Overwhelming evidence of the resistance to fire and the great structural strength of reinforced concrete has been provided during five years of aerial attack on cities. Whilst it may not be necessary to design against aerial attack in the future, it is only common sense to select for war-time and post-war construction the material which has been conclusively proved to possess the greatest structural advantages.

REINFORCED CONCRETE—OFFICES AND HOTELS

Reinforced concrete office building for the "Chicago Daily News"

HEAVY air raids on the business centres of our cities have yielded convincing proof of the advantages of reinforced concrete construction for office and hotel buildings in maintaining essential commercial life. When the time comes once more for Britain to take her place in the world of commerce, modern fireproof blocks of offices and hotels will be necessary to provide ideal conditions for worker and traveller alike. To meet this need, reinforced concrete will be specified as the form of construction providing permanency, speedy erection, and offering the greatest architectural advantages.

THE REINFORCED CONCRETE ASSOCIATION

94, PETTY FRANCE · LONDON, S.W.1.

Telephone: Whitehall 9936.

Alphabetical Index to Advertisers

	PAGE
Accrington Brick Co., Ltd.	———
Adamite Co., Ltd.	xviii
Adams, Robert (Victor), Ltd.	xxvi
Aga Heat, Ltd.	xxiii
Anderson, D., & Son, Ltd.	———
Anderson, C. F. & Son, Ltd.	v
Architectural Press Ltd.	xxvii, xxviii
Ardor Engineering Co., Ltd.	———
Arens Controls, Ltd.	* xxvi
Ashwell & Nesbit, Ltd.	xx
Associated Metal Works	———
Austins of East Ham Ltd.	ix
Bakelite Ltd.	———
Birmabright Ltd.	———
Bolton Gate Co., Ltd.	———
Bowran, Robert & Co., Ltd.	xii
Braby, Fredk., & Co., Ltd.	———
Braithwaite & Co., Engineers, Ltd.	vii
Bratt Colbran Ltd.	———
Briggs, William & Sons Ltd.	———
British Commercial Gas Association	xxiii
British Trane Co., Ltd.	———
Broadcast Relay Service Ltd.	———
Brockhouse Heater Co., Ltd.	———
Brown (Brownall) Ltd., Donald	———
Callender's Cable & Construction Co., Ltd.	———
Cellon, Ltd.	xvii
Cement Marketing Company Ltd.	———
Colthurst, Symons & Co., Ltd.	———
Concrete Ltd.	———
Crittall Manufacturing Co., Ltd.	———
Davidson, C. & Sons, Ltd.	———
Dawnays Ltd.	———
Dreyfus, A., Ltd.	———
Eagle Pencil Company	———
Educational Supply Association Ltd.	———
Ellison, George, Ltd.	xxvi
En-Tout-Cas Co., Ltd.	xxviii

	PAGE
Evertaut Ltd.	———
Fordham Pressings Ltd.	———
Foyles	———
Franki Compressed Pile Co., Ltd.	———
Freeman, Joseph, Sons & Co., Ltd.	———
Gray, J. W., & Son, Ltd.	———
Greenwood's & Airvac Ventilating Co., Ltd.	ii
Gyproc Products Ltd.	———
Haden, G. N., & Sons, Ltd.	———
Hammond & Champness, Ltd.	viii
Helliwell & Co., Ltd.	ii
Hills Patent Glazing Co., Ltd.	x
Holden & Brooke Ltd.	———
Hopton-Wood Stone Firms Ltd., The	———
Horseley Bridge & Thomas Piggott Ltd.	———
Ioco Rubber & Waterproofing Co., Ltd.	———
Jenkins, Robert & Co., Ltd.	———
Jones, Saml. & Co., Ltd.	xxii
Kerner-Greenwood & Co., Ltd.	xix
Ketton Portland Cement Co., Ltd.	xxix
King, J. A., & Co., Ltd.	———
Laing, John & Son, Ltd.	———
Leaderflush Ltd.	———
Lillington, George & Co., Ltd.	viii
Limmer & Trinidad Lake Asphalte Co., Ltd.	———
McCall & Company (Sheffield) Ltd.	xxv
Marley Tile Co., Ltd.	xiii
Mason, E. N., & Sons, Ltd.	———
Matthews & Yates Ltd.	———
Mellor, Bromley & Co., Ltd.	xxiv
Mellowes & Co., Ltd.	———
Metropolitan Plywood Company	———
Midland Joinery Works Ltd., The	xxvi
Mills Scaffold Co., Ltd.	xxx
Milners Safe Co., Ltd.	———

	PAGE
M. K. Electric Ltd.	———
Oliver, Wm., & Sons, Ltd.	xxvi
Parsons, C. H. Ltd.	———
Penfold Fencing Ltd.	———
P.I.M. Board Co., Ltd.	———
Plastilume Products Ltd.	xx
Positive Flow Ventilators, Ltd.	xxvii
Prodorite Ltd.	———
Rawlplug Co., Ltd., The	———
Reinforced Concrete Association	iii
Reynolds Tube Co., Ltd. & Reynolds Rolling Mills Ltd.	———
Ronuk, Ltd.	xx
Ruberoid Co., Ltd., The	———
Rustproof Metal Window Co., Ltd.	———
Sanders, Wm. & Co. (Wednesbury), Ltd.	iv
Sankey, J. H., & Son, Ltd.	xxvii
Sankey, Joseph & Sons, Ltd.	xiv
Sankey-Sheldon	———
Scaffolding (Great Britain), Ltd.	xxi
Sealocrete Products Ltd.	xxix
Seddon, G. & J., Ltd.	———
Sharman, R. W.	xxvi
Sharp Bros., & Knight Ltd.	xxix
Siegwart Fireproof Floor Co.	vi
Smith & Rodger, Ltd.	ii
Square Grip Reinforcement Co.	———
Spiral Tube & Components Co., Ltd.	xxviii
Stelcon (Industrial Floors) Ltd.	———
Taylor, Woodrow Construction, Ltd.	ii
Tentest Fibre Board Co., Ltd.	xv
Thornton, A. G., Ltd.	ii
Tretol Ltd.	———
Trussed Concrete Steel Co., Ltd.	xxiii
Turners Asbestos Cement Co., Ltd.	xi
United Steel Companies Ltd.	———
Walker, Crosweller & Co., Ltd.	x
Ward, Thos. W., Ltd.	xxix

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

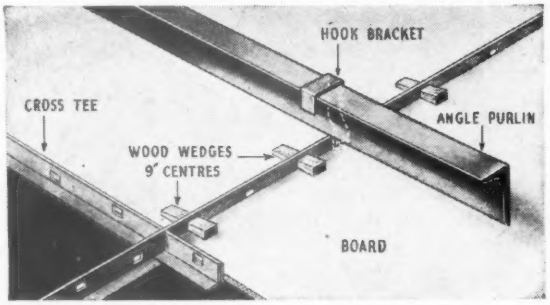
AN WEDGE METHOD

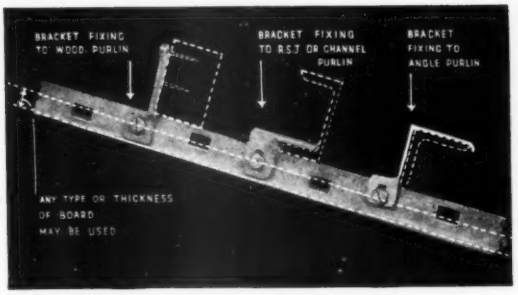
Patent No. 519406

FOR APPLYING ANY TYPE OF BOARD TO CEILING & WALLS

The Wallboard is secured to sherardised, pressed steel, slotted T-section by wedges. To the right are shown the methods of attaching the support to various forms of purlin.

Escalator Tunnel at St. John's Wood Underground Station. Architect : S. A. Heaps.





8 POINTS TO BE NOTED

1. Fixed to UNDERSIDE of purlins — steel or wood — covering unsightly hook bolts, clips, etc.
2. Assures the insulating value of air-space between roof and underside of purlins. No dust or dirt.
3. Can be fixed to steel or wood purlins of roofs and joists of flat ceiling.
4. No unsightly nail heads showing.
5. Can be applied to new or old buildings of any construction independently of the roofing contractor, who proceeds with his work ahead of the AnD Wedge Method.
6. Any thickness of board can be used, from $\frac{1}{8}$" to $\frac{5}{8}$".
7. This method can be used for applying linings to exterior walls.
8. The simplicity of application is such that any contractor can apply the AnD Wedge Method, and the materials making up this method can be purchased by the contractor.

Full particulars, specification and a typical layout will be sent on request

C. F. ANDERSON & SON, LTD.

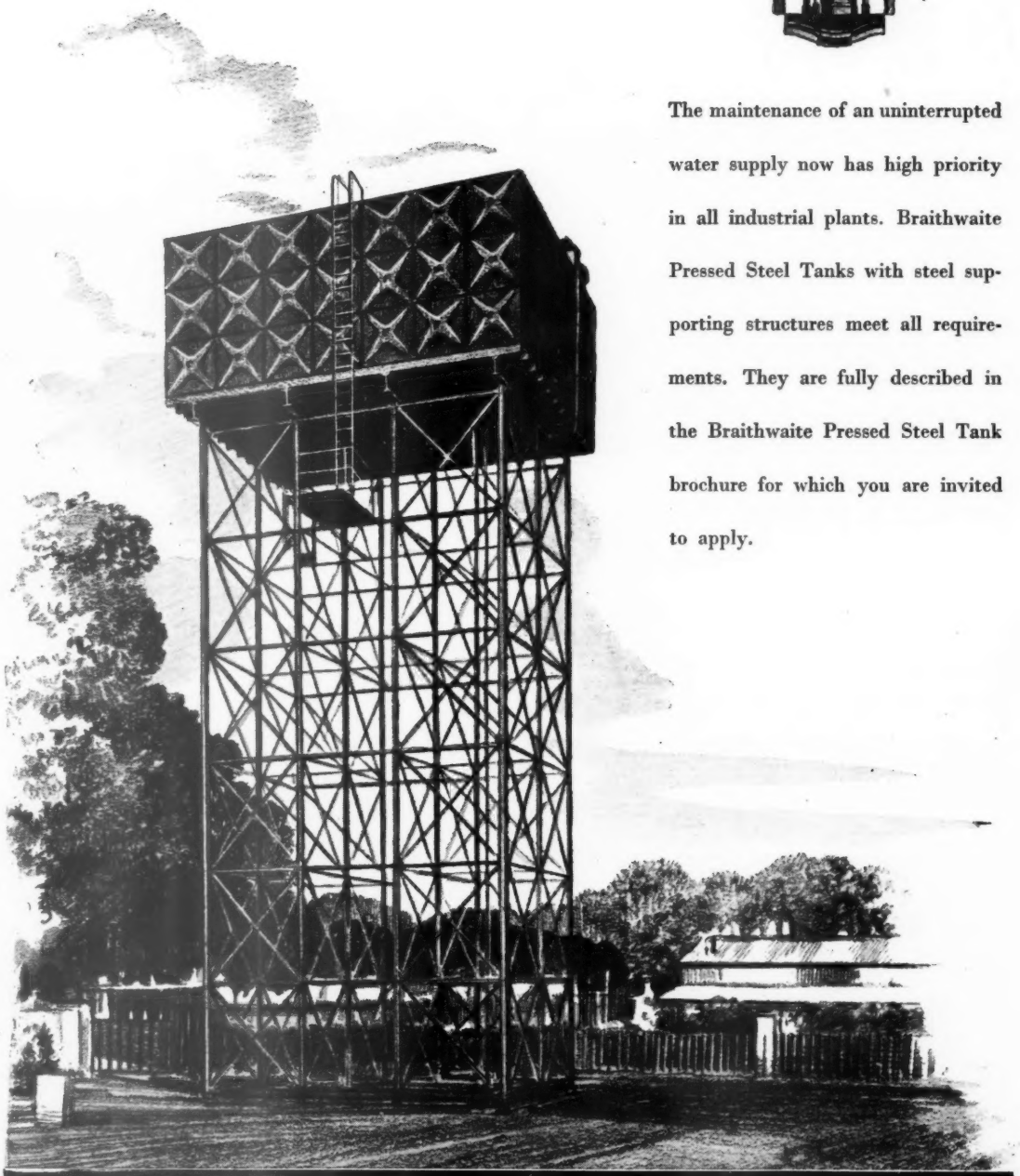
Wallboards for Government Work

Send us your "certificate of requirements" (such as Form PC/WD/1 War Dept.) and we will arrange for licence application to Paper Control

HARRIS WHARF, GRAHAM STREET, LONDON, N.1. TELEPHONE: CLERKENWELL 4582

AN/40

The maintenance of an uninterrupted water supply now has high priority in all industrial plants. Braithwaite Pressed Steel Tanks with steel supporting structures meet all requirements. They are fully described in the Braithwaite Pressed Steel Tank brochure for which you are invited to apply.



BRAITHWAITE

PRESSED STEEL TANKS

BRAITHWAITE & CO. ENGINEERS LTD. 35 KINGS HOUSE, 10 HAYMARKET, LONDON, S.W.1

Telephone: WHitehall 3993

RS

RS

pending

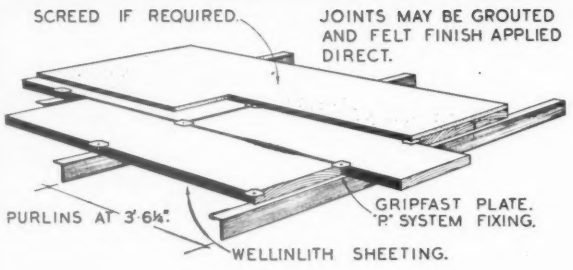
t is ap-
a pane
ne ven-
ed and
ady for
evron.

ned to
l light
and a
en by
ved by

MITED
(6 lines).
EAD, N.W.)

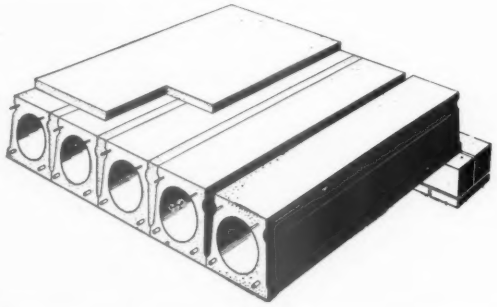
MARLEY ROOFING
INFORMATION SERVICE

Our knowledge and experience covers all types of roofing and we are always pleased to discuss problems with the technicians concerned. Marley products are available for lightweight factory roofing, permanent factory roofing, flat roofing and tiling.



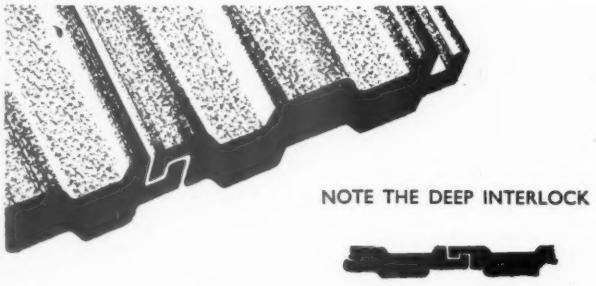
LIGHTWEIGHT FACTORY ROOFING

As recommended by the Department of Scientific and Industrial Research Wartime Building Bulletin No. 15A.



MARLEY 'EAGLE' PRECAST AND REINFORCED CONCRETE UNITS

Insuring easy handling and rapidity in erection.



MARLEY ROOFING TILES

THE ROMAN. An economical roof of high performance and distinctive appearance. Each tile has two rolls with solid ends for eaves tiles. Usually laid without dentil course at ridge. Size: 16¼"×13¾". Weight: 8¼ cwt. per square. Gauge: 13⅜ ins. No. per square: 87.

