THE ARCHITECTS' JOURNAL

standard contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur.

No. 2681] [VOL. 103

THE ARCHITECTURAL PRESS

Editorial: Thirteen Queen Anne's Gate, Westminster, S.W.1. Phone: Whitehall 0611

Subscriptions and Advertising: Forty-Five The Avenue Cheam, Surrey. 'Phone: Vigilant 0087-9.

Price 9d.

Registered as a Newspaper

✱ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers, is given below. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association. 34/6, Bedford Square, W.C.1.	Museum 0974
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 9, Belgrave Square, S.W.1.	Sloane 0421
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 25, Victoria Street, S.W.1.	
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	British Steelwork Association. Egginton House, Buckingham Gate, S.W.1.	Victoria 7301-2-3
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CSI	Chartered Surveyors' Institution. 12, Great George Street, S.W.1.	Whitehall 5322
DIA	Design and Industries Association. 9, Conduit Street, W.1.	Mayfair 5432
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EJMA	English Joinery Manufacturers Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FMB	Federation of Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 4, Hobart Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13 Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2.	Temple Bar 7676
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128-29
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767
MARS	Modern Architectural Research. 46, Sheffield Terrace, W.8.	Park 7678
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Belgrave Square, S.W.1.	Sloane 4522
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Abbey 7711
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94, Petty France, S.W.1.	Abbey 1010
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 7070
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041
NFBTO	National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1.	Holborn 2770
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 2881/2/3
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211/2
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Temple Bar 8274
SFMA	School Furniture Manufacturers' Association. 13, New Square, Lincoln's Inn, W.C.	Chancery 5313
SIA	Society of Industrial Artists. 20, Wellfield Avenue, N.10.	Tudor 7027
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6147
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815

THIS **built-in Prestcold refrigerator, installed in the model kitchen at the British Electrical Development Association Exhibition "Electricity looks forward," has the following important advantages:**

Storage capacity of approximately 4½ cubic feet, which will hold all the perishable foodstuffs for a family of four.

Larder space rendered unnecessary. Dry goods and non-perishable foodstuffs would be kept in kitchen cupboards.

Waist-high door, allowing access to interior without stooping. Height adaptable by varying position of supporting frames.

It can be built into kitchen fitments with cupboard space above and below it.

Design provides for adequate ventilation of mechanism without the necessity for special air-bricks or ducting.

Ice making and 'cold cooking' facilities.

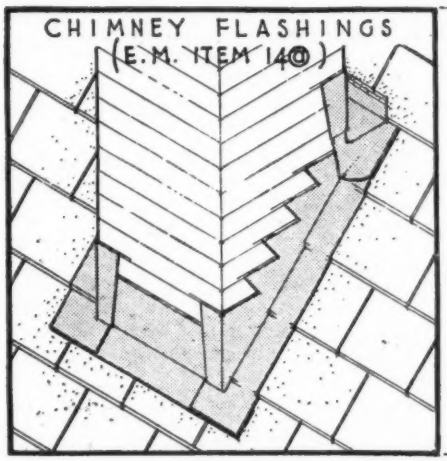
Most important too, is the fact that this Prestcold refrigerator provides the food storage temperatures necessary for the proper safeguarding of perishable foods — for instance 35°F for fresh fish and poultry; 40°F for milk — and even the lower temperatures needed to store the frozen foods which will be available later on. In addition, it will be most economical in current consumption, using only one unit a day.

PRESTCOLD *Refrigeration*

A PRODUCT OF THE PRESSED STEEL COMPANY LIMITED · COWLEY · OXFORD

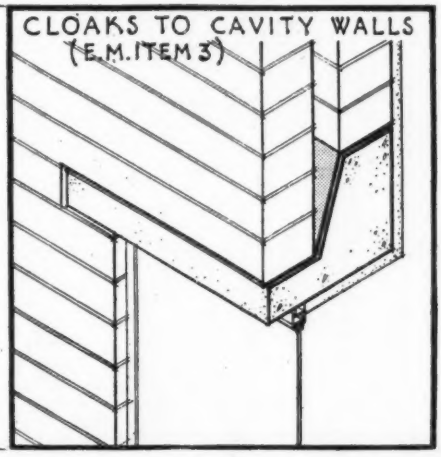
To ensure that available supplies of **LEAD** are used to the best advantage

the Ministry of Health have issued an Economy Memorandum which regulates the amount of lead to be used for certain purposes which are described and illustrated in a leaflet "Vital Minimum Uses of Lead Sheet and Pipe in House Building." Copies may be obtained from L.I.D.C. Illustrated below are 2 examples of vital uses which are included in the publication referred to.



FLASHINGS TO CHIMNEYS

The units of sheet lead forming flashings for chimneys, which are the stepped flashings with apron or soakers and the front apron and back gutter, can be prepared and applied by a skilled plumber in a very short time, and can be worked to suit any roof covering material, whether slate or plain tile, moulded or contoured tile, or corrugated sheet material. 4 lbs. per sq. ft. substances of sheet lead when worked down in close proximity to the roofing material will continue to fit close to the roof irrespective of weather conditions. A permanent flashing is obtained which remains impermeable under the most severe conditions. The substance of lead for this purpose should not exceed 5 lbs. per sq. ft. (see Item 14(a) of E.M.)



CLOAKS TO CAVITY WALLS

An important feature of cavity wall construction is that proper provision is made where the cavity is closed by lintels above doors and windows to prevent a bridge for dampness being formed. Sheet lead is eminently suitable for this purpose: it is readily fitted in position, forms an excellent bond with mortar and is permanent. The use of substance not exceeding 3 lbs. per sq. ft. is permissible. (See Item 3 of E.M.)

h LEAD

The Technical Information Bureau of the Lead Industries Development Council, which exists to give assistance on problems relating to the use of lead sheet and pipe in building work, will be pleased to give advice on any questions relating to the present restricted uses of the materials.

LEAD INDUSTRIES DEVELOPMENT COUNCIL, EAGLE HOUSE, JERMYN STREET, LONDON, S.W.1

LEAD TECHNICAL INFORMATION BUREAU, 25 LOWER BELGRAVE STREET, S.W.1

B 29

From Experiment to Achievement

The design of this prefabricated house was originated over three years ago, as a result of collaboration between the Coventry Housing Committee and Radiation Ltd.

An experimental structure, erected at Radiation House, created great interest among Architects, Gas Officials, Housing Authorities and Government Departments. Recently the actual house was opened for inspection at Coventry.

The layout centres on the prefabricated plumbing duct, in which all the services, flues and waste pipes are located for easy access, protection from frost, and the conservation of heat; with consequent reduction in fuel costs, by shortened pipe runs.

A Siesta slow-combustion stove with back boiler provides open fire comfort, background heating and hot water for domestic use, and to four concealed-type radiators in Kitchen, Hall, and two Bedrooms. A Radiation New World gas circulator provides hot water for summer use. A New World gas cooker and a gas refrigerator are installed in the Kitchen. A laundry unit in the Utility Room incorporates a gas wash-boiler and a gas-heated drying cupboard. Each Bedroom contains a built-in New World Silent Beam gas fire.

Information in connexion with cooking, space heating and water heating services for post-war houses will gladly be furnished on request.

The Radiation Kitchen

Above: The completed house.

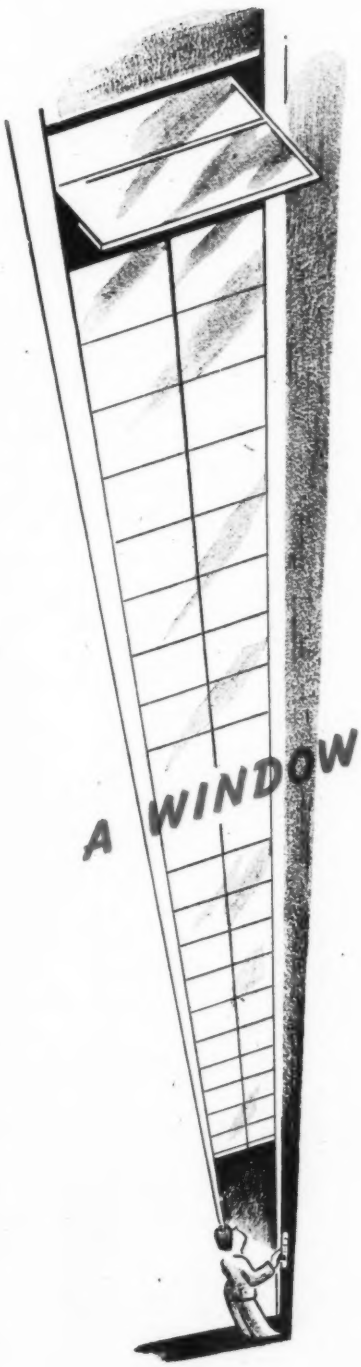
Below: The lounge with contained dining section and Radiation slow-combustion stove.

Radiation Ltd

MAKERS OF NEW WORLD GAS APPLIANCES

RADIATION HOUSE, ASTON, BIRMINGHAM, 6

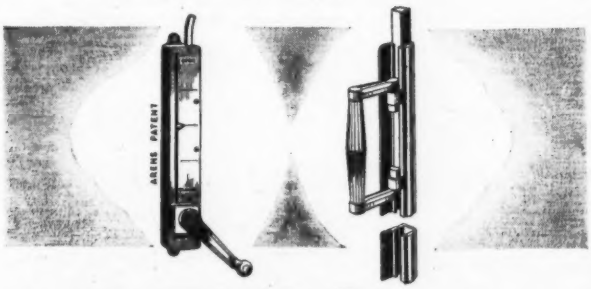
Showrooms and London Office:
7 STRATFORD PLACE, W.1



A WINDOW UMPTEEN STORIES HIGH!

A TALL ORDER, BUT EASILY MANAGED BY ARENS REMOTE CONTROL!

We do not anticipate that architectural visions of buildings of the future include windows that soar "umpteen" stories high—we would have great sympathy with the window cleaners!—but we ourselves would welcome just another opportunity to prove that Arens remote controls very easily bring the opening of such windows "under control." The simple movement of an Arens Control handle or slide will operate a window—however hung. And, best of all, the Arens installation *can* be æsthetically hidden behind plaster or panelling. Arens Controls are also ideal for operating Dampers in Air Conditioning Systems. Please ask us for advice and particulars!



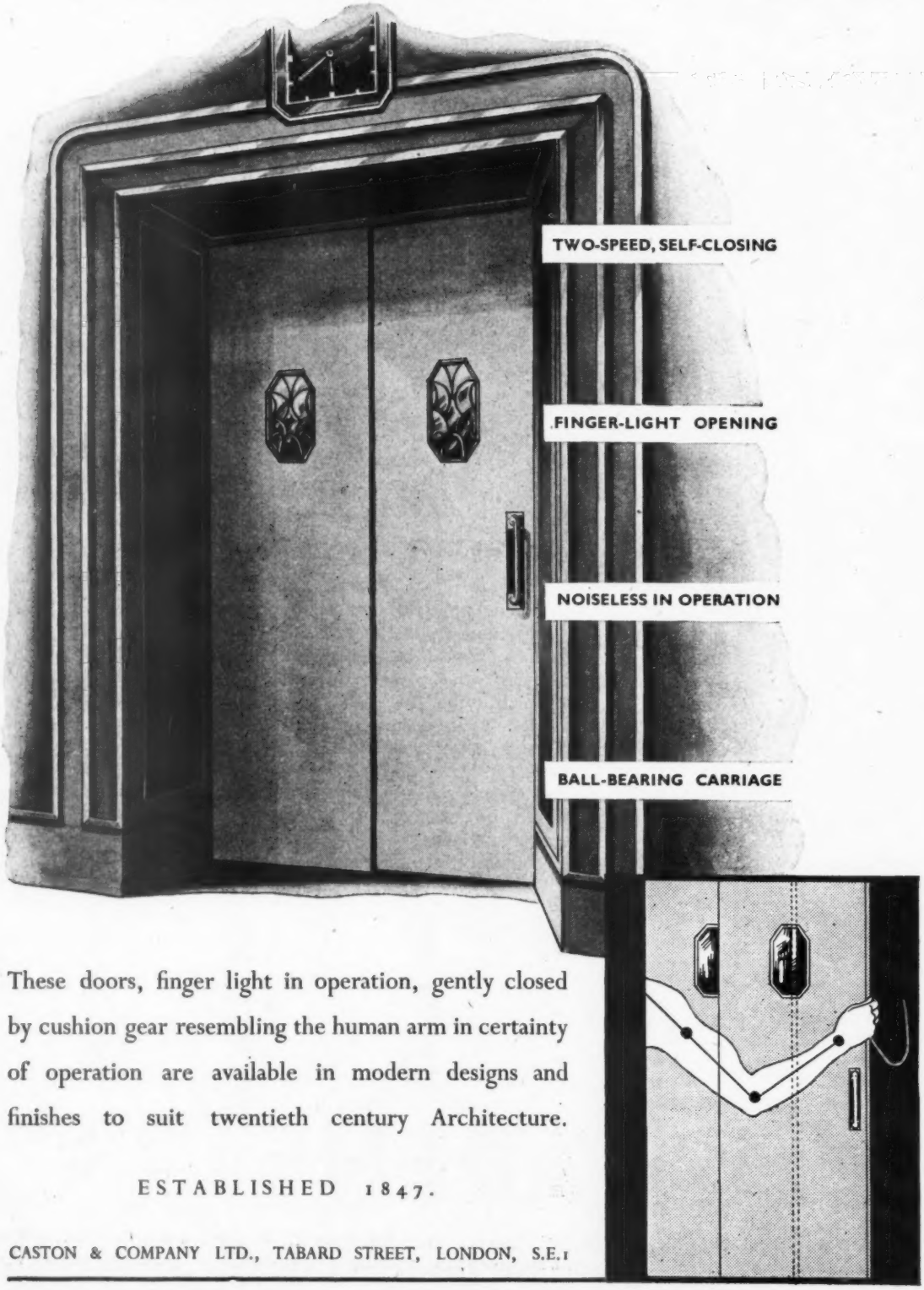
ARENS REMOTE CONTROLS

(Regd Trade Mark) Covered by Patents

Arens Controls Ltd., Tunstall Road, East Croydon, Surrey Tel.: Addiscombe 3051/4 Grams: Unicontrol, Phone, London

380A STRATFORD ROAD, SPARKSHILL BIRMINGHAM, 11 TELEPHONE: VICTORIA 2821

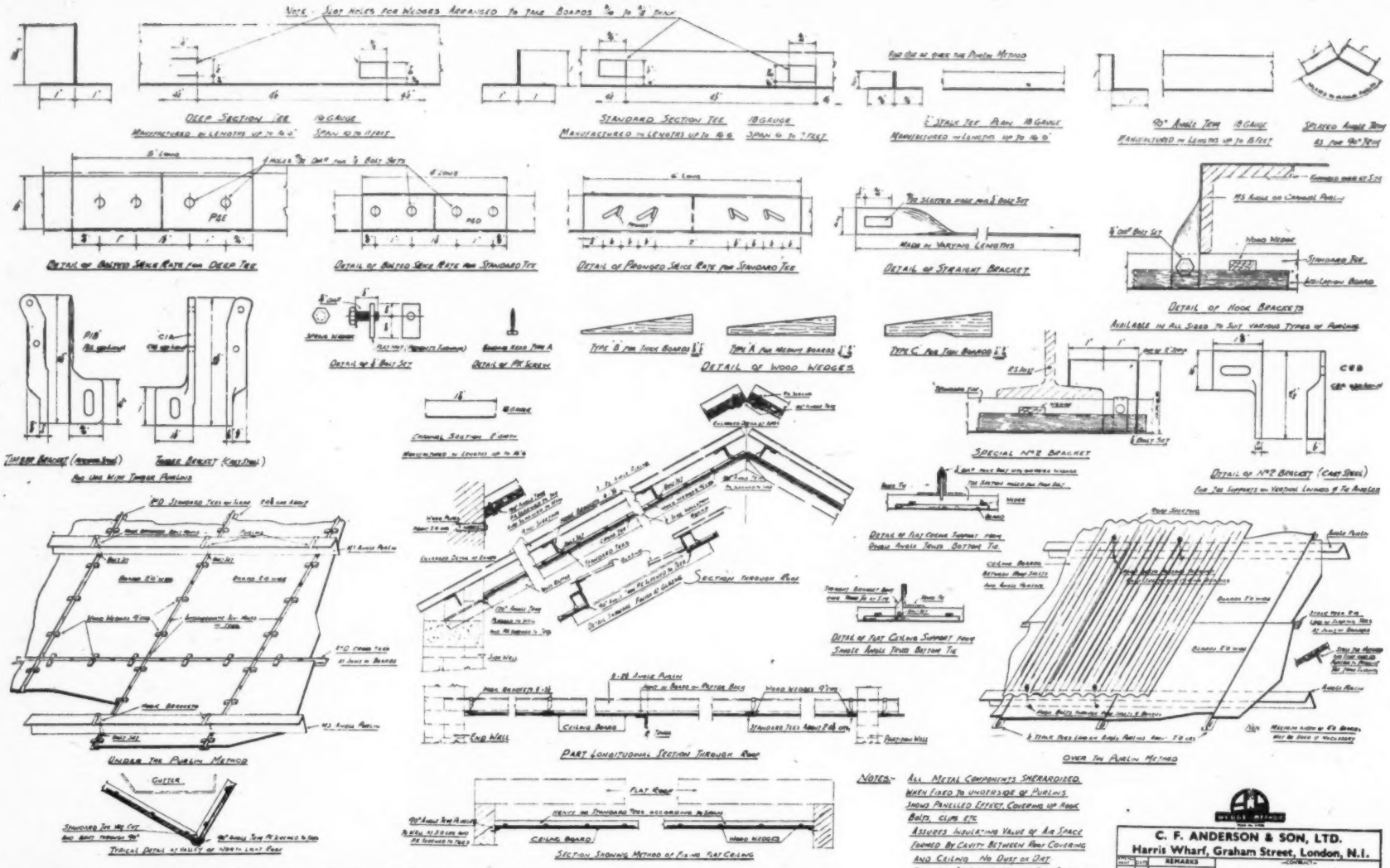
Caston PATENT LIFT DOORS



These doors, finger light in operation, gently closed by cushion gear resembling the human arm in certainty of operation are available in modern designs and finishes to suit twentieth century Architecture.

ESTABLISHED 1847.

CASTON & COMPANY LTD., TABARD STREET, LONDON, S.E.1



ANDERSON PATENT 'AnD' WEDGE METHOD FOR APPLYING ANY TYPE OF BOARD TO CEILINGS AND WALLS.
DETAIL OF COMPONENTS AND TYPICAL DETAILS OF METHOD OF FIXING. **Tel.: London Wall 1527.**

NOTES:- ALL METAL COMPONENTS SHERARDIZED.
WHEN FIXED TO UNDERSIDE OF PURLINS SHOWS PANELLED EFFECT, COVERING UP HOOK BOLTS, CLIPS ETC.
ASSURES INSULATING VALUE OF AIR SPACE FORMED BY CAVITY BETWEEN ROOF COVERING AND CEILING. NO DUST OR DIRT.
CAN BE APPLIED TO NEW OR OLD BUILDINGS.
CAUSES NO DELAY TO ROOFING CONTRACTOR.
THE SIMPLICITY OF FIXING IS SUCH THAT ANY CONTRACTOR CAN APPLY THE AnD METHOD.

WEDGE METHOD

C. F. ANDERSON & SON, LTD.
Harris Wharf, Graham Street, London, N.1.

REMARKS	COMPANY
	SPECIMEN SHEET No 3
	JOB No.
	Drwg. No.

TAS/AN 5

The use of Cast Iron in Building and Equipment

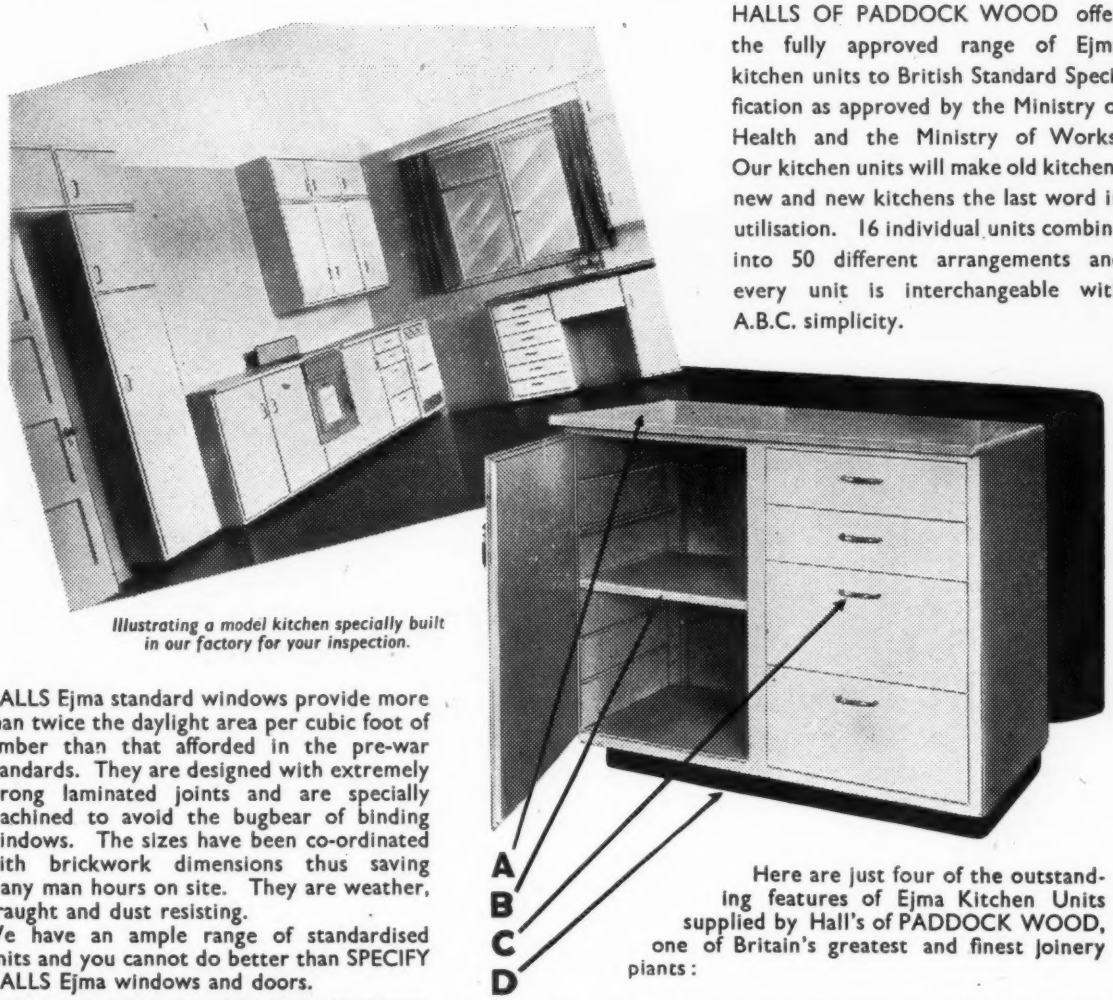
FACTS FOR ARCHITECTS AND BUILDERS

The use of cast iron in building and equipment has been studied by a special department of the British Cast Iron Research Association. This Building Uses Department is available for dealing with enquiries for architects and builders about the various uses of cast iron. The Architectural Consultant to the Department is Mr. Derek L. Bridgwater, B.Arch., F.R.I.B.A.

