THE ARCHITECTS' JOURNAL

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

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THE ARCHITECTURAL PRESS
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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 5721
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. Shobnall Road, Burton-on-Trent.	Burton-on-Trent 3350
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	British Steelwork Association. 11, Tothill Street, S.W.1.	Whitehall 5073
BSI.	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
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.	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 2415
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
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FMB	Federation of Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
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
HPS	Housing Production Society. 1, Old Burlington Street, W.1.	Regent 3380
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, W.C.2.	Temple Bar 7676
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
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
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767
MARS	Modern Architectural Research. 46, Sheffield Terrace, W.8.	Park 7678
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Belgrave Square, S.W.1.	Sloane 4522
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's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	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.	Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94, Petty France, S.W.1.	Abbey 1010
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
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 2881/2/3
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
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
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
SFMA	School Furniture Manufacturers' Association. 13, New Square, Lincoln's Inn, W.C.	Chancery 5313
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6147
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815

A small income . . .
but a large refrigerator!

In a happier, healthier, post-war Britain every housewife will be "cold-store-minded" and it is to be hoped that even the most modest home will possess a refrigerator to safeguard the precious vitamins, etc., in perishable foods.

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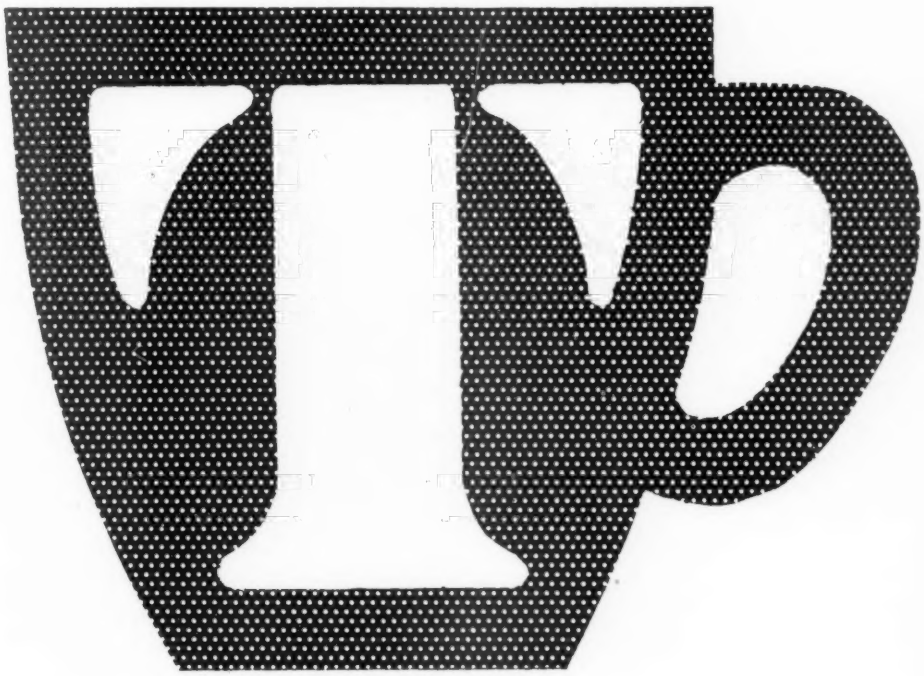

TO ARCHITECTS and others concerned with the rebuilding of Britain:

Whether they are designing community centres, shops, factories, office buildings, holiday camps, railway stations, schools or health centres, they can be certain that sooner or later those using their buildings will be 'dying for a cup of tea'.

The Empire Tea Bureau welcomes discussion with architects on all problems to do with tea drinking. Its files, plans, specifications are freely at their disposal.

The Empire Tea Bureau is a service organisation set up by all Empire tea growers to ensure that good tea is available to all. The Bureau is concerned solely with encouraging those who desire to make or drink the National Beverage in ideal conditions.

The Empire Tea Bureau has carried out very wide research and experiments during the war. Large factory canteens have been run, new and better equipment designed. Facts, figures, blue prints, findings both financial and technical, are at the architect's disposal in the public interest.

tea

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REGENT HOUSE
KINGSWAY LONDON WC2
CHANCERY 6601

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Q	A
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What is Sundeala medium Hardboard?	A homogeneous fibre building board formed under pressure. The War Emergency British Standard requires a weight of not less than 30lb. per cubic foot and not more than 48lb. per cubic foot. Made principally from wood cellulose fibre, SUNDEALA is, in fact, a manufactured sheet of wood, free from knots and grain. Its perfectly smooth surface permits of any decorative treatment. This famous medium hardboard is completely waterproofed to give greater permanence and durability.
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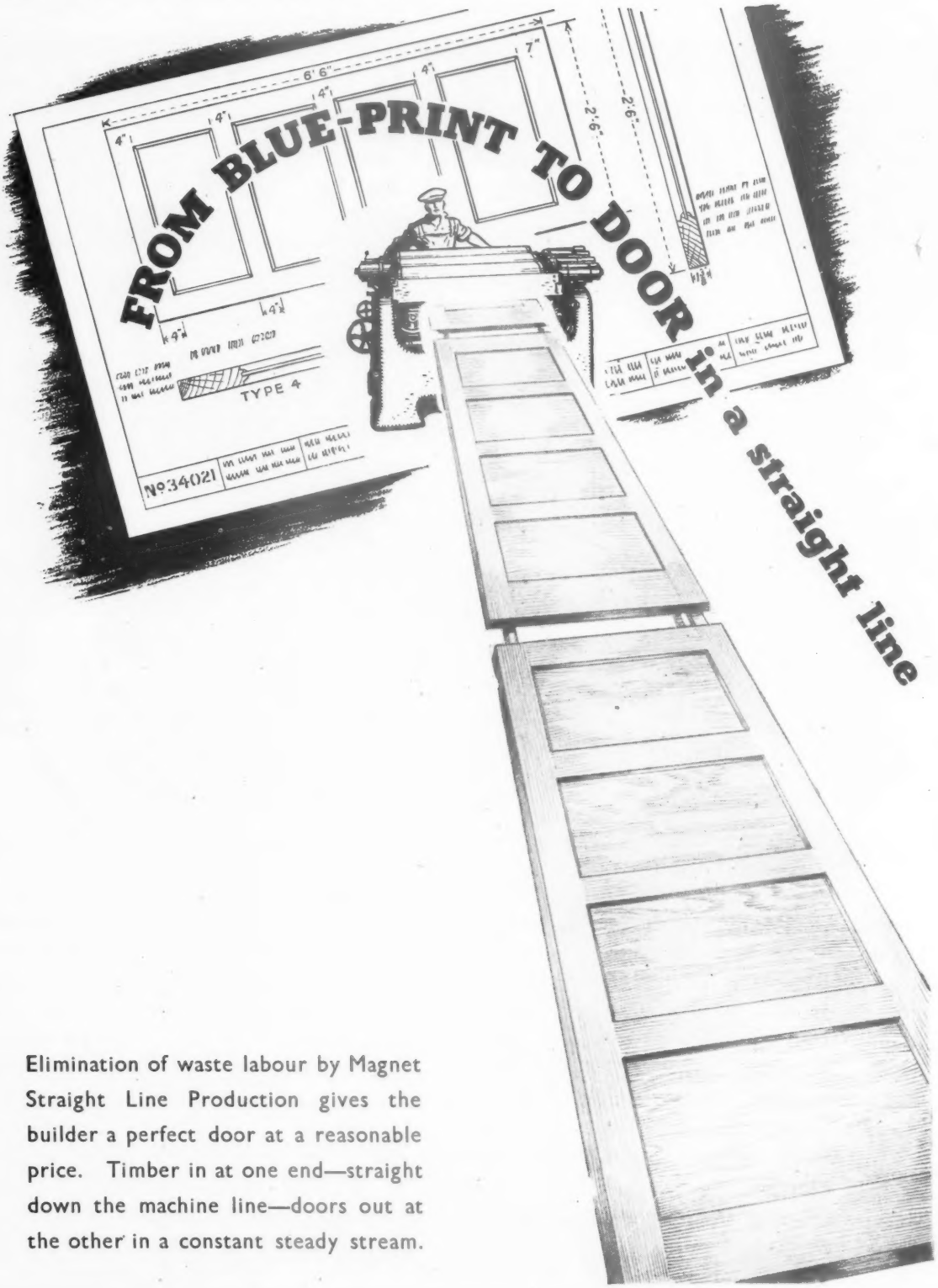

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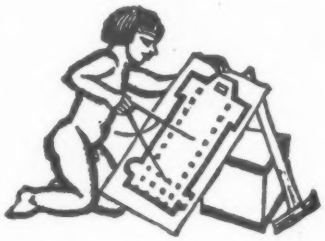


DIARY FOR NOVEMBER DECEMBER AND JANUARY

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.

BIRMINGHAM. *Housing Equipment Exhibition.* At the West End Dance Hall, Suffolk Street, Birmingham. The exhibition, prepared by MOW, illustrates the principal items of housing equipment as recommended in *Housing Manual, 1944*, and the advances possible in the standard of equipment available in post-war housing as a result of the employment of mass production methods. (Sponsor, MOH). Nov. 9-11

BIRMINGHAM. *Illuminating Engineering Society (Birmingham Centre).* At the Society of Arts Gallery, New Street, Birmingham. *Recent Development.* Papers by an Architect and an Illuminating Engineer. Joint Meeting with Birmingham and Five Counties Architectural Association. 6 p.m. Nov. 17

BROMLEY, KENT. *Your Inheritance.* Exhibition. (Sponsor, Housing Centre). Nov. 23

Good Neighbours. Exhibition. (Sponsor, Housing Centre) Nov. 30

DURHAM. *When We Build Again.* Exhibition and film. (Sponsor, TCPA, in collaboration with Messrs. Cadbury Bros.) Nov. 12-18

HOLBEACH, SPALDING, LINCS. *The English Town—Its Continuity and Development.* Exhibition. (Sponsor, TCPA). DEC. 4-16

LONDON. A. W. Kenyon, Chairman of the RIBA Central Planning Advisory Committee. *The National Plan.* At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA). 5.30 p.m. Nov. 14

T. P. Bennett, late Director of Works, Ministry of Works. *Principles of Organization and Management as Applied to the Building Industry.* At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. First of three lectures and discussions. Fees, three lectures 5s., single lectures 2s. Outline syllabus of lecture. Building—craft industry in 1844-1894, complicated industrial organization in 1944. The burden of legislation—compulsory and permissive. The conception of a building scheme. An industry of virgin projects. The contribution of the building owner, the architect, the consulting engineer, the quantity surveyor. (Sponsor, University of London in co-operation with the Institute of Industrial Administration). 5.30 p.m. Nov. 14

Guy Howard Humphreys, President of the Institution of Sanitary Engineers. *Some Modern Trends* in Sanitary Engineering. Bossom Gift Lecture. At the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. Chairman, Alfred C. Bossom. (Sponsor, Chadwick Trust). 2.30 p.m. Nov. 14

D. V. H. Smith, Consulting Engineer, Glasgow. *District Heating and the Smokeless City.* At the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. Chairman, G. L. Pepler, Member of the Council of the Institute. 2.30 p.m. Nov. 15

L. Hartshorn. *High-Frequency Heating.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, Royal Society of Arts). 1.45 p.m. Nov. 15

G. E. Moore. *Planning the Future Electricity Meters.* At Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE). 5.30 p.m. Nov. 17

The Effect of Welding on Electricity Supply. Discussion. At the Institute of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE). 5.30 p.m. Nov. 20

County of London Plan and *Town House.* Exhibitions. At the National Association of Maternity and Child Welfare, Piccadilly, W. (Sponsor, Housing Centre). Nov. 21-24

T. P. Bennett, late Director of Works, Ministry of Works. *Principles of Organization and Management as Applied to the Building Industry.* At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. Second of three lectures and discussions. Fee 2s. Outline syllabus of lecture. The contribution of main contractor, sub-contractor, agent, foreman, clerk of works and operative. The organization of operations: programme and progress (*a*) before commencement of contract; and (*b*) on the site. (Sponsor, University of London in co-operation with the Institute of Industrial Administration). 5.30 p.m. Nov. 21

K. de B. Codrington. *The Art of Seeing.* At the Courtauld Institute of Art, 20, Portman Square, W.1. 1.15 p.m. DEC. 7

T. P. Bennett. *The Architect and Organization of Post-War Building.* At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA). 6 p.m. DEC. 12

NEWS

THURSDAY, NOVEMBER 9, 1944
No. 2598 VOL. 100

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.

Epsom and Ewell Public Health Committee suggests the erection of temporary HOUSES ON EPSOM COMMON.

The suggestion is made in connection with the application of the Council to the Ministry of Health for five hundred Churchill houses. It is stated that no land is available in the district for purchase as permanent building sites.

During the quarter ending September 30 LOANS SANCTIONED TO LOCAL AUTHORITIES in England and Wales by the Ministry of Health totalled £1,248,244.

The loans sanctioned were as follows:—Housing, £527,548; Municipal Services (including clinics, sanatoria and mental hospitals), £381,977; Swimming Pools, playing fields, recreation grounds, open spaces, etc., £6,011; Water Supply, £135,218; Disposal of waste products (sewage and sewage disposal and refuse destruction), £56,753; Education Services (including libraries and museums), £25,513; Air Raid Precautions, £4,305; Roads and Bridges (including private street works), £32,419; Other Services (including loans to defray contributions, etc., under War Damage Act, 1943, £78,500.

From AN ARCHITECT'S *Commonplace Book*

THE SOCIALIST'S HYGIENIC CITY. [*From* Jules Verne, *by Kenneth Allott* (*The Cresset Press*).] Sarrasin (in *The Begum's Fortune*) allows his citizens to decide on the architectural style of their houses, but all buildings have to follow certain rules and prescriptions. Every house must be set back a certain distance from the street and must be suitably proportioned to the garden space available. No apartment must contain more than a single family or possess more than two storeys. The construction must be in light hollow brick, and kitchens must be placed on the first and not on the ground floor. Lifts, artificial light and telephones are provided at a small charge by the municipality. The interior arrangement of the houses is left to the individual, but carpets and wallpapers are regarded as sources of infection and are absolutely forbidden. Parquet floors and brick walls faced with a smooth tile are recommended. Bedrooms should be large and as bare as a private ward in a hospital to prevent germs being harboured. Smoke must be conducted into underground pipes to check the pollution of the air. . . . Finally, nobody can be a citizen who does not exercise a trade, craft or profession. . . . Verne's millenial city of 1879 is primarily an example of scientific planning for a healthy population in accordance with the advanced medical ideas of his day . . . There is a perceptible odour of socialist sanctity about Sarrasin's castles in Oregon.

Certain matters of interpretation of the provisions of the War Damage Commission's pamphlet COST OF WORKS (Form ROD. 1) have been the subject of consultation between the Commission and the National Federation of Building Trades.

The following decisions were arrived at:—*Haulage.* For the purposes of Note (i) of paragraph 31 of the pamphlet, the rates charged for lorry hire shall not exceed those set out in a Ministry of Home Security circular (HSC 50/44), issued on April 29 last to local authorities. *Sub-Contracts.* That to paragraph 33 of the pamphlet be added the words: "and in addition any work carried out by a nominated sub-contractor," thus making the paragraph read: "Sub-contracts cover work usually carried out by nominated sub-contractors, such as asphalter, electrician, heating, ventilating and lift engineer and steel erector, and in addition any work carried out by a nominated sub-contractor."

