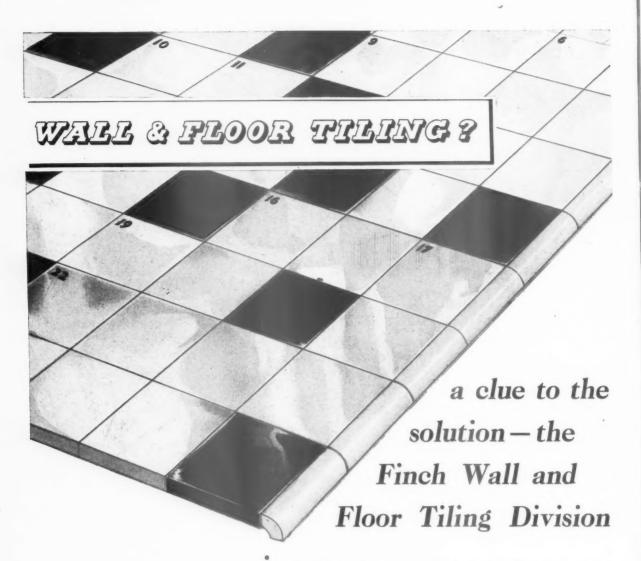
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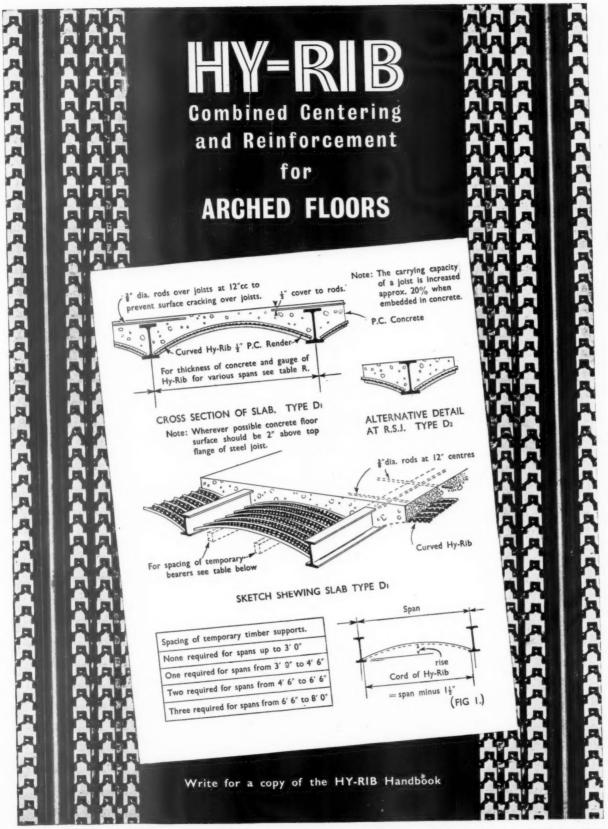
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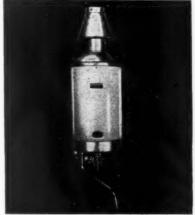
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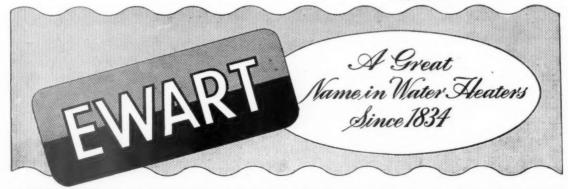
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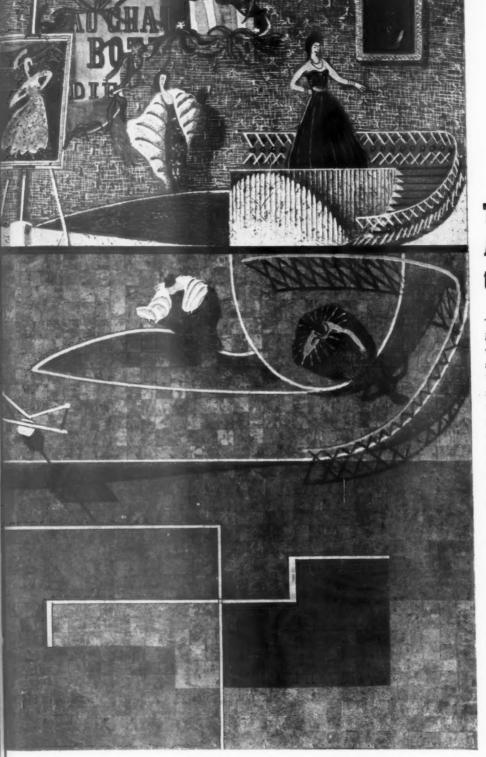
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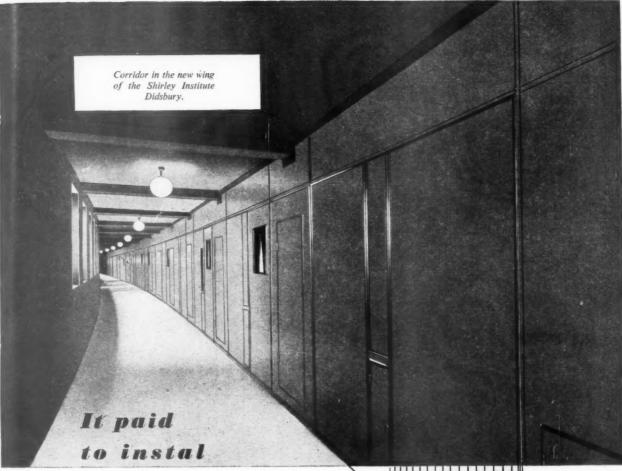


Contract carried out for Hampstead Borough Council.

Architects: Riley & Glanfield, F/AA.R.I.B.A.

Consulting Engineers: F. S. Snow & Partners.

MYTON LIMITED, Building and Civil Engineering Contractors
HEAD OFFICE: Newland, HULL. BRANCHES AT London, Birmingham and Sunderland



Architects:
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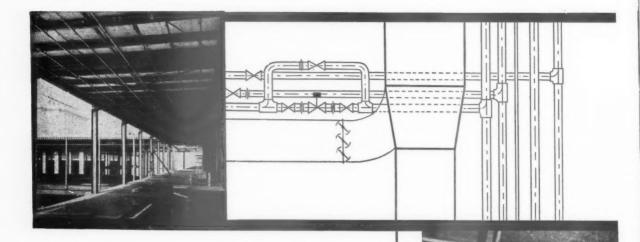
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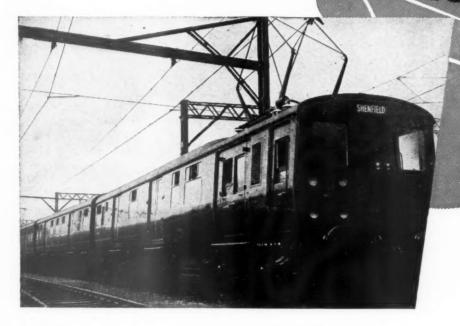
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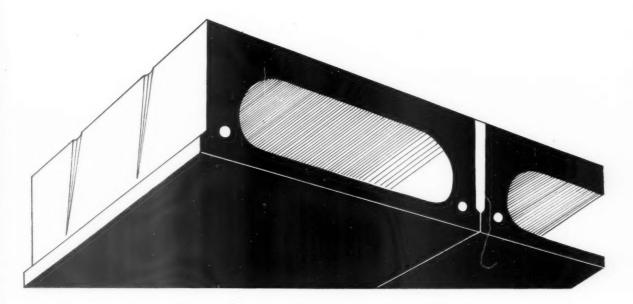
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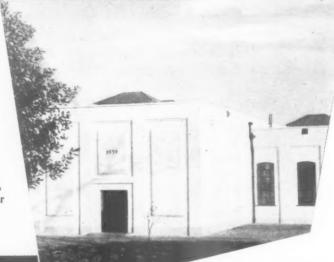
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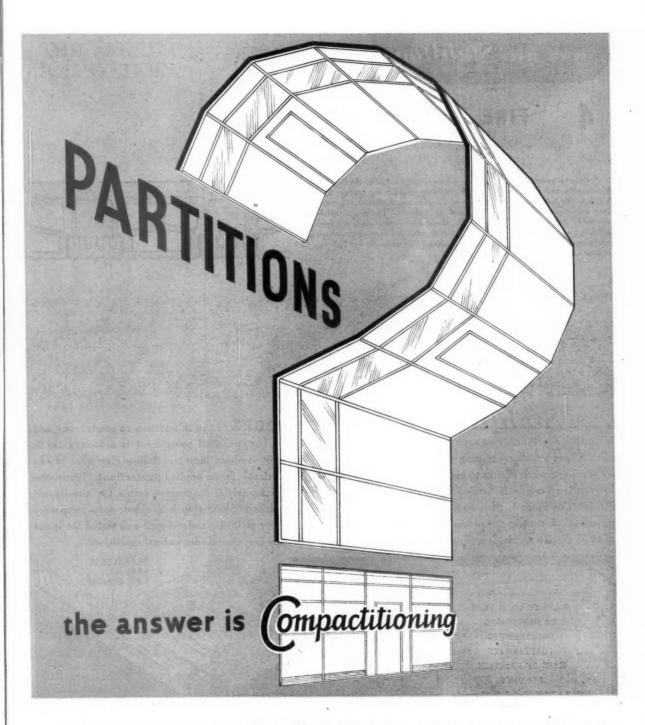
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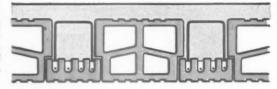
POINTS ABOUT Stahlton

4

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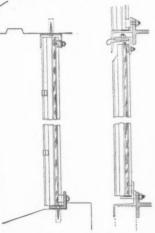


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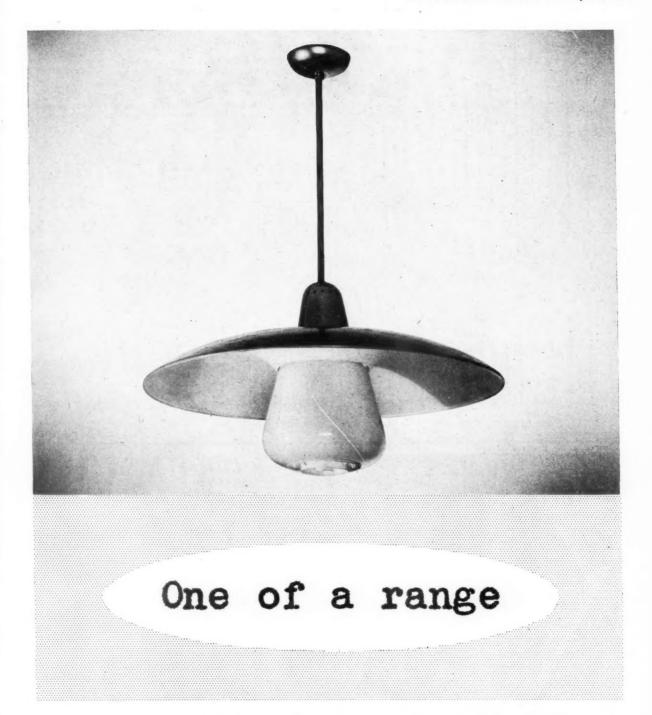
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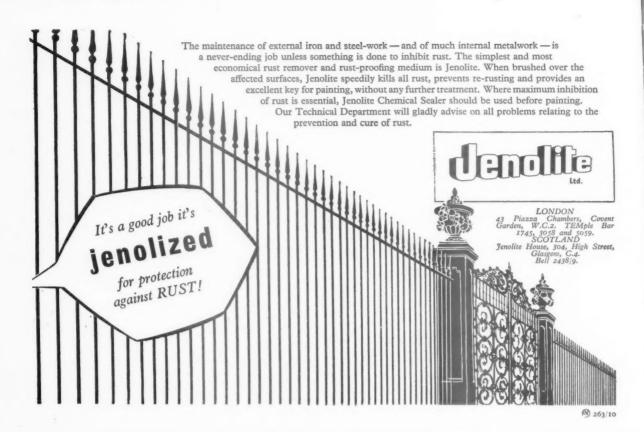


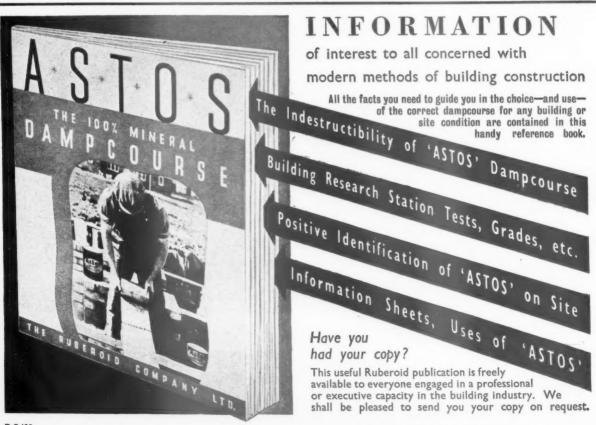
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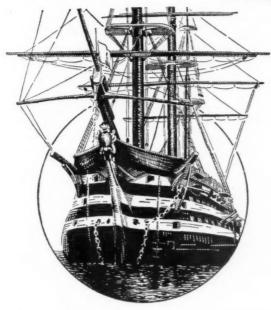


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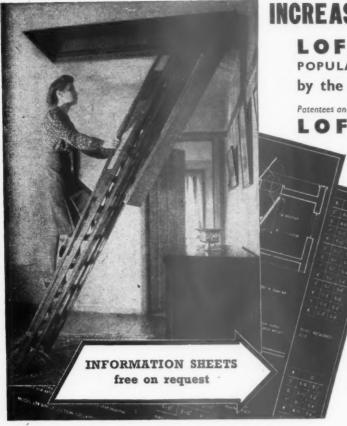
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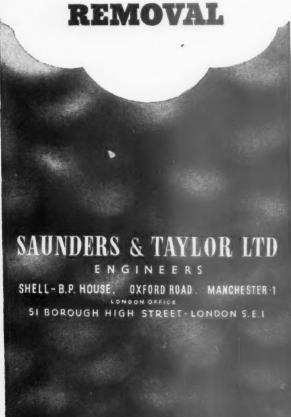


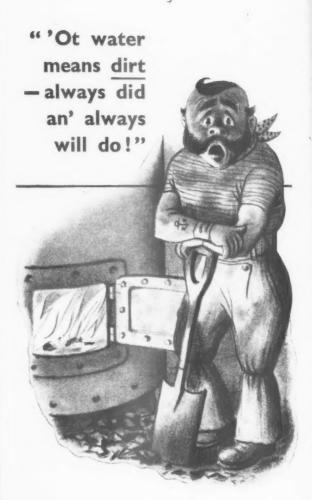


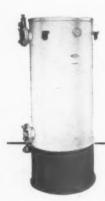


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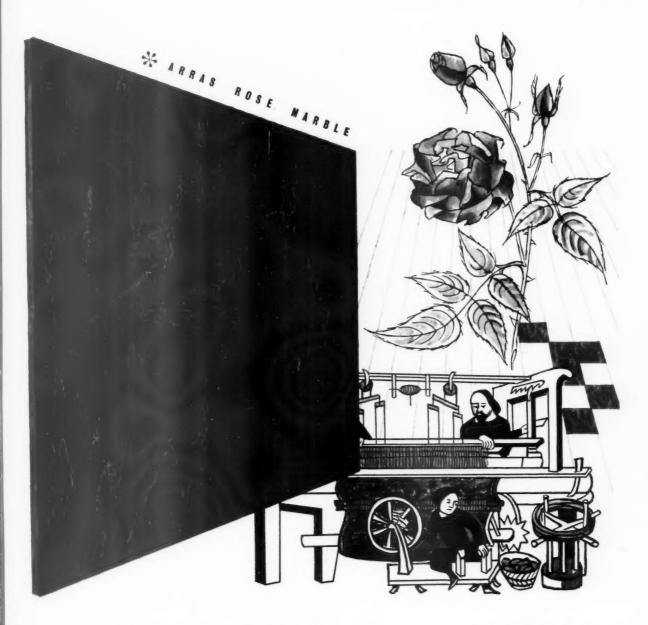
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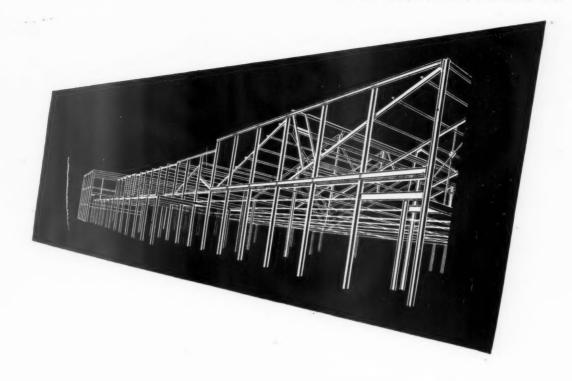
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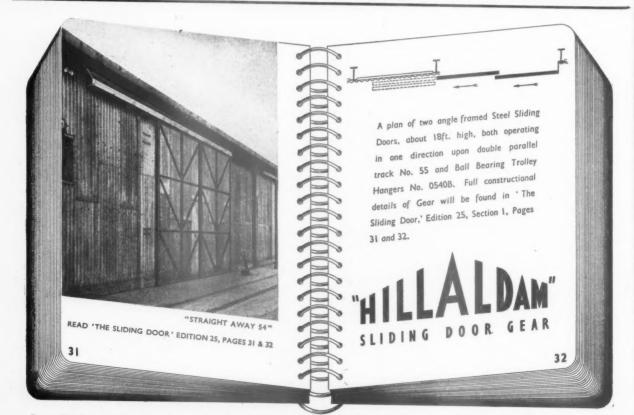
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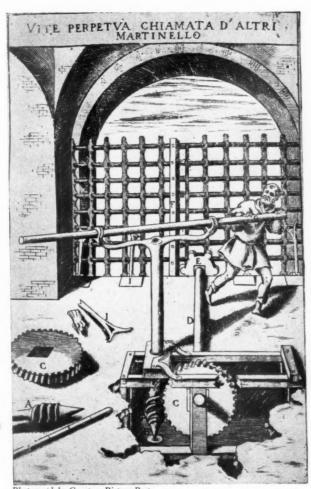




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The Martinello, a device for lifting great weights, in this case a heavy set of gates. A series of pawls holds the gates up, but the process of lowering them appears to be fraught with danger.

From "Novo Teatro di Machine et Edificii", by Vittorio Zonca, 1656.

