

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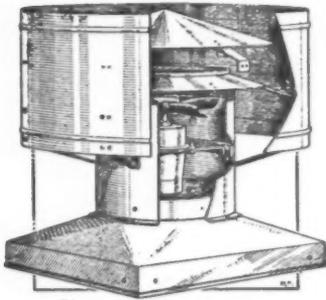
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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to I one week, Ie to Z the next. In all cases where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

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. 75, Eaton Place, S.W.1.	Sloane 3158
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
IR	Institute of Refrigeration. Empire House, St. Martin's-le-Grand, E.C.1.	Monarch 7391
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). 34, Gordon Square, W.C.1.	Euston 2158-9
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 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, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
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
NPL	National Physical Laboratory. Head Office, Teddington.	Molesley 1380
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 1761
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Temple Bar 8274
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPMP	Society of British Paint Manufacturers. 20, Piccadilly, London, W.1.	Regent 6347
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists. Room 243, Empire House, St. Martin's-le-Grand, E.C.1.	Metropolitan 8344
SNHTPC	Scottish National Housing & Town Planning Council. Hon. sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6146 (3 lines)
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TF	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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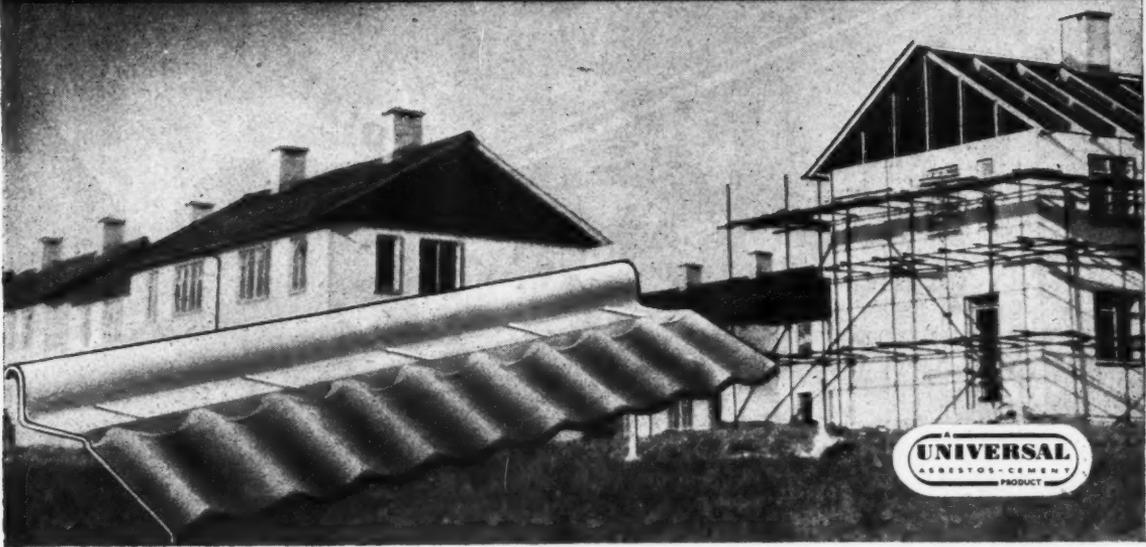
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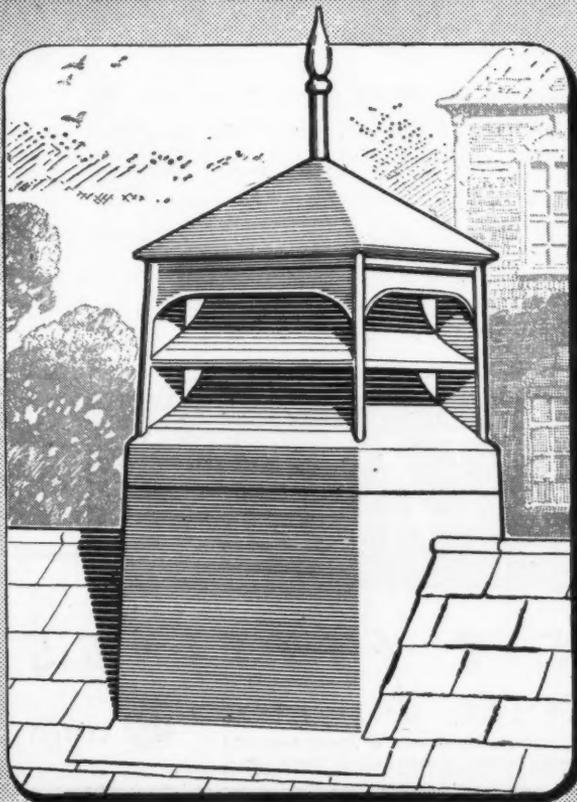
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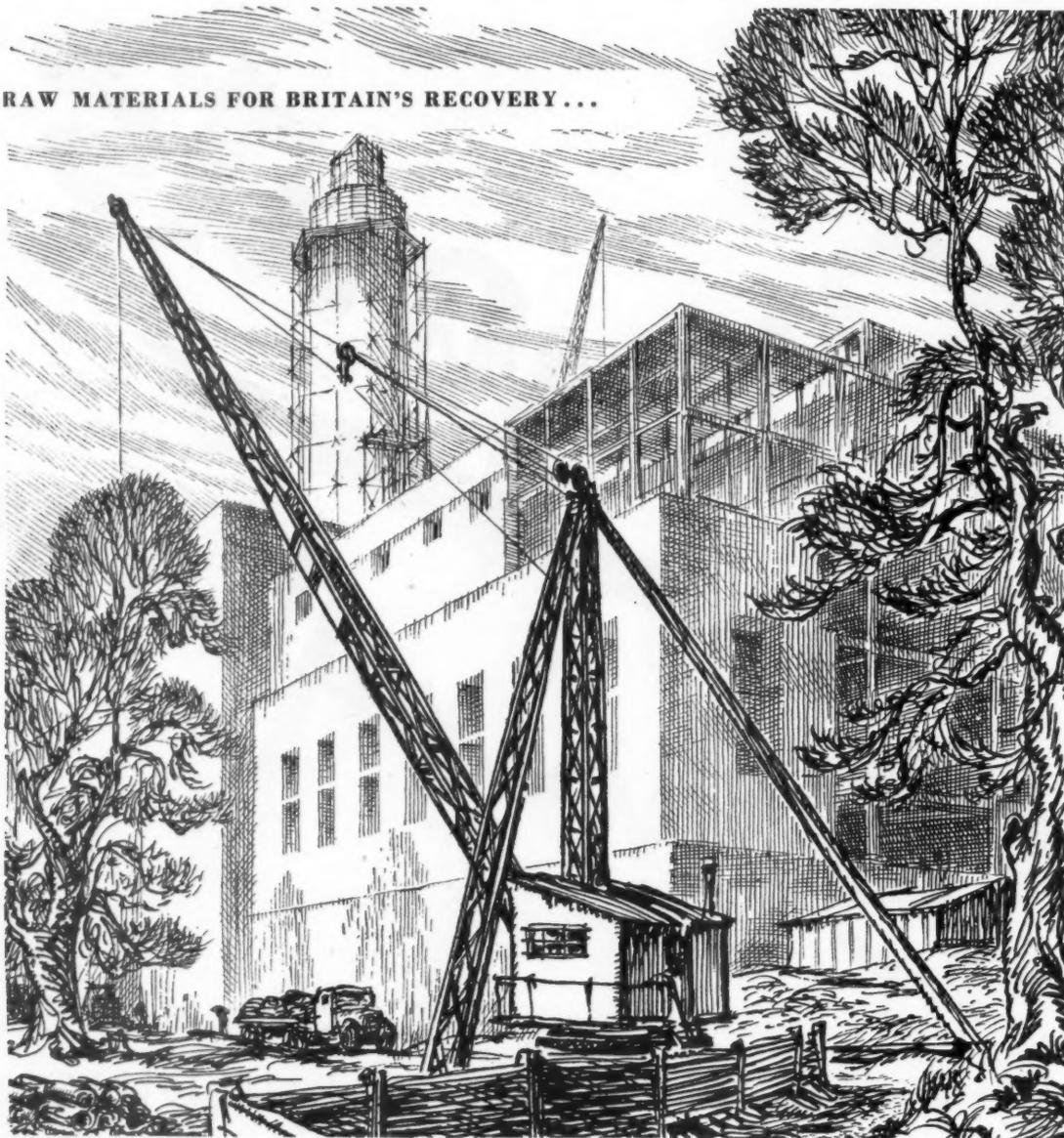
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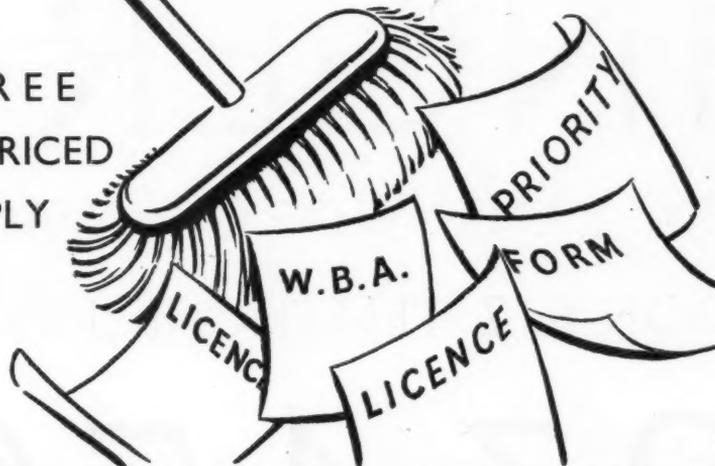
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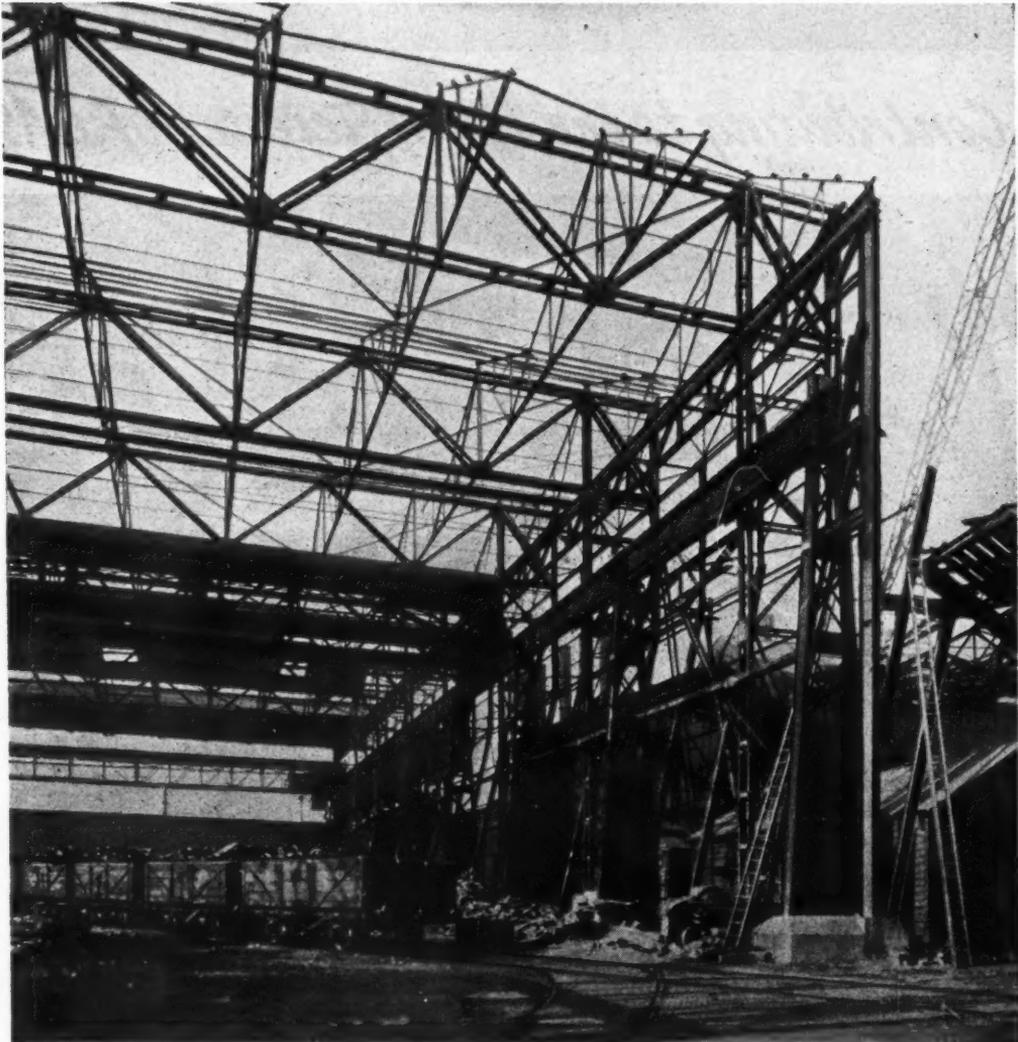
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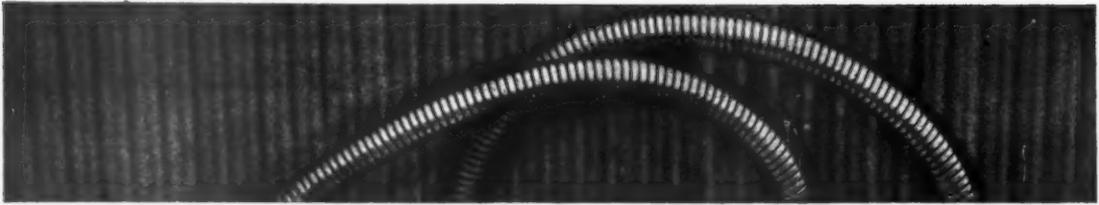
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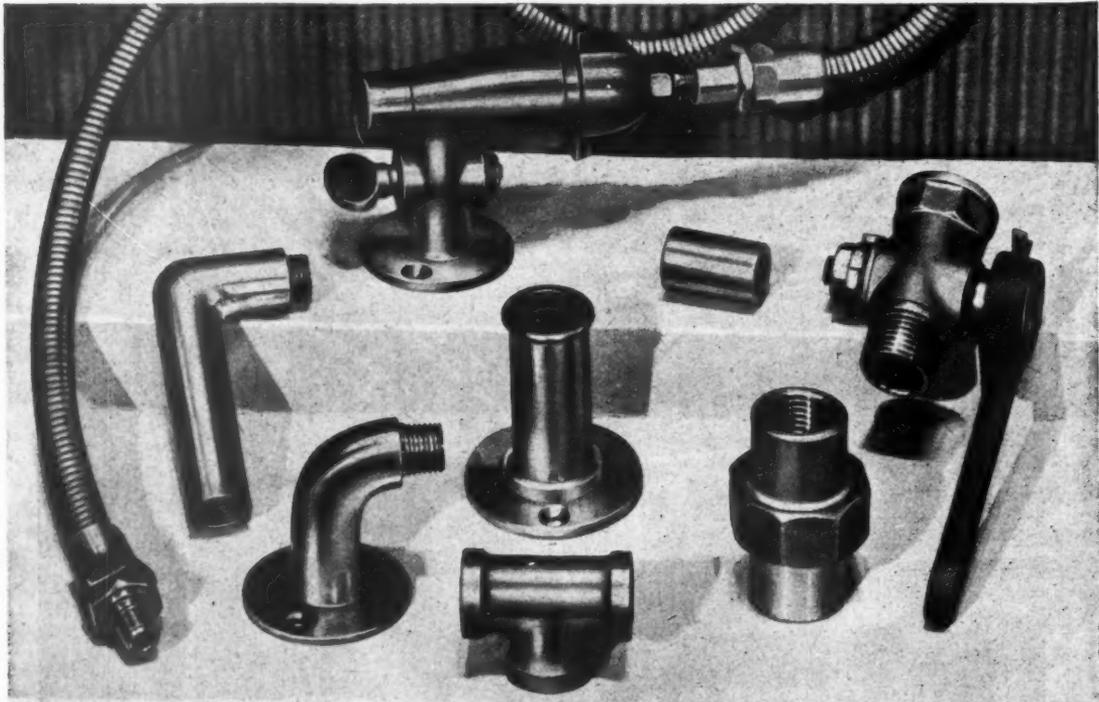
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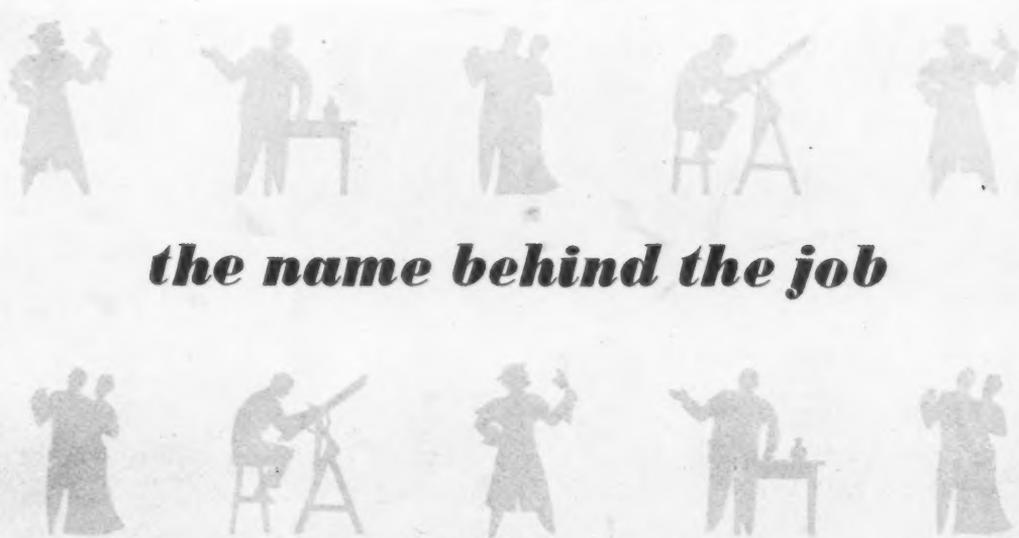
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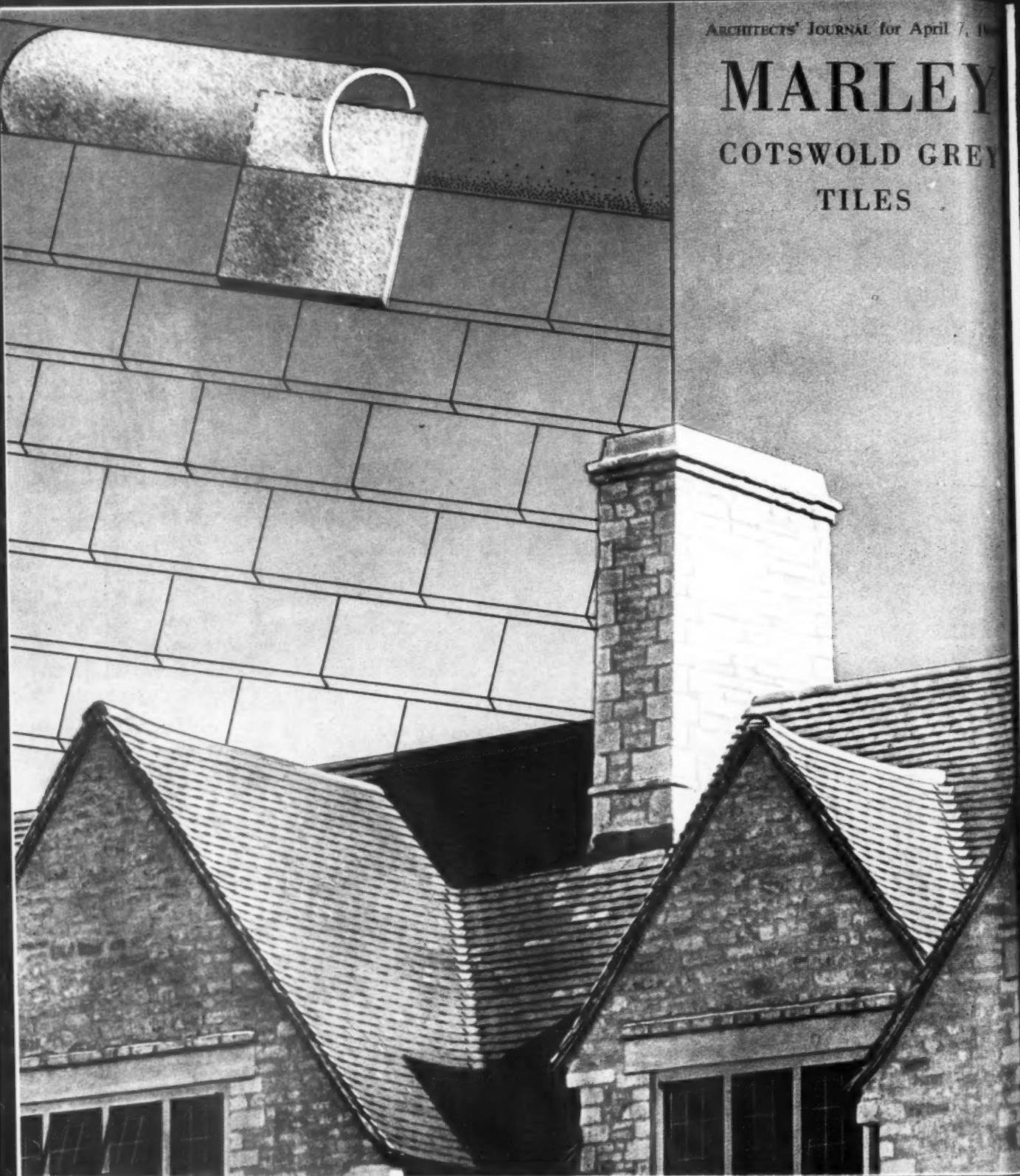
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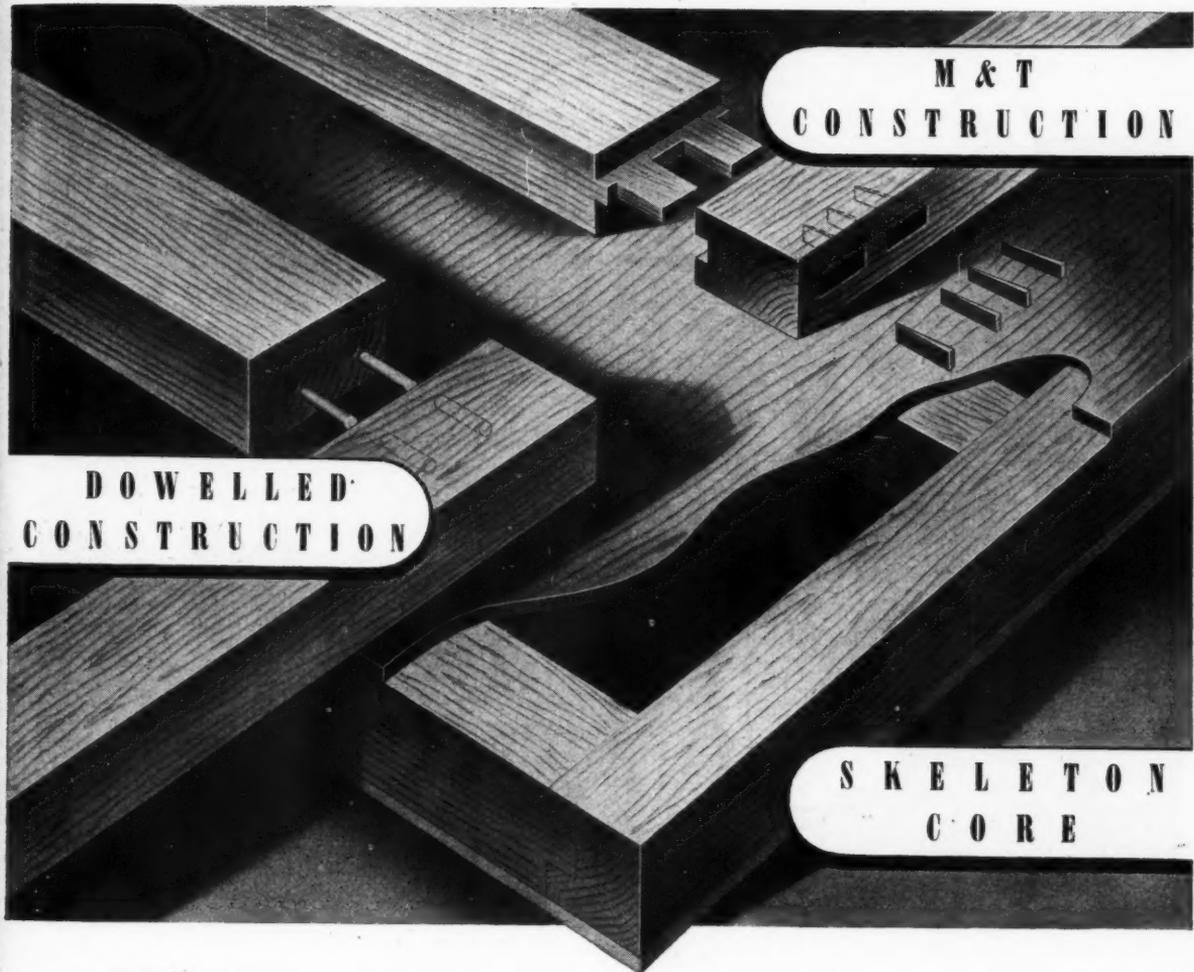
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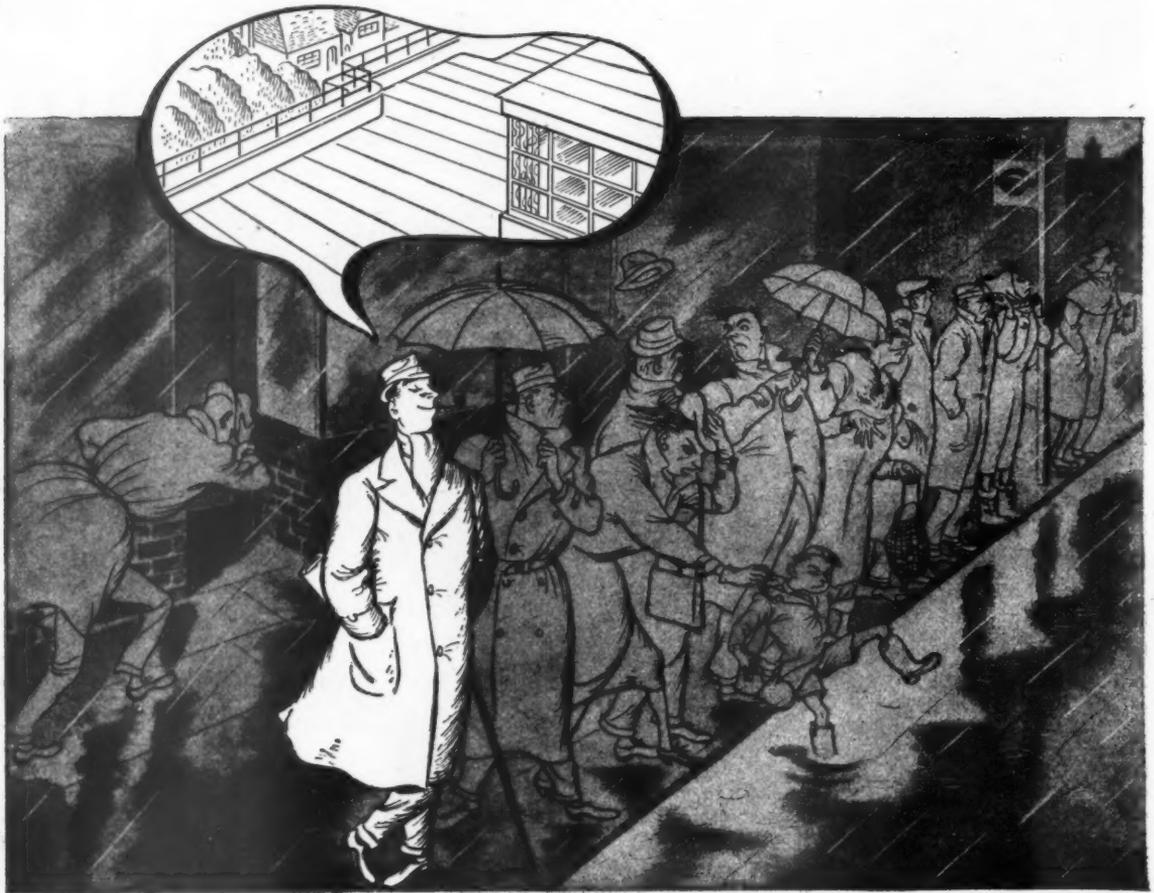
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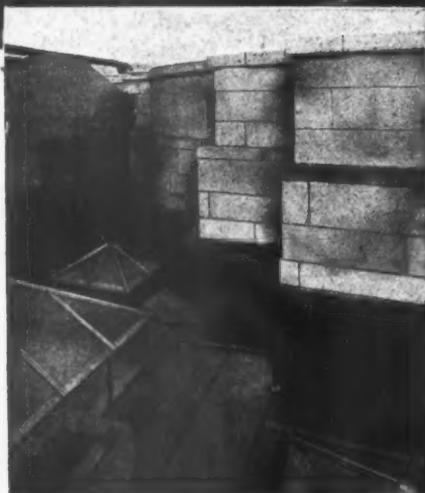
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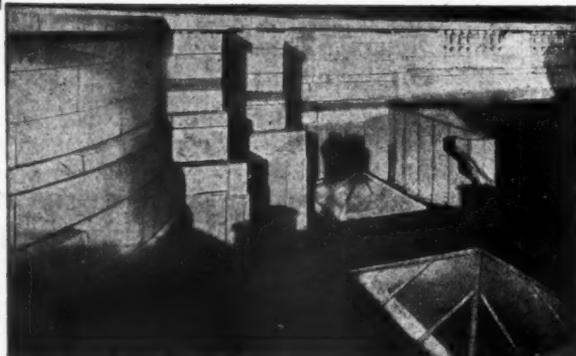
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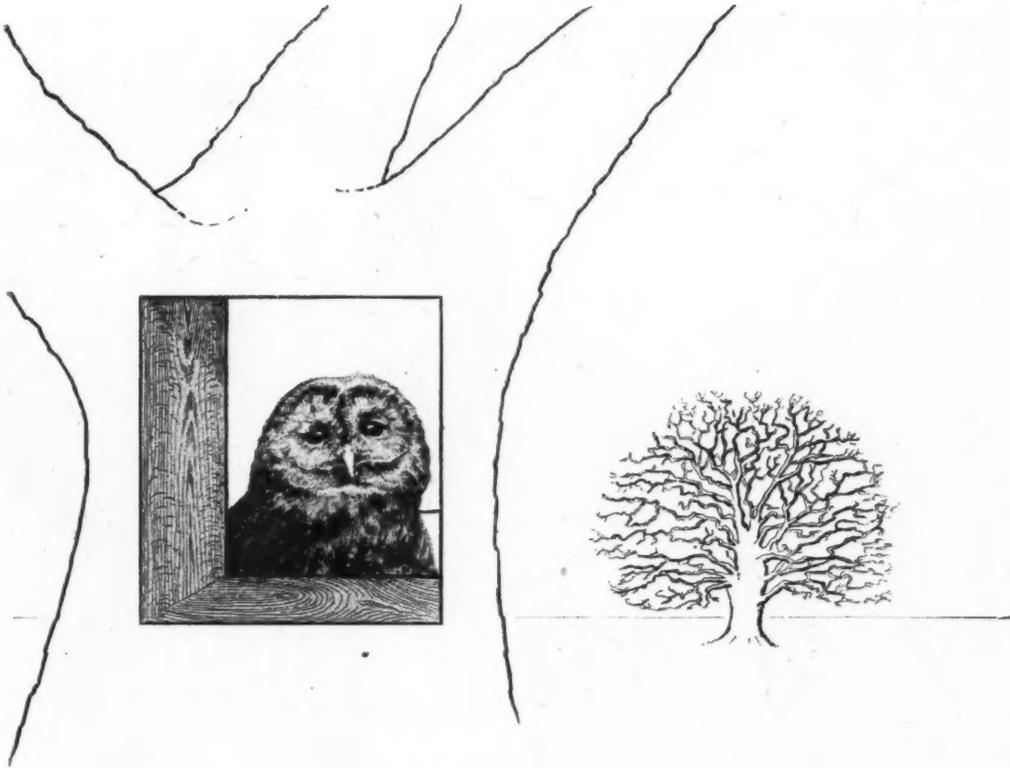
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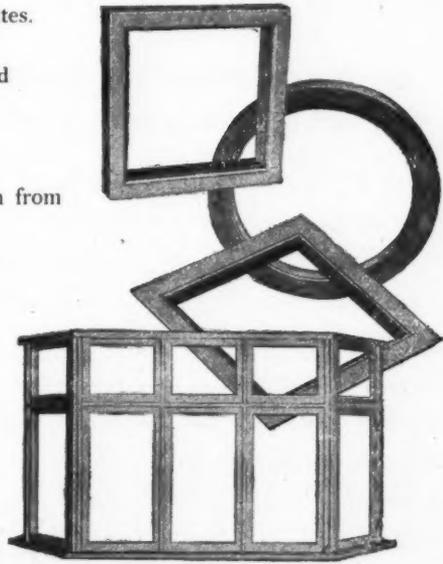


