THE ARCHITECTS' JOURNAL

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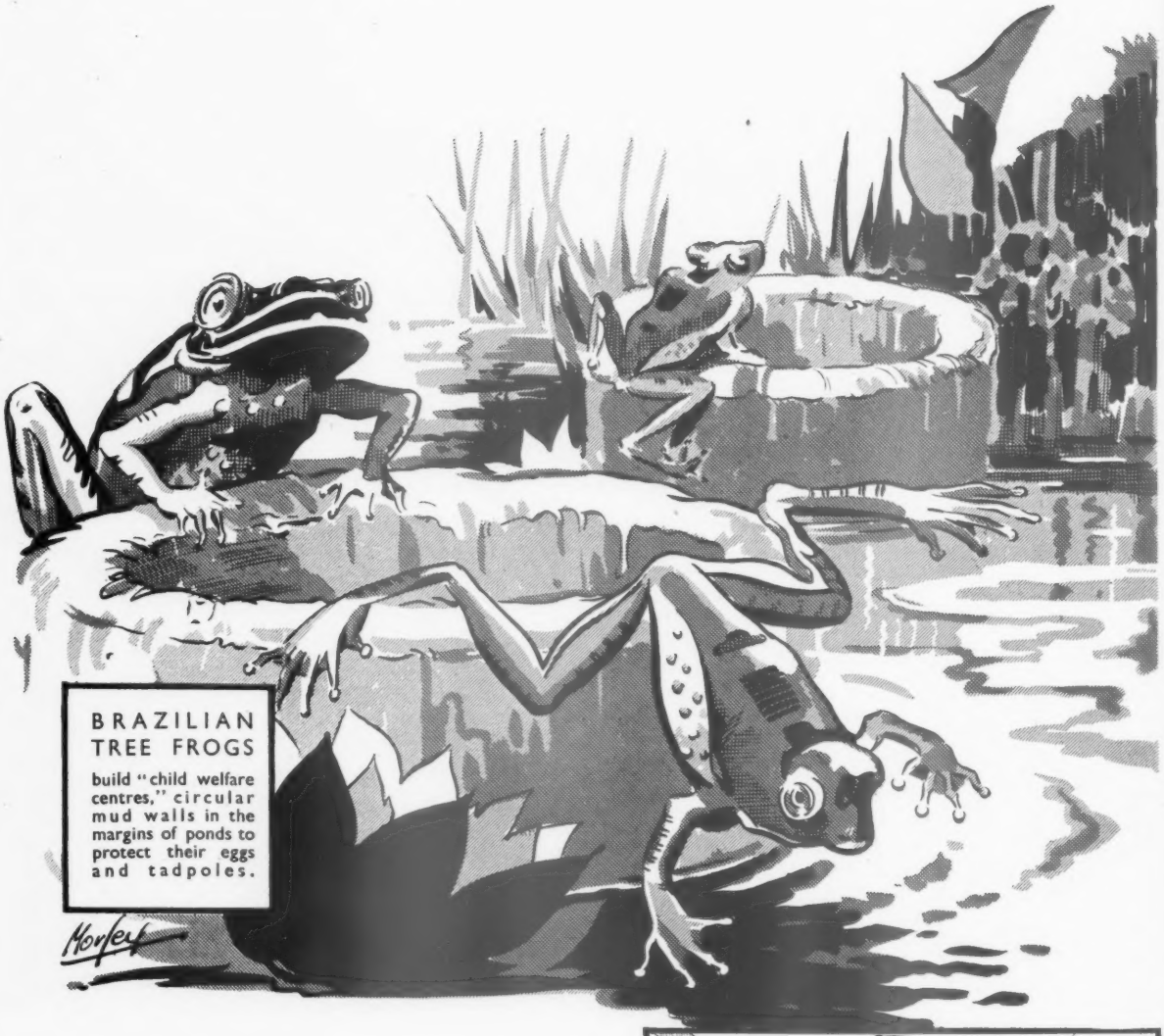
★ The war has both multiplied the number of Official Departments and encouraged Societies and Committees of all kinds to become more vocal. The result is a growing output of official and group propaganda. A glossary of abbreviations is now provided below, together with the full address and telephone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

AA	Architectural Association. 34/6, Bedford Square, W.C.1.	Museum 0974.
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8.
APRR	Association for Planning and Regional Reconstruction. 32, Gordon Square, W.C.1.	Euston 2158-9.
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738.
ASB	Architectural Science Board of the Royal Institute of British Architects, 66, Portland Place, W.1.	Welbeck 6927.
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128.
BCGA	British Commercial Gas Assn. 1, Grosvenor Place, S.W.1.	Sloane 4554.
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434.
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385.
BINC	Building Industries National Council. 110, Bickenhall Mansions, W.1.	Welbeck 3335.
BOE	Board of Education. Belgrave Square, S.W.1.	Sloane 4522.
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140.
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246.
BSA	British Steelwork Association. 11, Tothill Street, S.W.1.	Whitehall 5073.
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333.
CEMA	Council for the Encouragement of Music and the Arts. 9, Belgrave Square, S.W. 1.	Sloane 0421.
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280.
CSI	Chartered Surveyors' Institution. 12, Great George Street, S.W.1.	Whitehall 5322.
DIA	Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2.	Whitehall 7618.
DOT	Department of Overseas Trade. Dolphin Square, S.W.1.	Victoria 4477
EJMA	English Joinery Manufacturers Association (Incorporated), Goring Hotel, Grosvenor Gardens, S.W.1.	Victoria 9787-88.
FMB	Federation of Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041.
GG	Georgian Group. 55, Great Ormond Street, W.C.1.	Holborn 2664.
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881.
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158.
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577.
IEE	Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676.
IHVE	Institution of Heating and Ventilating Engineers. 21, Tothill Street, S.W. 1.	Whitehall 9609.
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172.
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128-29.
ISPH	Committee for the Industrial and Scientific Provision of Housing. 3, Albemarle Street, W.1.	Regent 4782-3.
LIDC	Lead Industries Development Council. Rex House, King William Street, E.C.4.	Mansion House 2855.
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767.
MARS	Modern Architectural Research. 8, Clarges Street, W.1.	Grosvenor 2652.
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300.
MOI	Ministry of Information. Malet Street, W.C.1.	Euston 4321.
MOLNS	Ministry of Labour and National Service. St. James' Square, S.W.1.	Whitehall 6200.
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.2.	Gerrard 6933.
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Abbey 7711.
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611.
NBR	National Buildings Record. 66, Portland Place, W.1.	Welbeck 1881.
	All Souls' College, Oxford.	Oxford 48809.
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041.
NFBTO	National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1.	Holborn 2770.
NT	National Trust for Places of Historic Interest or Natural Beauty. 7, Buckingham Palace Gardens, S.W.1.	Sloane 5808.
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245.
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House S.E.1.	Reliance 7611.
RC	Reconstruction Committee RIBA. 66, Portland Place, W.1.	Welbeck 6927.
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936.
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335.
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Temple Bar 8274.
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646.
TCPA	Town and Country Planning Association. 13, Suffolk Street, S.W.1.	Whitehall 2881.
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6147.
TPI	Town Planning Institute. 11, Arundel Street, Strand, W.C.2.	Temple Bar 4985.



Alphabetical Index to Advertisers

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

LOOKING BACK

Although the Franki management, for security reasons, cannot at the moment publish details of their present and recent work, a glance into the past reveals many instances of the superiority of the Franki systems of cast-in-situ piling, of which the following example is illustrative.

A few years ago four hundred Franki piles, varying in depth from 28 ft. to 30 ft., were driven at the Gravesend Sewage Disposal Works. The soil consisted mainly of Thames mud, but at 28 ft. down there was a thin stratum of Thames ballast of an average thickness of 4 ft. Owing to the unique advantages of Franki piling, it was possible to stop the piles on top of this ballast, their enlarged bases spreading over a sufficient area to give the necessary end-bearing. Had it not been possible to stop on this ballast, the piles must of necessity have been driven to a very considerable depth.

Three load tests were carried out on piles picked at random. One was loaded to 110 tons, showing a final settlement of $\frac{1}{16}''$ and the other two to 75 and 76½ tons respectively, showing no settlement whatsoever. These tests prove conclusively the stability and adaptability of Franki Piles.

Our illustrated Brochure, giving full particulars of the Franki system, will gladly be sent post free on receipt of one penny.

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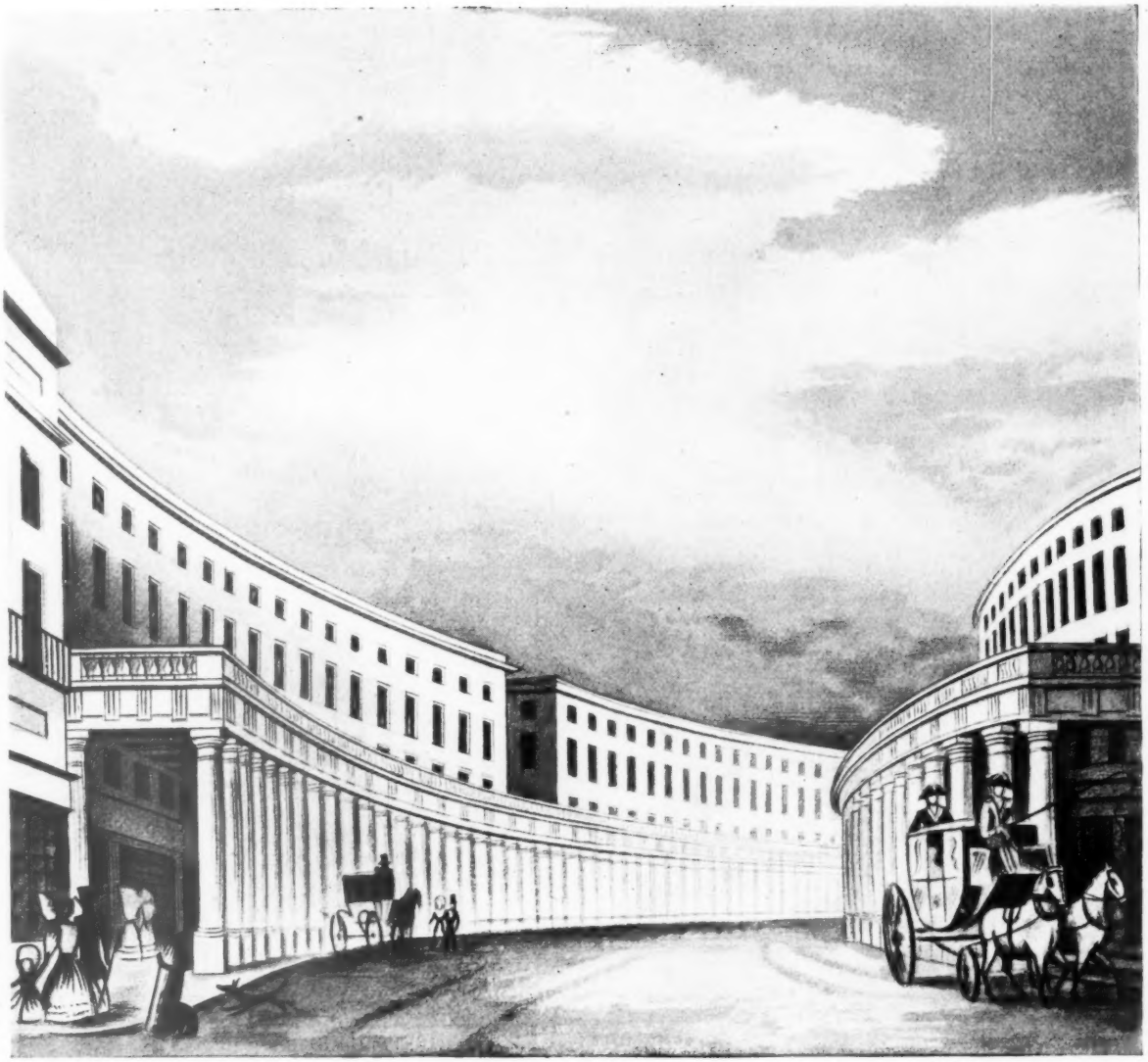
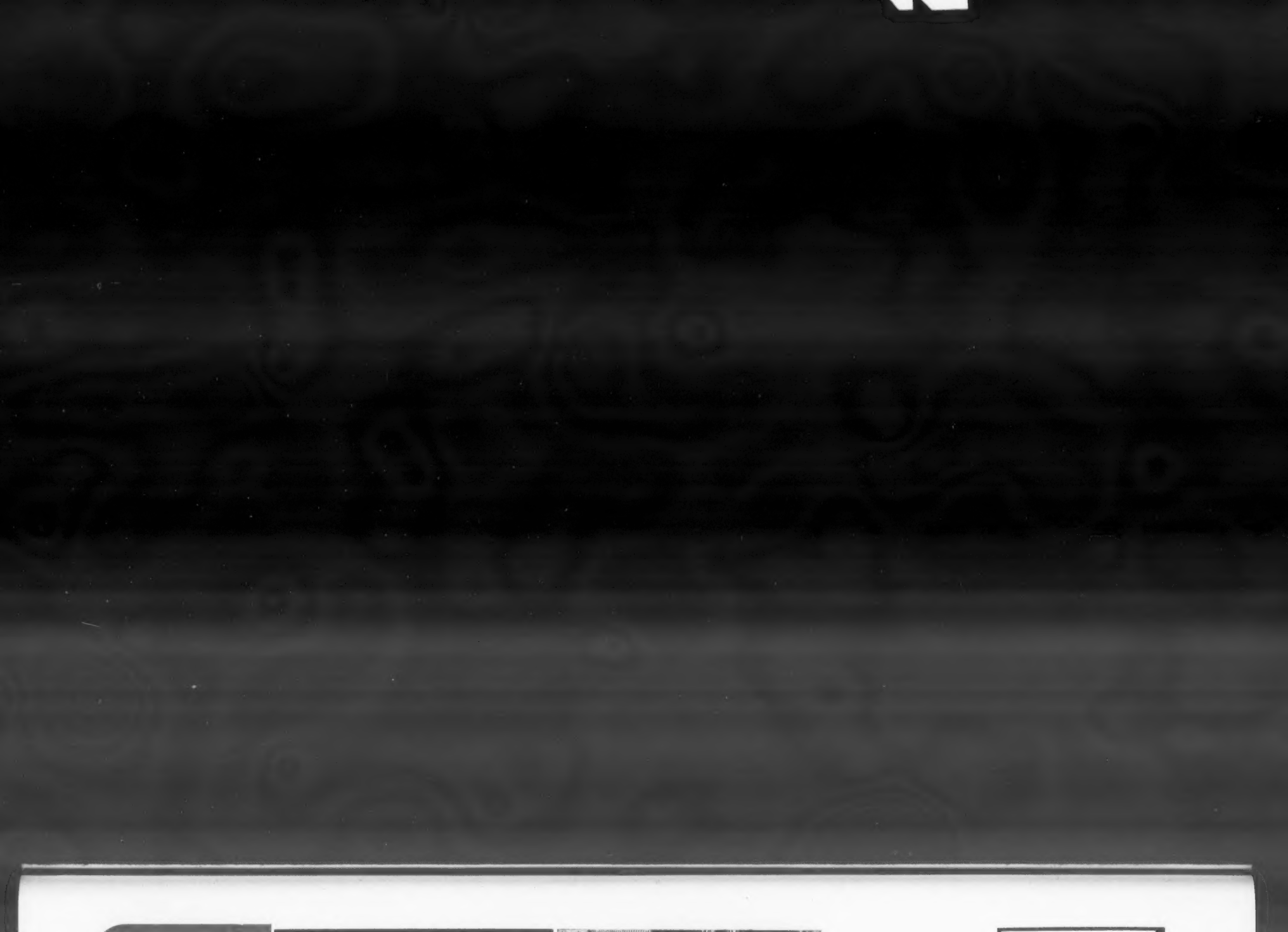
'Phone : ABBey 6006-9. *'Grams : "Frankipile, Sowest, London."*



Metropolitan Improvements

John Nash had to bear a good many jokes in his day; his plaster pinnacles and pediments will never seem the highest flight of English architecture; in propriety and amenity his houses are often sadly deficient. But he made amends magnificently, with his splendid sense of what was due to the town and its people as a whole! What an eye he had for an urban vista, for princely scale, for continuity of design! He rounded off the Georgian period with a flourish. His conceptions are a challenge and a stimulus to those architects who, in the mid-twentieth century, will undertake the most stupendous town-planning feats of history.... huge undertakings in which Celotex hope to take an important part.



