

# THE ARCHITECTS' JOURNAL



## standard contents

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

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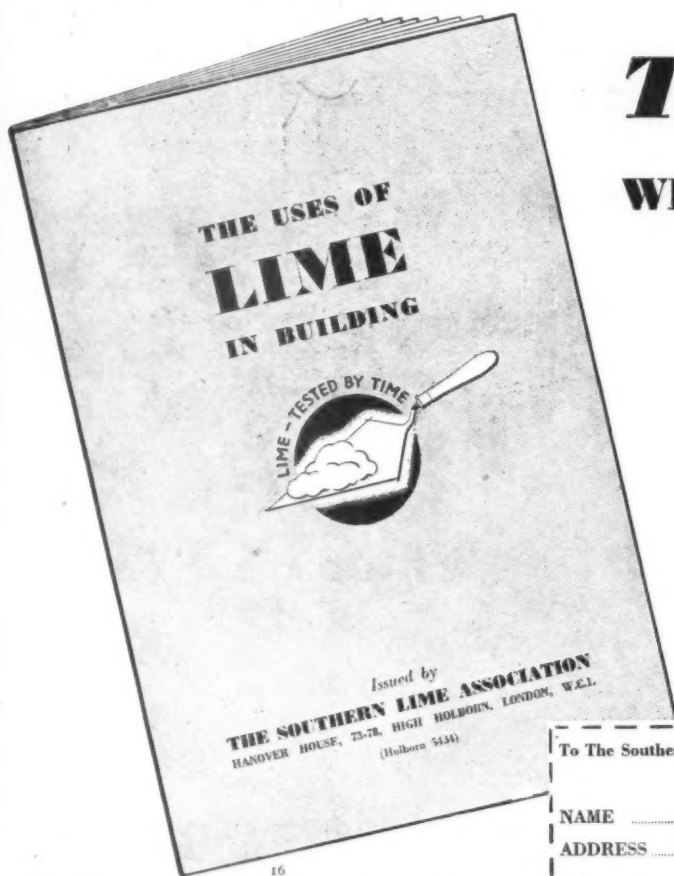
★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to H one week, I to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1. Sloane 3158
ICE	Institution of Civil Engineers. Great George Street, S.W.1. Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2. Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1. Abbey 5215
IGE	Institution of Gas Engineers. 1, Grosvenor Place, S.W.1. Sloane 8606
IHVE	Institution of Heating and Ventilating Engineers. 72/74, Victoria Street, S.W.1. Victoria 0146/7
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1. Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1. Museum 1783
IOB	Institute of Builders. 48, Bedford Square, W.C.1. Museum 7197
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128-29
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1. Whitehall 7264
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1. Museum 3891
MARS	MARS Group (English Branch of CIAM). 46, Sheffield Terrace, W.8. Park 7678
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1. Whitehall 3400
MOE	Ministry of Education. Belgrave Square, S.W.1. Sloane 4522
MOH	Ministry of Health. Whitehall, S.W.1. Whitehall 4300
MOLNS	Ministry of Labour and National Service. St. James's Square, S.W.1. Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C. Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. Abbey 7711
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1. Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1. Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94, Petty France, S.W.1. Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1. Abbey 5277/8
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7. Kensington 8161
NCBMP	National Council of Building Material Producers. 2, Caxton Street, S.W.1. Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1. Langham 4041
NFBTO	National Federation of Building Trades Operatives. 8, Rosebery Houses, Breams Buildings, E.C.4. Holborn 1881
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1. Whitehall 2881/2/3
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1. Langham 4041
NHTPC	National Housing and Town Planning Council. 41, Russell Square, W.C.1. Museum 1264
NPL	National Physical Laboratory. Head Office, Teddington. Molesey 1380
NRIAD	National Register of Industrial Art Designers. National Gallery, Trafalgar Square, W.C.2. Whitehall 2415
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1. Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1. Whitehall 0211/2
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 7245
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House, S.E.1. Reliance 7611
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1. Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. Edinburgh 20396
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1. Whitehall 5322
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.9. Wimbledon 5101
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1. Welbeck 5721
RFAC	Royal Fine Art Commission. 6, Burlington Gardens, W.1. Regent 1446
RS	Royal Society. Burlington House, Piccadilly, W.1. Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2. Temple Bar 8274
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1. Sloane 5134
SCR	Society for Cultural Relations with the USSR. 98 Gower Street, W.C.1. Euston 6272/3
SFMA	School Furniture Manufacturers' Association. 13, New Square, Lincoln's Inn, W.C. Chancery 5313
SIA	Society of Industrial Artists. Room 243, Empire House, St. Martin's-le-Grand, E.C.1. Metropolitan 8344
SNTPC	Scottish National Town Planning Council. 11, Drumsheugh Gardens, Edinburgh, 3
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4. City 6146 (3 lines)
TPI	Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815
TTF	Timber Trades Federation. 81, Cannon Street, E.C.4. City 1476
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1. Mayfair 8866
WEDA	Welfare Equipment Development Association. 61, St. Paul's Churchyard, E.C.4. City 4263/4
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford. Oxford 47988

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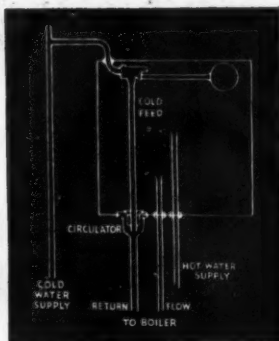
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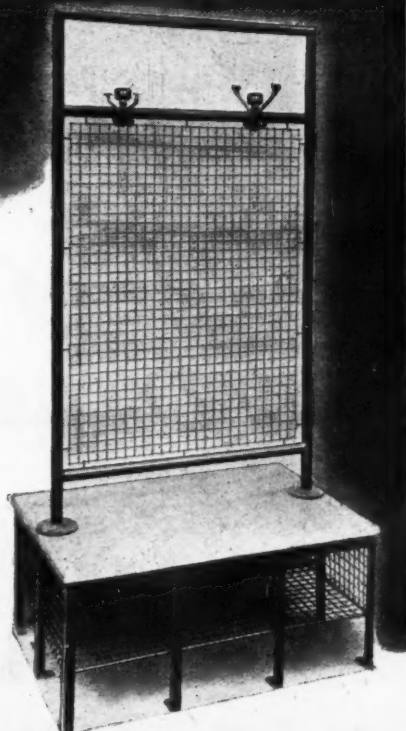
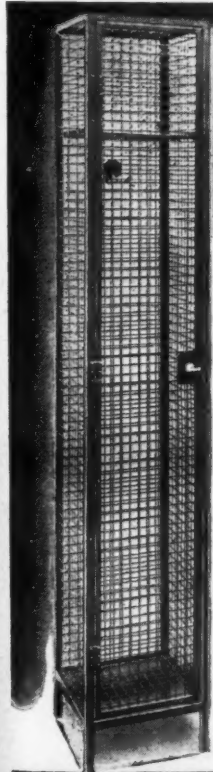
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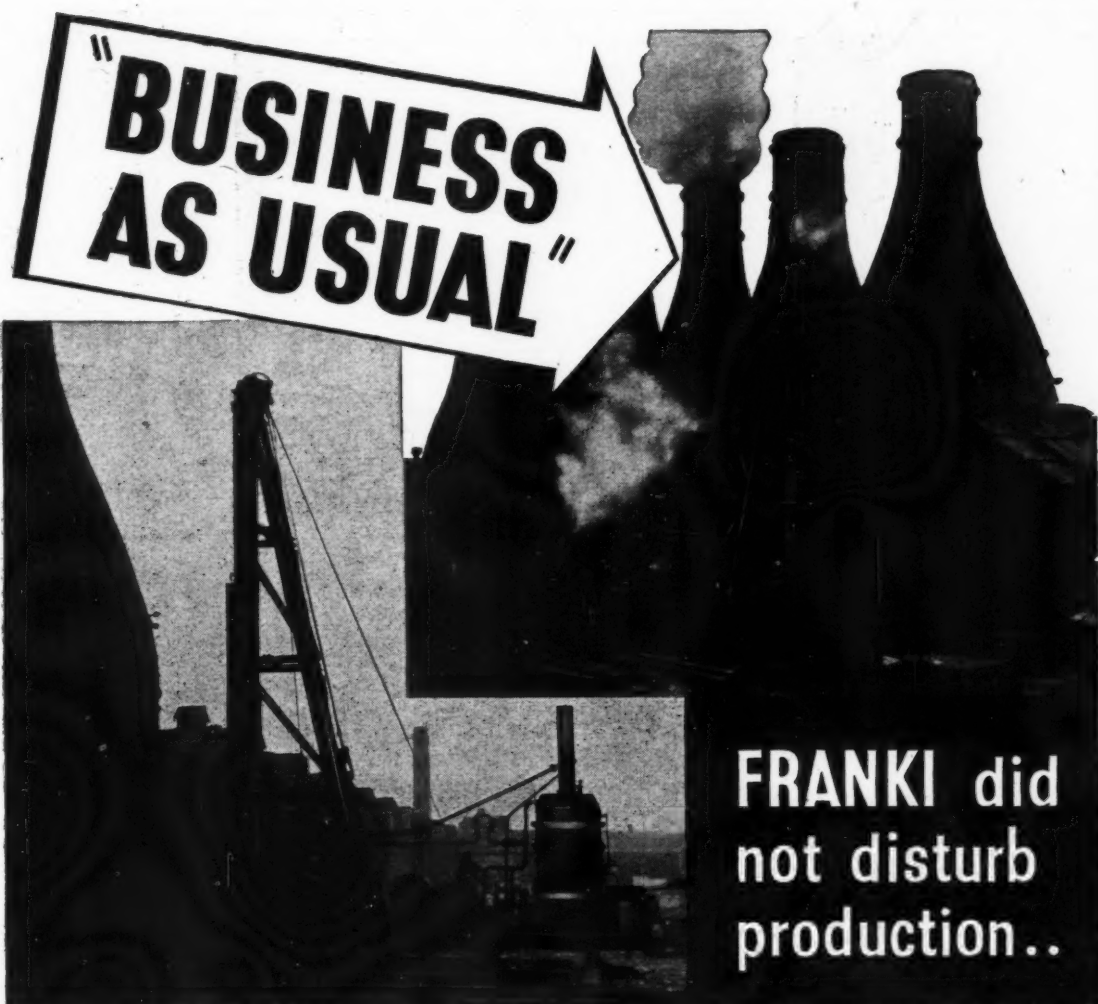


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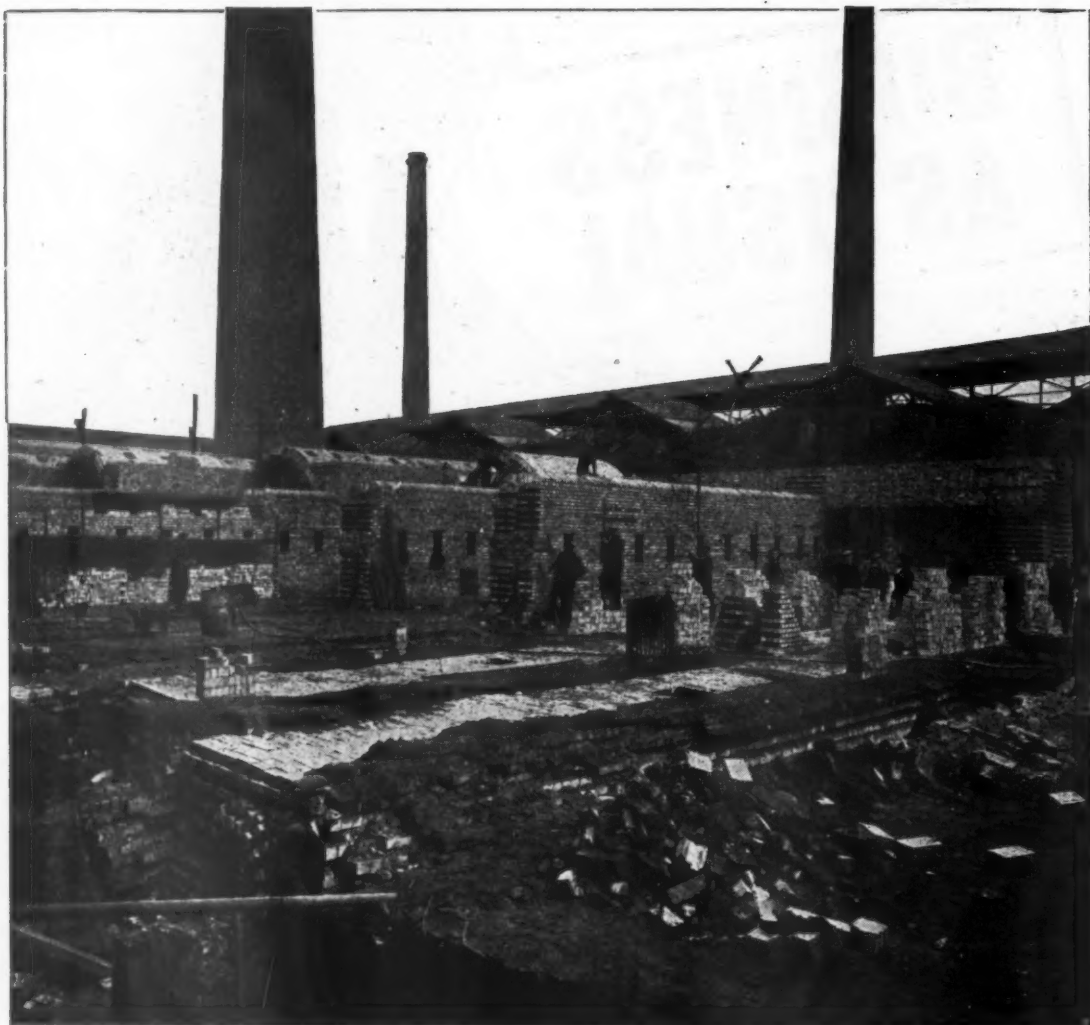
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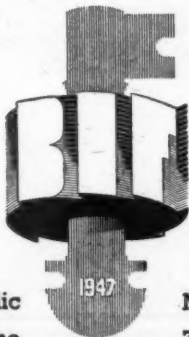
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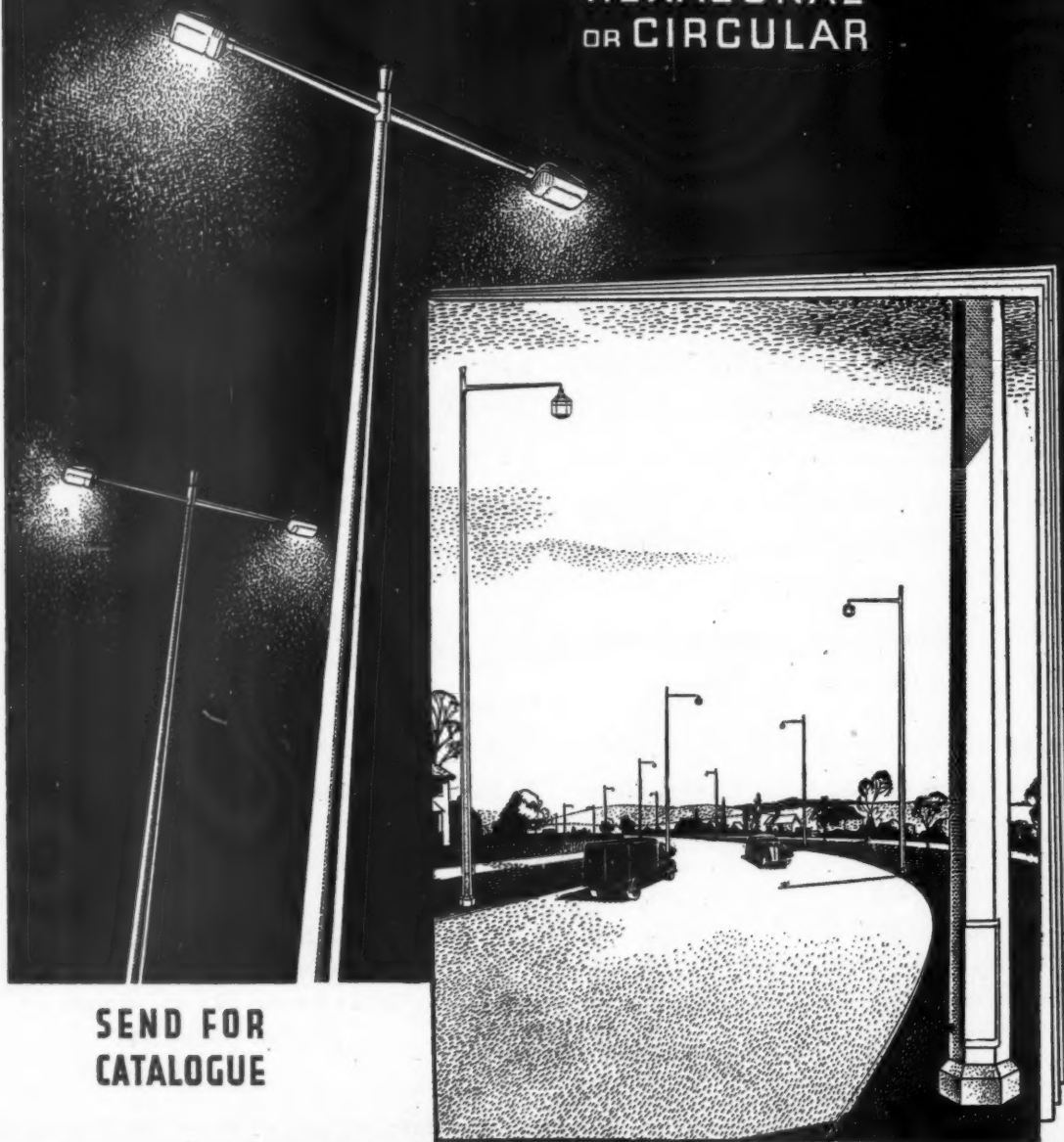
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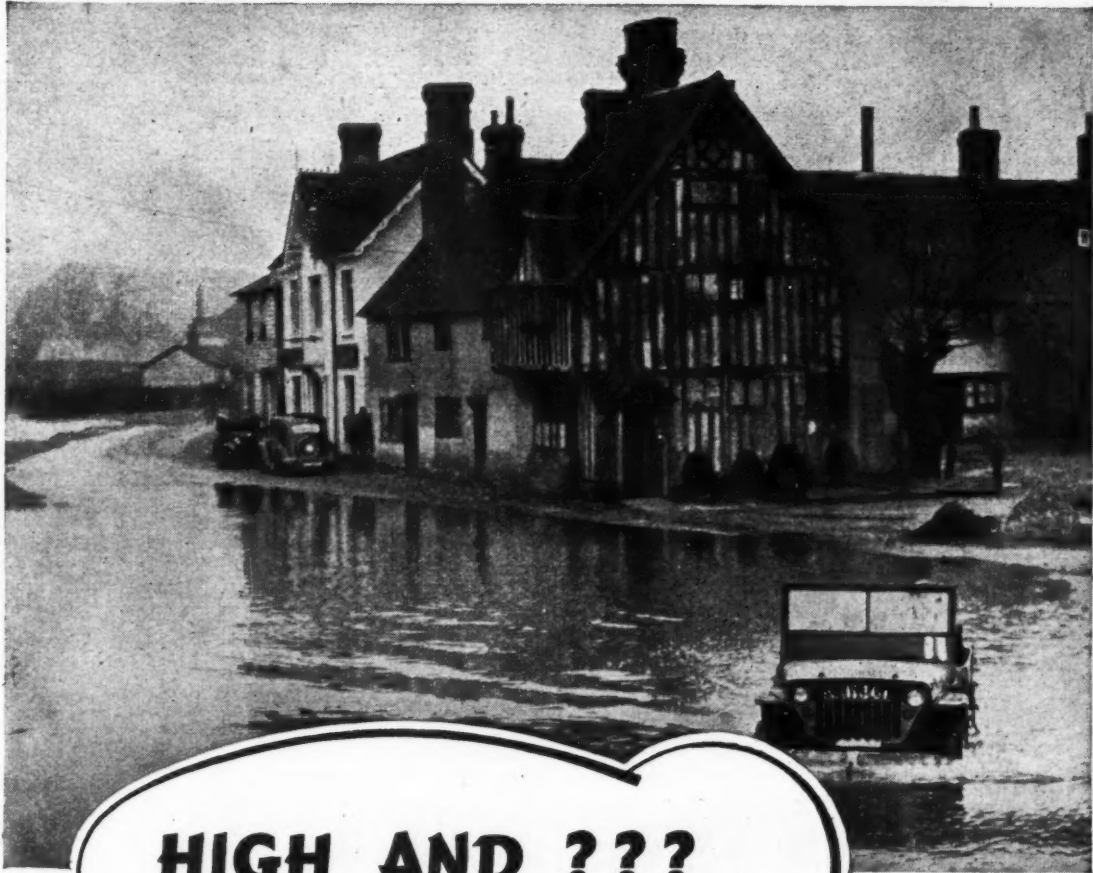
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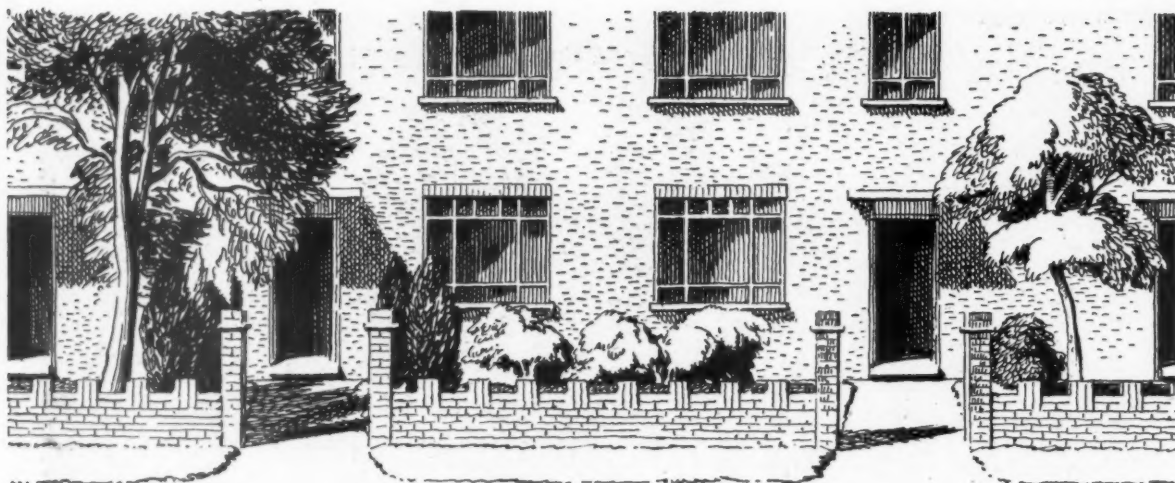
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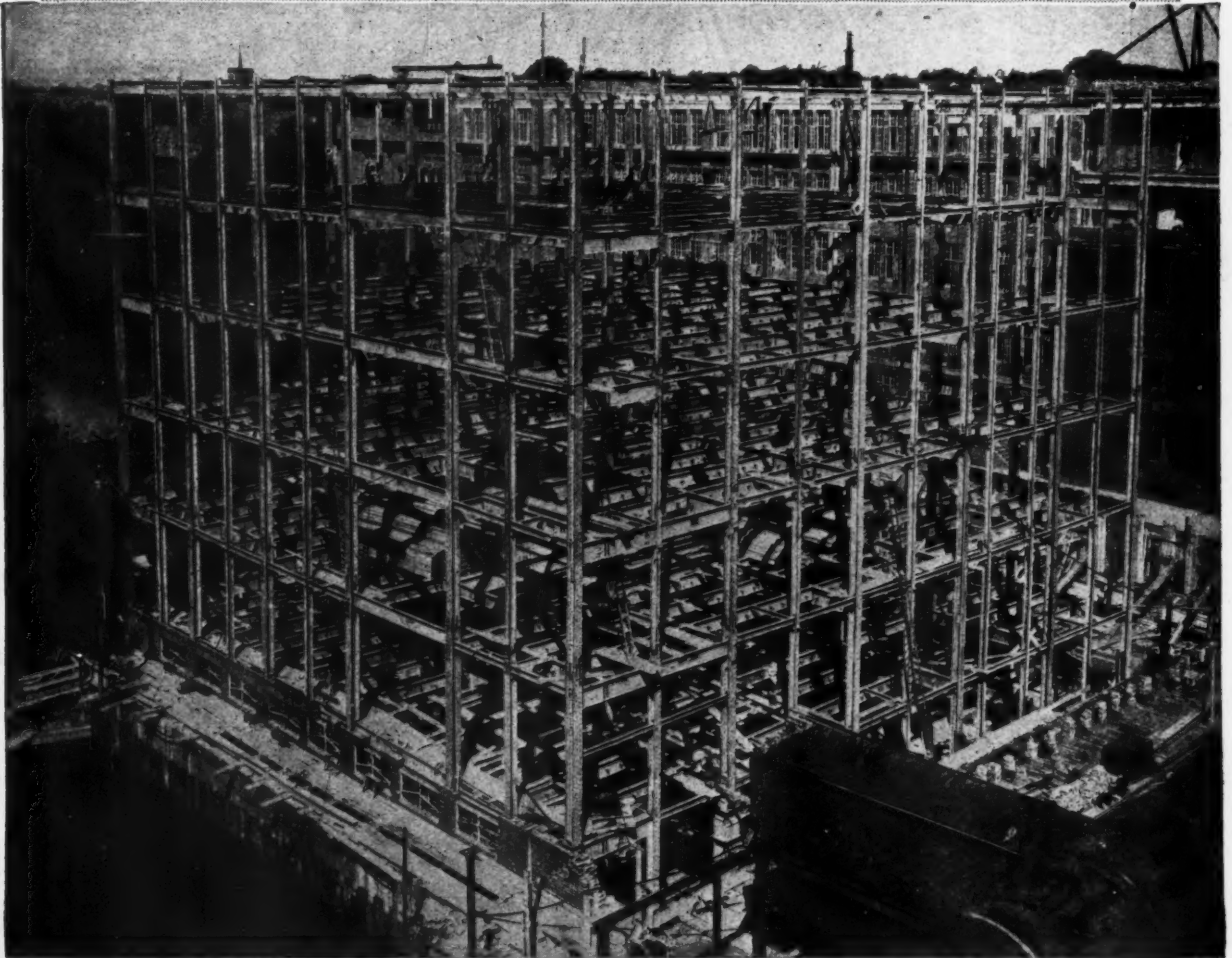
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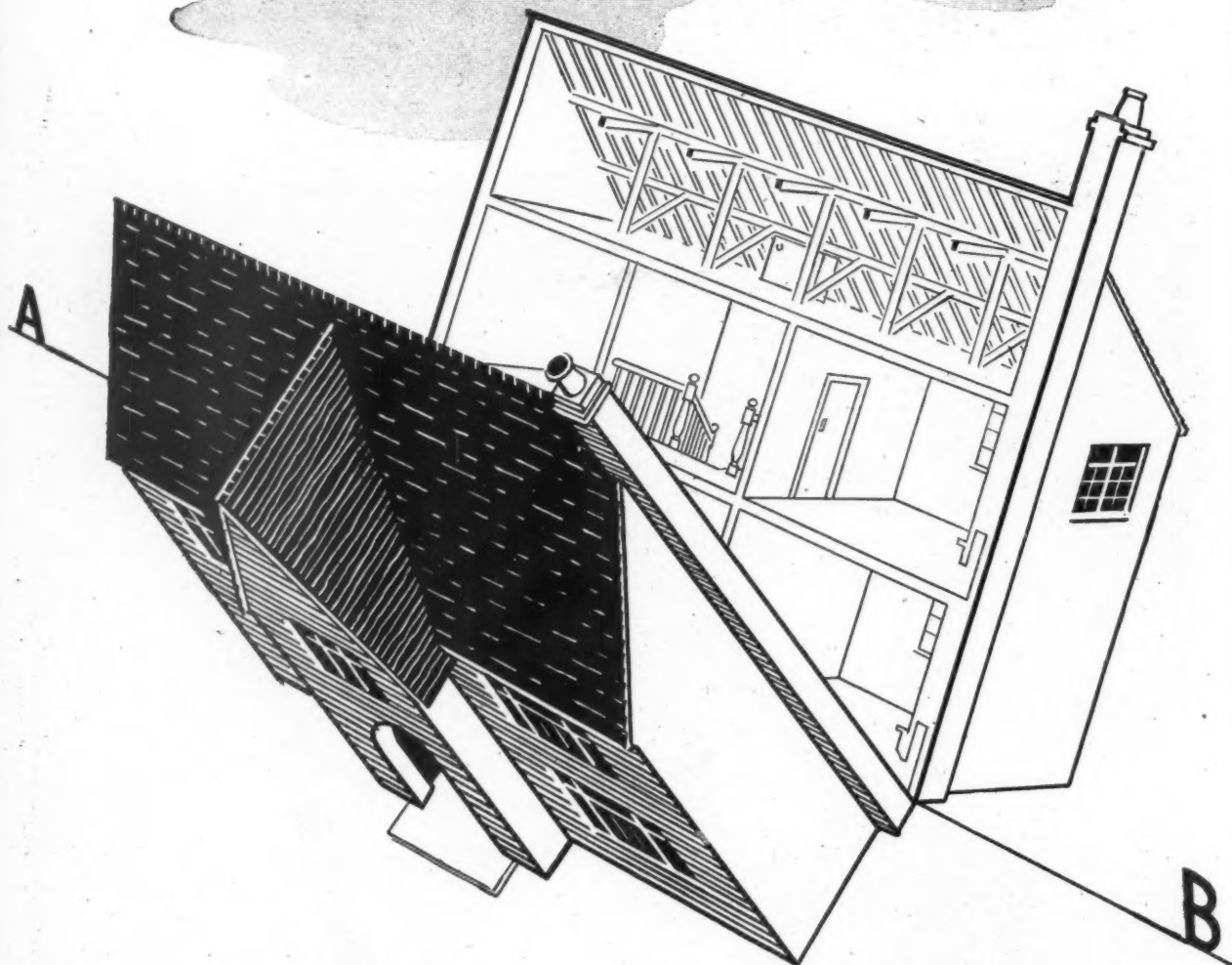
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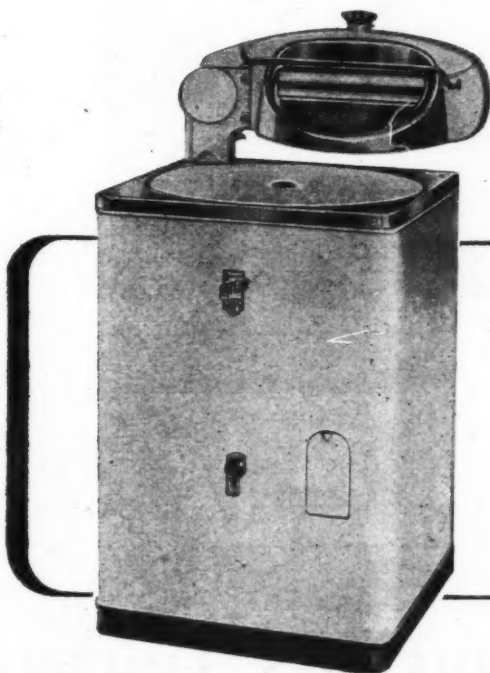
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*Example -*