Enquiries should be addressed to : THE BUILDING USES DEPARTMENT
THE BRITISH CAST IRON RESEARCH ASSOCIATION
Alvechurch, Birmingham

For All the Best IN JOINERY

HALLS OF PADDOCK WOOD offer the fully approved range of Ejma kitchen units to British Standard Specification as approved by the Ministry of Health and the Ministry of Works. Our kitchen units will make old kitchens new and new kitchens the last word in utilisation. 16 individual units combine into 50 different arrangements and every unit is interchangeable with A.B.C. simplicity.



Illustrating a model kitchen specially built in our factory for your inspection.

Here are just four of the outstanding features of Ejma Kitchen Units supplied by Hall's of PADDOCK WOOD, one of Britain's greatest and finest joinery plants:

A. Continuous worktop fits over floor cupboards at convenient working level of 3ft. above floor.

B. All cupboard shelves interchangeable.

C. Specially designed dustproof drawers.

D. Toe space is given by a recessed 3in. plinth.

HALLS Ejma standard windows provide more than twice the daylight area per cubic foot of timber than that afforded in the pre-war standards. They are designed with extremely strong laminated joints and are specially machined to avoid the bugbear of binding windows. The sizes have been co-ordinated with brickwork dimensions thus saving many man hours on site. They are weather, draught and dust resisting.

We have an ample range of standardised units and you cannot do better than SPECIFY HALLS Ejma windows and doors.

Whatever you need in KITCHEN UNITS, WINDOWS, DOORS AND FRAMES MANUFACTURED TO THE Ejma STANDARD, REMEMBER the name is HALL the mark of QUALITY for the RIGHT STANDARD at the RIGHT PRICE.

EJMA THE HALL MARK OF QUALITY

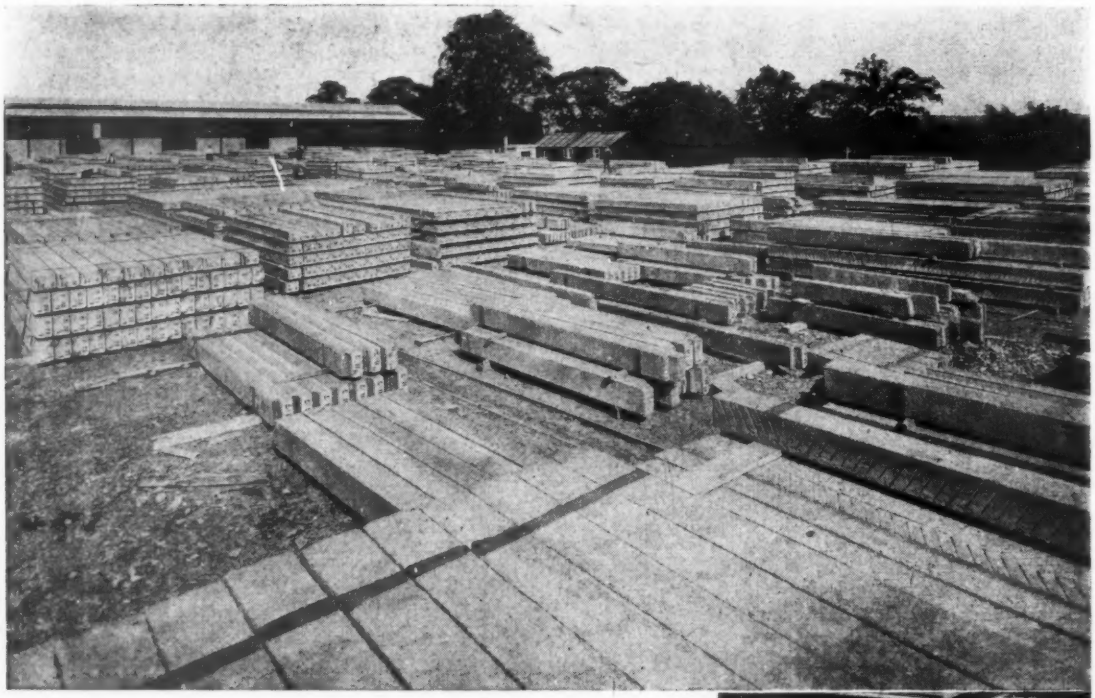
Ejma is the Certification Trade Mark of the English Joinery Manufacturers' Association.

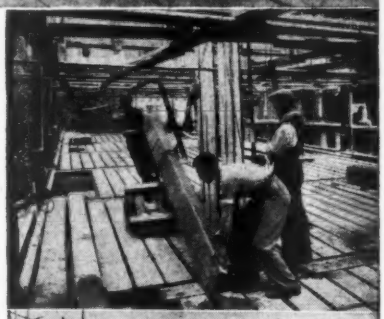
ROBERT H. HALL & Co. (KENT) LTD.

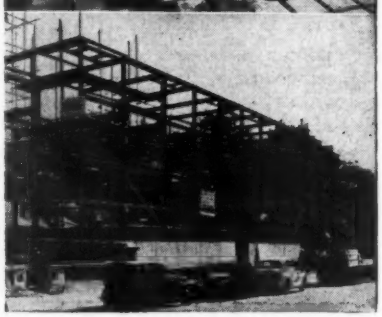
Station Wharf 8 **PADDOCK WOOD KENT** *TELEPHONE:* PADDOCK WOOD 105. 107. 108. 3 LINES

The Siegwart System

Avoids congestion of the site . . .







The Siegwart system does not require the stacking of precast units on the site as the fixing work is organised so that units are delivered as they are wanted and they can be hoisted direct into place on arrival at the site.

The Siegwart precast system thus gives a double advantage in that it not only avoids congestion of the site but the precast units provide working space for other trades as soon as they are laid. The photograph above shows units stacked at one of the Siegwart factories ready for delivery to their jobs as required.

SIEGWART
PRECAST FLOORS

★ ***The new Seigwart housing booklet is still available to all interested on receipt of a 1d. stamp.***

THE SIEGWART FIREPROOF FLOOR CO. LTD.
CROXLEY GREEN, RICKMANSWORTH, HERTS. Tel. : 2268

Ref 3/46

Branch offices at Birmingham, Manchester and Glasgow.

These aren't what you'd call luxury flats but the architect does want decent amenities. I've told him we can save a few hundreds by putting in Isteg instead of rounds. He can use the money to improve the finish and we won't have to worry about cracks.

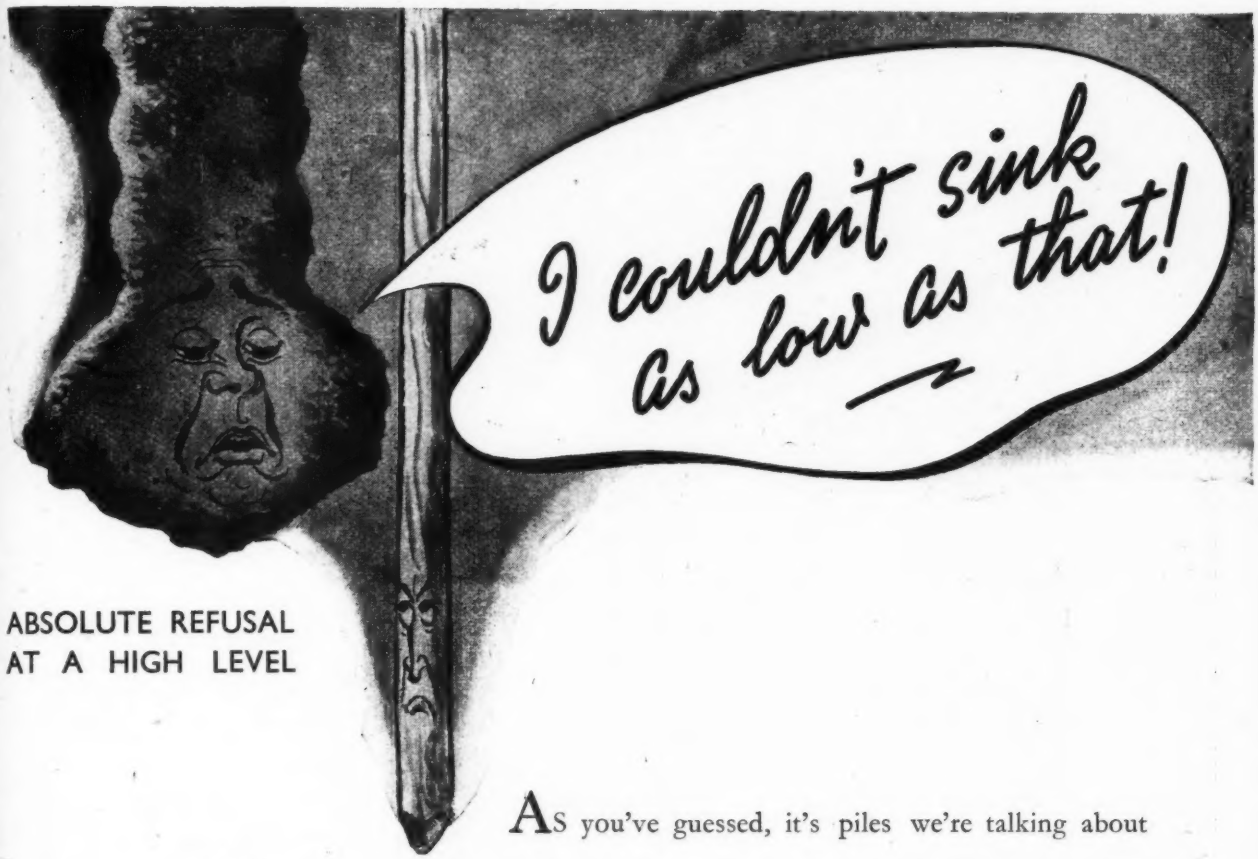
for Concrete Reinforcement

ISTEG STEEL

Manufactured by: GUEST, KEEN & NETTLEFOLDS, LTD., CARDIFF

McCALL & CO. (SHEFFIELD) LTD., TEMPLEBOROUGH · THE UNITED STEEL COMPANIES LTD. SHEFFIELD

AND **ISTEG STEEL PRODUCTS LTD. (SALES),** 7 PRINCES STREET, LONDON, S.W.1. PHONE: WHItehall 3757



ABSOLUTE REFUSAL AT A HIGH LEVEL

As you've guessed, it's piles we're talking about —Franki Piles to be exact. It is a feature of theirs to proclaim absolute refusal at an earlier stage in their downward career than usual. Why? Because the rugged Franki Piles possess tremendous overall skin friction and a huge, splayed "elephant's foot" base. These characteristics cause greater compression of the soil at an earlier stage than would occur in similar soil conditions with longer, slimmer, smoother piles. The result of this early practical refusal is . . . a quicker job, on shorter and heavier piles at a lower cost. Remember that when you're next thinking of foundations.

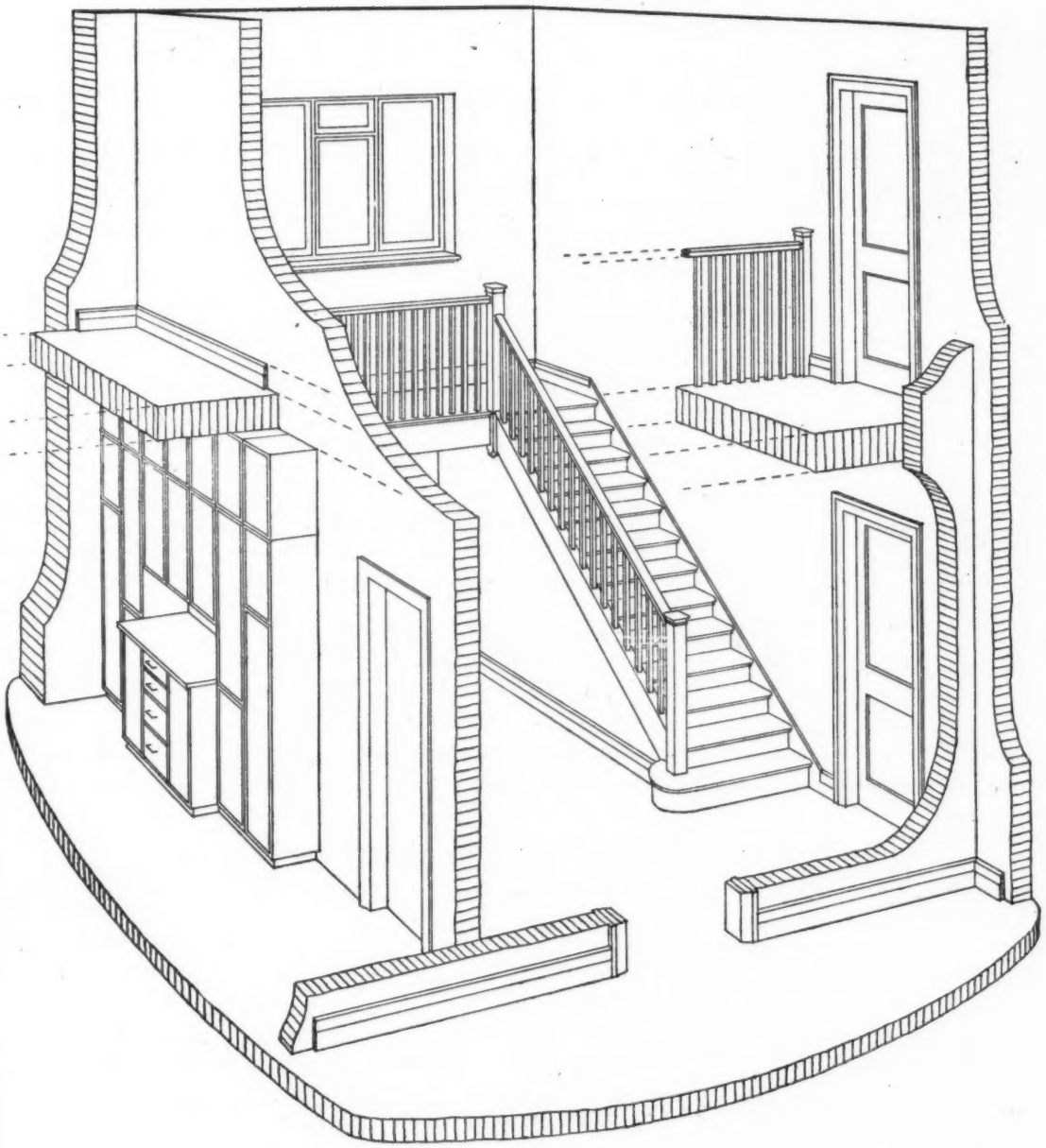
A quicker job, on shorter and heavier piles, at a lower cost . . . by FRANKI.

FRANKI PILES

CARRY MORE TONS PER PILE

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

THE FRANKI COMPRESSED PILE CO. LTD., 39 VICTORIA ST., LONDON, S.W.1



Selected and seasoned timber, machined to the fine limits which modern cutters make possible, and carefully assembled by craftsmen with a tradition of good work, will, even in production on the largest scale, give joinery worthy of the reputation of a firm like Sadds.

John Sadd & sons ltd

specialists in joinery

maldon Telephone: Maldon 131 (6 lines) **essex**

London Office: ALDWYCH House, W.C.2 Telephone: Holborn 7225

Sd.XIII/4-46

Help for Employers seeking men for Executive Jobs

AFTER the 1914-18 war, great resources of talent and ability were lost to business and industry. There was no national machinery then for singling out, from among the returning Servicemen, those of exceptional promise.

Now, as then, qualified and experienced men and women with the capacity for responsible posts are coming rapidly out of the Forces and out of war industry, or are becoming available from other civilian employment. And great numbers of younger men, too — men with little or no experience in business or industry, but with qualities of resource and leadership matured by war — are returning to civil life.

But this time the Government is putting at the disposal of employers a free, nation-wide appointments service whose function is to provide a field of candidates from which employers can recruit their executive, managerial, or administrative staffs.

MATCHING MEN AND JOBS

Thirteen Regional Appointments Offices are interviewing, registering, and classifying all of these men who come to them. Those who are without previous experience in their chosen field are assessed by modern, tested methods of "screening," to discover special aptitudes and potentialities.

Thus, the best men available for a given job are selected. The employer can draw upon the whole country for the type of man he is seeking, without wasting time in fruitless interviews; suitable candidates *only* are submitted for his selection.

The Appointments Offices do NOT exist to find jobs for all who apply to them, regardless of ability ; their task is to see that able men and women are put forward for responsible jobs, and to offer business and industry the choice of the best talent available. (They do not deal with jobs which are normally notified to the Employment Exchanges.)

The Appointments Department have successfully filled more than 27,000 responsible posts since VE-day.

Whatever your needs may be for experienced or potential executives, you would be well advised to get in touch with your Regional Appointments Office.

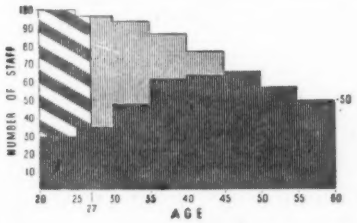
It is likely that the man you are seeking is on the register of one of the Appointments Offices — or will be as soon as his release group is reached. If he is not, the Appointments Offices will help you find him.

ASSISTANCE IN TRAINING

Even if your needs are not immediate, you will want to enquire about the training schemes by which promising candidates are being assisted to complete their professional or technical education, or to take a business training course.

Write, telephone, or call. The Regional Appointments Offices are in the following towns:

LONDON: 1-6 Tavistock Square, W.C.2
CAMBRIDGE: 5 Salisbury Villas, Station Road
READING: 23 Valpy Street
BRISTOL: Lyndale Hotel, Berkeley Square
BIRMINGHAM: 239 Broad Street
NOTTINGHAM: Commerce Chambers, Upper Parliament Street
LEEDS: Greek Street Chambers, Greek Street
MANCHESTER: Commercial Chambers, 47 Corporation Street
LIVERPOOL: Cotton Exchange, Bixteth Street
NEWCASTLE-ON-TYNE: 153 Barras Bridge
EDINBURGH: 5 Rothesay Terrace
GLASGOW: 450 Sauchiehall Street
Cardiff: 8 Cathedral Road



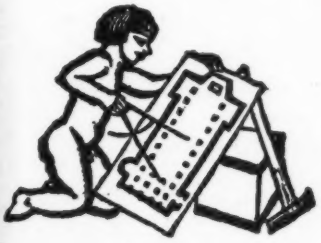
THE SEVEN-YEAR GAP. Employers trying to make up for the lost years, when they could not recruit promising young men to train for executive jobs, are finding the Appointments Offices a valuable source of "material."

The above chart represents the staff structure of a typical engineering firm. In grey: men called away. In black: the war-time staff, reserved or unfit. In stripes: the 20-27 age gap now left, even after reinstatement of pre-war employees.

Unfilled, this gap will mean a dangerous staff shortage, in ten years' time, of the 30-37's: in twenty years' time, of the 40-47's. It can be filled only by men between 20 and 27 returning to civil life. Most of those of executive calibre are applying, on release, to the Appointments Offices. That is where employers are finding the talent they want.

Issued by the Appointments Department, Ministry of Labour and National Service, St. James's Square, London, S.W.1

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



DIARY FOR JUNE JULY AND AUGUST

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

LONDON. *Living Communities.* Exhibition in Room 129, London County Hall, daily, 10 a.m. to 5 p.m. Thursdays, 10 a.m. to 9 p.m. (Sponsor, London Council of Social Service.) JUNE 13-15

Plan for Knutsford. Exhibition. At the RIBA, 66, Portland Place, W.1. The exhibition has been arranged by the *News Chronicle*. Admission free. Daily from 10 a.m. to 6 p.m. until July 5, Sundays excepted. (Sponsor, *News-Chronicle*). JUNE 13-JULY 5

Work of the students of the Regent Street Polytechnic School of Architecture. At the RIBA, 66, Portland Place, W.1. JUNE 13-15

Paintings by Donald Wood. Exhibition at the Batsford Gallery, 15, North Audley Street, W.1. 10 a.m. to 5.30 p.m. JUNE 13-19

Chemical Research Exhibition. At the Tea Centre, Lower Regent Street, S.W.1. (Sponsor, Imperial Chemical Industries.) JUNE 13-28

Building Materials and Components. Exhibition at the Princes Gallery, Piccadilly, W.1. (Sponsors, Ministry of Works and the Ministry of Health in consultation with the other Government Departments concerned.) Monday to Friday, 10 a.m. to 6 p.m. Saturdays, 10 a.m. to 1 p.m. JUNE 13 for about 6 weeks.