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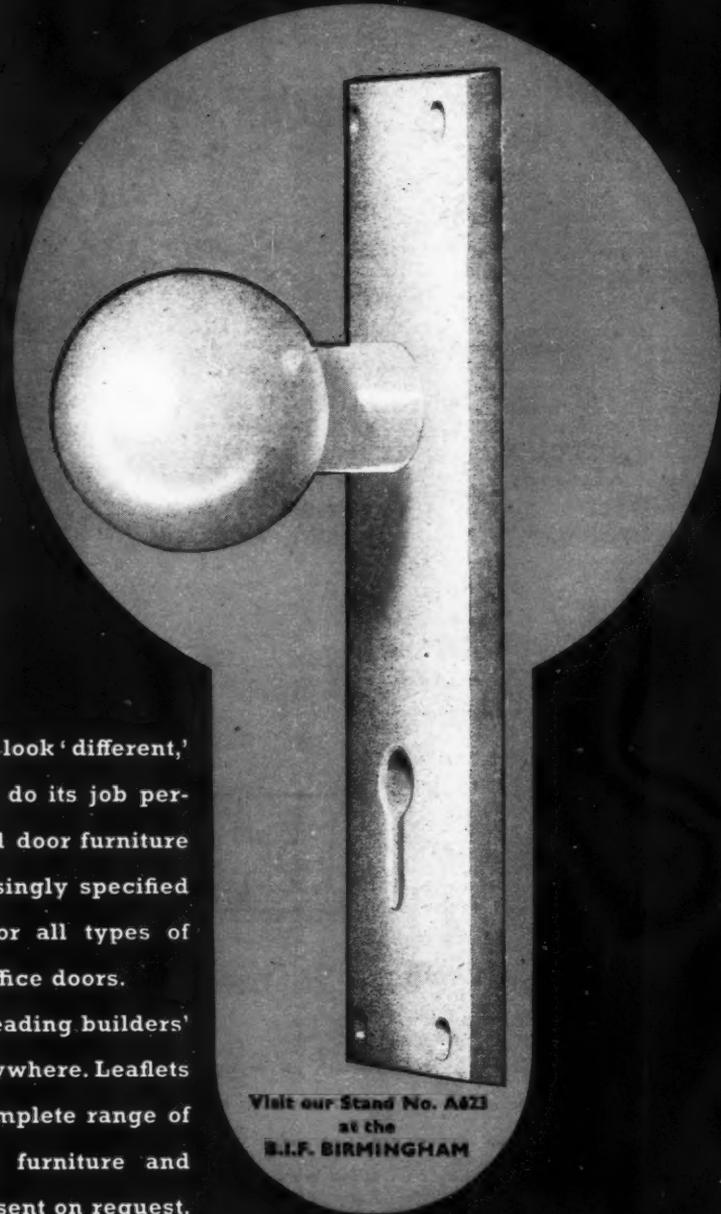
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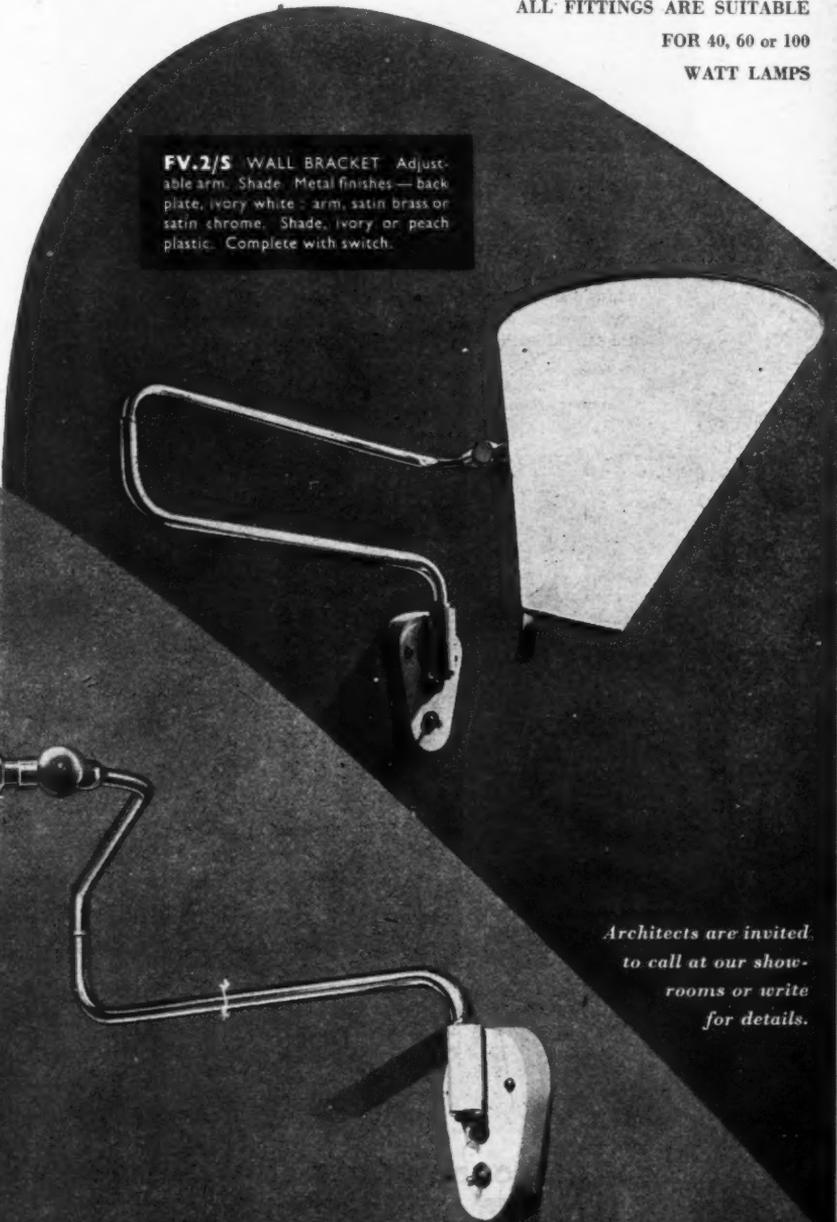
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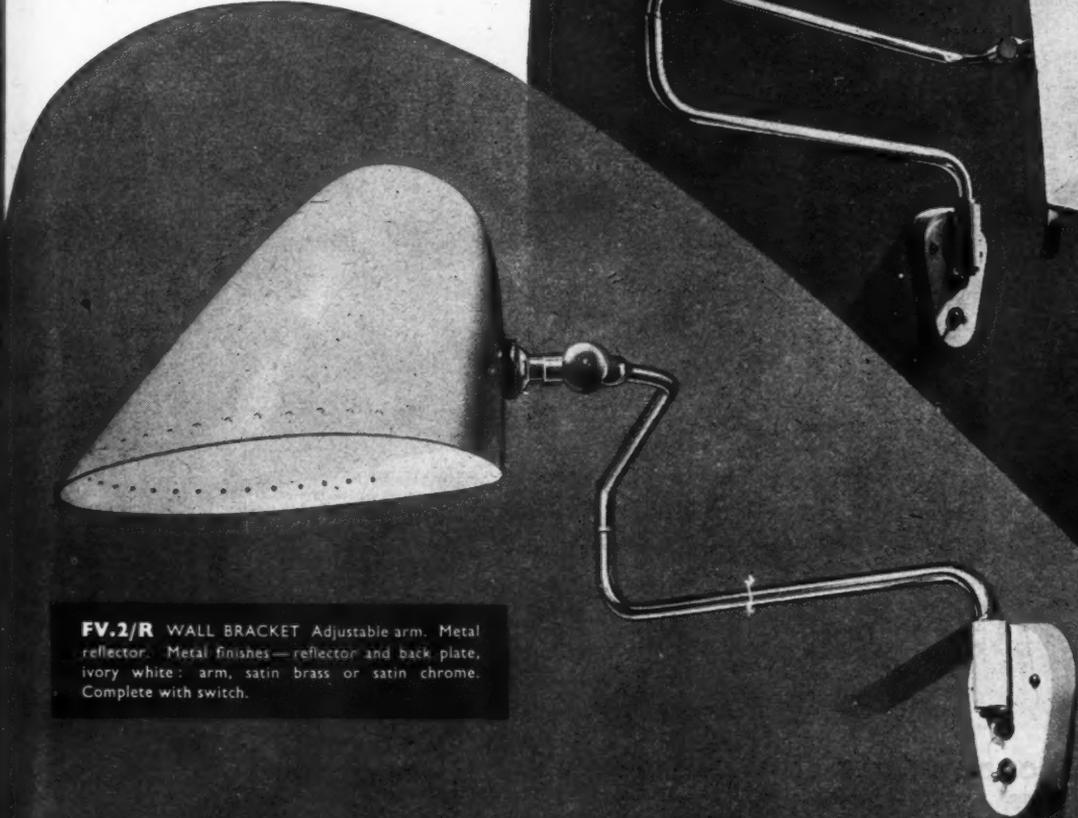
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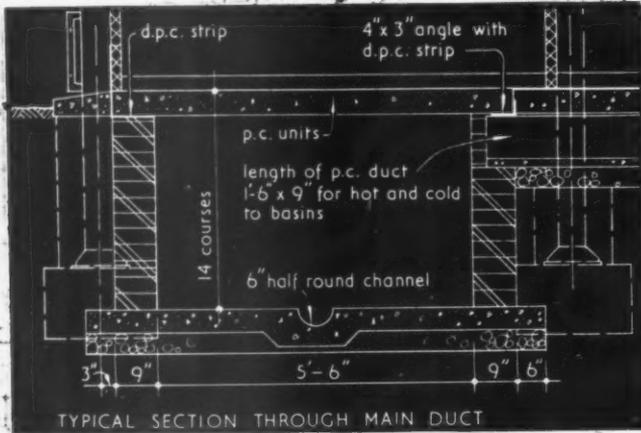
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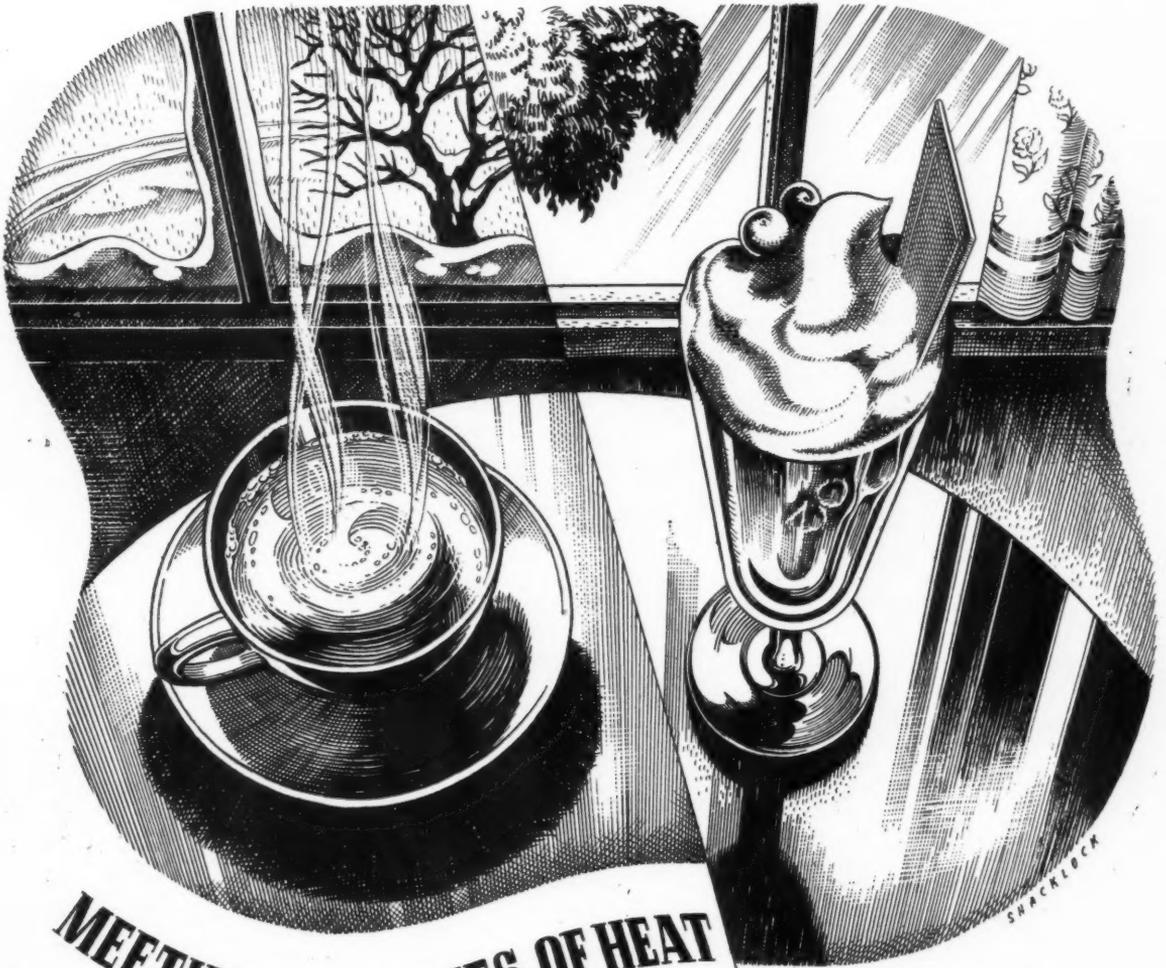
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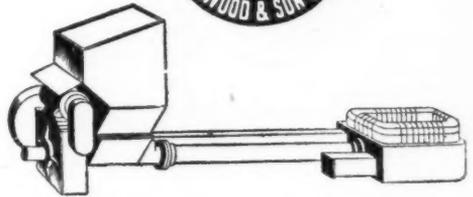
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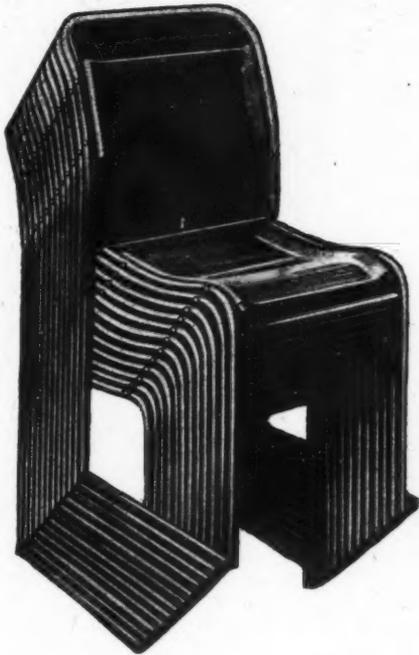
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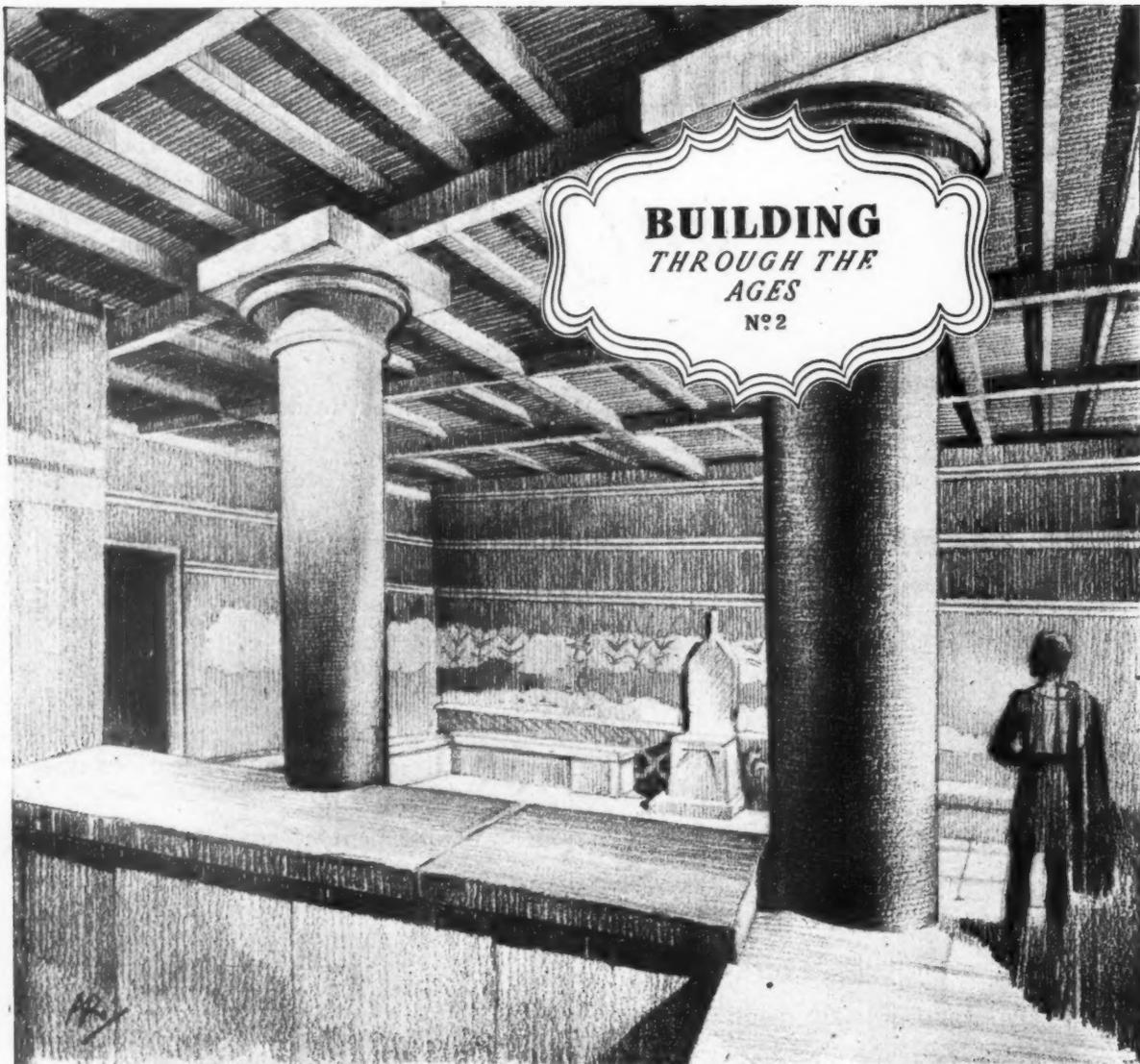
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Nº 2

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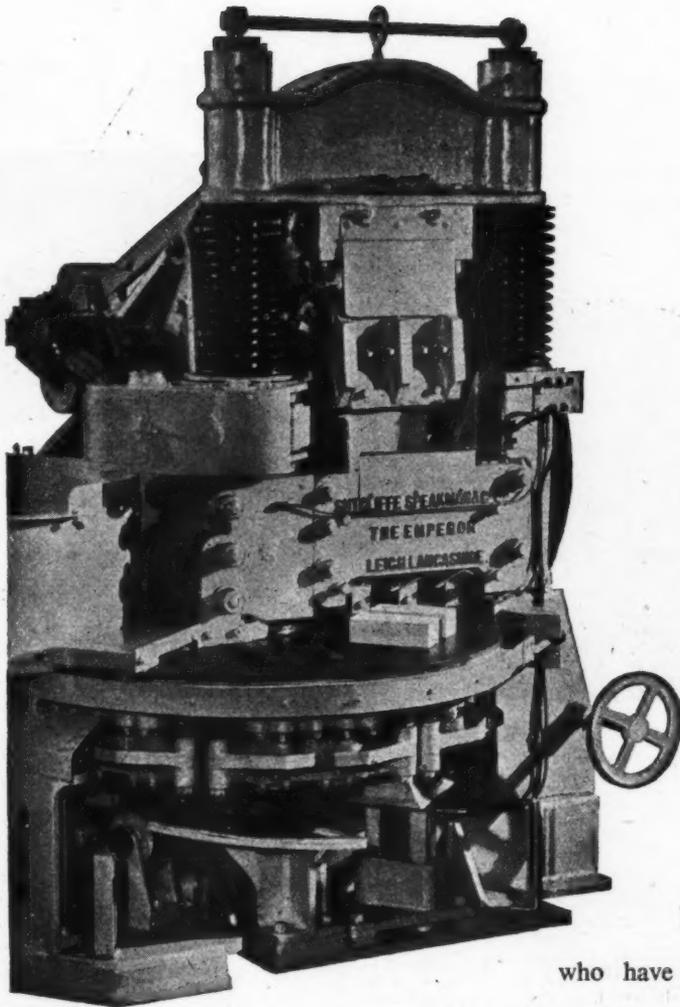
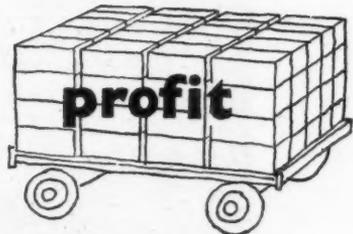
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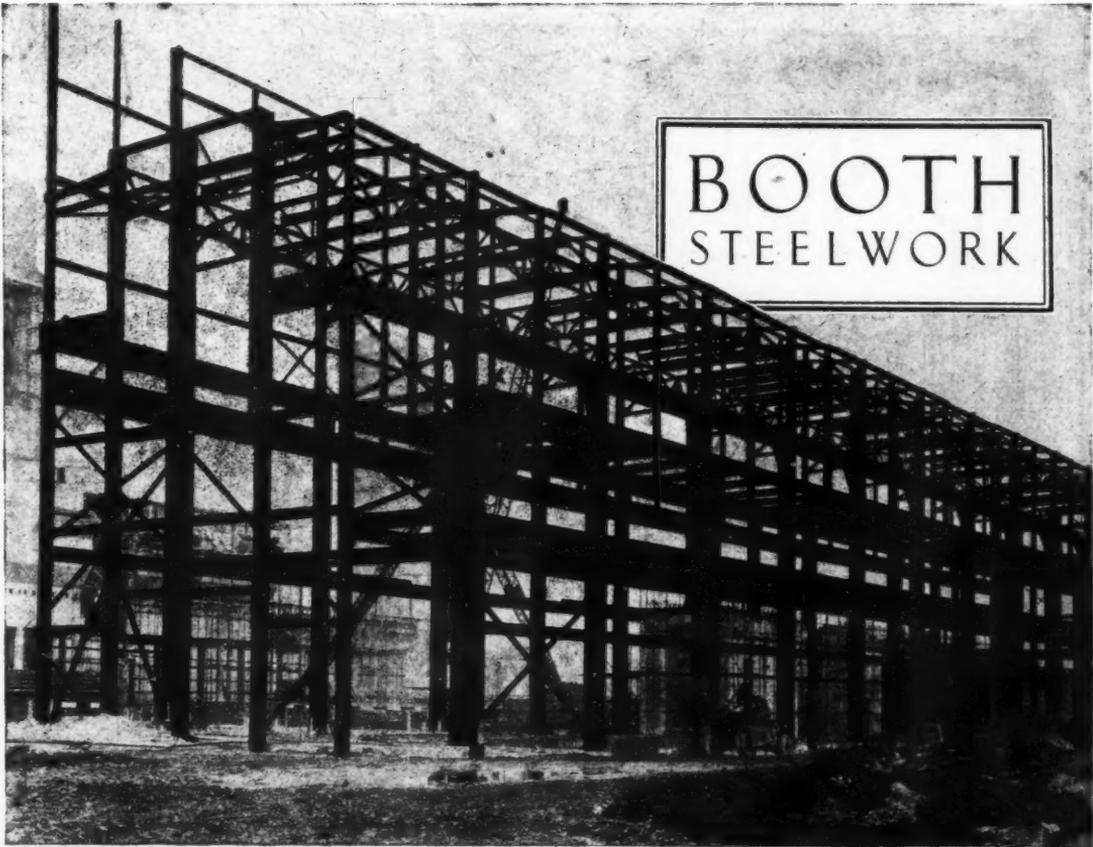
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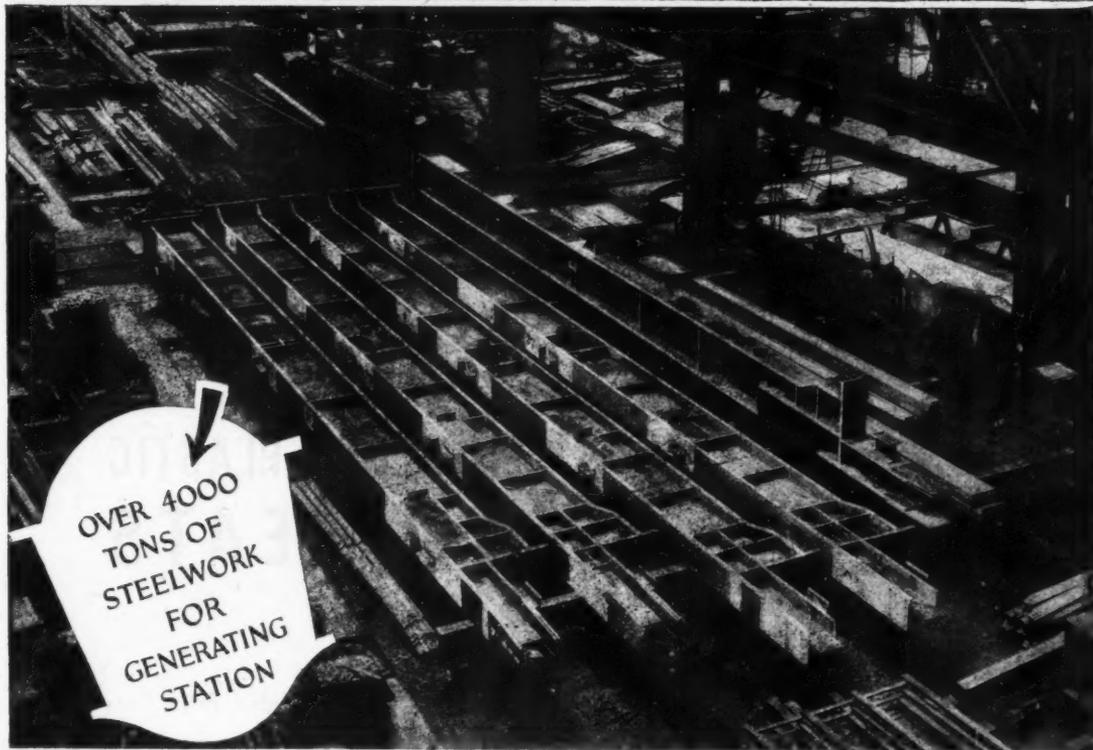
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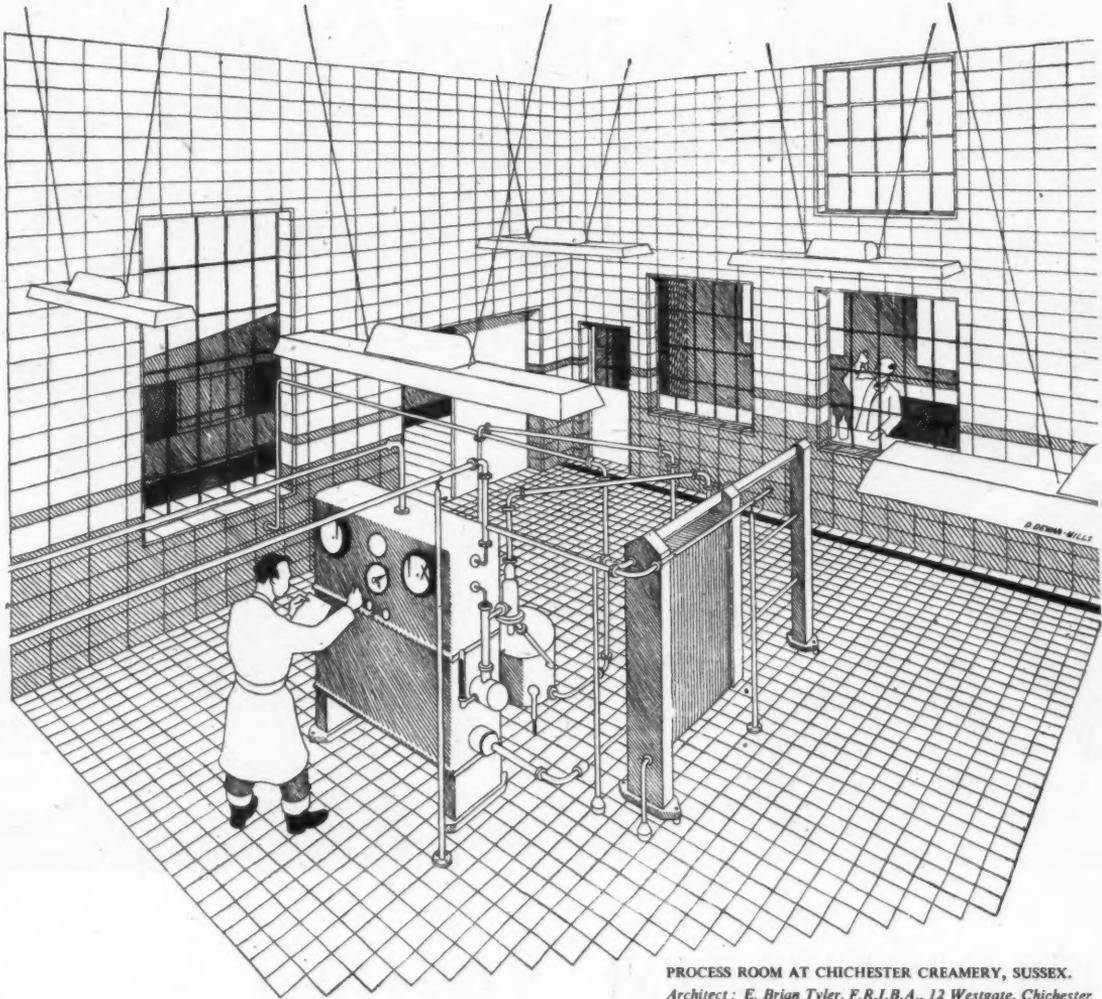
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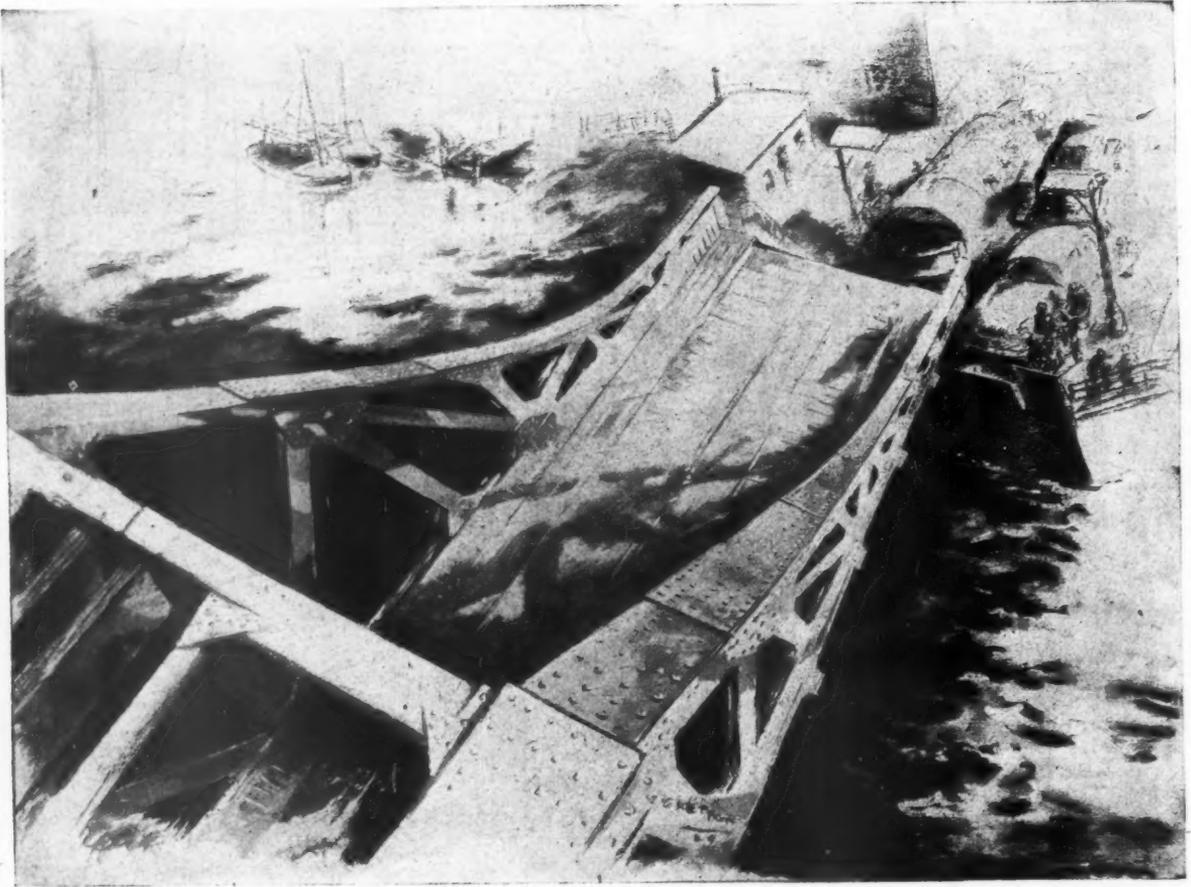
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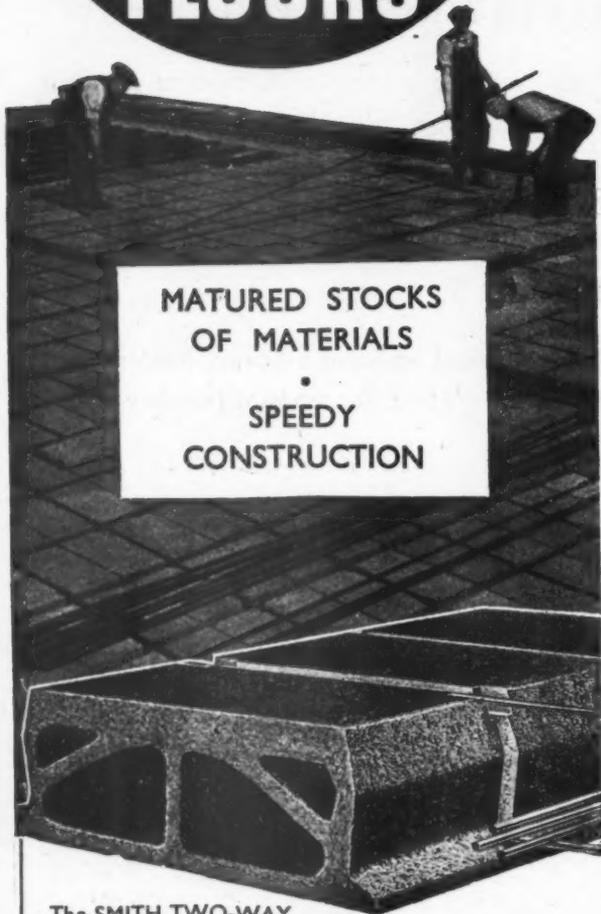
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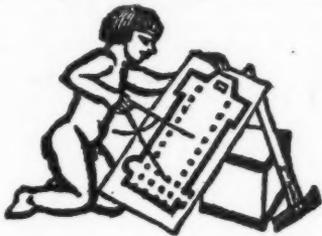
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DIARY FOR APRIL MAY AND JUNE

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 given in the glossary of abbreviations on the front cover.