Here's Sound Advice, Sir!

Many buildings in the past have been haunted by that architectural gremlin—"little Sir Echo."

It is now becoming more and more widely recognised that the time to destroy this gremlin is in the planning stage. And the method!—by consultation with people who specialise in sound—who devote themselves entirely to the propagation, control and analysis of sound in all its aspects.

Tannoy, the Sound People, provide such an acoustic advice service, and will be glad to assist architects in the reconstruction to come. Until then, Tannoy sound equipment and the Tannoy consultation service are available for high priority projects.

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THE SOUND PEOPLE

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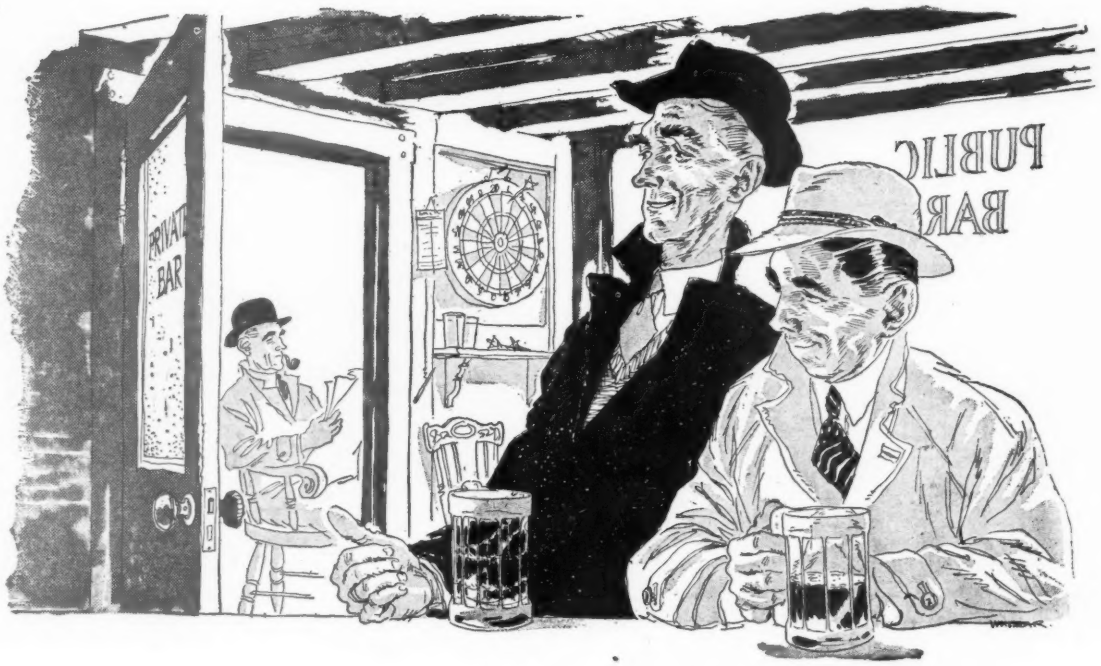

OL' DAVE—FOREMAN

A SATURDAY NIGHT SOLILOQUY

Yep! Ol' Dave's got it—wot it takes,
Mistakes . . . 'e wery seldom makes—
'E never makes the same one twice:
Nope! . . . n'if we do . . . in very nice
'N friendly tone—Yep! most polite—
'E murmurs—"busy blatherskite."

Yep! Ol' Dave's got it—wot it takes,
'E 'ates all shams. Yep! 'Ates all fakes.
Yep! . . . loves a job wot's straight and true.
'E? . . . spot the duds?—I'm tellin' you—
There's nuthin' wrong with Ol' Dave's sight;
'N a damn good job is Dave's delight.

Yep! Ol' Dave's got it—wot it takes,
'Is 'eart is in the bits 'e makes.
'E knows 'is metals round and thro'.
Yep! Better'n me . . . an' better'n you.
'E's wery nearly always right—
When 'e indents for BIRMABRIGHT.

Dave likes "B.B." because it's strong—
Yep! . . . work it cold an' sweet 's a song—
Yep! . . . welds like fun. It don't corrode—
Yep! . . . ruddy fact. Perfessor Joad
Would say Ol' Dave has seen the light
'Cause 'e insists on BIRMABRIGHT.

F.G.W.

TYRES are scarce — so remember never to brake suddenly unless in the gravest emergency. Apart from wear and tear to tyres remember, too, that sudden braking puts a colossal strain on your brake lining. Imagine the *destroying* heat that is generated within the brake drum. To stand up to these conditions, it was vital to discover a material which would irrevocably bond the asbestos strips that form the brake-lining. Isn't it significant that Bakelite Cement is chosen to-day for this purpose? Just another instance of the inevitability of Bakelite Plastics for a specific purpose.

Most forms of Bakelite Plastics are only available to-day for priority use and our wartime experience has taught us much which manufacturers in many industries can turn to good account when we are able once more to tackle peacetime problems.

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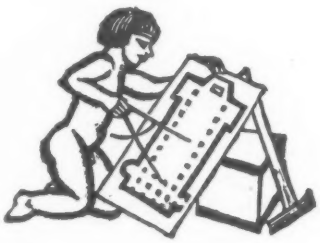
In common with every other periodical this JOURNAL *is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents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



DIARY FOR JULY

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

CHRISTCHURCH. *Living In Cities Exhibition.* (Sponsor, BIAE.) JULY 1 to 5

GATESHEAD. *Englishman Builds Exhibition.* At Shipley Museum and Art Gallery. (Sponsor, BIAE) JULY 1 to 4

LONDON. *Royal Academy's Summer Exhibition.* At Burlington House, Piccadilly. 9.30 a.m. until 7 p.m. Weekdays; 2 p.m. until 6 p.m. Sundays. Admission one shilling. JULY 1 to AUGUST 7

Exhibition of the work of the London Regional Reconstruction Committee. At the National Gallery. The LRRC is a Committee appointed by the Council of the RIBA, with 12 members from the Institute and the AA respectively. It has been at work for nearly two years on the problems of reconstruction and post-war planning for the London Region. The latter for the purposes of the Committee's work has been defined as C.D. Region No. 5, the area of which is about 850 sq. miles, with a population of about 8,500,000. The exhibition consists of proposals for a Regional Plan illustrated by plans and a plan-model to a scale of 6 in. to 1 mile. Many other drawings and diagrams are exhibited to illustrate particular problems of the Region, such as transport, and to demonstrate the principles upon which the Committee has based its proposals. A Historical Section is included in the exhibition. (See A.J., June 10). The Second Interim Report of the Committee, contains illustrations and forms a comprehensive survey of the work of the Committee and of the exhibition. JULY 1 to 10

Rebuilding Britain Exhibition. At Royal Exchange. Open at 1.45 p.m. Monday to Friday; 10 a.m. to 12 noon Saturdays.

The March Towards Freedom from Want Exhibition. At HC, 13, Suffolk Street, S.W.1. Exhibition by the Civil Service Clerical Association to illustrate The Beveridge Plan. JULY 1 to 3

Lecturer to be announced. *London and Air Transport.* At the Greater London—Towards a Master Plan Exhibition, National Gallery. (Sponsor, LRRC). 5 p.m. JULY 2

TCPA Conference on Town Planning, Housing, and Full Employment at Waldorf Hotel, Aldwych, W.C.2. July 3 and 4.

July 3. 10.30 a.m. Opening of Conference. 11.0 a.m. *Implications of a Full Employment Policy.* Chairman: Sir Cecil Weir, K.B.E. Address by Mrs. Joan Robinson (Lecturer in Economics, University of Cambridge). Discussion opened by Prof. Allan G. B. Fisher (Prof. of International Economics, Royal Inst. of International Affairs). 2.45 p.m. *Scale of Housing and of Expansion of Building Industry.* Chairman: (To be announced later). Address by Walter Hill. Discussion opened by T. P. Bennett. 6.45 p.m. *Difficulties of Rebuilding in City Areas.* Chairman: (To be announced later). Address by F. J. Osborn. Discussion opened by Paul Cadbury.

July 4. 11.0 a.m. *Finance of Housing and Rebuilding.* Chairman: Sir Walter Layton, C.H. (provisional). Address by W. Manning Dacey. 2.45 p.m. *Problem of Compensation and Betterment.* Chairman: Mrs. Hermione Hichens (member of Barlow Royal Commission and Scott Committee). Address by Raymond Evershed, K.C. (member of the Uthwatt Committee). Discussion opened by Donald Tyerman. JULY 3-4

The LRRC Brains Trust. Question-Master: H. V. Ashley. At the Greater London—Towards a Master Plan Exhibition, National Gallery. (Sponsor, LRRC). 5 p.m. JULY 5

Mrs. R. A. Butler. *Part-Time Education.* At 13, Suffolk Street, S.W.1. (Sponsor, HC.) 12.45 p.m. JULY 6

John L. Denman. *The South-East Region as a Part of a National Plan.* At the Greater London—Towards a Master Plan Exhibition. National Gallery. Chairman: Arthur W. Kenyon. (Sponsor, LRRC). 5 p.m. JULY 7

Gordon Stephenson. *Experimental Towns in the USA.* At 1, Grosvenor Place, S.W.1. (Sponsor, TCPA.) 1.15 p.m. JULY 8

E. C. Garrard. *Railways of London.* At the Greater London—Towards a Master Plan Exhibition, National Gallery. Chairman: S. Rowland Pierce. (Sponsor, LRRC). 5 p.m. JULY 9

H.C. Annual General Meeting. Address by W. S. Morrison, Minister of Town and Country Planning. *Civic Diagnosis,* An Exhibition of the work of The Hull Regional Survey. (Sponsor, HC.) 4.30 p.m. JULY 14

MARKET DRAYTON. *Living In Cities Exhibition.* (Sponsor, BIAE.) JULY 1 to 10

RUGBY. *Your Inheritance Exhibition.* At the School of Art. (Sponsor, HC.) JULY 1 and 2

SMETHWICK. *Post-War Housing.* A discussion opened by Roland Fletcher, Borough Engineer, Hugh Paul, Medical Officer of Health, and J. H. Wright, Chief Sanitary Inspector, of Smethwick. At the Council House, Smethwick, 10.30 a.m. Luncheon by invitation at Mitchell and Butlers, at Blue Gates Hotel, High Street (tickets essential), 1 p.m. Visits to Mitchell and Butlers' Brewery, or Incandescent Heat, Ltd., 2.30 p.m. Tea 4.30 p.m. (Sponsor, Royal Sanitary Institute.) Members proposing to attend must notify the local secretary by July 3. JULY 10

NEWS

THURSDAY, JULY 1, 1943
No. 2527. VOL. 98

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.

Major A. H. S. Waters, V.C., D.S.O., M.C., M.Inst.C.E., M.I.Struct.E., has been elected PRESIDENT OF ISE.

This is Major Waters' second term of office. The first was for the session 1933-34.

Mr. J. L. Beckett, City Engineer of Leicester, has been nominated by the Institution of Municipal and County Engineers TO SERVE ON MOW APPRENTICESHIP AND TRAINING COUNCIL for the Building Industry.

MOH has instructed local authorities TO REPLACE ALL GLASS blown out of window frames during the blitz.

Last autumn 50 per cent. of glass was allowed for blitzed living rooms and kitchens. In 1941 windows could only be repaired with glass substitutes. At that time the amount of daylight allowed in living rooms and kitchens was about half to two-thirds the normal and one-third in bedrooms.

from AN ARCHITECT'S *Commonplace Book*

DESIRABLE RESIDENCES: MR. LEOPOLD BLOOM'S. [*From* Ulysses, *by James Joyce*]. In what ultimate ambition had all concurrent and consecutive ambitions now coalesced? . . . to purchase by private treaty in fee simple a thatched bungalow-shaped two storey dwelling-house of southerly aspect, surmounted by a vane and lightning conductor, connected with the earth, with porch covered with parasitic plants (ivy or Virginia creeper) . . . the messuage to consist of one drawing-room with bay-window (two lancets), thermometer affixed, one sitting-room, four bedrooms, two servants' rooms, tiled kitchen with close range and scullery, lounge hall fitted with linen wallpresses, fumed oak sectional bookcase containing the Encyclopædia Britannica and New Century Dictionary, transverse obsolete medieval and oriental weapons, dinner gong, alabaster lamp, bowl pendant, vulcanite automatic telephone receiver with adjacent directory, handtufted Axminster carpet with cream ground and trellis border, loo table with pillar and claw legs, hearth with massive firebrasses and ormolu mantel chronometer clock, guaranteed timekeeper with cathedral chime, barometer with hygrographic chart, comfortable lounge settees and corner fitments, upholstered in ruby plush with good springing and sunk centre, three banner Japanese screen and cuspidors (club style, rich wine-coloured leather, gloss renewable with a minimum of labour by use of linseed oil and vinegar) and pyramidically prismatic central chandelier lustre, bentwood perch with a finger-tame parrot (expurgated language). . . . .

Thanks to the good offices of the Royal Society and to the generosity of the Pilgrim Trust, who have provided funds for purchase and repair, Woolsthorpe Manor, near Grantham, the BIRTHPLACE OF ISAAC NEWTON, IS TO BE HELD BY THE NT for preservation for the nation. It will be cared for with the help of a special committee on which the Royal Society and Trinity College, Cambridge, will be represented. Woolsthorpe Manor is a small stone manor in the Cotswold tradition. Isaac Newton was born there in 1642. To-day the house preserves many of its internal features, notably the wainscoting partition, which, according to tradition, the famous scientist had erected to form a retreat wherein he might pursue his studies undisturbed. The apple orchard still remains before the house. NT also announces the gift from Sir Stephen and Lady Tallents of their home in Kent, St. John's Jerusalem. The house, largely rebuilt in Georgian style by Hasted, the historian of Kent, embodies parts of older buildings, and is still moated by the Darenth. Sir Stephen Tallents, now Public Relations Officer of MOTCP, will continue to make St. John's Jerusalem his family home as a tenant of the Trust.

In a memorandum, issued by the Society of Housing Managers, and based on answers to a questionnaire completed by 2,077 tenants, 83 per cent. in the provinces and 72 per cent. in the Greater London area WANT A HOUSE ON THE OUTSKIRTS. In inner London a preference is shown for modern terraced houses because of the garden and nearness to work. Town amenities and nearness to work are also the reasons for the choice of flats. Families with young children express no preference for a lower flat to a higher one. With regard to internal planning, the memorandum states: rooms should be as nearly square as possible; fireplaces should not be in corners or opposite doors; the living room should be at least 180 sq. ft. for the medium-sized family; all bedrooms should be big enough to take two single beds; the bathroom should be at least 45 sq. ft. and there should be a separate w.c.; the larder should be in a cool position; the mass production of cheap and efficient refrigerators and water heaters should be accelerated. The memorandum points out that dwellings constructed and equipped in accordance with the standards claimed will now be beyond the means of most weekly wage-earners, and states that it is therefore of prime importance that the cost of land and capital should be so controlled, and the cost of building and equipment so reduced by the application of scientific methods, that such a home can be made available to all members of the community.

During the next three months, the Northern Ireland Ministry of Home Affairs hope to complete a HOUSING SURVEY OF NORTHERN IRELAND, to secure information to be used in connection with post-war planning and housing. The survey to take place over the whole of Northern Ireland is designed to secure details of the relation between the number of houses, the accommodation in them, and the number of people who have to be accommodated, and, consequently, the amount of present overcrowding for the elimination of which additional houses will be required. It will also provide valuable information about the general structure and condition of repairs of houses throughout the Province. The survey is being carried out for the Planning Advisory Board whose Chairman is the Vice-Chancellor of Queen's University, Mr. D. Lindsay Keir. Every house in every city, borough and urban district will be visited, but the task of visiting every house in rural areas will be so great that it has been necessary to have recourse to a system of sampling. For this purpose sample areas have been selected in each County in Northern Ireland. In the cities, boroughs, and towns the counting of residents —the overcrowding survey—will be done on the Ministry's behalf by enumerators employed by the local authority. In the rural sample areas both sections of the survey—that dealing with overcrowding as well as the structural survey—will be done by technical officers employed directly by the Ministry. The Ministry's technical officers will do the structural survey in the cities, boroughs and towns.

To ensure economy, BSI has issued a War Emergency Card of STANDARD COLOURS FOR PAINTS. There are three groups of colours. The first and second each contains eighteen colours, the third five. The first group includes colours for general purposes; the second those specified by one department or another for identification purposes; and the third those for public service vehicles. No new colours are introduced and all have been selected from the range covered by B.S. 381. Copies can be obtained from the British Standards Institution, price 1/-.