Oriental and European Carpets and Rugs. Exhibition at the Royal Water Colour Society's Galleries, 26, Conduit Street, W.1. (Sponsor, Perez.) JUNE 13-29

Commons, Open Spaces and Footpaths Preservation Society. Annual General Meeting at 71, Eccleston Square, Belgrave Road, S.W.1. To receive the Statement of Accounts and Report for 1945 and to elect the Officers and General Committee. All members invited to attend. 3 p.m. (Sponsor, COSFPS.) JUNE 19

Town and Country Planning Association. River Trip to View the Proposed Development in the Areas under the County of London Plan. By *Marchioness* from Westminster Pier. Times and full details from the Conference Secretary, 28, King Street, Covent Garden, W.C.2. Officials familiar with the many aspects of the Thames Development will be present. (Sponsor, TCPA.) JUNE 22

First Post-War Annual Reception of the RIBA. At the RIBA's first post-war annual reception, the President and Lady Thomas will receive guests in the Henry Florence Hall, 66, Portland Place, London, W.1, from 8 p.m. to 9 p.m. At 9 p.m. there will be music by the Charles Ernesco's Quintet in the foyer, and later in the evening a song recital will be given by Miss Rose Hill, soprano, and Mr. Roderick Jones, baritone (by kind permission of the Sadlers Wells Opera Company). Mr. Stanley Mobsby will be at the piano. On view during the reception will be an exhibition of the Knutsford scheme entitled *Your Town*, and an exhibition of library books, prints and drawings will be shown in the Aston Webb room. Refreshments will be served in the Henry Florence Hall and also in the Members' Room. Any member of the Institute wishing to attend the reception who has not already applied for tickets should do so at once. They can be obtained from the Secretary, RIBA, price 7s. 6d. each, and members can each bring one guest. Uniforms or lounge suits will be worn. (Sponsor, RIBA.) 8 p.m. to 9 p.m. JUNE 28

Gerald Barry. *The Place of the Architect in the Post-War World.* At the RIBA, 66, Portland Place, W.1. Before Mr. Barry reads his paper the results of the election of the Council for the session 1946-7 will be announced. (Sponsor, RIBA.) 6 p.m. JUNE 25

Presentation of Howard Memorial Medal to Professor Lewis Mumford. At a luncheon at the Connaught Rooms, Great Queen Street, W.C.1. (Sponsor, TCPA.) Luncheon 17s. 6d. 12.30 p.m. for 1 p.m. JUNE 27

Lewis Mumford. Amongst Lewis Mumford's many engagements when he visits England during June and July will be a lecture at the RIBA, 66, Portland Place, W.1, entitled *A World City for the United Nations.* The lecture has been arranged by the RIBA in collaboration with the Institute of Sociology. 6 p.m. JULY 12

MANCHESTER. *Art on the March.* An exhibition of drawings and paintings by students of the Manchester Municipal School of Art while serving in H.M. Forces, 1939-1945. At the Manchester Municipal School of Art, Cavendish Street, All Saints, Manchester, 15. (Sponsor, Manchester Municipal School of Art.) JUNE 13-22

PARIS. *International Technical Congress.* Among the delegates from Great Britain will be Sir Patrick Abercrombie, President, International Reunion of Architects, and Sir Percy Thomas, P.R.I.B.A. SEPT. 16-21

SUDBURY. *Conference and Exhibition on the Sudbury and District Planning Association's Survey and Plan.* At the Town Hall, Sudbury, Suffolk. Speakers: L. F. Easterbrook, R. L. Reiss. Chairman: Donald McCullough. (Sponsor, TCPA.) JUNE 28

NEWS

THURSDAY, June 13, 1946
No. 2681 VOL. 103

Though no feature in the JOURNAL *is without value for someone, there are often good reasons why certain news calls for special emphasis. The* JOURNAL'S *starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.*

★ *means spare a second for this, it will probably be worth it.*

★★ *means important news, for reasons which may or may not be obvious.*

Any feature marked with more than two stars is very big building news indeed.

★

Sir Patrick Abercrombie has LEFT FOR STOCKHOLM to lecture for the British Council in connection with a Town-Planning Exhibition arranged by the British Council and the RIBA.

His subjects will be *Replanning Civic Centres of War-Damaged Towns* and *New Towns for Old*. The exhibition shows how British planners are dealing with difficulties due to such factors as industrial changes, war damage and slums. There are development plans, with illustrations, of Ashford, Coventry, Durham, Exeter, Manchester, Norwich and Plymouth, and historical examples of town-planning shown include Regency London and Bath. The Ministry of Town and Country Planning has provided statistical maps and illustrations dealing with basic industries, communications, land utilisation, population density and other planning data, and exhibits explaining the development of a Neighbourhood Unit and how planning news is made available to the British public. Other sections deal with housing and the work of the Ordnance and Geological Surveys, and its relation to planning. There is a reference library and British films on the subject will be shown.

From AN ARCHITECT'S *Commonplace Book*

AN AMERICAN ON THE AMERICAN CITY : THE GOODS LIFE. [*From* City Development, *by Lewis Mumford* (*Secker and Warburg*, 1946, 8*s.* 6*d.*).] In so far as the New England community had a common social and political and religious life, the town expressed it. The city which was representative of the second period, on the other hand, was in origin a trading post, and the supreme occupation of its founders was with the goods life rather than the good life. New York, Pittsburgh, Chicago, and St. Louis have this common basis. . . . Since there was neither fellowship nor social stability nor security in the scramble of the inchoate commercial city, it remained for a particular institution to devote itself to the gospel of the " glad hand." Thus an historian of Pittsburgh records the foundation of a masonic lodge as early as 1785, shortly after the building of the church, and in every American city, small or big, Odd Fellows, Mystic Shriners, Woodmen, Elks, Knights of Columbus, and other orders without number in the course of time found for themselves a prominent place. . . . The social centre and the community centre, which in a singularly hard and consciously beatific way have sought to organize fellowship and mutual aid on different terms, are products of the last decade. Perhaps the only other civic institution of importance that the commercial towns fostered was the lyceum : forerunner of the elephantine Chautauqua. The lyceum lecture, however, was taken as a soporific rather than a stimulant, and if it aroused any appetite for art, philosophy, or science there was nothing in the environment of the commercial city that could satisfy it. Just as church going became a substitute for religion, so automatic lyceum attendance became a substitute for thought. These were the prayer wheels of a pre-occupied commercialism.

★★

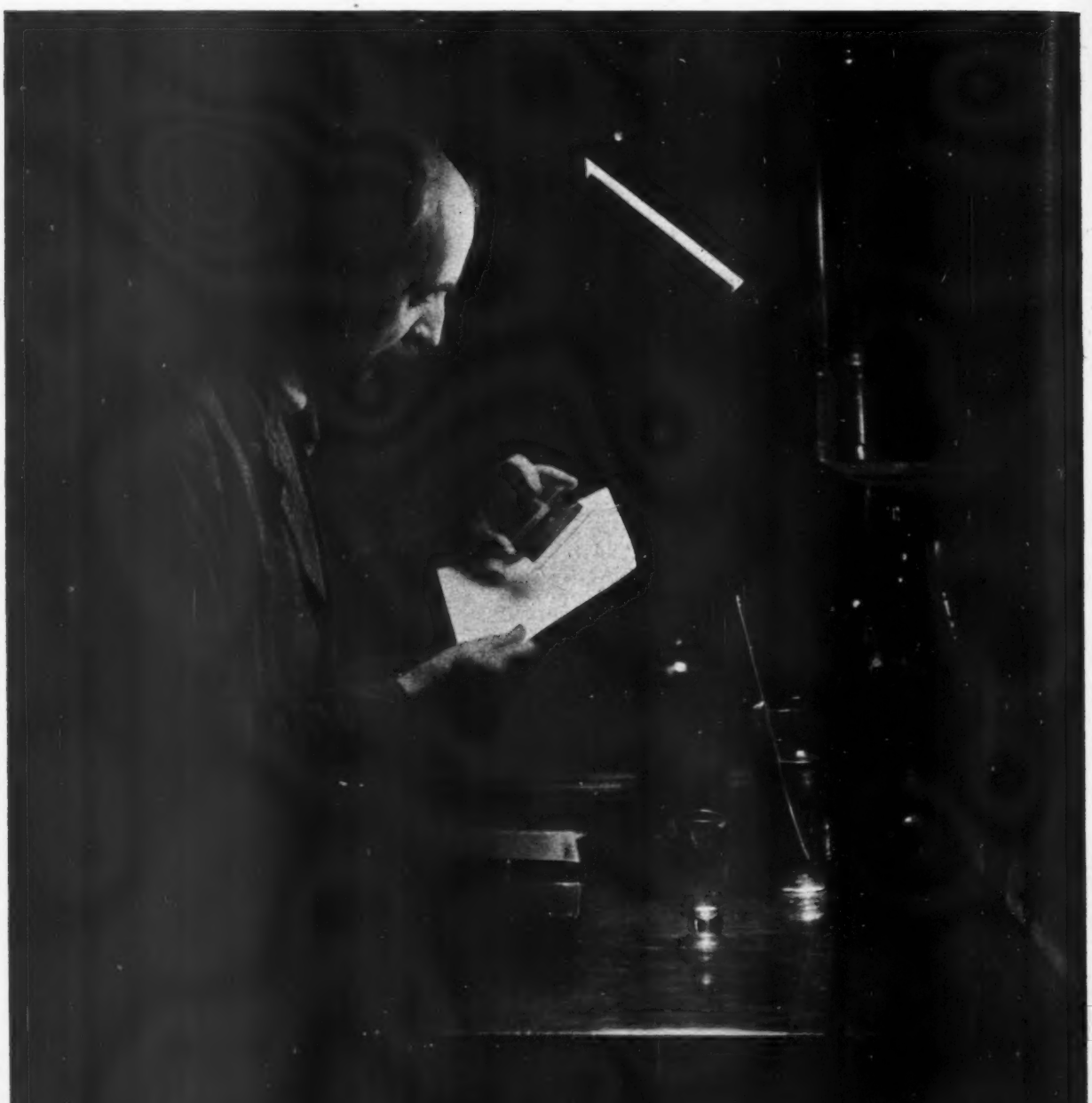
The assessors have made the following AWARDS IN THE HOLIDAY CENTRES COMPETITION promoted by the Workers Travel Association :

Design for a Coastal Holiday Centre. First Premiated Design—No. 14 (a): Jessie Morton Evans, A.R.I.B.A., A.M.T.P.I., and Frank Moate, 117, Ashley Road, Bristol 6. Second Premiated Design—No. 10 (a): G. W. Nightingale, A.R.I.B.A., and H. G. Pickering, L.R.I.B.A., 27, Kineton Road, Sutton Coldfield, Birmingham. Commended Designs: No. 11 (a): Maureen H. Maher and D. O. Forrest, 25, Sion Court, Richmond Road, Twickenham, Middlesex. 16 (a): Philip E. Bell, A.R.I.B.A., and Noel E. Campbell, A.R.I.B.A., M.R.I.A.I., Mount Pleasant, Bangor, Co. Down. 44: Peter Moro, in association with Gordon Bowyer and Sheila McKenzie, the Polytechnic, Regent Street, London, W.1. 45 (a): Hilton Wright, A.R.I.B.A., and Richard Sheppard, F.R.I.B.A., 20, Gower Street, London, W.C.1. *Design for an Inland Holiday Centre.* First Premiated Design—No. 41 (b): W. W. Fisk, A.R.I.B.A., A.A.DIP., and S. F. Burley, L.R.I.B.A., 52, Gwalior House, Chase Road, Southgate, London, N.14. Second Premiated Design—No. 48 (b): F. Chippindale, F.R.I.B.A., T. le Briero, and H. W. Rosenthal, DIPL.ING., 6, Roundhill Road, Leicester. Commended Designs: No. 11 (b): Maureen H. Maher and D. O. Forrest, 25, Sion Court, Richmond Road, Twickenham, Middlesex. 30 (b): Stanislaw M. Lancucki, Jan K. Sterling, and Witold A. Wondrausch, 53, Catherine Street, Liverpool 8. The Assessors were Sir Patrick Abercrombie, M.A., F.R.I.B.A., P.P.T.P.I., Mr. J. H. Forshaw, M.C., M.A., F.R.I.B.A., M.T.P.I., and Mr. C. G. Kemp, A.R.I.B.A., F.I.L.A. It is anticipated that an exhibition of all entries for the competition will be held in the Great Hall of the Institution of Civil Engineers, Great George Street, Westminster, London, S.W.1, during the week July 22 to 27. Fuller details will be announced later.

The AA Council announces the award of the following SCHOLARSHIPS IN ARCHITECTURE at the Architectural Association School of Architecture. Minter Open Entrance Scholarship (value £90), R. G. Harris, Cambridge; Sir Walter Lawrence Open Entrance Scholarship (value £90), P. J. Lord, Welwyn Garden City; Metal Window Scholarship (presented by the British Metal Window Manufacturers' Association, Ltd.) (value £75 p.a.), Miss D. R. Leigh, Edgware, Middlesex; Pilkington Scholarship (presented by Messrs. Pilkington Bros., Ltd.) (value £75 p.a.), T. de Pont Davies, Whitstable, Kent; Cement and Concrete Association Scholarship (presented by Cement and Concrete Association) (value (£75 p.a.), M. D. Willis, Worcester; Natural Asphalte Council Scholarship (presented by the Natural Asphalte Mine Owners' and Manufacturers' Council (value £50 p.a.), D. H. Hiscock, Gravesend, Kent; Northern Aluminium Scholarship (presented by the Northern Aluminium Company) (value £50 p.a.), J. A. Holderness, Watford, Herts; Patent Glazing Scholarship (presented by the Patent Glazing Conference) (value £50 p.a.), J. R. Plincke, Woldingham, Surrey.

The Council offers the following Senior Entrance Scholarships: Metal Window Senior Scholarship (presented by the British Metal Window Manufacturers' Association, Ltd.), value £50 p.a.; British Plywoods Scholarship (presented by the Association of British Plywood Manufacturers), value £50 p.a. These Scholarships, tenable for two years at the AA School of Architecture, are open to students of British nationality, who have passed the Intermediate Examination of the RIBA, either externally, or at another recognised school of architecture, and are for entry to the fourth year of the course, and, subject to satisfactory progress by the student, will be renewed for the fifth year. Full particulars and forms of application may be obtained from the Secretary of the AA, 36, Bedford Square, London, W.C.1, and forms of application should be received by the Secretary not later than July 22, 1946.

Commemorative postage stamps issued in connection with the Victory Celebration. The 2½d. *stamp, which is blue, emphasises Peace through Victory, and Reconstruction at Home, while the* 3d. *stamp, a deep violet, expresses the idea of Peace Abroad. The* 2½d. *stamp design, the work of Mr. H. L. Palmer, is typical of the present mechanical age. Peace, symbolised by the olive branch, appears as centre of a radiating tonal background on which in the central dark V, the King's Head is prominently displayed, and emblems of Reconstruction in the form of a tractor, a pair of workmen's houses, a power station and a ship, representing Agriculture, Building, Industry and Transport, are shown as white outline drawings, one in each of the four corners. The* 3d. *stamp, designed by Mr. Reynolds Stone, has, in addition to the King's Head, Crown, lettering and numeral, a dove holding an olive branch representing Peace, a set square and dividers representing Planning, a bricklayer's trowel and bricks representing Reconstruction. These various elements are defined and are bound together by calligraphic flourishes. The stamps are printed by Harrison and Sons, Ltd., the printers of this Journal.*



Mr. Dell is Retiring

Mark Oliver Dell, of Dell and Wainwright, the famous architectural photographers, is retiring. Born in July, 1883, at Walham Green, London, of a quaker family, he was educated at Sidcot School, and became an amateur photographer on leaving school. In 1905 he joined Hampshire House, whose founders hoped to make another Toynbee Hall in Hammersmith, and was secretary at various times of the Working Men's Club, the Hampshire House Trust and Hampshire House Workshops. This last, almost next door to Kelmscott House, aimed at small workshops rather in the Morris tradition. When the Hampshire House Workshops closed in 1922 he turned to photography as the thing he could probably do best. In November, 1924, he took into partnership Mr. H. L. Wainwright, and attributes his success to having known how to choose a good partner. Admitted a Fellow of the Royal Photographic Society in 1924, and an exhibitor in photographic exhibitions since 1911, of landscapes mostly taken in the French Pyrénées, he is best known among amateur photographers as a member of the Hampshire House Photographic Society, originally one of the educational activities of the Trust and now one of the most active societies of its kind. At the Milan Exhibition, 1933, Dell and Wainwright, after making photographic contributions at the invitation of the Board of Overseas Trade, were awarded, but never received, the International Gold Medal. They had a handsome diploma, but could not have the medal without paying for the gold in it. This condition was probably a totalitarian manœuvre with the foreign currencies. Now that Mr. Dell has decided to retire he hopes to return to the status of an amateur and photograph what he chooses. The portrait above of Mr. Dell was taken by Mr. Wainwright, official photographers of the *Architectural Review* for the past sixteen years. See Astragal's note.

The Canadian Government and people have given THE CANADIAN WAR HOSPITAL AT CLIVEDEN to Great Britain.

The hospital in the grounds of Cliveden, Lord Astor's estate at Taplow, Bucks, has been handed over to Mr. Aneurin Bevan, Minister of Health. The key of the main entrance of the hospital was handed to Mr. Bevan by Lord Bennett, chairman of the oversea advisory committee of the Canadian Red Cross Society. At the same time Lord Bennett placed on a chair in the dining-hall, where the speeches were made, a crowned label of the Ministry of Health, an act symbolizing the delivery to the Crown of the equipment and contents hitherto owned by the Canadian Red Cross Society. In doing so Lord Bennett said:—Conditions may not be imposed on gifts to the Crown, but it is the earnest hope and confident belief of the donors that this building may be used as a national key hospital for the investigation and treatment of rheumatic cardiac affections of children, and the Canadian Society desires that the establishment may be known as the Canadian Red Cross Memorial Hospital. In the name of the Government of Canada, Lieutenant-General J. C. Murchie then handed over part of the equipment and fittings—again represented by a chair to which he affixed a Crown label—which the Canadian Medical Service had added to the hospital. Mr. Bevan, acknowledging the gifts, said he was delighted to be able to accept them on behalf of the British nation as a further example of the warm-hearted generosity of the Canadian people. The hospital was most lavishly equipped and would be an invaluable addition to our general hospital facilities. The Government intended to use it as a special hospital for research into rheumatic conditions in children, and it would also serve general hospital purposes for people in the neighbourhood. Such an association of specialized research and general hospital service was of reciprocal value. When the National Health services were properly organized, the hospital would play a fitting part in the country's general hospital services.

★

Hertfordshire County Council has APPOINTED FIVE ADDITIONAL ARCHITECTS to the staff of Mr. C. H. Aslin, F.R.I.B.A., M.I.Struct.E., County Architect.

They are W. A. Henderson, DIPL. ARCH. HONS. (L'POOL), CERT.T.P., A.R.I.B.A., recently demobilised from HMF (RE); D. Rogers Stark, A.A.DIP., CERT.T.P., A.R.I.B.A., late RNVR, previously with the LCC; A. Cox, A.A.HONS.DIPL., A.R.I.B.A., at present serving in India with HMF (RE); L. Manasseh, A.A.HONS.DIPL., A.R.I.B.A., about to be demobilised from the RN; and D. Lacey, A.R.I.B.A. The following members of the Department have recently returned from the Forces: F. G. Allen, DIP. ARCH. HONS. (CARDIFF), A.R.I.B.A., A.M.T.P.I., late RE; G. C. Fardell, A.R.I.B.A., late RE.

★

His Majesty the King has been graciously pleased to command that the Chartered Surveyors Institution be known henceforth as the ROYAL INSTITUTION OF CHARTERED SURVEYORS.

The Institution was founded in 1868 and incorporated by Royal Charter in 1881. It now has over 12,000 members, probationers and students.

COMPETITIONS—I

THE architectural competition is a treasured institution. The romance of the architectural career founded upon winning an important competition at an early age fires the imagination. We could all name leading members of the profession whose careers were founded upon success in competitions and whose practices continue to be nourished from the same source. The hope of early success that the competition system offers is especially valued by the younger members of the profession. Perhaps this reconciles them to the low rates of pay allowed to architectural assistants, and provides a safety valve in the rapid promotion of some of the ablest of them.

Other professions have nothing quite like it. "The forward youth who would appear" can break a lance with his seniors at the Bar, or in politics, but nowhere else is the contest so elaborately staged, with the rule of anonymity to see that the best man wins. Our system gives the young man his opportunity and keeps the older man up to the mark. The system appeals to the sporting instinct in all of us.

We are very jealous of the good name of the system, intensely interested in the rules of the game and the due observance of them. The RIBA is the Football Association or Rugby League, drawing up an elaborate code of regulations, with its Competitions Committee as the watchdog to see that they are observed. It wields a very big stick to bring promoters into line, in the threat (by no means an empty one) to forbid its members to compete, if the conditions of a competition are irregular. The appointment of assessors is the President's prerogative, although he is prepared to consider suggestions from the promoters.

As to general policy this seems to rest with the profession at large: hitherto, it has been common consent that, like football or any other game, the more often we play it the more fun is had by all. Especially now, with architects of all ages coming back from the services and the ministries to rebuild their practices, there is a demand for the opportunities afforded by big competitions. But like all treasured institutions, the competition system comes in for a great deal of criticism. The present time is a good one for taking stock.

There is an art of competition-winning, rather like the art of writing, or of public speaking. Those that have no taste for acquiring the facility are inclined to disparage it. They point to the cliches of planning, the elegant tricks of presentation, the fashionable styling in the mode of the last season but one. On the other hand, the pressure of a book to write, or a speech to deliver, is a wonderful discipline for getting one's thoughts in order. The competition is, similarly, the forcing house of architecture: ideas are focused on the project and the sending-in date: the pedestrian tempo, and the afterthoughts, of everyday practice are denied.

The pressure of a competition design is exerted upon the individual to clarify his mind and stretch the imagination: he works his hardest and produces the best that is in him.

That is very good for him. It is also good for architecture that many of the keenest practitioners should be engaged on alternative solutions of a single project. It is not only the prize-winning design that promotes the advancement of architecture (in the last twenty years originality has been rare among prize winners), but the influence upon architectural thought of the whole concourse of designs, despite the apparent waste of time, is a most valuable feature of the system.

Few, however, will deny that there is something wrong, and the recent Crystal Palace Competition has brought the matter to a head. Is it the assessors, the regulations, the promoters, or are we all wrong to be so much addicted to our beloved competitions? We shall return to this question.

The Architects' Journal

13, Queen Anne's Gate Westminster, S.W.1
Phone: Whitehall 0611

NOTES & TOPICS

BIGGER RAILWAY WAGONS?

One way of reducing building costs seems to have been overlooked—the use of larger railway wagons. This contention comes from an expert in railway transport, Mr. F. R. B. Roberts, and, in view of the pending increase of rail rates with its inflationary effect, his is certainly a contention which needs considering.

*

"Whereas in Great Britain" writes Mr. Roberts, "higher wages and other expenses are habitually being met by the easy course of raising rates, in other countries they are met by improving methods in working—principally by building larger wagons."

*

"For example, if the present 1,200,000 ordinary wagons were replaced by 600,000 twenty-ton trucks, all operating expenses—shunting, train mileage, weighing, labelling, sheeting, roping, number-taking, repairs, invoicing, etc.—would automatically be reduced to one-half. A train now hauling 40 wagons carrying 400 tons of coal, would then carry 800 tons. In many countries 40, or more, 40-ton wagons carrying 1,600 tons are attached to a train—on a single coupling, and without the use of a continuous brake. But such loads cannot now be carried in England because they would mean 160 trucks behind the engine. The train would be well over 3,000 feet long, compared with 1,400 feet of the 40-ton wagon train. Even 100 of our present trucks cannot safely be hauled on a train, as their couplings are too weak to stand the strain. Despite statements made to the contrary, 40-ton wagons can be used at collieries, etc., as they are smaller than the locomotives which enter every railway, colliery and other private siding."

*

"Dutch, German, Belgian, and other rates are reduced by using larger wagons—on an average they are half the English rates. British railways, however, only quote rates for two-ton to five-ton lots, and have never yet cited them for full 10-ton truckloads nor, of course, for 20-ton or 40-ton wagon loads. Obviously, if British rates were anywhere near foreign levels a substantial reduction would be made in manufacturing costs. For instance, some four tons of coal and three tons of iron ore are required to make a ton of steel. The rail rate on steel at a higher level is, also, 200 per cent. higher than abroad, and when turned into machinery and other manufactured goods these have to bear, at a still higher level, another increase of 200 per cent. Hence the pre-war failure to compete abroad."

