THE ARCHITECTS' JOURNAL

standard contents

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

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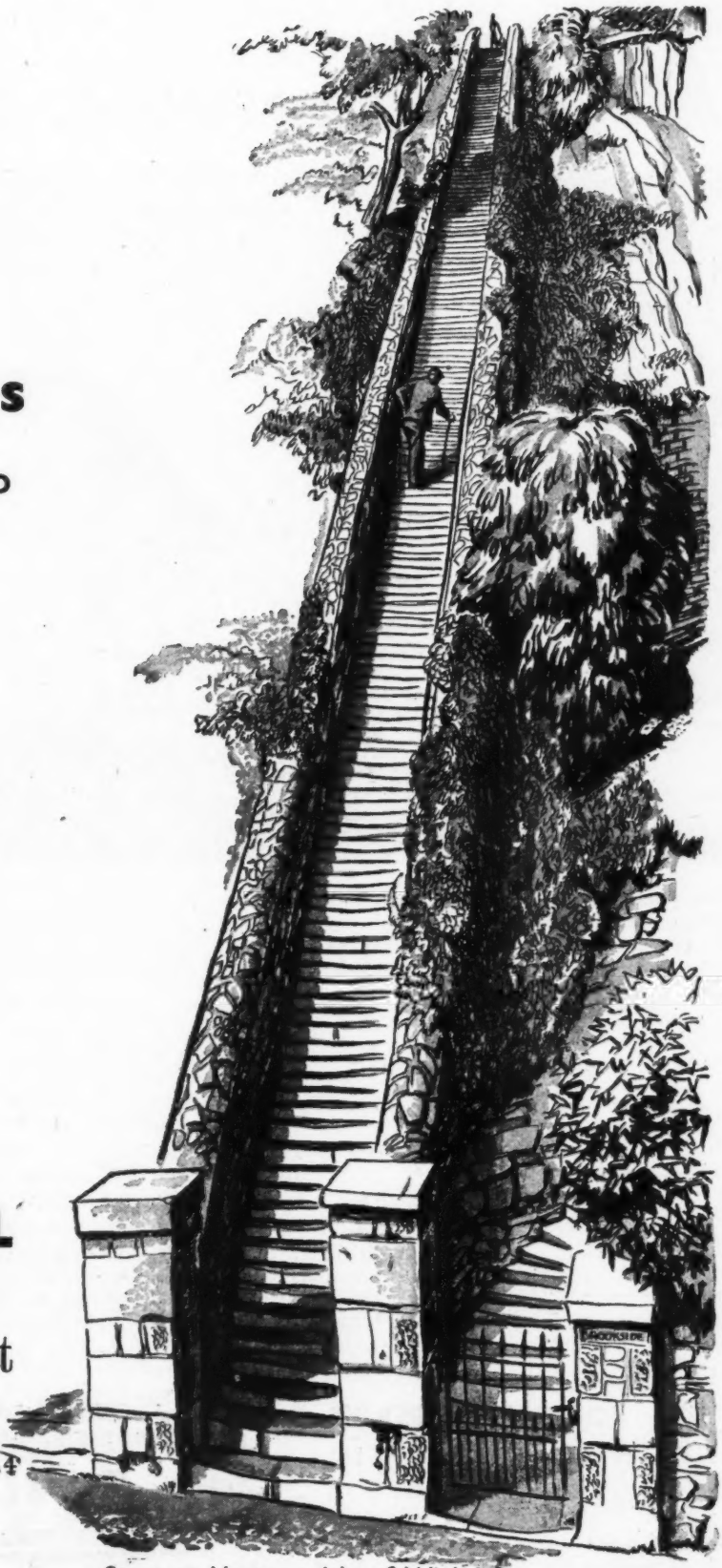
★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ic one week, Ie to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhampstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Welbeck 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. School of Architecture, Manchester Municipal School of Art, All Saints, Manchester, 15.	Ardwick 3480
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
AScW	Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.	Grosvenor 4761
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Welbeck 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 9, Conduit Street, W.1.	Mayfair 8641/6
BCC	British Colour Council. 28, Sackville Street, W.1.	Regent 3613
BCCF	British Cast Concrete Federation. 17, Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 25, Victoria Street, S.W.1.	Abbey 5422-3
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BGC	British Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
BGF	British Gas Federation. 1, Grosvenor Place, S.W.1.	Sloane 8266
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford	Garston 2246
BSA	British Steelwork Association. Eggington House, Buckingham Gate, S.W.1.	Victoria 7301-2-3
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CAS	County Architects Society. C/o A. Guy Chant, F.R.I.B.A. Salop County Council, 5, Belmont, Shrewsbury.	Shrewsbury 3031
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CDA	Copper Development Association. Kendals Hall, Radlett Herts.	Radlett 5616
CIAD	Central Institute of Art and Design. 41, 42, Dover Street, W.1.	Regent 3074
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7. Zurich, Switzerland	
CID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPC	Codes of Practice Committee. MOW, 42, Onslow Gardens, S.W.7.	Kensington 8161
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUJC	Coal Utilization Joint Council. 13, Grosvenor Gardens, London, S.W.1.	Victoria 1534
DIA	Design and Industries Association. 9, Conduit Street, W.1.	Mayfair 5432
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EC	Electricity Commission. Savoy Court, Strand, W.C.2.	Temple Bar 7565
EJMA	English Joinery Manufacturers Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FASSC	Federation of Association of Specialists and Sub Contractors. 21, Tothill Street, S.W.1.	Whitehall 9606
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	Flush Door Manufacturers Association. Stapleford Road, Trowell, Nottingham.	Ilkeston 623/4/5
FLD	Friends of the Lake District. Pennington House, Nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577
ICW	Institute of Clayworkers. 4, Vernon Place, W.C.1.	Chancery 6258

T

S



• Steps at Ventnor, Isle of Wight

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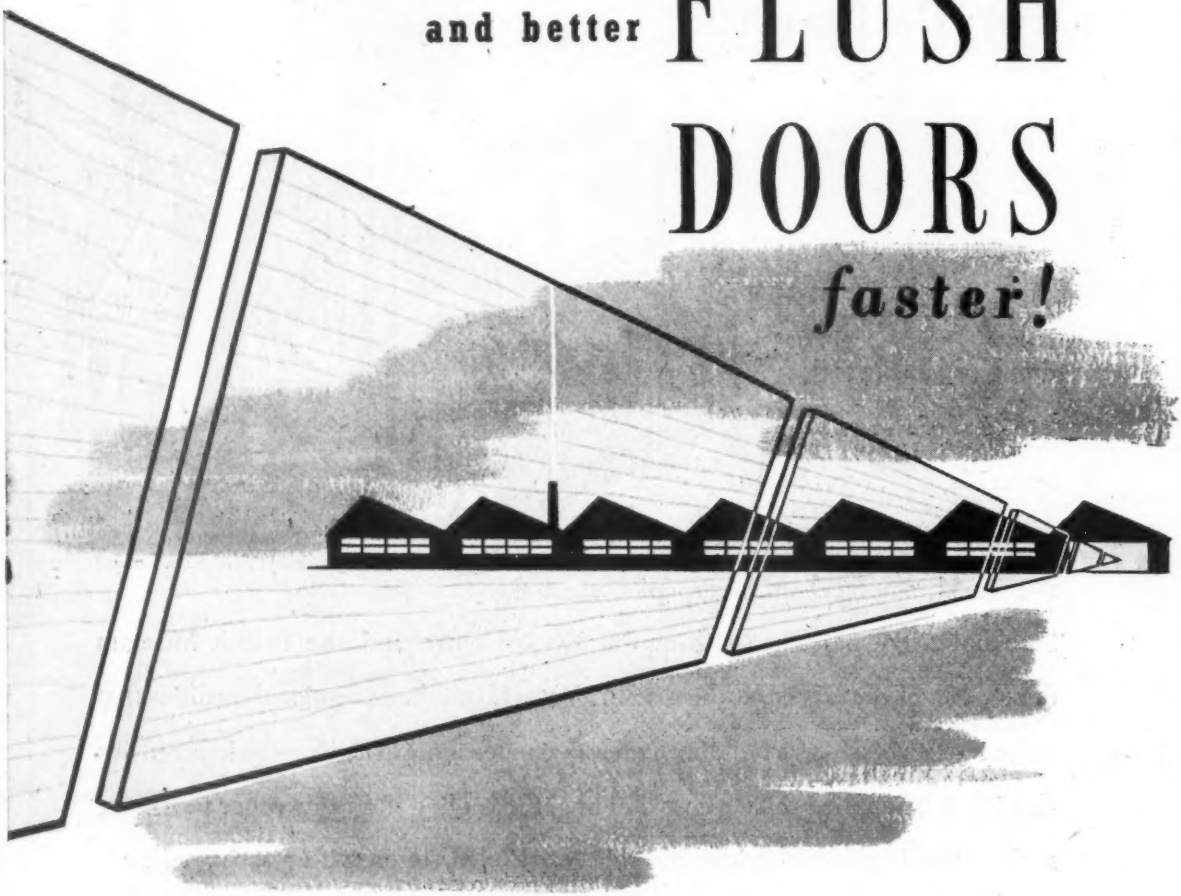

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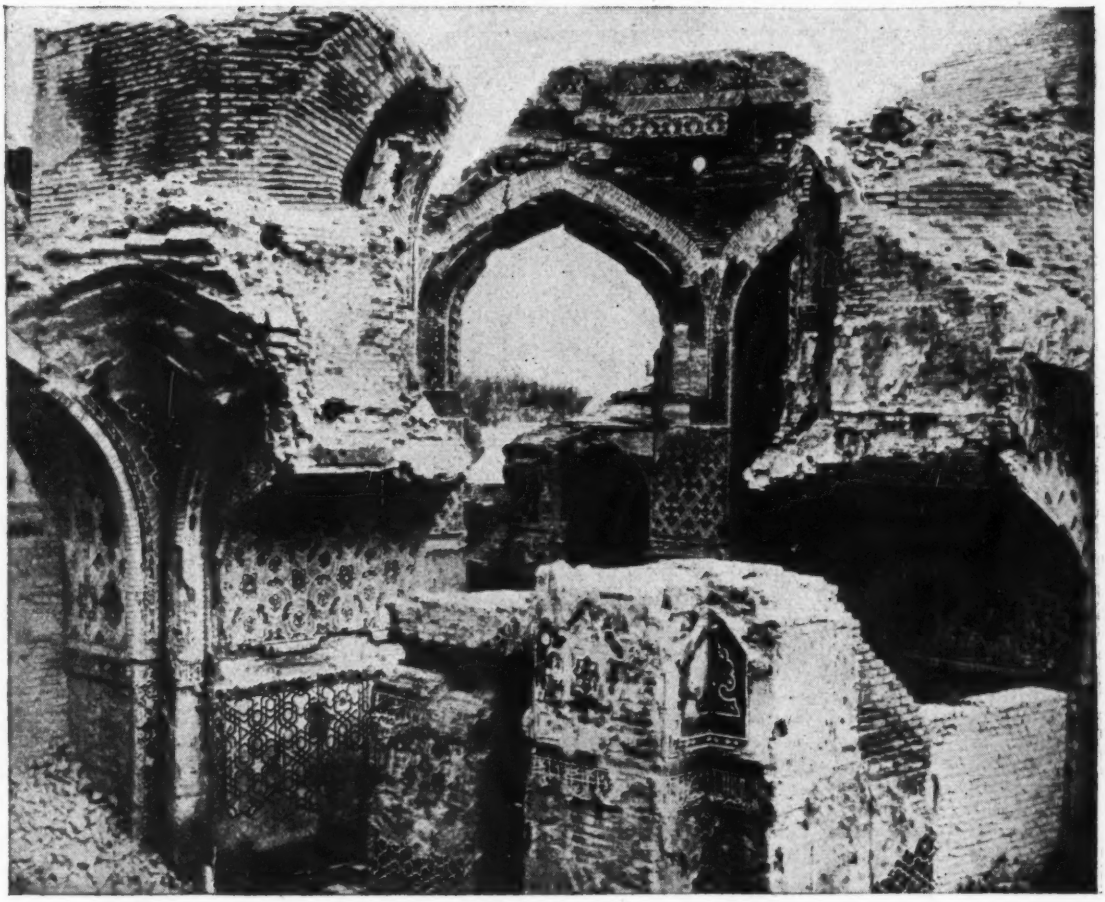

The Blue Mosque at Tabriz . . .

Little is known by Europeans about the sacred buildings of Persia, for the utmost hostility and risk meets the searcher after knowledge. Unbelievers are forbidden, on pain of death, to enter mosques which are in active use, but some idea of their magnificent structure and decoration can be gleaned from the above photograph, taken by special permission of the Shah, of the ancient Blue Mosque at Tabriz, which shows details of construction and beautiful mosaics.

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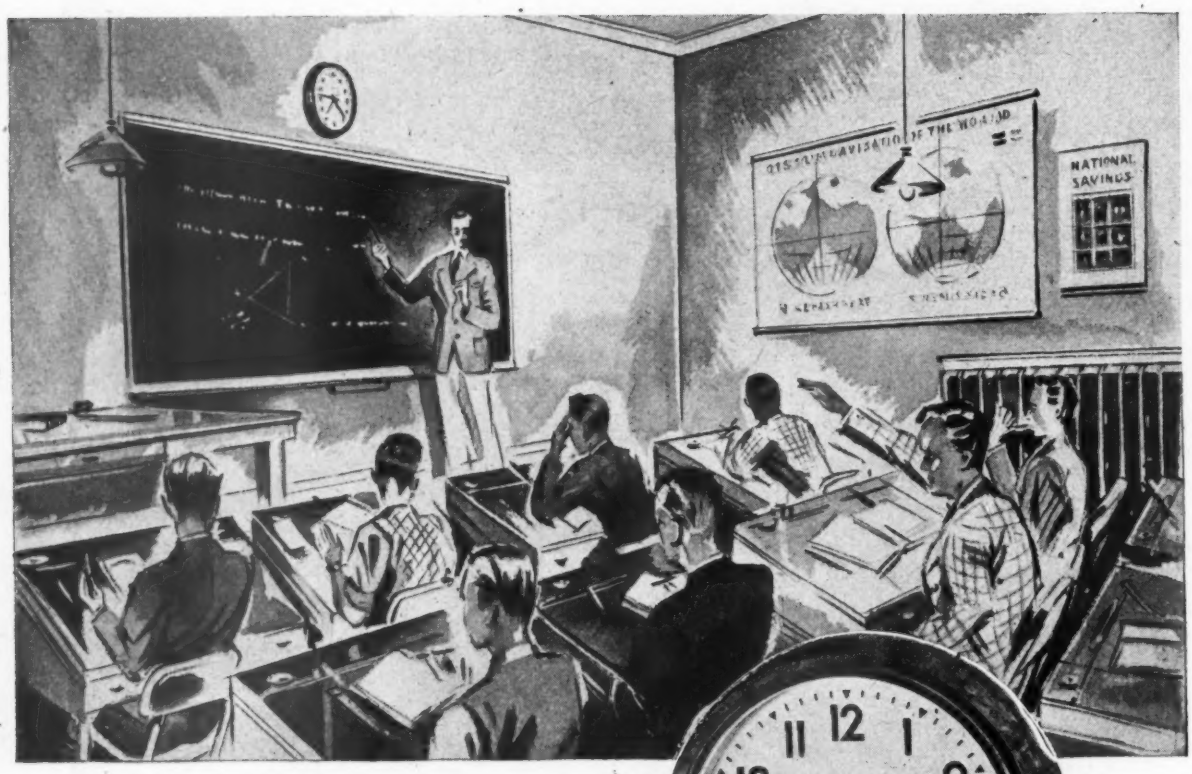

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POTTERY THROUGH THE AGES · NO. 13

Specially drawn by Gordon Nicoll, R.I.

ITALIAN MAIOLICA AND TERRA-COTTA

Although tin enamel and lustre colours were used in the 14th century, it was not until the Renaissance that a true tin-enamelled Italian earthenware, comparable with the Hispano-Moresque, was perfected. This development was encouraged by the Medici and other noble families who vied with each other in establishing centres of production in Faenza, Gubbio, Castel Durante, Pesaro, Urbino, Ferrara, Naples, Venice, Florence and many other cities and towns. Several of these developed distinctive styles of decoration but the wares became known generally as *maiolica*—a word probably derived from *Majorca*, whence large quantities of Spanish pottery had previously been shipped to Italy.

"The Three Books of the Potter's Art" written by Cipriano Piccolpasso about 1556 give a wealth of information about the methods of shaping, decorating and firing. The craft was pursued with well-nigh religious zeal, and the position of the moon and planets taken into account to ensure a successful firing. Many of the maiolica painters established great reputations, and their services were constantly in demand.

Paintings of some of the great Italian masters were often reproduced on pottery, besides themes based on Greek and Roman mythology and biblical events. Portraits from life were commissioned for the "bacili amatori" or "lover's gifts" presented to ladies by their courtiers. Some of the chargers, dishes and vases were completely covered with decoration in bright, enduring colours, among which brilliant yellow, orange, indigo, ruby, gold and mother of pearl lustre effects predominated. The characteristic intertwining scrolls of flowers, animals, shells, cherubs, sphinxes, dragons and birds on many maiolica pieces show a wealth of phantasy.

Lucca della Robbia, a famous Florentine goldsmith and sculptor employed by the Medici family, perfected a beautiful opaque creamy-white glaze which he used to cover his bas-reliefs, wall-plaques, altar-pieces and other creations in terra-cotta. His nephew, Andrea, whose entrancing studies of cherubs, babes and Holy Children are still so widely reproduced, carried on the della Robbia tradition after Lucca's death; later the style degenerated and became over-ornate.

Donatello, Alberti, Bramante, Michael Angelo and other great artists made use of terra-cotta both for the interior and exterior adornment of buildings and it has been well said that among all historic precedents for the architectural use of terra-cotta, the Italian Renaissance offers the most fruitful field of study.

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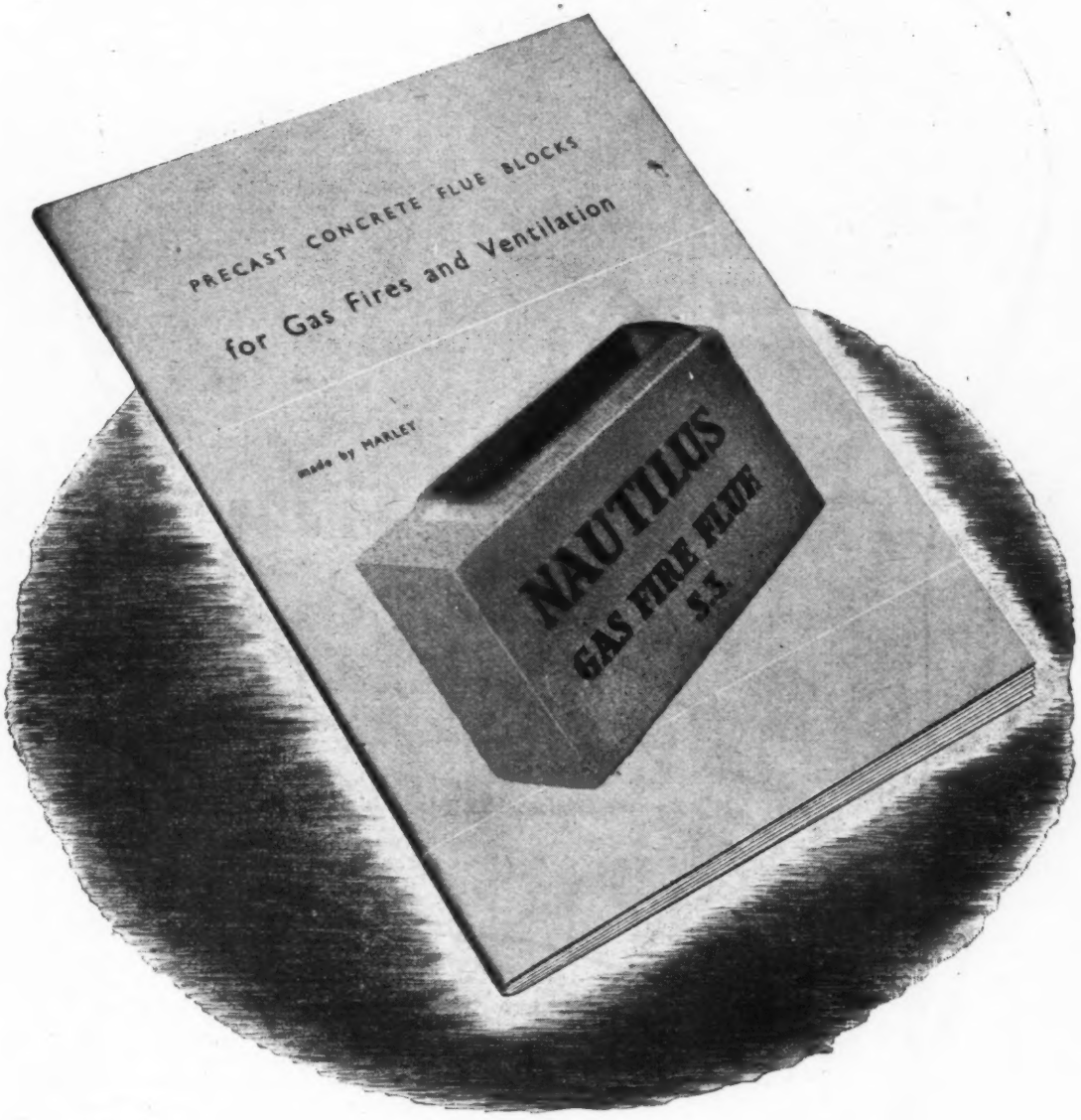
For Gas Fires and Ventilation



This new publication describes the Nautilus system of flue construction. The full range of standard flue blocks is illustrated, and drawings of typical construction are included, together with notes on the computation of quantities. Copies may be obtained from **MARLEY**

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The illustration shows the screw driver bit about to engage with the head of the screw.

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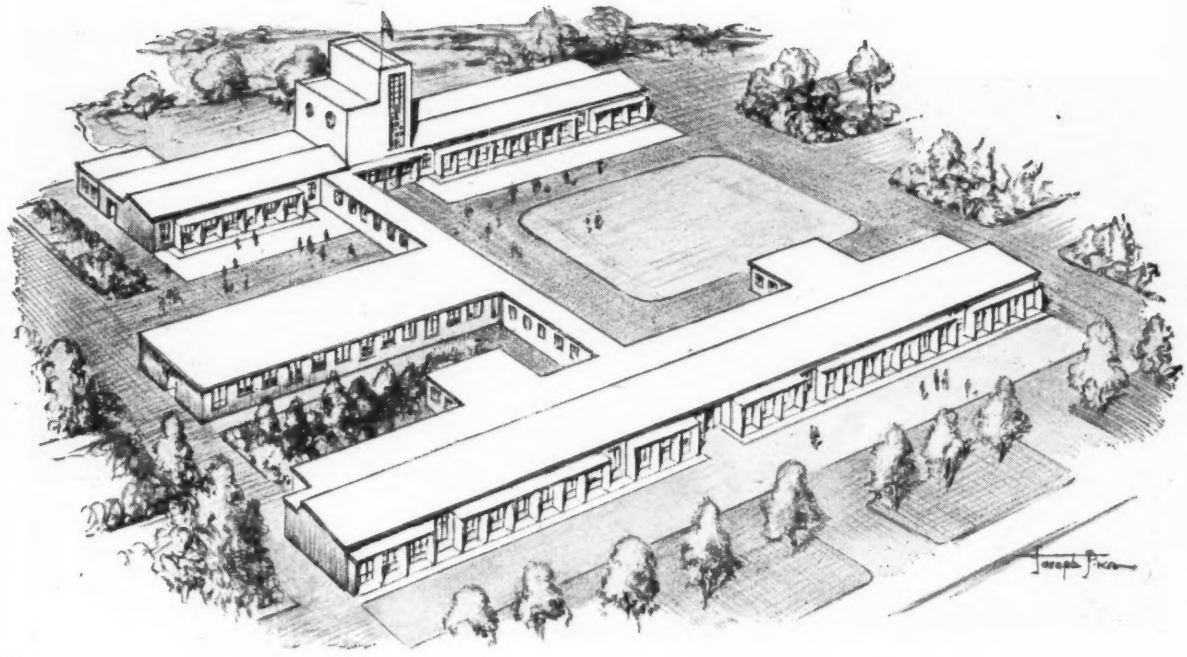
Schools by Girlings'



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★ **Reinforced Concrete frame (B)**

★ **Girlingstone Masonry for stone dressings (C)**

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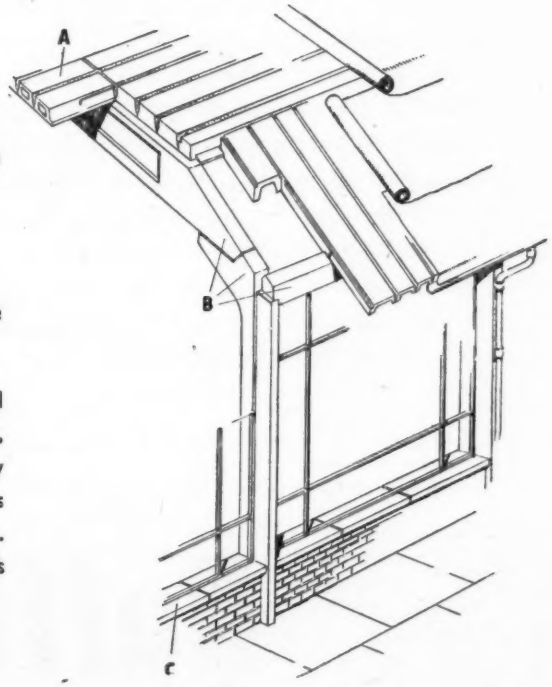

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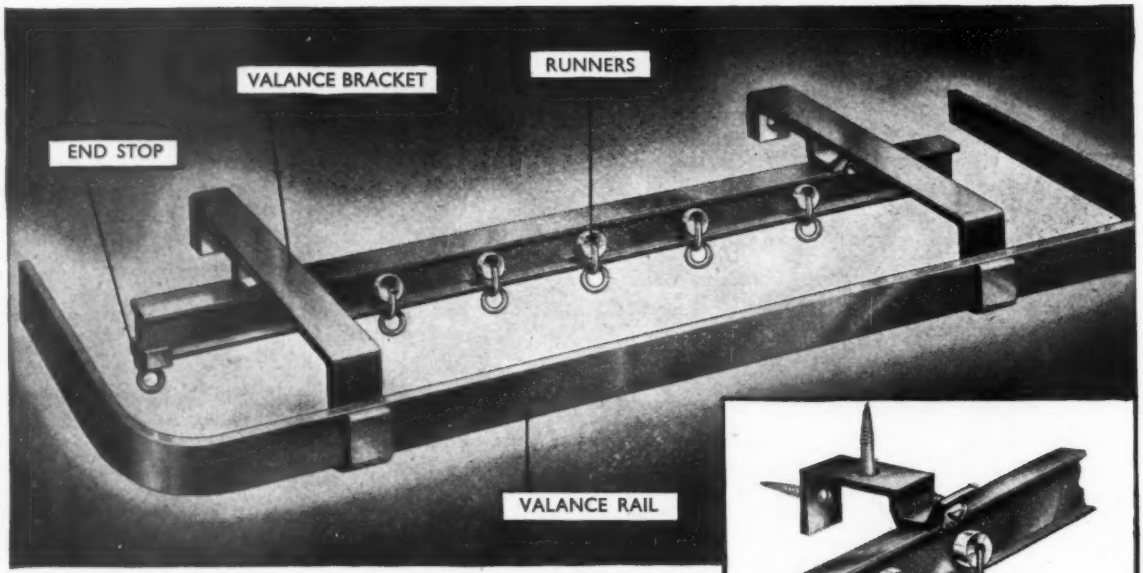

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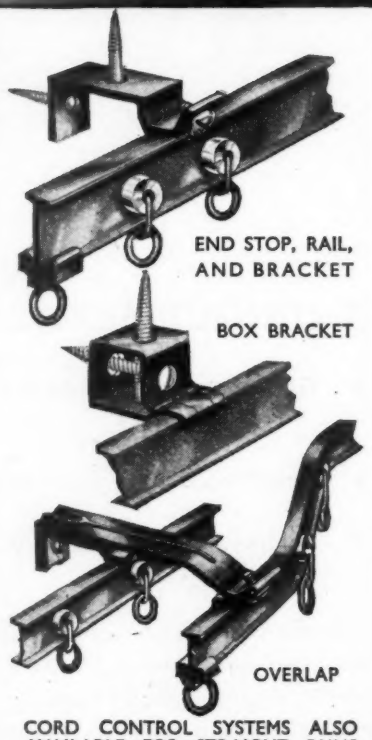

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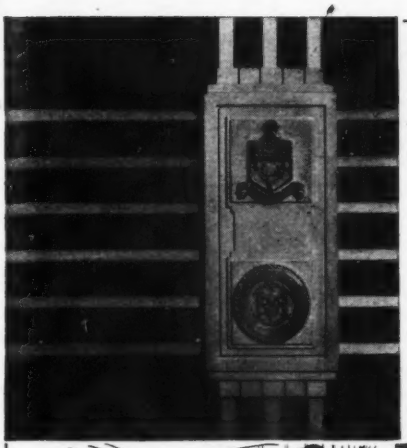
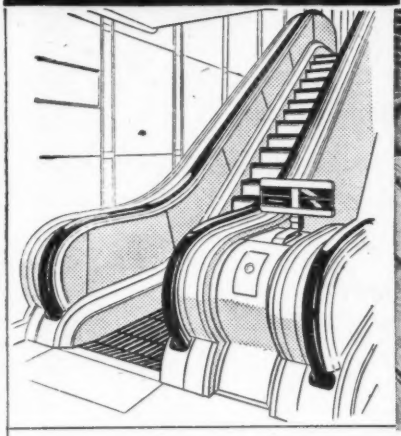
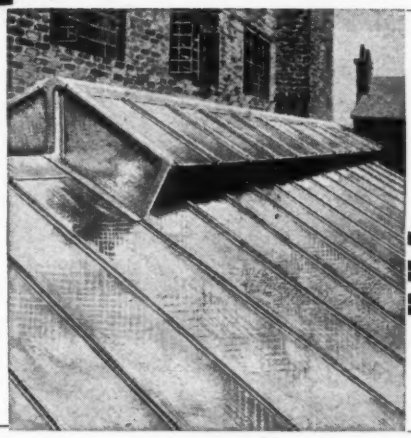


Glazing Bars . . . Flashings . . . Structural Members . . . Architectural Metalwork . . . Corrugated Sheeting . . . Rainwater Goods . . . Panelling and Interior Fittings . . .