THE LUDLOW. The lowest cost tile roofing. Interlocking type. Size: 15"×9". Weight: 7 to 8 cwt. per square. Gauge: 11 to 12 in. No. per square: 12" gauge, 150; 11" gauge, 165.

THE PLAIN. Size: 10½"×6½" with full range of specials.

MANUFACTURERS OF ALL KINDS OF PRECAST CONCRETE PRODUCTS . . .

THE MARLEY TILE COMPANY, LIMITED

HEAD OFFICE - - - LONDON ROAD, RIVERHEAD, SEVENOAKS, KENT
Telephone and Telegrams: Sevenoaks 1251 Works throughout the Country

TENTEST are STILL at your SERVICE

TRANSPORT MUST BE REDUCED YET QUICK DELIVERY OF BUILDING BOARDS IS ESSENTIAL . . . .

THEREFORE, when we have secured official sanction to deliver any particular type of building board, we must deliver from the nearest available stocks of that type of board, irrespective of brand or name. Inevitably, therefore, we are at times concerned with the supply of materials other than TenTesT Products.

But we shall always give—

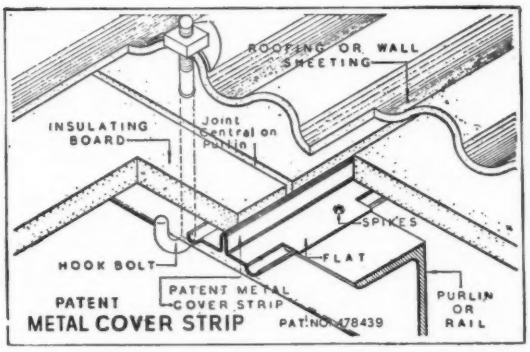
"TENTEST SERVICE"

In particular, we hope to maintain at the highest level the technical service we render to Architects, Engineers and Contractors.

- Advice on insulating buildings, to reduce heating plant costs and fuel consumption, eliminate condensation and control sound.
- Detailed fixing specifications.
- Solving new fixing problems when they arise, developing new fixing methods where necessary.
- Supplying and fixing complete any type of board by our Specialised Construction methods.

ENQUIRIES AND PROBLEMS ARE WELCOMED BY

"TENTEST SERVICE"



Our Specialised Construction service covers the fitting of any suitable type or make of board and details of Patent Metal Cover Strip and other fixing methods are free on request.

Ask TENTEST about
Insulation Boards ✓
Hardboards ✓
Laminated Wallboards ✓
SPECIALISED Fixings ✓

TENTEST
TRADE MARK

Made in Canada

TENTEST FIBRE BOARD CO. LTD., 75 CRESCENT WEST, HADLEY WOOD, BARNET, HERTS.

Telephone: BARnet 5501 (5 lines). *Telegrams: Fiboard, 'Phone, London*

THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE)
War Address: 45 THE AVENUE, CHEAM, SURREY.

*

THE ANNUAL SUBSCRIPTION RATES ARE AS FOLLOWS:
BY POST IN THE UNITED KINGDOM £1 3 10
BY POST TO CANADA £1 3 10
BY POST ELSEWHERE ABROAD £1 8 6
SPECIAL COMBINED RATE FOR SUBSCRIBERS TAKING BOTH THE ARCHITECTURAL REVIEW AND THE ARCHITECTS' JOURNAL: INLAND £2 6s.; ABROAD £2 10s.
SUBSCRIPTIONS MAY BE BOOKED AT ALL NEWSAGENTS

*

SINGLE COPIES, SIXPENCE; POST FREE, EIGHTPENCE. SPECIAL NUMBERS ARE INCLUDED IN SUBSCRIPTION; SINGLE COPIES, ONE SHILLING; POST FREE, 1s. 3d. BACK NUMBERS MORE THAN TWELVE MONTHS OLD (WHEN AVAILABLE), DOUBLE PRICE.

*

SUBSCRIBERS CAN HAVE THEIR VOLUMES BOUND COMPLETE WITH INDEX, IN CLOTH CASES, AT A COST OF 12s. 6d. EACH. CARRIAGE 1s. EXTRA

*

War Address: 45, The Avenue, Cheam, Surrey
TELEPHONE: VIGILANT 0087-9 (3 LINES)

The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, NOVEMBER 12, 1942. NUMBER 2494 : VOLUME 96

PRINCIPAL CONTENTS

News 305

R.I.B.A. Exhibition 306

This Week's Leading Article 307

Notes and Topics 308
Astragal's Notes on Current Events

Letters 310

Blue Moon Hotel, Leicester. By Frank Brown and A. L. Sharp 311

Education for Technics and Planning 313
By Max Lock

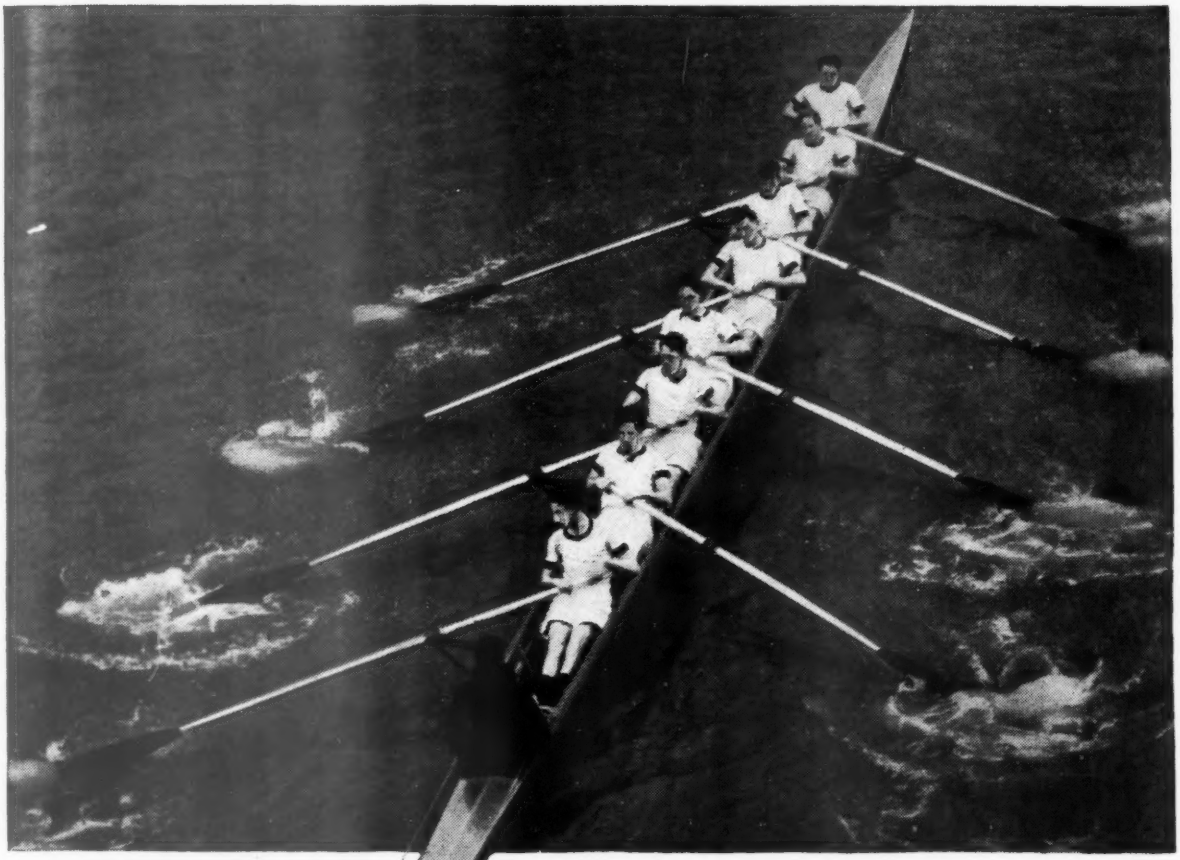
Scientific Research Abroad 316
By K. Hajnal-Kónyi

Societies and Institutions 319

Information Centre 320

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this JOURNAL *should not be taken as an indication that they are necessarily available for export.*

Owing to the paper shortage the JOURNAL, *in common with all other papers, is now only supplied to newsagents on a "firm order" basis. This means that newsagents are now unable to supply the* JOURNAL *except to a client's definite order.*



THE PERFECT FINISH

In — out — in — out ; there goes a stylish crew — look at the perfect finish.

There is another perfect finish — Cerrux, that is appreciated wherever it is used. Today, naturally, it is somewhat restricted for non-essential purposes but we shall be happy to supply you, if we are permitted to do so.

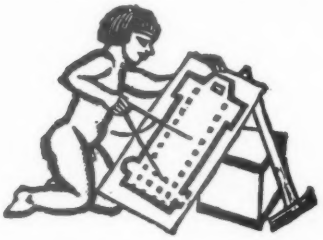
CELLON, Ltd. Kingston-on-Thames. Telephone: Kingston 1234.

CERRUX
DECORATIVE FINISHES

CVS-500C

ST. MILDRED'S CHURCH, BREAD STREET, CITY—considered by experts to have possessed the most perfect interior of the smaller Wren churches. Beautiful Grinling Gibbons furniture and plaster work were well-known features of this church.

In common with every other periodical and newspaper in the country, this JOURNAL *is rationed to a small proportion of its peace-time requirements of paper. This means that it is no longer a free agent printing as many pages as it thinks fit and selling to as many readers as wish to buy it. Instead a balance has to be struck between circulation and number of pages. A batch of new readers may mean that a page has to be struck off, and conversely a page added may mean that a number of readers have to go short of their copy. Thus in everyone's interest, including the reader's, it is important that the utmost economy of paper should be practised, and unless a reader is a subscriber he cannot be sure of getting a copy of the* JOURNAL. *We are sorry for this but it is a necessity imposed by the war on all newspapers. The subscription is £1 3s. 10d. per annum.*



from AN ARCHITECT'S *Commonplace Book*

"'All the same, London's creeping.' She pointed over the meadow—over eight or nine meadows, but at the end of them was a red rust.

"'You see that in Surrey and even Hampshire now,' she continued. 'I can see it from the Purbeck Downs. And London is only part of something else, I'm afraid. Life's going to be melted down, all over the world.'

"Margaret knew that her sister spoke truly. Howards End, Oniton, the Purbeck Downs, the Olderberge, were all survivals, and the melting-pot was being prepared for them. Logically, they had no right to be alive. One's hope was in the weakness of logic."

Howards End, *By E. M. Forster.*

Though every news item is news to someone, it doesn't follow that all news has the same value for everyone. The stars are used to draw attention to the paragraphs which ought to interest every reader of the Journal.

★ *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 paragraph marked with more than two stars is very hot news indeed.

N E W S

★

Lord Portal, Minister of Works and Planning, was the chief speaker at the annual meeting of the C.P.R.E. in London last Friday. He pointed out that the GOVERNMENT ARE WORKING HARD, *and no time is being wasted in order that a right decision may be reached in regard to the Scott and Uthwatt Reports. He continued*: My Ministry is seeking to plan the right use of land. There must be co-operation between the Government, local authorities and those who own or occupy the land. Planning for the countryside must be done by people who understand the countryside. Agricultural wages are at a standard which should make it worth while for the best of our youth to look upon it as an occupation after the war. We shall require a good deal of rural housing after the war . . . . Rural housing must be made to fit in with the atmosphere. . . . In future there will have to be trunk roads which will go round villages in preference to the altering and widening of existing roads.

Professor Patrick Abercrombie, who presided, said that they would have to see that the future England was beautiful, happy and prosperous, and that it was not dependent on the power of the purse. "We are incredibly deficient in architects who can handle country planning. We are at our wits' end to find people we can entrust with that great work."

In view of the heavy demands for the present building programme MOWP has taken power TO CONTROL ROOFING MATERIALS, *under an Order made under the Defence (General) Regulations, 1939. The materials to which the Order may be applied are: Asbestos cement products; roofing felts (all types); damp course felts (all types); plasterboard; natural slates for roofing and dampcourses.*

The controlled material cannot be produced or disposed of except in accordance with the conditions specified in a licence from the Minister, which may be rescinded or varied at any time. The controlled material cannot be disposed of unless the receiver has first stated in writing the purpose for which it is required, and it is an offence against the Order to use the material for a different purpose from that stated. Persons producing, disposing of or acquiring the controlled material must, on request by the Minister, keep such books, accounts or records as he may direct, and produce them for inspection as required. Manufacturers and recognized distributors of asbestos cement products will be informed by MOWP as to the correct procedure for obtaining the licence which they will require under the Order.

★

The Court of Common Council expressed, at a meeting last week, disagreement with the plan of the R.A. Committee for the rebuilding of London so far as the City is concerned, and adopted a REASONED CRITICISM *prepared by the City Engineer. The Engineer's report has been submitted to the Ministry of Works.*

The Special Committee, in adopting the engineer's report, drew attention to the position of the markets, stating emphatically that the Corporation could not accept the assertion of the Academy Committee that the markets as at present situated are a hindrance to traffic and the development of Central London, or the opinion that the markets should be relegated to a ring road. The engineer stated in his report that he had considered the City primarily as a market and place of commerce. It could not be regarded as a museum or a gallery for aesthetic satisfaction, or as a public park. The City could never be regarded, whatever the destruction, as a virgin building estate. A practical plan could be prepared which would display such architectural beauties as had been spared and allow of appropriate construction on existing sites.

★★

On Sunday next, November 15, at 7.45 p.m., the subject of the "Workers of the Week" programme will be builders, and the story will be told of their RECORD-BREAKING ACHIEVEMENTS *in building a wartime camp. Among the speakers will be the works foreman and labourers who hold what is probably a world's record for speed in erection of camp buildings.*

Sir James Marchant, of the Directorate of Salvage and Recovery, addressing a meeting in London of the London Master Builders Association, urged them

R. I. B. A. Exhibition Under Way

In the library and the committee rooms on the fourth floor of the R.I.B.A. Building, work is in progress on the planning exhibition which is to be held at the National Gallery at the end of January. The exhibition, sponsored by the Reconstruction Committee under the direction of Mr. Rodney Thomas, will occupy the whole of the south wing of the National Gallery and will consist of a large number of photographs and plans. Final details of the shape the exhibition will take have not yet been completed ; roughly, it will comprise six sections :—1, the case for planning ; 2, planning, past and present ; 3, problems of existing towns ; 4, design, civic and urban ; 5, building programme and organization ; 6, what the public can do about it. The above photograph, taken in the library of the R.I.B.A., shows the exhibition under way : from back to front, Miss Pat Clifford, Ian McCallum, G. M. Kallman and Miss Rachel Wallis. It is to be hoped that the R.I.B.A. Exhibition will do something to rectify the false impression the R.A. Exhibition has raised in the public mind about the real function of architects.

to appoint INDUSTRIAL SALVAGE STEWARDS *on every considerable job and in every yard to secure the salvaging of waste.*

Sir Charles Bressey gave a short talk on the R.A. PLAN *for the reconstruction of London at Burlington House last week. Points from his speech are printed below.*

Some writers are inclined to misconstrue the purpose and scope of the exhibition. It is concerned with the replanning of only a small portion of central London, and has nothing to do with residential and suburban areas. It is not an ideal homes exhibition. There is no intention to cut up the whole of London by fresh streets. Only a certain number of new roads are proposed, and it is hoped that they will be given a dignified alignment and useful and satisfactory architectural treatment—upon which, in the past, too little attention has been bestowed.