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Background gas heater (for very cold weather).

Bedrooms.  
Convector gas fire (for one bedroom used as a study, or in case of sickness). Panel or hearth gas fires (for other bedrooms).

Living Room.  
WINTER HEATING.  
Gas-ignited open coke fire (see new type of grate which gives controlled heating and 6 hours burning without refuelling).

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### B—FOR WATER HEATING

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Gas bath heater and sink heater or gas multipoint heater or gas circulator or gas storage heater.

WINTER WATER HEATING.  
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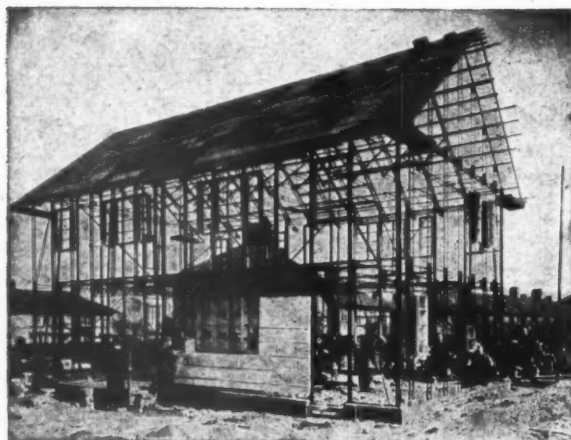
### D—FOR REFRIGERATION

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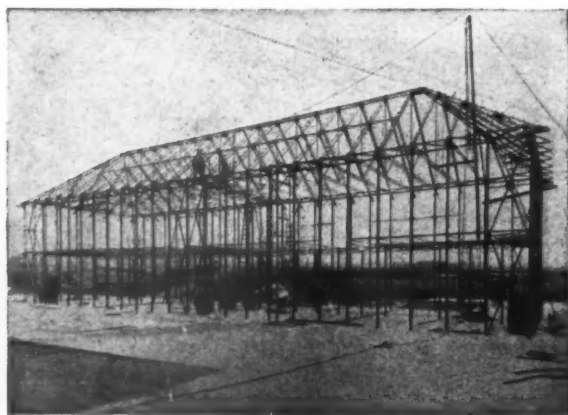
### E—FOR HOME LAUNDRY

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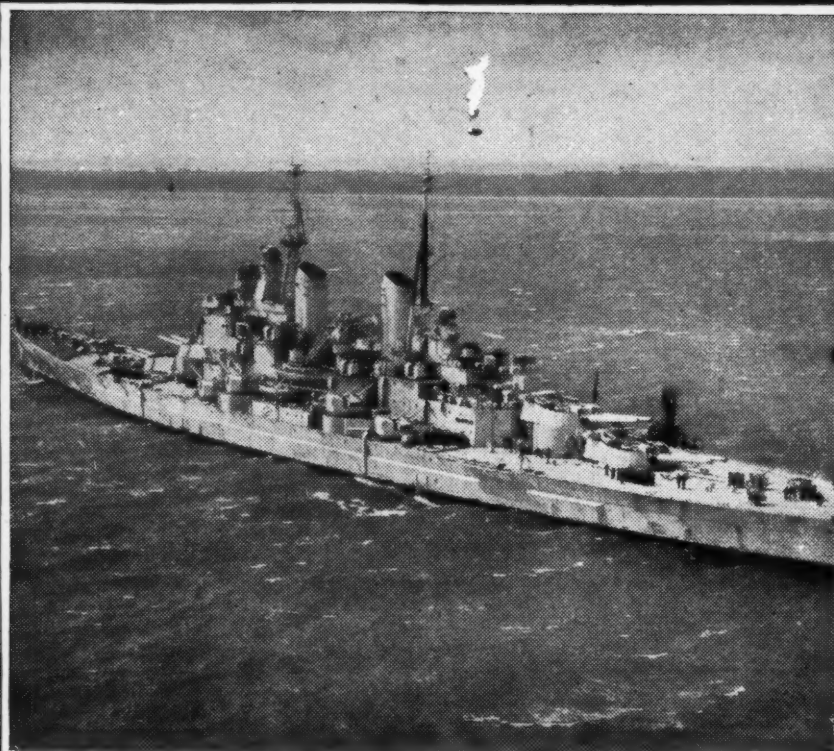
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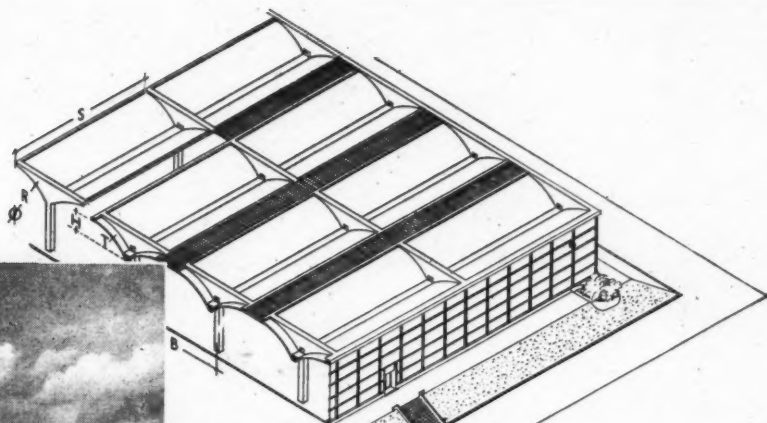
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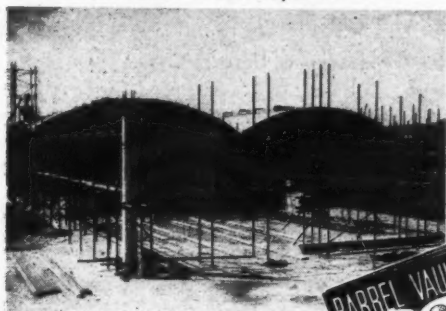




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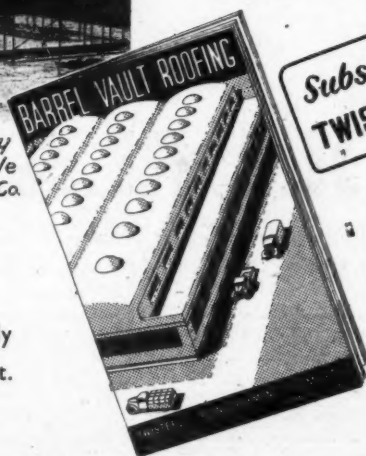
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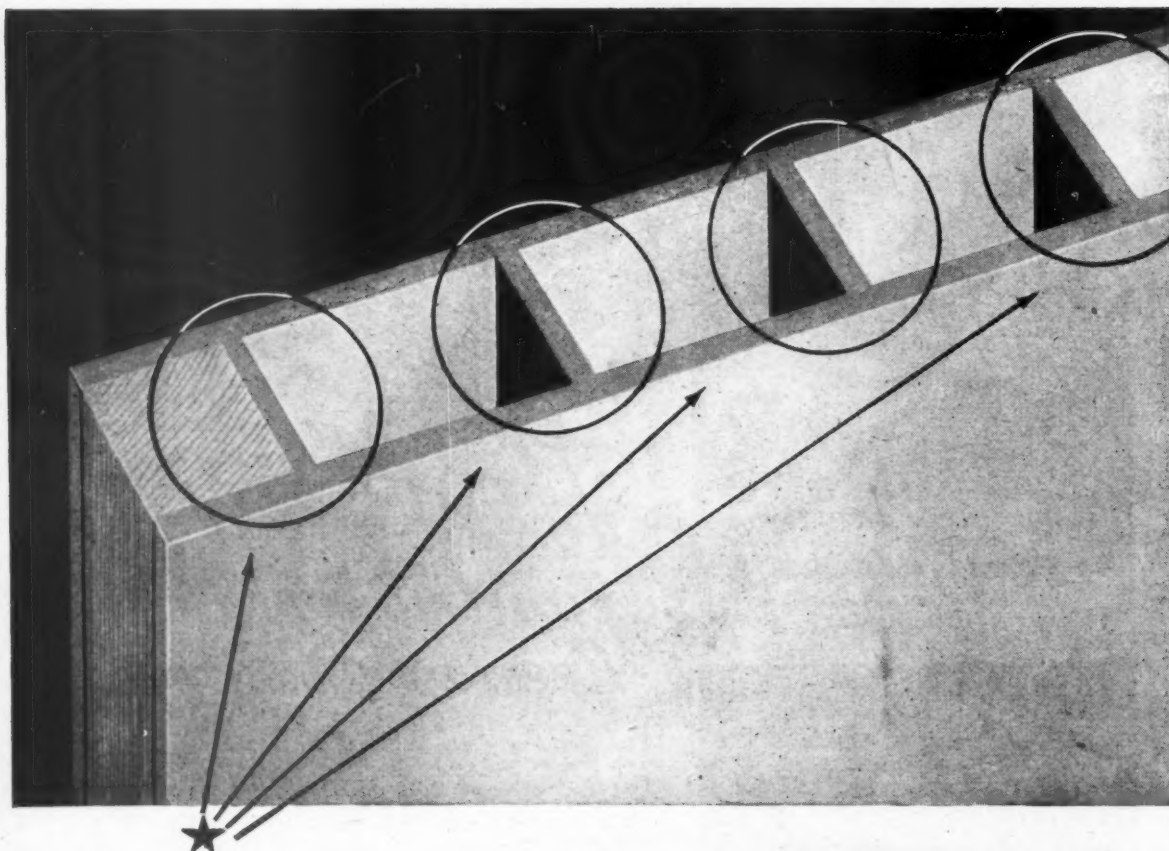
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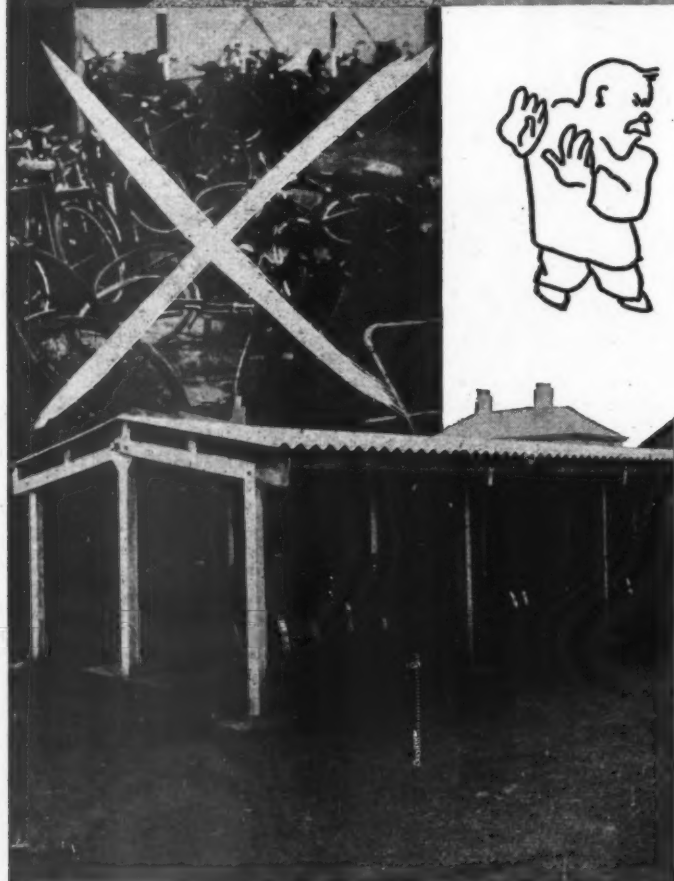


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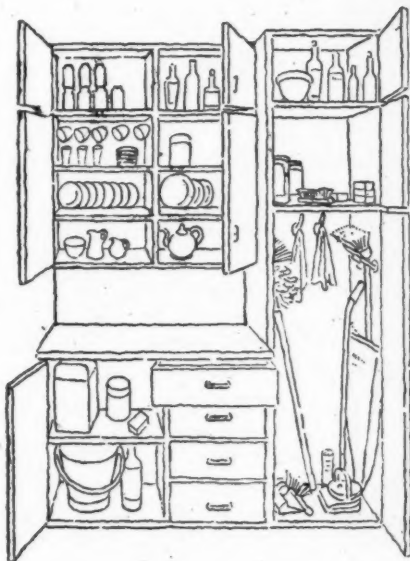
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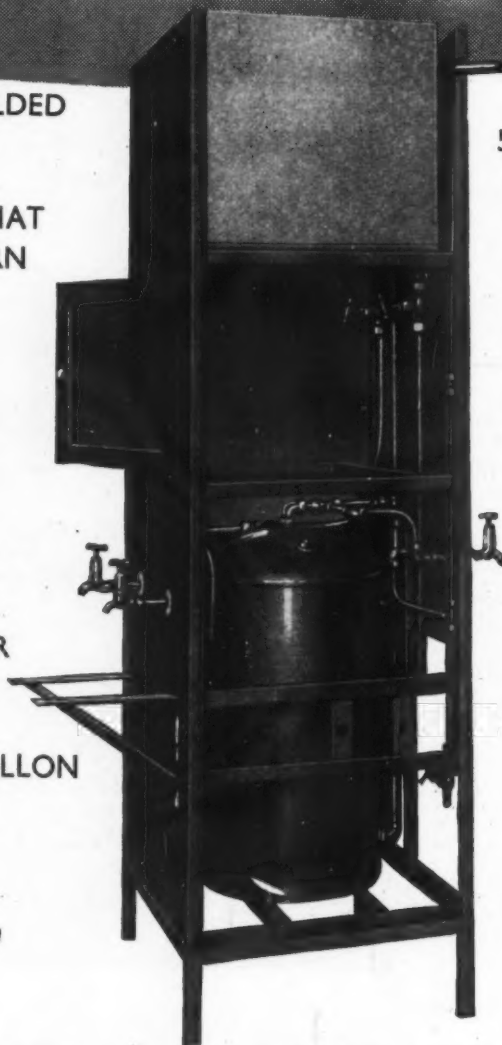
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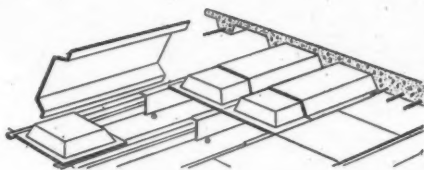
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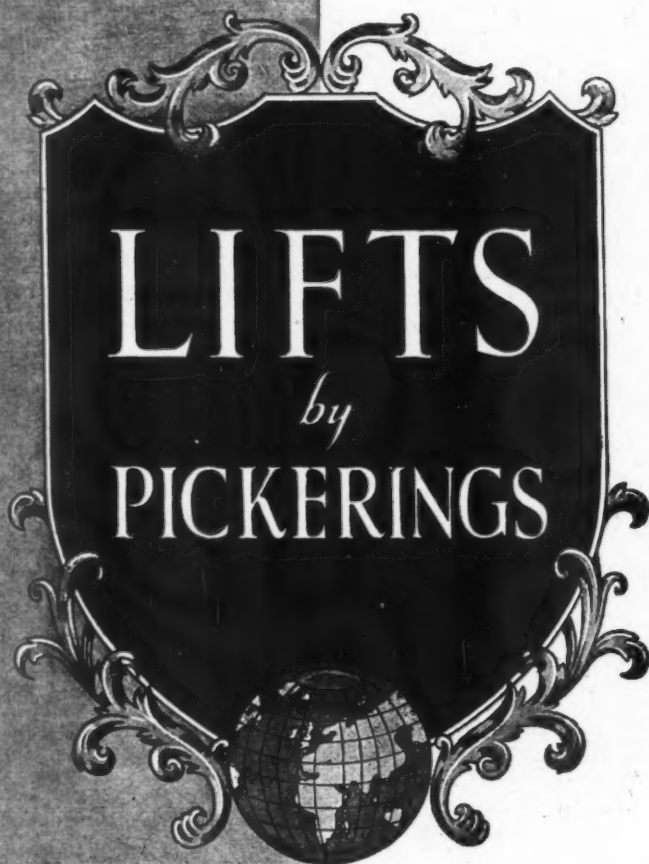
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## DIARY FOR APRIL MAY AND JUNE

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first. Sponsors are represented by the initials as given in the glossary on the front cover.

