

THE ARCHITECTS' JOURNAL



standard contents

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

NEWS and COMMENT

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Wanted and Vacant

No. 2993]

[Vol. 116

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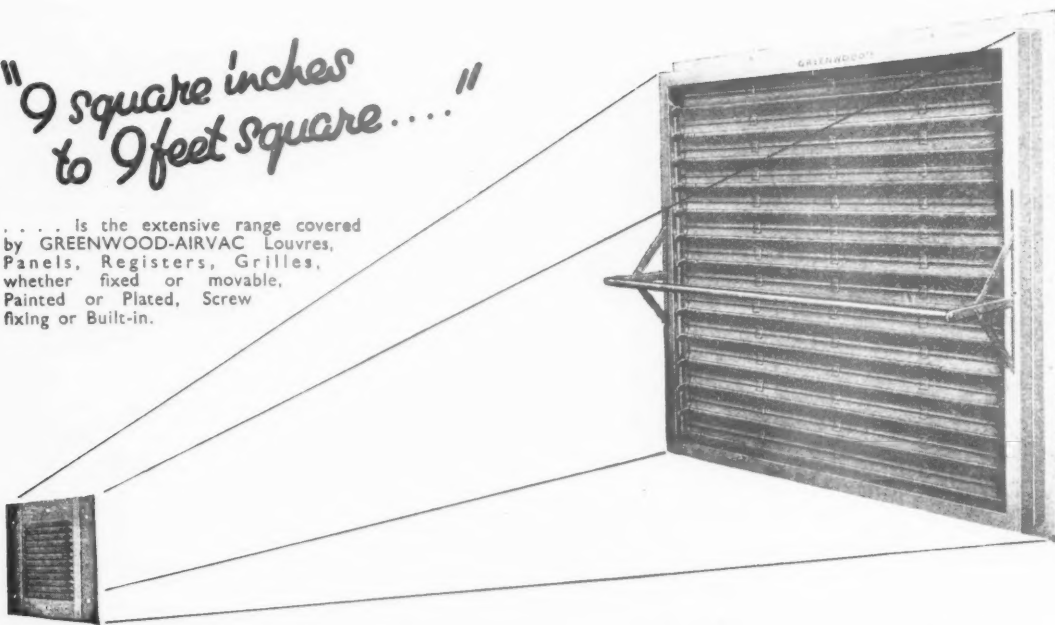
Registered as a Newspaper.

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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 11, Gower Street, W.C.1.	Museum 9200
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	Modern Architectural Research Group (English Branch of CIAM). Secretary: Gontran Goulden, Building Centre, 26, Store Street, W.C.1.	Museum 5400
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Saville Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesley 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House, 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 69, Cannon Street, E.C.4.	City 4444
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1.	Mayfair 8866
WEDA	Welfare Equipment Development Association. 74, Victoria St., S.W.1.	Victoria 5783
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford.	Oxford 47988

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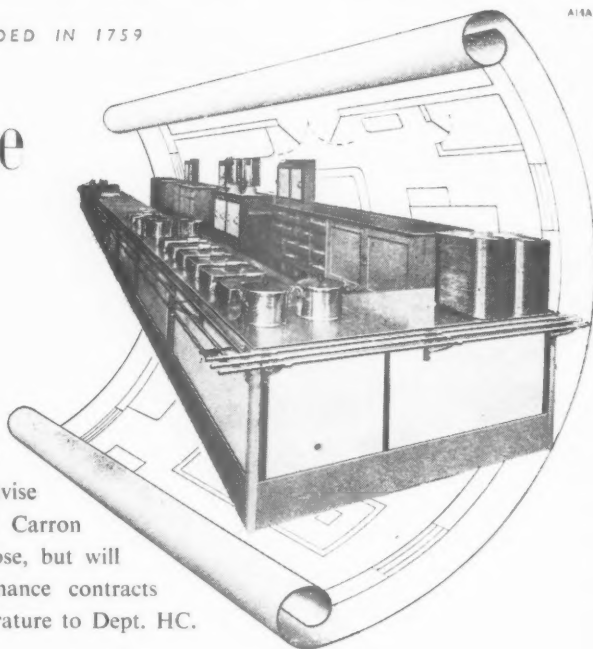
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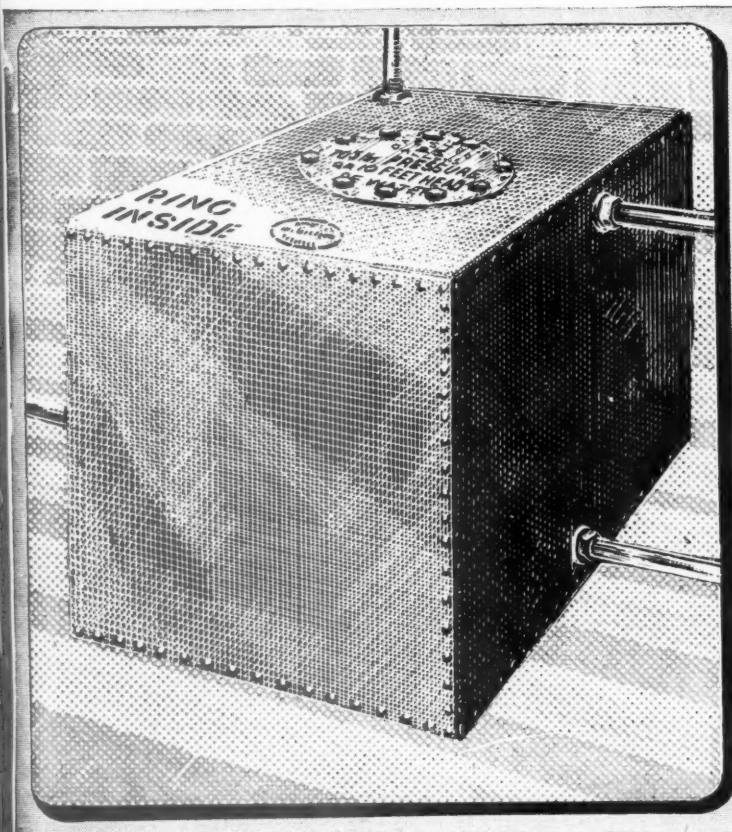
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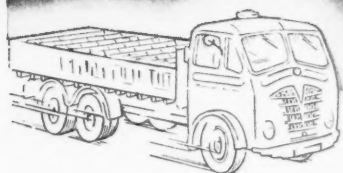
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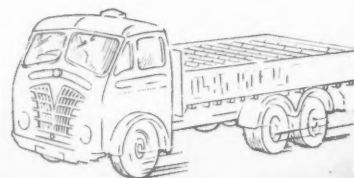
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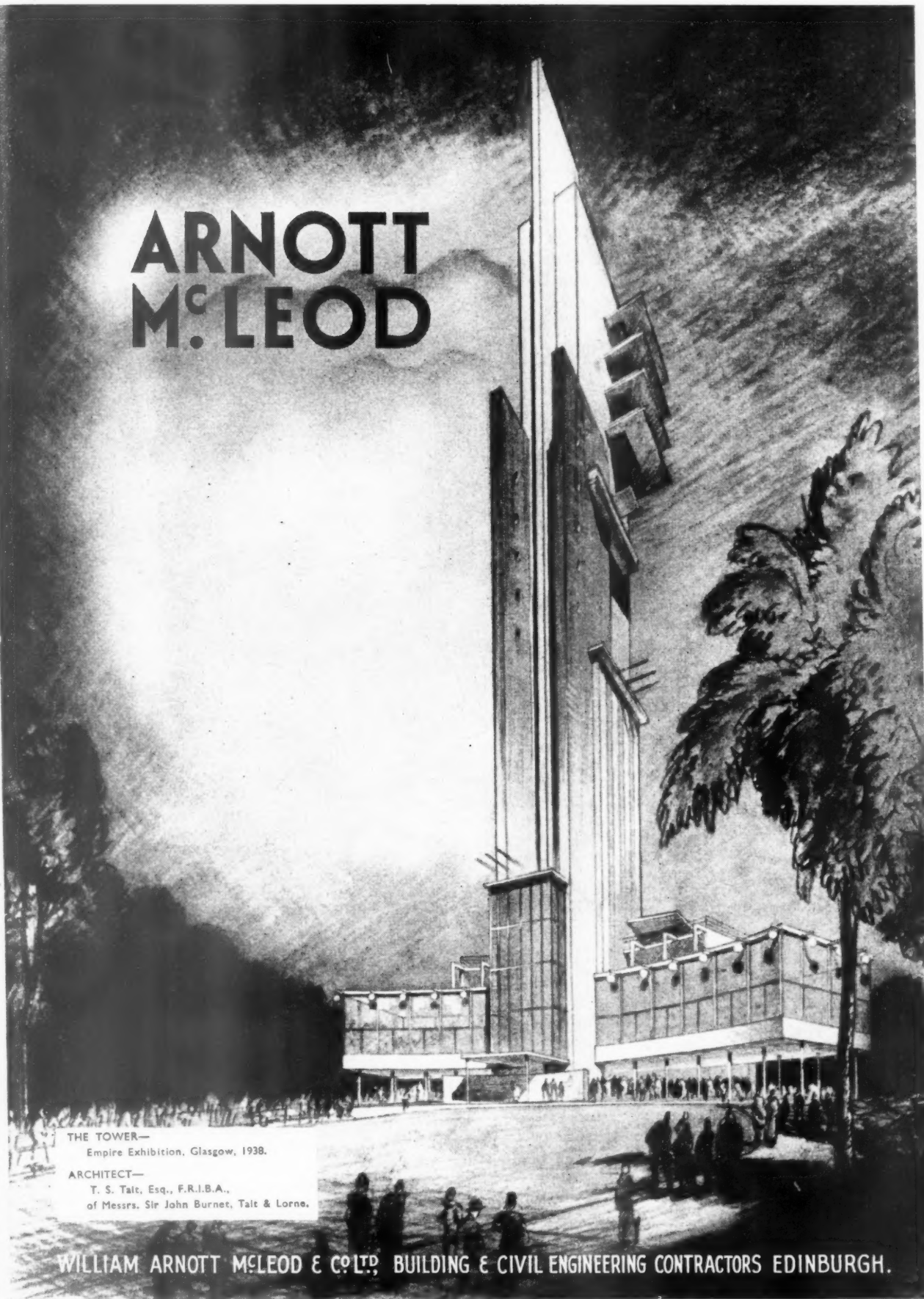
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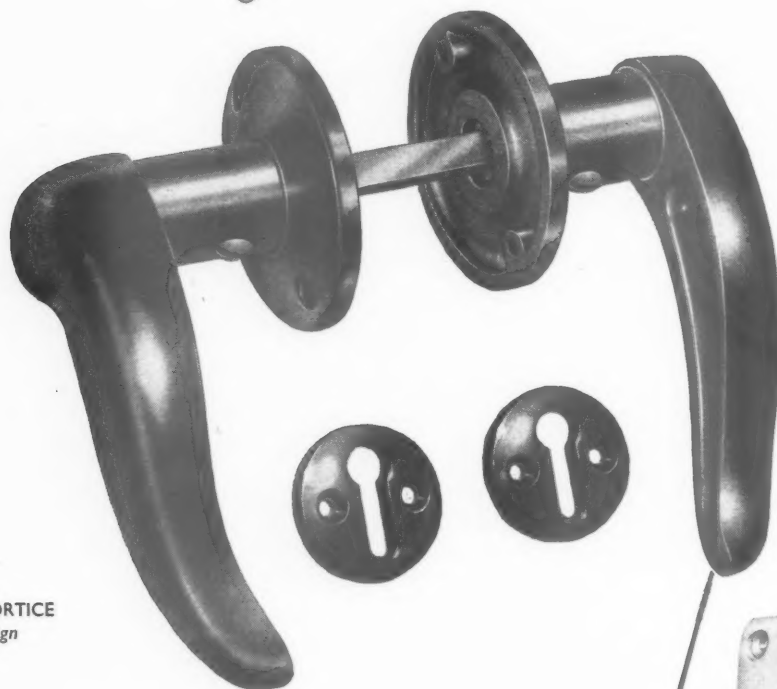


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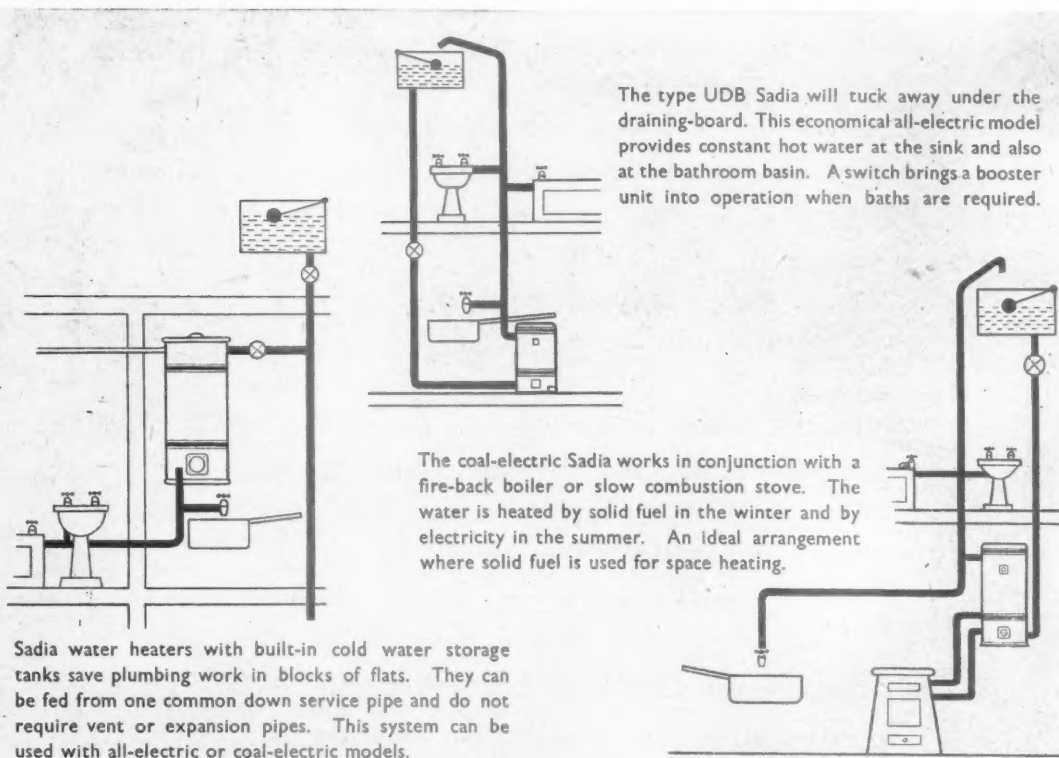
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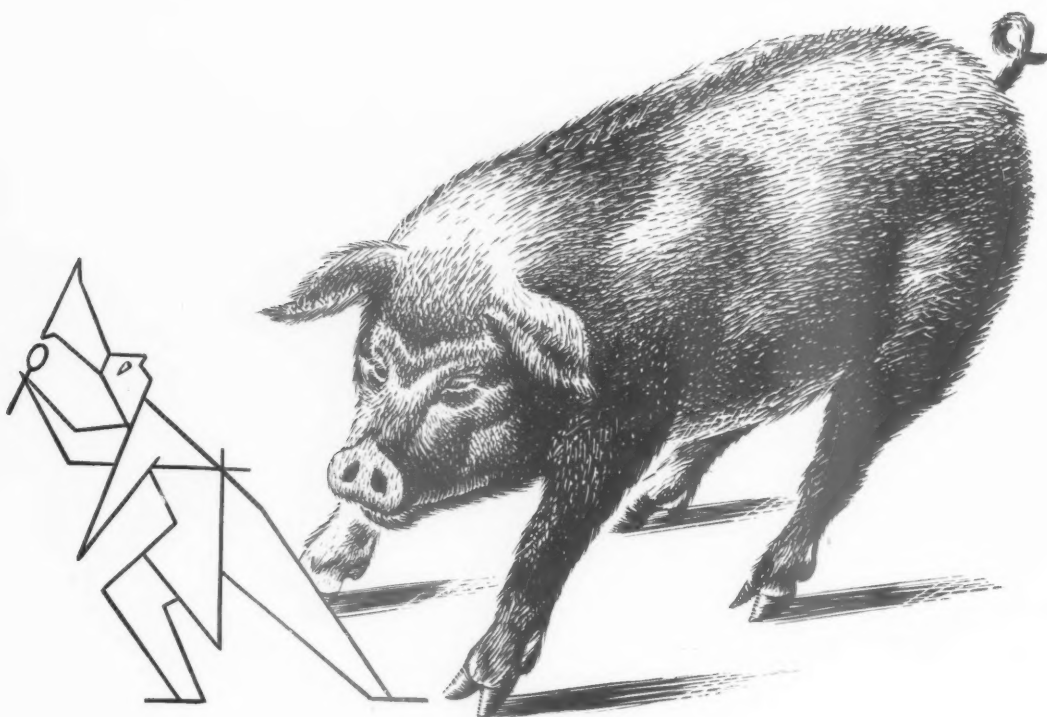
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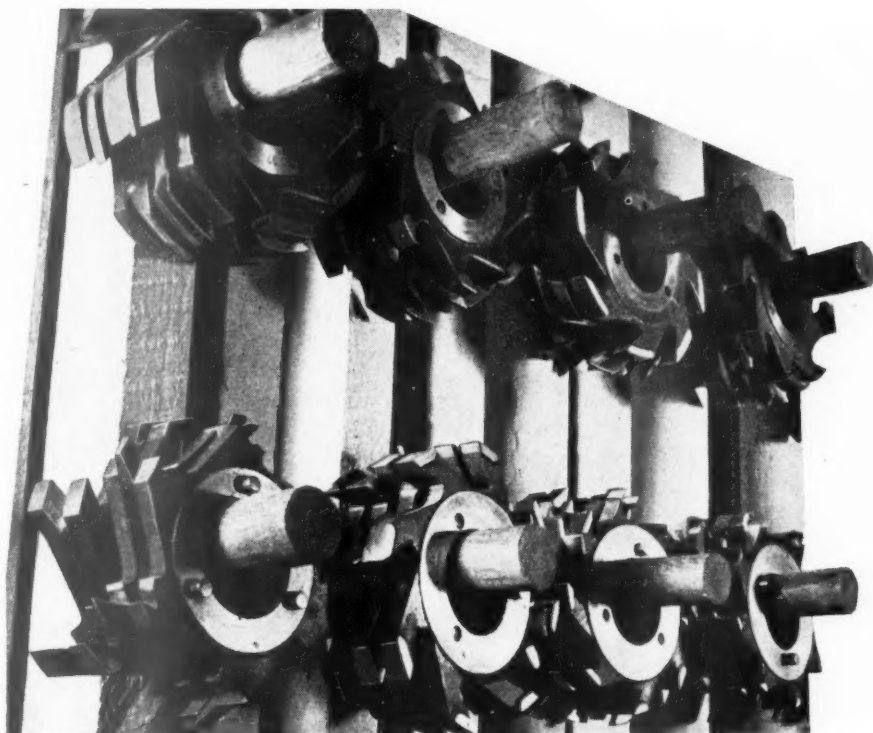
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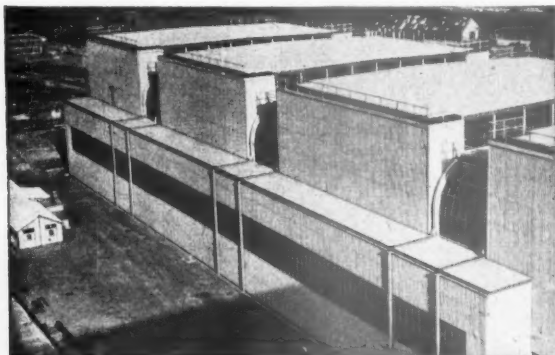
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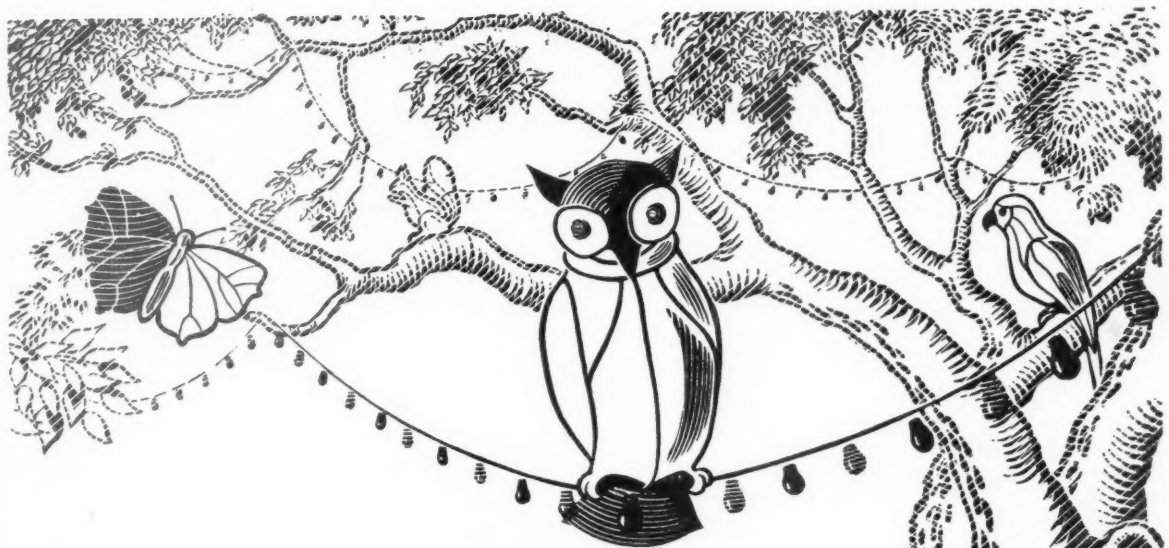
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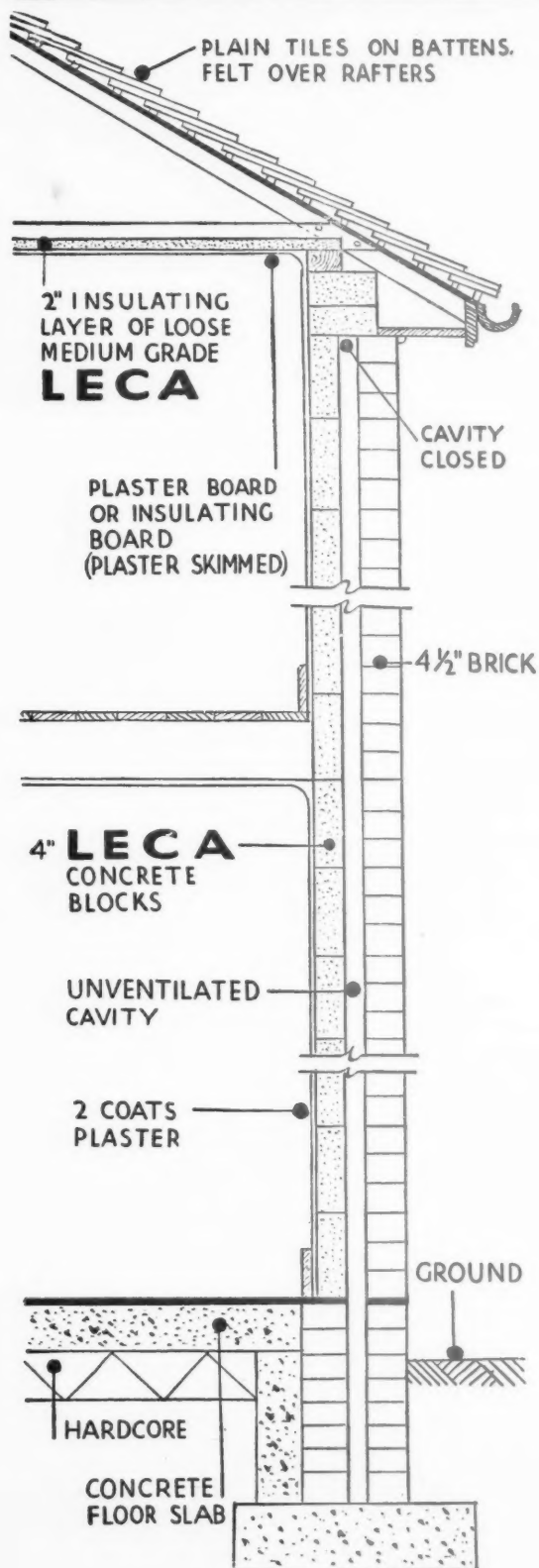
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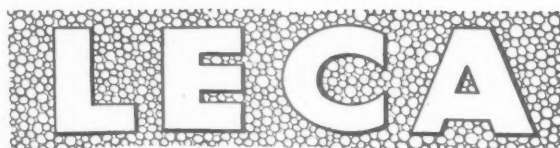
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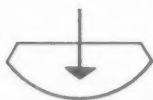
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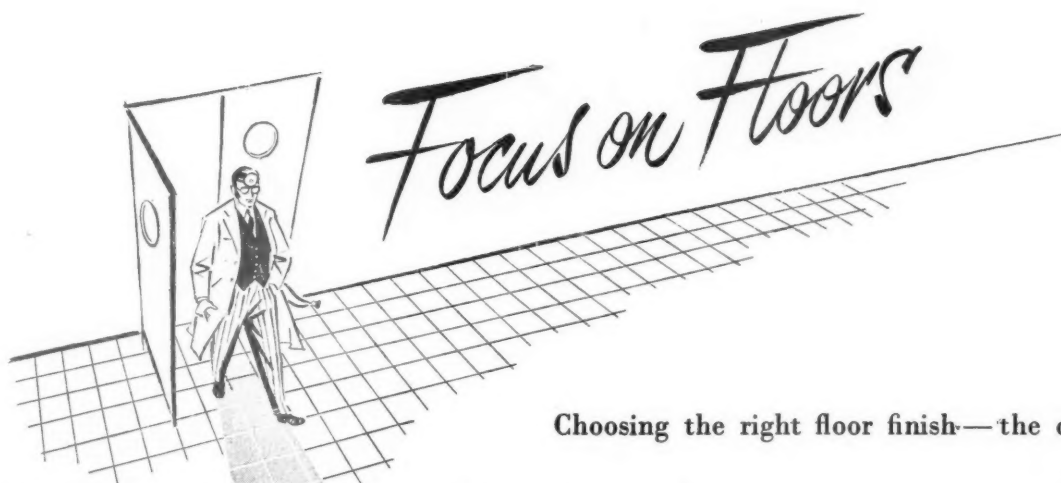
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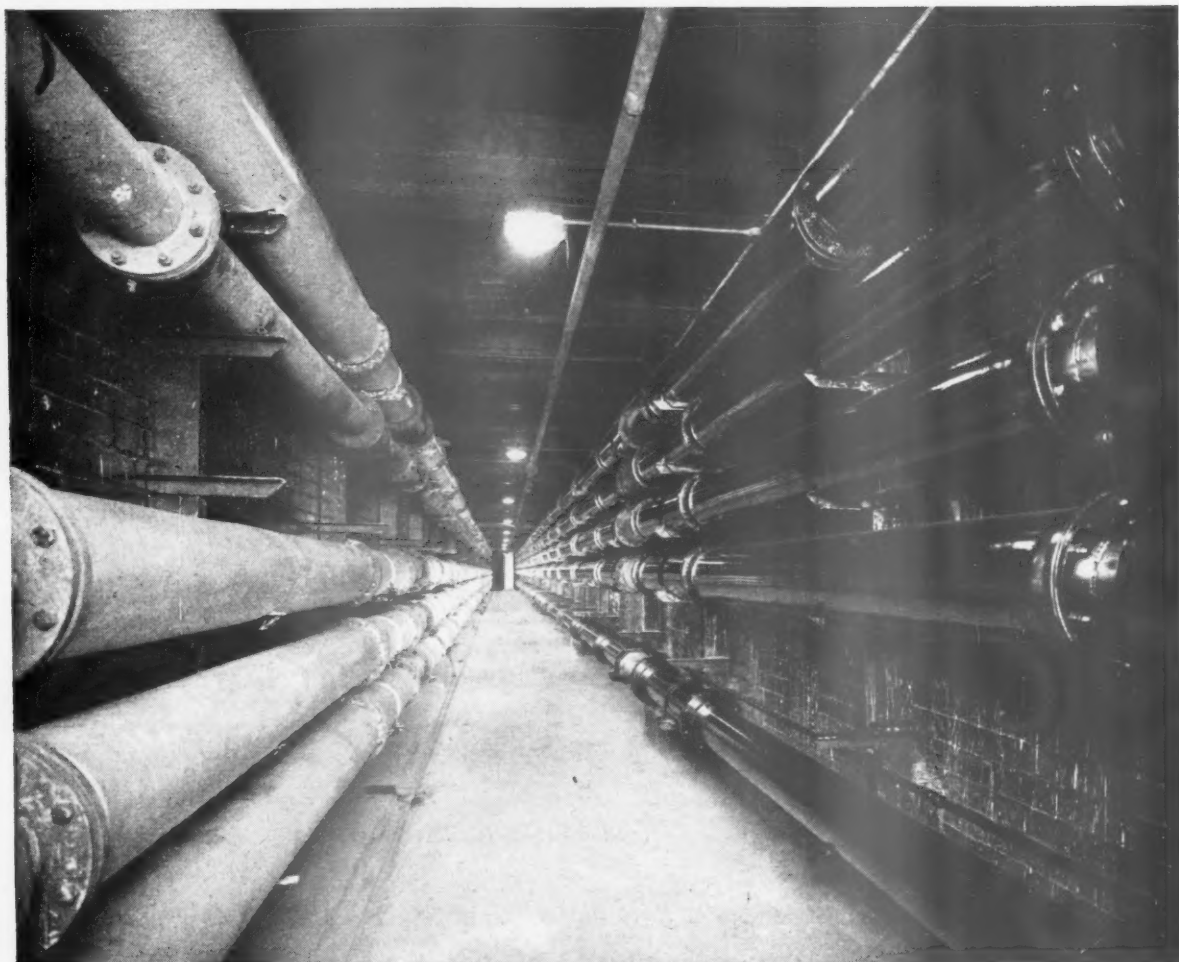
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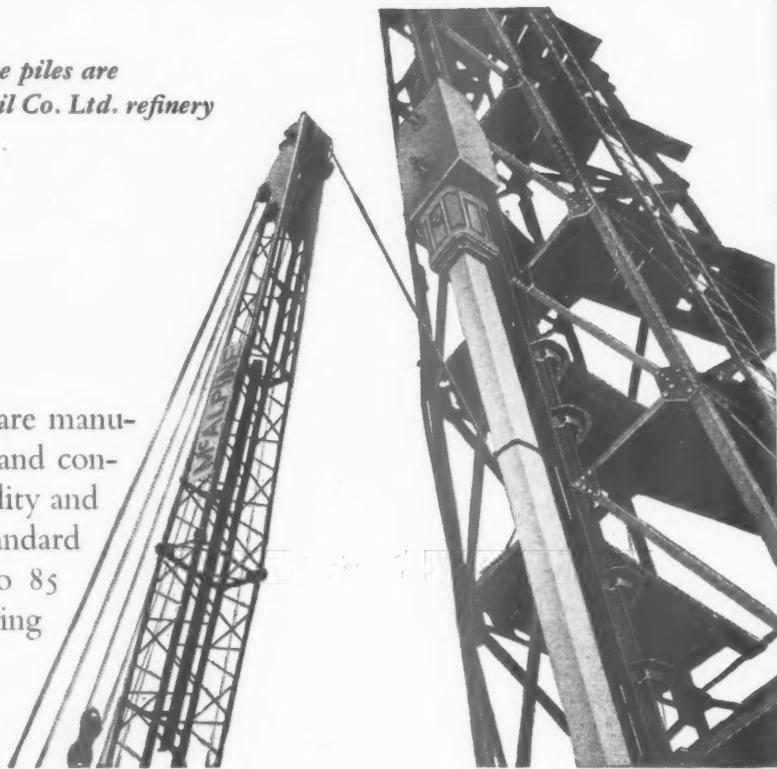
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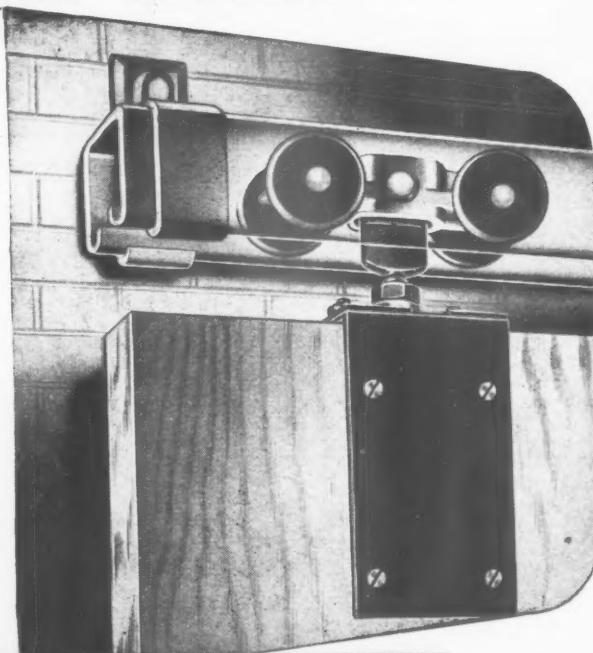
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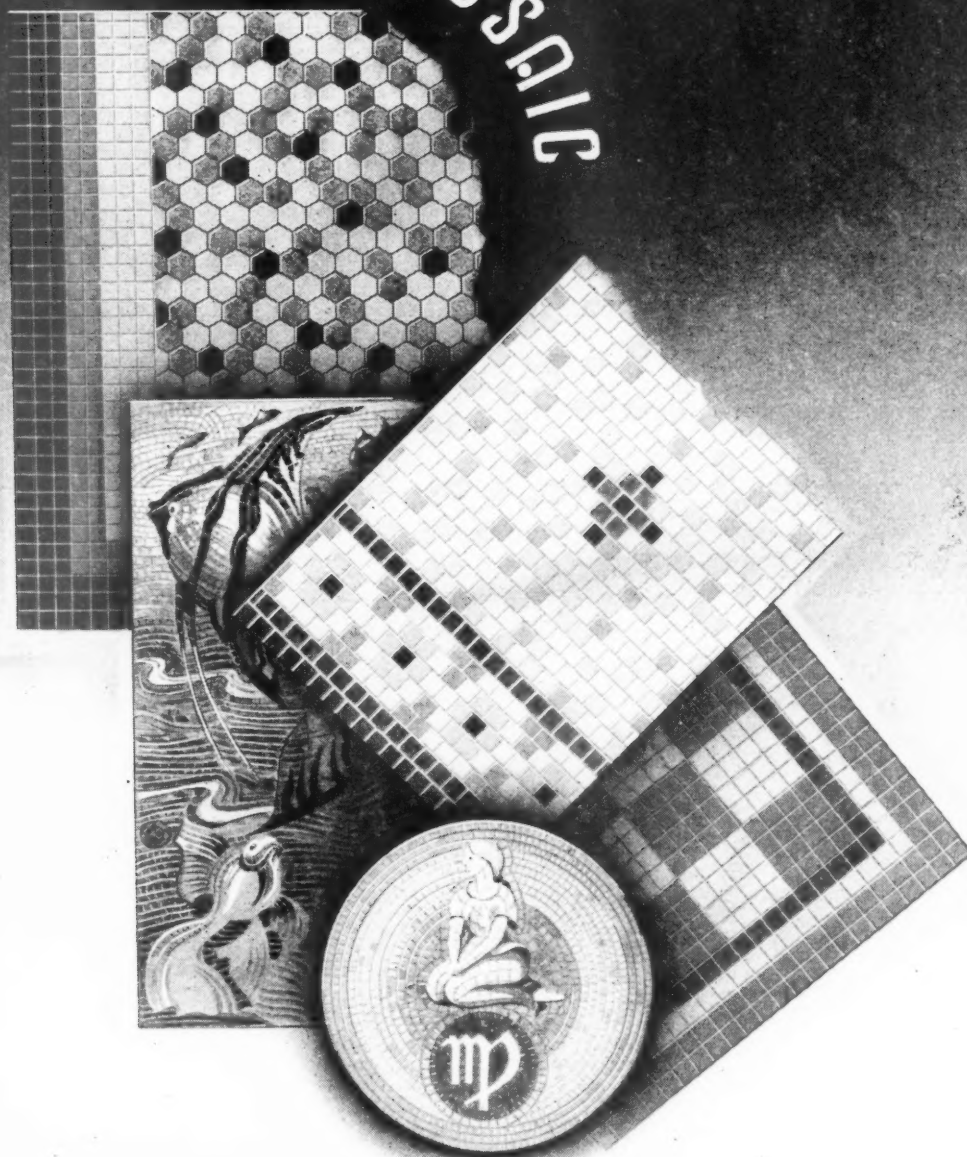


