Alphabetical Index to Advertisers

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

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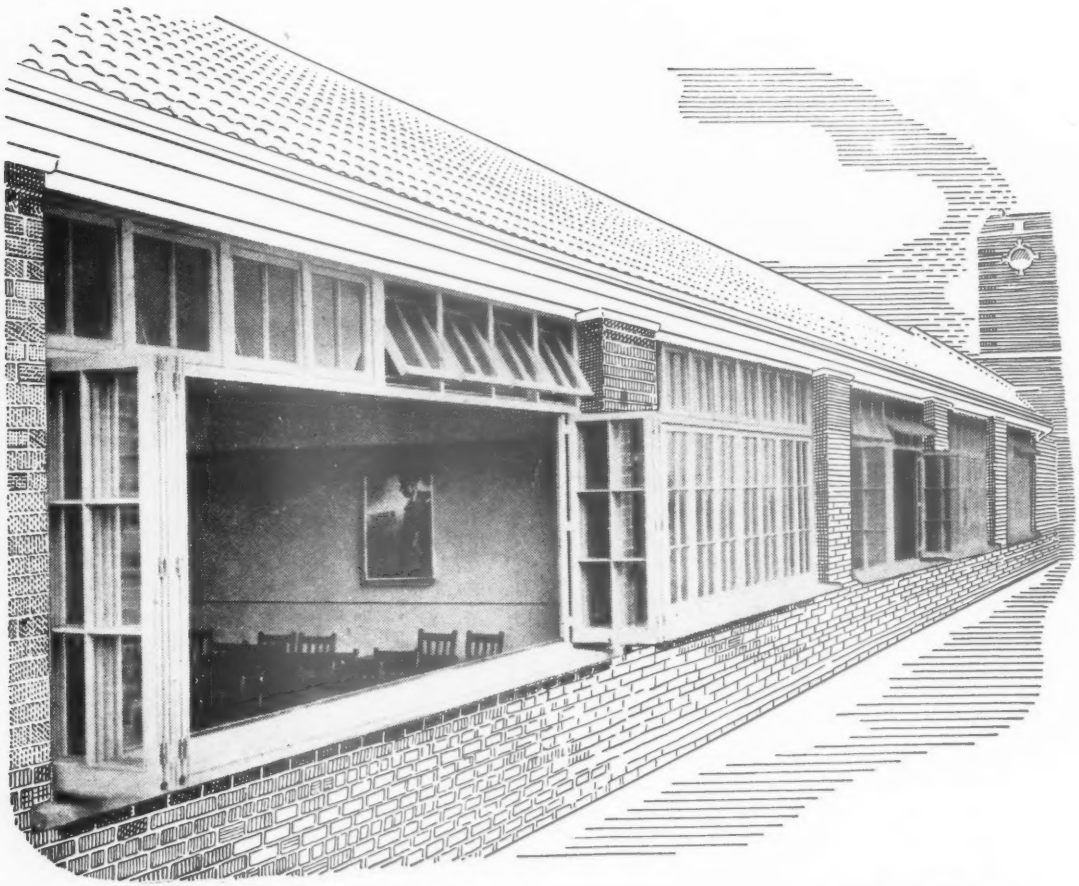

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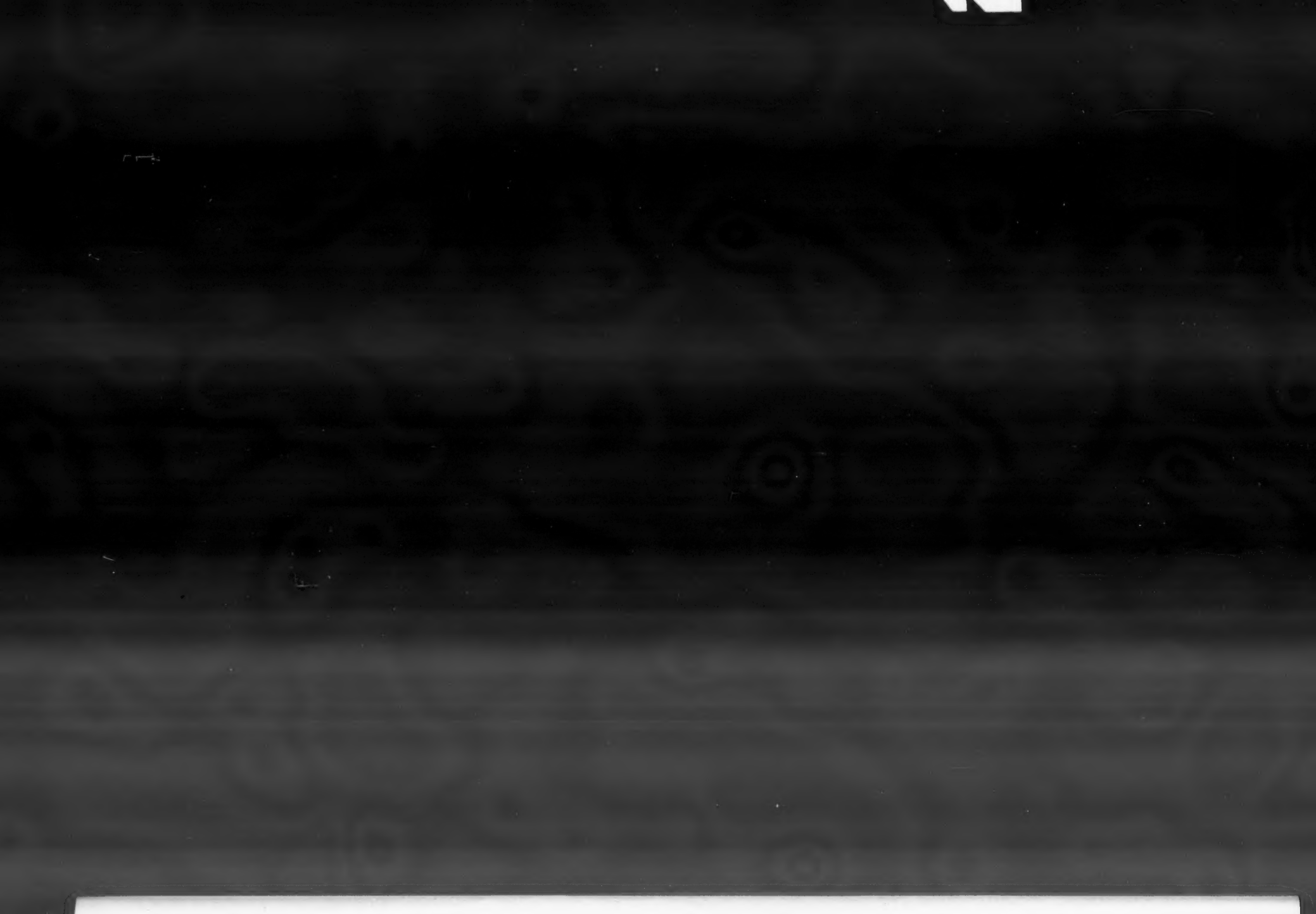

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Big Ben was placed in the Clock Tower in 1858 under the supervision of Mr. F. Dent. The dials are 23 ft. in diameter. The minute hands are of copper, 14 ft. long, and weigh 2 cwt. The hour hands are of gunmetal, 9 ft. long and weigh 6 cwt. The counter weights are almost 2 tons. 292 steps lead up to the top room, and winding is done by electric motor three times a week.

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Of course we can only supply you with ARENS WINDOW CONTROLS *now* if you have something really special in the way of priorities. But as a matter of academic interest we have an expert staff who will be delighted to give you technical details about Handles and Slides, Rack and Pinion Regulators, Screwed Regulators, and other Arens fitments. And an enquiry now *will* save time later.

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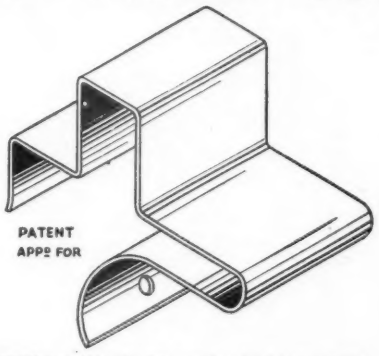

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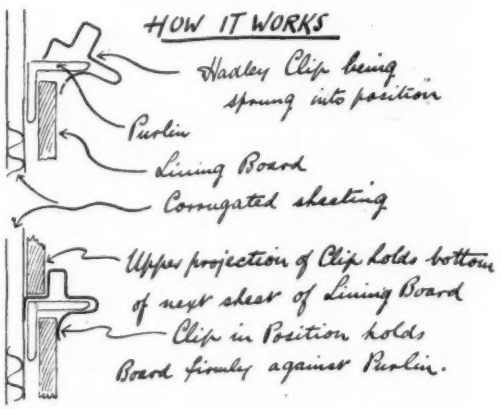

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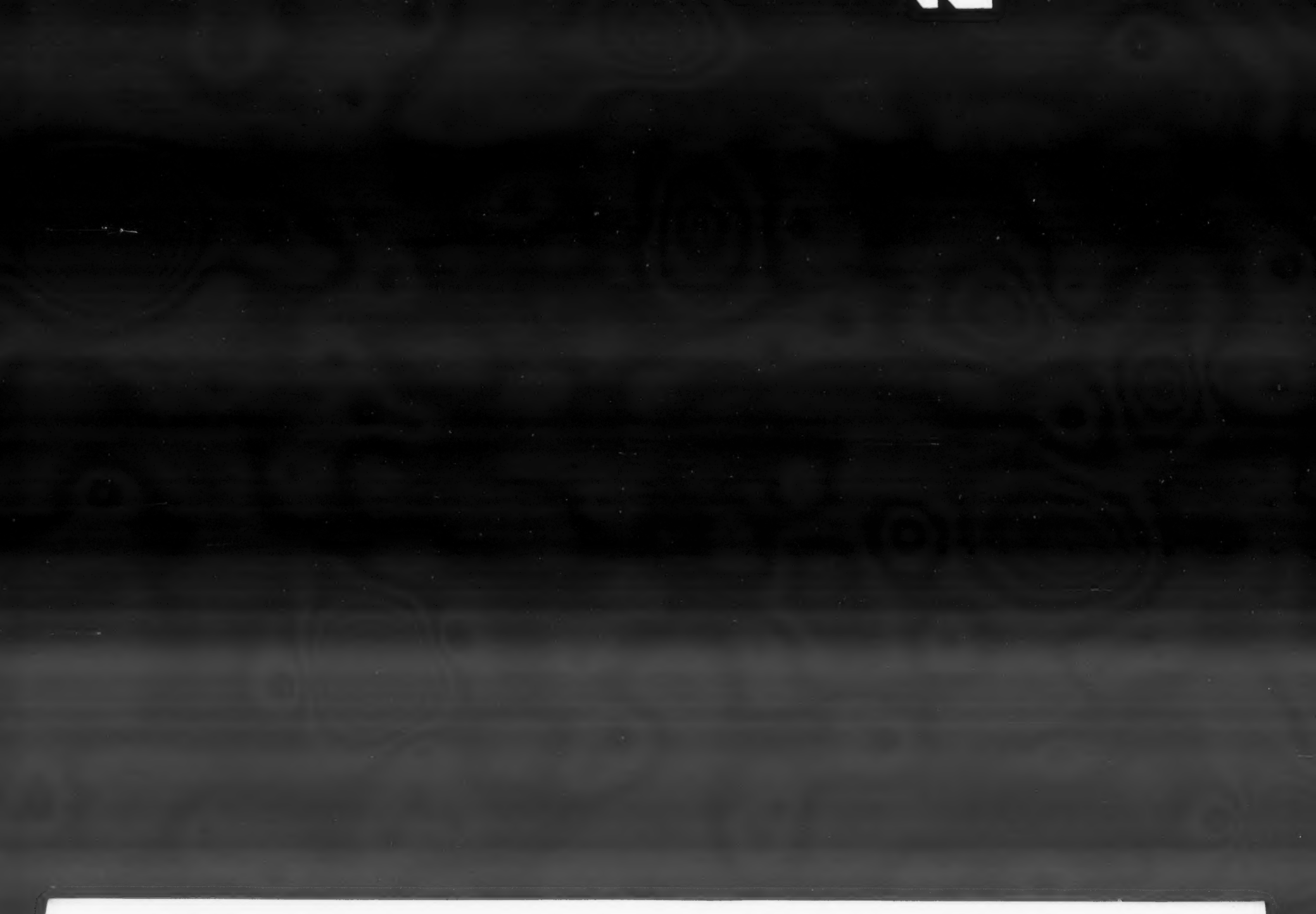

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In the days of post-war construction there will be many uses for pipes, and although we cannot now deviate from the greater task of war production, we are ready to discuss any of your post-war problems which may involve the use of manipulated pipes and standard or special machined fittings.

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CERTIFICATION TRADE MARK

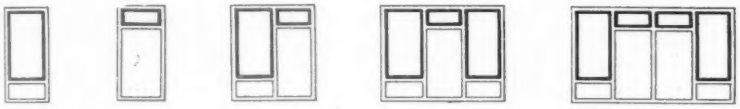
STANDARD WOOD CASEMENTS
are based on
SOUND LIGHTING PRINCIPLES

Sheet Two

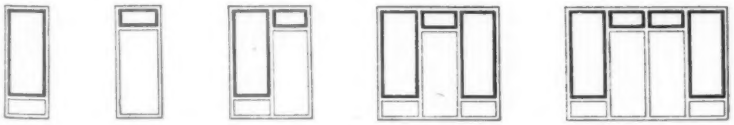
EJMA Standard Wood Casements are produced in ranges of different heights to cover all normal domestic requirements :—

The C.1 range is designed for such rooms as bathrooms, W.C's, and corridors. The higher it is placed in the wall, the deeper is the penetration of light.

The C.2 range is designed for any room where a high cill is required and therefore is ideally suited for use in kitchens.



The C.4 & 5 ranges are designed for rooms of normal domestic size—bedrooms, parlours, living-rooms. These windows are of sufficient height to throw light well into the room while still allowing a low cill-level.



The C.6 range are the windows to use for rooms which are deep in plan. The extra height of the window will allow valuable light to enter deeply into the room while keeping the cill pleasantly low.

The examples shown are representative of the EJMA ranges of Standard Wood Casements. For further particulars, apply to:—

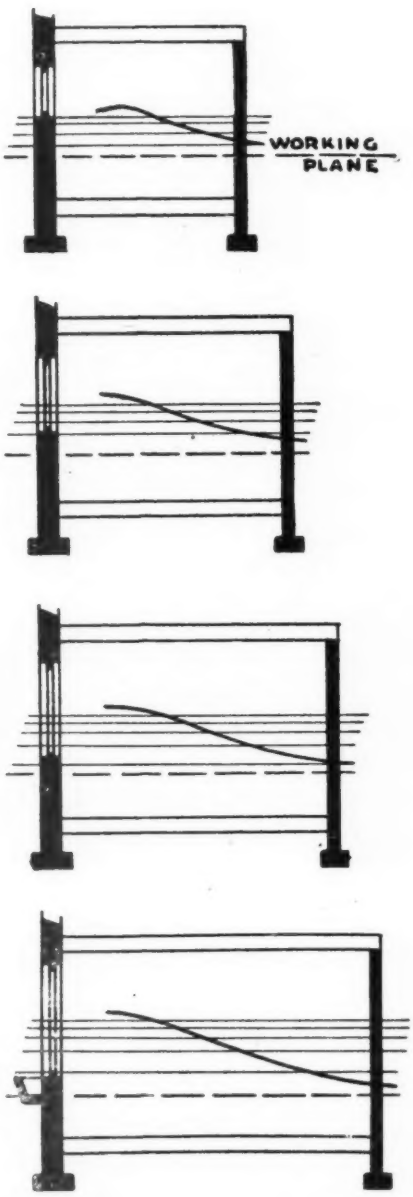


Fig. 4.—Four curves, which show the different penetration characteristics of each EJMA range, taken on the basis of a 6′ 0″ wide window.

