It's no part of our business to draw up a blue print of post-war building plans, but it's already obvious that, as a building medium, Brick will be as popular as ever. As manufacturers of Brick-making and Briquetting plant for over 50 years, we're glad to place our experience at the disposal of people who make bricks or are interested in doing so. The experts in our advisory department can help you select the best machinery for your particular purpose, and to supply full information regarding brick making procedure.

Our "Emperor" Presses are made in various sizes capable of producing 1,200 *to* 2,400 *bricks per hour and of exerting pressure from* 100 *to* 200 *tons. They produce high quality bricks of various types, including:*

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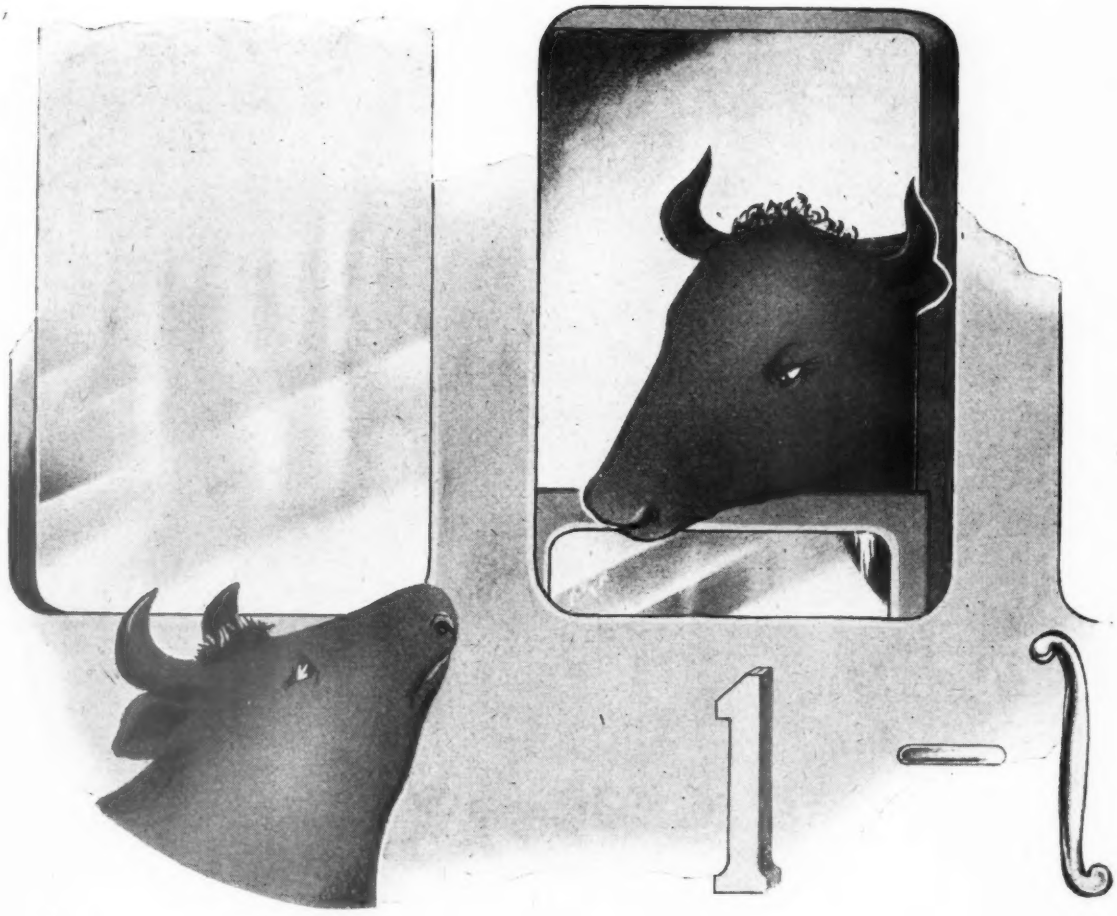

"Off to Brighton, old boy?"
"No, Connolly's, old man!"

"Just been elected! Pretty good show, what! Dashed nice of them, really, considering how exclusive they are an' all that! But, of course, family's everything—did you know my people?"

Connolly
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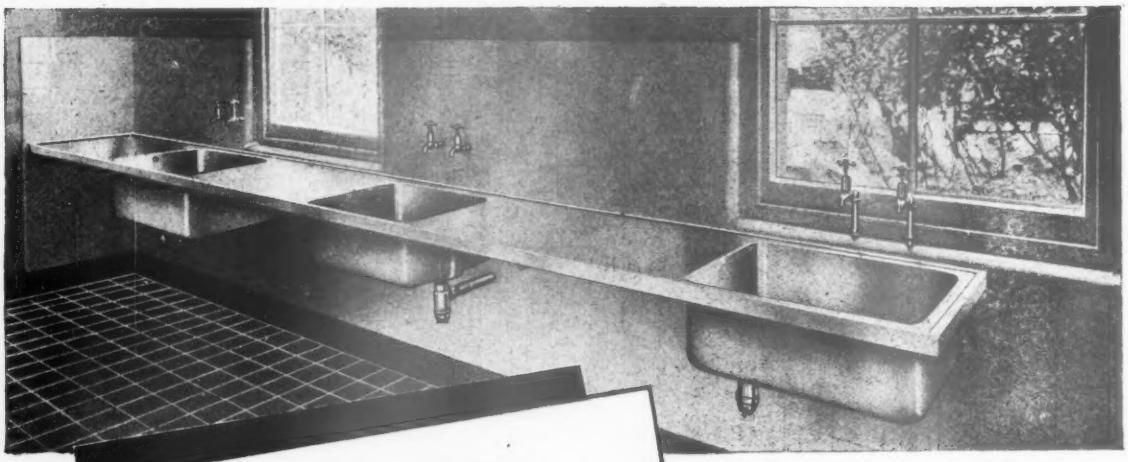
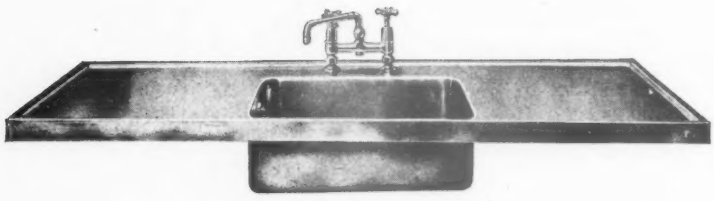
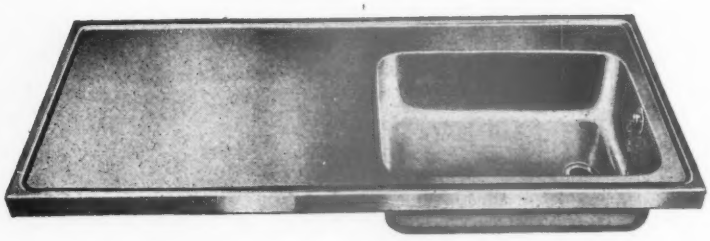


PLAND PRODUCTS FOR POST-WAR BUILDING SCHEMES





The hygiene factor alone is more than sufficient to commend Pland Stainless Steel Sinks for incorporation in post-war planning. But hygiene is only one of their salient features, for they are artistically designed, and present a sheer gleaming beauty which cannot fail to attract the eye of the most ardent critic. They save labour, because the simple wiping down with a cloth is the only procedure necessary to keep them brilliant and germ-free . . . rustless, non-contaminable . . . a fitting finish to any building where sinks will be used. When stainless steel is decontrolled, we shall be waiting to serve you.

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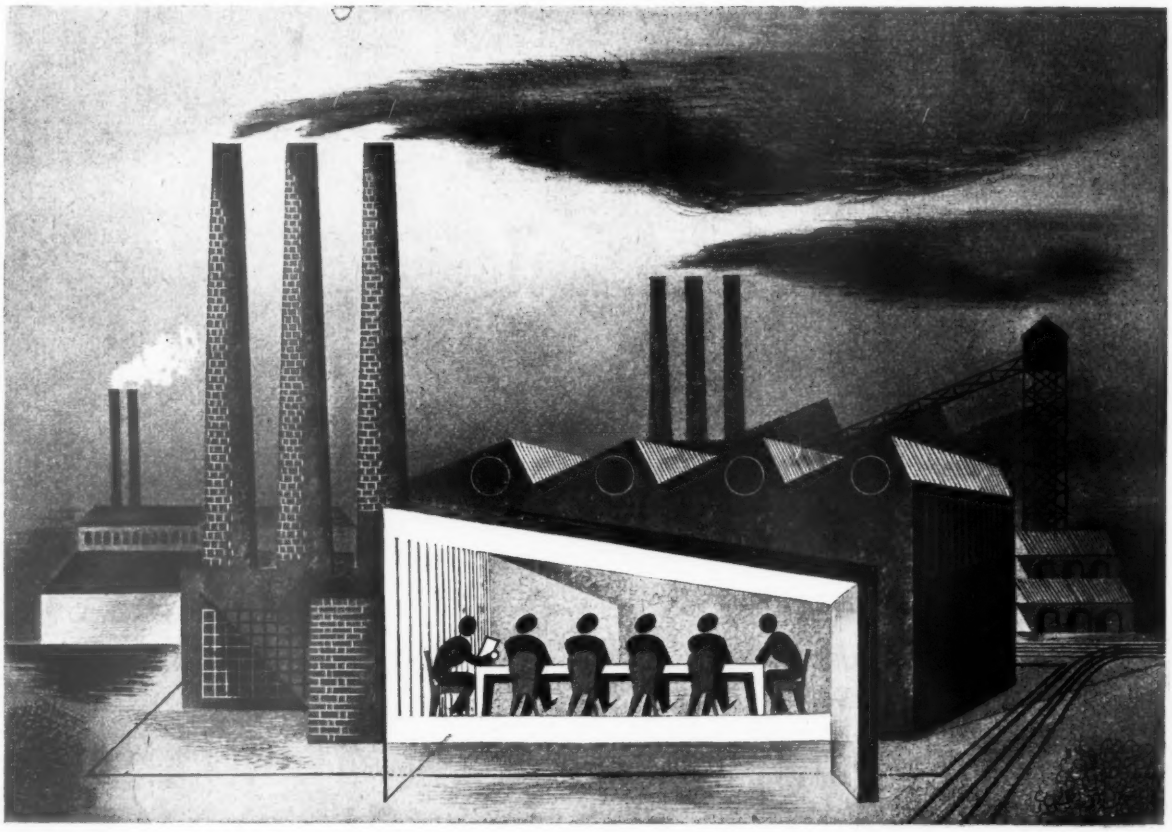

The switch-over in factories for peace-time output

A suggestion your industrialist clients will welcome

Owners and managers of factories will be discussing with their architects the replanning of their premises for peace-time needs. In most cases conversions will be needed; in not a few, extensions. Now is the opportunity to consider, for instance, making the factory less costly in fuel consumption, and not quite so dependent on ample fuel supplies (for restrictions will certainly continue). Celotex insulating board is the obvious choice, for it will provide the thermal insulation necessary to maintain equable temperatures. A valuable point also where offices are concerned, is the effective sound insulation value of Celotex. Specify Celotex for your industrialist clients for ceiling and wall linings and internal partitions in all factory developments.

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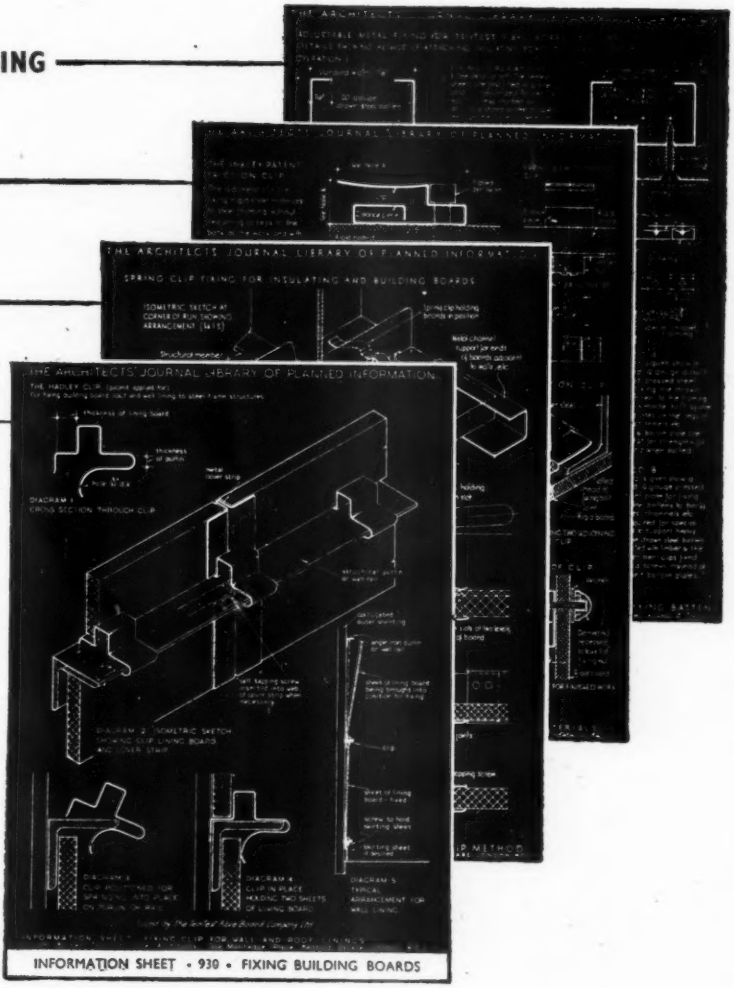

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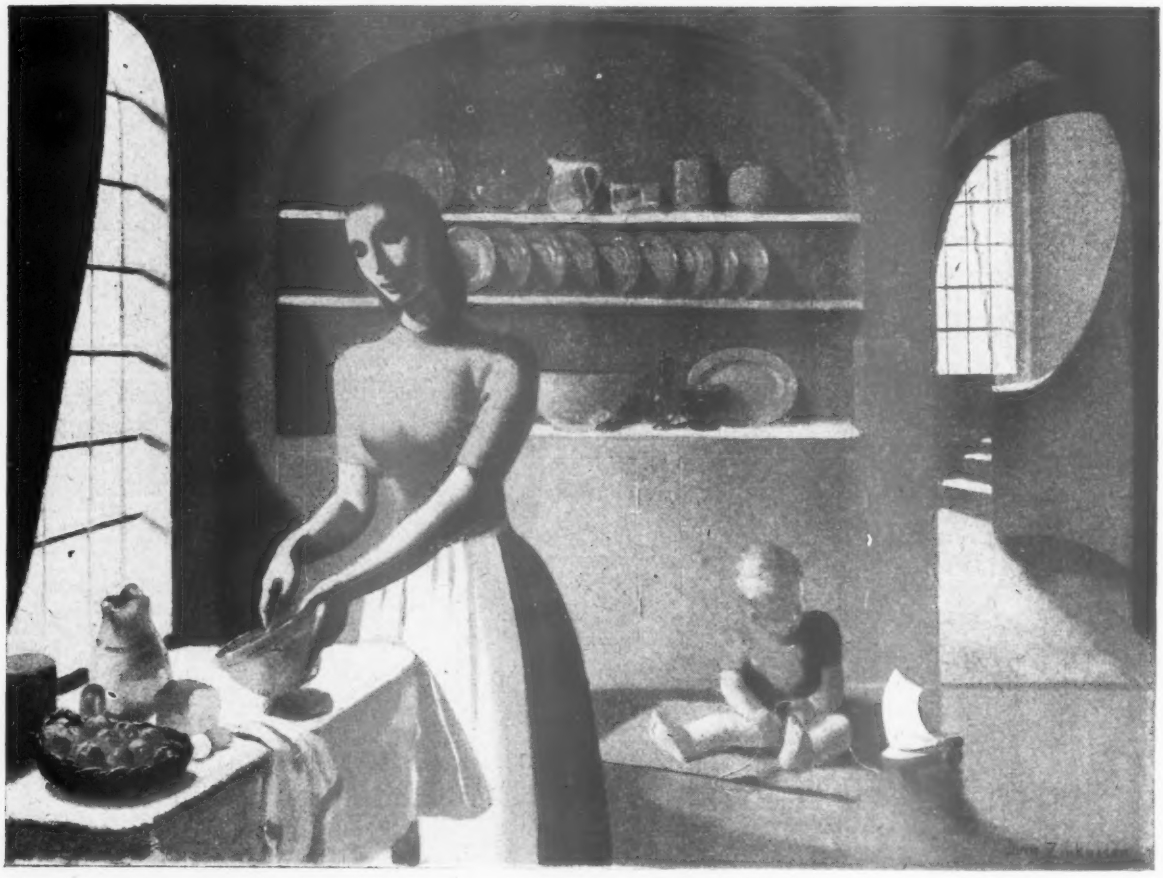
The New Horizon . . 7



Original Painting by Doris Zinkeisen

"That Freedom shall not perish from this earth."
ABRAHAM LINCOLN.

The vision of a new horizon is latent in the heart of every free born individual throughout the world. Without a complete faith in the power of liberty to transform such dreams into reality, no life would be worth living.

This is the force that can mould human destiny in a world rich with opportunity.

Of the many desires within a man's heart, none occupies a more important place than the home. With each it has a different meaning but for all it signifies peace, security and freedom of thought. There is immense scope for harmony and individuality in the gracious new homes which must be built for the welfare of their occupants. Whatever their size or location all can make use of the many varieties of steel, including the stainless varieties to procure efficient hygiene. Both directly and indirectly the many products of the industry will contribute much towards the shaping of the home. In doing so, with all the means that science can command, we shall be fulfilling a two-fold purpose ; that of providing continuity of work, and of advancing those better conditions of living so ardently desired by all free peoples.

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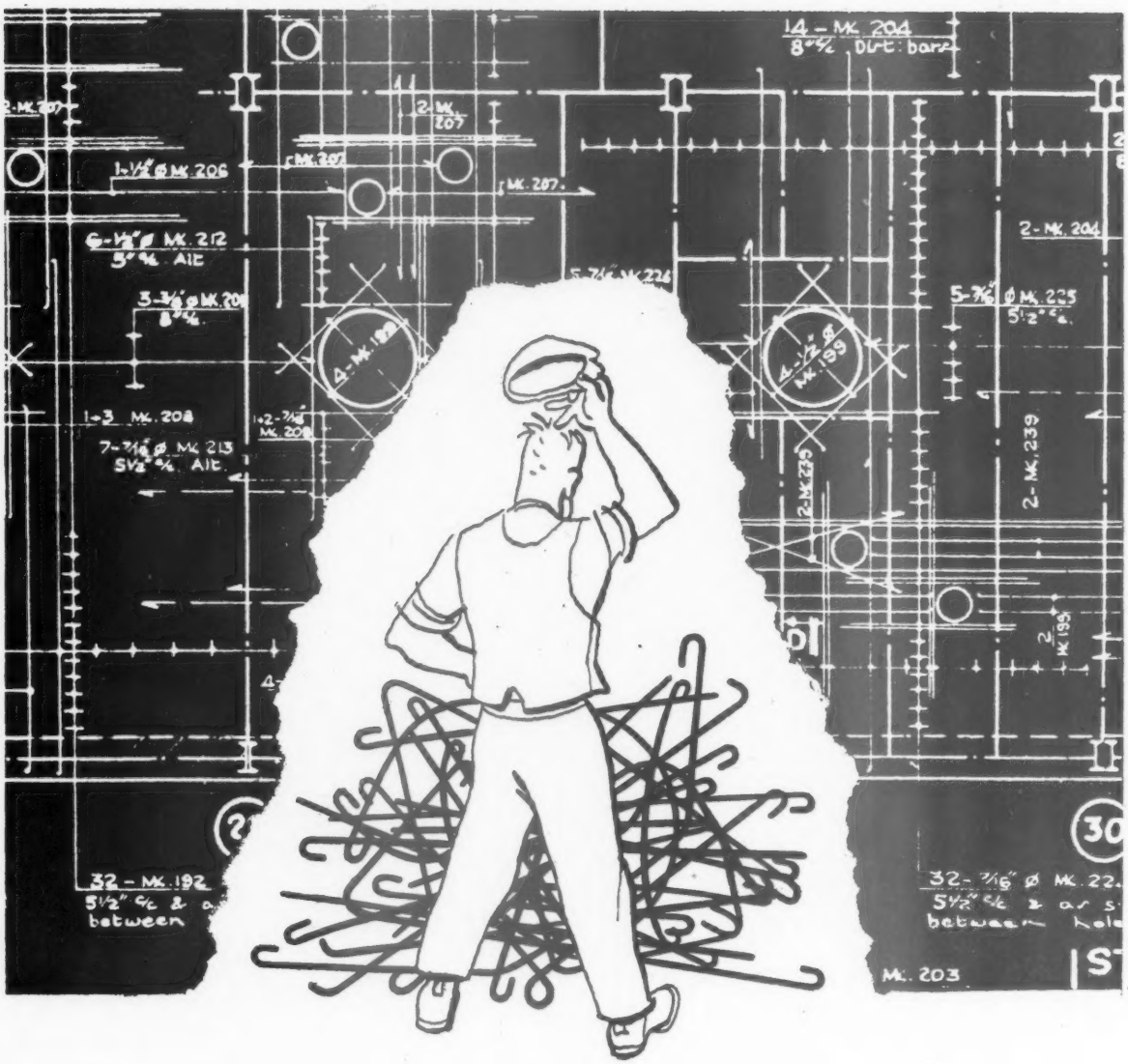

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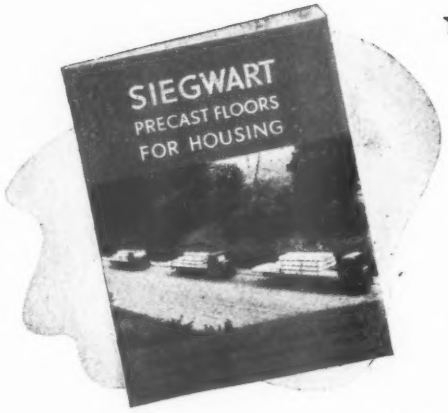
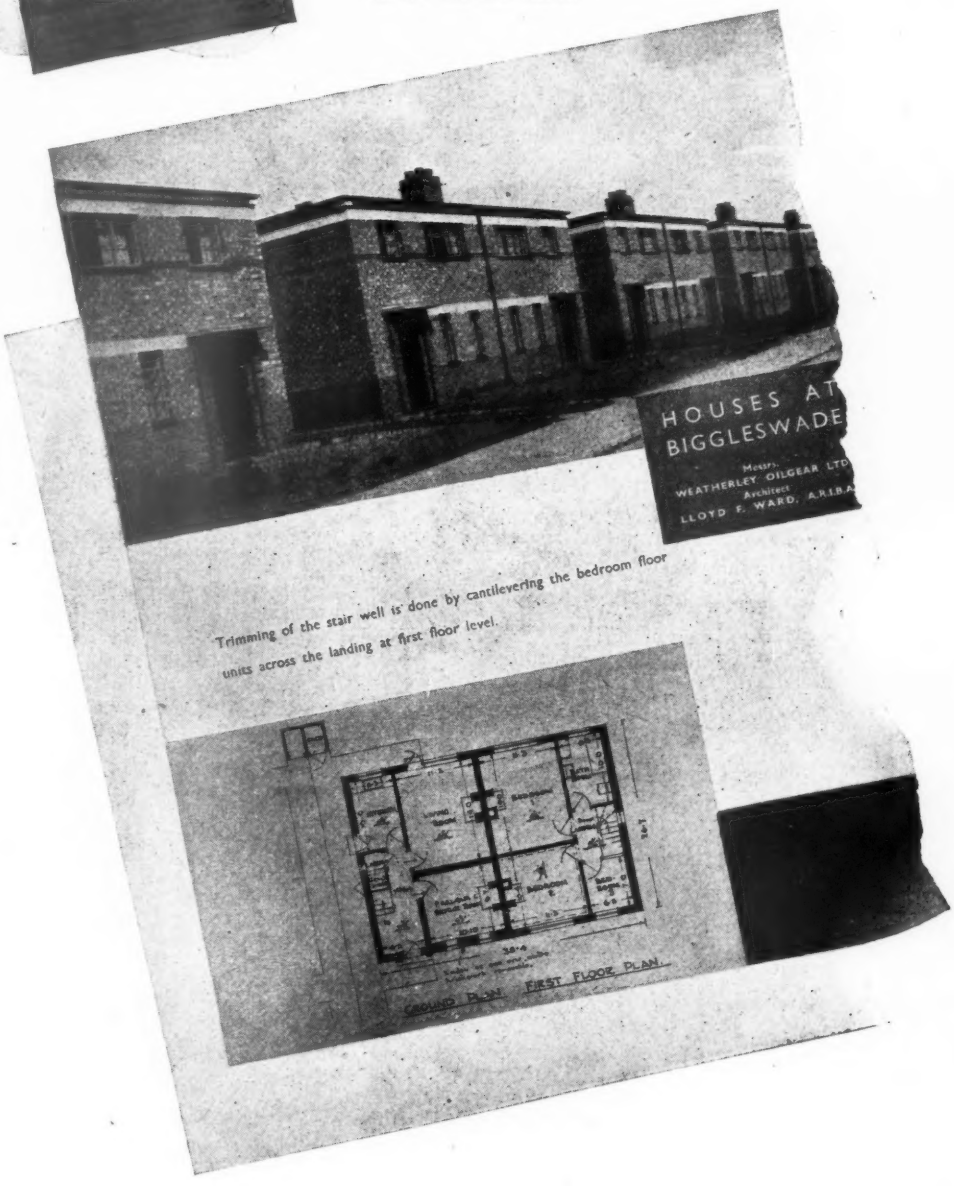


★PAGE 4 FROM THE NEW **SIEGWART** HOUSING BOOKLET

This is a new booklet illustrating the Siegwart precast floor system applied to housing. It contains typical plans showing the arrangement of Siegwart precast units in floors and flat roofs with photographs of fixing work in progress and of completed schemes. Technical details are drawn to large scale.

It is available to all interested in the Siegwart system but to comply with current restrictions it is necessary to send a 1d. stamp to the address below.



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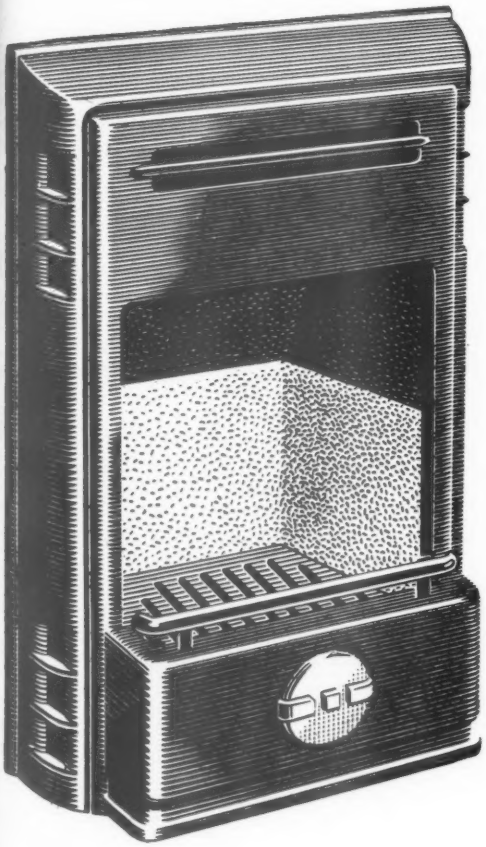
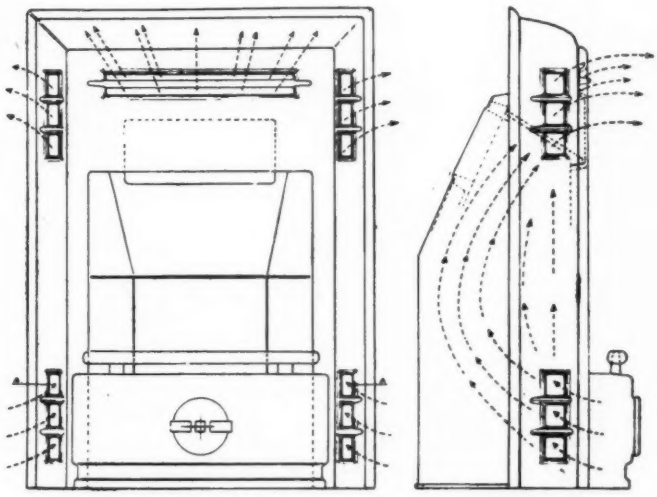
NEW-FASHIONED VISIBLE HEAT

EXAMPLE

A.I "PROJECTOR" HEATING UNIT

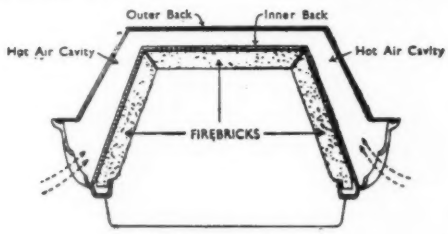


SPECIFICATION: This is a self-contained interior grate, with double casing, which gives warmth on the convection principle. By carefully arranged air inlets in the sides and top of the unit, the heat from the fire is projected over the whole area of the room. The path of this heated air is indicated by dotted lines in the accompanying diagrams.



FRONT ELEVATION

SIDE ELEVATION



SECTIONAL PLAN A.A.
with bottom grate & fret removed

SIZES : Overall sizes : 25½" high x 18½" wide x 12" fire. Minimum size of existing fire opening required : 22" high x 16" wide. Clearance from underside of projecting lintel (if any) over fire opening to level of hearth must be at least 26".

FINISHES : Ebony black or coloured vitreous enamel, or "Alisheen" de Luxe enamel.

ADVANTAGES : The unit can be fitted to most existing fireplaces. It gives more heat per unit of fuel, and cuts down fuel consumption by approximately 40% over the ordinary coal fire.

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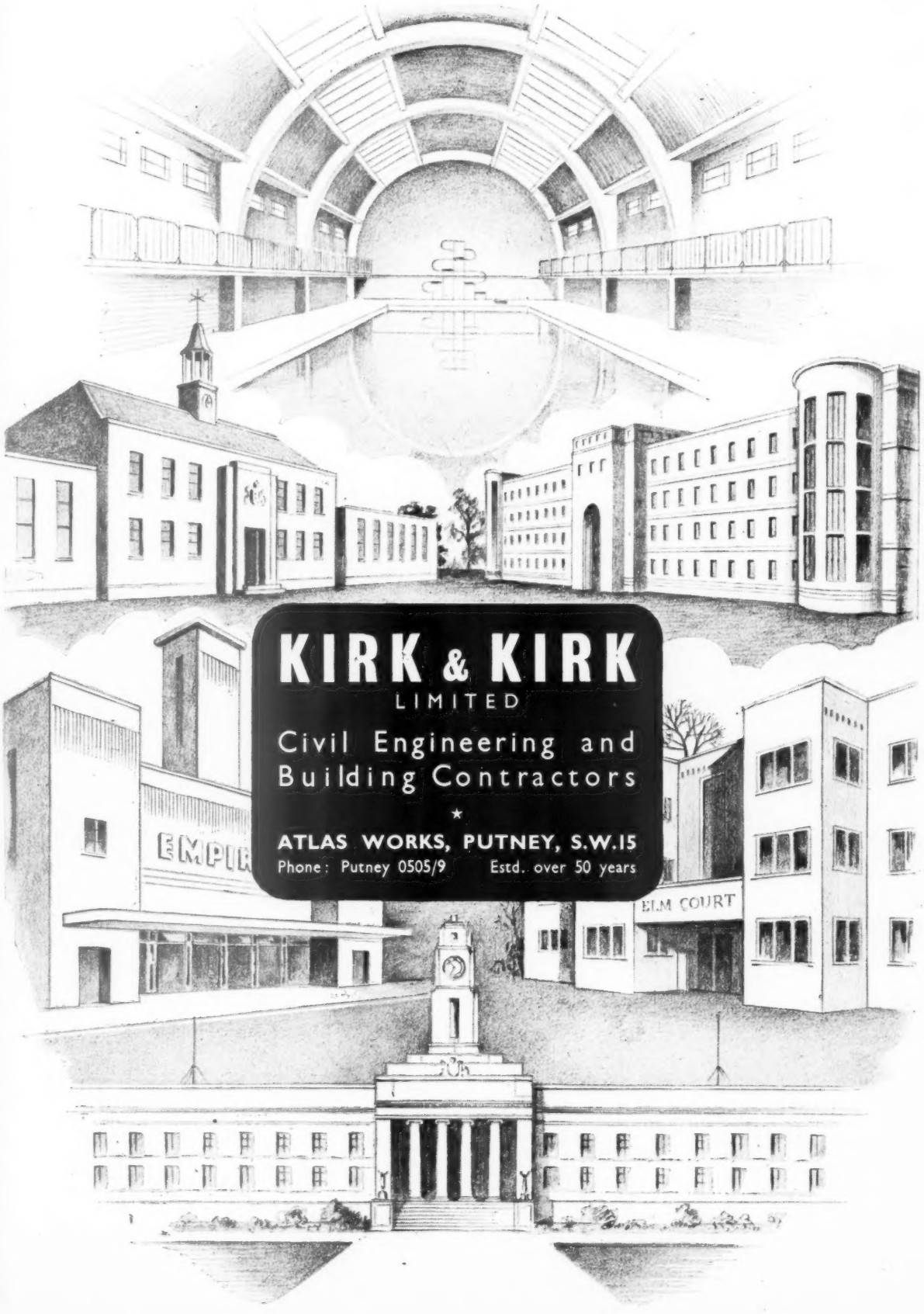
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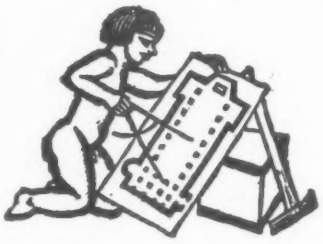


DIARY FOR JANUARY FEBRUARY AND MARCH

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first.

BIRMINGHAM. *When We Build Again.* Exhibition. At George Dixon Grammar School, Edgbaston, Birmingham. (Sponsor, TCPA). JAN. 18-21

CHESHUNT. *When We Build Again.* Exhibition. (Sponsor, TCPA). FEB. 28-MAR. 10

CROSBY, LIVERPOOL. *The English Town: Its Continuity and Development.* (Sponsor, TCPA). JAN. 18-31

LICHFIELD. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). The Town and Country Planning Association is holding a Conference on the last day of the Exhibition. Speaker, F. J. Osborn. FEB. 12-17

LONDON. *Applications of Electricity to Water Supply.* Discussion. At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE). 5.30 p.m. JAN. 22

S. R. Raffety. *Rural Water Supplies.* At the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. (Sponsor, Institution of Civil Engineers). 5.30 p.m. JAN. 23

TVA Documentary Film. At a joint meeting of the Town Planning Institute and the Institution of Civil Engineers. At the Institution of Civil Engineers, Great George Street, S.W.1. 6 p.m. JAN. 25

National Federation of Building Trades Employers Luncheon. At the Connaught Rooms. Chairman, J. G. Gray, the President. Guest of honour, Ernest Bevin, M.P., Minister of Labour and National Service. JAN. 25

G. Pierce Clingan, City Building Surveyor, Liverpool. *National Building Regulations.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, Royal Society of Arts). 1.45 p.m. JAN. 31

H. M. Webb. *Reconstruction under the Town and Country Planning Act, 1944.* At Caxton Hall, Caxton Street, S.W.1. (Sponsor, TPI). 6 p.m. FEB. 1

Percy Smith, Master of the Faculty of Royal Designers for Industry. *Beauty in Sign Painting and Civic Lettering.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. FEB. 7

H. S. Goodhart-Rendel. *The Work of the late Sir Edwin Lutyens.* At 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. FEB. 13

Wing-Commander T. R. Cave-Browne-Cave. *Camouflage for the Concealment of Civil Factories.* (Francis Cobb Lecture). At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 5.30 p.m. FEB. 14

F. N. Sparkes and A. F. Smith. *The Concrete Road; a Review of Present-day Knowledge and Practice.* At the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. (Sponsor, Institution of Civil Engineers). 5.30 p.m. FEB. 27

Professor E. P. Stebbing. *Erosion and Water Supplies.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. FEB. 28

F. Longstreth Thompson. *An Outline Plan for a Region.* At Caxton Hall, Caxton Street, S.W.1. (Sponsor, TPI). 6 p.m. MAR. 1

National Housing and Town Planning Conference. At the Central Hall, Westminster, London, S.W.1. The Conference will consider some of the more important problems confronting local authorities in post-war reconstruction in England and Wales, and will be similar in character to the conference held in Westminster in October, 1943. Ladies are specially invited. The Minister of Health (Mr. H. U. Willink) will address the Conference on March 2, and it is hoped that the Minister of Town and Country Planning (Mr. W. S. Morrison) will find it possible to address the conference on March 1. Following is the preliminary programme:—March 1: Chairman, Alderman P. J. M. Turner, J.P. (Sheffield), Chairman of the National Housing and Town Planning Council. General Subject: *Planning for Post-War Reconstruction.* March 2: Chairman, M. Lindsay Taylor, Town Clerk of Southall, Middlesex, and Vice-Chairman of the National Housing and Town Planning Council. General Subject: *Housing the Nation.* MAR. 1-2

MALVERN. *When We Build Again.* Exhibition and Film. (Sponsor, TCPA, in collaboration with Messrs. Cadbury Bros.). *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). Town and Country Planning Association Conference, Mar. 17. MAR. 10-19

MIRFIELD, YORKS. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). FEB. 25-MAR. 9

SHEFFIELD. J. Noel Wood, General Manager and Engineer, Sheffield Corporation Waterworks. *Some Aspects of Water Supply.* At the Council Chamber, Town Hall, Sheffield. (Sponsor, RSI). 10.30 a.m. JAN. 27

STOCKTON. *When We Build Again.* Exhibition. At the Gas Showrooms, Stockton. (Sponsor, TCPA). FEB. 1-14

NEWS

THURSDAY, JANUARY 18, 1945
No. 2608 VOL. 101

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.

★

The Council of the RIBA has decided to include the FORCES PRELIMINARY EXAMINATION in the list of examinations recognized for the Probationership of the RIBA.

The Forces Preliminary Examination has been instituted by the Education authorities of the Forces to enable men and women who will still be in the Forces to gain a certificate of general education. With regard to demobilization and post-war employment, RIBA Index—Questionnaires A and B, the RIBA state: All Members, and Probationers of the RIBA are reminded that if they have not already done so, they should complete their copies of Questionnaire A and/or B, and return one copy as soon as possible to the RIBA.

The Institution of Civil Engineers is to form an AIR TRANSPORT Division.

In view of the importance which Civil Air Transport will assume after the war, the Council of the Institution of Civil Engineers has decided to form a sixth Engineering Division to be known as the Air Transport Division, to deal with such aspects of Air Transport as airports (land and sea), airfields, operational buildings and facilities, hangars, and signalling and other appliances in connection with safety in flying. Until such time as a fully-constituted Divisional Board has been elected, Mr. M. G. J. McHaffie has been appointed Chairman of a provisional Board.

EDITORIAL NOTE

This issue of the Journal is similar in character to the New Year issue of last year, when a new form was adopted, the most noticeable difference to former issues being the lack of illustrations and descriptions of the buildings of the year. Again, there have been very few to illustrate, since most new building has been for war purposes and cannot for security reasons be published at the present time. There is however, another reason. This double number is intended, as was last year's, to be a useful reference to, and index of, both the year's events and of the year's developments in planning and housing for the future and in general building technique. It is designed particularly with the object of keeping architects now in the forces *au fait* with what has been happening during 1944.

★

On his retirement from the honorary secretaryship of the South Wales Institute of Architects, a PRESENTATION TO IVOR P. JONES was made at Cardiff.

