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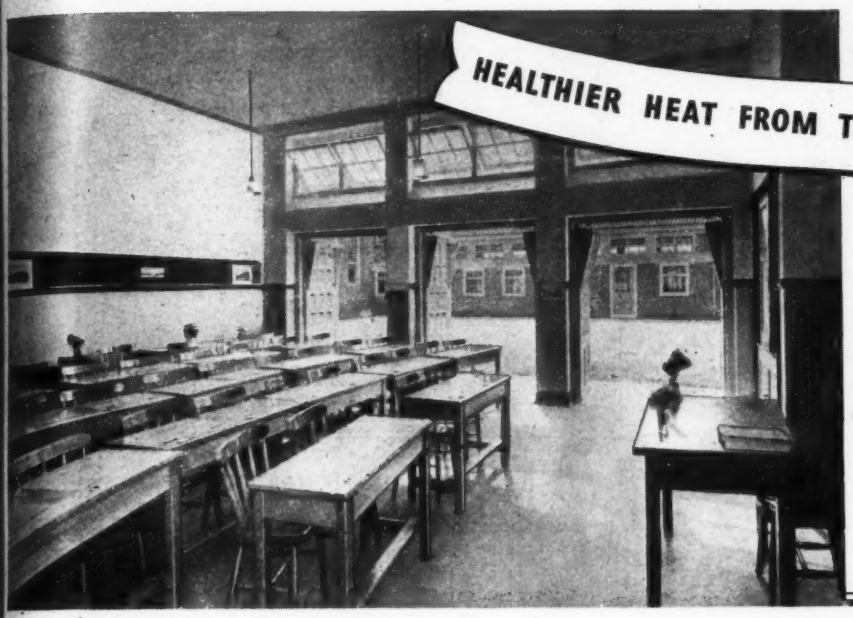
★ **A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to H one week, I to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, 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, 14	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 7070
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUJC	Coal Utilization Joint Council. 54, Victoria Street, S.W.1.	Victoria 9851
DIA	Design and Industries Association. 9, Conduit Street, W.1.	Mayfair 5432
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EC	Electricity Commission. Savoy Court, Strand, W.C.2.	Temple Bar 7565
EJMA	English Joinery Manufacturers Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FASSC	Federation of Association of Specialists and Sub Contractors. 21, Tothill Street, S.W.1.	Whitehall 9606
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	Flush Door Manufacturers Association. Stapleford Road, Trowell, Nottingham.	Ilkeston 623/4/5
FLD	Friends of the Lake District. Pennington House, Nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 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



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or to the Secretaries, Invisible Panel Warming Association, Pinners Hall, Austin Friars, London, E.C.2 Phone : London Wall 4286

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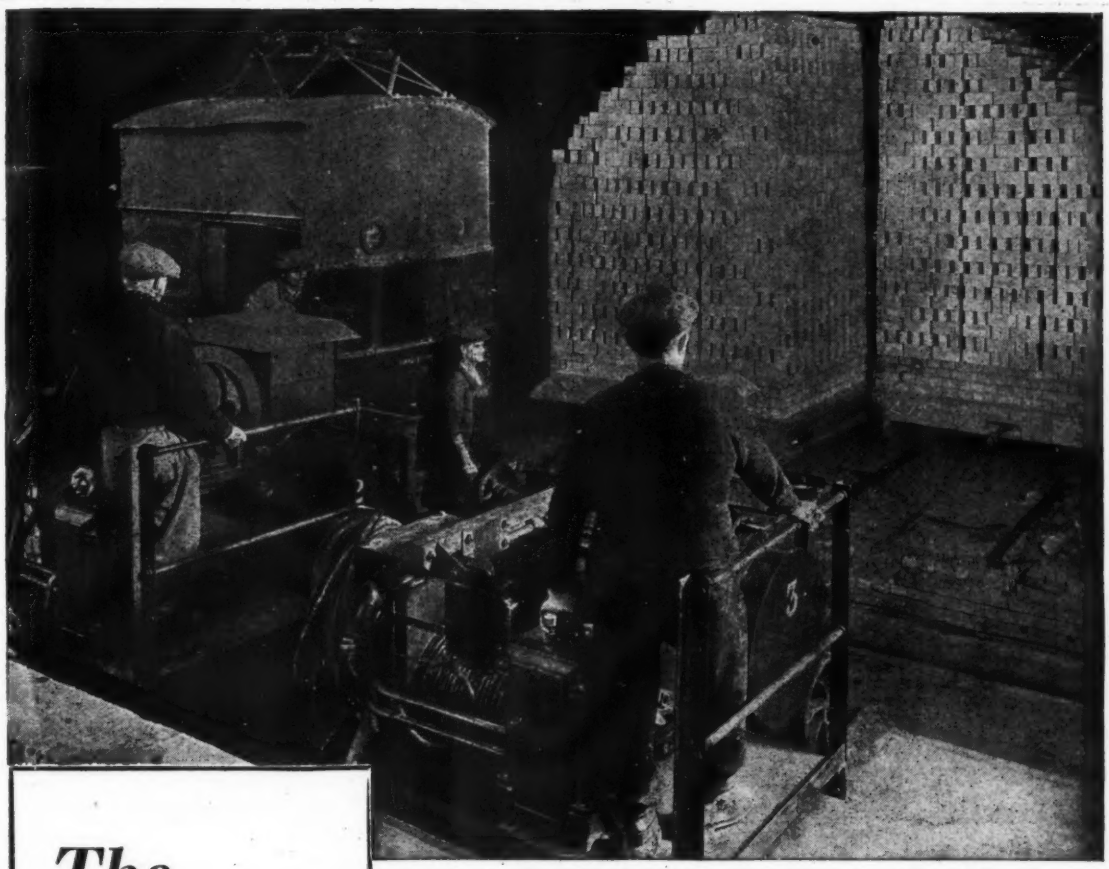

The Human Element in the BRICK Industry

A touch of the lever brings these trolleys of bricks (each weighing 15 tons) gliding from the kilns. Fourteen days ago they entered the chamber loaded with green bricks. Machinery, under the watchful supervision of skilled operatives, has brought them steadily through the various stages of the burning process. In London Brick Company works, manual labour is applied only where the job cannot be done by machinery. The operatives enjoy the best possible working conditions, and every facility for recreational activities.

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REMEMBRANCE SATURDAY NOVEMBER 8TH

PHORPRES

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L.B.37

To see how far one has travelled, it is sometimes necessary to look back.

These pages from pre-war technical journals, deal with a removable switch arm, and the 'Duplex' double duty fuse introduced by Sanders in 1933 and 1937 respectively. The degree of advanced thought with which their design was inspired, may be measured by the fact that fourteen years later, similar features are being claimed by contemporary manufacturers as 1947 innovations.

Latest designs in Switchgear and Accessories by Sanders are still as far ahead in the field of constructive development, but supplies are too limited to justify a general announcement. Engineers are on call at any time to acquaint Architects with what is or what will shortly be available for their projects.

● *Limited supplies of Information Sheet No. 342 on Sanders Safety Sockets and Plugs are available to any Architect who may be interested*

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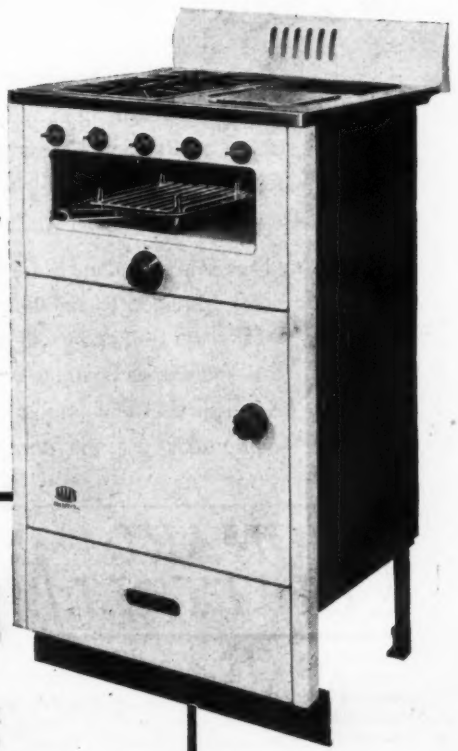

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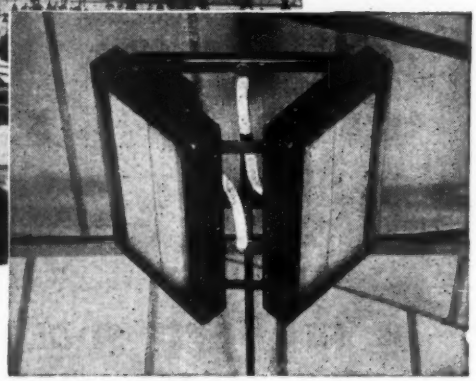

Hirae "V" Type Radiant Panel

Installation of RADIANT WARMING in Temporary and Ancillary Buildings

A simple and economical method of providing the advantages of Radiant Warming in buildings where a built-in system of Radiant Warming is unsuitable is by the use of "Hirae" Electric Radiant Warming Panels.

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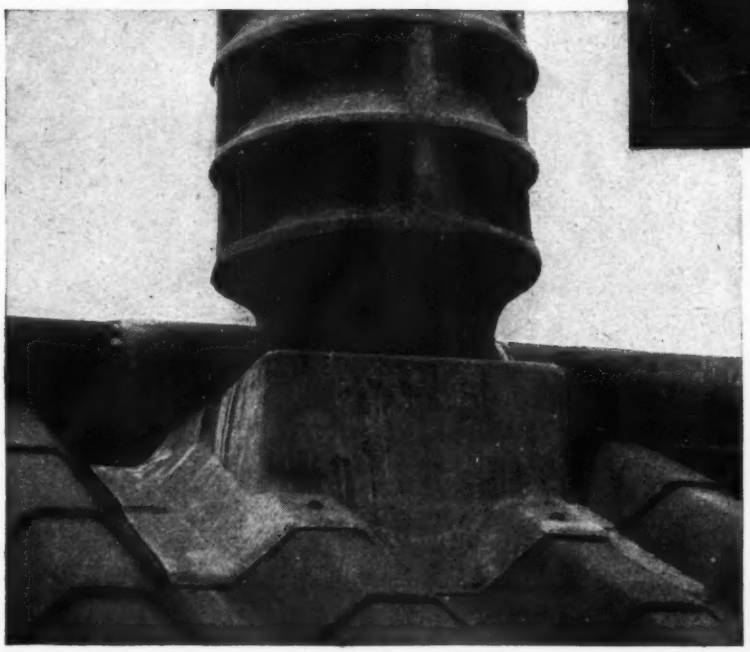

Two recent and widely differing examples of chimney flashings in sheet lead.

SATURDAY
NOVEMBER 8TH

See our exhibit at the Building Exhibition, Olympia, November 19 to December 4, Stand No. J.175.

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LEAD

The Technical Information Bureau of the Lead Industries Development Council, which exists to give assistance on problems relating to the use of lead sheet and pipe in building work, will be pleased to advise on any questions relating to the present restricted uses of the materials.

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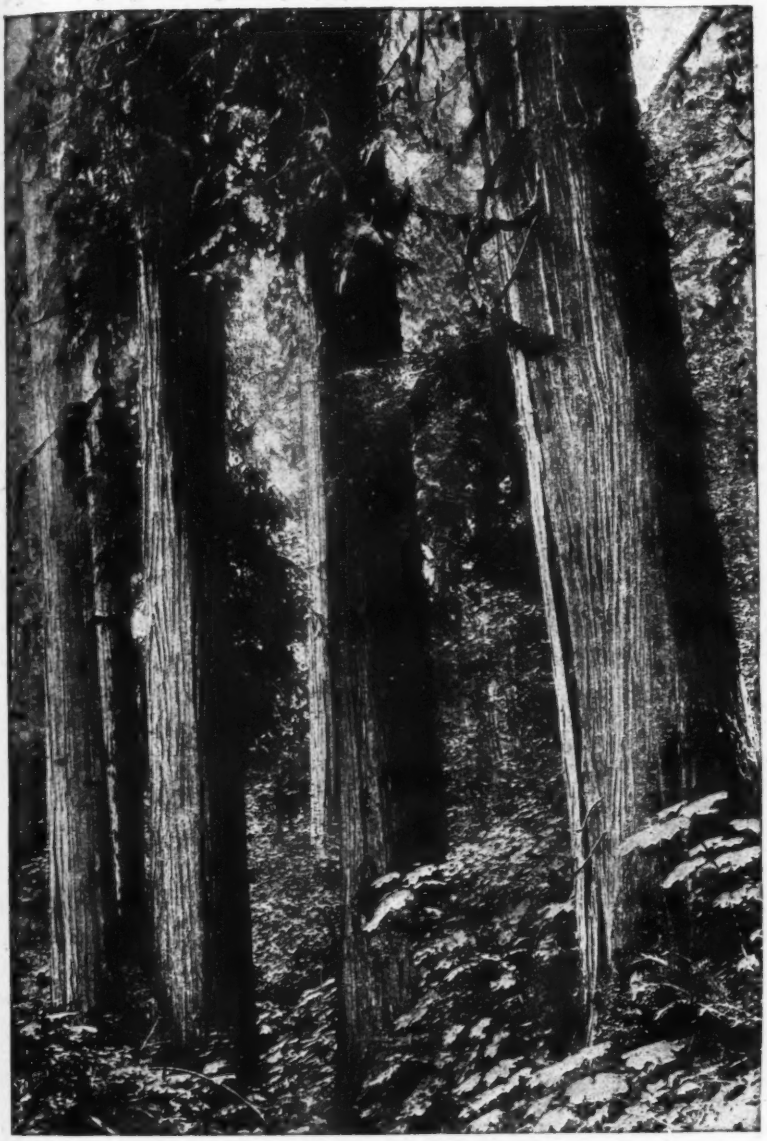
LEAD TECHNICAL INFORMATION BUREAU, 25 LOWER BELGRAVE STREET, S.W.1. Telephone: SLOane 0474
8.35/2



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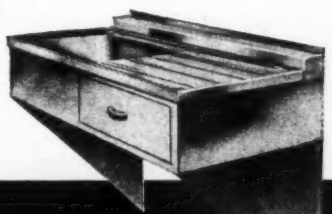

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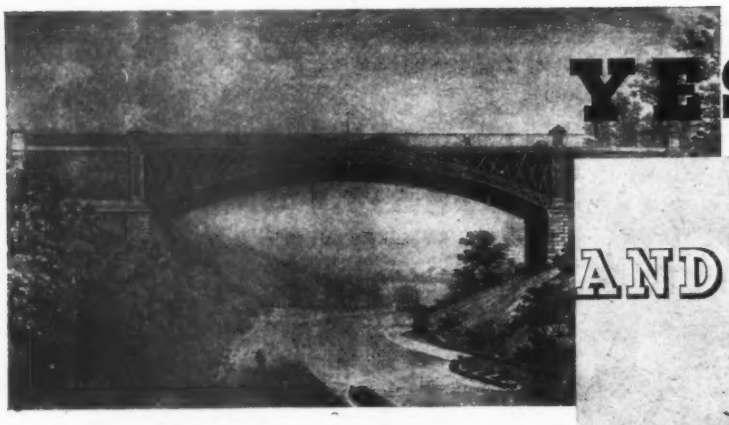
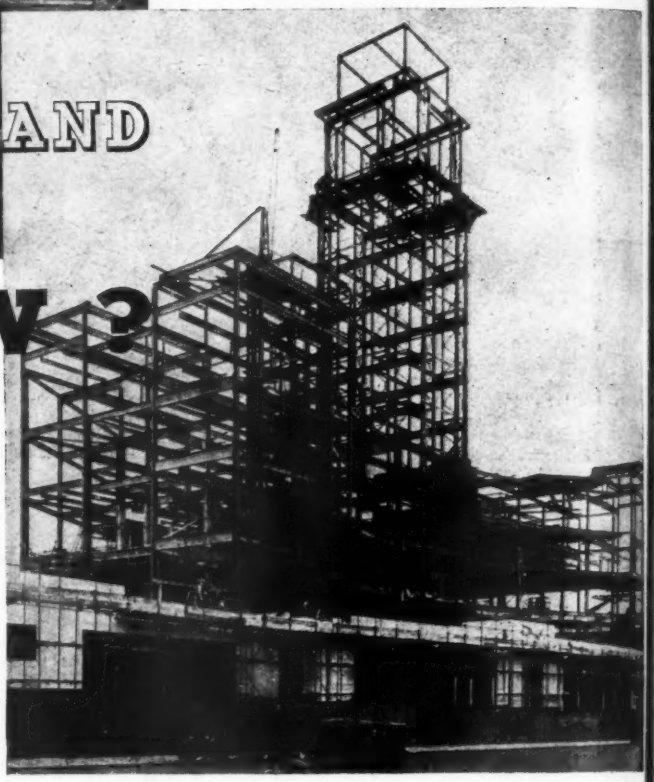


YESTERDAY-

AND

TOMORROW?



'Yesterday' for HORSELEY-PIGGOTT, stretches back 170 years, to the beginnings of the Horseley ironworks at Tipton. An early work was the construction of the Bridge shown above, built by HORSELEY in 1821—126 years ago—which still stands to-day as one of the famous features of the Midlands, carrying more traffic now than it has ever done before.

The right-hand photograph shows part of the structure of one of the Empire's most widely known buildings—completed by HORSELEY-PIGGOTT on the eve of the world war. The toughness of the old Bridge has its counterpart in the supreme strength of the modern structure. The same industry, the same care, the same unremitting attention to detail—the same combination of proved reliability with the latest advances in scientific method, are evident in both these works of HORSELEY—separated in time by 126 years. So yesterday reaches forward into tomorrow, for who can doubt after recent experience that the answer to the air-raider in the cities of the future is the steel-frame building. Here the HORSELEY-PIGGOTT organisation offers its services to Architects and Engineers interested in present-day construction and future reconstruction.

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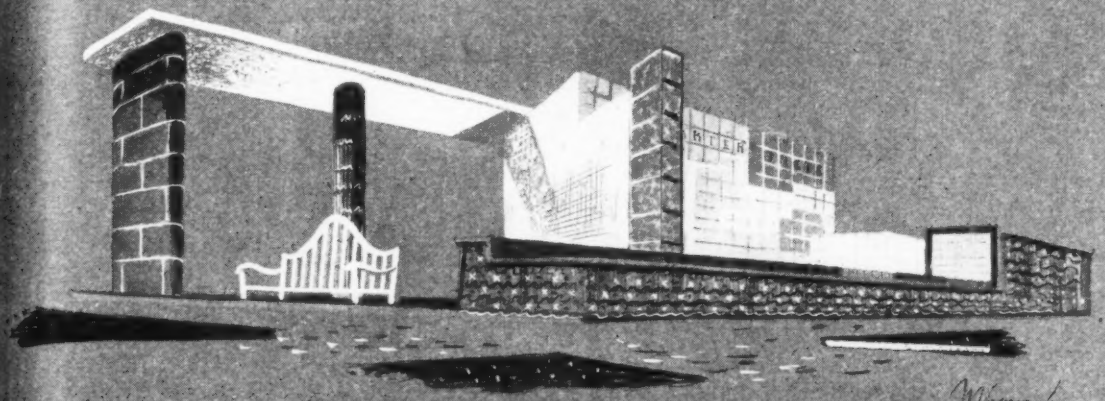
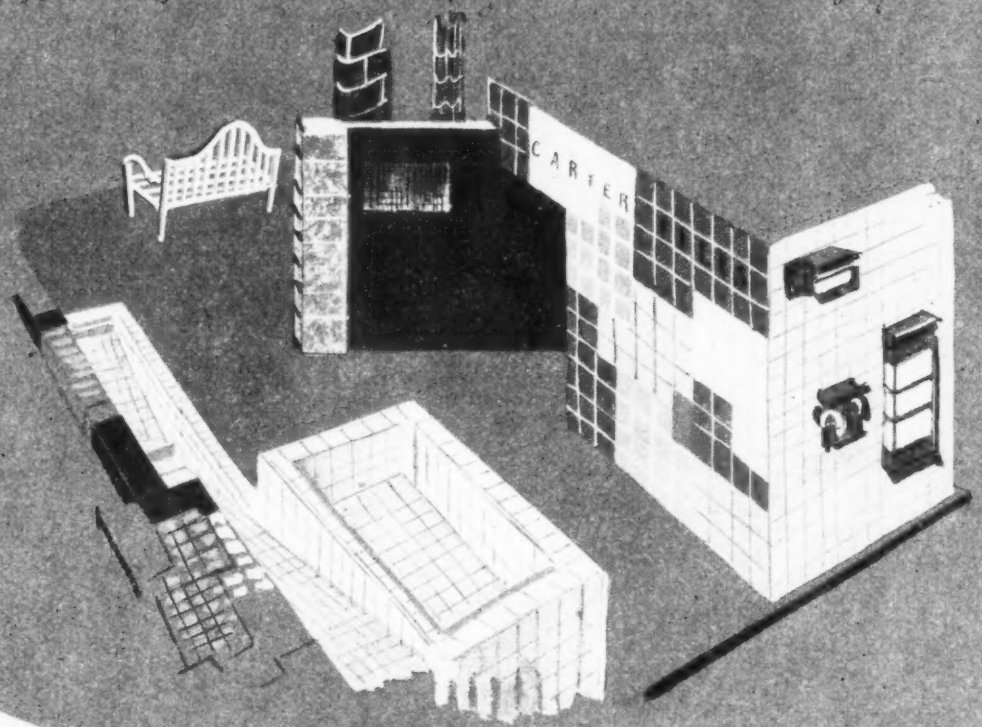
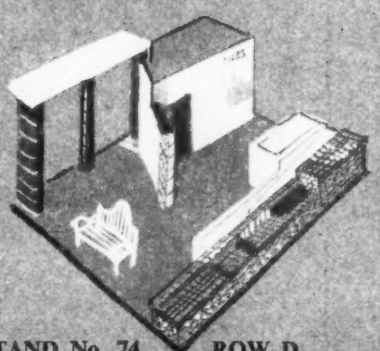


Designed by Keith Murray





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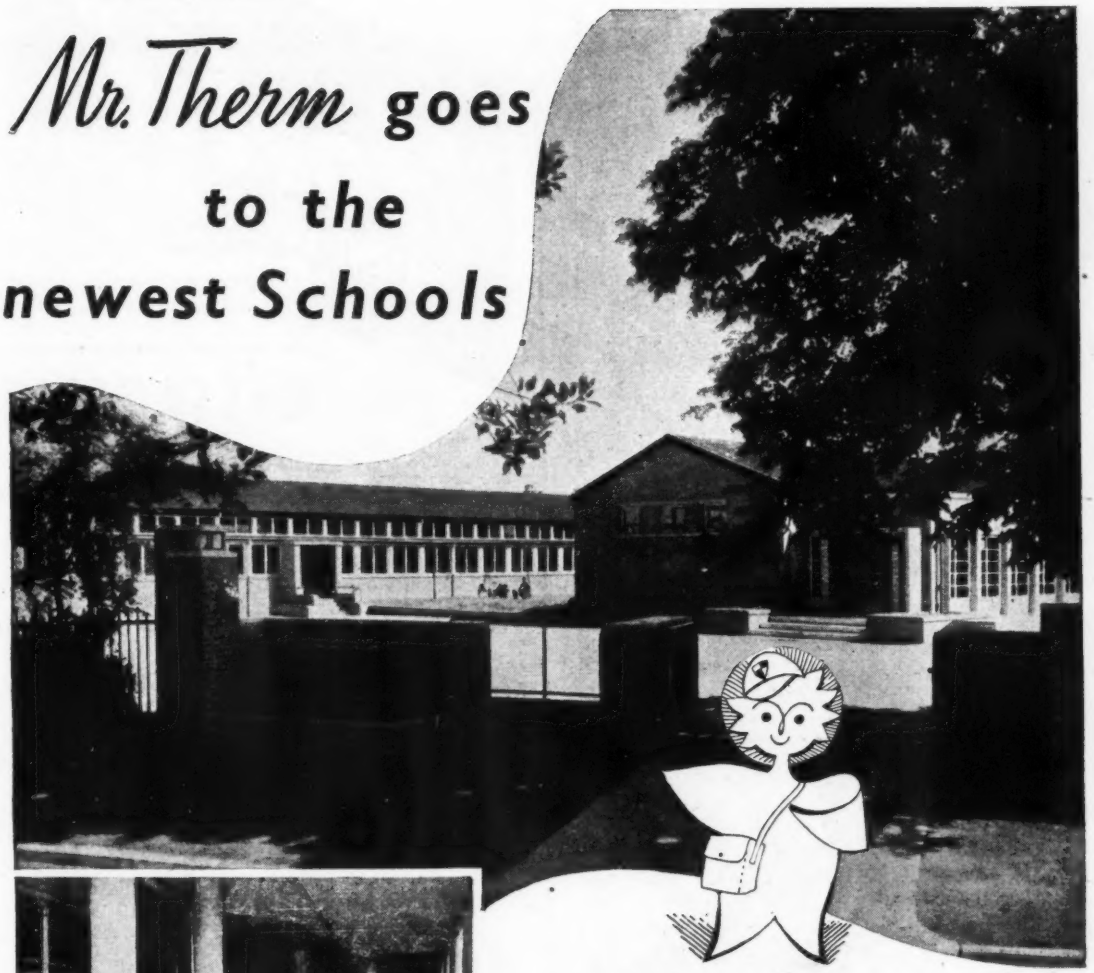

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The experience gained, in the building of St. Audrey's School has been used to advantage in the recently completed Bourne Secondary Modern School, Ruislip and the Junior School at South Ruislip now in hand. In both cases gas has been chosen for the heating and hot water systems.