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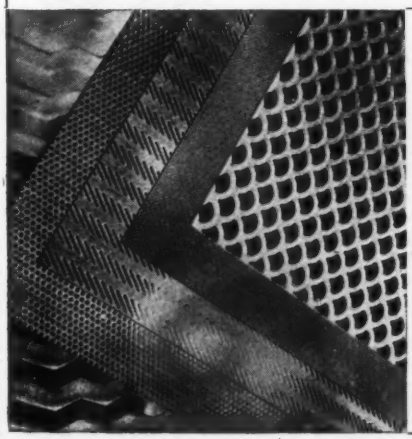

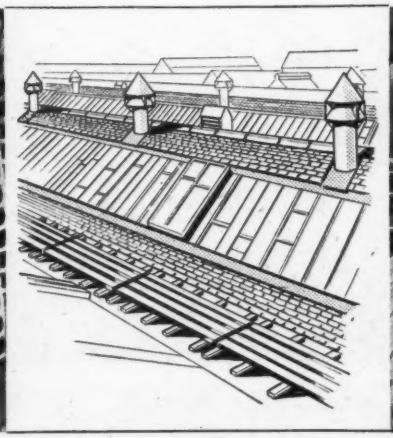

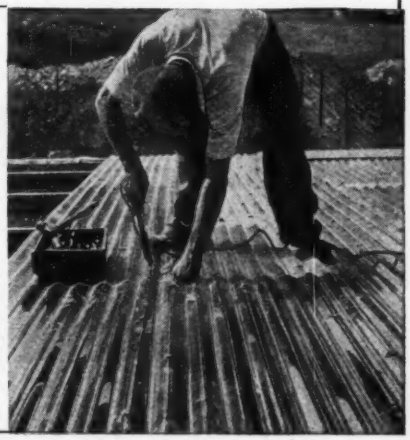

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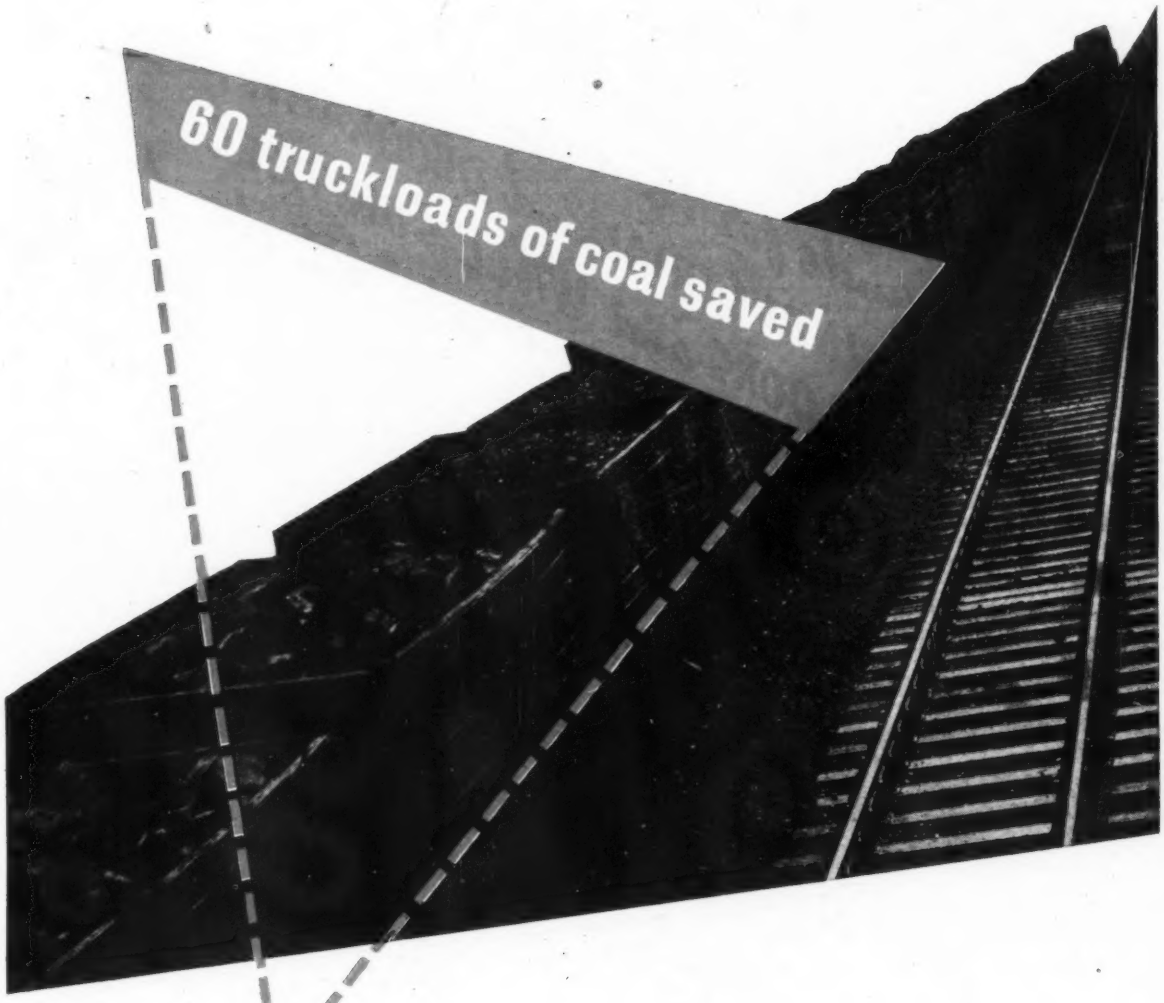

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Corrugated Iron		–	22G	–	22G	–	–	22G	22G
Celotex Insulating Board		–	–	–	–	1/2"	1"	1/2"	1"
Air Space/Purlins		–	–	4"	4"	–	–	–	–
Celotex Insulating Board		–	–	1/2"	1/2"	–	–	–	–
Thermal Transmittance 'U'		1.40	1.50	0.31	0.32	0.35	0.23	0.36	0.24
To make good heat loss per 1000 sq. ft.	Fuel Consumption tons p.a.	7.7	8.3	1.7	1.8	1.9	1.3	2.0	1.3
	Cost of Heating Plant. Cost £'s	88	94	19	20	22	14	22.5	15
Saving in Plant and Fuel due to Celotex Insulation %				78	79	75	84	76	84

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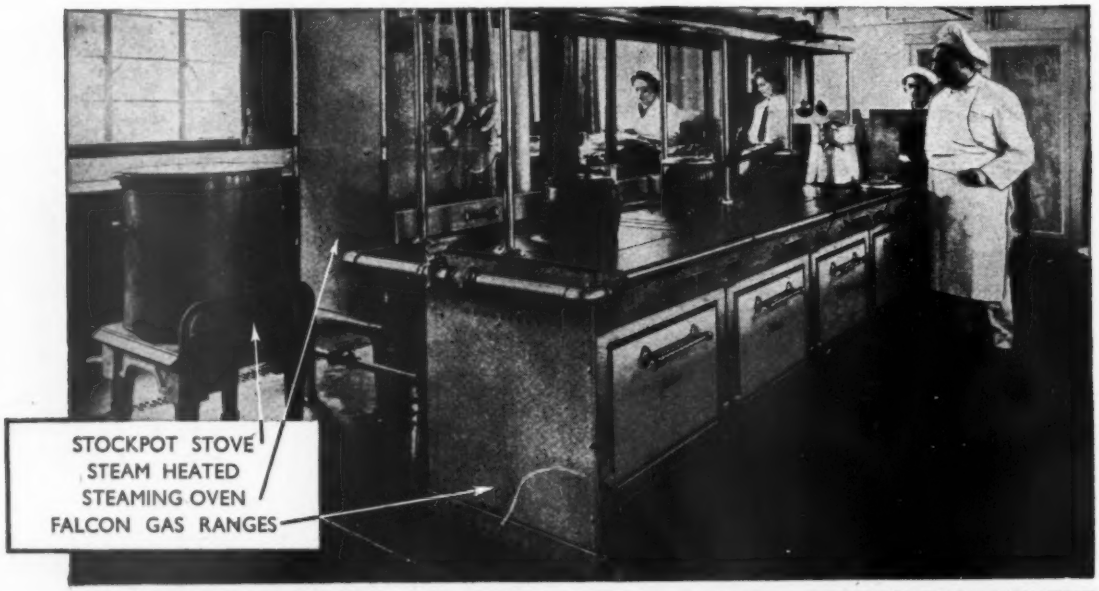

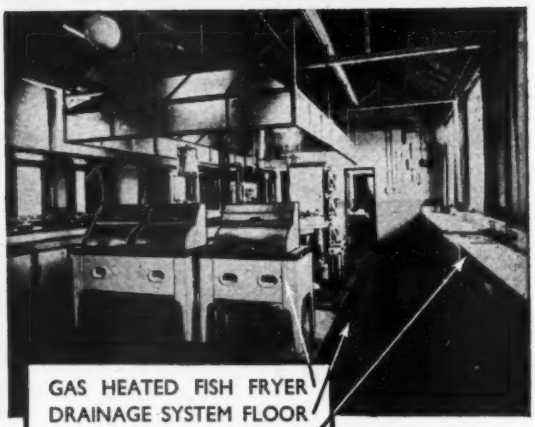

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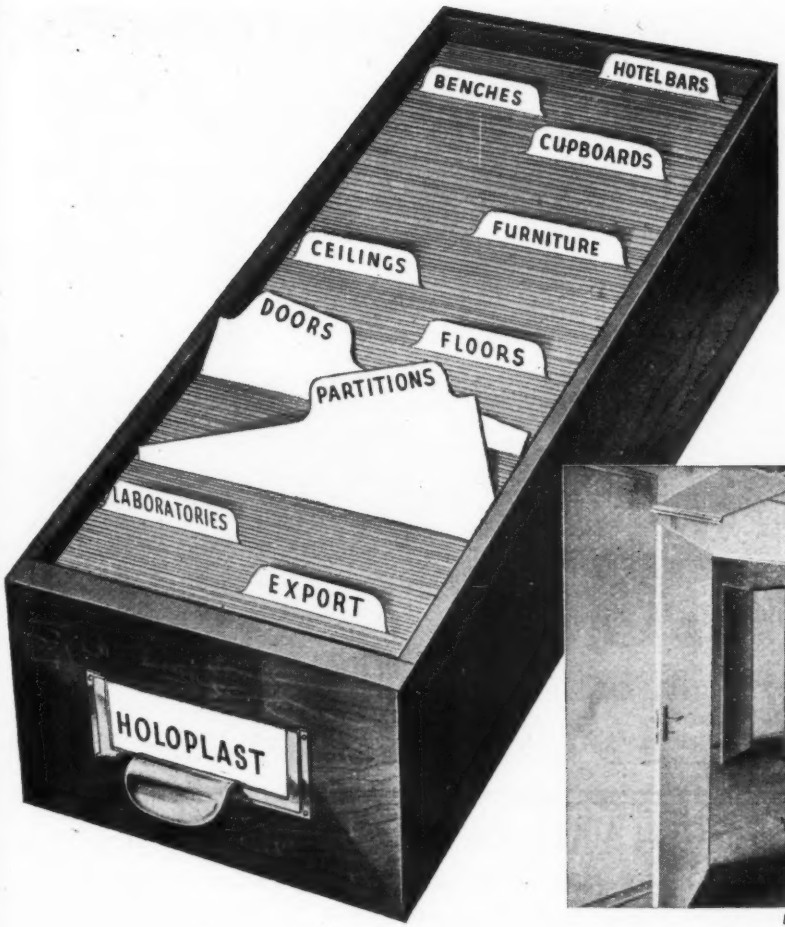

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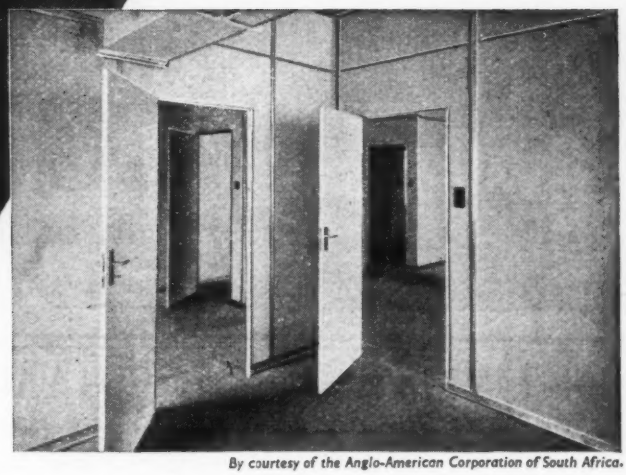

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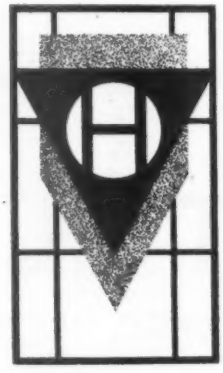

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In common with every other periodical, this JOURNAL *is rationed to a small part of its pre-war consumption of paper. Circulation is therefore temporarily restricted but would-be subscribers are advised to have their names put on the waiting-list. Their names will then be added to the subscription list as soon as possible. Subscription rates ; by post in the U.K. or abroad, £1 15s. 0d. per annum. Single copies, 9d. ; post free, 11d. Special numbers are included in subscription ; single copies, 1s. 6d. ; post free, 1s. 9d. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 15s. each ; carriage 1s. extra.*

DIARY FOR JULY AUGUST AND SEPTEMBER

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.

BRIGHTON. *A Regency Exhibition.* In the Royal Pavilion, Brighton. (Sponsor, County Borough of Brighton.) FROM JULY 15

CAMBRIDGE. *Town and Country Planning Summer School.* (Sponsor, TPI.) AUG. 23-28

LONDON. *Darkness into Daylight Exhibition.* At the Science Museum, South Kensington. (Sponsor, Science Museum.) UNTIL SEPTEMBER 30

Photography in Design Exhibition. At the Royal Photographic Society's House, 16, Princes Gate, S.W.7. (Sponsors, Royal Photographic Society and DIA.) 9.30 a.m. to 5 p.m. UNTIL JULY 30

Exhibition of Photographs and Models of Windmills. At the Victoria and Albert Museum, South Kensington. (Sponsor, Victoria and Albert Museum.) UNTIL AUG. 1

Mechanical Handling Exhibition. At Olympia. The exhibits will include aerial ropeways, conveyors and elevators; coal, coke and ash-handling plant; cranes, gears and chains, hoists, stackers, pulley blocks and lifting gear; hand-trucks, power-driven industrial trucks, runways, wagon-tippers, pneumatic handling plant and all types of accessories. (Sponsor, "Mechanical Handling.") UNTIL JULY 21

International Conference on Noise and Sound Transmission. At the RIBA, 66, Portland Place, W.1. (Sponsors, Acoustics Group of the Physical Society and the RIBA.) UNTIL JULY 16

Sport in Art Exhibition. At the Victoria and Albert Museum. (Sponsor, Olympic Games Exhibition Committee.) JULY 15-AUG. 14

Exhibition of the Polish University College School of Architecture. At 7, Cromwell Road, S.W.7. (Sponsor, Polish University College.) 10 a.m. to 7 p.m.; Sundays, 2 to 6 p.m. JULY 17-28

Conference on Civil Engineering Problems. Papers on subjects of importance in Colonial development will be read and discussed. At the ICE, Great George Street, Westminster, S.W.1. (Sponsor, ICE.) JULY 19-23

F. Webster. *Substitutes for Timber.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) Buffet lunch 12.45-1.15 p.m., 2s. 6d. Lecture 1.15-2.15 p.m., 6d. JULY 20

BSI Annual General Meeting. At the IEE, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, BSI.) 3 p.m. JULY 21

Reception of World Study Tour on European Reconstruction and Community Planning. At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) JULY 27

International Exhibition and Conference on Landscape Architecture. At County Hall, S.E.1. (Sponsor, ILA.) AUG. 9-12

International Congress of Architectural Students. (Sponsor, Arch. SA.) AUG. 24 TO SEPT. 2

TCPA Dutch Tour. (Sponsor, TCPA.) FROM SEPTEMBER 11

Biology and Civil Engineering Conference. September 21. Morning: *Causes, Effect and Prevention of Soil Erosion.* Afternoon: *The Effect of Vegetation on Drainage and Floods.* September 22. Morning: *The Effect of Vegetation in Stabilizing Artificial Slopes.* Afternoon: *The Use of Vegetation to Stabilize Sand Dunes.* September 23. Morning: *The Effect of Vegetation on the Settlement of Roads and The Effect of Vegetation on The Settlement of Structures.* Afternoon: *Algal Growth and Engineering Design.* At the ICE, Great George Street, Westminster, S.W.1. (Sponsor, ICE.) SEPT. 21-23

COMPETITIONS

RIBA Prizes for Public and Secondary Schools: A total of 10 guineas in prizes is offered for: 1, The best original illustrated essay dealing with a building or group of buildings with which the competitor is personally acquainted; 2, the best sketches or scale drawings of a building or part of a building in pencil, ink or colour, maximum size 30 in. by 22 in. Assessors: H. T. Cadbury Brown, Hugh Casson, E. R. Jarrett. Further information from the Secretary, RIBA, 66, Portland Place, London, W.1. Entries by October 7.

RSI Prize Competitions: John Edward Worth Prize (£40) for an essay on *Practical Improvements of Appliances or Inventions in or about Dwelling-Houses,* and John S. Owens Prize (£15) for an essay on *Atmospheric Pollution.* Apply Secretary, Royal Sanitary Institute, 90, Buckingham Palace Road, London, S.W.1, for general conditions. **Entries by December 31.**

NEWS

THURSDAY, July 15, 1948
No. 2788 VOL. 108

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.

★

A British Council TOWN PLANNING EXHIBITION is being toured in Germany by the Control Commission. It is visiting Munich (until July 25), Hanover (August 2-21), Berlin (September 1-18), Hamburg (September 27-October 10), and Dusseldorf (October 15-30), continuing its German tour until March, 1949. It is a smaller version of the original "Town Planning in Great Britain" exhibition which was assembled by the British Council at the request of the Federal and State Governments of Australia, and is scheduled for a year's Australian tour commencing in the autumn. Members of the special advisory committee appointed by the British Council to supervise its preparation were Mr. S. L. G. Beaufoy, C.B.E., F.R.I.B.A., M.T.P.I., Mr A. M. Chitty, F.R.I.B.A., M.T.P.I., A.A.DIPL., Mr. R. T. Kennedy, A.R.I.B.A., A.M.T.P.I, Mr. R. H. Matthew, A.R.I.B.A., and Sir George Pepler, C.B., F.S.I., P.-P.T.P.I., HON. A.R.I.B.A. The Design Research Unit was responsible for production and design.

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From AN ARCHITECT'S *Commonplace Book*

ARCHITECTURAL PRACTICE AND PROCEDURE. [*From Vasari's* Life of Antonio da San Gallo.] The Florentine nation having begun their church in the Strada Giulia behind the Banchi from the designs of Jacopo Sansovino, it was set too far back to the river. Accordingly they were involved in an expenditure of 12,000 crowns for foundations in the water. This was excellently carried out by Antonio, who had succeeded in doing what had baffled Jacopo, and several braccia were built over the water, Andrea making a remarkable model, and if the work had been completed it would have been stupendous. However, it was a disgrace, and showed great want of foresight in the head of the nation at Rome, to permit the architects to found so large a church in so formidable a river, in order to gain 20 braccia in length and throw so many crowns away on foundations involving a continual struggle with the river, when the church might have been brought farther forward on the land, if shaped differently, and could have been completed at the same cost. If they trusted in the wealth of the nation, time proved their calculations to be false, for the church remained and still is in the same condition, during all the years of Popes Leo and Clement, both Medici, Julius III and Marcellus, all Florentines, and in spite of the greatness of numerous cardinals and the riches of merchants ; and architects ought to look to the end before putting their hands to a work of importance.

★★★

The Minister of Works has announced the members of the WORKING PARTY ON BUILDING OPERATIONS.

In reply to a question in the House of Commons regarding the terms of reference and composition of the Working Party, he said: "I have now appointed the Working Party. The terms of reference are: To enquire into (*a*) the organization and efficiency of building operations in this country, including those of specialist and sub-contracting trades; (*b*) the position of the professions in relation thereto; (*c*) the arrangements for financing operations, and (*d*) the types of contract in general use, and to make recommendations. Questions of wages and conditions which are dealt with by the joint negotiating machinery in the industries will be outside the scope of the enquiry. I have appointed as Chairman Sir Thomas W. Phillips, G.B.E., K.C.B., who will be retiring from the Public Service at the end of this year. The other members are:—

Professor G. C. Allen, M.COM., PH.D., Economist, Professor of Political Economy, University College, London.

Mr. J. Armstrong, Member, Executive Committee, National Federation of Building Trades Operatives. Secretary, Operatives' Side of the Civil Engineering Conciliation Board.

Sir Hugh Beaver, M.I.C.E., M.I.CHEM.E. Managing Director of Messrs. Arthur Guinness, Sons & Co. Ltd. Formerly Controller General, Ministry of Works.

Sir George Burt, M.I.C.E., Past President, Federation of Civil Engineering Contractors. Chairman, Building Research Board.

Mr. R. Coppock, C.B.E., General Secretary, National Federation of Building Trades Operatives.

Mr. H. Drake, Representative of Federation of Associations of Specialists and Sub-Contractors. Past President of Electrical Contractors' Association.

Mr. H. B. Kerr, M.C., J.P., F.I.O.B., Member of Council, National Federation of Building Trades Employers. Past President, London Master Builders' Association.

Councillor J. McInnes, M.B.E., J.P., Member, Scottish Building Costs Committee. Convener of Housing Committee, Glasgow Corporation.

Mr. S. J. Pears, Chartered Accountant. Partner in Messrs. Cooper Brothers. Formerly Principal Controller of Costs, Ministry of Supply.

Mr. W. T. Porteous, President, Scottish National Building Trades Federation (Employers).

Mr. B. Sandercock, O.B.E., Vice-President, National Federation of Building Trades Operatives.

Sir John Stephenson, C.B.E., J.P., President, National Federation of Building Trades Operatives.

After consultation with the professional institutions concerned, I have appointed the following as assessors:—

Sir Lancelot Keay, K.B.E., Past President, Royal Institute of British Architects.

Mr. D. M. Watson, B.SC., Former Member of Council, Institution of Civil Engineers.

Mr. E. H. Palmer, Fellow of the Royal Institution of Chartered Surveyors. (Assessor for England and Wales.)

Mr. H. A. Brechin, Fellow of the Royal Institution of Chartered Surveyors. (Assessor for Scotland).

I shall invite other professional organizations to nominate assessors as the need arises. Mr. W. T. Lewis, Ministry of Works, will act as secretary to the Working Party."

Arrangements are now in hand for clearing the site and laying the foundations of the new CENTRAL TECHNICAL COLLEGE, BIRMINGHAM.

This is announced in a report of the Sites and Building Sub-Committee of the Birmingham Education Committee which said that the Minister of Education has approved the invitation of tenders for work on the foundations of the new college. The college will be built in New Corporation Street, and arrangements are to be made for the closure of two roads intersecting the site. The project was first put forward ten years ago, and its estimated cost in 1939 was more than £1 million.

The first exhibition of the work of ROYAL DESIGNERS FOR INDUSTRY will be held at Burlington House, Piccadilly, London, next October.

The exhibition is being organized jointly by the RSA and the CID. It will show the commercial importance of good design and the contribution to industry which designers are making. It is hoped that this 1948 exhibition of the work of the RDI's will stimulate production of British goods of outstanding design in time for the 1951 Festival of Britain.

The membership of the Working Party on Building Operations was recently announced in the House of Commons by the Minister of Works, and is reported in a news note on this page. The photograph is of Sir Thomas W. Phillips, G.B.E., K.C.B., who has been appointed Chairman of the Working Party.

Photo Album: Scandinavian Baroque

Contrast is the keynote of the baroque, both in the handling of space-shapes and the interplay of light and shadows. Though it reached its highest development in Italy and Central Europe, it was an international style with regional variations. The photograph above shows a Swedish version: Läckö Castle on Lake Vänern which was rebuilt in the second half of the seventeenth century for Count Magnus De la Gardie, Lord High Chancellor of Sweden. The entrance to the courtyard is a typical baroque treatment that relies for its effect upon the impact of spaciousness and light at the end of a tunnel-like approach. The work lacks the high technical finish of southern baroque, but it has the vigour and boldness common to the best seventeenth century architecture.

★

There is to be no change in **HOUSING SUBSIDIES** *this year.*

The Minister of Health has decided that the Exchequer subsidies and rate contributions for new houses built by local authorities in England and Wales shall remain unchanged for a further twelve months. They will be paid in respect of new houses completed before June 30, 1949.

This decision was made known in a report by the Minister on the result of a review of the contributions payable, under section 16 of the Housing (Financial and Miscellaneous Provisions) Act, 1946, which has been published as a White Paper (Stationery Office, 1d.).

The standard amount of the annual Exchequer subsidy is £16 10s. a house for 60 years, and the local authority contribution is £5 10s. a house annually for the same period.

ALL-HALLOWS CHURCH is to be rebuilt.

The Queen will attend on July 19 the laying of a foundation stone marking the inauguration of the rebuilding of the bombed church of All Hallows-by-the-Tower

The Rev. P. B. Clayton, vicar of All Hallows and founder of Toc H., has announced that gifts from sympathizers at home and overseas have ensured all the steel and timber needed for the restoration of the church tower and the roofs of the nave and north and south aisles. The Ministry of Works has granted a licence for the rebuilding of the north aisle, and work can begin promptly.