Mr. Ivor P. Jones, A.R.I.B.A., has been honorary Secretary since 1921. Mr. Ernest Morgan, of Swansea, President of the South Wales Institute, presided, and referred to the fine and devoted work done by Mr. Ivor Jones over this period of 23 years. Warm tributes were also paid to him by Mr. Percy Thomas, President of the RIBA; Col. E. H. Fawckner, of Newport; Alderman T. Edmund Rees, Mayor of Merthyr; Harry Teather, T. Alwyn Lloyd and Major Gordon Griffiths, of Cardiff. Mr. Ivor Jones expressed his thanks for the gift (which took the form of a wallet and Treasury notes) and his gratitude to the officers and members of the Institute for the support which they had always given him throughout the period of his office. Though he had resigned this for health and other reasons, he still hoped to be able to render service in other capacities to the South Wales Institute.

The Association of Building Technicians has received the following CABLEGRAM FROM POLISH ARCHITECTS meeting in Lublin.

Architects of the liberated territories of Poland gathered at their first meeting, held on November 5, in Lublin, are sending their colleagues, the architects of Great Britain, cordial words of friendship. The architects of Poland have set to work on the rehabilitation of our country at a time when Polish soldiers, joined in common struggle with our great eastern and western Allies, are liberating the oppressed countries of Europe from the yoke of Fascism. Please transfer our greetings to Polish architects working on your hospitable soil.

At a special meeting of the MANCHESTER SOCIETY OF ARCHITECTS, the winners of prizes in the annual students' competition received their awards from Mr. H. T. SEWARD, the President.

The awards were as follows:—Students' Prizes, 1943-44: Senior Measured Drawings Prizes—First, Bradshaw Gass Prize, D. F. Wrigley; Second, Society's Prize, Eluned Lewis; Recommended Prize, E. Ainsworth. Junior Measured Drawings Prize: Society's Prize, G. G. Wimpenny. Sketches Prizes: Beaumont Prize, W. A. Gibbon; Education Committee Prize, D. A. Cobb; Essay Prize, W. A. Gibbon. Senior Design Prizes—A Works Canteen: First, Society's Prize, D. F. Wrigley; Second, Woodhouse Bequest, P. H. Harrison. Junior Design Prize—A Village Hall: Society's Prize, G. G. Wimpenny.

Mrs. E. V. Penn has been APPOINTED GENERAL SECRETARY of the Association of Building Technicians.

Mrs. Penn became acting general secretary in July, 1940. The appointment will be reviewed after demobilization is substantially complete.

Following are the names of the winners of the LEICESTER AND LEICESTERSHIRE SOCIETY OF ARCHITECTS' PRIZES for measured drawings, sketches and designs.

Class I:—Measured drawings: Three guineas to G. A. Bass for drawings of Belgrave Hall, Leicester. Class II:—Measured drawings and sketches: First prize (£5 5s.) to M. G. Munday for drawings of Biggin Hall, near Oundle, and screen in St. Margaret's Church, Leicester; second prize (£3 3s.) to Miss Monica Burrows for drawings of house in Stamford, etc. Class III:—Design for a day nursery: Three equal prizes (£3 3s.) to Miss Monica Burrows, M. G. Munday and M. Heywood. All the prize-winners are full-time students in the Leicester School of Architecture.

Provision of modern farm buildings, the CONSERVATION OF AGRICULTURAL LAND from town building development, and the restoration of the countryside defaced by defence works.

These post-war measures are advocated by Mr. Hudson, Minister of Agriculture. He was speaking in London at the annual general meeting of the Council for the Preservation of Rural England. He said: The majority of farms are out-of-date; and a large number of new farm buildings will be needed within the next 50 years. In the last five years no fewer than 500,000 acres of good farming land have been used for pillboxes, gun sites, and anti-tank defences. I hope one of the first Government actions after the war will be to clear away these unsightly obstacles to agriculture.

★

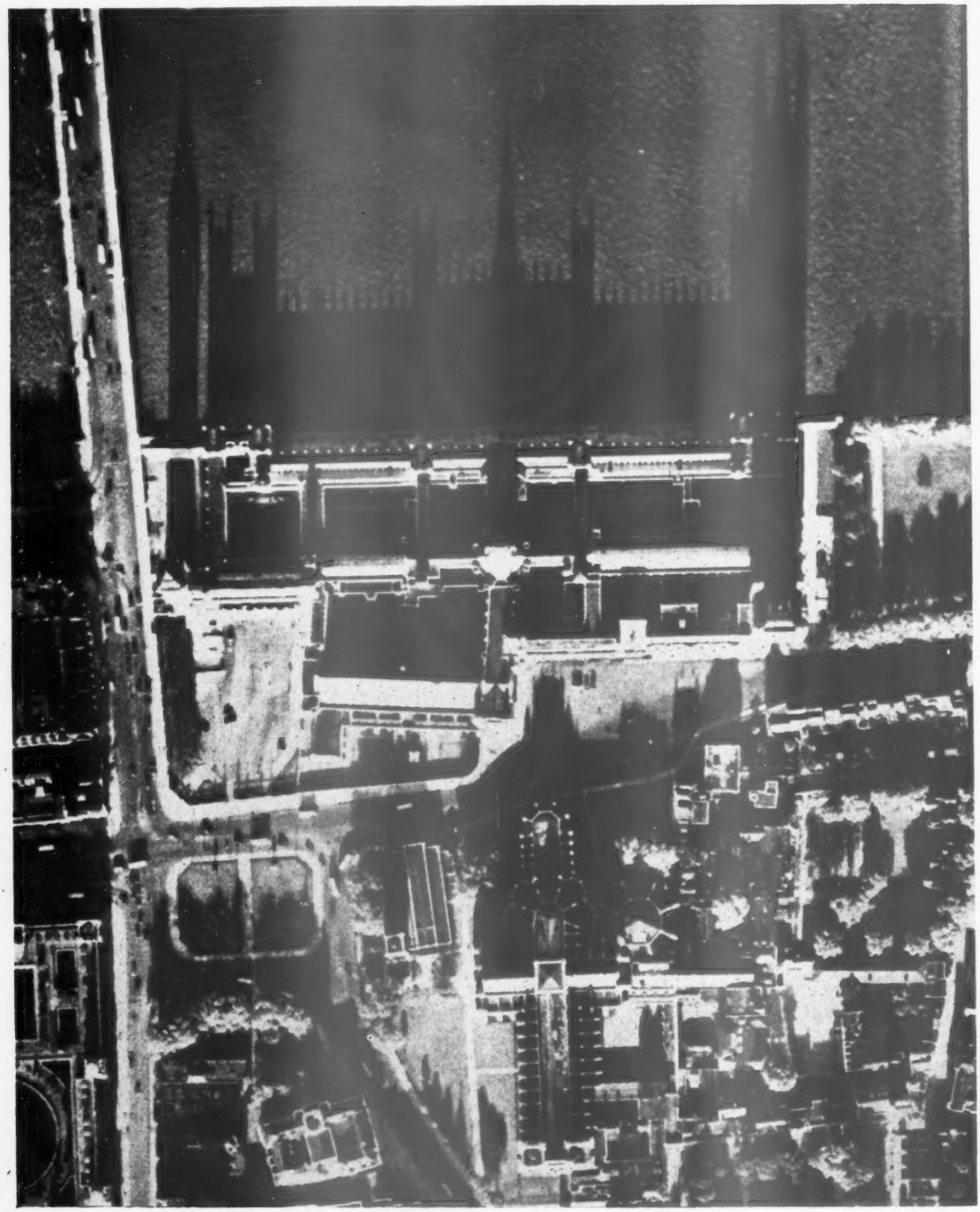
The Cement and Concrete Association offers premiums for designs in COMPETITION for two types of open concrete fences.

The Royal Society of Arts has undertaken to conduct the competition. The object of the promoters is to make available to manufacturers designs which will be attractive, practical and fully expressive of the character of the material employed and the methods used in manufacture. Type of fences for which designs are required: (*a*) Open type fence, approximately 1 ft. 9 in. high, for enclosing front gardens and demarking boundaries on housing schemes, etc.; (*b*) open type fence, approximately 4 ft. 6 in. high, for the protection of property, parks, open spaces, etc. To each type of fence a plinth should be designed to enable the height to be increased to suit special requirements. The plinth should be a separate unit, and it is suggested that it should be approximately 9 in. high in each case. The assessors are Oswald P. Milne, F.R.I.B.A. (Chairman), Royal Society of Arts; Charles Holden, F.R.I.B.A., R.D.I., Faculty of Royal Designers for Industry; A. G. Bray, F.R.I.B.A., Cement and Concrete Association. Three premiums for design (*a*) of £50, £25 and £10, respectively. Three premiums for design (*b*) of £50, £25 and £10, respectively. Sending in date, April 30. Particulars from the Royal Society of Arts.

★

The President of the Board of Trade has appointed a COUNCIL OF INDUSTRIAL DESIGN.

It will be the aim of the new Council of Industrial Design to encourage the improvement of design throughout the manufacturing industries and thereby to stimulate the sale of British goods both at home and in oversea markets. Every industry of any size will be invited to establish its own design centre, and, while industries will be expected to contribute to their maintenance, the centres will also be helped by Government grants, to be made on the recommendation of the Council. The new body will supersede the pre-war Council of Art and Industry. Sir Thomas Barlow has been appointed chairman of the Council, and the other members are: Mrs. Margaret Allen, Sir A. Steven Bilsland, Sir Kenneth Clark, Dr. R. S. Edwards, Leslie Gamage, Ernest W. Goodale, William Haigh, Mrs. Mary Harris, Francis Meynell, S. Gordon Russell, Charles B. L. Tennyson, A. G. Tomkins, J. H. Tresfon, Allan Walton, Josiah Wedgwood, and Philip G. R. Whalley. There will also be a Scottish committee of the Council, with Sir Steven Bilsland as chairman. Other members of this committee will be: Stanley Cursiter, E. L. Denny, J. Douglas Hood, William Hunter, John McMurtie Kay, Lady Macgregor of Macgregor, R. A. Maclean, Neil Macneil, William Rennie, R. Lyon Scott, and Allan Walton.



Plan Becomes Elevation

Doubtless, a number of symbolic allusions appropriate to a special New Year issue could be drawn from this remarkable Aerofilm of the Houses of Parliament, but it is enough to point out how once again the air has disclosed the strange and beautiful that lie hidden in familiar and commonplace scenes and objects. New and fascinating textures and patterns are here revealed from above, and in the setting sun, the shadow becomes the dramatic reality—plan is transformed into elevation, and elevation into plan.

MESSAGE TO THE ARCHITECTS' JOURNAL FROM THE MINISTER, THE RT. HON. DUNCAN SANDYS, M.P.

WHEN Peace comes it will fall to the lot of the Building Industry to play a leading part in re-creating conditions under which our people can lead healthy, happy and useful lives. Unfortunately that time has not yet arrived.

The opening of the New Year finds the war still at its very height. Tough and critical battles lie between us and the victory of which we are confident. Until then, the nation's man-power and industrial resources must continue to be employed to the fullest extent in support of our fighting men.

However, after the end of the war in Europe the forces which we shall be able to bring to bear against our enemies in the Far East will be restricted by shipping and other strategic factors. The man-power, materials and factory capacity which will thus be released will make it possible for us to start permanent house building on a limited scale immediately after the defeat of Germany.

Between now and then there is much urgent and important work to be done. Our immediate task is to press ahead with the repair of bombed homes, particularly in London, where the problem is most acute.

At the same time we can begin to make progress with the construction of temporary houses which will help a little to relieve our nation-wide shortage. We shall make as many of these houses as is possible with the small industrial resources at present available. But until the war in Europe is over, the number of houses of any kind which we shall be able to build obviously cannot be very great.

Nobody has in any case pretended that the temporary housing programme could be anything more than a stop-gap arrangement to tide us over until such time as we can once again build permanent houses on a large scale. If we are to make a flying start when that day comes, much preparatory work can and must be undertaken now. For a long time to come the number of houses which we can provide for the people of Britain will be largely determined by the number of skilled operatives who are available to build them. If, therefore, the nation's needs are to be met within a reasonable period of time, attention will have to be concentrated on increasing the effectiveness and productivity of every individual in every branch of the industry.

Under the pressure of war there has been an accelerated development in this country and in America of new materials, new techniques, new scientific developments, new experience in factory production and new methods of industrial organization. These and every other aid which modern knowledge and ingenuity can offer will have to be harnessed to the task.

The Government and the Building Industry are indispensable partners in this great enterprise. The Ministry of Works will make every practical contribution it can, and I hope that its relationship with the industry will become increasingly intimate and fruitful.

We shall before long be entering upon a decade or more of intensive building activity, which will make its impression on almost every town and village throughout these islands. It will be a constructive and an inspiring task, demanding qualities of public spirit, imagination and leadership of the highest order. I am confident that all branches of the Building Industry —architects, surveyors, civil engineers, employers and operatives—will discharge this great responsibility to the satisfaction of their fellow citizens, and will prove themselves worthy of their unique opportunity.

DUNCAN SANDYS

DIARY FOR 1944

This diary, which first became a regular feature of the New Year Issue at the beginning of the War, records the outstanding events in the building world during the past year. Owing to the need of including other index features in this issue it has been condensed in size but is the same in format. Where it has been thought necessary the source from which the information was obtained appears at the end of certain items. Sir Charles Reilly, instead of his usual review of the year's buildings, contributes the introduction.

INTRODUCTION

[BY SIR CHARLES REILLY]

1944 was a year of physical planning. That clearly was its main activity from our point of view and a grand one, too, especially if we make up our minds to see that a percentage at least of the plans are carried out. The Town and Country Planning Act was eventually passed, but to our amazement we found it applied only to blitzed and not to blighted areas. That has to be altered with many other things, and no doubt they will be after the General Election. When the bombs rained down in 1940 and 1941 we cursed the Germans and promised we would do the same to them, and more also. This we have done many times over. Our better resolution, however, was that now at last we would rebuild our towns, take away their shames and make them, as they could be, the finest works of man. Each town set to work making its plan, Abercrombie and Forshaw leading the way with their grand scheme for an articulate London in place of the grey, decaying mass it is as a whole to-day. That great LCC Plan appeared in 1943, but now at the very end of 1944 appears the Plan for Greater London; the text only so far, but one can see the drawings at the Ministry of Town and Country Planning and in April they, too, will be published.

Once again Professor Abercrombie has crystallized his revivifying idea of the great town as a congeries of balanced communities, each enjoying a full and varied life of its own yet each in touch with the dramatic, vivid life of the centre. How rightly he should be in the New Year's Honours List, shortly to be knighted! That he, too, like Forshaw, emerged from Liverpool and learnt his town planning there is a point I cannot be expected to pass over, so great is my pleasure at it. As an old father and grandfather of architects, and indirectly of town planners, too, I am sure I shall be forgiven for mentioning it.

The Plymouth Plan was another Abercrombie event of the year and did perhaps almost as much as the LCC Plan to educate the general public in what a town and town life could be, given the right powers to make it so. Like the Greater London Plan, it is a challenge to the Government to implement the three famous reports, the Barlow, the Scott and the Uthwatt, without which none of these things can be done. My own fear is that in the Housing Deluge that is upon us planning in the big sense may be swept aside and houses, prefabricated or not, dropped down anywhere. Even my own Village Greens, rejected by Birkenhead, but, since the resolution blessing them at the recent Labour Party Conference, revived in various places up and down the country, may not survive and produce the local community life and the more intelligent suburbs I hoped for. Planners everywhere must show their discontent with the present Government outlook if their plans are to mature. There is no compromise possible between the High Road of replanned cities, full employment, security and a decent life for all and the Low Road of profit-making as the main end in life with its human pools of unemployed and its city pools of shame.

The question of District Heating came to the fore during the year in the hope that it might be an amenity in the new housing estates and incidentally a solution both of the smoke problem and of the great cooling towers which threaten to overwhelm our cathedral cities of Durham and Lincoln. Instead of wasting sixty per cent. of the heat that is in the coal, and therefore the vast quantities of the coal used by these generating stations in heating up the Thames at Battersea or the Mersey at Birkenhead or the upper air at Durham and Lincoln, our engineers should set about using this heat in industry and housing as was done in Hamburg before the war. Vast vacuum towers were built there to store the heat over part of the summer months and to balance the load, and, incidentally to make the same sort of interesting addition to the town's skyline as Rowse's towers, ventilating the Mersey Tunnel, do at Liverpool and Birkenhead. In a town of modern buildings, of course, these cooling towers with their strange concave shapes, though still wasteful, might be not uninteresting in contrast to other plain masses, but in an old town they are the devil.

A queer result on the changing times in which we are living, which 1944 exemplified more than any preceding year, is the handing over of a number of great houses and estates in nearly every county to the National Trust. A leading example of this was given by a past-president of the RIBA, Mr. Goodhart Rendel, with his fine Adam mansion of Hatchlands. What will become of all these mansions is a problem to which Dean Inge's suggestion of community clubs is probably one of the best solutions and one in keeping with the new trend of social life.

Although most architects in 1944, as in the four previous years, have had to live on their capital, I have met one young man who has designed and built during the war twelve million pounds worth of aircraft factories and another several great electrical generating stations totalling as much. I have seen photographs of some of these latter and they are certainly in advance of Battersea, and now I hear the ban is removed and they can be published. I have a feeling that during the war, and especially during its later years, modern architecture may at last have found its cathedrals in such great structures. I remember feeling this when in pre-war days I saw the great Boots factory at Beeston, but that, I fancy, is comparatively a small dissenting chapel to some of the things built during the war and hidden from us till now.

Just as architects are beginning to break into the engineers' field in this way and co-ordinate their hand-to-mouth solutions, so in the new field of industrial design their names are beginning to appear as, for instance, those of Christian Barman and Ralph Lavers. This is only right with the numberless new materials modern architects are called upon to deal with, appreciate and apply. I should like to see the Schools of Architecture take away this subject from the Schools of Art, which, certainly in this country, have not succeeded very far with it up to the present.

Now for 1945, with Peace promised and the hope of a new life springing up everywhere, even in the RIBA and perhaps in the RA, too, though for that I should be a little sorry. Moribund as it has been for the last fifty years, it is a less dangerous institution. Unfortunately it is an unconscionably long time a-dying.

ASTRAGAL'S

Review of 1944

JANUARY

1944 has been a year of great events, of optimism and discouragement, of danger and boredom, of advances and retreats. It has been a year more successful on the fighting fronts than at home. Of this nobody will complain despite the recent Gallup poll which revealed that housing preceded victory in that draughty and featureless open space which is known as the public mind. It is true that housing was in January still our greatest domestic problem, though the initial stagnation on the building front did not indicate its urgency.

* * *

There was a Practical Planning Conference in London at which Mr. Noel Baker declared that " the engineer's function is to determine not only the right use of land, but also the right layout of every physical structure." (The architects, agriculturists, sociologists and town planners presumably come along at the end.) Sir Trustram Eve's Council issued its scheme for Building Apprenticeship, and 105 agricultural cottages were completed. Shades of Northolt gathered round the appointment of Mr. A. W. Kenyon, as consultant to MOW for experimental house development, and there was talk of founding a Chair of Building at Cambridge.

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There was slow progress on the Italian, Indian and Pacific fronts, and at home this country was filling up with troops in preparation for the Second Front. That this was a serious possibility in 1944 was shown by a headline, " Racing men fear invasion may cut programme."

* * *

Early on the morning of January 1, Sir Edwin Lutyens, O.M., P.R.A., died.

JANUARY

NEW YEAR'S HONOURS

Knight Bachelor : Major A. I. Harris, Timber Controller, Ministry of Supply.

KCB (Civil Division) : F. P. Robinson, Secretary, Ministry of Works.

CBE (Civil Division) : W. A. Akers and W. H. Glanville, Directors of Research, Department of Scientific and Industrial Research.

OBE (Royal Air Force) : Acting Wing Commander W. W. Welles-Coates, F.R.I.B.A. ; John Creese, A.R.I.B.A., County Architect and A.R.P. Controller for West Suffolk.

MBE : W. B. Wheatley, F.R.I.B.A., Senior Assessor of the War Damage Commission in Hull.

RESEARCH

Federation of British Industry report *Industry and Research* suggested the setting up of an organization to stress the need for industrial research.

Ministry of Works issued notes on experience with pitch mastic flooring in 31 hospitals.

HOUSING

Plans for a short-term temporary housing policy are now well prepared, as well as the long-term housing policy, announced Sir William Jowitt, Minister without Portfolio, in the House of Commons.

Mr. Thomas Johnston, Secretary of State for Scotland, estimated that Scotland needed 466,000 houses to meet present requirements.

Local Authorities House Repair scheme. Limit raised by Ministry of Health, from £250 to £500.

APPOINTMENTS

Minister of Works retained Mr. A. W. Kenyon as consultant affecting the design and planning of experimental and demonstration houses.

High Sheriff of the County of Sussex : Basil Ionides.

Director of Housing and City Architect, Dundee : J. M'Lellan Brown.

Head of Department of Architecture and Building, Municipal College, Southend : Norman Keep.

Everard J. Haynes resumed his appointment as Secretary to the RIBA Board of Architectural Education having been granted indefinite release from his duties as a Lieut.-Colonel on the staff of the War Office.

County Architect of Caithness : J. M. Henderson.

PRACTICE

RIBA Practice Committee considered the revision of the RIBA Scale of Charges for local authorities and public utility societies housing work to make it applicable for post-war use.

RIBA Council approved a resolution passed by the South Wales Institute of Architects that all those whose names are recorded in the Statutory Register of Architects shall be officially designated architects or assistant architects whenever engaged upon work of a building nature, whether or not in departments or offices controlled by a member of the architectural or any other profession.

TIMBER

Home Timber Production Department of the Ministry of Supply appointed consultative Committee for England and Wales consisting of representatives from the following bodies to ensure that the inevitable damage to woodlands should be as small as possible consistent with the war effort : Central Landowners' Association, Home Grown Timber Marketing Association, Land Agents' Society, Royal English Forestry Society, Chartered Surveyor's Institution and the Land Union.

BUILDING APPRENTICESHIP

Building Apprenticeship and Training Council, sponsored by the Government, issued an apprenticeship scheme for the building trades. Chairman : Sir Malcolm Trustram Eve.

PHYSICAL PLANNING

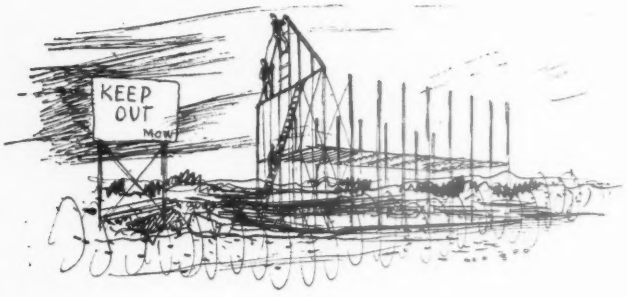
Mam Tor and The Winnants, between Manchester, Sheffield, Derby and Ashbourne, likely to be one of England's first national parks, bought by the National Trust.

Exhibition of a draft plan for Clydebank designed by Mr. Sam Bunton, L.R.I.B.A., A.R.I.A.S., Town Planning and Consultant Adviser to the Burgh of Clydebank at Janetta Street High School, Clydebank, near Glasgow (*A.J., Jan. 6, p.7.*)

Model completed illustrating post-war proposals for the replanning of Canterbury. Preliminary Plans prepared by Mr. H. M. Enderby, the City Surveyor and Town Planning Officer, model by Mr. H. E. Olle. Dr. Charles Holden appointed by the Council to undertake, in full collaboration with the City Surveyor, a comprehensive town planning scheme for the city.

Dulwich village announced its opposition to the County of London plan. Camberwell Borough Council asked by its Planning Committee to oppose proposal to locate a new industrial area in the neighbourhood. The committee suggested the proposal might be a draughtsman's error.

Frinton Urban District Council announced there will be no reconstruction of a kind to improve Frinton. It must not lose its unique charm of being quiet and exclusive.



FEBRUARY

Concurrently with the MCC's report on the problems of postwar cricket, Lord Portal announced the Government's emergency housing policy. There were two main points, (1) that with the relaxation of the aerodrome building programme more plant, materials and labour would become available for the preparation of housing sites, and (2) that the Government was proposing to produce a temporary prefabricated house. This would have a life of 10 years, and be owned and licensed by the Government.

* * *

At Northolt, construction had begun on the experimental houses, and the MOW mission had returned from the USA with their report on American methods.

* * *

The usual controversies were raging—about Oxhey with the LCC, about Hadrian's Wall with MOW, and about the Crystal Palace with the RIBA.

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Professor Reilly was appointed—ah, innocent the day!—town planning consultant to Birkenhead, and Sir Giles Gilbert Scott's novel plan for the rebuilding of Coventry Cathedral was published.

* * *

Leningrad was relieved, Berlin was bombed, Salerno was saved, Brighton had a by-election, and raids began again on London. These did not, however, succeed in emptying the capital which, in the West End at any rate, remained as crowded as ever. Indeed, it was said that a man who bent down in a restaurant to tie up his shoelace had a tablecloth thrown over his back and before he could complete the knot four people were eating *pâté maison* off his spine.

FEBRUARY

PRACTICE

Architects' Registration Council reported that two hundred and eight architects were admitted to the register last year. Total of architects on register : 14,984.

EDUCATION

Correspondence course for the Forces on Town and Country Planning prepared at the request of the War Office by the School of Planning and Research for Regional Development.

APPOINTMENTS

Principal Architect for war cemeteries in the United Kingdom : Edward Maufe.

Royal Academician : Professor A. E. Richardson.

BUILDING METHODS

Report issued of the Mission appointed by the Ministry of Works to visit the USA to survey American practice in the design and construction of buildings in equipment and finishing and in the use of materials. (HMSO, 4d.)

HOUSING

Ministry of Health warned local authorities that dry rot is greatly on the increase in the woodwork of houses.

Demonstration houses begun in Northolt, Middlesex, by the Ministry of Works.

BUILDING TRADE

Parliamentary approval to be sought by the National Federation of Building Trades Employers for the registration of builders on the qualitative basis.

POST-WAR BUILDING

Memorandum on Post War Building sent to the National Federation of Building Trades Employers by the London Master Builders' Association.

HOUSE REPAIRS

Mr. Henry Willink, Minister of Health, announced that the cost limit for house repair and the completion of partly-finished houses by local authorities raised from £250 to £500. In the case of flats or tenements the cost limit for local authorities raised from £200 to £400.

AFFORESTATION

Further steps taken by the Ministry of Supply to ensure that the amenities of woodlands will not be unduly impaired by the felling of timber for the war.

ARCHITECT VC

Funds to be raised to provide a scholarship in memory of Flight-Sergeant Arthur Louis Aaron, the first architect VC of the war, at the Leeds School of Architecture. The VC was posthumously awarded to Aaron in recognition of his great act of self-sacrifice in bringing his damaged bomber to a North African aerodrome after it had been damaged over Turin. He died nine hours after landing.

PHYSICAL PLANNING

Grantham House, Grantham, given to the National Trust, with 18 acres of land through which the river Wytham runs.

Lord Woolton, Minister of Reconstruction, addressing the Anglo-American Press Association of Paris, in London, said : During the last two or three months I have read some of the Scott, Uthwatt and Beveridge reports. If you ask me if I am going to apply the doctrines of these gentlemen, I should say : CERTAINLY NOT.

Professor C. H. Reilly appointed to replan Birkenhead. Mr. N. Aslan chosen by him to collaborate on the plan.

Continuation of the controversy concerning the TCPA attitude towards the LCC plan for London. (*A.J., Feb.* 3, *p.*96).

Rickmansworth Urban District Council sent a protest to MOH against the LCC Oxhey housing scheme. The Council contended that Oxhey being the only stretch of open country left between Watford and London, it ought to form part of the green belt.

The Building Trade Group Committee of the London and Home Counties Area of the Transport and General Workers' Union, demanded the setting up of immediate legislation for the compulsory acquisition of land for housing.

Mr. W. S. Morrison, in a written reply to Mr. Hutchinson (Ilford U.) stated that he had the appointment of a regional planning authority for the area of Greater London under consideration.

The Portsmouth City Council proposed the acquisition of Leigh House, Havant, with 1,671 acres adjoining it for development as a satellite town, to house an overflow of 25,000 people resulting from the replanning of Portsmouth.

At the request of the War Office the School of Planning and Research for Regional Development prepared a correspondence course for the forces on Town and Country Planning.

Battersea County of London Plan Committee announced that the London Plan "B" ring road will split the future Battersea in two. Two alternative routes are suggested.

MARCH

M A R C H

The Minister of Health announced that the Government's housing programme was budgeting for the production of 300,000 houses in the first two years after the war, and was also arranging for the speeding-up of domestic bomb-damage repairs. Mr. Churchill, as aggressive and reassuring as ever, explained over the radio, that housing had his personal attention, and that the Portal house would be the best planned, built, and equipped house that could be obtained in the circumstances. A sinister silence, however, was still maintained over land acquisition, compensation, and planning generally.

* * *

The Scottish Housing Advisory Council issued its admirable report, and Messrs. Lindy and Lewis published their curious plan for the City—the official version of the latter remaining for the moment a secret.

* * *

Abroad, the Russians had reached Rumania, but in Italy our troops were bogged down by bad weather. (This war at least will see the end of the Winter-in-Sunny-Italy gag.) At home, there was relief in Belgravia at the news that the tax on armorial bearings was to be lifted, and consternation in Bloomsbury at the news that corduroy trousers were in future to be issued only to industrial workers.

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The man-in-the-street was still in most towns an American soldier, and D-day nerves were as taut as piano wires. "Invasion prospects," wrote a City editor at this time, "are inimical to Stock Exchange business." Financial circles, however, faced it bravely. Powdered jowls were stiffened in resolve, and behind the stern spectacles, pale eyes looked unflinchingly at the tape machines.

COMPETITIONS

Mr. P. M. Powell of Sanderstead Surrey, won the competition promoted by the Northamptonshire Federation of Women's Institutes for the best design for a pair of cottages for rural workers.

Competition promoted by Robert G. Tarran (assessor, T. Cecil Howitt) for designs for houses in the Tarran System of Construction.

EDUCATION

Course in architecture and town and country planning for architectural members of the American and Canadian Armed Forces, held at the Liverpool School of Architecture.

Fifty members of the Canadian Forces attended a week's course of Architecture at Leeds University.

At the request of the War Office, Mr. L. Stuart Stanley, tutor in the Bartlett School of Architecture, London University, placed his correspondence courses of tuition for the RIBA Intermediate and Final examinations at the disposal of members of the Forces.

APPOINTMENTS

Temporary appointment of Secretary of the Royal Fine Art Commission: A. B. Knapp Fisher.

Chief Scientific Adviser to the Ministry of Works: Dr. R. E. Stradling.

President of the Royal Scottish Academy: Frank C. Mears.

Deputy Chief Architect of the Northern Ireland Ministry of Home Affairs: James M. Aitken.

BUILDING

London Master Builders' Association instructed its members not to tender in competition for works exceeding £1,500 in total value without quantities being supplied.

HOUSING

Ministry of Health asked local authorities to form groups for the preparation of post-war housing sites, each area to provide for 2,000 houses within a radius of, say, 30 miles.

Mr. Willink, Minister of Health, announced in the House of Commons that 300,000 houses are to be built in the first two years after the war, in addition to many emergency homes.

LCC programme provided for starting work on 16,500 houses in the first year after the war.

Mr. George Hicks stated in the House of Commons that since 1939 the cost of timber for a typical council house has risen approximately 160 per cent. Timber accounts, Mr. Hicks said, for about £130 of the present cost of a typical house, compared with £50 pre-war—a difference of £80. It represents 25 per cent. of the cost of material. Bricks have gone up approximately 45 per cent.

AFFORESTATION

Proposals for State assistance for private woodlands put forward by the Forestry Commission.

Forestry Commission proposes to organize a forestry corps of from 25,000 to 30,000 ex-Service men to work in the forests and on road-making. The men would be available for work both in State forests and private woods.

PHYSICAL PLANNING

MOH asked local authorities to prepare sites for housing, in consultation with the Regional Planning Officer of MOTCP.

The City of London Improvement and Town Planning Committee announced that until the Government makes known its attitude on the Barlow and Uthwatt Reports, the City of London Plan would not be published.

A memorandum on Land Control was issued by a special committee set up by the Incorporated Association of Architects and Surveyors to make recommendations on the Uthwatt Report. (*A.J.*, *March* 2, *p.* 180.)

Datchet Parish Council announced plans for a four-mile riverside promenade from the village to Victoria Bridge, the boundary with Windsor to be built after the War.

The National Trust bought Chipping Camden Market Hall.

Gloucestershire County Council decided that the most suitable site for a road crossing of the Severn Estuary is between Aust Cliff and Beachley Peninsula.

A motion that the City of London Improvements and Town Planning Committee should be instructed to make a statement concerning the City of London Plan was passed by the Court of Common Council.

3,900 acres in the Lake District were bequeathed to the National Trust.

Mr. Willink revealed that from early Summer onwards, labour and plant would be released from airfield construction to prepare sites for 200,000 to 300,000 houses.

Exhibition of City of London Sketch Plan by K. J. Lindy and B. A. P. Winton Lewis at the IAAS. (*A.J.*, *March* 23, *p.* 227.)

Mr. T. Warnett Kennedy, of Glasgow, won the Scottish Town Planning Competition with his Scheme for Peebles.

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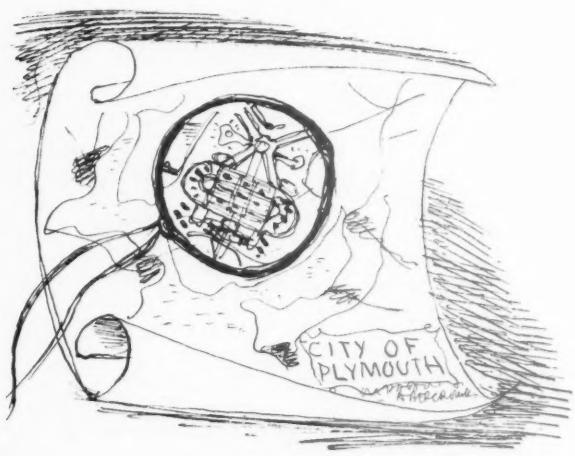


APRIL

For some months before the announcement of the Government's Portal house scheme the word Prefabrication had been zooming aimlessly through public discussions like a half-hearted doodle-bug. Now there was a short, stunned, nerve-wracking silence—and then the explosion. Prefabrication became the topic of the hour among laymen and experts alike. The Burt Committee debated it in their informative report, and the RIBA accepted the fact that it was inevitable. Not so others. "There are people," warned Mr. Coppock, darkly, "who expect to make a packet of money out of prefabrication." There are also those, Mr. Coppock, who "start from a new idea as they would from guilt."

* * *

The word became synonymous with "temporary," and began to alarm even those who looked forward eagerly to that post-war world where everything from crucifixes to bicycle-clips will be made of transparent, washable and reversible plastics, and where breakfast foods will be shot with increasing speed from guns of even larger calibre. Prefabrication, in fact, was only equalled by moons and tides as a subject of conversation.

* * *

Professor Abercrombie and Mr. Paton Watson published their Plan for Plymouth, and the Board of Education announced its plan to train 10,000 boys a year for the building industry. Abroad, the war fronts were coiling for the spring, and Vesuvius was in eruption. At home, there was an epidemic of strikes, caused largely by D-day nerves, and an advertisement in *The Times* asking "What's for Afters?" showed that democracy was only just around the corner.

A P R I L

SIR E. LUTYENS'S WILL

Sir Edwin Lutyens, President of the Royal Academy, left £42,271, net personalty £34,272.

COMPETITIONS

Dartington Hall Trustees promoted competition for designs for post-war cottages.

RIBA stated that the President's nomination of assessors for housing competitions does not imply the Royal Institute's approval of the different forms of construction asked for by the promoters.

Timber Development Association organized competition for a timber house, such as might be produced in quantities to help solve the housing problem.

West Wycombe Rural Cottages Competition, promoted by the National Trust, won by T. Mellor, G. Grenfell Baines and J. A. Ashworth.

BUILDING

Ministry of Labour and Ministry of Works worked out a scheme to provide man power for twelve years housing.

Plans made for new buildings for the University of Wales at Aberystwyth costing nearly £1,000,000. The Vice Principal, Prof. Campbell James, told the Old Students' Association that the buildings will be erected on a commanding site overlooking the town and the National Library of Wales. He said that £96,000 has been already spent. The old students have raised £10,000 and so can claim the gift of a further £10,000 promised by Lord Davies.

RESEARCH

British Iron and Steel Federation approved the Formation of the British Iron and Steel Research Association, which will take over the work of the Iron and Steel Industrial Research Council.

APPOINTMENTS

President of the British Iron and Steel Federation: A. C. Macdiarmid.

President of the Glasgow Institute of Architects: A. N. Malcolm.

HOUSING

Report of post-war building study of the Ministry of Works, on House Construction, prepared by an inter-departmental Committee under the chairmanship of Sir George Burt. (HMSO, 2*s*.)

EDUCATION

A Refresher Course limited to those who have reached the standard of the final examination of the RIBA accepted in principle by the Board of Education for assistance under the Government scheme of further Education and Training for men and women who have been engaged in various types of war service.

Plans made by the Board of Education to train 10,000 boys a year in technical schools for the building industry.

TOURING WALES

First interim report of the Welsh Reconstruction Advisory Council concerned with the tourist industry. Makes the point that any balanced plan of national development must make full use of the magnificent scenery of Wales while guarding against spoliation of that asset. A trunk road from North to South Wales and a Severn road-crossing are considered of the highest importance; so are improved inter-regional roads, which should be charged to the national Exchequer. At least one trans-Atlantic aerial terminus should be established in Wales. At the earliest suitable moment at least one national park should be developed in North Wales and another in South Wales.

PHYSICAL PLANNING

Mr. Henry Wilson, F.R.I.B.A., was appointed Town Planning Consultant to Falkirk.

A section published of the first interim report of the Welsh Reconstruction Advisory Council, concerned with the tourist industry.

Among commentaries and criticisms by the 28 London Boroughs on the County of London Plan, Lewisham's General Purposes Committee envisaged a Civic Centre in Catford. (*A.J.*, *Sept.* 28, *p.* 229.)

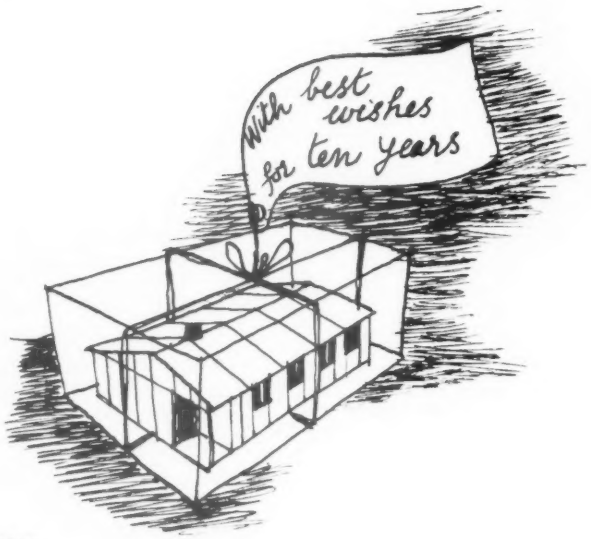
In an article in the *Middlesbrough Evening Gazette*, Max Lock, Town Planning Consultant to the Middlesbrough Corporation, described the principles upon which his team would act in the diagnosis of the social, economic and administrative aspects of Middlesbrough on which they have started work. (*A.J.*, *April* 20, *p.* 298.)

An exhibition of the Plan for Plymouth prepared by Mr. J. Paton Watson, the City Engineer, with Professor Abercrombie as Consulting Planner, was opened at the Plymouth Municipal Art Gallery. (*A.J.*, *May* 4, *p.* 331.)

A Ministry of Health inquiry was held into the proposal to acquire a site at Oxhey, near Watford, for a new LCC satellite town.

A White Paper was published by HMSO on the Government's National Water Policy.

Captain H. S. Goodhart-Rendel, serving with his old regiment, the Grenadier Guards, presented his house, Hatchlands, with 421 acres of land near East Clandon, Surrey, to the National Trust.