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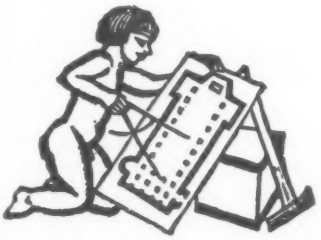
In common with every other periodical this JOURNAL *is rationed to a small part of its peace-time needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents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



DIARY FOR MARCH APRIL AND MAY

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

BBC HOME SERVICE. Wireless Discussion. *Homes for All.* Chairman, G. O. Slade, K.C. Second discussion. 7.40 p.m. March 24. Third discussion. 7 p.m. March 26. Fourth discussion. 7.40 p.m. March 27. Fifth discussion. 9.25 p.m. March 28. Sixth discussion. 7.40 p.m. March 31. Seventh discussion. 7 p.m. April 2. Eighth and last discussion. 7.40 p.m. April 3.

BILLINGHURST. *Living in the Country Exhibition.* (Sponsor, H.C.) MAR 23-APRIL 8

BIRMINGHAM. *Homes They Come From Exhibition.* (Sponsor, HC.) MAR. 27-APRIL 28

Your Inheritance Exhibition. At YWCA (Sponsor, HC.) MAR. 23-28

BRISTOL. W. T. Creswell, K.C. *The Powers and Obligations of the Quantity Surveyor.* At the Grand Hotel, Broad Street, Bristol. (Meeting also open to members of Allied Professions). Admission by ticket only on application to the Chairman, V. Mace, 13, Hengrove Road, Knowle, Bristol, 4; the Hon. Secretary, A. Weeks, 13, Glebe Road, Bristol, 5; or any member of the Committee. (Sponsor, Institute of Quantity Surveyors.) 3 p.m. APRIL 1

DAGENHAM. *Homes to Live In Exhibition.* At South-East Essex Technical College. (Sponsor, BIAE.) MAR. 23-25

DERBY. *Homes to Live In Exhibition.* At the School Museum. (Sponsor, BIAE) MAR. 23-APRIL

DIDCOT. *Twenty Women at Home Exhibition.* (Sponsor, HC.) MAR. 25-APRIL 1

IMPINGTON. *Design in the Home Exhibition.* At the Village College. (Sponsor, CEMA.) MAR. 24-APRIL 13

LONDON. *ABT Annual General Meeting.* At Denison House, Vauxhall Bridge Road, S.W.1. The agenda includes the President's address, auditor's report, proposed amendments to Rules 30, 37, 38 and 39, discussion on the Charter, and election of officers and members of the G.C. 2 p.m. to 5 p.m. MAR. 25

R. S. F. Simson. *The Work of the Haywards Heath Housing Society.* At 13, Suffolk Street, S.W.1. (Sponsor, HC.) 1.15 p.m. MAR. 28

Professor C. H. Reilly. *Planning London.* At AIA, 84 Charlotte Street, W.1. 7.30 p.m. MAR. 29

Prefabrication. At an informal meeting at the RIBA on April 4, at 5.30 p.m. G. A. Jellicoe will open a discussion on *Prefabrication.* He will be followed by Richard Sheppard and A. Pott, of the Building Research Station. The meeting will then be open for general discussion. APRIL 4

Reconditioning England Exhibition. At St. Martin's School of Art, 109, Charing Cross Road, W.C.2., by fourteen societies interested in the preservation of beautiful and historical buildings. The exhibition is intended to show how many of these buildings have been reconditioned so that their external appearance is not spoilt but their internal arrangements altered to suit some form of modern use. Lectures are to be given in the afternoons. APRIL 8-22

Dr. L. Reeve. *Factors Controlling the Weldability of Steel.* At Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, Institute of Welding.) 6 p.m. APRIL 12

AA Nomination of Officers and Council for Session 1944-5. At ordinary general meeting at 34-36, Bedford Square, W.C.1. 6 p.m. APRIL 18

Professor Sargant Florence. *Planning and Industry.* At Essex Hall, Essex Street, W.C.2. (Sponsor, TPI.) 6 p.m. APRIL 20

LOWESTOFT. *Twenty Women at Home Exhibition.* (Sponsor, HC.) MAR. 28-APRIL 1

MIDDLESBROUGH. *Rebuilding Britain Exhibition.* At the Public Library. (Sponsor, BIAE.) MAR. 23-31

MOLD, FLINTSHIRE. *Twenty Women at Home Exhibition.* (Sponsor, HC.) MAR. 23-APRIL 18

PLYMOUTH. *The Present Discovers the Past Exhibition.* At the Museum and Art Gallery. (Sponsor, BIAE.) MAR. 24-APRIL 11

Living in the Country Exhibition. (Sponsor, HC.) MAR. 23-APRIL 16

RISCA, MONMOUTH. *Octavia Hill Exhibition.* (Sponsor, HC.) MAR. 23-31

SOUTHEND. *Rebuilding Britain Exhibition.* At the Municipal College. (Sponsor, BIAE.) MAR 23-APRIL 5

THETFORD. *Twenty Women at Home Exhibition.* (Sponsor, HC.) MAR. 23-31

NEWS

THURSDAY, MARCH 23, 1944
No. 2565. VOL. 99

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.

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. They account for £84 of the cost of a house as against £58 pre-war—a difference of £26. It represents 50 per cent. of the materials of a house.

Dr. H. Levinstein says remove the TAX ON PLASTICS.

Dr. Levinstein, a leading scientist and industrialist in the chemical industry, speaking in London, said it is unfortunate that motor spirit taxation accidentally puts a tax of £10 a ton on the benzene used for making plastics, dyestuffs, pharmaceuticals and turpentine used for making synthetic camphor. If this tax can be removed, a considerable fillip will be given to a vital industry. Earlier in his speech Dr. Levinstein said: All the raw materials necessary for the new and rapidly expanding plastics industry can be found in Great Britain's coal supplies. Coal is a secret storehouse of chemical raw materials. For a long time ahead our main source of heat and power will be derived from it. Fortunately plastics do not require raw coal or coke, but only its liquid and gaseous products, with the one exception that coke is used for making carbide, a valuable raw material for plastics. Because of the increased cost of coal, it is unlikely that carbide will be an attractive substance to make in this country after the war.

from AN ARCHITECTS' *Commonplace Book*

ST. PETERSBURG COLOUR. [*From* Valse Des Fleurs : A Day in St. Petersburg and a Ball at the Winter Palace in 1868, *by Sacheverell Sitwell* (Faber & Faber)]. A picture of this beautiful city rises up, once more, before our eyes. We see the orange-painted Roumianzov palace on the Granite Quay, with its tremendous colonnade, a coloured architecture so different from the grey Palladian of England. The Ministry of Justice, painted blue, another classical building of which the effect would be most striking, whether in the golden summer, or in the powdery blue snow. Yellow is the colour of the Pavlovski Barracks. . . . There are many of the painted façades in St. Petersburg ; but from the contemporary evidence the Manège of the Gardes à cheval was most admired of all. It was painted green, having a portico of eight Doric columns of white granite. . . . These painted façades, coloured like the coats of soldiers, may have been the invention of Rastrelli in the reign of the Empress Elizabeth, but they continued till the time of Nicholas I. It was a Russian custom, first applied by Rastrelli to buildings in the Italian manner.

Miss Alexandrina Peckover has presented BANK HOUSE, WISBECH to NT with about 46 acres of land.
Bank House was built in 1722. It stands detached, with its large gardens and grounds to the rear, in the street along the north side of the River Nene known as North Brink. The front elevation seen from the Brink is plain brown brick, with red rubber-brick cornice and facings and regularly spaced sash windows. On the garden side balustraded steps run down to the lawn, and above the steps rise a door and two tiers of Palladian windows in stone. The interior and practically all the panelling and interior fittings down to the furniture of the doors and the steelwork of the grates dates from the first half of the eighteenth century. The carving, particularly in the drawing-room, and the plaster and woodwork of the stairwell were, according to tradition, executed by French artists who came to Norfolk to decorate Houghton Hall for Sir Robert Walpole.

★

MR. P. M. POWELL, L.R.I.B.A., of Sanderstead, Surrey, has WON THE HOUSING COMPETITION organised by The Northamptonshire Federation of Women's Institutes.
The other awards by Mr. Darcy Braddell, the assessor, were: second place, Messrs. T. H. Tufft, L.R.I.B.A. and G. M. Boon, A.R.I.B.A. of Stafford : third, Messrs T. F. Winterburn, A.R.I.B.A. and T. L. Viney, A.R.I.B.A. of Epsom, Surrey. The competition was for the best design for a pair of family cottages for rural workers. The winning designs will be illustrated in our next issue.

★

Mr. Frank C. Mears, R.S.A., F.R.S.E., F.R.I.B.A., has been ELECTED PRESIDENT OF THE ROYAL SCOTTISH ACADEMY in succession to Sir George Pirie, LL.D.
Mr. Mears was born at Tynemouth in 1880, educated at George Watson's School, and articled to the architect Hippolyte Blanc, attending classes in the Edinburgh School of Art. An associate of the late Sir Patrick Geddes, he worked with him on the University and National Library at Jerusalem and on the Scottish Zoological Park, Edinburgh. The designs for the Sanderson Memorial Homes at Galashiels, the restoration of Huntly House, Edinburgh, the Livingstone Memorial at Blantyre, bridges on the Fort William-Inverness Road, and the George VI Bridge at Aberdeen, are also his work. Town planning schemes by him have been adopted by Greenock and Stirling, and he has worked on post-war planning schemes for Midlothian, East Lothian, Fife and Aberdeenshire. In December last he was appointed consultant architect to the central and south-east Scotland Regional Planning Committee. He is a member of the Committee on Scottish Coalfields, which is concerned, among other things, with the development of the fields during and after the war. He was elected an Academician of the Royal Scottish Academy in February of last year.

After the war has come to an end COMMUNITY CENTRES AS WAR MEMORIALS may be built in Surrey.
Surrey County Council has already made plans for community centres, catering for old and young, for any town in the county if the local authorities ask for them and show that they are needed. One will be built at Morden. Wimbledon Guild of Social Welfare is asking for another in South Wimbledon, and the town council may support the application. Games rooms for young people and old of all ages, dancing, hobbies, classes, and night clubs on café lines, with snacks and music, are all likely to be included in the plans.

Mr. James M. Aitken, A.R.I.B.A., A.M.T.P.I., has been APPOINTED DEPUTY CHIEF ARCHITECT of the Northern Ireland Ministry of Home Affairs.
Until 1937 Mr. Aitken was in the City Architect's office, Edinburgh, from then till now on the staff of the Office of Public Works, Dublin. It is understood that Mr. Aitken's new duties will be largely concerned with Regional planning development, for which the Department of Home Affairs is mainly responsible.

To equip each of the mobile wireless stations for the R.A.F. one and three-quarter hundredweight of PAPER IS NEEDED.
These travelling units, which can be brought into action in the early stages of a campaign, provide high-speed wireless-telegraphy communication, and can also be used in conjunction with radiolocation stations. Waste paper also plays its part in the manufacture of these mobile stations. For sound and thermal insulation, the walls are lined with building board containing a substantial percentage of waste paper.

★

Speaking on reconstruction Lord Latham, Chairman of the LCC, said that during the past three years NINE MINISTERS HAVE PRODUCED NOTHING.
Lord Latham, who was speaking at the Woolwich Rotary Club, said : A prominent member of the War Cabinet some time ago told his departmental officials not to waver. Yet the Government has been wavering over the question of reconstruction for nearly three years. No fewer than nine Ministers have been concerned at one time or another, and the sum total of their collective efforts, so far as positive planning goes, is—nothing. Promises and declarations by Ministers are about the only thing of importance which in these days are not rationed. Here we are, in the middle of March, with no White Paper, as promised by Lord Woolton ; but, on the contrary, most disturbing reports are current that certain progressive proposals for the speedy acquisition of land on equitable terms have again been jettisoned. If this be so then we are entitled to know who the people are who are being permitted to put their private interests above the need of the nation and thus block the way, not only to proper planning, but also to the provision of decent homes for our men, women and children.

★

On the recommendation of the RIBA Competitions Committee the following amendments to the Regulations for the Promotion and Conduct of ARCHITECTURAL COMPETITIONS have been approved by the Council.
Regulation (A) to read : The nomination for every competition of an assessor or assessors who shall be architects of acknowledged standing and whose names shall be submitted to the President of the RIBA for approval and to whom the whole of the designs shall be submitted. To the paragraph reading: The President of the RIBA is always prepared to act as honorary advisor to promoters in their appointment of assessors, add the words . . . and it is customary for promoters to avail themselves

Brazilian Folly

This photograph typifies the complementary contrast of ancient and modern to be found in the architecture of Brazil, to which the March issue of *The Architectural Review* is specially devoted. As the *Review* states, " Le Corbusier's visit to Brazil as consultant marked a turning-point in the history of modern Brazilian architecture. . . . But the most striking thing about the new buildings is that they are already Brazilian—as Brazilian as Swedish buildings are Swedish. So Brazilian are they that they do not seem to conflict with the earlier architecture. On the contrary, one type seems to enhance the other." Strongly affecting the character of the new Brazilian architecture is the development of two main types of sun-baffle. One type is the *quebra-sol* or *brise-soleil*—an example can be seen in the ABI building illustrated in the JOURNAL for December 16, 1943—and the other the pierced concrete screen or *cambogé*, used in the water-tower at Olinda, above. This building is entirely of concrete—a material chosen almost exclusively for contemporary building in Brazil where the climate is suitably temperate and frost is absent. It is something of a modern Folly, thus maintaining an old tradition of water towers, for it appears to have been designed only partly for practical use, little of its space being actually needed for water storage. The water tower stands on reinforced concrete stilts and the ground floor is used as an *al fresco* dance floor.

of his advice. The following amendments to the Directions for Assessors were also approved : Additional paragraph to Clause 6 : It is suggested that an assessor, when drawing up his award, might bear in mind the desirability of commending designs of merit which are not premiated. Such commendation would be an encouragement to a competitor and would show him that he was working on the right lines. As in the case of the premiated designs, however, care should be taken not to commend any design which in any way contravenes the conditions as amplified by the answers to questions. Additional paragraph to Clause 14 : It is highly desirable that the assessor should have an interview with the successful competitor and give him the benefit of his advice.

Proposals for STATE ASSISTANCE FOR PRIVATE WOODLANDS are put forward by the Forestry Commissioners.

The proposals, published in a report issued by the Commissioners, are put forward after meetings with representatives of the Central Landowners' Association, the Scottish Land and Property Federation, the Land Union, the Royal Scottish Forestry Society, and the Royal English Forestry Society. It is proposed that all woodlands judged to be suitable and necessary for timber production should either be dedicated to that purpose by the owner or acquired by the State. Dedication would run with the land and would be unaffected by changes of ownership. The act of dedication would include undertakings by the owner to use the land in such a way that timber production is the main object, and to work to a plan approved by the forest authority. The agreed proposals for State assistance for dedicated woods—to be alternative, at the owner's option, to those of the original report—are as follows : (1) A planting grant of £7 10s. an acre for every acre planted or replanted, whether hardwoods or softwoods. (2) Loans (in addition to (1)) up to an amount to be fixed with reference to individual circumstances, the rate of interest to be that at which the forest authority is financed plus a small operating charge. (3) A maintenance grant for 15 years of 2s. 6d. an acre yearly on every

acre planted and properly maintained. (4) A maintenance grant for 15 years of 2s. 6d. an acre yearly from the date of dedication on all productive woodlands other than new plantations (which are already covered by (3) above). (5) Grants to be revised after five years on the basis of ascertained costs. It is also recommended that assistance should be offered for the planting of small woods which, although not suitable for dedication, will specifically be available for timber supply purposes, in the form of a planting grant of £7 10s. an acre.

★

From early summer onwards labour and plant are being released from airfield construction TO PREPARE SITES FOR 200,000 TO 300,000 HOUSES.
This was revealed by Mr. Willink, the Minister of Health, in the House of Commons. He said: "My main task in housing is to see that a home is available as quickly as possible after the war for every family that needs one. The number of men in the building industry to-day is approximately 40 per cent. only of the number employed on the outbreak of war. I hope, and it can only be a hope, that during this year we shall really break the back of the outstanding repair of war damage. Labour and plant on airfield programmes are now being released for the preparation of housing sites, roads, and ancillary services. I think it might be said that 3,000,000 to 4,000,000 houses is an informed estimate of the number which will be needed over a period of 10 to 12 years.

