THE ARCHITECTS' JOURNAL

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★ The war has both multiplied the number of Official Departments and encouraged Societies and Committees of all kinds to become more vocal. The result is a growing output of official and group propaganda. A glossary of abbreviations is now provided below, together with the full address and telephone number of the organizations concerned. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association. 34/6, Bedford Square, W.C.1.	Museum 0974
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. Shobnall Road, Burton-on-Trent.	Burton-on-Trent 3350
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	British Steelwork Association. 11, Tothill Street, S.W.1.	Whitehall 5073
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CEMA	Council for the Encouragement of Music and the Arts. 9, Belgrave Square, S.W.1.	Sloane 0421
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CSI	Chartered Surveyors' Institution. 12, Great George Street, S.W.1.	Whitehall 5322
DIA	Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2.	Whitehall 2415
DOT	Department of Overseas Trade. Dolphin Square, S.W.1.	Victoria 4477
EJMA	English Joinery Manufacturers Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FMB	Federation of Master Builders. 23 Compton Terrace, Upper Street, N.1.	Canonbury 2041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 55, Great Ormond Street, W.C.1.	Holborn 2664
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2.	Temple Bar 7676
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128-29
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767
MARS	Modern Architectural Research. 46, Sheffield Terrace, W.8.	Park 7678
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Belgrave Square, S.W.1.	Sloane 4522
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOI	Ministry of Information. Malet Street, W.C.1.	Euston 4521
MOLNS	Ministry of Labour and National Service, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Abbey 7711
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94, Petty France, S.W.1.	Abbey 1010
NBR	National Buildings Record. 66, Portland Place, W.1.	Welbeck 1881
	All Souls' College, Oxford.	Oxford 48809
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041
NFBTO	National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1.	Holborn 2770
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 2881/2/3
NT	National Trust for Places of Historic Interest or Natural Beauty. 7, Buckingham Palace Gardens, S.W.1.	Sloane 5808
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Temple Bar 8274
SFMA	School Furniture Manufacturers' Association. 13, New Square, Lincoln's Inn, W.C.	Chancery 5313
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6147
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815

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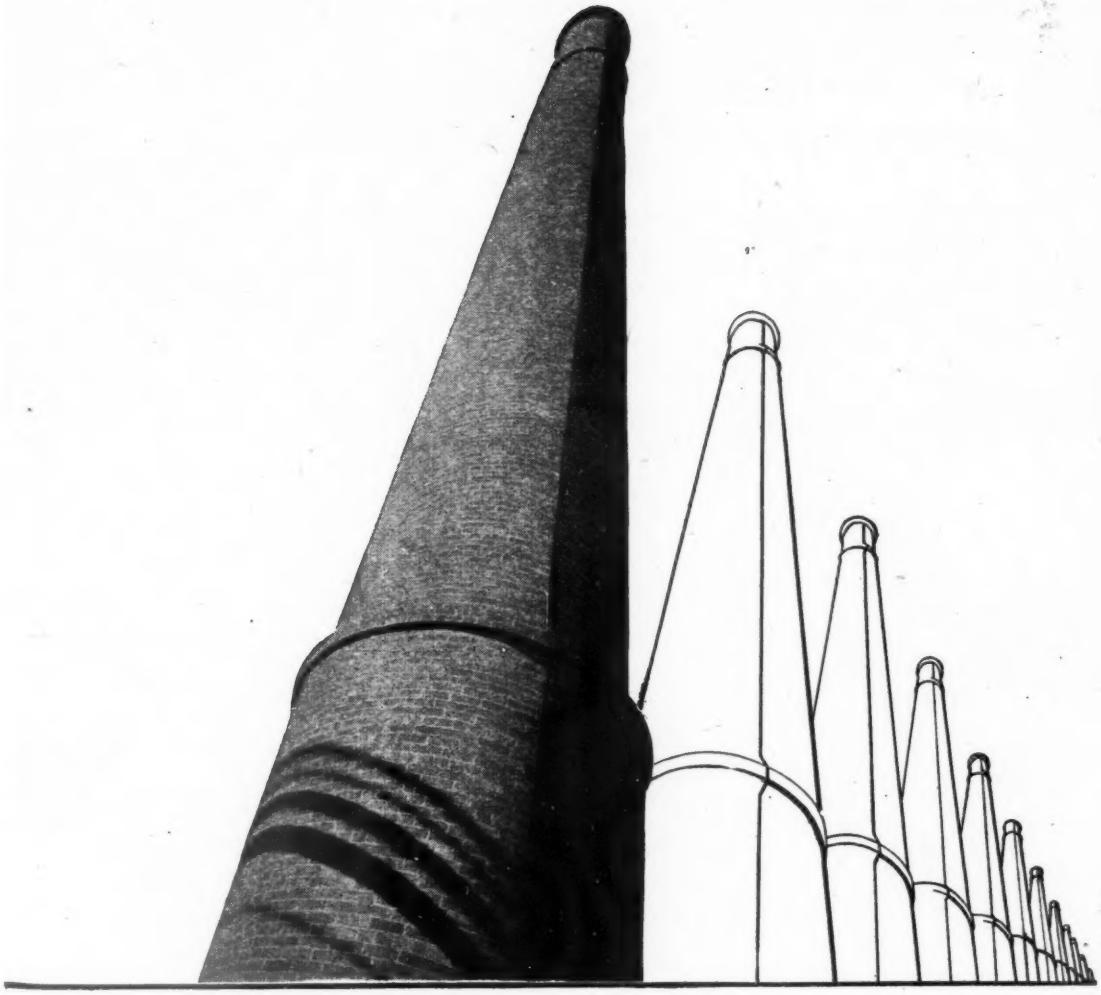

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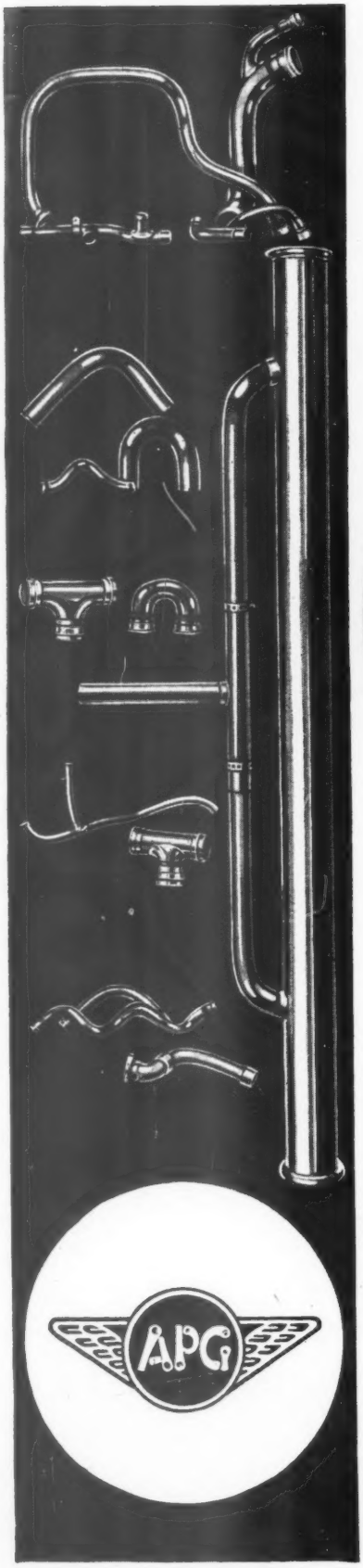

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Painting by Anna Zinkeisen

This Present Age . . 5

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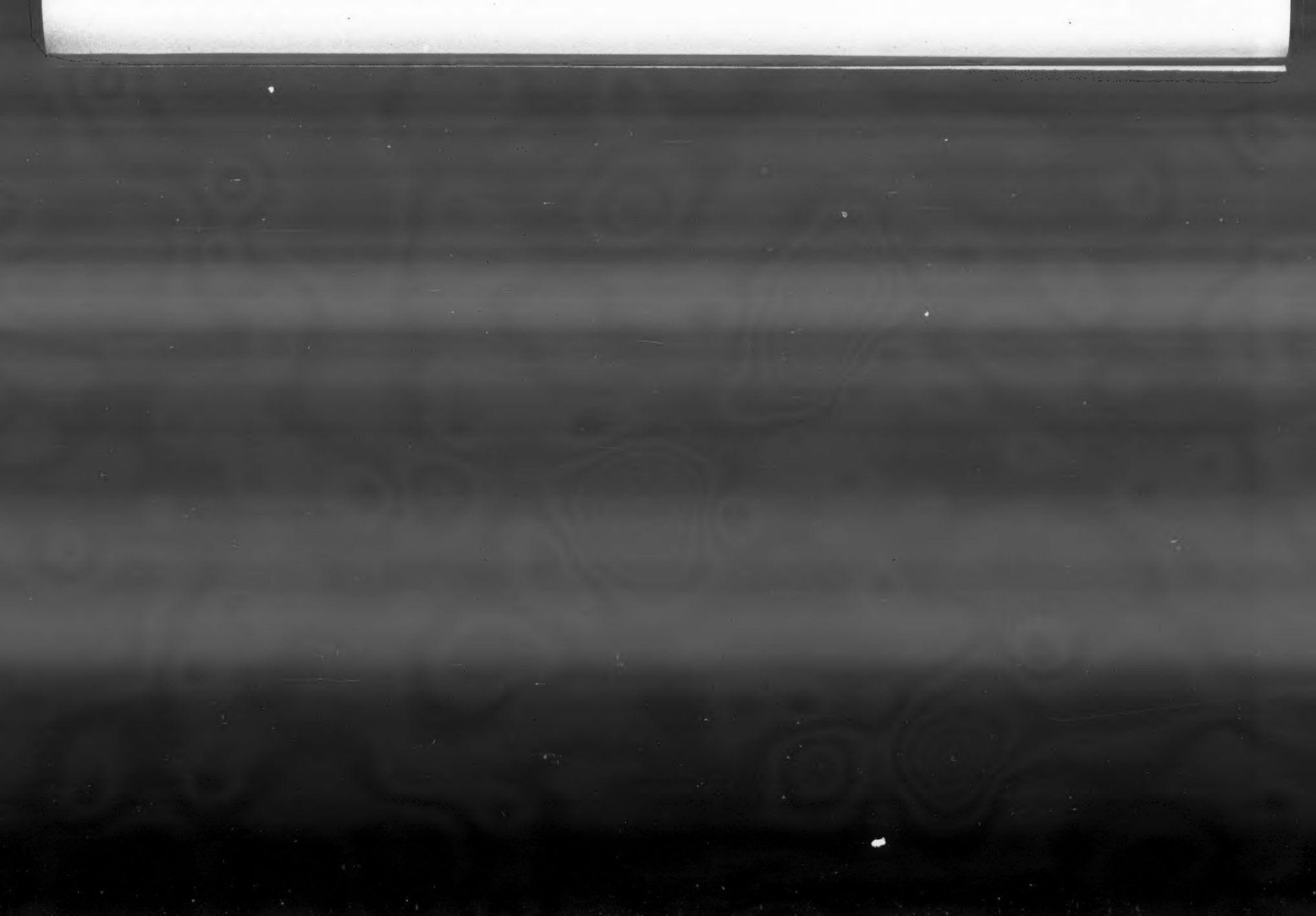

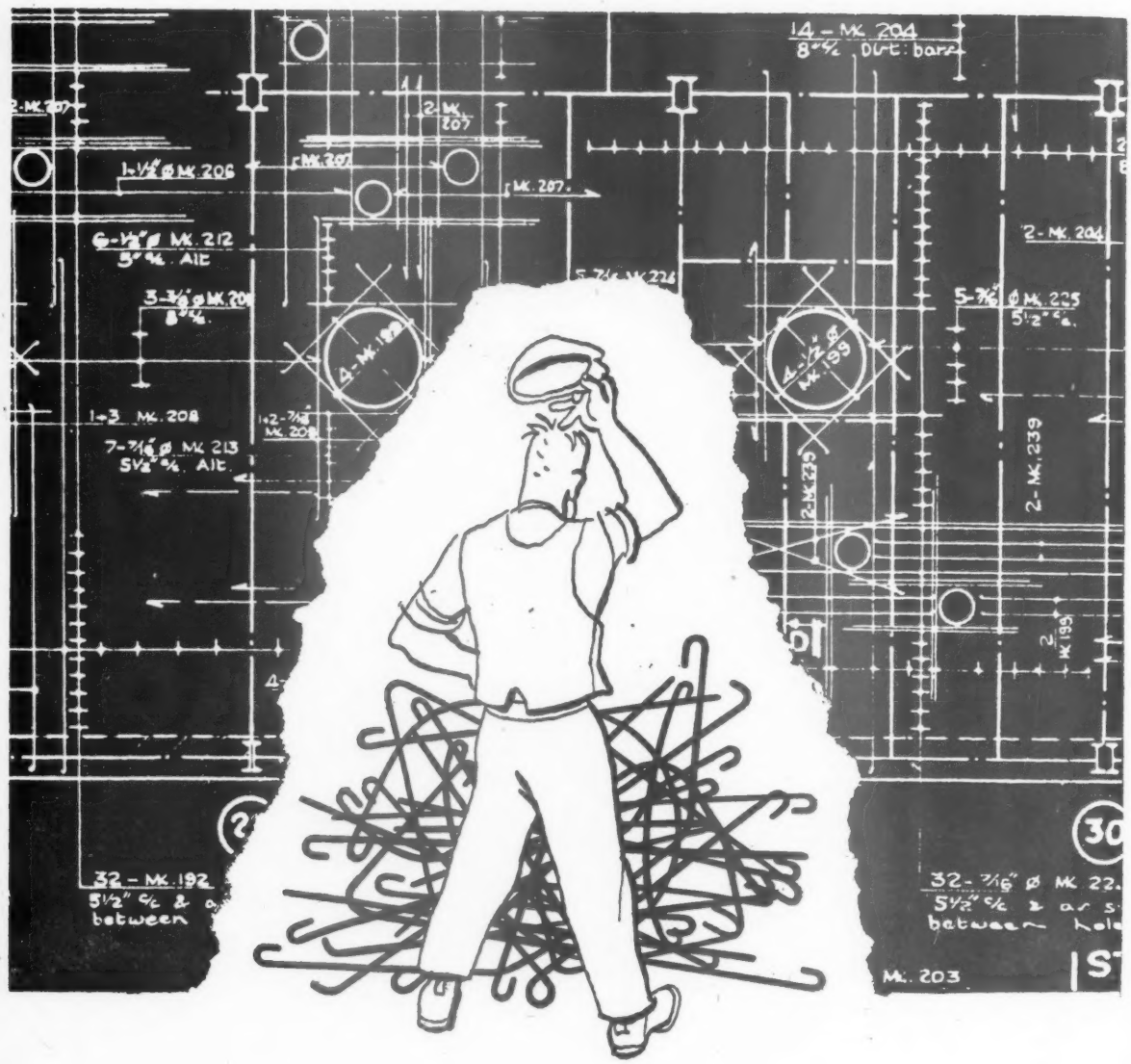

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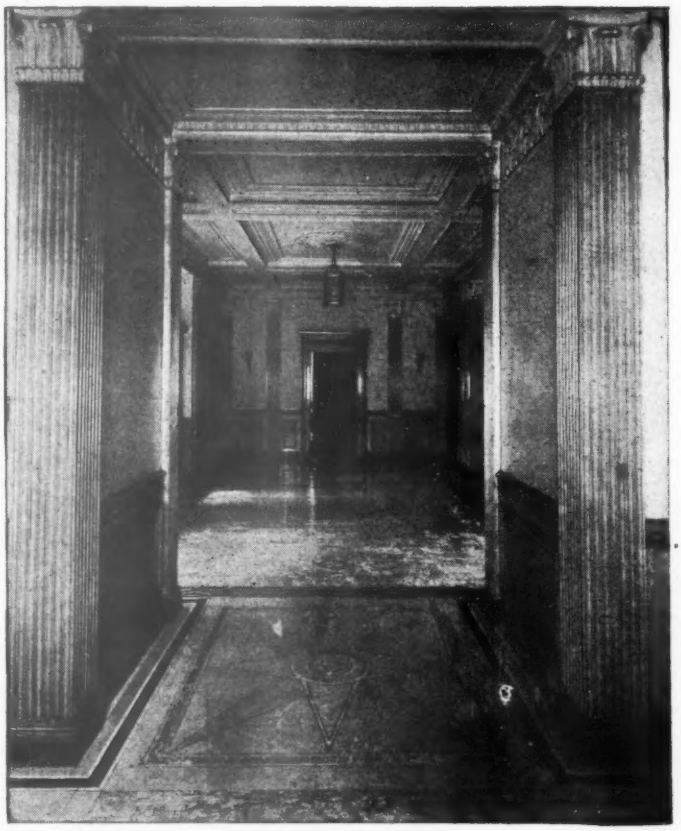

This is an unretouched photograph taken in April, 1945, of part of the rubber floor installed in 1932 at Martins Bank, Liverpool. It is published to indicate how Dunlop Rubber Floors stand up to hard wear over a long period.