MAY

The unveiling this month at the Tate Gallery of the Portal House was awaited as tensely as if it was a new Epstein. Its reception was as equally mixed, but the general opinion seemed to be that while the Government was to be congratulated upon its acceptance of the prefabricated and temporary house as a solution to the housing problem, the high quality and generosity of the equipment did not compensate fully for the poor planning and lifeless appearance of the house itself. The first version of the entrance porch in fact was a miracle of ill-considered improvisation. Detailed criticisms followed from the public, and were to lead to certain revisions in planning, a proportion of which made the layout even worse than ever.

* * *

The Royal Academy Planning Committee published their revised (and improved) schemes for London, and the *Architectural Review*, in counter-blast, announced its policy of Sharawaggi—the art of the irregular. Mr. Morrison promised a statement "shortly" on planning policy, and MOH revealed that nearly 1,000 agricultural cottages had been completed.

* * *

In Italy, an offensive was launched culminating in the fall of Cassino and later of Rome itself. Invasion rumours filled the newspapers. The West End, crowded with American servicemen and sable-bodied women in Jacqmar scarves, had a voluble excited eve-of-Waterloo atmosphere and at night the streets seemed fuller, noisier, dirtier and more disreputable than ever. D-day was very near.

MAY

HOUSING

Deputation from the National Federation of Building Trades Employers to the Minister of Health opposed the Government proposal to employ big contractors using equipment released from aerodrome contracts in preparing building sites for post-war housing.

Scale of fees issued by the RIBA after consultation with the Ministry of Health for work done for local authorities on war damage repairs and the emergency conversion of dwelling houses into flats.

Ministry of Works Emergency Factory-Made House opened for exhibition at the Tate Gallery, Millbank.

National Federation of House Builders' memorandum stated that when wartime restrictions are removed the immediate contribution of private enterprise in house building will be expected to exceed that of the local authorities. It stated that given certain conditions, houses can be built to rent at figures comparable with those charged before the war.

JOINERY

On the invitation of the President of the Board of Trade and Joinery Industry Reconstruction Committee formed by trade associations and union to consider the problems of the industry in the immediate post-war period of reconstruction.

THE LATE SIR EDWIN LUTYENS

Sir William Reid's bust of the late Sir Edwin Lutyens, commissioned for Viceroy House, New Delhi, given to the RIBA by Lady Emily Lutyens and Wing Commr. Lutyens.

BUILDING

London MPs' formed a Parliamentary Committee to discuss Parliamentary Building questions as they arise with representatives of the London Master Builders' Association.

TIMBER

Minister of Supply in consultation with Secretary of State for Scotland, appointed a Landowner Timber Consultative Committee for Scotland to advise on the reduction of the inevitable damage to woodlands caused by the heavy fellings of timber for war purposes.

WAR DAMAGE

War Damage Commission announced new repair procedure for war damaged houses and other property in which an expenditure of more than £250 is necessitated.

EQUIPMENT

A new association registered with the Board of Trade to protect the interests of British equipment manufacturers. Called the Association of British Business Equipment Manufacturers, it embraces the leading British manufacturers of metal business equipment for use in offices and factories.

PHYSICAL PLANNING

Two farms, with 289 acres of land in Great Langdale, Westmorland were presented to the National Trust.

£1,750,000 was allocated for sites for LCC houses in the estimates for the coming year, submitted to the Council.

Mr. Harold Marsh, Secretary to the National Smoke Abatement Society, advocated at a House of Commons conference, a smokeless zone for the City of London and parts of Westminster and Holborn.

The Royal Academy Planning Committee exhibited further proposals, related to those of the LCC for the replanning of London, at the Summer Exhibition. (*A.J.*, *May* 18, *p.* 367).

Mr. Philip Noel Baker, Parliamentary Secretary, Ministry of War Transport, opened a Safety First Road Exhibition in Manchester.

Three Thames Valley Councils—Richmond, Twickenham and Heston, and Isleworth—protest against land on the north bank of the river opposite the old Deer Park in Richmond, being used as a housing estate.

A number of separate holdings totalling 13 acres, at Daisy Nook, between Manchester and Ashton in Lancashire, purchased under a legacy left by the late Mr. J. E. Ludlam, of Ashton-under-Tyne and given to the National Trust.

421 acres of land in Carmarthenshire and Lancashire, were given to the National Trust.

A Ministry of Health inquiry held at Croydon into a struggle to retain an open space. On the one side was the council, who want to erect 470 houses, shops, a church and schools on Beckenham golf course, while on the other side was the East Ward Electors' Association, supported by youth and athletic clubs, who want to preserve the open space. The council own the land and are hoping to start building as soon as possible after December.

JUNE

D-Day came quietly over the first weekend of this month, and the release from tension brought a mixture of anxiety and strange relief to millions. To those more directly concerned it was the climax of many months of training and only the start of many more months of bitter fighting.

* * *

The first landings were successfully accomplished, and soon those queerly familiar photographs began to appear showing tanks alongside white-washed walls postered with Byrrh and Cinzano, or troops halted on the *pavé* in the centre of a mob of black-stockinged gamins.

* * *

In London, D-day seemed, above its tense undercurrents, to be normal enough—except perhaps in the City when upon receipt of the news of the invasion " the stock market presented an irregular appearance." Downing Street was deserted except for a cat, and in New York a reporter observed a woman sketching a lamp-shade in a shop window. " She figured, I suppose," he recorded, " that she might as well be doing that as anything else."

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Meanwhile, criticisms of the Portal House were growing. Phrases like Ersatz Shed and Heart-break House appeared in Hansard, and the architectural press was inundated with rival plans —most of which seemed superior even to the revised version of the official plan.

* * *

MOW retired behind a smokescreen of pamphlets on schools, plastics, heating, paints and plumbing, and prepared to face up to a more immediate problem—the effects of V 1. This " thing," as the BBC called it, arriving a few days after D-day, had succeeded in sharpening everybody's ears and in putting the housing shortage right back where it had been in January.

JUNE

THE KING'S BIRTHDAY HONOURS

Knight Bachelor : Professor C. H. Reilly.

Order of Merit : Sir Giles Gilbert Scott ; CB : George L. Pepler.

OBE (Civil Division) : F. M. Lea, Assistant Director of Building Research, Department of Scientific and Industrial Research, R. A. H. Livett, Chief Billeting Officer and Housing Director, Leeds ; W. A. Rutter, Assistant Director of Works, Ministry of Works.

HOUSING

Ministry of Health issued local authorities with model specifications for concrete roads for housing sites.

Revised plan issued by the Ministry of Works emergency factory-made house. Full size model in timber constructed in the Tate Gallery, Millbank.

TREES

Edmonton Borough Council on the suggestion of the Ministry of Town and Country Planning, made a Preservation Order for trees on the last remaining local natural beauty spot—on a site used for industry during the war and afterwards to become a public park.

COMPETITIONS

Competition for a new women's section of Manor House Hospital, London, promoted by the Building and Estates Committee.

Competition for designs for an International Airport for London, promoted by *The Aeroplane*.

EXHIBITIONS

National Buildings Record : photographs of buildings of architectural interest throughout the country, taken during the past three years for record purposes at the National Gallery.

APPOINTMENTS

Director of the London Master Builders' Association : G. H. A. Hughes.

President of the Town Planning Institute : Sir Peirson Frank.

President of the Institution of Structural Engineers : Gower B. R. Pimm.

Chairman of MOW Codes of Practice Committee for Civil Engineering, Public Works Building and Constructional Work : Hubert M. Fairweather.

Housing Director of Glasgow: Ronald Bradbury.

PHYSICAL PLANNING

The first scheme for a piped rural water supply was put forward by the Thingoe (Suffolk) Rural District Council.

Six architects in a letter to the Liverpool *Daily Post and Echo*, stated their belief that : Recent events in town and country planning, especially on Merseyside, have now reached a critical point when it is opportune to stress once again the indisputable claims of the fully-trained architect in this important work.

Among the Birthday Honours conferred by the King was the CB, to Mr. G. L. Pepler, Principal Assistant Secretary and Chief Technical Adviser to MOTCP.

Mr. F. Longstreth Thompson, P.P.T.P.I., was appointed County Planning Adviser to the Essex County Council.

Four schemes for the rebuilding of Sheffield were submitted to Mr. J. H. Manzoni, the City Engineer of Birmingham, for adjudication. Three of the schemes were by members of the Sheffield Corporation, the other was by a local architect. One of the schemes was selected by Mr. Manzoni, who recommended its adaptation with features of the other plans.

Three schemes for the replanning of Leicester Square Garden were submitted to the Westminster City Council Works and Traffic Committee, by the RA Planning Committee.

Mr. G. R. Mackenzie, President of the Aberdeen Society of Architects, said : We architects are conscious that the replanning of the centre of the city is a difficult enough problem, without having what is to be done at a crucial point laid down beforehand. My society is gratified that a factual plan for Aberdeen is being prepared, but the acceptance of plans for important alterations in St. Nicholas Street and Netherkirkgate, by Aberdeen Town Council, has placed a distinct handicap on the ultimate replanning of the centre of the city.

The Government's Town and Country Planning Bill, 1944, and white paper on the Control of the Use of Land were published by HMSO (*A.J., July* 13, *p.* 27.)

Gunby Hall, Lincolnshire, built in 1700, with its contents and about 1,500 acres of land, presented to the National Trust.

JULY

The long-awaited Town and Country Planning Bill appeared this month, together with a White Paper on the Control of Land Use. The Bill was sadly limited in scope, and bore the signs of compromise in high quarters. Sir Harold Bellman referred to it as "providing the basis of an acceptable compromise," but *The Times* called it "meagre" and even harsher words were used in the House.

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The Government also announced that subsidies would be granted under certain conditions for houses built by private enterprise. Stimulated, perhaps, by the exciting exhibition of American War Housing at the RIBA, Portal plans continued to pour into the correspondence columns of the technical press, and even Astragal was persuaded to try his hand.

* * *

Work began near Staines on the new London airport—biggest in the world—and the first shots were fired in the cathedral versus cooling-tower campaign at Durham. Buzz-bombs continued to hurtle overhead though in numbers which decreased as bomb-stories increased, and once more the Tubes were filled at night with silent figures huddled in their "Moore-ish" shrouds.

* * *

In the enemy camp, General Tojo resigned, and Hitler—"that hysterical lavatory brush," as Mr. Voigt called him—escaped with his life but without, apparently, his trousers, from an attempted assassination by a clique of generals. Seldom in history can an escape from murder have been greeted with such world-wide disappointment.

JULY

COMPETITIONS

National Housing and Town Planning Council promoted a competition for designs for blocks of terrace houses suitable for erection in towns.

APPOINTMENTS

Director of Works and Services (Scotland) : W. A. Ross.

President of the West Yorkshire Society of Architects : R. A. Easdale.

HOUSING

Scale of Architects' fees for Speculative Builders' work, for a Minimum of Ten Houses, printed on pages 755-756 of the 1939-40 RIBA Kalendar, formally withdrawn by the RIBA Council as being inapplicable to present-day conditions.

Announced that the Government proposed to make the sum of £150,000,000 available for the manufacture and erection of temporary houses to be provided by October 1, 1947.

Recommendations on the future design of houses of the types commonly built by local authorities given in the report of the Design of Dwellings Sub-Committee of the Central Housing Advisory Committee.

The Government decided to adopt the recommendation by the Central Housing Advisory Committee and grant an Exchequer subsidy for houses built by private enterprise.

SALVAGE

Estimated that since the collection of iron railings commenced, 530,000 tons have been sent to iron and steel works for smelting, said the Minister of Supply in the House of Commons.

PRESERVATION

To ensure that historic cottages are not destroyed when sites for post-war housing are chosen, a survey to be made at Lavenham, Suffolk. The Rural District Council, the regional planning officer and the Society for the Protection of Ancient Buildings are co-operating. Lavenham was once the centre of the hand-weaving industry.

WAR DAMAGE

New procedure for dealing with the repair or rebuilding of war damaged property issued by the War Damage Commission. Owners would be told the amount to be paid for repairs by the Commission before they are carried out. The new arrangement applied to claims costing more than £250.

PHYSICAL PLANNING

Mr. A. H. S. Waters, M.Inst. C.E., was appointed by the Minister of Town and Country Planning to carry out a technical investigation of the Ironstone industry of Northamptonshire, Lincolnshire and adjoining counties.

At Staines, Middlesex, work was begun on the world's largest airport ; it will have an area of 2,800 acres.

Leicester City Council considered a plan by the Housing Committee for Municipal Beer Pavilions on the City's Housing Estates.

Langley Park, Buckinghamshire, was acquired for the public under the Green Belt Scheme.

The draft of a new Order defining and regulating the powers of control over development to be exercised by local authorities during the period between the date of coming into force of a resolution to prepare a planning scheme and the coming into operation of that scheme, was published by HMSO on behalf of MOTCP.

Sir William Jowitt delivered an address at a Meeting of the Chartered Surveyors' Institution on the Government's Town and Country Planning Bill and White Paper on the Control of Land Use. (*A.J., Sept.* 7, *p.* 185.)

The MARS Group sent a letter to convey to the LCC its welcome of the County of London Plan.

An appeal to the Minister of Town and Country Planning for a public inquiry into the proposed gigantic electrical plant at Durham was lodged by the Bishop, the Chapter, the University, and the Durham Preservation Society.

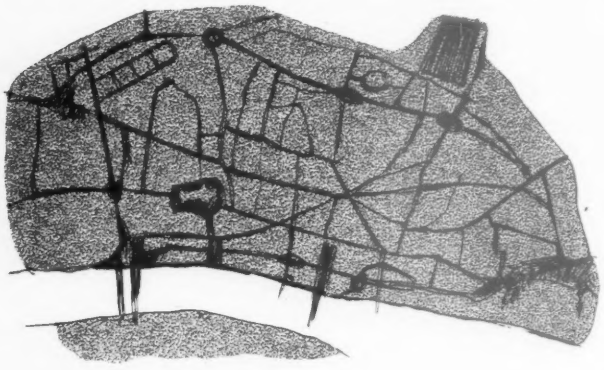
In the House of Commons, the second reading of the Town and Country Planning Bill, 1944, was carried by 227 votes to 14.

It was announced that the LCC were planning two new housing colonies, at Loughton and at Avely, in Essex.

Leathwaite Farm, in Borrowdale, Cumberland, well known for its rain, its yew trees and its plumbago mine, bought by the National Trust.

498 acres of Blackdown, 900 ft. high, between Haslemere and Fernhurst, given to the National Trust.

A £1,000,000 scheme for more attractive London parks submitted to the LCC, to provide for sports facilities, lidos and solaria, larger bandstands, shelters, more refreshment houses and floodlighting effects. After the war proposal to invite designs for new layouts of three sections of the Victoria Embankment Gardens, near Villiers Street, Whitehall and the Temple Station.



AUGUST

The publication of Mr. Forty's City Planning Proposals, produced in consultation with Mr. Lovett and glamourized by Mr. J. D. M. Harvey, was something of a disappointment. The Press was almost universally unreceptive to the proposals which did not amount to a Plan at all, but to a few street-widening proposals, and an axial "improvement" or two. Clearly the authors have not understood the romantic, almost mediæval, atmosphere which *is* the City and which wider streets and faster traffic and higher buildings could do nothing but destroy, and for the loss of which the City worker (as opposed to the City real-estator) gets no compensation in amenity or even in convenience.

* * *

Throughout the month arguments raged, at Lincoln (over cooling-towers), at County Hall (over LCC housing sites), and at Birkenhead (over Sir Charles Reilly). The Dudley Housing Report was published and Parliament went into recess to brood about Portal Houses. Abroad, the war was going well. The Riviera was invaded, Bulgaria and Rumania collapsed, Bucharest and Florence fell, and Paris was liberated in a fantastic atmosphere of barricades, mauve-haired courtesans on bicycles, and ricochetting bullets in Notre Dame.

* * *

A wave of optimism swept the country, and many an architect dusted down his T-square with an anticipatory gleam in his eye. In the USA world delegates began to assemble at various Spas to discuss post-war problems. The results of their deliberations were hard to understand, and even the correspondents on the spot seemed to find it difficult to see the Bretton Woods for the Dumbarton Oaks.

AUGUST

SIR E. LUTYENS'S MEMORIAL

Appeal issued for funds for a memorial to Sir Edwin Lutyens, consisting of a book in three or more folio volumes, under the joint authorship and editorship of Christopher Hussey and A. S. G. Butler, covering all aspects of his work, and an annual scholarship at the School of Architecture of the Royal Academy, to be known as the Lutyens Scholarship.

APPOINTMENTS

Imperial War Graves Commission's Architect for Italy : Louis de Soissons, A.R.A.

Head of the School of Architecture, Town Planning, Surveying and Building of the Regent Street Polytechnic, London : John S. Walkden.

City Architect of Exeter: F. R. Steele.

County Architect of Dumfries : George Bartholomew.

COMPETITIONS

Winners announced in the Tarran House Competitions for four types of houses built on the Tarran prefabricated system. Winners were : George E. Salt, both two-storey, three-bedroom and two-bedroom. Frederick Hill, two-bedroom, one-storey. A. M. Foyle and Glyn Roberts, three-bedroom, one-storey.

SEVENTEENTH CENTURY LONDON

Constructed for a film of Shakespeare's Henry V, a model of seventeenth century London, North of the Thames from the Tower to Ludgate Hill presented to the London County Council by Two Cities Films, Ltd.

FARM INSTITUTE

Merrist Wood Hall, Worplesdon, to be the first farm institute in Surrey for agricultural education. Merrist Wood Hall is a 600-acre farm. The initial cost of fitting it out will be about £30,000. The institute will be fully residential, with 30 students to begin with. Horticulture will be the main study.

HOUSING

Design of Dwellings issued by Ministry of Health (HM Stationery Office, 1*s*.).

Report issued of a study group of the Ministry of Town and Country Planning on Site Planning and Layout in Relation to Housing, and included in *Design of Dwellings*, issued by the Ministry of Health.

PHYSICAL PLANNING

Mr. Walter A. Yates, was appointed County Planning Officer of Merioneth.

A limited edition of the Report of the Improvements and Town Planning Committee, relative to Post-War Reconstruction in the City of London was published. (*A.J.*, *Aug.* 10, *p.* 95.)

A method of comparative analysis of town plans, based on a logical appreciation of town planning principles, and aiming at providing a yardstick with which to measure town planning contributions, was demonstrated on four London plans, LCC, LRRC, MARS, and RA. (*A.J.*, *Aug.* 10, *p.* 99.)

The Post-War Development and Housing Sub-Committee of Lewes, the ancient capital of Sussex, issued its first reconstruction report.

Portsmouth City Council decided to form a new department for Planning and Reconstruction, and appointed Mr. F. A. C. Maunder as City Planning Officer and Reconstruction Architect.

The RIBA Committee on the Training of Architects in Town Planning, published an *Outline of Studies in Town Planning*, by Dr. H. V. Lanchester.

The Government published a White Paper on Employment Policy, which included proposals on the Location of Industry and Population (*A.J.*, *Aug.* 17, *p.* 131.)

The acquisition of housing sites for Londoners near Pinner, at Upper Tulse Hill, Lambeth, Wandsworth, St. Marylebone and in Essex, was approved by the LCC.

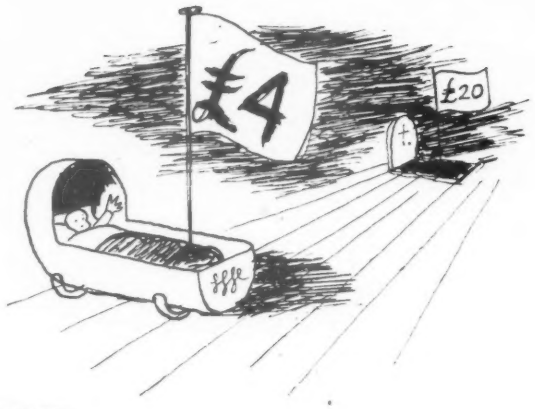
Lord Hambledon gave restrictive covenants to the National Trust of about 4,500 acres of his Greenlands estate, one of the most popular reaches of the Thames.

Oakham Castle, Rutland, founded over 750 years ago, and famed for its collection of horse shoes levied under ancient custom from every royal visitor and peer visitor to the town, given to the County of Rutland by Capt. Hanbury, Lord of the Manor of Oakham.

The request by the Dean and Bishop for a public inquiry into the proposed erection of the Lincoln Power Station, supported by the City Council and the Friends of the Cathedral.

W. E. Battersby, of Alstonfield, Ashbourne, purchased and granted to the National Trust, restrictive covenants over 156 acres of New Hanson Grange Farm, Dovedale.

Lacock Abbey, Wiltshire, one of the last religious houses to be dissolved by Henry VIII, the Manor Farm and Lacock village, with its ancient tithe barn and 500-years-old houses, presented to the National Trust.



SEPTEMBER

Encouraged by the virtual disappearance of the buzz-bomb, the all-over-by Christmas feeling continued to flourish undismayed by the setback at Arnhem and by the occasional gas-main explosions which started to occur in Southern England.

* * *

The Government's version of the Beveridge report was generally welcomed by a gullible nation, and the debate upon it in the House acted as a pleasant house-warming party to Sir William Beveridge, the newly-elected Member for North Berwick.

* * *

In Southern England the housing situation had developed alarming dimensions, and more labour for repair work was hurriedly drafted to the blitzed areas. The work made fair progress despite disputes over hours of work, the harrying tactics of the daily Press, and the inevitable hesitations as to the priority of totalisators over dwelling houses.

* * *

MOH announced that local authorities could now apply for an allocation of temporary houses, and the RIBA published its report, *Housing*, calling for a National Plan, a nation-wide survey of housing needs, and the establishment of a code of standards.

* * *

Finland was out of the war, and Mr. Churchill was out in Canada. Antwerp, Lyons and Brussels were liberated, and in Italy the 8th Army had crossed the Rubicon. In Llandudno a woman fainted with excitement when the street lights were switched on, but there were no reports that any Home Guard became unconscious at the news of the stand-down.

SEPTEMBER

FURNITURE

At the request of the President of the Board of Trade school furniture makers, together with interested trade unions, formed a post-war Reconstruction Committee for the industry.

WAR MEMORIALS

Royal Society of Arts set up a consultative Council on War Memorials.

PHOTOGRAPHIC RECORD

British Council selected Lacock in Wiltshire, the home of William Henry Fox Talbot, who invented photography independently, at the same time as Daguerre, for the making of a photographic record to be widely circulated overseas of the life of an English village.

APPOINTMENTS

Principal of the Leeds College of Art : J. S. Allen.

Architect to the Government of Irak : Philip Hirst.

PRESERVATION

Preservation Committee formed to act in close co-operation with the Society for the Protection of Ancient Buildings and the Suffolk Preservation Society to guard Laverham, an unspoilt mediæval town in West Suffolk, against spoliation.

HOUSING

Order made by Wembley Town Council for the compulsory purchase of five private sports grounds for use as post-war housing sites, overruled by the Minister of Health.

Minister of Health prepared to consider provisional applications from local authorities for an allocation of Churchill Houses.

Wallasey, Cheshire, Housing Committee banned Churchill houses as not suitable for its particular requirements.

Mr. William Grant, Minister of Health, announced that he proposed to set up a housing trust to share with local authorities the task of providing houses in Northern Ireland after the war.

Women's Advisory Committee on Solid Fuel recommends that in post-war building the old type of scullery and washhouse should be replaced by a utility room complete with laundry equipment and drying cupboard.

PHYSICAL PLANNING

Mr. Anthony Minoprio, was appointed by the Chelmsford Area Planning Group to direct a Civic Survey of Chelmsford Borough and Rural District, and to prepare suggestions for the future development of the area.

An exhibition was held of long-term plan for the central area of Macclesfield prepared by Mr. W. Dobson Chapman, Honorary Planning Consultant to the Macclesfield Corporation. (*A.J.*, *Dec.* 14, *p.* 441.)

Professor Sir Charles Reilly's plan for the satellite dormitory town of Woodchurch, near Birkenhead, was finally turned down on strict party lines, by six votes out of sixty, at a special meeting of the Birkenhead City Council. (*A.J.*, *Nov.* 9, *p.* 346.)

The RIBA stated, in a report on Housing, published by Simpkin Marshall, that the establishment of a national plan is the first essential to a housing programme.

The North of Scotland Hydro-Electric Board's Construction Scheme No. 1 was described by Mr. Hugh Quigley as "a shocking travesty of planning." (*A.J.*, *Sept.* 7, *p.* 178.)

Mr. Henry Strauss, Parliamentary Secretary to MOTCP, opened an exhibition at Bilston Art Gallery of the Bilston Civic Survey.

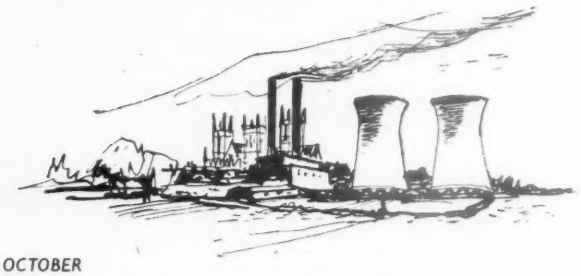
An exhibition of the Plymouth Plan was opened by Lord Astor, Lord Mayor of Plymouth, at the Institution of Civil Engineers, Westminster.

In a report on The Town and Country Planning Bill, 1944, adopted by the Council of the London Chamber of Commerce, the view was stated that new residential areas wholly confined to one class of the community are bad in principle.

Mr. F. J. Forty, the City Engineer, gave a talk at the Housing Centre on the Report on the Planning of the City of London. (*A.J.*, *Oct.* 19, *p.* 297.)

The Binns, West Lothian, with the surrounding park lands, family relics, portraits and plenishings given to the National Trust for Scotland and an endowment for its upkeep.

The estate of Kintail in Wester Ross, extending to about 14,000 acres, and lying at the head of Loch Duich, and for many years a stronghold of the Earls of Seaforth, acquired by the National Trust for Scotland.



OCTOBER

In an attempt to sort out the housing muddle which was becoming a major political issue, Sir Trustram Eve was appointed Housing Dictator for London; the labour force for repairs was again increased, and no building work over £10 in value was permitted in London without a licence.

* * *

The publication of the *Housing Manual*—the bright, informative child of MOW and MOH—was followed by an exhibition of officially sponsored domestic equipment at Birmingham, and the demonstration houses at Northolt opened their doors. These were a dull, lifeless lot to look at beside the Gibberd houses which had been erected alongside them by the British Iron and Steel Federation, and as samples of structural ingenuity they contrasted sadly with the Mulberry Port, a description of which was released this month. These experimental houses, however, have their value, and do not entirely deserve that unofficial title—Operation Raspberry. There was a town planning conference at St. Andrews, and a Building Trades Conference at Cambridge, where prefabrication was referred to as Moonshine. What might be called patrol activity continued over the Town and Country Planning Bill which was edging its way with shamefaced doggedness through the attacks of the stranded gentry in both Houses, and an inquiry was held on the proposed cooling towers at Lincoln.

* * *

Designs for the rebuilding of the House of Commons were submitted this month by Sir G. G. Scott. Athens, Belgrade and Aachen fell to Allied arms. There was an American naval victory in the Philippines, a demonstration at the Picasso show in Paris, a political crisis in Hungary, and Mr. Churchill in Moscow. The death of Rommel was officially confirmed, and the 20-ft. high portrait of Phyllis Dixey's torso in Whitehall was given its winter coat of paint.

OCTOBER

EDUCATION

A benefaction from the Cement Makers' Federation enabled the Imperial College to institute a Chair of Technology in its City and Guilds College.

SCHOOLS

To ensure full-time education for all children, local authorities, at the request of the Ministry of Education, to make an immediate survey of every war-damaged school within twenty miles of Charing Cross.

Codes of Practice Committee at the Ministry of Works, issued a code relating to daylight standards for dwellings and schools.

APPOINTMENTS

Deputy War Damage Commissioner for the London (South-West) Region : W. H. Ansell.

Borough Architect and Town Planning Officer of Huddersfield : Harold Nuttal.

HOUSING

Ministry of Health issued a circular to housing authorities in the London Civil Defence Region on winter housing plans. In special cases of acute shortage of accommodation, the Government will supply and pay the cost of erection of two types of temporary huts—Uni-Seco and Asbestos Cement Nissen.

NATIONAL ATLAS

Mr. W. S. Morrison announced that the Research Division of the Ministry of Town and Country Planning is assembling some of the preparatory work for the eventual formation of a national atlas. Its aim is to show not only all the physical aspects of the country, but the distribution of industry and population, essential services, transport, electricity, land use, types of farming, potential fertility, and so on.

GIRLS' CLUBS

Avon Tyrrell, Hampshire, given by Lord Manners to the National Association of Girls' Clubs and Mixed Clubs for use as a training school, holiday and conference house. The gift includes sufficient land for camping sites, games grounds, and two small lakes for bathing.

WORKSHOP

Zinc Development Association established an experimental workshop at Oxford for the use of architects.

BUILDING

Order made by the Ministry of Works reduced the limit of expenditure up to which building work may be carried out without licence in London from £100 to £10.

PHYSICAL PLANNING

In a survey made by a Committee of the Royal Society of Arts and published by the War Memorials Advisory Council, among several proposals designed to guide public opinion, so that the Memorials of the present war should reach a higher standard of artistic merit and social value than those of the last war, it was suggested that bombed churches should be preserved in a garden setting.

In the *Housing Manual*, published by HMSO, the Ministeries of Health and Works state : The most convenient basis for a community is a population of between 5,000 and 10,000.

In the House of Commons the dispute over the compensation clause in the Town and Country Planning Bill, which, it was at one time thought might have precipitated a major political crisis, ended after a heated debate with a safe majority for the Government.

Opening the *Kensington To-day and To-morrow* exhibition at the Housing Centre, Lord Balfour of Burleigh, said : The LCC Plan is a beautiful dream, but it cannot become a reality until the Government makes up its mind about planning legislation.

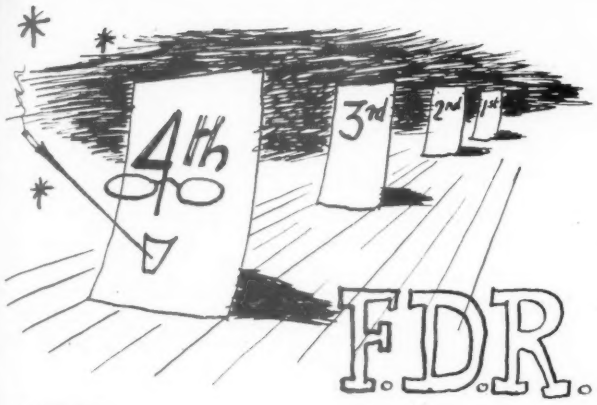
The RIBA issued a memorandum on the Government White Paper on the Control of the Use of Land and on the Town and Country Planning Bill, 1944. (*A.J., Oct.* 12, *p.* xxviii.)

Three committees of the Manchester City Council rejected a proposal for a thirty-eight million pounds tube railway.

A public inquiry was held by Sir Cyril Hurcomb, chairman of the Electricity Commissioners into the proposal to erect two 230-ft. cooling towers as part of the Lincoln corporations' electricity power station. (*A.J., Oct.* 19, *p.* 286.)

Mr. W. S. Morrison opened the Town and Country Planning Summer School at St. Andrews University. (*A.J., Oct.* 26, *pp.* 305 *and* 316.)

Protest made by the Chartered Surveyors' Institution against a clause in the Town and Country Planning Bill, which it stated appears to allow Government Departments to usurp the function of the Courts.



NOVEMBER

The appointment of Mr. Duncan Sandys as Minister of Works to succeed Lord Portal was an unexpected development at the end of this month. Evidently the Government meant business and, as it was rumoured that loaded ammunition boxes were seen being carried into Lambeth Bridge House, so perhaps did Mr. Sandys. The housing situation was still serious.

* * *

Portal houses, the Prime Minister admitted, would not appear so soon or in such numbers as was at first hoped, but three other types—the Tarran, the Uni-Seco and the Arcon—were being produced to help things out. This last design, details of which were revealed this month, is so immeasurably superior in planning, design and detail to the other three that it is incredible that it should ever have been officially accepted. To assist in the tricky problem of siting these EFM houses, MOTCP staged a small but lively exhibition of drawings and models demonstrating various methods of site arrangement, and a MOH Circular on the same subject was pressed into the hands of local authorities to make it clear that the whole problem was now theirs.

* * *

Franklin D. Roosevelt was elected President for the fourth term, and Mr. Churchill celebrated his 70th birthday after a trip to Paris. Political troubles were rending the liberated countries. The Government announced its leave plans for soldiers abroad, and Britain's war effort was proclaimed to the world by MOI. Among the facts revealed were those that every person had received about 30 shell eggs in the year, that we had made 100,000 aeroplanes, that 200,000 houses were destroyed, and that passenger trains now carried an average load 125 per cent. greater than before the war—as if we didn't know.

NOVEMBER

BOMBED HOUSE OF COMMONS

Earl Winterton's Select Committee recommended the design of Sir Giles Gilbert Scott, R.A., for rebuilding the old chamber of the House of Commons, destroyed in the blitz.

COMPETITIONS

First prize of £250 in the Timber Development Association's Timber House Competition, won by John P. Tingay.

National Housing and Town Planning Council Competition for designs for Blocks of Terrace Houses suitable for Erection in Towns, won by G. K. Findlay. (First prize, £125.)

APPOINTMENTS

General Manager and Secretary of the British Electrical Development Association: Victor W. Dale.

Lord Portal, Minister of Works, resigned and Mr. Duncan Sandys, Joint Parliamentary Secretary, Ministry of Supply, appointed in his place.

HOUSING

Resolution passed by the National Federation of Building Trades Operatives urged control of all forms of prefabrication from the construction of units in the factory to the assembling operation on the site.

EDUCATION

Memorandum on Educational Facilities for Students of Architecture Returning from National Service, issued by the RIBA Board of Architectural Education.

PHYSICAL PLANNING

The Department of Health for Scotland in its circular, *Housing in the Transitiona Period After the War*, asked local authorities to acquire land now for building programmes, and to proceed with the preliminary development of the land with roads and services.

Speaking at Bishop's Stortford, Lord Latham, leader of the LCC, said: I have the gravest misgivings that under the growing pressure of clamant demand for houses, much will be done which will hinder real planning and which in a few years' time we shall all keenly regret.

It was stated that the Bath Town Planning Report, the work of Professor Abercrombie and two local officials, would be published in January, 1945.

The Air Ministry indicated that the site of the proposed Atlantic Air Terminal, planned by the Blackpool Corporation fulfils all the requirements for a national air station. (*A.J.*, *Dec.* 7, *p.* 417.)

Birkenhead Corporation announced that work was to be started almost immediately on the building of an electric power station, costing three-and-a-half million pounds, on a site at Bromborough, near Birkenhead.

Mr. Henry Braddock, A.R.I.B.A., read a paper by Mr. A.W. Kenyon, F.R.I.B.A., Chairman of the RIBA Central Advisory Committee on National Planning, explaining the RIBA's National Plan. (*A.J.*, *Dec.* 28, *p.* 483.)

Mr. W. S. Morrison opened an exhibition at the Royal Exchange of maps and drawings illustrating the City of London plan.

Fifteen local government areas in Surrey combined to form the East Surrey Joint Planning Committee. MOTCP announced that of 1,441 local planning authorities in England and Wales, 1,045 are now combined in 181 joint planning committees.

Plans were submitted to the Hull Housing and Town Planning Committee for a garden city to cost five million pounds, by Mr. Harold Needler, a local miller, and Mr. George Williams, his architect.

Mr. E. R. Chiltern, A.R.I.B.A., A.M.T.P.I., was appointed Planning Officer for the County of Kincardine.

The result of the inquiry into the proposal to erect two 230-ft. cooling towers as part of the Lincoln Corporations' Electricity Power Station, was announced to the Lincoln City Council, in a report from the Electricity Commissioners. The Commissioners disapproved of the towers as originally proposed, but stated that they would consent to them if they were limited in height to 90 ft.

The Scottish Housing Advisory Committee's White Paper on the *Distribution of New Houses in Scotland*, was published by HMSO.

The Durham County Council passed a resolution, supporting the £3,500,000 Power Station Scheme.

The Ministry of Education announced that proposals for the immediate acquisition of sites for educational purposes required to meet urgent needs during the first two years after the end of the war may now be submitted by local authorities.

The Ministries of Health and Works Memorandum for the Guidance of Local Authorities on *Temporary Accommodation*, was published by HMSO. An exhibition, illustrating siting proposals for temporary houses, prepared for the Ministry of Health by the Research Division of the Ministry of Town and Country Planning, was held at 32, St. James's Square. (*A.J.*, *Nov.* 30, *p.* 399.)

DECEMBER

One of Mr. Sandys's first duties as Minister of Works was to explain to an irritable House—but not to anybody's surprise—that the Portal House had gone with its namesake, and that the Arcon, Tarran, Uni-Seco and, perhaps, the Phœnix (constructed from the debris of Mulberry), would be the only models produced for the present, to meet the allocation of 90,000 temporary houses which had been made by MOH. His second task was to re-organize the bomb-repair work in Southern England by making MOW the chief responsible authority with Sir Trustam Eve as general in the field, and by obtaining the aid of 3,000 US Service technicians. These men, assisted by mechanical plant, which was as magnificently ruthless as their American disregard for the value of scrap piping, accomplished wonders.

* * *

Apsley House was offered to the nation, and BINC issued a document on prefabrication, which for shortsightedness, surpassed even the famous RIBA memorandum of 1943. Mr. Gordon Brown was appointed head of the AA, and the compulsory acquisition of the Oxhey site by the LCC was sanctioned by MOH.

* * *

The war news could hardly have been less encouraging. The Germans had broken through on the Western Front, and in Greece there was civil war. Already more physical damage had been done in Athens than during the whole of the previous campaign and German occupation, but the damage to good relationships and the Allied cause generally was even more serious, and not easily irreparable. It was a tragic end to a year which had promised so well and in which so much had been accomplished.

DECEMBER

OXFORD

Protests made by the University Undergraduates against the proposal of Woolworths to demolish the eighteenth century Clarendon Hotel, and build a new store with a Gothic elevation on the site.

DEMOBILIZATION

Memorandum on Post-War Supply of Architects issued by the RIBA.

ELECTRICITY

Central Electricity Board aimed at providing ninety million pounds' worth of new plant, to extend the grid system by the winter of 1948.

HOUSING

Ninety thousand temporary houses allocated to local authorities in England and Wales by the Ministry of Health.

RIBA Council issued approved Scale of Fees for the siting of Emergency Factory Made Houses.

APPOINTMENTS

Principal of the AA School of Architecture : Major Raymond Gordon Brown, A.R.I.B.A., A.A. Dip., Parachute Regiment.

COMPETITIONS

East Sussex Branch of the Rural District Councils Association invited members of the South Eastern Society of Architects to submit designs for a Pair of Rural Houses.

Competion for the proposed Women's Hospital at Golders Green, London, N.W. won by W. F. Howard, of Enfield, Middlesex. Promoters, Industrial Orthopædic Society, assessor, Sir Giles Gilbert Scott, R.A.

WATERLOO BRIDGE

Waterloo Bridge opened to six lines of traffic, its full width, as compared with three lines on the old bridge. The building of the old bridge was begun in October, 1937, and continued, despite the difficulties caused by war conditions. But for the war, the bridge would probably have been completed in 1940.

WAR DAMAGE

Directions issued by the Treasury setting out general policy to be observed under the War Damage Acts with regard to buildings of special architectural or historical importance.

SCHOOLS

Ministry of Education issued draft Planning and Building Regulations for Schools maintained by local authorities.

ROADS

Mr. Noel Baker, Parliamentary Secretary, Ministry of War Transport, announced that the Government proposed to ask for powers to construct £100,000 a mile motor roads. The local authorities concerned would be consulted in each case, and if required, a public inquiry would be held. Agricultural interests and the preservation of amenities would be fully considered.