**BIRMINGHAM.** *British Industries Fair, 1947. Engineering and Hardware Section.* At Castle Bromwich. Sponsor, Exhibitions Branch, Export Promotion Department, Board of Trade, in collaboration with Birmingham Chamber of Commerce.) MAY 5-16

**DURHAM.** *Planning Problems of the North East.* Conference. (Sponsors, TCPA.) MAY 7 and 8

**LIVERPOOL.** R. Williams. *Feed Water Treatment.* At Accountants Hall, Fenwick Street. (Sponsor, IHVE.) 6.30 p.m. APRIL 30

**LONDON.** *Steel Door Frames.* Exhibition at Henry Hope and Sons, Ltd., 17, Berners Street, W.1. The object of the exhibition is to overcome any practical difficulties that architects may foresee or experience in fitting steel door frames to the various types of walls and floors in use to-day. (Sponsor, Henry Hope and Sons, Ltd.) Until MAY

*Daily Herald Modern Homes Exhibition.* At Dorland Hall, Regent Street, S.W.1. (Sponsor, Daily Herald.) Until MAY

*Town and Country Planning Association Annual General Meeting and Brains Trust on New Planning Bill.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 3 p.m. APRIL 25

Hope Bagenal. *Noise Abatement in Relation to Housing.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) 12.45 p.m. Buffet lunch, 2s. 6d., 1.15 p.m. Talk and discussion. APRIL 29

G. Hitchings, member of Council of the Amalgamated Engineering Union and of the recent AEU delegation to USSR. *An Engineer looks at the USSR.* An address to members of the SCR Architecture and Planning Group and their guests, at the RIBA 66, Portland Place, W.1. Sir Charles Reilly will preside. Admission by ticket (members of the Group free of charge, others 1s.), obtainable from the SCR, 98, Gower Street, London, W.C.1. 7 p.m. APRIL 29

E. J. B. Lloyd. Director and Secretary, Lewis's Investment Trust, Ltd. *Distribution.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA.) 5 p.m. APRIL 30

*Eleven Nations Plan for Better Living.* An exhibition of International Town Plans. At the Institute of Civil Engineers, Great George Street, S.W.1. (Sponsor, TCPA.) MAY

Professor A. E. Richardson. *Architectural Convention and Convenience.* Bossom Gift Lecture at University College, London (The Architectural Theatre), Gower Street, W.C.1. The chair will be taken by Frederick R. Hiorns. The lecture will be divided into three parts: (a) Development of sanitation from the earliest times. (b) The influence of sanitation on architecture. (c) The introduction of continuous water supply and subsequent improvements in hygiene. The lecture will deal with the various appliances designed from time to time in England to meet the changing conditions of domestic life. (Sponsor, The Chadwick Trust.) 2.30 p.m. MAY 1

Clough Williams-Ellis. *The National Trust.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Buffet lunch 12.45 p.m. Talk and discussion 1.15 p.m. MAY 1

*British Industries Fair, 1947 (Lighter Industries.)* At Earls Court and Birmingham. (Sponsor, Exhibitions Branch, Export Promotion Department, Board of Trade, in collaboration with the Birmingham Chamber of Commerce.) MAY 5-16

*RIBA Annual General Meeting.* At 66, Portland Place, W.1. 6.0 p.m. Buffet from 5.30 p.m. (Sponsor, RIBA.) MAY 5

*Council for Visual Education. Fourth Annual Meeting.* At the Royal Society of Arts, 6, John Adam Street, Adelphi, W.C.2. Sir Patrick Abercrombie will preside. Sir Kenneth Clark will speak on the need for the appreciation of design. (Sponsor, CVE.) 1.15 p.m. MAY 6

Mrs. G. E. Abbott, Organising Secretary, Women's Gas Council. *Gas in the Home.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA.) 5 p.m. MAY 7

**MANCHESTER.** *Newer Heat Exhibition.* At Milton Hall, 244, Deansgate, Manchester. An exhibition of new solid-fuel burning appliances for providing better standards of home heating and comfort. (Sponsor, Coal Utilisation Joint Council.) Until MAY 10

**SHEFFIELD.** J. S. Pickles and W. H. Wills. *Rural Electrification. The Use of the Single-Phase System of Supply.* At the Royal Victoria Station Hotel. (Sponsor, IEE, Sheffield Sub Centre.) 6.15 p.m. APRIL 30

**THE HAGUE.** *Fuel Economy Conference.* Particulars from the British National Committee World Power Conference, 201-2, Grand Buildings, Trafalgar Square, London, W.C.2. SEPT. 2-9

## NEWS

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

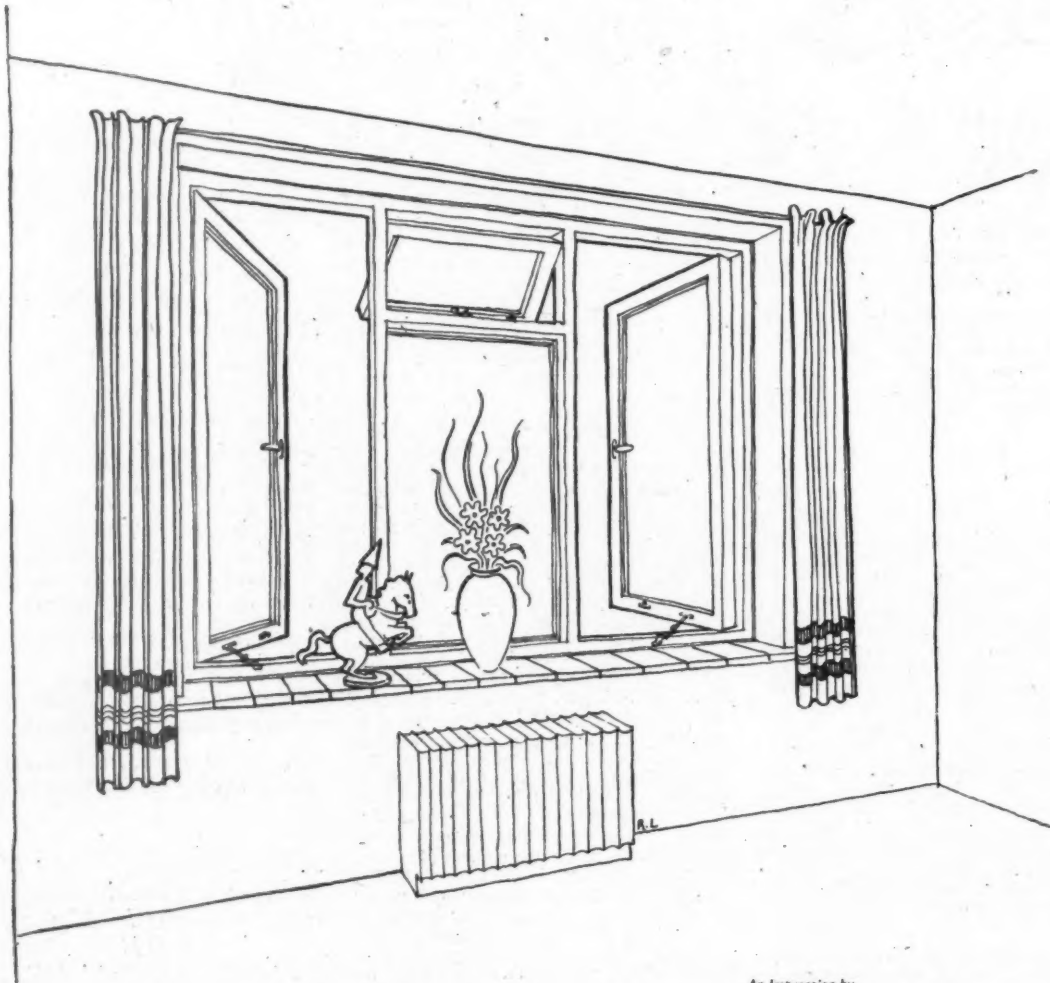
### ★ The Ministry of Works Codes of Practice Committee invites comments by May 14, on a NEW CODE ON ELEC- TRICAL SPACE HEATING.

*Installation of Domestic Electric Space Heating Equipment, draft British Standard Code of Practice 3.6421, is a further addition to the Electrical Installations series of codes, to be read in conjunction with the main code, 3.6 Electrical Installations—General. It has been prepared by a Committee convened by the Institution of Electrical Engineers and issued under the authority of the Codes of Practice Committee for comment. This draft code gives guidance for space heating of single family dwellings by the installation of independent electrical appliances, as distinct from central heating systems. The design of suitable installations (exclusive of wiring), the heat requirements and heat losses of typical dwellings and the classification of heaters, together with their characteristics are all dealt with in detail. Certain safety precautions are also recommended. Comments, which should be forwarded by May 14, are invited and will be welcomed. Copies may be obtained from the British Standards Institution, 28, Victoria Street, S.W.1. Ref. CP (B) 644, price 2s. post free.*



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## From AN ARCHITECT'S Commonplace Book

THE ENDS OF ARCHITECTURE. [From *Towards a New Architecture*, by Le Corbusier (The Architectural Press).] Architecture has nothing to do with the various "styles." The styles of Louis XIV, XV, XVI or Gothic, are to architecture what a feather is on a woman's head; it is sometimes pretty, though not always, and never anything more. Architecture has graver ends; capable of the sublime, it impresses the most brutal instincts by its objectivity; it calls into play the highest faculties by its very abstraction. Architectural abstraction has this about it which is magnificently peculiar to itself, that while it is rooted in hard fact it spiritualizes it, because the naked fact is nothing more than the materialization of a possible idea. The naked fact is a medium for ideas only by reason of the "order" that is applied to it. The emotions that architecture arouses spring from physical conditions which are inevitable, irrefutable and to-day forgotten. Mass and surface are elements by which architecture manifests itself. Mass and surface are determined by the plan. The plan is the generator. So much the worse for those who lack imagination!

### *The RIBA offers for award in July the following MAINTENANCE SCHOLARSHIPS in Architecture tenable from October 1, 1947.*

(a) Two RIBA Houston Maintenance Scholarships of a maximum value of £125 per annum each. They are available for any stage of training at a Recognised School of Architecture and are awarded in the first instance for one year. They are renewable from year to year. (The Houston Maintenance Scholarships are for the purpose of providing educational and maintenance allowances for the sons of architects and artists who may be, or at the time of their death were, in pecuniary circumstances, whether such architects or artists are alive or dead); (b) the Howe Green 4th and 5th year Maintenance Scholarship of £40 to enable students who have passed the Intermediate stage to complete an approved course at a School of Architecture recognised for exemption from the RIBA Final Examination. The Scholarships are intended to enable promising students, whose parents or guardians have not the necessary means, to attend approved courses at the Schools of Architecture recognised for exemption from the RIBA examinations. Students already taking such a course are also eligible to apply for a Scholarship. The Scholarships are available for students residing in Great Britain. The value of the Scholarships, up to the limits stated, will depend on the financial circumstances of the parents or guardians of the candidate. The parents or guardians will be required to furnish particulars on the proper form, of their financial position. Particulars and forms of application may be obtained, free, on application to the Secretary of the Board of Architectural Education, RIBA, 66, Portland Place, London, W.1. The closing date for the receipt of applications, duly completed, is June 1, 1947.

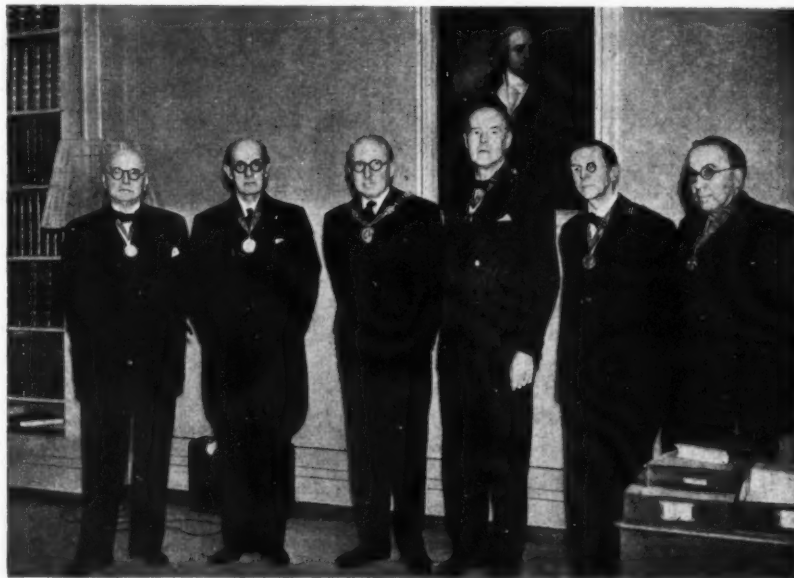
### *Lord Brabazon of Tara has been elected PRESIDENT OF THE BRITISH ELECTRICAL DEVELOPMENT ASSOCIATION for the fifth year in succession.*

Sir Leonard Pearce has been elected Vice-President. At the first meeting of the new Council, Mr. H. F. Carpenter was elected Chairman for the ensuing year, and Mr. J. Eccles, Vice-Chairman. The new Council is as follows:—M. F. Carpenter, H. J. Randall, Colonel J. Rankin, F. Nicholls, R. A. S. Thwaites, G. A. Vowles, appointed by the Central Electricity Board; R. Birt, J. Eccles, E. E. Hoadley, Councillor J. Selwyn Jones, F. Newey, appointed by the Incorporated Municipal Electrical Association; W. N. C. Clinch, General R. F. Legge, appointed by Power Company Members;

Clarence Parker, appointed by London Electrical Supply Association; Sir John Dalton, appointed by Provincial Electrical Supply Association; J. Harwood Lumsden, appointed by the Conference of Joint Electricity Authorities; and R. Steel, E. Jones, A. Kelso, G. F. Peirson, H. I. Hulme, H. H. Mullens, W. J. Girvan, J. R. Jones, G. P. Dixon, S. J. C. Ellis, and Lt.-Cmdr. E. J. Cook.

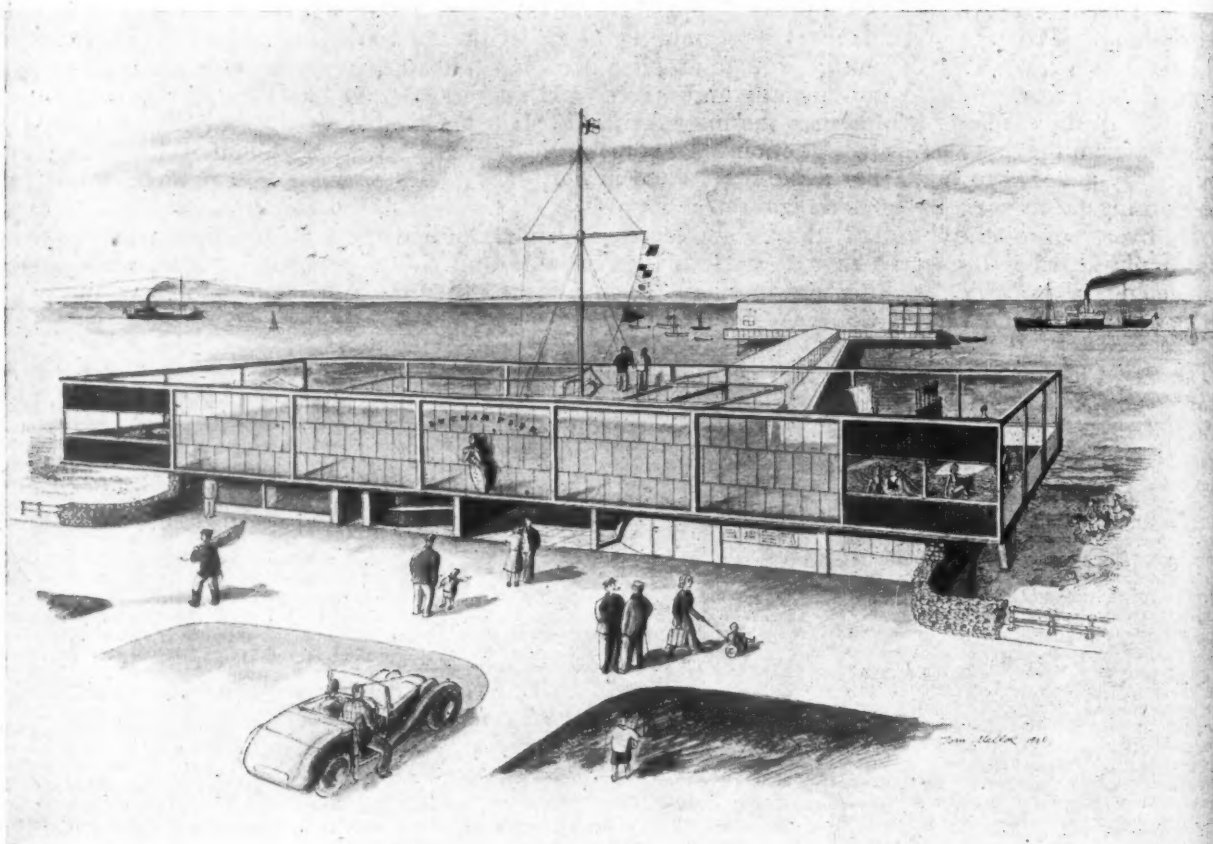
★  
*Commander in Chief, British Zone, Sir Sholto Douglas, told press correspondents that HOUSING IN THE BRITISH ZONE during the winter of 1946-7 was one of the most serious problems, possibly second only to that of food. He said: Although every endeavour has been made to increase the amount of avail-*

able housing space, progress has been disappointing, owing mainly to the shortage of building materials. Over the period October 1, 1946, to February 28, 1947, the number of repaired dwelling units was 36,185. This is the actual number of repairs carried out to dwelling units, but as some of these have been repaired on more than one occasion, owing to previous repairs having become dilapidated, this does not mean that a further 36,185 dwelling units have been brought into use. Although in the past German housing authorities have tended to shirk the job, much progress has been made in the more even distribution of housing space, and whereas in the past one could find relative comfort side by side with extreme poverty, the gap is now lessening appreciably. Asked by the A.J.'s special representative whether any permanent buildings are being erected in the Ruhr, Sir Sholto replied that apart from the limited number of pre-fabs erected, most of the building work being done is repair work, and that this repair work will last over several years.



*Five architects received Royal Gold Medals at the RIBA on Tuesday of last week from the hands of the President, Sir Lancelot Keay. The medals were awarded as usual during the war years, but this was the first investiture to be held since 1939. The photograph shows from left to right: Professor Sir Charles Reilly (1943), Mr. W. Curtis Green (1942), the President, Mr. Edward Maufe (1944), Professor Sir Patrick Abercrombie (1946) and Professor A. E. Richardson (1947). Mr. Frank Lloyd Wright awarded the Royal Gold Medal in 1941 was unfortunately unable to be present and Victor Vesmin, President of the Academy of the USSR, had already been sent his Royal Gold Medal (awarded in 1945), through the Soviet Embassy.*





## Jobs in the Making: Lytham Pier

The Lytham Pier entrance building is part of the scheme for the reconstruction of the whole of the Pier which is now derelict. It consists of a large restaurant, shops, pier offices and workshops, with a sun-bathing deck and outdoor café on the first floor. The façade is on the axis of Lytham Square and faces the Regency and early Victorian terrace houses on the Promenade, from which it is

separated by a wide grass strip. It is, therefore, being kept as simple and light in appearance as possible. The superstructure is of light steel faced in front with glass. The centre figure over the entrance is a ship's figurehead. The architect is Tom Mellor, of the Grenfell Baines Group, who drew the perspective shown above. Other drawings of the proposed building are shown on page 339-340.

**Sir Stafford Cripps:** *The present state of the electricity and gas plants means that, for a long time to come, the nation must depend to a great extent on SOLID FUEL for its basic household heating.*

We want, he said, to get the most out of the solid fuel available to heat the houses because we cannot afford to waste a single ton of coal by sending its heat up the chimney instead of into the room, or the oven, or the water tank. The ordinary open coal fire, which still heats the living room in the great majority of homes, has an efficiency not much above 15 per cent., often less. A modern grate of the same type has an efficiency around 25 per cent., and sometimes more. A closed stove with a boiler attached, has an efficiency up to 35 per cent., while there are types of stoves with boilers which have given efficiencies of over 50 per cent. It is not for the Government to set all the targets or prescribe all the means of attaining them. Industry itself must take the initiative. Sir Stafford

Cripps, President of the Board of Trade, was addressing a conference in London of the Women's Advisory Committee on Fuel.



*As a result of research into appliances which burn solid fuel, better designed and more economical FIRES, STOVES AND COOKERS are to be installed in new houses.*

Some are already being produced on a large scale. The Minister of Health, Mr. Aneurin Bevan, has sent housing authorities a list of post-war types which have been approved by the Department of Scientific and Industrial Research and by the Fuel Engineers of the Ministry of Fuel and Power, so that authorities can consider them for their new houses. More appliances are being tested, and additions will be made to the list, which includes open fires (with or without back boilers), continuous-burning open fires with back boilers, openable

stoves and continuous-burning cookers. Arrangements are being made, where necessary by production agreements between the Government and the manufacturers, to ensure immediate production. The Government has been considering improved solid fuel appliances since the Simon Report on Domestic Fuel Policy was made to the Minister of Fuel and Power. The report made recommendations on higher heating efficiency and insulation in the home. The Minister of Health has already sent housing authorities recommendations for improving the thermal insulation of houses. The following are the types of approved appliance which have been recommended to local authorities: Openable stoves with back boilers. Continuous-burning open fires with back boilers (with or without convection). Improved open fires with back boilers (with or without convection). Improved open fires without back boilers. Cookers; continuous-burning, with boilers:—(a) Semi-insulated—continuous-burning freestanding, with boilers. (b) Combination grate—continuous-burning, with boiler. (c) Back-to-back grate—continuous-burning, with boiler.



*In the United Kingdom 279 competitors took part in the Preliminary Competition for the TITE PRIZE.*

The following have been selected to take part in the Final Competition:—Peter G. Beresford (Birmingham School of Architecture), William H. Davies (Welsh School of Architecture, The Technical College, Cardiff), W. W. M. Rhys Davies (Welsh School of Architecture, The Technical College, Cardiff), Richard De'Ath (Glasgow School of Architecture), John B. Dinsdale (Leeds School of Architecture), Richard C. Hosford (Nottingham School of Architecture), John M. Jenkins (Welsh School of Architecture, The Technical College, Cardiff), Kenneth J. King (Birmingham School of Architecture), John O. Knight (Nottingham School of Architecture), David J. Lloyd (Department of Architecture, The Northern Polytechnic, London), Alastair C. Mackintosh (School of Architecture, Edinburgh College of Art), Gilbert D. Menzies (School of Architecture, Edinburgh College of Art), Alastair M. Michie (School of Architecture, Edinburgh College of Art), Arthur H. Roper (Liverpool School of Architecture, University of Liverpool), Stanley P. Ross-Smith (School of Architecture, Edinburgh College of Art), Philip J. Scott (Department of Architecture, The Northern Polytechnic, London), James D. Shearer (School of Architecture, Edinburgh College of Art), Ian H. Smith (Department of Architecture, City of Oxford School of Art and Crafts), George C. Taylor (Nottingham School of Architecture).

*Mr. Brian Hackett, A.R.I.B.A., A.I.L.A., has recently been APPOINTED LECTURER IN TOWN AND COUNTRY PLANNING in the new degree course at the University of Durham.*

Mr. Hackett was trained at the School of Planning for Research and Regional Development. During the war he served with the RAFVR and after release joined the staff of the School and was visiting lecturer in Town Planning at the Northern Polytechnic School of Architecture. At Durham University he is to work under Professor J. S. Allen who is head of the department at King's College, Newcastle. His appointment is the first of an intended full-time team of lecturers and research workers envisaged by Professor Allen for his department. See Astragal, page 336.



*Mr. Brian Hackett who has been appointed Lecturer in Town and Country Planning, University of Durham. See News Item.*

## ABOLISH THE BALCONY ACCESS

THE reconstruction of our towns and cities has begun, and although the materials position may well slow the whole programme down this year, it is possible from designs and photographs published already to see how things are shaping.

Architects have little to congratulate themselves upon here.

The drawings and photographs of the Minerva Street scheme of the LCC, published in this Journal on March 27, and referred to in a letter in last week's issue, can give little cause for satisfaction. We can take this scheme as a characteristic sample of the reconstruction of London's east end. At present the East-Enders are largely housed in two-storey houses, too tightly packed, dilapidated, ill-planned and ill-serviced, but none the less preserving a human scale and with a human quality.

The new Minerva Street flats achieve some improvements. They are cleaner, the blocks are more widely spaced, and the planning of the individual flats has been tidied up. But they are entirely devoid of humanity.

The influence of the book of type plans is clearly visible, and we may take as a symbol of the whole approach the persistence of the balcony access. Every architect who has had anything to do with housing work will have shared the common experience of wandering along these balconies, threading his way among dust-bins, hearing snatches of conversation from the kitchen windows, resisting the temptation of invading the privacy of the inhabitants by glancing through them as he passes along. Other domestic sounds, less entertaining, assault his ear, for the bathrooms and lavatories are invariably sited on the balcony side of the flat. Having reached the flat he is to visit, conversation is continually disturbed by traffic to and from other flats and after school hours the voices of children at play shrilly remind him that, though he may be four floors up, the balcony, an excellent race-track, makes every floor a ground floor.

Of course, there are many arguments in favour of the balcony. The crucial argument in this as in every other case where the inadequate is defended being, of course, that of economy. Others are neighbourliness, and as blocks go higher, the old question of alternative access.

No progress will be made by arguments along these lines. There are other factors to which increasing weight must be given. Ministers concerned with housing are fond of the trite phrase "homes not houses," which expresses something of the kind of value we hold to be important. Privacy and quiet, and, of course, the invariably neglected beauty, which in our view is the most needed of all. The balcony offends against all these.

What are the alternatives? There are many, and it is interesting that very few of what are known as "better class" flats

have this unsatisfactory feature. The proposals by Tecton for Finsbury provide for two flats on each floor for each staircase, and there are possible developments here; three or four flats can be planned from the same stair. Maisonnettes reduce the balconies by a half, and enable the wall adjacent to the balcony to be practically windowless. Some local authorities have already abandoned the old system, and the LCC is losing its leadership.

We have isolated the balcony access for special reference as it is the most obvious of the anachronisms. The books of type plans have served a useful purpose, but architectural ideas do not stand still. What is needed is a fresh start and a fresh approach. The idea that you can replan an area and re-house the population by threading together a row of standard plans on a balcony, like *shashlik* on a skewer, is not good enough. Let us scrap our old type plans and start by abolishing the balcony access.



*The Architects' Journal*

9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1

Phone: Whitehall 0611

## N O T E S & T O P I C S

### BREATH OF FRESH AIR

Sitting at the back of a crowded hall, peering through the gloom of tobacco smoke, listening to oracular statements mumbled from notes is, alas, a frequent evening out for ASTRAGAL. John Summerson's talk recently at the AA came as a breath of fresh air. He is no less witty and polished a speaker than author. A master of the dramatic pause, every syllable carefully mouthed, he related the early history of the AA—its first dozen years—with such a love for his material that at certain more theatrical moments (as he calmly closed the window and drew

the curtains) one was assailed by a schizophrenic complex divided between fascination for the speaker's delivery and attention to his subject.

### THE ARMY IN INDIA: AFTERMATH

Things are moving in India architecturally as well as constitutionally. A long overdue decision has just been taken by the University of Calcutta to open a School of Architecture and Regional Planning. Some credit for this move may be taken by British and American architects, town-planners, and other technicians who happened to be in India in the Forces.