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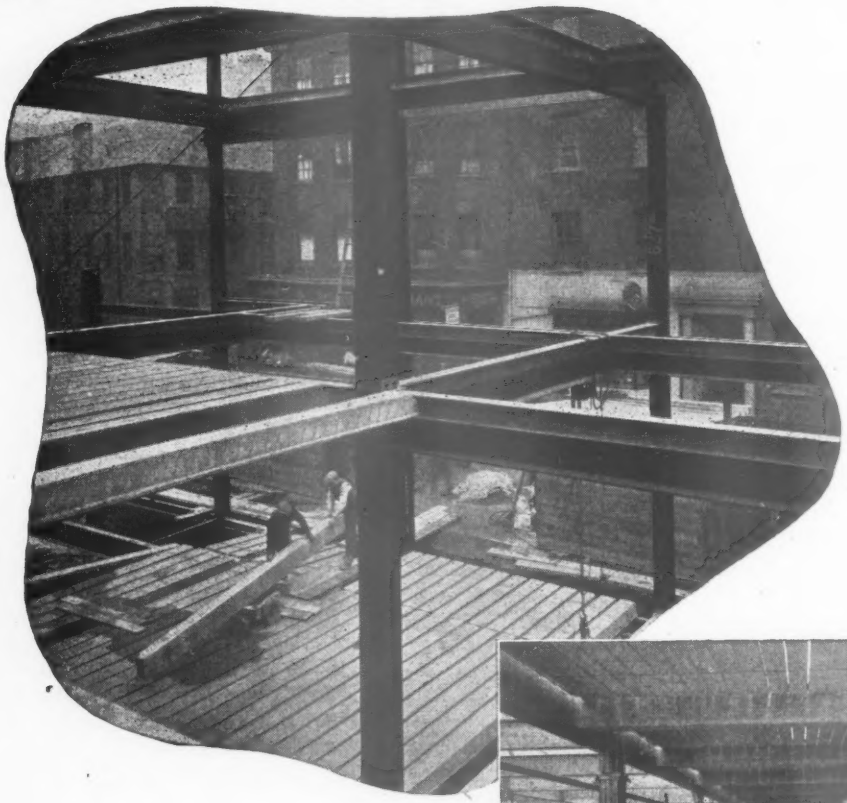

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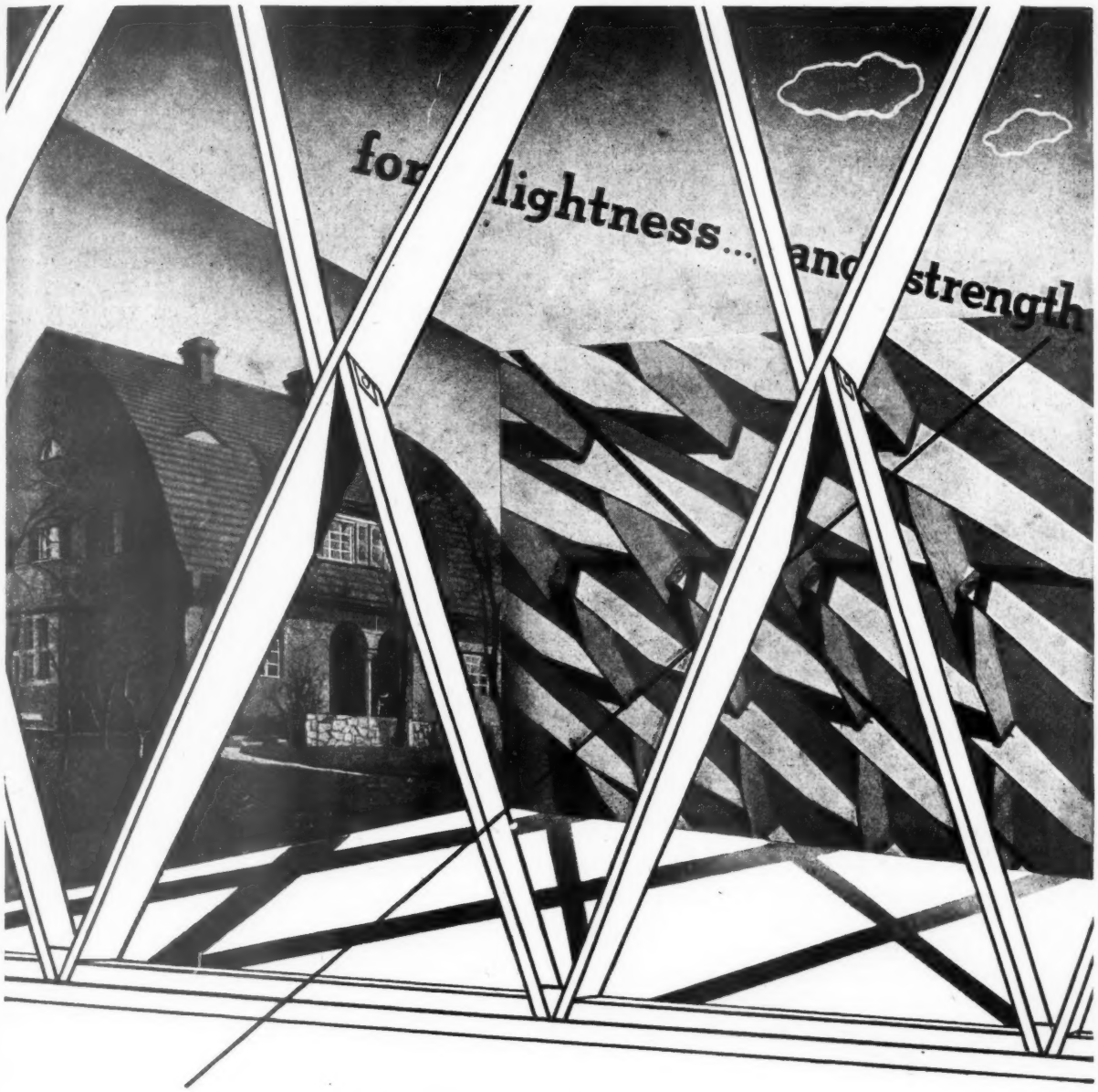

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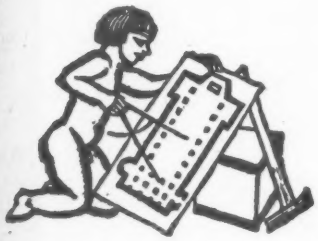
In common with every other periodical this JOURNAL *is rationed to a small part of its peace-time needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents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

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.

CARDIFF. *Kitchen Planning Exhibition.* At James Howell & Co.'s stores. JULY 5-14

LONDON. *Royal Academy of Arts.* One Hundred and Seventy-Seventh Summer Exhibition. JULY 5 to AUG. 15

Conversion and Reconditioning. One-day Conference at the Housing Centre, 13, Suffolk Street, Haymarket, S.W.1. Mrs. Muriel Gee, *Conversion of the Town House.* Walter H. Godfrey, *Conversion of the Country House.* Conference fee, 2s. 6d.; lunch, 2s. 6d.; conference report, 5s. (Sponsor, HC.) 10 a.m. to 5 p.m. JULY 6

Federation of Master Builders. Luncheon meeting preceding quarterly business meeting. At Connaught Rooms, Great Queen Street, W.C.2. Guest of honour, H. U. Willink, K.C. 1 p.m. JULY 10

AA Annual Prize Day and Exhibition of School Work. At 34-36, Bedford Square, W.C.1. Speeches in the Library 3.30 p.m., when the exhibition will be formally opened; afterwards tea will be served from 4.30 p.m. A dance, arranged by the AA Students' Club will begin at 8 p.m. and end at 5 a.m. Tickets 5s. each. The exhibition will remain open until August 10. (Sponsor, AA School of Architecture.) JULY 13

Daily Herald Post-war Homes Exhibition. At Dorland Hall, Regent Street, S.W.1. 10.30 a.m. to 8.30 p.m. (Sundays excepted). The purpose of the Exhibition is to present to the public a wide survey of some of the most up-to-date methods employed in construction, equipping and furnishing a home. (Sponsor, *Daily Herald.*) JULY 5-AUG. 25

News of the World Housing Exhibition. At Selfridges, Oxford Street, W. 10 a.m. to 5 p.m. Saturdays, 10 a.m. to 12.30 p.m. (Sponsor, the *News of the World.*) JULY 16-AUG. 11

National Federation of Building Trades Employers' Half-Yearly Meeting. At the Connaught Rooms. G. W. Buchanan will preside, and representatives of the eleven Regions into which the Federation is divided —they cover every county in England and Wales—will be present. JULY 18

Three films illustrating American building past and present, by courtesy of the USA Government: *The Home Place; Valley of Tennessee; The City.* At the Assembly Hall, Royal Empire Society, Craven Street Entrance, Strand, W.C.2. (Sponsor, IAAS, London branch). 6 p.m. Tickets from IAAS, 75, Eaton Place, S.W.1. JULY 19

BINC Second Building Congress. At Central Hall, Westminster, S.W.1. The general object of the congress will be to enable those in both official and private positions to meet and discuss the many problems facing the building group of professions and industries at the present time. 10 a.m. Opening of the congress by the Lord Archbishop of York. First Session: Dicussion on the *supply of labour and materials for post-war building.* Speaker: Ernest Bevin, M.P., Minister of Labour, 1940-45. Discussion opened by: J. W. Stephenson (President of the National Federation of Building Trades Operatives and Vice-Chairman, National Joint Council for the Building Industry), and Sir P. Malcolm Stewart, Bt. (President, National Council of BMP). 2.15 p.m. Second Session: Discussion on the position of the *building industries and the local authorities in relation to post-war housing.* Speaker: The Minister of Health (H. U. Willink, M.P.). Discussion opened by: E. B. Gillett (President, Chartered Surveyors' Institution). 10 a.m. Civic Welcome by the Mayor of Westminster (Councillor Douglas Wood, F.R.I.B.A.). Third Session: Discussion on the *organization of the building industries and their future relationships with Government Departments.* Speaker: The Minister of Works (Duncan Sandys, M.P.). Discussion opened by W. H. Forsdike (Senior Vice-President National Federation of Building Trades Employers and Chairman National Joint Council for the Building Industry). 2.15 p.m. Fourth Session: Discussion of the *place of the building industries in the resuscitation of economic activity and in the maintenance of full employment thereafter, and on the need in this connection for a balanced building programme.* Speaker: The Minister of Labour (R. A. Butler, M.P.). Discussion opened by Percy Thomas (President of the RIBA). 4.30 p.m. Summing up of congress by the President and Chairman of Congress Committee. Admission to the congress, open to all in any way interested in the activities of the building group of professions and industries, will be by ticket price 1 guinea, obtainable from the Building Industries National Council, 11, Weymouth Street, W.1. The fee will include Buffet Lunch, to be served each day between sessions in the Central Hall. (Sponsor, BINC.) JULY 24-25

NEWS

THURSDAY, JULY 5, 1945
No. 2632. VOL. 102

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.*

Brighton's land-mark, the Queen Victoria JUBILEE CLOCK TOWER MAY BE MOVED in the town's replanning.

This is one of the recommendations of the Planning Committee, which also include improvements to the Front and the King's Road, the rebuilding of the Town Hall, and the possible removal of the Fish Market.

The Builders (Working Parties) Association is forming SMALL LIMITED COMPANIES OF CONTRACTORS to deal with war damage repairs.

The names of the firms wil contain the names of their districts, *e.g.*, Working Parties Contractors (Hornsey), Ltd. Each company will be composed of 5 to 6 small contractors with a balanced man-power of 35 to 40 operatives. Each company will act autonomously so far as local supervision profit, etc., is concerned, but will be guided by the central body of Hon. Officers of the Association for arranging of contracts, purchase of materials, costing, licensing, and balancing of groups and labour. This scheme will enable every contractor, however small, to take on Fixed Price Contracts on the same footing as the large contractors. The scheme has the full approval of the War Damage Commission and the Ministries concerned.

From AN ARCHITECT'S *Commonplace Book*

LONDON ROAD EXPERIMENT OF 1816. [*From* Walks Through London, *by David Hughson, published in* The London Miscellany, *compiled by Robert Harling* (*Heinemann*)]. Another material improvement is exhibited in Black Friars Road or Great Surrey-Street, near the corner of Holland-Street, in the application of *iron* in lieu of stone, as a substitute for pavement in the streets of this metropolis. This succedaneum consists of square pieces of cast iron suitably shaped, roughed and dovetailed. This experiment, made in the summer of 1816, has succeeded so far, that it has been resolved to pave some streets in the city in this manner, and to begin with Wood-Street, Cheapside. It is computed that an iron pavement well adjusted will endure twenty years in a great thoroughfare ; whereas, it is too well known, that a stone pavement very frequently requires repairs, and a new adjustment. The pieces already laid down resemble a batch of eight or nine rolls, and are united like the parts of a dissected map, without interstices or even palpable joints. From their sustaining every kind of load, and the roughest usage, there is no doubt of the ultimate success of this invention.

Applications to the Board of Trade show that* 10,000 *A DAY WANT FURNITURE.

Nearly 1,000,000 people are planning to set up new homes, and applications for utility furniture permits are arriving at the Board of Trade at the rate of 10,000 a day. Government staffs are being increased to deal with them. The Board has announced that all permits and priority dockets will in future be issued only from the Utility Furniture Office, Board of Trade, Kingsway, Southport, Lancs.

★★

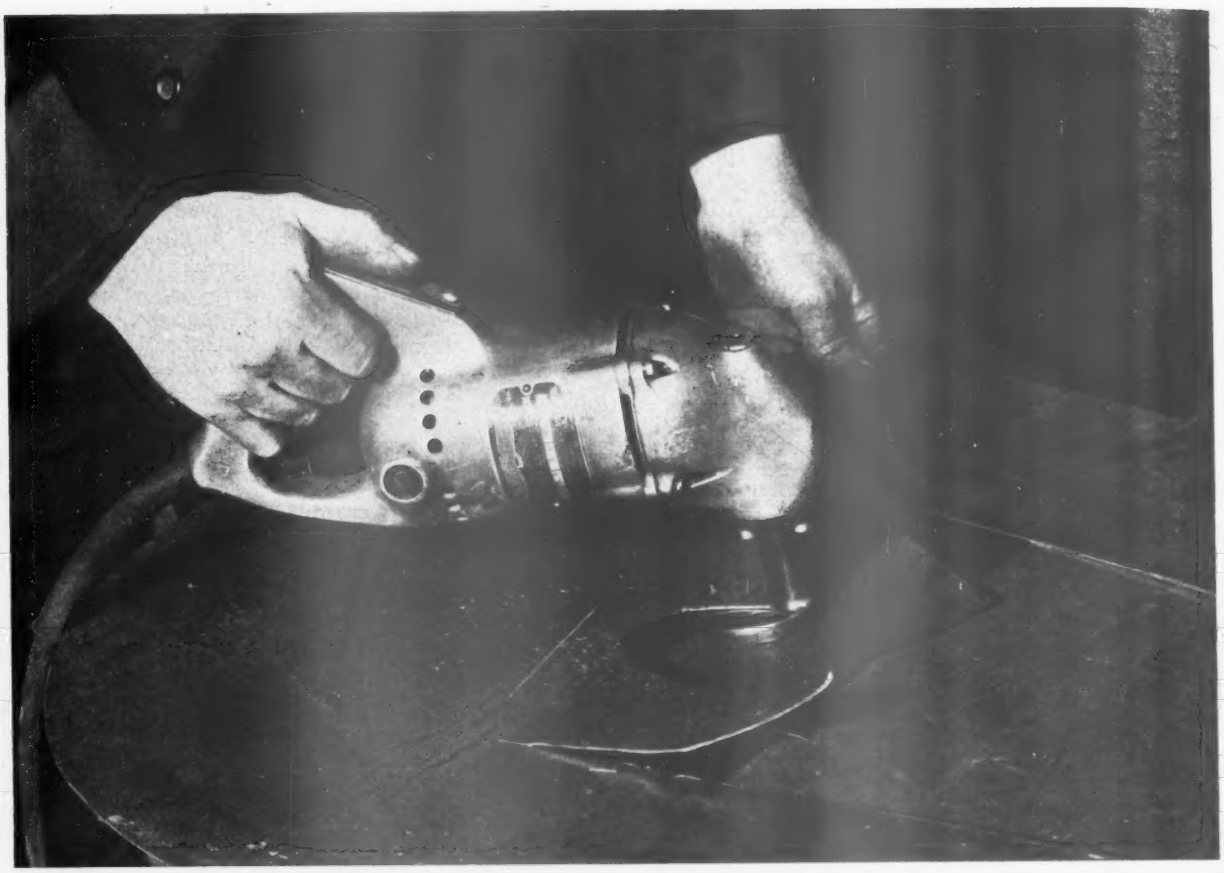
The Ministry of Health has sent a circular on the PERMANENT HOUSE PROGRAMME to all Housing Authorities. Important extracts are given below.