The following are this year's SCHOLARSHIPS AND PRIZE AWARDS at the AA School.

FIRST YEAR PRIZES: *Howard Colls Travelling Studentship* (*value* £15 15*s.*), T. G. Bidwell; *Second Prize* (*Books, value* £5 5*s.*), Andrew Derbyshire; *Honourable Mentions*, A. K. Allen; G. Lavington; R. A. Lee; V. F. Pym; Miss E. V. Shawcross.

SECOND YEAR PRIZES: *A.A. Travelling Studentship* (*value* £26 5*s.*), R. E. Wilkinson; *Second Prize* (*Books, value* £10 10*s.*), B. C. Cassidy; *Honourable Mentions*, T. D. Cooper; R. G. Harris; J. A. Holderness; P. J. Lord; L. H. Nixon; M. D. Willis; N. A. P. Whicheloe.

THIRD YEAR PRIZES: *Holloway Scholarship, tenable for the senior course* (*value* £150), H. S. Morel; *Third Year Travelling Studentship* (*value* £31 10*s.*), H. C. Morris; *Third Year Prize* (*Books, value* £10 10*s.*), Miss S. C. Gibson; *Honourable Mentions*, S. F. Amis; A. J. Ault; C. H. Felton; J. A. W. Killick; J. A. C. Higgins; Miss U. Pevsner; J. MacDonald; J. M. Rogers; W. White.

FOURTH YEAR PRIZES: *Year Prize* (*Books, value* £10 10*s.*), I. D. Grant; *RIBA Henry Jarvis Scholarship for Construction* (*value* £50), P. A. Newnham; *Honourable mentions*, B. L. Adams; I. C. Baker; B. A. Barker; P. J. Coles; J. R. Harris; P. B. Horsbrugh; H. S. Scorer; R. H. Sims; H. T. Swain; T. M. Williams; M. A. Wolstenholme.

FIFTH YEAR PRIZES: *Henry Florence Travelling Studentship* (*value* £50), P. A. R. Dickinson; *Fifth Year Travelling Studentship* (*value* £50), M. G. F. Ventris; *Medal presented annually by the Société des Architectes Diplomés par le Gouvernement, Paris, to the best Diploma student of the session* Miss N. Dore; *Third Prize* (*Books, value* £10 10*s.*), Oliver J. Cox; *Honourable Mentions*, P. H. Bosanquet; S. Gardiner; E. A. Gardner; D. M. Jones; C. S. Knight; C. A. Petty; V. Worley; J. Wright.

Alec Stanhope Forbes Prize (*for the best colour work during the session*) (*Books, value* £5), B. A. Barker; *Roland Wilmot Paul Prize*, 1948 (*value* £30), P. H. Bosanquet; *AA Measured Drawings Prize* (*value* £20), divided equally between Miss S. C. Gibson and W. J. Appleton; *Royal West of England Academy School of Architecture* (affiliated to the AA). *The prize in Design, value* £5 5*s., is awarded to*: D. Morris (3 gns.); G. P. Treglown (2 gns.).

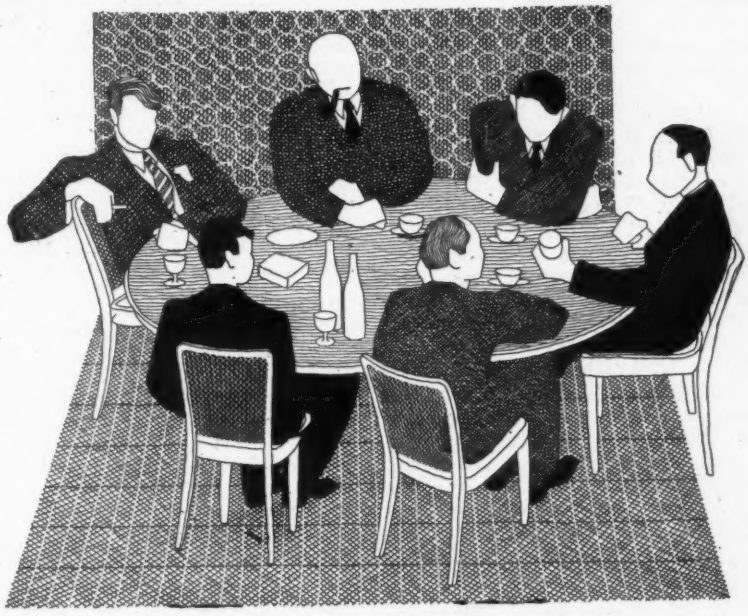
NEWS IN BRIEF

The Windmills of Britain whether still in working order or not, are to be included in the statutory lists of buildings being prepared under the direction of the Ministry of Town and Country Planning, said Mr. Lewis Silkin in the Commons recently.

The Leverhulme Scholarship tenable at the Architectural Association School of Architecture, London, value £1,000, which includes payment of fees and maintenance for five years, has been awarded this year to Mr. R. A. Maguire, of Queen's Park, London (and Bancroft's School, Essex).

Mr. T. Porteous Bolton, B.ARCH., A.R.I.B.A., DIP.C.D., A.M.T.P.I., formerly Chief Assistant Architect with the Lincoln (Parts of Lindsey) County Council, has been appointed Deputy County Architect to the Bucks County Council Mr. Bolton is a graduate of Liverpool University.

ROUND THE TABLE



THE growth of the public offices and the decline of private practice is probably the topic that most actively exercises the minds of the architectural profession. It is the subject of the fourth of the JOURNAL'S series of leader-page discussions, printed below. The subject next week will be Architecture and Standardization. This will bring the initial series to a close. It is hoped to organize further discussions later in the year and the Editor will welcome suggestions for topics to be dealt with. Some letters from readers commenting on the views expressed by the architects, builders, engineers and others who have taken part in previous discussions appear on another page.

4. Public versus Private Practice

F. R. YERBURY: chairman.

JOHN GREY, F.R.I.B.A.: architect in private practice (*London*).

KENNETH J. CAMPBELL, A.R.I.B.A., President ABT: architect (*Miners' Welfare Commission*).

ERIC JANES, A.R.I.B.A.: architect in private practice (*provinces*).

L. DE SYLLAS, A.R.I.B.A.: architect (*member of Architects' Co-operative Partnership*).

Chairman: The subject we are going to talk about today is the very topical one of official and private architects.

Grey: I would have thought that was two separate subjects, as they both want very different things.

Chairman: Do they really want such very different things? I should have thought that they wanted much the same.

Janes: No. I am a provincial archi-

tect and I have been serving for the last year on the Councils of Berks, Bucks and Oxford. I am very worried indeed by the policy of the Bucks County Council. The private architect has lost schools and is losing everything. And I understand that the County Architect's staff has risen since 1939, when it was sixteen, to forty-seven, which is just about equal to the rest of the architectural profession in the County. What is going to happen as a result is that the supply of work to private architects will be halved. The official architect's staff has been built up, to my mind, on completely uneconomical lines. In addition to this you have the closed shop principle whereby, for instance, if you have built a school you can build another one, but if you have not built a school you cannot build one. We therefore have Government sponsorship and expansion of various well established, old practices, whilst the young man is not able to make a start.

Grey : Not only the young man. I ran across the closed shop principle, as you call it, even nearer home. When the war ended, being out of touch with the profession, I consulted the RIBA as to the prospects of setting up in practice again. They told me there was plenty of housing, but as I hadn't done any housing schemes in 1939, although I had built a lot of houses, I didn't stand a chance.

Campbell : I think that is a little hard on the RIBA. I am on the Council, and I do know that this is a matter which occupies a very large amount of the Council's time at every meeting. Quite frankly, they are very disturbed about the drift of work to public offices, since after all the majority of the Council are private practising architects. So far, it is true, they have not been able to produce much of an answer, but the president has had considerable negotiations with the authorities.

De Syllas : A point I have never quite understood is: why must we always assume that there is an absolute split between the private and the official architect? There is the possibility that both can exist and be useful at the same time.

Campbell : That is where I take exception to Mr. Grey's statement that they are two different people. As Mr. Janes has pointed out, in many cases the man in the public office has only just come out of private practice; so they must be similar people.

Janes : The official architects have only become officials because they had to give up being individuals. What particular use are official architects?

Grey: Yes, why do you want official architects anyway, except perhaps for the general servicing of Government buildings?

Campbell : Well, having worked with the Miners' Welfare Commission for ten or eleven years, and having been in private practice for ten years before that, I can say I would not go back into private practice for any consideration at all—not because of the lack of security but simply because of the atmosphere.

Grey : While freely admitting the more restful atmosphere of Government service, I still fail to see why you should do better work as an official than as a private architect or group of architects.

De Syllas : It is quite evident that private practices have established standards and can do certain things which no official body can do, but on the other hand I think the pithead baths are an excellent example of co-ordinated work. If one private practice were to do the whole of the pithead baths, it would involve millions of pounds worth of business, building in all parts of the country, which would be quite beyond any private firm who wished to retain the characteristics of the individual. And why should that work go to one individual practitioner? It is better done by a centralised and regionalised organization.

Campbell : Yes, you have a new problem, architectural and in some ways structural, and it is only by the combined experience and experiments of a large group of youngish architects that a general high level can be reached.

Chairman : The Miners' Welfare pithead baths scheme is one of the best things that has been done in its way. But those responsible for their design were not trained as official architects; they came in from outside; possibly they could have done as good work outside, but the only opportunities they got were inside. There must be a difference between the man who joins an official office from outside and the man who goes directly from his school training into a Government office for a life's career.

Campbell : Look, Mr. Yerbury, I am going to admit this much. In spite of the fact, as I said, that I would not go back into private practice, for one reason because of the general atmosphere, I do admit that I think the ten years I had knocking about in private practice were essential, especially because of the general day-to-day variation of experience, the hard-hitting and all the rest of it. I cannot imagine, with our present system of architectural education and our present system of organizing public bodies, that the man going straight into public service will have the flexibility of the man who has had some experience in a private office. That brings us back to Mr. de Syllas's point, that there is definitely room for both; it is just a matter of adjusting the relationship between the two. Your public office has the enormous advantage of group consultation and can experiment on a large scale.

Janes : I disagree most strongly. There is room for both, but on the present basis the official architect is expanding to such a large extent that the other is going to close down. It is purely political. We have got mixed up with the policy of the Government, and it is difficult to see what we can do about it.

Chairman : It was going on before this Government.

Janes : I have just given you a concrete example. Buckingham County Council apparently had a staff of sixteen before the war and coped with their jobs, and now they have forty-seven. In normal times could any Council department substantiate a staff in 1948 which is three times as big as it was in 1938-39?

De Syllas : We have got a new Education Act for one thing. Take the progressive County Architect's offices for example; they are quite broad-minded about the issue. The majority are interested in the possibility of using private architects as consultants and in many cases are doing so. I speak without authority, but I think they would be interested, in fact, to expand their work by taking on private consultants. I know of one particular case where they have not been able to do so because they fix their programme on the basis of a three-year plan. During that three years they have built up a certain amount of knowledge and experience of how to use certain new materials and structural systems. Unless you are inside that department and learning on the drawing board exactly what that system is and how it can be modified, you cannot plan your next three-year programme with adequate correction of faults. At the moment the system is not perhaps sufficiently worked out to be applicable as a standard outside the official office. But, when it is, a consultant, working continuously with the department, could presumably be given the system and told to go ahead and do the job; but not the private architect if he is only to do one job. He has no continuity. He builds one school and learns a great deal from that one school, but he has no means of measuring, over a long term, the success or failure of a development.

Campbell : I think I can illustrate that exactly. For the last two years we have been working out a post-war system on which to build pit-head baths and the ancillary accommodation going with them. At the present moment part of the work is being done by private architects acting with us, but we worked out full basic standards and details, the results of continuity of experience of many architects working together for some years, and without this our present programme would be impossible.

Janes : I have no quarrel with that at all, because, as you say, you have continuity of research and so forth; in fact, in my opinion that is how it should be done. You use the official architect as such, but I see no reason why the expansion of the official architect should starve the private one, which is precisely what it will do in the next five years.

De Syllas : I think that you are laying the blame at the wrong door: it is due to conditions in Great Britain today. An American critic writing recently in the *Architectural Review* discussed the whole problem. He distinguished between the architecture of Genius and the architecture of Bureaucracy. He did not think the latter was necessarily bad, nor even not of the first rank, but that it was of a different kind. The buildings he included under the heading of the architecture of genius were ones like town halls or great national monuments—individual examples which require individual treatment and should be designed by the private architect. But there are also things like schools, of which in the next fifteen years we have to build thousands—for which we are evolving the best repetitive means, and we hope the best form. These must have continuity, which cuts out the individual architect. They are the architecture of bureaucracy in the best sense. We have got to face up to the difference between the two kinds of problem, and the repetitive job today is the one which has priority and licence. This does not mean that in fact, with more balanced conditions, the private architect is not going to have before him the whole field of the architecture of genius!

Chairman : I would add that there is one condition absolutely essential before a system like that could work, and that is that bureaucratic architecture must not be allowed to produce merely a low level of mediocrity in which individual ideas in design are not given full play. I think the Miners' Welfare set a very good example; its architectural office made sure from the earliest days that however much the jobs were in fact the collective responsibility of the office, individual assistants were given full responsibility for particular jobs, and their name was attached to them; they were in fact the assistants' own jobs.

Campbell : That is a very important aspect of internal organization. It is done now in many public offices and, I am sure, could be done in all.

Janes : What about the Ministry of Works, or what used to be H.M. Office of Works, who, for the last fifty years, have built post offices and telephone exchanges? Can you now see any brilliant examples of architecture there?

Campbell : You can put Holford's war-time hostels against that.

De Syllas : Yes, those hostels are the products of something that is neither the old dull, dim office of works nor the new enormous machine, such as the LCC machine, turning out an enormous amount of stuff.

Chairman : Are you not taking your examples from the days before the bureaucratic architectural expert had been evolved?

Janes : I am taking my examples from humanity. Sooner or later, when you nationalize anything, you produce a civil servant.

Campbell : I am nationalized, but I am not a civil servant. The civil service do not touch us.

Janes : You do not want them to, do you? I bet that when you have been in your department for ten years you will produce as low a level of architecture as is found in previous examples of bureaucratic design.

Campbell : Sir, I deny that.

De Syllas : I think you have given your own answer. Today the younger man in the profession goes into an official architect's office, and takes a job, perhaps in one of the lesser counties, as, say, a senior assistant. In ten years, if he is successful, he rises in the department, and then moves on to the next best job that is advertised, and so on. He gets to the top in the end by a series of hops from one job to another, and eventually becomes a chief architect. I think that is the contemporary answer to the question how we should build our careers. At the moment there is the criticism that this changing of staff disorganizes a department every time a man leaves and a new one comes; but that is much more a reflection on our present bureaucratic system. The people who make a proper use of the official machine are those who, by slogging away for years, rise step by step until they become architect to a large county —a really important job. I do not think the loss to their old job is as important as the gain to their new one. It is a good thing to have a change of personality and new blood coming in, if overall policy is allowed to carry on with a certain consistency, while remaining sufficiently flexible to accommodate the new man.

Chairman : I think England is one of the few countries that has this system of a Ministry of Works where the chief architect is a permanent full-time official rising to the top by gradual promotion. Take Sweden as the opposite case. They have a Ministry of Works there too, of course. But the Chief Architect is a private architect in private practice. His appointment, which is a part-time one, lasts for about five years, after which new blood is introduced, which seems to me a better answer. You have obviously got to have some sort of official centre for building. The important thing surely is to have people in control of it who care less whether the work is done by private or public architects than whether it is done with imagination and freedom to design.

Grey : There seems to me to be a danger that when people take on a temporary job in a Ministry they may be tempted to keep too sharp an eye on what will happen to them when they get out into private practice again. This has been known to have unfortunate results and to let down the standard of the profession. I have nothing but respect for the old type of civil servant who makes public service his career, but little or none for the new type of dual personality. Perhaps this is only one of the less attractive features of the general post-war set-up.

Campbell : I would like to point to the high level achieved by the Swedish co-operative departments. These chaps—and the fellows in our office—are, a very large proportion of them, keenly interested in the development of architectural design. They are not stooges, and they have gone into a particular office because it is one that has already set a standard, if you like, of being interested and enterprising; that seems to me the important thing. What we are talking about is not what public offices have been in the past, but what they can be and should be.

Chairman : Then you do not think the men working in your office would prefer practice on their own?

Campbell : Some of them certainly would not, though that is a terribly difficult question to answer because the people naturally vary from one extreme to the other—there are people like myself who have been in private practice and would not go back to it, quite frankly, because in the Miners' Welfare Commission they have found they were set a clear programme and were free to develop sketch plans on the basis of their own ideas. They were free to design as they wanted to design; they were not messed about by a client. The Commission was only interested in getting the building and the services.

Chairman : Your case is rather an exception, you know.

Campbell : No, I don't think so.

De Syllas : You get the same conditions in an office like the Hertfordshire County Architect's. I know the people there very well. They have got in front of them a programme of research and design for which they individually are given responsibility on each job. They are given the chance of working out a development and structural system which, as far as they are concerned, is going to revolutionize their methods of design. They need five or six years to do it. After a certain period in those circumstances, of course the other kind of man who has a sort of inside con-

viction that he is the chap to fit into the round hole labelled "architectural genius," is going to *be* an architectural genius, even if that should mean leaving public employment and going into private practice.

Chairman: I suppose that chap went into a public office to begin with because it was the only sort of place where he could get opportunities. But I still think it a pity that all the interesting work should go into official channels and nothing be left for the individual.

Janes: Speaking for myself, I would never give up private practice. I spent a time in the old Office of Works, and I would never think of going back to official architecture—unless I simply wanted to have an easy life.

EDITOR'S POSTSCRIPT

It is important not to let this very topical controversy become simply an accusation on the part of one half of the profession that the other half is taking away its bread and butter, because there is no doubt there will always be room for both public offices and private practitioners. A regrettable tendency for the two to become rivals has lately been aggravated by the fact that the kind of work that falls logically to the lot of the private architect has suffered most from the present economy cuts. All architects will agree that these issues must first be judged on a basis of what is best for architecture as a whole. When this has been decided, the second task will be for the profession to organize its own internal affairs in order to make sure that responsibilities and rewards are fairly allocated. It is clear that the architectural programme that now faces us demands public offices in which the architect becomes a public servant, as well as the old type of private office. As several speakers point out, only the former can provide the necessary continuity of experience to allow experimental planning and structural techniques to be studied to the full, but the danger to be guarded against is the mediocre quality of design that comes from the too complete suppression of individual freedom in some public offices. They must organize themselves so that, however the general responsibility may be shared, each building can be the conception of a single architect or a closely integrated group.

The Architects' Journal
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Phone: Whitehall 0611

NOTES & TOPICS

OUR OWN WORKING PARTY

On Monday last week the Minister of Works announced the setting up of a Working Party on building operations. The step may be justly called inevitable, brave and necessary. These are times for frankness and Astragal brings to the attention of the Working Party in all seriousness his view that the first and main requirement of the building industry today is that the operatives should do some work.

*

Slow working pace is notorious in the industry just now, but, like other architects, I have been cautious in accepting any one reason for it; and it was not until repairs and redecorations started on my own house that I really appreciated the present state of affairs. The men engaged were a very nice lot, and their quality of work (by 1948 standards) rather high. In 1939 I am quite sure such men would have done what can only be described in the common phrase as a good day's work.

*

Reports of their actual hours were, however, so surprising that subsequently they were timed with reasonably close accuracy. The period during which the men were actually in position to work came to just over 4½ hours a day. Small stand-easies, casual cigarettes, etc., have to come off this, but of these there did not seem to be many. It may be that I too easily allow myself to be surprised. On telling this story to another architect, I found that men who had done some work in his house rarely or never exceeded 4 hours on the job; and this was observed in a responsible way on a number of days.

*

The Minister of Works apparently holds that building operations are primarily a matter for the unions and employers. There are four of each on the Working Party. There is no architect (Sir Lancelot Keay is an "assessor" whose functions are not explained). There is also no representation of consumers unless Councillor McInnes, member of the Scottish Building Costs Committee and Convener of Glasgow's Housing Committee, fills this function.

*

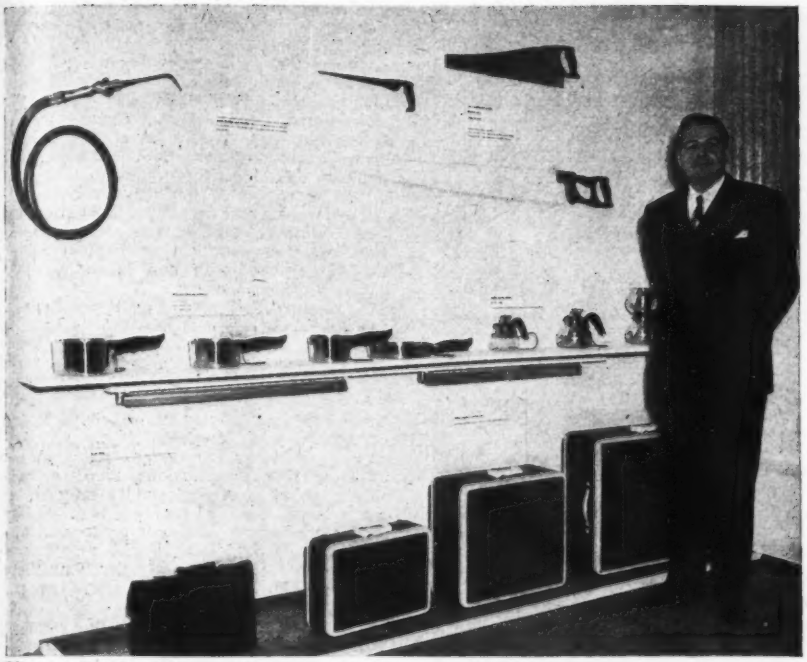
This last omission shows in my view a desolating lack of imagination. The fact that building operatives are turning out about half what they could produce in an ordinarily good, unsweated day's work is a national matter of the greatest consequence. To allow unions and employers, however well shepherded, to argue over old wrongs behind closed doors will produce little or nothing. But if two or three carefully chosen consumers were on the Working Party, and 20 more gave evidence in public to it, a sense of urgency and determination might be generated in Lambeth Bridge House that would do something effective to cover the *malaise* that afflicts the industry just now.

STUDENTS' WORK

Prize Day at the AA is always an agreeable function and on Friday it had the added interest of giving many architects their first contact with the RIBA president-elect, Mr. Michael Waterhouse. I hope most visitors took the opportunity of touring the exhibition of students' work. They must have been struck, as I was, by the steady progress made in the face of all the difficulties produced by overcrowding. The school now has over 500 students, themselves but a fraction of the total number now entering the profession—which incidentally is causing alarm in many quarters, but that is another story about which I shall have something to say another time.

*

There are many points one could pick on about the admirable exhibition in the AA studios. I notice *The Times*



Thomas Lamb, designer of the "wedge-lock" handle, at the exhibition of his handle at the Museum of Modern Art, New York. See Astragal's note.

next morning commented on the signs of a return to careful draughtsmanship after the slapdash fashions of recent years. I observed this, too. It may be only the swing of the pendulum, but a steadily swinging pendulum is at least a sign that the clock is going. The AA staff must be given credit for tactfully performing their task of controlling too violent a swing in either direction.

VARIATIONS ON A THEME OF HANDLE

Reproduced above is a photograph of Mr. Thomas Lamb, American designer of the patent "Lamb Wedge-lock" handle which was the subject recently of a special exhibition at New York's Museum of Modern Art. The Lamb handle, "a revolutionary handle designed to fit the hand, is made of plastic, wood, metal and other materials, is about six inches long, and derives its form from a combination of scientifically designed contours, curves, angles and wedges . . . which tend to equalize gripping tensions and to use the full power of the thumb. It fits either right or left hand, and doesn't slip, roll or slide."

*

Among the Lamb-handled objects now available on the American market are hairbrushes, suitcases, saucepans, saws and coffee percolators. Mr. Lamb, who is clearly a Dali fan, plans also to lay his Lamb-handle on to crutches and telephones. American spies report that, though rather inflexible in conception—a tennis player, for instance, likes to change his grip for different strokes—the Lamb-handle is the product of serious research and analysis and has been found in some cases notably to reduce fatigue and strain.

*

It must have been Mr. Lamb's influence which prevented anybody from flying off the handle at the Museum's recent conference on modern architecture. Some score of great names—Mumford, Brewer, Gropius, Chermayeff among them—met to discuss the threat to orthodoxy hinted at in recent articles in those two eccentric journals, the *New Yorker* and the *Architectural Review*.

*

This paraphrase of the modern movement—its progressive humanisation as exemplified in such phrases as Sharawaggi and the New Empiricism—is today largely accepted in Europe, but in the USA apparently it is still greeted with raised eyebrows as the Trojan Horse of reaction. There is one architect in Minneapolis, I hear, who will not accept a client who is not wholly convinced of the virtue of modern design. Tempers, however, were kept; there was no policy split. In spite of the raised eyebrows it seems to me symptomatic of something brewing that none other than Gropius himself said (quoting Kandinsky), "Let's not say 'either-or' any more, but 'and'; let's not exclude anything but include everything."

ASTRAGAL

LETTERS

R. Lewis Stubbs

R. A. Bigham, F.R.I.C.S.

Round the Table

SIR,—Having read with great interest the round-table discussion on Building Research, we should like to emphasize how much information is indeed already available. Further research is very important in itself, but perhaps some fact finding on the results already published should be regarded as equally important just now. The good lawyer, although he cannot possibly know all the law, is the man who knows where to find it; but the good architect, although he knows a lot, has no time to keep himself abreast of all the results of modern research and may have no idea at all where to find them. And the position of the smaller man, who cannot keep a separate department in his office to watch the latest developments, is quite hopeless.

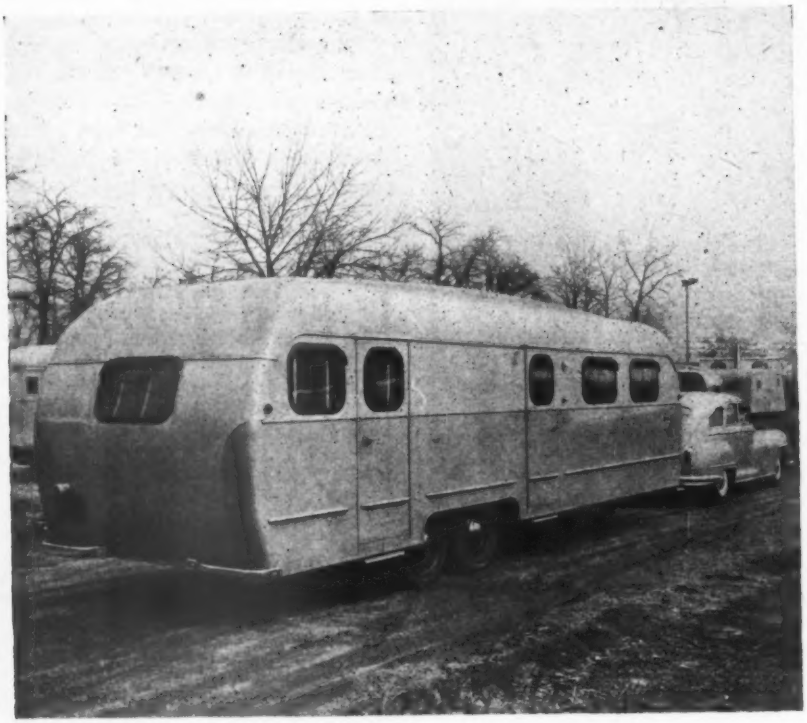
It is of course our special job to know the vast amount of research done all over the world on the various uses of zinc, and to spread that knowledge. But we are so often asked about problems that have been thrashed out years ago, that we feel that the most urgent need of all now is to guide the hungry to the food that already exists, rather than to expend all our efforts to increase the total stock.