Mr. G. B. Hutchings, principal Director of Salvage and Recovery at MOS, in a speech on the last day of London Goes to Sea in Trafalgar Square, said that MORE THAN TWENTY-FIVE MILLION BOOKS have been collected in the nation-wide book recovery campaign. This is more than half the fifty-million target for the year. Mr. Sidney T. Garland, General Manager of the Waste Paper Recovery Association, said that wartime uses of paper for actual munitions of war is daily increasing. The paper collected each week is hundreds of tons below production needs.

OWING TO THE HEAVILY INCREASED COSTS CAUSED BY THE WAR THE PUBLISHERS OF THE *JOURNAL* HAVE BEEN FORCED TO RAISE ITS PRICE TO NINEPENCE AND TO INCREASE THE ANNUAL SUBSCRIPTION RATE TO £1/15/-. THESE NEW PRICES TAKE EFFECT FROM TO-DAY, JULY 1.

Director of Woodworking

Youthful impressions of the forest country of North and South America first stimulated the interest of Mr. R. H. Hall, the newly-appointed Director of Woodworking, in the timber industry. Born in London, forty-five years ago, it was in the United States that he received most of his education and much of his commercial woodworking experience. After studying the utilisation of wood in various countries, he became managing director of a large producer of manufactured joinery with considerable timber building activities, and interests in other companies engaged in fabrication. At the outbreak of war, when he still held this position, he joined the War Department as Honorary Timber Adviser, and later was transferred to the Ministry of Supply to organise the timber rationing sections of the department of the Director General of Equipment and Stores. When this work was completed he became Assistant, and eventually Deputy Director of General Stores, specialising in the production of woodware items. The Directorate of Woodworking, of which he is now Director, has just been created on the advice of the Council of the Minister of Production, to co-ordinate and control the purchase of woodwork for all the Government departments.

★

Mr. Attlee, Deputy Prime Minister, replying to Maj. Lyons, who complained of "the time-lag" in BUILDING THE 3,000 RURAL COTTAGES, said that the cottages, though they will come to meet an urgent need developed under war conditions, have been planned to take their place as a contribution to the rural housing programme of the future. Therefore, he said, this work has to be undertaken in accordance with the provisions of the Housing Acts, under which primary responsibility rests on the local authority. The initial period of planning has now passed, and he was informed that the actual work of construction will proceed rapidly. It was, he added, a mistake to think that the provision of the houses was just pure emergency work to be swept away at the end of the war. It will not be possible to disregard the local authorities in the matter of putting up permanent buildings.

★

Work has started on the FIRST FOUR OF THE THREE THOUSAND farm workers' cottages the MOH is to erect. They are being built in an isolated part of South Derbyshire.

Mr. H. H. Murray has been re-elected PRESIDENT OF THE FACULTY OF ARCHITECTS AND SURVEYORS. He has been President since 1939. Mr. G. Eric Mitchell, City Surveyor, of Wells, Somerset, is re-elected Honorary Treasurer. The Executive Council is as follows: Messrs. H. H. Murray, T. A. Shackles, R. R. Allan, H. H. Clement, G. E. Mitchell, H. H. R. Ward, G. Silvester, Col. F. S. Hammond, D.S.O., L. Blausten, J. Hemsted, H. W. Johnson, H. Machin, W. MacDonald, H. A. Osbourne, S. Price, C. Hunt, W. A. Green, G. H. Ivory. Mr. L. W. Longhurst has been appointed Assistant Secretary and Mr. A. S. Wydell, Editor of *Portico*, official organ of the Faculty.

The Committee on Town Planning Assembly of the Sheffield, South Yorkshire and District Society of Architects and Surveyors, says the annual report of the Council, has completed its investigations of the POST-WAR PLANNING OF SHEFFIELD. The investigations concern in particular the siting of important buildings in the City Centre. They were begun in 1941 when the Committee was invited to assist the special committee appointed by the Corporation. Mr. Gordon Hale and Mr. F. D. Lindley, part-time students of the Department of Architecture, were awarded in open examination maintenance scholarships of ARCUK.

LESSON OF THE 3,000

IT cannot be said that the Government machinery for building has on the whole worked well during this war, and for some time the building and allied industries have been perturbed by the complexity of the Government building machine. The small but significant case of the three thousand agricultural workers' cottages appears to have brought matters to a climax.

Even in war-time it should be a simple task to carry through a programme euphemistically described by Mr. Ernest Brown as "moderate." Yet the news has consistently been of frustration, confusion and delay. Mr. Hudson, Minister of Agriculture, was the first to announce that farm workers were to have some new cottages. Mr. Brown shortly afterwards proudly presented his plans, which, he implied, were to be construed as pointers of the things to come. A week later MOW staked its claim by pointing out that even in war-time it is possible to have pretty looking cottages which "conform" to local scenery and tradition.

After some weeks of ministerial silence, M.P.'s began to bombard the Government with questions. It appeared that while plans and elevations had been sent to local authorities, tenders were slow in coming in. Later still it was discovered that there was too great a variation in the few tenders that had been submitted—the lowest being £784 and the highest £1,400 per cottage.

Then Mr. Brown announced that he had asked Lord Portal to prepare amended plans and specifications which would be supplied for local authorities to adopt where they could not obtain tenders on the original plans. Mr. Arthur Kenyon was called in by MOW and he has produced complete plans and details which are, at least, standardised and economic. Mr. Hugh Beaver, Director-General of MOW, said: "We have designed, planned and built a very large number of hostels and married quarters for factories where transferred workers have to be specially housed. It has been laid down that these have to be done on the most economical war-time standard and it was in exactly the same way that we were asked to attack this problem, looking on this housing question as the war-time housing of more urgent productive labour." It is not intended, we gladly note, that these cottages are to indicate the Government's idea of the ideal post-war house.

The building of the cottages will be further speeded up by the amended plans and specifications being already in the hands of the local authorities concerned, who have been told that, if they wish, they are to obtain tenders on the basis of the new MOW plans. On July 8, MOH is to inform MOW of the position. Where unsatisfactory tenders are produced MOW will arrange that there will be builders to undertake to carry out the work at a satisfactory figure. These builders will work on a fixed price contract on the assumption that where the local builder cannot tender to a "reasonable" price (not revealed) it is not because the Government's price is too

low but because the local builder's is too high. MOW anticipates that work will start on July 15 and will be completed within three or four months. It is therefore to be hoped that this vexed question of the 3,000 has at last been settled.

What lesson can be learned from this affair? Without doubt the division of responsibilities between too many ministries, notably MOH and MOW, has been the chief trouble. MOH is now the housing authority. MOW is the building authority. Where the line of demarcation runs it is difficult to tell. Common sense demands that MOW should be the housing authority as well as the building authority. MOW is (or should be) in possession of all known facts regarding the building and allied industries. Therefore when any demand for building is made, needs, possibilities, and the resources available to meet them could be at once assessed and the job quickly carried out.

Within the past two weeks apart from the reorganisation of the machinery and release of new plans for the agricultural cottages, two other items of news show that the Government has reverted to the decision announced by the Lord Privy Seal early in October, 1940, that MOWB would be responsible for the Government building programme. First, the Ministry of Aircraft Production has transferred its building division to MOW, who will in future carry out all building operations for MAP. Secondly, the Ministry of Supply is following the example set by MAP and the transfer of its building section is now taking place.

Here is evidence that the Government building machine is at last being organised in a sensible manner. A precedent has been created which, it is hoped, will clear the way for a central building authority. It is now too late for this reorganisation to help the war effort to any great extent since the war building programme is nearly completed. Nevertheless, the sooner a central building authority is established the better, not only for completing the present job of winning the war, but also for carrying out post-war reconstruction effectively. Such an authority should be the Government's contractor. It should compile and maintain central and regional registers of contractors, builders, architects and technicians, and ensure by means of these registers both good design and the quick and just letting of Government and local authorities' contracts. Any Government Department requiring building would then be able to go direct to MOW, which would in turn deal with other ministries concerned such as MOH and MOTCP. MOH should, of course, lay down minimum standards of building from the health point of view, but these should be received by MOW to guide it in forming codes of practice and BS specifications. All legislation for building should be carried through MOW. By such centralisation any individual, group, department or authority would have one building authority only to deal with. If a few million more miles of red tape is thus disgorged, at least it will be reconsumed and digested internally.

The Architects' Journal

War Address: 45, The Avenue, Cheam, Surrey

Telephone: Vigilant 0087-9

NOTES & TOPICS

THE 3,000 AGAIN

It seemed that Sir James West was concerned with the 3,000 agricultural cottages as Director of Post-War Building rather than as Chief Architect of MOW. This belief has been disabused, however, by Mr. Hugh Beaver's (he has not yet received the accolade) announcement that if necessary MOW will introduce contractors to do the job, starting work on the July 15, *1943*. While this method of letting contracts could perhaps not be condoned in peace time, it is the right way to get things done during a war.

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The intimation that MOW regards this job as one of providing homes for workers engaged on war production is particularly welcome. So is the news that these are war-time emergency cottages and not the sort we may expect to be built after the war. The new plans designed by Mr. Kenyon are better than the original effort, because the arrangement of the rooms is simpler and because the buildings are to be on a war-time standard, except, apparently, for the release of timber.

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A voice was heard remarking at a press conference that MOW has forethought, for the plans are eminently suited to adaptation by those people who have been in the habit of buying up a couple of farm workers' cottages and knocking them into a "nice little place in the

country." "No doubt," the voice said, "these cottages will be a bone of contention during the next war, when critics will demand their return to the agricultural labourers."

THE MICROCOSM OF LONDON

Four further King Penguin books have just been published. Congratulations are due to Dr. Nikolaus Pevsner, their editor, for these little illustrated books are delightfully produced. One is on *Fashions and Fashion Plates*, 1800-1900, by James Laver, Keeper of the Victoria and Albert Museum; another is on sea shells; a third is on *Elizabethan Miniatures*, by Carl Winter, also of the V. and A. It deals mainly with the work of Nicholas Hillyard, who is, without doubt, though unknown to many, Britain's greatest painter. The most fascinating of the four books, however, is *The Microcosm of London*, which has a charmingly written text by John Summerson, the Deputy Director of the National Buildings Record.

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The original *Microcosm of London* began to appear in the spring of 1808, at a time when conditions were in some ways like those of to-day. Though Trafalgar had been won, the war had a long way to go. "In these pictures," writes Mr. Summerson, "we see English people who lived their lives against a background of world war, of sweeping armies and mass fanaticism. . . . It is strange how much less we should have had in common with Rowlandson's Londoners as little as three or four years ago."

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Rudolph Ackerman was the publisher of these "one hundred coloured views of London scenes and two hundred pages of conversational text." He was a versatile man; he was a coach-designer, ran an art school, sold artists' materials, organized help for refugees from Napoleonic oppression, besides being a successful publisher. He also originated a startlingly modern idea, for he invented a balloon, equipped to carry out leaflet raids over enemy occupied country.

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Ackerman called in two illustrators for his *Microcosm*—Charles Pugin and Thomas Rowlandson. "They were absurdly unlike. Pugin was a rather pompous, aristocratic little man, as precise as his drawings. . . . He it was who drew the architecture. The figures he left to Rowlandson. This burly, lazy, tomfool Englishman was what Mr. Pugin was not—a genius. Ackerman saw that these two were apt complementaries. Pugin would draw architecture; Rowlandson could draw life. And a great city is a panorama of architecture and life. Hence the *Microcosm*."

Two illustrations from The Microcosm of London (*Penguin Books, King Penguin series*), *reviewed by Astragal on this page. The originals were drawn by Pugin, with figures by Rowlandson, and show St. Stephen's, Walbrook, and Brook's Club.*

To-day, the *Microcosm* is rare. A good copy will fetch £40 or £50 in the sale-room. The King Penguin book, which contains a well-reproduced selection in colour of 16 of the original 100 plates, is therefore extremely welcome at the surprisingly low price of only 2s. One of the reproductions on this page shows St. Stephen's, Walbrook, "one of the grandest of all Wren's interiors," writes the author, "soaring up above the impanelled merchants and their puny parson. As a study in architectural logic, St. Stephen's

surpasses St. Paul's Cathedral itself. Columns to beams, beams to arches, arches to domes: the architecture resolves itself like a Euclidean theorem with extraordinary simplicity and grace."

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The other reproduction here is of Brook's Club, which was built by Henry Holland in 1777. It still stands, and the fine and gracious, yet homely, room in Pugin's drawing remains unaltered. The club was built round the great Whig leader, Charles James Fox. With his friends, who included the Prince Regent, Fox started the club as a centre for the overriding passion of the Regency beaux—wagering and gaming. Though tastes in entertainment have altered, tradition flows on at Brook's, for the names of the great Whig families of the eighteenth century are still on the list of its members.

IN THE NEWS AGAIN

News comes from Ireland of a now somewhat mythical personality. "Mr. John Betjeman, Press Attaché to the office of the United Kingdom Representative in Eire for the past three years," the *Irish Times* reports, "is to leave this country shortly.

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"It is understood that he is going to take up a position with the Films Division of the Ministry of Information in Great Britain. He wandered far from the narrow service to which diplomats usually confine themselves. He was at home in every milieu, from the Architects' Society to Maynooth College, from the Society of Antiquaries to the Gate Theatre. Among his works for Ireland may be mentioned his rescue and recovery of several hundred drawings of Francis Johnston, and his securing of the recognition of Johnston as the greatest Irish architect."

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"After he left Oxford," says the *Irish Times*, "he edited, to his great enjoyment, a rather highbrow architectural magazine (*sic*)." The *sic* is there because that "rather highbrow architectural magazine" was the ARCHITECTURAL REVIEW.

ASTRAGAL

PLANNING NOTES

THE BOOK EVERY TOWN SHOULD PREPARE

Our Birmingham (Cadbury Bros., 1/-) is primarily addressed to the school children of the city in order to stimulate their interest in its past growth and future development, and is an example for every town to follow. The book contains a short illustrated history of the beginnings of the town: what it looked like in the eighteenth century: its prominent citizens and how the others lived, worked and played: the changes in the nineteenth century, and finally Birmingham to-day, with a pictorial analysis of the current problems and some plans thrown in to stimulate further ideas.

The presentation is excellent and the writing sensible.

HOSTELS AND CLUBS

In *Young Citizen* (Penguin, 9d.), Dr. Morgan brings out the need for more accommodation for the young worker away from home. Working boys and girls need plenty of good food. An admirable venture in Liverpool was the establishment some few years ago of lads' luncheon clubs, which have been primarily cheap restaurants with opportunity for games and other recreation. This scheme has had the double advantage of enabling the working lad to get a good meal and to have an opportunity in his midday interval for recreation and exercise. There is scope for development of this idea in many large cities where the juvenile worker lives too far from his work to get home at midday.

"One is tempted," says Dr. Morgan, "to let the imagination run free and look forward to a type of Day Continuation School which includes residential accommodation. It might be quite practicable and economical to have in cities of large population boarding schools of this kind in which the inmates were at work for part of their time.

"In order to obviate segregation of the young strangers, these schools could also have as day-boys the local lads who would come in for the education which the Day Continuation School would provide. If the Continuation School is linked with a Youth Centre, which in its turn provides club activities and opportunities for membership of one of the several juvenile organizations, the connection between the formal curriculum and recreational activities will be close. But such a scheme can be successful only in so far as it recognizes the variety of taste and desire and talent which youth should display, and gives amplitude of choice and full opportunity for individual expression."

LETTERS

Mrs. Marianne Walter, A.R.I.B.A.

W. H. Parry, M.Inst.R.A.

Rev. Vincent Monson.

Architects' Salaries

SIR,—I agree entirely with Judex's contention in his letter in the ARCHITECTS' JOURNAL of June 17, that a salary of £250 offered to an architect or townplanner is simply scandalous. But a statement on the position as Judex suggests, even if by a well-informed body, is not enough.

I should like to submit the following suggestions for discussion amongst architects and townplanners:

1. That the RIBA and the TPI should consult with each other and with allied bodies as to what salaries should be regarded as adequate for defined grades of qualification and experience.
2. That all professional papers should either (*a*) refuse publication of vacancies with less than the agreed minimum salaries, or (*b*) publish simultaneously a request of the RIBA or TPI, etc., to architects to refrain from applying without first consulting their institute.
3. That *no* position should be advertised and published (in professional papers) without full name and address of employer, or without stating the minimum salary offered.

