THE ARCHITECTS' JOURNAL

No. 2534] [VOL. 98
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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. A glossary of abbreviations 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.

AA	Architectural Association. 34/6, Bedford Square, W.C.1, Museum 0974.
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1. Victoria 0447-8.
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. Belgrave Square, S.W.1. Sloane 4522.
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.
CEMA	Council for the Encouragement of Music and the Arts. 9, Belgrave Square, S.W. 1. Sloane 0421.
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.
DIA	Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2. Whitehall 7618.
DOT	Department of Overseas Trade. Dolphin Square, S.W.1. Victoria 4477.
EJMA	English Joinery Manufacturers Association (Incorporated), Sackville House, 40, Piccadilly, W.1. Regent 4448.
FMB	Federation of 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.
ICE	Institution of Civil Engineers. Great George Street, S.W.1. Whitehall 4577.
IEE	Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. Temple Bar 7676.
IHVE	Institution of Heating and Ventilating Engineers. 21, Tothill Street, S.W. 1. Whitehall 9609.
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172.
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128-29.
ISPH	Committee for the Industrial and Scientific Provision of Housing. 3, Albemarle Street, W.1. Regent 4782-3.
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.
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.
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 7245.
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House S.E.1. Reliance 7611.
RC	Reconstruction Committee RIBA. 66, Portland Place, W.1. Welbeck 6927.
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1. Whitehall 9936.
RS	Royal Society. Burlington House, Piccadilly, W.1. Regent 3335.
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2. Temple Bar 8274.
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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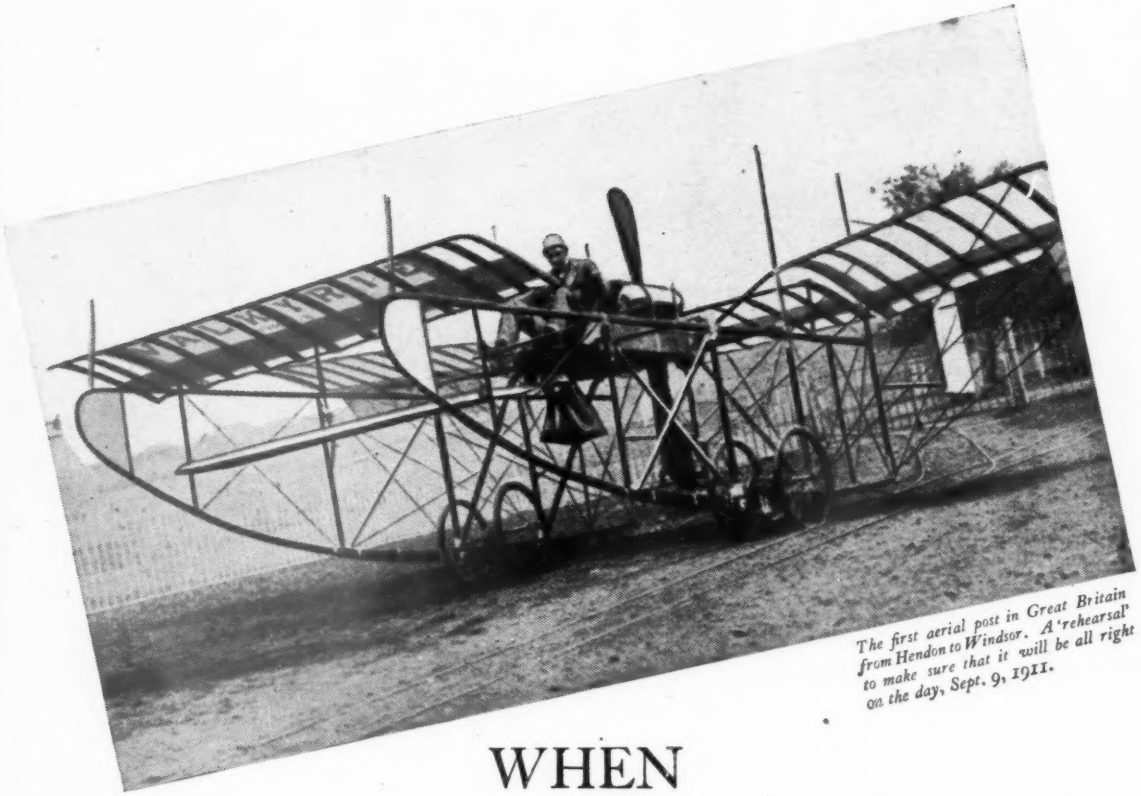

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Alphabetical Index to Advertisers

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational Legal Notices, Miscellaneous, Property and Land Sales—*see* pages xxxiv and xxxvi.

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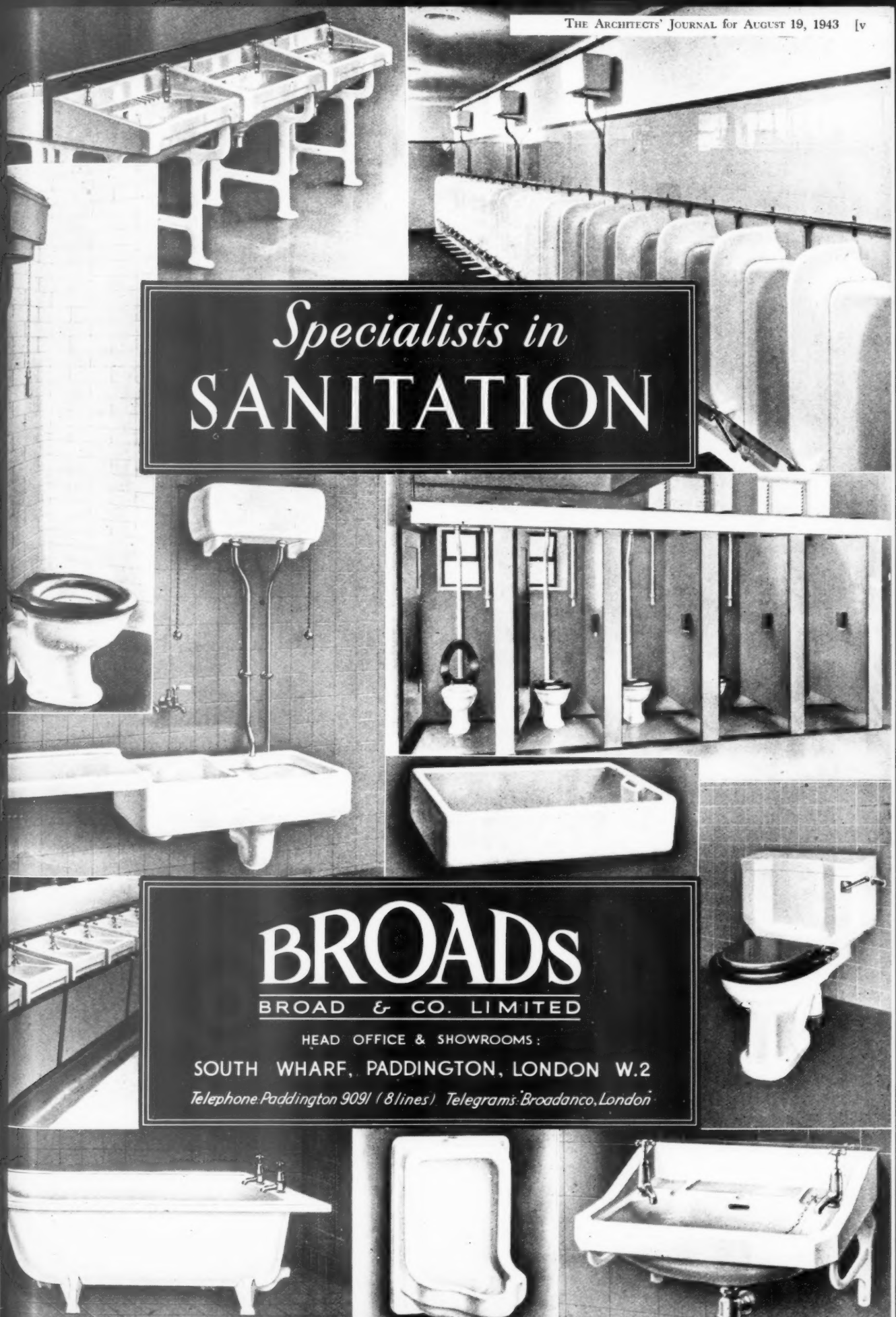
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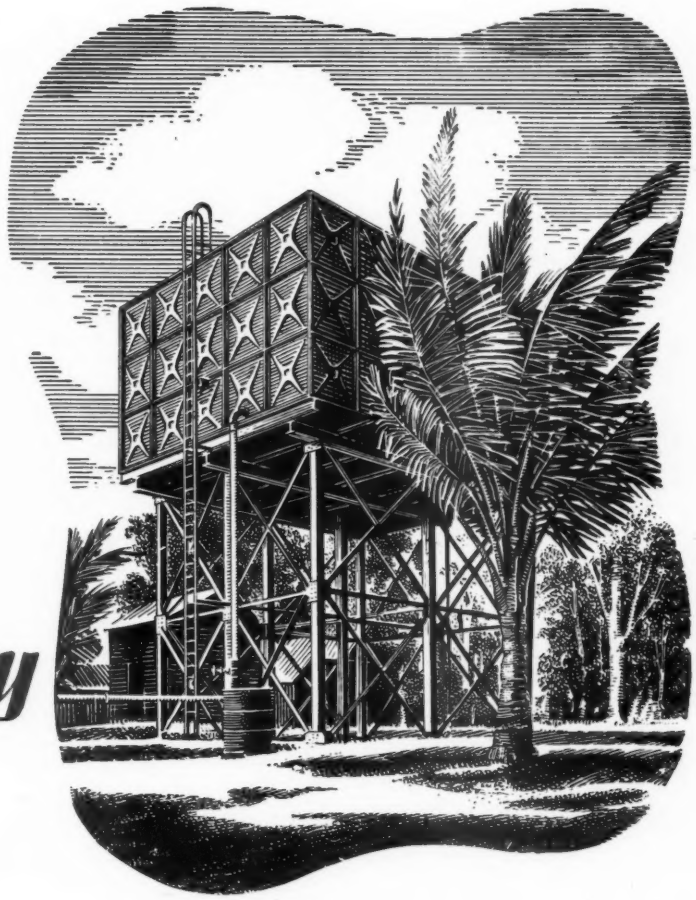

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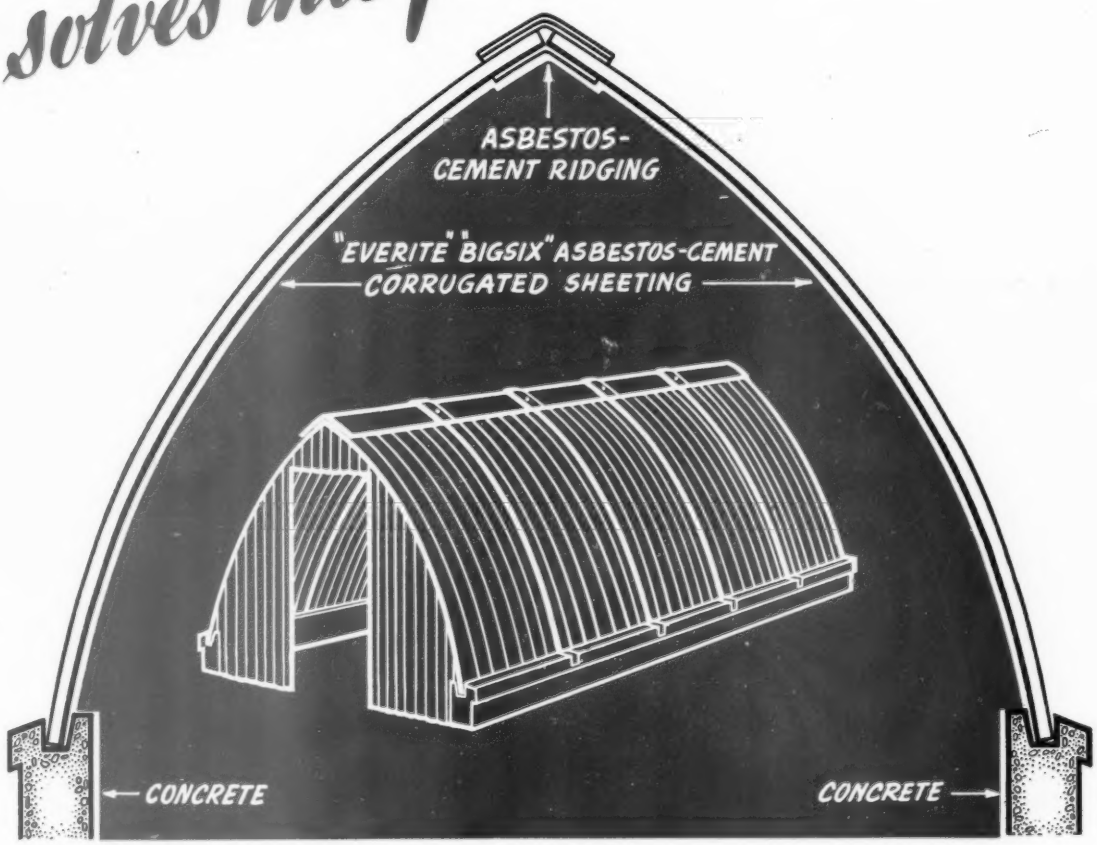

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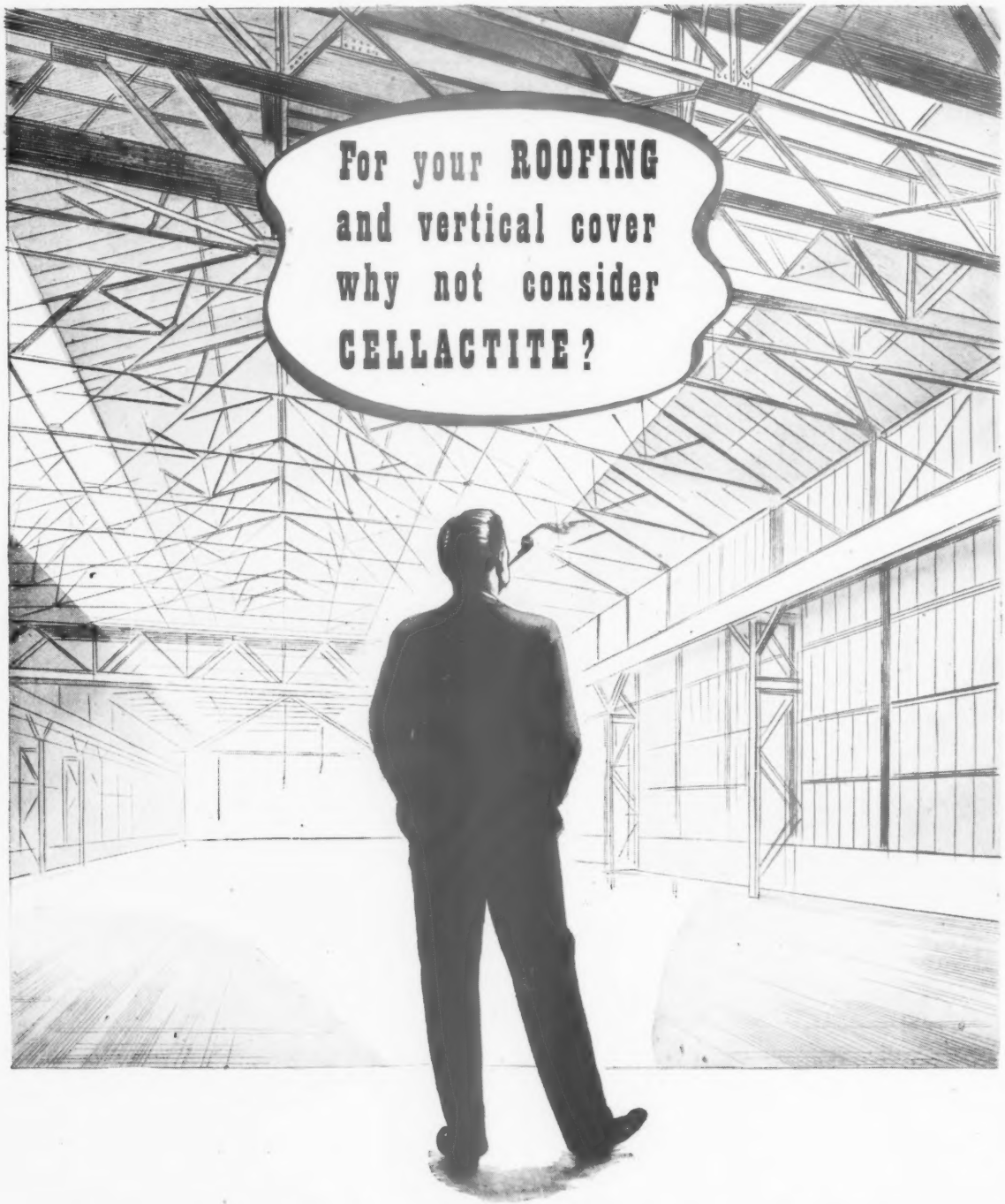

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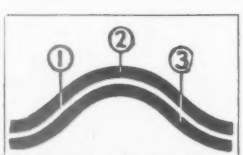

