

THE ARCHITECTS' JOURNAL

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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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PHYSICAL PLANNING SUPPLEMENT

CURRENT BUILDINGS

HOUSING STATISTICS

Architectural Appointments
Wanted and Vacant

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

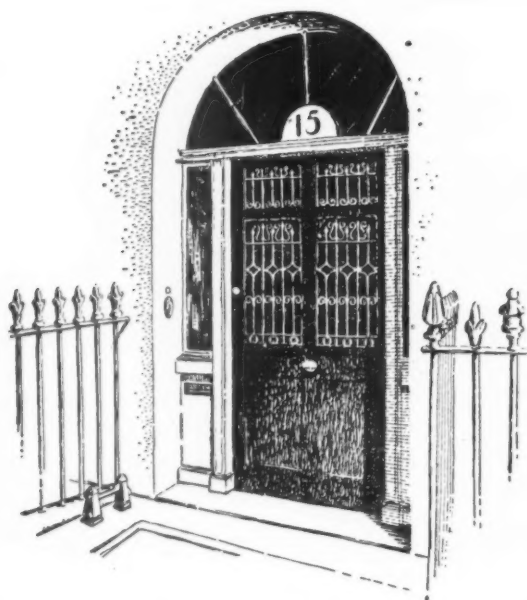
AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhamstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Welbeck 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 9, Belgrave Square, S.W.1.	Sloane 0421
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Easton 2158-9
ArchSA	Architectural-Students' Association. 24-26, Abercromby Square, Liverpool, 7.	Royal 6301
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Welbeck 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611. Ext. 1706
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128
BCC	British Colour Council. 28, Sackville Street, W.1.	Regent 3613
BCCF	British Cast Concrete Federation. 17, Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 25, Victoria Street, S.W.1.	Abbey 5422-3
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BGC	British Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
BGF	British Gas Federation. 1, Grosvenor Place, S.W.1.	Sloane 8266
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	British Steelwork Association. Eggington House, Buckingham Gate, S.W.1.	Victoria 7301-2-3
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CAS	County Architects Society. C/o A. Guy Chant, F.R.I.B.A. Salop County Council, 5, Belmont, Shrewsbury.	Shrewsbury 3031
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CDA	Copper Development Association. Kendals Hall, Radlett, Herts.	Radlett 5616
CIAD	Central Institute of Arts and Design. C/o National Gallery, W.C.2.	Whitehall 2415
CIAM	Congres Internationaux d'Architectures Modernes. Dolderal, 7, Zurich, Switzerland.	
CID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPC	Codes of Practice Committee. MOW, 42, Onslow Gardens, S.W.7.	Kensington 7070
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUJC	Coal Utilization Joint Council. 54, Victoria Street, S.W.1.	Victoria 9851
DIA	Design and Industries Association. 9, Conduit Street, W.1.	Mayfair 5432
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EC	Electricity Commission. Savoy Court, Strand, W.C.2.	Temple Bar 7565
EJMA	English Joinery Manufacturers Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FASSC	Federation of Association of Specialists and Sub Contractors. 21, Tothill Street, S.W.1.	Whitehall 9606
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	Flush Door Manufacturers Association. Stapleford Road, Trowell, Nottingham.	Ilkeston 623/4/5
FLD	Friends of the Lake District. Pennington House, Nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 4, Hobart Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881

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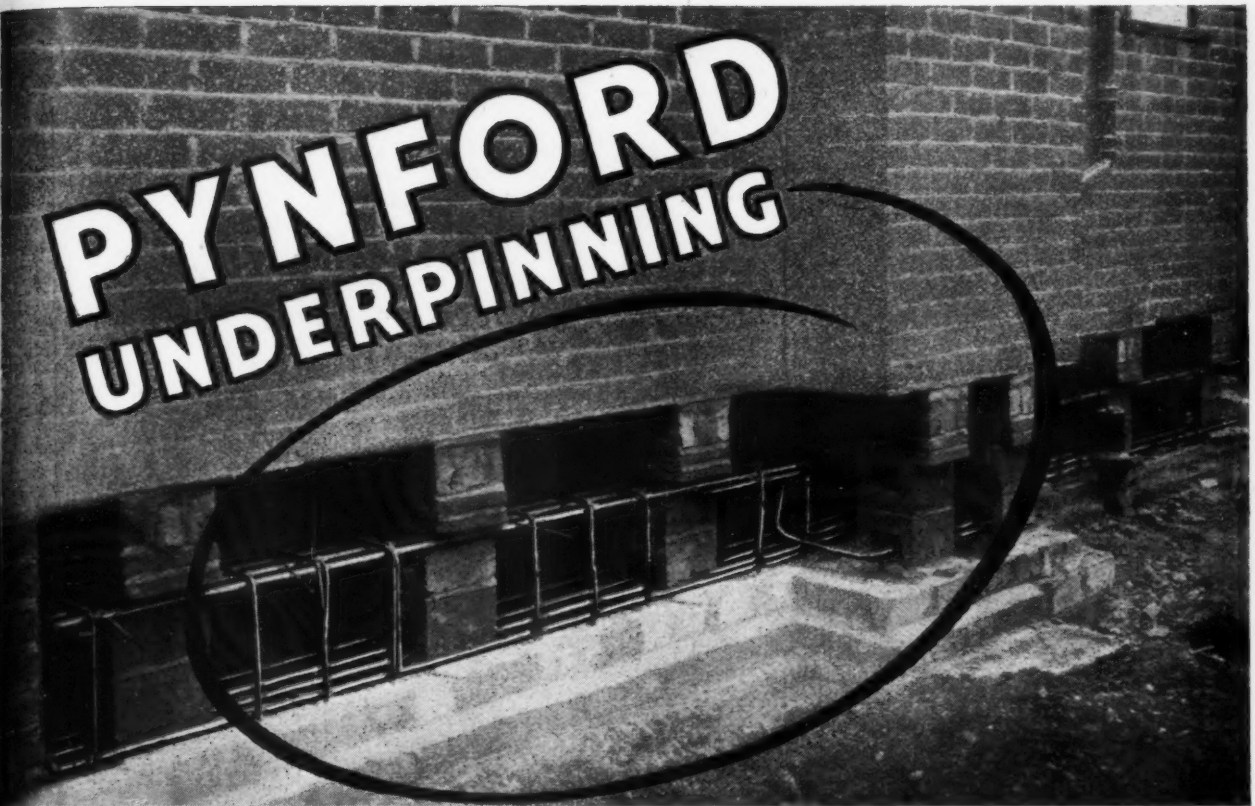
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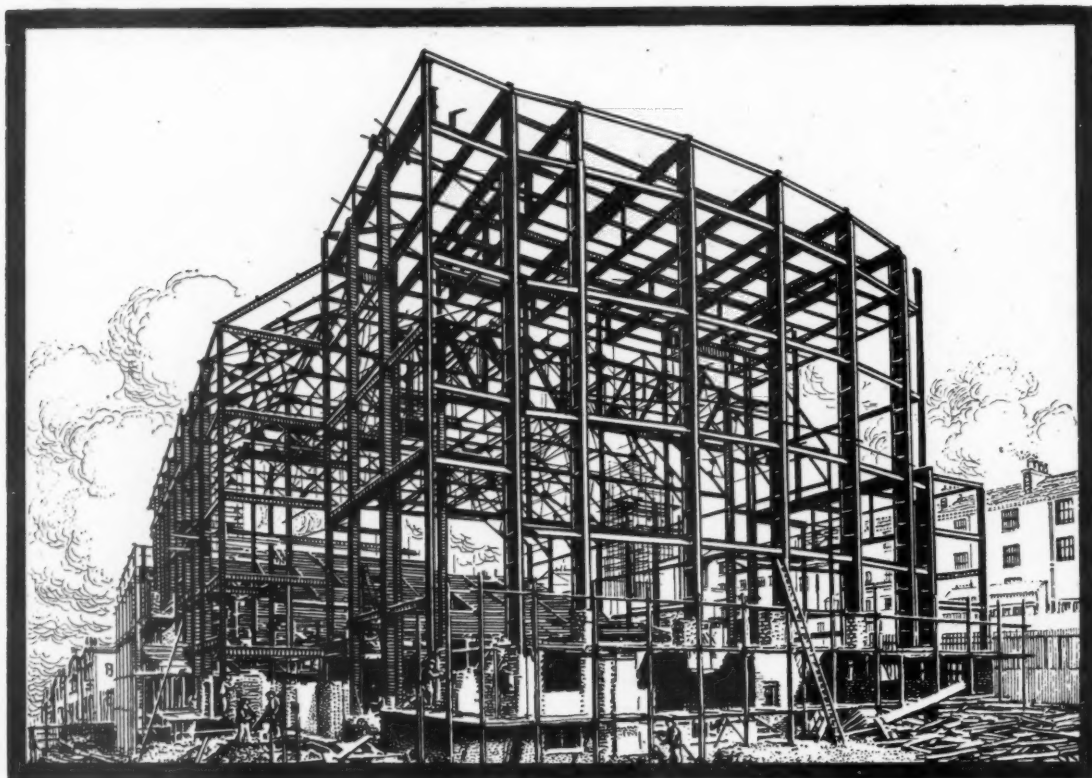
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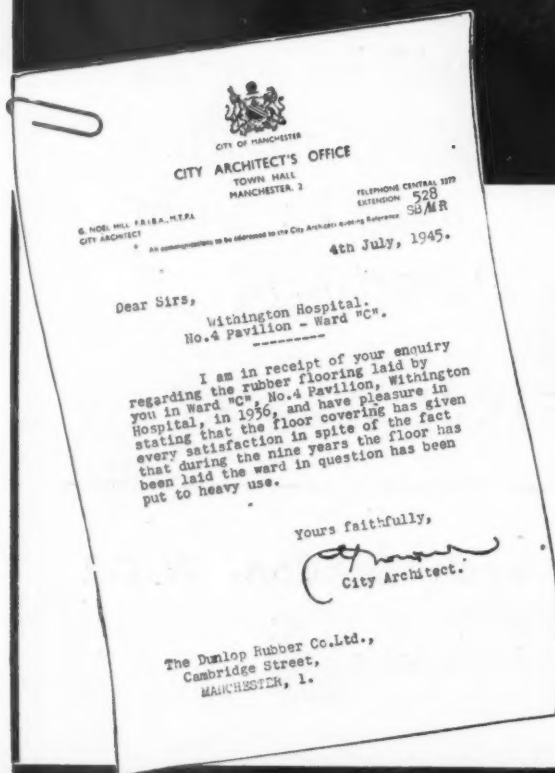
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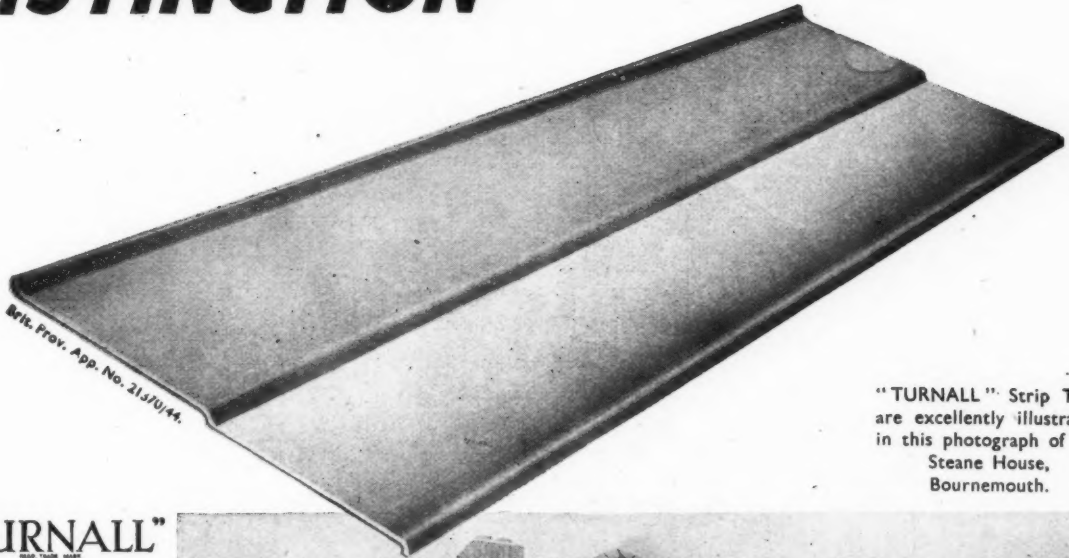
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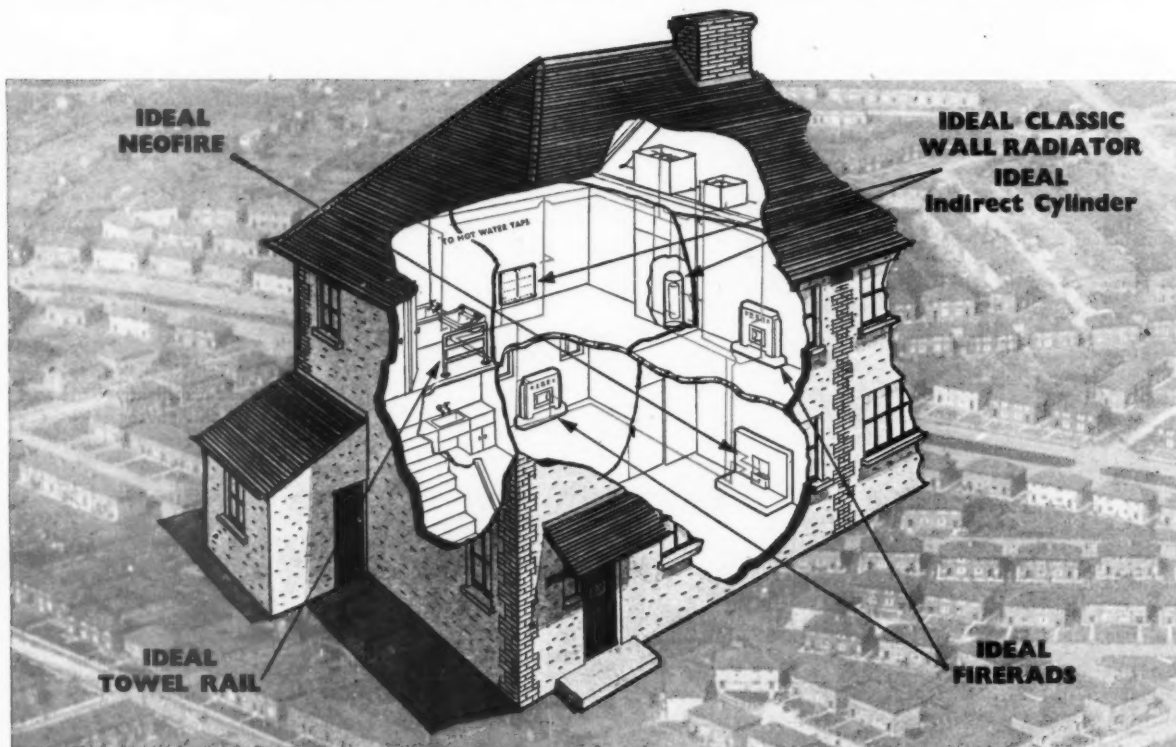
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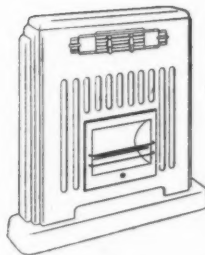
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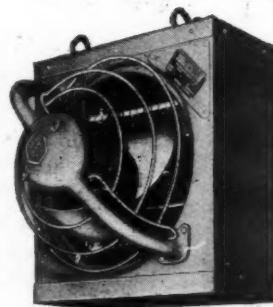
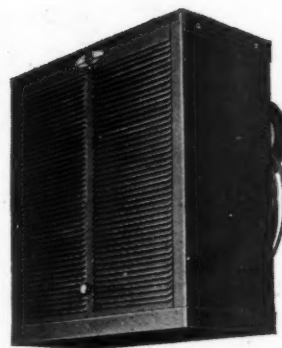
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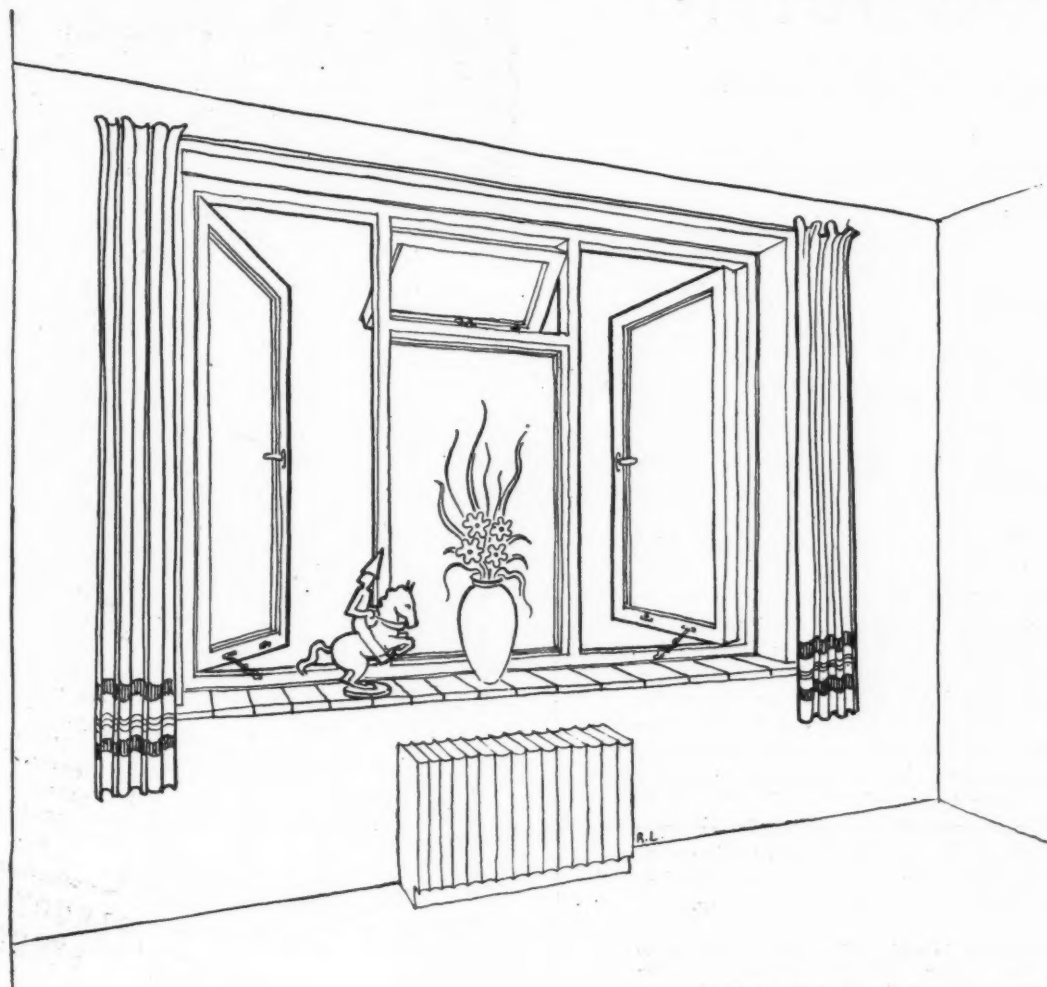
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| THERMACOUST | The Cementation Co., Ltd.,
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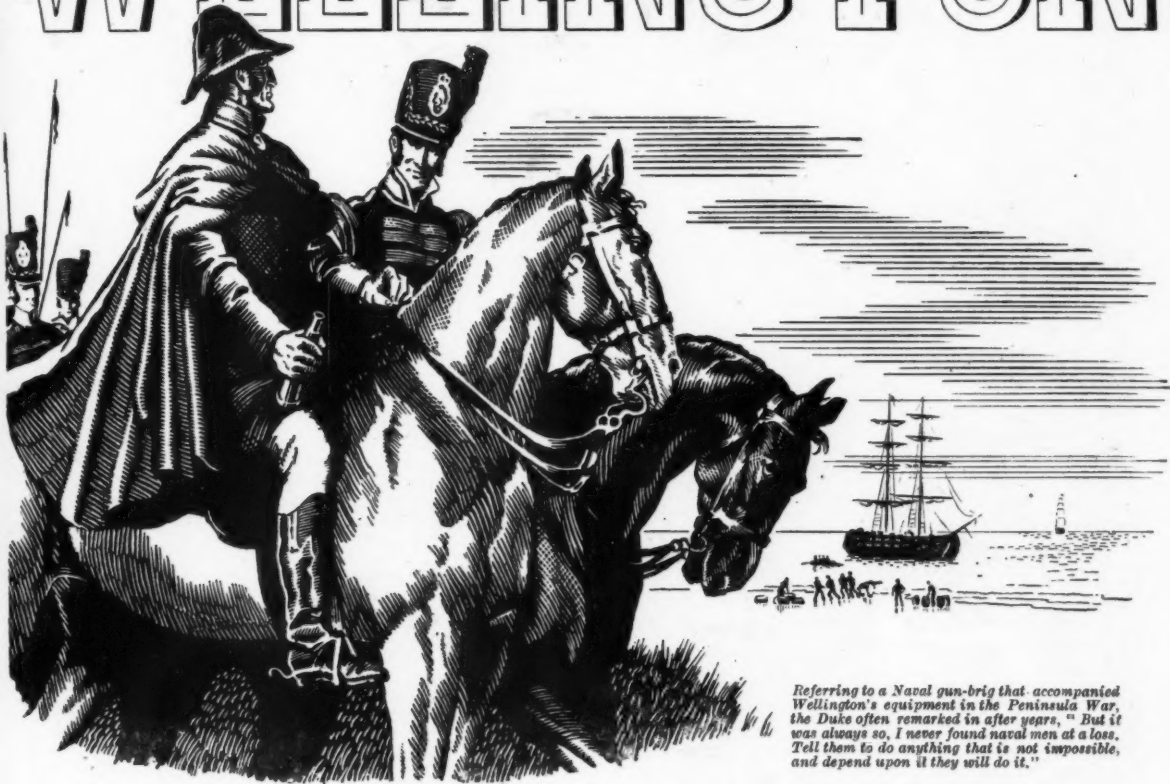
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CC 17

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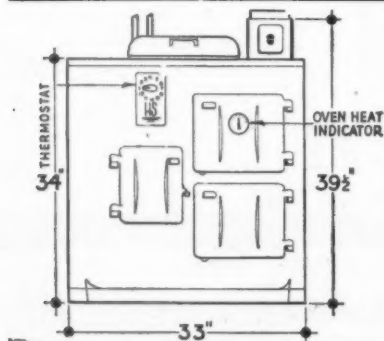
H.S. heat storage cooking

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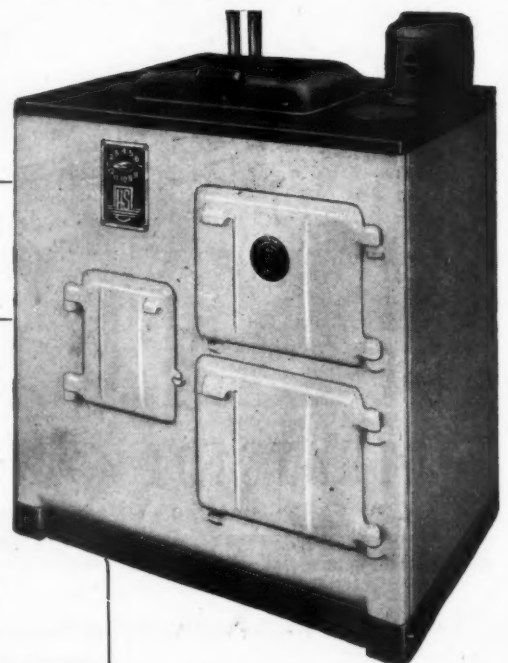
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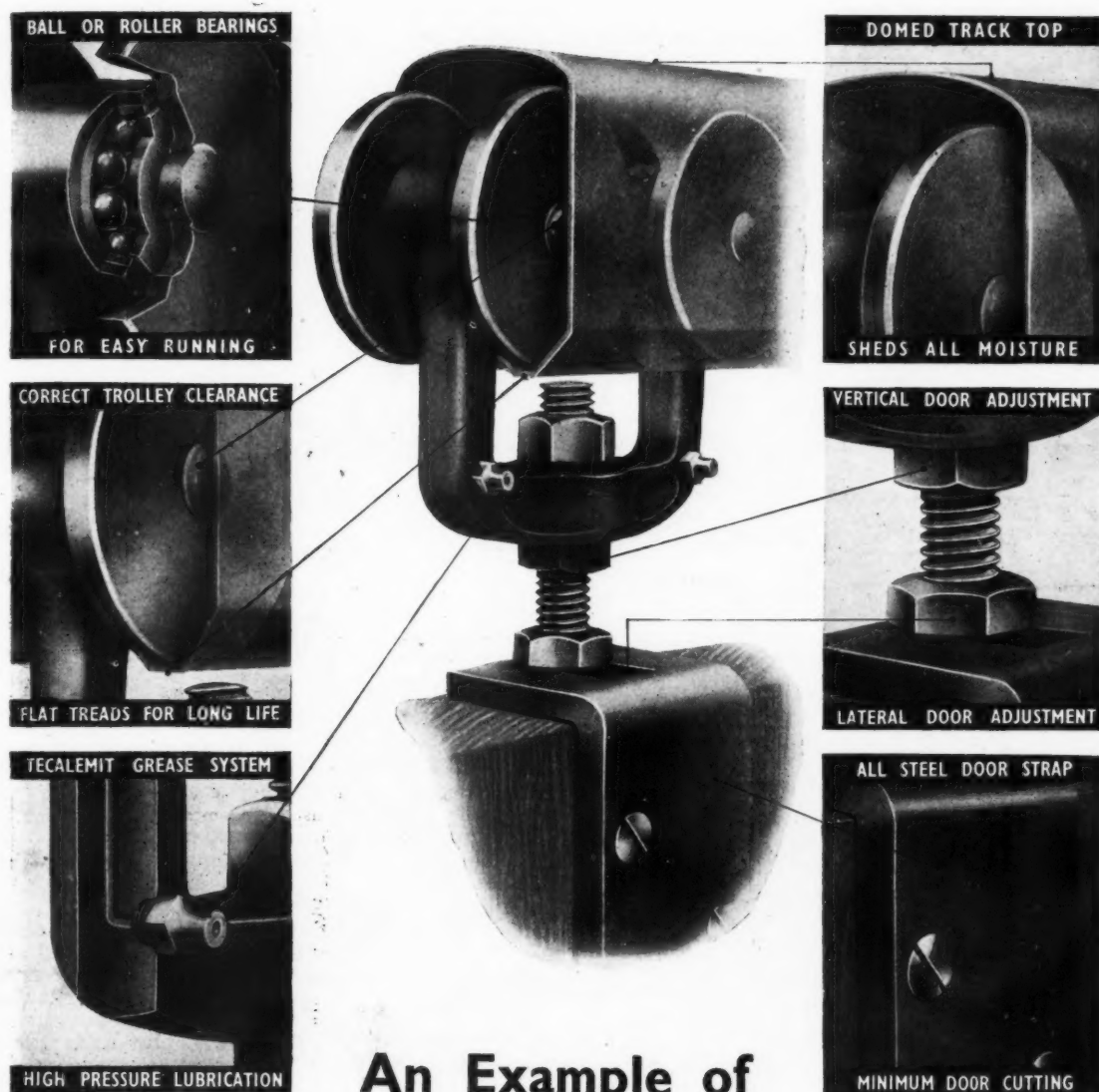
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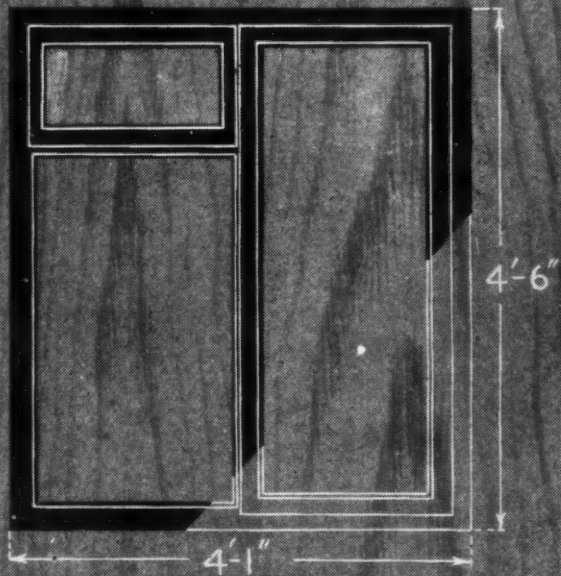