In 1943, Calcutta was the main military base for the Burma Front, and architects and other technicians in the Forces formed a group of SATO (Service Arts and Technical Organization) of which readers of the AJ will have heard. This group, with Patrick Geddes' reports of twenty-five years ago as a background, looked into the state of architecture and town-planning at Bengal. The view was not inspiring. The least satisfactory feature was the lack of educational facilities for technicians. There was only one small school recognized by the RIBA in the whole of India, and no training for planners throughout the East.

A committee was set up, with the indefatigable Percy Marshall as secretary, which included Sris Chandra Chatterjee (an Indian architect who had been fighting for a School of Architecture in Bengal for 20 years)

and Percy Brown (author of *A History of Indian Architecture*).

This committee was not content with a mere school of architecture, but prepared a scheme for a complete Faculty of Planning, Design and Technics "which would include a Basic Course in Art and Science, Schools of Architecture and Regional Planning, Departments of Industrial Design, Painting and Sculpture, Building School, and a Planning and Building Research Centre." Whew! The immediate demands of the committee were more modest, and merely covered the Basic Course in Art and Science, the School of Architecture and the School of Regional Planning.

A number of the leading citizens of Bengal next submitted these more limited proposals to H.E. the Governor, who passed them on to the University of Calcutta with a request to look into it. There was set up, yes, another committee including Marshall, Chatterjee and Brown to make detailed recommendations. For the next three years the project slumbered, but it has now been largely fulfilled. Faint heart ne'er won fair lady, and the Mistress Art is hard to catch.

### DURHAM'S NEW SPECIES

In historical perspective the nineteen-forties may well be dubbed the Planning Decade. "The road to hell is paved with good intentions," man is cautioned, and whether or not the fertility of so much post-war planning is rendered sterile by Damocles, dropping an atom bomb within ten years, as some of our more august news weeklies intimate, certain it is that the first spring of peace saw no lack of good-intending planners. We have had architect-planners, engineer-planners and now—just planners.

Durham University's new course in Town and Country Planning starts at scratch with promising raw material to train future planners unbridled with either an architectural or engineering training. The course was established when Thomas Sharp was Reader in Planning there and is the first of its kind, not merely in Great Britain, but in the Commonwealth. It is a five-year course automatically exempting

holders of the degree from the final examination leading to Associate Membership of the Town Planning Institute.

Doubtless other universities are likely to follow Durham's lead and if the New Town and Country Planning Bill is to achieve anything at all beyond initial enthusiasm, obviously facilities must be provided to train an adequate flow of capable planners. This agreed, what is more controversial is the creating collateral with architect-planners and engineer-planners, of a third species with professional status but devoid of a preliminary architectural or engineering background.

It is an experiment that will be closely watched by architects and engineers alike. Much depends on the quality of the teaching staff of the Town Planning Department at King's College, Newcastle, and in this respect the course augurs well. Professor J. S. Allen, who is head of the department, is bent on building up a strong full-time team of lecturers and research workers. First member is Brian Hackett, who was formerly editor of the Physical Planning Supplement of the A.J.

#### THE REGENT'S PARK TERRACES

Any lover of London who took an early constitutional through Regent's Park on one of the recent sunny mornings must have breathed with the spring air a great sigh of relief in knowing that Nash's gay, fantastic ad-

venture in urban landscaping will be preserved—at least, according to the Government statement, "as far as that is practicable."\*

The terraces are not by any means great architecture. Architectural jokes, John Summerson calls them in his *Georgian London*. "The Regent's Park of today," he writes, "is merely a shadow of what Nash envisaged in 1812. . . . Its architectural beauties are confined to the margins with their noble approaches and the belt of terraces. . . . These buildings, careless and clumsy though they are in many ways, have an extravagant scenic character which, perceived through nostalgic mists of time, makes them irresistible. They are dream palaces, full of grandiose, romantic ideas such as an architect might scribble in a holiday sketch-book."

No rot or dilapidation can add the appeal of ruins to their romance. They must be white and fresh and shining and so provide across the wide spaces of the park that suggestion of magnificence wherein their great charm lies. Let us hope that it will not be long before the houses can be fully restored and converted behind their façades so that London students can enjoy living-quarters as rich in *stimmung* as any Oxford or Cambridge quadrangle.

ASTRAGAL

\*See Report on page 343.



## LETTERS

E. V. Penn,

(General Secretary, ABT)

### Trade Unionism and the RIBA

SIR,—At the present time trade unionism is not merely developing among all kinds of people, including technical and professional people who have hitherto been slow to organise; trade union membership is being required by some local authorities as a condition of employment. Thus the question of what is the appropriate trade union for architects has been much discussed, and also the question of how far a professional institute can act as a trade union.

The RIBA has assumed the role of a trade union by creating negotiating machinery and appointing a negotiating officer. The Association of Building Technicians was and remains the only trade union affiliated to the Trades Union Congress which organises architects and architectural assistants.

The question which all employee architects and assistants, organised and unorganised, must ask themselves is: which is the appropriate body to encourage and recognise as the organisation to negotiate salaries and conditions, and generally to act as a trade union?

The answer which the ABT gives to this question is clear and definite. In the view of the ABT the Royal Institute cannot be the appropriate body for the following reasons:

1. Firstly, the RIBA is a learned and academic body concerned in important questions of technique, education, etc., and secondly it is a professional organisation based on the private practitioner. These are its two dominant activities, and not the economic interests of its members.

2. It contains employers in full membership and not only in full membership but in highly influential positions. The economic interests of salaried architects and employing architects are necessarily opposed. The RIBA cannot therefore wholeheartedly represent the interests of the salaried class.

3. It cannot represent the many thousands of architectural assistants who do not qualify academically for membership but whose salaries and conditions are interdependent with those of salaried architects.

The ABT maintains that it alone is the appropriate trade union for architects and architectural assistants, along with the other building technicians which it represents, because:

- a. The ABT is a registered trade union with no other purpose than to be a trade union.

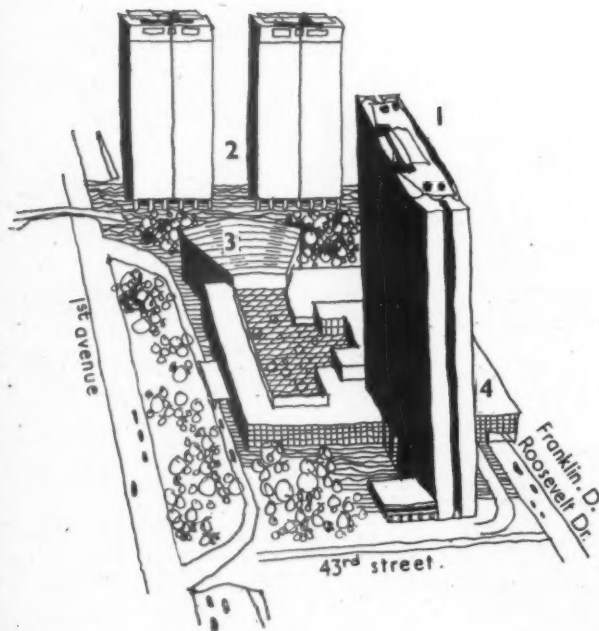
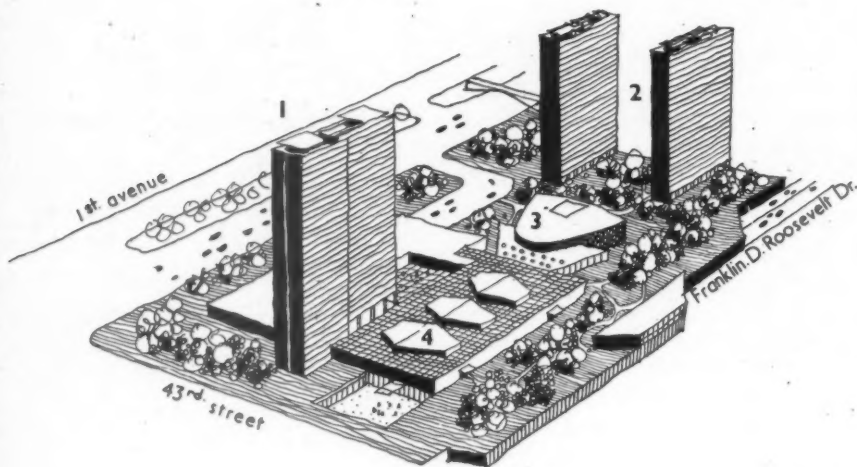
- b. It is affiliated to the Trades Union Congress and therefore allied to the whole trade union movement.



Chester Terrace, Regent's Park, before the war. See Astragal's note above.



# UN HEADQUARTERS PROJECTS AUGUR A NEW CITY PATTERN



The Planning Commission for UNO headquarters under Wallace K. Harrison has apparently now got down to work in earnest. We reproduce above sketches of two suggested arrangements of the units that designers are considering. The arrangement of the blocks is 1 the secretarial building; 2 accommodation for the delegations, and the special agencies in separate buildings; 3 the General Assembly building, in one proposal with an outdoor auditorium on the roof, and 4 the three council chambers. The illustration on the right shows the site as it is to-day. Le Corbusier, who is a member of the Commission, has remarked that here is an opportunity to build a sample of the new urban scene that will reveal the futility of the present character of New York and the town planning conceptions upon which it is based.



c. Its members are all employees and they fully and democratically control its policies.  
d. It accepts as members and acts for all employee architects and architectural assistants whether registered or not.

e. It recognises the interdependence of all categories of building technicians and includes all in its membership.

In short, the Royal Institute with the best intentions in the world, will not and, because of its very nature, cannot be an efficient weapon in the hands of the employee architects, qualified and unqualified, in their struggle for better salaries and conditions. That weapon can only be a real trade union forged for the purpose and linked with the other technicians and the other trade unions in the building industry, and with the whole trade union movement.

London E. V. PENN,  
General Secretary, ABT.

The official reply of the RIBA Council is as follows:—The statement published by the Association of Building Technicians may give rise to certain misconceptions in the minds of the profession, and it is, therefore, desirable to publish a note on this question of negotiations relating to salaries and conditions of service for members of the RIBA who comprise the greater proportion of registered architects in the United Kingdom.

An analysis of the figures of the Architects' Registration Council of the United Kingdom dated October 31, 1946, indicates that of the 15,045 registered architects on that date, 8,431 were members of the RIBA, and in addition, 971, although not themselves directly members of the RIBA, were members of Societies allied to the RIBA. Of the 15,045 registered architects, only 620 were members of the ABT.

The RIBA recognises the advantage of an organisation fully representative of any trade, vocation or profession to promote and protect the welfare of the members of that trade, vocation or profession, and in this respect it recognises the beneficial work of Trade Unions in the past, nor would it dispute the right of individual architects to join a Trade Union if they so wished; but it cannot agree that membership of a Trade Union should be made a condition of employment of any salaried architect, nor will it concede the right to the ABT to represent the architectural profession as a whole in negotiations affecting salaries and conditions of service.

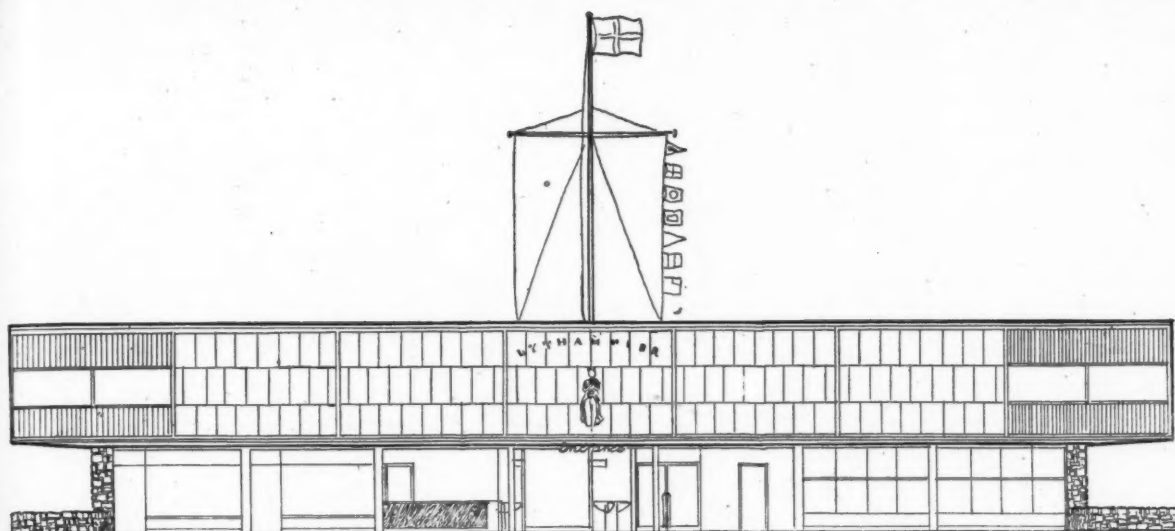
The RIBA is a professional body and a learned Society, but not a "registered Trade Union." It has, therefore, a dual responsibility; (a) towards the public to insist on a proper standard of qualifications for its members, and (b) toward its members to ensure that the conditions of service and the remuneration of those in salaried positions correspond to their qualifications. The ABT does not demand any standard of qualification for entry to its membership, nor does it demand that professional qualification shall be a criterion in assessing rates of remuneration.

The RIBA does contain employers in full membership as well as salaried architects, but it denies that the interests of these two categories are in any way opposed and indeed it considers that homogeneous membership of this nature is an element of strength.

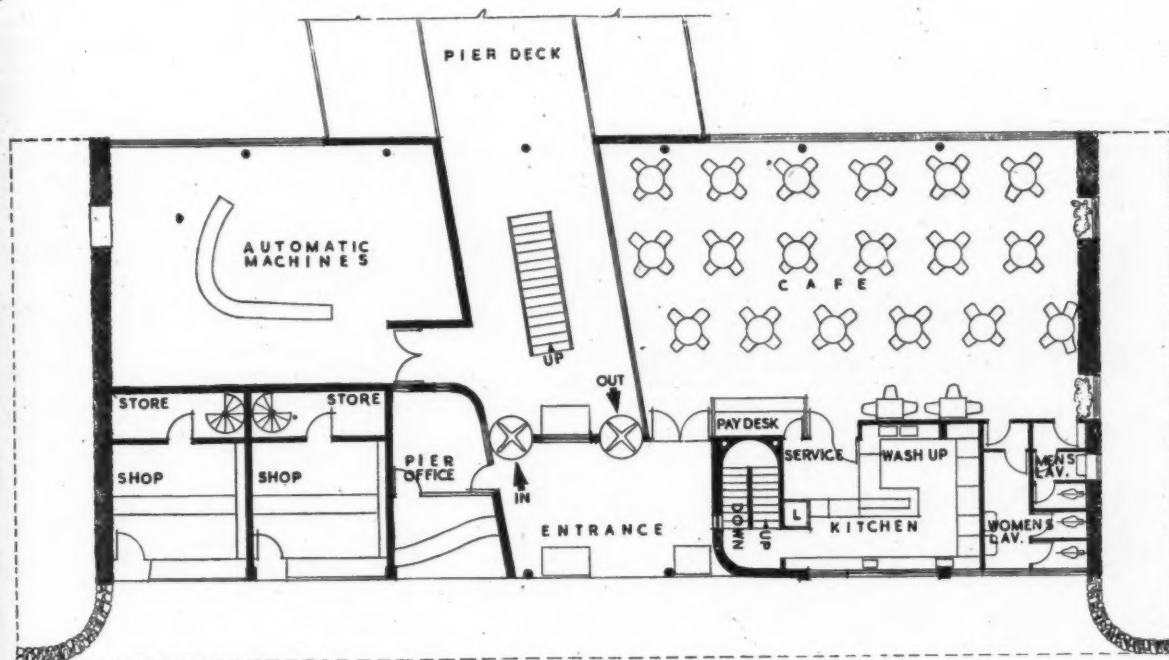
The RIBA has been approached recently by a number of large groups of members for the extension of the services it now provides in negotiation, and these requests confirm the Institute in its decision to continue the help and assistance it has given in the past to salaried members by means of the negotiating machinery it has set up.

At the same time, the Institute does not for one moment deny the right of the ABT to champion the cause of its members. The RIBA would welcome the renewal of its co-operation.





FRONT ELEVATION



GROUND FLOOR PLAN

[Scale:  $\frac{1}{4}$ " = 1'0"]

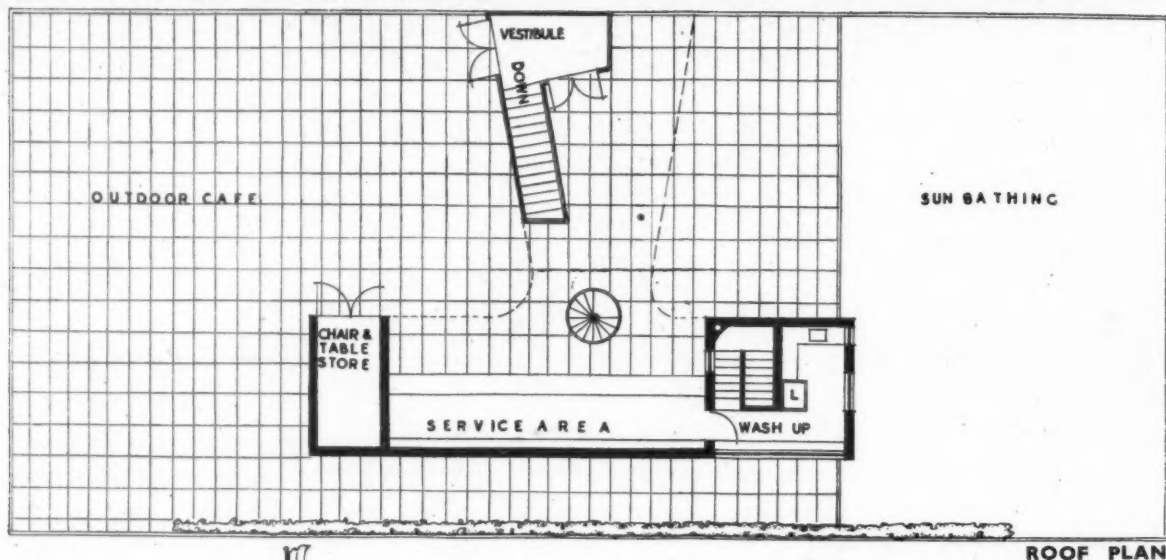
# ENTRANCE BUILDING TO LYTHAM PIER

**GENERAL.**—This design is part of the proposed scheme for the rebuilding of the whole of Lytham Pier for Messrs. Lytham Pier and Amusements, Ltd. The designer is Tom Mellor of the Grenfell Baines Group, of Preston. The ground floor contains the entrance, two shops, a room for automatic machines and a café with kitchen; the basement contains stores, a work-

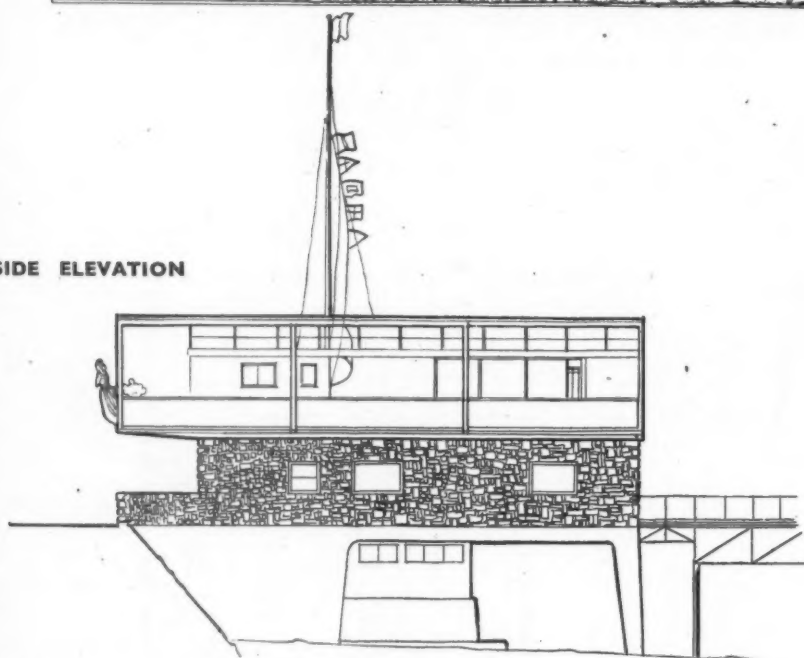
shop and a boiler room, while the roof plan contains an outdoor café, a sun bathing deck and a covered service area.

**CONSTRUCTION.**—Basement is in reinforced concrete, ground floor reinforced concrete frame with brick infilling, the end walls being in local stone cobble. The first floor is of light steel frame with a

DESIGNED BY  
TOM MELLOR



SIDE ELEVATION

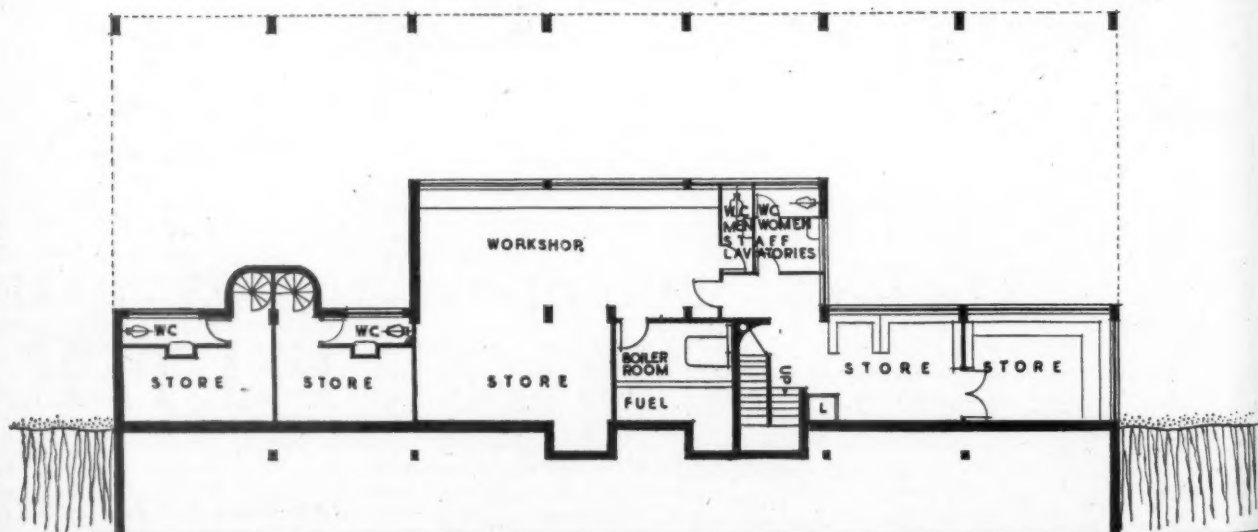


glass screen filling on the landward side from which a ship's figure-head projects centrally. The end bays are of vertical teak boarding. The balustrades on the south, east and west sides will be of painted steel sheet. A movable screen of brightly coloured canvas on metal tubular framing is to be provided on the upper deck; this will be removed when the summer season is over.

The floor to the café is cork; the roof deck is tiled.

A particular problem is the provision of a floor treatment to the sunbathing area that is at once comfortable and can be easily renewed or cleaned. The use of sand for this purpose has been considered:

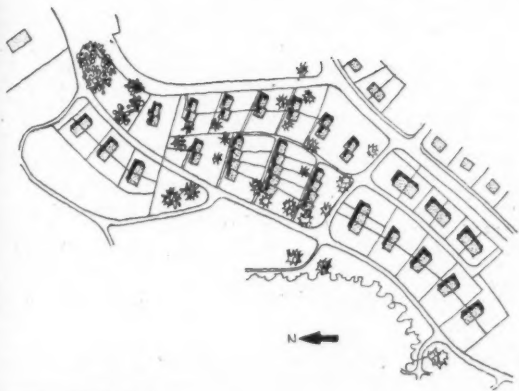
BASEMENT PLAN



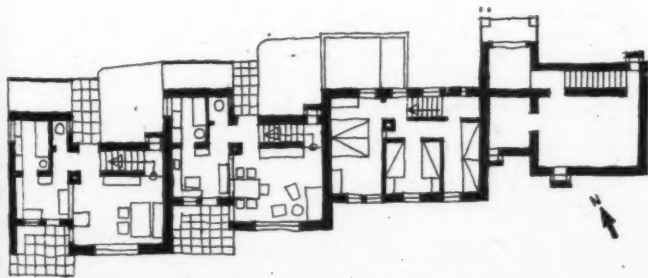
ENTRANCE BUILDING, LYTTHAM PIER



*The sheltered corner of one of the terrace houses on the garden side*



SITE PLAN



PLAN OF TERRACE HOUSES

## SWISS TERRACE HOUSES

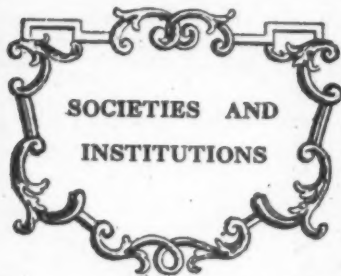
ARCHITECTS: AESCHLIMANN  
AND BAUMGARTNER

These terrace houses form part of a small settlement at Zollikerberg, Zurich, built 1943/44. Construction is traditional with tiled roof, walls being timber, boarded on the first floor and rendered elsewhere. Windows and shutters are of timber.