Similar methods have successfully been employed by *e.g.* the medical profession, and I plead that architects and townplanners consider them.

Sheffield. (MRS.) MARIANNE WALTER

Concrete Floors

SIR,—"In the multitude of counsels there is wisdom," or so we have been taught, but I doubt if it applies to building.

In the matter of cottage building, what a lot of opinions we have read and heard. So many of these are based on ignorance or prejudice.

May I say a word about that much discussed point—the concrete floor. I have lived for twenty years on concrete floors laid to my own specification and, if I built again for my own occupation, I would repeat as before. The only reasoned objection I have noted is

by one of your recent correspondents, who speaks of the "dawn chill." But even this is a fallacy. No one suggests uncovered concrete floors, and in any case the open joints of a shrunken wood floor are more likely to cause a dawn chill than a solid floor. The concrete floor—both upper and lower—are warmer than wood floors because they are draught-proof. If properly laid they are damp-, decease-, rot-, fire- and vermin-proof, and this last is a very important point. On concrete floors carpets and lino can be laid better than on wood floors and for obvious reasons will last longer.

Worksop W. H. PARRY

(*It happens that the Bakewell RDC is so angry about concrete floors that it has turned down all the cottages which composed its share, as the following extract from the* Daily Express *shows. We suggest that our correspondent's experience might lead Bakewell to alter its views.* Ed. A.J.)

We Will Not Build Those Cottages—Like Dungeons, says Council.

The Rural District Council of Bakewell, Derbyshire, refused last night to build 10 cottages, its share of the 3,000 promised for farm workers. Now the Ministry of Health will have to decide whether it can alter its specifications so that Bakewell will agree to build the cottages.

The County War Agricultural Committee will consider the refusal next week.

Bakewell Council has 17 members, eight of whom are farmers.

The council surveyor, Mr. Rennie Hayhurst, talking about the specifications, said: "Concrete flooring and concrete staircases and concrete walls faced with local stone would make the cottages as cold as dungeons in winter."

Farmer-Member Mr. J. Ollerenshaw said: "Farmers are employing married men with families who need houses, but this type would not do."

An official of the County War Agricultural Committee said: "These cottages are definitely needed. We allotted two each to five villages most urgently in need of them, and had the sites approved by the Ministry of Health."

Said the Ministry of Health: "We suggested certain ways of getting over the difficulties, but the council turned them down."

Built-in Bookshelves

SIR,—As a former lecturer to the Forces, I am much impressed by the high standard of cultural interests of youth to-day.

Go to the National Gallery or the Royal Exchange and watch the crowds of young folk, their tense interest, their enthusiasm, their obvious knowledge and appreciation of good music. Ask any bookseller, big or small, how his trade is increasing with the young people, and what quality and character of book is in demand among them. Youth was never keener and more "choosey" in its reading.

I therefore welcome the recent word of the Archbishop of Canterbury about private libraries, which he says should be encouraged however small. He goes on to endorse the suggestion that built-in bookshelves should be provided in our new houses, so that those who do buy books should not be faced with the alternative of buying bookshelves which they can ill afford, or leaving their books to lie about, which no genuine booklover likes to do.

Our young men and women are going to have a big say in the building of the future, using the word in its technical as well as its general sense. I think they will want those built-in bookshelves; and if they do want them, we may be sure they will have them. I speak as one who knows how much it means to have even the smallest library of one's own—with one bookshelf set apart for special old favourites, collected through a lifetime, and remembered from childhood's days.

Kensington (REV.) VINCENT MONSON

The ever increasing importance of continuity in structures calls for a better understanding by architects of this matter. The following article is an attempt to explain the main features of this type of construction without going into details. The first part in this issue deals with continuity from the point of view of distribution of stresses. Practical examples will be given in a second part.

CONTINUITY

in Construction

[*BY DR. K. HAJNAL-KÓNYI, M.I.Struct.E.*]

PART I

The use of continuity in the design of structures is officially encouraged in the USA, but rare in this country (as was reported in item 1030 of the Information Centre, A.J., for January 28). As continuity is also widely used on the Continent, it is obvious that this method of design has considerable advantages. Why have designers in this country been reluctant to apply it? One probable reason is suggested in a letter by Mr. W. Carter (A.J. for March 4, p. 154): The design of a continuous structure is more complicated than that of the conventional types and the average commercial designer has not the requisite knowledge.

This article* attempts to compare some outstanding characteristics of continuous and non-continuous structures, so as to help towards a better understanding of the advantages and difficulties involved in encouraging an extensive use of continuity. It will be found that the effort required to achieve this would be well worth while. Methods of analysis cannot, of course, here be set out.

To illustrate the difference between a continuous and non-continuous structure, let us assume that two adjacent spans have to be covered with steel members. Where these members meet they may either be supported independently (Fig. 2), or connected with each other so that any movement of the end of one beam affects the adjacent beam (Fig. 1). In the latter case they are said to be continuous. Now let it be assumed that the two members are loaded so that deformation takes place. Then if they are continuous, the centre lines of the beams which are rigidly connected will still have a common tangent t at support B (Fig. 1). If they are not continuous, the movements of the two beams are independent, and there will be no common tangent to the centre lines at the common support after deformation. (Tangents t_1 and t_2 form an angle at B, Fig. 2). As a consequence of the rigid connection at B in Fig. 1 any load on span AB induces stresses in span BC, and vice versa, whereas in the case of Fig. 2 the loading of one span has no influence on the other.

To generalize from this example it may be said that the characteristic feature of a continuous structure is the rigid connection between its members. This rigidity keeps the angles between the centre lines at the point of connection of any two members constant, i.e., these angles are not changed by the elastic deformations of the members themselves.

Continuous structures are "statically indeterminate" as distinct from "statically determinate" structures such as a simply supported beam, a cantilever, a three-hinged arch, etc. The meaning of these terms is that in a statically determinate structure one definite distribution of stresses, and one only, corresponds to any given loading, whereas in a statically indeterminate structure there is an infinity of possible stress distributions. It is this that makes its analysis more complicated, although there are a number of modern methods which allow a quick determination of the "statically unknown quantities" or "redundant forces." These depend on the deformation of the system under a given load, which is governed by the dimensions of the system itself, and in many cases on the possible movements of its supports. Changes of temperature in general induce separate stresses. All these circumstances have no effect on statically determinate structures. The cross sections and moments of inertia of the various members of a statically indeterminate structure, or at least their ratio must be known before an analysis

* Readers who find difficulties in following the calculations in this article may confine themselves to the passages in large print.

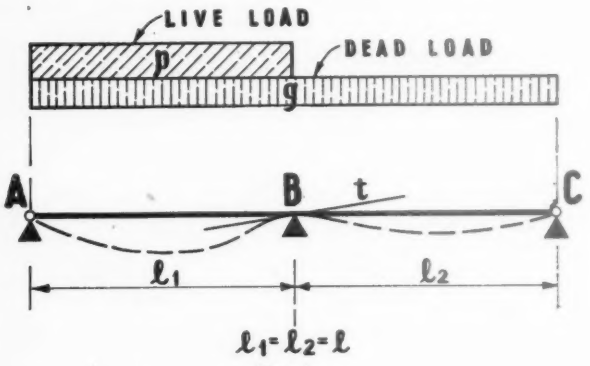


FIG. 1.
Continuous beam over two spans.

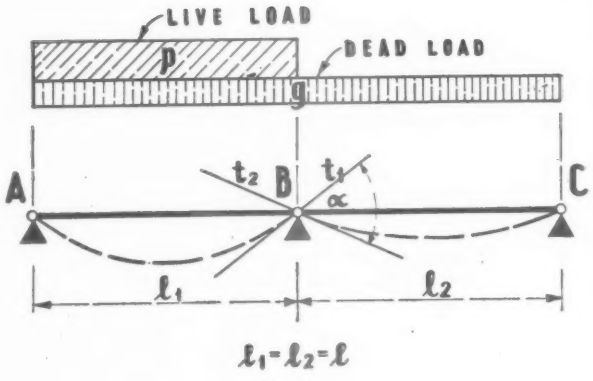


FIG. 2.
Two simply supported beams.

of the distribution of forces can be made. This seems a vicious circle at first sight, since the purpose of the calculation is precisely to determine the sizes of the various members which have to be anticipated in the analysis. Yet the possibility of an infinity of stress distributions, which makes the calculation more complicated, at the same time gives an increased factor of safety. It may prevent failure under certain conditions which would cause the collapse of a statically determinate structure, designed to carry the same load with the same factor of safety.

A few examples may explain the different behaviour of the two types of structure. Let us assume that both structures in Figs. 1 and 2 have to be designed for the same safe load w and that in both cases a rolled steel joist without additional plates is used. The maximum bending moment at support B in Fig. 1 is the same as in the spans in Fig. 2 (namely $\frac{wl^2}{8}$) and consequently the same size of joist will be required in both cases. What happens if the central support B (a) settles relative to the straight line connecting supports A and C or (b) is destroyed ?

(*a*) The distribution of bending moments in Fig. 2 is not affected by a settlement at B.

When investigating a statically indeterminate system of more than a single span like Fig. 1, the difference between dead and live load has to be taken into account. The dead load is permanent on the whole system; the live load may be partly or fully applied at any point. We denote the uniformly distributed dead load with g, the uniformly distributed live load with p. The maximum support moment occurs when both spans are fully loaded with w=g+p (Fig. 3a); the maximum span moment occurs when p is applied only on one span, i.e., one span is loaded with g+p, the other only with g (Fig. 1). As long as no settlement has taken place, the maximum support moment is $-.125\ (g+p)l^2 = -.125wl^2$ (Fig. 3b), the maximum span moment is $(.070g+.095p)l^2$. In terms of the total load w, this latter value depends on the ratio g : p. For instance, for g=p, it is $.0825wl^2$, i.e., only about two-thirds of the maximum support moment. A uniform settlement of all three supports has no effect on the bending moments, but if B settles relative to the straight line connecting the supports A and C, the support moment at B will be reduced and the span moments will be increased (Fig. 3c).

It is obvious that at a certain value of the settlement a stage will be reached when both bending moments are equal. For the ratio g : p=1 this will occur at a settlement which reduces the support moment from $-.125wl^2$ to $-.093wl^2$. (The rate of reduction of the support moment is more rapid than the rate of increase of the span moment, as may be seen from Fig. 3c.) A further increase of the settlement will reverse the ratio between span moment and support moment.

From this consideration the inference might be drawn that a settlement of the central support B, as long as it does not exceed a certain limit, is favourable in so far as it increases the factor of safety of the structure. It will be shown later that such a conclusion is not justified.

(*b*) If the central support B is destroyed, the structure in Fig. 2 will collapse. In the case of Fig. 1 the structure is transformed into a simply supported beam AC of twice the original span, with a maximum span moment of $(g+p)\frac{(2l)^2}{8} = (g+p)\frac{l^2}{2}$, i.e., 4 times the original maximum bending moment. If the structure is fully loaded, it is likely to collapse, but if no live load or only part of the full live load is applied, the structure may not fail. If g : p=1, it is probable that the structure will be able to carry a substantial part of the live load. Naturally, its deformation will render it unserviceable, but a catastrophe, which is certain in the case of Fig. 2, will often be avoided.

As a second example, Fig. 4 shows a beam with "built in" or "fixed" ends. Such a beam is a border case. The meaning of fixed ends is that whatever the load, the tangents at the supports to the deflection curve of the beam remain horizontal as long as the stresses at the supports do not exceed the elastic limit of the material of the beam. Only very massive abutments can prevent rotation at the supports. In most practical cases some rotation will occur owing to the flexibility of the supports. Then the beam is an intermediate case between a "simply supported" and a "fixed" beam, and may be called "partly fixed." Many continuous structures are a composition of partly fixed beams, e.g., a multi-storey frame over many spans (Fig. 5). This type of structure is composed of a series of beams and columns, rigidly connected with each other.

An investigation of a beam with fixed ends will enable us to draw certain conclusions as to the behaviour of the intermediate type.

The hatched area in Fig. 4 indicates the bending moment diagram of a beam with fixed ends and constant cross section, resulting from a uniformly distributed load w on the whole span. The support moments $(-\frac{wl^2}{12})$ are twice as big as the maximum span moment $(\frac{wl^2}{24})$. A variation of the cross section (strictly speaking of the moment of inertia) along the length of the beam has the effect of shifting the line a—a in the bending moment diagram. An increase of the moment of inertia in the central portion as against that at the supports will cause this line to move upwards and a strengthening at the ends as against the central portion will shift it downwards. Similar results will be obtained in the case of a beam with constant moment of inertia, if the supports rotate symmetrically inwards or outwards.

Line c—c indicates the limiting case of a simply supported beam, line d—d that of two cantilevers. Both cases may be reached with fixed ends by varying the shape of the beam (i.e., the moment of inertia) or, if the moment of inertia is constant, by rotation of the supports. It is such deformations that characterize partly fixed beams.

An unsymmetrical distribution of the moment of inertia or unequal rotations at the supports cause not only a shifting but also a rotation of line a—a which may be moved into the position shown by the dotted line d—c. A bending moment diagram with the line in this position corresponds to a beam with a built-in end on the left and a free support on the right.

If the beam with fixed ends has a constant cross section (the case represented by line a—a

in Fig. 4) and, e.g., owing to the explosion of a bomb, is cut in the middle, the bending moments at the supports are increased only by 50 per cent. and the beam, after being transformed into two cantilevers, will still be safe, even if fully loaded, provided the supports have not suffered and are capable of carrying the increased bending moments.

The case of line b—b, corresponding to equal bending moments ($\frac{wl^2}{16}$) in the span and at the supports, is of special interest, as will be shown later. This distribution can be reached by variation of the moment of inertia, but the result would be a weaker cross section at the supports than in midspan, although the same bending moments occur at both places. This would not be satisfactory.

Let us consider the case that a beam with fixed ends is arranged with a constant moment of inertia according to line a—a and is calculated with a factor of safety of 2 against the yield point. When increasing the total load on the beam to twice the permissible, i.e., to 2w, the yield point will be reached at the supports. Is there any danger of collapse, if the load is further increased? On reaching the yield point at the supports no further increase of stresses at these points will take place, owing to yielding of the material and a corresponding rotation of the tangents to the deflection curve.* The beam will act as a simply supported beam for any additional load until the yield point is also reached at midspan. The following table shows the gradual development of bending moments at various stages of loading:

Load	Bending moment at: supports	midspan
(w permissible)	$-\frac{wl^2}{12}$	$\frac{wl^2}{24}$
2w	$-\frac{wl^2}{6}$ (yielding)	$\frac{wl^2}{12}$
$2w+\frac{2w}{3}$	$-\frac{wl^2}{6}$,,	$\frac{wl^2}{6}$ (yielding)

Only at a load of $\frac{8w}{3}$ i.e., $\frac{1}{3}$ more than has been assumed as a basis of design, will the beam reach a critical stage which, in the case of a simply supported beam, designed on the same principle, would be reached at 2w.

This phenomenon is due to the plasticity of steel and is called "redistribution of stresses." (It applies equally to reinforced concrete.)

What is the practical conclusion and how can we design a beam with built-in ends and constant moment of inertia for the same factor of safety as a simply supported beam? The answer is a design according to line b—b, i.e., for $\frac{wl_2}{16}$ both at the supports and in span instead of $\frac{-wl^2}{12}$ and $\frac{wl^2}{24}$ respectively. The development of bending moments is as follows:

Load	Bending moment at: supports	midspan
w (permissible)	$-\frac{wl^2}{12}$	$\frac{wl^2}{24}$
$\frac{3w}{2}$	$-\frac{wl^2}{8}$ (yielding)	$\frac{wl^2}{16}$
2w	$-\frac{wl^2}{8}$,,	$\frac{wl^2}{8}$ (yielding)

The same principle can be adopted in the design of a continuous beam as shown in Fig. 1, i.e., in the case of g : p = 1 a bending moment of .093wl² may be assumed both at the support and in the spans instead of —.125wl² and .0825wl² respectively.

We now see the reason why the inference on p. 8, that a certain amount of settlement

* This is, strictly speaking, correct only if the material is "ideal plastic." The hardening of the steel at the edges may have the effect that the fibre stresses slightly exceed the yield point. The hardening may modify the development of bending moments quantitatively, but the qualitative behaviour of the beam will remain as discussed below.

