THE ARCHITECTS' JOURNAL

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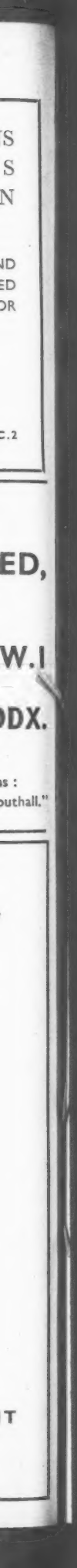
★ The war has both multiplied the number of Official Departments and encouraged Societies and Committees of all kinds to become more vocal. The result is a growing output of official and group propaganda. A glossary of abbreviations is now provided below, together with the full address and telephone 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.



Alphabetical Index to Advertisers

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

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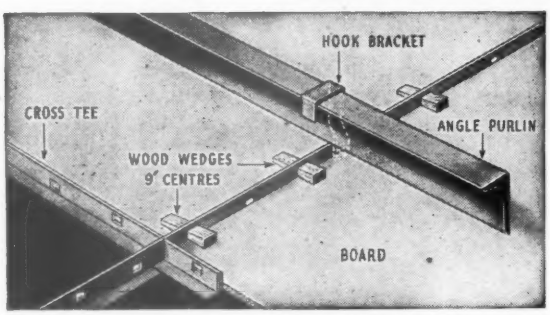

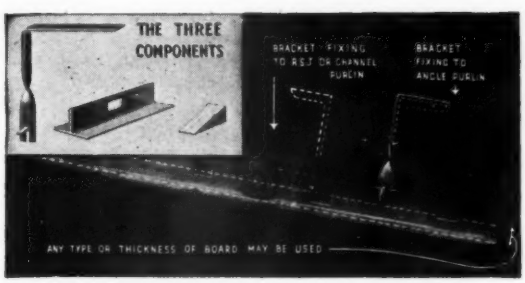

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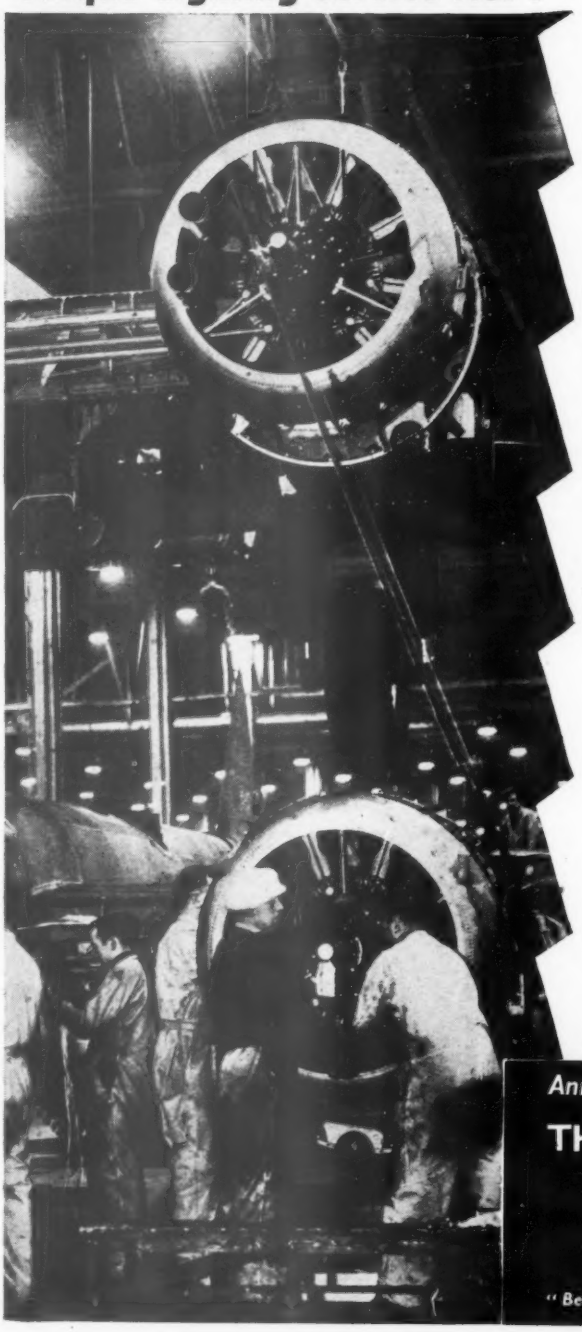

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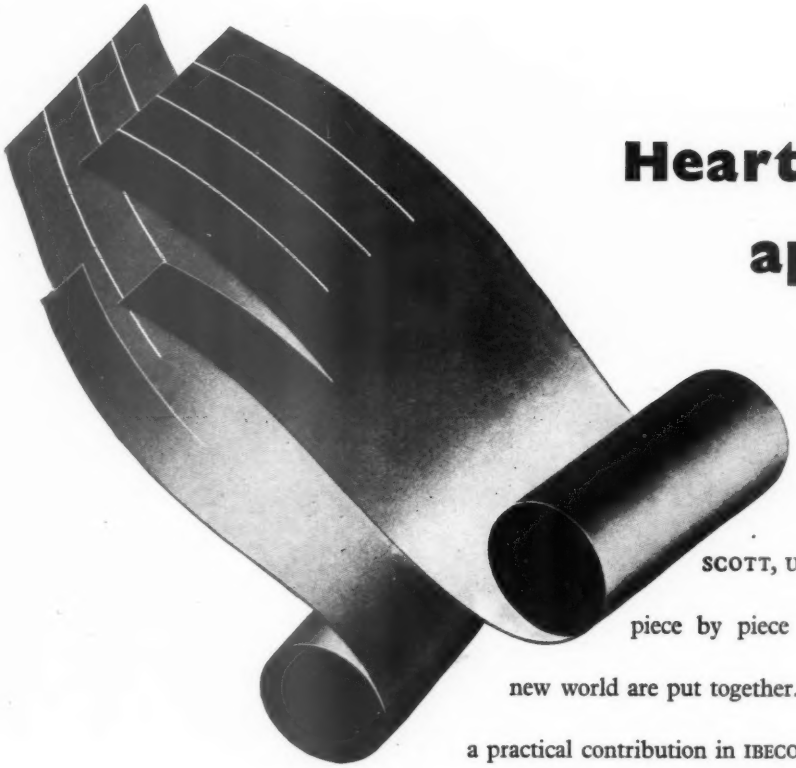

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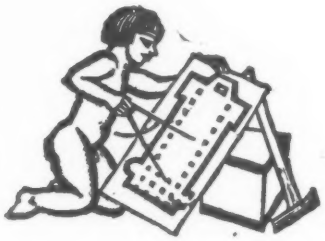
In common with every other periodical this JOURNAL *is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents 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.

AVONCROFT, Bromsgrove, Worcs. *Living in the Country Exhibition.* (Sponsor, HC.) AUG. 12-18

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

BOURNEMOUTH. *TCPA Conference.* OCT. 2

BRIGHOUSE. *Englishman Builds Exhibition.* At Museum and Art Gallery. (Sponsor, BIAE.) AUG. 14 to 28

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. 18 to 28

EDINBURGH. *Rebuilding Edinburgh Exhibition.* At the National Gallery of Scotland, Edinburgh. (Sponsor, Edinburgh AA and the National Buildings Record (Scottish Council).) AUG. 12-14

EVERSLEY, Basingstoke. *Twenty Women at Home Exhibition.* (Sponsor, HC.) AUG. 12-16

GILLINGHAM. *Homes to Live In Exhibition.* At County Library. (Sponsor, BIAE.) AUG. 16 to SEPT. 11

HULL. *When We Build Again Exhibition.* At Mortimer Gallery. (Sponsor, TCPA.) 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. 12-31

LONDON *County of London Plan Exhibition.* At the County Hall, Westminster Bridge, S.E.1. Large scale maps and drawings, etc., of the County of London Plan for redevelopment prepared by J. H. Forshaw, architect to the L.C.C. and Professor Patrick Abercrombie. Open to the public Mondays, Tuesdays, Wednesdays, Thursdays and Saturdays, 10 a.m. to 8 p.m.; Fridays 10 a.m. to 9 p.m The exhibition will not be open on Sundays. The Plan was illustrated in the *A.J.* for July 15. AUG. 12-14.

Civic Diagnosis of the City of Hull Interim Exhibition. At the Housing Centre. Maps, diagrams and photographs of the work of the Hull Regional Survey Research Group. (Sponsors, Leverhulme Trust, Lord Mayor of Hull and HC). AUG. 12-14

Your Inheritance Exhibition. At Carter Paterson's. (Sponsor, HC.) AUG. 12-14

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 15-23

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

TCPA Conference. OCT. 23

TODMORDEN. *Living In Cities Exhibition.* At Historical Rooms, Centre Vale Park. (Sponsor, BIAE.) AUG. 12 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: Mr. F. J. Osborn, Mr. W. F. Eccles and Mr. 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 12, 1943
No. 2533. 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 some of the houses repaired after raids, DAMAGE CAUSED BY PEOPLE IS GREATER THAN BOMBING, said the Lord Mayor of Hull.

He was speaking at a conference. Children, he said, are responsible for much damage, but the stripping of houses of all their fittings is the work of older people. Mr. A. Rankine, the City architect, said doors are taken off their hinges, cupboards removed, floorboards taken up, joists sawn through and fireplaces and staircases taken away.

Roger Pemberton Almshouses have been SAVED FROM DEMOLITION by the St. Albans City Council.

The almshouses were founded in 1627 by Roger Pemberton, a relative of Chief Justice Pemberton, to mark his regret at having accidentally shot and killed a widow while hunting, and are for the benefit of poor widows. To prevent the demolition of the almshouses the City Council not only made an order under the Town and Country Planning Act directing that such action should not be carried out without its consent, but also made an offer to the Charity Commissioners to buy the buildings. The Council's decision that the almshouses are worthy of preservation on account of their special architectural and historic interest has the support of SPAB

from AN ARCHITECT'S *Commonplace Book*

PLAN FOR THE NEW ERA, 100 YEARS AGO. [*From* Leaders, Dreamers and Rebels, *by René Fülop-Miller*]. Fourier wished to establish here and now, as a historical reality, the better, more rational world order which had disclosed itself to his spiritual vision as a contrast to the inadequate system in which he was living. This realization was to be begun in a small fenced precinct, carefully detached from the inharmonious, blighted world of our day. Fourier was firmly convinced that the example set by the first colony of the new era would arouse such universal enthusiasm that, ere long, the whole of France, the whole of the world . . . would be covered with such nuclei of harmonious community life, which would ultimately unite into a harmonious world-state. The organization of these " phalansteries," as Fourier called his nuclei, had been worked out in every detail. . . . In a great edifice, harmoniously proportioned, there would live from 1,600 to 1,800 persons, classified in groups suitable to their " refined passions," and the mingling of these. . . . Everyone would engage in a task that was pleasant to him, guided solely by inclination, talent and taste. The phalansteries disseminated over the globe would be allied in groups of four, eight, twelve, and twenty-four, each group, according to size, under the leadership of a duarch, a triarch, or a tetrarch. The dodecarch would be in charge of a million phalansteries ; and the omniarch, who would live in Constantinople, would be the president of the whole world.

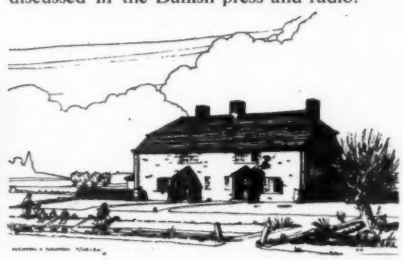
In Duddeston and Nechells the Birmingham City Council is TO DEMOLISH FIVE THOUSAND HOUSES after the war. The demolished houses will be replaced with maisonettes, terrace houses, flats and hostels. Sites have been selected by the City Council for schools, a fire station, police station, library, cinema, community buildings and a swimming bath. Based on pre-war prices, the cost is estimated at over £7,000,000.

Factory posters and other forms of print used to stimulate and maintain the war effort on the industrial front are to be seen at a PERMANENT REFERENCE BUREAU AT BIRMINGHAM. The bureau has been organized by the Midland Regional Office of the Ministry of Information. It includes upwards of three hundred of the exhibits which appeared in the *Tell the War Worker* exhibition, held in the city early this year, together with other posters and pictorial material, produced and distributed to factories by Government Departments. The manufacturers who organized the *Tell the War Workers* exhibition, almost without exception, placed their exhibits at the disposal of the Ministry. The bureau, which will, with the help of these manufacturers, keep fully abreast of all new developments in factory appeals, is at the Midland Regional Office of the Ministry of Information, at Lombard House, Great Charles Street, Birmingham, and is open daily from 10 a.m. to 4.30 p.m.

All but two of the thirty-six students attending the Polish School of Architecture at the University of Liverpool during the session just ended, had been SERVING IN THE POLISH ARMED FORCES and will now resume service. The Polish School was established within the Liverpool School in 1942 by an agreement between the Government of Poland and the University of Liverpool, with the assistance of the British Council. The existing five year course of the Liverpool School, together with its provisions for the study of civic design, has been accepted as the basis of the course taken by the Polish students, who are admitted to it at stages appropriate to their previous training and qualifications. Professor L. B. Budden is in charge of the Liverpool School, Professor W. G. Holford of the Department of Civic Design, and Lt.-Col. L. Torun, Civil Eng. STR, is Director of the Polish School. To meet the varied needs of architectural practice as they have now developed, the Liverpool School offers courses of study leading to the Degree of Bachelor of Architecture, or for candidates who have not passed an accepted examination for matriculation to the Diploma in Architecture. The schools' Final Degree and Diploma examinations have been recognized as qualifying for admission to the statutory register of architects, and to the associateship of the RIBA. The autumn term for both the Liverpool and the Polish schools starts on September 28.

In spite of intensive propaganda conducted for the last 18 months the COUNTRY'S NEEDS OF WASTE PAPER are still thousands of tons in excess of weekly collections. The best way of closing this gap, says the Waste Paper Recovery Association, is by digging into the hoards of paper still held by firms and individuals who do not realize how greatly their freezing of paper stocks is hindering the war effort. In addition to large quantities of used paper, records and correspondence stored in offices all over the country, there are also stocks of unusable paper and card-board.

Despite German occupation eminent Danish townplanners are engaged on a radical scheme for the RECONSTRUCTION OF COPENHAGEN. The old centre part of Copenhagen, the Borgergade-Adelgade area, is a huddle of old, inconvenient buildings and narrow streets unsuitable for modern traffic requirements. On July 2, the daily newspaper, *Politiken*, gave a detailed account of this scheme and a review of the 500 years' history of the Danish capital. Perhaps it is this widespread interest in their own planning schemes that has aroused among Danes rather more than a passing interest in the London Plan. This has been prominently discussed in the Danish press and radio.