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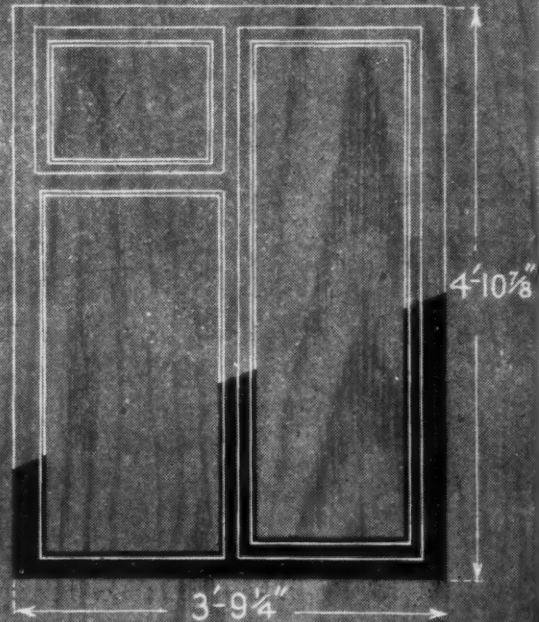
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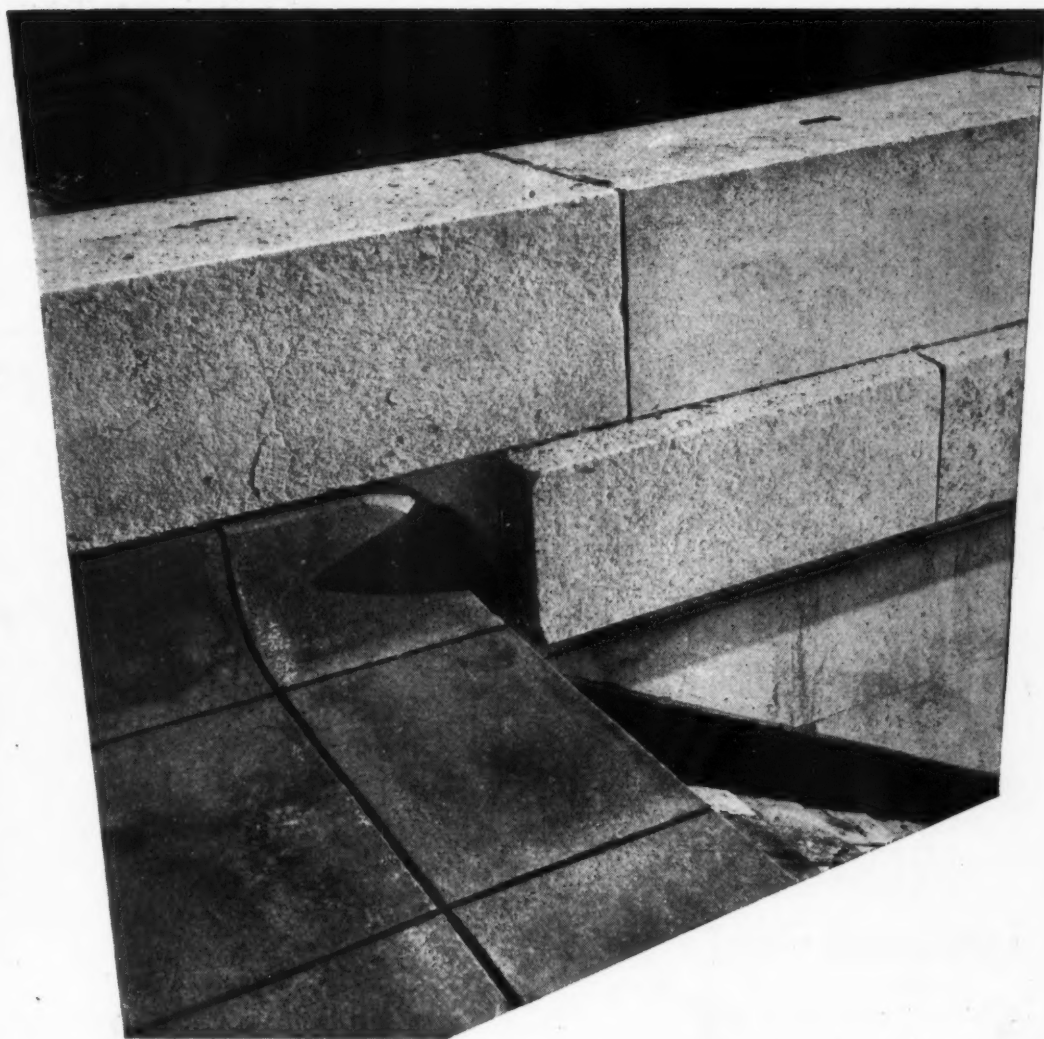
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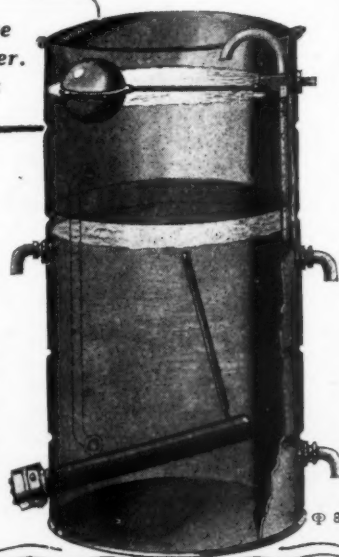
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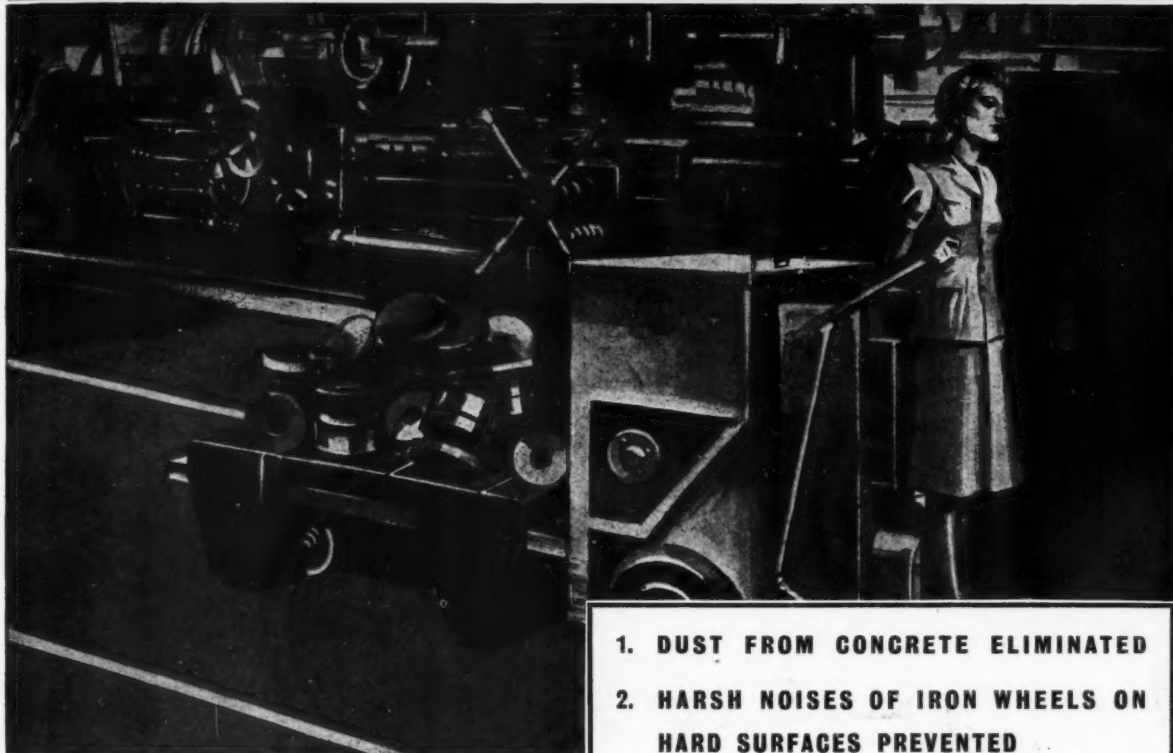


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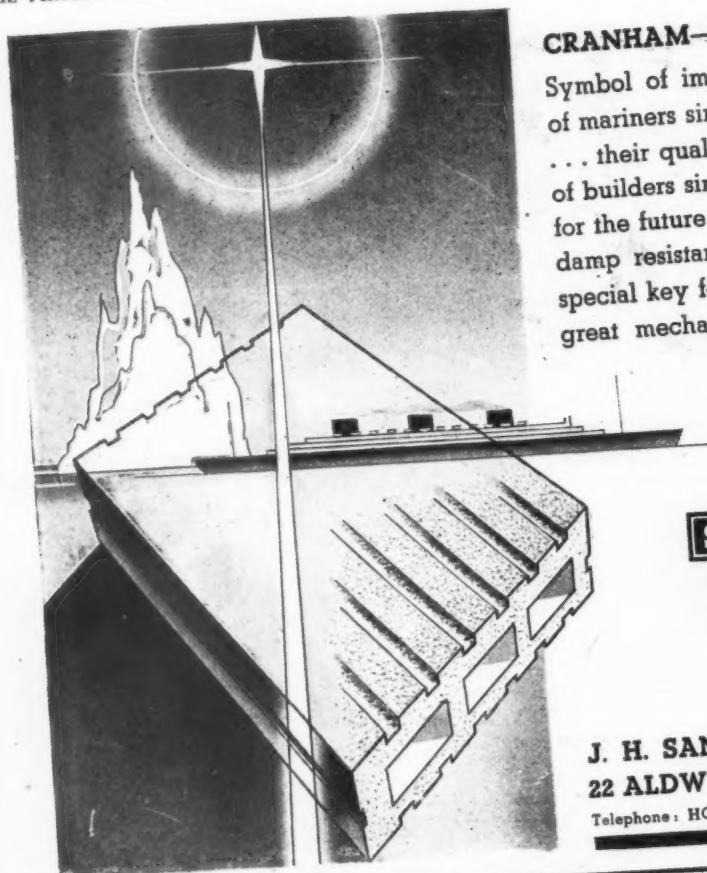
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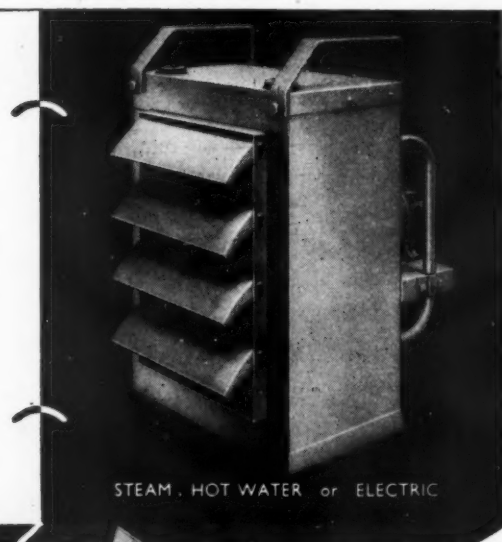
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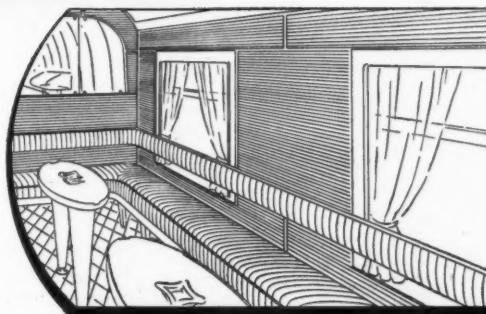
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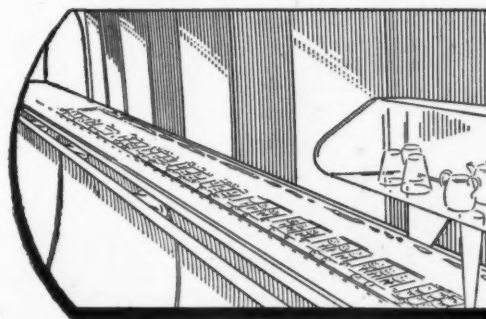
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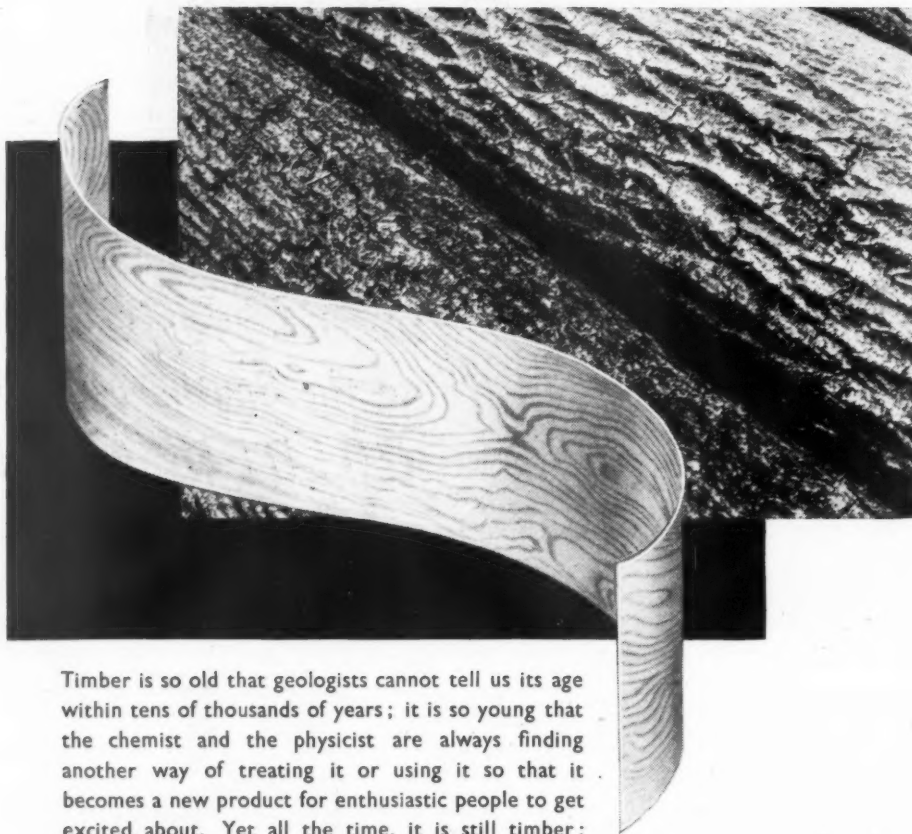


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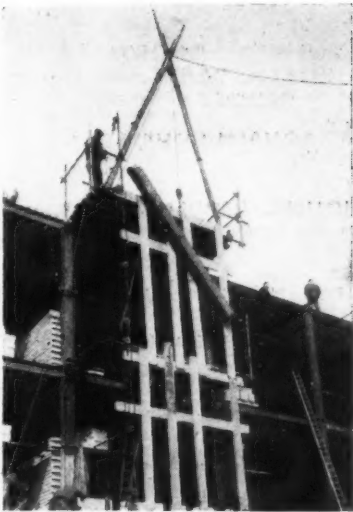
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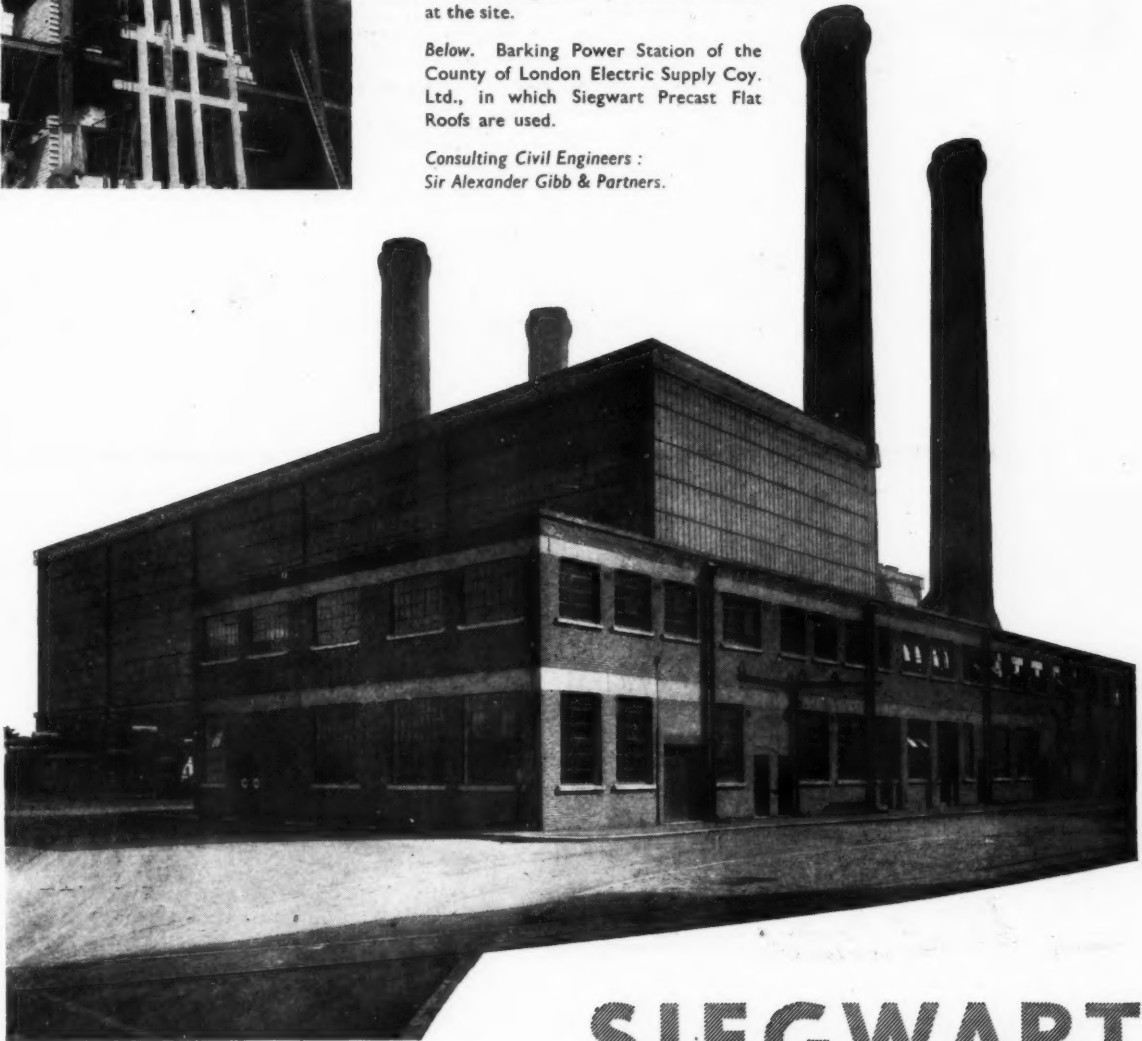


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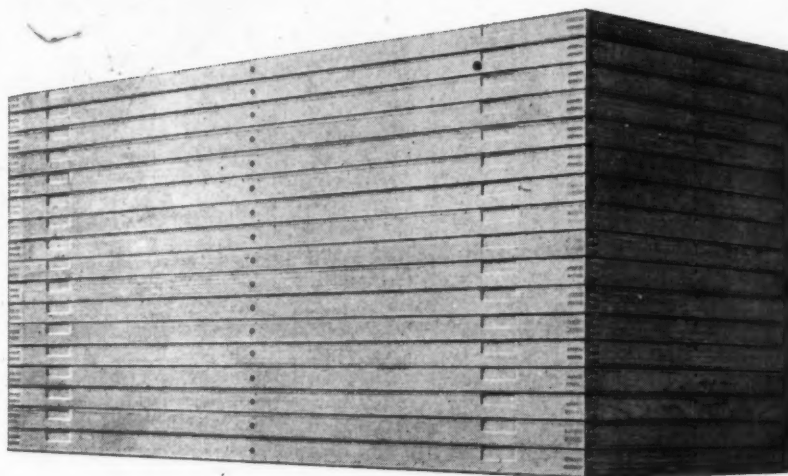
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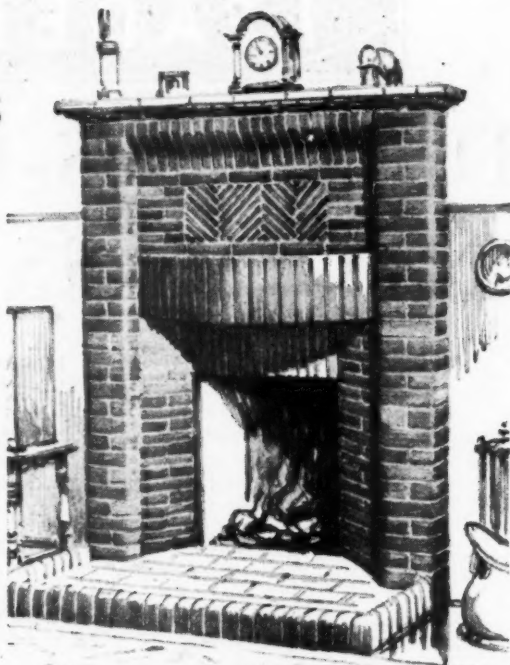
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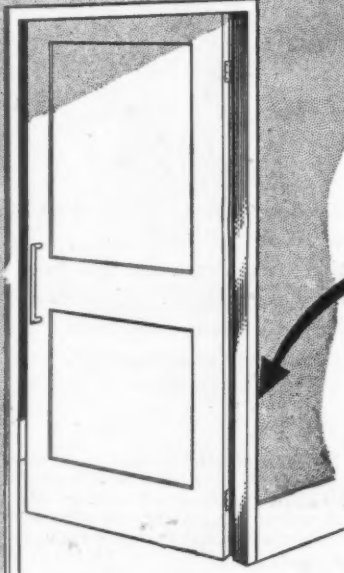
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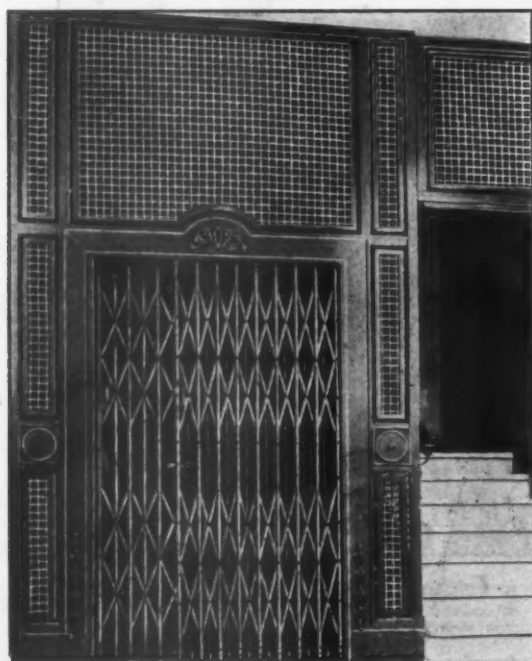
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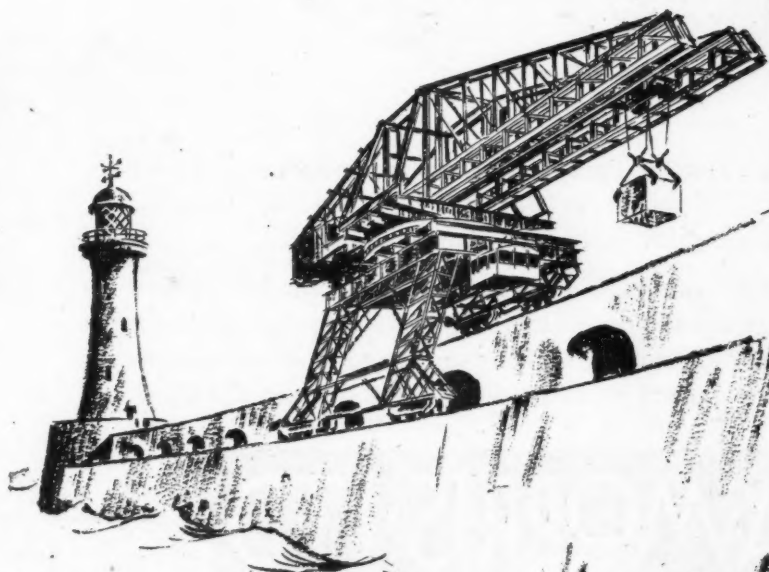
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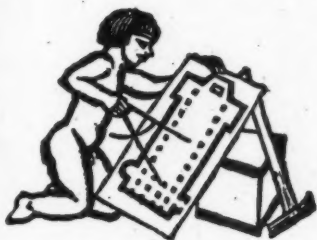


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BIRMINGHAM. W. A. Allen. *Some Recent Trends in Daylighting.* At the Imperial Hotel, Temple Street, Birmingham. (Sponsor, IES, Birmingham Centre.) 6 p.m. FEB. 7

LONDON. *Exhibition of the King's Pictures.* At the Royal Academy, Piccadilly, W. About 500 paintings in the Royal Collection, selected from all the Palaces in which the collection is permanently kept. Includes a large number of works not normally accessible to the public. Weekdays, 10 a.m. to 7 p.m. Sundays, 2 p.m. to 7 p.m. Admission 1s. 6d. Until MAR. 16

AA School of Architecture. Third Year Interior Decoration Subject Exhibition at the Building Centre, 9, Conduit Street, W.1. Models prepared by students in their Third Year (of a five-year course). The exercise the models illustrate is part of the normal school curriculum which considers interior decoration as indivisible from the study of architecture. The main purpose of the exercise is to train students in the correct and imaginative use of materials as applied to interior design. Emphasis has been laid on the importance of the design of furniture and fittings which have been considered both as regards construction and appearance. Three different programmes were set for the exercise from which the students could take their choice. They were—1. A Banqueting Hall for the British Council. 2. A Meeting and Committee Room for the Design and Industries Association. 3. A Council Room for the Arts Council of Great Britain. Sixty models were completed and of these nineteen have been selected for exhibition. Fourteen are the designs of ex-service students. (Sponsor, AA.) FEB. 6

Rural Building Materials Exhibition. At the Building Centre, 9, Conduit Street, W.1. Exhibits include 25 panels of hand-made bricks from various counties, examples of stone walling, rubble Bath limestone, Kent flintwork, repatching straw thatching, and slates from Westmorland, Wales and Cornwall. (Sponsor, Rural Industries Bureau.) 10 a.m. to 5 p.m. Until FEB. 15

More Furnishings for Today. Exhibition at the Good Housing Furnishing Studio, 28-30, Grosvenor Gardens, S.W.1. (Sponsor, Good Housekeeping.) FEB. and MARCH

M. Maurice Lebrun. *Thermic Drilling of Concrete and Stone.* At the Institution of Structural Engineers, 11, Upper Belgrave Street, S.W.1. (Sponsor, ISE.) 6 p.m. FEB. 6

Michael E. Rowe. *The New Towns Act, 1946.* At the Auctioneers' and Estate Agents' Institute, 29, Lincoln's Inn Fields, W.C.2. (Sponsor, AEAI.) 6 p.m. FEB. 6

Richard Lonsdale-Hands, the British Industrial Designer. *Packaging.* At the Lighting Service Bureau, Savoy Hill, W.C. (Sponsor, British Display Association.) 7 p.m. FEB. 6

Spanish Paintings. Exhibition at the National Gallery, Trafalgar Square, W.C. (Sponsor, National Gallery and the Arts Council.) FEB. 10-MAR. 23

W. Mac Quitty, of the Film Producers Guild Ltd. *The Way We Live.* At the Housing Centre, 13, Suffolk Street, S.W.1. 1.15 p.m. (Sponsor, HC.) FEB. 11

Sir Lancelot Keay, President of the RIBA. *Presentation of RIBA Medals and Prizes and Address to Architectural Students.* At the RIBA, 66, Portland Place, London, W.1. (Sponsor, RIBA.) 6 p.m. FEB. 11

J. S. Smyth. *The Brightness and Legibility at Night of Road Traffic Signs.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, IEE.) 5.15 p.m. FEB. 11

F. A. Freeth, of the Imperial Chemical Industries, Ltd. *Materials.* At the Royal Society of Arts, 6-8, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA.) 5 p.m. FEB. 12

Luncheon and 54th Ordinary General Meeting of the London Master Builders Association. Central Area No. 1. At Derry and Toms Restaurant, Kensington High Street, W.8. (Sponsor, LMBA Central Area No. 1.) 2 p.m. FEB. 12

AA Exhibition of Photographs by Members. At the AA, 34-36, Bedford Square, W.C.1. As far as possible photographs should be mounted on white cards 16 inches high, and title, name, make of camera, etc., should be printed on the front of the mount in the bottom right-hand corner. Photographs should be delivered to No. 36, Bedford Square not later than February 20. (Sponsor, AA.) FEB. 26

Brixton School of Building Association Re-union. Reception and dance at the Bedford Hotel, Balham, S.W. Past students, from all sections of the School, cordially welcomed. Tickets, price 5s. (including buffet), obtainable before March 1 from the Hon. General Secretary, Brixton School of Building, Ferndale Road, S.W.4. MAR. 8

SOUTHEND. J. Hacking. *The Generation and Wholesale Distribution of Electricity.* At the South Parade Pier, Southend. (Sponsor, IEE, Southern Centre.) 3 p.m. FEB. 8

NEWS

THURSDAY,
No. 2715

February 6, 1947
VOL. 105

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Though no feature in the JOURNAL is without value for someone, there are often good reasons why certain news calls for special emphasis. The JOURNAL's starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.