★

LMBA has told its members NOT TO TENDER for contracts over £1,500 without quantities.
Following its strong representation to the Government some months ago that builders should not be asked to tender for contracts over £1,500 without quantities, the Council of LMBA has, by resolution, amended its regulation on the provision of quantities for tendering to read as follows: Members shall undertake not to tender in competition for works exceeding £1,500 in total value without quantities being supplied. This undertaking shall not apply to contracts for repairs, painting and decorating. The resolution is in accordance with a recent decision of NFBTE and its strict observance is obligatory upon all members. Government Departments, all local authorities in the London area and the RIBA have been notified.

At the request of the War Office, Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I., tutor in the Bartlett School of Architecture, London University, has placed his CORRESPONDENCE COURSES of tuition for the examinations of the RIBA (Intermediate and Final) at the disposal of members of the Forces.
Applicants wishing to qualify, or those who wish to read subjects culturally, should apply to their Commanding Officer (or Unit Education Officer) for the necessary enrolment forms, or to the Assistant Principal, A.E.3, The War Office, 44, Eaton Square, London, S.W.1 The fee is ten shillings and text-books are free.

PLANNING AFTER HOURS

HOW the individual passes his free time is his own choice, whether he sits and thinks or just sits, whether he plays a piano or acts as ARP warden, whether he chases a golf ball—or merely sketches out a plan for a new town during a rainy week-end. What more suitable pastime for an architect could there be, one would think, than this—a view held, it seems, by Messrs. Lindy and Lewis who have prepared a scheme for the City of London.*

It is right and proper in a democracy that any individual should be permitted to contribute and publicise his ideas on any subject. Therefore all schemes such as are offered in this City plan, whether good or bad, should be welcomed, either for their positive use or for their purely negative value in acting as targets for the slings and arrows of constructive criticism.

What, then, has the Lindy-Lewis plan to teach us? Here is a planning doodle presented in an elaborate form, exhibited as though it were a serious and finished proposal and publicised widely in the daily press. Its authors cannot therefore shelter behind the protest, as they have attempted to do, that it is merely an amateur spare time effort; they must expect to be judged by the severe standards that the magnitude of the problem of replanning the venerable City of London imposes on professional full-time planners.

Obviously city plans, like revolutions, cannot be made in spare evenings. Nor can they be made by individuals, however able or inspired, working in isolation. This plan, we believe, is therefore valuable in providing a warning example of exactly how such a job should *not* be tackled.

It is interesting to see how this particular site attracts one independent civic designer after another, how it lures him into the minefield of vested interest, monetary or sentimental, how cunningly the booby traps are set—the historic relics, which if touched will blow up the planner and his plan, and if left alone will make a mockery of his scheme. Whichever way he turns he will be caught in a tangle of visual planning problems. Usually the adventurer cuts his way out by slashing Haussmanite avenues from east to west across the site and lines these with revivalist buildings of a Blomfield-Lutyens, Shell-Mex, Glasgow Exhibition or Radio City brand. The more desperate level the whole place and restock it with the better-known *clichés* of the great Franco-Swiss. Whichever alternative is chosen the result will be absurd.

The plan for a new city, even where its function is so clearly defined as in the Central Square Mile, demands an immense amount of co-ordinated planning work and a design effort of the highest cultural order—an effort that goes beyond the powers of any single individual however talented, and one that can only be accomplished after apprenticeship on the hundred prosaic jobs of general urban reconstruction.

*See pages 227-229 of this issue.

Considering this, and with free time at a premium, especially among architects, how can the enthusiasm and talents of those who plan after hours be most usefully employed? Those who wish to make their cities better places to live in should now be helping with the necessary groundwork of surveys by joining collective planning groups whose work is based on essential and thorough research. Those whose motive is the artist's *sacro egoismo* of self expression should surely not attempt to present a city plan as anything more than an individual sketch fantasy. There is no short cut to city planning. In that sphere there are now no giddy heights of fame to be climbed by the ambitious, for the days when a Wren could flourish have long since passed away.

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

NOTES & TOPICS

GRIG IN RETIREMENT

To many of us Mr. Spinlove (Architect), Mr. Grigblay (Builder), Mr. Bloggs (Foreman), and their colleagues are figures as familiar and beloved as the characters of *Happy Families*. They are certainly more lively and entertaining than many of their prototypes in real life. In *Grig in Retirement** Mr. Creswell presents us with another instalment of their activities—this time through the medium of Mr. Grigblay's journal. (Mr. Grigblay, in case you have not met him before, is a country builder in a fair way of business, "conservative in politics," as he explains, "but all for improvements for the benefit of the mass of the people," a man of integrity and humour, obstinate and a bit of a snob at times perhaps, impatient of sharp practice and jerry-building methods—just the sort of contractor every architect dreams of working with.)

* By H. B. Creswell. (Faber & Faber. 9s. 6d.)

Grig's journal, moving at the easy pace of a bricklayer not working on P.B.R. rates, is packed tight with a pleasant mixture of information and amusement. It is written, incidentally, with considerably more skill and technique than he employs in writing his business letters. But Grig is a shrewd old man, and he has probably found that a little honest clumsiness with the pen goes down well with his clients. He cultivates illiteracy in fact as some architects cultivate artistic vagueness.

★

Although officially "in retirement," Grig is still fully occupied, master of every situation, whether it be a collapsing gas-holder, an obstreperous council, or an ill-mannered quantity surveyor, and he is still very much at his old game of giving architects the benefit of his rich and varied experience.

★

Mr. Spinlove, you will be glad to hear, is doing very nicely with his old-fashioned domestic practice of the flower-pantry-gun-room-two-staircase type, and we meet some more of his professional colleagues, Messrs. Goosehanger & Troll (a much married young pair straight from an architectural school and struggling with what appears to be a highly-dentately designed church in Croydon), and Mr. Denis O'Braughan, A.R.I.B.A., who, despite a Cambridge degree, speaks and writes with a brogue which some people may find fetching—indeed it fetches him a bride who, like Baron Corvo, is allergic to toads—but is excessively tiresome to read.

★

Councillor Gallington is a worthy successor to the old enemies, Messrs. Nibnone & Rasper, who have disappeared (as we knew they would) into bankruptcy, and the civil engineering profession is represented by the fumbling and unimpressive Mr. Quirke, M.I.C.E. These personalities are more real than their background which, dated perhaps in the early thirties, to-day seems nostalgically remote. No whisper of international events, of slumps and civil wars, disturbs the serenity of Grig's diary. Perhaps in the next edition—and there surely *must* be one for we leave Grig as he is about to embark upon building his own quarters (O'Braughan, architect)—we shall find him dealing with more contemporary problems than that of weathered labels or double-pegging oak work—war time problems even. It would be nice to see how Grig copes with sectional huts and the Essential Works Order. Nice, and, I suspect, very instructive.

HOAX AND COX

In the good old days of undergraduate rags and practical jokes, the principal character usually passed himself off to his victims as a Foreign Potentate. A mysterious origin, a lordly manner and an impression (if no more) of unlimited wealth was an unfailingly successful recipe for hoaxing the gullible.

★

The spell, apparently, still works—if in slightly less exotic form. Potentates to-day have become civil servants. Glasgow business men, for instance, have recently been hoaxed by a "Mr. Cox," who, passing himself off as a representative of the Ministry of Reconstruction ("mysterious origin"), rented a smart suite of offices ("lordly manner") and after promising reconstruction contracts ("unlimited wealth") decamped suddenly with the money he had succeeded in borrowing, and left no trace except his half-decorated office suite.

★

While sympathising with the victims, I find it hard to understand how easily they fell, for "Mr. Cox," in ordering the reconditioning of his offices, stated that there was to be no red tape, the work was to have first priority, and expense

was no object—remarks which are not in character with the role of civil servant—at least as most of us know him. Take it easy, Mr. Cox, and don't over-act next time.

POET'S CORNER

BALLAD OF THE BY-PASS

The jerry-builder lay dreaming,
In his golden four-post bed ;
He dreamt of an endless ribbon
Of bungalows pink and red,
With fancy work on the gables
To every purchaser's choice ;
And he dreamt in the back of his conscience
He heard old England's voice :

" Don't build on the By-Pass, Brother,
Give ear to our last appeal !
Don't advertise where it tries the eyes
And distracts the man at the wheel.
You've peppered the landscape, Brother,
And blotted out half the sky ;
Get further back with your loathsome shack,
Let the By-Pass pass you by ! "

The jerry-builder made answer :
" I'm English, I wants me rights.
Wot are the by-pass fields to me
But Desirable Building Sites ?
I've peppered the landscape proper,
But me pocket 'as to be filled ;
If I wants to build on the By-Pass,
I'm bloody well going to build ! "

" Don't build on the By-Pass, Brother,
It won't suit anyone's book ;
An endless street is nobody's treat,
With roofs wherever you look.
Before you smother the country
We only hope you'll die :
You ought to be hung with the ribbons
you've strung . . .
Let the By-Pass pass you by ! "

They swung out a big new By-Pass,
When the first was a choke-full street ;
The glorious day isn't far away
When London and Liverpool meet ;
And nothing remains of England
Where the country used to be
But roads run straight through a housing estate
And a single specimen tree.

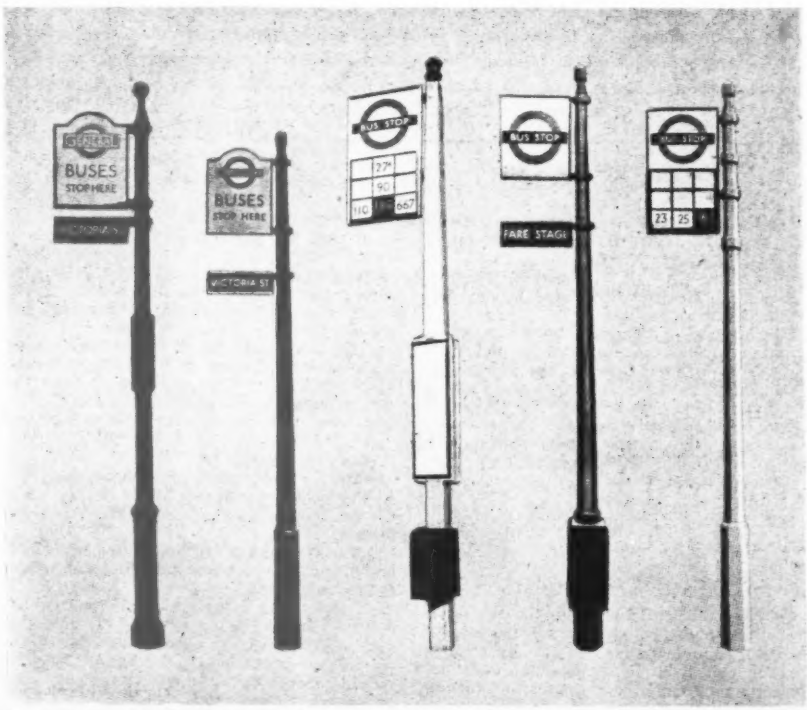
" Don't build on the By-Pass, Brother,
Allow us a breath of air ;
We like to see an occasional tree,
More so as they're getting rare ;
You're poisoning all the country
Like a dirty bluebottle-fly ;
Don't clutter the tracks with your loathsome
shacks,
Let the By-Pass pass you by ! "

Peggy Pollard.

BUS-STOP SIGNS

An erudite article in the January *Transport World* chronicled progress in the design of a not inconspicuous form of street-furniture—bus-stop signs for London Transport and its predecessor the LGOC. Though changed through the years to meet changing needs, the signs are all good and one wonders why the provinces have been so slow to emulate them. In most towns outside London, stops signs are varied and bad in design ; indeed, the only feature common to them all is their lack of distinction. They order these matters better in the realm where Frank Pick was king.

ASTRAGAL



London's Stopping-Posts through the years. Left to right : 1916, *approved standard ;* 1933, *reinforced concrete ;* 1936, *terrazzo ;* 1936, *reinforced concrete ; war-time type (from* Transport World). *See Astragal's note.*

LETTERS

Maurice W. Jones, L.R.I.B.A.
(*Surveyor to the Dean and Chapter, Worcester Cathedral*)

J. S. Allen, B.Arch., A.R.I.B.A.
(*Head of the Leeds School of Architecture*)

E. Bower Norris, F.R.I.B.A.

Rural Houses

SIR,—I ask a little more of your valuable space to reply to some of the comments made in letters of reply to mine about Mr. Lowe's plans for rural workers' cottages.

When I mentioned farm workers I meant the real aristocrats of the countryside—the waggoner, cowman, shepherd, ploughman (turned tractor man) and the general farm hand ; not a market gardener or small holder.

Mr. Lowe : I did not occupy a cottage to the exclusion of the farm worker. He was present when I was born.

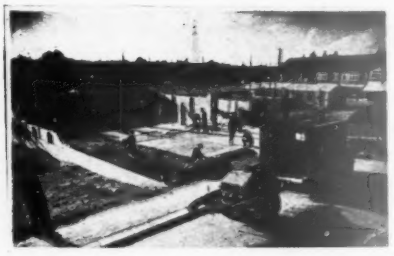
Mrs. Lowe : I have four children and there have been two under four years old. Why seek to change the habits of perfectly wholesome, decent people by prescribing " shining coloured sanitary ware ? "

L.M.H. : To you I owe a debt of gratitude. You have said so well and with such authority that which I tried to imply, so inadequately, in my former letter.

For goodness sake let us stop trying to plan the lives of the countryman and woman and plan homes for them instead. They are *not* genteel.

It has been my privilege to speak to hundreds of country women about housing, for I am constantly lecturing to Women's Institutes. Not once has the *Consistent Dirt* of Mr. Lowe's farm worker been mentioned by my audiences. Sweet muck, the sweat of honest toil done out of doors, hops a-cooking and new mown hay are spices rich for those who understand. (Dang these new-fangled ideas of evil smelling silage and artificials that reek of manufacture.)

FIREMEN BUILD THEIR OWN STATIONS



Since the nationalization of the fire-fighting services, the design and erection of almost all new building work, as well as maintenance building work, connected with the National Fire Service has been carried out by men within the Service—skilled craftsmen, building labourers, architects and surveyors. The men volunteer for the job receiving extra pay, and though they remain attached to the different units as operational firemen, they spend most of the day at building work. Altogether 1,300 *skilled men have been employed in the five building areas. Materials are transported in the Fire Service's own vehicles, though plant is hired as required. Master craftsmen, by arrangement with the Unions, sooner or later acquire a rank in the Service. Above and left, members of the NFS are seen building their own fire station in a London suburb.*

One of my friends changes his linen on a Saturday night. He takes his shirt off on the following Saturday night—not before. Watch those country clothes lines for pyjamas.

Last week I spoke to 30 women in an isolated country district and took a vote on the up or down bathroom controversy. Despite the fact that I emphasised all the advantages claimed by your correspondents, everyone voted for the bathroom (with running water) UPSTAIRS.

Worcester. MAURICE W. JONES

The Aaron Memorial Fund

Sir,—Many thanks for your note on the Arthur Louis Aaron V.C. Memorial Fund.* A list of subscriptions has now been published and the Fund to date is £2,151 7s. 4d. This is in addition to Mr. Charles Brotherton's gift of one complete scholarship.

The list includes contributions from private donors and £52 10s. from the West Yorkshire Society of Architects. The parents of old students of the Leeds School of Architecture and practising members of the profession have already proved most generous.

The purpose of the Fund is to provide an architectural scholarship in memory of Flight-Sergt. Aaron, the 21-year-old Leeds pilot who was posthumously awarded the V.C. last November for gallantry and devotion to duty during a raid on Turin.

The scholarship, which will cover a five-year course at the Leeds School of Architecture, where Flight-Sergt. Aaron was studying until he joined the RAF, will be open to boys from his old school, Roundhay, and other Leeds secondary schools.