Architects' designs for farm workers' cottages, selected by four rural district councils and approved by the Ministry of Health. Top : Sunderland, by C. Emmerson ; and Romney Marsh, by Jackson and Jackson. Above : Cockermouth, by P. L. Browne, Son and Harding ; and Aylesbury, by Raymond C. White. The designs are based on type plans issued by the Ministry adapted to harmonize with local surroundings.

Chairman, Royal Fine Art Commission

In all post-war reconstruction and development the Government has stated that it will look upon the Royal Fine Art Commission as the ultimate authority for consultation on matters of taste and æsthetics (though the Commission will remain in its present advisory position). Already the Commission is being consulted by local authorities, and already it has received major schemes (the City has just submitted the London Plan) for consideration. It is therefore to-day potentially one of the forces to be reckoned with in post-war development. The chairman of the Commission, the Earl of Crawford and Balcarres, is forty-two years of age and was educated at Eton and Magdalen, Oxford. He became a trustee of the British Museum in 1940, of the Tate Gallery in 1932, and of the National Gallery in 1935, and has been a member of the Standing Commission on Museums and Galleries since 1937. From 1924 to 1940 he was Conservative Member of Parliament for the Lonsdale Division of Lancashire. He inherited the earldom from his father, who died in 1940, and succeeded him as chairman of the Royal Fine Art Commission in January last.

Speaking at Woolwich on the newly completed ordnance factory programme, Mr. George Hicks, Parliamentary Secretary to MOW, said that each of these huge new FACTORIES COST MILLIONS OF POUNDS.
They are so big, he said, that it is not uncommon for one to have as many as 700 or 800 separate buildings covering two or three square miles, with 20 miles of roads, a new railway station and lines, and hostels for thousands of workers, and even for families of workers. MOW are undertaking to supply huts, equipment, and everything down to teaspoons to bring up to 3,000,000 the number of children who can have hot meals at school. The work of providing post-war houses is proceeding speedily and soundly, with the one object of giving the nation the best buildings that the public purse can afford. The future programme of the building trade and the intake of boys or demobilized service men must be correlated. It is Lord Portal's desire that every man shall be assured of a week's wages, whether rain fell or not.

A United States Timber Mission is in this country STUDYING TIMBER CONTROL organization and the most economical methods of supply and distribution.
Particular interest centres on the use of timber for aeroplane construction, huts for troops, and wooden containers of all kinds. The mission has already met the Ministers of Supply and Production, and preliminary discussions have taken place at the Bristol headquarters of Timber Control. The talks were followed by visits to sawmills, plywood factories and timber-using undertakings. Expansion of timber production is enabling Great Britain to supply most of her own needs, but special types are being imported from the USA under Lend-Lease arrangements. Members of the mission are: Messrs. David J. Winton, Special Assistant to Vice-Chairman of Operations, War Production Board (Head of the Mission); George W. Trayer, Chief of the Division of Forest Products, United States Forest Service; George R. Thompson, Consultant on Veneer and Plywood, Lumber Division, War Production Board; and Thorwald A. Carlson, Chief of the Division of Material Containers, Forest Products Laboratory, United States Forest Service.

A plan to encourage young people voluntarily to use their Service gratuities and post-war income tax credits TO ACQUIRE THEIR OWN HOUSES, is being put forward by Mr. David W. Smith, general manager of the Halifax Building Society, to the Treasury and MOH.
The main idea of Mr. Smith's plan, which he is putting forward through the Building Societies' Association, is for the Government to give priority in payment to those who desire to become owner-occupiers of houses through the building societies. Mr. Smith stated in an interview that with the collaboration and guarantee of the State it would be possible to extend the operation of the 1933-1936 Housing Acts to individual purchasers so that as much as 90 to 95 per cent. of the value of the house for personal occupation could be advanced for repayment over, say, thirty years.

TOWER OF BABEL

DURING his speech to the BINC Congress Mr. George Hicks asked whether highly progressive future organization of the building industry was not necessary. We think it is. Further, we think that there is no point in the industry's delaying its efforts to organize until it can see the results of Government reorganization. Until each section of the building and allied industries speaks with but one voice the sections themselves cannot combine to demand a similar simplification of the Government machine.

For some years before the war the building and allied industries were unanimous in their demand for direct representation with the Government through the medium of one Ministry. This demand grew with the outbreak of war and the consequent regimentation of the industries to the war effort. United action finally resulted in the establishment in October, 1940, of MOWB . . . a Ministry which, Mr. Attlee announced, would undertake all the Government's building work. The Government's intentions were not carried out to the full (probably through inter-Departmental jealousies) and we do not propose to labour the point here. But we now have to consider whether, in its various negotiations with the industries, the Government in its turn may not be embarrassed by the lack of co-ordinated representation within the industries themselves.

Mr. Bossom, during the recent debate on the MOW vote, pointed out that whereas the operatives have one body to represent them, the employers have sixty-seven. As far as we can ascertain there are nearly one hundred bodies representing different aspects of the industries with headquarters in London alone. There are, we are told, nearly six hundred representative bodies throughout the country.

This state of affairs caused Lord Reith, when Minister, to announce that he had asked BINC to assist him in collecting the information necessary for a close analysis of the many sections and branches that go to make up the building industry in its widest sense—an inquiry which arose naturally out of the investigations made earlier in the year by Mr. Justice Lewis also at Lord Reith's request. The Lewis report was never published. Nor has any information regarding the information gathered by BINC for Lord Reith been disclosed. We now ask: Was that information gathered? If so, to what purpose was it put? We understand that BINC was subsequently asked to expand its interests to make itself truly representative but that agreement on these lines was found to be impossible. What is the present position?

When Lord Reith *selected* his Central Council there was an outcry against bureaucracy. Why not an *elected* body, it was asked. The Minister answered: "Elect your own representative body and make it truly representative so that it may balance my selected body." This was a long time

ago. The industry seems to move even slower than the Ministry. The Minister also set up an elected body—the Building Advisory Council. This was yet another invitation to the industries to set up their own representative body. Why do the associations and federations and institutions still speak with the diverse voice of Babel?

There should be one body representing each facet of the industry. Each representative body should nominate a mutually agreed number of candidates to the national body. These nominees should elect the Minister's Advisory Council. In this way, with each body having affiliated, decentralised groups throughout the country, a pyramid could be built on firm foundations, which would, or should, be able to handle any negotiations that it might be found necessary to make with the Government, however delicate the subject. Moreover, the building industry would be in a far stronger position than it is now to press the Government for decisions on the wide issues of post-war planning and building.

The Architects' Journal

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

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

THE TIMES ON THE BINC CONGRESS

As General Montgomery advances across Sicily pressure on the Government to produce a coherent reconstruction policy increases at home. The Congress recently organized by BINC prompted a particularly forceful attack from the leader writer of *The Times*.

★

On July 24 he wrote :—

"A fully thought out plan for building cannot be restricted to housing and slum abatement. It is impossible to work out figures for the labour force which will be needed on the basis of an estimate of building requirements which makes no mention of industrial demands, no mention of the distribution of the population, no mention of the priorities to be established between the different parts of the national economy, and no mention of the machinery of land control, nor of the financial powers, and powers for the direction of industry, which are necessarily involved. The prerequisite of a reliable plan for building is, in short, a general economic policy on the home front."

★

It is encouraging, and perhaps rather surprising, to have the interdependence of physical and economic planning so clearly recognized.

KEEP OFF THE GRASS

When I look up from writing these notes, I see the backs of five little iron plaques and I know they are inscribed on the other side : *Please keep off the Grass*. I also see seventeen worthy citizens, not to mention the issuer of chair-tickets, conniving at, indeed colluding in, my crime ; for the railings are down and it is a sunny Sunday morning. Where there is crime there is a social problem. Here it is the conflict between the citizen's claim to put his feet where he likes and the same citizen's claim to have his eye protected from the horror of a patchy greensward. What is the solution of this problem?

Paths. There is no harm to grass if people are allowed to wander in limited numbers all over it ; there is, if they are allowed to take short cuts or walk along the verge. The inducement to do these things should be removed by the proper layout of paths. The Classical Tradition gave us geometrical patterns, which bore us now with their lack of purpose. The Romantic Reaction gave us meandering groves, which, in spite of occasional beauties, are equally pointless to-day. Both types of layout are spoilt if the grass be left unprotected. I suggest a new line of approach. (Dare I call it the functional one?)

★

Paths should be designed for man's footsteps, not man's footsteps for paths. The following seem to me the first principles of this new *Atrapology :*

1. All paths should be based on straight lines between probable destinations, e.g., gates, boat-houses, band-stands. Changes in direction should be gradual and should be made only if
   (*a*) there is a change of gradient ;
   (*b*) there are objects of beauty or interest to redirect the walker's natural course (or objects of ugliness or boredom to be avoided).
2. All paths should be of the minimum width required for normal peak traffic. Increases in width should be made only if
   (*a*) an increased volume of traffic is probable at that point ;
   (*b*) a slower flow may be expected on account of local interest.
3. Paths should be of two types :
   (*a*) winter paths with a hard surface such as tarred gravel ;
   (*b*) summer paths with a soft surface of natural earth. These might sometimes run parallel with the others, separated by a narrow grass verge.

★

In short, paths should be designed for the man with a destination. The rest should be allowed to wander where they will. Sheep, and other animals that make tracks and cannot read, set us a useful example. We clamour for more open spaces (both more open-spaces and more-open spaces). O, you who shall provide them, save us from ourselves. Lead us in the straight and narrow way.

THE TEMPLE

If you had dropped in a year ago at the Old Post House, Middle Temple Gate — now the law stationer's shop—you would have seen on the wall a fine old print of the Temple as it was in the seventeenth century. You would have read the following caption under the print: *A view of the Temple as it appeared in the year 1671, when James, Duke of York, afterwards James II, was a member of the Inner Temple, and St. Heneage Finch, Knight and Bart., Attorney General, afterwards Lord Keeper, Lord Chancellor and Earl of Nottingham, was Treasurer of that Honorable Society: at whose expense the same is now engraved Anno 1770.* This print is reproduced below.

*

Very few of the buildings seen in the print now stand, though the general layout of the Temple remains surprisingly unaltered. The Middle Temple Hall, seen on the extreme left, stands almost in its original state, and the Temple Church with its Norman rotunda was intact before the war, though it has been badly damaged by the *Luftwaffe*.

*

King's Bench Walk along the extreme right now looks very much as it does in the print, and while most of the fronts were rebuilt in the eighteenth century, a close inspection would probably reveal that the body of the terrace behind the facade remains as it was in 1671.

This is definitely so in the case of No. 42, which is on the far return facing south, in front of the Niblett Hall. A plaque outside the door tells you that "In 1577 the Alienation Office was built here, but was destroyed in the Great Fire of 1666. It was rebuilt by the Crown in 1668. The brick front has been renewed, but otherwise this is the building of 1668."

*

Crown Office Row can be seen in the print in the left middle distance. This row was standing before the war, but here (and also at the Master's House on the right of Temple Church) the bombs have done their worst. The little church tower on the horizon must be the old St. Dunstans-in-the-West on the River Fleet, now Fleet Street. A neo-Gothic building has taken its place.

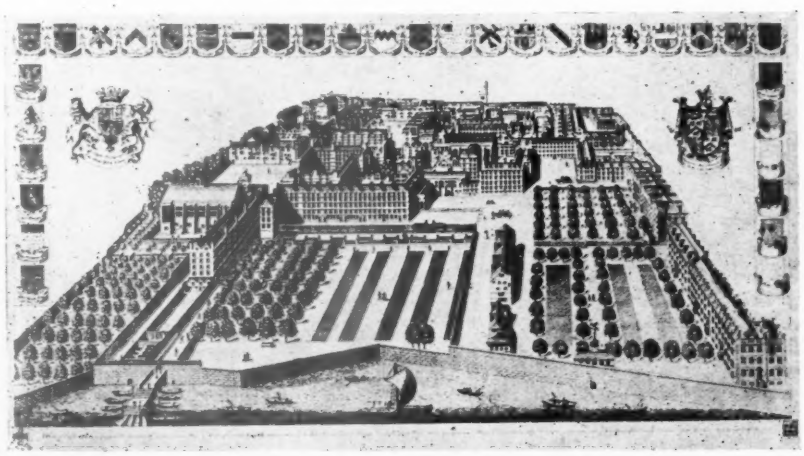
*

The river wall in the foreground is, of course, no longer in existence and was, in fact, a good hundred yards further north than the present embankment, for the river three centuries ago was far wider and less closely contained than it is to-day.

*

It is most earnestly to be hoped that the rebuilding of the Temple, when it takes place (under Professor Hubert Worthington ?) will be regarded as restoration, not "reconstruction."

ASTRAGAL



An old print engraved in 1770 showing the Temple as it was in 1671. See Astragal's note above, in which he compares it with the present state of the Temple.

LETTERS

Dr. Ernst Fuchs
Peter Berner, A.R.I.B.A.
I. L. James, L.R.I.B.A.

The Democratic City

SIR,—I was much interested in the Notes of Astragal on the *Rebuilding Britain Exhibition* in your issue for March 4, especially those in regard to "the sociological attack on the planning problem which the Reconstruction Committee has adopted" and "the new basic, pyramidal structure for town-planning by means of local units."

It was this very sociological approach to all planning problems which enabled the town-planners in Soviet-Russia 12 and 15 years ago to reach conclusions, the similarity of which with the "new basic structure" is evident.

In my article *The Democratic City. Town-planning in Russia and Australia*, published in *The Australian Quarterly*, March, 1942 (a condense was reprinted in the *World Digest*, October, 1942), I have described this pyramidal structure of the planned Soviet Russian town in detail.

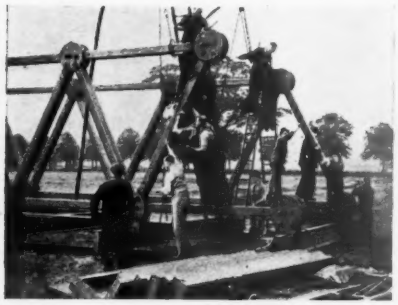
The smallest residential unit is the group, a town-planning cell for 100—200 families with kindergarten, crèches and restaurant. Two groups have a medical station and shopping facilities, 4 groups form a block with elementary school and post-office (corresponding in size and structure to the present neighbourhood-unit), two blocks make a rayon with community-centre and telephone station, two rayons are completed by an ambulance, fire brigade, recreation home and 4 rayons make the entire city with civic, health, educational centre, main commercial district and so on.