It is to houses built by traditional methods of construction that Local Authorities will in the first place look to meet the needs of their districts and it is the Government's policy that provision shall be made for the erection of such houses both by Local Authorities and by private persons, including Housing Associations, and by the rebuilding of 'cost of works' houses in districts which have suffered from war damage. As regards 'cost of works' houses it is, as stated by the Minister in the House on June 7, the policy of the Government to give a high priority in the building programme to the building of houses of this category which are of a rateable value not greater than £100 in London and £75 elsewhere, and it is intended that such of these houses as are not excluded on town planning or other grounds should be included in the building programme for the first two years to the maximum practicable extent. As regards houses to be built by private builders the Government have decided, as also announced by the Minister in the House on June 7th, in order to facilitate the building of small houses during the present building season, to issue licences for the erection of such houses. These licences will be issued by the Regional Licensing Officers of the Ministry of Works, and will only be issued in respect of houses which (*a*) are of a size ranging from 800 to 1,000 superficial feet in the case of two storey houses or from 730 to 930 superficial feet in the case of one storey houses or flats; (*b*) are subject to a controlled contract or selling price which will vary according to the size of the house, subject to an overriding maximum price of £1,200, including land, roads and services; (*c*) are approved by the planning and bye-law authorities. The number of houses to be licensed in any area, whether 'cost of works' houses or new houses to be built by private builders will be settled after consultation with the Local Authority, and will be in relation to all available resources and the programme of the Local Authority for house building. It is necessary to plan immediate house building on the present labour force as it lies. It is clear, therefore, that though tenders may have been accepted, and after making allowance for labour required for the rebuilding of 'cost of works' houses and a reasonable quota for houses to be built by private builders, there may remain unused a considerable amount of suitable labour and house building capacity in the hands of unsuccessful tenderers or firms not in a position to tender. If this labour and capacity can be brought into play it will very much widen the scope of the immediate house building effort. With a view to this object the Minister of Works has, in consultation with representatives of the building industry, assessed the possibilities and is satisfied that much capacity and labour could be effectively made available by means of contracts negotiated between Local Authorities and local builders at agreed prices. Such schemes will have the additional advantage of increasing the suitable work for the training of apprentices.

The Minister of Health has appointed Capt. Geoffrey C. H. Crawshay, to be CHAIRMAN OF THE WELSH BOARD OF HEALTH, in succession to Mr. I. F. Armer, M.C., who has been appointed to be a Principal Assistant Secretary in the Ministry of Health, Whitehall.

An outline redevelopment plan and report for the city of Worcester are to be prepared by Messrs. Minoprio and Spencely, who have been APPOINTED TOWN PLANNING CONSULTANTS to the Council.

A view of a prototype of a pair of houses which have just been completed at Sutton. Built by Wates, a firm concerned in the construction of the Mulberry Harbour, the houses are of precast reinforced concrete panel units stiffened by ribs of concrete poured into cavities formed at the joints of the units. Insulation is by glass quilt. A model of the house is one of the nine exhibited at the Daily Herald Post-War Homes Exhibition *at Dorland Hall, which Astragal comments on this week.*



Hand Tools Plus

Three electric power driven hand tools exhibited at the Ministry of Works mobile demonstration referred to in this week's leading article. Such tools have hitherto been little used in building in this country, compared with the USA. Now the Ministry of Works is stimulating their production and use in order to speed up house building. Top, a metal shearer; below left, a drill; below right, a saw, which can rip timber at twenty times the speed of the ordinary hand saw. The demonstration, sponsored by MOW, will now tour the country.

Already nearly two hundred and fifty architects have submitted competitive designs for the new CRYSTAL PALACE.

Sir Henry Buckland, general manager of the Crystal Palace, states that nearly 250 architects had already submitted competition designs for the new Palace. Between 5,000 and 6,000 architects from all parts of the world have made inquiries, and thousands of further entries are expected.

★

Mr. Duncan Sandys, Minister of Works, has appointed a DOMESTIC USERS PANEL.

The Panel will advise the Minister on matters relating to fitments, component and other internal arrangements in small houses from the standpoint of domestic convenience. The Chairman of the new Panel is the Dowager Lady Reading, J.P., and the members who were nominated by the bodies they represent are as follows:—Society of Women Housing Managers, Miss E. Bedwell; Central Housing Advisory Committee (Ministry of Health), Sir Harold Bellman; Women's Advisory Housing Council, Mrs. D'Arcy Braddell; National Federation of Women's Institutes, Lady Brunnen; British Legion—Women's Section, Councillor Mrs. E. Chamberlain, J.P.; National Union of Domestic Workers, Miss L. Gentle; Central Housing Advisory Committee (Ministry of Health), Mrs. E. Gooch, J.P., C.C.; RIBA, Mr. G. Grey Wornum; Women's Co-operative Guild, Mrs. G. Lloyd; the Department of Health for Scotland, Miss D. H. Melvin, O.B.E.; National Institute of Industrial Psychology, Mrs. Winifred Raphael. The Technical Secretary is Mr. C. R. Fowkes, A.R.I.B.A., A.M.P.T.I.,; the Administrative Secretary, Mr L. W. Burton.

★★

Work started last week at Alnwick Road, Woolwich, on the erection of TWENTY-TWO SEMI-DETACHED AND TERRACE HOWARD HOUSES, the first group of Britain's post-war permanent prefabricated dwellings to be built for occupation.

The steel frame Howard house (illustrated in the A.J., April 26, 1945, sponsored by John Howard & Co., and designed by Mr. Frederick Gibberd, is one of a dozen or so of the most promising of the non-traditional systems on which development is being pressed forward. The work is being undertaken by the firms themselves, with the advice and assistance of the technical staff of the Ministry of Works. The Minister of Works has arranged for groups of 50 or more of each type selected by the Burt Committee as being technically sound, and which appear promising from the point of view of saving labour, to be constructed in different parts of the country. In the case of the Howard house sufficient progress has been made to enable a pilot order for 3,400 houses to be placed. Small scale production has started, and arrangements are in hand for the houses to be delivered to local authorities to form part of their housing programmes. These houses will normally be erected by local contractors. Erection of the 22 houses (seven pairs of semi-detached and two terraces of four each) is expected to take 10 weeks. An interesting feature in their erection is the delivery of the complete kitchen, weighing 23 cwt., to the site.

POWER TO THE TOOLS

"IN Aircraft Production and other important war industries, power-driven hand tools have played a vital part. They have created better conditions for the worker and have helped him to develop his full capacity as a producer and wage-earner. Houses are the next big job. The same kind of tools will help to build them faster and with less effort." So ran the opening gambit of the Modern Building Tools demonstration, held last week on the bombed site behind St. Paul's. It is a healthy sign that the Ministry of Works is itself sponsoring this demonstration of which a mobile unit will now tour the country to provide visible proof of the value of power-driven hand tools to contractors, foremen, operatives, trainees, architects and surveyors, housing authorities and all concerned with rebuilding. The first stop is to be at Goose Green Fair, Nottingham, from July 11 to July 14, and then Holbeck Moor, Leeds, from July 25 to July 28. A programme for other towns is being arranged.

Power-driven hand tools have been known in this country for some time, and have been used considerably in factories, but we have been slow to apply them to building. In the United States they have been generally used for some time probably as much through force of economic pressure as anything else, for the wages of the American skilled craftsman are very high, and the building employer there has found that unless the craftsman is backed with mechanical power costs become excessive ; he has found, in fact, that building is too expensive without these expensive tools. Now circumstances are forcing us to use them in this country in that they do indeed provide a very important aid to solving the housing problem quickly.

One example, among many, of how much time can be saved, is that of the power-driven hand saw which can work at twenty times the speed of the ordinary hand saw. Besides the saw, there are many other types of tool, of which only a representative selection is being shown in the mobile demonstration ; among them are routers, planers, drills, tappers, screwdrivers, shears, hammers (mainly for percussion drilling), nut runners, grinders, sanders and polishers. With such tools screws can be driven home, slates, bricks, asbestos cement, plastics, metal, can be cut without waste or breakage, metal can be sheared, ground and polished, concrete and brick can be drilled and faced, wood can be ripped, cross cut, routed, grooved, and planed—all with little human effort and with remarkable speed and accuracy. The paint sprayer is another tool with great advantages, and one which had already been more widely used here before the war than other power-driven tools.

As yet, production of these tools has not been fully developed in this country, but efficient sales should start next year. Two associations of British manufacturers have been formed and are now co-operating with the Ministry of Works—one representing makers of pneumatic (compressed air) driven

tools, and the other makers of electric power tools. The electric tools will, we understand, have universal motors for AC/DC currents of voltages ranging from 200 to 250 volts, and will thus be suitable for use over most of the country. Factory Production, Intelligent Standardization and, not least, Full Mechanization are the pass words to rapid and efficient rebuilding. It is to be hoped that no unwarranted sentimentality about loss of craftsmanship, no over-cautious conservatism, no false parsimony or neo-Luddism among the 80,000 registered building contractors in this country will hamper the Ministry of Works' drive for the full and rapid development and use of the power-driven hand tool in Great Britain.

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

NOTES & TOPICS

REPORT ON POTTERS

When the employees in an industry have to campaign for better design in the goods they are making, it may suggest that the industry as a whole is alive and awake, but it does not imply much initiative on the part of those who should be its leaders, the employers. Such a state of affairs is current in the pottery industry at the moment, for a report by the National Society of Pottery Workers published recently demands a step which the protagonists of intelligent industrial design have been advocating for years in many industries—namely, concentration of production on fewer and better patterns.

*

The Society recommends mass-production of standardized ware, together with some control of distribution, because without such control, they suggest, "it is likely that the industry will soon slip back to the old uneconomic medley of designs."

*

While allowing a place in the pottery industry for "small units producing specialized ware," the report gently but firmly points out that most of the small units, before the war, were not in this category, but simply old and dilapidated factories producing, under more or less primitive conditions, the kind of common-grade ware that could be better done by mass-production methods. Just how numerous those small, unprogressive factories were is evident from (*a*) a walk through the streets of the Five Towns, or (*b*) a glance at the statistics included in the union's report. These show that nearly half the factories in the Potteries employed, pre-war, less than a hundred people each.

*

The pottery industry has a long tradition of design that is not only good but distinctively English, and anyone who wishes to see that tradition kept alive will applaud the union's concern with contemporary design standards.

THE WIDOW'S FOUR ROOMS

Whenever I come across a copy of any Law Report I turn avidly to see what fresh case on the Rent Acts has been through the Courts. Rarely am I disappointed by finding none at all. After thirty years of judicial effort almost every week there is a new case involving some point which has escaped the clarifying eye of the Court of Appeal or of the House of Lords for years. My latest selection from the monthly bag is an interesting appeal from the County of Leicester.

*

The facts, for once, are simple. The house concerned was a cottage with four rooms and a boxroom. It had been inhabited by a widow for 36 years, a fact that brings a tear to the back of the eye at once. The landlady (although there was some doubt expressed as to whether she was the landlady) took proceedings to obtain possession on the grounds that she wanted to live there herself and that greater hardship would be caused by preventing her from doing so than by turning the widow out.

*

The deputy Judge in the County Court who heard the case attempted a pleasantly biblical solution. He proposed to divide the house into two and let each party have two rooms and share the businesslike portions of the house. The widow tenant appealed and her appeal was successful. You cannot, said the Court of Appeal, divide houses of that kind into two. For one thing, you cannot create a new protected tenancy for the tenant in the severed section of the accommodation. The Court of Appeal has already said, in a recent case, that occupation of one or two rooms and common use of others is not a tenancy to which the Rent Acts apply. So this case goes back to another County Court judge for another hearing.

*

Three hearings, one of them in the Court of Appeal in London, should make any four rooms (and boxroom) in Leicestershire proud of themselves.

DAILY HERALD EXHIBITION

It is worth going to the *Daily Herald* Post-War Homes Exhibition, if only to see the paper sculpture by the Polish designer, Mr. Tadeus Lipski. The Heraldic cock on its bright red background that crows you into the show is an intriguing piece of contemporary rococo. But from the directly practical point of view, there is much to tantalize the general public but little to satisfy it, for the exhibits are mainly suggestions of what is yet to come. Perhaps therein lies a fault in the whole conception of the show, which

seems uncertain as to its real purpose, and to whom it intends to appeal. It is largely commercial, but can have only prestige advertising value so far as the public is concerned, for nothing exhibited can yet be bought in the open market by you and me.

*

The exhibition is of far greater immediate value to housing authority representatives, particularly in showing models of nine pairs of prefabricated houses of different types with structural details—houses sponsored by the firms or Howard, Davis, Orlit, Unity Structures, Crouch, Keystone Unibuilt, Prebuilt Constructions, Wates and Simplified Brick Constructions—the best of which, to look at, you will almost certainly agree, is the Howard House, designed by Mr. Frederick Gibberd.

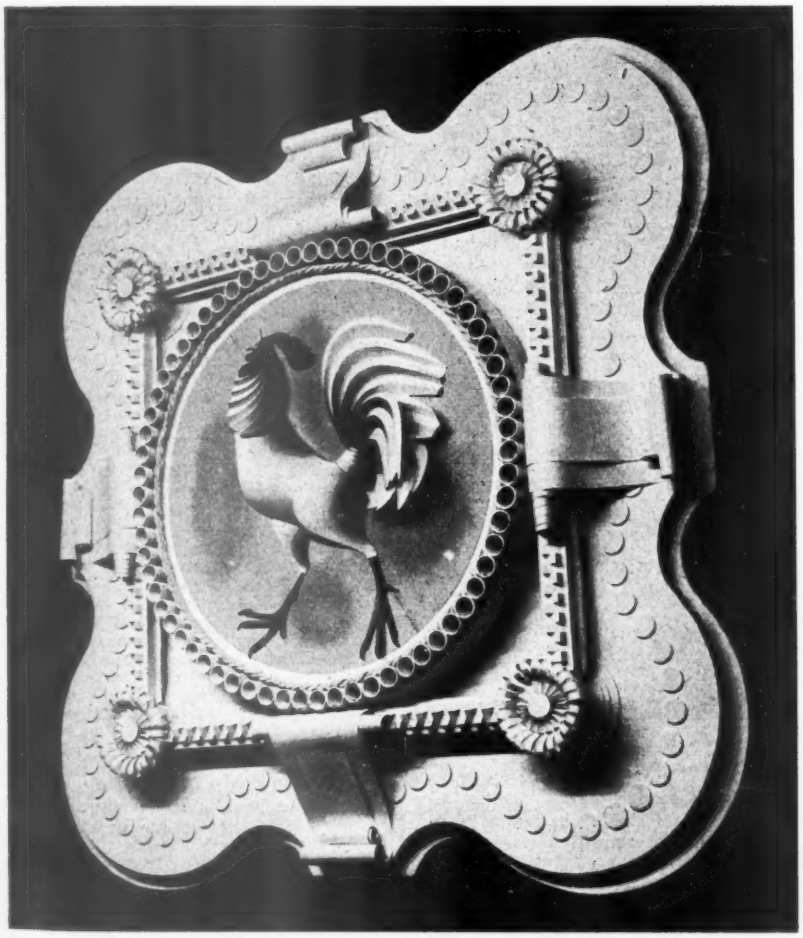
*

Useful to the expert, too (especially the local authority representative), is the showing of the prototype of the Ortyx Conversion Package Unit, which is a complete prefabricated kitchen-bathroom unit designed expressly to convert three or four storey terrace and large-type houses quickly into self-contained flats.

BEACHCOMBER'S CORNER

Captain Foulenough's claim that, as a Conservative, he is prepared to promise 50,000,000 houses by 1961 has been seized on by Charlie Suet, who went back to the Liberals two days ago. Suet, as a Liberal, promises 500,000,000 houses (with two sinks each) by 1982. He adds: "If I become a Socialist, for private reasons, I can promise 500,000,000,000 houses by 2034." A heckler who shouted, "What about some to go on with now?" received the withering reply, "Rome was not built in a day" (laughter, cheers, imprecations, fruit-throwing and fun).—(Beachcomber in the *Daily Express*).

ASTRAGAL.



The paper sculpture feature at the entrance to the Daily Herald Post-War Homes Exhibition *designed by Mr. Tadeus Lipski. The exhibition architect was Mr. B. Katz. See Astragal's note.*

LETTERS

Alec R. Boothroyd,
Student R.I.B.A.

G. M. Kallman

School in Standard Bay Units

SIR,—The design for a school in standard bay units interested me very much. As a fourth year student at the Nottingham School of Architecture I have recently been engaged in the design of a school in which I have used the other scheme of standard construction suggested in the MOW, Building Studies No. 2, namely using a grid of unit dimension 8 ft. 3 in.

The actual design is for a group of three schools in connection with a new housing estate near Nottingham, comprising a nursery school for 80 children, an infants' school for 240 children, and a junior school for 320 children. The scheme employs the 8 ft. 3 in. unit dimension throughout and is prefabricated to a large extent.

One classroom block has been taken to the stage of working drawings. Owing to the rather different structural problems involved it was not possible to use one of the many systems of prefabrication evolved for house building. The system of construction is somewhat as follows:—

First a concrete raft is laid over the whole area of the building, 6 in. thick. Bolts are let into this raft to take the stanchions. The stanchions are of a cruciform, rolled steel section, and are delivered to the site in four different lengths, with about three

SWEDISH HOUSES FOR SCOTLAND

Sketches of two of the designs of Swedish prefabricated permanent timber houses, adapted for Scotland by the Department of Health for Scotland. These are now in production and will soon be arriving in this country. Other plans and designs are now being evolved for England by the Ministry of Works. Top, a pair of the four-roomed, one-and-a-half storey rural type. Below, pairs of the two-storey urban type.

variations in each size to allow of different connections. Baseplates and caps are welded on, and bolt holes are cut, before the steel leaves the erecting shop.

The stanchions are bolted down in the appropriate places, and the steel beams are spanned between them. The beams are British Standard RSJ's, cut to length and with bolt holes where needed. The beams are bolted to the stanchions. Walling is in reinforced foamed slag concrete units spanning between the stanchions. Roofing is also in precast reinforced foamed slag concrete units, and is covered with a screed of foamed slag, laid to falls. Foamed slag is used as aggregate for the concrete in preference to other light weight aggregates because of the close proximity of ironworks producing foamed slag.

