# THE ARCHITECTS' JOURNAL

*standard contents*

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



No. 2518] [VOL. 97

*THE ARCHITECTURAL PRESS, War Address: Forty-five The Avenue, Cheam, Surrey. Phone: Vigilant 0087-9*

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★ The war has both multiplied the number of Official Departments and encouraged Societies and Committees of all kinds to become more vocal. The result is a growing output of official and group propaganda. To report this with conciseness and economy THE JOURNAL has found it necessary to make greater use of abbreviations. Most of these are in common usage, but for the reader to whom they are unfamiliar a glossary is now provided below, together with the full address and telephone number of the organizations concerned. In all cases where the town is not mentioned the word LONDON is implicit in the address. This list incidentally gives a comprehensive picture of the building and planning set-up as it is to-day. To find room for it on the cover, the only place where it can be effectively useful, the cover itself has had to be slightly re-arranged.



| | |
|---|---|
| AA | Architectural Association. 34/6, Bedford Square, W.C.1. Museum 0974. |
| ABCA | Army Bureau of Current Affairs. Curzon House, Curzon Street, W.1. Mayfair 9400 (Extension 461). |
| ABT | Association of Building Technicians. 113, High Holborn, W.C.1. Holborn 1024-5. |
| APRR | Association for Planning and Regional Reconstruction. 32, Gordon Square, W.C.1. Euston 2158-9. |
| 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 6927. |
| BC | Building Centre. 23, Maddox Street, W.1. Mayfair 2128. |
| BCGA | British Commercial Gas Assn. 1, Grosvenor Place, S.W.1. Sloane 4554. |
| BEDA | British Electrical Development Association. 2, Savoy Hill, W.C.2. Temple Bar 9434. |
| BIAE | British Institute of Adult Education. 29, Tavistock Square, W.C.1. Euston 5385. |
| BINC | Building Industries National Council. 110, Bickenhall Mansions, W.1. Welbeck 3335. |
| BOE | Board of Education. Alexandra House, Kingsway, W.C.2. Temple Bar 8020. |
| BOT | Board of Trade. Millbank, S.W.1. Whitehall 5140. |
| BRS | Building Research Station. Bucknalls Lane, Watford. Garston 2246. |
| BSA | British Steelwork Association. 11, Tothill Street, S.W.1. Whitehall 5073. |
| BSI | British Standards Institution. 28, Victoria Street, S.W.1. Abbey 3333. |
| CPRE | Council for the Preservation of Rural England. 4, Hobart Place, S.W.1. Sloane 4280. |
| CSI | Chartered Surveyors' Institution. 12, Great George Street, S.W.1. Whitehall 5322. |
| DOT | Department of Overseas Trade. Dolphin Square, S.W.1. Victoria 4477 |
| DIA | Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2. Whitehall 7618. |
| FGLMB | Federation of Greater London Master Builders. 23, Compton Terrace, Upper Street, N.1. Canonbury 2041. |
| GG | Georgian Group. 55, Great Ormond Street, W.C.1. Holborn 2664. |
| HC | Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1. Whitehall 2881. |
| IAAS | Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1. Sloane 3158. |
| IEE | Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. Temple Bar 7676. |
| IHVE | Institution of Heating and Ventilating Engineers. 22, Russell Square, W.C.1. Museum 1428. |
| IRA | Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172. |
| LIDC | Lead Industries Development Council. Rex House, King William Street, E.C.4. Mansion House 2855. |
| LMBA | London Master Builders' Association. 47, Bedford Square, W.C.1. Museum 3767. |
| MARS | Modern Architectural Research. 8, Clarges Street, W.1. Grosvenor 2652. |
| MICE | Member of the Institution of Civil Engineers. Great George Street, S.W.1. Whitehall 4577. |
| MOH | Ministry of Health. Whitehall, S.W.1. Whitehall 4300. |
| MOI | Ministry of Information. Malet Street, W.C.1. Euston 4321. |
| MOLNS | Ministry of Labour and National Service. St. James' Square, S.W.1. Whitehall 6200. |
| MOS | Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.2. Gerrard 6933. |
| MOT | Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. Abbey 7711. |
| MOTCP | Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1. |
| MOW | Ministry of Works. Lambeth Bridge House, S.E.1. Reliance 7611. |
| NBR | National Buildings Record. 66, Portland Place, W.1. Welbeck 1881. All Souls' College, Oxford. Oxford 48809. |
| NFBTE | National Federation of Building Trades Employers. 82, New Cavendish Street, W.1. Langham 4041. |
| NFBTO | National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1. Holborn 2770. |
| NT | National Trust for Places of Historic Interest or Natural Beauty. 7, Buckingham Palace Gardens, S.W.1. Sloane 5808 |
| PWB | Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House S.E.1. Reliance 7611. |
| RC | Reconstruction Committee RIBA. 66, Portland Place, W.1. Welbeck 6927. |
| RCA | Reinforced Concrete Association. 91, Petty France, S.W.1. Whitehall 9936. |
| RIAI | Royal Institute of Architects of Ireland. 8, Merrion Square, N. Dublin. |
| RIAS | Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. |
| RIBA | Royal Institute of British Architects. 66, Portland Place, W.1. Welbeck 5721. |
| RSA | Royal Society of Arts. 6, John Adam Street, W.C.2. Temple Bar 8274. |
| SPAB | Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. Holborn 2646. |
| TCPA | Town and Country Planning Association. 13, Suffolk Street, S.W.1. Whitehall 2881. |
| TDA | Timber Development Association. 75, Cannon Street, E.C.4. City 6147. |
| TPI | Town Planning Institute. 11, Arundel Street, Strand, W.C.2. Temple Bar 4985. |


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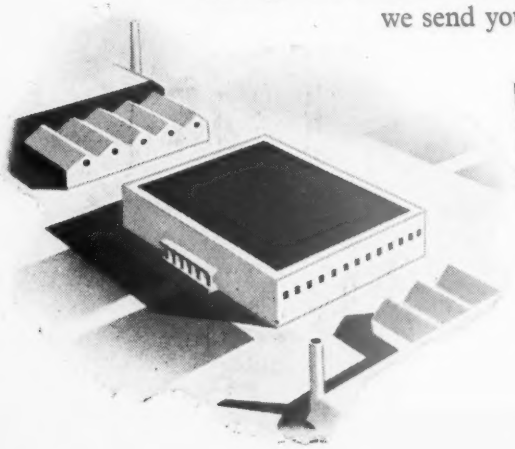

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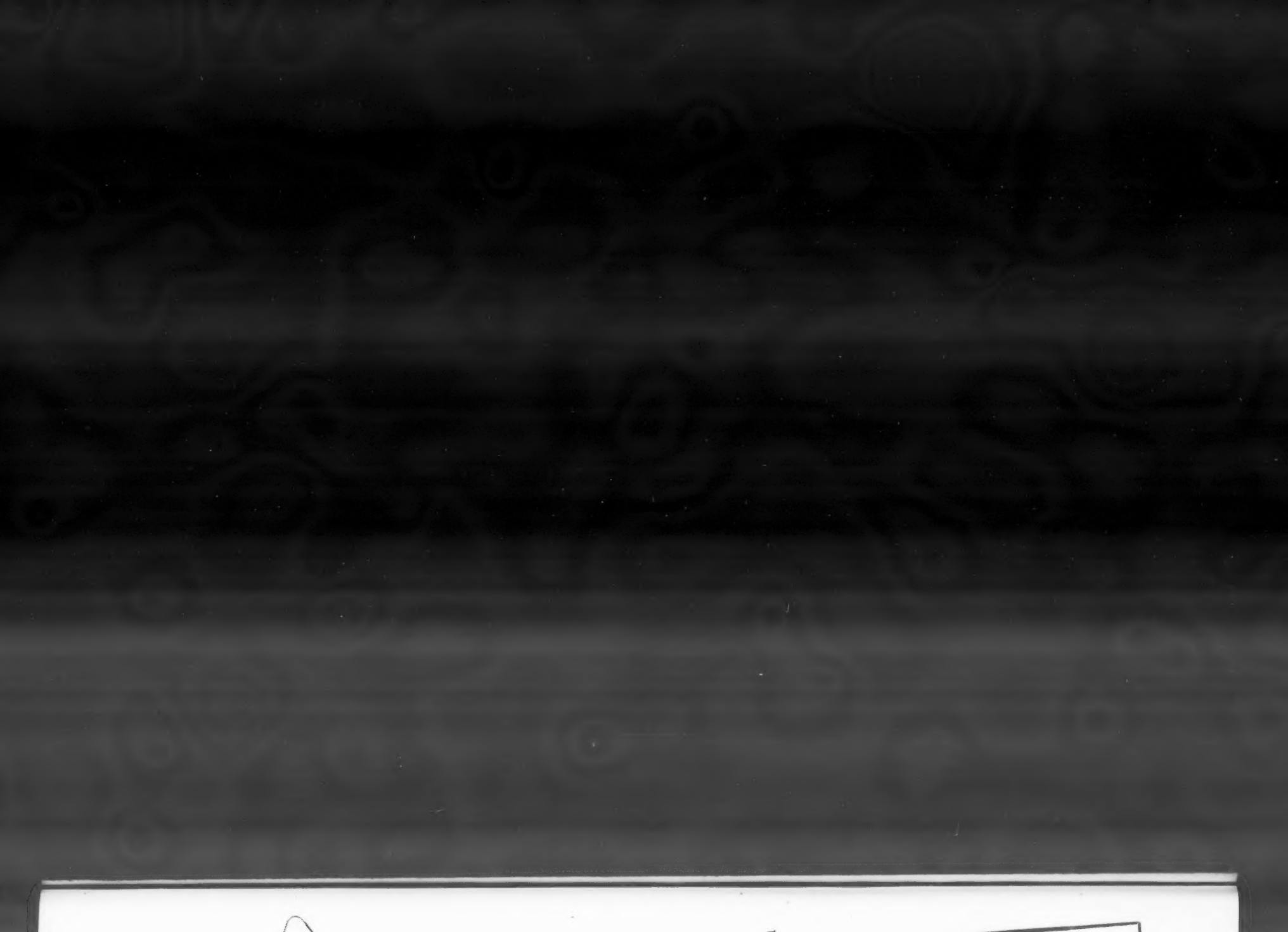

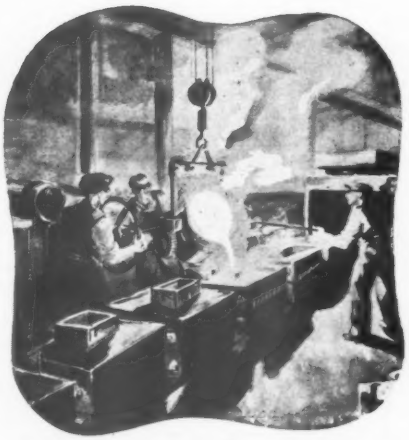

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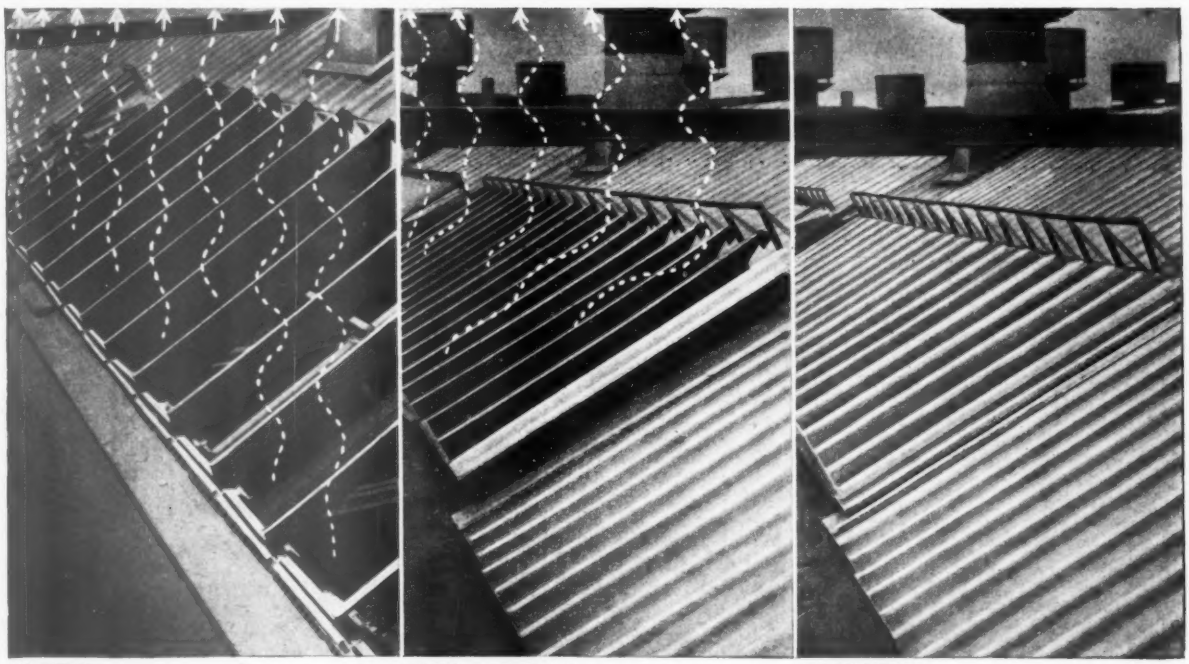

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M-W.43

# Alphabetical Index to Advertisers



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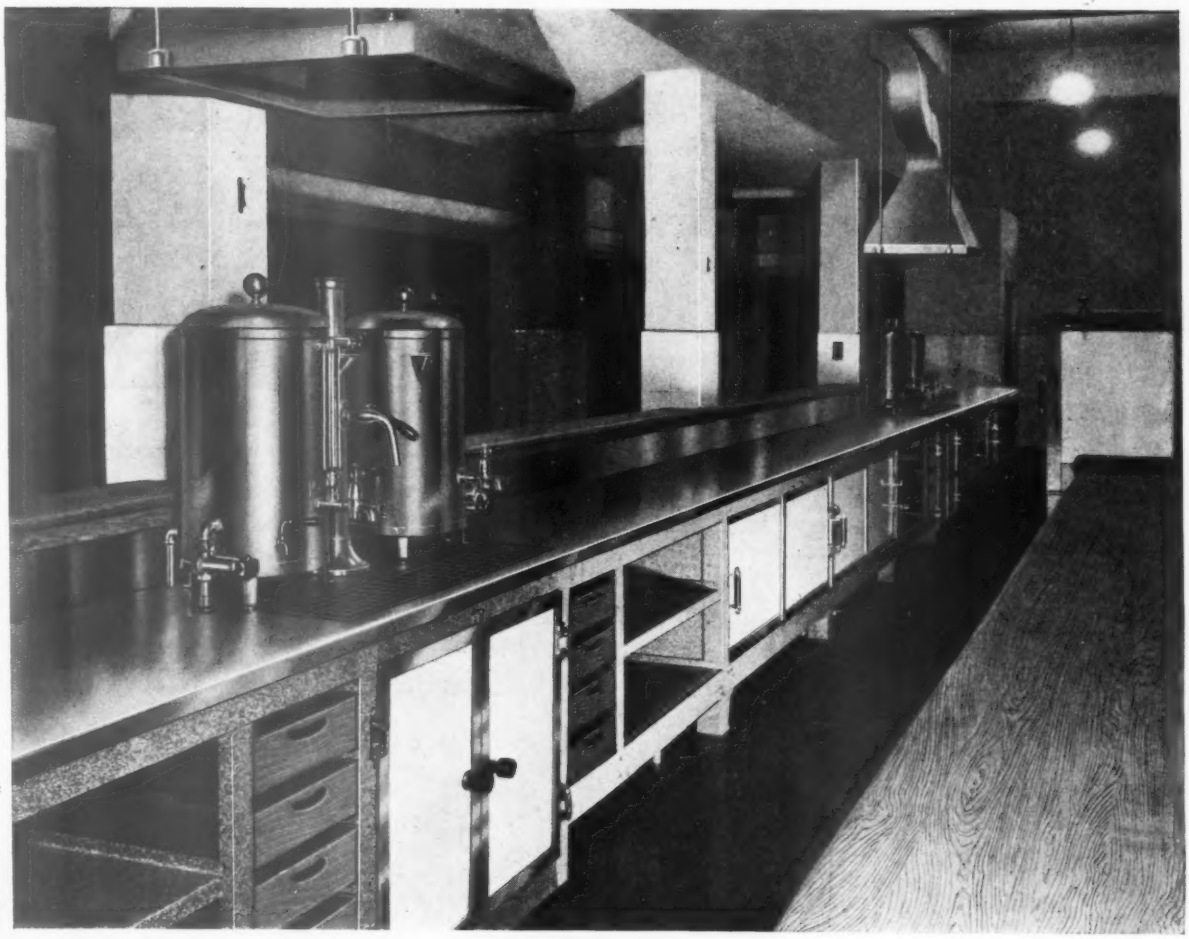

