

THE ARCHITECTS' JOURNAL



standard contents

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

NEWS and COMMENT

Diary

News

Architects' Commonplace Book

Astragal's Notes and Topics

Letters

Societies and Institutions

TECHNICAL SECTION

Information Sheets

Information Centre

Current Technique

Questions and Answers

Prices

The Industry

PHYSICAL PLANNING SUPPLEMENT

CURRENT BUILDINGS

HOUSING STATISTICS

Architectural Appointments
Wanted and Vacant

★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to H one week, I to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

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
IES	Illuminating Engineering Society.	32, Victoria Street, S.W.1. Abbey 5215
IGE	Institution of Gas Engineers.	1, Grosvenor Place, S.W.1. Sloane 8606
IHVE	Institution of Heating and Ventilating Engineers.	72/74, Victoria Street, S.W.1. Victoria 0146/7
IIBD	Incorporated Institute of British Decorators.	Drayton House, Gordon Street, W.C.1. Euston 2450
ILA	Institute of Landscape Architects.	12, Gower Street, W.C.1. Museum 1783
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 3891
MARS	MARS Group (English Branch of CIAM).	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
NAS	National Association of Shopfitters.	9, Victoria Street, S.W.1. Abbey 5277/8
NBR	National Buildings Record.	37, Onslow Gardens, S.W.7. Kensington 8161
NCBMP	National Council of Building Material Producers.	2, Caxton Street, S.W.1. Abbey 5111
NFBTE	National Federation of Building Trades Employers.	82, New Cavendish Street, W.1. Langham 4041
NFBTO	National Federation of Building Trades Operatives.	8, Rosebery Houses, Breams Buildings, E.C.4 Holborn 1881
NFHS	National Federation of Housing Societies.	13, Suffolk St., S.W.1. Whitehall 2881/2/3
NHBRC	National House Builders Registration Council.	82, New Cavendish Street, W.1. Langham 4041
NHTPC	National Housing and Town Planning Council.	41, Russell Square, W.C.1. Museum 1264
NPL	National Physical Laboratory.	Head Office, Teddington. Molesey 1380
NRIAD	National Register of Industrial Art Designers.	National Gallery, Trafalgar Square, W.C.2. Whitehall 2415
NSAS	National Smoke Abatement Society.	Chandos House, Buckingham Gate, S.W.1. Abbey 1359
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.	94, Petty France, S.W.1. Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland.	15, Rutland Square, Edinburgh. Edinburgh 20396
RIB	Rural Industries Bureau.	35, Camp Road, Wimbledon, S.W.19. Wimbledon 5101
RIBA	Royal Institute of British Architects.	66, Portland Place, W.1. Welbeck 5721
RICS	Royal Institution of Chartered Surveyors.	12, Great George Street, S.W.1. Whitehall 5322
RFAC	Royal Fine Art Commission.	6, Burlington Gardens, W.1. Regent 1446
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
RSI	Royal Sanitary Institute.	90, Buckingham Palace Road, S.W.1. Sloane 5134
SBPM	Society of British Paint Manufacturers.	20, Piccadilly, London, W.1. Regent 6347
SCR	Society for Cultural Relations with the USSR.	98 Gower Street, W.C.1. Euston 6272/3
SFMA	School Furniture Manufacturers' Association.	13, New Square, Lincoln's Inn, W.C. Chancery 5313
SIA	Society of Industrial Artists.	Room 243, Empire House, St. Martin's-le-Grand, E.C.1. Metropolitan 8344
SNTPC	Scottish National Town Planning Council.	11, Drumsheugh Gardens, Edinburgh, 3
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 6146 (3 lines)
TPI	Town Planning Institute.	18, Ashley Place, S.W.1. Victoria 8815
TTF	Timber Trades Federation.	81, Cannon Street, E.C.4. City 1476
WDC	War Damage Commission.	Devonshire House, Mayfair Place, Piccadilly, W.1. Mayfair 8866
WEDA	Welfare Equipment Development Association.	61, St. Paul's Churchyard, E.C.4. City 4263/4
ZDA	Zinc Development Association.	Lincoln House, Turl Street, Oxford. Oxford 47988

No. 2732]

THE ARCHITECTURAL PRESS
11 and 13, Queen Anne's Gate, Westminster,
W.1. Phone: Whitehall 0611

Price 9d.

Registered as a Newspaper

The man on the job is **ON THE JOB**



It takes a workman to be good, to rank as a craftsman of Gaze calibre. Right from the beginning (when he is admitted to co-partnership) he is in good company—in the company of men highly trained for the sound interpretation of the architect's conception and direction. All the evidence is that, in the profession, this high measure of co-operation is valued.



W. H. GAZE

& SONS LTD.

40, CONDUIT STREET, LONDON, W.1.
KINGSTON-ON-THAMES, SURBITON,
WALTON, BATH

BUILDING &

CIVIL ENGINEERING CONTRACTORS

PARAGON LANTERN LIGHTS

Maximum strength, minimum obscuration of light, extreme durability and attractive neatness of design are four outstanding characteristics of "Paragon" Lantern Lights and Skylights, whether of standard pattern (24 sizes), or purpose-made to suit any curb-trimming. They are manufactured outright by us at our Deptford Works from materials of pre-war quality. All opening sashes are double-weathered and hung on brass cup-pivots. The steel glazing bars are, of course, of the well-known "Paragon" type and standard, being of completely lead-clothed steel.

Our Brochure "A" will be sent you on request.

PARAGON GLAZING CO. LTD.
1 • VICTORIA ST. • WESTMINSTER • S.W.1
Telephone: ABBey 2348. Pte. Br. Exch. Telegrams: "Eclairage, Sowest." London

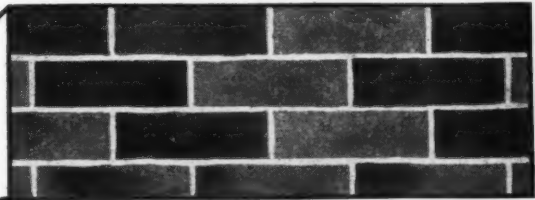
RS

D
I
lon



LICHFIELD COURT, RICHMOND.

Architects: Messrs. Bertram Carter & Sloat, A.A.R.I.B.A.



BRICKWORK SET IN LIME / CEMENT MORTAR

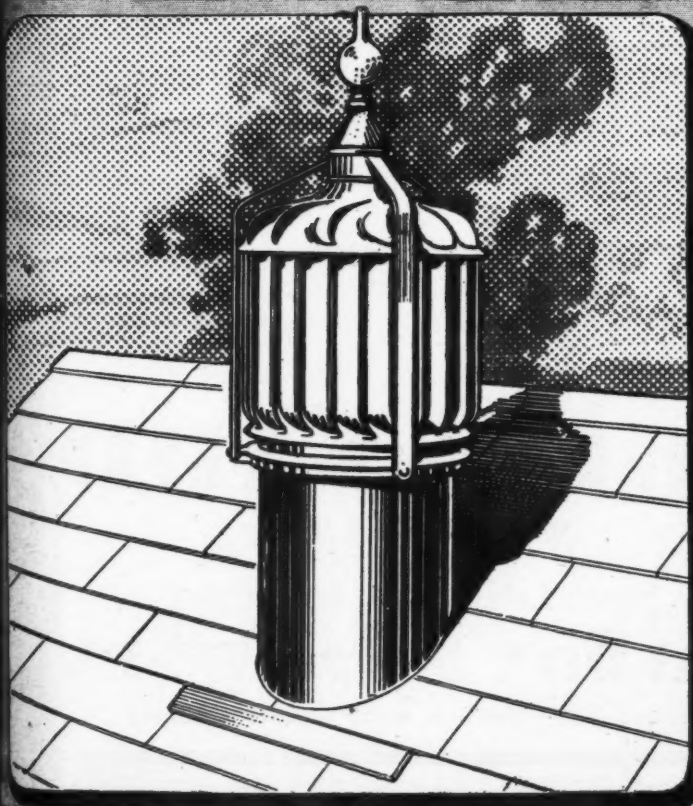
- Intimate bond between mortar and brickwork.
- Water-tight joint.
- Freedom from efflorescence.



A booklet "The Uses of Lime in Building" giving full details of Lime/Cement mortar mixes will be sent on application to:—

THE SOUTHERN LIME ASSOCIATION
HANOVER HOUSE, 73-78 HIGH HOLBORN, LONDON, W.C.1 (HOLborn 5434)