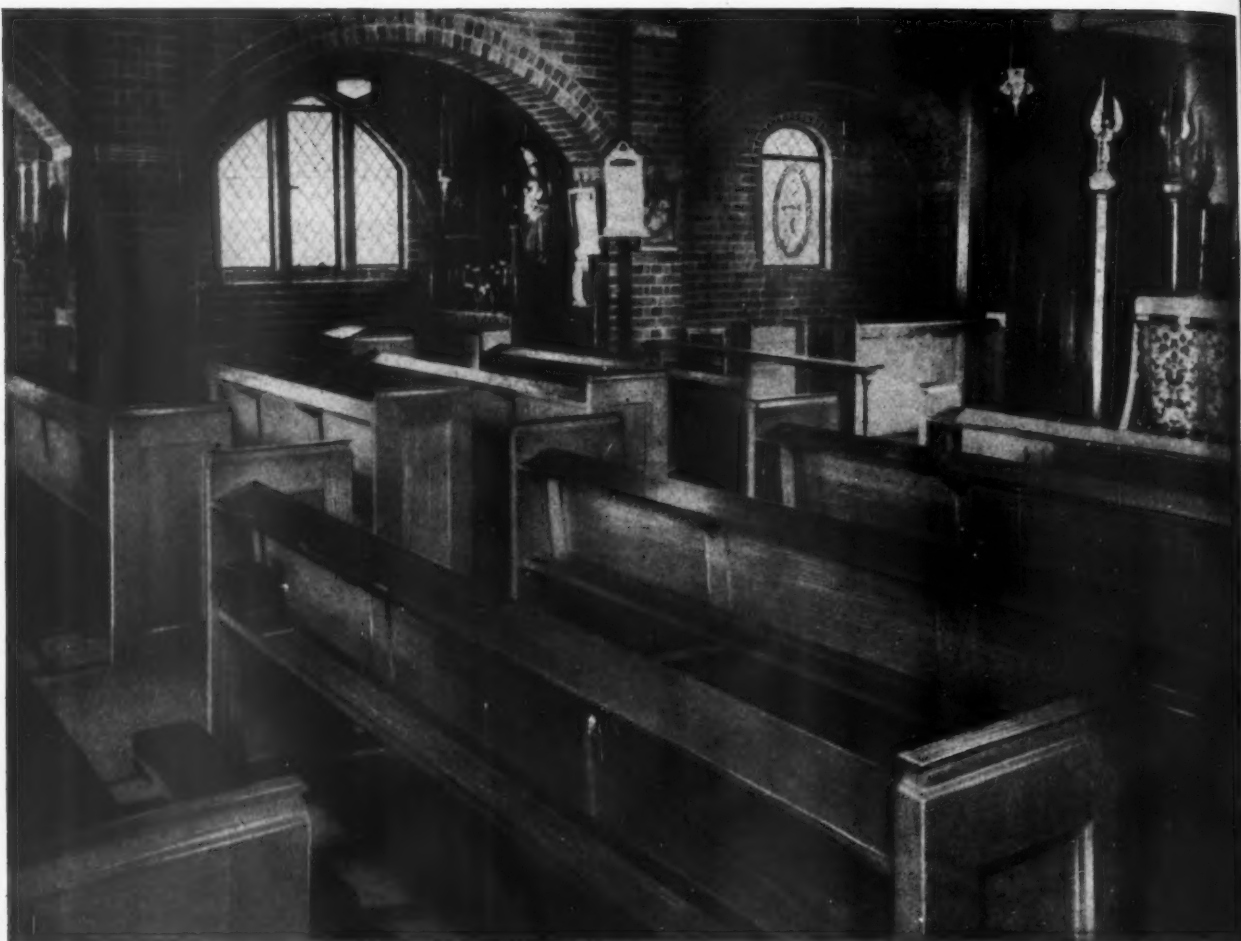
★ means spare a second for this, it will probably be worth it.

★★ means important news, for reasons which may or may not be obvious.

Any features marked with more than two stars is very big building news indeed.

★
Preparations are being made to re-open the RA SCHOOL OF ARCHITECTURE as a day school for ten advanced students who have taken a British University degree in architecture or have passed the final examination of the RIBA.

The Director of the School will be Professor A. E. Richardson, R.A., and the Master Mr. Marshall Sisson. The training will be for one year and will be gratuitous, and the students will compete each year for a Royal Academy Grand Prize of £300, and a Second Prize of £150 presented by Lord Fairhaven. Qualified students who wish to take this advanced course, comprising an intensive study of civil architecture and the preparation of designs for buildings of national importance, should apply to the Secretary, Royal Academy of Arts, Piccadilly, W.1, stating their age and qualifications, and should send with their application a portfolio of studies and designs, on Wednesday, February 12. Selected candidates will be invited to an interview with the Director.



CHURCH FURNITURE

The fine traditions of church furnishing built up by centuries of craftsmanship are to-day upheld, not unworthily, by the craftsmen of the E.S.A. Every piece made is a model of dignity and beauty, designed for true harmony with its surroundings. Every piece is impeccably finished, enduringly solid and substantial, meriting

comparison, to the last detail, with the work of the craftsmen of past generations. In the designing of church furnishings and fittings, all the experience of the E.S.A. in fine joinery is at your disposal. Drawings and specifications to your requirements will be submitted without any obligation on your part.

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From AN ARCHITECT'S Commonplace Book

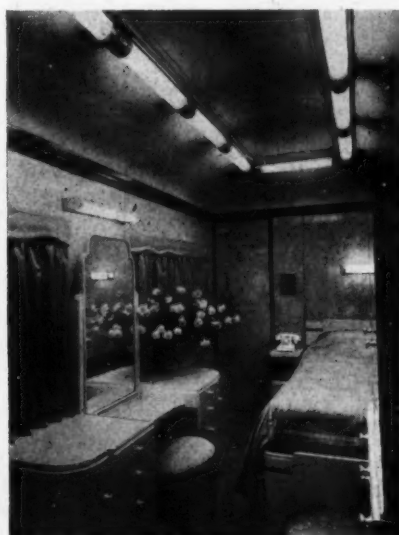
ARCHITECTURE WITHOUT TEARS. [From *The Adventure of Building*, by Clough Williams-Ellis (Architectural Press).] There are certainly some truly "Modern" buildings that, though really well designed and looking grand on the drawings from which they were built, or as photographed all gleaming white in strong sunshine against a dark sky, that can be, and are, a sad disappointment when we actually see them for the first time, perhaps when they have been standing for some years. There may be no sun, it may even be raining, and the soot-stained walls covered with little cracks, look anything but cheerful and even insecure, the great concrete flower-boxes are empty, some of the trees, carefully planted as part of the picture, have died, and the fountain is dry. Agreed, the lack of sun and the rain and the dirty air are not the architect's fault, but he knew (or should have known) what to expect and should have designed his building so that it does not go so dismal whenever the weather does—which in England is too often. He should have seen that his building had a skin that did not crack, a surface that the rain would scour clean and not smudge, colours that did not fade or run, and enough interest of its own not to depend entirely on sunshine and happy lighting in order to look pleasing. If window boxes and troughs of flowers are intended to provide part of the delight that the building is meant to give us, then, like everything else, they should be not only well placed, but well designed for their particular purpose. . . . Where attending to trimmings of this kind is found to be tiresome—such as the perpetual watering that is necessary—the trimmings themselves will sooner or later be neglected. . . . Again, it will be partly the architect's fault. . . . he could arrange for it all to be done in a few minutes and by simply turning a single tap if he had run connected pipes pierced with little holes over all the places where flowers were planted.

★
The Ministry of Health has issued a circular to housing authorities and county councils drawing their attention to an EXPLANATORY LEAFLET ON LICENSING RESTRICTIONS which is now being printed for distribution to applicants for building licences.

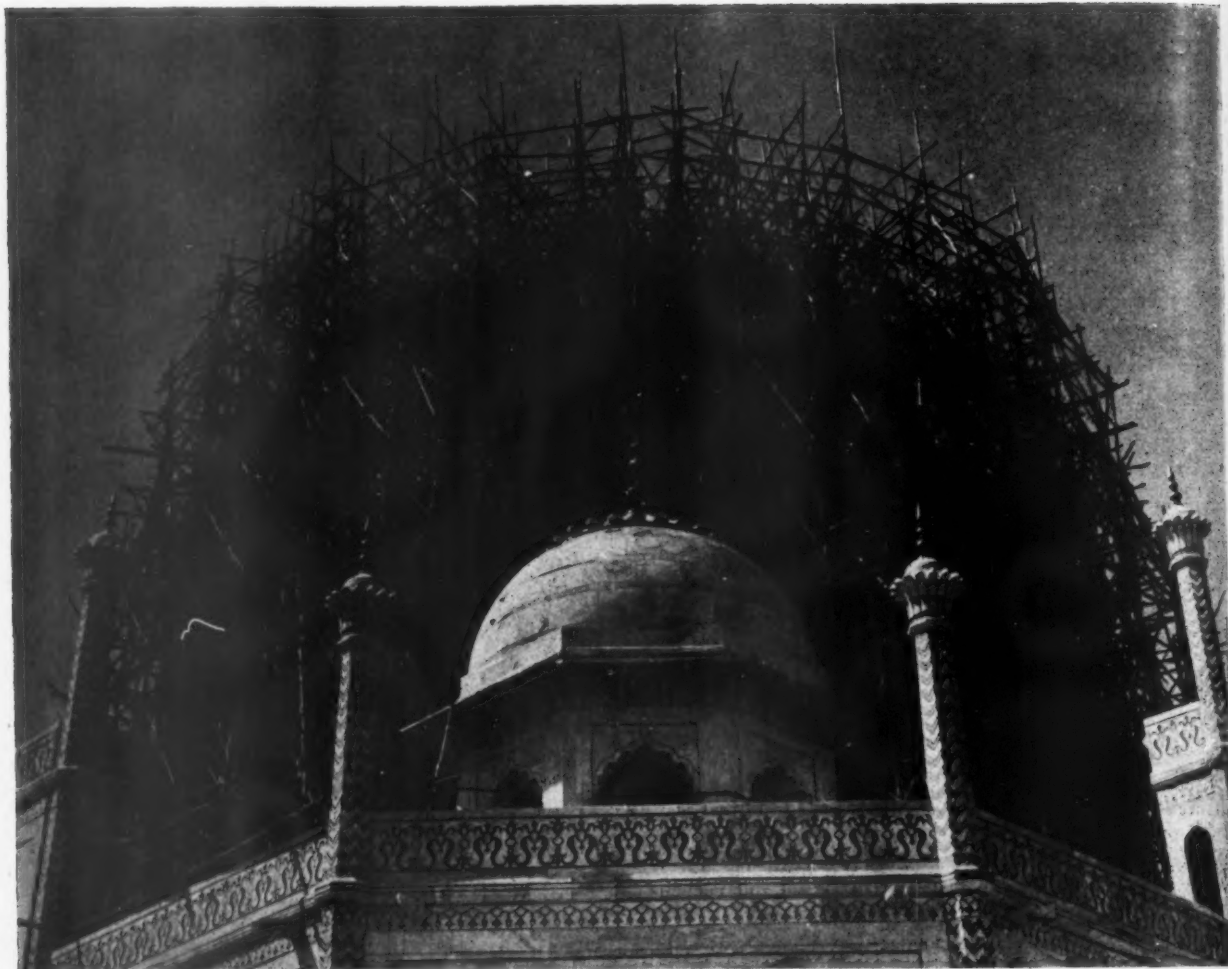
The leaflet, *Repairs—or Homes?*, has been prepared at the request of local authorities who feel that some official note on the reasons for licensing restrictions should be available for issue by licensing officers at the time when applications are rejected. Requests for supplies of the leaflet should be sent as early as possible to Despatch Section, Ministry of Health, Whitehall, London,

S.W.1. In an appendix to the circular the Ministry states: After six years of war, almost every building in this country needs work doing to it. The whole of the building labour force could be employed on nothing else but repairs and maintenance. Yet there are hundreds of thousands of families who urgently need homes of their own and will keep on suffering great hardship until houses can be provided for them. While the rehousing programme has been getting under way, repairs and maintenance have taken up a large part of the total labour force. But new houses are going up in large numbers, and on every building site there is an acute demand for labour. Work is being slowed to half its pre-war rate, partly because of this lack of a properly balanced labour force. Men and women are being denied homes that they could have. So the Government has been faced with a serious problem, Repairs—or homes? It has had

to ask local authorities to restrict the issue of building licences so as to free contractors and operatives for work that provides additional homes. Don't blame your local authority because they reject your licence application. They are allocating their licences as fairly as they can. As soon as the employment situation in any district makes it possible, these licensing restrictions will be relaxed. (Meanwhile, by postponing the work which you want done, you are helping to make more men and materials available to provide homes for families who have been waiting a long time. If you have made a claim for war damage repairs, it will not be affected by this postponement, provided it has been made in the proper way to the War Damage Commission. If you are in any doubt about war damage claims, apply to the Regional Manager of the War Damage Commission for advice.



Three views in the Royal train for the South African tour of the King and Queen and the two Princesses. Left, the King's bedroom; centre, the Royal lounge; right, the Queen's bedroom. The steel-built, externally cream coloured, gold-lined coaches have double armour-plate windows, are air conditioned and insulated against heat and cold. Internally, the coaches are lined throughout with Empire woods, the corridors with veneered walnut. In the Royal apartments are wireless sets, a radio-gramophone, bathrooms and a telephone exchange. The Royal party left London for Portsmouth on Friday last, January 31, and sailed for Cape Town the next day.



Onion into Cactus

The Taj Mahal recently underwent a face-lift. A group of expert workmen have been busy on repairing, cleaning and polishing its walls, removing the dust that had accumulated in its many crevices, filling up small holes and cracks and making good the decoration where weather had affected it. The dome received first attention and around it was erected an intricate scaffolding of light unsawn timbers, mainly of bamboo, which formed a spiral

passage running to the top. The splints have been so set up that they can cause no damage to the polished marble dome of the mausoleum. Top, the dome with its scaffolding creates a strange impression. Below left, the Taj Mahal's Mosque seen through the scaffolding. Centre, the mausoleum seen from a distance. Right, a minaret seen through the scaffolding with the Jumna river in the background. Close-ups of repairs appear on page 144.

★
The Minister of Works has appointed a new ANCIENT MONUMENTS BOARD for Scotland.

The members of the Board are as follows:—Chairman: Lord Cooper, O.B.E., K.C., LL.D. Members: The Earl of Haddington, M.C., T.D., D.L. (representing the Society of Antiquaries of Scotland); R. F. J. Fairlie, R.S.A., LL.D., F.R.I.B.A. (representing the Royal Commission on Historic Monuments); Ian G. Lindsay, F.S.A.(SCOT.) (representing the Scottish Education Department); A. Graham Henderson, A.R.S.A., F.R.I.B.A. (representing the Royal Incorporation of Architects); Professor Stuart Piggott, LLITT., F.S.A.; Professor J. D. Mackie, C.B.E., M.C., M.A.; W. Douglas Simpson, M.A., D.LITT., F.S.A.; Professor W. Croft Dickinson, M.A., P.N.D., D.LITT.; A. R. Cross, M.C., T.D.; B. H. St. J. O'Neil, V.P.S.A., Chief Inspector of Ancient Monuments. Secretary: J. S. Richardson A.R.I.B.A., F.S.A.(SCOT.).

★
The RIBA Council has approved the recommendation of the Competitions Committee that the following paragraph be added to Clause 2 of the model form of Conditions for ARCHITECTURAL COMPETITIONS.

In the event of the death of the Assessor or, in the case of a Jury, of one of the Architect-Assessors before the completion of the competition, or of his being unable to continue to act through illness or some other cause, the Promoters will, in consultation with the President of the Royal Institute of British Architects, appoint another architect to act in his place and to carry out the duties of Assessor as set forth in these Conditions and Instructions.



Mr. Frank Booth, A.R.I.B.A., A.M.T.P.I., senior assistant architect for design to Mr. Hubert Bennett, F.R.I.B.A. West Riding of Yorkshire County Architect, has won the RIBA Victory Scholarship, for 1946-47. Mr. Booth, who is 29 years of age and joined Mr. Bennett's department in June, 1946, was awarded the RIBA Silver Medal for Recognised Schools in 1938 and finalised for the Rome Scholarship in Architecture in 1939. In 1942, he was awarded the third premium in the Ilkley Architectural and Town Planning Competition. During the war, he was attached to the War Office, where he held the rank of captain.

HOUSING FOR WHOM?

REGRETTABLY, it is true that when the need is greatest the urge to plan is at its weakest. It is understandable.

Planning requires thought and thought requires time and when man is driven by a sense of urgency he is apt to begrudge any time not spent in immediate activity. A wise Frenchman once said: "Gentlemen, let us not hurry. We have no time to waste." Nowhere is this more true than in the case of housing.

In this issue there appears an article on *Flats: Their Numbers, Types and Distribution*. It is important because it raises very concretely the real issue which faces any housing authority in the planning of its housing programme: for whom is it building? Is it building for a standard family that may, in fact, be in a small minority among those whose names are on the lists of those waiting for accommodation? Or is it building for the known needs of the community for which it is responsible? Clearly what any authority should be doing is the latter. But how many are? How many have made a survey of the various sizes of family in their area? How many have thought of doing so? To quote an example given in the article, in Rotherham there were, in June 1946, 843 houses capable of accommodating eight people which were occupied by one- or two-person families. How stupid would every one consider an arrangement which supplied 843 people in one area with clothing four times too big for their measurements.

This aspect of housing is dealt with in greater detail in Mr. Alexander Block's book, *Estimating Housing Needs**—although "aspect of housing" is an inadequate phrase to associate with the scope of Mr. Block's investigation. Like all intelligent books, that of Mr. Block leaves the reader with a feeling that all the author has said is really very obvious. But are housing authorities applying to the problem the range of consideration that Mr. Block shows to be essential? In Britain, today, every authority can see more clearly than ever before the pattern of its own area. The population is now virtually static and, while the size of individual units will change, the changes can be plotted with considerable accuracy. The location of industry will shortly be a matter for general control. Lines of existing urban transport will alter very little and are never likely to change again with the speed that was characteristic of the nineteenth century. In short, it is possible to estimate with close accuracy the amount of space each family unit needs to provide it with both shelter and privacy.

Finally, the country can no longer afford (if, in fact, it ever could) the luxury of building either more accommodation than is needed or accommodation of the wrong kind. All those facts require, as well as enable, the social and economic basis of housing needs to be completely explored, before the

* Architectural Press, 10s. 6d.

country is committed too far in its programme of building almost all new dwellings of a uniform size. Financially, the country has now accepted the view that the family needs an additional allowance while the children are young, but still the family is expected, all its life, to rent and pay for a house designed for its needs when its size is near the maximum. Housing may not need fifty-seven varieties but it surely requires more than one.



The Architects' Journal

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N O T E S

&

T O P I C S

THE HOUSING PROBLEM

The long-awaited programme of houses to be finished has at last reached the public. 240,000 in 1947 is a figure like any other figure, and while half the critics will say that it is too low the other half will say that it is too high. The too-low school concentrate on the number of homeless families; the too-high brigade talk gloomily of timber and linseed oil.

One point strikes me as I am writing. Has Mr. Bevan ever noticed how cold it can be in January? February, too, is a bad building month. That means perhaps some 230,000 houses to be finished in a ten-month year; and the December rate was 10,500 a month. Rapid sums on our fingers put us almost into the too-high school of experts. Everyone will be pleased, and most people surprised, if this programme can be realized. It means finishing at a rate of well over 25,000

a month by December 1947, and that means a considerable effort.

SERVICE CAMP HOMES

The returns tell us that there are 12,411 families living in 957 service camps at the present time. How are these people getting along? Do their pipes freeze? Have they got enough fuel? Are there any communal services? In the old days we should have expected to hear from Mass Observation on these and other topics; surely these families deserve some attention, as their way of life, however involuntary, may provide hints to planners of the more lasting types of housing accommodation.

We should also like to be told just what houses are costing nowadays, but on this crucial point the Minister has so far disclosed very little.

HOME OFFICE DREAMS

There is, sadly enough, a faint touch of the Never-Never Land about some of the evidence recently given before the Home Office Committee into the health, welfare and safety of employees, particularly that dealing with the deficiencies of so much of the office accommodation now in use. Heaven knows Astragal has no brief for offices as so many of them are designed—or, rather, used. There are certain stations on the Southern Railway which even now—and for reasons which need not be particularized—bring a cold sweat to his brow.

But when will the day come when new office accommodation for city or town workers is actually available, when a man can choose his office? Look at the list of priorities. Houses, factories, canteens, steel works, generating stations, town halls, installations for atom fission—maybe the day will

come when London sees a new Bush House, but how many readers of this column expect then to be alive?

Still, the Never-Never Land has its pleasures. An air-conditioned room, soundproof, permanently wired for the Third Programme (which, of course, will then start at 10 a.m.), hot coffee on tap, an oubliette for tax officials and the lower forms of commercial life—perhaps they are on their way. At the moment we would settle for one electric radiator proof against diminutions in voltage.

AUTRE TEMPS—AUTRES HENRY MOORES

Sculptors who should normally be enjoying a gruesome post-war boom, have instead been having an uncomfortable time lately. The proposal to set up carvings on the new Waterloo Bridge has been shelved. The proposal to set up a memorial statue to President Roosevelt has become the centre of acrimonious controversy. The proposal to erect on Dover cliffs a gigantic statue of Mr. Churchill, flanked by 18-foot high bulldogs, is meeting opposition as well as bewilderment. Finally, the Tate Gallery Trustees have decided not to accept Jacob Epstein's large winged figure of Lucifer, which was offered as a gift to the nation by the Seven Pillars of Wisdom Trust.

The Tate Trustee chairman was refreshingly honest. "It was an extremely generous offer," he said, "but we did not like it sufficiently." Thus Lucifer brings to a fag-end a melancholy saga.

What are the lessons to be drawn from all of this? Not simply that the British public dislikes any sort of sculpture. [Frampton's Peter Pan and the Edinburgh War Memorial stand witness to the island race's enduring affection for sculpture provided there are enough animals about.] But we have always been suspicious of three-dimensional heroics in masonry, just as we often find the brazen frock coats of official portraiture uninspiring and absurd.

As for architectural sculpture—in the form of reliefs and embellishments of

structure—few of us notice it. [Asked what he thought of the huge ornamental doors of the ICI Temple in Westminster, a friend of mine who worked there said: "Oh, well, one takes the rough with the smooth."]

The trouble seems to be that architects are frequently frightened of using sculpture—except in the form of some doodled Henry Moore shape on the original sketch plans—and sculptors as a rule seem inhibited or bombastic when asked to show their skill. This is surely a lamentable state of affairs. The English tradition of sculpture particularly in lettering and heraldry, still flourishes. Dr. Giedion and the *Architectural Review* have often reminded us of the need for a new and richer monumentality, the Polish students have set us an example in the abundant skill and confidence of their recently published architectural drawings.

Let's have more and better sculpture then—and if you moan "Where are the sculptors?" don't forget that the sculptors can with equal justice say "Where are the architects?"

THE ADVENTURE OF BEING CLOUGH WILLIAMS-ELLIS

Twenty or so years ago Mr. Williams-Ellis wrote a book called *The Pleasures of Architecture*. His latest book (published this week at 10s. 6d. by the Architectural Press) is called *The Adventure of Building*. This might perhaps be interpreted as a significant comment on the changes which have taken place during that twenty years in the practice of architecture—but Mr. Williams-Ellis does not, I suspect, mean it to be taken that way. He is writing this time primarily for chil-

dren—and their backward elders—and is naturally out to make architecture as exciting a subject as possible.