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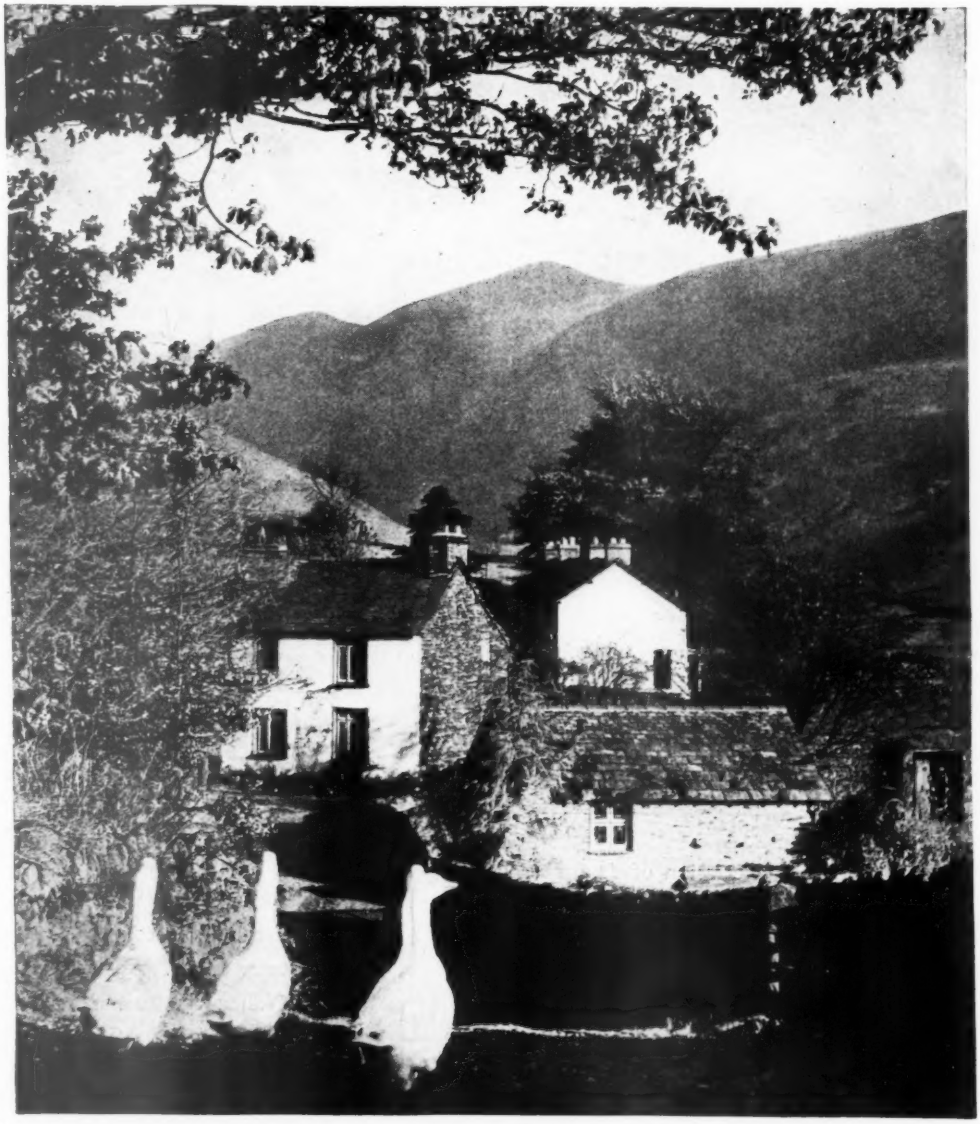

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# *Books on the Planning of Modern Buildings*

## TOWN HALLS By A. Calveley Cotton, A.R.I.B.A.

Under the collective title of " Town Halls " the author includes the Departments usually incorporated in a municipal centre—Municipal Buildings, Assembly Hall and Law Courts, and examines in detail the planning problems associated with each. In the chapters on departmental layout the views, both of Councillors and permanent officials, are summarized concerning the merits of different arrangements. Six recently built Town Hall schemes—Slough, Worthing, Hornsey, Beckenham, Southampton and Swansea—are fully illustrated by plans, sections and axonometric projections, and have been specially drawn to be easily read. About 40 other town hall plans are included, as well as details of various plan units. Price 6s. Postage 7d.

## SMALLER RETAIL SHOPS By Bryan and Norman Westwood

This is the second book to be published in *The Planning of Modern Buildings Series*, which is considering the planning, structure and equipment of certain specialized types of buildings.
The text is sectionized under various headings such as: The Various Problems—Sites and Sales Values—Sites in Detail—Elements of the Plan—Windows—Blinds—Signs—Pavements—Lights, etc.; and is fully illustrated by photographs and plans, while a large number of detail drawings are included. In addition, grouped together at the end of the book, there are 35 pages of illustrations of specially selected shop-fronts, interiors, plans and detail drawings of shops at home and abroad, with descriptive matter. Size: 12½ ins. by 9 ins. Price 12s. 6d. Postage 7d. Abroad 1s.

## THE DESIGN OF NURSERY AND ELEMENTARY SCHOOLS.

**By H. Myles Wright, M.A., A.R.I.B.A., and R. Gardner-Medwin, B.Arch., A.R.I.B.A.**

The new educational policy of which the framework was laid down by the Hadow Report is slowly being put into practice by education authorities throughout the country. With larger grants being made available, it is probable that the pace of re-organization will improve; but the greatest obstacle will still remain the changes in school buildings and their surroundings which the new policy requires. Of these changes the largest are: new Nursery Schools, separate Infant, Junior and Senior Schools; larger sites and looser groupings; and higher standards of equipment.
This book is concerned solely with such problems. It considers Nursery Schools and Classes, Junior and Senior Schools. Dimensions and layouts are suggested for each element in the school plan; the various alternative groupings of the plan units are discussed, and a large number of complete school schemes carried out in this country and abroad are illustrated. No such survey of contemporary school buildings exists at present in this country. The book contains 128 pages and about 250 photographs and drawings. Size 12½ ins. by 9 ins. Price 10s. 6d. Postage 7d. inland.

*The principal contents of these books originally appeared in " The Architects' Journal."*

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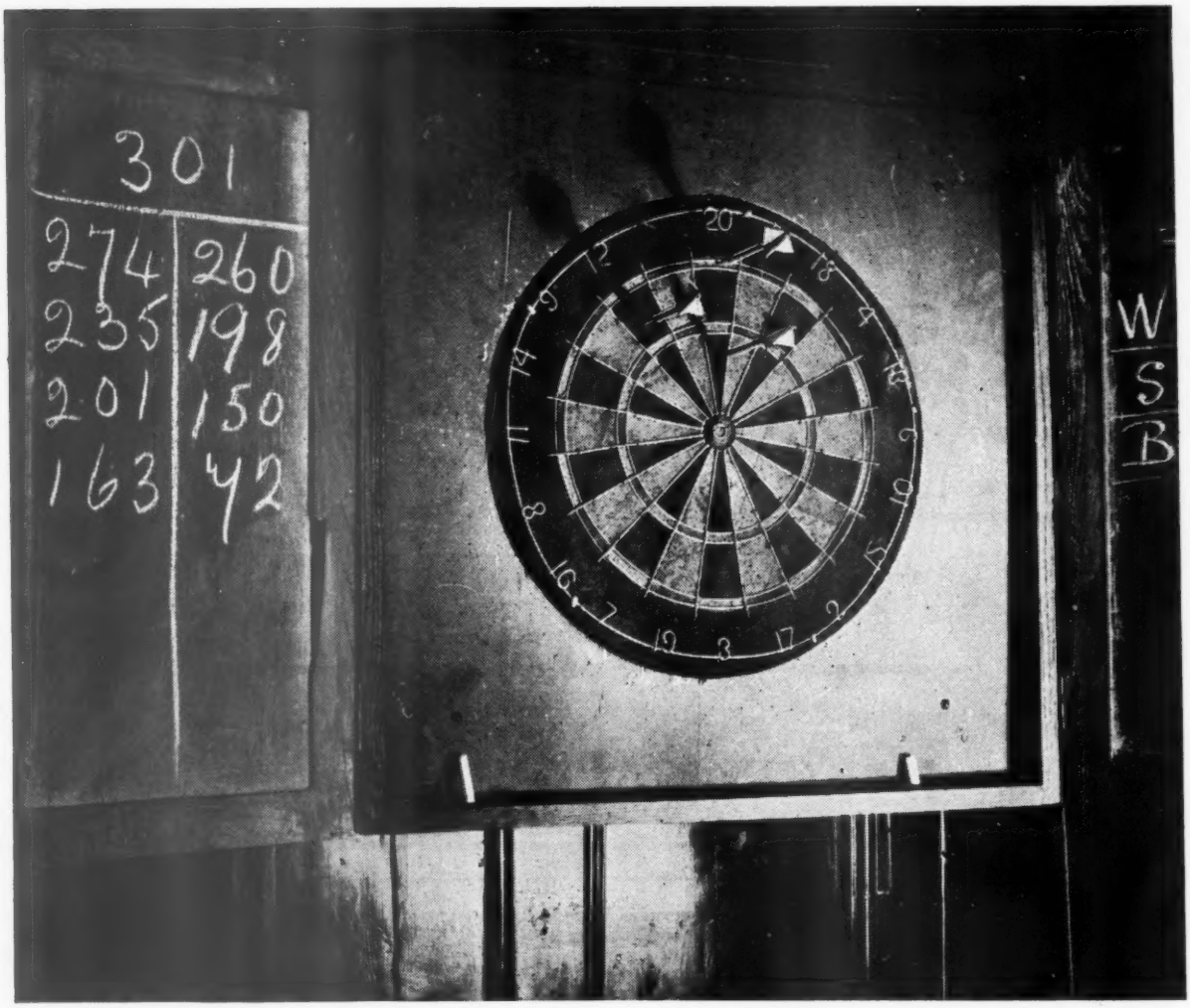


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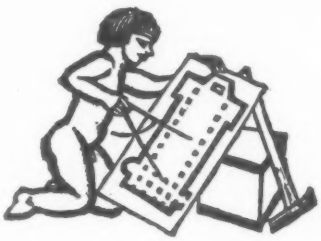

# NEWS

THURSDAY, APRIL 29, 1943
No. 2518. VOL. 97



*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.*

## *One of the new developments in the use of PAPER FOR WAR PURPOSES is in the construction of aircraft and other industrial components.*

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## *Mr. W. H. Forsdike has been ELECTED CHAIRMAN OF THE NATIONAL JOINT COUNCIL for the Building Industry in succession to the late G. H. Parker, C.B.E.*

Mr. Forsdike, who is chairman of W. & A. Forsdike Ltd., of Sheffield, has been a member of the Joint Council since 1936, and chairman of the Conciliation Panel since 1939. He is a past president of the Yorkshire Federation of Building Trades Employers, and has been on the Council of the National Federation for the past fifteen years. He was President of the Institute of Builders from 1937-1940.

# DIARY FOR APRIL-MAY

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

CAMBRIDGE. *Twenty Women at Home Exhibition.* (Sponsor, HC.) APRIL 29 to MAY 6

LONDON. Councillor Miss E. E. Halton, Secretary, Reconstruction Sub-Committee Red Cross. *Reconstruction and the Red Cross.* At Housing Centre. 12.45 p.m. MAY 4

ASB LECTURES

Dr. T. Bedford, Investigator to the Industrial Health Research Board of the Medical Research Council. *Heating and Ventilating: Analysis.* At RIBA. 2.15 p.m. MAY 8

A. C. Pallot of MOW. *Heating and Ventilating: Application.* At RIBA. 2.15 p.m. MAY 8

Dr. Charles White, MOH City of London. *Hygiene and Sanitation: Analysis.* At RIBA. 2.15 p.m. MAY 8

F. Barrow, of BRS. *Hygiene and Sanitation: Application.* At RIBA. 2.15 p.m. MAY 8

Tom Harrison of Mass Observation. *Industrial Design and the Public.* Chairman: George Hicks, M.P. At Burlington House, Piccadilly. 1.30 p.m. (12.45 p.m. buffet lunch, 2/6.) MAY 11

C. F. White, MOH, City of London. *Health Problems and Rebuilt London.* Chadwick Public Lecture. At Royal Society of Tropical Medicine and Hygiene. 26, Portland Place, W.1. 2.30 p.m. MAY 11.

Confederation of Management Associations. *46th "Oxford" Management Conference,* Waldorf Hotel, W.C.2 and St. Ermins Hotel, S.W.1. May 14, 15 and 16. Conference fee: £3 per delegate, inclusive of luncheon on Friday; buffet luncheon Saturday; tea on Friday and Saturday. Delegates to make own arrangements for hotel accommodation.

May 14. 12.30 p.m. Luncheon, Waldorf Hotel. Address by Sir Stafford Cripps, Minister of Aircraft Production. 4.0 p.m. Tea. 4.30 p.m. Address by Samuel Courtauld, *Co-operation in Industry*—An Employer's Views. Waldorf Hotel. 8.0 p.m. Group Discussion Meetings. St. Ermins Hotel.

May 15. 10.0 a.m. Address by R. Coppock, General Secretary of the National Federation of Building Trades Operatives, *Management and Labour Relations of the Future.* Waldorf Hotel. 12.30 p.m. Buffet Lunch, Waldorf Hotel. 1.0 p.m. Address by Miss Anne Loughlin, Chairman of the General Council of the Trades Union Congress and General Organiser of the Tailors and Garment Workers Union, *The Responsibility of Management.* 4.0 p.m. Tea. 4.30 p.m. Address to be announced later, Waldorf Hotel. 8.0 p.m. Group Discussion Meetings, St. Ermins Hotel.

May 16. 10.0 a.m. Concluding Session, St. Ermins Hotel. Address by Dr. Stanley Walpole, Chairman and Managing Director, Masson Seeley & Co., Ltd., *Joint Consultation at all Levels.*

ASB LECTURES

H. C. Weston, Investigator to the Industrial Health Research Board of the Medical Research Council. *Lighting: Analysis.* At RIBA. 2.15 p.m. MAY 15

P. V. Burnett. *Lighting: Application Natural Light.* At RIBA. 2.15 p.m. MAY 15

R. Ackerley. *Lighting: Application Artificial Light.* At RIBA. 2.15 p.m. MAY 15

E. A. Pearce and F. W. Woolgar. *High Pressure Hot Water Heating.* At 21, Tothill Street, S.W.1. (Sponsor, IHVE) 6 p.m. MAY 19

J. B. Priestley. *Urban Building After the War.* At AA. 6 p.m. MAY 25.

*English Town Exhibition.* At St. Martin's School of Art, 109, Charing Cross Road. The exhibition will be open free to the public every day (excepting Sundays and Easter Monday) from 10 a.m. to 7 p.m. The exhibits will comprise drawings, photographs and models illustrating the unbroken growth and development of the English town from the earliest to the present time. Twelve Societies have co-operated in the arrangements for the exhibition. APRIL 29 to MAY 8

LIVERPOOL. *ABT Meeting at WEA Rooms.* 62, Hope Street. 3.30 p.m. MAY 8

STOKE-ON-TRENT. *Your Inheritance Exhibition.* (Sponsor, HC.) APRIL 29 to MAY 4

WOOLWICH. *Englishman Builds Exhibition.* At the Town Hall. (Sponsor, BIAE.) APRIL 29 to MAY 12

## *from* AN ARCHITECT'S *Commonplace Book*

NOT A CHIP OF THE OLD BLOCK. EDWIN M. FOXHALL, architect, to Sir John Soane, 13, Lincoln's Inn Fields. [*From* The Portrait of Sir John Soane, R.A. (1753-1837), *by Arthur T. Bolton*].

South Audley Street, *February* 23, 1833.

My dear Sir John,—I herewith send you a drawing, the production of Mr. Frederick Soane, upon which he devoted two days. The outlines not tinted were done on the second day. They certainly indicate less attention as to neatness than I was led to expect from a young man on whom I hear you have already devoted a considerable sum of money for lessons in drawing, under that able master, Mr. Peter Nicholson. In Mr. Frederick Soane, I found a professed admirer of architecture, but I must confess, during the two days I had him in my office, he did not give any indication of that genius, or power or mind, which one cannot help associating with the name he bears. I have the honour to be, my dear Sir John, Your sincere and faithful servant, EDWIN M. FOXHALL.

***Sir William Rothenstein and other members of the Peak Joint Planning Committee and of the CPRE, Sheffield and Peak District Branch, have expressed DEEP CONCERN ABOUT LADYBOWER RESERVOIR, now nearing completion in the Peak District.*** They say: In the first stages the Derwent Valley Water Board were good enough to consult the CPRE as to the design and texture of the viaducts. Since then, though continued representations have been made to ensure that the detailed treatment of the scheme should harmonize with its landscape setting, these have evoked no response. Let any lover of Peak scenery walk down the rugged Ladybower Gorge, with its gritstone crags above and the boulder-strewn brook below. Suddenly at the foot is seen the smaller viaduct, its harsh lines accentuated by black asphalt footpaths, high concrete kerbs, and black tarmac. The northern approach consists of townified, spiked iron railings, the southern of ugly concrete fencing with steel rails. Where once was a scene of splendour and of peace, something like a dreary piece of Sheffield greets the view. In addition the concrete fencing, wire or steel tubing extend for nearly 10 miles, affecting every road connected with the scheme. This alien intrusion has encroached into the wild Snake country and penetrates into the remote Upper Derwent Valley as far as the sad remains of Derwent Hall. It is difficult to imagine a treatment of a great undertaking in this respect more out of sympathy with its grand natural environment. We have urged specific practical measures to ameliorate the worst features without avail. It is now time for the public who love the Peak to add their voice. We ask all country-lovers to see for themselves what harm has been done and to press for the substitution of fences, walls, and road surfaces in keeping with a country designated to become one of the first national parks.