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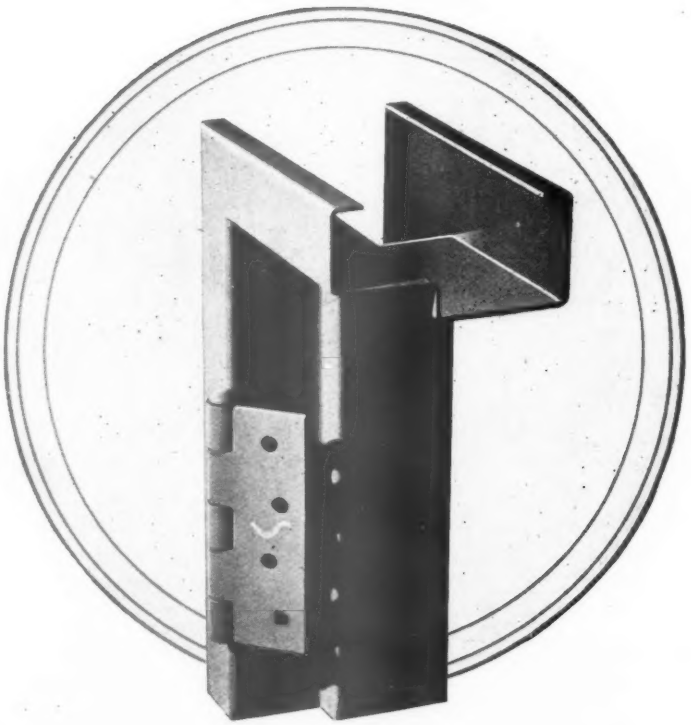

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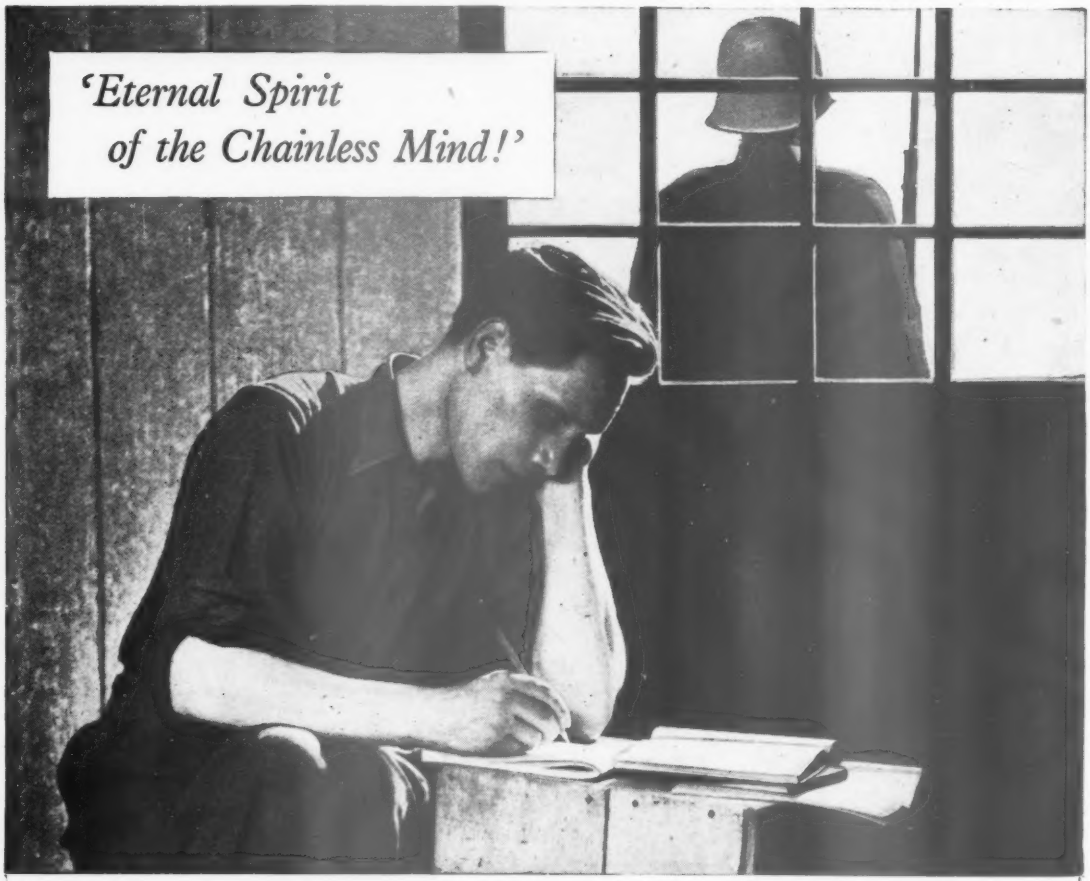

PRISONERS OF WAR STUDY FOR EXAMINATIONS

WILL YOU HELP THEM?

A Sergeant Pilot in a German prison camp has recently passed Part II of the University of London Diploma in Public Administration. Hundreds of other prisoners are preparing for examinations, or have already taken them, in Architecture, Surveying, Town Planning, Engineering and many other subjects.

Far from home, deprived of physical freedom, often without quiet or privacy for study, these men are preparing now for the tasks of post-war reconstruction. The Educational Books Section of the Red Cross and St. John are doing everything possible to help them. But many of the books needed by the prisoner-students are now unobtainable. So will *you* help as well? Please see if you have any of the books listed, or books of similar type. They should be in good condition to stand the journey and unmarked to meet censorship regulations.

BOOKS NEEDED BY PRISONERS OF WAR.

FLETCHER: History of Architecture.
ROBINSON: Modern Architectural Design.
WATERHOUSE: Story of Architecture.
BRADDELL: How to Look at Buildings.
ABERCROMBIE: The Book of the Modern House.
GREENHALGH: Carpentry and Joinery.
ELLIS: Carpentry and Joinery.
GARRETT: Brickwork.
REYNOLDS: Structural Steelwork.
WALDRAM: Structural Steelwork in Steel Frame Buildings.
BLAKE: Plumbing.
FLETCHER: Quantities.
Or any good substitutes for the above.
MITCHELL: Building Construction, Vols. I and II.
TURNER: The Mechanics of Building.
DYE: Warming of Buildings by Hot Water.
EATON: Painting and Decorating.
JAKWAY: Principles of Interior Decoration.

Also any good books on Town Planning, Housing, Surveying, Technique of Drawing and Painting, Art Criticisms well illustrated.

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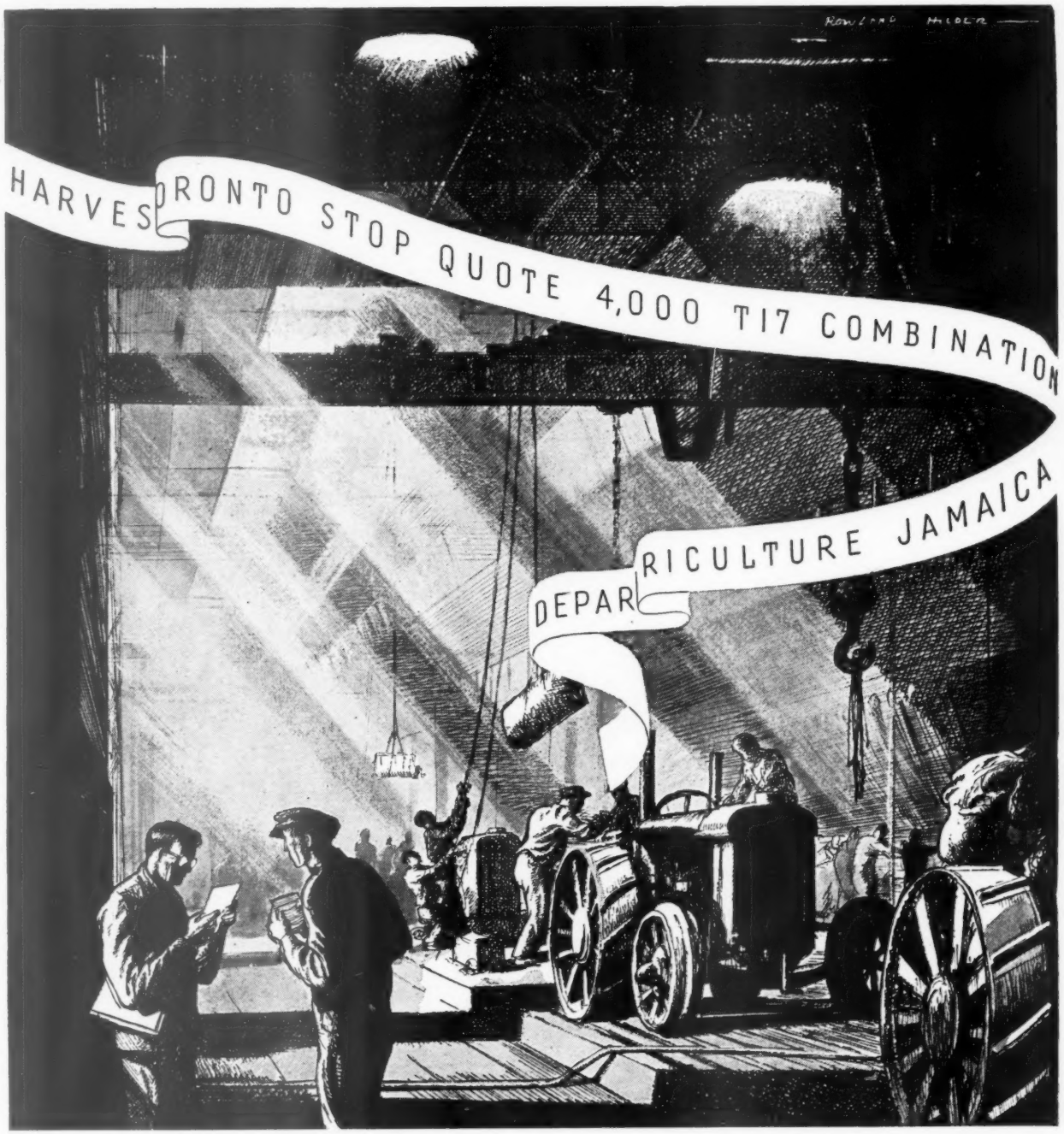

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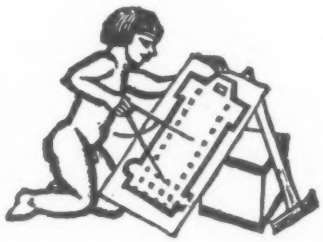
In common with every other periodical this JOURNAL *is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents now cannot supply the* JOURNAL *except to a "firm order." Subscription rates: by post in the U.K. or abroad, £1 15s. 0d. per annum. Single copies, 9d.; post free, 11d. Special numbers are included in subscription; single copies, 1s. 6d.; post free, 1s. 9d. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 15s. each; carriage 1s. extra. Goods advertised in the* JOURNAL, *and made of raw materials now in short supply, are not necessarily available for export.*



DIARY FOR AUGUST, SEPTEMBER AND OCTOBER

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

BANGOR. *TCPA Conference.* At Powys Hall. 11 a.m. to 5 p.m. Chairman: The Mayor of Bangor, Mrs. Elsie Chamberlain. Mr. B. Price Davies on *Planning a Town* (with slides). Alderman Edgar Chappell on *Welsh Planning Problems.* Conference fee 3s. (Sponsor, TCPA.) SEPT. 10

BIRMINGHAM. *Civic Diagnosis of the City of Hull: Exhibition.* At Town and Country Planning School, Birmingham University, Edgbaston. AUG. 24 to 31

BOURNEMOUTH. *TCPA Conference.* OCT. 2

BRIGHOUSE. *Englishman Builds Exhibition.* At Museum and Art Gallery. (Sponsor, BIAE.) AUG. 19 to 28

BRISTOL. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) SEPT. 15 to OCT. 6

CARDIFF. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) DEC. 20 to JAN. 17

CARLISLE. *When We Build Again Exhibition.* At Messrs. Binns Ltd. (Sponsor, TCPA.) OCT. 2-9

EAST BARNET. *Englishman Builds Exhibition.* At Littlegrove School, Cat Hill. (Sponsor, BIAE.) AUG. 19 to 28

EXETER. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) OCT. 18 to NOV. 8

GILLINGHAM. *Homes to Live In Exhibition.* At County Library. (Sponsor, BIAE.) AUG. 19 to SEPT. 11

HULL. *When We Build Again Exhibition.* At Mortimer Gallery. (Sponsor, TCPA.) SEPT. 1-11

Civic Diagnosis of the City of Hull: Exhibition. At Mortimer Gallery. SEPT. 1-11

Conference on "Planning for Living." In the Guildhall Reception Room. Conference fee, 3s. 0d. 11 a.m., Chairman: The Lord Mayor of Hull. Professor Patrick Abercrombie on *Hull in the National Plan.* 2.15 p.m., Chairman: The Bishop of Hull. Mr. Noel Curtis-Bennett, Chairman of the National Playing Fields Association, on *Living Needs of Industrial Cities.* Mr. Gilbert McAllister on *Towards a National Planning Policy.* The conference has been organized by Mr. R. G. Tarran. (Sponsor, TCPA.) SEPT. 4

LINCOLN. *Living in the Country Exhibition.* (Sponsor, HC.) AUG. 19-31

LIVERPOOL. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) AUG. 19 to SEPT. 4

LONDON. *Exhibition of Housing Plans and Models* at Selfridge's, Oxford Street, W. (Sponsor, IAAS). AUG. 19-31

Re-Planning Edinburgh. The Scottish half-hour in the BBC Home Service on August 24 will consist of a feature by Robert Kemp who will attempt to give in terms of sound some of the features of the "Re-Planning Edinburgh" Exhibition displayed in the National Gallery, Edinburgh. The Lord Provost of Edinburgh, Sir William Y. Darling, will introduce the programme. AUG. 24

Robert Lynd. *Obstacles to Planning in the U.S.A.* At 16, Queen Anne's Gate, S.W.1. (Sponsor, TCPA). 7 p.m. AUG. 28

War Office Exhibition. At National Gallery, Trafalgar Square. New pictures by war artists. First pictures of the victorious campaign in North Africa, portraits of General Eisenhower, General Alexander, Air Marshal Tedder and a whole series of pictures by Captain Edward Ardizzone.

Professor Sir Alfred Egerton. *Trends in the Development of Heating and Ventilating Installations.* At 21, Tothill Street, S.W.1. (Sponsor, IHVE.) 6 p.m. SEPT. 1

MIDDLESBROUGH. *When We Build Again Exhibition.* SEPT. 18-25

TCPA Conference. SEPT. 25

NOTTINGHAM. *Your Inheritance Exhibition.* At Notts, Derby and Lincoln Architectural Society. (Sponsor, HC.) AUG 19-23

SHEFFIELD. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) APRIL 4-25, 1944

SOUTHAMPTON. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) JAN. 28 to FEB. 18, 1944

STOKE-ON-TRENT. *When We Build Again Exhibition.* OCT. 18-23

TCPA Conference. OCT. 23

SWANSEA. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) NOV. 20 to DEC. 11

TODMORDEN. *Living In Cities Exhibition.* At Historical Rooms, Centre Vale Park. (Sponsor, BIAE.) AUG. 19 to 28

WELWYN GARDEN CITY. *TCPA Conference.* 11 a.m. to 5 p.m. Mrs. Nicholl, Chairman of the Urban District Council, will welcome the delegates. Sir Theodore Chambers, Chairman of Welwyn Garden City, will also be present. The party will be conducted round the city. Speakers: F. J. Osborn, W. F. Eccles and R. L. Rice. Subjects will include the general aspects of planning and the planning and development of Welwyn. (Sponsor, TCPA.) SEPT. 18

NEWS

THURSDAY, AUGUST 19, 1943
NO. 2534. VOL. 89

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.*

In the final examination in painters' and decorators' work of the City and Guilds of London Institute the first and second LMBA PRIZES GO TO HUDDERSFIELD and Bradford

The first prize has been won by Kenneth Barden, a student of Huddersfield Technical College; the second by Thomas Breen, a student of the Regional College of Art, Bradford.

Next month a report on the POST-WAR PLANS OF THE GAS INDUSTRY is to be presented to the Ministry of Fuel.

It is the result of two years' deliberation by a committee representing gas undertakings and appliance manufacturers. It recommends: Creating a fuel advisory council to guide and advise the Ministry on technical matters; setting up a national organization representing the industry, to co-ordinate its development; revising legislation to meet post-war needs; instituting a tribunal to deal with the industry's domestic problems; working out a flexible national plan for a post-war fuel policy; and expanding the suggestion in the Scott report that local grid systems should be extended. The hope is expressed that local undertakings, which number over 1,000, will co-operate with one another to make possible the creation of nation-wide local grid schemes after the war.

from AN ARCHITECT'S *Commonplace Book*

DESIRABLE RESIDENCES: DR. AXEL MUNTHE'S. [*From* The Story of San Michele, *by Axel Munthe*). As I saw it again I thought San Michele looked more beautiful than ever. The house was small, the rooms were few but there were loggias, terraces and pergolas all around it to watch the sun, the sea and the clouds—the soul needs more space than the body. Not much furniture in the rooms but what there was could not be bought with money alone. Nothing superfluous, nothing unbeautiful, no bric-à-brac, no trinkets. A few primitive pictures, an etching of Dürer and a Greek bas-relief on the whitewashed walls. A couple of old rugs on the mosaic floor, a few books on the tables, flowers everywhere in lustrous jars from Faenza and Urbino. The cypresses from Villa d'Este leading the way up to the chapel had already grown into an avenue of stately trees, the noblest trees in the world. The chapel itself which had given its name to my house had at last become mine. It was to become my library. Fine old cloister stalls surrounded the white walls; in its midst stood a large refectory table laden with books and terra-cotta fragments. On a fluted column of giallo antico stood a huge Horus of basalt, the largest I have ever seen, brought from the land of the Pharaohs by some Roman collector, maybe by Tiberius himself. . . . On a column of africano by the window, the mutilated head of Nero looked out over the gulf where he had caused his mother to be beaten to death by his oarsmen.