Any exterior walling, however, can be used, such as brick or stone. This would probably be preferable for both æsthetic and weatherproofing reasons.

The roof covering is of roofing felt. To minimize excessive heat from the sun it is suggested that the roof be whitewashed or perhaps even painted white. This latter would need some research to find a paint that would take well on the felt, would not blister or crack under the heat, and yet would be cheap enough to be economical in use.

Services would run in ducts in the floor and ceiling, and would wherever possible run in the same or adjacent ducts. On the site, services would run together in tunnels large enough for a man to work in. This would allow of easy access for servicing and repairs, and in a scheme of this size, with about half-a-dozen different services, including district heating, would be well worth the small extra initial cost.

There is a store for materials, etc., attached to each classroom. There is a chalkboard across the full width of the wall that the pupils face. Part of this board is reversible so that a silvered side can be exposed for the projection of lantern slides and films. All rooms are fitted with loud-speakers for the transmission of broadcast lessons, and to allow the head teacher to speak to the whole school in the classrooms. On the wall behind the pupils there is a cork-faced notice board to allow cuttings, etc., to be pinned up.

The minimum daylight factor with all windows closed is of the order of 6 per cent. (The Ministry of Education Building Regulations require a daylight factor of 1 per cent.)

Artificial lighting is by 5 ft. fluorescent tubes, giving an illumination of 25 foot-candles, of daylight colour, over a working surface 2 ft. 9 in. above the floor. (The Building Regulations require a minimum of 10 foot-candles.)

Heating is by radiant pipe coils in the floor and ceiling to give a temperature of 62 deg. F.

ALEC R. BOOTHROYD

Nottingham School of Architecture.

New USA CIAM Group

SIR,—I have recently received information from America concerning the foundation of a new CIAM group, which may be of interest to some of your readers. This group calls itself *The American Chapter for Relief and Post-War Planning of the International Congresses of Modern Architecture (CIAM)*, and has its national headquarters at the New Schools of Social Research, New York. President, Richard Neutra. Vice-president, J. L. Sert, K. Lonberg Helm (director of research for the F. W. Dodge Corp.), Paul Nelson (director of urban studies for the French Government). Secretary-Treasurer, Harwell H. Harris. Acting Secretary, Stamo Papadaki (CIAM delegate from Greece). Other incorporators and directors include: Walter Gropius, Lawrence Kocher, Joseph Hudnut, Ernest Weissmann (of UNRRA), William W. Wurster, Mies van der Rohe, L. Moholy Nagy, Paul Lester Wiener, Oscar Storonov, Serge Chermayeff, Pierre Charreau (CIAM delegate from France), Siegfried Giedeon.

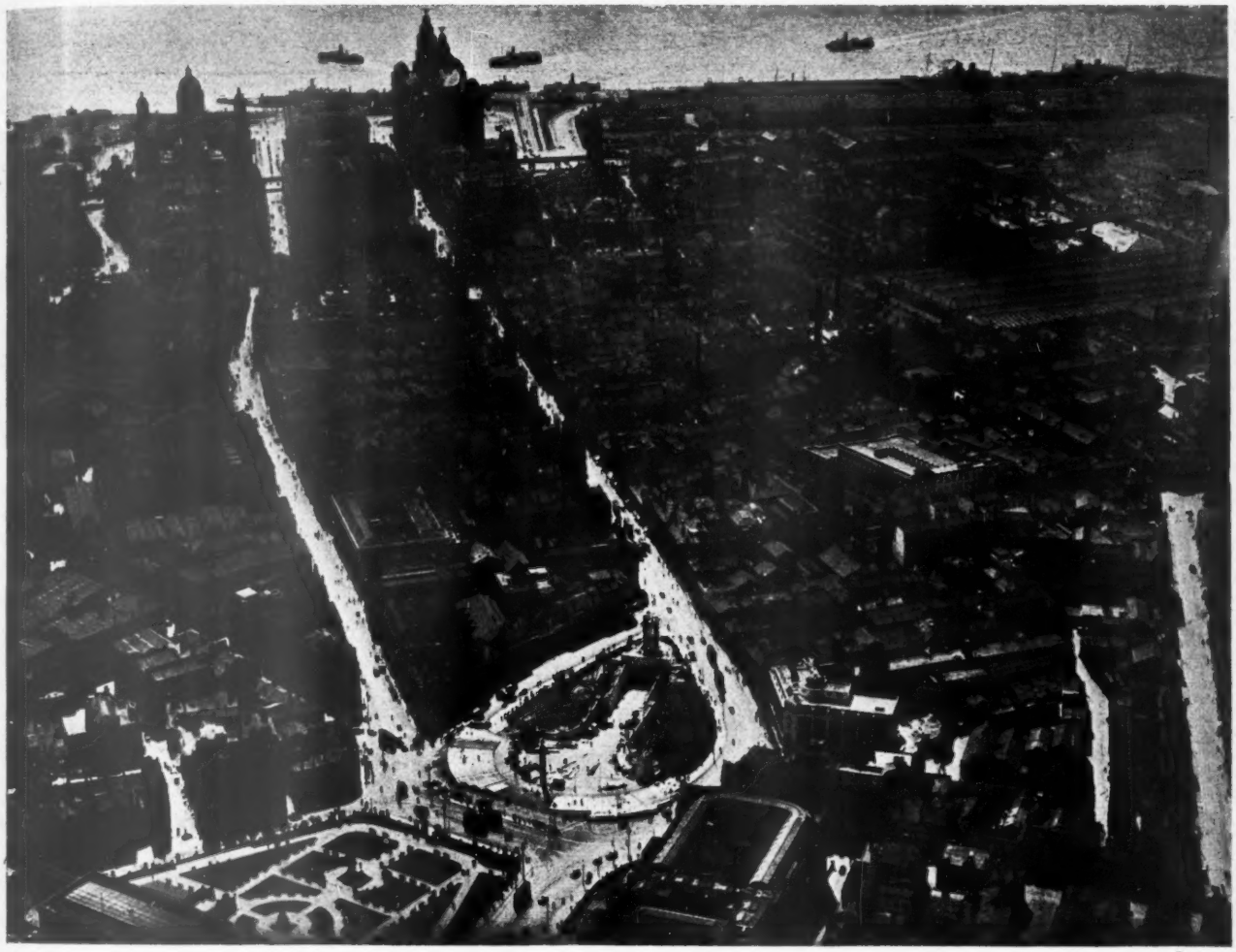
The aim of the group is to act in an advisory capacity, assembling data useful in European reconstruction, such as technical bibliography, lists of manufacturers for export to Europe, advice on planning procedure, etc.

Although sceptical of glamorous committees with vast programmes—and so far nothing has been heard of the work of the new group in New York—I believe that there is a need for a similar undertaking here in London. To my mind comes the Mars Group, from which we have heard no more lately (apart from an undistinguished discussion at the RIBA). It should not be impossible to collect the necessary funds for such work, which could proceed in collaboration with the Americans. The fact that representatives of most European countries are in this group already joined with English architects and with colleagues abroad should make the necessary organization an easy matter. The enormous destruction on the Continent underlines the urgency for such service, and I am convinced that UNRRA and the Allied Control Commission would welcome professional advice on these highly technical matters. Such organization should include representatives of the English official bodies dealing with reconstruction matters (MOTCP & MOW), for their experience of a practical nature would be invaluable, and synchronization of effort between English and Continental demands for reconstruction, which is a vital necessity, could thus be achieved.

London

G. M. KALLMANN

PHYSICAL PLANNING SUPPLEMENT



A plan for MERSEYSIDE

The recently published *Merseyside Plan* 1944* is the work of Mr. F. Longstreth Thompson, P.P.T.P.I. ; it was prepared in consultation with a Technical Committee of the Merseyside Joint Advisory Planning Committee at the request of the Minister of Town and Country Planning. Above is the centre of Liverpool, the hub of the Merseyside region, showing one entrance to the Mersey Tunnel. In the following article the report on the plan is reviewed, by

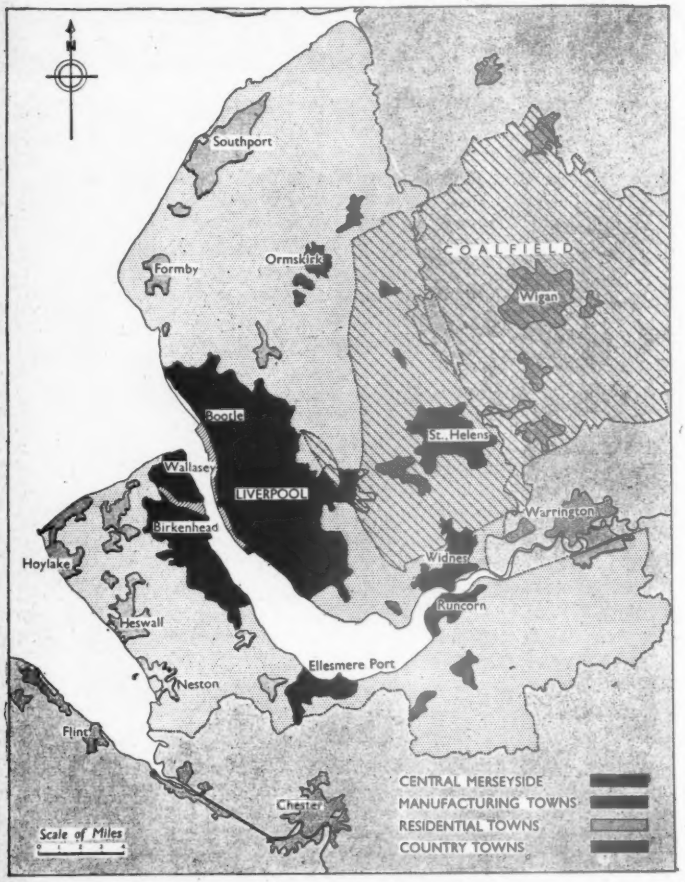
Professor S. D. Adshead

From an introductory note to the report on the Merseyside Plan it is understood that the Minister is anxious that Local Authorities and the Public should have the fullest opportunity of discussing it. Reports such as this invite an enquiry into their purport and significance. Not being tied up with bye-laws or regulations or traditional methods, makers of these Regional Reports may exercise their imagination in arriving at proposals, and may prophesy far-reaching results. Thus untrammelled, a regional report may often be of the utmost value, and as far as proposals are concerned far from being what is commonly known as impracticable, they may, after passing through the stages of public discussion and parliamentary debate, result in bringing about the most vital incidents in the final plan.

Statutory planning, as enacted under the Town and Country Planning Act, implements development, but often its effect has been to stultify rather than to give positive direction; there is, therefore, a great advantage in the making of a preliminary report. To take the Merseyside Report, it is understood that it was prepared in consultation with the Local Authorities; this should ensure that local conditions were studied and local knowledge obtained, but that is not enough; it is merely preparatory and a survey.

Some time before the war, planning was coming to be regarded as dependent on national as well as regional and local conditions; this was emphasized by improvements in transport which particularly affected industry and housing. Extremists in the planning world saw the neglect to observe all factors solved in the making of a National Plan. The Barlow Report, which dealt with the spread of industry, the Uthwatt Report with the acquisition of land, and the Scott Report with rural amenities, were largely inspired by a popular demand for a factual appreciation of these matters. Debates in Parliament arising out of matters concerned with the acquisition of land for housing, and the nationalization of

* H.M. Stationery Office, 1945, 7*s.* 6*d*



The Merseyside Plan includes the districts of 24 local authorities, of which 15 are in Lancashire and 9 are in Cheshire. The situation and boundaries of these local authorities are shown on the right. The region covers an area of approximately 450 square miles, extending from the borders of Preston in the north to the borders of Chester in the south, and from the estuary of the River Dee in the west to an eastern boundary parallel with and about five miles westward of a line running through Warrington, Wigan, Chorley and Preston.

features

Left are the essential features of Merseyside, which comprise: 1. The central compact group of towns that have grown up around the Port of Liverpool and are primarily dependent upon it and upon the industries connected with it. 2. The detached residential towns, which fulfil the functions of dormitory suburbs, recreational and holiday resorts and homes for the retired. 3. The detached industrial towns, which though they have strong ties with Merseyside, are largely independant and self-contained communities. 4. The exceptionally fertile agricultural land which surrounds Central Merseyside. 5. The coalfield, extending from St. Helens southwards to the outskirts of Widnes.

authorities

On the facing page is a map which summarizes the proposals for the whole region. In the final chapter of the report on Means of Giving Effect to the Plan, it is emphasized that this Outline Plan is essentially a regional plan, designed to satisfy the collective requirements of the communities that together constitute Merseyside, and that it will need their collective endeavour to give it effect. It is suggested that the existing Joint Executive Committee should remain in being after the Statutory Outline Plan has been completed to settle questions of principle and policy affecting Merseyside as a whole.

proposals

industry showed that these were basic questions, and very controversial, and when subjected to parliamentary scrutiny they were found to be too drastic and far-reaching to be drafted into a Bill that would implement National Planning. However, these Reports by Royal Commissions have not been unavailing, their recommendations are bound in the future to influence planning.

Enough has been said to indicate that in the preparation of a Regional Plan such as this one for Merseyside, questions of far-reaching importance are at stake, questions that are far beyond the reach of the technical planner, however versatile his education, knowledge and ability; and thus before National Planning, or for the matter of that Regional Planning, becomes a Statutory undertaking, we require a National Committee of promoters, economists, industrialists, politicians, statesmen and those representing our interests in foreign affairs, including men well-informed about the sources of raw materials and the possibilities of foreign markets. Until the Government sets up such a committee with executive or advisory power National Planning cannot be a practical policy.

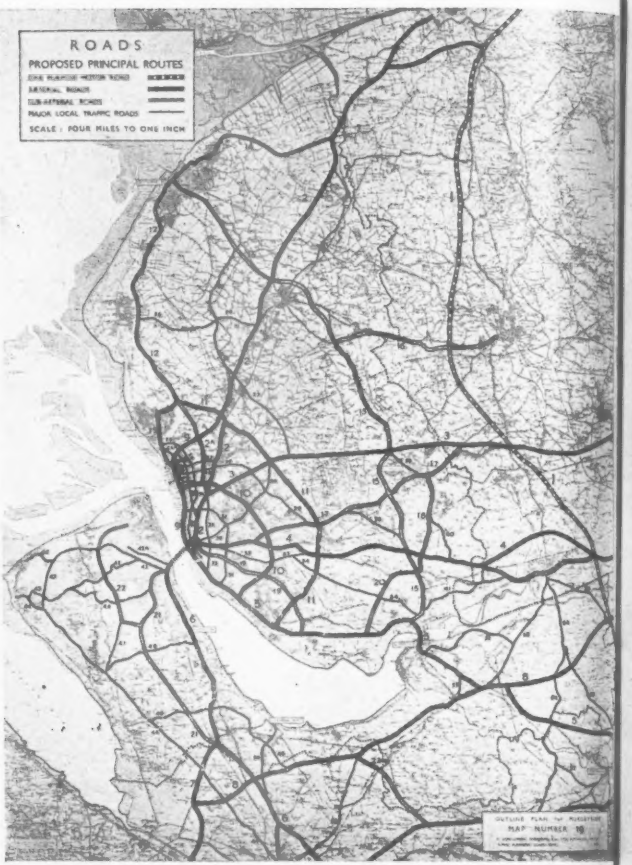
The professional Town Planner cannot be expected to undertake such work involving as it would do the widest experience and most expert knowledge, possessed only by the few. The Technical Planner, however, can interpret the findings of such a committee and convert them into terms of roads, land development and buildings; and he can do more, he can make preliminary reports and surveys, and in many ways prepare information preparatory to the making of a National Plan.

Mr. Thompson's report is a very valuable piece of work in giving a first impression of the area and a detailed survey. He has included all the main proposals of the Planning Authorities, but beyond drawing attention to what must


OUTLINE PLAN FOR MERSEYSIDE
SUMMARY OF PROPOSED PLAN
URBAN ZONES
INDUSTRIAL ZONES
AGRICULTURAL AND RURAL ZONES
OPEN SPACES
ARTERIAL ROADS
MAIN RAILWAYS
RESERVE AREAS
RESERVE AREAS
EXISTING
PROPOSED
SCALE: ONE INCH TO ONE MILE
SOUTHPORT
FORMBY
ORMSKIRK
CROSBY
WALLASEY
BIRKENHEAD
BEBINGTON
LIVERPOOL
GARSTON
HALEWOOD
ST. HELENS
WIDNES
RUNCORN
WARRINGTON
OUTLINE PLAN for MERSEYSIDE
MAP NUMBER 20

agriculture

The darker tone areas in the map above show first class and good land, all of which should be preserved for agriculture. It is part of the results of a survey of land within the region carried out by Dr. Dudley Stamp. The distribution of the proposed Urban Zones and their local boundaries have been determined in the light of Dr. Stamp's recommendations, and those of Mr. Rosbotham, who carried out an independent survey.



transport

Above is a map showing the proposed princip roads in the region. The procedure followe was to adopt a classification of roads base upon their function and existing or estimat future traffic value ; next to determine t widths for which provision should be ma in each category ; and, finally, to consid each route or proposed route in the region system and place it in its appropriate categor

appear to everyone as obvious lines of development, he does not venture very far into prophecy; perhaps in the present declining, or should we say mobile state of Liverpool, he is wise.