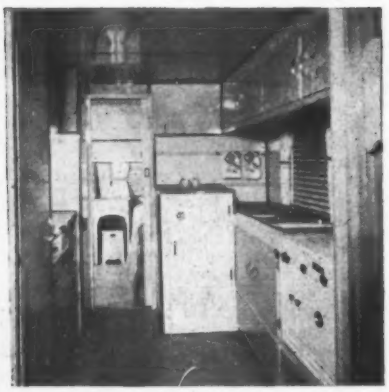
May we add how heartily we agree with the devastating remarks passed on jargon by Mr. Fitzmaurice and Mr. Deal. We estimate that to write plain English takes up to five times longer than to write jargon, but, with only five thousand readers, the saving of man hours is enormous. The scientists are the worst offenders but, as any builder knows, the architects are far from guiltless. It is unfortunate that pedantic and obscure English is so much easier to write than the plain and clear variety, and that so few people realize that easy writing makes hard reading.

R. LEWIS STUBBS,
Oxford. Zinc Development Association.

SIR,—I have been very interested in your Round the Table discussions. Comments by an estate surveyor may seem rather out of place and unhelpful, but your readers might overlook the fact that we are very much concerned in the points raised. Apart from the fact that it is not unusual for us to prepare plans and specifications and supervise building works, we probably have a larger share in the preliminary discussions and certainly in the ultimate results of large buildings than either the architect, quantity surveyor, or contractor. It is usually on our advice that a building is first contemplated, after we have given thought to advisability

PREFABRICATION ON WHEELS





The National Caravan Council recently held in the grounds of Chelsea Hospital a private exhibition of caravans made and designed in this country. More than forty different types were on view in sizes ranging from 10 ft. to 21 ft. in length at prices varying from £400 to £2,000. Most were intended for use on holidays and as mobile living quarters, but there were also models specially designed as mobile banks and dental and medical clinics. Their design is of great interest to architects since the problem is to provide the maximum of accommodation and comfort in the smallest possible space, and with a minimum of weight. It has points in common with the problem of designing a prefabricated house. The larger caravans can sleep four and are provided with hot and cold running water, chemical closets, and in some cases small anthracite stoves. Gas lighting is normally used since electric batteries for the supply of light and heat over long periods would be too heavy. The photographs on this page show the American treatment of the same problem. It is on a more lavish scale than that of their British counterparts, partly because American cars are generally larger and can pull a heavier load, and also because the longer distances travelled in the USA require that caravans should be even more self-contained than those used in this country. A complete kitchen unit has been provided (bottom) which compares favourably with many of those designed for more conventional dwellings. Centre, a view of the living room; beds can be transformed into divans for daytime use. All the photographs are of caravans designed by the Trailer Coach Manufacturers Association of the USA.

of development, suitability of purpose, relationship of cost to income, and correct timing. When it is completed, if it is a commercial building, it is the surveyor who has to make it "work."

On "research" I would suggest that the most urgent need is for a scientifically indexed summary of schemes, fittings, materials, etc., on the market. There are plenty of text books, compendiums, catalogues, advertisements, etc., but they do not compare like with like in simple form, nor are they complete. One is inclined to stick to processes and materials one knows rather than experiment with new at the possible expense of one's client.

I have never liked the custom where a specialist contractor is asked to submit a scheme and drawings which are subsequently used to obtain tenders. Apart from the ethics of obtaining free information and passing it on to competitors, the cost of wasted time, etc., must ultimately be borne by the building owners. If the architect cannot originate the complete scheme in drawings and specifications, either a consultant should be employed to do this, or the scheme itself should be part of the tender and secret from competitors. Alternatively, the architect should recommend one firm of specialists, and after tying them down to a fixed price, obtain the owners' consent to no competition.

It is far more important from the owner's point of view that he knows before the work starts what it will cost, than that he should obtain the lowest price. What is needed by a developer is some form of guarantee that the estimated cost on which his calculations are based will not be exceeded.

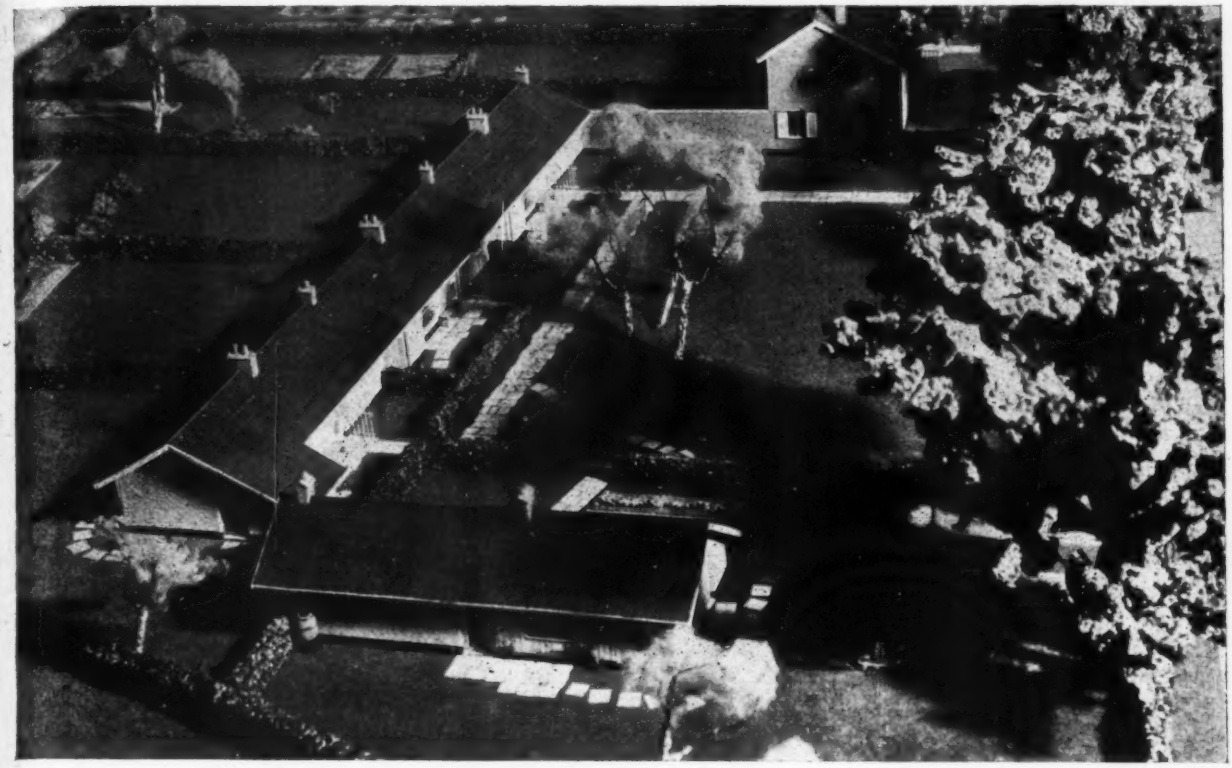
The great difference between building operations in America and in this country, apart from the number of specialist subcontractors, is the efficiency of their organization of time. I inspected a new twenty-five storey building where the steel was up to the twenty-second, the floors to the fifteenth, and the external wall panels to the tenth. It was a Sunday morning, and throughout the building there was an entire absence of loose materials, except on the top floor. Every trade clears up as it goes, and all deliveries are accurately anticipated and timed. This is where the contractor as an organizing expert can do so much, but we surveyors or architects must accept his advice as to sequence from the beginning if he is to be given a chance. He should also have a say in the subcontractors employed, for any difference in tendering can easily be swallowed up if they do not work in with the scheme as a whole and take their orders from the contractor without question. This applies particularly to times for starting, labour to be made available, and delivery of materials.

With regard to output by operatives, I am convinced that this is very largely dependent upon the atmosphere on the job. The average craftsman will do his best if he believes that a good job is more important than the time taken and that he is given a clear run without constant interruptions. This is essentially the job of the contractor, and within reason I would appoint one without tendering on this criterion alone.

The quantity surveyor must take the responsibility for the estimated cost being right. I have long lost any confidence that in a major job the price can be definitely and finally fixed by an estimate or contract. Extras are so common that builders have come to rely upon these for their profits.

My suggestion, therefore, boils down to a team consisting of the surveyor, the architect, the quantity surveyor, specialist consultants if necessary, and the contractor. All to work together from the beginning and each to be encouraged to take part in all discussions. If the contractor is paid an agreed fee instead of profit, so much the better, for he will then be on the same side of the fence as the rest of us.

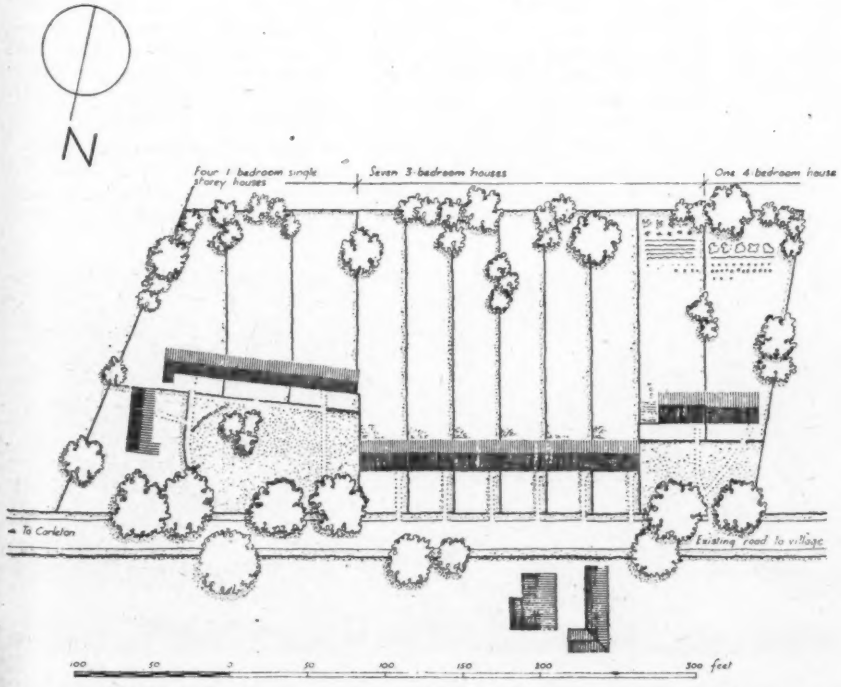
London. R. A. BIGHAM.



The green with old people's houses.

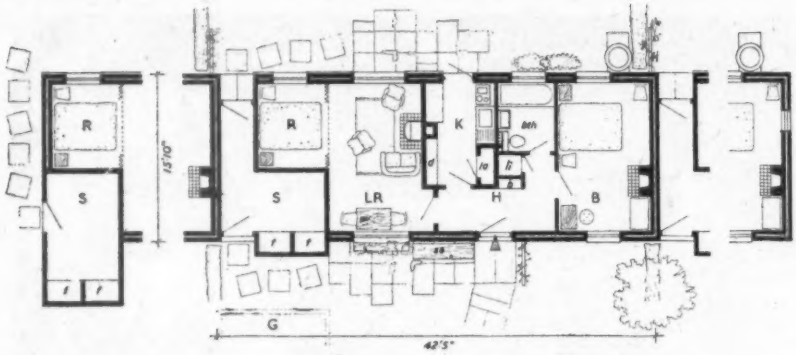
HOUSING AT THURTON, NORFOLK

DESIGNED BY TAYLER & GREEN



SITE PLAN

GENERAL.—These houses intended for agricultural workers were designed for a Rural District Council in accordance with the regulations for state-aided housing laid down by MOH. Although mainly intended for housing old people, the accommodation will serve for childless married couples or single people. The architects have attempted to overcome the prejudices against terraces which have arisen from improper planning in the past of through access, back doors, aspect, and frontage. Through access for each house is provided via the store which is incorporated in the main structure of the terrace. Back doors are eliminated, so that the through-access is only used for a private connection between front and back garden. The kitchen is placed opposite the front door as well as having its own door to the back garden. The occupants share the same entrance with visitors and no one has to enter through a scullery.



LR living-room
K kitchen
S store
R bed or dining recess
B bedroom
bth bathroom
li linen cupboard
la larder
se seat
B broom cupboard
f fuel
d drying cupboard
G garage (if required)

FLOOR PLAN OF ONE-BEDROOM HOUSE

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

Back of the terraces from the gardens. The model illustrated was made by Robert Davison, Student, Architectural Association, to $\frac{1}{8}$ in. scale.

Aspect for both the living room and bedroom is always alternative since they have windows back and front, and the plan will fit all aspects. The kitchen may face south as it has no solid-fuel range and the larder is cross-ventilated by a duct under the floor to the outside and also a flue through the roof.

Frontage is kept as wide as possible to give better shaped gardens and more privacy from neighbours.

PLAN.—The single glazed entry door opens into a hall round which the four units of the plan are grouped. The store is reached from outside only, but the wide eaves give covered access. A door could be made between store and living room but this would tend to make the living room a passage. A recess in the living room can be used either for a bed or for meals. Many elderly people either confined to bed permanently or temporarily, find it a comfort not to be cut off from the life of the living room or its fire. A separate bedroom and open fireplace are also provided. There are separate heated clothes-drying and linen cupboards. As this is not a family house, the w.c. is in the bathroom. Individual garages for each house are not now being provided, but will probably become a standard requirement. They would be accommodated in front of the store and when repeated for each house would make the front gardens into private forecourts.

ELEVATIONAL TREATMENT.—The long low proportions have been stressed, the wide eaves are kept level with door heads and the roof's pitch is the 30° minimum for pantiles.

The materials, brick and pantiles, are traditional to the county and the walls are generally colour-washed. Occasional end houses or gable walls are left in plain facing bricks, not colourwashed. Paintwork generally is white or grey with separately coloured front doors to identify each house. The end houses are slightly varied with roofs brought down lower over projecting stores. Windows are kept " casual " in their spacing and proportions and glass pane sizes differ throughout. There is a paved space at the entrance with a seat sheltered by the eaves and by a projecting trellis. The house walls have wood trellises on the garden side.

The architects regard landscaping as the most important single factor in the appearance of this housing scheme.

CONSTRUCTION.—Plain Fletton bricks are used in 11-in. cavity external walls. Internal walls are in 4½-in. brickwork or hollow tile partition blocks. Floors to living rooms and bedrooms are wood block on concrete. Floors to halls, kitchens and bathrooms are quarry tiles on concrete ; store floors are concrete. Roofs are in wood construction with Norfolk pantiles.

HOUSING AT THURTON, NORFOLK :

Front of the terraces from the road; below, low level view from the road.

Chimney cappings are in coloured concrete. Rainwater pipes are of purpose made galvanized steel. There are standard metal casements throughout with external cills in coloured concrete and internal cills in quarry tiles. The entrance door is purpose made in glazed wood. Other doors and casement doors are of standard type in wood.

FINISHES.—External walls are colourwashed, with the plinth tarred black. Paintwork to eaves, gutters, windows and door frames is white, with grey water butts and coloured entrance doors. Pantiles are bright red, "smut" [dark brown and red] or black. Internal walls are in lime plaster with a rough finish distempered off white. Paintwork is mostly pale grey; doors are finished in matt varnish. Curtain railways are provided throughout.

SERVICES.—Piped water is taken to every house, mostly from a new or existing well fitted with an electric pump for each individual site. No water mains existed on any site, but in some cases these are being laid to connect up several villages.

Sewage disposal is mainly by small plants designed for each separate site, though a few sites are linked with main schemes as for water. Adequate falls and the disposal of filtered effluent are usually difficult to arrange in Norfolk and are decisive factors in the choice of sites.

Mains supplies of electricity are being taken to all sites. This is of importance for water pumping as well as for lighting and heating.

EQUIPMENT.—Living rooms are heated by solid fuel open-close stoves which feed radiators in kitchen, bathroom and halls. Bedrooms have open fireplaces or electric radiators for which there are also points in other rooms.

Water is heated from the living room stove in parallel with an electrically-heated insulated cylinder in the roof.

Kitchens have electric cookers and are equipped with electric washboilers and large heated drying cupboards. There is a separate linen cupboard in the hall.

Plumbing is all inside the house and is concealed in ducts except for the rainwater pipes.

DESIGNED BY TAYLER & GREEN

SOCIETIES AND INSTITUTIONS

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.

CID

Gordon Russell

June 21. An address during *Design Week, Manchester*, on WHAT WE MEAN BY GOOD DESIGN, by Gordon Russell, Director of the CID.

Gordon Russell: What do we mean by good design? First, does it exist? It is often said that there is no such thing as good design or bad design, that design has no real measurable standards, that it is just a matter of personal taste. You like one thing, I like another, someone else likes a third; or that because an article sells in great quantities this alone proves it must be well-designed, and anyway the subject is not a very important one, that hard-headed business men cannot be expected to waste their time on what they think is purely a question of æsthetics, that foreigners are bound to know more of such niminy-piminy matters, and so on. So, to clear away some elementary misconceptions, let me say first what I think good design is not.

TECHNICAL ASPECTS OF GOOD DESIGN

Good design is not something precious, arty or high falutin'. The industrial designer must, by the very nature of his job, work as one of a group of technicians. At every stage of the work he must be closely in touch with them, saying to one, "Is this the best way to machine this job?"; to another, "What material shall we use here?"; to a third, "Is this likely to give trouble during transport?"; to a fourth, "Could you sell this for £6 10s. 0d.?"; to a fifth, "What finish would stand up to such and such conditions?" and so on. It will be seen that a designer calls on the experience of a great number of people in his organization, works manager, sales staff, foreman, mill manager, advertising and costing men, research staff, and so on. Yes, the industrial designer must be gregarious; in this he is distinct from the painter, the sculptor, musician or writer, who brings an intense creative effort to bear on a personal problem.

Industrial design is not something which we claim to put on the same plane as the fine arts, although they have a far-reaching effect on it. For instance, the great post-impressionist painters, so interested in trying to paint light, focussed much attention on the subject, and so helped us to see the necessity for bigger windows. Being several generations ahead of their time, they were laughed at, as pioneers have been in all ages. Good design is not a luxury which enters into the expensive end of a trade only. It is true that new styles and fashions not infrequently start in luxury markets. Indeed, I believe that luxury trades perform an important function by enabling experiments of all sorts to be made. But the technique of mass-production so spreads the cost of things designed for it, that there is no reason why everyone should not buy well-designed things. The idea that only wealthy people like well-designed things is as false as that they are the only ones to get pleasure from looking at flowers, listening to music, going to the ballet, or reading Shaw. Just as false is the notion that because a thing is low in price it cannot be expected to be of good quality.

Good design is not something which can be added to a product at a late stage in its planning or manufacture. It is fundamental. There used to be many people who thought that an architect was a person who was employed in order to ensure that the elevation of a building should be in a given style. But a good elevation grows out of a good plan. To grasp all the needs of a client—needs which he may not be able to express fully, and to crystallize them into a workable plan which is economic to build, and will give pleasure to live, work or play in, that is the architect's true function. It is the same with the industrial designer who is, as it were, another kind of architect—the co-ordinator in a team of specialists.

GOOD INDUSTRIAL DESIGN

I have said what I think industrial design is not, so now what is it? In the first place it is an essential part of a standard of quality. Many people talk as if good quality was made up of good workmanship and good materials, but without good design it is not possible to make the most of these, and so to give the best service to the consumer. What does the consumer really need? As a rule, he needs an article which is well-made of good and suitable materials, which does its job efficiently and gives him pleasure at a price which he can afford to pay. So the very first design question is "Does it work?"

You have all seen clocks with square dials, or hour and minute hands so similar that it is not easy to tell the time, teapots which do not pour well, kettles which burn your hand, handles which pinch your fingers. These are all examples of bad design, and there are many others. You can get quite a lot of entertainment and pain from discovering them for yourself. And, believe me, there is no surer way of raising the general standard of design than by encouraging the public to take an interest in such matters—as a first step, perhaps, by criticizing the design of goods in retail shops. For I want to make it clear that I do not think we can have one standard of quality at home and another for export. On the whole we are likely to export the things we like doing well for ourselves, because it is only so that we really find out their good and weak points.

I have said that "Does it Work?" is a good approach to design, but it does not take us all the way by any means. Even where science can practically define shapes, as in the case of the aeroplane, one of our most famous aircraft designers says, "I like a thing to look right. If it doesn't, although I may not be able to prove scientifically that it is wrong, I have often found out later that it is. This is very important." Here is a practical application of æsthetics which may seem strange to business men, yet I can think of many others. I maintain that dark and dirty factories, ugly dull-coloured machinery, unpleasant lettering, complete disregard of texture, shape and colour, inefficient packaging—in short, bad design, will be taken far more seriously in the future than they have been in the past, because they are actual deterrents of production and sales. A stimulating, lively, hopeful atmosphere has the opposite effect, and such an atmosphere is given by using the brains of a trained imaginative designer.

DESIGNING FOR PRODUCTION TECHNIQUES AND PURPOSES

Good design always takes into account the technique of production, the material to be used, and the purpose for which the object is wanted. For instance, you cannot get satisfactory results by designing for hand-production, and then turning over the same design to the machine. That is one reason why imitation Jacobean furniture looks so thin when seen side by side with furniture of the 17th Century. It has neither the qualities of precision and accuracy which the machine can give, nor has it the individual charm of hand work. Nor can you design in one material and then make the object in another. The wax candle was the best form of illuminant of its day, but as a prototype for electric light it leaves much to be desired. In the same way, the development of the railway carriage was arrested for several generations because it was thought of as a slightly different kind of stage-coach, or a series of stage-coaches. As soon as the idea of inter-communication between coaches was grasped, the corridor made possible great improvements in design, including the addition of restaurant cars and lavatories.

Of course it is true that there are certain to be many solutions to almost any design problems. There is no one perfect solution. Sometimes there are hundreds, even thousands, of shapes which would do the job, as in the case of a flower-vase. The designer is a person who is always studying shapes, and so is able to evolve or select one which not only works well, but means something to him. This applies also to colour and texture. The designer is able to give form to aspirations which all of us possess, but which we have not the training to do for ourselves. In the same way, we may have stood on one side of river and wished to pass across, but we realize that it takes a trained engineer to say exactly what kind of bridge would enable us to accomplish this.

THE INDUSTRIAL DESIGNER'S JOB

The industrial designer's job is not an easy one. It demands long and rigorous training in design, a wide knowledge of processes and materials, knowledge to which he is adding every day, and the ability to work harmoniously with all sorts of people, and to appreciate their points of view, which are often conflicting. Before starting on any job, any designer worth his salt makes a complete survey of the problem, and a manufacturer who is not prepared to place all the relevant information at his disposal cannot expect to get the best results. Design is not a matter of half-a-dozen sketches submitted in a hurry, and often adapted for manufacture by the works manager.

To recapitulate, the objects we are considering must work well. I have often wondered, for instance, why English watering-cans have, as a rule, a handle across the body to take the weight and another behind to tilt them, whereas French ones have a single fore-and-aft handle which enables both operations to be done with one hand. The shape of any manufactured object should be pleasant to look at, to handle, to clean. Perhaps this is the reason why nearly all dinner-plates are circular. Its colour or colours should be harmonious and pleasant. Few of us would want to come down to a black breakfast-set on a Monday morning. The material to be used should be chosen with care, not only to be economical from a manufacturing point of view, but to stand up to use.

In plastics, for instance, it is no good making a tea strainer of cellulose acetate which will not stand up to hot water. Again, there is a special metal which is excellent for hard liquor hip-flasks, but if you put lemonade in one, I am told there would be a surprising chemical reaction. Your flask might swell like a football. But the answer to that one is that people don't put lemonade in hip-flasks! Again, in places where easy cleaning is essential, a smooth surface must be used. But a thoughtful use of rougher textures can often give considerable variety and interest elsewhere. Here nature is indeed a great teacher.

ORNAMENT AND DECORATION

Then we come to the question of ornament. Some people have an idea that contemporary designers wish to dispense with ornament altogether. Certainly this is not so. From earliest times, men have loved to decorate the things they made with simple geometrical patterns, pictures of animals, trees and so on. But always the decoration meant something to them. It was never idle decoration, decoration at second-hand, design cliches.

Many plastics to-day try to give an impression of having been carved by hand, whereas they are moulded in a press, and the so-called carving is lifeless. Refrigerators which remain stationary are streamlined, as if they were aeroplanes or ships. And how many objects have had the three zigs up and three zags down plastered on them. Appearance styling can be either futile or effective, according to the amount of thought and purpose behind it.

It is true that much of the beauty we associate with the machine comes rather from intense preoccupation with the best possible way of achieving a given result with the sparing use of the most suitable materials, rather than from added decoration. This is perhaps best shown in the case of the aeroplane where weight is all important. But this is a problem which we have still to solve. Of one thing I am certain. We shall not solve it by using the machine to imitate forms of decoration which were evolved in the days of handwork; imitation hand-carving done on a machine is no answer. It is simpler to achieve satisfactory results in two dimensions, for have not many forms of printing a long and honourable history?

DESIGN RESEARCH

This brings me to the question of research. Research into design is a part of industrial research which in the past has been sadly neglected. Like research as a whole, it can only be tackled by adopting a policy which goes steadily ahead over a period of years. Like technical research you cannot expect each year's results to pay for themselves. There are no short cuts. Make no mistake about it, a firm will never get a high design standard by thinking they can pick up bad design on Friday night, having hired a designer recommended to them, and start churning out good design on Monday morning. It is not so easy as that. But equally it is not necessary to start in a big way, and so perhaps throw up certain profits for others which may not mature. For good design does not sell itself, but its prestige value is very great and is growing.

So I say, that any firm which has not done so already should start in a small way, regard the problem as research, and learn as they go along. My Council will be most eager to give all the help and advice we have available, which is quite a lot. Firms have only to ask for it. For this country to be regarded, as it is, as a pioneer of good quality, is of immense value to us all. We must, however, add to this reputation by ensuring that it is quality in its fullest sense.

DESIGN AND THE CUSTOMER

There is no doubt that the standard of public taste is going up in many ways. The contemporary design department started in a small way to-day is likely to grow until it becomes the mainstay of to-morrow. Taking the long view, there can be no question at all that good quality pays dividends, and good quality must embrace good design. Here is a selling point which our advertising should stress, which our packaging should stress, and which British goods themselves should stress. We simply cannot afford to be left behind in this aspect of our production. It is really bad business if our customers think of us as being rather uninterested in the look of our goods, and I could give you many instances where that is happening to-day.

An approach to design through horse-sense will carry any intelligent person far enough down the road to appreciate what the designer's problem is. After all, that is what we need more than anything else to see a great improvement in this matter. We don't want everyone to become expert designers; that is impossible. We cannot all become surgeons, but we can learn enough about surgery to grasp what the doctor tells us in simple language. We cannot all become accountants, but we can learn enough to read a balance sheet. We cannot all become conductors, but we can learn to appreciate music, and, remember this, no conductor could possibly put out his best to an audience of deaf mutes. The audience is as important to him as he is to the audience. There must be collaboration. It is the same with design. My Council are not design dictators. This problem of design affects every one of us, for we are all consumers of manufactured products in one way or another, whilst many of us are actively concerned in their manufacture and distribution.

In 1951 an opportunity will occur to show that Britain, which once led the world in design, is ready to assume leadership again. In that year the Centenary of the first great Exhibition—a British idea—will be held. It will not be a trade exhibition in the sense that stands will be let to exhibitors, but its significance to all British manufacturers is certain to be very great. A wide variety of British products will be shown. My Council has been given the job of selecting them. We cannot do this successfully without whole-hearted and immediate co-operation from industry, so as to ensure that a first-rate range of goods is available from which to select.

RSUA

New Officials

May 27. Annual General Meeting of the ROYAL SOCIETY OF ULSTER ARCHITECTS at 7, College Square North, Belfast.

The following elections took place:—*President*: A. F. Lucy, M.R.I.A.I. *Vice-President*: V. Smyth, A.R.I.B.A. *Hon. Treasurer*: F. McArdle, M.SC., F.R.I.B.A. *Hon. Secretary*: A. Neill, A.R.I.B.A. *Members of Council*: J. M. Aitken, A.R.I.B.A.; N. H. Gibson, F.R.I.B.A.; J. H. Stevenson, F.R.I.B.A.; H. H. Bell, A.R.I.B.A.; T. H. Eagar, F.R.I.B.A.; H. W. Scatchard, A.R.I.B.A.; W. M. Gamble; G. W. Heside, B.SC., M.B.E.; J. D. McCutcheon; W. H. D. McCormick, A.R.I.B.A.