The National Buildings Record now HAS OVER 170,000 PHOTOGRAPHS and a large collection of measured drawings.
The Record was inaugurated in 1941, under the chairmanship of Lord Greene, the Master of the Rolls, to form a national collection of records of English architecture. The index of photographs, which extends to certain collections outside the Record, now comprises about 25,000 entries. Many thousand photographs have been taken by the Record's own photographers as well as by highly skilled amateur helpers in various parts of the country. Valuable gifts of negatives and prints have also helped to establish the basis of a comprehensive national collection. The Record has organized a scheme whereby students in the schools of architecture are helping with the survey of English architecture by undertaking the measurement of buildings of which records are needed, as part of their studies. At several schools the students have organized themselves in groups to undertake large buildings or groups of buildings.

Are we in the future to have buildings which are just square blocks of efficiency and are the productions of T-SQUARE MINDS in air-conditioned offices, asked Mr. Charles Wheeler, R.A., the sculptor, speaking in London.
In all the talk about reconstruction he said he had not heard a single word about sculpture. He suggested that post-war planning should provide for sculpture decorations on civic buildings, blocks of flats, a distinguishing carved symbol over every doorway of suburban houses, the greater use of fountains, and the encouragement of a mid-twentieth-century architectural sculpture.

In the House of Lords the post-war construction of a THIRTY MILE SHIP CANAL between the Firths of Clyde and Forth was urged by Lord Teviot.
He said the canal would bring new industries to the banks of the Clyde and Forth, help to stem the drift south of Scotsmen; and provide post-war employment. Lord Leathers, Minister of War Transport, said he has set up a small group to review the matter departmentally and make a confidential report. There can be no question of undertaking construction of such a canal now, nor can he hold out any hope of it for the immediate post-war years.

The Central Advisory Water Committee, in a report, just published, recommend the ESTABLISHMENT OF 29 NEW RIVER BOARDS.
It is recommended that the new river boards should supersede existing authorities and be responsible for all questions of drainage, water conservation, pollution, land irrigation, navigation and fishing. The chairman of the committee is Field-Marshal Lord Milne. The report says: "There is ample evidence that the existing system of river control is generally inadequate and sometimes wasteful. There is considerable overlapping of functions." There are at present more than 1,600 authorities with statutory powers for the prevention of river pollution. There are 377 drainage boards, and 48 fishery boards have been established. The present system for the Thames and the Lee should not be disturbed, as it is working satisfactorily.

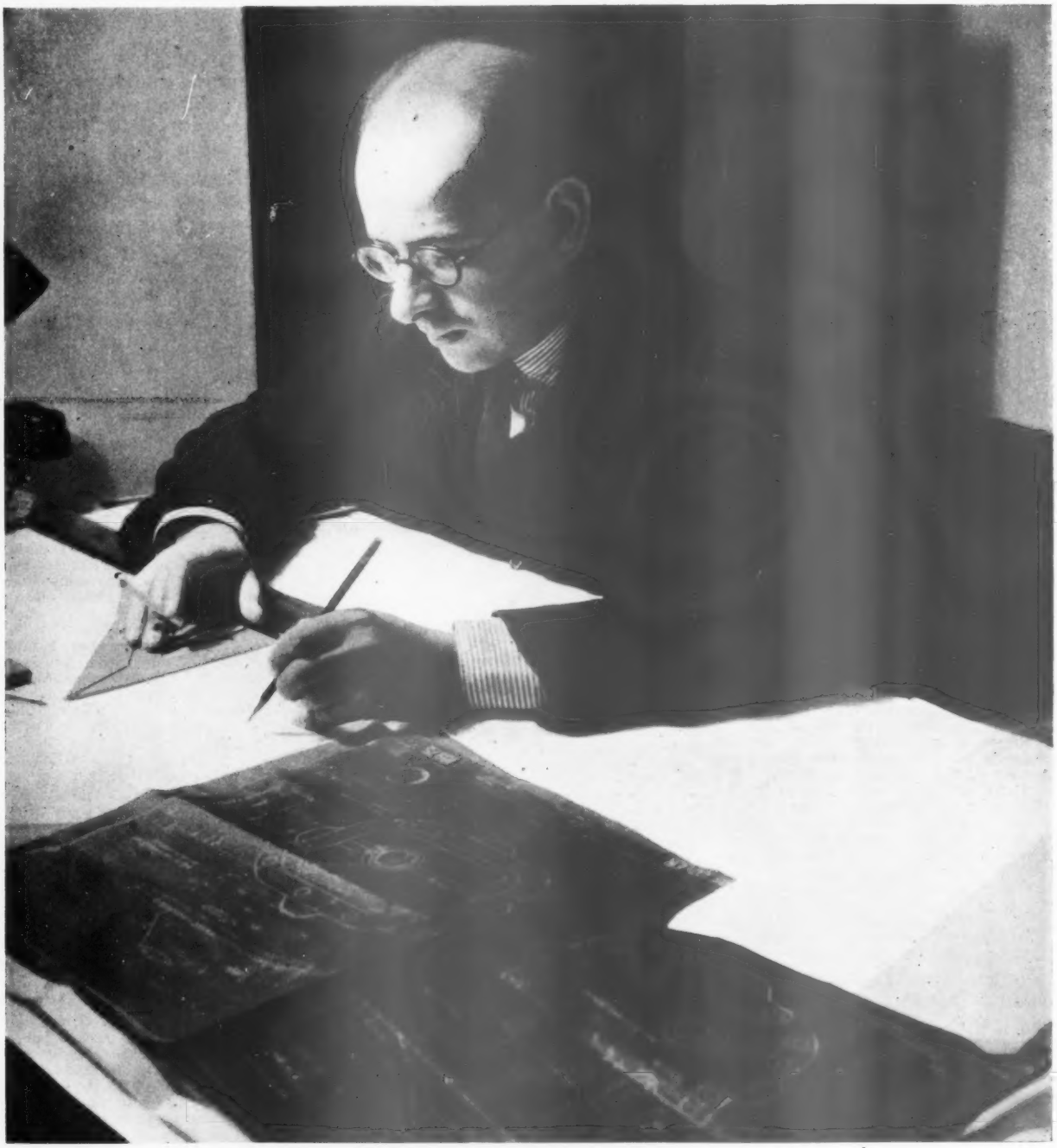
★

Plans for the proposed farm workers' cottages are VIEWED WITH STRONG MISGIVING by the National Executive Committee of the Electrical Association for Women.
This view is expressed in the following resolution, passed by the Committee and sent to the Government departments concerned and to the leading electrical organizations: "The Electrical Association for Women wishes to support strongly the protests that have been made against the plans proposed for agricultural cottages to be built in wartime. In the view of the Association, the amenities of the cottages are more limited than even wartime conditions justify and will condemn some thousands of agricultural workers to live for many years after the war in houses that will suffer greatly by comparison with the standards expected by all planners of post-war Britain. The Association also protests from the point of view of safety, against the proposal to omit lighting points from the store room and fuel store."

Since the railings were removed from St. John's Church, Chester, there has been a perfect ORGY OF WANTON DAMAGE.
This damage, says the Rev. A. W. G. Duffield, the vicar of St. John's, in his parish magazine, is not only by children. "Church windows have been riddled by our own coke being thrown in them. Locked doors have been forced. Almost every service is punctuated by the cries and comments of nit-wit trippers peering through the windows from which they have removed the glass. In the churchyard the intelligent people of civilized England have demolished several tombs—have actually dismantled them—apparently to see the bodies they cover."

★

Arrangements were made with the help of the British Red Cross Society and St. John War Organisation for holding the RIBA Intermediate Examination and the Final and Special Final EXAMINATIONS IN PRISONER OF WAR CAMPS in Germany in the spring this year.
The final examinations, held in eight camps, did not include the subjects of design and professional practice. Of the candidates whose work has been received so far the following have passed. The camps in which the examinations were held are given in parentheses: Intermediate Examination: Capt. R. G. Bateson (Oflag IX A:H); Cpl. Kenneth E. Foster (Stalag 383, Oflag III C); Lieut. J. G. Johnson (Oflag VII B); Cpl. John S. Madew (Stalag 383); Lieut. Sydney E. Nicholas (Oflag VII B); Lieut. David O. Searle (Oflag VII B). Final Examination: Lieut. P. L. Hansen Bay, 2nd Lieut. Edward J. Scollay, Lieut. J. C. O. Stansfield (all in Oflag VII B). Most of the men received books to help them with their studies through the Prisoner of War Scheme run by the Institute in co-operation with the British Red Cross and St. John War Organization. The funds for this scheme have been largely supplied through the generosity of the NFBTO, and thanks are due to Mr. Richard Coppock, whose energy and forethought on behalf of prisoners have resulted in a scheme being developed whereby technical books on architecture, surveying, the various trades connected with the building industry, town and country planning, etc., have been sent out. Over 5,000 books have already been despatched.



Chief Exhibition Architect to MOI

The Army Exhibition, now running at John Lewis's bombed site in Oxford Street, London, has been designed and produced by the Display and Exhibitions Division of the Ministry of Information, which is under the general direction of Misha Black. A specialist in design for exhibitions and design for mass-production, thirty-three years old, Russian born Misha Black, chief exhibition architect to the Ministry, has lived in Great Britain since 1912. Exhibitions, such as the Spanish-American (1929), Paris International (1937), Glasgow Empire (1938), and the New York World's Fair (1939) included his work, and he co-ordinated the design of the MARS exhibition of 1938, which is now a landmark in modern architectural history. He is particularly interested in the educative use of exhibitions and his achievements in this sphere have ranged from hydrogenation to housing and the history of transport. At the beginning of the war he was commissioned to re-design a section of the Science Museum at South Kensington, but the work is now temporarily suspended. Consultant on exhibitions and display to such bodies as the Gas Light & Coke Company and the London Passenger Transport Board and consultant on industrial design to Design Group Ltd., now undertaking exploratory work on post-war mass-production design problems, he was instructor in industrial design at the LCC Central School of Arts and Crafts, until the class was temporarily suspended. At MOI he has been responsible for Fuel Economy, Dig for Victory, and other exhibitions, both at home and overseas. Through such people as Misha Black the MOI has succeeded in creating a design standard for official work which puts British Government productions above those of any other country in the world—not the least of the great achievements of the last four years.

★

In future QUANTITIES SHOULD BE SUPPLIED in all Government building contracts.

This is the effect of a resolution the LMBA has sent to Lord Portal, Minister of Works, and to the Ministers of all other Government departments concerned with building. Explaining the purpose of the resolution, Mr. H. C. Harland, President of the Association, said: We have long had a rule instructing our members not to tender for contracts where quantities are not provided. The purpose of the rule is to avoid the necessity of having an unlimited number of builders doing the same work in getting out quantities before they are in a position to tender. In the case of cottages for agricultural workers, for which tenders were recently advertised, builders report that as many as thirty took out bills of quantities for the same job. This is obviously ridiculous and wasteful. Bills of quantities are the only scientific and economical basis of tendering, and the sooner the authorities appreciate this, the better it will be for the community as a whole. Tendering without quantities even as an emergency measure should be avoided. It saves no time, and in normal times there is no excuse for what is a careless and wasteful practice even for the smallest job. It is often said that in small jobs the builder is able to offer lower prices if he quotes without quantities. This is not the case. It may be that low tenders are obtained, but this does not mean that the work costs less. It merely means that the builder omits things from the bill. This does not excuse him from carrying out the work specified, and if he cannot meet the loss bankruptcy is the alternative. That is why we are making representations to the Government in good time, so that quoting by means of bills of quantities only may be established as the normal procedure for all post-war work. We already insist on quantities in all our private work.

Sorting collections made during the salvage drive has resulted in hundreds of books that have been MISSING FOR YEARS finding their way back to the shelves of public libraries.

Books from the House of Lords and Dundee were found at Hornsey, and some from Plymouth and Kettering turned up at Islington.

★

In the House of Commons Mr. R. Morgan asked the Minister of Town and Country Planning whether he can expedite publication of the CITY OF LONDON PLAN.

In his question Mr. Morgan also asked the Minister the number of authorities who are planning for building in the Metropolitan area. Sir W. Jowitt: There are two planning authorities in London for the purposes of preparing a scheme under the Town and Country Planning Acts, 1932 and 1943, the Corporation of the City of London and the LCC. In the far wider area for which Professor Abercrombie is at present preparing an outline plan, there are 138 Statutory Authorities, some of whom are grouped in joint committees. The City Corporation has a discretion in deciding at what stage it should make its provisional proposals public, and the question of expediting publication does not at present arise.

BRICKS: MORTAR: STONE

AT the recent BINC Building Congress, Mr. R. Coppock, Chairman of the LCC and Ex-President of BINC, said:—"Experts are suggesting we should have towns of prefabricated materials. To those experts, who are possibly pushing goods as commercial travellers for some interest, the nation will say that they decide on bricks, mortar and stone."

The number of dwellings to be built within the next ten years is estimated at 4,000,000. The programme of erecting those dwellings is spread over ten years, not because there is no urgent demand for completion within a shorter period, but because it will apparently be impossible to complete this huge programme more quickly. It took twenty years between the two wars to build about the same number of houses, and it is doubtful whether the average rate of output could be doubled with traditional methods, even were there nothing else for the building trade to do. It is estimated that the increased financial cost of building after the war will be about 60 per cent. above pre-war level. At the same time people will demand a higher standard of housing than was general before the war. How then will they be able to afford the "economic" rent?

Though the consumer has not benefited to the extent that could have been possible, the higher standard of living that was achieved during the past 150 years has been due to mechanization. In almost every branch of production, including agriculture (which is often considered conservative) the output per man hour has been substantially increased or multiplied by the use of machines.

Similar progress has been made in the building industry as far as excavation, steel and concrete and the mass production of fittings are concerned, but the output of houses in "bricks, mortar and stone" is practically the same as it was thousands of years ago. As long as we prohibit technical development, the relative real cost of house building, measured not in £.s.d. but in actual commodities, is bound to increase.

The word prefabrication has been misused as a slogan. To prevent further confusion, it could well be eradicated from our vocabulary. The opponents of prefabrication (or let us say, mass production of building parts in factories) seem to forget that brick is a prefabricated unit whereas, for instance, light weight concrete, cast in standardized shuttering—a suitable material for mass production of houses—is not.

Permanent employment in the building industry is, under present conditions, a justified claim of the workers and can be achieved by the introduction of new methods. With "brick, mortar and stone" it could only mean paying wages for no work during a considerable part of the year—a solution possible only by state subsidies or in the unlikely event of employers being willing to face a bankruptcy court.

The nation wants many millions of decent homes at the

earliest possible date and at the lowest possible rent. It is obvious that "bricks, mortar and stone" cannot alone solve the problem. The aim can only be achieved by organized mass production, by the improvement of our building technique and by the utilization of all available sources of labour and materials.

Organized mass production does not mean a deterioration of quality or reduction of æsthetic standards. It means a more efficient use of labour and materials than is possible by traditional methods. All our slums, our Victorian streets and depressing suburbs were built in bricks, mortar and stone. Traditional materials and methods must certainly have their share in post-war building but to pretend that the exclusion of any other material and method is the wish of the whole nation is to mistake the interests of certain groups for those of the nation. It would be regrettable, indeed, if developments of new and improved methods of building were frustrated by a policy of group interest of any kind.

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

NOTES & TOPICS

NEO-LUDDISM

Many JOURNAL readers must have agreed with the writer of the open letter to Mr. Coppock, published on August 5. Vested interests may certainly be supporting so-called prefabrication—not least the many running factories who are now producing engines of destruction and whose only hope of remaining in business after the war appears to be to muscle in on housing in the production of machine-made building parts.

★

On the other hand, vested interests are also opposing new methods of building—and among them, strangely enough, are representatives of the building trades operatives. Just as the mythical "General" Ned Ludd and his machine wreckers believed that the Machine would deprive them of their livelihood, so do these neo-Luddites. Within the existing framework of society, this fear of being ousted from employment by mechanization is understandable, but it is the result of a peculiar confusion in the mind.

★

Thus Mr. Luke Fawcett, General Secretary of the Amalgamated Union of Building Trades Workers: "The question of the permanent employment of the available building workers is the outstanding issue before the building industry." Does this kind of statement really make sense? Once the objective is clear, other matters, such as full employment, fall into proper perspective. The objective is—at least 4,000,000 houses in the shortest possible time. It is *not* primarily work-for-the-sake-of-work—but *houses*. If unemployment results from full use of modern technology, adequate buying power must be given to the unemployed to consume what the Machine produces. We could then call unemployment by another name—leisure, and be less scared of it.

★

Says the Primate of All England: "I am inclined to agree with the Biblical saying that work is a curse. If you have the money, you can have leisure, but if you have no money, it's unemployment. Personally, I'm rather doubtful about this blessing of work."

We hear less in this war than the last about the P.B.I., since the infantry does not footslog any more, but travels by car. It's time, however, that we heard more about the P.B.C.—the poor bloody consumer. After this war he will say in no uncertain voice to both employers and operatives, still struggling in a tangled web of confused thoughts and feelings, "A plague on both your houses. *Build me a house.*"

OH! I SAY, LOOK HERE!

For architects the thirties stand for many things—from Ideal Home Exhibitions to Highpoint, from Registration to crises at the AA, from Mr. Lubetkin to Mrs. Borders. For me those years are crowded with memories of surrealism, of haunted soft-footed hours in West End galleries among the luxuriant fur teacups, the pouring wet taxis, soft, drooping watches, and marble busts coldly aloof beneath their crawling carapaces of ants. (My particular favourite—do you remember it?—was the composition including a clockwork mechanism which bore a notice saying "This picture is out of order.")

★

In this country the blitz took much of the surprise out of surrealism. When daily you could see on the way to office a bicycle wrapped in flannel, suspended from a lamp-post or a bowler-hat full of marmalade floating in sewage, the juxtaposition of the unexpected for its own sake seemed somehow to lose its point.

★

Not so apparently in the USA, where, according to a recent *New Yorker*, surrealism is thriving, ants are in constant demand and the arch-priest, Salvador Dali, has just published his autobiography.