FA 2



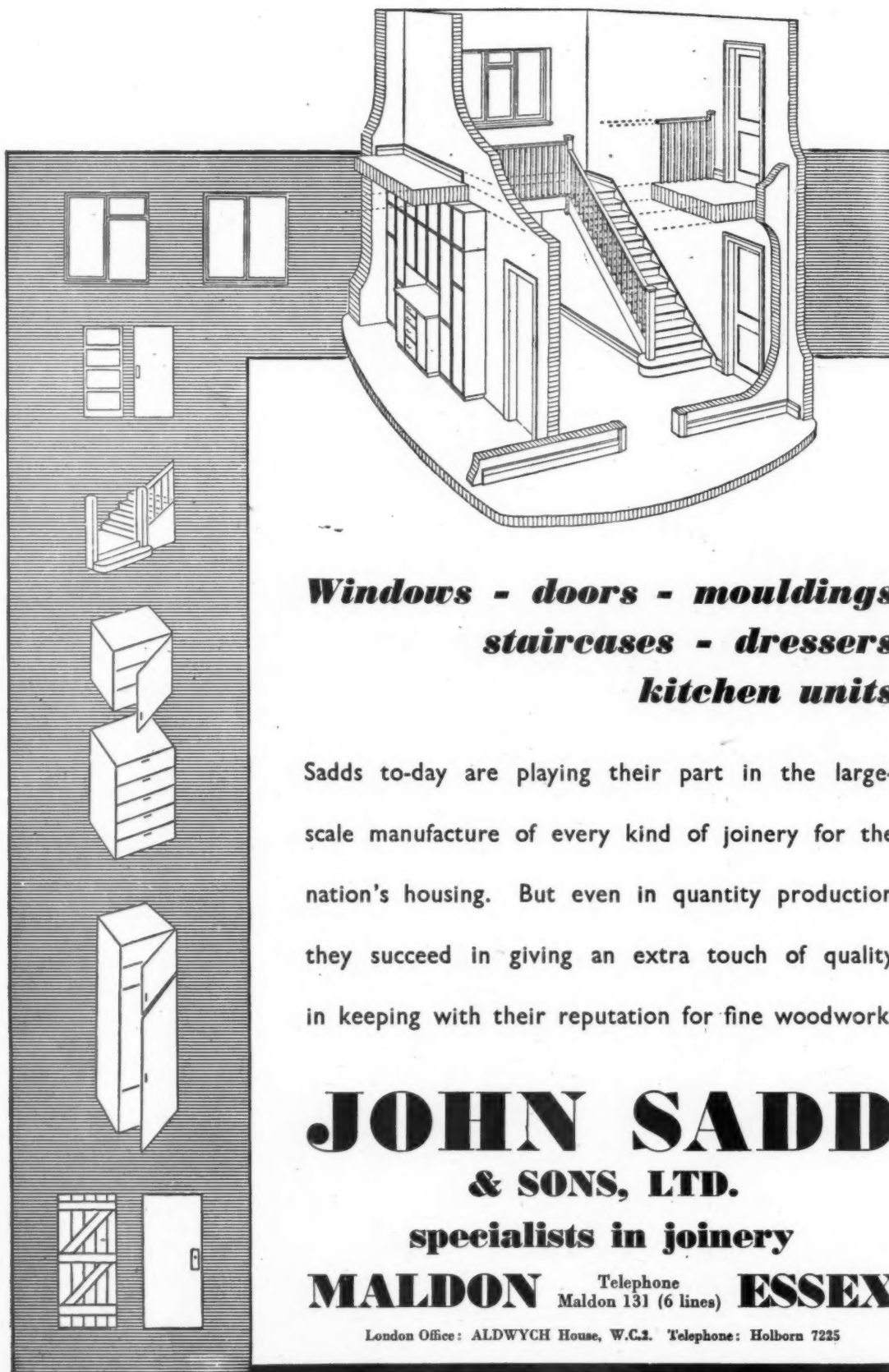
**TO THE ARCHITECT -
SURVEYOR AND BUILDER**

**Yours the problem -
Harveys the answer!**

Whenever the question of "where to get" Ventilators arises—remember Harveys. For Harveys make the long-established "Harco" self-acting ventilator that ensures effective draught-free ventilation for any type of building—Hospital, School, Garage, Workshop, Hostel, etc. Our illustration shows "Harco" Ventilator No. 28a but this is only one of a very wide range of patterns and sizes. Get all your supplies from your local Builders' Merchant. For full particulars write for catalogue AJ 481.

Harvey

G.A. Harvey & Co. (London) Ltd.
Woolwich Rd. London, S.E.7



***Windows - doors - mouldings
staircases - dressers
kitchen units***

Sadds to-day are playing their part in the large-scale manufacture of every kind of joinery for the nation's housing. But even in quantity production they succeed in giving an extra touch of quality in keeping with their reputation for fine woodwork.

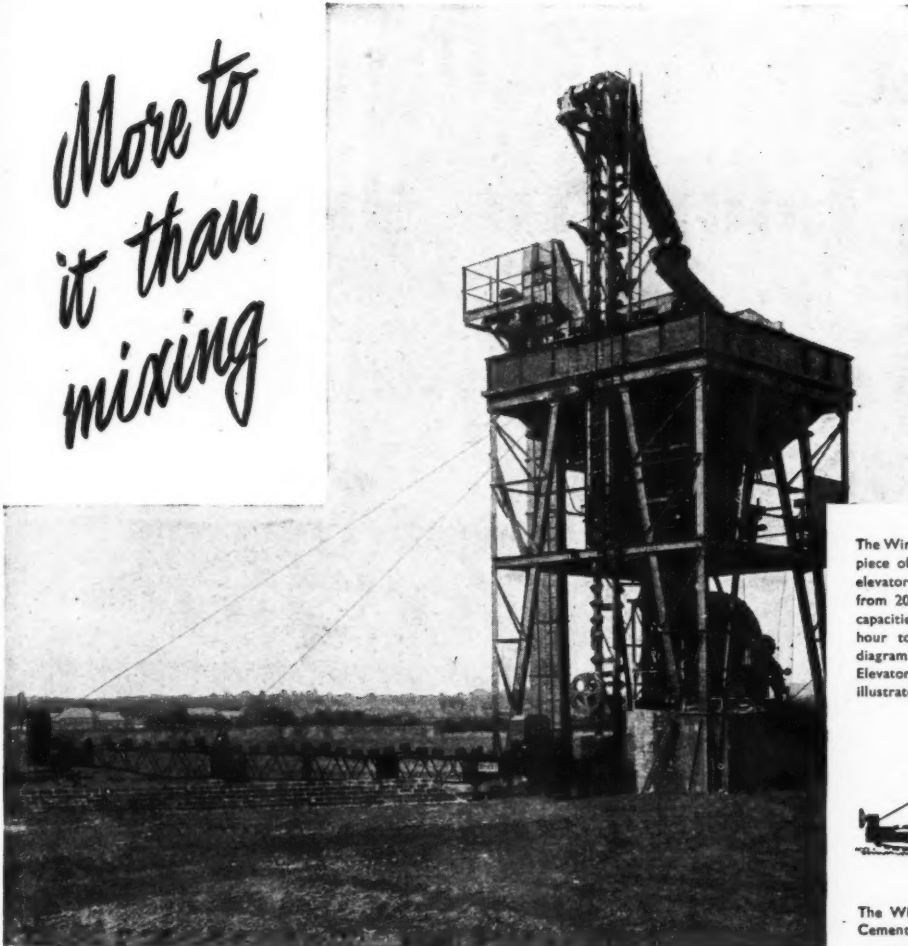
JOHN SADD
& SONS, LTD.
specialists in joinery

MALDON Telephone Maldon 131 (6 lines) **ESSEX**

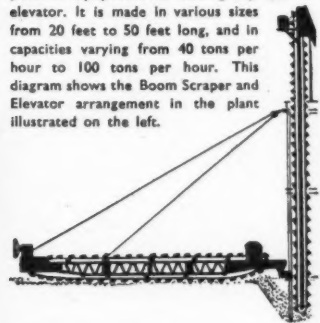
London Office: ALDWYCH House, W.C.2. Telephone: Holborn 7225

Sd. XVI/7-46

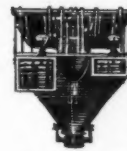
*More to
it than
mixing*



The Winget Patented Boom Scraper is an ideal piece of equipment for feeding any type of elevator. It is made in various sizes from 20 feet to 50 feet long, and in capacities varying from 40 tons per hour to 100 tons per hour. This diagram shows the Boom Scraper and Elevator arrangement in the plant illustrated on the left.



The Winget-Johnson Concentric Aggregate-Cement Batcher is a patented system with many advantages, including 2 complete and separate weigh batchers. Control of batching is centralised, and water-batching may also be co-ordinated. Cement hopper is centralised and hangs free inside aggregate batcher, on its own independent scale



The entire plant shown here can be literally operated by three men. One man feeds gravel, etc., to the Boom Scraper; one man looks after weighing and mixing; one man feeds cement from the Cement Elevator.

Mixing is perhaps the simplest part of the concrete contractor's work. At Winget we know this to be so. It is, in fact, obvious that you cannot put into operation the kind of project shown here, without the fullest co-operation between concrete plant specialist and the civil engineer. "Combined ops" as represented by mixing, placing, finishing, etc., do not succeed through the mere sale of plant by Winget to the contractor. That is why Winget engineers like to give the full benefit of their twentieth century experience . . . by advice on the site, by design on the drawing board, and in a dozen other ways . . . before ever the Winget range comes into the picture.

Winget OF ROCHESTER

Civil Engineering Equipment and Concrete Machinery Manufacturers



Regd. Trade Mark

Look to the Walls

MANY ALERT MINDS are planning the homes of the future—brighter, healthier houses and flats, embodying the most modern labour-saving ideas. Do not forget, however, that it is the material of which the *walls* are constructed which largely determines the solidity, durability and appearance of a building.

No other building material can rival the many advantages of good, honest Brick. Strong, durable, resistant to fire, weather and smoke-laden atmospheres, Brick is also an excellent thermal insulator, and suppresses noise and vibration.

Brick is available in a wide range of textures and colours, requires no painting and reduces maintenance costs to a minimum.

The capacity of the Industry in normal times is 8,000,000,000 Bricks a year. Given an adequate fuel supply and facilities for plant replacement, the brickworks of the country should be able to sustain a building programme of over half a million permanent houses per annum.