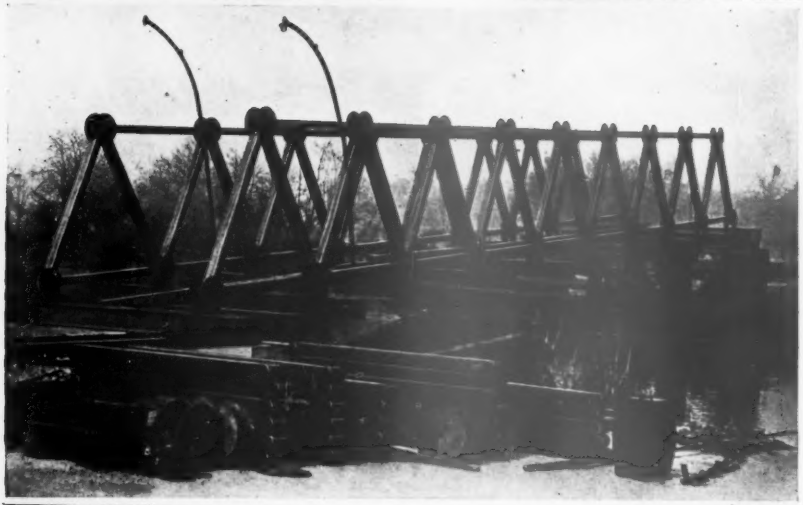
Thus we see that at the foundation of this pyramid is the human being. The smallest unit, the group, is the area within the scope and interest of the pre-school child, the block that of the pre-adolescent child, the rayon that for the adult in his daily work.

Not quite as schematic as this Russian scheme but nevertheless on a similar principle was based the design of the Master-Plan for the future development of the Borough of Swan Hill, Vic., Australia, by Frank Heath.

The school and the community building are the focal point in the neighbourhood-unit

BUILT IN 120 HOURS





A bridge being urgently required across one of Britain's waterways, a patent type composed of standard units was selected and erected in 120 hours by nine men and two boys. The bridge consists of three spans of 90 ft. to carry lorries up to 14 tons weight. The manufacturing time at the works for all the steelwork of the bridge was only three weeks. The photographs above show the different stages in the construction of the bridge. The system used is specially designed for rapid erection, and consists of only five interchangeable standardised parts. By varying the arrangement of the units, all types of bridges from a light footbridge to a heavy bridge of 150 ft. single span, either temporary or permanent, can be built. All parts are easily handled by light appliances, and no riveting is required either in the production stages or on the site.

on which principle the design is based. While the present township with a population of about 4,500 forms—after it has been replanned—the nucleus of the first neighbourhood-unit, the further development of the borough has been planned according to the neighbourhood-unit system of growth. The size of such a neighbourhood-unit, of about 200 to 250 acres, with a population of about 1,500 families, is between the size of a block and a rayon.

National and topographical differences have to be taken into consideration before judging the actual sizes and figures relating to the size, the number of units, the density regulations and so on. But what seems to be the most important aspect—as mentioned in the Notes of Astragal referring to the *Rebuilding Britain Exhibition*—is the principle and the approach: the principle of the town-planning cell and the sociological approach to its planning, primarily carried out in Soviet Russia.

Melbourne. DR. ERNST FUCHS.

Manufacturers' Catalogues

SIR,—The points raised in your issue of July 22 in the letter from T. E. Scott will stand elaboration.

How many manufacturers' of building materials are there who realize the fate of the shower of miscellaneous booklets, folders and pamphlets which in peace time made the job of compiling a catalogue file a well-nigh impossible task.

Some firms certainly were aware of this state of affairs and, where they did not contribute to the Information Sheet series, made some attempt to provide for time-to-time additions to an already published booklet of suitable form.

Now, in considering the future distribution of trade information, would it not pay advertising agents—who are in actual fact the persons concerned in the production of such information—to consider suggestions regarding the forms in which this is to be distributed, and regarding some degree of standardization of size and binding.

Such organization, at the source, of drawing office catalogue files, would materially assist a far wider number than the post-war students in whose needs Mr. Scott is concerned.

PETER BERNER.

Built-in Bookshelves

SIR,—How pathetic it is that the Archbishop of Canterbury, and others from time to time, should have to appeal for the incorporation of almost trivial amenities in our post-war homes.

Great strides in the production of synthetic materials, and the machinery of and for mass production, make the scientifically designed and precision built house a distinct post-war possibility, and these small houses can incorporate every modern amenity that science has achieved.

Air conditioning, telephones, built-in radio, prefabricated all-electric kitchens and utilities incorporating dish washing sinks, refrigerators, cookers, clothes washers and dryers, etc., are all well within the mass production power of the machine.

Compared with the fabulously costly and intricate machinery now used in this country for the production of machines for human destructive purposes, how simple and comparatively inexpensive would be the cost of machines to produce these products for human constructive purposes.

After having seen raised sums of astronomical magnitude for the conduct of the war, we refuse to believe that a small proportion of such cost cannot be expended on the most vital post-war human need, the small house.

Liverpool. I. L. JAMES.

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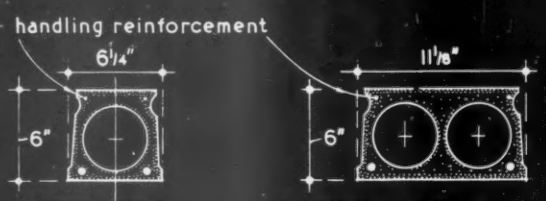
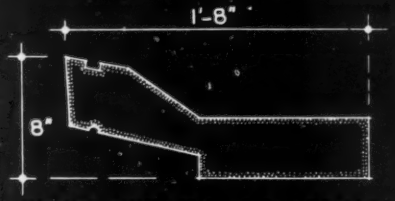
THE ARCHITECTS JOURNAL LIBRARY OF PLANNED INFORMATION

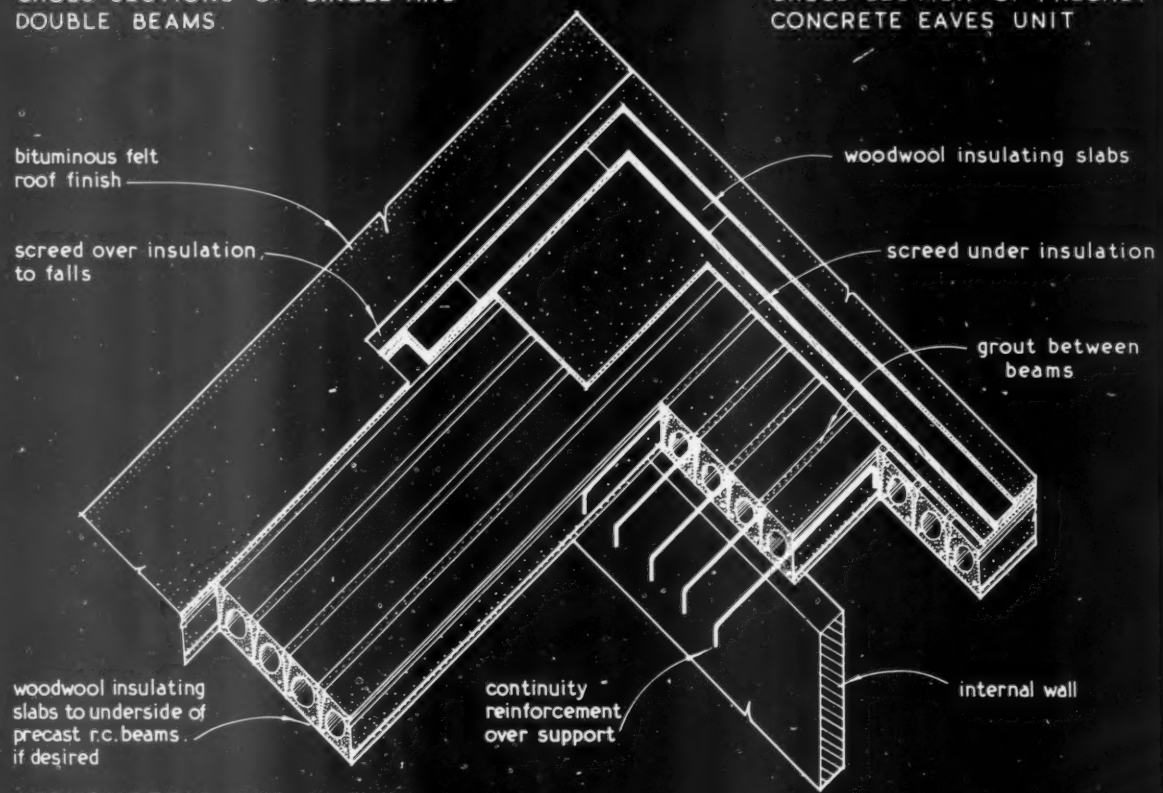
PRECAST ELEMENTS, CONTINUITY REINFORCEMENT AND ROOF FINISHES; AND ALTERNATIVE EAVES DETAILING.



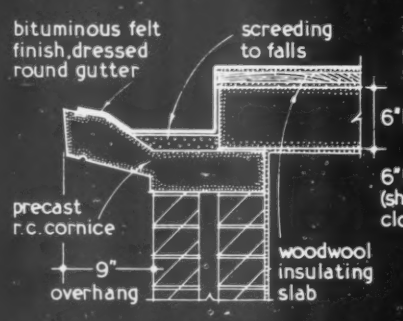
CROSS SECTIONS OF SINGLE AND DOUBLE BEAMS.



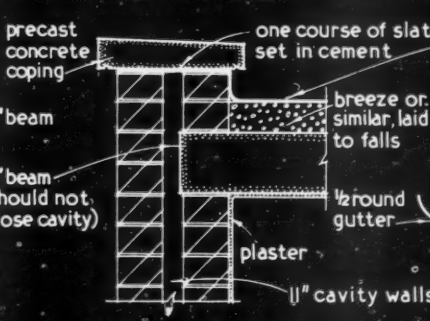
CROSS SECTION OF PRECAST CONCRETE EAVES UNIT



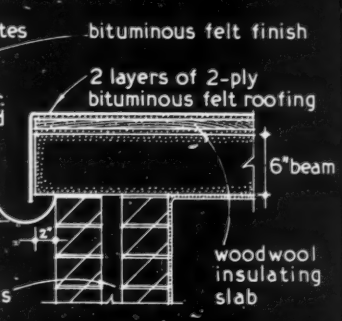
AXONOMETRIC PROJECTION SHOWING CONTINUITY REINFORCEMENT IN ROOF, INSULATION, AND FINISHES.



EAVES DETAIL FOR OVERHANGING CORNICE.



EAVES DETAIL FOR PARAPET WALL.



EAVES DETAIL FOR SIMPLE OVERHANG.

Issued by The Marley Tile Company Limited.

INFORMATION SHEET: PREFABRICATED R.C. FLAT ROOF CONSTRUCTION
Sir John Burnet Tait and Lorne Architects One Montague Place Bedford Square London WC1

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THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 905 •

ROOF CONSTRUCTION

Subject : Prefabricated R.C. Flat Roof Construction.

General :

This system of construction is designed 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 can be manufactured to suit all reasonable spans.

This Sheet illustrates the component prefabricated elements, and the method of assembly.

Prefabricated Elements :

Precast concrete beams, 11$\frac{1}{8}$ in. by 6 in. —34$\frac{1}{2}$ lb. per ft. run.

Precast concrete beams, 6 in. by 6$\frac{1}{4}$ in. —19 lb. per ft. run.

Precast concrete eaves plates, 1 ft. 8in. by 8 in. overall—80 lb. per ft. run.

Erection and Assembly :

The eaves elements are bedded and jointed on the external walls, and the ends of the beams located and bedded in position. Beams are jointed over internal supports, and the joints are reinforced with continuity reinforcement where necessary, grouted in. All beams are grouted together and screeded over before insulation or finish applied.

Details and Finishes :

Continuity reinforcement in the joints between beams, bent down at the ends.

Three methods of detailing at eaves are shown :

(*a*) Beams supported on the eaves plate and the roof finish dressed over into a chase in the plate. R.W. outlets are provided by the use of a modified slab at required intervals.

(*b*) The beams are run on to the inner skin of 11 in. cavity wall, the wall carried up and finished with precast concrete coping.

(*c*) The beams are continued over the wall, and overhang 2 in. The roof finish is dressed over into a half-round gutter fixed to brickwork.

Insulation may be obtained by bedding 1 in. wood-wool slab in a 1 in. cement screed, or by a 4 in. to 1 in. (fall) foam slag or breeze concrete screed. Wood-wool slabs may also be used under the beams.

The roof may be finished with 2-ply bituminous roofing felt in two layers, on the screed over wood-wool slabs, or direct to foam concrete or breeze insulation.

The ceiling may be plastered in the normal way (beams butt closely at bases) or wood-wool slabs may be used as additional insulation.

Issued by : The Marley Tile Co., Ltd.

Address : London Road, Riverhead, Sevenoaks, Kent.

Telephone : Sevenoaks 1251.

PHYSICAL PLANNING

2

index

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.

This is the second number of a new section of the Journal devoted to Physical Planning. There is urgent need that this subject should be brought into clearer focus. By linking specialist aspects of the problem to a general framework the Journal hopes to assist the formulation of a clearer conception of (i) social, political and economic factors which underlie planning (ii) problems which stand in the way of planning (iii) the present limits of planning research and (iv) the relationship between government expert and people in a planned democracy.

A physical planning section, of which this is the second number, has been included in the ARCHITECTS' JOURNAL in the hopes that it may help architects to appreciate the bearing of this complex and confusing subject on their own particular job. Underlying this step is the JOURNAL'S belief that planning *must* come and that the question at issue is no longer "Shall we plan?" but "How shall we plan?"

We have seen several attempts at planning on the continent, primarily social and economic but leading as a rule to the kind of planning in which Englishmen are chiefly interested—namely physical planning, the laying out of houses, factories, cinemas, pubs, parks and the roads between—and achieving in most cases results that we might well envy. We have also had some experience of planning at home. War with Germany involved us, whether we wanted it or not, in economic planning, allowing us no alternative but defeat. This in turn brought about control of land use. At this moment there can be little doubt that the continuation of "business as usual" would have lost us the war or that planning has won it.

And yet planning is not altogether popular. There are a variety of reasons. We dislike totalitarianism because it attaches no importance to the free development of individuals and planning abroad has unfortunately been prominently though not exclusively associated with totalitarianism. We also dislike the discomfort, rush, congestion, form-filling, queueing and delay to which we have grown accustomed in these last few years. War-time planning in this country has been associated with all these things.

Astragal's diary of planning events, with which this section opens, described last week our first strivings after urban order. This week the chronicle continues to relate the inevitable failure of a voluntary system which tried to achieve the appearance of planning in a period of social and economic chaos, and to trace in broad outline the more hopeful situation brought about by the need to organize for war. By way of counteracting some of the prejudices that may have grown up around the word and providing a kind of *hors d'œuvre* to what is to follow the survey of physical planning events, which leaves us this week in the middle of 1943, will continue later to record developments which have not yet taken place.