The appeal is organized by a committee composed of representatives of the Boards of Governors of the Leeds College of Art and Roundhay School, with the co-operation of the Education Committee and the Press.

Donations should be sent and cheques made payable to the Arthur Louis Aaron V.C. Memorial Fund, The Westminster Bank Ltd., Park Row, Leeds, 1.

Leeds J. S. ALLEN

* A.J., February 24, p. 145.

Prefabrication

Sir,—From recent reports in the Press, we are given to understand that deputations of Swedish manufacturers are at present in London endeavouring to negotiate contracts for supplying ready made houses for erection in this country after the war.

Reference has also been made to the fact that in order to bring their limited production as near as possible to the Nation's requirements, orders should be placed now so that the industry can be organized.

Considerable space has also been given in your own and other professional journals to interest the country in Swedish methods of construction and planning; a most interesting and instructive feature to all architects, as the study of all foreign developments must be, if we are to keep abreast the times.

In the larger field, the future of the building trade and our position as architects, is not the employment of our men returning from the forces requiring the greatest attention?

A recent query by our M.P. to the Board of Trade elicited the reply that "up to date no orders had been placed."

Before we hear, as usual in such cases, that it is an accomplished fact, could not the voice of the industry make known the following facts:—

1. The long view calls for providing immediate employment for as many men discharged from the forces as possible.
2. Factory made prefabricated houses offer the most favourable opportunity of providing semi-skilled labour to absorb them.
3. In view of the above, the Board of Trade should confine their attention to the provision of the raw timber only.

Stafford E. BOWER NORRIS

PHYSICAL PLANNING

THE JOBS TO BE DONE

30

index

The Job

The potential value of our national canal system for goods transport is too seldom realized. Its further development, especially through new links with road, rail, airports, and other waterways, would ease congestion on these methods of transport and in addition provide a very economical means of transit for heavy goods. In this week's article L. F. Richards urges that canals should be incorporated as a real component of a national transport plan. In connection with the siting of civil airports, he enumerates the factors determining their rational distribution and points out that time-distance rather than linear-distance is the main consideration to be taken into account.

WE MUST PLAN TRANSPORT AS A COMBINED OPERATION

Part 2, by L. F. Richards

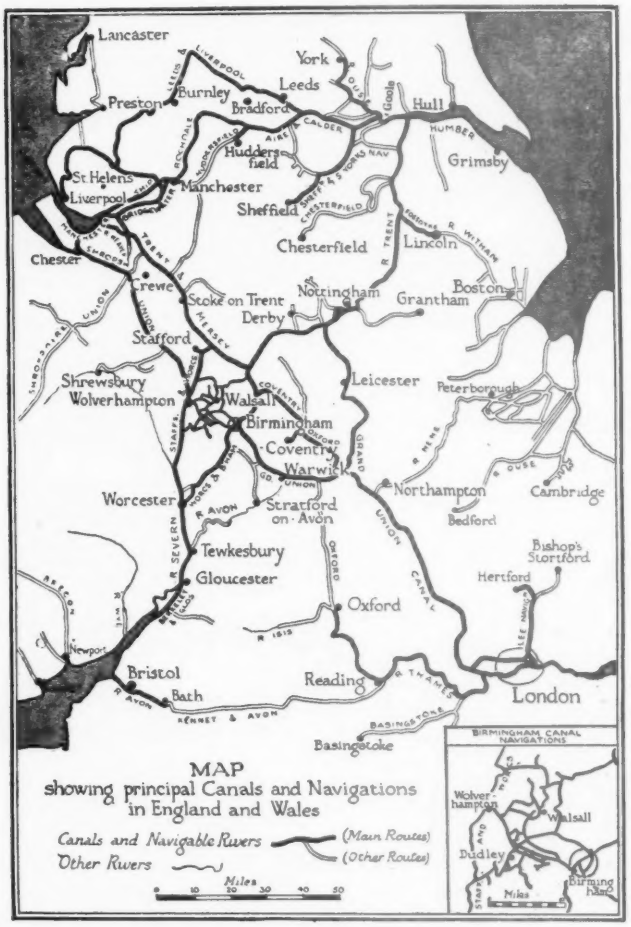
waterways

Canals are an integral part of Industry, and as such are a little different from their younger cousins in transport, the railways and the roads. Many Commissions have considered their usefulness during the last 100 years, and every commission has said that canals can play a useful part in the national life—but still traffic on them declined. The future of the canals is entirely dependent on the future of Industry. In so far as there is conscious direction and planning of Industry, so there must be conscious direction and planning of Canals. A particular canal is indispensable to a particular group of industries or even a single industry; it is not merely a rival to road or rail transport. One or two examples from history may emphasise this point; one of the first canals cut was that from Worsley to Manchester made for the Duke of Bridgewater *solely* for carrying coal from his collieries to market. The canal was as much a part of the industry as the pit winding gear. The Manchester Ship Canal was made by a group of cotton people and Manchester Corporation because they *knew* the *amount* of traffic the canal would carry before beginning the venture. The canals of Cheshire are "salt canals," those of the north pennines "wool, coal and paper canals"; the Surrey Canal is a "coal and timber" canal, because it carries nothing but these two commodities.

The useful canal system of England is in the form of a letter X with the Leeds and Liverpool, and the Aire and Calder navigation joining the top points of the X together, and the Thames together with the Kennet and Avon Canal joining up the base of the X. The centre of the system is Birmingham, and the extremities are the rivers Mersey, Humber, Thames and Severn. The whole system is much used except for the Kennet and Avon Canal. There are 932 miles of canal owned by Railways, 1,543 miles owned by 31 companies, including the Lee & Start Navigations, but excluding the Manchester Ship Canal, and 1,141 miles of navigable river controlled by 51 public bodies.* The bulk of the canals were made by different people to different standards; they were made to serve restricted localities and industries, and now only narrow boats about 7 ft. wide, carrying 25 to 30 tons, have universal access to all canals. There has been a demand for widening all the canals of the X to take barges of 60 to 100 tons, but this scheme failed, probably be-

* Royal Commission on Transport, 1931.

L. F. Richards, A.R.I.B.A., A.M.T.P.I., author of this week's article on Transport, has worked for various planning authorities as Planning Officer. He has visited other countries to study Housing and Town Planning. Formerly a studio instructor and lecturer at Liverpool University and the London Northern Polytechnic, Schools of Architecture he is now engaged on research for the Greater London Plan.



On the left is a map showing the principal canals and navigations in England and Wales (from Canals and Inland Waterways *by George Cadbury and S. P. Dobbs. Sir Isaac Pitman & Sons, Ltd.) The photograph on the right shows three barges loaded with completely erected railway passenger coaches at Hazelford Lock (Trent Navigation). Canals and navigable waterways are the only routes which can accommodate goods of this bulk.*

cause since it was proposed in 1909† there has been no likelihood of industrial planning. The canals exist in their particular position and therefore they determine the sites of the affiliated industries. Much frontage to canals is taken up by concerns which make no use of it. In London, the Metropolitan Water Board and Sewage Disposal Works occupy frontage. These are examples of a misuse of a national asset which planning aims to prevent. Many canals are inadequately served by road, rail and other waterways, and it is a major planning problem to link them all together. Whilst industry and transport are in a state of anarchy, the planner can only endeavour to allocate land for the right purpose, hoping that in the fullness of time his proposals will bear fruit. For instance he will zone areas round canals for industry and will reserve land for communications to salient points on the system, but he will always be in doubt about the wisdom of his proposals in relation to the life of the nation, until he can know that such and such industries will develop here or there and also that there is a co-ordinated policy between transport on the one hand and industry on the other. Lord Stamp* has given the following analysis of national capital :—

	Million £'s
Agriculture	1,400
Mines	240
Gas and water ..	300
Textiles	420
Iron, Steel and other Metals	740
Brewing, etc.	440
Timber and Building ..	325
Paper, etc.	320
Other items	1,095
Distribution and Wholesale	1,100
Retail	1,450
Banking Finance ..	750
Railways .. 860	
Transport .. 580 (Shipping, trams, electric power)	
——	1,440
Total ..	£10,020

This shows that transport of one form or another represents 15 per cent. of the national capital, and is the largest single item. It is obvious that transport should be administered through a co-ordinated policy. Canals capital in 1905 was given by Ledbury & Dobbs as £50,000,000, but much capital is tied to canals as waterside industry, or as a canal carrying company, and this figure cannot be used for detailed comparison, but it may be stated that canal capital is about 3 per cent. of transport capital which is in turn 15 per cent. of the national capital at home. Of all goods transported in 1935 canals carried about 4 per cent., roads 24 per cent., and railways 72 per cent. The tonnage carried by canals was 34 million tons in 1905, 16,400,000 tons in 1924 and 13,000,000 tons in 1938. The meaning of these figures is that canals are capable of carrying more than their present loads without material improvement. This is an important fact for the planner, because it gives him more freedom in fitting industry and canals together.

Just as electricity is ousting steam as motive power in most industries, so canals may be ousted by more efficient or more convenient transport, but the ousting must be part of a national policy. Messrs. Lyons have recently spent £1,000,000 in developing their industry in conjunction with a canal. The Grand Union Canal Company have found it possible to organise fleets of barges on the Continent, and steamships to America so that through rates may be quoted from Birmingham to Basle and from Birmingham to Montreal. Last year the Birmingham Canal Navigation paid 4 per cent. dividend, the Oxford Canal Company paid 5 per cent. These are signs of prosperity. May we not now look forward to the national planning of industry, incorporating canals as a real component of a national policy.

airways

The benefit of a transport service, measured by time and convenience factors, will depend on the carrying of an economic pay load between points of origin and destination along a prescribed route. We have already considered the economic possibilities within which rationalised road, rail and canal transport services could function in constructive physical planning. Air transport is the youngest and most flexible member of the transport family, and the responsibility of its direction in this air age is now our concern.

Air transport has benefited by *contemporary* scientific research and has now attained a high degree of operational efficiency. Its growth, like other forms of transport, was handicapped by prejudice and financial difficulties, but it is relieved from the cost and maintenance of a transit route along with those attendant physical and legal obstructions which beset the development of canal and railway routes.

It is most important to determine a proper basis for a planned growth of post-war Civil Aviation. For the attainment of an efficient service the means are now of less importance than the ultimate purpose to be achieved. The following are some outstanding aspects of approach.

(1) Airworthiness is the first consideration for air transport,

† Royal Commission on Canals and Waterways, 1909.

* *The British Isles*, Stamp and Beaver. Longmans, Green & Co. Ltd.

and the good survey work of the British Air Registration Board (under the 1937 Air Navigation Act) in setting up and maintaining their standards throughout the world is responsible for confidence already established. This quality of service operating with high speeds along routes which are flexible and free from normal weather restrictions constitutes the economic assets for future airway transport.

(2) We should realise that we are a nation of transport carriers, particularly by sea, as well as a nation of farmers, manufacturers, merchants.

The rehabilitation in a Civil Aviation Service of the highly trained Air Force personnel would be an obvious contribution to our post-war air service prestige, and would be in the interests of post-war national economy.

(3) We should determine whether the future use of airline or seaplane should be subject to rôle of haulage contracting by air agencies in the same way which other transport agencies operate lorries, barges and railway trucks.

(4) There should be no problem of airport provision in this country after the war. Providing a wise selection and distribution is made Britain could soon become an operational base for air transport service. The problem of reinstatement to agriculture, etc., of many airfields will, however, be difficult. Some should be retained for emergency landings apart from those required by the R.A.F.

The provision of marine bases for seaplanes will be necessary. It is difficult to find large areas of placid water which will allow aircraft of 100 tons to operate. A depth of 2 fathoms and a length of four or more miles may be required.

In planning future airports, adequate separation of the different types of air traffic and appropriate surface access highways must be considered. In many cases the choice must be made between spending relatively large sums of money either on express highways to reach cheap outlying sites, or on higher priced land for the airport closer to the centre of the town while saving on the highway investment.

The advantages of an outlying airport site, provided express highway connections are available, may be summarised as follows :—

(1) Clear air approaches ;
(2) Less city haze and smoke—hence better visibility ;
(3) Availability of large acreage of suitable and relatively inexpensive land ;
(4) Good airport expansion possibilities ;
(5) Less likelihood of air traffic congestion ;
(6) Good opportunity to acquire protective marginal areas for the airport ;
(7) Less danger of damage to people and property in the event of accidents ;
(8) Less opposition to proposed airport from adjacent property owners.

The Department of Civil Aviation (Air Ministry) has given technical information concerning present and future aircraft requirements and also regarding the suitability of certain areas for possible sites. Their classification, into five types, of air services for land planes is shewn in table above. Although dependent on the classification of airports within the country, and the flight characteristics of planes using them, the sites for major airports should be at least ten miles apart from the centre of their respective landing areas. Proper distribution depends on many factors :—

(1) The location for operation on suitable sites, with special regard to the by-passing of major centres of congestion.
(2) Distribution of service airports and private flying facilities between the scheduled air routes. Emergency landing facilities.
(3) Convenient location in relation to the points of origin of the commodity handled—(i.e., cargo airports near industrial areas, passenger airports near to business districts, and to residential districts).
(4) Selection with regard to existing and projected systems of rated transport facilities — whether by road or rail.

Time distance rather than linear distance is the important factor regarding airport accessibility (e.g., some distant airports may be more accessible in point of time than near-in airports which have congested road and rail approaches).

Improved arterial roads for car, airway bus, and lorry combined with express train facilities will give the required surface contacts.

CLASSIFICATION OF AIR SERVICES.

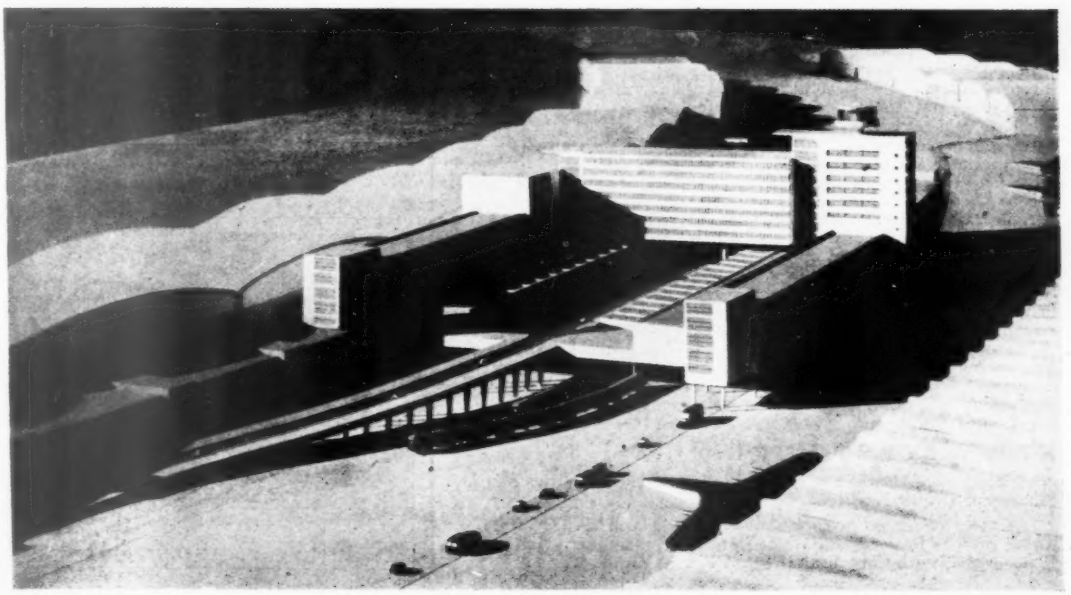
Prepared by the Department of Civil Aviation (Air Ministry).

1	2	3	4	5	6	7	8	9	10
Type of Service.	Typical Stage Mileage. (Miles).	Max. Expected Gross Weight of Aircraft (lb.).	Wing Loading (lb. per sq. ft.).	Power Loading (lb. per h.p.).	Max. Wing Span (Feet).	Max. Length (Feet).	Max. Height (Feet).	Max. Under-carriage Track (Feet).	Max. Tyre Pressure (Lb. per sq. in.).
I. Trans-Ocean	3,000—4,000	360,000	65	14	300	240	70	100	120
II. Intercontinental	1,600—3,500	180,000	65	12	220	175	55	70	100
III. Transcontinental	750—1,600	90,000*	55	11	170	135	40	55	85
IV. Continental	200—1,000	45,000	40	10	125	100	30	30	85
V. Local	100—500	30,000	27	11	110	80	25	25	60

Period on which estimate is based, 10 years.