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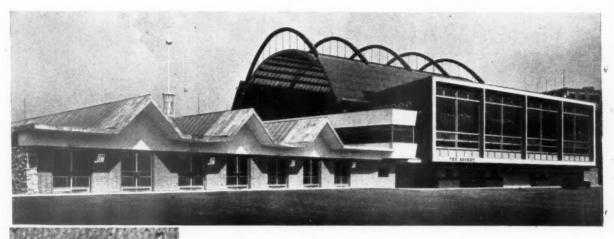
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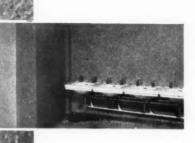
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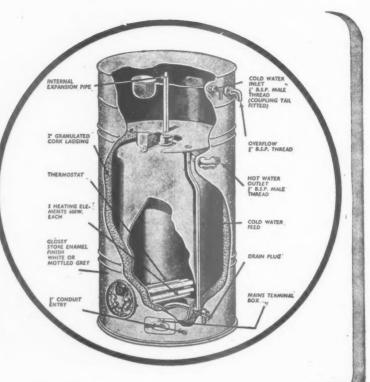
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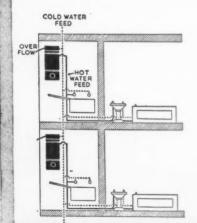
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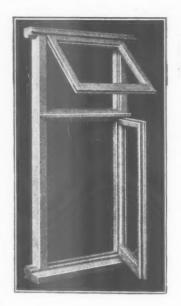
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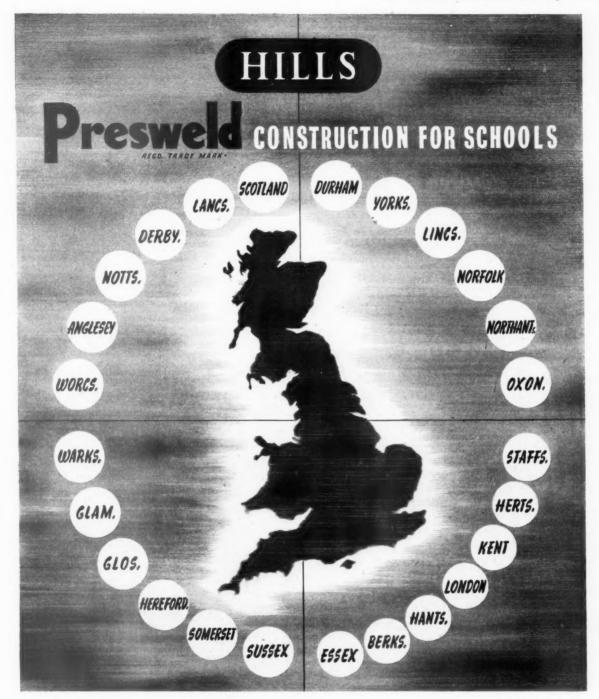
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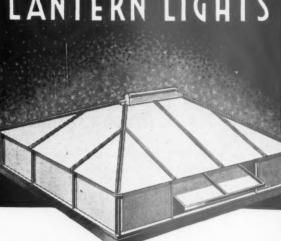
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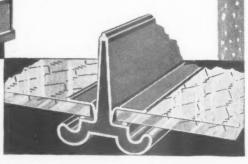
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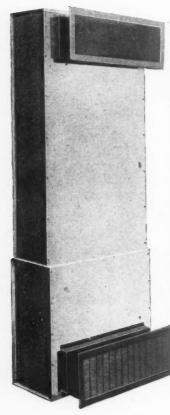
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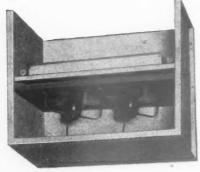
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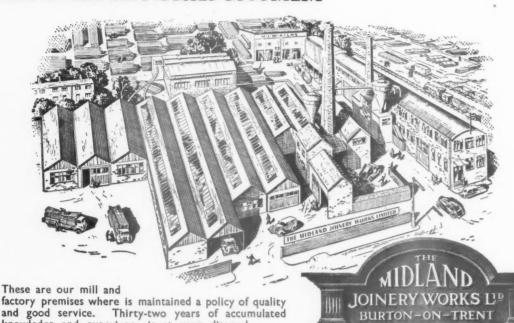


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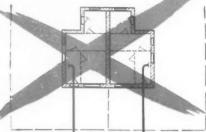
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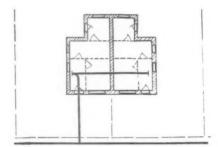
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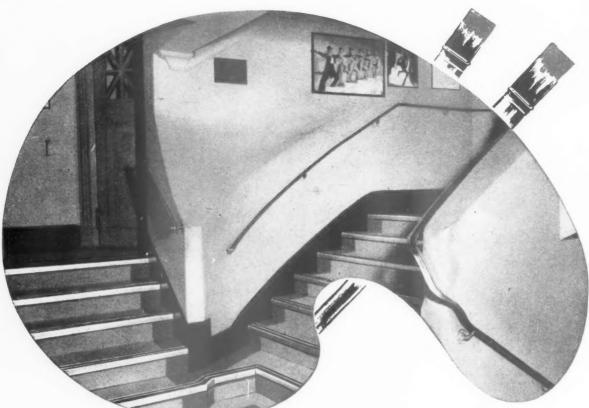
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ARE COUNCILS TOO AMBITIOUS?

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on

Readers may have noticed that there have been daily Press statements about local authority housing programmes being drastically cut by Mr. Macregional officers. MOHLG explanation is that housing has already reached the rate of 300,000 a year, and that this is the maximum figure with present supplies of bricks and cement. While it would be folly to repeat the old mistake of starting more houses than can be finished, it would be interesting to know whether the cuts are really the result of local authorities being over-optimistic or whether the increase in speculative building has made the difference.

The quarterly housing analysis will, no doubt, reveal the true facts, but it seems a pity that a town like Gateshead should have (according to the housing committee's chairman) a quota "even less than our smallest allocation in the worst years immediately after the war."

THE OXFORD BILL

A House of Lords Select Committee has rejected Oxford's proposal to extend its boundaries by 3,172 acres. That decision may prove very important.

Nearly every large town, including Oxford, has around it a number of villages and small towns which would benefit by some new development and increase of population and the better services they would bring into being. For thirty years motor buses have made it quite practicable to "expand" bigger towns by such satellite development. But local government structure, finance and city councillors have been dead against it. They have preferred to take in adjacent land as needed, to build new housing estates, and leave existing villages and small towns to die quietly. The Town and Country Planning Act has produced some hundreds of guardedly-phrased declarations of desire to do otherwise, but no real change of action or aim.

The Select Committee's decision suggests that local government should try to find a way to carry out what seems to unbiased people the most desirable solution to this tough problem. The time to try is now; and the place in which to try is Oxfordshire.

ARCHITECTS AS SCENIC DESIGNERS

Last week, ASTRAGAL said he did not think architects made good stage designers. (Alceste is still unseen and, therefore, excepted.) This brought a letter from John Gloag, who asks if your columnist has forgotten "that the design of exhibition stands and displays, an activity in which architects excel, is not far removed from the work of stage designers."

Surely not. If the work of the stage designer ever resembles that of the exhibition stand architect, it is surely because they are both on the wrong track. There have, for example, been many stage designers as overbearing as Loutherbourg, who, you will remember, (a hundred to one you won't), ended his theatrical career by presenting the "Eidophusikon," an entertainment consisting of nothing but scenic effects. And we all know the exhibition display architect who would obviously like to eliminate his clients' names from the stands he But when both men are at their best their works should surely have no similarity. Although the theatre man's scope is large-skeletal sets and realistic sets are equally acceptable today-his primary task is to provide, by means of flimsy material that will not stand up to close inspection, an unobtrusive background to whatever the author has to say. The exhibition designer, on the other hand, has to provide not only a solid background to his client's propaganda, but also the propaganda itself, which must scream-politely or otherwise-from the midst of his work. Which brings me to the end of the page, if not to the end of my argument.

# CREATION WITH CRAFTSMANSHIP



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BRAZIL BUILDS

There's a very good show of Brazilian architecture at the Building Centre, thanks to the Anglo-Brazilian Society and the man who has advised them-Professor Wladimir De Souza, professor in theory of design at the

National Faculty of Architecture (Rio's architectural school). Professor De Souza, who is very enthusiastic about his country's contemporary architecture, sums it up in one word-" plastic." That is, in fact, what will strike you most about the work exhibited (in black and white pictures, unfortunately), which includes not only buildings that have so often appeared in the technical Press, but also many new and fascinating designs-some built and others still in the project stage. Amid the more recent work, the newly completed buildings for Reidy's Pedregulho neighbourhood stand out not only as excellent designs in themselves, but as equally good

components of a larger group. Then there are some exciting designs by Niemeyer-the Lebanese Club-more sculpture than architecture, a new factory at Sao Paulo for Messrs. Peixe and Duchen-a building of similar quality, and the Copan Hotel and Offices Group, which although superb designs in themselves, show up the almost insoluble site planning problems too often encountered by Brazilian architects. Many of the buildings show a developing maturity of design which promises well for the future. There's a lot to admire—the astonishingly plasticity of form, the development of traditional materials in a valid modern way, the various methods of



Some of the buildings on view at the Brazilian exhibition (see note above). Left, garden at Petropolis by Roberto Burle Marx. Below, the Spa of Araxa, by Francisco Bolonha. Centre left, primary school at Pedregulho, by Affonso Eduardo Reidy. Centre right, holiday camp at Rio, by M. M. M. Roberto. Bottom left, neighbourhood centre at Pacqueta Island, Rio, by Francisco Bolonha. Bottom right, house at Petropolis, by Francisco Bolonha.













# Pardon Me, But Your Cliché Is Slipping.

. . . in fact, it's slipped so far that it can hardly be called a cliché. Not yet, anyway, though it probably won't be long before the Twisted Coffin motif is as popular for suburban porches as its forerunner (shown on the left). This new piece of doorscaping is the loading entrance of a pleasantly designed factory for the London Fancy Box Company at Dover. The architect was Louis Erdi.

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controlling the sun (the exhibition is only bearable in this country at all in July!) and so forth. But go and see this civilized and distinguished architectural contribution from Brazil for yourself.

### HIGH MATTING

And don't be too disturbed by the picture below. One of ASTRAGAL's colleagues swears that it was taken on the exhibition floor at the Building Centre. But ASTRAGAL remembers, with relief, that the multi-storeyed object in the foreground was rolled up neatly minding its own business in a corner when he last saw it. Anyway the superimposed landscape is obviously not Brazilian. So Anglo-Brazilian relationships need not be strained.



### HISTORY BUILDS THE TOWN

Many of us have for some time been looking forward to Arthur Korn's History Builds the Town.\* Now it has appeared and the author must be congratulated on his labours and his erudition. On the other hand, it would be dishonest to refrain from some expression of disappointment. The sociological and dialectical approach was admirable, but such an approach means something more than a lot of superficial history with wild jumps across the centuries, especially when it is unaccompanied by serious analyses of the resulting plans. There are a great many illustrations (most of them familiar) badly printed on poor paper -the smaller maps and plans illegible. For some of these faults it is, of course, the publisher as well as the author who must take the blame.

**ASTRAGAL** 

### \* Lund Humphries. £2 10s.

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# POINTS FROM THIS ISSUE

Proposal for new salary scale		pages 69 and 72
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BSI to co-ordinate window dimensions		page 76
The cost of house-building: UNO report		page 87

# The Editors

# SALARIED ARCHITECTS

A S readers of our correspondence columns will know, the public architect is not very happy about his salary. This week a contributor who makes proposals for a new salary scale for architects in government, municipal and industrial employment, writes (page 72) that "in no other profession would such underpayment be tolerated." He goes on to show, by means of accounts prepared in the architectural office of a county borough, that salaried architects may well be paid only fifty per cent. of the proper value of work done (according to the RIBA scale of charges), and that a local authority may thus make large profits at its employees' expense.

Our contributor, who is himself a local authority architect, suggests that a limit should be set to the profit a corporation can make. This, he says, would discourage it from engaging staff at unjust rates. He then makes his proposals for a salary scale—based on the RIBA scale of professional charges and the cost of building—a scale which is designed to encourage juniors to qualify and the staff as a whole to work hard (excess net profits would be distributed).

We feel that such a scheme is worthy of support. We invite readers to send in their comments on it.

# THE VALUE OF BUILDING RESEARCH

An editorial in last week's Technical Section of the JOURNAL questioned the wisdom of government cuts in research expenditure by the Building Research Station. If anyone needs convincing that such expenditure is, in fact, an investment which brings in a cash dividend for the benefit of the individual and the community, let him read two digests published recently by BRS.\*

The first of these, *Drainage for Housing*, could result in considerable saving on the cost of housing schemes.

The second, which deals with the fire resistance of board and joist floors for small houses and flats, does not show ways of making direct cash savings, but it illustrates the value of long-term research in enabling general advances in building technique to be made with safety. Changes in floor construc-

<sup>\*</sup> Drainage for Housing. BRS Digest No. 55 (June 1953). Fire Resistance of Board and Jolst Floors for Small Houses and Flats. BRS Digest No. 54 (May 1953).

tion (such as economy in the use of timber, and the substitution of board type ceilings for lath and plaster) can be made only if these changes do not lower standards of performance. And tests held to determine such matters as fire safety are not simple affairs. A lot of money and time go into a major research programme, the results of which are sometimesas in this case—deceptively simple.

It is impossible to over-rate the value of building research. We join with the United Nations Economic Commission for Europe, which has recently published a report on house building costs, in stressing the need for more—not less—

research.

# FOCUS ON

# Y O U

The JOURNAL will not be publishing the results of its enquiry into the state of the architectural profession until September. Professor Ian Bowen, who conducted the enquiry, tells you why in his article below. He also gives details of the "random sample" method used in the enquiry and explains why this method can produce accurate results. (The names shown in the headpiece above were taken at random from the Architect's Register and are not related to the article.)

# Guest Editor:

# Professor IAN BOWEN

**EPLIES** have been received from nearly 90 per cent. of the architects to whom we sent a questionnaire earlier this year. Although it would be possible to draw conclusions from these returns, we shall not do so until we have collected information from the remaining 10 per cent. We shall thus be sure that by the time we publish the results of our survey (in September) we shall have as accurate a picture as possible of the state of the architectural profession. (We shall also know the types of practice of those architects who have not replied to the questionnaire.) And by that time we shall have examined comments and information received from readers, some of whom have written us useful letters, while others have answered questions we asked in the Journal pages.\*

Public opinion surveys have sometimes produced erroneous results simply because no attempt was made to track down a large percentage of people who did not reply, or because many people had been persuaded to change their opinions by some significant event (an election, for instance). So although we feel that a 90 per cent. return is remarkably good for an inquiry carried out by post, we are glad that information about the 10 per cent. who would not reply is easy to obtain. (We shall explain how it is obtained in a later article.) We can-not, of course, be sure that all the answers given to a questionnaire that was issued in March will be true in September. Some people will have changed their jobs or their opinions. This kind of error" does not seem of much importance, but it will have to be borne in

# THE SIZE OF THE SAMPLE

The size of the random sample of architects to whom we sent questions had to be not only large enough to ensure accurate results, but also small enough to be handled within the limits of expenditure, staff and time available. And here let me explain-with an illustration-the advantage of the random sample system that we used. want to find an average weight per sack in a pile of sacks of coal, it is better to weigh a few sacks chosen at random than to weigh a larger number of sacks taken from the outside of the pile, \* Replies are still being received; they are still welcome.

which might well contain an exceptionally large proportion of one type of sack. In trying to get useful information from architects one has to realize that the man who will not answer a questionnaire may be a very different type from the one who will do so-and the information he could give might, therefore, be of immense value. In the RIBA inquiry of 1949 an attempt was made to use a census method—not a random sample. All architects (and architectural students) were written to. Only 63 per cent. (excluding students) replied, i.e., 7,900 out of 12,600. Yet incautious readers of the report subsequently published have not realized that the infor-mation was not obtained from a fair sample of the profession.

# ACCURACY ENSURED

Our method of conducting a survey was as follows:—We took 500 names from the official register of architects. This was 2.9 per cent. of all the names in the book—a high proportion, as sample percentages go. (Remember that the Registrar-General's office used only a 1 per cent. sample when estimating the size of town populations, etc., in 1951.) If information is obtained from every architect questioned in a random sample of nearly 3 per cent., the results will give a more accurate picture of the profession than could be obtained if only 60 per cent. of a larger number questioned sent a reply. The reason is, of course, that the missing 40 per cent. might consist mainly of one type of architect, in which case the 60 per cent. reply would prove nothing.

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Some of the questions asked in our questionnaire could have only a limited number of answers. For example: "Are you in public or private practice?" But other questions—such as those asking for an opinion on some matter-could produce a wide variety of answers. (Indeed, one is impressed by the variety of experiences and points of view enjoyed by members of the architectural profession.) Fortunately, however, we are sure that the answers to many of our questions will enable us to make safe generalizations. We shall be able to find out the percentage of registered architects in private practice, in central government or in local government, and we can rely on the sample for accurate information about other aspects of the state of the profession, as readers will soon see for themselves.

Very few people questioned were unable, or unwilling, to reply to the 86 questions we asked. Most of those questioned answered conscientiously and with clarity. Indeed, many of them wrote letters to supplement their answers. And those who grumbled at our persistence eventually sent in replies which, though in a shortened form, have helped to make the results

more reliable.

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Gordon Tomalin, M.I.Struct.E. W. Macdonald, M.I.R.A. Fames Fell G. W. Jackson, M.I.R.A.

# Education: For....

Sir.—Without doubt "experience" is a most important matter in the life of any professional aspirant but due regard must also be given to the need for "education." By all means let there be some recognition of the gallants with "years of experience" in architecture and construction, but let us not under-rate (as many people tend to do) those who have worked and studied, so developing themselves to be capable of pass-

those who have worked and studied, so developing themselves to be capable of passing carefully prepared examinations.

In all professions, and trades, there will be those who do not put into their service all one might desire. These, in time, fade away, qualified or unqualified. Through some thiry odd years' association with architects who have the distinction of being members of the RIBA, I say, freely, that I have yet to meet one who has not fulfilled the role undertaken to serve honourably and with ability those who have called upon him.

Nor do I forget that these architects, through various restrictive measures outside their control, have been forced so many times to submit to designing "monstrosities" so that those nearest to them may eat and be under a roof.

GORDON TOMALIN.

London.