● *An illustrated booklet on the design and construction of these schools is available free on request from :*

BRITISH GAS COUNCIL 1 GROSVENOR PLACE, LONDON, S.W.1.

SPECIAL ANNOUNCEMENT TO WOOD USERS

It appears that Industry is to get less timber in 1948 than the Government had originally hoped to be able to supply. While deploring the consequent limitation of business expansion, the T.D.A. feels that the interests of the country as a whole, and wood-users in particular, are best served by a realistic attitude.

To obtain maximum output from minimum supplies, the T.D.A. DIRECTORATE OF CONSTRUCTIONAL RESEARCH offers a free advisory and design service. A highly qualified staff is available to assist in the scientific and economic utilization of timber. Send your enquiries to the DIRECTOR OF CONSTRUCTIONAL RESEARCH, TIMBER DEVELOPMENT ASSOCIATION LTD., 38 BOW LANE, LONDON, E.C.4.

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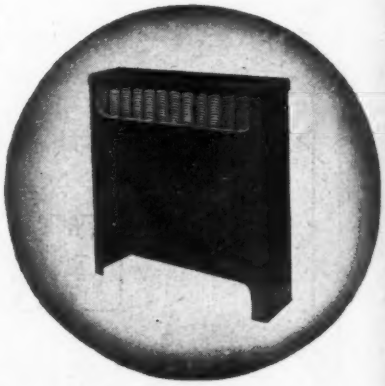
BELTON HOUSE, LINCOLNSHIRE

A fine example of a country house built at the beginning of the reign of William and Mary.

The decoration takes the form of fine carving in the classical style made popular by Wren, an effect more spacious and less heavy than in the preceding Elizabethan period.



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In common with every other periodical this JOURNAL *is rationed to a small part of its pre-war needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents now cannot supply the* JOURNAL *except to a "firm order." 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. Goods advertised in the* JOURNAL *and made of raw material now in short supply, are not necessarily available for export.*

DIARY FOR OCTOBER NOVEMBER AND DECEMBER

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

BRISTOL. *Building Science Exhibition.* At George Wills Museum. (Sponsor, DSIR.) UNTIL NOV. 1

FOLKESTONE. *Fourth Building Congress.* At Leas Cliff Hall, Folkestone. (Sponsor, BINC.) Admission 1 guinea. Nov. 18 and 19

LONDON. *Woman's Fair Exhibition.* At Dorland Hall, Regent Street, S.W.1. (Sponsor, "Woman.") UNTIL NOV. 22

T.U.C. Memorial Building Competition. Site: Great Russell Street. Assessor: Sir Percy Thomas. Premiums: £2,000, £1,000, £500. Conditions and plan of site from General Secretary, Trades Union Congress, Transport House, Smith Square, S.W.1, on payment of deposit, two guineas, to be refunded on receipt of a design or return of the Conditions within one month after the receipt of Answers to Questions. Last day for Questions, December 1. Last day for receiving designs, May 31, 1948. DEC. 1

The Englishman's Home: A History of House Design. An Exhibition of posters designed to meet the needs of schools for illustrative material on housing and history. The Exhibition provides a rapid survey of the developments in the architecture of the Englishman's Home from the early primitive huts to the modern prefab. At the Housing Centre, 13, Suffolk Street, S.W.1. UNTIL NOV. 1

Architects' Working Drawings. An exhibition of drawings that a practising architect hands to a contractor. Drawings by Sir Patrick Abercrombie and Richard Nickson, Maxwell Fry, and R. H. Matthew, Architect to the LCC, are included. At the RIBA, 66, Portland Place. (Sponsor, RIBA Board of Architectural Education.) 10 a.m. to 7 p.m. Saturdays, 10 a.m. to 5 p.m. UNTIL OCT. 30

Curtains and Murals, designed by Michael O'Connell for Industrial Canteens and Small Theatres. At Heal's, 196, Tottenham Court Road, W.1. UNTIL OCT. 31

Brewers' Exhibition. At Empire Hall, Olympia. (Sponsor, Trades, Markets & Exhibition Ltd.) UNTIL NOV. 1

Sir Harry R. Selley, President of the Federation of Master Builders. *House Production and Costs.* At the Housing Centre, 13, Suffolk Street, S.W.1. Sponsor, HC.) 1.15 p.m. Nov. 4

Leslie Hardern. *Town Planning and Fuel Planning—some current problems.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Buffet lunch, 12.45 p.m. Talk, 1.15 p.m. Nov. 6

Ordinary General Meeting of the Royal Institution of Chartered Surveyors. The President, Mr. R. W. Trumper, will deliver his Presidential Address. Immediately prior to the meeting the President, on behalf of members, will lay a wreath at the Institution War Memorial. At 12, Great George Street, S.W.1. (Sponsor, RICS.) 5 p.m. Nov. 10

F. C. Vokes. *The Future Sewage Disposal Works of the Birmingham Tame and Rea District Drainage Board—a Forecast.* At the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. (Sponsor, RSI.) 2.30 p.m. Nov. 12

Dr. O. Bondy. *Recent Trends in Structural Welding.* At the Institution of Structural Engineers, 11, Upper Belgrave Street, S.W.1. (Sponsor, ISE.) 6 p.m. Nov. 13

Twenty-second Building Exhibition, 1947. at Olympia. (Sponsors, H. Greville Montgomery, A.R.I.B.A. (HON.) and Hugh R. C. Montgomery, M.C.) Nov. 19-DEC. 4

H. Edward Newman. *The Internal Planning of the Home.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Buffet lunch, 12.45 p.m. Talk, 1.15 p.m. Nov. 20

Inland Waterways Exhibition. At Heal's, 196, Tottenham Court Road, W.1. (Sponsor, Inland Waterways Association.) UNTIL NOV. 22

E. J. Smith, President of the NFBTE, *Present-day Problems of the Builder.* At 12, Great George Street, S.W.1. (Sponsor, RICS.) 5.30 p.m. Nov. 26

MAIDSTONE. E. H. B. Boulton. *Timber—its Properties, Defects, Preservation and Uses.* At Maidstone Technical Institute, Tonbridge Road. (Sponsor, South-Eastern Society of Architects, Tunbridge Wells Chapter, Maidstone Group.) 7 p.m. Nov. 19

TONBRIDGE. *Exhibition of Work by Planning Students of The Polytechnic, Regent Street.* Some individual studies based upon the results of the Planning Survey of the Tonbridge and District Joint Planning Committee area, carried out by the Diploma Year students of Planning, are included, together with additional survey material loaned by the Tonbridge and District Joint Planning Committee. At Tonbridge School. (Sponsor, The Polytechnic School of Architecture, Regent Street.) Monday, Wednesday and Friday, 2-4 p.m. Tuesday, Thursday and Saturday, 2-6 p.m. UNTIL NOV. 1

NEWS

THURSDAY, October 30, 1947
No. 2751 VOL. 106

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

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

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

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

A new method of SLATE ROOFING BY PREFABRICATED PANELS, enabling a roof to be completed in a fifth of the time taken at present, has been invented by Mr. W. E. Evans, of North Wales.

The new roofing, which it is hoped to prefabricate in large quantities, is so made that its separate units can be slipped between and fixed to the rafters so as to complete the roof in a matter of hours. It is claimed that it will reduce costs by 30 per cent. The small slates used in these panels can be obtained from the heaps of slate débris in the slate valleys of North Wales. The Ministry of Works has assisted in perfecting the method at its experimental station at Thatched Barn, Barnet, where a specimen roof has been erected, and tests and costings carried out by technicians of the Chief Scientific Adviser of the Ministry have proved so satisfactory that the Ministry has placed an order to roof one of its new buildings by the method.

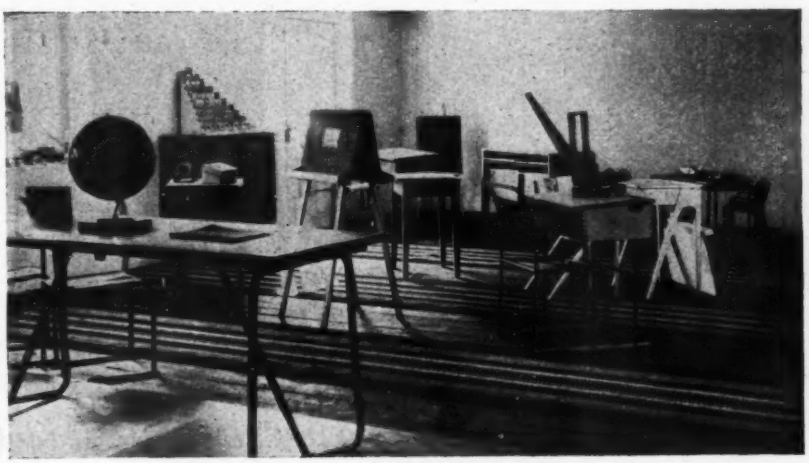
From AN ARCHITECT'S *Commonplace Book*

METROPOLITAN ECONOMY. [*From* City, Region and Regionalism, *by Robert E. Dickinson (Kegan Paul, Trench, Trubner & Co., Ltd.).*] The dominance of the economic metropolis is the basic feature of the organization of modern society, since it arises from that geographical specialization of function which is rooted in cheap and rapid transport. Moreover, the great complexity of our modern civilization brings to the city a further variety of functions which it performs for farms, factories and people around it. Metropolitan economy is a universal feature of modern civilization. It *is* modern civilization. In the past, metropolitanism was confined to a few cities. To-day many cities formerly tributary to the older metropolises are becoming increasingly independent of them. Several cities of Britain, such as Manchester, Birmingham, Newcastle and Glasgow, have acquired a large measure of independence of London, as centres of organization, business and opinion. They have become metropolitan in function and structure. Similarly in the United States, the cities of the Middle West and the Far West have passed rapidly through the phases of commerce and industry in serving their regional markets, and are now in large measure independent financial and cultural centres. It is true, however, that the status of such cities is not equal to that of New York or London, each of which not only serves its region, but is the central economic focus of the State, and at a still higher level is an international economic and cultural entrepôt.

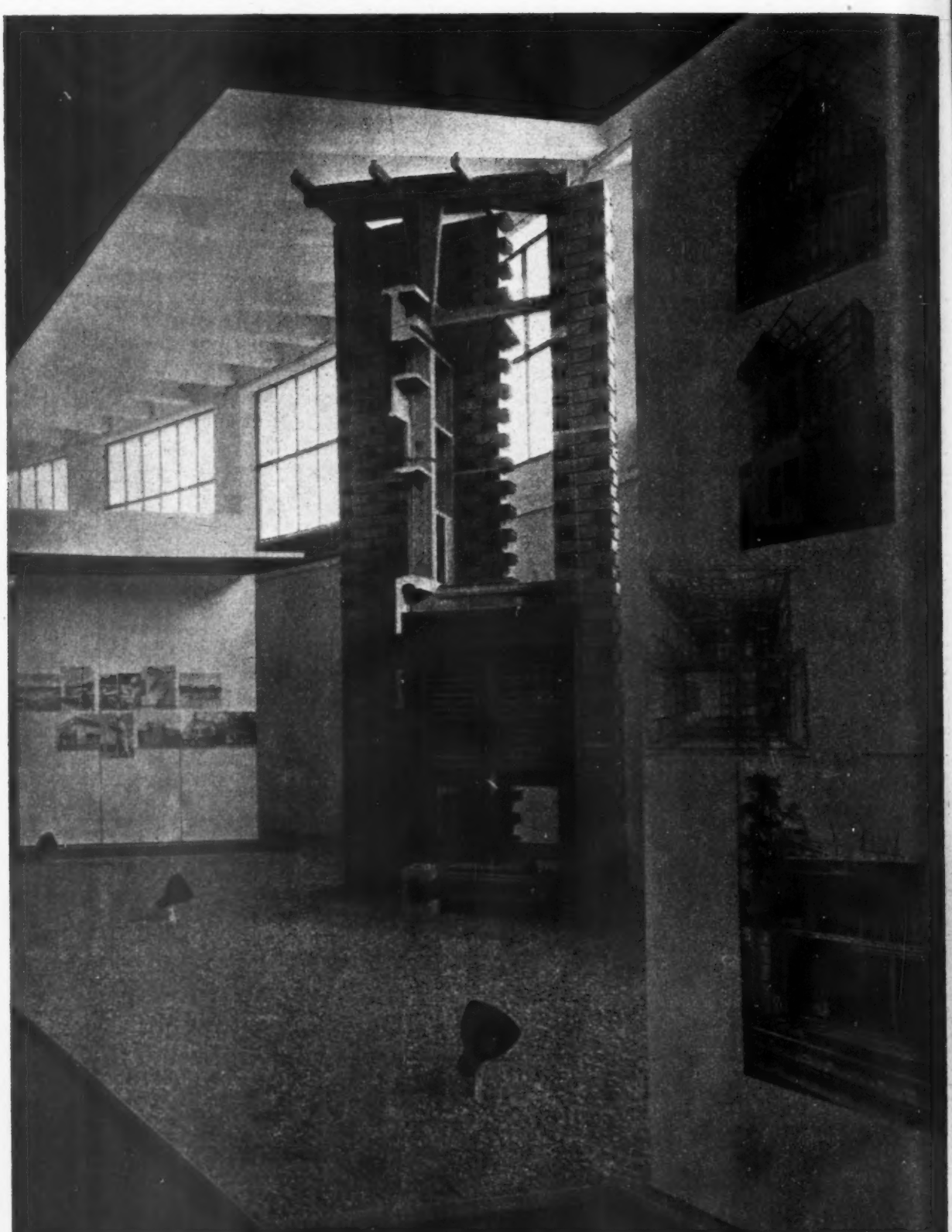
★★★

Sir Stafford Cripps, announcing to the House of Commons further details of the cuts in expenditure on capital construction, said a White Paper is to be issued shortly dealing with the BUILDING PROGRAMME for HOUSES and FACTORIES and the transport programme.

The object of this curtailment of our capital construction programme, he said, was to save steel and fuel and dollar imports such as timber, and at the same time to bring about a measure of deflation. In postponing the work they wanted to accomplish two things: To finish off as much work as had been already started as quickly as possible; to postpone only the less essential things. As a first step the annual expenditure on capital construction must be cut immediately by £200,000,000. The expression "capital construction" covered all new building, whether of houses, factories, or anything else, and the provision of new plant and machinery. The building programme for houses and factories and the transport programme would be set out in the White Paper to be issued early next week. The situation in housing was that 260.000 permanent houses were now in course of construction and 90,000 more were under contract. The Government had decided to provide for the completion of all these houses in the shortest possible time. The timber for many of these houses was already in hand; 80,000 were, in fact, already roofed, and they could expect to finish more houses in 1948 than in 1947. Work on new houses during the remainder of this year and next year would proceed on the basis that the number of houses to be completed in 1949 might not be more than 140,000. This meant that on the basis of foreseeable timber supplies there would be about 140,000 houses under construction by the middle of 1949. If we obtained more timber, that programme would be reviewed early next summer. Turning to new towns, he said work there would generally be limited to the provision of basic services, though some houses might be provided in mining or industrial new towns as part of the general housing programme. New factories were heavy steel users, and it was proposed to cut the factory programme sufficient to reduce the steel allocation by 30,000 tons a quarter. That would mean the starting, for the present, of very little new building, but the progressive completion of factories now in hand. Some factories which had not got their steel would have to be stopped for the time being unless they contributed to exports or other essential purposes. Preference would be given to finishing factories in the development areas where labour was available and waiting. The broad effects of the cut are:—Agriculture: all capital construction required for the new programme will be undertaken. Civil Aviation: work on the three runways of London airport will be slowed down. All other work, except maintenance and safety, will cease. Education: no curtailment up to June, 1948. Fuel and Power: building and civil engineering work required for the Central Electricity Board and the National Coal Board and other bodies connected with the mining industry will proceed. Building will be strictly phased with machinery. Health Services: a start will be made on urgent water and sewage works. Home Department: no work on new fire services or approved schools. Shelter demolition will be accelerated wherever it will yield supplies of steel. Post Office: contracts for new work chiefly on exceptionally old telephone exchange buildings. New telephone installations will be confined to those necessary for urgent purposes. The building programme of the BBC will be reviewed and demands for post office plant and equipment restricted to £5,000,000 in 1948. Transport: new road works will be reduced considerably. Major undertakings, such as the Severn Bridge and Dartford Tunnel, will be postponed. But the LNER electrification scheme, which is three-quarters complete, and the Manchester–Sheffield electrification scheme, which will facilitate coal traffic, will go forward. The cyclist and pedestrian sections of the Jarrow tunnel will be proceeded with, but not the main tunnel. Road maintenance work will be reduced to an extent that will release 20,000 men from the staffs of the highway authorities. The railway building construction programme will be reduced. All projects at ports and harbours will be postponed unless they can yield an immediate return in the handling of goods or the turn-round of ships. Ministry of Works: direct building work for the Government will be reduced by stopping work on employment exchanges and by not expanding office accommodation for Civil servants. Defence Services: more work in the shipyards will be done by maintenance staff in order to release outside contractors. Most of the major War Office works and the Air Ministry's new works programme will be postponed for at least a year. Requirements for married quarters will be considered as part of the total housing programme. Plant and Machinery: the new installation capacity of electric generating stations will rise from 1,150 megawatts in 1948 to 1,600 megawatts in 1949. Thereafter it will be limited to 1,500 megawatts. The North of Scotland hydro-electric projects will go forward, but an attempt will be made to rearrange the order in which they are to be completed. See also leading article and page 382.



A general view of one of the rooms in a new section at the Building Centre, London, devoted to school equipment. As yet incomplete, the section was opened for the first time last week at an informal reception for architects attending the RIBA course of lectures on Post-War School Planning and Construction. *See news item p.*379 *and* Societies and Institutions, *pp.* 387-389.

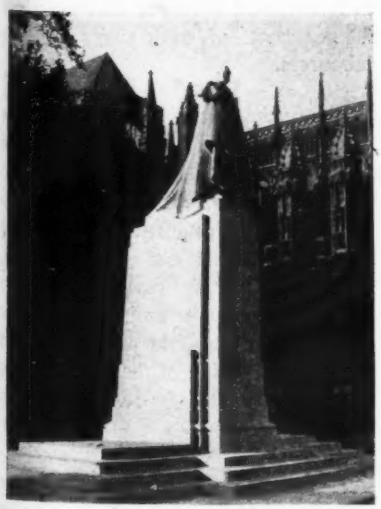


Milan Triennial: Building QT8

The first post-war triennial has just closed in Milan. Before the war the Milan exhibitions were well known for their delicate appreciation of the luxurious sensibilities of the rich; this year's exhibition is based upon design for mass production. The background to the exhibition is provided by the experimental community development known as QT8, now under construction. Typical structural elements suitable for mass production of dwellings for QT8 shown at the exhibition are illustrated above. Other exhibits included typical flats and furniture.

Details of the MINISTRY OF EDUCATION BUILDING PROGRAMME *for* 1947 *and* 1948 *have been announced by Mr. George Tomlinson at the RIBA course of lectures on school planning and construction.*
Mr. Tomlinson disclosed that this programme was estimated to cost £50 millions for permanent building, apart from the costs for standard huts for raising the school leaving age and school meals. The permanent building programme included 200 projects for raising the school leaving age, and another 235 projects to meet new housing developments in 1947, at a total cost of £24½ millions; and 650 projects including war damage repairs, new schools to meet 1948 housing schemes, some provision to meet the increased birth rate, and for Further Education requirements, at a total cost of £25 millions. Speaking of the future, Mr. Tomlinson said that he intended to continue the programme procedure, and hoped shortly to establish a provisional programme for 1949 based on three main requirements: new houses, the rise in birth rate, technical education. The aim was to give Local Education Authorities a framework within which they could press ahead without wasting time and labour. See *Societies and Institutions*, pages 387-389.

Representatives of BOMBED TOWNS *in Britain have met Mr. Silkin to discuss reconstruction problems.*
Cities and towns represented were: Birmingham, Plymouth, Bristol, Exeter, Bath, Tynemouth, Weston-super-Mare, Swansea, Coventry, and Nuneaton. Results of the discussions were not disclosed.