PHYSICAL PLANNING

Manchester announced its post-war plans, which will include three ring roads, a green belt for future satellite towns and a zoning scheme based upon precincts.

The three villages of Wraysbury, Horton and Datchet, in the Thames Valley, protested to the Eton Rural District Council, the controlling authority, against the Metropolitan Water Boards' Plan to construct three large reservoirs in their parishes.

The order made by the LCC for the compulsory acquisition of the Oxhey site, Watford, was confirmed by the Minister of Health.

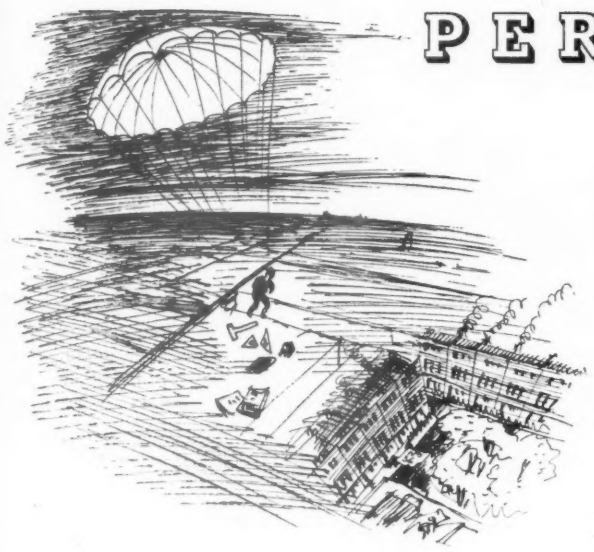
Rickmansworth Urban District Council approved on general lines a plan for post-war development, prepared by Mr. Longstreth Thompson, P.P.T.P.I., which includes a proposal to continue the digging of gravel in the district, so as to form a chain of lakes.

A comprehensive resolution on town planning and housing carried at the annual conference of the Labour Party, described the plans and proposals of the Government as totally inadequate and indicating a lack of realization of the extent and gravity of the problem.

A preliminary edition of the Report prepared on behalf of the Standing Conference on London Regional Planning by Professor Abercrombie, at the request of the Minister of Town and Country Planning, was published by HMSO for limited circulation.

Standing Committee on National Parks, urged a first instalment of some half-a-dozen National Parks at the end of the war. As obvious areas for National Parks, the Committee named the Lake District, Snowdonia, and the North Wales mountains, the Peak District with Doverdale, the north Yorkshire coast and moors ; the Pembroke coast, Exmoor and Dartmoor.

PERSONALITIES



THE draftee for Personality of 1944 only scraped into the position by a few weeks. He is **Gordon Brown**, major in the paratroops and principal-designate of the AA School of Architecture. At the age of 32 he has been selected to fill one of the most important posts in the world of architecture. To Gordon Brown Astragal doffs his hat in congratulation and with good wishes, and also to **Lord Portal** in farewell and **Duncan Sandys** in welcome: to **Charles Reilly** (Knight), **G. L. Pepler** (C.B.) and **Sir Giles Gilbert Scott** (O.M.): to Miss **Ledeboer** for her tireless work on Burt and Dudley Committees and to **Sir Trustram Eve**, Housing Dictator for London: to **Wells Coates** (O.B.E.) and **A. E. Richardson** (R.A.): to Lt.-Col. **Geoffrey Webb** who cherishes the monuments of Europe: to **Dr. Eva Taylor**, principal comedienne of the Town Planning Conference at St. Andrews: to **Frederick Gibberd** upon his retirement from the AA, and for his Northolt houses, and to **F. R. S. Yorke** for managing to survive both at home and on the site, attacks by flying bombs: to **Christian Barman**, visitor to USA and to **Jacob Crane** who is returning the compliment: to **W. H. Ansell**, deputy WD commissioner for SW London, and **Edward Maufe**, gold medallist for 1944 and principal architect for war cemeteries in the United Kingdom: to **Jane Drew** upon her return from the USA and her departure to West Africa and to **Edward Bawden** upon his return from Persia and departure to Yugo-Slavia: to the **BRS**, the **NBR** and **CEMA** (whatever Professor Bodkin may think): to the **Imperial Tobacco Co.** upon its profit of 8 million and to the **National Gallery** for making £20,000 out of its canteen: to the **Scottish Housing Advisory Committee** for *Planning Our New Homes* and to **MOW** and **MOH** for the *Housing Manual*: to the indefatigable comic draughtsmen **Osbert Lancaster**, **Acanthus** and **Giles**, and to the equally indefatigable **John Piper** and **Feliks Topolski**: to **William Wurster**, new Dean, School of Architecture, Massachusetts, **Dr. Stradling**, Chief Scientific Adviser to MOW, and **J. S. Allen**, architect principal of the School of Art, Leeds: to the **Museum of Modern Art**, New York, for its exhibitions, and to Miss **Phyllis Dixey**, who keeps going the human side of Whitehall: to **Edward Carter**, still incandescent at the RIBA: to the American impresario who thought up an orchestra of nuns and to the American ad. man who in a current beauty preparation advertisement tells the purchaser "to powder—yes, right down to *there*": to **Jacqmar** in the hope that they'll stop producing those scarves, and to **Henry**—still Sir Launchalot—**Kaiser**: to **Salvador Dali** for writing a novel, and to all those who have read *Technics and Civilization* right through: to **Plymouth** and the **City of London**, victims of this year's plans and to **Arcon** for their temporary house design (send it to Slazengers to be re-strung): to **Brighton** for its proposed rainproof promenade and to **Frinton-on-Sea** for its proposed fried fish shop ("subject to certain conditions"): to **Robert Moses** despite his attack on "long-haired planners and subsidized lamas" and to **W. S. Morrison** described by *Picture Post* as "the man who plans and runs away": to **Sir Ian MacAlister** upon his Presentation and to Messrs. **Faber & Faber** upon their emergence as Fathers Confessor to Maxwell Fry and Howard Robertson: to those who took the RIBA exams in POW camps, and to those who took the TPI exams in fly-bombed London: to **Durham** and **Lincoln** in commiseration, and to the **National Trust** who have had yet another bumper year.

The principal housing developments of the past year, both private and official, are reviewed here by an architect who has himself been associated with a number of experimental systems of prefabrication for houses. Both temporary and permanent types are described and commented upon and general trends are discussed. The article also includes brief reviews of the year's equipment, publications, and competitions.

DEVELOPMENTS IN POST-WAR HOUSING IN 1944

By Richard Sheppard

In 1944 a Government Department actually designed and produced a prefabricated house. Such a thing would have seemed impossible a year or two ago; in those days they made a long nose at the mention of the word and Ministry of Health officials associated it in their minds with the adulteration of food, or some other activity inimical for the nation's health.

But when Mr. Churchill introduced the factory-made house in his broadcast in the summer everything was altered—standards and values like braces were re-adjusted overnight; it had the same affect as the speech he made the night after Russia was attacked by Germany. Mr. Churchill is a great man, he is winning the war, he lays bricks in his spare time, so this tin-can house of his must be all right was the popular attitude.

Nearly all the houses built during the year have been prefabricated or embody experimental methods of building, for it was only on this basis that licences were issued. The only houses of orthodox construction are those demonstrating the plans recommended by the Dudley Committee in their report *The Design of Dwellings*. When Mr. Edric Neel wrote his survey of progress in 1943 for this journal, he was in the position of a man who knows what is coming, what is going to appear, but has little to show for it at the moment; the very reverse is the case this year. The Tate Gallery, both inside and out, is crammed with prototypes of prefabricated systems, and daily more appear round those damp walls. There are other prototypes of prefabricated houses up and down the country; in colonies and clusters at Sight Hill in Edinburgh, and at Northolt, and in ones and twos in Glasgow, Coventry, Liverpool, Birmingham: all of them erected in 1944 and designed in 1943.

More than this, the various Ministries have produced a number of reports on housing and prefabrication. The Ministry of Works came out with *House Construction* (P.W.B. Studies No. 1) in April, and the first pages of this report contain one of the most important pronouncements on house construction ever made by an official committee. For the Burt Committee's statement of desirable standards of heat and sound insulation and of fire resistance and moisture penetration, marks the progress made in building technique and also implies

a recognition of the importance of scientific research in building; it also provides a yardstick for measuring the efficiency of different forms of construction. Most of the houses erected since have conformed to or surpassed the suggested standards in this report, and we must press for the acceptance of these values as a minimum standard below which house construction, however built and financed, must never be allowed to fall.

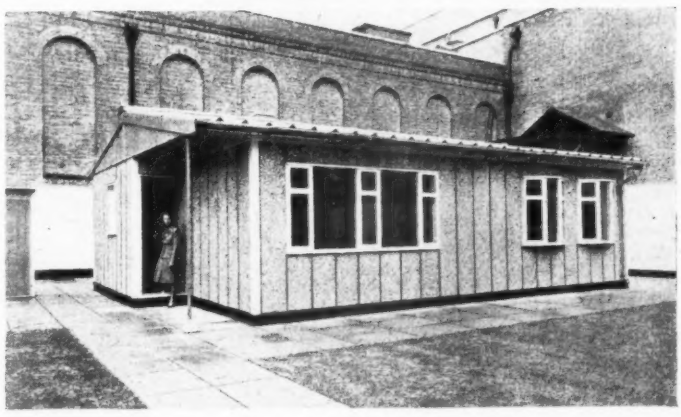
Apart from the Burt Report the year has been notable for the attention paid to the matter of factory fabrication. It has been debated in the Press on the Radio, and the Portal House captured nearly as much publicity as D-Day, and certainly as much as the revelation of the floating harbours (also prefabricated) which were used on that occasion.

The Portal House also revealed official policy on housing: the housing programme is divided into two principal sections, temporary and permanent. The Portal type of prefabricated house is given a life of ten years, the time limit for temporary accommodation. Before the arrival of the Portal House scheme, most of the firms and individuals who were working on prefabricated systems were following their own stars and producing systems of construction without any ideas beyond the fact that in the final analysis life and cost must bear comparison with normal constructional methods. In any case, it was believed, the overall shortage of dwellings would provide an assured market provided a system was sound. But the Government has taken a different line: so far as prefabrication is concerned, it has not yet approved any systems for permanent construction, and until further evidence is forthcoming this field remains with orthodox systems.

The reasons for this policy are difficult to understand. For one thing, the temporary houses are unlikely to be much cheaper than the permanent prefabricated ones, which claim a much longer life; the cost which has been quoted for the Portal type houses are £600 inclusive for an area of about 650 sq. ft., and this may be compared with some of the permanent systems whose sponsors put forward prices ranging from 16s. 6d. to 18s. 6d. per sq. ft. The short term house probably uses the same amount and in certain cases the same type of labour and material as the long term house. The policy may be partly explained by the attitude of many local authorities who do not like prefabrication and all that goes with it, and who will accept temporary housing only on the assumption that they will be able to meet the bulk of their requirements in the first ten years, and that the Government will put into effect their promise to "take the damned things away after that." "At the same time the housing committees are not prepared to accept the view of the Ministries, that, in specifying prefabricated housing, only temporary houses are meant. Other and more permanent methods of factory-built construction are proposed by various cities, extending the life of dwellings from ten to forty years, and so justifying a cost which, for a ten-year term of life, seems extravagant" (*The Observer*, November 26, 1944).

Other authorities are pushing ahead with their own proposals for permanent prefabricated houses, or, like Birmingham, with a temporary house which can be refaced internally and externally to make a permanent one. But the nation appears to be committed to the temporary house, and tens of thousands have already been ordered; one of the most popular is the Arcon, and this at least should satisfy architects, as it is one of the best designed houses of its class.

But this is only one side of the picture. At various times throughout the year permanent factory-built houses were introduced to us furtively or with a great fanfare, according to the natures of their sponsors.



On the facing page, the Ministry of Works temporary steel bungalow. Above, four types of temporary prefabricated houses produced by private enterprise. From top to bottom, Arcon, Uni-Seco, Tarran, Jicwood.

They have generally been of steel or concrete frames, reflecting official pessimism on the timber supply after the war, although Uni-Seco were sufficiently clever to get by with a timber prototype. The progress that has been made is very encouraging, considering how little was done in this country before the war. Designs have been produced which are economical in the use of materials (the frame of the Unibuilt house employs less than 2 tons of light strip steel), while many are extremely flexible in plan forms and in the variety of materials which can be employed—like the houses erected in Birmingham under Mr. Manzoni's direction. Very few, however, have yet achieved a satisfactory standard of design, although the Braithwaite House is considerably better in this respect than most of the others. But this year has only seen the first of the many, and our designers have had insufficient experience of the æsthetic problems presented by this type of construction. The exhibition of USA Wartime Housing in August showed the mastery of the technique of timber prefabrication which some of the American architects have attained.

TEMPORARY HOUSING

The temporary housing scheme is based on the following factors:—

1. Use of wartime factories, plant and labour.

2. Use of materials not commonly employed in building but available in Great Britain.

3. Standard foundation and service assembly which enable any approved type of house to be supplied.

4. High standard of equipment and fittings to offset lack of floor space and furniture shortage.

5. A more or less uniform standard of performance for all types.

6. Government control of production and distribution.

With very few exceptions nearly all the temporary types of houses were designed to meet the programme which became apparent when the so-called Portal Steel House was exhibited in May. Designers hurriedly modified their plans and fought for space in the Tate Gallery. Other systems of temporary construction exist besides those in this category which have been on view there, but all those which have been approved have certain common characteristics. These are:—(1) Standard overall dimensions; (2) a standard plumbing and services unit and services entry. Together, these factors limit both the planning and the sub-division of the available space, and when they are rigidly followed, there appear to be only two possible types—that with the central entrance and internal hall which gives access to all rooms except the kitchen (the Arcon plan), and those with a side entrance with a hall giving access to the living room and the bathroom and w.c., and the other rooms opening off the living room and kitchen (the official Portal House plan).

This latter arrangement of the plan has been vigorously criticized—one correspondent describes the living room as the Po-run. The popularity of the central entrance plan shows how well justified are these comments. It seems as if what might be called the engineering requirements of the services unit was allowed to dominate the social and architectural factors. Constructional systems are not so rigid as to preclude other arrangements. As the ARCHITECT'S JOURNAL said in its editorial at the time: "It would surely have been wiser to develop a system of unit construction rather than a single type of house, so that variation in plan and layout could have been obtained." How far this is justified may be seen from the MOTCP layouts for temporary housing which were exhibited towards the end of November. All the plans which were shown were more or less uniform in aspect and orientation, and only two basic variations are possible if these factors are given their proper degree of importance.

Inflexibility is the great disadvantage of the short term house. Certain of the various prototypes designed in 1944 may be in production in 1945, and once the jigs and the machinery are made up there can be little alteration in the design—particularly in the steel and light alloy houses. Æsthetically, the only satisfactory types are the Arcon and Jicwood houses, and even here the uniformity of layout imposed by the plan will make it very difficult to site them attractively. Nor has there been any guidance offered as to the type of site and its relation to other kinds of development. *Temporary Housing*, 1944, largely ignored the social problems connected with temporary housing. Indeed, in suggesting the use of land not permanently intended for housing, as sites for temporary housing, it goes near to saying that they should be in colonies. Isolation is about the worst possible way of siting these houses. There is also no provision for the change in the size of the family unit—except that of moving to another and larger house so that these temporary houses will normally have more than one owner. The occupants when they are forced to move to a permanent house will have been accustomed to high standards of equipment (if that equipment does materialize). If Northolt is any guide they will be disappointed with what they find in the permanent houses.

EXAMPLES OF TEMPORARY PREFABRICATED HOUSES

THE MOW STEEL HOUSE

The construction of this house is original, and is an interesting application of the sheet metal fabricating processes normally used in the motor car industry. Walls and roof are formed of sheet metal panels stiffened by pressed steel ribs. The ceiling units span from the outer wall to the central spine of cupboards, and are braced and locked longitudinally at the apex of the roof. Metal posts are erected at the angles of the building with intermediate metal posts in the centre of the two long sides; the whole structure is braced by threading longitudinal rods between these posts, which, when tightened, lock the intermediate wall panels tightly together. This arrangement reduces the flexibility of opening on the two long walls, and might have created difficulties in erection. The project now appears to have been shelved. (*A.J., May* 11.)

ARCON.

A steel frame house with tubular steel trusses. Walls are of asbestos cement sheeting with internal board linings. The total effect in planning, design and detail of the house is very satisfactory. It breaks away from the Army Hut conception, improves the plan by making all the rooms excepting the kitchen accessible from the hall. The pergola over the french window to the living room will probably puzzle the occupants. The reason for the steel panel which forms the external wall to the bathroom and w.c., is difficult to discover, as it would appear to provide a surface on which condensation will take place, though it looks good from the outside. (*A.J., November* 30.)

TARRAN AND SECO

Both these houses are similar in that they have a timber structure and the general construction does not differ essentially from the permanent houses proposed by both these firms. In the Uni-Seco bungalow the resin bonded plywood panels are abandoned in favour of a wall unit which consists of a core of wood wool faced externally with asbestos cement and lined internally with board. The planning of both houses follows closely the original steel house erected at the Tate Gallery, and both are ruined by a series of small bay windows. (*A.J., November* 30.)

JICWOOD

The stressed skin method of construction with a core infilling has so far not been adopted in this country. The system of construction is economical in material and simple in fabrication, and the whole structure, wall, roof, floor and partitions are stressed. It might be described as monocoque. It is extremely flexible, and since the plans were published it has been adapted to the Portal standard. The double skin with the core of infilling has a high degree of thermal insulation, and allows a sympathetic internal and external finish. (*A.J., December* 14.)

PERMANENT HOUSES

Nearly all the prefabricated houses which are of a permanent type employ a framed system of construction, and nearly all the frames are of steel. There are numerous reasons for this which have nothing to do with the prejudice most service men have acquired against the concrete frames of the wartime hut. There are considerable differences in the way steel is employed in the frames, and these extend from the light, 18-gauge strip steel construction of the Unibuilt system to the hot-rolled, heavy sections which form the frame of the BISF houses.

If the temporary houses suffer from a deadening uniformity, the permanent houses which have been built during the year exhibit sharp differences in planning and design. The circumstances, in which, and for which, they have been designed, are very different; the temporaries are clearly intended for a closed market and Government control, while the permanent houses are designed for the open market, and allow for the different requirements of the various local authorities. There appears to be a lack of direct and unified official guidance, and although the various Government departments are friendly and helpful, they themselves do not know what policy and procedure will be adopted when it comes to this class of construction. Firms have been largely left to muddle along as best they may in an unfamiliar field, with only the guidance of such pamphlets as the *Design of Dwellings* (MOW Central Housing Advisory Committee) to assist them. They and their designers have often worked under difficulties caused by the lack of uniformity in practice, and by the absence of Codes covering these specialised forms of construction as well as by the often divergent views of local authorities and the Ministry of Health. This is to be seen in the varying relations of kitchen and dining space, living room and kitchen, embodied in their plans. As an instance of this diversity, the plan of the BISF house at Northolt may be compared with that of the 20 ft. by 20 ft. Unibuilt House, erected near Coventry.

In general, permanent houses appear to be better in flexibility of layout and arrangement than the temporary ones. This is due to their being designed as systems of construction rather than standard houses. Where light steel sections are employed the first floor is usually so designed that its trusses derive no support from the partitions which can therefore be freely arranged, or, in the case of those employing heavier sections, the floor derives support from intermediate columns in such a way that great freedom of arrangement is possible. This is undoubtedly a sound policy, as it is unlikely that the local authorities will surrender such autonomy as they possess for the problematical advantage of a centrally-directed programme for the production of permanent houses; it would probably not be in the best interests of a democratic community

The Braithwaite pair of demonstration houses of steel unit frame under construction on the LCC Watling Estate.

either. At the same time the experience that has been gained during the year indicates that some change in the procedure by which local authorities contract out their housing programme will be necessary if permanent houses are to be prefabricated. Under the present arrangement prefabrication will find it hard to make a start as tens of thousands of pounds must be spent in laying down plant before promises of delivery can be made.

Technical progress can be summarized:—

1. The progress made in the design of light frames and particularly in light gauge welded sections. This was practically unknown to the building industry before the war, and will undoubtedly be widely used in the future. This is to be seen in the Braithwaite and Unibuilt systems. The guages vary between 12 and 18. The use of laminated timber and plywood beams for the frame and other components is another advance which can be studied in the Uni-Seco house.

2. Developments in the applications of insulating materials. Fibre materials like glass silk, slag and asbestos wool boards and composite sandwich materials embodying a core with a high insulating value like plywood and expanded rubber, as used in the Jicwood house. The attention paid to thermal and sound insulation can also be seen in the party wall construction of the Unibuilt house.

3. In nearly all the systems the weight, size and easy handling of components have been studied; in the Foamed Slag house at Glasgow the wall units were related in size to the mechanical plant used in their erection.

EXAMPLES OF PERMANENT PREFABRICATED HOUSES

UNI-SECO

Demonstration cottages at Chobham. The cottages were erected on pre-cast, post piles so that the superstructure can be removed and re-used elsewhere. The design of the shutter boxes in the pile heads allows the main beams, formed of resin-bonded plywood to be clipped to them. The whole fabric of the building is formed of resin-bonded plywood units with a maximum of 12 ft. 9 in. The system of construction allows great flexibility in planning. (*A.J., February* 17.)

UNIBUILT

Demonstration houses near Coventry built of ridge welded strip steel frame erected on mass concrete foundations. Maximum span of floor trusses 24 ft. 0 in. The fabric of the building is clipped to the steel frame; walls are asbestos trays which form the exterior finish and are filled with 2¼ in. wood wool; plasterboard is used internally. The internal planning is flexible, and the entire house is of dry assembly and factory made components. (*A.J., June* 22.)

TARRAN

Demonstration House at Hull. Construction consists of standard panels of vertical plywood main ribs with reinforced concrete external slab; interior lining of wall board. The floors have an ingenious, pressed-steel, frame. *In-situ* concrete foundations. Like other systems the design relies largely upon the efficiency of the bituminous joint between the wall units. (*A.J., July* 27.)

GLASGOW FLATTED HOUSES

Experimental block of four houses made with reinforced foamed slag concrete units, maximum 10 ft. 0 in. × 8 ft. 8½ in. External wall units 6 in. thick—heat transmittance U = 0.26. Internal partitions 4 in. thick. Flues and chimneys—pre-cast foamed slag units. These flats should be compared with the poured concrete houses at Northolt. The system, if flexible and with adequate mechanical plant, seems to have possibilities for speeding up erection of permanent houses. The construction is of more interest than the design. (*A.J., August* 17.)

BRAITHWAITE

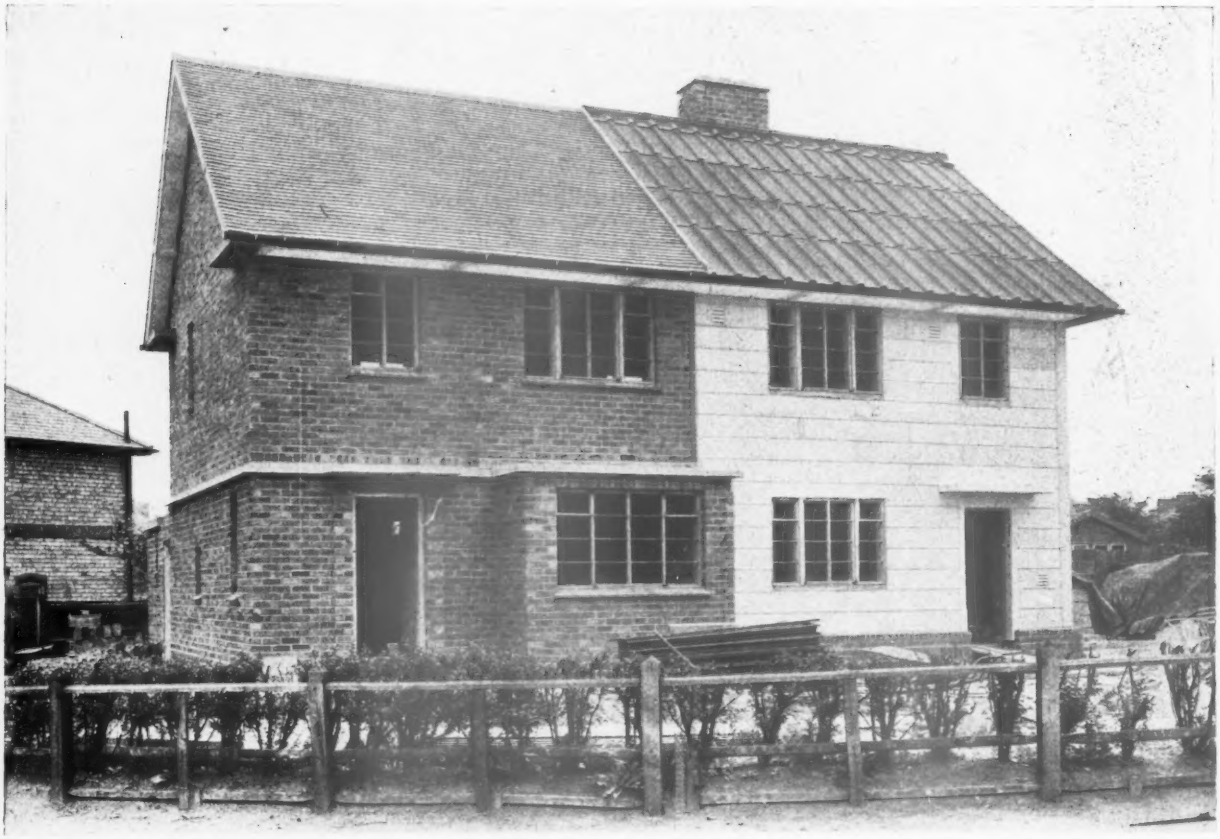
Pair of cottages on the LCC Watling Estate. Built of light rolled steel structure on *in situ* concrete foundations. A method of clipping of external and internal linings allows a wide range of materials to be used; bituminous jointing for external units is avoided by the use of zinc flashings. The floor beams obtain intermediate support from partitions. Apart from the intrinsic interest of the system, it is the most satisfactory design among the permanent houses. (*A.J., October* 5.)

BIRMINGHAM

The structure of this experiment is a permanent steel frame to which, in the first instance, temporary covering materials (asbestos, plasterboard) are attached; when conditions allow it is proposed to remove these and to reface the houses with permanent materials. In view of the Minister of Works speech on December 8, it is evident that proposals of this type are to be carefully considered. (*A.J., October* 19.)

BISF HOUSES, NORTHOLT

The construction of these houses is intermediate between prefabricated and *in situ* construction. Frame is formed of rolled steel sectional members, and the walls of a variety of materials, including brick, and



patent partition blocks, rendering on expanded metal. The roof can be built before the internal and external walls and traditional methods of construction used. The two pairs already built are extremely attractive in appearance, and help to support the view that the solution to the housing problem is more likely to be found in a combination of traditional and prefabricated methods of construction. Criticisms have been made of plans; furniture is difficult to arrange in the living room, and the wall area available is restricted by sliding doors and low cills. The third bedroom is too small, and has no cupboard. The design of details (balustrade of the stairs, porch and wrought iron work outside the house) though they do much to help the design are probably too elaborate and expensive to be reproduced cheaply for mass production. (*A.J., October* 12.)

FLATTED HOUSES, NORTHOLT

Here the steel frame is similar to that already described for the Birmingham houses. Orlit concrete slabs form the external facing unit with pointed joints; the steel work is protected against damp penetration by bituminous felt stuck to the outside of the steel members behind the slabs. Thermal insulation is provided by quilted glass fibre, and the interior lined with building board. (*A.J., October* 12.)

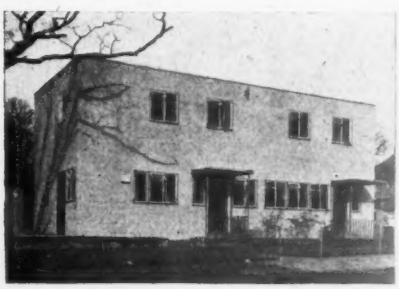
TRADITIONAL AND ALTERNATIVE CONSTRUCTION

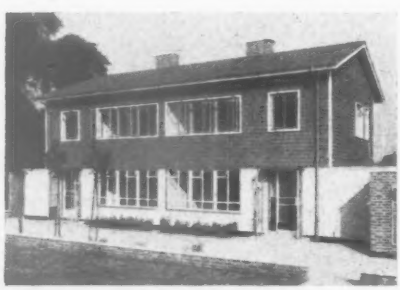
This year saw the climax of the protracted travail which produced 3,000 houses for agricultural workers. The situation reached a farcical point which was recognized in the House of Commons when members asked the sort of questions commonly reserved for intelligence tests—if it takes two years to build 2,000 houses, how many years does it take to build 2 million? In matters of construction and design there was little in this programme.

At Northolt, there was a good deal of interest in the poured concrete houses where foamed slag and expanded clay were used. Apart from this the little work that has been carried out is disappointing. The various reports produced by the Central Housing Advisory Committee show a great deal of research in planning, equipment, and ventilation, and in the design of the kitchen and service areas of the house. In the reports this is impressive, yet when demonstrated in actuality at Northolt it did not amount to so much. The Housing Committee came to Northolt full of hope and went away with the feeling that after all there wasn't so very much to catch the electors, just some extra cupboards here and there and a large and rather draughty kitchen.

Most architects were rather put off by the dreary standard of design at Northolt, and Mr. Gibberd's BISF houses shone, not so much as a good deed in a naughty world, as a piece of frivolity in a dull one.

Constructionally, apart from the BISF houses and the flatted houses, the poured concrete house in foamed slag was the most important demonstration. This house has 8 in. thick walls, and the astonishing heat transmittance co-efficient of U = 0.16. The houses cost 17s. 10d. per sq. foot, the shuttering was easily assembled and the foamed slag itself is easy to cut and chase. It has a pleasant open texture, and was scarcely





Top, the Birmingham experimental steel frame houses, designed by H. J. Manzoni, the City Engineer. Below left, the Unibuilt house at Coventry, also of steel frame. Below centre, one of the two British Iron and Steel Federation's houses at Northolt. Below right, war-time housing at Coatesville, Pa., from the exhibition of USA Housing in War and Peace, held last year at the RIBA (see A.J., July 27).

in need of the rendering which it received. This experiment, coupled with the foamed slag house at Glasgow, suggests that this material is going to play a big part in future building. (*A.J., October* 12.)

EQUIPMENT AND COMPONENTS

The design and production of equipment has lagged behind the developments in other spheres in building. In the last two years various bodies, public and private, have carried out a considerable programme of research, but this has scarcely begun to appear in the actual production of components. The Standards Committee of the Ministry of Works, for instance, has produced a series of designs for standard components of all types, and reports are heard of the mass production of drying cupboards, and refrigerators. Some of these units were included in the various demonstration houses at Northolt, but the plumbing units shown in the Tate Gallery were nearly all mock-ups.

The standard factory-produced plumbing unit, about which we heard so much in 1943, when the Denham system was shown, has not been included in any of the 2-storey houses but a service unit has been designed for the standard plan of the MOW temporary houses. This contains hot and cold water storage, water and space heating, electrical controls, and is a compact and complete unit. Access is by means of a removable panel or internal lining in the linen cupboard. There is nothing revolutionary in such a unit—similar ones have been produced in America—but it is a definite advance on anything which has hitherto been produced in this country. The cooker and the refrigerator and the other individual components are well designed, and nothing has been omitted. The unit is small in size, and may have to be enlarged if it is used in permanent houses. (*A.J., May* 11.)

The Frigidaire company have produced a cooling unit, or larder conditioner, which maintains thermostatically a predetermined temperature of 50°. It is a suitcase version of the cellar, and the cooling is effected by a small motor which can be housed in almost any larder. Naturally, the degree of thermal insulation provided by the construction of the larder, and its size, affect the maintenance cost, but this unit allows all kinds of food to be stored in bulk.

Space heating, as most architects have found to their cost, is a controversial subject, and one in which it is unwise to dogmatize; it is difficult to assess the conflicting claims made by the supply companies, but the Fulham grate which burns solid fuel appears to utilize nearly all the heat produced by combustion, and even to control that unpredictable process. Doubts concern its cost and the amount of fuel it burns; the common domestic fire is inefficient, but as combustion is imperfect, it doesn't burn much coal. (*A.J., Inf. Centre, December* 21.)

Towards the end of the year the Ministry of Works produced in Birmingham a sensible and well arranged exhibition on House Equipment. Neither the exhibition nor the exhibits were dramatic (the work of the Standards Committee and the types of equipment referred to in the Housing Manual were shown), but it emphasized once again the important part the Ministry is playing in the building industry and in standardizing the design of building components. (*A.J., November* 23.)

Radiation has produced a well thought-out and fully equipped kitchen in collaboration with Arcon, and has sensibly related it to a specially prepared house design. The fuel used throughout is, of course, mainly gas and coke. (*A.J., December* 28.)

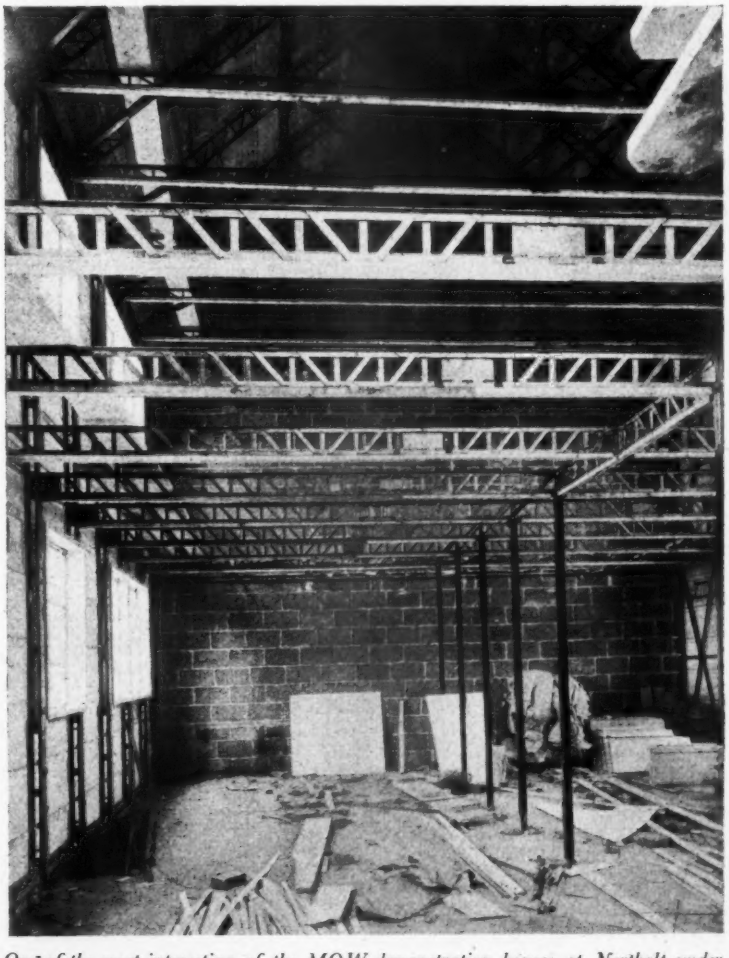
In December, the British Electrical Development Association published a well-produced booklet on electric kitchen plans for low-cost houses, and an exhibition of demonstration models of these kitchens was opened at the Building Centre at the end of the year.

1944 AND 1945

The most surprising thing about the year is that the famous old slogan Dimensional Co-ordination has been ignored. Not one of the systems of construction which have been tried out for housing has the same module or modular ratio. The only device found to be practical is the limitation of floor areas to provide a standard plan on which costs can be compared (for the Demonstration houses at Northolt this area was 850 square feet). When a group of systems of similar material—like the thin guage steel frame houses—is examined, it is found that there is a definite unit, as well as a principle of assembly which runs through each individual design, and that it is difficult to transfer or amalgamate good features of different designs to make an ideal synthesis. Furthermore, each system is based upon the most economic use of its chief material, whether steel or timber, and the possibilities of variation in either of these materials are so great, in relation to the system of assembly, that the modular dimensions are never the same. Most of these systems depend upon infilling materials (either boards or slabs) for walls, roofs and floors, and the dimensions of these materials can be easily altered in manufacture. Plasterboard, to take an instance, can be manufactured in any size up to the economic maximum of 8 ft. 0 in. in one dimension, but the mills can roll off any dimension up to this by fairly simple adjustments of the machinery. So, except in the matter of components and equipment, the theory of modular co-ordination has not yet been applied in practice.

Two outstanding problems remain to be solved in 1945. The first of these concerns *the type* or *the system*. Are we going to produce standard houses—or systems of standardized construction? The first alternative has advantages; it is certainly cheaper, it is practically foolproof, and it is capable of mass production and erection. The second is much more flexible, and enables the local needs to be met, and a variety of materials and finishes to be used; it also avoids monotony, and is not confined to house construction. This problem still stands unresolved for permanent housing. The answer to it depends to a considerable extent on local government; if that is alive and vigorous the problem will be resolved during the coming year.

The second enigma is an æsthetic one. There has scarcely been a single, well-designed house produced in 1944, and the technique of design for the mass-production of houses has been unsuccessful. The traditional houses erected at Northolt were stolid and uninteresting, but the failure in the prefabricated systems is more surprising; the methods of construction are new and stimulating, even if they are unfamiliar. The machine demands uniformity, yet the architects have tried to give interest



One of the most interesting of the MOW demonstration houses at Northolt under construction—the flatted dwelling designed to reduce site labour, of a light steel frame of the same patented type as that used in the Birmingham house. The cladding is of 2-in. concrete slabs, the walls being insulated with glass wool and faced internally with wall boarding.

The kitchen side of the MOW kitchen-bathroom unit to be incorporated in the MOW steel house and other officially-approved temporary houses. This unit was incorporated also in the Northolt flatted dwellings.

and relief to their designs, without interfering with economic production. In most of the schemes sections have been built using *in situ* construction (the Braithwaite system) or little pieces of pre-war "Vogue," smart, sophisticated and non-standard (the BISF porches), and extravagant whimisies which will puzzle the inhabitants of Bermondsey and Stepney (the Arcon garden-side porch). Where the architect has stuck entirely to standard, mass-produced components the results have been flat and insipid (Unibuilt houses at Coventry).

Another pitfall has been to misapprehend the market and produce a house which is unsuitable for the working class family for whom it is presumably intended. The BISF houses at Norholt, for example, appear to have been designed for a childless couple who entertain a good deal at the Pink Gin level of life; at the other end there is the design which deliberately encourages the stout-and-bloater strata—like the foamed slag houses at Glasgow.

One last point: there should be no conflict of interests when it comes to post-war housing. The sharp distinction between prefabrication and *in situ* methods of construction must not be allowed to become an obstruction and a rivalry. Both methods have a function, and to regard them as two distinct and incompatible entities is misleading. It may well be that the best method of solving the housing shortage will prove to be a combination of both.

PUBLICATIONS

The principal event of the year has been the fertile union of the Ministry of Works and the Ministry of Health in housing matters. In November alone two manuals were produced; and others were issued at regular intervals throughout the year. It is difficult to choose between the various official publications; the report of the Scottish Housing Advisory Committee was brightly and copiously illustrated: *Demonstration Houses* had much useful and carefully tabulated information on Northolt and was well illustrated. The two volumes of the *Housing Manual* and the Royal Institute of British Architects' Housing Committee's report were also important.

Important publications of the year were:

PLANNING OUR NEW HOMES. Report by the Scottish Housing Advisory Committee on the Design, Planning and Furnishing of New Homes. Department of Health for Scotland. (HMSO, 3s. 0d.)

METHODS OF BUILDING IN THE USA. Ministry of Works. (HMSO, 4d.)

HOUSE CONSTRUCTION. Post-War Building Studies, No. 1. Ministry of Works. (HMSO, 2s. 0d.)

GAS INSTALLATIONS. P.W.B. Studies, No. 6. Ministry of Works. (HMSO, 6d.)