Each house is set back from its neighbour and is thus provided with an area of privacy and shelter on the garden side.

The houses are approached by paths only from the nearby roads. Each house has a living-dining room, and three bed-rooms.





*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.*

ASB

ISE

## F. S. Snow

April 2 at the RIBA. A joint meeting of the Architectural Science Board and the Institution of Structural Engineers. A lecture on SHELL CONCRETE CONSTRUCTION by F. S. SNOW, M.INST.C.E., M.I.STRUCT.E.

**F. S. Snow:** The name shell construction indicates very clearly the type of structure it implies, i.e., a structure forming a roof of very thin RC construction and like an egg shell—very strong.

These shell roofs take advantage of the historic fact that arched shapes can span larger distances than flat shapes. They take advantage of a further fact that by choosing certain arched shapes, suitably restrained, the material may be considered as having zero or negligible bending moment in itself and having uniform tensile or compressive stress across any cross section of the shell, that is, the forces are axial in any cross section.

### DESCRIPTION

There are two types of such shells:

(a) Domes or shells curved in more than one direction.

(b) Shells curved in one direction only. These shells may be of cross sections which are segments of circles or ellipses or of any curves for which the assumptions quoted above are valid. Such shells lend themselves to construction in reinforced concrete and many structures incorporating shell roofs have been designed and constructed in England, America, Germany, and elsewhere, in concrete.

A complete simple example of the calculations necessary for a span of 50 ft. are impossible to give within the scope of this lecture, but for a shell curved in one direction only the slab thickness for a 50-ft. span roof may be as small as 2½ in. and theoretically even less. This gives a ratio of thickness to span 1/240, which ratio is conservative compared with 1/600 which has actually been achieved.

### HISTORY

There are numerous claims as to the inventors of the system, but it would appear that the theories of design have been developed over many years by various designers. For instance, the membrane theory of rotation shells was pursued by G. Lame and E. Clapeyron, for loads symmetrical with the axis.

Many of the fundamental investigations were published by Messrs. Love, Reissner and Meissner, but it was left to I. Geckeler to give close approximate solutions for symmetrically loaded rotation shells, which could be suitably used in practice.

In 1923, Dr. Dischinger, in conjunction with Carl Zeiss, endeavoured to design shells on a rectangular plan; this first proposal was to use double curved shells stiffened by vertical trusses. The difficulties of calculation were so great that the system was abandoned and investigations were concentrated on the single curved shell stiffened at both ends.

Dr. Bauersfeld found the differential equations which can be solved mathematically and as a result of his labours, in conjunction with Zeiss, the first shell concrete roof of small span was constructed in the Zeiss Works in Jena in 1924. A larger span was constructed in 1925 and in 1926 the first large scale scheme was effected at Dusseldorf, with spans of 23 metres. Dr. Bauersfeld, in conjunction with the Zeiss Company, developed the netting used in the construction of the Zeiss Planetarium.

In this country the work has been developed, among others, by C. B. Blumfield and one of the first constructions was that of the Airfield Buildings at Doncaster. It has also been developed by such firms as Concushell, Chisarc-Shell and D. De Steiger, and more recently by Barrel Vault Roof Designs, Limited, in conjunction with Messrs. Clifford Tee and Gale, Architects, and Messrs. Twiss Reinforcements, Limited.

### DESIGN

The calculations tend to be complicated even after simplifying assumptions are made and, although good papers in English have appeared in *Concrete and Constructional Engineering*, the complete theory is presented in German in *Handbuch für Eisenbetonbau* and other journals.

Tensile, compressive and shear stresses are calculated for each point on the shell, and these are converted to principal stresses. The magnitude and direction of these principal stresses being known, reinforcement is provided in these directions to take up the stresses.

### METHOD OF CONSTRUCTION

In the case of Zeiss, two distinct methods of construction have been adopted; the first is applicable to spans up to 120 ft. A fragile mesh or network is incorporated and forms part of the reinforcement, which is left in position. This method consists of erecting a triangular steel mesh weighing about 1.8 lb. per sq. ft. (equivalent to a steel plate of 0.043 in. thick) to the required diameter. On both sides of this network reinforcing bars about ½ in. are laid wired to the network, which takes the slab stresses, particularly those due to the shrinkage of concrete. Below this steelwork is erected a light scaffold (sometimes hung to the network) which in turn carries the light removable formwork to which a high grade concrete is applied, generally sufficient only to cover the reinforcement and protect it from the elements.

The concreting is carried out concentrically from the springing to the crown of the shell so that, when it is finished and set, the rings of the concrete are self-supporting and the reinforcement has only to carry the weight of the unfinished or unset rings.

A very accurate shaped structure allowing the shell to be a minimum thickness throughout is obtained, permitting the use of a very light sub-structure and obviating the use of heavy scaffolding or centring.

At spans greater than 120 to 130 ft. other methods are employed, which will be described later, but for the method mentioned for greater spans than this there is the natural risk of failure by buckling, having regard to the lightness of the reinforcement.

In the second method of construction, which is applicable to spans of greater size, the network serves purely the purpose of scaffolding, and it is, therefore, recovered after use and re-used frequently.

The process consists of erecting two concentric networks and connecting them by members so as to transmit the stresses over the inner and outer nets. On this is placed the shuttering covered by the steel reinforcement, the nets and formwork being removed after the concreting is complete and the nets and formwork re-used.

Many other types of formwork have been used, some jacked from the steel scaffold and "pulled through" the structure as the concrete is set.

### TESTS

Many interesting load tests have been carried out at various times, such as those at the Hamburg Dock Shed, where the deflection did not exceed 1/10,000th of the span (Anton Iedeko Concrete and Quarry-maker, October, 1933), showing conclusively the strength of the shell concrete system of construction.

In the early days, and prior to the construction of the first barrel vault roof at the Carl Zeiss Works at Jena in 1924, Dr. Dischinger caused tests to be carried out on sheet iron and concrete models, later followed by further tests intended to solve the problem of flatter circular segments supported at the rim. An elastic support at the rim was obtained by touching up the sheets at the edge, the load being applied by pumping air into the space between the two circular segments, and open joints being filled with plasticine.

The deformation under various load intensities were measured with a precision micrometer, and these gave a clear picture of the working of such segmental vaults, similar to plastic models today (Professor Pippard).

The advantages of shell construction are its very light form, light loads carried down to foundations, economy of concrete and steel, and the ratio of shell thickness to span up to 1/600 already obtained. Against these are the disadvantages of shuttering problems, that normal construction methods are not applicable except for lower rings and domes, greater accuracy is required in formwork, good labour and supervision are essential, point loads on roofs inadmissible, and rise of the roof may be a disadvantage.

### EXAMPLES OF SHELL CONSTRUCTION

Probably the most famous example of shell roof construction is the Grand Market Hall at Frankfurt. The Hall is 220 metres long, 50 metres wide and 23 metres high. The roof consists of 15 shells which are elliptical in sections of 14.1 metre spans, the length of the cylinder being 36.9 metres. The thickness of the shell at the central cylinders is 7 c.m., i.e., 1/527th of the span, and the end cylinders 8 c.m., being increased to 10 c.m. where the shell joins the rigid end frames and horizontal tie beams. The reinforcement consists of three sets of rods and two sets of distribution rods, following the lines of the principal stress as closely as possible. The rise of the roof is 6 metres. The concreting was done partly by means of a cement gun and partly by normal methods, the latter being adopted as soon as the slope was sufficiently flat.

Another interesting development of shell concrete construction, utilizing the Zeiss net-work, is its use for cooling towers, whilst in Hungary, shell construction has been used for a salt storage hall. The width of the hall is 100 ft. 0 in., height 65 ft. 0 in., and length 450 ft. 0 in. The ribs or stiffening arches were spaced at 32 ft. 0 in.,



and from this was suspended a thin concrete shell carried between the stiffening arches. The formwork was of bow string arch centering in timber and was jacked or pushed through the whole length on rails. The inside of this hall is entirely smooth and not obstructed by any members.

An English example is a warehouse for Messrs. Wiseman at Alpert, the architect being Mr. E. Drummond Roberts. The span is 60 ft. 0 in. and the width 35 ft. 0 in. Both natural and artificial lighting is provided, and the thickness of the shell in this case is 2 in., with a  $\frac{1}{2}$  in. internal rendering. The consulting engineer was C. V. Blumfield Consultants, Ltd.

#### COST COMPARISONS

Obviously the cost of a shell type structure depends on a variety of factors, as does the more traditional type of structure. Some of the factors involved are the span of the barrel in each direction, the rise of the barrel, the number of barrels in the structure, the clear height under the barrel, the type of roof lighting, and finish. If these points are kept in the forefront of one's mind the following example may be of some use, as a very general guide.

For twelve barrels each covering an area of 35 ft. 0 in.  $\times$  60 ft. 0 in. with 12 ft. 0 in. clear height for the springing to the floor, the cost was approximately £3 per yard super, including insulated board, lining and roofing felt. If the barrel had been 35 ft. 0 in.  $\times$  100 ft. 0 in., the cost might have been £4 per yard super. If the barrels had exceeded 35 ft. 0 in.  $\times$  100 ft. 0 in. the cost curve would have risen sharply. The overall cost of the conventional type of structure, using light steel roof trusses with asbestos sheet roofing would be very approximately of the order of 35s. to 40s. per yard super. If say, insulated steel deck were used instead of asbestos sheeting, the overall cost would be of the order of 50s. per yard super.

The insulation of these shell roofs may be carried out by normal means, i.e., cork, or an insulating board on the exterior to the thickness required to meet specific conditions. In this respect the advantages are superior to anything other than insulated steel deck.

Under normal construction weatherproofing of this particular type of roof is not considered necessary, but in actual fact usually a coat of bitumen or asphalt is applied or, as is more usual, two layers of bituminous roofing felt.

#### CONCLUSIONS

There is no doubt that, with the continued shortage of structural steel, asbestos, timber and other structural elements, this type of construction has much to commend itself to present-day needs. With world shortage of materials, it requires very little steel or concrete, although the latter is in ample supply.

The architect, with his æsthetic imagination, can visualise all kinds of uses for this form of construction, and in particular its clean, light reflecting surface is ideal for food factories or any building where cleanliness is essential.

I make the further suggestion that many of our bombed churches could be quickly roofed in from their existing walls and made usable, leaving the more orthodox type of roof to be constructed at a later period, when conditions are more favourable. An example is that of a chapel designed by J. B. S. Compers, F.R.I.B.A., for the Royal Free Hospital, the shell of which forms both the roof and the interior. To convey the strength of the shell, I need only mention that this particular chapel had almost a direct hit from a flying bomb which destroyed an area of about 4 acres and, whilst the plaster ribs and cornice were shaken from the structure, the reinforced concrete shell and columns suffered little more than "hair cracks" in the barrel roof.

## CRPT

### Regent's Park Terraces

April 16. Report of the Committee on the Regent's Park Terraces under the chairmanship of Lord Gorrell. H.M. Stationery Office. One shilling. The Committee was appointed by the Prime Minister on January 12 last year, "to consider the future of the Terraces adjoining Regent's Park from all aspects, architectural, town-planning and financial, and to make recommendations as to their future adaptation or replacement to meet modern requirements."

The Committee in its conclusions states: We are unanimously of the opinion that the Nash Terraces are of national interest and importance and that, subject to certain reservations they should be preserved as far as that is practicable and without strict regard to the economics of "prudent" estate management. We consider that there is a minimum which must at all costs be restored and preserved, namely (from west to east): Hanover Terrace, Sussex Place, Cornwall Terrace, York Gate, Park Crescent, Chester Terrace, Cumberland Terrace. York Terrace is admittedly not of quite the same architectural merit, but we nevertheless feel that it also should be preserved.

As to the method of preservation, there are two possible alternatives: namely reconditioning of the Terraces in their present form, or conversion on some such scheme as that prepared by Mr. de Soissons. A combination of these two methods is perfectly feasible.

It must be a matter for later decision whether circumstances at any given date require a piecemeal or a wholesale demolition and rebuilding. We wish, however, particularly to emphasise that in our opinion on either alternative any rebuilding must be in accordance with a master-plan. Such a plan would have to be prepared under the direction of the best architectural and landscape advisers in collaboration with the Commissioners, the Borough Councils and the London County Council as the planning authority. Regard should be made to the whole as an important civic improvement scheme, embodying in one unit the Park, the Terraces and the immediate areas of redevelopment adjoining.

We are agreed that use should be residential, and that occupation of these magnificent sites should not be the privilege of any particular income-group. We would deprecate the use of any of these sites as offices of any description, and consider that use by medical and other professional men should not be allowed to grow to such proportions as to affect the essentially residential character of the district.

We do not consider that hotels should be permitted in this area, but would not object to conversion of some of the large houses in Cumberland Terrace for use by learned institutions or clubs.

We wish to put forward two specific proposals:—

(a) *Hostels for London University.* Favourable consideration should be given to a proposal by representatives of London University, that a portion of the Terraces should be made available to the University for conversion for use as a hostel for students.

(b) *Music Centre.* We recommend that the site of Someries House, Cambridge Gate and Cambridge Terrace should be cleared, together with buildings behind so as to give a frontage to Albany Street; and that a Music Centre should be erected upon it.

An alternative use for the area made available by the removal of Someries House, Cambridge Gate and Cambridge Terrace would be that of sites for a Music Centre

and a hall of residence for students of London University. Both these buildings would have frontages on to the outer circle of the Park, and on to Albany Street on the east. It may well be that circumstances would dictate a decision in favour of this alternative.

The use of the 212 houses in these Terraces as Government offices under the Ministry of Works should be terminated at the earliest date possible, and the houses handed back to the Crown Commissioners.

The present building line should be adhered to in perpetuity, and there should be no encroachment of any kind upon the Park, nor should the Ring Road be re-sited in consequence of any new development. We would not necessarily object, however, to some encroachment on the ornamental gardens outside the perimeter of the Ring Road, should this be required.

We would greatly deprecate any further building within the Park itself, and consider that the Park and Terraces area should always be dealt with as a whole, and that a landscape architect should be brought into consultation whenever changes are contemplated, either in the Park or in the Terraces.

The area enclosed by Park Square and Park Crescent should at once be substantially cleared of the mass of overgrown shrubs and trees which—even in winter—completely obscure the vista of Park Crescent leading down to Portland Place.

Park Crescent should in any case be preserved for so long as possible with the present façade, and the gaps left in it by bombing should be made good by new building to the former façade design.

The height of any new buildings should not be greater than that of the present buildings (other than Cambridge Gate) though in a completely new design there would not necessarily be objection to isolated towers of a greater height.

The colour of any new buildings might vary from white to a dark cream.

The unsightly additions on the tops of the buildings should be removed as soon as possible.

Advantage should be taken of any scheme of restoration or reconstruction to remove unsuitable additions at the rear of the Terraces which have been built from time to time.

Regarding dry rot, we do not feel that there is any escape from Dr. Faber's evidence as to its extent and severity. "Nearly all the buildings," he has stated, "are affected by dry rot."

Regarding the de Soissons adaptation plan the Committee reports: At an early stage we examined in detail the plans which Mr. Louis de Soissons had prepared in 1943, at the request of the Commissioners of Crown Lands, for converting 18 houses in York Terrace into 24 units of modernised accommodation behind the existing façades.

There are three main difficulties—though not necessarily final obstacles—in the way of accepting the de Soissons scheme, namely, its cost would be heavy; its life might be short; and there would be difficult estate-management problems.

Despite these drawbacks, we nevertheless feel that expenditure on this scale to produce modern converted dwellings in some at least of the Terraces would be preferable to a lesser—though still heavy—expenditure to maintain an older type of accommodation for a further period.

A statement by the Government on the Committee's findings stated that they were in sympathy with preservation of the Nash Terraces as far as was practical.

The Government also agreed that the long term use of the buildings should be for residences and not for offices. They were in general agreement with most of the detailed recommendations.

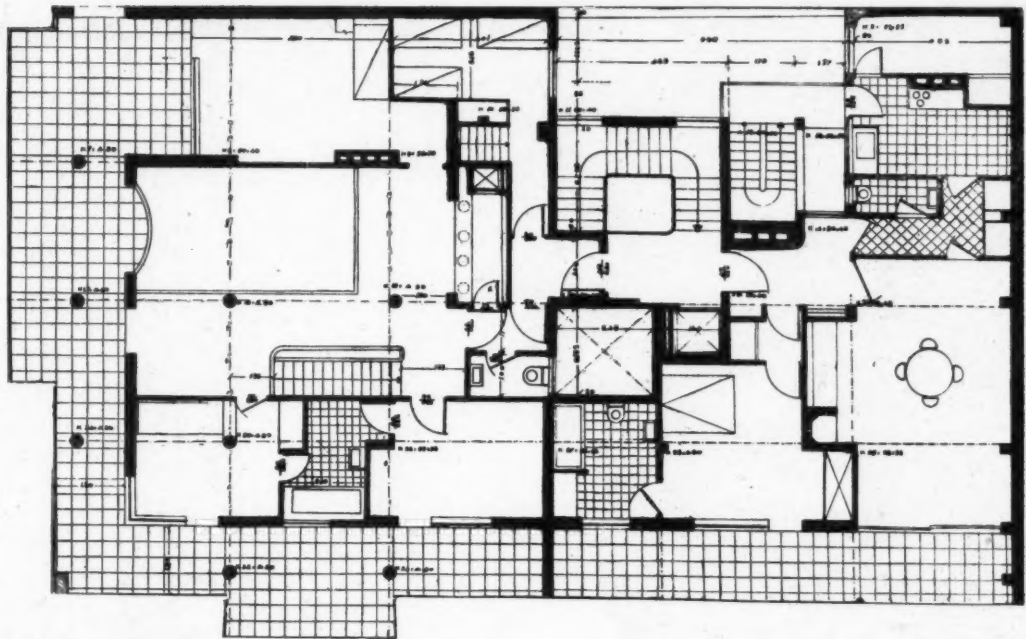
Restoration for preservation of even the minimum number of Terraces would involve a major diversion of labour and material which could not be justifiably considered for some years.

*The narrow elevation.  
The top two floors  
contain a duplex  
apartment. Each  
flat has its private  
balcony.*

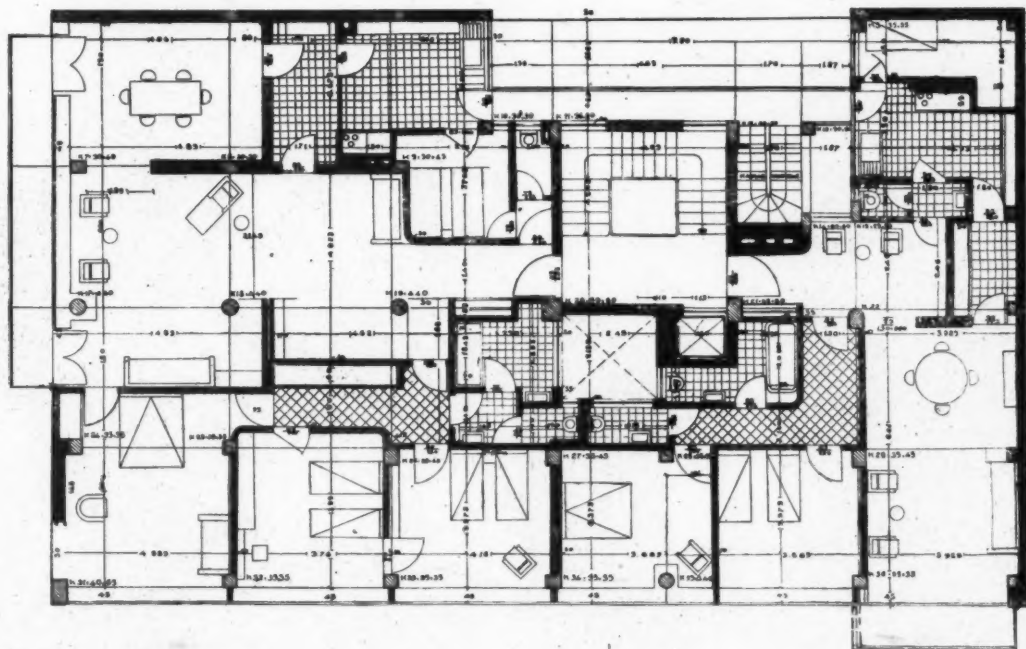


# FLATS IN ATHENS

DESIGNED BY T. VALENTIS AND P. MICHAELIDES



TOP FLOOR PLAN



TYPICAL FLOOR PLAN

[Scale  $\frac{1}{8}'' = 1' 0''$ ]

These luxury flats, completed before the war, have a reinforced concrete framework with hollow brick walls; finished externally with a rendering of cement and marble chippings, and internally with plaster, oil painted in different colours to articulate the

different structural elements. Floors are of reinforced concrete slabs finished in the main rooms with wood and in the kitchens, bathrooms and balconies with terrazzo. Windows are of steel and slide horizontally to open. Shutters

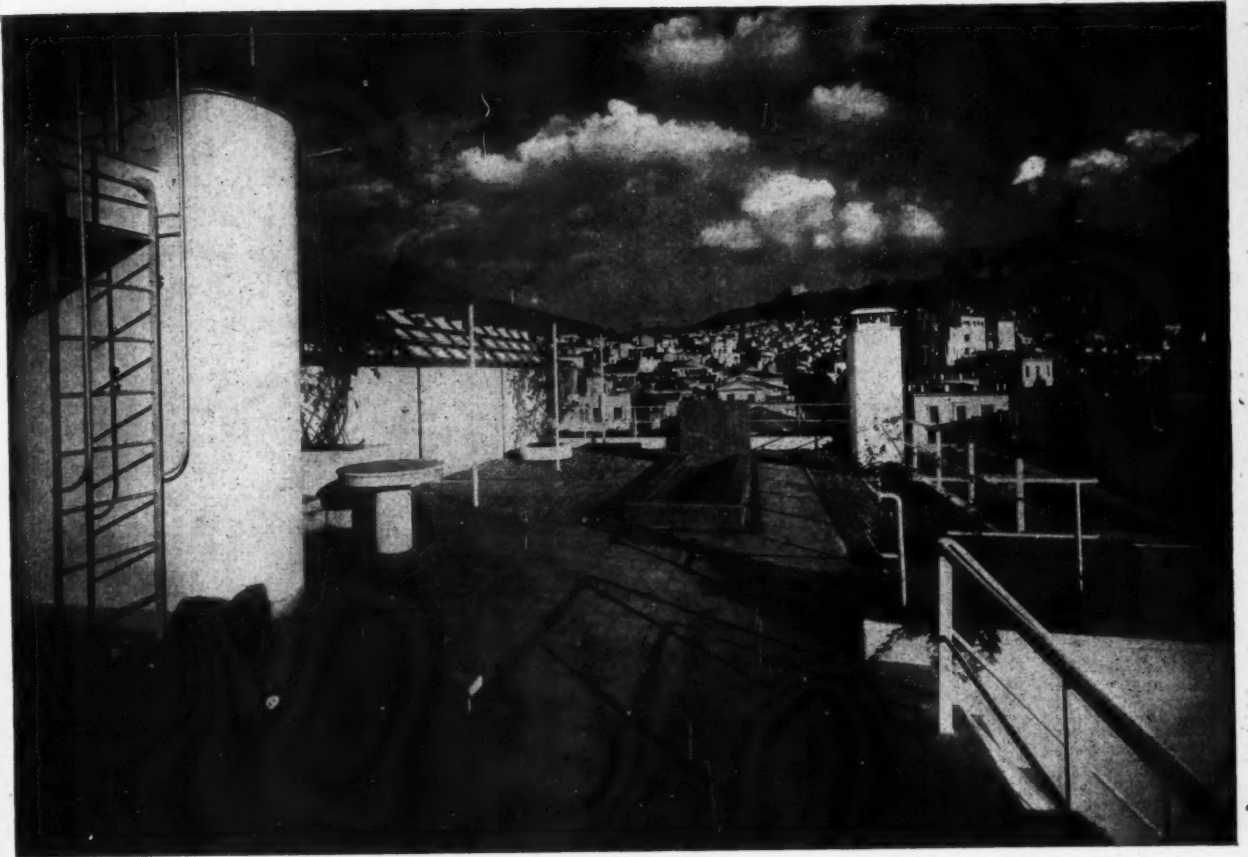
are of oregon pine. Balcony railings are of wire mesh on steel tube. The flats are centrally heated. Each floor contains two flats except for the top floor, part of which contains a duplex, two-storey apartment.