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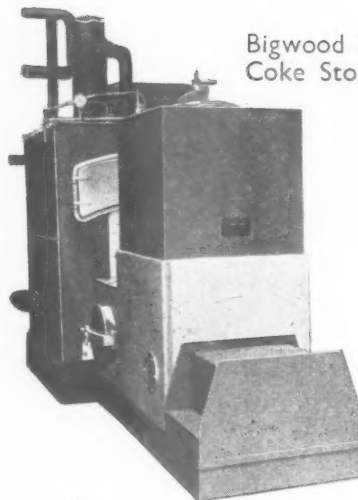
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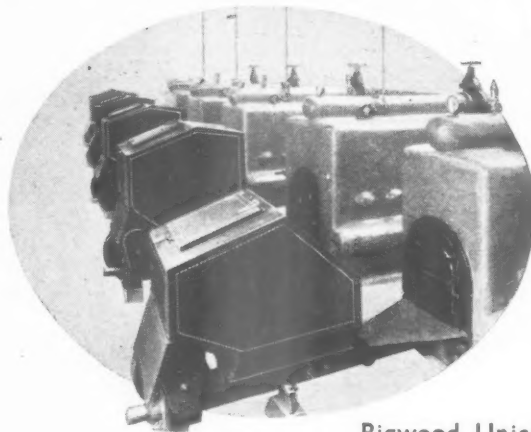
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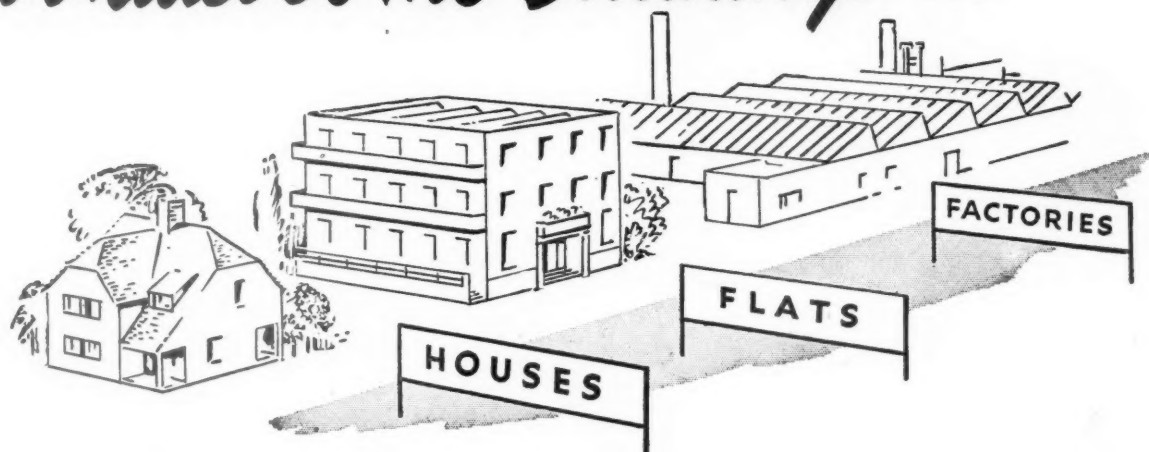


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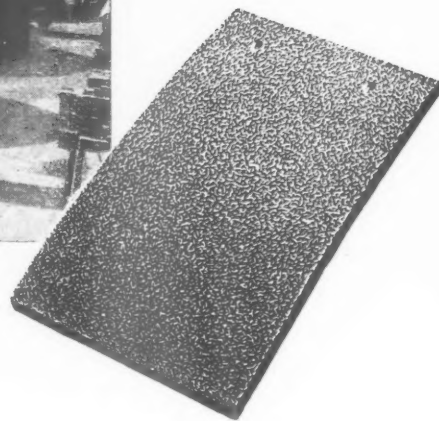
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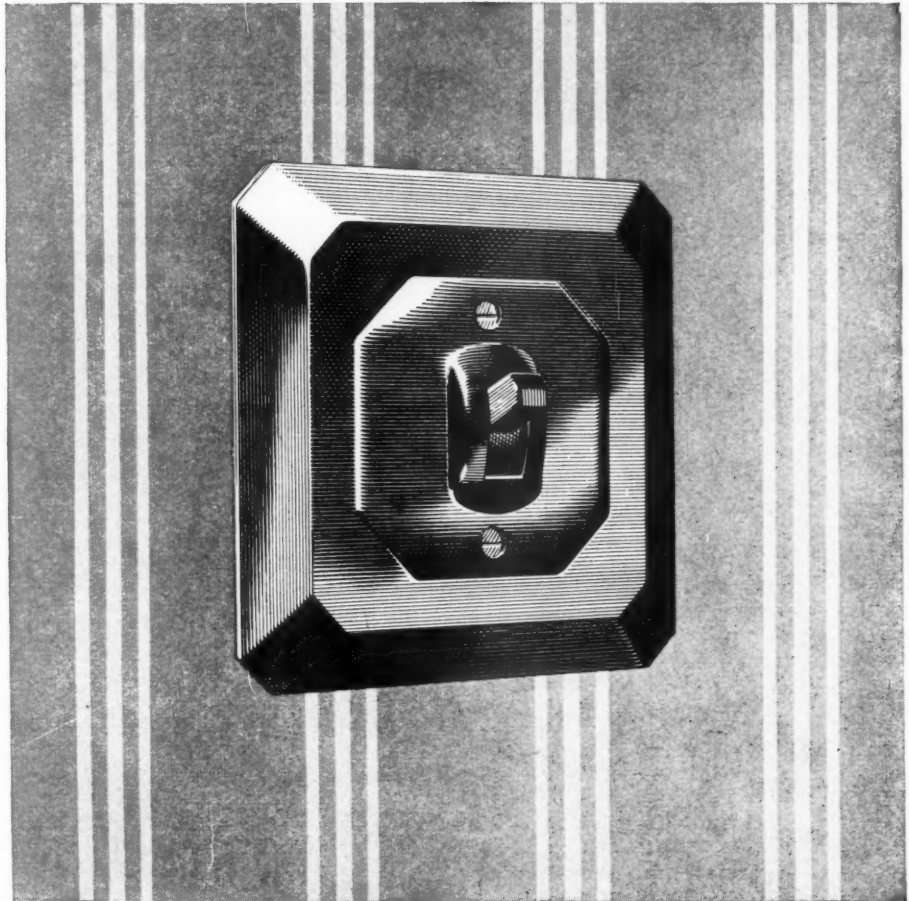
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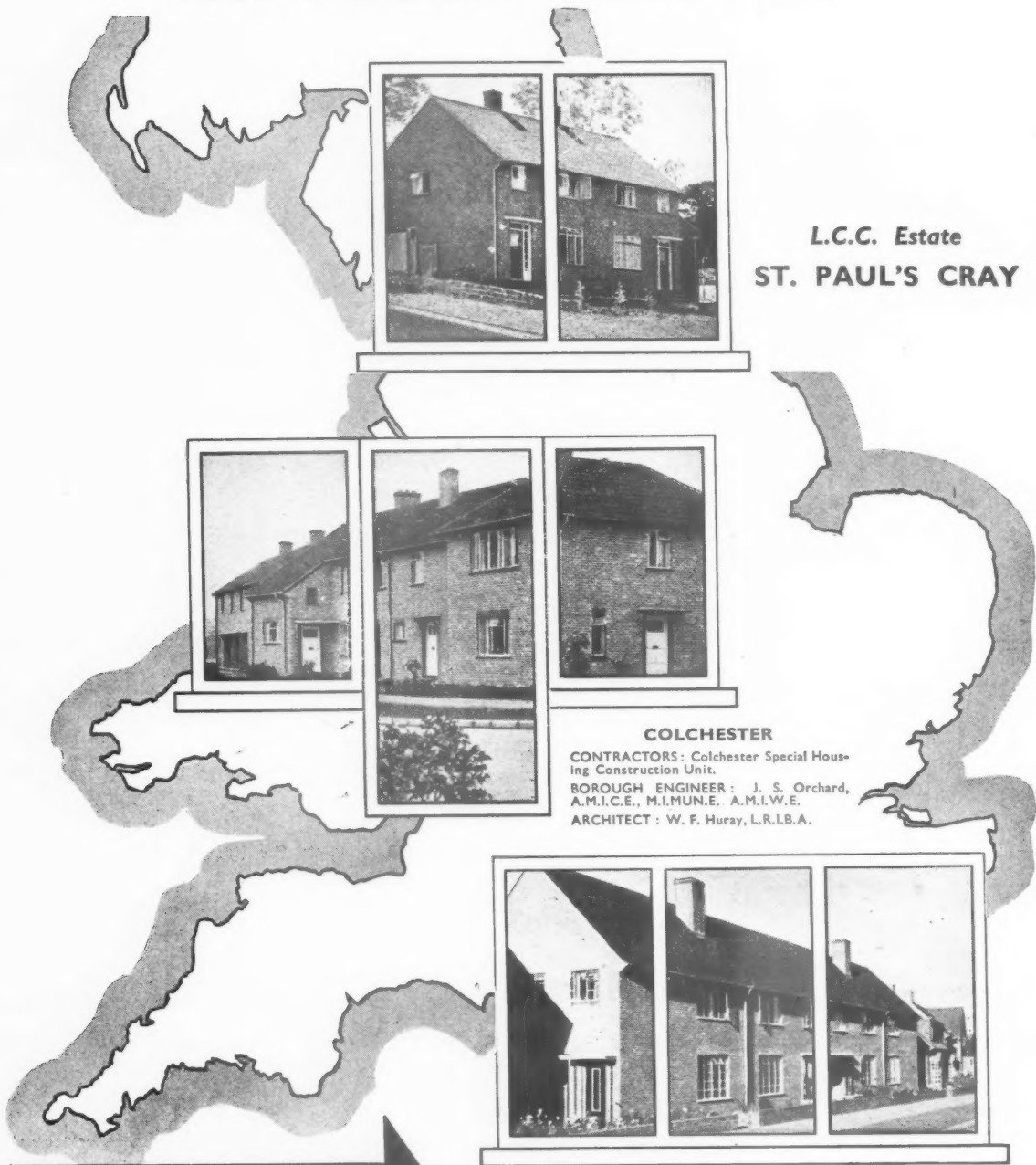
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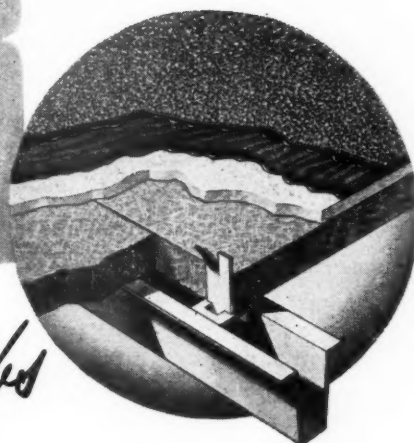
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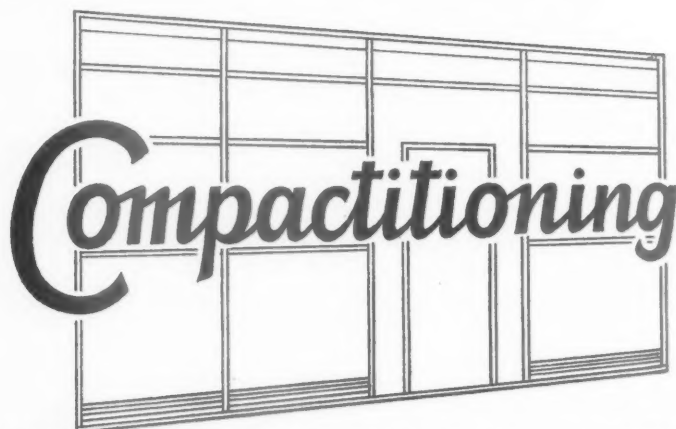
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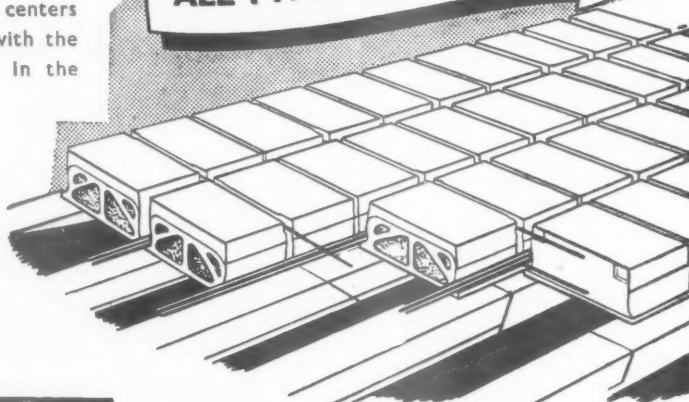
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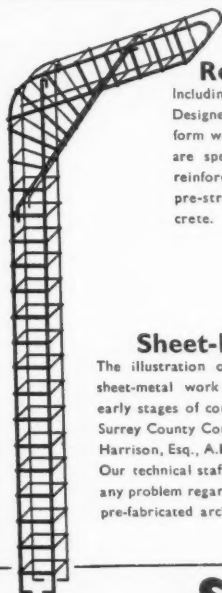
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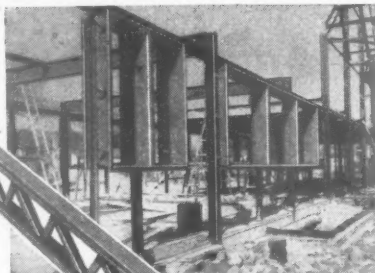
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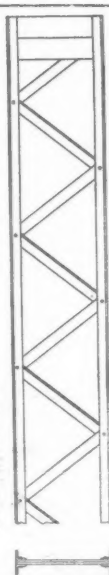
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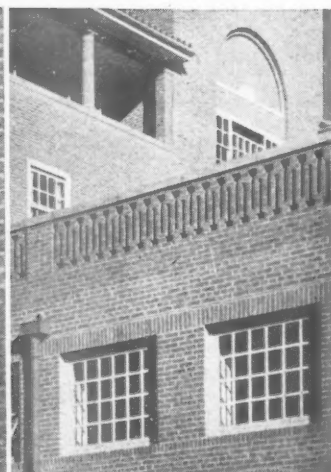
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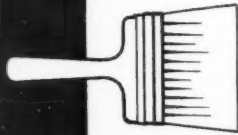
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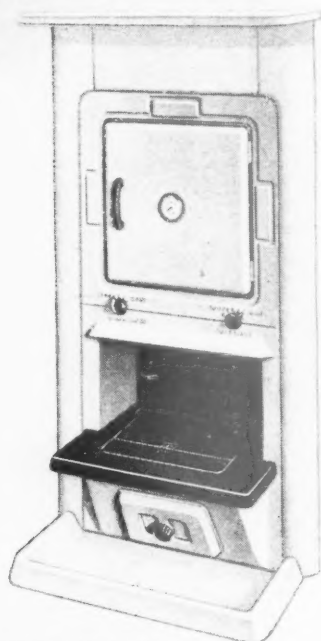
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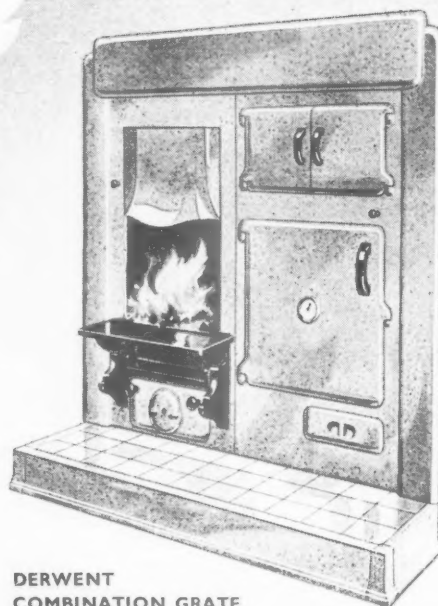


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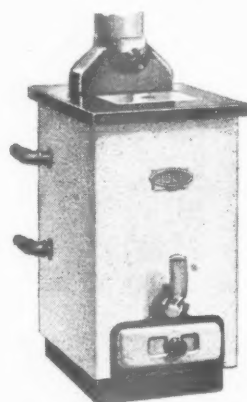
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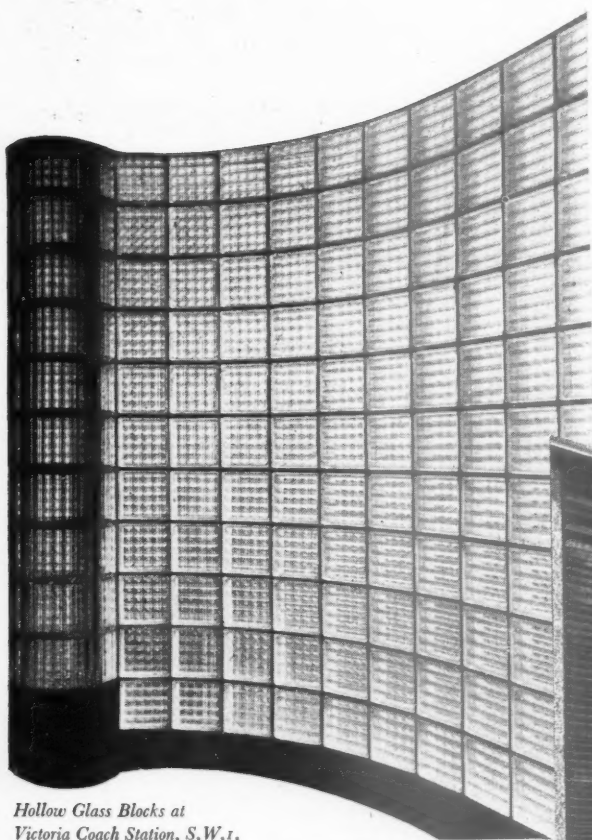
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Hollow Glass Blocks at

Victoria Coach Station, S.W.1.