In January will be published the BATH TOWN PLANNING REPORT, the work of Professor Patrick Abercrombie and two local officials.

The plan, which will take half a century to carry out, will be introduced to the inhabitants by coloured magic lantern slides shown in every ward in the city. Mr. A. Mealand, town planning officer, said every building built for 40 years will fit into the master-plan and give us one of the finest cities in England.

The National Trust is appealing for £45,000 TO BUY THE CLUMBER ESTATE, Sherwood Forest, for the Nation.

It is probable that no property in the Midlands, says the secretary of the Trust in a letter to *The Times*, could have a more powerful appeal on grounds of natural beauty or romantic associations than this part of Sherwood Forest, and we are confident that your readers will help us to raise the sum of £45,000, which we must collect by the end of 1944 if we are to preserve this property. He writes: This is the largest appeal issued by the Trust for 20 years, and we recognize that we have undertaken no light task. Only the urgency of the need could justify such an appeal in wartime. Donations should be sent to the secretary of the National Trust, 7, Buckingham Palace Gardens, marked "Sherwood Forest Appeal." Donations of £500 or more make the donors benefactors, and those of £100 or more make the donors honorary members of the Trust. Gifts may also be made under seven-year deeds of covenant.

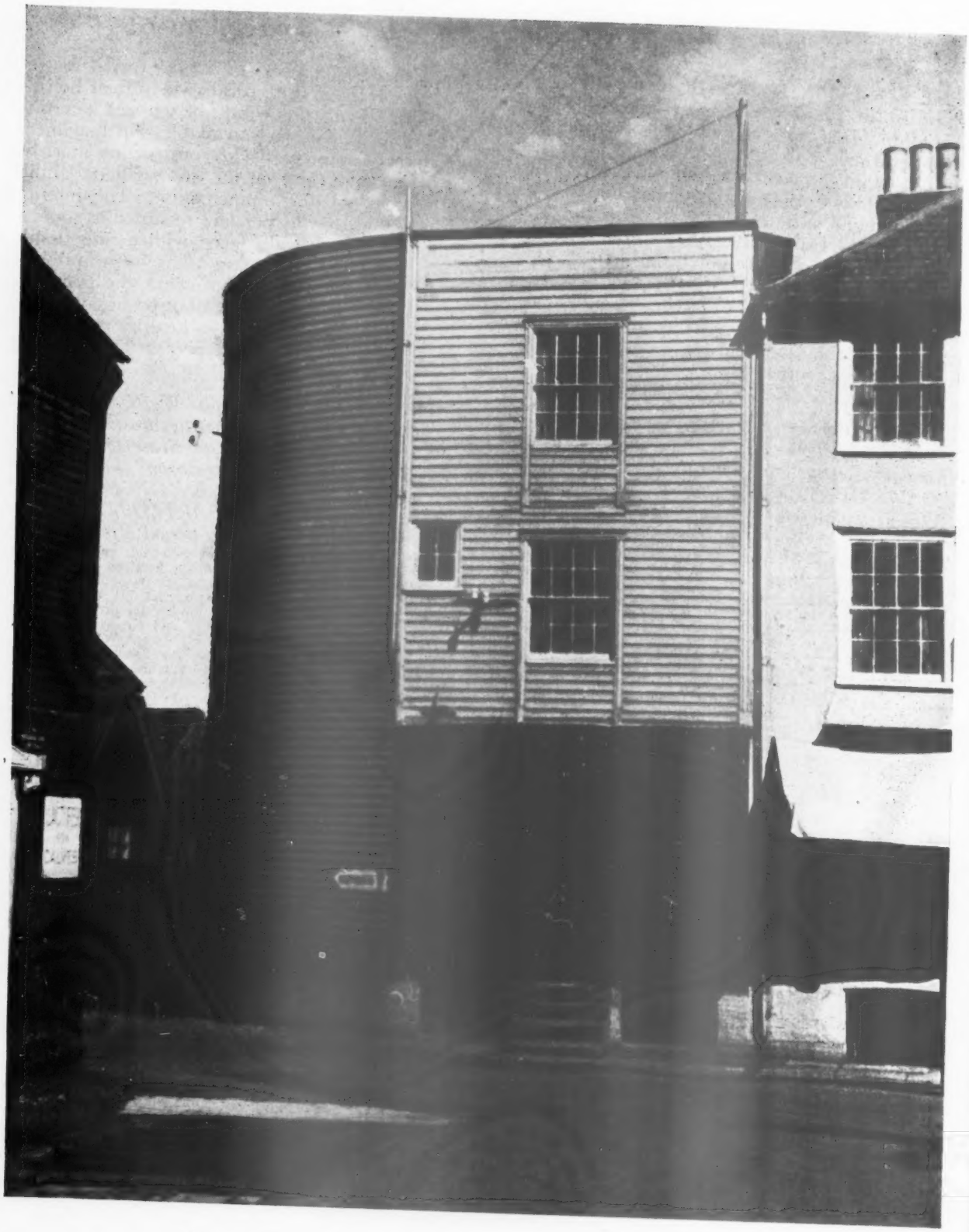
After the war Blackpool may be the NORTH OF ENGLAND'S MAIN ATLANTIC AIR TERMINAL.

The Air Ministry has indicated that the site of a base, which the town has planned fulfils all the requirements for a national air station. It will cost £10,000,000.

Mr. W. J. Rudderham, who, in recognition of his services as Secretary of the London Master Builders' Association for over twenty-five years has been entertained by the Council to lunch at the Dorchester Hotel and presented with a silver cigarette box and a cheque. Those present included Mr. H. C. Harland, the president, and fourteen past presidents.

Mr. Joseph Westwood, M.P.: Local authorities are advised by the Secretary of State for Scotland to concentrate on the provision of HOUSES OF FOUR OR FIVE APARTMENTS in the transitional period after the war.

Parliament may pass Acts and the Department of Health for Scotland may redouble its efforts in the speedy approval of proposals and plans, but in the last resort the success of the housing programme rests on the efficiency and energy of the local authority, said Mr. Joseph Westwood, M.P., Joint Parliamentary Under Secretary of State for Scotland, at the annual conference of the Scottish National Housing and Town Planning Council in Glasgow. Continuing, he said: The Department of Health for Scotland and planning authorities are sparing no pains to ensure that the most suitable sites for houses are selected and that due regard is paid to such planning considerations as the claims of agriculture and industry, the needs of transport, and the preservation of open spaces. To date, sites for 83,000 houses have been approved from the planning point of view, and a substantial proportion of these are already in the ownership of the local authorities. It is hoped that by the end of the year sites for 100,000 houses will have been approved for acquisition. A second report dealing with the *Distribution of New Houses in Scotland*—the work of a Sub-Committee of the main Committee under the chairmanship of Mr. G. P. Laidlaw—has been prepared by the Scottish Housing Advisory Committee and will be issued shortly. Mr. Westwood urged all members of local authorities and others interested in the planning of housing to study the recommendations and suggestions in the report. The Secretary of State, continued Mr. Westwood, has carefully considered the Scottish Housing Advisory Committee's report on *Planning Our New Homes*, and has accepted the Committee's recommendations on standard of occupancy. The Secretary of State has advised local authorities to concentrate on the provision of houses of 4 or 5 apartments in the transitional period after the war. In the meantime, houses of 3 apartments will be approved for subsidy purposes only where the local authority can show that on the long term view, under the new standard, additional houses of that size are required for families for whom they are suitable. The effect of this new standard is that it will now be necessary to build a 4 apartment house for a husband and wife and four children. The short term needs for smaller families will to some extent be met by the temporary 3 apartment house.



Two Lessons from Rye

This delightful little eighteenth century weatherboarded building on the Strand at Rye was originally a dwelling house but is now a corn merchant's office. With its horizontal stress, its bold curve, its functional simplicity and flat roof, it contains the very elements which the so-called traditionalist decries in contemporary architecture, in spite of their frequent use in Georgian buildings such as this. But it contains also what contemporary design too often lacks—sensitive detail and scale that is in harmony with the surroundings. The photograph is by Eric Brown.

In the emergency work of repairing London houses ARCHITECTS ARE NOT BEING FULLY USED.

This fact has been reported to the Council of the RIBA, who wished to know what had been the result of its offer of help, made some time ago to Sir Malcolm Trustram Eve, Chairman of the War Damage Commission, who is directing the organization of this work. The RIBA state: this offer was made at an early stage of the emergency when the urgent need for proper organization of repair work was being discussed. The Council of the Royal Institute had prepared a list of 140 London architects who were available for examining houses and directing repair work. It was pointed out to Sir Malcolm Trustram Eve that economy of labour and materials would result if practising architects were engaged to organize definite programmes of repair work, and that the services of architects would be of special help in connection with more serious structural repairs to houses and their reconditioning. A scheme for organizing this work on the basis of a systematic survey was outlined to Sir Malcolm. The Council was informed that these offers of help had been conveyed by Sir Malcolm to the local authorities in the London area who are responsible for the work in their localities. The Council has now been told that only in a small number of cases have local authorities used the services of architects in private practice.

The plan to erect two 230 ft. cooling towers at Lincoln power station has been rejected by The Electricity Commissioners on the ground that they WOULD MAR A STRIKING VIEW OF THE CATHEDRAL.

The Commissioners state that they are prepared to consent to the extension scheme subject to: Lincoln Corporation seeking the advice of the Royal Fine Art Commission on architectural design before submitting the plans and drawings to the Electricity Commissioners. The height of the two station chimneys not exceeding 225 ft. (it had been proposed that they should be 279 ft.). The height of the natural draught cooling towers being approximately 90 ft. and the station buildings 90 ft. The Commissioners also suggested that the 90-ft. towers should be sited to avoid direct interposition between the Cathedral and some of the points of view which it was specially desired to protect. A correspondent of *The Times* says: I understand that another alterative scheme which renders cooling towers unnecessary is now being considered. It has been submitted to the Electrical Engineer by Sir Robert Pattinson, chairman of the Witham and Steeping Rivers Catchment Board, after collaboration with the board's chief engineer, Mr. F. H. Tomes. This proposal is, I learn, to pump water from the river Trent at Torksey, seven miles from Lincoln, into the Foss Dyke, from which it will flow into the river Witham at Lincoln, thus providing a sufficient supply of water for cooling purposes without the use of towers. The whole question as I see it, Sir Robert Pattinson told *The Times* correspondent [for report of public inquiry into the scheme see ARCHITECTS' JOURNAL, October 19, page 279], is one of water supply. If the scheme I have put forward is adopted—and I have a strong belief that it will be—it will provide the water and provide it cheaply, for I estimate that this scheme will save about £100,000.

LOCAL GOVERNMENT

OF the many post-war problems, that of local government reform is among the most important, for it will have a resounding effect on planning of all kinds. The war has already forced the issue to the extent of introducing the very necessary emergency and defence precaution of splitting the country into regions. This has brought into being an intermediate regional government devoted to seeing that the central authorities' wishes are carried out. The Regional Commissioners were not, for obvious reasons, elected by the people, but were appointed by the Government with authority to use their most comprehensive powers only in the event of emergency. Meanwhile, as advisers and interpreters of the demands of the central government departments upon local authorities, they have been increasing their velvet-gloved hold on the reins of local government. Now, the local authorities and their associations, having appreciated the shortcomings of their own young growth of some fifty years in tackling the still expanding and ever more comprehensive affairs of civil administration, have persuaded the Government to examine the whole question and hear evidence.

Architects and planners should know something of the story. How, although local administration in counties and towns is age-old, the organizations as at present constituted were not, in the main, brought into being until the latter part of the nineteenth century ; and how their advent was the result of a demand for the removal of patronage and corruption and, refreshingly enough, the increase of political responsibility and political education amongst those who had previously been without a voice in local and national affairs. Do many of us realize, for instance, that the London County Council was in being before any of the Metropolitan Boroughs in London ; that they were, in fact, created in order to protect the many powers of boards and vestries from complete absorption by the new authority ? Westminster did not become a City, as far as local government was concerned, for some six years after 1888, the year which marked the constitution of the County Councils.

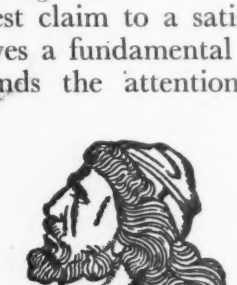
Now local authorities are showing an understandable fear of the shadow of autocratic regional government ; this dreaded but inevitable intermediate authority which, while assuming the less wholly national government functions, will tend to absorb much of the authority now jealously embraced by the local chains of office, forged during the 'eighties.

There are three possible solutions : first, to allow things to remain as they are, in which case areas and boundaries would remain undisturbed, an unsatisfactory structure upon which to attempt the co-ordination of the great zoning schemes and the administration of overlapping areas.

Second, still to leave the local authorities in being whilst introducing a regional system of intermediate government such as now exists in embryo, with the proviso that the authority should be elected on democratic principles. This

would appear to be the right solution, although it must be realised that in attempting to constitute the regions upon a democratic basis, elected by *vox populi* the lack of historical or sociological background in the new regional areas would probably result in a lifeless set-up in which the local representatives (if such could indeed be found) would be merely opportunists or exhibitionists whose claim to local patriotism could not be easily supported. The jealousies resulting from the overlapping of authority and ground would be acute and the worst fears of the small authorities might soon be justified. Third, to allow each statutory authority within the region to provide one or more representatives as members of the regional authority acting in the interests of their own particular services or departments. This, of course, would mean a large body in which water, gas and electricity undertakings would also be represented, and to which would have to be added other members appointed by the central government departments whose interests were involved; a cumbersome machinery. It has, however, been suggested in order to preserve the hard-won rights and pride of local government as it stands at present, that a regional authority thus constituted would best serve the interests of government, both local and central, were it to confine its activities to planning (that is, of course, in the very widest sense).

The magnitude of this question is not fully realized. Its greatest claim to a satisfactory and rapid solution is that it involves a fundamental question of democracy. It therefore demands the attention and interest of every one of *us*.



The Architects' Journal
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NOTES & TOPICS

LESSONS FROM NORTHOLT

I asked recently why MOW's demonstration houses at Northolt had been built. Those who study the lower of the two pictures in the JOURNAL frontispiece for October 12 may find at least one answer. Here, obviously, is a trial model erected for the study of the effects of frost on external pipes. We do not yet know definitely, for instance, whether pipes burst because water expands when it freezes. No doubt a lot will be learned from this experiment. It would be a pity if it forced us to the conclusion that plumbing should be enclosed in ducts inside a building, for a very decorative feature would then be lost to the architect, as one can gather from the appreciation of the charming pipework seen in the frontispiece photo.

*

Another lesson of a more serious nature to be learned at Northolt concerns thermal and sound insulation. Though we are told that all the houses have been built according to the standards laid down by the Burt Committee in *House Construction*, No. 1 of MOW's excellent post-war building studies, experiments on several of the houses would probably show that insulation values fall below the Burt standard.

*

Houses 2 and 6, of foamed slag and expanded clay respectively, would, I suspect, come through the tests better than the 11-in. brick cavity types, though even here no serious attempt has been made at thermal insulation of the roofs. No. 7, of steel frame and concrete blocks, with internal lining of wall boarding and glass wool blanket, is probably the most effectively insulated. It would be interesting to see reliable comparative figures for heat and sound insulation of all the Northolt houses.