Sixty years ago I lived in the neighbourhood of Manchester, and thirty years ago I lived for some time in Liverpool. I have seen the cutting of the Manchester Ship Canal, and have witnessed its effect on Manchester, and how it revolutionized methods of transacting business, more especially with regard to the warehousing of cotton and the distribution of food from abroad. The construction of the canal meant a great loss to Liverpool in small cargo vessels; but as a port for ocean liners Liverpool remained supreme. Since the Great War of 1914, much shipping moved to Southampton and the Thames; however, Manchester and Liverpool still survive.

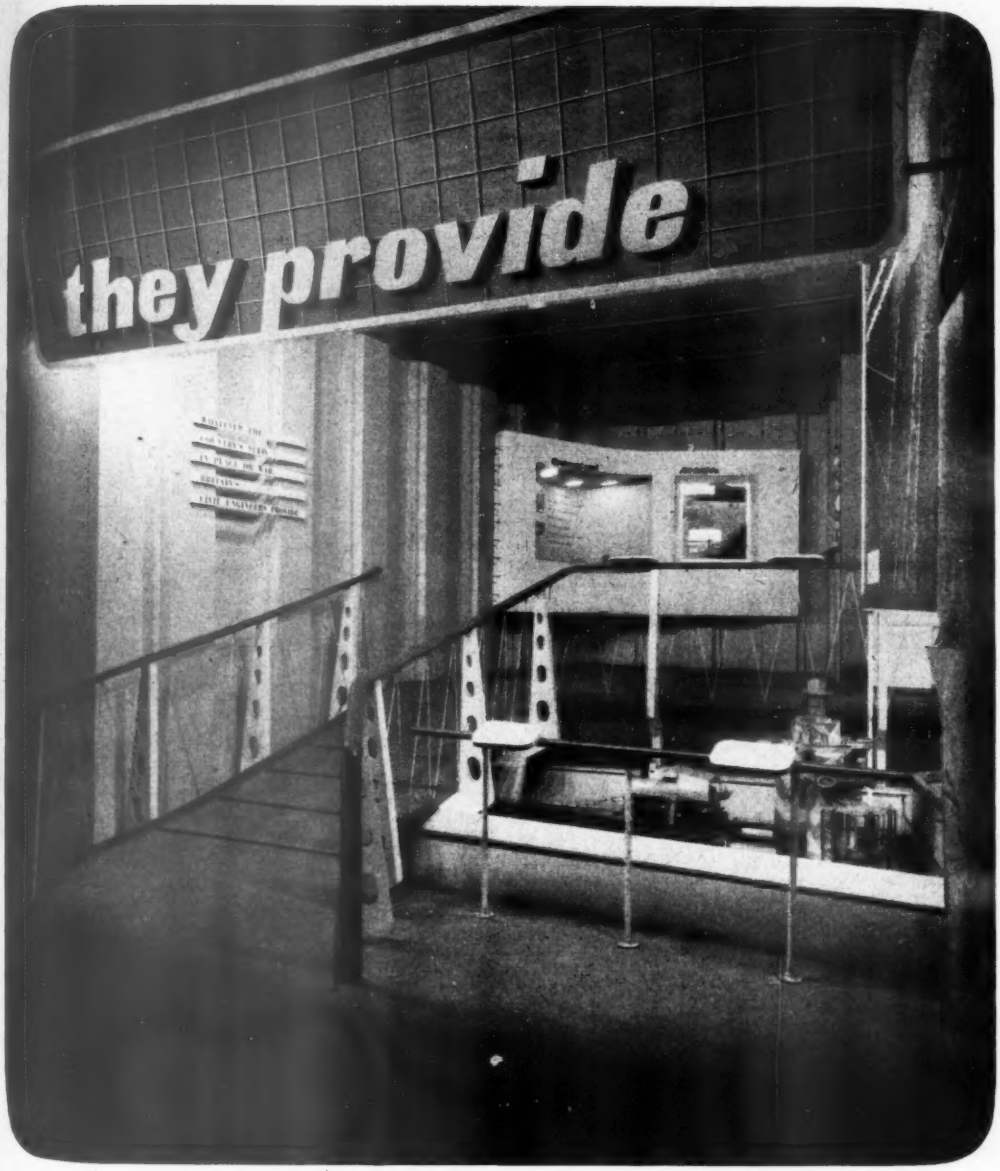
I could quote numerous examples of towns that have lost their industries and survived. The skilled operatives and their employers remain and refuse to be eliminated: they undertake new industries or adopt entirely new methods in carrying on their old industries. Manchester now makes machinery which she sends abroad to those countries which have stolen her old industry, or she has modernized her old machinery, and her industrialists have syndicated into groups. This has happened in Liverpool as well, since the commencement of the present century.

It is the result of these changes that Mr. Thompson sees in Merseyside: the commencement of new industries, the changes in transport, society, and housing. But along with these changes there has been the revolution in transport, the most striking effect of which has been in the modern road between Liverpool and Manchester and in the construction of the Mersey Tunnel, the latter having been responsible for much of the industrial development around Bebington and Ellesmere Port, though this has no doubt been assisted by the tendency of the estuary currents to deepen the channel on this side of the river. The tunnel has also had its effect in increasing the popularity of the Wirral as a residential area.

One of the exceptional advantages that England possesses over other countries is in the proximity of the sea to her towns. To have a sea front or to be in close proximity to the sea is always attractive. There is insufficient land along the water front, of which there is an abundance, reserved in the Merseyside report for building development, and this applies to the Dee side of the Wirral, between Crosby and Southport, and South beyond Speke about Hale.

The section of the Report devoted to the improvement of Urban and the preservation of Rural amenities in Merseyside has been contributed by Mr. C. H. James, A.R.A. Writing as an architect and artist he views the whole area as one looking back upon three generations of dull and disgraceful development, and he sees the problem of regeneration as too great to be tackled without remodelling as well as rebuilding.

Mr. James' essay on the use of new materials in these north country industrial districts is so good and so much to the point, both as to the types of buildings that should be erected and to the materials used, that the Minister would be well advised to publish this section of the Report in a separate pamphlet and circulate it throughout the area to Local Authorities and everyone concerned.



Left, the entrance to the exhibition. Much of the detailing was given an engineering character. The vertically-fluted wall on the left, for instance, is sheet steel piling painted a red-lead colour. Supports of the balustrade are white with a dark blue-green handrail.

EXHIBITION

AT CHARING CROSS STATION

DESIGNED BY BRIAN PEAKE

This exhibition was recently open at Charing Cross Underground Station. Organized by the Federation of Civil Engineering Contractors, its purpose was to show the public some of the civil engineering achievements in war and peace.

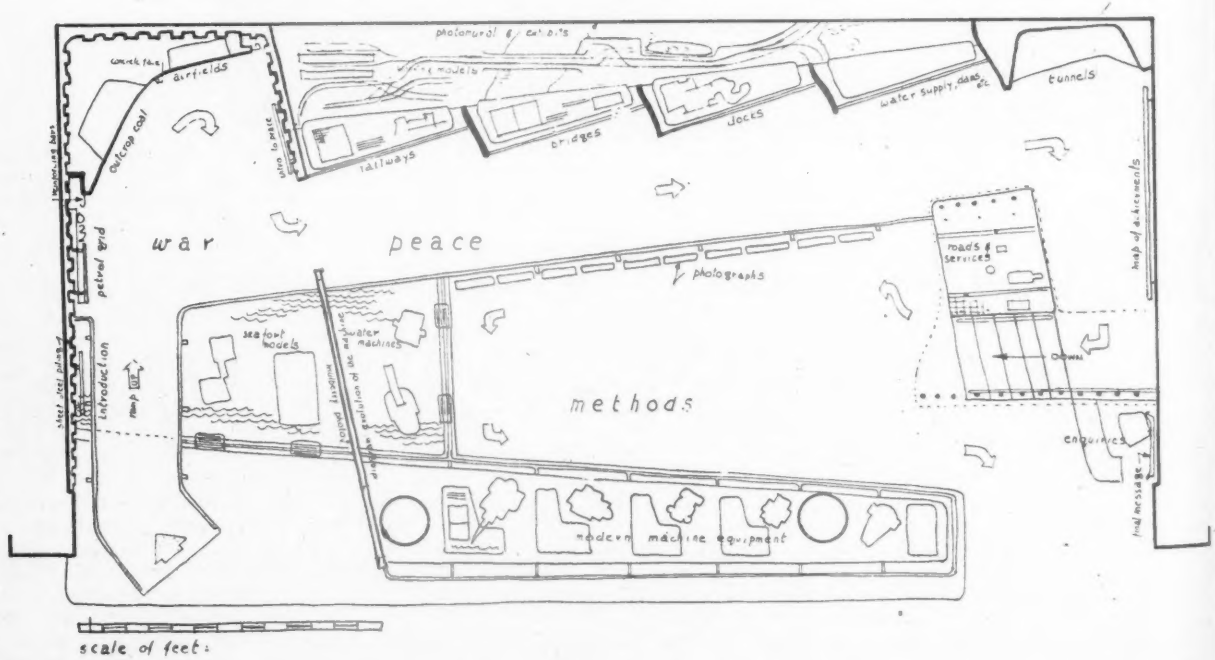
It was designed by Brian Peake, A.R.I.B.A., with Misha Black as consultant. The script was written by Adrian Thomas and the lettering and typeface was arranged by Charles Hasler, who also designed the map of achievements.

The main problem in planning was to provide enough room for the many subjects to be exhibited without destroying the feeling of space at the end of the booking hall. The plan was therefore worked out at two levels with the entrance on the left-hand side where people normally gravitate at Charing Cross.

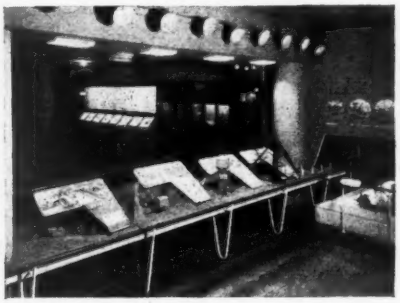
Much of the detailing was designed with an engineering character; the vertically-fluted wall on the left of the entrance, for

instance, represented sheet steel piling. This wall was painted a red-lead colour, the supports of the balustrade being white with a dark blue-green handrail. Most large wall surfaces were grey and showcases and smaller areas were in pale blue-green, dark red, terra cotta or pale yellow.

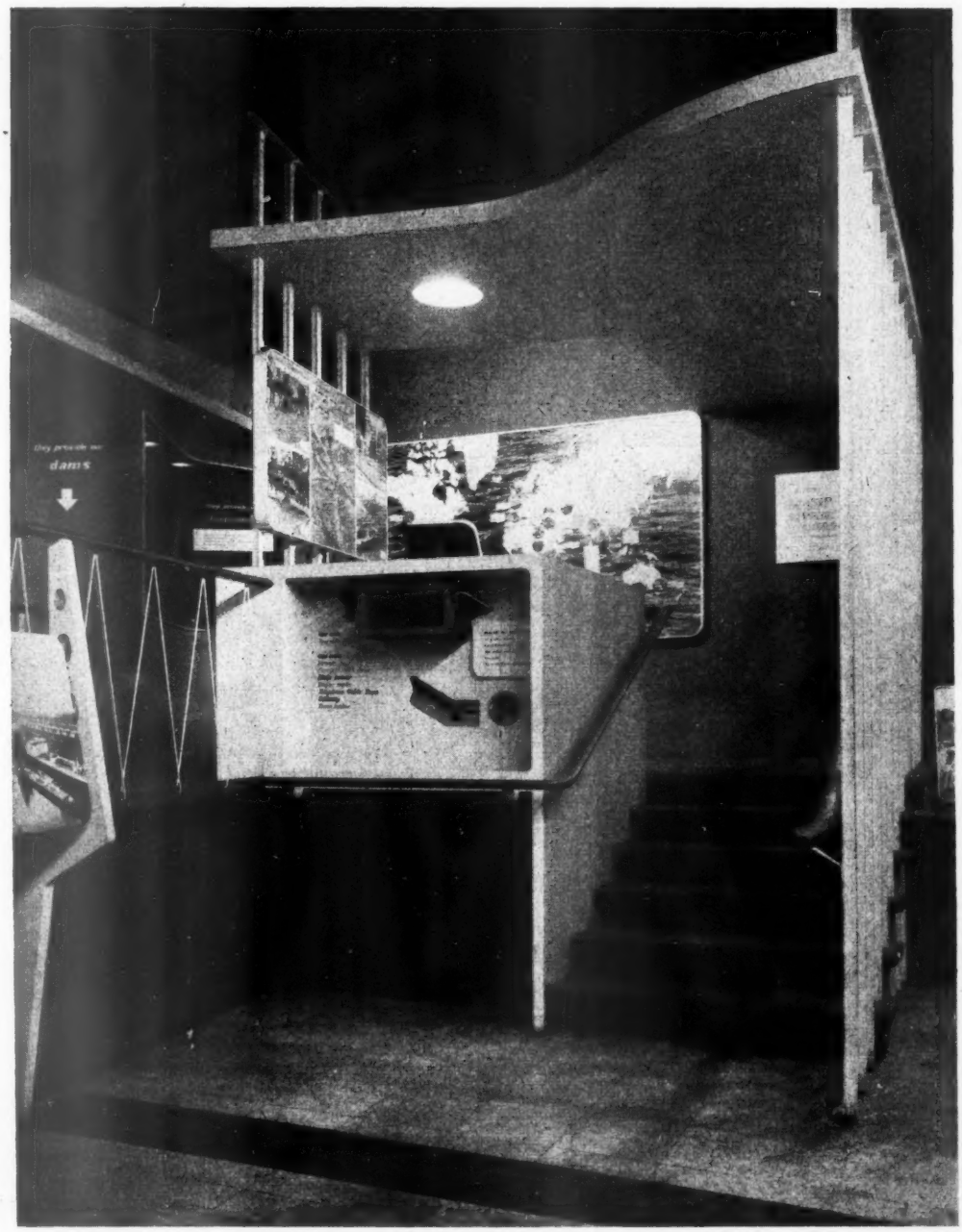
The exhibition showed models and action photographs illustrating, among other things, open-cast coal production, a railway siding lay-out, the services under a main road, a bombardment tower, a reinforced-concrete floating dock, and various items of large building plant.

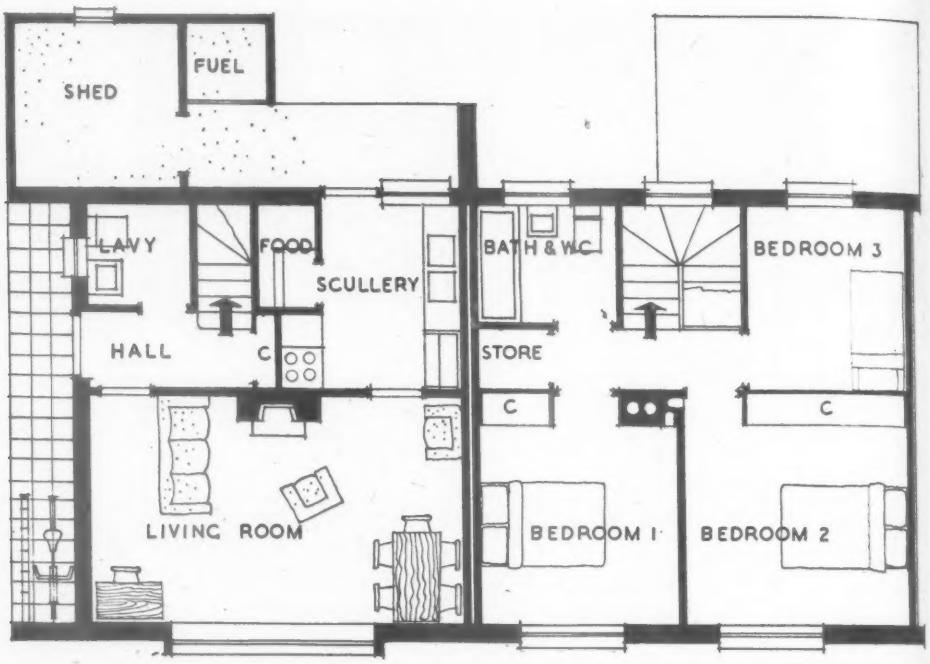


EXHIBITION AT CHARING CROSS STATION



Above from left to right: view looking right at the entrance; the corridor on the upper level; the stand of models of modern machine equipment at the lower level. Below, the steps on the right of the exhibition leading from the upper to lower level. On the facing page, a general view from the booking hall of the station, and sketch plan of layout.





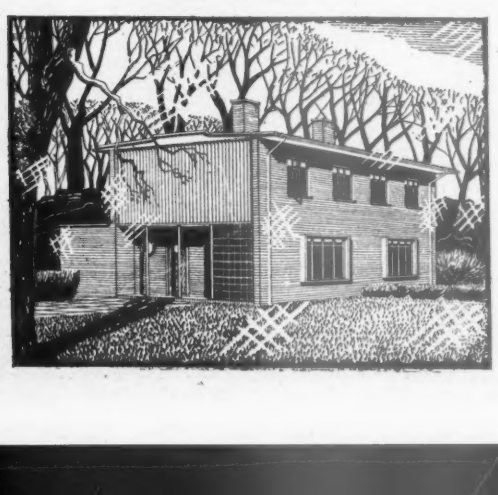
GROUND FLOOR PLAN. FIRST FLOOR PLAN

[Scale : ⅛" = 1' 0"]

A PROPOSED PAIR OF COTTAGES AT KINGS LANGLEY, HERTS

DESIGNED BY CHARLES READ

GENERAL—To enable reasonable sized bedrooms to be obtained in this plan of 790 sq. ft. floor area, it has been found necessary to overhang the first floor; this provides a porch to the front door and sufficient covered space for parking a cycle.