ELECTRICAL INSTALLATIONS. PWB Studies. No. 11. Ministry of Works. (HMSO, 1s. 6d.)

RURAL HOUSNG. Report of the Central Housing Advisory Committee. Ministry of Health. (HMSO, 1s. 0d.)

PRIVATE ENTERPRISE HOUSING. Report of the Central Housing Advisory Committee. Ministry of Health. (HMSO, 1s. 0d.)

DESIGN OF DWELLINGS. Report of the Central Housing Advisory Committee. Ministry of Health. (HMSO, 1s. 0d.)

HOUSING MANUAL, 1944, Part I. Ministries of Health and Works. (HMSO, 2s. 0d.)

HOUSING MANUAL, 1944, Part II. (Technical Appendices). Ministries of Health and Works. (HMSO, 1s. 6d.)

HOUSING. Royal Institute of British Architects. (RIBA, 1s. 0d.)

TEMPORARY ACCOMMODATION. Ministries of Health and Works. (HMSO, 6d.)

DEMONSTRATION HOUSES: NORTHOLT. Ministry of Works. (HMSO, 1s.)

MEMORANDUM UPON PHYSICAL RECONSTRUCTION IN BRITAIN. National Federation of Registered House-Builders. (NFRHB, 1s. 0d.)

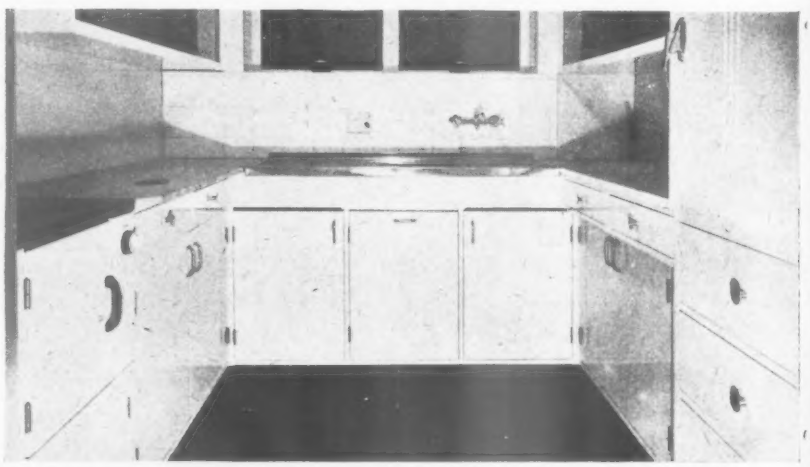
ELECTRIC KITCHEN PLANS FOR LOW-COST POST-WAR HOMES. British Electrical Development Association (BEDA).

COMPETITIONS

The number of competitions held reflects the general interest in housing. Those for Northamptonshire and West Wycombe were concerned primarily with design in relation to local conditions and the assessors choice in each was for a strictly traditional solution. Others, like the Tarran and the Timber House competitions, were intended to demonstrate the use of materials, and the assessors were on solid grounds. It is open to doubt, however, whether such competitions really do assist the promoters, and whether the results which are obtained are practical demonstrations of their systems. They give the entrants a good deal of hard work, and only seldom do the winners see their schemes erected.

Competitions related to housing in 1944 were:—

1. Northants Rural Cottages (*A.J., March* 30).
2. West Wycombe Cottages (*A.J., April* 20).
3. Tarran System Houses (*A.J., August* 31).
4. National Housing and Town Planning Council's Terrace Houses.
5. Timber Development Association's Timber Houses.



Two of the model electric kitchens at the BEDA Exhibition at the Building Centre. Top, a working kitchen for flats. Below, a dining-kitchen for a semi-detached house.

INFORMATION CENTRE

INDEX 1944

The function of the Information Centre is to supply a digest of current developments in planning and building technique as recorded in publications and statements of every kind. To this is added an annual index, which will build up year by year, containing the title, author, source and brief description of every item that has been published in the Centre since its inception in its new form in the JOURNAL *for January 28, 1943. For fuller information than can be found in the index, reference should, of course, be made to the original* JOURNAL *text published week by week. The serial number and date number in brackets after each item relate to the* JOURNAL *issue in which the item appeared. The main headings are—Acoustics and Sound Insulation, Heating and Ventilation, Lighting, Materials, Physical Planning, Plumbing and Sanitation, Structure. Subheadings are in alphabetical order.*

ACOUSTICS and Sound Insulation

CODES OF PRACTICE

Interim Code of Functional Requirements for Dwellings and Schools (Classification Code). Chapter III, Precaution Against Noise. *Codes of Practice Committee of the Ministry of Works.* (*British Standards Institution*, 2*s.*) Draft for comment, subject to revision. Desirable standards and methods of obtaining them. (*No.* 1530 : 13.7).

FACTORIES

Acoustic Cells for Airplane Engine Test Buildings. *D. Fitzroy.* (*J. Acoust. Soc. Am., October*, 1943, *p.* 106). Experiments on sound insulating ducts for aero-engine test sheds. (*No.* 1387 :17.2).

Music as a Safety Factor. (See *Music*).

Attitudes Towards Types of Industrial Music. (See *Music*).

Industrial Music and Morale. (See *Music*).

Programming Music for Industry. (See *Music*).

The Statistical Method in Determining the Effects of Music in Industry. (See *Music*).

The Factory and the Future. (See *PHYSICAL PLANNING : Industry*).

INSULATION

Acoustic Cells for Airplane Engine Test Buildings. (See *Factories*).

Interim Code of Functional Requirements for Dwellings and Schools (Classification Code). Chapter III, Precaution Against Noise. (See *Codes of Practice*).

MUSIC

Music as a Safety Factor. *E. Hough.* (*J. Acoust. Soc. Am., October*, 1943, *p.* 124.) Experience of music as a safety factor in an arsenal. (*No.* 1382 : 17.2).

Attitudes Towards Types of Industrial Music. *W. A. Kerr.* (*J. Acous. Soc. Am., October*, 1943, *p.* 125.) A study of reaction to music among different types of workers. (*No.* 1383 : 17.2).

Industrial Music and Morale. *D. D. Halpin.* (*J. Acous. Soc. Am., October*, 1943, *p.* 116.) Technique of using music for industrial morale. (*No.* 1384 : 17.2).

Programming Music for Industry. *Ben Selvin.* (*J. Acous. Soc. Am., October*, 1943, *p.* 131.) A record of experience in the use of music in industry. (*No.* 1385 : 17.2).

The Statistical Method in Determining the Effects of Music in Industry. *R. L. Cardinell.* (*J. Acous. Soc. Am., October*, 1943, *p.* 133.) A study of the effect of music in production rates. (*No.* 1386 : 17.2).

REPRODUCTION

Cinema Sound Quality. *J. Moir.* (*Wireless World, November and December*, 1943). Design of Cinema: its relation to quality of reproduced sound. (*No.* 1576 : 24.8).

HEATING and Ventilation

AIR CONDITIONING

Heating Industrial Buildings with Direct-fired Warm Air System. *D. Henderson.* (*Heating, Piping, November*, 1943, *pp.* 587-9.) Importance of minimizing heat losses and reducing air change emphasized. Typical warm air system described briefly. (*No.* 1420 : 23.3).

Air Conditioned Operating Rooms have Five Advantages. (*Heating, Piping, December*, 1943, *p.* 648.) Mentions advantages of conditioned operating rooms. (*No.* 1421 : 23.3).

How Control of the Air in Industry is Helping to Win the Battle of Production. *G. Midboe.* (*Heating, Piping, December*, 1943, *p.* 623.) Describes heating and air conditioning services in aero-engine plant. (*No.* 1438 : 6.4).

The Air Conditions in Cinema Projection Rooms. *Oesterle.* (*Gesundheit-Ingenieur, June* 10, 1943, *pp.* 163-4.) Ventilation often inadequate : should be much greater than that of body of cinema. (*No.* 1500 : 25.5).

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. (*No.* 1665 : 9.11).

Air Disinfection in Ventilation. *W. F. Wells.* (*Heating, Piping and Air Conditioning, June*, 1944, *p.* 365.) Review of theories developed and study of respiratory contagion and control of airborne infection. (*No.* 1666 : 9.11).

Heating and Air Conditioning of Buildings. (See *General*).

Fire Hazards of Air Conditioning Systems. (See *Fire Precautions*).

Heating and Ventilating. (See *Factories*).

Mechanical Installations. (See *STRUCTURE : General*).

Industrial Exhaust Ventilation in Industrial Hygiene. (See *Factories*).

Control of Air Streams in Large Spaces. (See *General*).

CENTRAL HEATING

Improved Central Heating Equipment. *C. C. Downie.* (*Heating and Ventilating Engineer, January*, 1944, *p.* 252.) Describes a few modern developments. (*No.* 1452 : 13.4).

Engineering Services for Restaurant, Stores and Flats. (See *Flats*).

CHURCHES

A Study of Intermittent Heating of Churches. *F. E. Giesecke.* (*Heating, Piping, December*, 1943, *p.* 669.) Heating plant in case considered should be nearly twice as big as for continuous heating. (*No.* 1419 : 23.3).

CODES OF PRACTICE

Interim Code of Functional Requirements for Dwellings (Classification Code). Chapter I (*c*), Ventilation. *Codes of Practice Committee of the Ministry of Works.* (*British Standards Institution*, 6*d.*) Draft for comment, subject to revision. Controllable openings, air-changes, flues and shafts. (*No.* 1531 : 13.7).

Interim Code of Functional Requirements for Dwellings and Schools (Classification Code). Chapter VIII, Heating and Heat Insulation. *Codes of Practice Committee of the Ministry of Works.* (*British Standards Institution*, 2*s.*) Draft for comment, subject to revision. Temperature requirements and insulation values. Heating methods not covered. Determination of desirable insulation. Solar heat and equivalent temperature. (*No.* 1681 : 16.11).

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. (*No.* 1664 : 9.11).

COOKING

Choose Your Own Kitchen. *Adie Ballantyne.* (*Faber and Faber*, 5*s.*) Book for the housewife. Notes on most aspects of planning and equipment of kitchens. Likely to provide housewife with just enough ideas to make architect's life difficult. (*No.* 1634 : 19.10).

The First Five Years. (See *Solid Fuel*).

Where Do We Go from Here ? (See *Gas*).

Electric Kitchen Equipment. (See *Equipment*).

Refrigerators. (See *Equipment*).

Domestic Apparatus IV. (See *Equipment*).

Electrical Installations. (See *Electrical Installations*).

Gas Installations. *Ministry of Works Post-War Building Studies No. 6.* (See *Gas*).

Heating, Cooking and Hot Water Supplies for the House. (See *Houses*).

DISTRICT HEATING

District Heating. *P. G. Kaufmann.* (*Industrial Heating Engineer, January*, 1944, 1, 33.) Summary of conclusions in Report on District Heating for Bristol. (*No.* 1413 : 16.3).

District Heating. *P. A. Kaufmann.* (*Electrical Times, February* 24, 1944, *p.* 228.) Advantages. Survey of special factors involved in district heating. Figures of cost. (*No.* 1555 : 3.8).

District Heating. *P. G. Kaufmann.* (*Industrial Heating Engineer, January*, 1944, 15.) District heating in Russia. General information and recommendations. (*No.* 1563 : 17.8).

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.) Advan-

tages of district heating in zones according to requirements such as density, industry. Examples give. (*No.* 1667 : 9.11).

ELECTRICITY, GENERAL

Co-ordination of Distribution. (*Electrical Times, February* 3, 1944, *p.* 128.) Proposals of Joint Committee of Electricity Supply Associations for future policy and practice in distribution of electricity. (*No.* 1472 : 4.5).

Report on Electricity Supply, Distribution and Installation. (*Journal of the Institution of Electrical Engineers, January*, 1944.) Standardization of voltages considered. Costs estimated. Recommendations for National Plan and two-part tariff. (*No.* 1474 : 4.5).

Electricity Supply. Distribution and Installation. (*Journal of the Institution of Electrical Engineers, Part I, March*, 1944, *p.* 104.) Report of the Sub-Committee 3 of the Post-War Planning Committee. (*No.* 1571 : 24.8).

Industrial Power Supply. *T. E. Houghton.* (*Journal of the Institution of Electrical Engineers (Part I), February*, 1944, *p.* 65.) Conditions compared where industrial electric power should come from public or private supply. Private generation of current often worth while, particularly when large quantities of process steam are needed as well. (*No.* 1476 : 4.5).

ELECTRICAL INSTALLATIONS

Domestic Fused Plug. *R. Amberton.* (*Elect. Rev., October* 29, 1943, *p.* 569.) Discussion of a standard 10 amp. plug with fuse. (*No.* 1431 : 30.3).

Domestic Standard Fused Plug and Socket (*Dorman & Smith, Ltd.*) Commercial fused plug and socket. (*No.* 1618 : 28.9).

Electrical Installations—The Present and the Future. *A. G. Ramsey.* (*Journal of the Institution of Electrical Engineers, January*, 1944, *p.* 21.) Reviews shortcomings of present electrical installations, and seeks remedies for these defects. (*No.* 1471 : 4.5).

Building Costs and Electrical Services. *E. Jacobi.* (*Electrical Times, January* 27, 1944.) Possible post-war costs for building and electrical services. (*No.* 1473 : 4.5).

Liaison with the Architect. *G. A. T. Burdett.* (*Electrical Times, December* 30, 1943.) Urges that electricity sales officer should keep in close contact with architect when new buildings are being planned and gives reasons. (*No.* 1475 : 4.5).

Domestic Ring Main. *E. Jacobi.* (*Electrical Review, December* 31, 1943, *p.* 871.) Discussion of new domestic electrical circuit. (*No.* 1488 : 18.5 *and No.* 1532 : 13.7).

Ring Mains, Outlets, and Plugs. *R. Plummer.* (*The Electrician, January* 21, 1944, *p.* 48.) Practical problems in the use of ring mains. Elimination of building work. (*No.* 1489 : 18.5).

A Universal Domestic Plug. (*Electrical Times, February* 10, 1944, *p.* 168.) Description of a plug and socket design for universal domestic use. (*No.* 1490 : 18.5).

Wiring Post-War Houses. *E. W. Faithfull.* (*Electrical Times, March* 30, 1944, *p.* 370.) Comprehensive discussion of house wiring for future conditions. (*No.* 1617 : 28.9).

Electrical Installations. *The Ministry of Works Post-War Building Studies, No.* 11. *By a Committee convened by the Institution of Electrical Engineers.* (*HMSO.* 1*s.* 6*d.*) Installations in small and large houses and flats, including electrical domestic appliances. Ownership and control of electricity service cables in flats and other multi-occupier buildings. Installations in multi-occupier buildings, schools, hospitals and farms. Includes telecommunications of all types. (*No.* 1712 : 14.12).

Wiring Post-War Houses : Lessons from the Birmingham Experimental Houses. (*Electrical Review, September* 1, 1944, *p.* 313.) Description of steel frame experimental houses at Birmingham and their electrical installation. (*No.* 1726 : 21.12).

Report on Electricity Supply, Distribution and Installation. (See *ELECTRICITY : General*).

Electricity Supply, Distribution and Installation. (See *ELECTRICITY : General*).

Domestic Electrical Apparatus. (See *Equipment*).

Electric Kitchen Equipment. (See *Equipment*).

Refrigerators. (See *Equipment*).

Availability of Electrical Appliances after the War. (See *HEATING : Equipment*).

Domestic Apparatus IV. (See *Equipment*).

EQUIPMENT

Domestic Electrical Apparatus. (*Electrical Review, March* 3, 1944, *p.* 295.) General trends in electrical equipment and its influence on some aspects of house design. (*No.* 1619 : 28.9).

Electric Kitchen Equipment. (*Electrical Times, March* 2, 1944, *p.* 256.) Suggestions for standard kitchen units, including electrical equipment. (*No.* 1620 : 28.9).

Refrigerators. (*Leader in Electrical Review, March* 3, 1944, *p.* 287.) Statement of electrical industry policy and action for supply of domestic refrigerators. (*No.* 1621 : 28.9).

Availability of Electrical Appliances after the War. (*Electrical Times, July* 6, 1944, *p.* 2.) Leader discussing time necessary to produce good and inexpensive electrical domestic equipment in quantity. (*No.* 1646 : 26.10).

Domestic Apparatus IV. (*Electrical Review, March* 17, 1944, *p.* 371.) Survey of probable electric cooker developments. (*No.* 1650 : 26.10).

New Principles of Burning Anthracite Announced. (*Plumbing and Heating Journal, September*, 1944, *p.* 58). New principle enables very small heating units to be built, burning small quantity at high rate. (*No.* 1714 : 14.12).

The First Five Years. (See *Solid Fuel*).

Domestic Fused Plug. (See *Electrical Installations*).

Domestic Standard Fused Plug and Socket. (See *Electrical Installations*).

Ring Mains, Outlets, and Plugs. (See *Electrical Installations*).

A Universal Domestic Plug. (See *Electrical Installations*).

Improved Central Heating Equipment. (See *Central Heating*).

Gas Installations. *Ministry of Works Post-War Building Studies No.* 6. (See *Gas*).

Where Do We Go from Here ? (See *Gas*).

A Fireside Talk. (See *Houses*).

Has Coal a Future for Small-scale Uses ? (See *Solid Fuel*).

Less Fuel v. Comfort. (See *General*).

Mechanical Installations. (See *STRUCTURE : Mechanical Installations*).

Pittsburgh Housing Authority Designs and Installs 296 Ceramic Heaters. (See *Houses*).

Solid Fuel Installations. (See *Solid Fuel*).

Electrical Installations. (See *Electrical Installations*).

Handbook of Building Standards, Materials and Components. (See *MATERIALS : Standards*).

Choose Your Own Kitchen. (See *Cooking*).

FACTORIES

Big Gravity Ventilation System Serves Kaiser's New Steel Mill. *G. E. Skaggs.* (*Heating, Piping, December*, 1943, *p.* 647.) Details of ventilation of large steel mill. (*No.* 1440 : 6.4).

Gas-Fired Hot Water Supply for Industry. *E. G. Brooks.* (*Gas Journal, March* 15, 1944, *p.* 338.) Discussion of suitable plant for various needs. (*No.* 1649 : 26.10).

Heating and Ventilating. (*Electrical Review, April* 28, 1944, *p.* 582.) Scheme in an underground factory. Plenum system. (*No.* 1682 : 16.11).

Industrial Exhaust Ventilation in Industrial Hygiene. *A. D. Brandt.* (*Heating, Piping and Air Conditioning, July*, 1944, *p.* 428.) Possible methods of removing air pollutants (such as powdered products and industrial solvents) from air of workrooms. (*No.* 1698 : 30.11).

Heating Industrial Buildings with Direct-fired Warm Air System. (See *Air Conditioning*).

How Control of the Air in Industry is Helping to Win the Battle of Production. (See *Air Conditioning*).

Ventilation and Heating, Lighting and Seeing. (See *HEATING : General*).

Foundrymen's Group Approves Code Recommending Ventilation Practice. (See *Codes of Practice*).

Industrial Power Supply. (See *Electricity : General*).

Daylight Cuts Fuel Consumption. (See *LIGHTING : Daylight*).

The Factory and the Future. (See *PHYSICAL PLANNING : Industry*).

FARMS

Farming Power and Light from Gas. (*Gas World, January* 29, 1944, *p.* 120.) Extension of gas grids in many rural areas has brought about a large increase in the use of gas on farms for cooking, lighting, heating and general farm purposes. (*No.* 1540 : 20.7).

Electrical Installations. (See *Electrical Installations*).

FIRE PREVENTION

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. (*No.* 1662 : 9.11).

FLATS

Design Factors. *H. Swaine.* (*Heating and Ventilating Engineer, March*, 1944, *p.* 344.) Heating services in flats. Low-pressure hot-water systems with central plant usually adopted. Avoidance of pipe-borne noises. Hot-water storage. (*No.* 1569 : 24.8).

Engineering Services for Restaurant, Stores and Flats. (*Air Treatment Engineer, June*, 1944, *p.* 83.) Description of heating system and hot water supply in a block of flats with store below. (*No.* 1651 : 26.10).

Observations on the Natural Ventilation of Dwellings. (See *General*).

Gas Installations. *Ministry of Works Post-War Building Studies No.* 6. (See *Gas*).

Electrical Installations. (See *Electrical Installations*).

GAS

Report on the Planning of the Gas Industry. (*British Gas Federation, October*, 1943.) Review of post-war position of Gas Industry by Central Federation of Employers. (*No.* 1453 : 13.4).

Gas Installations. *Ministry of Works Post-War Building Studies No.* 6. *Report of Committee convened by the Institution of Gas Engineers.* (*HMSO*, 6*d.*) Service pipes. Internal installations. Meters. Appliances. Installations in dwellings and schools. (*No.* 1537 : 20.7).

Where Do We Go from Here ? *A. Forshaw.* (*Gas Journal, October* 27, 1943, *p.* 522 ; *and November* 3, 1943, *p.* 564.) Post-war trends in gas appliances. Little probability of permanent standardization in gas cookers. Water heaters and gas fires discussed. (*No.* 1538 : 20.7).

Farming Power and Light from Gas. (See *Gas*).

Post-War Domestic Fuel Policy, with Special Reference to South Wales. (See *Houses*).

Gas-Fired Hot Water Supply for Industry. (See *Factories*).

The Fulham Grate. (See *Open Grates*).

GENERAL

Observations on the Natural Ventilation of Dwellings. *T. Bedford and C. G. Warner* (*Industrial Health Research Board, Medical Research Council*), *assisted by F. A. Chrenko* (*London School of Hygiene and Tropical Medicine.*) (*RIBA Journal, November*, 1943.) Summary of results of observations of natura ventilation of rooms in houses and flats.

Ventilation rates in closed rooms; effect of cracks round doors and windows; wall ventilators and effect of wind speed; the influence of heated and unheated flues of varying sizes and with varying height of chimney. (*No.* 1352 : 6.1).

Heating and Air Conditioning of Buildings. *Oscar Faber and J. R. Kell.* (*Architectural Press*, 45*s*.) Second edition of detailed treatment of whole subject except district heating. (*No.* 1451 : 13.4).

Control of Air Streams in Large Spaces. *L. G. Tuve and G. B. Priester.* (*Heating, Piping and Air Conditioning, January*, 1944, *p.* 39.) Choice and design of air outlets for ventilation systems. Tests described. (*No.* 1501 : 25.5).

Ventilation and Heating, Lighting and Seeing. *Pamphlet No.* 1. *Industrial Health Research Board.* (*H.M. Stationery Office*, 3*d*.) Simple explanation of principles of heating, ventilation and lighting, referring particularly to conditions in factories. (*No.* 1539 : 20.3).

Less Fuel v. Comfort. *M. F. Blacktin.* (*Heating, Piping and Air-conditioning, October*, 1943, *p.* 547.) Points to note in getting best out of existing heating and hot-water supply systems. (Also largely applicable to new equipment.) (*No.* 1574 : 24.8).

Automatic Control for Heating and Ventilating Plants. *J. Brown.* (*Air Treatment Engineer, March*, 1944, *p.* 34.) Briefly discusses characteristics and uses of various types of control systems for temperature and humidity. (*No.* 1575 : 24.8).

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. (*No.* 1663 : 9.11).

Heating, Past, Present and Future. *J. R Kell.* (*Journal of the Institute of Heating and Ventilation Engineers, July/August*, 1944, *p.* 90.) Survey of past achievements, with forecast of future development. (*No.* 1713 : 14.12).

Mechanical Installations. (See *STRUCTURE : Mechanical Installations*).

Handbook of Building Standards, Materials and Components. (See *MATERIALS : Standards*).

HOUSES

A Fireside Talk. *A. F. Dufton.* (*Journal of the Institution of Heating and Ventilating Engineers, January-February*, 1944, *p.* 214.) Experiences with heating, cooking and hot water supply in a private house. Advantages of fireclay balls added to fuel, of Cheminée de Nancy and of slow combustion appliances burning solid fuel. (*No.* 1545 : 27.7).

Post-War Domestic Fuel Policy, with Special Reference to South Wales. *W. R. Branson.* (*Gas Journal, March* 22, 1944, *p.* 371.) Estimate of post-war demand for heat in new dwellings. Conclusion is that most practicable way of providing it is by use of gas and solid smokeless fuel. (*No.* 1645 : 26.10).

Pittsburgh Housing Authority Designs and Installs 296 Ceramic Heaters in Broadheath Manor. *M. Rosenauer* (*New Pencil Points, une*, 1944, *p.* 85.) Article on the coal-fired ceramic stove for heating 2-roomed house. History of the ceramic tile heater. (*No.* 1696 : 30.11).

Heating, Cooking and Hot Water Supplies for the House. (*Report of the Women's Advisory Committee on Solid Fuel.*) General discussion of problem with recommendations intended to lead to economy in fuel and labour. (*No.* 1697 : 30.11).

Observations on the Natural Ventilation of Dwellings. (See *General*).

Hot Water Supplies to Domestic Dwellings. (See *Water Heating*).

Open Grate Efficiency. (See *Open Grates*).

The Degree-day Method as a Check on Fuel Consumption. (See *Insulation*).

Domestic Ring Main. (See *Electrical Installations*).

A Universal Domestic Plug. (See *Electrical Installations*).

Domestic Standard Fused Plug and Socket. (See *Electrical Installations*)

Interim Code of Functional Requirements for Dwellings (Classification Code). Chapter I (c), Ventilation. (See *Codes of Practice*).

Interim Code of Functional Requirements for Dwellings and Schools (Classification Code). Chapter VIII, Heating and Heat Insulation. (See *Codes of Practice*).

Gas Installations. *Ministry of Works Post-War Building Studies No. 6.* (See *Gas*).

Electrical Installations. (See *Electrical Installations*).

Has Coal a Future for Small-scale Uses ? (See *Solid Fuel*).

Wiring Post-War Houses. (See *Electrical Installations*).

Domestic Electrical Apparatus. (See *Equipment*).

Electric Kitchen Equipment. (See *Equipment*).

Refrigerators. (See *Equipment*).

Availability of Electrical Appliances after the War. (See *Equipment*).

Conservation of Fuel. II. (See *Insulation*).

Conservation of Fuel. III. (See *Insulation*).

Domestic Apparatus IV. (See *Equipment*).

The Fulham Grate. (See *Open Grates*).

A Post-War "Metro" Coke Grate. (See *Open Grates*).

Solar Houses. (See *STRUCTURE : Housing*).

HOSPITALS

Air Conditioned Operating Rooms have Five Advantages. (See *Air Conditioning*).

Electrical Installations. (See *Electrical Installations*).

Air Disinfection in Ventilation. (See *Air Conditioning*).

HOTELS

Design Factors. *H. Swaine.* (*Heating and Ventilating Engineer, February*, 1944, *p.* 297.) Heating services in hotels. (*No.* 1418 : 23.3).

INSULATION

The Degree-day Method as a Check on Fuel Consumption. *Van Zuilen.* (*Gesundheit-Ingenieur, June* 10, 1943, *p.* 157.) Factors affecting heat requirements of a small experimental house over long periods of time. Only temperature difference determines fuel consumption. (*No.* 1432 : 30.3).

Effects of Studs and Joists on Heat Flow through Frame Constructions. *P. D. Close.* (*Heating, Piping and Air-conditioning, October*, 1943, *p.* 529.) Importance of considering effect of studding in calculating heat losses through framed constructions. (*No.* 1564 : 17.8).

Engineered Insulation. *C. O. Mackey.* (*Prefabricated Homes, July*, 1943, *p.* 12.) Economic thickness of insulation. Vapour wall barriers. Heat capacity for walls. (*No.* 1570 : 24.8).

Conservation of Fuel—II. (*Plumbing and Heating Journal, April*, 1944, *p.* 29.) Insulation of houses. Heat loss and fuel consumption. Costs. (*No.* 1647 : 26.10).

Conservation of Fuel—III (*Plumbing and Heating Journal, May*, 1944, *p.* 24.) Condensation within building structure. Methods of prevention. Vapour barriers. (*No.* 1648 : 26.10).

Interim Code of Functional Requirements for Dwellings and Schools (Classification Code). Chapter VIII, Heating and Heat Insulation. (See *Codes of Practice*).

Low-cost Housing (Timber). (See *STRUCTURE : Housing*).

Solar Houses. (See *STRUCTURE : Housing*).

LAUNDRIES

Design Factors. *H. Swaine.* (*Heating and Ventilating Engineer, January*, 1944, *p.* 256.) Heating services in laundries. (*No.* 1417 : 23.3).

Mechanical Installations. (See *STRUCTURE : Mechanical Installations*).

OPEN GRATES

Open Grate Efficiency. *J. Young.* (*Journal of Royal Institute of British Architects, January*, 1944, *p.* 65.) Convector type open fire, which burns coal or coke. (*No.* 1430 : 30.3).

The Fulham Grate. *Note from the Press Officer, Gas Industry House.* New coke-burning grate, with gas ignition burner. (*No.* 1724 : 21.12).

A Post-War "Metro" Coke Grate. (*Coke and Smokeless Fuel Age, August*, 1944.) Illustrated description of new version of the Metro coke-burning domestic open grate. (*No.* 1725 : 21.12).

Solid Fuel Installations. (See *Solid Fuel*).

PIPES

Practical Radiant Heating. (See *Radiant Heating*).

Gas Installations. *Ministry of Works Post-War Building Studies No. 6.* (See *Gas*).

Design Factors. (See *Flats*).

RADIANT HEATING

Practical Radiant Heating. *Raymond Viner Hall.* (*Architectural Record, August*, 1943, *p.* 62.) How comfort is achieved with radiant heating. Situation of panels. Basic design. Heating media. Layout of coils. Pipe materials. Control. Cost. (*No.* 1378 : 10.2).

Optimum Surface Distribution in Panel Heating and Cooling Systems. *B. F. Raber and F. W. Hutchinson.* (*Heating, Piping, November*, 1943, *pp.* 602-614.) Gives methods for evaluating the uniformity of radiation from floor, wall or ceiling panels. Consideration of some particular cases. Conclusions drawn as to optimum distribution of panels for rooms of various sizes and heights. (*No.* 1410 : 16.3).

Radiant Heating. *L. J. Fischer.* (*Heating and Ventilating Engineer, December*, 1943, *pp.* 221-227.) One of series of articles describing design and specification of panel warming systems. (*No.* 1411 : 16.3).

Floor Heating System in Hangar Conserves Metal. *J. K. Fairbourn and J. D. Dillon.* (*Heating, Piping, November*, 1943, *pp.* 573-575.) Short description of particular application of floor heating. (*No.* 1412 : 16.3).

What 500 Installations have Revealed about Radiant Heating. *C. A. Hawk, Jr.* (*Heating, Piping and Air Conditioning, January*, 1944, *p.* 28.) Summarizes American practice in radiant floor heating. (*No.* 1502 : 25.5).

Design and Practice of Radiant Heating. *P. Hallock.* (*New Pencil Points, December*, 1943. *p.* 69.) Main advantages of radiant heating. A few practical details for installation of floor heating. (*No.* 1556 : 3.8).

SOLID FUEL

The First Five Years. (*Report of work* 1938-1942 *of British Coal Utilization Research Association.*) General outline of start and growth of BCURA, including reference to research on domestic solid fuel appliances. Development of space-heating units, combined space-heating and hot-water units, and combined space-heating, hot-water and cooking units. (*No.* 1353 : 6.1).

Has Coal a Future for Small-scale Uses ? *J. G. Bennett.* (*National Builder, March*, 1944, *p.* 167.) Discusses coal economy of various fuels. 16 per cent. of heat in original coal now used in domestic heating. Technical developments will lead to improvement. Future coal fires will be smoke consuming. (*No.* 1582 : 24.8).

Post-War Coal Processing. *G. M. Gill and J. Roberts.* (*Gas Journal, January* 19, 1944, *p.* 82.) Effect of increase in coal processing after the war. (*No.* 1573 : 24.8).

Solid Fuel Installations. *The Ministry of Works Post-War Building Studies, No.* 10. *By a Committee convened by the British Coal Utilization Research Association.* (*HMSO*, 9*d*.) Objectives in appliance design. Recommendations for design. Economies from improved appliances. Installation of appliances. Characteristics of solid fuels. Objectives relating to building and architecture. Ap-

pendices on: Standards of performance of appliances; Smoke abatement; Comparative examples of operating costs for existing and improved appliances; Installation of appliances; Design of flues; Selection of types of appliances. (*No.* 1711 : 14.12).

Open Grate Efficiency. (See *Open Grates*).

A Fireside Talk. (See *Houses*).

Post-War Domestic Fuel Policy, with Special Reference to South Wales. (See *Houses*).

Pittsburgh Housing Authority Designs and Installs 296 Ceramic Heaters. (See *Houses*).

New Principles of Burning Anthracite Announced. (See *Equipment*).

The Fulham Grate. (See *Open Grates*).

A Post-War "Metro" Coke Grate. (See *Open Grates*).

STORAGE

Some Physical Aspects of the Storage of Works of Art. *F. I. G. Rawlins.* (*Journal of the Institution of Heating and Ventilating Engineers, November-December*, 1943, *p.* 175.) Temperature, humidity and ventilation of storerooms for art treasures. (*No.* 1439 : 6.4).

SWIMMING POOLS

Design Factors. *H. Swaine.* (*Heating and Ventilating Engineer, November*, 1943, *p.* 177 : *December*, 1943, *pp.* 219-221.) Heating and ventilation of indoor swimming pools. (*No.* 1416 : 23.3).

WATER HEATING

Hot Water Supplies to Domestic Dwellings. *E. S. Hobson.* (*Heating and Ventilating Engineer, February*, 1944, *p.* 313.) Utilization of waste heat from refuse disposal works. (*No.* 1422 : 23.3).

The First Five Years. (See *Solid Fuel*).

Where Do We Go from Here ? (See *Gas*).

A Fireside Talk. (See *Houses*).

Design Factors. (See *Flats*).

Less Fuel v. Comfort. (See *General*).

Gas-Fired Hot Water Supply for Industry. (See *Factories*).

Engineering Services for Restaurant, Stores and Flats. (See *Flats*).

Heating, Cooking and Hot Water Supplies for the House. (See *Houses*).

LIGHTING

CODES OF PRACTICE

Interim Code of Functional Requirements for Dwellings and Schools (Classification Code). Chapter I(a), Daylight. *Codes of Practice Committee of the Ministry of Works.* (*British Standards Institution*, 2s.) Draft for comment, subject to revision. New scientific approach through standards based on Daylight Factor values. Methods of obtaining recommended standards. Compensation for external obstructions. Siting. (*No.* 1679 : 16.11).

Interim Code of Functional Requirements for Dwellings and Schools (Classification Code). Chapter I (b), Sunlight. *Codes of Practice Committee of the Ministry of Works.* (*British Standards Institution*, 6*d*.) Draft for comment, subject to revision. Winter sunlight. Methods of analysis. (*No.* 1529 : 13.7).

COLOUR

Munsell Colours. (*J. Opt. Soc. Am., July*, 1943, *p.* 385.) Final report of a sub-committee of the Optical Society of America on the spacing of the Munsell colours. (*No.* 1447 : 13.4).

The Concept of Colour. *Chapter II of the Colorimetry Report of a Committee of the Optical Society of America.* (*Journal of the Optical Society of America, October*, 1943, *p.* 544.) Elaborate discussion of nature of colour. (*No.* 1518 : 29.6).

Æsthetic Measure Applied to Colour Harmony. *Parry Moon and D. E. Spencer.* (*Journal of the Optical Society of America, April*, 1944, *p.* 234.) Interesting and persuasive record of experiments in aesthetic valuation of simple colour combinations. (*No.* 1656 : 2.11).

Light Finishes on Machine Tools. (See *Industrial Lighting*).

White Floors. (See *Industrial Lighting*).

The Basis of Night Vision. (See *Vision*).

DAYLIGHT

Daylight Illumination in Factories and Workshops. *P. J. Waldram.* (*Journal of the Junior Institution of Engineers, December*, 1943, *p.* 65). Methods of analysis for daylighting. (*No.* 1448 : 13.4).

Sunlight Houses. (*Pencil Points, February*, 1944, *p.* 77, *and Architectural Forum, March*, 1944, *p.* 35.) Description of houses designed by G. F. Keck for optimum sunlighting. (*No.* 1583 : 31.8).

Daylight Cuts Fuel Consumption. *P. A. Ottman.* (*Electrical Times, April* 13, 1944, *p.* 43.) Generous roof glazing shows overall fuel economies. (*No.* 1615 : 28.9).

The Sky Factor Value of Windows. (See *Windows*).

Interim Code, Daylight. (See *Codes of Practice*).

Interim Code, Sunlight. (See *Codes of Practice*).

The Ways of Daylighting Classrooms. (See *Schools*).

Graphic Estimating of Daylight. (See *Evaluation*).

ELECTRICAL INSTALLATIONS

Electrical Installations in Hqspitals. (See *Hospitals*).

Electrical Installation—The Present and the Future. (See *HEATING : Electrical Installations*).

Co-ordination of Distribution. (See *HEATING: Electricity, general*).

Building Costs and Electrical Services. (See *HEATING: Electrical Installations*).

Report on Electricity Supply, Distribution and Installation. (See *HEATING: Electricity, general*)

Electricity Supply, Distribution and Installation. (See *HEATING : Electricity, general*).

Domestic Ring Main. (See *HEATING : Electrical Installations*).

Ring Mains, Outlets, and Plugs. (See *HEATING : Electrical Installations*).

A Universal Domestic Plug. (See *HEATING : Electrical Installations*).

Wiring Post-War Houses. (See *HEATING : Electrical Installations*).

Domestic Standard Fused Plug and Socket. (See *HEATING : Electrical Installations*).

Liaison with the Architect. (See *HEATING : Electrical Installations*).

Light Sources and Utilization. (See *Industrial Lighting*).

Fluorescent Lighting Installation. (See *Fluorescent Lighting*).

EQUIPMENT

Plastics for Lighting Equipment. *W. H. MacHale.* (*Lighting and Lamps, January*, 1944, *p.* 20.) Characteristics of plastics and their suitability for lighting equipment. (*No.* 1582 : 31.8).

Electrical Installations in Hospitals. (See *Hospitals*).

Railroad Lighting. (See *Railways*).

Post-War School Lighting. (See *Schools*).

Portable Lamp Design with Circular Fluorescent Lamps. (See *Fluorescent Lighting*).

Notes on the Lighting of Five Types of Factory Equipment. (See *Industrial Lighting*).

Domestic Electrical Apparatus. (See *HEATING : Equipment*).

Availability of Electrical Appliances after the War. (See *HEATING : Equipment*).

The Distribution of Light from Reading Lamps. (See *Lamps*).

The Ways of Daylighting Classrooms. (See *Schools*).

Handbook of Building Standards, Materials and Components. (See *MATERIALS : Standards*).

EVALUATION

An Economic Evaluation of Lighting Systems. *J. L. Kilpatrick.* (*Illuminating Engineering, November*, 1943, *p.* 493.) How to analyse economic factors in artificial lighting design. Types of data necessary for comparison discussed. (*No.* 1625 : 5.10).

Graphic Estimating of Daylight. *J. M. Dall and Valle.* (*Architectural Record, May*, 1944, *p.* 83.) Nomograph to determine daylighting provided by given windows, or conversely the size of windows required for given value of daylighting. (*No.* 1626 : 5.10).

Daylight Illumination in Factories and Workshops. (See *Daylight*).

Interim Code, Daylight. (See *Codes of Practice*).

Interim Code, Sunlight. (See *Codes of Practice*).

Effect of Fluorescent Lighting on Vision. (See *Fluorescent Lighting*).

The Sky Factor Value of Windows. (See *Windows*).

Sunlight Houses. (See *Daylight*).

Fluorescent Sources at Work. (See *Fluorescent Lighting*).

Æsthetic Measure Applied to Colour Harmony. (See *Colour*).

FLUORESCENT LIGHTING

Cold Cathode Fluorescent. (*Architectural Forum, November*, 1943, *p.* 6). Description of cold cathode fluorescent lighting and comparison with other illuminants, particularly hot cathode fluorescent. (*No.* 1465 : 27.4).