*

It is strange that in none of these houses, nor indeed in any experimental house yet built in this country, has a window with air-tight, vacuum-filled space between double glazing been tried out. This is surely a feature that should become a standard in post-war houses and not just a very rare luxury. The saving in fuel which it would bring would make it a sound investment in any house, however humble. The question of proper joints and draught checks in windows, too, has not had enough notice. If the window makers won't move in these matters, then the Ministry of Works should take them up.

*

Incidentally, Mr. Howard Robertson, in his *Architecture Arising* just published (Faber, 10s. 6d.), gives definite figures about the saving due to double glazing. In a five-bedroom house, the extra cost of double glazing would be £30. Saving in fuel would be £3 per annum. Thus in ten years double glazing would have paid its way.

*

Apart from facts to be gained about sound and thermal insulation (which should be, and probably are, known already in any case), there are one or two structural lessons which can be learned at Northolt, in particular, about foamed slag in House No. 2. Many visitors will have noticed the vertical cracks in the plaster below and above the centre of each window, and wondered why they have occurred just there instead of the usual place for cracks near the corners of openings starting from the ends of the lintels and cills. Such corner cracks are likely to happen where different materials are used together, as in the brick and timber of House No. 3, or, for instance, in a case of hard concrete lintels bearing on light-weight concrete walls.

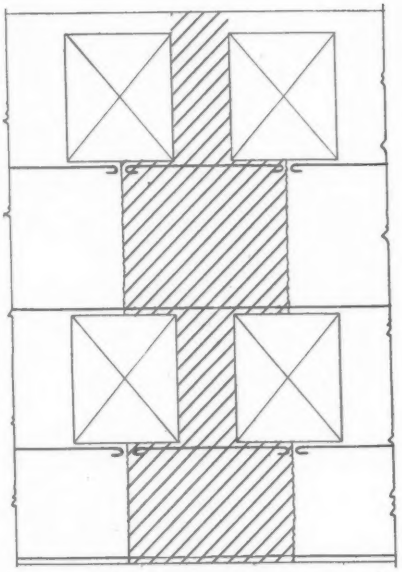


Diagram of a foamed slag concrete wall. See Astragal's note.

The diagram herewith shows why the cracks have not occurred in the usual place in No. 2. The rectangles with diagonal crosses indicate windows, and the dark lines with hooked ends are the reinforcing rods in the foamed slag walls. The reinforcement goes that way so that cracks can be deliberately controlled to occur at the centre lines of the windows without the use of a denser mix in the lintels. The structure thus acts as a series of piers with cantilevered projections over the windows, and only one concrete mix need be made. The reinforcement stops short of the centre lines of the openings and pre-cast foamed slag briquettes of the same mix as the walls are inserted along these lines in order deliberately to create weak joints just at those points.

*

But who wants cracks anywhere, whether neatly controlled or merely wild? No one, of course, and a mistake has been made in House No. 2 in not waiting until the foamed slag stopped contracting, before applying the plaster. The walls should be left uncovered for several weeks, and then the joints should be scrimmed with strips of some material like hessian or expanded metal before plastering. This waiting is likely to be a snag where quick building is wanted, but the greater the number of houses built in one area, the less important this snag becomes if the houses are erected, as usually happens, in a series of progressive groups and not all at once.

POETS' CORNER

GREATER BLUNDEN

O give us Ye Dear Old Days,
Ye twelve to ye acre days,
  Sweet ribbons of Tudorbethan
In the morning's misty haze,
  Half timbered on ye high road,
  Half roughcast on ye low road,
Half witted all ye ways!

O give us Ye Dear Old Days,
Ye Jerry building days,
  When through ye kitchen brickwork
Ye gentle raindrop plays,
  While on ye flooded flooring
  Disturbed but still adoring
Ye young Bride kneels and prays.

O give us Ye Dear Old Days,
Ye quaint romantic days,
  When through his sweet dear nose
Ye dear sweet Bridegroom pays,
  And with ye Elms and Larches
  And Cupid's Bijou Arches
Confounds ye King's Highways.

EDWARD LEWIS

DON'T BLAME THEM FOR THAT

There is a lot to be said against the Portal house as a house, and Mr. John Grey in this issue adds one more contribution to the mass of constructive criticism of its planning, which has been published in the Journal and elsewhere. And an excellently constructive contribution it is, so far as planning is concerned.

*

Mr. Grey is less constructive in his criticisms of Government policy. The Government may get many kicks, but it certainly deserves a clap on the back, not only for having accepted the revolutionary principle of the temporary house (even if it makes some mistakes in carrying that principle into effect), but also for having sought public reaction to a trial model.

*

Why blame the Government for that? It not only "sounds very praiseworthy and democratic." It *is* so. Moreover, a Government *should* be "sensitive to criticism," so long as that does not cause it to lose its head. Democracy is a vague enough word, we know, and it is certain that without firm leadership, it results in mere directionless muddle. Nevertheless, if the word means anything at all, such a move as MOW has made in seeking public opinion on the Portal house is surely a fine democratic gesture. It will have been nothing more than a gesture if the results are not sifted objectively and used by the authorities to help them towards effective and unprevaricating action.

ASTRAGAL

LETTERS

W. W. Hopkin

Adie Ballantyne
(*Kitchen Planner*)

Noel Moffett,
B.Arch., A.R.I.B.A.

Where Shall We Eat?

SIR,—The various ideas and suggestions for improvements to the Churchill House which have been published in the JOURNAL have been most interesting, especially Astragal's solution of the problem. The restrictions imposed by the limited space available are very severe, and it is difficult to devise anything better than a series of box-like rooms of small size. Astragal has certainly given us a new line of thought.

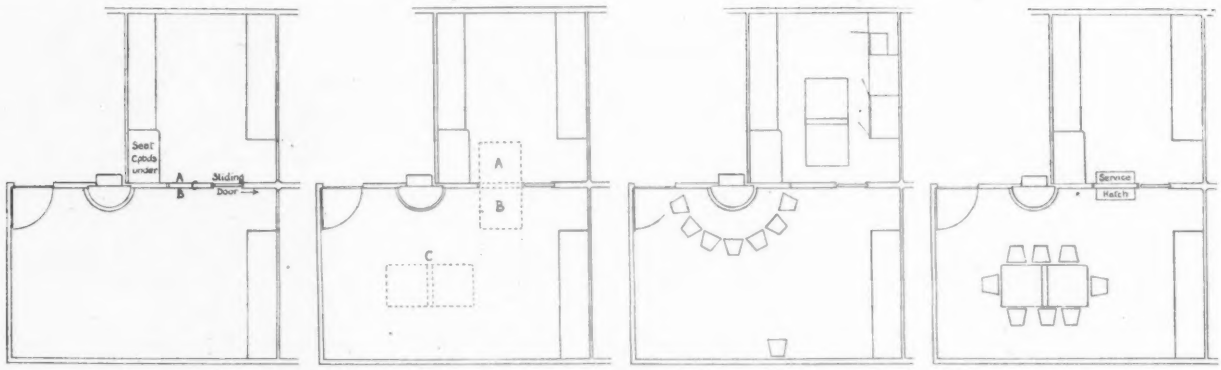
I am not concerned here with endeavouring to arrange the MOW's plan in yet another way, but wish to present a general solution to that vexed question, namely, Where shall we eat? Let us consider plans already put forward in the light of this question.

The Churchill House provides us with a folding table in the kitchen opposite the sink. But I don't want to eat in the kitchen opposite the sink. I must therefore clutter up an already small living-room with a permanent table.

The result of the Tarran Competition was very interesting in that the dining problem resolved itself in every instance into a special recess of some form or other, thus cutting down the living-room area (call it the lounge if you prefer it).

The MOH *Design of Dwellings* and the *Daily Mail Britain's Post-War Homes* both give various plans for meals in the kitchen, or dining recess in the living-room.

C



1 2 3 4

(*See letter from W. W. Hopkin*)

Turning to Astragal's plan, it is most ingenious and unique in its flexibility; may I be permitted to show you an additional flexibility with regard to dining space?

The lady of, we will say, the Churchill House can't be bothered about meals for herself, and takes her mid-day meal in the kitchen opposite the sink. Also the children coming home from school maybe will have their meals there. However, here comes the head of the family, jaded, from his daily toil, and he will probably wish to take his evening meal in the living-room. And now, here come the snags. At the week-ends the whole family will take their meals together, and, more difficult still, this family is going to entertain a party of, say, six people to supper (a post-war dream). How on earth will they do it?

Turn to diagram 1. There you have (A) a foldaway table for the kitchen (instead of, or in addition to, the one provided by the MOW), or (B) a foldaway table with service hatch above for the living-room, or (C) a full-size dining-table for the middle of the living-room for that post-war party.

Perhaps diagram 1 does not make this clear, although it is all there, so look at diagram 2.

(A) shows a flaptable housed in the dividing wall.

(B) shows a flaptable also housed in the wall.

(C) shows the complete device automatically detached from the wall and wheeled to any convenient position in the living-room. Now have your party! Perhaps I should mention here that taking the table away does not leave a large gaping hole in the wall, as there is a sliding member, or shutter, within the hollow partition available to be drawn down to floor level, and as a further refinement the upper part of this sliding member contains two drop-flaps forming a service hatch with large shelves.

Let us turn to our party assembled in the living-room (or lounge). The head of the family entertains the visitors, whilst the lady of the house sets the table for supper (diagram 3). The table is drawn through the opening in the wall (which has been closed by the sliding member during the setting operation), and the guests sit round it (diagram 4). As this is a post-war dream, there is more than one course for supper, and the service hatch is brought into play. Supper finished—the table is returned just as it is through the hole in the wall into the kitchen, there to await the attentions of the lady of the house and the head of the family after the guests have departed. And so to bed, with the table once again in its streamlined position in the wall (as in diagram 1).

Does not this envisage labour-saving and a minimum of disturbance to the social activities of the party?

In case all this seems complicated, let me assure you that it is not. All the component parts of this patented device are simple in construction and economical in the expenditure of materials used.

Hadleigh W. W. HOPKIN

Housing Equipment

SIR,—The Housing Equipment Exhibition now on view at Birmingham will naturally arouse a great deal of interest, in view of the requirements of a large proportion of the nation who will have to be re-housed as soon as possible. There are, however, some adaptations and additions in equipment which, without adding appreciably to the cost, would make the final result more pleasing.

For example, viewing the metal sink unit, the first thing that occurs to one is the fact that the slope of the draining boards is much too steep. When dishes are wet and hot they will tend to slide down this slippery surface into the sink again, causing casualties to the new tenant's china the very first time it is washed. Would it not have been better to leave the surface of this unit level, supplying draining grooves which had been deepened at the ends where the sink joins them? This would drain the boards efficiently without risk of accident. A really practical person will see this point immediately. Also the wooden draining boards attached to each side of the fireclay sinks should be hinged to lift up. The sink can become very messy where the board overhangs if it is not possible to get beneath it easily.

The dresser cupboards are an immense improvement on the old-fashioned type, and standardization will make for efficiency in production, and ease in adding new units to fit when required, but I should like to offer the following suggestions for their improvement. In each unit there are four drawers. Two or three of these could be lined with metal if wooden drawers are to be made, thus making them suitable for the storage of bread, cakes and flour. The bread drawer should, of course, be deeper than the others, and have several perforations to enable it to keep well and breathe. This would save the purchase of bins for storing the above foods, as these containers take up a good deal of space if stored as separate units in a cupboard. Above, the top portion of the dresser will probably be used on one side for keeping china and dishes of different kinds. One shelf should be fitted with a little bar to enable meat dishes to stand upright. Most housewives like to stand their meat dishes on edge to allow them to be lifted out easily and to give more room for stacking other plates. Between top and bottom portions of the dresser the space at the back of the wall should be covered by a sheet of plastic or metal to prevent the wall from becoming stained. This applies also to cookers fitted beside a wall.

There are many other small criticisms one could offer if space would permit, but chief among these is that the height of fitted taps varies, and it is necessary to leave enough room for a pail or tall pan or jug to stand below. In the dining-kitchen house this is particularly noticeable. There should also be more pot racks, as one small rack is not enough to hold the pots necessary for a family of four. Finally, there does not appear to be any provision made in any of the houses for outdoor clothes. Where there are one or two children and a husband as well, the hall will soon become untidy if extra space is not available for all the hats and coats, not to mention shoes that every family needs.

London ADIE BALLANTYNE

Teaching of Town Planning

SIR,—Astragal's recent account of Mies van der Rohe's methods of teaching at the Illinois Institute of Technology interested me very much, especially the importance he attaches to the teaching of town planning. Astragal's statement that "it is pleasing to note that there exists at least one architectural school in the world which . . . includes town-planning as part of the course and not merely as a post graduate study," makes me think that he might be interested in an educational experiment which we are carrying out in Dublin.

We believe that if the student commencing to study architecture could become fascinated and thrilled by the big things architects can do—design new cities and neighbourhoods, envisage new types of buildings, etc.—he would take more kindly to the drudgery and routine of his later studies. Accordingly every new pupil who comes to our private school, founded four years ago, is immediately introduced to the principles of town-planning, and the human problems connected therewith, and is encouraged to prepare sketches and models of the most imaginative kind for whole cities, towns and communities of varying sizes. The whole school criticizes and discusses the ideas expressed in these schemes, and their authors find out the snags.

Four years' experience has proved that our system does three things:—

(1) Stimulates the students' creative faculty, through his imagination.

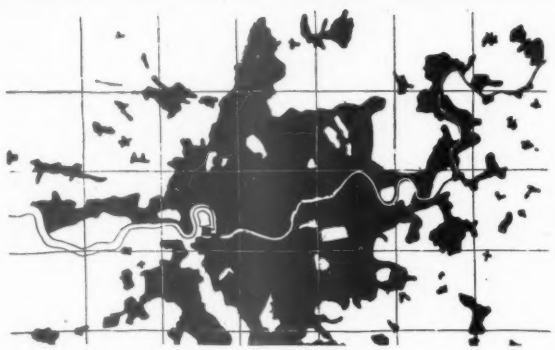
(2) Gives him a clear sense of scale, and the relation of one single building to a group and a whole community.

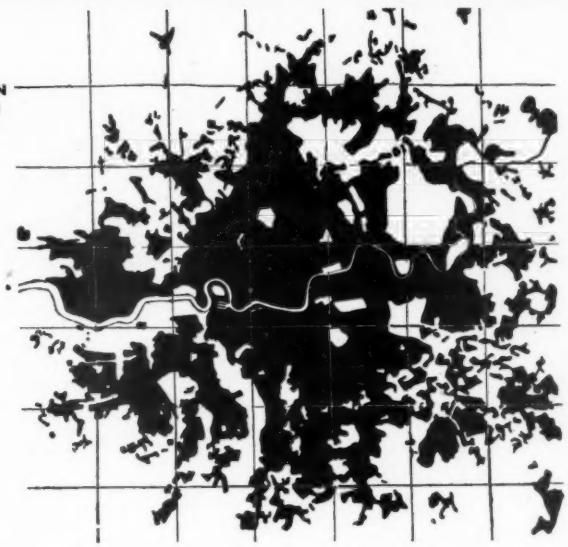
(3) Makes him so fascinated by and interested in architecture that the more tedious part of his work is willingly put up with.

Clear proof, perhaps, of the success of our methods, is provided by the fact that every Wednesday evening and on occasional Sunday afternoons, the school meets for general discussions, which are consistently well-attended whatever the weather condition.