# ....and Against

SIR,—Respecting Professor Ian Bowen's very interesting publications, it should also be known that up to 1930 there were about 36,000 members of the public practising architecture for a livelihood, and who also architecture for a livelihood, and who also made your publication a success. We all pulled our weight to satisfy the public, who are the best judges for engaging a person's services. And the best of us have survived. In fact, I have a large clientele, including seven multiple firms for whom I have taken the place of F- and A-RIBA members. There are some exceedingly good members of the RIBA, but there are also many poor ones, too, with experience from 15 to 16 years. I think the poor knowledge they possess is due to the granting of affixes;

possess is due to the granting of affixes;

they consider their knowledge at an end and expect the public to take notice of their

W. MACDONALD.

London.

# Broome

SIR,—I much enjoyed your passage about Broome and the beautiful photographs of the locality (A.J., June 4). One regrets the drive you chose to enter by (the most dilapidated), but it enabled you to see the walled garden Kitchener established, using the old bricks, and the Steward's House, flint Georgian Gothic, with its castellated battlements, which incorporates an early Tudor (?) cottage with door-ways little more than 5 ft. high. In justice to Kitchener, one must mention that it is thanks to his interior supports of steel that the fabric enjoys its present state of health. The hall (which I deplore) was the best he could do. It did not supports with the first (which would have deplore) was the best he could do. It did not supplant the first (which would have been a crime indeed), but is a cold 18th century affair in no way comparable to the ball-room. The plaster ceiling (identical to a contemporary one in Sharsted great hall, near Faversham) was one of several—no two or them were alike—worked by a firm of skilled Italian craftsmen to strictly traditional motifs

worked by a firm of skilled Italian craftsmen to strictly traditional motifs, He copied his hall fire-places faithfully from Hatfield. Wherever possible he used the old material. Other of his fire-places are good 18th century. His staircase is a James I, imported from a house in Essex. He crowned it with a part of the earliest Broome stairs. The marble used to floor the porch came from the 18th century great hall. This porch he obtained from an Italian villa of the Rothschilds, together with the rosette columns—and the doorknocker you mention, which is probably Venetian renaissance. It shows Poseidon and a horse. The door-knobs with which

Venetian renaissance. It shows Poseidon and a horse. The door-knobs with which it makes a set represent dolphins.

It is practically certain that Richard Barham's Tappington is Broome, not the half-timbered Jacobean manor-farm-house where he lived, which bears this name. An Ingoldsby legend turns upon a secret passage which has been identified at Broome: its greater portion is still extant. greater portion is still extant.

You have been unfair to Denton Court, which, though ghastly from the road, has a

charming Georgian wing screened off by trees. Denton Church, some ten yards from this mansion, has a Saxon tower, And the top lancet of a Gothic window in the transept (south) contains an ancient stained-glass God-head, really lovely. The position of this church, some distance from the village and nestling in against the Court, as if a private chapel, suggests that there has been a Great House for long ages on this site.

TAMES IELL

Canterbury.

# Wanted: A Plan for the Age of Plenty

Age of Plenty

SIR,—Eric de Maré, in his letters of March 12 and May 7 must realize that he and I, and perhaps a handful of other architects, are the only members of our profession who have fallen under the spell of John Hargrave.

We believe that there is a real world abundance of timber, a potentially unlimited supply of raw materials for bricks and steel, an abundance of real wealth, and that aided by "dollar gap" magic the financial and economic system is an arbitrary (and crazy) one, creating its own state of bankruptcy in a world of plenty.

We jibe at our colleagues who cheerfully compete with each other for the honour of getting the most into 1,000 sq. ft. We laugh good-heartedly when they complain that they always end up with a "box."

Mr. Eric de Maré's exciting philosophies are presumably intended to soften us up for a subsequent letter in which he will give us the know-how. In order not to disappoint his lay and architect readers, he must let us in on how he intends to wrest the initiative from the bankers. Will he shoot them? One wonders. If so, one hopes he will do so affectionately, since his system is, he writes, based on love. he will do so affectionately, since his system

he will do so affectionately, since his system is, he writes, based on love.

We all want to leave the drudge-work to machines, and dance and do something creative and worthwhile and useful. Mr. Eric de Maré has whetted our appetite. He has us—his public—hanging upon his words; he owes us in the near future a practical and simple analysis of his plans to usher in the age of plenty.

in the age of plenty.

G. W. JACKSON.



The walled garden at Broome, referred to above by James Jell in his letter.

In this article a local authority architect complains of the low salaries received by architects in government, municipal and industrial employment, and makes proposals for a new salary scale. It is hoped that readers will send their comments on these proposals to the editors, who will be glad to publish them.

# SALARIED ARCHITECTS

# A PROPOSAL FOR A NEW SALARY SCALE

THE salaries received by architects in government, municipal and industrial employ are, in many instances, unjustly small. In no other profession would such underpayment be tolerated. If the reader needs proof of this he can compare the proper value of work done (in accordance with the RIBA scale of charges) with the actual salaries paid.

One cause for complaint is that architects are often engaged at a particular grade, and are then expected to design and superintend work for which a higher grade salary should be paid.

The following table is a summary of accounts prepared in the architectural office of a county borough which has neither a borough architect nor a deputy, the highest grade being VIII (£760-£835).

Column (1) shows the value of work done, measured in accordance with the probably low.

people employed on the staff each year.

received by the staff each year.
Column (5) shows the net profit to the corporation as from the previous columns.

Column (6) shows the percentage of

The amount of work of this kind varies
with each authority. In the case being
discussed here the figure of 7½ per cent.
was assumed in the first year and has
been retained. From experience it
should probably be nearer 10 per cent.
Column (2) in the table shows the
estimated cost of rent of offices, rates,
cleaning, light and heat and borough
engineer's supervision. This figure is

Column (3) shows the number of Column (4) shows the total salaries

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Year	Value of work at RIBA rates plus 7½ per cent. of total fees	Establish- ment charges and Borough Engineer supervision	Number of staff	(4) Total salaries	Profit to Corpora- tion	Percentage of net profit on gross charges
1949 1950 1951 1952	£ 4,309 6,562 7,847 9,404	£ 650 650 900 900	4·22 4·77 9·00 9·33	£ 2,227 2,201 4,607 5,144	£ 1,432 3,711 2,304 3,360	33·0 56·5 29·4 35·7
Totals	28,122	3,100	27.32	14,179	10,807	38 · 4
Average for 1949–1952	7,030	755	6.83	3,545	2,702	38-4
Average per member of staff, 1949-52	1,030	113	1.00	517	400	38.4

A summary of accounts prepared in the architectural office of a county borough which has neither a borough architect nor a deputy, the highest grade being VIII (£760-£835)

RIBA scale, to which has been added 7½ per cent. of the total fees earned to cover the cost of other municipal work -keeping records, making housing returns, estimating for alterations, attending committee meetings, discussing various matters with ministries, making annual estimates, and even dealing with gipsies and doing other work outside normal professional practice.

1949-52 inclusive are totals for the four years on which the averages given have been based.

The figures given are office figures; they were not prepared by an accountant and have not been audited, but they are sufficiently accurate for practical

The important points revealed by this table are :-

(1) Each member of the staff, including juniors, earned-on the average £1,030 per annum.

(2) The salary paid was £517 per

(3) The corporation's net profit was £400 per annum—or 38 per cent.

(4) The cost of rent, etc. and of the borough engineer's supervision was £113 per annum per member of the staff. (This is probably a low estimate.)

(5) The accumulated net profit to the corporation for the four years (from a staff of 6.83) is £10,800.

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## PROPOSED ARCHITECTS' SALARY SCALE

These facts have led me to prepare a scheme (opposite) for a salary scale. It is not satisfactory in all respects, but as a basis for discussion it is essential. And it is hoped that JOURNAL readers will send their comments on it to the editors.

The purpose of the proposed scale is to ensure a proper remuneration for architects engaged in government, municipal and industrial offices, partly by means of a revised salary scale, partly by limiting the employer's net profit to a predetermined percentage.

The suggested scale has been arranged in such a way as to give the maximum encouragement to juniors to qualify and for the staff as a whole to work hard, as remuneration would be, to some extent, in proportion to the value of the work

The suggested scale and limitation of profit also have the advantage that if they were used it would be unnecessary for staff to apply for increments consequential to currency depreciation, as they are based on the RIBA scale of professional charges and the cost of building.

Irrespective of the size of the office, the employer should accumulate a reasonable reserve to carry the staff over a period of under-employment. This is the principal financial risk involved in maintaining an office, e.g. one year's total costs.

It should, however, be borne in mind that members of architectural staffs who are fortunate enough to be engaged on the larger buildings cannot individually claim a disproportionate remuneration compared with others working on more laborious projects for which the fee value may be considerably less. The value of what is done must be taken over the office as a whole and not applied exclusively to individuals. It will be seen that this matter has been covered as fairly as possible in the proposed scale with reference to architects in charge of major buildings.

The establishment of such a scale would certainly not make jobs for architects; indeed, its effect would be rather the reverse-it would prevent ff, inverage

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Right, the author's proposed salary scale, designed to ensure a proper remuneration for architects engaged in government, municipal and industrial offices. Below right, a table showing how the scale would be applied to the architectural office of the county borough mentioned in the article.

staffs from becoming larger than is necessary for the thorough execution of the work of offices.

Whether or not you favour the principle of the proper scale you are requested to let the JOURNAL'S editors know by card or letter so that the measure of support, opposition and modification may be determined.

If there is enough support for the suggested scale, or an amended version of it, a Salaried Architects' Association will be formed for its establishment. This Association will also try to restrict entry into the architectural profession to the numbers really required by the building industry.

It is hoped that the analysis at present being made by Professor Ian Bowen, the JOURNAL'S Guest Editor for 1953, will disclose this vital requirement.

The final table shows how the proposed scale would be applied to the architectural office of the county borough previously mentioned. It does not allow for the appointment of a borough architect and/or deputy.

It is also contended that adjustment should at least be retrospective to some extent where a strongly substantiated case be determined.

Designation	Salary range	Increments	
Junior Architect, unqualified	£200-£400 (£200)	8 at £25 (not established)	
Junior Architect, Intermediate examination	£450-£550 (£100)	4 at £25 (not established)	
Assistant Architect, on quali- fying	£600-£750 (£150)	3 at £50 (established)	
Assistant Architect, qualified, three years' experience	£800-£950 (£150)	3 at £50 (established)	
Architect in charge of Section or major building	£1,000-£1,150 (£150)	3 at £50 (established)	
Deputy or Deputy Borough Architect	£1,200-£1,350 (£150) or two-thirds RIBA scale for Borough Architects	3 at £50 (established)	
Chief or Borough Architect	£1,600-£2,000, or RIBA scale for Borough Architects	4 at £100	

The "unqualified" scale should be £200–£750 (£550) 22 at £25. (Establishment at £600 at discretion of the employer.)

In order that a proper incentive shall be provided for the staffs of government, municipal and industrial offices, the work, where practicable, should be measured and the excess net profit over 20 per cent. proportionately distributed, subject to the proviso that the RIBA scales for state-aided houses and layouts (which have become unsatisfactory) are revised, and preferably put on a percentage basis.

	Present salaries	Present scale minimum	Proposed scale minimum	Present scale maximum	Proposed scale maximum
1	265	265	200	265	400
2	525	465	450	510	550
3	480	495	450	540	550
4	495	495	450	540	550
5	525	525	450	570	550
6	585	555	800	600	950
7	625	595	800	645	950
8	625	595	800	645	950
	735	710	800	785	950
0	810	760	1,000	835	_ 1,150
	£5,670	£5,460	£6,200	£5,935	£7,550



# MODULAR SOCIETY Encouraging Letter from Minister

The following letter from Sir David Eccles, Minister of Works, has been received by Sir Alfred Bossom, the Chairman of the provisional committee of the Modular Society, who has asked us to bring it to the attention of our readers:

"I was so pleased to hear from you about the good progress that the Modular Society has made since its foundation in January this year and I am glad to know that its future programme includes the study of the interchangeability of components from different manufacturers.

"This Society can make a real contribution to any lowering of costs without sacrifice of quality that may be achieved through modular co-ordination. Claims of farreaching potentiality in this direction have been made, but I am advised that their full establishment would require intensive and long-term preliminary investigation.

"There can be no doubt that limited preiiminary investigations proposed by other agencies do not make the Society's efforts unnecessary or unhelpful. I sincerely hope, therefore, in the interests of the country as well as of the building industry, that the Society will receive support and full participation in its work from all branches of the industry."

# UNO

# International Council for Building Research

The International Council for Building Research was set up last month at the Geneva office of UNO by eleven founder members; of which the UK member is BRS. It succeeds the International Council for Building Documentation, but is extending its field of work by setting up three permanent sections which

under the statute will be concerned with the technical, economic and social problems of housing and building. The chairman of the research section is to be F. M. Lea, director of BRS; the chairman of the documentation section to be J. van Ettinger, executive director of the Bouwcentrum. A. Marini, who is director of the Centre Scientifique et Technique du Bâtiment, France, has been elected president of the Council for two years and chairman of the studies and applied research section. The Council is a non-governmental organisation. The technical secretariats will be located in London, Rotterdam and Paris.

Speaking of the purpose of the Council Mr. Myrdal said it was to promote direct collaboration in the field of building research, studies and documentation amongst those concerned with the building industry and related professions.

and related professions.

G. Myrdal, executive secretary of the Economic Commission for Europe, opened the first assembly of the Council at Geneva last month. It was attended by architects, sociologists, engineers, public specialists, economists, physicists, officials and industrialists from Austria, Belgium, Denmark, Finland, France, Italy, Greece, the Netherlands, Norway, Israel, Yugoslavia, Western Germany, the United States, the United Kingdom, Switzerland and Sweden.

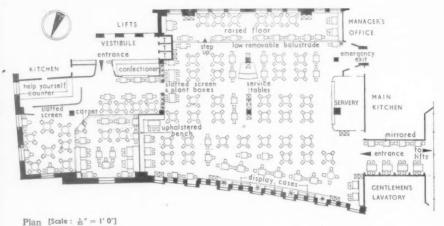
A number of important international organizations, governmental and non-governmental, also took part in the work of the assembly, amongst them:—International Federation of Building and Public Works; International Union of Architects; and

# RESTAURANT FOR SWAN AND EDGAR'S

The conversion of the restaurant which occupies the top floor of Messrs. Swan and Edgar's department store at Piccadilly Circus was done to designs by Jacques Groag. Originally the restaurant stretched over the whole floor space, divided only by a glazed dwarf partition, but in the new scheme the lifts are separated and the restaurant itself is divided into small areas. The designing the restaurant was made difficult by the assortment of windows in exterior walls, some set too high in sloping parts







of the ceiling, some set too low and some circular; consequently it was necessary to correct, with the minimum of structural alteration, these proportions. The photograph above, left, shows a section of the north wall, which faces Regent Street,

where showcases have been introduced to cover a number of windows in the facade. The picture above, right, shows part of the help-yourself area, where a window has been turned into a feature with artificial lighting and indoor plants. Below is a

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LONDON W.1.





general view of the restaurant with the main servery (also seen in photo below) on the right. Top, the north-west corner. Above, part of the raised area along the south wall. General contractors were Cooke's (Finsbury), Ltd. For sub-contractors see page 94.

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A. Marini (France), chairman of the assembly, speaking on the purposes of the assembly, speaking on the purposes of the assembly, said: "It is the first time that the most important European organizations engaged in building research, study and documentation have come together in such a large conference and decided to collaborate in the interests of the community at large. We are well aware that other associations have already, very fortunately, been set up; some of them, uniting individuals and societies of particular branches and professions, have been in existence for a long time. But what we have set up with the unanimous agreement of the founder members is, by its nature, something very different. By bringing together workers in various fields and calling on the readiness of each to help the other we aim at promoting and directing the co-operation of the bodies we represent towards achievement of the economic and social objectives our countries are pursuing.

"To organize this co-operation, relying

"To organize this co-operation, relying solely on the voluntary support of those taking part, to endeavour to fill the gaps, to see that national resources are economically employed and overlapping avoided, and to bring about integration where necessary, such are the tasks that the founder members have set the Council.

"Our scientific and technical co-operation, therefore, will accord full importance to the economic and social problems; more than that, it is the social value of our endeavours that constitutes the very core of our unity."

# GOLD MEDAL

# American Award

William Adams Delano has been awarded the gold medal of the American Institute of Architects for 1953. Mr. Delano was born in 1874 in New York City. He trained at the Ecole des Beaux Arts, having previously worked for Cassere and Hastings. He founded the firm of Delano and Aldrich in 1903 and was responsible for the recent White House renovation, the US Embassy in Paris, the Post Office Department Building in Washington, buildings at La Guardia airport, New York, the Venice Art Gallery in Venice and many other well-known buildings.

Mr. Delano retired from his senior partnership and became advisory architect to his firm in 1949. He is an honorary corresponding member of the RIBA.

# **BRAZIL**

# International Exhibition of Architecture

Architects and officially recognised schools of architecture are invited to submit entries for the International Exhibition of Architecture of the 2nd Biennial, Sao Paulo, which is being arranged by the Museum of Modern Art, Sao Paulo, Brazil. Prizes will be awarded.

be awarded.

The exhibition is to take place at the end of this year. All material should be sent to G. S. Inglefield, c/o The British Council, 65, Davies Street, W.1, not later than September 30. The Brazilian Embassy has undertaken to bear the cost of forwarding the entries to Brazil.

# CUC

# Convention

"The Use of Solid Fuel in the Home" is to be the theme of a convention to be held by the CUC at Harrogate on October 14 and 15. There will be four business sessions. The speakers will include Dr. J. Bronowski, director of the Central Research Establishment of the National Coal Board, and Eric Bellingham, directorgeneral of the CUC. The papers will be printed in advance and circulated to delegates. Copies of the programme and registration forms can be obtained from the director of the CUC, 3. Upper Belgrave Street, S.W.1. The registration fee for delegates to business sessions is £2 12s. 6d

### CCA

# Assembly of International Federation of Prestressing

The first general assembly of the International Federation of Prestressing is to be held at the ISE, Great George Street, S.W.1, from October 6 to 9. Delegates will be received by D. H. New, chairman of the Prestressed Concrete Development Group, who will also preside during the election of the governing body of the International Federation. There will be three technical sessions. The subject of the first will be "The influence of abnormal temperatures on prestressed concrete constructions"; the chairman will be Ulf Bjuggren of Sweden. The second subject will be "Design of statically determinate beams and slabs in prestressed concrete, based on ultimate load"; the chairman will be E. Torroja of Spain. The third subject will be "Statically indeterminate structures in prestressed concrete in elastic and plastic phases"; the chairman will be Professor G. Guidi of Italy. A programme and further information can be obtained from the secretary, Prestressed Concrete Development Group, CCA, 52, Grosvenor Gardens, S.W.1.