★★

Lord Portal has appointed an ADVISORY COUNCIL *representing the employer, operative and professional sides of the building and civil engineering industries, for the examination and mutual consideration of problems and policies affecting the present and future position of these industries in relation to the demands of the country's building and civil engineering requirements. The members of the Council have been nominated by their respective bodies as follows:*

T. Howarth, O.B.E., Sir Jonah Walker-Smith, M.P., and G. H. Parker, C.B.E. (National Federation of Building Trades Employers) ; A. G. Hutton (Scottish National Building Trades Federation [Employers]) ; Henry T. Holloway, J. Crowley and N. H. LeMare (Federation of Civil Engineering Contractors) ; J. W. Stephenson, J.P., Bruce Sandercock, Luke Fawcett and R. Coppock, C.B.E. (National Federation of Building Trades Operatives) ;

Tom Pugh and H. Bullock (Civil Engineering Conciliation Board); W. H. Ansell, M.C., P.R.I.B.A., and Hubert Worthington, O.B.E., F.R.I.B.A. (Royal Institute of British Architects); Sir Peirson Frank, M.INST.C.E., F.S.I., and W. T. Halcrow, M.INST.C.E. (Institution of Civil Engineers); Alan W. Davson, F.S.I., and Alexander H. Purdie, F.S.I. (Chartered Surveyors' Institution). G. H. Parker, C.B.E., has been elected chairman, and J. W. Stephenson, J.P., vice-chairman.

MOWP draws attention to the fact that when any change occurs in the particulars of a REGISTERED FIRM *notification should be given to the Chief Registrar (B. & C.E.), Sanctuary Buildings, 18, Great Smith Street, S.W.1. The certificate of registration should be returned at the same time for amendment.*

Circumstances in which such notification is necessary, include: (*a*) change of name(s) of owner(s), trading name, or address; (*b*) change in constitution of business; (*c*) permanent or temporary closing down of business; (*d*) resumption of business; (*e*) formation of a group of builders, or other such amalgamation. Certificates of Registration are the property of H.M. Government, and must be returned to the Ministry of Works on demand. Care should be taken to safeguard them against loss; the Chief Registrar should be notified immediately if a Certificate is lost. Certificates must not be defaced or amended in any way.

We regret to record the death of Captain F. H. P. C. Wood, son of Lord Halifax, has been KILLED IN ACTION *in Egypt. He was a partner in the firm of G. Langley Taylor and Partners, architects, of Beaconsfield, Bucks.*

The All-Union Building Industry EXHIBITION *is now being held in Moscow; the exhibition includes examples of various types of building materials and, in addition, machines used for rail and road construction. The photograph below shows visitors examining some of the machines used for highway construction.*

TRAINING FOR TECHNICS

DISCUSSIONS which followed the series of lectures recently organized by the Architectural Science Board at the R.I.B.A. showed that architects, particularly students of architecture, are very much alive to the need to equip themselves more thoroughly to deal with the complicated technical problems that arise in connection with modern building. Fear is sometimes expressed that if the architect strays outside his proper sphere—æsthetics and detailed planning—he will become a jack of all trades and a master of none. But few architects are rash enough to imagine that it's in their interests to invade the spheres of other specialists, though many of them feel that if they are to retain their position as co-ordinators in the building industry they must learn more of the procedure and habits of thought of the men with whom they are called on to collaborate—both professional men and building trade operatives—and be trained to assess more rapidly and accurately the possibilities of new methods of construction and new materials.

The problem they are faced with is not a simple one. Criticism now may be chiefly directed at architects but in this matter the architect merely reflects the chaotic state of the whole industry, which, in an age of scientific and engineering progress, continues to organize itself, in so far as it organizes at all, more like a craft than an industry. Naturally there are exceptions to this but broadly speaking it is true, as is shown by various statements and figures published by MOWP since it was called upon to organize the nation's war building programme.

It is tempting to jump to the conclusion that efficiency depends on size and that all the necessary improvements will automatically result from grouping operatives in large firms and architects in large offices. In some branches of the industry, particularly on the engineering side, rationalization is undoubtedly necessary but much more is needed than a mere increase in the scale of operations if English architecture and English building is to become what it ought to be.

The discussions referred to above made it clear that there are four distinct but closely related problems to be solved. (i) How to organize building research on a national scale. (ii) How to make the results of such research readily available not only to specialists but also to architects (and one might add town planners) whose particular responsibility it is to see that scientific inventions are applied in such a way that the general public reaps the full benefit of them; as we all have good reason to know, technical progress does not necessarily result in greater civilization. (iii) How to train an increasing number of specialists of different types to have not only an accurate knowledge of their own subject but a sufficient understanding of the methods of thought of other types of building expert, to facilitate the very close collaboration we now see to be necessary if the work of a collection of scientists is to be raised to the level of an art. (iv) How to frame and

administer building regulations and bye-laws so that the best possible use can be made of existing knowledge and skill. This issue of the JOURNAL is largely devoted to a discussion of one of these problems—the type of organization necessary to train the kind of building technician required. Mr. Max Lock has had unusual opportunities of forming conclusions on this subject because he has not only been for a short time head of the Hull School of Architecture but has also for the last year been organizing, on behalf of the Leverhulme Trust, a civic survey of Hull, which has given him first-hand experience of the kind of team work that is needed to make reconstruction mean something more than re-building. As the proper training of students is very largely dependent on the existence of adequate facilities for research work and a coherent background of scientific knowledge, a short note by Dr. K. Hajnal-Kónji on the organization of building research on the Continent has also been included in this issue.

The Architects' Journal

War Address: 45, The Avenue, Cheam, Surrey

Telephone: Vigilant 0087-9

NOTES & TOPICS

R.I.B.A. EXHIBITION

A visit to the R.I.B.A. gives one grounds for hoping that its forthcoming Exhibition, Rebuilding Britain, which the Reconstruction Committee is organizing and Mr. Rodney Thomas is designing, will go far towards meeting a need that is very badly felt just now, and may even succeed in explaining to the world at large the very special meaning which most architects attach to that ambiguous word Reconstruction. At present the gap between professional and public opinion is painfully obvious.

*

As far as one can judge from an incomplete script Rebuilding Britain will do for planning what the MARS Exhibition of 1937 set out to do for modern architecture. It's not intended to make propaganda for a particular plan or even for a particular system of planning. Instead it sets out to explain how the need for planning has arisen and to describe the sort of improvements we can reasonably hope to achieve by it.

*

But unlike other exhibitions of the kind it will not *merely* present the spectator with sketchy pictures of a new heaven startlingly different from the land we see around us, but will make a determined effort to explain to him the general principles, technical, social and æsthetic, which must underlie any sound reconstruction scheme, and also the kind of organization that will be needed to carry such a scheme into execution.

*

It is hoped that the Exhibition will be on view at the National Gallery early in the new year.

*

On the facing page is a photograph showing the exhibition under way; another, I understand, is reproduced on page 306.

BOMBED BUILDINGS

The Bombed Buildings of Britain, edited by Mr. J. M. Richards, is a pictorial record of damage done to notable buildings throughout the country in the blitzes of 1940-41, enlivened by notes delightfully written by Mr. John Summerson.

*

By notable the author does not mean either large or well known. It is one of the merits of the book that quite apart from recording damage done before the end of 1941, in photographs which show how the ruins looked on the morning after the raid, it catalogues for the first time a number of unpretentious but charming buildings, as can be seen from the illustrations reproduced on this and facing page.

Essex Street Arch. Badly damaged, but now partly repaired, this forms the south end of Essex Street, Strand, one of the many speculations of Dr. Nicholas Barbon. It was not, as is so often stated, "the Water Gate of Essex House," whose site was levelled by Barbon, but merely a closing feature to the street, probably designed by the Doctor himself, who included a working knowledge of the orders among less reputable accomplishments, mostly of a financial turn.—[*From* The Bombed Buildings of Britain].

*

Indeed, looking at this book one realizes what a shocking lack there is of architectural picture books. There are books which illustrate adequately better known examples of the approved styles, but they are relatively few in number, and the photographs are usually swamped by redundant text. So far very little imagination has been shown in the use made of the camera to record buildings. One can pick up books by the dozen which show with a thoroughness approaching

* *The Bombed Buildings of Britain.* Edited by J. M. Richards with notes by John Summerson. London: The Architectural Press. Price 15/-

that of a film almost every phase in the development of painting and sculpture. But the smeller-out of good buildings is continually disappointed in his search for books. Perhaps it is the strength of the measured drawing tradition that has prevented the possibilities of photography from being fully appreciated.

TWO M.P.'S ON WARTIME CONTROL

Mr. Craven Ellis, M.P., speaking to the Federation of Greater London Master Builders at their quarterly meeting, looked forward to the abolition of wartime control and advised the Federation to strengthen its membership and agitate to that end. He stated that the high cost of building after the last war which had seriously hampered the execution of the housing programme, had been due to government control of the industry.

★

Mr. McLaren, who also spoke, seemed to have a better grasp of the facts, but his speech was received with slightly less enthusiasm. He started by saying that he was all for private enterprise but considered it advisable to define the term. Were —— for instance (mentioning the name of one of the larger firms now handling government contracts) an example of the kind of private enterprise we were anxious to see survive?

★

Warming to his subject he said that if the Government continued to interfere the industry would have only itself to blame. They would have no case unless they organized themselves to undertake large contracts and execute them punctually, efficiently and within the estimate cost. Were they making any effort to do this? The audience murmured "No."

Work in progress on the R.I.B.A. Exhibition to be held at the National Gallery in January. Left to right: Miss Pat Clifford, G. M. Kallman, Miss Rachel Wallis and Ian McCallum.

Finally he gave them to understand that if private enterprise continued to put up the kind of buildings we've grown accustomed to see going up during the last twenty years he, personally, would not oppose whatever measure of control was necessary to stop it. Here, again, he suggested it was up to the builders to show what they could do.

SINGING HINNIES, ETC.

It is the fashion to draw maps of England covered with charming little symbols. Frequently they take the form of sheep and cows; at other times of hay ricks and sheaves of wheat. It has been left to the Association for Planning and Regional Reconstruction to map the country in terms of cakes, buns and biscuits, puddings, pastries and pies. The idea of the investigation is, it seems, that food habits may provide a basis for the delimitation of regions—areas of social solidarity being indicated by a common love of *Fuggan* or *Squab Pie*.

★

The delimitation of regions is a formidable problem. No clue to its solution should be ignored. But is it likely that food will provide such a clue now that Woolton has been busy swapping recipes for nearly three years? Whatever the answer may be the Association's questionnaire contains a series of recipes that Lord Woolton himself might envy.

WOMEN ARE SO ORIGINAL

An officer of the ATS told me that the most popular subject for discussion amongst her girls is "The House I would like to live in." What do you think they want?

★

They want a house of their own, with a garden for children to grow up in. A gas cooker, or at least not an old-fashioned range. A sitting-room with an open fire. A bathroom. And to be within easy reach of the country while not too far from a town.

ASTRAGAL

The Goree Warehouses, on the waterfront of George's Dock, Liverpool, are among the finest examples of early nineteenth century industrial architecture. Though altered from time to time and lacking, as a result, the impressive uniformity evident in the engraving, they retain their most striking feature, the "piazzas" with their alternate large and small arches. The warehouses were begun in 1802.—[From The Bombed Buildings of Britain].

LETTERS

Lord Esher

John M. Holmes
(*Principal, Manchester School of Art*)

N. Aslan

Lt.-Col. Graham Seton Hutchison
(*Co-operative Permanent Building Society*)

George C. Oldham, L.R.I.B.A.

R.A. Plan

Sir,—As you were kind enough to mention my name in your interesting criticism of the Royal Academy plan, perhaps I may be allowed to express my regret that your too rigid adherence to the theory of planning will not allow you to collaborate in the practical task of dealing with the ancient but battered city of London. You say that "engineering plus architecture is not town-planning." Nobody ever said that it was, and the epigram begs the question. I have studied with care the admirable diagrams with which Mr. Tatton-Brown has elaborated the sort of city in which modern people want to live. The ideas which he advocates seem to me perfectly suited to Mr. Trystran Edwards' hundred new towns, or even to an industrial city without character or history. But I cannot conceive how they can be applied to a capital city that, whatever its defects, has for a thousand years developed its own peculiar personality and become deeply embedded in the affections of its citizens. Even the changes suggested by the Royal Academy Committee, which are not fundamental "town-planning" in the modern sense, have excited alarm lest the character of London be lost and Haussmannized into a reflection of Paris. If the town-planners want to go farther than this, it is surely essential that they should show how the application of their ideas can be effected without London becoming, perhaps "better," but decidedly something else.

Destructive criticism is easy enough. Half-an-hour's concentration on an editorial can demolish a year of other people's work. Even more harmful is the eager welcome it will receive from the inert mass who are determined to do nothing at all, and who will watch with delight the experts wrecking each other's schemes. The Royal Academy Committee consider their plan to be "tentative and provisional" and, in view of so modest an attitude, it was to be hoped that constructive collaboration rather than contemptuous superiority would be the reaction of the critics.

Watlington Park. ESHER

[Lord Esher defends, by implication, his support of the R.A. plan on the ground that it preserves the character and personality of London which have, he says, become deeply embedded in the affections of its citizens. But does it? That is exactly the point we would ask him to reconsider, since the exhibition seems to us to show little understanding of London's personality or character. If the critcs have been contemptuous this is no doubt why. We hope to return to this question next week.—ED., A.J.].

SIR,—

Mr. Gibberd with nerves that are jangly,
Leaves the R.A. scheme crushed up and mangly.
Could not London Fantastic,
Mix Gothic and Classic
And so be quite Batty like Langley.

JOHN M. HOLMES,
Principal, Manchester School of Art

SIR,—On October 28, 1942, *The Evening Standard* published an attack on Prof. Reilly for his advocacy of modern contemporary architecture for London by someone modestly calling himself Vox Londinii, but at the same time saying he was no architect.

The main points in this attack were that Prof. Reilly advocated heavy clumsy buildings like Shell Mex House (which Reilly did not mention and has often condemned) and that modern architecture, truthful to its steel construction, demands endless straight lines. Vox Londinii went on to say he had still to learn of a modern building which was light and gay or had curved lines. All this, of course, is nonsense. The *Daily Express* building in Fleet Street with its bright glass front is the reverse of Shell Mex House clumsiness. So is Peter Jones building in Sloane Square with its long curved Serpentine front to King's Road, a building designed by an old Liverpool student with Prof. Reilly as consultant.

The other main point of Vox Londinii's letter was that this modern architecture is not true to the spirit of Londoners themselves because they like processions and Lord Mayor's Shows. Why not? It is obvious that truthful architecture makes a better background to street processions than the old scenery; tired buildings in eternal fancy dress, pretending that they belong to any age but the present.

When Vox Londinii implies that Prof. Reilly must be a strange sad person, remote from life, those who know him will laugh. He is really a baroque personality, and in his time the Liverpool School of Architecture was a centre of gaiety and pageantry. I know. I was there.

N. ASLAN.

Design for Britain

SIR,—Noting with interest your review of the booklets—*Design for Britain*—sponsored by this Society, but published by J. M. Dent and Sons Ltd., may I venture some observations? There seems to be at least an implied suggestion in your sentence—"Ironically enough, only too often, those who are loudest in their condemnation of the evils of the last peace are just those who contributed the most towards them"—that building societies were those responsible for the evils of lack of planning and of bad architecture which characterized much of the building of the period following the peace of 1919.

A building society is confined in its activities and operations by the Building Societies Acts; and though no doubt they must bear their share of responsibility, it falls nevertheless in equal measure upon all those concerned with building construction, surely including also architects themselves. Ultimately, the whole community was responsible, due to lack of informed public opinion, and we must, therefore, pin responsibility finally upon Parliament and Local Authorities, in whom were vested all powers of decision by the electorate.