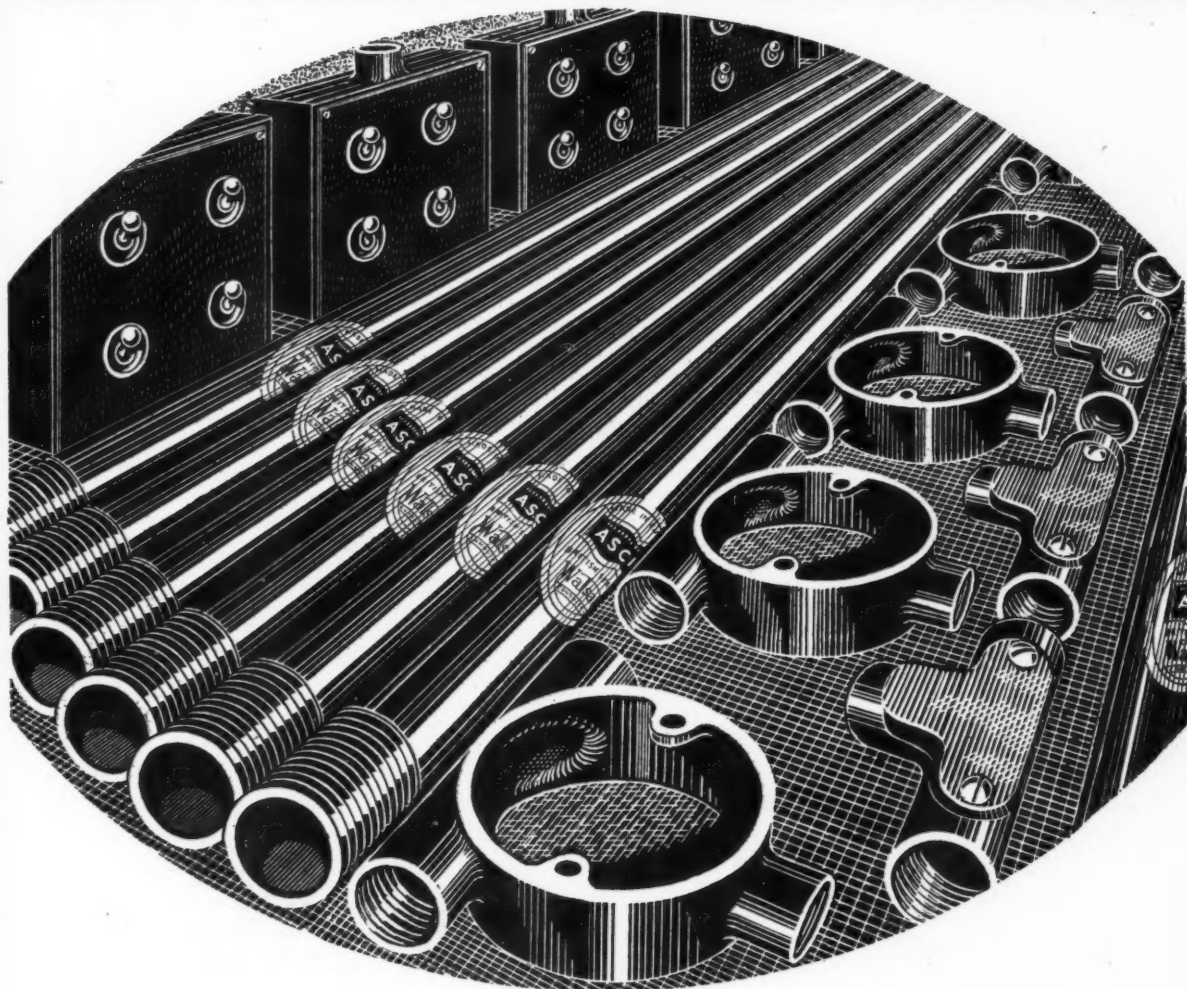
BRICK

The Proved Building Material

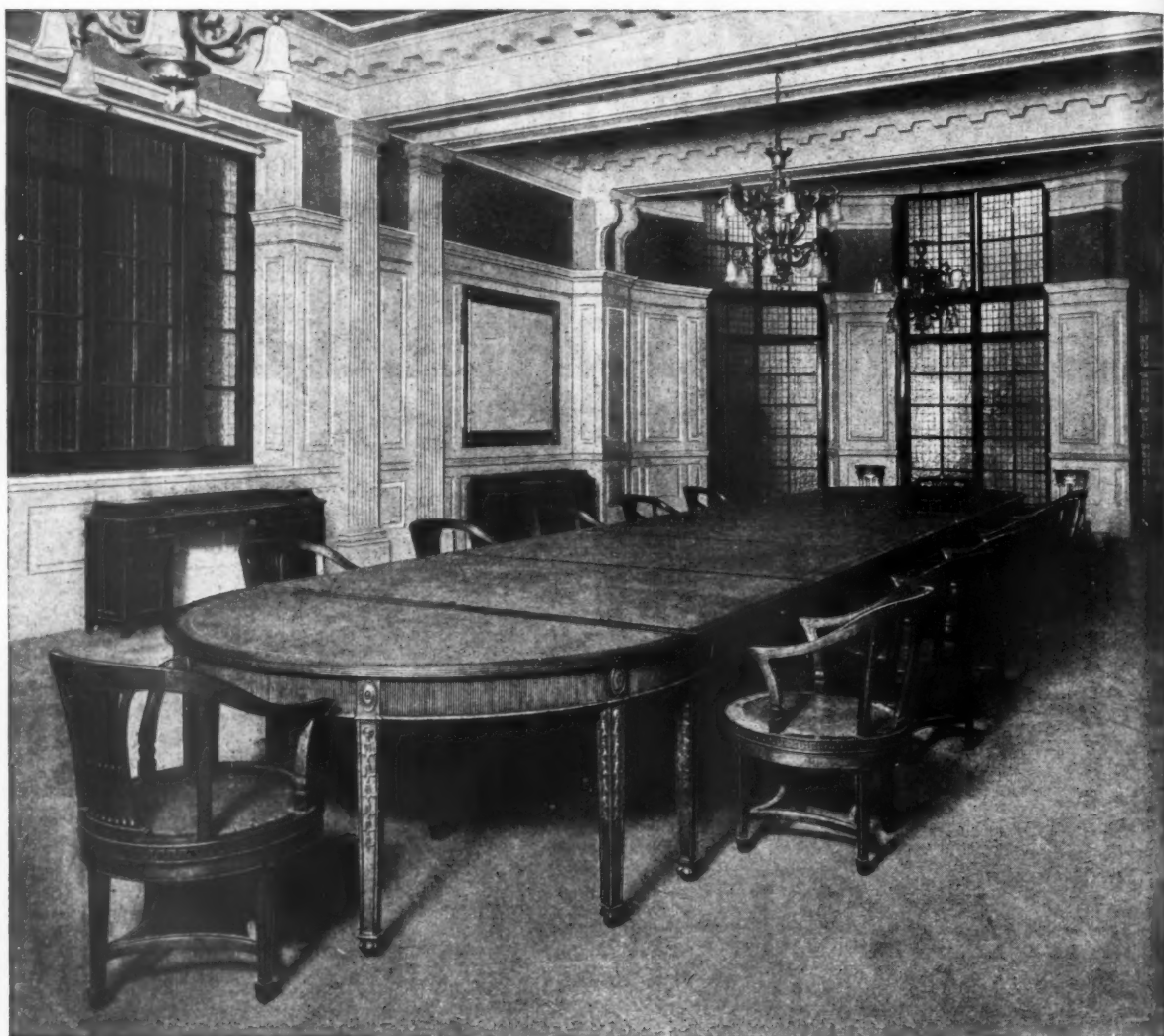
THE NATIONAL FEDERATION OF CLAY INDUSTRIES, DRAYTON HOUSE, LONDON, W.C.1



**MEANS EVERYTHING FOR THE
ELECTRICAL INSTALLATION**



WALSALL CONDUITS LTD
WEST BROMWICH · STAFFS



Bath

**CABINET MAKERS
AND ARTCRAFT LTD**

CONTRACTORS FOR MODERN INTERIORS
FURNISHINGS FOR SHIPS, HOTELS, PUBLIC BUILDINGS, OFFICES, ETC.
LOWER BRISTOL ROAD, BATH • LONDON SHOWROOMS: 1 GRAFTON STREET, W.1

POTTERY THROUGH THE AGES · NO. 7



Specially drawn by Gordon Nicoll, R.I.

ROMAN POTTERS SPREAD THE CRAFT

The cities of Etruria in the west and Greek colonies in the south of Italy imported Athenian pottery between about 750 and 550 B.C. Local potters subsequently imitated the painted Greek wares but their productions gradually deteriorated in design and technique. Generally speaking, the Romans had little aptitude for the art of painting.

The development of the late Hellenistic technique of relief-moulding in the so-called "Samian" wares was unquestionably Rome's outstanding contribution to the art of the potter. The best of these wares (known as Arretine, after Arretium, the chief centre of manufacture) are of smoothly-finished coral-red earthenware, coated with a hard thin glaze of still undetermined composition, and decorated in relief with mythological and hunting scenes, friezes and medallions. The

designs—often inspired by goldsmiths' and silversmiths' work—were cut in plastic clay moulds or impressed from revolving tools or "runners", the beauty and accuracy of their finish revealing excellent craftsmanship.

More elaborate relief decorations were hand-modelled and applied to plain vases thrown on the wheel. Excellent undecorated bowls, cups and other domestic pottery were also made. Many Roman pots were stamped with the maker's name, the name of the pottery and the date, and on some of the glazed "Samian" ware the dipper's thumb-marks are still clearly visible today. Among more unusual uses the Romans made of pottery were terra cotta tickets, money boxes, coin moulds and an astonishing variety of lamps for domestic and ritual use.

Through the Romans, the arts of

throwing and relief-moulding spread north of the Alps, eventually reaching Britain, where Roman and Romano-British kilns have been found in many districts. "Samian" pottery was imported in large quantities from Gaul and elsewhere, but there were British centres of manufacture also—such as Colchester. Roman pots made at Caistor, in Northamptonshire, are particularly interesting for their vigorous slip decorations in relief, depicting gladiatorial combats, chariot races and deer hunts. The burnished black pots made at Upchurch, in Kent, are noteworthy for their fine shapes.