# COMPETITION

# Design of Storage Cabinet

The Furniture Makers' Guild invites students under the age of 23 to design a storage cabinet up to 3 ft. 6 in. in height which can be used as a general purpose piece of furniture in the dining room, sitting room or bedroom. Prizes will be £20, £10 and £5. The design must be suitable for commercial reproduction at a reasonable price and should be accompanied by an essay of not more than 500 words. Competitors may submit two, but not more, designs.

Robin Day, J. C. Pritchard, Ernest Race and F. Silvester have been appointed judges. The closing date for entries is July 31. Entry forms can be obtained from the clerk of the Furniture Makers' Guild, D. Plummer, The Rectory, 29, Martin Lane, Cannon Street, E.C.4. Applications for each entry form must be accompanied by a postal order for 3s. 6d.

### **TCPA**

# Conference on Social Life in New Towns

The TCPA is to hold a conference in London on October 10 at which problems connected with the proper provisions for social life in the new towns will be discussed. F. J. Osborn, chairman of the executive committee of the TCPA, speaking at a recent meeting of representatives of voluntary organizations in the new towns, said that the provision of buildings and facilities for social and group activities was seriously lagging behind the need for them.

# BUILDINGS IN THE NEWS



# Post Office Building in London

Above, the office building at Crouch Hill, N.8, accommodating the telephone manager and staff of the north area, one of the eight areas in the London Telecommunications Region. It was designed by F. W. Holder of the Chief Architect's Division, MOW. The floor area is 84,000 sq. ft.



### Houses at Tynemouth

Above, the first of thirty blocks, each block consisting of four two-bedroom flats and two three-bedroom houses, to be built, at a negotiated price of £7,476 per block, for Tynemouth County Borough. The designs, by Kenneth Anns, specifications and working drawings are supplied to any local authority at a negotiated price by Ubicon Ltd., with an assurance of immediate start in erection.

The following resolution was passed unanimously at the meeting:—"That this meeting of representatives of voluntary organizations in new towns stresses the urgent necessity for the provision of adequate facilities for social and community activities and recreation in the new towns in a way which will not place an undue financial burden on the newlyformed communities. This meeting is of the opinion that this should be done by modifying the administration of the Physical Training and Recreation Act, 1937, so that 75 per cent. grants can be made for the establishment of social and community buildings and playing fields in new towns; and permitting development corporations to operate the Act without having to show a financial return on their expenditure. The local education authority should be encouraged to support applications and to use the power given to them by the Education Act, 1944, to assist in the maintenance of facilities provided in such a way. It should be made clear to local authorities that it is open to a housing authority to operate this Act."

# RIBA

# Officers Elected

C. H. Aslin, E. D. Jefferiss Mathews, and S. Rowland Pierce have been elected vice-presidents of the RIBA. P. Garland Fairhurst, chairman of the Allied Societies' Conference, is also a vice-president. Kenneth M. B. Cross was re-appointed hon. secretary and Thomas E. Scott was re-appointed hon. treasurer.

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# BSI

# Co-ordination of Window Sizes

The RIBA has asked the BSI to convene a meeting of representatives of the BSI committees concerned to investigate the general co-ordination of standards for domestic windows, both wood and metal, with special reference to existing standards and those now in the course of preparation. This is with a view to securing interchangeability and a more general relation to the dimensions of openings in brickwork. The RIBA council has approved this action which has been taken on the recommendation of the Science Committee.

# DIARY

1953 House and Garden Colours for Summer Living. At the House and Garden Decoration Centre, 16, Grafton Street, W.1. Weekdays, 10 a.m. to 5 p.m.; Saturdays, until 12.30 p.m.

UNTIL JULY 31

Ten Selected "News Chronicle" Coronation House Designs. At Heal's, 196, Tottenham Court Road, W.1. Weekdays, 9 a.m. to 5.30 p.m.; Saturdays, until 1 p.m.

UNTIL JULY 31

Contemporary Brazilian Architecture. Exhibition at the BC, 26, Store Street, W.I. Weekdays, 9.30 a.m. to 5 p.m.; Saturdays, until 1 p.m.

UNTIL JULY 31

Furnishing to a Figure. At Heal's, 196, Tottenham Court Road, W.1. Weekdays, 9 a.m. to 5.30 p.m.; Saturdays, until 1 p.m. UNTIL JULY 31

# OLD PEOPLES' HOME

in TILE HILL NEIGHBOURHOOD UNIT, COVENTRY

designed by D.E.E. GIBSON City Architect and Planning Officer,

F.B. POOLEY, Deputy City Architect and Planning Officer,

J.C. BARKER Chief Assistant, W.A. JAMES, architect-in-charge

JOAN M. VAWSER, assistant architect; quantity surveyor, J. ROBINSON

Hawthorn Lodge, which accommodates 42 old people of both sexes, is sited in a new neighbourhood unit on a bus route to the city and forms a part of the social pattern. The main idea has been to avoid any feeling of separation from the rest of the community and to give the old people the opportunity to participate in the life around them. To achieve this, the grounds are not enclosed in any way and the building is sited carefully in relation to housing and a school. The MOH fixed a price limit of £700 per place, and by care in planning and detailing it has been possible to keep the cost down to £680 per place in spite of increases in labour and material costs.

The courtyard from the south-west.



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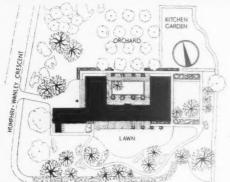
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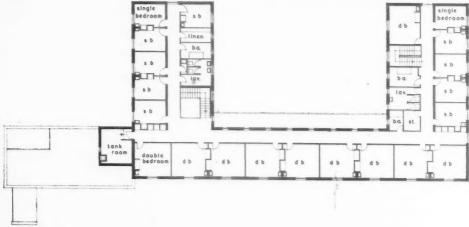




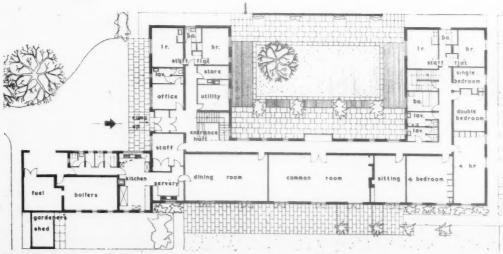
Site plan



Above, left, the courtyard from the north-east. Above, the south facade from the east.



First floor plan



Ground floor plan [Scale:  $\frac{1}{38}$ " = 1' 0"]



OLD PEOPLES' HOME in TILE HILL, COVENTRY designed by D. E. E. GIBSON, City Architect

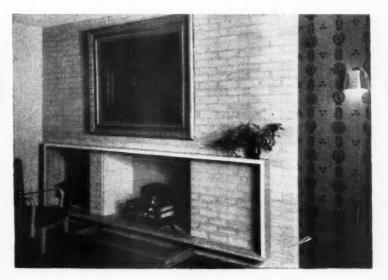
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CONSTRUCTION.—External walls are of 11-in. cavity brickwork and the first floor and roof are of precast concrete slabs. The roof slabs are prestressed. Internal partitions are of 2-in. breeze

Bay window in ground floor corridor.







Left, the entrance hall looking towards the main entrance. double bedroom. Above, typical

FINISHES.-External walls are faced with multicoloured sand-faced bricks and copings are of precast concrete. There are small areas of cement-sand rendering, smooth finished and painted with liquid stone paint. The roof is covered with 3-layer bituminous felt on a vermiculite screed, laid to falls The first floor is insulated against noise by a glass silk quilt laid on the floor slabs and covered with building paper to receive the screed. All internal walls and ceilings are plastered, and, for the most part, distempered, with small areas of wallpaper. The fireplace wall of the lounge is faced with sand-lime bricks. Floors of bedrooms and public

blocks, 3-in. brick-on-edge and 4½-in. brickwork.

SERVICES.—Heating is by accelerated low pressure hot water with radiators throughout and hot and cold water is laid on to each bedroom. Bell pushes are provided in all bedrooms, connected to an indicator board in each staff flat, with a change-over switch.

rooms are covered with cork tiles, composition tiles are used in corridors and staff rooms, and quarry tiles in bathrooms, lavatories, stores and kitchen.

The general contractors were J. G. Gray, Ltd. For sub-contractors, see page 94.

The lounge fireplace.

# BEA WATERLOO AIR TERMINAL, SOUTH BANK, LONDON S.E.1



The BEA Terminal on the South Bank is a conversion from and extension to the original Waterloo entrance to the 1951 Festival. It was designed by the architects for the original building, Sir John Burnet, Tait and Partners. The Terminal was illustrated at the time of its opening, in the JOURNAL for May 21. The plan on the right (top) indicates the circulation. Above is the departures hall and part of the new staircase leading to the first floor buffet and lounge; right is another view of this hall, showing the baggage and weighing area on the south side; below is the north facade of the arrivals hall, which is an extension to the original building and below, right, is the interior of this hall. The escalators in the departure hall connect with the Bakerloo, Northern and City lines of London Transport. Passengers arriving by car or taxi enter the departures hall on the north side or by bus from the east. Baggage is checked in and weighed on the south side, where it awaits loading into the appropriate coach. Illuminated indicators over each processing clerk's desk show





Site and circulation plan [Scale:  $\frac{1}{128}$ " = 1' 0"]

flight number, destination of plane and time of departure of the coach. In addition to cashiers, booking clerks, etc., the building contains offices of foreign air lines, banking facilities, hotel and theatre bookings, car hire, a bookstall and public telephones. The structural engineer was A. E. Beer. General contractors, Richard Costain, Ltd. Sub-contractors, page 94.

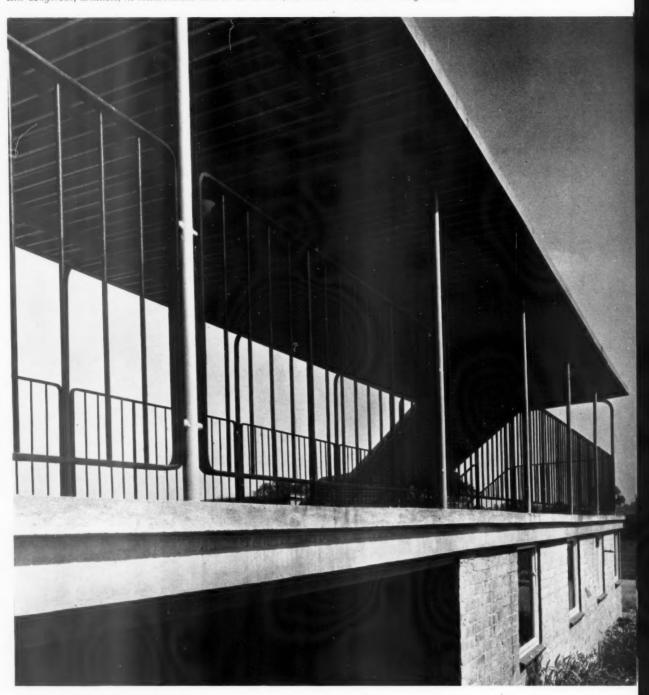






COVERED WAY: SCHOOL AT ST. PAUL'S CRAY

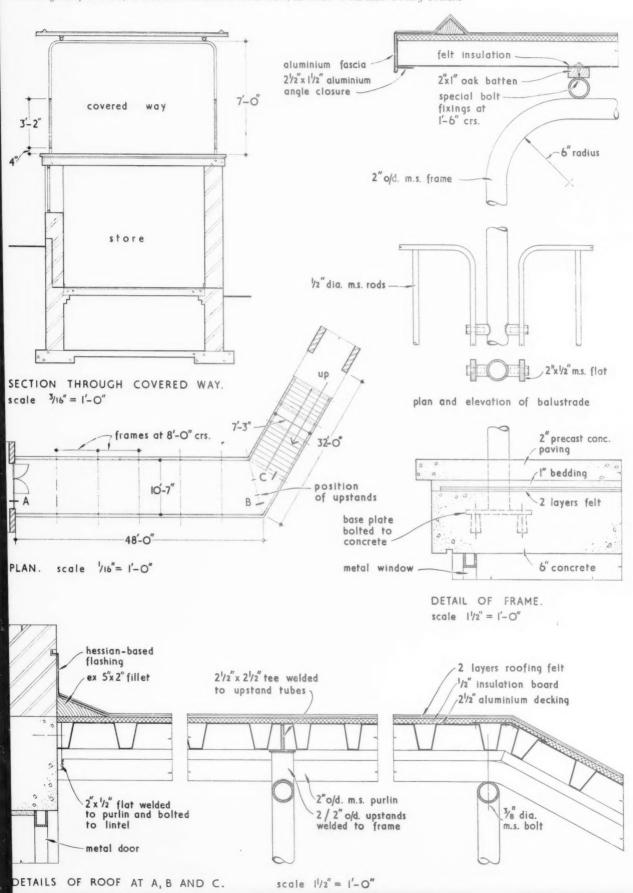
Elie Mayorcas, architect, in collaboration with S. H. Loweth, Architect to the Kent County Council



The roof to the covered way and staircase is of aluminium decking supported on tubular steel frames and purlins

COVERED WAY: SCHOOL AT ST. PAUL'S CRAY

Elie Mayorcas, architect, in collaboration with S. H. Loweth, Architect to the Kent County Council



HEATING: 9

SUSPENDED HEATING PANELS: SHOP IN LONDON, W.1.

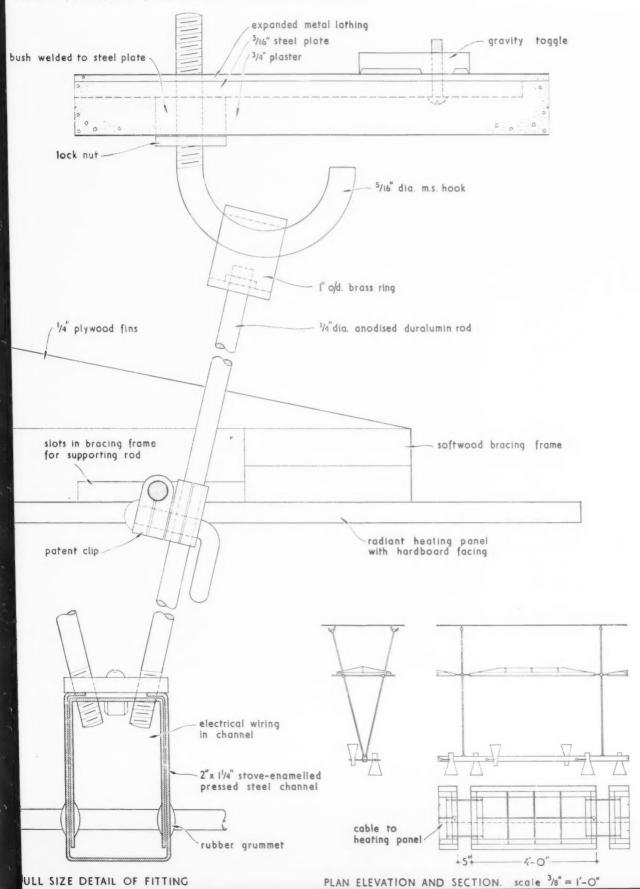
Chamberlin, Powell and Bon, architects; Robert Ashdown, assistant-in-charge



The radiant heating panels, which are painted yellow, and the adjustable light fittings are suspended by rods from the deep blue ceiling

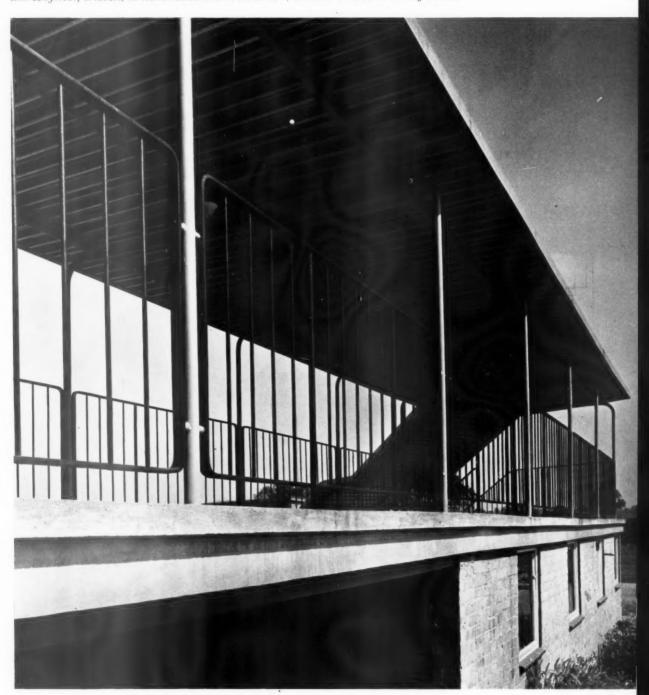
SUSPENDED HEATING PANELS: SHOP IN LONDON, W.1.

Chamberlin, Powell and Bon, architects; Robert Ashdown, assistant-in-charge



COVERED WAY: SCHOOL AT ST. PAUL'S CRAY

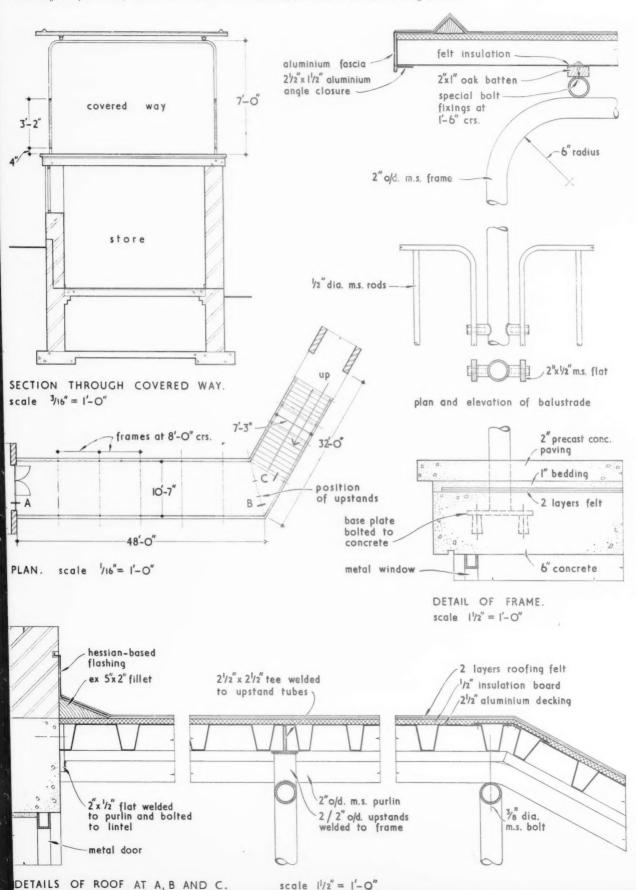
Elie Mayorcas, architect, in collaboration with S. H. Loweth, Architect to the Kent County Council



The roof to the covered way and staircase is of aluminium decking supported on tubular steel frames and purlins

COVERED WAY: SCHOOL AT ST. PAUL'S CRAY

Elie Mayorcas, architect, in collaboration with S. H. Loweth, Architect to the Kent County Council



SUSPENDED HEATING PANELS: SHOP IN LONDON, W.1.