CONSTRUCTION—The external and party walls are 11 in. cavity, fair-faced internally and distempered. Ground floor partition walls are 4½ in. brickwork and first-floor 3-in. breeze block. The end walls on the first floor are of timber studding with an outer cladding of asbestos-cement and an inner one of plaster-board; between these, sheets of aluminium foil are hung to give the requisite thermal insulation. The ground floor is a solid concrete raft finished with pitch-mastic, and the first floor is formed of asbestos-cement decking units screeded with breeze concrete to which the floor boards are nailed. The flat roof is covered with silver-grey asbestos-cement troughing sheets carried on steel purlins at 6 ft. 3 in. centres to which the suspended ceiling is attached.

SERVICES—A gas cooker and gas multi-point water heater are installed and a True Flue fire heats the living-room and provides convected heat to the two principal bedrooms. The air to this fire is drawn from outside through a duct in the floor, so eliminating the draughts usually experienced round the fireplace; a further precaution for the prevention of draughts is the provision of shallow cills to all the ground floor internal doors.

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

2005 **Retail Distribution**

INDUSTRIAL RECORD, 1919-1939. (*Cadbury Bros.*, 1945, 8*s.* 6*d.*) Well-produced account of organizing manufacture and distribution of milk chocolate between wars. Organization and management. Technical progress and factory development. Marketing and distribution of retail shops. Welfare.

Apart from the railways, the Firm has been concerned with three main forms of transport: (1) the delivery of goods to customers by vans; (2) the collection of milk from the farms and its delivery to the milk-condensing factories; (3) canal transport from the milk factories to Bournville. In the early twenties the Firm operated its own fleets of vans for delivery to customers, of steam and petrol lorries for milk collection, and of canal boats for inter-factory transport. In the development of the rail-head depot system of delivery, it proved cheaper to employ contractors who operated special vans bearing the Firm's name. With milk collection it was found that the small local haulier, with his low overheads, despite his rather higher maintenance costs, could compete successfully with any other form of transport concern. His costs were also helped by his being able to combine a certain amount of general work with milk collection. The Firm's lorries were, therefore, sold, and the work given out to local hauliers. Similar considerations applied to canal transport; the barges were sold to a canal carrying company in which the Firm had a financial interest.

These experiences have been quoted to show that vertical expansion has not always been economic, and that it does not always pay to strive for self-sufficiency.

Another example of the need for a flexible attitude towards development problems is furnished by the history of the Firm's milk condensing factories.

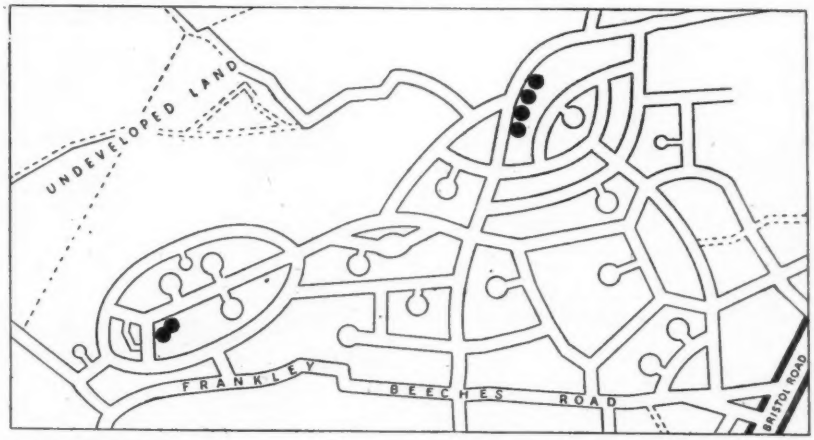
Condensing factories were accordingly built in locations which would minimize haulage from the farms and would at the same time provide adequate water supplies and satisfactory transport facilities to Bournville. Unfortunately, the areas in which large-scale supplies of milk can be most conveniently obtained are subject to constant change. This fact has had its repercussions on the economical siting of the factories. The result has been that the four factories which were in operation when the war broke out were the survivors of nine (of varying size) which at one time or another had been established during the previous twenty years.

About 1929 Cadburys started an investigation into the costs of wholesale and retail distribution in six varied areas. They arrived at the conclusion that there were about 250,000 retail outlets for confectionery, of which only a small number were confectionary shops and nothing else. Even if under this heading those who combine tobacco with confectionery were included, the proportion would be found to be no more than about 21 per cent. Of the remainder, some 7 per cent. were cafés or pastry cooks, 32 per cent. grocery and provision shops, and no less than 40 per cent. general dealers, mostly of the village store or the corner shop variety. It is within the ranks of this class that the majority, though not all, of the poorest shops are to be found.

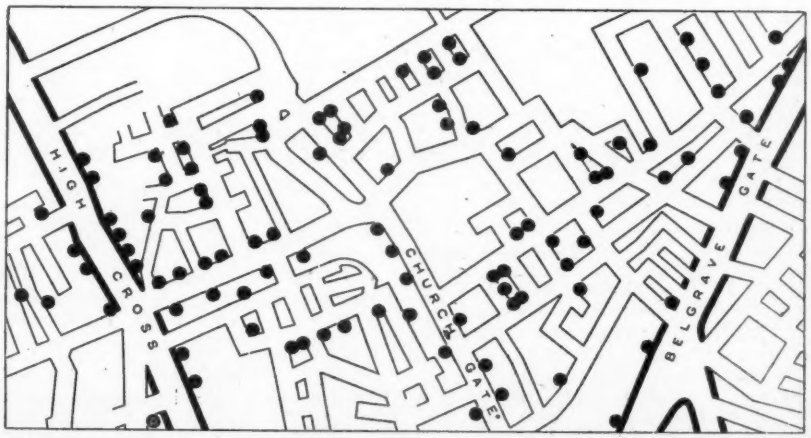
A comparison between the total number of selling points and the total annual turnover in confectionery (known approximately from the Census of Production) showed that the sales of many retailers must be insufficient to provide them with a proper livelihood. It was impossible to estimate even roughly what proportion were "uneconomic" in this sense, because so many of them were either grocers or small mixed businesses, selling many other lines besides confectionery. On any reckoning, however, it was evident that the number must be alarming.

Although it was difficult to escape the broad conclusion that there were everywhere too many shops—little difference being shown in this respect between town and country or between large towns and small—there was also evidence of serious local maladjustments between the number of shops and the population density in the immediate vicinity. In the residential areas of large towns, and particularly (as subsequent investigations showed) in newly-built housing estates, there were actually no shops at all or too few to meet the daily needs of the immediately surrounding population. On the other hand, in the central districts, especially in the slums, the excess of selling points sometimes rose to fantastic heights. Examples of this unequal distribution are shown in the maps on pages 46 and 47 of two industrial areas in Leicester and Hull, where the population per confectionery outlet is as low as 160, and a municipal housing estate, where it is as high as about 900.

BIRMINGHAM (A MUNICIPAL HOUSING ESTATE)



LEICESTER (CENTRAL INDUSTRIAL AREA)



Top, an example of too few shops (selling confectionery). Many of the houses are half-a-mile from the nearest shop. Below, an example of too many shops covering an area of under a square mile. The numbers are based on a survey made before the war. From Industrial Record. *See No.* 2005.

STRUCTURE

2006 *Bryant System*

THE BRYANT SYSTEM OF CONSTRUCTION. Experimental Houses for Birmingham's Post-War Housing Programme. *C. Bryant & Son, Ltd.* (*Architectural Design and Construction, April*, 1945, *pp.* 84-90.) Permanent house with cast *in situ* walls in ordinary concrete lined by lightweight concrete cavity blocks on inside, erected with special steel shuttering.

The external walls are composed of an outer leaf of 4 in. reinforced concrete, cast on the site with ordinary heavy aggregates, and of pre-cast cavity blocks of lightweight concrete. These blocks consist of two slabs of 2¼ in. thickness each, distance-pieced apart by twisted wire ties, with a cavity of 1½ in. The wall forms for external use comprise 2 ft. square steel sheets with angle iron ribs. To the inside line a skeleton formwork is erected. This consists of vertical tubular supports of storey height, linked by light steel frames. The blocks forming the inner lining of the wall are placed between the forms against the inner face of the framing. Window and door frames are placed in the formwork, and are fixed securely by the poured concrete, which, as it sets, also rigidly binds the twin lining blocks into an integral part of the wall. The first floor is cast on steel shuttering formed by telescopic steel beams at 2 ft. centres and square pan-shaped steel forms laid across them. The roof construction is of prefabricated steel framed trusses, but timber roofing or flat roofs may also be used. Ceilings of plaster or fibre board are nailed to fillets clipped to concrete beams and steel trusses. The outer surface of the walls may be rendered, roughcast, painted, or treated in different ways.

2007 *Duplex House*

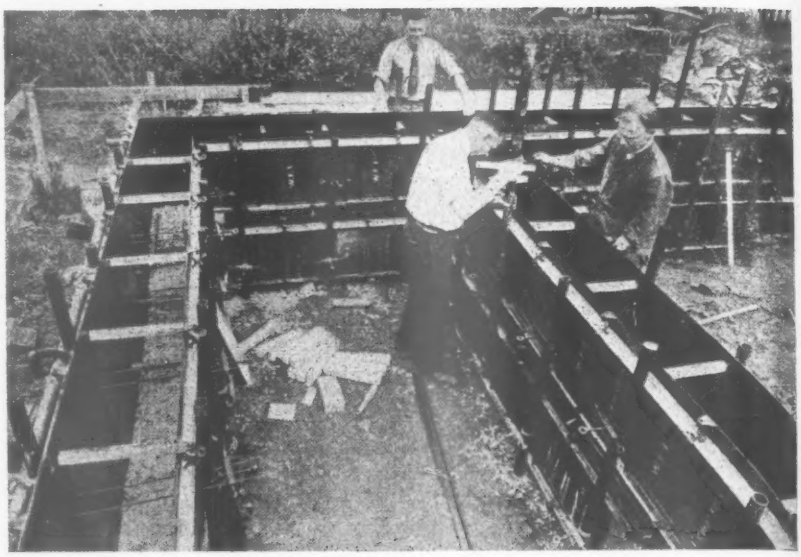
THE PREBUILT DRY CONSTRUCTION DUPLEX HOUSE. *Designed by I. Shamah.* (*The Architects' Journal, May* 3, 1945, *pp.* 335-339.) First Duplex House sponsored by private enterprise. Steel framed two-storey building.

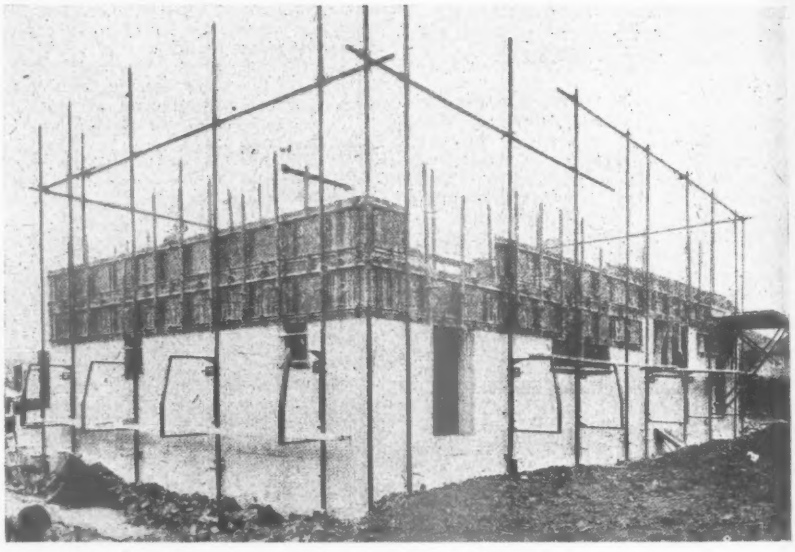
The outer cladding may be of any type, including brick. Two special types have been developed: (*a*) 4 in. thick hollow tile blocks erected dry and pointed later; (*b*) plastic composition panels ¾ in. thick, made largely of waste materials and chemically treated, produced in sizes up to 3 ft. by 8 ft. in various thicknesses, densities and colours. The interior lining and partitions are of the same plastic composition panels, 1 in. thick. The ground floor is cast on the ground, the first floor is of plastic composition panels on timber joists laid between steel beams at 12 in. centres. The roof may be flat or pitched. If flat, a lightweight reinforced asbestos cement decking with bitumen felt is used. If pitched, asbestos cement purlin tiles with air space are laid on steel trusses 6 ft. apart.

2008 *Temporary House*

LEASE-LEND TEMPORARY BUNGALOW FROM THE UNITED STATES. (*The Architects' Journal, May* 10, 1945, *pp.* 353-6, *and other journals*). First of 30,000 prefabricated houses from USA.

The total inside floor area is 600 sq. ft. Foundations are 4 in. thick concrete slab, with or without dwarf walls. Timber floor panels, tongued and grooved, on light timber framing, are delivered in a finished condition. Walls are timber framed units, approximately 8 ft. long and 3¾ in. thick, faced both inside and outside with a variety of alternative materials. The under side of the wedge-shaped roof units, 4 ft. wide by 12 ft. long, is faced with wallboard, and the top surface is flat asbestos sheet covered with three layers of single-ply roofing felt, provided by UK.





Photographs showing a prototype house being built by the Bryant system. Top, the second line of "Kwikform" in position. About a foot of concrete has been poured to steady the base. Below, the belt of formwork rising to the first floor level. See No. 2006.

HEATING and Ventilation

2009 *Electrical Space Heating*

SPACE HEATING BY ELECTRICITY. *J. I. Bernard.* (*Official Architect, December*, 1944, *p.* 576.) Methods of thermal insulation. Convective and radiant electric heating. Types of heaters.

Mr. Bernard draws attention to the thermal insulation standards of the Burt Report; and to the effect of moisture in the building material on the actual heat loss through the structure. For intermittent heating, low thermal capacity linings are recommended, and these, the author says, are materials which feel warm to the touch. He adds that the 'best form of construction from the point of view of comfort and fuel saving is one in which the outer skin is impermeable to moisture and the inner lining is warm to the touch.' (It is worth while to note that an impervious outer skin may lead to condensation within the wall, unless a vapour barrier is included on the warm side of the wall.) The author briefly discusses convective and radiant methods of heating, and points out that electricity can supply either or both with equal ease. For intermittent use, electric fires are most suitable, but for continuous heating, radiators, tubular heaters, convectors and wall and ceiling panels are available. Convectors or tubular heaters are generally the cheapest to instal. Electrical heaters should be under thermostatic control. The reflector type of electric fire gives the maximum output in a shorter time than the spiral element or firebar type, which is to be preferred for more general distribution of heat. As a rough guide in assessing the power demand, it is usual to allow 1 watt

per cubic foot. For background warming, a 1-1½ kW. convector would serve for a normal small house.

2010 *Electrical Water Heating*

ELECTRICAL WATER HEATING IN THE POST-WAR HOUSE. *P. Honey.* (*Official Architect, December,* 1944, *p.* 579.) Advantages of electric water heating. New types of electric water heaters. Costs and consumption figures. Use in conjunction with solid fuel boilers.

The author states that the choice of a system of water heating depends on the capital and running costs, but labour has also to be included. The use of electricity as a heating medium enables the heat to be produced where wanted, in the storage vessel, without the losses resulting from combustion or circulating pipes. It is also clean and labour-saving.

A quantity of 30 gallons a week at a temperature of 160 deg. F. per person is estimated to represent an average consumption of hot water in a working class family. With this comparatively low usage, electric water-heating with thermostatic control may well prove economical.

The new types of electric heaters have two elements—one permanently on to give constant hot water in limited quantities, and the second under manual control for larger quantities for laundry, baths, etc. The maintenance costs of electric heaters are very low, and their initial cost is generally less than that of other types, owing to the absence of flow pipes or chimney. Electricity can also be used in conjunction with solid fuel boilers, when the above heater replaces the usual storage vessel.

A hot bath requires about 3 units; and a wash of 1 gallon about ¼ unit. If the usage amounts to 30 gallons per person per week as suggested above, the current consumption for a family of four would be about 40 kWh per week, which at ¼d. or 1¼d. per kWh would be competitive with solid fuel.

2011 *Electric Supply*

PROGRESS IN ELECTRIC SUPPLY. *F. W. Lawton.* (*Official Architect, December,* 1944, *p.* 566.) Progress in electricity consumption. Avoidance of price increases. Wiring temporary houses. Need for close collaboration between architect and electrical expert. Future of electricity supply industry.

In 1926, the average consumption of electricity per head of population was 110 kWh, at an average price of over 1¼d. per unit; in 1944, the consumption was 500 kWh, at about 1d. per unit. The avoidance of price increases during the war has been principally due to the greatly increased load factor on account of greater industrial loads. It follows that one of the best ways of countering any increased cost after the war would be to increase the domestic use, including off-peak loads. For example, the use of thermal storage for heating or water heating is advantageous to the supply companies.

The author suggests that the cheapest way of supplying current to temporary houses is by block wiring, which consists of neat under-eaves wiring common to the whole block from adjacent feeding points.

The importance of close collaboration between architect and electrical expert is shown to be essential, even in the earliest stages of planning, no less of the estate than of the house.