Being Mr. Williams-Ellis he finds this an easy task, and his warmth and enthusiasm are such that we are rattled along like characters in a Dick Barton serial. This vivacity and pace more than compensate for the rather bewildering structure of the book, which jumps from Tudor garages back to the Parthenon and then takes a couple of hops forward into the middle of a Reilly Green and leaves us panting with a questionnaire in our hands which we are told will help us to decide whether or not to be architects.

Those of us who—with or without questionnaires—have already decided to be architects, and who are familiar with the road from Karnak to Garchey [Old-Timer Henry Wotton on the box] will nevertheless find many new points of interest to notice *en route* with Mr. Williams-Ellis at our side, and those who have never been that way before will find his running commentary [and running is here no conventional epithet] both amusing and instructive.

The forty illustrations were specially and very vigorously drawn by Geoffrey Robson—a comparative newcomer to the ranks of architectural illustrators. The drawings are robust and direct, but the overpowering use of black in most of them gives the subjects he portrays an air of menacing gloom which is out of key with the light-hearted gaiety of the text. Mr. Robson is too accomplished in his own right to mind my saying that it's time we had a Late Night Final to these Evening Pipers.

ASTRAGAL



LETTERS

Peter A. Dannenbaum.

Malcolm MacTaggart.

Double Glazed Windows and Heat Insulation

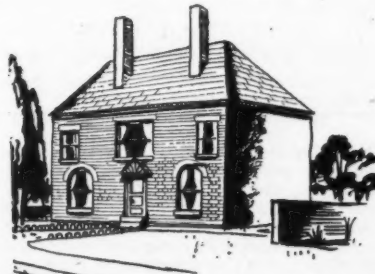
SIR,—In connection with heat insulation of buildings, much is said and written about walls and practically nothing about windows—yet it is surely windows which cause the greatest heat loss? Why not use double-glazed windows, with an air-space between the sheets of glass for insulation? My own past experience with such windows has been very satisfactory, and I have read that it has been calculated that, in an average house in average English winters, the cost of double-glazing of windows is met in seven years by the fuel-saving which they cause—assuming pre-war prices of coal. It would thus seem to be a very paying proposition in all buildings except the most temporary.

PETER A. DANNENBAUM,
Twickenham Student of industrial design

Necessary

SIR,—Those who part with £1 annually in order to be permitted to attach the label architect to themselves in connection with their work, may be interested in the following:—

- (1) A short while ago I was working as an architectural assistant.
- (2) My employer departed from the agreed conditions of service.
- (3) I accepted the departure on the condition that I should henceforth be designated in accordance with the noun-term architect, to which I was by Law entitled.
- (4) My condition was refused, but my services continued to be accepted. The departure was persisted in.
- (5) I claimed £1 as an annual expense against otherwise taxable income.
- (6) My claim was refused because registration was not a condition of my service.
- (7) I informed the Inspector of Taxes that registration was a condition of my service because I had made it so, and because my employer continued to accept my services.
- (8) The Inspector thereupon accepted the fact that registration was a condition of my



A lesson in proportion from *The Adventure of Building* by Clough Williams-Ellis; reviewed by Astragal above. The drawings are by Geoffrey Robson.

REPAIRING AND CLEANING THE TAJ MAHAL



The Taj Mahal has recently been cleaned and repaired, for which purpose a strange scaffolding mainly of bamboos was erected round the dome. A general view is shown on page 140. Top, inside the spiral ramp formed by the scaffolding. Below left, a new block of marble being inserted to repair a damaged rib in the dome. Centre, mixing the special mortar. Right, a workman discharges cement under pressure into a crevice.

service, but denied that it was a *necessary* condition because I, and not my employer, had made it, so my claim was therefore not allowed.

Reference to the Architects Registration Council has produced the view that "the Inland Revenue Authorities will *necessarily* look to the employer to state whether registration as an architect is a *necessary* condition of employment in respect of any particular person on his staff."

David Hume, who, whatever else he may have been, was not a simpleton, once said, "All power, even the most despotic, is ultimately a matter of opinion." "Power," as Hume has here used the word, is the same thing as the Inland Revenue and the Architects Registration Council mean by the words "necessary" and "necessarily." It is the element of connective "force" in our argument and in our understanding of external reality.

Now, why, in the matter of conditions of service, should *opinion* operate in the way it appears to do? Why should an architect be *necessarily* less well suited than an employer (who very often is not an architect) to say when an architect should be called an architect? And why should the Registration Council put the opinion of an architect below that of someone else? Are architects *necessarily* more stupid than other people? Welwyn

MALCOLM MACTAGGART

Through economic pressure, flats, whether tenements or luxury types, have come to be associated with overcrowding, and with the lack of such simple amenities as light, air and space. Thus flats are wrongly regarded as a necessary evil. This article suggests that a well-thought-out and coherent housing and planning policy would allow flats to come into their own. Such a policy should be based on a detailed survey of population and family structure which would reveal for whom flats should be built, how many and where. The author here deals with these questions under Numbers, Distribution, Densities and Types.



FLATS

Their Numbers, Types and Distribution

[by Mrs. Marianne Walter,
A.R.I.B.A., A.M.P.T.I.]

THE NEED FOR A POLICY

Flats seem still to be the bugbear and the special worry of many planning authorities, and the pull of conflicting interests proves too strong for well-thought-out and coherent policies. Hence policies of flat building not only often lack clarity; they are even occasionally of a quite contradictory nature and the means do not always further professed aims.

This position has arisen because in this country "flats" or tenements were established either in those social-climb-down or Commuter Zones which adjoin the higher class commercial areas on the one side, and various high and low class residential areas on the other; zones where, in expectancy of business development, boarding houses and other more temporary users sprang up, zones in which premises were allowed to dilapidate and social control was lax. Alternatively, tenements were built in commercial or mixed commercial areas, where the cost of land might be many times the cost of individual houses on this land, and where the Planning Authority would be pressed hard to permit excessive "crowding" of buildings in order to make a reasonable return of rent possible. This was true even where very high rents were charged, and consequently even luxury flats were denied as a rule the simple amenities of light, air and green space, without which no cottage could be built.

As a result of this kind of economic pressure, flats or tenements have come to be associated with those two distinct types of areas. They have also come to be associated

with the smell of petrol and overcrowding of people, with dark and noisy ground floor rooms, with washing hanging out in dim wells, and children on paved grey yards many stairs away from their mothers.

Public opinion, with such experience of flats, very naturally swung towards the little cottages, even if they were strung out along the so-called by-passes, even if it meant very long journeys to work for father, loneliness for mother and "never come home for supper" daughters and sons.

Flats have come to be regarded as a necessary evil. In London they are an admitted necessity—in Manchester they will be reduced to the absolute minimum. Being regarded as an evil, they have been given far less thought than houses—their distribution is still determined by the very factors that are responsible for the low standard of the earlier flats and tenements. And though Mr. Bevan said (March 26, 1946, House of Commons) that he wanted to avoid the stereotyping of the kind of houses to be built and the kind of housing estates where people of a special kind and income were confined, he has nevertheless cautioned Local Authorities to confine their flats to parcels of expensive land—the kind of areas which I have described. In other words, there is no policy for building flats to satisfy a definite need and to become an integral part of the housing of our towns.

We do not even know the proportions of the different sorts of people who would favour well planned, well serviced flats with a high standard of amenities. We can and must, therefore, make certain assumptions, if we want to have a clear policy—but these assumptions must be adjusted from time to time, as our experience and knowledge increase.

There is also the question of an economic distribution of house room and we should ask in what sorts of dwellings do different groups of people live to-day, and is their way of "dwelling" both agreeable to themselves and economic from the point of view of the community?

The Rotherham Rural Council reported in June, 1946, that although 1,645 families in its area were without homes of their own, 2,575 houses were being used by single people or by married couples without children. There were 501 houses occupied only by single persons and most of these houses had three or more bedrooms. There were in all 843 houses, capable of accommodating eight or more people, which were occupied by one- and two-person adult families. If the

Rotherham RDC were to build 843 flats, it would free as many family houses at the same time.

Though the inquiry is enlightened and quite original, the conditions revealed are far from unique. The following table (No. I) is taken from *When We Build Again* (p. 53) and illustrates the size of houses in Birmingham. The outer ring, built between 1919 and 1939, shows the provision of dwellings of various sizes and is perhaps not so very different from housing in the rest of the country.

To build 1-, 2- and 3-room houses in large numbers is, of course, very wasteful of roads, sewers, cables, gas and water pipes, etc. Small dwellings in large numbers require the building of flats, which at the same densities allow larger open spaces, and economise in public services. But before a sound policy for number, distribution and types of flats can be worked out, a number of questions must be asked and answered.

THEIR NUMBERS

Our first question will be:—

(1) *Who* will require flats, if they are well designed, and built in convenient places?

We are assuming here that single persons, and families consisting of adults *only*, would in the main prefer flats—provided, of course, that their design, lay-out and distribution offer amenities not economically available in small houses. This is a controversial point—for *conclusive evidence is not yet available*. (See my article on *The Right Use of Opinion Surveys in the Fabian Quarterly*, July, 1944, which is an analysis of ten such opinion surveys.) This lack of knowledge has also been recognised by the authors of the Manchester Plan.

We may further assume that a higher percentage of such (purely) adult families will prefer flats in larger urban centres than in smaller towns. (Cultural changes are faster in larger towns, the smaller towns and villages following when an innovation is established beyond doubt—also the space question is less pressing in towns where the countryside is within walking distance.)

The next question would be:

(2) *How many* (purely) adult families are there in the population? And once the numbers have been decided on, the question of type and distribution will logically follow from the first two.

When these two questions have been answered, and not till then, shall we be able to determine the requisite types of flats and their distribution.

The following table (No. II) is reprinted by kind permission of the editor of the *Contemporary Review*, and has been taken from an article on *The Housing Estate* by Marianne Walter (May, 1945). The calculations were based on a population forecast in Broadsheet No. 3, by the Association for Planning and Regional Reconstruction (and this was based on researches by Drs. E. Charles, D. V. Glass, Mr. Lafitte and Prof. Percy Ford.) *It is not meant to be taken as a recommendation*, but it does illustrate the short-comings of a housing programme, that would not carefully take account of the structure of the population it is to serve, providing maybe (see Table No. I) no more than 0.6 per cent. of accommodation for 17 per cent. of the population. The resulting wastage of house room is well illustrated by the Rotherham Survey.

TABLE I

Part of table on p. 52 in *When We Build Again*, reprinted by kind permission of Messrs. Cadbury Bros., Ltd.

		Size of Houses (Rooms per House), Birmingham					
		1-2 rooms	3	4	5	6 and more	—
Outer Ring	Per cent.	0.6	4.0	26.9	49.6	18.9	100
Entire City	Per cent.	0.9	15.7	24.0	41.2	18.1	100

TABLE II

From the Article *The Housing Estate: a Warning* by Marianne Walter
(By kind permission of the Editor of the *Contemporary Review*)

Forecast for the 1950 Population	Suitable Accommodation (excluding Kitchens)	For Every 10,000 Town-dwellers
37.5 per cent. in families with children under 17 (4-5 person families)	5-6 room houses with gardens for 4-5 person families	865 houses (with 5-6 rooms)
45.2 per cent. in families without young children. Of these—		
3, i.e., 15 per cent., may be newly married couples (2-3 person families)	4½ to 6 room houses with gardens for growing families	555 houses (with 4-6 rooms)
and		Total, 1,420 houses
8 people with grown up children, i.e., 30 per cent.	3 to 4 room flats for 2 to 3 person families (adults)	1,100 flats
12.3 per cent. single adults	1-2 room flats for each person (some communal rooms and amenities)	1,230 flats (with 1-2 rooms)
5 per cent. single persons over 65	1 to 2 room flats, some with gardens, resident nurse, some communal rooms and amenities	500 flats or cottage flats
100 per cent. (of persons)		Total, 2,830 flats

But a mere counting of existing families is not a sufficient basis for an adequate programme either. In our sense there is only one useful definition of Family (or as some prefer Household), namely, *such person or persons who wish to live together in a separate dwelling*. From the housing point of view, it does not matter in the least whether an adult person family consists of three unrelated spinsters or whether it consists of sister and brother in their thirties with their old mother. It is the type of persons (and ages) but not their relationship which counts for our purpose. On the other hand, a large related family may want to occupy two or more separate dwellings, if suitable accommodation is available at rents they can afford.

Table No. III shows different estimates of the distribution of families by size, but as it does not distinguish between children and old people, it fails to throw light on the housing needs of these families.

Yet the needs of a family of three or four adults would differ radically from the needs of, say, a widow with three children. Table No. IV shows the distribution of families by sizes, and what proportion of each size-group consists of adult families and the proportion in each group of families containing one or more children. It is based on the Estimates of the City of Manchester Plan (for 1961) which were the result of an extensive social survey and careful researches. The population structure may be characteristic of large industrial urban areas. According to this table (No. IV), the total of adult families in the population may be as high as 65.8223 per cent. in Manchester. Or, if we allow one dwelling per family, approximately 66 per cent. of all dwellings should be designed for families with no young children, while only 34 per cent. of all dwellings would be designed for families with children.

These figures are indeed staggering, but few housing programmes have yet taken account of the actual structure of population, supplemented by a survey of what the voluntary structure of families would be like, given adequate provision of dwellings in the right places. Perhaps the most surprising fact of all is that, for each size of family, there is a greater number of adult families than of families with children, while one would have expected to find more families with children amongst the 3- and 4-person units at any rate.

It would be wrong to assume that all adult families would prefer flats in this country, but if flats offered first-class amenities not otherwise economically available (e.g., restaurant and common rooms, central heating, etc., on the premises), it is quite feasible that as many as two-thirds of adult families

TABLE III

Estimated Families by Sizes (per cent.)

No. in Family	Middlesbrough	City of Manchester Plan (p. 28)		LCC Plan (p. 172)	Census 1931
		1951	1971		
1	4	9.57	11.75	3.5	5.7
2	28.8	24.00	26.12	19.5	20.6
3	27.0	25.7	27.7	27.0	23.7
4	18.2	22.4	23.94	22.5	20.3
5	11.4	9.68	7.68	12.5	13.1
6		4.6	2.34	—	7.8
7		1.9	0.28	—	4.5
8		1.13	0.19	—	2.2
Over		0.95	—	—	1.2
	10.6	100 per cent.	100 per cent.	100 per cent.	

Middlesbrough figures with acknowledgements taken from Broadsheet No. R37, p. 16 (intermediate post-war estimate), Association for Planning and Regional Reconstruction.

TABLE IV

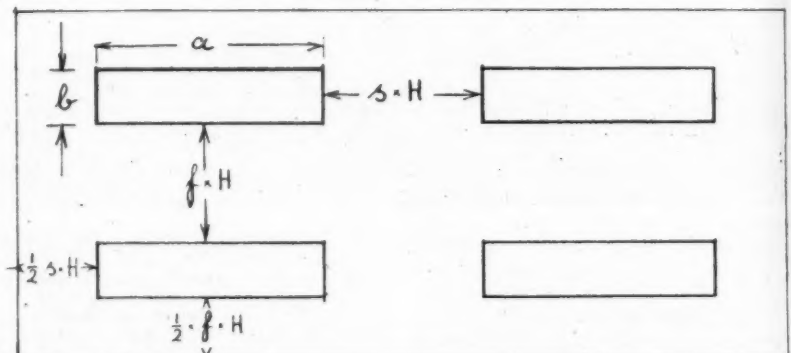
Estimated Families by Sizes (per cent.) for Manchester in 1961

No. in Family	Families Without Children	Families With Children	Totals
1	10.8	1.3(7)	12.1
2	24.5	19.7	44.2
3	15.0	8.9	23.9
4	10.1	2.5	12.6
5	3.6	1.1	4.7
6	1.3	0.4	1.7
7	0.2	0.2	0.4
Over	—	—	0.4
	65.5 per cent.	34.1 per cent.	100 per cent.

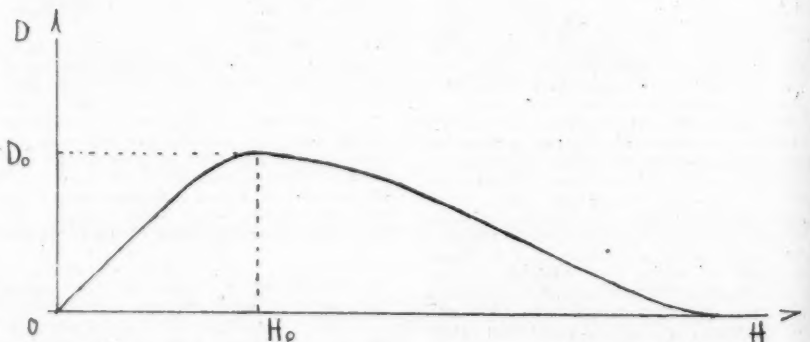
Based on the estimates of the City of Manchester plan.

TABLE V

Illustration of Rado's Formula



Site plan with four building blocks. Density $D = \frac{\text{volume of one block}}{\text{space allotted to block}} = \frac{a \times b \times H}{(a + sH)(b + fH)}$



$H_0 = \frac{1}{A \times B}$, $D_0 = \frac{1}{(A+B)^2}$, where $A = \sqrt{\frac{f}{a}}$, $B = \sqrt{\frac{s}{b}}$, H_0 = optimum height at maximum density, D_0 = optimum density at suitable maximum height, H = height of building.

Floor Space Index = $\frac{\text{floor area of one block}}{\text{space allotted to one block}} = \frac{Nab}{(a+sH)(b+fH)}$, where N = the number of storeys.

may prefer flats—and that would be 44 per cent. of all families in larger urban areas. And it must not be forgotten that this would be the percentage of the *total* of dwellings available in a given area.

DISTRIBUTION

The question of a desirable distribution of flats must be regarded in the light of numbers. If a Planning Authority should decide to provide flats for all adult families, their distribution would aim at providing flats in all parts of their residential areas; but it is more likely that a Planning Authority will consider providing one-third to two-thirds of all adult families with flats—e.g., between 22 and 44 per cent. of all available dwellings. The present writer disagrees with the tendency to provide flats only in areas of mixed commercial and residential development or (inner) reconstruction areas, because she considers flats suitable for many adult families, but only for those. If social facilities will in future be available also in the outer urban areas, there is no reason why spinsters should be forced to live near railway stations and old people's dwellings be removed miles away from the houses of their families. In short, a good mixture of all dwelling types in all parts of the town appears the only rational policy—with the qualification that dwellings for families with children should have priority for the healthiest and pleasantest part of the town, but definitely *not* to the exclusion of any other types of dwellings and people.

DENSITIES

The question of densities, which has so often been allowed to override all other considerations, is here seen to be merely a subsidiary question. In my view, density of flats should be determined by two factors, namely:—

- (a) by the light required, and
- (b) by the open space required.

It would be difficult to correlate the daylight factor directly with density, because there are too many variables. But it can be correlated with the angle of obstruction, and for a given angle of obstruction, plan and layout of the daylight factor can readily be assessed.

Dr. Richard Rado, of Sheffield University, has very kindly worked out for me the following formula:—

$$\text{Density } D = \frac{\text{Volume of one building}}{\text{Space allotted to each building}} = \frac{a b H}{(a + sH)(b + fH)}$$

$$H_0 = \frac{1}{A B}$$

$$D_0 = \frac{1}{(A - B)^2}$$

$$\text{where } A = \sqrt{\frac{f}{a}}$$

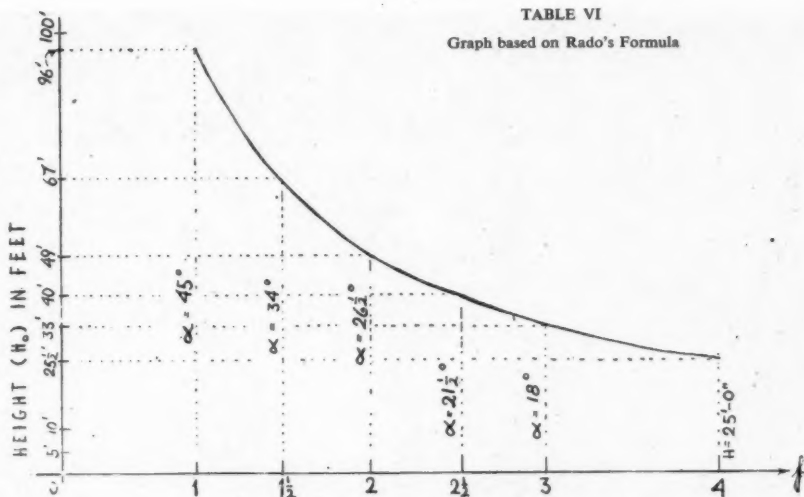
$$B = \sqrt{\frac{s}{b}}$$

H_0 = optimum height at max. D (for a given case).

D_0 = optimum density at max. H (for a given case).

Table No. V illustrates the formula, while Table No. VI shows the height of buildings at which the maximum density is achieved for different factors f , the distance between buildings being $f \times H$ (H = height).

Table No. VII illustrates a practical case, namely, a block of flats 225 ft. long and 30 ft. deep. There are eight 3-room flats per storey and for this particular plan, the table (No. VII) gives the maximum densities for a given angle of elevation. The angle of elevation may be reckoned from the bottom of the first-floor window sills or from the second floor, if the first floor is used for non-residential purposes. Where the plan is less than 30 ft. deep, lower densities would be obtained, but where the plan is deeper, the densities would be slightly higher. It has been assumed that the distance side-



H_0 = height of buildings at which maximum density is achieved for different factors, f , or angle of elevation, α .
Distance between buildings = $f \times H$ (H = height).

TABLE VII

Maximum Densities at Given Angles of Elevation (or Obstruction) Rado's Formula for a Block of Flats 225 ft. long and 30 ft. deep

Angle of Elevation α	f	s	H, in Feet	No. of Storeys	Flats per Acre (net)	Floor-space Index
18°	3	2	33	3	30	0.53
21.1°	2½	1.66	40	4	36	0.71
26.1°	2	1.33	49	5	45	0.89
34°	1½	1	67	6	61	0.93
45°	1	1	96	9 or 10	80	1.4

Distance between buildings = $f \times H$. (H = height).

ways may be two-thirds of f , but may not be less than 1f.

What conclusions can be drawn from this table? First of all, it is quite clear (and can very easily be verified) that for a given angle of elevation the density does not increase *ad infinitum* with higher buildings, but that there is a definite height at which the maximum density is achieved and that for increased height, the density falls in a slow curve (see Table No. V). We can further conclude that for good lighting conditions in flats, arranged in parallel blocks, the floor space index should not exceed about 0.8.

The densities given in my examples apply only to the particular plan and where the buildings are of equal height. Where buildings in one area are of different heights and shapes, the densities would be lower—this would also happen where sites are of irregular shapes. It is clear that for the same light conditions densities may vary, and that, where open spaces are of the same size, densities may vary also. Therefore, taken by themselves only, density figures say very little about the amenities of light and open space—and it is light and open space that really matter to people.

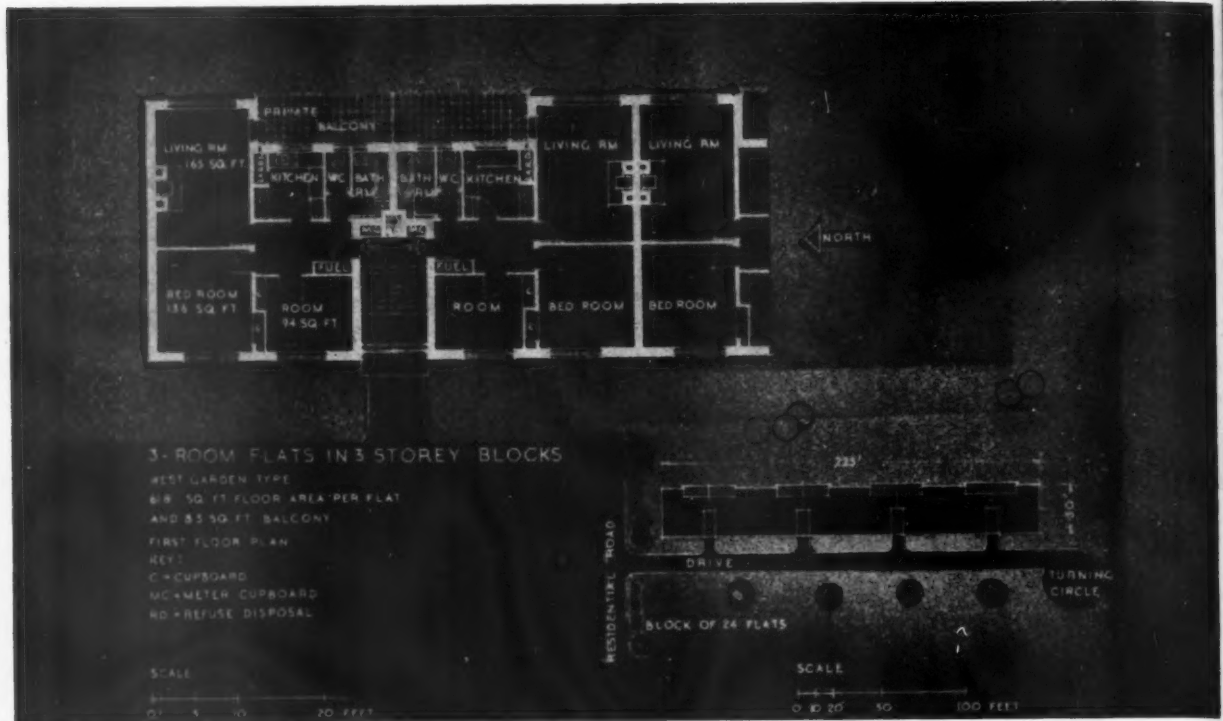
The calculations (Tables V, VI and VII) are based at variance with certain statements which are still appearing even in quite recent works, but the angle of elevation (or obstruction) decreases as the height of parallel building blocks increases—at a fixed density. One writer, for instance, claims (Lucifer in *To-morrow's Houses*, edited by John Madge) that "this effect in housing is most pronounced when the storeys number between three and about twenty." This common error has been avoided by the workers of the Manchester Plan (see *City of Manchester Plan*, p. 249, §1354).

Mr. P. V. Burnett, F.R.I.B.A., in a special article on Insulation (in *The Lighting of Buildings*, MOW Post-War Building Studies No. 12, pp. 158/160), shows that "sites with obstructions higher than about 25° are unsuitable for housing," because of a very sharp

decrease in the possible hours of sunlight whatever the orientation. An arrangement of buildings higher than four to five storeys therefore does not increase the density, if this condition is observed, but would result in a slightly decreased density. However, we must also take into account the size of open private space between buildings, which should be large enough to provide some outdoor amenities, and for these a space of 0.874 acres for the 100 persons (about) living in 45 flats would obviously be inadequate, unless there was an adjoining open space.