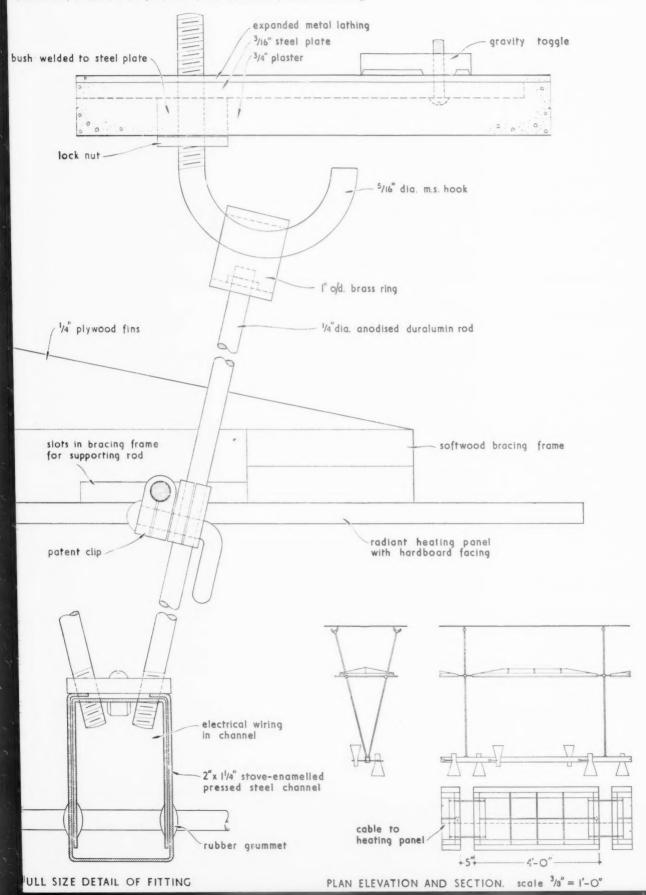
Chamberlin, Powell and Bon, architects; Robert Ashdown, assistant-in-charge



The radiant heating panels, which are painted yellow, and the adjustable light fittings are suspended by rods from the deep blue ceiling

SUSPENDED HEATING PANELS: SHOP IN LONDON, W.1.

Chamberlin, Powell and Bon, architects; Robert Ashdown, assistant-in-charge





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# STUDENTS' HOSTEL

in FITZROY SQUARE, LONDON, W.I

designed by RALPH TUBBS

consulting engineers FREDERICK S. SNOW and PARTNERS

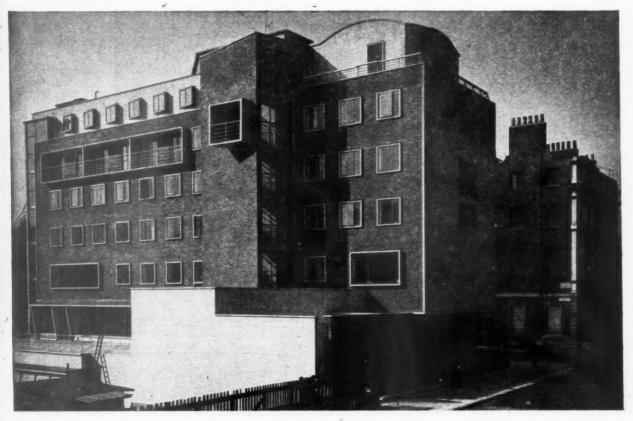
quantity surveyor B. G. COFFIN

Inscribed on the foundation stone of the Y.M.C.A. Indian Students' Union and Hostel in Fitzroy Square are the following words of Mahatma Gandhi: "I do not want my house to be walled on all sides nor my windows to be shut. I want the culture of all lands to blow about my house as freely as possible: but I refuse to be blown off my feet by any of them." These words describe something of the spirit in which this building was designed. The flank wall, seen on the right in the photograph below, is faced with polished Belgian fossil slabs fixed to brickwork.



The letterbox and bell push.

The rear facade from the north.





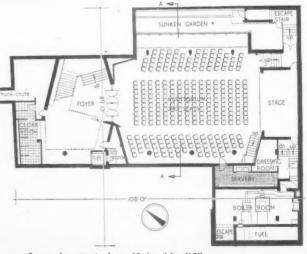
The north and west The north and west facades seen from Fitzroy Square. The end wall is faced with ashlar to give "visual continuation" of the houses on the south side of the square which are faced with Portland There revival, the arc the cor

First

### STUDENTS' HOSTEL

in FITZROY SQUARE, LONDON, W.1 designed by RALPH TUBBS

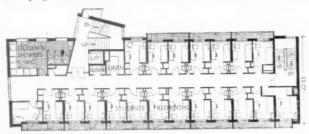
> GENERAL.—The building is designed to provide the following facilities: a hostel where young Indian students can find a temporary home before moving into permanent quarters and can obtain advice on first coming to this country; an opportunity for Indian students to have a social life amongst themselves and entertain their English friends; to provide educational facilities by means of plays, concerts, lectures, discussion groups, painting, sculpture and a comprehensive library. In the design of this building consideration was given to its relationship with the existing square, two sides of which were designed by Robert Adam.



Lower basement plan [Scale: 1 o']

revival, but as a result of his study of the problem the architect decided, amongst other things, to keep the coping line level with that in the square.

There was no question of any kind of imitation or PLAN.—There are 55 single bedrooms, main lounge and ladies lounge, dining room for 100, assembly hall to seat 324 (with facilities for showing films), games room, garden room and roof terrace, prayer



Fourth floor plan

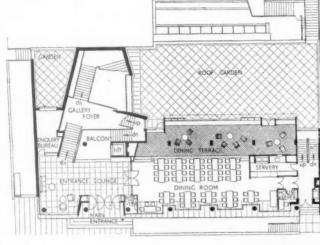
Fifth floor plan

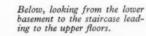




First floor plan

Section A-A





[Scale:  $\frac{1}{32}$ " = 1.0"] Ground floor plan STAGE

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Upper basement plan

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The north-east corner of the hostel. In the centre is the main staircase block and in the foreground the sloping windows to the auditorium in the lower basement.





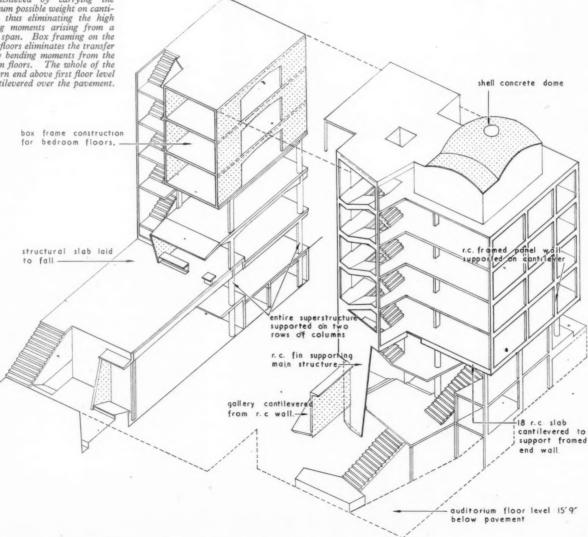
Axonometric sketch, below. The main block is supported on two rows of RC columns at 16-ft. centres, with 25 ft. between the rows. These columns have been kept slender by the maximum reduction of bending moments in them. In the lower floors this was achieved by carrying the maximum possible weight on cantilevers, thus eliminating the high bending moments arising from a 25-ft. span. Box framing on the upper floors eliminates the transfer of any bending moments from the bedoom floors. The whole of the northern end above first floor level is cantilevered over the pavement.

room, warden's flat and administrative offices. On the ground floor the plan has been kept as open as possible to give a sense of spaciousness on entering the building. Above this level the planning expresses the more cellular use of the building.

Above left, and above, two views of the auditorium in the lower basement.

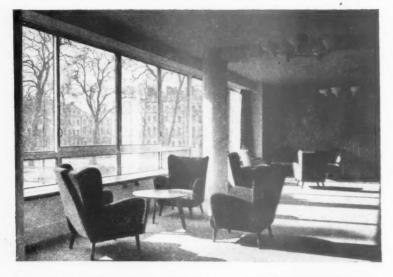
## STUDENTS' HOSTEL

in fitzroy square, london, w.1 designed by ralph tubbs



Axonometric projection showing method of construction [Scale: 24" = 1'0"]

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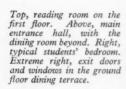
STUDENTS' HOSTEL

in FITZROY SQUARE, LONDON, W.I designed by RALPH TUBBS

CONSTRUCTION.—The basic system of construction is explained on page 85 in conjunction with an axonometric drawing. The box frame construction used for the upper floors, which was considered suitable to the cellular nature of the bedrooms, permitted shallow tie beams across corridors, making it possible to have a continuous pipe duct along the length of the building above the corridors. The whole of the north end of the building above first floor level is cantilevered over the pavement. This was done by placing an 18-in, thick floor slab over the entrance hall.

FINISHES.—Colours that have become traditional in India, such as mauve, gold, dark green and pale blue, are used inside the building. The prayer room on the fifth floor is for different religious denominations, and there are, therefore, no symbols. It is lit by a glass dome in the ceiling.

SERVICES.—Owing to the need for strict economy central heating is mostly by radiators, but where these would have been unsightly, as in the prayer room and dining room, floor panels are used. Under the low window sills in first floor public rooms there are radiant heaters. For the permanent ventilation of habitable rooms slots are provided under window sills, eliminating the necessity for air bricks. The ventilation of the assembly hall is provided by an inlet and extract plant, the air being warmed before entering the hall. The contract price was £87,624 and the number of cu. ft. 348,500. General contractors, Tersons Ltd. Sub-contractors page 94.







## TECHNICAL SECTION

Papers presented recently at the third annual convention of the British Wood Preserving Association cover several aspects of a subject which is of no little importance to the building industry.

These papers, which can be obtained from the Association at 6, Southampton Place, W.C.1, give details of codes of practice, pressure creosoting, the preparation of timber for preservative treatment and the value of surface treatment. A paper from Germany contains information about research and development in a country where war-time damage has led to an enormous increase in the number of attacks on wood by fungi and beetles.

As annual expenditure in the UK on restoration following similar attacks is reaching alarming proportions, the work of the Association is of vital importance. Its findings can be of immense value in helping us to keep down the cost of building maintenance.

This week's special article

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## 17 CONSTRUCTION: GENERAL the cost of house construction

The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant Information Centre items. Further and earlier information can be found by referring to the index published free each year.

A number of interesting suggestions are made in the United Nations Housing Sub-Committee report on the cost of house construction, summarized below. Most of these suggestions have been made before but, since they have yet to be adopted (at least, to a sufficient degree), they are well worth repeating. However, the report is mainly of interest in that it confirms (on evidence submitted by about 15 European countries) the value of several measures that we have long been advocating in this country—e.g. the use of progress schedules, incentive schemes, and the drawing-up of a long-term and stable programme of demand. The report criticizes the industry for giving insufficient support to research work.

Ever since it was established in 1948, the ECE Housing Sub-Committee has regarded the reduction of building costs as one of the main problems it should tackle. At its fifth session (in 1951), the sub-committee asked the secretariat to undertake a study of the chief measures now being taken in various European countries to reduce house-building costs. The secretariat has now carried out the enquiry, having

been in correspondence with some countries and having had direct discussions with government experts in others, and its findings are contained in a report entitled *The Cost of House Construction*.

The report deals with the factors which could reduce the cost of house construction under three headings—firstly, technical improvements; secondly, the rationalization of demand;

thirdly, increased efficiency in the organization of the industry.

#### WEIGHT

Under the first heading, the report draws particular attention to the problem of the weight of a house. Quoting UK research, it points out that the dead weight of the average traditional house is 130 tons, and the total weight of material handled in building it is nearly five times this figure. "A reduction of the weight of the components of the house is," says the report, "important as a means of diminishing the expenditure of man-hours on site. A reduced weight is a prerequisite for the distribution of building components over greater distances and, thus, for the development of factory production. . . . Reduced weight also makes it feasible to reduce the strength and, consequently, the size of foundations."

From Sweden it was reported that the average weight of houses built in Stockholm dropped by roughly 50 per cent. from 1883 to 1939.

#### MAINTENANCE COSTS

The report also draws attention to the difference between the lifetime of a house, in terms of its physical durability, and its economic life—the latter being dependent largely on maintenance costs and on the rate of change of the "customs, habits and needs of the consumer." The traditional house has a lifetime far longer than that of most other economic goods and, since it is often difficult, technically and financially, to adapt a house to changes in customs, etc., most houses remain in use for many years after the living habits and needs of the inhabitants have changed.

Moreover, to keep houses in a serviceable condition for long periods involves considerable expense in maintenance, etc., with the result that between a third and a half of all building operatives are kept permanently employed on this work. Yet most countries regard the initial cost as the prime factor when considering projects for state finance. However, in other countries (e.g., Sweden) the estimated running costs are, rightly, given equal weight.

The report concludes that "the introduction of new materials and constantly increasing use of prefabricated parts and components . . . which can . . . be dismantled and used . . . in new buildings, enables the problem of the lifetime of the house to be regarded from an entirely different point of view."

With regard to technical innovations generally—the use of so-called "new" materials, such as prestressed concrete, accurately finished concrete blocks, aluminium, sheet steel, fibrous wall-boards, plastics, etc., and the use of new

building methods, such as prefabrication, particularly of interiors—the authors of the report are of the opinion that these are all capable of leading to reductions in cost but that "the possibilities are at present potential rather than actual."

The reason given for this is the well-known one—" the traditional structure of the industry, with its multiplicity of small firms and comparative absence of powerful associations or large producing units with the responsibility and power to prepare and carry out fully co-ordinated production plans."

#### RATIONALIZATION OF DEMAND

"Technical innovations cannot be considered as representing technical progress until the organization of the industry and of the demand for its products is such as to enable the cost of using a new material or method to be lower than that of using one already established." So reads part of the report's conclusions and in the second and third sections of the report are described the various factors which might make possible technical progress.

The second section of the report commences by quoting the report of the Bailey Committee (HMSO, 1953, 3s.)—
"house building to a small number of interior plans will make the greatest single immediate contribution to speed, efficiency and lower costs"—with which statement the Housing Sub-committee whole-heartedly agrees.

The Sub-committee also recommends a reduction in the number of types of components, such as stair units, windows, doors, baths, etc., on the grounds that this facilitates large-scale production and, hence, cost reduction.

Experience has shown, says the report, that even when the number of types of a given component has been drastically reduced, the range of consumers' choice is still perfectly adequate and that "standardization has frequently been associated with an improvement in quality"

The Sub-committee appears to be in favour of the modular system, which it claims "enables building components to be interchangeable." It reports that Belgium, France, Sweden and the Soviet Union have adopted a 10-cm. module and (rather prematurely) that "it is proposed to adopt a 3-ft. 4-in. module in the horizontal plane and an 8-in. module in the vertical plane in the UK."

## CONTRACT DOCUMENTS AND PROCEDURE

The report criticizes the awarding of building jobs as a result of public tender. "Whatever the advantages of the tendering system," it states, "it does not appear to have contributed significantly to the reduction of costs." Further examination of alternative methods of "distributing jobs between builders" is recommended.

## BUILDING REGULATIONS

The importance of frequent revision of building codes and the adoption of one code for the whole country is stressed, since obsolete codes "often stand in the way of the . . . use of new building materials and systems and even the technical development of traditional ways of building."

Perhaps most important of all is the need for a long-term and stable programme of demand, a point that has been emphasized time and time again by Professor Bowen, in his articles on the building industry.

#### ORGANIZATION OF THE INDUSTRY

The Sub-committee deals in the third section of the report with the role of the architect, who, it says, is no longer a completely free agent. "In preparing his design, he has to take full account of information coming from or views expressed by research specialists, engineers, materials producers and contractors." This change, says the report, "implies that co-ordination is essential right from the designing stage."

The changing role of the architect necessitates changes in his training, and a new type of builder is needed, too. To be a good builder used to require little more than individual skill and the qualities of "a good boss"; today, with growing mechanization, the builder needs a much wider knowledge: "Lessons can be learnt from other industries where the qualifications of managers and their staffs are proving to be much of the essence of higher productivity."

## MECHANIZATION

Lack of knowledge of accurate costing methods has been put forward as one of the reasons why many builders are unaware of the economic advantages of increased mechanization. Another obstacle to mechanization, at least among small firms, is lack of funds. The solution to this problem may lie in the organization of co-operative machine stations, on similar lines to the agricultural machinery stations in use in Denmark and elsewhere.

#### LABOUR

One of the last subjects dealt with in the report, and certainly one of the most important, is conditions of labour: "attempts to rationalize house building... can only be successful with the support of the workers, who must be convinced that the increased output per man sought will improve their own earnings, welfare and status."

Welfare facilities should include "shelter against inclement weather, facilities for drying and storing clothes, wash basins, showers and sanitary installations."

The principal method of enlisting workers' support is by means of payments by results schemes. These schemes are operated, to varying

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payhese ying "Do you know that medical authorities once laid down that travel at twenty miles an hour would unhinge the mind?"

"Why should you as an architect bring the history of locomotion into a publication like this?"

"I'm leading up to progress, with particular reference to the advantages of Carlite pre-mixed vermiculite plaster, over old-style sand based plasters."

"I believe they're very considerable from the contractor's as well as the architect's point of view. Proceed."

"The big thing is that, being pre-mixed, Carlite can be rigidly controlled at the factory. The quality never varies." "So you architects know you have no trouble about your specifications being met."

"And you contractors have no trouble meeting them—which is more than you can say when you're putting up a mixture of sand, water and plenty of human element."

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extents, in 10 countries of western Europe and in most of the countries of eastern Europe. Also exceedingly valuable are regular site meetings, "to obtain the views and suggestions not only of the foremen and charge hands but also of the workmen themselves." Lastly, in this section, the report warns that "since the reduction of cost inevitably means a reduction of manhours at some points in the production process, the continued co-operation of the workers depends on a guarantee or at least a fair probability that they will not be thrown out of work."