That this Society has now pioneered an enquiry through this series of booklets, to which architects, surveyors, financial experts, medical men, professors of economics, trade union leaders, sociologists, and specialists in building construction are contributing, is surely an earnest of its desire to educate the public as to the necessities of proper planning and good building, in order that, conscious of the responsibility, we may acquit ourselves at least of any further charge of lack of public conscience. I venture to suggest that we could make the further claim that in the publication of these booklets we do demonstrate our determination to play an active part in planning and design rather than following the role of passive finance. Nevertheless, even before the war, apart from the demands by our Surveyors' Department, headed by an architect, for quality, we did also demand good planning and amenities as was illustrated by our association with Rochester Garden City Estates Ltd.

In my own contribution to this Series ("Challenge to Youth"), I recommend: "Architects should have a Charter as secure as is that of the Medical Profession"; and again, "It will only be when the architect, surveyor, medical authority and welfare worker, finance and industry, transport and the distributive trades, and especially the housewife, have poured their experience of all conditions of life during years of prosperity and depression into

the melting pot, that from this crucible will wise men and women be able to extract the refinement of Building for Work and Play worthy of a great People.'' That surely suggests, not a post-war sales campaign, as you seem to imply, but a definite condition of social construction in which, as I think, good planning and architecture can alone be accomplished.

As to your enquiry—'' there will be some who would be far more interested to learn in just what form the Co-operative Building Society itself envisages post-war housing—still more green fields covered with semi-detached at twelve to the acre ? or a more concentrated form of building with corresponding increase in communal open space ? ''—I suggest that it must be fairly obvious that we are ourselves subjecting the booklets written to close scrutiny and analysis, and are in consultation with a number of highly experienced experts, with a view to determining how best post-war housing can be accomplished both for urban and rural requirements. We have under close consideration, for example, high density cottages and flats and garden cities, while also our Research Department is in touch with the latest developments in prefabrication, timber construction, and plastics ; and, as a Co-operative Society, we have for some time also been exploring the H.S.B. system in Sweden, in which Sven Wallander has played so important a part, with his inventive skill as an architect, his keen business sense and his capacity for organization.

LT.-COL. GRAHAM SETON HUTCHISON
Co-operative Permanent
Building Society

Unity in the Profession

Sir,—F.R.I.B.A. is to be congratulated upon his answer to my question : '' Does he consider fellowship or associateship the greater proof of architectural ability ? ''

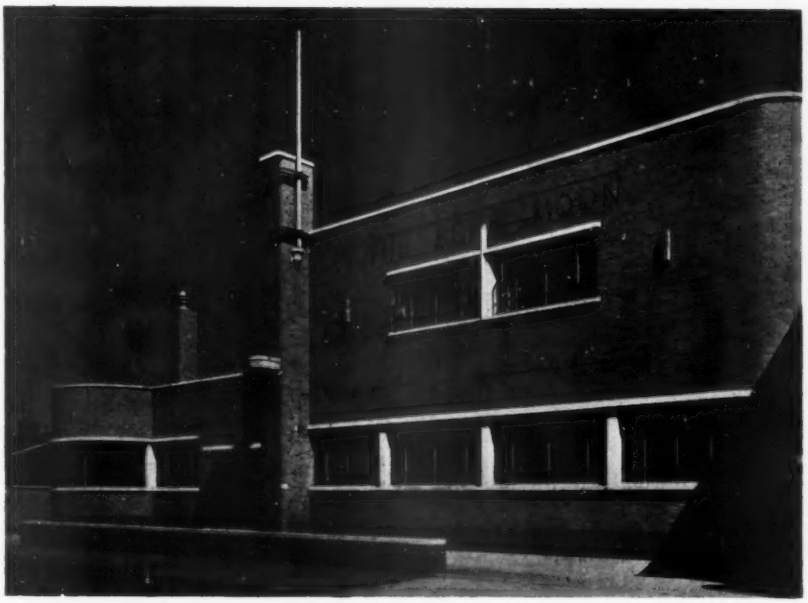
I agree in general principle with the first part of this answer. But when F.R.I.B.A. goes on to say : '' Architectural ability can be assessed from graphical representation as part of a qualifying examination and fortunately for the student (and the community) it is not necessary to erect a building in order to judge whether the designer is or is not fitted to become an architect . . . '' then I disagree with him entirely, and find in disagreeing that I am in good company.

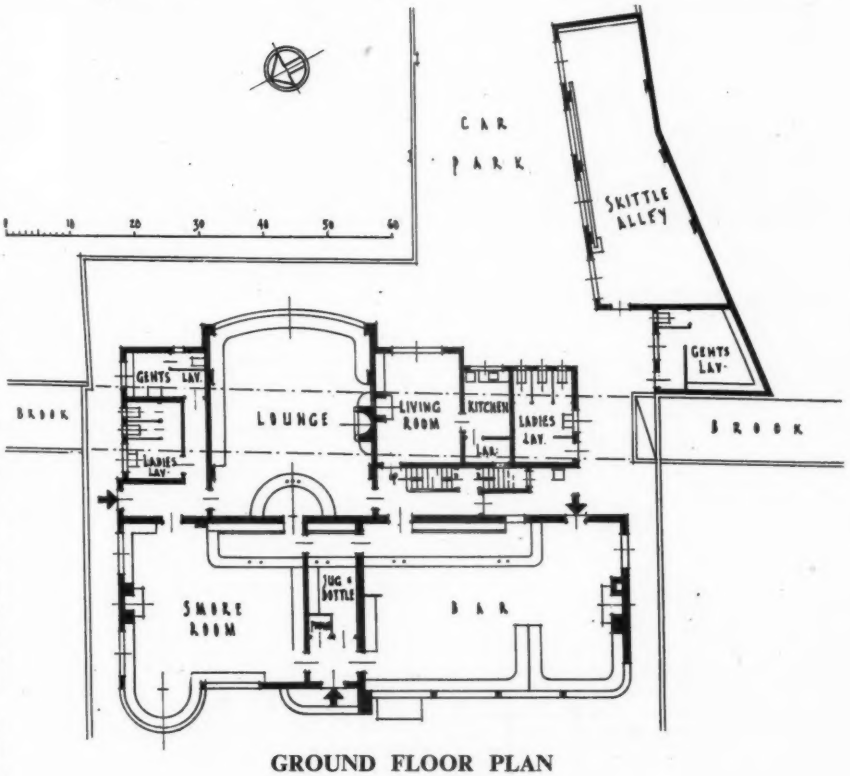
Furthermore, when he declares me wrong in stating that the R.I.B.A. has approached only those known to have reached the required standard for licentiateship, one can only refer him to the R.I.B.A. circular letter D.696/42, dated October 1, 1942, which, with its accompanying memorandum D.704/42, sets out the Royal Institute's policy on the subject in detail, and disposes of all the general misunderstanding.

Poole. GEORGE C. OLDHAM.

HOTEL, LEICESTER

BY FRANK BROWN AND A. L. SHARP





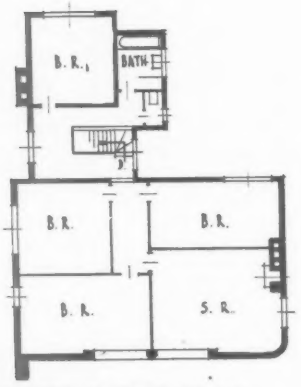
GROUND FLOOR PLAN

GENERAL—The licence for this hotel was transferred from a building demolished in a slum clearance scheme. As there was no licensed accommodation in the neighbourhood, the best vacant site for the hotel was bought.

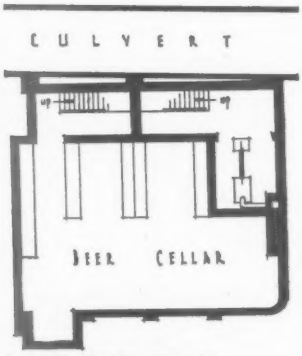
SITE—The site has two frontages and is situated about 50 yards from the main Hinckley Road. The open brook, running across the width of the site, was enclosed by a reinforced concrete culvert.

PLAN—There are entrances from

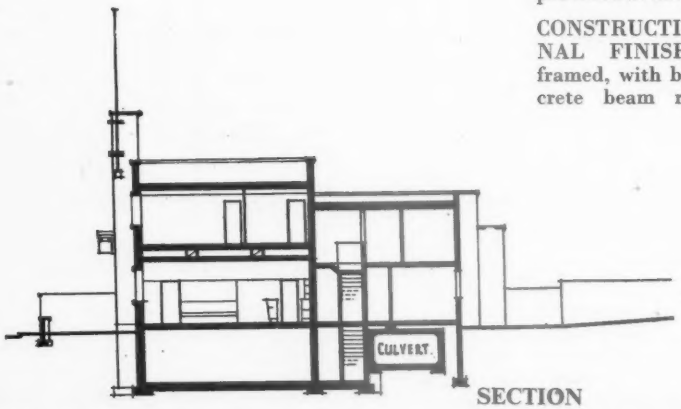
The lounge, looking towards the fireplace. The electric fire has a Hopton Wood marble surround; the semi-circular glass feature over the fireplace is illuminated with the "Blue Moon" sign. Walls are covered with plastic paint. Right, the Bar.



FIRST FLOOR PLAN



BASEMENT PLAN



SECTION

HOTEL, LEICESTER

BY FRANK BROWN AND A. L. SHARP

the two street frontages; counters are arranged for easy access for serving room; a skittle alley has been provided at the side of the car park.

CONSTRUCTION AND EXTERNAL FINISHES—Partly steel framed, with brick walls and concrete beam roof covered with asphalte. Special facing bricks were used for the plinth and the external walls are of 2in. Bedfordshire greybricks.

INTERNAL FINISHES—Lounge: floor, rubber; walls, plastic paint with veneered wood picture decoration; bar fittings, mahogany; upholstery folk-weave. Bar: floor, rubber; furniture, light oak; upholstery, green leather; walls, plastic paint. Smoke room: fireplace, Hopton Wood, with walnut surround; walls, walnut panelling; counter and back fittings, walnut; seating, walnut, with tapestry upholstery; curtains, green folk-weave.

SERVICES—Extract fan ventilation with plastered panels in ceiling; automatic stoker with Ideal boiler feeding pipes and radiators. General contractor was F. Elliott; for list of subcontractors, see page 320.

Mr. Max Lock, one time member of the A.A. teaching staff and until recently head of the Hull School of Architecture, has had unusual opportunities of studying at first hand our present system of Architectural Education. He has also had experience, as organizer of the Hull Regional Survey, of the kind of team work that may be expected from Architects, Planners and others in the near future. In the article which follows he deals more fully with a subject TECHNICS AND EDUCATION *which he broached at a Housing Centre lunch meeting last month, and will again talk about to members of the Association for Planning and Regional Reconstruction on November 17.*

EDUCATION *for* TECHNICS AND PLANNING

[BY MAX LOCK]

When the social history of this century comes to be written, it might not be untrue to say that the Reports and Commissions of Uthwatt, Scott and Barlow will have exerted as great an influence upon the twentieth century as those of Chadwick, Southwood-Smith and Ashley Cooper have upon the nineteenth.

In 1842 it was sanitation and public health that became the preoccupation of social legislation and reform. In 1942 it is environment and physical re-planning, which we plan to be the final front against the many social evils of competitive industrialization.

Chadwick's reports of 1844 appeared at a time when the national average expectation of life in large towns was as low as 21 years—in Liverpool it was only 17.* There followed improved urban sanitation, a more highly skilled medical profession and a gradual conquest of disease and bad building. Democratic election to local government placed the control of environment theoretically at least in the hands of the ratepayers. Almost anyone could stand for election upon his local council —which provided an opportunity for citizenship and service as well as an opportunity for self-interest.

To-day's civilization has not demanded the same degree of expert direction from those who are shaping the physical form of town and country as it has exacted from all branches of the medical and health services. No longer are our children at the mercy of the quack doctor, though their houses and their home environment may be in the hands of the jerry-builder.

The architect has had to build his reputation upon a system that holds sacrosanct the right of the individual to do what he likes with his land and property, with the result that his æsthetic convictions are tempered right through with economic expediency, and he must so often design his work from the standpoint of "what pays"—and "art" thus prostituted assumes a material, commercial value and is quite divorced from "science"—the abstract intellectual entity—in the process. Do we then wonder that in 1939 there were to be found among the aldermen and councillors in this country representing their local electorate less than fifty architects but more than 2,000 speculative builders, and that over 90 per cent. of the nation's houses were built without architects?

Yet the public are beginning to demand better planned cities, higher housing standards and better architects, just as a hundred years ago they called for better sanitation, better trained engineers and more highly skilled doctors.

The time has come when the responsibilities of the architect must be recognized both inside and outside the profession. Responsibilities that are at the same time technical, æsthetic and social.

During our lifetime we have seen medical practice develop into a vast range of new specialist professions, and now, while our own profession emerges somewhat painfully from private to public significance, we must not be unprepared for the emergence of a number of new professions within it as and when the lens of public need brings the planning picture into truer focus.

We entertain the ideal of world federation as the only ultimate solution of the bitter wasteful struggles for peace, justice and a right distribution of raw materials among mankind. Likewise this great art and science of civic surgery within our nation comprising as it does the sociological, technical, æsthetic and economic sciences must so constitute itself that all the allied professions and trades relating to the planning, servicing, maintaining and building of the physical environment can come together and pool their resources.

Indeed the first stirrings of movement in this direction appear in the recent Ministerial union of "Works" and "Planning," and if it be a real union, we may expect from it not only the birth of new specialist professions but a simple re-ordering of the imperfect relationships that already exist. In this respect the fifteen committees set up under the Directorate of Post-War Building are a promising development.*

The Soviet Russians have been equal to the contemporary situation. Specialist professional grouping between architect-engineers, architect-designers, and architect-town planners have already appeared, and in fulfilling the programme for their vast ten-year plan, a planned pooling of knowledge and skill became a necessity in the building of their 145 new towns, each scheduled to house over 50,000 people. In both the U.S.S.R. and the U.S.A. physical planning and building itself forms part of a nation-wide policy for the development of industrial resources as a whole. But in this country, where and how is this combined unification and differentiation possible? Where can we begin the process? The answer is, surely, in—the field of training—in the schools, —in the responsive embryonic and experimental stages of professional life. At the moment much thought is being given by central Government departments, the building industry and its allied professions to the preparation of the ground for a properly balanced

* Figure taken from the "Royal Commission on the State of Large Towns and Populous Districts," First Report (1844), quoted in the "Royal Commission on the Distribution of the Industrial Population" (1940), p 53.

* See THE ARCHITECTS' JOURNAL, p. 48, July 16, 1942.

training for post-war needs. It is comparable, we hope, in a more vital way to the similar urge of the last century which gave rise to the development of of the great training hospitals medicine and surgery.

Among the building professions there is a rush to fill the place of leadership, if not monopoly, in the planning field. The architect, because he is an architect, thinks he should replan Britain, the civil engineer and the municipal and county engineer say the same of themselves, and there is the town planner who, with this extra qualification, believes himself to be the key man in the piece. But we are not here concerned with the struggle about who should do the replanning, for we are all in the same boat. Our preoccupation is with its direction, and the fitness of the crew for its navigation and, in particular, with the qualification of the architect for the national task that lies in front of him.*

Can the architect fulfil the responsibilities that " planning " imposes upon him ? If he is to extend the field of his planning from the building to the neighbourhood, from the neighbourhood to the city, from the city to the region, it is obvious that he must include within his ken an ever-widening range of economic, sociological, geographical and engineering sciences, as well as legal and administrative practice, and this at a time when he is already deeply conscious of his lack of a wider technical awareness which needs essentially to play a more scientific and a less casual part in his training.

From this it seems to follow that the schools of architecture should confidently expand and push down their roots into the field of technics on the one hand, and on the other into the field of planning where building, the visual arts, and the physical environment can be studied in all their aspects, and where those who serve within this ever-widening circle can practise the first degree of practical co-operation by meeting together and discovering what goes on in each other's minds.