In Egypt, under Roman rule, an important development was the combination of relief-moulding with a rich yellow lead glaze or a lead glaze stained with copper to produce a deep green.



DOULTON & CO. LIMITED

DOULTON HOUSE · ALBERT EMBANKMENT · LONDON · S.E.1

Makers of Fine China and Earthenware, Porcelain Insulators, Laboratory Porcelain, Chemical Stoneware, Ceramic Filters, Sanitary Earthenware and Fireclay, Stoneware Pipes and Conduits, etc.

WORKS: BURSLEM, DUDLEY, ERITH, HANLEY, LAMBETH, STOKE-ON-TRENT, TAMWORTH



STEEL REINFORCING BARS FROM STOCK



Large stocks of "Stribar" brand steel bars for reinforcement are carried at our London Warehouse. Prompt delivery can be made of sizes from $\frac{1}{8}$ " upwards, cut to length, shaped and hooked as required.

UNITED STRIP & BAR MILLS, 8-10, GROSVENOR GARDENS, LONDON, S.W.1

Branch of The United Steel Companies Limited

WORKS • THE ICKLES • SHEFFIELD

l

21

2

2

Distinctive as the Glossier Finishes



VULCAN PRODUCTS LTD. Specialist Paint Manufacturers
SLOUGH and 24, Ryder Street, St. James, London, S.W.1. Abbey 4161 [5 lines]

**WE BUILD
IN STEEL**



Great Crested Grebe

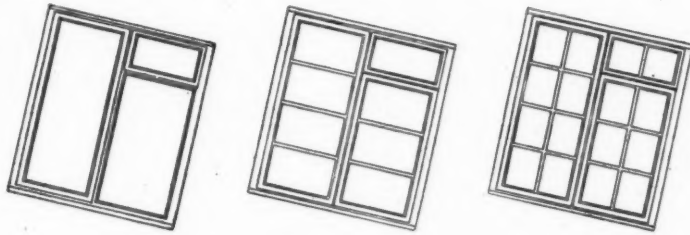
IT'S a fairly complicated matter, this building of a water bird's nest. A case of weeds within weeds. Building in steel has its complications too at the present time, but the building part at least, is no headache for the engineer.

**BANISTER,
WALTON & CO.
LTD.**
STRUCTURAL STEELWORK

RIVETED ★ WELDED



LONDON, S.W.1—82 Victoria Street MANCHESTER 17—Trafford Park BIRMINGHAM 15—192 Broad Street



Bars - or no bars?

Their good proportions, timber economy and excellent daylight admission factors make EJMA standard casement windows without glazing bars the logical and satisfactory choice for most purposes. But their virtues must be weighed against the need for variety and the demands of architectural style. Austerity must not be overdone, and there are designs which clearly call for windows with glazing bars — either lay bars only or both vertical and horizontal bars — and these types are therefore included in the EJMA range.

EJMA is the Certification Trade Mark of the English Joinery Manufacturers Association Incorporated and may only be applied to joinery by virtue of a certificate issued by the Council of the Association. The Secretary will be glad to supply the names of member firms, many of whom can give prompt delivery of EJMA windows.

EJMA
CERTIFICATION TRADE MARK

The Question of Timber Content

In spite of present timber restrictions the use of glazing bars in EJMA windows is perfectly feasible, and they have been specified in a number of large housing schemes. The additional consumption of timber is very small — approximately, to take one typical house of 1,000 ft. super, .021 standards for lay bars and .035 for full bars.

THE
ENGLISH JOINERY MANUFACTURERS ASSOCIATION
SACKVILLE HOUSE, 40 PICCADILLY, W.1 REGENT 4448 (INCORPORATED)



NIPPED IN THE BUD

THE British countryside can show few sights more charming than an orchard in blossom. Yet its promise may never be fulfilled. The brief but glorious period between bud-break and petal-fall is critical. Bugs as well as buds awake to life in spring, and the eggs of insects hatch out as well as those of birds. Against their menace the fruit-grower must be prepared. He turns to the labours of the research chemist made available in the products of the British chemical industry. In fruit-growing, unlike warfare, defence is the best method of attack. The professional opens the battle in autumn by girdling the trunks with sticky compounds to prevent wingless moths from crawling up to lay their eggs in twig and branch. In winter, when the trees are dormant, he applies a "winter wash" to destroy insect eggs and pests hibernating in the bark. Lime wash and cresylic or caustic soda solutions were used for this purpose until, in

1921, the British chemist provided a far superior article — tar oil distillate, which is now indispensable in orchard routine. Pests which escape are met in spring by a barrage of chemical sprays. The usual method is to apply lime, sulphur or Bordeaux mixture (copper sulphate and lime) to prevent "scab," a fungus disease of apples and pears which blasts the foliage, blemishes the fruit and blisters the bark. Lead arsenate may be added as a stomach poison for beetles and caterpillars, nicotine to kill sucking insects like greenfly, and chemical wetting agents to make the spray spread evenly. The campaign closes in summer when pests meet a dusty end from derris or nicotine powders — notably the young larvæ of the Codlin moth which so neatly tunnel apples to the core. Spring, summer, autumn and winter, the fruit-grower relies on the chemical industry to help him produce fruit without blemish and in full measure.



MORRIS SINGER COMPANY

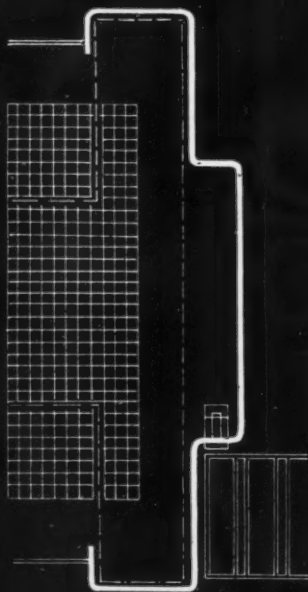
A Complete Door Frame Unit in Pressed Steel

Morris Singer Pressed Steel Door Frames leave our works ready to install without further fabrication. All corners are electrically welded and cleaned off.

Hinges, fixing lugs and lock striking plates are supplied with each frame, and the standard finish is one coat of special rust proofing paint.

The frames are rot, fire and vermin proof. Pressed steel Door Frames cannot shrink or warp.

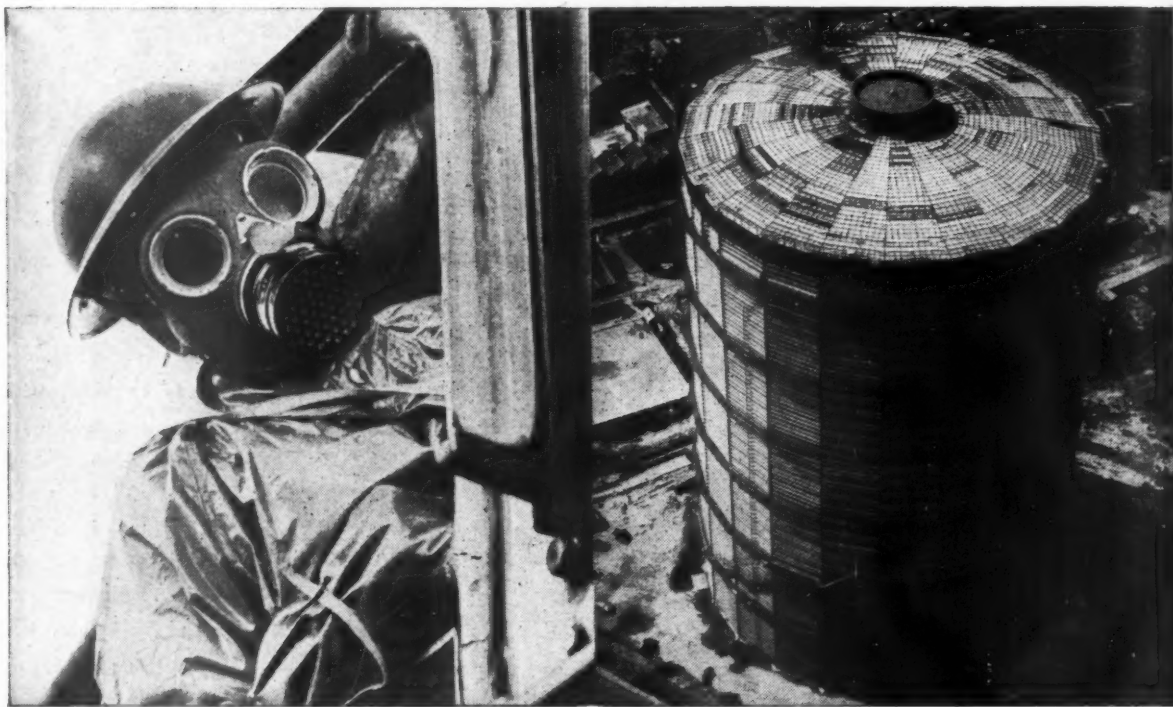
Ready to Build in



MORRIS SINGER COMPANY

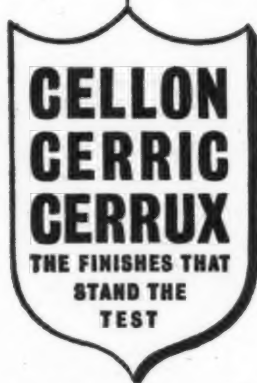
FERRY LANE WORKS, WALTHAMSTOW, LONDON, E.17.
Tel. Larkwood 1055 • Grams. Morrisinger, Walt. London.

FROM GAS MASKS TO GASOMETERS



Has it occurred to you that the Cellon technical service department may be able to supply the answer to your post-war finishing problem? In these days of shortage of materials we make no wild promises, of course; but we feel that if we were able to solve the wartime problems which we *did* solve, then we can be more than a little helpful to you just now.