* Where there is exceptionally heavy traffic, aircraft in this class may be employed on Continental routes.

Extract from Pamphlet recently issued by the Department of Civil Aviation (Air Ministry).



This shows an Airport Terminal designed to combine the operation of road, rail and air transport services, which have been catered for on three different levels, vertically superimposed. This reduces lateral movement of either passengers or freight to a minimum. Project by Guy Morgan and Partners.

PLANNING REVIEW

HOUSES AND LAND

A recent article in *The Times* quotes Mr. Willink's circular to local authorities which states that it is not the intention at the present time to sanction the purchase of the large areas of land required for a long-term housing programme. These suggested purchases must be deferred pending decisions on the major questions of planning which are still under consideration. *The Times* points out that local authorities still lack the eleven extensions of their powers of compulsory land acquisition proposed by the Uthwatt Report. Last December Lord Woolton hoped that a White Paper on compensation and betterment would soon be ready, and that a bill relating to land in built-up areas would follow shortly after. They are still awaited. Mr. Willink's announcement of yet another interregnum measure, welcome and necessary though it is, suggests the gloomy possibility that even now decisions on the crucial long-term issues are not in sight.

A bulletin issued by the executive of the Tory Reform Committee criticizes the Government for delay in producing a national policy for the development and use of land. It also makes detailed suggestions for amending proposals of the Uthwatt Committee.

An article in the *Observer* on March 12 states that until powers of purchase, the pegging of prices, terms of compensation, and planning policy are definitely known, local authorities can only proceed empirically on the old unsatisfactory lines. Until they know what aid to rates they will have, they will be forced to crowd both buildings and plans to keep rateable values high.

Last October *The Times* published a letter signed by the lord mayors and mayors of Plymouth, Portsmouth, Norwich, Kingston-upon-Hull, Exeter, Swansea, Birkenhead, Salford, Wallasey, Bootle, Coventry, Sheffield and Bristol. The men who fill these positions to-day have written another letter in which they point out that local authorities are asked to prepare schemes for more houses, for more school buildings, for more open spaces, etc. Proper planning and re-planning to remedy past errors must involve altering the layout of streets and the zoning of new shopping and industrial districts. Months must pass before they will have the necessary power of entry on to land to enable new pipes for drains, for water, for gas, for telephones to be laid. Many more months must pass before sites in new shopping or industrial centres can be allocated to individual firms. Still more months must pass before, first, architects complete plans of building suited to these at present unknown sites, and, secondly, before builders erect them. Months of delay total years lost. They urge Parliament to pass without further delay the oft-promised Bill to enable them to provide on demobilization the new cities which are needed to supply both the life blood of commerce and also home life for the citizens.

A leading article in *The Times* on March 15 refers to the desperate note of repeated appeal in its columns from the competent authorities of the bombed cities for official guidance, which it believes is a shocking comment on the passivity of our domestic leadership. Plainly there is need for Parliament and the Government to refresh their general conception of the scope and character of national planning, and to recapture a sense of the urgency of this question. Housing and allied subjects must be looked on as parts of a concerted use of one and the same limited commodity—the land. The use of that commodity, its ownership, its value, all these must be regulated in accordance with a plan that takes account of all main national interests.

Lord Latham, leader of the LCC, speaking at Woolwich, said that it was useless to prepare plans for the reconstruction of our cities and towns unless the necessary powers and means were made available to those who must do the job. Yet weeks, months and even years went by and little or nothing had been done in that direction. It was idle for the Prime Minister to talk of homes for the people unless those who must build them could get the necessary land on equitable terms and quickly, too.

The *Daily Worker* points out that, in the USSR, no less than 300,000 houses were built and occupied in liberated territory during the four months from September to December, 1943.

AIR TRANSPORT

The Times concludes a leading article on the planning of post-war air transport by stating that the first step is to recognize the fundamental difference between the use of air-power in war and the development of civil flying. Fortunately the public with every year of the war is becoming educated in the difference that separates military and civil types of aircraft and their functions; and there can be no doubt of the weight of opinion in this country now ready to support the eventual transfer of the control of civil flying from the Air Ministry to the Ministry of Transport.

NATIONAL PARK

The creation of a war-memorial national park is to be urged on Mr. W. S. Morrison by northern ramblers. This suggestion follows the survey made by Mr. John Dower, whose report was presented to the Minister as long ago as last September. Since then no more has been heard of the report and its contents remain private.

NEW LITERATURE

Post-war Housing. Purchase of Land: With a statement by the Minister. Ministry of Health, No. 28/44.

Industrial Planning and Research Catchwords or Realities? F. J. North, D.SC., F.G.S. Address to the South Wales Institute of Engineers. January 20, 1944. Published by The Institute, Park Place, Cardiff.

TRAFFIC STUDY IN MANHATTAN

The diagrams below showing trends in movement of persons in and out of the section of Manhattan south of Central Park are part of a traffic and parking study published by the Regional Plan Association of New York.

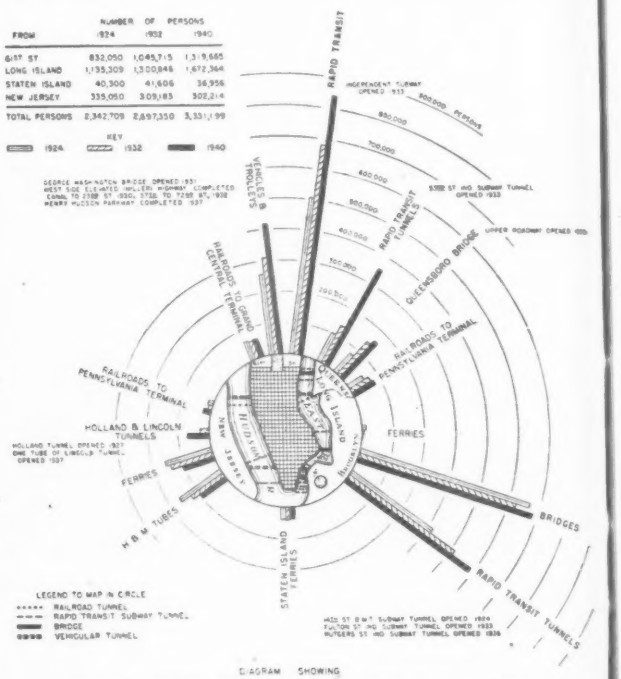


DIAGRAM SHOWING

PERSONS ENTERING MANHATTAN SOUTH OF 61ST STREET

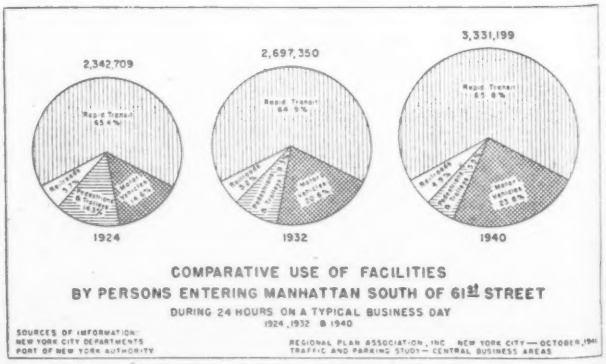
DURING 24 HOURS ON A TYPICAL BUSINESS DAY

IN 1924, 1932 AND 1940

SOURCE OF INFORMATION:
NEW YORK CITY DEPARTMENTS,
PORT OF NEW YORK AUTHORITY

REGIONAL PLAN ASSOCIATION, INC. NEW YORK CITY—SEPT. 1941
TRAFFIC AND PARKING STUDY - CENTRAL BUSINESS AREAS

As the area of New York City's central districts is largely surrounded by water and statistics are available for most of the movement of persons and vehicles over the bridges, tunnels and ferries that cross these waterways, it is possible to compile statistics for the total movement in and out of the area. On a typical business day in 1940, a total of 3,331,199 persons entered that part of Manhattan south of 61st Street. Their distribution by geographical sectors and types of facilities used and a graphical comparison with similar figures for 1924 and 1940 are shown in the star diagram above, which also includes a tabular summary. Changes in the relative distribution over various means of transportation are shown in the diagram below, the total area of each circle being proportional to the total number of persons entering daily in that year. Rapid transit, except for a fractional percentage loss between 1924 and 1932, has widened its margin over other facilities, with motor vehicles pushing up and trolleys leading the railroads for a poor third. The startling thing in the analysis is that the figures show an increase in the business-day influx to an already congested area of 42 per cent. in the 16 years ending with 1940, while in the same period the population of the city and the Region each increased only about 24 per cent.



COMPARATIVE USE OF FACILITIES

BY PERSONS ENTERING MANHATTAN SOUTH OF 61ST STREET

DURING 24 HOURS ON A TYPICAL BUSINESS DAY

1924, 1932 & 1940

SOURCES OF INFORMATION:
NEW YORK CITY DEPARTMENTS
PORT OF NEW YORK AUTHORITY

REGIONAL PLAN ASSOCIATION, INC. NEW YORK CITY—OCTOBER, 1941
TRAFFIC AND PARKING STUDY—CENTRAL BUSINESS AREAS

A view of the east end of St. Paul's seen from the great St. Paul's-Mansion House axis. The western part of the axis is designed as a dual carriage way with a central park strip. The buildings on each side would house the new halls of the Livery Companies. This illustration typifies the authors' visual approach to the problem, which provides a spectacular setting for the great occasion, but leaves unsatisfied the demands of everyday life. Even if we view it merely from the spectacular point of view, the scheme entirely fails to realize the city's essential characteristic, which is one of multi-focal interest, with each point discovered as a surprise, not seen down a half-mile vista.

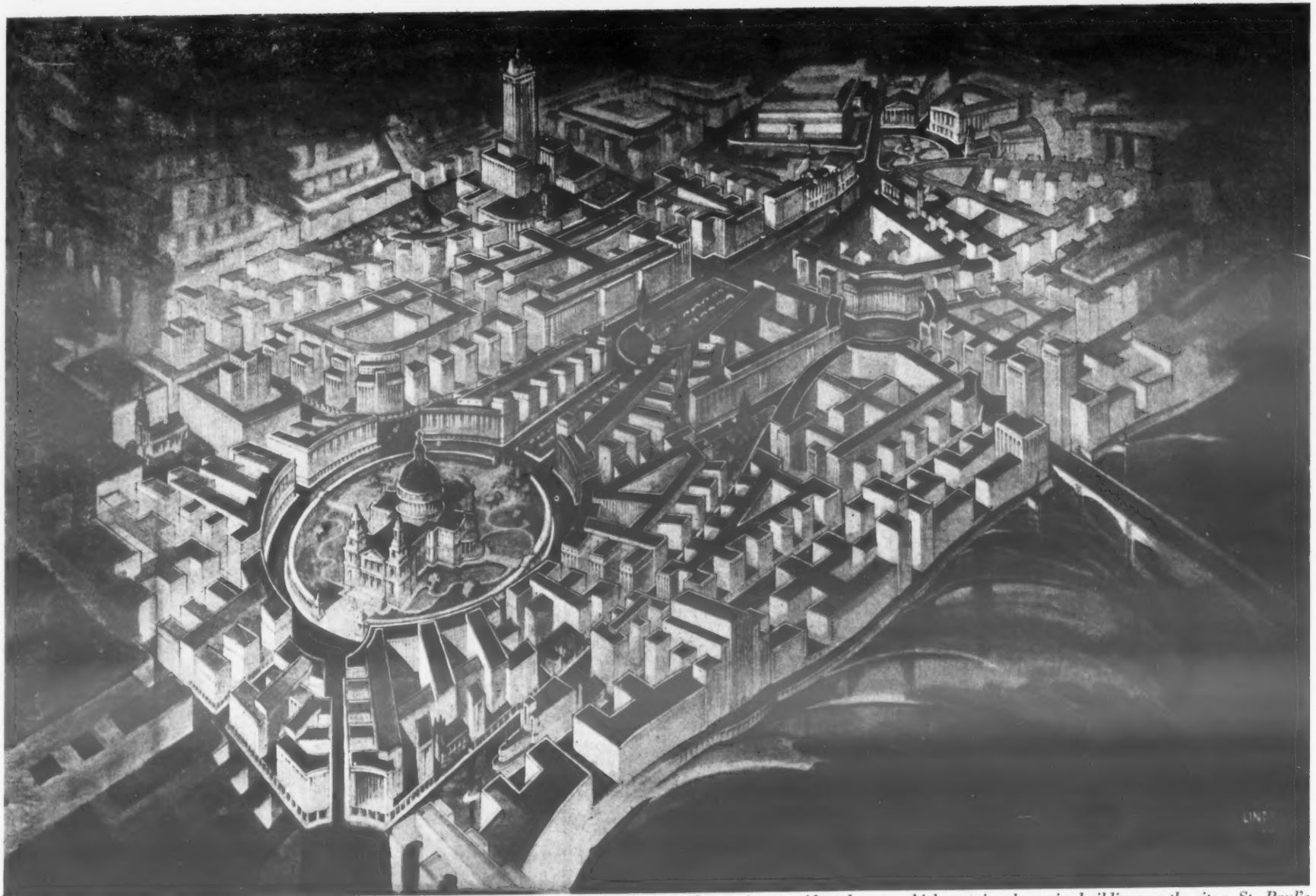
CITY OF LONDON

SKETCH PLAN

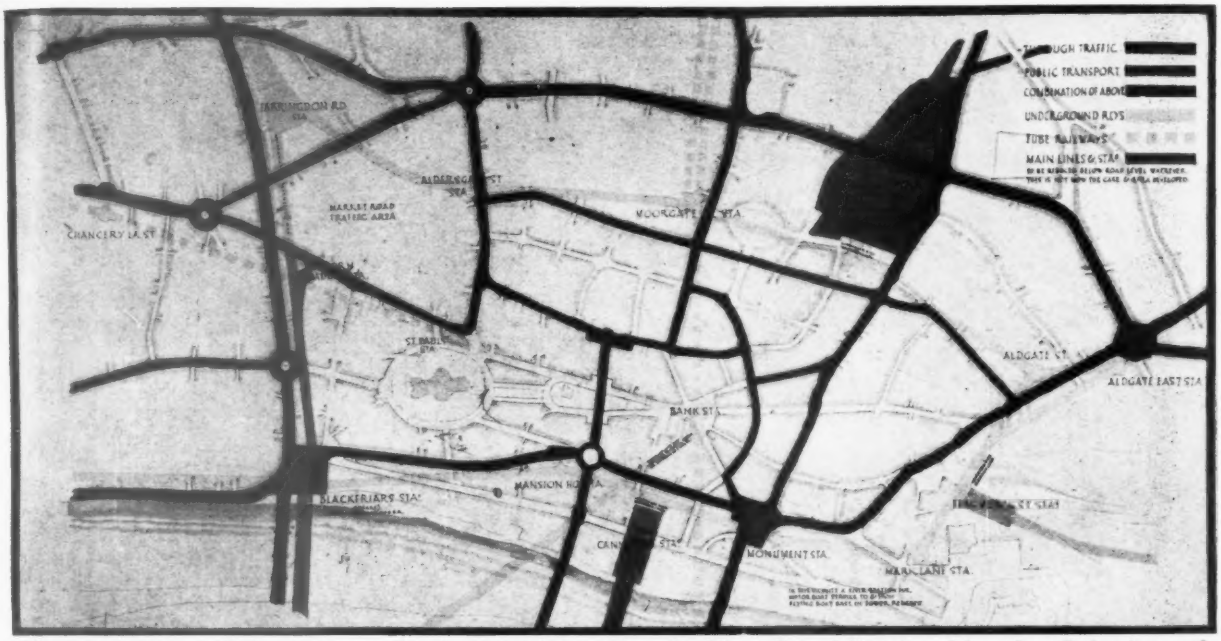
K. J. LINDY AND B. A. P. WINTON LEWIS

This sketch plan for the city which has recently been exhibited at the Incorporated Association of Architects and Surveyors appears in the lull before the long-awaited publication of the official plan. It presents an interesting contrast with Mr. Aslan's plan which was published in the Journal for December 9, 1943. That plan was predominantly concerned with transport, whereas this one illustrates an almost exclusive interest in the visual aspect of civic layout. Some of the pitfalls into which this approach has lured the authors are explored in this week's leading article and in the following critique.