BIRMINGHAM. *British Industries Fair.* Birmingham and London. MAY 2-13

CANTERBURY. *RIBA Housing Layout Exhibition.* At the School of Architecture, Canterbury College of Art, St. Peter's Lane, Canterbury. (Sponsor, SE Society of Architects.) 10 a.m. to 7 p.m.
UNTIL APRIL 13

DORCHESTER. *Exhibition of designs submitted in Worcester school competition.* At Christopher Whitehead School, Malvern Road, Worcester. (Sponsor, Worcester Education Authority.) APRIL 8-14

DUNDEE. *Trade Exhibition.* At the Royal British Hotel, Dundee. (Sponsor, D. A. Anderson & Son Ltd.) APRIL 26-28

EDINBURGH. *Trade Exhibition.* At the Scotia Hotel, Great King Street, Edinburgh. (Sponsor, D. A. Anderson & Son Ltd.) APRIL 11-15

LONDON. *Exhibition of Howard Robertson's Work.* At the RIBA, 66, Portland Place, W.1. 10 a.m. to 7 p.m. (Closing 5 p.m., April 9.) UNTIL APRIL 9

Thomas Sharp. *Design of Villages.* At Caxton Hall, Westminster. (Sponsor, TPI.) 5.30 p.m. APRIL 7

The Preservation of Campden Hill. At Derry and Toms, High Street, Kensington. W. G. Corfield, H. M. Fletcher, Christopher Stone and Desmond Donnelly. (Sponsor, TCPA.) 6.15 p.m. APRIL 11

Clough Williams-Ellis. *Holiday Resorts and Accommodation.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) 1.15 p.m. APRIL 12

G. Manley. *Microclimatology: Local Variations of Climate as they Affect the Design and Siting of Buildings.* At 66, Portland Place, W.1. (Sponsor, ASB.) 6 p.m. APRIL 12

Howard Robertson. *The Architect, the Client, the Builder and the Building Operative.* At the AA, 34/6, Bedford Square, W.C.1. (Sponsor, AA.) 7.45 p.m. APRIL 13

Reception by the President and Mrs. Waterhouse. At the RIBA, 66, Portland Place, W.1. 8.15 p.m.-12 midnight. APRIL 29

The Royal Academy Summer Exhibition. At Burlington House, Piccadilly, W.1. APR. 30-AUG. 7

British Industries Fair. London and Birmingham. MAY 2-13

RIBA Annual General Meeting. At the RIBA, 66, Portland Place, W.1. 6 p.m. MAY 3

Exhibition of Packaging Materials at Murray House Exhibition Hall, Murray House, Petty France, S.W.1. (Sponsors, Institute of Packaging and Printing, in collaboration with the CID.) MAY 3-31

Mr. E. B. Hugh-Jones. *Safety as a Factor on Road Design, Construction and Layout.* The First Rees Jeffrey's Triennial Lecture. At the Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, TPI.) 5.30 p.m. MAY 5

Open-air exhibition of paintings in the Embankment Gardens. (Sponsor, LCC.) Weekdays. MAY 9-21

Building and Engineering Exhibition (Equipment and Materials.) At the Horticultural Hall, S.W.1. (Sponsor, "Britain's Best" Exhibitions.) MAY 16-27

LISBON. *The Sixteenth International Congress of the History of Art.* Details, Sir Leigh Ashton, Victoria and Albert Museum, S.W.7. APRIL 18-24

MANCHESTER. *Exhibition of Printed Furnishing Fabrics.* by Messrs. Stead, McAlpin Co. Ltd., of Carlisle, at the Colour Design and Style Centre of the Cotton Board, 19, York Street, Manchester, 2. (Sponsor, The Cotton Board, 1948.) Hours: Weekdays, 10 a.m. to 5 p.m. Saturdays, 10 a.m. to 12 noon. UNTIL APRIL 9

NOTTINGHAM. *Design Week organized by the CID.* UNTIL APRIL 9

SOUTHAMPTON. *Allied Ironfounders' Exhibition Train.* No. 5 Platform, Terminus Station, Southampton. (Sponsor, Allied Ironfounders.) APRIL 11-14

SOUTHEND. *Allied Ironfounders' Exhibition Train.* Passenger Dock, Up Side, Southend Station. (Sponsor, Allied Ironfounders.) APRIL 19-23

COMPETITIONS
Fleet Air Arm Memorial of the 1939-45 War, at Lee-on-Solent, for the Imperial War Graves Commission. Premiums, £100, £60, and £30. Assessor, Edward Maufe, R.A. Conditions from the Secretary, Imperial War Graves Commission, 32, Grosvenor Gardens, London, S.W.1. Closing date, May 20, 1949.

Design of Community Centre. The Incorporated Association of Architects and Surveyors. Details to be announced by IAAS, 75, Eaton Place, Belgrave Square, S.W.1.

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Information Centre 327

Though no feature in the JOURNAL is without value for someone, there are often good reasons why certain news calls for special emphasis.

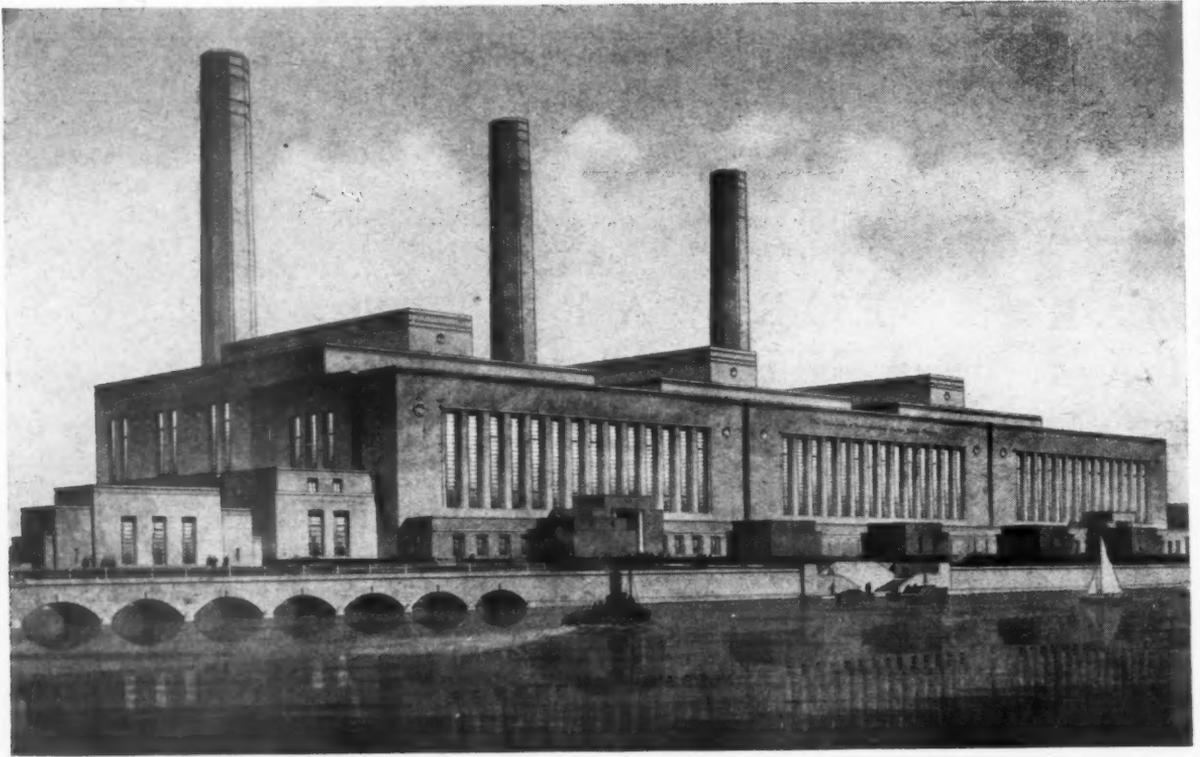
★ means spare a second for this, it will probably be worth it.

★★ 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.

New Regulations for External B.A. DEGREE IN ARCHITECTURE, University of London.

Hitherto registration was restricted to those members who had qualified through a recognized institution approved by the University. The new regulations are now extended to all members of the Royal Institute of British Architects who have qualified by passing the External RIBA Final Examination. Before registration for the degree is accepted by the University, applicants must:—(a) Have matriculated at the University (or gained exemption therefrom—usually through the School Certificate). (b) Pass the Intermediate Examination in Arts of the University consisting of (i) Two languages (one of which must be either Latin or Greek). (ii) History of Greek and Roman Architecture (one paper). (iii) Drawing Test (usually one of the Orders of Greek and Roman Architecture); or, as an alternative, The History of Greek and Roman Art (one paper). (iv) The submission of two sheets of studies of the Orders of Architecture. Further information may be obtained from the External Registrar, The Senate House, London University, W.C.1.



NEW GENERATING STATION, STAYTHORPE, NOTTINGHAMSHIRE
Architect: T. CECIL HOWITT, F.R.I.B.A. BALFOUR, BEATTY & Co. Ltd., Engineers

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From AN ARCHITECT'S *Commonplace Book*

PLEASING DECAY. [From Buildings and Prospects, by John Piper (The Architectural Press).] Buildings that are beginning to go "back to nature," crumbling, growing moss and lichen, were so much admired by our grandfathers that we are still self-conscious about them. . . . Once we get finally beyond our conventional reaction against the nineteenth century's enthusiasm, and our distaste for the bad art that pleasing decay has nourished, we may be able to become ourselves again, and design with an eye to the beauty that our buildings may have when they get old. . . . For the good town-planner, decay—present decay, as well as possible future decay—should surely be one of the tricks in his box of tricks to be used, as the country gentleman used it in the late eighteenth and early nineteenth centuries, for certain specific purposes. For instance, the planner might find it sensible to retain the tower of a redundant church and the fabric of a Nonconformist chapel as visual points of interest in one new development scheme, a decayed warehouse or a terrace of houses of decayed charm in another. . . . Though the contemporary designer in setting out to injure modern buildings in the world justly shuts his eyes to the fact that it is full already of patterns hostile to the modern picture, it is out of the question for the contemporary planner to adopt the same attitude. A consistent plan will not spring from his own consistent loyalty to modern architecture, because the world is not consistent.

★ COMPENSATION APPEAL TRIBUNALS have been set up by the Minister of Labour and National Service.

They will deal with appeals arising out of compensation claims by officers under the Town and Country Planning (Transfer of Property and Officers and Compensation to Officers) Regulations, 1948 (S.I. 1948, No. 1236), and with appeals arising out of similar compensation claims under other recent legislation. Each tribunal consists of a chairman, one member representative of employers and one member representative of workers, all appointed by the Minister of Labour and National Service. The tribunals will sit at the Ministry of Labour and National Service Employment Exchange in each regional town. Normally, appeals will be dealt with by the tribunal for the region in which the appellant is or was last employed. Compensating authorities, when notifying their decision and giving the address of the appropriate tribunal, should, at the same time, advise claimants that any notice of appeal should be accompanied by a statement setting out the grounds on which the appeal is based, and the name and address of the compensating authority concerned.

HEATING INSTALLATION EXPERIMENTS are being carried out at Ipswich in four houses belonging to the Ipswich Corporation, on the Whitton White House Estate.

The primary object of the experiments is to test the suitability of various forms of heating to the present design of dwellings. Two houses are fitted with "skirting" heating. Cast-iron heaters 6 in. high, and of a purely radiant type, are used. They can be mass-produced and assembled in sections. They are fitted with control valve boxes at the ends, and the connecting circulating pipes are fitted behind a matched wood skirting. The third house is warmed by a closable stove with a boiler in the living room, serving radiators in the living room and in two bedrooms. Space heating in the hall, staircase and landing is partially obtained from a domestic hot water boiler and hot water tank. For purposes of comparison the fourth house is warmed by normal easy clean radiators. The warming in the first two and the fourth house is on the "background" basis, excepting in the dining annexe. The temperatures to be maintained when the outside air is at 32° F. are:—dining annexe, 65° F.; living room, 57° F.; bed-

rooms, bathroom, hall and stairs, 50° F. Contrary to the theory of "background" heating, supplementary heat beyond these temperatures will not be provided, except in the living room, where the open fire will be in use. The bathrooms are heated by a pipe coil. The first, second and fourth houses are warmed by the No. 4 "New Carlton" boiler, rated at 42,000 B.T.U. per hour, and hot water is obtained by the use of a 30-gallon galvanized indirect cylinder fixed in the linen cupboard and with short single draw-off branches to the usual taps. It is estimated that during the coldest weather the total consumption of solid fuel will be about 2½ cwt. per week, including coal for the living room fire. The third house is provided with a No. 01 Ipswich Domestic Boiler and a 30-gallon hot water tank of the new BSI dimensions, 2 ft. 6 in. by 1 ft. 6 in. by 1 ft. 6 in. Alternative means of obtaining hot water are provided in all houses. No thermometers have been installed, but the collaboration of tenants is being sought in recording temperatures. Messrs. Crane Ltd. are carrying out these experiments and heating systems have been installed by Messrs. H. Warner and Son Ltd.

Plans for the NEW CONCERT HALL to be erected on the South Bank site in time for the 1951 Festival of Britain are nearing completion.

The Council's architect, Mr. Robert H. Matthew, and his staff, have had the advice of the Council's consultants, Messrs. Frank N. Falkner & Partners, the appointed quantity surveyors for the work; Messrs. Scott & Wilson, consultant civil engineers; Mr. Hope Bagenal, acoustics consultant; the Building Research Station; and Mr. Ralph Downes, organ consultant. Other authorities consulted have been the BBC; the Arts Council; the Council for Architecture, Town Planning and Building Research of the Festival of Britain, 1951; and representatives of the British Drama League and the Old Vic Theatre Company.

It is hoped that full plans and drawings will be laid before the LCC at its next ordinary meeting in May.

FIRST COMPULSORY PURCHASE by Central Land Board.

The Central Land Board has made a compulsory purchase order in respect of a plot of land at Southcroft Road, Orpington. This is the first order the board has made

under the Town and Country Planning Act, 1947. Permission for building two bungalows on the plot, which is about one-fifth of an acre, was granted to F. Berge, an architect, by Orpington Urban District Council in May, 1947. Notice of the order has been served on J. C. Walker, Mrs. Margaret Avery, and A. I. Todman.

★ There has been a LARGE INCREASE IN PLANNING APPEALS brought before the Minister of Town and Country Planning.

A circular issued by the Ministry to local planning authorities contains the following statement:—Recent decisions have shown that there is a tendency on the part of some authorities towards too rigid an application of planning principles. Most authorities will agree that if this tendency is not checked it will bring discredit on planning. The corollary to this is that there should be a greater readiness on the part of authorities to admit the existence of exceptional cases. Refusals of permission are often due to the fear of setting up a precedent which is likely to embarrass the authority in dealing with other applications of the same kind in the same area. There is sometimes, but not always, real substance in this argument. The merits of particular cases differ widely, and where, apart from the question of precedent, there are good reasons for allowing an applicant to carry out development, the fact that the granting of permission in this case may lead to other applications being made should not be accepted as a sufficient reason for refusal.

★★ STEEL PRICES WILL BE INCREASED by 9 per cent as a result of the Government's decision to cut the steel subsidy.

Subsidy payments to the industry are expected to be reduced from £36 million to £11 million during the coming financial year. The only subsidies which the industry will continue to receive are those designed to meet the excess cost of imported finished steel and import duties on pig iron and steel. Even at the higher levels, steel prices show a smaller increase compared with pre-war than most other basic products.

L'ECOLE DES BEAUX-ARTS TRAVERSE UNE CRISE GRAVE

A la demande de l'Association... L'ECOLE DES BEAUX-ARTS TRAVERSE UNE CRISE GRAVE

Il est en effet, comme on peut s'en rendre compte... L'ECOLE DES BEAUX-ARTS TRAVERSE UNE CRISE GRAVE

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Crisis at the Beaux-Arts School

The above poster has been displayed in Paris by representatives of students of L'Ecole des Beaux-Arts. It states the demands of the students, who are criticizing both the system of architectural education and the school's administration. The school has always been recognized as the last home of academic teaching, and enjoys great prestige in many countries, but its students are demanding

alterations in the curriculum so that they may obtain more knowledge of practical value. They are also asking for a "free choice" atelier in which to work under the direction of outside architects, and expressing dissatisfaction with the school's amenities. Astragal comments on this revolution against traditional methods of architectural training on page 314.

THE FUTURE OF THE JOINERY TRADE is referred to in a memorandum which has been presented to the MOW by the EJMA, the BDA, the NFBTO, the Amalgamated Society of Woodworkers and the Amalgamated Society of Woodcutting Machinists.

The memorandum states that if the national building programme is to be carried through, and costs reduced, the joinery manufacturing trade has a substantial contribution to make. It points out that in recent years a high standard of efficiency and productivity has been built up by the trade, and appeals to the Minister to allow the trade to play its proper part in the task of national reconstruction. This, it states, can be done without placing additional strain on available resources. One of the

main points raised in the memorandum is the use of substitutes for timber. It is claimed that this not only affects the employment position in the joinery trade but also increases costs by about £20 per house. It is also pointed out that the feeling of insecurity prevailing in the industry means that the necessary amount of apprentices essential to ensure skilled craftsmen in years to come cannot be absorbed, and that only full production will allow the industry to take on its full quota.

A SUGGESTION THAT THE AMALGAMATION OF HOUSING ASSOCIATIONS would result in increased efficiency and economy was made by Sir Hugh Beaver chairman of the Shoreditch and Hackney Housing Association at its annual meeting at the RIBA recently.

Sir Lancelot Keay, P.-P.R.I.B.A., speaking on this occasion, paid tribute to the work of the many housing associations and trusts throughout the country. There were many cases of hardship which, for some reason or other, did not get dealt with by the local authorities, he said. Voluntary bodies were less bound by rule and regulation and could therefore deal more easily with the merits of each individual case. It was to be hoped that before long all such bodies would enjoy the same rights and privileges as were enjoyed by the local authorities in their housing operations. It would be unfortunate if, through the extended powers given to local authorities, the operations of private enterprise declined still further.

★

The INTERNATIONAL ARCHITECTURAL STUDENTS CONFERENCE, which was to have been held last December, will take place at the RIBA from Thursday, April 21, to Wednesday, April 27.

The Conference has been shortened by three days and the size of delegations has been cut down to reduce delegates' expenses. It is hoped that this will permit more countries to take part. About 70 delegates from some 25 countries are expected to attend. The programme remains basically the same as originally proposed, although sections have been condensed. Enquiries should be addressed to the Organizing Committee, 34, Bedford Square, W.C.1.

NEWS IN BRIEF

A Welsh New Town at Cwmbran, Monmouthshire, will be the subject of consultation at a meeting between the Minister of Town and Country Planning, Mr. Lewis Silkin, M.P., and local authorities concerned, at the Monmouthshire County Hall, Newport, on April 13.

The LCC has approved a proposal that it should acquire the whole of the Shepherds Bush exhibition site at the White City, and to make part available for the BBC, who propose to hold an open architectural competition if a Bill to be promoted in Parliament is passed.

At the invitation of the committee on Houses of National Importance, set up by the Treasury, the RIBA council has appointed a sub-committee to prepare evidence on behalf of the Institute. It consists of the following members of the Institute:—the Hon. Lionel Brett, Mr. H. S. Goodhart-Rendel, the Hon. Godfrey Samuel, Mr. Raglan Squire and Mr. John Summer-

Dr. A. R. Collins has been appointed technical director of the Cement and Concrete Association. Prior to joining the Association in 1947 as assistant to the technical director, he was a principal scientific officer at the Road Research Laboratory.

Mr. H. B. Cavanagh, has been appointed Architect, Civil Engineer's Department, Paddington.

THE NATIONAL PARKS BILL

A NATIONAL Parks Bill appearing in 1949 does so under handicaps that did not exist in 1945 or 1946, when faith in national boards, commissions and executives was untarnished by much practical experience and John Dower's masterly statement for National Parks was still fresh in mind. It says a good deal for the Bill and public good sense that it has had a good Press.

The Bill is, in fact, a non-party measure and overdue. England and Wales (to which by legislative custom and not by merit the present Bill is confined) have an astonishing range of different kinds of beauty in their wilder areas, in patches both big and small. If these areas are not unique in their variety of beauty they are certainly so when one adds their historical associations and the fact that their beauty is in large measure man-made. We should have given many of these areas special protection a long time ago. Failure to do so had many causes. The land was partly cultivated, much of it was preserved for shooting and fishing, and administratively it was shared between many local authorities.

Now one difficulty is over—it remains to be seen whether it is the biggest. The Bill sets up a machine for the selection, preservation and development of National Parks which is capable of working well. Most people will be glad that Mr. Silkin has had second thoughts about his proposal—announced at the Town and Country Planning Summer School last August—to make the Local Planning Authorities the Parks Authorities without, one gathered, any safeguards. In the Bill the Planning Authorities are still the main agents but they must set up a special Committee for each Park (on which the Minister will appoint a quarter of the members) and they will be shepherded by a National Parks Commission.

The Commission's first job will be to decide policy. Its policy must include the setting up of some system of priorities to ensure that agricultural and other forms of production can continue in being so as not to sterilize the land altogether, without interfering with the recreational purposes for which the Parks are planned. It must then make sure that people of all ages and incomes can enjoy the particular kinds of recreation for which the Parks are best suited. These will be the simpler, less organized recreations of climbing, walking, camping and boating. A policy of this kind will cut down numbers to some extent but a very big increase in visitors will have to be catered for.

The second policy question is likely to be whether to try to spread visitors equally over all Parks—trying to give each a ration of solitariness—or to accept that certain Parks will be made more popular than others and make arrangements accordingly. A fine Easter before the war could produce a queue a mile long climbing Sca Fell, and any district subjected to this degree of popularity will require special measures to prevent litter and tawdriness. Moreover, many of the greatest admirers of the proposed National Parks would

not visit them if they could not escape crowds. There is therefore a strong case for restricting accommodation in some parts of National Parks and making liberal provision in other parts. The Commission must also be prepared for first class rows over the siting and design of buildings. On siting most architects are likely to agree that in National Parks natural beauty should hold the stage and that a new camp, if not discreetly concealed, should at least not close a vista or dominate a skyline. But they will expect the Commission to give a lead on design. The proper policy for building in National Parks is contained in paragraph 207 of the Scott Report* and the profession should and must make sure that neither Commission nor Park Committees depart from it.

* The text of this paragraph is printed on page 316 of this issue as a reminder to readers.



The Architects' Journal

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Phone: Whitehall 0611

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

THE BARKER BIT

Public respect for what planning stands for has had another blow, and from a most unexpected quarter: from the Minister of Town and Country Planning himself. Readers will have seen the brief announcement in the Press that the Minister has allowed Messrs. John Barkers' appeal against the LCC's refusal of planning consent for their project to build a loading dock on the gardens of the houses on the north side of Kensington Square.

The decision was a surprise because at the inquiry an extremely good case was made out for not disturbing the residential character of the square, which was strongly supported by a number of amenity societies, including the Georgian Group and the SPAB. The amenity societies' arguments are dismissed in a sentence in the Minis-

ter's verdict, which treats the issue as though it was a simple case of arbitration between a commercial concern and the occupants of a few private houses. He bases his decision on alleged traffic congestion in Young Street and Derry Street, though no evidence was given of congestion in Derry Street, and the facts do not suggest that Barkers' project will in practice relieve Young Street.

Whatever the realities of the traffic situation, the disturbing thing is that here is a Minister of *Planning* taking a much narrower view of the purpose of planning than the planning authority whose decision he has overruled. There is additional irony in the fact that it is Mr. Silkin's own Ministry that has listed numerous houses in Kensington Square as "buildings of special historic and architectural value" that should be preserved. Thackeray's house is one of those immediately involved.

FRENCH REVOLUTION

Students of the Beaux-Arts School in Paris are having a lot to say about the system of architectural training they receive and the way their school is run. At one time the school was generally regarded as the last home of eclectic and reactionary teaching. But its students are now seeking a form of education that will prepare them to deal with contemporary problems. And while they are in this mood they are taking the opportunity of criticizing methods of administration. The frontispiece of this JOURNAL shows a poster prepared by their representatives.

What do the students object to? Quite naturally they dislike having to pay for

the heating of studios in which they work. Last winter they couldn't afford to foot the bill and the heating was cut off. Apart from this they want better equipped studios and freedom to work under the direction of outside architects. At the moment their choice lies between one contemporary architect, Auguste Perret, and "traditional" architects. Then again, they are complaining about the Prix de Rome Jury, which gives less than one minute to the consideration of each project submitted. This is hardly fair treatment of work that may have taken two months to complete.

However, the students have certain advantages. They are particularly fortunate in their relationship with the Minister of Education, whom they are in touch with frequently. Students of all countries will be interested to see what further advantages arise from the present revolt. Tradition dies hard, but it is encouraging to see would-be architects taking a realistic approach to their work.

BAD DREAM HOUSE

Two films now showing in the West End deal with housing problems. "Angelina," produced by Lux Films, an Italian company which takes an intelligent approach to topical questions, tells of a property owner who is defeated in his shady deals by an uprising of working-class people in the slum district of Pietralata, Rome. On the other hand, the new American film, "Mr. Blandings Builds His Dream House," shows the inconveniences of life in a luxury flat in Manhattan and the difficulties involved in building a country house at something more than 40,000 dollars.

This film is a good satire on American methods of advertising, but it strikes a false note towards the end. Somebody tried to give the film social significance by allowing Mr. Blandings to offer a few words of sympathy on behalf of the newlyweds who might easily be lured, as he was, into spending a fabulous sum on a house. It's difficult to know whether he is criticizing the extravagance of his wife, the incompetence of his architect, or the insidious advertising system which "makes people who can't afford it buy



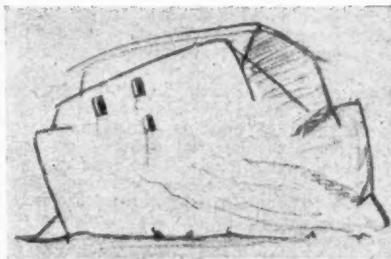
A view of the den in the film "Mr. Blandings Builds His Dream House." See Astragal's comment.

things they don't want with money they haven't got." But no doubt we are expected to realise that while wives and architects vary in quality, advertisers must always be devoid of a social conscience.

Architectural students who are interested in that quaint old custom called "private enterprise" will feel somewhat relieved that for some time to come building restrictions will spare them from the millionaire client, like Mr. Blandings, who wants more rooms on the first floor than the ground floor. Sociologists will shake their heads sadly at the thought of so much money being spent on one house in front of impressionable suburban audiences; and architects with sensitive natures will have to be conducted out of the auditorium long before the end of the film.

SUBLIME BUNKERS

Calling at the Soane recently, Astragal found curator John Summerson just



A sketch by John Summerson of a partially demolished bomb proof bunker. See Astragal's comment.

back from his own personal *Return Journey to Berlin*. What had impressed him most? One thing was the extreme ugliness of so much of Berlin's architecture ("I don't think even Hitchcock could make anything of it"). Another was the sublime results ("nearer to Piranesi than anything I've ever seen") produced when really massive concrete is blown up with high explosives.

You remember the story. Word went out that all fortifications in Berlin were to be demolished, even including the bomb-proof bunkers in the Tiergarten. The first two efforts made were complete failures, and our Russian allies sent a polite note offering the help of their own engineers. That roused the old lion all right, and altogether bigger and better explosions were contrived, wrecking the bunkers and a great many windows as well. The effect on the bunkers, said Summerson, has to be seen to be believed, and, drawing his ever-ready pencil (green), with a few deft strokes he produced the accompanying sketch of one of them. The spots at ground level are people—which gives an idea of the scale of these modern ruins.

PIONEERS A LA MILANESE

I have recently seen the first seven volumes in the series "Architects of the Modern Movement," which the publishing house "Il Balcone" of Milan is issuing from time to time. Starting with William Morris and Giuseppe Terragni, whose work is comparatively unknown in this country, other volumes deal with Frank Lloyd Wright, Tony Garnier, Aalto, Asplund and Olbrich (of the Vienna Secession). A future volume by Professor Pevsner will be on Mackintosh.

Each consists of some biographical and critical notes about the architect, followed by illustrations of his works. Though not well produced by English standards, the books as a series form a very commendable enterprise. Now that it has become virtually impossible to get books from abroad, perhaps some equally enterprising English publisher will undertake a similar job for English readers.

ASTRAGAL

LETTERS

L. G. Pearson, F.R.I.B.A.

C. B. Martindale, A.R.I.B.A.

LCC Housing

SIR,—I am very glad you are focusing attention on the multi-storeyed flat question. If we are committed to this policy in order to improve housing conditions (which are too often deplorable) it is as well that we should do it with our eyes open.

Personally I believe some of the younger town planners, who take this job seriously, could show us how to avoid the unpleasant alternatives of suburban sprawl or multi-storeyed flats in central areas.

Mr. Lewis Mumford in the columns of *The New Yorker* has been having an argument on this subject with Mr. Moses, the opposite number to Mr. Gibson, who is an exponent of "get a move on at all costs."

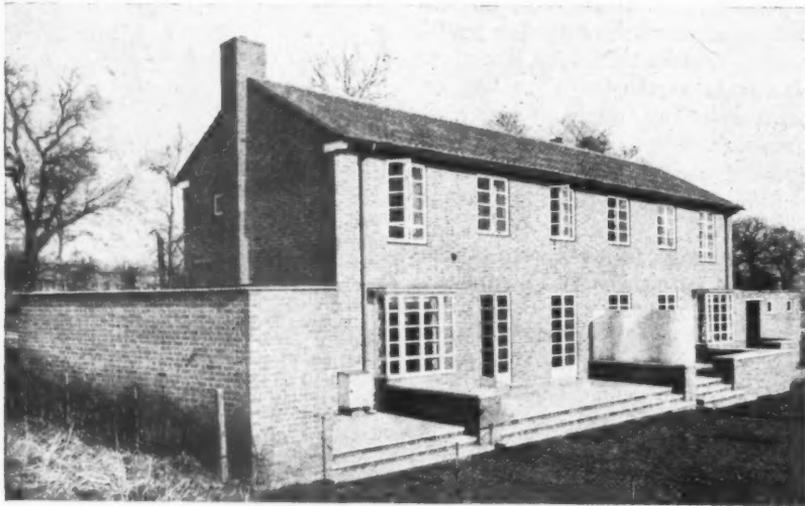
L. G. PEARSON

[The following are some extracts from the Lewis Mumford article referred to by Mr. Pearson. It appeared in the November 28 issue of *The New Yorker*:

"One must not be deceived by the fact that new developments, like Stuyvesant Town and the Jacob Riis Houses nearby, have more open space than the old slums. What matters in their case is not merely the percentage of the land covered by the buildings but the number of people crowded together in a given area. Like Le Corbusier, Mr. Moses confuses visual open space with functional (habitable) open space. In these projects, the city, far from rectifying the situation, has re-established slum densities. Such slum clearance is completely unrealistic, and far more costly than the alternative, which is to write off the cost of land in every public housing project and keep the density of population moderate. Throughout the world, pre-eminently in Britain, city planners and administrators have dedicated themselves to rebuilding urban communities on a human scale and to re-establishing a healthy density of population in cities. Mr. Moses, a man of singular authority in our city's rehousing scheme, is proceeding counter to this world-wide movement to re-humanize city life. He has a deserved reputation as an administrator who "gets things done," and he has carried out works, such as Jones Beach, that are monuments of skilful and imaginative planning. But though the great urban planners of our time have learned their lesson from the Democratic Ebenezer Howard, Mr. Moses seems still to be following the imperial example set in the reconstruction of Paris by the autocratic Haussmann, whose purpose was to put up a front for Napoleon III. The ability to get things done quickly is not as important as the ability to get the right things done in the right way in the right order. Many generations of New Yorkers will have to pay for the mistakes that have already been made."—EDITOR.]

SIR,—The only two plans shown in your survey of LCC housing have long and draughty passages or "streets" between blocks lying roughly north and south. The effect on the health of the residents would have been clear even to Vitruvius, some 2,000 years ago. Aesthetically, how can one analyze the paucity of invention, in terms to be understood by the man in the street? It would be easier for a doctor or a banker to describe a disease or a Stock

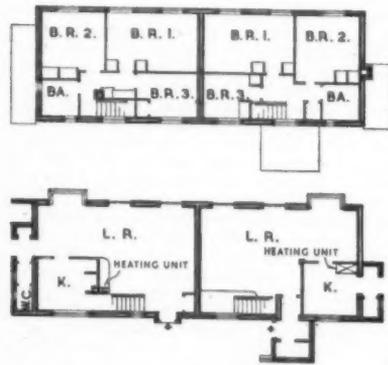
A NEW HOUSE HEATING EXPERIMENT



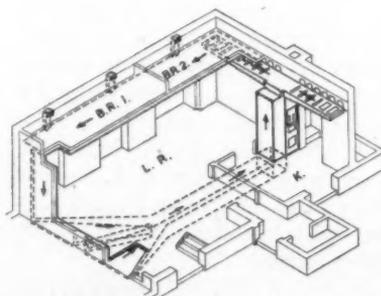
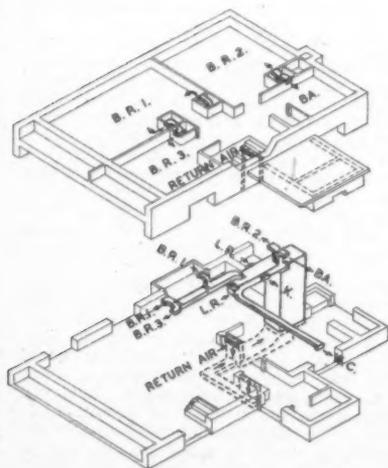
In order to develop and demonstrate new methods of whole-house heating, these houses have been built by Radiation, Ltd. Designed by A. W. Kenyon, the plans are unusual in that the ground-floor living area is kept very open, with the stairs, and in one instance the front door, leading off it. It is hoped to demon-

strate that the experimental systems of whole-house heating will allow this free planning without the discomfort of cold draughts. In the kitchen, extract ducts have been provided to remove all odours of cooking. The construction of the houses is largely traditional, but insulation has been provided to conform to the Egerton standards. The outer wall is of brick, but the inner is of multi-cavity blocks. A fibre-glass quilt covers the ceiling joists.

Two heating systems have been installed in each house. Firstly, for comparison with the other experimental systems, a radiator system operated from gas circulators connected in parallel has been installed. Additional hot-water coils are used in the floor by the front and back doors. In the second and third systems the air is drawn by fan from the landing through a heater and then taken by ducts to each room. The air is warmed by either a solid-fuel cabinet heater (see diagram, left) or by a gas chimney furnace. In the fourth system a special first-floor construction is required. Reinforced concrete beams of U section, with suspended ceilings for ground-floor rooms, form channels along which is passed the air which has been heated by a solid-fuel cabinet heater. Lateral flow is permitted by providing 2 in. diameter holes in the side web of the concrete beams. From this interspace the air is passed down ducts in the party-wall and returned in floor ducts to the heater for re-heating and re-circulation (see diagram, below).



GROUND AND FIRST FLOOR PLANS



Exchange slump in non-technical words. May not some of the trouble lie in conditions imposed by the building owners? It is difficult to decry any encouragement to a standard generally regarded as adequate for a provincial city.

What can now be done about it? I suggest more and more illustrations and details of good architecture in exhibitions, publications, or films seen by the building owners.

C. B. MARTINDALE

Carlisle

National Parks

Extracts from paragraph 207 of the Scott Report, referred to in the leading article on page 313.

Modern Building Design.—New buildings should use to the full all the possibilities which new materials and new building techniques have made available. This, however, does not mean that no regard should be paid to the principle of designing a building in harmony with its surroundings. On the contrary we believe that the achievement of such a harmony is a cardinal requisite of all good design, though the harmony we have in mind arises out of a fundamental consideration of the building in its setting and not out of narrowly conservative or sentimental considerations.

An occasional strongly vertical element may sometimes, of course, by its very contrast, be highly successful, as, for instance, are the towers and spires of churches, particularly in a flat landscape. This avoidance of vertical emphasis, except for certain buildings, is particularly necessary in buildings erected against a sky-line. In an undulating country, it is comparatively easy to avoid building on the sky-line; buildings can, and generally should, be situated away from the sky-line ridges where they will dominate the surrounding country. But in level country it is only in the lee of a wood that the sky-line effect can be avoided, and it is particularly desirable there that a softness of outline, a horizontal emphasis, should be maintained. And of all sky-line effects to be avoided the chief is that which is created by the setting of identical blocks of houses at identical distances apart, such as occurs in much modern housing.

On the question of the quality, colour and character of building materials in the countryside we have received much contradictory evidence. Many people who have the maintenance of the beauty of the countryside very much at heart sincerely believe that only buildings of "traditional" and "local" materials should be permitted to be erected in country places. While we have every sympathy with the desires which prompt such belief, tradition is not a fixed and final thing. If it is alive—and it is only worth anything when it is alive—it must be subject to growth and development. Any attempt to prevent the use of new materials and new types of design arising out of new building techniques based on those new materials, or arising merely out of changes and developments in human needs, is bound in the end to be futile; and if it were not it would mean the end of all architectural development whatsoever.

To say this is not in the least to suggest that there has been nothing wrong in the kind of building which has been going on in the last few decades—the use of glaring red brick in stone country, and so on. It has in truth been disastrous. But we feel certain that the future of architecture does not lie in the easy direction of mere preservation and narrow conservatism. It lies in the imaginative use of new opportunities—and it is precisely these that we are now afforded, in building, by the new materials and new methods of construction which are available to us.



The entrance front.