In his presidential address Mr. Lucy referred to the good relations which existed between the profession and the various Government Departments with which architects were in daily contact, and said that the slight relaxation of the restrictions on the issue of building licences was welcomed by all concerned. He then spoke of the rebuilding of churches, and added that he hoped the supply position would improve sufficiently to permit this work to be carried out. He went on to speak about the increasing popularity of architectural competitions and felt sure that this policy would result in the erection of finer buildings.

Mr. Lucy stated that mutual benefits were now being derived from the Joint Committee of the Royal Society of Ulster Architects and the Royal Institute of Architects of Ireland which was set up about two years ago to consider matters of common professional interest. Mr. Lucy said that it had caused great satisfaction to the senior Council to find that the Junior Branch had made so much progress, and the lectures and competitions which they had organized during the year had been a source of great encouragement to the younger members studying for their examinations. In conclusion, he referred to the co-operation between the Society and the parent body, the RIBA; it was with regret that Council had realized that Sir Lancelot's term of office would come to an end in June.

HIOWAA

Election of Officers

June 24. Bi-Annual General Meeting of the HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION at the Polygon Hotel, Southampton.

The following officers were elected for the Session 1948-1950, commencing on July 1:—*President*: Mr. Ernest Bird, F.R.I.B.A. (Southampton). *Immediate Past President*: Mr. A. E. Geens, F.R.I.B.A. (Bournemouth). *Vice-Presidents*: Colonel R. F. Gutteridge, F.R.I.B.A. (Southampton); Mr. H. S. Sawyer, F.R.I.B.A. (Winchester). *Chairmen of the Chapters*: *Central*: Mr. H. G. Baker, L.R.I.B.A. (Aldershot); *Eastern*: Mr. R. A. Thomas, F.R.I.B.A. (Portsmouth); *Western*: Mr. W. G. Seaton, A.R.I.B.A. (Bournemouth); *Isle of Wight*: Mr. V. Aldridge, F.R.I.B.A. (Ventnor, I.O.W.).

Mr. John S. Fowler, A.R.I.B.A. (Southampton) was re-elected Honorary Secretary, and Mr. C. C. Jackson (Winchester) Honorary Treasurer.

The Honorary Secretary in his report on the past session's working stated the membership of the Association now numbered 339. The Headquarters of the Association, previously at Winchester, had been moved to 39, Portland Terrace, Southampton, where there was an excellent library and other facilities open to members. The publication of the Year Book, which had been suspended during and since the war years, was to be resumed this session.

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TECHNICAL SECTION

HEATING RESEARCH

During the last few years there has been a great deal of interest in improving space heating, particularly in connection with domestic work. Much of this is directly attributable to officially-sponsored investigations, reports and meetings. *The Report on Heating of Dwellings*, in the *Post-War Building Studies* series, and the subsequent "Simon" report on domestic fuel policy, are outstanding examples. More recently interest has been aroused by the descriptions of practical full-scale trials carried out by the Building Research Station. It will be remembered that these have, so far, consisted of experiments on two groups of houses. In the first group, all the houses had similar forms of heating and the experiment consisted of finding out what value could be obtained by introducing differing degrees of heat insulation. In the second,—a larger group of houses—the insulation value of the structures was kept constant, but the heating systems were varied. This experiment has been described, but it is as yet too early for the results to be available.

No doubt architects will find the results of these full scale tests of very great value, but it is as well to remember that all the information that is required cannot be obtained from such practical tests. For example, experiments on the larger group of houses cannot do more than assess the relative merits of certain systems of heating. For any one of those systems there may be either a few, or a great many manufacturers producing appliances of that type, but differing in detail and possibly differing very considerably in efficiency. For the testing of individual appliances, a quicker and more precise method is needed. This kind of work forms one of the activities of the Fuel Research Station of the DSIR.

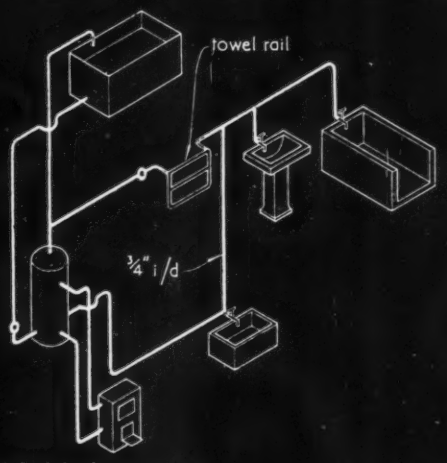
The first essential in all such work is to establish the best possible method of test. The Fuel Research Station has for some years been testing heating appliances to the best of its ability, but in some respects such tests have been incomplete or of a less informative nature than could have been wished. This was due to a lack of adequate testing facilities. In particular, the problem of determining the total efficiency of an appliance and of finding what proportions of that efficiency are due to convection and to radiation has been extremely difficult. A new test building* has just been completed and should result in very much more accurate and informative results. This new Calorimeter Building—an elaborate and most carefully conceived piece of large-scale apparatus—is probably the finest of its kind in the world, being considerably in advance of anything known to exist in other countries. The main feature of the building is the provision of calorimeter cabinets in which domestic appliances can be installed and operated. The cabinets are about the same size as living rooms in small houses, and are designed so that the heat flowing through the walls, floor and ceiling is automatically recorded. They are of air-tight construction with specially balanced draught arrangements to eliminate leakage and to enable the amount of incoming air to be recorded. The total useful heat from the appliance can thereby be determined by direct measurement. It is also possible to measure separately radiant heat, warmed air from convection jackets, and heat to the boiler water. Heat losses in the chimney are also covered by careful smoke analysis.

The significant thing is the link between the results which should come from this type of research and the full scale application trials of BRS. It is to be hoped that in this way the overall efficiency of domestic heating may be raised to something like twice the pre-war figure, benefiting both the nation and the individual householder. Whether this improvement will occur and how soon must depend to a considerable extent upon the readiness of architects to accept the information produced by the fuel research scientists and to apply it in practice.

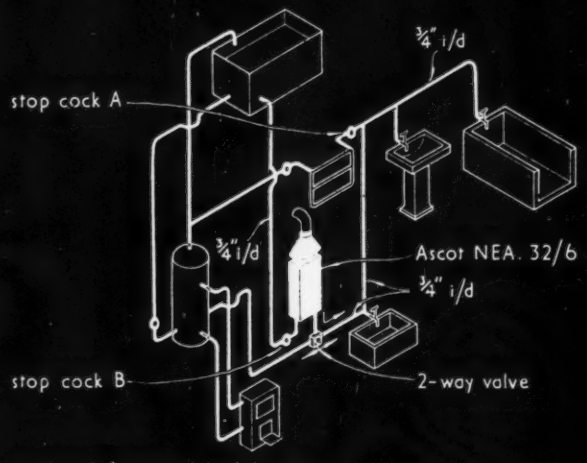
*See Information Centre 23.65.

WATER HEATING | UNITS | GAS 32.C25

The Architects' Journal Library of Information Sheets 83. Editor: Cotterell Butler, A.R.I.B.A.

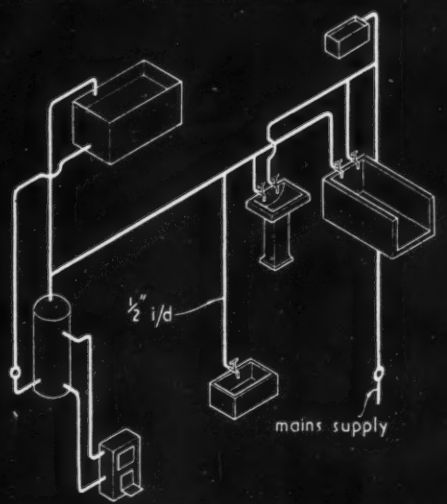


solid fuel boiler system

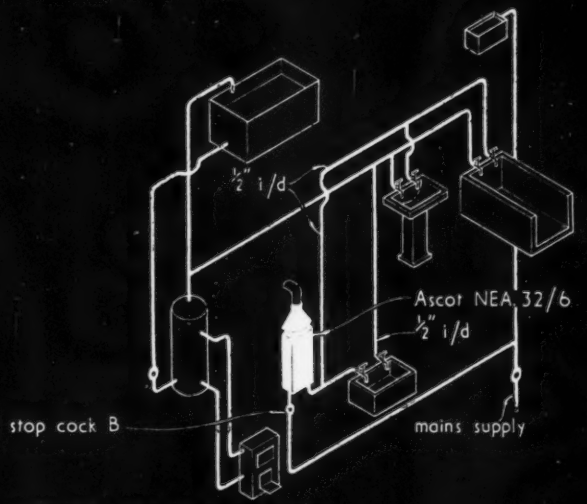


combined Ascot and boiler system

DIAGRAM 1: INSTALLATION WITH SECONDARY RETURN AND TOWEL RAIL.

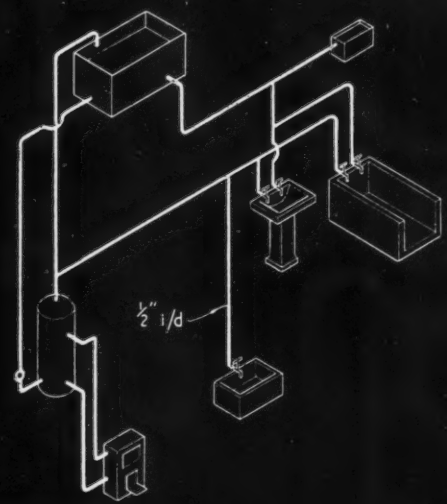


solid fuel boiler system

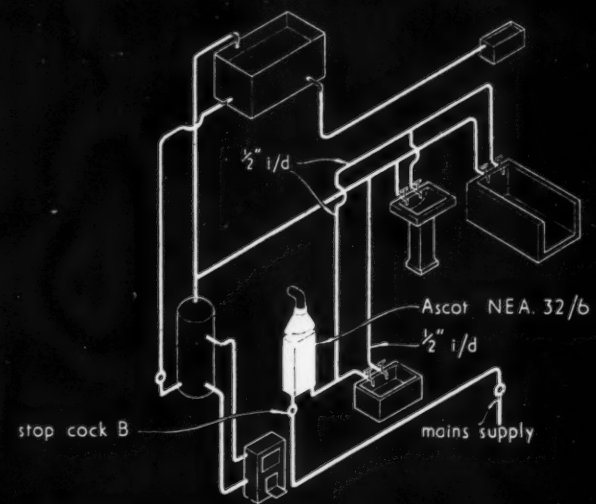


combined Ascot and boiler system

DIAGRAM 2: MAINS CONNECTED HEATER — EXISTING MAINS COLD WATER SUPPLY TO BATHROOM.



solid fuel boiler system



combined Ascot and boiler system

DIAGRAM 3: MAINS CONNECTED HEATER — EXISTING TANK COLD WATER SUPPLY TO BATHROOM.

ASCOT ALTERNATIVE HOT WATER SYSTEMS. Manufacturer: Ascot Gas Water Heaters Ltd.

32.C25 ASCOT ALTERNATIVE HOT WATER SYSTEMS

This Sheet is a continuation of Sheet 32.C23, and describes three further alternative hot water systems combining the Ascot multi-point heater Type NEA 32/6 with solid fuel fired boiler systems.

All pipe sizes specified refer to internal diameter and relate to normal installations where the available head or pressure of water is adequate, and where the sizes and lengths of all piping are in accordance with standard practice. (See Sheets 32.C20 and 32.C22.)

Diagram 1 : Installation with Secondary Return and Towel Rail

Supply to the heater is from the cold water tank by means of a separate ¾ in. down service.
A two-way valve, situated in the secondary return pipe to the boiler, is connected to the heater outlet to give the alternative flows as shown. ¾-in. piping is run from the valve to the kitchen sink.

Where the existing hot water piping is of inadequate size additional piping may be necessary. See diagram 2 of Sheet 32.C23.

Stopcock " A " is required to isolate the towel rail and expansion pipe when the heater is in use.
Stopcock " B " is required for maintenance purposes and may remain open when the boiler is in use.

Ascot operation—Turn the two-way valve to the Ascot position.

Boiler operation—Turn the two-way valve to the boiler position.

Diagrams 2 and 3 : Mains Connected Heaters

General considerations : Multi-point heaters acting as auxiliaries to a boiler system should only be supplied from the cold water main when :

1. It is impossible to ensure satisfactory service from all draw-off points utilising tank supply.
2. Permission has been obtained from the appropriate water authority.
3. There is no connection between the outlet of the heater and the boiler system.

Diagram 2—Existing mains cold water supply to bathroom : The mains cold water supply to the bathroom is disconnected.
The supply to the heater is taken direct from the main in ½ in. piping.
The outlet of the heater is connected by ½ in. piping to a second hot tap at the kitchen sink.
From this point an additional hot water service is connected to the cold water piping in the bathroom. Stopcock " B " is required to turn off the cold water supply to the Ascot as necessary.

Ascot operation—Hot water in the bathroom is obtained from the cold taps. Cold water is obtained from the hot taps through the boiler system.

Boiler operation—Hot water in the bathroom is obtained from the hot taps. Cold water is obtained from the cold taps through the Ascot, the gas cocks of which must be turned off.

Diagram 3—Existing tank cold water supply to bathroom : The tank cold water supply to the bathroom is disconnected.
Procedure thereafter is the same as that for diagram 2, but care should be taken to ensure that the cold water piping in the bathroom is of sufficient weight to withstand the mains water pressure.

Central Heating Systems with Calorifier

Where the boiler system incorporates a central heating calorifier and secondary return, the complete installation should be considered as two separate systems each with its own cold water supply tank and expansion pipe. The system providing hot water for domestic and toilet purposes should be treated in the same way as the boiler system incorporating secondary return and towel rail. (See diagram 1.)

Calculation of Minimum Head Required for Particular Installations

The installation of heater Type NEA 32/6 as an alternative to an existing boiler system often involves ensuring that the original piping is of adequate size for the available head and lengths of run. The head of water necessary for satisfactory operation is the total of the following individual losses calculated at the requisite average flow of 2 gallons per minute :

a. Loss for piping
b. Loss for bends and tees
c. Loss for stopcocks
d. Loss for taps
} See table below.
e. Loss for heater alone—6 ft. head at 2 gal/min.

The following table should be used to calculate the losses for a, b, c and d above at a flow of 2 gallons per minute.

Approximate Losses in Feet Head

Nominal bore	Per foot run of pipe	Bend	Tee	Stopcock	Tap
½ in.	·15	·10	·15	2·50	1·60
¾ in.	·02	·02	·03	·70	·50
1 in.	can be disregarded			·35	·25

Example of use of table.

Installation with a. 25 ft. of ¾ in. piping, hot and cold.
b. 6—¾ in. bends and 1-¾ in. tee.
c. 1—¾ in. stopcock.
d. 1—¾ in. tap.
e. Heater Type NEA 32/6.

		Ft. Head
Loss for	a. — 25 × ·02	·50
	b. — 6 × ·02 + 1 × ·03	·15
	c. — 1 × ·70	·70
	d. — 1 × ·50	·50
	e. — 1 × 6·00	6·00
∴ theoretical total head required is		7·85
Add allowance for subsequent increase in losses caused by scaling		1·00
Total minimum head necessary		8·85

Compiled from information supplied by :

Ascot Gas Water Heaters Ltd.

Head Office : 43, Park Street, London, W.1.
Telephone : Grosvenor 4491.
Works : Ascot Works, Neasden, London, N.W.10.
Telephone : Willesden 5121.
Telegrams : Gascot, Phone, London.
Branch Offices : Belfast, Birmingham, Bournemouth, Bristol, Cambridge, Glasgow and Manchester.

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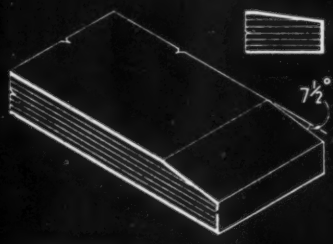
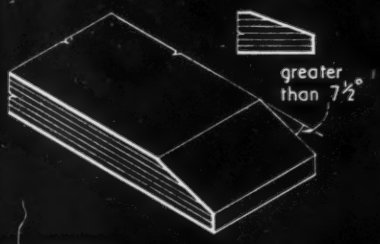
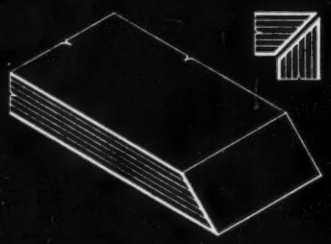


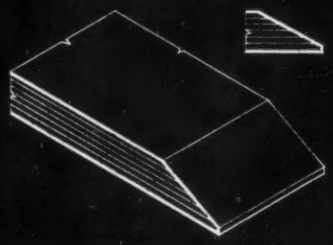
standard bevel



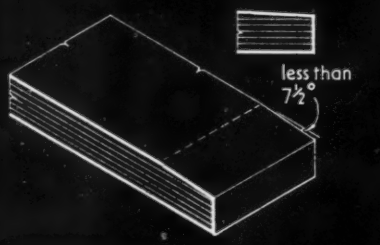
steep bevel



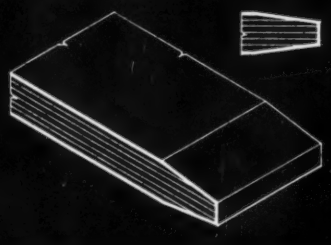
mitre bevel



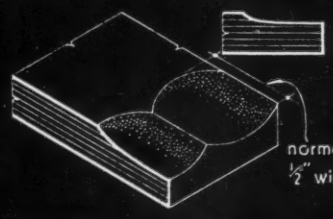
feather edge bevel



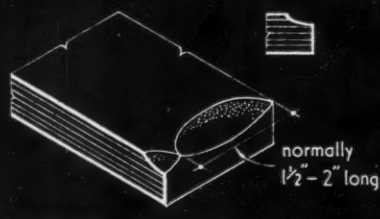
Vauxhall bevel



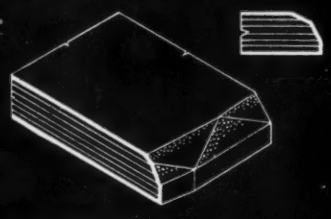
bevelled both surfaces (standard bevels)



scalloped bevel type a

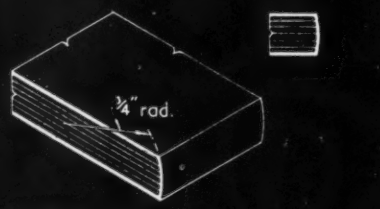


scalloped bevel type b

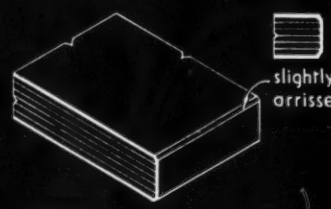


cross bevels

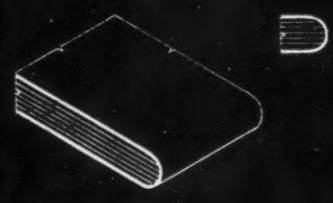
arris edge



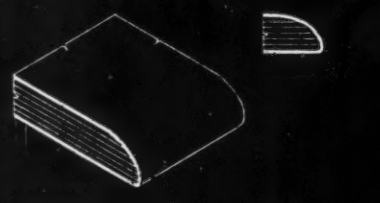
rounded edge



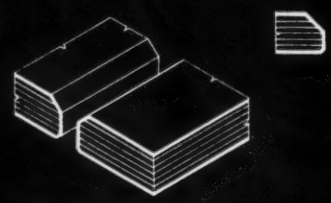
flat edge



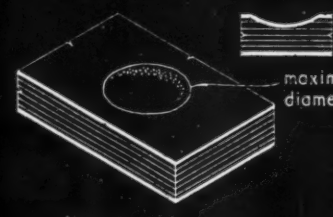
full round edge



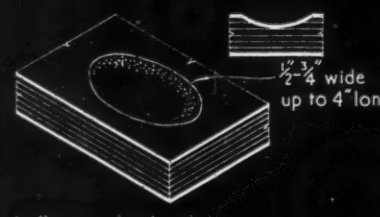
thumb or bullnose



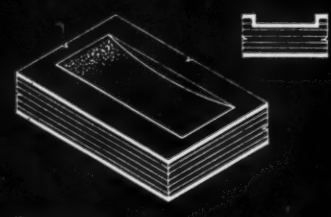
flat edge and bevel



round punt



hollow or oval punt



finger grip

PLATE GLASS . WORKED FINISHES. Manufacturer: James Clark and Eaton Limited.

8.F1 PLATE GLASS: WORKED FINISHES

This Sheet describes various types of edge and surface finishes to plate glass.

Working of Plate Glass

Bevelling : The process removes a fixed width (generally of from $\frac{1}{8}$ in. to 3 in.) from the surface of the glass, leaving the final edge as cut by the diamond.

Edge working : There are three grades of edge treatment—grinding, smoothing and polishing. The first is that of grinding down the edge to a level finish which is, however, opaque. This is satisfactory when the edge is covered by a bead or is sunk into an opening, but it is not recommended if the edge is exposed, as it collects dust and dirt. Smoothing gives the edge a smooth matt but still opaque finish and polishing gives the edge a highly transparent finish suitable for frameless mirrors, shelves, table tops, etc. Any of the edge treatments illustrated on the face of this Sheet can be supplied with either ground, smoothed or polished finish.

Finger grip : This is a recess, rectangular in section on one axis and curved on the other. It can be cut $\frac{1}{2}$ in., $\frac{3}{4}$ in., $\frac{7}{8}$ in. or 1 in. wide and up to 3 in. long. Standard sizes are 3 in. by $\frac{3}{4}$ in. and $2\frac{1}{2}$ in. by $\frac{1}{2}$ in.

Punts : These are recesses of semi-elliptical section. Round punts up to 2 in. diameter or oval punts $\frac{1}{2}$ in. to $\frac{3}{4}$ in. wide and up to 4 in. long are practicable.

Surface Finishes

Sandblasting : Various finishes are obtainable by sandblasting—surface (matt), shaded and deep (gravé). In matt sandblasting the surface is just sufficiently scored to obscure it, either plain all over or to a design leaving parts of the glass clear. Shading is obtained by varying the intensity of treatment. The gravé grade of sandblasting results in the surface being scored to a greater depth—on $\frac{1}{4}$ in. plate from $\frac{1}{32}$ in. deep to $\frac{1}{16}$ in. deep. On thicker glass a greater degree of depth is possible. Sandblasting is largely used for design work in transoms, door panels, clock-faces, edge-lit signs, etc. Varying degrees of depth can be carried out on the same sheet of glass.

Acid embossing : This can be carried out in a number of ways to practically any design either on a clear transparent background or an obscured background. A wide range of effects is possible combining acid embossing with grinding and using techniques such as stipple embossing and tone effects.

Silvering : This consists of the deposition of silver on glass, either to form mirrors for decorative effect or for reflection of light. Types of glass most commonly treated are plate (for mirrors, etc.), rough cast (for table tops, etc.) and figured glasses (for reflection). Where silvered glass is liable to be exposed to damp, e.g., in bathrooms, a special laminated metal backing —Metallite— should be specified.

Drilling

The maximum size of hole which can be drilled is 6 in. diameter. Larger holes are obtainable by cutting. The standard sized hole for fixing splash-backs, mirrors, etc., is $\frac{1}{4}$-in. diameter.

Compiled from information supplied by :

James Clark & Eaton Limited

Head Office : Scoresby House, Glasshill Street, Blackfriars, London, S.E.1.
Telephone : Waterloo 4611 (15 lines).
Telegrams : Replacement, Sedist, London.
Branch Offices : Canterbury, Bournemouth, Eastbourne and Reading.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS, BELFIELD AND EVEREST, Chartered Quantity Surveyors

Rates of Wages last rose on November 16, 1947, and are now as follows :—

	Craftsmen.	Labourers.
LONDON DISTRICT		
Within 12 miles radius	2s. 10½d.	2s. 3¾d.
From 12-15 ,, ,, ...	2s. 10d.	2s. 3¼d.
LIVERPOOL and DISTRICT	2s. 10½d.	2s. 3¾d.

GRADE CLASSIFICATIONS	A	A¹	A²	A³
Craftsmen ..	2s. 9d.	2s. 8½d.	2s. 8d.	2s. 7½d.
Labourers ..	2s. 2½d.	2s. 2d.	2s. 1¾d.	2s. 1¼d.

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.

		6 tons and over	In 80-ton freights F.A.S. Safe Wharf in River Thames London Area.
* 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 cwts.	10–19 cwts.	1 ton and 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
¾" (Down) Washed, crushed and graded shingle to B.S. 882, Table 2	per yard cube	14/5
¾" (Down) Ditto	per yard cube	15/5
2" Broken brick	per yard cube	14/6
¾" Ditto	per yard cube	16/–
Washed pan breeze	per yard cube	10/6
⅛" 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	3/9
2" coarse gravel for paths	per yard cube	17/6
¾" fine ditto	per yard cube	20/–
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, ⅛" diameter and upwards, ex mills delivered to station or siding	per ton	£19 12 6

CONCRETOR—(*continued*)

Reinforcement—continued

Extras for :—

Under ⅜" to ⅞" diameter	per ton	15	0
Ditto ⅞" and over ⅜" diameter	per ton	£1	2 6
⅜" and over ⅜" diameter	per ton	£1	10 0
⅜" and over ⅝" diameter	per ton	£1	17 6
⅝" and over ¾" diameter	per ton	£2	5 0
¾" and over 1" diameter	per ton	£2	12 6
1" diameter	per ton	£3	0 0
Under 1" to ⅞" 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	3/2⅞	1/11⅛	1/0⅝
	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	2/6¾	1/10	–/11⅛

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	67/11
‡Phorpres pressed Flettons	per 1,000	73/–
‡Phorpres keyed Flettons	per 1,000	75/–

Facing Bricks

Best white sand limes	per 1,000	95/–
Ditto in red, blue, grey, ivory and buff	per 1,000	115/–
‡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	241/6
Red rubbers (9¾")	per 100	55/–
†White facings	per 1,000	100/–
Coloured facings (creams, buffs, browns and terra-cotta)	per 1,000	From 120/6
†Dunbrika (concrete), greystone facings	per 1,000	132/6
†Dunbrika (concrete) various colours	per 1,000	152/6
†Southwater pressed sandfaced reds	per 1,000	184/6
†Dorking pressed sandfaced multicoloured facings	per 1,000	163/–

Engineering Bricks

†Lingfield engineering wirecuts	per 1,000	126/–
†Southwater or Lunsford engineering No. 1 (first quality red pressed)	per 1,000	209/6
†Southwater or Lunsford engineering No. 2 (second quality red pressed)	per 1,000	182/–
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, 6d. per 1,000 levy.

‡ At Kings Cross (Maiden Lane) Stn. For delivery in W.C. district add 12/– per 1,000.

† Plus 6d. per 1,000 levy—prices ex works—Haulage extra.

Firebricks

Firebricks, best Stourbridge, 2½"	per 1,000	55/3
Ditto, 3"	per 1,000	66/6

BRICKLAYER—(*continued*)

Glazed Bricks

	Best quality £ s. d.	Seconds £ s. d.
White, Ivory or Brown, 9″ × 2⅞″ × 4½″ :—		
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 + 22½%.