The reduction of building costs de-

pends, in the long run, on research and the dissemination and application of the results of research. If the knowledge already available were applied in practice, particularly by the smaller firms in the industry, the cost of building could be greatly reduced. The report concludes, therefore, with a plea that governments should encourage and support all forms of building research and the dissemination of documented information, and a criticism that "the building industry, and in considerable measure also the building professions, appear to give insufficient support to activities of this kind."

## CELLULAR RAFT FOUNDATIONS FOR SCHOOL IN MINING AREA

The site of the Swinton Fitzwilliam Infants School, Swinton, Yorks, is in a mining area, and in the design of the foundations the possibility of subsidence had to be taken into account. There was almost no top-soil and, apart from a 6-in. covering of turf, the sub-soil consisted entirely of a bed of sand 6 ft. deep, on a strata of bedded sandstone. The foundations were designed as cellular reinforced concrete rafts, 4 ft. deep. After the site was levelled, a 2-in. bed of weak concrete was laid, upon which the rafts were constructed. Between the site and concrete the reinforced concrete rafts a layer of building paper was placed to prevent adhesion. Each raft is divided into cells approximately 7 ft. square. There are 6-in. gaps between adjacent rafts, which are carried up throughout the superstructure in the form of expansion joints, to counteract the effects of settlement. The ground floor consists of precast concrete slabs supported on the ribs of the raft cells. Construction of the superstructure consists of 11-in. and 16-in. cavity walls with flat and single-pitch roofs of concrete. The roof over the assembly hall consists of channel-reinforced wood-wool slabs, on light steel trusses. Drainage under the building has been avoided; drains from the lavatories are collected in reinforced concrete manholes attached to the sides of the rafts, thereby minimising the number of connections to the main drains in case of fractures. (Architects, Shapley and Davison, F. A.R.I.B.A.; consultants for design of foundations, West Riding County Architect's Structural Department.)



## INFORMATION CENTRE

A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.

Headings below:

## 6.41 planning: social and recreational ATMOSPHERIC POLLUTION

The London Fog. (Smokeless Air. The Smoke Abatement Journal. Spring, 1953. 1s.)

Survey of the December, 1952, London fog, with details of weather conditions, pollution figures, death rates and effects on animal health and plant life. Estimates of the cost of the fog obtained from shops and stores.

## 8.34 surveying: specification CURRENT PRICES: BOOK

Laxton's Builders' Price Book, 1953. Edited by P. T. Walters. (Kelly's Directories Ltd. 126th Edition. 1952. 30s.)

This standard price book is now an annual publication. The current edition contains about 500 pages of prices and wage rates and 500 pages of other information of interest to all connected with the building industry.

Now that this work is an annual publication, drastic changes in the setting out of the information, says the Editor, are undesirable. They are, moreover, unnecessary in a work which it is difficult to criticize.

Prices for materials and measured rates are given for a variety of specialist trades, in addition to all the usual trades, including sound and heat insulation, ventilation, blind maker and lift engineer. Measured rates are in accordance with the revised rates of wages that came into force on February 2, 1953.

No allowance has been made in the rates for the effect of any possible improvement in output due to the operation of an incentive scheme, and it is difficult to see how the effect could, at present, be estimated. It is to be hoped, however, that as more information on the results of incentive schemes is accumulated, it may eventually be possible to include some factor which can be

<sup>1</sup> Sociology. 2 Planning: General. 3 Planning: Regional and National. 4 Planning: Urban and Rural. 5 Planning: Public Utilities. 6 Planning: Social and Recreational. 7 Practice. 8 Surveying, Specification. 9 Design: General. 10 Design: Building Types. 11 Materials: General. 12 Materials: Miscellaneous. 11 Materials: Miscellaneous. 17 Construction: General. 18 Construction: Theory. 19 Construction: Details. 20 Construction: Theory. 19 Construction: Details. 20 Construction: Complete Structures. 21 Construction: Miscellaneous. 22 Sound Insulation-Acoustics. 23 Heating Ventilation. 24 Lighting. 25 Water Supply, Sanitation. 26 Services Equipment: Miscellaneous. 27 Furniture, Fittings,



County Education Architect: G. W. Oak, Esq., A.R.I.B.A.

Contractors: R. G. Carter Ltd., Drayton, Norwich.

Por the Diss Secondary Modern School, "PUDLO" Brand Cement
Waterproofer was once again selected. In this new building, 'Pudlo' was
used in reinforced concrete slabs on the ground floor, and for concrete and
brick ducts below floor level. Where the ground rises above floor level, the
cavity of the II" wall has been filled with concrete waterproofed with 'PUDLO.'



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used to calculate the probable saving.
General information includes: the London Working Rule Agreement; tables of safe loads on joists and stanchions, and the scales of professional charges of the RIBA, the RICS and the Auctioneers' and Estate Agents' Institute.

The alphabetical list of brands and trade names now fills 271 pages, the thorough general index occupies 15 pages and the advertisements are indexed twice—firstly, classified according to subject; secondly, alphabetically.

## 9.35 design: general

#### ABSTRACTS

Building Abstract Service. (Jan.-Feb., 1953. Distributed by L. M. Giertz. Hagelbygard, Tumba, Sweden. 20 Sw. Kr. plus postage.) 32 very brief abstracts. English translation. Cover wide range of subjects. This abstract service is useful to those who wish to keep an eye on publications in Denmark, Finland, Norway and Sweden.

## 9.36 design: general DSIR PUBLICATIONS

Government Publications. Sectional List No. 3. Department of Scientific and Industrial Research. (HMSO. 1953.)

This list is a most useful office reference. In addition to BRS publications, it includes Fire Research, Forest Products, Fuel, Illumination, National Physical Laboratory, Pests and Roads Research, all of which cover items of importance to architects. The BRS section includes the well-known Digests, National Building Studies, Bulletins, Technical Papers, Research Papers, Special Reports and a number of other publications. A "must" for the office reference shelf. References are up to date to March, 1953.

## 10.105 design: building types COLOUR IN SCHOOLS

Colour in School Buildings. MOE, Building Bulletin No. 9. (HMSO. 1953. 4s.).

See long review in JOURNAL for April 2, 1953. Excellent study of colour decoration, of value to all architects, in addition to special application to schools. Explains Munsell colour system very clearly and includes colour samples of the "Archrome" (Munsell) range of 47 colours.

#### 14.61 materials: concrete ESTATE ROADS

Lean Concrete Base for Estate Roads. (The Surveyor. April 18, 1953.)

Brief article on use of weak concrete for estate roads, as used at Crawley New Town because of shortage of hardcore. Appears to give good results at reasonable cost. A 1:14 cement to aggregate mix, with controlled water-cement ratio, was used; mostly 8 in, thick but 10 in, where carrying buses. Compacted by 2½-ton roller and topped with sprayed bitumen emulsion.

## 14.62 materials: concrete READY-MIXED CONCRETE

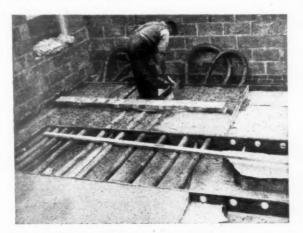
Methods of Specifying Ready-Mixed Concrete. BS 1926. (British Standards Institution. 1953. 2s. 6d.)

The merits of ready-mixed concrete were discussed in JOURNAL for June 26, 1952. This standard describes methods of controlling the product either where the concrete mix is designed by the supplier or where the purchaser specifies a definite mix. The standard is divided into three sections giving general requirements applicable to both methods of supply and specific requirements for each method.

### FLOOR HEATING BY HOT AIR

The use of inflatable rubber tubes to form ducts in floors. through which hot air can be passed for floor heating, was mentioned in Information Centre item 23.173: 30.4.53.

The photo on the right shows con-



crete being placed around the rubber tubing at a house at Caversham, Berks (architects, Booth and Ledeboer). The tubing is at 6-in. and 12-in. centres in the 4-in. surface concrete, separated from the oversite concrete by a bituminous D.P.C. The finished diameter of the ducts is 3 in.

## 16.101 materials: miscellaneous

#### **OUARRIES**

Directory of Quarries, Clayworks and Sand and Gravel Pits, etc. (The Quarry Mana-gers' Journal, Ltd. 1953. 15s.)

A useful reference for architects with jobs outside their normal district, including information on stone and slate quarries.

#### 16.102 materials: miscellaneous STONE CONSTRUCTION

Modern Practical Masonry. E. G. Warland. (Pitman. 2nd Edition. 1953. 50s.)

First published in 1929, this well-known book has now been revised for its second edition. Many clear detail drawings and photographs. An extremely good and lengthy section on plane and solid geometry relating to setting out of stonework. The section on types of building stone is not as helpful as it might have been. The examples of stonework construction are noticeably of the heavy "tied-on-to-a-steel-frame" type, but give a comprehensive description of how to do that kind of work. A useful book to know of for reference purposes.

#### 17.93 construction: general ESTATE ROADS

Specifications for the Construction of Housing Estate Roads Using Soil-Cement. Roads Research Road Note No. 15. (HMSO, (HMSO, 1953. 9d.)

Specifications for two methods of constructing soil-cement roads. Methods are economical in labour and material. Costs said to be between half and one-third of concrete roads.

## 18.128 construction: theory

## TIMBER

Timber Progress & Desk Book for 1953. (Clever-Hume Press Ltd. 1952. 15s.)

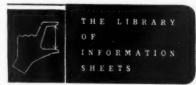
Timber reference book provides 14 articles giving new ideas, latest achievements in technology and commerce of the timber and allied industries. Comprehensive bibliography, reference tables of commercial uses of the newer hardwoods and list of world information centres. A useful acquisition for the architect's reference library.

## 18.129 construction: Ttheory

#### WELDED STEEL

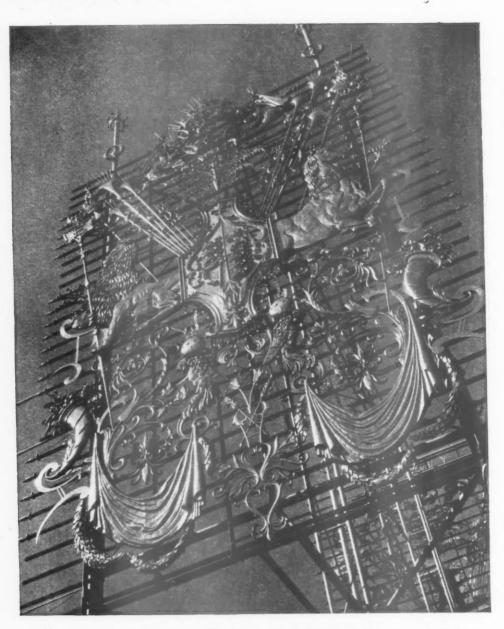
Welded Plate Girders Portal Frame Formu-læ. (Quasi Arc Co. Ltd., Bilston. Free on application.)

Welding design brochures provide useful addition to architect's library.



#### 19.J1, REFERENCE BACK

Readers are asked to note the following revisions and to amend their copy of the Information Sheet in question: Sherwood miniature wood block floor is now replaced by the Windsor Floor (patent No. 544228).



All the Aluminium Tubes and Extrusions used by the Engineers and Craftsmen, J. Starkie Gardner Ltd., in the construction of this Whitehall feature were supplied by T.I. Aluminium Ltd.

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publications are the second two of a series. "Welded Plate Girders" deals with design considerations of component parts of plate girders, fabrication and practical factors. Complete design of a 30-ft. plate girder is given in detail. "Portal Frame Formulæ" gives a series of simple formulæ for bending moments in flat or ridged, hinged or fixed, single-storey single-bay portals.

## 18.130 construction: theory

## TIMBER TRUSSES

TDA Standard Truss—Type B. TDA Design Sheets 15, 16, 17, 18, 19. (Timber Development Association Ltd.)

Continuation of series of designs for timber roof trusses suitable for industrial and commercial buildings. Type "B" trusses are for use with false ceilings. Previous design sheets were reviewed in Information Centre item 18.103:4.9.52.

## 18.131 construction: theory

#### **ALUMINIUM DESIGN**

Large Aluminium Rivets. BS 1974. (British Standards Institution. 1953. 4s.)

New BS for large aluminium alloy rivets intended for use in general engineering and shipbuilding; covers range ½ in. to 1 in. dia. Provides for small snap-head, conical head, small pan-head, rounded or flat countersunk head and shallow rounded or flat counter.

sunk head rivets. Large aluminium rivets are a recent development and experience in their manufacture and use is rapidly increasing. Arrangements are being made to review the standard in about two years' time.

## 18.132 construction: theory

#### TIMBER JOINTS

Connectors for Timber. BS 1579. (British Standards Institution. 1953. 3s. 6d.)

Revised BS omits claw plate and malleable cast iron shear plate connectors. Includes split rings, shear plates, round and square toothed plates and corrugated toothed rings. Specifications define dimensions and materials of connectors but include no data on strengths of joints. See article in JOURNAL for May 21, 1953, p. 657.

## 19.165 construction : details

## PILED FOUNDATIONS

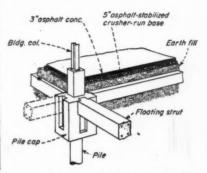
Movable Foundation Struts Settle with Surrounding Soil. (Engineering News Record [USA]. March 12, 1953. p. 52.)

Interesting solution to problem often met in piled foundations where surrounding floor is not supported.

There are several examples at the various docks in this country where it was considered unnecessary or uneconomical to suspend the ground floor of transit sheds while piling the foundations. The result of many years of floor settlement produces a

rather unfortunate result and it is interesting to find a solution at an air station in California.

The station has 200-ft. by 1,000-ft. supply warehouses, supported on piled foundations at 40-ft. centres. Soil tests indicated that the ultimate settlement of floor relative to foundations would be 18 in. This would mean that the struts between the pile caps would also have to settle, or to carry the load from the floor. Consequently, the 12-in, square beams were keyed into an 8-in. slot in the pile cap, so that during settlement the strut merely moves down the cap.



The cap is surrounded by expansion joint material to allow the floor to settle. The floor has an asphaltic pavement which can be replaced at a later date when all anticipated settlement has taken place.

## 20.217 construction: details

#### **FOUNDATIONS**

Leaning Tower of Pisa. C. B. Spencer. (Engineering News Record [USA]. April 2, 1953. pp. 40-43.)

History of construction of famous tower, with opinions on why it still stands and how to arrest its overturning.

Charles B. Spencer is the head of Spencer, White and Prentis, the well-known American authorities on foundations. After a visit to Europe he considered the tower and his opinions make a very interesting article.

opinions make a very interesting article.

The Italian authorities suggest that the tower is leaning further each year and, on that basis, that it should collapse in about 200 years. Mr. Spencer considers that the rate of lean will increase as the centre of gravity moves nearer the lower foundation and that 100 years is more likely.

Four methods were considered for arresting the incline of the tower: producing a push on the tower on the low side; producing a pull on the high side; increase the vertical support to the foundation on the low side and removal of some of the foundation on the high side. This latter is, in Mr. Spencer's opinion, the most hopeful solution. Reducing the soil consolidation here would move the centre of the remaining support towards the low side and towards the centre of the load. Any settlement on the high side would still further improve the position. Carried to a point where the centre of the foundation coincides with the centre of gravity of the tower, the overturning couple would be eliminated.

## 42-FT. PRESTRESSED PRECAST CONCRETE FLOOR UNITS

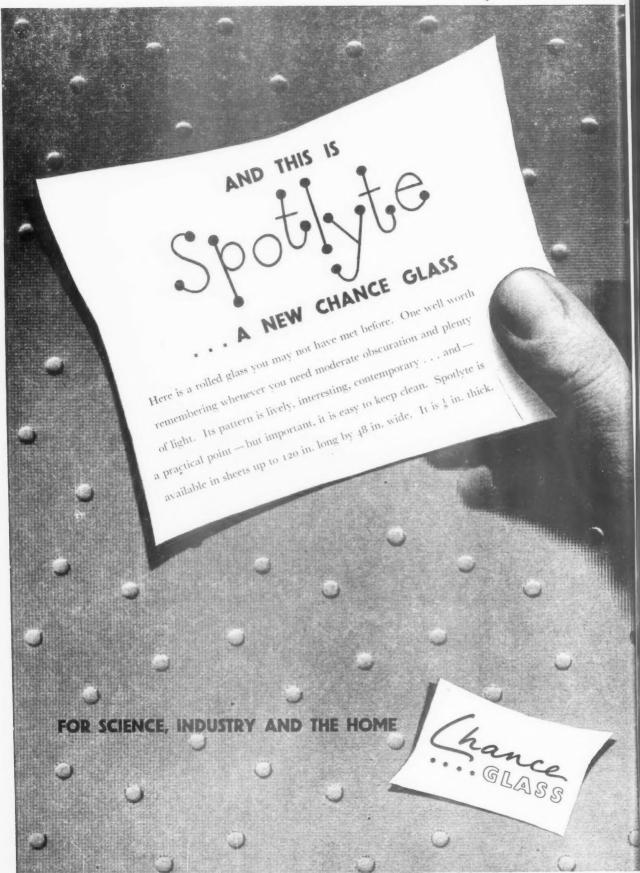
The photo below shows a 42-ft. 4-in. long hollow precast and prestressed concrete roof unit being placed in position at Chiswick Polytechnic. This roof is claimed to be one of the longest single-span hollow roof slabs in the world. The units are 14 in. wide,  $8\frac{1}{2}$  in. deep at the ends and  $10\frac{1}{2}$  in. deep at the centre. The cavity is approximately  $9\frac{1}{2}$  in. wide,  $5\frac{1}{2}$  in. deep at the ends and  $6\frac{1}{2}$  in. deep at the centre. The weight of the roof structure is 68 lb./sq. ft. The units are designed to carry 28 lb./sq. ft. (finishes) plus 25 lb./sq. ft. (live load, including loads from gymnasium ropes, etc.). The units are prestressed by 14 0.2-in. diameter wires. (Architects, Dalgliesh and Pullen, in collaboration with C. G. Stillman, County Architect, Middlesex C.C.)



## 23.180 heating and ventilation TROPICAL BUILDINGS

New Directions in Thermal Insulation. Groff Conklin. (Progressive Architecture [USA]. April, 1953.)

Five-page article dealing with wall insulation, especially insulation for hot climate conditions where keeping houses cool is the main problem. Discussion covers value of



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ventilation, use of shading, double windows and heat absorbing glass. Of interest to all those designing for hot climates.

#### 23 181 heating and ventilation IMMERSION HEATERS

Fitting Immersion Heaters. Philip Honey. (Plumbing Trade Journal. May, 1953.)