★

This last event was celebrated by the personal appearance of Mr. Dali at his publishers' offices in order to sign copies of his book. Mr. Dali, it is reputed, was assisted in this task by his new self-designed spectacles which contained live ants between their double lenses, while in the show-window a clock was displayed with a few more ants crawling over the dial below the glass. (There were only a few because the pub-

lishers—and the ants—got weary and ill-tempered after three hours of laboured insertion work.)

★

The ant-ridden clock which, the *New Yorker* man says he was told, symbolized the destruction of Time or something, attracted considerable attention from kindly old folk who were constantly coming in to report worriedly that the clock in the window was infested with insects. It was then the task of one of the publishers' men to explain that the ants had been put there on purpose.

★

And yet some people still think it would be nice to be a publisher.

FÊTES CHAMPÊTRES IN THE CITY

The larger photograph below shows the cathedral from the east across the bombed site between Cannon Street and Cheapside, now called "In the Shadow of St. Paul's," which used to be covered with grim commercial premises. The photo was taken on August Bank Holiday when some 10,000 stay-at-home holiday makers gathered on this site to enjoy "a fair where thousands meet, but none can stay"—an open-air fête and sports meeting organized by the City Fire Force.

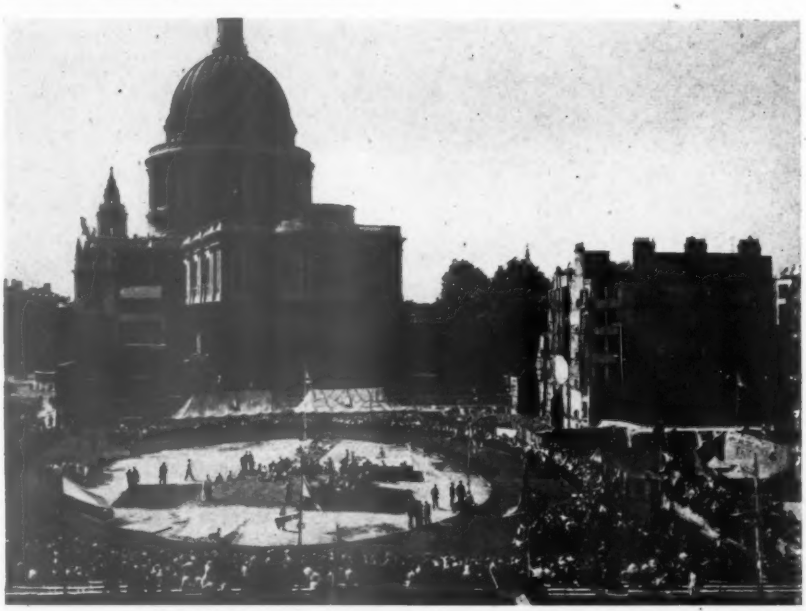
★

The smaller photo shows the other end of the site giving a breath of wholesome light and air to Santa Maria de Arcubus (St. Mary-le-Bow to you). The church stands, incidentally, on the south side of Cheapside. On this part of the site another kind of meeting took place—as you see, a dog show.

★

There is something pleasing about this fête, held in the heart of the City, a savour of a once merrier England, when enjoyment was believed to be more valuable than a 10 per cent. return. Let's hope it is a portent, and that the bombs have blasted away, as well as ten thousand squalid buildings, something less tangible, but no less real and deadly, than the pre-war shambles of our cities.

ASTRAGAL



August Bank Holiday open-air fête and sports meeting held in the heart of the City. Top: In front of St. Mary-le-Bow. Above: In the shadow of St. Paul's.

LETTERS

Gordon Marriott, A.R.I.B.A.
W. E. J. Budgen
Dr. Hajnal-Kónyi, M.I.Struct.E.
Judex
Rev. S. Claude Tickell (Vicar of Latton-cum-Eysey, Wilts)

Smoke at the RIBA

SIR,—In reply to Astragal's invitation, in your issue for July 22, to readers to make suggestions, may I submit the following.

Could not an extension to the Architects' Registration Act be made to the effect that designs and specifications for buildings must be prepared by, or receive the approval of, an architect, or a panel of architects attached to the local authority, before permission to build is granted.

Such a law would do much to safeguard our post-war building programme from the ravages of engineers, building contractors, patent prefabricated inventors, estate agents, etc., all of whom may be good in their own sphere of work, but lack the fundamental characteristics and ability of the architect.

GORDON MARRIOTT

Potters Bar

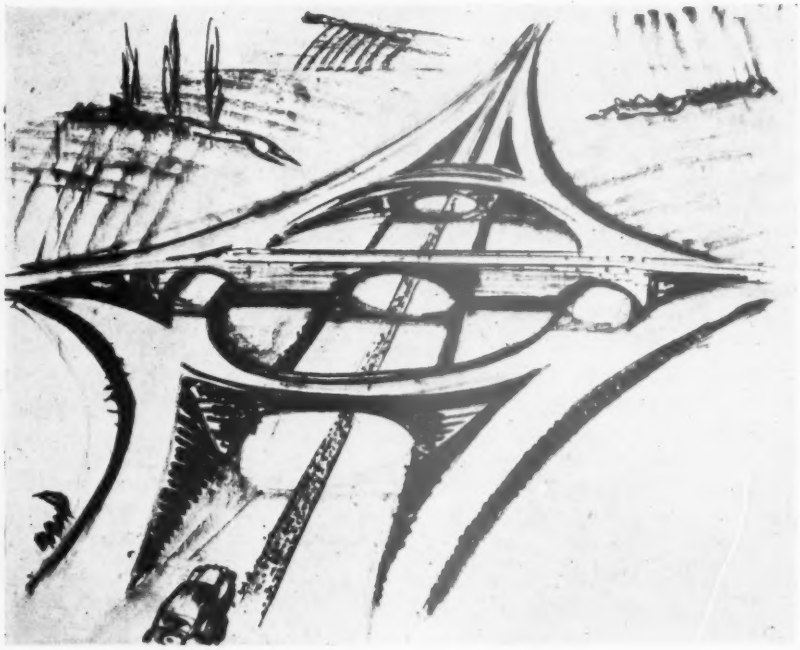
Continuity of Construction

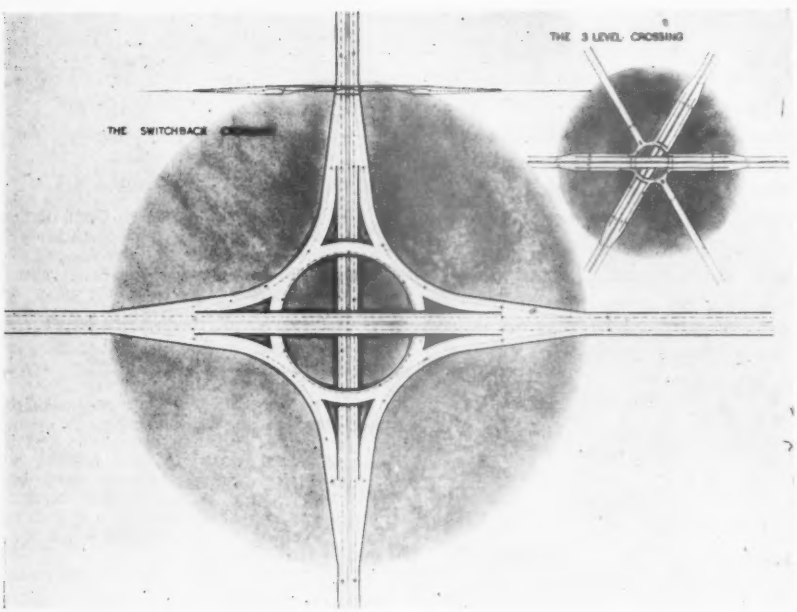
SIR,—May I deal briefly with Dr. Hajnal-Kónyi's reply to my letter.

(1) He says: "It is clear . . . my aim was to deal with continuity in *steel* structures." His articles are headed "Continuity in Construction." His first words are: "The use of continuity in the design of structures." I do not see that this makes it clear that he was limiting his remarks to steel construction.

(2) He said: "Framed buildings in the proper technical sense of the term could not be designed until a recent date," and I say this is incorrect even if he meant his remarks to be confined to steel structures. There are two mistakes. I have explained his misuse of the word "framed." I now ask him to quote any item in the London Building Act which ever

NEW TYPE OF CROSSING





The Switchback Crossing designed by Ing. Arch. Ernest Pollok and T. Warnett Kennedy, A.M.T.P.I., attempts to reduce the high cost and the ground area of the Cloverleaf and to simplify circulation. It is limited to two levels as against the four levels of the Maltese crossing (see A.J., April 22, 1943). The height above ground is small since the difference in levels is equally divided above and below ground levels, permitting construction by simple earth embankments. The new principle consists in depressing the roundabout circle at two opposite sides thus forming a switchback. Traffic on the two main cross roads runs straight through thus reducing the volume of roundabout traffic to less than half. The Three-Level Crossing is a variation of the Switchback, for here the roundabout is flat and at ground level. It is suitable for urban crossings where ground area may be restricted, and where arterial roads do not cross at right angles. Interweaving length is dependent upon volume of traffic. Roundabout traffic, as in the case of the Switchback, is reduced to a minimum, making smaller roundabouts possible. Additional minor roads can be incorporated in the roundabouts into either scheme.

stated that a steel frame building should not be designed as a " continuous " structure.

(3) He said : " The London Building Act provides for a minimum cover of 2 in. of 1 : 2 : 4 concrete." To support this he now quotes a document which says, among other things, that the cover on internal steelwork shall be 1 in. of 1 : 2 : 4 concrete. This document is now obsolete—it was never in fact a statutory part of the London Building Act and few, if any, steel frame buildings were erected in accordance with this particular provision. The LCC by-laws governing encasement of steelwork (Clause 68), require certain thicknesses of incombustible materials such as " brickwork, terra cotta, concrete, stone, tiles or other similar incombustible materials."

There are many other statements both in Dr. Hajnal-Kónyi's articles and letter with which I could join issue if space permitted.

W. E. J. BUDGEN.

Wembley.

We have submitted the above letter to Dr. Hajnal-Kónyi, who replies as follows :—

(1) I assumed in my article that continuity of reinforced concrete was common knowledge and mentioned this, as quoted in my previous letter. I do not think it matters whether this was in the first sentence or later.

(2) I did not say that the design of continuous steel frames was *legally* prohibited, but quoted a case where a continuous steel frame, already fabricated, had to be freed of end restraint at the request of the LCC. This was surely not encouraging to structural engineers and manufacturers of structural steelwork, and made the application of continuity for this type of structure *practically* impossible. If my statement is incorrect, it must be easy for Mr. Budgen to give a few examples of multi-storey steel framed buildings in London, designed before 1938, in which continuity between columns and beams was taken into account.

(3) Mr. Budgen's paragraph implies that " few, if any, steel frame buildings " in London were erected with a casing of a concrete of 1 : 2 : 4 mixture. I am greatly surprised that Mr. Budgen apparently does not know of such buildings, and should be pleased to show him many examples all over London.

K. HAJNAL-KÓNYI.

London.

Architects' Salaries

SIR,—It was encouraging to see recently an advertisement for the appointment of an Architect for the County of Stirling. Scale of salary is £800 to £1,000 per annum, plus war bonus. Car and allowance also provided. These conditions make the post well worth striving for.

Other authorities should take note of the progressive action of Stirling County Council when considering the appointment of an official architect.

It certainly seems as if the letters which your valuable paper has published from time to time on this subject have had some effect. Perhaps other public authorities will also see the light and give better salaries in future.

But when one considers that a town clerk, medical officer of health and engineer already get paid decent salaries, it is high time that the financial position of the architect was improved.

In any future plans for reconstruction the architect will be the key man, and on his professional skill and ability much of the success of our rebuilding schemes will depend. Proper payment for services rendered is the acid test of sincerity.

JUDEX.

Mortuaries Wanted

SIR,—In the interest of public health every undertaker in town or country should have a mortuary to which all bodies in small homes could be removed and seen by relatives at any time.

S. CLAUDE TICKELL.

1126

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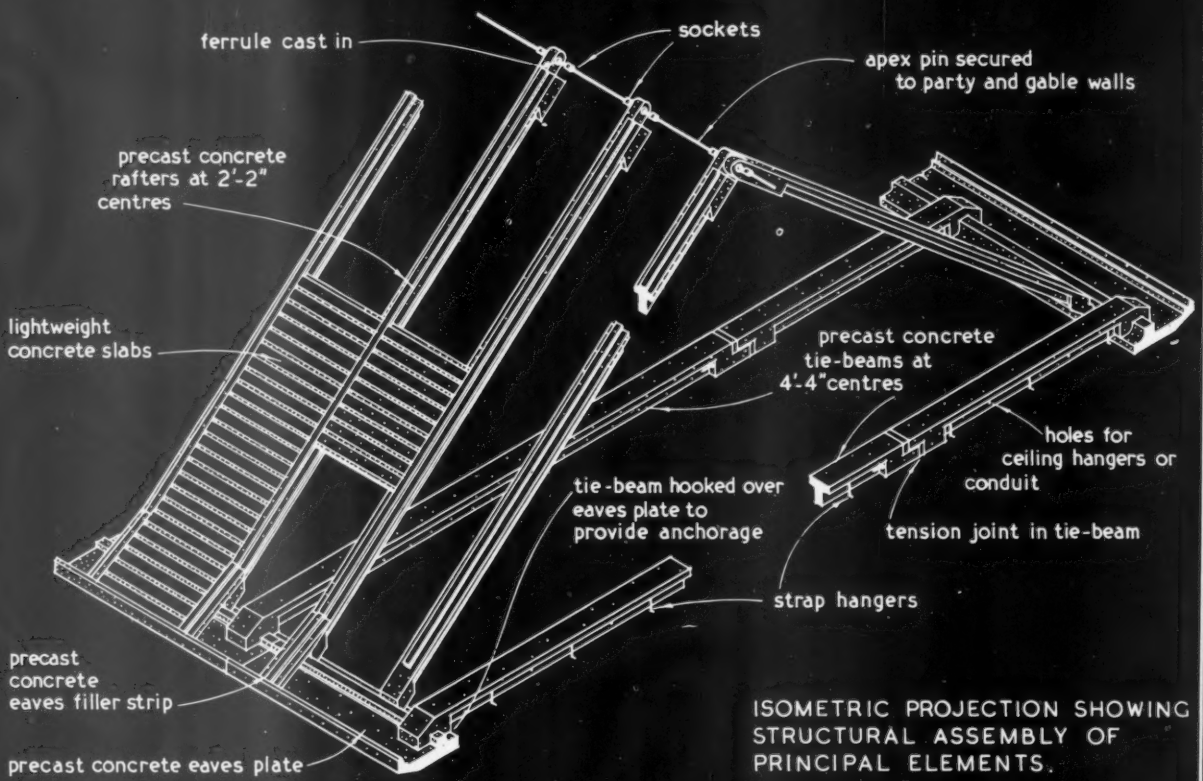
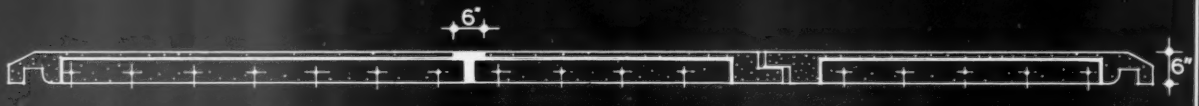
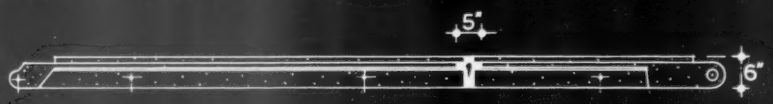
ASSEMBLY, AND DETAILS OF PRECAST ELEMENTS.



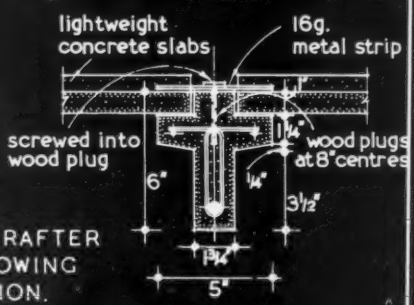
ISOMETRIC PROJECTION SHOWING STRUCTURAL ASSEMBLY OF PRINCIPAL ELEMENTS.



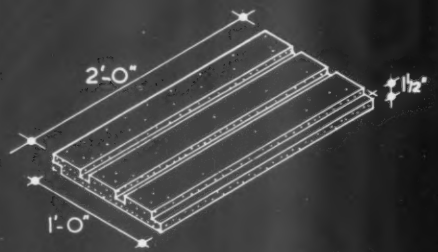
PRECAST CONCRETE TIE-BEAM.



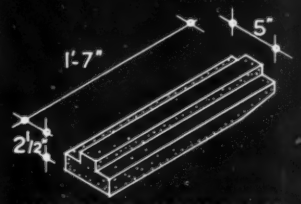
PRECAST CONCRETE RAFTER.



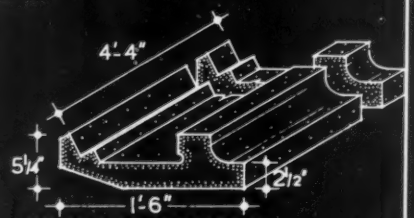
SECTION THROUGH RAFTER AT 90° TO SLOPE SHOWING FIXING OF INSULATION.



LIGHTWEIGHT CONCRETE SLAB.



PRECAST CONCRETE EAVES FILLER STRIP.



PRECAST CONCRETE EAVES PLATE.

Issued by The Marley Tile Company Limited to the design of The British Cast Concrete Federation.

643 INFORMATION SHEET: PREFABRICATED R.C. PITCHED ROOF CONSTRUCTION
Sir John Burnet Tait and Lorne Architects One Montague Place Bedford Square London WC

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET
• 906 •
ROOF CONSTRUCTION

Subject : Prefabricated R.C. Pitched Roof Construction (1).