Such schools, it is suggested, should be national in importance and serve a regional field, their ultimate destiny being possibly to become regional or sub-regional training colleges or universities of technics and planning, centres of citizenship where public awareness of the physical environment can be intelligently stimulated in student and citizen alike, and above all where the pooled resources of training, research and practice can be made available for the general good.

In brief, the position seems to resolve itself thus : If architects are to serve society well, and if they are to become responsible citizens and to be realistically trained in terms of the growing demands of the profession upon them, artificial barriers must be broken down, false presumptions abandoned, and a new synthesis or unification achieved not on one plane but on four or five, briefly as follows :

Firstly, on the broadest plane of *education* between
Cultural,
Technical and
Manual Training.

Secondly, on the plane of *public service* between
Training for Architecture,
Training for Technics,
Training for Planning.

Thirdly, in the ever-widening *professional* field between
Training,
Research and
Practice.

(There is a serious isolation of training from research and of both of these from practice.)

Fourthly, in the field of actual practice between
The Architect,
The Engineer and
The Operative.

Fifthly, on the narrower technical plane of training between the three spheres that require an essential integration in the student's experience, i.e. the sphere
Of building materials (the laboratory),
Of building methods (the builder's yard on the site).
Of building manufacture (the factory).

Finally, these desirable syntheses cannot begin to be achieved nor can the problem be handled as a whole until there is a common aim and understanding in the field of national direction between
The Government (the Ministry of Works and Planning, etc.),
The Building Industry,
The Allied Professions (architecture, engineering and town planning).

The primary object of this cursory review of the situation is to try to find out what it is the student of architecture is to be trained for. For if we are moving " towards a living architecture," this can only be approached along the pathway of a realistic education, an education that is anxiously sought by those in industrial, professional and student circles who are profoundly dissatisfied with the many kinds of inward division that exist among ourselves.

As architects, our first sphere is building. Dealing broadly with the situation we know that the reason for the lack of affinity between the architect, engineer and operative, lies deep beneath the surface and resides in that wide chasm which separates cultural, technical and manual education. We see the mouth of this chasm plainly on the surface at the undergraduate level, but do we perceive its depth extending right down through the educational system to the post-nursery school stage? The result is the educational process we know to-day, one that is standardized, inflexible and tends to be regimented into a purely " cerebral " examination system—a system which sets a premium upon the boy who is good with his head, and judges him too good to be taught to be good with his hands, a faculty now chiefly reserved for stream " D " children *This manual stigma must be removed.*

To-day's unpardonable attitude of indifference towards those young submerged artists who are great enough to think through hand and eye as well as brain has surely made our architecture what it is and has as surely rendered our field of architectural genius so barren. Indeed, it is not difficult to understand why the architect is regarded by the man in the street as a cultivated and professional luxury—while the builder and the engineer are the " practitioners " of our age.

However, with architecture now a " closed " profession, it is obvious that the intellectual and " cultural " standard of its members is all the more important ; and this recently acquired legal status justifies in the same way a heightening of technical and social responsibility among us.

But surely it is this educational departmentalism at the root of things, this lack of a genuine culture for living, that is basically to blame for the ruthlessness of the speculative builder, for the earnest but often " technocratic " lopsidedness of the engineer and for the predominant lack of conviction of the architect, who feels himself to be misunderstood and overlooked and is consequently too often on the defensive.

When teachers of theory and design can lay a brick and know the feeling and behaviour of the materials about which they theorise, and when technical teachers of practical (vocational) subjects in art and technical colleges have as much knowledge of the humanities as the average university lecturer, then we may expect the beginning of this happier integration of the cultural, technical and manual branches of education that still lie so rigidly railed from each other.

If we happen to be architectural students, we probably know already that our present training is as theoretically overweighted as the engineer's is technically biased.

We live on our drawing boards, in the studios, and maybe we emerge from the hot-house of art education, knowing about stylism, functionalism and organic shapes, but we are kept

*" For there is one branch of architecture where deceit is impossible, and that is Town-planning. Town-planning can spring only from the full life ; it is possible only when the different levels of human activity have attained a certain unity and equilibrium."—Giedion, " Space, Time and Architecture." p. 95.

from the salutary breezes, the strengthening gusts of technical and sociological reality. In very few schools do we handle bricks or get to know the "feel" of a mortar or concrete mix* so we must not be surprised if we have not the ability to think through the mind of the operative. Our understanding of building materials is as casual as is our contact with practical building methods. We know little about the behaviour and nature of these materials and still less about the machines which manufacture them, for there is no scientific background to our curriculum, no well staffed technical laboratories† and no contact with factory methods or with manufacturers whose products we must one day assume responsibility for using. As students we are isolated from technical reality and our knowledge, our design and our enthusiasms suffer. The vigorous remedy proposed by the Architectural Science Group‡ who insist upon the scientific impregnation of the whole of the design, and construction curricula for the schools may prove to be the most significant step towards truthful constructiveness that the Institute has taken during the lifetime of its younger members, who want to feel they are "part of a social, technical and cultural process with almost limitless possibilities for architectural invention."§

However, in some ways the war will have provided the means to make good these deficiencies for there is in the Forces a vast potential of excellent material among students and architects alike—men who for the first time have learned to handle and to organize materials on a job. Why should not many of these on demobilization, as has been elsewhere suggested, receive a final training to equip them to fill this vast vacuum that urgently needs instructors in practical building methods in organization and in building science in the schools?

A proposal has been put forward that a year of national or public service between the ages of 17 and 18 would help to mitigate the repressive influences of an unrelieved sequence of examinations. It is obvious that unless democratically and imaginatively run, such a course would have its dangers, but on the other hand the opportunity to direct the enthusiasms of youth into constructive channels, to initiate the adolescent into the responsibility of citizenship, and to break down the social stigma of manual tasks by the levelling influence and comradeship of practical work would, if directed towards the aim of responsibility and freedom, have a salutary effect in at least two directions:

1. It would lead to a better balance of technical and "cultural" subjects in the schools prior to this period of public service.

2. It would feed into the universities and technical training colleges something less raw and more mature and responsible than the average school product of the matriculation or school certificate examination.

During this period all study need not necessarily cease, but there should be no examinations. It seems, however, that a nation-wide system of youth training could not be satisfaetorily run as suggested until the State school leaving age is raised to 16 with day continuation classes until 17. But whatever system may be envisaged, a year's guided experience in the workshop or builder's yard, before coming to a school of architecture would give the student a more sincere and understanding approach in terms of the materials he will have to use.

We have been isolated from technical truth as students (and there are many who would defend this isolation in those formative years), but there is no defending this disassociation in the case of those who are engaged in private (or public) practice. How far are we divorced from reality in this field? It is true we learn much from our own handling of jobs—our technical experience may be enough to satisfy the private standard we set for our own reputations—but is it enough to satisfy us as members of an institute which exists to give a square deal in a national sense to the public? The architects' recent re-orientation from the cultivation of a purely private clientele to that of a public service, to the community,* the extension of his civic responsibilities from the designer of buildings to that of planner and shaper of the environment, the growing status and responsibility of the salaried official architect, all these changes insist that we discover a new and appropriate technique of progress.

We are learning to organize ourselves into groups as did the master builders and the metics before us. We are learning the division and pooling of labour in education and in practice. In this we become business-like, but do we fully appreciate that the basis of progress in business and especially in education is experiment and research?

Research is the keystone of enterprise, and yet, except under the larger public architectural departments, the mass of individual architects are only allied to the building research organizations in the loosest possible way. For as things are, the ordinary practitioner is almost entirely isolated from the only two centres where progress and the stimulus of experiment are developed for their own sake, i.e. the schools and the building research laboratories. This insularity is surely the most fatal of all, since it directly affects the public in the resulting standards of building and design.

Let the student, the research officer and the practising architect each pool their contribution; for training, research and practice are, after all, a historic affinity.

Experiment and research should form the gateway from training to practice and from practice back to re-training again, and the place for this is in our schools. For when research is applied to training on the one hand and to practice on the other, its dangerous and unrealistic elements are removed; the dilute abstractions of pure science are precipitated into tangible solidity, and only then can a positive progress result which can stand the tests of time.

It is clear that the initial lead must be taken in our schools, whether they be independently governed or whether under university or local authority auspices. That they all have fallen short of full responsibility is no new criticism and, indeed, is no more than a reflection of what that great honest prophet of reality, Professor Lethaby, said a generation ago. "The old type of education has gone dangerously far to create a distaste for work by its presupposition that culture was alone to be found in books. To counteract this modern disease of thought we shall need some very definite new teaching of a religious kind, which will reverence, and even worship, the great precedent necessity of labour. If any man will be a saint, let him dig or make. We must begin with the spirit; we have to light up a flame of desire to serve in all ways of human work. . . . Education and production need to be brought together in new types of apprenticeship. It is absurd to aim at merely abstract and grammatical preparation until the age of 20 or 30. Even for those who prefer to read books, the scholarship university should be a research workshop. The vocational ideal in education is not only a theory which would apply to a commercial and industrial people, but it would rationalize and make human the 'humanities' themselves."*

Here Professor Lethaby has grasped the nettle nearest to its root, and sees

* The Manchester School of Art is an exception where architectural students lay bricks in their first year.

†Exceptions are the Regent Street Polytechnic, and the Leicester School of Architecture and the Brixton School of Building.

‡ Report of the Architectural Science Group of the Board of Architectural Education.

§ Focus No. 3, 1939, p. 88.

*"At present individual architects are at the mercy of vulgar accidents, such as having a flow of dinner talk, or being in with a business syndicate, or knowing a lord. This Institute has to win a place for the ablest building directors considered as essential ministers of civilization, and to see to it that public works are done in a proper way. To do this they must enter on a large and consistent educational policy. We have been educated long enough as purveyors of whims, our education must be recast in the public service." P. 128, "Form in Civilization." Lethaby. 1917.

* Lethaby, "Form in Civilization," 1917 pp. 136-7.

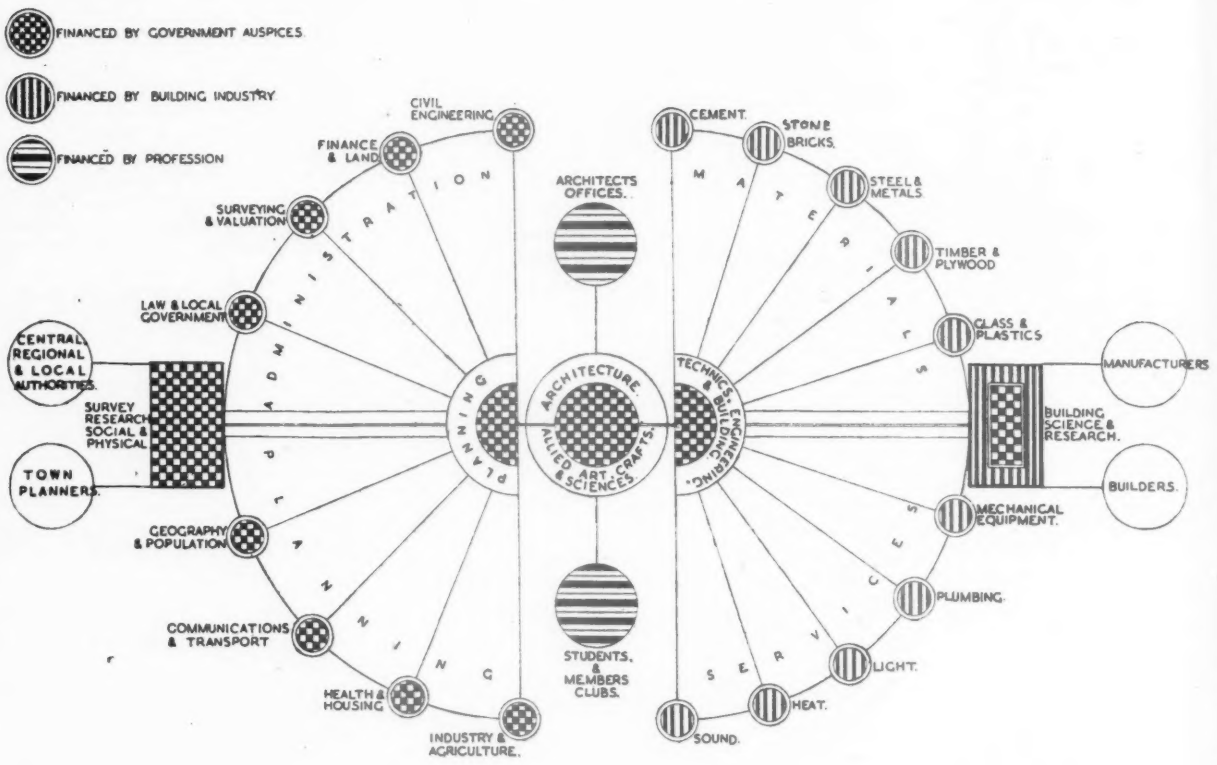


DIAGRAM SHOWING REGIONAL TRAINING CENTRE

The creation in this country of an organization comparable to that which had grown up in Germany (described in these notes) during the last thirty-five years would not only make possible a great improvement in building technique, but would facilitate the kind of change Mr. Lock advocates in our methods of technical education. Mr. Lock suggests (see drawing above) that education and research should be very much more linked up than they are at present. Clearly this is exceedingly difficult, if not impossible, so long as research is undertaken either to further vested interests or not at all. The two problems—that of organizing research and providing a system of education for the building industry that is suited to our present needs—are very closely connected with each other. Mr. K. Hajnal-Kónyi, who is an expert on the subject, has contributed the following notes on how research is conducted abroad.

"At a recent meeting of the R.I.B.A. much interest was shown by a number of architects in the practical application of the results of scientific research. One of the lecturers pointed out that research work was very expensive and that the funds available in this country were much smaller than in U.S.A., where many universities possessed large, well-equipped experimenting stations. No-one mentioned, however, the fact that although research is expensive, it is far more expensive for the community, if no research work is done. Two examples may serve to make this clear.

(1) The sight of strengthened shelters is familiar to everybody. Had proper research been made in time, or had the experience gained abroad (Spanish Civil War) been utilized in the first design, many lives and many millions of pounds could have been saved.

(2) It is well known that the cost of the fire resisting encasement of structural steelwork is a substantial percentage of the total cost of the steelwork itself (i.e. 15 to 17 per cent. in a typical office building). In an article on this subject in *The Structural*

the blame for this divided education of those who plan and build to be found in the divisions that exist in *pre-graduate* education. At thirteen, boys and girls in public and secondary schools are directed into one of three channels—classical, science or modern. Should there not be a fourth division, a technical side which can serve as the general preparation ground for all those who intend to become directly or indirectly associated with the vast field of building (which forms our largest national industry apart from agriculture) whether as builders, planners, surveyors, architects or engineers ?—an initial cultural synthesis of the interests of those who build up the environment would be achieved from the start, and the retarding influence of the manual stigma would be gradually removed from among us.

Again Professor Lethaby's words have a contemporary ring as he wrestles with the implications of a basic change of outlook, which he was one of the first to welcome and proclaim. He speaks thus in a paper given to the R.I.B.A. in 1917, on " The Education of the Architect."

" There has been remarkable agreement in the view that this Institute should take up questions of public welfare in matters relating to building more definitely and constantly, that it is called upon to enter on a large constructive policy, and even to engage in earnest propaganda work. In working for the public interest this Institute would incidentally find a worthy place for itself but, unless we awake, the new cottages, national housing and town improvements will be done in the main without us."†

This was in 1917. Now in 1942 experience is still arguing that the architect already has too much on his plate ; that if you press him to take science, and after that sociology, dis-

† Lethaby, " Form in Civilization," 1917, pp. 125 and 127.