Brief, illustrated article dealing with various problems which arise in fitting immersion heaters, especially in existing installations. Clear and useful diagrams of typical cases.

#### 23.182 heating and ventilation COKE-BURNING APPLIANCES

Coke-Burning Appliance Handbook. Edition. The Gas Council. 1953. 12s. 6d. Catalogue of tested coke-burning open fires, heating stoves, small domestic and large domestic and central heating boilers, and free-standing cookers. More extensive for coke-burning appliances than the CUC list of approved appliances. 246 pp., illustrated.

This handbook is more than just a list—each appliance is illustrated and the following data given where applicable: purpose, finish, fuel capacity, weight, method of ignition, dimensions, construction, list of available tools and accessories, method of combustion control, size of fuel recom-

handbook, giving minimum prices with standard finish for each appliance.

The handbook has four main sections: (i) notes on the efficiency and selection of open fires and heating stoves, (ii) technical data on coke, (iii) a list of the appliances, (iv)

detailed information on each appliance.

Recognizing the inadequacy of "test-bench efficiencies," the Gas Council has chosen to indicate the approximate room sizes for the open fires (inset, convector and with large back boilers) and the openable heating stoves by means of tables in the first part of the handbook, until such time as a precise room efficiency rating is available for each appli-

ance.
The tables give the cubic content of the room that can be adequately heated by means of each type of appliance installed under various conditions, e.g., inset fire, 16-in., with chimney ventilation control; ditto, without ventilation control; 18-in. ditto, with boiler and with and without chimney ventilation control, etc.

## 24.166 lighting VISUAL FATIGUE

Visual Fatigue, with Special Reference to Lighting. H. C. Weston. (Trans. Illum. Eng. Soc. [London]. Vol. XVIII, No. 2. 1953.)

Outside the architect's usual scope, but an interesting analysis of visual fatigue and the lighting most likely to cause it. Related to mended, etc.
A separate "Price Guide" accompanies the posture, and face, head and neck muscular control. Photographs showing these effects are most interesting.

#### 26.106 services equipment: miscellaneous POLYTHENE TUBE

Polythene Tube for Cold Water Services. BS 1972:1953. (British Standards Institution. 3s. 6d.)

Normal- and heavy-guage types. Quality, sizes, thickness, testing. Notes on the use of tubes for cold-water services. Non-corrosive, flexible, elastic and heat insulating, and less liable to conduct sound than metal pipes. Cannot be used for electrical earthing and softens with heat. Sunlight can degrade polythene, but black pigment prevents this. Methods of jointing, bending and fixing are

#### 26.107 services and equipment: miscellaneous POLYTHENE TUBE

Polythene Tube for General Purposes, including Chemical and Food Industry Uses. BS 1973:1953. (British Standards Institu-

Quality, dimensions, testing. Notes on properties and use. Considerable resistance to many, but not all, chemicals may make these tubes very convenient for some industrial applications.

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.I

#### ENQUIRY FORM

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

Please ask manufacturers to send further particulars to :-

NAME .....

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AJ 16.7.53

## BITUMEN/ALUMINIUM FOIL ROOFING FOR STADIUM

The recently completed Radjadamnern boxing stadium, Bangkok, seen in the photograph below, has a saucer-shaped dome roof, the flat rim of which has an unusual covering. This comprises a base of bitumen-saturated felt, a layer of bitumen (laid hot), overlapping strips of 0.10 mm. thick embossed aluminium foil, another layer of bitumen and a second layer of aluminium foil. Advantages claimed for this alternative to felt-bitumen-gravel built-up roofing include: ease of application (the roofing of the Radjadamnern station was laid by two men-one applying the hot bitumen, the other applying the foil), and good thermal insulation (the aluminium foil reflects back much of the sun's heat). The arrow in the photo below shows the flat rim of the saucer dome.



## Buildings Illustrated

Restaurant Conversion for Swan & Edgar Ltd., 49-63, Regent Street, London, W.1. (Pages 75-76.) Designer: J. Groag, F.R.S.A., DIP.INGARCH., F.S.I.A. General contractors: Cooke's (Finsbury) Ltd. Subcontractors: electric light fittings, Courtney Pope (Electrical) Ltd.

Old People's Home, Tile Hill Neighbourhood Unit, Coventry, for the Corporation of the City of Coventry. (Pages 77-79.) Architect: D. E. E. Gibson, C.B.E., M.A., A.R.I.B.A., M.T.P.I., City Architect and Planning Officer; F. B. Pooley, A.R.I.B.A., Deputy City Architect & Planning Officer; J. C. Barker, A.R.I.B.A., Architect in charge; Joan M. Vawser, A.R.I.B.A., Assistant Architect. Quantity surveyor: J. Robinson, F.R.I.C.S., A.I.ARB. General contractors: J. G. Gray Ltd. Sub-contractors: pre-cast concrete floors and roof, Concrete Ltd.; plumbing, J. S. Wright & Co. Ltd.; heating, Brightside Engineering Co. Ltd.; electrical work, P. D. Brady; roofing, Permanite Ltd.; flooring, Mundet Cork Products Ltd., Marley Tile Co. Ltd.; balustrading, Walker & Wood Ltd.; windows, Kingston Ltd.; tiling, Coventry Tile Co. Ltd.; fireplaces, Edwin H. Fryer; plastic letters and numerals, The Lettering Centre; terrazzo, Marbolino Co.; landscaping, Coventry Parks Department.

BEA Waterloo Air Terminal, South Bank, London, S.E.1. (Page 80.) Architect: Sir John Burnet, Tait & Partners. Structural engineer: A. E. Beer, A.C.G.I., M.I.STRUCT.E. General contractors: Richard Costain Ltd. Sub-contractors: bricks, R. Y. Aymes Ltd.; counters, desks, baggage benches, shop front, D. Burkle & Son Ltd.; roof glazing, British Challenge Glazing Co.; copperwork, Builders

Iron & Zinc Works Ltd.; sound relay service, Central Rediffusion Services Ltd.; decorations, C. & T. Painters Ltd.; metal lathing, W. H. Colt (London) Ltd.; glazed steel doors, glazed screen at head of escalator, The Crittall Manufacturing Co. Ltd.; structural steelwork, Dawnays Ltd.; electric clocks, English Clock Systems Ltd.; travertine facing, Fenning & Co. Ltd.; balustrade, barrier rails, Grundy Arnatt Ltd.; aluminium stair nosings, Gandy Ltd.; bar fitting, Gaskell & Chambers Ltd.; ironmongery, James Gibbons Ltd.; garden work, Gilliam & Co.; glazing, E. A. Hetherington Ltd.; linoleum laid by J. Hamilton-Fish Ltd.; signs and lettering, The Lettering Centre; commemoration plaque, H. H. Martyn Ltd.; roller shutters, accordeon doors, Potter Rax Ltd.; steel roof decking, bituminous sheeting, The Ruberoid Co. Ltd.; cold glaze finishes, Robbs Cement Enamel Finishes; concrete and quarry tiles, J. H. Sankey & Son Ltd.; message conveyor, Sofex Ltd.; internal telephones, Standard Telephones & Cables Ltd.; lighting installation, light fittings, light indicator signs, Troughton & Young (Heating) Ltd.; tarmacadam, Val de Travers Asphalte Paving Co.; panelling, Veneercraft Ltd.

YMCA Indian Students' Union and Hostel at 41, Fitzroy Square, London, W.1. (Pages 81-86.) Architect: Ralph Tubbs, O.B.E., F.R.I.B.A. Consulting engineers: Frederick S. Snow & Partners. Quantity surveyor: B. G. Coffin, F.R.I.C.S. General contractors: Tersons Ltd. Sub-contractors: soil, drainage, rainwater and plumbing, Richard Audrey Ltd.; tanking to basement, William Briggs, Ltd.; patent roof covering, Durable Asphalte Co. Ltd.; roof paving, Everseal Products Ltd.; terrazzo paving, Art Pavements Ltd.; linoleum, Catesby's Ltd.; internal flush

doors, Rippers Ltd.; ironmongery and panic bolts, Alfred G. Roberts Ltd.; metal windows, Williams & Williams Ltd.; suspended ceilings, Expanded Metal Co. Ltd.; passenger lift, Hammond & Champness Ltd.; service lifts, Keighley Lifts Ltd.; ventilation, heating and hot water, Rosser & Russell Ltd.; sanitary fittings, Pryke & Palmer Ltd.; electric lighting, Troughton & Young Ltd.; kitchen equipment, Benham & Sons Ltd.; facing bricks, Henry J. Greenham Ltd.; special balustrading, Scaffolding (G.B.) Ltd.; insulation to prayer room roof, C. & T. Pyrok (Contracts) Ltd.; furnishing, Heal's Contracts Ltd.

## Announcements

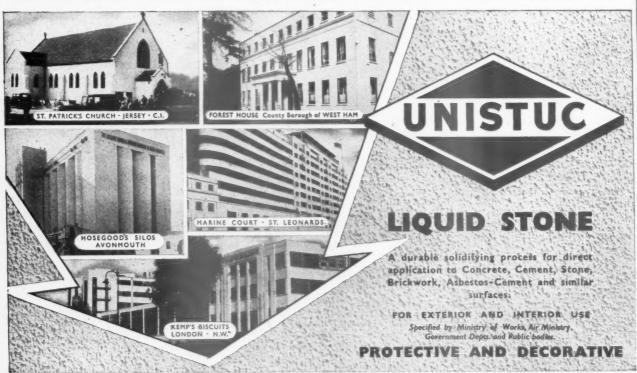
New Floor Installations Ltd., by agreement with the Onsite Flooring Company, have become the concessionaires of the "Windsor" floor (patent No. 544228), which now takes the place of the "Sherwood" miniature wood block floor.

Pratt, Blount & Cooper, L.R.I.B.A., are to be known as Pratt, Cooper & Casse; they will continue to practice at 174, High Street, Acton, W.3 (Tel., Acorn 0860).

Brian Peake, F.R.I.B.A., of 13, Dover Street, W.1, informs us his telephone number has been changed to Hyde Park 4914-5.

Dunlop Special Products Ltd., have opened n new London depot and warehouse at Kingsbury Road, N.W.9 (Tel.: Colindale 7033).

The Wallboard Importers', Distributors' and Merchants' Association of the United Kingdom are holding their autumn general meeting at the Grand Hotel, Scarborough, on October 14. Those requiring further particulars should contact Charles D. Phillips, secretary of the Association, at 3-4, Newgate Street, E.C.1 (Tel.: City 3313).



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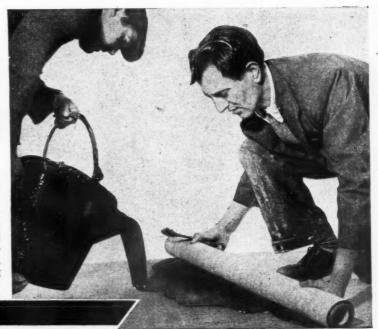
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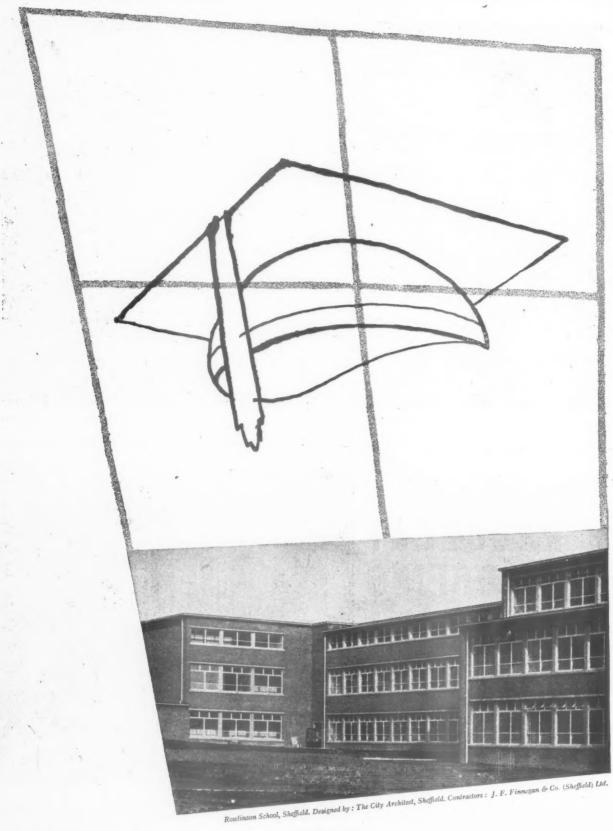
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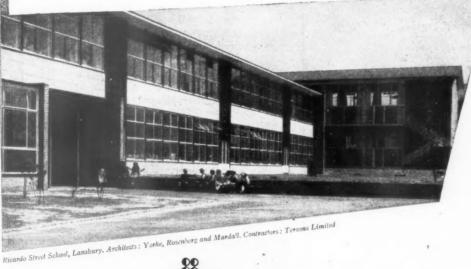


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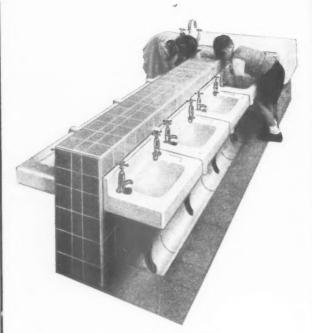


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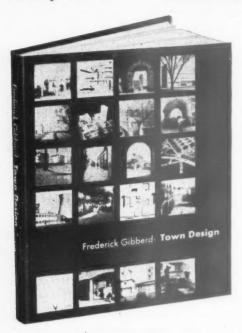


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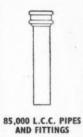
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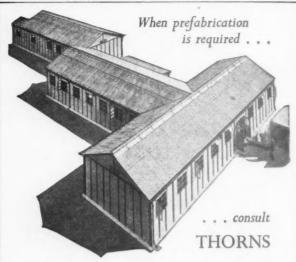
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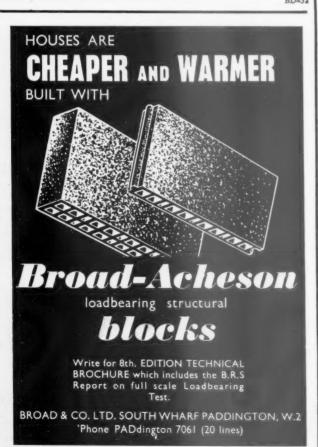
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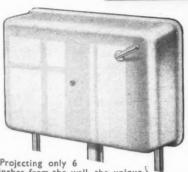
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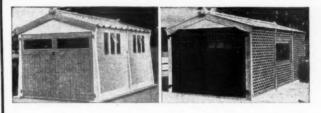
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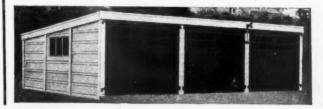


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August, 1963.

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9th July, 1953.

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T. H. EVANS. Clerk of the County Council.

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upwards.
Write to Room 403, J.Q.S., M.L.N.S., Technical and Scientific Register, 26, King Street, London, S.W.1.

BOROUGH OF TOTTENHAM.
BOROUGH ENGINEER & SURVEYOR'S
DEPARTMENT.

BOROUGH ENGINEER & SURVEYORS

DEPARTMENT.

Applications are invited for established posts of ARCHITECTURAL ASSISTANTS at salaries in accordance with the National Scales, A.P.T. Grades II, III or 11 (£495 to £500, £525 to £520 to £520 to £520 to £520 to £525 to £525 to £526 to £520 to £

accommodation.

Form of application, conditions of appointment Form of application, conditions of appunitment and further particulars obtainable from the Borough Engineer, Town Hall, Tottenham, N.I.5, to whom applications must be delivered not later than Tuesday, 28th July, 1983.

M. LINDSAY TAYLOR,

Town Clerk.

DERBYSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications invited for appointment of ARCHITECT (permanent staff) on A.P.T. Grade VI (£670 by £20(2) and £25 to £735 per annum) for duties in connection with the General Education Section dealing with the extension, improvement and maintenance of school buildings. Forms and particulars to be obtained by 22nd July, 1953, from F. Hamer Crossley, County Architect, St. Marry's Gate, Derby.

NATIONAL COAL BOARD—SOUTH WESTERN DIVISION.
Applications are invited for the post of

NATIONAL COAL BOARD—SOUTH WESTERN DIVISION.

Applications are invited for the post of ARCHITECTURAL ASSISTANT, Grade I, in the Divisional Architects Branch of the National Coal Board, South Western Division, Cardiff. The salary will be at the rate of £525 by £25 to £650 for male and £420 by £20 to £520 for female. The appointment will be subject to the provisions of the Board's Superannuation Scheme.

Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects and have had at least three years subsequent practical office experience.

Applications, in writing, stating age, education, qualifications and details of present appointment and salary, and giving the names of two professional referees, should be sent to Establishments Branch, National Coal Board, Cambrian Buildings, Mount Stuart Square, Cardiff, not later than Friday, 31st July, 1953.

GLAMORGAN COUNTY COUNCIL.

GLAMORGAN COUNTY COUNCIL.
Applications are invited for the following appointments at Headquarters, County Hall, Cardiff:
SENIOR PLANNING ASSISTANTS. (Grade A.P.T. VII.) (Salary £710 per annum by £25 to £785 per annum.)
The appointments are subject to the National Scheme of Conditions of Service, and to the staffing regulations of the County Council from time to time in force.
Only applicants who have a sound knowledge of planning technique and have had previous experience in the preparation of a Development Plan and analyses of survey and research work, will be considered.
Candidates must have passed the Final examination of the T.P.I., or obtained exemption therefrom. Additional qualifications will be an advantage.

will be considered.
Candidates must have passed the Final examination of the T.P.I., or obtained exemption therefrom. Additional qualifications will be an advantage.
Applications stating age, training, qualifications, experience and present salary, together with the names of two referees, should be received by the County Planning Officer at this address, not later than 14 days from the date of the appearance of this advertisement.
D. J. PARRY,
Clerk of the County Council.
Cardiff.
5th July, 1953.
CITY OF BIRMINGHAM EDUCATION
COMMITTEE.
Applications are invited for the following appointments in the Archietet's Branch of the Education Department:

1. ASSISTANT QUANTITY SURVEYING ASSISTANTS.
Applicants should be thoroughly experienced in "working up" and should have passed the Intermediate Examination of the Royal Institute of Charlered Surveyors or its equivalent. Experience in the settlement of final accounts for minor contracts will be an advantage. The appointment will afford good experience for the keen worker over the whole field of quantity surveying.
2. JUNIOR ASSISTANT QUANTITY SURVEYOR—Salary Salary in accordance with the General Division Scale (£260 p.a. at 21 years rising to 4550 p.a. at 30 years). Previous experience in "working up," abstracting and the routine duties of a quantity surveyor's office desirable. Applicants should have a good knowledge of building construction to National Certificate standard.
Application forms which may be obtained from the undersigned on receipt of a stamped addressed envelope must be returned by not later than 31st July, 1953.