OFFICES IN CRAWFORD STREET, ST. MARYLEBONE

DESIGNED BY C. H. ELSOM & MORDECAI PEARLMAN

GENERAL.—Offices for a firm manufacturing cigarette lighters. The plan provides for a large general office and enquiry, two private offices, a showroom, lavatory accommodation at ground floor level and a small warehouse in the basement.

SITE.—The offices are on the ground and basement floors of a block of flats and the site was originally intended for shops.

PLAN.—Bad lighting facilities at the rear of the site dictated the layout. The offices are grouped around a large general office, placed on the street front. Eye-level borrowed lights are used to assist badly-lit windows to rear offices. Corridors have been elimin-

ated in the planning and all access is through the general office. A lobby for visitors was required, and this has been formed with an inner wall of glass bricks, so as to retain as much natural light as possible.

ELEVATIONAL TREATMENT.—The design of the elevation was largely conditioned by the landlords of the premises, who insisted that at the end of the present tenancy the front should be capable of being changed into a shop front, with a minimum of alteration. The main window was therefore designed to take the sashes shown or five sheets of plate glass. The windows, door frames and doors were manufactured in imported hardwood, glazing being



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



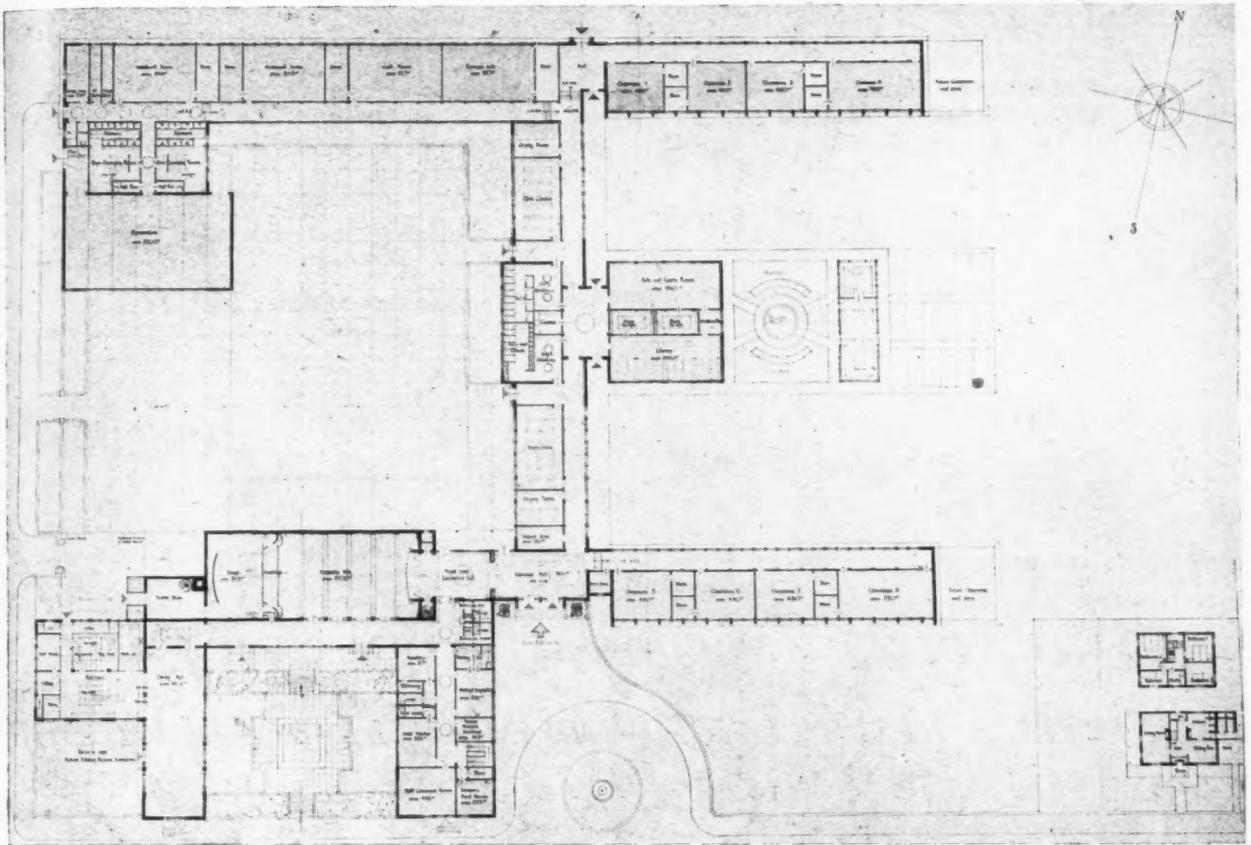
Above, left, the window of the general office; right, the entrance. Left, the general office looking towards the entrance lobby.

$\frac{1}{4}$ -in. $\frac{3}{8}$ plate and pinhead morocco glass. The fascia and lettering are of aluminium, cellulosed and stove enamelled. Brown quarry tiles, with wide joints, frame the window. Wall facings around doors and showcase are of fluted asbestos painted dove-grey.

CONSTRUCTION AND FINISHES.—Internal partitions are breeze block plastered. Flush doors and other internal joinery are soft wood. The screen wall at the end of the general office is covered in light buff quarry tiles. Decoration generally is distemper in pastel shades, each room being in a different colour. Floors to general office, entrance lobby and lavatories are composition, other office floors being close carpeted.

SERVICES.—The water services were run from the main building system. Heating is by gas radiators. The general contractors were Messrs. Leslie Bilby Ltd. For list of sub-contractors see page 330.

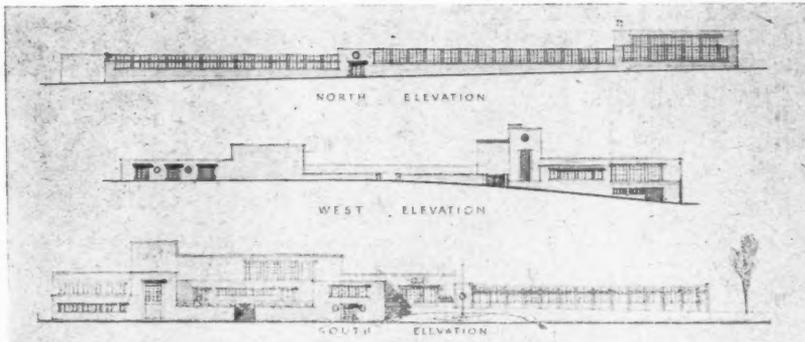
OFFICES IN CRAWFORD STREET, ST. MARYLEBONE



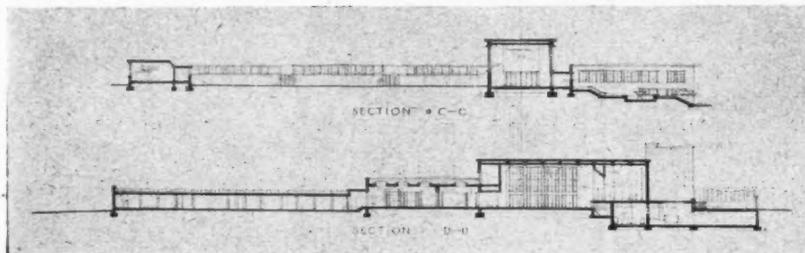
PLAN

WORCESTER SCHOOL COMPETITION

WINNING DESIGN BY E. B. MUSMAN



ELEVATIONS

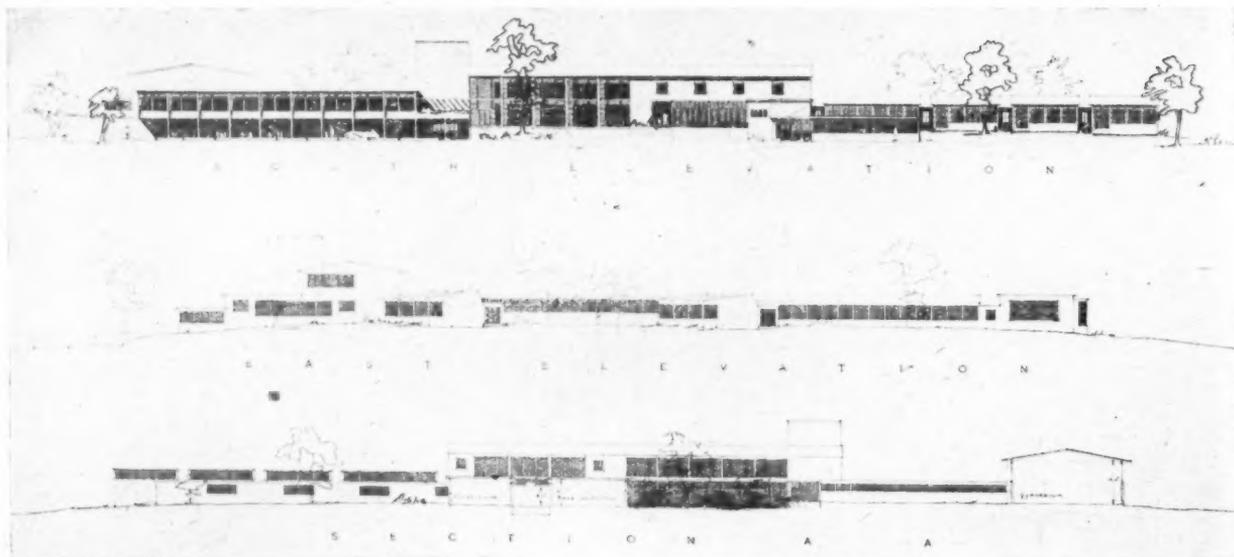


SECTIONS

The full results of this open competition for a secondary modern school at Nunnery Farm, Worcester, were given in the JOURNAL for March 31. Mr. J. B. Surman assessed the ninety-four designs submitted. The following are extracts from the report of the winner of the first prize of £400.

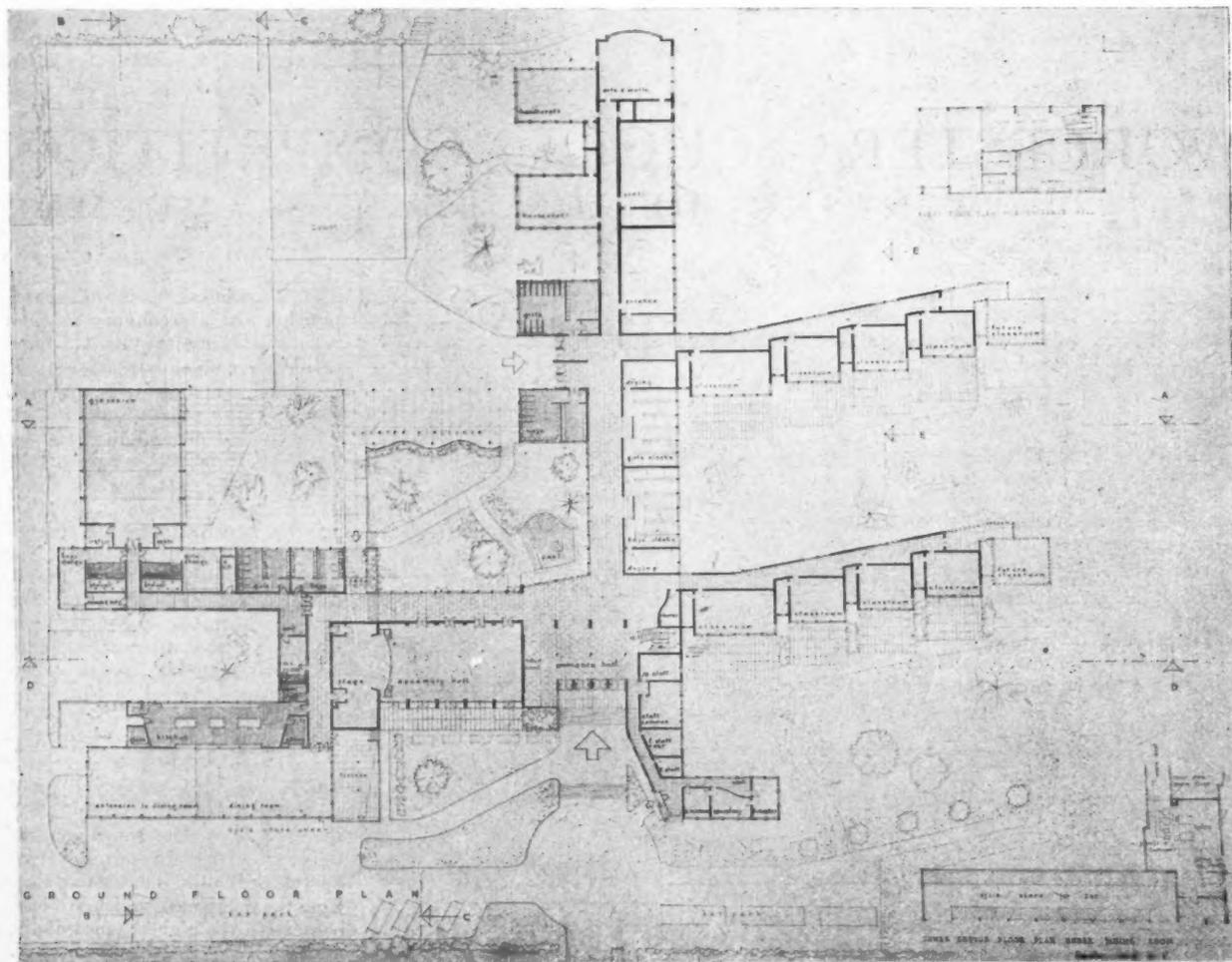
In the first instance, the school will be a two-form entry for boys and girls of ages 11-15, for the accommodation of 320 pupils, which may eventually have to be extended to accommodate the additional age group when leaving age is raised to 16. Ultimately, the school will be used entirely for boys. First consideration has been given to the latter use in planning the layout and accommodation.

The site lies to the south east of the town, with main approach from Spetchley Road. The ground rises from the north east and south east corners to the highest point about midway along the west boundary.

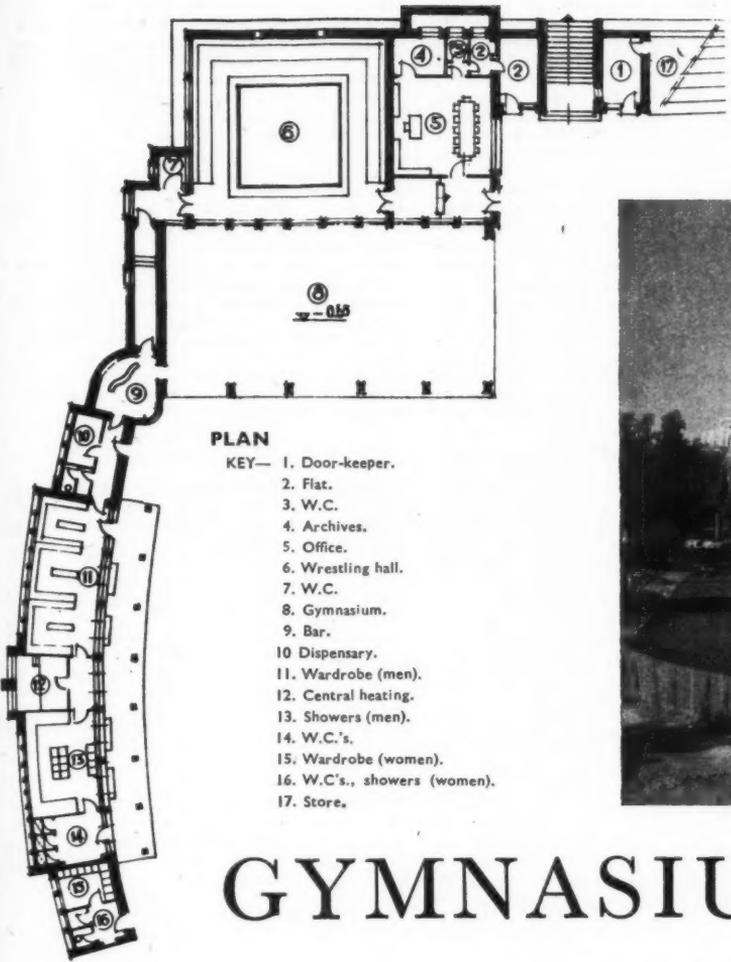


ELEVATIONS AND SECTION, BELOW: PLAN

WORCESTER SCHOOL COMPETITION
SECOND PRIZE DESIGN BY P. DUNHAM & McFARLANE WIDDUP



Below, a general view with the Acropolis in the background. Bottom, the gymnasium elevation.

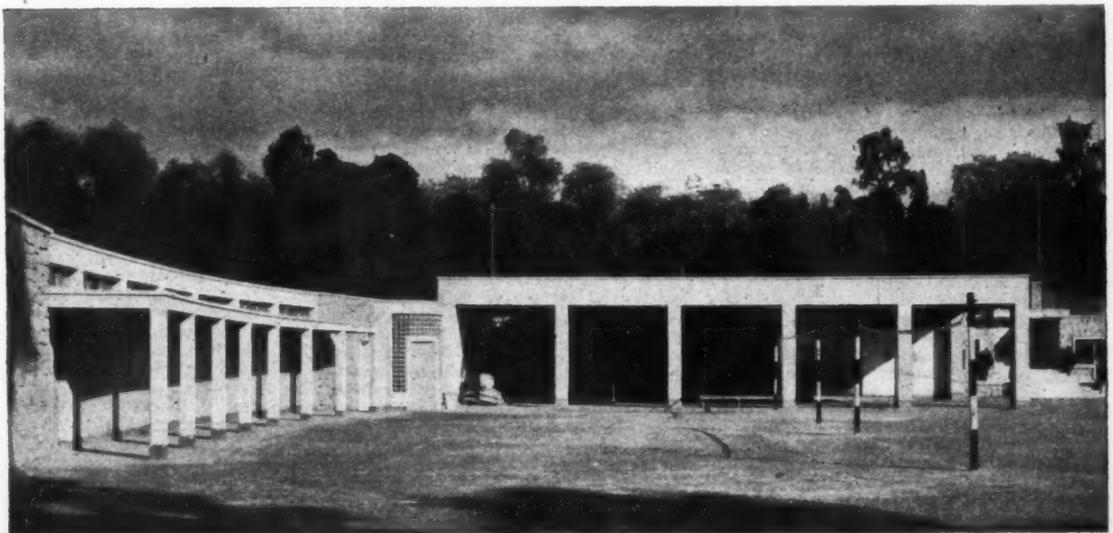


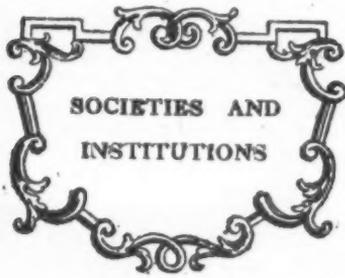
GYMNASIUM AT ATHENS

DESIGNED BY
 RENNO KOUTSOURIS

Erected in 1948 at the south end of Zappion Park, the gymnasium was specially built on the lowest level ground available in order to save the view of the Acropolis. It is close to the stadium swimming pool and tennis club, and in addition to the gymnasium itself there

is a wrestling hall, athletic track, cloakrooms, refreshment rooms and an office. The track, on account of the lack of space, is smaller than is normally required, and is only suitable for training. The construction is of stone and reinforced concrete.





Speeches and lectures delivered before societies as well as reports of their activities, are dealt with under this title, which includes professional societies, trade associations and government departments. To save space they are represented by their initials—see front cover. Lectures cannot usually be reported in full, but the extracts given are in the speaker's own words.

ISE

Ove N. Arup

March 7. At the Northern Ireland Branch of the Institute of Structural Engineers, Belfast. Extracts from a lecture by Ove N. Arup on THE ARCHITECTURAL POSSIBILITIES AND LIMITATIONS OF REINFORCED CONCRETE CONSTRUCTION.

Ove N. Arup: To make up the walls, floors and roofs of buildings, we have at our disposal a great many different building materials. They all have certain space dividing and structural qualities, but in greatly varying proportions. We therefore talk about structural, heat-insulating, sound-insulating or water-proofing materials, but it is important to remember that practically all materials combine several functions, and their secondary qualities may be the deciding factor in choosing one of these materials rather than another.

The designer of a particular building element must, of course, try to satisfy the functional requirements in the most economical way by making full use of all the qualities of the various building materials he is employing. Sometimes a single building material may have a combination of qualities which, taken together, satisfy all our requirements to a particular building element. A brick wall may be a case in point. It may provide structural strength, weatherproofness, heat-insulation, etc., in reasonable proportion. But in most cases we have to remedy shortcomings in one or several of these respects. This can sometimes be done by inventing a synthetic material with just the right combination of qualities. But in most cases we have to combine several materials. The tendency nowadays is towards specialization, leading to the totally differential structure where each material is used for one specific purpose only.

Before the advent of reinforced concrete, timber and steel were the only materials which could be used for long spans. Both materials suffered from the limitation that they were only available in sections extending mainly in one direction. Although Manier first introduced reinforced concrete in the form of tubes, slabs and vaults, this first step in the right direction was swamped by the subsequent development which reverted strictly to the forms known from timber and steel construction, the only ones with which structural engineers were familiar. It was entirely forgotten that a reinforced concrete slab could be a useful means of providing stability, and that it was eminently suited to resist forces in its own plane. The fact is, however, that as a structural material, reinforced concrete has qualities which are entirely different from those of steel or timber. It does not grow and it is not rolled. It is produced by a series of castings *in situ* and can be given almost any shape, the only limitation being imposed by the cost of the formwork. Ordinary structural reinforced concrete cast *in situ* is definitely "polyfunctional"; it can be used for enclosing or dividing space as well as for resisting forces of every kind. This is because, compared with steel, it has bulk or body. Its most characteristic qualities are its monolithic or jointless character and its great adaptability of form and strength. As a "universal" building material, the ordinary reinforced concrete, as generally employed for structural purposes, suffers from three defects:—It is dependent on good workmanship; it has a high thermal conductivity, and therefore cannot be used for walls in buildings without the addition of heat insulation; and it is rather rough and does not weather well, at any rate not in a dirty atmosphere.

From a purely structural point of view, the bulk and weight of reinforced concrete may be a serious disadvantage, adding to the loads to be carried. For this reason, it cannot generally compete with steel in carrying light loads over long spans, as in roof trusses for factories. This difficulty may be overcome if the depth of the structural member is very great in relation to the span. Special cases of this kind are the concrete arch and thin shell construction.

ENGINEERING AND INDUSTRY

But obviously concrete comes more into its own where its bulk is not a disadvantage but an advantage; that is, where it is used as an "enclosing" material which can take care of its own structural problems. Such cases abound in engineering and industry when "body" is needed to enclose, retain, contain or exclude water, earth, coal, etc. Structures of this kind are also subjected to heavy forces. Further, weatherproofness is important, and such structures are mostly unique in that they are closely conditioned by location and other special considerations, so that standardization and quantity production is ruled out in any case. In such cases, reinforced concrete is the obvious material to use.

If the designer aims at simplicity, neatness, and economy, he will try to make the architecturally necessary form (the enclosing material) take care of the structural problems with the least possible help from external structural members. The natural structural unit will then be the wall, slab-shell or membrane—in other words, a plane or curved surface of a certain thickness. Suitably reinforced, this two-dimensional member can act as a column, beam, wall or slab as required. That this is the natural form for an enclosing material is obvious, but it is natural to concrete also for another reason—that the plane surface extending some distance in both directions is the easiest surface to shutter.

This question of shuttering or formwork is a very important aspect of reinforced concrete design. Supply, erection and dismantling of formwork may account for as

much as a third of the total cost of the structure, and it is the item where rational design and organization is most likely to show a return. Simplicity and repetition of surfaces is the key to economic shuttering.

I am not advocating standardization of reinforced concrete design to match it to a standard system of formwork. It would destroy one of the main assets of reinforced concrete cast *in situ*—its flexibility and adaptability to varying conditions. And for many reasons it is not a practical proposition either—except for flat slabs, floors and walls, for which many systems of steel shuttering are in use. But I do recommend limited standardization inside the sphere of a definite building programme, together with the utmost simplicity of design, using the slab as the natural element of reinforced concrete construction. Incidentally, the discipline of regularity imposed by economic formwork on concrete design is not without its aesthetic value.

CONCRETE IN BUILDINGS

Having roughly explained to you my outlook on reinforced concrete design, it remains to apply it to the use of concrete in buildings. Columns will, of course, always be needed wherever point loads have to be carried, but if the columns happen to be placed in a wall, and if that wall is made of reinforced concrete, then they can generally be discarded. In most cases the reinforced concrete wall will be strong enough to support the loads coming on it without help from projecting ribs. If it is not, it may be a better policy to thicken the wall all over rather than start providing projections which complicate the shuttering and are undesirable from other points of view.

Beams will, of course, also be needed in many cases, but where the beam supports a wall, that wall could be made of reinforced concrete, and could do the work of the beam without any external help. Where beams are supporting a reinforced concrete slab, it will often be better to omit the beam and thicken up the slab and let it span the other way. Or perhaps the slab can be spanning in both directions.

If the slab gets too heavy, we will, of course, have to leave out some of the concrete in the tension zone which is not doing useful work, and we then get some kind of ribbed construction—or a grid construction. I think I ought to warn you that this approach to reinforced concrete design has only a limited application in the sphere of building. The structural carcass of an ordinary building is not very exciting from an engineering point of view. Civil engineering and the industrial field offer much more scope for engineering ingenuity. Nevertheless, this approach makes a lot of difference to the way in which problems of detail are solved, and in most buildings there are special problems where use can be made of the plasticity of the material to provide the right architectural solution, if the problem is approached without prejudice.

Then there are the problems presented by large span roofs for halls, cinemas or factories, or by the necessity of avoiding columns in large basement halls, etc. There, more spectacular solutions may be possible, of which the modern technique of shell construction is an example. Whether reinforced concrete is the best material to use for the structural carcass of buildings depends on many factors. For small houses, brick and timber may, for the time being, be the best materials to use, and if concrete is used, it may be in the form of blocks or of precast members. But for large multi-storied blocks of flats or office buildings, either structural steel or reinforced concrete has to be used to provide stability. And, of these, reinforced concrete will generally be found to be the most economical, provided the necessary contracting and design experience is available.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS, BELFIELD AND EVEREST, Chartered Quantity Surveyors

Rates of Wages last rose on February 7, 1949, and are now as follows:—

LONDON DISTRICT				<i>Craftsmen.</i>	<i>Labourers.</i>
Within 12 miles radius	..	..	..	2s. 11½d.	2s. 4½d.
From 12-15 ,,	..	..	..	2s. 11d.	2s. 4d.
LIVERPOOL and DISTRICT				2s. 11½d.	2s. 4½d.
GRADE CLASSIFICATIONS				A	A ¹
Craftsmen..	2s. 10d.	2s. 9½d.	2s. 9d.	2s. 8½d.	
Labourers..	2s. 3½d.	2s. 3d.	2s. 2½d.	2s. 2d.	

Davis
F.R.I.C.S., F.I.Arb.

Prices vary according to quality and the quantity ordered. Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

CONCRETOR

Cements

* In non-returnable paper bags charged at 11/- net per ton or 7d. each net per bag in lots of less than 1 ton.

* In non-returnable jute sacks charged at 11/- net per ton or 7d. each net per sack in lots of less than 1 ton.

* In returnable jute sacks charged at the rate of 35/6 net per ton of cement or 1/9½ net per sack in lots of less than 1 ton. Credit on return at 1/6 net per sack.

* In returnable cotton sacks charged at the rate of 66/8 net per ton or 3/4 each sack in lots of less than 1 ton. Credit on return at 3/- net per sack.

† Supplied in paper bags and/or non-returnable jute sacks—9/- per ton extra in 1-ton lots or more, 6d. net each bag or sack in lots of less than 1 ton.

		In 80-ton freights F.A.S. Safe Wharf in River Thames London Area.
	6 tons and over	
* Portland to B.S. 12	per ton	60/6 58/-
* Rapid hardening to B.S. 12	"	66/6 64/-
† Aquacrete water repellent	"	92/-
† "417" cement (quick setting extra rapid hardening)	"	82/-
† Colorcrete, red, buff and khaki	"	102/-
Colorcrete, other shades.	1 ton lots.	183/- to 407/- (paper bags free)

Snowcrete....		(Minimum 1-ton lots) 234/- (paper bags free)
		1-9 10-19 1 ton and cwts. upwards
Ciment Fondu to B.S. 915 delivered London area	per cwt.	16/3 14/7 per ton 236/6

Aggregate and Sands (Full Loads)

2" Unscreened ballast to B.S. 882, Table 5	per yard cube	14/5
½" (Down) Washed, crushed and graded shingle to B.S. 882, Table 2	per yard cube	14/5
½" (Down) Ditto	per yard cube	15/5
2" Broken brick	per yard cube	14/6
½" Ditto	per yard cube	16/-
Washed pan breeze	per yard cube	10/6
½" Sharp washed sand to B.S. 882, Table 3	per yard cube	16/4
White Silver Sand for white cement (one ton lots)—		
Fine	per yard cube	66/-
Coarse	per yard cube	48/9
(For Sands for Bricklaying and Plastering, see respective trades)		

Pavings

Brick hardcore	per yard cube	6/6
Concrete ditto	per yard cube	6/6
Clean furnace clinker and boiler ashes	per yard cube	3/6
2" coarse gravel for paths	per yard cube	17/6
½" fine ditto	per yard cube	19/-
Clean granite chippings to B.S. 1201, Table 4 (in 5-ton loads)	per ton	39/6
Ditto (in 5-ton loads) (Immediate delivery)	per ton	42/6

Reinforcement

Home trade maximum basis price for mild steel rods to B.S. 785, ½" diameter and upwards, ex mills delivered to station or siding	per ton	£19 12 6
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CONCRETOR—(continued)

Reinforcement—continued

Extras for:—			
Under ½" to ¾" diameter	per ton	15 0	
Ditto ¾" and over ¾" diameter	per ton	£1 2 6	
½" and over ½" diameter	per ton	£1 10 0	
¾" and over ¾" diameter	per ton	£1 17 6	
1" and over 1" diameter	per ton	£2 5 0	
1½" and over 1½" diameter	per ton	£2 12 6	
2" diameter	per ton	£3 0 0	
Under ½" to ¾" diameter	per ton	£4 10 0	
Lengths over 40 ft. to 45 ft.	per ton	15 0	
" " 45 ft. to 50 ft.	per ton	£1 2 6	
" " 50 ft. (as 50 ft. plus per ft.)	per ton	2 6	

Fabric Reinforcement

	16.35 lb.	9.32 lb.	5.67 lb.	1.83 lb.
Steel wire mesh fabric to B.S. 1221, Part A per yd. super.	5/7½	3/2½	1/11½	1/0½
	10.76 lb.	7.32 lb.	5.17 lb.	1.58 lb.
Steel wire mesh fabric to B.S. 1221, Part B per yd. super.	3/9½	2/6½	1/10	-11½

Sundries

Retarding liquid, in 5-gallon drums (for exposing aggregate)	per gallon	26/8	} Ex Warehouse, Southwark Bridge. Drums chargeable and credited, if returned.
Ditto (for obtaining a bond)	per gallon	16/8	

BRICKLAYER

Common Bricks

Common stocks	per 1,000	109/6
Rough stocks	per 1,000	119/6
Mild stocks	per 1,000	161/6
Sand limes	per 1,000	86/-
† Phorpres pressed Flettons	per 1,000	73/-
† Phorpres keyed Flettons	per 1,000	75/-

Facing Bricks

Hand selected sand limes	per 1,000	121/-
† Phorpres rustic Flettons	per 1,000	93/-
Stocks, firsts	per 1,000	206/6
Stocks, seconds	per 1,000	191/6
Sandfaced, hand made reds	per 1,000	244/-
Red rubbers (9½")	per 100	55/-
† White facings	per 1,000	100/-
† Coloured facings (creams, buffs, browns and terra- cotta)	per 1,000	125/6
† Dunbriks (concrete), greystone facings	per 1,000	135/-
† Dunbriks (concrete) various colours	per 1,000	152/6
† Southwater pressed sandfaced reds	per 1,000	187/6
† Dorking pressed sandfaced multicoloured facings	per 1,000	165/-

Engineering Bricks

† Lingfield engineering wirecuts	per 1,000	127/6
† Southwater or Lunsford engineering No. 1 (first quality red pressed)	per 1,000	215/-
† Southwater or Lunsford engineering No. 2 (second quality red pressed)	per 1,000	185/-
† 2½" White Engineering bricks to B.S. 187	per 1,000	120/-
* Blue pressed bricks to B.S. 1301	per 1,000	160/-
* Plus 110% plusage, 5 per cent. builders cash discount.		
† At Kings Cross (Maiden Lane) Stn. For delivery in W.C. district add 12/- per 1,000.		
† Prices ex works—Haulage extra.		

Firebricks

Firebricks, best Stourbridge, 2½"	per 1,000	63/9
Ditto, 3"	per 1,000	75/6

BRICKLAYER—(continued)

Glazed Bricks		Best quality		Seconds	
		£	s. d.	£	s. d.
White, Ivory or Brown, 9" x 2 1/4" x 4 1/2" :-					
Headers	per 1,000	39	10 0	37	10 0
Stretchers	per 1,000	40	0 0	38	0 0
Buff or Cream ditto :-					
Headers	per 1,000	41	10 0	39	10 0
Stretchers	per 1,000	42	0 0	40	0 0

All prices for glazed bricks + 22 1/2%.

Limes and Sands

		1 ton lots.	
		£	s. d.
Lime, greystone, to B.S. 890	per ton	84	9
Lime, chalk, ditto	per ton	84	9
*Lime, hydrated, ditto	per ton	89	6
*Lime, blue lia	per cwt.	7	8 (small quantities)
Washed pit sand to B.S. 1200	per yard cube	16	4

(For cements, see "Concretor.")

* Including paper bags.

Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

Sundries

10 s.w. gauge galvanized butterfly type wall ties to B.S. 1243	per 1,000	84	9
12 s.w. gauge ditto	per 1,000	73	3
Wall ties, self coloured, 8" x 1/2" x 1/2", to B.S. 1243	per cwt.	56	3
Wall ties, galvanized, 8" x 1/2" x 1/2", to B.S. 1243	per cwt.	74	6
Damp proof course slates:			
Size 14" x 9"	per 100	43	3
" 14" x 4 1/2"	per 100	20	9
Hessian based bitumen damp course to B.S. 743	per yard super	4	3
Airbricks:			
Red and buff terra-cotta	each	1/1	2/3
Black cast-iron School Board pattern airbricks	each	1/8	2/11
Galvanized ditto	each	2/5	4/-
Black hit-and-miss cast-iron ventilators	each	1/9	3/1
Galvanized ditto	each	2/6	4/10
Buff terra-cotta chimney pots	each	5/7	6/8
Fireclay (loose) per ton		120	-
Wall reinforcement supplied in standard rolls containing 25 yards lineal			
1 1/2" wide black japanned	per roll	2	11
1 3/4" wide black japanned	per roll	3	7 1/2
† Greater widths pro rata 2 1/4" price, carriage paid on orders of £7.			

Discount for quantities.

Partitions, etc.

Clinker	per yard super	3/6	4/-	4/6	6/-
Hollow block to B.S. 1190	per yard super	3/1	3/4	4/-	4/7 (4 1/2")
Plaster	per yard super	6/6	7/3	8/5	-
Moler	per yard super	-	-	-	-
†1" Wood Wool slabs	per yard super	from	4/2	to	4/10
†2" Wood Wool slabs	per yard super	from	6/7	to	7/6 1/2
†3" Wood Wool slabs	per yard super	from	8/6	to	9/8 1/2

† Prices according to quantity ordered.