Here is yet another proposal for the City of London, the spare-time effort of two architects. It is essentially a piece of civic design; for its authors are not seriously concerned with planning matters, and think it their main job "to achieve the civic dignity due to the capital of a great empire." Hence follows the grandiose layout for the centre at the expense of overcrowded work areas; all the paraphernalia of the grand manner, the axes, vistas and monuments. Following in the footsteps of Bernini, Le Notre, Wren and Haussman, a rigid pattern is once again imposed on a



This aerial view drawn by K. J. Lindy shows the general outline of the proposals. The main feature is a cruciform layout, which contains the major buildings on the site : St. Paul's set in an oval enclosure, the Mansion House group spread about a fan-shaped piazza, Southwark Bridge emphasised as the new entry to the city by warehouse pylons, the old Guildhall restored in a new setting. In contrast to the lavish momumentality of the centre, the city work area is developed practically to the old pattern but to much greater height. The result, in spite of indenting the building blocks, looks like a bad case of overcrowding. A city of fine vistas perhaps, but a raw deal for the city workers. Let us remember this is 1944, not 1666.



The transport proposals shown above are based on partial segregation of public traffic and diversion of through traffic by ring roads. A practical step, but only the first one in tackling the city's traffic problem. Below, on the left, is the Liverpool Street Station development with its auto-gyro landing platforms. It shows well how a vicious system of land values, combined with the unlimited scope of modern technics, can produce a building which may be a delight to the financier but is a nightmare to the everyday user. Below, on the right, is the Guildhall group. It demonstrates a vital problem for the city planner : how to graft the new stock on to the old, so that both may benefit. In the combination shown here, neither seems to be any the happier for it, to put it very mildly.

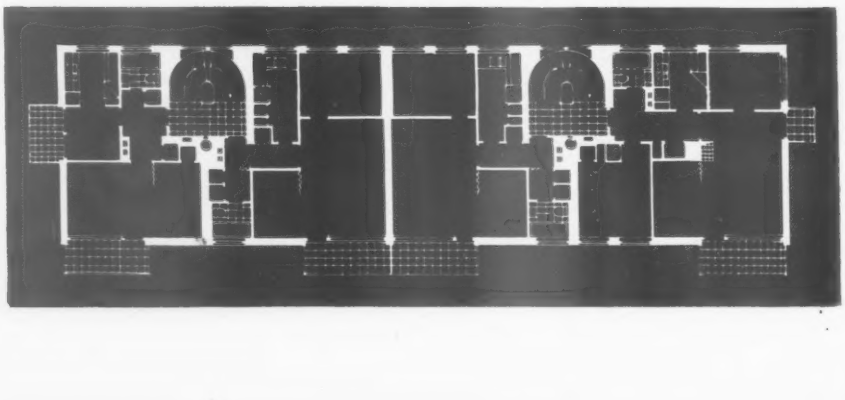
living town. Nothing can be said against pattern making as such, so long as it is legitimate pattern making, and not a wilful matter of personal taste. The pattern of environment is the result of many forces. Some are innate in a site, such as its history, its geographic peculiarities; and some arise from the functions and the outlook on life of our period, as far as it is carried into the things we shape. In the Lindy-Lewis proposals these forces have been repressed to make way for a private formal conception without any social basis. No brilliance of design could make such a scheme succeed.

restored in a new setting. In contrast to the lavish monumentality of the centre, the city work area is developed practically to the old pattern but to much greater height. The result, in spite of indenting the building blocks, looks like a bad case of overcrowding. A city of fine vistas perhaps, but a raw deal for the city workers. Let us remember this is 1944, not 1666.

FLATS AT STOCKHOLM

DESIGNED BY LENNART BERGVALL

This block of small flats in reinforced concrete and brickwork with a rendered finish was completed in 1940. The balconies have fronts of painted metal sheets and returns of wire mesh fixed to steel tubes, while the double-glazed windows have wood frames. The ground floor stands the usual 4 ft. above ground level to avoid the winter snowfall, and to form a semi-basement for storage and services. Features are the refuse chutes with an access on each landing, and the curtained-off bed recesses in the living rooms.



INFORMATION CENTRE

The function of this feature is to supply an index and a digest of all current developments in planning and building technique throughout the world as recorded in technical publications and statements of every kind whether official, private or commercial. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal and views expressed are disinterested and objective. The Editors welcome information on all developments from any source, including manufacturers and contractors.

PHYSICAL PLANNING

1415 Rebuilding South Africa

REBUILDING SOUTH AFRICA. (*South African Architectural Record*: *September and October*, 1943.) Record of exhibition prepared by students of Johannesburg School of Architecture.

1. *Human and Material Resources*

Many of the basic material requirements for industrial development are present in South Africa. For this it is necessary to develop the latent skill, intelligence and initiative of the mass of the population, at present condemned to unskilled labour. Only by a more intelligent and skilful use of the land can they save their agricultural resources from being wasted away. This demands a change in agricultural policy, directed towards producing more food for home consumption and towards technically better methods of farming, a necessary counterpart to a policy of industrial expansion.

2. *The Problem*

The low economic level of the greater part of the population creates the squalor, which is typical of South African towns. The poor distribution of educational and health facilities in relation to communities generally, overloads the system. The automatic adoption of the standardized gridiron plan, due primarily to the possibilities this offers for high land values on street frontages, results in traffic problems. The uncontrolled development of land, in which the maximum financial return forms the basis, gives rise to the conditions of overcrowding that prevail, and destroys the proper relationship between country and town.

3. *Lines of Attack*

Health and educational services should be closely related and proportioned to the areas they serve; in fact the population required to support a school should be a measure of the community. Recreational and cultural facilities should be provided for children and adults, and for non-Europeans living in European communities. The facilities should serve intellectual, emotional and physical aspects and should be sufficiently varied to suit all age groups.

Housing on an adequate scale should be provided for all sections of the community, both European and non-European.

Place of work should be zoned to involve the minimum loss of time in daily travel and should be planned to allow efficient production under healthy and stimulating conditions.

Road systems should be designed to meet the requirements of motor transport. They should be capable of sustaining high speeds safely on arterial byways on the one hand and, on the other, must give adequate access to residential areas.

Town and country should interpenetrate. Communities could thus live in close contact with nature, and at the same time enjoy the benefits of urban life.

Control over land use is essential if an environment is to be created that is worthy of contemporary man.

4. *A Plan for Living*

The basis of planning is the family, the varying composition of which is analysed in the housing unit.

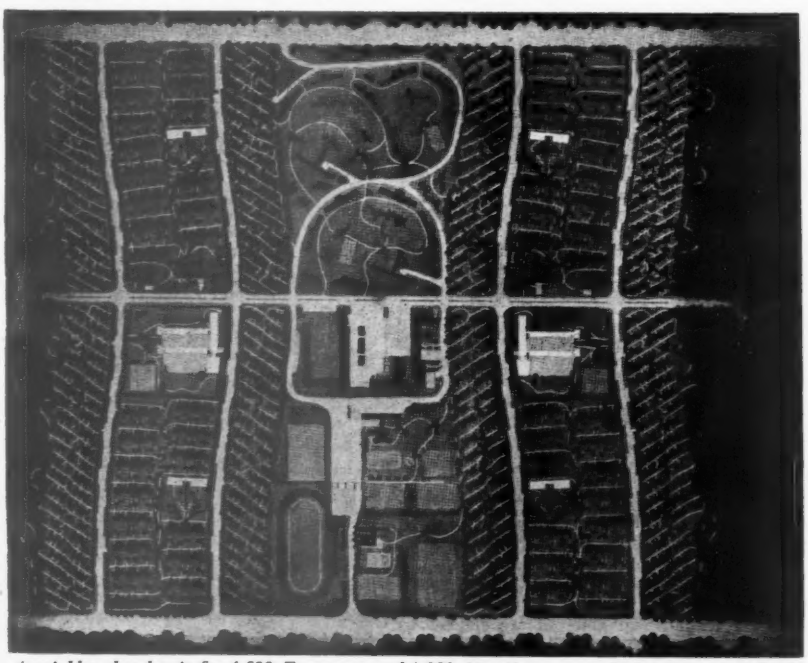
When the population has been divided into its family groups (South African census figures) accommodation according to established standards has been allocated to each family group.

The size of the unit is limited by the number of children necessary to support an elementary school, which must be within short and safe distance of all homes.

The social needs of two such housing units merits the provision of community facilities. The urban unit which emerges is termed a neighbourhood.

An extension of this unit will demand additional social amenities. Two such neighbourhoods with a population of 10,000 will support a high school. This constitutes the community unit.

The town, with additional community and social facilities and industrial developments, is based on a series of community units. A combination of towns will form a metropolitan area which has as a nucleus the regional centre.



A neighbourhood unit for 4,500 *Europeans and* 1,000 *Non-Europeans which tries to satisfy the fundamental needs of contemporary living. The average family income here is* £240 *p.a. Two schools and four nursery schools are provided and the unit has its civic centre, where administrative, shopping, health and cultural facilities are grouped. A large recreational centre has also been provided for Europeans and a smaller one for Non-Europeans.* (*From* Rebuilding South Africa). *See No.* 1415.

HEATING and Ventilation

1416 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.

The author points out that it is necessary to heat the hall as well as the water of a swimming bath. Temperatures suggested are: 70-75° F. for the hall, 65° F. for dressing-rooms and 60° F. for lavatories. A combination of direct heating with a semi-plenum system for ventilation is advocated. For the direct heating at low-level, a hot water system is preferred. Methods of heating the bath-water are also discussed. For the slipper-bath annexe to a public bath, the hot-water storage capacity (in gallons) should be about 40 times the number of baths, with provision for heating this water in one hour. Engineering requirements for Turkish and Russian baths are also discussed.

1417 Laundries

DESIGN FACTORS. *H. Swaine.* (*Heating and Ventilating Engineer*, *January*, 1944, *p.* 256.) Heating services in laundries.

The basic principles of the provision of heating services in laundries are the same for all types, whether commercial, institutional or public. Differences arise from the different classes of work done.

It is important to have plenty of air to remove moisture from drying clothes. In public laundries, separate compartments or rack driers are usually employed. Hot air, usually heated by steam, is passed through the compartments by mechanical means. Public wash-houses require self-contained cubicles, containing a wash-sink, a rinsing sink and a boiling-vat. In average use, about 40 gallons of hot water and up to 30 lb. of steam are employed in each compartment. Hoods, with extract fans, should be fitted over all washing-machines and boiling-vats. Ten air changes per hour should be provided in laundry- and washing-rooms, and up to 15 per hour in finishing-rooms where gas-irons are used. In all cases, definite fresh-air inlets must be provided, and if desired, a simple filter may be incorporated.

1418 — Hotels

DESIGN FACTORS. *H. Swaine.* (*Heating and Ventilating Engineer, February*, 1944, *p.* 297.) Heating services in hotels.

The hot water supply for the guests is based on the following considerations: 1 gal. storage for each bedroom with lavatory basin, 20 gal. storage for each suite with private bath, and 50 gal. for bathrooms serving several bedrooms. The water-heating system should be capable of heating this quantity of water in 2 to 3 hours. For the service side, hot water is provided on a basis of one hour's peak and one hour recovery, as the demand is fairly steady. It may be advantageous to zone hot water supply in multi-floor hotels, and have separate calorifiers for each floor.

For heating, any system may be used, but low-pressure hot water is most favoured. A combination of radiant and convected heat is best for the public rooms, and ordinary radiators under the windows are suitable for bedrooms. A towel rail is often sufficient for smaller rooms, bathrooms and lavatory annexes.

Many modern hotels have double glazing, and ventilation is then necessary. A simple warm-air scheme is usually adopted, except in large hotels, where full air-conditioning may be employed. Heated skirting-board panels may be used where desired to avoid exposed low-level pipe-work. In entrances, warm-air inlets over the doorway will minimize draughts.

Extract ventilation is usually necessary in large public rooms, kitchens and lavatories, each system being kept separate. Three air-changes per hour are recommended for public rooms and lavatories. In kitchens hoods over selected cooking appliances will suffice. Anti-vibration devices and acoustic insulation of ducts are a matter of course.

1419 — 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.

The heat requirements of intermittently heated buildings vary with (*a*) prevailing minimum outdoor temperature; (*b*) interval between heating periods; (*c*) construction, form and size of building; and (*d*) length of heating-up period. The paper describes a study based on particular assumptions as regards these factors, using the graphical method described in the *Transactions of the American Society of Heating and Ventilating Engineers*, 1939, p. 441. For a church with 21-in. brick wall, wood ceiling, steel roof and concrete floor, a 3-hour preheating period was assumed when the outdoor temperature was 0°F. The indoor temperature was required to be 70°F. The heat requirement was calculated to be 1.73 times that for steady state. (It may be noted that the Institution of Heating and Ventilating Engineers does not recommend the use of a 3-hour preheating period when the building is occupied one day a week, and suggests a 60-90 per cent. increase in the capacity of heating systems with a 24-hour preheating period.)

1420 — Industrial Buildings

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 heating system described briefly.

Air is warmed by two stoker-fired heaters, and is distributed by a duct which runs along the lower chord of the roof truss of a single-storey factory building. The air is discharged from the duct at various points through a number of high-velocity air diffusers. Fans are used to re-circulate the air, and they also provide an induced draught for the heaters. A number of advantages are claimed for this system (though it appears probable that many of them are shared by other warm-air systems).

1421 — Operating Rooms

AIR CONDITIONED OPERATING ROOMS HAVE FIVE ADVANTAGES. (*Heating, Piping, December*, 1943, *p.* 648). Mentions advantages of conditioned operating rooms.

1422 — Use of Waste Heat

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.

Author suggests that heat from incinerators could be employed as a modest start on district heating. In order to get maximum heat yield, the incinerators must be efficient, with mechanical charging and clinkering. It may also be assumed that non-combustibles, such as tins or glass, will be removed before the refuse is burnt. The calorific value of peace-time refuse was about 3500 B.T.U. per lb.

The problem is to provide a continuous heat service from a plant working intermittently. This can be done by use of a hot water accumulator, for nights and part week-ends, but a stand-by coal-fired boiler is advisable to have a sure supply over the week-ends. Seasonal changes are more difficult to deal with. It is necessary to make an estimate of the consumption, from a knowledge of the principal consumers and the type of service required. The majority of installations in use now provide central heating, with tapping for domestic purposes. It is advantageous to have all consumers using heat for the same purpose, and grouped together. The mains are usually of steel pipe in r.c. ducts. Such a plant would cost more than a normal refuse disposal works, but it is not possible to give estimates of the economy as conditions vary from place to place. A plant having a capacity of 200 tons a day could sell about 27 million B.T.U. per hour—enough for heating and hot water for about 800 houses. Refuse from 70 houses is needed to supply heat for one. Dwelling-houses are not the most suitable type of load; but large business premises are good. In self-contained plant for blocks of flats, heating is the primary consideration, and refuse disposal a secondary one. The boiler should therefore chiefly use coal, coke, etc., with refuse as a secondary fuel.

A plant at Zurich is described, which supplies electricity and district heating, with an efficiency of 50-55 per cent. Hot water is the distributing medium, and the furthest consumer is about 1½ miles from the station. The output amounts to 160 million B.T.U. per day for heating, and about 1½ to 2 million kWh. of electricity annually.

1423 — Kitchen Grease Filters

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.

Authors state "range filters are important parts of ventilating systems of kitchens in industrial, commercial and public buildings. They eliminate grease, dirty ducts, prevent dangerous fires in ventilating ducts and protect exhaust fans and motors."