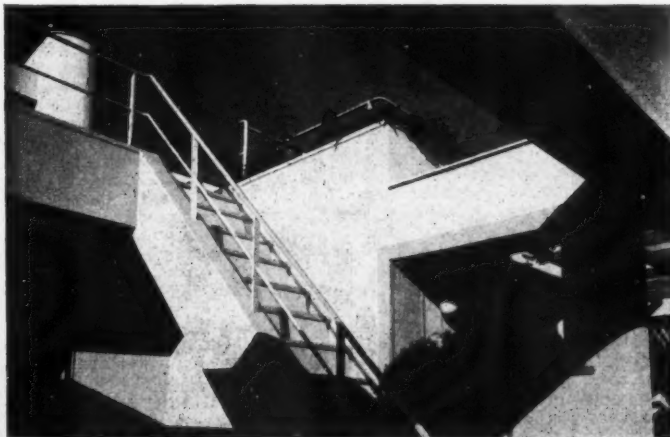
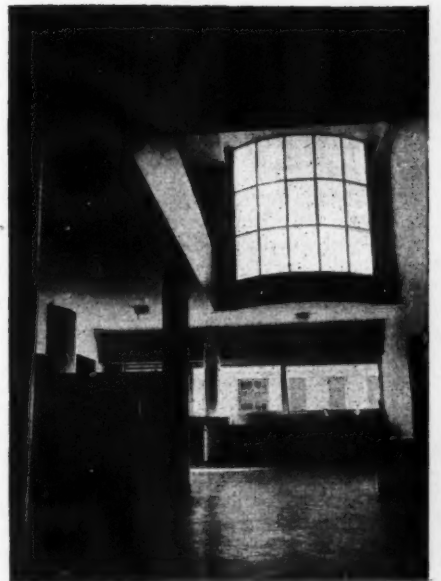


*The long elevation, with shop, main entrance and garages at street level.*





*Top, the roof garden. Right, the living room of the two-storey duplex apartment on the top two floors. Bottom, stairway to the roof garden*



FLATS IN ATHENS  
BY T. VALENTIS  
AND P. MICHAELIDES

## TECHNICAL SECTION

*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. Items are printed on one side of the paper only to permit of cutting out and pasting up in classified order in readers' files. The Editors welcome information on all developments from any source.*

### INFORMATION CENTRE

To enable items to be filed all information is classified under the following headings:

1 SOCIOLOGY. 2 PLANNING: General. 3 PLANNING: Regional and National. 4 PLANNING: Urban and Rural. 5 PLANNING: Public Utilities. 6 PLANNING: Social and Recreational. 7 PRACTICE: SURVEYING, SPECIFICATION. 9 DESIGN: General. 10 DESIGN: Building Types. 11 MATERIALS: General. 12 MATERIALS: Metal. 13 MATERIALS: Timber. 14 MATERIALS: Concrete. 15 MATERIALS: Applied Finishes, Treatments. 16 MATERIALS: Miscellaneous. 17 CONSTRUCTION: General. 18 CONSTRUCTION: Theory. 19 CONSTRUCTION: Details. 20 CONSTRUCTION: Miscellaneous. 22 SOUND INSULATION, ACOUSTICS. 23 HEATING, VENTILATION. 24 LIGHTING. 25 WATER SUPPLY, SANITATION. 26 SERVICES, EQUIPMENT: Miscellaneous. 27 FURNITURE, FITTINGS. 28 MISCELLANEOUS.

#### 2.9 planning: general

##### PUBLIC INQUIRIES

*Public Inquiries.* A Solicitor. (Town and Country Planning, Winter, 1946-47, pp. 166-167 and 186.)

Useful examination of law governing procedure at local inquiries held (a) under Town Planning Acts and (b) under New Towns Act. Law relating to procedure derived partly from statute and partly from case law. Description of statute. Analysis of essential difference between types of inquiry held under Town and Country Planning Acts and under New Towns Act. Objections to inquiries held under New Towns Act.

#### 4.6 planning: urban and rural

##### PLANNING IN INDIA

*Town Planning in India.* E. B. (Town and Country Planning, Winter, 1946-47, p. 177.)

Short review. Work of Calcutta Improvement Trust. Interesting project for satellite town set out in report submitted by Trust's Chief Valuer to Government of Bengal. Proposed Green Belt Expansion Scheme sponsored by Nagpur Improvement Trust. Problems confronting Cawnpore Development Board in providing urban accommodation for a population which has more than doubled its size during last four or five years.

#### 16.9 materials: miscellaneous

##### GLUES FOR WOOD

*Requirements and Properties of Adhesives for Wood.* Forest Products Research

Bulletin No. 20. (HMSO. 6d.)

Prepared at request of Adhesive Makers' Panel. Requirements of glues. Purposes to which various types are best suited. Methods of use. Classifications according to durability and origin. List of specification tests.

A very useful bulletin which discusses animal blood albumin, casein, sodium silicate, soya bean derivative, starch derivative and synthetic resin glues.

#### 17.7 construction: general

##### SPOT WELDING

*Spot Welding for Light Assemblies in Mild Steel.* BS. 1.140: 1946. (British Standards Institution. 2s.)

Chemical composition of parent metal, welding pressure and procedure. Routine tests, workmanship, inspection, plant.

#### 17.8 construction: general

##### B.S. CODE FOR MASONRY WALLS

*Masonry Walls with Natural and Cast Stone Ashlar Facing.* Draft B.S. Code of Practice: 1946. 1.321. (British Standards Institution. 3s. 6d.)

Materials, design and erection of masonry walls, with ashlar facing of natural and cast stone. Footings, damp-proof courses, formation of openings, sound and thermal insulation: (See *A.J.* Jan. 9, 1947, p. 25.)

#### 19.10 construction: details

##### FLOOR SYSTEMS: ECONOMY

*Comparative Economy of Fireproof Floor Systems.* Theodoro Barbato. (Architectural Record [USA], December, 1946, pp. 118-125.)

Analysis of floor systems as to weight, structural characteristics, relative cost, and availability of materials for different spans and load conditions.

The article deals with ten types of floor construction suitable for light live loads and spacing of columns ranging from 16 ft. to 24 ft. inclusive. It cautions against too ready reliance upon a single structural framing system as the final answer to economical building construction. Reinforced concrete framing is advocated for structures with heavy loads, but in the case of light loads only in structures of moderate height (4 to 5 stories).

All types of floor construction considered comply with the requirements of the New York City Building Laws for Class 1, Fireproof Structures. Most of the systems are

in common use in this country. In the USA, however, lightweight concrete is adopted in some systems as a structural material, a purpose for which it is not yet employed in this country.

#### 20.18 construction: complete structures

##### FLATS: MONOLITHIC R.C.

*Flats in Monolithic Reinforced Concrete.* Bethnal Green. Cyril H. Walker. (The Architects' Journal, March 27, pp. 253-256. The Builder, March 7, 1947, pp. 218-222.)

Eight blocks of four-storey flats with monolithic walls and floors.

The structural system is a special case of box frame construction (see No. 1710: 14/12/44) in which the longitudinal walls are also monolithic with the transverse walls and floors.

The solid concrete floors span between the transverse concrete walls without the introduction of beams or columns. The walls are 7 in. thick throughout, the suspended slabs are 5½ in. thick. The formwork consists of interchangeable standardised members with simple bolted connections. All storeys are of equal height, and above ground floor level the concreting of each is carried out in three lifts. The height of the lifts, the fenestration and the floor levels are carefully related and with certain exceptions the horizontal construction joints arranged to coincide with sills and heads of openings and floor levels. Contraction joints limit the free length to approximately 160 ft. The external walls are lined internally with 1 in. wood-wool slabs, used as permanent formwork, the transverse walls are lined both sides. The thermal transmittance coefficient of the external walls is 0.26, which compares favourably with that of an 11 in. cavity brick wall.

Two contrasting wall finishes are used. In a flush plinth extending up to the level of the ground floor sill the aggregate is exposed by brushing when the formwork is removed and the concrete is still "green." Above the plinth the buildings are faced with a special white concrete. An incised V, emphasising the horizontal construction joints is formed by fillets on the inner face of the formwork and made a feature of the external treatment. The structural and facing concrete are placed simultaneously and separated during placing by a steel sheet sliding shutter.

#### 21.4 construction: miscellaneous

##### FIRE SAFETY OF HOTELS

*Hotel Fire Safety.* (Architectural Record [USA], February, 1947, pp. 105-109.)

Elements of fire safety: Fire prevention, fire control, escape.

Within six months 258 people lost their lives by fire in three large hotels in USA (Wincoff in Atlanta, La Salle in Chicago and Canfield in Dubuque, Iowa), and hundreds were injured. (See No. 2871: 26/12/46.) The public was particularly appalled because the Wincoff and La Salle hotels were thought of as fireproof. The layman naturally, but mistakenly, believed that a hotel of fire-proof construction was, for that reason alone a fire safe hotel. The term fireproof construction indicates only that the framework will be capable of being rehabilitated and continued in use, even though the contents are completely destroyed and contents includes occupants.

Fire safety depends not only upon fireproof construction of the shell, but also upon (1) fire prevention, (2) fire control and isolation, (3) adequate means of escape.

(1) It is essential that all possible finish materials, equipment and furnishings be as incombustible as possible. Combustible finish was a highly contributory factor in all the three cases referred to. Certain

# LONDON LANDMARKS FROM THE AIR



Pre-war  
photo by  
Aerofilm Ltd.

## CENTRE-PIECE

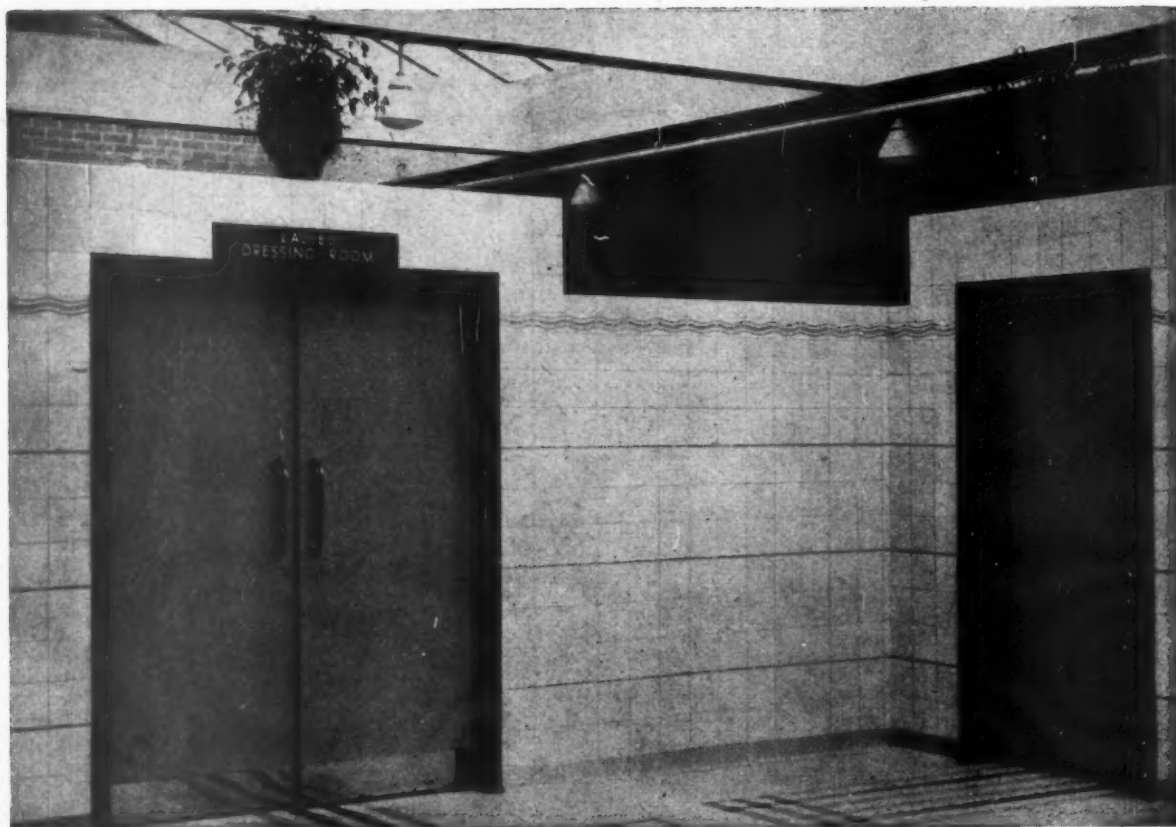
One of the most individual of all modern buildings, the central block of Bush House has one elevation scaled down in sympathy with St. Mary le Strand, while the other presents a bold and most satisfying design which dominates Kingsway.

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STEELWORK BY  
**DORMAN  
LONG**







Above: Solid laminated Flexometal doors completely sealed in steel, at the Chorley Baths, Lancashire. Below: Photograph showing the saving in space effected by the use of Flexometal for dressing cubicles. Architect: Percy Howard, A.R.I.B.A.



# FLEXOMETAL

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hotel elements offer unusual hazards to fire prevention and should be provided with sprinkler protection. Service areas should be isolated, wherever possible, and separated by fire walls.

(2) Fire control is accomplished by isolation, directed venting and quick extinguishing provisions, including fire detection and alarm systems. For safety, all vertical openings must be continuously enclosed with fireproof walls or partitions on all storeys and should have approved fire doors at all openings. *Unprotected vertical openings were the chief cause of the rapid spread of fire in each of the recent disasters.*

(3) At least two safe, readily accessible exits from every corridor, public space or service area are necessary. The doors to escape stairs must be self-closing. Outside escapes are far less satisfactory than enclosed fire stairs.

The article contains many detailed suggestions and includes a statistical analysis of the point of origin of 451 hotel fires between 1930 and 1940.

### 23.17 heating and ventilation SOLAR HEAT

*Solar Heat Gain through Windows.* N. S. Billington, M.Sc. (J. RIBA. January 29, 1947. pp. 177/180.)

Theoretical analysis of heating effects of sunshine. Effect of window size on fuel requirements likely to be small in this country.

Taking a number of assumptions the author makes a theoretical analysis of the probable effect of window size upon fuel economy in heating buildings in this country. The general conclusion reached is that the differences in fuel consumption, and therefore fuel cost, are likely to be small and that the architect need not feel that window size should be controlled by heating requirements; although the aspect of the windows will affect the application of this general principle, as also will other factors such as the uses of double glazing. A number of interesting points came out during the examination, such as the effect of curtains upon heat loss at night, the value of solar radiation upon the main wall area and, in particular, differences in the amount of sunshine to be expected in different districts. On the latter point, the very considerable difference in winter sunshine record between this country and some districts in USA makes it unwise to accept as applicable here

some of the claims made for Solar houses in USA.

There are some interesting data on sunshine hours showing the very serious effect of atmospheric pollution in a large city such as Manchester.

### 23.18 heating and ventilation BREATHING ROOF

*Previews of Four Postwar Houses.* Schweikher and Elting, Architects. (Arch. Record [USA.] Dec., 1946. p. 73.)

Design for a house in Indiana, USA, with "breathing" flat roof open at two ends.

The object of this would appear to be that of keeping down ceiling temperature in summer rather than thermal insulation as such; but the idea seems to have possibilities worth investigation for hot climates. The roof is constructed of reinforced concrete.

### 24.16 lighting LIGHTING FIXTURES

*Re-Lighting of G.E. Lighting Institute, Nela Park, Ohio.* (Arch. Forum [USA], January, 1947, p. 99.)

Various fixtures and installation types. Illustrated.

This is a popular article describing the redesigned lighting of the Institute of the General Electric Co. of America. Architects will find it interesting for the variety of fixtures and installation techniques illustrated. Generally these are along sound lines, for American designs are now further advanced than our own architectural techniques of reducing brightness contrasts. School classroom lighting is given most space in the illustrations.

### 24.17 lighting CHURCH LIGHTING

*Modern Church Lighting.* (Elect. Times, February 13, 1947.)

Fluorescent lamps, new fittings for church.

This is a short note describing the re-lighting scheme for St. Paul's Church, Harrogate. The old wiring was condemned, and a new scheme, employing fluorescent tubes, was installed. It is stated that 300 per cent. more light is provided with a more than 50 per cent. reduction in current. The illumination level is about 2 f.c. The

fittings consist of a V trough, with two lamps, one on either side. The trough appears to be painted cream on one side and silver on the other (the description is not very clear on this point).

### 24.18 lighting COLOUR: DEFECTIVE VISION

*Report on Defective Colour Vision in Industry.* by a Committee of the Colour Group of the Physical Society. (Pub. Phys. Soc., 1946. 3s. 6d.)

Nature and Incidence, Tests, Colour vision in industry, pre-vocational and school testing. pp. 52.

This is perhaps the most convenient and lucid discussion of defective colour vision available. It has, of course, only limited relevance to architectural problems, but it has a direct bearing upon the examination of students in schools of art and architecture.

### 28.1 miscellaneous INTERNATIONAL DOCUMENTATION

*Bulletin de Documentation (Bulletin of Documentation).* Institut National du Logement et de l'Habitation. (The Institute, Belgium, No. 1, January, 1947, no price.)

First issue of new Belgian periodical providing abstracts of current international publications of interest to architects, engineers, sociologists and planners. Items covered include recent books published in England, France, Belgium and Switzerland, and an international review of periodicals appearing in Belgium, Holland, France and Switzerland. Text in French, no illustrations and no index, the latter being a serious omission.

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

## QUESTIONS AND ANSWERS

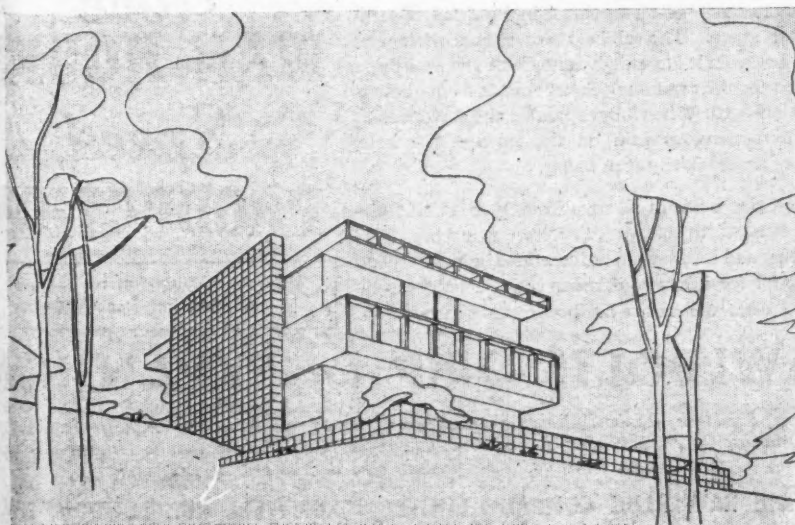
### 2891 ARCHITECTS' DRAWINGS: COPYRIGHT

**Q** I have been commissioned to prepare drawings for a small private residence. The client has handed to me copies of plans previously prepared for a friend of his by another architect and insists on a building identical in plan except for very minor alterations.

Can you please inform me how far an architect can claim "copyright" on his design?

It is felt that this has probably already been well thrashed out, conclusively (or otherwise), but having just returned from war service abroad I have been out of touch for some little time.

**A** Before you can use in any way plans prepared by another architect you must communicate with him informing him that you have been asked to use his plans. The copyright of any design prepared by an architect remains his own property, and therefore some arrangement must be come to before it can be used by anyone else.



House (for hot climates) with "breathing" flat roof. See No. 23.18.

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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	—	—	1,657	1,031	2,688
1946: 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.	178,379	61,293	239,672	23,923	28,175	52,098
1947: Jan.	190,340	63,319	253,659	28,440	31,609	60,049
Feb.	197,948	64,461	262,399	30,607	33,278	63,885
Increase of Feb. over Jan.	7,598	1,142	8,740	2,167	1,669	3,836
Total at February 28, 1947						
Local Authorities	..	..	..	167,331	..	30,607
Private Builders	..	..	..	31,181	..	33,278
War-destroyed rebuilt	..	..	..	15,454	..	7,480
Total	..	..	..	213,966	..	71,365

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: 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
1947: Jan.	134,023	118,451	107,214	97,070
Feb.	136,238	118,734	109,033	99,461
Increase of Feb. over Jan.	2,215	283	1,819	2,391

Temporary Houses Under Construction at February 28 : 9,572.

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

	Begun	Completed
To end Sept. 1946	18,818	1,304
Oct.	23,887	1,972
Nov.	28,285	2,625
Dec.	31,947	3,321
Jan., 1947	34,457	4,183
Feb.	36,083	4,627

Non-traditional Houses Under Construction at February 28 : 31,456.

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 Sept., 1946	99,087	26,345	3,480*	175
Oct.	102,307	29,010	—	183
Nov.	105,228	31,676	—	193
Dec.	107,898	35,814	—	193
Jan., 1947	110,149	38,693	—	193
Feb.	111,955	40,653	—	232
Increase of Feb. over Jan.	1,805	1,960	Nil	39

\* Programme completed at end of August.

### BUILDING MATERIALS

TABLE V : PRODUCTION AND STOCK

	Unit	Jan.-March, 1946		January, 1947		February, 1947	
		Pro- duction	Stocks†	Pro- duction	Stocks†	Pro- duction	Stocks†
		(monthly average)					
Cement .. ..	th. tons	409	257	550*	263	192†	244
Bricks .. ..	millions	153	712	379	301	247	347
Roofing materials							
Clay tiles ..	th. squares	24.7	50.2	63.5	36.4	46.0	43.5
Concrete tiles ..	"	8.5	30.4	48.0	44.3	16.7	45.1
Slates .. ..	"	19.7	48.7	—	—	—	—
Asbestos cement sheeting ..	th. tons	25.0	16.2	34.5*	27.3	11.9†	—
Roofing felt ..	th. rolls of 24 sq. yds.	179	163	274*	113	96	83
Ceilings, Wall Linings and Floorings							
Plaster gypseous	th. tons	14.8	—	18.7*	—	6.2	—
Plasterboard ..	th. sq. yds.	2,915	429	3,424*	399	1,598†	215
Tiles							
Glazed .. ..	th. sq. yds.	300	—	520	—	344	—
Floor (Clay) ..	"	76.9	—	161.2	—	133.8	—
Pipes (Water, Gas, etc.)							
Lead .. ..	th. tons	3.35	—	3.58	—	—	—
Copper .. ..	"	2.19	—	2.30	—	—	—
Soil Pipes .. ..	"	0.92	—	2.57	—	—	—
Drain Pipes, Salt Glazed .. ..	"	24.8	—	39.5	—	27.8	—
Rainwater Goods, Rainwater Pipes, Gutters and Fittings							
Cast Iron and Pressed Steel	th. of equiv. tons of cast iron	1.98	—	4.48	—	—	—
Asbestos Cement Goods	th. tons	1.26	—	*1.26	—	0.24†	—
Manhole Covers and Frames	th. of equiv. tons of cast iron	2.0	—	3.69	—	—	—
Metal Windows ..	Mn. ft. sup.	2.34	1.51	4.52	2.95	2.49	3.00
Sanitary Fittings	thousands	16.3	—	31.2	—	—	—
Baths .. ..	"	31.1	—	87.0	—	—	—
Lavatory Basins ..	"	27.0	—	53.1	—	—	—
Sinks .. ..	"	41.7	—	96.4	—	75.42	—
W.C. Pans .. ..	"	—	—	—	—	—	—
Cookers .. ..	"	7.8	—	21.7	—	—	—
Solid Fuel .. ..	"	11.1	—	18.7	—	—	—
Electric .. ..	"	19.5	—	33.8	—	—	—
Gas .. ..	"	37.0	—	71.1	—	—	—
Fires, Solid Fuel ..	"	11.7	—	22.4	—	—	—
Wash Boilers ..	"	33.2	—	39.9	—	—	—
Electric .. ..	"	—	—	—	—	—	—
Gas .. ..	"	—	—	—	—	—	—
Furnace Pans (Solid Fuel) ..	"	2.0	—	3.1	—	—	—
Solid Fuel .. ..	thousands	0.11	—	1.49	—	—	—
Softwood Timber (Imports and Home Produced)	th. stds.	64.7	498.7	65.4	172.5	(32.2)	—

† At end of period. \* 5-week period. † 4-week period.

Other figures relate to calendar months. — Not available.

### LABOUR

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

	July, 1945	January, 1946	January, 1947
Total	535.0	721.0	952.0
Housing	343.9	435.4	606.9
Permanent	4.2	34.5	209.0
Temporary	14.5	36.8	27.1
Other (sites, repairs, etc.)	325.2	364.1	370.8
Other Work	191.1	285.6	345.1

N.B.—Figures in Table VI are repeated from last month, as labour figures for February, 1947, have not been issued.



*The form printed below is to assist readers requiring up-to-date information on building products and services. Complete and post it to The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1, and the advertisers listed will be asked to supply information direct.*

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## Announcements

*The Report on Plumbing: Flats, Maisonnets, Conversion Work, Bulletin No. 113, has just been issued by the Technical Information Bureau of the Lead Industries Development Council. There are four sections: One, Plumbing for Flats (in multi-storey Blocks); two, Plumbing in Conversion Works; three, Plumbing to Maisonnets; four, Notes on One Pipe System of Disposal. Architects and other technicians can obtain copies, free of charge, from the Council at Eagle House, Jermyn Street, London, S.W.1.*

Mr. George R. Bruce, DIP.ARCH. (Durham), A.R.I.B.A., A.M.T.P.I., Senior Assistant Architect to Derbyshire County Council, has been appointed Deputy County Architect to Cardiganshire.