PAVIOR

Red quarry tiles, 6" x 6" x 1/2", to B.S. 1286	per yard super	10	9
Ditto 6" x 6" x 3/8", to B.S. 1286	per yard super	9	6
Buff quarry tiles 6" x 6" x 1/2", to B.S. 1286	per yard super	12	-
Ditto 6" x 6" x 3/8", to B.S. 1286	per yard super	10	9
Hard red paving bricks, 2"	per 1,000	326	-
Ditto 1 1/2"	per 1,000	310	-

DRAINLAYER

Clay Land Drain Pipes to B.S. 1196

Pipes in 12" lengths	per 1,000	2"	3"	4"	6"
		99/6	138/6	179/-	372/-

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

	Standard List +		
	Orders for 2 tons and over	Orders under 2 tons 100 pieces upwards	Orders under 2 tons less than 100 pieces
Seconds Quality	35% less 15%	55% less 15%	65% less 15%
Best Quality	35%	55%	65%
British Standard Quality	42 1/2%	62 1/2%	72 1/2%
Tested Quality	60%	80%	90%
British Standard Tested	67 1/2%	87 1/2%	97 1/2%

Cast Iron Drain Pipes and Fittings

Socket and spigot pipes to B.S. 437 :-		Size			
		9 ft.	6 ft.	4 ft. ea.	3 ft. ea.
1	1 17	4" per yard	16/3	17/10	28/7
2	0 1	6" per yard	24/2	28/8	46/1
3	3 21	9" per yard	43/8	57/3	99/2

DRAINLAYER—(continued)

Cast-Iron Drain Pipes and Fittings—continued

		2 ft. ea.				18 ins. ea.		12 ins. ea.		9 ins. ea.	
1	1 17	4" per yard	17/8	-	-	-	-	-	-	-	-
2	0 1	6" per yard	27/9	-	-	-	-	-	-	-	-
3	3 21	9" per yard	-	-	-	-	-	-	-	-	-

Tonnage Allowances :-

Orders up to 2 tons nett.

		4"			6"			9"		
*Bends (short radius) as Fig. No. 4	each	6/3	13/-	40/-	-	-	-	-	-	-
*Single junctions as Fig. No. 18	each	11/-	22/6	69/-	-	-	-	-	-	-
*Intercepting traps as Fig. No. 33	each	30/-	50/-	123/-	-	-	-	-	-	-
*Gullies ordinary trapped "P"	each	14/6	-	-	-	-	-	-	-	-
*Extra for vertical back inlet 4"	each	4/3	-	-	-	-	-	-	-	-
*Grease gully trap	each	110/6	-	-	-	-	-	-	-	-
*H.M.O.W. large socket gully trap with 9" gully top and heavy grating and one back inlet	each	26/3	-	-	-	-	-	-	-	-

* These prices are subject to 32% plusage.

Channels in Brown Glazed Ware

Standard list + same discounts as "Best" quality salt-glazed Stone-ware pipes.

White Glazed Channels

Orders under 20 pieces. Standard list + 32 1/2%.

Concrete Pipes, etc.

Concrete pipes to B.S. 556		12"	24"	48"
With O.G. joints	per foot run	3/10	11/3	38/4
Bends	each	11/6	33/9	115/-
Junctions	each	32/-	63/6	-
Double junctions	each	-	-	-
Concrete pipes to B.S. 556				
With spigot and socket joints				
	per foot run	4/3	12/4	42/3
Bends	each	12/9	37/-	126/9
Junctions	each	32/-	63/6	-
Double junctions	each	-	-	-
Concrete road gully to B.S. 556				
18" diameter and 42" deep	each	62/6	-	-
Precast concrete manholes to B.S. 539				
		27"	48"	72"
Precast concrete manhole chamber rings				
	per foot run	13/6	38/4	86/8
6" precast concrete cover alabs	each	35/-	65/6	-

***Manhole covers and frames**

To B.S. 497

		Size of load	Unit price
C.I. coated double triangular manhole cover and frame, 22" dia. clear opening to B.S. 497, Grade A		35 tons	110/-
C.I. coated circular manhole cover and frame, 22" dia. clear opening to B.S. 497, Grade B		5 tons	60/-
		Size of load	Single seal Flat type
			Double seal Flat type
C.I. coated manhole cover and frame, 18" x 18" to B.S. 497, Grade C	1 ton	24/6	36/-
Ditto galvanized ditto	1 ton	36/-	49/9
Ditto coated manhole cover and frame, 24" x 18" to B.S. 497, Grade C	1 ton	27/-	40/-
Ditto galvanized ditto	1 ton	40/6	58/-
Ditto coated manhole cover and frame, 24" x 24" to B.S. 497, Grade C	1 ton	38/6	58/6
Ditto galvanized ditto	1 ton	59/6	86/6

*Subject to plus 2 1/2% on coated, and plus 2 1/2% plus 7 1/2% on galvanized.

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrapped, random sizes	per foot cube	8/11
Add for blocks to dimension sizes	per foot cube	1/1 (each dimension)

Templates with sawn beds, edges rough (up to 4 ft. super and not over 2' 6" long)	per foot cube	10/-
Templates with sawn beds, sawn one edge	per foot cube	11/6
Templates with sawn beds, sawn two edges	per foot cube	13/8
Price f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 4-ton loads)		38/7

Artificial Stone to B.S. 1217

6" x 3" Copings and sills	per foot run	2/3
6" x 6" Copings and sills	per foot run	4/6
9" x 3" Copings and sills	per foot run	3/6
9" x 6" Copings and sills	per foot run	6/9
12" x 3" Copings and sills	per foot run	4/6
12" x 6" Copings and sills	per foot run	9/-
Cornices according to detail, per foot cube (from)		15/-

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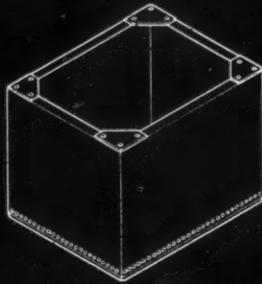
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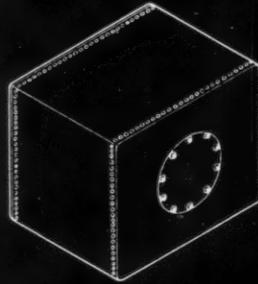
TANKS | CISTERNS AND CYLINDERS

42.B2

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CISTERN.



TANK.



CYLINDER.

B.S. size number		1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8	1-9	1-10	1-11	1-12	1-13	1-14	1-15	1-16	1-17	1-18	1-19
dimensions (ft. and in.)	length	1-6	1-6	2-0	2-0	2-0	2-3	2-5	2-6	3-0	3-0	3-0	3-2	3-2	5-0	5-0	6-0	6-0	8-0	10-0
	width	0-9	1-0	1-0	1-6	1-8	1-8	1-10	2-0	2-0	2-0	2-6	2-3	2-6	3-0	3-9	4-0	4-0	5-0	5-0
	height	0-11	1-0	1-3	1-7	1-8	1-8	1-10	2-0	1-9	2-0	2-2	2-3	2-7	2-8	3-0	3-4	4-0	4-0	4-0
capacity (gal.)	nominal	6	10	15	30	35	40	50	62	65	75	100	100	125	250	350	500	600	1000	1250
	actual to waterline	3½	6	10	20	25	30	40	50	50	60	80	80	100	200	300	400	500	800	1000
waterline from top (in.)		4¾	4¾	4¾	4½	4½	4½	4½	4½	4½	4½	4½	4½	5½	5½	5½	5½	6	9	9
overflow or warning pipe details	size of hole (in.)	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	2	2	2	2	2½	3¾	3¾
	c.l. from top (in.)	3	3	3	3	3	3	3	3	3	3	3	3	3¼	3¼	3¼	3¼	3½	4½	4½
inlet details	size of hole (in.)	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	1¾	1¾	1¾	1¾	1¾	2½	2½
	c.l. from top (in.)	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1¾	1¾	1¾	1¾	2¼	3	3
outlet details	size of hole (in.)	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	1¾	2	2	2	2	2½	3¾	3¾
	c.l. from btm. (in.)	2½	2½	2½	2½	2½	2½	2½	2½	2½	2½	2½	2½	2½	3	3	3	3	3½	4¼	4¼

DIMENSIONS OF CISTERNS.

B.S. size number		2-1	2-2	2-3	2-4	2-5	2-6	2-7	2-8	2-9
outside dimensions (ft. and in.) assuming handhole at front	height	2-0	2-0	2-0	2-0	2-6	2-3	2-5	2-6	3-0
	width	1-4	2-0	1-6	2-0	1-6	1-8	1-10	1-11	2-0
	back to front ●	1-3	1-0	1-7	1-3	1-6	1-8	1-10	2-0	1-11
capacity (gal.)	nominal	20	25	30	30	35	40	50	60	70
	actual	17	21	25	27	29	34	46	53	64

DIMENSIONS OF TANKS.

● excluding handhole cover

B.S. size number		3-1	3-2	3-3	3-4	3-5	3-6	3-7
dimensions (ft. and in.)	diameter inside	1-3	1-6	1-6	1-6	1-8	2-0	2-0
	height over dome	3-0	2-6	3-0	3-6	4-3	4-0	5-3
capacity (gal.)	nominal	23	28	33	39	58	78	103
	actual	21	25	30	36	55	73	98

DIMENSIONS OF CYLINDERS.

42.B2 CISTERNS, TANKS AND CYLINDERS TO B.S. 417: 1944

This Sheet describes a range of cisterns, tanks and cylinders to B.S. 417 : 1944.

Further Products

Other types of tank and bin manufactured include corrugated cisterns, supply and flushing cisterns, cattle troughs, corn and flour bins, dust bins, coal bunkers, oil and petrol tanks and street orderly bins.

British Standard

In the preparation of this Sheet, information has been extracted from B.S. 417 : 1944 *Galvanised Mild Steel Cisterns, Tanks and Cylinders*, by permission of the British Standards Institution.

This Series of Sheets deals with tanks, cisterns, bins, bunkers, cycle-racks, non-ferrous metal mouldings,

perforated and embossed metals, woven wire screens, steel partitions and furniture, railings, fencing, gates, manhole covers, rainwater goods and ventilators.

Compiled from information supplied by 1

G. A. Harvey & Co. (London), Ltd.

Head Office : Greenwich Metal Works, London, S.E.7.

Telephone : Greenwich 3232 (20 lines).

Telegrams : Cheaper, Wol, London.

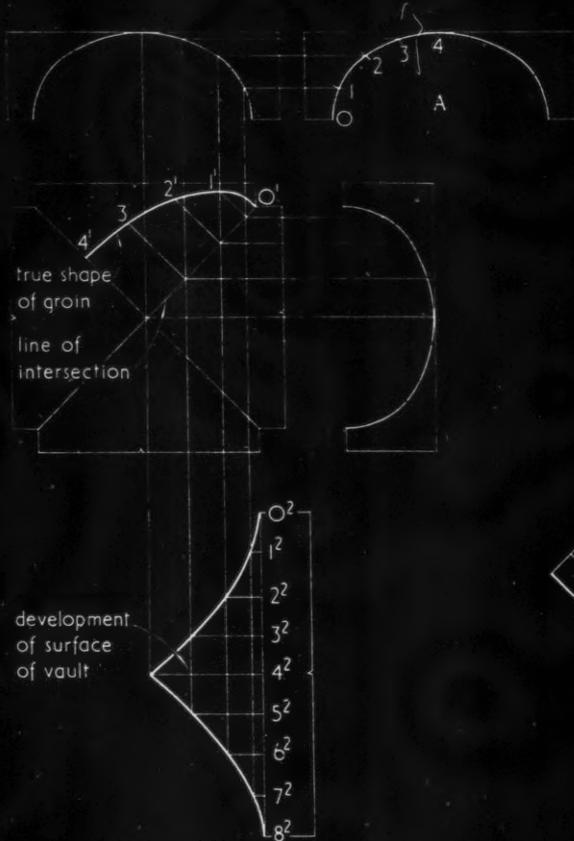
London Office : 58, Victoria Street, S.W.1.

Telephone : Victoria 4963.

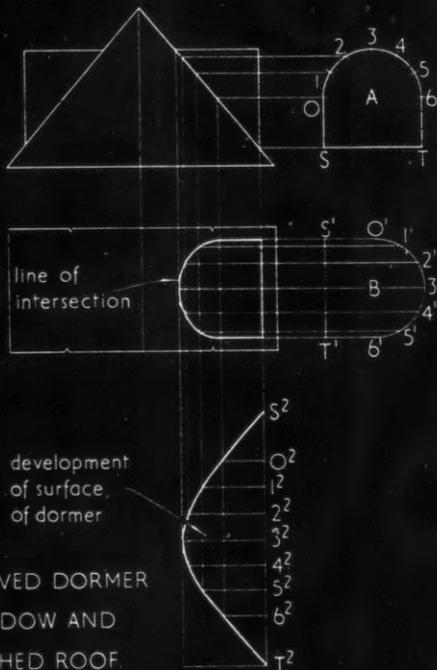




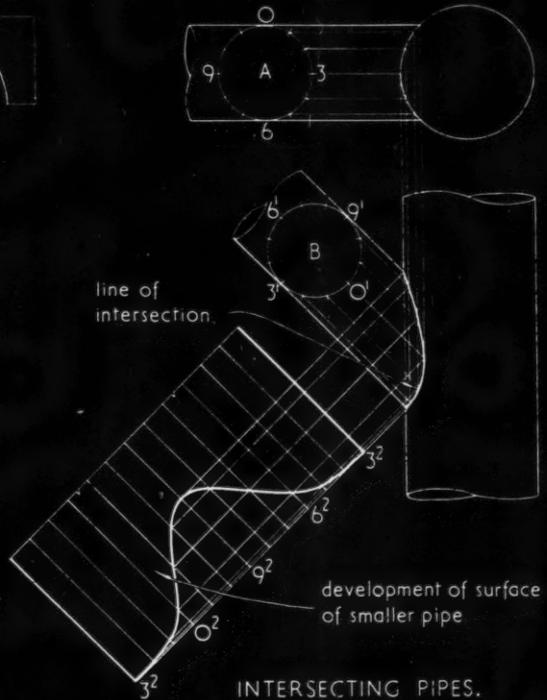
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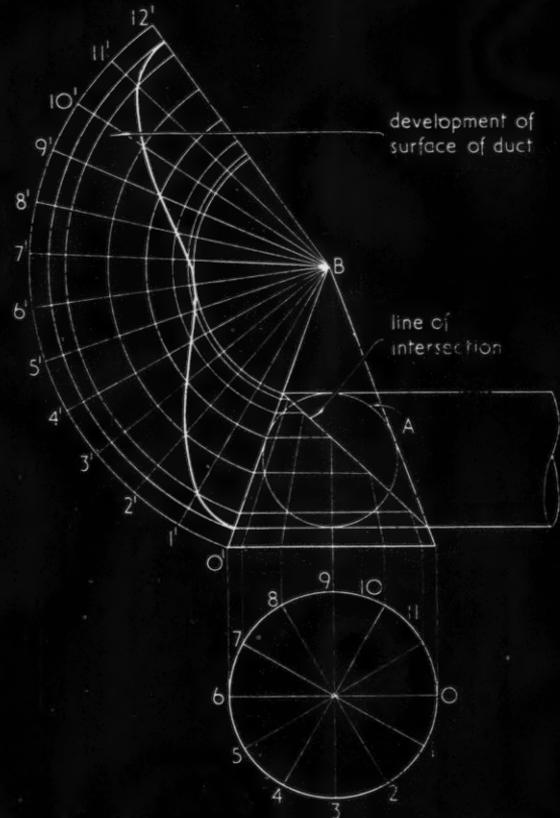
SEMI-ELLIPTICAL VAULTS.



CURVED DORMER WINDOW AND PITCHED ROOF.



INTERSECTING PIPES.



CONICAL HOPPER AND CYLINDRICAL DUCT.

INTERSECTIONS AND DEVELOPMENTS OF INTERPENETRATING CURVED SURFACES.

1.B16 INTERSECTIONS AND DEVELOPMENTS OF INTERPENETRATING CURVED SURFACES

This Sheet describes methods of obtaining the lines of intersection and the developments of interpenetrating curved surfaces.

Semi-Elliptical Vaults

Draw the sectional elevation and plan of the intersecting vaults and also the auxiliary section A.

True shape of line of intersection (groin): Divide half the auxiliary section into any number of equal parts—four in this case—produce to the sectional elevation and drop verticals from the points found to cut the line of intersection in plan. From these points draw ordinates at right angles and mark off heights to correspond with those in the sectional elevation. Join the points found to form the true shape.

Development of surface: At any convenient distance from 0^1 and in line with it draw 0^28^2 equal in length to the arc of the vault and mark off $0^21^2, 1^22^2$, etc., equal to $01, 12$, etc. Draw horizontals from 0^21^2 , etc., to cut the verticals dropped from the sectional elevation. Join the points found to form the development.

Intersecting Pipes

Draw the sectional elevation and plan of the pipes and auxiliary sections A and B of the smaller pipe.

Line of intersection: Divide the auxiliary sections A and B into twelve equal parts and produce ordinates to cut the larger pipe. Where the ordinates from section A cut the larger pipe draw co-ordinates to meet the ordinates produced from section B. Join corresponding meeting points to form the line of intersection.

Development of surface: The procedure is the same as for the development of the surface of the vault the line 3^23^2 being equal to the circumference of the smaller pipe.

Curved Dormer Window and Pitched Roof

Draw the sectional elevation and plan of the dormer and roof and also the auxiliary views A and B of the dormer.

Line of intersection: This is obtained in the same way as in the previous example.

Development of surface: This is also obtained in the same way as in the previous example. It should be noted that 0^26^2 provides for the curved part of the dormer and that 0^25^2 and 6^27^2 provide for the vertical straight sides.

Conical Hopper and Cylindrical Duct

Draw the side elevation and auxiliary section A of the duct.

Line of intersection: Draw the sides of the cone tangential to Section A.

Join the points where the cylinder cuts the cone to form the line of intersection.

Development of surface: Draw the plan of the cone and divide it into twelve equal parts. Produce ordinates to cut the base of the cone in elevation and join the points found to the apex B. At the points where these lines cut the line of intersection draw horizontal lines to cut the side of the cone. With centre B and radius $B0^1$ describe arc 0^112^1 and mark off $0^11^1, 1^12^1$, etc., equal to $01, 12$, etc. Draw radials from these points to cut the arcs produced from the side of the cone. Join the points of intersection to form the development.

This Series of Sheets covers geometrical drawing, orthographic, isometric and axonometric projections, perspective, rendering, lettering and draughtsmanship generally.

Compiled from information supplied by:

Eagle Pencil Company.

Address: Ashley Road, Tottenham, London, N.17.
Telephone: Tottenham 4435-6-7.
Telegrams: Octennial, London.

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Editor: Cotterell Butler, A.R.I.B.A.

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MASON—(continued)

Bath Stone in random blocks

Monk's Park	per foot cube	5/4½
St. Aldhelms Box Ground	per foot cube	5/10½

Delivered on rail at South Lambeth station.

Portland Stone in random blocks, average 20 feet

Whitbed	per foot cube	6/1½
---------	---------------	------

Delivered on rail at Nine Elms Station.

SLATER, TILER AND ROOFER

Best Bangor Slates to B.S. 690

24" x 12"	per 1,000 actual	91 0 0
30" x 10"	per 1,000 actual	60 5 0

Prices include for delivery to site in lots of 1,000 and upwards.

Tiles

Hand-made sandfaced 10½" x 6½" red roofing tiles	per 1,000	189/-
*Machine-made sandfaced best red tiles with continuous ribs, 10½" x 6½"	per 1,000	150/-
*Delivery London area in loads of 5,000 and over	per 1,000	19/3
Berkshire hand-made red Pantiles, 14½" x 10"	per 100	70/-
Berkshire hand-made Dun coloured Pantiles, 14½" x 10"	per 100	80/6

Concrete Tiles

Plain tiles, 10½" x 6½"	per 1,000	90/- to 95/-
Interlocking tiles, 15" x 9"	per 1,000	£14 10s.
Double Roman tiles	per 1,000	£28 to £30

CARPENTER AND JOINER

½" Imported Insulating board	Up to 5,000 sq. ft.	5,000 to 15,000 sq. ft.	
(per 100 sq. ft.)	37/6	36/-	
½" Imported Insulating board	15,000 to 50,000 sq. ft.	Over 50,000 sq. ft.	
(per 100 sq. ft.)	33/9	31/6	
½" Imported Hard-board (per 100 sq. ft.)	Up to 5,000 sq. ft.	5,000 to 10,000 sq. ft.	
¾" Imported Hard-board (per 100 sq. ft.)	10,000 to 30,000 sq. ft.	Over 30,000 sq. ft.	
¾" Imported Hard-board (per 100 sq. ft.)	43/-	41/-	
¾" Imported Hard-board (per 100 sq. ft.)	58/6	56/-	

	25-75 yards	150-300 yards	Over 600 yards
½" Fireproof plaster board	per yard super	2/8	2/4
½" Ditto	per yard super	2/6	2/2
¾" Paper Faced Linen Tape, per 100 yard roll			6/9
Joint filler	per lb.		-/4

Asbestos-cement and Asbestos Products

*6" corrugated sheets, grey	per yard super	3/6
*Standard 3" corrugated sheets, grey	per yard super	3/2½

* Prices are for minimum two-ton loads, and are subject to 5% trade discount.

¾" Semi compressed flat building sheets, grey,	per yard super	1/7½
½" Ditto	per yard super	2/4
¾" Asbestos wall board (in sheets 8' 0" x 4' 0")	per yard super	5/4
¾" Ditto	per yard super	4/-
¾" Asbestos wood (in sheets 8' 0" x 4' 0")	per yard super	3/0½

Prices are for orders of 2 tons and over. Subject to 5% trade discount.

Sundries

Slaters or sarking felt to B.S. 747	per yard run	1/3
Roofing felt (1-ply bitumen) to B.S. 747, Part I	per yard sup.	1/8
Bituminous hair felt to B.S. 747, Part II	per roll	76/-

All rolls 25 yards long by 32" wide.

"Sisalkraft" standard grade	per yard sup.	-/7
"Sisalkraft" subsoil grade	per yard sup.	-/4

"Cabots" quilts (Ex Works):—

Triple ply ½" thick	2/4 per yard super
Double ply ½" thick	2/1 " "
Single ply ½" thick	1/10 " "

All rolls 28 yds. long by 36" wide. Quantities less than complete roll 2d. extra per yard.

CARPENTER AND JOINER—(continued)

Sundries—continued

"Fibreglass" sound deadening quilt	per yard super	
Light grade	Up to 500 yds.	2/3½
Medium grade	Over 500 yds.	2/3
In rolls 27 yards long by 36" wide.		2/8
"Fibreglass" bitumen bonded mats in standard rolls	per yard super.	1/8½
In rolls 12½ yards long by 42" wide.		
Slagwool (loose in 1" thickness)	per yard super	1/4

Home Grown Timber Prices. See Statutory Rules and Orders, 1947, No. 94.
Imported Softwood Prices. See Statutory Rules and Orders, 1947, No. 731.
Imported Hardwood Prices. See Statutory Instruments 1949, No. 497.
These may be obtained on application to H.M. Stationery Office, York House, Kingsway, W.C.2.

Standard Panelled and Glazed Wood Doors

Type 4	size 2' 0" x 6' 6" x 1½"	each	33/9
	size 2' 6" x 6' 6" x 1½"	each	36/-
Type 2 x G	size 2' 6" x 6' 6" x 2"	each	39/-
	size 2' 9" x 6' 6" x 2"	each	40/6
Type 4 x G	size 2' 6" x 6' 6" x 2"	each	44/3
	size 2' 9" x 6' 6" x 2"	each	46/6

In lots of from 1 to 11 inclusive.

Standard E.J.M.A. Wood Windows

INP 26	size 2' 6" x 1' 6½"	each	25/4
4V 36	size 3' 6" x 7' 10"	each	113/9
IV 40	size 4' 0" x 2' 2½"	each	33/1
3T 46	size 4' 6" x 5' 11½"	each	116/8
4T 50	size 5' 0" x 7' 10"	each	139/8

Standard E.J.M.A. Kitchen Units

No. 1	size 3' 0" x 3' 6" x 1' 7"	each	191/8
No. 2	size 3' 0" x 3' 6" x 1' 7"	each	128/8
No. 4	size 3' 0" x 1' 9" x 1' 7"	each	115/10
No. 5	size 3' 10" x 1' 9" x 1' 7"	each	99/6
No. 7	size 6' 6" x 1' 9" x 1' 7"	each	186/-

Corkboard, 1" thick ft. sup. 6½d.
Cut steel clasp nails to B.S. 1202 1" per cwt. 51/3
..... 3" per cwt. 42/3
Cut steel floor brads to B.S. 1202 2" per cwt. 43/6
Bright oval wire nails to B.S. 1202 1" per cwt. 50/4
Galvanized wire staples with slice cut points, 1" x 12 gauge per cwt. 67/3

STEEL AND IRONWORKER

Basis price for rolled steel joist sections, 5" x 4½" to 16" x 6" in 10 ft. to 50 ft. lengths...	ex mills per ton	£ s. d. 17 16 6
Extra for sizes:—		
9" x 7"	Add per ton	5 0
6" x 3"	" "	7 6
3½" x 3½", 4" x 4", 5" x 3", 10" x 8", 12" x 8", 14" x 8", 16" x 8", 18" x 6", 18" x 7", 18" x 8", 20" x 6½", 20" x 7½"	" "	10 0
5" x 2½", 22" x 7"	" "	15 0
4" x 2½", 4" x 3", 24" x 7½"	" "	1 0 0
3" x 3"	" "	1 5 0
4½" x 1½"	" "	1 10 0
4" x 1½"	" "	2 10 0
3" x 1½"	" "	3 10 0
Basis price for angles	ex mills per ton	17 16 6
" " " tees	" "	18 16 6
" " " solid steel columns	" "	18 16 6

All delivered Station or Siding.

PLASTERER

Plaster and Cement

		1-ton loads	6-ton loads
Thistle (browning) to B.S. 1191, Class B	per ton	118/6	99/3
Gypstone to B.S. 1191, Class B	per ton	80/6	
Paristone (haired) to B.S. 1191, Class B	per ton	83/-	} ex Works, Kent.
Ditto (unhaired)	per ton	80/6	
Glastone to B.S. 1191, Class C	per ton	83/-	
Sirapite (coarse) to B.S. 1191, Class C	per ton	115/6	96/3
Ditto (fine) to B.S. 1191, Class C	per ton	123/6	104/3
Keene's Pink to B.S. 1191, Class D	per ton	161/9	
Keene's White to B.S. 1191, Class D	per ton	166/9	
Cullamix (Tyrolean Finish), 1-ton lots and upwards	per ton from	155/6 to 190/-	

PLASTERER—(continued)

<i>Sundries</i>			
Sharp washed sand to B.S. 1198	per yard cube	16/4	
Cow Hair	per cwt.	84/6	
Goat Hair	per cwt.	102/6	
Expanded metal lathing, 9' 0" × 2' 0" × 1/4"	per sheet	4/8	
mesh × 26 gauge	25-75 yards	150-300 yards	Over 600 yards
1/4" Plasterboard (plaster lath)	per yard super	2/2	1/11 1/9
Galvanized lath nails	per cwt.	90/-	
Hessian Scrim cloth in 100-yard rolls, 3 1/4" wide	per roll	7/6	

Wall Tiles

The following prices are subject to 75 per cent. addition:

Standard quality.		
White, glazed 6" × 6" × 1/4"	per yard super	8/6
Cream "	per yard super	9/-
Angle beads (1 1/2" wide)	per yard run	1/0 1/2
Rounded edge tiles (white glazed)	per yard run	1/8
" " (cream glazed)	per yard run	1/9
Coloured enamelled bright glazed, 6" × 6" × 1/4"	per yard super	14/3
Angle beads (1 1/2" wide)	per yard run	1/2 1/2
Rounded edge tiles	per yard run	2/9
Eggshell glazed tiles, 6" × 6" × 1/4"	per yard super	15/-
Angle beads (1 1/2" wide)	per yard run	1/4 1/2
Rounded edge tiles	per yard run	2/10

PLUMBER

Lead

3 1/2 lb. and upwards milled sheet lead in quantities of 5 cwts. to 1 ton in sheets to B.S. 1178	per cwt.	142/6
Lead ternary alloy, No. 2 quality extra over sheet lead or lead pipe	per cwt.	16/9
Allowance for old lead delivered to merchant or manufacturer	per cwt.	83/6

Cast Iron Goods

	Percentage Adjustment on List No. 3100 A.B.
Rainwater Goods (painted or unpainted)	Plus 70%
Soil goods (coated or uncoated)	Plus 70%

Mild Steel Rainwater Goods

	Standard List +
Gutters (under 100 lengths)	98%
Pipes and Fittings (" ")	108%

Asbestos-Cement Rainwater Goods

The following prices are subject to 12 1/2% trade discount and 2 1/2% cash discount.

Orders over £30 are subject to 17 1/2% trade discount and 2 1/2% cash discount.

Rainwater Pipes.

Prices are for 6' 0" lengths, but 10' 0" lengths are available in 2", 2 1/2", 3" and 4" diameters at same prices. Short lengths up to 2' 0" are charged as 1 yard. From 2' 0" to 4' 0" charged as 1 1/2 yards. From 4' 0" to 6' 0" charged as 2 yards. Over 6' 0" charged as 10' 0"

Round Pipes.

2"	per yard run	2/4
2 1/2"	per yard run	2/7 1/2
3"	per yard run	3/2
4"	per yard run	4/4
6"	per yard run	9/1

Gutters.

Short lengths of gutter up to 2' 0" charged as 1 yard; from 2' 0" to 4' 0" as 1 1/2 yards, and over 4' 0" as 2 yards.

Half round gutters	3"	4"	4 1/2"	5"	6"	8"
per yard run	1/8	2/-	2/1	2/5 1/2	3/5	4/2 1/2
Ogee gutters per yard run	—	2/8 1/2	2/7 1/2	3/2	3/10 1/2	5/-

INTERNAL PLUMBER

Lead pipe in coils, 5 cwts. and upwards, to B.S. 602	per cwt.	143/9			
Lead soil pipe	per cwt.	146/9			
Add if ribbon marked	per cwt.	-/3			
Plumber's solder	per cwt.	327/6			
Tinman's solder	per cwt.	307/-			
Drawn lead traps with brass screw eye, 6 lb., to B.S. 504	1"	1 1/4"	1 1/2"	2"	
S. trap	each	5/5	6/4	7/10	11/3
P. trap	each	4/9	5/3	6/6	9/1
Extra for 3" deep seal "S" trap	each	1/4	1/6	1/9	2/2
Extra for 3" deep seal "P" trap	each	-/11	1/1	1/1	1/6

INTERNAL PLUMBER—(continued)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts:—

Tubes:	1/2" to 4"		
Class A	47 1/2%	Fittings:	
" B	41%	Lightweight	20 1/2%
		Heavyweight	13%
Galvanized Class A	24 1/2%	Flanges:	
" B	19%	Lightweight (Table D)	9 1/2%
		Heavyweight (Table E) Plus	8 1/2%

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 5-cwt. lots (4' × 2' sheets), to B.S. 899	16 wire gauge	per lb.	1/10 1/2
Ditto	24 wire gauge	per lb.	2/0 1/2
Copper wire, 10, 12 and 14 gauge (over 2 cwt.)		per lb.	1/10 1/2
Copper nails		per lb.	2/1

GLAZIER

Sheet Glass, cut to size (ordinary glazing quality), to B.S. 952, Section A. For quantities exceeding 500 ft. super.

24 oz.	per foot super	5 1/2 d.
26 oz.	per foot super	7 1/2 d.
32 oz.	per foot super	9 1/2 d.
Polished Plate glass, ordinary substance, approximately 1/4", to B.S. 952, Section A.		

In plates not exceeding:	Glazing quality	Selected glazing quality	Silvering quality
2 ft. super	per foot super 2/6	2/8	3/2
3 ft. super	per foot super 2/10	3/3	3/11
5 ft. super	per foot super 3/1	3/9	4/6
*45 ft. super	per foot super 3/9	4/1	5/7
*100 ft. super	per foot super 4/5	5/7	7/2

* Extra sizes, i.e., plates exceeding 100 ft. super or 160 in. long, or 96 in. wide, at higher prices.

1/2" figured rolled and cathedral, to B.S. 952, Section B—untinted	7 1/2 d.	per foot super
tinted	10 1/2 d.	per foot super
1/2" rolled plate, to B.S. 952, Section B	7 1/2 d.	per foot super
3/8" or 1/2" rolled plate, " "	8 1/2 d.	per foot super
3/8" or 1/2" rough cast, " "	8 1/2 d.	per foot super
Prismatic, to B.S. 952, Section D	1 1/2 d.	per foot super
1/2" wired cast, " "	9 1/2 d.	per foot super
1/2" Georgian wired cast, " "	10 1/2 d.	per foot super
1/2" polished wired, " "	3/6 d.	per foot super
1/2" wired arctic, " "	1/8 d.	per foot super

Hollow glass blocks, to B.S. 952, Section D:—

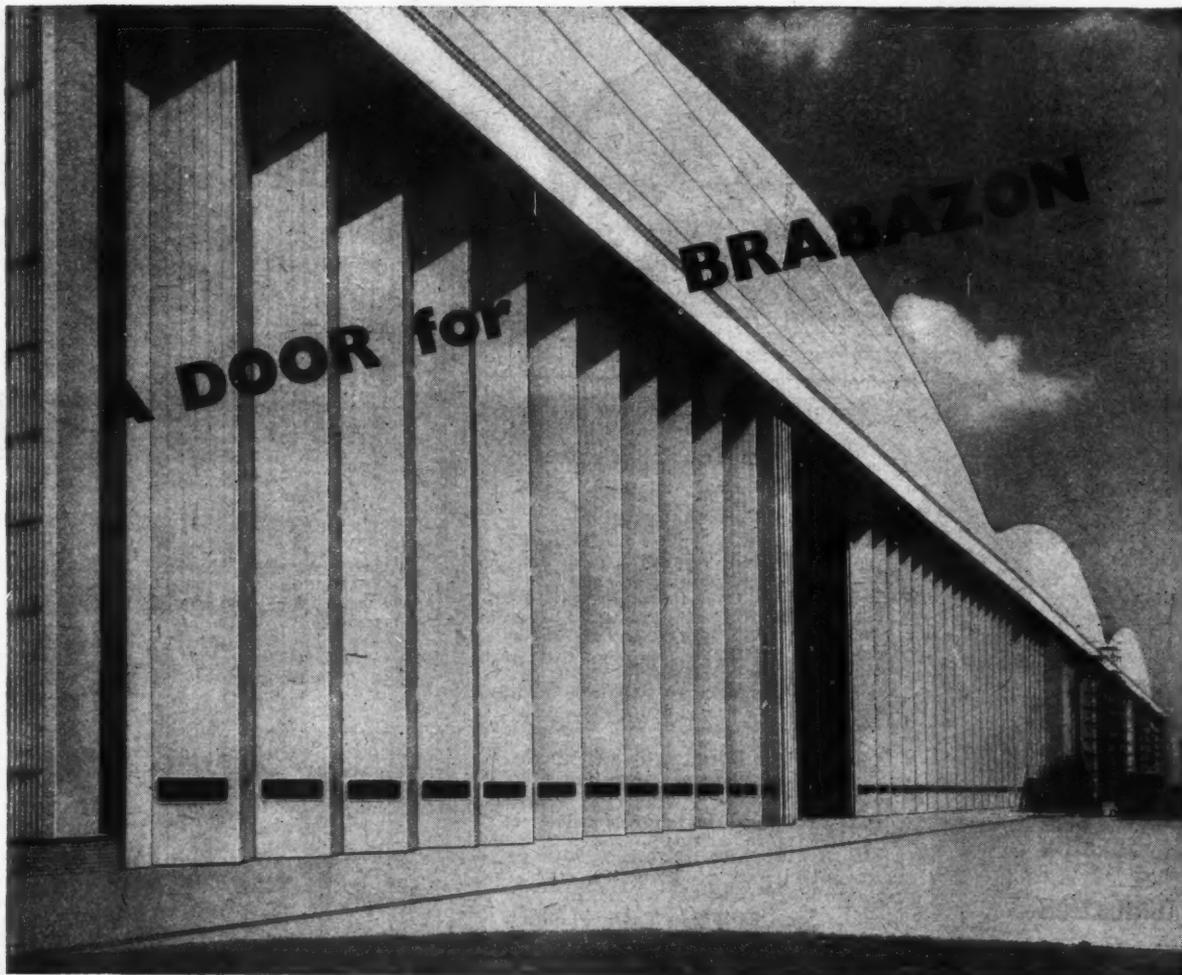
P.B.2. 5 1/2" × 5 1/2" × 3 1/2"	2/6 each
P.B.3. 7 1/2" × 7 1/2" × 3 1/2"	3/10 each
P.B.32. 7 1/2" × 7 1/2" × 3 1/2"	3/10 each

Radiused corner blocks to match up with:—

P.B.2	4/6 each
P.B.3 or 32	6/- each

PAINTER

Snowcem paint (in free air-tight metal containers)	per cwt.	56/-
White ceiling distemper	per cwt.	27/9
Washable distemper	per cwt. from	82/-
Ready mixed white lead paint (best), semi-gloss, per 32 lb.	per gallon	41/6
Aluminium paint (best quality)	per gallon	29/-
White enamel paint	per gallon	41/-
Stiff white lead (genuine English stack process, 1 ton lots, 1 cwt. kegs)	per cwt.	157/6
Liquid driers, best Terebene	per gallon	19/-
Knotting	per gallon	25/-
Oil stain (scumble)	per lb.	3/4 1/2
Varnish (outside quality), copal oak	per gallon	29/-
" " general oak	per gallon	24/-
" " egg shell flatting	per gallon	31/6
Turpentine, genuine American, 5-gallon lots	per gallon	—
" substitute	per gallon	3/8
Linseed Oil Putty	per cwt.	53/3
Ferramastic (14 lb. kegs)	per cwt.	74/-
Size, in 1 S, best quality	per lb.	2/4



Architect :—
Eric Ross, A.R.I.B.A.