Low Voltage Cold Cathode Fluorescent Lamps. *R. Hultgren.* (*Lighting and Lamps, November*, 1943, *p.* 11.) New type of cold cathode lamp and circuit to overcome certain disadvantages in present practice. (*No.* 1466 : 27.4).

Fluorescent Lighting Installations. *J. N. Aldington.* (*Electrical Times, February* 17, 1944, *p.* 192, *and February* 24, 1944, *p.* 222.) Notes on design and maintenance of fluorescent lighting installations. (*No.* 1547 : 27.7).

Effect of Fluorescent Lighting on Vision. (*Lighting and Lamps, February*, 1944, *p.* 14.) Inquiry to find out if fluorescent lamps have any exceptional effect on eyesight or general health. (*No.* 1561 : 17.8).

Portable Lamp Design with Circular Fluorescent Lamps. *E. W. Commery.* (*Lighting and Lamps, January*, 1944, *p.* 16.) Discussion of new possibilities in portable lamps with circular fluorescent tubes. (*No.* 1585 : 31.8).

Fluorescent Sources at Work. *R. D. Bradley and F. B. Lee.* (*Illuminating Engineering, January*, 1944, *p.* 13.) Relative economies of hot and cold cathode fluorescent lighting. (*No.* 1614 : 28.9).

Railroad Lighting. (See *Railways*).

A Review of New Lamps. (See *Lamps*).

Recent Developments in Light Sources. (See *Lamps*).

Light Sources for Public Buildings. (See *Public Lighting*).

Illuminating Engineering To-day and Tomorrow. (See *General*).

Lamps from the Laboratory Shelves. (See *Lamps*).

Post-War Lighting. (See *Lamps*).

Electrical Installations in Hospitals. (See *Hospitals*).

GAS LIGHTING

Farming Power and Light from Gas. (See *HEATING : Gas*).

GENERAL

Illuminating Engineering To-day and Tomorrow. *W. Harrison.* (*Trans. of Illuminating Engineers' Society of America, July*, 1943, *p.* 369.) Retrospect and prospect in intensities, sources and practice in illumination engineering. (*No.* 1349 : 6.1).

Brightness Engineering. *M. Luckiesh.* (*Transactions of the Illuminating Engineers' Society*

of America, *February*, 1944, *p.* 75.) Problems of brightness in lighting design. Brightness contrast and ratios. Glare and specular reflection. (*No.* 1607 : 21.9).

The Work of the American Illuminating Engineers. (*Illuminating Engineering*, *December*, 1943.) Report of American Illuminating Engineering Society. Some discussion of its work. (*No.* 1613 : 28.9).

The Place of Science in the Art of Lighting. *R. O. Ackerley and A. MacDonald.* (*Transactions of the Illuminating Engineers' Society*, *London*, *March*, 1944, *p.* 45, *and The Architects' Journal*, *March* 2, 1944, *pp.* 178-179.) Formal conversation on scientific and art relationships in lighting given at a joint session of architects and lighting engineers at the RIBA. (*No.* 1616 : 28.9).

Light and Architecture. *H. E. d'Andrade.* (*Lighting and Lamps*, *June*, 1944, *p.* 22.) Use of light to bring out dimensional effects, pattern and mood in building design, strip lighting, coffers, laylights, coves. (*No.* 1655 : 2.11).

Post-War Lighting. (See *Lamps*).

Principles of Good Lighting. (See *Vision*).

Ventilation and Heating, Lighting and Seeing. (See *HEATING : General*).

Handbook of Building Standards, Materials and Components. (See *MATERIALS : Standards*).

HOSPITALS

Electrical Installation in Hospitals. *F. C. Raphael.* (*Journal, Institution of Electrical Engineers*, *September*, 1943, *April*, 1943.) Wiring systems, lighting, electro-medical apparatus. (*No.* 1363 : 13.1).

Light Sources for Public Buildings. (See *Public Lighting*).

INDUSTRIAL LIGHTING

Lighting and War Production. *W. C. Darley.* (*Trans. of Illuminating Engineers' Society of America*, *June*, 1943, *p.* 307). General propaganda for better lighting to boost war production. (*No.* 1350 : 6.1).

Lighting and Labour. *E. B. Sawyer.* (*Electrical Review*, *October* 8, 1943, *p.* 465.) A review of factory lighting in relation to labour problems. (*No.* 1351 : 6.1).

Lighting for Wool Sorting. *G. G. Cousins and G. H. Brooks.* (*Illuminating Engineering*, *September*, 1943, *p.* 433.) Technique and intensity of lighting for special task. (*No.* 1449 : 13.4).

White Floors. *W. C. Darley.* (*Transactions of the Illuminating Engineers' Society of America*, *February*, 1944, *p.* 112.) Report on condition of white floors in use in factories as light reflectors. (*No.* 1591 : 7.9).

Notes on the Lighting of Five Types of Factory Equipment. (*Illuminating Engineering*, *March*, 1944, *p.* 151.) Notes by five authors on lighting of specialised factory machines : spindle, sheet metal, milling, welding machines. (*No.* 1624 : 5.10).

Light Sources and Utilization. *W. Sturrock.* (*Illuminating Engineering*, *November*, 1943, *p.* 499.) Brief review of newly developed design rules for factory lighting. New circuits and starters described. (*No.* 1680 : 16.11).

Light Finishes on Machine Tools. *J. H. Nelson.* (*Light and Lighting*, *December*, 1943, *p.* 190.) Description of English experiment on machine tool colouring to improve vision conditions and cheerfulness in factories. (*No.* 1517 : 29.6).

Daylight Illumination in Factories and Workshops. (See *Daylight*).

Data Relating Lighting and Plant Safety. (See *Safety Precautions*).

Ventilation and Heating, Lighting and Seeing. (See *HEATING : General*).

The Factory and the Future. (See *PHYSICAL PLANNING : Industry*).

LAMPS

Lamps from the Laboratory Shelves. *S. G. Hibben.* (*Lighting and Lamps*, November, 1943, *p.* 12.) New types of lamps and new ways of lighting. (*No.* 1467 : 27.4).

Post-War Lighting. *Ward Harrison.* (*Lighting and Lamps*, *December*, 1943, *p.* 21.) Indication of new developments in lighting, including ultra-violet germicidal lamps. (*No.* 1522 : 6.7).

A Review of New Lamps. (*Architectural Forum*, *July*, 1944, *p.* 12.) New incandescent and discharge lamps likely to be available in America after war. (*No.* 1688 : 23.11).

Recent Developments in Light Sources. *P. S. Miller.* (*Electrical Engineering*, *April*, 1944, *p.* 126.) Review of new lamp types. Data on operating characteristics. (*No.* 1722 : 21.12).

The Distribution of Light from Reading Lamps. *T. C. Angus and W. R. Luxton.* (*Transactions of the Illuminating Engineers' Society*, *September*, 1944, *p.* 149.) Intensity distribution from ordinary reading lamps, from BS study lamp, and from modified library lamp. (*No.* 1723 : 21.12).

Illuminating Engineering To-day and To-morrow. (See *General*).

Cold Cathode Fluorescent. (See *Fluorescent Lighting*).

Low Voltage Cold Cathode Fluorescent Lamps. (See *Fluorescent Lighting*).

Railroad Lighting. (See *Railways*).

Effect of Fluorescent Lighting on Vision. (See *Fluorescent Lighting*).

Portable Lamp Design with Circular Fluorescent Lamps. (See *Fluorescent Lighting*).

Fluorescent Sources at Work. (See *Fluorescent Lighting*).

PUBLIC LIGHTING

Public Lighting. (*Electrical Times*, *September* 30, 1943.) Report of a conference of public lighting engineers. (*No.* 1361 : 13.1).

Lighting of Public Buildings. *W. T. F. Souter.* (*Trans. Illuminating Engineering Society* (*Eng.*), *January*, 1944, *p.* 1.) Summary of lighting practice in several types of public buildings. Paper not constructive but gives understanding of problems of lighting engineer faced with architecture in transition. (*No.* 1553 : 3.8).

The Lighting of Public Buildings. (*Illuminating Engineering Society*, *London*, 1944.) Pamphlet on general points about the lighting of buildings used by public at large. (*No.* 1695 : 21.9).

Street Lighting Specifications of the Future. *S. English.* (*Trans. Illuminating Engineering Society* (*Eng.*), *February*, 1944, *p.* 23.) Brief discussion of basis for street lighting specifications, in terms of possible future developments Light road surfaces main factor in visibility. (*No.* 1546 : 27.7).

Light Sources for Public Buildings in New York City. *A. Lorch.* (*Lighting and Lamps*, *June*, 1944, *p.* 18.) Various lighting arrangements examined by New York City Architects' Department for standard use in public buildings. Article deals mostly with hospital ward lighting. (*No.* 1686 : 23.11).

RAILWAYS

Railroad Lighting. *L. Schepmaes.* (*Lighting and Lamps*, *February*, 1944, *p.* 18.) Some general trends in railway carriage lighting, with emphasis on fluorescent tubes and use of plastic shades. (*No.* 1524 : 6.7).

Lighting for Safety. (See *Safety Precautions*).

SAFETY PRECAUTIONS

Lighting in Accident Prevention. *H. L. Logan.* (*Light and Lighting*, *August*, 1943, *p.* 120.) The relation of accidents to lighting. (*No.* 1362 : 13.1).

Lighting for Safety. *E. E. Dorting.* (*Illuminating Engineering*, *September*, 1943, *p.* 421.) Platform and stair lighting in New York underground railways, with accident statistics. (*No.* 1450 : 13.4).

Data Relating Lighting and Plant Safety. (*Transactions of the Illuminating Engineers' Society of America*, *February*, 1944, *p.* 120.) Collection of data on accident rates and lighting. (*No.* 1608 : 21.1).

Lighting and Labour. (See *Industrial Lighting*).

Light Finishes on Machine Tools. (See *Industrial Lighting*).

SCHOOLS

Post-War School Lighting. *J. J. Neidhart.* (*Lighting and Lamps*, *February*, 1944, *p.* 20.) General plea for high foot candle levels in schools, with suggestions for fittings and wall and ceiling tones. Defective eyesight through bad lighting not proved. (*No.* 1554 : 3.8).

The Lighting of Schools. (*Illuminating Engineering Society*, *London*, 1944.) Pamphlet setting out general principles and standards of lighting for schools. (*No.* 1606 : 21.9).

The Ways of Daylighting Classrooms. *D. Haskell.* (*Architectural Record*, *May*, 1944, *p.* 75.) American experience of classroom daylighting. Suggestions for new glazing arrangements. Emphasis on value of reflecting surfaces and louvres. (*No.* 1687 : 23.11).

Interim Code, Daylight. (See *Codes of Practice.*)

Interim Code, Sunlight. (See *Codes of Practice*).

SHOPS

Lighting in Shops—a Post-War Must for Stores. *K. A. Stoley.* (*Lighting and Lamps*, *December*, 1943, *p.* 14.) Use of local lighting in shops. Too much general lighting used. (*No.* 1523 : 6.7).

VISION

Principles of Good Lighting. (*Illuminating Engineering Society*, *London*, 1944.) Pamphlet on vision and essential points of lighting technique. (*No.* 1584 : 31.8).

The Basis of Night Vision. *G. L. Walls.* (*Transactions of the Illuminating Engineers' Society of America*, *February*, 1944, *p.* 93.) Functioning of the eye in darkened conditions. Basis of dark adaptation described. Coloured light in blackout. (*No.* 1609 : 21.9).

Light Finishes on Machine Tools. (See *Industrial Lighting*).

Post-War School Lighting. (See *Schools*).

Effect of Fluorescent Lighting on Vision. (See *Fluorescent Lighting*).

Brightness Engineering. (See *General*).

Ventilation and Heating, Lighting and Seeing. (See *HEATING : General*).

Street Lighting Specification of the Future. (See *Public Lighting*).

WINDOWS

The Sky Factor Value of Windows. *P. J. Waldram.* (*Trans. Illuminating Engineering Society* (*Eng.*), *January*, 1944, *p.* 16.) Modifications to Waldram methods of lighting analysis, with brief notes on other recent developments. (*No.* 1562 : 17.8).

Daylight Cuts Fuel Consumption. (See *Daylight*).

Graphic Estimating of Daylight. (See *Evaluation*).

WIRING

Electrical Installations in Hospitals. (See *Hospitals*).

Low Voltage Cold Cathode Fluorescent Lamps. (See *Fluorescent Lighting*).

Domestic Ring Main. (See *HEATING : Electrical Installations*).

Ring Mains, Outlets, and Plugs. (See *HEATING : Electrical Installations*).

Wiring Post-War Houses. (See *HEATING : Electrical Installations*).

MATERIALS

BOOKS

Elements of Quantity Surveying. (See *Quantity Surveying*).

Concrete Surface Finishes, Renderings and Terrazzo. (See *Concrete*).

British Timbers : Their Properties, Uses and Identification. (See *Timber*).

Plastics, Scientific and Technological. (See *Plastics*).

Fowler's Architects', Builders', and Contractors' Pocket Book. (See *General*).

Simple Examples of Reinforced Concrete Design. (See *Reinforced Concrete*).

Reinforced Concrete Simply Explained. (See *Reinforced Concrete*).

An Example in Quantity Surveying. (See *Quantity Surveying*).

The Place of Glass in Building. (See *Glass*).

Handbook of Building Standards, Materials and Components. (See *Standards*).

CONCRETE

Tensile and Other Properties of Concrete made with various types of Cements. *Louis Schuman and John Tucker, Junr.* (*United States Department of Commerce. Journal of Research of the National Bureau of Standards, August*, 1943, *pp.* 107-124.) Improved method for tensile testing of concrete. Maximum values of tensile strengths usually between 7 days and 3 months. (*No.* 1369 : 27.1).

Concrete Surface Finishes, Renderings and Terrazzo. *W. S. Gray and L. H. Childe.* (*Concrete Publications. 2nd (Revised) Edition.* 8*s.* 6*d.*) Useful practical guide to subject. New edition incorporating recent developments. (*No.* 1458 : 16.4).

Concrete Products Manufacturers in England, Wales and Scotland. (*Cement and Concrete Association. Free of charge.*) Provides a simple method of ascertaining names and addresses of manufacturers of various types of concrete products in any locality. (*No.* 1460 : 20.4).

The Resistance of Concrete to Frost. *A. R. Collins* (*of the Road Research Laboratory of the Department of Scientific and Industrial Research*). (*Journal of the Society of Chemical Industry, Concrete and Constructional Engineering, April*, 1944, *pp.* 100-107.) Concrete road construction in war-time suffered severe damage by frost, due to porosity, caused by high-water-cement ratio. Experiments and tests. (*No.* 1510 : 22.6).

The Design of Concrete Mixes on a Minimum Strength Basis. *E. E. Morgan.* (*The Engineer, May* 26, 1944, *pp.* 400-402.) How to design concrete strong enough, but only just strong enough to achieve purpose. (*No.* 1589 : 7.9).

Rapid and Simple Concrete Proportioning. *L. D. Long.* (*Engineering News Record, March* 23, 1944, *pp.* 426-429.) Concrete proportioning reduced to use of simple empirical charts. (*No.* 1590 : 7.9).

Specifying Controlled Concrete. *R. F. Moss.* (*Engineering News Record, August* 10, 1944, *pp.* 152-155.) Present-day specifications responsible for uneconomical and inferior concrete because of lack of incentive for producer to use accurate control methods. Specifications assuring improved quality with greater cost savings suggested, in which emphasis variously placed on strength determination, quality bonuses and profit sharing. (*No.* 1638 : 19.10).

Width and Spacing of Tensile Cracks in Axially Reinforced Concrete Cylinders. (See *Reinforced Concrete*).

Load-Bearing Concrete, Brickwork and Masonry. (See *Standards*).

ASB Lectures. (See *General*).

Tests of Concretes containing Air-entraining Portland Cements or Air-entraining Materials added to Batch at Mixer. (See *Tests*).

FIRE PREVENTION

The Fireproofing of Timber. (*Timber Development Association, May*, 1944.) Booklet on treatment of wood to increase its resistance to fire. Impregnation and surface treatment. Testing of Fire-Resistance. (*No.* 1604 : 21.9).

Methods of Reducing the Fire Fisk in Fibre Building Boards in War-time Building. *Issued by the Ministry of Home Security.* (*F. G. Leaflet No.* 19.) Results of research. Flame retardant paints. Fire breaks. (*No.* 1676: 16.11).

GENERAL

ASB Lectures. 1. New Developments in the Design of Structural Timber. (*February* 5.) *P. O. Reece, A.M.Inst.C.E. & Cy.E.* (*The Architects' Journal, March* 9, 1944, *pp.* 196-198.) **2. New Developments in the Design of Welded Frames.** (*February* 5.) *Ramsay Moon, B.A., M.I.Struct.E.* (*The Architects' Journal, April* 6, 1944, *pp.* 269-270.) **3. New Developments in the Design of Concrete Form Work.** (*February* 12.) *C. Parry, D.F.C., M.I.Struct.E.* (*The Architects' Journal, April* 20, 1944, *pp.* 304-6.) **4. The Influence of New Developments in Construction on Architectural Design.** (*February* 12.) *M. Hartland Thomas, M.A., F.R.I.B.A.* (*The Architects' Journal, March* 16, 1944, *pp.* 213-217.) Valuable series of lectures arranged by the Architectural Science Board of the RIBA concerned with new developments of three main structural materials : Timber, Steel, Reinforced Concrete. (*No.* 1512 : 22.6).

Fowler's Architects', Builders', and Contractors' Pocket Book. (*Scientific Publishing Co., Manchester ; Third Edition*, 7*s.* 6*d.*, *or* 8*s. post free.*) 995 pages of text. Contains much useful information on building materials, building practice and by-laws. Special Appendix summarises government, professional and technical statements so far issued upon national planning, supply and control of material and recruitment and training of personnel. (*No.* 1551 : 3.8).

Handbook of Building Standards, Materials and Components. (See *Standards*).

GLASS

Glass in Architecture : The Making of Glass. *John Gloag.* **Why is Armourplate Glass Tough ?** *E. M. S. Wood.* **Strength through Glass.** *R. H. Sheppard.* **Glass in the Building Structure.** *Howard Robertson.* **Glass Plus Daylight.** *G. Grey Wornum.* **Glass for Special Purposes.** *Christian Barman.* **The Surface Treatment of Glass.** *Kenneth Cheesman.* (*Official Architect, June*, 1944, *pp.* 257-273.) Special number devoted to glass. Manufacturing technique. Practical and aesthetic applications to buildings. New structural and decorative uses. (*No.* 1612 : 28.9).

The Place of Glass in Building. *John Gloag.* (*Second Edition, published by Allen and Unwin*, 1944, 5*s.*) Handbook of glass types and uses, two short notes on glass in architectural education and in small house design. (*No.* 1639 : 19.10).

NON-FERROUS METALS

Some Possible Applications of Aluminium Alloys in Building. *Lecture by Dr. E. G. West at IAAS on June* 14, 1944. (*The Architects' Journal, July* 6, 1944, *pp.* 16-18, xxx.) Possible applications of aluminium in roofs, gutters, partitions, doors, glazing bars and windows, canopies, kitchens and bathrooms, insulation, lights, escalators, wall facings. (*No.* 1602 : 21.9).

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*, 1*s.*) Properties. Specific uses. Recommendations and suggestions for future investigations. (*No.* 1661 : 9.11).

Milled Lead Sheet and Strip for Building Purposes. *British Standard* 1178 : 1944. (*British Standards Institution*, 1*s.* 0*d.*) Soft milled lead sheet and strip for roofs, weatherings, dampproof courses and other work. (*No.* 1705 : 7.12).

PAINT

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. (*No.* 1660 : 9.11).

Methods of Reducing the Fire Risk in Fibre Building Boards in War-time Building. (See *Fire Precautions*).

PITCH

Bitumen and Fluxed Pitch Roofing Felts. *War Emergency British Standard* 989 : 1944. (*British Standards Institution*, 2*s.*) Classes of roofing felts. Single layer work on sloping roofs. Double layer work on flat roofs and gutters. Details of eaves and expansion joints. Fluxed pitch for roofing felt. (*No.* 1678 : 16.11).

Pitch Mastic Flooring. *War Emergency British Standard* 1093 : 1944. (*British Standards Institution*, 2*s.* 0*d.*) Alternative to mastic asphalt for flooring. (*No.* 1720 : 21.12).

Pitch Mastic Flooring Incorporating Lake Asphalt. *War Emergency British Standard*, 1177 : 1944. (*British Standards Institution*, 2*s.* 0*d.*) Alternative to mastic asphalt for flooring. (*No.* 1721 : 21.12).

PLASTICS

A Survey of Plastics. *L. Livingston Smith.* (*The Engineer, December* 17, 24, 31, 1943, *pp.* 491-492, 511-512, 529-530.) *Lecture at the Institution of Mechanical Engineers on December* 10, 1943.) Characteristics of plastics. Survey of plastic products. Unfilled resins, moulding powders, laminated sheet, mouldings containing unidirectional fibres. Plastics in combination with wood. (*No.* 1372 : 3.2).

Plastics, Scientific and Technological. *H. R. Fleck, M.Sc., F.I.C.* (*Temple Press*, 25*s.*) Comprehensive handbook, intended as companion to monthly publication *Plastics*, presupposes some scientific knowledge on part of reader. Covers history, raw materials, chemistry, theory, manufacture, testing, etc. Fully illustrated. (*No.* 1550 : 3.8).

Plastics. *The Ministry of Works Post-War Building Studies, No.* 3. *By a Committee convened by the British Plastics Federation.* (*HMSO*, 48 *pp.*, 1*s.*) Authoritative assessment of value of plastics in building. Covers raw materials, classification, manufacture and properties of plastics. Application to building as structure, fittings and finishes. Design and standardization. Conclusions and recommendations. (*No.* 1588 : 7.9).

Plastics for Lighting Equipment. (See *LIGHTING : Equipment*).

PLYWOOD

Plywood. Technical Developments in USA. (*The Builder, December* 24, 1943, *pp.* 517-18.) Summary of a report prepared by the US Bureau of Labour on the technological developments of plywood affecting war production. (*No.* 1403 : 9.3).

Weathering Qualities of Plywood Glues. *R. A. K. Knight and L. S. Doman.* (*Wood, June*, 1944, *pp.* 136-140.) Article which is an abbreviated version of Report prepared by Forest Products Research Laboratory on experimental work examining the behaviour of glue under severe weathering conditions. Resistance to moisture and micro-organisms. (*No.* 1640 : 19.10).

Temperature Effects on the Strength of Wood. (See *Timber*).

QUANTITY SURVEYING

Elements of Quantity Surveying. *A. J. Willis.* (*Third Edition. Crosbie Lockwood.* 15*s.*) Useful book brought up to date with improvements on previous editions. General survey of origin and functions of a quantity surveyor and of principles of quantity surveying. Various stages in preparation of Bill of Quantities. (*No.* 1444 : 13.4).

An Example in Quantity Surveying. *Arthur J. Willis, F.S.I.* (*Distributed by Crosby Lockwood*, 25*s.*) Useful book bridging gap between theory and practice. Four separate documents. comprising drawings for pair of cottages, set of dimensions for these, abstract showing how job should be worked-up, finally a complete Bill. (*No.* 1603 : 21.9).

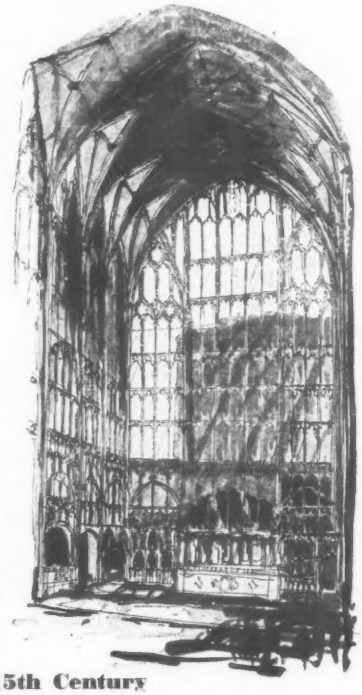
REINFORCED CONCRETE

Width and Spacing of Tensile Cracks in Axially Reinforced Concrete Cylinders. *David Watstein and Douglas E. Parsons.* (*United States Department of Commerce. Journal of Research of the National Bureau of Standards, July*, 1943, *pp.* 1-24.) Investigation of the width and spacing of cracks in weak and strong concrete, reinforced with different types of bars. (*No.* 1368 : 27.1).

BUILDING FOR DAYLIGHT

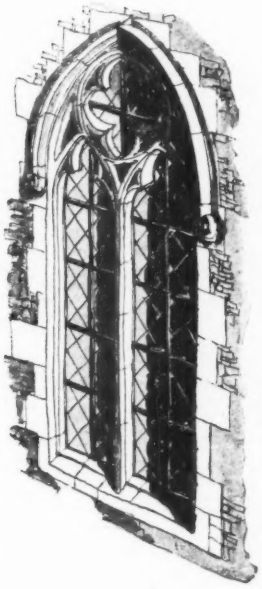
No. 2 FACTS ABOUT GLASS FOR ARCHITECTURAL STUDENTS

In the dark ages which followed the Romano-British period glazing was unknown. It was revived in early mediæval times. The output of glass was limited, its cost was high, and it was made in very small sizes, so its use was confined to important buildings, churches and the larger fortified manor houses. Windows generally had wooden shutters, or at the best parchment or thin panes of horn to keep out the weather, and window openings were little more than narrow slits.



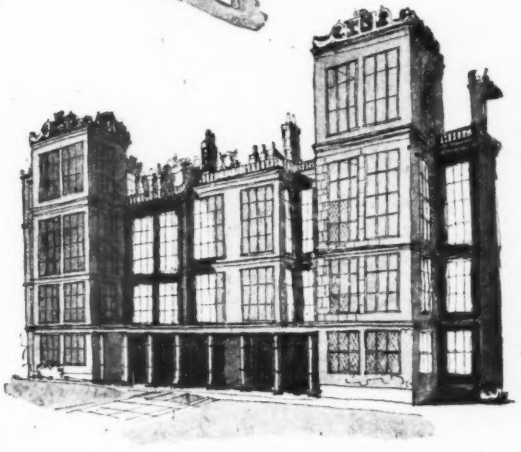
15th Century

Structural knowledge rapidly advanced; the church was becoming "a cage of stone," the voids filled with coloured glass. In the choir at Gloucester Cathedral, the whole of the east end of the church became a vast window. But it was not until after the Wars of the Roses that these structural possibilities were allowed to improve domestic architecture.



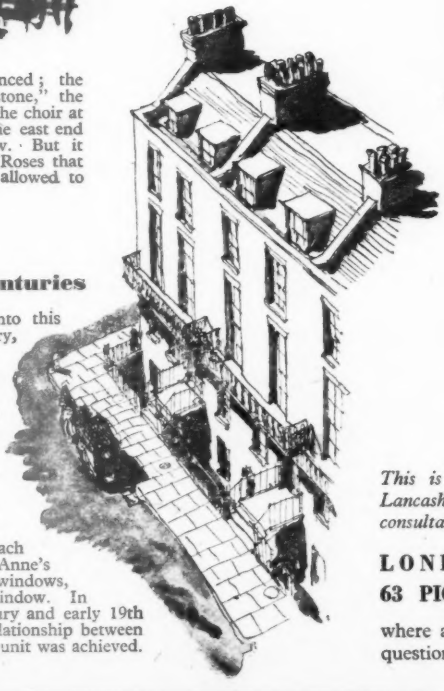
13th and 14th Centuries

As production increased glass became cheaper. Structural technique improved; windows in churches expanded in size, and in manor houses larger window openings were introduced, high above ground level. Small panes of glass were used, set in lead glazing bars, which were framed by stonework, windows being divided vertically by stone mullions.



16th and early 17th Centuries

By the beginning of the 16th century the need for fortification had disappeared and the great period of church building declined. Patronage for architecture was wholly in the hands of a new and wealthy aristocracy, and their great houses had oriel windows, and tall bays ascending through two storeys, huge areas of glass that turned walls into continuous windows. Hardwick Hall was an outstanding example of this dominance of voids over solids, and a contemporary wit wrote: "Hardwick Hall, more glass than wall."



Late 17th and 18th Centuries

The sash window was introduced into this country in the mid-seventeenth century, and glass was at the same time produced in larger sizes. The idea of the window wall was abandoned, and windows again became regular apertures in a solid wall. By the end of the 17th century and throughout the 18th, until the end of the Georgian period, the sash window was usually based on the proportion of the double square, each square divided vertically by two glazing bars and horizontally by one, making twelve panes to each window. The window tax in Queen Anne's reign reduced the number of windows, but not the individual size of the window. In the best examples of late 18th century and early 19th century houses, a fine and subtle relationship between the window opening and the glazing unit was achieved.

This is published by Pilkington Brothers Limited, of St. Helens, Lancashire, whose Technical Department is always available for consultation regarding the properties and uses of glass in architecture.

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where architectural students may get advice and information on all questions relating to the properties of glass and its use in building.

Prevention and Control of Cracking in Reinforced Concrete Buildings. *W. S. Merril, (Engineering News Record, December* 16, 1943. *pp.* 893-895.) Control joints successfully eliminate unsightly patterns of cracks in reinforced concrete walls and parapets. (*No.* 1459 : 20.4).

Simple Examples of Reinforced Concrete Design. *Oscar Faber. (Third Edition. Oxford University Press. London, Humphrey Milford,* 84 *p.*, 6*s.*) Design of simple structures. Computation of stresses and details of construction. (*No.* 1580 : 31.8).

Reinforced Concrete Simply Explained. *Oscar Faber. (Third Edition. Oxford University Press. London, Humphrey Milford,* 80 *p.*, 6*s.*) Elementary explanation of basic features of reinforced concrete and principles of design. (*No.* 1581 : 31.8).

British Standard Specification for Cold Twisted Steel Bars for Concrete Reinforcement. (See *Standards*).

Tests on Square Twisted Bars and their Application as Reinforcement of Concrete. (See *Tests*).

ASB Lectures. (See *General*).

Reinforced Concrete Structures. (See *STRUCTURE : Reinforced Concrete*).

STANDARDS

Load-Bearing Concrete, Brickwork and Masonry. (Not reinforced.) *British Standard* 1145 : 1943 ; **Reinforced Brickwork.** *British Standard,* 1146 : 1943. (*British Standards Institution,* 2*s. each.*) Both issued as interim measure pending issue of Code of Practice ; they will then be withdrawn. Both specify minimum strengths required, maximum permissible stresses, methods of testing and quality of materials to be used. (*No.* 1436 : 6.4).

British Standard Specification for Cold Twisted Steel Bars for Concrete Reinforcement. (*B.S.* 1144 : 1943 ; *price* 2*s. net.*) New standard not covered by B.S. 785 and 405. (*No.* 1445 : 13.9).

The Use of Standards in Building. *First Progress Report of the Standards Committee of the Ministry of Works.* (*HMSO,* 1944, 6*d.*) Scope of the Standards Committee. Consumer and producer requirements. Programme of work. Prefabrication. - List of materials and components. Building drawing office practice. (*No.* 1552 : 3.8).

Handbook of Building Standards, Materials and Components. *B.S. Handbook No.* 3. (*Published by the British Standards Institution, HMSO,* 1944, 12*s.* 6*d.*) Technical requirements of all 164 British Standards so far issued relating to building brought together in single volume. Summarizes all essential requirements laid down in specifications referred to in Government's *Housing Manual.* Includes standards for services' fittings. (*No.* 1759 : 28.12).

Milled Lead Sheet and Strip for Building Purposes. (See *Non-Ferrous Metals*).

Sizes of Stress-Graded Softwood Timber. (See *Timber*).

Pitch Mastic Flooring. (See *Pitch*).

Pitch Mastic Flooring Incorporating Lake Asphalt. (See *Pitch*).

STEEL

British Standard Specification for Cold Twisted Steel Bars for Concrete Reinforcement. (See *Standards*).

Tests on Square Twisted Bars and their Application as Reinforcement of Concrete. (See *Tests*).

ASB Lectures. (See *General*).

TESTS

Tests on Square Twisted Bars and their Application as Reinforcement of Concrete. *Dr. K. Hajnal-Konyi.* (*The Structural Engineer, September,* 1943, *pp.* 327-368. See also discussion in *The Structural Engineer, February,* 1944, *pp.* 68-92, and *March,* 1944, *pp.* 114-118.) Properties of square bars obtained from mild steel by twisting. No yield point, increased ultimate strength. Importance of bond. Possibility of using the full strength of the bars as compared with mild steel where the yield point is the critical value. Suggested increase of permissible tensile stresses by 50 per cent., *i.e.,* up to 30,000 lb./sq. in. (*No.* 1446 : 13.4).

Tests of Concretes containing Air-entraining Portland Cements or Air-entraining Materials added to Batch at Mixer. *H. F. Gonnerman.* **Concretes containing Air-entraining Agents.** *A Symposium.* 16 *contributions by* 15 *different authors.* (*Journal of the American Concrete Institute, June,* 1944, *pp.* 477-596. *Reprints from USA,* $2.25.) Laboratory and field experience with concretes containing air-entraining agents—and problems still to be solved. (*No.* 1675 : 16.11).

Width and Spacing of Tensile Cracks in Axially Reinforced Concrete Cylinders. (See *Reinforced Concrete*).

Tensile and Other Properties of Concrete made with various types of Cements. (See *Concrete*).

Load-Bearing Concrete, Brickwork and Masonry. (See *Standards*).

The Resistance of Concrete to Frost. (See *Concrete*).

Plastics, Scientific and Technological. (See *Plastics*).

Temperature Effects on the Strength of Wood. (See *Timber*).

The Fireproofing of Timber. (See *Timber*).

Weathering Qualities of Plywood Glues. (See *Plywood*).

TIMBER

Dry Rot in Damaged Houses. Building Research Wartime Building Bulletin No. 21. (*Issued by the Department of Scientific and Industrial Research, pp.* 7-14 ; *Memorandum on, issued by MOH ; MOH Memorandum reprinted in The Builder, January* 14, 1944, *p.* 43 ; *Article on, by W. P. K. Findlay, The Builder, October* 8, 1943, *pp.* 287-288 ; *Article on, by Archilex, The Architect and Building News, October* 15, 1943, *p.* 40.) Increase in extent of dry rot. Nature of dry rot. Remedial and preventive measures. Problems of war damage and liability for spreading. (*No.* 1429 : 30.3).

The Ministry of Health Dry-Rot Memorandum. *J. Watson Cabre.* (*The Builder, March* 3, 1944, *p.* 180.) Article offering sharp criticism of Circular No. 3/44 issued by MOH (See Inf. Centre No. 1429.) (*No.* 1496 : 25.5).

British Timbers : Their Properties, Uses and Identification. With Notes on the Growth and Cultivation of the Trees. *E. H. B. Boulton and B. Alwyn Jay.* (*A. & C. Black, London,* 1944, *price* 12*s.* 6*d.*) Reference book in which user of timber will find all facts of practical value to him regarding any individual timber. Description of individual timbers. (*No.* 1464 : 27.4).

Post-War Timber Supplies for the Building Industry. (*Memorandum by the English Joinery Manufacturers' Association, February,* 1944.) No timber shortage expected after the war. (*No.* 1497 : 25.5).

World Timber Supplies. (*Timber Development Association.*) Booklet examining timber situation likely to arise after the war. No shortage of standing timber. No lack of production capacity. (*No.* 1498 : 25.5).

Timbers of British West Africa. (*Timber Development Association.*) Description in alphabetical order of most important West African timbers. (*No.* 1499 : 25.5).

Forest Products. *Cantor Lectures* : (1) **Timber.** *W. A. Robertson* ; (2) **Timber Uses, New and Old.** *H. A. Cox* ; (3) **The Minor Products.** *W. A. Robertson.* (*Journal of the Royal Society of Arts, January* 21, 1944, *pp.* 94-117.) Three lectures, under auspices of Forest Products Research Laboratory, Department of Scientific and Industrial Research, deal with fascinating subject of uses of forest products throughout the ages. (*No.* 1511 : 22.6).

Temperature Effects on the Strength of Wood. (*Engineering, June* 16, 1944, *pp.* 478 ; *short account of Reprint No.* 83, *issued by the Division of Forest Products.*) Investigation to determine the effect of variations of temperature on strength properties of wood, plywood and glued joints at various moisture contents. (*No.* 1579 : 31.8).

Are Timber Checks and Splits Serious ? *V. Ketchum, T. K. May, F. J. Hanrahan.* (*Engineering News Record, July* 27, 1944, *pp.* 110-113.) Suggestions for maintenance of timber connections in structurally sound condition, made by group of experienced timber engineers. (*No.* 1677 : 16.11).

Sizes of Stress-graded Softwood Timber. *British Standard* 1175 : 1944. (*British Standards Institution,* 2*s.* 0*d.*) Standard sizes of beams, columns and struts, members of small cross section. Shrinkage. Variation in rough sawn timbers. Reduction due to surfacing. Determination of moisture content. (*No.* 1706 : 7.12).

The Fireproofing of Timber. (See *Timber*).

A Survey of Plastics. (See *Plastics*).

ASB Lectures. (See *General*).

Physical PLANNING

AGRICULTURE

The Living Soil. *E. B. Balfour.* (*Faber and Faber,* 1943, 12*s.* 6*d.*) Important book with wide planning implications. Evidence of importance to human health of soil vitality with special reference to post-war planning. (*No.* 1371 : 3.2).

New Trends in Farm Buildings. *G. Rosenberg.* (*Architects' Journal, July* 20, 1944, *pp.* 47-52.) Changes in farming conditions. Changes in buildings, for milk, meat and crop production, cattle yards, storage. Grouping of buildings. Fully illustrated. (*No.* 1753 : 28.12).

Post-War Development. (See *General*).

Rebuilding South Africa. (See *National Planning*).

Highways and Parkways. (See *Transport*).

The Geographical Basis of Government. (See *Regional Planning*).

Re-building an Industrial Village in Russia. (See *Village Planning*).

Re-building the Village of a Collective Farm in Russia. (See *Village Planning*).

Planning Villages along Arterial Roads. (See *Village Planning*).

Two-Day Study of a Village. (See *Surveys*).

Physical Planning. (See *General*).

Town and Country Planning (Interim Development) Act, 1943. (See *Legislation*).

Control of the Use of Land. (See *Legislation*).

Hydro-Electric Development in the Highlands. (See *Regional Planning*).

ATMOSPHERIC POLLUTION

Measures for Smoke Prevention in Relation to Plans for Post-War Reconstruction. (*Proceedings of the Eleventh Annual Conference, London,* 1943, *of the London Smoke Abatement Society,* 1*s.*) Representatives of nearly 100 local authorities talked over expensive evils caused by smoke and feasibility and advantages of smokeless zones and smokeless fuel. (*No.* 1434 : 6.4).

Rapid Surveys of Atmospheric Pollution. (*Circular from Department of Scientific and Industrial Research.*) Kinds of pollution. Methods of measurement. Of interest to town planners. (*No.* 1691 : 30.11).

Solid Fuel Installations. (See *HEATING ; Solid Fuel*).

AVIATION

Aviation as a Stimulus to Architecture. *Francis R. Meisch.* (*New Pencil Points, November,* 1943.) New ideas on layout of aerodromes and their architectural implications. (*No.* 1470 : 4.5).

The Factory and the Future. (See *Industry*).

BOOKS

Fine Building. *Maxwell Fry.* (*Faber and Faber,* 1944, 15*s.*) To some extent personal credo, indicating extent to which society might benefit by employing architects to design

towns instead of just allowing them to happen. (*No.* 1543 : 27.7).

Fowler's Architects', Builders', and Contractors' Pocket Book. (See *MATERIALS : General*).

Traffic and Parking Study. (See *Transport*).

The Living Soil. (See *Agriculture*).

The Journey to Work. (See *Sociology*).

Design of Dwellings. (See *Housing*).

Planning Our New Homes. (See *Housing*).

Housing Manual, 1944. (See *Housing*).