Commenting in *The Times* upon the protest, Mr. O. B. Steward, clerk and solicitor to the Derwent Valley Water Board, writes: The members of the Derwent Valley Water Board feel considerable surprise on the appearance of the letter, which does not appear to pay due regard to the true position, does not in some respects appear to be reasonable, and in other respects apparently seeks to import prejudice. It is true, he says, that when the lover of Peak scenery walks down the Ladybower Gorge he sees the smaller viaduct, but it is also true to state that the board devoted very great care and attention to the designs of the viaducts and to the choice of materials, and consulted the representatives of the Sheffield branch of the C.P.R.E. at several interviews. Considerable satisfaction was expressed by the Sheffield representatives with what the board had done and proposed to do. Mr. Steward admits that at present "a dreary picture" can be seen, but urges that this is inevitable during the period of transition inseparable from the construction of a great work. The area concerned, he says, is to be covered with water, and the board is of opinion that when the reservoir is filled the view will be "a spectacle of unsurpassed beauty." With regard to "the intrusion into the Snake Valley and the upper Derwent Valley," says Mr. Steward, the views of the Sheffield branch of the council are not the views of Government Departments and the highway authorities whom the board must satisfy. It has already been pointed out to the Sheffield and district branch that, in districts subject to heavy falls of snow, the stone wall as a road boundary is a very undesirable thing. The road authorities ask for open fences, so that the roads may be at all times available to serve their purpose as roads, with a minimum amount of the use of snow ploughs and other forms of labour. Mr. Steward adds: "Many people other than the signatories to the letter have seen what is going on in the neighbourhood of the Ladybower Reservoir. Their views are not the views of the signatories to the letter. On the other hand, both viaducts, though still raw and unweathered, have been greatly admired."

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***At a luncheon of the Queenhithe Ward Club the REPLANNING OF THE CITY of London was mentioned by the Lord Mayor, Lord Latham, and Mr. Harold Baily, F.R.I.B.A., the chairman of the club, who exhibited plans and drawings of a scheme he had prepared.*** Lord Latham said he wanted to see London a place of activity in which its commerce and industry can be revived. He wished London to remain the capital of the British Commonwealth, conserving its cultural aspects, seeking to renew its beauty, and remaining alive and active. He viewed with dismay any sending away of the Cockney with all the contribution he made to the life of the great City. They should be careful not to allow the past to oppress the future. The Lord Mayor said that the Corporation of the City and the L.C.C. will continue to co-operate. He hoped that those responsible will seek to give us modernity with all the comforts and the brightness which will be supplied—but, he added, leave us something of our history and our historic buildings. Every yard of the City has a tale to tell. It is a great heritage. Mr. Harold Baily, explaining his scheme, suggested that main streets should be widened to 100 ft., and that narrow passages and blind alleys should be removed. There should be a great opening-out to give more air and sunshine to buildings. Traffic must be a first consideration and new routes must be planned. The main approach to the Cathedral would be a wide processional avenue replacing Ludgate Hill on an axis line running through the centre of St. Paul's.

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***Dorneywood House, Buckinghamshire, has been GIVEN TO THE NATION by Sir Courtauld Thomson for the use in the future of a Minister of the Crown. The gift includes an endowment fund for the maintenance of the house.***

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***Sir P. Hurd asked the President of the Board of Education whether his attention has been drawn to the proposal of the Wiltshire Education Committee TO ESTABLISH A COMMUNITY CENTRE in the county for the greater development of the cultural life in the countryside, and whether the Board favour such proposals?*** Mr. Butler: I have been interested to see from local Press reports that the Wiltshire Education Committee have recently discussed the desirability of establishing a community centre in the county. The Board have not received any definite proposal from the authority for that purpose. They would, of course, be glad to consider any such proposal should the authority decide to put one forward. Sir P. Hurd: What steps are being taken to encourage local education authorities to submit such schemes? Mr. Butler: The possibility of starting community centres is well known to the authorities, and I should be only too glad to consider any such scheme put forward by the Wiltshire education authority.

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***Not exceeding 480 square feet of PLASTERBOARD MAY NOW BE SOLD by merchants without the purchaser having to procure a certificate of an Emergency Works Officer or any other duly authorized officer.*** MOW, in issuing this order, state that any such sale may be made only for air raid damage repair or another essential purpose. It must not form part of a larger transaction which aggregates to more than 480 square feet. Each purchaser must complete and sign form PB/SS which can be obtained from any approved builders' merchant.

# *Thomas Sharp*

**The model town of Mr. Thomas Sharp, sponsored by Cadbury Brothers and made for a now popular cinema film, was shown at Preston during the course of the exhibition illustrated in the Journal last week, and is at the moment touring the North of England. Mr. Sharp is Senior Research Officer at the Ministry of Town and Country Planning. He is also the author of one of the famous books of our time and is in practice as a town planning consultant. He was secretary to the Scott Committee on Land Utilization in Rural Areas, and was for four years lecturer in Town and Country Planning at Durham University. Born in County Durham in 1901** the son of a miner, he began town planning work in a borough surveyor's office twenty years ago and since then has prepared schemes in various parts of the country, amongst them the great regional planning scheme and report for South West Lancashire, some three hundred square miles round Liverpool. Prepared in 1927 to 1931 this was the fullest survey and plan that had up till then been produced in this country for an industrial area. He is unquestionably the best known town-planner of his own generation. An RIBA lecture by Mr. Sharp in the Town and Country Planning Series appears on pages 290-292.

★★

*Mr. C. T. Every, F.S.I., of Horace W. Langdon & Every, has been appointed, as Director, by MOW to compile and co-ordinate the POST-WAR BUILDING PROGRAMME envisaged in the recent White Paper on Training for the Building Industry (Cmd. 6428).*

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*A circular on the RISK OF CARBON MONOXIDE POISONING from slow combustion stoves has been issued by MOW to all local authorities in Great Britain.*

The circular states it has been reported that certain types of slow combustion stoves used for heating huts are fitted with regulating dampers which, when shut, completely close the flue pipe, thereby exposing the occupants to the risk of carbon monoxide poisoning. Where such stoves are in use steps should be taken to ensure that the dampers are provided with an aperture of sufficient size to allow fumes and smoke to escape via the flue pipe even when the damper is in the closed position.

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*Mr. E. E. Cook, of Bath, has given BOARSTALL TOWER to the National Trust, with restrictive covenants over some adjacent land to protect its amenities.*

Boarstall Tower is near the village of Brill, in Buckinghamshire, between Thame and Bicester, and is the gatehouse of a fortified house demolished in the eighteenth century. The Tower dates from the fourteenth century, but was altered in the sixteenth and seventeenth centuries, when larger windows were inserted and a bay window was added to the second floor. Its cross loops for the bow and arrow and the grooves for a portcullis still preserve its medieval aspect. It consists of three storeys built of local stone with crenellated turrets at the four corners, and is almost completely surrounded by a wide moat.

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*Sir A. Duncan announced in the House of Commons that approximately 450,000 TONS OF RAILINGS HAVE BEEN REMOVED and collected in the country up to date. Of this, 85,000 tons are in reserve dumps, and the remainder has either already been sent to iron and steel works or is being sorted and cut up preparatory to going there. The entire output of iron and steel is used to meet essential war-time requirements.*

Sir A. Knox: Does the Minister consider that in view of the annoyance caused throughout country districts this action has really been worth while for the war effort? Sir A. Duncan: I should not have thought there was the slightest doubt about that in anybody's mind.

# ORGANIZE RESEARCH

IN a recent lecture before the Royal Society of Arts, Dr. P. Dunsheath made a survey of the position of industrial research in Great Britain. "In the absence of authoritative figures, it is difficult to estimate the comparative expenditure on research in different countries, but it has been claimed by Professor Bernal that whereas the Soviet budget for science is 1 per cent. of the national income, ours is only one-tenth of 1 per cent. and that of the USA three-tenths." Research in this country may be roughly classified as industrial, Government and academic. "By far the greatest contribution is made by industry through its own laboratories . . . The nature of scientific industrial research has improved considerably since industry became research-minded under the stress of war twenty-five years ago. . . . There is frequently a large measure of co-operation between one firm and another in sharing resources.

"There are twenty research associations covering a wide range of industry (coal, iron and steel, etc.) and spending about half a million a year on administration and research, one-third of which is provided by the Department of Scientific and Industrial Research funds and two-thirds by the industries concerned."

The principal establishments administered by the Department of Scientific and Industrial Research are the National Physical Laboratory, the Building Research Station, the Forest Products Research Laboratory, various Food Investigation Laboratories, the Fuel Research Station and the Road Research Laboratory. The net annual expenditure on the National Physical Laboratory is about £100,000, that on all the other establishments about £300,000. The organization of Government support for industrial research was formed during the 1914-18 war and has remained practically unchanged after twenty-five years.

Dr. Dunsheath emphasized the necessity of raising industrial research to the position which it deserves "as an accredited national service. Research must become a normal activity of every industry and not only a service to it."

The building industry is not represented among the twenty research associations mentioned above and only a fraction of the budget of the Department of Scientific and Industrial Research is allocated to its tasks. Building research in this country is in a particularly backward stage. The reasons have been explained before in this Journal (Nov. 12, 1942, pp. 316-7). In other industries firms spending money on research work enjoy the financial benefit of their expenditure, and indeed, in view of the national and international competition, cannot do without research. In the building industry research is not a private, but a national necessity, at present more than perhaps in any other industry. The White Paper on Training for the Building Industry anticipates steady employment for 5,000,000 workers in the

building and allied industries for a period of ten to twelve years. It is essential that the enormous amount of money to be spent on this vast programme should be used in the most efficient way. As Sir William Beveridge pointed out in his opening speech at the RIBA exhibition at the National Gallery, the building industry is going to be the most important industry in this country. It should therefore have the maximum efficiency. This cannot be achieved with the present rule-of-thumb methods. Whereas very substantial research work has been, and is being, done during the war by private firms and the Government in industries connected with the war effort, no similar progress has been made in the building industry. Large scale organized, systematic research into modern building materials and methods is of vital importance for the rebuilding of Britain. Such research is only possible on a national centralized basis, with the whole-hearted support of the Government, both in organization and finance.

But building research alone is not enough. Its results must be spread among all concerned with building. Also in this respect the building industry is in a different position from those others, in which a comparatively small number of engineers and managers can introduce new and improved methods. In the building trade the knowledge of technical progress must be extended to a large number of architects, engineers, surveyors, contractors, builders and so on, all over the country. The valuable work done by the Building Research Station remains practically unknown to many people who ought to be acquainted with it. The Building Centre is a useful source of information but only to those who ask for its advice. A more active form of information is wanted, which does not wait for enquiries, but broadcasts its bulletins to all concerned, in a manner adequate to the knowledge of every recipient. The channels through which such information could be spread are the various professional institutions, associations and federations. Almost everybody in the building trade is a member of some organization and is, therefore, within easy reach.

Without well planned and organized building research of an order which is many times greater that at present, and without a very active and efficient broadcasting organization to spread the results of research, all post-war schemes will be seriously handicapped. Especially valuable would this research be to the Study Committees of the Post-War Building Directorate of MOW, which were the subject of last week's leading article in the JOURNAL.

A far more logical, simpler and properly co-ordinated organizational machine for post-war building than now exists is urgently needed. This should include as an essential part a great National Building Research Centre, not only to collect information and to carry out objective research but to spread in a disinterested way all the knowledge it obtains. It should moreover work in close collaboration with architectural and technical schools and colleges.

*The Architects' Journal*
*War Address: 45, The Avenue, Cheam, Surrey*
*Telephone: Vigilant 0087-9*

# NOTES & TOPICS

STIR IN ST. JAMES'S SQUARE

During its next sitting the House of Commons will debate the Minister of Town and Country Planning's Interim Development Bill. By this Bill MOTCP takes its first step towards guiding the post-war use of all land and will also end a four months' lull in physical planning preparations.

*

The aims of Mr. Morrison's first Bill are not yet known. But its title suggests that it is a ring-holding measure intended to prevent uncontrolled development in any part of the country in the immediate post-war period during which long-term planning schemes are being thoroughly considered. To this end the Bill is expected to embody the Uthwatt recommendation that areas not already covered by planning schemes or resolutions should be deemed to be subject to such resolutions. How much else the Bill will contain is speculative: it is suggested that it may provide for the setting up of a permanent planning commission and for the enlargement of local authorities' powers to buy land. We must wait and see.

*

It has, however, to be remembered that a ring-holding or freezing measure, effective though it may be, is no part of real preparations for physical planning. What is frozen can be unfrozen and can be unfrozen very quickly when post-war screeches for houses at any cost and at once begin to be heard. And no one can doubt that those

screeches will begin *fortissimo* the day the war in the west ends.

★

Mr. W. E. Morrison's job is to construct a mechanism by which transitional development can be skilfully and flexibly guided while providing for the simultaneous preparation of long-term plans. Yet although the Government's definition of Mr. Morrison's duties can be stretched to cover such a job, he possesses none of the powers needed to carry it out. This would not matter greatly if there was evidence that the Government intends to confer such powers upon him, one by one, fairly quickly and after careful consideration of each by Parliament. Without such evidence —and none has yet appeared— the public are forced to regard MOTCP and all its works with scepticism.

THE NEW DIRECTOR AT MOW

The leading article in the JOURNAL for April 8 on *Men : Materials : Priorities* called for " a little precise information on the drawing up of the post-war construction schedule. . . . Who has been selected to draw up this programme we have not been told. The feeling is that we should be."

★

Now we have been told. Mr. C. T. Every, F.S.I., junior partner for many years of the firm of Horace W. Langdon and Every, Chartered Quantity Surveyors, has been appointed by MOW as Director to compile and co-ordinate the Post-War Building Programme predicted by the publication of the recent White Paper on *Training for the Building Industry*.. At 41, he now has before him the responsibility, as the leader puts it, of " furnishing the biggest and most important estimate in the world-history of building."

THE COTTAGES OF ENGLAND

In the past month there has occurred in the correspondence columns of *The Times* another of the flurries over house design which seem to have become as regular as the First Cuckoo Letter. To the architect reader, this flurry, like its predecessors, had something of a 5th of November pattern : the initial flare of indignation, a sequence of flashes and pops from sympathisers, a few attempts to redirect the display by architects and others, a few more belated pops and then the end.

★

The actuating match, was the publication on March 13 of the designs for wartime farm workers' cottages (published in the JOURNAL on March 25). A number of correspondents considered these designs to be absolutely horrible—especially those showing houses with flat roofs —and the original discussion was prolonged by Mr. Oswald P. Milne saying (with reference to the RIBA *Rebuilding Britain Exhibition*) how the appearance of modern buildings had been described as that of village idiots.

★

As one turns over the various letters, none of them appears to contain any point or comment of particular value. But taking them in a bunch they have a general value. They show that half a dozen people, probably comfortably off, probably possessing some local influence, probably elderly, are opposed to a change of form in rural housing, just as their fathers opposed motor cars and their great-grandfathers opposed railways.

★

It is possible that this opposition to a design, which seemed to most architects to be very " traditional," might find powerful allies. If brick, tile and concrete manufacturers and building Trade Union officials base their post-war policies only on what will be easiest and most obviously profitable, a very powerful movement back to " traditional building " might be inaugurated.

★

It might, therefore, be wise for the Ministries of Agriculture and Health to remind the public that the countryside was made like the towns by man and for man, and that the No. 1 reconstruction job will be to build about 4 million houses at reasonable cost and as quickly as possible. These houses must be conveniently planned and well equipped and it is highly desirable that in appearance they should be skilfully grouped and be pleasing externally in general form, colour and texture. But it should be made clear that " pleasing in general form, colour and texture " must be widely interpreted. It cannot be narrowed to mean the use of particular materials, small windows, pitched roofs or Lutyens chimneys if this use will mean an increase of cost or slowing down of production. And there is every sign that it will mean just that.

★

We cannot yet say what part full prefabrication will play in post-war house building. But the post-war demand for houses will be so clamant that it is almost certain to be used to some extent and will certainly set the pace for house building by more familiar methods. The correspondents of *The Times* should therefore be assured that they will continue to get brick houses and probably houses with tile roofs, but that they cannot be certain of anything else. The form and detail of those houses must be dependent on the technique necessary to give a rate of output of anything from 100 to 500 times that achieved in the first year after the last war.

★

That is why the Government should give a clear lead on the question of prefabrication. As the leading article pointed out last week a definite distinction should be drawn between (1) the immediate post-war short-term rebuilding policy and (2) the long-term policy suitable for more stable times. Clearly at the present time and immediately after the war, say, for at least ten years, almost all building should be purely temporary —prefabricated, standardized *and* well designed. This plea for a period of temporary, mass-produced building has every argument in its favour, chief of which is, of course, the purely practical one that only thus shall we get the necessary building carried out quickly enough to make living conditions tolerable for the mass of the people.

★

The cry against standardization and large-scale temporary building threatens to become as clamorous as that against the flat roof which still re-echoes through the wilderness. To drown it a vast amount of education and propaganda, both public and private, is needed to

enlighten sentimental minds still thinking in terms of the 18th century.

TERRACE HOUSE PROBLEM

There is a steady swing of architectural opinion back towards the terrace house as a form of urban settlement. Advantages over the semi-detached vogue are much less waste of ground, economy in actual building and a larger architectural unit: advantage over flat development—is the individual garden, still prized by the English in spite of all movements towards the left: sum total of advantages is pretty considerable. Against this is the great barrier of prejudice built up by novelists, garden city fans and maybe building societies too. Almost the only terraces built of late are in war-worker housing schemes, where tenants can hardly express preferences — if we except Ernö Goldfinger's courageous terrace of three in Hampstead.