Dublin. NOEL MOFFETT

PHYSICAL PLANNING SUPPLEMENT





The houses *versus* flats controversy, which has dogged the steps of the County of London plan since its birth, may have proved a diversion to many, but it has clarified singularly little of the very complex problem of housing the future London. In the following article Alexander Block shows exactly why this has been so, and along what lines the necessary research, which must precede any solution, should be conducted.

LONDON HOUSING NEEDS

by Alexander Block

As there are signs that the New Britain is to have millions of new houses and the air is full of housing plans, it is well to remind the planners of their responsibilities. One of these is that the houses should be of the right type. The County of London Plan, important in itself, has additional importance as a test case. However, the discussion now in process has not been very fruitful. It should not be confined to the controversy houses *versus* flats, but embrace the wider subject of suitability of dwellings to human needs. It should apply a more convincing criterion and be based on better evidence than likes and dislikes, so much stressed by some of the critics.

housing and the study of population

In concentrating attention on density the County of London Plan has over-simplified its housing problem. It is here that the organic approach, which so favourably distinguishes this great work in many ways, is missing. It treats housing as a mechanical relation of human beings to space. If we had the task of housing an army within a given area, a simple density formula—so and so many soldiers per acre—could perhaps be applied more successfully, because of the uniformity of composition and structure of army units. The housing of the population of London or any other area is much more complex, because of the diversity of its composition and structure. By *composition* I mean the distribution of the population by age, sex and marital condition, and by *structure* its differentiation into primary units such as households and families.

If first things are put first, we must realize that population is the object of objects in housing.* Are not houses built for the people to live in? Is not the task primarily one of suiting the needs of the people? Is it not obvious that these needs vary according to age, sex, marital condition of the people, and their social status? Does it not make a world of difference whether a habitation is intended for old age pensioners or for vagrants, for middle-aged childless couples or for newly married couples with children to come, for families with small children or for families at various stages of the empty nest? Is not the whole aspect of life, work and rest, to which dwellings must be fitted, different in these and in a great many other cases? It looks as if we were forcing an open door, yet the population aspect is being constantly neglected in housing plans. The London Plan makes no exception and herein lies its fundamental weakness.

True the available information is incomplete and defective, but even this is hardly used at all, and in addition not properly used. This article cannot undertake to provide what the civic survey of the County of London Plan has failed to provide: an estimate of the housing needs of London's population. But it will endeavour to show (1) the principal population facts affecting housing; (2) where to look for and how to use the information available; and (3) the principal gaps in the existing information to be filled in.

the census

The information on our subject is supplied by the census.* The last census was taken in 1931, and is, of course, badly out of date, but this should not affect the usefulness of the following comments inasmuch as they mainly refer to methods. Census figures of the composition of the population by age, sex and marital condition are more comprehensive and accurate than those relating to the differentiation of the population into households. With regard to the latter, we must, before going any further, acquire complete clarity about terminology. Population units described in the census as "families" are in reality households. Any person or group of persons living in a separate dwelling or part of a dwelling is returned as a separate "family" for census purposes. Lodgers are included in the "family," unless they board separately. In the latter case they, too, are treated as "families."

families and households

The census does not record true families at all. Consequently we do not know the number of childless couples,

* This article is based on a study of Population made by the author in co-operation with the Housing Centre and the Population Investigation Committee, not yet published. All figures, unless otherwise specified, refer to Census of England and Wales, 1931.

* Estimates based on recent social surveys confirm my conclusions. I have confined myself to the census as by far the more important source. Indispensable for planning, a new census must be among the very first things when the war is over. This article is a reminder of its need.

D

and how many families there are with one, two or more children. We must remember this flagrant gap in our knowledge, made less apparent, but by no means less harmful, by the terminology just mentioned. To avoid confusion which among many other things affects estimates of housing needs, I shall henceforth call census "families" households.

Many households contain no families at all; others contain two or more families each. In other words, there are families which have not formed a household of their own for one reason or another; for instance, because of lack of suitable accommodation. In Camberwell 1,229 married couples, or nearly 5 per cent., were living two and three couples to a household. The proportion was much higher in the larger households. Out of 9 couples living in households consisting of 15 persons each, not less than 8 were living at the rate of two couples to a household.

Housing from the population angle is the problem of adjusting the number and type of dwellings to the changing number and condition of households. The number is changing by households coming in and out of existence, the condition—by changes in the number and relationship of persons within the households. The contribution of demography is in foreseeing these changes, thus helping to estimate housing needs of the immediate future.

age

Increase in the proportion of adults is responsible for the peculiar population structure of our time. Fig. 1 shows decimal increase (or decrease) of persons under and over 20 years of age during the ninety years to 1931.

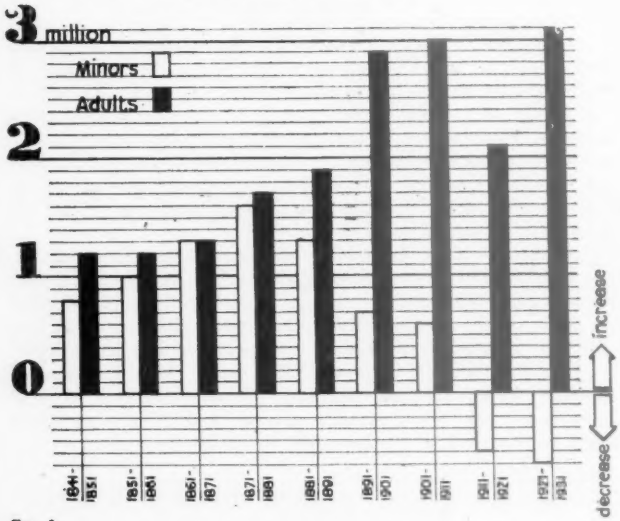


fig. 1

How this process has affected per cent. distribution of the population by the same age groups since 1901 is shown below:

Census year	Persons under 20 years of age	Persons over 20 years of age
1901	42.6	57.4
1911	40.1	59.9
1921	37.2	62.8
1931	32.8	67.2

Every stage of life has its own problems; and it happens that those of the aged are becoming more important. According to an estimate published in Sir W. Beveridge's Report (1942), the pensionable proportion of the population (men 65 and over, women 60 and over) of Great Britain has nearly doubled since the beginning of the century (from 6.2 to 12.0 per cent. in 1901-1941), and is likely to increase in the future. Old people often live in houses too large for them, or live with relations, or struggle alone in unsuitable lodgings. Independence is strongly cherished by the old. There is a growing need for dwellings specially designed for their requirements.*

increase in number and decrease in size of households

Increase in the proportion of adults accounts for the growth in the number of households which by far exceeds population growth (see Fig. 2). In the two decades 1911-1921-1931, households increased by 10 and 17 per cent., and population only by 5 and 6.4 per cent. respectively. This increase is limited to small households. Between 1911 and 1931 one-person households increased by 63, two-person households by 74, and three-person households by 61 per cent. The table below shows percentage distribution of households by size as recorded at the last three censuses, and as estimated by the Registrar-General for 1941.

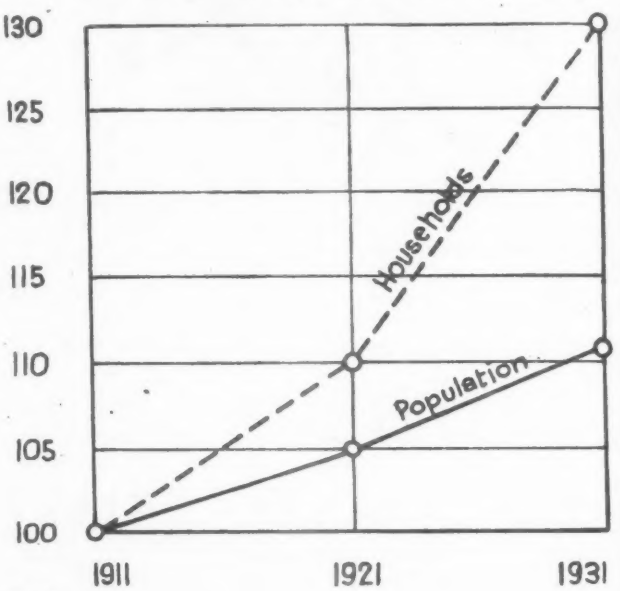


fig. 2

Distribution of Households by Size—England and Wales

Persons in household	Percentage distribution of households			
	1911	1921	1931	1941
1	5.3	6.0	6.7	7.2
2	16.2	17.7	21.9	23.9
3	19.3	20.8	24.1	25.8
4	18.1	18.6	19.4	19.8
5	14.4	13.9	12.4	11.7
6	10.4	9.4	7.3	6.2
7	6.9	6.0	4.1	3.1
8	4.3	3.6	2.1	1.4
9	2.5	2.1	1.1	0.6
10 and over ..	2.6	1.9	0.9	0.3
	100.0	100.0	100.0	100.0

other conditions of households

The size of households is important, and this item is well covered by the census, but it is not enough. Their biological condition is also important in selecting the type of dwellings. For instance, there seems to be agreement that for households containing families with small children, houses with gardens are preferred. It is surprising, in view of the controversy about the proportion of houses to be built, that no attempt has been made to find out the number of families

* See *Are the Aged being left out of Planning?* Olive Matthews. A.J. Physical Planning Supplement, 7.9.44.

with children. It has been mentioned that information on the subject is deficient. But while this is a serious matter for the attention of the Royal Commission on Population, we must use the data available as best we can. The census schedule filled up by every householder has (since 1851) a special column, B, where the relation of each person in the household to the head of the household is entered. In this way valuable information is being collected, but little of it has been tabulated and published. Reports of the 1851 and 1861 censuses contain detailed analysis of the relationship column covering, among many other things, the distribution of children in households for a few sample districts. This practice, discontinued in subsequent censuses, should be revived and extended. It would greatly help planning. The 1931 census investigated the types of households in Camberwell and Sheffield as samples, to find out the proportion of households with and without (1) married couples and (2) children under ten years of age. As the general trend of the figures in Camberwell and Sheffield differs but slightly, the census used the mean to estimate the same proportion for England and Wales. The particulars below are taken from Table XI of the 1931 Census Housing Report.

Households without families and small children—England and Wales. (Thousands.)

No. of persons in household	Total households	Households containing no married couples (estimated)	Households without children under 10 (estimated)
1	689	689	689
2	2,240	677	2,213
3	2,460	462	1,525
4	1.980	279	1,085
5	1,271	152	610
6	747	81	294
7	422	39	130
8	214	18	45
9	112	9	14
10 and more	98	4	7
Total ..	10,233	2,410	6,612

some features of London's population

The foregoing remarks refer to the country as a whole, but housing is essentially a local problem, and requires a detailed study of local conditions. Neither the County of London Plan nor its critics has discussed population facts peculiar to London. National averages only are considered. Moreover, the figure 3.6 is, according to the Plan, the national standard of persons per dwelling (page 170)—according to Mr. F. J. Osborn, the national average of "family" (*i.e.*, household). The following figures show the difference (1) between the average number of persons per dwelling and per household, and (2) between the average for England and Wales and London.

	Average number of persons			
	Per dwelling		Per household	
	1931	1921	1931	1921
England and Wales ..	4.17	4.66	3.72	4.14
London A.C.	5.64	6.05	3.46	3.79

The difference between the average per dwelling and per household is an index of bad housing, namely, of the extent to which dwellings are occupied by more than one household. The difference between London and the country as a whole shows that predominance of the small household has reached a more advanced stage in London. The following table further illustrates this, and also the variety of conditions within London.

The smallest households are in Holborn, Westminster and Paddington, with an average size of 2.94, 3.07 and 3.08 persons respectively. On the other extreme are Bethnal Green, Bermondsey and Shoreditch, with an average size of 3.79, 3.77 and 3.77 respectively. In these three boroughs the average size of households is even larger than in the country as a whole; in the former three it is the lowest for the country.

	Proportion of households of various size per 1,000							
Number of persons in household	1	2	3	4	5	6–7	8–9	10 & more
England and Wales ..	67	219	241	194	124	114	32	9
London County ..	130	237	220	167	106	101	31	8

A feature which distinguishes London's conditions is that a greater proportion of its population lives in institutions, namely, 6.1 per cent., against 4.8 in England and Wales. More than half of it, 156,000 persons, was living in hotels, boarding houses, etc. They form only 3.6 per cent. of the population in the county, but their concentration in certain neighbourhoods raises this proportion to 25.9, 17.2, 11.7 and 10.0 per cent. in Holborn, Westminster, Paddington and Kensington respectively.

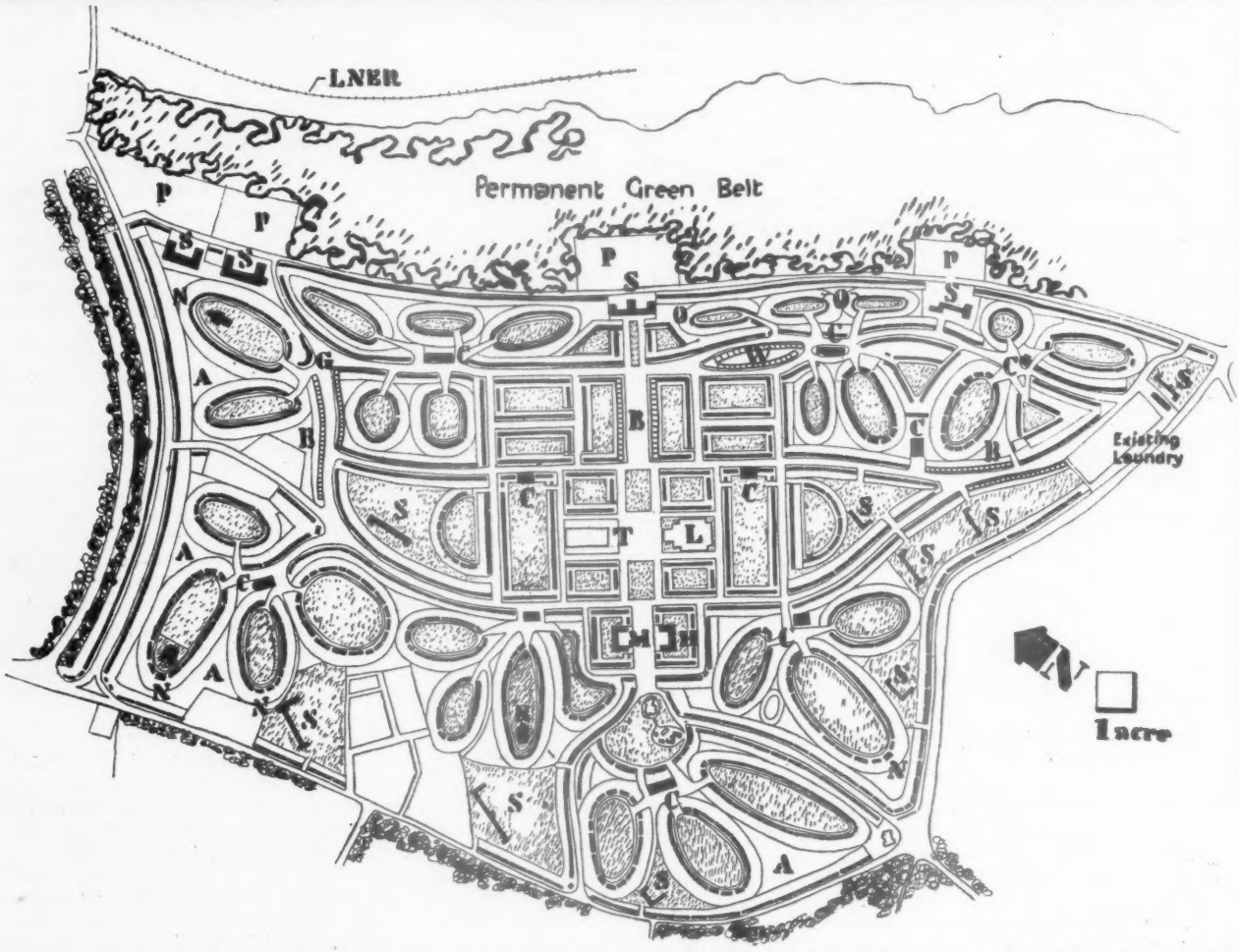
The proportion of childless households is a little higher in London. The estimated percentage of households without children under 10 in England and Wales and in London County is 65 and 68 respectively. In some of the London boroughs this proportion is much higher than the London average. I estimate that in Westminster the percentage of households without children under ten is about 75, and in Holborn even 76. These figures relate to the year 1931. Since then the proportion of childless households must have increased considerably, but the rate of increase probably varies a great deal locally. However, even before a new census will supply more exact information, it is safe to say that the claim of the Town and Country Planning Association that "at least 80 per cent." of London's "families" should be provided with houses and gardens, has little foundation in actual population facts.