In this article Astragal starts a journey in the fourth dimension. He has freed what J. W. Dunne might call his 'observer now,' and will survey **PHYSICAL PLANNING** *events from the 1946 viewpoint, starting in 1909. In Past Definite 1909—1929 and 1930—1943 he has shown the evolution, accelerated by the Second World War, of a national policy for physical planning. In Future Simple and Future Perfect he now shows us the future which will be ours if we realize the possibilities of the present and translate them through imagination and initiative into reality.* ★*This star indicates events of significance in Physical Planning.*

PHYSICAL PLANNING No. 1, PAST DEFINITE 1909-29
PHYSICAL PLANNING No. 2, PAST DEFINITE 1930-43
PHYSICAL PLANNING No. 3, FUTURE SIMPLE 1943-44
PHYSICAL PLANNING No. 4, FUTURE PERFECT 1945-46

PAST DEFINITE [1930-33

1932

★
Town and Country Planning Act, 1932: Voluntary system made applicable to undeveloped land.

It is by now axiomatic that the guidance of land use is dependent on and linked with central guidance of the country's main economic activities. All students of planning know of the late Lewis Mumford's superb work, *Monopoly and Mononucleation: A Staggered Dichotomy*, and most will have read Miss Barbara Wootton's *Where the Money Goes*, which deals most lucidly with the same subject in somewhat shorter space. It may therefore be a matter of surprise that the first Act intended to deal comprehensively with the control of land use should have been passed during the biggest Inter-War economic crisis only by accident. Yet it was so.

The Act is well worth reading in that planning carried out under it in the next five years undermined prejudice and instructed public opinion: two essential prerequisites of democratic advance.

Sir Ernest Hilton Young moved the second reading in a House not disposed to boggle—except as landowners—over small things. Unemployment stood at 2,800,000 and the adverse balance of trade was £113,000,000, and though most members were supporting the ruthless cutting of expenditure some wondered privily whether, even if the operation were successful, the patient might not die of shock. They were therefore ready to support some boldness in fields less strewn with high explosive, and the Town and Country Planning Bill seemed modestly bold. The countryside where it was unlikely to be developed and the centre of towns were both brought under planning powers, as was the design and external appearance of buildings. In certain places building could be prohibited unless it could be shown that it did not come under one or other of quite a list of "anti-social" heads.

In brief, the Bill redefined more broadly the "duty of neighbourliness" which a citizen who wanted to build owed to his fellow citizens. This, in theory at least, diminished the grounds on which compensation could be claimed, and this in turn increased the chances of worthwhile planning schemes being made and carried out. But the Bill did more than this. Under its provisions almost any person or body who was prepared to co-operate voluntarily in fulfilling the aims of planning was enabled to do so. Private owners of land could, by placing their land in the category of private open space ensure its preservation and its enjoyment by themselves and the public in varying ratios according to its nature. In association with the RIBA and CPRE panels of architects were later set up to try to prevent major æsthetic failings in rural building. That this latter protective net caught in its meshes in due course some of the most able and æsthetically well-equipped younger architects was, in the slang of the Second World War—"Just one of those things . . ."

It can be said that by this Act, and a few ancillary measures passed later, the system of "voluntary" planning was fully extended. If that system failed there were but two alternative courses of action: to wait an indefinite number of years until rising standards of taste and patriotism secured voluntary co-operation in planning schemes; or, after full trial, to see where the system was failing and to remedy such failures whatever the cost. The previous decade had proved to all informed persons that the first alternative was inacceptable, and the next six years was to be the period of full trial before adopting the second. At the time the Act came into force one-quarter of England and Wales was covered by, at least, "resolutions to plan," and the Government hoped for an increase—which was forthcoming, and for results—which were not.

In the meantime the papers were filled with advertisements of the great Conversion Scheme, Sir Malcolm Campbell won a speed record at Daytona of 253 m.p.h., the BBC left Savoy Hill, and the Prince of Wales opened a new theatre at Stratford-on-Avon, which the public seemed surprised (despite ten years of "women architects wanted" articles) to find had been designed by a woman.

unemployed demonstrator

★
Advisory panels of Architects set up to whom designs could be submitted.

Shakespeare Memorial Theatre.

* *

1939

★
Restriction of Ribbon Development Act. Power given to the Minister of Transport to limit access to Trunk roads.

By the time Hitler had seized the rest of Czecho-Slovakia, planning could not hope for much public attention, and for several years beforehand public comment on Government planning measures had tended to become shorter and more incisive. The Trunk Road Act had not had a good Press, and the Restriction of Ribbon Development Act had been compared, in a manner unfavourable to both, with the Non-Intervention (Spain) Agreement. In part this querulousness was the result of resentment at the continued retreat of democracy before Fascism, in part it came from the realization that the six years trial of "voluntary" planning had failed, and that for several years it would probably be impossible to introduce remedial measures.

Failed it certainly had. Three-quarters of England and Wales was under some form of planning control, but positive guidance of land use had been almost negligible. The sole satisfaction was that the main reasons for failure were now

Sir Thomas Barlow.

★

Barlow Report, 1940, recommended the creation of a new Ministry to control the location of Industry and impose the pattern of a balanced economy on regional and local schemes.

end of business as usual.

beyond dispute. First, a positive planning scheme could not be put into force because of claims for compensation which were not only beyond the capacity of local authorities to pay but were, when totalled, quite unreal. Second, the skilful guidance of land use depended upon a number of fundamental questions being considered first nationally then regionally, and finally in their application to localities. The first step towards remedying these two failures was already being taken. While the public felt reassured at the guarantees which were then being handed out to Poland, Jugo Slavia and Rumania, the Barlow Commission considered the location of the industrial population and the multitudinous problems which radiated from it. In particular they heard evidence about the founding of Trading Estates in Special Areas, about the inducements which these Estates and certain local authorities were able to offer to manufacturers to attract them, and pondered the possible future development of such an innovation.

The man in the street had, however, forgotten the existence of the Barlow Commission. He looked at many sketch maps of Dantzig and Gdynia, wondered whether to take an early holiday, whether he would come back from his territorial camp or whether to join the AFS.

As the first siren was heard on Sunday, September 3, as women sprouted trousers, and multitudes shared homes and swore at each other's cigarette ends, it was realized by a few that planning of land use would emerge, must emerge, from the second war as one of the fundamental activities of Government. But they were very few ; and they filed off to draw Identity Cards along with about 1½ million unemployed, and with the inhabitants of almost exactly 4 million new houses which had been built between the Cease and Open Fire.

★ ★

1940-43 TOTAL WAR

★ ★

1940

The year opened with the guidance of land use, almost the last subject likely to flit through the mind of the man in the street. To begin with, he was much too cold. A bitter winter had once again crippled Britain's pipes, and plumbers had received unexpected priority in call-up. But besides this he was being told that rationing was entirely unnecessary, and so were the crowds of Civil Defence men and women ; and he had just finished with some trouble over the 999 men and women found to be already enrolled in the Ministry of Information. If planning was moribund, however, its related activity of building was in different case. A score of departments were trying to cover the land with swarms of works for war needs—from Observer Post huts to giant Ordnance Factories. As was natural, mistakes were made, and during the next three years an investigating body called a Select

Battle of Britain.

ruined homes.

★

Ministry of Works and Buildings created October, 1940, with Lord Reith as first Minister.

Lord Reith.

Committee at first horrified tht public with its revelations of whae had taken place, and then bored them—chiefly because many people as time went on knew of much worse cases than anything the Committee rooted up. This record was of muddles only, and it was not until the publication, in 1945, of MOTCP's best seller, *How War Changed the Land*, that the man in the street could see, in a series of beautifully produced maps, how vast in volume and variety were wartime building and the wartime agricultural changes.

The story of the first nine months of 1940 needs no retelling to-day,* and no one can forget the moment and place of the birth of the positive guidance of land use as we now know it in Britain ; but perhaps we may allow ourselves the luxury of retelling the story in the words of the first of all the official accounts.

"*Soon after five o'clock [on the afternoon of September 7, 1940] he saw a great rash of black dots breaking out to the North against the summer sky . . . hostile planes in numbers never yet seen over any great city, moving up river from the East . . . There were 375 bombers and fighters in waves.*"

From the moment of this first big attack on London the British people have never again lost an interest in planning, which began in fervent hope and determination to use damage done by bombs to good purpose.

First moves were practical. The bombing, and fear of much greater damage to come, finally convinced the Government that the existing system of war building control was inadequate, and one month later Lord Reith became head of the new Ministry of Works and Buildings. At once Lord Reith set up a small group to consider the problems of guiding land use after the war and post-war reconstruction in general. It was this small group which grew, in seven stages, to the very big, but sensitive and flexible, machine which is to-day the Plans Office. The terms of reference for this small group were laid down by the Lord Privy Seal in the following month in these words :—

"It is clear that the reconstruction of town and country after the war raises great problems and gives a great opportunity. The Minister of Works and Buildings has, therefore, been charged by the Government with the responsibility of consulting the departments and organizations concerned with a view to reporting to the Cabinet the appropriate methods and machinery for dealing with the issues involved."

In the debate which took place in the Lords the same month Lord Reith left no one in doubt of his sincerity, high purpose and resolve.

The year ended with a serious attempt to destroy the City of London by fire, but it was in a way a last jab at too tough an enemy. Air attack was already being turned to the Provinces, and the constant London attacks were near their end.

*Professor Eberhardt, of Berlin, states that 63,000 books, 14,200 other publications and 2,741 films are indexed in the German National Library as solely concerned with that period.

Lord Reith set a fast pace. On January 29 he announced in the Lords that the main obstructions to planning, those which concerned compensation and betterment, were to be enquired into by an expert committee. And so the famous Uthwatt Committee came into being.

In the meantime Wavell was advancing in North Africa, and the setbacks in Greece and Crete, which seemed very important at the time, were just about to take place.

On February 26 Lord Reith nailed his colours to the mast. He said he was authorized to work on the assumptions that the principle of planning would be accepted as national policy, that a central authority would be needed, this authority would work on a positive policy for agriculture, industry and transport, that some services will require treatment on a national basis, some regionally and some locally. From those basic principles Lord Reith at least never afterwards departed.

★
Uthwatt Committee's Interim Report, 1939, imposes ceiling on land values.

The pace continued fast. In July, a month after Russia's entry in the Second World War, the Uthwatt Committee published its Interim or "holding" Report which was accepted by the Government, and in October while the spear point was being knocked off the Wehrmacht to the west of Moscow, the Scott Committee was set up to examine the question of post-war development and rural areas.

In December the Japanese perpetrated the "most irrational act" of Pearl Harbour, and thus made victory for the Allies absolutely certain. This explained a certain jubilation among the British public despite a series of initial disasters in the Far East—a fact which the USA, inexperienced in British ways of beginning wars, found a little trying.

* *

1942

★
Planning Powers of MOH transferred to MOWB renamed Ministry of Works and Planning

Lord Portal.

★
Scott Report, August, 1942, recommended that living conditions in country districts should be brought in line with those in towns.

★
Uthwatt Report, September, 1942, recommended purchase of development rights in rural areas, and increased powers of compulsory purchase in towns.

The year proved to be a patchy one in planning as in other matters. On February 11 MOWB became MOWP, the planning powers of the Minister of Health were transferred to Lord Reith, and the latter was charged with the welding of all physical reconstruction into a single and consistent whole, and the execution of the main recommendations of the Barlow Report.

Lord Reith's speech of that day expressed a full determination, a full sincerity of interest in planning; as had everything he had said since his appointment. A fortnight later he was gone, and Lord Portal ruled in his place. The facts are now public concerning that affair, and nothing need be added to the general verdict that, the merit of the act apart, the manner of its doing was very bad and should have been avoided.

The end of the year also saw a swing in planning matters. The Scott Committee had reported in August, and the Uthwatt Committee's final Report in September, but no announcement of Government action was made in those or the two following months, and it was in face of a very widely expressed dissatisfaction that in December the Government defended itself and announced the third of the seven stages of growth of the Plans Office. A separate Ministry of Town and Country Planning was to be set up to take over from MOWP all planning powers.

* *

1943

★
Minister of Town and Country Planning Bill, January, 1943, separated Ministry of Planning from Ministry of Works.

Sir William Jowitt.

★
Town and Country Interim Development Bill, May, 1943, extended control over areas not yet covered by voluntary schemes.

Mr. W. S. Morrison.

On January 26 Sir William Jowitt moved the second reading of the Minister of Town and Country Planning Bill, and explained why the Minister was to be called that instead of Minister of Planning. In view of hard wear the word 'planning' had had, a qualification of some kind was felt by the House to be desirable in the new Minister's title. The Government's choice did not however arouse much enthusiasm, in that it implied that the Minister's job would be to administer the Town and Country Planning Act 1932 rather than something very much bigger. And despite the Government's addition of "or any Amendment of it [the 1932 Act] which may hereafter be contemplated," members still felt that the "assumptions" announced a year before had been trimmed down almost beyond recognition. Nevertheless the Second Reading was approved, and the Bill was passed.

In February the Russian counter offensive was still making progress and Axis troops in North Africa were retreating into Tunisia for a short-lived last stand and Mr. W. S. Morrison became first Minister of Town and Country Planning.

On May 11 Mr. W. S. Morrison moved the second reading of the Town and Country (Interim Development) Bill which extended planning control to the whole of England and Wales, enabled local authorities to allow temporary development, and cleared away certain barriers to effective post-war guidance of land use. The Bill was not well received, and was once called, and quite generally thought, a "miserable sprat." Mr. H. G. Strauss, Parliamentary Secretary, said that Members who wanted further measures would have their wishes fulfilled. Perhaps few Members then realized how amply the new Ministry was to fulfil this promise in the following three years.

* *

The first half of 1943 ended with victory in sight. The Russian offensive was rolling past Orel, and Allied troops were bringing the war home to Italy. At home much thought had been given to the machinery that would be necessary for planning, and the results of it had been published in three important Reports. Pressure of public opinion had forced a Government at war to create a new ministry — the Ministry of Town and Country Planning, but not as yet to define its powers. How this Ministry justified the hopes of the public is told in the next two issues.