Note application of corner blocks to form column.

Architects: Elliott, Cox & Partners, F.R.I.B.A.

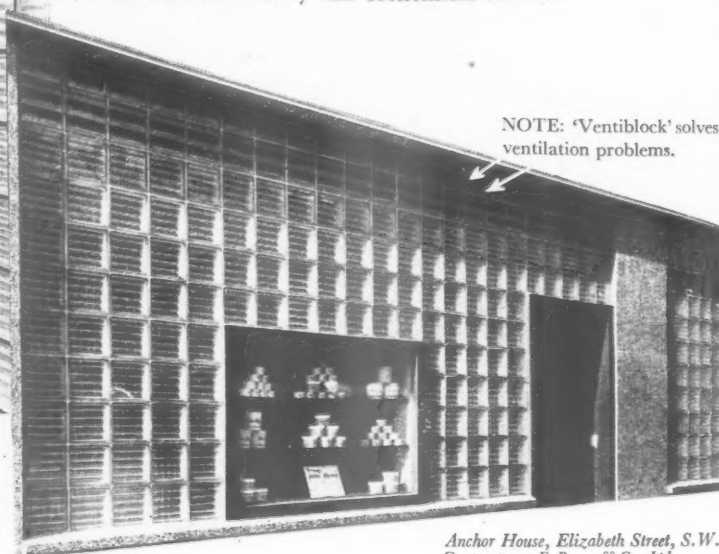
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THE ARCHITECTS' JOURNAL

No. 2993 July 10, 1952 VOL 116

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A DEFENCE OF BUILDING TARGETS

While you were all worrying last week-end about building targets and how they could be hit (or were you?) Hal B. Hayes—"millionaire house-builder"—spent a few hours in London wondering how building targets could be defended.

If you don't know Mr. Hayes, it is time you did, for he has your interests at heart; he is a man with an Ambition—to fireproof the world against attacks by A— and H— bombs. Armed with small sample blocks, "an odd mixture of mud, cement and certain chemicals"—the bomb-proof material of the future—he is in the middle of a European tour. His object? To study structural defence methods and to tell

building code divisions what they must do. When he has completed his two-months' tour of twenty-two cities, from Athens to Oslo, he will prepare "a report on world building conditions and the chances of the masses surviving."

You will, doubtless, await this report anxiously. But is it likely that we Britons will be included in it? Mr. Hayes was only in London from 6.10 p.m. on Friday until 11.30 a.m. on Monday. If he learned anything about our flame-resistance during a blazing English week-end he is a very remarkable man.

HELP YOURSELF IN USA . . .

In spite of the laudable efforts of Mr. Hayes, his fellow countrymen continue to build without waiting for the mass-production of fireproof materials. In fact, reports have it that America is going in for self-building in a big way. This is not, of course, a move to avoid the housing queue—as it is over here; it is a move to avoid the high cost of new building and repairs.

Apparently three-quarters of all the paint used, nearly two-thirds of the wall paper, and about one-third of the asphalt floor tiles are applied by amateurs. Makers of power hand tools, such as saws, drills, planes and spray guns, are selling in large quantities to householders, and at least one plumber is holding classes where housewives can learn how to do minor repairs. Timber merchants will provide "how-to-make" drawings for everything from tables to houses and will hire out power tools. And two firms sponsor weekly television shows

which include "how-to-build" demonstrations. This is, perhaps, no more than one might expect from a country with a pioneering self-build tradition, but it's a little surprising to hear about the wall paper, which is already pasted and trimmed and needs only moistening and application. ASTRAGAL has always looked on paper-hanging as a job needing experience. How many householders, one wonders, come back for a few more lengths to replace those that have crinkled in the wrong places? Not that it matters. Endless fun, as they say, may be had by the amateur who is trying to do an unfamiliar job, and it's nice to hear that he's given his head in this world of union rulings.

. . . AND IN CHELSEA

Both the amateur who likes to potter and the potter who likes to cut down his overheads will be pleased to hear of a scheme introduced in Chelsea by David Rawnsley. Mr. Rawnsley has opened a pottery in Radnor Walk, in premises previously occupied by a firm making bakers' hand carts, for which there is now, alas, no demand. You can be taught here if you want to be, but it is equally possible for you to go in and mess about for your own amusement—materials, tools, wheels and kilns being provided.

If you have already been trained, you can use the place as a workshop and the pottery will try to sell your work if you like. All this can be had for an annual subscription, plus a studio fee which varies from half-a-crown an hour to £50 for a whole year. A good idea, as it allows the amateur to have some relatively inexpensive fun, while at the same time the impecunious professional

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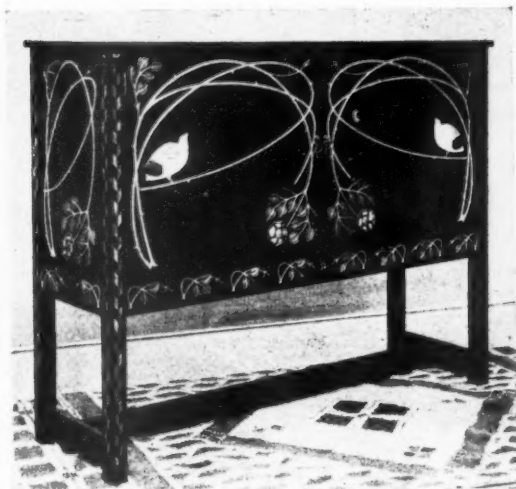
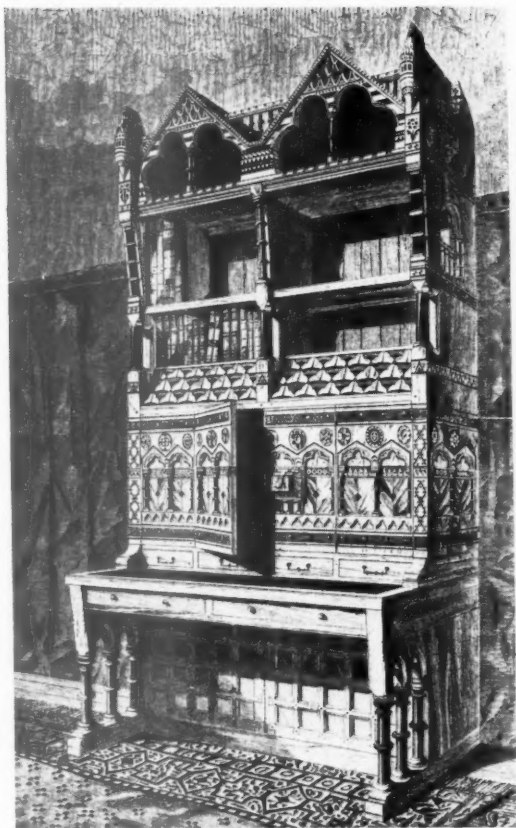
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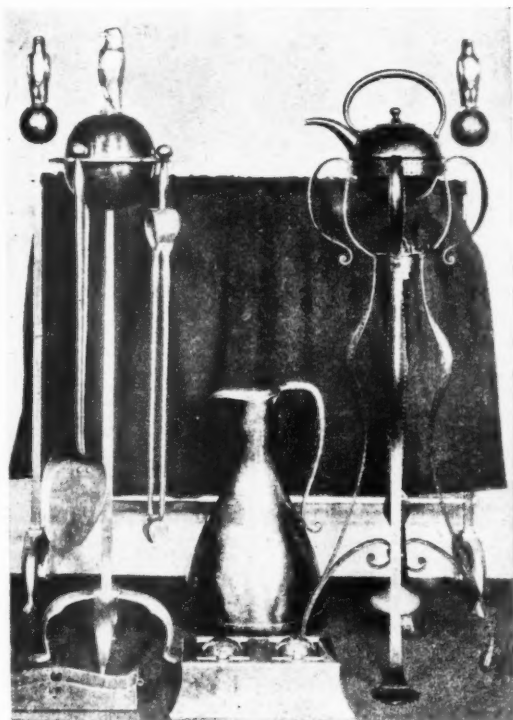
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Last week ASTRAGAL referred to the V & A's search for masterpieces of Victorian and Edwardian decorative art to be shown in a large autumn exhibition. Three of the wanted items are shown here. Above: a "medieval" combined writing table and book-case in inlaid and painted oak (shown at Great Exhibition, 1851); designed by Norman Shaw, made by James Forsyth. Top, right: cabinet designed by M. H. Baillie Scott, made by J. P. White in 1904. Rug also by Baillie Scott. Right: metal work by C. F. A. Voysey.



can turn out a finished product without investing in a lot of equipment. Many people will be grateful for the opportunity given to them by Mr. Rawnsley, who some of you may remember from pre-war days as an AA student and a film producer.

SHARP PULL-UP FOR CARMEN

Another ex-AA student who is connected with the film industry is Carmen Dillon. ASTRAGAL has always followed her career as a designer of film sets and he went with not a little interest to the Odeon, Leicester Square, to see whether her work for *The Importance of Being*

Ernest was worthy of an Oscar. (She received one, of course, for her *Hamlet* designs.)

*

In the first shot the director, Anthony Asquith, rings up the 1895 Haymarket curtains, as though to proclaim that all will be pure pastiche. But tastes change and Miss Dillon's sets, while just right for us, would hardly have passed muster with Sir George Alexander. "Ernest's" country home has a superb façade—a gem of very early Victorian Gothick. But, alas, in the 'nineties John Betjeman had not even been born, and the smart set, let alone

the Yellow Book boys, would not have given this house so much as the curl of a lip. Miss Dillon should have gone to Goring.

*

Again, it was pleasant enough to escape from chambers in Albany to that delicious long shot of a child bowling a hoop in front of a sunlit Regent's Park Terrace—but how *demodé*. It was to be thirty years before John Summerson would make his *début* and we would all discover Nash. Miss Dillon should have gone to the pillars and posts of Pont Street or—if that is a shade too far west—to Mount Street.



Architects at Work and Play

The two oddly opposed photographs above of members of this year's Architects' Conference listening to a paper being read and attending the usual garden party serve to point the question: What proportion of the members' time should be devoted to the Conference proper and what proportion given to social events? This question forms the subject of this week's leading article (opposite) and a general survey of the Conference appears on pages 39-45. There was a record attendance of over seven hundred and fifty members at this, the sixth post-war Conference, which was held in Edinburgh. Of this total, nearly four hundred were architects, and just over three hundred were

wives and women visitors. The Conference programme was similar to former years, an informal reception on the evening of the first day, and a welcoming address by the Lord Provost of Edinburgh and the President of the RIBA, together with a paper, on the Thursday morning. A garden party at Lauriston Castle (see above) on Thursday afternoon, and a civic reception and dance in the evening. A second paper was read on Friday, and there were alternative whole-day and half-day tours of Edinburgh and the surrounding towns and countryside, followed by the Conference dinner in the evening. There were further sightseeing tours on Saturday.

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All this may seem a little pedantic, but ASTRAGAL would rather make an admirer of Nash his teeth than award an Oscar wildly. Will Miss Dillon please remember that there are a few architecturally-minded cinemagoers who expect to find the results of careful research in her work?

A MINE ON MINOS

Which reminds me: did you hear the result of Michael Ventris's research work—a brilliant little talk on Minoan Script in the Third Programme last Thursday? An exceptional career at the AA, a solid piece of work with the MOE Development Group, and a home in Highpoint may seem an odd background for the elucidation and unravelling of Europe's earliest written language.

*

There seems no doubt, however, that Michael Ventris has deciphered the pictograms which Sir Arthur Evans brought to the notice of the world over sixty years ago. The decipherment of inscriptions, where neither the writing nor language are known, had been considered impossible; there could be no Rosetta Stone for Minoan. It was all hard work—statistics, inflexions, research, and yet more research. In the end it would seem that the language King Minos spoke—or at any rate the syllabary his scribes wrote—was neither Hittite nor Etruscan, but Greek. An archaic, pre-Homeric Greek of course, but basically Greek. And that raises all sorts of questions as to when the Greek mainlanders really did first come to Crete.

REPRIEVE FOR STUDENTS

Good news? The RIBA has decided that its new professional practice regulations for students shall not come into force until November 1, 1955. This means that students who started their training before the first hint of the new regulation was given (in November, 1949) will be free to qualify for associateship immediately after finishing their five-year course. They will not have to put in twelve months' practical work. But if they have not had four months of practical experience, they must do two months' post-graduate work in an office. A fair decision. My heartiest congratulations to the RIBA.

ASTRAGAL.

The Editors

NOW LET'S HAVE A CONFERENCE

THE RIBA's hosts at the recent annual architects' conference in Edinburgh—the Royal Incorporation of Architects in Scotland and the Council of the City of Edinburgh—were most hospitable, kindly and generous. The programme was as full and as varied and as carefully executed as usual.

The time has come, however, for a change in policy. No one can object to the RIBA holding a social gathering to enable members to get to know each other and exchange viewpoints informally on professional matters—or, indeed, object to a meeting held purely for the purpose of having a good time. But whether such a jollification should be held under the august title of an architects' conference is another matter. Does the reading of two papers, in two working days, each followed by about an hour's discussion constitute a conference? It is surely the very minimum which can qualify for the convenient title in order to allow the public architect to put part of the expense on to public funds and enable the private architect to set some of the cost against his income tax. It is interesting to note that the conference programme today is very similar to what it was prewar—a leisurely, entertaining, mildly instructive interlude in the lives of a well-regulated professional body of men. But how fundamentally different are conditions today—we have a profession whose numbers are growing out of all proportion to the demand for architects in the *true* sense of the word; the private client has been replaced by the government or by the local authority; the architect is almost solely responsible for the largest house and school building programme ever attempted; and a science of building is being formulated of a very complex and almost incomprehensible nature. Are there not a hundred subjects which are meet to be conferred on? Has not the moment been reached when the architectural profession could copy other professions—or even the American Institute of Architects—and have two or three papers—and the subsequent discussion—on each of a variety of subjects? Indeed, the practice of publishing the papers in advance and using the conference only for a discussion on them might further encourage a more scholarly approach.

These proposals might be condemned as those of earnest spoilsports determined to limit everyone's fun. They are not put forward in any such cause, but in the belief that a little more intense effort in the morning lectures and afternoon "field-work" would put added zest into the evening entertainment. Certainly the conference, as it stands, is humbug. The first steps are now being taken to arrange next year's conference with the South-Eastern Society of Architects. It is to be hoped that the opportunity will not be missed to start a fresh series of conferences in the real meaning of the word.

RESULTS OF COMPETITION FOR SERVICE STATIONS

Five hundred and eighteen architects entered for the competition for the design of service stations sponsored by Shell-Mex and B.P. Ltd. The competition was divided into three sections:—a design for a country service station, one for a suburban or neighbourhood service station, and another for a main motorway service station. The first was won by M. Gregory, Dip. Arch. (Sydney), of Bayswater, who also won the second. (A total of £600 in prize money.) The third section was won by G. M. Crockett, A.R.I.B.A., A.M.T.P.I., of Hampstead. (£300.) He also won the second prize of £150 for his country station design. The assessors were David du R. Aberdeen, D. A. Birchett and Frederick Gibberd. See news item, page 48, for names of second prizewinners and those highly commended by the assessors.



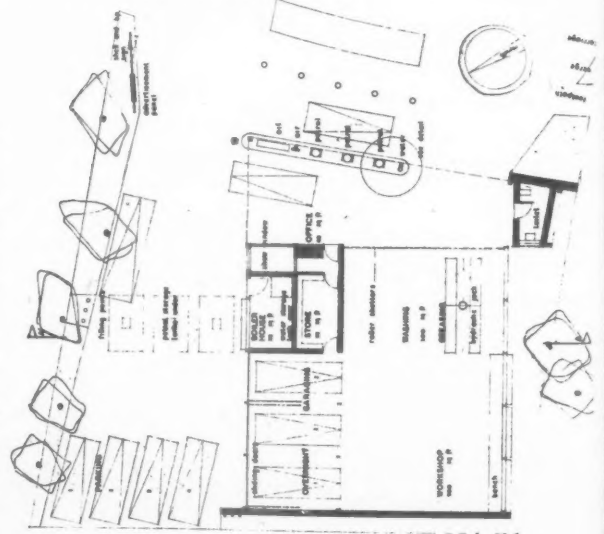
ASSESSORS' REPORT

Among the great number of designs submitted there are many interesting and skilfully developed schemes and in the awards we have found ideas of great merit. These awards, the fine response from the profession and the generally high standard of design in all sections has fully justified the decision of the promoters to sponsor this competition and we wish to congratulate them upon its undoubted success. If means could be found for erecting a series of service stations to the designs of the successful competitors then a standard would be set far higher than that attained in any other country.

COUNTRY STATION: WINNER M. GREGORY

The winning design, say the assessors, has a remarkably simple and workable plan, disposed correctly and imaginatively on the site. The building is modest and attractive in design and appropriate to its setting. Minor points of criticism, readily rectified, are as follows: The service island could be improved in disposition and layout of pumps, etc. The lavatory is rather overstressed as an element and the main canopy continues over it somewhat wastefully at high level. The deep red colour proposed for the painted finish to the soffit of this canopy should be replaced by a lighter colour. The lettering and detailing generally could be rather more distinguished.

Plan of country service station (Scale: $\frac{1}{4}$ " = 1' 0")



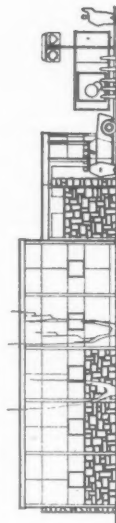
North-east elevation



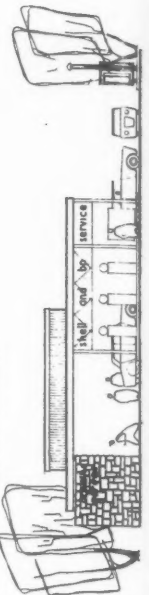
North-west elevation



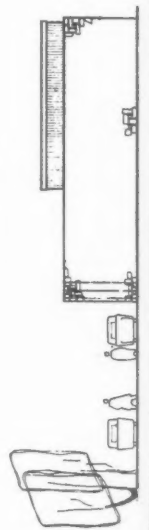
South-west elevation



South-east elevation

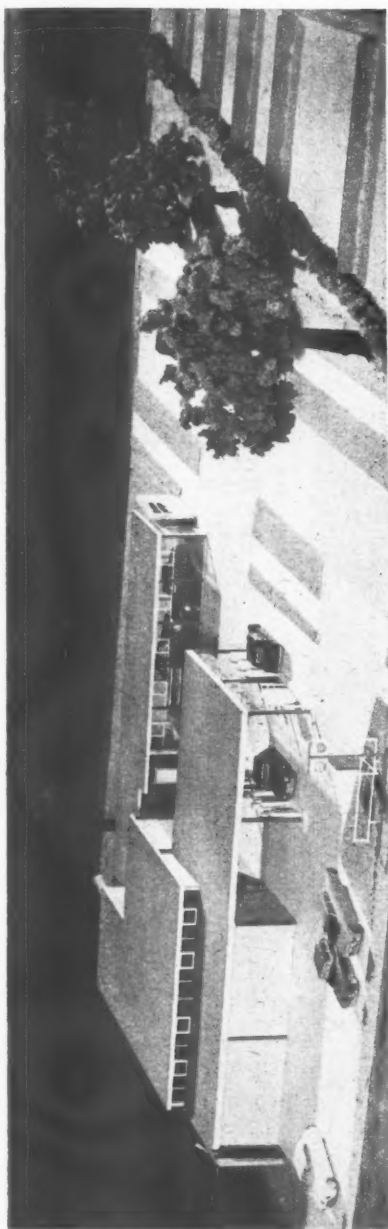


Section A-A

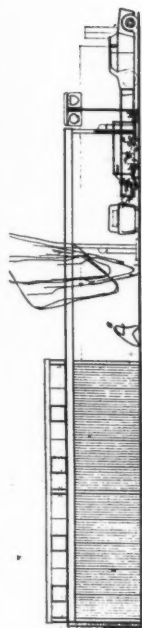
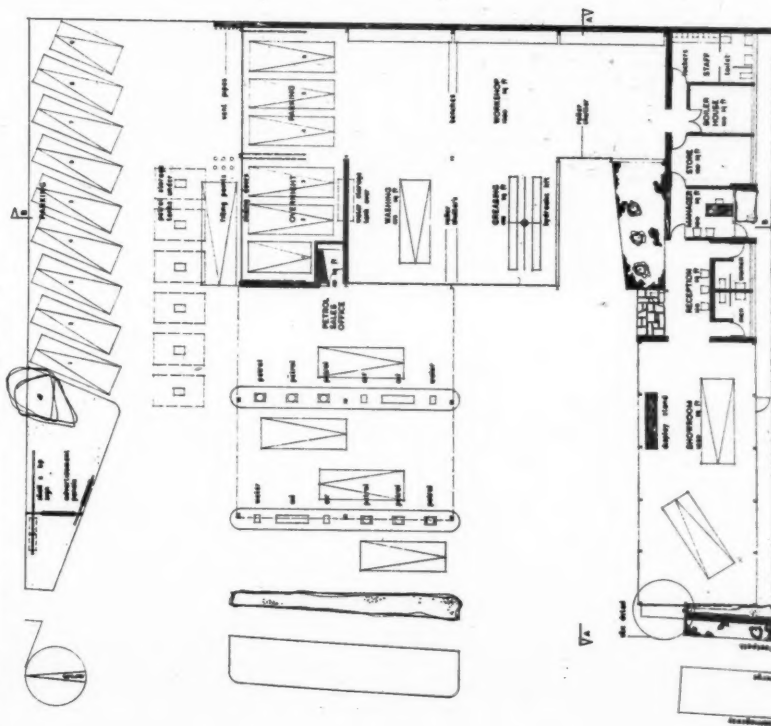


SUBURBAN STATION : WINNER M. GREGORY

This scheme, say the assessors, provides excellently planned accommodation ideally disposed upon the site. The showroom is particularly well placed in relationship to the forecourt and the road. The buildings will form a most attractive group. The circulation arrangements in and about the accommodation could hardly be bettered. The off-set fitting to the storage tanks, keeping the tankers off the island circulation, is a good practical feature, which also appears in a number of other designs. The arrangement of equipment on the islands needs further consideration. Minor points of criticism are as follows:—The free standing brick wall just in front of the sheer glass window of the showroom appears a stupid and clumsy feature, better omitted or incorporated in the showroom structure. The advertisement panel shown in connection with the well-placed Shell and B.P. sign would be better located on the external blank wall of the night parking bay. The colour proposed for the canopy soffit—deep red—should be replaced by a lighter colour.



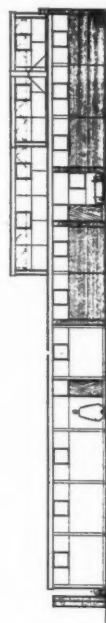
Plan for suburban service station [Scale: 1/4" = 1'0"]



North elevation



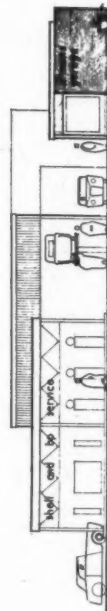
Section A-A



South elevation



Section B-B

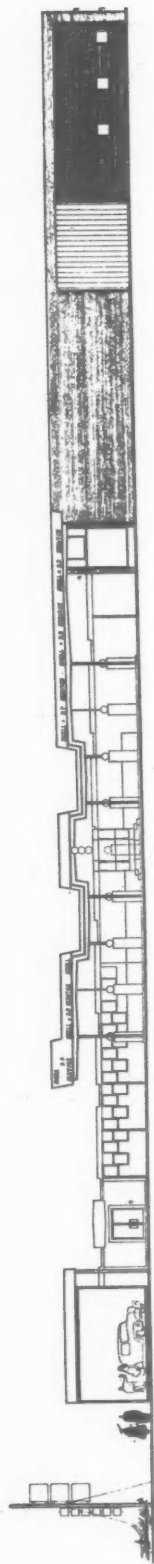
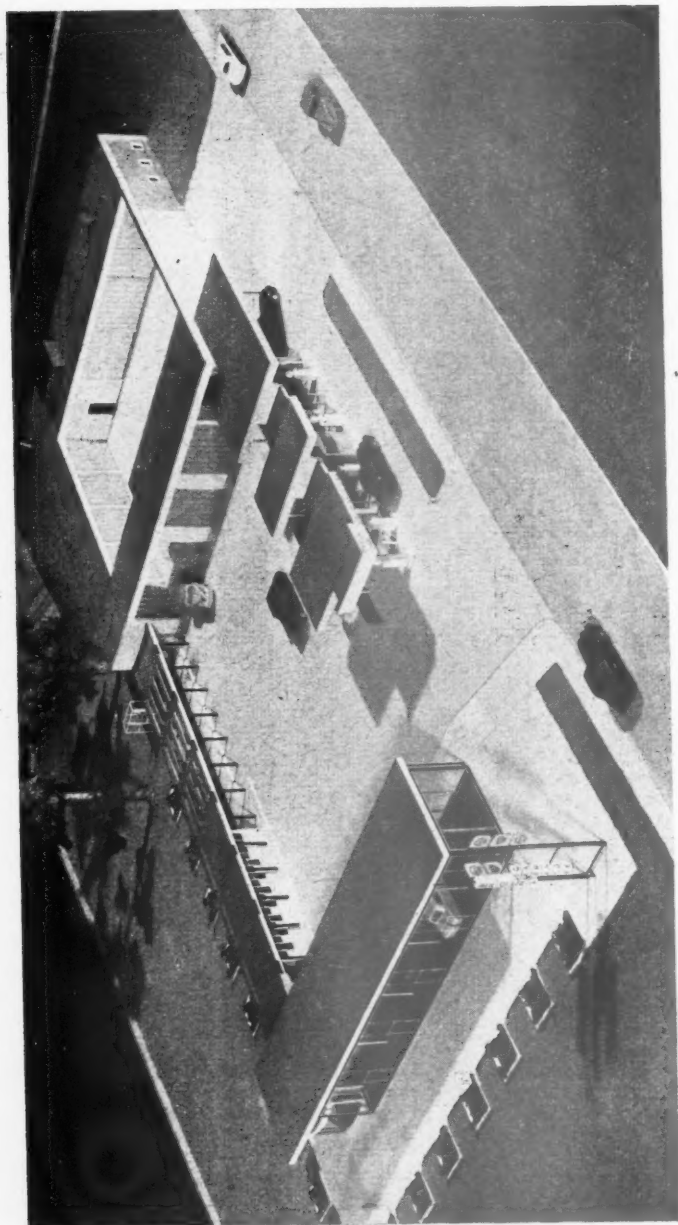


West elevation

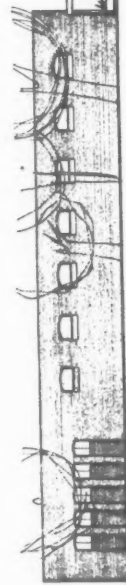
SERVICE STATIONS COMPETITION (continued from page 37)

MAIN MOTORWAY STATION: WINNER G. M. CROCKETT

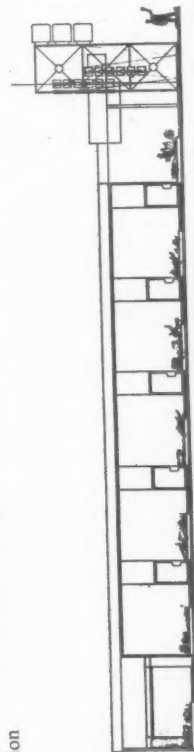
The buildings in this scheme are disposed upon the site in a most satisfactory manner, the composition from all viewpoints being sound. The showroom is well exposed to the motorway approach with the Shell and B.P. sign admirably located at one end. The workshops, greasing and washing bays and the overnight garage are arranged to form a courtyard on the west which is well screened from view. Between this and the showroom is a main courtyard screened from the motorway by a pergola and separated from the forecourt and petrol islands by a low wall; the greasing and washing bays are well placed both in relationship to the central courtyard and that on the west. The forecourt is a little restricted in depth, so that although access is planned on both sides of the islands one car cannot pass another. The filling of storage tanks would cause the blocking of forecourt circulation by the tanker. Some of the detail design is perhaps a little mannered, and the colour scheme is disappointing and requires further detailed study. Apart from these minor defects, which are readily corrected, the whole scheme presents a thoroughly workable and attractive group of great merit.