The further conclusion is that, for a layout in parallel blocks, it is uneconomic in space ever to build higher than six storeys (except where the lower storeys are shops for which daylight is considered less essential). But the densities obtainable even at an elevation (or obstruction) angle of 18° or 21.1° are considerably above those for houses and may therefore contribute to economising space. It is unfortunate that the maximum densities obtainable at a tolerance angle of obstruction are for buildings between four and five storeys. It is desirable to provide lifts where there are more than three storeys as social surveys show that dislike of their flat comes mainly from tenants in the higher storeys in buildings without lifts (see *The Right Use of Opinion Surveys in the Fabian Quarterly*, July, 1944, by Marianne Walter), but where there are only two flats per staircase per storey, lifts do not pay at these heights. From four storeys onwards stronger construction of wall or skeleton is required, which increases the cost per flat in brick construction, but steel or concrete pays at greater heights only. It is therefore likely that other considerations will often prevail over considerations of maximum densities; it may be desirable to go up beyond six storeys to provide lifts and build in steel or concrete and achieve a better sized outdoor space—although this would mean a slight decrease in density (for a given angle).

These and general lighting considerations lend added force to the development in



vertical blocks, which is recommended "where high densities prevail" (in *The Lighting of Buildings*, see §§ 78-81). The reasons for this recommendation are two-fold:

(a) "It has been observed that the dominantly horizontal types of buildings cast more extensive winter shadows than do the taller and more slender units" (*idem*); and (b) that the more uniform obstruction forms a continuous skyline, allowing less light dispersion than a more serrated and irregular skyline, broken by gaps of light sky, which also reduces the feeling of being enclosed, which occurs easily in the lower storeys of horizontal blocks, arranged in parallel lines. The photos (*The Lighting of Buildings*, facing p. 65) demonstrate this point very clearly and show further that the angle of elevation in the vertical type of development may be much steeper than in the horizontal type.

TYPES

Let us now consider the different types of plans in the light of what has been said—their particular advantages and disadvantages.

(1) *The Cottage Flat*. This type is peculiar to this country, where it has been so well developed and tried out that it is hardly necessary to comment—except that it should be pointed out that central heating and central hot water for old people in such flats is too expensive and that it is more difficult to look after them in their own flat, when they are ill.

(2) *The External Balcony Access Flat* is popular, because one or two staircases and a lift can serve a great number of flats, and are comparatively cheap. But it has heavy drawbacks: (i) The only suitable orientation is for the flats to face SSE, S, or SSW, while the access balconies must be NNW, N, or NNE accordingly. (ii) All rooms adjoining the balcony will be noisy, dark and, except where obscured glass is used, without privacy. Therefore only 1-room or 2-room flats can be planned satisfactorily in this type of flat—a third room would have to adjoin the balcony, which is thoroughly bad.

(3) *The Internal Corridor Flat*. This type, though much used in very densely developed areas, because one staircase and a lift can serve a great number of flats, is altogether

so bad, that in our view it should be prohibited in future.* Its considerable drawbacks are: (i) The orientation can never be satisfactory for all flats. If the blocks run from east to west, half of the flats face north. If the block runs from north to south, the flats face either west or east; hence all these flats receive only half the possible hours of sunshine which they should have. (ii) Cross ventilation is impossible in any one flat (except at corner flats), and in this respect the flats are virtually like back-to-back houses. (iii) In floor area it is uneconomic because three widths of corridors lie between each two flats.

It has, however, certain advantages if it is considered as an hotel plan rather than as a plan for flats. Where internal bathrooms, or shower baths and W.C.s on air ducts are admitted, it is a useful type for the smallest flat, 1-room to 1½-rooms, but it should be permitted for these only, and the block should run from north to south, or else half of the flats will face north, which should be prohibited as the sole aspect for any permanent dwelling.

(4) *The Twin Flat Type* allows each staircase to give access to only two flats on each landing. The chief drawback of this type is the cost of stairs and lifts. A lift in a six-storey block serves only 12 flats. But from the point of view of aspect, ventilation, noise planning and privacy, it is the most satisfactory type yet developed and has been extensively used all over the continent and in Scandinavia.

A variant of this type has been developed first in Russia and now also in Scandinavia.

(5) *The Tripled Flat Type* is cheaper in stairs and lifts, hot water and central heating, as three flats can be served from each landing. If the three flats are put at an angle as shown on the diagram, blocks can be developed to great heights, while giving satisfactory aspect to all flats. It will demand much taste and ingenuity, however, on the part of the architect, as it would appear very difficult to design good looking buildings of this type.

The last type is a group of plans that may be called:

(6) *The Internal Access Flat*. If we wish to apply the recommendations and conclusions

*Except for 1-room flats.

Three-room flats in three-storey blocks, designed for a Community Housing Association by Marianne Walter, of the twin flat type.

of the Lighting Committee of the Building Research Board and consider "slender" high blocks, we find that these are hardly practicable, unless staircase, lift and W.C.s can be arranged centrally, as in Holland, Sweden, US, and other countries. The present writer thinks that for this type of flats and one-room flats of the Internal Corridor Flat type, the Bye-laws in respect of direct light in W.C.s and bath rooms might be relaxed. The height of an air column in an air flue adjoining W.C.s and bath rooms for ventilation provides a considerable up-draft (due to the difference in temperature at the bottom and top of the column), which makes this form of ventilation perfectly satisfactory.

This type of development can also have advantages where the densities are low. A lift becomes an economic proposition, as is the central staircase. Central heating, hot water supply, and other plumbing are cheaper than in horizontal blocks, a communal restaurant and common rooms can more easily be provided indoors—steel and concrete construction becomes more economic, and, perhaps most important of all, the size of the open space is much greater and far more attractive than with other types; there is hardly a patch of ground where plants would not grow well owing to lack of light—as is the case with horizontal blocks running from east to west (such as the external balcony across flat type).

The obvious danger of this type of development is the difficulty of good orientation. Diagrams D, E, and F indicate the orientation of the principal windows in variations of this type. In the case of plan E and F, good orientation of main windows and balconies is more easily achieved. Plan E especially offers opportunity for different sized flats in the same building, but

they are a little less economic than plan D. The daylight curves for this type of development are considerably better than those of the hollow block plan—at the same densities. Yet the latter is still to be seen in some quite recent town plans.

Diagram G illustrates the need for keeping the east and west arms of a cruciform building short. The winter shadows in plan G are better than in plan D, but the flats in the northern arm receive fewer hours of sunlight than do any of the others.

Diagrams H and K illustrate a plan where only half the number of flats are served from one staircase and lift per storey, as compared with plans D and E. But two sides of each flat have an unobstructed sky, and good light conditions are more easily obtained.

Balconies. One last word about balconies might be added. The lately much publicised Swedish flats have balconies which are not as suitable for the English climate. Balconies should comply with the following requirements, which are, however, very difficult to satisfy.

(1) All but kitchen balconies should be sunny and sheltered against the main wind direction.

(2) To obtain good light conditions in living rooms and kitchens underneath, they should not overhang the main windows beyond a maximum angle of 45° (measured from the window sill), and this angle should be reduced for very deep rooms, unless there are also unobstructed windows on the same or other wall. Wherever a balcony overhangs a window, the underside should be painted white.

CONCLUSION

To sum up, we should consider a detailed survey of the population, the family structure and trends as the *sine que non* of a sound housing policy. It might be of interest to note that Mr. D. E. E. Gibson, F.R.I.B.A., city architect of Coventry, estimates the cost of such a survey for Coventry at £3,000.

On the basis of such a survey it can be decided (amongst other things) for whom flats shall be built, how many, and where.

The lay-out and types chosen will depend on sunlight considerations in the first place—for this is a primary health factor—and, in the second place, on the ground space and desired services.

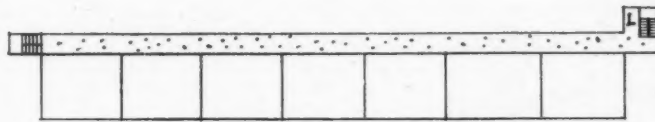


DIAGRAM A. *External balcony access type.*

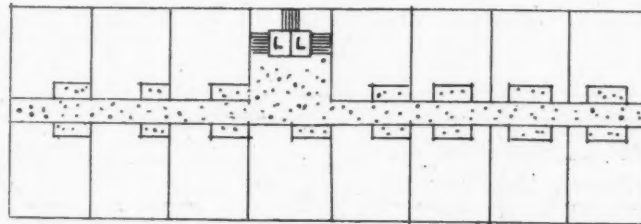


DIAGRAM B. *Internal corridor, flat type.*

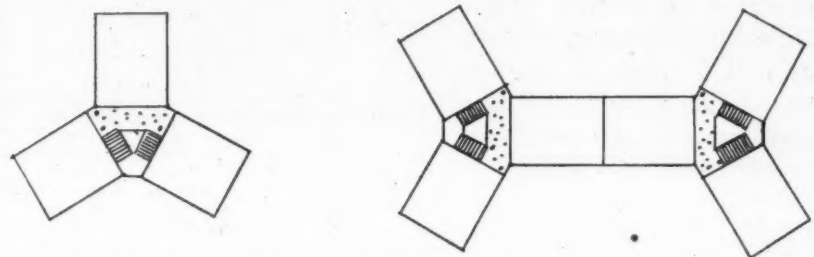


DIAGRAM C. *The triple flat type; individual plans vary with aspect.*

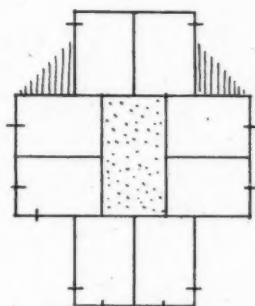


DIAGRAM D.

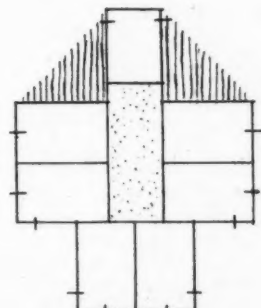


DIAGRAM E.

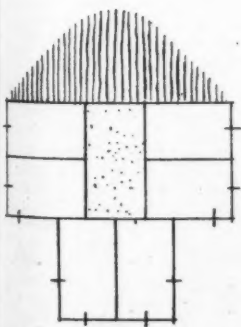


DIAGRAM F.

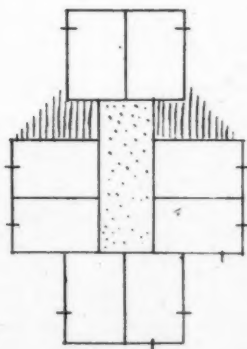


DIAGRAM G.

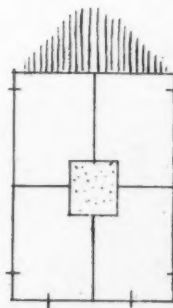


DIAGRAM H.

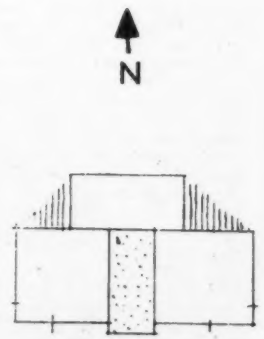
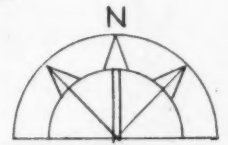


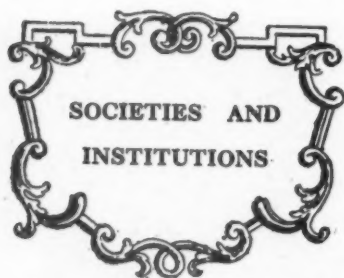
DIAGRAM K.



VARIATIONS OF ASPECT



Diagrams D-K show variations of the internal access flat types; the vertical hatching shows winter shadows and the dotted hatching corridors and stairs; main windows are marked by strokes.



Speeches and lectures delivered before societies as well as reports of their activities, are dealt with under this title, which includes trade associations, Government departments, Parliament and professional societies. To economize space the bodies concerned are represented by their initials, but a glossary of abbreviations will be found on the front cover. Except where inverted commas are used, the reports are summaries, and not verbatim.

RIBA

W. G. Holford

January 28, at 66, Portland Place, W.1.
Talk to the RIBA on NEW TOWNS by
Professor W. G. Holford, M.A.,
A.R.I.B.A., M.T.P.I.

W. G. Holford: The social basis of our present New Towns is to be found in the part they can play in receiving families decentralised from the big concentrations, while these urban centres are themselves being redeveloped.

New towns may owe their origin to any one or more of a number of causes; the overflow of congested cities, the exploitation of mineral wealth, feudal dependence, military needs, or the pioneering spirit seeking a new field to colonise. Their direction may be autocratic, democratic or even technocratic. Ours, at the moment, are largely bureaucratic, for the good reason that administrative decisions—once policy is determined by Parliament—are becoming more and more the responsibility of Government Departments, and of their agents the Public Corporations, who possess as a rule a greater degree of managerial freedom. But whatever their origin, provided always that they are shaped by a conscious effort of will, the results are architecture. By architecture I mean the skilled expression of a social fact in terms of buildings, landscape and utilities—a design crystallising an idea.

It is so often said, nowadays, that social experiment should not be dominated by architectural conceptions; as if architecture and society were forces of the same kind that could somehow come into flat opposition. While it is true, as Mr. Churchill said but recently, that "we shape our buildings, then our buildings shape our lives," yet initially the new buildings and the new towns that we create are reflections of our own society.

We have to establish the social sanctions before we can revive a social architecture;

and without a social architecture we cannot hope to reach the higher achievements of civic design. The Greeks developed the megaron from the small house, and the temple from the megaron; and although the structural parallel no longer holds good, the social principle still applies. I take it that something akin to this feeling animates Sir Charles Reilly in the creation of his greens, and Mr. Thomas Sharp in his approach to village planning. Both have sketched a social programme, and both pave the way for designers who will give the programme architectural form in the landscape.

The broad principles of our new towns are very much the same all over the world. There is the same attempt everywhere to define the maximum population, or at least the maximum limits of spread, in relation to the surrounding country; there is the same range of residential type, from small single, semi-detached and terrace houses, to blocks of maisonnettes or flats; there is the same care to provide opportunities for industrial, agricultural and service employment within easy reach of a large proportion of the inhabitants—both men and women; there is the same careful placing of schools and public buildings with their attendant open spaces; in a word, there is the same general concept of the residential neighbourhood.

I cannot myself see any practical advantage in running down this basic idea, on the ground that it is petty and insufficient, or that it is merely a new way of creating dormitories, or segregating cranks, or that it is unnecessary to build new towns as well as adding to those which history has already given us. Quite apart from occasions such as the present, when population movements demand them as one of the ways of attaining a more rational pattern of town and country, the impulse towards the creation of new forms and fabrics of living is one of the oldest, and can be one of the noblest of human activities.

It follows, I think, that where the basic idea is sound and universal, the individual manifestations should spread into the most fertile variety. National and regional differences can be accentuated by every advantage of local circumstance and character so that even in the same area New Towns will have histories, characters and appearances entirely different. No formula, however convenient to the administrators, will ever achieve this variety, it can only be properly secured by plans and designs which are produced in response to particular programmes.

THE NEW PATRONAGE

Sidney Smith once quoted Lord Thurlow as saying, "Did you ever expect a corporation to have a conscience; when it has no soul to be damned, and no body to be kicked?"

This matter of conscience is critical, it seems to me, in the make-up of the New Towns Corporations, even though they are working on behalf of those who, as citizens of the new towns, do not exist for the most part; and even though in ten or fifteen years they themselves will cease to exist as a Development Corporation and turn into a local authority. Conscience is especially needed in the exercise of two functions in particular; that of drawing up a planning programme which is in effect a rational speeding-up of an otherwise slow and piecemeal process of local growth, and that of setting terms of reference for the technicians. Right at the start there is a technique of administration and there is a technique of design; and both have to be acquired rapidly. For the relationship between the committee of clients and the team of designers is a most important one. It is precisely in the adjustment of the design control that I suggest our touch is least certain. The art of commissioning work

from scientists is being, by force of circumstances, revived; the art of commissioning work from artists is sadly in need of revival.

The primary difficulty is that no committee can design a building or lay out a topographical plan or sketch a perspective. Only the most disciplined of lay committees can make a constructive criticism of a design; and then only in the terms of its success or otherwise in measuring up to standards already understood. A new metaphor of representation, and expression of personal taste, what Bacon called "some strangeness in the composition," is so often confused with the failure to reach those standards. And dullness succeeds.

ORGANISATION

The pattern of organization that seems likely to emerge for most of the New Towns is something like this. I must assume a common framework so as to show how the responsibility for design fits into it. But there will, of course, be variations as between town and town, and in any case it is a matter entirely for the Corporations to decide. But there must clearly be a sphere of policy-making at the top, which covers a whole number of personal relationships as well—for example, with the local authorities, the departmental offices, and the chief officers of the Corporation. There must also be a central link between the Board and the office, in the shape of a chief executive officer or director.

At this point the organisation must spread fairly widely, in order to cover a number of different activities which can be broadly grouped again under the twin functions of technique and administration. The former will include financial, estate and welfare management, legal and public relations, and establishment; the latter all the technical operations from town planning and 'ayout, through architecture and civil engineering, to detailed subjects such as horticulture and heating systems. All these technical and administrative functions and requirements have to be gathered together in the process of actual construction, which will involve contracts and supervision, labour relations, plant, material, transport and maintenance.

The fusion of programme and design, which is the creative task of physical town planning, can only take place at the centre, as a result of innumerable imitations and reactions on the part of the responsible officers. This is no idle figure of speech, nor is it a formal one. If any of the technical officers ignore the demands of the programme or fail to test out their designs—on a factual rather than an aesthetic basis—with their opposite numbers on the management side, their work will be useless, however ideal it may be in conception. Equally, if the officers concerned with finance, administration or management, fail to draw up clearly the conditions and requirements for the building programme, or having done so impose their own ideas of taste or convention on the designers, the result will be mediocrity or worse.

GOOD DESIGN

The real issue, it seems to me, in getting good design, is to know how to use the designers at every stage of the procedure. They will have to do a lot of listening and considerable asking of questions before they are in a position to do preliminary sketch layouts, then detailed layouts, then small-scale plans of buildings, then contract drawings and quantities. But having reached any stage at which imagination and imitative skill can usefully be turned onto a problem, the designers should be given a free hand. The difficulty is that in a complex job of this character they cannot be given a free hand for very long at a time. So it is all the more important that when the opportunity arrives they should be enabled to make the most of it.

View from the south; the entrance door is on the left.



HOUSES

FOR THE LOTHINGLAND RDC, SUFFOLK
DESIGNED BY TAYLER AND GREEN

These houses were built in 1943 and represent an attempt to avoid the dreariness of the average council house while difficulties of materials and labour necessitated a rigid economy. The architects were dissatisfied with the standard solutions and determined on a fresh approach both to the planning and appearance.

PLANNING : One entrance only is provided, opening off a large porch connecting the house to the store. The central hall gives access to each unit of the plan. The tenants expressed a preference for the single entrance and, indeed, in country districts the

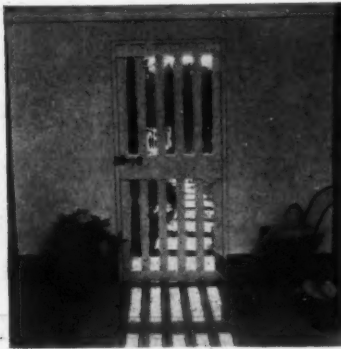
front door is seldom used. While the living room and parlour have separate entrances from the hall, the two rooms may be used as one by opening the double doors between them. The kitchen, with no outside door, is no longer a passage for the whole household. All the bedrooms are provided with wardrobe cupboards and there are separate heated linen and drying cupboards.

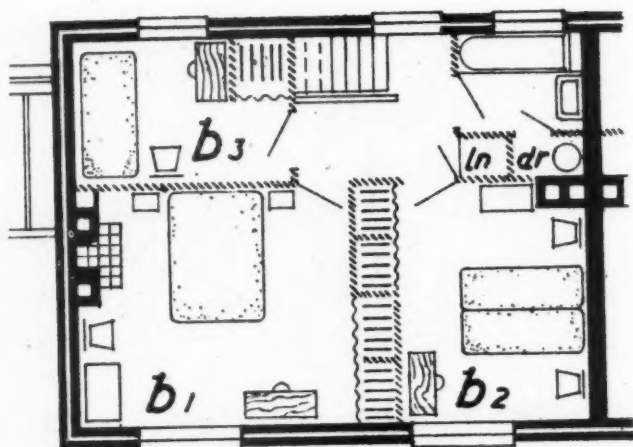
APPEARANCE : The usual box-like look of the bye-law house has been avoided by reducing ceiling heights to 7 ft. 6 in. and connecting each pair of houses with the covered entrance and the

store. The low pitch allowed by the use of asbestos cement roofing further strengthens the horizontal lines.

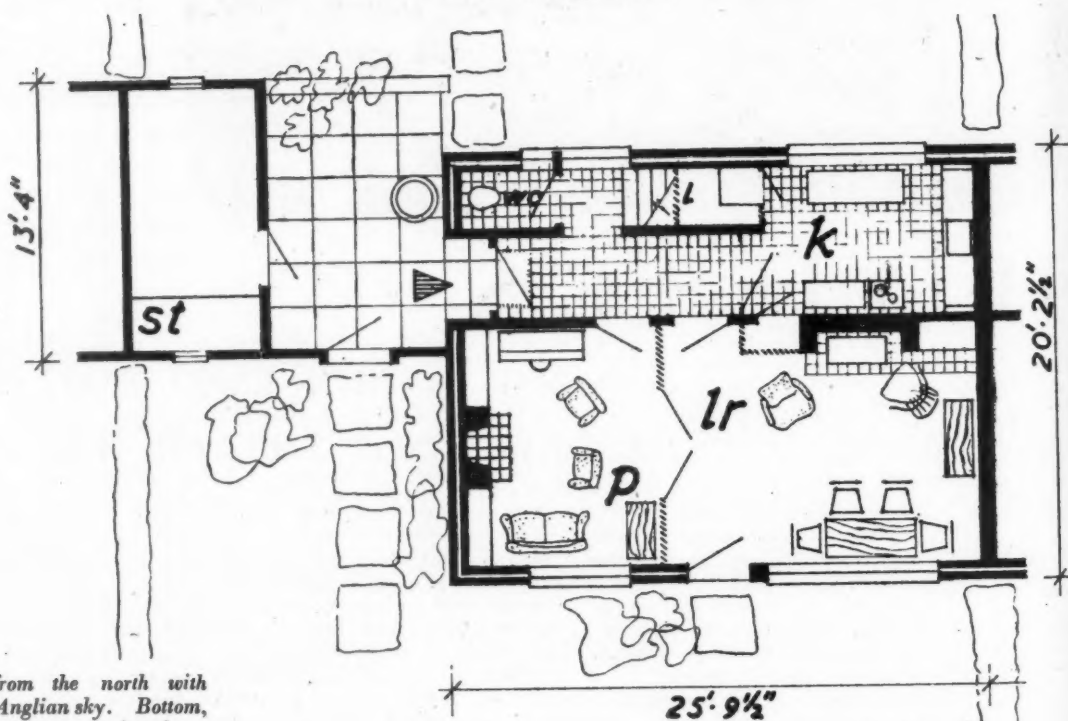
INTERIORS : The furniture shown in the photographs was arranged by the architects, but there is ample room for the more usual heavier conventional furniture. The floors are red quarry tiles, the walls are of rough plaster distempered, the pine doors being flat varnished.

Below, right, north exterior detail of entrance yard. Centre, door to entrance yard from inside; and left, from outside.





FIRST FLOOR PLAN



GROUND FLOOR PLAN

[Scale : $\frac{1}{2}$ " = 1' 0"]

Top, view from the north with typical East Anglian sky. Bottom, right, living room interior; quarry tile floor, rough plaster walls—distempered, paintwork in white. Centre, exterior from the south showing the two pairs of houses. Left, looking into the parlour from the living room. The doors are pine, flat varnished.



This newly arranged Technical Section will now draw together in a comprehensive whole all the technical material in the Journal. It will cover Information Centre, Questions and Answers, Current Technique, The Industry, Prices, special technical articles and so on, and will, from time to time, contain editorial notes on technical trends and developments.

TECHNICAL SECTION

The Architects' Journal

CLASSIFICATION FOR INFORMATION CENTRE

- | | |
|--|---|
| <p>1 SOCIOLOGY
<i>Human needs, family structure, population statistics, social relationships</i></p> <p>2 PLANNING : GENERAL
<i>History and evolution, legislation, administration, survey technique, comprehensive publications</i></p> <p>3 PLANNING : REGIONAL & NATIONAL
<i>Re-planning and new planning, surveys, planning schemes</i></p> <p>4 PLANNING : URBAN & RURAL
<i>Re-planning and new planning, surveys, planning schemes, site planning, zoning</i></p> <p>5 PLANNING : PUBLIC UTILITIES
<i>Transport, power, water supply, main drainage, retail and other distributive services</i></p> <p>6 PLANNING : SOCIAL & RECREATIONAL
<i>Health, education and other community services, recreation, preservation of amenities</i></p> <p>7 PRACTICE
<i>Professional practice, office management and organization, model making, draughtsmanship</i></p> <p>8 SURVEYING & SPECIFICATION
<i>Land surveying, quantity surveying, estimating costs, specification notes</i></p> <p>9 DESIGN : GENERAL
<i>Architectural design generally, design data, comprehensive publications</i></p> <p>10 DESIGN : BUILDING TYPES
<i>Administrative, industrial, domestic, commercial</i></p> <p>11 MATERIALS : GENERAL
<i>Comprehensive publications, comparative data, legislation</i>
<i>(This section includes products)</i></p> <p>12 MATERIALS : METAL
<i>(Including products)</i></p> <p>13 MATERIALS : TIMBER
<i>(Including products)</i></p> <p>14 MATERIALS : CONCRETE
<i>(Including products and allied products)</i></p> | <p>15 MATERIALS : APPLIED FINISHES & TREATMENTS
<i>Paints, stains, plasters and renderings</i></p> <p>16 MATERIALS : MISCELLANEOUS
<i>Glass, bitumen, plastics, fibreboards, plaster, stone</i></p> <p>17 CONSTRUCTION : GENERAL
<i>Comprehensive publications, general data, legislation</i></p> <p>18 CONSTRUCTION : THEORY
<i>Statics, principles of design, general design data</i></p> <p>19 CONSTRUCTION : DETAILS
<i>Foundations, floors, walls, roofs</i></p> <p>20 CONSTRUCTION : COMPLETE STRUCTURES
<i>Buildings, bridges, reservoirs</i></p> <p>21 CONSTRUCTION : MISCELLANEOUS
<i>Demolition, shoring and underpinning, contractors' work</i></p> <p>22 SOUND INSULATION & ACOUSTICS
<i>Physiological data, general design</i></p> <p>23 HEATING & VENTILATION
<i>Physiological data, services, fittings and equipment</i></p> <p>24 LIGHTING
<i>Physiological data, natural and artificial, fittings and equipment</i></p> <p>25 WATER SUPPLY & SANITATION
<i>Fittings and equipment, plumbing and water heating, drainage, minor sewage disposal, hygiene</i></p> <p>26 SERVICES & EQUIPMENT: MISCELLANEOUS
<i>Cooking, lifts, escalators, telephones</i></p> <p>27 FURNITURE & FITTINGS
<i>Furniture, soft furnishings and fittings such as bolts, curtain rails</i></p> <p>28 MISCELLANEOUS
<i>Aesthetics, sculpture, painting and allied arts</i></p> |
|--|---|

The function of this feature is to supply a digest of, and commentary on, current information of interest to architects as recorded in technical publications and statements of every kind throughout the world. Items are prepared by specialists of the highest authority who are not on the permanent staff of the Journal, and views expressed are disinterested and objective. The Editors welcome information on all developments from any source.