*

Again, says Mr. Roberts, 100 tons of coal are required to bake 100 tons of bricks. The rail rates on coal seriously increase manufacturing costs, and the bricks then have to bear a rate 200 per cent. higher than abroad. Sanitary pipes, tiles, etc., have to pay similarly high charges.

*

"As an outsize in possible economies, ten or twelve of the present trucks are required to carry 30 tons of timber—of which, 6,000,000 tons are annually carried between ports, timber yards and towns. Owing to its length, the timber has to be loaded overlapping the end of the truck—with the result that only about three tons can be carried, and two-thirds of the wagon space is wasted. So ten trucks have to be weighed, labelled, roped, shunted, hauled, etc., instead of one 40-tonner, which is nearly double the length of a 10-ton truck. The timber can thus be laid flat and piled."

*

"True, the railway companies have built a number of 'bolster' wagons for carrying some of this traffic. But this is only adding to the already excessive number of types (over 80) of uneconomical one-way-empty trucks in service. By using an ordinary open 40-tonner, it could be loaded again immediately on discharge with practically any other class of traffic. In other countries, which carry exactly the same classes of traffic as England, the number of types of wagons has been reduced to well under a dozen—principally because the big wagon is a much better general utility vehicle, and saves heavily in shunting and train mileage. For example, to return 200 of the present trucks to collieries, etc., at the rate of 50 to a train, requires the running of four trains. But to return fifty 40-ton wagons requires the running of only one train of empties—a saving of 75 per cent. in light mileage."

*

"Obviously, if British railway rates, unloading and road transport costs were reduced to anywhere near foreign

levels," he concludes, "it would mean a reduction of probably well over 25 per cent. in building costs." This sounds to the outsider rather a sanguine figure, but Mr. Roberts' arguments certainly tend to support it.

DELL AND WAINWRIGHT

It used to be unkindly said of the modern school of architects before the war that they designed their buildings not to please their clients or even themselves, but to please Dell and Wainwright. Unfair though this was, it paid a deserved compliment to Messrs. M. O. Dell and H. L. Wainwright, the official photographers of *The Architectural Review*.

*

It meant that their representations of modern buildings—resplendent in a perpetual mellow sunshine, beautifully composed within a frame of leafy branches or above a foreground dappled with shadows—when reproduced on the glossy pages of the *Review* came near to the ideal their designers had in their imaginations. They were the brave new world itself, not the disappointing approximations to it that other people saw when the sun failed to shine, when awkward viewpoints emphasized the uncompromising nature of their geometry or when harsh lighting showed up angles and wall surfaces as not quite immaculately clean and white.

Dell and Wainwright's genius, I hasten to add, served a more useful purpose than that of flattery, because they played a large part in popularizing modern architecture; by bringing out its glamour and charm they made it easier for those who judge solely by appearances to accept it while its practical principles were being established. Now they *are* established, so Mr. Dell, who has announced his retirement, need not feel he has left a job half done.

*

Many modern architects will nevertheless miss his tall unmistakable figure when new buildings come to be ready for photographing once more. It is some consolation that Mr. Wainwright is carrying on, but he would be the first to agree that an era has now ended: the era when no new building could be said to be respectably launched on the world till the world had seen it through the eyes of Dell *and* Wainwright.

RIPOSTE

An architect colleague who travels frequently on buses sends me this fragment of conversation garnered from two fellow-passengers: "... 'e called me a liar and a thief. But I 'ad my answer ready for 'im..... 'I'm not,' I said."

ASTRAGAL

Mr. Wainwright photographed by Mr. Dell. On page 442 is a picture of Mr. Dell by Mr. Wainwright. See Astragal's note.

LETTERS

Kenneth M. B. Cross,
Chairman of the Competitions Committee of the RIBA

A. G. Gibson,
A.R.I.B.A., AA.Dip.

C. R. Adams

Crystal Palace Competition

SIR,—In reference to the letter from Mr. Hartland Thomas, I have the following observations to make:—

Since there appears to be some misapprehension on the point it should be emphasized that the Competitions Committee of the RIBA does not nominate assessors in any competition nor does the Committee take any part in such nomination. Assessors are nominated by the President of the RIBA at the request of the Promoters or they are nominated by the Promoters. The efforts of the Competitions Committee are directed in the main to ensuring that the RIBA Regulations governing Competitions are carried out.

In the case of the Crystal Palace Competition the Assessors were nominated by the Promoters and Mr. Hartland Thomas describes the award as being "indecisive." The award may have been good, bad or indifferent; opinions appear to differ considerably on the point but it was clear, definite and unequivocal and, for the purposes of the competition, quite decisive. Nothing which the assessors may have unwisely said about the winning design or about any other designs can alter the award.

Mr. Hartland Thomas hopes that this case will be the occasion for the re-orientation of the competition system as a whole and I am sure that any suggestions which he cares to make about such re-orientation will receive the careful consideration of the Competitions Committee.

It is not my experience that most competitions during the past twenty-five years "merely find new men to operate in the same stale conventions." During this period the changes in planning and design as evinced in competition work have been revolutionary and the paramount object of

LIVING COMMUNITIES

The London Council of Social Service has organized an exhibition called Living Communities, *which was opened last week at County Hall, Westminster, by Mr. Lewis Silkin, Minister of Town and Country Planning. Its object is to show the activities of Community Associations and Centres and how they are established, administered and financed. It illustrates how the individuals and voluntary organisations in a locality can co-operate to form a Community Association and how the Community Centre can be evolved. Top, the central feature of the travelling section which shows the various activities for which a Community Centre caters—music and dramatic societies, citizens advice bureaux, political parties, adult education, craftwork, youth organizations, and so on. Below, model of the suggested development for an area in Stepney as part of the County of London Plan showing how the Community Centres are related to the Neighbourhood Units. The exhibition closes on June* 15, *and will later be shown in the provinces.*

the Competitions Committee during the period during which I have been privileged to serve on this Committee has unquestionably been the advancement of architecture.

KENNETH M. B. CROSS,
Chairman of the Competitions
London Committee of the RIBA

SIR,—Whilst I hope that analyses are being made of the winning schemes to show some of the faults they contain, the most serious aspect of this fiasco is the loss of prestige which the younger section of the profession feel they have suffered abroad. However much criticism of the result appears in our press, little will filter through to the foreign competitors of the indignation felt in this country, and I feel very strongly that a big gesture is needed on the part of all architects who deplore the assessors' award; it must be shown that their choice represents a point of view that is carrying less and less weight and is, in fact, one which most of us, after six years of war, were shocked to find still existed.

To this end I can only suggest that some body—possibly the Architects' Journal—should invite subscriptions from all disillusioned architects to be used in one of the following ways:—

1. As premiums—however inadequate—to the architects of the best foreign designs. For this purpose it would seem most appropriate to accept Maxwell Fry's choice in last week's A.J. I hope that Entwistle and Arup would view this idea as the purely national penance it is.
2. To allow representative students from the competing countries to come over here, possibly when the school's exhibitions are on during the summer, to enable them to see that even if we are behind most European countries in general level of design, we have the beginnings of a contemporary style.

There may be better ways of making this gesture; what I am certain of is that one of sufficient magnitude should be made to show the world that this sort of thing will not be allowed to happen again.

Or will it?

London A. G. GIBSON

Students in Architects' Offices

SIR,—I attended the informal meeting of the RIBA on Office Organization.

It was apparent that some practising architects realize that they have a responsibility to architectural students and indicated an appreciation of the work done by students in their offices during the vacation.

I would be glad if you could tell me if there is any organization to facilitate

(1) Architects selecting students,

(2) Students selecting suitable architects.

If no such organization exists, I would suggest that in this field the Architectural Students' Association could most suitably implement the work. I would suggest that

(1) The ArchSA should compile a register of students requiring work during the vacation,

(2) That a similar list be kept by the RIBA of architects wanting temporary assistants,

(3) That contact be maintained between the two organizations and the scheme be advertised in their respective journals,

(4) That to speed up the working of the scheme the administration should be by geographical regional centres such as at present exist in the ArchSA, and which would arrange information and introductions.

I feel that such a scheme would do much to link the student with the practising side of architecture, to their mutual benefit and also the building of a greater sense of unity which I feel is needed in the profession.

London C. R. ADAMS

This is the fourth of the series of commentaries on the Government's housing returns, published by the Ministry of Health and the Department of Health for Scotland, and on the tables published in the Digest of Statistics which is being issued month by month. The object of the series is to supply a factual and unbiased interpretation of the official figures by an expert statistician. He covers such matters as the rate of provision of new housing, the amount of housing under construction and begun, and the labour and materials position. This month the author also sums up the 1946 programme, compares the present rise of those employed in the Industry with that in 1933 and points to the continued inaccuracies in the official Housing Returns.

HOUSING STATISTICS

A MONTHLY COMMENTARY ON THE OFFICIAL RETURNS—4

by

Ian Bowen

By the end of April there were in Great Britain 8,606 Permanent and 26,199 Temporary houses completed. In addition, space for about 121,000 family units had been found by requisition, by conversion and adaptation of existing premises, by repair of war damaged premises, and by the provision of huts. Since the end of March there was an increase of 2,536 Permanent and 5,017 Temporary houses completed, and for 6,000 more family units space was otherwise provided in the ways described above.

RATE OF PROVISION OF NEW HOUSING

Four months of the year have now been recorded, and the picture is becoming clearer. It may be summarized as follows:—

TABLE I

Monthly Rate of Provision of New Housing and Other Housing Space in Great Britain up to April, 1946*

—	Six Months to Jan. 31 (average)	Feb.	Mar.	April.
Permanent Housing—				
Local Authority schemes	208	151	468	774
Private enterprise	186	494	992	1,338
War-destroyed houses rebuilt ..	74	158	192	424
Total Permanent Housing	468	803	1,652	2,536
Temporary Housing	1,839	3,967	4,464	5,017
Total (Permanent and Temporary) ..	2,307	4,770	6,116	7,553
Space otherwise provided	9,300	4,700	8,500	6,000
Total families housed .. .. .. (to nearest hundred)	**11,600**	**9,500**	**14,600**	**13,600**

Inclusive of "Space Otherwise Provided" (*i.e.*, conversion and adaptation of premises, huts, requisition, etc.), the monthly rate of houses coming forward in April was actually lower than in March. The Temporary Housing Programme accounted for 5,000 new homes in April, a rate less than half of what was hoped by this date. Nevertheless, Temporary Houses were coming out at double the rate of Permanents. The monthly rate of provision of Permanent Houses (2,500) is extremely small for the fourth month of the year, the twelfth from the close of European hostilities; and no gloss on the figures can explain away the dismal share of the Local Authorities, 774† out of this inconsequential total.

It is now clear beyond a doubt that the first half of 1946 will have been a period containing one of the biggest failures to build houses that a Government of several Ministries and an industry of nearly a million men have ever achieved.

HOUSES UNDER CONSTRUCTION AND BEGUN

What then of the second half of 1946? Are we to be promised better things, and what are the promises worth? On this point the most relevant *immediate* figures are those for houses under construction and houses begun; for it is safe to say that the number of houses *not* yet begun that are completed by the end of the year, at present rates of building, will be a negligible number.

At the end of April there were 71,000 Permanent Houses under Construction in England and Wales, and 11,600 in Scotland, say 83,000 in all.

If all these are finished by December, 1946—more should be, of course—we shall have no more than 90,000 permanent houses 18 months after the end of a war, during which the building and civil engineering industries in this country became world-famous for organisation and drive. If, by some special effort, 10,000 more are begun and finished by then the grand total still fails to rise above the disappointing figure of 100,000.

Is it possible that this gloomy picture is too pessimistic? Let us look at the figures for Houses Begun:—

TABLE II

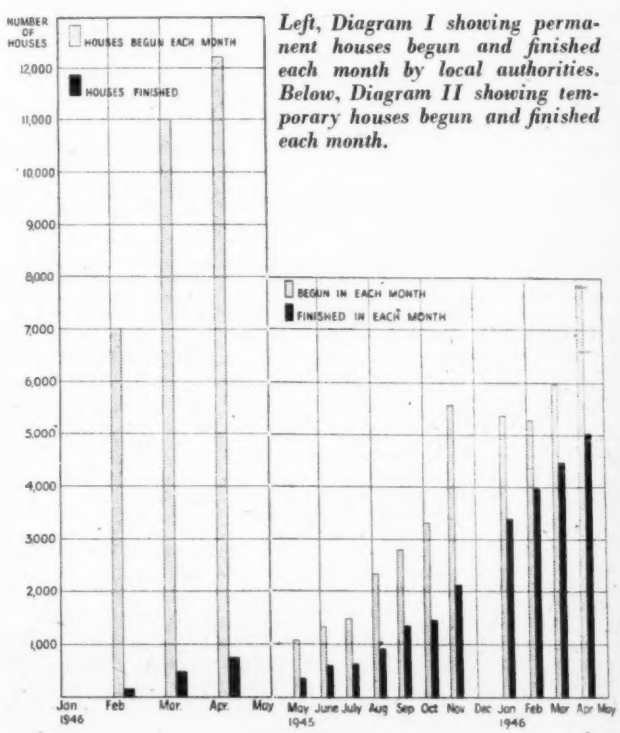
Houses on which Work Began, February, March and April, 1946. (Great Britain)

—	Feb.	Mar.	April
Permanent Housing—			
Local Authority schemes	7,000	10,800	12,200
Private enterprise	8,000	8,000	5,300
Rebuilding of war-destroyed ..	600	600	1,900
Temporary Housing	5,300	6,000	7,800
Total	20,900	25,400	27,200

Consider the figures in Table II in conjunction with those in Table I. Houses Begun in each month are likely to be followed in due course by an equal number of houses finished in each month. For Temporary Houses (see Diagram II) a lag of about three months established itself: Houses Begun broke the 1,000 level in June, the 2,000 level in August, and the 3,000 level in October, 1945, and in each case Houses Finished followed suit after a lag of three months. In November, 1945, Houses Begun reached well over 5,000, but Houses Finished did not break the 5,000 level until April, 1946. The lag has thus lengthened, partly no doubt owing to delays in the delivery of components and fittings and to the seasonal delays usual in winter conditions.

In the May 9th Commentary the hope was expressed that Temporary Houses would average 6,000 a month from April to June of this year; Diagram II suggests that this is still a reasonable target, but that completion rates must be accelerated for it to be attained. Given a large stock of partially completed houses in hand, site-organisation action *now*, and improved components' delivery *now*, can substantially improve the supply of houses.

But this is true not only of the Temporary Housing scheme. Though the lag is different, the same principle applies to the Local Authorities' Permanent Housing projects, the figures for which are illustrated in Diagram I. The relation between Houses Begun (the tall bars) and Houses Finished is strikingly different from that holding for temporary houses. The Houses Begun bar reached the 7,000 level



Left, Diagram I showing permanent houses begun and finished each month by local authorities. Below, Diagram II showing temporary houses begun and finished each month.

* The source for all of Table I except the item "Space otherwise provided," is Table 75 of the Monthly Digest of Statistics.

† Apart from the Local Authorities' contribution to re-building of war-destroyed houses.

in February; it is not likely that houses finished will reach this monthly rate till September or October. In April, over 12,000 houses were begun; by November or December perhaps 12,000 houses will be finished in a month.

If we add in the private enterprise houses it would appear (as stated in a previous article) that a rate of 19,000 permanent houses a month completed by October might be realised.

This being the correct order of magnitude of the attainable monthly target, the total of less than 100,000 houses finished in 1946 would seem to be by no means an unduly pessimistic forecast. There is nothing very mysterious about the fact that houses finished later on in the year must result from houses started by the end of the spring. Our short-term position (to the end of 1946) is thus only too clear, and can only be improved by adequate organisation of site-work and speeded-up delivery of materials.

LABOUR SUPPLY

There were over a million persons in the industry at the end of April ("total man-power"), and 836,000 operatives employed ("effective labour force").* It can hardly be said, in view of these figures, that labour supply was the bottleneck as far as new housing work is concerned. Indeed, the effective labour force increased by 39,000 in April, but only 16,000 of this increase went on to construction of new houses (see also Diagram III).

Or, if we look at the numbers on *permanent* new housing construction the figures are:—

TABLE III

Building and Civil Engineering Labour Employed. January-April, 1946. (Great Britain.)

—	Total (Operatives aged 16 and over) (thousands)	On Permanent New Housing (thousands)	(2) as per cent. of (1)
	(1)	(2)	(3)
1946—Jan.	721	34·4	5
Feb.	739	51·7	7
Mar.	797	71·5	9
April	836	84·0	10

Thus the percentage of the effective operative employed labour on new permanent housing was a meagre 5 per cent. in January. The percentage had doubled by the end of April, but it still must be regarded as very low.

Two questions arise: (1) Are the housing jobs that have been begun over-manned or under-manned—in other words, is there a smooth supply of labour to new housing contracts out of the large total force available? and (2) have enough jobs been started?

(1) might at first glance be answered decisively; it would seem that jobs must be over-manned in view of the large supply of labour taken to complete a house judging by pre-war standards; since houses are taking far more man-hours to finish than pre-war projects. That output per head has fallen is confirmed by the persistently high level of tender prices, which cannot be accounted for by the rises in materials' prices, wage-rates and overheads by themselves.

But the recent influx of a further 19,000 new permanent houses started in April rather changes the position. Now, as already seen, there are 83,000 houses under construction and 84,000 men at work on them, practically one man to a house. On this showing (and these are the official figures), over the programme as a whole, there must be a bad breakdown in labour supply; *of course* jobs will take an undue number of man-hours to complete if the right amount (and right proportions) of labour is not available on the site. Thus, in relation to the contracts that have been let, there has been a failure in planning and a failure in labour supply. Factories, agricultural buildings and a number of other types of work have been allowed to absorb men while for each house there is only one worker.

Question (2), whether enough contracts have been let, relates to the long-term (1947-8) prospects rather than to the immediate future. Certainly there could have been more contracts let if say 20 per cent. instead of 10 per cent. of the labour employed had been used on housing.

But the *immediate* future depends on (*a*) adequately manning up the existing jobs, and (*b*) securing an improved output from the labour there employed. Present low output is not, of course, necessarily due to labour slacking, since low output may be caused by bad organisation, delays in the delivery of materials and other results of inadequate planning by contractors or by Government, and possibly by inadequate diet.

PROGRAMMING FOR 1946

To sum up, improved results in 1946 can only be secured by attention to the progress of (in the main) existing jobs. There seems to be a widespread fallacy that identifies the "letting of contracts" or "approving of tenders" with the final building of houses. In times of shortage the task of Government, as well as of contractors, only really begins with the start of the contracts. The jobs will not be quickly done, nor cheaply done, unless there is action first to speed the supply of labour and materials to the sites, and secondly, to devise incentive schemes and labour-saving schemes to reduce the labour cost.

The National Housing Drive, or NHD, thus has a preliminary objective. The official statistics, analysed above, show pretty clearly what are the chances of achieving any given target. But do the figures tell us enough?

* See ARCHITECT'S JOURNAL, April 11, for definitions.

SUPPLY OF BUILDING MATERIALS

The two key figures on this subject are changes in the level of stocks, and the labour supply to the building materials' industries. Neither of these sets of figures is published, though what enemy their suppression is intended to deceive remains far from certain.

Although the output of bricks *nearly* doubled in four months (not six weeks), there has been a drain on stocks which suggests the possibility of local stringencies. In any case, the current output of 200 millions a month will have to be very much improved to meet the housing demand alone by October, quite apart from the huge demand for bricks to carry out the rest of the building programme.

The controversy as to whether or not there is a shortage of bricks (carried on publicly now at a very "high level") can never be settled unless terms are precisely defined; because if the bricks cannot be ordered some of the jobs will slow down, less men will be taken on, and labour as well as materials will seem to become the bottleneck. If we mean by a shortage of bricks "too few in current output to sustain a minimum housing target by October of 20,000 houses finished a month" then bricks are in very short supply.

A COMPARISON WITH 1933

It may be of interest to compare the rise in the monthly total employed (insured males aged 16-64) in 1946 with the corresponding rise at the beginning of the building boom, in 1933. The figures are plotted in Diagram III. It will be seen that the rise so far in 1946 has exceeded the steep rise of 1933 and moreover the total employed labour force is greater now than then. In 1933 about 280,000 houses were completed. The labour force flattened out in May of that year and showed a seasonal decline the following winter. Specially designed programmes and the use of new techniques can avert this seasonal decline, but, here again, action *now* is needed to secure the desired result.

NOTE ON ACCURACY OF THE STATISTICS

In previous commentaries some errors of detail in the Housing Returns have been listed. In the April issues nearly all these errors have been repeated. The Ministry of Health and Department of Health for Scotland are setting up a new standard of inaccuracy in Government statistics, and surely it is time that they brought their presentation of facts up to the level maintained by the Ministry of Labour or the Board of Trade. The danger of using incorrect definitions, round number estimates with insufficient basis, etc., is that finally the figures become very misleading.

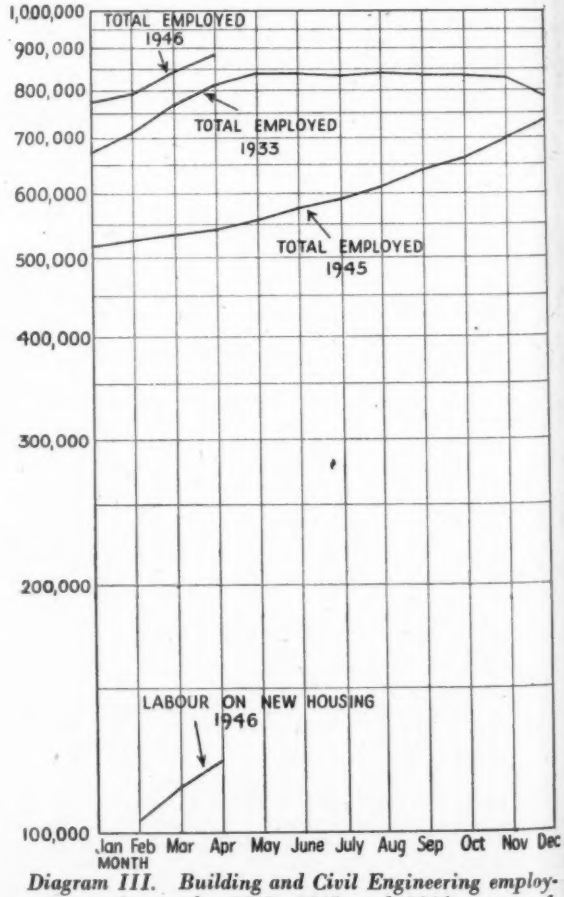


Diagram III. Building and Civil Engineering employment; figures for 1933, 1945 *and* 1946 *compared.*

PHYSICAL PLANNING SUPPLEMENT

WORCESTER

SURVEY AND PROPOSALS BY WALTER RITCHIE

Walter Ritchie is co-author with J. H. Glaisyer, P. Sargant Florence and T. Brennan of the book, *County Town*, to be published shortly. The book incorporates a survey commissioned by the Worcester City Council, and an outline planning scheme based on the recommendations of the survey. This article presents a general description of the Worcester Area, its economic potentialities, and the technique Mr. Ritchie recommends should govern redevelopment. The other authors of *County Town*, and the Worcester City Council, are not committed to any opinion expressed here. Above, a prospect of Worcester from an old print.