conclusion

The main population fact affecting housing at the present time is age. The structure of an ageing population is characterized by a great number of small households requiring separate accommodation. The demographic approach explains the need for more dwellings for a population which has ceased to grow in size. There will be less mouths to feed, fewer bodies to clothe, and yet, at least in the immediate future, more differentiated population units to house. But this is only one side of the picture: the biological. Socio-economic forces tend to intensify this process. The need for a separate household is part of the need of individuals for self-assertion and self-expression which develops with adult life. That is why the number of households is affected by the age composition of the population. But the relation is more complicated. The amount of energy for self-assertion with which human beings are charged when coming of age is not always the same. It varies from generation to generation. Ours is particularly full of this energy. It is part of the fundamental democratization of our time. Millions of people who would not have dreamed of a separate household a generation or two ago, now experience it as a pressing need forming part of their claim for dignity and social status. That explains the otherwise surprising fact that the demand for dwellings is far greater than is suggested by the census figures. Moreover, in planning for the future, we must consider not only the needs of households already in existence, but also of potential households prevented from coming into being through lack of accommodation and bound to emerge as soon as suitable accommodation will be available to them.

What will be the shape of these households to come? Biological and social changes just reviewed give some indication, but no more. We know, for instance, that in 1931 many families were living without a household of their own, but their total number and distribution by size cannot be ascertained without a new census and a more complete tabulation of the facts recorded by the census. It cannot be doubted, however, that the number of homeless families has

greatly increased during the war by newly married couples and otherwise. We can also foresee increased demand for dwellings for the middle-aged and aged, especially if and when social security projects are put into practice. One thing we know for certain: a very great part of these potential households is of the small and smallest types, and their needs must not be overlooked. This applies even more to London, where the biological and social processes referred to have developed a step further. A good housing plan requires full mastery of the relevant population facts. This article is an attempt to indicate the lines along which research might be conducted.



Above is Sir Charles Reilly's plan for the dormitory town of Woodchurch, outside Birkenhead. It is bounded on the East by a permanent green belt, on the North by Upton Village, on the West by Arrowe Park and on the South by a permanent belt of agriculture. The site covers 347 acres. There are 2,106 houses on greens and 1,548 on roads making 3,654 in all or 10·4 houses to the acre. The following letters denote the various elements in the plan. A: allotments. B: shops. C: clubs. G: public garage. H: health centre. L: library and community centres. M: maternity and child welfare centre. N: nursery school. O: houses for aged people. P: playground. S: school. T: cinema. W: lock-up workshops. In addition to the old church, vicarage and hamlet and existing development (outlined in plan above), there are churches, a swimming pool and a dance hall. NOTE: All houses have private back gardens. Those on roads have front gardens as well.

THE REJECTED PLAN

Sir Charles Reilly's plan for the satellite dormitory town of Woodchurch has been finally turned down on strict party lines by six votes out of sixty, at a special meeting of the Birkenhead City Council, held on 22nd September. In view of the opinion of the Labour Councillors, who are solidly behind the plan, that the matter will not be finally settled until after the next municipal election, it may be of interest to recall some of the major points in the plan as described by Sir Charles Reilly. These are:

1. It provides the opportunity for a pretty full community life round the greens and squares and in the club houses for those who prefer that sort of life, say, for two-thirds of the population. The young children can play in safety in view of their mothers, for such traffic as there is round the greens is one way traffic from the single entrance. There is a nursery school at the far end of the larger ones. The young people can form cricket, tennis and football teams to play against those of other greens. Indeed, the greens should be related to the whole, much as the boarding-houses are to the public school, and should foster the team spirit in the same way. For each group of greens it will be seen there is a club-house round which they cluster. The debates and discussions in these club-houses will bear the same relation to those in the Community Centre on the main avenue. That will be the parliament of the whole, but it will also provide a theatre and opportunities for adult education. The greens and the club-houses (licensed, of course) should be run by committees of the tenants so that the latter feel they own them and will keep the cricket pitches, billiard tables and everything in order.

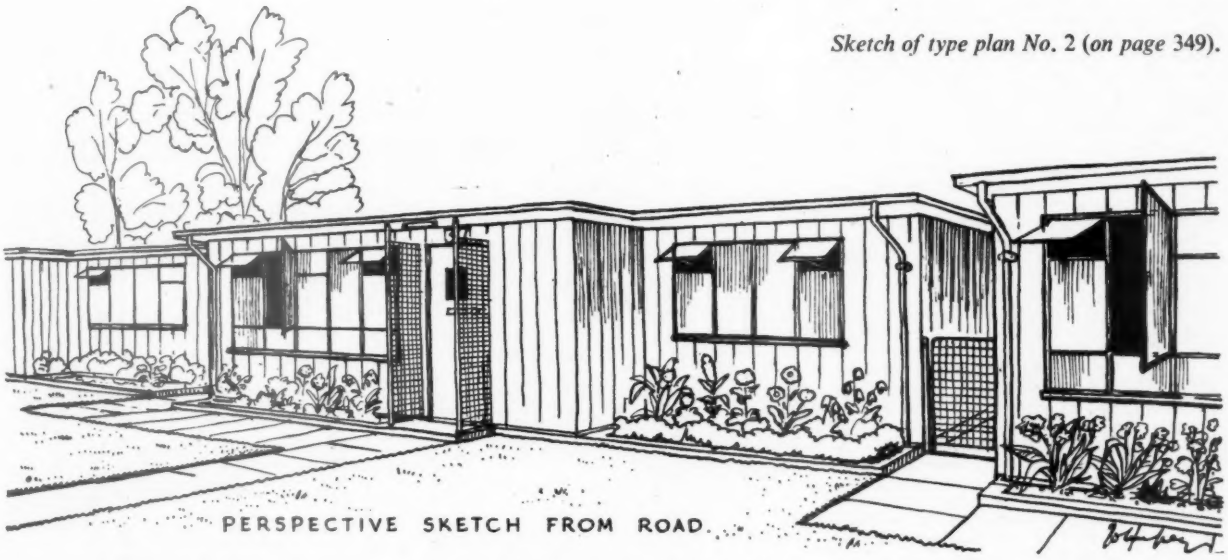
2. For those who want to keep themselves to themselves behind their little privet hedges and lead the ordinary suburban life, there are the houses on the roads, roughly a third of the whole.

3. The scheme for the town has been extended to take the estimated overspill from the whole of Birkenhead when the blitzed, blighted and slum areas have been cleared and rebuilt on more generous lines. It now reaches Arrowe Park to the South-West and to permanent open and green spaces on the other sides. Further, it is surrounded by a road with short tightly-packed terraces of houses on one side looking out across this road to the green belt. These form the modern equivalent of the city wall, only in this case guarding the country as well as the town. By such means there need be no loose edges anywhere.

4. It should be realized this little town is designed mainly for people doing hard physical labour during the daytime, such as dockers and shipbuilders. They are generally too tired after their day's work, to do justice to a large garden. For those who can, however, allotments are provided between the greens, in addition to the garden at the back of each house.

5. From the drawing it may not be clear that one can walk anywhere in any direction across the town by the footpaths between the groups of houses from green to green, or that the blocks of houses are all straight and that no curved building work is necessary. It is thought, too, that with the houses nearer together than in the ordinary suburban plan District Heating would be feasible and perhaps also the Garchy Suction System of rubbish disposal, which has been used in a block of 1,000-tenement flats at Leeds.

Sketch of type plan No. 2 (on page 349).



PERSPECTIVE SKETCH FROM ROAD.

Alternative PLANS for the PORTAL HOUSE

[*BY JOHN GREY, F.R.I.B.A.*]

AUTHORIZED AND REVISED VERSIONS

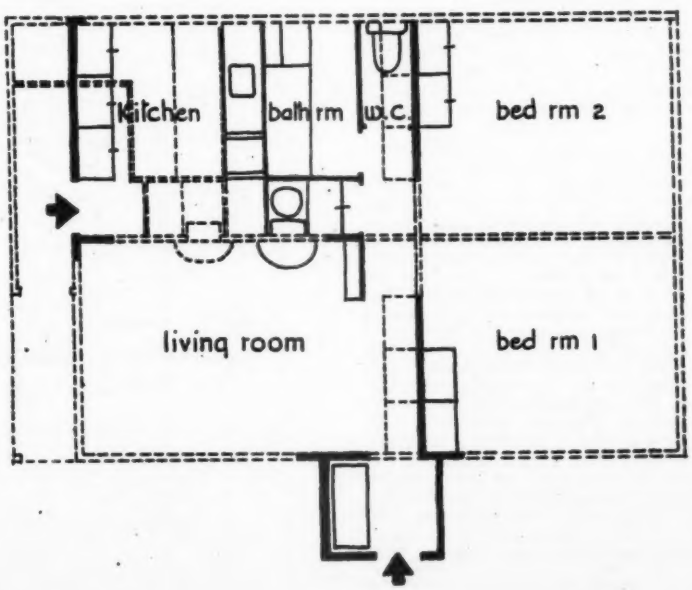
It must be nearly three years ago since the Government invited a wide range of individuals and representative bodies to make recommendations on the design and equipment of post-war housing, and much valuable information must have been collected. Later the Prime Minister announced the temporary steel house policy. The wisdom of this high level decision is not here in question: after all we seem to like canned music, drama and food, so it should be no great hardship to become a temporarily canned population. Next a plan was commissioned and produced, and this was then submitted to a never-ending series of mixed committees and continually amended to meet their every detailed criticism. At long last the "authorised version" was published to an expectant world, and still further criticism was invited and given in no uncertain terms. A "revised version" was hastily substituted, and prototype houses built, but sniping is still going on from strong pockets of resistance. No doubt every casual comment is being noted as a guide to future revisions.

This all sounds very praiseworthy and democratic, but is certainly not the way to produce a good plan which should be the solution of a definitely formulated problem. What in fact was this tremendous problem needing such prolonged and portentious consideration? It was to produce a design for a two bedroom bungalow to suit average requirements. Not, you would think, a major problem of planning if tackled in a reasonable manner. But the trouble is that the Government has been far too sensitive to criticism with the result that the original plan has by now reached a stage of dissolution, and all sense of proportion has been lost. The fact that the Famille X has survived a week or two in the house and come out smiling is of little consequence to anyone but the Press since they have had no opportunity of comparison nor are the casual comments of Mrs. Everyman after a walk round the prototype of more than superficial human interest.

Surely the proper way to tackle the problem is to do all your sounding of public opinion first, call as many committees as you can get together, and when every avenue has been explored formulate a cut and dried programme for your architect. It should then only remain for him to produce a satisfactory solution of this programme.

Although the standard of equipment is probably an advance on anything of the sort hitherto attempted this cannot make up for deficiencies in planning since it is an accepted fact among architects that good planning saves more labour than gadgets, and that modern equipment should supplement it, not take its place, still less, as in this case, tend to hamper it.

The fact is that the published plans are like a tempting example of those drawings in children's magazines entitled, "What is



PLAN No. 1 [Scale: ¼"=1'0"]

wrong with this picture?" in which the child is invited to pick out as many faults as possible. Let us walk round the plans and discover some of them. In the "authorized version" we have some initial difficulty in finding the front door which is modestly placed at the side. A pram shed sensibly provided off the hall has all entrance to it passed by meter and drying cupboards, and can only be reached by walking round the house. The conspicuous position of the w.c. entrance in relation to the front door on the other hand is bound to afford many anxious moments. There is no way from hall to living room except by way of the kitchen. Since there is no back door rubbish buckets would have to be carried out of the front door unless the housewife preferred to keep the dustbin in the hall or throw the rubbish out of the window. In fact we are offered the curious phenomenon of a front door at the side leading only to the kitchen and serving as a back door.

In this "revised version" attempts have been made to remedy these defects. A processional way or queuing space has been introduced to give emphasis to the front door, the shed has been relegated to the back garden, leaving room for the pram in the hall and the w.c. turned sideways to give a feeling of visual security.* Incidentally, the more than ample size of the entrance arrangements occupying as they do about 1/10th of the total floor, seems hardly justified in such a small house, especially now that they afford no access to the kitchen. This has been blocked by the hot water cylinder and drying cupboard in favour of a door into the living room which means three doors along the line of the fireplace and no shelter from the draught. In fact, planning circulation has given way to hot water circulation, and you can take your choice between hot water and cold feet in one plan and the reverse in the other. A french window into the garden now serves as a back door.

One of the bedrooms opens directly out of the living room, and the other, presumable the children's, out of the kitchen. Apart from cooking smells the children seem ill served in that, should they have occasion to use the w.c., or less probably the bathroom, they can only reach it by way of the kitchen, living room and hall opening four doors as they go.

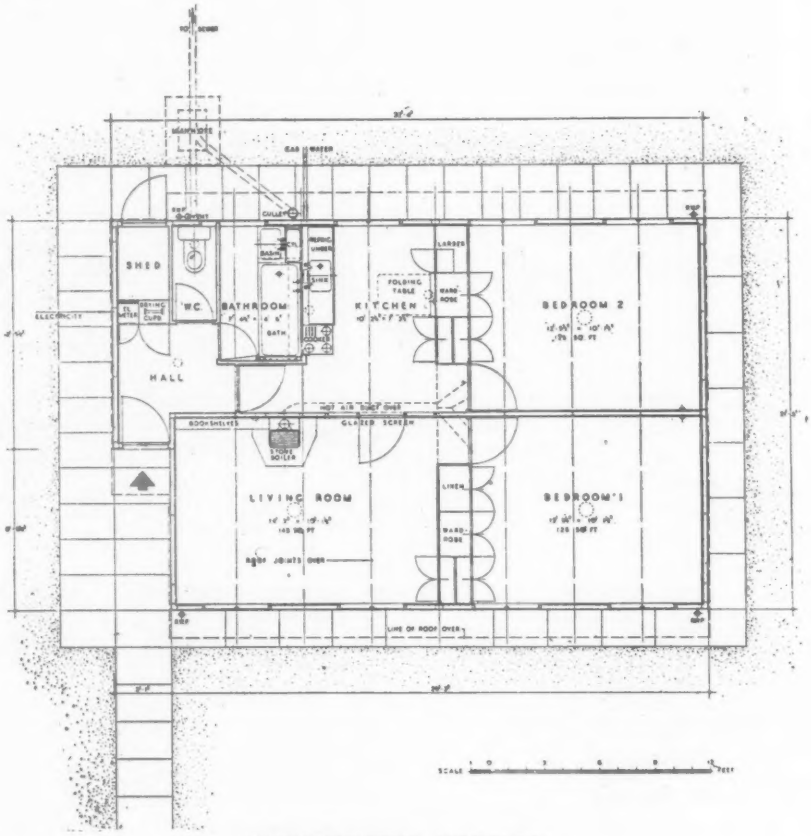
In each of the bedrooms the joints of one window are hard up against the corner of the room, leaving no wall space for a curtain, and in one case a cupboard door complicates the issue still further.