General :

This system of construction has been designed for the British Cast Concrete Federation to eliminate timber scantlings ; in-situ work is minimised and the prefabricated elements are restricted to a range which may be handled by two men. Erection may be carried out by one skilled and two unskilled operatives. The finished roof offers a high degree of fire resistance. Standard units manufactured cover the normal range of domestic spans.

This Sheet illustrates the component prefabricated elements and the method of assembly :

Prefabricated Elements :

Tie beams (2 units) : 6 in. by 6 in., T-section lengths according to span ; weight 20.6 lb. per ft. run.

Rafter : 6 in. by 5 in., length according to span.

Eaves filler strips : 1 ft. 7 in. by 5 in. by 2 in., rebated top edges, underside splayed.

Eaves plates : 4 ft. 4 in. by 1 ft. 6 in. by 5 in., shaped to provide anchorage for beams and rafters.

Timber reinforced wood-wool slabs : 6 ft. by 2 ft. by 1½ in. (72 lb. approx. per unit).

Light-weight concrete slabs : 24 in. by 12 in. by 1½ in. rebated and grooved (18 lb. approx. per unit).

Erection and Assembly :

(1) The precast concrete eaves elements are bedded and jointed on the external walls.

(2) Tie beams are bedded on eaves plates at 4 ft. 4 in. centres.

(3) Ties are inserted at gable ends and built in.

(4) Rafters at 2 ft. 2 in. centres and jointed at apex located.

(5) Eaves filler strips are placed at the foot of each rafter to carry the insulation slabs over the eaves plates.

(6) Insulation slabs are then dropped into position, commencing at eaves and finishing at ridge. Slabs are rebated at the joints, and are located by rebates in the rafters and eaves plate.

(7) Battens nailed to wood-wool slabs, if these are used.

(8) Slate or tile finish fixed.

For details and finishes see the next Sheet of this series.

Issued by : The Marley Tile Co., Ltd.
Address : London Road, Riverhead, Sevenoaks, Kent.
Telephone : Sevenoaks 1251.

PHYSICAL PLANNING

FUTURE SIMPLE 1943, 1944

Astragal, having brought his diary up to date, proceeds to chronicle the principal planning events of the next few years. In the last two issues under the heading Past Definite 1909-29 and 1930-43 he has already traced the development of statutory planning during the inter-war years and its failure to achieve orderly development in a period of social and economic chaos. He has also described in broad outline events connected with the present war, which have been responsible for the growth of a more positive attitude to problems connected with Physical Planning, and the urgent demand for pleasanter living conditions, brought about by bomb damage, which has led to the creation of a new and separate Ministry of Town and Country Planning. This week and next under the headings Future Simple 1943-4 and Future Perfect, 1945-6 he outlines the future that is there to be created if we know how to seize the opportunity.
★ This star indicates events of significance in Physical Planning.

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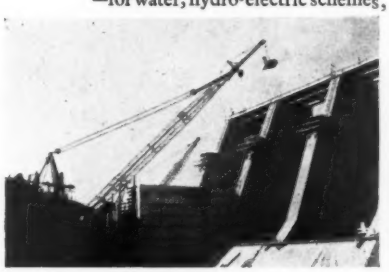
Above is the framework of the physical planning series. It represents an eight week period, and, after the first three weeks, it will move down one rung each week. Thus, after the first three numbers, the next six rungs in the framework will always be visible with the last two.

1943

LATE SUMMER. The Government, having realized by the late summer of 1943 that "the end of the beginning" was turning suddenly into "the beginning of the end," took counsel with itself and instructed various departments to prepare, without publicity in the first place, accelerated working programmes on reconstruction issues. Thus the Minister without Portfolio (MWP) was to revise, in the light of the progress of the war, his proposals for demobilisation, for social insurance, and for various kinds of administrative machinery—for water, hydro-electric schemes,



national parks, land reclamation, playing fields, and so on. This meant close interdepartmental consultation with the various executive departments or commissions, notably MOTCP, MOH, MAF, MOT, the Ministry of Fuel and Power (MFP), the Electricity and Forestry Commissions, the War Damage Commission, and last but not least, that ancient planning authority the Treasury.

★ **BOT plans location of industry.** The Board of Trade, taunted by accusations of *laissez faire*, and *laisser passer* (better known as Passed to You, Please), was authorised to work out positive plans, in concert with MOTCP and other departments, for the maintenance or relaxation of its wartime controls to ensure a better national disposition of industry after the war, and to forestall the growth of industrial unemployment and "special" areas. The question of administrative and commercial dispersal from London was left with the Lord President of the Council.

★ **MAF plans land use.** MAF was told to prepare a series of 4-year plans, budgeting for agricultural production of a type that would be economic in the widest sense; that is to say making the best use of the resources of land, soil, vegetation, climate and agricultural labour, and assuming that the Government, as buyer for the nation and for certain oppressed peoples in Europe, would wish to see a healthy and prosperous rural England rather than a numerically increased production.

★ **Supply Departments report on switchover to peace production** The Service Departments, in full stride for the prosecution of the War, were simply informed of the claims that would be made on their own planning departments in the near future—the use of aerial surveys, the maintenance, reconditioning or removal of war-time camps, hostels, and other buildings and open spaces.

The Supply Departments, on the other hand, were told that the time had already come for considering end-of-the-war policy. The war factories were to be asked to report on production facilities for export and capital goods, on scientific personnel, management and labour. The Departments, with MOLNS, would later be asked to apply their resources to a programme of production, drawn up by the Minister and the Production Council, on the understanding that not only full employment,

but *productive* employment, was to be the keystone in the national arch.

All this discussion took place behind closed doors. Certain subjects were more openly ventilated, including plans for the building industry itself, the training of operatives and the supply of material. MOW began to sort out its cupboards, throwing

out some junk here, and handing over files to other departments. Some of its functions, such as the inspecting of Ancient Monuments, it decided to keep separate from its daily administrative work and make into specialist services, not unlike some of the branches of DSIR. It then plunged into the colossal task of programming post-war public works, receiving from all departments, public utility undertakings, the larger local authorities and firms, their short and long-term requirements, and translating them into terms of men and material.

★ **MOW programmes public works.**

Outside Whitehall there was a growing feeling of impatience with the lack of Government decision, and during the autumn a good many vague impulses and still vaguer dreams began to crystallize out in the shape of hundreds of sectional programmes. The great difference between 1917 and 1943 appeared as an improvement in human memories. The gradually increasing age of the population, its higher rate of information and education, greater facilities for discussion, and the fact that such large numbers of people remembered not only the Great Depression but the Great War of 1914-18, all combined to create a curious phenomenon—a cautious and tolerably well-informed public opinion. Politicians, with one exception, were still ignorant of the extent of this change in the public mind, and were puzzled to find criticism where they expected abandon, determination where they might have found enthusiasm, and everywhere a lurking fear of unemployment even among men at present over-employed.

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The Town and Country Planning Association, most vocal and best organised of the propaganda bodies, continued to hold meetings all over the country. These meetings were well attended. Speakers became more and more critical of the Government; made it more and more difficult for it to compromise on the big issues of redevelopment—and all planning is to some extent compromise. "Build 20, 30, 40, 50 new towns," they said, "throw a green girdle of chastity round London and Manchester and Birmingham, send factories and people out of the old towns, build no flats."

★ **RIBA sponsors local schemes.**

The RIBA, having changed its President but kept its Council, started to regionalize. Allied Societies were asked to take some of the Reconstruction Committee Reports and apply them, in detail, to their own area. Plans were made for producing in each large urban centre in the regions a composite model of the central area to an agreed scale. The Allied Society determined the method, provided the material and the contoured base; members made themselves responsible for blocks of buildings, and like the Stockholm model, made them removable. The intention was to lead on to a three-dimensional redevelopment plan which could also be applied to the model, and later exhibited.

★ **TPI memo on status of planners**

The TPI presented a memorandum to the Government on the status of planners in local and central government offices; and furthermore published proposals for a School of Planning for Demobilised Members of the Armed Forces, to be held in a famous country house for two alternative periods of six months after the cessation of the European War. The staffs were to be recruited from Universities and also from the armed forces themselves, many of whom only needed acquaintanceship with recent events to complete their stock-in-trade.

Professor Abercrombie had been presented earlier in the summer with the Howard Memorial Medal; and a certain Member of Parliament was presented with the Freedom of Welwyn Garden City in honour of his hundredth Parliamentary Question on planning and architecture.

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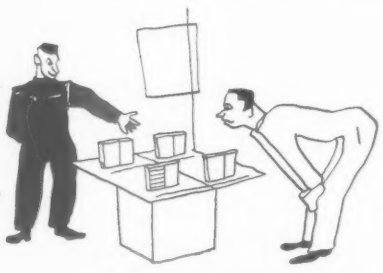
AUTUMN, 1943

★ **Land purchase bill.**

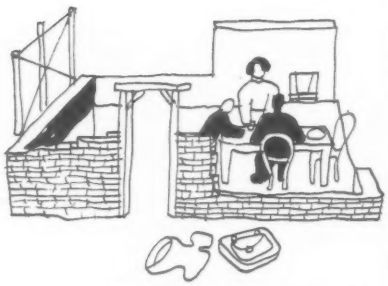
In the late Autumn of 1943 things began to happen. MOTCP produced its famous Land Bill, outwitting Uthwatt. For months members had been complaining of timid and dilatory legislation. Now they were presented with a Bill so fundamental and so simple that its importance was not immediately comprehended. When it was, there began a more exciting series of debates than anything since 1940. Briefly, the Government proposed that the State should be the only purchaser of land, and that it should purchase it whenever its use came to be changed, *or* when it was judged in the public interest that it should be acquired. In effect this meant a gradual relinquishing of freeholds; and quite naturally the chief line of opposition was to enquire what guarantee there was that land would be better planned or better managed under State control than under the private owner. The Local Authorities welcomed the bill, with reservations, assuming that State acquisition meant management by the local authority at the Exchequer's expense. But the Minister made it clear in the debate that Local Authorities would have to account to him for their stewardship, and that if they did not produce adequate planning proposals he would do it for them. The last stages of the contest were free-for-all. "Either you are prepared to trust us and give planning a chance," said the Government, "or we must assume that the country is not ready for it, and that comprehensive redevelopment of the bomb damage and the slums must follow its old, slow, piecemeal system." Sanity prevailed; and the bill passed all its stages by Christmas.

★ **Architectural unemployment reaches peak.**

Meanwhile wartime unemployment of architects reached its highest figure. There were periodic pacification speeches from MOW and MOP and MOTCP asking architects to stand by "ready for the enormous task confronting them." But no active steps could be taken except on a voluntary basis. The torch of propaganda was handed on from the TCPA, which had now gained its first point, to the physical reconstructors in architecture, engineering and building. Models of actual building schemes began to appear—unofficial ones from the Allied Societies, official ones from places like Coventry and Portsmouth. The public began to take a fascinated interest in the details of streets and building blocks, and the appearance of model houses, model flats and children's playgrounds. The Civil Defence Artists staged a show of models made by their members, with a remarkable knowledge of the dangers of small internal courts and areas, and other fire hazards. The Institution

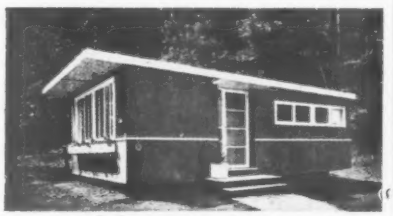


of Civil Engineers had an exhibition of working models of bridges, sluices, tunnels, docks, railway stock, and even sewage disposal works.



The housing situation, owing to further MOH circulars, to the fact that a few of the 3,000 Agricultural Workers Cottages were still in process of completion and causing storms of unwarranted criticism, to the slowness of civil repair work, and to the overcrowding of London, began to line up for second place in the list of big political issues. Then MAF, pushing up the arable acreage for all it was worth, asked MOH and MOW for 20,000 more houses for agricultural workers. This was followed by similar representations from women factory workers, evacuated civil servants, and others who were getting restive at the thought of a fifth winter in billets. The building industry was by this time so weak and diluted that new methods had to be adopted. Some war factories, now becoming obsolete, were turned over to make War Houses. And surprisingly enough production engineers calculated that 100,000 of these could be turned out in twelve months from the word Go. The most attractive

★ **20,000 war houses.**



design was a light metal-cum-homegrown-timber frame with panels of an inert, expanded, and steam hardened silicon compound of pleasing external texture.

All the amenity societies were dubious; but as someone had the wit to say that War Houses were not *meant* to be permanent homes, all the fuss about appearance faded away. Twenty thousand houses were commissioned as a first instalment.

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WINTER, 1943

The principal of compensation and land acquisition having been settled the entire surveying profession was enrolled for the task of making valuations, and devising machinery for the state control of land. Politically, interest now shifted to what was to be put on to the land. Mineral working caused a little storm in Parliament, it having been demonstrated that a lot of gravel, sand, roadmetal and other material was still being taken from the wrong places, on the grounds that it was urgently needed for the war effort, and it didn't matter where it came from. The Government and the industries concerned set up a Mineral Works Board to map out in advance, and decide the priority of working in, the areas of chalk, gravel and clay.

★ **Mineral Works Board set up.**

MOTCP issued a statement on National Parks, and the Forestry Commission, the Electricity Commission, MAF, and the new Water Commission, were brought in to discuss methods and machinery.

The Treasury made a statement on the type and scale of financial assistance that local authorities could expect in dealing with reconstruction areas as a whole, with private or municipal housing, and with schools.

1944

The New Year brought the Pact with Italy, and the formation of an Italian Building Corps from among the prisoners of war already in this country or brought from N. Africa, Sicily and Southern Italy. These men volunteered to perform the semi-skilled labour necessary in connection with the erection of the War Houses. A detachment was also released for nursery gardening and afforestation. All were paid

★ **Italian Building Corps.**

appropriate wages. One immediate result was an improvement in the technique of plastering.

★ **MOTCP maps published.**

MOTCP produced a series of national maps of great interest, showing climate, population, communications, industry, areas of natural beauty, accessibility, regional grouping, open spaces and recreational facilities and many other economic and geographic factors. Those maps which were not considered secret, and were published, were soon sold out. It became a common thing to use them for wallpaper—and not purely from decorative motives.

★ **BOE school building programme.**

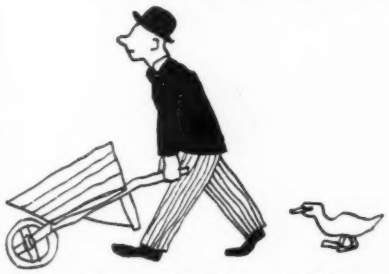
The Board of Education announced, after discussion with MOW, its school building programme. It was calculated to absorb 15 per cent. of the resources of the building industry in the first two years, and over 10 per cent. in the succeeding three.

The TCPA published preliminary schemes for the siting and layout of half-a-dozen satellite towns on the outer fringe of London. Birmingham demanded an enlargement of its boundaries.

With the approach of Spring a dozen authorities appointed a dozen consultants to prepare plans for their towns: six of them were Professor Abercrombie.

SPRING, 1944

The prospect of longer days brought the subject of holidays to the fore. The Government produced all sorts of schemes for spending people's time—or what was left of it. They included part-time and transfer schemes of all kinds, planting, harvesting, teaching, crafts, motor driving, even the painting and wall-papering of ships and houses. All white-collar workers were urged to take up a secondary trade. Many civil servants in the clerical grades were put on Two-Third Time, and instead of working at their desks for 49 hours a week, worked 36. The remainder was devoted to manual labour in gardening,



house decorating, teaching, or craftsmanship. As a *quid pro quo* many grades of manual workers were urged to put in time to learn or practise non-manual labour — book-keeping, typing, précis writing, library research and reading. This movement gathered impetus very quickly; and many were the arguments between professional, manual and non-manual workers on the subject of fair wages. But the symptoms of nervous ill-health, and other wartime disabilities, began to decrease.

★ **Holiday Camp Corporation formed.**

The wartime problem brought into sharper perspective the post-war holiday question. MOLNS, after consulting MOTCP and MOH made a register of holiday accommodation of all kinds, camps billets, hotels, hostels, etc.; and formed a Holiday Camp Corporation to organise holidays for the millions who had never before been able to take a holiday away from home. The Board of Education at the same time issued a statement on School Camps, and proposed a better scale of remuneration for teachers. The

National Park and Coastline organsation was also drawn into the scheme.

Local authorities, freed of their former caution over land speculation, began to publish plans for

reconstruction. It soon became apparent that only in a few cases, in which capable technical advice was available, were the proposals a real improvement on existing conditions. This created some concern over the release of planners from the Forces and the enrolment of men and women in the related professions of architecture, engineering, social science, economic geography and landscape design, as consultants. The training of planners was at this time a serious pre-occupation of MOTCP, who called a conference of learned societies, professional institutions and associations of technical and scientific workers, and agreed with them a thirty-year programme of enrolment for (*a*) national and geographic planners, including economists; (*b*) administrative planners, suitable for local government offices; and (*c*) consultant and executive planners in the architectural and engineering fields. These agreements, and the tentative estimates of numbers, status, remuneration and future growth, were incorporated in the "Planners Charter."

★ **Planners' Charter.**

With one of those queer and unpredictable movements of public opinion which have no relation to press campaigns or the utterances of statesmen, everyone became suddenly convinced that the war in Europe was practically over. There was little in the military sense to justify this optimism—except the release of Albania and Greece from Axis domination. But on the planning front the effect was very marked. The Prime Minister himself formed a Reconstruction Council with, as deputy chairman, the then Minister of Production. It had a Chief of Staffs Committee and a Planning Board, and was divided into Home, Colonial and European Commands. Statements were promised within a short time on questions of policy which had been holding up physical planning and social insurance alike for some years—to wit, the place of agriculture in the national economy, the use of wartime factories, the priorities of the public works programme, the plans for changeover from wartime to peacetime production, and for the export of capital goods, the scale of Allied relief in Europe, and the measures for influencing the location of industry in this country by means of the relaxation of wartime controls, the protection of certain areas, and general assistance to districts liable to immediate depression after the war.