North elevation
(Scale: $\frac{1}{8}'' = 1' 0''$)

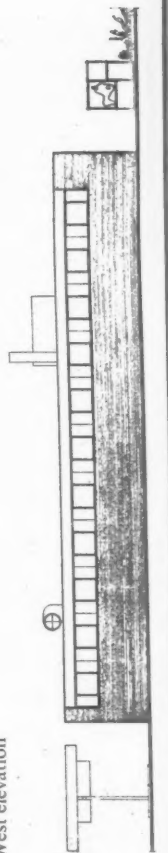


South elevation



East elevation

West elevation



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In recent years the JOURNAL has not given much space to reporting the annual Architects' Conference. This year's Conference in Edinburgh (June 25 to 28) is reported more fully in order to assist those not attending to appreciate its value and to discover what they missed.

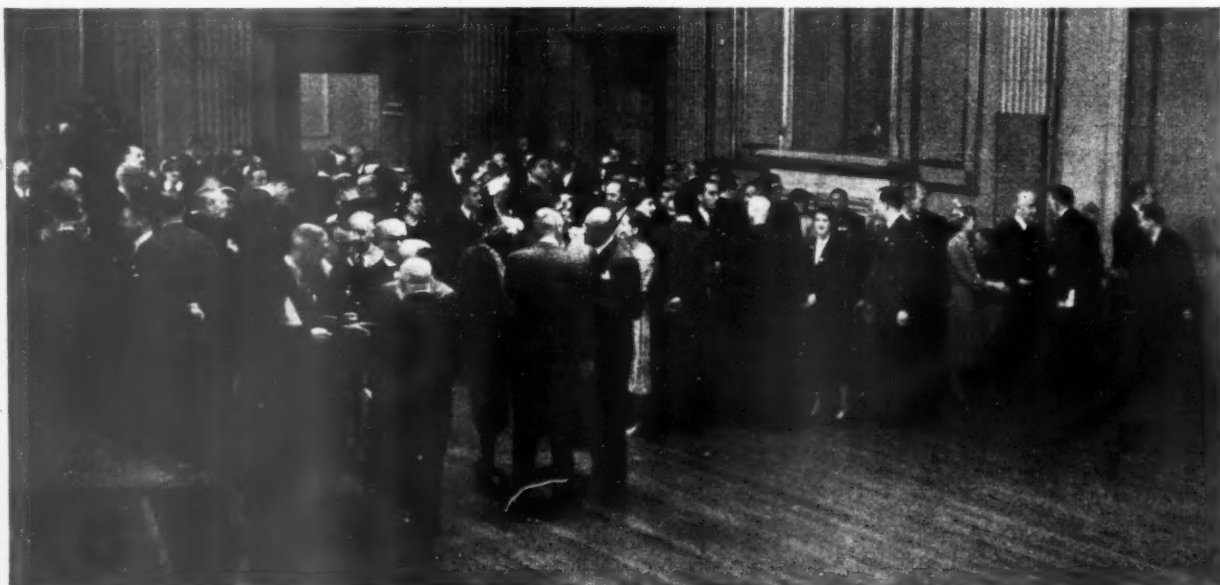
A PICTORIAL RECORD OF THE BRITISH ARCHITECTS' CONFERENCE—EDINBURGH

The Informal Reception

There were seven hundred and seventy-odd members at this year's conference and by far the majority of those not resident in Edinburgh had arrived in time to attend the Informal Reception held on the Wednesday evening. A few arrived sufficiently early in the day to be able to catch a glimpse of the Queen, above, left, as she drove from the station to the Palace of Holyroodhouse where she was in residence for the following five days. The first order all conference delegates had to obey was to visit the Conference Office (which was in the Assembly Rooms, George Street, the scene of all the conference activities). Here they were each given an envelope containing a list of members, a book of tickets for the various events which the member had decided to attend, and a handsomely produced and illustrated Conference programme which included descriptions of Edinburgh, and of some of those places which were to be visited in the sightseeing tours, two blank pages for autograph hunters, a mis-



captioned photograph of Crail harbour and two pages of quotes from Sir Walter Scott. There was also that indispensable item, the identification medal which conference members J. Beetham Shaw (Bingham), left, and Charles T. I. Bloodworth (Liverpool) are seen above attaching to their lapels. Both are architects working for the MOHLG—the former for the North Midlands and the latter for the North-Western Region. Once ticketed the next step was to be received (below) by Presidents (RIBA and RIAS), A. Graham Henderson and Lt.-Col. A. Cullen, in the 18th century ballroom of the Assembly Rooms at the Informal Reception.





The Informal Reception (continued)

The Assembly Rooms, of which rather inadequate glimpses can be obtained from these photographs, are on the south side of George Street, the principal street which forms the backbone of the New Town. They were built in three stages—a little-known architect called John Henderson completed the Assembly Rooms proper by 1783 and a Tuscan portico on rusticated arches was added by William Burn in 1818, who then added a music hall in the rear in 1843. The Rooms, which are the property of the City Corporation, have been largely redecorated and were the subject of admiring comment from the members. Another source of interest was an exhibition of current Scottish Architecture on view in one of the ground floor rooms, together with work from various Scottish architectural schools. Three forms of refreshment were provided at this reception, that which is known as "light" and is the desire of the eager row of members shown above, left; that which is known as spiritual—the Newhaven Fishwives choir who followed tradition in songs as well as dress, and who can be seen above, centre, with C. F. Bates, from Newport, Mon., listening to them; and that which is known as alcoholic. Left to right, in the bar, above, right, are: Basil Spence (Edinburgh) whose work is now probably more familiar to the English than it is to the Scots, Malcolm G. Gilling (Wirral) and F. R. S. Yorke (London). Of course, if these forms of refreshment proved inadequate there remained a quiet corner and the evening paper (left).



The Inaugural Meeting

On Thursday morning, at 10.15, the members assembled for the reception and address of welcome by the Right Honourable James Miller, the Lord Provost of the city. Pausing to talk outside the Assembly Rooms was J. A. H. Mottram, head of the town planning course at the Edinburgh College of Art (above, right). In the background can be seen the rather incongruous window decoration which fills the ground floor windows of the assembly hall and spoils an otherwise admirable attempt at redecoration. It consists of cut-out pale blue boarding with a heavily textured finish and a small, centrally hung, imitation parchment lampshade. The large hall fairly easily accommodated the six-hundred-odd audience, a small portion of which, who had wisely chosen the softest chairs, are shown above.

THE LORD PROVOST. Mr. Miller (top right, opposite page) in welcoming the architects to the city and expressing his hope for a successful conference referred to Edinburgh as a city "rich in history and romance . . . dominated by a castle . . . with great open spaces, golf courses, parks and playing fields and trim and neat bungalows and houses on the

outskirts." He then referred to criticisms of the city in the JOURNAL for June 19, saying that the article seemed to imply that the physical development of Edinburgh until the completion of the New Town about a hundred years ago was satisfactory and that since then the architects of Edinburgh had achieved a standard unworthy of the city and presumably even below the standard achieved elsewhere. "I, for one, take exception to this suggestion (applause). The same journal points out that Edinburgh is very much the city of the private architect. I think it is generally accepted that there are more practising architects in Edinburgh per square mile than in any other comparable city. Our college of art, recognized as one of the finest in the country, turns out an average of over sixty architects a year. I refuse to accept that with such a reserve of architectural ability this generation of architects in Edinburgh, and their fathers and grandfathers during the last hundred years, have let the city down. Perhaps the view expressed by the JOURNAL is just as loose as their statement about Cramond being an isolated fishing village. There hasn't been a fishing boat in Cramond for at least fifty years and so far as I can ascertain there are no records

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of it ever having been such." Speaking of the Royal Mile, Mr. Miller said that architects would see in it some gems of Scottish architecture, but they would also have a feeling of great disappointment. "Disappointment that something had not been done before now to preserve that which was worthy of preservation and to rebuild in a sympathetic manner on the sites where buildings not worthy of preservation should have been removed. None could regret that more than the Town Council. Until fifteen years ago, when greater authority was given as a result of town planning and similar legislation there were many inherent difficulties . . . At the end of the war many wanted an immediate start made on the redevelopment of this famous thoroughfare, but permission for clearance could not be obtained and it was felt that the needs of the people without homes of any sort must get first priority. In these areas we had to wait somewhat impatiently until the provision of new houses had made some headway, but nearly a year ago we made up our minds we had waited long enough, and I'm now happy to report that a certain amount of progress is being made. Apart from the architectural department of the Edinburgh Corporation there are at least four architects engaged on important projects in the Royal Mile." In conclusion, Mr. Miller said that "if architects could give a clear lead to bigger and better things for the future we will feel that your conference has been a success."

THE PRESIDENT, RIBA, A. Graham Henderson, having thanked the Lord Provost then delivered a short inaugural address in which he referred to the last conference in Edinburgh, thirty years ago, and thanked the generous action of the South Eastern Society of Architects in agreeing that the last Conference of his term of office as President should be in Scotland. The President of the RIAS, Lt.-Col. Alexander Cullen, proposed a vote of thanks for the inaugural address.

J. STEEL MAITLAND. Mr. Maitland's paper on Scottish Housing, Past and Present, which was then delivered, will be appearing in the next issue of the RIBA Journal. It consisted of a very full description of the history of Scottish housing and some comments on present day trends

Student Exhibition

After the inaugural meeting a number of conference members were invited to the College of Art for lunch and to view an international exhibition of architectural students' work. This exhibition will also be on view at the Edinburgh Festival. At this preview only exhibits from three of the nine countries contributing had been received—from South Africa, Finland and Vienna. They were exhibited in a studio of the College, but unfortunately time had not allowed adequate captioning of the work to make it readily comprehensible. At the lunch table, from left to right, are: Alex Brown, a fifth-year student, Clifford Culpin, Gerard Walmsley, and Norval R. Paxton, vice-president of the RIBA.

together with a startling and regrettable attack on the author's fellow architects in central government offices. The following is an excerpt: "Temporary prefabricated sub-standard houses were features of the immediate post-war period here as elsewhere. Ten years was the given time for their use, six of which have now elapsed; let us see how many are scheduled for demolition at the prescribed time! The less said about them the better. But the makers of prefabricated houses, having once tasted blood, were loath to retire from the arena, and the temporary prefab has given place to the permanent non-traditional house of equal merit and design, and a spate of these covers the countryside. No beauty spot is too sacred to be free of them. Glen Coe, the Glen of Weeping, weeps the more to have them guard the very entrance to one of the most picturesque old Highland villages in the land. I realise the difficulties the Government have in carrying out their obligations to the nation. They are hard put to it to tap every source of supply and they must look to the factory as well as to the building yard for their labour, they must test every new method of construction that will produce more houses more quickly, even at the expense of taking risks and courting failures, I suppose in the end it is more important to have houses of any sort than to have houses of decent design, though I could never see why it is not possible to have both. In my own view—and of course it is only a personal view—standards of design have deteriorated; the architect has allowed himself to be dominated by the engineer; he has become the slave, not the master, of present-day materials. He has been frustrated, thwarted and dictated to now for many years by these theoretical and academic young men ensconced in the architectural departments of the various ministries, whose knowledge of design is limited by the dictates of their administrative superiors and whose practical knowledge is negligible. Scarcity has dictated a bleak and joyless architecture that is accepted not as something to be overcome but as the standard to be attained, the fashion to be followed. For my own part I am an unrepentant traditionalist; but when I look at what now goes by the name of 'traditional' I sometimes wonder, am I?"





Garden Party

At twenty minutes to three guests assembled at the conference headquarters where buses drove them to Lauriston Castle, a sixteenth-century Scottish baronial building with some nineteenth-century additions, where, the garden party was held by permission of the City Council. There being no host present, and good manners preventing an immediate rush for the tea tent, there is always a slightly indecisive air about this form of party. However, the pipe band of the King's Own Scottish Borderers attracted everyone on to the lawn which has a fine view over the Forth. The air "Redford Cottage" was barely finished before the

band was doubling for cover under the trees as the rain began. This gave members the opportunity to go indoors and admire the catholic taste of the late William Robert Reid, whose collection of furniture fills the ground floor in magnificent confusion—or to wait in the dripping marquee (above). Before long, however, the famous "Conference Weather" prevailed, and sun, pipe band and, to everyone's amazement, a flock of penguins (see below) all came out. Above left, Ernest F. Tew (Bath), Mrs. R. A. Gerrard (Bath), and Mrs., Mr. and Miss Lionel Pearce (London). Above, centre, Mr. and Mrs. Robert C. Weinberg (New York), representing the AIA. Above right, in foreground, Mrs. and Mr. L. Clifford (Nottingham).





Civic Reception and Dance

On Thursday evening the civic reception and dance was held at the Assembly Rooms. Over seven hundred members attended. Bailie J. Campbell deputized at the reception for the Lord Provost who was unable to attend owing to pressure of work in connection with the Royal visit. There were demonstrations of Scottish dancing—the performers are seen entering the ballroom above, left. Unfortunately the dancers rapid movements defied the camera, so this record of the dance is largely a static one, of people sitting out formally, and in comfort, as left, or informally, and probably just as comfortably, as do Gordon Anderson and James Wallace (Glasgow) above right. This dance was, indeed, in most respects like all dances—there was a busy buffet, a busier bar, and the indefatigable dancers, below, going round and round and round . . . “a quarter to twelve? My dear, isn't it late . . .”



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Whole-day Tour

For those not wishing to attend the second paper on Friday there was a choice of three whole-day tours. On this page are photographs of a tour which included Falkirk, Stirling, Dunblane, Gleneagles (for lunch), Yettis of Muckhart, Dunfermline (for tea), and Queensferry. The tour was by sleep-provoking bus, as L. Clifford (Nottingham) soon discovered, left. Top left, the party visit Stirling Castle. Below, a close study of Dunfermline Abbey buttresses. Acting as guide was the Rev. Dr. J. M. Webster, the former Clerk to the Presbytery of Dunfermline and Kinross, above, centre. Above right, A. Wilkinson (representing Borough of Edmonton) and Vincent A. Jolley (representing Borough of Tottenham) at North Queensferry. In the background is the Forth Bridge.



The Second Paper Read

On Friday the second paper of the Conference was read by J. L. Womersley, Borough Architect and Town Planning Officer of Northampton. The title was: *The Architect's Contribution to Housing in 1952*. This was an excellent paper which will be published in full in the RIBA Journal. There were barely two hundred present. (See opposite page, top) Left, the President, A. Graham Henderson, leading the applause for Mr. Womersley's paper. Mr. Womersley is on the President's right. On his left are C. D. Spragg, Secretary; Leonard C. Howitt, representing the City of Manchester, who proposed the vote of thanks and Ian Leslie, editor of *The Builder*, who seconded the vote. In the discussion which followed, J. H. Forshaw, Chief Architect, MOHLG, said he thought Mr. Womersley's paper had brought out quite forcefully the national



need for houses. "We are all aware of it in a rather loose sort of way, but I wonder if we all realize that in the next 10-15-20 years we want 4-5 million new houses. How are we going to get these? We have been going hard at it so far as material and labour will allow since the end of the war, and we have produced approximately one million houses. If we are to improve that pace—and, believe me, the indications are that materials and labour and finance will be difficult in years to come—that means we shall have to adopt some extraordinary new forms of construction. We must have new thought about constructional methods, about methods on the site, and about planning."

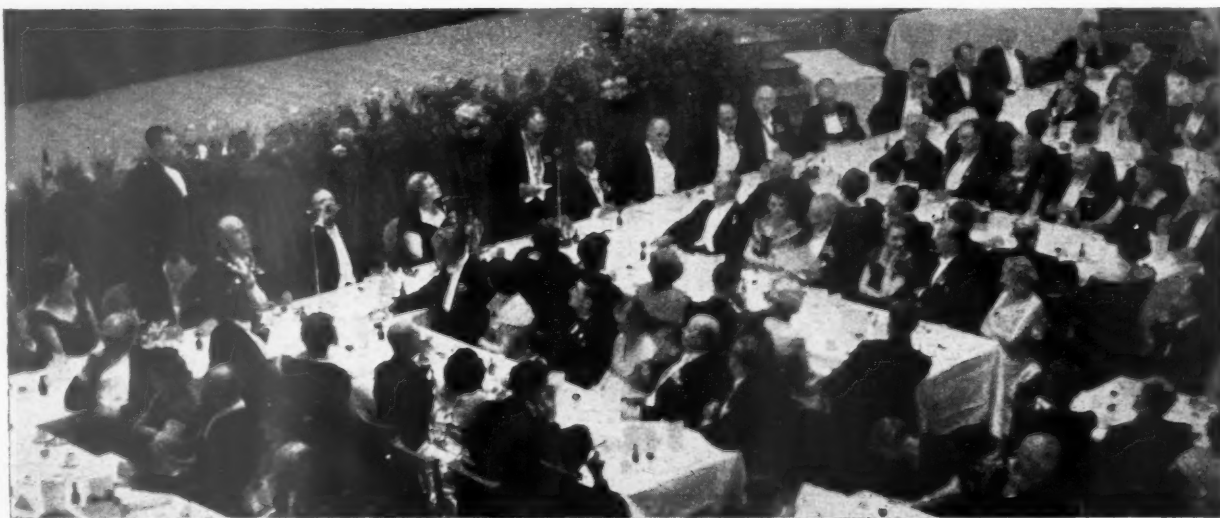


The Conference Dinner

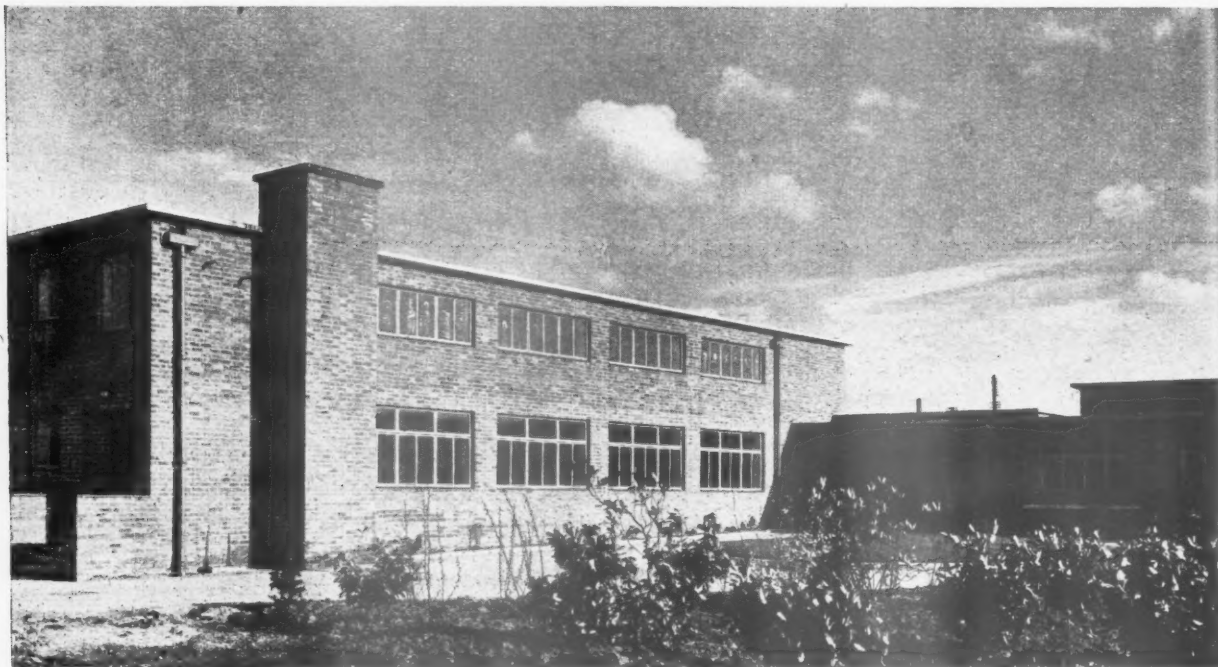
Although there were further sightseeing tours on Saturday the last major event of the conference was the dinner on Friday. Following the loyal toast there were toasts to the City of Edinburgh, proposed by Lt.-Col. Alexander Cullen, President of the RIAS (seen speaking, below) and replied to by the Lord Provost; to the RIBA and its allied societies, proposed by the Earl of Home, Minister of State, and replied to by A. Graham Henderson, President, RIBA; and to the guests, proposed by W. H. Kininmouth, President of the Edinburgh Architectural Association (left), and replied to by Lord Bilsland, seen left, between Mrs. Graham Henderson and the Countess of Home.

Mr. A. Graham Henderson, President of the RIBA, replying to the toast to the RIBA, said the conference was the biggest the Institute had ever held, and had left them with something positive to think about. The urgency of providing housing accommodation, the speed of building and the question of keeping costs down were the essentials of today. "We should always regard austerity not as a frustration but a challenge to us to show what we are worth."

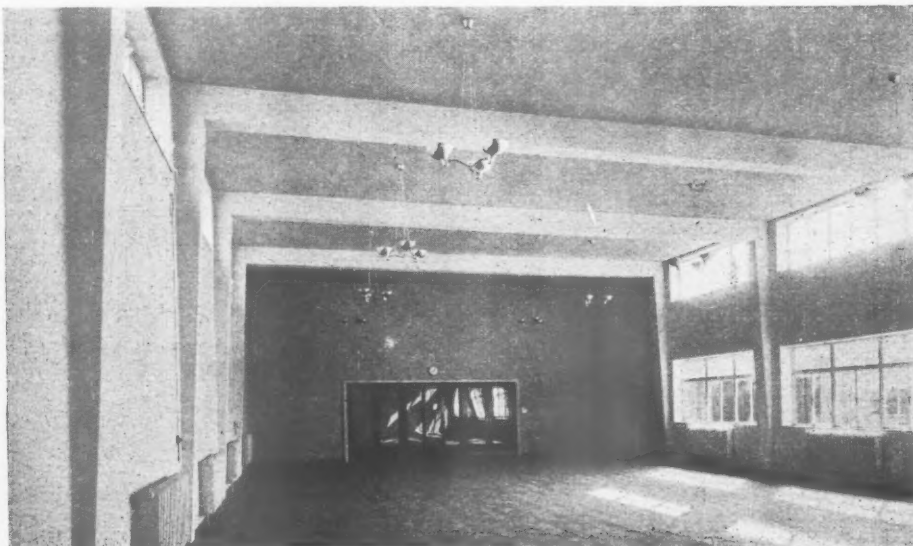
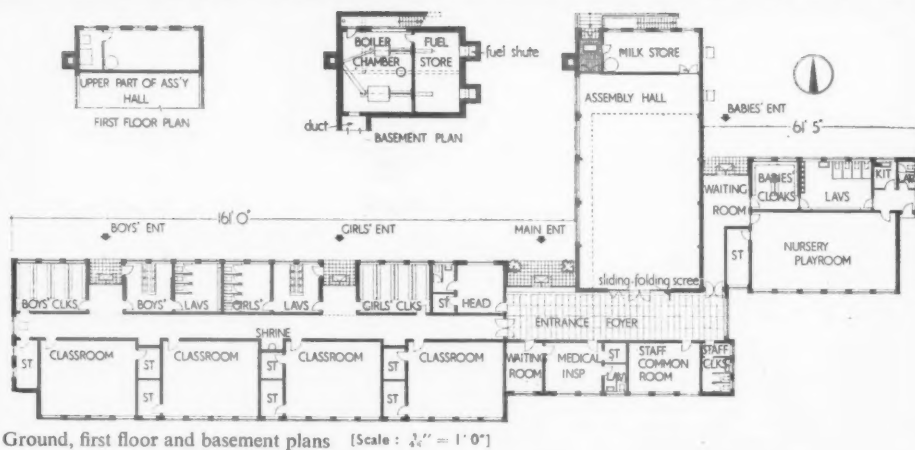
Proposing "The City of Edinburgh," Lt.-Col. A. Cullen quoted from Robert Louis Stevenson's criticism of Edinburgh in his "Picturesque Notes." "Recently—very recently," he said (in a reference to the JOURNAL) "we have had critics who do not possess Stevenson's literary gifts, and who do not possess his inborn knowledge of Scotland and our Scottish way of life. I would gently chide them by saying that Scotsmen have a remarkable aptitude for ordering their own affairs."