Little consideration seems to have been given to the larger questions of frontage width and aspect. As regards the latter it may have been thought that the amount of sun we may expect in ten years is not worth worrying about, nor for that matter will be the view.

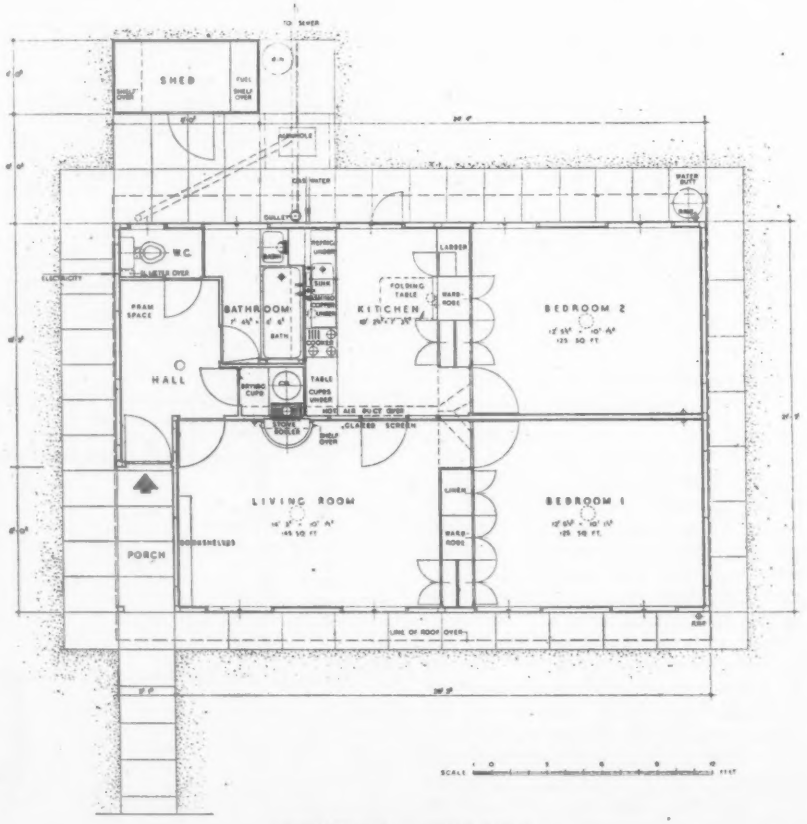
ALTERNATIVE PLANS

The official design is, appropriately enough, in the tradition of cottage planning, which consists of providing an area for living sheltered from the weather and subdivided by as few internal walls as possible. Circulation is from room to room with the minimum waste of space in passages. But if passages are eliminated the order in which the rooms are arranged becomes of primary importance. It is on this point that the official plans break down. In a small cottage of this type the accommodation falls naturally into two parts—for day and night use. Common to both are the bathroom and w.c. It would, therefore, seem logical to place them in a central position between bedrooms and living rooms. For ease of drainage and water services, the kitchen should adjoin the bathroom, and for privacy and hygiene a lobby is necessary separating the bathroom and w.c. from

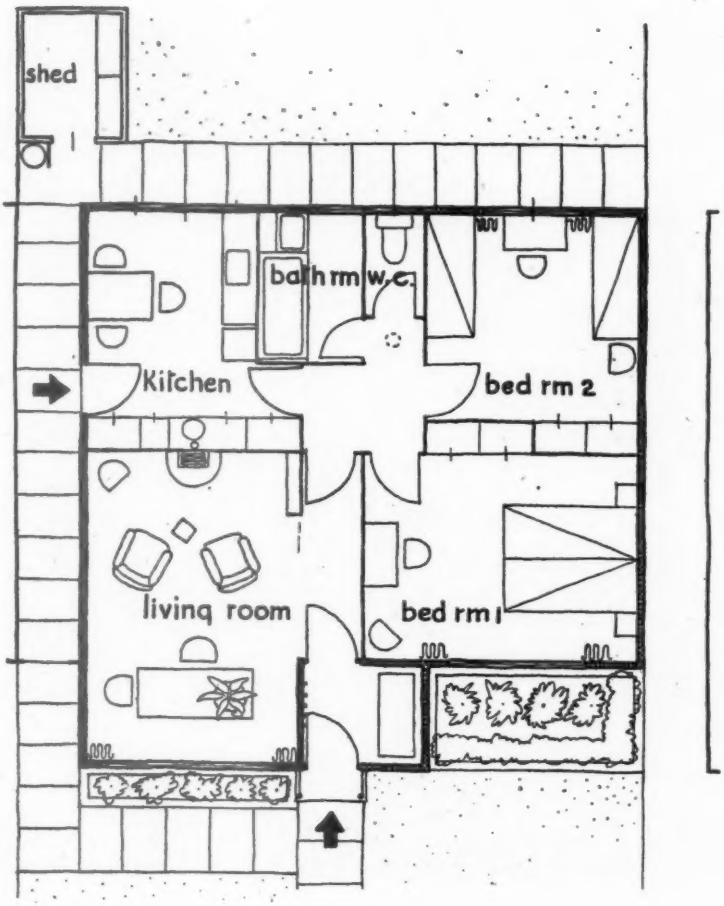
* Someone of importance must have criticized the narrowness of the bathroom to judge by the heroic efforts which have been made to gain a few inches at the business end.



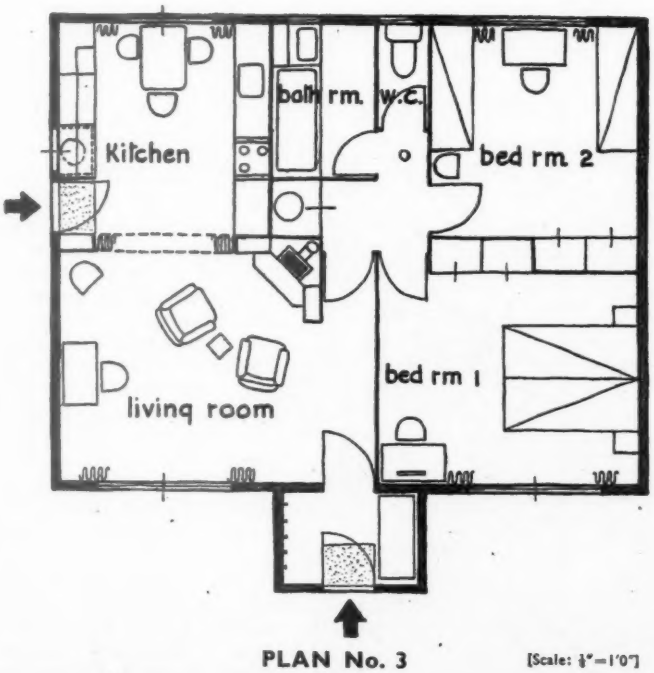
AUTHORIZED VERSION



REVISED VERSION



PLAN No. 2



PLAN No. 3 [Scale: ¼"=1'0"]

the other rooms. This general arrangement of rooms at once produces a plan with convenient circulation.

Next we have the vexed question of external access, or in other words, where to put the broad arrows. Even in the smallest house it has usually been found necessary to have two outside doors, which we loosely term front and back doors; the former for the use of family and visitors and the latter for housewife and tradesmen. The front door, being the more formal entrance by which the guests may find and enter the house, normally faces the road, while the back door, which is for all the intimate purposes of household business, is best screened from the prying eyes of neighbours and put at the back or side, preferably the latter so as not to spoil the garden.

In traditional cottage planning, as well as in the latest types of American standard prefabricated bungalows, the front door opens directly into the living room, but nowadays in this country it is usual to provide a small introductory hall or lobby large enough for hanging coats and perhaps parking a perambulator, as in fact has been done in the "revised version," though here the hall also gives on to the bathroom and w.c. The back door should open more or less directly into the kitchen.

If the above remarks be accepted, we have established the following principles as being desirable:—

(1) The plan should have the bathroom and w.c. in a central position with living rooms on one side and bedrooms on the other, the kitchen to adjoin the bathroom.

(2) The front door should be in the front or easily visible from it, and should lead by way of a small hall into the living room.

(3) The back door should be out of sight, probably at the side of the house, and should lead into the kitchen.

PLAN No 1.

A simple adaptation of the "revised version" on these lines is shown in Plan No. 1. This plan is open to criticism in detail, but the fundamental arrangement is sound and capable of any number of variations, two of which are shown in Plans Nos. 2 and 3.

PLAN No. 2.

Advantages:

(1) Narrower frontage.
(2) Central position of bath and w.c., accessible with privacy from other rooms.
(3) Convenient placing of front and back doors.
(4) Unspoilt back garden.
(5) Wider bathroom and kitchen.
(6) Shorter branch drain from w.c.
(7) Jambs of bedroom windows clear of room corners.
(8) Larger living room free from draughts round fireplace.
(9) More interesting elevation giving variety of modelling to street frontage.
(10) More privacy for bedroom 1 from front garden.

Disadvantages:

(1) Hot water circulation across corner of kitchen as in "authorised version" later revised.
(2) No view of living room from kitchen.
(3) Wider range of standard windows may complicate production.

PLAN No. 3.

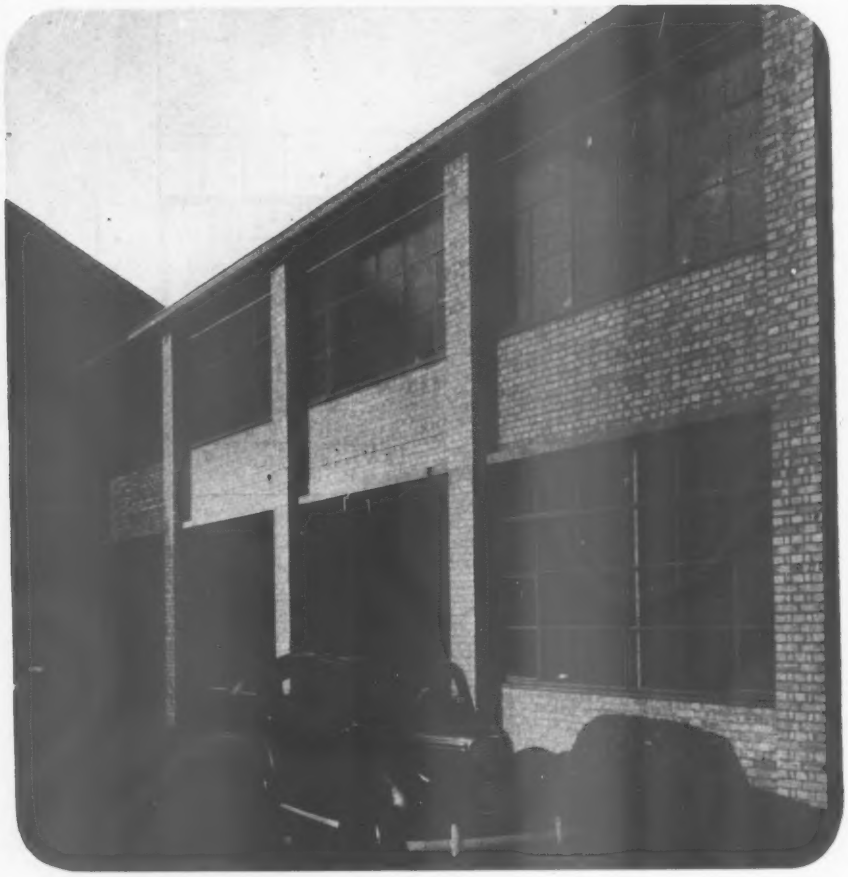
Advantages:

1, 2, 3, 4, 5, 6, 7 as in Plan No. 2.
(8) Living room and kitchen both larger and capable of being used as one room or screened off from each other.
(9) Dual aspect obtained through living area.
(10) Better view of living room from kitchen.
(11) Simple symmetrical front with porch giving chance of individuality to elevation.

Notes:

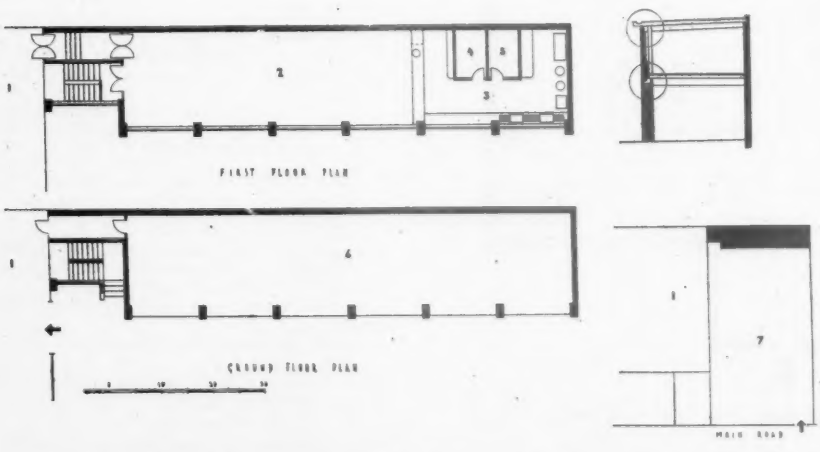
The total area of these two houses is the same as that of the official design.

Bedroom 2 (children's) is smaller than that of the official designs, but the combined area of the two bedrooms is the same.



CANTEEN

DESIGNED BY RUDOLF FRANKEL



Ground and first floor plans reproduced to a scale of $\frac{1}{32}$ of an inch to one foot. 1, *Existing factory;* 2, *canteen;* 3, *kitchen;* 4, *larder;* 5, *store;* 6, *cars;* 7, *yard.*

GENERAL—The building contains covered space for cars and lorries on the ground floor and staff canteen and kitchen on the first floor. This arrangement was chosen to establish direct approach to the first floor of the existing factory, where most of the employees are working, and to maintain the full size of the yard as car park and loading space. Part of the ground floor was later enclosed for use as repair shop.

CONSTRUCTION—Walls are 14in. brickwork and the piers are arranged to allow wide openings in the ground floor and maximum light for the canteen. Precast reinforced concrete construction is used for floors and roof. They, as well as all beams, stairs and cornices, were manufactured and delivered to the

site ready for assembly. The gutter is incorporated in the reinforced concrete cornice.