★ **Reconstruction Council formed under MOP.**

This General Economic Plan could, however, only be completed by a review of the Budget, and the determination of a policy for loan sanctions in housing, public works, the acquisition of land, social and health measures, and reconstruction.

Coventry produced, just at this time, magnificent models of its proposed town centre, of its regional plan, and of sample post-war houses. These models, after revision in the light of criticisms from various bodies including the City Council, became symbols of the scale of development which the post-war years might bring.

★ **Model of Coventry Town Centre.**

Applying to this test case the labour and material programme of MOW, and the loan sanction policy of the MOH for housing, it was found that it would probably be over 20 years before many of the public buildings and recreational buildings on the plan would be built. This raised a storm of protest in Coventry, and did more to stir up local feeling than anything since the bombing. Coventry started a Speed-the-Peace fund and pledged themselves to carry out all the most important elements of their plan within eight years—the first two four-year Plans—as a memorial to the civilians killed in the war.

Rumour had it that great improvements in the manufacture of bricks would be secured by a new pressure-heating system which would reduce the time, the cost and the amount of fuel previously required for burning. Trade agreements were signed with Canada, Sweden and the USSR for timber for Britain and the devastated countries of Europe.

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A Highways Delegation from the USA visited this country, inspected our roads, discussed road-making machinery, and took back with them a few technicians for a return visit. The Association of Residential Settlements, with the indefatigable Sir Wm. Beveridge as Chairman, published a valuable report on the standard requirements of the individual and the family in any community, i.e., the facilities, services and amenities which every citizen had a right to expect from his physical and social environment.

★ **Beveridge Report on Planning Standards.**

The Building Societies, in conference with architects and builders, made an agreement to combine to give a high quality of service to the public through private enterprise housing: finance, design, craftsmanship. These three functions, if efficiently carried out, would turn the country once again into a place that its citizens could be proud of. It was agreed at the same conference that the huge funds at the disposal of the Building Societies would be laid out only for building that measured up to an adequate standard—no more cases for the Mrs. Borders of the future to fight. This, of course, did not refer to temporary building.

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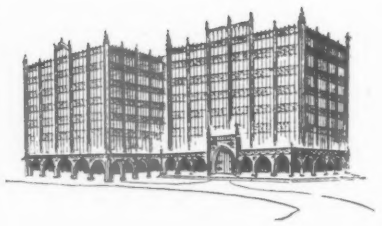
SUMMER, 1944

Twenty successive raids on Berlin caused a definite collapse of German morale. Nazis started to disappear mysteriously, and for the first time the German public began openly to execrate their leaders. It was clear that the end was coming, but surrenders began in some of the occupied countries first, notably Czechoslovakia and Norway. Demobilisation plans were published by the Government and keymen began to be released from the army—but not yet from the Navy or Air Force.



Owners of some of the worst architectural monstrosities of London spared by the blitz were startled to receive anonymous communications saying: "Empty your building on Armistice Night, or take the consequences." Armistice night arrived, and a gang of hooded men, with tanks and bulldozers, began a systematic damage tour of the offending premises. Bulldozers ran merrily through the ground floor walls, and when enough had been done to make repair impossible the gang passed on to the next leaving a notice with the words THIS BUILDING IS DANGEROUS. The crowds rather enjoyed the fun, and the police were powerless. Thus was Hitler's blundering work made just a little neater in a few places.

With the terrific pent-up excitement of the armistice celebrations a thing of the past, there was a strong tendency to relapse; and people began to talk about the impending peace in a way which showed that they were partly afraid of it. The Prime Minister made his famous Fight for Peace broadcast in which he said: "... I can still promise you toil and sweat, but this time without blood, and let us hope with fewer tears. But do not let the rest of Europe look upon us as the Lion of Least Resistance. War is only round the corner; we must still fight to keep it at bay."

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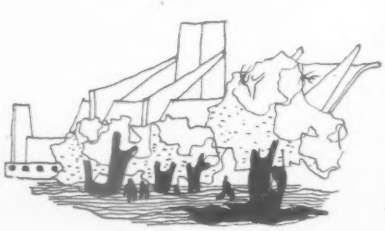
AUTUMN, 1944

★ **The Great Exhibition**

Thus the great Reconstruction Campaign started. A great exhibition in Hyde Park was promoted, with an indoor section to be opened at Christmas, and the complete exhibition in time for the Peace Celebrations the following Easter.

The first part of the exhibition was planned to contain a great public statement of the intentions of the national plan, in maps, aerial photo-montage, models, diagrams, and peepshows. The chief regions were also to be illustrated separately. Autumn saw the giant framework of the Great Hall already rising above the trees.

The contents of that exhibition, and a description of its central theme form another chapter in this Future History.



HOUSE IN NEW YORK

BY WILLIAM HAMBY & GEORGE NELSON

The plan of this house is its basic feature. A radical deviation from the customary approach to the city house, its major contribution is privacy and an unprecedented sense of spaciousness. Though the site is only 25 feet wide, there are clear views within the house of 80 feet and more; replacing the conventional dark stair hall, the glassed-in ramps provide constantly changing vistas as well as easy circulation; the court through which the main views pass has been designed as an

HOUSE IN NEW YORK

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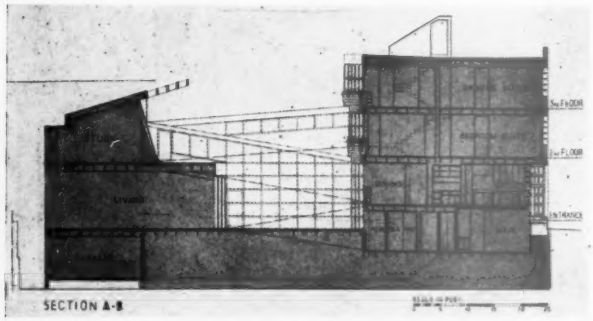
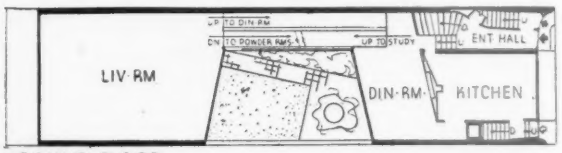
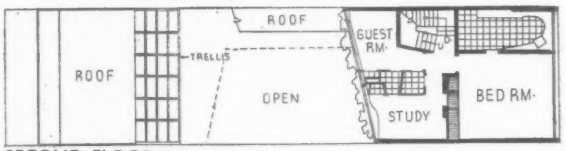
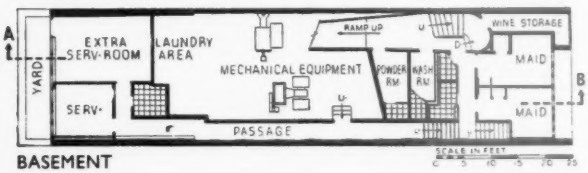




GROUND FLOOR



SECOND FLOOR



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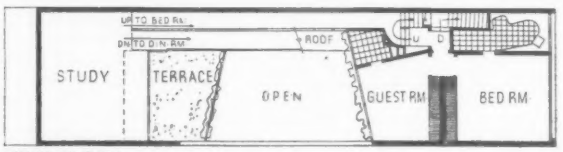
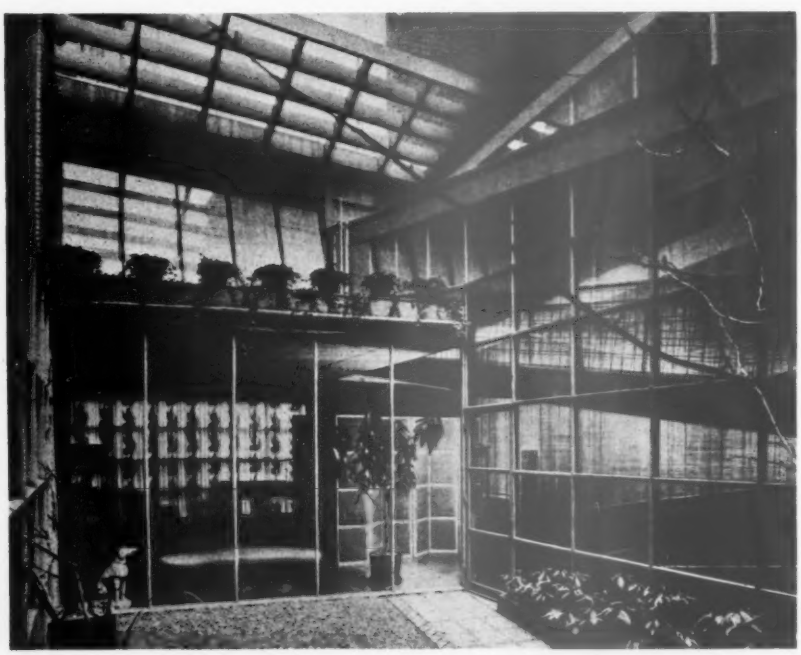
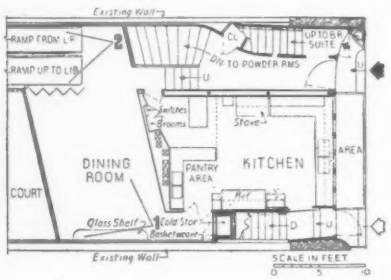


FIRST FLOOR

integral part of the architectural scheme. Because most of these views look out on the house rather than the neighbouring buildings, and because the interiors have been thoroughly sound-conditioned, the sights and sounds of the city seem very remote to the occupant, and the feeling of privacy is virtually complete. In describing the job, the architects remark: "The house was planned for a bachelor who entertains a great deal and who does much of his work at home. Also special was the requirement that a private apartment, with its own stairway, be provided for a member of the owner's family. Since we were working on a restricted lot, this requirement seriously complicated the process of planning the front unit. . . The owner, who developed the Fairchild aerial camera and manufactures trainers, engines and other aviation equipment, applied the same rigorous standards to the design of his house as to his planes. Every step in the design was examined minutely and critically, and design changes were made right through the construction period. One result was that the house took a year and a half to plan and almost as much time to build.

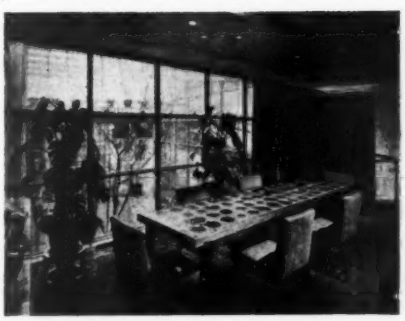
"As far as we are concerned, the job was worth the headaches, for if the client worked us to a frazzle, the reverse was also true, and constant collaboration produced many good ideas from

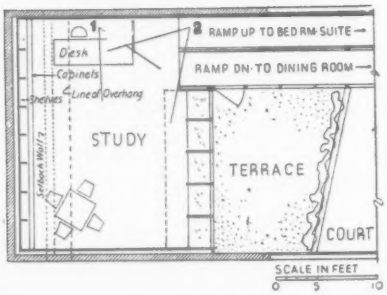




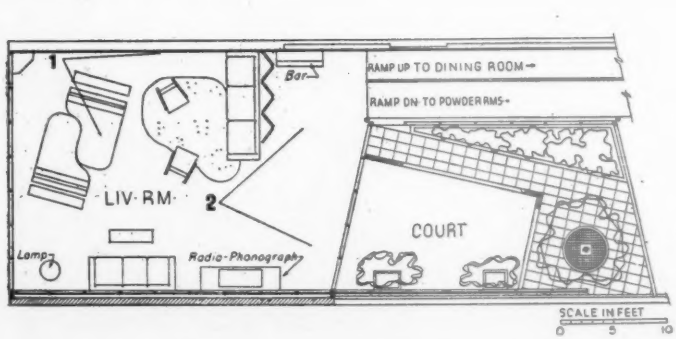
Top, plans and section of house; left, the court looking towards living room and library; above, plan of dining room. Facing page, top, photograph showing the ramp coming up from the living room into the dining room and continuing on to the study above. The ramps are carpeted. Railings are covered with red-painted wire mesh. Bottom, dining room.

both sides of the conference table. "Considering the simplicity of the exterior, it is a little hard to remember that this was one of the worst of the headaches. At street level we had to arrange three doors, the kitchen windows, and the windows of two servants' rooms below. After many tries, everything but the main entrance was put into a grille of wood and translucent glass. The expression may not be 'functional' but it is at least coherent and unobtrusive. Although there was no possibility of harmonizing the facade with that of the house next door, some of the main lines of the earlier building were carried through by the bedroom block. The large exterior louvers were installed partly for privacy but chiefly to reduce the load on the summer cooling equipment. The vanes are motor-operated, with push-button controls on both floors."





Above, plan and two views of the study. *Below, plan and view of living room.*



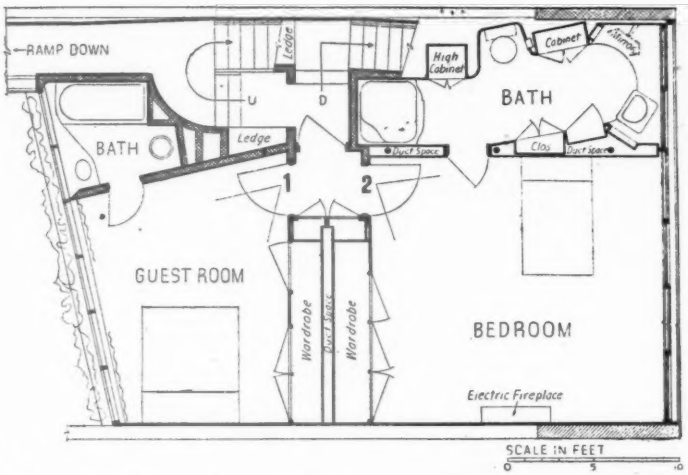
The living room was designed primarily around a set of acoustical requirements. Because of these the glass walls are not parallel; the wall of oak plywood is faced by a "dead" wall (rock wool covered with grass matting) and the ceiling consists of a series of broken surfaces covered with natural linen stretched over wood frames. The framework of the oak panelling extends into the court as a trellis, while the woven wood background continues into the dining room to become its west wall. A more dramatic example of this same interlocking of elements is the ramp, which breaks through the living room ceiling on its way to the study directly above.

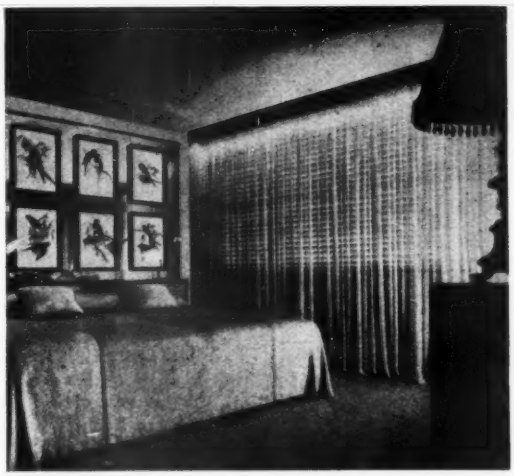
Small and irregular in shape, the dining room relies heavily on its open relationship to both ramps and court for its effect of spaciousness. Focus of the decorative scheme is a long table whose top is made of sections of desert cedar imbedded in a cement composition. Illumination is indirect and direct, with small spotlights furnishing the latter. The small alcove which conceals the service door to the kitchen contains a refrigerator unit used mainly as a wine cooler. The kitchen incorporates both cooking and pantry facilities. Its wood and glass grille provides an abundance of natural light.

The study, perhaps the most successful of the interiors, offers an interesting case history of design conditioned by non-æsthetic factors. Zoning regulations permitted the rear wall to extend only a short distance above head height, and forced development of the low book alcove at the rear. To get a usable room it was necessary to slope the ceiling. At this point the owner, anxious to get additional floor space, suggested that the window be sloped as well—and the room was designed. The problem of making Dorothy Liebes' shades stay in place was solved by the use of thin stainless steel wires, stretched from top to bottom. To emphasize the shape of the room, the end walls were covered with grass matting, which contrasts agreeably with the ceiling and floor of polished mahogany. Book shelves are tapered in section and supported by glass inserts: both features were introduced to produce an effect of lightness and simplicity.

The master bedrooms are in the front section of the house, on the two top floors.

The lower of these floors is occupied by the owner's aunt. This suite



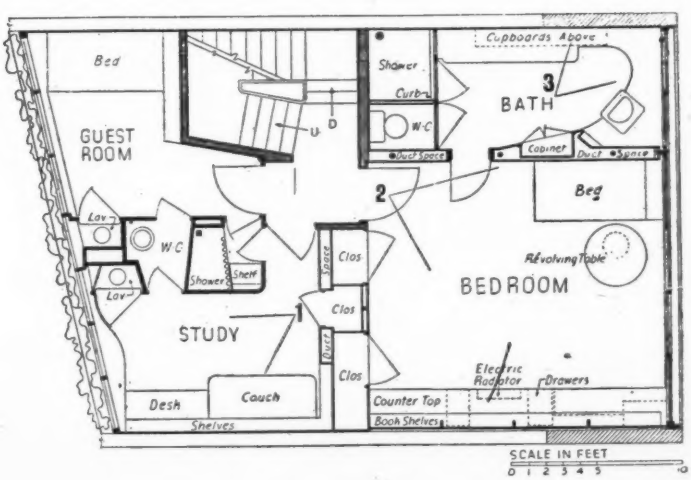


Above, plan of bedroom occupied by owner's aunt and view in guest room. Below, plan of owner's floor and view in owner's bedroom.

had to be arranged so that it could function as an integral part of the house, or as a completely private living unit with its own stair and outside entrance. The guest bedroom faces the court; its bath has outside light. The room, which is comparatively small, has been decorated in an architectural manner: the beds and the mirrored wall behind form a single unit with no other furniture in the room except a bureau. The main bedroom offers a sharp contrast with its use of old as well as new furniture. Its very feminine character makes few concessions to the modern background, suggesting that the contemporary house will permit as wide a variety of decorative schemes as any other type.