We don't know what your product is—we don't need to guess—for every industrial finishing problem is *our* concern. We merely look forward to hearing your troubles and maybe putting you into a rather more cheerful frame of mind. We don't work miracles; but we do work out the right answers. Shall we be hearing from you?



CELLON LIMITED, KINGSTON-ON-THAMES, SURREY. TELEPHONE: KINGSTON 1234 (5 LINES)

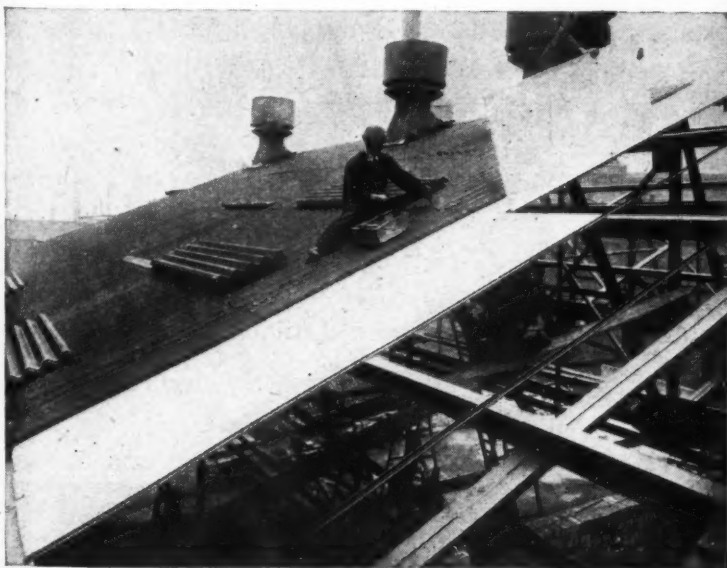
CVS—563

INSULATED FACTORIES USE LESS COAL

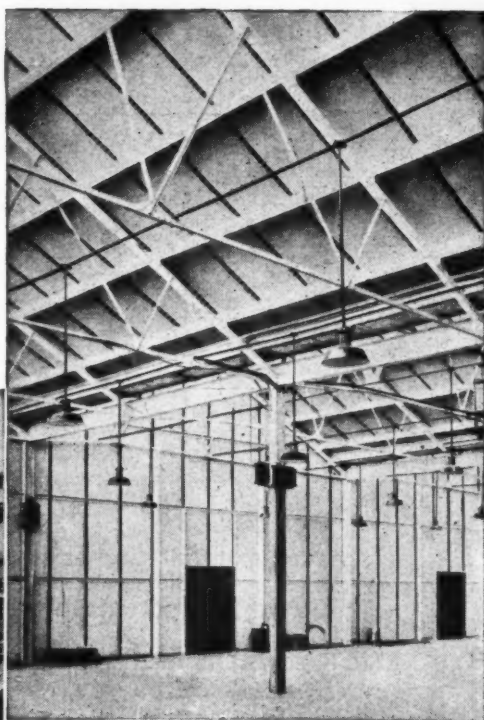
A TENTEST LINING, $\frac{1}{2}$ inch thick, cuts the heat loss through a roof of corrugated asbestos cement by 75% and may save over half the total fuel needed for heating.

THE MINISTRY OF FUEL AND POWER give you these figures in "Fuel Efficiency Bulletin No. 12" and in their new Booklet "You amaze me, Young Man!", both of which are free.

SPECIALISED CONSTRUCTION is a modern building technique developed by TenTesT using light gauge metal members to fix insulating roof or wall linings or ceilings to steel-framed buildings economically and without timber. The methods vary with the type of lining material, the position in which it is to be fixed and the type of structural framework. The Patent Metal Cover Strip method is particularly economical for new buildings or buildings which are being re-sheeted.



Fixing TenTesT by Patent Metal Cover Strip



Roofs and walls lined with TenTesT by Patent Metal Cover Strip

In addition to saving fuel the appearance of the interior is enhanced, noise is controlled, condensation eliminated and solar penetration reduced.

TO ENSURE PERFECT RESULTS WE SUPPLY AND FIX COMPLETE

Some of the most widely useful Specialised Construction methods have been published as Information Sheets and we shall be pleased to supply copies free on request.

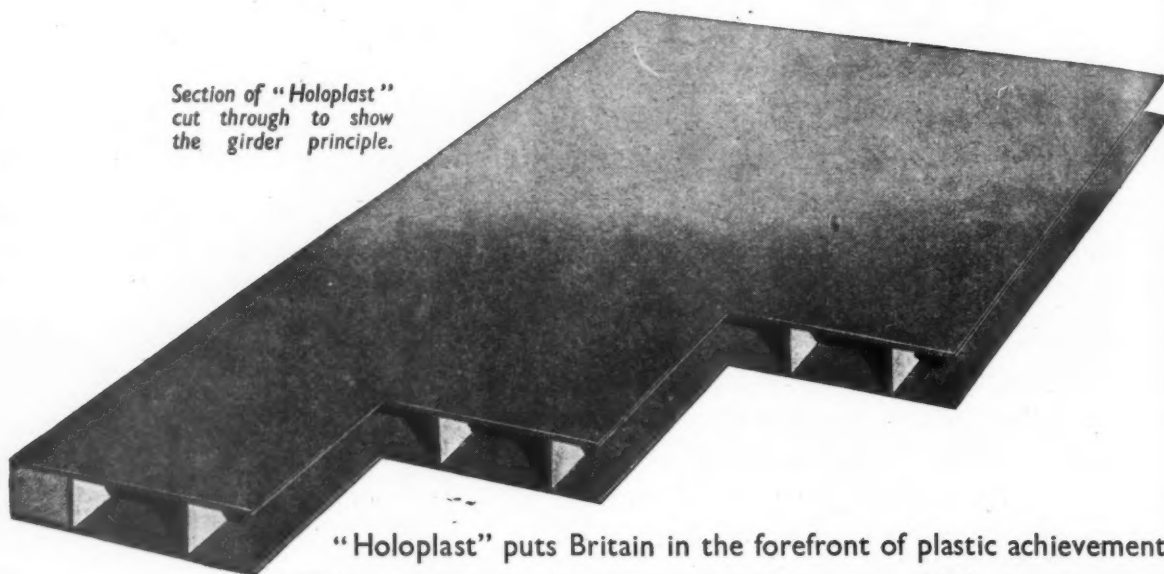


TENTEST FIBRE BOARD CO. LTD., 75 CRESCENT WEST, HADLEY WOOD, BARNET, HERTS.

Telephone: BARnet 5501 (5 lines)

Telegrams: Fiboard, 'Phone, London

STRUCTURAL PLASTIC



Section of "Holoplast"
cut through to show
the girder principle.

"Holoplast" puts Britain in the forefront of plastic achievement. This new laminated plastic panel, built on established engineering practice and embodying the well-known girder principle, fulfils the requirements of the constructional engineer wherever exceptionally high mechanical strength combined with light weight is essential. Here are some of the reasons why "Holoplast" is being specified by the leading architects and shipbuilders.

It does not support combustion or spread flame.

Its easy manipulation and speed of erection save many man-hours.

It is vermin-proof and hygienic.

It is resistant to oils and dilute acids.

It can be cut, sawn, drilled, routed, planed, etc., by normal joinery technique.

Available in standard dimensions 8 ft. by 4 ft. by 1 in. overall in natural brown, cream-sprayed, or with veneered surface. Write for full particulars to :

HOLOPLAST LTD.

NEW HYTHE, NEAR MAIDSTONE, KENT

London Office: 68, Victoria Street, S.W.1

Telephone: Victoria 9981

AUTHORISED DISTRIBUTORS FOR THE UNITED KINGDOM:

Metropolitan Plywood Company

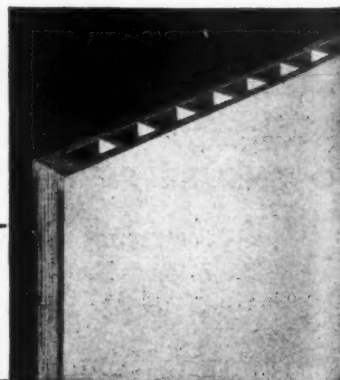
Venesta Ltd.

Denny, Mott & Dickson Ltd.

Gabriel, Wade & English Ltd.

Gliksten Building Materials.

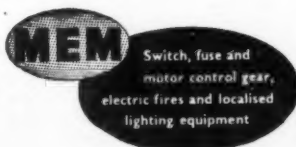
L. Keizer & Co. Ltd.





output stepped up ...

In the last six months we doubled production of 212K Memroy all-insulated switch-fuses. We showed substantial output increases in other M.E.M. lines too, and the production drive continues. Before very long, the sheer weight of M.E.M. output will certainly make itself felt. But industry and housing are still demanding tremendous quantities of M.E.M. gear and, in spite of this fine response from the factory, **demand still keeps ahead of supply.** Your wholesaler has the difficult job of sharing out such supplies as are available: Your best plan is still to keep in touch with him.



Midland Electric Manufacturing Co. Ltd., Birmingham, 11 • Branches in London & Manchester

DOORS

ready for delivery

Service?

We can once more give you immediate delivery from stock of **panelled doors** for interior or exterior use, in all the usual sizes.

Quality?

The name of Austins is an assurance that you will get a thoroughly satisfactory job — a hackneyed claim, but this time literally true.

Price?

Remarkably modest by to-days standards, thanks to a factory equipped and organised for high-speed, large scale production of good joinery.