PRIMARY SCHOOL AT SUTTON, ST. HELENS



St. Anne's Roman Catholic Primary School designed by W. and J. B. Ellis has been placed in the south-east corner of the site because of the risk of mining subsidence. It is known that the coal bed underlying the two intersecting railway lines will not be disturbed. These considerations also governed the L-shaped plan, which provides all teaching and administrative accommodation in the long east-west wing and the assembly hall and boiler house in the short north-south wing. The central corridor is lit by dome lights and from the west end. The assembly hall is constructed of 14-in. brickwork and reinforced concrete portal frames; all other accommodation being of 14-in. brickwork with flat roofs of pre-cast or in-situ reinforced concrete. The photograph (this page, top) shows the main entrance with



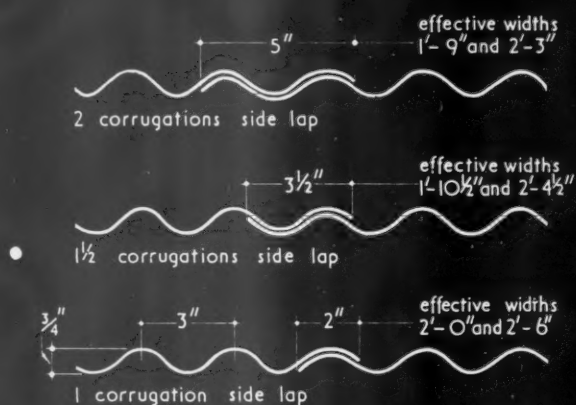
ROOF SHEETING | ALUMINIUM | GENERAL DATA

16.B1

The Architects' Journal Library of Information Sheets 371. Editor: Cotterell Butler, A.R.I.B.A.

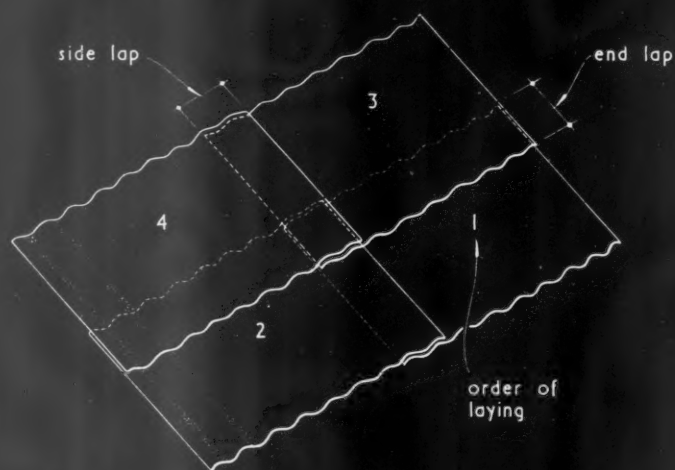
thickness		width	weight in lb. for one sheet							
in.	s.w.g.		5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
0.036	20	2'-2"	6.14	7.36	8.60	9.83	11.05	12.28	13.50	14.73
		2'-8"	7.62	9.14	10.67	12.11	13.64	15.24	16.76	18.28
0.028	22	2'-2"	4.78	5.73	6.68	7.64	8.60	9.55	10.49	11.45
		2'-8"	5.92	7.11	8.29	9.48	10.67	11.85	13.04	14.22
0.022	24	2'-2"	3.72	4.49	5.24	5.99	6.74	7.49	8.24	8.99
		2'-8"	4.65	5.58	6.51	7.44	8.37	9.30	10.23	11.16

SIZES AND WEIGHTS OF STANDARD SHEETS.



	length of roof slope	pitch	side lap	end lap (min)
pitched roofs	30'-0"	15°	2 corr.	8"
	30'-0"/50'-0"	20°	2 corr.	8"
	over 50'-0"	over 20°	1 1/2 corr.	6"
curved roofs	—	—	2 corr.	9"
vertical siding	—	—	1 corr.	4"

DETAILS OF EFFECTIVE WIDTHS AND RECOMMENDED LAPS FOR VARIOUS ROOF SLOPES.



ORDER OF LAYING.

purlin spacing	maximum design loads (lb./sq. ft.)		
	20 s.w.g.	22 s.w.g.	24 s.w.g.
3'-6"	67	53	41
4'-0"	53	41	33
4'-6"	42	33	26
5'-0"	34	27	22
5'-6"	28	22	•
6'-0"	24	•	•

• not recommended

DESIGN LOADS. (see notes on reverse)

CORRUGATED ALUMINIUM ROOF SHEETING: GENERAL DATA.

Compiled from information supplied by The Aluminium Development Association.

16.B1 CORRUGATED ALUMINIUM ROOF SHEETING : GENERAL DATA

This Sheet describes the general properties and laying requirements of corrugated aluminium roof sheeting. Details of specifically shaped sheets for ridging, flashing, etc., are given on Sheet 16.C1. Aluminium roof sheeting is a light, high-strength durable material for roofing or vertical cover. The high reflectivity and low emissivity of the material ensure relatively even temperatures for internal working conditions. As the material does not require to be painted or protectively coated in any way, maintenance costs are negligible.

Standard Sizes

The standard sizes and nominal weights of sheets are given on the face of this Sheet. Curved corrugated sheets are available in addition to straight sheets and are made to suit requirements.

Fixing

Typical methods of fixing are shown on Sheet 16.C1.

Maximum Design Loads

A table of recommended maximum design loads for various purlin spacings and thicknesses of aluminium is given on the face of this Sheet. The data are based on standard 3 in. pitch corrugations in N.S.3 material to B.S. 1470, using a maximum working stress of 11,000 lb./sq. in., giving a factor of safety of 2 on the 0.1 per cent. proof stress (yield). In the table on the face of this Sheet the zig-zag line indicates the maximum purlin spacing which may be employed when working to B.S. Code of Practice CP3, Chapter V, paragraph 7b.

Use of purlin spacings below the line depends upon the pitch of the clad surface, the maximum spacings shown being those recommended for vertical walls.

For buildings where a certain amount of roof traffic may be expected a sheet thickness of 20 or 22 s.w.g. is recommended, depending on the purlin spacing. Where no roof traffic is to be expected sheets of 24 s.w.g. thickness may be used. 20 s.w.g. sheet is recommended for industrial buildings, in urban areas or in severely corrosive atmospheres.

Further Information

The Aluminium Development Association maintains a Technical Advisory Service and Information Bureau, and its architectural department is available to answer questions on the properties and uses of aluminium and its alloys in all forms and to advise on technical problems, suppliers, etc.

This Series of Sheets on aluminium and aluminium alloys gives general data on the properties of the materials and their use in various building applications.

Compiled from information supplied by :

The Aluminium Development Association

Address : 33, Grosvenor Street, London, W.1.

Telephone : Mayfair 7501-8.

CONCRETE | REINFORCED | SLAB DESIGN**6.A21**

The Architects' Journal Library of Information Sheets 372. Editor: Cotterell Butler, A.R.I.B.A.

slab thickness	permissible superimposed loads in lb./sq. ft. for spans in feet																
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	30
3"	392	261	182	131	96	71	52	38	27	18	11						
3½"	598	402	284	207	155	118	90	69	52	39	29	20	13				
4"	815	552	393	289	218	168	130	102	80	62	48	36	26	18	12		
4½"	1102	749	536	397	302	234	184	146	117	93	74	58	46	35	26	18	
5"	1430	974	700	522	400	312	247	198	160	130	105	85	69	55	43	33	
5½"	1720	1175	845	632	485	380	303	244	198	162	132	108	88	71	57	45	
6"	2125	1454	1049	786	606	477	382	309	253	208	172	142	118	97	80	65	
7"	3060	2099	1520	1144	887	702	566	462	381	317	265	223	188	158	133	112	
8"	4045	2781	2017	1521	1183	940	760	623	516	432	364	308	262	223	190	162	19
9"	5302	3649	2652	2003	1561	1244	1009	830	692	582	492	419	359	309	266	229	42
10"	6720	4630	3369	2552	1992	1592	1293	1067	892	753	640	548	471	407	353	307	70
12"		6951	5066	3846	3010	2411	1968	1630	1367	1159	991	853	739	644	563	494	139
15"			6552	4974	3892	3120	2547	2111	1773	1504	1286	1108	961	838	733	644	186
18"				7716	6054	4862	3980	3310	2790	2376	2041	1769	1540	1351	1190	1053	348

SIMPLY SUPPORTED SLABS.

slab thickness	permissible superimposed loads in lb./sq. ft. for spans in feet																
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	30
3"	499	335	236	172	129	97	74	56	43	31	23	15					
3½"	758	513	365	269	204	158	123	96	75	59	47	35	27	19	13		
4"	1031	702	503	373	284	222	175	139	112	89	72	57	45	35	27	19	
4½"	1391	950	683	509	391	306	243	196	160	130	106	86	71	57	46	36	
5"	1803	1233	890	667	515	405	324	262	215	177	146	121	101	84	69	56	
5½"	2166	1485	1073	806	622	491	395	321	264	219	181	151	126	105	88	73	
6"	2673	1835	1329	1001	775	614	496	404	334	278	233	195	165	139	118	99	
7"	3846	2644	1921	1451	1131	898	728	598	497	417	352	300	256	218	187	162	25
8"	5082	3499	2545	1924	1503	1199	974	802	669	564	479	409	351	303	261	226	48
9"	6655	4588	3342	2532	1978	1582	1288	1066	892	756	642	550	476	413	359	313	79
10"	8430	5820	4140	3220	2520	2020	1646	1364	1145	972	830	717	619	538	471	414	117
12"		8721	6369	4844	3798	3049	2496	2074	1745	1484	1274	1103	960	841	739	653	210
15"			8230	6260	4911	3945	3228	2685	2261	1924	1653	1430	1246	1092	962	851	277
18"					7619	6124	5026	4190	3541	3024	2604	2263	1980	1742	1541	1370	489

CONTINUOUS SLABS.

6.A21 REINFORCED CONCRETE SLAB DESIGN—1 : 1½ : 3 MIX

This Sheet is the second of two dealing with reinforced concrete slab design. The tables on the face give the safe uniformly distributed loads which various thicknesses of reinforced concrete slab will carry over different spans. In both cases the tables give values for slabs of 1 : 1½ : 3 mix, the upper table being for simply supported slabs and the lower table for continuous spans.

Sheet 6.A20 gives the values for slabs of 1 : 2 : 4 mix.

Permissible Concrete Stresses

Permissible concrete stresses are as given in British Standard Code of Practice CP 114 : 1948.

Bending Moments

Simply supported slabs : The table values are based on a bending moment of $\frac{WL^2}{8}$.

Continuous spans : The table values are based on a bending moment of $\frac{WL^2}{10}$ as the limiting value occurs at the end span. Where the end spans of a series of continuous spans are less than 0.8 of the remaining spans, the loads in the lower table may be increased by a factor of 1.2.

Note.—When designing slabs spanning less than 8 ft. it should be borne in mind that British Standard Code of Practice CP 3 Chapter V : 1944 *Loading* lays down minimum loads on slabs per foot width for the various loading classes.

Use of Tables

Loads to right of heavy dotted line : When the selected loading for a given slab falls to the right of the heavy

dotted line, the deflection will be greater than that laid down in British Standard Code of Practice CP 114.100 : 1949 (with amendment PD 1054, June, 1950).

Loads to left of heavy full line : When the selected loading for a given slab falls to the left of the heavy full line, the shear stress should be investigated.

Effective Depth of Slab

The effective depth for each thickness of slab is given in the table below and has been based on the cover and reinforcement diameter given. The reinforcement suggested is heavy and uneconomical. Where possible the designer should choose a slab thickness with an ample margin of strength. When the superimposed load to be carried by a given slab over a given span is not as high as the maximum shown in the tables on the face of this Sheet, the area of reinforcement per foot width of slab may be reduced *pro rata*.

Slab depth (in.)	Effective depth (in.)	Resistance moment (lb. in.)	Area of steel required (sq. in.)	Steel dia. and spacing (in.)
3	2.25	16,060	0.477	½ at 5
3½	2.75	24,000	0.583	½ at 4
4	3.2	32,410	0.678	½ at 5
4½	3.7	43,350	0.784	½ at 4½
5	4.2	55,850	0.890	½ at 4
5½	4.6	67,000	0.975	½ at 5
6	5.1	82,400	1.080	½ at 4½
7	6.1	118,000	1.293	½ at 4
8	7.0	155,400	1.484	1 at 6
9	8.0	202,900	1.696	1 at 5½
10	9.0	256,800	1.907	1 at 4½
12	11.0	383,000	2.329	1 at 4
15	12.5	495,000	2.650	1 at 7*
18	15.5	761,500	3.285	1 at 5½*

* In two layers

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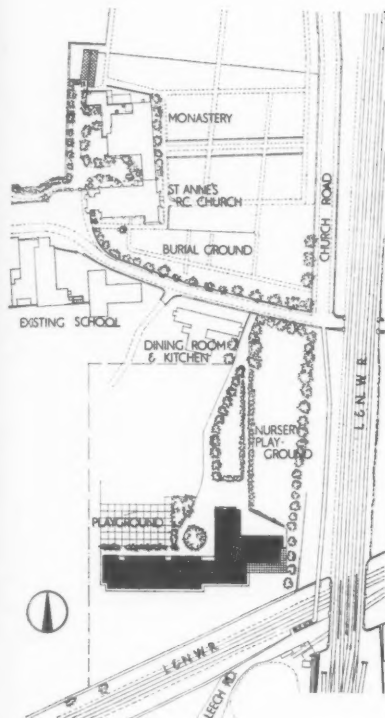
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Site plan

the assembly hall on the left; below opposite is the assembly hall looking towards the entrance doors; below on this page are seen the entrance hall and a view looking east along the north side of the classroom wing. The cost was £35,000. The general contractors were J. Yearsley & Sons, Ltd. For sub-contractors, see page 60.



RIBA

Aslin, Briggs and Enthoven —Vice-Presidents

At the meeting of the Council held on July 1, C. H. Aslin, C.B.E. (Hertford), Martin S. Briggs (London), and R. E. Enthoven (London), were elected Vice-Presidents of the RIBA. P. Garland Fairhurst, M.A. (Manchester), Chairman of the Allied Societies' Conference, is also a Vice-President. Kenneth M. B. Cross, M.A. (London), was appointed Hon. Secretary and Thomas E. Scott, C.B.E. (London), was appointed Hon. Treasurer.

Council's Concern over Housing Standards

The President of the RIBA is to send a letter to the Minister of Housing and Local Government to inform him of the Council's concern as to the effects of his recent circular on the services and equipment of houses. The letter will point out that while a reduction in expenditure was advocated, no indication was given of the means whereby it should be effected.

At its recent meeting, the RIBA Council endorsed the recommendations of the Town and Country Planning and Housing Committee that it would be a false economy to abandon the provision of built-in cupboards, etc., since that would involve the tenants in buying furniture, with correspondingly increased demands on the furniture industry.

Architects to be Consulted by Housing Boards

The Council have been in correspondence with Sir Percy H. Mills in regard to the representation of the architectural profession on Regional Housing Production Boards. Representatives of the Council have met Sir Percy Mills and discussed the question and as a result the Minister of Housing and Local Government has agreed to the nomination by the President of the RIBA of a member in each administrative region, who will be available to be called on by the Production Board for consultation on matters of immediate importance to the profession.

MOW

Advisory Service Closed Down

The Minister of Works has decided to discontinue the ministry's advisory service on "Payments by Results" schemes. All local authorities have been advised that the Payments by Results section, under its chief adviser, R. H. James, has been closed down as from June, 1952, and that it will not be possible for the ministry to give local authorities any further assistance on this subject. Mr. James, however, will be continuing similar work in a private capacity as a production consultant.

It is understood that the ministry is preparing a statement explaining fully its reasons for closing down the section. The only reason given so far is that it is one of the minister's economy measures.

CCA

World's First Symposium on Shell Concrete

Three papers were presented by architects at the first session of the Symposium on Concrete Shell Roof Construction held in London last week. Organized by CCA, the symposium is the first of its kind and was attended by architects, engineers, industrialists and materials' producers. There were visitors from a number of countries overseas, including Belgium, Burma, Denmark, France, India and Sweden.

The three architects who addressed the first session were Leo De Syllas, Edward D. Mills and E. Leslie Gale, and the session was held appropriately at the RIBA.

The Henry Jarvis Hall was filled to hear the opening remarks of Sir Francis Meynell, Director of CCA, who pointed out that, although the first, non-experimental shell roof in this country (an aircraft hangar at Doncaster) was built as recently as 1936, already 500 shells had been completed—most of them since the end of the war. Whilst the architectural treatment of shell construction was becoming more varied, Sir Francis continued, calculations were becoming simpler, and experimental work was now taking place to study the distribution of stresses in shells where the supports were liable to settlement.

Sir Francis Meynell was followed by the JOURNAL's House Editor, J. M. Richards, who chaired the discussion on Mr. De Syllas's paper. Mr. Richards made a plea for close collaboration between architects and engineers. It was, he said, a great tragedy when they drifted apart, as they had in the late nineteenth century. The great domes of the past were built by men who were at the same time architects and engineers. Modern life was too complicated for us to hope for a return to such an arrangement, but, concluded Mr. Richards, shell concrete and other new forms of construction gave architects and engineers a new opportunity for working together.

Introducing his paper on "Domes, Vaults and the Development of Shell Roofing," Leo De Syllas, of the Architects' Co-operative Partnership, drew attention to the large number of small, but important, details which architects would have to consider in connection with shell concrete. For example, where openings were pierced through the shell to provide daylighting, it was necessary to have a kerb to prevent the penetration of rain. From the inside, the kerb destroyed the thin appearance of the shell.

Ove Arup, in a witty contribution to the discussion, contrasted the present era of scientific understanding with the trial and error methods of the past. It was possible

nowadays, he said, to design without models or tests or experiments, almost any structure. We could do things today which would make S. Sophia look very primitive, but other things had changed too, and we no longer felt the need for such displays. In any case we could not afford them. The question today was usually, not how far could we span, but how cheaply? Mr. Arup contrasted shell concrete domes with other forms of construction, which could now be "bought off the peg." Not only precast beams, but even barrel vaults were now standardized and prefabricated. Barrel vaults could be obtained in precast sections and joined together by post-tensioning. But shell concrete represented the "bespoke tailoring" of building, and gave architects and engineers an opportunity to use their imagination.

F. J. Samuely pointed out that steel designers were catching up with concrete designers and that very soon concrete shells would have to compete not with conventional steel structures but with steel also in shell form. Shells, he added, could be almost any shape; so far only a very few alternatives had been tried out.

D. H. New, of Holland & Hannen & Cubitts Ltd., took up Ove Arup's point about "bespoke tailoring," but said that in his opinion, apart from the occasional great building, the success of shell construction would depend on its use in bulk—as with every other form of construction. There was much to be said for standardizing smaller shells—calculations, shuttering, and steel bending schedules all became simpler and thus reduced costs.

Summaries of the three papers by architects and the ensuing discussions, together with a review, by the JOURNAL'S Specialist Editor, No. 13 (Structural Engineering), of the papers presented by engineers, will be published in the Technical Section in the near future.

LMBA

Duke to Present 1952 Medals

H.R.H. the Duke of Edinburgh is to present the LMBA's 1952 medals to the successful candidates in the City and Guilds of London Institute's examinations in the Mansion House on Wednesday, November 5. The Lord Mayor is to preside, and the Masters of the City Livery Companies connected with building crafts are to be present.

To encourage interest in technical and industrial education, the LMBA, which this year celebrates its 80th birthday, set up a fund last year, with a capital sum of £1,000, to which it is allocating an additional £500 annually, for the award of medals and prizes to apprentices and students at the various schools of building and technical institutes throughout the London region. The medals, nine in silver and eight in bronze, are to be awarded to the most successful London students in the City and Guilds of London Institute's examinations in building subjects. The medals, designed by Cecil Thomas, incorporate the LMBA coat-of-arms on one side, and will be engraved on the other with the name of the recipient and the details of the award.

LCC

Housing Progress

Since the end of the war, the LCC has built over 41,000 new houses and flats; nearly two-thirds of them on its "cottage estates." In addition, nearly 8,000 temporary houses have been provided, 7,500 seriously war-damaged dwellings restored, and 3,000 war-destroyed dwellings rebuilt.

Nine thousand three hundred and fifty-eight dwellings were completed in the year 1951-52 and on March 31, 1952, 15,446 dwellings were under construction and a further 3,019 under contract. At present over 12,000 men are engaged in new house building for the LCC and another 5,000 are engaged on housing maintenance work.

Council Houses Not to be Sold

At the Council meeting last week, after a lengthy and heated debate, it was decided *not* to sell Council houses to tenants. An amendment to the Housing Committee's estimates, moved by Mrs. Thornton, "that the Housing Committee be instructed to offer, in suitable cases, to sell Council houses to tenants on the Council's estates who desire to purchase their own homes," was defeated.

Two other amendments, the first moved by Mr. East and the second by Lady Pepler, were also defeated. They were respectively, "that the Housing Committee be instructed to set aside, wherever practicable, on housing estates to be developed by the Council, areas for development by private enterprise, including self-help housing groups, and to seek the power to grant building licences for this purpose," and "that the Housing Committee be informed of the deep concern felt by the Council, in view of the rapidly approaching exhaustion of building sites both in London and on out-county estates, at the long delay in making arrangements for the Council to take part in the extension of existing towns adjacent to London, and that the Committee be instructed to proceed in this matter with the greatest urgency and to report to the Council at an early date."

COMPETITION

Winning Designers of Service Stations

On pages 36 to 38 are photographs and plans of the first prize-winning designs in the three sections of the service station competitions sponsored by Shell-Mex & B.P. Ltd. The names of other prize-winners, and entrants commended by the assessors, David du R. Aberdeen, D. A. Birchett and Frederick Gibberd, are given below.

Section A. Country Service Station—Second prize (£150): G. M. Crockett, A.R.I.B.A., A.M.T.P.I., the winner of the first prize in Section C. Highly commended: Jack Tomlinson, DIPL.ARCH. (LIVERPOOL), A.R.I.B.A.; N. H. Notley, DIPL.ARCH., A.R.I.B.A., and D. W. Notley, B.A.R.C.H., A.R.I.B.A. Commended: Trevor Dannatt, A.R.I.B.A.; Cline Parker, DIPL.ARCH. (LIVERPOOL), A.R.I.B.A.; Terence O'Toole, A.R.I.B.A., A.A.DIPL., Patrick de Saulles, A.R.I.B.A., A.A.DIPL., and Mary de Saulles, A.R.I.B.A., A.A.DIPL., M.S.I.A.; E. M. C. Butcher, A.A.DIPL., A.R.I.B.A.; Graham Winteringham, DIPL.ARCH. (BIRM.), A.R.I.B.A.; George Subiotto; Percival W. Flaxman, A.A.DIPL. HONS., A.R.I.B.A., in association with Ernst Pollak.

Section B. Suburban or Neighbourhood Service Station—Second prize (£150): G. H. Fletcher, DIPL.ARCH. (DUNELM), A.R.I.B.A., and R. T. Miller, B.A.R.C.H. (DUNELM). Highly commended: Margaret A. Paul, A.R.I.B.A., in association with Arthur A. Baker; Frederick Thomas, B.A.R.C.H., A.R.I.B.A., and Jan Cybulski, DIPL.ARCH., A.M.T.P.I. Commended: E. W. Hoyte; G. Uffindell, A.R.I.B.A.; Alan J. Elliott, D.A. (EDIN.), A.R.I.B.A., in association with Eric G. Ribet; Norman Frith, A.R.I.B.A., A.R.I.C.S., in association with John Jaques and Ron Mutton; Ronald W. Trebillock, A.R.I.B.A.

Section C. Main Motorway Service Station—Second prize (£150): Alan Reisch,

A.R.I.B.A., A.M.T.P.I., Ralph Cowan, A.R.I.B.A., A.M.T.P.I. and T. R. Spaven, A.R.I.B.A. Highly commended: Phillip Brown, B.A.R.C.H., A.R.I.B.A., in association with Gordon Elliott; Paul Boissevain, DIPL.ARCH., M.S.I.A., Barbara Osmond, A.R.I.B.A., in association with Horacio Caminos. Commended: David E. Morrison, B.A., A.R.I.B.A., L. Melville Rose, L.M.I.A.S., A.F.S. (ENG.); Peter Carter, A.R.I.B.A., Colin St. J. Wilson, A.R.I.B.A., M.A. (ARCH.).

Five hundred and eighteen designs were submitted for this competition. The drawings for these will be exhibited at the Royal Institute Galleries, Piccadilly, from August 11 to 28. Models of the prizewinning designs will also be on view.

TIMBER

Wood Preservation Convention

Dry rot is costing Great Britain £20,000,000 a year. Presenting a paper on the need for timber preservation in present-day buildings to the second annual convention of the British Wood Preservation Association, held recently at Cambridge, Kenneth Lindy compared this figure with a pre-war estimate of £1,000,000 a year.

"Even accepting the rise in the cost of repairs," said Mr. Lindy, "the increased incidence of the disease is very alarming. Wood preservation is an established practice in railway and dock engineering but is by no means in common use in the general building trade . . . due partly to a failure to realize the benefits involved."

Dry rot is only one of the causes of timber decay, and Dr. R. C. Fisher of the Forest Products Research Laboratory, who presented a paper to the convention on insects which attack timber, pointed out that, in spite of the serious damage being caused by various timber beetles, if proper precautions were taken, there was no reason why the death watch beetle should ever cause damage in buildings erected at the present day. "I am convinced," he concluded, "that wood preserving authorities and biologists, by their close co-operation, have an opportunity, unequalled in the past, of bringing about a reduction in the waste and financial losses caused by wood-boring insects."

DIARY

Students' Exhibition. At Polytechnic School of Architecture, Little Titchfield Street, Great Portland Street, W.1. 10 a.m. to 8 p.m.

Until July 10

Annual Prize-Giving and Exhibition. AA, 36, Bedford Square, W.C.1. Presentation by Howard Robertson. 2.30 p.m. (Exhibition: 10 a.m. to 6 p.m. [until 2 p.m., Saturday] until July 31.)

July 11

Students' Exhibition. At the Polish University College School of Architecture, 7, Cromwell Road, S.W.7. 10 a.m. to 7 p.m.

Until July 21

For Bill and Betty—Or Setting Up Home. At the Whitechapel Art Gallery, High Street, E.1. (Sponsors: Oxford House in Bethnal Green and the Whitechapel Art Gallery.) Weekdays (excluding Mondays) 11 a.m. to 6 p.m.; Sundays 2 p.m. to 6 p.m.

Until July 24

Building Research and Housing Exhibition. At the Building Centre, Store Street, Tottenham Court Road, W.C.1. (Sponsor: MOW.) 9.30 a.m. to 5 p.m. daily; Saturdays 9.30 a.m. to 1 p.m.