INFORMATION CENTRE

4.2 planning: urban and rural PLANNING SCHEMES

(Town Planning in Canada. Architects' Journal Physical Planning Supplements: August 15, 1946: pp. 117-120, and October 10, 1946: pp. 261-263.)

Planning in Canada: Saint John, New Brunswick, and Greater Winnipeg, Stratford, Ontario. Illustrated reviews of reports.

Saint John, New Brunswick, and Greater Winnipeg:—

Preliminary report on Saint John Master Plan, prepared by Town Planning Commission. Development of two badly overcrowded areas under slum clearance programme. One area to be freed partly for industry and partly for recreational purposes. Other area to be redeveloped for low-rent housing. Proposals for new residential sites based on neighbourhood unit principle in anticipation of population increase. Improvement of traffic circulation. Provision of additional industrial sites.

Development proposals for Greater Winnipeg contained in First Annual Report for 1945, prepared by Joint Executive Committee on Metropolitan Planning for Greater Winnipeg. Comprehensive list of survey work undertaken. Preliminary Master Plan studies carried out to date. Schedule of priorities in connection with streets and districts. Description of special advance studies, and some residential layouts attempting to overcome grid-iron pattern.

Stratford, Ontario: Proposals of the Planning and Development Council:—Review of Master Plan for development of city, prepared by Dr. E. G. Faludi. Anticipated population growth from present 18,000 to 25,000 in 1975.

10.1 design: building types FARM BUILDINGS, USA

Farm Buildings. John C. Wooley. (McGraw Hill. 1946, second edition, 17s. 6d.)

Comprehensive American textbook by the Professor for Agricultural Engineering at the University of Missouri. Chapters on optimum investment in building, balancing building needs and farm organization, livestock and poultry buildings, air-conditioning, structural design, storage of crops. Useful owing to its systematic approach and the reports of many experiments.

The book is written for students and in the traditional textbook manner, with questions and tests at the end of each chapter. It has a breadth of approach, which no English book written this side of the Atlantic can emulate—not having the laboratory and experimental resources of a Midwestern university to draw on. Although the book is definitely a treatise on American farm buildings, it is as well to keep in mind that the United States contain practically every possible range of climate, and that at least one of its four climatic zones—though not the one with which the author of the book is most familiar—resembles closely our own conditions. Its main attraction is: its refreshing effectiveness in approaching quantitative problems which have never been adequately tackled in this country; such as a precise answer to the question of just how much money per cow may safely be spent on a building, or what annual expenditure on buildings are permissible and compatible with a certain type of farm. Where classifications are lacking the author has the courage to introduce some of his own. Unfortunately for the reader who wants to use the book as a ready reference, the figures are based on American rates of wages, taxes and insurances, but for all that, with the necessary adjustments, there is a wealth of ideas, information and, at least approximate quantitative data, certainly enough to make the book a valuable reference work.

12.1 materials: metal REINFORCEMENT FOR CONCRETE

Deformed Bar Reinforcing Steel in Sweden. Erling Reinius. (The Engineer, December 6, 1946, pp. 508-9.)

New type of high tensile steel with increased bond, developed in Sweden during the war and used in large quantities. Offers technical improvements and economic advantages.

Before the war a great part of the reinforcing steel used in Sweden was imported from Germany, but in the course of the war this stopped. To overcome the shortage of reinforcing steel it was suggested that steel with a higher yield point should be used, and it was decided to use a coal steel with a yield point of 57,000 lb./sq. in. The shape of the bars was so determined that a considerable improvement of bond as against plain bars was obtained. This resulted in a great reduction in the width of cracks. On the basis of many tests the Concrete Commission of the Civil Department approved the new deformed bar in October, 1942, and a permissible stress of 28,500 lb./sq. in. was introduced.

During the years 1942 to 1945 about 40,000 tons of deformed steel was delivered and a great number of buildings have been reinforced with such bars without any inconvenience whatsoever. In most of these buildings a permissible stress of 30,000 lb./sq. in. was adopted. The saving in cost is considerable as compared with mild steel bars. E.g., in the construction of a power station 550 tons of deformed bars were

exclusively used, and if plain bars had been used, the steel quantity would have amounted to 800 tons. The saving in cost was about £6,000.

13.3 materials: timber TIMBER READY RECKONER

The Ware-Petrograd Standard Ready Reckoner. Compiled by Scientific Computing Service, Ltd. (Published by W. C. Ware and Sons, Ltd., 11, Manett Street, W.1. Free.)

Tables showing fit, run per Petrograd standard for timber of various sizes. Useful for calculating timber quantities, particularly for licence purposes.

16.4 materials: miscellaneous ASPHALT TILES

Asphalt Tiles for Paving and Flooring. Mineral Aggregate with no Inherent Bitumen. B.S.S. 1,325:1946. (British Standards Institution. 2s. 0d.)

Asphalt tiles primarily for industrial purposes and paving of carriageways; coloured tiles excluded. Details of materials. Dimensions 9 in. x 4½ in. in thicknesses of ½ in., 1 in., 1½ in., 2 in. and 2½ in. Manufacture, analysis of composition, inspection, sampling and testing. Recommendations for application, pending completion of Code of Practice.

24.8 lighting AERODROME LIGHTING

Guide to Civil Land Aerodrome Lighting. B.S.S. 1,332:1946. (British Standards Institution. 2s. 0d.)

Guide to position, type, colour, and size of lighting for civil aerodromes and surrounding obstacles. Essential to architects working on subject.

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

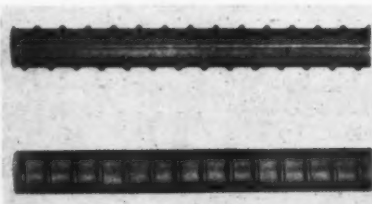
QUESTIONS AND ANSWERS

2882 COST OF FLATS

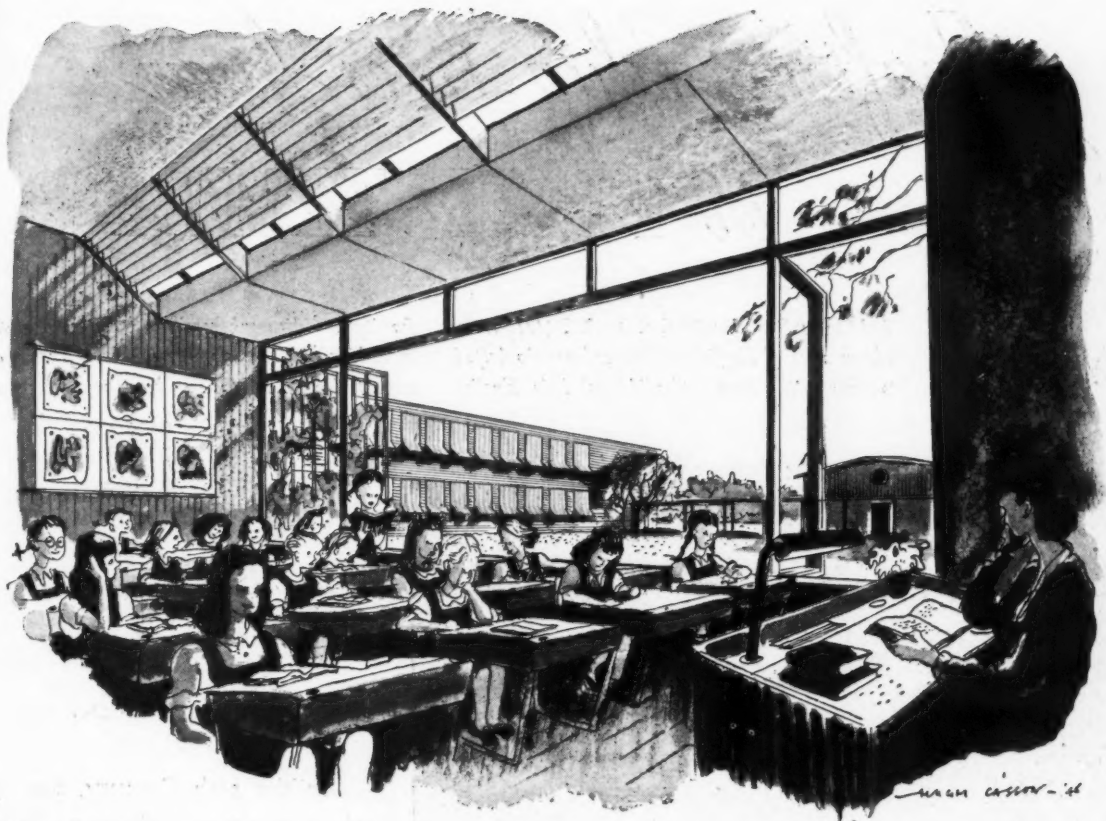
Q What is a fair estimate per cubic foot or square foot for three-storey flats with flat roof. A very small block is proposed.

A We would expect blocks of flats in the London area, of the type being erected by local authorities, to cost approximately 2s. 8d. per ft. cube at the present time. This represents the contract price, which will be subject to adjustment for fluctuations in rates of wages and prices of materials, etc.

A very small block needs special consideration and its cost must depend upon a number of factors such as location, accessibility and amount of repetition, apart from the question of construction and finish.



Deformed bar reinforcement developed in Sweden.



ZINC at St. Monica's

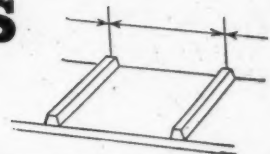
Inside St. Monica's they're all hard at work, pigtailed heads industriously bent over their exercise books, working out the values of x and the significance of πr^2 . But the outside of St. Monica's is an example of other problems worked out in practice.

Take the roof for instance. The architect decided on a flat roof. But what was it to be covered with? For many reasons he chose zinc. Zinc is tough; the worst excesses of the English climate make no impression on it. It is economical because it is long-lasting, easy to lay, and needs little maintenance. It is malleable, and suited to every size

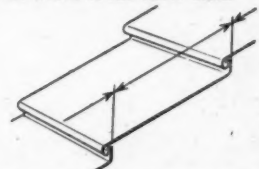
and style of building. So Q.E.D., as they say at St. Monica's, he chose zinc.

The diagrams on the right show details of the laying of sheet zinc roofing on a flat roof, the spacing of rolls and drips and the minimum fall.

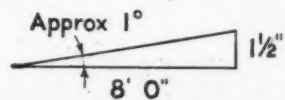
This is only a glance at a single method of zinc roofing. There are many others, and many other uses of zinc. If you want any information or advice on any aspect of the use of zinc write to us — Z.D.A. We are a non-trading organisation and will be glad to advise you free of charge and to put you on our mailing list of books, booklets and information sheets.



How the rolls should be spaced — at centres $1\frac{1}{2}$ inches less than the width of the sheet used.



How drips on standard 8-ft. sheets should be spaced at about 7 ft. 6 in. centres, the rest being taken up with folds and bends.



The minimum fall for a flat roof, which should be not less than $1\frac{1}{2}$ in. in 8 ft.

ZINC DEVELOPMENT ASSOCIATION

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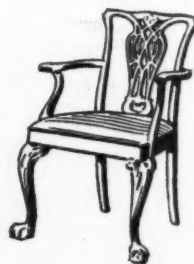
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furniture. His work combines grace with solidity, while his chair backs are among the most pleasing and elegant things that have ever been done in furniture.



*A Modern Office interior
Architects: Laurence M. Gotch & Partners
Contractors: Johnson & Appleyard Ltd. (Sheffield)*



A typical Chippendale Chair

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The following Tables summarise the official statistics on housing progress, the production of building materials and the labour position.

HOUSING, MATERIALS AND LABOUR

by Ian Bowen

HOUSING

TABLE I PERMANENT HOUSES IN GREAT BRITAIN: Cumulative Totals

	Begun			Finished		
	Local Authorities	Private Builders	Total	Local Authorities	Private Builders	Total
To Dec., 1945	20,409	—	—	1,637	1,031	2,688
1946: Jan. ..	25,708	(8,000)	(33,000)	1,912	1,262	3,174
Feb. ..	32,638	(16,000)	(48,000)	2,063	1,756	3,819
March ..	43,431	(24,000)	(67,000)	2,531	2,748	5,279
April ..	55,504	29,077	84,581	3,305	4,086	7,391
May ..	69,591	35,597	105,188	3,939	5,854	9,793
June ..	82,178	40,267	122,445	5,059	7,945	13,004
July ..	97,126	44,878	142,004	6,530	10,911	17,441
Aug. ..	112,491	48,841	161,332	8,335	13,670	22,005
Sept. ..	130,705	52,218	182,923	10,902	17,394	28,296
Oct. ..	150,882	55,800	206,682	14,570	21,177	35,747
Nov. ..	165,447	58,581	224,028	18,459	24,639	43,098
Dec. ..	179,051	61,362	240,413	24,101	28,180	52,281
Increase of Dec. over Nov. *	13,604	2,781	16,385	5,483	3,536	9,019
Total at December 31, 1946—						
Local Authorities ..	..	..	..	Under Construction	154,950	24,101
Private Builders ..	..	..	..	Finished	33,182	28,180
War-destroyed rebuilt ..	..	..	..		14,263	5,857
Total ..	..	..	..		202,395	58,138

TABLE II TEMPORARY HOUSES IN GREAT BRITAIN: Cumulative Totals

	Slabbing Begun	Slabbing Completed	Erection Begun	Erection Completed
To Dec., 1945	61,008	39,998	22,932	9,376
1946: Jan. ..	67,444	44,817	28,297	12,751
Feb. ..	74,554	52,262	33,572	16,718
March ..	81,591	58,980	39,540	21,182
April ..	89,743	67,897	47,374	26,199
May ..	99,142	76,646	54,871	30,637
June ..	103,322	84,594	61,472	35,139
July ..	108,374	92,100	69,057	40,425
Aug. ..	114,016	98,744	76,519	47,176
Sept. ..	117,422	103,700	83,725	57,040
Oct. ..	122,742	109,368	93,201	70,121
Nov. ..	128,258	112,837	98,650	80,135
Dec. ..	131,646	115,711	103,796	92,306
Increase of Dec. over Nov. *	3,388	2,874	5,146	12,171

Temporary Houses Under Construction at December 31: — 11,490

TABLE III NON-TRADITIONAL PERMANENT HOUSES (ALREADY INCLUDED IN TABLE I) GREAT BRITAIN: cumulative totals

	Begun	Completed
To end July, 1946	12,040	638
Aug. ..	15,395	903
Sept. ..	18,818	1,304
Oct. ..	23,887	1,972
Nov. ..	28,285	2,625
Dec. ..	31,947	3,521

Non-traditional Houses Under Construction at December 31: — 28,426.

* The figures published in the Housing Returns are not exactly reconcilable with those in the Monthly Digest of Statistics; hence some discrepancies.

TABLE IV HOUSING ACCOMMODATION PROVIDED OTHERWISE THAN BY NEW BUILDING: Cumulative Totals

	Unoccupied War-Damaged Houses Repaired	Conversions and Adaptations	Emergency Huts	Accommodation for Government Employees
To end June, 1946	85,134	19,341	3,412	—
July ..	91,276	22,014	3,467	—
Aug. ..	95,638	23,784	3,480	—
Sept. ..	99,087	26,345	3,480	175
Oct. ..	102,307	29,010	3,480	183
Nov. ..	105,228	31,676	3,480	193
Dec. ..	107,898	34,710	3,480	193
Increase of Dec. over Nov. *	2,670	3,034	Nil	Nil

BUILDING MATERIALS

TABLE V PRODUCTION AND STOCKS

	Unit	December, 1945		July, 1946		December, 1946	
		Pro-duction	Stocks	Pro-duction	Stocks	Pro-duction	Stocks
Cement ..	th. tons	387	262	682*	240	517†	—
Bricks ..	millions	114	990	305	329	353	—
Roofing materials							
Clay tiles ..	th. squares	19.5†	58.5	53.8*	33.1	60.8	—
Concrete tiles ..	"	5.4†	38.2	38.4*	31.0	45.5	—
Slates ..	"	19.4	55.1	22.0	37.4	—	—
Asbestos cement sheeting ..	th. tons	19.3†	18.6	32.2*	19.2	24.4†	—
Roofing felt ..	th. rolls of 24 sq. yds.	146	146	203*	120	210†	—
Ceilings, Wall Linings and Floorings							
Plaster gypseous	th. tons	12.0†	—	17.1*	—	15.6†	—
Plasterboard ..	th. sq. yds.	2,329†	418	2,979*	395	3,002†	—
Tiles							
Glazed ..	th. sq. yds.	284	—	500	—	496	—
Floor (Clay) ..	"	69.5	—	95.8	—	144.9	—
Pipes (Water, Gas, etc.)							
Lead ..	th. tons	3.62	—	4.35	—	3.26	—
Copper ..	"	1.72	—	2.59	—	2.70	—
Soil Pipes ..	"	0.69	—	1.30	—	1.84	—
Drain Pipes, Salt Glazed ..	"	20.3	—	30.3	—	37.4	—
Rainwater Goods, Rainwater Pipes, Gutters and Fittings							
Cast Iron and Pressed Steel	th. of equiv. tons of cast iron	1.18	—	3.14	—	3.70	—
Asbestos Cement Goods	th. tons	1.03	—	1.22	—	1.41†	—
Manhole Covers and Frames	th. of equiv. tons of cast iron	1.56	—	3.04	—	2.68	—
Metal Windows ..	Mn. ft. sup.	1.54	—	2.81	—	—	—
Sanitary Fittings							
Baths ..	thousands	12.2	—	23.4	—	29.7	—
Lavatory Basins	"	23.5	—	81.1	—	79.2	—
Sinks ..	"	39.2	—	49.3	—	55.5	—
W.C. Pans ..	"	53.4	—	89.8	—	86.8	—
Cookers							
Solid Fuel ..	"	3.7	—	10.5	—	18.2	—
Electric ..	"	8.6	—	12.6	—	15.4	—
Gas ..	"	15.1	—	28.9	—	39.9	—
Fires, Solid Fuel ..	"	—	—	49.2	—	55.1	—
Wash Boilers							
Electric ..	"	8.0	—	13.2	—	18.8	—
Gas ..	"	25.6	—	32.0	—	39.1	—
Furnace Pans (Solid Fuel)	"	1.6	—	2.7	—	4.0	—

* 5-week period. † 4-week period. Other figures relate to calendar months.

LABOUR

TABLE VI BUILDING AND CIVIL ENGINEERING LABOUR IN GREAT BRITAIN: Operatives Employed, aged 16 and over

	July, 1945	January, 1946	December, 1946
Total ..	535.0	721.0	943.0
Housing ..	343.9	435.4	621.1
Permanent ..	4.2	34.5	201.2
Temporary ..	14.5	36.8	31.4
Other (sites, repairs, etc.) ..	325.2	364.1	388.5
Other Work ..	191.1	285.6	321.9

The price of a war-time success story

The harsh, inescapable fact is that your Electricity may occasionally be cut off for short periods during the whole of this winter.

This is why

Electricity cuts are to prevent complete breakdown. There just isn't enough plant to supply all the Electricity demanded. The Electricity Industry put everything into the job of winning the war; it was not allowed to provide

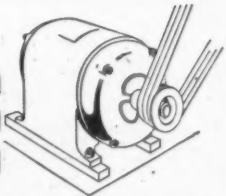
additional power plant for the higher demands that would come afterwards. Inconvenience arising from this shortage is the price that must be paid until the £200,000,000 programme now in hand for the new plant and power stations is completed. Meanwhile, overstrain on war-tired machinery (which has worked for the past seven years at a tremendous pace) is an ever-present danger.

The danger points

Twice a day, five days a week, Monday, Tuesday, Wednesday, Thursday and Friday, come the danger periods. They are between 8 a.m. and noon, and between 4 and 6 in the afternoon. The reasons why they happen then are quite simple: these are the times when industrial needs *plus* domestic needs add up to the biggest daily demand. They are called the PEAK PERIODS.

How you can help

If you hear that Electricity has been cut off during a Peak Period, you will understand straightaway what has happened. People were using too much. The strain on the machinery was too great: breakdown point was being approached. The Electricity engineers had no alternative; they *had* to switch off. Cuts will not happen if everyone helps. During the danger Peak Periods, use Electricity only where it is *essential*. If Plant needs to run only part of the day, operate it between 12 noon and 4 p.m. Such practical help as this will minimise cuts.



**USE
ELECTRICITY
AT
OFF-PEAK
PERIODS
AND HELP TO AVOID CUTS**

Issued by British Electrical Development Association

This feature covers both the production and marketing of new materials and designs of equipment, as well as the general trend of developments within the Building Industry.

THE INDUSTRY

[by Philip Scholberg]

GAS BURNERS

Some months ago I referred to the present fairly widespread use of non aerated or neat gas burners as opposed to the aerated Bunsen type to which we were accustomed before the war. A considerable amount of research work has gone into their development and they have been placed on the market with the main publicity accent on silence, but with no further explanation, even for the technician, of the pros and cons of the two types. I suggested that one of the main reasons for this change was the shortage of maintenance fitters and the ease of servicing the neat gas burner, but there is really quite a lot more to be said.

In the early days when gas was used as an illuminant with the old fish-tail burner it was the lighting value which was standardised, not the therms. The development of the Welsbach mantle and the Bunsen burner transferred the emphasis to heating and the Gas Regulation Act of 1920 produced the therm basis of charging. Various hydrocarbons (valuable as by-products) which had been left in the gas for their illuminating value, were stripped out, and the neat gas burner was almost abandoned for the Bunsen type, so far as cookers and gas fires were concerned.

It must, of course, be remembered, that geysers have always burnt neat gas, the main reason probably being that, with gas consumption at the rate of something like 150 cubic feet an hour, striking back is to be avoided and inaccurate gas-air adjustment could reduce efficiency too far for properly hot water to be obtainable.

Even for gas fires the neat burner has never been completely abandoned, and it was starting to come back before the war, for Radiation's Silent Beam first appeared as far back as 1938, this being a direct descendant of their luminous flame Cobble Beam fire of 31/32.

Although the silence of the neat burner has a good deal of popular appeal, its major virtue is reliability. I have referred before to the fiddling with gas-air adjustments which seems to take up such a lot of time. One of the failings of the Bunsen type burner is that it tends to become choked with dust, and particularly with blanket fluff in bedrooms, so that the efficiency falls off and the householder probably does not notice as long as the fire will light at all. Moreover, the burners are not affected by falls of soot and rubble from the chimney.

The general appearance of these Silent Beam fires seems good. The louvred refractory has a glowing appearance from top to bottom which gives an impression of depth as though one were looking into a high temperature furnace, an improvement on the older type where most of the heat seemed to be on the other side of a grille.

From the cooking point of view, the neat burner has the advantage that it can be turned down very low for simmering and will still be not at all likely to blow out.

Whether it has the speed required for some portions of the hot plate I do not know, but a number of manufacturers are using it.

Mention of neat gas burners reminds me that the firm of Friedman-Athill is specializing in appliances of this kind, and has so far produced a portable fire and three boiling rings, one of which is illustrated on this page. Simple and straightforward, and to my mind a great improvement over previous types. (240, High Holborn, London, W.C.1.)

WIRING REGULATIONS

I have already referred to the proposal to standardize a 13 amp (3 KW) socket to be used universally for portable electric equipment, with individual protection of each appliance by a small fuse in the live pin of the plug. At the moment of going to press I hear that the appropriate BSS has been agreed, and it will be published in a fortnight or so. Just when the actual sockets will be available is anybody's guess. Tooling up for a new job is a pretty slow process nowadays, even though most of the interested manufacturers must know well enough the details of the specification. Perhaps anyone who hopes there will be some produced by July won't be very far wrong.

A NEW SERVICE HATCH

While I suppose it is possible that there are a few people left who manage to sup-

port a cook in the kitchen and somebody else to hand round the food, most of us have to fend for ourselves, and might well do worse than consider the Rotar service hatch, illustrated below. Many ordinary hatches require a pair of hands at each side, but the Rotar has a circular tray, pivoted in the centre, so that a semicircular shelf projects into both kitchen and dining room. The cooked food and cutlery on the kitchen side of the fitting is then turned round into the dining room and the next course can be placed on the free shelf. The obvious objection that the next course will get cold is overcome by making provision for a socket in each shelf so that an electric hot plate can be used. The main disadvantage with revolving shelves of all kinds is that they need fairly careful packing if dishes are not to overhang the edge and be broken. Well do I remember the engaging little turntable in the centre of a Finmar table which looked so sensible at exhibitions but which often knocked people's drinks over in the home. A three- or four-inch rim on this Rotar fitting should reduce breakages and might perhaps be an improvement. The manufacturers also produce cupboard fittings incorporating the rotary unit, the result being a multi-purpose piece of equipment which combines dining room sideboard with hatch and kitchen cupboard. (The Tetbury Furniture Co., Ltd., Tetbury, Glos.)



Top, boiling ring using neat gas burners manufactured by Friedman - Athill. Below, the Rotar service hatch

The form printed below is to assist readers requiring up-to-date information on building products and services. If completed and posted to *The Architects' Journal*, 13, Queen Anne's Gate, S.W.1, the advertisers mentioned will be asked to supply information direct.

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Announcements

The Durable Asphalte Co., Ltd., flooring and roofing specialists, announce that their address is now 29, Orde Hall Street, London, W.C.1. Telephone number: Holborn 4961.

Princess Elizabeth has been elected an Honorary Member of the Institution of Civil Engineers. Her Royal Highness thus becomes the first Lady Honorary Member. Ladies have been considered eligible for election to corporate membership under the Charters in view of the provisions of the Sex Disqualification (Removal) Act, 1919, and the first lady Member was elected in 1927. At present there are three Corporate Members and four Students, of whom the third lay Corporate Member was elected and the fourth lady Student admitted on January 21. The Prince Consort was elected an Honorary Member of the Institution in 1843 and since 1865, when Edward Prince of Wales was elected an Honorary Member, the Heir to the Throne has honoured the Institution by becoming an Honorary Member. Their late Majesties King Edward VII and King George V became Patrons of the Institution on acceding to the Throne. The King is the Patron of the Institution at the present time and the Duke of Gloucester is an Honorary Member.

Messrs. Clifford and Dingle, registered architects and designers, have commenced practice at Chapel House, Chapel Street, Penzance, Cornwall, and would be pleased to receive trade catalogues, etc.

Obituary

Mr. Harry Holden, joint founder of Holden and Brooke, Ltd., after a short illness at

the age of 88. Educated at Repton, he served his apprenticeship at Sharpe, Stewart and Co., the Manchester locomotive builders. In 1881 he left them to start up in business on his own in Salford, under the name of the Broughton Manufacturing Co. Two years later, Robert Brooke, a fellow apprentice at "Sharpe's," joined him to form the firm of Holden and Brooke, which was not until some years later turned into a limited company. Their object was to develop the manufacture of the steam injector, then very much in its infancy. In due course the firm broadened its activities, until to-day, as is well known, injectors form but a small proportion of its products. Both of the founders were closely occupied with the direction of the business until 1929, when the death of Mr. Brooke severed the partnership and Mr. Holden took over the duties of Chairman, a post which he held until 1944, when failing health and activity caused him to relinquish it in favour of the elder son of his old partner, becoming himself vice-chairman.