Worcester is situated in the centre of an undulating plain irregularly framed by hills and rising ground, and drained by the River Severn and its tributaries. The Worcester Plain consists of Keuper Marl masked by superficial deposits of sand, gravels and alluvium. These deposits, principally of glacial origin, lie in the form of terraces following the river valleys and have had an important influence on the City, which, sited on both banks of the Severn, has taken advantage of the well-drained and comparatively level sites they afforded for settlement. The flood-plain of the river has sterilized a large area from building use and given an unusual openness to the city development pattern.

economic environment

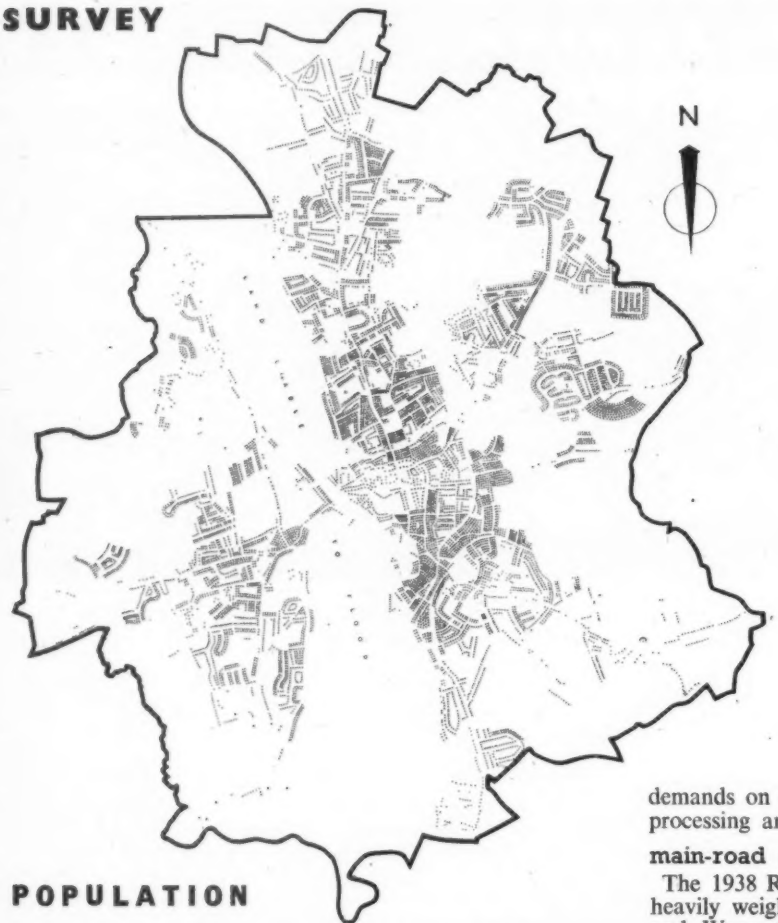
The City of Worcester, a county and market town with a population of 60,000, is a service centre for an average radius of ten miles of surrounding countryside. It is an important focal point for road, rail and water traffic, commanding main routes between the Midland industrial areas and Mid and South Wales, and also between Mid Wales and Eastern and Southern England. This convenience of transport allied to the City's proximity to major concentrations of population, has encouraged industrial development. The area serviced by Worcester is chiefly devoted to agriculture, and the well-wooded plain with its many old farm orchards, winding rivers and background of hills, provides an environment rich in natural beauties, and an important factor in Worcester's economics is the attraction of the area for holiday-makers, tourists and those seeking health at the neighbouring spas of Malvern and Droitwich. Worcester has a fine Cathedral on an exceptional riverside site and many domestic and public buildings of the Elizabethan, Queen Anne and Georgian periods, which, also an attraction to visitors, frequently suffer from the visual, and sometimes odorous offence of their surroundings.

city-pattern

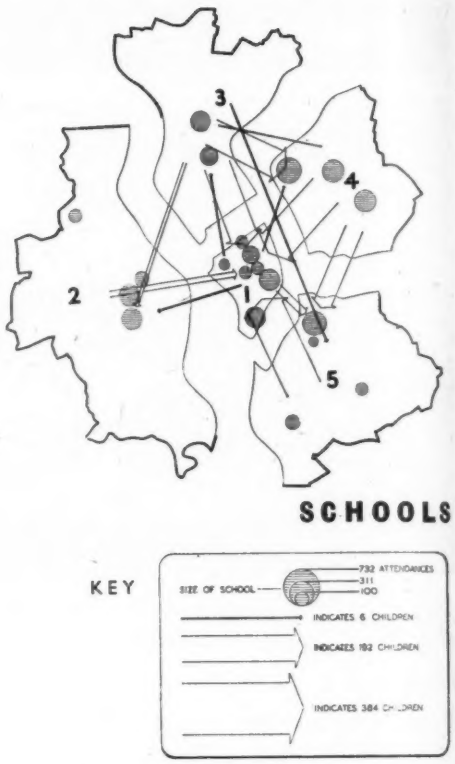
The primary influences on the City development pattern are the physical conditions already mentioned—the River Severn, the wide area of land liable to flood on either side, the convenient foundation of gravel deposits running parallel to the river and above the flood level, and finally the higher ground to the east of the river. The first element in the pattern to be superimposed on the physical basis is the road system. Worcester bridge provides the only road crossing of the Severn for 5½ miles up and 8½ miles down stream, a circumstance which has formed a radial road system embracing a wide area of countryside. This road system converging on Worcester includes the A 38 connecting Birmingham to Gloucester and Bristol; A 449 from Wolverhampton and Kidderminster to Malvern (and via A 40 to South Wales); and A 44 which, coming from Mid Wales, continues to Evesham and eventually connects with the A 34 to Oxford and London. The railways are the second element in the pattern. Lines from Birmingham and the North separate in the centre of the City area, the line to Hereford branching sharply west and crossing the Severn a short distance upstream from Worcester Bridge, while the other line veers south-east to Bristol and Oxford. The third element is the Worcester-Birmingham Canal, which leaves the Severn to the south of the City and, after curling round the central area, follows a course parallel to the river for a long mile.

The pattern of built-up area is governed by one or all of these considerations. Old-established industries such as gloving, milling and porcelain manufacture which use or used water transport are sited alongside river or canal, while the newer engineering concerns show a tendency to site near the railways and main roads. The central area, well defined by the river, canal, and the rail line to Hereford, is a congestion of markets, shops, offices and factories intermixed with what is for the most part substandard housing, and the open spaces of clearance areas already dealt with. The western bank of the river has not developed to the extent of the eastern. The most pronounced development has followed the main north-south road which forms the backbone of the City. From it branch a great number of short side roads which are terminated by the river on the one hand and the canal on the other. The road provides frontage for most of the principal buildings of the City, including the Shire Hall, Guild Hall, Cathedral, cinemas, several churches, and a large proportion of the City's shops. The other main roads have attracted development in a varying lesser degree and this ribbon development has caused an unnecessary increase in distances within the City.

SURVEY



POPULATION



SCHOOLS

Above, a map showing an estimate of the residential population of Worcester in 1944 (excluding temporary wartime intrusion), each dot signifies five persons. On the right, the generalisation of the movement of children from home to school. Elementary schools are indicated by shaded circles of a size varying according to the number of children attending. Children travelling to schools outside the area in which they are resident are shown by arrows pointing to the area to which travel is made.

Three other principal contributors to the City-pattern are:— The small airfield sited to the north-east causing nuisance through its craft taking-off over the City against the prevailing wind; the sewage works on the western bank of the river in the south-west of the City, the penetrating odour of which is carried over the City by the wind from this direction; and finally the docks, a terminal for 300-ton barges, and situated at the junction of the canal and river.

economic potentialities

The position of the City near the Midland Conurbation and commanding main routes to Bristol and South Wales, together with its comparatively high proportion of services, suggests it as a convenient reception area for Birmingham factories that may be decentralized under a comprehensive regional plan. The resulting increase in population would, in view of the low density of existing development, encourage more economic functioning and by producing higher salaried posts, attract a better qualified local government official. A minimum desirable increase of 15,000 to Worcester's present population is suggested. Side by side with a limited industrial expansion should come development of the tourist and holiday trades. Rural areas, with a wider availability of water and electricity and a tendency for their scattered populations to concentrate, will become less dependent on the City for some shopping and social services. On the other hand, this will be offset by increased travelling facilities and the continuation of the agricultural expansion initiated by the war. Progress in farming technique will make heavier demands on the City's function as an agricultural servicing, processing and marketing centre.

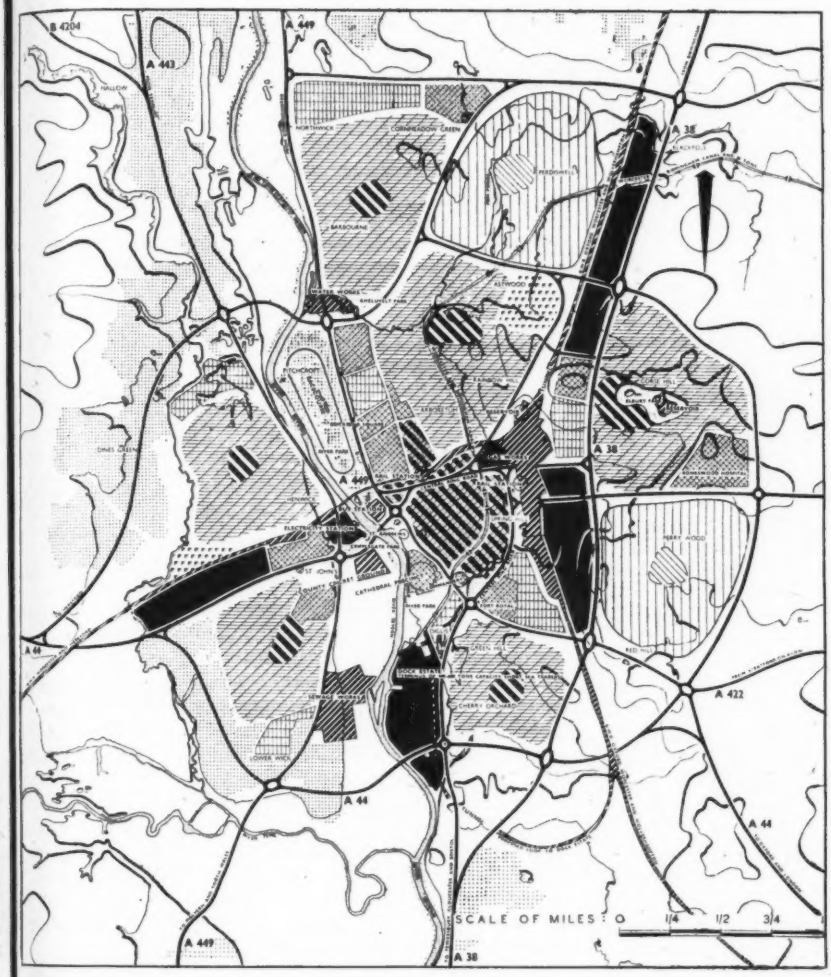
main-road system

The 1938 Road Traffic Census shows A 38 to be the most heavily weighted north-south route in the West Midlands, and Worcester Bridge to carry an average daily load of 19,920 tons. These are salient features of Worcester's road system. In order to achieve the desirable limited industrial expansion or even to maintain its present economy, Worcester must provide or encourage the provision of efficient facility for A 38 and the other main regional and national routes converging on the City. The bypass at its best is a poor solution and when constructed to avoid a town usually succeeds in attracting the town towards it. Existing roads should as far as possible be retained and adapted to allow an efficient circulation system to come into being without undue waiting for property to outlive a useful life. It is essential that access to these roads should be strictly limited.

waterways

The Severn Commission has sponsored an improvement scheme of the river which, if carried into operation, would add considerably to the City's importance as an inland port. Under the scheme, short sea trading vessels of 600 tons and specially designed craft of 800 tons would be able to pass up river as far as Worcester and thus make direct communication to other British ports and the Continent. Further proposals of the Scheme would make possible the navigation of 300-ton barges to Stourport and afford connection for 100-ton barges from Stourport to the Mersey. Worcester was selected as a convenient terminal point owing to its situation near the Midland industrial areas. A rail connection to the Worcester-Oxford and Bristol-York lines is planned.

The basis of traffic reorganization begins with an assessment of the location of the factors causing the traffic, and, if this is proved to cause unnecessary movement, the remedy should be the relocation of these factors and not necessarily an improvement in traffic facilities. A Zoning Plan should be so organised that all internal movement is reduced to a minimum. Factories should be grouped in economically-sized units adjacent to the means of transport best suited to their requirements. Dwelling areas should be located to obviate



PROPOSALS

- INDUSTRIAL LAND USE
- LAND OF MINISTRY OF AGRICULTURE CLASSIFICATION A, A_2
- SPECIFIED USE
- NEIGHBOURHOOD HOUSING AND FACILITIES INCLUDING NURSERY SCHOOLS AND ALLOTMENTS
- NEIGHBOURHOOD CENTRES INCLUDING SHOPS AND OFFICES FOR LOCAL REQUIREMENTS
- INDIVIDUAL HOUSING DEVELOPMENT
- CITY CENTRE, COMMERCIAL, ADMINISTRATIVE AND SOCIAL
- PARK PROVIDED WITH HOTELS CAFES AND AMENITIES FOR TOURISTS AND HOLIDAYMAKERS.
- CHURCHES, HOSPITALS, POST PRIMARY SCHOOLS AND BUILDINGS PRESERVED FOR THEIR CULTURAL VALUE.
- CEMETERIES
- DEVELOPMENT SITES FOR NEIGHBOURHOOD CENTRES.
- DEVELOPMENT SITES FOR NEIGHBOURHOOD HOUSING.

Above, map and key showing traffic circulation and zoning, based on and incorporating conditions as in 1945. The main road system shown in this simplified map demonstrates a method by which Worcester may retain its command of the main regional and national routes converging on the City and yet provide direct and unimpeded facility. The system retains existing roads as far as possible, and within this framework of main traffic routes a developing City could gradually conform. Below, proposed river front development described on page 450.

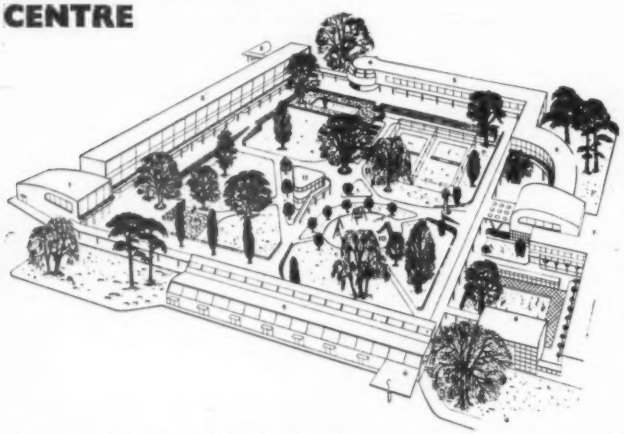
long journeys to work. The implied concentration of housing makes possible far-reaching economies in domestic delivery and collection services, and the pooling of these services to enable the maximum use to be made of the vehicles is another desirable step towards town-efficiency. Before a comprehensive scheme of re-location can be made, it is an essential preliminary to determine those factors that should be left unchanged. Apart from structures and plant likely to maintain a long-term working efficiency, these are covered by (*a*) land of high agricultural value, and (*b*) sites and buildings of æsthetic or historical interest.

relocation

Many of Worcester's factories receive their raw material by rail or water and dispatch their finished products by road, and this suggests the siting of factories in the form of Industrial Estates between the main roads and the rail or waterways in order to obviate the movement of goods through streets. The estates should also be planned in relation to residential areas in order to minimise travel to work, but in Worcester, with its maximum internal bus journey only 13 minutes, this is not the important consideration it is in larger cities. Worcester over the past thirty years has favoured a low-density development of mainly detached and semi-detached houses sited as already mentioned, without regard to any coherent plan. To provide services and amenities on an economical basis it is essential to concentrate populations, and, wherever possible, encourage vertical rather than horizontal development.

Residential areas should be replanned in the form of neighbourhood units that should consist of a population of 7,000-10,000 persons and that should not exceed an area of 200 acres. Housing must essentially be provided with regard to the age structure of the population, size and type of family, etc. Growing children need a garden play-space and would be most suitably housed in two- and three-floor terrace dwellings. The three-floor type (for larger families) shows a saving in land and may provide a garage and covered play-yard on the ground floor as well as offering a solution to the problem of front to back access. Flats can provide satisfactory accommodation for other types of family—single persons, couples without children, adult families, and the aged or infirm, who should be given the opportunity of living on the ground floor

NEIGHBOURHOOD CENTRE



A proposal for a Neighbourhood Centre, showing (1) cinema, (2) shops, (3) bus stop, (4) library, (5) offices, (6) health services, (7) school and social centre, (8) gymnasium, (9) workshops, (10) childrens' playgarden, (11) cafe or public house.

and provided with small private gardens. The density of this type of neighbourhood development makes possible the provision of district heating and hot-water supply. The *Report on the Severn Barrage Scheme*, HMSO, 1945, asserts the feasibility of using energy from the Barrage for thermo-electric heat stations for towns within a 50-mile radius (which would, of course, include Worcester). Suitable areas should be prescribed for development by persons not desiring to take advantage of the economic facilities and services of the neighbourhood development. As far as the exigencies of site allow, local shops and social facilities should be grouped to form a natural focal point for the neighbourhood. Provision of these services is relative to the distance of the neighbouhood from the City centre.

central facilities

The problem of the City Centre is essentially one of reconciling the concentrated daytime business and shopping, and the evening social populations with efficient and safe circulation. An inner ring road, already existing in embryonic form, should define the Centre and prevent through-traffic, and at the same time connect the two rail stations with the terminus for outside bus services. Within the central area, the process of renewal should be directed to the grouping of all buildings, commercial or administrative, in the form of precincts. The buildings forming the precincts should be varied in height to allow sunlight to penetrate and to prevent excessive shadowing of pedestrian walks. The ground floor of the buildings should be left partially free to allow instant access from service roads and car and cycle parks to the interior of the precincts, and loading bays should be provided at the rear of shops. Pedestrian access to neighbouring precincts would be provided by subways under the traffic roads or by light bridges.

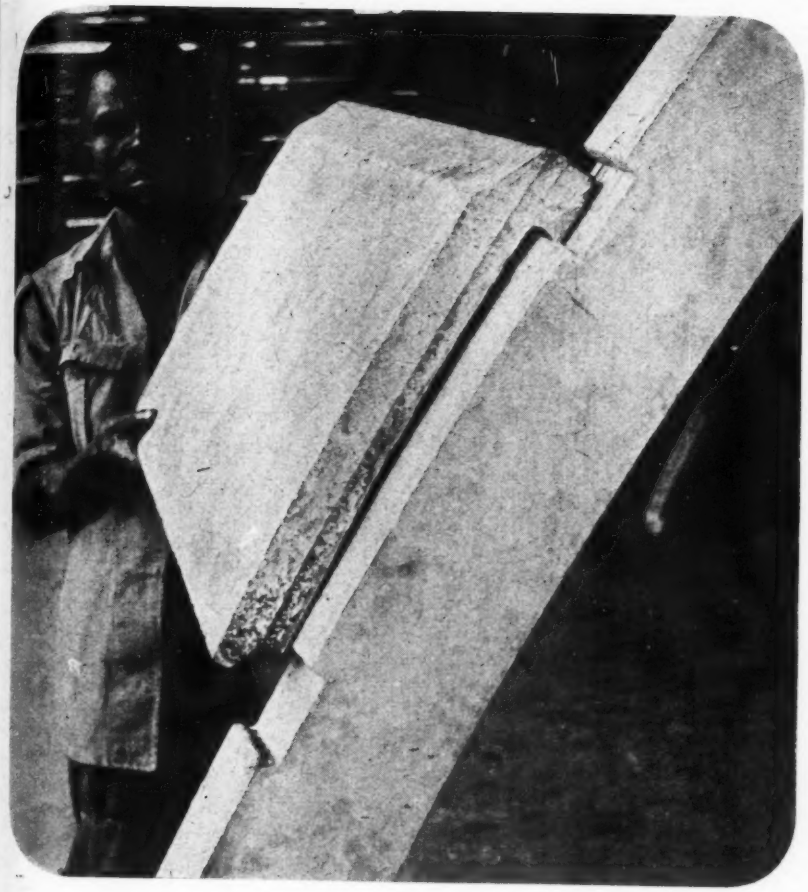
amenity and visual planning

Six years of war economy would leave an impression on the amenity and appearance of any city, but, even during the pre-war era, Worcester did little to expoit the natural beauties of its site and structural situations. Development of our Tourist Industry is now of national importance. The sterilization of the wide area of land liable to flood has provided the basis for a great River Park following the course of the River Severn through the City. The present front of the river is marred by advertisement-decorated warehouses, dumps, and obsolete factories—these last close to the Cathedral. The factories and warehouses need resiting in the specified industrial zones to allow a scheme of unified landscaping that would incorporate the existing Racecourse, County Cricket Ground, two churches, the Deanery, Cathedral, and College Green. The Electricity Station sited on the west bank near Worcester Bridge is not an offensive building and may be improved by the painting of its dramatic gantry and chimneys the attractive pale grey used by the Severn Commission for their transit sheds, though the practicability of this colour remains to be seen.

The slender spire of St. Andrew's is second only to the Cathedral in the importance of its contribution to the Worcester landscape. It is unfortunate that this church has fallen into dereliction, but the A 44 road runs between the church and the new Police and Fire Stations and sooner or later the twining of the road may necessitate the demolition of the body of the building and the running of a pedestrian-way through the base of the tower to provide the space for the dual carriageways. Every effort should be made to preserve the tower and spire under any circumstances. The natural levels of the river bank near St. Andrew's offer a possible site for an amphitheatre for open-air concerts, drama, etc. A Civic Hall should also be incorporated in the scheme, and hotels (a serious deficiency in Worcester) should be sited to take advantage of the magnificent view south-west to the Malvern Hills. A convenient site for the new bus terminal is presented by an open space adjoining Worcester Bridge and providing immediate access to all the routes leaving the City.