INTERNAL FINISH—The concrete floor of the canteen is covered with brown corbulin. Walls and ceiling are distempered in ivory and the counter is erected in glazed bricks. The steel furniture is enamelled in light blue. The black-out curtains are dark blue and the windows are painted on both sides in battleship grey. Ministry of Information posters are arranged along the rear wall. The central heating is connected with the installation of the factory and ventilation is provided for larder and store.

Above and right, two views in the canteen.

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

1659 *Australian Regional Planning*

THE GEOGRAPHICAL BASIS OF GOVERNMENT. Specially applied to New South Wales. *J. Macdonald Holmes, Ph.D., Professor of Geography, University of Sydney.* (*Angus and Robertson, Sydney*, 1944.) Advantages to rural Australia of regional planning approach. Removal of artificial barriers. Research on region in New South Wales.

The purpose of this book is to show that the regional approach forms an opportunity to establish in rural Australia all the social and cultural facilities characteristic of its capital cities. "The idea of regional Planning is the co-ordination of the resources and the activities of an area for better administration, more successful achievement, a better standard of living both cultural and material and for political and personal harmony. In general, physical planning of resources usually cannot be done effectively for the nation as a whole, since the area is too large and lacks homogeneity."

Australia is divided into States. The boundaries of these States were fixed without proper geographical knowledge, and therefore latitude and longitude lines were mainly used. The States are further subdivided into counties, shires and municipalities with entirely arbitrary boundaries.

The author suggests dividing the country into regions on a common principle, to remove all artificial barriers to natural units and further to have a reasonable scale map to represent these regional units and their combinations. In determining the boundaries of the regions the author stresses both the importance of natural phenomena which are distributed according to well-defined laws and also the changing imprint of human affairs. "A natural region in itself without people is of little significance, and the history of a nation is the history of its battles to obtain a living from its resources, and there is imprinted over the land a record in farms, roads, bridges and towns."

This book contains information about the research on a regional sub-division of New South Wales, undertaken over the last fourteen years by the University School of Geography in Sydney. It was carried out by field methods and by statistical plotting of information supplied from official sources. Each region was visited and a cross-section of the population was questioned.

The sizes of the regions are based upon the following factors: geographical distribution of resources, the attractive power of a large municipality and its shopping facilities and social amenities, the range of advantages of saleyards and business houses, of ambulance and hospital services, and the general community of interest in common problems under the historic growth of settlement.

Based on these investigations New South Wales was sub-divided into 48 regions, which are described in detail in the second part of the book.

MATERIALS

1660 MOW *Post-war Building Study*

THE PAINTING OF BUILDINGS. *The Ministry of Works Post-War Building Studies, No. 5. By a Committee convened by the Paint Research Association.* (*HMSO*, 1*s*.) General nature of paints. Preparation of surfaces. Recommendations for painting. Types of paint recommended for use. Painting of buildings during the immediate post-war period.

The terms of reference of the Committee were as follows:—"To review practice in paint manufacture and in painting technique in the most general terms.

To study such problems as arise out of this review, and to supervise research as may be desirable and necessary.

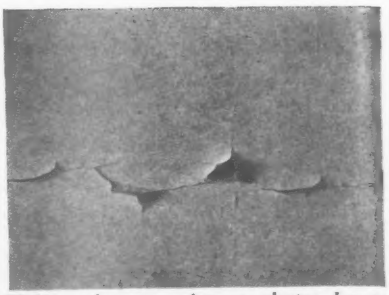
To report and make recommendations on:

1. Improvements in practice (*a*) with a view to simplification to meet essential needs during the first three years of peace, and (*b*) generally.
2. Decorative, protective, and other technical properties of paint products.
3. Specifications as may be necessary to give effect to the above requirements and to meet both general and special needs in building.
4. A suggestion for a scheme of official certification for quality in paint products."

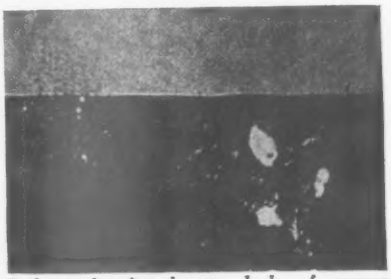
Sound painting is an essential form of protection for many materials used in building. Immediately after the war there will be an urgent demand for the painting of buildings, both for the reparation of existing buildings and the protection and decoration of new ones, coupled with acute shortage of many of the necessary materials. The various products of the modern paint industry involve the use of some three hundred raw materials, many of which will be in short supply and some almost unobtainable. Economy in the use of paint will therefore be necessary. This economy must not be attempted by using inferior paint; it can only be attained by raising the standard of intelligent application.

The use of paint of outstanding durability results in actual economy, regardless of the increased first cost. Since labour is responsible for some 60 to 80 per cent. of the cost of painting work and availability of labour will be a serious problem in the post-war period, the use of paints with a short life involving high maintenance cost must be avoided.

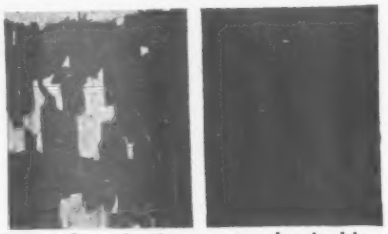
The report gives a survey of the general nature and properties of paints used in the building industry. Particular attention is devoted to the preparation of surfaces, the importance of which cannot be overesti-



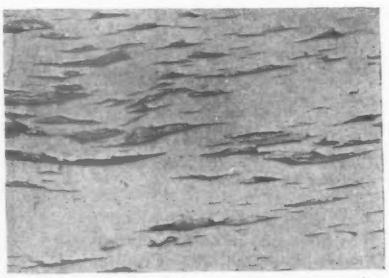
Flaking of water paint on plaster due to inadequate preparation of surface.



Failure of paint due to lack of proper treatment of knots before painting.



Left, failure of paint on new galvanized iron due to application without previous treatment. Right, result from proper adhesion due to treatment of surface before painting.



Cracking and flaking of paint after weathering, necessitating complete removal of paint before repainting.

Cracking of paint on interior work, due to improper sequence of coats, necessitating removal before repainting. The illustrations are from The Painting of Buildings. (*See No.* 1660.)

CASTLEACRE PRIORY, NEAR KING'S LYNN

From a Mezzotint Engraving by Leonard R. Squirrell, R.E., R.W.S.

IN its original form, this monastic church must have been a magnificent example of Norman architecture at its best. The massive walls and piers are faced with finely cut stone which has suffered little from centuries of exposure, but wherever the filling of flint stones has been exposed to rain, the saturation and frost have caused its destruction. Portland cement, when used for concrete or renderings, is made impervious by the addition of 'PUDLO' Brand waterproofer and, in consequence, is immune from frost attack besides giving complete protection against dampness and flood. Specifications, well proved by successful use, are available free for the asking.

PUDLO

BRAND
CEMENT WATERPROOFER

KERNER-GREENWOOD & COMPANY, LIMITED
ANN'S PLACE, KING'S LYNN

Sole Proprietors and Manufacturers

The word 'PUDLO' is the Registered Trade Brand of Kerner-Greenwood & Co., Ltd., by whom all articles bearing that Brand are manufactured or guaranteed

mated. Detailed recommendations are given both for exterior and interior painting, applied on new and old surfaces respectively. The descriptions of types of paint recommended for use are kept in general terms and not intended to be regarded as specifications. Many of the types are covered by one of the specifications issued by the British Standards Institute, a complete list of which is added in an appendix. Many of the paints which should be used when conditions become stabilized are not available and substitutes will have to be used during the immediate post-war period. How soon these substitutes can be dispensed with will depend on the import of a large number of raw materials to which the highest degree of priority should be given. For the period of transition it is suggested that economy should be exercised in the use of paints, *e.g.*, by restricting the number of coats applied.

The report stresses the importance of proper craftsmanship, and makes a suggestion for a scheme of official certification for quality in paint products.

A series of practical instructions are included in appendices; one of them contains a summary of common causes of paint failure.

1661 MOW *Post-war Building Study*

NON-FERROUS METALS. *Ministry of Works Post-War Building Studies, No.* 13. *By a Committee convened by the British Non-Ferrous Metals Research Association.* (*HMSO*, 1s.) Properties. Specific uses. Recommendations and suggestions for future investigations.

The terms of reference of the Committee were as follow:

"To review practice in the use of non-ferrous metals in building construction, with particular reference to (*a*) the most suitable application of the various metals and alloys involved; (*b*) the purposes for which the available materials may be employed, bearing in mind the possibility of shortage in certain directions. To make recommendations for further research as may arise in considering the above."

The following are the chief metals and alloys which are considered in the report:

Aluminium and its alloys.
Copper, brass, bronze, gunmetal.
Lead and its alloys.
Magnesium and its alloys.
Nickel, Monel, nickel silver, etc.
Stainless steel.
Zinc and its alloys (including galvanized iron and steel).

The report is divided into three parts.

Part I contains the properties of the materials; a list of compositions and available specifications is given in Appendix I.

Part II deals with the specific uses of the materials. They are particularly suitable for pipes (water, waste, vent, soil and gas pipes, electrical conduits), tanks (both cold and hot-water), boilers; sinks, baths and wash-hand basins; fittings; roofing, flashings and weatherings; gutters and other rainwater goods; damp courses.

Aluminium and stainless steel may also be used for structural purposes. In designing structures in light alloys the engineer must be familiar with the differences in properties between them and the more conventional materials. Some of these are discussed in detail in Appendix III. Other properties of interest to the structural engineer, such as thermal expansion and conductivity, are given in Appendix II.

The non-ferrous metals and stainless steel find a very extensive and varied application in buildings as semi-structural and decorative components. Many applications are in sheet form (wall facings, doors, metal trim), many in forms such as die-castings, hot stampings and extruded sections.

The use of aluminium foil for heat insulation is a most important application of this metal.

The report suggests that after the war the skilled labour, available for example in the aircraft industry, should be employed in the mass production of selected building units and prefabricated housing assemblies. On the conclusion of hostilities ample supplies of non-ferrous metals will be available. Most of these have particular advantages for unit construction (plumbing assemblies, roofing units, partitions and wall panels, window and door assemblies, kitchen and bathroom units).

Part III includes a summary of the main uses of the metals and of the techniques, materials and finishes, and recommendations for the revision or extension of present standards and for further trials and research.

Non-ferrous metals (including stainless steel) offer a combination of corrosion resistance and mechanical properties which render them quite exceptional among the materials available. Permanence and low maintenance cost are primary requirements in building construction, and the non-ferrous metals, which can so readily be worked and built up to the forms required, and which are competitive with other materials in cost, should be used more widely than at present because of their attractive appearance and long life.

HEATING and Ventilation

1662 *Ventilation Fire Hazards*

FIRE HAZARDS OF AIR CONDITIONING SYSTEMS. *J. A. Neale* (*Heating, Piping and Air Conditioning, June*, 1944, *p.* 358.) Suggestions for reducing fire risks in ventilation and air-conditioning systems.

The suggestions for reducing fire risk include:—

(i) Frequent cleaning of the system to remove dust and other accumulations of combustible matter; and frequent cleaning and renewal of air filters.

(ii) Use of incombustible material for ducts, insulation and filters, as far as practicable.

(iii) Do not use joist channels or roof or underfloor spaces as ducts or plenum chambers, as a fire in the system then involves the structure as well.

(iv) Provision of fire shutters in ducts where they pass through fireproof walls or floors.

(v) On outbreak of fire, first shut off fan, then subdivide system by the fire doors, and finally extinguish the fire.

1663 *Attic Fan*

SOME EFFECTS OF ATTIC FAN OPERATION ON COMFORT. *W. A. Hinton and W. G. Wanaker* (*Heating, Piping and Air Conditioning, May*, 1944, *p.* 298.) Copious ventilation at night as aid to summer comfort.

When cool night air was drawn through a single-storey frame house, at a rate of about 45 air-changes per hour, the inside air temperature was reduced to within 2° F. of the outdoor air temperature. Air velocities of 18 to 169 ft./min. were observed. The mean wall temperature was approximately 1° F. above the inside air temperature. Comfortable temperatures were obtained early in the evening, about 7 to 8.30 p.m. (3 or 4 hours after starting the fan). It was estimated that the use of the fan reduced the "effective temperature" from about 80° F. to about 73° F.

1664 *Ventilation Code*

FOUNDRYMEN'S GROUP APPROVES CODE RECOMMENDING VENTILATION PRACTICE. (*Heating, Piping and Air Conditioning, May*, 1944, *p.* 293.) Extracts from Section V (Ventilation) of a code of recommended practice for the foundry industry, suggested by American Foundrymen's Association.

1665 *Air Conditioning Systems*

DESCRIPTION AND PERFORMANCE OF TWO HEAT PUMP AIR CONDITIONING SYSTEMS. *P. Sporn and E. R. Ambrose.* (*Heating, Piping and Air Conditioning, June*, 1944, *p.* 377.) Description of two year-round air conditioning systems, one using well water, and other atmospheric air with auxiliary water as sources of heat. The water system appeared to be the more satisfactory.

The authors conclude that, properly designed and installed, the heat pump is even now a practical device for all-electric air conditioning.

1666 *Air Disinfection*

AIR DISINFECTION IN VENTILATION. *W. F. Wells* (*Heating, Piping and Air Conditioning, June*, 1944, *p.* 365.) Review of theories developed and progress in study of respiratory contagion and control of airborne infection.

The studies indicate that air-disinfection by the use of ultra-violet radiation, disinfectants such as hypochlorites, or aerosols, such as hexyl-resorcinal in propylene glycol, can reconcile the demand for minimum fresh air intake with the growing demand for "sanitary" ventilation in the prevention and control of airborne infection. Many references are given.

1667 *Zonal Heating*

ZONAL HEAT DISTRIBUTION AS A STEP TOWARDS DISTRICT HEATING. *J. L. Musgrave* (*Journal of the Institution of Heating and Ventilating Engineers, May/June*, 1944, *p.* 42.) Advantages of district heating in zones according to requirements such as density, industry. Examples given.

The author suggests that cities and towns should be zoned, and each zone marked for special treatment as regards the utility services such as electricity, gas, water, heating and hot water supply, according to the density of population, dwellings, industries, etc.

The easiest problem is that of areas of substantial damage. A zone boiler house for heating and hot water supply distribution, conveniently situated for connection to district heating mains when installed, should be provided. Zone heating avoids the construction of individual boiler house, chimney and plant in each building, and would aid smoke-abatement. Electricity, gas and fuel oil could also be used as forms of district heating. As an example of zone heating, a residential area of 370,000 sq. yd. in London is considered. The heating and hot water supply load amounts to 700 therms per hour. The simplest method would be distribution of high pressure hot water from the central

source to calorifiers in each block, to provide a limited hot water supply and background heating in the buildings.

The importance of thermal insulation of the buildings themselves is stressed, but the author considered that insulation of the distribution pipes would not be necessary. In the following discussion, other speakers queried this.

The author notes the advantages of low temperature panel heating—in particular the low temperature (80-90° F.) of the circulating water. Some advantages of electrical panel warming for large buildings are also discussed.

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.*

1668 **Registration**

Q *Prior to the war I studied architecture for four years, but got no further than the Testimonies of Study stage for the Intermediate Examination of the RIBA, chiefly owing to a lack of interest in history. Being rather mathematically minded, I found that my interests lay more with modern design and structural engineering.*

During this time I became what might be termed a part-time architect. I undertook work for many people, surveying and laying out several housing estates in Exeter and Sidmouth and preparing plans for well over a hundred buildings. All these plans were submitted to the Local Authorities under my own name.