Ring up GRANGEWOOD 3444
and tell us your needs

THE
AUSTIN-HALL GROUP OF COMPANIES

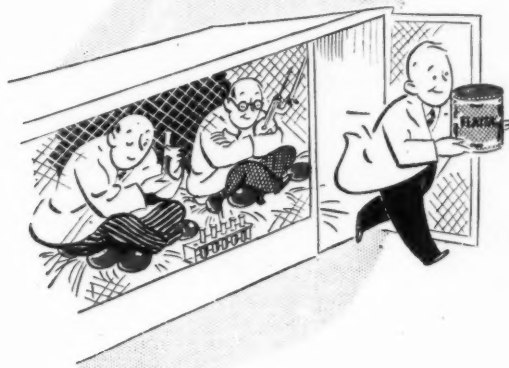
AUSTINS OF EAST HAM LTD.

LONDON E.6

GRAngeWood 3444

FLATTA

EGGSHELL FINISH WALL ENAMEL



Our technicians after considerable "brooding" eventually hatched the FLATTA eggshell—they spent hours and hours on research and experiment before the "happy event"..... and FLATTA Eggshell Wall enamel is a child to be proud of. It brushes like silk and flows out entirely free from brush marks. When dry its eggshell porcelain-like surface can be scrubbed without the slightest damage. FLATTA is NOT a standard type of wall enamel, but an entirely new technical development with extreme durability and the "Eye Appeal" all high-class decorators so much desire.



FERGUSON EDWARDS & CO. (LONDON) LTD.

PAINT & VARNISH MANUFACTURERS, ST. GEORGES MILLS, LONDON, N.1
TELEPHONE: CLERKENWELL 7411 (5 LINES). TELEGRAMS: EDLACA, NORDO, LONDON

THE MASTICON PROCESS

FOR

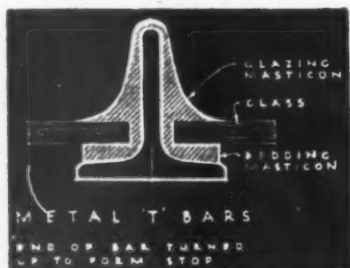
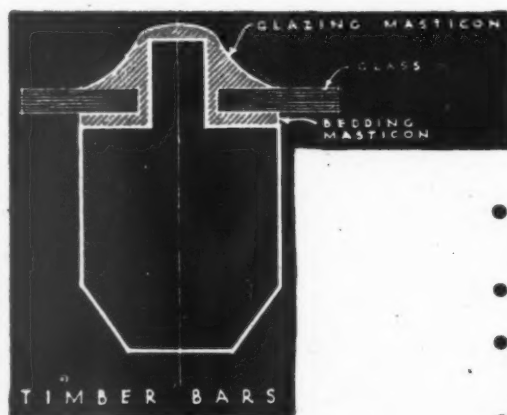
MODERN FACTORY GLAZING

by

INDUSTRIAL ENGINEERING LTD.

THE MASTICON PROCESS is a service for the glazing of roofs of Industrial premises. It combines the supply and fixing of special type metal T. bars, the glass being cushioned on

resilient Bedding MASTICON. The bars are sealed against the weather by the application of plastic GLAZING MASTICON over the exposed cap of each bar.



ADVANTAGES OF GLAZING BY THE MASTICON PROCESS

- Ensures permanently sound glazing which will withstand roof movement and vibration.
- Makes glazing joints which remain watertight.
- Protects metal bars against corrosion and timber bars against decay.
- Eliminates painting costs.
- Is unaffected by changes in temperature.

Our technical service is at your disposal to conduct surveys and submit estimates willingly and without obligation.

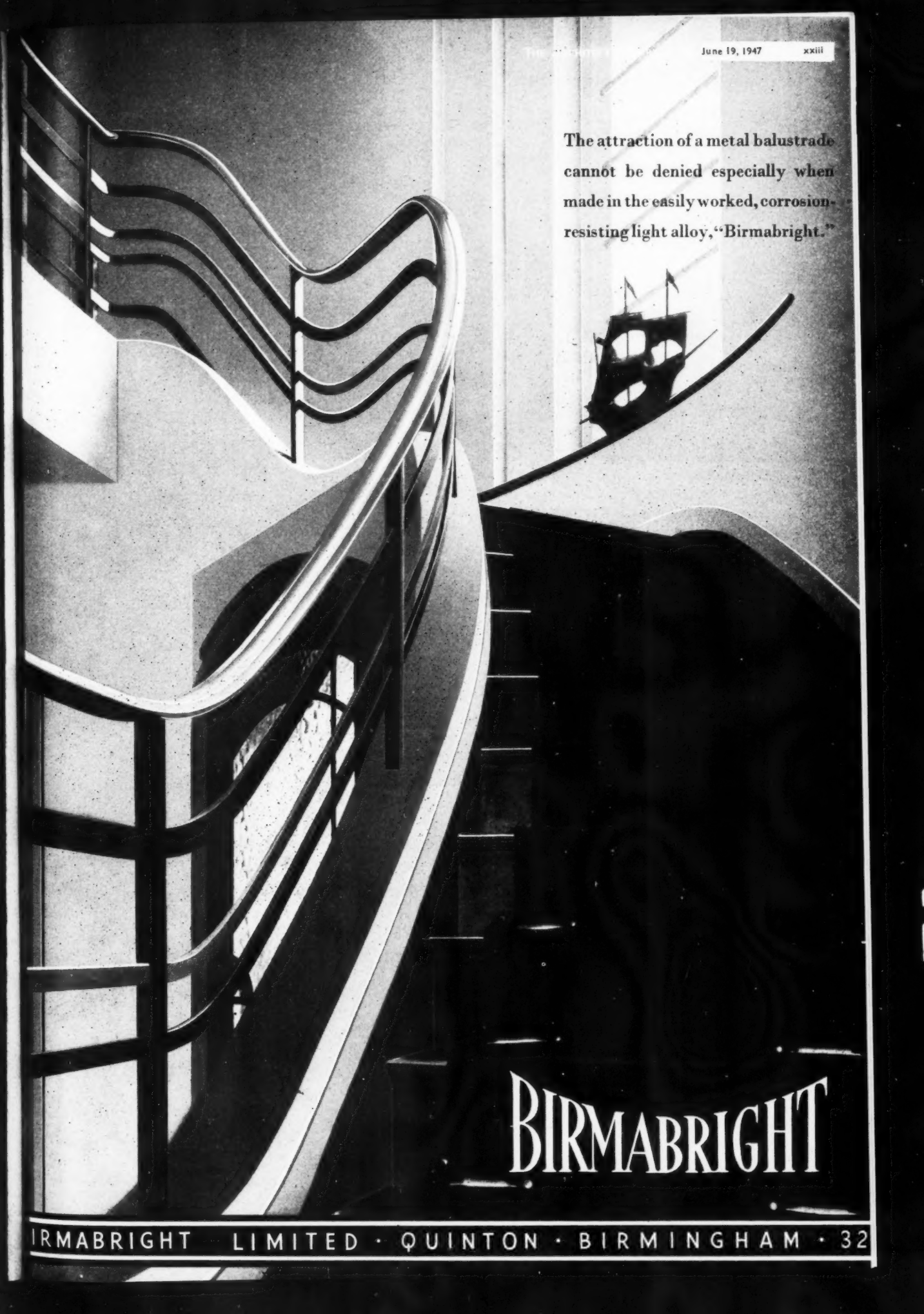
INDUSTRIAL ENGINEERING LTD.

Head Office : Mellier House, Albemarle Street, London, W.1

Telephone Number : Regent 1411 (P.B.X. 4 lines)



IRM



The attraction of a metal balustrade cannot be denied especially when made in the easily worked, corrosion-resisting light alloy, "Birmabright."

BIRMABRIGHT



Wrought iron furniture specially designed and supplied by Heal's for Kempinski's Restaurant, "La Corniche," London. The chairs have hair stuffed seats, backs, and arm pads, and are covered in specially printed salmon pink material. The dispenca bar is fitted with a wrought iron grill-and refrigerating plant. Chequer pattern cork tiling is laid on the floor. Murals painted by Lucien Lowen.

Furniture for Special Needs

The furnishing of restaurants, hotels, schools, colleges and institutions is not a simple matter in these days of short supplies and restrictions. At "La Corniche" which we recently furnished, we overcame these problems by designing and producing the good looking metal furniture that may be seen in the illustration.

At Heal's we are always happy to solve your problems by working in collaboration with your architect or by creating original schemes in our design office. Why not consult us?

HEAL'S CONTRACTS LTD

196 TOTTENHAM COURT ROAD . LONDON . W.1

SUNDEALA

THE BUILDING BOARDS THAT WON'T LET IN THE WET ...

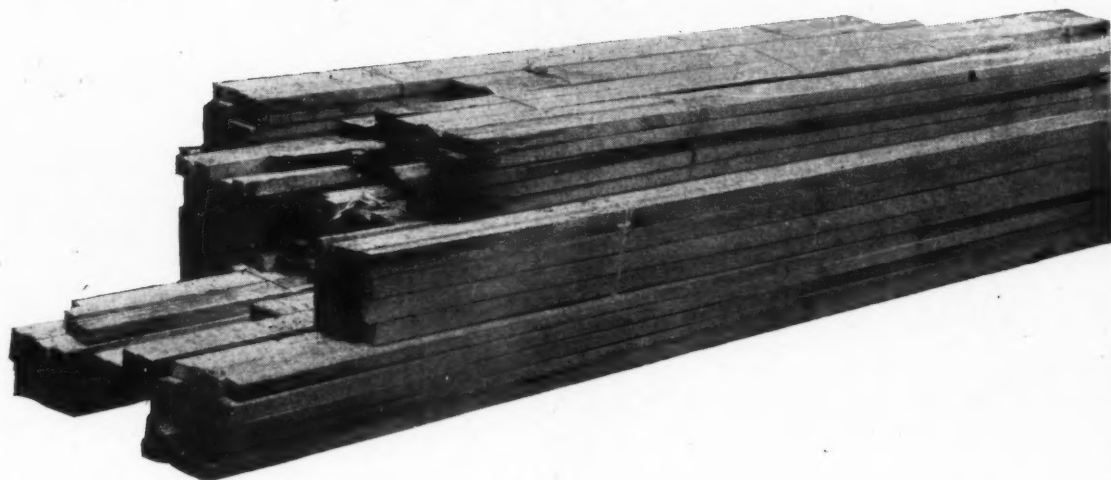
The exceptional water-resisting properties possessed by SUNDEALA Building Boards are due to the fact that every board is scientifically waterproofed throughout its entire thickness during the process of manufacture. For exteriors that must weather the weather SUNDEALA is supreme! Available in a range of standard sizes and thicknesses to meet all requirements. Write for details.