If the Severn Commission Scheme for taking 300-ton barges up-river to Stourport is put into operation it will necessitate structural modification to Worcester Bridge. This is a five-span bridge built in the early nineteen-thirties and will require an additional height of five feet to accommodate the proposed traffic. The present levels would allow the provision of pedestrian subways under the road carried by Worcester Bridge and with the embanking that would be necessary with any increase in the height of the bridge, it would be possible to construct a road subway to serve the new bus terminal. The only swimming facilities in the City are provided by the river, but a scheme has long been mooted to construct baths near the Power Station and utilize its waste heat. Other opportunities to improve the amenities of the City are provided by the Worcester-Birmingham Canal, which, with its interesting ramped access to road crossings, would prove an attractive asset if landscaped with paved walks and occasional gardens.

The fine heritage of old buildings is often offended by their surroundings. Advertisements need encouraging to the more appropriate positions that can be provided in the planned city environment, enlivening the walls of subways and similar situations. Allotments are most extensive in Worcester, and though the demonstration they make of the industry of citizens is pleasant in itself, they could be considerably improved. Cemeteries also form an important land-use that suffers from lack of visual planning. Cremation gains slow ground, but until it can replace earth burial a move should be made towards the level turfing of graves and the grouping of lettered records in the form of single memorials. Side by side with the visual planner must work the economist, and both have an unenviable job when dealing with a town holding associations for people who may be largely conditioned by the surroundings they have grown up in.



Left, a concrete hook-on slab being held in position on a curved standard. Below, a prototype hut with curved sides incorporating the ventilating slabs ; joints were left open in this demonstration house.

HOOK-ON SLAB

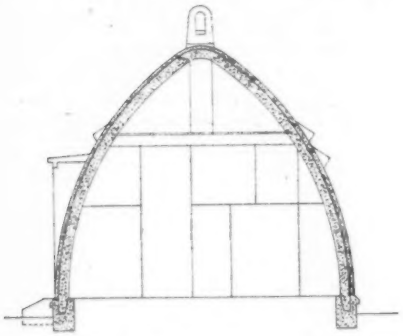
REINFORCED CONCRETE SYSTEM

DESIGNED BY E. MAY

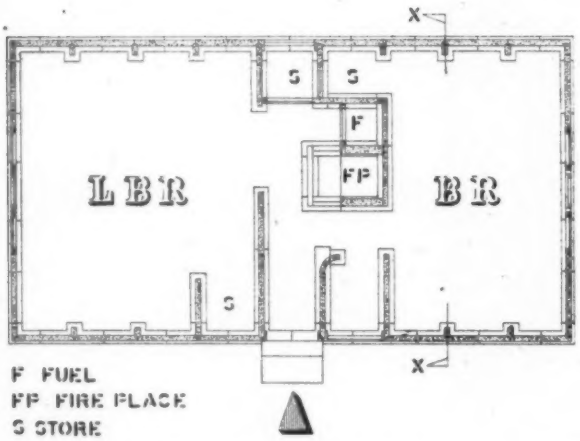
GENERAL—This is a system of precast concrete slab construction invented and patented by a Nairobi architect and town-planner. Hook-on slabs may be used as external wall coverings to any type of building, regardless of height, provided that the supporting structure is designed accordingly and that standards along the outer walls are spaced at 3 ft. 0 in. centres.

Two prototype houses have been built to demonstrate the system—one having a pitched roof and the other, illustrated here, having curved sides.

FRAMEWORK.—This consists of precast reinforced concrete standards, 3 in. by 6 in., at 3 ft. 0 in. centres. These rest in precast

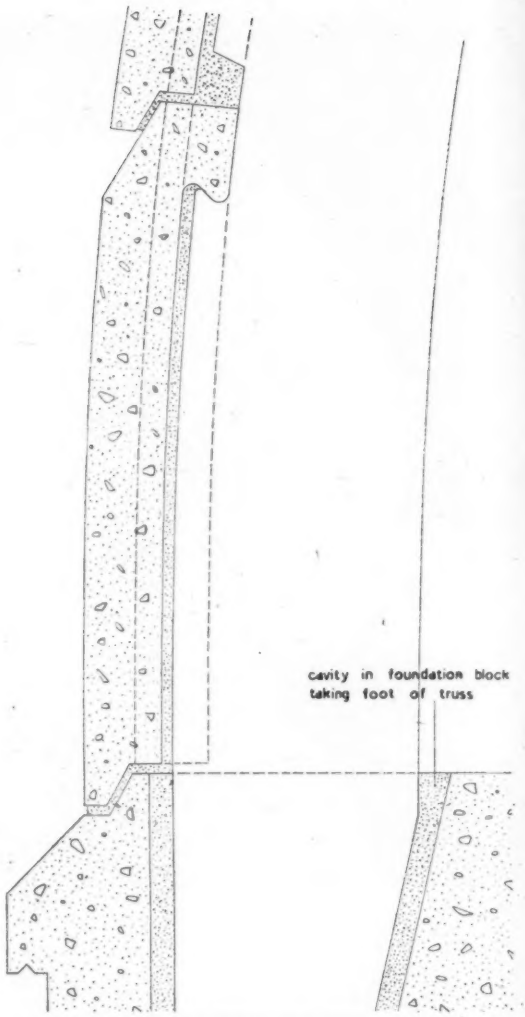


SECTION XX THROUGH HUT WITH CURVED SIDES

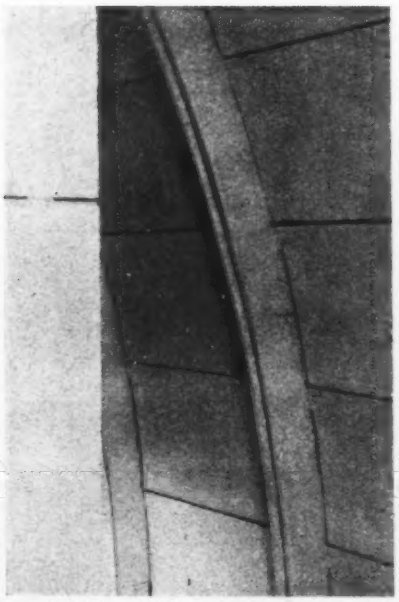


F FUEL
FP FIRE PLACE
S STORE

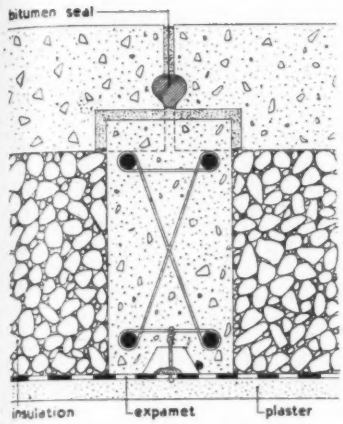
PLAN OF HUT WITH CURVED SIDES [Scale: $\frac{1}{8}$" = 1'0"]



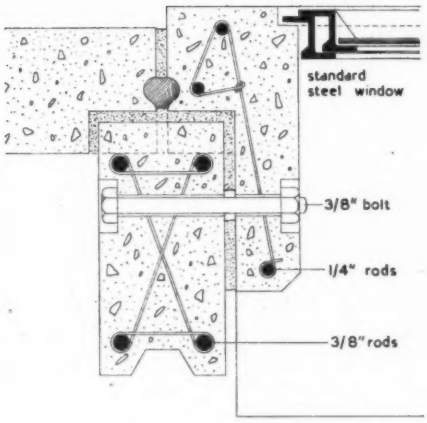
¼ FULL SIZE SECTION OF WALL



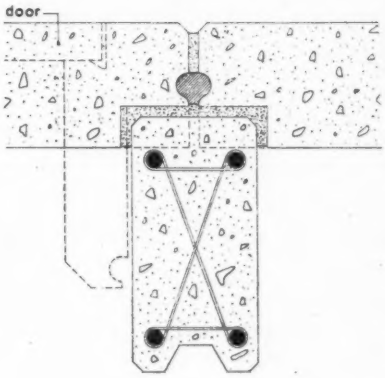
Left, one of the reinforced concrete curved standards in position. Centre, view of interior of wall. Right, close-up showing door and window construction of precast elements, and ventilating slabs ; joints are shown without their mortar filling.



PLAN DETAIL OF WALL IN BUILDING WITH VERTICAL WALLS HAVING HIGH THERMAL INSULATION. [½ FULL SIZE]



PLAN DETAIL OF WINDOW JAMB IN HUT WITH VERTICAL WALLS. [½ FULL SIZE]



PLAN DETAIL OF WALL OF HUT WITH CURVED SIDES SHOWING JOINT BETWEEN SLABS. [½ FULL SIZE]

concrete blocks with tapered recesses which form sockets to take the ends of the standards. By lining up the foundation blocks at the correct 3-ft. centres, spacing of the standards is automatically assured.

CLADDING SLABS.—The standards have slots recessed into their outside edges which receive the hooks on the upper corners of the concrete slabs. These slabs are hung in horizontal courses with their lower edges overlapping the upper edges of the course below. By means of the hook-on device, the slabs are easily adjusted even by unskilled labour. (The prototype hut shown here was erected by unskilled African natives under the supervision of an Indian artisan.) The slabs are bedded on to the standards and against each other in mortar.

Channels are formed along the sides of the slabs during manufacture which are filled with bitumen during construction, the outside of the joints being pointed with mortar. The bitumen is thus protected and does not decompose quickly.

RIDGE SLABS.—Special ridge slabs are laid over the ridge pieces which connect the standards in the prototype with curved sides, and overlap the joints. They are held in position by their own weight.

GABLE WALLS.—Gable and partition walls can be carried out in any of the usual methods. In the case of the prototype, large concrete slabs are used which have hexagonal grooves along their edges which are filled in with fine concrete. There are similar grooves between the slabs and the standards. Horizontal joints are tongued and grooved.

DOORS AND WINDOWS.—Door and window openings are formed by precast concrete surrounds. The jambs, in the case of the curved standards, have vertical outer edges, the inner edges taking up the curve of the standards and overlapping them with flanges. Interlocked with each pair of jamb slabs is a lintel slab, which fits into the slots in the standards at its back edge and interlocks at each end with the jambs. Window cills are also precast. Door openings are constructed in the same way.

In the case of designs with vertical walls, door and window jambs are fixed in position by means of two bolts securing them to the vertical posts.

FLOORS.—The foundation blocks referred to also form the framework for the floors. Any type of floor may be used, from the most primitive, such as rammed Laterite over processed clay, to cork or rubber over concrete.

THERMAL INSULATION.—In extreme climatic conditions where greater thermal insulation than can be provided by the slabs alone is needed, the inside of the walls can be faced with insulating board, or, for greater insulation still, with plaster on expanded metal forming a space which is filled with peat, diatomite, pumice or similar material.

WATERPROOFING.—Under subtropical conditions a double coat of waterproof limewash applied externally to the slabs offers sufficient protection against penetration of moisture. Alternatively, a spray coating with any of the resin paints can be applied. For high-class work a coating of terrazo is recommended.

VENTILATION.—Where special ventilation, apart from that through the windows, is required, special vent slabs can be inserted in place of the standard slabs.

HOOK - ON SLAB R. C. SYSTEM

INFORMATION CENTRE

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

PHYSICAL PLANNING

2585 **Green Belt Cities**

GREEN-BELT CITIES: THE BRITISH CONTRIBUTION. *F. J. Osborn.* (*Faber & Faber*, 1946, 12*s.* 6*d.*) Garden City Movement. Critical examination of Letchworth and Welwyn Garden City. Future development of green-belt cities. Historical origins of green-belt principle. Select book list. Illustrated.

In the introduction Mr. Osborn states that the book " is concerned with a strangely neglected social issue: that of the size of towns and the disposition of towns in relation to the countryside." The examination of this major problem is divided into three parts.

Part One: The Garden City Movement: A Revaluation. Ebenezer Howard in his book *Garden Cities of To-morrow*, published in 1898, started the garden city movement. As this book has been neglected and left unread to a large extent even by specialists, a summary of Howard's argument and proposals in the light of the modern approach to the urban problem is given. Howard's main proposals were the following:

Planned Dispersal,
Limit of town-size,
Amenities,
Town and Country Relationship,
Planning Control,
Neighbourhoods,
Unified Land-ownership,
Municipal and Co-operative Enterprise.

The practical outcome of Howard's book is described in—

Part Two: The Working Models Examined, which contains an examination of the methods by which the two garden cities Letchworth and Welwyn Garden City were built. It is stressed that the two towns are very different from each other. There are differences of topography, of regional situation, of the personalities taking part in their physical, social and cultural development, and of the date of their foundation. Letchworth was founded in 1904 when " the idea of starting a town *de novo* was looked on as just madness." Welwyn was started in 1920, " when town planning was in existence and . . . was identified in the public mind with openness of layout and . . . housing was being accepted for the first time as a public responsibility."

The main aspects of development for both towns are considered in parallel.

Part Three: Green-Belt Cities: The Future. This part of the book considers some of the practical lessons to be learned from the Letchworth and Welwyn experiments. The first aspect discussed is a proposal for a national policy of dispersal. After explaining the meaning of dispersal, an attempt is made to estimate " how much dispersal from congested cities is needed to bring their density down to a point at which their remaining citizens can find the right amount of space for their life and work." It is stated that the answer must depend on the standard of density to be adopted in central rebuilding and on the future size of Britain's population.

New towns and expansions of existing country towns are then discussed as ways and means of dispersal. In regard to the siting of new towns it is suggested that there ought to be powers of initiative and guidance, and powers of veto, in the hands of a central state department assisted by regional planning control.

A new town designed for modern industry and employing people living on the spot should cater for a population of at least 30,000 and not exceed 50,000. It is estimated that the land needed for a population of 30,000 is at least 2,000 acres, and that for a population of 50,000 amounts to 3,333 acres based on an average of 15 persons per acre.

The designated country belt of a new town should preferably be in the same ownership as the area to be built up, so as to co-ordinate the planning of the town area and the farmland most closely related to it. The zoning of country belts around all towns should be regulated by statutory planning schemes. There should be definite zones of permanently reserved open land between a new town and an existing country town nearby. As a desirable minimum distance between the building limits of any two small towns a distance of two to three miles is suggested.

As regards finance, the sites of new towns should be acquired by compulsory purchase.

In choosing a body to promote and build new towns, Howard's method is described as the best, namely, "the ownership of the town site by a body having the freedom of action of private enterprise, with a limit on its profits." The ownership of a town site is a powerful economic monopoly, especially in dealing with any attempts at anti-social exploitation in regard to compensation and betterment.

Appendices: In the first appendix to the book the author provides an interesting note on the historical origins of the green-belt principle, beginning with the Levitical cities of Palestine. The second appendix contains a note on town development terminology, and the third appendix gives significant quotations from the *Prospectus of First Garden City, Ltd.*, 1903, and from the statement of the *Provisional Board of Second Garden City*, 1919.

STRUCTURE

2586 **19th Century Train Sheds**

19TH CENTURY TRAIN SHEDS. *C. L. V. Meeks.* (*The Architectural Forum, February*, 1946, *pp.* 104-109.) Development of railway sheds in England and USA.

Covered loading for the train was the inspiration for the remarkable series of train sheds of the middle of the 19th century. The development started with Crown Street Station in Liverpool in 1830, designed by George Stevenson. He used wooden trusses of the Queen type of 48 ft. span. The next important example was Euston Square Station in 1837, a two-span shed, designed by Philip Hardwick. Trusses were composed of both wooden and cast-iron members. Here the principle of separating departing and arriving passengers was already adopted. Derby Station, designed by Francis Thompson in 1839, was the biggest in the world at this time. It had three spans of 42, 56 and 42 ft. and was 1,000 ft. long. The material used in the trusses was wrought iron, they were supported on cast-iron columns and masonry walls. The need for more tracks under the shed, and for more daylight, led to the adoption of the arch system. Kings Cross Station, built in 1851 and designed by Lewis Cubitt, has two arched spans of

First Grand Central Station, New York, 1871, which was the largest interior in the USA at that time, being 200 ft. wide and 600 ft. long. Its open-web arched girders, probably imitating those of St. Pancras, are of cast and wrought iron. See No. 2586.

105 ft. Terminal facilities are grouped along the sides of the sheds, whose ends are allowed to dominate the station's entrance façade for the first time.

The layout of Kings Cross was repeated and enlarged in Paddington Station in 1855, by I. K. Brunel, engineer, and M. D. Wyatt, architect. Three spans of 68, 102 and 68 ft. were provided.

The peak of England's train shed development was reached when all tracks, platforms and carriage ways were placed under a huge single span created by arched open web girders using steel. This was achieved at St. Pancras Station in 1866, by W. H. Barlow. The shed was the largest single-span interior in the world, being 210 ft. wide, 90 ft. high and 660 ft. long.

St. Pancras formed the prototype for many subsequent stations and exhibition halls in Europe and America, e.g., the First Grand Central Station of 200 ft. span in New York in 1871. The Galerie des Machines at the Paris Exhibition in 1889 was probably the largest single-span structure ever built. It was 362 ft. wide, 147 ft. high and 1,386 ft. long.

The end of the great train sheds in both England and America was caused by the same force that created them: expanding traffic. With the opening of the 20th century, all important terminals needed more and longer platforms and greater space for crowds in a concourse heading all the platforms. It was found that lower sheds over each platform were more efficient than a single towering shelter and the majority of stations erected since 1905 have had small sheds of this individual platform type.

2587 **Timber**

ADVENTURES IN LUMBER. *David Pleydell-Bouverie.* (*The Architects' Journal, February* 21, 1946, *pp.* 159-163.) Short report on war-time development of timber structures in USA.

LIGHTING

2588 **Fluorescent Lighting**

DESIGNING WITH FLUORESCENT LIGHTING. *M. Luckiesh.* (*Architectural Record, December,* 1945, *and January,* 1946.) Reduction of brightness contrasts. Elements of good factory lighting. Excellent illustrations.

Part 1 of this article commences with a summary of the main factors in good lighting somewhat as follows:—

1. There must be adequate light on the work.
2. Intensity of light at the eyes of the worker should be only a fraction of that on his work.
3. Ratio of brightness between light sources and the general environment must be kept low.

The remainder of the article consists of a series of photographs of factory interiors showing lighting which ranges from bad and contrasty to very satisfactory conditions; these are accompanied by instructive notes. For instance it is demonstrated that while tungsten fittings often seem glaring because of the high source brightness, fluorescent lamps can also be very annoying in this respect. Then he shows how contrasts can be reduced by light floors and ceilings and by turning part of the light upward. Finally there is some reference to colour in factories.

In Part II there are further excellent examples of factory lighting and some photographs in offices. These illustrations are very good—probably the best set of photos of illumination in practice published for many years.

Summarizing factory lighting, the author's main points are these.

1. When extremely critical seeing has to be done for long periods, localized lighting in addition to the general lighting is best.
2. With supplementary localized lighting intensities of the order of 100-500 foot-candles are now easily obtained.
3. Localized light should never be used alone.
4. With proper localized light the operatives can avoid or utilize specular reflection, whichever is needed for their purpose.
5. In drawing offices where long rows of fluorescent tubes are used, it is best to run the tubes and desks at 45 deg. to one another. This gives almost completely shadowless lighting. An intensity of 80-100 foot-candles on blue prints is moderate.

In offices, of course, many of the same principles apply as in factories, but this additional note is worth mentioning. At present, with fluorescent lighting, the general level now being aimed at in offices is about 50 foot-candles. A case is illustrated where fluorescent tubes in continuous rows of flush ceiling panels give this intensity.

The illustration is reproduced here, and it is interesting to quote the author's note, *viz.*, "The pleasure of being emancipated from . . . . a hanging forest of fixtures can be felt. . . . This is . . . . progress towards freedom and endless opportunities for the architects of the future."

In an interesting passage at the end of the article he discusses what he believes to be the intensities necessary for what he calls the highest practicable visibility level.

He first compares the intensities necessary to make various tasks just as visible as ordinary black print (of about this present size) on white paper, seen under 50 foot-candles. On this comparison, pencil notes require 100 f.-c.; newspaper text 150; white thread on white cloth 500; dark thread on dark cloth, 2,000 f.-c. Then he remarks that the optimum value for reasonable-sized black print on white paper appears to be about 350 f.-c., which would bring it up to about the same brightness as a grass lawn at mid-day. Near a very large, unobstructed window one can often find about 250 f.-c., which he judges to be about the highest practicable value for a task such as reading, and rather implies that this would be a fairly low point in his scale, with about 2,500 f.-c. about the top.

Architects should read the full note.

2589 **Fluorescent Tubes**

FLUORESCENT TUBES FOR THE NON-TECHNICAL. *T. C. Holdsworth.* (*Light and Lighting, January,* 1946.) Simple explanations of mercury vapour lamps, ultra-violet radiation, fluorescence, lamp-starting mechanism.

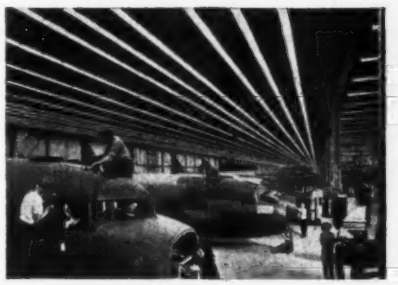
This is a very satisfactory paper. The explanations are very clear, and those who wish to understand precisely how the fluorescent lamp gives off its light should read it.

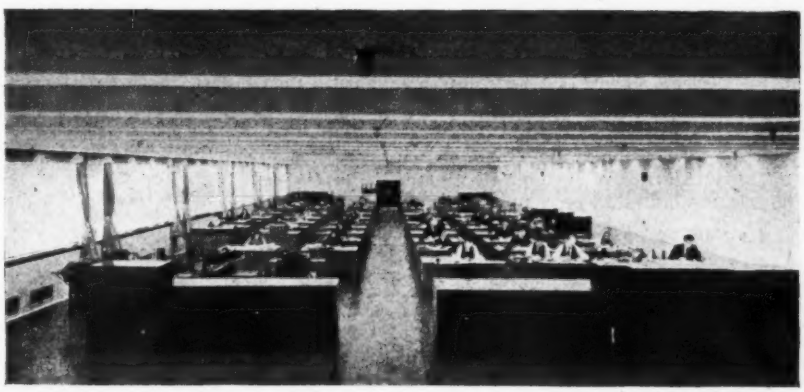
QUESTIONS and Answers

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential, and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to: THE ARCHITECTS' JOURNAL, *13, Queen Anne's Gate, Westminster, S.W.1.*

2590 **Lime Washing**

Q *I have a job to complete in an exposed area and it is proposed to lime wash on cement rendering. Can you give me a*





Top right, an illustration of common lighting defects—spottiness, shadows, dark ceilings and high contrast ratios between fixtures and background. Centre right, close-spaced continuous strip lighting in a low ceiling provide shadowless lighting approaching sky effect. Below, fluorescent lighting in strips recessed in the ceiling gives good office light without the usual clutter of hung fixtures. See No. 2588.

specification for a durable lime wash with the proportions of tallow, etc.?