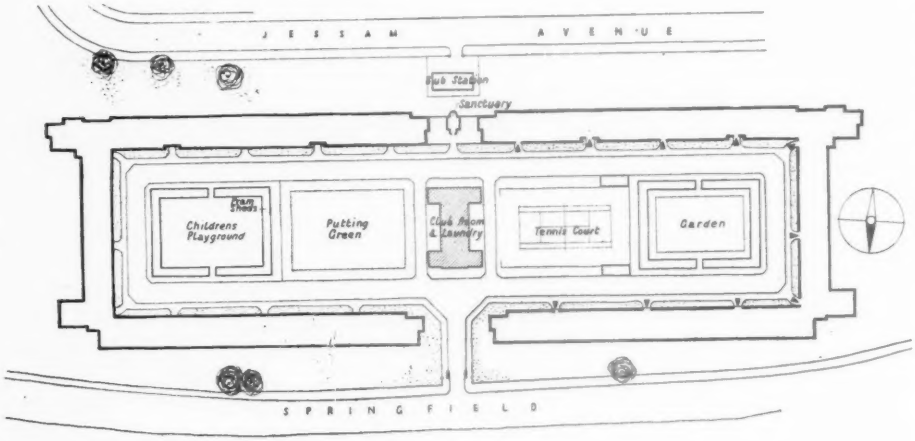
F L A T S

D E S I G N E D B Y M E S S R S. J O S E P H

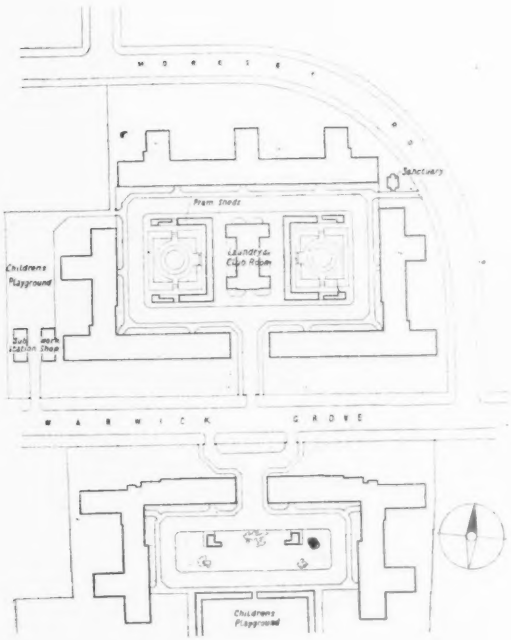
GENERAL—Two schemes erected on independent sites a few minutes' walk from each other, at Warwick Grove and Springfield, Clapton, London. They were built in 1938 - 1940 for the Hackney Borough Council. The total number of flats is 585, the total of rooms 1,582. 285 flats are at Warwick Grove, 300 at Springfield. 140 flats are of one room each, 138 of two rooms, 135 of three rooms, 154 of four rooms, and 18 of five rooms. The flats cater for married couples with children as well as for single men and women and childless couples. Rents are 6s. 7d. a week for the one room flats, 9s. 11d. for two rooms, 13s. 6d. for three rooms, 16s. 9d. for four rooms and 19s. 10d. for five room flats. To keep rents as low as they are, the schemes rely on the usual Government grant of about 25 per cent., and London County Council and Hackney Borough grants of about 6 per cent. each.

PLANNING — The general principle is the quadrangle with buildings around divided up into two U-shaped blocks, or three blocks, two of L-shape and one straight. The Warwick Grove scheme consists of one and a half such quadrangles, north and south of Warwick Grove with its splendid old trees. The quadrangle on the

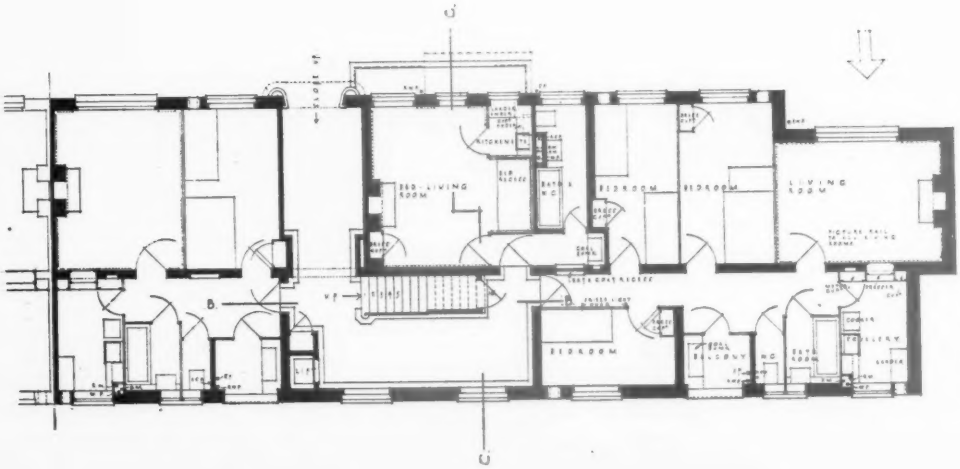
Top : Part of the Warwick Grove scheme ; Above : Looking into one of the quadrangles of the Springfield scheme. The two schemes provide 585 flats.



Left: Lay-out plan of Springfield. Three hundred flats are provided of from one to five rooms. Each quadrangle has a free-standing community hall in the centre, club room (with stage and dressing rooms) on the first floor, and a washhouse and drying room on the ground floor below.



Left: Lay-out of Warwick Grove. Here there are 285 flats of from one to five rooms. Above: The central courtyard at Springfield. In the centre is the community centre.



Left: Plan of typical flats. All bathrooms are separate from the kitchens. No living room has a northern aspect.

north is complete with three blocks; of the southerly one only the northern half has been built. The Springfield scheme is of two very elongated U blocks around a quadrangle of 580 by 130 feet. The Warwick Grove quadrangle is smaller: 275 by 155 feet. By keeping the open spaces in the centres on such a generous scale, the disadvantages of the quadrangle principle have been overcome.

Each quadrangle has a free-standing community hall in the centre, club room (with stage and dressing rooms) on the first floor, and a washhouse and drying room on the ground floor below. A sanctuary, 130—140 pram and cycle sheds, and railed-off playing grounds for children are also provided. The pram and cycle sheds are for the time being converted into shelters. Turfed gardens are to be laid out after the war. The individual flats are grouped three to a staircase, with a square or oblong entrance hall instead of the usual long and narrow passages. This adds considerably to the feeling of spaciousness which the architects were particularly anxious to create throughout the two schemes.

CONSTRUCTION AND EQUIPMENT—External walls are 14 in. thick, faced with sand-faced multi-coloured bricks in dutch bond. Central backbone wall of 9 in. construction for supporting floors and roof, with 9 in. walls enclosing staircases. Staircases of reinforced concrete, finished with grano and carborandum. Floors and flat roofs of hollow tile construction.

The plumbing and hot and cold water services have all pipes, branches, fittings, etc., of standardized sizes. All pipes, where practicable, are encased in ducts. All flats have bathrooms separate from the kitchens. Bathrooms are equipped with porcelain enamelled baths and basins. Living-rooms have tiled fireplaces of pleasant design; in the other rooms heating is by electric fires. The kitchens are all-electric; appliances can be hired from the Borough Council. The chief supply of hot water is from electric heaters, but gas for heating and cooking has been laid on as an alternative.

A hatch connects kitchen and living-room. All living-rooms have metal window boxes outside their windows. Wood coal bunks are provided on the balconies.

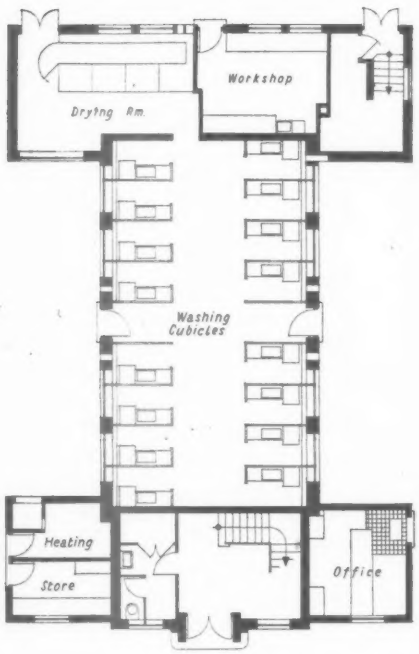
Windows are of wood: of the double-hung sash type to living rooms and bedrooms, of the casement type to kitchens, bathrooms

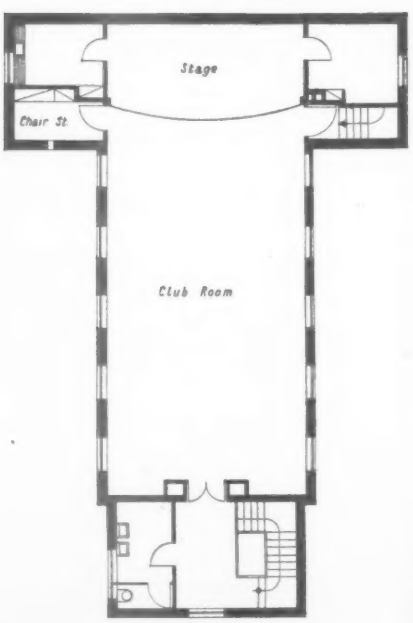
A view in a quadrangle at Springfield. External walls are 14 in. thick, faced with sand-faced multi-coloured bricks in dutch bond.

FLATS AT CLAPTON

BY MESSRS. JOSEPH

Left : Two of the washing cubicles, and a kitchen in one of the flats. Right : club room, and plans of the community hall. On the ground floor are the washing cubicles, drying room and workshop. On the first floor the club room with stage and dressing rooms.





and w.c.'s. In the community hall the windows are vertical pivot-hung. In the flats themselves, where windows are on their own (as in bathrooms) they are also vertically pivot-hung. None of the windows is of fixed lights. All can be opened.

Staircase walls to flats are tiled full height and electric service lifts are provided to each staircase. The floors are finished with a patent composition flooring to all flats, with quarry tile skirtings and cills to living-rooms, bedrooms and halls. Glazed screen and door is provided to the larger flats between balconies and halls for light and ventilation. Kitchens, bathrooms and w.c. walls are tiled to a height of 5 ft. and plastered above.

The club room has lino dado with painted plaster above, metal skirting and wood block flooring. The communal laundries are equipped with sixteen cubicles for each of the two schemes. Each cubicle has sink and draining board, mixing valve over sink and electric washing machine. Electrically operated drying tumblers and water softening plant are also provided. Walls and partitions are tiled full height. The use of washhouse and drying room is included in the rent.

For general contractors and sub-contractors see page xxvi.

FLATS AT CLAPTON

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

1197 *Planning for Leisure*

SPACE FOR LEISURE. *Broadsheet No.* 207. (*PEP, June*, 1943). Relation of space for leisure to town planning. Greyhound race tracks, swimming baths, playing fields, cinemas, meeting halls, churches, pubs, etc., dealt with. Needs and conditions in home or garden, on holidays, or in rural areas not considered.

The citizen needs not only a home but a genuine community in which to live. The community should be of such a size that it is possible for the ordinary person to be aware of its existence. The community should contain within it a certain minimum of public facilities, of which facilities for leisure, including adult education of every kind, are by no means the least.

Greyhound racetracks rely on a local population of at least 20,000 and professional football teams on about twice this number. Particular communities should be so related to a larger unit that they can share facilities of this kind, rather than contain them within their boundaries.

The more the uses of certain kinds of building —swimming baths, for example, can be converted into dance-halls in the winter and meeting rooms used as welfare centres in the afternoon—the smaller the unit of population which they can economically serve.

The Juvenile Organizations Committee of the Board of Education estimates that at present only one boy or youth in three and one girl or young woman in five wishes to play organized games. Assuming that better opportunities would induce others to take part, but that most players over fourteen are free to play only on Saturday or early closing day, the Committee arrives at a standard 2½ acres of playing fields for every 200 people between the ages of 14 and 25, or for every 1,000 people of all ages. An additional half an acre to meet the needs of games players over 25, chiefly for bowls or tennis, makes up the three acres set aside for games.

Swimming calls for both outdoor and indoor provision. It has been recommended that for every 20,000 people there should be one bath or pool. Present standards are much lower.

In 1938 there was one cinema to every 9,200 persons, but, with one or two special exceptions, no town under 20,000 has a theatre that depends only on the local population for its audiences. Rooms should be available in every district for hire by any organization wishing to hold meetings. Public houses usually have one or two such rooms and the community centre could also provide both small rooms and a hall.

Those planning for the needs of Church of England members in new urban areas envisage a church to seat a congregation of 450 to 600 in every parish of about 2,000 houses or population of about 7,000.

To-day there is one pub to every 550 persons. There are many more pubs in town centres and business areas than in residential districts. This is partly because there is greater demand in business districts, but partly also because the existing licensing system makes it difficult to obtain new licences and, consequently, to redistribute pubs in accordance with the shift of population from the centre to the outskirts of towns.

STRUCTURE

1198 *Consolidating Sub-foundations*

THE ARTIFICIAL CONSOLIDATION OF SUB-FOUNDATIONS. *R. R. Minikin.* (*Civil Engineering, June*, 1943, *pp.* 118 *to* 121). Mechanical and chemical methods of ground consolidation. German method of blasting by explosives in bog land.

One of the earliest methods of ground consolidation, the Compressol system, was used by Hennebique in 1911 in the construction of the foundations of the arched reinforced concrete Risorgimento bridge over the Tiber in Rome, which, with a span of 328 ft., was the largest reinforced concrete bridge at that time. It was useless to attempt to found on stable natural soil, and Hennebique proposed to compact the surface soil and erect the bridge on a surface crust.

A frame of similar shape to tha of a pile driving plant is used to manipulate a conical weight of about 2 tons. This weight is allowed to fall freely from a suitable height to secure a convenient perforation of the ground. Holes up to 35 ft. have been driven in this manner. When the hole has been driven to the required depth, another weight of about 2 tons but of the shape of a shrapnel is used to widen the perforation. The hole is then filled with plain or reinforced concrete, and each batch is consolidated in the hole by a dumper. The holes may be spaced at 3 diameters apart. On the Resorgimento bridge they were of 42 in. diameter, and spaced at the corners of rectangles 12 ft. by 10 ft. with an additional cone in the centres of the rectangles. The main function of these cones was rather to compact the surface soil than to act as bearing piles. It is claimed that in one instance ground which failed at 15 cwts. per sq. ft. was compacted by the Compressol system to take 3 tons per sq. ft. successfully.

A development of this method is the Lolat system. A precast conical block of concrete is placed in the hole and concrete poured in. The concrete is then subjected to blows from a freely falling ram causing it to penetrate aterally into the soil.

A very convenient outfit is the grouting plant which delivers a grouting liquid at the requisite pressure to any point which may require sealing against water access or impregnates soft ground in such a manner that the water in the voids of the soil particles is displaced by cement. This latter, when set, transforms soft soil into a raft of appreciable load bearing capacity.

The uses of pressure grouting are many: repairs of breakwaters, dock walls, bridge piers, dams, reservoirs, tunnel lining and underpinning in general. Perhaps one of the most noted of its applications is the consolidation of the sub-strata of the Leaning Tower of Pisa. Over 4,000 borings were made around the base of the tower, inside and outside, and about 1,000 tons of cement slurry injected into the strata.

The chemical processes used for the consolidation of soils are mostly patented methods. The main principle is either the chemical binding of the soil particles or the freezing of water-logged ground by a system of refrigeration pipes. The latter method is essentially designed to facilitate ground penetration, and the consolidation is only temporary. Hot water is circulated in the pipes to thaw the ground when the operations are completed. It is usually found that these processes are more expensive than the mechanical methods, but in certain cases they are almost indispensable.

To determine the correct proportions of chemicals to be injected, the ground must be closely examined for its physical and chemical characteristics, and the natural salt content must be accurately known. Chemical grouting will penetrate all the finer grained soils impermeable to cement grout.

A recent development is the electro-chemical process which consists of the deposition of insoluble aluminium salts between electrodes in the soil and the reduction of the moisture content. It is particularly applicable to clay soils, especially for the extension of the bearing capacity of piles.