Limes and Sands

	1 ton lots.
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 lias .... per cwt.	7/6 (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/–
12 s.w. gauge ditto			per 1,000	71/6
Wall ties, self coloured, 8″ × ¾″ × ½″, to B.S. 1243			per cwt.	58/9
Wall ties, galvanized, 8″ × ¾″ × ½″, to B.S. 1243			per cwt.	78/9
Damp proof course slates :			Welsh	
Size 14″ × 9″			per 100	48/9
,, 14″ × 4½″			per 100	24/–
Hessian based bitumen damp course to B.S. 743			per yard super	4/3
Airbricks :	9″ × 3″	9″ × 6″	9″ × 9″	14″ × 9″
Red and buff terra-cotta each	1/1	2/4	5/9	15/5
Black cast-iron School Board pattern airbricks .... each	1/8	2/11	4/3	5/3
Galvanized ditto .... each	2/6	4/6	6/3	8/–
Black hit-and-miss cast-iron ventilators .... each	3/–	4/3	7/3	—
Galvanized ditto .... each	4/6	6/3	10/9	—
Buff terra-cotta chimney pots .... each	1′ 0″ 5/7	1′ 6″ 6/8	2′ 0″ 9/8	2′ 6″ 12/10	3′ 6″ 29/5	5′ 0″ 50/2
Fireclay (loose) per ton	115/6					

Wall reinforcement supplied in standard rolls containing 25 yards lineal

‡2″ wide black japanned .... per roll	2/11
‡2½″ wide black japanned .... per roll	3/7½

‡ Greater widths pro rata 2½″ price, carriage paid on orders of £7. Discount for quantities.

Partitions, etc.

	2″	2½″	3″	4″
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 (4½″)
Plaster .... per yard super	6/6	7/3	8/5	—
Moler .... per yard super	8/3	8/6	8/9	9/6
†1″ Wood Wool slabs .... per yard super	from 4/2 to 4/10			
†2″ Wood Wool slabs .... per yard super	from 6/7 to 7/6½			
†3″ Wood Wool slabs .... per yard super	from 8/6 to 9/8½			

† Prices according to quantity ordered. 2½% cash discount.

PAVIOR

Red quarry tiles, 6″ × 6″ × ¾″, to B.S. 1286 .... per yard super	10/9
Ditto 6″ × 6″ × ½″, to B.S. 1286 .... per yard super	9/6
Buff quarry tiles 6″ × 6″ × ¾″, to B.S. 1286 .... per yard super	12/–
Ditto 6″ × 6″ × ½″, to B.S. 1286 .... per yard super	10/9
Hard red paving bricks, 2″ .... per 1,000	316/3
Ditto 1½″ .... per 1,000	298/–

DRAINLAYER

Clay Land Drain Pipes to B.S. 1196

	2″	3″	4″	6″
Pipes in 12″ lengths .... per 1,000	99/6	138/6	179/–	372/–

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

	Orders for 2 tons and over	Standard List + 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	42½%	62½%	72½%
Tested Quality....	60%	80%	90%
British Standard Tested	67½%	87½%	97½%

Cast Iron Drain Pipes and Fittings

Socket and spigot pipes to B.S. 437 :—

Weight per 9 ft.	Size	9 fts.	6 fts.	4 fts. ea.	3 fts. ea.
1 1 8	4″ per yard	12/7	14/–	22/6	17/–
1 1 17	4″ per yard	13/–	14/4	23/–	17/7
2 0 1	6″ per yard	19/6	23/1	37/2	29/8
3 3 21	9″ per yard	35/3	46/2	80/–	61/–

DRAINLAYER—(*continued*)

Cast-Iron Drain Pipes and Fittings—continued

Weight per 9 ft.	Size	2 fts. ea.	18 ins. ea.	12 ins. ea.	9 ins. ea.
1 1 8	4″ per yard	14/–	—	—	—
1 1 17	4″ per yard	14/3	—	—	—
2 0 1	6″ per yard	22/5	—	—	—
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/–	21/3	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	37/6	—	—

* These prices are subject to 82% plusage.

Channels in Brown Glazed Ware.

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

White Glazed Channels

Orders under 20 pieces. Standard list + 37½%.

Concrete Pipes, etc.

		12″	24″	48″
Concrete pipes to B.S. 556 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	4/2	12/4	42/–
Bends	each	12/6	37/–	126/–
Junctions	each	32/–	63/6	—
Double junctions	each	—	—	—
Concrete road gulley 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	89/6
6″ precast concrete cover slabs	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	115/–
C.I. coated circular manhole cover and frame, 22″ dia. clear opening to B.S. 497, Grade B.	5 tons	65/–

	Size of load	Single seal Flat type	Double seal Flat type
C.I. coated manhole cover and frame, 18″ × 18″ to B.S. 497, Grade C	1 ton	25/6	34/–
Ditto galvanised ditto	1 ton	36/6	49/9
Ditto coated manhole cover and frame, 24″ × 18″ to B.S. 497, Grade C	1 ton	30/–	38/–
Ditto galvanised ditto	1 ton	43/6	56/–
Ditto coated manhole cover and frame, 24″ × 24″ to B.S. 497, Grade C	1 ton	41/–	55/6
Ditto galvanised ditto	1 ton	62/–	83/6

*All prices plus 5%.

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrappled, random sizes .... per foot cube	8/6
Add for blocks to dimension sizes .... per foot cube	1/– (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2′ 6″ long) .... per foot cube	9/6
Templates with sawn beds, sawn one edge, per foot cube	11/–
Templates with sawn beds, sawn two edges, per foot cube	13/–
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″ × 3″ Copings and sills .... per foot run	2/3
6″ × 6″ Copings and sills .... per foot run	4/6
9″ × 3″ Copings and sills .... per foot run	3/6
9″ × 6″ Copings and sills .... per foot run	6/9
12″ × 3″ Copings and sills .... per foot run	4/6
12″ × 6″ Copings and sills .... per foot run	9/–
Cornices according to detail, per foot cube (from)	15/–

MASON—(*continued*)

Bath Stone in random blocks

Monk's Park	per foot cube	5/4
St. Aldhelms Box Ground	per foot cube	5/10

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. 680

	£	s.	d.
24″ × 12″ per 1,000 actual	91	0	0
20″ × 10″ per 1,000 actual	61	15	0

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

Tiles

Basic for Hand-made sandfaced 10½″ × 6½″ red roofing tiles	per 1,000	189/–
*Machine-made sandfaced best red tiles with continuous nibs, 10½″ × 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″ × 10″	per 100	70/–
Berkshire hand-made Dun coloured Pantiles, 14½″ × 10″	per 100	80/6

Concrete Tiles

Plain tiles, 10½″ × 6½″	per 1,000	90/– to 95/–
Interlocking tiles, 15″ × 9″	per 1,000	£14 10s.
Double Roman tiles	per 1,000	£30

Asbestos-cement

*¼″ 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.

	Up to 5,000 sq. ft.	5,000 to 15,000 sq. ft.
¼″ Insulating board (per 100 sq. ft.)	37/6	36/–
	15,000 to 50,000 sq. ft.	Over 50,000 sq. ft.
½″ Insulating board (per 100 sq. ft.)	33/9	31/6
	Up to 5,000 sq. ft.	5,000 to 10,000 sq. ft.
⅛″ Hardboard (per 100 sq. ft.)	46/6	45/–
¼″ Hardboard (per 100 sq. ft.)	62/6	61/3
	10,000 to 30,000 sq. ft.	Over 30,000 sq. ft.
⅛″ Hardboard (per sq. ft.)	43/–	41/–
¼″ Hardboard (per sq. ft.)	58/6	56/–

Asbestos-cement and Asbestos Products

†⅛″ Semi compressed flat building sheets, grey,	per yard super	1/7½
†¼″ Ditto	per yard super	2/4

†Prices are for orders of two tons and over and are subject to 5% trade discount and 2½% cash discount.

*¼″ Asbestos wall board (in sheets 8′ 0″ × 4′ 0″)	per yard super	4/–
*⅛″ Ditto	per yard super	5/4
*¼″ Asbestos wood (in sheets 8′ 0″ × 4′ 0″)	per yard super	2/7

* Prices are for orders of 2 tons and over.

		25–75 yards	150–300 yards	Over 600 yards
⅛″ Fireproof plaster board	per yard super	2/7½	2/3½	1/11½
¼″ Ditto	per yard super	2/5½	2/1½	1/9½
2″ Paper Faced LinenTape,	per 100 yard roll	—	—	5/–
Joint filler	per lb.	—	—	–/4

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.	–/7½
"Sisalkraft" subsoil grade	per yard sup.	–/4
"Cabots" quilts (Ex Works) :—		
Triple ply ¼″ thick	2/4 per yard super	
Double ply ⅛″ thick	2/1 " "	
Single ply ⅛″ thick	1/10 " "	

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

SLATER, TILER AND ROOFER—(*continued*)

Sundries—continued

	Up to 500 yds.	Over 500 yds.
"Fibreglass" sound deadening quilt	per yard super	
Light grade	1/11	1/10½
Medium grade	2/4½	2/3¾

In rolls 27 yards long by 36″ wide.

"Fibreglass" bitumen bonded mats in standard rolls	per yard super	1/4

In rolls 10, 12½, 15 yards long by 33″, 36″, 42″, 45″, 48″ wide.

Slagwool (loose in 1″ thickness)	per yard super	1/4

CARPENTER AND JOINER

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 Rules and Orders, 1947, No. 1524.

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″ × 6′ 6″ × 1⅜″	each	36/9
	size 2′ 6″ × 6′ 6″ × 1⅜″	each	39/–
Type 2 × G	size 2′ 6″ × 6′ 6″ × 2″	each	43/–
	size 2′ 9″ × 6′ 6″ × 2″	each	45/9
Type 4 × G	size 2′ 6″ × 6′ 6″ × 2″	each	52/–
	size 2′ 9″ × 6′ 6″ × 2″	each	56/3

In lots of from 1 to 11 inclusive.

Standard E.J.M.A. Wood Windows

INP 26	size 2′ 6″ × 1′ 5½″	each	25/2
4V 36	size 3′ 6″ × 7′ 10″	each	113/2
IV 40	size 4′ 0″ × 2′ 2½″	each	32/10
3T 46	size 4′ 6″ × 5′ 11½″	each	116/2
4T 50	size 5′ 0″ × 7′ 10″	each	139/–

Standard E.J.M.A. Kitchen Units

No. 1	size 3′ 0″ × 3′ 6″ × 1′ 7″	each	169/–
No. 2	size 3′ 0″ × 3′ 6″ × 1′ 7″	each	126/11
No. 4	size 3′ 0″ × 1′ 9″ × 1′ 7″	each	131/5
No. 5	size 3′ 10″ × 1′ 9″ × 1′ 7″	each	95/2
No. 7	size 6′ 6″ × 1′ 9″ × 1′ 7″	each	158/2

Corkboard	Orders under 20,000 sq. ft.	Orders over 20,000 sq. ft.
1″ thick per foot super	8d.	7½d.

Cut steel clasp nails to B.S. 1202	1″ per cwt.	51/3
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″ × 12 gauge	per cwt.	63/9

STEEL AND IRONWORKER

		£	s.	d.
Basis price for rolled steel joists sections, 5″ × 4½″ to 16″ × 6″ in 10-ft. to 50-ft. lengths	ex mills per ton	17	13	0
Ditto of 9″ × 7″ sections	ex mills per ton	17	18	0
Ditto of 4″ × 3″ sections	ex mills per ton	18	13	0
Ditto of 5″ × 2½″ sections	ex mills per ton	18	8	0
Ditto of 10″ × 8″ sections	ex mills per ton	18	3	0
Ditto of 12″ × 8″, 14″ × 8″, 16″ and 18″ × 6″, 18″ × 7″, 18″ × 8″, 20″ × 6½″, and 20″ × 7½″ sections	ex mills per ton	18	3	0
Ditto 22″ × 7″ sections	ex mills per ton	18	8	0
Ditto 3″ × 1½″ sections	ex mills per ton	21	3	0
Ditto 3″ × 3″ sections	ex mills per ton	18	18	0
Ditto 4″ × 1¾″ sections	ex mills per ton	20	3	0
Ditto 5″ × 3″ sections	ex mills per ton	18	3	0
Ditto 24″ × 7½″ sections	ex mills per ton	18	13	0
Ditto of solid steel columns	ex mills per ton	18	13	0
Ditto of angles	ex mills per ton	17	13	0
Ditto of tees	ex mills per ton	18	13	0

All delivered to Station or Siding.

PLASTERER

Plaster and Cement

		1-ton loads	6-ton loads
Thistle (browning) to B.S. 1191, Class B	per ton	96/3	86/3
Gypstone to B.S. 1191, Class B	per ton	70/6	ex Works, Kent.
Paristone (haired) to B.S. 1191, Class B	per ton	73/–	
Ditto (unhaired)	per ton	70/6	
Glastone to B.S. 1191, Class C	per ton	73/–	
Sirapite (coarse) to B.S. 1191, Class C	per ton	96/3	86/3
Ditto (fine) to B.S. 1191, Class C	per ton	104/3	94/3
Keene's Pink to B.S. 1191, Class D	per ton	155/6	
Keene's White to B.S. 1191, Class D	per ton	161/9	
Cullamix (Tyrolean Finish), 1-ton lots and upwards	per ton from	155/6 to 189/–	

PLASTERER—(*continued*)

Sundries

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″ × ⅜″ mesh × 26 gauge	per sheet	4/7

½″ Plasterboard (plaster lath)	25-75 yards	150-300 yards	Over 600 yards
per yard super	2/1¼	1/10½	1/8½

Galvanized lath nails	per cwt.	84/6
Hessian Scrim cloth in 100-yard rolls, 3¼″ wide	per roll	7/6

Wall Tiles

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

Standard quality.		
White, glazed 6″ × 6″ × ¼″	per yard super	8/6
Cream ,, ,,	per yard super	9/–
Angle beads (1½″ wide)	per yard run	1/1
Rounded edge tiles (white glazed)	per yard run	1/8
,, ,, ,, (cream glazed)	per yard run	1/9
Coloured enamelled bright glazed, 6″ × 6″ × ¼″	per yard super	14/3
Angle beads (1½″ wide)	per yard run	1/2
Rounded edge tiles	per yard run	2/9
Eggshell glazed tiles, 6″ × 6″ × ¼″	per yard super	15/–
Angle beads (1½″ wide)	per yard run	1/4
Rounded edge tiles	per yard run	2/10

PLUMBER

Lead

3½ lb. and upwards milled sheet lead in quantities of 5 cwts. to 1 ton in sheets to B.S. 1178	per cwt.	107/6
Lead ternary alloy, No. 2 quality extra over sheet lead or lead pipe	per cwt.	16/–
Allowance for old lead delivered to merchant or manufacturer	per cwt.	81/3

Cast Iron Goods

	Percentage Adjustment on List No. 3100 A.B. 1/2/40
Rainwater Goods (painted or unpainted)	*Plus* 70%
Soil goods (coated or uncoated)	*Plus* 70%

Mild Steel Rainwater Goods

	Standard List +
Gutters	83½%
Pipes and Fittings	93½%

Asbestos-Cement Rainwater Goods

The following prices are subject to 12½% trade discount and 2½% cash discount.

Orders over £30 are subject to 17½% trade discount and 2½% cash discount.

Rainwater Pipes.

Prices are for 6′ 0″ lengths, but 10′ 0″ lengths are available in 2″, 2½″, 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 1½ 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
2½″	per yard run	2/7½
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 1½ yards, and over 4′ 0″ as 2 yards.

	3″	4″	4½″	5″	6″	8″
Half round gutters per yard run	1/8	2/–	2/1	2/5½	3/5	4/2½
Ogee gutters per yard run	—	2/5½	2/7½	3/2	3/10½	5/–

INTERNAL PLUMBER

Lead pipe in coils, 5 cwts. and upwards, to B.S. 602	per cwt.	108/9
Lead soil pipe	per cwt.	111/9
Add if ribbon marked	per cwt.	–/3
Plumber's solder	per cwt.	307/–
Tinman's solder	per cwt.	381/–

Drawn lead traps with brass screw eye, 6 lb., to B.S. 504	1″	1¼″	1½″	2″
S. trap each	4/7	5/–	6/7	9/7
P. trap each	4/1	4/5	5/6	7/9
Extra for 3″ deep seal "S" trap each	1/1	1/3	1/6	1/10
Extra for 3″ deep seal "P" trap each	–/8	–/11	1/–	1/3

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:	⅛″ to 4″
Class A	47½%
,, B	41%
Galvanized Class A	28½%
,, ,, B	23%

Fittings:	
Lightweight	24½%
Heavyweight	17%
Flanges:	
Lightweight (Table D)	13%
Heavyweight (Table E)	Plus 3½%

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.	1/9½
Ditto	24 wire gauge	per lb.	1/11½
Copper wire, 10, 12 and 14 gauge (over 2 cwt.)		per lb.	1/10½
Copper nails		per lb.	2/–

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 5½d.
26 oz.	per foot super 7½d.
32 oz.	per foot super 9½d.

Polished Plate glass, ordinary substance, approximately ¼″, to B.S. 952, Section A.

In plates not exceeding:		Glazing quality	Selected glazing	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 100 in. wide, at higher prices.

⅛″ figured rolled and cathedral, to B.S. 952, Section B—untinted	7½d.	per foot super
tinted	10½d.	per foot super
¼″ rolled plate, to B.S. 952, Section B	7½d.	per foot super
3/16″ or ¼″ rolled plate, ,, ,,	8½d.	per foot super
3/16″ or ¼″ rough cast, ,, ,,	8½d.	per foot super
Prismatic, to B.S. 952, Section D	1/2½d.	per foot super
¼″ wired cast, ,, ,,	9½d.	per foot super
¼″ Georgian wired cast, ,, ,,	10½d.	per foot super
¼″ polished wired ,, ,,	3/6d.	per foot super
¼″ wired arctic, ,, ,,	1/8d.	per foot super

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

P.B.2.	5¾″ × 5¾″ × 3¾″	2/6 each
P.B.3.	7¾″ × 7¾″ × 3¾″	3/6 each
P.B.32.	7¾″ × 7¾″ × 3¾″	3/6 each

Radiussed corner bricks 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.	29/–
Washable distemper	per cwt. from	82/–
Ready mixed white lead paint (best), semi-gloss, per 32 lb.	per gallon	42/–
Aluminium paint (best quality)	per gallon	32/–
White enamel	per gallon	—
White enamel paint	per gallon	42/–
Stiff white lead (genuine English stack process, 1 ton lots, 1 cwt. kegs)	per cwt.	141/–
Liquid driers, best Terebene	per gallon	21/–
Knotting	per gallon	25/–
Oil stain (scumble)	per lb.	4/6
Varnish (outside quality), copal oak	per gallon	32/–
,, ,, ,, general oak	per gallon	26/–
,, ,, ,, egg shell flatting	per gallon	32/–
Turpentine, genuine American, 5-gallon lots	per gallon	—
,, substitute	per gallon	3/8
Linseed Oil Putty	per cwt.	60/9
Ferramastic (14 lb. kegs)	per cwt.	76/9
Size, in 1 S, best quality	per lb.	2/4

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.

23.65 heating and ventilation

DOMESTIC HEATING RESEARCH

The Calorimeter Building for Domestic Heating Research. (Fuel Research Station, June 29, 1948, AJ, July 15, 1948.)

Brochure published by the Fuel Research Station describing the new Calorimeter Building for domestic heating research.

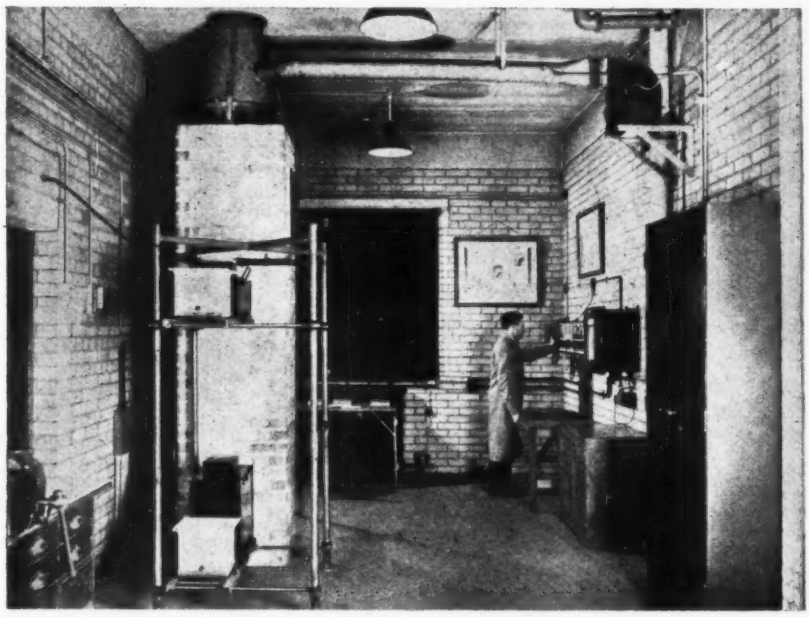
The main feature of the building is the provision of calorimeter cabinets in which domestic appliances can be installed and operated. The cabinets are about the same size as living rooms in small houses, and are designed so that the heat passing through the walls, floor, and ceiling is automatically recorded. They are of air-tight construction with specially balanced draught arrangements to eliminate leakage and to enable the amount of incoming air to be recorded. The total useful heat from the appliance can thereby be determined by direct measurement. It is also possible to measure separately radiant heat, warmed air from convection jackets, and heat to the boiler water. In this way an appliance may be tested without its performance being affected by the measuring instruments. The tests will give a complete picture of the behaviour of the appliance under different operating conditions, and with different fuels.

A separate wall-mounted control panel is provided for each cabinet, each panel having a complete set of instruments and controls. These comprise a six-line recording potentiometer, the controller for the constant-temperature chamber, remote control switches and indicator lamps, and in addition various terminal boards and electric supply points. The recording potentiometer can be linked to instruments inside the cabinet and to the wall thermocouples through suitably placed terminal boards.

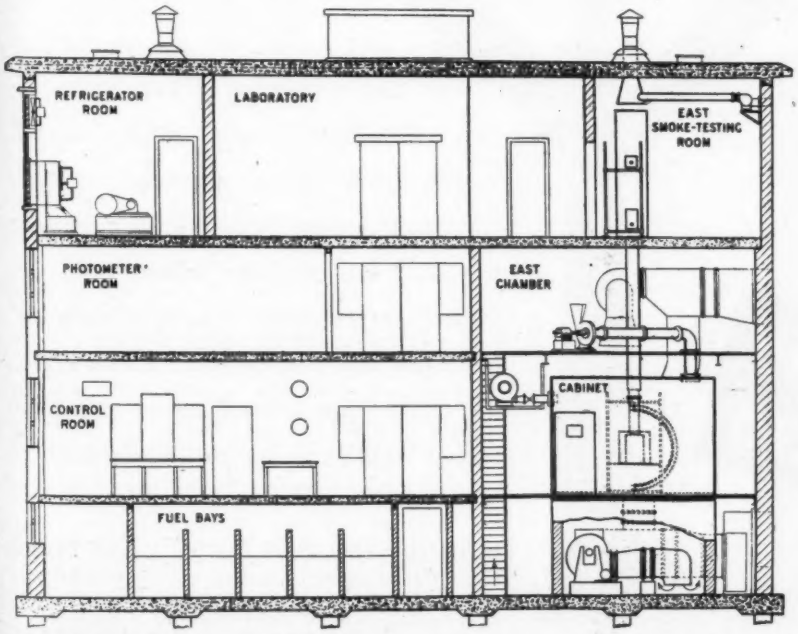
The automatically controlled air supply to the cabinets is drawn from the control room, and the air-flow recorders are wall-mounted underneath the inlet ducts. Equipment is provided for accurate control and measurement of a water supply for measuring the boiler output of appliances under test.

A loudspeaker intercommunication system links the control-room staff with operators in the cabinets and in the smoke-testing rooms.

The laboratories, smoke-testing rooms, office accommodation, fuel stores, and all necessary equipment are provided in the building, which is supplied with gas, water, compressed air. An electronically controlled motor generator designed to give a constant voltage supply provides the electric energy.



One of the smoke-testing rooms. Smoke-samplers are inserted in the chimney seen on the left. See 23.65.



Cross section through the Calorimeter Building showing laboratory, control room and a smoke testing room. See 23.65.

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

2950 ARCHITECTURAL ASSISTANTS: GRADES

Q *I should be glad if you could tell me where information can be obtained on the grades which are mentioned in so many of the advertisements asking for architectural assistants for Government offices?*

A The grades which are mentioned in the employment advertisements are the Administrative, Professional and Technical grades of The National Association of Local Government Officers, York Gate, Regents Park, London.

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

THE INDUSTRY

DISTRICT HEATING IN PRACTICE

One of the few district heating schemes actually in operation in this country is at Urmston, Lancs, where the local council will supply, ultimately, 1,300 houses and flats and 17 public and other buildings (including schools) with heating and hot water. So far the scheme serves 62 dwellings, but a further 40 are almost ready for connection, and with the third instalment the scheme will extend to 250 houses.

With an outside temperature of 32°, the service keeps the living rooms at about 60° and the bedrooms and hall at 50° to 52°. Domestic hot water is supplied separately at 130° to 140°, thirty or forty gallons a day being allowed for each house.

The service is provided from a central boiler house, temporary plant being installed to serve the first 20 dwellings. Capital cost for the first 250 houses will be approximately £40,000, and this figure will become £102,000 for 600 dwellings, or £170 each. The cost of the complete scheme of 1,300 houses and other buildings is estimated at about £200,000.

The cost to the consumer varies with the floor area of the house, but over the whole scheme the average should be about 4s. 6d. a week, with a further figure to be added for individual tenants topping up with gas or electric fires during exceptionally cold weather. Other houses in the area involve, according to a survey, anything from 6s. 9d. to 7s. a week for heating by solid fuel and other methods. The charge is based on a rate of 7d. a week for each 100 square feet of floor area, with a minimum charge of 3s.

It is the further intention of the Urmston Council to make the service available to other houses in the neighbourhood, although this development cannot take place for some considerable time. In any event, district heating has been discussed a great deal during the past two years, and figures for a scheme in actual operation are therefore of some interest. The scheme incidentally is the first to be recommended for approval by the District Heating Sub-Committee.

A NEW SYNTHETIC ADHESIVE

Aero Research, well known for their synthetic adhesives and the Redux bonding process, are now marketing Araldite, a new resin for bonding metals, glass, porcelain, china and other materials. The process has two particular advantages: the resin sets with the application of heat alone, only enough pressure being needed to bring the surfaces into contact; moreover, no water or other volatile substance is evolved during the setting process, so that non-porous materials can be successfully bonded. The resultant joint is often stronger than the materials which it bonds, and is resistant to boiling water and most organic solvents.

The bonding material is made as a powder and also in rods. The powder is applied by dusting it on to the surfaces to be bonded; with the rod form the surfaces must be heated to 100° or 120° C. when the rod will melt and flow easily. Surfaces must be degreased and sanded, and provided they fit well it is only necessary to spread the bond on one surface. Curing times are reasonably short, varying from 10 minutes at 240° C. to 2 hours at 180° C. Temperatures lower than this can be used provided the curing time is increased, but for maximum strength a temperature of from 180° to 190° C. is recommended. The natural colour of the bond is a light brown, but both powder and rods are also made in a silver colour, which gives the joint a metallic appearance.

The Araldite process was originally evolved by Ciba, Ltd., of Basle. (*Aero Research, Ltd., Duxford, Cambridgeshire.*)

VERTICAL GLAZING

The Aluminex aluminium bar for roof glazing has been well known for a number of years, and the section on this page shows how it has now been applied to glazing vertical surfaces. For industrial buildings the system should be useful, and comparatively simple to fix, as the bars are held in fixing shoes which are bolted to horizontal steel joists. An extruded aluminium alloy member runs the full length of the joists separating each bar from the one vertically above it and providing a weatherproof joint between the sheets of glass. This method emphasizes the horizontal lines of the glazing, while the section on the right shows an alternative method in which the glazing bars are butted and run the full height of the glazing, the section being modified so that it is less prominent; this emphasizes the vertical lines.