The original scheme for the owner's floor was similar to that of the bedroom suite below. When this was changed to provide an additional room, it became necessary to break up the guest bath into the compartments shown on the plan. The master bedroom is a combination study and sleeping room; its coffered ceiling, required by the owner, is made up of specially cut sections of cork insulation. The bath-dressing room is similar in shape to the one on the floor below, but has a shower instead of a tub. It contains drawers for shirts and underclothing, and closets for shoes, etc.

The illustrations are from *The Architectural Forum*.



HOUSE IN NEW YORK

BY WILLIAM HAMBY AND GEORGE NELSON

INFORMATION CENTRE

The function of this feature is to supply an index and a digest of 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. 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.

PHYSICAL PLANNING

1203 Town Structure

THE SIZE AND SOCIAL STRUCTURE OF A TOWN. *National Council of Social Service.* (*Allen & Unwin*, 1943. 1/-). A report by the Community Centres and Associations Survey Group of the National Council of Social Service.

Recommendations :

1. All development of housing policy should be based on the neighbourhood unit regarded as a community with a maximum of about 2,000 dwellings, and thus comprising between 7,000 and 10,000 persons and furnished with the communal facilities required for the full development of the life of the neighbourhood.

2. Each neighbourhood unit should be socially balanced, containing houses of different types and sizes inhabited by families belonging to different income groups.

3. A Community Centre, or the essential nucleus of a Centre, should be available to the residents from the beginning of their residence.

4. Factories and workshops should, so far as possible, be collected in factory groups, separated from the residential areas of the neighbourhood units by narrow but definite green belts and so located that most persons will be able to live within fifteen minutes' door-to-door travel by 'bus, tram or cycle, from their work.

5. In order to produce good social results, a town should be large enough to give its residents a balanced variety of employment and sufficient scope for their talents, but not so large that it acts as a magnet, drawing talent from other areas, or that it involves its residents in travel of half-an-hour or more by tram, 'bus, or cycle to reach their work or the open country. A population of about 50,000 is therefore suggested as a norm.

6. The growth of towns should be controlled by means of (i) a green belt reserved for agriculture and recreation ; (ii) limitation of the density of houses, factories and workshops ; and (iii) prevention of overcrowding.

7. Main traffic routes should never pass through a neighbourhood unit, but only between such units.

8. In the case of towns with more than 50,000 population, and particularly those with more than 100,000, the addition of new housing estates on the outskirts is strongly deprecated.

9. Efforts should be made to develop the housing estates established before 1939 into neighbourhood units.

1204 Hull Survey

CIVIC DIAGNOSIS. *Max Lock.* (*Hull Regional Survey, July*, 1943, 1/6. *See also Architects' Journal, July* 29, 1943). The technique and reasons for an elaborate town planning and sociological survey of Hull. Analysis of the extent, cause and remedy for areas of urban blight. USA method of diagnosis used.

The Federal Housing Administration in Washington has worked out a method of diagnosis which Mr. Lock has adapted as follows :—

1. The rateable or rental value of housing ; 2. The age of structures ; 3. The state of repair of structures ; 4. Density of dwellings per acre ; 5. Sanitary amenities (houses have no baths and no hot water) ; 6. Mixed development (factories, etc., in housing blocks) ; 7. Amount of sunshine in dwellings ; 8. Amount of overcrowding ; 9. Amount of atmospheric pollution by smoke, smell and noise ; 10. Amount of juvenile delinquency and infant mortality.

The Hull Regional Survey, in consultation with the city officials, have prepared maps for all these factors.

When all these maps are completed, the worst factors or symptoms from each map are transferred to separate maps of transparent celluloid paper. By superimposing these transparencies, the total diagnosis can be completed and the worst plague spots of blight accurately located. It only remains to add to the blighted areas a survey of the blitzed parts, and the fields for civic surgery and for planned rehabilitation are established.

HEATING and Ventilation

1205 District Heating

THE LATEST DISTRICT HEATING SCHEME IN THE UNITED STATES. *David Brownlie.* (*The Steam Engineer, May*, 1943, *pp.* 222-226, *June, pp.* 254-257.) Describes district heating and hot water supply schemes for Parkchester Residential Community mainly from engineering viewpoint.

Parkchester, situated in New York, is owned by the Metropolitan Life Assurance Co., and includes 51 blocks of flats 7-13 storeys high, 5 garages, a theatre and single-storey stores. The site occupies 129 acres. The flats, of which there are 12,273, each of two to five rooms, have an average rental of £2 15s. per room per month, including heating and lighting.

The garages will accommodate 3,500 to 4,500 cars, while the theatre has a seating capacity of 2,000. Parkchester is intended to house about 40,000 people. About 26.4 per cent. of the site is occupied by buildings, 21.2 per cent. by avenues, and 51.4 per cent. by lawns and walks.

Heating is carried out entirely by steam, all condensate being returned. Steam leaves the central station at a pressure of about 100 lb. per square inch and is reduced in pressure at 29 sub-stations to 5 lb. per square inch at which pressure it enters the buildings. Each of these sub-stations contains two hot water storage units. These are heated by steam and supply hot water at a standard temperature of 140 degrees F. for ablution, cooking and other purposes.

Rooms are warmed by convector units. Steam is taken to the top of the buildings and led down through the convectors, which are one under the other on the various floors. The convectors are in series so that individual control of the steam supply is impossible. Dampers are used to regulate the rate of flow of air over the heaters in the convectors and so the rate of heat output from the convectors. This method eliminates valves and traps in the buildings and so avoids completely one of the most serious sources of maintenance trouble and expense in district heating. Automatic control is included to adjust the supply of heat in accordance with outside temperature fluctuations.

External walls of the buildings are insulated with 1 in. thick spun glass, with an air space between brick and plaster. It is claimed that this construction will result in a saving of not less than £8,000 in the annual fuel bill.

Leakage of various kinds accounts for a loss of about 3 per cent. of the steam sent out. Elaborate methods are used to ensure the purity of the consequent make-up water. The boiler house equipment generally is complex and complicated control and test equipment is provided. A large number of precautions are taken to prevent corrosion troubles.

The plant is in line with present American practice in that it uses live steam. The boilers have, however, been designed to operate at a pressure of 450 lb. per square inch with super-heating when desired. It will then be possible to generate electricity using exhaust and pass-out steam for heating. The plant is oil-fired but space has been provided for coal bunkers so that pulverized fuel may be used if desired.

1206 Air Temperature Control

THE PENTAGON BUILDING. (*Architectural Record, January*, 1943, *p.* 67). Complete climatic control, summer and winter—a novel method of individual room control over air temperature.

All boiler and refrigeration plant is housed in a central station which communicates with the Pentagon Building by means of a tunnel 1,500 ft. long.

In order to save space required by central fan chambers, the ventilating fans, over 500 in number, are installed in some 200 small spaces throughout the building.

The heating and cooling of the perimeter space, i.e. the space within 25 ft. of external walls, is dealt with by window units. These units fill the window embrasures, their tops forming sills. Each unit consists of a steel casing, a thermostatically controlled hot water coil and an air duct.

The casing carries an inlet grille on its front surface and an outlet grille on the top surface. This latter slopes slightly in order to give better air distribution and prevent obstruction of the grille by books and papers. The duct in the unit is supplied with air from one of the main fans, the air discharging vertically into the unit through nozzles at high velocity. The jets of air thus created induce a flow of room air through the inlet grille and hot water coil ; the mixture of fan air and room air is discharged through the outlet grille. Ventilation rate is kept constant although temperature may be controlled by regulating the temperature of the duct air and the hot water coil. Vertical insulated asbestos prefabricated ducts adjacent to each window supply the unit ducts.

Interior spaces are supplied by ducts furred into the ceiling with circular ceiling diffusion outlets or sidewall outlets.

Central station equipment is not remarkable save the use of a high velocity in the chimney to throw combustion products well clear of the building.

The bus terminal has eight fans supplying sufficient air to keep carbon monoxide within safe limits. An automatic control switches

L. E. Walker, Photo.

GATES, ST. NICHOLAS' CHURCH, KING'S LYNN.

IT is likely that the smith who wrought these gates in 1749 was a Lynn man, because they retain the full vigour of design and workmanship which, elsewhere, declined as the 18th century progressed. A reason for this local resistance to the decay of craftsmanship is that the smiths continued to use Swedish iron, brought direct by sea to the port; this iron was not in convenient strips which tempt the craftsman to sloth but in 'billets' or blocks, and so even the most simple forms had to be forged into shape, thus sustaining the essence of the blacksmith's craft. The difficult jobs of waterproofing have contributed most to the experience, extending over more than thirty years, upon which the technique of using 'PUDLO' Brand waterproofer is based.

B

New type of precast reinforced concrete frame, widely used since the beginning of the war. See item No. 1207 below

the fans in accordance with carbon monoxide variation. The air is warmed sufficiently to keep the area dry.

STRUCTURE

1207 Precast Concrete Frames

CONCRETE FRAME CONSTRUCTION: New Type for Industrial Buildings. (*The Builder, April* 16, 1943, *pp.* 347 *to* 349 *: other journals of the same period*). New system of precast reinforced concrete frames, widely used since the beginning of the war.

This system, designed by Messrs. Glover & Partners, consists essentially of a series of single-storey three-hinged frames. The roof may be pitched, curved or flat. The frames possess a high transverse strength ; they are connected by concrete purlins. Over 500 industrial and other examples have already been built. The application and details of the system are illustrated by an industrial building of three spans of 50 ft. each. The building is 350 ft. long with frames at 16 ft. 8 in. centres.

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.*

1208 Rusty Pipes

Q *In a large building in the City, central heating is by means of hot water, and the pipes, etc., which are ordinary steam quality, are in chases in the brickwork. The system has been in use for about* 14 *years now, and I find that the piping is becoming rusty and pitted from the outside and in some cases has caused leaks, which have been very difficult to repair, as they are built in the brickwork. What is the action that is taking place to the pipework on the outside? The insides of the pipes are perfectly good. In some cases the pipes are buried in the floors and cemented in. Would cement have any action on pipework? On opening up chases in one or two instances there is sign of moisture on the rusty piping. Is this anything to do with the trouble?*

A If the pipes are pitted with rust and there are signs of moisture there seems no reason to look for an exceptional cause. It seems probable that the trouble is rust, due to the presence of moisture in the air as presumably the chases are not air-tight. The trouble may also have been aggravated by condensation when the heating was shut off and by dampness in the walls themselves, either due to their being in an exposed position or due to a defective rainwater pipe, etc.

The defects in the pipes buried in floors are more difficult to account for as buried in floors presumably means that they were totally encased and sealed from the air. Cement has no action upon iron and steel (otherwise reinforced concrete and encasing steel joints and stanchions in concrete would not be a practicable proposition). However, the expansion and contraction of hot-water pipes is almost bound to crack a cement or concrete casing and it is probable that the casing is neither so air-tight or so free from damp as might appear at first sight.

If, on examination, you feel that the various factors suggest something more than ordinary dampness, we would advise you to write to the Building Research Station, Garston, Watford, Herts, who would go into the matter thoroughly and, if necessary, examine a sample of the pipes and of the materials with which they were in contact.

1209 Books on Surveying

Q *I shall be very glad if you can recommend a current book dealing with the subject of land surveying with or without levelling, as normally required in a general architect and surveyor's practice.*

A The librarian of the Chartered Surveyors' Institution recommends the following :—

Land Surveying. Parry & Jenkins : Published by Estates Gazette. Price 11s. 9d.

Elementary Surveying. A. L. Higgins : Published by Longmans, Green & Co. Price 6s. 0d.

The latter is a fairly recent work and is probably sufficiently advanced for your purpose. There are, of course, a large number of books on this subject but most of them are rather advanced and technical.

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

ASB Lecture

May 15 at 66, Portland Place. Lecture in a series arranged by the Architectural Science Board of the RIBA on *Lighting : Application ; Artificial Light*, by R. Ackerley. Chairman : Alister MacDonald, F.R.I.B.A. The preceding lectures on *Lighting : Analysis*, by H. C. Weston and *Lighting : Application : Natural Light*, by P. V. Burnett were published in the two preceding issues.

R. Ackerley : In the first place we have to have enough light ; in the second place, we have to avoid glare ; in the third place, we have to see that apart from having enough light for the particular job that we want to do, the background is taken care of and there is some sort of general illumination ; and finally, we have to see that the lighting is so disposed that we do not have bad shadows. Those are the main practical points to be considered, and if we look after them we shall achieve the results that we want.

To begin with, you have to determine what is the value of illumination which you want to achieve. No matter what the problem is, there is some appropriate standard of illumination for it ; and so the first thing to do is to agree what is the appropriate standard of illumination. I do not think that at the moment you can do very much better than consult the IES code, which will give you guidance as to the sort of illumination at which you ought to aim.

The next thing you have to determine is what sort of lighting fitting or what system of lighting you are going to use. There are

various practical factors; for instance, you have to consider overall efficiency, on which the out-of-pocket expenses of your client will largely depend. If you put in a very inefficient form of lighting, it is going to cost a lot more to run. There may be cases where that extra cost is thoroughly justified. In a restaurant the lighting system is part of the advertising value, and a little extra expense on the running of the system may bring in a great deal more revenue; but you have to remember that the overall efficiency of the fitting is a factor to be considered.

Then you have to consider the capital cost, and whether it is possible to instal and maintain the fittings easily. It is no good having a lighting installation which in the particular building with which you are concerned cannot easily be looked after, because it will quickly, in that event, get into a bad condition. You have also to consider the nature of the light distribution. Those are all practical problems, and you have to consider them along with the much more nebulous problems of the æsthetic values, on which you and not the engineers are the authority, and the psychological factors. I do not know who is the authority on them, but we have to try to work them out between us.

When you have decided on the type of fitting or the system which you are going to use, you have then to get down to the practical job of working out how many of those fittings you need, and what wattage or power of gas mantle is needed.

Last time I spoke here, someone raised the question of the square law; that is, that the illumination from a source on any plane varies inversely as the square of the distance from the plane. If you were to take every lighting fitting in an installation and work out the candle-power in a given direction and its distance from the plane of work, take the square of the distance and divide that by the candle-power, and then in addition, if it strikes the plane of work at an angle, take the cosine of the angle, and then take account of the light from various fittings overlapping at all sorts of angles, then after two or three months, if you are an expert mathematician, you can get the answer; but in practice that is not the way in which we go about it, nor could we do so. In practice we work on what are known as coefficients of utilization.

You have to determine first of all what sort of fitting you are going to use, because the wattage you will require, the number of points you will want and so on will differ with the different types of fitting.

The first step which you have to take, after deciding which of these different classes of fitting you are going to use and what ultimate foot-candle illumination you want, is to determine what is called the room index, because according to the size of the room and the nature of the decorations of the room, the amount of light which finally comes down on to the place where you want it is determined.

If you are dealing with a direct lighting fitting, something like an industrial reflector, which throws the light downwards, it does not matter nearly so much what the nature of the walls is and how far the walls are away as it does in the case of a diffusing fitting, where a great deal of the light is coming back to the working plane after bouncing off the walls and ceiling. You have therefore to consider the nature of the room, how high it is, how far away from each fitting the walls are, and so on; and you have a table showing room width, room length and height of fitting above working plane. In the case of fittings which give mainly indirect lighting, you take not the height of the fitting above the working plane but the height of the ceiling above the working plane because the ceiling acts as the light source. In that way, having got your room index from this table, you go on to the next step.

You have your room index, and you know your type of fitting; and then you take into consideration the nature of the ceiling and the nature of the walls, and you can then work out what is your coefficient of utilization. All that that means is that you work out the percentage of the light emitted by the lamp which is ultimately going to strike your working plane. The table takes into consideration the overall efficiency of the fitting and the nature of the light distribution. If you are dealing with indirect lighting it is very important that the ceiling should be light; on the other hand, if you are dealing with a direct lighting fitting the ceiling does not matter nearly so much. You have therefore taken into account all those practical factors relating to the fittings and the room in which you are going to put them. You have taken into account the mounting height, and doubling the mounting height does not by any means result in dividing the illumination by four. You have taken into account whether to allow for the light bouncing off the walls and ceiling and, if so, whether much of it will be absorbed because the walls and ceiling are dark. You will then be in a position to say that, for example, using one type of fitting with light walls and a light ceiling, 38 per cent. of the light which left the lamp in the first instance is ultimately going to reach the working plane; and if you have chosen the right sort of fitting and placed it at the right sort of intervals (information which you can learn by experience or take from the manufacturer's catalogue), you will be able to work out what your illumination values are.

When choosing your type of illumination, you must bear in mind the nature of the decorations. If, for example, you have a lantern light above, you will be very unwise to use indirect lighting, because a good deal of light will be lost.

You know your desired illumination value, you have chosen your type of fitting and you have worked out the room index. You can now go on to see how many fittings you want and what wattage you want.

$$\text{Lamp lumens required} = \frac{\text{ft.-candles} \times \text{area (sq. ft.)} \times \text{d.f.}}{\text{coefficient of utilization.}}$$

(d.f. = depreciation factor.)