★

Architects, however, have to face up to the garage business when they plan terraces to-day. Their present tendency is to say garage doors just wreck the architectural unity of a house by overshadowing the front door, so they must be put in a block by themselves at the end of the road. But women don't like walking to the end of the road, on a wet night in particular, before going places. So what then? Another solution is a service road to a garage at the end of the garden. For larger houses I should say why not the noble arch and doorway of the French small *hôtel*?

★

One architect I know would place them under the house. I fancy it is rather an expensive solution and few cars like climbing a steep ramp first thing on a cold morning.

POETS' CORNER

On with the MOT and the MOTCP
Lest the WLA MOW with no PEP,
For the IRA MOH at the GG,
With BSA HC and BOT.
"Ah IES!" sighed the NFBTO,
and NT and IAAS DOT,
So to MARS went the MICE and the DIA,
And "SPAB!" went the wizard of AJ.

AGWARIBA.

*P.S.*—What a BEDA!

ASTRAGAL

# LETTERS

*T. Alwyn Lloyd, F.R.I.B.A.*
*Noel Carrington*
*N. C. Stoneham*
*A. H. Dungay, F.I.A.A.*
*T. Warnett Kennedy, A.R.I.A.S., A.M.P.T.I.*
*Robert Ellis*
*Nikolai Kolli*

## Farm Workers' Cottages

SIR,—It was disappointing to read in your issue for March 25 of Mr. Eberlin's advocacy of so retrograde a plan as that he illustrates, which has only one entrance to the cottage—and that at the back. In these days when we are trying to maintain, and wherever possible to improve on, good standards, it is absurd to say that farm workers have no use for a front door.

When men come in from their work and children from school, no doubt the back door is generally used, but there are callers at every dwelling—the doctor, parson, rent collector, school teacher, not to speak of the casual visitors that come to the humblest home. Can you imagine any of these wishing to go anywhere but to the front door.

Mr. Eberlin's *economies* in planning entail entering the living room through the scullery, and an inconvenient stairs opposite the back door. Incidentally, the larder is next to the outdoor W.C., with door and window adjoining.

The Ministry's standard plans are issued with the intention of giving the rural workers those simple amenities and improvements that have become common practice in urban houses. I hope we shall not lend support to any effort in the direction of departing from these.

Cardiff. T. ALWYN LLOYD.

SIR,—In the note which appears with the designs for MOH farm workers cottages now to be built, I can detect delicate consideration for appearances. Flat roofs only to be used in suitable surroundings, otherwise pitched roofs as a concession to neighbours; bricks to be colourwashed where out of keeping with surroundings; and so on.

The drawings are of the romantic type one associates with Christmas prints; horses at the plough rather than tractors. But (as a layman I am tempted to ask), why eight small panes to every window instead of one? Is it that countrywomen like cleaning the corners, or is it because large panes are unprocurable? Nor can I find provision for any fitted storage space in bedrooms or even in kitchens, though this is amongst the demands put forward by the Women's Electrical Association on another page of the same issue. One begins to feel that such plans should be the preserve of a Ministry of Appearances.

London. NOEL CARRINGTON.

## Thirteenth Century Panelling in Kent

SIR,—I enclose two photographs, obverse and reverse, of what I believe is one of the earliest examples of panelling in this country. I found it in a moated manor house outside Edenbridge, Kent.

It is reputed to date from the early 13th Century at least. The planks are English oak, adze hewn, as can be seen on the reverse photograph. On the obverse side the stiles are bevelled on their edges. The piece of stile-and-panel panelling underneath the window is reputed to be of 17th century work, and is of interest as showing the development.

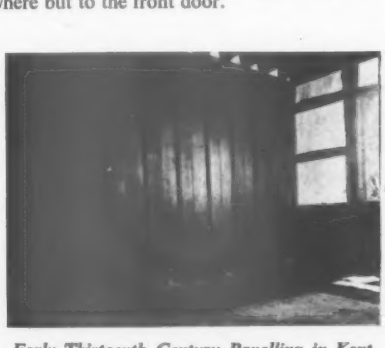
London. N. C. STONEHAM.

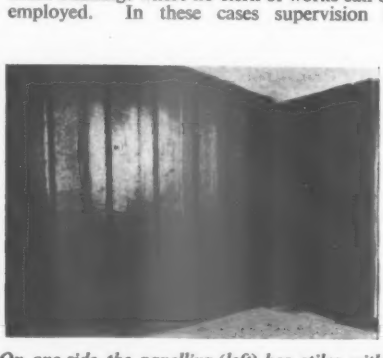
## Articled Pupils

SIR,—In all the letters on this subject I have looked for but have seen no mention of the—to use a mild term—desirability of a youth hoping to become an architect obtaining some practical knowledge of building work.

Surely an architect's job is not only to design buildings, write specifications (many clauses of which are often impracticable), etc., but to see that the buildings are properly erected.

Most of us are concerned with comparatively small buildings where no clerk of works can be employed. In these cases supervision is

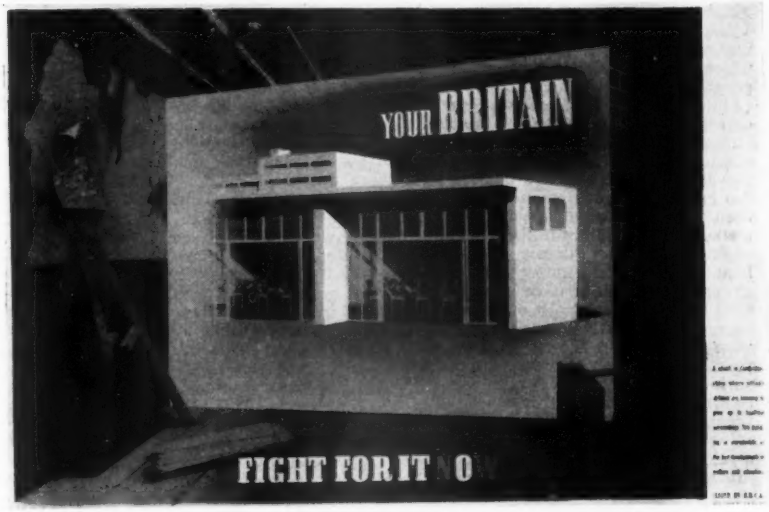


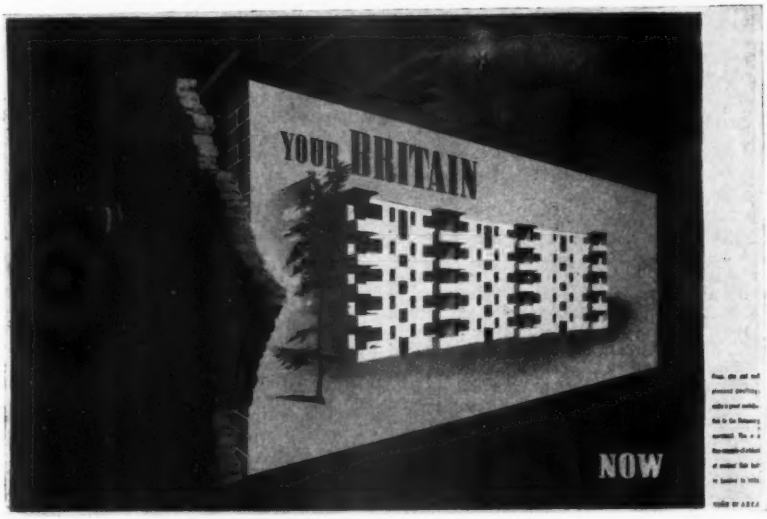


*Early Thirteenth Century Panelling in Kent. bevelled edges: on the other it is adze hewn.* *On one side the panelling (left) has stiles with See letter from N. C. Stoneham on this page.*

# A B C A  P O S T E R S

**The main work of the Army Bureau of Current Affairs is the educational one of issuing information for the guidance of army officers when they organize weekly talks and debates in their units. A sideline of ABCA's activities, however, is the distribution of an excellent series of coloured posters showing the best of Britain, the old and the new. They are displayed in barrack rooms, canteens and offices and wherever they are likely to increase morale. Three of the four posters so far published are reproduced here. The two depicting the new Britain, designed by A. Games, show a modern school in Cambridgeshire and a block of workers' flats built in London in 1936. The third poster of the traditional Britain, designed in a more conventional manner, is by Frank Newbould.**




*The New Britain and—*


*—the Old*

directly the work of the architect, and it amazes me how he can effectively do this without some practical knowledge of the work. Would it not be very useful, to say the least, if a youth were taught how to use tools and to gain experience by actually working on buildings at a trade and with other men for, say, a couple of years? I am sure he would get a better understanding of the work.

Lonon. A. H. DUNGAY.

## Ply-Plastics

SIR,—In your issue for April 8, Information Centre, Answer 1112, you end with the statement "this material (resin-bonded plywood) cannot, however, be classified as a plastic."

The point is highly debatable and, although seemingly unimportant, is causing a great deal of misunderstanding. Both the building and plywood industries dismiss resin-bonded woods as being merely improved plywoods, but the plastics industry, on the other hand, are under no illusions regarding the tremendous significance of this new material, for which they rightly claim credit. They know that a world of difference exists between traditional animal hide, vegetable, casein and blood albumin glues and the new urea-formaldehyde, phenol-formaldehyde, and thermoplastic cements and glues. They know that plywood was revolutionized when, by the use of these plastics, the material became overnight waterproof, stronger and rot-proof. When the glue-line became stronger than the plys they bonded, it suddenly became possible to stress the wood up to its physical limits without delamination. They know that in association with the new double-curvature moulding techniques, perfected by the aircraft and boat-building industries, this material can assume almost any desired shape without the initial stresses being locked up within the material, causing tendencies to distortion. They know these things, and the incalculable effect they may exercise on future building problems because, being a young industry, they have an unbiased and scientific outlook.

On the other hand, the plywood industry has a traditional outlook, and with few exceptions timbermen still operate under rule of thumb conditions. Many are blind to the potentialities of the magnificent materials they handle. Architects and building technicians are blinded for quite different reasons. Again, their outlook is traditional and unscientific

but further obscured by their æsthetic approach. Ply-plastics do not differ in appearance from traditional plywoods and are therefore apt to be casually dismissed, as in the case of your Information Centre correspondent.

They lack the æsthetic novelty which always makes first appeal to the architect and without which stimulus he seldom pauses to assess the physical properties of the new materials.

I find it hard to credit the statement by your correspondent that "the fabrication of structural members by extrusion . . . is quite practicable." It is known that plastics using powder fillers are extruded but are invariably too brittle for structural use. The writer has been trying for some time to arrive at some method by which fibrous fillers could be made to flow through an extrusion die thus giving a high impact and torsion-resisting plastic material, but without success to date. Failing this, resort was made to other methods and experimental plastic sections, 12 ft. in length, were produced. These proved to be impracticable as beams, girders and columns for various reasons, but later a plastics semi-structural element, that is, a window frame, was successfully produced although it may be some time before it can meet market conditions.

In all other respects the statements of your correspondent on structural plastics are borne out by our experience. Conventional comparisons with metals like used structural materials are, however, quite misleading, and it is a pity that, just where progress appears to be most promising, that is, with ply-plastics, interest should be damped down by the mis-use of words.

FOR BUILDING PLASTICS RESEARCH CORP. LTD.
T. WARNETT KENNEDY.

London.

## Old Fashioned Youth

SIR,—With reference to Gordon F. Taylor's letter in your issue for April 1, I am afraid he is right when he says we must first educate the architects, but there is more to it than that.

Most people, including architects, think as they were taught to think. They are products of a commercialized community which provides no real cultural education and can therefore see no virtue in simplicity.

Good design is a matter of morals and ethics and a healthy unprejudiced outlook is impossible until our system of living and education is based on a true morality, not the warped artificial moral attitude towards sex which seems to be the only morality the masses recognize.

All good art is anonymous and the best architecture was produced before the professional architect came into being. Since then buildings have been a hotch-potch of borrowed styles and periods, whichever fashion dictated, and each an exercise in expressing the architect's so-called individuality, which he did not possess.

I am convinced there will be no improvement in the future unless our whole social system is changed and the masses educated to a new sense of values. Then good architecture will naturally follow without effort.

Building is so inseparable from sociological conditions that the few architects who have "seen the light" are voices crying in the wilderness.

ROBERT ELLIS.

Edinburgh.

# CABLEGRAM

## *from Russia*

***The following cable on "The Reconstruction of Moscow" has been sent us by Nikolai Kolli, member of the Academy of Architecture.***

During number pre-war years Moscow was being rebuilt in accordance with Government sponsored general plan of reconstruction. This plan provided for vast amount new construction which was intended bring about radical change in outward appearance of ancient city adorning it with numerous new buildings, monuments, bridges, etc.

In ten years it was proposed build about 2,500 new large apartment houses, 530 schools, 50 big motion picture houses, 9 huge department stores. Part of general plan which was completed before outbreak of war included building Moscow "Metro" or underground railway, Moscow Volga canal, 9 magnificent new bridges, several new theatres and hundreds buildings which have transformed number of streets, such as Gorky Street and Kaluzhskaya Street.

War has temporarily interrupted this busy work of construction. Work has not been entirely suspended however. On January 1, 1943, Moscow received new "Metro" line which connects centre of city and some of its industrial districts. Construction this line of underground railway involved excavation of about 700,000 cubic metres earth and laying of about 200,000 cubic metres concrete: in four places tunnels pass at great depth beneath Moskva river.

When war is over work of reconstruction will be resumed in its full scope.

Recently Architectural Planning Department of Moscow Soviet headed by Dmitri Chechulin who has been awarded Stalin Prize has set up number special brigades to draw up projects for work restoration and to revise previous plans of reconstruction with view to introducing changes and corrections made necessary by the war. Special section for reconstruction of Moscow of which I am in charge is making thorough study of Moscow's relief, its historically established outlines and its most important historical buildings.

Plan of reconstruction provides for preservation of city's noteworthy works of architecture. Moscow Kremlin and its ancient cathedrals, Red Square, Lenin Library and other unique architectural creations naturally remain beauty of Russia's capital. New construction must be in style that will not clash with these traditional Moscow ensembles but on contrary represent harmonious complement and further development of earlier architecture. That is one fundamental problem with which our section has to cope.

Analysis is being made of reconstruction of number Moscow thoroughfares already accomplished. This analysis will serve as a basis for concrete suggestions regarding further work. All city's streets are being classified with view to determining their place and role in city. Many important streets are singled out as mainly traffic arteries while others are reserved for residential construction with traffic reduced to minimum so as not to interfere with peace of inhabitants. We are also drawing up plans for new thoroughfares such as link between Leningrad highway and Novaya Solyanka southern section of the "A" ring and others.

Before war it was planned erect in Moscow over 50 new monuments to outstanding Russians — statesmen, scientists, artists, generals, writers. Now number will have to be greatly increased since it is proposed erect monuments to many heroes of present patriotic war and defenders of Moscow.

Projects which have been submitted in contests will be examined by special committee headed by Lev Rudnev, member of Academy of Architecture: this committee, with co-operation of sculptors, artists and writers will also draw up suggestions regarding sites for these monuments. Other committees will study questions of city's transportation system, of planting trees, parks, housing and industrial construction.

Section's activity extends also to Moscow region. Thus it has taken part in elaborating plans for rehabilitation number of towns smaller settlements in Moscow region wrecked by Germans. At present it is examining projects for reconstruction of some towns submitted by members of Academy of Architecture—Ivan Zholtovsky, Alexei Shchusev and others.

NIKOLAI KOLLI.

*The following special article deals with the lecture on* The Provision of Heat in Buildings, *given by Professor Sir Alfred Egerton at the Institution of Civil Engineers, on April 6. It describes the heat requirements of houses, their calculation and amount, and the efficiencies of various methods of supplying heat, and preventing its loss. The main consideration is the provision of heat in houses.*

# HEAT

## In Buildings

[*BY A TECHNICAL CORRESPONDENT*]

The first item in man's budget is food, followed by shelter and warmth. These are all intimately concerned with his well-being but an additional factor becomes of importance when the provision of warmth is considered. This is a recurrent expenditure and may be carried out with good or poor efficiency. If part of a man's income is thrown away by extravagant heating appliances, the less there is available to raise his standard of living.

Probably half the coal used in Britain is used for heating and more than half of this goes to domestic heating. In 1938, there were 240 million tons of coal mined in this country of which 56 million tons were exported. It is estimated that 93½ million tons went to heating buildings; of this quantity 53½ millions were needed for domestic heating including that for cooking and water. The figure given includes the coal equivalent of gas and electricity used for the supply of heat. The heating of buildings is not only an individual problem but one of national importance as has in fact been suggested by last winter's fuel economy campaign.

The 1931 census showed that there were 10,270,000 inhabited houses in this country. Assuming that they were comparatively small and detached it may be computed that with appliances having an efficiency of 25 per cent., 29 million tons of coal would supply a fully adequate standard. Making

allowance for water heating and for cooking, the gross requirement is about 39 million tons. Actually 53½ million tons are used and the houses are by no means warm. Evidently the efficiency is very low and much more coal than is necessary is used for warming.

An interesting comparison may be made with Germany. Here the winter is colder and the standard of warmth in the houses higher. Yet in 1937 the fuel consumption was 40 per cent. less per household and 30 per cent. less per person.