Until July 26

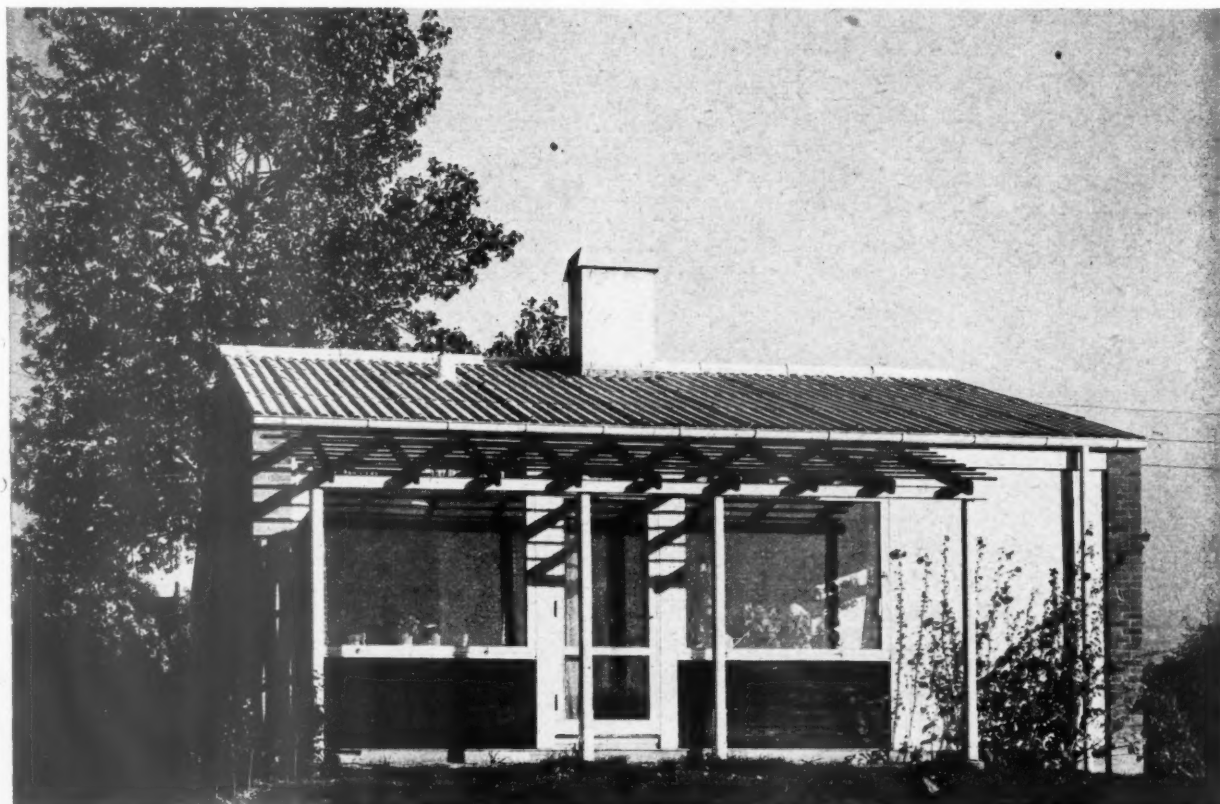
HOUSING

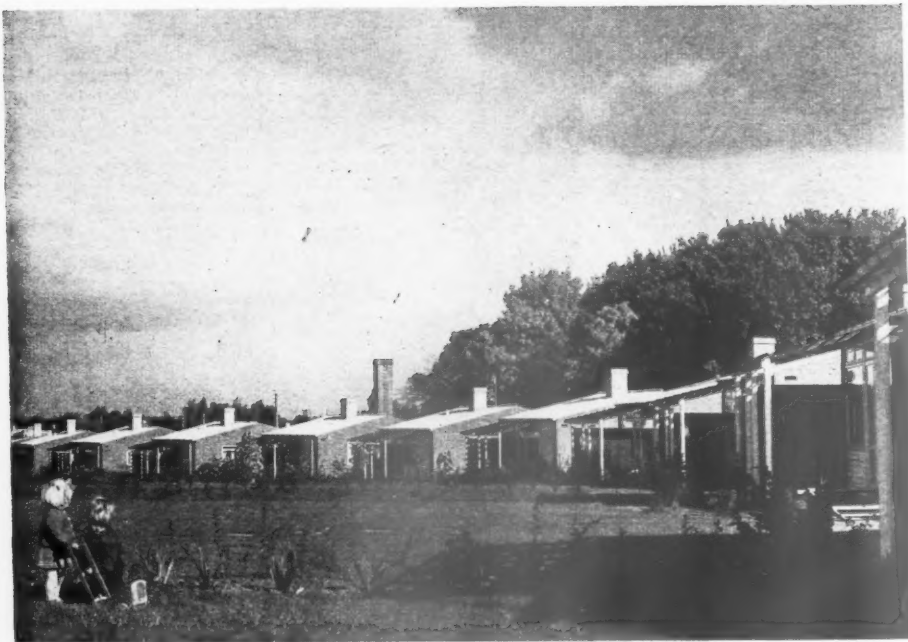
at SOGAARD, DENMARK

designed by POUL ERNST HOFF and BENNET WINDINGE

The site of this housing estate is very simply laid out with detached houses of one plan shape only, but varied internally to give different arrangements of kitchens, dining spaces and living rooms, although the aspect of the houses varies very little. Each house has a fairly large area of garden.

Typical west facade looking towards the living room.





Left, typical view of houses looking north-east.

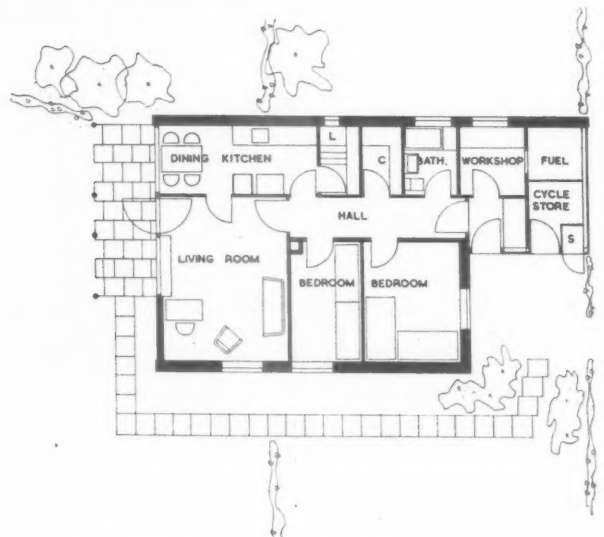
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at SOGAARD, DENMARK

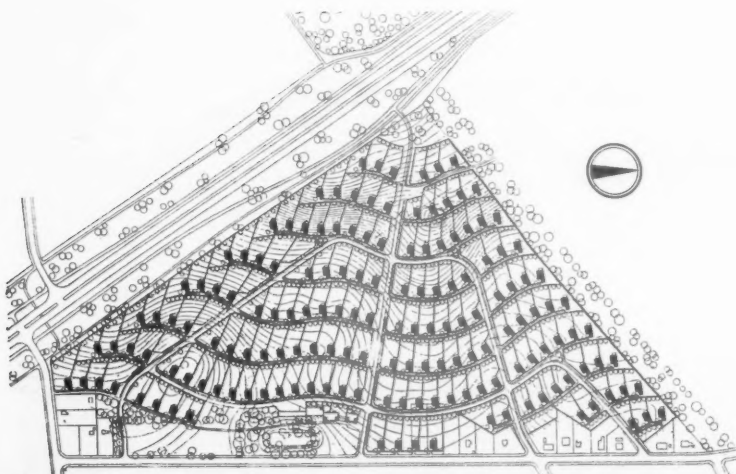
designed by P. E. HOFF and B. WINDINGE

SITE.—There are some large, established trees on the site, but further carefully planned planting of trees and hedges forms an intrinsic part of the scheme. The houses are widely spaced, linked by pergolas, and each has a shaded terrace outside the living room windows.

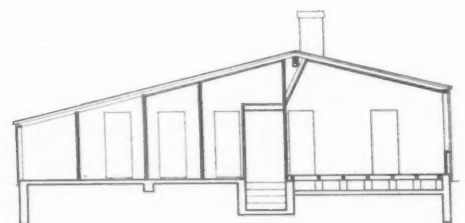
CONSTRUCTION.—Walls are of cavity construction with outer skins of red bricks and inner skins of molar blocks, except walls facing west, which are of rendered aerated concrete blocks and have areas of rough wooden boarding treated with a



Typical house plan [Scale: $\frac{1}{8}$ " = 1' 0"]



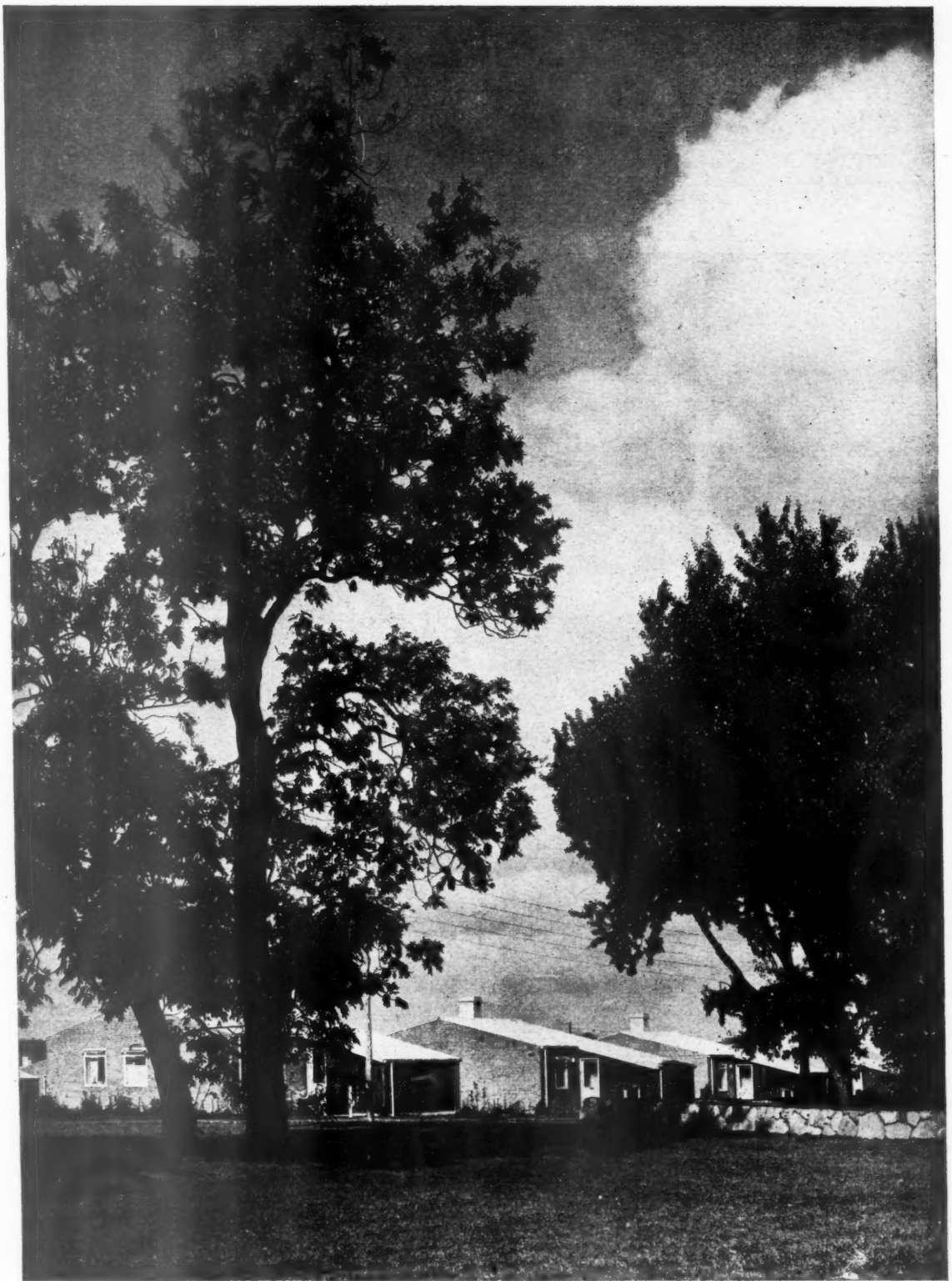
Site plan



Long section through dining-kitchen

preservative. Sub-floors are of concrete. Rafters are 7-in. by $3\frac{1}{2}$ -in.

FINISHES.—Roofs are finished with corrugated asbestos cement sheeting on battens, with 2-in. mineral wool mats incorporated for additional



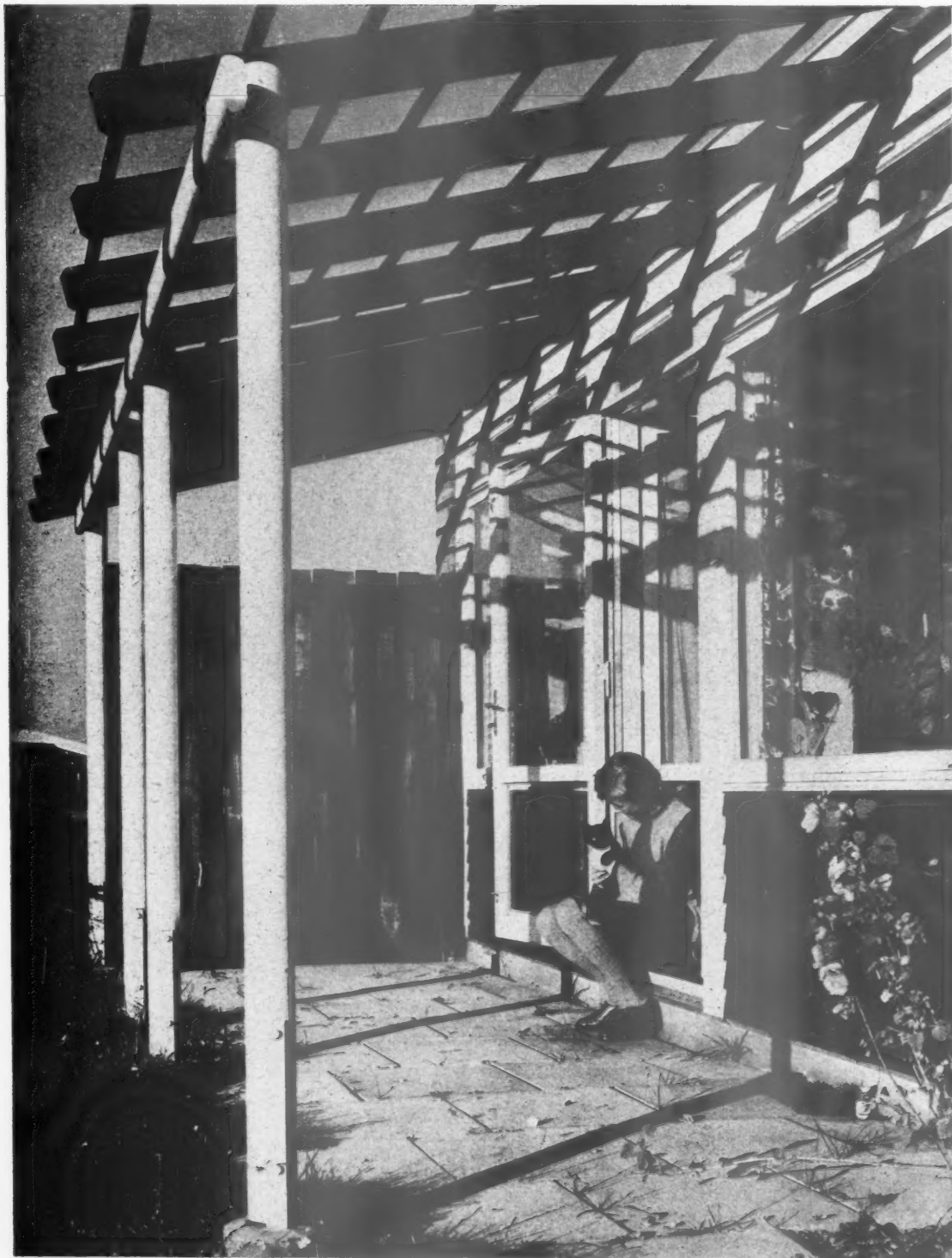
*Above, looking south-west, showing stores
on the right of each house.*

insulation. Floors are of 5-in. by 2½-in. joists and wood boards, with a layer of clay on pugging under the joists for additional insulation. Ceilings are boarded, with reed lathing and plaster finish. Windows are timber framed and have double glazing.

Internal partitions are of lightweight concrete block or of brick.

SERVICES.—The living room fireplace heats water for radiators and for the hot water system. Cooking is by electricity.

Typical pergola and terrace outside living room windows.



TECHNICAL SECTION

In addition to the constant problem of theoretical building costs, there is the problem of building "prices" (*i.e.* tender prices). It has been suggested that these often seem to increase by a greater amount than increases in wages and materials' prices justify. In his article this month, Professor Bowen analyses this problem and comes to the conclusion that sudden changes in government policy which produce equally sudden changes in demand are largely responsible.

The solution seems clear enough: the programme for the building industry must be planned, as Professor Bowen has emphasized so often before, several years in advance and this programme should not be changed except under the most exceptional circumstances. Only stable conditions of demand can create stable prices (*i.e.* relative to wages and materials' costs) and above all stability is essential. The dangers of excessively rising prices are equalled by the dangers of sudden, short-term drops in prices (*i.e.*, as distinct from a general lowering of costs as a result, say, of increased productivity). When prices start falling, potential building owners postpone their orders and a vicious circle is started which can easily lead to a slump in the industry—a most unhappy prospect, particularly at a time when work for the architectural profession is by no means plentiful.

This week's
special article

8 ESTIMATING wages and prices

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.

In his article below, Professor Bowen, the JOURNAL's regular contributor on economic affairs and their effect on the building industry, comments on the current controversy regarding "wages and prices." He also analyses the probable effects on the industry of the Chancellor of the Exchequer's policy of deflation.

The point has been made from time to time that post-1945 building "costs" (by which are usually meant either the prices at which tenders are let, or final costs to building owners) have risen out of proportion to the rise in building workers' hourly wages. At present "costs" are supposed to be between 3 and $3\frac{1}{4}$ times their 1939 level, whereas hourly wage-rates (in London) are not more than $2\frac{1}{4}$ times their level at that date; hence, the discrepancy certainly invites comment.

The fact that finished building costs have risen much more steeply than hourly wage-rates is not disputed, but much controversy has arisen with regard to the causes of the discrep-

ancy. Is it due to gross profiteering and exorbitant materials' prices, or to a fabulous drop in the aptitude and assiduity of the craftsman? Is it due to the higher standards of building, or is it a consequence of excessive controls?

It is difficult to select the correct reasons. The terms involved, such as "the general level of building costs," can be defined in so many ways, that it is hardly surprising that much confusion often results from public debate on the subject. Changes in building costs represent changes in some of the most intricate of human relationships, and before the question "By how much have building costs increased?" can be

answered it must be decided by what means the prices are to be compared.

COSTING SIMILAR BUILDINGS

The costing of identical buildings is one way, but the usual objection to this method is that identical buildings are seldom repeated, especially after a long interval. If a number of different types of building are priced, then the problem remains of weighting their relative importance in arriving at a true index. Moreover, specifications of typical buildings change, sometimes because of changes in the prices or availability of materials and sometimes because of innovations and improvements.

If figures were available of the actual cost of, and price charged for, specific buildings of similar specification and dimensions, before and after the war, it would be possible to state, at least for such types of buildings, firstly, by how much costs and prices have changed, and, secondly, how far this change is due to wider profit margins. Furthermore, the relative changes in materials and labour costs could also be deduced, but these facts are not publicly known. The best, and most efficient, firms in the industry may have their own information on this subject, but it is certainly not generally available.

ARE PRE-WAR COMPARISONS VALUABLE?

However, a prolonged search for this kind of information, though of some historical interest, may not be very rewarding. Indeed, there is much to be said for the view that comparisons of present with alleged pre-war costs and prices are of very little importance for two reasons: firstly, because the analysis of pre-war costs has very little relevance to current conditions and, secondly, because not enough is known on such vital points as labour productivity and profit-levels pre-war—that is, not enough in an exact quantitative sense—to answer the inevitable query as to the *cause* of the subsequent change.

A more useful comparison is between different periods since the end of the war. Why have tender prices for houses, for example, fluctuated more violently than wage-rates and the building materials' price index?

POST-WAR COMPARISONS

Since the war labour productivity has slowly improved. There seems to be agreement that it was low in 1946, but as new craftsmen were trained, and the older ones were demobilized, output improved. Meanwhile wage-rates went steadily upwards, with periods of relative stability and periods of rather rapid advance. London wage-rates alone are a poor index of the rise, since the up-grading of lower-grade districts has played an important, but unmeasurable, part in raising the general level

of wages. Thus, changes in hourly earnings are, perhaps, a better guide, although changes in the bonus payments' system and in hours worked have also had their effects.

Building earnings per week rose from July, 1946, to October, 1951, by 48 per cent., and earnings per hour by 50 per cent. (the hours worked per week had fallen slightly). Over the same period building materials' prices rose by about 49 per cent. No firm figures are available for the rise in the average tender prices of houses in Great Britain as a whole, but a rise of a great deal more than 50 per cent. seems very unlikely. If tender prices were about £1,200 per house in 1946-47, as has been announced, it seems improbable that they much exceeded £1,800 in 1951, except under unusual circumstances.

If, when data become available, a similar comparison is made between other years, different results may emerge. For example, from the middle of 1949 to October, 1951, hourly earnings rose only by 14 per cent., yet tender prices probably rose much more steeply, but most of the difference could have been due to the fact that materials' prices rose by 24 per cent.

SUPPLY AND DEMAND

Variations in demand affect building prices, without always having as great an effect on wages or materials' prices. Increased demand is usually due to inflationary pressure, but it may be due to a change in Government or industrial policy resulting in a sudden increase in the number of contracts to be let. For example, from time to time circulars may be sent to local authorities urging them to feed more and more contracts into their housing programmes, or certain industries may be encouraged to expand their capacity in order to produce more goods for export or for the rearmament drive. Such expansion has to be financed somehow, and in this sense any increase in effective demand is inflationary. Moreover, in addition to the effects of inflation, there may be the effects of other kinds of monetary stimulus, such as a fall in the rate of interest.

All these factors make high prices possible and experience shows that when high prices are possible, they usually occur. In other words, *prices* will move, over a short period, more violently than *costs*, the difference representing, among other things, the variation in contractors' intended profit margins.

Conversely, however, in times of reduced demand, prices may decline without any corresponding fall in costs. Profit margins may be reduced and losses may be incurred, and even accepted, in order to tide over a going concern until there is an improvement in demand.

So it can be seen why there can be considerable fluctuations in tender prices

even when basic wages and materials' costs are changing slowly. On top of the problem of the steady upward trend in wages and materials' prices there is also the problem of smoothing out short-term changes in builders' quotations.

There is a tendency to think of the post-war period as one of consistent shortage, particularly of houses and other buildings, and it is true that the building industry is one industry that has not yet experienced any substantial glut. Nevertheless, even before 1952, there were variations in demand sufficient to demonstrate that prices and costs do not move together in perfect harmony. For, while the general inflation has driven wages and materials' prices inexorably upwards, the force of demand itself has varied from one White Paper, or government circular, to the next.

Wages have tended to go up with the cost of living (or, rather, with a slight lag behind it) and rising wages have affected costs both directly and through the prices of materials, except in so far as this has been offset by increasing labour productivity. It is sometimes assumed that these movements are only of academic interest, and of no concern to members of the building industry, since it is thought that it does not matter much whether prices, in general, are rising or falling so long as *relative* prices are not moving. In other words, if all prices are going up, what does it matter that building prices are rising, too? But the building industry is particularly susceptible to sudden changes, even if these changes affect other industries, too.

THE NEW SITUATION

The general inflationary forces that have driven up building costs more or less irresistibly since the war have recently met with a check, due partly to the slump in certain other industries and partly to a drastic change in banking policy. This check may, after two or three years, bring some long-term benefits to the industry, particularly if its ultimate consequence is a decline in relative building costs. (The fall in building costs, and prices, between 1928 and 1932 paved the way for the housing boom of the 1930's.) But the immediate effect of a deflationary tendency must be gravely inimical to constructional activity of all kinds. A rise in the interest rate means a rise in the amount by which earnings in the future are discounted, and as buildings last for a long time, this rise discriminates against their construction and in favour of much shorter-term investments. Raising money becomes more costly, and mortgages are granted only on much less favourable terms. All these factors result in a sharp slump in building activity. These consequences have been masked so far by the artificial maintenance of building demand by building for de-



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fence purposes and for subsidized housing.

No one who has studied the market for second-hand houses can have failed to notice the depressing effect of dearer finance on the effective demand for housing. If temporary measures to stimulate demand, such as relaxing controls on repairs, prove inadequate, the industry will face a severe slump.

Wages largely determine costs, but prices are dependent also upon demand and the short-term state of the market. A sudden change in market conditions, such as has been experienced recently, may lower the prices that can be charged, and so make

building work a little cheaper for the customer. But there is a limit to any such reduction, set by the irreducible cost of labour and materials. The level at which wages and materials will settle is still difficult to predict. Over a short period, say, the next six months, they may stand still or even drop. Taking a long view, they are sure to rise, for the inflationary forces in society are still very strong. The danger is that the short-term effects may be prolonged. Mr. Butler's policy of *deflation* and the easing off of effective demand may combine to bring down prices, and more and more potential building owners may postpone

their orders until prices drop still further. So that the movement could feed itself on its own momentum and produce a real slump in the industry.

There is no evidence that in the past prices have *consistently* moved without corresponding changes in wages, but, undoubtedly, during some periods of heavy ordering, prices have risen much faster than costs in general. The moral is, surely, that building owners should try to let their contracts more rationally, and to avoid, either by controls or by mutual agreement, the tendency to order too much to be done too quickly, regardless of the effect on prices.

An old controversy gains a new lease of life as a result of the development of new appliances in two fields — heating and fire protection.

CENTRALIZED SERVICES v. INDIVIDUAL APPLIANCES

There appears to be a tendency in the United States to move away from centralized services and towards individual appliances. Two examples of this attitude have received attention recently in American architectural journals. The first concerns fire-fighting equipment. Red Comet Inc. has recently brought on to the market an individual, automatic chemical extinguisher. Mounted on wall or ceiling, the extinguisher protects an area of 35 sq. ft. and is set off, as are sprinkler heads, as soon as the temperature in its vicinity is high enough to melt the fuse.

These extinguishers are said to be more economical than a sprinkler installation, and the absence of a piping system is an additional advantage. They are suitable for domestic as well as industrial installations and can be



Fig. 1. The "Silver Spray" automatic chemical fire extinguisher.