The weight of grease passing the filter is determined when half a pound of lard is fried beneath a hood connected to the filter. The efficiency is expressed as a percentage of the weight of grease in the air entering the filter.

QUESTIONS and Answers

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

1424 — Romney Hut

Q *Could you give us some information about the Romney Hut? We understand a short pamphlet has just been published, but are unable to trace it.*

A The Romney Hut is an improvement on the Iris Hut, overall size 6 ft. 0 in. by 35 ft. 0 in., with a tubular steel frame in four pieces, corrugated in fabrication, and has a concrete floor. Information and plans are usually only issued to tendering contractors, but it may be possible for responsible persons such as yourselves to obtain copies of the plans from the Directorate of Fortifications and Works, War Office, Romney House, Marsham Street, London, S.W.1.

1425 — Dictionary of Terms

Q *Has a Dictionary of Building Terms ever been published and, if so, by whom?*

A We suggest *A Concise Building Encyclopædia*, compiled by T. Corkhill, M.I. STRUCT.E., published by Sir Isaac Pitman & Sons. Price 7s. 6d.

1426 — PEP Broadsheets

Q *I have seen references in your columns to* Planning, *the Broadsheet of PEP. Can members of the general public obtain copies of these Broadsheets, and if so from whom?*

A Copies of *Planning* can be obtained from PEP (Political and Economic Planning), 16, Queen Anne's Gate, London, S.W.1, price 1s. 0d. each. During the year about 24 Broadsheets are issued, and these can all be obtained for a yearly subscription of £1.

1427 — Canteen Flooring

Q *Is there any available flooring which could be laid on existing wooden flooring which is badly worn in the kitchen of an industrial canteen?*

A At the present time we consider that the best available flooring for re-surfacing wooden flooring is Pitch Mastic (the wartime substitute for asphalte), which any responsible asphalte firm should be prepared to lay for you. (See *A.J.*, March 9, 1944, p. 186.)

You will probably want to employ a local firm, but if you are in difficulties in getting anyone to undertake the work, we can let you have the names of suitable firms.

1428 — Newtonite Lathing

Q *Your issue of December 30, 1943, dealt with prefabricated timber houses. The cement rendering on these houses is shown on a base of Newtonite. Is this just an ordinary dovetailed steel sheet? Is it possible to obtain further details about this sheet and about the manufacturers?*

A Newtonite is a waterproofed lathing made of fabric similar to bituminous felt. It is not a structural material in the sense that steel sheeting is. Full particulars can be obtained from Messrs. Newtonite, 12, Verney Road, London, S.E.16.

UNHEARD BROADCAST

Question Master : We have some very peculiar questions for the old team, and here they are, sitting round the table —the team I mean, not the questions. There's Professor Noad-Hall, Dr. Treat M. Roughly, Captain Campstool and, of course, the man who really knows all the answers, ———

Professor Noad-Hall : You've mentioned me already.

Question Master : Ah, yes, but when I said the man who knew all the answers, I meant our Expert. Now, gentlemen, we have a question from a Major Twohoot, of Bickering Parva. He says : "What is foam glass ?" and adds, "I feel it must be very interesting." Now the question is, "What is foam glass ?" Roughly ?

Dr. Roughly : Surely there must be some mistake in the phrasing of the question : isn't he referring to the aeration of emulsifying liquid in a glass vessel ?

Question Master : The question is perfectly clear : What is foam glass ?

Captain Campstool : Well, I think the feller must be a congenital frothblower, if you ask me. He must mean "foam *in* a glass."

Professor Noad-Hall : Surely we must define, first of all what we mean by glass, and secondly, by foam ?

Dr. Roughly : Foam first, and glass afterwards, surely ?

Captain Campstool : Well, you can't have foam unless you've got a glass to put the stuff into, if you see what I mean.

Question Master : Gentlemen, we are getting nowhere ! If I may say so, you are all thinking of the wrong kind of glass, and we are discussing foam, not froth. Foam glass is presumably some kind of product that Major Twohoot has heard of. Have you any serious view about this, Noad-Hall ?

Professor Noad-Hall : All my views are serious. But I contend that this is not a serious question.

Captain Campstool : Well, confound it, old chap, remember he's a Major. I mean to say, you've got to take a field officer seriously.

Question Master : Well, Major Twohoot, you've certainly beaten our two scientists, and our world traveller, and now I'm going to ask the Expert, and I hope he's going to prove that I wasn't wrong when I said he was the man who knew all the answers.

The Expert : Foam Glass is a solidified froth or foam. It is made by heating a mixture of finely powdered glass with a finely powdered material which will evolve gas when heated to the temperature at which the glass is soft. The mixture is heated in moulds, the glass melts and the gas is evolved from the frothing material in the form of minute bubbles which are entrapped in the glass. The glass is then cooled before these bubbles have time to escape.

Foam Glass is a very light buoyant material with a density about 1/6th that of water. Because each pore is sealed the glass will float without soaking up water, as cork does.

It is an excellent vermin-proof heat insulator, and is very suitable for lining refrigerators and cold-storage rooms.

Question Master : Well, that disposes of your question, Major Twohoot, though the answer is by no means as light as foam. Now, our next question comes from Sir Mill Dew, of The Moulders, Damprushe. He asks, "What is double glazing. Is it the right thing to put in windows, and if so, why ?" Now, this sounds easier. Campstool ?

Captain Campstool : Well, I know what a mixed double is, and what a double whisky is, and I've seen a chap's eyes glazing when he's had a couple, but I suppose double glazing means that both your eyes are glazing.

Dr. Roughly : I really must complain about the excessively alcoholic interpretation which is given to a very simple question. Double glazing means glazing a window with two panes of glass instead of one.

Captain Campstool : I don't think that's right. All my windows at home have got six panes in them. What would you call that ? Sextuple glazing ?

Professor Noad-Hall : Dr. Roughly was no doubt trying to say, though he expressed himself very loosely, that double glazing implied the use of two sheets or panes of glass in a single window frame, with an air space between them.

Dr. Roughly : I was about to say that, perhaps in rather more appropriate words, when I was interrupted by Campstool.

Question Master : Well, how does the Expert react to these views ?

The Expert : Both Professor Noad-Hall and Dr. Roughly are right, but their answer needs considerable amplification. Double Glazing is the fixing of two parallel panels of glass spaced apart, instead of the single panes of an ordinary window. If this is done so that the air between the panes is brought to rest the loss of heat through the window is greatly reduced and there is also good insulation against sound. At the same time the gain in heat from solar radiation through the window is only slightly reduced.

Double glazing is almost universally employed in cold countries, and is being used more and more in this country. The usual practice is to have two complete separate glazed sashes, but there are also forms of single sashes double-glazed.

Question Master : I think that, after hearing these views, Sir Mill Dew may well say "Double, double toil and trouble," but it certainly seems to be worth the trouble involved in view of the benefits received. I'm sure that both our questioners will be grateful to the Expert who, perhaps I need hardly explain, knows practically everything there is to know about glass, because he comes from Pilkington Brothers, Limited, the glass manufacturers, of St. Helens, Lancashire.

Advert.

SOCIETIES AND INSTITUTIONS

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

THE TIMES

Sir George Burt

March 11, the following article PREFABRICATED DWELLINGS—MULTIPLE DEMANDS OF A HOUSING PROGRAMME—COMPARISON OF AMERICAN COSTS, by Sir George Burt, appeared in *The Times*. The author is Chairman of the Building Research Board, and of the Interdepartmental Committee on House Construction (the Burt Committee). He was with MOW's recent mission to the USA.

In any consideration of prefabrication and its application to post-war housing the question "What is housing?" immediately asserts itself. A house is more—much more—than four walls and a roof. A "desirable residence" presupposes all the usual public services—water, light, etc.: it should be near—very near, most people will say—a bus route or some other means of transport; shops, schools, even a cinema should be within easy reach. "Amenities" have become "necessities." The Government programme for housing will require a vast expansion of public services. At present water in too many districts is deficient in supply or distribution; supplies of gas or electricity are even more inadequate; sanitation is still primitive in many parts.

Let us assume, however, that sewerage, water, electricity and gas supplies, roads, schools, transport, and all the extraneous things that contribute to the "desirability" of a residence be available. How, then, can the actual residence be produced more quickly and economically?

For permanent houses a continued public demand for heating and cooking by means of open coal fires will necessitate a chimney, which still further narrows the field for prefabrication of the outside structure. If full advantage is to be taken of prefabrication of this outside structure, then the idea of an open fire-place must be given up, and heating and cooking must be done by gas, electricity, or oil. This again narrows down the possibility of prefabricated construction to localities where gas and electricity are available, and available at a price within reach of the low wage-earner—at ½d. a unit or under.

FOR AND AGAINST

Factors common to both traditional forms and prefabricated forms of construction are, first, all the ancillary services, which have already been mentioned, and the use of land, roads, sewers, and foundations. There are, of course, several more, but taking the last item alone, this, together with domestic drains, would account for very nearly one-quarter of the total cost of the building. Among the advantages of prefabrication can be stated the undoubted reduction of site man-hours in the actual erection; the easing of the bottleneck caused by shortage of bricklayers, if in fact this will exist. An equal, or perhaps better, thermal insulation is possible. As against these advantages must be set the disadvantages inherent in prefabricated structures. Maintenance charges will almost certainly be considerably greater, especially in wooden types. Among its physical disadvantages must be rated quite high poor insulation against sound, either from outside or from adjoining rooms or houses. The standard is likely to be considerably less than that attained by a 9 in. brick wall, which is low enough. From a health point of view the voids inherent in almost any prefabricated system conduce to vermin infestation.

It is a mistake to assume that America solved even her war-time housing requirements by prefabricated methods. Official records show that up to the end of 1942 only some 2 per cent. of war-time needs have been met that way. At the same time some prefabricated, or at any rate partially prefabricated, houses seen by the recent mission to the United States were good, in fact indistinguishable from houses built by ordinary methods. Other types, obviously for war-time, temporary needs, were sub-standard as to size judged by British standards and, except as isolated structures, fell short of a standard of sound insulation acceptable here. As to heat insulation they were good; climatic conditions made that a necessity. The producers of the houses have offered to place their experience freely at our disposal, an offer which should be accepted. Wood is cheaper and more plentiful in the United States than here, and therefore enters largely into their prefabricated methods. It is the simplest material to apply for this purpose.

GREATER RISK OF FIRE

Much has been written on the subject of wood as a material for post-war house construction. If we are to adopt wood as a main material in our post-war programme, prefabricated or otherwise, then we shall be obliged to follow the American example and vastly improve our fire-fighting equipment. Water is a first essential. In the United States consumption of water per head is three times that in England, and there can be no doubt that the amount of water necessary for efficient fire-fighting has had its effect in this larger consumption. In this country we are not in a position at present to supply this extra quantity of water. When we are, then it may be a possibility to consider wood as a main factor in house construction. Economically it is difficult to see how it can be, but if that time ever comes the fire-fighting side must be considered at the same time.

Prefabrication applied to the outside structure of a house is likely to be expensive and unsatisfactory, though it should save some 30 per cent. of site man-hours, but not more than 20 per cent. in actual time of erection, and except as a purely temporary expedient it is hoped that its adoption will be unnecessary. There is, however, considerable scope for the increased application of prefabrication to the inside of a house. There it can effect material saving in man-hours and possibly cost also. Adoption of modern plumbing methods and the use of plaster-board on ceilings and walls as well as complete flooring and roof sections, well-designed cupboards and fitments, are obvious lines of development, but it must always be remembered that in the pre-war house between 30 and 40 per cent. of the entire building inside and out was prefabricated, either on the site or away from the site.

COSTS AND CONTROL

It is too often overlooked that the apparent saving of time to be achieved by prefabricated methods can equally be achieved—without the attendant disadvantages of prefabrication—by better planning and processing of the building development programme. The proposals of the Minister of Works for making an early start on roads, sewers, and public services generally, and it is hoped foundations also, is a welcome recognition of this, and augurs well for the speed of development after the war.

Finally, if the Government's post-war building programme is to be an economic possibility, then costs must come down. On this important question of cost, the control of house building will still remain vested in the local authorities. It is to be hoped that there will be some overriding supervision to prevent extravagant "fads and fancies" unduly increasing the cost. These idiosyncrasies vary with the different administration of the by-laws from locality to locality and taking the country as a whole they may account for a difference in cost of up to £50 to £60 a house. The restrictions vary from unduly extravagant road requirements to unnecessarily stringent drainage and plumbing requirements and as between the extravagant and the adequate the occupier of the house would not know the difference.

One of the essentials for the post-war housing programme will be, of course, a sufficiency of timber at a reasonable price, otherwise no house built to the standards which we expect in this country could possibly be an economical proposition.

On this question of cost, have we anything to learn from America? We have. No comparison can be exact, of course, but there can be no doubt that their buildings are produced relatively more cheaply than ours. There is no single reason for this. There are several, and it can best be expressed by saying that there is a different tempo existing throughout the industry. This can be traced very largely to the fact that before the slump in 1931 no architect, builder, or operative had to think twice where his next job was coming from, whereas in this country boom periods, where these conditions have applied, have been rare and of short duration, and it is considered that the great difficulty will be to get the industry in this country out of the depressing attitude of mind that the sooner a job is finished the sooner will unemployment ensue.

AMERICAN STANDARDS

In America wages are high—some two-and-a-half times as high as in this country—but if wages are high, so is output, appreciably higher than is usual in this country. High wages in the American building industry could not have been maintained unless high output had gone hand in hand with them. This high rate of wages has meant a high degree of organization on behalf of the architect and the builder. Mistakes, alterations, and bad organization generally are very expensive luxuries when the price of labour is some 5s. to 7s. 6d. an hour. The American workman is not fundamentally better than his British counterpart, but he does appear to have a different outlook. While he certainly has pride in his skill, he has a very real pride in his output also. This is one of the most noticeable things on a visit to American building work in progress, even in war-time.

In this country the building trade has always appeared to confuse the price of labour with the cost of labour. The price of labour is what it is paid an hour; the cost of it is the output it gives for that price. America's building industry has proved that a high labour price does not necessarily imply a high

labour cost. High output cannot be given by the operative without good organization on the contractor's part. The contractor cannot organize properly unless he has full control of his work and knows in good time what he has to do.

One very significant contrast between American and British building costs is brought out in the mission's report—namely, the relatively high cost of building materials in this country. Materials represent in terms of cost some 60 per cent. to 70 per cent. of the total cost of building, so that however architects, contractors, and operatives may reduce their share of the cost, it cannot be ignored that between them they account for only 30-40 per cent. of the total cost of the work. In comparing costs between Great Britain and America it is significant that the cost of materials there relative to wages is far lower than in this country.

Unless real saving can be effected in the principal building materials, then nothing the architect, builder, or operative can do will be adequate to make the Government's post-war building programme an economic possibility.

ANBS

Sir H. Bellman and S. C. Ramsey

March 10, at the Wigmore Hall, London, W.1. Special Meeting of the Abbey National Building Society. Speeches on HOUSING AFTER THE WAR, by Sir Harold Bellman, Chairman of the ANBS, and on POST-WAR CONTROLS, by Stanley C. Ramsey, F.R.I.B.A., Deputy Chairman.

Sir H. Bellman: The question of providing houses for letting to workers in the lower income groups will undoubtedly assume urgent importance immediately the war is over. Indeed, the urgency may be such that it may be necessary to exercise some measure of official priority regarding both materials and labour in favour of this type of housing. There is no fundamental reason why building societies should not usefully collaborate in the provision of houses for letting; we recognize that differing needs must be met by differing types of accommodation. The societies through their central organization have already expressed their willingness in principle to do so on a considerable scale after the war, but the lessons of the past must be learned if future collaboration is to be fruitful. In particular, a clear line of demarcation must be drawn between houses on the one hand, which must necessarily be let at rents substantially below the economic level (after taking any general, though not any particular subsidy into account), and in respect of which, therefore, the most privileged loan terms possible are essential; this is distinctively the field of the local authority. On the other hand, there is a vast number of houses in connection with which the rent must, by common consent (after taking account of any general subsidy) be substantially at an economic level; this is a field in which the building societies should be able to provide a service on acceptable terms. The building societies have both the will and the means to help.