If sections of the glazing are to be made to open, this can be done by fixing the standard Aluminex bar to an aluminium frame the top member of which is hung from a special continuous hinge which forms part of the head section. (*Williams and Williams, Ltd., Reliance Works, Chester.*)

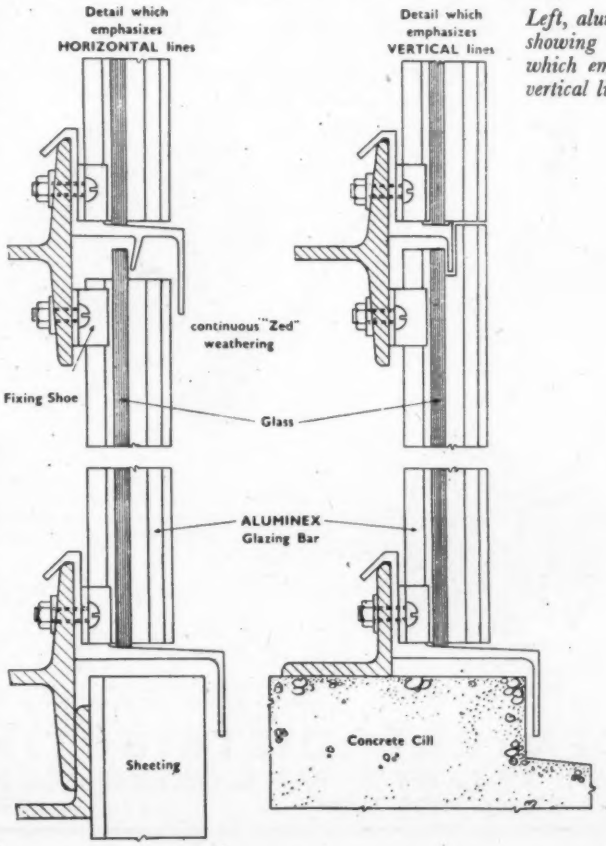
INCENTIVES IN THE BUILDING INDUSTRY

Last November the incentives scheme was agreed, though with a certain amount of misgiving on the part of the employers and operatives, and it will continue at least until November, 1949, when the problem will be discussed again. In an industry which has for years paid its workers mainly by hourly rates, any bonus scheme naturally means considerable changes. It is, of course, too early to make any final pronouncement on the effects of the scheme, but the results of a preliminary survey were given last week by Mr. F. M. Sleeman, President of the National Federation of Building Trades Employers, at the half-yearly meeting.

A questionnaire had been circulated to a representative cross-section of Federation members, and the replies showed that incentives had certainly increased output and, in a majority of instances, have led to reduced costs. So far as the operatives are concerned, the incentives scheme is popular, many of them earning bonuses as much as 25 per cent. above the standard wage rates. It is interesting to note that at a recent meeting of the NFBTO the incentives scheme was approved by a very considerable majority.

As was to be expected, bonus systems had been applied more to housing than to other types of work, but it was encouraging to note that many of the firms operating them were applying them to other types of contract work, and sometimes even to maintenance and repair jobs. One of the main reasons against a bonus scheme for the industry was the difficulty of finding a method which could be applied to work of this kind, which forms such a large part of the work of the industry.

At the moment the Employers' Federation has set up a special committee which will keep incentives schemes continuously under review. From the architect's point of view, the main interest is that incentives have probably come to stay, although Mr. Sleeman did not specifically say so. The general impression seems to be that incentives should make for more accurate costing and should



Left, aluminex side wall glazing showing details of treatments which emphasize horizontal and vertical lines.

tend to improve site organisation, as inefficiency instead of merely penalising the contractor will have an effect on the bonuses of the operatives, and may be expected to produce prompt criticism. It seems, too, unlikely that there will ever be a bonus scheme or standard rate which will be applicable to the whole country: at the moment most of the schemes are subject to revision, but if contractors continue to share their experiences, the schemes may finally work out on something like a regional basis.

Announcements

Mr. Clifford Duke, A.R.I.B.A., A.A.DIPL., has moved to 111, Haverstock Hill, N.W.3; Primrose 2512. In a recent issue Mr. Duke's number was incorrectly given as eleven instead of one hundred and eleven.

Mr. J. H. Cox, A.R.I.B.A., has moved to 64, Limes Avenue, Aylesbury.

Mr. C. D. Andrews, F.R.I.B.A., has been appointed Regional Architect to the North-West Metropolitan Regional Hospitals Board (11A, Portland Place). For the last 30 years he has specialized in hospital architecture, etc., and has for 23 years served with the Middlesex County Council as Principal Assistant Architect (Health).

A reduction of 5 per cent. in the price of Perspex Corrugated Acrylic Sheet has been made by Imperial Chemical Industries, Ltd. New lists showing the revised prices of different sheet lengths and profiles are now being printed by ICI.

Mr. James S. Bramwell, F.R.I.B.A., has joined the firm of Barnard & Smith, and professional correspondence should, in future, be addressed to him at their offices at 50, Knightsbridge Court, Sloane Street, London, S.W.1.

Mr. Richard Mellor, F.R.I.B.A., has been appointed Architect to the Leeds Regional Hospital Board. He began his new duties on June 1. His address is at the offices of the Board, 29/31, Eastgate, Leeds, 2 (Telephone No. Leeds 32281/3), where he would be glad to receive trade catalogues.

Mr. E. W. Sanger is relinquishing his position as General Sales Manager of the Birmingham Aluminium Casting (1903) Co., Ltd. (Birmal), to take up an appointment as Joint Managing Director of Begwaco Meters, Ltd., at Farnworth, Lancs. Mr. Sanger will be succeeded by Mr. W. J. Price, formerly Sales Engineer of Birmal.

The telephone number of the Head Office and London Sales Office of Northern Aluminium Company Limited has been changed to Temple Bar 8430.

Mr. Alan L. Booth, A.R.I.B.A., is now practising from "Leighton House," Darkes Lane, Potters Bar, Middlesex, telephone Potters Bar 3050, and would be glad to receive trade catalogues and literature at this address.

Mr. C. E. Edwards has been appointed Sales Manager of the Appleby-Frodingham branch of the United Steel Companies, Ltd.

The Aluminium Wire and Cable Co., Ltd., 10, Buckingham Place, London, S.W.1 ,have transferred to their works at Swansea the manufacturing facilities for aluminium and alloy wire and hot rolled rod previously operated by the British Aluminium Co., Ltd., and Reynolds Light Alloys, Ltd. Sales of wire and rod made at Swansea will continue for the present to be handled by the British Aluminium Co., Ltd., but will be taken over by the Aluminium Wire and Cable Co., Ltd., in a few months' time. In the meantime, deliveries to customers against existing orders will not be affected.

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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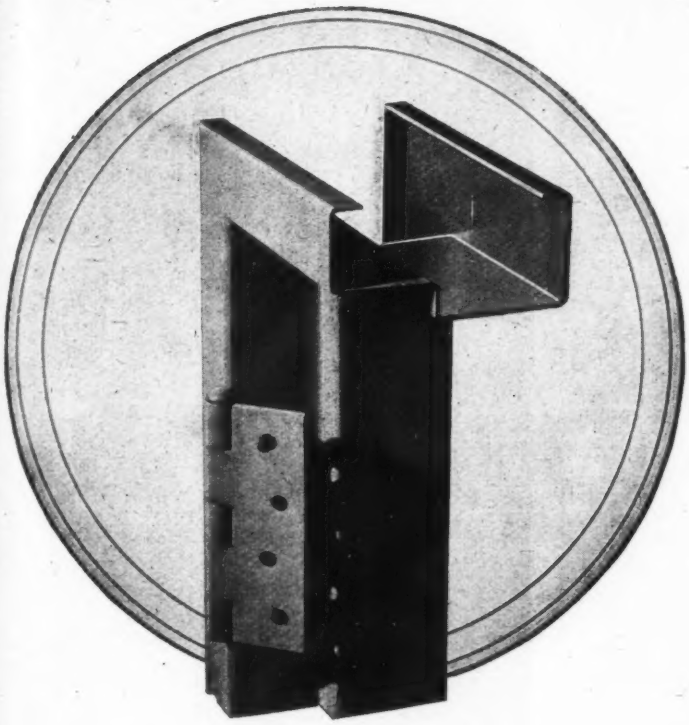

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CLASSIFIED ADVERTISEMENTS

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

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

None of the vacancies in these columns relates to a man between the age of 18 and 50, inclusive, or a woman between the age of 18 and 40, inclusive, unless he or she is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

Public and Official Announcements

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

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: EMPLOYMENT REGISTER, WREN PARK, WHYTELEAFE. Tel: Uplands 0935. 991

LONDON COUNTY COUNCIL.
HOUSING AND VALUATION DEPARTMENT.
ARCHITECTURAL ASSISTANTS. Applications are invited for positions of Architectural Assistant, at salaries of up to £580 a year. Commencing salaries will be determined according to qualifications and experience, and qualified candidates will be eligible for appointment to the permanent staff of the Department on the occurrence of vacancies. Engagement will involve Superannuation contributions at the rate of 6 per cent. of salary.

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.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed foolscap envelope required). Canvassing disqualifies. (870) 1032

DENBIGHSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
The above County Council invites applications for the under-mentioned appointments in the County Architect's Department, *viz.*:—

TWO ASSISTANT ARCHITECTS. A.P.T. Division, Grade VI. Salary £595-£660 per annum.

Preferably Associates of R.I.B.A., and must have had a thorough training in architectural design and construction of modern school buildings, and other works carried out by Local Authorities.

TWO ASSISTANT ARCHITECTS. A.P.T. Division, Grade V. Salary £520-£570 per annum.

Preferably Members of R.I.B.A., and must have had sound experience in architectural design and in the preparation of working drawings, with full understanding of modern school construction.

TWO ASSISTANT ARCHITECTS. A.P.T. Division, Grade IV. Salary £460-£525 per annum.

Preferably Members of R.I.B.A. Must have had good experience in architectural design and in the preparation of working drawings.

ONE JUNIOR ASSISTANT ARCHITECT. Misc. Division, Grade II. Salary £375-£420 per annum.

Applicants must be capable of preparing working drawings, and have a good knowledge of building construction.

ONE ASSISTANT QUANTITY SURVEYOR. A.P.T. Division, Grade III. Salary £450-£495 per annum.

Preference will be given to candidates who have passed the Intermediate examination of the R.I.C.S. (Quantities Sub-division), or who hold an equivalent qualification, and must be capable of "taking-off" for small works, abstracting, and should have a good knowledge of specification writing and experience in the settlement of accounts.

ONE HEATING ENGINEER. A.P.T. Division, Grade VI. Salary £595-£660 per annum.

Applicants must be fully experienced in the design of and preparation of drawings, specifications, and estimates for modern hot water heating schemes, domestic hot water supply schemes and ventilating schemes, for all types of Public Buildings, and should be members of the Institute of Heating and Ventilating Engineers.

The appointments will be subject to termination by one month's notice on either side, expiring at the end of any month, and also to the provision of the Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination, and to reside in such place in the County as the County Council may direct.

Applications, giving age, qualifications, and particulars of present and previous appointments, and accompanied by copies of three recent testimonials, to be sent to me, the undersigned, in a sealed envelope, endorsed with a description of the post applied for, by not later than the 23rd day of July, 1948.

WILLIAM JONES,
Clerk of the County Council.
County Offices, Ruthin.
29th June, 1948. 1223

METROPOLITAN BOROUGH OF POPLAR.
APPOINTMENT OF TOWN PLANNING ASSISTANT (A.P.T., V).
Applications are invited from suitably qualified persons for the above-mentioned appointment, on the permanent establishment of the Works Department.

The duties will cover the preparation of Town Planning Surveys and Schemes within the Stepney/Poplar Reconstruction Area, and various other planning areas.

Full details of the appointment and form of application may be obtained from the Borough Engineer and Surveyor, Poplar Town Hall, Bow Road, E.3, to whom completed applications must be delivered not later than first post on Wednesday, 21st July, 1948. 1201

WEST SUFFOLK COUNTY COUNCIL.
Applications are invited for the under-mentioned appointments in the County Architect's Department. Salaries as indicated in accordance with the National Joint Council Salary Scales, position on scales according to qualifications, *viz.*:—

(*a*) QUANTITY SURVEYOR. A.P.T., Grade V-VI (£520-£660).

(*b*) ASSISTANT ARCHITECT. A.P.T., Grade V (£520-£570).

(*c*) ARCHITECTURAL ASSISTANT. A.P.T., Grade I-II (£390-£465).

Travelling allowance in accordance with County Scale.

Candidates in respect of (*a*) should be Associates of the Royal Institute of Chartered Surveyors (Quantities Division), and have experience in the preparation of Bills of Quantities, estimates, valuations, and settlement of Accounts.

Candidates in respect of (*b*) must be Registered Architects, preferably Associates of the Royal Institute of British Architects. They must be thoroughly experienced in Architectural Design and capable of preparing preliminary sketch plans, complete working drawings and specifications.

With regard to (*c*) preference will be shown to candidates in possession of the Intermediate examination of the Royal Institute of British Architects.

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

Forms of applications may be obtained from the undersigned, by whom applications, accompanied by three recent testimonials, should be received not later than Monday, 19th July, 1948.

L. G. H. MUNSEY,
Clerk of the County Council.
Shire Hall, Bury St. Edmunds. 1209

BINGLEY URBAN DISTRICT COUNCIL.
APPOINTMENT OF CHIEF ARCHITECTURAL ASSISTANT.
Applications are invited for the permanent appointment of Chief Architectural Assistant. Salary, Grade V, £520 per annum, rising by three annual increments to £570 per annum.

Candidates should have had considerable training and experience in housing design, development, and general architectural work. Preference will be given to candidates who have passed the examinations of the Royal Institute of British Architects.

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

Applications, stating age, qualifications, training and experience, and details of past and present appointments, accompanied by copies of three recent testimonials, should be forwarded, endorsed "Architectural Assistant," to the undersigned before the 21st July, 1948.

F. M. DUNWELL,
Clerk of the Council.
Town Hall, Bingley. 1225

COUNTY BOROUGH OF ROTHERHAM.
ARCHITECTURAL ASSISTANT.
Applications are invited for the appointment of an Architectural Assistant, in the Office of the Borough Engineer, at a commencing salary of £520, rising by annual increments to a maximum of £570 per annum.

Applicants must be Associate Members of the Royal Institute of British Architects, and preferably with experience in the service of a Local Authority.

The post is Superannuable, and the candidate selected for appointment will be required to pass a medical examination. The appointment will be subject to the conditions of service adopted by the Council and based on the National Scheme of Conditions of Service. It will be determinable by one month's notice on either side.

Housing accommodation will be available for the successful applicant if required.

Applicants must state whether they are related to any member or officer of the Rotherham County Borough Council. Deliberate omission to disclose any such relationship will disqualify any candidate.

Canvassing of members of the Council, whether direct or indirect, will disqualify.

Applications (endorsed "Architectural Assistant"), stating age, qualifications and experience accompanied by copies of three recent testimonials, should be delivered to the undersigned not later than Friday, 20th August, 1948

JOHN S. WALL,
Town Clerk.
Municipal Offices, Rotherham, Yorks. 1273

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

ASSISTANT ARCHITECT. Grade VI.

Commencing salary £595, rising by annual increments of £20/£25 to a maximum of £660, plus London allowance of £30.

Applicants must be Associate Members of the Royal Institute of British Architects, and should have had a good training and an adequate experience in the design and construction of modern buildings.

It is desirable that applications should be accompanied by a small sample of the applicant's work.

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.

Applications, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, should be sent to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 24th July, 1948.

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

The Council will be unable to provide any housing accommodation, and the successful candidate will be expected to make his own arrangements in this direction.

DUDLEY AUKLAND,
Clerk of the Council.
County Hall, Kingston-upon-Thames. 1228

DORKING URBAN DISTRICT COUNCIL.
AMENDED ADVERTISEMENT.
Applications are invited for the following appointments:—

(*a*) ARCHITECTURAL ASSISTANT. Grade IV, A.P.T. Division.

(*b*) PLANNING ASSISTANT. Grade IV, A.P.T. Division.

Applicants for appointment (*a*) must have had good general experience in architectural design, including housing, and possess an appropriate qualification.

Applicants for appointment (*b*) must have had appropriate training and experience in a Municipal Surveyor's or Planning Office, and should preferably have passed the Intermediate examination of the Town Planning Institute.

The National Conditions of Service will apply to the appointments. They will be subject to the provisions of the Local Government Superannuation Act, 1937, and the selected applicants will be required to pass a medical examination. They will be terminable by one month's notice in writing on either side.

Application forms may be obtained from the undersigned, and are to be returned, with the names of three referees, not later than 31st July, 1948, in envelopes appropriately endorsed.

Canvassing in any form will be a disqualification, and candidates must disclose in writing whether to their knowledge they are related to any member or to any senior officer of the Council.

H. D. JEFFRIES,
Clerk of the Council.
Pippbrook, Dorking. 1242

BOROUGH OF DEAL.
CHIEF ARCHITECTURAL ASSISTANT.
Applications are invited from suitably qualified persons for the permanent appointment of Chief Architectural Assistant, in the Borough Engineer and Surveyor's Department.

Salary on Grade V of the National Consolidated Scale of £520 per annum, rising subject to satisfactory service to £570 per annum.

A self-contained two-bedroom Flat will be available to the successful candidate.

Preference will be given to those holding an appropriate professional qualification, and applicants must have had experience in general Municipal architecture, including the preparation of working drawings, specifications, quantities, and the measuring of contracts.

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

Applications, stating age, qualifications and experience, with the names and addresses of two persons to whom the Council may refer, must reach the undersigned not later than first post on Wednesday, 21st July, 1948.

D. A. DANIELS,
Town Clerk.
Municipal Offices, Queen Street, Deal. 1240

BOROUGH OF BEXLEY.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
ARCHITECTS' SECTION.
AMENDED ADVERTISEMENT.
Applications are invited for the under-mentioned appointment:—

QUANTITY SURVEYOR (Temporary). Salary, Grade A.P.T., VI, of the National Scales of Salaries, £595×£20×£20×£25—£660, plus London weighting.

Form of application, with conditions of appointment, may be obtained from the Borough Engineer and Surveyor, Council Offices, Bexleyheath, to whom completed applications must be returned by 26th July, 1948.

Canvassing, directly or indirectly, will disqualify.

W. WOODWARD,
Town Clerk.
Council Offices, Bexleyheath. 1239

METROPOLITAN BOROUGH OF WANDSWORTH.
ARCHITECTURAL ASSISTANTS.

Applications are invited for the undermentioned vacancies in the Borough Architect's Department :—

(*a*) Established SENIOR ARCHITECTURAL ASSISTANT, at a salary in accordance with Grade A.P.T., VI, *viz.*, £615-£680 per annum inclusive. Candidates should have had good professional training, experience with a local authority in housing schemes, the layout of estates, general architectural design, and the control of staff. Preference will be given to Associates of the R.I.B.A.

(*b*) Two Unestablished ARCHITECTURAL ASSISTANTS, at a salary in accordance with Grade A.P.T.I., *viz.*, £410-£455 per annum inclusive. Candidates should have good architectural knowledge, and be capable of preparing working drawings and details. Preference will be given to candidates studying for R.I.B.A. examinations.

Forms of application may be obtained from the Borough Architect, and must be returned to me not later than 30th July, 1948.

R. H. JERMAN,
Town Clerk.

Municipal Buildings, Wandsworth, S.W.18.
2nd July, 1948. 1241

COUNTY BOROUGH OF EAST HAM.
BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited for the under-mentioned appointments :—

SENIOR ENGINEERING ASSISTANT—STRUCTURAL. Grade A.P.T., VI. Salary, £625-£690.

SENIOR ARCHITECTURAL ASSISTANT. Grade A.P.T., VI. Salary, £625-£690.

ARCHITECTURAL ASSISTANT. Grade A.P.T., III. Salary, £480-£525.

ENGINEERING ASSISTANT. Grade A.P.T., III. Salary, £480-£525.

CHIEF QUANTITY SURVEYOR. Grade A.P.T., VII. Salary, £665-£740.

SENIOR ASSISTANT PLANNING OFFICER. Grade A.P.T., V. Salary, £550-£600.

BUILDING INSPECTOR. Grade A.P.T., V. Salary, £550-£600.

The above salaries are inclusive of the London allowance. Salaries in excess of the minima of the grades may be paid, according to the qualifications and experience of successful candidates.

The Council have in course of preparation a large and varied programme of interesting works, which it is anticipated will not be affected by the proposed reductions in capital expenditure.

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.

Full particulars of the duties, terms and conditions of appointment and form of application (which must be returned by Friday, the 6th August, 1948) may be obtained from the undersigned.

Canvassing in any form will disqualify.

H. A. EDWARDS,
Town Clerk.

Town Hall, East Ham, E.6.
July, 1948. 1275

CITY OF BATH.
SENIOR PLANNING ASSISTANT.

Applications are invited for the appointment of Senior Planning Assistant, on the permanent staff of the City Planning Officer, at a salary in accordance with A.P.T., Grade IV (£480-£525 per annum). Applicants should possess a recognized qualification in town planning, and preference will be given to those with previous experience in a Town Planning Office. The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination. Applications, stating age, qualifications and experience, together with copies of not more than three recent testimonials, should be sent to the City Planning Officer, 2, Princes Buildings, Bath, not later than the 31st July, 1948.

J. BASIL OGDEN,
Town Clerk.

Guildhall, Bath.
8th July, 1948. 1281

CITY OF NOTTINGHAM.
CITY ENGINEER'S DEPARTMENT.

Applications are invited for the posts, as follows :—

SENIOR ARCHITECTURAL ASSISTANTS : Grade A.P.T., VII, National Scale, £635-£710. Grade A.P.T., VI, National Scale, £595-£660.

Candidates must be Associates of the R.I.B.A., and should have a thorough practical knowledge of School or Hospital work. The grade for which the application is intended must be stated when applying for the form.

JUNIOR ARCHITECTURAL ASSISTANT : Grade A.P.T., I, National Scale, £390-£435.

Candidates must have completed a full course of study at a recognized School of Architecture or articles of pupilage.

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

Applications are to be on forms to be obtained from Mr. R. M. Finch, O.B.E., M.I.C.E., City Engineer and Surveyor, Guildhall, Nottingham, and are to be returned to this office not later than Wednesday, 11th August, 1948.

J. E. RICHARDS,
Town Clerk.
1258

Amended Advertisement.
WEST SUSSEX COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of an ASSISTANT MAINTENANCE SURVEYOR, at a salary in accordance with Grade IV (£480-£525), A.P.T. Division of the Consolidated National Scales.

Preference will be given to applicants who have passed the whole or part of the examinations of the R.I.B.A. or R.I.C.S.

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 must be submitted not later than the 23rd July, 1948.

T. C. HAYWARD,
Clerk of the County Council.

County Hall, Chichester.
2nd July, 1948. 1249

BOROUGH OF DOVER.
APPOINTMENT OF CHIEF ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment, in the Borough Engineer and Surveyor's Department.

Salary in accordance with A.P.T., Grade VI, of the National Scales, *i.e.*, £595/£660 per annum.

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

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

Applications, stating age, experience and qualifications, accompanied by three recent testimonials, must be delivered to the Borough Engineer, Maison Dieu House, Dover, not later than Monday, 26th July, 1948.

The Corporation is prepared to make a grant not exceeding 50 per cent. of approved expenditure in connection with household removal expenses.

Canvassing, either directly or indirectly, will be deemed a disqualification.

JAMES A. JOHNSON,
Town Clerk.

Brook House, Dover.
5th July, 1948. 1253

LYMM URBAN DISTRICT COUNCIL.
ENGINEER AND SURVEYOR'S DEPARTMENT.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a Temporary Architectural Assistant, in the Engineer and Surveyor's Department.

Candidates must be qualified Architects, and are required to have experience in the preparation of Schemes for new houses, and the supervision of works in progress.

The salary will be according to the National Joint Council Scheme of Conditions of Service, Grades III to V(a), being fixed according to qualifications and experience.

Applications should give particulars of qualifications, present and past appointments, and full details of experience, accompanied by copies of two recent testimonials. They should be addressed to the undersigned in sealed envelopes, endorsed "Architectural Assistant," to be received not later than Monday, 2nd August, 1948.

Canvassing, directly or indirectly, will be a disqualification, and relationship to a Member or Senior Officer of the Council must be disclosed.

T. ASHCROFT,
Clerk to the Council.

Council Offices, Lymm, Warrington.
10th July, 1948. 1260

COUNTY BOROUGH OF SWANSEA.
BOROUGH ARCHITECT'S DEPARTMENT.
QUANTITY SURVEYORS.

Applications are invited for the following appointments on the Established Staff in the Borough Architect's Department :—

TWO SENIOR ASSISTANT QUANTITY SURVEYORS (Grade VII, A.P.T.). Salary £635 to £710 per annum.

The salary scale is that of the National Scheme of Conditions of Service.

Applicants must be under 45 years of age unless in Local Government Service, and must be Professional Associates of the Royal Institution of Chartered Surveyors (Quantities Section). Candidates should have experience in the preparation of Bills of Quantities, Specifications, and Estimates for Schools, Houses and Buildings of various types.

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

The appointments may be terminated by one month's notice on either side.

Forms of application may be obtained from the Borough Architect (Mr. H. T. Wykes, F.R.I.B.A.), Guildhall, Swansea.

Applications, accompanied by copies of three recent testimonials, and enclosed in an envelope endorsed "Senior Assistant Quantity Surveyor," must be delivered to the undersigned not later than Wednesday, 11th August, 1948.

Canvassing, directly or indirectly, will disqualify.

T. B. BOWEN,
Town Clerk.

Guildhall, Swansea.
June, 1948. 1247

COUNTY BOROUGH OF DERBY.
APPOINTMENT OF PLANNING STAFF (ESTABLISHED).

(*a*) CHIEF PLANNING ASSISTANT. £685-£760.

(*b*) GENERAL PLANNING ASSISTANTS (TWO). £480-£525.

Applications are invited for the following appointments in the Town Planning Department, Borough Engineer and Surveyor's Office :—

(*a*) CHIEF PLANNING ASSISTANT (Grade VIII, £685 to £760, consolidated).

Candidates should be A.M.T.P.I. and hold a basic professional qualification (preferably A.R.I.B.A.), and have had considerable experience in modern planning technique.

Preference in this appointment will be given to a person who is experienced in the planning of new development and re-development schemes in urban areas, for which work he will be primarily responsible and in which there is considerable scope.

(*b*) GENERAL PLANNING ASSISTANTS (Grade IV, £480 to £525, consolidated).

Candidates should be suitably qualified and experienced in general planning work, preferably in a large Municipal office. In these appointments preference will be given in one case to a person with an architectural background and in the other to a person with a surveying (valuation and estate management) background, or to a person with a degree in economics.

Conditions of service are those formulated by the National Joint Council, and the appointments are subject 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, appropriately endorsed, together with three recent testimonials, should be sent to M. L. Francis, F.R.I.C.S., M.I.Mun.E., Borough Engineer and Surveyor, The Council House, Corporation Street, Derby, not later than 28th July, 1948.

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.

C. ASHTON,
Town Clerk.

Town Clerk's Office, Market Place, Derby.
July, 1948. 1269

NORTH RIDING OF YORKSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the undermentioned appointments on the permanent staff. Salaries in accordance with the National Joint Council's Scales.

(*a*) ASSISTANT ARCHITECTS. A.P.T., Grade IV, £480-£525.

(*b*) JUNIOR ARCHITECTURAL DRAUGHTSMAN. General Division. Salary according to age, up to £385 (men), £308 (women).

Candidates in respect of (*a*) should have passed the Intermediate examination of the Royal Institute of British Architects.

The above appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and to a satisfactory medical examination. Appointment (*a*) will be terminable by two months' notice in writing on either side and (*b*) by one month's notice.

Forms of application are not being issued, but further information may be obtained from J. Catchpole, A.R.I.B.A., County Architect, County Hall, Northallerton. Applications, stating age, qualifications and experience, together with particulars of present and previous appointments, and the names and addresses of three persons to whom reference can be made, must be delivered to the undersigned not later than the 2nd August, 1948.

Canvassing will disqualify, and a candidate who is related to a member of, or a senior officer under, the Council must disclose the fact when applying.

H. G. THORNLEY,
Clerk of the County Council.

County Hall, Northallerton.
2nd July, 1948. 1264

CITY OF BATH.
CITY ENGINEER'S DEPARTMENT.
ARCHITECTURAL SECTION.