Engineer, April, 1942, Mr. C. Roland Woods gave a short summary of the development of the "fire-encasement requirements" of the L.C.C. since 1909. It is clear from this paper that the specified thicknesses and qualities of the materials are not based on the results of scientific or experimental investigations; they are "rule of thumb" requirements and, apart from details, are substantially still the same as in 1909.

Considering the results of tests made abroad and the information given in Wartime Building Bulletin No. 13 of the Building Research Station, it would appear that the fire-encasement requirements of the L.C.C. are obsolete. This is not surprising after 33 years.

Until 1935 no testing station existed in this country for the investigation of the fire resistance of building units of substantial size under load. In that year the Fire Testing Station at Elstree was opened and, as Mr. Roland Woods says: "the stage was set for a scientific examination of the fire-resistance regulations of local authorities whose building by-laws require steelwork to be encased to eliminate fire risks, but this work could not be lightly undertaken because each test costs upwards of £100." In other words, although a testing station is now available, very limited use has so far been made of this facility.

It does not seem to be too optimistic to assume that a series of, say, 100 tests at £100 each would be sufficient to establish the principles of up-to-date regulations regarding the fire-resistance of steel framed buildings. The total amount of, say, £10,000, which would be spent on these tests, represents only a very small fraction of the cost of steel framed buildings erected in one pre-war year in this country. The saving in cost or the increased resistance to fire, which could be achieved if proper data for the real requirements were available, would amply justify this expenditure. In fact, taking the country as a whole, it would be one of the best possible capital investments which would be repaid within a very short period and bring an ever increasing interest with increased building activity.

But who is to pay for these tests? It is obvious that no individual, no limited company, responsible to its shareholders, no public body, responsible to its rate- and tax-payers, would be able to afford it.

In these two examples, to which many more could be added, the characteristic difficulty of financing building research work is revealed. In this respect the building industry is very different from other industries. In the chemical, electrical and automobile industries every firm of reputation is more or less compelled to do its own research in order to maintain the sale of its product in a competitive market and is automatically rewarded by patents or by the development of improved manufacturing processes. Apart from a few exceptions, building research is not of such a nature that its results cannot be monopolized; they become the property of the whole nation. Consequently a definite contribution from the State is necessary. Two examples from the Continent may be given.

(1) *Switzerland.*—The Federal Research Station for Materials at Zürich was established some 60 years ago. It is aided by the Swiss Confederation and is one of the most famous institutions of its kind. It has investigated many fundamental problems of engineering, and the high standard of the Swiss industry (not only the building industry) is due to a great extent to its work. The Research Station is attached to the Federal Technical University and its function in training engineers is perhaps of the same importance as its research work.

(2) *Germany.*—In a similar way each Technical University in Germany is connected with a Research Station. The work of these institutions is not confined to the building industry—all branches of engineering are represented in them. It was, however, realized in Germany long ago that the mere existence of these research stations was not enough, although each did valuable work. As far as one of the most important building materials, i.e., reinforced concrete, is concerned, a special Committee (Deutscher Ausschuss für Eisenbeton) was set up in 1907. On this Committee the Governments of the various German States (Prussia, etc.) are represented. Its main task is to foster the scientific research connected with concrete and reinforced concrete and to issue a "Code of Practice." This "Code of Practice" is modified and improved from time to time so as to keep the regulations up to date and incorporate in them the results of scientific investigations. In 1921 this Committee was attached to the German Ministry of Transport. All professional associations as well as the various organizations of the cement industry co-operate with this Committee. During the first 25 years of its existence (i.e., until 1932) it spent 1,130,000 Marks on research. (Approximately £56,500, but equivalent to at least £100,000 to-day.) This amount was divided between seven research laboratories, attached to the various Technical Universities.

To give an idea of the Committee's activity it may be of interest to quote the headings of its seventh research programme, which was published in 1934.

(1) Increase of the tensile strength of concrete and of its safety against cracking; (2) High tensile steel as reinforcement; (3) Fatigue strength of concrete; (4) Tests on reinforced concrete columns; (5) Hollow tile floors; (6) Elasticity, plasticity, shrinkage; (7) Reinforced concrete beams in shear; (8) Influence of cold temperature on the hardening of concrete; (9) Wall-beams; (10) Resistance of concrete to weather; (11) Shear in foundation slabs under columns; (12) Welding of round reinforcing bars; (13) Strength of concrete reinforced in two directions; (14) Safety of three-hinged arches against buckling at right angles to their planes under eccentric loading; (15) Further development in making concrete. Methods of testing.

By now about a hundred reports on tests, some of them containing more than a hundred pages, have so far been published.

The above example, referring to reinforced concrete, is only a small part of the building research work in Germany—e.g., welding in structural steel has been investigated with equal thoroughness by other organizations and is now far more widely adopted than in this country.

The advantage of this planned research on a national basis is obvious and it would be of the greatest benefit to this country if it were able to organize its building research in a similar way. In connection with the rebuilding of Britain there are a great number of problems which need systematic scientific investigation. Without it serious mistakes and waste are inevitable. The Building Research Station alone, in its present form, cannot cope with this task. The University Research Laboratories, such as South Kensington, Birmingham, Leeds, etc., make valuable contributions from time to time, but there is no co-ordination between their programme. It is essential to create a central organization to control the national research programme and to make use of all facilities available in the country; also to establish more research institutes with up-to-date equipment, and to make a substantial annual allowance for carrying out building research work."

aster is certain—especially if he be a student. Do not already sanitation, acoustics, insulation and a dozen more such services compose a rich enough diet?

We venture to say that the problem goes deeper than diet—it resides in the field of metabolism. Is not the taking or leaving of the extra mouthful but the necessity for a complete inner mutation that engages us? Is it not likely that only when the architect rediscovers that his sense of æsthetic awareness, however well trained, must be clothed with a scientific and sociological conscience—when he himself becomes impregnated with this primary trinity—which must be part of his inner soul—that his worth and significance will be rightly appraised by our own civilization which will yield here its own simple manifestation of contemporary English tradition.

Then his digestion will be equal to the feast because he will recapture the satisfaction of a right attitude towards his problems from *within*, instead of from *without*, with all its uncertainty—or from *above* from the precariousness of a professional pedestal.

So in our schools, architecture will include both science and sociology—with their physical products, technics and planning. As close companions of the mistress art, they will together exert their maturing influence upon the student throughout his training. While engaged upon his design subjects in the studio, he will in the laboratory be learning the rudiments of physics and chemistry, as they relate to building science. Manual experiment in the workshop and builders' yard will give him a knowledge of materials, of their uses and of the men who use them.

In the lecture room he will be shown the history of building, with its social background and the cultural outlook which produced it, and will be introduced to the elements of the local government within his own city. On

these occasions he will meet and discuss with local administrators and officers—to meet whom will be students of art, engineering and building—not omitting students from the teachers' training colleges, who in the junior schools are to be the front line propagators of right principles of visual awareness among to-morrow's electorate.

So the object of the first two or three years of training is to engender citizenship, and to see to it that the carefully planned cultural integration of artist, architect, engineer and operative is producing the whole man in the degree that he realizes his freedom in society, as a whole, and his freedom to expand his genius, as a related part of his group. His natural predisposition may lead to specialization and, after the third year, the architect will need to decide whether during his fourth and fifth years he will work for a town planning degree, or whether he will simply become qualified in his basic profession, or whether he will add to this the town planning qualification as well, in which case he will have to take an extra (sixth) year of full-time tuition or two extra years on a part-time basis.

But the student of architecture, like the medical student, should be given, immediately before qualification, a "house job," where he can work on a building in course of erection and assume partial responsibility for the organization of the job in collaboration with the foreman or clerk of works. After his final examination, six months spent in this way followed by a further six months in an architect's office, would entitle him to full associateship, when finally he has among other things learned to comprehend the correct keeping of accounts and the commercial aspects of an architect's work.*

Because of the increasing importance of public architectural departments, and because of the diversification of technical, sociological and planning requirements in modern building, allied to the growing demand for speedy erection, the well-balanced co-operative approach is likely to solve the problems of professional organization and to give the best architectural service to the community. For this reason it is suggested that group working should be encouraged in the schools, especially in the senior years. Experience has shown that the undertaking of specific subjects for actual social requirements, whether it be a city, housing scheme or rural neighbourhood, can only be adequately approached in that way, and moreover the collective discussions leading to a well-balanced solution are of the highest educational value to staff and student alike.

The chief advantage of group working perhaps is the complete field of research that can be covered by a number of senior students, each choosing a selected field of investigation and pooling the results. Not only should these results be available for other schools, but for the profession as a whole, and it is suggested that each of the regional training centres should become the local clearing house for the results of all kinds of research relating to planning and building available to students, builders and architects in public and private practice.

Here it is only possible to mention in passing the necessity of establishing in connection with a research centre such as this, a post-graduate school for architects in practice.

There should also, of course, be included in close association with this college, accommodation for architects' offices. The student and practitioner have mutual need of each other's contract.* Those who teach need also to practise. The reverse also is true.

When group practice becomes more generally established, every member of a firm could contribute his quota of teaching (to a greater or lesser degree) without creating conflicting responsibilities as now so often happens where full-time members of school staffs accept architectural commissions.

It is not proposed to enter into the details of a school curriculum in this article. It is the spirit which animates a school that determines what the student makes his own. Aesthetic, technical and social sense will only spill over into the curricula and into the students themselves as school staffs are alive with æsthetic, technical and social enthusiasm.

In the words of the Report of the A.A. Students' Sub-Committee on the School System :

"Energy and enthusiasm are generally not lacking, but often are not applied to architecture. Here is the working and living split and the problem is to fuse them together and direct this considerable capacity for enthusiasm into architecture. For the formation of their outlook, students must have an unrestricted and stimulating environment, and if they are to have this necessary freedom in the school it is important that they should have sufficient enthusiasm to use it properly, for without productive energy this freedom of environment will be in danger of becoming a spiritual vacuum. Students must be given the opportunity of realizing their present position in history, they must be given the knowledge of the importance of the social and intellectual changes that are imminent and the roots from which they have grown, and of the immense potentialities for advance inherent in contemporary civilization. Because the school does not give them this opportunity it misses its great chance of directing the students' energy into a live and creative channel, and here we maintain is the fundamental fault which colours the whole educational system.

"The consequence of this missed opportunity is a lack of real enthusiasm for architecture. Students do not feel they are part of a social, technical and cultural process with almost limitless opportunities for architectural invention. They have no contemporary consciousness. An external stimulus independent of architecture becomes necessary if they are to work, and in consequence we find the emergence of a complicated and elaborately theorized system of competition, of rewards and punishments, which is accepted as a perfectly natural state of affairs. Inherent in this is the gradual splitting up of the school into two conflicting groups—the staff and the students.

"It must be emphasized that this split is not necessarily consciously willed by either party, but is the inevitable consequence of such a system. These groups in turn develop their own interests; the staff try to keep the students up to certain abstract standards which have emerged, not from Plato but from their own elaborate competitive system, and the students try feverishly to maintain the standards or to evade them."†

It would, however, be inappropriate to conclude without an outline suggestion for the sort of school we might endeavour to create—upon, if possible, the foundations that already exist, requiring only the consolidations necessary to support the fresh equilibrium of forces that are to be set upon them.

The school envisaged would attempt to bring about a unification of conflicting interests upon those five planes mentioned above—interrelating visual design, technics and planning, as well as making far more opportunities of contact between training, research and practice which might be run under joint industrial, government or university, and professional auspices.

The diagram explains this :

1. *The School*

The School of Architecture with its allied arts would be centrally placed and closely related to planning and technical departments, the latter providing instruction for civil and structural engineers, surveyors and builders. Each of these three centres would have full-time, part-time and post-graduate instruction.

2. *Materials.*

On the building side, demonstration centres would be provided to serve each of the following basic industries in the region : Cement and concrete, brick and stone, steel and the metals, timber and plywood, and plastics (including glass).

*During this last year of training, the student will, of course. be paid,

* This is a subject requiring a thesis on its own. The whole question of the relationship of staff to student and to practice can only be resolved by some sort of group system, in which neither teaching, learning nor practice is sacrificed to the other.

† Focus 3, pp. 88-9.

WATERPROOFED CEMENT TESTED BY WATER-HAMMER

36 HAMMER BLOWS EVERY MINUTE, ALL DAY LONG

Up and down move the weights, thirty-six times a minute, and with each opening of the valve that admits water pressure from the mains, the cement mortar discs, $\frac{5}{8}$ in. thick, receive a hammer-like blow from the water in the cylinders lined with thick, toughened glass. This test, made in public view at several of the Building Trades Exhibitions, Olympia, went on all day, and every day for two weeks, and in spite of its severity—far greater than any test likely to occur in actual work—the disc composed of 2 parts of sand to 1 part of Portland cement waterproofed with 5% of 'PUDLO' Brand powder, remained proof against the penetration of the water. The pressure of the water-hammer is 10 lbs. per square inch, and as the area of the waterproofed cement disc in contact with the water is 7 sq. in., the total force of the blow over this area is 70 lbs. This is but one of many tests which give positive proof of the unfailing dependability of this pioneer British waterproofer. If you will send us a brief description of any waterproofing problem you are considering, we will submit a fully detailed specification that will ensure a thoroughly satisfactory result at the most reasonable cost. There is, of course, no obligation.

'PUDLO'

BRAND

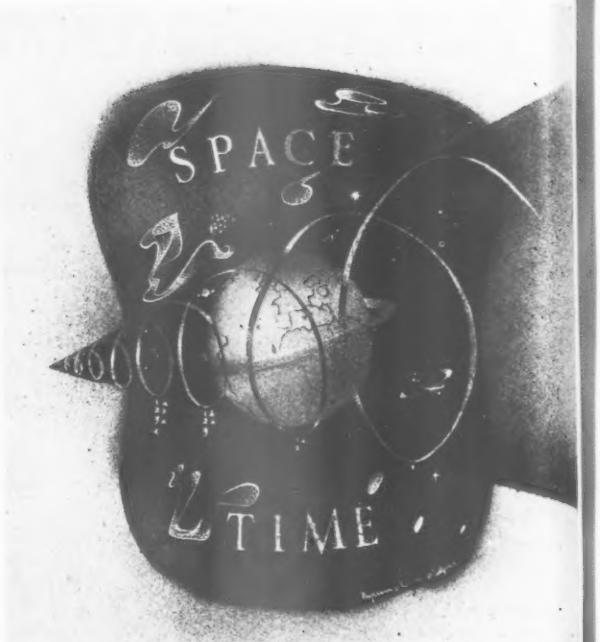
CEMENT WATERPROOFER

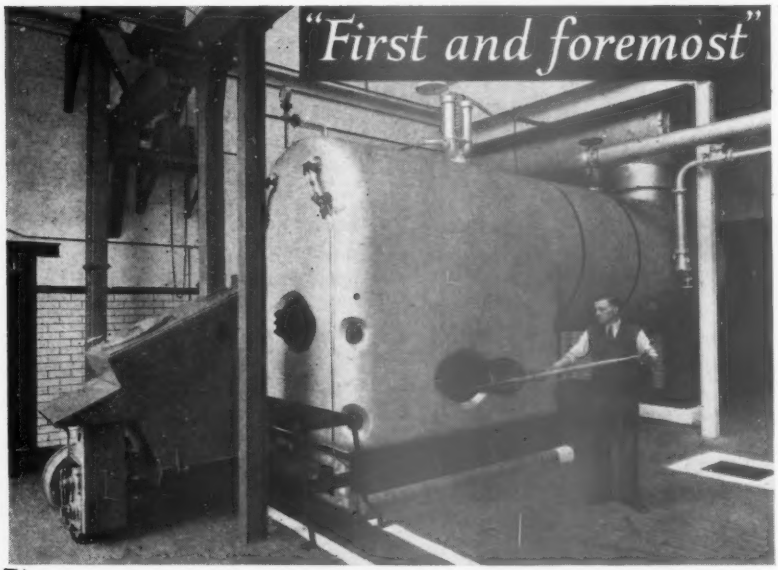
KERNER-GREENWOOD & COMPANY LIMITED

ANN'S PLACE KING'S LYNN

Sole Proprietors and Manufacturers.