*With reference to Q.*1397 *in your issue of March 2 this year. For the purpose of registration, could it be said that I was in practice? If this is so, what possibility is there of my application for registration being accepted by ARCUK? I might add that I am a good draughtsman, having a sound knowledge of the construction and design of many types of building and for the last four years I have been serving on RE Works Service as an Architectural Draughtsman.*

A Six architects supporting your application will have to sign certificates in the following form, and even so your application will have to be supported by a majority at a meeting of the Admission Committee.

Certificate.

I hereby certify that I have known Mr. ..... personally for ..... years and that I am satisfied that he had been in *bona fide* practice for not less than ..... years as an architect prior to July 29, 1938. I understand that the term "practising as an architect" means that he was carrying on his profession as an architect and as a means of livelihood.

Dated ..... Signed .....

1669 **Competitions**

Q *Is it legal for architectural assistants to compete in Architectural Competitions, when the Promoters—to quote the conditions of entry—". . . invite* architects *to submit designs for, etc."?*

A The position is a little obscure, as no person can call himself an architect unless registered as such, but, at the same time, it is not usually the promoters' intention to bar achitectural assistants. We would advise you to write to the promoters stating your position, and asking their permission to enter.

SOCIETIES AND INSTITUTIONS

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

TCPA

J. Charrington

September 21, at 2, Savoy Hill, W.C.2. Lunch-time meeting of the Town and Country Planning Association. Talk on THE PLACE OF SOLID FUEL IN TOWN AND COUNTRY PLANNING, by John Charrington, Vice-president of the Coal Utilization Joint Council. Chairman: W. H. Gaunt, C.B.E.

J. Charrington: As regards the future location of industry, the so-called heavy industries, whose coal bill is a high proportion of their total manufacturing costs, will probably, as in the past, be situated in areas near collieries and coke ovens, so that transport charges may be kept at the minimum. But in considering this matter, the important bearing of cheap transport by sea should be kept in mind. As an example of this, it is of interest to note that whilst it cost about 13s. to bring a ton of coal from Nottingham to London by rail in 1939, coal could be brought from the Tyne, the Firth of Forth, or South Wales to the Thames in 3/4,000-ton ships for about 2s. 6d. a ton. Intermediate types of industry, in which the fuel cost, though appreciable, is not so proportionately heavy, can be situated away from existing industrial areas and established within easy reach of new satellite towns. Industries of a still lighter type may be considered fully mobile and offer practically unlimited scope for the ingenuity of town and country planning authorities.

Smoke Emission and Amenities

There is no necessity for industry to spoil the amenities of any district by the emission of smoke; which only means that a plant is being inefficiently handled and that coal is being wasted. In large plants, such as central electricity generating stations, the quantities of coal consumed make any wastage a serious matter, and in consequence adequate means are taken to secure complete combustion; moreover, smoke, grit and sulphur are practically eliminated by flue-gas washing. Even in smaller plants a very great deal can be accomplished by proper combustion and the appropriate use of instruments for measurement and control, as had been largely effected in the London area before war broke out.

All this can be effected without the necessity for further restrictive legislation. What is important is that technical education should be encouraged so that the operators can effectively control these processes at all times. Equally, the coal salesman ought to be in a position to give technical advice and assistance wherever the need arises. The coal industry is planning to provide these facilities as part of its services to the industrial consumer.

The Domestic Fire

For domestic purposes there is a definite tendency—evident in almost every report and questionnaire—in favour of the coal fire; and this is not an unreasonable whim but has been endorsed by no less an authority than Lord Horder. The open fire should be preserved as a healthful accessory for home comfort. The problem has been to improve its effectiveness and convenience.

For sheer economy the coal fire can meet every challenge as a single-room heating unit. A modern grate avoids many of the disadvantages of the older types, and with the grates evolved as the result of recent research, efficiency leaps up and further very important advantages are gained. Coal consumption is lowered; ashes need not be removed oftener than once a week; and smoke emission can be reduced to the point at which it is practically invisible.

Central Heating

For central heating of buildings no competitor can approach solid fuel in respect of running costs. Modern firing methods secure complete and smokeless combustion, automatic control, and the avoidance of dust and dirt in the handling of the fuel and ash. Enclosed hopper feeds and suitable ashing arrangements enable modern heating appliances to be run with a minimum of attention, in some cases for a period of days; the overall efficiency reaching as high as 80 per cent. Similar advances have been made in cooking appliances.

Storage

The importance of adequate storage in the homes of the future cannot be over emphasized. The tendency for more and more people to live in flats and small dwellings, with totally inadequate solid fuel storage, was, before the war, making the coal merchant's job increasingly difficult; and if efficient and economical deliveries are to be assured there should be space for not less than one ton, and preferably to hold two types of fuel. Repeated deliveries of very small quantities increase the coal merchant's costs, with the result that a higher price for this method has to be charged. There need be no fear that the poorer members of the public cannot afford to store a ton or 30 cwts. of coal in the summer, for the system of payment by weekly instalments against a substantial

order is already in existence and could no doubt be greatly extended.

Conclusion

There is no mistaking the place that solid fuel must assume in post-war housing. Colliery owners, coal distributors and appliance makers are thoroughly alive to their responsibilities in this matter. They are collaborating actively and are jointly and continuously engaged in research work, some of which has already borne valuable fruit, and are fully prepared to give planning authorities all possible assistance in regard to the more effective use of coal, so that the standard of heat comfort in the difficult climate of these Islands shall leave nothing to be desired.

RIBA

New Members

As Associate (1).—*(Overseas)*: Emary, John Elliott, B.A.Arch. (Aliwal North, South Africa).

As Hon. Fellow (1).—Munnings, Alfred James (Dedham, Essex).

As Fellows (6).—Crabtree, William, Dip. Arch. (Liverpool) (Tadworth, Surrey); Piggott, John Robert (Lt.-Col. R.E.) (Stoke-on-Trent); Sheppard, Richard (London); Wilkie, David Archibald (London). *(Overseas)*: Hall, Alexander Sergeant (Melbourne, Australia); Weerasinghe, Oliver, A.M.T.P.I., Dip. Arch. (Liverpool) (Colombo, Ceylon).

As Associates (8).—Blair, Robert Capper, B.Arch (Liverpool) (University of Liverpool (Stoke-on-Trent); Brendon, Arthur Geoffrey Cunningham (Yelverton, S. Devon); Carroll, Leo Mary, B.Arch. (N.U.I.) (University College, Dublin) (Dublin); Firth, James Ronald (Bristol); Pickard, Miss Nora Frances, Dip. Arch. (Leeds) (Leeds School of Architecture) (Skipton, Yorks); Tilley, Michael Floyd (Banbury, Oxon) *(Overseas)*: Lyon, Eric Donald (Melbourne, Australia); Martin, Douglas Edward Barry, B.Arch. (University College, Auckland, New Zealand) (Wellington, New Zealand).

As Licentiates (18).—Burgess, Cecil Gurney (Wrexham); Cargill, Arthur Forbes (Dumfries); Cooper, Eric Peter Wellburn, M.A. (Cantab.) (London); Devine, Edward Allison (Newcastle-upon-Tyne); Dyer, Herbert Hugh Rolfe (Hastings); Halliwell, Norman (Blackpool); Jones, Norman Lewis (Dolgelley); Kemp, Arthur Sydney (St. Austell, Cornwall); Knight, Horace Athelstane Woulfe (London); McNab, Robert (Glasgow); Marshall, Donald Plaskett (Seven Kings, Essex); Ord, Victor (Gateshead); Riley, Harold Frank (Birkenhead, Cheshire); Rushton, Henry Theodore (London); Secrett, Michael John Frederick (London); Whittaker, Clifford (Stoke-on-Trent); Wort, William Alfred, P.A.S.I. (London); Wraith, Captain George, R.E. (Doncaster, Yorks).

TRADE NOTES

A full-size kitchen with flexible units, which can be built into any combination, was manufactured and shown at the Lincoln Civic Survey and Housing Exhibition by Messrs. Newsum & Sons, Ltd., joinery manufacturers, in collaboration with the city engineer and surveyor, Mr. A. Addington. Sixteen units combine into fifty different arrangements to equip new kitchens or re-equip old ones. The cupboard units, finished in pale blue cellulose, have detachable shelves, with runners for space adjustment, and the flat draining board, with ample working space, has grooves which gradually deepen towards the sink. The Newsum Tradesman's hatch accommodates the delivery of three kinds of perishable goods most common to householders in normal times; bread, meat and milk. Each hatch door is fitted with a locking device so that it cannot be opened once the tradesman has inserted goods until the housewife has opened the hatch door in the kitchen. Insulated against heat and sun when in an exposed position, the hatch has removable stainless steel shelves. Built into the wall of the model kitchen is an EJMA window, which has improved framing with light sections to give the fullest vision and guaranteed weatherproof tightness. This type of window has been approved by the Ministry of Works, and is now being made into a British standard.

ANNOUNCEMENTS

Mr. Robert Grant, B.Sc., M.Inst.C.E., who has been manager of the Scottish office of Goerge Wimpey & Co., Ltd., since 1936, has been elected a Director of the company. He will remain at the Edinburgh office in control of the company's work in Scotland and the North of England. The company has already carried out a great variety of work under his management in that area, including reservoirs, jetties, wharves, railway works, factories, roads, aerodromes, and housing schemes.

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: 75 EATON PLACE, LONDON, S.W.1. TEL.: SLOANE 5615. 991

COUNTY BOROUGH OF WALLASEY.

SENIOR PLANNING ASSISTANT—BOROUGH ENGINEER'S DEPARTMENT.

Applications for the above post, with copies of three recent testimonials endorsed "Planning Assistant," are invited before the 14th November, 1944, from persons experienced in Town Planning.

Commencing salary in accordance with qualifications and experience. Grade £300 to £425, plus bonus (at present £49 10s. p.a.). Candidates possessing suitable engineering, surveying or architectural qualifications preferred.

Please state age, qualifications and experience, and position regarding National Service.

EMRYS EVANS,
Town Clerk.

Town Hall, Wallasey. 858

ARCHITECTURAL ASSISTANT, PERMANENT, REQUIRED BY THE COUNTY BOROUGH OF TYNEMOUTH.

Candidates must have been born before 1923, and be Members of the Royal Institute of British Architects, and have had practical experience in general municipal works.

Salary: £375 to £420 per annum, plus cost of living bonus. £49 8s. per annum.

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

Applicants should write quoting EA.866XA to the Ministry of Labour and National Service, Room 432, Alexandra House, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 18th November, 1944. 850

TOWN PLANNING ASSISTANTS (4), PERMANENT, REQUIRED BY THE COUNTY COUNCIL OF THE COUNTY OF LANARK.

Candidates must have been born before 1923, and must be either A.M.I.C.E., A.M.I.M. & Cy.E., A.R.I.B.A. or P.A.S.I., preference being given to those with qualifications or experience in Town Planning.

Salary £350 p.a. by £25 to £400 p.a., plus cost of living bonus £49 8s. p.a. Commencing salary to be determined by qualifications and experience.

The appointments are terminable by one month's notice on either side, and subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937, the successful candidates being required to pass a medical examination.

Applicants should write quoting F.1151 XA to the Ministry of Labour and National Service, Room 432, Alexandra House, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 21st November, 1944. 359

WESTMORLAND COUNTY COUNCIL.

COUNTY ARCHITECT.

Applications are invited for appointment to the post of COUNTY ARCHITECT.

The salary for the post, which is a new one, will be £750—£25—£800 per annum, plus war bonus.

The County Architect will be responsible for new construction under the Council's post-war programmes, including the building of new schools, and for the maintenance of existing Council property.

Preference will be given, other things being equal, to applicants serving or having served in H.M. Forces.

Details of the appointment and forms of application may be obtained from me, and applications must reach me not later than 31st January, 1945.

H. B. GREENWOOD,
Clerk to the County Council.

County Hall, Kendal.
23rd October, 1944. 838

Architectural Appointments Vacant

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

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.

ARCHITECTURAL ASSISTANT required in London Office. Write, stating age, experience and salary required, to Box 841.

QUALIFIED ARCHITECT and Quantity Surveyor required; car driver; £400 per annum. Box 844.

SMALL progressive office near Kingston requires capable Assistant, with interest in contemporary architecture. Box 851.

JUNIOR ASSISTANT required, with some experience of specification writing; R.I.B.A. intermediate standard preferred. Box 843.

HOUSE ARCHITECT required by important West End firm; must have complete knowledge of London Building Acts. Box 846.

ARCHITECT'S competent Junior Assistant required at once for Office in the Midlands; permanency. Apply, stating age, salary, and previous experience, to Box 852.

RESIDENT ARCHITECT to large multiple concern in Yorkshire requires the services of one capable Senior and one Junior Architectural Assistant; reply, giving age, experience, and salary required. Box 853.

ARCHITECTURAL DRAUGHTSMAN. — Senior Assistant required; with good pre-war experience of factory, commercial and hospital work, construction and details; permanency considered for right applicant; state age and qualifications. Box 854.

ARCHITECTS' DRAUGHTSMAN required for London firm temporarily evacuated to Maidenhead; good salary and prospects to suitable applicant. Apply, stating age, qualifications, experience, and salary required to Box 836.

ARCHITECT wanted to take charge of Drawing Office in Edinburgh; must be able to supervise staff; preferably with housing experience; aptitude for detail work required for standardized units an advantage; good salary and prospects for the right man; house could be provided if necessary. Box 185, Robertson & Scott, Edinburgh, 2. 856

JUNIOR ARCHITECTURAL ASSISTANT required in Midlands Office; Intermediate R.I.B.A. standard; must be capable draughtsman; able to prepare working drawings and details from sketch schemes, under supervision; also make measured surveys of existing buildings; must be free from liability for National Service. State age, experience, and salary required to Box 840.

Architectural Appointments Wanted

Architectural Assistants and Students seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice.

ARCHITECT, residing Maidstone, Kent, desires spare time work on Sketch Plans and Working Drawings. Box 386.

ARCHITECT, qualified, will assist in layouts and detail drawings for housing etc.; spare time work. Box 384.

ARCHITECTURAL and Surveying Assistant (age 22), Inter, R.I.B.A. 1942, seeks responsible post in Architectural, Surveying or Town Planning Office. Box 381.

YOUTH (17), general school certificate, at present attending architectural evening classes, desires position in an Architect's Office. Cooper, 23, Abbotsbury Gardens, Pinner. 387

TWO Assistants, one A.R.I.B.A., offer to undertake measured surveys, London or near to London. Write 40, Harvest Bank Road, West Wickham, Kent, or 45, Westbury Avenue, Wood Green, N.22. 385

YOUTH (16), previous office experience, attending architectural and building courses, desires appointment with Architect and Surveyor in Birmingham district. R. E. Roberts, 90, Cient Road, Quinton, Birmingham. 383

REGISTERED ARCHITECT, L.R.I.B.A. (age 39), desires permanent, progressive position; licensed houses, factories, hospitals, housing estates, post-war planning, quantity surveying, etc.; salary by arrangement. Box 382.

A.R.I.B.A., Dip. Arch., invalided out of H.M. Forces, wishes to contact busy Architect, with a view to assisting in the preparation of working drawings, details, perspectives, etc., in his own home; excellent and quick draughtsman; 1st class constructionalist. Write BM/ZTYJ, W.C.1. 380

Other Appointments Vacant

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

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