(1) Applications are invited for the following appointments on the Staff of the City Engineer :—

(*a*) GENERAL ARCHITECTURAL ASSISTANT (Permanent). Salary, £450-£495, or £480-£525, per annum (A.P.T., III or IV), according to qualifications and experience.

(*b*) JUNIOR ARCHITECTURAL ASSISTANT (Temporary). Salary, £390-£435, or £420-£465 (A.P.T., I or II), depending on qualifications and experience.

(2) Candidates for appointment (*a*) should be members, by examination, of the Royal Institute of British Architects, or hold equivalent qualifications.

(3) Appointment (*a*) will be subject to the provisions of the Local Government Superannuation Act, 1937, and the person appointed will be required to pass a medical examination.

(4) Applications, stating age, qualifications and experience, together with copies of not more than three recent testimonials, should be sent to the City Engineer, Guildhall, Bath, not later than 24th July, 1948.

J. BASIL OGDEN,
Town Clerk.

Guildhall, Bath.
6th July, 1948. 1274

THE NORTH OF SCOTLAND COLLEGE OF AGRICULTURE.
FARM BUILDINGS DEPARTMENT.
The Governors invite applications for the post of ASSISTANT ADVISORY OFFICER in the Farm Buildings Department. This Department advises on all matters pertaining to farm buildings, carries out the investigation of problems pertaining to these subjects, and studies new developments and techniques. While preference will be given to applicants who have passed the qualifying examination for A.R.I.B.A. or its equivalent, due consideration will be given to applicants who have had a sound practical training and experience in this field.
Salary scale: £470 to £760.
The person appointed will be eligible for admission to a Superannuation Scheme.
Forms of application, which may be obtained from the undersigned, must be lodged by 31st July, 1948.
JOHN L. INNES,
Secretary.
43, Union Street, Aberdeen. 1267

CAERNARVONSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the under-mentioned permanent appointments in the County Architect's Department, at salaries in accordance with the National Scheme of Conditions of Service (consolidated):—
(*a*) ONE ASSISTANT ARCHITECT. Salary, Grade A.P.T., III, £450-£495.
(*b*) TWO ARCHITECTURAL ASSISTANTS. Salary, Grade A.P.T., I, £390-£435.
(*c*) ONE ARCHITECTURAL DRAUGHTSMAN. Salary, Grade Misc. I, £315-£360.
Applications should be sent to the undersigned (from whom particulars and forms of application may be obtained) by not later than 31st July, 1948.
GWILYM T. JONES,
Clerk of the County Council.
County Offices, Caernarvon.
6th July, 1948. 1268

URBAN DISTRICT COUNCIL OF COLNE VALLEY.
ENGINEER AND SURVEYOR'S DEPARTMENT.
ARCHITECTURAL ASSISTANT.
Applications are invited for the appointment of Architectural Assistant, in the Engineer and Surveyor's Department, at a salary in accordance with Grade II of the A.P. and T. Division of the National Scheme of Conditions of Service, namely £420 per annum, rising by annual increments of £15 to a maximum of £465 per annum.
Applicants must have had good training and experience in design and construction, be able to survey, prepare plans, estimates, quantities and specifications for building works.
They must be Registered Architects, and preference will be given to applicants who are Associates of the Royal Institute of British Architects.
The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side.
Applications, endorsed "Architectural Assistant," stating age, qualifications, present and past appointments, details of experience, and whether married or single, accompanied by three recent testimonials, should reach the undersigned not later than Wednesday, the 28th July, 1948.
Candidates must state whether to their knowledge they are related to any member or senior officer of the Council. Canvassing, directly or indirectly, will disqualify.
J. W. LOMAS,
Clerk of the Council.
Town Hall, Slaithwaite.
9th July, 1948. 1265

OXFORDSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the following appointments:—
(*a*) ONE QUANTITY SURVEYOR. Grade VI, £595-£660 (consolidated salary).
(*b*) ONE ASSISTANT ARCHITECT. Grade V, £520-£570 (consolidated salary).
(*c*) ONE ASSISTANT ARCHITECT. Grade IV, £480-£525 (consolidated salary).
(*d*) ONE BUILDING SURVEYOR. Grade IV, £480-£525 (consolidated salary).
Candidates for (*a*) must be qualified members of the R.I.C.S.
Candidates for (*b*) and (*c*) should be qualified Architects and members of the R.I.B.A., and preference will be given to those with experience in the work of a County Council.
Candidates for (*d*) must be members of the R.I.C.S., and preference will be given to those with experience in the preparation of specifications and supervision of building works. The candidate appointed will be required to own and drive a car, for which an allowance on the Council's scale will be made.
Applications, stating age, qualifications and experience, with one recent testimonial and the names and addresses of two persons to whom reference can be made, are to be sent to the County Architect, 3, Becket Street, Oxford, not later than the 6th August, 1948.
The appointments, which are subject to a medical examination, are on the established staff, and determinable by one month's notice on either side.
F. G. SCOTT,
Clerk of the Council.
1266

Applications are invited for the following appointments on the permanent staff of the Architect to the Board.
(1) SENIOR ASSISTANT ARCHITECT.
Salary will be in accordance with Grade VIII of the A.P.T. Division of the National Scale, *i.e.*, £685 per annum, rising by annual increments of £25 to £760 per annum, consolidated.
Candidates must be members of the Royal Institute of British Architects, and have had extensive and responsible experience in the design of large public buildings, including hospitals and health service buildings.
To Architects interested in becoming specialists, the appointment offers wide scope and excellent opportunities.
(2) ARCHITECTURAL ASSISTANT.
Salary will be in accordance with Grade IV of the A.P.T. Division of the National Scale, *i.e.*, £460 per annum, rising by annual increments of £15 to £525 per annum, consolidated.
Candidates must have had a good general experience of preparing working and detail drawings, and of making surveys of lands and buildings, and should be quick and neat draughtsmen.
Both appointments will be subject to the provision of the National Health Service (Superannuation) Regulations, 1947. Successful candidates will be required to pass a medical examination.
Applicants should state: (1) Name and full address; (2) age and whether married; (3) degrees and professional qualifications; (4) experience; (5) present appointment and salary; (6) war service; (7) date available if appointed; (8) name and address of three referees.
Applications are to be received not later than 28th July, 1948, and are to be addressed to The Secretary to the Board, "Dunira," Osborne Road, Newcastle-upon-Tyne, 2. 1256

COUNTY BOROUGH OF WEST BROMWICH.
BOROUGH SURVEYOR'S DEPARTMENT.
Applications are invited from suitably qualified persons for the following appointments in the Borough Surveyor's Department:—
(*a*) SENIOR ASSISTANT ARCHITECT. A.P.T., Grade VI, £595-£660.
(*b*) ARCHITECTURAL ASSISTANT. A.P.T., Grade IV, £480-£525.
(*c*) ARCHITECTURAL ASSISTANT. A.P.T., Grade II, £420-£465.
(*d*) CHIEF TOWN PLANNING ASSISTANT. A.P.T., Grade VII, £635-£710.
(*e*) PLANNING ASSISTANT. A.P.T., Grade V, £520-£570.
The appointments may be made at a point within the scales, according to qualifications and experience.
The appointments are subject to the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination.
Applications, appropriately endorsed, stating age, qualifications, experience, present and past appointments, together with the names of two persons to whom reference may be made, should be delivered to the Borough Engineer and Surveyor, Town Hall, West Bromwich, not later than the 31st July, 1948.
H. SCHOFIELD, B.Sc.(Eng.), A.M.I.C.E.,
Borough Engineer and Surveyor.
Town Hall, West Bromwich.
7th July, 1948. 1272

KENT EDUCATION COMMITTEE.
MEDWAY COLLEGE OF ART, ROCHESTER.
DEPARTMENT OF ARCHITECTURE.
Applications are invited for the post of Full-time STUDIO MASTER, in the Department of Architecture. A recognized qualification in Architecture is necessary, and training in a recognized school would be a recommendation.
Duties to commence on 1st September, 1948.
Salary: Burnham (Technical) Scale, 1948, with additional allowances where appropriate for training, graduation, previous professional or teaching experience, and service with H.M. Forces.
Further particulars and application forms may be obtained from the Principal, Medway College of Art, Eastgate, Rochester, to whom they should be returned within fourteen days of the publication of this advertisement. 1259

COUNTY BOROUGH OF WEST HARTLEPOOL.
Applications are invited for the following appointments on the staff of the Borough Architectural Department:—
(*a*) ASSISTANT ARCHITECT. Grade A.P.T., V, £520-£570.
(*b*) ASSISTANT ARCHITECTS. Grade A.P.T., IV, £480-£525.
(*c*) QUANTITY SURVEYOR. Grade A.P.T., V, £520-£570.
The appointments are subject to the Scheme of Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services, and the provisions of the Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination.
Applications, stating age, qualifications, previous and present appointments, details of experience, together with copies of recent testimonials, are to be sent to S. M. Richmond, F.R.I.B.A., A.M.T.P.I., Borough Architect, Municipal Buildings, West Hartlepool, not later than 26th July, 1948. Candidates are to state clearly the appointment for which application is made.
ERIC J. WAGGOTT,
Town Clerk.
West Hartlepool.
7th July, 1948. 1289

BOROUGH OF WORTHING.
BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF TOWN PLANNING ASSISTANT.
Applications are invited for the appointment of a Town Planning Assistant, at a salary in accordance with Grade IV of the National Scale of Salaries—£480-£525 per annum, consolidated.
Applicants should have had a good general training in either Architecture, Engineering or Surveying, and have had previous Town Planning experience in a Municipal office—particularly with regard to the examination of deposited plans and development control.
Preference will be given to candidates who hold a recognized Planning qualification.
The appointment will be subject to one month's notice on either side and to the provision of the Local Government and Other Officers' Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination for entry to the Corporation's service.
Applications, stating age, qualifications, experience, previous and present appointments, and accompanied by copies of three recent testimonials, should be delivered to P. E. Harvey, Esq., O.B.E., A.M.I.C.E., Borough Engineer and Surveyor, not later than 3rd August, 1948.
ERNEST G. TOWNSEND,
Town Clerk.
Town Hall, Worthing.
6th July, 1948. 1284

COUNTY COUNCIL OF RENFREW.
The Council invite applications for the appointment of SENIOR ARCHITECTURAL ASSISTANT, in the County Engineer's Department. Applicants should have wide experience of Local Authority Housing and Public Buildings. Preference will be given to Members of the R.I.B.A. and the R.I.A.S. Salary scale, £480 to £570 per annum (inclusive of bonus). The appointment is subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937, and the successful candidate will require to pass a medical examination. Applications, stating age, qualifications and experience, together with copies of two recent testimonials, should be lodged with the undersigned immediately.
ROBERT URQUHART,
County Clerk.
County Buildings, Paisley. 1286

COUNTY BOROUGH OF GREAT YARMOUTH.
BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF CHIEF ASSISTANT ARCHITECT (SCHOOLS).
Applications are invited for the appointment of Chief Assistant Architect (Schools), at a salary in accordance with A.P.T., Grade VI, of the National Conditions of Service, commencing at £595 per annum and rising to £660 per annum.
Applicants must be Associates of the Royal Institute of British Architects, and must have had considerable experience in modern practice in design and construction of school buildings.
Applications, stating age, qualifications, and giving details of past experience, together with copies of three recent testimonials, should be enclosed in an envelope endorsed "Appointment of Chief Assistant Architect (Schools)," and must reach the undersigned not later than Friday, 30th July, 1948.
The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the passing of a medical examination, and will be terminable by one month's notice on either side.
Canvassing, directly or indirectly, will be deemed a disqualification, and candidates must disclose in writing whether to their knowledge they are related to any member of, or holder of any senior office, under, the Council. A candidate who fails to do so will be disqualified and, if appointed, will be liable to dismissal without notice.
FARRA CONWAY,
Town Clerk.
Town Hall, Great Yarmouth. 1287

THE COUNCIL OF INDUSTRIAL DESIGN has vacancies for INDUSTRIAL LIAISON OFFICERS, to assist the promotion by industry of good design for exhibition in the Festival of Britain, 1951. Essential qualifications for all posts are experience in a responsible position and an understanding of industrial design acquired through designing or management or sales or technical journalism or teaching, with further qualifications as follows:—
(*a*) To lead a team concerned with certain engineering industries: A degree or equivalent qualification in mechanical engineering. Salary £1,000-£1,200, rising to £1,350.
(*b*) To lead a team dealing with industries covering recreation in the widest sense, including those concerned with the arts; books; crafts and hobbies; sport; holidays; and community activities. A degree in Sociology or Arts and/or training as a Designer. Salary £1,000-£1,200, rising to £1,350.
(*c*) Several posts requiring knowledge in one of the following main groups of industries: Clothing and ancillary trades; Engineering; Furniture; Pottery and Glass; Paper, Printing and Packaging; Textiles; Transport. Starting salaries £750-£870, rising to £980. Exceptionally, one or two posts may carry salaries as under (*a*).
The posts are temporary, with the possibility of permanency for some. Women's salaries are rather lower than those given.
Write full particulars of age, education, posts held with dates, and qualifications in the light of the above requirements, to the Establishment Officer, Council of Industrial Design, Tilbury House, Petty France, London, S.W.1. 1290

BOROUGH OF FINCHLEY.
HOUSING AND TOWN PLANNING DEPARTMENT.

Applications are invited for the appointment of CHIEF ARCHITECT in the above Department, at a salary in accordance with Grade VII, A.P. and T. Division (£635×£25 to £710, plus £30 per annum London weighting).

Candidates must be Chartered Architects, and have had experience in housing design and general architectural work and also considerable administrative experience.

The person appointed will be in charge of the Architectural Section of the Department and responsible to the Housing and Town Planning Officer for the design and carrying out of the Council's Housing Programme.

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

Applications, giving full particulars of training, qualifications and experience, and accompanied by copies of two testimonials (of which at least one should be recent), should be sent to the Borough Housing and Town Planning Officer, The Avenue, Finchley, N.3. by not later than first post on Tuesday, 3rd August, 1948.

Canvassing will disqualify.

R. M. FRANKLIN,
Town Clerk.

Municipal Offices, Finchley, N.3.
14th July, 1948. 1285

MOUNTAIN ASH URBAN DISTRICT COUNCIL.
APPOINTMENT OF ASSISTANT ARCHITECT.

Applications are invited for the temporary appointment of Assistant Architect, in the Architect's Department, at an inclusive salary of £450 p.a.

Applicants must have passed the Intermediate examination of the Royal Institute of British Architects, and should have good housing and general architectural experience, and a knowledge of Building Quantities.

Applications, endorsed "Assistant Architect," stating age, qualifications, experience, and accompanied by two recent testimonials, must reach the undersigned not later than the 23rd August, 1948.

BERNARD M. MURPHY,
Clerk of the Council.

Town Hall, Mountain Ash.
8th July, 1948. 1296

CITY AND COUNTY OF BRISTOL.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following Temporary Staff appointments :—

SENIOR ASSISTANT ARCHITECTS. A.P.T., Grade VI (Housing and Education Sections), (£595-£660).

Preference will be given to Associates R.I.B.A.

Applications, giving full details of age, qualifications, experience, present position and salary, and the names of two persons to whom reference may be made, to be sent to the undersigned. Appointments will be subject to one month's notice in writing on either side.

Although not compulsory, it is desirable that successful applicants shall live within the City.

J. NELSON MEREDITH, F.R.I.B.A.,
City Architect.

Eagle House, Colston Avenue, Bristol, 1.
1288

CROWN AGENTS FOR THE COLONIES.

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

QUANTITY SURVEYOR required by Government of Nigeria, Public Works Department, for two tours of 18-24 months in first instance. Salary and expatriation pay £970, rising to £1,175 a year. Commencing salary within these limits, according to experience. Outfit allowance £60. Free passages. Candidates should be Chartered Quantity Surveyors, and have had good experience of practical Quantity Surveying. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/17564/3D on both letter and envelope. 1292

BOROUGH OF SOUTHALL.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment, on the permanent staff of the Corporation. Salary in accordance with Grade A.P.T., II and III, of the National Scheme (£420—£15—£495), plus appropriate "London" weighting, the commencing salary being dependent on the qualifications and experience of the successful applicant.

Candidates must have passed at least the Intermediate examination of the R.I.B.A., and have previous local government experience.

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

It is a condition of appointment that the successful applicant shall be a member of his appropriate trade union, professional organization or other recognized body.

Applications, on forms to be obtained from the Borough Engineer, Town Hall, Southall, must be returned on or before Tuesday, 3rd August, 1948. Canvassing will disqualify.

J. S. SYRETT,
Town Clerk.

Town Clerk's Offices, Southall. 1294

COUNTY BOROUGH OF BARROW-IN-FURNESS.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments :—

(*a*) ASSISTANT ARCHITECTS (TWO). Grade Va, £560-£610 per annum.

Candidates must be registered architects, preferably A.R.I.B.A., and should have had experience on Education Works, Housing and General Municipal Architecture.

(*b*) ASSISTANT ARCHITECTS (TWO). Grade III, £450-£495.

Candidates should have had Municipal experience, and possession of a recognized professional qualification will be an advantage.

(*c*) ASSISTANT ARCHITECT. Grade I, £390-£435.

Candidates should be good draughtsmen, with some experience of design.

(*d*) QUANTITY SURVEYOR. Grade Va, £560-£610.

Candidates must possess a recognized professional qualification, and be competent to prepare quantities, specifications, estimates, and schedules for Education, Housing and General Municipal work.

The Council has accepted the principle of providing housing accommodation if required by successful applicants.

The appointments will be subject to (1) the National Scheme of Conditions of Service; (2) the provisions of the Local Government Superannuation Act, 1937; (3) termination by one month's notice on either side; (4) the successful candidate passing a medical examination, and (5) becoming a member of the appropriate Trade Union.

Forms of application may be obtained from the Borough Engineer and Surveyor, Town Hall, and must be completed and returned to him not later than Saturday, 7th August, 1948.

No candidate summoned for interview who is not prepared to accept the position without qualification, whether it be offered to him or not, will be paid his expenses.

W. LAWRENCE ALLEN,
Town Clerk.
1293

Partnerships and Financial

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

F. Dip. Arch. (Liverpool) (1935), R.I.B.A., Dip.T.P., experienced housing, agricultural and industrial work, requires Partnership; limited capital available. Box 1254.

Architectural Appointments Vacant

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

SENIOR ASSISTANT wanted. Write Hening & Chitty, F.R.I.B.A., 20, Gower Street, W.C.1. 1216

INTERNATIONAL Correspondence Schools require for immediate full-time employment an ARCHITECT, A.R.I.B.A., also JUNIOR ARCHITECTURAL ASSISTANT, qualified by examination. Write or 'phone, stating age, experience and salary required, to Director of Instruction, International Correspondence Schools, Kingsway, W.C.2. 1214

ARCHITECT'S ASSISTANT required in Midlands Office. Must be quick and accurate draughtsman, with experience in Industrial Buildings. Reply, with full particulars, salary required, etc., to Box 1207.

JUNIOR ASSISTANT ARCHITECT required in West End Architect and Surveyor's office; age 22-25; salary £275-£325, according to experience; scope for advancement. Applications should state age, experience, training, and position held, to Box 1231.

WANTED.—ARCHITECTURAL ASSISTANT, preferably with previous office experience and qualifications, for Country Practice (Berkshire); domestic and agricultural; salary according to ability. Write Box 1244.

ARCHITECTURAL ASSISTANTS required by Midland Company; must be quick and accurate draughtsmen, with experience on industrial buildings. Full particulars, salary required, etc., to Box 1243.

ARCHITECTURAL ASSISTANTS required in Offices at Tavistock, Newton Abbott, and Plymouth; applicants should have reached at least R.I.B.A. Intermediate standard, and be capable of working with a minimum of supervision; salary according to experience and qualifications. Reply to L. F. Vanstone & Partners, Chartered Architects, Surveyors, National Provincial Bank Chambers, Tavistock. 1253

BRIGHTON Architect has vacancy for ASSISTANT; busy general practice; capable of writing Specifications and taking charge of small jobs; progressive situation. Box 1248.

LONDON Firm of Architects require TWO ASSISTANTS, of Intermediate or higher standard, for their Manchester office; previous office experience desirable; salary by arrangement. Box 1270.

REQUIRED, in West End Architects' office, ONE SENIOR ASSISTANT, A.R.I.B.A., and ONE JUNIOR ASSISTANT, of Intermediate standard; previous office experience essential; salary according to ability. Box 1271.

ARCHITECTURAL ASSISTANTS required in Westminster; Inter. R.I.B.A. standard; salary £300-£500, according to ability and experience; good prospects, with pensions scheme, etc. Apply Box 1250.

ARCHITECTURAL ASSISTANTS. — Opportunity for recently qualified school trained Architects to gain experience of industrial buildings in large London practice in remunerative employment. Apply Box 1251.

SURVEYOR'S ASSISTANT for London Company; war damage claims, dilapidations, and priced schedules of disrepair; age 25-35; state qualifications salary and expenses. Box 1276.

CAPABLE ASSISTANT required, with good general experience in the Architect's Department of a Multiple Company in the Midlands; permanency and good prospects to suitable applicant. Apply, stating age, experience, and salary required, to Box 1282.

THE GAS, LIGHT & COKE CO.—ARCHITECTURAL ASSISTANT required; preferably experienced in the design, alteration and maintenance of industrial buildings, and capable of preparing surveys, working drawings, details and specifications; knowledge of quantities an advantage; the appointment would be permanent and pensionable; salary according to experience and qualifications. Applications, stating age, experience and qualifications, should be sent to the Staff Controller, The Gas, Light & Coke Co., 30, Kensington Church Street, W.8. 1122

ASSISTANT ARCHITECT required by large industrial concern operating in the Middle East; applicants should be Associate Members of the Royal Institute of British Architects, and not more than 35 years of age; must be able to prepare sketches for major and minor works, including housing, and be able to develop these sketches to working drawings for minor works, and possibly to a lesser degree for major works; should also be capable of preparing ¼ in. details from architect's drawings, and be able to design and develop layouts for housing and other schemes; attractive salary, plus generous allowance in local currency; free passage out and home, medical attention, and kit allowance. Apply, stating age and full details of qualifications and experience (no specimens at this stage), quoting Department F.12, to Box 1319, at 191, Gresham House, E.C.2. 1291

ARCHITECTURAL ASSISTANT required for North-West Lancs, with good general experience in alterations, modernization and rebuilding work, ability in perspectives and a knowledge of the requirements of licensed premises an asset; a reasonable commencing salary is offered, according to qualifications. Apply in first instance by letter, stating age, references or names of referees, to Box J.849, qualifications, present salary, and enclose copy Lee & Nightingale, Liverpool. 1295

Architectural Appointments Wanted

JUNIOR ARCHITECTURAL ASSISTANT, 3 years' office experience, seeks position in Central London office from August 3 to September 25. Box 138.

Other Appointments Vacant

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

ARCHITECT, Central London, requires young TYPIST; willing to learn drawing; state age, experience, and salary. Box 1185.

ENGINEERING DRAUGHTSMAN, capable of design and calculations for re-inforced concrete floors and roofs in precast, hollow block and solid forms and staircase construction; able to carry contracts through from start to finish without supervision. Full details of experience, age, and salary required, to Box 161, Allardyce Palmer, Ltd., 109, Kingsway, W.C.2. 1186

ARCHITECTURAL METALWORK DESIGNER, first-class man with wide experience, required by old-established company. Apply Box No. A.280, W.B.G., 39, Cheapside, E.C.2. 1262

TAKER-OFF required to take charge of branch office of London Chartered Quantity Surveyor in Dorset. Reply, stating age, experience, and salary required, to Box 1255.

CLERK OF WORKS required, with all-round building experience, especially on industrial work; location is Northern Ireland; salary according to experience, but salary with allowances likely to be over £600, plus free travel warrants if person normally resident in England. Please state all experience and qualifications and age to Box 1252.

BUILDING DRAUGHTSMAN required; experienced in factory maintenance and general building construction. Apply by letter, stating age and full details of experience, to Personnel Department, E.M.I. Factories, Ltd., Blyth Road, Hayes, Middlesex. 1279

Services Offered

4 lines or under, 2s. 6d.; each additional line, 1s.

GENTLEMAN, with extensive experience in the Building Industry, and very large personal connection with Architects, Surveyors and Local Authorities, seeks appointment with progressive company desiring experienced representation. Box 54.

PERSPECTIVES.—Water colour or line; professional; terms moderate. Write "New Services." 85, Heath Street, Birmingham, 18. 1079

BUILDER'S MERCHANT'S MANAGER, with connection among Architects and Builders in mid-Sussex, now living S.W. London, seeks new appointment with merchants or manufacturers in either district. Box 137.

A.R.I.B.A. offers spare-time Assistance to other Architects. Apply Box 1257.

For Sale

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

PRE-WAR Specification and Bill Paper; duplicating quality. Knight, 248, Ditchling Road, Brighton. 1277

GRAPHOS DRAWING PENS.—Invaluable to Architects and Draughtsmen; small quantity, each with six nibs of various sizes, now for sale. Box 1278.

CAMERA, P. C. Houghton Butcher "Klimax," single exten.. rising cross front, very solid, Aldis anastig. f7.7 lens, Lukos III shutter 1/100 to 1 sec., 4 metal slides, FP adapter, case, all excellent condition; complete, £10. Box 1283.

Miscellaneous

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

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works, 99,107, St. Pauls Road, N.1. Canonbury 2061.

NEWER HEAT DISPLAY, Building Centre, Conduit Street, W.1. New solid-fuel appliances. New heating methods. New standard of home comfort. Open 10-5. Organised by the Coal Utilisation Joint Council. 730

PLANTS FOR HIRE.—We can supply Petrol and Electric Paint Spraying Compressors at £5 10s. per week, single gun machines, and £7 per week double gun machines. Aerocem, Limited, 71, Lots Road, S.W.10. Flaxman 1423/4. 1121

SPECIFICATIONS, BILLS OF QUANTITIES, etc.—General Duplicating or Typing. Nothing too large or too small. Prompt, efficient service by experienced staff at reasonable charges. Copycraft, Ltd., 3, Broad Street Buildings, Liverpool Street, E.C.2 Bishopsgate 9100. 1199

ARCHITECTURAL Photography by PETER PITT. Specialist (and engineer). Utmost detail and pictorial presentation. I.B.P. scale of charges. 7, Inglemere Road, London, S.E.23. FOR. 8224. 1206

SOUTH AFRICA WITHOUT WAITING.—Liner and rail, £88. Also for Australia, New Zealand, East Africa. Write O.P.S.A. Club, Veryan, Cornwall. 1037

FENCING FOR ALL PURPOSES.—Supplied and erected; established 100 years. Parker, Winder & Achurch, Ltd., 20, Broad Street, Birmingham, 1.

WANTED.—Copy of the "Architectural Review" for November, 1947. Seely & Paget, F./L.R.I.B.A., 41, Cloth Fair, E.C.1. 1261

Educational Announcements

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

R.I.B.A. AND T.P.I. EXAMINATIONS.—Mr. L. Stuart Stanley, M.A., F.R.I.B.A., Dist.T.P., M.T.P.I., Tutor in the Bartlett School of Architecture, London University, prepares candidates by correspondence tuition. 212, Euston Road, N.W.1. Tel.: EUSton 7760.

ARCHITECTURAL FOUNDATION, under the Will of WILLIAM HOFFMAN WOOD, deceased.—Applications are invited from Students of Architecture, of either sex under 21, born in Yorkshire, of parents one or both of whom were born in Yorkshire, for consideration for the benefits of the above Foundation, which includes defraying the costs of the advancement of Architectural training either by study or by travel in ancient and modern cities. Applicants should forward particulars of sex, age, place of birth, parentage, education and present occupation and study, to W. H. Clarke & Company, Solicitors, 12, South Parade, Leeds, 1, by 31st August, 1948. 1280

Alphabetical Index to Advertisers

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational, Legal Notices, Miscellaneous Property, Land and see pages lxiii, lxiv, lxv, lxvi and lxvii.

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