Consulting Engineers :—
Brian Colquhoun & Partners

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castings and sheet by*
Northern Aluminium Co., Ltd.

THE largest door Man has yet built . . . 200 tons of it, 25 feet longer than "The Queen Mary", 65 feet 9 inches high, with each of its three sections opening centrally or from either end at 80 feet a minute. It is the door of the vast new hangar for the Bristol 'Brabazon'. Such a supreme feat of design typifies the adaptability of Esavian engineers and the Esavian principle of slide and fold . . . a principle that has proved its complete success for a hundred uses, from schoolroom partitions to 'bus garage doors. Your own 'closure' problem may not call for a door larger than an Atlantic liner but it does call for a talk with Esavian.

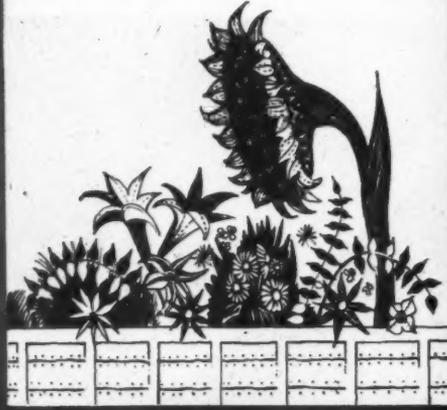
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FOR DOORS, WINDOWS, PARTITIONS & FOLDING SCREENS

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DESIGN
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257 FAMILIES will live in the block of flats now being built at Cromer Street for the Borough of St. Pancras, London, using 1350 tons of steel. Architects: Robert Hening, M.B.E., Anthony M. Chitty, M.A., F.R.I.B.A., A.M.P.T.I., Town Planning Consultants. General Contractors: Stewart & Partners Ltd., London.

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 QUESTIONS AND ANSWERS · CURRENT TECHNIQUE
 THE INDUSTRY · PRICES · TECHNICAL ARTICLES

TECHNICAL SECTION

A digest of current information prepared by independent specialists; printed on one side of the paper only, to allow readers to cut out the items for filing and paste them up in classified order. Headings below.

INFORMATION CENTRE

1 SOCIOLOGY. 2 PLANNING: General. 3 PLANNING: Regional and National. 4 PLANNING: Urban and Rural. 5 PLANNING: Public Utilities. 6 PLANNING: Social and Recreational. 7 PRACTICE. 8 SURVEYING, SPECIFICATION. 9 DESIGN: General. 10 DESIGN: Building Types. 11 MATERIALS: General. 12 MATERIALS: Metal. 13 MATERIALS: Timber. 14 MATERIALS: Concrete. 15 MATERIALS: Applied Finishes, Treatments. 16 MATERIALS: Miscellaneous. 17 CONSTRUCTION: General. 18 CONSTRUCTION: Theory. 19 CONSTRUCTION: Details. 20 CONSTRUCTION: Complete Structures. 21 CONSTRUCTION: Miscellaneous. 22 SOUND INSULATION, ACOUSTICS. 23 HEATING, VENTILATION. 24 LIGHTING. 25 WATER SUPPLY, SANITATION. 26 SERVICES, EQUIPMENT: Miscellaneous. 27 FURNITURE, FITTINGS. 28 MISCELLANEOUS.

1.10 sociology

ESTIMATING HOUSING NEEDS

The Assessment of Housing Needs. PEP (Political and Economic Planning, Vol. XV, No. 293, Jan. 10, 1949. 2s.).

Informative broadsheet outlining type of data required for accurate estimate of housing needs. Best methods of collection and analysis.

This is a very important document which should be studied by planners in relation to housing requirements for development plans under the Town and Country Planning Act, 1947.

In an introduction it is stated that "except in particular districts where special surveys have been made, nobody knows how many and what kind of households make up the demand. Not even the total number of dwellings in England and Wales is known, still less their types, sizes and rents or what sized families live in what sized houses."

Although there is plenty of information available from the Registrar-General regarding births, deaths and marriages there is very little knowledge about the way people live.

As nowadays the responsibility for housing rests with the local authorities, county boroughs, county district and metropolitan borough councils, it is of great importance that they should be aware of the need for accurate information and of the best way of making use of the data in their possession. The different housing investigations that are being undertaken should all be so designed that they can be compared in different places and with each other, so that from them can be built up the whole situation on a national level. They will then provide an accurate picture of local needs and achievements.

A first step towards estimating housing needs is the definition "with reasonable objectivity" of what housing needs are. The authors suggest that in view of nutritional and health standards it is necessary to determine the minimum standards for living purposes. These are defined as standards of space, privacy, quality and equipment of dwellings, and the maintenance of social mobility at the level considered necessary for modern life. Different traditions and ways of life will, of course, affect the standards to be adopted, but it is clear that housing needs depend on the number and size of separate households combined with the minimum standards necessary for each household. That is the first aspect which should be investigated. The second one concerns the number and size of existing dwellings, the extent to which they fall short of minimum standards and the facility with which they can be raised to them. The difference between these two figures, which has to be measured locally as well as nationally, is the final estimate of housing requirements.

These very concise definitions are followed by a survey of existing estimates of housing needs. There is a critical comment on the 1931 Census drawing attention to its inadequacy in regard to present-day estimates based on its figures. Two other methods discussed concern household indices and sample surveys. The conclusions to be drawn from the shortcomings of all these methods lead to suggestions for improved methods of collecting and analysing census material in the future. Families, households, institutional households and dwellings are the elements in the composition of society which should be studied individually and in relation to each other, and the sort of information required about each of these is discussed in detail.

Lastly the broadsheet stresses the need for a new housing census. This should, however, be supplemented by sample national inquiries and local surveys in order to fill the gap until the census information becomes available and to collect facts about types and quality of dwellings and their environment which cannot be collected by the census. The functions of national samples and local surveys are specified providing useful information for the planner.

15.47 materials: applied finishes and treatments

REDECORATING OLD FLOORS

Floors and their Treatment. (The Decorator, Feb., 1949, pp. 58 and 59.)

Hints on renewing the surface of deal floors, including descriptions of what to do with nail heads, how to remove old wax, use of water and oil stains and floor varnishing. Quite a useful article and specially applicable to architects dealing with conversions, bomb damage repairs, etc.

Points emphasized in the article are:—

- (1) That floors must be thoroughly cleaned, and sanded if necessary, before application of the finish.
- (2) That nail heads must be punched home and depressions stopped with plastic wood or other suitable material.
- (3) That oil stains are generally to be preferred.

(4) That when varnishing a floor, a special grade of varnish designed for the purpose should be used, and that a sealing coat of varnish size should be applied. Glue size, which is commonly used, is not recommended.

The traditional treatment of boarded and particularly softwood floors in conversions and in bomb damage repair work often presents a problem, and these notes, which are to be continued, are timely and helpful.

16.46 materials: miscellaneous

SOME SCOTTISH LIMESTONES

Some Scottish Limestones. (Scottish Council, Dec., 1948. 2s.)

A report by the Building Materials Committee of an investigation in three areas in Scotland where it is thought that the exploitation of the limestone for building purposes is practicable.

These investigations took place as a result of the reports that there was a shortage of lime in Scotland, particularly imported English hydrated lime. There is at present only one works in Scotland where lime is calcined and hydrated—namely, at Cutts, in Fife, but it is thought that enough lime for building could be obtained from the three areas under review—Gorebridge, Keith and Fort William areas, were they developed.

Because of the failures which occur in lime due to the slow slaking of the impurities which it contains producing "pitting" and popping, the BRS, in their report produced in collaboration with the Scottish Council and which is quoted in this pamphlet, suggests that only those limestones which contain less than 5 per cent. of impurities and 5 per cent. magnesium should be developed. The BRS also suggests that concentration of the



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32.D9 REFERENCE BACK

Readers are asked to note the following amendments and to correct their copy of the Information Sheet in question:

Diagram 5—Owing to faulty reproduction, the hot water outlet pipe from the heater to the lavatory basin, bath and sink shows a break immediately adjacent to the appliance. This is incorrect. The pipe should, of course, connect to the heater.

Diagrams 5 and 6—The flow and return connections to the heater should be reversed.

Diagram 6—The return circuit from the radiators has been omitted. A return leg should be shown from the lower radiator to the return pipe connected to the solid fuel heater on the left-hand side of the stopcock.

FUEL FOR AGA COOKERS IS IN PLENTIFUL SUPPLY

ALL MODELS OF THE AGA COOKER BURN EFFICIENTLY ON COKE... AND SUPPLIES OF DOMESTIC COKE ARE PLENTIFUL

RECENT REPORTS about difficulty in obtaining suitable fuel for cookers of slow combustion or heat conserving types have been misleading.

Aga owners and prospective purchasers should not be concerned by these reports — the Aga burns coke!

THE AGA DESIGNED FOR COKE

In fact, all models of the Aga cooker have been designed specifically to burn coke—the cooker and water heater models for a minimum of 10 hours unattended, other models for a longer period.

Domestic coke is in plentiful supply. One ton of this fuel will last as long in an Aga as a ton of anthracite, and costs considerably less.

The special design and construction from high-duty chrome iron of the Aga firebox makes the Aga cooker suitable for burning all qualities of domestic coke of the correct size.

Many present Aga owners know from their own experience that coke is an efficient fuel for the Aga.

The Aga was designed, originally, in Sweden to burn coke.

With no natural coal resources of their own, the Swedes have always imported their fuel and they have always used coke for Aga cookers.

AUSTRALIANS USE COKE

The steady and increasing demand for Aga cookers in overseas markets substantiates still further the efficient performance of these cookers when fuelled with coke. In most of these countries, coke is the only available fuel.

In Australia, one of the best Aga export markets, Aga owners get satisfactory performance using coke even of inferior qualities. The increase in sales demands for the Aga proves further its success with this fuel.

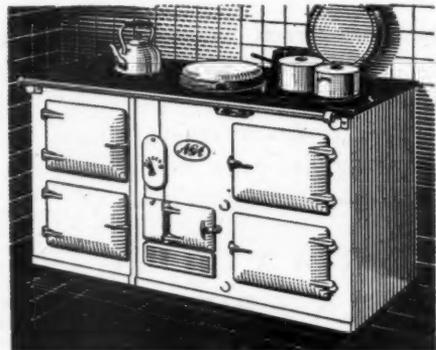
NO HARDSHIP FOR AGA OWNERS

It is in national interests that export demands for anthracite should be satisfied.

The export of this fuel, however, need not cause any hardship to present or prospective Aga owners.

Both in this country and abroad, the reputation of the Aga for efficiency and economy has been established by its performance as a coke-burning cooker.

The Aga saves fuel for the householder and the nation.



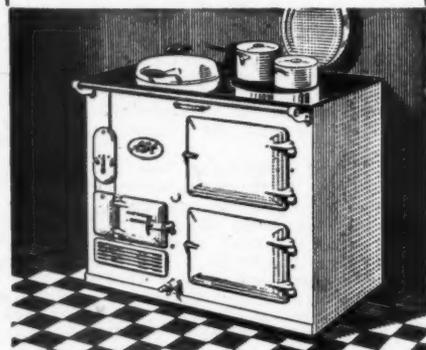
This is the Aga Model E Cooker for the larger household. Its guaranteed maximum fuel consumption per year is 3 tons using COKE or "Phurnacite".

ALL AGA MODELS BURN COKE

Night and day, the Aga is ready to cook. Using coke, its continuous burning fire needs fuel only twice in 24 hours, or 3 times for cookers with water heater and the heavy duty models.

Coke is the most economical smokeless fuel for all Aga models. It costs 20% less than anthracite. Any quality of the correct size is effective fuel for both domestic and heavy duty models in use in schools, hotels, hospitals, etc.

Domestic Aga models are priced from £85 to £115.



This is the Aga Model CB Cooker and Water Heater for the medium size family. Its guaranteed maximum fuel consumption per year is 3½ tons using COKE or "Phurnacite".

AGA HEAT LIMITED
Orchard House, Orchard St., London, W.1

(Proprietors: ALLIED IRONFOUNDERS LTD.)

calcining and hydrating process at a few larger works rather than dispersal all over the country, would enable a greater degree of control to be exercised over the quality of the material produced.

19.62 construction: details RC EXPANSION JOINTS

Bewegungsfugen im Beton u. Stahlbetonbau. (Expansion Joints in Concrete and Reinforced Concrete Structures.) A. Kleinlogel. (Berlin, 4th edition, 1947, W. Ernst & Sohn.)

Principles of design and details of expansion joints in various types of concrete and reinforced concrete structures.

The arrangement of expansion joints is always a problem causing much discussion between engineer and architect. This book, comprising 212 pages with 471 illustrations, is a comprehensive guide to the subject. It is a collection of several hundreds of practical examples with references, divided into chapters on various types of structure, e.g., multi-storey buildings, roofs, silos, quay- and retaining walls, tanks and swimming pools, bridges, roads, etc. In each case, not only examples are given but the principles governing the design are explained. Examples of the damage caused by the omission or by the unsatisfactory arrangement of expansion joints are also included.

From the architects' point of view, the first two chapters, dealing with buildings, are of particular interest. The author emphasizes the necessity of joints if the size of a building exceeds a certain limit, and sets out basic rules which should be adhered to if the joints are to fulfil their purpose. Perhaps the most important of these rules is the principle that the joints must go right through the internal and

external walls, including the rendering. The violation of this rule, for aesthetic or economic reasons, will involve at some later date, repairs at much higher cost.

Most of the diagrams are self-explanatory so that the book will be of help even to those who do not understand German.

20.116 construction: complete structures PRESTRESSED RC BRIDGE

First Prestressed Bridge in the U.S. P. R. Schofield. (Engineering News-Record [USA], Dec. 30, 1948, pp. 16-18.)

Details of a road bridge of 74 + 160 + 74 ft. spans and about 64 ft. wide, as yet in the design stage, to be built in Philadelphia. Girders will be prestressed according to the Magnel system, precast on the site and lifted into position.

22.31 sound insulation PARTY WALLS

Cavity Party Walls for Sound Insulation. (Building Research Station Digest No. 2, Jan., 1949.)

Materials and thicknesses for cavity walls; indirect transmission by window surrounds and chimneys. Important. Diagrams and figures.

This is one of the current series of digests circulated for the Building Research Station by the RIBA. It makes explicit recommendations for the construction of cavity party walls to reach the standards of sound insulation stated in the Housing Manual.

24.109 lighting BED LIGHTING

Performance Analysis of Available Lighting for Reading in Bed. M. Fahsbender and P. Presbery. (Illum. Engineering [USA], December, 1948, p. 1189.)

Comments and data on 17 types of bedside lighting. Directly useful for architects. Illustrated photographs.

Location of the source was a major factor. None of the lamps which were fixed to the headboard (and were thus at shoulder level) were much use. Brightness on the paper was too high and the room brightness too low. Also they often forced one into a position where there was a glaring view of the source in the corner of the eye.

Wall lamps fixed overhead gave the best results, almost regardless of type. Units were fixed about 4 ft. 6 in. above the floor, and were all arranged to let light up as well as down and all had diffusing bowls or screens below the lamps, as part of the fitting. Ordinary tungsten lights with translucent shades were used, and fluorescent strips with strip-shades of various kinds. All were comfortable for other people as well as the reader.

Table lamps beside the bed gave results almost as satisfying as the positions overhead.

24.110 lighting COMPUTING GOOD LIGHTING

The Practical Mechanics of Designing Optimum Lighting Patterns. H. L. Logan. (Illum. Eng. [USA], Dec., 1948, p. 1233.)

Technique of using a grid to predict good indoor illumination. Useful. Diagrams and one photograph.

Readers are now familiar with the idea that the relative brightness of different parts of a view largely influences our state of vision and our personal comfort. It is easy to predict foot candles, but engineers are still mastering the technique of predict-

ing brightness conditions. This appears to be the best attempt to date. A grid, which will remind architects of familiar daylight diagrams, has drawn on it a view of a room as it will be seen by a person using it. The projected areas of different parts of the scene and their brightness can then be established, and these are transferred to a diagram classified according to the position of the parts of the view. That is to say, the diagram is adjusted so that one takes account of nearness to the normal line of vision, which is important in glare. From the diagram one can see at a glance whether or not any particular area will offend by its brightness. Views are analysed at different angles if necessary, and an example is fully worked out.

There are interesting references to a colour "kit," by name Plochere, and to the author's division of it into four psychological classes, exciting, cheering, tranquillizing and depressing.

26.48 services and equipment: miscellaneous GAS FITTING

Questions and Answers on Gas Fitting. H. A. Blum. (George Newnes Ltd., 1949, 5s.)

A useful quick reference book which contains answers to many points of detail otherwise difficult to find. 126 pp. diagrams.

28.10 miscellaneous DSIR PUBLICATIONS

Government Publications: Sectional List No. 3. Department of Scientific and Industrial Research. (HMSO, 1948.)

Useful reference list of DSIR publications revised to August 31, 1948. Items listed under classified headings. Aspects covered include building, forest products, fuel, illumination, road and water pollution research. Publications on atmospheric pollution and Geological Survey reports should be of special interest to planners.

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

2984 COST OF CHURCH BUILDING

Q Can you give us some idea of the present cost of church building compared with the cost of similar work in 1939, either as a rough percentage, or in any other form. The type of building would be collegiate, probably without a tower, faced in Portland stone and with other finishes fairly plain but of good quality.

A It is probable that the present cost of church building would be in the neighbourhood of 140 per cent. above 1939 costs. However, this must be regarded as an opinion based on very scanty information, as prices of different materials have risen by varying amounts and an accurate assessment can only be made by means of a detailed examination of the particular project.

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.

ENQUIRY FORM

I am interested in the following advertisements appearing in this issue of "The Architects' Journal."

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Please ask manufacturers to send further particulars to:—

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BLOCK LETTERS, Please

Announcements

Mr. A. B. Grayson announces with regret his decision on medical advice to retire from the firm of Grayson & Goldsmith and to devote himself to his practice in the Channel Islands. Mr. Humphrey Goldsmith took over the practice on March 31 under the style and title of Humphrey H. Goldsmith, A.R.I.B.A., Chartered Architect, 7, Bridge Street, Bath.

The new office address of Mr. Ervin Katona, A.R.I.B.A., is 23, Old Burlington Street, London, W.1. Regent 6133.

Mr. K. Ward, A.R.I.B.A., has commenced practising on his own account from 3, Finkle Street, Selby, Yorks., and would be pleased to receive trade catalogues.

The head office address of Messrs. Sinclair & Newton, Quantity Surveyors, 129, Balham High Road, London, S.W.12, Telephone Balham 2431/2, is now 87/88, Newman Street, W.1, Telephone Museum 4747. War damage enquiries should continue to be addressed to the Balham office.

Mr. Frank Swinington, A.C.I.S., A.C.C.S., F.R.ECON.S., assistant manager of Leeds and Holbeck Building Society, has been appointed assistant general manager to the Isle of Thanet Building Society. He joined Head Office at Ramsgate, Kent, on March 1 as deputy to Mr. W. W. Wetherill, general manager, who is deputy chairman of the Building Societies' Association.

Messrs. Gough Cooper & Co. Ltd. announce that they have established a Civil Engineering Division at Windsor House, 46, Victoria Street, London, S.W.1, under the management of J. H. W. Turner, B.Sc.(Econ.), B.Sc., A.M.I.C.E.

Mr. Joseph G. Fogel, DIP.ARCH., A.R.I.B.A., chartered architect, is now practising from 544, Kingsland Road, London, E.8 (telephone: Clissold 5532), and would be glad to receive trade catalogues.

Messrs. Scherrer & Hicks, M.A., F.F.R.I.B.A., of 310, Upper Regent Street, have moved from their office at 10, Dover Street, W.1, to 18, Harcourt House, 19, Cavendish Square, W.1. (Tel.: Museum 1105/6). The address of their Croydon office remains at 50, George Street, Croydon.

The telephone number of Messrs. E. J. & A. T. Bradford, sculptors and craftsmen, has been changed to Hop 2316 (five lines).

Messrs. Copperad Ltd. announce that an additional telephone line has been provided at their Head Office and Works at Colnbrook, Bucks. The numbers available are, Colnbook 203/4/5.

Mr. T. C. Garland, F.I.A.A. & S., M.INST.R.A., principal of Messrs. Garland & Place, Architects and Surveyors, of Hammersmith, W.6, announces that the surveying division of the London practice has been extended to No. 4 Derrigate, Northampton. Telephone: Northampton 3429.

Mr. Ove N. Arup, consulting engineer, of Colquhoun House, Broadwick Street, London, W.1, and 19, Merrion Square, Dublin, Eire, is taking into partnership three senior members of his staff, Mr. R. S. Jenkins, Mr. G. Wood and Mr. A. Young. The firm will in future be known as Ove Arup and Partners.

Lord De L'Isle and Dudley, V.C., will admit visitors to Penhurst Place, Kent, birthplace of Sir Philip Sidney, from 2 p.m. to 5 p.m. each Wednesday, Thursday and Saturday, until October 22, also on Easter, Whit-sun and August Bank Holidays. Connoisseurs' Day—the first Friday in each month (May to October). The earliest part of Penhurst Place, including the Great Hall, dates from 1340. It is a house of great historical and architectural merit and contains an interesting collection of family portraits and old furniture. Visitors are shown the Great Hall, Armoury and State Rooms as well as much of the exterior of the house. On Wednesdays and Thursdays they are also

admitted to the formal gardens. Organizers of parties are asked, when possible, to give previous notice to the Secretary, Penhurst Place, near Tonbridge, of the date and time of arrival. Special arrangements for parties of 50 or more to see the State Rooms on Tuesdays can be made on application to the Secretary. Admission, 2s. 6d.. Children, 1s. 6d. Gardens, 1s. Connoisseurs' Day, 5s.

Buildings Illustrated

Offices in Crawford Street (pages 317-318). Architects: C. H. Elsom, A.R.I.B.A., and Mordecai Pearlman, A.R.I.B.A. General contractors: Leslie Bilsby, Ltd. Sub-contractors: Electrical installation, I. & W. Rockall, Ltd.; heating system, F. J. Baynes & Co. Ltd.; electrical fittings, Troughton & Young, Ltd.

Correction

In the list of sub-contractors for the factory at Iver, published in our issue of March 24 we omitted Mills Scaffold Co. Ltd., who designed and erected the tubular structure supporting the barrel vault roofs.

Obituary

We regret to record the death of Mr. R. H. Morton, F.R.I.B.A., on March 18. His practice will be carried on under the same name of J. H. Morton and Son, by Mr. M. A. Mackenzie, L.R.I.B.A.

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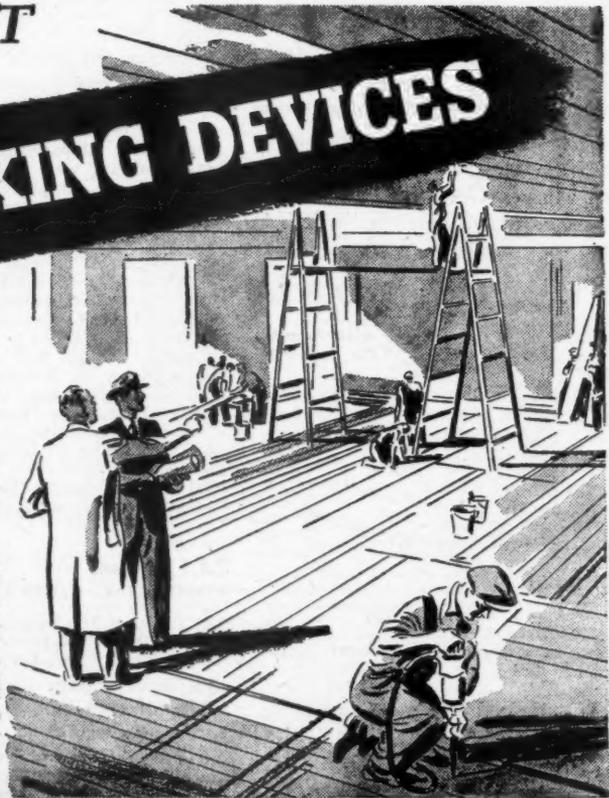
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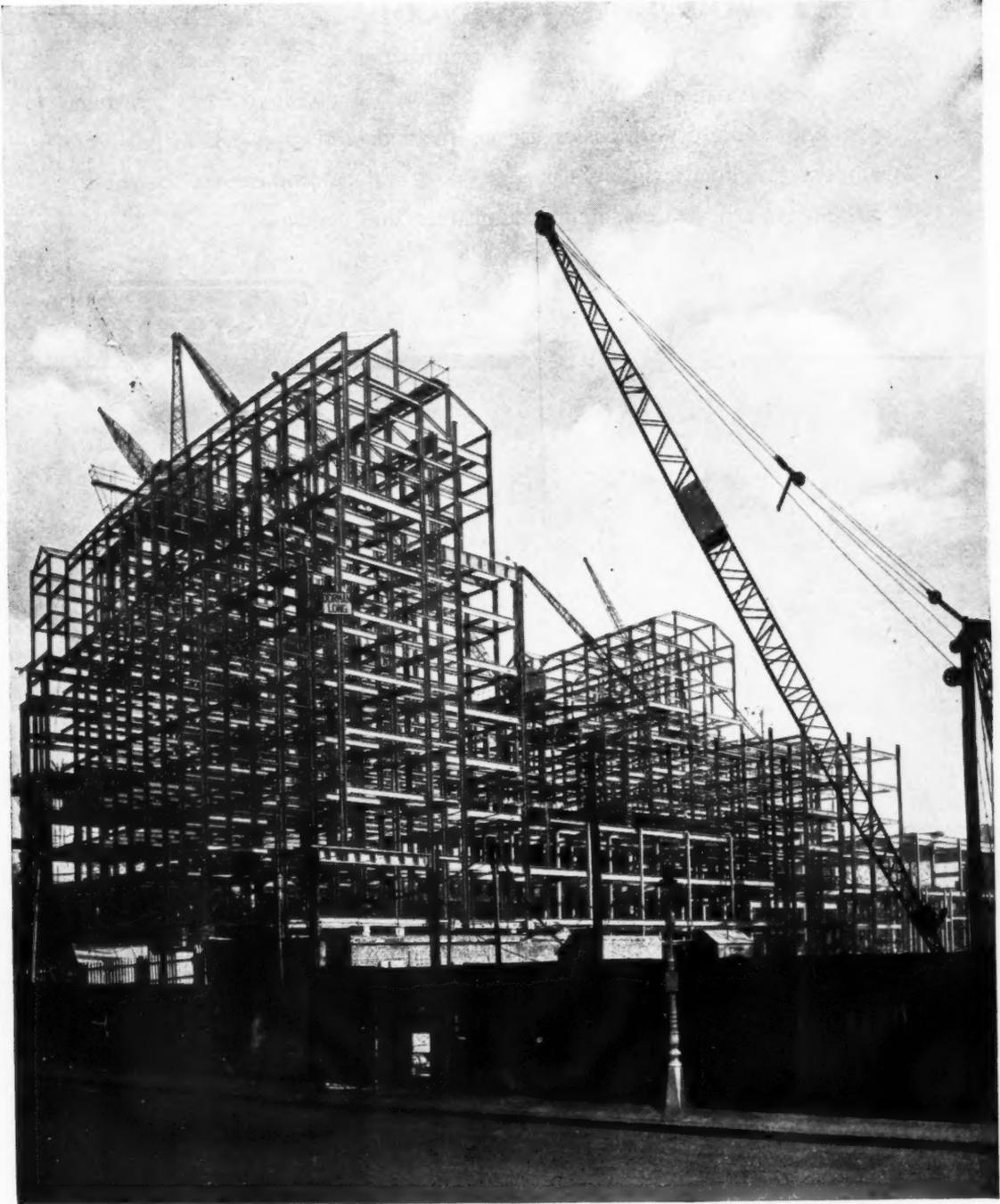
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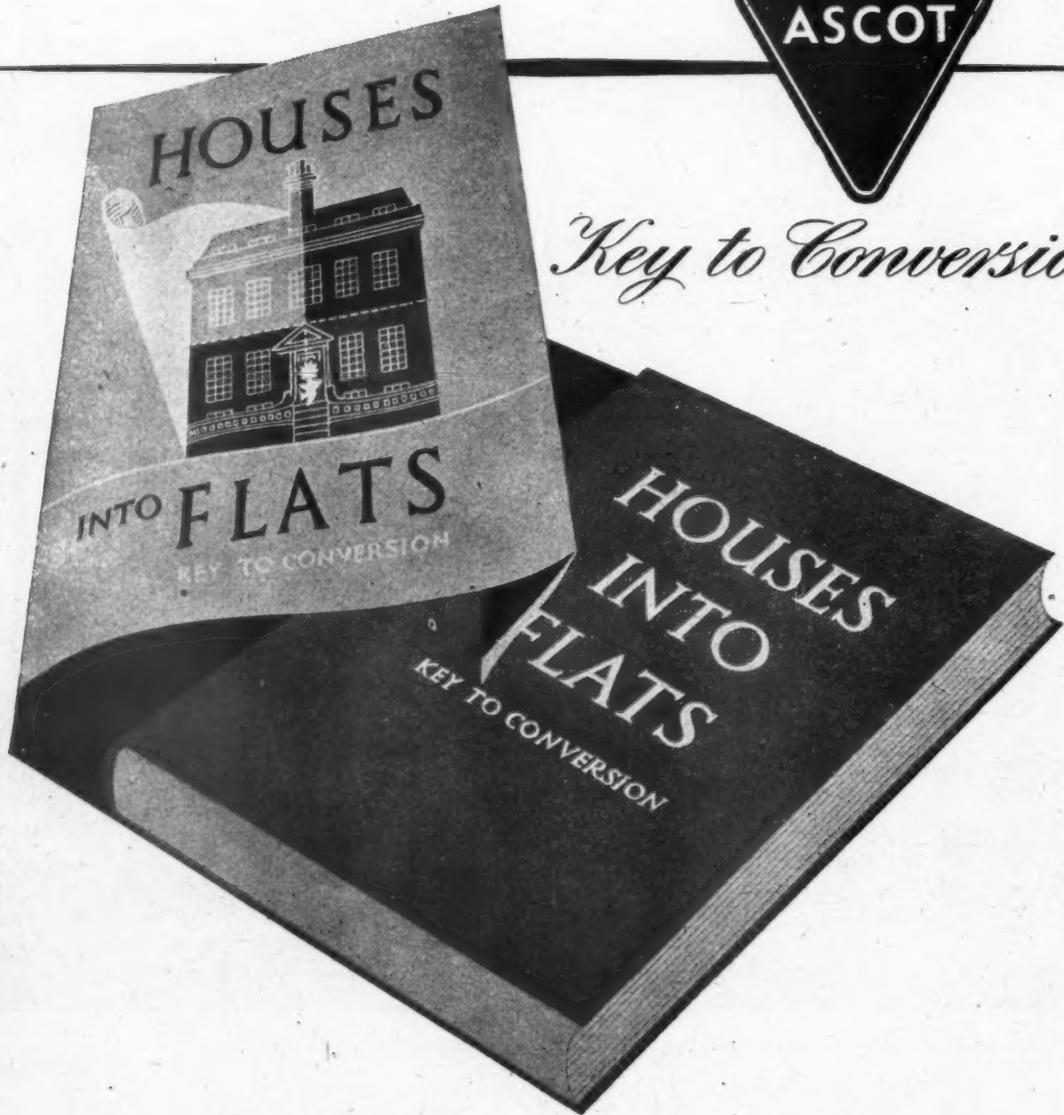