The efficiency of use of manufactured fuel is governed first of all by the efficiency of their manufacture, at least so far as the national economy is concerned. The bigger carbonising or gas making plants have an efficiency exceeding 80 per cent., the average figure for the whole country being 71 per cent. The average figure for the efficiency of the generation of electricity was 20.6 per cent. in 1938 although one station has since exceeded 30 per cent.

In studying heat supply to buildings the first stage is to lay down desirable conditions. Enough research has now been carried out to enable this to be done with fair certainty. For the living room an equivalent temperature of 62° F. to 66° F. is desirable although individuals may prefer temperatures outside this range. The mean for the greatest number of people is 64° F.

It will be noticed that an equivalent temperature and not an air temperature is specified. Air temperatures are no criterion of comfort when radiant sources of heat are used or when there are considerable air currents. They are quite satisfactory when central heating or convective heating is employed. Equivalent temperature can be measured by the Eupatheoscope, an instrument invented by Dufton of the Building Research Station and which takes into account radiation, air movement and air temperature.

A temperature of 62° F. to 66° F. is necessary in the living room only when it is occupied. At other times its temperature may be allowed to drop to 50° F. It is suggested that the temperature of no part of the house be allowed to drop below this figure, except possibly at night when a temperature of 45° F. to 50° F. is sufficient. Such temperatures prevent undue sensations of chilliness in moving about the house and, very important, help to maintain the house dry by preventing condensation which may take place with change of weather. This general warming suffices for halls and passages in which occupation is only transitory. Kitchens and bathrooms should be warmed to 60° F. when occupied and bedrooms to 55° F. at morning and evening. The temperatures suggested avoid that uniformity which has a deleterious effect on the temperature regulating mechanism of the human body that leads to its atrophy.

If these standards are adopted, heating requirements fall into two classes. Background heating is necessary continuously while topping up is required when rooms are occupied. The same appliance may or may not fulfil both functions.

The quantity of hot water needed by a household depends very largely on the number of baths taken. It is estimated that for two adults and two children the requirements per week are 116 gallons at 140° F. and 220 gallons at 110° F.

The heat input necessary for heating a room or building depends on :—

(*a*) the temperature inside ;
(*b*) the climatic conditions ;
(*c*) the degree of exposure of the building ;
(*d*) the orientation of the building ;
(*e*) the construction of the building ;
(*f*) the rate of air change ;
(*g*) the means of applying the heat.

The maximum output of the heating appliance must be sufficient to deal with the heat requirement when all the factors are at their maximum. The annual heat requirement and fuel consumption will depend on the average value of these factors. Instead of calculating these average values, " degree days " may be used. When the average external temperature over 24 hours is one degree below a desired internal temperature, the heat requirement is equal to that for 1 degree day. If the temperature is 2 degrees lower there are 2 degree days per 24 hours and so on. In calculating these degree days it is usual to base them on internal temperatures 5° F. lower than the desired temperatures to allow for solar heat gain. Using data from the Meteorological Office, degree days have been calculated for various parts of the country. With a 65° F. internal temperature a town in the North of England would have 4,750 degree days and one in the South, 3,750 degree days, indicating a 20 per cent. higher heating load in the North.

Using heat transmission coefficients, heat losses from rooms may be determined and the maximum hourly heat input, for any given conditions, found. Suitable allowances must be made for ventilation. If the heat loss in B.Th.U. per hour for 1° F. temperature difference between inside and outside be denoted by H, then the annual heat demand is given by H by D by 24 where D is the number of degree days for the particular locality. These computations apply only to continuous heating.

Calculations have been made for a typical small house in the South of England. The annual heat requirements are 8.7 million B.Th.U. for background heating to 50° F. and 11.6 million B.Th.U. for topping up.

An intermediate floor flat requires 14 million B.Th.U. per annum, but one on the top floor under a 6 in. concrete roof needs 26 million B.Th.U. per annum. The loss for the top storey may be reduced to 18.5 million B.Th.U. by using a 2 in. light-weight concrete screed with ½ in. wall board on battens.

When a room is used and heated intermittently a considerable saving in heat requirement may be effected by low thermal capacity linings (plywood, fibre board, etc.) on the walls. For an occupation period of two hours a lined room needs only about half the heat input of an unlined room but the saving drops to about 15 per cent. as the period of occupation lengthens to 10 hours.

If about 53 million tons of coal are consumed per annum in heating dwellings in Great Britain, the cost will be more than 100 million pounds or about the sum required to build two or three hundred thousand houses. Any expenditure which conserves heat should be recovered in a few years of the life of the house. Suitable insulation, therefore, seems worth while.

In a normal house a low estimate of the cost of heat lost through a square foot of external wall (11 in. cavity brickwork, plastered) is 1d. per annum. An additional shilling on the cost of the building increases the amortisation rate by ½d. per annum (3½ per cent. compound interest). On this basis, an expenditure of a shilling a square foot on insulation which reduces the heat loss by 50 per cent. would be justified. Since tenants might fear that an increase in rent would not be counterbalanced by saving in fuel, the extra allowance which can be afforded has been halved in the following table :—

| | *Value of U.* | *Saving of heat.* | *Increase in cost of wall which can be afforded per square foot.* |
|---|---|---|---|
| | | % | d. |
| *Wall :* 11 in. cavity, 1 in. fibreboard on battens or 2 in. wood-wool slabs .. | 0.15 | 56 | 6 |
| *Floor :* 1 in. wood block on 4 in. foamed slag or clinker concrete ; and ½ in. bitumen on 2 in. ballast concrete .. | 0.14 | 44 | 6 |
| *Roof :* Tiles, battens, fibreboard ; ½ in. fibreboard above ceiling joists, plaster or plasterboard ceiling .. .. | 0.18 | 68 | 8 |

In this table U is the heat transmission coefficient.

On the foregoing reasoning, economy would be achieved if :—

For external walls U did not exceed 0.20 for any part of the house and 0.15 for the living room.

For ground floor U did not exceed 0.15.

For roof and top ceiling U did not exceed 0.2.

There appears no reason in principle why new insulated construction should cost more than present construction, particularly as insulating materials are light in weight. The inner leaf of a cavity wall might be constructed with insulation as the main consideration, the outer leaf being of brick to retain appearance and strength.

To obtain full value from insulation, overheating due to heating having too large a minimum output must be avoided. Although the British climate has not appeared to warrant thorough insulation of buildings, substantial gain to the nation would follow its adoption.

Heat input necessary for water heating varies widely with the layout and the amount of insulation. The amount of heat required for the water quantity given earlier is 236,500 B.Th.U. Radiation losses increase the necessary heat input per week to the following figures in thousands of B.Th.U.

| | *Insulated* | *Uninsulated* |
|---|---|---|
| Compact system .. .. | 394 | 708 |
| Less compact system .. .. | 457 | 805 |
| Straggling system .. .. | 545 | 1,235 |

In considering appliances to supply heat, high efficiency is of importance to the householder because it reduces running costs and to the nation because it reduces wastage of a national asset. In the following tables the national aspect is considered by taking account of generating station and gas works efficiencies when other than raw coal is used.

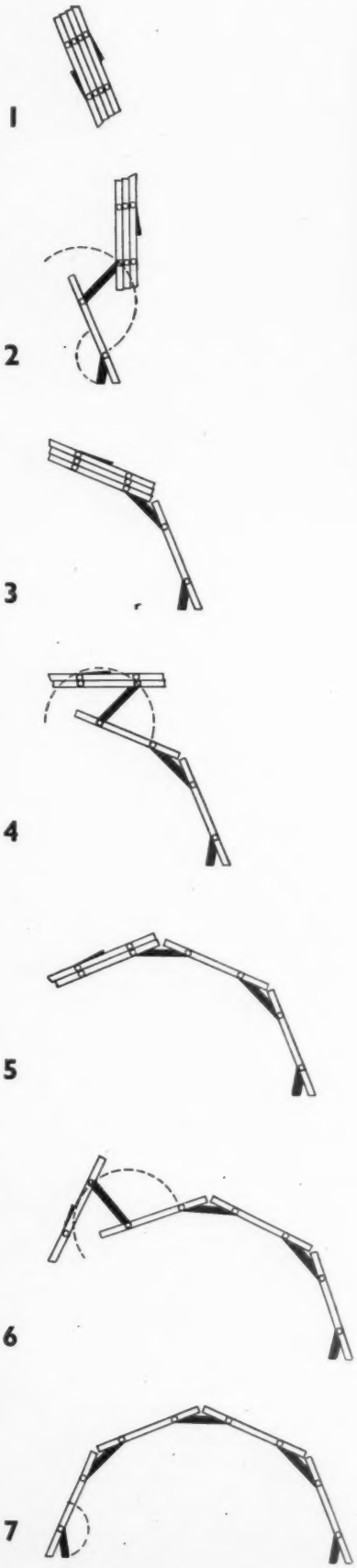
| | *Test-bench efficiency.* | *Thermal efficiency.* | *Coal economy.* |
|---|---|---|---|
| Coal-fired boilers (large) ; automatic with hot-water radiators.. .. .. | 80.0 | 80.0 | 61 |
| Anthracite in closed stove | 72.0 | 72.0 | 58 |
| Coal-fired boiler (small) ; with hot-water radiators | 75.0 | 75.0 | 51 |
| Gas-fired boiler (large) ; with hot-water radiators | 85.0 | 59.4 | 50 |
| Gas-fired boiler (small) ; with hot-water radiators | 80.0 | 55.8 | 48 |
| Coke-fired boiler (large) ; automatic stoking with hot-water radiators .. | 80.0 | 57.2 | 46 |
| Modern gas fires with convection .. .. .. | 65.0 | 45.4 | 45 |
| Coke in closed stove .. | 72.0 | 51.3 | 41 |
| Coke-fired boiler (small) ; with hot-water radiators | 72.0 | 51.5 | 35 |
| Coal in closable fire .. | 50.0 | 50.0 | 40 |
| Coke in closable fire .. | 54.0 | 38.5 | 31 |
| Modern gas fire .. .. | 42.5 | 29.7 | 30 |
| Coal in open grate .. | 30.0 | 30.0 | 24 |
| Coke in open grate .. | 35.0 | 25.0 | 20 |
| Electric fires, radiators and convectors .. .. | 100.0 | 17.8 | 18 |
| Electric thermal storage and hot-water circulation | 100.0 | 17.8 | 15 |

| *Hot-water appliances, etc.* | *Test-bench efficiency.* | *Thermal efficiency.* |
|---|---|---|
| Gas-fired boilers .. .. .. | 80 | 56 |
| Anthracite-fired boilers .. .. | 55 | 55 |
| Gas heaters, instantaneous .. | 75 | 52 |
| Coke-fired boilers (smallest) .. | 55 | 39 |
| Electric heaters .. .. .. | 100 | 18 |
| *Multi-purpose Units.* | | |
| Coal in lightly insulated range .. | 30—65 | 30—65 |
| Coke in lightly insulated range .. | 33—70 | 24—50 |
| Coal in back-to-back grate .. | 16—30 | 16—30 |
| Coal in combination grate .. | 14—30 | 14—30 |
| Coal in brick-set kitchen range .. | 10—30 | 10—30 |

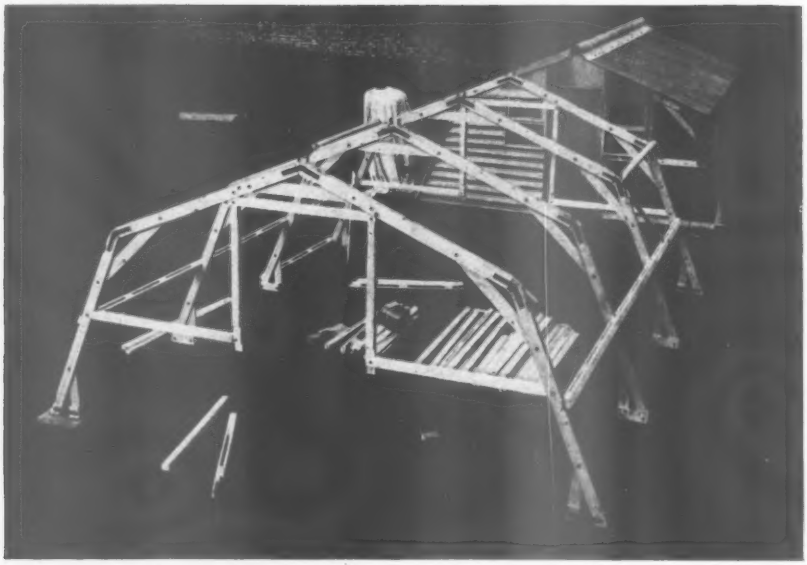
Test-bench efficiency is the measured efficiency of the appliance. Thermal efficiency takes account of antecedent processes mentioned above and of losses in transmission of gas or electricity. Coal economy efficiency is thermal efficiency reduced to allow for losses which take place with normal use.

Increase in efficiency results in reduction of atmospheric pollution since less coal will be burnt. Those appliances therefore with a low coal economy efficiency may be regarded as potent sources of pollution, the assessable value of which appears to be 10-12 shillings per head of the population per annum.

In an attempt to provide the standards of heat supplies given earlier, a study has been made of combinations of various appliances. It has been found that total costs using pre-war prices for fuel, are no greater than the average householder's annual pre-war expenditure on fuel, although a very much more comfortable house results.




*How to unfold the trusses.*



# TRANSPORTABLE TIMBER HUT

## *DESIGNED BY H. DALTON CLIFFORD*

**The chief advantage of this hut lies in the ease with which it can be transported and erected by virtue of its collapsible timber trusses.**

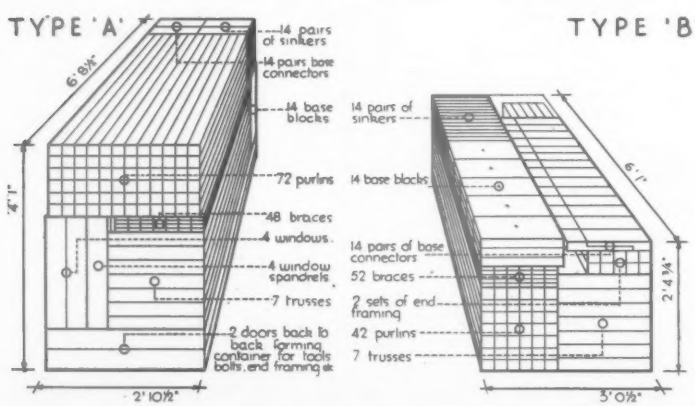
**The hut is of two types, A and B, both being 36 ft. by 14 ft. 6 in. Type A is covered with sheet material such as corrugated asbestos or iron, wall-board or plywood, and type B with canvas or other flexible material. All the structural parts of four Type A huts, excluding covering material, but including gable ends with doors and windows can be carried on a 3-ton lorry. Type A can be erected complete in 35 man-hours and type B in 10 man-hours.**

**The trusses which are twin-membered are normally intended for use at 6 ft. centres and are strengthened by small section timber braces sandwiched between the twin main members. The main joints are formed with removable metal bolts and angle braces. The longitudinal framing consists of single-membered wind braces and twin-membered purlins.**

**The various parts are made in the factory from jigs and can thus be standardised and interchanged.**

**Anchorage can be provided by fixing the trusses to (1) concrete base or foundation blocks if no concrete or other floor is used; (2) timber tailing down plates; (3) a concrete floor; and (4) any kind of brick, concrete or block dwarf wall.**

**The hut can be used for many purposes such as camps, stores or contractors' site buildings.**




***Framework, doors and windows for the two types of hut packed for transport. Both types are 36 ft. by 14 ft. 6 in., when erected.***