The future of the electricity supply industry is briefly reviewed.

2012 *Radiation Corrections*

RADIATION CORRECTIONS FOR BASIC CONSTANTS USED IN THE DESIGN OF ALL TYPES OF HEATING SYSTEMS. *B. F. Raber and F. W. Hutchinson.* (*Heating, Piping and Air Conditioning, December,* 1944, *p.* 705.) Effect of radiation on accepted values of the design inside air temperature, inside and outside surface film coefficients of heat transfer.

The authors point out that the normal design air temperature (70 deg. F. in America) is strictly applicable to the case where the air and the walls are all at the same temperature. The design air temperature should be altered where this condition does not hold, small changes in air temperature serving to compensate for small changes in the mean wall temperature. Convection heating usually results in an air temperature greater than the surface temperature, whereas with radiant heating the converse is true. Formulæ are derived to enable estimates of the required change under given conditions to be made, and a graphical solution of the problem is given.

2013 *Unit Heaters*

UNIT HEATERS. *G. L. Copping.* (*Journal of the Institution of Heating and Ventilating Engineers, November/December,* 1944, *p.* 206.) Use and installation of unit heaters. Types of heaters described. Position of heaters.

Unit heaters provide a convenient and economical means of regulating air temperature, air movement and ventilation of rooms and buildings—all factors which affect the feeling of comfort. The degree of air movement will largely determine the size and type of the unit heater in relation to its position. Local conditions must be considered at the design stage.

The various types of unit heaters are briefly described, those with horizontal or downward delivery for overhead mounting, and those for floor mounting. With all types it is possible to arrange for partial or complete recirculation of the air, or to employ all fresh air.

Unit heaters are rated in terms of the output in B.Th.U./hr. and the volume of air handled in cu. ft./min. Other factors being equal, the thermal output increases as the temperature difference between the air and the heating medium, and in the case of hot water as the medium, with the velocity of the water. A decrease in air velocity through the heater reduces the output, but results in an increased exit air temperature. It frequently happens that the prescribed ventilation can be obtained by less than the full air delivery of the heater, and, if so, recirculation is resorted to.

When choosing the position of the heaters, they should be placed so as to direct warm air to the cooler parts of the buildings, and in addition so arranged that a rotational movement of the air round the building is set up.

Account must be taken of (*a*) ceiling height, (*b*) distribution of personnel, and whether male or female, (*c*) nature of occupancy (*d*) construction of building, and (*e*) general noise level when deciding upon the temperature and velocity of the air from the heaters. In low rooms, more units working at low velocities are required, especially with sedentary work or female labour. Air movement should preferably be from the front of the occupants. In high buildings, or where low mounting is impossible, high velocity downward types should be used, with low outlet temperatures. Provision should generally be made to allow of full recirculation during heating-up. The higher the velocity of the exit air, the noisier is the operation; and where this cannot be tolerated, low mounted, low velocity types must be used.

Thermostat control of the temperature of the medium will yield marked fuel savings. Fan control is easy and inexpensive, and is better in fresh air systems.

The installation and running are discussed.

Unit heaters can be used in many types of building, from factories to swimming baths and offices. Among the advantages are the provision of general air movement, rapid warming of the air, good distribution of heat, ease of extension and control, fully automatic operation can be easily contrived, positive ventilation is obtained when required, and with the overhead units no floor space is occupied.

A discussion of the paper follows.

2014 *Store Air Conditioning*

DEPARTMENT STORE AIR CONDITIONING. *A. L. Jaros, Jr.* (*Architectural Record, November,* 1944, *p.* 97.) Brief review of factors in conditioning stores buildings.

It is expected that all (American) new department stores and most of the existing ones will have air conditioning in the future. Public demand is not the only appeal, for there is also the saving in cleaning bills, reduction in spoilage, and general increase in the efficiency of the personnel.

Self-contained conditioners are suitable for small stores or single departments. Direct expansion systems are suitable for larger jobs, but they are forbidden by some building codes when toxic refrigerants are used. Indirect systems where chilled water is used as an intermediary cooling medium are permitted by all codes.

It is often advantageous to place all the equipment on the roof, but the position of other mechanical equipment should be taken into account when deciding on the location.

Probably the most common type of installation will be conditioning of the first (ground) floor, with exhaust ducts in the basement. But when possible the whole building should be conditioned, or at least provision made for extension of the system to the whole building. It is usually desirable to zone the system, to give separate control of the systems for the individual floors, as it allows for expansion, and makes for economy and better control. Humidity and temperature must be separately controlled. Air filters should always be included in a scheme, and in restaurants activated charcoal should be considered, especially if some air is recirculated. When recirculation is employed, it is found economical to introduce about one-third to one-fifth fresh air, the remainder being recirculated. A plenum system is usually advisable, to maintain a slight excess pressure inside the building, and avoid draughts at doorways.

EQUIPMENT

2015 *Electric Kitchens*

THE EFFECT OF ELECTRICITY ON THE KITCHEN PLAN. *A. L. Osborne.* (*Official Architect, December,* 1944, *p.* 572.) Two modern solutions to food storage problems. Planning should include for washing machine. Electric drying cupboards.

On the question of food shortage, the author refers to two modern solutions which render the north-facing kitchen or larder unnecessary: (*a*) In the use of a refrigerator, as part of, or adjacent to a ventilated food store with a separate unventilated compartment for groceries and dry goods. The power consumption of a refrigerator is estimated at about 1 unit a day. Solution (*b*) is the larder conditioner, which maintains the tem-

perature of the larder at about 50 deg. F. Good thermal insulation is required, when the consumption will average 2 units a day.

With regard to laundry, the author states that although people may not be able to afford to *buy* a washing machine or wash boiler, they can afford to *use* them, and the architect must therefore include them in his planning. The wash-boiler produces steam, and should not be placed in the kitchen. A washing-machine makes no steam, and where laundry must be done in the kitchen it offers the best solution of the problem. Boiler or washing machine should be placed near the sink. Electric drying cupboards may be provided also.

2016 — **Fireclay Sinks**

FIRECLAY SINKS. *BS* 1206:1945. (*British Standards Institution*, 2*s*.) Dimensions and workmanship of glazed fireclay sinks.

Four types of sink covered. Two reversible sinks without shelves, 30 in. × 18 in. × 10 in., and 24 in. × 18 in. × 10 in., and two sinks with back shelves, 30 in. × 21 in. × 10 in., and 24 in. × 21 in. × 10 in. It is good to see the sink with shelf included. They are required to be made with falls to ensure full drainage, but falls are not specified in detail which seems unfortunate. One might have expected some guidance on the height to which rims should be fixed, and that this would be linked to BSS for other kitchen fitments, but this is not included.

2017 — **Ceramic Basins**

CERAMIC LAVATORY BASINS. *BS* 1188, 1944. (*British Standards Institution*, 2*s*.) Covers dimensions and workmanship. Two sizes only.

Another of the series of BSS designed to reduce the number of available types and thus facilitate production. One wonders if in fact production will be limited to two sizes of basin. If this is a serious proposition which is to be enforced then why is the colour of basin to be "white—or any colour agreed between manufacturers and purchaser"? It is also surprising to see that short ceramic pedestals may be specially ordered. One notices that dimensional tolerances are fairly large. This may be a point for prefabricators to note.

There is a recommendation that except where space is restricted a basin of 25 in. × 18 in. should be used in houses. This is very desirable no doubt, but rather luxurious in a small house. Since a recommendation of this kind is allowed to come into a Standard Specification why not give some guidance as to which of five types of material is most suitable for houses? Presumably there are some differences between a basin of earthenware weighing 30 lb. and one of similar size in heavy earthenware of 40 lb., or of fireclay of 58 lb.

2018 — **Ceramic WC Pans**

CERAMIC WASHDOWN WC PANS. *BS* 1213:1945. (*British Standards Institution*, 2s.) Prepared pending preparation of BS for complete W.C. suites. Covers dimensions and workmanship.

This Specification might be criticized for reasons similar to those in B.S. 1188 (see No. 2017 above). If restriction to one model was necessary why was a sloping seat type not chosen? It would be interesting to know whether any medical evidence was given to the Committee on this point. The Specification fixes position of inlets and outlets in order to facilitate prefabricated plumbing. This is all to the good if the tolerances are not too great to defeat the object, but one fears that a variation of ¼ in., plus a possibility of non-alignment, might prove too much for easy fitting of some systems of factory made units.

QUESTIONS and Answers

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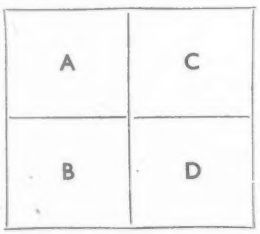
2019 — **Address**

Q *Re Information Centre of the* ARCHITECTS' JOURNAL, *where can the* Air Treatment Engineer *be obtained?*

A The *Air Treatment Engineer's* offices are at 7, Princes Street, S.W.1.

2020 — **Window Opening**

Q *I enclose a sketch of a window where the question arises as to whether the window arrangement complies with the model bye-law requirements. My own view is that it does not comply, and moreover that it does not provide good ventilation. I should be very glad to have the views of the Information Centre.*



A B C and D are the four sections of a sash window which is, say, a tenth of the floor area. Sections A and B are fixed; sections C and D are movable. *It has been claimed that the part made to open in this case is half the window, and so complies with the bye-law—although only a fourth of the window can be made to open* at any one time, *which is actually only a fortieth of the floor area.*

A The actual wording of the model bye-laws is as follows:—

"Every habitable room shall be provided with a window or windows which shall open directly into the open air and:—

(*a*) Have a total area not less than one-tenth of the floor area of the room; and

(*b*) Be so constructed that a total area, not less than one-twentieth of the floor area of the room may be opened, and so that at least to the extent of this requirement the window can be opened at the top.

In our opinion it is quite clear from the above that the window mentioned in your enquiry does not comply with the model bye-laws.

2021 — **Builder's Registration**

Q *My friend and I are hoping to start a business as Builders and Contractors with a private capital of £5,000, and would be much obliged if you would give us any information re registry.*

A If you wish to start a business as Builder and Contractor, it is necessary for you to register, and you should write to the Chief Registrar's Office, Ministry of Works, Sanctuary Buildings, London, S.W.1, stating your qualifications.

SOCIETIES AND INSTITUTIONS

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

SNHTPC

Ronald Bradbury

June 1 and 2. Conference at Aberdeen organized by the Scottish National Housing and Town Planning Council. Lecture on BUILDING BY ALTERNATIVE METHODS, by Ronald Bradbury, PH.D., F.R.I.B.A., A.M.T.P.I., Director of Housing, Glasgow Corporation.

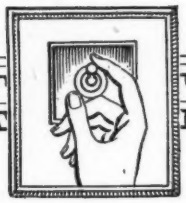
R. Bradbury: It is plainly necessary to devise techniques whereby as much unskilled labour as possible can be used on house construction. Alternative methods of construction do offer means whereby assistance can be given to the building industry.

The main alternative systems of constructing a building of any kind are two in number. There are others but they are very complicated and, in any case, are unlikely to find any ready acceptance in the house building programme. The first main system is what I shall call the Masonry Technique, although it includes the use, not only of stone but also bricks, concrete blocks, terra cotta or composition blocks of many kinds. This is the so-called Traditional Technique, and its most important characteristic is that the walls themselves are the load bearing members.

The alternative to this is what we can call Framed Construction, in which the loads from floors and roof are transferred to posts or frames set at intervals apart. The walls serve merely as a protection against weather and to provide thermal and sound insulation so that they cease to be load bearing and become only an infilling between the structural members of the framework.

The difference between these two systems of construction can be best understood by thinking of the first as a stone hut and the second as a tent. Prefabrication can be applied with success to both methods.

Much can be done to rationalize tradi-



On Active Service

Electricity is basic in building

Electricity, which has been the *mainpower* behind the production of munitions of war, will be a prime necessity in the building and equipment of the new and better homes for peacetime Britain. Electricity is no longer a luxury to be enjoyed by a few; it is the *main source* of that comfort and cleanliness to which every householder is entitled. And, in addition to being indispensable, Electricity is able to meet—and *will* meet in the post-war world—the hundred and one demands which indispensability entails.

For information and advice about the many new uses and greatly increased adaptability of Electricity consult your Electricity Supply Undertaking or the British Electrical Development Association, 2 Savoy Hill, London, W.C.2.

The Electrical Section at the Building Centre, Maddox Street, London, W.1, provides interesting illustrations of electrical applications in domestic and industrial premises.

EDA

tional construction, and we must try, while retaining it for a proportion of the output, to introduce improvements which will increase the rate of output per skilled operative when working in masonry mediums. There are great possibilities here for ingenuity and research. For instance, standardization of brick sizes will not only facilitate the supply of bricks but will eliminate cutting when fitting standard components. Rate of output can be increased also by more care and attention to the way in which bricks and mortar are delivered to the bricklayer. Better and movable scaffolding will also help as will arrangements whereby bricklayers can continue to work under cover during the wet weather. Mechanical aids of all kinds should be devised to assist the tradesmen to increase output without any addition to the physical energy which he requires.

The next and most obvious way in which the traditional technique can be developed is by using larger units, although still adhering to the load bearing wall, but introducing mechanical equipment to handle and hoist such larger units into position.

For instance, there is one new method in which bricks are precast in the factory in wooden pallets with reinforcing rods running through them and with an internal leaf of solid concrete to form the other side of the cavity, thus giving a prefabricated slab of ready-made brick-faced cavity walling about 6 ft. by 4 ft. These are lifted into position by mechanical means, and the joint between them is grouted with cement. The benefits claimed for this system are that the walling units can be made under cover, in the factory by unskilled labour, so minimizing site erection-time and yet retaining much of the value of traditional construction. Another method which the Glasgow Corporation Housing Department has developed, is houses of large precast foamed slag blocks.

Another method of load bearing construction which has great possibilities and which is being advanced by many firms of repute, is poured concrete construction, using either dense concrete, no-fines or foamed slag. The principle of the poured method is, as its name indicates, that material in a semi-fluid state is poured on site into moulds or form-work constructed to form a negative of the structure. We may refer to this as the Blanc Mange method of house construction. The form-work or shuttering may be of wood or metal and one side may be plywood or special hardboard which is left in position to form a decorative finish to the interior of the building. In the best methods, the shuttering is arranged to slide up in guides after each section has been poured and set, thus using less material for the form-work and saving time in erection. Of course, once the form-work has been constructed it can be used again for further houses of similar type. Thus, this is another method of mass production. Instead of casting the units in the factory, however, as in the Glasgow method, the buildings are cast on site.

When we consider Framed Construction we are breaking much newer ground with consequent dangers and difficulties ahead, but it must be acknowledged that, theoretically at least, framed construction is the more scientific of the two methods.

The range of materials which can be used for framed construction include not only the steel and aluminium frame, but also precast concrete and timber. The membrane covering the frame is usually in two layers, known as the internal and external cladding. The former resists the weather and the latter provides a decorative finish for the interior. For the exterior, there is a choice of the following main materials: Sheet steel, aluminium, asbestos sheeting, wooden weather boarding, foamed slag blocks, brickwork, or dense concrete. All these would be non-load bearing, that is, just thick enough to carry only their own weight. All serve the primary purpose of excluding the weather.

The internal cladding may be of plasterboard, hardboard or plywood attached to light wooden or steel framing, fixed to the external cladding, or, alternatively, may be of self-supporting blocks or foamed slag, terra cotta, etc. In addition, further insulation in the form of glass quilt or wood wool may be needed to improve the thermal properties of the walling.

There are many possible snags in framed construction. But in assessing the qualities of the newer techniques we should remember that many of our traditional buildings are unnecessarily strong. It is here that we get the value of framed construction which makes use of the materials scientifically and consequently eliminates unnecessary material.

We can perhaps summarize rules of guidance for developing both traditional and new techniques as follows:—

1. Prefabrication or factory assembly must be adopted in order to ensure that as much work as possible will be done off site by unskilled labour.

2. Mechanization must be adopted to ensure that the maximum use is made of the skilled operative with the minimum of wasted time.

3. Every effort should be made to ensure the rapid covering-in of the framework of a house so that the finishings will not be impeded by adverse weather conditions.

4. Dry building rather than wet building should be adopted wherever possible to ensure minimum drying-time.

5. Standardization of parts, fittings, etc., should be introduced to ensure minimum work in finishing and fitting.

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

Six lines or under, 8s.; each additional line, 1s. THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: 75, EATON PLACE, LONDON, S.W.1. TEL.: SLOANE 5615. 991

CARMARTHENSHIRE COUNTY COUNCIL.

Applications are invited for appointment on the temporary staff of the County Architect's Department, with the possibility of a permanency, of two thoroughly qualified and capable Assistants. Experience of the design of Schools, Police Buildings, etc., an advantage. Salary offered, up to £550 per annum according to capabilities.

Applications, stating age and experience and accompanied by copies of two recent testimonials, should be delivered to the undersigned not later than the 14th July, 1945.

W. VINCENT MORGAN, A.R.I.B.A.,
County Architect.
County Offices, Carmarthen. 870

CITY OF SALFORD.

Applications are invited for the appointment of an Architectural Assistant. Salary £330, rising by annual increments of £10 to £360 per annum, plus cost of living bonus (at present £59 16s.) Preference will be given to applicants who are Associates of the Royal Institute of British Architects. The appointment is pensionable.

Applications should be forwarded in an envelope appropriately endorsed, and addressed to the City Engineer, Town Hall, Salford, 3, so as to be received not later than 11th July, 1945.