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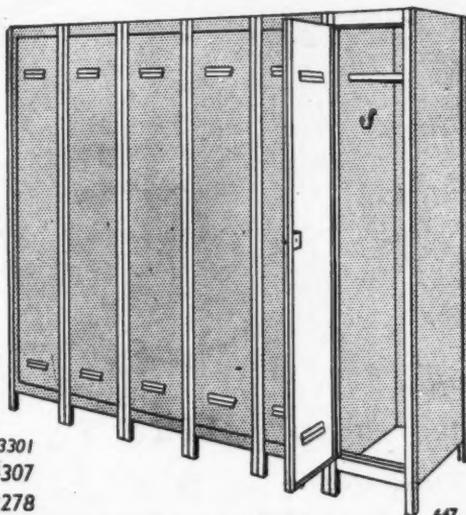
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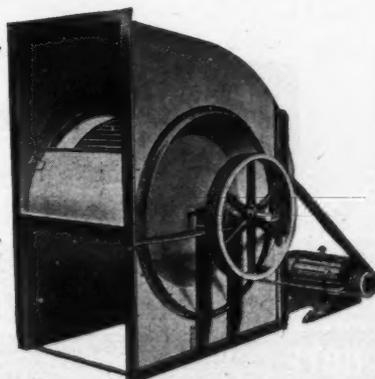
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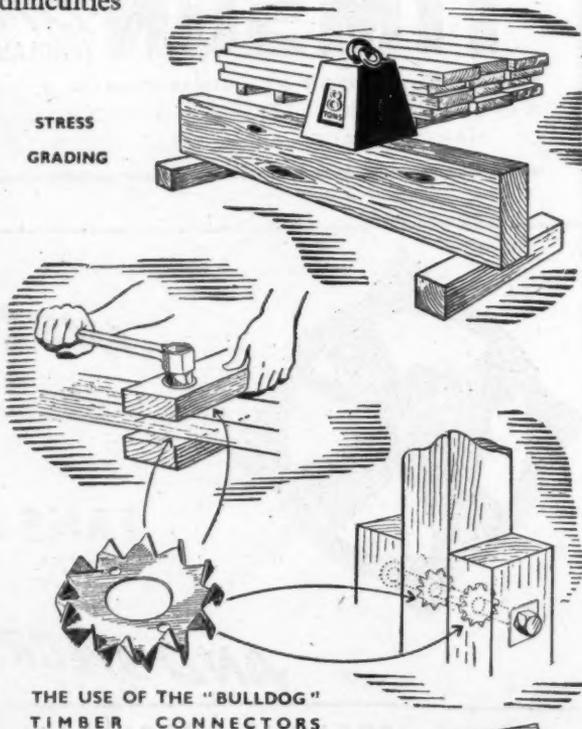
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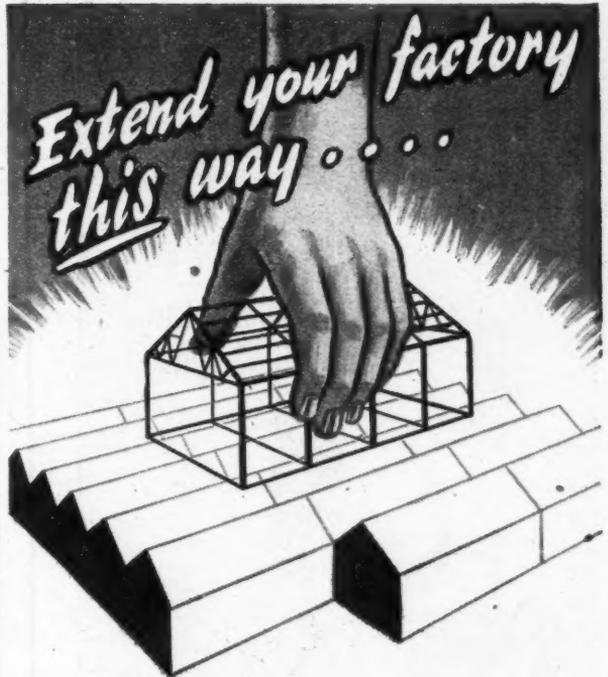
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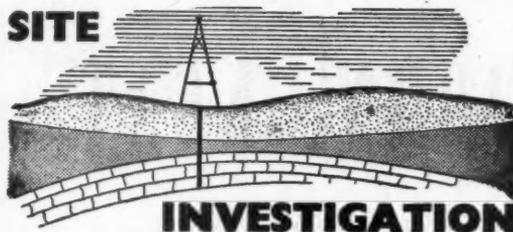
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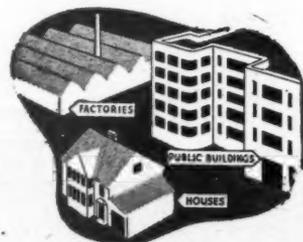
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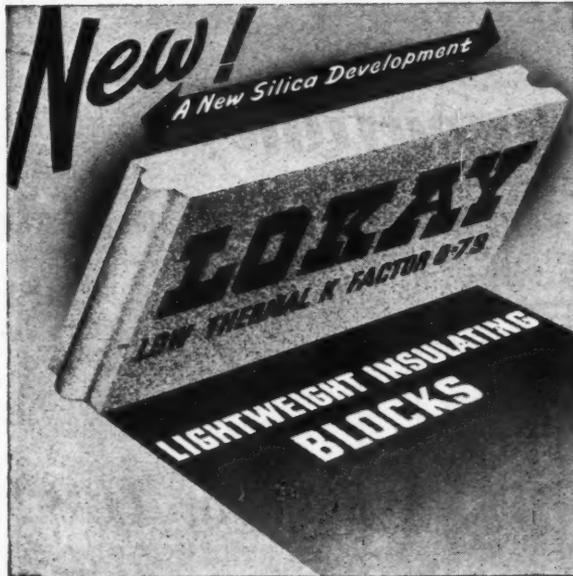
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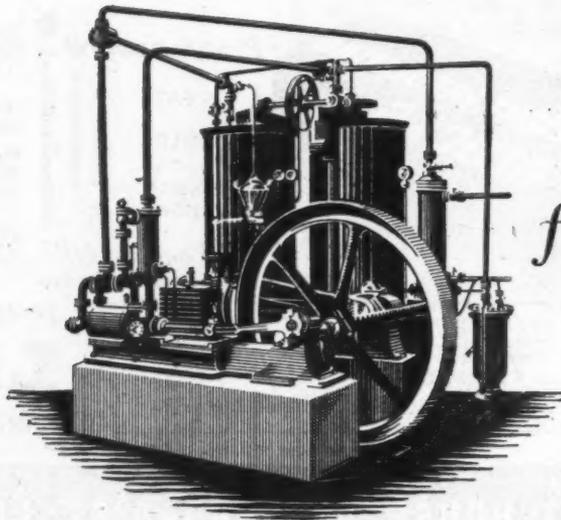
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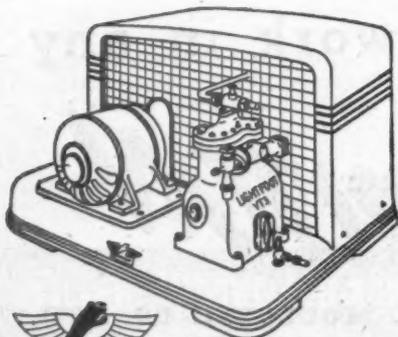
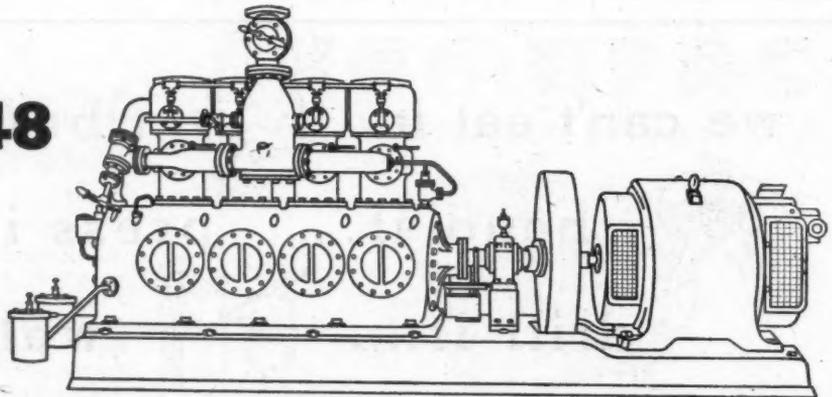
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Successful candidates will be required to undertake the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats), and will be employed in the Housing Architect's Division. Preference will be given to candidates holding a recognized professional qualification.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required, and quote Ref. G.R.3). Canvassing disqualifies. (2359) 1046

CITY OF GLOUCESTER.

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

It is probable that the Council will be able to assist in finding housing accommodation.

Applicants for (a) should be Corporate Members of the Town Planning Institution; preferably with recognized qualifications in Architecture, Civil Engineering or Surveying, have had considerable experience in Planning procedure, and be competent to take charge of the Planning side of a City Engineer and Surveyor's office.

Applicants for (b) should be appropriately qualified and be fully conversant with and experienced in the administration of the Town and Country Planning Act, 1947.

Applications, stating age, qualifications and experience, accompanied by three recent testimonials or the names of three referees, and endorsed "Assistant Planning Officer" or "Planning Assistant," as the case may be, must be delivered to the undersigned not later than Wednesday, 20th April, 1949.

L. O. NEED, Town Clerk.

Guildhall, Gloucester. 2355

COUNTY BOROUGH OF DONCASTER EDUCATION COMMITTEE.

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For appointment (b) the candidates should be suitably qualified and have had considerable experience in the preparation of Bills of Quantities, Specifications and Estimates and the settlement of Final Accounts.

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

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

Applications, suitably endorsed, giving age, qualifications, past and present appointments and full details of experience, together with names of three referees, must reach the undersigned not later than the 23rd April, 1949.

V. H. HOSKIN, Chief Education Officer.

Education Office, Doncaster. 2357 March, 1949.

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The appointments will be subject to the provisions of the Scheme of Conditions of Service for Local Authorities' Administrative, Professional, Technical and Clerical Services; to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Forms of application may be obtained from the Borough Engineer, Town Hall, Tottenham, N.15, to whom they should be returned, together with copies of two recent testimonials, not later than Monday, the 11th April, 1949.

M. LINDSAY TAYLOR, Town Clerk.

Town Hall, Tottenham, London, N.15. March, 1949. 2208

BRECONSHIRE COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

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(f) TWO ARCHITECTURAL ASSISTANTS. Grade II, £420-£465 per annum.

(g) ONE QUANTITY SURVEYOR. Grade VII, £635-£710 per annum.

(h) ONE LAND SURVEYOR. Grade III, £450-£495 per annum.

Applicants for appointments under (a), (b) and (c) above must be registered Architects.

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

Canvassing, directly or indirectly, will definitely disqualify the candidate for the appointment.

Applications must be made on a form to be obtained from the County Architect, Mr. H. C. W. Strickland, F.R.I.B.A., Watton Offices, Brecon, South Wales, and must be received by the undersigned not later than 16th April, 1949.

C. M. S. WELLS, Clerk of the County Council.

County Hall, Brecon. 2194

LONDON COUNTY COUNCIL. QUANTITY SURVEYORS.

Vacancies exist for Quantity Surveyors in the Housing and Valuation Department, for work in connection with the development of cottage estates and the construction of multi-storey dwellings, at salaries of up to £700 a year, the commencing salary in each case being determined according to qualifications and experience. Successful candidates will be required to contribute to the Council's Superannuation and Provident Fund, and will be eligible for appointment to the Council's permanent staff and for advancement on the occurrence of vacancies.

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Forms of application may be obtained from the Director of Housing and Valuer, The County Hall, Westminster Bridge, S.E.1 (a stamped addressed foolscap envelope required), quoting Q.S.1. Canvassing disqualifies. (2140) 762

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CHAS. E. BRADBURY, Town Clerk.

Town Hall, Wallsend. 525

THE RAILWAY EXECUTIVE invite applications for the post of ARCHITECT, Eastern Region. Candidates must be Fellows or Associates of the Royal Institute of British Architects, and also be capable designers who are progressive in outlook and experienced in all aspects of architectural practice. Candidates for the Railway service will be in competition with Architects employed by British Railways.

The salary offered is in the region of £1,000/£1,250 per annum, according to the qualifications of the successful candidate, who will be eligible for membership of a Superannuation Scheme subject to the requirements of the Rules.

Applications, giving full particulars of education, experience and age, should be sent within 14 days to the Secretary, Railway Executive, 222, Marylebone Road, London, N.W.1. It is emphasised that any approach except in the form of a direct and written application from candidates themselves will disqualify an applicant. 502

BOROUGH OF PORTADOWN. APPOINTMENT OF ARCHITECT.

The Portadown Borough Council require the services (in a permanent, full-time capacity) of an ARCHITECT for Town Planning, Housing and other Municipal Schemes, and Services to be carried out in collaboration with the Borough Surveyor.

Salary payable for the position will be at the rate of £650 per annum, rising by four annual increments of £25 to £750 per annum; cost-of-living bonus (at present £90 p.a.) payable in addition; all payable monthly.

The appointment will be subject to the approval of the Ministry of Health and Local Government (N.I.).

The person appointed will be on probation for twelve months.

Applicants must be Registered Architects and Members or Associate Members of the Town Planning Institute, and comply with the other provisions specified in the Local Authorities' (Architects' Qualifications) Regulations (Northern Ireland), 1946 (S.R. & O. 1946, No. 79) and the Local Authorities' (Planning Officers' Qualifications) Regulations (Northern Ireland), 1948, S.R. & O. (Northern Ireland), 1948, No. 145. Preference will be given to ex-Service applicants possessing the required qualifications, provided that the Council is satisfied that such applicants can or within a reasonable time will be able to fill the vacant post efficiently.

Vouched travelling expenses will be recouped to applicants selected to attend for interview.

Initial housing accommodation (being vacated by the previous holder of the position), free of rent and rates, is offered to the successful applicant.

Applications, stating qualifications, age and experience, and accompanied by copies of two recent testimonials, will be received by the undersigned up to 12 noon on Monday 25th April, 1949.

Dated this 4th day of April, 1949. GEORGE MCGOWAN, Town Clerk.

Town Hall, Portadown, Northern Ireland. 556

CITY OF NORWICH. CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment on the permanent staff of ARCHITECTURAL ASSISTANTS, in Grades I to IV of A.P.T. Division, grading in accordance with experience.

Candidates to have good general architectural training and experience. For the higher grades preference will be given to those qualified by examination.

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

Housing accommodation can be made available. Candidates who, to their knowledge, are related to any member or officer of the Council shall, when making application for the appointment, disclose the relationship in writing to the Town Clerk. A candidate who fails to do so shall be disqualified for the appointment and, if appointed, shall be liable to dismissal without notice.

Canvassing of members of the Council or of any Committee, directly or indirectly, shall disqualify the candidate for the appointment.

Applications, stating grade for which applying, accompanied by copies of three recent testimonials, endorsed "Architectural Assistant," must be received by the City Architect, City Hall, Norwich, not later than Friday, 22nd April, 1949. 559

(By permission of the Ministry of Labour and National Service under the Control of Engagement Order.)

METROPOLITAN BOROUGH OF HAMPSTEAD. APPOINTMENT OF JUNIOR ARCHITECTURAL ASSISTANT (MALE).

Applications are invited for the permanent appointment of Junior Architectural Assistant (Male) in the Housing Architect's Section of the Borough Engineer and Surveyor's Department, at a salary in accordance with the General Division of the National Scale of Salaries. Commencing salary at age 16 years £135 p.a., rising by annual increments to £385 p.a. In addition London area weighting will be paid at the rate of £10 p.a. for ages 15 to 20 years, £20 p.a. for ages 21 to 25 years, and £30 p.a. for ages 26 years and over.

Preference will be given to an applicant who has made some progress towards obtaining a professional qualification.

The appointment will be subject to the Council's usual conditions of service, including the passing of a medical examination and contributing to the Council's Superannuation Scheme.

Candidates must disclose in writing whether to their knowledge they are related to any member or senior officer of the Council.

Applications, accompanied by copies of not more than two recent testimonials and stating age, particulars of education and experience, if any, must be delivered to me in sealed envelopes endorsed with the title of the appointment, not later than 23rd April, 1949.

Canvassing will disqualify. The Council is not able to assist in the provision of housing accommodation.

P. H. HARROLD,
Town Clerk.

Town Hall, Haverstock Hill, N.W.3.

CROWN AGENTS FOR THE COLONIES.

Applications from qualified candidates are invited for the following post:—
QUANTITY SURVEYOR required by Sierra Leone Government, Public Works Department, for one tour of 18 to 24 months, with prospect of permanency. Commencing salary and expatriation pay according to experience up to £1,200 a year. Outfit allowance £40. Free passages. Candidates must be able to prepare Bills of Quantities for Estimates and Contracts by direct or indirect labour. Preference given to candidates with professional qualifications. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/24218/3D, on both letter and envelope.

COUNTY COUNCIL OF INVERNESS.

Applications are invited for the following appointments in the Town Planning Section of the County Architect's Department:—
(a) **SENIOR PLANNING ASSISTANT.** Salary A.P.T. (3), V, £320 by £15 to £570 per annum. Candidates should possess a recognized architectural qualification and have had experience in the office of a Local Planning Authority.

(b) **TWO JUNIOR ASSISTANTS (SURVEYING).** Salary A.P.T., (1) B, £260 by £15 to £405 per annum. Candidates should have had training in a planning, architectural, surveying or engineering office.

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

Applications, stating age, qualifications, experience, and present position, accompanied by copies of not more than three recent testimonials, should be submitted to the undersigned within ten days of publication of this advertisement.

R. WALLACE,
County Clerk.
County Buildings, Ardross Street, Inverness. 522

BUCKS COUNTY COUNCIL.

Applications are invited for the appointment of an **ARCHITECTURAL ASSISTANT, Grade IV, £480-£525 p.a.**, in the County Architect's Department. Candidates should preferably have been trained at a recognized School of Architecture and have a fair for design.

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

Applications, stating age, qualifications, and particulars of present and previous appointments, and giving the names and addresses of three referees, to be sent to the County Architect, County Offices, Aylesbury, not later than 19th April, 1949. 2292

BOROUGH OF SURBITON. APPOINTMENT OF ARCHITECTURAL ASSISTANT, A.P.T., IV.

Applications are invited for this permanent post. Salary £480, £15-£295 per annum, plus London "weighting." Housing accommodation will be provided, if necessary, at an economic rent as and when such accommodation becomes available. Conditions of appointment and forms of application may be obtained from the undersigned, to whom applications should be delivered by 23rd April, 1949.

R. H. WRIGHT,
Town Clerk.
Council Offices, Surbiton. 550

CITY OF COVENTRY. PLANNING DEPARTMENT.

Applications are invited for the following appointments on the permanent staff of the Planning Department:—

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

(b) **ONE DRAUGHTSMAN, General Division. Maximum Men, £385; women, £308.**

Applicants for appointments (a) should have had considerable experience in survey work in connection with the preparation of the Development Plan, and must hold appropriate qualifications.

The appointments are subject to the following: (a) National Scheme for Local Government Officers, as amended by the Coventry Corporation Act, 1937, as amended for widows by the Coventry Corporation Act, 1935, and the Coventry Municipal Officers' Widows' and Orphans' Pension Fund; (c) medical examination; (d) one calendar month's notice on either side.

Housing accommodation may be made available for the successful candidates for appointments (a).

Applications, suitably endorsed, stating age and, in date order, education, training, technical qualifications, experience, present position and salary, together with the names of three referees, to be delivered to the Joint Planning Officers not later than the 25th April, 1949.

E. H. FORD, O.B.E., M.Inst.C.E.,
M.Inst.Mun.E., M.T.P.I.,
D. E. E. GIBSON, M.A., A.R.I.B.A.,
A.M.T.P.I.,
Joint Planning Officers.

Planning Department, Earl Street, Coventry. 512
30th March, 1949.

WEST SUSSEX COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments at salaries in accordance with the National Scale of Salaries (bonus consolidated):—

(a) **SENIOR ASSISTANT ARCHITECT, A.P.T. Division, Grade VI (salary £595 to £660 per annum).** Applicants must be Associates R.I.B.A., who have had considerable experience in the design and construction of modern school buildings. Previous experience with a Public Authority is not essential in the case of candidates with outstanding qualifications in architectural design.

(b) **ASSISTANT MAINTENANCE SURVEYOR AND CLERK OF WORKS, A.P.T. Division, Grade I (salary £390 to £435 per annum).** Applicants should have had experience in connection with the supervision of maintenance works, and must be able to prepare reports, specifications, schedule of dilapidations and estimates of cost. Previous experience with a public authority is desirable.

(c) **JUNIOR QUANTITY SURVEYING ASSISTANT, General Division (salary according to age; Male, rising to £385 per annum at 32).** Applicants, whose education should have reached matriculation standard and be accurate with figures, will have opportunity for training for this work.

Further particulars should be obtained from F. R. Steele, F.R.I.B.A., F.R.I.C.S., M.T.P.I., County Architect, County Hall, Chichester, to whom detailed applications, based on the further particulars, must be submitted not later than the 22nd April, 1949.

T. C. HAYWARD,
Clerk of the County Council.
County Hall, Chichester. 511
29th March, 1949.

SURREY COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

(a) **ASSISTANT QUANTITY SURVEYOR, Grade VI. Salary £595 to £660 per annum, plus London allowance of £30 per annum.**

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

Full details of past and present appointments should be given. The appointment will be subject to the provisions of the Local Government Act, 1937, and the successful applicant will be required to pass a medical examination.

CLERK OF WORKS, on major building projects on the temporary establishment of the County Council. The salary will be up to a maximum of £12 per week, according to the qualifications and experience of the applicant.

All applicants must have been properly trained as craftsmen, and for preference have served as Foremen on substantial contracts, prior to 1940.

Applications, stating age, qualifications, full details of experience, salary required, and accompanied by copies of three testimonials, should be addressed to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, to reach him not later than the 23rd April, 1949.

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

The Council will be unable to provide any housing accommodation, and the successful applicants will be required to make their own arrangements in this direction.

DUDLEY AUKLAND,
Clerk of the Council.
County Hall, Kingston-upon-Thames. 508

COUNTY BOROUGH OF DERBY. BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments on the permanent staff, in accordance with the National Scale of Salaries:—

(a) **ONE CHIEF ASSISTANT ARCHITECT (GENERAL SECTION). Salary £600-£680 (x225).**

Applicants should be Associate R.I.B.A., with a good knowledge of General Architectural work.

(b) **ONE ASSISTANT ARCHITECT, Grade III, IV and V. Salary £450-£570.**

Applicants should have passed the Intermediate examination of the R.I.B.A., and have had good architectural experience.

(c) **ONE SENIOR QUANTITY SURVEYOR, Grade VII. Salary £635-£710.**

Applicants should be Chartered Quantity Surveyors or Prospective, and have had experience in the preparation of quantities, specifications, site measuring and estimates.

(d) **ONE JUNIOR QUANTITY SURVEYOR, Grade III, IV and V. Salary £450-£570.**

Applicants should be fully experienced in working up final accounts and the taking off of minor works.

(e) **ONE JUNIOR QUANTITY SURVEYOR, Grade I and II. Salary £390-£465.**

Applicants should be experienced in working up bills of quantities and general assistance to Senior Quantity Surveyors.

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

Forms of application may be obtained from Thos. W. East, F.R.I.B.A., Borough Architect, The Council House, Corporation Street, Derby, and should be returned when completed, together with a copy of one testimonial and the names of two persons to whom reference may be made, to arrive not later than Friday, 22nd April, 1949. Canvassing, directly or indirectly, will be a disqualification.

E. H. NICHOLS,
Town Clerk.
The Council House, Derby. 506

COUNTY BOROUGH OF BLACKBURN.

Applications are invited in connection with the following vacancies on the permanent staff of the Borough Engineer's Department:—

ONE ARCHITECTURAL ASSISTANT, Grade VI (£595-£660), or VII (£535-£710), according to experience and qualifications.

ONE ARCHITECTURAL ASSISTANT, Grade VI. Salary £595-£660.

TWO ARCHITECTURAL ASSISTANTS, Grade V. Salary £520-£570.

TWO ARCHITECTURAL ASSISTANTS, Grade III. Salary £450-£495.

Applicants must be Registered Architects and have good general experience in the design and construction of schools, public and Municipal buildings and housing. Preference will be given to Associates of the R.I.B.A., or in the case of the Grade V and III posts, to candidates who have passed the Intermediate examination of the R.I.B.A.

ONE CLERK OF WORKS, Grade IV, A.P.T. Division. Salary £480-£525.

Applicants for this post must have a sound knowledge of all the building trades, and be capable of supervising new and maintenance work. He must also have experience in preparing estimates for maintenance work and certifying on completion. A good knowledge of the construction of school buildings is required.

Applications, endorsed "Staff Appointments," stating age, qualifications, experience, present and past appointments, together with recent testimonials, should be submitted to the Borough Engineer and Surveyor, Town Hall, Blackburn, not later than 22nd April, 1949. 514

OXFORDSHIRE COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

(a) **PRINCIPAL ASSISTANT ARCHITECT, A.P.T., Grade VIII, £685-£760.**

(b) **SENIOR ASSISTANT ARCHITECT, A.P.T., Grade VII, £635-£710.**

(c) **PRINCIPAL QUANTITY SURVEYOR, A.P.T., Grade VII, £635-£710.**

The above salaries are consolidated.

Candidates for (a) must be Associates of the R.I.B.A. and have a sound knowledge of modern school design and construction. Candidates for (b) must be Associates of the R.I.B.A. and have experience in general County work, and preference will be given to one having experience in the design and construction of Police and Fire Service Buildings, etc.

Candidates for (c) must be an Associate Member of the R.I.C.S. (Quantities).

Candidates for (a) and (b) may be required to own and drive a car, for which an allowance on the Council's scale will apply.

The appointments will be subject to a satisfactory medical examination, to the National Scheme of Conditions of Service and the Local Government Superannuation Act, 1937, and to one month's notice on either side.

Applications, stating age, qualifications and experience, accompanied by copies of three recent testimonials, are to be sent to the County Architect, 3, Becket Street, Oxford, not later than 20th April, 1949.

F. G. SCOTT,
Clerk of the Council. 510

**COUNTY BOROUGH OF NORTHAMPTON.
BOROUGH ARCHITECT'S DEPARTMENT.
APPOINTMENT OF SENIOR ASSISTANT
ARCHITECT (TOWN PLANNING).
GRADE VI, A.P.T. (£295 to £660).**

Applications for the above appointment, stating age, qualifications, experience, past and present appointments and salary, whether related to any member or senior officer of the Council, and giving the names of two persons to whom reference can be made, should be delivered to J. L. Womersley, A.R.I.B.A., A.M.T.P.I., Borough Architect and Town Planning Officer, not later than 13th April, 1949.

Applicants should be Members of the Royal Institute of British Architects, and preferably hold a qualification or have experience in Town Planning. Previous employment in a Local Government Office is not essential.

The appointment offers considerable scope for a person having design ability and a sound training, the successful applicant being expected to take charge of staff preparing the Outline Development Plan, and detailed replanning schemes for the central Area, including a Civic Centre. At a later stage there will be opportunity to engage upon the architectural projects embodied in the schemes.

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

Canvassing will disqualify.
C. E. VIVIAN BOWK,
Town Clerk.
Guildhall, Northampton. 2242

**METROPOLITAN BOROUGH OF
PADDDINGTON.
HOUSING DEPARTMENT.**

Appointment of—
(a) TWO ARCHITECTURAL ASSISTANTS.
(b) TWO JUNIOR ARCHITECTURAL ASSISTANTS.

Applications are invited for the above-mentioned appointments on the permanent establishment of the Housing Department:—

(a) ARCHITECTURAL ASSISTANT. Salary within Grades III-IV, A.P.T. Division (£450-£525 per annum), according to experience and qualifications, plus London weighting allowance.

Candidates must be suitably qualified and should have had experience of multi-storied blocks of flats. Preference will be given to Associates of the R.I.B.A., or those in an advanced stage of preparation for the Final examination of that Institute.

(b) JUNIOR ARCHITECTURAL ASSISTANT. Salary within Grade I of the A.P.T. Division (£390-£435 per annum), according to experience and qualifications, plus London weighting allowance.

Applicants must have passed or be about to sit for the Intermediate examination of the Royal Institute of British Architects, be used to preparing working and detail drawings, and be good draughtsmen.

These appointments will be subject to one month's notice on either side, to the provisions of the Council's Superannuation Acts and Standing Orders, and to the National Joint Council's Scheme of Conditions of Service.

Forms of application are obtainable from the undersigned, and applicants should state clearly which form is required.

Applications for these appointments, stating age, qualifications, present and previous appointments, with names of three authorities or persons to whom reference may be made, should be delivered to the undersigned not later than noon on Tuesday, 19th April, 1949.

Canvassing, directly or indirectly, will disqualify.

W. H. BENTLEY,
Town Clerk.
Town Hall, Paddington, London, W.2. 2198

**CITY AND COUNTY OF THE CITY OF
EXETER.**

Applications are invited for the following appointment on the permanent staff of the City Architect's department:—

PRINCIPAL ASSISTANT PLANNING ARCHITECT. Salary A.P.T., Grade VII, £600-£635 per annum to £710 per annum.

Duties will include architectural and detailed planning work in connection with the reconstruction of the blitzed central areas of the City. Candidates must be Associate Members of the Royal Institute of British Architects, and competent in design and detailed construction.

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

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

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

Applications, stating age, qualifications, previous and present appointments and salaries, and details of experience, together with copies of recent testimonials, should be sent to H. B. Rowe, F.R.I.B.A., A.M.I.S.T.B., City Architect, Southernhay West, Exeter, not later than Tuesday, the 19th April, 1949.

C. J. NEWMAN,
Town Clerk.
Exeter. 294th March, 1949. 2294

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

Applications are invited for the following appointments on the permanent staff:—

(a) SECTION ARCHITECT. Salary £760-£860 per annum.

(b) SENIOR ASSISTANT ARCHITECTS, Grade VIII. Salary £685-£760.

(c) SENIOR ASSISTANT ARCHITECTS, Grade VII. Salary £635-£710.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937; to a satisfactory medical examination, and to the termination of each appointment by one month's notice in writing on either side.

Applications should be forwarded on the forms to be obtained from the County Architect, G. Noel Hill, F.R.I.B.A., M.T.P.I., County Offices, Preston, to whom they should be returned, accompanied by copies of three recent testimonials, to arrive not later than Tuesday, the 12th April.

R. H. ADCOCK,
Clerk of the County Council.

COUNTY OFFICES, PRESTON. 22nd March, 1949. 2220

**METROPOLITAN BOROUGH OF
HAMPSTED.
ARCHITECTURAL ASSISTANT
(TEMPORARY).**

Applications are invited for the appointment of an Architectural Assistant on the Temporary Staff of the Housing Architect's Section of the Borough Engineer and Surveyor's Department, at a salary in accordance with Grade IV of A.P.T. Division, National Scales of Salaries, £480 to £525 per annum, plus £30 London weighting. Age limit: 45 years of age on the 1st January, 1949.

Applicants should have passed the Intermediate examination of the Royal Institute of British Architects, or have made marked progress towards obtaining a professional qualification, and should have had experience in general architectural work, including housing.

Applications, stating (a) age, (b) examination qualifications, (c) present and past appointments with dates and salaries, (d) detailed particulars of experience, and accompanied by copies of three recent testimonials, must be delivered to me in a sealed envelope endorsed "Architectural Assistant," not later than 12 noon on Tuesday, 19th April, 1949.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937.

The conditions of service are those in the National Scheme for Local Government Officers, and the appointment will be terminable by one calendar month's notice on either side.

Canvassing will disqualify.
F. H. HARROLD,
Town Clerk.

Town Hall, Haverstock Hill, N.W.3. 2232

**NORTH-WEST METROPOLITAN REGIONAL
BOARD.
ARCHITECT'S DEPARTMENT.**

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

ARCHITECTURAL ASSISTANTS (7 posts). Grade A.P.T., II-V (£420-£570 p.a.), plus London weighting. Applicants must have good general experience of design and construction, and will be placed on the grade appropriate to their experience and qualifications.

Appointments will be subject to the provisions of the National Health Service (Superannuation) Regulations, 1947/48, and will be terminable by one month's notice. Successful applicants will be required to pass a medical examination.

Applications, giving age, details of experience, together with the names of two referees, should be addressed to the Secretary, North-West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, not later than 15th April, 1949. 2202

**COUNTY BOROUGH OF DERBY.
APPOINTMENT OF STAFF.**

(a) ONE GENERAL TOWN PLANNING ASSISTANT. Grade VI (£595-£660).

(b) ONE DRAUGHTSMAN. Grade III (£450-£495).

Applications are invited for the above appointments on the staff of the Borough Engineer and Surveyor.

Applicants for position:—
(a) Should possess appropriate qualifications and should be experienced in Urban Planning.
(b) Should be neat and expeditious draughtsmen and tracers and must have had previous experience in this class of work, preferably with a Local Authority.

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

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

Applications, stating which post is applied for, age, qualifications, experience and accompanied by copies of three recent testimonials, or names of two persons to whom reference may be made, should be addressed to M. L. Francis, F.R.I.C.S., M.I.Mun.E., Borough Engineer and Surveyor, The Council House, Derby, appropriately endorsed, to be received not later than 18th April, 1949.

Canvassing directly or indirectly will be a disqualification, and candidates should state whether they are related to any member or senior official of the Council.

E. H. NICHOLS,
Town Clerk.
The Council House, Derby. 2252

HIS MAJESTY'S COLONIAL ENGINEERING SERVICE.

Vacancies exist in the Public Works Department, Federation of Malaya, for ASSISTANT ARCHITECTS. Salary in the scale \$520-\$1,065 per month (sterling equivalent £728-£1,491 per annum), plus cost-of-living allowance. Point of entry depending on age, qualifications, and experience.

Candidates must be Associates of the Royal Institute of British Architects or hold equivalent qualifications, and have had two years' experience in a responsible position in an Architect's office. Age limits 25-30 years.

The duties of the posts include the preparation of building schemes, layouts and site investigation. Planning and designing of new buildings of all kinds. Supervision of construction and maintenance of buildings and any other normal duties of an architect.

Officers appointed will be on probation for three years in the first instance for permanent and pensionable employment.

Free first-class passages will be supplied for the officer and his wife and children under 10 years of age on first appointment and on leave. Government quarters and heavy furniture, if available, are provided at low rents.

Leave on full pay after tours of 2-3 years at the rate of 5 days per month of resident service. Intending candidates should write at once for application form, giving brief details of age, qualifications and experience, to the Director of Recruitment, Colonial Office, Sanctuary Buildings, Great Smith Street, London, S.W.1, quoting the reference number of the post, 27301/19. 509

**NORFOLK EDUCATION COMMITTEE.
APPOINTMENT OF ARCHITECTURAL
ASSISTANT, GRADE A.P.T. III.**

Applications are invited for the appointment of an Architectural Assistant, at a salary of £450 per annum, rising by three annual increments of £15 to a maximum of £495 per annum.

Applicants should have had good general architectural training and experience, including surveys and levelling.

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

Form of application may be obtained from the undersigned on receipt of a stamped addressed envelope, which should be returned not later than 14 days after the date of this advertisement. All communications regarding this matter should be marked "Architectural Assistant, Grade III" on the envelope.

W. O. BELL,
Chief Education Officer.
County Education Office,
Stracey Road, Norwich. 562

**NORFOLK EDUCATION COMMITTEE.
APPOINTMENT OF ARCHITECTURAL
ASSISTANT, GRADE A.P.T. V.**

Applications are invited for the post of Architectural Assistant, at a salary of £520 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £570 per annum.

Applicants should have had good architectural experience. Knowledge of school design and construction would be an advantage.

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

Form of application may be obtained from the undersigned on receipt of a stamped addressed envelope, and should be returned within 14 days of the date of this advertisement. All communications with regard to this matter should be marked "Architectural Assistant, Grade V."

W. O. BELL,
Chief Education Officer.
County Education Office,
Stracey Road, Norwich. 561

**GOVERNMENT OF NORTHERN IRELAND.
MINISTRY OF HEALTH AND LOCAL
GOVERNMENT.**

ASSISTANT ARCHITECTS.

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

Remuneration: Successful candidates will be remunerated within the salary range £500-£750 per annum inclusive, and the commencing salary within this range will be fixed in each case according to qualifications and experience. Vacancies exist for Planning and Public Health Work.

Qualifications: Candidates must be Registered Architects by examination. In addition, the candidates for the Public Health vacancies should, preferably, have experience in up-to-date hospital design and layout, and some aptitude for research into comparative standards of design and construction. In the case of a Planning appointment candidates should preferably possess a recognized qualification in town planning or have good experience in town planning work.