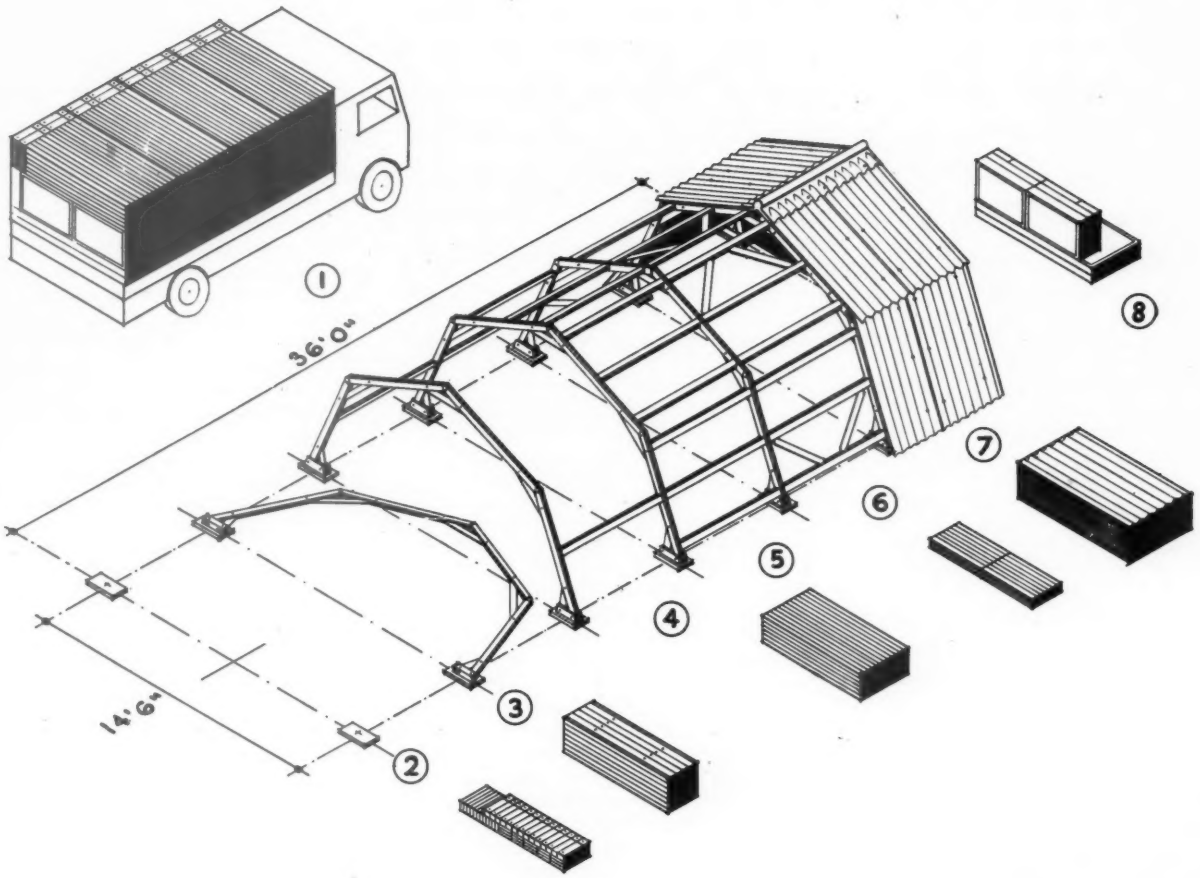
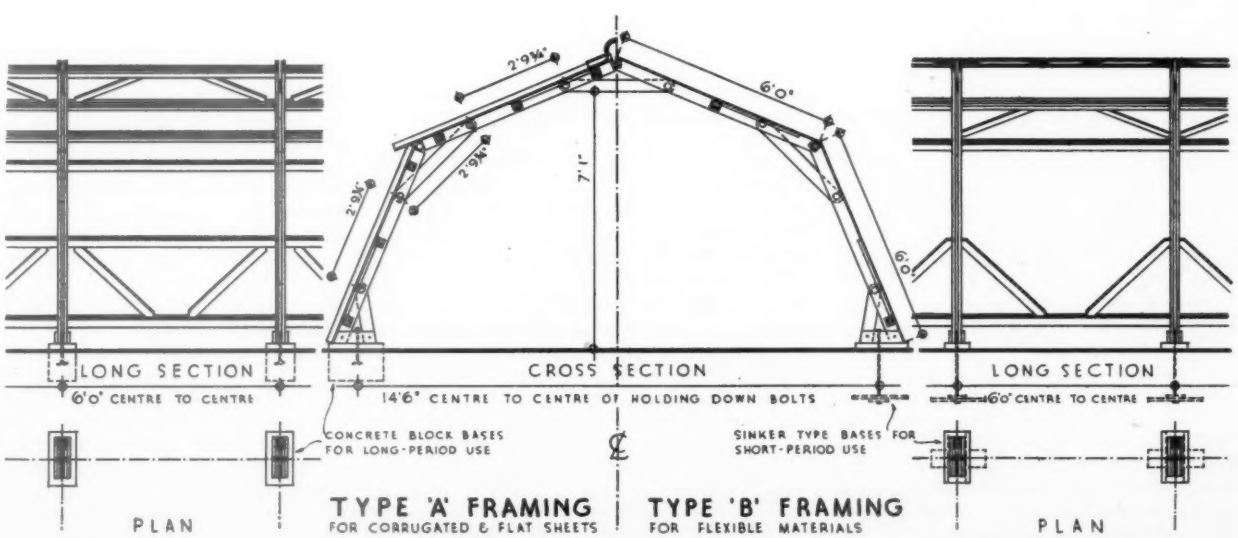



*Diagram of transport and erection operations.* (1) *Transport to site; framing for four Type A huts can be carried on a 3-ton lorry and unloaded in sections by two men.* (2) *Preparation of site; site must be roughly levelled; base centres are then set out, sinkers buried and base blocks positioned and levelled (for long period use sinkers can be concreted in).* (3) *Opening of trusses; trusses are unfolded on ground adjacent to their respective base blocks, and base and angle connections fitted.* (4) *Erection of trusses; trusses are raised to vertical position and held by fixing of one purlin on each side.* (5) *Fixing of purlins; remaining purlins are clipped into position.* (6) *Fixing of braces; braces are then fixed as required in all bays, alternate bays or end bays only, according to conditions.* (7) *Covering material; corrugated asbestos or iron sheets are fixed to framing by hook bolts.* (8) *End framing, etc.; framing is erected, doors, windows, etc., fitted and end wall panels fixed. Below: general structural details of the folding trusses.*



*The function of this feature is to record all current developments in planning and building technique throughout the world as recorded in technical publications, and statements of every kind whether official, private or commercial. The* ***Information Centre*** *attempts to supply an index and a digest of scientific data, the lack of which has for too long been a handicap both to the technician and the planner. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal and views expressed are disinterested and objective. The Editors welcome information on all developments from any source, including manufacturers and contractors.*

# STRUCTURE

### 1127 Prefabrication in USA

THE PREFABRICATED HOUSE—CONCRETE. (*The Architectural Forum, February*, 1943, *pp.* 67 *to* 78). Series of articles on prefabrication. Early experiments. Edison's single mould house. Type successfully employed for 25 years. More recent developments. Future prospects.

This article is the third of a series on prefabrication of which the first dealt with the contributions of non-profit foundations and government agencies to the development of prefabrication and the second described certain radical proposals for "mast" houses, "eggshell" houses, the "mechanical core," etc. The third article, of more immediate interest, is a very useful summary of American proposals for prefabricated houses in concrete illustrated with many photographs and sketches.

The earliest American attempt to attract attention is an experiment of that versatile inventor—Thomas A. Edison. He was trying in 1908 to utilize machinery acquired for an attempt to revitalize New Jersey's abandoned iron mines, and proposed to pour a three-storey house, complete with concrete bath-tub, in a single operation. It was found, as could have been expected, that the cast iron forms required would be far too expensive; but the scheme was tried with timber moulds.

A year earlier a New York architect, Grosvenor Atterbury, had begun to develop the first American system to find large scale application. He used hollow-cored precast units for walls, floors, roofs and even such features as chimneys and porches. The joints between them were grouted. The surface of the concrete, as produced at the factory, provided an attractive exterior and interior finish for the walls. The result was a wall unit "consisting of a single economical material, which was complete as soon as it was put into place, damp-proof, of reasonably low heat conductivity compared with the materials then in use, and required virtually no maintenance." The only trouble was that the units were very difficult to transport and handle. The finished houses look very pleasant, and the early ones had all the elaborate ornamentation of the time, suitably varied to avoid monotony. They have proved very comfortable and exceptionally durable.

The article gives examples, clearly described and illustrated, of all the more important types developed since, up to the monolithic bubble house, designed by Wallace Neff in 1934, which consists of concrete sprayed on to an inflated balloon. Great progress has been made, so that more than a tenth of American houses each year are now built of precast concrete units, though this has been achieved by the development of the simple 8 by 8 by 16 in. concrete block rather than the more complicated systems. This, the article concludes, far from proving that such systems are impracticable, seems to show that concrete construction is tending in the direction of prefabrication. The war has already greatly speeded up the process. No doubt much more will be done particularly in the period of post-war reconstruction.

### 1128 Air Raid Shelter

BOMB-RESISTANT AIR RAID SHELTERS. *H. E. Wessman* (*Journal of the American Concrete Institute, February*, 1943, *pp.* 241 *to* 252). A shelter to resist the direct hit of a 1,000 lb. heavy-case bomb requires a roof slab 11 ft. 3 in. thick, side walls 6 ft. thick above ground and 9 ft. thick below, and a base 5 ft. thick. A surface shelter to resist blast and splinters from a 1,000 lb. bomb exploding 25 ft. away, has 15 in. side walls and 8 in. roof.

The dimensions necessary to give safety against a 1,000 lb. bomb show the futility of attempting to provide absolute protection for many people, especially in view of the actual use of 8,000 lb. bombs. Considerable protection, but not safety, may be given by surface shelters to a large part of the population. It is suggested, however, that the U.S.A. ought not to embark upon a large programme of building shelters now, but build factories, schools, office buildings, blocks of flats and hotels with blast and splinter-resistant outside walls after the war.

# ACOUSTICS & Sound Insulation

### 1129 Sound Waves

PERTURBATION OF SOUND WAVES IN IRREGULAR ROOMS. *R. H. Bolt, H. Feshbach and A. M. Clogsten* (*J. Acoustical Soc. Am., July*, 1942, *p.* 65). Acoustical importance of irregular shapes and absorbents in auditoria.

During the past few years a number of writers in America, and Bagenal and others in this country, have been directing attention to the importance of diffuse sound in rooms, and the evidence is now very clear that in the design of many auditoria this factor has been given too little attention. The classical formula for the calculation of reverberation times in auditoria is based upon the assumption that sound is well diffused throughout the room. The formula has been applied, however, to rooms of all shapes, in some of which the sound does not become diffuse even to the point of giving approximate accuracy to the calculation. In particular, shell-shaped rooms direct sound to the audience so powerfully that much of it is absorbed at once. The result is often a dead room, with reverberation much shorter than intended, and unsuited to music.

The present paper discusses the theory of the problem and the conclusion is reached that "irregularities in shape or absorbing material should be distributed in a completely non-symmetrical fashion if diffuse sound is desired." The authors remark that this rule is amply supported by experience in the field, and evidence is quoted that the

use of dispersing forms and non-parallel surfaces has proved most effective in improving the acoustics of auditoria. Broadcasting studios, in particular, have used these treatments with great acoustic success.

A secondary point is brought out in this study. When the sound is diffuse in the room, the effectiveness of the absorbing material is increased.

Points of this sort will obviously lead to modifications in concert hall design after the war, which would be all to the good. We have succeeded in eliminating some percentage of the gross failures of acoustical design, which were due mostly to echo, but at the same time we have stepped into an unexpected, though less serious problem of another sort. Evidently fifty years of research has not brought to this subject a finality of assessment.

# LIGHTING

### 1130 Domestic Wiring

DOMESTIC WIRING. *Immediate Developments, by F. Jackson and W. J. N. Wood. The Distant View, by G. Smith and E. Jacobi:* (*Papers given to IEE, March* 11, 1943). Suggest one universal size of socket for housing with all outlets in one house or flat to be on one ring main, rather than the conventional plug-per-circuit arrangement. Other factors of cost and practice discussed.

Despite the obvious attempt here to divide the future into two parts, immediate and distant, both papers dealt with much the same material, and there was no particularly far-sighted contribution. Treatment of the immediate future, however, was adequate and interesting.

There were two principal suggestions, namely :—

(*a*) The use of a universal socket ;

(*b*) A single ring main for all socket outlets.

Universal sockets have received lately such widespread commendation in the electrical world that every appearance of agreement is given, and it begins to look as though at last we may have this simplification for the householder. The size of socket recommended is for 10 amperes, and in this paper it is further suggested that it should have a fused plug. This idea is associated with the second suggestion for a single ring main to carry all the sockets in the house, the need for separate circuits being reduced by the separate fusing. The authors of the first paper had in mind that for a house or flat containing four rooms (plus kitchen and offices) 12 general utility sockets should be provided, and they demonstrate that this load can be carried without excessive wiring, and even without excessive cost, for they say that the additional expenditure required is only 15—20 per cent. or £2 or thereabouts per house. This would appear to give the measure of economy provided by a ring main carrying all outlets, as compared with the conventional plug-per-circuit system offering, probably, half the sockets.

For the wiring system the first authors suggested grip-joint light gauge tubing, $\frac{5}{8}$ in. diameter, which could be set in a brick-joint. The second authors expressed disapproval, saying that it holds moisture, which has a detrimental effect on insulation, and that it has too many "bits and pieces." Their only serious suggestion for an alternative is the use of plastic skirtings providing a space for wiring. Contributors to the subsequent discussion contributed to the disagreement, and one could draw no conclusion that the industry was of one mind with regard to wiring, which is most unfortunate. In such an important matter it would seem a useful suggestion to carry out a thorough impartial examination of existing installations, determine success or cause of failure, and finally attempt to secure an agreement on the evidence. At present one receives the impression that each protagonist of one system has had success with it, and has failed with others, and having mastered one, feels that it is therefore good for everybody. A statistical enquiry seems an urgent need.

The authors of the paper on the distant future of wiring had one or two interesting points to make, but a vision of the distant future requires, not practical men such as both these, but theorists. It would have been more interesting, then, to have heard from the pure scientists.

For instance, they stress the use of electricity for war-time power in kitchens, for labour-saving equipment. They anticipate generous developments in this field where there is no competitor and suggest provision of adequate outlets for power. They remark upon the future wattage of lighting installations, suggesting a maximum of 2,000 watts, about 3 watts per sq. ft. The present standard is probably about 350—400 watts, and in view of the fact that sources are increasing rapidly in output per watt, their figure of 2,000 seems altogether excessive.

The distant vision of these authors seems, from their paper, to be circumscribed. One can hardly help feeling that practical men such as these are not the best choices for a paper of this kind ; it requires the research end, and particularly the pure scientist, who is already far ahead of practice, to know with reasonable certainty what direction events and knowledge are taking.

One last point. Both papers urged that architects should consult the electrical engineering side at the outset of design. This plea is heard from every profession in rotation—the heating side, the planning side, the noise side, and all the rest. An impossible situation is presented, and one is impelled to believe, therefore, that this is not, in fact, the solution. The trouble appears to be that these specialist trades and professions are unable to state their requirements in design in such a way that the architect can make a single elementary move without danger of error. In that sense it is a form of self-criticism for them to call upon the architect to give them a chance to be heard at the beginning of design. At the same time the architect is not without blame, for little encouragement has been given to science and technique to prepare what would, in fact, be codes of practice. Perhaps this will be rectified soon.

# QUESTIONS
## and answers

*THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential, and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to:* THE ARCHITECTS' JOURNAL, 45, *The Avenue, Cheam, Surrey*

### 1131 Holidays with Pay

Q *Will you kindly enlighten me on the working of the holidays with pay in the Building and Civil Engineering Industries scheme and advise me on the following points.*

1. *Does the operative only receive* 13*s.* 0*d. for the current year* ? *The question crops up if the employer stamps the Holiday Card at* 1*s.* 6*d. per operative and pays the man equivalent in cash on taking his six days, i.e., he is paying twice over,* 1*s.* 6*d. in stamps and also the equivalent in cash representing the amount of stamps. Is this recoverable from any source* ?

2. *When a man is away sick, etc., is the card to be stamped* ?

3. *If an operative has say* 25 *stamps on his card and is transferred or called up for Military Service does the employer lose the contributions of* 25 *weeks. A carpenter, for instance, has to his credit next year* 52 *stamps, he is entitled to* £3 18*s.* 0*d. Holiday Pay and*

*the employer paying this in cash, has paid altogether £7 16s. 0d.*

A 1. The scheme operates over annual periods commencing on the first Monday in April, e.g., the holiday money for 1944 will be the amounts credited to the operatives during the twelve months commencing April 5, 1943. As the scheme has only just come into operation, operatives this year will only get a total payment amounting to the sums credited to them from February 1, up to but not including April 5, 1943. In each case the administrative charge will be deducted.

Such operatives as are fully employed up to April 5 this year will receive 13s. 0d. but they do not receive their weekly credit if at any time they are away from work for the whole of one week.

As it would be unfair for an employer to have to make holiday payments to operatives who have only been with him a short time, it is arranged that the employer should make the cash payments and obtain reimbursement from the Management Company which, incidentally, has already received payment for the stamps on the man's card, possibly from a number of employers.

The money that the employer spends during the course of the year in purchasing stamps for his employees weekly is not recoverable under the scheme, although (dependent on his contract) he will normally be able to recover the cost from the building owner unless he has allowed for it in his tender. It is understood that Government Departments expect the Contractor to allow for the cost in his tender for contracts after December 11, 1942.

2. An operative does not receive credit unless he is present for work during at least a part of the week. The card is not stamped if he is away sick the whole week.

3. The transfer or call up of an operative cannot affect the employer. As pointed out above, he only purchases stamps for operatives whilst they are in his employ and any sums which he can recover from the building owner will be related to the actual payments made.

The operative himself does not lose by transferring as he takes his card with him and continues to have it stamped by his new employer.

Nothing is specifically stated about operatives called up for Military Service, but we think there is no doubt that they are entitled to receive the amounts credited to them at the time of their call up, less an appropriate administrative charge.

Full particulars can be obtained from the Building and Civil Engineering Holidays Scheme Management, 82, New Cavendish Street, London, W.1.

See also Q. 1073, A.J. February 18, 1943.

## 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 economise 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

# Thomas Sharp

April 14, at 66, Portland Place, W.1. Lecture on PLANNING OF RURAL AREAS, by Thomas Sharp, M.A., M.T.P.I. Fifth in series of six lectures on *Town and Country Planning*, organized by the RIBA Committee on the Training of Architects as Town-Planners. Chairman: H. V. Lanchester, F.R.I.B.A.

*T. Sharp:* The townsman has discovered the countryside, for new methods of transport have laid it wide-open before him. The countryside must be recognized as home and heritage alike of the countryman and the townsman. Thirty-six million townsmen in Great Britain demand their part and place in it—and will not, and cannot, be denied.