The statue of King George V which was unveiled by the King last week. The statue has been erected in the grounds of Westminster Abbey, exactly opposite the entrance to the House of Lords, as part of the national memorial to King George V. It stands on one of the Abbey lawns to the south of Henry VII's Chapel. Sir Giles Gilbert Scott has acted as architect for the layout and setting and the statue is the work of Sir William Reid Dick. *See Astragal's note page* 380.

THE NEW BUILDING PROGRAMME

RECRIMINATIONS over the years that have eaten our dollars are unprofitable. Plans have gone astray. The housing programme which every political critic said was too low has turned out to be unmanageably high. Now is the time to discuss not the past so much as the practical possibility of a more realistic programme.

Details of what is in effect a new programme, considered in our feature article by Professor Bowen, have clearly been arrived at by the Government after a review of national building needs as a whole. The programme represents a drastic cutting back of building plans generally. The school building programme, and buildings for the C.E.B. and N.C.B. and a few other essential schemes, seem to have escaped the axe. But all the " frills " have been cut out. Factory building, tunnels, docks, and harbours, civil aviation, houses for government employees, education other than schools, are all items that must suffer. The development of the new towns is to be slowed down, and presumably the re-building of blitzed cities will also proceed less rapidly—if possible—than it has done hitherto. The scope and variety of the architect's work seems likely to be restricted for at least two, and possibly three or four, years ahead.

Considered from the standpoint of the Government's national and international policy there unfortunately does not seem to be much doubt that a severe cut in the building programme had to be made. Even housing, into which so much political, as well as physical and financial, capital has been sunk cannot escape a reduction. But it is of the greatest concern to the public, and to the architectural profession especially, that the cuts shall not be self-defeating or unnecessarily severe.

The crucial question here is the allocation of the building (and civil engineering) industry's resources between new works and maintenance and repairs. In August last there were over one million *operatives* employed by these industries, of whom 261,000 were engaged on new house construction, not more than 15,000 on work for the services, and perhaps 50,000 on new factory building. War damage repairs took another 100,000. That leaves a remainder, a formidable army of well over half a million operatives, engaged on ordinary maintenance work, " minor " licensed works of all kinds, and frank black market operations. Is this force going to be swollen by the cuts in *new* building ? Or is there going to be large-scale temporary unemployment in the industry ? Either of these results would gravely reflect on the new building programme as a practical proposition.

To make cuts may be necessary ; but to turn the reduced programme into actuality will need more than a single administrative decision. The labour in the building industry must *this time* be correctly related to the labour in the materials' industries—or to the timber supply, if as Sir Stafford Cripps

hinted timber is the permanent master-bottleneck. Though it is difficult to see why this single factor should prove so obdurate a stumbling block. There is wide scope for the development of techniques enabling very considerable economies in the consumption of timber, coal and steel. Some pretty drastic scaling down in the total building labour force seems to be implied, involving negotiations with the trade unions at an early date ; nothing would be more fatal than to imagine that the new building programme will progress smoothly without much better attention to balance of the industry in relation to other industries than has yet been commonly given.

The Architects' Journal

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

Phone: Whitehall 0611

NOTES & TOPICS

WESTMINSTER PRECINCT

The King George V memorial statue in Old Palace Yard, which was unveiled by the King last week, is as simple and restrained as the original design was fussy and ornate, so public criticism may be said to have served a useful purpose. Readers will not have forgotten the controversy that raged over Sir Giles Scott's elaborate Gothic design when it was published in 1938.

*

The critics at that time attacked the lay-out of the surroundings as much as the design of the memorial itself, not only because it involved the demolition of the Georgian houses in Abingdon Street (most of which have since been bombed), but because it opened up the end of Old Palace Yard and would thus have further destroyed the precinctual character of Westminster already partly spoiled by the use of Old Palace Yard for through traffic on its way to Millbank and Lambeth Bridge. The present setting is more modest and is agreeably in keeping with the informal planning of the Abbey precincts, the only concession to formality being the placing of the statue exactly on the axis of the entrance to the House of Lords.

*

But I understand that No. 5 Old Palace Yard is later to be demolished in order to enlarge the garden in which the memorial stands. I hope this does not represent the beginning of a reversion to the original policy. It is essential that the sense of enclosure which Old Palace Yard still retains, preserving an intimate relationship between the Abbey and the Palace of Westminster, should not be destroyed by further opening up.

*

Saving the Georgian houses was the crowning success of a controversy on the scale of Carlton House Terrace and in which that belligerent Fabian, Mr. Robert Byron, took the leading part. It was, too, the first great victory of the Georgian Group, which hired the room in the threatened street, organised petitions, and carried on the campaign. It looks as if the Group had better nip round and hire that room again.

*

The arguments in favour of preserving Westminster's essential precinctual character are, incidentally, most convincingly presented in the November number of *The Architectural Review*, of which I have just been shown an advance copy. The *Review* has devised its own plan for the future of the Westminster area, based generally on the Abercrombie - Forshaw Road lay-out, but admirably illustrating how important it is for the town planner to study the visual character of a neighbourhood at the same time as he studies its functional requirements.

'REVOIR, RILEY

I hope those of you who were fair given to Cripps last week by the Government's curtailment of building may well spare a moment's sympathy for a minor casualty in the USA. From New York comes news that, owing to pressure of other commitments, Maude K. Riley has been obliged to suspend publication of her *Art Publication* and *MKR's Weekly*, both of which have fought well during their short lives for the right causes. Our condolences to Miss Riley. Let us hope that the suspension is only temporary.

INCENTIVES AT LAST

After years of opposition from the Unions, and almost as many years of unofficial bonuses by the small builder, the industry as a whole, *via* the National Joint Council, has at last agreed to the principle of payment by results. The basic idea is that any man should be able to add, by incentives, about 20 per cent. to his basic rate of pay: the principle cannot be applied uniformly throughout the industry, as there have always been a number of jobs where output cannot be measured, but there is to be a general increase of threepence an hour for craftsmen and 80 per cent. of craftsmen's rate for labourers.

*

Two further items in the agreement should be noted. It is to remain in force for two years as a minimum, so that the chances of large and time-wasting wage arguments at high level should be reduced, and the bonus rates, once agreed on any particular site, are to remain until the end of the job, a decision which should tend to cut out the petty bickering of the type so often encountered with piece-work rates in factories.

*

The agreement regularizes a practice which we all know has long been in vogue in certain sections of the industry, and it is only right and proper that there should be an official code, with the additional advantage that employers can conduct their own negotiations with the operatives and not have to submit to national rates which all too often are too high in one district and too low in the next.

ON SCRAPPING PLANNERS

If one has to postpone the execution of a job it may or may not be wise to postpone also preparations for doing it. As one travels up the scale of jobs, from making paper boats towards the recasting of the British economic and social set-up, it becomes more and more necessary for the two questions to be considered separately.

*

It will probably be helpful if persons in authority repeat these truths a good many times during the next year, for the announcement that a cut must be made in capital expenditure has produced signs that the old-fashioned boom and slump habits of thought and action are still much with us. Architects will remember these habits only too well; either everyone built at once, drawings were rushed and scamped and prices high, or nobody built at all and preliminary work—even for big schemes, where preparations should take two or three years—was likely to be shut down.

*

So one cannot help feeling a twinge of pessimism when the *Daily Express* —an accurate barometer of the moods of many men—suggests that MOTCP should be closed down for three years. MOTCP can look after itself, but the implication that planning can be flicked off and on like an electric light switch is somewhat out of touch with reality.

RIBA SCHOOLS CONFERENCE

When Mr. Tomlinson, the Minister of Education, spoke at the RIBA last week during the course of lectures on school planning and construction he was his usual urbane, smiling and joking self. He gave those present no shocks about the curtailment of the school building programme, as was half expected. Since then the position has been made clear and is at least not so bad as it might have been.

*

Mr. Tomlinson revealed that the report on prefabrication in schools now being worked out by a committee appointed by his predecessor, the late Miss Ellen Wilkinson, would be ready early next year. This should be welcomed by school architects, for there is far too little information available on school building now that the whole problem of school design has been so radically changed by the 1944 Education Act and 1945 School Building Regulations, though the *Journal* a fortnight ago made some contribution.

*

School architects are thirsting for knowledge to help them through their great difficulties, as the success of the RIBA schools conference revealed. Every county architect was either present or represented, the hall at No. 66 was packed, and I hear that half the applications for tickets had to be refused owing to lack of space. Could not some central source of information which would collect and issue all the latest knowledge on school building technique be set up by the Ministry of Education? There is obviously a great need. Such a centre could hold a permanent but renewable exhibition of school design, where school architects could both deposit and collect new ideas—a clearing-house of information. Passed to you, Mr. T.

OPTIMISM AND EXTRAS

The *Honeywood File* was the story of the building of a house written from the architect's point of view. Now we have *Mr. Blandings Builds His Dream House*,* which is more or less the same thing from the client's angle. Here you have the whole story from the first $11,000 for an old house and 35 acres ("more or less"), with another estimated $10,000 for restoration, right up to the new house costing $40,000 or more. Author Eric Hodgins knows his American scene and the technicalities of housebuilding as well, and there is the usual story of the house getting larger and larger even in the plan stage, and then the extras mounting up again as, I suppose, they do all over the world.

*

Since the book is intended mainly for the general public, it is faintly odd that both architect and contractor come out of it quite well; the pathetic figure is poor Blandings, watching his dollars disappear and too fascinated or diffident to try and stop it. These days it is pleasant to find a book about building which can make you laugh out loud; and I almost forgot Mr. Steig's drawings, which help the story along very nicely.

ASTRAGAL

* Michael Joseph, 10s. 6d.

LETTERS

Harry W. Weedon and Partners
Gilbert Stoddard
A. L. Abbott, F.R.I.B.A.
N. C. Stoneham

The New Library of Information Sheets

SIR,—In the not very distant past, architects in the British Isles were wont to cast longing eyes across the Atlantic at the advantage given to their American professional counterparts by that literary phenomenon known as *Sweets' Architectural Catalogues*. Gathered therein was an orderly system of technical information regarding equipment and materials for use in building. In the USA, also, there was available a valuable volume of the ordinary "bread and butter" data so necessary for everyday use in the architect's drawing office: *Architectural Graphic Standards*, which had its German counterpart in *Bau Entwurfslehre*.

For many years, British architects depended for information on dimensional norms on such foreign publications, or upon extensive research amongst the prime sources of such information. The foreign trades data, whilst interesting and often instructive, were of little practical value, being of equipment and materials not available generally in the United Kingdom.

The appearance of *The Information Book of Burnet, Tait and Lorne* was hailed by all busy architects with enthusiasm, as it provided them at last with the principal clues to data required every day in compact and easily accessible form. Subsequently, the flow of Information Sheets giving really valuable and succinct data on the multitudinous products available for use in building, rapidly built up an extensive library of details, dimensions and other data. This work, however, was halted by war, leaving five volumes in addition to the original *Information Book*, as index to the materials that now would not be available. In practice, however, the need for substitution of unaccustomed materials for familiar ones, the swing of practice from peacetime types of buildings and building methods to the austere wartime types, set a problem for architects which could not have been solved quite so readily in those days when every minute might mean another man's life saved, had the Library not been available as it was. During those dark days, as now, when austerity and stringency have so sunk into our make-up as no longer to be strange to us, the six Information Sheet Volumes were the most thumbed books of reference in our office.

The incompleteness of such collections must, of course, be perennial, for study, research and experiment must increasingly make available new products, new materials and new methods. The publication of the *Post-War Building Studies* is an index of the previous paucity of organized information on so many principles of architectural design and construction, and points to the need for the continuation of your valuable work of co-ordination, cataloguing and indexing, our now really well documented standards of practice.

The reintroduction of your Information Sheets is, therefore, timely and welcome. Previously you have covered much ground in them, but the scope is always growing, and there is much information yet to be assembled in this form. To architects in cities and towns less well provided than London with libraries, exhibitions, permanent

and occasional, and other sources of essential technical information, the new series will be doubly welcome, as they have received particular benefit from the easy accessibility of information in the original series.

HARRY W. WEEDON AND PARTNERS

Birmingham

Liverpool War Memorial Competition

SIR,—I do not think anything should be done to glorify war; on the contrary everything should be done to show it in its worst aspects, the killing, looting and rape.

How can you have a memorial to enshrine the names of those killed in war without glorifying war?

What comfort can it be for relatives to see their loved ones' names on a tablet of stone?

There is no "idea" in a war memorial, as such, deserving of consideration.

The purpose of art is to convey ideas. If an artist felt strongly enough on the subject of war, as many have—Goya, Picasso, Eric Kennington—it is up to him to put forward his idea as strongly and forcefully as he can, and then we should have a true war memorial.

If an opportunity is wanted of satisfying the need for emotional stimulus in our visible surroundings it can be met by building works of art—of sculpture—not by adding a tomb-like structure to the names of those already enshrined in the hearts of those who loved them.

London GILBERT STODDARD

The Depressed Profession

SIR,—While the majority of architects in private practice have insufficient work to keep themselves and their staffs working at 100 per cent. efficiency, all the technical journals week after week are full of advertisements for architects and architectural assistants to swell the staffs of the various ministries, county and local authorities.

Surely through the press, public opinion or the RIBA, pressure could be brought on the various Government departments and authorities to insist upon much more use being made of architects in private practice and their organization and thus save the criminal waste of highly skilled man-power which is occurring.

Soon all architects in private practice will be forced to become salaried architects, which is certainly not in the best interests of the profession.

London A. L. ABBOTT

When Were Cast-Iron Lavatory Bowls Supplied?

SIR,—Amongst the remains of dirt and rubble in that corner of the old City of London which is being excavated to trace Roman and mediæval remains was discovered an interesting object, a Victorian antiquity—a cast-iron lavatory pan or bowl.

From superficial observations it would seem that this was in use right up to the time when that part of the City was burnt in the fire-bomb raid. At that time it appears to have had an elevated cistern reposing upon gloriously scrolled cast-iron brackets; but this cistern may have been an addition later than the installation of the lavatory pan itself. The lavatory when first installed may possibly have been flushed merely with buckets of water.

Can anyone give the date when cast-iron lavatory bowls were supplied?

Unfortunately, it was excavated one day and by the next had been shattered by well-directed bricks dropped from above, so that there was no opportunity to photograph or to draw it.

London N. C. STONEHAM

The outlines of the crisis housing programme are now emerging from speeches by Ministers and are here discussed.

The Meaning of the Cuts

[by Ian Bowen]

Until the White Paper on the new economic plan has appeared, full details of the cuts in the building programme will be lacking, though some evidently inspired guesses as to the direction of most of these reductions have already appeared in the press.

The most sensational cut is the reduction of the housing programme to an annual rate of 140,000 houses in the year 1949, a year by the middle of which the total number of houses under construction will also total 140,000. This figure was reached, Sir Stafford Cripps stated in his speech of October 23, "on the basis of foreseeable timber supplies. . . . If, of course, we were to succeed in importing more timber from non-dollar sources, we might increase that number, and improve on that programme."

In answer to a question by Mr. George Hicks, Sir Stafford went on to say that other raw materials for building would "be matched up to the timber. Timber is in shortest supply."

The net effect of these two statements is to reveal that uncertainty over the future of the size of the housing programme has by no means been removed by the drastic cut in its size. Housing is still to be the unfortunate victim of changes in the foreign supply of timber. All the other building materials' industries are to be given what are in effect provisional targets only, since these targets may be revised whenever the timber supply proves to be elastic.

This policy may be defensible in view of the continuing serious need for housing; the Government can hardly be blamed for deciding to build the maximum number of houses that timber supply allows. At the same time, it must be emphasized from the start that we are not yet on firm ground; the precise quantity of timber available for import by Great Britain over any forward period has always proved difficult to forecast.

Next, it must be asked, what the target figure of 140,000 houses means in the way of sacrifice or of efficiency. How many homeless people will be disappointed? How much cheaper can we build, if we build less?

One hundred and thirty-five thousand houses have been completed from the end of the war to August, 1947; not more than 200,000 houses may be predicted for completion between now and the end of 1948. Adding in the target for 1949, the total 4½ years after the end of the war would be 475,000. Nearly all inquiries into housing needs have agreed that in 1945 there was something over ¾ million families in need of houses at that time, and that there was an urgent need for an average of 400,000 new permanent houses *per annum* for a period of at least ten years after the close of hostilities.

By the end of 1949, therefore, the unsatisfied demand for new houses will very likely reach a formidable size.

Up to now the inefficiency of the rate of finishing houses has mainly been blamed on to the size of the programme and on to the fact that houses were being begun out of all proportion to the rate at which they were being finished. The hope might therefore be entertained that a reduction to a "reasonable" figure of 140,000 houses per year would yield dividends in high productivity.

But an increase in efficiency due to this cause would be likely only after a certain regular rhythm had been established in the programme, so that contractors could employ trained teams of workers under experienced foremen on continuous production. Housing will not be in this agreeable state, on the most favourable calculations, until long after 1949. The cut now envisaged will reverse the trends both of commencements and of completions that now obtain. From a steady rate of beginning 20,000 and more houses per month, the industry is required to drop to an *average* rate of commencement of less than 12,000 houses per month by 1949—involving a drop to an even lower figure than this average meantime. How then can gangs be continuously employed on foundations? The present steadily rising figure in completions is to be boosted even more rapidly up than hitherto (to clear off the "backlog" of houses under construction), and then drop to the approved rate of less than 12,000. How then can the finishing trades be continuously employed?

The immense difficulties created by this unfortunate cut in the housing programme alone are repeated for the prospective reductions elsewhere.

The remaining cuts in new building will have less obvious social consequences. Indeed, the nature of the projects to be sacrificed raises the question whether more might not have been done in this direction and less to the housing programme.

Above all, the official statistics that have been summarised in the *Architects' Journal* from month to month show quite clearly (in Table VI each month) that labour on non-housing work has grown out of all proportion to the increase in labour on housing. There must be scope for the reduction of licensed small works, that is if labour is the factor needed.

It is not yet clear how far the building and housing cuts are founded on the need for conserving scarce and expensive raw materials from abroad (such as timber), or in order to reduce the inflationary pressure on the economy generally. The Government might make the basis of its policy a little clearer on this point. If the saving of dollars for timber is the main consideration, some further stimulation of non-traditional types of houses with a low timber factor might seem to be worth more high pressure.

If, on the other hand, the main purpose of the cuts is to reduce capital expenditure for the sake of doing so, then a drastic overhaul of licensing methods would have seemed likely to be announced.

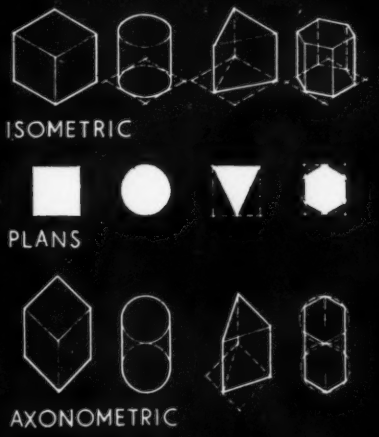
The effects of cuts in factory building may be offset by multiple shift working, and there are ways and means of carrying on in emergency conditions even if the educational programme has to be reduced. Has a vigorous exploration been made of the possibilities of using the fully equipped and empty war-time hostels and camps scattered up and down the country, and now empty, for emergency educational premises? Their use in many cases would require very little maintenance labour, and some organization of transport.

It is to be hoped, and indeed expected, that before long more information will be available on the working of the new plan. Meanwhile, it may be hoped that the axing of housing will be applied with some moderation. Present plans appear to have overlooked some of the disorganisational effects of sudden changes.

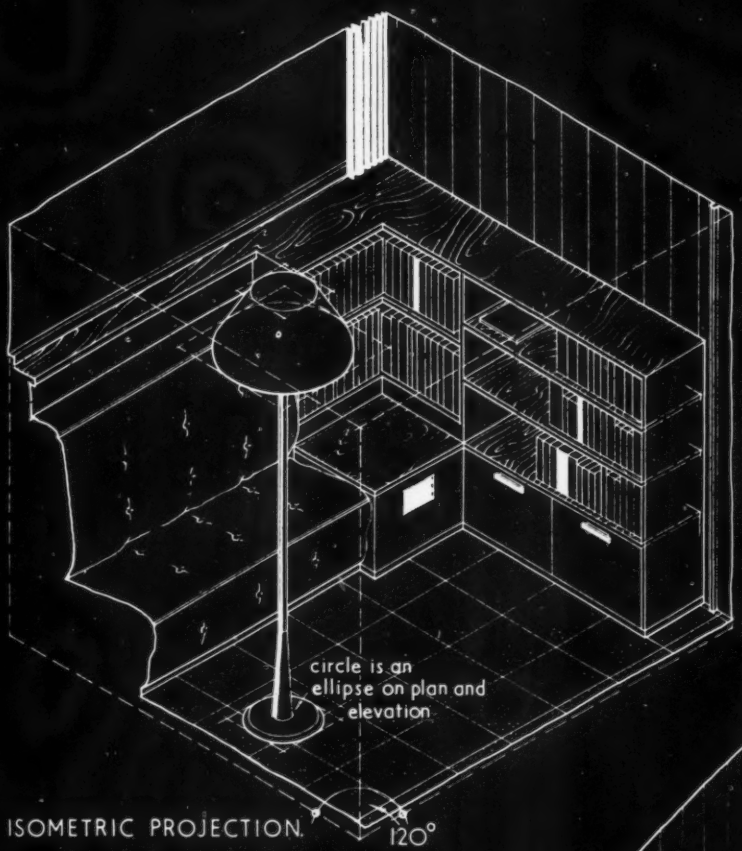
Architects' Journal 30.10.47

DRAUGHTSMANSHIP | ISOMETRIC AND AXONOMETRIC I.B23

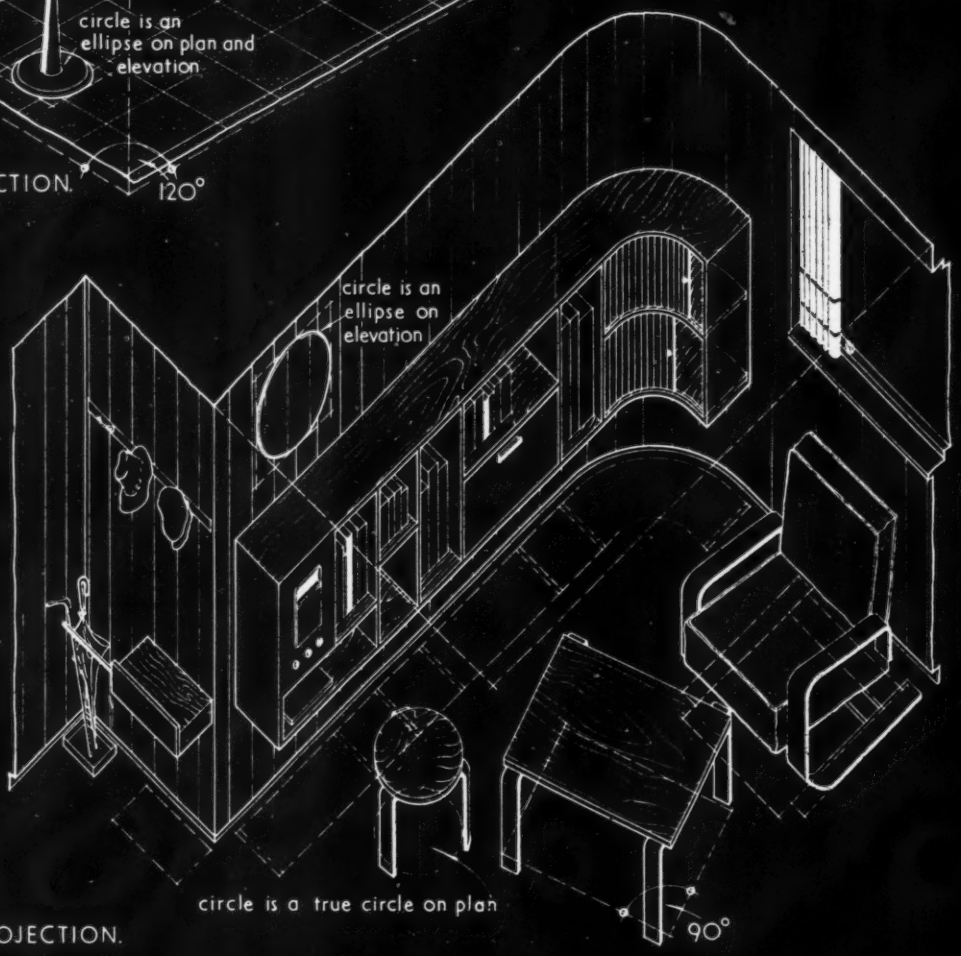
The Architects' Journal Library of Information Sheets 9. Editor: Cotterell Butler, A.R.I.B.A.