Mr. Robert W. Paterson, A.R.I.B.A., A.M.T.P.I., Head of the Department of Architecture, Cheltenham School of Art and Crafts, will be pleased to receive from manufacturers, samples, catalogues and data relevant to modern building construction, for the use of full-time students of architecture.

The Aluminium Wire and Cable Company, Ltd., formed recently by the British Aluminium Company, Ltd., Hawker Siddeley Aircraft Company, Limited, and Tube Investments, Ltd., has arranged to buy premises at Port Tennant, Swansea, from the Ministry of Supply and will enter into occupation as from May 1. Modifications to buildings and installation of plant will be carried out as soon as possible, and it is anticipated that some production will start towards the end of the year. The company has offices, temporarily, at Salisbury House, Circus Place, London Wall, London, E.C.2.

Mrs. Victor Ord, L.R.I.B.A., Council Offices, Prudhoe-on-Tyne, Northumberland, wishes to receive trade catalogues.

The Institute of Design, in Chicago, announces the appointment of Mr. Serge Chermayeff, A.I.A., F.R.I.B.A., as its new President and Director to replace the late L. Moholy-Nagy. Mr. Chermayeff, since 1942 Professor of Architecture and Chairman of the Department of Design at Brooklyn College, was at one time in partnership in England with Mr. Erich Mendelsohn. Among Mr. Chermayeff's best known buildings are the Research Laboratories and Administration Buildings for the Imperial Chemical Industries, and Gilbeys in Manchester, Huddersfield, and London.

Mr. Peter Moro has moved to 32, Crooms Hill, Greenwich, London, S.E.10. (Telephone: GRE0914.) He would be glad to receive trade catalogues at this address.

Mr. C. Edmund Wilford, A.R.I.B.A., has moved his Leicester office from 10/12, Market Street to Waterloo House, 2, Hastings Street, New Walk, Leicester. Tel. No. Leicester 58432 (unchanged). The address of his London office (Eagle House, Jermyn Street, S.W.1) remains unchanged.

Mr. Arthur Toll, F.A.B.S.S., 3, Bridge Street, Halesworth, Suffolk, has recently commenced practice on his own account and would be glad to receive catalogues, etc., from all manufacturers of materials and fittings who are in a position to supply in that district.

All the London Departments of The Neuchatel Asphalt Company, Limited, are now operating from 58, Victoria Street, Westminster, S.W.1; Telephone No. Victoria 9982.

A new showroom devoted to the display of the latest types of solid fuel heating, cooking and hot water equipment has been organised by the Coal Utilisation Joint Council at the Building Centre, Conduit Street, London, W.1. It was declared open on Wednesday, April 16, by Lord Simon of Wythenshawe. It is intended to change the appliances on view about every three or four months.

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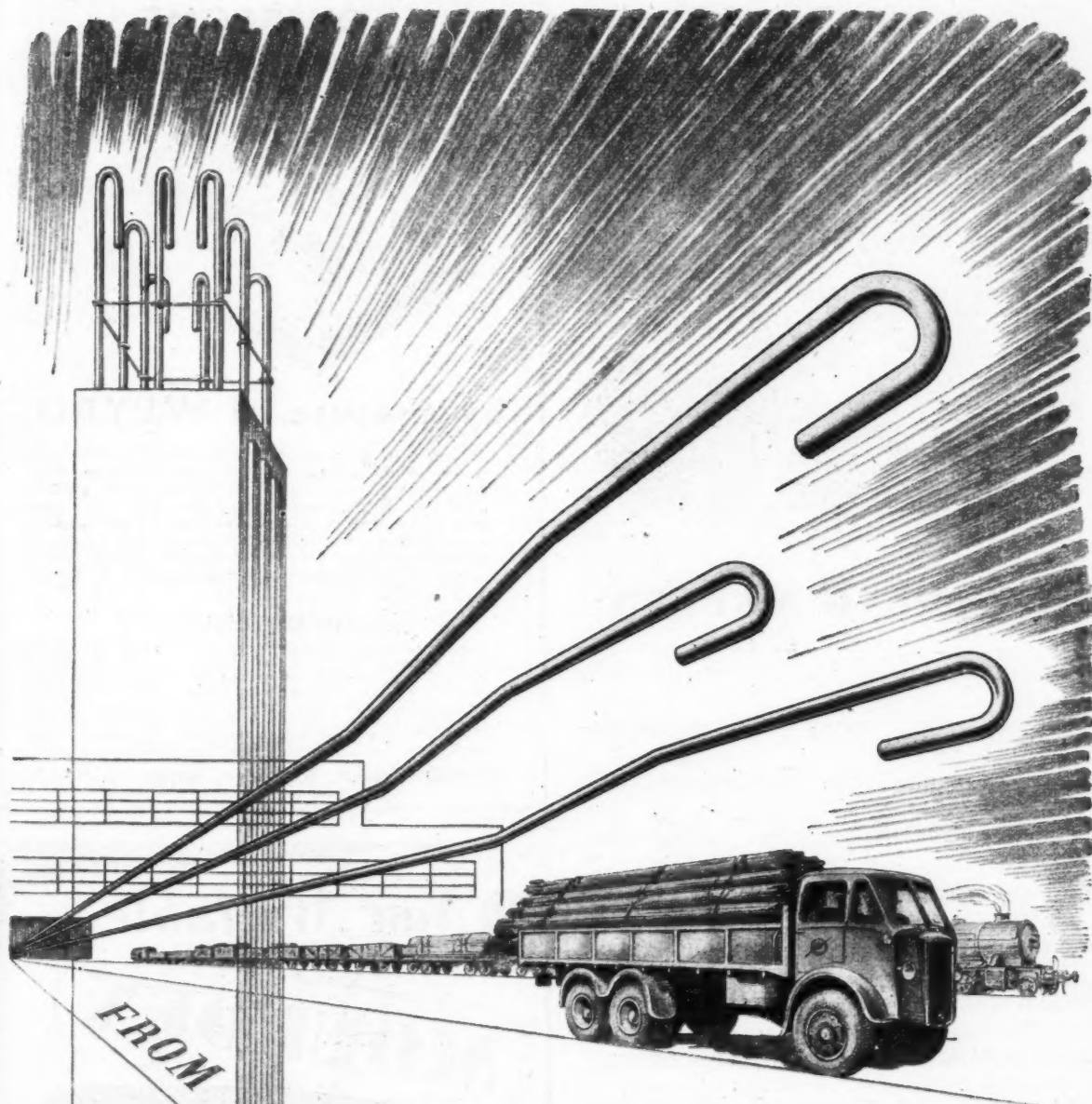
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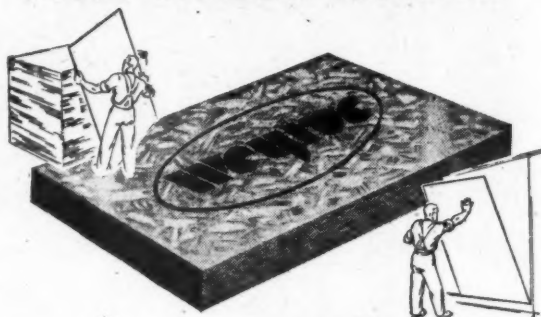
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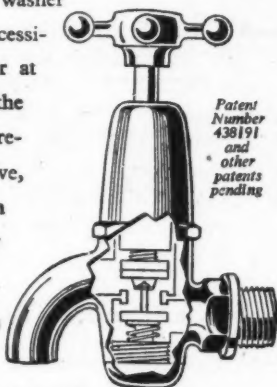
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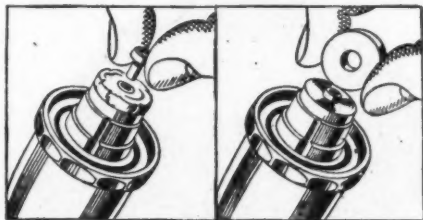
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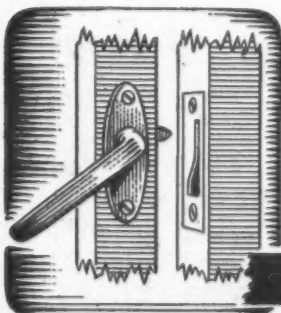
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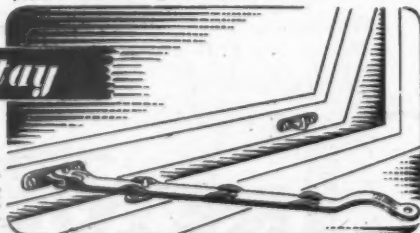
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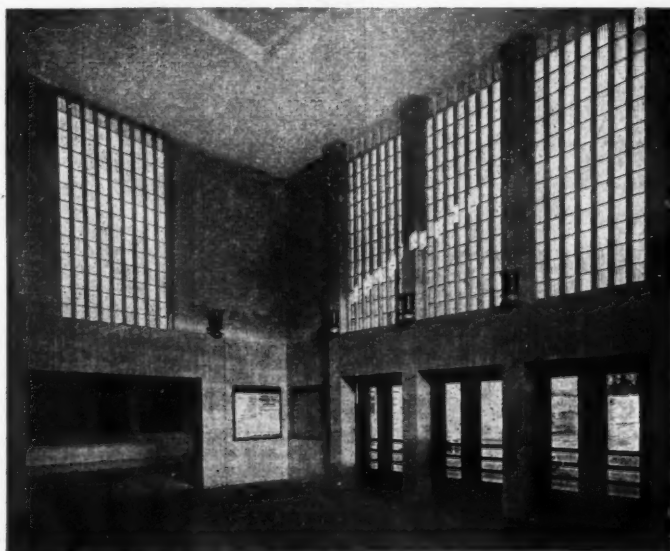
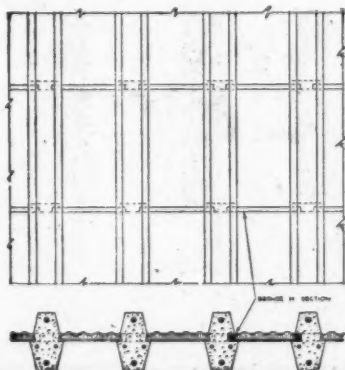
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Patent "Cristol" Window construction, comprising vertical R.C. mullions, grooved and slotted to receive "H" bronze members, which in turn carry special high-relief glass units or sheet glass.

It is thus possible to construct windows continuously up to any desired height, as the weight of each glass is carried on the "H" members, which, in turn, transmit it to the mullions. Mullions are spaced at 9in. or 12in. centres when high relief glass units are used, but may be spaced up to 2ft. centres when glazing is carried out in sheet glass.

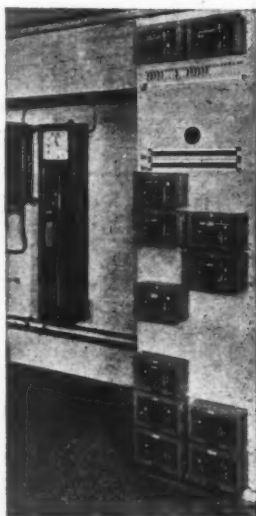


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## CLASSIFIED ADVERTISEMENTS

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

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

## Public and Official Announcements

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, Eaton Place, London, S.W.1. TEL. SLOANE 5615. 991

## LONDON COUNTY COUNCIL. VACANCIES FOR PLANNING STAFF IN THE ARCHITECTS' 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 £700 a year.

TECHNICAL ASSISTANT, up to £580 a year. Commencing rate of pay will be according to qualifications and experience.

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-Servicemen 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 forms of application (enclosing stamped addressed envelope), returnable not later than ten days from this date.

Canvassing disqualifies. 983

## BOROUGH OF NEATH. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited from qualified persons for the permanent appointment of Architectural Assistant (Grade III), in the Borough Engineer and Surveyor's Department.

Candidates must be Associate Members of the Royal Institute of British Architects, or hold an equivalent qualification, and have general knowledge and experience of architectural and housing work.

The salary will be in accordance with Grade III of the National Salary Scales, i.e., £390-£435 per annum, and war bonus (at present £59 16s. per annum).

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

Applications must be delivered to the Town Clerk, together with copies of three recent testimonials, not later than Wednesday, the 30th April, 1947.

A. E. I. CURTIS,

Town Clerk.

Town Clerk's Office, Queen Street, Neath. 708

## 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, plus cost-of-living bonus in each case, at present £59 16s. per annum. The appointments are subject to the Local Government Superannuation Act, 1937, and a medical examination.

ONE ARCHITECTURAL ASSISTANT (Grade A.P.T. IV—£440-£485).

Candidates should be suitably qualified, with experience in preparing sketch plans, working drawings and specifications, preferably in connection with educational buildings.

ONE JUNIOR SURVEYING ASSISTANT (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 with copies of three recent testimonials, not later than the 19th May, 1947.

Canvassing will disqualify.

E. TABERNER,

Town Clerk. 771

## 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 Buildings, and preference will be given to Associates of the Royal Institute of British Architects.

(2) SENIOR ENGINEERING ASSISTANT (Grade VI), £460-£510, plus bonus, at present £59 16s. per annum. Applicants should have had considerable experience in structural design of all types, and preference will be given to Associate Members of the Institution of Civil Engineers or holders of the Testamur of the Institute of Municipal Engineers.

(3) ENGINEERING ASSISTANT (Grade I), £230-£275, plus bonus, at present £59 16s. per annum.

Applicants should have had experience in a municipal engineer's office, and have completed articleship or a recognized engineering course at a University or other approved establishment.

The commencing salary for the successful applicants for appointments (1) and (2) will be fixed according to experience and qualifications.

Conditions of service are those formulated by the National Joint Council, and all appointments are on the established staff and subject to the provisions of the Local Government Superannuation Act, 1937. The successful applicants 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 Wednesday, 30th April, 1947.

C. V. THORNEY,

Town Clerk.

Town Hall, Burnley. 732

## CITY OF PLYMOUTH EDUCATION COMMITTEE.

PLYMOUTH SCHOOL OF ART.

Principal: LEWIS DUCKITT, M.C., A.R.C.A.

Applications are invited for the post of Temporary LECTURER AND STUDIO INSTRUCTOR, in the Department of Architecture.

Applicants should be Associates of the R.I.B.A., and preferably have been trained in a recognized School of Architecture. Previous teaching experience desirable, and ability to give instruction in any of the subjects of the Intermediate and Final Examination of the R.I.B.A. The appointment is temporary in the first place, with the possibility of a permanent post if selected developments mature. Salary according to the Burnham Technical Report.

Further particulars and form of application to be returned within two weeks of the appearance of this advertisement may be obtained on the receipt of a stamped addressed envelope from Andrew Scotland, Director of Education, Plymouth. 782

## SALOP COUNTY COUNCIL.

COUNTY ARCHITECTS' DEPARTMENT.

Applications are invited for the following appointments, to be established posts in the (1) Architectural, (2) Quantity Surveying and (3) Engineering Sections of the Department:—

(1) ARCHITECTURAL:

CHIEF ASSISTANT ARCHITECT. Salary £700×£25—£800 per annum.

SENIOR SECTION HEADS. Grade A.P.T. VII-VIII. £575×£25—£700 per annum.

SECTION HEADS. Grade A.P.T. VI-VII. £535×£20×£25—£650 per annum.

SENIOR ASSISTANT ARCHITECTS. Grade A.P.T. V. £460×£15×£20—£510 per annum.

(2) QUANTITY SURVEYING:

CHIEF QUANTITY SURVEYOR. Salary £700×£25—£800 per annum.

SENIOR ASSISTANT QUANTITY SURVEYORS. Grade A.P.T. IV-V. £420×£15×£20—£510 per annum.

ASSISTANT QUANTITY SURVEYORS. Grade A.P.T. II-III. £360×£15—£435 per annum.

(3) ENGINEERING ASSISTANT. Grade A.P.T. III-IV. £390×£15—£465 per annum.

A cost-of-living bonus, at present £59 16s. per annum, will be payable in addition to all salary scales above.

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

Applications should be accompanied by copies of not more than three recent testimonials, and must state age, educational and professional qualifications, previous experience fitting candidates for the appropriate appointments for which they are applying, with details of any knowledge of Local Government administration or procedure in the case of senior appointments. These applications must be received by Mr. A. G. Chant, F.R.I.B.A., County Architect, 5, Belmont, Shrewsbury, not later than Thursday, 1st May, 1947.

G. C. GODBER,

Clerk of the Council.

Shirehall, Shrewsbury. 725

## GOVERNMENT OF NORTHERN IRELAND. ASSISTANT ARCHITECT.

Applications are invited for posts of Assistant Architect, in the Ministry of Health and Local Government. The appointments will be temporary, but so far as can be foreseen will last for several years.

Remuneration: Successful candidates will be remunerated within one of the following salary ranges:

Range A: £550-£800 per annum.

Range B: £400-£650 per annum.

and the commencing salary within these ranges will be fixed in each case, according to qualifications and experience. In addition a war bonus, varying between £78 and £90 per annum, is at present payable.

Qualifications: Candidates must be Registered Architects by examination. In addition they should have experience in up-to-date house or hospital design and layout, and some aptitude for research into comparative standards of design and construction, and preferably some experience of planning work. For one of the posts on the A salary range the candidates must possess a recognized qualification in town planning, or have experience of town planning.

Preference will be given to candidates who served with H.M. Forces during the 1914-18 or 1939-45 war, providing the Ministry is satisfied that such candidates can, or within a reasonable time will be able to, discharge the duties of the post efficiently.

Closing date for receipt of applications: Applications must reach the Assistant Secretary (Establishments), Ministry of Finance, Stormont, Belfast, on or before the 12th May, 1947.

Applicants should state date of birth, give full particulars of qualifications and experience, and enclose copies of two recent testimonials. 800

## WESTSUGHTON URBAN DISTRICT COUNCIL. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the above permanent appointment, at a salary in accordance with Grade IV of the Administrative, Professional and Technical Division of the National Scheme of Conditions of Service (£420-£465), plus cost-of-living bonus, at present £59 16s. per annum.

Preference will be given to persons holding recognized architectural qualifications, who must have had good experience in the preparation of detailed plans and specifications for housing schemes.

The appointment will be subject to the National Scheme of Conditions of Service, and the provisions of the Local Government Act, 1937.

Applications, stating age, qualifications and experience, together with copies of two recent testimonials, should reach the undersigned not later than Friday, 9th May, 1947.

Candidates should also state whether or not they are related to any Member or Senior Officer of the Council.

G. W. LYTH,

Clerk of the Council.

Town Hall, Westsoughton. 759

## HIS MAJESTY'S COLONIAL SERVICE.

ARCHITECT is required by the Government of Nigeria. The appointment is on contract for one tour of 18-24 months in the first instance, with possibility of renewal up to 7 years. Salary, £560-£1,300 per annum, according to qualifications and experience. Rent is charged for Government quarters at rates ranging from £60-£90, according to salary. Candidates must possess the qualification of A.R.I.B.A., and a Diploma in Town-Planning would be an advantage; preference will be given to candidates who have had experience in the design of modern school and hospital buildings.

The terms of service include free passages once each way each tour for the officer, and, if married, for his wife, an outfit allowance of £60 on first appointment, free medical attention, and home leave on full pay at the rate of 7 days for each month of resident service. Income-tax is payable at low West African rates only. The officer is entitled to a gratuity of £25 for every three months' service on the termination of his contract. If he has not in the meantime been transferred to the pensionable establishment, Applicants should write at once to the Director of Recruitment (Colonial Service), 15, Victoria Street, London, S.W.1, stating age, professional qualifications and experience. 794

## HERNE BAY URBAN DISTRICT COUNCIL. APPOINTMENT OF ARCHITECT.

Applications are invited for the above appointment, which is to be for a minimum period of three years, in the Engineer and Surveyor's Department, at an inclusive salary of up to £700 per annum. Previous experience and qualifications will be taken into account in fixing the commencing salary.

Applicants must hold a recognized professional qualification, and have had sound experience in architectural work.

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

Applications, accompanied by two recent testimonials, must be delivered to the undersigned not later than 12th May, 1947.

Canvassing in any form will disqualify.

A. C. BRADBURY,

Clerk of the Council.

Council Offices, Herne Bay, Kent. 758



**CITY OF WESTMINSTER.**

Westminster City Council invites applications for the following permanent and temporary appointments in the Housing Department:—

**CHIEF ARCHITECTURAL ASSISTANT (Permanent).** Salary at A.P.T., Grade VIII, viz., £645-£725-£720 per annum, plus bonus.

Applicants should be members of the Royal Institute of British Architects, or hold equivalent qualification. They should have had a wide experience in Housing and General Architectural work, including administration appertaining to architectural matters.

**SECOND ARCHITECTURAL ASSISTANT (Permanent).** Salary at A.P.T., Grade IV, viz., £440-£515-£485 per annum, plus bonus.

Applicants should be members of the Royal Institute of British Architects, or hold equivalent qualification; and should have had a wide experience of housing and other architectural spheres.

**THIRD ARCHITECTURAL ASSISTANT (Permanent).** Salary at A.P.T., Grade III, viz., £410-£485-£465. Applicants should be Registered Architects, and should have had good architectural experience.

**JUNIOR ARCHITECTURAL ASSISTANTS (2) (Permanent).** Salary at A.P.T., Grade I, viz., £350-£415-£395 per annum, plus bonus.

Applicants should either have qualified or be about to qualify for Associate Membership of the Royal Institute of British Architects, and have had good experience in an architectural office.

**CHIEF QUANTITY SURVEYOR (Permanent).** Salary at A.P.T., Grade VII, viz., £595-£725-£670 per annum, plus bonus.

Applicants should be Fellows or Professional Associates of the Royal Institute of Chartered Surveyors, Quantity Surveyors, and have had considerable experience of housing work, including estimates, valuations, and settlement of accounts.

**CLERK OF WORKS (Permanent).** Salary at A.P.T., Grade V, viz., £480-£515-£520-£530 per annum, plus bonus.

Applicants should possess practical experience of the various trades, including the supervision of buildings in course of construction, and adaptations and conversions of existing premises.

**ASSISTANT MAINTENANCE INSPECTORS (2) (Temporary).** Salary at A.P.T., Grade I, viz., £350-£415-£395 per annum, plus bonus.

Applicants should have a thorough knowledge of the building trades and experience in the supervision of building maintenance and repair work.

**TRACER (Female) (Permanent).** Salary as General Division, viz., £115 p.a. at 16 years of age to maximum of £264 p.a. at 26 years of age, plus bonus.

Applicants should not be over 30 years of age, and must possess draughtsmanship of good quality and have drawing office experience, particularly in tracing and filing of plans.

In the case of each appointment, the salary stated is in accordance with the National Scale of Salaries. The bonus for all members of the staff over 21 is, at present: Men, £59 16s., and women, £48 2s., per annum. Staff under 21: Men, £24 14s.-£41 12s.; women, £20 3s.-£37 14s. p.a. (according to age).

Experience in a Local Government Office is an advantage, and applicants, except existing members of the Council's staff, should not be over 45 years of age, unless otherwise stated.

The appointments will be subject to a satisfactory medical report (in the case of the permanent staff); to the National Scheme of Conditions of Service; and to the provisions of the Council's Standing Orders, General Regulations and Superannuation Scheme. Canvassing will disqualify.

Applicants must state, in the order given, full name and address, age, war service, qualifications by examination, present appointment (how long held and salary), previous appointments, particulars of experience, date on which appointment could be taken up, and, whether to their knowledge, they are related to any member or Chief Officer of the Council. Applications, accompanied by two recent testimonials, for appointments in Grades I, IV and V, and three for Grades VII and VIII, should be sent in an envelope marked "Housing Department—Chief Architectural Assistant," or "Chief Quantity Surveyor," etc., so as to be received by the undersigned not later than Friday, 9th May, 1947.

PARKER MORRIS, *Town Clerk.*

Westminster City Hall, Charing Cross Road, W.C.2.  
16th April, 1947. 807

**COUNTY BOROUGH OF NORTHAMPTON.**

**SENIOR ASSISTANT ARCHITECT.**  
Applications are invited for the appointment of a Senior Assistant Architect, on the permanent staff of the Borough Architect and Town Planning Officer, in Grade VI of the A.P.T. Division (£535-£600 p.a., plus bonus).

Applicants should be Members of the Royal Institute of British Architects, and have experience of housing and educational work.

The position will afford a wide scope to an Assistant possessing initiative, sound constructional knowledge and design ability. Previous experience with a Local Authority is not essential.

Further particulars of the appointment and form of application may be obtained from the undersigned, to whom completed forms should be returned by Wednesday, 14th May, 1947.