This means that a new balance and a new synthesis must be struck between town and country, for they are linked by far greater bonds than they have ever been in the past. In no way would I advocate the physical mixture of the two. The success of each lies in maintaining the ancient physical distinction between them. The country can supply certain essential deep needs of the townsman. The town can supply certain essential needs of the countryman. Town and country are not two organisms, but complementary parts of one organism, together providing the background of the one great synthesis of national life.

The townsman's future requirements in the countryside will be of two main kinds. First, and principally, the great majority of the inhabitants of towns will demand, and should be given, all facilities necessary for them to enjoy, in their leisure, frequent temporary escape to the country. Second, no doubt, there will continue to be numbers of people who, though they earn livelihoods in town, may prefer to live in the countryside—though if towns are made noble and fine places, fit to live in, instead of what they are now, these people may become far less numerous than at present. A further section of this second type will be those elderly people who, after a lifetime in town, desire to pass their remaining years in country peace. These people, too, may not have the urge to escape if towns are made more reasonably habitable. We have this to bear in mind, that whatever happens now, we are almost bound to have for many decades an increasing proportion of elderly people in the population. This second type should be directed into villages, rather than permitted to scatter about the countryside, for only in villages will they find the kind of social life which, though escapers, is still necessary to them after a lifetime in towns.

Now I come to what is necessary for townsmen who wish to make temporary, rather than permanent, country holidays. What *is* necessary is *access* to the countryside. This access is of two kinds, wide-ranging, free access to special holiday lands of the country, mountains and coast—and more access to the ordinary countryside. Of the first of these I need say little now, for John Dower dealt with them in his lecture on National Parks in this series only a fortnight ago. The case for National Parks and the preservation and opening-up of the coast line is now well established, and it will be surprising if we are not given at least the first instalments of a National Park system very soon after the end of the war. National Parks, however, will only meet rather special requirements; for most people they will only be available for long-period, specially-arranged holidays. It will be at least as necessary to provide for more immediate, unprepared escape into the everyday countryside immediately adjacent to towns.

The principal need in this direction is the provision of a complete system of country footpaths. Present paths are erratic, unrelated, often ill-defined and frequently insecure. What is necessary (and what every plan for a countryside within a ten mile radius and more of a town needs) is a footpath system of streamside paths, paths through woods and fields, past farmyard ponds, in the valleys and on skylines, which will enable a man to walk out from his town and complete a circuit back again, a distance of ten, fifteen, or twenty miles in which he would never need to walk along a busy traffic road.

In addition to this kind of access, there is another necessary for those townsmen who do not merely wish to enjoy country sights and sounds, but want to join in country pursuits. For these kind of people Sir G. Stapledon has suggested what he calls Guild Farms, where those who wished could find a change of occupation in farm work. I think myself there may well be a place for country allotments, to cultivate which men may stay with their families in adjoining hostels. Something of this kind already exists in the neighbourhood of Stockholm, except that there families sleep in little huts on their own allotment—a state of affairs which might easily become undesirable. Many other arrangements of this kind may well come about. Some are more distant in the future than others, and many are dependent on the future development of leisure and the organization of that leisure, whether into shorter day or longer week-end. The latter question, indeed, lies at the root of much of the planning for the future townsmen in the country, for a decision on it would decide what kind of facilities are needed.

As the possession of a car becomes commoner the congestion of roads round the great cities at weekends will be more and more frightful. This alone may lead to the necessity of staggered weekends. But whether or not that happens, it is obvious that the townsman in his leisure will demand increased road facilities in the country. And commerce between towns will also need increased road facilities. But the two demands will not be met by the same kind of provision, except that the townsman dashing as quickly as he can from town to coast may be wishing to use the high-speed motorways which commerce will require. The ordinary motorist out for a country pleasure trip will not, however, generally be content to do so. What he will want is to see

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the country intimately, and not as from a railway track ; he will want country incidents, and to pass through villages. And here is going to be a difficult problem of planning. Highly desirable as I think a number of high-speed motorways may be, and delightful as I think country parkways may be, I should hate to see every country lane turned into either one or the other. This will, of course, eventually be a problem of space and the occupants of it. But here is to some extent a matter of waiting and seeing. Here is an example of the necessity for flexible planning. It would be a mistake to plan intimate side roads out of existence before this is necessary (which I hope may never be).

I now pass on to the main part of my subject, the planning of the country for the countryman. Obviously the most important matter here is the future of agriculture. This is a matter of high government policy, and is dependent on resolving the clash of many interests. The broad alternative policies which are possible are quite clear, and they are set out in the majority and minority reports of the Scott Committee. One school of thought, basing itself on a governmental pronouncement promising the maintenance of a healthy, prosperous and well-balanced agriculture after the war, envisages the revival of large-scale agriculture—or more accurately the continuance of flourishing large-scale agriculture we have seen developing during the course of the war. The opposing school of thought expects a contraction of agriculture within the narrow limits of orthodox economics and is quite prepared, theoretically at least, to see great acres of the countryside go out of productivity altogether, through continuation of under-selling of home produce by the produce of bankrupt foreign farming. I find myself awed by the mad and fearsome prospect of an England farmed only in patches, for, though that may be sound economics, it seems mad by all other standards, and shows a complete lack of the realization that our landscape is man-maintained. Land not farmed would lapse to a primeval condition of scrub, forest and fen.

I will, for my purpose now, assume that agriculture of the future will be large-scale, well-balanced and vital. It is difficult to forecast exactly what will be the full effects of changes in methods of agriculture. No doubt in some parts there will be a considerable broadening of pattern. Many parts may be changed, too, by afforestation. No sentimental considerations should lead us to resist these changes, but we should not, on the other hand, leave them to themselves. I believe there is an increasing field of opportunity for the landscape architect, and certainly believe that the landscape architect should have a very important place in the team of planners in country areas (and in towns too).

Other changes in landscape as a result of mechanical advancement and other changed conditions must be considered. It is argued in some quarters that the coming of the car may mean a change of the whole system of rural settlement. In the past village location was determined by the necessities of economic geography. A village was a place housing and providing other basic requirements for people working in the immediate neighbourhood. The distance between villages in normal agricultural districts was determined by the necessity of home being within reasonable walking distance of work, and also by the volume of labour required in different kinds of work. This also determined the economic size of a village. But these old factors have been modified to a considerable extent by the development of motor transport, and also by the increasing mechanisation of agriculture, which may reduce the density of labour over certain types of land. These developments may alter the whole pattern of village distribution. Superficially, it can be maintained, for example, that agricultural workers could live in towns and travel out by motor conveyance right into their very fields. On this argum nt most of 10,000 villages of England could disappear, and instead of the existing countryside pattern of villages at intervals of two or three miles, the future pattern would be one of small towns ten or twelve miles apart. But few agriculturists, I imagine, could view such a development as that with any satisfaction, especially in districts which carry stock, as most districts must surely continue to do. Besides, and more important, the village way of life is different from the small town way of life, and there are many who prefer it to any other. There are bound to be many changes, and there should be. Many old villages will disappear, and there will be new ones, and additions to old ones, if for no other reason than to accommodate the elderly of the towns and others—though I hope, too, for more vital reasons than that. Whatever may happen in the distant future, I think something of the existing pattern is likely to continue for as far as we can at present foresee. Existing villages will largely need rebuilding in the next decade or so. They should be given all necessary services, social institutions, etc., and they should be by-passed by the main roads. The capacity or incapacity for being given improvements and for being brought up to standards consistent with modern ideals of living, will determine whether or not they shall continue to exist. Many villages may be removed to some nearby, more suitable, site (as some were in the 18th century), and many hamlets, which are too small to provide proper social life, will need regrouping. But in the main the broad pattern of village location is not likely to be subject to change on that revolutionary scale which is theoretically possible through the advent of the car.

I have mentioned size as being an important factor in the success of a village. This is so for obvious reasons. Communal facilities and public services depend to a very large extent upon size. Though certain services can, and should more and more, be provided on a district rather than on an immediately local basis (as village colleges), other services are essentially local. It is obviously desirable that a village should be of such a size and in such a situation that it can provide the inhabitants with at least minimum services which, according to modern standards, should be available for all communities. It is difficult to establish criteria of what these should be. Whatever is done, certain social facilities can never be provided in a village at the level to which they develop in a town ; the very scale of the group activity that is involved prevents this. The solution of the problem lies in determining which of the social services indispensable to our civilization must essentially be provided on a local basis.

There is little doubt that the basic service is the education of the young child. Older children, over 11, can be provided for on a district basis, at the village college, or district senior school, but provision for the young child should, if possible, be at the place where it lives. This problem awaits a government pronouncement on educational policy. The village school of 50 children (three classes of 17 apiece, a compromise arrangement) demands a population of something between 550 and 600, or, allowing for scattered farmhouses and cottages, a village population of between 400 and 450. (This may be much changed by the present population trends which may mean for the same number of children a village population of 500—550 by 1971). Now most villages are far below this number. Therefore if this minimum service is to be provided on even a tolerable compromise basis, villages must get an increased population, and may have to be regrouped. A really satisfactory school unit probably requires a population of 1,200. This again may be used as an argument for the wholesale change of pattern just mentioned. Here, as in so much else in human affairs, is a question of choosing not between perfection and imperfection in a single field, but between a series of combinations and permutations in a number of fields which are sometimes mutually conflicting.

Many other social facilities are necessary —the Village Hall, for example, and an adequate bus service. For most of these, too, a population of about 400 to 450 is desirable.

Now as to the structure of this population : reasonably well-balanced and satisfactory social life can only be obtained in a village of population made up of well-mixed occupational groups. The ordinary agricultural village has been declining in this respect during the last 50 years, but it still retains a good deal of diversity. Some recent rural experiments, however, have been quite deplorable in this respect. I refer especially to land settlement schemes. These thoroughly well-intentioned schemes have gone hopelessly wrong on this point. Through them people have been set down in concentrated agricultural colonies where every worker is either a smallholder or a co-operator in some scheme of intensive cultivation, and where not even a shopkeeper or an inn-keeper varies the occupationally-standardised character of the colony. These places are worse even than the mining villages which have long been regarded as the arch type of an ill-balanced community. We must certainly do all we can to avoid this kind of thing in future. If a new village is required for land settlement purposes, or for rural industry (or any other purpose), it should be based on a plan which will permit, and indeed require, a varied occupational structure among its population. Or better still, any new population that is introduced into the countryside should be attached to some existing satisfactory village (for there are great social advantages in being at, or near, a long-settled site)—though the addition of a new population should be in such carefully selected numbers that it will not result in the social unbalancing of the existing villages.

This brings me to the important question of the introduction of industry into the countryside. I have said that one of the revolutionising developments of this age was the new mobility of industry, and its workers. This means that it is now possible to establish in country areas certain industries which are in no way connected with the winning of natural resources or with processing them. There are at least five possible results from that, if development is permitted to take a " natural " unplanned course. (1) A single factory and houses for its workers may be built in some new place away from an existing village or town ; this is almost certainly highly unsatisfactory for the working of the factory and for the social life of the workers in it. (2) A single factory or group of factories may be set up in a rural area, the workpeople being daily transported from one or more towns nearby ; this is almost certainly unsatisfactory in that it would involve workers in excessive daily travel. (3) A group of factories and houses for workers may be established in a new country place ; the effect of this will depend on the size of the group and of the number of workers in it ; if the group is considerable, as it should be to achieve occupational diversification, and if the units in the group are of substantial size (as they are likely to be in this age of mass-production), then they, with their associated houses, will constitute a small town rather than a village, and as such will be outside the subject I am now discussing. (4) A group of such factories and associated houses of this kind may be attached to an existing village ; the result, again, will be to convert the village into a town ; this may or may not be desirable, but again it lies outside my subject. And finally, as the fifth of these possible developments, a single factory, or two or three, may be attached to a small village. This, to my mind, is the desirable course. Properly planned it might bring immense benefits to the countryside. For one thing well-adjusted development of this kind might absorb rural labour which may be displaced through the mechanisation of agriculture. For another it would help the occupational diversification which is so desirable and give opportunities of employment not now available in the country. For a third, it could introduce just that volume of new population necessary to assure sufficient sized groups to sustain further social facilities in villages. I think that

this well-controlled introduction of industry to villages might have an immensely revitalizing effect on the countryside. New factories should be in small units. It has been said that a factory employing more than a third of the total working population is unbalancing. I have no means of substantiating this, but it is likely to be true. I do not think that the country factory should generally employ more than a dozen or so, and I think that industry should be very largely of a type engaged in processing local produce—creameries (the Danes have 2,000 of almost standard size, employing three or four men only)—and perhaps factories making plastics which have their base in milk products; canneries; sugar-beet factories; corn mills for grinding grist or flour; tanneries; small breweries; factories processing potatoes, flax and other products; small textile mills; furniture workshops (especially in association with afforestation schemes); and many other factories and workshops of this kind. Alongside them may be a number of light workshops of other kinds, whose raw materials, though not local, are light and non-bulky by nature; such workshops as those making scientific instruments have been mentioned in this connection, and small scale precision industries of the kind that are so successfully carried on in many Swiss villages. I believe there is a great revitalising possibility for the countryside in all this, if only we have the courage and the imagination to plan for it.

# New Members

On April 13, the following members were elected:—

As HON. ASSOCIATES (2).—Cox, Herbert Arthur, F.C.A., F.S.A. (London), Howling, George Jeffrey (London).

As FELLOWS (4).—Gregson, Sydney (Newport, Isle of Wight), Pearson, Charles Edward (Lancaster), Bollinger, Charles Adolph (London), Foreman, Herbert Edwin (Windsor, Berks.).

As ASSOCIATES (30).—Bransgrove, Charles Alfred (Whitton, Middlesex), Brittain, Thomas Arnold (Burnley), Carter, Miss Gillian Ruth (Architectural Association) (St. Albans, Herts.), Carter, Gordon Ernest (London), Clifton, Philip Ernest (University of London) (Newmarket, Suffolk), Coles, Robert John, B.ARCH. (HONS.) (Liverpool) (University of Liverpool) (London), Cook, Alan Denis (The Polytechnic, Regent Street, London) (Swaffham, Norfolk), Cooke, Leslie (Derby), Davies, Thomas Leslie (Chesham, Bucks.), Dobson, Roger (Liverpool), Douglas, Alan, DIP. ARCH. (EDIN.) (Edinburgh College of Art) (Edinburgh), Douglas, James Arthur (Wimbledon), Draper, Eric William (Leicester), Dupree, Mrs. Joanne Gwendolen Shirley (Architectural Association) (Portstewart, Co. Derry, N. Ireland), Easton, Frederic Roy (Southall, Middlesex), Empsall, Raymond (Bedford), Gauldie, William Sinclair (Dundee), Hogg, Thomas Wilkinson Dunkley (Birmingham), Hooper, David Vincent (Wells, Somerset), Hughes, William Norman (Wallington, Surrey), Jackson, Alec Walter (Yeovil, Somerset), Johnston, James Scott (Newcastle-on-Tyne), Lloyd, Sidney John (London), Lynham, George Allin (The Technical College, Cardiff) (Cardiff), Marriott, George Henry Gordon (Potters Bar, Middlesex), Nunn, Leslie Watson (Edwarlton, Notts.), Price, Philip John (London), Read, Jack Winter (Southampton), Roberts, Frank Henry (Birmingham), White, Cyril George (Thames Ditton, Surrey).

As LICENTIATES (26).—Bacon, Francis (Denham, Bucks.), Bennett, Alfred Edwin (Exeter), Britton, George Alex Payne (London), Clark, Herbert Anthony (London), David, Arthur Samuel (Neath), Dickinson, George Henry (Grantham), Dominy, John Newel (Loughborough), Dorin, Thomas Griffith (Nottingham), Gorton, Maurice George, P.A.S.I. (Stroud, Gloucestershire), Green, Arthur Ronald (Brentford, Middlesex), Hamilton, Humphrey Allen (London), Hammond, Gordon Henry (London), Harvey, Hugh (Irvine, Ayrshire), Hill, Robert Sharpe (Belfast), Hunt, William Alfred (London), Keatley, Robert Aubrey (Epsom, Surrey), Lynam, William Arthur Tatton (Clay Cross, nr. Chesterfield), Martin, Ivan Charles (London), Matthews, Richard Kirkpatrick (Nantwich, Cheshire), Partridge, William John (London), Riley, Robert William (Weston-super-Mare), Ruse, Arthur Walter (Bristol), Slipper, Reginald Owen, P.A.S.I. (London), Sykes, Major Wilfred Elsworth, F.S.I. (Hull), Turner, William Joseph Ellis (Newark), Wort, William Alfred, P.A.S.I. (London).

## TCPA

# Henry Morris

April 1 at YWCA, Great Russell Street, W.C.1. Lecture by Henry Morris, Director of Education, Cambridgeshire, on COMMUNITY CENTRES. Seventh and final lecture in series, *Rebuilding Britain*, organized by the Town and Country Planning Association. Chairman: Professor C. H. Reilly, F.R.I.B.A.

*H. Morris:* There is at the present time a universal breakdown of culture, and this is a problem of the whole world. The breakdown of the great religious sanctions means that we are in for a period of aimless materialism and real decadence. Planning must take this into account; and yet we are now only thinking of planning in materialistic terms. The provision of amenities for the whole community will have to become deliberately part of our pattern.