ISOMETRIC AND AXONOMETRIC PROJECTIONS OF SIMPLE SOLIDS.



ISOMETRIC PROJECTION.



AXONOMETRIC PROJECTION.

COMPARATIVE PROJECTIONS: ISOMETRIC AND AXONOMETRIC.

Compiled by Leslie A. Lee, L.I.O.B., and H.N. Hoskings, A.R.I.B.A., for Eagle Pencil Company -- Chemi-Sealed Turquoise pencils.

Architects' Journal 30.10.47

1.B23 COMPARATIVE PROJECTIONS: ISOMETRIC AND AXONOMETRIC

General

This Sheet, the second to be published in a series on draughtsmanship, deals with isometric and axonometric projections. Other groups of this series cover geometrical drawing, orthographic projection, perspective, rendering, lettering and draughtsmanship generally.

Applications

Isometric and axonometric are most useful for illustrating material in three dimensions without the complications of distant vanishing points (which may often occur off the drawing board) and the involved scales or projection from a plan necessary for perspective. They present considerable advantages over orthographic projections where structural details are to be illustrated, but they should be used with discretion where the appearance of the subject is important, as the fact that parallel lines do not converge causes an appearance of distortion. Another characteristic of these projections, which demands care if it is to be avoided, is their tendency to turn inside out. When preparing an isometric or axonometric drawing of a particularly complex object it is useful to assume that it is to be contained in a cube or rectangular "box" according to the overall dimensions of the object, then by drawing the "box" in isometric or axonometric the contents can easily be plotted inside. The drawings on the face of this Sheet illustrate a range of simple solids and two typical interiors drawn in isometric and axonometric projection, and affords a comparison between the two techniques.

Isometric

Isometric projections are not true in plan being based upon the principle of projecting the sides of the original plan at an included angle of 120° to each other. This means that horizontal lines are drawn inclined at an angle of 30° to the horizontal and in constructing isometrics a tee square and 30° set square are therefore used. Vertical lines are drawn perpendicular to the horizontal.

Circles: A circle being contained within a square, will appear as an ellipse in isometric both in plan and elevation.

Scale: If an isometric is set up using the actual dimensions taken from a plan, section and elevation, the projection appears to be drawn to a larger scale than the plan, etc., from which the dimensions are taken. To avoid this happening an isometric scale (which reduces the orthographic dimensions) may be used. Owing to the time involved in preparing an isometric scale and the doubtful importance of visual similarity with the original orthographic projection isometric scales are very rarely used.
An isometric scale is constructed by drawing the original scale to an angle of 45° to the horizontal. This can represent one side of a square whose diagonals are horizontal and perpendicular. Assume that the square revolves on its horizontal diagonal so that its side now lies on a line at 30° to the horizontal. Produce perpendicular lines from the original scale to meet this new line which will then form the isometric scale.

Axonometric

The principles of this projection are similar to those of isometric except that the original true plan can be drawn to any scale and placed with its sides inclined at any angle to the horizontal. (The usual angles are 45° and 45° or 60° and 30°). Vertical dimensions are projected upwards to the same scale.

Circles: A circle in the original plan will still be a true circle in plan in axonometric but a circle in elevation will appear as an ellipse.

Compiled from information supplied by:

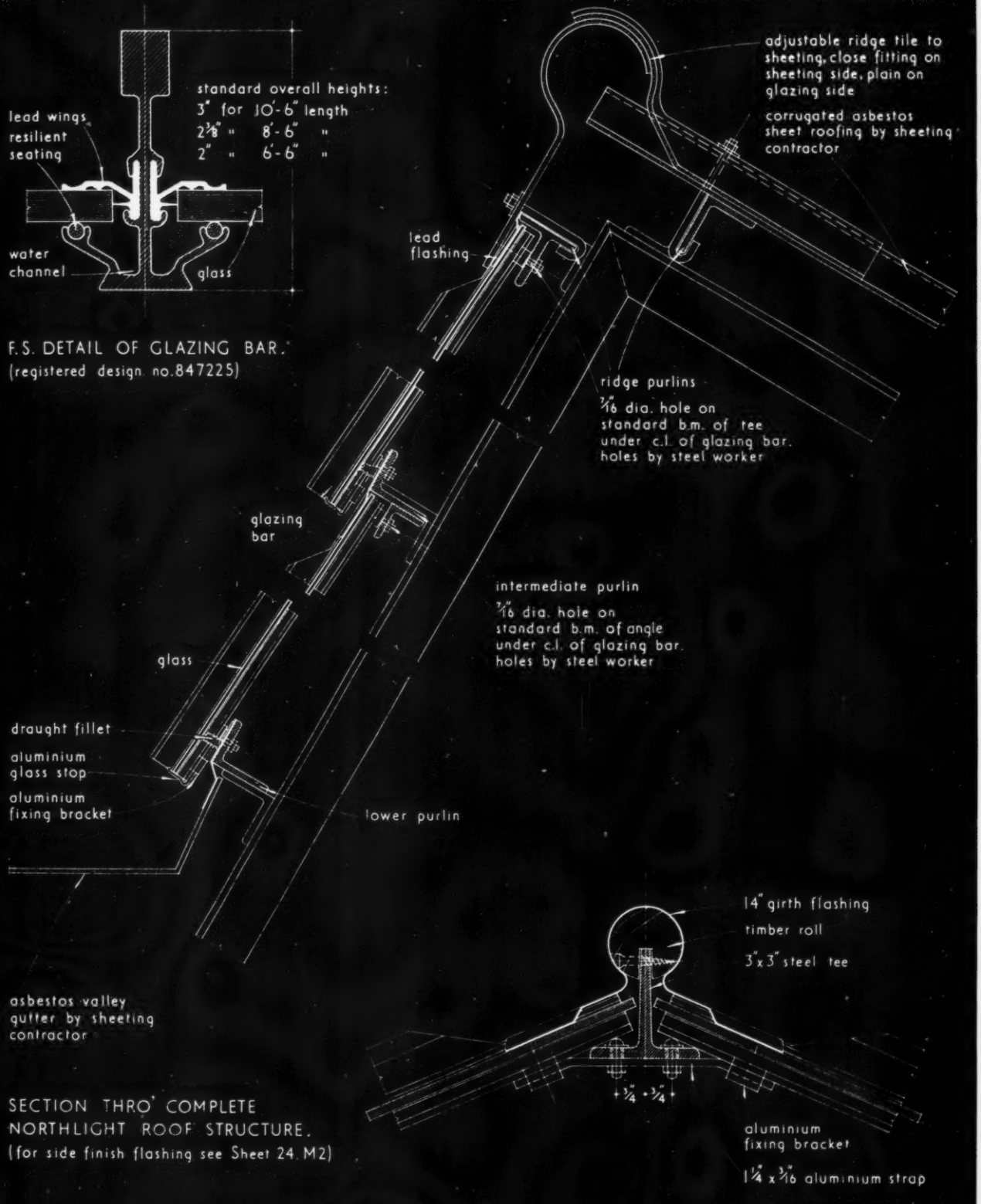
Eagle Pencil Company
Address: Ashley Road, Tottenham, London, N.17.
Telephone: Tottenham 4435-6-7.
Telegrams: Octennial, London.

Compiled by Leslie A. Lee, L.I.O.B., and H.N. Hoskings, A.R.I.B.A., for Eagle Pencil Company -- Chemi-Sealed Turquoise pencils.

ROOF GLAZING ALUMINIUM

The Architects' Journal Library of Information Sheets 10. Editor: Cotterell Butler, A.R.I.B.A.

F.S. DETAIL OF GLAZING BAR.
(registered design no.847225)



SECTION THRO' COMPLETE NORTHLIGHT ROOF STRUCTURE.
(for side finish flashing see Sheet 24.M2)

RIDGE DETAIL FOR GLAZED ROOF OF NORMAL PITCH
(for eaves and verge see detail above and Sheet 24.M2)

CHALLENGE ALUMINIUM GLAZING BARS: APPLICATION TO STEEL ROOF CONSTRUCTION.
I. NORTHLIGHT AND GLAZED ROOF OF NORMAL PITCH. Manufacturer: The British Challenge Glazing Co.

24.M1 CHALLENGE ALUMINIUM PATENT GLAZING BAR *(Regd. Design No. 847225*

General

This Sheet is the first of a series dealing with aluminium glazing bars and illustrates a full-size detail of the Challenge aluminium glazing bar, together with its application to a north-light roof structure and a glazed roof of normal pitch. Sheet 24.M2 gives details of a glazed panel in a steel roof of normal pitch and Sheet 24.M3 shows the application of the glazing bar to a timber roof construction.

Glazing Bar

Material: The bar is extruded from a weather-resisting aluminium alloy and is fitted with lead glazing wings.

Sizes: Three sizes are obtainable—2 in., 2⅜ in. and 3 in., to provide suitable spans for use with glass up to 10 ft. 6 in. long.

Centres: The bars should be spaced at 2 ft. 0½ in. centres wherever possible for use with 2 ft. wide panes of glass.

Glass Stop: This is secured direct to the purlin and clamped to the glazing bar.

Water Channels: These are formed in the section by the arms which carry the resilient plastic seating.

Draught Fillet

Material: The fillet is of creosoted wood and is held in position by means of an aluminium bracket.

Application to North-Light Roof

Top Purlin: The top purlin of tee or angle section is drilled one ⅜ in. dia. hole on standard backmark at glazing bar centres to take top fixing bolt. Flashing is fixed between the ridge tile and top purlin and dressed down over the glass.

Intermediate Purlin: This may be formed of two angles fixed back to back to form a step. The glass stop and fixing bracket is bolted to the upper angle and the end of the bottom glazing bar is bolted to the lower angle. Flashing is secured between the fixing brackets and purlin flange and dressed down over the glass.

Bottom Purlin: The glass stop is clamped to the glazing bar and bolted to the purlin, and the lead flashing is dressed down into the valley gutter.

Application to Glazed Roof of Normal Pitch

Ridge: The detail shown on the face of this Sheet illustrates the finish at the ridge of a typical glazed roof. One aluminium strap prepared to suit the pitch of the roof is bolted to the flange of the ridge joist to receive the clamping brackets of each pair of glazing bars.
A timber roll should be used wherever possible, but may in special circumstances be omitted.

Eaves: The detail at the eaves is similar to that shown on the north-light roof detail given on the face of this Sheet.

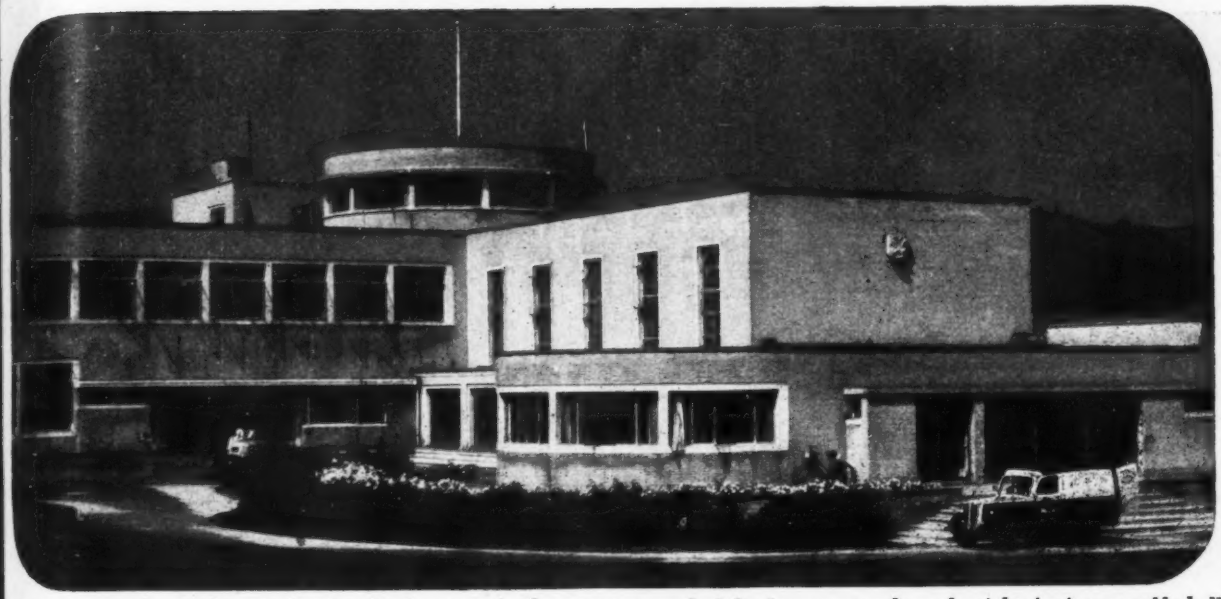
End Panel: Typical details at wall and at side of panel are shown on Sheet 24.M2.

Life of Glazing Bars

The alloy from which these glazing bars are extruded is of the silicon magnesium range and specially adapted to resist general atmospheric conditions. From experience, the use of lead insert wings has proved to be sound in practice.

Compiled from information supplied by:

The British Challenge Glazing Co.
Address: Marshgate Lane, Stratford, London, E.15.
Telegrams: Astragal, Phone, London.
Telephone: Maryland 4161 (7 lines).



A view from the south-west: in the circular tower is the art room; on the left, classrooms and, on the right, junior assembly hall and main entrance.

SCHOOL
AT FOLKESTONE
DESIGNED BY E. WAMSLEY LEWIS

SITE PLAN

GENERAL.—Harcourt Elementary School, Folkestone, for 320 senior girls and 388 mixed juniors and infants.

SITE.—The actual area for the buildings was restricted to a space between a sewer running west and east, over which no structure might be built, and the excavations of a former brickyard to the north of the site. Approximately 40 ft. to the south of the sewer and running roughly parallel to it was a stream. The stream was piped and filled in and the excavations of the brickyard were also filled by mechanical shovels with soil removed from the higher portions of the site. Thus the whole area covered by the buildings was brought to convenient levels.

CONSTRUCTION. — The main school block is built on a frame of reinforced concrete with hollow tile suspended floors and roofs. External walls are 11-in. cavity brickwork; facings 2-in. yellow sand-lime bricks. Inset in the side of the columns within the cavities are strips of lead to prevent the carriage of water from the outside to the inside of the walls and all beams in the external walls are covered with asbestos fibre and asphalt damp-course covering. Cloakroom and sanitary block wings have external walls 9½ in. thick, the inner shell being of bricks on edge. The roof of these are timber supported by the standards of the cloakrooms, which carry pairs of steel angles bolted together to carry the joists. In the case of the lavatory blocks, the door frames form trusses which support the roof. All roofs are covered with three-ply bituminous roofing and finished with crushed marble chippings to produce a white surface. All ledges in the school for the harbouring of dust have been avoided. In constructing the partitions and ceilings special attention was paid to insulation and acoustics.

ELEVATIONAL TREATMENT. —Walls are butter yellow sand-lime bricks with white joints and all exposed concrete members are

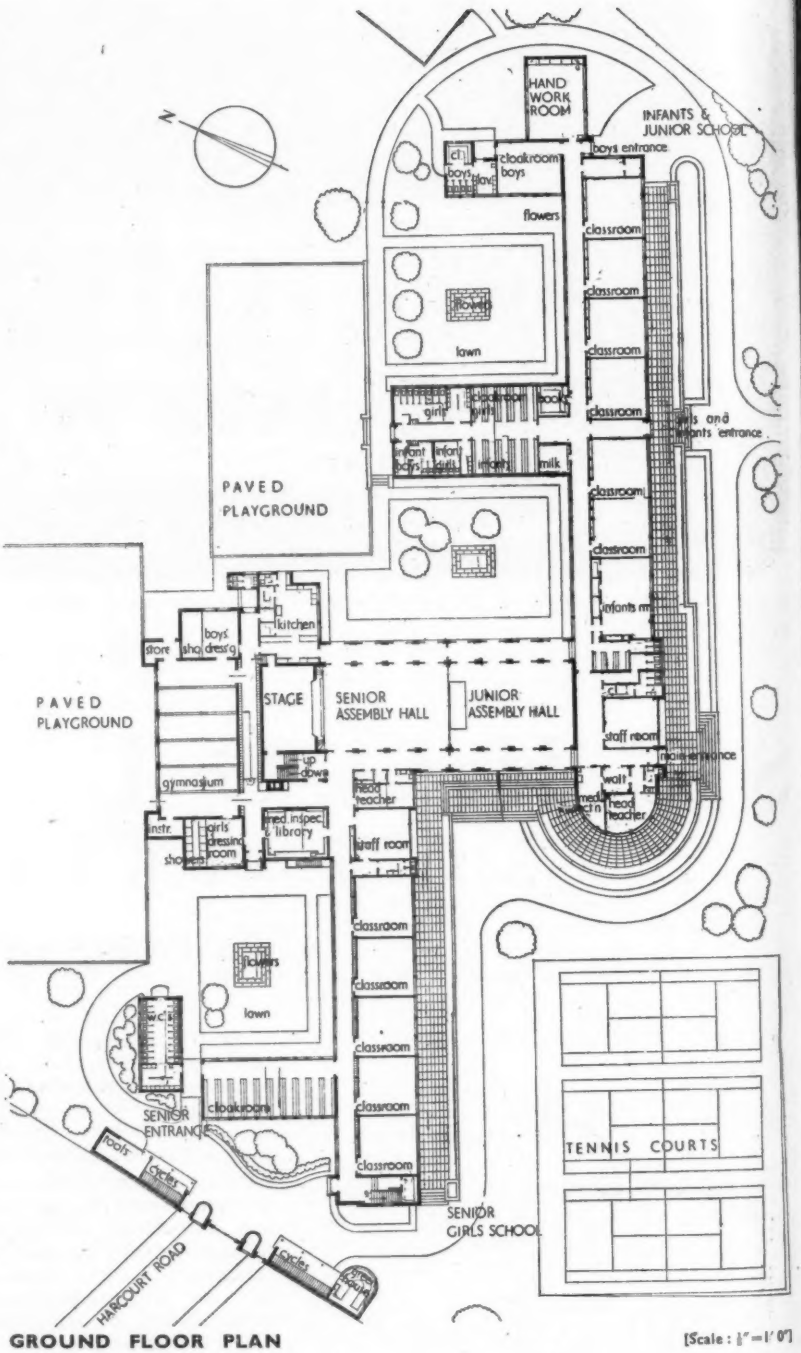
Another view of the main entrance on the south front.

painted white. Window frames and doors are turquoise blue. Mr. Bainbridge Copnall carved the cartouche on the end wall of the assembly hall block.

INTERNAL FINISH.—All internal doors are flush type and for double spring hinged doors Dunlopillo cushioning has been used to save the fingers of children using them. Walls of sanitary apartments, showers, etc., are finished in glazed cement. Considerable attention was paid to the colour schemes for each room to produce cheerful backgrounds for teaching. Strong primary colours are used in the infants' department and elsewhere the predominating colours are bright canary yellow and sky blue. All ironmongery is covered with plastic of a colour to contrast with the door or fitting to which it is fixed. Floors generally are finished with battleship linoleum made in special colours of yellow and rust, and internal window ledges are covered with bright yellow glazed tiles. In the babies' cloakrooms the hooks for both coats and mugs are indicated by tiles with animals painted on them and the mugs have similar designs. The assembly hall has oatmeal coloured acoustic plaster, rust coloured curtains of heavy material and birch block flooring, and the gymnasium yellow walls, sky blue metal work, a floor of birch strips and standard apparatus.

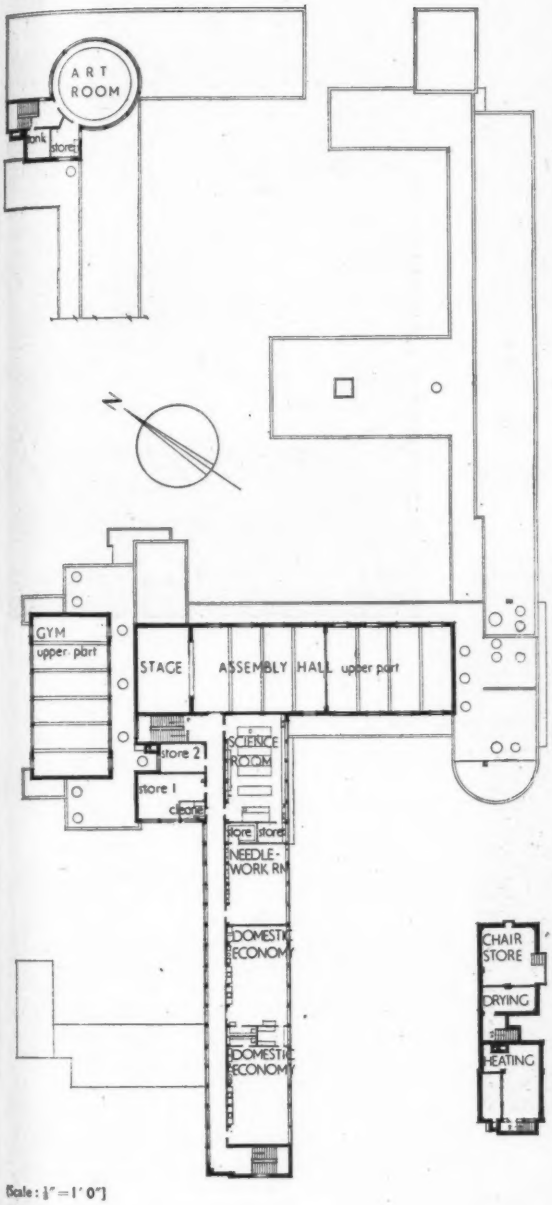
SERVICES.—Heating is by pipes built into the ceilings in bands along the external walls, fed by low pressure hot water, and no pipes are visible within the main rooms of the building. A separate boiler provides hot water to lavatory basins, sinks, and showers and heats the racks in the drying room. Electrical plugs are provided for wireless receivers in all teaching rooms and points for cinematograph projectors in each assembly hall. Amplifiers for loud speakers are installed in the halls, and electric clocks in the staff and head teachers' rooms of both senior and junior schools and at the ends of all corridors. On the stage, the back wall is plastered and whitened to act as a screen for cinema apparatus and as a horizon for coloured lighting effects so that back cloths can be avoided for stage performances. Footlights are of the dipping type controlled by dimmers in three colours. They are coupled with the first batten, which is provided with two 1,000-watt spotlights.