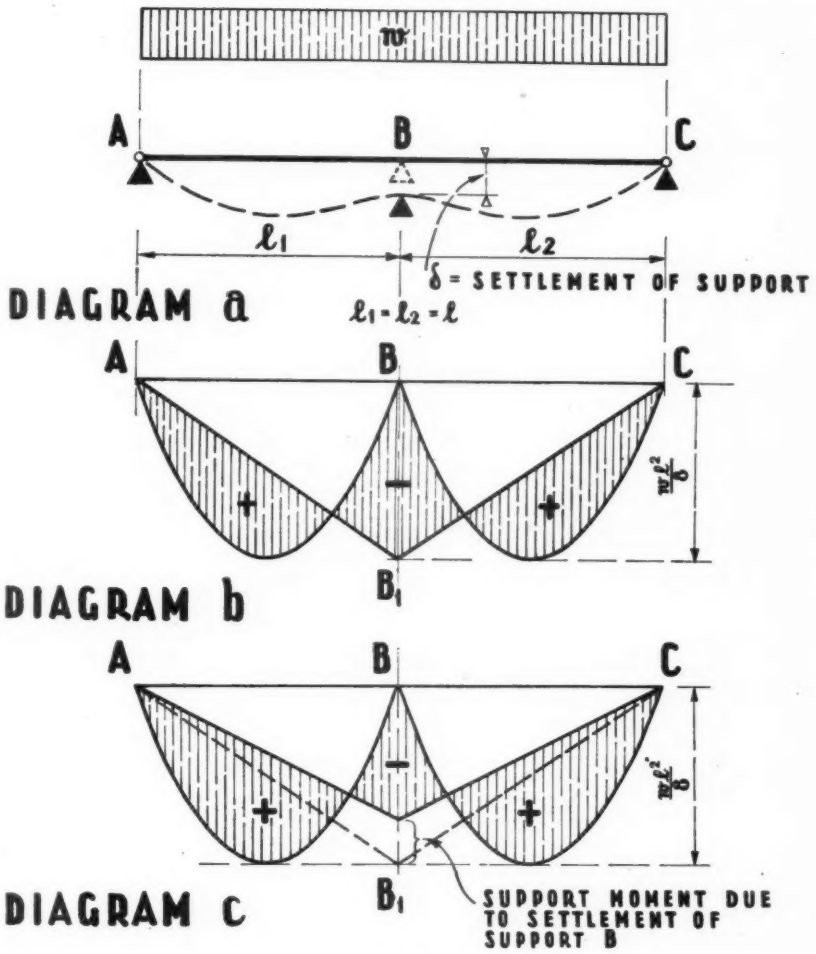


FIG. 3.
Effect of settlement of central support.

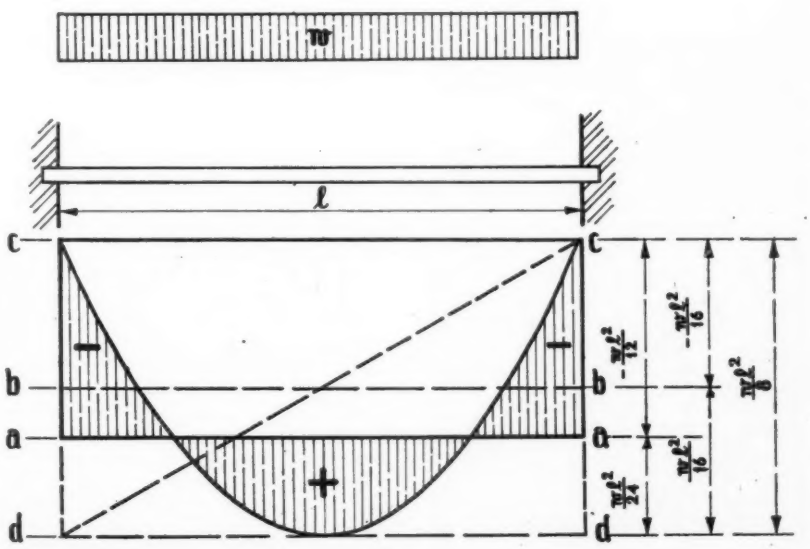


FIG. 4.
Beam with fixed ends.

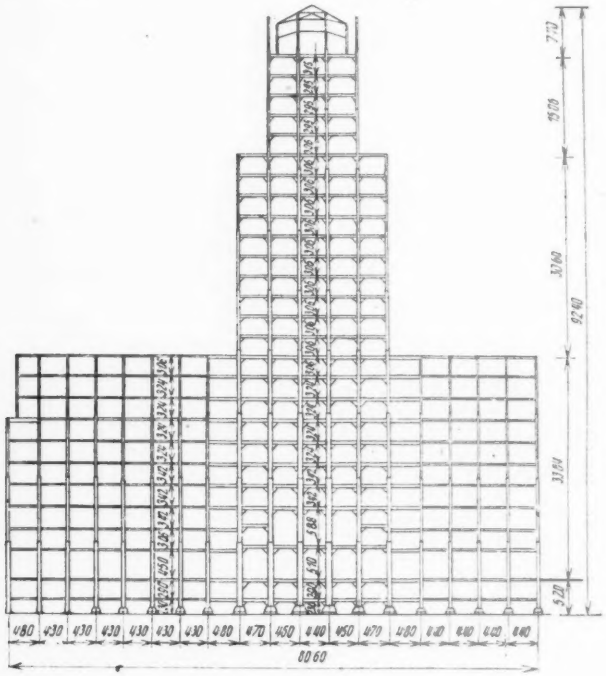


FIG. 5.
Steel framed building at Antwerp.

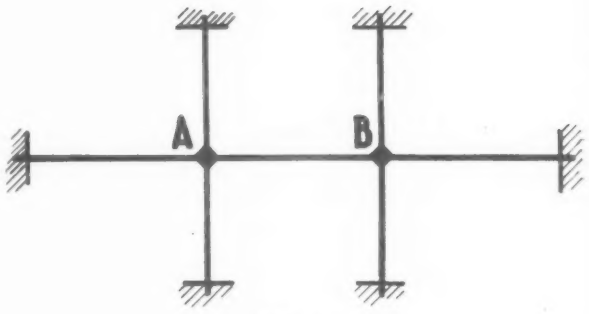


FIG. 7.
Part of a framed structure.

FIG. 8.
One panel of a framed structure.

of the central support of a continuous beam could increase the factor of safety, is incorrect. A redistribution of stresses will occur without any settlement of the central support and the ultimate load to be carried cannot be increased by settlement.

An important consideration in the design is the deformation. Let us compare the deflection f_1 of a simply supported beam, designed for $\frac{wl^2}{8}$ and that of a beam with fixed ends (f_2), designed for $\frac{wl^2}{16}$, i.e., assuming a redistribution of stresses before failure. The formulæ for the deflections are :

$$f_1 = \frac{5}{384}\frac{wl^4}{EI_1}, \quad f_2 = \frac{1}{384}\frac{wl^4}{EI_2}$$

where E = modulus of elasticity, I_1 and I_2 = respective moments of inertia. The section modulus of the simply supported beam has to be twice that of the beam with fixed ends. Hence, owing to the smaller depth of the latter, a ratio $I_1 = 2.5I_2$ is a good approximation. Therefore the deflection of the simply supported beam will be about twice as much as that of the beam with fixed ends, in spite of the smaller depth of the latter and in spite of an excess of the "permissible working stress" at the fixed ends by 33 per cent.

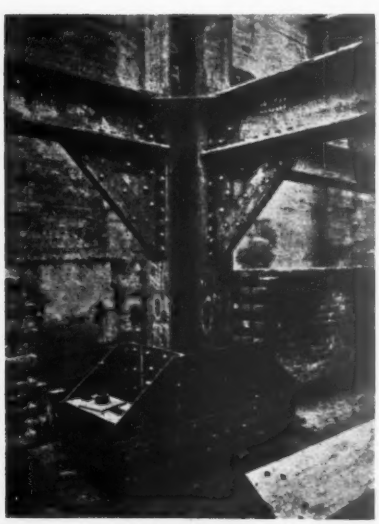
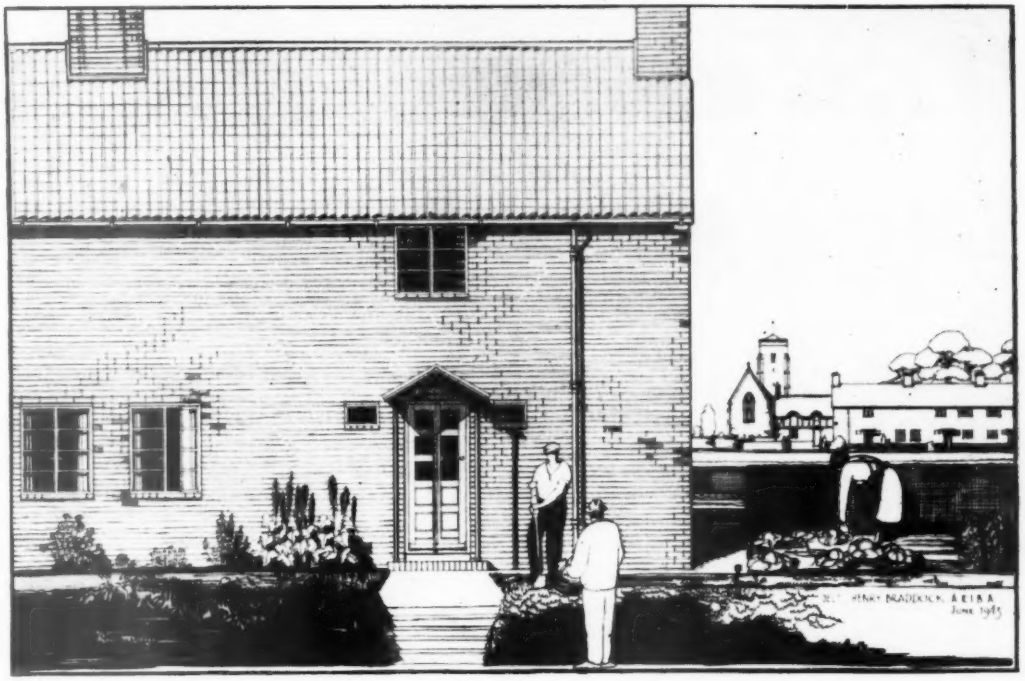


FIG. 6.
Typical detail of Fig. 5.

In a continuous structure like Fig. 5 the various members are partly fixed. This figure shows the skeleton of a steel-framed building at Antwerp, the highest in Europe, completed in 1931. The dimensions are in metres, the overall height of the building is 303 ft. Fig. 6 is a photograph of a connection in this building between a stanchion and the adjoining beams, and illustrates one way of achieving rigid connection between members. Fig. 7 is a diagram of part of the structure. The ends of beam AB are fixed by the resistance to rotation of the adjacent beams and columns. From the static point of view, the distinction between beams and columns is rather arbitrary. In both beams and columns a combination of bending moments and axial forces occurs, but in beams bending moments prevail, in columns axial forces. The degree of fixing, exerted by one member on the other, depends on the respective moments of inertia and lengths. Any load acting on span AB induces fixing moments at the ends of AB and at the ends of the adjacent members (Fig. 8), which affect the whole length of these members and, theoretically, the whole framework. The four moments acting at one nodal point like A or B must be in equilibrium. Practically it is often sufficient to consider the influence of the load on span AB on the part of the framework shown in Fig. 7. The bending moments in beam AB depend therefore not only on the load on the span itself, but (1) on the load on any part of the structure, and (2) on the dimensions of all the columns and beams forming part of the structure. The alteration of the cross section of a column or beam adjacent to AB may have a substantial influence on the bending moments in AB.

In a non-framed multi-storey building the beams are all considered as simply supported or hinged at the supports and no bending moments are transmitted from panel to panel. In a framed structure the various members are so connected with each other that loading of the beams causes bending moments in the columns and vice versa. In general, in a framed structure, the beams are weaker, the columns stronger than in a non-framed structure. This is a better distribution of material, allows a saving in weight and at the same time increases the factor of safety and rigidity of the building, especially against lateral forces, such as blast, earthquake, etc.

(To be concluded)



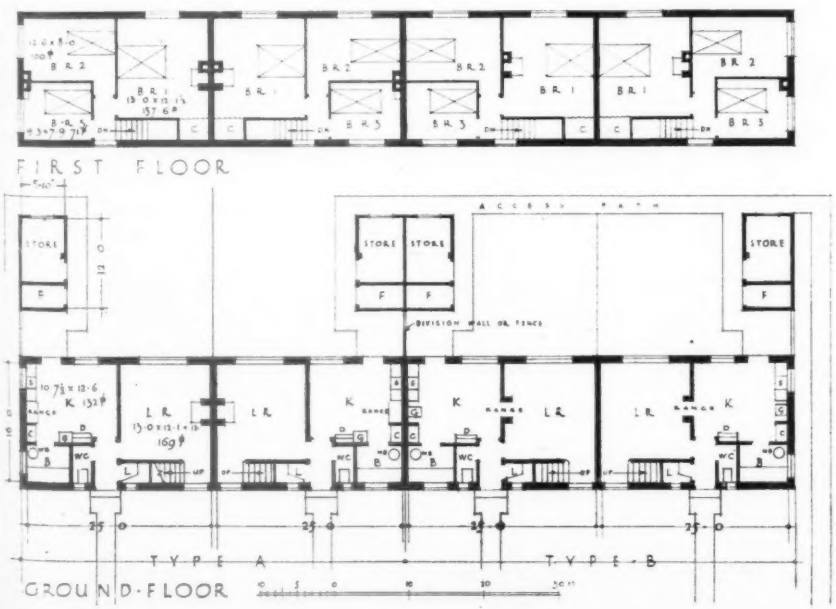
Right: A sketch, by Henry Braddock, of the elevational treatment of the cottages, designed by Arthur W. Kenyon for MOW. Below: plan of types A and B for north aspect, floor area 800 sq. ft., sheds 70 sq. ft.