Between the two wars, over 550 housing estates were erected, with over 500 dwellings each, and a population of 2,000,000. Eighty-two housing estates housed over 1,500 people each. In addition there were private housing estates, housing over 1,000,000 people. Therefore five to seven million people had no provision for community life. For these local authorities provided:—

Twenty-five wooden huts, 20 halls, four other centres, and voluntary enterprise provided:—

Ten wooden huts or converted houses, 17 halls, nine other centres. Eighty-five centres in all, some adequate and some not.

In housing estates for 10,000 people, there were 36 centres, consisting of huts, converted houses, and old schools. Becontree and Dagenham were built without even sites for schools.

In future, town planning and country planning must provide for the adult life of the community. It must be done by the authorities, and the facilities must be humanistic. The school is not enough. There can be no advance in social problems, until *adult* education in the broadest sense is the centre of gravity, to which the school is merely an annexe. The academic institution is not the instrument of this. The proper environment is the civilised city. You cannot educate people by having technical institutes—grim places to which people go in the evening to listen to lectures. It is only an old superstition that we learn in this way. Adult culture, in the main, does not consist of learning; it consists of doing—physical education, physical training, dancing are also necessary.

The major premise of all art is the order of our individual environment. The new city ought to be a completely orchestrated work of architectural art. If there is to be a renaissance of art, the artist must take in hand the whole of the ordering of one art. Both in town and in country it will be lamentable if our new towns and cities are erected without consulting the artist, and if they are not works of architectural art.

The scope and object of community planning have not been thought out, much less reduced to systematic form. This is one of the greatest needs of civilisation. The truth is that, in Europe, since the disintegration of the medieval economy of town and country, no attention has been given to the planning of man's environment and to his social and cultural needs. Everywhere the town has failed, or is beginning to fail, as an environment, and the instruments of life have to be thought out afresh everywhere. Otherwise further decadence stares us in the face.

Community centres must be provided by the authority, not by the individual or industrialist.

The provision of proper cultural community centres at one end of the axis is essential to a tolerable family life at the other end.

In the adult sphere, our teachers are artists, prophets, priests, creative people. It is only because children are helpless that they are incarcerated in schools and sermonised for four hours a day by adults.

## PWB

# Study Committees

The Directorate of Post-war Building of MOW has issued a leaflet to the technical press which contains reviews of ten of the First Draft Reports and Provisional Statements of its twenty-three Study Committees. Reference should be made to the leading article and to the *Societies and Institutions* columns of last week's issue of the JOURNAL. The ten reviews deal with the work of the Committees on House Construction, Design of Houses and Flats, the Architectural Use of Building Materials, Business Buildings, Steel Structures, Plumbing, Electrical Installations, Gas Installations, Paint, Plastics. These reviews will be reprinted here, and the first of them appears below.

1. COMMITTEE ON HOUSE CONSTRUCTION. (Group A. Design). Secretary's Provisional Statement, October, 1942.

1. The Terms of Reference of the Committee are: "To consider materials and methods of construction suitable for the building of houses and flats having regard to efficiency, economy and speed of erection, and to make recommendations for post-war practice in the light of all the relevant findings of the Study Committees co-ordinated by the Directorate of Post-War Building of the Ministry of Works."

2. The Committee has met three times. Consideration was first given to the prospective situation of the Building Industry after this war, and comparisons were made with the situation in 1919, when a number of alternative methods of house construction were used to meet a shortage of labour, in particular, of bricklayers. The following points emerge:—

(*a*) that it is significant that few methods of construction alternative to the traditional have continued in use, and that where the labour shortage was overcome, alternative methods were discontinued.

(*b*) that it is likely that a situation similar to that of 1919 will occur in the building industry, as regards the supply of labour and materials, and that it will call for the use of alternative methods of construction.

(*c*) that, in addition to this, some form of temporary construction may have to be considered, though it must be recognized that, however temporary the construction of the house, access in the shape of roads and public services, drainage, and water, etc., cannot be temporary.

3. In developing a programme of work the Committee has decided :—

(*a*) to investigate the alternative methods of house construction used in the inter-war years, and to report on such methods as may be of practical application in the post-war period.

(*b*) to consider the use of methods of prefabrication for house building.

(*c*) to examine any proposals placed before it for new methods of construction.

(*d*) to consider proposals emanating from the Study Groups of the Post-War Building Directorate in their relation to house construction.

(*e*) where necessary, to arrange for the carrying out or testing of forms of construction by field research or experiment.

4. The Committee has decided to assess both known alternative methods and new methods against the following criteria, basing these on comparisons with normal house construction :

i. Stability
ii. Resistance to moisture penetration
iii. Thermal insulation
iv. Sound insulation
v. Fire resistance
vi. Durability
vii. Vermin infestation
viii. Initial cost and cost of maintenance
ix. Speed of erection
x. Appearance
xi. Appeal to housing authorities and tenants

5. The Committee has had submitted for its consideration reports on steel clad houses and on cellular (no-fines) concrete. No final conclusions have been reached on either of these systems, further investigations being required.

The Committee is continuing its investigations into other known methods.

The Committee feels that mere recitation of the different methods of construction is not what is required. The problem is of greater complexity.

To be of value its investigations and reports must be governed by a yardstick of requirements, some of which have still to be postulated by the various Study Committees of the Post-War Building Directorate.

## MOW

# Building Supplies

The third edition of *Wartime Building Supplies*, scheduling the requirements of Government Departments in plumbers' brass-foundry ; builders' ironmongery ; closet cisterns and seats ; sanitary appliances ; cisterns, tanks and cylinders ; porcelain enamel baths and footbaths ; concrete, clayware and asbestos cement goods ; tubes and pipes ; manhole covers and frames ; and windows and doors, has been published for MOW by H.M. Stationery Office, price 1/-.

Many changes in the supply of raw materials and the production of certain building supplies have taken place since the publication of the second edition, dated November, 1940. The third edition has therefore been produced so that all concerned may have, in a single volume, an up-to-date booklet which schedules building supplies that are available to-day, provides for the bulk of such supplies needed for the war-time programme and complies with the requirements of the various controls for conserving raw materials and labour.

The schedule does not preclude the purchase and use of existing stocks, but such purchase will not necessarily carry the right to the issue of certificates for replacement of material where such stock items are outside this present schedule. The schedule provides for alternatives—in some cases where one standard is unlikely to be appropriate for all conditions, and in others where the production of an article in the least scarce material is insufficient for all demands. The conservations of metal is most important, and where its use is necessary, choice should be made in the following order : steel, grey cast iron, malleable cast iron, non-ferrous metals (including galvanising). There are two appendices to the schedule, making recommendations regarding heating and hot water installations and electrical installations.

The schedule is issued for the use of all technical officers of Government contracting departments and their agencies, Local Authorities and independent Architects and Engineers advising Government Departments as well as Building Contractors, Builders' Merchants and Manufacturers of Building Supplies. Unless there is a definite reason to the contrary—such as special process requirements—the schedule will be followed by all Departments. In most cases the manufacture of articles not permitted by the schedule will cease, or has already ceased.

## Trade Note

The BCGA, in co-operation with the National Catering Service of the Empire Tea Bureau, has prepared a brochure entitled *Planning for Industrial Catering*. It contains plans and perspective drawings of kitchens of various sizes, together with specifications of equipment.

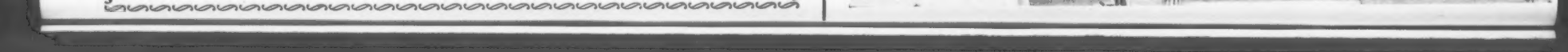
## Publications Received

*Bristol Engineering Directory*. (Bristol Engineering Manufacturers' Assoc., 9d.)

*Housing and Planning After the War*. (Labour Party, 2d.)

*Future of Local Government*. (Labour Party, 2d.)

*Economy Memorandum—Bitumen, Tar and Pitch*. (Committee on Building Materials and Standardisation.)



## DEMOLITION

Demolition is a specialised trade calling for experience and skill. The work is often hazardous and under inexperienced direction may be of danger to the public. Trained top and mattock men, capable of working under difficult conditions, combined with experienced management and direction, are essential. Their combined skill makes for economy of effort, speed and safety.

The National Federation of Demolition Contractors was inaugurated on the 28th October, 1941, at the request of the Ministry of Works and Planning, in order that demolition contractors might be organised to be of full use in the national effort. It has now a representative area organisation in every Civil Defence Region. Membership is strictly limited to contractors of experience in demolition.

Further information may be obtained from
The Secretary, 13, Bloomsbury Sq., London, W.C.1.
Chancery 6731-2-3.

## CLASSIFIED ADVERTISEMENTS

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

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

## Public and Official Announcements

*Six lines or under, 8s.; each additional line, 1s.*

**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

**CITY OF MANCHESTER.**

HOUSING COMMITTEE.

APPLICATIONS are invited for the APPOINTMENT under the Housing Committee of TEMPORARY ARCHITECTURAL ASSISTANTS. Applicants must be Registered Architects and must be prepared to devote the whole of their time to the position.

The salary for these positions is £6 to £7 per week (plus cost of living bonus) according to experience, and after six months' service the successful candidates will be required to contribute to the Corporation's Superannuation Fund. Preference is likely to be given to men over military age or of a low medical category.

Applications stating age and experience, together with two testimonials, must be returned to the Director of Housing not later than 12 noon on Monday, May 17, 1943, and endorsed "Temporary Architectural Assistant."

Canvassing in any form, oral or written, direct or indirect, is prohibited, and copies of applications must not be sent to any member of the City Council.

R. H. ADCOCK.
*Town Clerk.*

Housing Department,
Town Hall, Manchester 2.
19th April, 1943. 880

**CITY OF BIRMINGHAM EDUCATION COMMITTEE.**

BORDESLEY GREEN JUNIOR TECHNICAL SCHOOL.

REQUIRED from September, 1943, a PERMANENT FULL-TIME TEACHER of building subjects, preferably with industrial experience, for service in the Junior Technical School for Building.

Salary in accordance with the Burnham Provincial Technical Scale.

Forms of application may be obtained by sending a stamped addressed envelope to the undersigned, to whom applications must be returned (in envelopes endorsed "H.E. Dept.") so as to arrive not later than Wednesday, May 12.

P. D. INNES,
*Chief Education Officer.*

Higher Education Department,
Education Office,
Margaret Street, Birmingham, 3. 881

## Architectural Appointments Vacant

*Advertisements from Architects requiring Assistants or Draughtsmen, and from Assistants and Draughtsmen seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice. Other "Appointments Vacant" and "Wanted" will be found under later headings, and are subject to the charges given under each heading.*

*Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed.*

**AN EXPERIENCED QUANTITY SURVEYOR**, also Junior Assistant Quantity Surveyor, required for professional office in Westminster on work of National importance. Write, stating age, experience, etc., to Box 95.

## Architectural Appointments Wanted

**ARCHITECT,** experienced in carrying through works complete, requires position as Manager, London area. Box 67.

**SENIOR ARCHITECT** (51), qualified and with good general and housing experience, wants post in South Midlands (Oxon, Bucks or Worcs). L.A. or private architect only; no contractors or factories. Box 68.

**REGISTERED ARCHITECT** requires part-time work (evenings). Preparation of working drawing, perspectives, etc. Box 868.

**ARCHITECT AND SURVEYOR, I.A.A.S.** (38), exceptional experience of varied war-time factories in different parts of the country. Canteens, hostels, camouflage and A.R.P. requirements. M.A.P., M.O.S. and private contracts. Design, equipment, supervision, costs and accounts. Box 72.

**A.R.I.B.A.,** prize winner in R.I.B.A. Industrial Housing Competition, having fourteen years' experience with Local Authorities, and specializing in housing, is immediately available for a temporary appointment to assist with post-war housing and site planning proposals. Box No. 74.

**ARCHITECTS, A.R.I.B.A., A.M.P.T.I.,** with wide experience in up-to-date housing, commercial and industrial buildings, hospital, etc. offer assistance for any work which can be dealt with in own office Box 75.

**YOUTH** (17), seeks employment on the practical side of Building. Knowledge of interior design and lettering, perspective drawing. Theoretical knowledge of building construction, paints, varnishes, etc. Architectural drawing and history and heraldry. Practical graining, marking, etc. Preparing for City and Guilds Examinations. Box 79.

*Classified Advertisements continued on page xxviii.*

**GIRL,** age 16½, Camb. Sch. Cert. (Matric. exemption), Credits Art and Maths., keen to enter Drawing Office in Bath or Bristol areas. Box 80.

**A.R.I.B.A.** offers assistance in own London office. Box 81.

**ARCHITECT** (Registered), practising independently pre-war, offers services in advisory and practical capacity, with view permanency. Experienced in carrying contracts through from drawings and specification to completion. Especial qualifications as designer meeting post-war requirements. Box 82.

**ARCHITECTURAL ASSISTANT,** three years' university training, 19 years old, seeks progressive position in architect's or similar office—if possible on work of national importance. Box 84.

**REGISTERED ARCHITECT** (42), seeks employment as senior assistant to large firm; first-class man; wide experience large buildings of all types, schools, factories, hospitals, railway stations, etc., etc. Public Authority work. Would accept appointment as works architect for important firms. Box 85.

**PART-TIME WORK** wanted by qualified architect, A.R.I.B.A. Age 29. Wishing to work at home. 1½ hours train journey from London, but would travel to take instructions week-ends. Box 86.

**A.R.I.B.A.** (Dip. Arch.), discharged forces, seeks responsible position in architect's office. Varied experience, strong preference for a planning appointment, especially if related to Post-war Reconstruction or work of national importance. Some degree of permanency must be assured. Central London area desirable, but a permanent position in the provinces would be considered. Salary about £400 p.a., or by arrangement. Box 87.

**YOUNG BUILDING AND LAND SURVEYING ASSISTANT,** with architectural design training, desires position in busy progressive Chartered Surveyor's office. Preparing for professional examinations. Accept £3 to start. Excellent references. Box 89.

**VIENNESE ARCHITECT,** Continental University degree, fourteen years' experience, also well versed with modern interior design, at present studying for RIBA Special Final Exam., seeks position in London architect's office. Box 90.

**YOUTH,** just turned 16, seeks progressive position in architects' office. Has knowledge of building construction and draughtsmanship. Studying for R.I.B.A. Box 92.

**ARCHITECT (F.R.I.B.A.)** requires permanent Senior post with Brewery Company in South or South-west England. Considerable experience with well-known company; good references. Box 93.

**ARCHITECT (Registered), SURVEYOR, PROPERTY MANAGER, etc.,** practising independently pre-war, offers services; advisory and practical capacity, with view permanency; thoroughly experienced carrying contracts through from drawings, bills of quantities, specifications, measuring off, etc., general supervision all branches of the building, allied and specialists trades, to completion; and also estate, and maintenance staffs; over military age; highest recommendations. Please apply Box 94.

**YOUTH,** age 17¼, requires post in architect's office. Limited knowledge of Building Construction and Architectural Design. Studying for probationer at approved school. Good references. Box 97.

## Other Appointments Vacant

*Four lines or under, 4s.; each additional line, 1s.*

**ASSISTANT EDITOR** wanted for Architectural Paper. Write, with full particulars of qualifications, salary required, &c., to Box 51.

## Miscellaneous

*Four lines or under, 4s.; each additional line, 1s.*

**A. J. BINNS, LTD.,** specialists in the supply and fixing of all types of fencing, tubular guard rail, factory partitions and gates. 53, Great Marlborough Street, W.1. Gerrard 4223-4224-4225.

**SPECIFICATIONS AND BILLS OF QUANTITIES,** etc., expeditiously and accurately typed or duplicated. Translations and Facsimile, Typewriting. All work treated confidentially. Miss G. Saunders, Typewriting Bureau, 17, Dacre Street, Westminster, S.W.1. Telephone: Whitehall 2605.

**WANTED** to purchase, The Library of Planned Information, Vols. I—IV. Box 76.

**WANTED.** Complete set of Information Sheets, loose or bound. State price. Box 77.

**HAS ANYONE A COPY** of "Sound Transmission in Building," by R. Fitzmaurice, B.Sc., and William Allen, B.Arch., that they could spare? Stoneham & Kirk, 24, John Street, W.C.1. 88

**WANTED.** Complete set of volumes of the Architects' Journal Library of Planned Information. Box 98.

## For Sale

*Four lines or under, 4s.; each additional line, 1s.*

**SMALL ARCHITECTURAL LIBRARY** and drawing materials for sale. Apply 20, Clifton Avenue, Finchley, N.3. Finchley 3147. 91

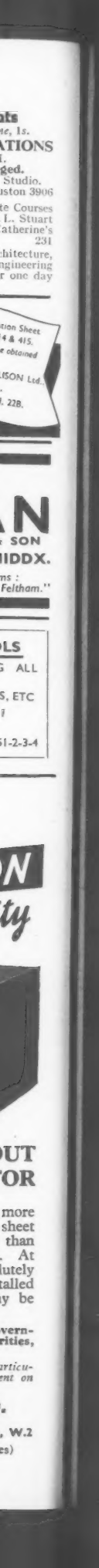
## Educational Announcements

*Four lines or under, 4s.; each additional line, 1s.*

**R.I.B.A. QUALIFYING EXAMINATIONS**
Mr. C. W. Box, F.R.I.B.A., M.R.San.I.
**Short Term Wartime Tuition Arranged.**
Courses by Correspondence and Personal in Studio.
115, Gower St., London, W.C.1. Telephone: 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, St. Catherine's College, Cambridge. 231

**TEACHING.**—First Class graduate in Architecture, with Town Planning and Structural Engineering qualifications, seeks Teaching appointment for one day per week and/or evenings. Box 96.



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