The general contractor was Mr. O. Marx. For sub-contractors, see page 396.



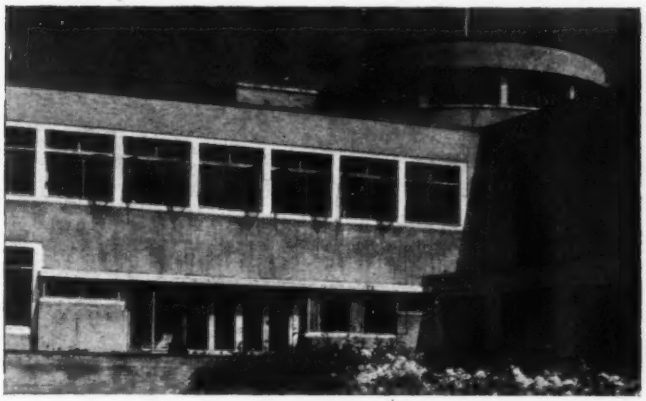
GROUND FLOOR PLAN [Scale: 1/8" = 1' 0"]

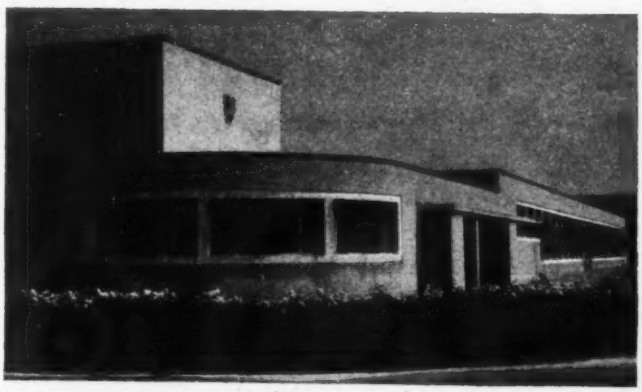
SCHOOL AT FOLKESTONE

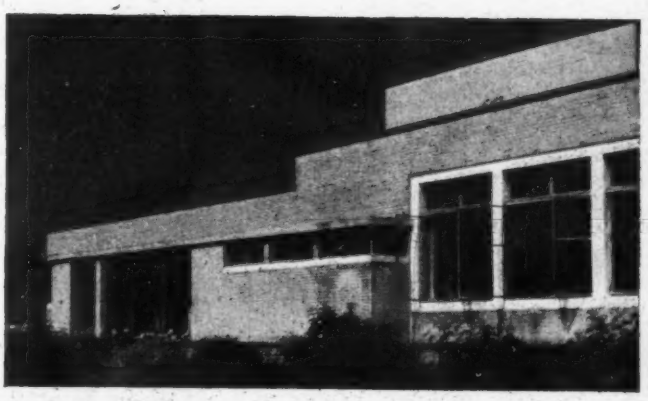


Scale: $\frac{1}{8}$" = 1' 0"

BASEMENT, FIRST AND SECOND FLOOR PLANS

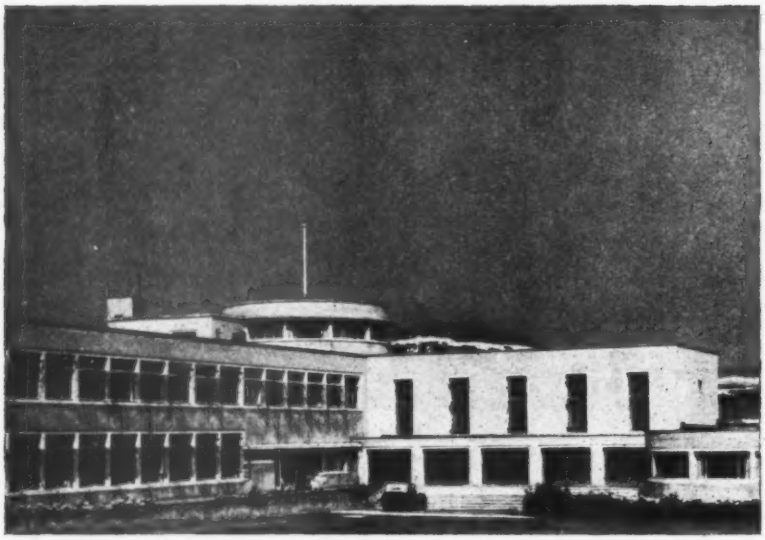


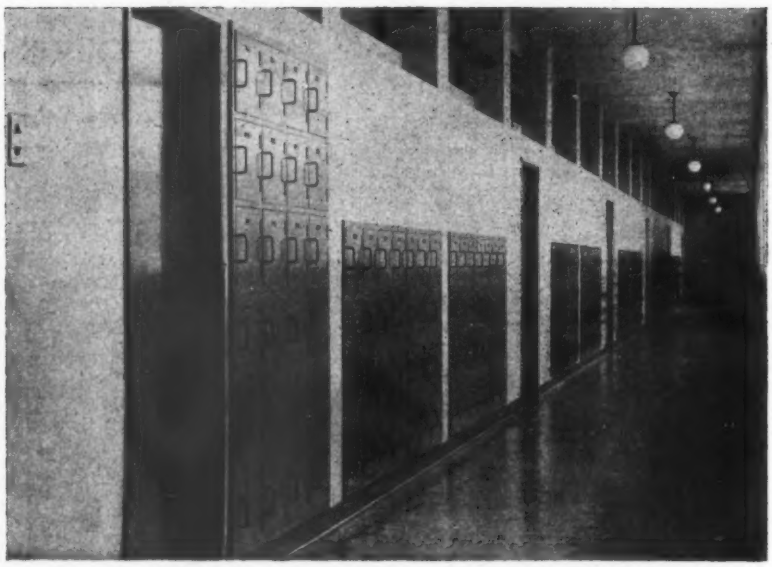


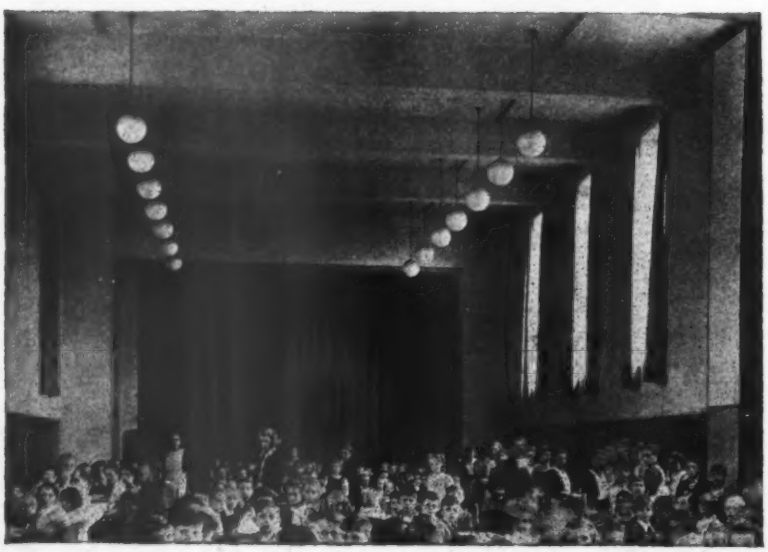


Right, from top to bottom: senior classrooms (left) and part of junior assembly hall; classroom with doors folded back for open air teaching; staff rooms (left), main entrance and junior classrooms; staff room (left) and infants room.

BY E. WAMSLEY LEWIS







Top, left, senior classrooms (left) and junior assembly hall. Top, right, a corridor. Centre, children's lockers in one of the corridors. Bottom, children at lunch in the assembly hall.

SCHOOL AT FOLKESTONE

SOCIETIES AND INSTITUTIONS

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

RIBA

Post-War School Planning & Construction

October 23-24. At 66, Portland Place, W.1. A course of lectures on POST-WAR SCHOOL PLANNING AND CONSTRUCTION, together with an exhibition of school designs to illustrate the course. Among papers read were SECONDARY SCHOOLS, by Dennis Clarke-Hall; NURSERY, INFANT AND JUNIOR SCHOOLS, by John Harrison, Architect to the Surrey County Council; and STANDARD AND QUALITY OF LIGHTING, by William Allen.

SECONDARY SCHOOLS

D. Clarke-Hall: While the new Building Regulations* are in many ways similar to the pre-war practices, there are three outstanding features that basically affect the design of secondary schools. (1) The increased area of accommodation, notably in classrooms, giving one classroom to each class in the school. (2) The accommodation for meals. (3) The standard of natural lighting. These alone have made almost every existing school in England sub-standard, and a very large percentage cannot be economically brought up to requirements.

While it is generally a comparatively simple matter to increase the existing accommodation, such as teaching rooms and lavatories, by the addition of new blocks or wings, it is extremely difficult to enlarge existing halls and gymnasia. This, together with the lighting requirements, are two of the biggest problems in bringing existing buildings up to date, and to which I cannot see any satisfactory economical solution.

Natural lighting is a very controversial point, and many consider the standard set unnecessarily high, of little value, and impossible to achieve economically. This one regulation introduces problems that affect the whole design, layout plan and structure more than all the others put together.

Generally the problem of acoustics falls into three parts: (1) Airborne sounds which can be overcome by careful layout planning, in which all noisy areas are segregated, either by acoustic barriers or distance from those where mental work is done. (2) Structure-borne sounds, which are mainly a matter of detailing, and have in the past been very noticeable in the case of heating pipes running directly from room to room, and through thin partitions. (3) Internal acoustics that are mainly affected by the use of internal surfacing materials.

THE STRUCTURE

When considering the structure, there are three possible lines of approach. First, to construct school buildings along traditional lines. Second, to develop some system of complete prefabrication. The third method is a balance between these two extremes whereby the overall sizes of certain essential components are determined, so making it possible to use a variety of materials and plans within those limitations.

In 1943 the Wood Committee was convened to study this problem and their findings were issued in Post-War Building Study No. 2, *The Standardization of School Buildings*. In this, two methods were put forward.

One method visualises the school building as a series of blocks linked by *in situ* connections, each block being made up of a series of bays, in which the dimensions of the bay have no relationship to those of the span, the principle being like a train that is made up to any size and type by connecting a series of standard coaches or wagons by flexible connections. This method was recommended by the Ministry of Education in a recent circular on the operational programme for schools.

It is very adaptable and forms a balanced combination of prefabricated elements and *in situ* work necessary to meet the great variety of conditions found in schools and on the site. Two dimensions of span were given, leaving the choice of the bay width open. However, if such elements as standard windows and infilling panels are to be considered, it is necessary to fix the bay dimensions. An analysis of dimensions to spans shows that a bay width of 10 ft. with two spans of 21 ft. 4 in. and 24 ft. 9 in., are both economical in the use of structural members and in obtaining room areas approximating to those asked for under the Building Regulations, giving an average increase of approximately 3¼ per cent.

Owing to the material shortages, it is important that more efficient structures be used than have been customary in the past. Light-framed structures are generally efficient provided that a suitable bay width of, say, 10 ft. is used. This type of structure is easy to erect and facilitates the positioning of walls, windows, roofs and partitions, especially when these are prefabricated units which can be very satisfactory if suitably constructed to the desired degree of weathering, noise, thermal insulation and appearance. If solid walling or blocks are used in the building, it is still an advantage to have a structural frame, as setting out is simplified and allowance is made for segregation of trades. As the structure carries the roof, it is also possible to get this on at an early date, so facilitating the erection of the remainder during inclement weather. In the case of two storeys or more, a framed structure is essential, and it is even more important to use some form of light cladding-units on the upper floors, in order to reduce weight and keep the sizes of the members down to the absolute minimum.

Welding the structure to make a rigid portal frame is the most efficient method. The frames can be welded in the shop with site construction joints provided at the points of contraflexure where the bending stresses are at a minimum. In the case of a a single-story building of 25-ft. span with the frames 10 ft. apart with normal loadings, a steel joint beam riveted to joist stanchions will use 10½ cwt. of steel for each truss, whereas a welded frame will need only 6 cwt. This is even lower than the traditional pitched trusses and stanchions, which work out at about 6¼ cwt.

A very low steel content can be achieved with the minimum use of strip steel by cold-rolling suitably shaped box sections filled with concrete reinforced with pre-stressed steel rods. This method obviates the use of shuttering, as the box section is left in position and acts as part of the member. The typical frame would then need only 3.5 cwt. of steel, including reinforcement.

THE ÆSTHETIC CONTENT

A building cannot be complete unless the design of the equipment and furniture is fully considered. If small details such as the size of desks, chairs, stools, cupboards, and even exercise books, are badly designed, it can cause mental and physical numbness, bad circulation, and eyestrain. In all these points, proportion, colour, and detail are as important as in any other part of the building, as they are most closely associated with human needs and play a large part in the physical or mental comfort of the pupils.

A stimulating atmosphere is achieved in direct proportion to the lightness and clarity of the colours used. White and pure clean yellows, greens, and blues are the most exciting, while an atmosphere of rest can be obtained by soft warm body colours such as grey-greens, blues, yellows or reds, but, going down the scale still further, a depressing effect is made by a predominance of heavy browns, yellows, and colourless dark greys.

When clear colours are used, great care must be taken to apply them only to the right surface: a clear yellow on a very hard plaster gives a totally different effect from the same colour on a soft lime plaster. In the first case, the atmosphere is unsympathetic, hard, and reflective to sound, light, and mental images, while in the case of the soft body colours there is sufficient weight to cover almost any surface to give a warm appearance. Few could feel at home in a living room which was completely surfaced with ivory glazed tiles, and furnished with oil-cloth curtains and painted steel furniture, but exactly the same colours in soft plaster, good material and wood would allow immediately for relaxation.

NURSERY, INFANT AND JUNIOR SCHOOLS

J. Harrison: The first factor I examined in my attempt to find a solution to the problem of school planning was the size of the infant and junior schools required under the development plan. The sizes ranged from the one-class school, of these there were nine only, to three-form junior schools, but far the greater number of schools lay between the three classrooms and nine classrooms size, the most common being the six-class school. It seemed, therefore, that the unit of planning might well be three classrooms, and that the planning of the cloakroom and sanitary accommodation as part of the unit should be examined. The smaller schools in size and number of one and two classrooms could well be ignored and treated as special cases, and for the larger schools, the classrooms of which were not in multiples of three, the sanitary annexe could be slightly enlarged to serve a unit of four classrooms.

The components of this unit—classrooms, storerooms, cloakrooms and lavatories—might well be considered the "constants" of the problem, the variables being the hall, dining room, kitchen and administrative rooms, which appeared or increased in size with the increase in number of children, but not necessarily in direct proportion with that increase.

* Regulation Prescribing Standards for School Premises, 1945.

The spatial unit had then to be settled, and after trial in planning, and consideration of other units of size which have been used, a 6-ft. spatial unit was decided upon —a 6-ft. spatial unit which is used as a 12-ft. constructional unit, particularly as regards the steel frame. The remaining rooms which are the small units of administration are readily used in their proper combination, as filling-in pieces between the major elements.

DAYLIGHT

There is little or no difficulty in obtaining the standard of day-lighting required by the regulations in a single-storey building, but there is an inevitable wide margin between the maximum and minimum values in the same room on the lower floors of a multi-storey building. The floor to ceiling height decided upon for the single-storey primary school is 11 ft. 3 in., and in each room, apart from the main south-east window, there is a clerestory window and a north top light. The maximum daylight value, using for measurement the Daylight Factor Protractors introduced by the Building Research Station, and measured on a line taken 8 ft. from the blackboard surface on a 2-ft. working plane, is 15.00; on the same line the minimum value is 8.50. In the ground floor classrooms of a multi-storey school, with a ceiling height of 11 ft. 9 in., the same readings are 12.54 and 2.36. Even if the ceiling height were substantially increased above 11 ft. 9 in., it would be impossible to get the same readings as the single-storey room as it is planned. The separation of the classroom block from the corridor and cloakrooms by means of light courts gave maximum and minimum readings of 12.75 and 6.15.

The attainment of satisfactory daylight factors alone, however, will not completely meet the case for good lighting, for intensity of light is not necessarily an adequate measure of seeing comfort. The twin enemies are gloom and glare, and the brightness contrasts within the room, which are frequently well over 100-1, must be minimised. This will mean a general use of light pastel colours for rooms and furniture. We should aim at interiors giving 70 per cent. ceiling reflectivity, 60 per cent. wall, and 35 per cent. reflectivity from desks and floors.

The struggles to lift the maximum values of lighting does, and perhaps inevitably, raise the value near the main bank of windows to such a degree that there is the nuisance of excess solar light. This is being counteracted by providing external glare screens—a hood at transome level, with side cheeks diminishing to zero at the feet.

Another approach to the provision of really good classroom lighting may be the use of the prismatic glass block, in what the Americans call the glass block and vision strip construction, and no doubt we will hear and see more of this in the future.

ARTIFICIAL LIGHT

The standard required, 10-15 foot candles. can be readily obtained, and the bone of contention will be whether tungsten lamps or high voltage hot or cold cathode tubes should be used. The tungsten lamp will be with us for many years yet, but obviously cathode fluorescent tubes have many advantages, particularly as a means of supplementing daylight and in giving a surface of comparatively low brilliance. Blending artificial light with daylight by the use of an automatic switch control actuated by falling light values deserves serious consideration, and this would suggest that light values both for daylight and artificial light should be assessed or expressed in foot candles.

HEATING

The heat losses in a school building, and particularly the primary school, are higher than in most types of buildings. The losses amount to 4·6 B.T.U.s per cubic foot, as compared with an average of 3 B.T.U.'s per foot for normal buildings, and to this add that the young children themselves suffer a proportionately greater heat loss from the body than an adult.

When designing one school I resolved that the wall and floor surfaces should be free of all heating units; that, together, with the type of building construction to be used, in effect determined the system to be used. The familiar low pressure hot water system was therefore adopted using cast iron radiant panels (rayrads) as a continuous dado for the heating surface. The rayrads are part of the inner wall surface, and extend from skirting to cill. The cold down-draught from the main bank of windows is counteracted by the use of electric panels in the underside of the window heads. A unit of underfloor heating will be used near the main bank of windows in the central hall. This scheme, of course, takes advantage of the Building Regulations, which permit a lower temperature by 5° F. than with convector heating, and this should mean a saving of 15% in fuel.

CONSTRUCTION

The present shortage of materials meant abandoning any constructional design based on particular materials, especially if time of erection is to be considered of any importance. One must be prepared to substitute materials and forms of infilling as time passes. By dealing with the irregularities of the site by means of a light concrete raft and piers, the steel frame can be fairly easily standardised, and has been adopted in one single-storey school to obtain the advantages of rapid roofing in.

The external cladding, for the first schools at least, will be 4½ in. brickwork, clipped to the steel framework, and all internal cladding will be wood wool panels, with the exception of the heated lower wall surface.

STANDARD AND QUALITY OF LIGHTING

William Allen: An important aspect of lighting which is of interest in relation to the prescribed standard and which has had no public discussion among architects in this country is that of a study of brightness ratios, and it relates to the brightnesses and contrasts which ordinarily occur in the field of vision, especially indoors.

The two following characteristics of vision lie at the root of the matter:

1. Our eyes tend automatically to direct themselves to the brightest thing in any view and to focus on a contrast.

2. Our comfort and our ability to see are impaired by glare.

From these two characteristics we can deduce three important rules for design.

1. The object of attention should be bright and contrasty.

2. The immediate background of the object of attention should be almost as bright, but much less contrasty than the object.

3. The environment should not contain brightnesses and contrasts which compete with those on the object.

The first and third of these rules are obvious because if our eyes tend to gravitate to the brightest and most contrasty thing in view, then these characteristics should be given to the object of attention and avoided in the background. The reason for the second rule is less apparent. The explanation is that if the object of attention is very much brighter than the background there will be too much contrast for the eye to deal with properly. But should the immediate background be brighter than the object of attention then a sharper condition of glare occurs, accompanied by the usual deterioration of vision. Thus we arrive at the statement that the object of attention should be only slightly brighter than its background.

The application of this group of principles to the daylighting of classrooms presents a problem which architecturally is outstanding. The source of light is bound to be brighter than the object on which its light falls. If, therefore, we want children to concentrate attention upon the teacher, the blackboard and the books on the desk, then the source of light itself should be screened in some way.

LOUVRES AND WINDOWS

The use of louvres is a growing practice in America, but because of the prohibitive cost at present of louvres in this country it is necessary to accept the view of sky associated with large windows, but to reduce to a minimum the contrasts on and around them. By this means the distracting effect can be very much reduced and it becomes much easier for interest to be maintained upon objects of attention inside the room. Similarly, the strain and discomfort and the impaired vision associated with bright and contrasty windows can be kept within reasonable limits. On what basis can we modify window design to reach this objective?