Buildings Illustrated

Houses for Lothingland RDC, Suffolk. Architects, Taylor and Green (pages 151-152).

General Contractor, J. Youngs and Son, Ltd.; Metal Windows, The Crittall Manufacturing Co. Ltd.; Trafford Tile Roofing, Gutters and Downpipes, Shelving, Draining Boards, Turners Asbestos Cement Co. Ltd.; Electrical Installation, Boardley and Roberts, Ltd.; Light Welded Steel Trusses, R. J. Pryce and Co.; Plastering, Crotch and Son, Ltd.; Plumbing, W. J. Taylor; Well Sinking, Palmer, Son and Lilly.

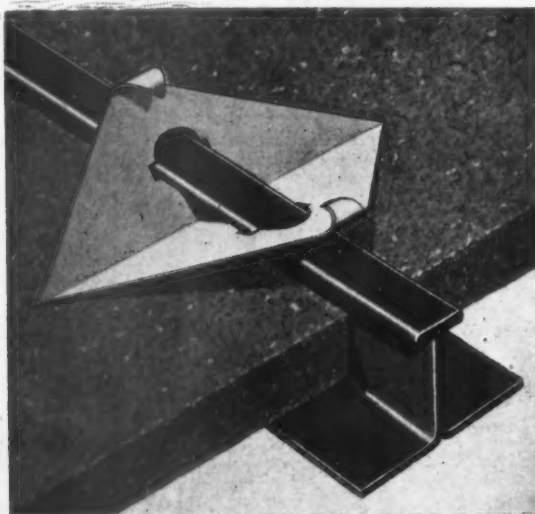


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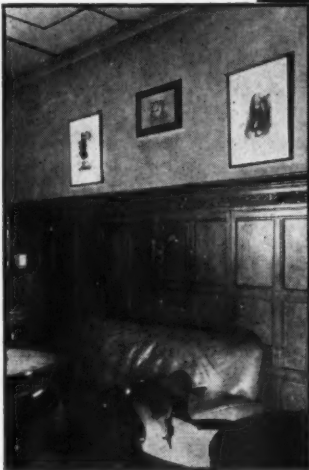


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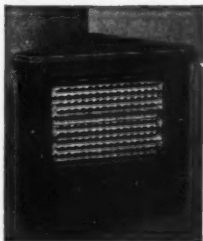
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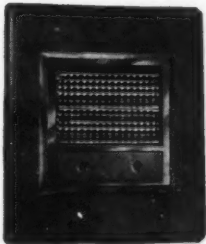
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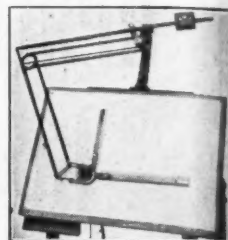
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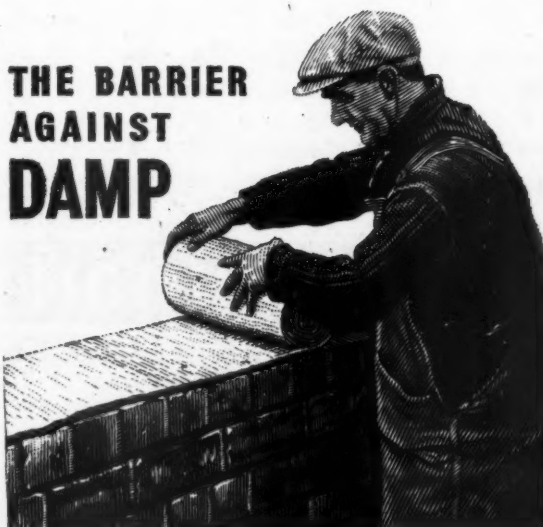
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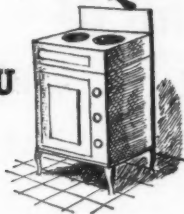
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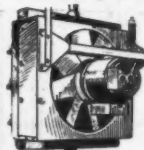
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C CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," War Address: 45 The Avenue, Cheam, Surrey.

Public and Official Announcements

Six lines or under, 10s.; each additional line, 1s. 6d.

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address: 75, RAYON PLACE, LONDON, S.W.1. TEL. SLOANE 5615. 991

LONDON COUNTY COUNCIL. CLERKS OF WORKS.

Applications are invited for positions of Clerks of Works (Class II), in the Architect's Department, to supervise constructional, maintenance, and repair works at the Council's schools, hospitals, and other buildings. There may also be shortly a few Class I positions. Rates of pay (according to qualifications and experience) are: Class I, £360-£400 a year (basic), plus cost-of-living addition, at present £76-£90 a year; Class II, up to 135s. a week, plus cost-of-living addition, at present of 30s. a week.

Successful candidates, under 55 years of age, will be subject to the Council's Superannuation and Provident Fund, but will be temporary in the first instance.

Other things being equal, preference will be given to persons registered under the Disabled Persons' (Employment) Act, 1944, and ex-Service men will also receive special consideration.

Applications (enclosing stamped addressed envelope) to be made to the Architect to the Council, County Hall, Westminster Bridge, S.E.1, for form of application.

Canvassing disqualifies. 966

LONDON COUNTY COUNCIL. VACANCIES FOR PLANNING STAFF IN THE ARCHITECT'S DEPARTMENT FOR WORK ON THE COUNTY OF LONDON PLAN.

Applications are invited for a number of positions in the following grades:—

PLANNING OFFICER (Grade III). Up to £500 a year (basic).

TECHNICAL ASSISTANT. Up to £420 a year (basic).

Commencing rate of pay will be according to qualifications and experience. Cost-of-living addition, at present £78 to £90 a year (men), and £63 to £84 (women), are payable in addition.

There will be opportunities for competing, on merit, in due course for permanent appointment and for positions in the higher grades on the occurrence of vacancies. Successful candidates will be subject to the Council's Superannuation and Provident Fund.

The planning work involved includes assistance in the detailed development of Reconstruction Area schemes, and the preparation of revised zoning plans.

A knowledge of current town planning legislation is desirable in all cases, and candidates for Grade III positions should possess architectural or surveying or town planning qualifications.

Other things being equal, preference will be given to candidates registered under the Disabled Persons' (Employment) Act, 1944, and ex-Service men and women will also receive special consideration.

Application should be made to the Architect to the Council, County Hall, Westminster Bridge, S.E.1, for form of application (enclosing stamped addressed envelope), returnable not later than ten days from this date.

Canvassing disqualifies. 983

ARCHITECTURAL ASSISTANTS WANTED BY MINISTRY OF WORKS.

Applications are invited to fill vacancies for DRAWING OFFICE duties in London, Edinburgh, Newcastle-upon-Tyne, Birmingham, Tunbridge Wells, Bristol, Exeter, Manchester, Preston, Salwick, Cambridge, Nottingham and Leeds. Salary up to £510 per annum, according to qualifications and experience.

The appointments, which offer good opportunities for advancement, are in the first place in an unestablished capacity, with possibility of permanent appointment. Work is varied, giving ample scope to those seeking further experience in the design of all types of Buildings.

Applicants should have had a recognized full period of training and experience with a practising Architect or Local Authority, etc.

Apply in writing, giving age, details of training and experience, and indicating town or district in which employment is desired, to CHIEF ARCHITECT, W.G.10, Ministry of Works, Abell House, John Islip Street, London, S.W.1. Local interviews will be arranged where possible. 832

LEEDS SCHOOL OF ARCHITECTURE. (LEEDS COLLEGE OF ART).

Applications are invited for the undermentioned posts, in the Leeds School of Architecture. Candidates should preferably have been trained in a recognized school of architecture, and be Associates of the R.I.B.A.

(1) FULL-TIME LECTURER AND STUDIO INSTRUCTOR in Architectural Design and Construction. Special qualifications in Advanced Building Construction, Steel and Reinforced Concrete and/or Acoustics will be an additional recommendation.

(2) LECTURERS AND STUDIO INSTRUCTORS in Architecture.

Candidates will be required to lecture in subjects to be arranged, and to instruct in the Studio.

Burnham Salary Scale: Men £315-£215-£555; women, £282-£12-£444, with additions for full-time architectural school training. War service and up to 10 years' professional experience may be counted as teaching service in fixing the commencing salary. Opportunities for promotion to Senior Lectureships and posts with responsibility allowances.

Further particulars and application forms may be obtained by sending stamped addressed envelope to The Director of Education, Education Offices, Leeds, 1. 706

CANNOCK URBAN DISTRICT COUNCIL. APPOINTMENT OF ARCHITECTURAL DRAUGHTSMAN AND CLERK OF WORKS.

Applications are invited for the following appointments:—

(1) Architectural Draughtsman, at a salary in accordance with Grade II of the A.P.T. Division of the National Scale (£360-£405), plus cost-of-living bonus.

(2) Clerk of Works (Temporary) to supervise the erection of permanent houses, at a salary at the rate of £350 per annum, plus cost-of-living bonus (at present £59 16s. per annum).

Applications for either post, giving full details of age, training, qualifications, present and previous appointments, nature of experience, and accompanied by copies of two recent testimonials, must be delivered to the undersigned not later than 10th February, 1947.

Candidates are required, when making application, to disclose in writing to the undersigned whether to their knowledge they are related to any member or the holder of any office under the Council. A candidate who fails so to do will be disqualified for the appointment, and, if appointed, will be liable to dismissal without notice.

Canvassing members of the Council or any Committee of the Council will also disqualify.

WM. C. SPEEDY,

Clerk of the Council.

Council House, The Green, Cannock. 775

EDINBURGH COLLEGE OF ART.

Applications are invited for appointment of:—

(a) SENIOR ASSISTANT in School of Design. Salary scale, £600-£750.

(b) ASSISTANTS in School of Drawing and Painting. Salary scale, £450-£600.

Successful applicants will receive placing within the scales according to qualifications and experience, but commencing salaries will not exceed in (a) £700 and (b) £555 per annum.

Full particulars and forms of application from the Registrar and Secretary, with whom applications should be lodged not later than 22nd February, 1947. 779

COUNTY BOROUGH OF BURNLEY. BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following positions:—

(1) SENIOR ARCHITECTURAL ASSISTANT (Grade V), £460-£510, plus bonus, at present £59 16s. per annum. Applicants should have had experience in the design of educational building, and preference will be given to Associates of the Royal Institute of British Architects.

(2) ARCHITECTURAL ASSISTANT (Grade IV), £420-£465, plus bonus, at present £59 16s. per annum. Applicants should preferably have had experience in either housing or educational works. Previous service with a Local Authority would be regarded as an advantage, and preference will be given to Members of the Royal Institute of British Architects.

(3) QUANTITY SURVEYOR (Grade V), £460-£510, plus bonus, at present £59 16s. per annum. Applicants should be experienced in the preparation of Bills of Materials, the checking of interim valuations, and the settling up of final accounts. Preference will be given to Professional Associates of the Surveyor's Institution, and experience with a Local Authority would be regarded as an advantage.

Conditions of service are those formulated by the National Joint Council, and all three appointments are on the established staff and subject to the provisions of the Local Government Superannuation Act, 1937. The successful candidates will be required to pass a medical examination.

Forms of application may be obtained from the Borough Engineer and Surveyor, Town Hall, Burnley, to whom applications should be returned in the envelope provided, not later than noon on Monday, the 17th February, 1947.

C. V. THORNTON,

Town Clerk.

Town Hall, Burnley. 789

DEPARTMENT OF HEALTH FOR SCOTLAND. SENIOR PLANNING OFFICERS AND PLANNING OFFICERS.

Applications are invited by the Department of Health for Scotland for appointment in Edinburgh to (a) three posts of Senior Planning Officer, and (b) about twelve posts of Planning Officer. The majority of these appointments will be on a permanent basis.

Candidates appointed to the senior posts will be employed either as Regional Planning Officer or as Senior Appeals Inspector. Planning Officers will be allocated to the Planning Regions Section, the Appeals Inspectorate, or to the staff engaged on planning technique, but two will be required as research officers (a) to correlate information on economic, social and industrial factors which affect planning, and (b) to act as maps officer.

The salary scales (both for the permanent and temporary appointments) are as follows:—

Senior Planning Officer: Men, £1,010×£30-£1,200; women, £870×£30-£1,035.

Planning Officer: £730×£30-£970; women, £610×£25-£830.

The above salary scales do not include consolidation additions, which at present range (a) for Senior Planning Officer from £105 (men), £84 (women), at the minimum to £120 (men), £96 (women), at the maximum, and (b) for Planning Officer from £90 (men), £72 (women), at the minimum to £105 (men), £84 (women), at the maximum.

If a successful applicant for one of the permanent appointments is a pensionable official of a local authority, the Local Government and Civil Service (Superannuation) Rules, 1936, will apply.

Candidates must be between the ages of 30 and 49 on 1st January, 1947. Those applying for appointment to the two research officer posts referred to above must have a good University degree in economic geography. Candidates for the other appointments must be members of the T.P.I., and preference will be given to those having a basic qualification in Architecture, Engineering, or Surveying.

Applications will be considered from candidates in the Forces who expect to be released in the near future.

Forms of application, with further particulars of the appointments, may be obtained from the Establishment Officer (Room 31), Department of Health for Scotland, St. Andrew's House, Edinburgh, 1, or from the Chief Officer, Civil Service Commission, at the following addresses:—(India), 10, Underhill Lane, Delhi; (Egypt), 8, Sharia Tolubmat, Garden City, Cairo; (Italy), c/o G.H.Q. C.M.F.; (Germany), c/o 2nd Echelon, G.H.Q. B.A.O.R. Completed application forms must be returned direct to the Department of Health for Scotland not later than the 15th March, 1947.

Those candidates who appear best qualified will be required to attend a Selection Board in Edinburgh or London. 985

MONMOUTHSHIRE COUNTY COUNCIL.

Applications are invited for the following posts, in the County Architect's Department:—

(a) PERMANENT PRINCIPAL ARCHITECTURAL ASSISTANT, at a salary in accordance with Grade VII of the Administrative, Professional and Technical Division of the National Joint Council's Scheme, viz., £575 per annum, rising by annual increments of £25 to a maximum of £650 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

(b) SIX PERMANENT ARCHITECTURAL ASSISTANTS, at a salary in accordance with Grade V of the Administrative, Professional, and Technical Division as above, viz., £460 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £510, plus cost-of-living bonus, at present £59 16s.

(c) TWO PERMANENT ASSISTANT QUANTITY SURVEYORS, at a salary in accordance with Grade IV of the Administrative, Professional and Technical Division of the National Joint Council's Scheme, viz., £420 per annum, rising by annual increments of £15 to a maximum of £465 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

Candidates for (a) and (b) must have a knowledge of design and construction, particularly in relation to schools, public buildings, police stations, etc., and must be Associate Members of the Royal Institute of British Architects, and for (c) should be members of the Surveyors' Institution (Quantities Section), and should have had wide experience in preparing estimates and bills of quantities, and in dealing with Contractors' accounts, etc. The appointment will be subject to the Local Government Superannuation Act, 1937, and to the Regulations of the Council in force from time to time governing their Administrative, Technical and Clerical Staff, and will be determinable by one month's notice on either side. The successful candidates will be required to pass a medical examination. Forms of application and conditions of service can be obtained from the undersigned. Applications, stating age, experience and qualifications, together with copies of three recent testimonials, must be delivered to Mr. Colin L. Jones, F.R.I.B.A., County Architect, Queen's Hill, Newport, Mon., not later than 17th February, 1947.

VERNON LAWRENCE,

Clerk of the Council.

County Hall, Newport; Mon. 991

CORPORATION OF LONDON. CITY SURVEYOR'S OFFICE.

APPOINTMENT OF TECHNICAL STAFF.

Applications are invited for the following appointments, in the City Surveyor's Office:—
ARCHITECTURAL ASSISTANTS. Salary £350, inclusive of consolidated bonus.

Applicants should be students of the Royal Institute of British Architects or probationers of the Royal Institution of Chartered Surveyors (Building sub-division).

The appointments are for the present on a temporary basis, and will be concerned principally with the reinstatement of war damage to a variety of types of properties. There will be a possibility of establishment for suitable men, and temporary service will count for the purpose of superannuation.

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

Previous experience with a Municipal Body is not essential.

Applications, endorsed "Technical Staff," to be made to George Holliday, F.S.I., The City Surveyor, 55-61, Moorgate, E.C.2, giving the following particulars: Service with Armed Forces, age, qualification or intentions in connection therewith, previous training, positions and experience, date when available to commence duties if selected, together with copies of two testimonials. 806

COUNTY BOROUGH OF SUNDERLAND EDUCATION COMMITTEE.

Applications are invited for the following appointments on the staff of the Education Architect, in accordance with National Scales of Salaries.

(a) **TWO ASSISTANT ARCHITECTS** (salary, A.P.T., Grades III or IV, £390-£435 or £420-£465), according to experience.

(b) **TWO ASSISTANT ARCHITECTS** (salary, General Grade or A.P.T., Grade I, £265-£300 or £330-£375), according to age and qualifications.

All the above appointments will carry a cost-of-living bonus, at present £59 15s. 3d.

For appointments (a) applicants must be Associate Members of the R.I.B.A. or hold equivalent academic qualifications. For appointments (b) applicants who have passed the Intermediate Examination of the Royal Institute of British Architects will be placed on Grade A.P.T. I.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and to the selected candidates passing a medical examination as required by the Council.

Applications, giving full particulars, qualifications, experience, age, present and previous appointments, accompanied by copies of not more than three recent testimonials, to be addressed and appropriately endorsed to the undersigned not later than first post on Tuesday, 11th February, 1947.

W. THOMPSON,

Director of Education.

Education Offices, 15, John Street, Sunderland. 779

CROWN AGENTS FOR THE COLONIES.

Applications from qualified candidates are invited for the following post:—

ASSISTANT QUANTITY SURVEYOR required by the Government of Northern Rhodesia Public Works Department, for one tour of 2 to 3 years, with prospects of permanency. Salary according to age, qualifications and war service, in the scale £480, rising to £720 a year, plus cost-of-living allowance of £60 for a single man and for a married man between £105 and £144 a year, according to number of dependants. Free passages and quarters. Candidates must be Professional Associates of the Chartered Surveyors' Institution, or possess recognized qualifications of similar Institutions and have had good experience of practical quantity surveying. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/17613 on both letter and envelope. 828

SOUTH-EAST KENT JOINT PLANNING COMMITTEE.

APPOINTMENT OF DRAUGHTSMAN.

Applications are invited for the post of Draughtsman, at salary in accordance with the National Scale, viz. General Division for persons aged 26 or under and thereafter on the Miscellaneous Division, Grade I or II, up to a maximum of £360 p.a. (plus cost-of-living bonus), according to qualifications and experience. The post is superannuable. The successful candidate will be appointed to the Staff of the Kent County Council and seconded to the service of the Joint Committee at Ashford. Applicants should have had experience in the preparation of plans and maps in connection with town and country planning, and must be neat and expeditious draughtsmen. Application, in own handwriting, stating age, qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received by me not later than 20th February, 1947.

J. SUDLOW,

Hon. Secretary.

Council Offices, "The Cedars," Church Road, Ashford, Kent. 819

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 CHIEF ASSISTANT ARCHITECT** (EDUCATION). Grade VIII. Salary, £625-£730 per annum.

Applicants should be Associate R.I.B.A., with good experience of Architectural work, especially in the design and construction of Schools and Educational Buildings generally.

(b) **ONE ASSISTANT ARCHITECT.** Grade VI. Salary, £535-£600 per annum.

Applicants should be Associate R.I.B.A., with good experience of work undertaken by a Local Authority.

(c) **ONE JUNIOR ARCHITECT.** Grade I. Salary, £330-£375. Applicants should have passed the preliminary examination of the R.I.B.A., and have had experience in general architectural work.

Cost-of-living bonus, at present £59 15s. (male), will be payable in all cases.

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.

Applications should be tabulated, showing age, qualifications, present salary, previous experience, and date when available, accompanied by copies of three recent testimonials, and delivered to Thos. W. East, F.R.I.B.A., Borough Architect, The Council House, Corporation Street, Derby, to arrive not later than Friday, 21st February, 1947.

Canvassing directly or indirectly, will be a disqualification.

C. ASHTON, M.A.,

Town Clerk.

Market Place, Derby. 818

17th January, 1947.

CITY AND COUNTY OF THE CITY OF EXETER.

APPOINTMENT OF TWO ARCHITECTS AND ONE QUANTITY SURVEYOR.

Applications are invited for the appointment of:—

(a) Two Senior Assistant Architects (Education Section), and

(b) One Senior Assistant Quantity Surveyor,

on the temporary staff of the City Architect's Department, for a period of not less than two years' duration.

Each appointment will carry an inclusive salary of £750 per annum, rising by one increment of £50 to £800 per annum.

Candidates for the posts of Senior Assistant Architects must be Associate Members of the Royal Institute of British Architects, or hold equivalent qualifications, and must have had considerable experience in design, construction and erection of all classes of Educational work required under the Education Act, 1944.

Candidates for the post of Senior Assistant Quantity Surveyor must be well qualified and thoroughly experienced in all classes of quantity surveying work, particularly in connection with educational work, and should be able to undertake all stages in the preparation of Bills of Quantities, estimates, issue of certificates, and the settlement of final accounts.

The appointments will be subject to one month's notice on either side.

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

Applications, stating age, qualifications, previous and present appointments and salaries, and full details of experience, and the earliest possible date when available, together with copies of recent testimonials, should be sent to H. B. Rowe, F.R.I.B.A., A.M.I.Struct.E., City Architect, 2, Southernhay West, Exeter, not later than 12 noon on the 12th February, 1947.

C. J. NEWMAN,

Town Clerk.

Exeter. 822

23rd January, 1947.

BOROUGH OF ROYAL TUNBRIDGE WELLS.

APPOINTMENT OF QUANTITY SURVEYING ASSISTANT.

Applications are invited for the appointment of Quantity Surveying Assistant, in the Borough Surveyor's Department, for a period of approximately three years, on Grade V of the National Scale of Salaries, plus cost-of-living bonus, at the rate from time to time in force.

Successful candidate will be required to contribute under the Local Government Superannuation Act, 1947, and to pass a medical examination. Applicants should state, in addition to the usual particulars, whether to their knowledge they are related to any member or senior officer of the Council.

Applications, endorsed with the title of the post applied for, together with the names of not more than three persons to whom reference can be made, should be delivered to Mr. H. P. Bishop, Borough Surveyor, Town Hall, Tunbridge Wells, not later than 19th February, 1947.

JOHN WHITEHEAD,

Town Clerk.

Town Hall, Tunbridge Wells. 847

COUNTY BOROUGH OF EASTBOURNE.

BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited for the appointment of **JUNIOR TOWN PLANNING ASSISTANT**, on the permanent staff of the Borough Engineer, at a salary of £380 per annum, rising to £435 by increments of £15, plus cost-of-living bonus, at present £59 15s. per annum.

The appointment is subject to: (1) The National Joint Council's Scheme of Conditions of Service; (2) The Local Government Superannuation Act, 1937, and (3) the passing of a medical examination by the successful candidate.

Preference will be given to applicants who have had previous experience in the Planning Office of a Local Authority.

A flat in requisitioned premises will be provided upon rental for the person appointed, if required.

Applications, giving details of training, qualifications and experience, together with copies of two recent testimonials, must reach the undersigned not later than Saturday, 15th February, 1947.

R. WILLIAMS, B.Sc., A.M.I.C.E.,

Borough Engineer.

2/4, Saffrons Road, Eastbourne. 830

25th January, 1947.

Amended Advertisement.

COUNTY BOROUGH OF CROYDON. BOROUGH ENGINEER'S DEPARTMENT. ARCHITECT'S DIVISION.

VACANCIES ON PERMANENT STAFF.

Applications are invited for the following appointments, on the Established Staff, from candidates, with qualifications and experience, according to grade. The persons appointed will carry out their duties under the direction of the Principal Assistant Architect:—

TWO GENERAL ASSISTANTS. To be Registered Architects, with a good general knowledge of the architectural work undertaken by a Local Authority. Wide housing experience is essential. Salary scale: Grade A.P.T., IV, £440 × £15 = £485, plus cost-of-living bonus, at present £59 15s. per annum.

ONE ARCHITECTURAL DRAUGHTSMAN. To be a recognized Student in Architecture, with at least three years' Local Government Drawing Office experience, and possessing a high standard of draughtsmanship. Salary scale, Grade A.P.T., I, £350 × £15 = £395, plus cost-of-living bonus, at present £59 15s. per annum.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and the satisfactory passing of a medical examination.

Forms of application may be obtained from the Borough Engineer, Town Hall, Croydon, and should be returned to him not later than 15th February, 1947.

Canvassing will disqualify.

E. TABERNER,

Town Clerk.

Town Hall, Croydon, Surrey. 837

24th January, 1947.

WILTS COUNTY COUNCIL.

ARCHITECTURAL ASSISTANT.

The County Council invite applications for the post of Architectural Assistant, in the County Architect's Department.

Applicants should have passed the Intermediate examination of the Royal Institute of British Architects, have had experience in the office of a Local Authority, and be conversant with school planning as required by the Education Act of 1944.

Salary £330 per annum, rising by annual increments of £15 to £375 per annum, plus war bonus (at present £59 15s. per annum).

The appointment is superannuable, subject to medical examination, and terminable by one month's notice on either side.

Forms of application may be obtained from the County Architect, County Hall, Trowbridge, and should be forwarded to the undersigned not later than the 24th February, 1947.

P. A. SELBORNE STRINGER,

Clerk of the County Council.

County Hall, Trowbridge, Wilts. 840

27th January, 1947.

NORFOLK COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of an **ASSISTANT ARCHITECT**, on National Grade V, £460-£510 per annum, plus bonus (at present £59 15s. per annum). Candidates should have a good general knowledge and experience, must be registered architects, and preferably hold a recognized Architectural qualification.

The appointment will be subject to the Local Government Officers' Superannuation Acts, to a satisfactory medical certificate, and to one month's notice on either side. National Scheme of Service Conditions will apply.

Applicants must state age, qualifications, full details of training and experience, particulars of previous appointments, with dates, salaries and designations; the names and addresses of three persons to whom reference may be made must be stated. Applications to be delivered to Mr. C. H. Thurston, L.R.I.B.A., P.A.S.I., County Architect, 25, Thorpe Road, Norwich, not later than 21st February, 1947.

H. OSWALD BROWN,

Clerk of the Council.

County Offices, Thorpe Road, Norwich. 851

28th January, 1947.

BOROUGH OF RICHMOND, SURREY.
Applications are invited for the following appointments, on the staff of the Borough Engineer and Surveyor:—

BUILDING INSPECTOR, Grade IV.
ARCHITECTURAL ASSISTANT, Grade II.
The grades are those of the National Salary Scale, A.P. & T. Division, for the London area, viz.:

Grade IV, £440-£485 p.a.
Grade II, £380-£425 p.a.
(these grades including £20 in respect of London area weighting). In addition, a cost-of-living bonus, at present £59 16s. p.a., is payable in each case.