COMMUNITY PLANNING

Community Planning in Detroit. *J. Davidson Stephen.* (*Pencil Points, January*, 1944.) Detroit has planned for a 1990 population of 5,000,000 divided into communities of 38,000 each composed of ten neighbourhoods averaging 3,800. (*No.* 1480 : 11.5).

Birkenhead : Community Versus Segregation. (*Architects' Journal, August* 3, 1944, *pp.* 85-87.) Two conflicting plans for satellite estate outside Birkenhead compared—one by B. Robinson, Borough Engineer and Surveyor, of Birkenhead ; other by Sir Charles Reilly, Planning Consultant to Birkenhead. May prove test case. (*No.* 1739 : 28.12).

Planning Public Places. *H. S. Phillips.* (*Architects' Journal, October* 19, 1944, *pp.* 283-286.) Public buildings and social amenities needed today. Civic group, health centre, public convenience, swimming pool, club, school, restaurant, aerodrome, park, crematorium, etc. Full list of needs given. (*No.* 1747 : 28.12).

Street Design for Service. (See *Transport*).

Worthy Ideas from Wartime Housing. (See *Housing*).

USA Planning Exhibition. (See *Exhibitions*).

Design of Dwellings. (See *Housing*).

Planning Our New Homes. (See *Housing*).

Physical Planning. (See *General*).

Draft Plan for Clydebank. (See *Town Planning*).

Plan for Plymouth. (See *Town Planning*).

A Method of Comparative Analysis Demonstrated on Four London Plans. (See *London*).

Toronto Master Plan. (See *Town Planning*).

Housing Manual, 1944. (See *Housing*).

EDUCATION

Prize Design for an Elementary School, USA. *I. Aroztegui* (*Architectural Record, April*, 1944.) Design for school for 200 boys, aged 8-12, to receive a modern education in an American city. (*No.* 1587 : 7.9).

Planning with You. (*Architectural Forum, May*, 1944.) Planning requires publicity. How American City Planning Commissions are putting their plans across to the townspeople. (*No.* 1595 : 14.9).

City Government. *K. Hall Gardner.* (*South African Architectural Record, February*, 1944.) Critical Study of Capetown Municipal Administration. Plea that Capetown Education should teach principles of City Government. (*No.* 1601 : 21.9).

The Journey to Work. (See *Sociology*).

Community Planning in Detroit. (See *Community Planning*).

Standards for Recreation. (See *Recreation*).

Physical Planning. (See *General*).

USA Planning Exhibition. (See *Exhibitions*).

Planning Public Places. (See *Community Planning*).

Town and Country Planning Summer School. (See *General*).

Standard Construction for Schools. (See *STRUCTURE : Schools*).

EXHIBITIONS

USA Planning Exhibition. *Rudolf Mock.* (*Architects' Journal, November* 2, 1944, *pp.* 324-333.) Illustrations from New York Museum of Modern Art's *Look at your Neighbourhood* Exhibition, designed for mass-production for sale or hire to local housing authorities and schools in USA, to stimulate public interest in physical planning. (*No.* 1742 : 28.12.)

Rebuilding South Africa. (See *National Planning*).

Physical Planning. (See *General*).

Draft Plan for Clydebank. (See *Town Planning*).

Plan for Plymouth. (See *Town Planning*).

RA Exhibition. (See *London*).

City of London Sketch Plan. (See *London*).

Toronto Master Plan. (See *Town Planning*).

GENERAL

Physical Planning. *Various authors.* (*Architects' Journal, August* 5, 12, 19, 26, 1943 ; *September* 2, 9, 16, 23, 30, 1943 ; *October* 7, 14, 21, 1943 ; *November* 4, 11, 18, 25, 1943 ; *December* 2, 9, 16, 23, 30, 1943 ; *January* 13, 27, 1944 ; *February* 3, 10, 17, 1944 ; *March* 2, 9, 16, 23, 1944 ; *April* 6, 13, 20, 27, 1944 ; *June* 1, 22, 29, 1944.) Series of articles by specialists in the various fields covering general aspects of physical planning, under headings : (1) Planning Diary, 1909-1946 (*by Astragal*) ; (2) The Bogies ; (3) The Problems ; (4) The Job ; (5) Outline for a Policy. (*No.* 1730 : 28.12).

Town and Country Planning Summer School. (*Architects' Journal, October* 26, 1944, *pp.* 305-310.) Extracts from lectures delivered at school, held at St. Andrews, on Industry and its Environment (Lord Forrester), Social Aspects of Town Planning (Ruth Glass), Planning by Lease Control (H. W. Wells). (*No.* 1752 : 28.12).

Post-War Development. (*Interim Report submitted by the Post-War Development Committee of the New South Wales Chapter, Royal Australian Institute of Architects.*) The report deals with national framework, building industry organization, codes and standards, the architect's contribution. (*No.* 1400 : 9.3).

Action for Cities. (See *Surveys*).

Fine Building. (See *Books*).

A Method of Comparative Analysis Demonstrated on Four London Plans. (See *London*).

USA Planning Exhibition. (See *Exhibitions*).

Town and Country Planning (Interim Development) Act, 1943. (See *Legislation*).

Design of Dwellings. (See *Housing*).

Housing Manual, 1944. (See *Housing*).

Land Values. (See *Surveys*).

Control of the Use of Land. (See *Legislation*).

HEALTH

The Living Soil. (See *Agriculture*).

The Journey to Work. (See *Sociology*).

Measures for Smoke Prevention in Relation to Plans for Post-War Reconstruction. (See *Atmospheric Pollution*).

Rapid Surveys of Atmospheric Pollution. (See *Atmospheric Pollution*).

Standards for Recreation. (See *Recreation*).

Are the Aged Being Left Out of Planning? (See *Housing*).

Planning Public Places. (See *Community Planning*).

Physical Planning. (See *General*).

HOUSING

Worthy Ideas from Wartime Housing. (*Architectural Record, November*, 1943.) Normont Terrace FWA Housing Project, Los Angeles, on 38 acres for 400 housing units, 60 with one bedroom, 240 with two, 100 with three (say 1,200 people). (*No.* 1406 : 16.3).

A Memorandum on Housing. (*Communist Party, January*, 1944, 9*d.*) Deals with past, present and future, latter covering principles of Communist housing policy, the short and long-term plans, new methods and materials, quality and standards, flats and houses, ownership of land, finance, control of building industry. (*No.* 1435 : 6.4).

Design of Dwellings. *Report of the Design of Dwellings Sub-Committee of the Central Housing Advisory Committee of the Ministry of Health (the Dudley Committee).* (*HMSO*, 1*s.* *Reviewed in Architects' Journal, leading article, August* 24, 1944, *p.* 135. *Precis of report on site planning, same issue, pp.* 149-150.) Valuable guide to local authorities. Proposals for raising all-round standard of post-war housing of 3-4 million houses. Stresses need for greater flexibility in planning than in past. Suggestion for lay-out of kitchen-eating arrangements. 900 ft. super regarded as minimum space for 3-bedroom house. Recommendations for equipment. Excellent special report of a study group of the Ministry of Town and Country Planning on site planning and lay-out in relation to housing included. (*No.* 1684 : 23.11).

Planning Our New Homes. *Report by the Scottish Housing Advisory Committee on the Design, Planning and Furnishing of New Homes.* (*HMSO*, 3*s.* *Reviewed in the Architects' Journal, leading article, March* 30, 1944, *p.* 237.) Outlines scope of Scottish post-war housing problem. Recommends three-stage programme. Furniture, equipment, and neighbourhood planning dealt with. Well produced and fully illustrated. (*No.* 1685 : 23.11).

Are the Aged Being Left Out of Planning? *Olive Matthews.* (*Architects' Journal, September* 7, 1944, *pp.* 175-177.) Need for study of statistics in planning for aged. Present lack of provision. Housing for aged should be part of estates and not segregated. Institutions for infirm. (*No.* 1746 : 28.12).

Housing Manual, 1944. *Ministries of Health and Works.* (*HMSO*, 2*s.*) Gathers together matter contained in Government housing reports and other studies as advice mainly to local authorities. Represents present Government policy on permanent housing. Sets improved standards. Section on site planning is important advance. Community planning advocated. Many illustrations. (See AJ leading article for October 12, 1944). (*No.* 1748 : 28.12).

Temporary Accommodation. *Ministries of Health and Works.* (*HMSO*, 6*d.*) Memorandum for guidance of local authorities in carrying out the Housing (Temporary Accommodation) Act, 1944. Layout, siting, financing, management and maintenance of officially approved bungalows. Describes four approved types, MOW, Uni-Seco, Tarran, Arcon (see AJ frontispiece, November 30, 1944). (*No.* 1749 : 28.12).

A New Method for Measuring the Quality of Urban Housing. (See *Surveys*).

The Younger Women's Needs in Future Housing. (See *Surveys*).

A Layout for Small Houses. (See *Site Planning*).

Siting the Factory-Made House. (See *Site Planning*).

Siting the Portal House. (See *Site Planning*).

Physical Planning. (See *General*).

Draft Plan for Clydebank. (See *Town Planning*).

Plan for Plymouth. (See *Town Planning*).

London Housing Needs. (See *Surveys*).

Birkenhead : Community Versus Segregation. (See *Community Planning*).

Siting the Temporary House. (See *Site Planning*).

Conversion of Old Houses into Flats at Hampstead. (See *STRUCTURE : Housing*).

Choose Your Own Kitchen. (See *HEATING : Cooking*).

INDUSTRY

The Factory and the Future. *E. Gerner, G. B. Panero and H. Burson.* (*Architectural Forum, June*, 1944, *p.* 79.) Influence of air view on advertising, amenities for personnel, technical developments on new factory design in lighting, heating and noise reduction. Lay-out discussed. (*No.* 1623 : 5.10).

Physical Planning. (See *General*).

The Journey to Work. (See *Sociology*).

Post-War Development. (See *General*).

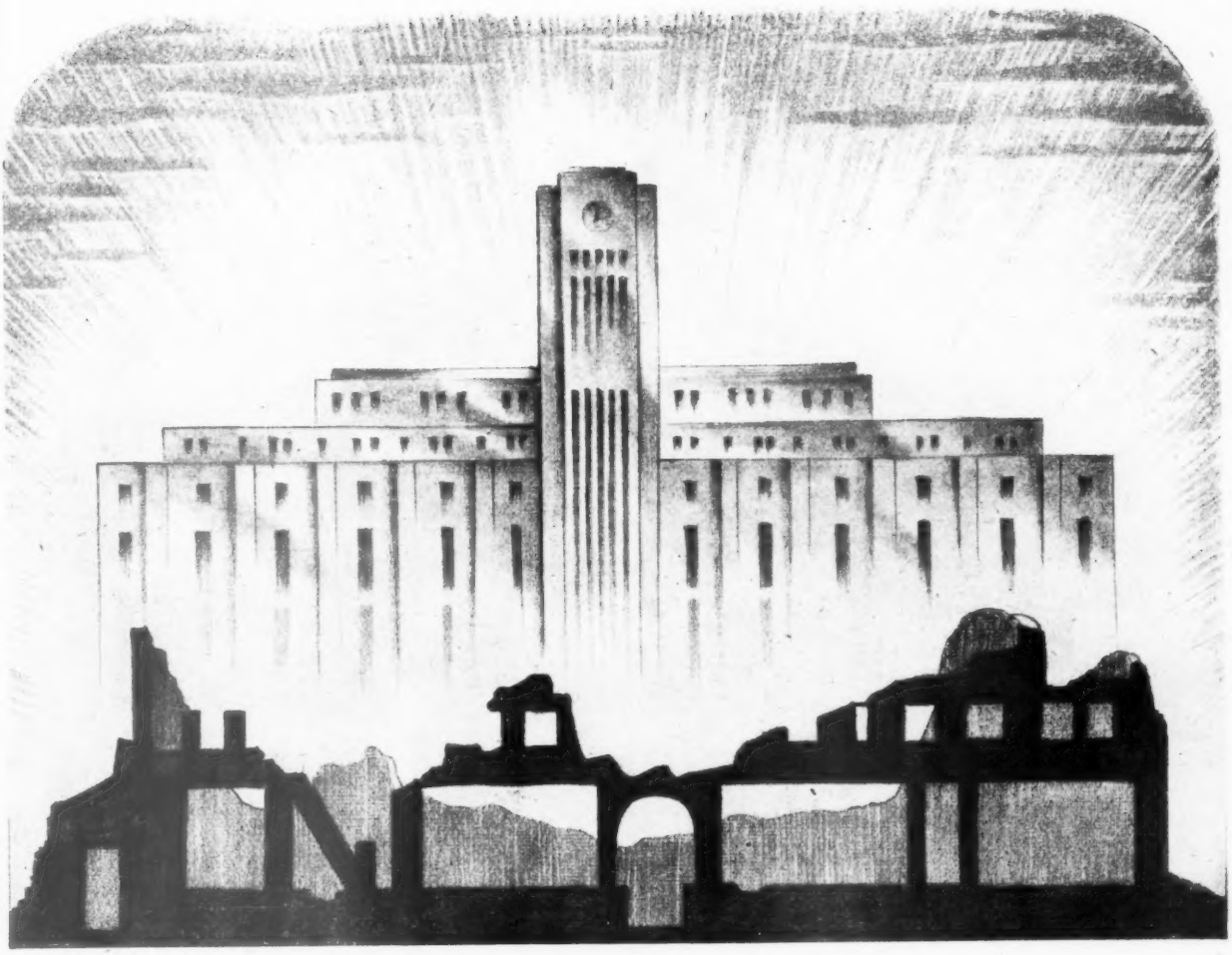
Draft Plan for Clydebank. (See *Town Planning*).

Plan for Plymouth. (See *Town Planning*).

Hydro-Electric Development in the Highlands. (See *Regional Planning*).

Town and Country Planning Summer School. (See *General*).

Re-building an Industrial Village in Russia. (See *Village Planning*).



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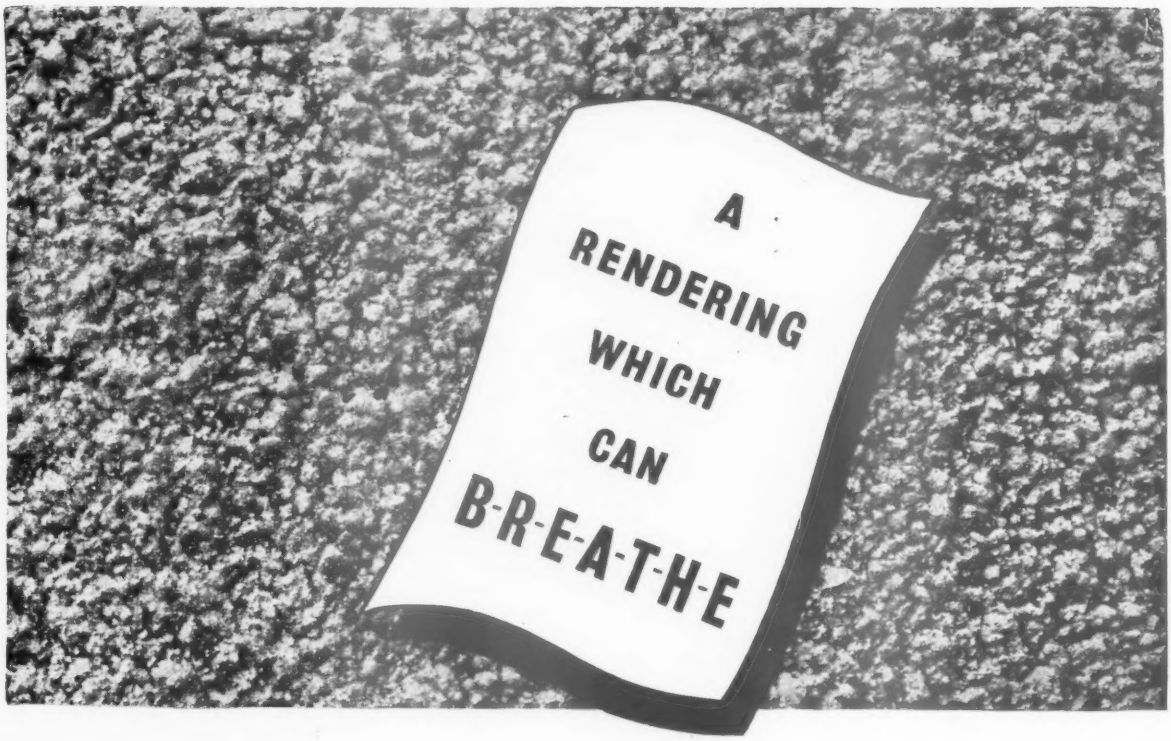

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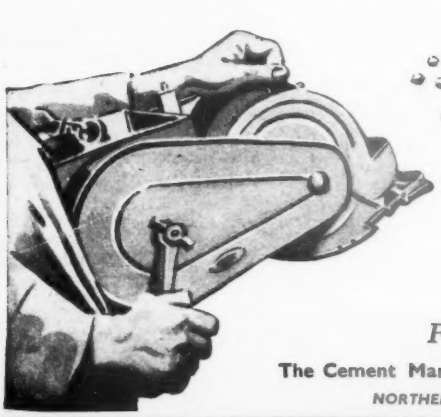

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LEGISLATION

Town and Country Planning (Interim Development) Act, 1943. *J. B. Wikely.* (*Architects' Journal, October* 14, 1943, *pp.* 269-273.) Synopsis and commentary on the Act in AJ Physical Planning supplement. (*No.* 1743 : 28.12.)

Control of the Use of Land. *Regionaliter.* (*Architects' Journal, July* 13, 1944, *pp.* 27-28.) Review of Town and Country Planning Bill, 1944, and the White Paper on *The Control of Land Use* (see also leading article in same issue). (*No.* 1744 : 28.12).

City Government. (See *Education*).

Physical Planning. (See *General*).

Land Values. (See *Surveys*).

Town and Country Planning Summer School. (See *General*).

County of London Plan. (See *London*).

A Memorandum on Housing. (See *Housing*).

LOCAL GOVERNMENT

City Government. (See *Education*).

Physical Planning. (See *General*).

The London Boroughs and the London Plan. (See *London*).

Planning Public Places. (See *Community Planning*).

The Geographical Basis of Government. (See *Regional Planning*).

A New Method for Measuring the Quality of Urban Housing. (See *Surveys*).

LONDON

County of London Plan : Memorandum of Observations by the Council of the Chartered Surveyors' Institution. (*Journal of the CSI, March*, 1944.) Council criticizes practicability of London Plan in view of existing legal powers and customs. (*No.* 1495 : 25.5).

Post-War London. *N. G. Brett-James.* (*Transactions of the London and Middlesex Archæological Society, Volume VIII, Part III.*) Useful and comprehensive analysis of post-war plans, schemes and reports for London that have been prepared during war. (*No.* 1558 : 17.8).

RA Exhibition : Work of the Planning Committee. (*Architects' Journal, May* 18, 1944, *pp.* 367-370.) Royal Academy Planning Committee's exhibit at the Summer Exhibition. Deals almost exclusively with road planning, related to the County of London Plan. Ring roads, traffic roundabouts, parking spaces and garages, loopway railway connections. (*No.* 1733 : 28.12).

City Plan. *N. J. Aslan.* (*Architects' Journal, December* 9, 1943, *pp.* 429-432.) Further development of City of London plan, published in AJ for October 8, 1942. Mainly a traffic plan. Ring road connects most of railway termini. Retention of defined trade zones. (*No.* 1734 : 28.12).

City of London Sketch Plan. *K. J. Lindy and B. A. P. Winton Lewis.* (*Architects' Journal, March* 23, 1944, *pp.* 227-229.) Privately produced plan exhibited at IAAS. Interest almost exclusively concentrated on visual aspect of layout. Formal conception without serious basis. (*No.* 1735 : 28.12).

The London Boroughs and the London Plan. *Elizabeth McAllister.* (*Architects' Journal, September* 28, 1944, *pp.* 229-232.) Record in outline of comments on County of London Plan (see AJ, 15.7.43) by the 28 Boroughs of County. (*No.* 1737 : 28.12).

A Method of Comparative Analysis Demonstrated on Four London Plans. *E. C. Kent and F. J. Samuely.* (*Architects' Journal, August* 10, 1944, *pp.* 99-114, *and XXX.*) Method demonstrated by comparing LCC, LRRC, MARS and RA plans for London by question and answer, *e.g.*, does plan fit into national and regional pattern? Is individual character of town preserved and developed? Does it cater for community needs? (*No.* 1738 : 28.12).

London Housing Needs. (See *Surveys*).

Fine Building. (See *Books*).

NATIONAL PLANNING

Rebuilding South Africa. (*South African Architectural Record : September and October,* 1943.) Record of exhibition prepared by students of Johannesburg School of Architecture. (*No.* 1415 : 23.3).

Town and Country Planning (Interim Development) Act, 1943. (See *Legislation*).

Control of the Use of Land. (See *Legislation*).

Land Values. (See *Surveys*).

Physical Planning. (See *General*).

Post-War Development. (See *General*).

PARKS AND OPEN SPACES

Swedish Portable Gardens. *F. R. Yerbury.* (*Lecture reported in Architectural Association Journal, January*, 1944.) Large pots of flowers in Stockholm decorate streets and open spaces. (*No.* 1401 : 9.3).

From Plan to Reality. (See *Regional Planning*).

Action for Cities. (See *Surveys*).

Community Planning in Detroit. (See *Community Planning*).

The Master Plan for the City of Toronto and Environs. (See *Town Planning*).

Toronto Master Plan. (See *Town Planning*).

Standards for Recreation. (See *Recreation*).

Highways and Parkways. (See *Transport*).

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USA Planning Exhibition. (See *Exhibitions*).

Planning Public Places. (See *Community Planning*).

Housing Manual, 1944. (See *Housing*).

RECREATION

The Pub in the Future. (*True Temperance Associations, London, November*, 1943, 6*d.*) The new pub must be properly equipped to serve also as a club. (*No.* 1360 : 13.1).

Standards for Recreation. (*National Recreation Association, New York.*) Proper recreation facilities are essential to city life. Pamphlet indicating standards of distance, position, size and equipment that should serve to assess present position in towns and determine their future needs. (*No.* 1549 : 3.8).

Physical Planning. (See *General*).

A Method of Comparative Analysis Demonstrated on Four London Plans. (See *London*).

The Master Plan for the City of Toronto and Environs. (See *Town Planning*).

Toronto Master Plan. (See *Town Planning*).

USA Planning Exhibition. (See *Exhibitions*).

Planning Public Places. (See *Community Planning*).

REGIONAL PLANNING

From Plan to Reality. *Regional Plan Association.* (*New York, December*, 1942.) Third report of progress on development of Greater New York Regional Plan. (*No.* 1347 : 6.1).

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. (*No.* 1659 : 9.11).

Hydro-Electric Development in the Highlands. *Hugh Quigley.* (*Architects' Journal, September* 7, 1944, *pp.* 178-179.) Criticism of North of Scotland Hydro-Electric Board's Construction Scheme No. 1 as secretive policy and travesty of planning. (*No.* 1751 : 28.12).

Physical Planning. (See *General*).

SITE PLANNING

A Layout for Small Houses. *Walter Segal.* (*Building, March*, 1944.) Interesting solution to provision of small detached house and garden in urban areas at 11-14 to acre, with adequate privacy and east-west orientation. (*No.* 1487 : 18.5).

Siting the Factory-Made House. *Tom Mellor* (*Architects' Journal, August* 3, 1944, *pp.* 81-84). Dangers of uncontrolled prefabrication. Call for control of design and siting of factory-made houses by architects and planners. Functional and aesthetic requirements of siting. Illustrated suggestions for layout of Portal houses. (*No.* 1692 : 30.11).

Siting the Portal House. *Walter Segal.* (*Building, September*, 1944.) Straight row siting is banal and means frontages of 30 to 40 ft., according to which side faces road. Suggestions for grouped siting, which is pleasanter, and can reduce road frontage. (*No.* 1693 : 30.11).

Siting the Temporary House. (*Architects' Journal, November* 30, 1944, *pp.* 399-403.) Extracts from *Temporary Accommodation : Memorandum for the Guidance of Local Authorities* (HMSO, 6d.). Selection and acquisition of sites, layout and site planning. Fully illustrated. (*No.* 1750 : 28.12).

Worthy Ideas from Wartime Housing. (See *Housing*).

Design of Dwellings. (See *Housing*).

Planning Our New Homes. (See *Housing*).

Housing Manual, 1944. (See *Housing*).

Temporary Accommodation. (See *Housing*).

SOCIOLOGY

The Journey to Work. *K. Liepmann.* (*The International Library of Sociology and Social Reconstruction. Kegan Paul*, 1944, 15*s.*) Material concerning daily journey to work previously only found in scattered sources. It is here assembled and discussed together with result of some specific statistical investigations undertaken by author. (*No.* 1399 : 9.3).

The Pub in the Future. (See *Recreation*).

City Government. (See *Education*).

Town and Country Planning Summer School. (See *General*).

Are the Aged being Left out of Planning? (See *Housing*).

Land Values. (See *Surveys*).

A Method of Comparative Analysis Demonstrated on Four London Plans. (See *London*).

London Housing Needs. (See *Surveys*).

Physical Planning. (See *General*).

Fine Building. (See *Books*).

SURVEYS

A New Method for Measuring the Quality of Urban Housing. (*American Journal of Public Health, June*, 1943.) System by which existing staff of local housing authorities can collect and assess data necessary for policy making. (*No.* 1348 : 6.1).

Action for Cities : A Guide for Community Planning. *Public Administrative Service Booklet No.* 86, *Chicago.* (Sponsored by *American Municipal Association; American Society of Planning Officials, International City Managers' Association.*) Valuable guide to information required in planning any town, its sources (USA) and methods of collation and presentation. (*No.* 1367 : 27.1).

Minnesota Town Plans for Peace. (*The Reader's Digest, February*, 1944.) Inventory of post-war needs prepared by citizens of Albert Lea, town of 13,000 in South Minnesota. (*No.* 1391 : 2.3).

The Younger Women's Needs in Future Housing. (*Report from the Women's Advisory Housing Council*, 1943, 2*s.* 6*d.*) Analysis of 2,000 questionnaires on housing completed by women in the Forces and in factories. (*No.* 1392 : 2.3).

Two-Day Study of a Village. *Architectural Association School.* (*Architectural Association Journal, July-August*, 1944.) Study organized in conjunction with course of town planning lectures to illustrate principles of town planning surveys. (*No.* 1694 : 30.11).

London Housing Needs. *Alexander Block.* (*Architects' Journal, November* 9, 1944, *pp.* 343-346.) Call for adequate census of population to discover real housing needs. Houses versus flats controversy futile without such census. (*No.* 1736 : 28.12).

Land Values. *H. J. Crone.* (*Architects' Journal : Part I, August* 17, 1944, *pp.* 121-124 : *Part II, August* 24, 1944, *pp.* 139-140.) Need for full surveys of land values in which to work out ideal plans. Social aspects. Redistribution of values. Compensation and betterment. (*No.* 1745 : 28.12).

The Journey to Work. (See *Sociology*).

The Geographical Basis of Government. (See *Regional Planning*).

Rapid Surveys of Atmospheric Pollution. (See *Atmospheric Pollution*).

Two-Day Study of a Village. (See *Surveys*).

Physical Planning. (See *General*).

Draft Plan for Clydebank. (See *Town Planning*).

Plan for Plymouth. (See *Town Planning*).

A Method of Comparative Analysis Demonstrated on Four London Plans. (See *London*).

Toronto Master Plan. (See *Town Planning*).

TOWN PLANNING

The Master Plan for the City of Toronto and Environs. (*City Planning Board of Toronto, December* 31, 1943.) Brief explanation in booklet and maps of first stage of Master Plan for City of Toronto and Suburbs. Submitted to City Council by City Planning Board. (*No.* 1521 : 6.7).

Toronto Master Plan. *E. G. Faludi.* (*Architects' Journal, September* 14, 1944, *pp.* 193-196.) Describes exhibition in Art Gallery, Toronto. First example in Canadian town planning history of plans based on analysis. Proposals to co-ordinate development as geographic, economic and social unit. Green belt, transport, uses of land, neighbourhood units. (*No.* 1740 : 28.12).

Draft Plan for Clydebank. *Designed by Sam Bunton.* (*Architects' Journal, January* 6, 1944, *pp.* 8-15.) Housing and Town Planning Exhibition of reconstruction plan for Clydebank. (*No.* 1731 : 28.12).

Plan for Plymouth. *J. Paton Watson and Professor Abercrombie.* (*Architects' Journal, May* 4, 1944, *pp.* 331-334.) Describes exhibition for proposed replanning. Based on survey. Assumption that HM Dockyard will continue. Proposals for new centre, at least 18 neighbourhood units, increased facilities for holiday makers, and areas for light industries. Maximum population density of 100 persons per acre recommended. Through traffic to be by-passed, and different types of traffic segregated. Great parkway to run from proposed Station Hotel through City Centre to the Hoe. (*No.* 1732 : 28.12).

Action for Cities. (See *Surveys*).

Minnesota Town Plans for Peace. (See *Surveys.*)

County of London Plan. (See *London*).

Fine Building. (See *Books*).

Standards for Recreation. (See *Recreation*).

Post-War London. (See *London*).

Highways and Parkways. (See *Transport*).

Physical Planning. (See *General*).

RA Exhibition. (See *London*).

City Plan. (See *London*).

City of London Sketch Plan. (See *London*).

The London Boroughs and the London Plan. (See *London*).

Planning Public Places. (See *Community Planning*).

A Method of Comparative Analysis Demonstrated on Four London Plans. (See *London*).

Town and Country Planning (Interim Development) Act, 1943. (See *Legislation*).

Control of the Use of Land. (See *Legislation*).

Land Values. (See *Surveys*).

Town and Country Planning Summer School. (See *General*).

Architectural Notes on a Recent Visit to Sicily. (See *STRUCTURE : General*).

TRANSPORT

Traffic and Parking Study. *Regional Plan Association.* (*New York*, 1942.) Analysis and recommendations to deal with New York's congestion of automobiles at the centre. (*No.* 1359 : 13.1).

Street Design for Service. (*The American City, February*, 1944.) Review of the Chicago Plan Commission's Report, *Building New Neighbourhoods.* Street design divided into Major Streets, Residential Streets and Court (cul-de-sac) Streets. (*No.* 1594 : 14.9).

Highways and Parkways. *C. Rodgers.* (*The Studio, June*, 1944.) Description of New York Parkways carried out by Park Commissioner Robert Moses, which provide swift communication between countryside and the heart of City. (*No.* 1633 : 19.10).

Road Crossings. (*Architects' Journal, April* 22, 1943, *p.* 267 ; *August* 19, 1943, *p.* 124 ; *April* 13, 1944, *p.* 276.) Alternatives to the cloverleaf and the fly-over. Maltese Crossing, by A. G. Paton. Switchback Crossing, by E. Pollock and T. W. Kennedy. Positive Turn Crossing, by A. G. Wise. (*No.* 1741 : 28.12.)

From Plan to Reality. (See *Regional Planning*).

The Journey to Work. (See *Sociology*).

The Master Plan for the City of Toronto and Environs. (See *Transport*).

Toronto Master Plan. (See *Town Planning*).

Physical Planning. (See *General*).

Draft Plan for Clydebank. (See *Town Planning*).

Plan for Plymouth. (See *Town Planning*).

RA Exhibition. (See *London*).

City Plan. (See *London*).

City of London Sketch Plan. (See *London*).

A Method of Comparative Analysis Demonstrated on Four London Plans. (See *London*).

VILLAGE PLANNING

Re-building an Industrial Village in Russia. *I. Golosov.* (*Architectura, No.* 2, 1943.) Description of re-organization of a factory, administrative village, railway station and several collective farms after destruction by Germans. (*No.* 1509 : 22.6).

Re-building the Village of a Collective Farm in Russia. *L. Rydnev.* (*Architectura, No.* 3, 1943.) Construction of village buildings is new field for architects. New conditions require new approach to village planning, but traditions of centuries must be treated with respect. (*No.* 1535 : 20.7).

Planning Villages along Arterial Roads. *V. Semenov-Prozorovschi.* (*Architectura No.* 1 : 1942.) Many Russian villages straddled main traffic routes. Have been more bombed than others. Proposals made for rebuilding on new lines. (*No.* 1700 : 7.12).

Two-Day Study of a Village. (See *Surveys*).

PLUMBING
and Sanitation

DRAINAGE

The Design of Airport Drainage. (*The Plumber and Journal of Heating, February*, 1944. *Extracts from article in The Shire and Municipal Record, Australia*). Objects of drainage. Description of methods of calculation. (*No.* 1492 : 18.5).

New Test Method Shows Efficiency of Kitchen Grease Filter. *M. E. Kliefoth and D. L. Hunzicker.* (*Heating, Piping, December*, 1943, *p.* 630.) Method of testing filters for removal of grease. (*No.* 1423 : 23.3).

Plumbing. (See *General*).

GENERAL

Sanitary Science and Hygiene in Reconstruction. *A. F. Russell.* (*RIBA Journal, February*, 1944.) Extracts from Chadwick Trust Essay 1943, dealing in general way with various aspects of hygiene. (*No.* 1484 : 11.5).

Plumbing. *The Ministry of Works Post-War Building Studies, No.* 4. *Building Research Board of DSIR.* (*HMSO*, 1*s.*) Plumbing of low cost houses is main subject. Lay-out of installations. Use of materials. Standardization of appliances. Notes on drainage. Recommendations for future research. Test results for siphonage of traps on simple one-pipe installations. Common defects in plumbing. (*No.* 1627 : 5.10).

Post-War Plumbing in USA. *Norman J. Rodder.* (*The Plumbing Trade Journal, August*, 1944. *Culled from the National Real Estate Journal.*) Brief notes on materials and fittings. Plastics. Fibre pipes. Shower baths. Dental lavatories. Flushing valves. (*No.* 1689 : 23.11).

Handbook of Building Standards, Materials and Components. (See *MATERIALS : Standards*).

PIPES

Pipe Jointing Material. *A talk on Philplug Products, by C. H. Taylor, before Manchester and Preston Registered Plumbers.* (*The Plumber and Journal of Heating. August*, 1944.) Description of patent jointing material. (*No.* 1628 : 5.10).

Bent Piping v. Elbows. *P. N. Thomson.* (*Plumbing and Heating Journal, July*, 1944.) Possible advantages of substituting bent piping with straight joints for normal elbow joints. Writer concludes bent pipes more efficient. No definite statement on costs. Typical lay-out illustrated. (*No.* 1630 : 5.10.)

Plumbing. (See *General*).

Post-War Plumbing in USA. (See *General*).

PREFABRICATION

Kitchen and Plumbing Prefabricated Unit. *Designed by Charles E. Elcock.* (*Architects' Journal, December* 23 ; *The Builder, December* 3, 1943.) Unit combining all sanitary appliances, cold and hot water services, sink and refrigerator and cooler and heating devices with all water, gas and electric services and drainage in one assembly. (*No.* 1407 : 16.3).

Prefabricated Components. *Architect and Building News, September* 29, 1943.) Prefabricated plumbing unit for Universal plan house, designed by Walter Segal, described by Edwin Gunn. (*No.* 1405 : 16.3).

The Denham Plumbing and Heating System Unit. *Designers, S. G. Gravely and S. C. Warren.* (*Architect and Building News, December* 10, 1943 ; *Architects' Journal, January* 20, 1944.) Prefabricated plumbing and hot-water unit for small house. Illustrated by diagrams. (*No.* 1409 : 16.3).

Prefabricated Plumbing. *F. L. Barlow.* (*Journal of the Royal Sanitary Institute, October*, 1944.) Analysis of merits and demerits of prefabrication applied to plumbing considered under headings of *Is It Good Plumbing?, Overall Costs*, and *Speed of Installation.* (*No.* 1727 : 21.12).

SEWAGE

The Problem of Sewage Disposal in Rural Areas. *G. T. Cotterell.* (*Journal of the Royal Sanitary Institute, January*, 1944.) Broad survey of problem. Future town planning schemes should fully consider sewage and its disposal. Finance must not dictate. (*No.* 1513 : 22.6).

STANDARDS

Handbook of Building Standards, Materials and Components. (See *MATERIALS : Standards*).

WATER SUPPLY

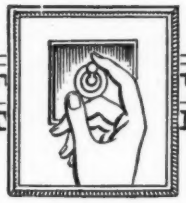
Odoriferous Fungi in Waters. *H. A. Sandford.* (*Architect and Building News, June* 30, 1944.) Reasons for odour and taste of drinking water. (No. 1629 : 5.10).

London's Water Supply. *Henry Berry.* (*Journal of the Royal Society of Arts, March* 17, 1944.) General description of London's water supply. Area served, companies concerned. Methods and capacity of storage. Methods of filtering and chemical treatment (*No.* 1491 : 18.5).

STRUCTURE

AESTHETICS

A New Approach to the Aesthetics of Engineering Structures. *D. T. Lloyd Jones.* (*Journal*



On Active Service

Electricity is basic in building

Electricity has become the *mainpower* of production; and new and better homes will be the main necessity of peace production. In building and equipping these homes the cheap flexible power of Electricity will be a requirement as basic as bricks, as sure as steel, as capable as concrete. In each future dwelling the universal versatility of Electricity will cause it to be not an adjunct to, but the presiding genius of the home.

For information and advice about the many new uses and greatly increased adaptability of Electricity consult your Electricity Supply Undertaking or the British Electrical Development Association, 2, Savoy Hill, London, W.C.2.

The Electrical Section at the Building Centre, Maddox Street, London, W.1, provides interesting illustrations of electrical applications in domestic and industrial premises.

EDA

of the Institution of Structural Engineers, published lecture, March, May, 1944, *pp.* 101-114, 197-212.) Aesthetics of buildings governed by specific laws capable of enunciation and of being practised as an applied science. New forms must be rational development of properties of material of construction, and of functional elements of design. Functional concept of structures. (*No.* 1567 : 24.8).

Architectural Record's Building Types Study. (See *Factories*).

Architecture and Reinforced Concrete. (See *Reinforced Concrete*).

BOOKS

The Practical Builder. *Edited by R. Greenhalgh.* (*Odhams Press*, 9*s.* 6*d.*) Comprehensive and well illustrated guide to latest methods of modern building practice and building organization. Valuable to apprentices and craftsmen. (*No.* 1671 : 16.11).

Elementary Principles of Brickwork Construction. (See *Brickwork*).

A Short Dictionary of Architecture. (See *General*).

BRICKWORK

Elementary Principles of Brickwork Construction. *J. G. V. Proudman. Volume One. Chapman & Hall*, 7*s.* 6*d.*) Fundamentals of bricklaying in theory and practice, illustrated by 25 plates. Useful guide for apprentices and students. Reference to Model Byelaws. (*No.* 1672 : 16.11).

Methods of Bricklaying. *D. G. R. Bonnell, D. W. Aldred and L. W. Baldwin.* (*The Builder, July* 28, 1944, *pp.* 75-77.) Investigation of various modifications of normal practice of bricklaying. (*No.* 1673 : 16.11).

Resistance of Brick Walls to Wind. (See *Collapse of Buildings*).

House Construction. (See *Housing*).

MOW Demonstration Houses at Northolt. (See *Housing*).

Load-Bearing Concrete, Brickwork and Masonry. (See *MATERIALS : Standards*).

BRIDGES

Pedestrian Bridge, Chicago. Ill. *Chicago Park District Engineering Division. Ralph H. Burke.* (*Architectural Forum, July*, 1944, *pp.* 97-99, *The Builder, September* 3, 1944, *pp.* 190-1.) Passerelle across Lake Shore Drive. Three hinged welded steel arch of 187 ft. span transecting footway. Approaches in rigid reinforced concrete frame construction. Harmonious combination of the two materials. (*No.* 1643 : 26.10).

CODES OF PRACTICE

Resistance of Brick Walls to Wind. (See *Collapse of Buildings*).

Interim Code of Functional Requirements. (Classification Code.) Chapter IV, Precautions against Fire. (See *Fire Protection*).