If the window bars as seen from the inside present a pattern of a strong dark against light, it will be found that the eyes follow the pattern of the bars, travelling over and over them again, and one will experience difficulty in focusing attention upon a view outside no matter how attractive it is. In other words, the pattern will attract attention strongly and tend to force a focus upon it. It will be worst if the pattern is close, and is relieved as the spacing of the bars increases; it is bad if the brightness contrast is strong and better if the contrast is weak. Let us suppose there is a window with a view of buildings outside. The latter will be less bright than a view of the sky, and all contrasts between window and view are accordingly reduced. A dark-painted grid of window bars with small Georgian panes will not be uncomfortable to look at under these conditions, but will be found a pretty effective barrier to the outside view. In other words, the contrast is strong enough to draw attention, but not to irritate. If the bars are painted white, one will not experience any difficulty in looking outside, nor will one experience such a strong tendency to look at the window itself. On the other hand, if we take a case where the view is mainly of sky, then even the white painted bars can present a sufficient contrast not only to draw attention, but to be very irritating when we do so. In this case, however, much depends on the shape of the bar. When this is flat inside, as for instance most metal windows are, then we have the worst case, because the full width of window bar is in shadow and the edges are very sharp. Any shape tending to be elongated at a right angle to the plane of the window will be an improvement, but a very striking difference will be found between one shape and another even in this apparently limited range. At this point we run into an architectural problem which it is worth while to examine quite closely. Obviously, one way of reducing the contrast effect is to reduce to a minimum the width of bar in full shadow. Preferably one should start with a thin bar, but, thick or thin, it should come to a virtual feather edge. Some recent trials at the BRS have also shown that surfaces presenting an angle greater than about 40° to the plane of the window received so little light that they also formed contrasts which were too strong. The aim should be, in fact, to have the sides of the window bar strongly illuminated. One is bound to draw the conclusion that certain traditional window bars held their strong position in the history of architecture at least in some measure because they provided the conditions of comfortable vision which the eye requires. Now let us consider the reveals, working from the outside edge inward.

REVEALS AND LINTELS

The outer edge of the reveal, like the outer edge of the window bar, is seen next to bare sky and for this reason should be as bright as possible. In the ancient stone windows of the Gothic period there was an outward

splay which, because of its angle, caught the light very well. In the Georgian window we are familiar with the rendered and white-painted external reveal. Whatever the original intentions of the people who developed these details, there is no doubt they were fundamentally sound from the present point of view. It follows that the modern practice of putting windows at the outer faces of the wall can be regarded as generally disadvantageous because it means that in place of a bright external reveal there will be the shadow line of the frame next to the view of sky.

The shadow line of the frame should be reduced to the narrowest possible width and finished in a very light colour. It is one of the singular pleasures of fixed glazing that no frame shadow occurs.

SUBTLETIES OF HISTORICAL STYLES

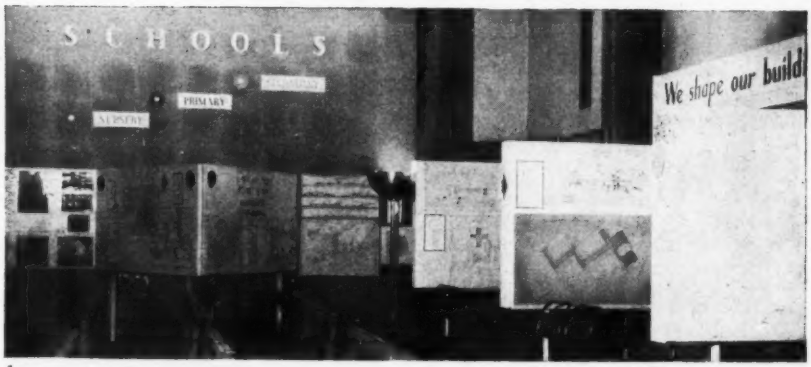
In historical styles, both Gothic and later, the inner reveal was commonly, though not always, splayed. This, like other details, had an advantage of illumination, for it meant that the contrast between it and the surrounding wall, which is usually relatively dark, was very usefully reduced. Thus it will be seen that there was a sort of progressive reduction in brightness from the outer edge of the reveal to the inner face of the wall. There is no doubt that the gradual change from external brightness to the low level illumination inside made a big difference in comfort, and it is not easy to see how we are to produce similar results in the depth of the modern wall. The problem has, however, been successfully circumvented by one element in modern architectural vernacular, in which windows run the full length of the outer wall right up to the return wall across the ends. In this way the whole end wall becomes a sort of deep reveal providing a gradual gradient in brightness. This is a point relevant to school classrooms in particular.

The lintel of a window is a very special case of the reveal. Inherently it is difficult, because all the surfaces, inside and out, face downward, and are bound to be in shadow. The reflected light which reaches them from below is hardly enough to reduce a very aggravating contrast with the sky brightness, though it can help when fully exploited. Projecting canopies outside the window sometimes seem to help, but mainly by reducing the area of sky visible to those nearest the window. Also they avoid the aggravation of having shadow of the window frame next to the view of the sky, which is always acutely uncomfortable.

With modern thin walls, there is not much chance of reducing contrasts by treatment of the reveal, but we can arrange the windows in a room so that light from one will fall on wall surfaces around another. This is one of the major uses of a clerestory, and apart from their use in schools, significant examples are to be found in recent examples of domestic work by Frank Lloyd Wright in America. The well known pleasantness of lighting in rooms with windows on more than one side can be attributed largely to this idea.

Two final points. The mere admission of a large amount of light into the room is a safeguard against excessive brightness ratios. Brightness outdoors cannot be controlled by the architect, but indoors it can be increased and generally the consequence will be, reduced contrasts. Also we can reduce the risk of sky glare to children in classrooms by different arrangements of the seating.

Natural and artificial lighting problems are similar in principle. In one case the sky is the source, in the other it is a lamp or a tube. In both cases our first course should be to prevent the source from being seen, or reduce the direct view of it; but when this is impossible or very difficult, then, as with windows, we have to study the fittings to ensure that on them, and round about them, contrasts are kept within desirable limits. Adequate light should reach surfaces against which the fittings are seen, but of course the major part of the light should travel directly to the pages of the books, desks, the teacher and the blackboard. All this probably rules out both completely direct light and the completely indirect, and there is certainly evidence to show that either of these courses leads to unsatisfactory results in the great majority of cases.



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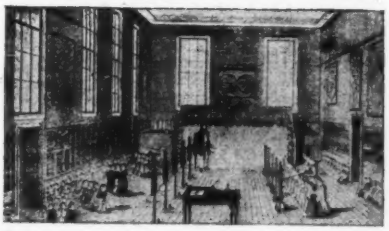
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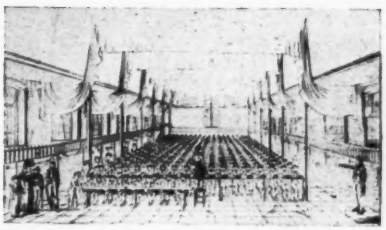
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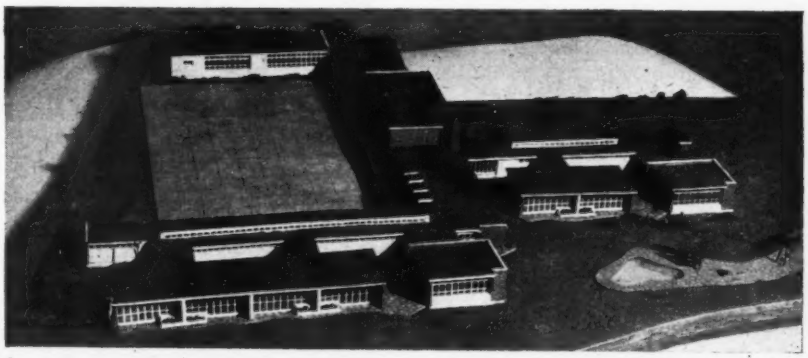
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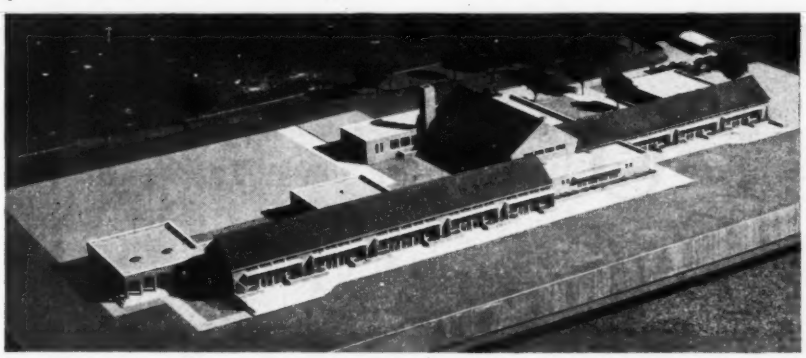
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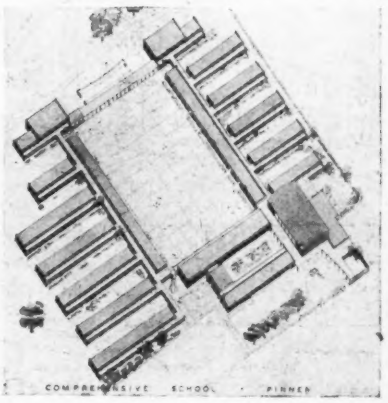


6

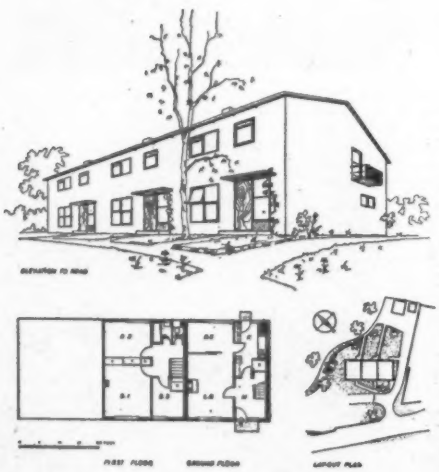
Models and drawings from the RIBA exhibition of school designs complementary to the course of lectures on Post-war School Planning held at the RIBA October 23-24. 1, General view of exhibition; 2 and 3, early 19th century schools; 4, proposed Junior and Infants School at Ormesby, York, by Dennis Clarke-Hall; 5, Hamsey Green Primary School by John Harrison; 6, Comprehensive School at Pinner for Middlesex County Council by C. G. Stillman.

Right, close up of one of the four houses. Bottom, the architects' preliminary design for the scheme. In execution the number of houses was increased from three to four.

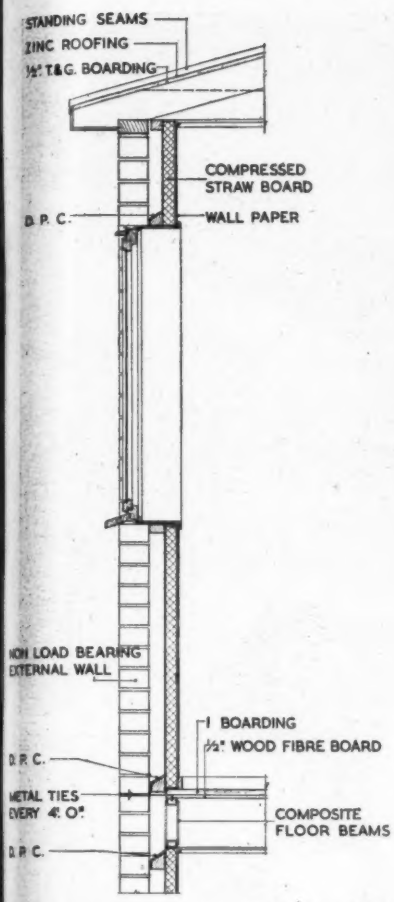
HOUSES

AT COWLEY PEACHEY

DESIGNED BY F. R. S. YORKE, E. ROSENBERG AND C. S. MARDALL



SITE.—Terrace of four houses at Cowley Peachey, near Uxbridge, Middlesex, facing the West Drayton-Uxbridge high road to the north east, and an orchard on the garden side. Beyond the orchard, a hundred yards distant, lies a joinery factory, for whose employees the houses were built. It is proposed to extend the housing scheme at a future date, and to provide a service road separated from the main road by a belt of newly planted trees. The local council required the roof to be pitched, with a non-combustible finish. The roof therefore is constructed of light timber trusses



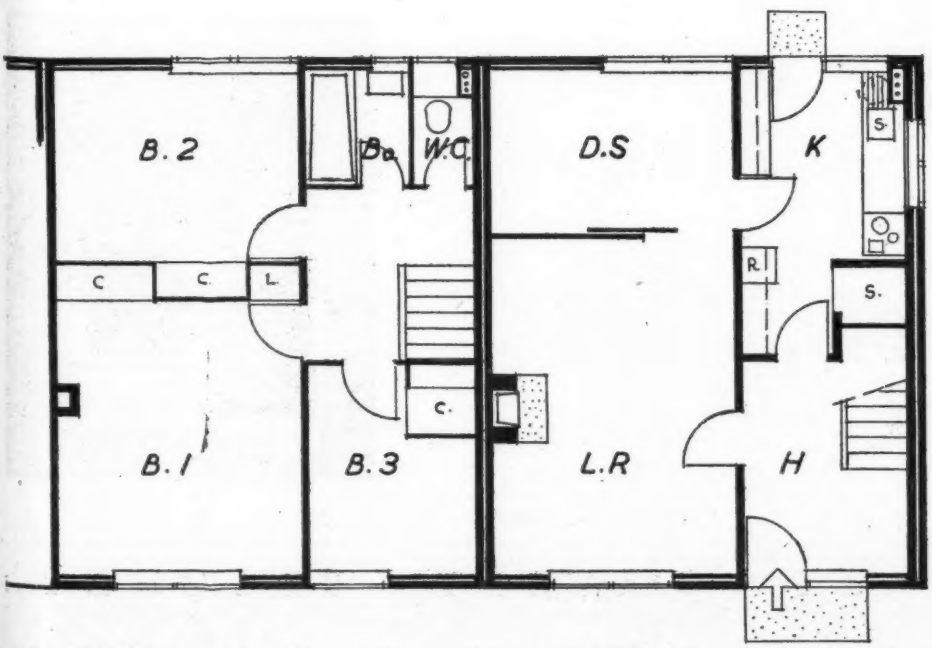
SECTION [Scale : ½" = 1'0"]

Above, rear elevation.

widely spaced, carrying ½ in. T. and G. boarding and having a zinc covering with standing seams.

PLAN.—The plans were evolved with the object of forming a simple structural grid with short spans and non-load-bearing external walls. The living room and dining space are separated by a sliding door and extend from front to back. The two main bedrooms are separated by a tier of cupboards, prefabricated in the adjoining factory.

CONSTRUCTION. — Party walls and end walls are 11 in. cavity brickwork and, together with the parallel cross wall, form the load-bearing structure. Front and back walls are 4½ in. stocks with light timber battens and an inner wall skin of 2 in. compressed strawboard. Non-load-bearing partitions are formed with the same 8 ft. by 4 ft. compressed strawboard units. Floors are—ground : pitch mastic on concrete; first : composite steel floor beams, welded up from bent steel rods, with inset timber nailing fillets, carrying wood boards. The windows are wood, of EJMA standard sections, with non-standard window sizes.



GROUND AND FIRST FLOOR PLANS [Scale : ⅛" = 1'0"]

Top, front elevation. Bottom, a front door.

INTERNAL FINISH.—The compressed strawboard wall linings are plastered and painted in bathroom, kitchen and w.cs. and elsewhere lined with a William Morris pattern wall paper or lining paper distempered. The general colour scheme is: walls and ceilings white; doors and joinery olive grey, relieved with bright yellow and wine red.

HEATING.—There is an open fire in the living room. Domestic hot water is from an Ideal boiler in the kitchen.

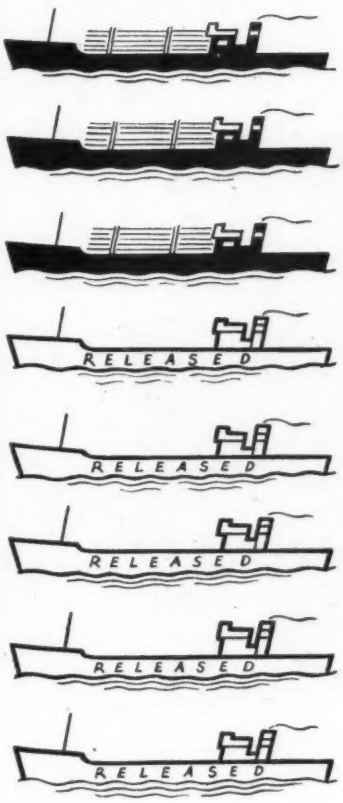
CONTRACT PRICE.—£5,398 17s. 5d., *i.e.*, £1,349 18s. 0d. per house. Price per foot cube, about 2s. 6d.

The general contractors were Messrs. W. S. Try, Ltd. For sub-contractors, see page 396.

HOUSES AT COWLEY PEACHEY:

BY F. R. S. YORKE, E. ROSENBERG AND C. S. MARDALL

Log Logistics*



A comment on the timber fleet

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Corent

TECHNICAL SECTION

The function of this feature is to supply a digest of, and commentary on current information of interest to architects as recorded in technical publications and statements of every kind throughout the world. Items are prepared by specialists of the highest authority who are not on the permanent staff of the Journal, and views expressed are disinterested and objective. Items are printed on one side of the paper only to permit of cutting out and pasting up in classified order in readers' files. The Editors welcome information on all developments from any source.

INFORMATION CENTRE

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

1 SOCIOLOGY. 2 PLANNING: General. 3 PLANNING: Regional and National. 4 PLANNING: Urban and Rural. 5 PLANNING: Public Utilities. 6 PLANNING: Social and Recreational. 7 PRACTICE. 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.

4.25 planning: urban and rural
NEW TOWNS: DECENTRALISATION

New Towns in Relation to the Decentralisation of Population and Industry. R. J. *Williams.* (National Housing and Town Planning Council, 1947.)

Paper discussing problems confronting New Towns authorities and those carrying out redevelopment schemes of overcrowded areas in connection with simultaneous movement of population and industry.

The New Towns Committee gave careful consideration to the variety of agencies which might be charged with the responsibility for the development of the town and the subsequent estate management. The decision in favour of the Government-controlled Corporation as opposed to a Local Authority-sponsored Corporation increases the chances of success for the new town, but makes more difficult the problem of the local authority responsible for the re-development of its overcrowded areas. The paper suggests a policy to be adopted by the local authority in regard to the dispersal movement of population and industry, and discusses the points where this policy is possibly antagonistic to the one likely to be pursued by a New Towns Development Corporation.

10.21 design: building types
HOUSING STANDARDS

Housing Standards. H. Ashworth. (Franey and Co. Ltd., 1947, 4s.)

Short general treatise on housing standards giving factual outline survey of recent developments in connection with construction, design, and town and country planning as related to housing. No illustrations.

Discussion confined to subjects of special interest to students of the Building Societies Institute. Summary of constructional standards laid down by Burt Committee (*House Construction, Post-War Building Studies,* No. 1, HMSO, 1944). Examination of contents of Model Byelaws in order to demonstrate their application to and influence on permanent house construction. Types of dwellings and their internal layout as recommended in the Dudley Report (*Design of Dwellings,* HMSO, 1944). Housing standards and effects of inefficient neighbourhood planning of inter-war years. Historical survey of evolution of town and country planning from Industrial Revolution up to and including New Towns Act, 1946, stressing importance of relationship between progressive planning and good housing.

19.27 construction: details
RC FILLED STEEL PILES

Concrete Filled Steel Piles Supporting Wharf at Long Beach, Calif. R. R. Shoemaker. (Engineering News-Record [USA], September 4, 1947, pp. 328-31.)

Wharf deck supported on some 1,000 composite piles.

The use of concrete filled piles in sea-water, believed to be an innovation, is one feature of the construction of a new pier for the Port of Long Beach. There was fear that the extremely severe requirements for handling heavy concrete piles in sea-water would not be met during the war. This led to the consideration of tapered steel piles filled with concrete. Two main problems had to be studied: (1) the possibility of corrosion of the steel; (2) the uncertainty of the safe load bearing capacity of the piles. Observations at many other places indicate a maximum loss of steel on exposed surfaces of some $\frac{1}{16}$ in. over a period of 21 years. Full allowance for this was made in the choice of shell thickness. Two test piles were driven and the concrete poured by conventional methods. Before pouring, inspection was made of the piles on a bright day by the use of a mirror deflecting sunlight to the bottom. The results of the tests were excellent. The piles are 70 to 85 ft. long.

20.41 construction: complete structures
GRAIN SILO

Improved Concreting Techniques Facilitate Grain Elevator Construction. (Engineering News-Record [USA], September 4, 1947, pp. 320-3.)

Large grain elevator built with pre-mixed air-entrained slag concrete in sliding forms.

The concrete for a 2,000,000-bushel grain elevator at Toledo, Ohio, was hauled four miles to the site in open-body trucks, from the mixing plant of a commercial supplier, who furnished more than 20,000 cu. yd. of concrete to the job. Air-entrained concrete was used because of its superior plasticity and workability. The main structure consists of 40 cylindrical bins, is 118 ft. high, with the workshop at one end for unloading, handling and transferring grain 204 ft. high.

The inner and outer sliding forms were suspended on jack frames at intervals of about 6½ ft. around the periphery of each bin. The platform, constructed to rise with the forms, was carried on wide flanged steel beams designed to support the concrete slab roof of the bin. When raised to final position, it served as the bottom form for the roof.

The superstructure was divided by construction joints into three units. Concrete was delivered to the job 24 hours a day in quantities averaging 24 cu. yd. per hour. Average raise of the forms was 17 ft. every 24 hours.

The structure is designed to handle 25,000 bushels of grain per hour, either receiving it or transferring it from bin to bin.

25.40 water supply and sanitation
CESSPOOLS

Cesspools Draft BS C of P. Sub-Code 302.200: 1947. (British Standards Institution. 2s.)

A code of practice for cesspool building.

This draft code deals with all the unpleasantnesses of three types of cesspool and states that the impervious type is "preferable in all circumstances," but only when there is no reasonable access to a sewer. A capacity formula is given and also a maximum depth of 14 ft., for ease of pumping. Construction, siting, ventilation, access and emptying, are all dealt with. Site, work and testing are fully described.

REFERENCE BACK

23.43 published 23.10.47, is incorrectly attributed to the "Structural Insulation Society." This should be the "Structural Insulation Association."

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

2917 BUILDING DENSITY

Q *Is building density based on the average for the district or on the plot of land in question, e.g., should it be possible to build three houses on a plot of land 3,420 yards square (including half width of road on frontage) zoned at building density 4 per acre, providing the average for the district in which the plot is situated is less than 4 per acre?*

A In line with the Model Clauses prepared by the Minister of Health as a guide to Planning Authorities, the Local Planning Authority has power to lay down the minimum size of plots for any density zoning prescribed in the area. Density zoning is, of course, laid down for any particular district under the Town Planning Scheme for that district. It may vary in different parts of the area. No doubt, the Local Authority, if approached would give permission for 3 houses to be built on the plot mentioned, as density zoning generally is elastic and can be modified slightly if circumstances warrant it.

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

THE INDUSTRY

[by Philip Scholberg]

PLASTICS FOR LIGHT FITTINGS

The enamelled steel troughing used for the reflectors of most fluorescent fittings is perfectly satisfactory for industrial purposes, but leaves a little to be desired on domestic jobs, largely because of the rather unattractive tunnel effect so often produced by hard shadows on the ceiling. The illustration below shows how Philips lamps have overcome this difficulty by using a detachable Perspex reflector which is, of course, translucent, and thus allows a large area of ceiling to be illuminated. The model illustrated takes two 40-watt tubes, and is complete with starting gear, all wired.