C. E. VIVIAN ROWE, *Town Clerk.*

Guildhall, Northampton.  
11th April, 1947. 779

**CITY OF CANTERBURY.**

**ARCHITECTURAL ASSISTANTS.**

Applications are invited for the following appointments in the City Architect's Department:—

(1) **ARCHITECTURAL ASSISTANT.** Salary, A.P.T. Division, Grade III, £390-£435.

(2) **ARCHITECTURAL ASSISTANT.** Salary, A.P.T. Division, Grade I, £330-£375. Cost-of-living bonus, at present £59 16s. per annum, is payable.

The duties of appointment (1) will be mainly in connection with the provision of new buildings for Education purposes, and preference will be given to members of the Royal Institute of British Architects.

Applicants for appointment (2) should have reached the Intermediate standard of the Royal Institute of British Architects. Experience in housing work for a local authority is desirable, but not essential.

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

Applications, endorsed "Architectural Assistant," giving age, full particulars of experience and qualifications, and the name of three persons to whom reference may be made, should be received by Mr. L. Hugh Wilson, A.R.I.B.A., A.M.T.P.I., City Architect, not later than Tuesday, 13th May, 1947.

J. BOYLE, *Town Clerk.*

Municipal Buildings, Canterbury.  
15th April, 1947. 783

**BOROUGH OF YEOVIL.**

**APPOINTMENT OF PERMANENT ARCHITECTURAL ASSISTANTS.**

Applications are invited for the appointment of Architectural Assistants, at a salary according to the National Joint Council Scale, one, Grade V (£460-£510 per annum, and one, Grade III (£390-£435 per annum), plus bonus, which is at present £59 16s. Housing accommodation will be made available. Applicants should be Associates of the R.I.B.A., good draughtsmen and surveyors, and have had considerable experience in design and preparation of working drawings, and have a good knowledge of building construction, supervision of building works, preparation of bills of quantities, measuring up for interim and final certificates for housing schemes, and other architectural work.

The appointment will be subject to the Local Government Superannuation Act, 1937, and be terminable by one month's notice on either side. The successful candidates must pass a medical examination. Forms of application may be obtained from the undersigned, and sent with copies only of three recent testimonials, not later than Monday, 13th May, 1947.

A. J. PRICE, A.M.I.C.E., *Borough Surveyor.*

Municipal Offices, Yeovil.  
784

**BOROUGH OF BRENTFORD AND CHISWICK.**

**APPOINTMENT OF ARCHITECTURAL ASSISTANTS.**

Applications are invited for the appointment of Two Temporary Architectural Assistants, in the Borough Engineer and Surveyor's Department.

Salary £650 per annum, plus cost-of-living bonus at present £59 16s. per annum. Candidates should be Members of the Royal Institute of British Architects (or hold equivalent qualifications), and have had experience in the design and planning of flats, houses and schools.

Applications, endorsed "Architectural Assistant," stating age, qualifications, present and previous appointments and experience, and accompanied by copies of three recent testimonials, should reach the undersigned not later than 12 noon on Monday, 5th May, 1947.

The successful candidates will be required to enter into a Fidelity Bond with the Council's Insurers at the expense of the Council.

Applicants are notified that the Council cannot undertake the provision of housing accommodation.

JOHN SKINNER, *Town Clerk.*

Town Hall, Chiswick, W.4.  
11th April, 1947. 808

**CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.**

**APPOINTMENT OF CITY ARCHITECT.**

Applications are invited for the appointment of City Architect, from Fellows or Associates of the Royal Institute of British Architects, at a salary of £1,600 per annum, rising by annual increments of £100 to £1,800 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

The person appointed will be required to pass a medical examination, and to devote the whole of his time to the duties of his office.

The appointment will be subject to the Conditions of Service of the National Joint Council of Local Authorities' Administrative, Professional, Technical and Clerical Services, and to the provisions of the Local Government Superannuation Act, 1937.

The appointment will be subject to three months' notice on either side.

Forms of application (with full particulars of the duties of the office) may be obtained from the undersigned, and should be returned to the undersigned not later than the 5th May, 1947.

JOHN ATKINSON, *Town Clerk.*

Town Hall, Newcastle-upon-Tyne, 1.  
10th April, 1947. 776

**NEWCASTLE-UPON-TYNE EDUCATION COMMITTEE.**

**TECHNICAL SCHOOL OF BUILDING CRAFTS.**

Wanted, as soon as possible, a Qualified ASSISTANT MASTER, to teach Plumbing and Metalwork. Barnham Scale. Prescribed form to be returned to undersigned within 14 days of the appearance of this advertisement.

THOS. WALLING, *Director of Education.*

City Education Office, Northumberland Road, Newcastle-upon-Tyne, 1. 774

**CRAWLEY DEVELOPMENT CORPORATION.**

The Development Corporation recently appointed for the establishment of a new town at Crawley invite applications for the under-mentioned post.

The Officer will be a responsible head of a department, and will be expected to work as one of a team under the direction of the Chief Executive Officer. The team will comprise a Chief Engineer, Chief Architect, Estate Officer, Legal and Administrative Officer, and Chief Finance Officer. The task is of a pioneering kind, and calls for imagination, initiative, resource and proved organizing ability of a high order. Applicants should show themselves possessed of this combination of qualities, as well as of a recognized professional status.

**CHIEF ARCHITECT (Ref.: H.D.109).** Applicants should be Fellows or Associates of the Royal Institute of British Architects, and should, in addition, have had experience of town planning work. The successful applicant will be required to co-ordinate the design and planning work in connection with the development of the town.

Applications, in writing, must quote the reference given above, and should be submitted to the Crawley Development Corporation, 11, Grosvenor Square, London, W.1, by the 24th May, 1947, together with copies of three testimonials. Date of birth should be given, as well as particulars of education, qualifications, appointments in chronological order, present salary, and salary now required.

SOUTHAMPTON COUNTY BOROUGH. **BOROUGH ARCHITECT'S DEPARTMENT.** Applications are invited for the following appointments:—

(1) **TOWN PLANNING ASSISTANT (Temporary).** Grade III, £390-£435.

(2) **TOWN PLANNING ASSISTANT (Temporary).** Grade II, £360-£405.

The above posts are subject to a cost-of-living bonus, amounting to £59 16s. per annum.

Candidates should have a professional qualification in architecture, engineering or surveying, and should be desirous of qualifying for Membership of the Town Planning Institute.

Applications, giving full particulars of age, qualifications and experience, and enclosing copies of two recent testimonials, should be sent to Denis Winston, M.A., B.Arch., A.R.I.B.A., M.T.P.I., Civic Centre, Southampton, to reach the above on or before 19th May, 1947. 780

**SURREY COUNTY COUNCIL.**

**COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointments:—

**ASSISTANT QUANTITY SURVEYOR (Grade VI),** at a commencing salary of £535, rising by annual increments of £25-£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.

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

**GENERAL ARCHITECTURAL ASSISTANT,** at a salary of £260 per annum, plus bonus, at present at the rate of £59 16s. per annum.

Applicants should be of good general training and experience.

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 26th April, 1947.

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

DUDDLEY AUKLAND, *Clerk of the Council.*

County Hall, Kingston-upon-Thames. 712

**ARCHITECTURAL ASSISTANTS required by MINISTRY OF WORKS.** Applications are invited to all vacancies for Drawing Office duties in London. Gross emoluments up to £550 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.

In writing, giving age, details of training and experience, to Chief Architect, W.G.10, Ministry of Works, Abell House, John Islip Street, London, S.W.1. 696



**ARCHITECTURAL ASSISTANTS REQUIRED BY MINISTRY OF WORKS.**

Applications are invited to fill vacancies for Drawing Office duties in Risley, Warrington. The posts are in an unestablished capacity, and the inclusive salary is up to £550 per annum, according to qualifications and experience. 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, to Chief Architect, W.G.10. Ministry of Works, Abell House, John Islip Street, London, S.W.1. 806

**MUNICIPALITY OF SINGAPORE. MUNICIPAL ARCHITECT AND BUILDING SURVEYOR'S DEPARTMENT.****(1) Appointment of ONE SENIOR ASSISTANT ARCHITECT AND BUILDING SURVEYOR.****(2) Appointment of THREE ASSISTANT ARCHITECT AND BUILDING SURVEYORS.**

The Municipal Commissioners of Singapore invite applications from Associate Members of the Royal Institute of British Architects for appointment to one post of Senior Municipal Architect and Building Surveyor, and three posts of Assistant Municipal Architect and Building Surveyors, in the Department of the Municipal Architect and Building Surveyor, Singapore, at a commencing salary of \$680 per month for the Senior Assistant Architect and Building Surveyor—age between 35 and 40—and \$550 per month or higher, according to qualifications and experience, for the three Assistant Architect and Building Surveyors appointments—age between 25 and 35, under Class III of the Municipal Senior Officers' Salary Scheme.

The duties of the appointments involve:—

(1) The preparation of plans and working drawings for Municipal, public, domestic and essential service buildings, etc., including structural steel and reinforced concrete details, etc.

(2) The checking and dealing with private building schemes and building plans, etc., for approval under Local Ordinances and Municipal Building By-laws.

The appointed officers in all the above appointments must be capable of performing either section of the above Departmental work.

Applicants must have had previous professional experience in Municipal or Government service or other equivalent service, and be familiar with L.C.C. Building By-laws and applications of Building Law and Procedure, including structural steel and reinforced concrete structures.

Strict medical examination is required. There is a Provident Fund under which Rules Senior Municipal Officers must contribute 7½ per cent. of salary. An extra cost-of-living allowance is at present granted—married officers maximum \$160, and single officers maximum \$110 per month.

From date of appointment, the Senior Municipal Officers' salary in Class III of the Senior Municipal Salary Scheme rises, by yearly increments of \$40 per annum to a maximum salary of \$800 a month in the Senior Assistant Architect and Building Surveyor appointment, and \$25 per annum to a total of \$600, thence yearly increments of \$40 per annum to a maximum salary of \$800 a month for the three Assistant Architect and Building Surveyor appointments.

Applications, stating whether married or single, age, birthplace, details of education, qualifications, training and experience, accompanied by copies of three recent testimonials, must be lodged with Messrs. Pelrice & Williams, 1, Victoria Street, London, S.W.1 (Agents to the Municipal Commissioners), not later than 1st May, 1947. 802

The Air Ministry has vacancies for a limited number of OFFICERS for the Airfield Construction Service in the British Air Force of Occupation in Germany, and former R.A.F. officers qualified for these duties who have now been released are invited to apply for extended service commissions under the following terms:—

(1) The extended service commissions will be for 4 years' active list service in the Technical branch (with the obligation to serve initially in Germany), followed by 4 years in the Reserve.

(2) On satisfactory completion of the full active list period, extended service gratuity of £500 will be payable. Proportionate gratuity will be payable under certain conditions for periods of broken service, subject to the completion of at least one year's service on the extended service engagement.

(3) Substantive rank on appointment will be determined by length of previous commissioned service up to the date of release as follows:—

Those with less than 6 months' commissioned service: Pilot Officer.

Those with more than 6 months' but less than 3½ years' commissioned service: Flying Officer.

Those with more than 3½ years' commissioned service: Flight Lieutenant.

Those who reached the age of 30 on date of release and had attained the temporary or acting rank of Wing Commander: Squadron Leader.

Higher acting rank can be granted as appropriate to fill establishment vacancies.

(4) Selection will be subject to medical fitness to the R.A.F. standard of A4B, i.e., medically fit for air duties as a non-combatant passenger and fit for ground duties at home and overseas.

Those interested should apply in writing to the Under-Secretary of State, Air Ministry (A.R.T.), Bush House, S.E. London, W.C.2, by not later than 31st May, 1947. 805

**COUNTY BOROUGH OF WALLASEY.**

Applications are invited for the post of ASSISTANT SCHOOLS ARCHITECT. Applicants should be not more than 45 years of age, and preferably Associates of the Royal Institute of British Architects. Good experience of educational buildings is desirable. Salary £535, plus two increments of £20 and one of £25 to £600 per annum, plus bonus, £59 19s. 3d.

Forms of application may be obtained from the Director of Education, Town Hall, Wallasey, to whom completed forms should be returned as soon as possible, and in any case not later than a fortnight from the date of the appearance of this advertisement. Canvassing will disqualify.

EMRYS EVANS,

Town Clerk.

Town Hall, Wallasey. 760

**NORTHERN IRELAND HOUSING TRUST. APPOINTMENT OF ARCHITECTS.**

Applications are invited for the following posts from Fellows or Associates of the Royal Institute of British Architects, having a good knowledge of housing:—

(a) Salary scale, £640×£25—£890.

(b) Salary scale, £490×£20—£740.

(c) Salary scale, £338×£20—£540.

In each case the entry point on the salary scale will be fixed according to the experience and qualifications of the successful applicant.

The Northern Ireland Housing Trust is a Statutory Body set up by Parliament, and has an immediate building programme of several thousand houses.

The Chief Technical Officer of the Trust is E. A. Ferriby, Esq., B.Arch., A.R.I.B.A., A.M.T.P.I. The appointments will be full-time, and a successful candidate will be required to carry out such work in connection with the design, construction and supervision of housing schemes from the layout stage to the completion of the houses as may be assigned to him.

Preference will be given to ex-Service candidates possessing the required qualifications, provided that the Trust is satisfied that such candidates can, or within a reasonable time, will be able to fill the vacant posts efficiently.

Candidates should apply by letter to the address given below, stating the date and place of birth, qualifications and experience, the date when able to commence duties, and for which post they are applying, and giving the names of two referees.

GENERAL MANAGER,

Northern Ireland Housing Trust, 5, Donegall Square South, Belfast, N. Ireland. 795

**THE RURAL DISTRICT COUNCIL OF GODSTONE.****ARCHITECTURAL ASSISTANTS.**

Applications are invited for the under-mentioned appointments:—

ONE ARCHITECTURAL ASSISTANT. Salary, A.P.T., Grade II, £360—£15—£405.

ONE ARCHITECTURAL ASSISTANT. Salary, A.P.T., Grade I, £330—£15—£375.

In addition a cost-of-living bonus is paid, together with a travelling allowance of £70 per annum.

The Architectural Assistants will be employed wholly on housing work. Preference will be given to those applicants who have obtained qualifications of a recognized professional institution.

The Council have adopted the National Scale of Salaries and Conditions of Service, and the appointments are subject to this.

Applications, stating age, qualifications and experience, together with copies of not more than two testimonials, should be delivered to the undersigned not later than Saturday, 3rd May, 1947.

F. W. WALPOLE,

Clerk of the Council.

Council Offices, Oxted, Surrey. 791

**HUNTINGDONSHIRE COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.****APPOINTMENT OF TECHNICAL STAFF.**

Applications are invited for the following appointments on the permanent staff, at commencing salaries according to qualifications and experience within the grades stated below:—

(a) SENIOR ARCHITECTURAL ASSISTANT, at a salary of £460 per annum, rising by annual increments of £15 and one of £20, to a maximum of £510 per annum (A.P.T., Grade V), plus bonus.

(b) QUANTITY SURVEYING ASSISTANT, at a salary of £420 per annum, rising by annual increments of £15 to a maximum of £465 per annum (A.P.T., Grade IV), plus bonus.

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

For each position candidates should possess the appropriate technical and professional qualifications applicable to the post.

Both appointments will be subject to the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

The appointments are terminable by one month's notice on either side.

Applications, stating age, qualifications, experience, and date on which duties could be commenced if appointed, together with copies of testimonials, should be sent to Mr. T. H. Longstaff, M.Inst.C.E., F.R.I.B.A., County Architect, Walden House, Huntingdon, by not later than Wednesday, 30th April, 1947.

J. B. KELLY,

Clerk of the County Council.

County Offices, Old Grammar School, Huntingdon. 767

10th April, 1947.

**SHIPLEY URBAN DISTRICT COUNCIL. APPOINTMENT OF (a) ARCHITECTURAL ASSISTANT, and (b) ENGINEERING ASSISTANT.**

Applications are invited for the following established appointments, at salaries, in accordance with the National Joint Council Scales.

(a) Architectural Assistant, Grade III, A.P.T. Division, commencing at £390 per annum, rising by £15 yearly increments to £435 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

(b) Engineering Assistant, Grade II, A.P.T. Division, commencing at £360 per annum, rising by £15 yearly increments to £405 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

(1) Applicants for appointment (a) should be members of the Royal Institute of British Architects, and have a thorough knowledge of architectural work, practical experience in the development of Housing Schemes, design of houses and public buildings, quick and accurate Draughtsman, and be capable of taking off quantities.

(2) Applicants for appointment (b) should hold the Testamur of the Institute of Municipal Engineers or other similar qualification, and have a general knowledge and experience in the design and construction of Municipal Engineering Works, and should be accustomed to the preparation of plans, estimates, quantities and specifications, and also setting out and supervision of works carried out by contract and direct labour.

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

Applications, endorsed "Architectural Assistant" or "Engineering Assistant," stating age, training, qualifications and experience, and accompanied by three recent testimonials, must reach the undersigned not later than the 15th May, 1947.

HAROLD S. HASLAM,

Clerk of the Council.

Town Hall, Shipley.

15th April, 1947. 796

**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

**SURVEYORS.—London Architects** have vacancies for Surveyors, with experience of war damage work; salary, £500-£605 per annum. Write, stating age, experience, and when free. Box 445.

**JUNIOR (14-16)** required in Chartered Architect's office; general office work, with prospect of profession. Clark, 44, Gt. Russell Street, W.C.1. Museum 4400. 890

**ASSISTANTS** required (20-23 years) capable of draughtsmen; surveys, working drawings, specifications, etc.; busy private practice. Clark, 44, Gt. Russell Street, W.C.1. Museum 4400. 660

**APPLICATIONS** are invited by a well-known firm of Building Contractors in N.W. London for an ARCHITECTURAL ASSISTANT in their Architect's Department; applicants should be to final R.I.B.A. standard, preferably with experience in house and factory design. Box 681.

**ARCHITECT,** Central London, requires good JUNIOR DRAUGHTSMAN; excellent prospects for suitable man; state age, experience, salary. Box 733.

**DRAUGHTSMAN** wanted in Architect's office of a Bank; applicants must be good draughtsmen, able to measure up buildings and plot surveys. Reply, stating age, training, experience, qualifications, and salary required, to Box 713.

**DRAUGHTSMAN** required immediately for busy office with varied practice in East Anglia; must be neat and accurate; would consider ex-Service man or Junior requiring experience; small flat available. State experience and salary required to Box 721.

**ARCHITECTURAL ASSISTANT** required immediately in S.E. Kent practice; R.I.B.A. Inter. standard; permanent position for the right man, with good salary by arrangement, according to experience. Box 748.

**PLYMOUTH** Associate has vacancies for CHIEF and JUNIOR ARCHITECTS; to assist in general reconstruction schemes. Apply, stating particulars of training and experience, to Box 754.

**MAXWELL AYRTON,** 9, Church Row, Hampstead, N.W.3, requires experienced ASSISTANT; working drawings, details. Write, stating age, experience, and salary. 768

**DRAUGHTSMAN** as Assistant to Architectural Department; experienced in building construction, surveying and levelling. Apply Austin Motor Co., Ltd., Birmingham. 772

**ARCHITECT** required for busy Office within 30 miles of London, with growing practice in Home Counties; must be capable of supervising staff; good opportunity for man with initiative; state qualifications, experience, and salary required; employer can assist to provide housing accommodation. Box 770.

**INTERNATIONAL Correspondence Schools** require for immediate full-time employment **JUNIOR ARCHITECTURAL ASSISTANTS** (either sex), qualified by R.I.B.A. examinations. Write or phone (Hol. 3971), stating age, experience and salary required, to Director of Instruction, International Correspondence Schools, 71, Kingsway, W.C.2. 785

**SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS** required for Cotswold office, with varied practice; state age, experience, and salary required. Pyle & Saint, Chartered Architects, Thomas Street House, Cirencester, Glos. 757

**SENIOR ARCHITECTURAL ASSISTANTS** required for Midlands office; A.R.I.B.A., experienced in design and preparation of all drawings for wide range of buildings; special consideration given to candidates experienced in housing, licensed premises, theatre and industrial work; state age, experience, and salary required, to Box 761.

**LARGE and active Firm of Architects and Surveyors** in Midlands require **SENIOR SURVEYING ASSISTANT**; P.A.S.I., A.M.T.P.I., or equal; experience in land surveying, design and layout of large estate developments; applicants to state age, salary required, when available, and to give brief résumé of previous experience. Box 762.

**JUNIOR ARCHITECTURAL ASSISTANT** wanted for office, W.R. Yorkshire; state experience and wages required. Box 765.

**SURVEYING ASSISTANT** required for Drawing Office of busy South-Coast Chartered Surveyors; experience in supervision and working drawings of agricultural and domestic structures, levels, etc. State age, qualifications, and salary required, to Box 790.

**KEEN JUNIOR DRAUGHTSMAN** wanted for London Office. Write, stating qualifications and salary required, to Box 793.

**ARCHITECT'S ASSISTANT** required in busy private practice; Inter. R.I.B.A. standard preferred; surveys, working drawings, specifications; salary £250-£350, according to age and experience. Write, giving full particulars, to G. Gerald G. Saunders, 51, Queen Street, Exeter. 810

**ARCHITECTURAL SENIOR ASSISTANT** required for busy Dublin Office; must be fully qualified and highly competent. Reply, stating full particulars, to T. J. Cullen & Co., Architects, 25, Suffolk Street, Dublin. 799

**A SENIOR and JUNIOR ARCHITECTURAL ASSISTANT** required immediately; salary according to qualifications and experience. Johns & Slater, F./A.R.I.B.A., 8, Lower Brook Street, Ipswich. 801

**ARCHITECTURAL ASSISTANT** required for Branch Office in East Dereham, Norfolk; intermediate standard; good draughtsman; two similar ASSISTANTS required for main office at King's Lynn; in each case send full details of age, experience, and salary required, to Harold Marsh, L.R.I.B.A., 14, King Street, King's Lynn. 811

## Architectural Appointments Wanted

**SENIOR ARCHITECTURAL ASSISTANT** (Dipl.Arch., Liverpool) requires position; Liverpool or near Proximity; sound knowledge of design and construction; good practical experience; if necessary would undertake part-time work at own home; early release from present position possible. Box 303.

**ASSISTANT** (23), studying R.I.B.A. final, 6 years' varied experience, mainly housing and industrial, seeks position; West Country, preferably Bristol or Exeter. Box 304.

**ARCHITECT'S ASSISTANT** (29) desires change; 5½ years' experience; working drawings, details, surveys, specifications, etc.; London or S.E. Essex district preferred; salary £475. Box 305.

**ARCHITECT'S ASSISTANT** (27), 7 years' experience, desires position in Architect's Office in the Birmingham area. Box 306.

**VIRILE**, young (24), ex-Army Officer, passed recent R.I.B.A. final, in office past 16 months, seeks position, progressive London office, at salary relative to cost of living. Box 307.

## Other Appointments Vacant

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

**SURVEYOR** to take site particulars and detail work for highly specialised London Firm of Building Sub Contractors; knowledge of ferro-concrete design an advantage; excellent opportunities offered. Box 764.

**APPLICATIONS** are invited from men with thorough practical experience of the Building Trades for the post of **BUILDING FOREMAN** in a large Factory in the South-East; duties will include the supervision of permanent staff engaged in general alterations and maintenance work; some factory experience essential, and some knowledge of the duties of a Clerk of Works an advantage; apply in writing stating age, experience, and salary required. Box 678.

**ARCHITECT**, Central District, London, requires **SHORTHAND-TYPIST** who can trace and colour; state age, experience, and salary. Box 745.

**BUILDING SUPERINTENDENT**.—Required, in the Works Department of the Royal Arsenal Co-operative Society, Ltd., a Building Superintendent, experienced in the preparation of schedules in connection with maintenance and war damage reinstatement, setting out, and organisation of large and small works, and control of all trades; salary, £650 per annum, including war bonus. Applications should be made in writing, giving full details of training and experience, age, qualifications, and copies of references, to the Staff Manager, Royal Arsenal Co-operative Society, Ltd., 113, Powis Street, Woolwich, S.E.18. Endorse envelope "Building Superintendent." 756

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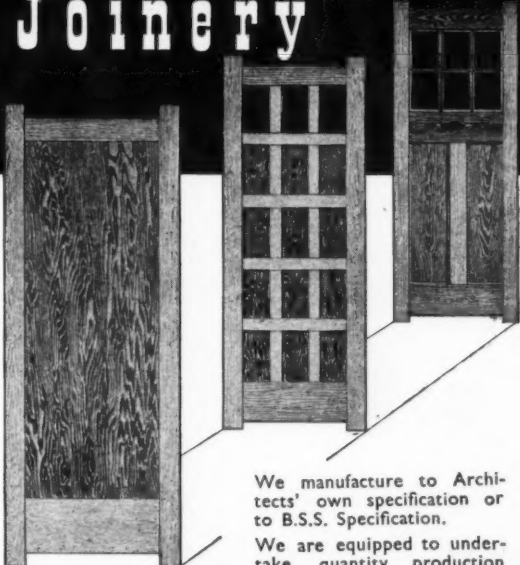
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