A You will find references to various methods of lime washing in the *Architects' Journal* for February 15, 1945.

We have also found a recipe for lime washing in a series of notes by Professor A. E. Richardson. The proportions are: Skimmed Milk, 2 qts. Linseed Oil, 4 ozs. Fresh Slaked Lime, 6½ ozs. Whiting, 3 lbs. These should be mixed in a stone vessel and the skimmed milk added to the lime until it reaches a creamy consistency; then the oil should be added slowly and then the remainder of the milk. The whiting is added last of all and the amount given should provide enough to cover about 27 sq. yds. Professor Richardson adds that the skimmed milk should be fresh. While these ingredients may be difficult to obtain at the moment you may be interested in having the recipe.

SOCIETIES AND INSTITUTIONS

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

DIA

R. Furneaux Jordan

At the Royal Society of Arts, John Adam Street, W.C.2. Meeting of the Design and Industries Association. Paper on THE EQUIPMENT OF SCHOOLS read by R. Furneaux Jordan, F.R.I.B.A. Chairman. Maxwell Fry, F.R.I.B.A.

R. F. Jordan: To-day there are no modern schools and there is no modern equipment. There are a few schools which you could count on the fingers of one hand which were good and modern seven years ago. There is at the present time a great deal of discussion and planning going on with regard to schools and their equipment which we hope, rather optimistically, will come into existence in the next few years. At the moment, however, there are no actual modern designs which we can discuss and I do not think you would thank me for giving you a dissertation on the school equipment of seven years ago. In effect, as far as it is possible with the complicated structure of our educational system, we have to-day a clean slate. We have a new Education Act and we have had no new buildings for several years. In one sense we have gone through a considerable period of frustration but in another sense we have had time for discussion and planning.

With a clean slate and a fresh start we have a tremendous opportunity. We also have tremendous dangers to face. As designers we may perhaps have a tendency to rush everything and to think out new ideas and develop them without very much consideration. Alternatively we may decide to be more cautious and careful. Both states of mind, of course, are admirable if they are correctly worked out. In other words we have to consider how far we are tied to past tradition and how far we have to make a fresh start. We have to sort out—and it is not always very easy—the sound traditions from the good habits. Very often what has happened is that sound tradition has been thrown overboard and the bad habits have been retained.

I should like to give you two instances, one of tradition and one of bad habit, which have a direct bearing on our subject. In this country we have a tradition of great liberal education and in the past that tradition was fulfilled in various ways. Our educational system in the last four or five hundred years has contained many elements and the great men of the past were educated in devious ways. They were educated through the elementary schools and the public schools, the country rectories, the dame schools and the great universities. Those were the many ways in which the great men of this nation were produced. These ways are devious but they have one thing in common, namely, that either through their nature or through deliberate art those systems of education provided for children some form of positive and absolute beauty as a background. If one thinks of Carlyle walking through the green hills of Annandale to school, for instance, that is obvious. Through those surroundings and through his college equipment Carlyle, and others, came into contact with a beauty which influenced them throughout their lives and enriched their nation. That is an instance of what happens when there is positive beauty in the background. That was part of a tradition. There were, of course, also things of the mind and spirit.

Now we turn to the question of the bad habits as opposed to tradition. As an example, let us take the school desk. Somewhere about the eleventh century, if you were a lay brother in a monastery, you had a large tome of the early fathers to illuminate and you wanted a large sloping surface upon which to place it. You also wanted a large box underneath in which to put it away—and furniture in those days was largely a matter of carpentry. In addition there was usually a seat attached to the box with a sloping top. At the time of the Reformation the Prayer Book was changed but when the monasteries were designed as grammar schools there was no particular reason for burning the furniture and so our public schools and grammar schools inherited the tradition of the monastery desk with the sloping top and the seat attached. That, with slight modifications, has gone on to this day. Long after ordinary people had learnt to sit on chairs the school desk with the attached seat still persisted. It has lost all the charm of medieval carpentry, and in more recent years it has been specially designed to be banged about by small boys and the seat has almost been specially designed so that they fidgeted. Yet these desks have been put forward as a practical piece of furniture for a classroom.

So far as I can make out it was not until the second third of the twentieth century that it occurred to someone that children might sit on chairs at tables to do their work. I do not know who thought of it but, nevertheless, the bad habit of the classroom desk had persisted for five or six hundred years.

The material things with which we have to surround children in their schools may be roughly divided into those things which they see and use every day and those things which they do. The things they see and use include the school buildings, gardens, furniture, fabrics and decoration—all the things we can think of regarding school equipment in the widest sense. Then there are the things they do and we, as designers, are concerned with those. It has somehow got about that William Morris said that things would be killed if they were made by machines. He did not say that but that they would be simpler if they were made by hand. If people are to appreciate beautiful things I am sure that the connection between hand and brain has got to be restored. I believe that there has never been any contentment in the world greater than that of the medieval mason working on a cathedral with complete synthesis of brain and hand. That has not only got to be taught to children but the schools have got to be equipped for it. That means that a full programme with regard to craft rooms must be carried on and extended and those rooms must be fully equipped so that the children can get that contentment which is to be derived from making things. When a child begins to make things then he will begin to appreciate the things round him.

Thus, through the craft rooms and practical rooms and through the development of their equipment we shall prevent the passivity of our civilization. The listening, reading and looking at things which the cinemas provide for children instead of doing things, has got to be destroyed. I think that passive entertainment has become one of the curses of our civilization and until the craft rooms and practical rooms of our schools, used both by children and adults, have become an essential part of life we shall not have conquered the local cinema.

That is one of the first steps we must take in the right direction. That brings me to the subject of the school which we have got to equip. I am not proposing to outline the educational system of the primary and secondary schools but I expect you know that Mr. Morris, as an education officer, and Gropius in Germany, developed the village school before the war to a very high standard indeed. One of the greatest tragedies of the war is that that village college programme has had to be closed down for six years. Nevertheless, the village college, which provided just the kind of thing I have been talking about for children and adults, serving several villages, was established and it is working and is a success. In this country there are 146 education offices. Supposing that they each produced seven village colleges in the next ten years. We should then have a thousand village colleges and I believe that the values of civilisation could be restored that way almost more quickly and better than in any other way. It would mean a spiritual revolution and a revolt against urban values. In a different setting, I believe that the village college, fully equipped in a beautiful environment, would be the equivalent in the 20th century civilisation of the monastery in the previous civilisation.

That means, I think, that we have got to consider the whole problem of design of equipment afresh. Before the war we had achieved a certain rather admirable negation. We produced an efficient, svelte and negative kind of design in many of the things which we put into schools. It was as though recent generations had been paring away the Victorian excrescences. That was a very good thing to do but I believe that we are now coming to a period when we can say that that has been done. If you consider the furniture in the best schools before the war, you will find that it has achieved that simplicity which comes from efficient design. Now we have got to start from where we

left off rather than go back and we have to recognise that the paring away of those stylistic expressions of the Victorian era has been done. We now have to put colour and gaiety into the surroundings of our children in the schools.

There is just a little more I want to say about school furniture itself. I cannot deal with school furniture in detail, but I think that there are three main points in connection with it. The first one is the obvious point about fitness for purpose which almost goes without saying. It involves the basic design of each type of furniture, the overall dimensions and placing of fittings and the first functional diagram which we must draw up before we begin on the refinements which we call design. In that connection past experience will be valuable. A great deal of work has been done once and for all. Now we have to start from there and add something rather better to it.

The second point is a matter of hygiene. By that I mean that the school furniture must be hygienic and must have a minimum of grooves and projections. It should not impose bad hygienic conditions on its users which was exactly what the old school desk did. The old school desk forced people to sit in awkward positions. Another hygienic condition is that the furniture shall be easily movable for cleaning or so that the floor can be cleaned. If it is not movable it must be completely built in.

The third point is lightness which is connected with movability. It is also connected with the æsthetic side of furniture design because light furniture is more likely to be in harmony with the lightness of the modern school buildings. We have got to ask ourselves whether strength and clumsiness are inseparable. I think it is possible to have strength without clumsiness. I also think that furniture can be light so that it can be moved in and out of the rooms in schools. We must remember that many rooms in our schools are likely to be multi-purpose rooms. A dining-room for instance, may have to be used as a rest room and if so the furniture must be light and preferably of the nesting type. There are metal types of furniture and folding types but the nesting type must remain part of school equipment.

That brings me to a fourth point, which is rigidity and durability. They are essential because there is no furniture in the world which gets greater wear and tear than school furniture. In connection with a school which I designed before the war for a mining district, I was assured that the one aim of the children would be to destroy everything. While that is, perhaps, an extreme case, the principle nevertheless applies right through the school system.

Then there is the question of appearance. The whole question of the function of furniture, its form and its colour, must be carefully reconsidered, and I am inclined to think that positive colours are better introduced into a school in the furniture and cupboards rather than on the big spaces of the walls and ceiling. Appearance, of course, involves the question of unity. If the metal type of furniture is considered the best for a dining hall, then I think you must consider whether some sort of unity must run through the whole school. I am not sure that the ideal classroom chair has yet been devised. At one of the Cambridge colleges they have used the Windsor chair, but I think that is rather a defeatist solution. It is not very much in harmony with modern furniture and buildings.

Announcement

Mr. Gordon K. Denniss, F.S.I., 13, Warham Road, South Croydon, Surrey, will be glad to receive trade catalogues especially in relation to housing.

VISION

MEN of vision detect even in these uncertain times, a prospect of transforming National life—of building a new and nobler Britain in which one and all must make some practical contribution. In all classes of our people there is unmistakable evidence of a strong will to National recovery and substantial social betterment. High up on the list of priorities to serve these worthy ends is the urgent need for reconstruction.

It is unnecessary to tell Architects, Engineers and Builders who have long been in practice, the advantages of Ruberoid Products. But those who have only recently qualified or who have returned from war service will inevitably find that the specification of a Ruberoid Built-up Roof will be recognised as evidence of sound professional judgment.

RUBEROID *Roofing*

ARCHITECTS, ENGINEERS AND BUILDERS are invited to write for Ruberoid Publication No. 326 entitled "Standard Specifications for Ruberoid Roofs."

Ruberoid Contract Departments located in London, Birmingham, Manchester, Newcastle, Edinburgh and Belfast, promptly undertake work on any scale and in any part of the country. Estimates sent on receipt of particulars.

THE RUBEROID COMPANY LTD., 1, Commonwealth House, New Oxford Street, London, W.C.1

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

Six lines or under, 10s.; each additional line, 1s. 6d.

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

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

BIRMINGHAM CENTRAL TECHNICAL COLLEGE, SUFFOLK STREET, 1.

DEPARTMENT OF BUILDING AND STRUCTURAL ENGINEERING.

Applications are invited for the full-time appointment as ASSISTANT TEACHER OF BUILDING CONSTRUCTION and associated subjects. Salary will be in accordance with the new Burnham Technical Scale. Basic scale: £300—£15—£525. Additions to the scale may be given for academic or professional qualifications, and the commencing salary will depend upon professional or industrial experience.

Applicants should preferably be Associates of the R.I.B.A., with good professional experience.

Conditions of appointment and form of application may be obtained from the College on receipt of stamped, addressed, foolscap envelope.

The last day for receipt of applications is 29th June, 1946.

E. L. RUSSELL,
Chief Education Officer.
824

BOROUGH OF EALING.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the appointment of Two Architectural Assistants, at a salary in accordance with the National Scale of Salaries, A.P.T. 3-5, £390 per annum, rising by annual increments to a maximum of £510 per annum, plus cost-of-living bonus, which is at present £59 16s. per annum. In the first instance the appointments are temporary, but there is a possibility that they may become permanent.

Preference will be given to applicants who are Associate Members of the Royal Institute of British Architects and Registered Architects, and have had experience in Municipal works, including Housing.

Applications are to be made on forms to be obtained from C. W. Seddon, Borough Engineer and Surveyor, Town Hall, Ealing, W.5, endorsed "Architectural Assistant," and must be delivered to me not later than 9 a.m. on 22nd June, 1946.

Canvassing in any form will disqualify.

E. J. COPE-BROWN,
Town Clerk.

Town Hall, Ealing, W.5.
3rd June, 1946. 827

CITY OF STOKE-ON-TRENT.

CITY ARCHITECTURAL DEPARTMENT.

APPOINTMENT OF ASSISTANT QUANTITY SURVEYORS (TWO).

Applications are invited for the above appointments.

Preference will be given to members of the Chartered Surveyors' Institution, competent to take off, abstract and bill quantities, prepare estimates, interim certificates, and final accounts.

Salary £460-£510. The commencing salary will be fixed within, or at the maximum, of this grade, according to qualifications and experience, plus cost-of-living bonus, at present £59 16s. per annum.

The appointments will be subject to one calendar month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Applications, stating date of birth, qualifications and experience, and particulars of present and previous appointments, together with copies of two recent testimonials, must be delivered to the undersigned, endorsed "Assistant Quantity Surveyor," on or before Friday, 21st June, 1946.

HARRY TAYLOR,
Town Clerk.

Town Hall, Stoke-on-Trent.
5th June, 1946. 850

COUNTY BOROUGH OF WEST HAM.

BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.

Applications are invited for the following appointments:—

(a) ARCHITECTURAL ASSISTANT (HOUSING), Grade "E.1."

The salary for this post is £425 p.a., rising by one increment of £30 (subject to approved service) to a maximum of £455 p.a.

Applicants should have had considerable experience in housing work under a Local Authority, and be competent to carry out detailing, etc., under supervision.

(b) ASSISTANT QUANTITY SURVEYOR, Grade "E.1."

The salary for this post is £425 p.a., rising by one increment of £30 (subject to approved service) to a maximum of £455 p.a.

Applicants should be experienced in the preparation of Estimates, Bills of Quantities, Specifications, Contract Documents, and the settlement of Contractors' Accounts.

(c) JUNIOR ASSISTANT QUANTITY SURVEYOR, Grade "C."

The salary for the post is £250 p.a., rising by two annual increments of £20 each and one increment of £10 to a maximum of £300 p.a.

Applicants will be required to carry out general duties in Construction and Accounts Section of the Architect's Department.

(d) CLERK: STATUTORY PLANNING SECTION.

The salary for this post is £335 per annum, rising by annual increments of £15 (subject to approved service) to a maximum of £380 p.a.

Applicants should be fully competent Shorthand Typists and have considerable ability and experience in the compilation of reports from details furnished by technical assistants, the preparation of Committee Reports, Indexing and Tabulation of Statistics and Records, etc. Experience in Statutory procedure connected with Acts of Parliament will be an advantage.

All salaries plus war bonus, at present £59 19s. 3d. p.a.

The appointments will be subject to the provisions of the Local Government Superannuation Acts, 1937-39, and the statutory deductions will be made. The successful candidate will be required to pass a medical examination.

The appointments are whole time, and will be terminable by one month's notice in writing on either side, and will be subject to the Council's Regulations made from time to time regarding holidays, sick pay, etc.

Application forms can be obtained from Thomas E. North, F.R.I.B.A., Borough Architect and Planning Officer, 100, West Ham Lane, E.15, and should be returned not later than Friday, 21st June, 1946.

Canvassing members of the Council is prohibited, and will disqualify.

E. E. KING,
Town Clerk.

Town Hall, West Ham, E.15.
5th June, 1946. 842

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

BIRMINGHAM SCHOOL OF ARCHITECTURE.

Director: GEORGE DRYSDALE, F.R.I.B.A.

An ASSISTANT MASTER OF ARCHITECTURE is required to teach for 20 hours a week throughout a school year of about 40 weeks. Commencing salary will be based on the Burnham Technical Scale, and will not be less than £287 10s. per annum for a suitably qualified candidate. Additions will be allowed for appropriate professional and teaching experience and war service. The appointment, which will date from 1st September, is for the school year 1946-47, but may be renewed from year to year.

Applications (no special form), stating age, qualifications and previous experience, and not more than two testimonials, must be sent to the Principal of the College of Arts and Crafts, Margaret Street, Birmingham, 3, and reach him not later than 22nd June.

E. L. RUSSELL,
Chief Education Officer.
846

COUNTY BOROUGH OF TYNEMOUTH.

BOROUGH SURVEYOR'S DEPARTMENT.

TECHNICAL STAFF.

Applications are invited for the position of ARCHITECTURAL ASSISTANT (Temporary), at a salary of £420 per annum, plus war bonus.

Candidates must be Associate Members of the Royal Institute of British Architects, and have had practical experience in General Municipal work.

Applications, stating age, experience and qualifications, and accompanied by copies of three recent testimonials, must be delivered to Mr. D. M. O'Herlihy, B.Sc.(Eng.), M.Inst.C.E., Borough Surveyor, Howard Street, North Shields, not later than the 24th day of June, 1946.

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

Dated this 7th day of June, 1946.

FRED. G. EGNER,
Town Clerk.

14, Northumberland Square, North Shields. 839

ROBERT GORDON'S TECHNICAL COLLEGE, ABERDEEN.

SCHOOL OF ARCHITECTURE AND DEPARTMENT OF BUILDING.

Head: E. F. DAVIES, B.Arch.(Livpl.), F.R.I.B.A., F.R.I.A.S.

JUNIOR LECTURER AND STUDIO INSTRUCTOR.

Applications are invited for the post of Full-time Junior Lecturer and Studio Instructor in Architectural Design and Constructional Subjects. Special qualifications in Architectural Design and Town Planning will be an additional recommendation.

The School is recognized for purposes of exemption from the R.I.B.A. Intermediate and Final Examinations.

Candidates must be Associates of the Royal Institute of British Architects, and should possess a degree or diploma of a recognized School of Architects.

Salary: Men, £400 by £15 to £595; women, £350 by £15 to £490. Initial placing according to qualifications and experience.

The successful applicant will normally be expected to take up duty on 1st September, 1946, but consideration will be given to applications received from men who may still be on National Service at that date. Applications, accompanied by copies of testimonials and the names of three referees, should be sent to the undersigned not later than Monday, 1st July, 1946.

A. C. WEST,
Director.
841

BOROUGH OF WREXHAM.

HOUSING ARCHITECTURAL DEPARTMENT.

Applications are invited for the following temporary appointments intended for duties concerned with the development of the Council's Housing Estates: the salaries are inclusive of cost-of-living bonus.

(1) HOUSING ARCHITECT. Salary £800 per annum (including £59 16s. cost-of-living bonus).

Applicants should be members of the Royal Institute of British Architects, and have a thorough knowledge of architectural work. Practical experience in the development of housing estates, the design of houses, and of the organization of an Architect's Department is necessary.

(2) QUANTITY SURVEYOR. Salary £510 per annum (including £59 16s. cost-of-living bonus).

Applicants should be members by examination of the Royal Chartered Surveyors' Institution (Quantities Section), and have had experience in the preparation of bills of quantities and estimates, measurement and adjustment of final accounts.

(3) ARCHITECTURAL DRAUGHTSMAN. Salary £360 per annum (including £59 16s. cost-of-living bonus).

Applicants should have had experience in an Architect's office, and must be neat architectural draughtsmen.

The persons appointed will be required to devote the whole of their time to the duties relating to their appointments. The appointments are subject to the Council's Standing Orders and to the successful candidates passing a medical examination, and are terminable as to the Housing Architect by three months' and the two other appointments by one month's notice in writing on either side.

Further particulars and conditions of appointment may be obtained from the undersigned, to whom applications, together with copies of two recent testimonials, are to be forwarded by not later than 28th June, 1946.

Canvassing, directly or indirectly, will disqualify.

PHILIP J. WALTERS,
Town Clerk.

Guildhall, Wrexham.
5th June, 1946. 847

EAST ELLOE RURAL DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment, in the Architects' Department.

The salary will be at the rate of £400 to £450 per annum, according to qualifications.

Applicants must be qualified Architects, and have had considerable experience in the preparations of bills of quantities, specifications, estimates and housing development, together with a thorough training in design and construction, preferably with a Local Authority.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and may be terminated by one month's notice on either side.

Applications, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, endorsed "Architectural Assistant," must be sent to the undersigned not later than the 18th June, 1946.

J. C. PYWELL,
Clerk to the Council.

Council Offices, Holbeach, Spalding, Lincs. 821

CHICHESTER RURAL DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments in the Engineer and Surveyor's Department :—

(*a*) QUANTITY SURVEYOR. Commencing salary £500 per annum, plus war bonus, at present £59 16s. Applicants must have had considerable experience in the preparation of bills of quantities and contract documents, and preference will be given to Chartered Quantity Surveyors.

(*b*) JUNIOR ENGINEERING ASSISTANT. Commencing salary £360× £15 to £405 per annum, plus war bonus, at present £59 16s. Applicants should be members of the Institution of Municipal and County Engineers, or the Chartered Surveyors' Institution, and must have had experience in water supply and sewerage schemes and the construction of housing estate roads and small sewage disposal plants.

The appointments, which are of a temporary nature, with probable duration of four years, will be subject to the Local Government and Other Officers' Superannuation Acts and the Council's sick pay scheme.

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

Applications, appropriately endorsed, stating age, qualifications, present position and experience, accompanied by copies of three recent testimonials, must reach the undersigned not later than the 22nd June, 1946.

LEONARD BAILEY,
Clerk to the Council.

Pallant House, Chichester.
27th May, 1946. 796

EAST SUFFOLK COUNTY COUNCIL.

ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments on the Permanent Staff of the County Architect's Department :—

One Class A Assistant Architect, commencing salary £460 per annum, rising on satisfactory service by £15 to £600, plus cost-of-living bonus of £59 16s.

Two Class B Assistant Architects, commencing salary £390 per annum, rising on satisfactory service by £15 to £465, plus cost-of-living bonus of £59 16s.

Applicants must be Registered Architects, preferably Associates of the Royal Institute of British Architects, and if possible have had experience in the service of a Local Authority.

Applicants for the Class A appointment must be thoroughly experienced in architectural design, and capable of preparing preliminary sketch plans, complete working drawings and details with the minimum amount of supervision.

Applicants for the Class B appointments must have had a sound architectural training, and be capable of preparing working drawings and details, surveying and levelling.

The appointments will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937.

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

Applications, clearly stating which appointment is being applied for, and giving age, full details of previous experience and qualifications, accompanied by copies of not more than three recent testimonials, must be delivered to E. J. Symcox, F.R.I.B.A., County Architect, County Hall, Ipswich, not later than Friday, 21st June, 1946.

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

CECIL OAKES,
Clerk of the Council.

County Hall, Ipswich. 836

HAMPSHIRE COUNTY COUNCIL.

Applications are invited for the following pensionable appointments :—

(1) ASSISTANT to the County Planning Officer, at a salary of £700× £50—£800.