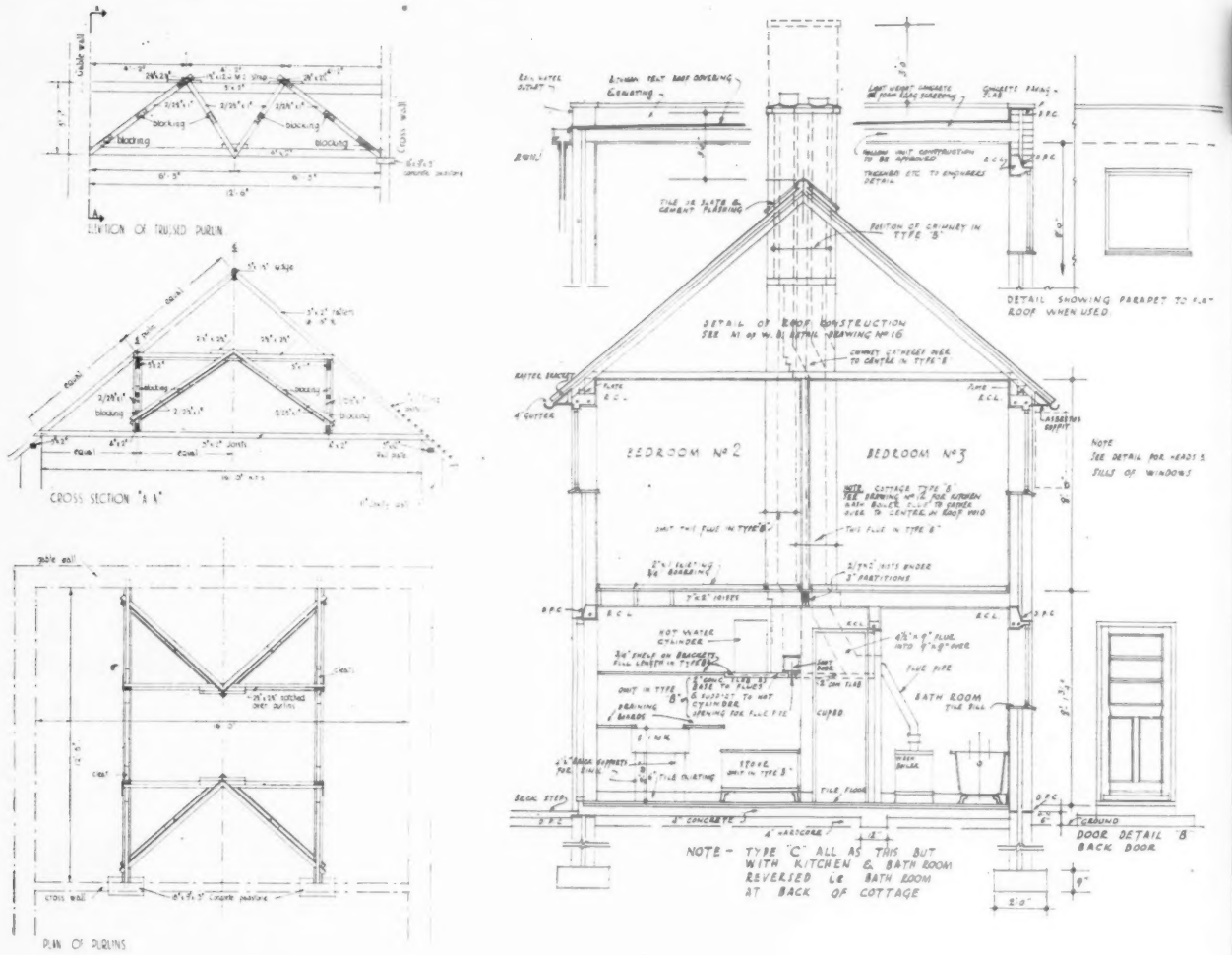
COTTAGES

FOR FARM WORKERS

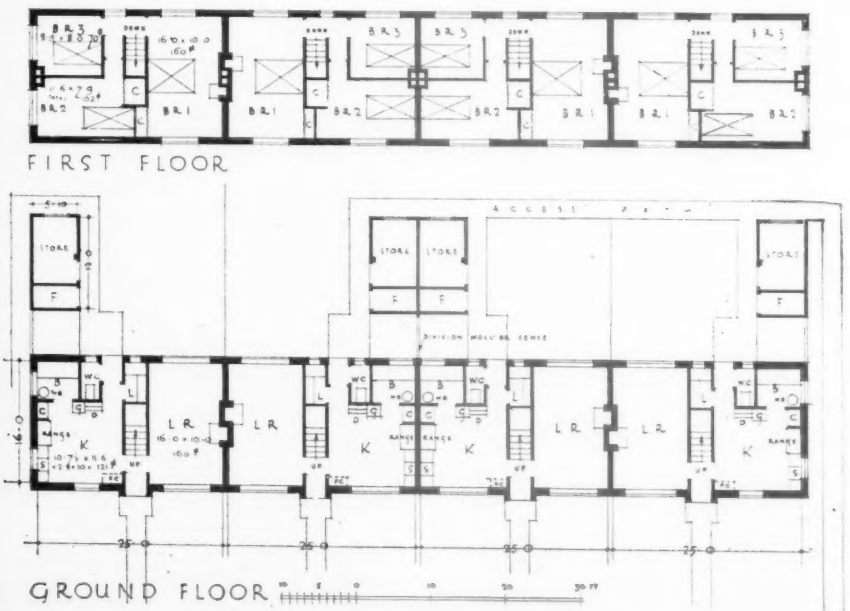
NEW DESIGNS BY MOW

The Government has reviewed the arrangements made for the building of the 3,000 agricultural cottages, with the result that the organisation of this programme has been handed over to MOW. The result of this arrangement has been the issue to local authorities of amended plans, prepared by Mr. Arthur W. Kenyon for MOW. The MOH will inform MOW by July 8 if they are unable to obtain satisfactory tenders for either the original or the new plans. MOW will then step in and allot contracts to builders accustomed to war-time building who, it was stated by Mr. Hugh Beaver, Director General of the Ministry, will start work by July 15 and complete within "three or four months." The amended plans have been produced by Mr. Kenyon, acting as consulting architect to MOW. Simplicity and economy are the chief considerations Mr. Kenyon had in mind when he drew up three alternative plans, for cottages with a floor area of 800 square feet. The cottages are in blocks of four—again to achieve economy. B type cottage varies from A in that a back-to-back grate is provided. In all cottages the ground floor rooms are 7 ft. 6 in. high, saving some £50 per block of four. The kitchens of all the cottages are fitted with a sink with two draining boards, a range, a linen cupboard and a dresser, while the bathroom, an adjunct of the kitchen, contains a copper and can therefore be used for washing clothes with a minimum of effort.





Above: details of roof construction. Right: section, types A, B and C. Below: plans of type C for north or south aspect. Floor area 800 sq. ft., shed 70 sq. ft.



MOW FARM WORKERS' COTTAGES

Timber is to be released in sufficient quantity to enable the living room and bedroom floors to be wood, while the stairs will also be made of wood. Further, the roofs generally will be pitched and covered with slates or tiles, though in some instances asbestos cement sheets or tiles will perforce be used. Kitchen and bathroom floors will be tiled. The cottages will be built of local brick with 11 in. cavity walls. Internal walls will be plastered and distempered and internal woodwork will be stained. Standard metal windows will be provided, with a simple device for fixing the black-out. In villages where there is electricity, there will be provision for electric light in each room, while there will be a power plug in each of the bedrooms without a fireplace, a plug for ironing in the kitchen and a plug in the living room for a wireless set. Gas will be laid on where it is available. Each cottage is provided with an outhouse containing a store (6 ft. by 8 ft. 7½ in.) for all purposes and a store for fuel (6 ft. by 3 ft.).

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

• DOMESTIC WATER HEATING 2: ECONOMIC ASPECTS

COMPARISON OF HEAT SUPPLY FACTORS DIRECTLY AFFECTING THE INDIVIDUAL CONSUMER.

Consideration was given in Information Sheet No. 899 to the economic utilisation of fuel on a national basis. In this sheet those factors which have a more direct influence on the individual consumer will be considered.[1]

i. **Fuel Storage.** iii. **Attendance.** v. **Appliance**
ii. **Installation space.** iv. **Maintenance.** **Efficiency.**

It is evident that consideration should be given to all these factors since, no less than the actual working efficiency, they influence the economy of the system as a whole.

1. Fuel Storage Space :

Coal : 15 cu. ft. (minimum).[2]
Coke : 20 cu. ft. (minimum).[3]
Gas, instantaneous : none.
Gas, storage : none.
Electricity, storage : none.

2. Installation Space :

Coal : 20 cu. ft.[4 and 5]
Coke : 20 cu. ft.[5]
Gas, instantaneous : 4 cu. ft. (on wall).[6]
Gas storage : 30 cu. ft.
Electricity, storage : 20 cu. ft.

3. Attendance :

Coal : 10 journeys daily—say, 20 minutes, total.[7]
Coke : 10 journeys daily—say, 20 minutes, total.[7]
Gas, instantaneous : none.[8]
Gas, storage : ½ minute daily.[9]
Electricity storage : none.

4. Maintenance :

(Cost of new parts for appliances and cost of labour in connection with keeping them in working order.)

Coal : 20 hrs. yearly.[10]
Coke : 20 hrs. yearly.[10]
Gas, instantaneous : two visits yearly, total 1¼ hrs.[11]
Gas, storage : two visits yearly, total 1¼ hrs.[11]
Electricity, storage : none.[11]

1. In order that the figures given on this sheet shall be strictly comparative all calculations have been based on the assumed hot water requirements of an average household of 3·77 persons, namely 60 gals. raised through 65°F. an average domestic day.

2. At 60 cu. ft. a ton.

3. At 80 cu. ft. a ton.

4. Kitchen range, 10 cu. ft. 60-gallon hot water tank, 10 cu. ft. (M.W.B. Bye-Law. B.W.A.).

5. This does not take into consideration the space occupied by a coal bucket, fire irons, etc., and the fact that water piping takes up more space than gas piping, or electricity cables.

Both kitchen range and coke boiler methods of providing hot water necessitate a hot-water tank. This is frequently in an airing cupboard, which is most useful to the housewife. Electricity and gas do not necessarily provide this.

6. Single point instantaneous water heaters may be connected directly to the water main, saving the space and weight of part of the cold water storage and the whole of the hot water storage and much of the pipe work.

Instantaneous multi-point gas water heaters should be connected to a cold water feed cistern of the same size as for a solid fuel-fired boiler, but the space and weight of the hot water storage and much of the pipe work is saved.

7. 2 Journeys to fuel store.
4 Journeys to replenish fire.
1 Journey to ash tip.
3 Journeys to inspect boiler.

This does not include the time spent lighting the fire, cleaning the installation, or cleaning up the dust caused by the fire. (These are predominantly dirty jobs which may only be done with some reluctance.)

8. About one minute on first taking up residence.

9. In order to avoid wasting fuel overnight, the gas should be lighted at the correct time interval before hot water is needed, and be turned off at other times. This is advisable even though a thermostatic control is fitted.

10. Coal and coke-fired boilers periodically require new fire bars and new fire bricks. It may also be necessary to renew boiler insulation, fire doors, and flue pipes at less frequent intervals, particularly if the boiler is under capacity and is worked hard. It is also necessary to provide for the removal of soot, and the removal of scale in districts with hard water.

11. In districts with hard water, gas and electricity heaters must be descaled, as must coke and coal-fired heaters.

[TURN OVER

INFORMATION SHEET 901 (CONTINUED)

5. Appliance Efficiency :

Coal : (kitchen range) 10—15 per cent.[12 and 13]
Coke : 15—20 per cent.[13]
Gas, instantaneous : 55—65 per cent.[14]
Gas, storage : 30—45 per cent.[14]
Electricity, storage : 65—80 per cent.[14]

Summary :

The average cost of hot water a therm is shown in the following table, which summarises the above data.

	RAW COAL	COKE	GAS		ELEC-TRICITY
			Instantaneous Water Heater (on wall)	Storage system	
Fuel Storage (cubic feet) ...	15	20	Nil	Nil	Nil
Apparatus Installation Space (cubic feet)	20	20	4	30	20
Attendance (minutes per day)	20	20	Nil (1)	½	Nil
Maintenance (hours per annum)	20	20	1½	1½	Nil
Efficiency of small domestic appliance (%)	10 to 15	15 to 20	55 to 60	30 to 45	65 to 80
Average cost of fuel (pence per therm)	1.85(2)	1.59 (3)	8	8	14.7 (4)
Cost per therm of hot water used (pence) (5)	12 to 18	8 to 11	12 to 15	18 to 27	18 to 23

(1) *1 minute on taking up residence for the first time.*
(2) *50s. per ton : 14,500 B.Th.U. per pound. 1.85d. per therm.*
(3) *40s. per ton : 13,400 B.Th.U. per pound. 1.59d. per therm.*
(4) *½d. per unit of 3,412 B.Th.U.*
(5) *Excluding labour, storage, attendance and cleanliness factors and availability of hot water.*

12. Value as hot-water plant only, considered. Allowance should be made for other services which may be provided at the same time, i.e. heating and cooking.

13. This figure will depend to a very great extent upon the skill of the user. In order that the fire will not burn too fast or go out, it is necessary to have the correct depth of fire bed and provide for proper air supply and ash removal. Thermostatic controls, even if fitted, do not take account of changes in draught due to changes in outside temperature, or in the direction or velocity of wind. Moreover, kitchen ranges are frequently called upon to perform both their functions simultaneously, namely, to heat water and cook, and unless excessive capacity is provided, they fail to do either job satisfactorily. Any attempt to make them do both jobs simultaneously inevitably involves waste of fuel. A coal range or coke boiler, like an industrial steam boiler, requires skilled handling to give best results. The majority of housewives and domestic servants are unlikely to exercise such skill.

In addition, the efficiency of coal-burning equipment depends on the design of boiler, flue and hot water system. Theoretically a super high efficiency coal-fired boiler could be designed to give a boiler or bench test efficiency of approximately 80 per cent. Such a boiler would require only 2 lb. of fuel per hour, but the minimum practical size of fire-box is about 0·4 cu. ft., which requires about 9 lb. of fuel to fill it. It is therefore necessary to waste fuel to achieve proper combustion, the excess heat being lost partly by radiation into the surrounding space and largely up the flue. This combined with changes in the weather and human errors in firing and kindling lead to the efficiency of use given by Professor Barker and others.

14. The efficiency of gas and electric water heaters is independent of the skill of the operator.

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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

1170 Planning Survey

TOWARDS A NATIONAL PLANNING SURVEY. *Professor W. G. Holford.* (*Address to Town Planning Institute, April* 29, 1943. *Reported in full, A.J., May* 13, 1943). Notes on methods of classification and requirements of land and population.

The physical planner has to come to terms with three major obstacles :—

(1) The political questions which are outside his province to answer and for which he must make assumptions. If he is wise he will make alternative assumptions wherever possible. That means more planning now ; but it will lead to quicker decisions when the time comes.
(2) Although he is not responsible for the solution, the planner must make plain the consequences of courses of action contemplated by various development agencies.
(3) He must set down the actual physical results and trends of geographic conditions, demographic movement and economic change. This is the planner's stock in trade.

The war has drawn the attention of the public to the problem of long term redevelopment. It has also caused certain psychological changes which may alter the whole background of planning :—

(1) A realisation of the strategic importance of these islands, their small extent and the supreme importance of maintaining the efficiency of its physical apparatus.
(2) A realisation of the importance of our limited natural resources.
(3) An intolerance of waste, whether of food, fuel, paper or man power.
(4) A preoccupation with post-war employment. The country is clearly in the mood to accept controls if they are necessary for full employment.
(5) An increasing tendency to take a bird's-eye view of things.

No matter what were the bases of the new system of land control, it would be the task of the central authority to determine the meaning of the phrase " in the national interest." The picture might be built up in three stages :—

(1) The natural characteristics of the land.
(2) The use to which it is at present put.
(3) The potential suitability of the land.

This forms the background, but the most urgent of all reasons for a national survey is anticipation of the movement of population upon it. It is possible that in another generation the number of school children per 1,000 population will be, on a national average, what it is in London now, namely 11 for each of the school years or even less. So that schools now planned for 400 children will then have 300. At the other end of the scale there will be proportionately twice as many old people over 65 as there are now. This will in fact need attention long before then.

Any scheme of redistribution must be conceived on a national and regional basis, and so must the location of any new or satellite towns for which sound economic reasons arise.

All needs must be anticipated so that eventually all kinds of development agencies, from Government Departments to individuals, will become accustomed to approach the officers of the central or local planning authorities *before* any proposal is decided upon.

STRUCTURE

1171 Moving a Building

STEEL-FRAME BUILDING MOVED BY NEW METHOD. (*Civil Engineering, USA, Nov.* 1941, *pp.* 659 *to* 662). Describes how part of a New York hospital of five stories, which interfered with construction of road, was moved 60 ft. and raised 12 in.

The construction of roads, railways or new buildings is often made awkward by existing structures. These sometimes have to be demolished. Buildings have grown larger and more expensive to build, yet " engineers have been amazingly timid in applying modern methods and equipment to the moving of the heavier structures." This problem may be particularly important for the rebuilding of London and other big cities.

In the case described a part of a New York hospital interfered with the construction of a road. The hospital was already overworked, and funds for reconstructing the building, in case of demolition, were not available. Further, the loss of time involved would have been serious. The building had five stories, it weighed approximately 2,350 tons. It had a steel frame with brick walls, and the floor dimensions were 80 ft. by 30 ft., with a 26 ft. lift extension six stories in height. It was necessary to move the building about 60 ft. and raise it about 12½ in.

The column loads were carried through transverse beams to " runner " beams, which rested on rollers running on steel " track " beams.

The raising was done first by 52 hydraulic rams—two at each column—in 6 hours—⅛ in. at a time. The moving was accomplished in one day on the track built at cellar height. Speed was between 6 ft. and 10 ft. per hour.

As a result of this operation, the contractor feels that the methods used would be equally successful in moving a twenty-storey building and raising or lowering it to any extent desired.

LIGHTING

1172 Fluorescent Lamps

FLUORESCENT LAMPS. *Davies, L. J., Ruff, H. R., and Scott, W. J.* (*Journal of the Institution of Electrical Engineers. Vol.* 89, *Part* 2, *No.* 11). Description of the historical development and characteristics of fluorescent lamps.

The fluorescent lamp represents an important stage in the development of illumination engineering, and it is not surprising to find frequent papers about it. The present one, by Davies, Scott and Ruff, is a very competent discussion, and although intended no doubt for consumption within their profession, it contains interesting material for architects. Unfortunately little is said about application of the lamp to installations, where architects will have a central interest, but this is not a criticism of a paper which was intended to deal with the lamps only.

After a brief historical survey, a description of the lamp is given. This is followed by a discussion of its efficiency, and a more detailed examination of its physical, chemical and mechanical characteristics, ending with an indication of the trend of development.