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

Applicants for the appointments should possess the following qualifications:—

Building Inspector: Corporate membership of the Institution of the Municipal Engineers and/or hold the Building Inspector's Certificate. Applicants should have had wide experience of Building Inspector's work, and a knowledge of Town Planning would be deemed an advantage.

Architectural Assistant: R.I.B.A. Intermediate or other Diploma in Architecture, together with some years' experience in an architect's office.

Applications, stating in the following order:—

(i) Title of appointment applied for,
(ii) Surname, followed by Christian names,
(iii) Address,
(iv) Age, date, place of birth, and whether married,

(v) Education and training,

(vi) Professional qualifications—(a) by examination, (b) without examination,

(vii) Present position, salary, and date appointed,

(viii) Previous positions, with dates and salaries,

(ix) Particulars of experience,

(x) Notice required in present position,

should be forwarded, with copies of two recent testimonials, to the undersigned, to be delivered not later than 15th February, 1947.

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

CLIFFORD HEYWORTH,
Town Clerk.

Town Hall, Richmond, Surrey. 833

BOROUGH OF COLCHESTER.

BOROUGH ENGINEER'S DEPARTMENT.

ARCHITECTURAL SECTION.

Applications are invited for the following temporary appointments:—

(a) **QUANTITY SURVEYOR.** Salary, Grade VI, commencing £235 per annum.

(b) **ASSISTANT QUANTITY SURVEYOR.** Salary, Grade I, commencing £330 per annum.

Both appointments rank for bonus, at present £59 16s. per annum, in addition to salary.

Applicants for (a) should hold appropriate professional qualifications, and be accustomed to the preparation of Bills of Quantities, Specifications, Estimates, and settlement of final measurements in connection with Housing and General Building Works.

Applications for (b) should have had experience in working up, and be prepared to assist generally with work of the Architectural Section.

Applications, stating age, qualifications, and full details of experience, together with copies of two recent testimonials, must be sent to the undersigned not later than Saturday, 15th February, 1947.

HAROLD COLLINS, Assoc. M.Inst.C.E.,
Borough Engineer.

Town Hall, Colchester. 834

CITY OF LINCOLN.

CITY ENGINEER'S DEPARTMENT.

Applications are invited for the following appointments:—

(a) **SENIOR ARCHITECTURAL ASSISTANT.** Grade V, A.P.T. Division. Salary, £460-£510 per annum.

Candidates should be Associate Members of the Royal Institute of British Architects (or hold equivalent qualifications), and have good experience in general architectural work, including school planning and design, and in the preparation of working drawings and specifications.

(b) **ENGINEERING ASSISTANT.** Grade IV, A.P.T. Division. Salary, £420-£465 per annum.

Candidates must have passed the examination of the Institution of Civil Engineers, or the Institution of Municipal and County Engineers, and have had experience in the preparation of plans, quantities, estimates for road and bridge construction, and the general work of a Municipal Surveyor's Department.

Applications for each appointment, stating age, qualifications and experience, and whether housing accommodation would be required, should be forwarded to the City Engineer and Surveyor, Silver Street, Lincoln, not later than Wednesday, 19th February, 1947.

J. H. SMITH,
Town Clerk.

Corporation Offices, Lincoln. 839

25th January, 1947.

SURREY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the following appointments:—

PRINCIPAL ASSISTANT ARCHITECT.

Commencing salary £800, rising by annual increments of £25 to a maximum of £900 inclusive.

Applicants must hold either a degree in Architecture or be Members of the Royal Institute of British Architects, and should have had a good experience in the control of staff, organization of work, and had a good training and an adequate experience in the design and construction of modern buildings. This appointment will require a specialized knowledge of the design of school buildings.

The following appointments will carry a cost-of-living bonus, at present £59 16s., and London allowance of £20 per annum.

ASSISTANT QUANTITY SURVEYOR (Grade VI).

Commencing salary £535, rising by annual increments of £20/£25 to a maximum of £600 per annum.

Preference will be given to applicants who are members of the Surveyors' Institution (Quantities Sub-Division), and who have an adequate experience in the preparation of Bills of Quantities, and in measuring up and in settlement of final accounts.

ASSISTANT QUANTITY SURVEYORS (Grade III).

Commencing salary £390, rising by annual increments of £15 to a maximum of £435 per annum.

Preference will be given to applicants who have passed the Intermediate Examination of the Royal Institute of Chartered Surveyors (Quantities Sub-Division), and be capable of undertaking working-up, and the general technical duties of a Quantity Surveyor's Office.

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

Applications, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, should be sent to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 15th February, 1947.

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

DUDLEY AUKLAND,
Clerk of the Council.

County Hall, Kingston-upon-Thames. 815

THE POLYTECHNIC, 309, REGENT STREET, W.1

SCHOOL OF ARCHITECTURE, SURVEYING, AND BUILDING.

Applications are invited for the post of **SENIOR ASSISTANT IN TOWN PLANNING.**

Candidates should be members of the Town Planning Institute, and have had both teaching and practical experience.

Salary scale commences at £600 per annum, rising by annual increments of £25 to a maximum of £750 per annum, plus London allowance, and possibly an additional allowance for training. The total salary is subject to the usual deduction of 5 per cent. for superannuation.

Further particulars and form of application, which should be returned not later than 17th February, may be obtained by sending a stamped addressed foolscap envelope to the undersigned.

J. C. JONES,
Director of Education.

823

BOROUGH OF LEYTON.

APPOINTMENT OF GENERAL ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a General Architectural Assistant, in the department of the Borough Engineer and Surveyor, at a salary in accordance with Grade V of the National Conditions of Service (£460 per annum, rising by two annual increments of £15 and one of £20 to £510 per annum), plus £20 London weighting, plus cost-of-living bonus, which is at the present time £60 per annum.

Candidates should possess the recognized architectural qualifications (preferably A.R.I.B.A.), and have had good Municipal experience.

The appointment is subject to the Scheme of Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services; to the general conditions of service laid down by the Council from time to time, including membership of a trade union; to the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate satisfactorily passing a medical examination.

Applications, stating age, details of qualifications and experience, together with copies of three recent testimonials, should be delivered to the undersigned not later than the 21st February, 1947.

Candidates must disclose in writing whether they are related to any member of the Authority or to the holder of any senior office under the Authority. Failure to make such disclosure will disqualify.

Canvassing, directly or indirectly, will disqualify.

D. J. OSBORNE,
Town Clerk.

Town Hall, Leyton, E.10. 884

January, 1947.

The Miners' Welfare Commission invites applications for appointment as **EXECUTIVE OFFICER** (male or female), to exercise control of administrative detail and clerical staff of the Architects' Department in London. Previous experience in an Architect's or Surveyor's office is desirable, though not essential. Commencing salary between £353 and £615 for men, and £285 and £492 for women, will depend on qualifications and experience.

Application forms obtainable from Establishment Officer, Miners' Welfare Commission, Ashley Court, Ashted, Surrey. 840

TARVIN RURAL DISTRICT COUNCIL.

CLERK OF WORKS FOR HOUSING.

Applications are invited for the appointment of a Temporary Clerk of Works in connection with the erection of houses on various sites in the Tarvin District. The salary will be at the rate of £300 per annum, plus bonus, at present £59 16s.

Applicants should have a good knowledge of the building trade and supervision of works.

Applications, stating age, qualifications and experience, accompanied by copies of three recent testimonials, and endorsed "Clerk of Works," should be delivered to Mr. Thomas Pritchard, M.Inst.M. & Cy.E., Surveyor to the Council, at this address, not later than 22nd February, 1947.

J. H. MOORE DUTTON,
Clerk to the Council.

Westminster Buildings, Newgate Street, Chester. 846

28th January, 1947.

BOROUGH OF SLOUGH.

Applications are invited from persons not liable for military service for the permanent appointment of **SENIOR ASSISTANT ARCHITECT**, within Grade A.P.T., V, of the National Scale, at a commencing salary of £460 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £510 per annum, plus cost-of-living bonus (at present £59 16s. per annum). Preference will be given to applicants who are Associates of the Royal Institute of British Architects.

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

Canvassing, either directly or indirectly, will disqualify.

Applications, on forms to be obtained from the Borough Engineer, Mr. E. Gardner Thorp, M.Inst.C.E., Town Hall, Slough, must be sent in a sealed envelope endorsed "Senior Assistant Architect," so as to reach the undersigned not later than Friday, 21st February, 1947.

NORMAN T. BERRY,
Town Clerk.

Town Hall, Slough. 848

6th February, 1947.

COUNTY OF LINCOLN—PARTS OF LINDSEY.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited from suitably qualified persons having a modern outlook for the following appointments, on the permanent staff, at salaries in accordance with the National Scale.

(a) **ONE SENIOR QUANTITY SURVEYOR (Grade VI),** £535 per annum, rising to £600, plus bonus.

(b) **THREE SENIOR ASSISTANT ARCHITECTS (Grade V),** £460 per annum, rising to £510, plus bonus.

(c) **SENIOR ASSISTANT ARCHITECT (Grade IV),** £420 per annum, rising to £465, plus bonus.

(d) **ONE CLERK OF WORKS (Grade IV),** £400 per annum, rising to £465, plus bonus.

The cost-of-living bonus is at present £59 16s. per annum.

Candidates for (a) should be members of the Surveyors' Institution, and should have had good experience in preparing Estimates, Bills of Quantities, and Final Certificates.

Candidates for (b) should be members of the R.I.B.A., and should have had experience in architectural design and construction, especially in the design and erection of modern Educational Buildings. The successful candidates will be expected to provide their own cars, for which an allowance on the County Council's scale for an 8 h.p. car will be made.

Candidates for (c) should be members of the R.I.B.A. or Registered Architects, and should have had a sound experience in architectural design and in the preparation of working drawings.

Candidates for (d) must have had a wide experience in all classes of building, be able to set out jobs, and have had experience as a general Foreman or a Clerk of Works on large building contracts. The successful candidate will be required to live in the centre of his district, and must provide his own car, for which an allowance on the County Council's scale for an 8 h.p. car will be made.

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

Applications, which should state age, qualifications, experience, and present appointment, and be accompanied by not more than three testimonials, should be sent as soon as possible to the undersigned.

ERIC W. SCORER,
Clerk of the County Council.

County Offices, Lincoln. 849

COUNTY BOROUGH OF CROYDON—EDUCATION DEPARTMENT.

Applications are invited for the following permanent appointments, in the School Architect's Section, at salaries in accordance with the National Scales, as set out below, plus cost-of-living bonus in each case—at present £59 16s. per annum. The appointments are subject to the provision of the Local Government Superannuation Act, 1937, and successful candidates will be required to pass a medical examination.

ONE SENIOR ASSISTANT ARCHITECT

Grade A.P.T. VI, £555-£620.
In charge of Architectural Staff under the School Architect and Chief Assistant Architect. Candidates should be Registered Architects, and preferably Associate Members of the R.I.B.A., or hold equivalent qualifications, and should be experienced in the design and construction of educational buildings.

ONE ASSISTANT ARCHITECT (Grade A.P.T. V), £480-£530.

Candidates should be Registered Architects, suitably qualified, and preferably with experience in connection with educational buildings.

TWO JUNIOR ARCHITECTURAL ASSISTANTS (Grade A.P.T. II), £380-£425.

Candidates should be prospective Associates of the R.I.B.A., and capable of preparing working drawings.

ONE DRAUGHTSMAN (Grade A.P.T. I), £350-£395.

Candidates should be studying for R.I.B.A. examinations, and should have had experience in an Architect's office, and be capable of a high standard of draughtsmanship.

ONE SURVEYING ASSISTANT (Grade A.P.T. IV), £440-£485.

Candidates should be suitably qualified, with a good general experience, preferably with a Local Authority, in the preparation of Estimates, Bills of Materials, Specifications, the supervision of works, and the checking of final accounts.

TWO JUNIOR SURVEYING ASSISTANTS (Grade A.P.T. II), £380-£425.

Candidates should be of Inter. P.A.S.I. standard, and suitably experienced.

Forms of application, giving terms and conditions of appointment, may be obtained (on sending a stamped addressed foolscap envelope) from the Education Officer, Katharine Street, Croydon, and must be returned to him, accompanied by copies of three recent testimonials, not later than the 28th February, 1947.

Canvassing will disqualify.

E. TABERNER,
Town Clerk.

Town Hall, Croydon.
January, 1947.

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ANGLESEY COUNTY COUNCIL.**COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointment, in the County Architect's Department:

ONE SENIOR ASSISTANT ARCHITECT.

Salary in accordance with the National Scale, Grade A.P.T. IV, commencing at £420 per annum, and rising by annual increments of £15 to £465, plus cost-of-living bonus, at present £59 16s. per annum.

Candidates should be Registered Architects and Members of the Royal Institute of British Architects, with good experience in general architectural work, especially schools, also in the preparation of working drawings and specifications.

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

The appointment will also be subject to one month's notice on either side.

Applications, in plain envelopes endorsed "Senior Assistant Architect," stating age, qualifications, training and experience, giving particulars of present and past appointments, accompanied by copies of three recent testimonials, must be delivered to the undersigned not later than 24th February, 1947.

WILLIAM JONES,
Clerk of the County Council.

Shire Hall, Llangefni, Anglesey.

30th January, 1947.

858

COUNTY BOROUGH OF WEST HAM.**APPOINTMENT OF TWO TEMPORARY CLERKS OF WORKS.**

Applications are invited for the appointment of Two Clerks of Works, at a salary of £10 per week inclusive, from which the statutory deductions will be made. Applicants should have had previous experience, and possess a sound knowledge of building construction and trades.

One Clerk of Works will be required for supervising Road and Sewer Works, and the erection of approximately 300 B.I.S.F. houses at Rookery Farm, Dagenham, Essex.

The other Clerk of Works will be required for supervising building work within the County Borough of West Ham.

The appointments are temporary, subject to one month's notice in writing on either side, and the successful candidates will be required to pass a medical examination. Membership of the appropriate Trade Union is a condition of engagement.

Applications are to be submitted on forms to be obtained from Thomas E. North, F.R.I.B.A., Borough Architect and Planning Officer, 100, West

Ham Lane, E.15, and are to be returned not later than 17th February, 1947.

E. E. KING,
Town Clerk.

West Ham Town Hall, Stratford, E.15.

5th February, 1947.

COUNTY OF ESSEX.**ILFORD COMMITTEE FOR EDUCATION.****APPOINTMENT OF SECTIONAL ASSISTANT ARCHITECT.**

The Essex County Council invite applications for the appointment of a qualified Assistant Architect, to act as leader of a Section in the office of the Borough Engineer of Ilford, to deal with work for the Committee for Education.

Applicants should be Members of the Royal Institute of British Architects, and have had considerable experience in the planning, designing, construction, and supervision of school buildings, and have had some administrative experience.

The commencing salary will be not less than £575 per annum, nor more than £650, and in fixing the commencing salary regard will be had to the qualifications and experience of the successful applicant. There will also be paid such (if any) bonus and travelling and subsistence allowances as may be from time to time determined by the Council. The amount of bonus payable at present is 25s. per week.

The appointment will be held at the pleasure of the Council, and may be terminated by the holder of the office by two months' notice.

The successful applicant in each case will be subject to the provisions of the Local Government Superannuation Act, 1937, and will be required to pass a medical examination to the satisfaction of the Council.

Applications must be made on a form to be obtained from the Borough Education Officer—Mr. W. J. Benton—and returned to him at the Education Offices, Town Hall, Ilford, together with copies of not more than three recent testimonials.

The envelope should be sealed and endorsed "Sectional Assistant Architect."

Canvassing, either directly or indirectly, is forbidden.

B. E. LAWRENCE,
Chief Education Officer.

County Offices, Chelmsford.

857

BOROUGH OF TORQUAY.**APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT.**

Applications are invited for the appointment of Senior Architectural Assistant, in the permanent establishment of the Borough Surveyor's Architectural Department, on the salary scale, Grade V, A.P.T. Division, £460-£515/£520-£513 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

Candidates should preferably be Associates of the Royal Institute of British Architects, and should have had experience in the design and construction of modern buildings.

The post is an established post, subject to the provision of the National Scheme of Conditions of Service, and the Local Government Superannuation Act, 1937 (and the Council's regulations thereto).

The successful candidate will be required to pass a medical examination, and the appointment will be terminable by one month's notice on either side.

Whilst no guarantee can be given, the Council will endeavour to obtain living accommodation for the successful applicant within a reasonable time of appointment.

Applications, endorsed "Senior Architectural Assistant," giving details of qualifications, experience, age, etc., together with copies of three recent testimonials, should be sent to the Borough Surveyor, Town Hall, Torquay, not later than Saturday, 22nd February, 1947.

HERBERT A. HIELD,
Town Clerk.

Town Hall, Torquay.

28th January, 1947.

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Architectural Appointments Vacant

Four lines or under, 5s.; each additional line, 1s. 6d.

HENRY C. SMART & PARTNERS, Architects, 120, Moorgate, E.C.2, require Assistant; working drawings, details, surveys, etc. Write, stating age, experience, and salary required. 913

APPLICATIONS are invited for the appointment of Assistant to the Technical Editor, "Architects' Journal"; applicants must be first-class draughtsmen, possess a sound knowledge of building practice, and be interested in the preparation of technical data; salary according to qualifications and experience. Application should be made to the Technical Editor, The Architectural Press, Ltd., 13, Queen Anne's Gate, Westminster, S.W.1. 215

FIRST-CLASS DRAUGHTSMAN required for work on "Architects' Journal" Library of Information Sheets; applicants must possess a sound knowledge of building practice, and be interested in the preparation of technical data; salary according to qualifications and experience. Application should be made to the Technical Editor, The Architectural Press, Ltd., 13, Queen Anne's Gate, Westminster, S.W.1. 216

ARCHITECTURAL ASSISTANTS required; must be able to prepare working drawings; houses from sketch plans; salary according to experience. Saunders & Reiss-Smith, Architects, 70, Hill Park Crescent, Plymouth. 631

SURVEYORS.—London Architects have vacancies for Surveyors, with experience of war damage work; salary, £500-£625 per annum. Write, stating age, experience, and when free. Box 645.

ARCHITECTURAL ASSISTANT required in West Country office for busy and expanding general practice; Inter. R.I.B.A. Standard; good draughtsman; able to make surveys and prepare working drawings; five-day week. Full particulars of experience, salary required, etc., to Box 731.

ARCHITECT, Central London, requires a qualified Assistant to take charge of a general practice; measuring up and simple surveying essential; state age and experience and salary required. Box 732.

ARCHITECTURAL ASSISTANT wanted in busy Country Practice, to assist in preparation of housing schemes; must be a good draughtsman, and have knowledge of surveying and levelling and able to drive a car; applications from seniors or juniors entertained; salary according to ability and experience. Parkinson & Doe, L./A.R.I.B.A., Huntingdon. 761

LONDON ARCHITECTS, with varied general practice, require Male ASSISTANT immediately; R.I.B.A. Intermediate standard, with pre-war general office experience; good draughtsman; able to prepare working drawings quickly and accurately; experience on large housing and flat schemes an asset; salary £8 8s. per week, with efficiency bonus yearly. Apply by letter before 15th February, giving full particulars of age, training, qualifications, experience and war service, to Stewart & Hendry, F./A.A.R.I.B.A., 90, Fenchurch Street, London, E.C.3. 763

MANCHESTER.—CONTRACT MANAGER required for a permanent post; must be able to estimate, cost, have some drawing experience; must be a good supervisor, and capable of handling small and large jobs; salary £500-£600, according to ability. Write, stating age and experience, to Box 801.

ARCHITECTURAL DRAUGHTSMAN required; working drawings from sketches; sound knowledge of construction, surveys, specifications. Write, stating age, experience, and salary required, to Read & McDermott, F.R.I.B.A., A.M.I.M.E., 18, High Street, Maidstone, Kent. 772

SENIOR ASSISTANT required; good experience and draughtsmanship essential; salary up to £700 per annum; permanency. Apply J. R. Boyd Barrett, A.R.I.B.A., F.R.I.A.I., 61, South Mall, Cork, Eire. 781

TWO ASSISTANT CIVIL ENGINEERS required for private office in West Norfolk; must be good draughtsmen, and have sound experience of reinforced concrete construction, and general civil engineering work; salary, £400 to £500 per annum, according to qualifications. Reply, with full details, to Box 784.

COMPETENT JUNIOR ARCHITECTURAL DRAUGHTSMAN required for office in West Norfolk; salary, £300 to £400 per annum, according to experience. Reply, with full details, to Box 785.

QUALIFIED ARCHITECTURAL ASSISTANT required in progressive London firm of Architects. Write, stating full particulars and salary required, Box 793.

ARCHITECTURAL ASSISTANT required immediately; good draughtsmanship essential; salary, £250-£350, according to experience. Forshaw & Greaves, 33, Albion Street, Hanley, Stoke-on-Trent. 794

ASSISTANT REQUIRED; must have passed Inter. R.I.B.A. and preparing for Final; housing, hospitals; salary £250-£350, according to qualifications and experience. G. H. N. Inman, F.R.I.B.A., The Charterhouse, Charterhouse Square, E.C.1. Tel.: Clerkenwell 4414. 812

DRAUGHTSMAN as Assistant to Architectural Department; experienced in building construction, surveying, and levelling.—Apply Austin Motor Co. Ltd., Birmingham. 814

ARCHITECTURAL ASSISTANT, R.I.B.A. (Inter.) standard, required for busy Eastern County office; varied practice, including Local Authority housing schemes. Apply, with full particulars and salary required, to Box 820.

PROGRESSIVE appointment offered to capable and energetic Architectural Assistant (25/35) in private practice near London (E.); good designer, accurate draughtsman, with good provincial experience, including surveying and levelling, and with knowledge of quantities; minimum salary, £500 p.a. Reply, with full particulars, to Box 825.

HARROGATE.—Old-established practice requires competent Architectural Assistant for drawing office; salary, £6 to £9 per week, according to experience and ability; good prospects. Apply T. S. Victoria Avenue, Harrogate. 836

CHARTERED ARCHITECT required to control small branch office centre of Norfolk; thorough practical experience necessary, including good knowledge surveys; own car essential; mileage allowance on County Council scale. Reply, stating salary and other particulars, to Box 816.

ARCHITECTS require **JUNIOR** and **SENIOR ASSISTANTS**. Write H. Jackson and R. Edmonds, F.F.R.I.B.A., 65, New Street, Birmingham, 2, stating qualifications, experience, and salary. Box 841.

LONDON PASSENGER TRANSPORT BOARD.—Applications are invited for appointments on the temporary staff of the Architect's Office as follows:—**ASSISTANT ARCHITECTS**, **ARCHITECTURAL ASSISTANTS**, **STRUCTURAL ENGINEERING ASSISTANTS**. Salaries range from £250 to £465 per annum, according to ability, qualifications and experience, plus war advance, at present £72 16s. per annum. Applications, which should give a brief outline of training and experience, to be sent to the Staff Officer (ER/E.408), 55, Broadway, Westminster, S.W.1. Applicants may also telephone ABBey 1234, Extension 194. 977

OXFORD Architects require **SENIOR** and **JUNIOR ASSISTANTS**; applicants must be keen, accurate draughtsmen, with sound knowledge of construction; only qualified men considered for Senior position; excellent salaries offered, according to ability and experience. Apply by letter, stating age and giving particulars. Box 842.

LONDON (W.1).—Architects invite **SENIOR** and **JUNIOR ASSISTANTS**, now employed in a temporary capacity with Ministries or Local Authorities, to contact them when available, as they have vacancies for permanent posts in a rapidly expanding office, in which ability and effort would be recognized. Details of salary, age, experience, to Box 850.

CENTRAL London Architects have immediate vacancies for **ASSISTANTS** (male or female) to augment their existing staff; ex-R.E. or other Services are particularly invited to reply; applicants should have up-to-date knowledge of the housing requirements of Ministries and Local Authorities; there is ample opportunity for advancement; salary according to results obtained. Full details of career and commencing salary required to Box 849.

Architectural Appointments Wanted

CHIEF ARCHITECTURAL ASSISTANT. University Diploma, seeks change: 15 years' experience high-class work, large housing schemes, flats, conversions, schools, hospitals, factories, etc.; accustomed complete charge; excellent references; London area or South of England preferred. Box 228.

YOUNG MAN (27, single), demobilised, desires training vacancy in quantity surveyor's office; 4 years' experience general office routine; slight knowledge of building construction; 5 years' battery surveyor in Royal Artillery; keen worker; low wage; any district. Reply E. W. Hammond, 39, York Road, Aldershot, Hants. 234

ARCHITECTURAL and **SURVEYING ASSISTANT** requires position in London area; age 30; 7 years' general experience prior to war service; studying for Final Surveyors' Inst. (Building). Box 238.

A.R.I.B.A., A.M.T.P.I., seeks appointment with a view to early Partnership; over 20 years' varied experience, including housing, schools and factories; accustomed to taking full charge. Box 239.

QUALIFIED ARCHITECT, 10 years' varied experience, requires part-time work; to be carried out in own office; fees by arrangement. Box 240.

ARCHITECT'S ASSISTANT (24) requires position in small private practice; good all-round knowledge of design; housing, construction, war damage, surveys, conversions, specifications and estimating; good organizer; own car. Box 241.

YOUNG A.R.I.B.A., Dip. Arch., desires post in office of Architect, with progressive outlook; general experience. Box 242.

ARCHITECTURAL ASSISTANT, preparing for Inter. R.I.B.A., used to responsibility, desires change to progressive office (London area); can make surveys. Box 245.

EXPERIENCED SENIOR ARCHITECTURAL ASSISTANT (30) requires position in London. Box 243.

REGISTERED ARCHITECT, A.R.I.B.A., Dip. Arch. (26), 4½ years' varied experience, requires position; South or South-West England preferred; married; living accommodation necessary. Box 246.

ARCHITECT, A.R.I.B.A. and Town Planning Diploma, seeks appointment in S.W. counties; country practice preferred, where position of responsibility would lead to possible partnership; age 37; 15 years' experience. Box 247.

A.R.I.B.A. (aged 31), at present employed on Architectural staff of Brewery Co., desires change in similar capacity. Box 244

Other Appointments Vacant

Four lines or under, 5s.; each additional line, 1s. 6d.

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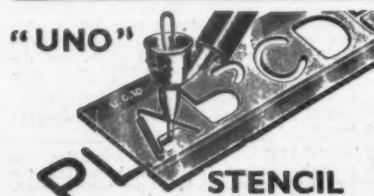
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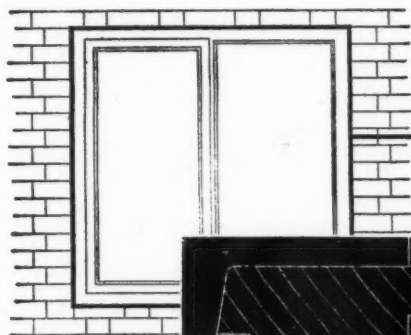
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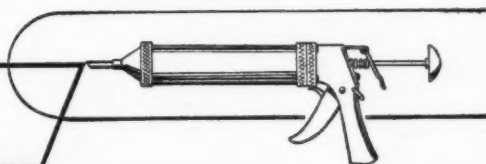
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