Cement grouting and in situ piling may be combined.

A temporary form of ground stabilization is the ground water lowering process by wells.

During the construction of highways traversing bog land in Germany, a novel method of blasting by explosives was introduced. The line of a proposed road traversed a bog some twenty feet deep, and was some feet higher than the surface level of the bog. Over the line of the road and some feet wider than the road a sand embankment was tipped. This embankment displaced some of the underlying bog to the sides; it was built a few feet higher than required for the final road level. On the centre line of the road and through the embankment, holes were jetted to the firm ground some 20 feet below the original surface.

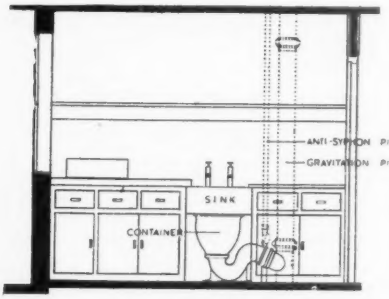
Near the toes of the embankment other holes were jetted, but stopped some 6 feet short of the firm ground. Into these holes explosive charges were placed, the heavier in the centre. The two outside charges at each section were first exploded to release the ground at the toes, and within a few seconds after, the centre charge was exploded. The explosions forced the poor soil away to the sides and the sand of the embankment fell into the craters on the firm ground. In effect, the bog was squeezed out laterally and replaced by sand over the width of the road.

SANITATION and Plumbing

1199 *Toilet Rooms in Factories*

MECHANICAL EQUIPMENT FOR FACTORIES. *Chester T. Row.* (*Architectural Record, February*, 1943). Location of toilet rooms, circulation arrangements, wartime materials.

A brief article without much detail. In large factories practice was to put toilet rooms at mezzanine level or in roof truss space. This is inconvenient when plant alterations are made, and all rooms are now located in basements. Men's and women's accommodation are adjacent with movable partitions to allow flexibility according to proportion of male and female staff at any time. A few very brief notes on wartime materials are included.



Scullery at Quarry Hill Flats, Leeds, showing sink and container of the Garchey system of refuse disposal. See No. 1200.

1200 Garchey System

GARCHEY SYSTEM OF REFUSE DISPOSAL. *R. A. H. Livett.* (*The Builder*, *May* 14, 1943.) Description and records of costs of automatic disposal of refuse from flats at Leeds.

The Garchey system of refuse disposal removes solids and liquids and conveys them hygienically from dwellings to a disposal station.

The scheme described was designed for 2,500 flats and is at present used for 938. All refuse and sink waste passes into a container via the scullery sink, is flushed down with water and discharged by gravitation into a collecting chamber. Surplus water from the collecting chamber passes direct to ordinary sewers, the refuse is transferred to a disposal station by suction after which it is collected in receiving tanks and passed through hydro-electric extractors where liquids and solids are separated, the liquids being discharged to a sewer and the solids being passed to an incinerator after being dried on sloping baffle plates. Heat from the incinerator helps to provide hot water for a laundry housed in the same building.

Capital costs are £25 to £30 per dwelling. Details of capital and running costs are given and it is stated that after allowing for adjustment of rates to allow for the saving of costs of normal methods of refuse disposal the nett increase on rentals is 1½d. to 1¾d. per week.

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.*

1201 Books on Housing & Planning

Q *A friend, who is a member of a rural district council, has asked me to get for him a book or books on Housing and Town and Country Planning—suitable to pass to the less enlightened members of his council and, of course, for his own information as well. What do you suggest ?*

A The Association for Planning and Regional Reconstruction has kindly submitted the enclosed list of books which it considers would be of interest to a layman. If any further books are required, we suggest you get in touch with the Association direct, 32, Gordon Square, London, W.C.1

Town Planning. Thomas Sharp. (Pelican ; 9d.)

Living in Cities. Ralph Tubbs. (Penguin : 1s.)

The Social Foundations of Post-War Building. Lewis Mumford. (Rebuilding Britain Series, No. 9, Faber & Faber Ltd. ; 1s. 6d.)

Our Towns. Elizabeth E. Halton. (Handbooks for Discussion Groups, No. 4, Association for Education in Citizenship—English Universities Press Ltd. ; 3d.)

Make Fruitful the Land. Sir George Stapledon. (The Democratic Order, Kegan Paul, Trench, Trubner & Co. Ltd. ; 1s.)

Britain Can Feed Herself. George P. Pollitt. (Macmillan & Co. Ltd. ; 3s. 6d.)

Fertility, Productivity and Classification of Land in Britain. L. Dudley Stamp. (Land Utilization Survey of Britain ; 3s.)

Britain's Town and Country Pattern. G. D. H. Cole. (Rebuilding Britain Series, No. 2, Faber & Faber Ltd. ; 2s. 6d.)

Town and Country To-morrow. Geoffrey Boumphrey. (Discussion Books, No. 74, Thomas Nelson & Sons Ltd. ; 2s. 6d.)

Rebuilding Britain. (Published in connection with the RIBA *Rebuilding Britain* Exhibition. Lund Humphries & Co. Ltd. ; 3s. 6d.)

Towards a New Britain. (Published as a handbook to the RIBA *Rebuilding Britain* Exhibition, Architectural Press ; 1s. 6d.)

When We Build Again. (A Bournville Village Trust Research Publication, George Allen & Unwin Ltd. ; 8s. 6d.)

Our Birmingham. (Published by Cadbury Bros. Ltd., Bournville, Birmingham ; 1s.)

Your Inheritance. (Published by The Architectural Press Ltd. ; 1s.)

Overture to Planning. F. J. Osborn. (Rebuilding Britain Series, No. 1, Faber & Faber Ltd. ; 1s.)

The Land and Planning. F. J. Osborn. (Rebuilding Britain Series, No. 7, Faber & Faber Ltd. ; 1s.)

The Changing Village. F. G. Thomas. (Discussion Books, No. 25, Thomas Nelson & Sons Ltd. ; 2s. 6d.)

Land and Plan. Professor E. G. R. Taylor. (Architect and Building News ; 7s. 6d.)

Report of the Royal Commission on the Distribution of the Industrial Population. (Barlow Report). (H.M. Stationery Office ; 5s. Cmd. 6153.)

Report of the Committee on Land Utilization in Rural Areas. Cmd. 6378. (Scott Report.) (H.M. Stationery Office ; 2s.)

Our Towns—A Close Up : A study made during 1939-1942. (Oxford University Press; 5s.)

1202 Books on Landscape Planning

Q *Some time ago in one of your* JOURNALS *you referred to the "Art of making landscape—a clear-cut English Tradition," and I should be glad if you could recommend any further literature, either pamphlets or text books on this subject, as I am rather interested in the uniting of landscape art with town planning practice.*

A The Institute of Landscape Gardeners has kindly submitted the following list of publications, and has suggested that you would probably find the first one of most interest :

The Culture of Cities. Lewis Mumford (Secker & Warburg).

The English Panorama. Thomas Sharp (J. M. Dent).

The Land Now and To-morrow, George Stapleton (Faber & Faber).

Town and Country Planning. Professor Abercrombie (Butterworth).

Town and Countryside. Thomas Sharp (Oxford University Press).

Town Planning. Thomas Sharp (Pelican).

Design of Residential Areas. Dr. Thomas Adams (Harvard University Press).

Town and Country To-morrow. Geoffrey Boumphrey (Nelson).

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.

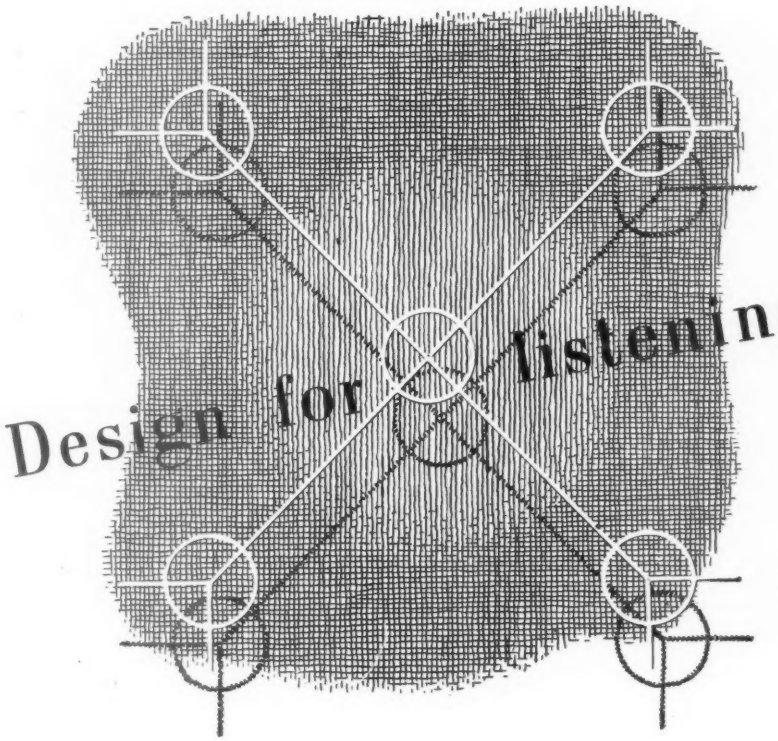
RIBA

ASB Lecture

May 15, at 66, Portland Place. Lecture in a series arranged by the Architectural Science Board of the RIBA on *Lighting: Application ; Natural Light* by P. V. Burnett. Chairman : Alister MacDonald, F.R.I.B.A. The preceding lecture by H. C. Weston on *Lighting : Analysis* was published last week. The lecture following on *Lighting : Application; Artificial Light* by R. Ackerley will be published in the next issue.

P. V. Burnett : Daylight within buildings has not received from architects anything like the same amount of study as other amenities necessary for health and comfort, such as heating and ventilation. But there is a proper quantity of daylight for any purpose, in just the same way as there is a proper quantity of artificial light and a proper quantity of heat, and the purpose of this paper is to explain what this proper quantity is, and simple methods by which architects can design their windows for its admission. This is not a subject for specialists ; the normal architect can do all that is necessary with a very little trouble.

The subject is not only important from the point of view of the health and comfort of the individual, but is also important nationally, because windows that do not permit the proper quantity of daylight to enter an interior to the point where it is required, mean that artificial light is used needlessly, fuel is wasted, and money is expended on power unnecessarily. Even if poor window design only means turning on the artificial light a quarter-of-an-hour earlier than would otherwise be necessary, that means a very large quantity



It might be a crystalline formation or a crochet pattern. As a matter of fact it's neither. Rediffusion engineers call it a Star Formation link.

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of fuel wasted in the whole year when millions of buildings are concerned.

During the last few years a number of important advances have been made in the technique of this subject, which remove it from the realm of the specialist into the sphere of any normal architectural draughtsman, and it is to these advances that I am confining myself mainly. But before we can get down to methods of deciding window sizes, we must first consider the general principles in outline.

THE SKY AS THE SOURCE OF DAYLIGHT

Daylight is, of course, derived initially from the sun, but the sun is not always visible, and in any case changes its position every hour and every day, so that it is usual for window design purposes to consider the sky as being evenly overcast, covered in light cloud, the sort of condition with which we are all too familiar, and which occurs for long periods in all seasons of the year. A method of this description is essential with anything as variable as the brightness of the sky, because we must provide for satisfactory windows under bad conditions. It is of no use knowing that the sun shone yesterday if one cannot see to-day; a reasonable standard sky-brightness must be the commencement, and that is why the evenly overcast sky is used for this purpose.

The whole sky, then, is our source of light, and appears to be a hemisphere in shape. Now the amount of useful daylight at any point within a room is in direct relation to the area of sky that can be seen from that point through the window. If this area of visible sky is reasonable then so will the daylight be, but if no sky is visible from a point in the room, then the daylight at that point is not sufficient for any normal purpose. The problem then consists of so designing windows that a sufficient area of sky is visible from the points in the room where daylight is required.

This area of sky visible through the window from a particular point is usually considered as a percentage of the whole sky which is termed daylight factor. The reason for using a percentage of the whole sky as the unit of measurement instead of the foot-candle value is that the brightness of the sky is continually changing according to the hour, season and weather, whilst the percentage daylight factor remains constant under all conditions. The percentage visible through a window is usually surprisingly small, and can be as low as one-fifth of one per cent. before becoming quite inadequate for normal purposes, but slightly higher percentages are required for any critical task, such as reading or writing.

THE FLOW OF DAYLIGHT THROUGH WINDOWS

If a pebble is thrown into a pond we all know that concentric waves are formed which move outwards from the centre, and the further out these waves move the weaker they become. Similarly with daylight, more or less concentric waves or contours flow out into a room from the window, and each contour is of different intensity according to its distance from the window, and these contours are the method by which daylight penetration is illustrated on plans, the surface equivalent to the surface of the pond being table level, about 2 ft. 9 in. above floor level.

INTENSITIES

Every task we perform with the help of our eyes has an appropriate quantity of light for its comfortable and convenient performance; and if this quantity of light is not present we cannot see properly to do the job. We may be able to see for a short period, or by straining our eyes, but we could not see comfortably for any appreciable time unless the right quantity of light is there. This proper quantity is the intensity of daylight required, and until recent times our knowledge was very limited indeed, being almost confined to the fact that anything less than 0.2 per cent. daylight factor was not enough. But during the last few years a great deal of study has been given to intensities, and large-scale surveys of actual buildings, questionnaires designed to find out what normal people find satisfactory, and careful observation of the daylight at the moment when artificial light is turned on, have given us much information with which to build up upon the sound foundations laid by early workers in this field.

Starting from the standard of inadequacy that I have mentioned, 0.2 per cent. daylight factor, and which was arrived at after long experiment and observation, it has been found that that intensity is not sufficient for the normal tasks performed in a living room, such as reading, writing and sewing. A daylight factor of 1 per cent. is thought to be more satisfactory, and there is evidence from occupiers of dwellings in support.

For kitchens it has been found that something rather more is required. The tasks involving judgment of subtle colour differences, texture and cleanliness which are performed at the cooker, the work table and the sink all require good daylight, and the minimum that has been found to be satisfactory is 2 per cent. daylight factor.

In bedrooms a lower intensity is usually satisfactory, but here again something slightly more than the standard of inadequacy is really required, and 0.5 per cent. daylight factor is recommended.

AREA FACTORS

But even when we have decided upon the intensity that we require we have not solved the whole problem because we must then decide how much of the room concerned should receive not less than the proper intensity. Should it be the whole room or half the room or any other fraction? This is a matter for the judgment of the designer, and there are two factors to be considered. First, we have to remember that unless there is a reasonable intensity over a large part of a room it will appear gloomy; and, secondly, the functions performed in a room require definite areas, irrespective of the proportion of the whole room that they may be. For instance, sitting in an armchair reading a book requires about 6 sq. ft., whether that be one-tenth or one-fiftieth of the whole room. So it is necessary to decide upon a definite minimum area of space lighted to the proper intensity, and this area is termed the area factor. The planner must decide his area factor bearing in mind these two points: it must be enough to cover the space where normal functions will be performed, and it must be enough to cover a substantial proportion of the whole room. In normal living rooms an area factor of less than 100 sq. ft. is seldom enough to cover table, sofa and armchairs round the fireplace, etc. In kitchens it is seldom possible to plan for cooker, sink and work table to be included within a smaller area than 50 sq. ft. and in bedrooms at least half the room should be included in the area factor.