THE PIONEER ALL-BRITISH
BUILDING BOARDS FOR
EXTERIOR & INTERIOR USE

SUNDEALA BOARD CO. LTD., ALDWYCH HOUSE, LONDON, W.C.2. Telephone: CHAncery 8159. Works: Sunbury-on-Thames, Middlesex

Members of the Building Board Manufacturers' Association.

YOU CAN SAVE



TIMBER and MONEY in ROOFING

We recently prepared some figures in connection with a scheme of Local Authority houses now being built near London.

The scheme consisted of 200 pairs and the original specification called for ordinary tiles at a roof pitch of $37\frac{1}{2}$ degrees, but it was found necessary to save timber.

Various alternatives were considered, and eventually, in order to produce the desired saving in timber and, incidentally, a welcome saving in money as well, it was decided to employ our INTERLOCKING CLAY TILES at a roof pitch of $32\frac{1}{2}$ degrees.

The savings effected by a reduction of only five degrees in the pitch of the roof amounted in total to nearly 28 standards of timber (or sufficient for approximately 18 further houses at 1.6 standards per house), and a monetary saving of nearly £1,900 as a result of the recent increase in timber prices.

These economies are being effected because it is practicable to use a clay interlocking tile of proven durability with efficient locks at both head and side at the lower pitch.

We will send further details of both savings and our roofing tiles upon request.

LANGLEY LONDON LIMITED
161, BOROUGH HIGH STREET, LONDON, S.E.1.

'PHONE: HOP 2946 (5 lines), 2538 (2 lines).

'GRAMS: LAGLYCOL, PHONE, LONDON

FLOORS

(ACID & NON-ACID)

AND

WALL SURFACES

OF ALL TYPES TO
SUIT EVERY CONDITION

INCLUDING:—

"FERROGRAN"

STEEL FACED
FLOOR FLAGS

(Hydraulically Pressed)

FOR HEAVY
TRAFFIC CONDITIONS
&

"CONSOL"

STEEL ANCHOR
FLOOR PLATES

FOR HEAVIER
TRAFFIC CONDITIONS



HEAD OFFICE & WORKS:
WEDNESBURY, STAFFS.

Telephone: 0284 (5 lines)

LONDON OFFICE:
Artillery House, Artillery Row, S.W.1.
Telephone: 1547-8 Abbey.



...use **Bostik No.321**

Bostik Cement No. 321 is not a general purpose Adhesive, it is one of a whole series—each designed to make vice-like resilient joints between particular materials. Bostik No. 321 is used in Aircraft construction for the waterproof sealing of overlap riveted joints. In other industries it is used in conjunction with Bulldog Upholstery Cements to firmly secure Upholstery Fabrics to metal. Not only do Bostik adhesives provide a powerful resilient joint that lasts and lasts, but, by using the appropriate grade the joint can be made resistant to water, to petrol, or oil. Write to-day for further interesting information.

The BOSTIK MAN who represents our technical and research departments is at your service. Call him in to advise on any problem of adhesion or sealing.



Bostik SERIES OF ADHESIVES

★ The word "Bostik" is a registered trade mark of B.B. Chemical Co. Ltd.

THE B.B. CHEMICAL COMPANY LTD., LEICESTER

Architects and Engineers—

A NEW BUILDING MATERIAL

“CHEECOL”

STABLE

LIGHTWEIGHT CONCRETE

with the following properties

- STABILITY
- LOW COST
- STRUCTURAL STRENGTH
- GOOD INSULATION
- ABILITY TO TAKE NAILS
- IMPERMEABILITY
- NO CONDENSATION
- NO DECORATION PROBLEMS
- FREEDOM FROM CRAZING



Materials and machines are available now for immediate use. Send for full particulars to
CHEECOL PROCESSES LTD., 40 Broadway, Westminster, London, S.W.1

Telephone: **WHitehall 6355/9.**

Licencees for Scotland: **J. & W. HENDERSON, ALBYN TERRACE, ABERDEEN**

CHEECOL
STABLE

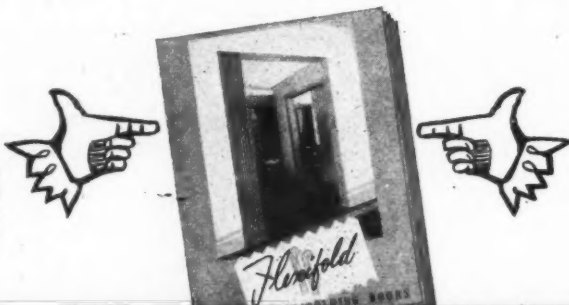
Lightweight

CONCRETE

ANNOUNCING *Flexifold* A NEW IDEA IN FOLDING DOORS

Flexifold combines the practical with the artistic in decorative style and furnishing. These doors fold accordion-fashion; the space wasted by the usual swinging door is thus avoided.

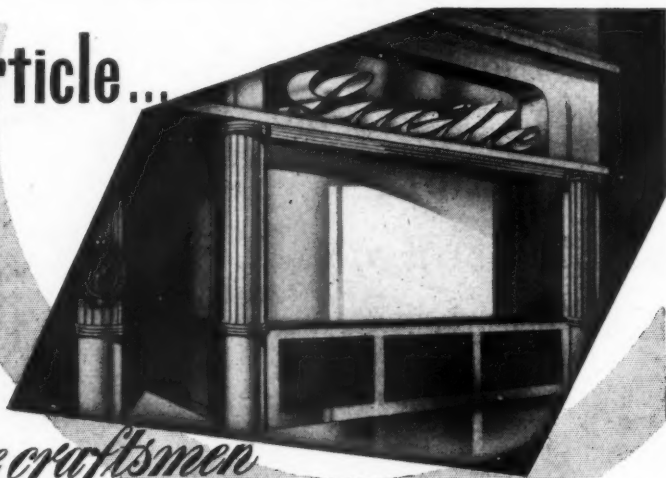
Send for this fully illustrated colour brochure which gives all necessary style, technical and installation information.



Flexifold technicians are always ready to co-operate with Architects and Interior Furnishing Specialists.

WESTLAND ENGINEERS LIMITED • YEOVIL • ENGLAND

The finished article...



MOULDINGS



SHOWCASES



METAL LETTERS



DOOR HANDLES

*speaks for the craftsmen
behind it...*

Carlton

We design and manufacture all types of Architectural Metal Work, Bronze metal and stainless steel mouldings, Shop-fronts, Grilles, Showcases, Metal Letters, etc. We should be pleased to help you with any problems you may have.

WRITE OR PHONE US TODAY—WE CAN HELP YOU

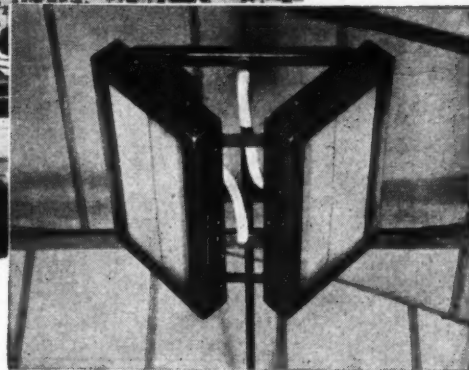
METAL MOULDING CO. LTD

TAYBRIDGE WORKS • BATTERSEA • LONDON • S.W.11

Phone: RAttersea 7464/5 & 6531



Architectural Association Temporary Building, Tottenham Court Road, W.1.



Hiraе "V" Type Radiant Panel

Installation of RADIANT WARMING in Temporary and Ancillary Buildings

A simple and economical method of providing the advantages of Radiant Warming in buildings where a built-in system of Radiant Warming is unsuitable is by the use of "Hiraе" Electric Radiant Warming Panels.

"Hiraе" Radiant Warming Panels are of all-metal construction with insulated backs, the normal size being 24" x 12", and can be used singly or in pairs, the total number depending on the cubic space to be warmed. The rating is 500-600 watts per square foot and the normal running

temperature under thermostatic control is approximately 300°-350°F.

The approved method of installation is to suspend the Hiraе Panels from the ceiling where a minimum height of 10 feet can be obtained, or mount them on brackets from the walls. This arrangement assists even distribution of heat rays and as the Hiraе Panels may be built into lighting fittings the requirements of heating and lighting can be solved concurrently. Richard Crittall will supply full detailed information on application.

**RICHARD
CRITTALL**



By Appointment
Engineers
to H.M. King George VI.

RICHARD CRITTALL AND COMPANY LIMITED

LONDON: 156, GREAT PORTLAND STREET, W.1
BIRMINGHAM: Prudential Buildings, St. Philip's Place.
LIVERPOOL: Martin's Bank Building, Water Street.
POTTERIES: Jubilee Chambers, Stafford St., Hanley.

Telephone: Museum 3366
Telephone: Central 2478
Telephone: Central 5832
Telephone: Stoke-on-Trent 29385

SPECIALISTS IN: HEATING, VENTILATING, AIR
CONDITIONING, ELECTRICAL INSTALLATIONS,
HOT AND COLD WATER AND STEAM
SERVICES, BOILER HOUSE INSTALLATIONS.