Od. P. St.





3. *Services*

Likewise the industrial associations responsible for the major services would help to maintain demonstration and instruction centres, representing mechanical equipment, lighting, heating, sanitation and insulation.

4. *Laboratories and Building Research*

Of key importance would be the building science laboratories provided in this school, together with a building research station in each region stimulating experiment and research among manufacturers, builders, architects, and students. In connection with this, special post-graduate courses would be arranged.

5. *Planning*

On the planning side, information and instruction centres would be set up by the Ministry of Works and Planning (or other responsible Ministries) relating to industry and agriculture, health and housing, transport and communications, geography and population.

6. *Administration*

Planning administration would be covered by a department providing instruction in surveying, law and local government, land and finance, and engineering, as it relates to town planning.

7. *Planning Research*

A central research centre to pool and collate social and physical urban and rural surveys, and to connect the school with local authorities and town planners, would, as in the building research centres, be the main contact between training and practice, and above all a centre for publicity in planning matters in which can be worked out standard methods of survey for the rehabilitation of towns (such as advocated by the Federal Housing Administration, Washington).

8. *Professional and Social Amenities*

Architects' offices provided by the profession will be closely related to this regional training centre ; together with a members' and students' club and halls of residence.

9. *Finance*

It is suggested that the centre of architecture, technics and planning might, in certain circumstances, be financed jointly by the Government, the building industry and the professions, as shown in the diagram, in such a way that each would stimulate the other to mutual advancement. (An analogy of this mutual stimulation can be found in the financial organization of the Municipal, Co-operative and Private Enterprise Administration of Housing in Sweden, which have adjusted themselves most beneficially to the needs of the community as a whole).

In short, the architect, town-planner or engineer, if he is to meet the growing demands of the nation upon him, will need to be more than a private practitioner—he is to become the city surgeon or practical diagnostician of all conditions relating to the physical environment. The planner, too, is to be concerned with more than roads, zoning and preservation of amenities, he is to be the collator and co-ordinator of financial, legal, health, transport, planning and building factors as they affect the well-being of the civic organism as a whole and his function is likely to be an extension of architectural or engineering training, allied to a social, technical and administrative knowledge.

Whether such an organization is under local authority or university auspices, its structure must above all be flexibly planned, its constitution democratic, allowing the freest flow of individuals into fields of generalization or specialization according to their personal propensities and, above all, giving them a corporate awareness of the significance of their calling.

Questions of immediate concern, such as the increasing importance of the salaried official architect or engineer, the so-far undetermined (if not under-determined) status of the planning officer, the organization of local regional planning agencies to collate all factors relating to the physical environment, the right adjustment of all these to the demands of our age must spring up out of a thorough and integrated training. The new world cannot come alone by pleading or praying ; our responsibilities to society can only be fulfilled by constructive co-operative thought and action in those fields where we happen to be. The responsibility is a wide if not a total one, including as it does the whole field of re-education for technical and social reality.

We have the foundations in our Schools as they exist together with the technical and cultural facilities within our cities. It is for us to strengthen them, "recast them in the Public Service," and build upon them in terms of to-day's and to-morrow's requirements.

SOCIETIES AND INSTITUTIONS

ARCHITECTURAL ASSOCIATION

Lecturing on "Civic Design" at the Architectural Association, Mr. Thomas Sharp said we could never again build architecturally fine towns, or towns having any claim to express their social structure until we transferred the architectural emphasis from the individual building to the street ; but street architecture in the traditional sense did not serve modern requirements satisfactorily when carried to the heights now becoming customary in our great cities. Recent investigation into the daylighting of buildings showed that the traditional method of building up frontages and leaving courtyards and lighting wells in the middle of the building sites, was the worst form of building for anything over three or four storeys in height under ordinary conditions of central city building ; in the office districts of large towns, and in the building of flats and hotels we should have to discard the method of development by the hollow square. Buildings for that kind of use should be in the cruciform, the Y, the T or the simple slab form ; and therefore street architecture in the old sense would very largely disappear from the office and flatted districts of our big towns. If the City of London was to continue as a great business centre, and was to function properly, almost every square yard of it left standing after the bombing would have to be pulled down, and the whole thing replanned and rebuilt, and not on the hollow square system of gloomy internal courtyards and narrow slits of light wells. But he was not speaking only of London. Most of our towns were built to comparatively low heights and consisted chiefly of family houses, and in these smaller towns, and in the residential parts of bigger towns, the street should continue to be the unit of design. In speaking of street architecture he was not suggesting that our towns should be made monumental, that their lay-outs should consist of symmetrical patterns with highly developed axes and that kind of thing. He would wish instead to see the more intimate planning which was nearer our tradition and more appealing to our national character. With the emphasis on the street as the unit of design, the plan of the town as a whole could be left free and organic. There need be no strangulation by symmetry, no sacrifice to pattern. Great geometric features could not be appreciated from the ground. What the architect had to plan for was the man's eye view, not the bird's eye view and the man's eye view of the particular street he was in at the particular moment. Traffic roads would need to be bold and direct, but for the living quarters of the city lying between them, the lay-out should be free and rectangular, intimate in character and modest and domestic in scale. It was important to maintain the quality of intimacy in towns : we must be careful not to go too far in our reaction against the congestion of to-day. While it was absolutely essential to proper planning that all requirements for daylighting and ventilation of buildings should be met, and adequate recreational and public garden space provided, that having been done a sense of compactness, enclosure and intimacy should be maintained in a town. In occasional contrast with this a sense of spaciousness was also attractive. The formula for a good town was a combination of concentration and openness. The neighbourhood and community units should be compact, but between them should be spacious areas of lawns and trees, some running out wedgewise into the open country, others ranging ringwise across the town. Such a pattern would fit in admirably with traffic requirements, because the inter-district speedways would run clear and unobstructed through or alongside the open spaces.

CIVIC SOCIETIES

At a recent meeting of the Central Council of Civic Societies, Mr. Henry Strauss, Joint Parliamentary Secretary, MOWP, gave a talk on the "Preservation of Town and Country." He began by saying that he had been speaking on this subject for years and had nothing new to offer. But since the basic truths seemed to him simple and important, but had not yet been recognized, he proposed to go on repeating them until they were.

The core of his creed was that there were two things which men needed—a good town and good country, the town which fostered the civic virtues and the arts, and without which we should not have either the name or the achievement of urbanity, and the country which gave us natural beauty, greenness and solitude, recreation, serenity and peace. "Each has its characteristic virtue, and the distinction must not be blurred. In our reckless folly we have been steadily destroying both town and country and creating in their place a universal suburbia without the virtue or the charm of either. In the long run I am convinced that we must save both town and country or we shall save neither. We shall not save the country as long as men regard towns as places from

which to flee. It is necessary to have some re-development of our towns if we are to save the countryside; and we must have access to the countryside if we are to be happy in our towns."

Unfortunately in England, while love and appreciation of the country were widespread, belief in the town was rare. People had come to regard it as quite natural that a town should be a blot on the landscape. He instanced the question of advertisements. Most civilized people agreed that commercial advertising should be barred from the open countryside, but it was accepted as quite natural that the Advertisement Regulation Acts should contain no provision whatever by which the ordinary street in the ordinary town could be protected from complete disfigurement.

He went on to put three preliminary propositions. The first was that when they spoke of preserving town and country, they intended to preserve them not as museum pieces but as living things, making vital contributions to contemporary life. The countryside which they meant to save would be a countryside where agriculture and some industries flourished. The town would be one which, however old, would play its part in a vigorous present.

The second proposition was that, when a Civic Society sought to promote the seemliness and convenience of a town, it must care for the whole town and not merely for two or three buildings of special value. The suburbs were as important as the centre. The design of the lamp-posts and street signs was as important as the elevation of the town hall. When the Ministry of Transport many years ago adopted an over-elaborate, arty and idiotic "no entry" or "one-way" sign, it probably wrought a greater destruction of civic decency in almost every city in the country than the work of any single architect however bad. It was a temporary aberration which our admirable tradition of street furniture made the more astonishing.

The third proposition was that the Civic Society should always establish close and friendly relations with the civic authorities. The chairman and other members of the Town Planning Committee should also be members of the local Civic Society, and some prominent members of the Society should be members of the local authority. The central government and the local authorities provided the machinery for planning, but it was patriotism, local and national, and enthusiasm, which would decide the use to which the machinery was put. Public opinion, whatever the planning legislation might be, would remain of vital importance.

The Scott and Uthwatt Reports were receiving the close examination of Ministers at the present time, but some conclusions had already been stated. As long ago as July, 1941, the Government accepted certain recommendations of the Interim Uthwatt Report. They recognized that reconstruction areas must be planned as a whole and that Planning Authorities for such areas must be given adequate powers to acquire land.

In his opinion the principal reason for the failure of planning hitherto had been the failure to recognize the importance of architecture. As long as town and country planning was thought of merely in terms of zoning and maps showing land uses, so long would it be a complete failure. "We are not concerned with what a city looks like to a person suspended from a captive balloon three miles up, but what it looks like to the man in the street. We are concerned with homes and cities, towns and villages, construction in three dimensions, civic design. Architectural advice is essential from an early stage. It must never be forgotten that while a town plan can be so bad as to render good building impossible, it can never, however good it is, render good building certain. That will depend on the architect and on those who are wise enough to consult him in time.

"What sort of architecture and what sort of city? I would plead for intelligent respect for the English tradition. Because for a century we have done some vile things, do not let us forget that before that we created some of the most gracious, urbane, and lovely towns in the world, and developed in the eighteenth century perhaps the most satisfying and perfect domestic architecture that has yet been known anywhere. And what was the nature of our creation and the strength of our tradition? It was domestic and modest, rather than monumental and spectacular. If you consider our best cities and towns, you think of the homes of citizens, their streets and terraces and squares, their market places and taverns, rather than grand boulevards, imposing palaces, or famous vistas. The beauty of the English town is a compact and intimate beauty. You find it in Bath and Farnham, in Sherborne and Stratford-on-Avon, in York, King's Lynn and Salisbury, in Burford, Marlborough, Stamford and Chipping Campden, and a score of others. We shall be mad if we sacrifice that glorious tradition to the megalomania of the vista-mongers. I am frankly terrified by people who describe themselves as enthusiastic town planners, but whose one idea is to place every important building in the middle of a void. You can immensely overdo the amount of space around a building even if the building is St. Paul's. St. Paul's certainly must not be hemmed in again, but the scale, layout and design of surrounding buildings are as important as new vistas. Not long ago it was seriously suggested that we should 'open up' our cathedrals by destroying our cathedral closes! This appalling suggestion fortunately provoked an intelligent reaction."

He wanted London to remain London and not to be an inferior imitation of some foreign capital, which had never had its charm or known its magic. Many of the things which he loved best in London had been destroyed. In the Temple, where he lived for many years, the intimate perfection of Pump Court had gone, the Cloisters and Lamb Buildings had gone, and the urbane serenity of Gray's Inn had been demolished. But in spite of all London's losses, Londoners had never loved or admired it more than now.

"When we rebuild London, let us rebuild in our own idiom and in the vigour of our tradition. Study Rasmussen's book, 'London: the Unique City' and learn what London is to a foreigner with vision. Let us keep its characteristic virtues and not, blind to the worth of our tradition, seek to imitate some alien capital. That does not mean that our new buildings should not be modern. Of course they should be. We do not want a London in fancy dress. Our new buildings should be as worthy of the twentieth century as Bath was of the eighteenth, but let our young architects create them and let those architects be soaked in our tradition. It will not sap their vigour. When we rebuild the East End do not let us scatter new homes, as from a pepper-pot, at so many to the acre. The street, the crescent, and the square, and not the individual house, should be the unit. The square, indeed, is the greatest contribution to the grammar of town-planning that English genius has made.

"May I say a word to commercial men? Architecture should never be used to advertise by ill-mannered shouting or shoving, though it could indirectly advertise by its excellence and good manners. The late Mr. Frank Pick was not a less good man of business because he insisted on good design. London Transport had the good sense to employ Dr. Charles Holden as their architect, and his admirable stations not only enrich London but are the best advertisement of the efficiency and public spirit of his clients. The Peter Jones building proves that good business and good civic manners are not inconsistent, and draws attention to the barbarism of some multiple shop companies, which insist on the same design and facade for their shops, no matter in what surroundings they are erected.

"There is a ridiculous opinion among the architecturally illiterate that uniformity produces monotony, and that by having each house different from its neighbour you produce a pleasing variety. In no great age of architecture have people been frightened of uniformity. Nobody complains of the uniformity of the Terraces of Bath, of Nash's London, or of the Bloomsbury Squares. It is an illusion to think that the Bijou-baronial and Mock-Tudor villas and Cosy Palaces of the by-pass are rendered less horrible by the fact that each differs from its neighbour. A uniformity of horror is certainly horrible, but you do not get a better result by breaking up the uniformity so as to get a variety of horror. It might be natural for an industrial worker, rightly seeking to escape from the by-law street, to suppose that what he needed was variety. He needed light and air and good design, a good house in a good street. Let us try to provide them instead of nursing the illusion that what had been wrong with the old place was uniformity."

When he made similar observations not long ago he was gently taken to task by an architectural journal which pointed out that unity was more important than uniformity. Certainly some admirable examples of unity were to be found in the towns he had named in his address. Illustrations could be seen in *Country Life* almost any week—the main street of Burford, for example. There one had not uniformity, but continuity and an extraordinary rightness and instinctive harmony. Chipping Campden illustrated the same point.

Mr. Strauss praised Mr. Ralph Tubbs's brilliant Exhibition recently shown at the National Gallery, and concluded with a reference to the need for an informed public opinion which the Societies represented at that Conference could do much to stimulate.

DIARY

Saturday, November 14.— Ecclesiological Society, 6, Queen Square, W.C. 2.30 p.m. "18th Century Churches." By F. L. Clarke.

Tuesday, November 17.—Housing Centre, 13, Suffolk Street, S.W.1. 1.15 p.m. "A University Settlement." By J. L. Paterson. Leicester College of Arts and Crafts. 6.15 p.m. "Houses to Live In." By Judith Ledeboer.

Thursday, November 19.—T.C.P.A. At the Y.W.C.A., Great Russell Street, W.C.2. 1.15 p.m. "Beauty and Utility in Planning." By W. H. Ansell, P.R.I.B.A.

Tuesday, November 24.—Architectural Association, 36, Bedford Square, W.C. 6 p.m. "Towards a Consolidated Building Profession." By Eric L. Bird.

BUILDINGS ILLUSTRATED

"BLUE MOON" HOTEL, LEICESTER (pages 311-312). Architects: Messrs. Franx Brown and A. L. Sharpe, L/A.R.I.B.A. General contractor: F. Elliott, Leicester. Sub-contractors and suppliers included: J. Hewitt & Co., asphalt; Proctor & Lavender, facing bricks; John Ellis & Sons, artificial stone and fireproof construction; Richards (Leicester) Ltd., structural steel; Geo. H. Eyre, painter and plastic paint; Leicester Cabinet Co., grates, joinery and furniture; Ashwell & Nesbit, iron-fireman boilers; Cox-Walker & Gamble, electric wiring; R. Pochin & Sons, central heating, ventilation, plumbing and sanitary fittings; Crittall Manfg. Co., Ltd., casements; J. Hutt, plaster; Architectural Metal Works, metalwork and signs; Adderley & Sons, textiles.