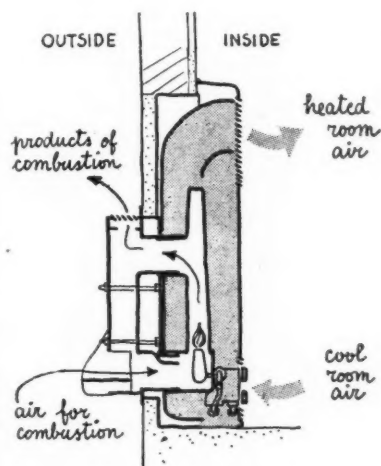


Fig. 2. Diagram illustrating the principle of the type of individual gas heating appliance gaining favour in the USA.

used in buildings where a full-scale sprinkler system is not needed but where protection in certain rooms, such as stores, basements and attics, is desirable. The extinguisher is neat in appearance (see Fig. 1) and is encased in ivory-coloured, heat-resistant plastic. Cost in America is \$8.35 for the standard model; \$11.35 for a slightly larger model. Discounts are allowed on orders for 100 or over.

The second example is in the field of heating. A long article on the subject of individual heating for multi-storey flats appeared in the May, 1952, issue of *Architectural Record*. It was pointed out in this article that the principal reason why central heating in flats is cheaper than whole-house heating in individual, semi-detached or terrace houses, is not the fact that the heat source is a central plant, but the fact that, whereas in a house heat can be lost through 2, 3 or 4 external walls, the floor and the roof, in most flats the only path for heat loss is through one external wall.

Cost analyses in the USA show that individual gas-operated heating appliances in each room of each flat, excluding kitchens and bathrooms, are 57

per cent. cheaper to install and 33 per cent. cheaper to run than a central heating system with steam-heated radiators and oil- or gas-fired boilers. These gas-operated room heaters are designed on the heat-exchange principle, so that the products of combustion cannot enter the room, nor is oxygen from the room used up. Air is heated in an outer casing and convection currents of warm air set up (see Fig. 2). The appliance must be vented through an outside wall or by means of flues, but the latter need only be 4 in. in diameter. As an alternative to having an appliance in each room, a single "overflow" heater for each flat can be used, although this does not provide such an even distribution of heat. A gas appliance suitable for this purpose (also designed on the heat exchange principle) is already on the market in Great Britain (see Fig. 3 and the JOURNAL for March 6, 1952, page 319).

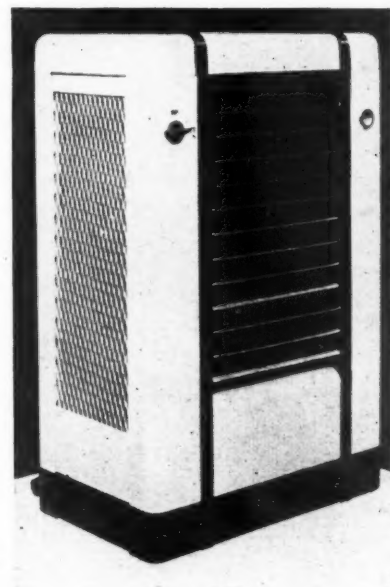
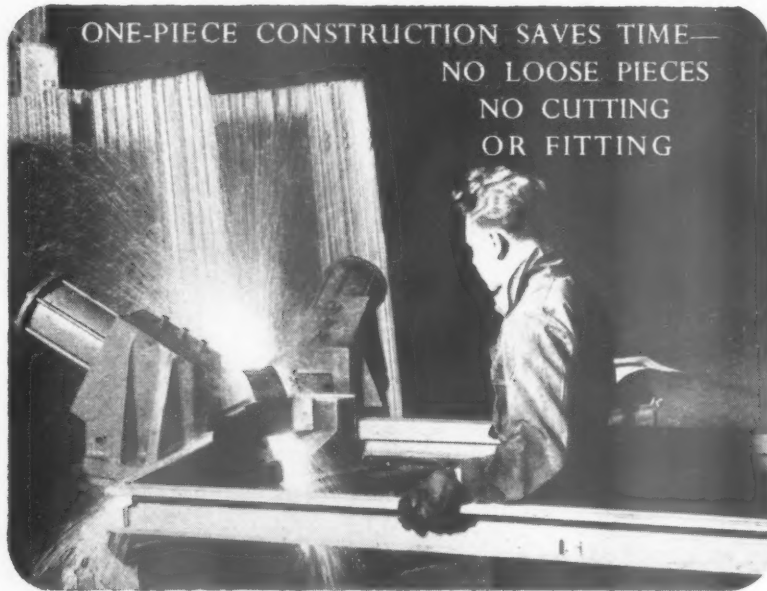


Fig. 3 The "Halcyon" domestic gas-fired space heater. (W. Sugg & Co. Ltd.)



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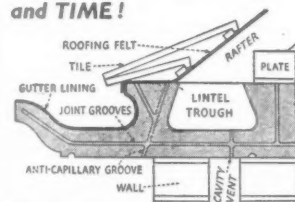
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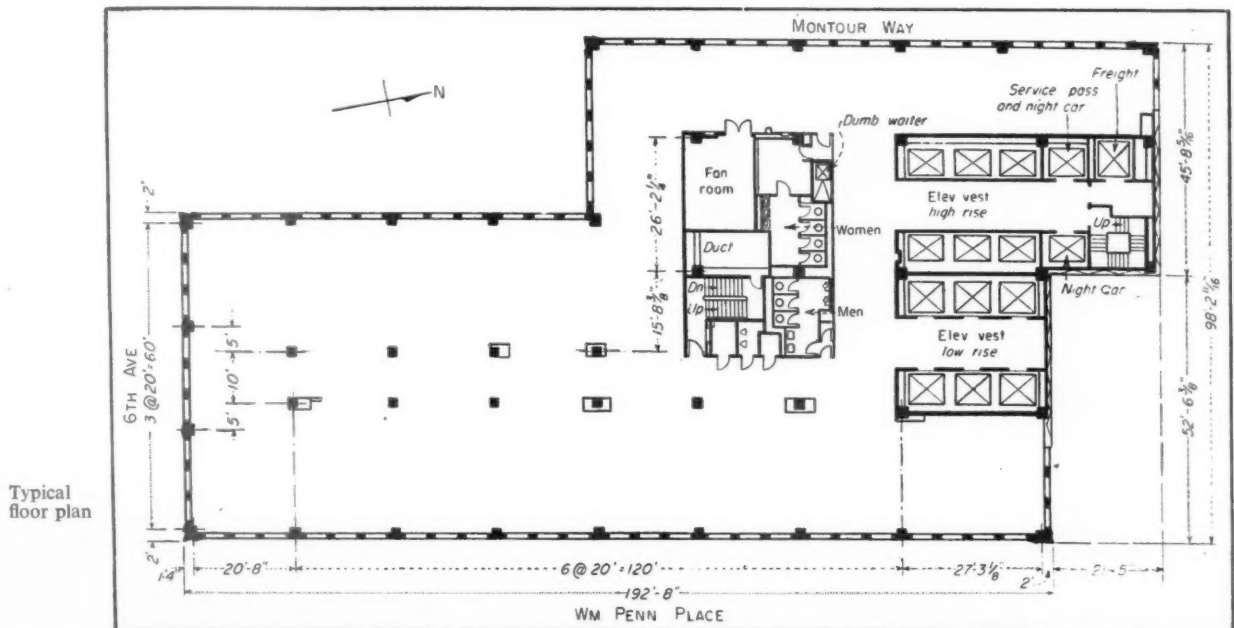
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LIGHTWEIGHT SKYSCRAPER IN PITTSBURG (continued)

on. This light skin provides thermal insulation, fire resistance and adequate strength against wind loads. Double-glazed, vertically-pivoted windows, 4 ft. 2 in. wide and 4 ft. 7 in. high, were set in the panels. The total weight of the wall is only 40 lb./sq. ft. Interior walls are of terra cotta tiles, plastered, or double-glazed panels of corrugated glass in aluminium frames. The present shortage of aluminium in the USA prevents an

extension of this technique but the production of aluminium is increasing and any slackening of the rearmament drive would make possible further use of this method of construction which should prove most economical for multi-storey buildings. (For further information and photographs, see Engineering News Record [USA], April 3, 1952, pp. 67-71, from which the drawings are reproduced.)



QUESTIONS & ANSWERS

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

3052 THE "RISE AND FALL" CLAUSE

Q In the event of a contract over-running the date for completion, is the contractor justified in claiming extras under the "rise and fall" clause for materials which increased in price after the contracted date for completion?

A In our opinion a contractor cannot make any claim for increase in the price of materials after the contract date for completion, if the building is still not completed. If there is power under the contract to extend the time and this has been done, increase in the price of materials during the extended time could be claimed.

3053 PAINTING IN TWO COLOURS

Q On a small job carried out under the RIBA Form of Contract, without quantities, the specification for external painting reads: "All timber—knot, stop, prime and paint three coats, including finishing coat gloss." Is the contractor justified in claiming an extra for painting windows and doors in two colours?

A Yes. The Standard Method of Measurement states that work in parti-colours is to be given separately and so described.

3054 COVERING UNEVEN FLOORS

Q Our local Scouting headquarters is an ex-World War I army hut. We wish to know how to provide the uneven timber floor with a suitable covering. We feel that an ordinary floor covering would probably crack and that rubber would be too expensive. The hut is 30 ft. by 20 ft. and the price of floor covering or materials for laying a new floor should not exceed £25.

A Your simplest solution is to remove the existing floor, put in some shuttering and form small walls round the building between the supporting piers. Then fill and thoroughly ram with hardcore and put in a concrete floor, say 4 in. thickness, and for the time being finish it with a proprietary floor paint. Later on, when funds allow, this floor could be covered with thermoplastic tiles or any other finish you may wish to have.

3055 PAYMENT FOR SEWERS

Q Under what section of the Public Health Act or the 1949 Housing Act does it state that if the owner of a house or houses has to connect and build lavatories where no sewer was available before, 50 per cent. of the cost is to be paid by the local council? Is it too late now to claim for a grant under the 1949 Housing Act? Improvements to a house were started last November but, owing to shortage of labour, the work has been left unfinished since December. The house concerned is well over 100 years old but it is in good repair and let to two separate parties.

A Under Section 37(4) of the Public Health Act, 1936, if a sewer is more than 100 ft. from the building and the local authority requires connection, then they must pay so much of the expenses incurred in constructing, maintaining and repairing the drain as may be attributable to the fact that the distance of the sewer exceeds 100 ft. Under the Housing Act, 1949, the conversion from cesspool to main drainage is work coming within the scope of the Act.

Work which has been commenced prior to obtaining the formal approval of the local authority under section 20 of the Act does not come within the scope of the Act. Work to "tied houses" and connections to sewers over land not owned by the applicant or held by him on a lease with less than 30 years to run do not come within the scope of the Act. (See Practice Notes issued by the Ministry of Health with Circular 4/51.)



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INFORMATION CENTRE

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9.30 design: general BUILDING ABSTRACTS

Byggglitteratur. Building Abstract Service. (Hägelbygd, Tumba, Sweden. 20 Swedish Kr. per annum.)

A new abstracting service at present covering Denmark, Finland, Norway and Sweden. Each Abstract printed in both Swedish and English. The January/February issue contains 32 abstracts easily arranged for filing in a small card index file. The lengths of the abstracts vary, but method of presentation appears to impose a limit of about 250 words, which probably means that an item of real interest would have to be followed up by reference to the original article. A useful service which enables one at least to keep in touch with developments without having to know the foreign languages.

13.88 materials: timber RESEARCH

Forest Products Research 1950. DSIR. (HMSO. March, 1952. 3s.)

General review of the work of Forest Products Research Laboratory. Much attention has again been given to new types of imported hardwoods. Fifty new names were added in 1949 and a further 30 in the first nine months of 1950. Some were in fact known woods under new names, but many had to be identified and their properties assessed. This Report does not give information about these new woods.

A section on the use of timber in building reports the construction of an important new structure-testing laboratory, some testing of shear connectors and some tests on doors, but seems to contain little else. This is accounted for, perhaps, by the way the Report is set out, for there is, in fact, a good deal of other information which has applications to buildings but comes under other headings.

1 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: Metal. 13 Materials: Timber. 14 Materials: Concrete. 15 Materials: Applied Finishes, Treatments. 16 Materials: Miscellaneous. 17 Construction: General. 18 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. Miscellaneous.

13.89 materials: timber HARDWOODS

Leaflets on Hardwoods. Forest Products Research Laboratory. (Feb., 1952.)

Six leaflets on hardwoods, giving names, description of the tree and the timber, seasoning, general properties and some notes on use. Timbers covered are Agba, Ramin, Makoré, Danta, Dahoma, and one of doubtful nomenclature. These leaflets are useful for filing for reference on the difficult problem of new types of hardwood.

13.90 materials: timber STRENGTH COMPUTATION

Structural Softwood—Measurement of characteristics affecting strength. BS 1860: 1952. (British Standards Institution. 2s. 6d.)

This Standard supersedes BS 940. Part I, 1944; Part II, 1942 and BS 1175: 1944. It does not overlap BS C of P 112, "Structural Use of Timber," which is to be issued shortly.

BS 1860 is a new Standard issued to define methods of assessing the measurable characteristics of softwood for the purpose of computing the strength of individual members. The methods cover determination of moisture content, density and rate of growth, knot measurement, shakes, splits and checks, wane and slope of grain. Illustrations show the procedure for measuring defects. Allowances for sawing and surfacing are defined and a table of normal sizes of stress-graded timber is provided.

15.99 materials: applied finishes and treatments WALLPAPER

Wallpaper. The Length of Roll and Number of Matches. Philip Arctander and Henry F. Holm. (Statens Byggeforskningsinstitut. Rapport Nr. 9: Copenhagen. 1952.)

Investigation into lengths of pieces of wallpaper and resulting wastes in relation to normal use in houses. A useful piece of research which might well be noted by our manufacturers. Essential parts translated into English.

18.99 construction: theory ANALYSIS TABLES

Influence Line Tables. H. G. Lorsch. (Frederick Unger Publishing Co., New York. 1952. \$3.75.)

Four-place influence line tables for 2, 3 and 4 span continuous beams provide easy method of analysis for moments and shear for live and dead loads. Valuable addition to office libraries of architects and engineers.

18.100 construction: theory REINFORCED CONCRETE

The Deformation of Concrete. E. Freyssinet. (Magazine of Concrete Research. Cement and Concrete Association. No. 8. Dec., 1951. pp. 49-56.)

Translation from Freyssinet's paper on mechanics of concrete presented to the Prestressed Concrete Conference at Ghent, Sep., 1951.

M. Freyssinet suggested that little was known of the mechanics of concrete and presented his paper in the hope that it would encourage research into this subject.

Very little is known of what really goes on in concrete after it has been mixed;

setting, hardening, shrinkage and creep, all require further investigation. M. Freyssinet does not accept the popular conception of concrete; he prefers to treat it as a living tissue—a complex fluid, to which the laws of thermodynamics may be applied. This enables creep, shrinkage and elastic and plastic deformations to be explained, as well as the autogenous healing of cracked concrete.

19.153 construction: details TIMBER TRUSSES

Light Timber Roof Trusses. D. Dalgleish. (Paper TS 29. Commonwealth Experimental Building Station, Australia.)

In Australia, as in Gt. Britain, the idea of using light-truss roofs, instead of rafter types, is new. This paper is of interest chiefly because it deals with roofs of hardwood and with, therefore, small members unsuitable for ring connectors. Designs up to 28-ft. span, with nailed or riveted joints, are described, and sensible notes on construction and erection given.

26.100 services and equipment: miscellaneous. IMPULSE CLOCKS

Impulse Clock and Timing Systems. BS C of P. 327.403 (1952). (British Standards Institution. 3s.)

General description of systems. Worth referring to before installing any timing system.

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

ENQUIRY FORM

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

Please ask manufacturers to send further particulars to:—

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Buildings Illustrated

St. Anne's R.C. Primary School, Sutton, St. Helens. (Pages 46-47.) Architects: W. & J. B. Ellis, F./A.R.I.B.A. General Contractors: J. Yearsley & Sons Ltd. Sub-contractors: heating, Seymour Sweet & Co. Ltd.; electrical installation, John Hunter & Co.; electrical fittings, Merchant Adventurers, Ltd.; reinforcements, The Trussed Concrete Steel Co. Ltd.; metal windows, W. G. Kaleyards Ltd.; cast dome lights, R. Seddon & Sons; door furniture, cloakroom fittings, Quiggin Bros. Ltd.; sanitary goods, Shanks Ltd.; terrazzo, partitions and flooring, Conways Ltd.; plastic floor tiles, Semtex Ltd.; roofing, Wm. Briggs & Sons Ltd.; wood block flooring, R. W. Brooke & Co. Ltd.; plumbing and decorating, W. Swire & Sons Ltd.

Corrections

On page 500, April 17, it was announced that D. Longdon was drainage consultant for the Austin Motor Works. The name should have read Daniel Longden, M.R.S.A.N.I., M.I.S.A.N.E., consulting sanitary engineer.

Peter Whiston, A.R.I.B.A., is no longer chief architect to the Scottish Special Housing Association, as announced on June 19. He resigned from this post some years ago.

The landscaping of Hemel Hempstead New Town is in the hands of H. F. Clarke, not N. H. J. Clarke as announced on June 26.

Announcements

Mr. H. J. Richards, A.R.I.B.A., has opened an office at 12, Market Square, Buckingham, where he will be pleased to receive trade catalogues, etc.

Messrs. Johnson and Crabtree, F./F.R.I.B.A., have dissolved their partnership by mutual consent. Mr. H. A. Johnson, Mr. L. Bulmer, L.R.I.B.A., and Mr. A. H. Wilson, A.R.I.B.A., will continue to practice in partnership at 20, Priory Place, Doncaster, under the name of T. H. Johnson & Son. Mr. William Crabtree will continue to practice under the name of William Crabtree, architect and town planner, at 8, Robert Adam Street, London, W.1.

The partnership between Mr. Hugh D. Roberts, F.R.I.B.A., and Mr. Richard H. Davies, A.R.I.B.A., under the style of Hugh Roberts & Davies, has been dissolved by mutual consent as from June 30, 1952. Mr. Roberts will continue to practice from 7, Brock Street, The Circus, Bath, Somerset (Tel.: Bath 5254/5) and from 27, Grosvenor Place, London, S.W.1. Mr. Davies has entered into partnership with his senior assistant, Mr. Raymond W. Arnold, under the style of Davies & Arnold, and will continue to practice at 27, Grosvenor Place, London, S.W.1. (Tel.: Sloane 7118.)

The Guild of Surveyors has changed the address of its office to 17, Westbury Avenue, London, N.22. All communications should be addressed to the Secretary.

Warnott Kennedy & Associates have moved their offices to 8, New Square, Lincoln's Inn, London, W.C.2, and will be pleased to receive trade catalogues, etc. (Tel.: Holborn 1772.)

The 1952 Year Book of the British Standards Institution has recently been published. It contains a complete list of the 1,800 British Standards current at March 31, 1952, with a brief description of the subject matter of each. A subject index simplifies reference. The Year Book also gives particulars of

the membership of the General Council and of the Institution's Divisional Councils and Industry Standards Committees. These Industry Standards Committees, 59 in number, each represent a major British industry through whom the work of drafting British Standards is delegated to some 2,200 Technical Committees and Sub-Committees. In addition 20 Special Committees, some of an advisory category, are also listed. Copies of the Year Book may be obtained from BSI, 24, Victoria Street, S.W.1, price 7s. 6d.

R. H. James, who for a number of years has been Chief Payment by Results Adviser at the Ministry of Works, has set up in private practice as a production consultant in building and civil engineering work. He will be in partnership with T. E. Crowley, B.Sc. (who at one time was responsible for building method study at the Department of Scientific and Industrial Research), and with other former members of his Section at MOW. The firm is operating under the title of R. H. James & Partners at 7, Hobart Place, Westminster, London, S.W.1. (Telephone: Sloane 9860.)

Dr. Kurt Billig, M.I.C.E., M.I.Struct.E., M.A.S.C.E., has been appointed by the Indian Government as Director of the Central Building Research Institute of India, at Roorkee. At present he is Professor of Civil Engineering of Hong Kong University. Before taking up his new duties, Dr. Billig is going on a lecture tour through Japan.

Mr. Christopher Martindale, F.R.I.B.A., and Mr. F. Gerald Jackson, A.R.I.B.A., at present carrying on architectural practice at Cathedral Chambers, Castle Street, Carlisle, in the style of Messrs. J. H. Martindale & Son, announce that from June 1, 1952, the name or style of the firm will be Messrs. Martindale & Jackson.

*The N.A.A.F.I. Club, Plymouth

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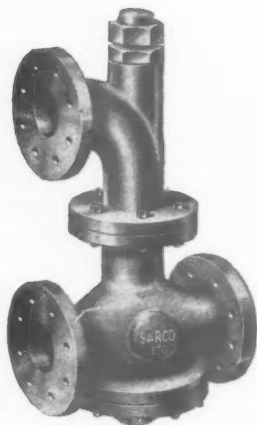
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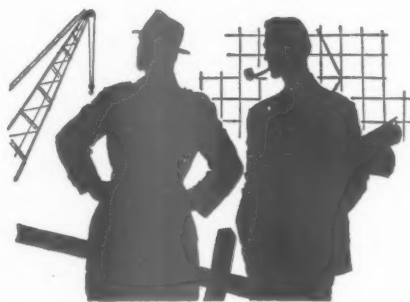
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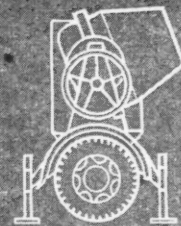
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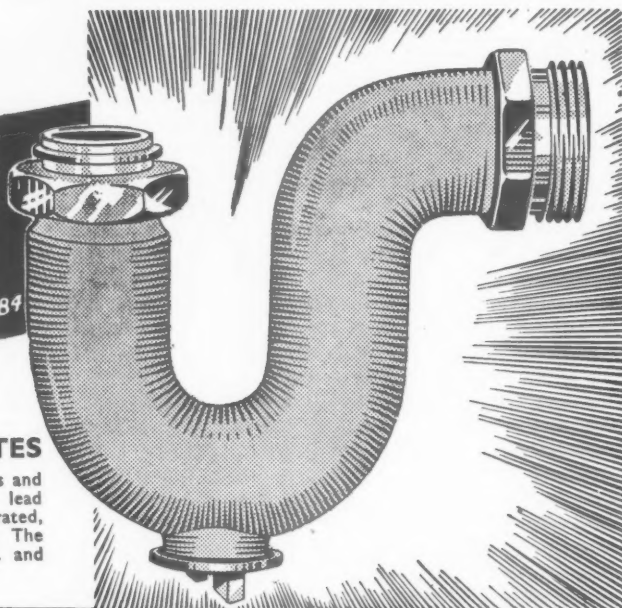
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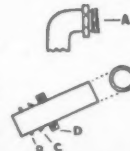


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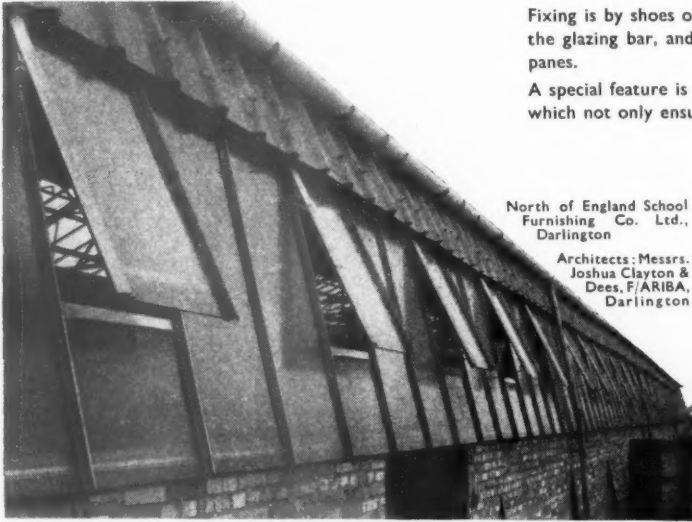