You have here an equation which you can arrange in any way you like to get the unknown factor. Let us assume that you have consulted the IES code and that you know what foot-candles you want, you know what the area is, and you have worked out the coefficient of utilization. There are two other factors which come in. One is the size of lamp and number of lamps required, which is covered by "lamp lumens," and the other is the depreciation factor, which is very important, because you have always to allow for depreciation in service—depreciation due to the lamp itself not being quite as good half-way through its life as it was at the beginning, and due to the fact that people are not so careful about cleaning things as they might be, so that you get dirt on the lamps and fittings, and due also to the fact that the decorations will always depreciate in value from their new condition. Unless you are dealing with a place which you know will be kept very clean, you will normally allow about 30 per cent. for the depreciation factor, and take a figure of 1.43. For practical purposes a figure of 1.4 will do.

You can then say that you want x thousand lumens, and any lamp manufacturer's catalogue or any handbook on illumination or the BS Specifications and so on will tell you the lamp lumens of all the standard lamps, and you can work out that you want ten times the lumens of 200 watts or four times the lumens of 500 watts or whatever it may be. You can either do this sum in relation to each individual fitting, having previously decided how many lighting points you want, or you can take the whole area and then split it up into so many lamps of so many lumens each. That is the practical way in which the lighting engineer gets down to working out the lamps required for giving a particular illumination with a particular system of lighting.

One word of warning about polar curves. Polar curves, so far as this sort of problem is concerned, are intended for one purpose and for one purpose only, and that is to tell you at a glance the nature of the light distribution. A polar curve is not intended to tell you the efficiency of the fitting; it tells you what the illumination is in any direction—whether it is throwing more light up than down, whether it throws a lot of light out to the sides, and so on. The area enclosed by the polar curve bears no relation whatever to the efficiency of the fitting, unless it is examined very closely indeed by an expert. An expert can work out efficiencies from polar curves, but unless it is done mathematically you cannot tell the efficiency from the size; the size of the polar curve means nothing. I give you that warning because many people think that a very large polar curve means that a great deal of light is coming out of the fitting.

All that a polar curve does is to tell you in the form of a cross-section of the candle power distribution of the fitting, how the light is being sent out. It tells it to you over various angles in relation to a vertical axis. You may have an angle close to the downward vertical, and the light emitted over that angle may average x candle power. That x candle power covers the area shown. As you rotate the angle from the vertical, you will see that the area over which the beam spreads its light is steadily increased, until near the horizontal it is throwing light over 17 times as big an area as it was near the vertical. Never judge the efficiency of a fitting, therefore, by the polar curve.

The next thing we have to consider is how to avoid glare. That is a question of the design of the fitting, the nature of the diffusing medium employed and the size of the fitting; that is to say, the distance of the diffusing medium from the lamp. In other words, you spread your light over a much greater area than the original source, and thereby reduce the average brightness. If you had a table lamp with anything like 10 candles/sq. in. coming out of the fitting directly through the shade, and that was close to you, you would find it most uncomfortable.

(Switching on a table-lamp, the lecturer continued): That is about 3½ candles/sq. in., or at any rate definitely under 5, and if that were close to your eye I think you would find it trying. You must not judge it too much under these conditions, because there is no general lighting around it. When I put this shade on it (doing so) we get something comfortable for a table-lamp close to the eye, with a maximum brightness of 0.5 candles/sq. in. You will see, therefore, that the suggestion of 10 candles/sq. in. is extremely liberal.

The next point you have to consider is providing a certain amount of illumination of the background, and there it is a question of the choice of fittings. Different types of fitting give different percentages of light in the upper and lower hemispheres. To obtain a reasonably light background, provided that the background is light in colour, you do not need a great amount of light; quite a small amount of light going up on to a white ceiling or off-white ceiling or on to cream walls will give you the lightish background effect that you want; but you do want to make sure that there is a fairly bright background, and therefore you want to choose your fittings according to their light distribution, so that they give a reasonable illumination on the ceiling and walls. If the walls are dark, you will need a bigger proportion of light striking them to make them reasonably bright; they will absorb more light and therefore you want more to begin with.

This table-lamp which I have here is designed so that it will automatically provide reasonable background lighting. It has an indirect component which gives a good deal of light even in this very big room, and in a small sitting room it would give that amount of light on the ceiling and the upper part of the walls which will relieve the darkness beyond the immediate range of the lamp. On the other hand, it gives underneath it a first-class reading light, but even that light immediately underneath it is diffused, and if a bit of the bottom of the reflector is visible it is under 5 candles/sq. in.,

and so you will not get an unpleasant direct glare or, if you are reading a book with glossy paper or sewing on shiny material, you will not get a specular reflection which is uncomfortable.

Finally, there is the question of shadow. That is primarily a question of the position of fittings.

Lighting a house is in some ways one of the most difficult jobs that a lighting engineer or an architect or a combination of the two (which we hope to see in the future) can undertake, because in some cases it is quite impossible to define what is the job for which you want the illumination. It is fairly easy to define it in the kitchen, and it may be fairly easy to define it in the bedrooms, where it is wanted either to do your hair by, or whatever it may be, or to read in bed. In the sitting room, on the other hand, there is a vast variety of jobs which people may want to do, from sitting round the fire and talking to doing homework or intricate sewing or reading small print.

The workshop of the home is the kitchen, and for that reason you want first-class lighting there, and in particular you want to take care of the question of shadows. You cannot get everything on one side of the average kitchen, and there are three main points which you have to consider—the sink, the cooker, and the table. The table is probably against a different wall from the cooker and the sink, so that it is impossible to light the room properly from one point only; you need at least two points in the kitchen.

Then you come to the living room. One of the things in which we have to educate people, and particularly people who have not much money to spend on lighting or anything else, is the advantage of having some form of lighting to work off those plug-points. That will easily save its cost, because often it will be possible to cut out the main light and use the little light instead. Unless you have those additional points you can never get really satisfactory living-room lighting, because you will lack the necessary flexibility. If you have the general lighting of such power that you can read small print or do fine sewing under it you will be using a good deal of unnecessary current, and you will probably have a sense of discomfort, because many people when sitting talking do not like to have a brilliantly lighted room; they prefer the cosy intimacy given by table-lamps and so on.

In the bedrooms, there are definite tasks to be performed. You have the task of making yourself beautiful in front of a glass, generally in front of the bedroom window, and therefore it is suggested that the point should be put in front of the bedroom window. In bigger houses, that could be dealt with by a utility point, and in large rooms there would be three utility points; the mirror lighting would be on the mirror and worked off a plug, and the bed-head lighting is taken off another plug. The two normal points for illumination are the bed-head and the dressing table, but you must remember also that you want to see into the cupboards. As for bathroom lighting, you want to see yourself when shaving, and so you want to arrange the light so that it will strike your face when you are at the mirror. The bathroom light will therefore be put over the mirror, and it must be at the right angle, and also of low brightness, so that it does not dazzle you.

A point of special importance is the lighting of the staircase. When lighting a staircase you want to aim at a pattern of light and dark, because that clearly defines the edges of the stairs. You get that pattern by putting the light fairly well back, so as to get the shadow of the riser thrown on to the step, and each step shows a pattern of light and shadow which defines where each step ends. With a straight staircase it is quite straightforward, but where there is a kink in the middle it may be more difficult. Another method is to choose the pattern of the staircase carpet so as to have a pattern at the edge of each stair.

RIBA

New Members

New Members elected July 20:—

As Fellows (8).—Allberry, Harry (Clonskeagh, Co. Dublin); Fawcett, Peter George Herbert (London); Harrison, John Edward Kenneth (London); Hickey, Patrick (London); Hollis, Henry Clifford (Stevenage, Herts); McNaught, Robert Mackison (Bolton, Lancs.); Marlow, Alan Fletcher (London); Wilson-Wood, Harry Wilson (Coventry).

As Associates (2).—Baird, James (Paisley, Scotland); Brierley, Edward Walter, DIP. ARCH. (Leeds School of Architecture) (Leeds).

As Licentiates (16).—Bearpark, John Ronald (Colne, Lancs.); Cromie, Stanley Hudson (Retford, Notts); Cross, Max George (Weymouth); Dorward, James (Leith); Duxbury, James (Gateshead-on-Tyne); Jack, James Deas (Dumfries); Jackson, Edwin (Newcastle-on-Tyne); James, John Lewis Thomas (Cardiff); Kirk, David Gray (Edinburgh); Murray, David Alexander (Edinburgh); Osman, Percival Frederick Robert (Southampton); Page, Lt.-Col. Stanley Hatch, C.M.G., T.D., F.S.I. (Ramsgate); Spiers, Ernest Noel (Nottingham); Sykes, Clark Hodgson (Bradford); Webbe, Arthur Harold Frank (Slough); Whyte, John MacFarland (Lanark).

ANNOUNCEMENTS

Messrs. Edric Neel, M.A., A.R.I.B.A., A.M.P.T.I., N.R.D.; Raglan Squire, A.R.I.B.A., and Rodney Thomas, A.R.I.B.A., have formed a new partnership, Arcon, Chartered Architects, with offices at 81, Piccadilly, London. Telephone: Grosvenor 3721-3.

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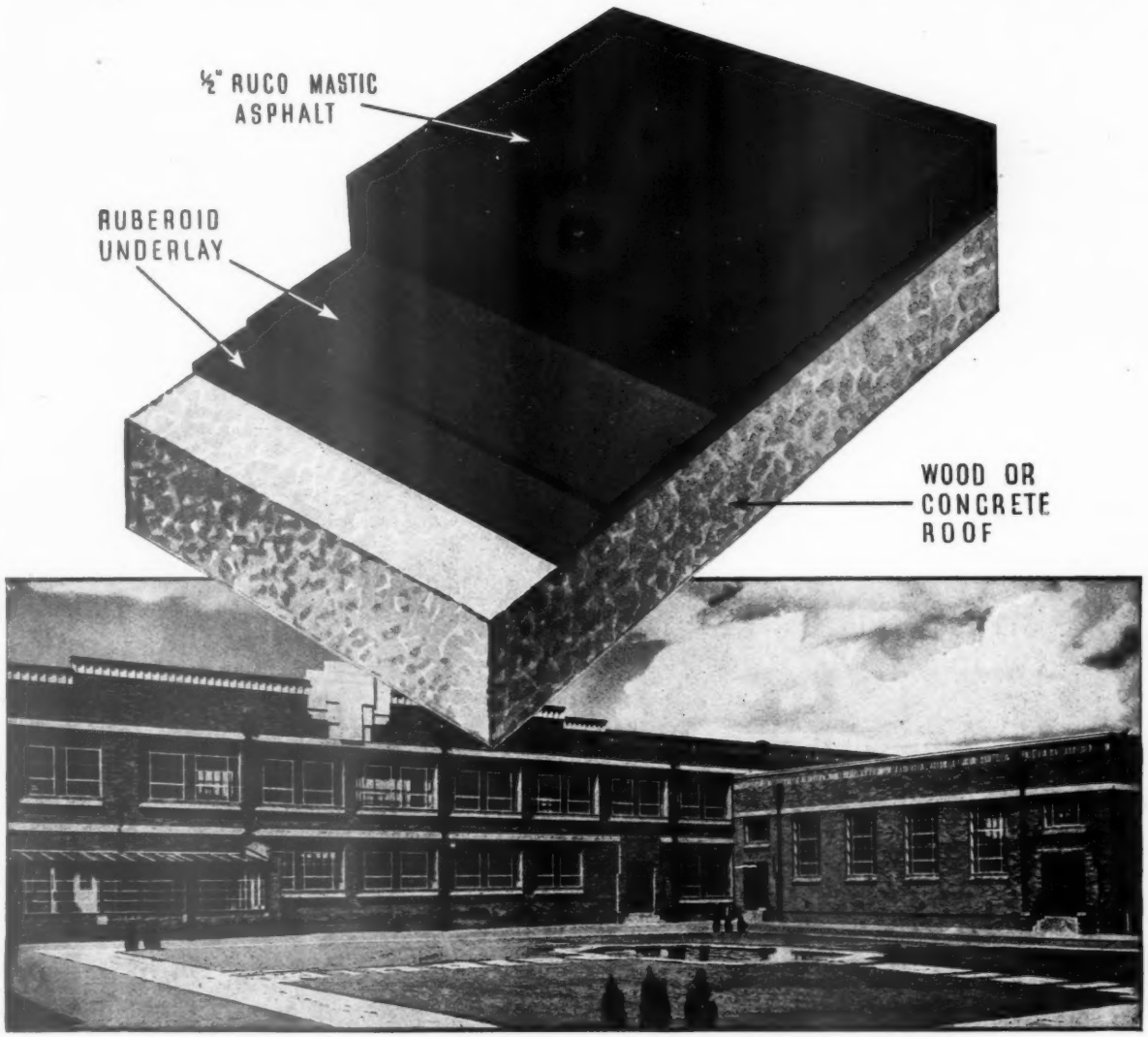

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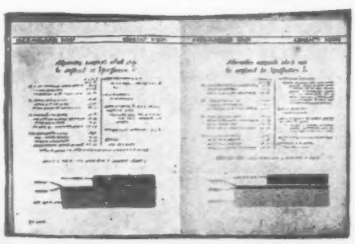

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KENT COUNTY COUNCIL.

Applications are invited for the temporary post of SURVEYING ASSISTANT in the Buildings Department. Inclusive salary about £370 a year, according to experience.

Applicants must (i) not be liable for military service; (ii) have had practical experience in the use of level and theodolite; (iii) be competent draughtsmen; (iv) have a knowledge of building construction, and (v) be able to prepare schedules of dilapidations.

The appointment may be superannuable.

Application forms may be obtained from the Council's Architect, Buildings Department, Springfield, Maidstone, not later than August 21, 1943.

W. L. PLATTS,
Clerk of the County Council.

County Hall,
Maidstone.
3rd August, 1943. 932

CITY OF COVENTRY.

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Applications are invited from qualified persons for the post of TEMPORARY ARCHITECTURAL ASSISTANT, at a salary of £6 per week plus Cost of Living bonus.

All applications should be addressed to the undersigned, and should give full particulars of experience, age and qualifications.

Canvassing, directly or indirectly, will be a disqualification.

D. E. E. GIBSON, M.A., A.R.I.B.A., A.M.T.P.I.,
City Architect.

1A, Warwick Row,
Coventry.
August 19, 1943. 938

CITY OF LEEDS.

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APPLICATIONS are invited for the APPOINTMENT of TWO ASSISTANT ARCHITECTS (TEMPORARY) in connection with the Post-War Housing Programme.

The salary scale in each case will be £310 to £350 per annum, and the commencing salary £310 per annum, plus cost of living bonus.

Applicants must be Registered Architects.

Applications, on forms obtainable from the undersigned, accompanied by copies of not more than three recent testimonials (not returnable) must be received by me, in the envelope supplied therefor, not later than 10.0 a.m. on Tuesday, August 31, 1943.

Canvassing in any form, either directly or indirectly, will be a disqualification.

R. A. H. LIVETT, A.R.I.B.A.,
Housing Director.

Priestley House,
Quarry Hill, Leeds, 9.
August, 1943. 936

MONTGOMERY COUNTY COUNCIL.

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Applications are invited for the appointment of ARCHITECTURAL ASSISTANT on the staff of the County Architect at a salary of £400 per annum.

Applicants should be over Military age or exempt from Military or National Service, and should preferably be Members of the Royal Institute of British Architects or the Chartered Surveyors' Institution. Applicants should state experience, if any, of work on Town and Country Planning Schemes.

Under a resolution of the Council all appointments during the war are of a temporary nature.

Applications stating age, qualifications, experience, appointments held, together with copies of three recent testimonials, should be received by me not later than September 4, 1943.

G. R. D. HARRISON,
Clerk to the Council.

County Offices,
Welshpool. 939

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 charge given under each heading.

Classified Advertisements continued on page xxxvi

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.

NATIONAL BUILDINGS RECORD requires the services of one or two draughtsmen, R.I.B.A. intermediate or finals standard, for survey work in London. Short-term appointments considered. Salary £3 to £5 according to qualifications. Apply by letter to Deputy Director, N. B. R., 66, Portland Place, W.1. 138

ARCHITECTURAL DRAUGHTSMAN, well experienced, required for the permanent staff of a Birmingham Office. A good knowledge of construction is necessary, and applicants must be adaptable and prepared to specialize in the application of a modern material to building purposes. Box 935.

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YOUTH, 17, registered as Probationer; distinction in Drawing, London General Schools. Would like summer vacation work in architect's office, from August 16 to September 20. Write R. Burbidge, c/o 53, Beattyville Gardens, Ilford, Essex. 135

ARCHITECT. Experience carrying through works complete; all parts country. Requires position with other architect or firm. Please state possibilities and remuneration. Box 136.

CHARTERED SURVEYOR; qualified town planner; experienced in research work; some experience of journalism and publicity; ineligible for military service; would be interested to hear of any remunerative opening for his services. Box 137.

YOUTH, aged 16½, completed three years' course in School of Art, desires post in Architect's office (London Area). Keen and willing. J. W. Newall, 91, West Road, E.15. 139

YOUNG ARCHITECT, registered, competent, requires position—London or Surrey area, on war-time building or preparation post-war schemes. Box 140.

YOUNG MAN, 20 years old, not liable for military service, attending evening classes in architecture. Looking for post as junior draughtsman (war work) in London area. Write Box 141.

BREWERY ARCHITECT (registered) **QUANTITY SURVEYOR,** Member of the Birmingham and Five Counties Architectural Association, desires responsible position with Brewery Co., experienced designing Licensed Houses and Hotels for Midland Breweries, one-eighth scale working drawings, details, bills of quantities, estimates, surveying, post-war planning, etc. Salary £500 per annum. Box 142.

DRAUGHTSWOMAN, over 41, with architectural and reinforced concrete experience, seeks post in London or Essex area. Box 144.

ARCHITECTURAL AND BUILDING SURVEYING ASSISTANT, age 22, sitting for Final Chartered Surveyors' Institution and Inter. R.I.B.A. in 1944. Four years' experience. Medical Grade III. London area. State salary. Box 145.

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