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

War Address:

45 THE AVENUE, CHEAM, SURREY.

Telephone: VIGILANT 0087

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

Q 990

ARCHITECTS, SOUTHAMPTON.—*What is the new address of Messrs. Heppells (late of 34, Osnaburgh Street), the makers of Heppells Fluid for the treatment of TIMBER AFFECTED BY WOOD BORING BEETLES.*

We regret that we have not been able to trace Messrs. Heppells and assume that they have ceased manufacturing.

For the treatment of timber affected by wood boring beetles, the Timber Development Association recommend the use of:—

Cuprinol—Messrs. Jenson & Nicholson, Jenson House, Carpenters Road, London, E.15.

Hopes Woodworm Destroyer—Messrs. Watco, Ltd., 56, Buckingham Gate, London, S.W.1.

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

Wykamol—Messrs. Richardson & Starling, Ltd., Swan Lane, Winchester.

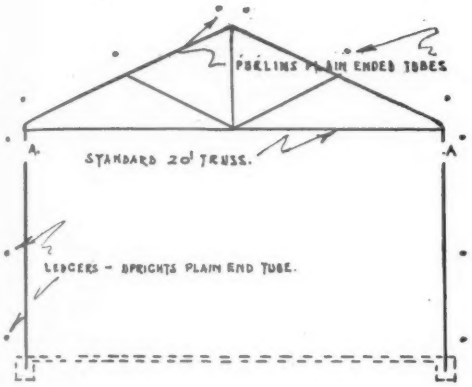
Q 991

ENQUIRER, WILTS.—*DOES the R.I.B.A. Royal Charter EXCLUDE FOREIGNERS from election as Associates, etc., if so does the R.I.B.A. offer to foreigners an affix of any description after passing the final examination.*

The R.I.B.A. as its name implies is for British Architects only. Foreigners may take the examinations and receive a certificate if they pass, but they are not entitled to membership or to letters after their name. The benefit that a foreigner

PATENT WELDED TUBULAR CONSTRUCTION

Data Sheet No. 8



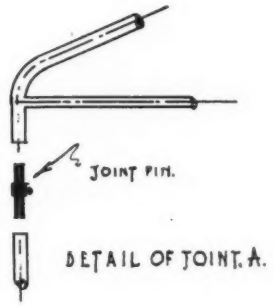
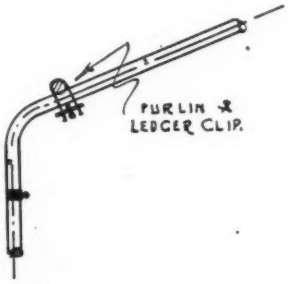


Fig. 18. Tubular sections for 20′ span assembly, with special joint pin and ledger clip.



20′ TO 40′ SPANS

The simple form of assembly indicated in Fig. 18 is suitable only for small temporary structures of a span not exceeding 20 ft. The standard roof truss is connected to the tubular uprights by means of a special joint pin.

The trusses, gable ends, door frames and double doors (10 ft. by 5 ft.) are supplied to be used with plain ended tube and couplings, and the whole of the structural frame is covered externally with asbestos-cement or corrugated iron sheeting. These tubular framed hutments, simply erected and equally simply dismantled, are being used as temporary site-workshops, cement stores, etc.

Buildings of 30 ft. to 40 ft. span incorporate the composite truss, tubular column and tubular wall frame as shewn in Fig. 19. A ceiling lining of insulating board or plasterboard can be incorporated at tie level ; the detail in Fig. 22 shews "Celotex" board suspended at tie level, the "Celotex" clip-suspension method being utilised.

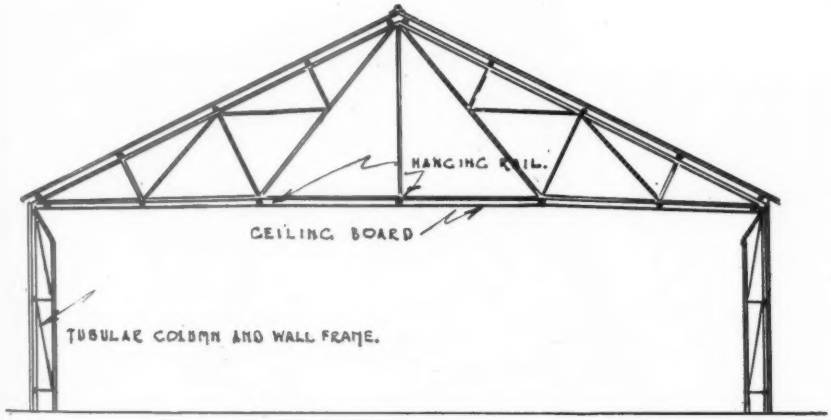
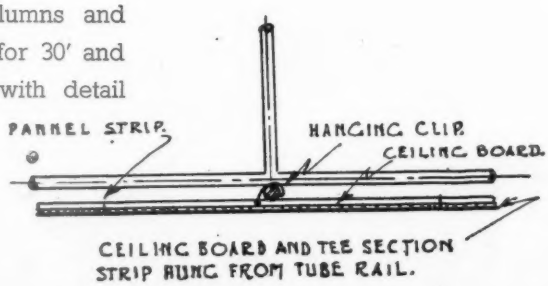


Fig. 19. Tubular columns and composite roof truss for 30′ and 40′ span structures, with detail shewing method of ceiling suspension.



NOTE.—These data sheets are appearing weekly in THE ARCHITECTS' JOURNAL — *they are now available in complete Folder form and application for these Folders should be addressed to Scaffolding [Great Britain] Limited, 77, Easton Street, High Wycombe, Buckinghamshire.*

may receive from passing the R.I.B.A. examinations is, of course, in the fact that the examinations are recognised by the Architects' Registration Council.

Q 992

ARCHITECTS, LONDON.—*We are architects for some AIR RAID SHELTERS in school yards for an Education Committee. The scheme has been sanctioned by the Board of Education. We propose to charge the usual 6 per cent. unless there is a Government circular laying down terms for such work.*

There is no scale of fees which applies particularly to the work in question, and it is for you to come to an agreement with the Board of Education.

There is a Schedule of Fees for Air Raid Shelter work for Local Authorities, which is contained in A.R.P. Circular No. 110, 1939. You are under no obligation, however, to conform to this circular.

Q 993

ARCHITECTS, YORKS.—*Our clients wish TO PROTECT the (pitched) roof of a large WAREHOUSE AGAINST the new 5 lb. INCENDIARY BOMBS. This roof consists of heavy timber trusses covered with boarding and slating. As the roof is of the pitched type, the main requirement is resistance to penetration—as bombs which do not penetrate will roll down into the gutters, and it will only be there that resistance to fire is of primary importance. We do not wish to increase the load on the roof to any great extent.*

It is impossible to apply directly to a pitched roof, protection against penetration by 5 lb. bombs without appreciably increasing the load on the roof.

According to Bulletin C.23 issued by the Ministry of Home Security, Research and Experiments Branch, 2 in. B.S.368 concrete paving slabs, weighing 24 lb. per square foot, are recommended for covering a slated pitched roof to guard against the penetration of a 1-kilo bomb, so it is obvious that the weight of protective covering for a 5-lb. bomb would be considerable.

The penetration of the wood and slated roof does normally "break the fall" to a very considerable extent and it is much easier to provide a "stopping layer" inside the building although this, of course, will not be of much use if the floor is used for storage of inflammable goods.

The most you can do is to provide a "stopping layer" at the highest possible point, render it as fireproof or fire resisting as circumstances permit and provide fire-fighting facilities and easy access. No official information has been given as regards protection against the 5 lb. incendiary but Bulletin C.23 is well worth studying.

There are in existence a number of devices for the detection of fires caused by incendiary bombs. Information on this subject is contained in Bulletin C.22.

For the Bulletins mentioned above apply to Mr. Mitchell, Ministry of Home Security, Research and Experiments Laboratory, Princes Risborough, Near Aylesbury, Bucks.

Q 994

MANUFACTURERS, GLASGOW.—*We have been given the name of a SPECIAL BOARDING made by Thermacoust Products, Ltd. Could you give us the address of the manufacturers?*

Thermacoust Building Slabs are manufactured from wood wool fibres cemented together under pressure, and are primarily intended for acoustic purposes. The slabs were formerly manufactured by the Thermacoust Products Ltd., but the business has been sold to the Cementation Company. You should write to the Cementation Company (Thermacoust Department), 39, Victoria Street, London, S.W.1.

CHANGE OF ADDRESS

The British Reinforced Concrete Engineering Co., Ltd. have removed to 8, Little College Street, Westminster, S.W.1. Telephone: Abbey 7121.

BUILD FOR POSTERITY

Wren, after the fire of 1666, had visions of a purer, cleaner, better London. Although petty officialdom and self-seeking merchants thwarted his dreams, many of his buildings were planned as he envisaged. Let us not commit the same crimes against the visionaries who desire to reconstruct Britain after the war. It must be a better land . . . the highest authorities in Britain and in the U.S.A. have determined that this shall be so.

Often courageous plans for a better world have been ruined in the past by the cost of pulling down before building up. This will not deter us this time.

A new world needs new methods and the latest science, air conditioning, will play its part in this new development when Peace comes . . . the Air Conditioning Division of Mellor-Bromley & Co. Ltd., through their intensive endeavour to give the utmost service to firms on vital production, may not have been able to contact you recently but when Peace comes . . . and it may come sooner than we expect . . . Mellor-Bromley will be able to offer to you a complete service employing the accrued experience of applying air conditioning to almost every type of industry.

MELLOR BROMLEY & CO. LTD. MINOTAUR WORKS ST. SAVIOUR'S RD. **LEICESTER**

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

Architectural Appointments Wanted

CHARTERED ARCHITECT, exempt military service, requires senior post, with possibilities of partnership. Box No. 5.

ARCHITECT'S ASSISTANT, widely experienced, free two days a week, London area. Would undertake usual office duties. Jones, 17, Lichfield Road, Kew Gardens. Tel. Rich. 1737. 6

ARCHITECT'S ASSISTANT (24) (B.Arch., A.R.I.B.A.), experienced in preparing Sketches, Working Drawings, Details, etc., also supervision and sound construction. Would prefer aircraft design. Box 7.

ARCHITECT'S ASSISTANT (26), requires post, preferably temporary. Experienced surveying and levelling, working drawings and details, for factory work, etc. Good draughtsman. Box No. 9.

ARCHITECTURAL AND CIVIL ENGINEERING DRAUGHTSMAN requires part-time work. Neat and accurate. Box 11.

DRAUGHTSMAN, with ten years' experience working drawings, details, drainage and road layouts. Experience on site and supervision. Box 13.

L.R.I.B.A. QUANTITY AND MEASURING SURVEYOR desires responsible position. Extensive experience in all types of government and other contracts; office and site work, including levelling; preparation of quantities; measuring on site for certificates, adjustment of variations and final accounts. Just completed final re-measurement of large aerodrome contract. Minimum salary, £600 plus subsistence. Box 14.

QUALIFIED ARCHITECT AND ENGINEER, experienced in carrying through large or small schemes, shortly available, salary £450—£550, according to locality. Reply Box No. 16.

JUNIOR ASSISTANT, 20 years old, experienced in preparation of working drawings, surveying and levelling, etc., desires position with good prospects. Box 17.

CHARTERED SURVEYOR, 34, highly experienced and qualified, own practice until 1940, wishes to contact firm or individual with view partnership, managerial capacity, or undertake surplus work with own staff. W.D., A.M. and private experience on large scale. Box No. 19.

GRADE IV (MILITARY) ARCHITECT, aged 27, adaptable, energetic and practical, seeks interesting work of any description, inside or outside. Home Counties, not London. Berner, Camden Close, Chislehurst, Kent. Imp. 1124. 20

ARCHITECT, B.Arch., A.R.I.B.A. (30), exempt from military service, requires responsible position preferably in central or N.W. London district. Experienced in shelters, camp design and construction, fire stations, estimating, specifications and quantities, surveying and levelling, supervision. Salary £450—£500 per annum. Box 21.

ARCHITECT, experienced, carrying works complete all parts country, requires position as manager, view to partnership, in London area. Box No. 22.

QUALIFIED ARCHITECT (32), desires responsible position in London district or Essex. B.Arch., A.R.I.B.A. Good experience in supervision of contracts and all types of design; specializing in hospitals, schools and factory layouts. Salary, £400—£450 per annum. Box 24.

ARCHITECT'S ASSISTANT, 23 years, exempt military service. Studying for R.I.B.A. Final. Able to carry out all forms of Architectural drawings from ⅛-in. scale working drawings to full-size details. A. J. S. Brown, 39, Watling Avenue, Edgware. 26

YOUNG CHARTERED ARCHITECT offers part-time services. Experienced war damage surveys, working drawings, perspectives, etc. Please write Box 27.

JUNIOR ARCHITECTURAL ASSISTANT seeks progressive position in architect's office; London area. Knowledge of architectural draughtsmanship and building construction. Previous office experience. At present taking course at Polytechnic, Regent Street. Box 28.

A.R.I.B.A., Dip. Manchester, desires responsible appointment; north-west or northern area preferred, but not essential if good prospects. Own practice for five years before war and recent experience as senior architect on large Government factories. Age 33, married, and medically exempt from Forces. "R.," 410, Devonshire Road, Blackpool, Lancs. 29

Miscellaneous

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

A. J. BINNS, LTD., specialists in the supply and fixing of all types of fencing, tubular guard rail, factory partitions and gates. 53, Great Marlborough Street, W.1. Gerrard 4223-4224-4225.

SPECIFICATIONS AND BILLS OF QUANTITIES, etc., expeditiously and accurately typed or duplicated. Translations and Facsimile, Typewriting. All work treated confidentially. Miss G. Saunders, Typewriting Bureau, 17, Dacre Street, Westminster, S.W.1. Telephone: Whitehall 2605.

WANTED. Copy of the "Architectural Review" for September, 1940 Box 475.

Classified Advertisements continued on page xxviii.

WANTED. Complete set of copies of "The Architectural Review," July, 1940—June, 1942. Box 495.

WANTED, a complete set of bound volumes of "The Architectural Review," Vols. I—L. Box No. 3.

WANTED. Second-hand copy of "Building Materials," by R. F. S. Grundy, state condition and price to Box "P," Southcombes, 167, Strand, London, W.C.2. 825

WANTED TO PURCHASE. Copies of *The Architectural Review* for February and December, 1939. February, 1940. Box 25.

ADVERTISER wishes to purchase the two volumes of the "Architects' Standard Catalogues" for 1939-40-41. Will anyone wishing to sell please reply to Box 827.

WANTED TO PURCHASE. Books on Town Planning, particularly "Town Planning in Practice," by Sir Raymond Unwin. Reply to R. W. Weir, 5, Roundhay Avenue, Leeds, 8. 828

WANTED. Two copies of "Building Mechanics," by W. G. Sheppard. Oxford Press. Reply to Box 829.

For Sale

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

COAT OF ARMS.—Collection of hundreds of above, of Royal Counties and Towns of England and Wales, in Album for easy reference. Some large size cartoons of the Welsh Counties.—F. Gould Wills, 26, Suffolk Place, Porthcawl. 10

Educational Announcements

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

R.I.B.A. QUALIFYING EXAMINATIONS
Mr. C. W. Box, F.R.I.B.A., M.R.San.I.

Short Term Wartime Tuition Arranged.

Courses by Correspondence and Personal in Studio. 115, Gower St., London, W.C.1. Telephone: Euston 3906

R.I.B.A. AND T.P. INST. EXAMS. Private Courses of tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, St. Catherine's College, Cambridge. 231

st

ACH

you
yor of
letails

ost
ell-
m-
the
ms
e :
ng,
ter
ing
ind

8d.

Y

E

ples
ent.
by
tails,
uire-
wall,
es an
e 8d.

SS

EY

S

O., LTD.,
Middlesex