It is arguable that fluorescent tubes are not really suitable for domestic use, since it is difficult to make completely silent control gear, and since their life is considerably reduced by repeated switching on and off. These fittings, however, would be particularly suitable for offices, where switching will be comparatively infrequent, and where ceilings are generally low enough for the translucent reflector to be of value. (*Philips Lamps, Ltd., Century House, Shaftesbury Avenue, London, W.C.*2.)

PAINTING ALUMINIUM

Quite a useful little booklet on the preparation of aluminium for painting has been produced by Northern Aluminium. The full title of the booklet is the *Surface Preparation of Aluminium for Paint Systems*, and it covers all uses from structural members in aircraft to straightforward domestic interiors. In the building industry the alloys used are nearly all highly resistant to corrosion, much more so than steel, and no exceptional precautions are generally necessary, probably the best solution being to specify that all material is to be delivered with a coat of zinc chromate primer. The booklet does, however, give an idea of the troubles which may crop up under severe conditions of exposure, and outlines the various pre-painting processes which can be carried out. One or two standard specification clauses would have been useful to the architect, but it is very easy to assume that they are universally applicable, and until the building industry is more used to aluminium it is perhaps better that they should be omitted. (*Northern Aluminium Co., Ltd., Banbury, Oxon.*)

LOSS BY FIRES

The formation of the Fire Offices' Committee Fire Protection Association was announced at the end of last year, and a booklet has now been issued describing what the Association is and what it proposes to do. The key to the whole story is the colossal annual waste caused by fires, over 12 million pounds last year, for example, and the fact that this sum represents only the material loss and ignores altogether the vast consequential losses, which may be many times greater than the amount actually paid out in insurance.

To assume that the whole thing is merely a matter for the victim and his insurance company is easy enough, but wrong. In the long run the general public pays fire damage *and* the consequential loss, in the same way that you, as a driver of extreme sobriety, have to pay your whack every time some drunk wraps his car round a lamp-post, *and* you have to pay for the lamp-post as well.

The insurance companies have never been content to sit back and draw their premiums, but have always been very interested in the whole problem of fire protection. Witness their Elstree Testing Station, which was opened in the early '30's and has been run in conjunction with the DSIR, though, of course, research into methods of fire protection started long before this. The new Fire Protection Association is sponsored by the insurance companies, and is also closely linked with the recently formed joint fire research organization of the DSIR and the Fire Offices Committee. It will give advice free to those who ask for it, collect statistics relating to fires, and publish the latest research information.

Membership of the Association costs a guinea a year. I do not suggest that all architects ought to join, but I imagine that bodies like the RIBA will co-operate, and it should certainly be supported by the many trade associations in the building industry. The temporary address of the Association is the *Testing Station, Boreham Wood, Elstree, Herts.*

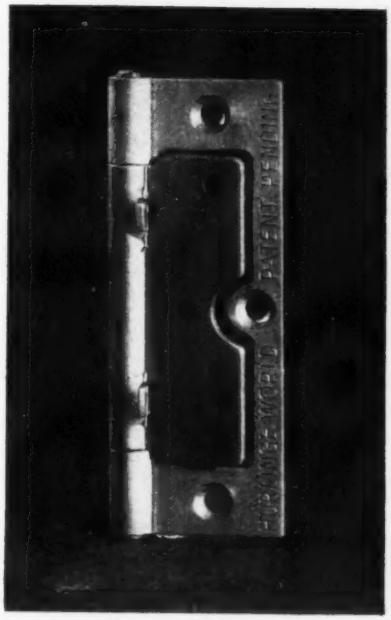
SAVING SITE TIME

In the years before the war it was gradually being realized that almost the only way to bring building costs down was to cut the times of work on the site. Prefabricators, of course, know that half an hour saved on the site is worth at least twice as much saved in the shops. As far back as 1937 I remember an enterprising firm of joinery manufacturers who did very well selling doors hung in door frames and with all the furniture fitted in the shops. How long it takes to hang all the doors in a small house (not forgetting the cupboards) I would not like to guess, but I have just come across a new type of hinge which should cut the time to less than half. It is called the Hurlinge, and is illustrated on this page. Stamped out of a single piece of strip, the two leaves, when closed, are only the single thickness of the strip, and this provides the right gap between door and frame. There is thus no need to rebate either door or frame, and the offset pin and projecting lugs give correct alignment when pushed up against the angle of door and frame.

So far only a 4-inch hinge is produced, and this sells at 7½d. a pair retail. Two-, three-, and 3½-inch sizes are to be added to the range shortly. (*The Hurcal Engineering Co., Ltd.*, 3, *Ferry Buildings, Woodside Ferry, Birkenhead, Cheshire.*)

WARM, HOT OR BOILING

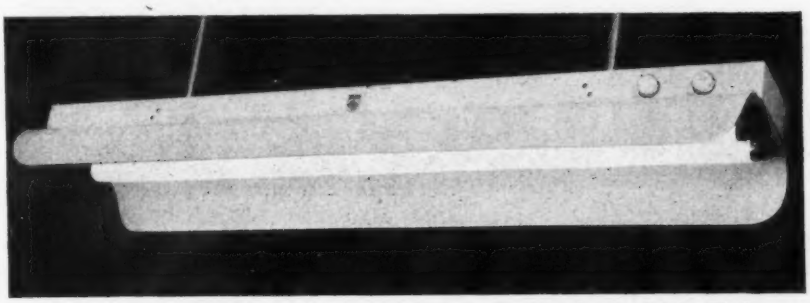
It must be at least ten years since Ascots introduced their boiling water heater, a small model about the same size as their sink heater, but designed to supply boiling water. The original argument, so far as I remember, was that water, even straight out of the spout of a boiling kettle, is still two or three degrees below actual boiling point, and that tea is best made with water which is really boiling. This model was abandoned during the war years, but it has now been reintroduced, and seems to be selling in spite of 66 per cent. purchase tax. Apart from tea making I imagine that it should be useful in doctors' surgeries and suchlike. As well as boiling, there is a three-position gas tap which gives warm or hot water as alternatives. (*Ascot Gas Water Heaters, Ltd.*, 43, *Park Street, London, W.*1.)



Hurlinge 4-in. door hinge. *See* Saving Site Time.

FILM PUBLICITY

J. H. Sankey have just produced a good film on the uses of Sisalkraft. I have known this material for a number of years as a waterproof building paper with any number of uses, for curing concrete, for use below site concrete, or instead of sarking felt on roofs. But this firm also makes other grades, notably a copper faced paper to be used as dampcoursing, and another version faced with aluminium foil for use as a thermal insulation. To publicise materials like these, which are naturally invisible on the completed job, is not too easy, and a constructional film is a logical way of doing it. Commendably lacking in propaganda, the film is factual and straightforward. It is to be shown at regular intervals and can be seen on application to its sponsors. (*J. H. Sankey and Son, Ltd., Aldwych House, Aldwych, London, W.C.*2.)



Detachable Perspex reflector for fluorescent lamps. *See* Plastics for Light Fittings.

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 :—

NAME.....

ADDRESS.....

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..... *A.J.* 30.10.47

Buildings Illustrated

Harcourt Elementary School, Surrenden Road, Folkestone, for the Folkestone Education Committee (pages 383-386). Architect: E. Wamsley Lewis, F.R.I.B.A. General contractor: O. Marx. Clerk of works: T. H. Amery. General foreman: P. Mummery. Contract price, £46,100. Price per foot cube, 1s. 4½d. Sub-contractors: Ruberoid Co., Ltd., dampcourses; D. G. Somerville & Co., Ltd., reinforced concrete; Ryarsh Brick & Sand Co., buff sandlime, bricks to special size; Bath & Portland Stone Firm, Ltd., stone; William Briggs & Sons, Ltd., 3-ply bituminous roofing; Educational Supply Association, Ltd., partitions; T. & W. Ide, Ltd., glass domes; Horsley Smith & Co., Ltd., woodblock flooring; Sika Français, waterproofing materials; J. Jeffreys & Co., Ltd., central heating; Davis Gas Stove Co., Ltd., Sidney Flavel & Co., Ltd., gas fixtures; Folkestone Gas Co., gasfitting; Folkestone Electricity Supply Co., electric wiring; F. H. Pride, Ltd., D. Walter & Co., Ltd., light fittings, footlight and stage lighting; Doulton & Co., Ltd., sanitary fittings; Gummers, Ltd., shower fittings; Adamite Co., Ltd., stair-treads; Adrian Stokes, Ltd., door furniture; Crittall Manufacturing Co., Ltd., casements; Garton & Thorne, balustrades, gates and railings; Modern Surfaces, Ltd., glazed wall surfaces in sanitary block; Venesta, Ltd., flush doors; Brace & Fisher, animal tiles for infants' room; Carter & Co., Ltd., tiling; Donald Brothers, Ltd., textiles; James MacDonald, grass seed; D. Stewart & Son, Ltd., trees and shrubs; Clibrans, Ltd., polyantha roses; Educational Supply Association, Ltd., folding partitions; Andrew Bentley, chromboards; Spencer, Heath & George, Ltd., gymnasium fittings; Lockerbie & Wilkinson, Ltd., cloakroom fittings, etc.; Smith's Electric Clocks, Ltd., clocks; Becco Engineering and Chemical Co., Ltd., water softening plant; Daymond, Ltd., plastic letters and numerals.

Terrace of 4 3-bedroom houses in High Road, Cowley Peachey, near Uxbridge, Middlesex, for the Tomo Trading Company (pages 390-392). Architects: Messrs. F. R. S. Yorke, F.R.I.B.A., E. Rosenberg, and C. S. Mardall, A.R.I.B.A., General Contractors; W. S. Try, Ltd. Sub-Contractors: asphalt: The French Asphalt Co.; bricks, London stocks, Cement Marketing Board; structural steel, Trussed Concrete Steel Co.; zinc roofings (standing seams), G. A. Harvey & Co. (London) Ltd.; Stramit board partitions, Tomo Trading Co.; waterproofing materials, Astos D.P.C., Ruberoid Company Ltd.; stoves, A.1 projector and grates, W. N. Froy; boilers, Ideal Boilers and Radiators Ltd.; electric wiring, W. S. Marler; sanitary fittings, Stitson's Sanitary Fittings; door furniture. S. Grahame Ross Ltd.; casements, Linden Doors Ltd.; window furniture, Tomo Trading Company.

Announcement

Mr. William S. Robertson, M.B.E., B.SC., has been appointed Scientific Contacts and Industrial Information Officer to the Scottish Council (Development and Industry). Mr. Robertson is at present employed in the Department of Scientific and Industrial Research and will take up his new position early in the new year.

Acknowledgment

The photograph of the prototype school under construction at Cheshunt in our issue for October 16 was reproduced by permission of the Building Research Station.

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: 75, EATON PLACE, LONDON, S.W.1. TEL. SLOANE 5615. 991

LONDON COUNTY COUNCIL.
COUNTY OF LONDON PLAN—VACANCIES FOR PLANNING STAFF.

Applications are invited for positions in the following grades:—

PLANNING OFFICER, Grade III, up to £700 a year.

TECHNICAL ASSISTANT, up to £580 a year.

Commencing rate according to qualifications and experience. Opportunities for competing for permanent appointment and promotion. Successful candidates will be superannuable.

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

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

Application forms obtainable from Architect to the Council, County Hall, S.E.1 (enclose stamped addressed envelope), returnable not later than 10 days from this date.

Canvassing disqualifies. (1680) 835

DEPARTMENT OF HEALTH FOR SCOTLAND invite applications for the following temporary Planning and Architectural appointments. The work covers town and country planning, housing and design of hospitals, health centres, schools, and other community buildings.

(a) Planning Appointments (covering regional planning work, planning technique, and studies for survey and development plans):

(1) ASSISTANT PLANNING OFFICERS. Candidates should be qualified as architects, engineers or surveyors, and should have passed the Final examination of the T.P.I. Preferably they should have had at least three years' experience in a planning office. Minimum age: 26. Commencing salary: £485 at age 26, with additions of £25 for each year up to age 32.

(2) PLANNING ASSISTANTS. Candidates should have reached the Intermediate examination stage as architects, engineers, surveyors or planners, and should preferably have had some experience in a planning office. Minimum age: 22. Commencing salary: £320 at age 22, with additions of £20 for each year up to age 25.

(b) ASSISTANT ARCHITECTS. To assist on research work on special building types and on design and layout of housing and other building schemes for redevelopment areas and new towns. Candidates should be fully qualified architects, preferably with at least four years' practical experience. Minimum age: 24. Commencing salary: £435 at age 24, with additions of £25 for each year up to age 30.

Successful candidates over the higher ages mentioned may be given further additions to the salaries indicated. Salaries for women in respect of all the above-mentioned appointments will be somewhat lower than those for men. Forms of application may be obtained from the Establishment Officer (Room 31), Department of Health for Scotland, St. Andrew's House, Edinburgh, 1. No application can be considered unless received by the Department on the prescribed form not later than 1st December. 861

ROYAL BOROUGH OF NEW WINDSOR.
TOWN PLANNING CONSULTANT.

Applications are invited from persons (preferably Architects), with suitable qualifications and experience in Town Planning, to act as the Council's Town Planning Consultant generally.

For the guidance of applicants, the main features of the Consultant's duties would be to advise on applications for town planning permission, and on the Council's own plans for housing and improvements generally; to attend meetings when necessary, and to prepare sketches to illustrate any suggestions made.

Applications, stating age, qualifications, experience, and the fees required, together with the names of three persons to whom reference may be made, must reach me not later than the 15th November, 1947.

R. WEBSTER STORR,
Town Clerk.

14, Park Street, Windsor. 939

CITY OF OXFORD.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the undermentioned posts on the permanent staff of the City Architect's Department:—

(1) ASSISTANT ARCHITECT (Site Planning). Grade VII, A.P.T. Division. Salary £575×£25—£650 per annum, plus cost-of-living bonus (at present £60 per annum).

The successful applicant will be required to prepare, under general direction, comprehensive site lay-outs for new Council Estates and general City Development schemes. A high standard of ability in design will be expected, and at a later date the duties of the post may also include detailed architectural work required in connection with new public buildings.

Applicants should be Members of the R.I.B.A., and a Town Planning qualification will be an advantage.

(2) TWO ASSISTANT ARCHITECTS (HOUSING); ONE ASSISTANT ARCHITECT (EDUCATION).

Grade V, A.P.T. Division. Salary £460×£15 (2) × £20 (1)—£510 per annum, plus cost-of-living bonus (at present £60 per annum).

For the Housing posts experience in House and Flat design, and for the Education post experience in the design and construction of Schools will be an advantage. Applicants should be members of the R.I.B.A.

(3) (*a*) ASSISTANT SURVEYOR.

Grade VII, A.P.T. Division. Salary £575×£25—£650 per annum, plus cost-of-living bonus (at present £60 per annum).

The successful applicant will be required to take charge of the Quantities and Accounts section of the Department. The duties of this Section comprise the checking of accounts for both new building contracts and maintenance, and repair work on Council property, preparation of estimates, valuations for certificates, labour and materials returns, etc. In addition the section deals with administrative work connected with the Works Section of the Department which carries out Council building work by direct labour.

Candidates should be members of the Royal Institution of Chartered Surveyors.

(*b*) ASSISTANT SURVEYOR.

Grade III, A.P.T. Division. Salary £390×£15—£435 per annum, plus cost-of-living bonus (at present £60 per annum).

The successful applicant will be required, with others, to assist the head of the section, referred to above. Preference will be given to qualified members of the R.I.C.S.

Housing accommodation, if required, will be made available by the Council for successful applicants for the above-mentioned posts.

(4) TWO ARCHITECTURAL ASSISTANTS.

Grade III, A.P.T. Division. Salary £390×£15—£435 per annum, plus cost-of-living bonus (at present £60 per annum).

The successful applicants will be required to carry out work on Schools, Housing and Public Buildings.

It may be possible to assist the persons appointed in finding housing accommodation.

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

Further details of the duties and application forms, which must be used in applying for the posts, may be obtained from E. G. Chandler, A.R.I.B.A., A.M.T.P.I., City Architect, Town Hall, Oxford.

Applicants must clearly state for which post they wish to apply when writing for forms, and these forms must be returned to the City Architect not later than first post Wednesday, 19th November, 1947.

HARRY PLOWMAN,
Town Clerk.

Town Hall, Oxford. 959

DERBYSHIRE COUNTY COUNCIL.

Applications are invited for the appointment of an ASSISTANT ARCHITECT.

Conditions of service are in accordance with the National Joint Council Scheme as adopted by the County Council.

Salary payable is under Grade VII, plus cost-of-living bonus, at present £59 16s. per annum.

Applicants must have had experience in the design and construction of modern buildings, have a knowledge of surveying and levelling, and possess an appropriate professional qualification.

Applicants must state in their applications whether or not they are related to any member of the Council or to the head of a department under the Council.

Canvassing of Members of the Council, directly or indirectly, will be a disqualification for appointment.

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

The Council is not able to assist successful applicants in the provision of housing accommodation.

Applications to be made on a form to be obtained from the undersigned, to whom it must be returned, accompanied by copies of three recent testimonials, by 12th November, 1947.

F. HAMER CROSSLEY, Dipl.Arch., A.R.I.B.A.
County Architect.

30th October, 1947. 1001

WEST SUFFOLK COUNTY COUNCIL.

Applications are invited for the appointment of a QUANTITY SURVEYOR, in the County Architect's Department, at a salary within the range of Grades A.P.T., V-VI, of the National Joint Council salary scale (£460-£600), commencing salary according to qualifications and experience, plus cost-of-living bonus (at present £60 per annum).

Travelling allowance in accordance with County Scale.

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

Forms of application may be obtained from the undersigned, by whom applications, accompanied by three recent testimonials, should be received not later than Monday, 10th November, 1947.

L. G. H. MUNSEY,
Clerk of the County Council.

Shire Hall, Bury St. Edmunds. 961

HIS MAJESTY'S COLONIAL SERVICE.
ASSISTANT TOWN PLANNING OFFICER

required by the Government of Aden. The appointment is on temporary terms for two tours of duty, covering 5 years in all (including leave). Salary scale £840×40—£920 per annum, point of entry dependent on age, qualifications and experience. Candidates must possess qualification of A.M.T.P.I., and preferably architectural qualifications in addition. They must have had experience in the design and execution of Town Planning Schemes.

The terms of service include free quarters or an allowance in lieu, free passages once each way each tour for the officer and, if married, for his wife, and home leave on full pay at the rate of 7 days for each month of resident service. Tours of duty 18-24 months. A war allowance of 15 per cent. of the salary is payable, with a maximum of £135 per annum. Income tax at local rates only.

Applicants should write at once to the Director of Recruitment (Colonial Service), Colonial Office, 15, Victoria Street, London, S.W.1, stating age and professional qualifications, and giving brief details of experience. 993

MANCHESTER MUNICIPAL COLLEGE OF TECHNOLOGY
(FACULTY OF TECHNOLOGY IN THE UNIVERSITY OF MANCHESTER).
APPOINTMENT OF LECTURER IN QUANTITY SURVEYING.

The Governing Body invites applications for a Lectureship in Quantity Surveying, with the title and status of Lecturer in the University of Manchester.

Candidates should be either Fellows or Professional Associates of the Royal Institution of Chartered Surveyors, with good professional and teaching experience.

Present salary scale: £550 per annum, rising by annual increments of £20 to £725 per annum. Commencing salary according to qualifications.

Conditions of appointment and form of application may be obtained from the Registrar, College of Technology, Manchester, 1. The last day for the receipt of applications is Thursday, 6th November, 1947.

Canvassing, either directly or indirectly, will disqualify a candidate for appointment.

J. E. MYERS.
Principal of the College. 997

SURREY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

STRUCTURAL ASSISTANT, Grade V, at a commencing salary of £460, rising by annual increments of £15/£20 to a maximum of £510 per annum, plus London allowance of £20, together with cost-of-living bonus, at present £59 16s. per annum.

Applicants must have had a comprehensive training in Structural Engineering, and have had good experience in the design and detail of:—(*a*) Steel-framed buildings and/or (*b*) reinforced concrete structures.

Preference will be given to applicants who are members of the Institute of Structural Engineers.

GENERAL ARCHITECTURAL ASSISTANT, at a salary commencing at £160 at 21 years of age and rising to £300 at 30 years, plus London allowance of £20/£30, together with cost-of-living bonus, at present £59 16s. per annum.

Applicants should be of good general training and experience.

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

Applications, stating age, qualifications, and experience, and accompanied by copies of three recent testimonials, should be sent to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 8th November, 1947.

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

DUDLEY AUKLAND,
Clerk of the Council.

County Hall, Kingston-upon-Thames. 952

CITY OF CARDIFF.
CITY SURVEYOR'S DEPARTMENT.

Applications are invited for the undermentioned appointments, which are subject to the following conditions:—(i) The Scheme of Conditions of Service approved by the National Joint Council for Local Authorities, (ii) the Local Government Superannuation Act, 1937, (iii) the passing of a medical examination by the successful candidates, (iv) determination by one month's notice on either side, (v) the disclosure in writing of any known relationship between the candidate and any member of the Council or the holder of any Senior Office under the Council, and (vi) canvassing directly or indirectly will disqualify.

(a) ASSISTANT ARCHITECTS. £460-£510 (Grade V).

Applicants must be Chartered Architects, with good experience in the preparation of working drawings of all types. (Two vacancies.)

(b) ARCHITECTURAL ASSISTANTS. £420-£465 (Grade IV).

Applicants must be Architects, with good general experience as an Assistant. (Four vacancies.)

(c) ARCHITECTURAL ASSISTANTS. £390-£435 (Grade III).

Applicants should have had experience of a general nature. (Four vacancies.)

(d) ASSISTANT QUANTITY SURVEYOR. £535-£600 (Grade VI).

Applicants must be Chartered Quantity Surveyors, and have had a good general experience.

(e) QUANTITY SURVEYING ASSISTANT. £460-£510 (Grade V).

Applicants to be fully experienced in the duties of a Quantity Surveyor, and able to control contracts under supervision.

The foregoing are permanent appointments, and the City Council will materially assist in obtaining housing accommodation for successful applicants.

The salaries are exclusive of the present cost-of-living bonus of £59 16s. per annum.

Applications should be tabulated, showing age, qualifications, present and previous appointments, salaries, list of buildings on which experience has been obtained, and the names of three referees to whom reference can be made and delivered to the undersigned within fourteen days of the appearance of this advertisement.

S. TAPPER JONES,
Town Clerk.

City Hall, Cardiff. 987

DEVON COUNTY COUNCIL.

Applications are invited for the appointment of AREA BUILDING SURVEYOR, in the County Architect's Department. Candidates must have been trained as tradesmen and be able to prepare estimates and specifications for minor work, repairs and maintenance to all classes of County Buildings, and supervise contracts for such work in the area.