PENETRATION

Also, the shape of the area is important. A wide low window will light an area that is wide but of moderate depth, whilst a tall narrow window will light a space that is less wide but deep. For that reason windows of Queen Anne or early Georgian proportions are good, whilst modern windows that are wide and low very often provide bad daylight conditions. For depth of penetration the window head must be kept high; this is a fundamental rule of window design, and many architects have found that out from their own experience.

Another reason for high window heads is that unless the angle of light to a point within a room is fairly high the rays of light become so nearly horizontal that any article flat on a table, such as a book, cannot be seen with comfort no matter what the intensity may be. The book would have to be tilted so as to be almost at right angles to the rays of light before it would be really comfortable to read. I doubt very much whether an angle of anything less than 30 degrees from reference point to window head is satisfactory, but this point is being studied now at the NPL.

METHODS OF WINDOW DESIGN

There are a number of methods by which windows can be designed for efficiency of daylighting. None of these methods is either difficult or complicated once the principles are understood, but some involve more work than others, and I propose to refer to them in the chronological order of their development, which will demonstrate the increasing simplification of the problem, until it has now reached a stage where it is so simple that in most cases the selection of the proper window is little more complicated than the selection of the proper size of wooden joist for a floor.

THE WALDRAM METHOD

The first method was designed by that pioneer of daylight research, Mr. P. J. Waldram, and his son, Mr. J. M. Waldram, and is explained in detail in *Technical Paper No.* 7 of the DSIR, which was published in 1927, and which is available at the Stationery Office. A more detailed explanation was given in the *RIBA Journal No.* 32, 1925, and is available in the library. The method consists of representing a quarter-sphere of sky by means of a simple graph of known area, which is divided horizontally into angles of bearing, and vertically into angles of altitude, upon which can be plotted the outlines of the window from any particular reference point within the room, the area within the window outlines being compared with the total area of the whole graph.

If the graph is made, for convenience, 20 in. by 10 in., or 200 sq. in., then each square inch represents 0.25 per cent. daylight factor, or 4 sq. in. equals 1 per cent. daylight factor. In this way the lighting value of a window can be tested simply and fairly quickly, from any pre-selected point within a room. If, for instance, a 10 ft. penetration is required for a certain intensity, the 10 ft. point can be the reference point used, and with a few trials the dimensions of the window required can be found. This method has the great advantage over other methods of enabling external obstructions of any shape to be given full consideration, by plotting them on the graph also.

PROTRACTORS

The second method consists of the use of special daylight factor protractors, first published in the *Wartime Building Bulletin No.* 1 in 1940, developed in an article by Mr. P. J. Waldram appearing in *The Builder*, August 2, 1940, and which are explained in detail in a paper prepared in 1940 by Mr. A. F. Dufton, of the BRS, which I have seen but which has not yet been published owing to the war. The protractors are obtainable on application to the BRS. The method consists first of a celluloid protractor with which can be read off the daylight factor value of any height of window opening on section, for openings of infinite length; and, secondly, another protractor for use on plans giving the correction factor for reducing the width of the opening from infinite length down to whatever length may be required by the designer. For the correction factor, it is necessary to measure on section the altitude of the horizontal centre of the window, and apply it to the altitude scale on the protractor; this point is not very clear from the BRS explanation. With a little practice this method is quick and simple to use and reasonably accurate where there are no complicated external obstructions.

THE WINDOW SCALE

The third method is a window scale evolved by Mr. A. F. Dufton, of the BRS, and which is illustrated in *Transactions of the Illuminating Engineering Society*, dated March, 1943. The principle of the method is similar to the BRS protractors, but instead of applying to hypothetical windows of infinite length and then reducing, this method gives readings of daylight factor per foot width of window. All that is necessary is to lay the scale along the table plane of a

section drawn to ½ in. scale, with the arrow at the reference point, regard the edge of the scale as the hypoteneuse of a right-angled triangle, and by means of a set square take the reading on a line at right angles to the line joining the reference point with the glass line at the cill. Then mark off on the scale the daylight factor value per foot width required, and with a set square find the point on the glass line giving a right angle at the head. It is very simple to use, and of reasonable accuracy for windows of normal widths, where there are no complicated external obstructions.

ALIGNMENT CHART

The fourth method, evolved by Dr. J. W. T. Walsh, of the NPL, and not, I believe, published previously, consists of an alignment chart, for ascertaining the daylight factor per foot width of window also. Upon the chart are the heights of window head, distance of reference point from window, and daylight factors per foot width of window, and all that is necessary is to lay a straight edge across the chart connecting any two of these factors to find the third, so that the designer only has to decide the daylight factor per foot width of window and the depth of penetration that he requires to find the height of window head required immediately. The method is extremely simple and sufficiently accurate for normal purposes for low values of daylight factor, but refers only to unobstructed windows.

FORMULA

The fifth method is in the form of a mathematical formula, evolved by Mr. T. Smith, of the NPL.

$$A = K \frac{\pi f R^3}{H}$$

where A is the glazed area of the window, H is the height of its centre above working plane, R is the distance of the top of the window from the point on the working plane where the daylight factor is f. The factor K is to make an allowance for loss of light passing through the glass and for dirt on the surfaces, and I suggest that 1.15 would be a suitable figure to take. This formula gives results rather more accurate than the window scale, protractors or alignment chart, and it is now being used extensively at the NPL. It can be applied to even obstructions but not complicated ones.

RATIOS

The sixth and last method of calculation to which I will refer relates to unobstructed windows only. In these cases it has been found that there is a definite relationship between the area of the window and the area of the space on the horizontal plane (or area factor) that the window will light to a given standard, whatever the shape of the window, provided that the cill is at the same level as the working plane. These relationships can be expressed as ratios. They are extremely simple to use, and it is only necessary to multiply the area factor required by the ratio for the standard selected to arrive at once at the area of the window necessary, whatever the shape.

It should be noted that this method differs from all the others because it gives the area of the lighted space, and not the value at a point, which leads to the next and final stage, which is an attempt to do without any form of calculation at all.

TABLES

This final stage arose when it was realized that if the dimensions of the window are fixed, as with a standard metal window, it is an easy matter to work out the sort of lighting conditions that will be provided under all normal conditions of obstructions, and tabulate them. So that any list of standard windows, such as BSS, could be accompanied by tables showing the lighting performance of each type under varying conditions of obstruction, and then all the designer would have to do would be to select the type of window required to give whatever conditions he may want within the room. And it is not necessary to confine this principle to standard windows, because just the same thing could be done with window openings of any size, and in fact it is being done now at the NPL, and tables are in course of preparation for window openings of all normal sizes under any even extent of obstruction. These tables will, I hope, be published this year, and I think they will justify my claim that in normal cases the selection of the right window size for the extent of daylight illumination required will be no more difficult than the selection of the right scantlings for a wood joist for a floor.

THE FUTURE

If we peer into the future for a moment, to the time when town planning has been applied everywhere, so that widths of streets and heights of buildings are standardized by zones, and so external obstructions to daylight have definite limits, it will then be possible to specify window dimensions according to the function of the room and the zone in which it is situated. We have not reached that stage yet by a long way, but we are sufficiently far forward to see the possibility.

OBSTRUCTIONS

But to return to the present time, buildings on the opposite side of the road, trees or hills, define the skyline over which is the area of sky which we have to consider, and these obstructions are largely uncontrolled at present. For the purpose of designing windows, however, they can often be averaged. The principle is to strike an average line in a position where the solids above are more or less equal to the voids below, and provided that there are no very great variations in skyline this method of averaging will produce fair results. A line on section from the average line to the reference point will cut the glass line, and at this point becomes equivalent to a high cill, and can be treated in this manner for the methods of calculation that I have explained. The area of window below this high cill has little or no value for lighting, but it has, of course, a high value for view out of the room, which is very important for a comfort condition.

CONTOURS

There is a method of plotting contours by any of the methods of calculating daylight factor at a point. A grille is drawn on the plan of the room, usually in 3 ft. squares, and the value calculated at each intersection. Then by means of a graph the position of any value of daylight factor can be found, transferred to the plan, and the points joined up to form the contour.

THERMAL INSULATION

In a normal room something like 25 per cent. of the heat lost is through the window, so that it is important to see that the window is no larger than necessary to provide proper lighting conditions. It is often said that window areas found by design methods must necessarily be very large, with consequent large heat losses, but actually this is not a fact at all. To demonstrate the point I have selected a plan that most of us have seen, the agricultural cottages to be built by the Government, the plans of which have been illustrated in the technical press, and I have analysed the lighting conditions for the main rooms upon the assumption that there is only a very low even obstruction outside.

In the parlour, the window on the published plan is 4 ft. 10½ in. wide and 4 ft. high, having an area of opening of 19.5 sq. ft. It will be seen that the window 3 ft. 3½ in. wide and 5 ft. high gives nearly the same amount of daylight, but has an area of 16.3 sq. ft., or approximately 16 per cent. less glass, so that by the design method there would actually be less loss of heat through glass than through the window selected but not designed.

The same considerations apply to the living room, where windows selected give a total opening area of 45.7 sq. ft. whilst windows designed to give satisfactory lighting have a total area of 40.65 sq. ft., and a saving of 11 per cent. of glass.

These examples show that there is no truth in the criticism that design methods must mean huge windows and heat losses; in actual fact windows designed for efficiency can often be smaller, involving less heat loss than those guessed or selected for elevational reasons only.

These plans also show what happens when three bedrooms of quite different sizes are all lighted by the same size window. Bedroom 1, where the window is put to one side to give a balanced elevation, would be poorly lighted and gloomy, in spite of being in the open country.

The lesson to be learnt is that there is a right size of window for a room, and a proper position for it; guesswork often ruins the room.

AESTHETICS

It is sometimes said that an architect is an artist, and must be free to design any shape or type of window that his elevation needs. Whilst I have every sympathy with that view, architecture is a science as well as an art, and an architect has a duty to the public to apply the latest scientific knowledge to his buildings. An architect has no more right to design a beautiful building that is inefficient and gloomy within than he has to design a well-lighted building that is hideous; there must be a compromise between the two requirements arising from an equal knowledge of both.

I am not prepared to believe that architects are unable to design an æsthetically satisfactory building that is also scientifically efficient, and I consider that some of the criticisms that have been made of our profession in recent times have arisen because we have been too inclined to give preference to æsthetics over the scientific needs of our time. We live in a scientific age, and if architects are not prepared to learn and keep abreast of modern thought, we shall be left behind to watch others design the buildings that the public demand. And in no field is it more necessary to fight our habitual lethargy than in natural light, for which the public have shown unmistakable evidence of their desire and insistence.

CONCLUSION

In conclusion I would mention that the report of the PWB Lighting Committee of the DSIR, which should be published by the end of this year, will give much more detailed information about the subject to which I have referred.

During discussion Mr. Peckham, referring to three bedrooms with windows of the same size, said he assumed that if the window in the large room had been put round the external corner, half on one wall and half on the other, it would not have the same value.

Mr. Burnett said the type of window which looked partly on the front and partly into one's neighbour's garden (much to his annoyance) would act in much the same way as if there was a 45° splay across the corner, with the same window in it, but not quite so well.

The Chairman remarked that apparently the modern idea of splitting a window on the corner was even more inefficient than he had thought.

Mr. Burnett said he did not think it was ever done for efficiency; it was like the other modern idea of the long, low window with a hood over it, which was almost the worst possible type of window for lighting.

Mr. Humphreys asked whether, in designing windows, some consideration should be given to the question of sun angles. Different rooms were occupied at different times of the day, and bedrooms, for example, were usually made to face east. It might be an advantage to place the window in such a way that the sunlight was more general throughout the room, even though that might mean that the window was not in the ideal position from the

daylight factor point of view.

Mr. Burnett did not agree, and pointed out for how short a time the sun shone in this country, taken over the whole year. For the south of England, even in the summer the ratio of actual to possible sunlight was only in the region of 0.44, so that if one designed a window through which 10 hours of possible sunlight might come in the summer, actually one would get only 4½ hours, and that at a time when there were 16 or 17 hours of daylight. In the worst conditions, in the winter, the expected was only 0.18 of the possible. It was not worth making any substantial variations in the position of windows in the expectation of getting more sunlight.

A member referred to the generally held view that windows led to very large heating losses, and pointed out that the infra-red radiation which came through them and the fuel economy due to the daylight which they admitted had also to be taken into account. If those three factors could be worked out, he suggested, they would throw a new light on the whole question of fuel economy in relation to the size, shape and location of windows.

Mr. Burnett agreed, and mentioned that an interesting investigation had been going on at the National Physical Laboratory to show what was the smallest size of window which would give a definite, fixed quantity of daylight in a room, and some very remarkable conclusions had been reached. For instance, they showed that if one wanted a 2 per cent. daylight factor at a point 8 ft. back from the window—a quite normal requirement—it could be done by means of a window 8 ft. high and 4 ft. wide (32 sq. ft.) or by a window 6 ft. high and 6 ft. wide (36 sq. ft.), but with a window 4 ft. high it would require a width of 16 ft. (64 sq. ft.). It was obvious that there was a right proportion for a right standard of light, and if that right proportion was not used one would have windows which were much larger than they need be and so lose a great deal of heat from the room. That would, he hoped, be regarded as a matter of national importance from the point of view of the conservation of fuel, which would be so important in future.