The conversion efficiency from power to light is about 2½ times that of an incandescent lamp. The wartime tube, with its 80 watt output, is therefore the equivalent of, say, a 200 watt incandescent lamp, with the difference, however, that its colour is almost precisely that of daylight. The authors describe it as " warm " daylight, though many users find it cool. Lamp life is about twice that of the incandescent lamp, which means 2,000 hours or more. There is a little flicker to be observed, a characteristic of most discharge lamps, but this can be overcome by combining two or three lamps operating in the opposite phase. The starting gear includes a choke which gives off a little noise. The loudness has been reduced to 15 phons at 6 in. in modern equipment, which ought not to be serious. The lamp operates in ordinary mains voltage.

In America, where production was on a greatly expanding scale in the early days of the war, lamps were marketed in wattages from 6—100, varying in length from 9 in. to 5 ft., and in several colours. The authors do not discuss the cost of the lamps, but they are very cheap compared with the English " utility " tube ; the latter is about 30s. for each replacement, while in the USA the price had dropped to 6s.—8s.

QUESTIONS and answers

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

1173 Treating Wood Worm

Q *Some of the floor-boards of my house and also two of the floor joists are affected by wood worm, this I can observe because my house has a cellar. The holes are not very numerous but they have grown in number recently. How can I get rid of the menace ?*

A The wood should be painted or, better sprayed, with one of the following :—, A mixture which can be obtained, already made up, from some chemists, consisting of 97 per cent. Orthodiachlorbenzine, 2 per cent. Castille Soap, 1 per cent. Cedar Wood Oil ; or one of the following proprietary brands :—

Rentokil—Rentokil Sales, 12, Stockwell Road, London, S.W.9.

Toritna—The Dry Rot & Fire Prevention Co., 20, Harp Lane, London, E.C.3.

Wycamol—Richardson & Starling, 48, Andover Road, Winchester.

It would be advisable to treat other woodwork near the affected part, as a precautionary measure, as wood-worms usually spread and lay their eggs in other wood, particularly where there are cracks.

SOCIETIES AND INSTITUTIONS

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

HOUSE OF LORDS

Town and Country Planning Bill

Afforestation was the main topic during the discussion of the Town and Country Planning Bill in the House of Lords on June 22.

The Lord Chancellor: (Viscount Simon, L.N.), moved a new clause to ensure the protection of trees and woodlands. It empowered interim development authorities to make orders prohibiting the cutting down or wilful destruction of trees without consent.

Lord Nathan: (Lab.) suggested that any penalties which could be imposed should be prescribed by Parliament.

The Earl of Mansfield: (C.) complained that the new clause was a further interference with the rights of landowners, and that under it owners of woodlands might be compelled to replant woodlands which are of no value and to do things which they do not intend or wish to do.

The new clause was agreed to.

Lord Mansfield: asked whether, before deciding to adopt the Commission's recommendations, the Government will consider any suggested amendments or alternatives from the forestry societies and other bodies with expert knowledge of the problems. The Commission aims at not merely rehabilitating our woodlands, which will be virtually wiped out before the end of the war, but it also aims at more than doubling the area in the next 50 years.

Viscount Bledisloe: (C.) hoped that nothing will be done to deter the private owner from developing his woodlands. He saw in the Government's interim policy a danger of greatly depreciating the value of cleared areas and forcing them into the hand of the Government when, with fair treatment, they can continue under private control.

The Earl of Selborne: (U.) Minister of Economic Warfare, said that the Government recognised the necessity for a vigorous forestry policy after the war, but any plan must fit into the general scheme of post-war reconstruction. He agreed that it is important to encourage the individual owner, and especially the small owner, to pursue an up-to-date forestry policy and to replant. While considering the report the Government will always be ready to receive representations from authorities.

DIA

Herbert Read

June 10, at Royal Society, Piccadilly, under the auspices of the Design and Industries Association. Lecture by Herbert Read, M.A., D.LITT., ON THE FUTURE OF INDUSTRIAL DESIGN.

Herbert Read: Assuming there are only a thousand people in this country with a sufficient appreciation of the principles of good design, these thousand people, *if given a free hand*, would be able to transform in a relatively short time the whole process of mass production—would be able, that is to say, to transform the whole character of our physical environment.

If we ask why the designer is not given a free hand in the modern industrial system, we shall find three answers, all of them arising out of the economic structure which has arisen parallel to the industrial system, but which is not a necessary part of it.

If you will look at our economic system as distinct from our industrial system, you will discover three features which effectively prevent the free use of good design. If your economic system is such that an expanding amount of production from competing sources is pitched against a relatively static or even shrinking power of consumption, then what we without shame call "cheapness" will become the dominant factor in production. That cheapness should ever have become a virtuous quality in our civilization is, of course, a sufficiently damning criticism of that civilization. For cheapness implies a continual minimizing process—less of everything, less raw material, less labour, less time, and above all, less "overhead charges," a mystical formula which covers, among other things, the payment of a designer. The first answer to our question, therefore, is that the present economic system tends to eliminate design in the costing process: design doesn't necessarily pay.

If by means of social credit, or some such method, we could ensure that purchasing power was always geared to the volume of production, then the qualitative factor would begin to tell. In other words, if an economic system cannot only deliver the goods, but also distribute them to the point of full satisfaction, then the competitive instincts will be diverted into qualitative rather than quantitative channels. Let me put it another way: any such system involves the determination of just prices. Is it conceivable that a just price for any article can be fixed without taking into consideration its quality and design?

The second reason is closely related. Design is intangible—almost, to the manufacturer, metaphysical. Why, in the midst of a mechanical and materialistic world, should the hard-headed manufacturer be expected to pay for a metaphysical entity? Why, in the name of all that's prudent and profitable, should he attempt to change the existing shapes of things? It is not his business to improve the world, but to pay a dividend.

In the third place, modern industry depends on its system of distribution—the gigantic organization of wholesale and retail trade. Hidden in this very intricate pile is a very black nigger: he is called the buyer. He is the funnel through which the mass production of the factories must pass. He earns his living on a commission basis. For many years now he has been making quite a nice living out of a regular sale of Jacobean oak furniture, oriental carpets made in Kidderminster, lampshades with silk fringes and cushions with appliqué butterflies. Then one day a mild fanatic from the DIA comes along and tells him that he is a corrupter of public taste and that he ought to give the public something "fit for its purpose," etc., something severe but subtle in glass or stainless steel. Now it may be that these new objects are infinitely better both from a functional and an æsthetic point of view: it may be that there is a large public ready to buy them. But however eloquent we may be, and however many facts about the adaptability of public taste Mass Observation may produce, there remains a very real element of risk for the buyer. And apart from the risk, there is all the trouble of learning a new sales talk, all the troubles of converting scores if not hundreds of retailers. This is a very real snag in the path of progress in industrial design, and I see no way round it short of an abolition of the commission basis upon which the buyer depends for his living. It is a pernicious and illogical system in any case, for a man's income should depend, not on other people's needs but on his own.

There are many signs that the economic system is changing and will continue to change: indeed, it must change in accordance with the process of economic stabilization which is everywhere taking place and to which we must adapt ourselves if we are to avoid an unending series of world wars and the ultimate extinction of our civilization. Stabilization when it comes will be expressed in a general tendency to substitute qualitative for quantitative standards. If there are any laws of history (which I doubt) this is one: that a stable civilization is biased towards quality of achievement, a bias which has hitherto eventually led to over-refinement and sophistication.

I have asked you to imagine that a stable civilization has been achieved, and that the industrial system is then devoted to the mass production of articles which satisfy the æsthetic standards which we have established for machine art: economy, precision, fitness for purpose—all qualities of classical beauty. What then? We shall have factories full of clean automatic machines moulding and stamping, punching and polishing, innumerable objects which are compact in form, harmonious in shape, delectable in colour. Gone are the jointed and fragile objects which to-day we ingeniously construct from wood and metal: almost everything will be made from one basic plastic material, and beds and bathtubs, plates and dishes, radio cabinets and motor cars, will spill out of the factories in an unending stream of glossy jujubes. Nothing will be impossible, The technologist and the designer between them will be able to satisfy every whim and fancy. From a technical point of view, it will all be fearfully easy, and we may well ask ourselves what is to prevent this search for quality and variety degenerating into an avalanche of vulgarity? Nothing whatever can save us from that avalanche unless we take preventive measures now.

The most striking facts about the great epochs of art is their homogeneity. If we could transport ourselves into the sixth century in Greece, to the twelfth century in Northern France, the thirteenth century in

Italy, the early eighteenth century in England, we should find not only great monuments of art in the cities and public places: diffused everywhere throughout those lands, in houses and clothes, in ordinary objects of utility and ornament, we should find the ubiquitous stamp of a civilization. It would not all be refined: it might be rough in texture, even crude in conception. But it will never be vulgar. The shape will be good, the ornament appropriate, the colour harmonious. Now, the usual assumption is that somehow or other the high cultural achievements of an elite at the top of such a society trickle townwards until they reach the lowest cottage in the land. But such a theory is not born out of the facts. Apart from the absence of any means of diffusion, such as we possess nowadays in the press and the radio, in mass production and mechanical distribution the chronological evidence is all against it. The peasant art comes first—we can prove it in the evolution of an art such as Greek pottery. But more than this: I believe that the peasant art is there all the time until it is corrupted by influence coming from a more artificial class. Good taste is always built up from a broad basis: it is a slow elaboration and refinement of instinctive activities natural to man, and this slow process is what we call a tradition in art. I mean that the fingers must feel the clay, the crisp substance of the wood, the tension of the molten metal; there must be sensuous contact of hand and eye with the grain and grit. Otherwise we have made a divorce between man's senses and man's artifacts which has never existed before in history, and from which consequences will flow of a quite unpredictable nature.

The atrophy of sensibility which will be involved in such a cessation of handwork will involve the decay of our civilization—some of us would say that the evidence is already plain to see, that the decomposition has begun. It would be possible to elaborate an up-to-date psychological theory to explain why this should happen: it is summed up in one of the most ancient of psychological maxims: *nihil est in intellectu quod non fuerit prius in sensu*, which means that the basis of intelligence is a lively sensibility. If by advances in technology, in machine-tool design, by factory organization and so on, the human element is largely eliminated from production, then, apart from the problem of the adequate distribution and consumption of these mechanically produced goods—a problem which, as I have already said, could conceivably be solved by some scheme of social credit—there remains not only what the sociologists call the problem of leisure, but this much more serious aspect of the problem which I have called the atrophy of sensation. You might solve the problem of leisure, not only by employing a greater number of people in distributive trades and social services, but also by various forms of cultural entertainment. It is an only too credible possibility—a vast conglomeration of shop-walkers and civil servants, ticket-punchers and typists, their hands getting more and more refined, their minds more and more cultured. Even the peasant's fingers will have forgotten the knack of milking a cow and the spade and fork will have joined the rest of the neolithic tools in our museums.

It might be said that I have forgotten the designer, and the pattern maker and the machine-tool maker. But these people who may still be required to use their hands in creative contact with a material will always be an insignificant minority in any industrial community. No: if we are to go forward to the logical conclusion of the machine age, then we must create a movement in a parallel direction and not in opposition.

We must establish a *double-decker civilization*. Such a phenomenon has, indeed, appeared many times in the course of history, chiefly in primitive communities where a secret art was practised by the priesthood in complete independence of the utilitarian or decorative arts of the common people. But the most striking example of a duplex civilization is that of Ancient Egypt, and it is one which offers some striking parallels to our own. In the valley of the Nile there existed for many centuries side by side two types of art of entirely distinct character. One, consisting mainly of public buildings and sculptured monuments, was religious: the other, consisting mainly of paintings, small carvings and decorated vessels of various kinds, was domestic. The religious art was geometric, rational, objective, abstract: the other was naturalistic, lyrical, even sentimental.

A similar stylistic division has already become evident in our own time. Surely between the constructive art of a Gabo or Nicholson, the functional architecture of Le Corbusier or Aalto on the one hand, and the rest of what passes for art and architecture on the other hand, there is not merely a separation, but a decree absolute. Among that rest there is much that is merely bad and imitative. But among it we shall find the naturalistic, the lyrical and sentimental modes of expression which correspond strictly in character to the domestic arts of Ancient Egypt. So therefore we are already a double-decker civilization, though there seems to be some confusion on the lower floor.

The art of the machine can never be naturalistic or humanistic: it is an art of geometrical proportions, of purely formal harmonies. Though my last wish is to exclude those intuitive faculties which only the artist can bring to bear on industrial design, its general character can best be described as objective rationality.

Do not let us make the mistake of assuming that a civilization can be based on rationality or functionalism alone. The foundations of a civilization rest not in the mind but in the senses, and unless we can use the senses, educate the senses, we shall never have the biological conditions for human survival, let alone human progress.

We must look forward, therefore, to some division of our human and social activities which will ensure a due proportion of time devoted to manual craftsmanship. It would be quite impracticable to achieve this by any artificial interference with industrial development. We should divide the industrial world into a technological priesthood and a lower order of handicraftsmen. That solution might be possible under some system of centralized planning, but I think we can dismiss it as undesirable and as only partial in its effects. But there is another possibility, and this is to make the division horizontal, affecting every industry and every individual, but only up to a certain point. In other words, let every individual serve an apprenticeship in handicrafts. Creative arts of every kind should be made the basis of our educational system. If, between the ages of five and fifteen, we could give all our children a training of the senses through the constructive shaping of material—if we could accustom their hands and eyes, indeed all their instruments of sensation, to a creative communion with sounds and colours, textures and consistencies, a communion with nature in all its substantial variety, then we need not fear the fate of those children in a wholly mechanised world.

The result would be a private art standing over against the public art of the factories. I am recommending that everyone should be an artist. I am not recommending it in a spirit of dilettantism, but as the only preventive of a vast neurosis which will overcome a wholly mechanised and rationalized civilization. But I make a further claim. The art of that completely mechanised civilization can never, if it is to be an art, arise from the purely rational solution of functional problems. The function, after all, always relates to human needs. Human needs, in their turn, are always related to a natural environment. There can be no artificial separation of art from nature, of the machine from its environment. Only a people serving an apprenticeship to nature can be trusted with machines. Only such a people will so contrive and control those machines that their products are an enhancement of biological needs, and not a denial of them. Only such a people will be secure from the debilitating effects of mass production and mass leisure (mis-called "unemployment"). Only such a people, with sensations still vivid and intelligence ever active, can hope to form a stable and integrated society in the industrial world of the future.

BATC

Inaugural Meeting

On June 18, at Middlesex Guildhall, Westminster, the Building and Apprenticeship Training Council, proposed in the White Paper on *Training for the Building Industry* presented to Parliament by MOLNS and MOW in February, held its inaugural meeting. Chairman: Sir Malcolm Trustram Eve, Bt., K.C., M.C. The following is the only information yet officially issued.

Agenda: 1. Welcome to the members by the Minister of Works (the Rt. Hon. Lord Portal, D.S.O., M.V.O.).

2. The Chairman to move a vote of thanks to the Minister of Works.

3. To discuss within the Terms of Reference, the *Report on Training for the Building Industry*, of the Central Council for Works and Buildings with particular reference to para. 24 (Policy of the Council) and the principles set forth in Chapters 3 and 4 in relation to apprenticeship and technical education.

And to consider any resolutions thereon.

4. To appoint three additional members of the Council "chosen for their special qualifications to assist in the Council's deliberations" (para. 25 of the report). The Chairman has received the following nominations:

Mr. J. L. Manson, M.I.STRUCT.E., H.M.I. (Staff Inspector of Building, Board of Education).

Mr. E. G. Savage, C.B., Education Officer, London County Council (late chairman of the Educational Courses Sub-Committee of the Education Committee of the Central Council for Works and Buildings).

Sir Ernest Simon, M.INST.C.E., M.I.E.E. (late chairman of the Education Committee of the Central Council for Works and Buildings).

Other nominations will be accepted at the meeting, in which case a vote will be taken.

5. To appoint a General Purposes Committee.

6. Notice of motion by Mr. Forsdike and Mr. Stephenson: "That it be a general direction to the General Purposes Committee—

(1) to receive the views of the Scottish members of the Council in relation to all questions specially affecting Scotland, and

(2) to receive the views of the members of Council associated with training or apprenticeship schemes in any particular trade in relation to all questions specially affecting that trade."