Salary will be paid in accordance with Grade II of the National A.P.T. scales (£360-£405 per annum), plus cost-of-living bonus, at present £59 16s. per annum.

The successful candidate will be required to reside in or near the town of Okehampton (the most convenient centre for the area), and must provide his own car, for which he will be paid an allowance in accordance with the County Scales.

Applications, stating age, qualifications and experience, accompanied by not more than three recent testimonials, should be sent to the County Architect, 97, Heavitree Road, Exeter, not later than Friday, the 14th November, 1947.

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

H. A. DAVIS,
Clerk of the County Council.

The Castle, Exeter.
18th October, 1947. 986

COUNTY OF LINCOLN—PARTS OF KESTEVEN.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT ARCHITECT in the above Department.

Salary will be in accordance with Grade VI of the A.P.T. Division of the National Scales, *i.e.*, £535, rising by annual increments of £20 and £25 to a maximum of £600 per annum, plus cost-of-living bonus of £59 16s. per annum, and travelling and subsistence allowances on the Council's scale. A lodging allowance of 30s. per week up to a maximum of six months will be paid to married men where difficulty is found in obtaining housing accommodation.

A.R.I.B.A., or similar qualification, is essential, and experience in Educational and General County work is desirable.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, to a satisfactory medical certificate, and to termination by three months' notice in writing on either side.

Applications, stating age, experience and qualifications, present appointment and salary, together with the names of two referees, should be received by the undersigned not later than the 30th November, 1947.

J. E. BLOW,
Clerk of the County Council.

County Offices, Sleaford, Lincs. 999

CITY OF COVENTRY.

Applications are invited for the following whole-time appointments, on the permanent staff of the City Architectural Department:—

(a) TWO ASSISTANT ARCHITECTS, one vacancy each in the Housing and Education Sections.

Salary grade A.P.T., V, commencing at £460 per annum, and rising to £510 per annum. Candidates should be Associate Members of the Royal Institute of British Architects, or hold equivalent qualifications.

(b) ONE ASSISTANT ARCHITECT.

Salary grade, A.P.T., IV, commencing at £420 per annum, and rising to £465 per annum.

(c) ONE SENIOR ASSISTANT QUANTITY SURVEYOR.

Salary grade A.P.T., V, commencing at £460 per annum, and rising to £510 per annum. Candidates should be Professional Associates of the Royal Institution of Chartered Surveyors (Quantities Division).

(d) One ASSISTANT QUANTITY SURVEYOR.

Salary grade A.P.T., III, commencing at £390 per annum, and rising to £435 per annum.

Salary increments are subject to satisfactory service. The above salaries are exclusive of the Council's cost-of-living bonus, which may vary, but which at present amounts to 23s. per week.

The posts are subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, as amended in regard to annuities to widows by the Coventry Corporation Act, 1936, and a satisfactory certificate will be requisite from the Council's medical referee. The successful male applicants will be required to contribute to the Coventry Municipal Officers', Widows' and Orphans' Pension Fund.

Applications must be made on the forms obtainable from the undersigned, and should be returned completed, together with copies of not more than two recent testimonials, or names of two persons to whom reference may be made, not later than Monday, the 10th November, 1947.

Canvassing, directly or indirectly, will be a disqualification.

D. E. E. GIBSON,
City Architect.

1a, Warwick Row, Coventry.
23rd October, 1947. 976

MONMOUTHSHIRE COUNTY COUNCIL.

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

PERMANENT ASSISTANT QUANTITY SURVEYOR, at a salary in accordance with Grade V of the Administrative, Professional and Technical Division of the National Joint Council Scheme, *viz.*, £460 per annum, rising by annual increments of £15 and one of £20 to a maximum of £510 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

Candidates should be members of the Surveyors' Institution (Quantity Section), and should have had wide experience in preparing estimates and bills of quantities and in dealing with Contractors' Accounts, etc.

The appointment will be subject to the Local Government Superannuation Act, 1937, and to the Regulations of the Council in force from time to time governing their Administrative, Technical and Clerical Staff, and will be determinable by one month's notice on either side.

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

Canvassing, directly or indirectly, will be a disqualification, and applicants must disclose in writing any relationship within their knowledge to a member of the Authority or to a holder of any Senior Office under the authority.

Forms of application and conditions of service can be obtained from the undersigned. Applications, stating age, experience and qualifications, together with copies of three recent testimonials, must be delivered to Mr. Colin L. Jones, F.R.I.B.A., County Architect, Queen's Hill, Newport, Mon., not later than Monday, 10th November, 1947.

VERNON LAWRENCE,
Clerk of the Council.

County Hall, Newport. 984

CITY OF ST. ALBANS.
CITY ENGINEER AND SURVEYOR'S DEPARTMENT.
CHIEF ARCHITECTURAL ASSISTANT.

Applications are invited for the temporary post of Chief Architectural Assistant, in the above department, at a salary of £600 per annum, plus current cost-of-living bonus, £59 16s. per annum. A car allowance will be paid in addition, the amount for the present being £70 p.a. The appointment will be for a minimum period of three years.

Applicants must be members of the Royal Institute of British Architects, and must have had experience in the preparation of plans, working drawings, specifications, and layouts for modern Municipal Housing Schemes, and other Municipal Buildings.

The appointment is subject to one month's notice on either side.

Applications, stating the applicant's age, qualifications and Municipal experience, accompanied by not more than three copies of recent testimonials (non-returnable) must reach the undersigned, in envelopes endorsed "Temporary Chief Architectural Assistant," not later than 17th November, 1947.

S. H. E. CRANE,
Town Clerk.

38, St. Peter's Street, St. Albans.
17th October, 1947. 989

COUNTY BOROUGH OF HALIFAX.
BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited for the appointment of JUNIOR ARCHITECTURAL ASSISTANT, at a salary of £315, rising to £360 per annum, in accordance with Grade II (Miscellaneous Division) of the National Scale, plus cost-of-living bonus, at present £59 16s. per annum. Applicants should be trained Architects, capable of assisting in the preparation of schemes for and the supervision of architectural work. They must be neat draughtsmen, and a recognised architectural qualification will be considered an advantage. 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, present position and salary and experience, accompanied by copies of three recent testimonials, should be delivered to the undersigned not later than Saturday, 15th November, 1947.

W. USHER,
Town Clerk.

Town Hall, Halifax.
13th October, 1947. 979

COUNTY BOROUGH OF EAST HAM.
APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments on the Architectural Staff of the Borough Engineer's Department:—

(1) ARCHITECTURAL ASSISTANT—Grade V.

Candidates must be Associate Members of the Royal Institute of British Architects or hold an equivalent qualification, and have a general knowledge and experience of architectural work. Salary £480 to £530 per annum.

(2) ARCHITECTURAL ASSISTANT—Grade IV.

The qualifications required are as above. Salary £440 to £485 per annum.

The above appointments are on the permanent staff of the Council.

The salaries quoted above include the London allowance. War bonus (at present £59 16s. per annum in the case of men over 21) will be paid in addition.

The appointments will be subject to the Council's conditions of service in force from time to time for permanent staff, to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Applications, on forms obtainable from the undersigned, must be delivered to me, together with copies of three recent testimonials, by not later than Monday, the 17th November, 1947. Applicants should state the position for which they desire to apply.

Canvassing will disqualify.

H. A. EDWARDS,
Town Clerk.

Town Hall, East Ham, E.6.
October, 1947. 980

HIS MAJESTY'S COLONIAL SERVICE.

SENIOR TOWN PLANNING ASSISTANT required by the Government of the Gold Coast. The appointment is on contract for two tours in the first instance, with the prospect of transfer to the permanent and pensionable establishment. Salary scale (inclusive of expatriation pay), £660-£1,300 per annum, by varying annual increments, point of entry depending on age, qualifications and experience. Rent of Government quarters varies from £60 to £90 per annum, according to salary. The officer selected will be required to assist the Secretary and Executive Officer of the Town and Country Planning Board. The programme of the Board envisages the preparation of supplementary and final schemes for Accra, Kumasi, Sekondi, Takoradi, Cape Coast, Tarkwa, and several smaller towns. Candidates must possess the qualifications of A.M.T.P.I. and A.R.I.B.A., and have had good experience in the preparation of Town Planning Schemes. The age limits are 25-35.

Tours of service last from 18-24 months. The terms of service include free passages once each way each tour for the officer, and, if married, for his wife, free medical attention and home leave on full pay at the rate of seven days for each month of resident service. Income tax is at low West African rates only. A gratuity is payable on satisfactory completion of the period of the contract, if the officer is not selected for transfer to the permanent and pensionable establishment. Outfit allowance of £60 payable on first appointment.

Applicants should write at once to the Director of Recruitment (Colonial Service), Colonial Office, 15, Victoria Street, London, S.W.1, stating age, professional qualifications and experience. 982

CROWN AGENTS FOR THE COLONIES.

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

QUANTITY SURVEYOR required by Gold Coast Government, Public Works Department, for 18 to 24 months, with prospect of permanency. Commencing salary and overseas pay up to £1,000 a year, rising to £1,200. Outfit allowance £60. Free passages. Candidates must be proficient in taking off, abstracting, and preparing bills of quantities for general building work (including reinforced concrete). 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/12810 on both letter and envelope. 981

FIFE COUNTY COUNCIL.
COUNTY HOUSING ARCHITECT'S DEPARTMENT, CUPAR.

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT, in the County Housing Architect's Department. Applicants must be qualified Architects, under 45 years of age, with previous experience of Local Authority Schemes, particularly Housing. Salary will be £430 per annum, plus war increase of £60 per annum. The appointment is superannuable, and the successful candidate will require to undergo a medical examination. Applications, stating age, qualifications, and experience, accompanied by copies of testimonials, must be lodged with the undersigned not later than 3rd November, 1947. No canvassing.

J. M. MITCHELL,
County Clerk.

County Buildings, Cupar-Fife.
23rd October, 1947. 1005

DEPARTMENT OF HEALTH, DUBLIN.
VACANCIES FOR TEMPORARY ASSISTANT ARCHITECTS.
GRADE I AND GRADE II IN CONNECTION WITH SANATORIA CONSTRUCTION.

Candidates must hold a recognized University degree in architecture or an equivalent academic qualification. For Grade I posts candidates must have satisfactory post-graduate practical experience of architectural work and in the design and construction of buildings, including experience in the preparation of designs and contract drawings from sketches or instructions, and in the supervision of building contracts. Candidates for Grade II posts must have had satisfactory architectural experience.

Salary: Salary to be determined according to qualifications and experience will for Grade I posts be within the range of £650 to £800 a year (men) and £550 to £675 a year (women), and for Grade II posts within the range of £9 10s. to £13 a week (men) and £7 10s. to £10 10s. a week (women).

Female candidates must be unmarried or widows.

If a sufficient number of candidates resident in Great Britain is forthcoming, arrangements will be made to interview them at a suitable centre in Great Britain.

Application forms and conditions of service may be obtained from the Secretary, Department of Health, Room 225, Custom House, Dublin. Completed forms should be forwarded so as to reach that address on or before the 28th November, 1947.

PADRAIG O CINNEIDE,
Secretary.

Department of Health, Dublin.
28th October, 1947. 992

METROPOLITAN BOROUGH OF PADDINGTON.
APPOINTMENT OF SUPERINTENDENT OF WORKS (WORKS SECTION), HOUSING DEPARTMENT.

The Council invite applications for the appointment of Superintendent of Works (Works Section), Housing Department, at a salary of £700 per annum, in accordance with Grade VIII of the A.P.T. Division of the National Joint Council's Scheme of Conditions of Service, plus London "weighting" (£20 p.a.) and cost-of-living bonus (at present £59 15s. p.a.).

The duties of the appointment will involve supervision of the works side of the whole of the Council's building programme (including large new housing schemes and works of adaptation and conversion) being executed both by contract and by direct labour.

Applicants, who should not be over 50 years of age, must have had good all-round experience of the building trades and of the control and management of such a building organisation, either with a local authority or with a commercial undertaking.

The successful candidate will be required to produce a certificate of birth; pass an examination by the Council's Medical Examiner, and devote the whole of his time to the duties of his office. The appointment will be subject to the Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services, and to the provisions of the Paddington Borough Council (Superannuation and Pensions) Acts.

Applications, stating (*a*) age, (*b*) qualifications (*c*) present appointment, (*d*) previous appointments, and (*e*) experience, and giving the names of three persons to whom reference may be made, should be sent in an envelope marked "appointment of Superintendent of Works," so as to be received by the undersigned not later than Monday, 24th November, 1947.

Canvassing, either directly or indirectly, will disqualify.

W. H. BENTLEY,
Town Clerk.

Town Hall, Paddington W.2.
29th October, 1947. 1002

BOROUGH OF KEIGHLEY.
BOROUGH ARCHITECT'S AND HOUSING DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT. The salary for the position will be in accordance with Grade III, A.P. & T. Division of the National Scheme for Local Government Officers, *viz.*, £390-£435 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

The appointment will be subject to the Corporation's Conditions of Service and Superannuation Scheme, and the successful candidate will be required to pass a medical examination. The Corporation are unable to provide housing accommodation for the successful applicant.

Applications, stating age, previous experience, etc., and accompanied by two recent testimonials, must reach the undersigned not later than Friday, 14th November, 1947.

ERIC G. FELGATE, A.R.I.B.A.,
Borough Architect,

Borough Architect's and Housing Department, College Street, Keighley, Yorkshire.
23rd October, 1947. 1008

CROWN AGENTS FOR THE COLONIES.

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

HEAD DRAUGHTSMAN required by Ceylon Government Irrigation Department for one tour of three years. Salary Rs.900 a month (Rs.1 = 1s. 6d.). Free passages and quarters. Provident Fund. Candidates must have had ten years' experience in the drawing office of a large Civil Engineering establishment, and must be capable of preparing detailed designs and quantities for reinforced concrete and masonry bridges, dams, sluices, and other hydraulic structures. 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/17282 on both letter and envelope. 1007

CITY OF PLYMOUTH EDUCATION COMMITTEE.
PLYMOUTH SCHOOL OF ART.

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

Applications are invited for the post of SENIOR ASSISTANT AND STUDIO INSTRUCTOR in the Department of Architecture.

Applicants should be Associates of the R.I.B.A., and preferably have been trained in a recognized School of Architecture. Previous teaching experience desirable and ability to give instruction in any of the subjects of the Intermediate and Final Examination of the R.I.B.A. Salary according to the Burnham Technical Report.

Under the current Burnham Report (which will be modified as from April 1, 1948), the salary scale for Senior Assistants is £600×£25—£750, with appropriate additions for periods of full-time study or training exceeding two years.

Further particulars and form of application to be returned within two weeks of the appearance of this advertisement may be obtained on receipt of a stamped addressed envelope from Andrew Scotland, Director of Education, Plymouth. 978

BOROUGH OF WIMBLEDON.
ARCHITECTURAL ASSISTANTS.

Applications are invited for the appointment of TWO ARCHITECTURAL ASSISTANTS, on the permanent staff in the Department of the Borough Engineer and Surveyor.

Applicants must have had experience in Municipal architectural and housing work, and should be members of the Royal Institute of British Architects or have reached a similar standard.

The salary is £440 per annum, rising by three increments of £15 to £485 (A.P.T., Grade IV), and a cost-of-living bonus, at present £59 16s. per annum. The appointments are in accordance with the National Conditions of Service.

The appointments are also subject to the provisions of the Local Government Superannuation Act, 1937, and to satisfactory medical examinations.

Applications, endorsed "Architectural Assistants," stating age, qualifications, experience, past and present appointments, length of notice required to terminate present appointment, and accompanied by the names of three persons as referees, must be forwarded to the Borough Engineer and Surveyor, not later than first delivery on Saturday, 15th November, 1947.

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

EDWIN M. NEAVE,
Town Clerk.

Town Hall, Wimbledon, S.W.19. 1003

Partnership

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

ASSOCIATE wishes to purchase Private Practice or Partnership in same; Newcastle-on-Tyne area. Reply in confidence to Box 1000.

Architectural Appointments Vacant

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

JUNIOR ARCHITECTURAL ASSISTANT required in general practice in Somerset; R.I.B.A.; Intermediate standard; good draughtsmanship and experience essential; excellent prospects; salary by arrangement. Box 933.

ESTIMATING SURVEYOR required by large building contractors engaged on Council housing schemes, factories, etc.; must have knowledge of estimating, measuring, quantities; write, stating age, experience, and salary required; interviews open to likely candidates. Apply Architect, E. O'Sullivan, Ltd., Building Contractor, Cray Avenue, St. Mary Cray, Kent. Telephone: Orpington 3737. 951

ARCHITECTURAL ASSISTANT required immediately in London office; must be good draughtsman of intermediate standard; some experience of industrial buildings an advantage. Box 963.

REQUIRED, young, qualified Quantity Surveyor for Bills of Quantities, Specifications, Estimates, etc., in private architect's office, Somerset. Full particulars to Box 972.

ARCHITECT or SURVEYOR required at Head Office, Guildford, to survey Company's properties; salary by arrangement. Box 996.

LONDON PASSENGER TRANSPORT BOARD.—Applications are invited for appointments on the temporary staff of the Architect as follows: Assistant Architects, Architectural Assistants, Structural Engineering Designers; commencing salary from £300 to £600 per annum, according to ability, qualifications and experience. Applications, which should give a brief outline of training and experience, to be sent to the Staff Officer, ER/E451, London Passenger Transport Board, 55, Broadway, S.W.1. 923

YORKSHIRE BREWERY require a fully qualified ARCHITECT; the applicant must have had previous experience in brewery work and the control of direct labour. Box 981.

ARCHITECTURAL ASSISTANT, with Provincial experience, including factory work, required immediately at Scarborough; permanency if proved suitable. Apply, stating age, experience, and salary required, Baker, 7, York Place, Scarborough.

ARCHITECTURAL ASSISTANT, with general architectural experience (experience of Quantity Surveying an advantage) required to take charge of Drawing Office of large Yorkshire firm of Building Contractors; applicants interested in permanency preferred; this position carries membership of Staff Life Assurance and Pension Scheme after probationary period; financial assistance will be given until accommodation is found if this is required. Apply in own handwriting, stating experience, qualifications, age, and salary required, to Box 1006.

Architectural Appointments Wanted

MATRICULATED ex-Serviceman, very keen to resume work, desires post with Building Surveying Firm for Training as Building Surveyor; a little previous experience, night school. Box 412.

ARCHITECT (35), chartered and registered 16 years, most varied experience, seeks position of responsibility. Box 433.

A. R.I.B.A. (29) requires position in progressive London office; experience in housing and war damage; good knowledge of building construction, reconversion, specification, and working drawings; competent designer. Box 437.

JUNIOR ARCHITECTURAL ASSISTANT requires position in London area; salary by arrangement. Box 438.

ARCHITECTURAL AND SURVEYING ASSISTANT requires change, preferably on South Coast; 17 years' experience on all types of constructions; salary required £725 p.a. Box 439.

CHARTERED ARCHITECT, with wide first-class experience, mainly in London, shortly available for position of responsibility, with prospects and adequate remuneration. Box 440.

A. R.I.B.A., Dip.Arch., with 6 years' varied practical experience, requires position in progressive London office. Box 441.

A. R.I.B.A. (34), 16 years' experience, seeks responsible appointment; used to controlling staff and carrying out works on own initiative. Box 442.

Other Appointments Vacant

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

MANAGER for old-established Company engaged in the manufacture of Factory made agricultural workers houses; preference will be given to applicants possessing a thorough knowledge of standardised quantity production of sectional timber structures, and an executive ability to maintain administrative control in offices, works, and on outside erection; modern housing accommodation is available if required. Write, giving full details of age, experience, and positions held in chronological order, stating salary required, and when free to take up this appointment. Box 943.

ASSISTANT required, with drawing office experience and interest in contemporary design; office near Hampton Court (½ hr. Waterloo). Apply Eric Lyons & Townsend, Mill House, Bridge Road, East Molesey. 980

WANTED.—CLERK OF WORKS, for Industrial Building and Housing Estate in North Wales. Only applicants with superior qualifications should apply, giving full particulars, to S. Colwyn Foulkes, M.Arch., F.R.I.B.A., Colwyn Bay. 998

Other Appointments Wanted

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

QUANTITY SURVEYOR, with London and Provincial practice, desires to meet Architects and Surveyors whom he can assist in any professional capacity. Box 941.

ARCHITECT (A.R.I.B.A.), in practice in Grays Inn, London, offers spare-time coaching, as desired, to Students or Probationers; individually or as small group. Box 940.

PERSPECTIVES.—Work executed any medium; moderate fees; London and West of England. 985

A. R.I.B.A. (28) offers evening assistance from own home; working drawings from sketch plans, conversions, war damage, perspectives, etc. Box 991.

For Sale

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

FOR SALE.—Architect's Practice, South Yorkshire border; going concern, with old-established connections; low figure for quick disposal; possession January, 1948, but earlier collaboration an advantage; house available. Box 1004.

Miscellaneous

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.

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SECRETARY/SHORTHAND TYPIST required by Architect to large London Company; application should state age, experience, etc.; salary, £325 p.a. Box 968.

ELDERLY ARCHITECT, with office of furniture and small practice, desires arrangement with another firm in West End for use of 2-3 Rooms, with possible share of typist. Write Box 944.

MODELS, Perspectives, Wash Drawings, Lettering.—For every kind of activity demanding the expert use of pencil, pen and brush. E. Laverty, 44, Aldershot Road, Guildford, Surrey. 944

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PARQUET and other kinds of Wood Floors repaired, resurfaced and polished by latest machine method; new floors, including rubber flooring, supplied and laid; panelling restored; charges moderate, estimates free. Davis Parquet Resurfacing, Ltd., Grove Hall Court, London, N.W.8. 'Phone: CUNningham 3206/6. 600

THE R.C.B. ENGINEER SERVICE is designed to assist Architects seeking technical advice; we prepare drawings and calculations for structural steelwork and reinforced concrete at short notice. Contact 25, Netherfield Gardens, Barking, Essex. 'Phone Rippleway 3439. 950

WANTED.—Pair of Drafting Machine Scales; any make; size 18 in. and 12 in.; both divided ½ in. and ¼ in. scales. Box 994.

Educational Announcements

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

R.I.B.A. QUALIFYING EXAMINATIONS. Mr. C. W. Box, F.R.I.B.A., M.R.San.I. Courses of Correspondence and Personal to Studio 23, Gower St., London, W.C.1. (Tel.: Euston 3906)

R.I.B.A. and T.P. INST EXAMS. Private Courses of Tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, 212, Euston Road, N.W.1. Tel.: EUS. 77►

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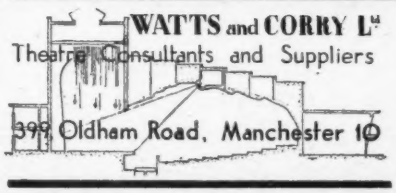
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