BUILDINGS ILLUSTRATED

FLATS AT CLAPTON, LONDON. Architects: Messrs. Joseph (pages 111-114). General contractors: Warwick Grove, Ford & Walton, Ltd.: Springfield, John Laing & Sons, Ltd. Principal sub-contractors: J. Ashton & Sons, demolition work at Warwick Grove; H. J. Moyes, demolition work at Springfield; Flooring Contracts (London) Ltd., concrete floors, roofs, staircases, and surface shelters; Air-guard Ltd., trench shelters; Plastering Ltd., non-slip aggregates and plasterwork at Warwick Grove; Pollock Brothers, non-slip aggregates and plasterwork at Springfield; Erith & Co., Ltd., brickwork (plinths); Marston Brick Co., Ltd., brickwork generally; London Brick Co., Ltd., Flettons; F. C. Flack, brickwork; Permanite Ltd., damp-proofing; F. Bradford & Co., Ltd., artificial stonework at Warwick Grove; Emerson & Norris, Ltd., artificial stonework at Springfield; Carter & Co., Ltd., terrazzo and faience; Everseal Products, Ltd., roofing; Rippers, Ltd., joinery; Martin Bachtold, special windows; Nettlefold & Sons, Ltd., door and window furniture and plastics; John Bolding & Sons, Ltd., sanitary fittings at Warwick Grove; W. N. Froy & Sons, Ltd., sanitary fittings at Springfield; Hupex Taps, Ltd., special fittings; Kay & Co., Ltd., anti-siphonage traps; Permutit, Ltd., water-softening plant; T. W. Palmer & Co., Ltd., gates and railings, and stair balustrades; Holliday, Hall & Stimson, Ltd., electrical installation (flats); H. V. Stone, Ltd., electrical installation (club-room and laundry); Hammond & Champness Ltd., service lifts; J. Jeffreys & Co., Ltd., air conditioning (club-room and laundry) and thermostats; Ford & Walton Ltd., painting and decorating at Warwick Grove; C. & T. Painters Ltd., painting and decorating at Springfield; International Paint & Compositions Ltd., paint; Lewis Berger & Sons, Ltd., stain and varnish; H. W. Butler (Furnishings) Ltd., club-room furniture (chairs and tables); Pelham (Materials), Ltd., curtains; Gas Light & Coke Co., Ltd., cooking—gas (in flats); Hackney Borough Council, Electricity Department, cooking—electric (in flats); T. M. Gardiner Ltd., playground equipment; W. B. Simpson & Sons, Ltd., wall tiling to laundry and staircases; Avis Engineering Co., Ltd., tile fireplace surrounds, interiors, etc.; J. Gardner & Co., Ltd., flower boxes; Haskins Ltd., sub-station steel shutters; General Constructional & Engineering Co., Ltd., steel doors; G. Brady & Co., Ltd., wood rolling shutters to dust bins; Lister Bros., drying tumblers (laundry); Marbolith Flooring Co., Ltd., floor finish in flats; Bennetts Wood Flooring Co., Ltd., floor finish in club-room; Hotpoint Electric Appliance Co., Ltd., washing machines; Heatrae Ltd., hot-water equipment to laundry, and E.L. hot-water heaters to flats; F. H. Wheeler Ltd., metal picture rails; and Grassphalte Ltd., hard tennis court at Springfield.

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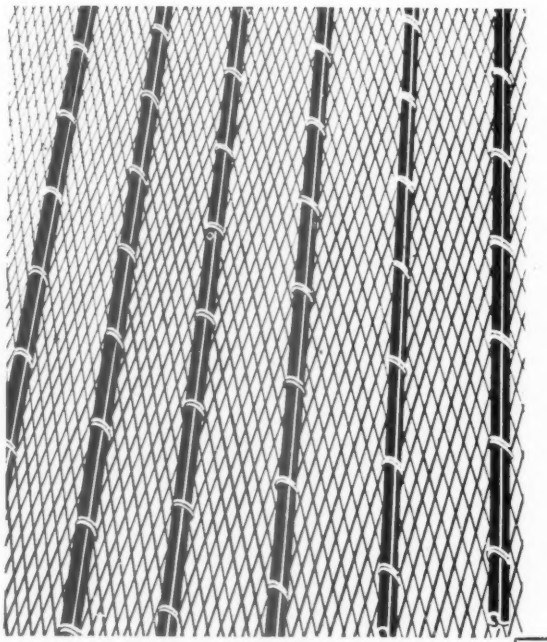
CORRECTION

Mr. Towndrow in Astragal's note on the BINC Congress in the issue for July 29 should have read Mr. Townroe.

The suffix A.R.I.B.A. after Mr. Hilton Wright's name at the head of the letters column of Aug. 5 should not have been added.



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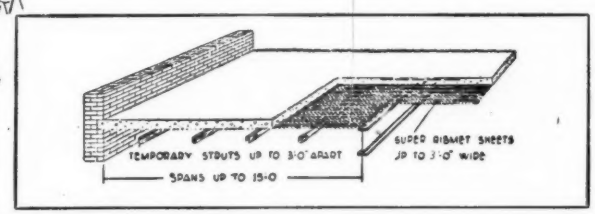

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KENT COUNTY COUNCIL.

Applications are invited for the temporary post of SURVEYING ASSISTANT in the Buildings Department. Inclusive salary about £570 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

MANCHESTER AND DISTRICT REGIONAL PLANNING COMMITTEE.

APPOINTMENT OF TECHNICAL ASSISTANTS.

Applications are invited for the following posts in the Regional Planning Department:—

(1) Senior Technical Assistant	£550	per annum.
(2) Two Technical Assistants	£450	,,
(3) Technical Assistant ...	£400	,,
(4) Technical Assistant ...	£300	,,

Applicants for Post (1) should have had considerable practical experience in Planning, especially in relation to Road Layout and Design. Preference will be given to applicants holding an Engineering qualification and who have had administrative experience.

Applicants for Posts (2) should have had a good practical experience in planning, and for one of the posts preference will be given to applicants who have had considerable surveying experience.

Applicants for Posts (3) and (4) should have had good general planning experience.

Preference will be given in all cases to applicants holding a planning qualification.

Applications, duly endorsed for the respective posts, should state in the following order (*a*) name, (*b*) address, (*c*) age, (*d*) qualifications by examination, (*e*) present appointment, (*f*) previous positions held, (*g*) result of Medical Examination for Military Service if this has taken place, and (*h*) particulars of experience, and accompanied by copies of three recent testimonials, must be delivered to the undersigned not later than Saturday, August 21, 1943.

R. H. ADCOCK,
Hon. Clerk to the Committee.

Town Hall,
Manchester, 2. 983

CITY OF PORTSMOUTH

CITY ARCHITECT'S DEPARTMENT—RE-PLANNING STAFF.

Applications are invited for the post of temporary Technical Assistant at a commencing salary of £330 per annum, rising by annual increments of £15 to a maximum of £375, but the first of such increments will not become payable until April 1, 1945, with subsequent increments payable on April 1 in each succeeding year.

Applicants with architectural qualifications are preferred, with a good experience of Town Planning and of the procedure under the Town and Country Planning Acts.

The person appointed will be required to pay the appropriate contributions to the Corporation's Superannuation Fund, under the Local Government Superannuation Act, 1937.

The appointment is subject to one calendar month's notice on either side, and the person appointed will be required to pass the Corporation's Medical Examination as to fitness.

Applications, suitably endorsed, and accompanied by three recent testimonials, should be sent to the undersigned not later than 10 a.m. on Wednesday, September 1, 1943.

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

FREDERICK SPARKS,
Town Clerk.

Royal Beach Hotel,
Southsea.
August 5, 1943. 934

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.

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.

Architectural Appointments Wanted

ARCHITECTURAL ASSISTANT, seven years' experience, age 25 years, exempt military service, seeks position in architects or similar office. Experienced in design and construction, surveying, levelling and estimating. Studying for forthcoming Inter. R.I.B.A. examination. Good references. Box 124.

ARCHITECTURAL ASSISTANT, age 19, desires post in architect's office, preferably in Birmingham or Shrewsbury areas. Competent draughtsman, able to make surveys, use level, theodolite, etc.; sound knowledge of building construction; over 2½ years as builder's draughtsman; studying for Studentship R.I.B.A. Not liable for military service. Prefer essential work. Available from July 26. Present salary £5 15s. per week. Box 126.

Classified Advertisements continued on page xxxii

CHARTERED BUILDING SURVEYOR, 27, exempt Forces, requires situation in Birmingham; wide experience, including architectural work and quantities. Box 125.

ARCHITECTURAL AND SURVEYING ASSISTANT requires position on work of National importance; 6 years' experience industrial and domestic design; willing to go anywhere, if has post-war possibilities; salary by arrangement. Box 127.

LADY seeks position as Junior Architectural Assistant in Reading. Box 128.

ENGINEERING AND ARCHITECTURAL ASSISTANT. Expeditious and efficient detail draughting. Accurate engineering, calculations and quantities. Thorough site supervision. Medically exempt. Age 28. Office if required, but travel no object. Farrant, 366, Chelsea Cloisters, Sloane Avenue, S.W.3. Kensington 2525. 129

SURVEYOR, PROPERTY MANAGER, etc., requires appointment; 25 years' theoretical and practical experience in the profession and building trade. Not liable for military service; rendered war service 1914-18 first great war. Energetic, alert and conscientious; supervision all branches of the building, allied and specialists trades; all classes of buildings, etc., and also war damaged properties, etc. Excellent testimonials. Please apply Box 130.

ASSISTANT ARCHITECT (registration pending), having just completed a five years' diploma course at the Regent Street Polytechnic School of Architecture, requires position in architect's office. Would prefer post-war reconstruction work with local government. Not liable for military service. Salary by arrangement. Meller, 35, Clifton Gardens, W.9. 134

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.

ASSISTANT (22 years), six years domestic and industrial experience, studying for final R.I.B.A., seeks progressive position with room for initiative. Exempt military service. Evans, 91, Alexandra Road, S.W.19. 143

Other Appointments Vacant

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

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

Miscellaneous

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

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

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

WANTED to purchase. The Library of Planned Information, Vols. 1—IV. Box 76.

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

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

WANTED TO PURCHASE. A copy of *Specification,* 1933. Box 123.

Competitions

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

SCOTTISH NATIONAL HOUSING AND TOWN PLANNING COUNCIL.

SIR WILLIAM E. WHYTE PRIZE FUND.

The Council invite competitive efforts for the replanning of an existing town or village of approximately 5,000 inhabitants with a view to the creation of a model self-contained community. The Competition is confined to men and women (of not more than 35 years of age) of British nationality normally resident in Scotland. They will be allowed to choose which Scottish town they propose to replan.

Prizes of twenty guineas, ten guineas and five guineas will be awarded as First, Second and Third Prizes respectively.

Sketch plans with appropriate letterpress must be lodged with the subscriber not later than 31st October, 1943, in the case of civilians, and not later than 31st December, 1943, in the case of men and women serving in H.M. Forces, and copies of the Conditions of the Competition may be obtained from him.

NORMAN J. CAMPBELL, S.S.C.,
Honorary Secretary and Treasurer.
11, Drumsheugh Gardens,
Edinburgh 3.
26th June, 1943. 910

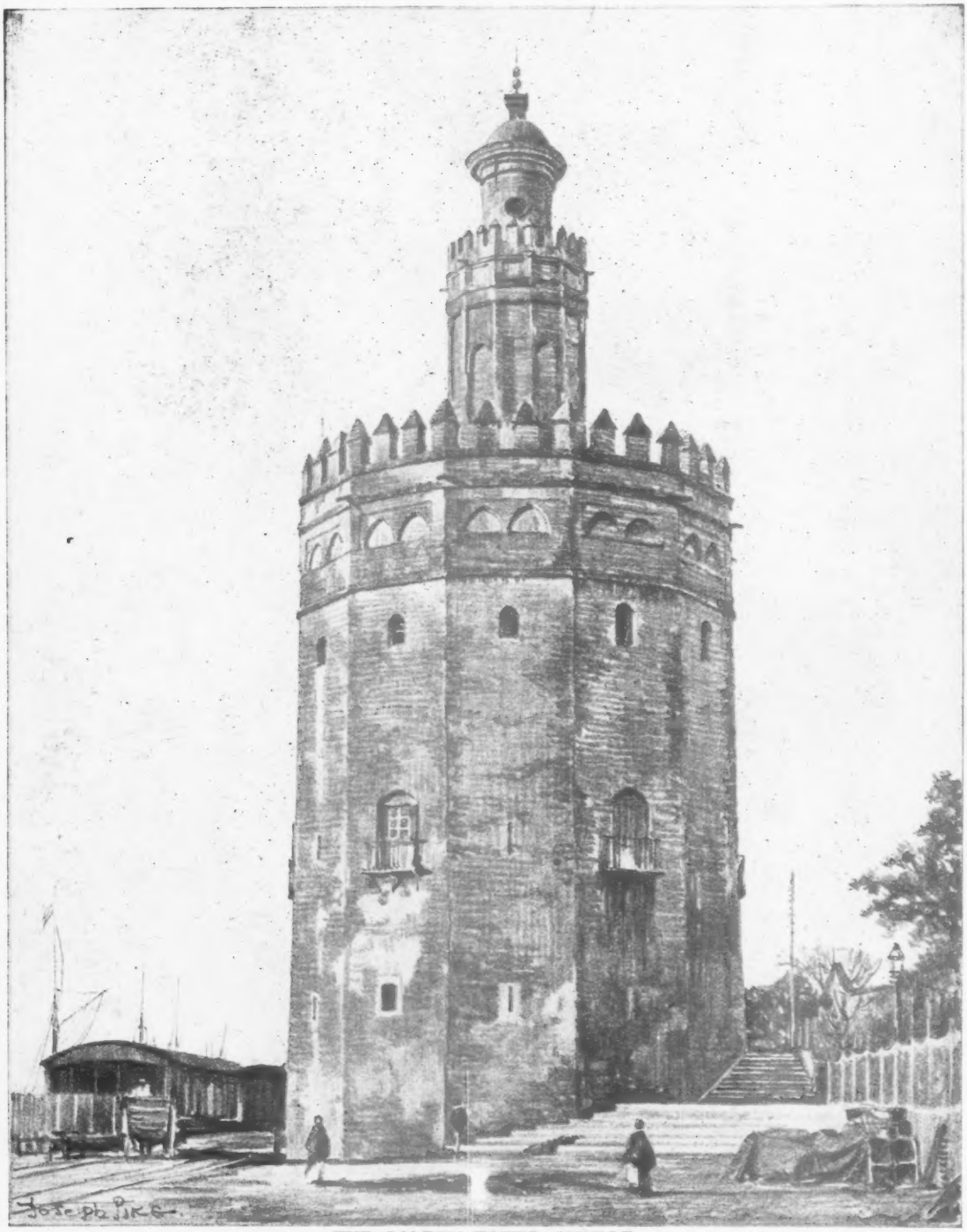
Educational Announcements

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

R.I.B.A. QUALIFYING EXAMINATIONS
Mr. C. W. Box, F.R.I.B.A., M.R.San.I.

Courses by Correspondence and Personal in Studio.
115, Gower St., London, W.C.1.
Telephone: Euston 3305 and 3906.

R.I.B.A. AND T.P. INST. EXAMS. Private Courses of tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, St. Catherine's College, Cambridge. 231



THE GOLDEN TOWER, SEVILLE.

The tower formed part of the fortress of the Mussulman Castle and was built in 1220 by the governor of Seville, Cid-Abu-el-Ola. It was called "Golden," because of a covering of tiles which it had over the second or upper part which produced the effect of the gleam of that metal. It was built by the Moors with the intention of preventing the passage of ships up the river, and with this object thick iron chains were slung across every night which were fastened to another tower on the opposite bank. It is dodecagon in plan and consists of three sections, the topmost one of which is crowned by a lantern and dome of much later date. To-day it is the headquarters of the port-captain.

Printed in Great Britain for the Proprietors of "THE ARCHITECTS' JOURNAL" (The Architectural Press, Ltd.) War Address: 45 The Avenue, Cheam, Surrey by KNAPP, DREWETT & SONS LTD. Kingston-on-Thames and London.