7. Notice of motion by Mr. Coppock and Mr. Howarth: "That it be a direction to the General Purposes Committee as a matter of priority—

(1) to review all existing schemes of apprenticeship training in building crafts;

(2) to review the present position of pre-employment education in building in the junior technical schools, trade schools (in Scotland) and in senior full-time courses (Statistics as to the numbers available for employment at different periods should be compiled).

(3) To consider the measures to be taken during the war—

(*a*) For the employment and training of boys coming out of junior technical schools and trade schools;

(*b*) for stimulating technical education in building;

(*c*) for ensuring early demobilization of
  (i) youths who were in apprenticeship or at full-time technical courses in building ;
  (ii) men suitable as instructors and teachers.

(4) To estimate for the post-war periods
  (*a*) the numbers of building craftsmen for each trade likely to be available ;
  (*b*) the numbers of apprentices in training for each trade ;
  (*c*) the prospective requirements of craftsmen and apprentices over a period of years and the manner in which they can be met.

And to make recommendations thereon to the full Council.

Terms of Reference : 1. To observe and advise on all matters concerning the recruitment, education and training of young persons for craftsmanship and management.

2. To encourage the development of craft apprenticeship schemes and student apprenticeship schemes on a comprehensive basis.

3. To report to the Minister of Works from time to time on any matter referred to the Council by the Minister.

4. To take such executive action on matters within the ambit of the preceding terms of reference as the Council may decide and the Minister of Works may approve.

Members : The Minister of Works has appointed the following members to the Council :

Chairman

Sir Malcolm Trustram Eve, Bart., M.C., K.C.

Employers' Representatives

The National Federation of Building Trades Employers : Mr. W. H. Forsdike, Mr. F. Leslie Wallis, J.P., Mr. T. Howarth, O.B.E., J.P., Mr. L. A. Peyman, Major L. Shingleton, O.B.E., Councillor C. A. Chown, Mr. F. M. Sleeman, Mr. James Dearden, F.I.B.D., Mr. H. Payne, Mr. T. C. Bowler, Mr. I. Ernest Jones.

The Scottish National Building Trades Federation (Employers) : Mr. A. G. Hutton, Mr. Harry T. Benzies.

The Federation of Civil Engineering Contractors : Sir George M. Burt, Mr. A. M. Holbein.

Plumbing Trades National Apprenticeship Council (Employers' side) : Mr. J. M. Goldthorp.

National Joint Council for the Mastic Asphalt Industry (Employers' side) : Mr. R. W. Bright.

National Joint Industrial Council for the Electrical Contracting Industry (Employers' side) : Mr. E. A. Reynolds.

Heating, Ventilating and Domestic Engineers' National Joint Industrial Council (Employers' side) : Mr. J. Newman Ellis (provisional).

Operatives' Representatives

The National Federation of Building Trades Operatives : *England and Wales* : Mr. J. W. Stephenson, J.P., Mr. Luke Fawcett, O.B.E., Mr. J. Whittaker, Mr. B. Sandercock, Mr. A. H. Telling, Mr. F. Wolstencroft, Mr. W. Cotter, Mr. J. A. Gibson, Mr. H. J. Adams, Mr. A. Gill, Mr. R. Coppock, C.B.E. *Scotland* : Mr. T. McMenemy, Mr. A. McTaggart, O.B.E.

Civil Engineering Conciliation Board (Operatives' side) : Mr. H. L. Bullock, Mr. T. Pugh.

Plumbing Trades' National Apprenticeship Council (Operatives' side) : Mr. G. W. Harris.

National Joint Council for the Mastic Asphalt Industry (Operatives' side) : Mr. F. V. Jenkin.

National Joint Industrial Council for the Electrical Contracting Industry (Operatives' side) : Mr. M. T. Greenwell.

Heating, Ventilating and Domestic Engineers' National Joint Industrial Council (Operatives' side) : Mr. E. Pacey (provisional).

Representatives of Professional Institutions

Royal Institute of British Archiects : Mr. T. E. Scott, F.R.I.B.A.

The Institution of Civil Engineers : Dr. Reginald Edward Stradling, C.B., M.C., F.R.S.

Institution of Municipal and County Engineers : Mr. John Leslie Beckett, M.INST.C.E.

The Institution of Structural Engineers : Mr. F. E. Drury, M.SC.

The Chartered Surveyors' Institution : Mr. R. T. Dadson, O.B.E.

The Institute of Builders : Mr. R. L. Roberts, C.B.E., M.A., F.I.O.B.

Educational Representatives

Association of Technical Institutions and Association of Principals of Technical Institutions : Dr. D. S. Anderson, M.I.MECH.E.

Education Committees of Local Authorities in England and Wales (Nominated by Board of Education) : Alderman Sir James Aitken, J.P.

Educational Bodies in Scotland (Nominated by Secretary of State for Scotland) : Lord Provost Garnet Wilson.

Representatives of Government Departments

Ministry of Works : Mr. J. W. Hobson.

Ministry of Health : Mr. A. Scott, M.B.E., F.R.I.B.A., M.I.STR.E.

Ministry of Labour and National Service : Dr. A. E. Morgan.

Board of Education : Mr. H. B. Wallis.

Department of Scientific and Industrial Research : Mr. I. G. Evans.

Department of Health for Scotland : Mr. H. R. Smith.

Scottish Education Department : Mr. J. W. Parker.

Secretary of the Council : Mr. E. J. Rimmer.

Educational Assessor : Mr. J. L. Manson.

Activities and Liaison : The diagrams below explain the proposed activities and liaison of the Council.

N. STAFFS. CBI & MOH

Farm Workers' Cottages

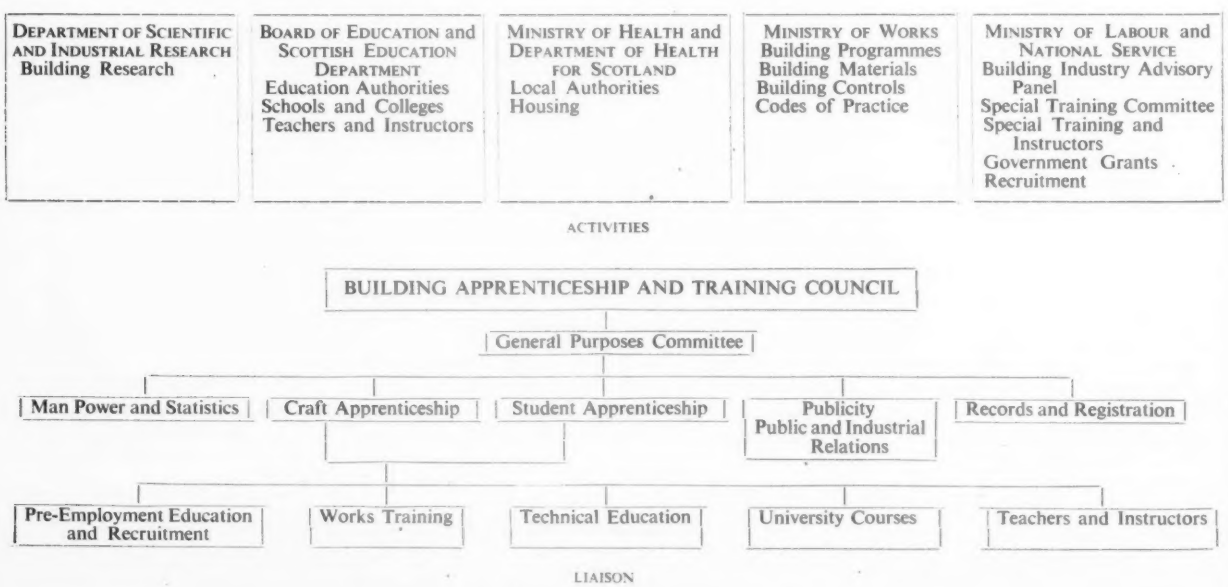
The following correspondence has taken place between the Chairman and Secretary of the North Staffordshire Council of the Building Industry and Mr. Ernest Brown, Minister of Health.

45, Trinity Street,
May 14, 1943 Hanley, Stoke-on-Trent.

DEAR SIR,—Our attention has been drawn to an advertisement published locally and addressed to contractors inviting tenders for the new agricultural cottages, and we are concerned to note that the particulars offered do not include quantities.

In view of the agreements normally operating between architects and builders and officially approved by their respective organizations that the pricing of works over £500 in value should only be undertaken when quantities are available, we regret to notice that a Government Department is setting such a poor example.

This would be quite bad enough in normal



Diagrams showing the proposed activities and liaison of the Building Apprenticeship and Training Council.

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OFFICIAL COMMENT

Extracts from Air Raid Precautions Handbook No. 13: *Fire Protection for the guidance of occupiers of factories and other business premises:*

PARAGRAPH 18: "Fire may spread from an adjacent burning building by direct flame, burning brands or radiated heat. This is specially liable to occur in closely built-up areas; fire may spread from building to building, growing in intensity until large areas, and even possibly towns, are involved .... Windows broken by high explosive bombs in the vicinity provide a ready means of ingress to fire."

PARAGRAPH 90: "The risk of passage of fire from building to building through window openings is reduced if frames are of hard metal, the glazing is of wired glass and the windows do not open, each panel being limited in area to 4 superficial feet."

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times but having regard to the abnormal fluctuations in the costs of labour and materials at present being experienced, and further to the fact that in order to arrive at a reliable estimate, each individual contractor will either have to take off his own quantities or have these taken off for him, thus involving an undue waste in technical manpower, we can only hope that this is not the general policy of your Ministry.

We have heard the excuse advanced that this is a means of getting a cheaper price, but we had thought that quality would have been the criterion rather than cheapness.

We hope that this policy, if it is confirmed, is not a foretaste of the attitude of mind which will direct our post-war housing.

Yours faithfully,
(Signed) J. MEIKLEJOHN, Chairman.
G. L. GREAVES, Hon. Secretary.

To the Rt. Hon. Ernest Brown, M.P.,
Minister of Health,
Whitehall, S.W.1.

Ministry of Health,
May 24, 1943. Whitehall, S.W.1.

SIR,—I am directed by the Minister of Health to refer to your letter of May 14 and to point out that it has been the common practice of contractors to tender for housing proposals for many years without bills of quantities. No difficulty is, therefore, anticipated in obtaining tenders in connection with the programme without supplying bills of quantities, on the basis of plans and specifications especially as many of the speculative items are covered by prime cost allowances. Your representations have, however, been noted.

I am Sir, your obedient servant,
(Signed) W. J. PEETE

To the Honorary Secretary,
North Staffordshire Council
of the Building Industry,
Stoke-on-Trent

45, Trinity Street,
June 11, 1943 Hanley, Stoke-on-Trent

DEAR SIR,—Your reply to our letter of May 14 was placed before the Executive Committee of this Council at their meeting on June 2.

Our Council did not feel that the common practice which had obtained for tendering for housing proposals before the War is at all suitable for the present conditions for the following reasons :—

1. By reason of calling up for Armed Forces and War Industries technical staffs employed in builders' offices have been reduced to an absolute minimum. In one case quoted to us 24 builders submitted tenders which involved the preparation of 24 sets of quantities, and even if these were roughly drawn the amount of labour entailed was wholly out of proportion to the value of the work to be done.
2. It is felt that in view of the present position of the building industry your Ministry is taking an unfair advantage of the scarcity of work to obtain prices from the builders.
3. In regard to the practice obtaining in municipal housing my Council desires to draw your attention to the fact that in their experience such work has invariably been made the subject of quantities. They also wish to place on record that such minor items as street shelters have had measured quantities supplied upon which to base estimates for tendering.
4. The housing under review involves several variations of type and construction and other variations in site conditions, which all involves additional work in pricing without quantities.

We trust therefore that having regard to the reasons stated above you will be able to see your way to review the policy which you have so far followed, and we hope that on consideration you will agree that some modification would not only be more fair to the industry as a whole but in the long run of advantage to your Department.

Yours faithfully,
(Signed) J. MEIKLEJOHN, Chairman.
G. L. GREAVES, Hon. Secretary.

To the Rt. Hon. Ernest Brown, M.P.,
Minister of Health,
Whitehall, S.W.1.

RIBA

New Members

AS FELLOWS (3).—Cubitt, Horace William, F.S.I. (London). *Overseas*: Coates, Udolphus Aylmer (Lahore, India), Doctor, Bhicaji Edulji (Bombay, India).

AS ASSOCIATES (6).—Compton, Douglas Keith (Birmingham School of Architecture) (Stourbridge, Worcs.), Griffiths, Geoffrey Barnett (Birmingham School of Architecture) (Birmingham), Mallick, Sushil, B.SC. (Glasgow School of Architecture) (Glasgow), Molloy, Brendan, B.ARCH. (University College, Dublin) (Athlone, Eire), O'Reilly, Brendan, B.ARCH. (University College, Dublin) (Dublin), Wood, Allan Haigh (Burnley, Lancs.).

AS LICENTIATES (14).—Dubery, Herbert (London), Henderson, James (Edinburgh), McNeill, John (Sandbank, Argyllshire), Moorhouse, Arthur Henry (Huddersfield), Morgan, Ernest James (South Shields), Nicholls, Lt.-Col. Guy Herbert (Reading), Randall, Cyril George (London), Shapley, Arthur Frank (Ardrossan), Smith, Kenneth (London), Storey-Moore, Albert Victor Theodore (Ipswich), Stuart, Leslie Charles (Richmond), Thuell, Donald Allen (Bristol), Vallis, Eric Walter Harvey, F.S.I. (Maidstone), Ward, Raymond John, F.S.I. (London).

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

The Incorporated Association of Architects and Surveyors maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address: **75 Eaton Place, London, S.W.1. Tel.: Sloane 5615** 991

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Applications are invited for the following temporary appointments:—

One Technical Assistant £390—£435 (Grade C)
" " " £330—£375 (Grade B)

The salaries are in accordance with the Whitley Council Grading Scheme (plus the present War Bonus of £33 16s. per annum).

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

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

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

Applications, suitably endorsed, and accompanied by three recent testimonials, should be sent to the undersigned not later than 10 a.m. on Monday, 19th July, 1943.

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

FREDERICK SPARKS,
Town Clerk.

Royal Beach Hotel, Southsea.
Ref. FW/VB.
18th June, 1943. 905

BOROUGH OF LOWESTOFT.

APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment at a salary of £400 per annum, rising subject to satisfactory service to £450 by annual increments of £25.

Applicants should be fully qualified architects with experience in civic design, a knowledge of town planning in built-up areas is desirable.

Applications stating age, training, experience, qualifications and position in regard to Military Service, accompanied by three recent testimonials to be delivered to my Office in sealed envelopes endorsed "Architectural Assistant" not later than 16th July, 1943.

F. G. SOUTHGATE, A.R.I.B.A.,
Borough Surveyor.

Town Hall,
Lowestoft.
25th June, 1943. 907

Architectural Appointments Vacant

Advertisements from Architects requiring Assistants or Draughtsmen, and from Assistants and Draughtsmen seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice. Other "Appointments Vacant" and "Wanted" will be found under later headings, and are subject to the charges given under each heading.

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

ARCHITECTS' ASSISTANT. Preferably qualified, Slough district, required for investigation and design, should be experienced in medium-size dwelling-house construction, plumbing and equipment. Exempt from Military Service. State salary. Box 906.

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ARCHITECT (Registered), practising independently pre-war, offers services in advisory and practical capacity, with view permanency. Experienced in carrying contracts through from drawings and specification to completion. Especial qualifications as designer meeting post-war requirements. Box 82.

ARCHITECTURAL ASSISTANT, three years' university training, 19 years old, seeks progressive position in architect's or similar office—if possible on work of national importance. Box 84.

VIENNESE ARCHITECT, Continental University degree, fourteen years' experience, also well versed with modern interior design, at present studying for RIBA Special Final Exam., seeks position in London architect's office. Box 90.

ARCHITECT (F.R.I.B.A.) requires permanent Senior post with Brewery Company in South or South-west England. Considerable experience with well-known company; good references. Box 93.

YOUTH, age 17½, requires post in architect's office. Limited knowledge of Building Construction and Architectural Design. Studying for probationer at approved school. Good references. Box 97.

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Classified Advertisements continued on page xxxii

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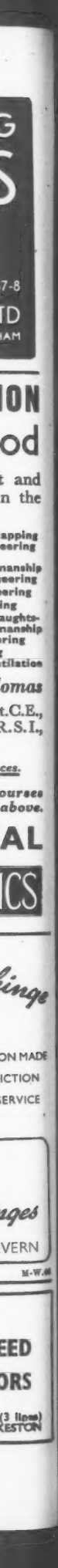

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