Reinforced Concrete Structures. (See *Reinforced Concrete*).

COLLAPSE OF BUILDINGS

Sao Paulo Tower is Righted with Jacks. (*Engineering News Record, October* 21, 1943, *p.* 623.) Huge reinforced concrete frame building righted by means involving freezing of subsoil, installation of deep concrete piers and hydraulic jacking. (*No.* 1375: 10.2).

Memorandum on the Construction of Single Storey Buildings, with Suggested Precautions to Prevent Collapse during Erection. *Form* 1998, *April*, 1943, *Factory Department.* (*Issued by MOLNS in consultation with MOW. Price* 2d.) Collapse of single storey building structures in course of erection. (1376 : 10.2.).

Resistance of Brick Walls to Wind. *H. A. Sweet.* (*Engineering News Record, October* 21, 1943, *pp.* 630-31. *Correspondence in E.N.R., November* 18, 1943, *pp.* 734-35.) Analysis of the stability of a 50 ft. high fire-wall that failed because of a 32 m.p.h. wind. Inadequacy of building codes. (*No.* 1396: 2.3).

CONCRETE

Sao Paulo Tower is Righted with Jacks. (See *Collapse of Buildings*).

High Stressed Wire in Concrete Tanks. (See *Reinforced Concrete*).

House Construction. (See *Housing*).

Steel Structures. (See *Steel*).

Concrete Railway Sleepers. (See *Reinforced Concrete*).

Reinforced Concrete Structures. (See *Reinforced Concrete*).

Prefabrication : (1) Timber Prefabricated Houses. (2) Swedish Steel and Timber Prefabricated Houses. (3) Tarran Revised System of Construction. (4) The Weir Paragon House. (See *Prefabrication*).

Experimental Flatted Houses in Glasgow. (See *Prefabrication*).

MOW Demonstration Houses at Northolt. (See *Housing*).

Load-Bearing Concrete, Brickwork and Masonry. (See *MATERIALS: Standards*).

ASB Lectures. (See *MATERIALS : General*).

Memorandum on Box Frame Construction for Terrace Housing and Flats. (See *Housing*).

FACTORIES

Architectural Record's Building Types Study Number 89. *Prepared in collaboration with Power Plant Engineering.* (*Architectural Record, May*, 1944, *p.* 85-104.) Architecture and engineering of the power plant. Procedures in design. Wartime production. Future progress in power plant programme for rural areas. (*No.* 1670 : 16.11).

Aircraft Plant has 150 ft. Timber Trusses. (See *Timber*).

Long Span Laminated Timber Arches for an Aircraft Hangar. (See *Timber*).

Construction After the War. (See *General*).

Municipal Asphalt Plant. (See *Reinforced Concrete*).

Long Span Arches for Modification Centre. (See *Timber*).

Shell Concrete Construction. (See *Reinforced Concrete*).

FIRE PROTECTION

Interim Code of Functional Requirements. (Classification Code.) Chapter IV, Precautions against Fire (for Dwellings and Non-residential Schools of not more than two storeys in either case.) *Codes of Practice Committee of the Ministry of Works.* (*British Standards Institution*, 2*s.*) Draft for comment, subject to revision. General requirements: safety of occupants, restriction of external spread. Recommended standards for surface finishes, walls, structural framework, floors, roof coverings, chimneys, flues and hearths. Method of testing the flame-propagating properties of the surfaces of materials. Classification of the surfaces of materials in terms of flame-propagating properties. (*No.* 1528 : 13.7).

The Protection of Structures Against Lightning. *J. F. Shipley.* (*Journal of the Institution of Electrical Engineers, December*, 1943, *Part I, p.* 501.) Description of nature of lightning and how to deal with it in buildings. (*No.* 1483: 11.5).

Foundations in Combustible Material. (See *Foundations*).

FLOORS

Plywood Plate Girders for Buildings. (See *Timber*).

Low-cost Housing (Timber) : American Research on Suitable Forms of Construction. (See *Housing*).

Interim Code of Functional Requirements. (Classification Code.) Chapter IV, Precautions against Fire. (See *Fire Protection*).

Steel Structures. (See *Steel*).

Reinforced Concrete Structures. (See *Reinforced Concrete*).

FOUNDATIONS

Foundations in Combustible Material. *W. C. Andrews.* (*The Structural Engineer, February*, 1944, *pp.* 53-65.) Structures founded on substrata containing combustible elements require special precautions. Examples of remedying damage caused by fire in subsoil. (*No.* 1568 : 24.8).

Sao Paulo Tower is Righted with Jacks. (See *Collapse of Buildings*).

Steel Structures. (See *Steel*).

Pitch Mastic Flooring. (See *MATERIALS : Pitch*).

Pitch Mastic Flooring Incorporating Lake Asphalt. (See *MATERIALS : Pitch*).

GENERAL

Construction After the War. *G. A. Bryant.* (*Engineering News Record, October* 21, 1943, *pp.* 616-618.) Expected industrial building activity in USA after the war. (*No.* 1437: 6.4).

Architectural Notes of a Recent Visit to Sicily. *Eric Bird.* (*Lecture at the AA, April* 18, 1944. *The Architects' Journal, May* 18, 1944, *pp.* 376-378, *and other journals.*) Social, geological and climatic conditions governing town planning and building technique. Plaster tradition. Predominance of Baroque. Messina, entirely rebuilt after earthquake in 1908, example of planned modern town with reinforced concrete framed buildings. (*No.* 1504: 8.6).

Methods of Building in the USA. *The Report of a Mission appointed by the Minister of Works.* (*HMSO*, 1944, 4*d. Extract in AJ, February* 10, 1944, *pp.* 121-3.) Design of Buildings. Building Procedure. Construction and Costs. Factory Produced Building. Summary of Recommendations. (*No.* 1527: 13.7).

A Short Dictionary of Architecture. *Dora Ware and Betty Beatty.* (*Allen G. Unwin*, 6*s.*) Practical reference book containing 791 terms and 278 illustrations intended to be of help not only to students of architecture, but to everybody with interest in building. Clear and simple explanation of technical terms. Illustrations neat and well selected. (*No.* 1644 : 26.10).

The Presentation of Technical Literature. *G. E. Williams.* (*Journal of the Institution of Electrical Engineers, May*, 1944, *Part I, p.* 199.) Technique of technical writing. Method of presentation, choice of words, organization, psychological principles. (*No.* 1702 : 7.12).

Trimetric Projection. *H. Fowcett.* (*Metropolitan-Vickers Gazette, January*, 1944, *p.* 264.) Simplified drawing office technique for making trimetric projections. (*No.* 1703 : 7.12).

Post-War Building. (See *Housing*).

The Practical Builder. (See *Books*).

British Standard Conversion Factors and Tables. (See *Standards*).

Fowler's Architects', Builders', and Contractors' Pocket Book. (See *MATERIALS : General*).

HOUSING

Weir, Atholl and Cowieson Steel Houses, 1926-1928. 17 Years' Experience proves the Success of an Experiment. *A. H. Mottram.* (*Architectural Design and Construction, November*, 1943, *pp.* 222-227. *See also Inf. Centre No.* 1240 [*A.J., September* 23, 1943, *pp.* 224-5]). Three types of steel houses erected in Scotland by three big Glasgow firms in last post-war period are described. (*No.* 1380: 17.2).

Solar Houses. (*The Reader's Digest, February*, 1944.) USA one-storey houses with eaves projecting four feet over wall, 90 per cent. glass, facing south. Room temperatures reach 70° without heating when outside registers 17° below zero. (*No.* 1395: 2.3).

Low-cost Housing (Timber) : American Research on Suitable Forms of Construction. *R. Cotterall-Butler.* (*The Builder, December* 10, 1943, *pp.* 468-473.) Review of US National Bureau of Standards: Report BMS 99, entitled *Review and Heat-Transfer Properties of Multiple Box-Girder Plywood Panels for Walls, Floors and Roofs.* (*No.* 1481: 11.5).

House Construction, *Post-War Building Studies, No. 1. By an Interdepartmental Committee appointed by the Minister of Health, the Secretary of State for Scotland and the Minister of Works.* (*HMSO*, 1944, 2*s.*) (*Summary reprinted in* Architects' Journal, *April* 6, 1944, *pp.* 268-9.) Suggested basic

technical considerations of house construction. Alternative forms of construction used in the inter-war period. Notes on materials. Recommendations for use of no-fines concrete. (*No.* 1516: 29.6).

Post-War Building. *Alfred C. Bossom.* (*Design for Britain Booklets No* 27, *J. M. Dent*, 6*d.*) Provision of small houses demands modern and scientific building methods. Need for research. (*No.* 1598 : 14.9).

Two-Stage Housing. *E. J. Buckton.* (*The Engineer, August* 25, *September* 1, 8, 1944, *pp.* 145-9, 161-3, 177-182.) Houses built in two stages. Ground floor in reinforced concrete framework, to be carried out by civil engineering industry. Upper floor to be built temporarily of Nissen huts, if required in first stage. Permanent upper floor added when conditions permit. Deficiency of housing could be overcome in 2¾ years instead of in the 3¾ years envisaged by Government programme. (*No.* 1654 : 2.11).

Memorandum on Box Frame Construction for Terrace Housing and Flats. *Ove Arup.* (*Privately published, May*, 1944.) Blocks consisting of load-bearing division walls, monolithic with floors and roof, and of non-load-bearing longitudinal external walls and partitions. (*No.* 1710 : 14.12).

Conversion of Old Houses into Flats at Hampstead. *James I. Wolfsohn.* (*Architects' Journal, October* 26, 1944, *pp.* 311-314.) Examples of converting socially obsolete but structurally sound houses into flats for modern use to ease housing situation. (*No.* 1754: 28.12).

MOW Demonstration Houses at Northolt. (*Architects' Journal, October* 12, 1944, *pp.* 265-276.) Full description of 13 houses built at Northolt Grange Estate, Middlesex, to demonstrate alternative types of materials, plans and construction suitable for immediate post-war permanent housing. (*No.* 1755 : 28.12).

Science and Housing. *A. M. Chitty.* (*Architectural Science Board Lecture at RIBA, June* 13, 1944. *The Architects' Journal, June* 29, 1944, *pp.* 492-494, *XXX.*) Application of science to house construction. Burt Committee Report reviewed. (*No.* 1757 : 28.12).

Interim Code of Functional Requirements. (Classification Code.) Chapter IV, Precautions against Fire. (See *Fire Protection*).

Prefabrication. (1) Prefabricated Cottages at Chobham, Surrey. (2) Emergency Factory-Made House by MOW. (3) Experimental Houses, City of Birmingham. (4) Experimental Houses, Coventry. (See *Prefabrication*).

Prefabrication : (1) Timber Prefabricated Houses. (2) Swedish Steel and Timber Prefabricated Houses. (3) Tarran Revised System of Construction. (4) The Weir Paragon House. (See *Prefabrication*).

Experimental Flatted Houses in Glasgow. (See *Prefabrication*).

Braithwaite Unit Frame Construction. (See *Prefabrication*).

Swedish Factory-Produced Timber Houses. (See *Prefabrication*).

The Arcon Temporary House. (See *Prefabrication*).

Jicwood Stressed-Skin House. (See *Prefabrication*).

Shop Production and House Design. (See *Prefabrication*).

Sunlight Houses. (See *LIGHTING : Daylight*).

Memorandum on the Synchronous Electric Clock. (See *Mechanical Installation*).

Methods of Building in the USA. (See *General*).

MECHANICAL INSTALLATIONS

Mechanical Installations. *The Ministry of Works Post-War Building Studies, No.* 9. *By a Committee convened by the Institution of Mechanical Engineers.* (*HMSO*, 2*s.*) Covers relation of installation engineering and building and recommends more co-ordination. Detailed sections of lifts, hoists, and escalators. Cooking installations (except for homes). Laundry appliances. Refuse disposal. Heating, ventilation, and air conditioning. Wells, bore-holes, and pumping. Building plant and refrigerator equipment. (*No.* 1637: 19.10).

Memorandum on the Synchronous Electric Clock. (*Submitted by the British Synchronous Clock Conference.*) A brief review of synchronous electric clock types and installations for all principal uses. (*No.* 1701 : 7.12).

MOVING BUILDINGS

Moving Buildings in the USSR. *A. Ling.* (*The Architects' Journal, February* 24, 1944, *pp.* 151-162.) Examples of moving multi-storey buildings in USSR. Details of equipment. Economic conditions for moving instead of demolishing and rebuilding. (*No.* 1482: 11.5).

ORGANIZATION

Programme and Progress. A Pamphlet dealing with the Preparation of Charts for Civil Engineering and Building Contracts. (*HMSO, 9d.*) Clear and simple explanation of preparation and use of programme and progress charts. (*No.* 1695 : 30.11).

The Placing and Management of Building Contracts. *Ministry of Works.* (*HMSO*, 1*s.*) Report of Central Council for Works and Buildings. Recommended procedure in relation to present and probable trend of development. Based on 7 technical papers (included in report). Causes of inefficiency. Fixed Price Contract. Bill of Quantities for Housing recommended. (See AJ leading article for November 30, 1944.) (*No.* 1756 : 28.12).

Methods of Building in the USA. (See *General*.)

Steel Structures. (See *Steel*).

The Practical Builder. (See *Books*).

PREFABRICATION

Prefabrication. (1) Prefabricated Cottages at Chobham, Surrey. (*The Architects' Journal, February* 17, 1944, *pp.* 139-140, *and other journals*) ; **(2) Emergency Factory-Made House by MOW.** (*The Architects' Journal, May* 11, 1944, *pp.* 344-346, 349-357, *and other journals*). **(3) Experimental Houses for the City of Birmingham.** (*The Architects' Journal, October* 19, 1944, *pp.* 291-294, *and other journals*). **(4) Experimental Houses at Coventry.** (*The Architects' Journal, June* 22, 1944, *pp.* 471-474, *and other journals*). Details of prefabricated experimental houses in plywood and steel. (*No.* 1596 : 14.9).

Prefabrication : (1) Timber Prefabricated Houses. *Designed by Cyril Sjostrom.* (*The Architects' Journal, December* 30, 1943, *pp.* 485-6). Working-class houses in Monmouthshire. Two blocks of six-terraced houses. **(2) Swedish Steel and Timber Prefabricated Houses.** *Designed by Eric Friberger.* (*The Architects. Journal, July* 13, 1944, *pp.* 33-36). Steel frame and standard timber panels. External ground floor walls non-load bearing first floor walls carrying roof. Bay 10 ft. by 10 ft. **(3) Tarran Revised System of Construction.** (*The Architects' Journal, July* 27, 1944, *pp.* 69-72, *and other journals.*) Factory building construction in cast stone or concrete. Steel and laminated resin bonded timber floors. **(4) The Weir Paragon House.** (*The Builder, August* 4, 1944, *p.* 91): Metal clad demonstration house. (*No.* 1597 : 14.9).

Experimental Flatted Houses in Glasgow. *J. H. Ferrie and W. Kerr.* (*The Architects' Journal, August* 17, 1944, *p.* 125-238.) Block of four houses of large reinforced foamed slag concrete units, mass-produced in a factory and erected by cranes. (*No.* 1635 : 19.10).

Braithwaite Unit Frame Construction. (*Architects' Journal, October* 5, 1944, *pp.* 251-256, *and other journals.*) Experimental house in light-framed rolled steel structure. Flexibility of layout and freedom in choice of cladding materials. (*No.* 1636 : 19.10.)

Swedish Factory-produced Timber Houses. *Cyril Sjostrom.* (*Architects' Journal, February* 3, 1944, *pp.* 101-105.) Scano Houses of solid timber units. (*No.* 1708 : 14.12).

The Arcon Temporary House. (*The Architects' Journal, November* 30, 1944, *and other journals.*) Prefabricated temporary bungalow of steel frame and asbestos cement cladding. (*No.* 1709 : 14.12).

Jicwood Stressed-Skin House. (*The Architects' Journal, December* 14, 1944, *pp.* 447-450, *and other journals.*) Experimental house of stressed skin construction near Weybridge. Walls 1⅛ in. thick of plywood skins, enclosing core of expanded rubber plastic. (*No.* 1718 : 21.12).

Shop Production and House Design. *Walter Segal.* (*Building, May*, 1944, *pp.* 130-135.) Unit frame construction in timber. (*No.* 1758 : 28.12).

Weir, Atholl and Cowieson Steel Houses, 1926-1928. (See *Housing*).

Methods of Building in the USA. (See *General*).

Long Span Laminated Timber Arches for an Aircraft Hangar. (See *Timber*).

The Use of Standards in Building. (See *MATERIALS : Standards*).

REINFORCED CONCRETE

Architecture and Reinforced Concrete. *Paul Weidlinger.* (*New Pencil Points, August*, 1943, *pp.* 58-66.) Intricacies of building design in concrete. Period of transition. Characteristic shapes of sincerely designed structures. Development of new aesthetics. Responsibility of architects. (*No.* 1456: 20.4).

High Stressed Wire in Concrete Tanks. *J. M. Crom.* (*Engineering News Record, December* 30, 1943, *pp.* 947-949.) Wires pre-stressed at 150,000 lb./sq. in. save 75 per cent. of steel and eliminate cracks. (*No.* 1457: 20.4).

Concrete Railway Sleepers. *British Standard Specification* 986 : 1944. (*British Standards Institution*, 2*s.*) Revised specification providing data for design and manufacture of both ordinary reinforced concrete and pre-stressed concrete sleepers. (*No.* 1544 : 27.7).

Municipal Asphalt Plant. *Designed by the Office of the President of the Borough of Manhattan.* (*Architectural Forum*, 1944, *pp.* 109-112.) Manhattan's Municipal Asphalt Plant, built entirely in reinforced concrete barrel vault construction. Light structural steel trusses used both as centering and reinforcement of ribs. (*No.* 1559 : 17.8).

Reinforced Concrete Structures. *Ministry of Works Post-War Building Studies, No.* 8. *By a Committee convened by the Institution of Structural Engineers.* (*HMSO*, 1944, 6*d.*) Consideration of Code of Practice. Loads on floors and roofs. Stresses in steel and concrete. Improvement in design and construction methods. Loan periods. Pre-stressed and vibrated concrete. Welding. Composite construction. Schedule of symbols for use in reinforced concrete and structural steelwork calculations. (*No.* 1560 : 17.8).

Shell Concrete Construction. *K. Hajnal-Konyi.* (*The Architects' Journal, September* 21, 1944, *pp.* 211-219, *see also pp.* 206-208.) New type of reinforced concrete roof construction (*System Zeiss-Dywidag*), consisting of thin shell and stiffening members at edges, vaults and domes. Particularly suitable for covering large areas without intermediate supports. (*No.* 1717 : 21.12).

Architectural Notes of a Recent Visit to Sicily. (See *General*).

Experimental Flatted Houses in Glasgow. (See *Prefabrication*).

Pedestrian Bridge, Chicago. (See *Bridges*).

Two-Stage Housing. (See *Housing*).

Prevention and Control of Cracking in Reinforced Concrete Buildings. (See *MATERIALS: Reinforced Concrete*).

Simple Examples in Reinforced Concrete. (See *MATERIALS : Reinforced Concrete*).

Reinforced Concrete Simply Explained. (See *MATERIALS : Reinforced Concrete*).

ROOFS

Plywood Plate Girders for Buildings. (See *Timber*).

Low-cost Housing (Timber) ; American Research on Suitable Forms of Construction. (See *Housing*).

Interim Code of Functional Requirements. (Classification Code.) Chapter IV, Precautions against Fire. (See *Fire Protection*).

Reinforced Concrete Structures. (See *Reinforced Concrete*).

Long Span Laminated Timber Arches for an Aircraft Hangar. (See *Timber*).

Memorandum on Box Frame Construction for Terrace Housing and Flats. (See *Housing*).

Shell Concrete Construction. (See *Reinforced Concrete*).

A New Type of Hut Incorporating Welded Steel Frames. (See *Welding*).

Bitumen and Fluxed Pitch Roofing Felts. (See *MATERIALS : Pitch*).

SCHOOLS

Standard Construction for Schools. *Post-War Building Studies, No. 2. By a Committee appointed by the President of the Board of Education.* (*HMSO*, 1944, 6*d*.) Application of standardized construction to schools. Recommendations as to their planning, layout and equipment. (*No.* 1505: 8.6).

Interim Code of Functional Requirements. (Classification Code.) Chapter IV, Precautions against Fire. (See *Fire Protection*).

STANDARDS

British Standard Conversion Factors and Tables. *B.S.* 350 : 1944. (*British Standards Institution*, 3*s*. 6*d*.) Useful basic tables of units. Standard conversion factors and multiples. Selected tables. (*No.* 1674 : 16.11).

House Construction. (See *Housing*).

Concrete Railway Sleepers. (See *Reinforced Concrete*).

Load-Bearing Concrete, Brickwork and Masonery. (See *MATERIALS : Standards*).

The Use of Standards in Building. (See *MATERIALS : Standards*).

STEEL

Steel Tubes for Structural Work. (*Tubewrights, Brook House, Park Lane, London, W.*1.) Specifications and data. (*No.* 1394: 2.3).

Steel Structures. *Ministry of Works Post-War Building Studies No. 7. By a Committee convened by the Institution of Civil Engineers.* (*HMSO*, 1944, 6d.) Recommendations regarding intensity of loading on floors, methods of design, permissible steel stresses, casing of steel members, standardization, extended use of welding, design of connections, pressures on concrete foundations. Suggestions for elimination of certain customs. Handling of contracts. (*No.* 1536 : 0.7).

Weir, Atholl and Cowieson Steel Houses, 1926-1928. (See *Housing*).

High Stressed Wire in Concrete Tanks. (See *Reinforced Concrete*).

House Construction. (See *Housing*).

Municipal Asphalt Plant. (See *Reinforced Concrete*).

Reinforced Concrete Structures. (See *Reinforced Concrete*).

Prefabrication. (1) Prefabricated Cottages at Chobham, Surrey. (2) Emergency Factory-Made House by MOW. (3) Experimental Houses, City of Birmingham. (4) Experimental Houses, Coventry. (See *Prefabrication*).

Prefabrication : (1) Timber Prefabricated Houses. (2) Swedish Steel and Timber Prefabricated Houses. (3) Tarran Revised System of Construction. (4) The Weir Paragon House. (See *Prefabrication*).

Braithwaite Unit Frame Construction. (See *Prefabrication*).

Pedestrian Bridge, Chicago. (See *Bridges*).

The Arcon Temporary House. (See *Prefabrication*).

MOW Demonstration Houses at Northolt. (See *Housing*).

ASB Lectures. (See *MATERIALS : General*).

A New Type of Hut Incorporating Welded Steel Frames. (See *Welding*).

TIMBER

Aircraft Plant has 150 ft. Timber Trusses. (*Engineering News Record, October* 21, 1943, *pp.* 624-629.) Aircraft factory in second grade timber. (*No.* 1381: 17.2).

Long Span Arches for Modification Centre. (*Engineering News Record, October* 21, 1943, *pp.* 632-635. *New Pencil Points, November*, 1943, *pp.* 64-66.) Laminated timber arches of 177 ft. and 157 ft. 6 in. span used in hangars. (*No.* 1393: 2.3).

Plywood Plate Girders for Buildings. (*Engineering News Record, November* 4, 1943, *pp.* 690-692.) Girders with web a single thickness of plywood and flanges of dimension lumber used for numerous buildings in Detroit area. Lumber reduced compared with conventional timber construction. (*No.* 1402: 9.3).

Long Span Laminated Timber Arches for an Aircraft Hangar. *Alfred Zweig.* (*Engineering News-Record, September* 21, 1944, *pp.* 347-349.) Three hinged laminated arch ribs of $7\frac{1}{2} \times 36$ in. cross section and 171 ft. span serve as principal framing for timber aircraft hangar. Arches prefabricated. (*No.* 1704 : 7.12).

Low-cost Housing (Timber); American Research on Suitable Forms of Construction. (See *Housing*).

Prefabrication : (1) Prefabricated Cottages at Chobham, Surrey. (2) Emergency Factory-Made House by MOW. (3) Experimental Houses, City of Birmingham. (4) Experimental Houses, Coventry. (See *Prefabrication*).

Prefabrication : (1) Timber Prefabricated Houses. (2) Swedish Steel and Timber Prefabricated Houses. (3) Tarran Revised System of Construction. (4) The Weir Paragon House. (See *Prefabrication*).

Swedish Factory-Produced Timber Houses. (See *Prefabrication*).

Jicwood Stressed-Skin House. (See *Prefabrication*).

Shop Production and House Design. (See *Prefabrication*).

ASB Lectures. (See *MATERIALS : General*).

TRAINING

Education and Training for Engineers. (*J. Inst. Elect. Eng., June*, 1943, *Part I, p.* 223.) Report of a committee of the Institute on the training of engineers. (*No.* 1377: 10.2).

WELDING

A New Type of Hut Incorporating Welded Steel Frames. *S. R. Sparkes and G. M. Cornfield.* (*The Welder, January-June*, 1944, *pp.* 3-5.) Walls and roof of $1\frac{1}{2}$ in. cement mortar with embedded steel mesh, supported on ridge type portal frames with welded eaves joints. (*No.* 1719 : 21.12).

Steel Structures. (See *Steel*).

Reinforced Concrete Structures. (See *Reinforced Concrete*).

Pedestrian Bridge, Chicago. (See *Bridges*).

ASB Lectures. (See *MATERIALS : General*).

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 **Friday** *morning for inclusion in the following Thursday'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

SENIOR EXECUTIVE ENGINEER required by the Public Works Department, Trinidad, for one tour of 3 years. Salary T$4,320 a year, plus temporary war bonus T$216 a year (Trinidad dollars 4, cents 80 = £1). Free passages. Candidates must be Associates of the Royal Institute of British Architects, or hold equivalent qualifications, or must be Associate Members of the Institution of Civil Engineers, or hold a Civil Engineering Degree exempting them from Sections A and B of the A.M.I.C.E. examination, and should have had extensive architectural experience.

Applicants should write, quoting E1804A, to the Ministry of Labour and National Service, Central (T. & S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 24th January, 1945. 963

GLAMORGAN COUNTY COUNCIL.

COUNTY PLANNING DEPARTMENT.

Applications are invited for the following appointments:—

(*a*) ASSISTANT PLANNING OFFICER, at a commencing salary of £425 per annum, rising by annual increments of £25 to £500 per annum, plus war bonus at present £49 8s. per annum. Applicants should have had extensive experience in County Planning, and should be corporate members of either:

(1) The Institution of Civil Engineers.
(2) The Institution of the Municipal and County Engineers.
(3) The Royal Institute of British Architects.
(4) The Chartered Surveyors' Institution.

Corporate membership of the Town Planning Institute in addition will be deemed a preferential qualification.

(*b*) One Grade II PLANNING ASSISTANT, at a commencing salary of £255 per annum, rising by annual increments of £15 to £300 per annum, plus war bonus at present £49 8s. per annum.

Applicants should be competent Surveyors and Draughtsmen, and have had experience in a Planning Office. Preference will be given to applicants who have passed Section "A" of the Institution of Civil Engineers or the intermediate examination of any of the other bodies enumerated in respect of appointment (*a*).

Both appointments are subject to the Local Government Superannuation Act, and the successful candidate will have to pass a medical examination.

Applicants must not be over 45 years of age on the 1st day of April, 1945, unless they have exceptional qualifications and are already in the permanent employment of a Local Authority.

The appointments will be subject to the County Council's general conditions of service, and will be determinable by one month's notice on either side.

Applications, accompanied by three recent testimonials, in a sealed envelope endorsed "County Planning Appointment," should be delivered to the County Planning Officer, Glamorgan County Hall, Cardiff, not later than 27th January, 1945.

Applicants, who are members of H.M. Forces and serving abroad, are requested to cable the date of the despatch of their applications. Telegraphic address: "Morganwg, Cardiff."

A. CLIFFORD WALTER,
Deputy Clerk of the County Council.

Glamorgan County Hall, Cardiff.
January, 1945. 967

HITCHIN URBAN DISTRICT COUNCIL.

TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment to the above position at an annual salary of £350-£400, according to qualifications and experience.

Applicants should be Registered Architects, and should preferably hold the Final Examination of the R.I.B.A. or the T.P.I. Previous municipal experience is not necessary, but will be considered an advantage, and the person appointed will be required to assist in the preparation of plans, specifications and quantities for the Council's Post-War Housing Schemes.

Application, stating age, experience, qualifications, liability for military service, date when available to commence duties, and the addresses of three persons to whom reference may be made, should be addressed to the Clerk of the Council. Applications should be endorsed "Architectural Assistant," and should reach this office not later than 31st January, 1945.

A. PERCY RUSCOE,
Clerk to the Council.

Old Town Hall, Hitchin, Herts. 965

STOKE-ON-TRENT CORPORATION.

APPOINTMENT OF ARCHITECT, POST-WAR HOUSING.

Applications are invited for the above appointment in the City Architectural Department at a salary of £500 per annum, plus cost of living bonus at present £49 8s.

Candidates should be members of the Royal Institute of British Architects, and should have wide experience in the design of dwellings, site planning and layout, and the carrying out of important housing schemes.

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

Applications, stating age, qualifications, experience, and position with regard to military service, together with copies of three recent testimonials, should be received by me not later than Friday, the 2nd February, 1945, and endorsed "Architect, Post-War Housing."

HARRY TAYLOR,
Town Clerk.

Town Hall, Stoke-on-Trent.
5th January, 1945. 969

EAST GLAMORGAN JOINT PLANNING COMMITTEE.

Applications are invited for the following appointments:—

(*a*) PLANNING OFFICER.—Salary £750, rising by annual increments of £25, to a maximum of £800 per annum, plus War Bonus and travelling expenses on the approved scale.

(*b*) GRADE I PLANNING ASSISTANT.—Salary £305, rising by annual increments of £20, to a maximum of £400 per annum, plus War Bonus.

(*c*) TWO GRADE II PLANNING ASSISTANTS.—Salary £255, rising by annual increments of £15, to a maximum of £300 per annum, plus War Bonus.

The qualifications required for the appointments are as follows:—

(*a*) PLANNING OFFICER.—Must be a corporate member of the Institution of Civil Engineers and/or hold the Testamur of the Institution of Municipal and County Engineers, and must have passed the final Town Planning Joint Examination or its equivalent.

(*b*) GRADE I PLANNING ASSISTANT.—Must hold any *one* of the preceding qualifications, or be a corporate member of the R.I.B.A.

(*c*) GRADE II PLANNING ASSISTANT.—Must be a competent Surveyor and Draughtsman, with experience in a Planning Office, and have passed the Intermediate Examination of the Town Planning Institute or hold equivalent qualification.

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

Applications, stating age, qualifications, experience and present position, and liability for military service, accompanied by copies of three recent testimonials, should be sent to the undersigned in sealed envelopes, endorsed "Planning Officer" or "Planning Assistant," as the case may be, and should be received by him not later than the first post on the 31st day of January, 1945.

BERNARD M. MURPHY,
Clerk of the Committee.

Council Offices, Hengoed, Glam.
2nd January, 1945. 955

COUNTY BOROUGH OF BOLTON.

HOUSING DEPARTMENT.

Applications are invited for the appointment of temporary ARCHITECTURAL ASSISTANT, with good prospect of permanency later.

The salary will be £350 per annum, plus war bonus at present £49 11s. per annum.

Candidates should be qualified and have had experience in preparation of plans, specification and quantities in connection with Municipal Housing.

Applications, endorsed "Architectural Assistant," stating age, qualifications and experience, accompanied by three recent testimonials, should be delivered to the undersigned not later than 9 a.m. on Wednesday, 24th January, 1945.

PHILIP S. RENNISON,
Town Clerk.

Town Hall, Bolton.
12th January, 1945. 976

COUNTY OF DORSET.

COUNTY ARCHITECT'S DEPARTMENT.

The Dorset County Council invite applications for the following appointments, all of which will be of a temporary nature during the war, and the position will be reviewed thereafter in the light of circumstances then prevailing :—

(*a*) ARCHITECTURAL ASSISTANT.—Salary £400 per annum, plus travelling and subsistence allowances, in accordance with the County scale. Candidates must be competent to prepare detailed plans and specifications in connection with alterations and extensions to Public Assistance Institutions and should be capable of supervising building work in progress and settling contractors' accounts.

(*b*) ENGINEERING ASSISTANT.—Salary £300 per annum, plus travelling and subsistence allowances, in accordance with the County scale. Candidates must be competent to prepare, under supervision, detailed schemes of central heating and domestic hot water. Some knowledge of electrical installations would be an advantage.

(*c*) ACCOUNTS CLERK.—Salary £350 per annum. Candidates should have had experience either (*a*) as an estimating clerk in a Builder's office, or (*b*) as an assistant in a Quantity Surveyor's office, and should be familiar with current building prices and the checking of Contractors' accounts.

Applications, stating age, qualifications, previous and present engagements and present salary, together with the names and addresses of two persons to whom reference may be made, should be sent to the County Architect, Shire Hall, Dorchester, so as to be received not later than the 29th January, 1945.

C. P. BRUTTON,
Clerk of the County Council.

Shire Hall, Dorchester.
5th January, 1945. 966

FERMANAGH COUNTY COUNCIL.

APPOINTMENT OF PLANNING OFFICER.

Applications are invited from qualified persons for the post of COUNTY PLANNING OFFICER for the preparation of a Planning Scheme for the County of Fermanagh, including the Urban District of Enniskillen, under the provisions of the Planning Acts (Northern Ireland), 1931 and 1944.

The salary fixed for the position is £750 per annum, together with travelling expenses, in accordance with the Civil Service scale.

Applicants for the position must possess the following qualifications :—

He must be a Fellow, Associate or Member of the following :

The Royal Institute of British Architects;
The Royal Institute of the Architects of Ireland;
The Institution of Civil Engineers;
The Institution of the Civil Engineers of Ireland;
The Institution of Municipal and County Engineers; or
The Chartered Surveyors' Institution;

and, in addition, he must be at least an Associate Member of the Town Planning Institute, and have had practical planning experience.

The probable duration of the work will be at least three years, and the person appointed must devote his whole time to the duties of the office.

The post will be terminable by three months' notice, in writing, on either side, and the appointment is subject to the sanction of the Ministry of Health and Local Government.

Selected candidates may be required to attend for interview, when vouched travelling expenses will be paid.

The person appointed will be required to take up duties as soon as possible.

Applications in writing, giving full particulars of age, qualifications and experience, accompanied by copies of three recent testimonials, will be received by the undersigned not later than 4 p.m. on Tuesday, the 6th day of February, 1945.

H. J. D. MOFFITT,
Secretary.

Fermanagh County Council, Courthouse,
Enniskillen.
10th January, 1945. 975

ARCHITECT, permanent, required by the BURGH OF HAMILTON.

Candidates must have been born before 1923, and be Registered Architects, preferably with experience in Town Planning.

Salary £600, plus war bonus.

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

Applicants should write, quoting EA.1184XA, to the Ministry of Labour and National Service, Central Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 27th January, 1945. 974

COUNTY BOROUGH OF WEST HARTLEPOOL.

ARCHITECTURAL ASSISTANT (Temporary) required in the Borough Engineer's Office. Candidates must possess good knowledge of Building Construction, preparation of specifications, estimates, etc., and have had a good general architectural training. Medical examination required. Salary £315 × £15—£360 p.a., plus £49 8s. war bonus.

Applications in writing (no interviews), stating date of birth, full details of qualifications and experience (including a list in chronological order of posts held), and quoting reference No. 232M, should be addressed to the Ministry of Labour and National Service Appointments Office, 38, Great North Road, Newcastle-upon-Tyne, 2. 964

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.

EXPERIENCED LAND SURVEYOR required immediately by Nottingham Architects. State experience and salary required. Box 972.

ARCHITECT'S or BUILDING SURVEYOR'S ASSISTANT, whole or part time, required by Chartered Surveyor, London, N.W.1.—Particulars, with age and salary, to Box 971.

LONDON Architects require Senior Assistant; exempt from military service; with experience of commercial and domestic work; excellent prospects for suitable applicant.—Write, with fullest details, to Box 961.

WANTED, an Architectural Assistant, between 25 and 30 (preferred), with experience in general practice, including schools and housing, with a view to early partnership in a country town; good prospects for a suitable man. Apply Box 970.

ARCHITECTURAL ASSISTANT required for busy South of England office; permanent progressive post for right man, who must be a good draughtsman, have sound knowledge of construction, and have progressive design outlook; salary commensurate with qualifications and experience. Reply, giving full particulars, including salary required, and position reference National Service, to Box 973.

ARCHITECT'S or Surveyor's Assistant, on a temporary basis, for a Midland Brewery Company; all round experience, including licensed work. Write, giving full particulars of age, experience, salary required, and when available, to Box 952.

REQUIRED, immediately, experienced Architectural Assistants; must be first-class draughtsmen and well trained, for important large scale work. Apply, stating age, salary, and experience, Herbert J. Rowse, F.R.I.B.A., Martins Bank Building, Liverpool, 2. 945

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.

STRUCTURAL ENGINEER is prepared to undertake Design Work, etc., in spare time; steelwork or reinforced concrete; Wessex area preferred. Box 418.

JUNIOR, with drawing office experience, requires position in Architect's Office (London or Croydon area); keen and willing; at present attending Architectural classes. Apply Box 432.

ARCHITECT (Czech), 45, diploma Master Class for Architecture in Vienna (Prof. J. Hoffmann, H.C.M., R.I.B.A.), 20 years' extensive experience in all parts of the Continent, over 3 years' practice in private Architect's office in London, seeks to improve position. Box 431.

CHARTERED ARCHITECT, L.R.I.B.A., A.I.A.A., requires post in Central London or N.W., W., suburbs; long and varied experience factories, shops, flats, houses and brewery work. Box 433.

A.R.I.B.A., aged 37, with first-class experience in prefabrication, housing, factory design, etc., is willing to give assistance; either part or full time. Write Box 425.

A.R.I.B.A., Dip. Arch. (discharged H.M. Forces), offers to assist Architects by undertaking spare-time work in own home; tracing, research work, presentation drawings, and post-war schemes; competent draughtsman; town planning experience. Box 426.

EXPERIENCED Architect; willing to undertake parttime work; surveys, schemes, working drawings, details, perspectives, etc. Write E.A.F., 79, Chelverton Road, S.W.15. 427

TOWN PLANNING ASSISTANT (woman), Local Authority and Regional planning experience, studying for T.D.I. final, seeks work on Planning Scheme or Research; London or home counties. Box 428.

SURVEYOR (Land and Building), A.I.A.S., requires position in or near Liverpool; age 24; exempt military service on medical grounds; studying Graduateship Institution of Structural Engineers. Box 429.

ARCHITECTURAL ASSISTANT, student at Liverpool School of Architecture, also engineering qualifications, age 21 years, requires position for few months prior to call up; London preferred. Thomas, 45, St. Matthew Street, Burnley. 430

Planning

As originators of the Auto-Recorder System of Machine Milking, we have had extensive experience of planning layouts to accommodate the new technique. The Ministry of Agriculture's Clean Milk Bill, when passed, will mean a large increase in the number of new or modified farm buildings required. The position will be affected also by the findings of the English and Scottish Commissions on this important subject. The service of our Technical Department is available to any Architect who may be consulted in these matters. Write in confidence to: Gascoignes (Reading), Ltd., Berkeley Avenue, Reading.

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DRAWING INSTRUMENTS FOR SALE.—Full set of drawing instruments; makers Stanley; perfect condition; price £7, including morocco leather case. Box 968.

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WELL-KNOWN SPECIALIST on building materials re-opening consulting practice, closed during war, is now able to undertake a few non-competitive additional research and technical market investigations; well equipped chemical and physical laboratories. Inquiries to Box 410.

J. O. SHEPPARD, late of 21, Bedford Row, W.C.1 (and the Granwood Flooring Co., Ltd.), now at 1, East Road, Chadwell Heath, Essex, and on war work, thanks Architects for past cordiality, and looks forward to meeting them again when his new office opens. 800

Educational Announcements

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

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Alphabetical Index to Advertisers

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