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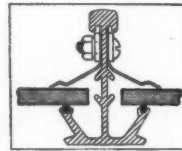
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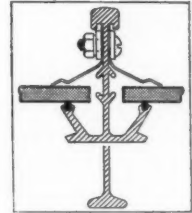
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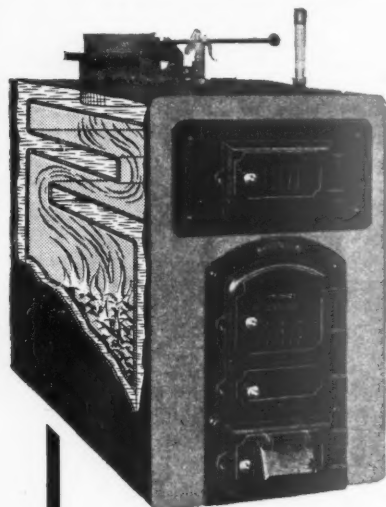
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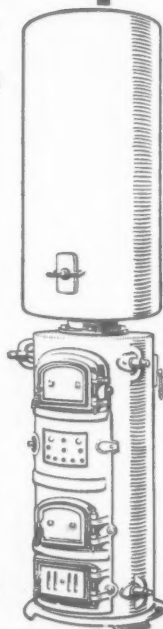
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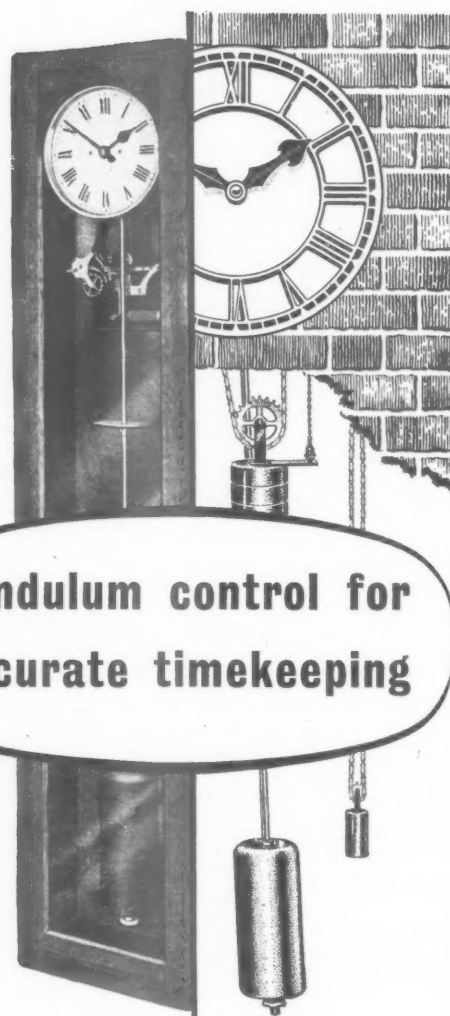
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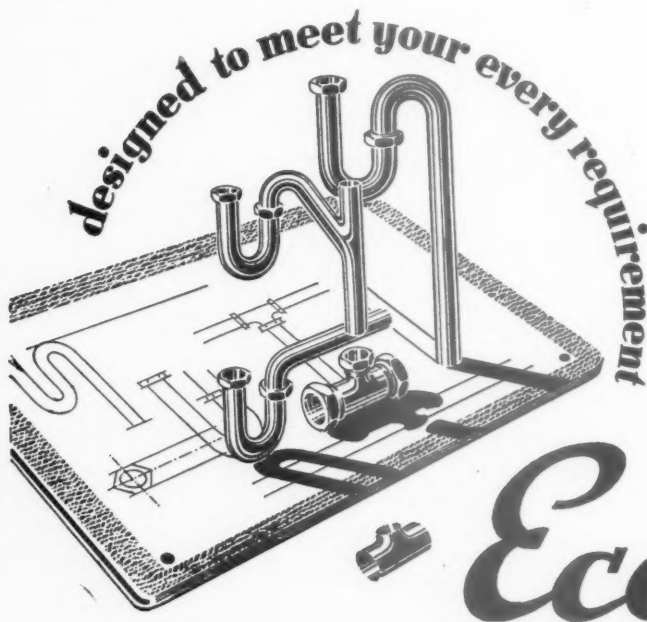
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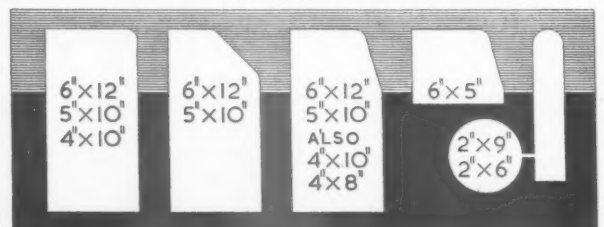
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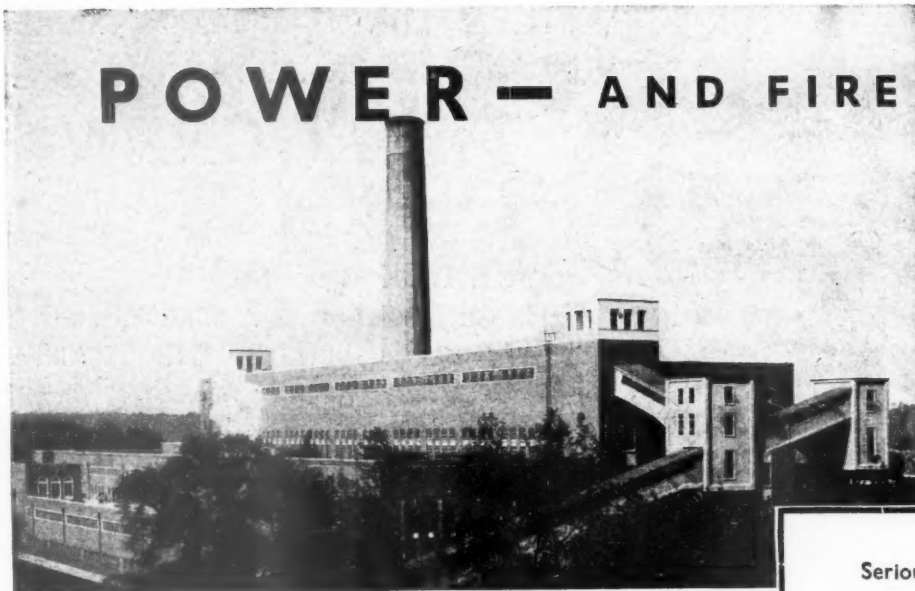
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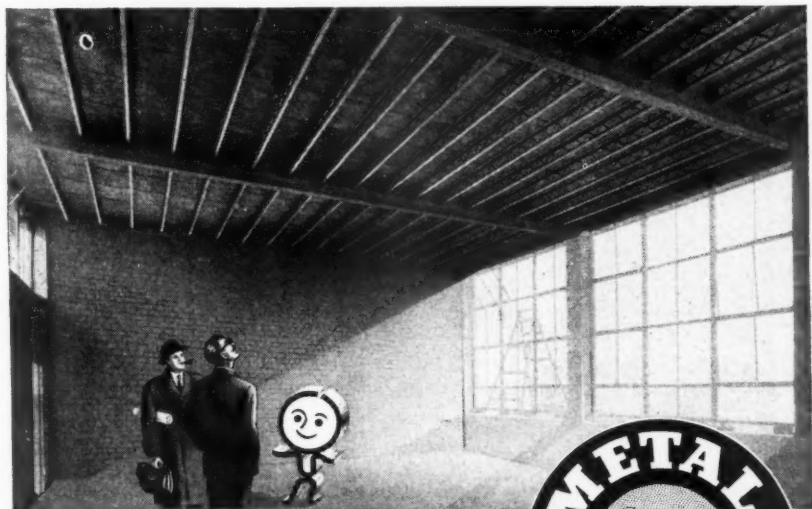
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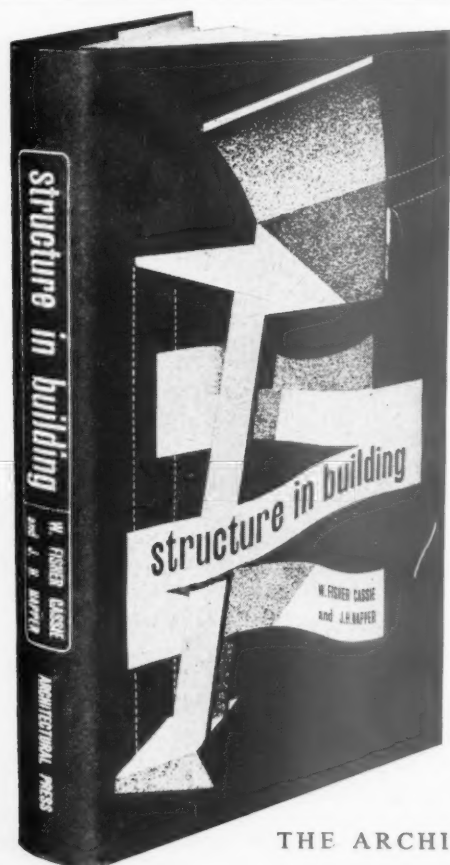


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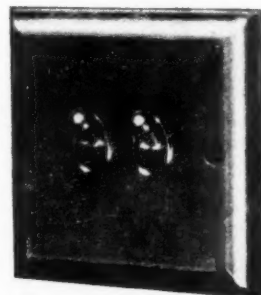


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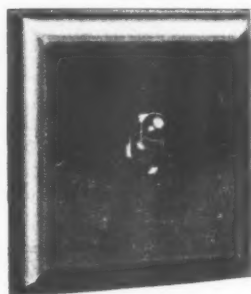


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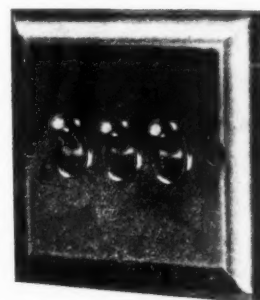
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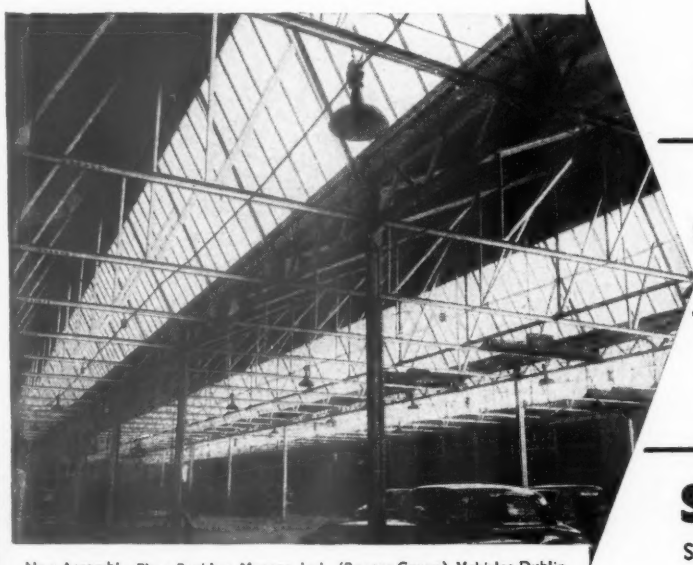
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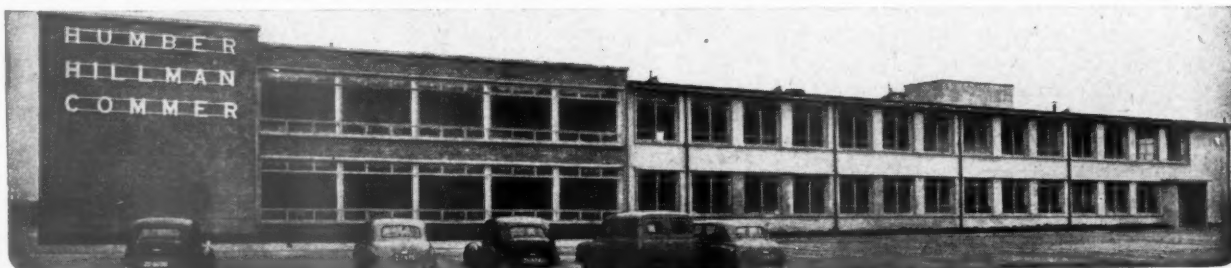
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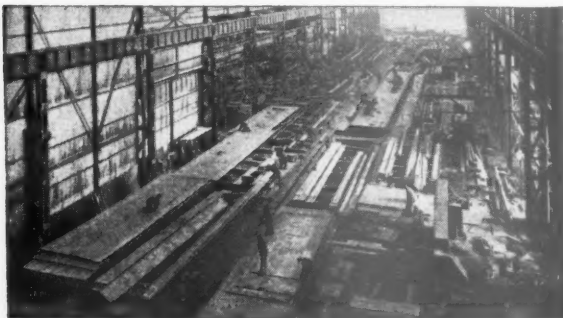


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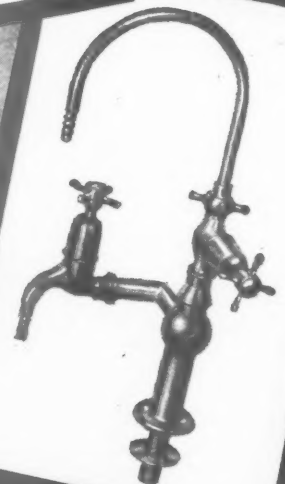
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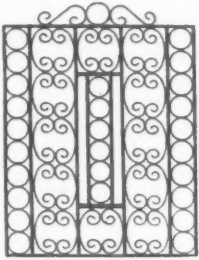


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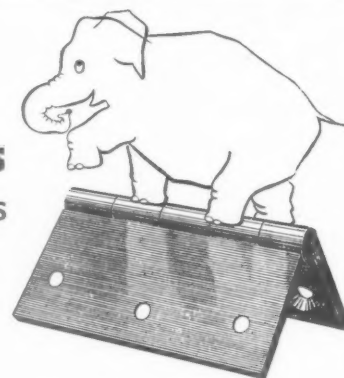
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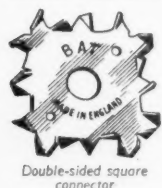
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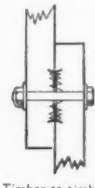
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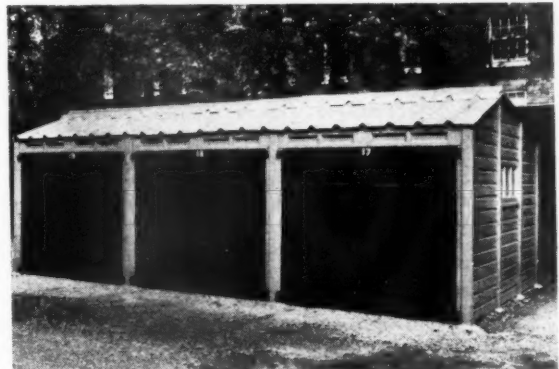
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 Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Public and Official Announcements

25s. per inch; each additional line, 2s.
 The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

THE UNIVERSITY OF LIVERPOOL.
 Applications are invited for the post of LECTURER AND STUDIO INSTRUCTOR in the School of Architecture, at a salary scale of £550/£500/£450/£400/£350 p.a.

Applications, accompanied if possible by drawings or photographs of work, two testimonials, and the names of two referees, should be received not later than 1st September, 1952, by the undersigned, from whom further particulars of the conditions of appointment may be obtained.

STANLEY DUMBELL,
 Registrar.
 June, 1952.

BOROUGH OF ACTON.
BOROUGH ENGINEER'S DEPARTMENT.
 Applications are invited for the following permanent appointments:—

ARCHITECTURAL ASSISTANT. A.P.T., Grade Va, of the National Scale (£500-£660 p.a.). Applicants must be Registered Architects, experienced in the design, erection and maintenance of houses, flats and public buildings.
SURVEYING ASSISTANT. A.P.T., Grades III or IV, of the National Scale (£500-£545 p.a. or £530-£575 p.a.).

Applicants must have passed the Intermediate Examination of either the Institution of Municipal Engineers or the Royal Institution of Chartered Surveyors, and preferably have experience in surveying buildings, preparing plans, and dealing with means of escape in case of fire from industrial buildings.

ENGINEERING ASSISTANT. A.P.T., Grade II, of the National Scale (£470-£515 p.a.). Applicants must have completed professional training and be good draughtsmen, experienced in surveying and levelling.

Commencing salaries may be fixed within the Grades, according to the qualifications and experience of the persons appointed. London "weighting" will be added to the salaries.

Application forms and copies of the conditions of appointment may be obtained from the Borough Engineer, Town Hall, Acton, W.3, to whom applications must be delivered by 21st July, 1952. Canvassing will disqualify.

H. C. LOCKYER,
 Town Clerk.
 Town Hall, Acton, W.3. 7061

COUNTY BOROUGH OF DERBY.
BOROUGH ARCHITECT'S DEPARTMENT.
 Applications are invited for the following appointments on the permanent staff in accordance with the National Scale of Salaries:—

(a) **ONE SENIOR ASSISTANT ARCHITECT.** Grade VII. Salary £685-£760. Commencing salary £685 per annum. Applicants must be Associate R.I.B.A., with a good knowledge of work undertaken by a Local Authority.

(b) **ONE JUNIOR QUANTITY SURVEYOR.** Grade III/IV. Salary £500-£620. Commencing salary £500 per annum. Applicants should be of R.I.C.S. Intermediate Examination standard, and be fully experienced in abstracting and billing, measuring on site, preparation of final accounts, and taking off quantities for small building works.

The appointments will be subject to one month's notice in writing on either side and to the terms of the National Joint Council's Scheme of Conditions of Service and the provisions of the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination.

Forms of application may be obtained from the Borough Architect, The Council House, Corporation Street, Derby, and should be returned when completed, together with a copy of one testimonial and the names of two persons to whom reference may be made, to arrive not later than Monday, 21st July, 1952.

Canvassing, directly or indirectly, will be a disqualification.

E. H. NICHOLS,
 Town Clerk.
 7059

THE CHELMSFORD DIOCESAN DILAPIDATIONS BOARD invites applications before the 31st July, 1952, from qualified Architects for the part-time appointments of SURVEYORS to inspect parsonage houses in the County of Essex under the Ecclesiastical Dilapidations Measures, 1923-1929. Further particulars and rate of remuneration can be obtained from the Secretary, Dilapidations Board, 87, Newland Street, Witham 7085

APPOINTMENT OF ARCHITECT.
THE TYRONE COUNTY EDUCATION COMMITTEE invites applications for the post of ASSISTANT ARCHITECT, on a salary scale £650×£225 to £750 per annum. Applicants should be Registered Architects. The point of entry in the salary scale will be determined according to the qualifications and experience of the person appointed.

Application forms and conditions of appointment may be obtained from the undersigned, with whom applications should be lodged not later than Saturday, 19th July, 1952.

A. GIBSON,
 Chief Education Officer.
 Education Office, Omagh, Co. Tyrone.
 24th June, 1952. 7054

MIDDLESEX COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
ASSISTANT ARCHITECT. Registered. A.P.T., VI (£675-£740 p.a. incl., £10 less if under 26 years). Appointment at grade minimum. Established, pensionable, subject to medical assessment and prescribed conditions. Application forms from County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1 (s.a.e. foolscap), to be returned by 18th July (quoting K.937 A.J.). Canvassing disqualifies. 7081

COUNTY BOROUGH OF CROYDON.
SENIOR ASSISTANT ARCHITECT.
 Applications are invited for this appointment in the School Architect's section from qualified persons with considerable experience in the preparation of working drawings and sketch plans. Salary: A.P.T., VI, £675-£740 per annum inclusive. Applications and forms obtainable from the Chief Education Officer, Katharine Street, Croydon, must be submitted to him by 19th July, 1952. No living accommodation is offered. Canvassing will disqualify.

E. TABERNER,
 Town Clerk.
 7084

CITY OF BIRMINGHAM EDUCATION COMMITTEE.
APPOINTMENT OF DEPUTY ARCHITECT.
 Applications are invited from suitably qualified Architects for the position of Deputy Architect to the Education Committee (Architect to the Committee: Mr. J. R. Sheridan-Shedden, A.R.I.B.A.).

The salary will be at the rate of £1,250 per annum, rising by annual increments of £50 to £1,450.

Applicants will be required to produce evidence of their capacity in design and construction. Further particulars and forms of application, which should be returned not later than 29th July, 1952, should be obtained (s.a.e.) from the undersigned.

E. L. RUSSELL,
 Chief Education Officer.
 Education Office, General Purposes Branch, Council House, Margaret Street, Birmingham, 3. 7078

CITY OF COVENTRY.
ARCHITECTURAL AND PLANNING DEPARTMENT.
 Applications are invited for the following appointment:—

QUANTITY SURVEYOR. Grade A.P.T. VII. (£685 by £25-£760 p.a.)

The person appointed, who must be a Corporate Member of the R.I.C.S. (Quantities Sub-Division) will be engaged in the preparation of Bills of Materials for major new works including large buildings of all types in connection with the redevelopment of the City, Schools and Educational Buildings and similar works. Sound experience in taking-off for large and varied projects is essential.

Housing accommodation will be made available in approved circumstances.

Applications on forms available from the undersigned should reach me not later than Wednesday, 23rd July, 1952.

D. E. E. GIBSON,
 City Architect and Planning Officer.
 Bull Yard, Off Warwick Row, Coventry.
 10 July, 1952. 7090

UNIVERSITY OF HONG KONG.
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Applicants must be qualified Architects and Fellows or Associates of the R.I.B.A., and should have had considerable practical and teaching experience.

First-class sea passages and furnished houses or flats at reasonable rentals are provided for expatriate staff.

Further particulars and information as to the method of application should be obtained from the Secretary, Association of Universities of the British Commonwealth, 5, Gordon Square, London, W.C.1.

The closing date for the receipt of applications is 1st September, 1952. 7094

SOUTHAMPTON C.B.C.
Appointment of QUANTITY SURVEYOR.
 Grade VI. Application forms from Borough Architect, Civic Centre, Southampton, to be returned by 28th July, 1952. 7096

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

Applications are invited for the following posts on the permanent establishment, in connection with the reconstruction programme of the County Borough:—

TWO ASSISTANT ARCHITECTS. A.P.T., Grade VI, £645×£20×£20×£25-£710, plus London allowance.

Applicants should be A.R.I.B.A. or Registered Architects, and have had experience in large Housing works and be able to supervise Contracts.

Application forms (returnable by 28th July, 1952) to be obtained from the Borough Architect and Planning Officer, Thomas E. North, O.B.E., F.R.I.B.A., 70, West Ham Lane, E.15. 7095

G. E. SMITH,
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LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

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COUNTY BOROUGH OF GREAT YARMOUTH.
APPOINTMENT OF JUNIOR ASSISTANT ARCHITECT.

Applications are invited for the appointment of Junior Assistant Architect in the Borough Engineer's Department, for housing and general work, at a salary in accordance with A.P.T., Grade II (£420-£465). The appointment will be terminable by one month's notice on either side, subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination.

Applications, stating age, qualifications and experience, together with the names of three persons to whom reference may be made, should be enclosed in an envelope endorsed "Junior Assistant Architect," and must be received by me not later than Monday, 21st July, 1952. Canvassing will be deemed a disqualification, and candidates must disclose in writing any relationship to any member of, or holder of, any senior office under the Council. Candidates who fail to do so will be disqualified and, if appointed, will be liable to dismissal without notice.

FARRA CONWAY,
 Town Clerk.
 Town Hall, Great Yarmouth.
 4th July, 1952. 7099

WYCOMBE RURAL DISTRICT COUNCIL.
APPOINTMENT OF ASSISTANT ARCHITECT.

The above Council invite applications for the appointment of an Assistant Architect (Male) in the Architect's Department. The salary grade will be determined according to the successful applicant's qualifications, experience and ability, and may be either Grade V, VIa or VI.

The appointment will be subject to one month's notice on either side and to the National Joint Council Conditions of Service. The Council will consider the provisions of housing accommodation if necessary.

Applicants should possess a final professional qualification, be experienced draughtsmen, and capable of designing house plans. Knowledge of housing scheme procedure will be an advantage. An Engineering Staff is employed for site development works.

Applications, stating age, experience and qualifications, and present grading, together with the names and addresses of two persons to whom reference can be made, should reach the undersigned not later than Saturday, the 26th July, 1952, and be endorsed "Assistant Architect."

J. AUTON,
 Clerk of the Council.
 17, High Street, High Wycombe. 7097

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Architectural Appointments Vacant

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ASSISTANT with good practical experience required for taking charge of detailing large scale contemporary factory. Ring L. Erdi. Central 3310. 7041

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ARCHITECTURAL ASSISTANTS required in Westminster office of Consulting Engineers for detailing designs of Power Stations, Administrative Office Blocks, etc. Apply, stating age, experience, qualifications and commencing salary required. Box 7076.

ARCHITECTS' JUNIOR ASSISTANT required immediately. Some office experience essential. Salary according to ability. Permanent and progressive job for an active minded person. William Crabtree, F.R.I.B.A., 8, Robert Adam Street, London, W.1. Tel.: Welbeck 8918. 7080

QUALIFIED R.I.B.A. and Registered ASSISTANT ARCHITECTS required by British Railways (London Midland Region) for service in Architect's office, Euston. Applicants must be competent to carry out work from the scheme to contract stage with the minimum of supervision. Starting salary £575 p.a. Certain residential and free travelling facilities available. Apply Civil Engineer, British Railways, London Midland Region, Euston Grove, N.W.1. 7075

JUNIOR ARCHITECTURAL ASSISTANT required in the office of the Architect, Eastern Region, British Railways, King's Cross. Applicants should have Intermediate R.I.B.A. Salary according to age, qualifications and experience. Free residential travelling facilities within certain limits and other reduced rate travelling facilities after qualifying period of service. Five-day week and canteen facilities available. Applications, which should be in writing, should be addressed to the Civil Engineer, British Railways, King's Cross Station, London, N.1. 7086

ARCHITECTURAL DRAUGHTSMAN required for detailing a variety of Industrial and other Buildings involving Framed Construction in Precast Reinforced Concrete. Ability to check up on site, and work largely on own initiative essential. Excellent opportunity offering interesting position to a keen young man. Write, giving full particulars of experience and ability, stating age, and salary required, to Box 7083.

ARCHITECTURAL ASSISTANT, Intermediate Standard, required for branch office at Ellesmere, Salop. Particulars to McDonald & Partners, Architects, 1, Unity Street, College Green, Bristol, 1. 7082

EXPERIENCED ARCHITECTURAL ASSISTANT required to take charge of Drawing Office in busy country practice. Must be school-trained and qualified. Salary up to £800 according to experience and ability. Full particulars of training, experience, age, etc., to Box 7092.

ARCHITECTURAL ASSISTANT required for general duties, particularly housing for Local Authorities, in West Country practice. Full particulars of experience, age, salary required, etc., to Box 7093.

Architectural Appointments Wanted

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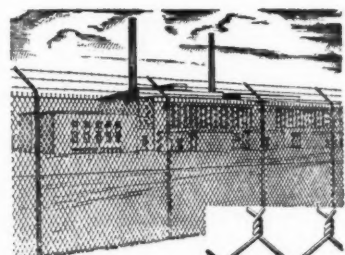
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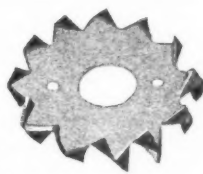
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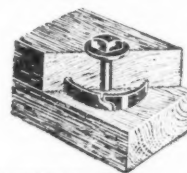
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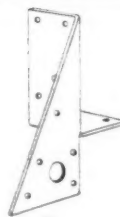


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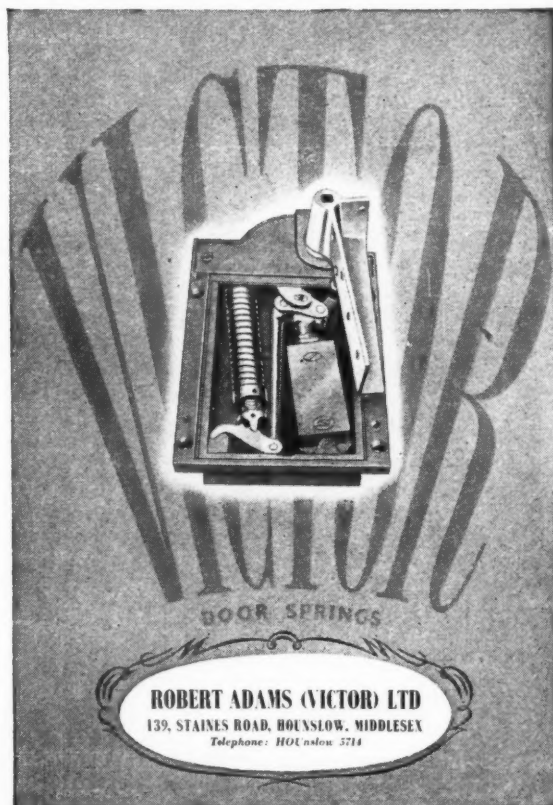
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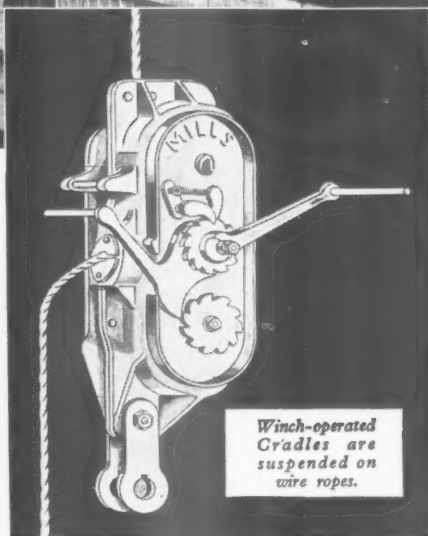
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