The building societies are not only willing but well equipped to play their part in this field of post-war reconstruction. If it is borne in mind that their resources made possible over half the houses erected in the years between the wars, then this can be appreciated at its true worth. The societies' total funds have been substantially maintained throughout the war, but their composition has undergone a marked change, which is important in relation to its participation in post-war housing. Thus, at the present time no less than 25 per cent. of the resources of all building societies is, on the average, in reasonably liquid form. Moreover, this margin is almost continuously growing. Consequently, the societies should have no difficulty in making advances on a scale of some £150 million a year after the war—a figure broadly corresponding to a quarter of a million houses per annum. A glance at the balance sheet of the Abbey National as at the commencement of business on New Year's day, with aggregate resources of nearly £82 millions, is sufficient proof that the society will be in the very front rank; we have the money and we can provide the service.

The most significant pointer in this direction is our liquid funds, which already amount to upwards of £15,000,000. Although there is necessarily no new building during the war, there is still some scope for the extension of home ownership. The sitting tenant, for instance, can approach the landlord and enquire if he is willing to sell the house: then the tenant can come to us and we will do all that we can to help.

S. C. Ramsey: Lord Woolton, in a recent speech, has told us that there will be a shortage both of trained personnel and traditional materials for building. Therefore if first things are to come first, in this case houses rather than luxury building, then obviously there will have to be priorities or some system of licensing.

I have frequently thought that the control which is exercised over building societies by the Chief Registrar through the Building Societies Acts is an almost ideal form of control which safeguards our movement whilst allowing the maximum amount of freedom for initiative.

I am also further convinced that if the mistakes of the years between the two world-wars are not to be repeated, some form of control to be exercised by the Ministry of Town and Country Planning is not only desirable but essential. Lord Sankey, the President of the Building Societies' Association, said in his opening address to the Associations' Reconstruction Committee: "There must be no more jerry-building and no more ribbon development."

MOW

Burt Report

The report of the Interdepartmental Committee on House Construction (the Burt Committee) is now being printed and will be published late this month under the title of House Construction. Since the receipt of this report, the three Ministers concerned have reconstituted the Committee and agreed fresh terms of reference.

The new composition of the Committee is as follows:

Members: Sir George Burt, F.I.O.B. (Chairman), R. Coppock, C.B.E., Louis de Soissons, O.B.E., A.R.A., F.R.I.B.A., S.A.D.G., A. B. Gardner, F.R.I.B.A., F.R.I.A.S., L. H. Keay, O.B.E., F.R.I.B.A., R. T. James, M.INST.C.E., J. W. Laing, F.I.O.B., F.A.R.P.I., J. R. McKay, F.R.I.B.A.; G. M. McNaughton, B.SC., M.INST.C.E., M.I.MECH.E., G. W. Mitchell. Secretary; W. A. Procter. Technical Officer: A. M. Chitty, M.A., F.R.I.B.A. The Ministry of Works, the Ministry of Health, the Department of Health for Scotland, and the Department of Scientific and Industrial Research will be represented by observers.

The new terms of reference of the Committee are: "To advise the Minister of Works, the Minister of Health, and the Secretary of State for Scotland on materials and methods of construction for the building of houses and flats; in particular to advise on the experimental work in connection with house building being carried out by the Ministry of Works."

MOW

Experimental Building

The Controller of Experimental Building Development was appointed in June, 1943, to encourage and facilitate practical experiments and demonstrations of new building materials and new methods, including prefabricated components. He works closely with the Interdepartmental Committee on House Construction under the chairmanship of Sir George Burt.

During the last eight months, five hundred and fifty-nine proposals have been submitted by local authorities and private enterprise, a large proportion of which were sufficiently developed for submission to the Burt Committee.

So far 143 proposals have been found suitable for further development and consideration: 87 of these are for complete houses, 23 are sub-assemblies, installations, fittings and prefabricated components, and 33 are new materials, structural units and miscellaneous items.

Certified building experiments which have already started or are about to start total 55. These figures do not include the demonstration houses now being built by the Ministry of Works.

Anyone who requires the assistance of the Ministry regarding a scheme, whatever stage it has reached, should send details to the Controller of Experimental Building Development, Ministry of Works, Lambeth Bridge House, S.E.1.

LIVERPOOL SCHOOL

Course for Americans and Canadians

A course in architecture and town and country planning is now being held for architectural members of the AMERICAN AND CANADIAN ARMED FORCES AT THE LIVERPOOL SCHOOL of Architecture.

The course, which began on March 20 and ends to-morrow, March 24, was arranged by the Liverpool School in association with the British Council. It included a reception by Sir Arnold D. McNair, Vice-Chancellor of the University of Liverpool; lectures on *Architectural Education in Great Britain*, by Professor L. B. Budden, Head of the Liverpool School; *British Municipal Housing of the Present Century*, by Mr. L. H. Keay, City Architect and Director of Housing, Liverpool; *Modern Polish Architecture*, by Mr. Boleslaw Szmidt; and *Contemporary Ecclesiastical Architecture*, by Mr. B. A. Miller; visits to the Harold Cohen Library of the University, conducted by the architect, Harold A. Dodd; the Students' Union, the Metropolitan Cathedral of Liverpool; an afternoon tour of redeveloped and newly-developed areas; a dinner (followed by a dance) under the presidency of Viscount Leverhulme, chairman of the Merseyside Council for Hospitality; and exhibitions of the work of students of the School and of the students of the Polish School of Architecture.

To-day there are an exhibition of the work of the Department of Civic Design; a lecture on *An English Village*, by W. A. Eden; lunch as the guests of the Liverpool Rotary Club: visit to Liverpool Cathedral, conducted by the architect, Sir Giles Gilbert Scott, R.A.; reception and tea given by the Liverpool Architectural Society and the British Council;

and a dinner, reception and dance at Derby Hall. To-morrow the course terminates with a lecture on *Reconstruction and Planning in Great Britain*, by Professor W. G. Holford; a farewell lunch given by the British Council; and a visit to the Philharmonic Hall, Martins Bank Buildings, and the Mersey Tunnel, conducted by the architect, Mr. Herbert J. Rowse.

MSA

Competition

February 24. Special meeting of members of the Manchester Society of Architects. The winners of prizes in the annual students' competition received their awards from Mr. H. T. Seward, F.R.I.B.A., the President. The awards were as follows:

Senior Measured Drawings Prizes.—First: Bradshaw Gass Prize: R. Latte (Manchester University School of Architecture). Second: Society's Prize, Miss M. Heatley (Manchester University School of Architecture).

Junior Measured Drawings Prize.—Society's Prize: Brian G. Cobb (Manchester University School of Architecture). An additional prize awarded to Joyce Edmunds (Manchester University School of Architecture).

Sketches Prizes.—Beaumont Prize: Brian G. Cobb (Manchester University School of Architecture). Education Committee Prize: John B. Bickerdike (School of Architecture, Municipal School of Art).

Essay Prize.—President's Prize: Joyce Edmunds (Manchester University School of Architecture). Subject of winning essay, English Wallpaper Design.

Senior Design Prize.—Subject, A Children's Welfare Centre. First: Society's Prize: John B. Bickerdike (School of Architecture, Municipal School of Art). Second: Woodhouse Bequest: Derek Wrigley (School of Architecture, Municipal School of Art).

Junior Design Prize.—Subject, A Youth Hostel. Society's Prize: Eluned Lewis (Manchester University School of Architecture).

ANNOUNCEMENTS

MOW announces the following changes in the staff of its Regional Plant Advisers: Regions 4, 5, 6 and 11, Mr. H. Cooper has been appointed Assistant Director of Plant; Mr. J. C. Watson has taken Mr. Cooper's place as Regional Plant Adviser for London and the south-east, and Mr. C. P. Clement-Davies will be temporarily in charge of Region 6, Whiteknights Road, Earley, Reading. (Tel. Reading 61431.) Regions 1, 2 and 10, Mr. R. Draper will act as Regional Plant Adviser for Regions 1, 2 and 10, with the assistance of Mr. C. A. Kitson in Region 10.

MOW announces that, as from April 3, the following items have been added to the list of contractors' plant which can be purchased only under permit: (i) Portable asphalt plants and bituminous mixers; (ii) Tar and bitumen boilers, asphalt mixers, cookers and cauldrons, patching outfits; (iii) Gritting machines (for use in conjunction with tar spraying machines only) and cold emulsion sprayers; (iv) Bituminous spreaders and finishers. Applications for permits to purchase should be made to A.S.72, Ministry of Works, Lambeth Bridge House, Albert Embankment, London, S.E.1.

The Home Timber Production Department of the Ministry of Supply announces the following changes in its Divisional Officers: Mr. Frank Scott, O.B.E., Perth—retired; Mr. H. C. Beresford Peirse, Aberdeen—returning to Forestry Commission at the request of that Department; Mr. A. W. Moodie—transferred from Dumfries (on the closing of that Divisional Office) to Perth; Mr. J. Macdonald—transferred from Nottingham to Aberdeen; Mr. A. H. Popert—transferred from Lyndhurst to Nottingham; Mr. W. H. M. Collin, Headquarters—to Lyndhurst.

Mr. J. P. Powell has resigned his position as Deputy Controller in the Timber Control Department of the Ministry of Supply. As a member of the Board of Denny, Mott & Dickson, Ltd., he was seconded for this service in October, 1939, and will be rejoining them in that capacity in mid-April.

Messrs. F. McNeill & Co., Ltd., announce the opening of a new London office at 10, Lower Grosvenor Place, London, S.W.1 (Telephone, Victoria 6022). On and after April 1 all correspondence and enquiries should be sent to this new address.

Mr. Leonard Blausten, F.F.A.S., F.F.S. (ENG.), architect and surveyor, has opened an office at 52, Brook Street, Grosvenor Square, W.1—Mayfair 8771—where he will be pleased to receive manufacturers' catalogues and circulars relating to post-war housing.

Messrs. W. H. Saunders & Son, architects, have moved to No. 2, Carlton Crescent, Southampton. Telephone: Southampton 2002.

OBITUARY

Dr. William Kelly, the architect, has died in Aberdeen at the age of 82. Among the Aberdeen buildings he designed are the Savings Bank, St. Ninian Church, additions to the Royal Infirmary, the Royal Asylum, the Music Hall and the parapets of Union Bridge. He also designed many war memorials in Scotland.

CLASSIFIED ADVERTISEMENTS

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

COUNTY BOROUGH OF BARNSLEY.

Applications are invited for the appointment of an Assistant Architect on the Borough Engineer and Surveyor's Staff.

The Salary will be £350 per annum plus War Bonus, rising subject to satisfactory service by increments of £10 to £400 per annum in accordance with the Corporation's Grading Scheme.

The applicant will be subject to the Local Government Superannuation Act and the successful applicant will be required to pass a medical examination.

Applications stating age, qualifications and experience, together with copies of two testimonials should reach the Borough Engineer and Surveyor, Town Hall, Barnsley, on or before 29th March, 1944.

A. E. GILFILLAN,
Town Clerk.
578

GLOUCESTERSHIRE COUNTY COUNCIL.

SENIOR PLANNING ASSISTANT.

Applications are invited for the appointment of a temporary Senior Planning Assistant in the County Planning Department at a salary of either £312 or £364 per annum, according to qualifications and experience, plus war bonus (at present 17s. 6d. per week). Travelling allowances will be payable in accordance with the Council's scale.

The higher salary will be paid to the successful applicant who has passed the examination of the Joint Planning Board and is an Associate Member of the Town Planning Institute.

The successful applicant will be required to pass a medical examination. The appointment will be terminable by one month's notice on either side.

Applicants must be above military age or otherwise not liable for military service.

Applications stating age, qualifications, and experience, should reach The County Planning Officer not later than April 4th, 1944.

GUY H. DAVIS,
Clerk of the County Council.
579

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.

JUNIOR ARCHITECTURAL ASSISTANT required for West Norfolk. Apply stating experience, age and salary required, to Box 271. Permanent position with good prospects. [Architect and Surveyor].

EXPERIENCED ASSISTANTS required, London office, for urgent Post War work. Reply stating age, nationality, details of experience and approximate salary. Box 273. [Architects.]

ARCHITECTS JUNIOR ASSISTANT required with good experience in measuring up and plotting sites and buildings. Must be accurate draughtsman, and able to prepare working drawings under instruction. References required. Apply by letter with full particulars and salary required to Dyneley Luker & Moore, 1, Lincoln's Inn Fields, W.C.2. [Registered Architects.] 575

TEMPORARY TOWN PLANNING ASSISTANT (man or woman) required. Good draughtsman, preferably with architectural and town planning experience, or University student recently graduated might be considered. The position offers good opportunity of obtaining experience in Town Planning. Salary £300 per annum plus £45 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 Order No. 328, should be addressed to the Ministry of Labour and National Service, Appointments Office, 48, Prince of Wales Road, Norwich. 576

JUNIOR ARCHITECTURAL ASSISTANT required for W.R. Yorks., office. Apply, stating age, experience and salary required to Box 580. [Architects and Surveyors.]

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.

ENTERPRISING AND CAPABLE ARCHITECT, B.A.(Hon.), A.R.I.B.A., wide experience, requires responsible and interesting appointment. Box 263.

Classified Advertisements continued on page xxxvi.

QUALIFIED ASSISTANT, B.A. (Arch.), A.R.I.B.A., seeks position. Experienced in all types of work, including design and supervision of industrial and other buildings for war purposes. Salary by arrangement. Box 265.

STUDENT (24); exempt R.I.B.A. Intermediate; four years' training in fully-recognized school; knowledge of all branches of architecture; desires position in London area. Available in a month—or later Excellent testimonials available. Box 267.

COST INVESTIGATOR AND MEASURING SURVEYOR, would like situation in Lancashire district. 18 years' experience with contractor and two years' experience with Quantity Surveyors. Box 268.

ARCHITECT, A.R.I.B.A., A.M.T.P.I., would be glad to undertake preparation of drawings in own office in Birmingham district. 15 years' experience in varied high-class work. Box 269.

ARCHITECT (registered), L.R.I.B.A. (quantity-surveyor), age 38, desires responsible position (near Birmingham), experienced, Licensed Premises, Hospitals, Faetories, Housing Estates, Hotels, Land and Building Surveys, working drawings, details, specifications, bills of quantities, supervision of works and final accounts. Salary £450—£500 p.a. Box 272.

ARCHITECT, L.R.I.B.A., 33, married, exempt M.S., seeks permanent position in Southern Counties; 15 years' experience in private and public offices; all-round knowledge architectural design and construction; surveying, levelling, estimates, etc. Salary £600. Write Box 274.

ARCHITECT, fully qualified, A.M.T.P.I., with long practice, first-class references, seeks change. Would consider responsible position where initiative, drive and capability appreciated. Post-war development, housing, prefabrication, town planning. Reply to Box 275.

ARCHITECTURAL ASSISTANT desires change. Keen, practical. Experience in private, commercial and Local Government offices, and constructional experience. Now studying for R.I.B.A. Age 21. Exempt H.M. Forces. Box 276.

ASSISTANT. Continental Architect, with degree and experience of 15 years. Specially conversion of houses. London area. Box 278.

AN EGYPTIAN ARCHITECT and Inc. Quantity Surveyor desires position with an English firm intended to work in Egypt at present or after the war, high qualifications, 12 years' experience in Egypt as an architect and contractor, including about 3 years as civilian quantity surveyor with the W.D. Write to N. Morsy, 167, Khedevi Ismail Street, Cairo, Egypt, stating conditions, etc. 279

ARCHITECT L.R.I.B.A. (33) requires post (or would assist) on work providing scope for an experience commencing with a practical training in various trades; jobs covering: structural alterations, flat conversions, housing schemes, shop and multiple stores, shopfitting and public buildings up to £18,000 (pre-war), R.O. factories, surveys, schemes, perspectives, working plans and drawings, specifications (Schedules of), dilapidations, war damage, labour and materials, estimates, invalided out of R.E.'s 1942. Present remuneration £455. Box 280.

Other Appointments Vacant

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