H. H. TOMSON, *Town Clerk.*
871

BLACKWELL RURAL DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant. Salary £300, rising by £15 to £375, plus cost of living bonus.

Candidates must be holders of recognised professional qualifications, and be accustomed to making surveys, taking levels and preparing plans of layouts and other incidental work in connection with the Council's housing scheme.

The post will be subject to the Local Government Superannuation Act, 1937, and will be terminable upon one month's notice on either side at any time.

The successful candidate will be required to pass a medical examination.

Applications, stating age and experience, together with copies of three testimonials, should reach the undersigned not later than 31st July, 1945.

W. S. COCKERHAM,
Clerk to the Council.
Dale Close, 100, Chesterfield Road South, Mansfield, Notts. 887

COUNTY BOROUGH OF TYNEMOUTH.

BOROUGH SURVEYOR'S DEPARTMENT.

CHIEF TOWN PLANNING ASSISTANT.

Applications are invited for the above position at a salary of £500 per annum, plus war bonus. Candidates will require to have passed the final examination of the Town Planning Institute, and preference will be given to those with Engineering qualifications. Previous experience in a Municipal Engineer's Office is essential.

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

Applications, stating age, qualifications and experience, together with copies of not more than three recent testimonials, must be received by Mr. D. M. O'Herlihy, B.Sc.(Eng.), M.I.C.E., Borough Surveyor, Howard Street, North Shields, not later than 10 a.m. on the 28th July, 1945.

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

The Ministry of Labour and National Service have been given permission under the Control of Engagement Order, 1945, for the advertisement of this vacancy.

Dated the 22nd day of June, 1945.

FRED G. EGNER,
Town Clerk.
14, Northumberland Square, North Shields. 890

URBAN DISTRICT COUNCIL OF HORNCHURCH.

APPOINTMENT OF ARCHITECT.

Applications are invited for the permanent appointment of an Architect at a salary of £700 per annum, plus war bonus, at present amounting to £59 16s. per annum.

Applicants must be Fellows or Associate Members of the Royal Institute of British Architects.

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

Applications, stating age, experience and qualifications, accompanied by copies of three recent testimonials, must be received by me, the undersigned, endorsed "Appointment of Architect," not later than Saturday, the 7th July, 1945.

Canvassing, directly or indirectly, will be a disqualification.

WILLIAM C. ALLEN,
Clerk of the Council.
Council Offices, Billet Lane, Hornchurch.
18th June, 1945. 881

BOROUGH OF WISBECH.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant in the Borough Engineer and Surveyor's Department, at a commencing salary of £375, plus war bonus, at present £59 16s. per annum.

Candidates must be qualified for architectural work, and will be required to carry out such work for housing and public buildings, etc., under the direction of the Borough Engineer.

The appointment will be for an indefinite period, subject to the provisions of the Local Government and other Officers' Superannuation Act, 1937, and also subject to one month's notice on either side. The successful candidate will be required to pass a medical examination.

Candidates must disclose in their application whether to their knowledge they are related to any member or senior Officer of the Council.

Applications, stating age, qualifications and experience, accompanied by not more than three testimonials, and endorsed "Architectural Assistant," must reach the undersigned not later than Monday, 16th July, 1945.

Canvassing either directly or indirectly will disqualify.

J. E. SIDDALL,
Town Clerk.
Town Hall, Wisbech.
19th June, 1945. 898

BOROUGH OF MACCLESFIELD.

APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a temporary Architectural Assistant, at a salary of £400 per annum, rising by two annual increments (subject to satisfactory service) to £450 per annum, plus current war bonus.

Candidates should be A.R.I.B.A. or have an equivalent qualification. A surveying qualification and previous experience in municipal housing schemes would be an advantage.

The appointment, though temporary, will probably be made permanent at the conclusion of hostilities.

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

Applications, stating age, experience, and qualifications, and accompanied by copies of one recent testimonial, and giving the name, etc., of two referees, should reach the undersigned not later than Saturday, the 14th July, 1945.

WALTER ISAAC,
Town Clerk.
Town Hall, Macclesfield.
21st June, 1945. 899

LONDON COUNTY COUNCIL.

Visiting Teachers will be required during the session, commencing in September, 1945, for evening or part-time day classes in the following subjects, at the Brixton School of Building, Ferndale Road, S.W.4:—

Architectural Design and Drawing; Building Construction; Building Science; Building Geometry; Mathematics; Building and Quantity Surveying; Land Surveying (Theory and Practical); Drainage of Buildings; Sanitary Engineering; Heating or Ventilating; Structural Engineering (Steel and Reinforced Concrete); Builders' Book-keeping; Estimating and Pricking.

Applicants should be engaged in building work, and should be members of the Royal Institute of British Architects, Chartered Surveyors' Institution, Institution of Structural Engineers, or Institute of Builders, or have other suitable qualifications.

Forms of application obtainable from the Principal at the School (stamped addressed envelope must be sent).

Fees, for a teaching period of 2 to 2½ hours, 16s. or 22s., according to subject, plus war allowance of 2s. 6d. a day. Fees include payment for any duties required beyond the teaching period. 907

CITY OF NOTTINGHAM EDUCATION COMMITTEE.

COLLEGE OF ART AND CRAFTS.
Principal: ALFRED H. RODWAY, A.R.C.A.

Applications are invited from men and women holding recognised qualifications in Architecture, preferably the degree or diploma of a recognised school, for the following three full-time posts as Studio Instructors to teach Architectural Design, Construction, and ancillary subjects in the School of Architecture of the College. The School is recognised for purposes of exemption from the R.I.B.A. Intermediate and Final Examinations, and in the Department of Town and Country Planning from the Final Examination of the Town Planning Institute: (*a*) Two full-time Studio Instructors to teach Architectural Design, Construction, and the technique of presentation up to and including 3rd year Diploma Course work; and (*b*) a full-time Studio Instructor in advanced Architectural Design for Diploma candidates. Possession of A.M.T.P.I. and/or an approved qualification in Surveying may be regarded as an added recommendation in respect of one or more of these posts. Salary in accordance with the Burnham Scales for Art Colleges and Schools, *viz.*: £300 x £15—£525. In fixing the commencing salary allowance will be made for previous professional experience up to a maximum of ten years after age 21. Subject to the conditions governing full-time teaching the successful candidate will be given such opportunities as may be practicable to maintain their professional practice. The persons appointed will be required to commence duty on the 1st September, 1945, or on the nearest date possible thereafter. The appointments will be terminable by notice of two months being given by either side. Application forms are obtainable from the Principal, College of Art and Crafts, Waverley Street, Nottingham, to whom applications and two recent testimonials should be returned by Monday, 16th July, 1945.

F. STEPHENSON,
Director of Education.
Education Office, South Parade, Nottingham. 908

COUNTY BOROUGH OF EAST HAM.

APPOINTMENT OF ARCHITECTURAL ASSISTANT AND TOWN PLANNING ASSISTANTS.

Applications are invited from qualified persons for the undermentioned posts in the Borough Engineer and Surveyor's Department:—

(1) ARCHITECTURAL ASSISTANT (permanent).

From Associate Members of the Royal Institute of British Architects, or persons holding an equivalent qualification, of not more than 45 years of age, and who have had a general experience in a similar capacity in the service of a local authority.

Commencing salary £370 per annum, rising annually (on approved service) by £15 to a maximum of £445 per annum, plus war bonus, at present £59 16s. per annum.

(2) TWO TOWN PLANNING ASSISTANTS (temporary).

From Associate Members of the Town Planning Institute or persons holding an equivalent town planning qualification, and competent to undertake work in all aspects of post-war re-development.

Commencing salary £485, rising annually (on approved service) by £20, to a maximum of £525 per annum, plus war bonus, at present £59 16s. per annum.

An extended working week of 46 hours is temporarily in operation, and additional payment is made for the extra hours worked at a proportion of the basic rate.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and the Council's conditions of service, and the successful candidates will be required to pass a medical examination.

Applications, on forms obtainable from the undersigned, and accompanied by copies of three recent testimonials, must reach me not later than Monday, 23rd July, 1945.

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

C. V. THORNLEY,
Town Clerk.
Town Hall, East Ham, E.6.
27th June, 1945. 913

ARCHITECTURAL ASSISTANT, permanent, required by the Spalding Rural District Council. Salary £300 per annum, plus cost of living bonus (at present £59 16s. per annum). Candidate should have a sound knowledge of surveying, levelling, the preparation of drawings and quantities for housing and other architectural work. The appointment is subject to the provisions of the Local Government Superannuation Act, 1937. Applications, stating age, qualifications, and experience, and earliest date on which duties could be commenced, if appointed, together with copies of two recent testimonials, must reach me not later than 20th July, 1945.

L. FENNELL,
Clerk of the Council.
7, The Crescent, Spalding, Lincs. 911

MINERS' WELFARE COMMISSION.

Applications are invited for six Architectural Assistants. Salary £360-£400 (including bonus), according to qualifications and experience.

Subject to satisfactory service, the Assistants will be eligible for appointment to the regular staff, and membership of the staff pension scheme, upon the occurrence of vacancies.

Preference will be given to candidates who are members of the R.I.B.A., and who have a good knowledge of building construction.

Forms of application may be obtained from the Establishment Officer, Miners' Welfare Commission, Ashley Court, Ashtead, Surrey, to whom applications, accompanied by three recent testimonials, must be sent not later than 31st July, 1945. 888

BRENTWOOD URBAN DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECT.

Applications are invited for the permanent appointment on the staff of the Engineer and Surveyor of a qualified Architect holding the A.R.I.B.A. or equivalent qualification.

The basic salary will be at the rate of £400 per annum, plus war bonus of £59 16s.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937.

Applications (endorsed "Appointment of Architect"), giving age, qualifications, experience, and position regarding National Service, must be submitted on a Form of Application to be obtained from the undersigned, which when completed should be delivered not later than the 16th July, 1945.

Canvassing, directly or indirectly, will be a disqualification.

J. J. R. DAY,
Clerk of the Council.

Council Offices, Ingrave Road, Brentwood.
27th June, 1945. 905

Architectural Appointments Vacant

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

Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed

ARCHITECTURAL ASSISTANT required immediately; in private practice; permanent position; must be capable of war damage schedules, surveys, and general post-war development. Clark, 44, Great Russell Street, W.C.1. 804

REQUIRED immediately, experienced Architectural Assistants. Must be first-class draughtsmen and well trained, for important large scale work. Apply, stating age. salary and experience, Herbert J. Rowse, F.R.I.B.A., Martins Bank Building, Liverpool 2. 848

ASSISTANT REQUIRED by Chartered Surveyors in London in connection with works of Alteration, Reconstruction, Conversion, etc. Permanent and progressive post. Write fully, stating age, experience and salary required, Box 889.

ARCHITECTURAL ASSISTANTS required, various grades. General practice, Housing, Industrial Design, etc. Forshaw & Greaves, 45, Trinity Street, Hanley, Stoke-on-Trent. 872

JUNIOR Architectural Assistant required by Professional Firm in London, preferably with 2-3 years' training in General Draughting and Building Construction. Good prospects and varied experience in all branches of Architectural and Surveying Professions to suitable applicant. State experience, N.S. liability and salary required, to Box 876.

ESTIMATOR-DRAUGHTSMAN required, permanency for the right man, by a large firm of Joinery manufacturers in the Midlands. Reply, giving full particulars of previous experience, stating age and salary required, to Box 880.

CAPABLE Architectural Assistant required for industrial, commercial and similar work. Apply, giving full particulars, to W. H. Saunders & Son, Architects, 1, Carlton Crescent, Southampton. 884

ARCHITECTURAL ASSISTANT required in West Norfolk for busy practice, principally housing and small commercial buildings; man with experience in private practice and quantities preferred; salary by arrangement, according to qualifications; car owner/driver. Box 827.

ARCHITECTURAL DRAUGHTSMEN required in West Norfolk; preferably Juniors studying for R.I.B.A. examinations; must be good surveyors and car drivers; salary by arrangement. Box 828

ARCHITECT'S ASSISTANT required in South-West London Office; write, stating age, qualifications, experience, position under National Service Acts, and salary required. Box 895.

QUALIFIED ARCHITECT required; speed and efficiency in design specifications for and supervision of industrial buildings essential; salary £600/£700, according to experience and qualifications; car and subsistence allowances additional; location at Gloucester. Box 896.

WANTED, immediately, Architectural Assistant; able to prepare working drawings from sketch plans; state experience and salary required. H. S. W. Stone and Partners, Chartered Architects, Lloyds Bank Chambers, Taunton. 897

ARCHITECTURAL DRAUGHTSMEN required in Civil Engineer's Office, Westminster; state experience and salary required. Box 901.

ARCHITECTURAL and/or Surveying Assistant required (1 junior) in London Architect"s and Surveyor's office; experience of dilapidations and war damage desirable; write for appointment. Box 902.

ARCHITECTURAL ASSISTANT, with good general experience, required for Slough and Uxbridge district, by Architects on essential work; housing and factories; permanent and progressive job for enthusiast; state age, salary required, and brief details. Box 903.

ARCHITECTURAL ASSISTANT (Junior) required. Reply, stating age, experience, and salary required, to Geo. Elkington & Son, Architects, 7, Laurence Pountney Hill, E.C.4. 904

SENIOR ASSISTANT required in Croydon Architect's Office. Reply, stating qualifications and salary required, to Box 909.

ARCHITECTURAL ASSISTANT required for change-over post war planning within a group of modern factories near Birmingham; salary £300-£600, according to ability. Box 910.

Architectural Appointments Wanted

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

DESIGNER (light welded construction); interested in post-war appointment with progressive firm; has practical experience and valuable contacts. Box 8.

YOUNG MAN, discharged from Forces, 2 years Army Surveyor, with previous experience as Architectural Assistant, seeks post in progressive office. Box 42.

QUALIFIED ARCHITECT, part or full time, specialised in Housing and Factory work. Full control of work. London district. 12 guineas per week. Box 33.

SPARE TIME Evening Work executed at home by Architect, 15 years' experience in working drawings and details. Specialist in house planning and design. Surveys undertaken preferably in the North London area. Box 34.

ENGINEER and SURVEYOR (32), 15 years Local Government. Wide experience Housing, Roads, Sewerage, seeks appointment offering scope. Box 35.

REGISTERED ARCHITECT, now in Local Government office, seeks change. L.G. or progressive firm engaged on re-housing preferred. London area only. Box 36.

SITE-RESIDENT Senior Assistant Architect, i/c Large Works, seeks appointment as Staff Architect, Building Manager, etc., or would accept responsible and interesting work in Architect's office. 29. Exempt school trained, experienced in structural alterations, departmental stores, licensed hotels, large war projects. Accustomed supervision of work, quantities specifications. Testified as excellent draughtsman. Good at design. Box 37.

PART TIME WORK at home, or permanent progressive post for full time employment required. London area. Qualified Architect; neat quick draughtsman. Box 38.

ARCHITECTURAL and Building Surveying Assistant; young man, age 24; P.A.S.I., M.R.San.I.; studying for the R.I.B.A. and T.P.I. examinations; 5½ years' experience; medical grade III; would prefer post in North England or Scotland. Box 44.

SENIOR ASSISTANT ARCHITECT (27), A.R.I.B.A., A.M.T.P.I.,, 8 years' office experience, including schools, clinics, offices, factories, houses, war damage, etc., requires appointment in London; salary required £650 p.a. Box 43.

ARCHITECT'S ASSISTANT (36) seeks new position; good draughtsman; can measure up premises, prepare working detail drawings for alterations or additions; experience in the design of schools, public halls, etc., together with all classes of domestic buildings; can survey, take levels. Box 45.

CHARLES HOWARD FROBISHER, F.R.S.A., F.R.G.S., A.F.S.(Hon.), of 61, Buslingthorpe Lane, Chapeltown Road, Leeds, 7, at present serving as an Engineer-Draughtsman on the staff of a C.R.E., wishes to contact principal prepared to pay reasonably attractive salary after demobilisation at end of this year, in return for first-class Architectural and Surveying work, executed with rapid precision and cheerfulness. 46

EXPERIENCED qualified Senior Architect, now teaching, offers part-time services during August in London area. Private Architects only. Box 39.

ARCHITECTURAL ASSISTANT, Merchant Navy Officer, ex P.O.W., no disability, and exempt further service, requires post as Architectural Assistant in Manchester. Four years' building school; passed for Associate Member Clerk of Works Association. Box 40.

ARCHITECTS' ASSISTANT, who served four years indentured apprenticeship as Architect. Good knowledge of general practice, supervision of building work, etc. Also four years' experience of use of arc lamp for making prints of tracings, seeks position along South or South-West Coast. Please apply to Box 41.

Other Appointments Vacant

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

ARTIST-DESIGNER required for product styling; must have flair for presentation and draughtsmanship; technical and inventive ingenuity an advantage; good position with industrial design team. Write Sir William Crawford & Partners, Ltd., 233, High Holborn, W.C.1. 834

COMPETENT Designer and Draughtsman (Senior and Junior) required by London firm of Decorators and Furnishers, having knowledge of traditional styles, with a flair for contemporary work; one with hotel and ship experience preferred; good prospects and permanency. Box 894.

Other Appointments Wanted

Four lines or under, 2s. 6d.; each additional

EXPERIENCED Industrial Art Designer seeks contact with progressive Furniture Manufacturer on free-lance basis. Box 874.

Planning

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