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 efficiently.

Applications, giving date of birth, full particulars of qualifications and experience, and stating the post applied for, together with copies of two recent testimonials, should be sent, without delay, to the Assistant Secretary (Establishments), Ministry of Finance, Stormont, Belfast. 505

HEMEL HEMPSTEAD DEVELOPMENT CORPORATION
CHIEF ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of **PRINCIPAL PLANNING ASSISTANT**, in the Chief Architect's Department, at a starting salary of between £750 and £850 a year, according to qualifications and experience. Increments may be expected, according to service, up to a maximum of £1,000 a year.

Applicants must have the qualification of at least Associate Membership of the Town Planning Institute, and should preferably have architectural qualifications in addition.

The officer appointed will be responsible for the work of the Planning Section, involving the planning and programming of neighbourhood units and other residential and industrial layouts prior to construction, dealing with development applications and reports thereon, consultations with other bodies, and assisting with the development scheme for the New Town.

The post will be subject to the Development Corporation's staff rules and conditions of service, and in particular to 3 months' notice of termination on either side. He will be required to contribute under the New Towns Pension Scheme or the Local Government Superannuation Acts.

The Corporation is unable to provide housing accommodation for the successful applicant.

Applications, stating age, education, qualifications and experience, and the names of two persons to whom reference may be made, should be clearly marked "Principal Planning Assistant" on the envelope, and addressed to reach the undersigned not later than 23rd April, 1949.

W. O. HART,

General Manager.

Westbrook Hay, Hemel Hempstead, Herts. 2290

BOROUGH OF KEIGHLEY
BOROUGH ARCHITECTS AND HOUSING DEPARTMENT.

Applications are invited for the following appointment on the permanent staff—

Conditions of service and salaries are in accordance with the National Joint Council Scheme for Local Authorities.

QUANTITY SURVEYING ASSISTANT, Grade II. Salary scale £420 to £465.

Preference will be given to applicants having passed the Intermediate examination of a recognized professional Institute.

Applications to be made on a form to be obtained from the undersigned, to whom it must be returned, accompanied by copies only of two recent testimonials, not later than Wednesday, 20th April, 1949.

E. G. FELGATE A.R.I.B.A.,

Borough Architect's and Housing Department,
College Street, Keighley. 2274

BERKSHIRE COUNTY COUNCIL.

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

ASSISTANT ARCHITECT, at a salary of £520-£570 A.P.T., Grade V.

Candidates should have had considerable experience in the design and construction of modern buildings.

Application forms and further particulars can be obtained from the County Architect, Wilton House, Parkside Road, Reading, to whom they should be returned completed by Thursday, 14th April, 1949.

H. J. C. NEOBARD,

Clerk of the Council.

Shire Hall, Reading. 2269

COUNTY BOROUGH OF WOLVERHAMPTON
APPOINTMENTS OF SENIOR ASSISTANT ARCHITECTS.

Applications are invited for the appointments of Senior Assistant Architects to the permanent staff in the Architectural Section of the Borough Engineer's Department. Salary A.P.T. Division, Grade VI, £595-£660 per annum.

Applicants must be Associates of the Royal Institute of British Architects. Preference will be given to applicants who have had experience in the design and construction of buildings for educational purposes, or on flats and general housing work. Previous experience in Local Government work is desirable but not essential.

The appointments, terminable by one month's notice on either side, are subject to the provisions of the Local Government Officers' Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination. The Conditions of Service will be those of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services.

Housing: A Modern semi-detached house is available for one of the Senior Assistants appointed. Applicants must state whether their application is conditional upon the offer of this house. Where housing accommodation is not available, successful applicants may, if married, qualify for a subsistence or travelling allowance under the Council's scheme as at present in force.

Applications, stating age, qualifications, present position, and full details of experience, together with copies of three recent testimonials, should be delivered to the undersigned not later than 18th April, 1949, in a plain sealed envelope suitably endorsed.

J. BROOK ALLON,

Town Clerk.

Town Hall, Wolverhampton. 2200

BOROUGH OF DOVER
CHIEF ASSISTANT ARCHITECT.

Applications are invited for the above appointment. Salary in accordance with A.P.T., Grade VI, £595-£660 per annum.

Applicants should hold recognized architectural qualifications, and have experience in housing, Municipal building design, and general building construction.

The Corporation is prepared to make a grant not exceeding 50 per cent. of approved expenditure in connection with household removal expenses and to assist in the provision of housing accommodation.

Applications, stating age, experience and qualifications, accompanied by copies of three recent testimonials, must be delivered to the Borough Engineer and Surveyor, Maison Dieu House, Dover, not later than Thursday, 14th April, 1949.

JAMES A. JOHNSON,

Town Clerk.

New Bridge House, Dover. 2268

BOROUGH OF SOUTHALL
APPOINTMENT OF SENIOR TOWN PLANNING ASSISTANT (GRADE Va).

Applications are invited for the above appointment, on the permanent staff of the Corporation, at a salary in accordance with Grade A.P.T. Va, of the National Scheme (£550-£610), plus appropriate London weighting.

Candidates must hold a recognized Town Planning qualification.

Applications, on forms to be obtained from the Borough Engineer, Town Hall, Southall, must be returned to him on or before Monday, 18th April, 1949.

J. S. SYRETT,

Town Clerk.

Town Clerk's Office, Southall. 2287

BOROUGH OF MALDEN AND COOMBE
ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant, on the permanent staff of the Borough Engineer's Department, at a salary in Grade IV, A.P.T. (£480-£525, plus London weighting). The appointment is terminable by one month's notice in writing on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination. Preference will be given to Associate Members of the Royal Institute of British Architects, and applications, giving age, qualifications and details of training, experience, present and previous appointments with salaries, accompanied by copies of two recent testimonials, should be addressed to the undersigned and be delivered not later than 21st April, 1949.

Canvassing, directly or indirectly, will be a disqualification.

Candidates, when making application, must disclose in writing whether to their knowledge they are related to any member of, or the holder of, any office under the Council. The Council will endeavour to provide the successful candidate with housing accommodation if deemed necessary.

HAROLD E. BARRETT,

Town Clerk.

Municipal Offices, New Malden, Surrey. 2267

PLANNING ASSISTANTS, A.P.T. IV-V, required in the County Planning Department of the Middlesex County Council. Salary £480-£570, plus £30 London weighting (£10 less under 26). Duties include preparation of maps, plans and reports and investigation of data. Previous experience, and Inter. T.P.I. or similar qualification essential. Established and pensionable, subject to medical examination.

Applications, together with three testimonials, to the Clerk of the County Council, Guildhall, Westminster, S.W.1, by 23rd May, 1949, quoting F. 479 A.J. Canvassing disqualifies. 2285

CITY AND COUNTY OF KINGSTON-UPON-HULL
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments in the Quantity Surveyor's Section—

(a) **ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade VI** (£595-£660 per annum).

Applicants must have had experience in all branches of building work, and should be familiar with every aspect of a Quantity Surveyor's duties, including preparation of estimates, "taking off" in all trades, complete for Bills of Quantities, and be able to measure up for interim and final certificates and settle final accounts.

(b) **ASSISTANT QUANTITY SURVEYORS, A.P.T. Grade I** (£390-£435 per annum).

Applicants should have had experience in the checking of interim certificates, measurement of works in progress, and able to "take off" under supervision.

The Corporation have in course of construction and in preparation a large and varied programme of interesting works which will offer experience and opportunity to successful applicants.

The appointments will be subject to one month's notice on either side, to the National Scheme of Conditions of Service, and the Local Government Superannuation Act, 1937.

Application forms, obtainable from the undersigned, should be returned complete on or before 22nd April, 1949.

ANDREW RANKINE, A.R.I.B.A.,

City Architect.

Guildhall, Kingston-upon-Hull. 2266

COUNTY BOROUGH OF EAST HAM
APPOINTMENT OF ASSISTANT PLANNING OFFICERS.

Applications are invited for the appointment of **TWO ASSISTANT PLANNING OFFICERS, Grade A.P.T. III** (salary £450-£495 per annum), plus London weighting, in the Town Planning Section of the Borough Engineer's Department.

Candidates must be competent draughtsmen and have general knowledge and experience of town planning work.

Housing accommodation is not provided, but the Council will be prepared to consider applications for subsistence allowances in appropriate cases from persons appointed who may be unable to obtain suitable accommodation.

Application forms obtainable from the undersigned must be returned not later than 16th April, 1949.

H. A. EDWARDS,

Town Clerk.

Town Hall, East Ham, E.6. 2277

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF FINANCE
ASSISTANT ARCHITECTS AND ARCHITECTURAL ASSISTANTS.

Applications are invited for posts of Assistant Architect and Architectural Assistant, in the Works Division of the Ministry of Finance. Appointments will be non-pensionable, but, as far as can be foreseen, will last for several years.

Applicants will be eligible for consideration for appointment to established posts as vacancies arise. The work programme embraces design and execution of Factories, Housing, Schools and Public Buildings.

Remuneration: The ranges of salary attaching to the posts are:—

Assistant Architect, Grade "B," £500-£750.

Assistant Architect, Grade "C," £400-£600.

Architectural Assistant, Grade "D," £250-£500.

Entry point will be determined according to the qualifications and experience of the successful candidates.

Qualifications: Candidates for Grade "B" and "C" must be Registered Architects, by examination. In addition, candidates for Grade "B" posts must have had good general experience in an Architect's office, including the writing of Specifications. Candidates for Grade "D" posts should have had approved experience in an Architect's drawing office.

Preference will be given to ex-Service candidates of the 1914-1918 or 1939-45 war, provided that such candidates can or within a reasonable time will be able to fill the posts efficiently.

Applications, giving date of birth and full details of training and qualifications, should be sent immediately to the Assistant Secretary (Establishments), Ministry of Finance, Stormont, 2150

METROPOLITAN BOROUGH OF SHOREDITCH
BOROUGH ARCHITECT AND SURVEYOR'S DEPARTMENT.

Applications are invited for the appointment of **TWO ARCHITECTURAL ASSISTANTS**, in Grade A.P. & T. IV (£480-£525 per annum, plus London weighting).

Applicants should have good general Architectural experience, and will be required principally to undertake the preparation of working drawings and details for housing schemes.

Preference will be given to candidates who have passed the Intermediate examination of the R.I.B.A.

The appointments will be subject to the Council's conditions of service.

Applications, stating age, training and experience, and the names of two persons to whom reference may be made, should be submitted to the undersigned not later than 21st April, 1949, and endorsed "Architectural Assistant."

Any applicant who is related to a member of the Council or to the holder of any senior office under the Council must disclose the fact in his application.

C. A. JAMES,

Town Clerk.

Town Hall, Old Street, E.O.1. 2291

COUNTY BOROUGH OF EASTBOURNE
BOROUGH ENGINEER'S DEPARTMENT
APPOINTMENT OF TWO ASSISTANT ARCHITECTS.

SALARY GRADE VII.

Applications are invited for the above appointments, at a salary in accordance with Grade A.P.T., VII (£634-£710 p.a.).

The successful applicants will be engaged principally in the design and construction of new schools, and experience in this type of work is desirable.

Applicants should be Associate Members of the Royal Institute of British Architects, and have had good experience in the design, supervision, and construction of new buildings.

The appointment is subject to the National Joint Council's Conditions of Service and the Local Government Superannuation Act, 1937.

The Council will assist in finding suitable housing accommodation for the successful applicants.

Applications, giving full details of age, present position, qualifications and experience, together with the names and addresses of two persons from whom references can be obtained, should be forwarded to the undersigned not later than Tuesday, 19th April, 1949.

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

Borough Engineer.

2 & 4, Saffrons Road, Eastbourne. 2284

DENBIGHSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

The above Council invite applications from suitably qualified persons for the following appointments to the staff of the County Planning Department:—

(a) **SENIOR COUNTY PLANNING ASSISTANT (ARCHITECTURAL)**, for the Headquarters Office at Ruthin, and

(b) **SENIOR COUNTY PLANNING ASSISTANT** for the East Area Office at Wrexham.

Consolidated salary for each of the above-mentioned appointments in accordance with A.P.T., Grade V, £520-£570 per annum.

Applicants should be Associate Members of the Town Planning Institute, and for appointment (a) should possess a recognized qualification in architecture. Applicants must be competent to undertake the preparation of Development Plan proposals for urban and/or rural areas, and for appointment (b) detailed schemes for the re-development of built-up areas, neighbourhood units, and housing estates.

(c) **COUNTY PLANNING ASSISTANT (DEVELOPMENT CONTROL)**, for the Headquarters Office at Ruthin, and

(d) **COUNTY PLANNING ASSISTANT** for the EAST AREA Office at Wrexham.

Consolidated salary for each of the above-mentioned appointments in accordance with A.P.T., Grade III, £450-£495 per annum.

Applicants should have passed the Intermediate examination of the Town Planning Institute, and should have obtained experience in town and country planning and be competent to assist, in regard to appointment (c), in the control of development and, in regard to appointment (d) in the preparation of survey work and development plan proposals.

(e) **SURVEYOR AND DRAUGHTSMAN** for the Headquarters Office at Ruthin.

A.P.T., Grade II. Consolidated salary £420-£465 per annum. Applicants must be competent surveyors and expert draughtsmen, and be able to undertake the revision of Ordnance survey maps and the preparation of regional survey and development plans. Previous experience in Ordnance survey work is essential.

(f) **DRAUGHTSMAN** for the East Area Office at Wrexham. Miscellaneous Division, Grade II. Consolidated salary £375-£420 per annum. Applicants must be expert draughtsmen and colourists, and should be able to undertake the preparation of architectural drawings.

The salaries are consolidated to include cost-of-living bonus. The appointments will be subject to the terms and conditions of service applying to the administrative, technical and clerical officers of the County Council and will be terminable at the end of any month by one month's notice in writing on either side. The successful applicants will be required to pass a medical examination and will be subject to the Local Government Superannuation Act, 1937. Applicants should indicate the appointment applied for, and should state whether they wish to be considered for more than one appointment.

Applications, stating age, whether married or single, qualifications, present position and salary, previous positions, and full details of experience obtained, accompanied by copies of not less than two recent testimonials, must be sent to me, the undersigned, suitably endorsed, by not later than the 19th April, 1949.

WILLIAM JONES,
Clerk of the County Council.
County Offices, Ruthin, Denbighshire. 2281

ISLE OF ELY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the under-mentioned appointments:—

(1) **QUANTITY SURVEYOR**, Grade VI. Salary £295 to £260 per annum.

(2) **SENIOR ASSISTANT ARCHITECT**, Grade V. Salary £550 to £610 per annum.

(3) **SECOND SENIOR ASSISTANT ARCHITECT**, Grade V. Salary £520 to £570 per annum.

(4) **JUNIOR ARCHITECTURAL ASSISTANT**, Grade I. Salary £390 to £435 per annum.

The appointments are permanent and are subject to the provisions of the National Scheme of Conditions of Service, to the Local Government Superannuation Act, 1937, and to a medical examination. The office is progressive and has not been sectionalised, so that excellent experience is available over the whole field of County Council building administration.

Forms of application may be had from the County Architect, County Hall, March, Cambs., and are to be returned not later than 25th April, 1949.

R. F. G. THURLOW,
Clerk of the County Council.
County Hall, March. 2279

CROWN AGENTS FOR THE COLONIES.

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

STRUCTURAL DRAUGHTSMAN required by the Government of Kenya for four years in first instance. Commencing salary according to experience in the scale £670 a year, rising to £840 a year. Free passage. Outfit allowance £30. Separation allowance. Gratuity. Candidates should have had experience of commercial reinforced concrete design and if possible experience of steelwork design as applied to buildings. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1. quoting M/N/24333/3D on both letter and envelope. 2278

COUNTY COUNCIL OF INVERNESS.
SWEDISH TIMBER HOUSING PROGRAMME.
CLERKS OF WORKS.

Applications are invited for the appointment of Clerks of Works for the following schemes:—

(1) CAOL, near Fort William—100 houses.

(2) KINLOCHMORE—50 houses.

(3) PORTREE, BROADFORD, KYLEAKIN and DUNVEGAN, Skye—62 houses.

(4) CASTLEBAY, Barra—40 houses.

(5) TARBERT and LEVERBURGH, Harris—46 houses.

(6) LOCHMADDY, BALFANICH, CREA-GORRY, LOCHBOISDALE and DALIBURGH, North and South Uist—72 houses.

Applicants must have wide and thorough experience.

Salary £12 per week, plus subsistence allowance of £207 per annum (appointments Nos. 1-5); £250 per annum (appointment No. 6). In addition, travelling expenses will be paid.

Applications, stating age, training and experience, and giving the names of three referees, should be submitted to the undersigned, within 10 days of the publication of this advertisement.

R. WALLACE,
County Clerk. 521

County Buildings, Inverness.
NATIONAL COAL BOARD.

Applications are invited for the post of **DIVISIONAL CHIEF ARCHITECT**, to the South-Western Division of the National Coal Board, Cardiff. Salary £1,200-£1,900 per annum, according to qualifications.

Applicants should be Associate Members of the Royal Institute of British Architects, and should be capable of organizing and controlling the work of the Architects' Branch and preparing and supervising the execution of plans for all buildings, pithead baths, etc., to be erected in the Division.

Applications, stating age, qualifications and experience, and giving the names of two architect referees, should be sent to the Divisional Establishment Officer, South-Western Division, National Coal Board, Cambrian Buildings, Mount Stuart Square, Cardiff, to reach him not later than 23rd April, 1949. 520

COUNTY COUNCIL OF THE WEST RIDING
COUNTY OF YORKSHIRE
COUNTY PLANNING DEPARTMENT.

Applications are invited for the following permanent appointments to the Staff of the County Planning Department:—

(a) **AREA PLANNING OFFICER** (at a salary within the range of £750-£50-£1,050 per annum).

(b) **CHIEF PLANNING ASSISTANT** (salary scale, £685-£25-£750 per annum).

The successful candidate for appointment (a) will be required to take charge of the Huddersfield Area Planning Office and to be responsible for the carrying out of such duties as may be assigned to him. Applicants should be Corporate Members of the Town Planning Institute, and in addition should possess qualification in Civil Engineering, Surveying or Architecture, and have had considerable planning and administrative experience in a position involving the control of staff.

Appointment (b) is on the Headquarters staff at Wakefield, and applicants should have had a wide experience in town and country planning and possess a knowledge of current planning practice and legislation. They should also be Corporate Members of the Town Planning Institute or possess a recognized qualification in Civil Engineering, Surveying or Architecture.

The above appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, as amended by the West Riding County Council (General Powers) Act, 1948, and successful applicants will be required to pass a medical examination.

Applications, stating age, qualifications and experience, and accompanied by copies of two recent testimonials, should be received by the undersigned not later than the 23rd April, 1949.

ARTHUR BATES,
County Planning Officer.

County Planning Office, 7, Bond Street, Wakefield. 519

BOROUGH OF RAWTENSTALL.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

ARCHITECTURAL ASSISTANT.

Applications are invited for the post of Architectural Assistant, at a salary in accordance with Grade IV, A.P.T. Division, of the National Consolidated Scale (£480-£525 per annum). Applicants for the post must be Registered Architects, and preferably Associate Members of the Royal Institute of British Architects. The appointment is to the Council's permanent staff, and is subject to the provisions of the Local Government Superannuation Act, 1937, and to the National Joint Council's Scheme of Conditions of Service. The successful applicant will be required to pass a medical examination, and the Council will, if necessary, arrange for a house to be provided for him. Applications, endorsed "Architectural Assistant," must be in writing, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, and must reach me not later than Monday, the 25th inst. Canvassing, either directly or indirectly, will be regarded as a disqualification.

H. ISHERWOOD,
Town Clerk.

Town Hall, Rawtenstall, Rossendale, Lancs. 1st April, 1949. 558

COUNTY BOROUGH OF MIDDLESBROUGH
EDUCATION COMMITTEE

Applications are invited for the following appointments on the permanent establishments:—

(a) **Assistant Architects: A.P.T. Division VI** (Salary £395-£260 p.a.).

(b) **Assistant Architects: A.P.T. Division V** (Salary £320-£270 p.a.).

Applicants for appointment (a) must be Associates of the Royal Institute of British Architects with experience in the design and construction of school buildings and capable of carrying out large contracts.

Applicants for appointment (b) should preferably be fully qualified architects with experience of the design and construction of school buildings. Forms of application and general conditions of service may be obtained from the Director of Education, Education Offices, Woodlands Road, Middlesbrough, to whom completed applications should be returned by not later than Monday, 25th April, 1949.

E. C. PARR,
Town Clerk. 557

Architectural Appointments Vacant
4 lines or under, 6s.; each additional line, 1s. 6s.

ASSISTANT for E. Midlands office. Good draughtsmanship and practical experience of domestic work, alterations, maintenance, and quantities desirable. Box 1945.

SENIOR ARCHITECTURAL ASSISTANT, qualified, with extensive experience of preparing working drawings, required for work in connection with large housing, cinema and office schemes in private office, London; West Central area; age 30/35; salary up to £750. Write Box 2085.

ARCHITECTURAL ASSISTANTS (TWO) required immediately; R.I.B.A. Intermediate standard or better; with office experience preferred; salary £350-£400, according to experience. Ruddle & Wilkinson, F./L.R.I.B.A., Long Causeway Chambers, Peterborough. Telephone 2166. 2139

ARCHITECTURAL ASSISTANT required immediately for office, West Riding of Yorkshire; must be experienced in working drawings, details, levelling, etc.; knowledge of quantities an advantage. Write, giving experience and salary required. Box 2157.

SENIOR ARCHITECTURAL ASSISTANT required for permanent staff at good salary; applicants should be top grade men, with at least 3 years' drawing office experience, preferably on industrial or hospital work; accustomed to responsibility and ambitious; this is a post with prospects, which will attract the best assistants. Apply by letter, giving experience and all usual particulars, to Harry S. Fairhurst & Son, F.R.I.B.A., Chancery Chambers, 55, Brown Street, Manchester, 2. 2163

ASSISTANT ARCHITECT required in London office of Oil Company operating in the Persian Gulf; should be prepared for possibility of short tour of company's site; applicants must be A.R.I.B.A. and have actual office experience in the design and supervision of public buildings, housing schemes, etc.; age 28 to 37; salary according to age and experience. Write, giving details age, experience, etc., and quoting L0125, to Box "K.L.", c/o J. W. Vickers & Co., Ltd., 7/8, Great Winchester Street, E.C.2. 2169

SENIOR ARCHITECTURAL ASSISTANT required for London office of large Property Owning Company; experience in design, detailing and specification for domestic premises essential. Write, stating age, experience, and salary required. Box 2231.

THE Architectural Section, The Estate Department, The Prudential Assurance Co., Ltd., 142, Holborn Bars, E.C.1, has a vacancy for an A.R.I.B.A. in a position of responsibility offering scope for advancement; applicant must have had good experience in design and practical experience for some years and also administrative ability; a sound knowledge of London building practice is essential; age 35/40; progressive salary, according to age and date of qualification, e.g., qualification at age 25 now aged 35; salary £850 p.a. and, subject to satisfactory and normal progress salary at age 40 £1,000 p.a.; excellent opportunity for promotion to higher grades; pension scheme. Application should be made in writing, giving full particulars, to G. A. Coombe, F.R.I.C.S., L.R.I.B.A., Chief Surveyor, and will be treated confidentially if marked "personal." 2234

JUNIOR ARCHITECTURAL ASSISTANT (Male or Female) required for work in connection with prefabricated buildings; knowledge of preparation of Bills of Quantities an advantage, but not essential; salary according to age and experience. Box 2216.

ASSISTANT ARCHITECT (30-40 years) with industrial and engineering experience for long-term planning and development of breweries and bottling factories in the South of England. Assistance with housing accommodation will be given to suitable applicant. Applications with details of education, experience, and salary required to Reginald E. Southall, A.R.I.B.A., Chief Architect, H & G. Simonds, Ltd., The Brewery, Reading, and endorsed "Personal" on envelope. 564

EXPERIENCED ARCHITECTURAL ASSISTANT wanted for London office. Particulars salary, etc., to Edwin M. Lawson, A.R.I.B.A., Barras Buildings, Barras Bridge, Newcastle-on-Tyne. 2175

SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS required in West Country office; general practice, including farms, factories, domestic work, etc.; ability to drive car an advantage; interesting work and progressive appointment. Full particulars of experience, training, salary, etc., to E. W. H. Vallis F.R.I.B.A., 6, North Parade, Frome, Somerset. 2244

ARCHITECTURAL ASSISTANTS required with experience in general and commercial work. Senior and Junior positions open. Good salaries. Lewis Solomon & Son, 21, Bloomsbury Way, W.C.1. 2259

ASSISTANT ARCHITECT required by large industrial organization for service in the Middle East for work on development, of sites and designs of housing amenity buildings; L.R.I.B.A. experience, and a minimum of 5 years in an Architect's office on Housing Development essential; age limit 35 years; attractive salary, plus generous allowance in local currency; free passages out and home; free medical attention; full allowance; pension scheme; good leave arrangements. Write, giving age and details of qualifications and career, quoting Department P.12, to Box 1822, at 191, Gresham House, E.C.2. 1738

ARCHITECTURAL ASSISTANT, qualified, to work mainly on blocks of Flats in London; salary £6 to £8 10s. per week, according to experience. Harry Moncrieff, F.R.I.B.A., A.M.T.P.I., Co-operative Planning, Ltd., 73b, South Side, Clapham Common, S.W.4. 2286

LARGE business concern in London has vacancies for ASSISTANTS in Architect's office; must have experience of building surveys, be neat and accurate draughtsmen, with good knowledge of construction and detail and working drawings; permanency for suitable applicants, who should write, stating age and experience. Box 2277.

ARCHITECT'S ASSISTANT required; must be good draughtsman and have full knowledge of building construction, and capable of making war damage surveys. Reply, stating age and salary to Messrs. H. Payne Wyatt, Son & Partner, 463/465, Brixton Road, London, S.W.9. 2270

SENIOR ASSISTANT, preferably qualified, required for busy London practice; opportunity for wide experience in commercial and industrial work; able to drive car an advantage. Ley, Colbeck & Partners, F.F.R.I.B.A., F.R.I.C.S., Palmerston House, 51, Bishopsgate, London, E.C.2. Tel.: London Wall 2917. 2271

ARCHITECTURAL ASSISTANT for country practice, Berkshire; Associate or Student, R.I.B.A. Write, stating age, salary and experience, Box 2272.

ARCHITECTURAL ASSISTANTS REQUIRED.—**SENIOR ASSISTANT**: Either qualified or fully experienced man, good draughtsman, capable of taking full charge of jobs, writing specifications, supervising construction and settling accounts; salary £700-£800 p.a. **ASSISTANT**: Fully experienced, capable of preparing working drawings and details, good draughtsman; sound knowledge of construction essential; salary £350-£450 p.a. **JUNIOR**: Keen, good draughtsman, some knowledge of construction, capable of measuring up buildings on his own; salary £250-£350 p.a. Reply, stating age and experience, to Crickmay & Sons, F.F.R.I.B.A., 23, St. Thomas Street, Weymouth, Dorset. 2273

ASSISTANT for General Practice required in Winchester. Details to Box 2275.

ARCHITECTURAL ASSISTANT required for central London office, with country practice; must be neat draughtsman, with previous office experience, good knowledge of construction; Intermediate exam. standard or higher. Write Box 2282, stating salary required.

ARCHITECTURAL Staff required by London Firm of Architects.—(a) **SENIOR QUALIFIED ASSISTANTS**; (b) **ASSISTANTS**, R.I.B.A. Intermediate standard, preferably those having some experience of surveying and levelling; (c) **JUNIOR ASSISTANTS and IMPROVERS**. Apply by letter, stating experience, age, and salary required, Box 2283.

ARCHITECTURAL ASSISTANT required for Hertfordshire; young, qualified, good draughtsman; capable of preparing working drawings, details and specifications. An interest in practice to one proving himself keen and suitable. Apply, giving particulars and salary required, to Box 2288.

ASSISTANT required for Staff Architect of large Department Store in the North of England; Intermediate R.I.B.A. standard. Extensions, structural alterations, interior refitting and redecoration of existing buildings containing the store and its complementary trading activities. Experience in commercial and industrial building of more value than specialised shopfitting knowledge. Salary £400 p.a. Write fully, age, training, experience, to Box 553.

CLIFFORD TEE & GALE, F.F.R.I.B.A., invite applications for appointments as Senior and Junior Assistant in their London and Birmingham offices. Good salaries commensurate with experience. Five-day week. Write Moorgate Hall, London, E.C.2, or 39, Bennetts Hill, Birmingham. 2238

ARCHITECTURAL ASSISTANTS required for busy office in Midlands. Applicant's should state age, experience, and salary required. Box 570.

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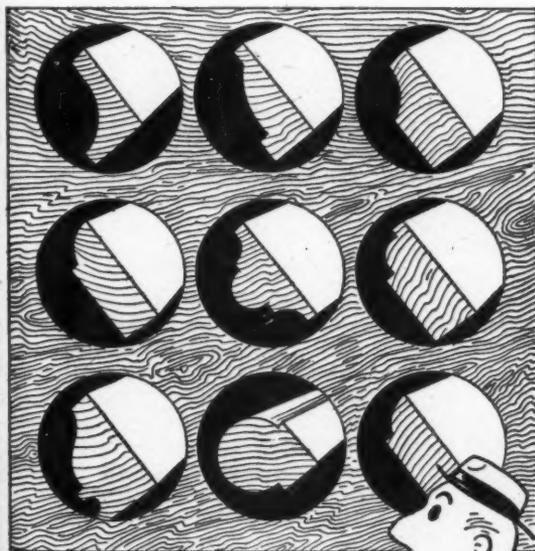
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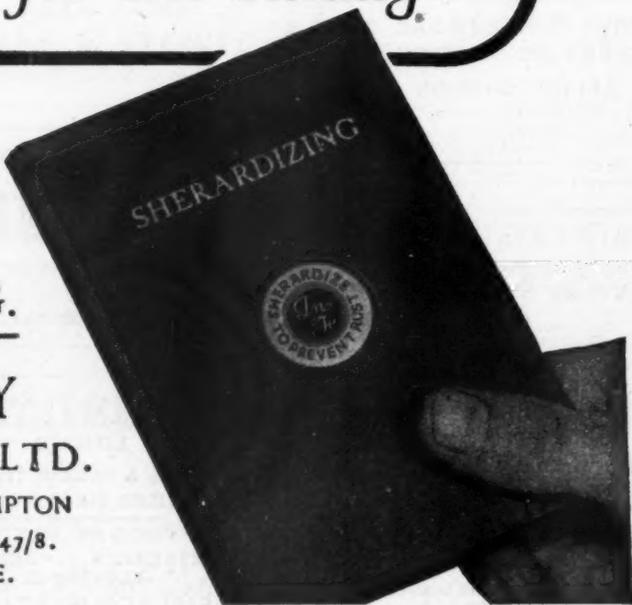
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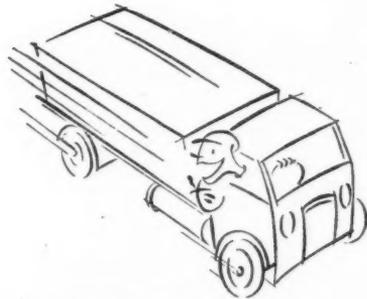
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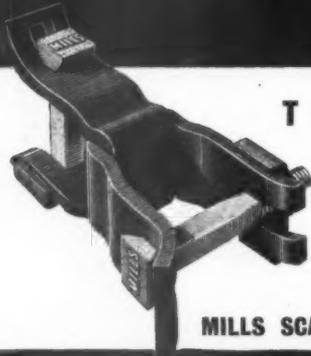
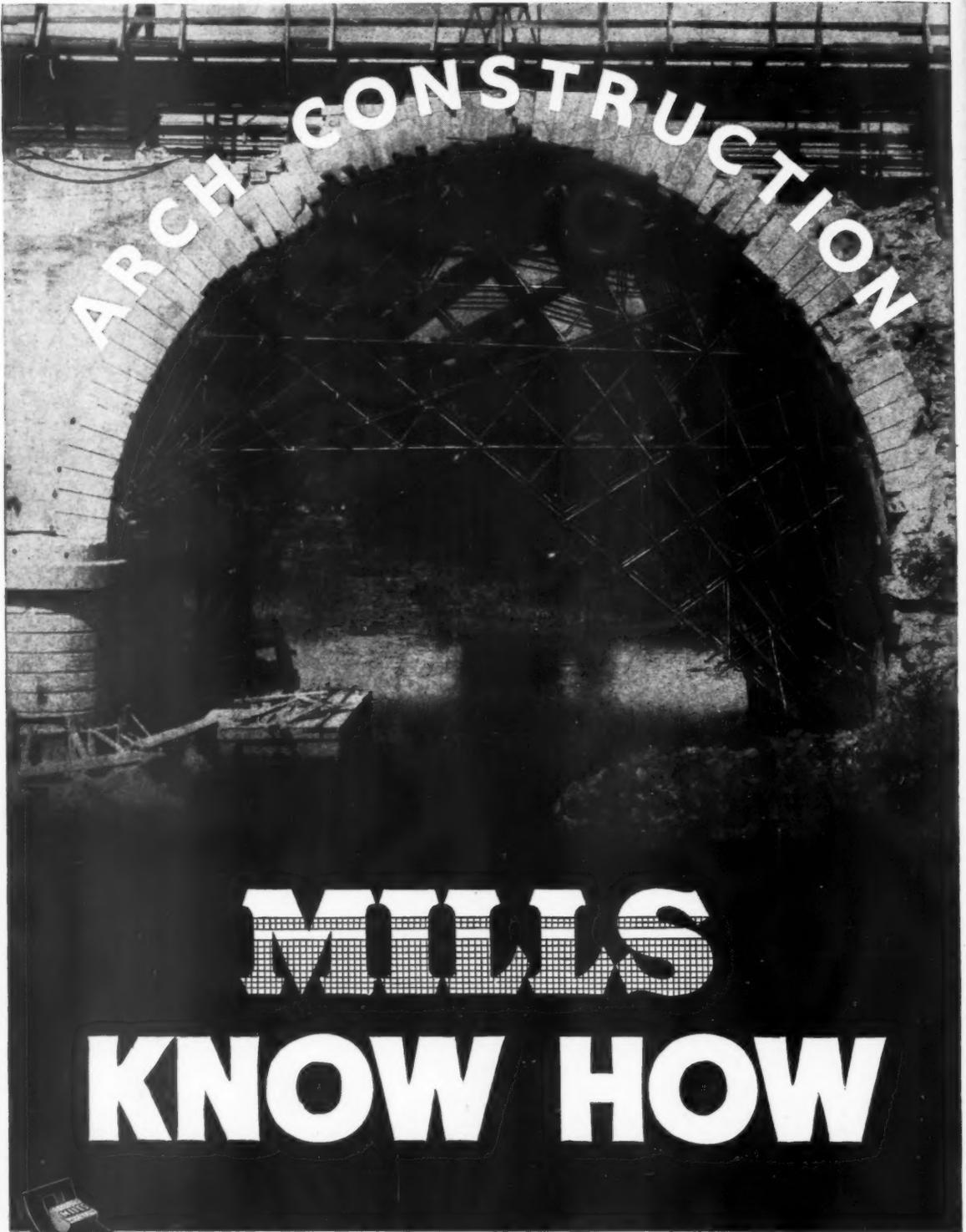
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