E. L. RUSSELL.
Education Department.

31st July, 1953.

E. L. RUSSELL.

Chief Education Officer.

General Purposes Branch,

Margaret Street, Birmingham, 3.

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Applicappointr particula URBAN DISTRICT COUNCIL OF CORBY.
ENGINEER & SURVEYOR'S DEPARTMENT.
Applications are invited for the undermentioned
appointment on the permanent staff of the
Council's Engineer & Surveyor.
TRACER / DRAUGHTSMAN (MALE OR
FEMALE).
Salary in accordance with Grade III of the
Miscellaneous Division of the National Scale of
Salaries, commencing at £375 per annum (£375—

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Applicants must be neat and expeditious draughtsmen, well experienced in the tracing of Architectural drawings and must be able, also, is undertake lettering thereon of a high standard.

standard.

Housing accommodation will be made available to the selected candidate (if married).

The provisions of the Local Government Superannuation Act, 1937, will apply.

Forms of application can be obtained from the undersigned to whom they should be returned completed by not later than Friday, the 24th July, 1953.

G. B. BLACKALL, Clerk of the Council.

Council Offices, Corby, Northants. 4th July, 1953.

Conduction of the control of the con

students are in the employ of practising Architects. The School has a full-time staff of four, augmented by a number of specialist Lecturers.

Applicants should be graduates of a recognised School of Architecture and be members of the R.I.B.A. or R.A.I.A. or hold such other qualifications as may be deemed equivalent; foreign travel and experience will be an additional recommendation.

The duties of the appointee will include the control and development of his Department, and lecturing (within his field) in subjects to the level of the final examinations of the R.I.B.A. Subject to Departmental approval, limited consultative practice is permissible.

Present salary range £A1,322—£A1,407 p.a., which is varied with the cost of living; appointment will be within this range, dependent upon experience. Subject to medical examination, a superannuation scheme or equivalent insurance cover is requisite.

Information should be supplied concerning general and Architectural training, age, marital status, and teaching experience (if any), also period required to finalise arrangements before departure. A reasonable allowance for sea transport will be made subject to an undertaking being given to remain in the service of the Department for a period of 3 years.

Applications in triplicate, and including a recent photograph, addressed as under, will be accepted until 30th September, 1955.

The Superintendent of Technical Education, Perth Technical College,

Perth Technical College,

Western Australia.

9148

NORTH WESTERN INDUSTRIAL ESTATES.

Perth,
Western Australia. 9148

NORTH WESTERN INDUSTRIAL ESTATES,
LIMITED.
APPOINTMENT OF GENERAL MANAGER.
Applications are invited from suitably qualified candidates for the post of General Manager of the North Western Industrial Estates Limited. The Company acts for the Board of Trade and It responsible in the Merseyside. South Lancashire, and North East Lancashire Development Areas for the construction and management of factory premises and industrial estates financed by the Government under the Distribution of Industry Acts 1945 and 1950.

The initial salary will be within the range of £1,500—£1,750 dependent on the qualifications and experience of the successful candidate. The successful candidate. The successful candidate on taking up the appointment, will be required to join the Company's Staff Pension and Life Assurance Scheme.
Applications stating age, education, present appointment and salary, and giving full particulars of qualifications, experience, etc.,

together with the names of two referees, should be forwarded to:

The Chairman,
North Western Industrial Estates Limited,
Derby House,
Exchange Buildings,
Chapel Street,
Liverpool, 3,
so as to reach him not later than 21st August,
Envelopes should be Envelopes should be endorsed "General

Envelopes should be endorsed "General Manager."

WARWICKSHIRE COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of SENIOR ASSISTANT ARCHITECT, Salary Grade A.P.T. VII. 2710 by 25 to 2785. Applicants should be Associate Members of the Royal Institute of British Architects and have had sound general experience in the preparation of working drawings for schools, housing and other local authority projects.

The appointment 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.

Application forms obtainable from G. R. Barnsley, F.R.I.B.A., County Architect, Shire Hall, Warwick.

L. EDGAR STEPHENS.

L. EDGAR STEPHENS, Clerk of the Council.

Shire Hall, Warwick.

Shire Hall, Warwick.

GLAMORGAN COUNTY COUNCIL.

Applications are invited for the following appointment on the permanent establishment of the County Architect's Department:

HEATING AND VENTILATING ENGINEER-ING ASSISTANT, Grade A.P.I. IV (5555—6500).

Candidates should be graduates of the Institution of Heating and Ventilating Engineers, and be fully experienced in the design and supervision of modern heating, and the supervision of supervision of modern heating how twater and ventilating systems for all types of County Buildings. Knowledge of the mechanical equipment of buildings will be considered an advantage. The duties will include inspection of premises, the preparation of drawings, and the supervision of installation works.

Forms of application, which may be obtained from the County Architect, County Hall, Cardiff, must be completed and returned to him not later than 14 days after the appearance of this advertisement, together with copies of two recent testimonials.

RICHARD JOHN,

RICHARD JOHN,

Deputy Clerk of the County Council.
Cardiff.
8th July, 1953.

Cardiff
8th July, 1963.

BASILDON NEW TOWN.

Applications are invited for a PLANNING POST on the staff of the Architect Planner, N. Tweddell, A.R.I.B.A. The appointment is superannuable and salary will be within the range £835—£1,085, the point of entry being determined by experience and ability. The person appointed will be required to take charge of the day to day planning work in the new town and sound training and good administrative experience is essential. Architectural qualifications would be an advantage. Housing accommodation in the new town will be available in appropriate cases. Applications on forms obtainable from the Chief Architect should reach the General Manager, Basildon Development Corporation, Gifford House. Basildon, by 27th July, 1955.

Tenders for Contracts

Basildon, by 27th July, 1983. 9167

Tenders for Contracts
6 lines or under 12s 6d.; each additional line, 2s.
BOROUGH OF BASINGSTOKE.
SOUTH HAM SITE.
ERECTION OF NINE SHOPS AND
MAISONETTES.
Tenders are invited for the erection of Nine
Shops and Maisonettes together with ancillary
Stores and Garages.
Bills of Quantities and Form of Tender may
be obtained from the Borough Archiect, Eric
Almond, Dipl. Arch. A.R.I.B.A., Municipal Buildings. Basingstoke, on payment of a deposit of
£2 2s. 0d. returnable on receipt of a bona-fide
tender.
Tenders must be received by the undersigned not
later than first post on Tuesday, 4th August,
1955.

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

It may be noted that tenders will shortly be invited for other works in the immediate vicinity of these shops, comprising 42 dwellings in 3 Storey flats.

MEIRION O. JONES,

MEIRION O. JONES, Town Clerk.

Municipal Buildings, Basingstoke.

**Architectural Appointments Vacant** 

Architectural Appointments Vacant
4 lines or under 7s. 6d.; each additional line, 2s.
The engagement of persons answering these
advertisements must be made through a Local
Office of the Ministry of Labour or a Scheduled
Employment Agency if the applicant is a man
aged 18-64 inclusive or a woman aged 18-59
inclusive unless he or she is, or the employment. is
excepted from the provisions of the Notification
of Vacancies Order, 1952.

ARCHITECTURAL DRAUGHTSMAN wanted
Maidenhead; permanent position; good
salary and prospects. Full particulars training,
experience, age, salary, to Box 8668.

A SSISTANT required for large general Archi-tectural Practice with offices in Maidenhead. Some experience in specification writing essen-tial. Salary £300 to £500, according to experience. Box 8933.

Box 8933.

A SENIOR ARCHITECTURAL ASSISTANT
required by London firm. Should be Associate R.I.B.A., age about 35. Must be fully experienced both in design and construction. Box 9084.

A RCHITECTURAL ASSISTANT, Intermediate standard or approaching Final, with previous office experience. Commercial and industrial practice. Watson, Johnson & Stokes, Victoria Square, Birmingham.

rous once experience. Commercial and industrial practice. Watson, Johnson & Stokes, Victoria Square, Birmingham.

ARCHITECTURAL ASSISTANT, with experience, required for general practice. Reply, stating experience and salary required, to Thomas Worthington & Sons, 178, Oxford Road, Manchester, 13.

ARCHITECTURAL ASSISTANT, Intermediate R. I.B.A. Standard with office experience, required in small private office. Write stating experience and salary required, to Robert S. Shaw, A.R.I.B.A., 402, Bitterne Road. Southampton.

JUNIOR ARCHITECTURAL ASSISTANT required. Write, stating age, experience, and salary required, to Portess & Richardson, Lloyds Bank Chambers, Peterborough.

SENIOR ARCHITECTURAL ASSISTANT, under 40 years, required in London Office with experience in Private Practice, able to control works throughout. Highest qualifications and training necessary. Good opportunity for young Architect with initiative. Salary £500 p.a. Write full particulars in confidence to "Architectural Assistant," 1, Old Burlington Street, London, W. 1.

RCHITECTURAL ASSISTANT, JUNIOR.

London, W.1.

ARCHITECTURAL ASSISTANT, JUNIOR.
Good draughtsman with some experience wanted. Apply by letter stating age, experience and salary required to Tooley and Foster, Chartered Architects, Buckhurst Hill, Essex.

9163

FIRST - CLASS ARCHITECTURAL
ASSISTANT required, Midlands industrial
area. General practice including factory, hotel
and domestic work. Knowledge of Quantities
advantageous. State age, qualifications and
salary required. Box 9165.

ARCHITECTURAL ASSISTANT required, of
Reply, stating salary required, to Stroud &
Nullis, AAR.I.B.A., 25. Ebury Street, S.W.I.
SLOane 4726.

9178

Nullis, AA.B.L.B.A., 9178

ARCHITECTURAL DRAUGHTSMAN (aged 25/35, with industrial experience, required by Humphreys & Glasgow, Ltd. Five-day week and pension scheme, Holidays can be arranged. Five minutes Victoria Station. Write, giving details of experience, age, education and salary required, to 22, Carlisle Place, London, S.W.1. 9175

required, to 22, Carlisle Place, London, S.W.I.

PLANNING OFFICER required at Builders' and Civil Engineering Contractors' head office in West of England. Applicants must have intimate knowledge of and be able to produce Progress Charts on own initiative for large contracts. Reply, stating age, salary expected, and previous experience, to Box 9176.

ARCHITECT or SURVEYOR required by Granada Theatres, Ltd., to supervise building maintenance work and alterations. Ability to prepare drawings and/or specifications essential. Write, giving age, education, qualifications, experience, and salary required. To Personnel Manager, 36, Golden Square, London, W.I.

ARCHITECTURAL ASSISTANTS required immediately to take charge of preparation of full working drawings for major schemes and assist supervision. Apply in writing to J. Stanley Beard, Bennett & Wilkins, 101/3, Baker Street. W.I., stating age, qualifications, experience, and salary required.

MPERIAL CHEMICAL INDUSTRIES. LTD., requires TWO ASSISTANT ARCHITECTS in London. Applicants for the junior position should be of R.I.B.A. (Intermediate) standard, and aged not more than 25. Applicants for the senior position should be of R.I.B.A. (Final) standard, and aged not more than 30. Some years of office experience essential for both vacancies. Salary according to age and experience. Applications to: Personnel Manager, Head Office and Regions Staff Department, Imperial Chemical House, S.W.I.

ASSISTANT, Inter./Final standard, required Immediately. Quick, accurate draughtsman.

Staff Department, Imperial Chemical House, S.W.I.

A SSISTANT, Inter./Final standard, required immediately. Quick, accurate draughtsmanessential. Apply in writing, stating age, experience, and salary required. E. B. Musman & Partners. 12, Upper Berkeley Street, W.I. 9153

ILFORD, LIMITED, require Architectural Assistants with at least two years' office experience. Minimum standard R.I.B.A., Intermediate. Five day working week with pension scheme and staff canteen in operation. Applications in writing giving age, training, and experience to Chief Staff Architect, Ilford Limited, Romford, Essex.

JUNIOR ASSISTANT required. Intermediate standard, R.I.B.A. Working drawings, specifications. Some previous office experience for general practice. Apply in writing, stating age, experience, and salary, to Henry C. Smart & Partners, L.R.I.B.A., 120, Moorgate, London, 967

RONALD WARD & PARTNERS require
THREE ARCHITECTURAL ASSISTANTS.
Apply 17, Lowndes Street, S.W.1. Tel.: SLO. Apply 8291

## Architectural Appointments Wanted

ARCHITECTURAL ASSISTANT, First Class B.A. (Arch.), Sheffield, fair experience, age 27, requires post, preferably London. Box 724.

CHARTERED ARCHITECT (Canadian), with experience in Canada and England, 4 years as chief assistant in large general practice, responsible for design, drawings production, specifications, and supervision, desires position, with minimum salary, £750. Box 725.

minimum salary, £750. Box 723.

SENIOR ASSISTANT, day school to Inter. then 6 years' office experience, seeks partime job, or work at home. Surveys, Details, Working Drawings. Used to working alone. London area. Box 9141.

A SSISTANT (25), 7 years' varied experience, seeks position in a progressive London office. Box 721.

Box 721.

A. R.I.B.A. (Dip. Arch.), single (24), completed A. N.S., seeks post. York, Scarborough, Hull. Anything with prospects considered. Box 722.

A. R.C.H.T.B.C., present appointment. Chief Architectural Assistant with Local Authority, also Il years' experience in private practice, requires similar position, with view to Partnership, in York-Scarborough area. References available. Willis, 5, Princess Royal Terrace, South Cliff, Scarborough.

Other Appointments Vacant

Other Appointments Vacant

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

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-69 inclusive unless he or she or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

of Vacancies Order, 1952.

RAWING OFFICE MANAGER required.
Applicants must be first-class draughtsmen, and be interested in the preparation of technical possess a sound knowledge of building practice, data; salary according to experience. Applications, in writing only, to the Organising Secretary, The Architectural Press, Ltd., 9-13, Queen Anne's Gate, London, S.W.1.

A SENIOR REPRESENTATIVE is required by leading manufacturers of prefabricated buildings. Architectural background, with practical or technical experience of prefabrication in building, would be a considerable asset. Sound commercial ability in initiating and negotiating at highest level in municipal and commercial undertakings for the successful development of new projects. Box 9120.

new projects. Box 9120.

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(2) Bradford.
(3) York.
(4) Middlesbrough.
(5) Newcastle.
(6) Edinburgh.

Interested parties must have established first-class connections with public and private architects, executives of local authorities, builders and shop-fitters, etc., and already represent organisations of repute whose goods do not compete with a bove.

Annly Riskeley (Sheffield) Ltd. Prides Worke.

the above.

Apply Blakeley (Sheffield), Ltd., Bridge Works,
Hope, via Sheffield.

9142

CO-OPERATIVE WHOLESALE SOCIETY,
LIMITED, Architect's Department, London.
TAKER-OFF required, with experience of commercial/industrial buildings.
The appointment is permanent and offers prospects of up-grading.
Successful candidate will be required to undergo medical examination for compulsory superannuation scheme.
Applications stating age, experience, qualifications and salary required to W. J. Reed, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Limited, 99, Leman Street, London, E.1.

DUILDING RESEARCH AND DEVELOPteam to investigate new ideas and organise
experimental work on building materials and
building methods. Research experience essential.
Practical building experience desirable. Progressive position, pension fund. Write stating
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METALWINDOW DRAUGHTSMAN required. Good salary; pension scheme; canteen an premises; modern drawing office. Morris-Singar Co., Ferry Lane Works, Walthamstow, London,

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RECONDITIONED EXARMY HUTS, and manufactured buildings. Timber, Asbestes, Nissen type, Hall type, etc. All sizes and prices. Write, call, or telephone, Universal Supplies (Belvedere), Ltd., Dept. 25, Crabtree Manorway, Belvedere, Kent. Tel.: Erith 2948.

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The starters are of the totally enclosed, wall mounting, air break, contactor, direct-on type, and provided with T.P. interlocked isolating switch, 3 adjustable overload trips, under voltage release, all suitable for 1 in. circuit entry. Originally costing £308 each, and intended for export to Haifa, the above units are completely new and unused, packed in export cases, and to anyone interested we would be prepared to allow a substantial discount off the original Road, Portsmouth 71435/6.

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URVEYING and Levelling of Sites, Bills of
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A RCHITECTT'S experienced and reliable SECRETARY seeks sole charge job. Please write Box 9130.

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BUSINESS EXECUTIVE (42), many years successful in technical and commercial position, connected with architectural and building circles, seeks position making use of administrative ability and affording opportunity of assisting in realisation of creative work. Box 9177.

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A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. Harvest Works, 96/107, 8t. Paul's Road, N.1. Canonbury 2061.

M. O.S. approved organisation has immediate high-class sheet metal fabrication and light constructional work. Plate up to 5/16 in. thickness handled. Guillotine capacity up to 8 ft. by 5/16 in. and 10 ft. by 3/16 in.; bending up to 8 ft. by 5/16 in. and 10 ft. by 4 in.; rollers, circle cutters, oxy-acetylene profilers, etc. Work done in aluminium, brass, copper, mild and stainless steel, black and galvanised sheet, lead coated and tin plate. Facilities include gas, electric arc, argonarc and bronze welding; jig welding and the use of manipulators. Special paint finishes applied as required, also metal spraying, bonderising, phosphating and rubber covering. Quantity production of items no obstacle—we have 24,000 sq. ft. of floor space and skilled personnel to cope. Apply Keith Blackman, Ltd., Mill Mead Road, London, N.17.

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M./A.M.T.P.I. (Prof. Sir Patrick Abercrombie in assn.), prepare Students by correspondence tuition. 10, Adelaide Street, Strand, W.C.2.

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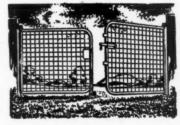
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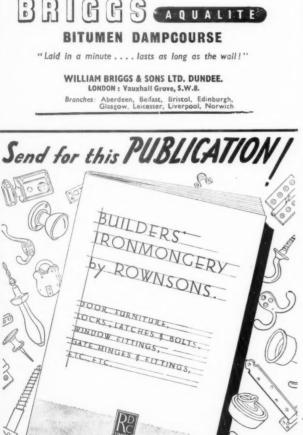


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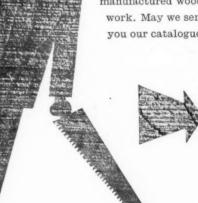
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