Applicants must have passed the Associate Membership examination of the Town Planning Institute, or an examination exempting therefrom, have had extensive practical experience of town and country planning in good offices, and show evidence of administrative as well as technical ability. Preference will be given to candidates who are qualified architects, engineers or surveyors.

(2) FIRST-CLASS DRAUGHTSMAN, at a salary of £360× £15—£405.

Applicants must be first-class draughtsmen, preferably certificated as such. Previous experience of town and country planning is not essential, but preference will be given to applicants skilled in cartographical and perspective work, and lettering.

A cost-of-living allowance in addition to the salary will be payable in each case.

Canvassing, directly or indirectly, will disqualify a candidate.

Applications, giving details of qualifications and experience, and accompanied by copies of three recent testimonials, should reach me not later than the 30th June, 1946. Drawings should *not* be sent with the initial application.

G. A. WHEATLEY,
Clerk of the County Council.

The Castle, Winchester.
May, 1946 837

COUNTY BOROUGH OF NEWPORT, MON.

BOROUGH ARCHITECT'S DEPARTMENT.

Applicants are invited for the following permanent appointments :—

(*a*) ONE SENIOR ASSISTANT QUANTITY SURVEYOR. Commencing salary £525 per annum, plus cost-of-living bonus £59 16s. per annum (Grade VI).

(*b*) ONE ASSISTANT QUANTITY SURVEYOR, at a commencing salary of £460 per annum, plus cost-of-living bonus of £59 16s. per annum (Grade V).

The salaries for the above appointments will be in accordance with the Scheme of Conditions of Service, National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services.

Applicants should have had experience in the preparation of specifications, bills of quantities, estimating, measuring, and the settlement of final accounts.

The appointments are subject to the Corporation's Conditions of Service and Superannuation Scheme, and the successful candidates will be required to pass a medical examination.

Applications, stating qualifications and accompanied by not more than three testimonials, must reach me not later than Monday, the 24th June, 1946.

JOHNSON BLACKETT, F.R.I.B.A.,
Borough Architect.

Town Hall, Newport, Mon.
May, 1946. 814

BOROUGH OF LUTON.

BOROUGH ENGINEER'S DEPARTMENT.

APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a Senior Architectural Assistant, in the Borough Engineer's Department, at a commencing annual salary of £535, rising by two annual increments of £20 and one of £25 to a maximum of £600 per annum, plus cost-of-living bonus, the present rate being £59 16s. per annum. The appointment will be temporary in the first instance, with the prospect of transfer to the permanent staff, and will be subject to the provisions of the Local Government Superannuation Act, 1937. It may be possible to provide housing accommodation for the successful applicant within a reasonable time of the appointment being taken up.

Applicants must be A.R.I.B.A., and have had extensive experience of architectural work, particularly in the design and construction of schools and development of housing estates.

Applications, stating age, qualifications and experience, together with copies of not more than three recent testimonials, should be delivered, endorsed "Senior Architectural Assistant," to the Borough Engineer, Town Hall, Luton, not later than Wednesday, the 26th June, 1946. Canvassing, either directly or indirectly, will disqualify.

W. H. ROBINSON,
Town Clerk.

Town Hall, Luton.
4th June, 1946. 844

COUNTY OF DORSET.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments on the permanent staff, at salaries in accordance with the Administrative, Professional and Technical Division of the National Scales of Salaries :—

(*a*) TWO ASSISTANT ARCHITECTS (Grade III-V). Salary £390-£510.

(*b*) TWO CLERKS OF WORKS (Grade III). Salary £390-£435.

(*c*) FOUR JUNIOR ARCHITECTURAL ASSISTANTS (Grade I). Salary £330-£375.

(*d*) ONE JUNIOR QUANTITIES AND ACCOUNTS ASSISTANT (Grade I). Salary £330-£375.

(*e*) FOUR IMPROVERS—ARCHITECTURAL. Salary £160-£245, according to age.

Plus the appropriate cost-of-living bonus.

Applicants for (*a*) must be Registered Architects, and have passed the final examination of the Royal Institute of British Architects or hold an equivalent qualification, and preferably have had experience in architectural work undertaken by a Local Authority, especially in the design of Educational buildings.

(*b*) Should have a sound knowledge of all building trades, and experience in the preparation of specifications for maintenance work.

(*c*) Must have passed the intermediate examination of the R.I.B.A., and preferably have had experience in Architectural work undertaken by a Local Authority, including the preparation of working and detail drawings.

(*d*) Should have had experience either (i) as an estimating clerk in a Builder's Office undertaking Public works, or (ii) as an assistant in a Quantity Surveyor's Office, and should be familiar with current building prices and checking of Contractors' accounts.

(*e*) Must have had previous experience in trading and in the preparation of surveys of sites and existing buildings.

The appointments will be terminable by one month's notice, in writing, on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937. The successful candidates will be required to pass a medical examination.

Applications, on forms to be obtained from the undersigned, should be sent to the Clerk of the County Council so as to be received not later than Saturday, the 29th June, 1946.

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

C. P. BRUTTON,
Clerk of the County Council.

Shire Hall, Dorchester.
31st May, 1946. 838

UXBRIDGE URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant, on the temporary staff of the Engineer and Surveyor's Department, at an inclusive salary of £8 8s. per week.

Applicants should be Registered Architects, and have had experience in the design of small dwellings.

Applications, stating age, whether married or single, examination qualifications and experience, and giving the names of three persons from whom references may be obtained, should be addressed to the undersigned in a sealed envelope endorsed "Architectural Assistant," and delivered not later than Wednesday, 19th June, 1946.

Canvassing, either directly or indirectly, will disqualify.

JOHN POOLE,
Clerk of the Council.

Council Offices, 265, High Street,
Uxbridge, Middlesex.
31st May, 1946. 823

LINDSEY (LINCS) COUNTY COUNCIL.

Applications are invited for the following positions in the County Architect's Office :—

(*a*) SENIOR QUANTITY SURVEYOR. Salary offered is APT. Grade 5, £460 per annum, rising to £510, with cost-of-living bonus in addition, at present £59 16s. per annum. Applicants should be Professional Associate Members of the Chartered Surveyors' Institution, and be experienced in the preparation of Bills of Quantities and Public Buildings, etc. It is desirable that the successful candidate should provide his own car, for which he would receive an allowance for an 8 h.p. car on the Council's scale.

(*b*) JUNIOR ASSISTANT QUANTITY SURVEYOR. Salary offered is APT. Grade 1, £330 per annum, rising to £375, with cost-of-living bonus in addition. Applicants should have passed the Intermediate Examination of the Chartered Surveyors' Institution, and be capable of squaring, abstracting and billing, and of taking off for small works.

Successful candidates will be required to pass a medical examination.

Application by letter only, accompanied by three recent testimonials, to be received by the undersigned not later than 22nd June, 1946.

PHILIP W. BIRKETT,
County Architect.

County Offices, Lincoln. 843

BERKHAMSTED AND TRING JOINT PLANNING COMMITTEE.

APPOINTMENT OF PLANNING ASSISTANT.

Applications are invited for the appointment of a Planning Assistant. Salary £385 by £15 to £430 per annum, plus such war bonus as may from time to time be payable (at present £59 16s.).

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

The applicants should have had experience in planning and in the administration of interim development, should be expeditious surveyors and neat draughtsmen, and should hold the Testamur of the Institution of Municipal and County Engineers, or be Associate Members of the Town Planning Institute.

Applications, stating age, qualifications, and experience, with copies of not more than three recent testimonials, endorsed "Planning Assistant," should reach the undersigned not later than first post on Friday, the 21st June, 1946.

Canvassing will disqualify. Applicants must disclose in writing any relationship to any member or senior officer of the Council.

D. T. THORNE,
Clerk of the Joint Planning Committee.

Civic Centre, Berkhamsted, Herts.
24th May, 1946. 792

TARVIN RURAL DISTRICT COUNCIL.

TECHNICAL ASSISTANT.

Applications are invited for the appointment of (*a*) General Engineering, or (*b*) Architectural Assistant, in the office of the Engineer and Surveyor.

Applicants must have had sound training by pupilage, and had previous experience in design and construction of (*a*) general engineering works, or (*b*) building works, particularly in relation to housing. Preference will be given to persons qualified by examination (*a*) Institute of Municipal and County Engineers, (*b*) R.I.B.A.

The salary will be in accordance with Grade II (Technical Division) of the National Joint Council Scheme, *viz.*, commencing at £360, plus war bonus, at present £59 16s.

The appointment will be subject to one month's notice in writing on either side, to the provisions of the Local Government Superannuation Act, 1937, and to the selected candidate passing satisfactorily a medical examination.

Applications, stating age, qualifications, and experience, together with copies of three recent testimonials, should be enclosed in an envelope endorsed "Technical Assistant," and must reach this office not later than the 19th June, 1946.

J. H. MOORE DUTTON,
Clerk to the Council.

Westminster Buildings, Newgate Street, Chester.
29th May, 1946. 817

Tenders

Six lines or under, 10s.; each additional line, 1s. 6d.

METROPOLITAN WATER BOARD.

SUNNYSIDE PUMPING STATION, HAMPTON WORKS.

The Metropolitan Water Board invite tenders for the construction of buildings of the following descriptions and approximate dimensions:—

Engine and Pump House: 120 ft. by 30 ft. by 40 ft.

Administrative Office: 30 ft. by 20 ft. by 30 ft.

Administrative Office: 30 ft. by 36 ft. by 25 ft.

Chlorinating house: 33 ft. by 20 ft. by 20 ft., together with demolition work, pipe chambers, drainage, and other contingent works at their Hampton Works, Lower Sunbury Road, Hampton, in the County of Middlesex.

Drawings, forms of tender, conditions of contract, specification and bills of quantities, may be inspected without charge at the Board's drawing office, Testing Shop, Hardwick Street (adjoining the offices of the Board, New River Head, Rosebery Avenue, E.C.1), on and after Thursday, 6th June, 1946.

Contractors desirous of tendering may obtain the necessary documents from the Chief Engineer on production of an official receipt for £10, which sum must be deposited with the Comptroller to the Board, and which will be returned on receipt of a *bona fide* tender accompanied by the above-named documents (with the exception of the spare copy of the bills of quantities, which may be retained by the tenderer). Such payments and applications must be made between the hours of 10 a.m. and 4 p.m. (Saturdays, 9 a.m. and 11 a.m.). Cheques must be made payable to the Metropolitan Water Board and not to individuals.

Tenders, enclosed in sealed envelopes, addressed to the Clerk of the Board, and endorsed "Tender for Sunnyside Pumping Station," must be delivered at the Offices of the Board (Room 122) not later than 12 o'clock noon on Tuesday, 2nd July, 1946.

The Board do not bind themselves to accept the lowest or any tender.

C. W. STOKER,
Clerk of the Board.

Offices of the Board, New River Head, Rosebery Avenue, London, E.C.1.
27th May, 1946. 797

Architectural Appointments Vacant

Four lines or under, 5s.; each additional line, 1s. 6d.

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

INDUSTRIAL Design Draughtsman wanted. Apply Warnett Kennedy & Associates, 11, Bentinck Street, W.1. 688

H. M. DOUGHTY & PARTNERS, Quantity Surveyors, 55, Pall Mall, S.W.1, would be glad to receive applications from experienced men seeking posts in London area; applicants must have had first-class training as quantity surveyors, and be used to measuring and settling variations on building contracts. Please give particulars of age, salary required, when free, etc. 751

SENIOR ARCHITECTURAL ASSISTANT required; capable of preparing working drawings and details, writing specifications, and supervising works. Apply, giving age, experience, qualifications and salary required, to L. F. Vanstone and Partners, 11, Grimestone Terrace, Plymouth. 766

QUANTITY SURVEYOR required for Architect's Office; experience in draughtsmanship would be an advantage. Apply, giving age, experience, qualifications, and salary required, to L. F. Vanstone & Partners, 11, Grimestone Terrace, Plymouth. 767

ARCHITECTURAL ASSISTANT required to supervise erection of a pre-fabricated house in Cambridgeshire; site experience, with pre-fab. erections, desirable. Box 771.

REQUIRED.—One Senior and one Junior Architectural Assistant immediately. Gotch, Saunders & Surridge, High Street, Kettering. 786

JUNIOR ARCHITECTURAL ASSISTANT required at once; East Midlands. Apply, stating age, experience, and salary required, to Box 809.

ASSISTANT required immediately; varied practice, housing and industrial work, etc.; progressive position for suitable applicant. Please send all particulars and salary required to G. Alan Burnett, A.R.I.B.A., 76, Albion Street, Leeds, 1. 819

SENIOR ARCHITECTURAL ASSISTANT required to take charge of small London office; opportunity for partnership to qualified man with initiative. Apply Mackintosh & Partners, 11, Orchard Street, Bristol, 1. 836

ASSISTANTS required in Civil Engineering and Building Department; experience of general civil engineering and structural work, with some knowledge of factory development and building essential. Apply, in writing, to Personnel Manager, T.I. (Group Services), Ltd., Rocky Lane, Aston, Birmingham. 829

ARCHITECT, practising from office in the country (Bedfordshire), requires Assistant, with quantity surveying or architectural training; to manage the administrative side of the practice; salary £400. Box 831.

WANTED.—Junior Architectural Assistant; R.I.B.A.; intermediate standard; general office, Somerset. Full particulars of training, experience, salary required, to Box 832.

SENIOR ARCHITECTURAL ASSISTANT required. Apply, giving age, experience, qualifications, and salary, to T. P. Bennett & Son, 43, Bloomsbury Square, W.C.1. 840

ARCHITECTURAL ASSISTANTS required by Resident Architect of large multiple concern in West Riding of Yorks; very interesting and varied type of work; state age and experience; remuneration by arrangement. Box 845.

ARCHITECTURAL ASSISTANT required in well-established provincial practice; knowledge of surveys, levelling, and working drawings. Write, stating age, experience, and salary required, to Raymond C. White, F.R.I.B.A., Ceely House, Church Street, Aylesbury, Bucks. 848

A PROVINCIAL Shopfitting Firm, with London branch, established 40 years, have vacancy for Senior Representative, to work Metropolitan area; experience of architectural decoration and joinery essential; remuneration and expenses four-figure level; present employees know of this announcement. Box 849.

Architectural Appointments Wanted

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

ASSOCIATE, age 35, ex-Capt. R.E., seeks employment of progressive and permanent nature; interested also in teaching appointment, or Partnership in well-established firm; South-West of England preferred. Box 453.

ASSISTANT.—Experience: pre-war, 4 years; military, as R.E. draughtsman and foreman of works. Age. 30. Interested in domestic and agricultural design, but will consider any other. Work required for three days a week; other days wanted for study. Please say if room available for study. Box 457.

DRAUGHTSMAN, 2 years' varied experience, car driver, seeks post in London or rural locality. Box 451.

ARCHITECTURAL ASSISTANT, aged 19, probationer R.I.B.A., requires part-time employment in Architect's office; experience preparation of plans and competition work. Box 452.

LONDON (Central or West).—Neat and rapid Draughtsman; sound construction and "light" designer; with 10½ years' busy experience in farms, factories, housing and general; consider part time. Box 456.

EFFICIENT Draughtsman, all drawings, experienced domestic and licensed work, etc.; South England only (not London); start soon; salary not main object. Box 458.

ARCHITECT (39), Continental, fully qualified, varied experience in office work, but mainly as Architect's representative on large sites, desires position with private architect or public authority in London. Box 459.

CHARTERED ARCHITECT, A.R.I.B.A. (aged 36), with own office, desires part-time work with Public Authority or Private Architect in Midlands area. Box 460.

A. R.I.B.A., Dip.Arch. (26), school trained and 5 years' varied experience, married, own car, seeks appointment as Assistant to progressive Architect in home counties. Box 461.

Other Appointments Wanted

Four lines or under, 2s. 6d.; each additional line, 1s.

ADVERTISING MANAGER (38) seeks post-war position in priority line, where 10 years' experience in national industrial concerns would be effective in advertisement, literature, press relations and sales, etc. Write Box 401.

PROFESSIONALLY trained Quantity Surveyor, qualified, offers services to Architects. Write in first instance to Box 750.

SITE or Travelling Outside Supervisor, age 42, available to take up appointment with firm of Architects; 25 years' experience of trade on large and small contracts. Write Box 779.

ARCHITECT offers spare-time assistance to other Architects; surveys, dilapidations, specifications, war damage, working drawings, etc. 12, Dollis Court, Crescent Road, Finchley, N.3. FIN. 5137. 830

GIVE your client the right idea; give him a Perspective, in full colour or black-and-white; expertly executed by A.R.I.B.A. illustrator. Box 834.

For Sale

Four lines or under, 5s.; each additional line, 1s. 6d.

ELECTRICITY FOR COUNTRY HOUSE.—Complete equipment for Sale, including 20 h.p. Oil Engine, Electric Generator and Booster Set, Switchboard, Battery and Motors, 200 volts supply; in good running order; inspection.—Apply Baily, Grundy & Barrett, Ltd., Electrical Engineers, Cambridge. 687

PLAN PRINTING MACHINE.—Mercury vapour lamps, 215-255 volts, a.c.,; suitable for blue printing, etc.; max. drawing size, 13 in. by 11 in.; £15. Box 439.

TEN Vols. of "The Architectural Review," 1928-1932; excellent condition (as new); price £5. Mrs. W. S. Leuchars, The Lea, Ridgeway, Horsell, Woking, Surrey. 455

HALDEN Duplex Plan Printing Machine; first-class condition; 27 in. by 30 in. prints; £75. Write Box 828.

Miscellaneous

Four lines or under, 5s.; each additional line, 1s. 6d.

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

F. J. BAYNES, LTD., established over 100 years. Heating, Ventilating and Sanitary Engineers, 99/107, St. Paul's Road, N.1. Canonbury 2061-3. 594

FENCING AND GATES of every type, supplied and erected. Specialists in chain link. Boulton & Paul, Limited, Norwich. 662

£5,000 to £250,000

INVESTMENT TRUST wishes to purchase PROPERTY LET to good tenants. Details of Houses, Flats or Shops to John Swait & Sons, Surveyors, The Mall, W.5. EAL. 2866 804

WANTED.—One set of "Arts Et Matiers Graphiques." Please reply to Box 5.

"CAN I HELP YOU?"—I have on my staff Architectural and Civil Engineering Draughtsmen, Building, Estimating, Land, Measuring and Quantity Surveyors. Write C. F. Rumble, 29/31, Whitehall, S.W.1. Tel.: Whitehall 8514. 916

AMOUNTS of £25,000 upwards available for Industrial Expansion, also Mortgages arranged on commercial properties; low interest rates; authentic enquiries invited. Chas. B. Buxton, Ltd., Corporation Loans Brokers, 9, Clements Lane, Lombard Street, E.C.4. 577

CLOCKS, Time Switches, Controllers, Electric Clocks, Clockwork Systems, Clockwork Toys, Turret and Outside Clocks, and every kind of Clockwork Appliance repaired, maintained, bought and supplied; enquiries invited about everything clockwork; we collect and deliver within 20 miles of London. J. W. & R. E. Hughes (Clockwork Engineers), 58, Victoria Street, London, S.W.1. Telephone: Victoria 0134. 689

FENCING FOR ALL PURPOSES.—Supplied and erected; established 100 years. Parker, Winder & Achurch, Ltd., 80, Broad Street, Birmingham, 1.

JENNIFER WRIGHT, A.A.Dipl., can give spare-time assistance to Architects from own home, 11, Campden Hill Road, W.8; ring Western 8483. 864

DRAWING OFFICE SUPPLIES.—"Classic" Tee-squares, made from well-seasoned Honduras mahogany; 12 in., 3s. 9d.; 18 in., 5s.; 24 in., 6s. 6d.; 34 in., 10s. 6d.; 42 in., 13s. (all post free). "Classic" Set-squares, made from stout celluloid: 45 deg.—4 in., 1s.; 5 in., 1s. 2d.; 6 in., 1s. 6d.; 8 in., 2s. 4d.; 10 in., 2s. 10d.; 12 in., 3s. 3d.; 15 in., 3s. 9d.; 60 deg.—5 in., 1s.; 6 in., 1s. 2d.; 8 in., 1s. 6d.; 10 in., 2s. 4d.; 12 in., 2s. 10d.; 15 in., 3s. 3d.; 18 in., 3s. 9d. Brass Drawing Pins, with screwed steel points, bevelled tops, milled edge, packed three dozen to the box: Per box, ⅜ in., 6s. 9d.; ½ in., 7s. 7d.; ⅝ in., 8s. 6d.; 1 in., 11s. Stobart & Son, 9, Victoria Street, London, S.W.1. 950

MODELS.—Architectural Scale Models of every description faithfully constructed from plans or photographs; post-war reconstruction, dioramas, structural details. Randall Page, 11b, Royal Terrace, Southend-on-Sea, Essex. 521

FIRM of Building Material Manufacturers, having Sales Organisation covering the United Kingdom, with offices at London, Birmingham, Newcastle and Glasgow, are prepared to undertake the sale of additional lines of interest to the Building Trade. Write to Box A57, c/o Streets, 110, Old Broad Street, E.C.2. 522

RAPID WRITING for busy people. Send 3d. for first lesson. Double Speed Longhand (S30), 92, Gt. Russell Street, W.C.1. 666

SHOPFITTINGS.—Long-established Building Firm, in South of Ireland, requires connections with reputable manufacturers for the purpose of erecting new Shop Fronts and Fittings in Eire. Particulars Box 833.

WANTED.—Copy "Architects' Journal" for March 6, 1941. Box 454.

PLANTS FOR HIRE.—We can supply Petrol and Electric Paint Spraying Compressors; £5 weekly. Tel. No.: Flax 1423. M. & E. Spraying, Ltd. 851

Educational Announcements

Four lines or under, 5s.; each additional line, 1s. 6d.

R.I.B.A. QUALIFYING EXAMINATIONS. Mr. C. W. Box, F.R.I.B.A., M.R.San.I. Courses of Correspondence and Personal in Studio. 115, Gower St., London, W.C.1 (Tel.: Euston 3906), and at 23, St. James's St., Derby (Tel.: 45648).

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, 212, Euston Road, N.W.1. Tel.: EUS. 7760. 415

Alphabetical Index to Advertisers

For Appointments (Wanted or Vacant), Competitions, Open, Drawings, Tracings, etc., Educational, Legal Notices, Miscellaneous Property and Land Sales—see pages li, liii, liii, liv and lv.

Printed in Great Britain for the Proprietors of "THE ARCHITECTS' JOURNAL" (The Architectural Press, Ltd.), Editorial: 13, Queen Anne's Gate, Westminster, S.W.1 Subscriptions and Advertising: 45 The Avenue, Cheam, Surrey by HARRISON & SONS LTD., Printers to His Majesty The King, 44-47, St. Martin's Lane, London, W.C.2