R.C. 101



*An Inaudible Lift
is a testimony
to Craftsmanship*

One of our customers writes:

"The lift goes so quietly and smoothly
that you do not even hear it—the results
were nothing short of marvellous."

Wadsworth
ELECTRIC
PASSENGER & GOODS
LIFTS

WM. WADSWORTH & SONS, LTD.,

BOLTON and LONDON

"CHARLTON" ELECTRIC STORAGE WATER HEATERS



**Our production engineers
are donning kilts . . .**

The B.N.E. factory
at Newarthill is
designed for large-scale production of
domestic appliances, and J. & P. produc-
tion engineers are determined to make
the most of its advantages. To do
this means complete reorganisation,
the installation of new equipment

and the efficient marshalling of stores.
It also means that we cannot yet deliver
domestic appliances in the quantities
you—and we—would like. Nevertheless
we feel sure you will agree that our
policy is right: to reorganise now for
big production in the future—the near
future, we hope.

BRITISH NATIONAL ELECTRICS LIMITED

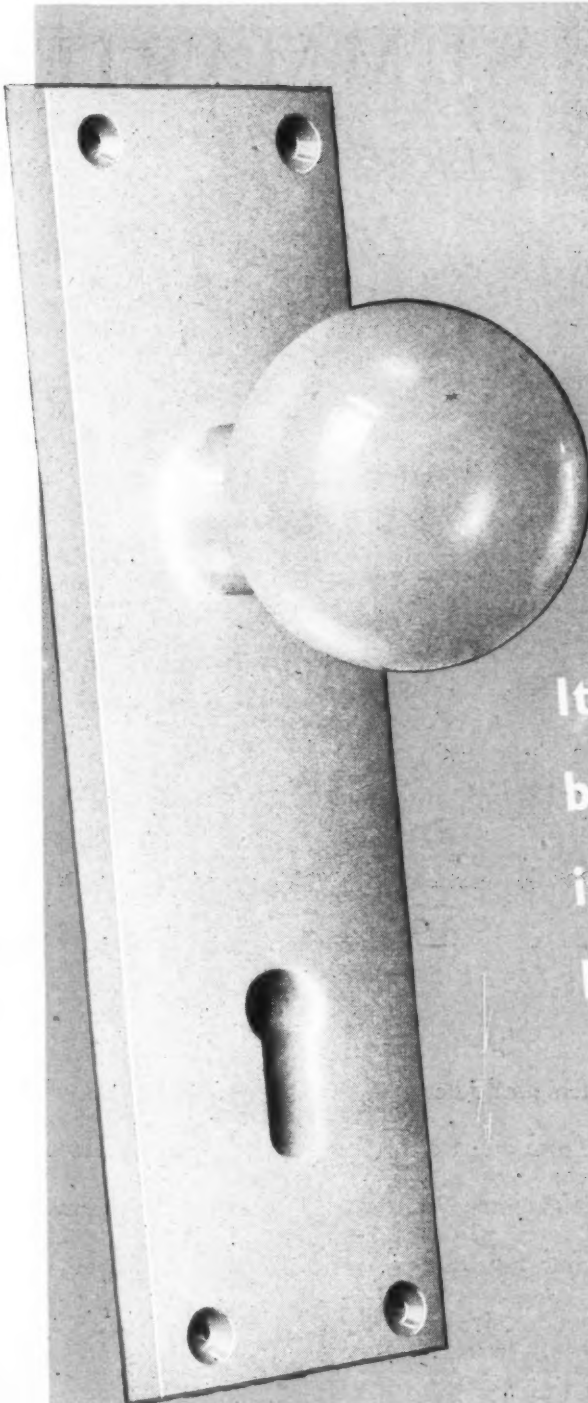
—Domestic Appliances—

NEWARTHILL • MOTHERWELL • SCOTLAND

B.N.E. Ltd. (Incorporating Archibald Low
Electrics Ltd., and J. P. Tubular Heater Co.
Ltd.) is the Domestic Appliances Section of
JOHNSON & PHILLIPS LTD.

"BRITISH NATIONAL" ELECTRIC COOKERS AND FIRES

U. S. SPACE RESEARCH FOUNDATION



It is pleasing to
both hand and eye,
it stands up to
hard usage,
it does its job —
like all
door furniture
by

LACRINOID
TRADE MARK

Now also made in our Canadian Plant

LACRINOID PRODUCTS LTD 90 REGENT STREET LONDON W.1 Regent 5001

TOWN PLAN SUMMARIES



A new service to Architects and Planners

To assist Architects, Housing authorities, Planners and others interested, to familiarise themselves with the main features of the more important Town and Regional Planning Schemes, Ascot have commissioned a team of experts on Town and Country Planning to summarise the plans in a convenient standardised form. A letter on your headed notepaper will bring you copies of the Summaries listed below and ensure that you receive copies of others as published.



LIST OF PLANS

GREATER LONDON PLAN

COUNTY OF LONDON PLAN

MANCHESTER REGION PLAN

No. 1

No. 2 (a)

No. 2 (b)

No. 3 (a)

CITY OF MANCHESTER PLAN

CITY OF NORWICH PLAN

EXETER PHOENIX

A PLAN FOR PLYMOUTH

No. 3 (b)

No. 4

No. 5

No. 6

ASCOT GAS WATER HEATERS LIMITED, 43, PARK STREET, LONDON, W.1. GROSvenor 4491

See our exhibit at the Building Centre, 9, Conduit Street, W.1

VISION

by Beacon Windows

BEACON
WINDOWS

MOGDEN ISOLATION HOSPITAL, ISLEWORTH.
ARCHITECT: P. J. B. HARLAND, F.R.I.B.A.

JOHN THOMPSON BEACON WINDOWS LIMITED

BEACON WORKS · WOLVERHAMPTON · Telephone: Bilston 41944/7 (4 lines) · Telegrams: Windows, Wolverhampton

London Office: IMPERIAL HOUSE, KINGSWAY, W.C.2. Tel: Temple Bar 3216 · Manchester Office: DEANS GATE HOUSE, 274 DEANS GATE Tel: Blackfriars 4721

Glasgow Office: 79 WEST REGENT ST. C.2. Tel: Douglas 3983 · Birmingham Office: EXCHANGE BUILDINGS, STEPHENSON PLACE Tel: Midland 11972

'THE LIVING STONE'

Hands, chisel and stone strive with a common purpose to carve out of swift inspiration a lasting beauty. For Hopton-Wood is a stone of inherent warmth and character: responding instantly to the delicate hands and tools that work it.

From a hill in Derbyshire

HOPTON-WOOD STONE



THE HOPTON-WOOD STONE FIRMS LTD. CRAIG'S COURT HOUSE, 25 WHITEHALL, S.W.1

Quarries and Works: WIREWORTH, DERBYSHIRE *Members of British Stone Federation*



TIMBER MERCHANTS AND SAWMILLERS

A new Timber "Ready Reckoner"

96 pages of accurately computed tables.
Convenient pocket-size attractively bound
in strong cloth bound cover.

Complimentary copies

Complimentary copies are available
for Architects, Builders and Joinery
Manufacturers in London and the
Home Counties.

W. C. WARE & SONS, LTD.

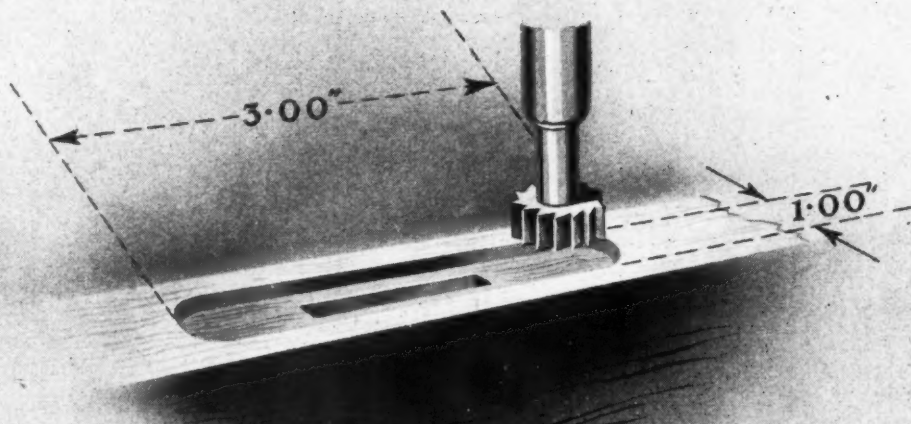
6-8, Kennington Lane, S.E.11. Phone: Reliance 1426 P.B.E.
11, Manette Street, W.1. Phone: Gerrard 2621 P.B.E.
138-140, Saffron Hill, E.C.1. Phone: Holborn 2326

SOFTWOODS · HARDWOODS · WALLBOARDS · PLYWOOD · PLASTERBOARD

Better doors through MASS — PRECISION

LEADERFLUSH LTD.

*manufacturing methods are planned
to eliminate human error*



This lock-recessing operation for instance.

An essential quality of efficient mass-production is absolute accuracy, consistently maintained. In the lock-recessing operation shown above the travel of the revolving cutting tool is limited in all directions, automatically, with a precision which ensures the perfect fit of the lock. The set-up necessary for mass-precision on this scale is only economic with large scale output and such operations are often performed in runs of up to 10,000 per week at Leaderflush. Similar methods are in operation throughout the construction and account for the exceptional accuracy and quality of finish you always get in a Leaderflush door. Leaderflush put best quality on a quantity footing.

The Leaderflush Trade Mark reproduced enlarged on the right is inlaid in the hinge edge of every door, in three colours.



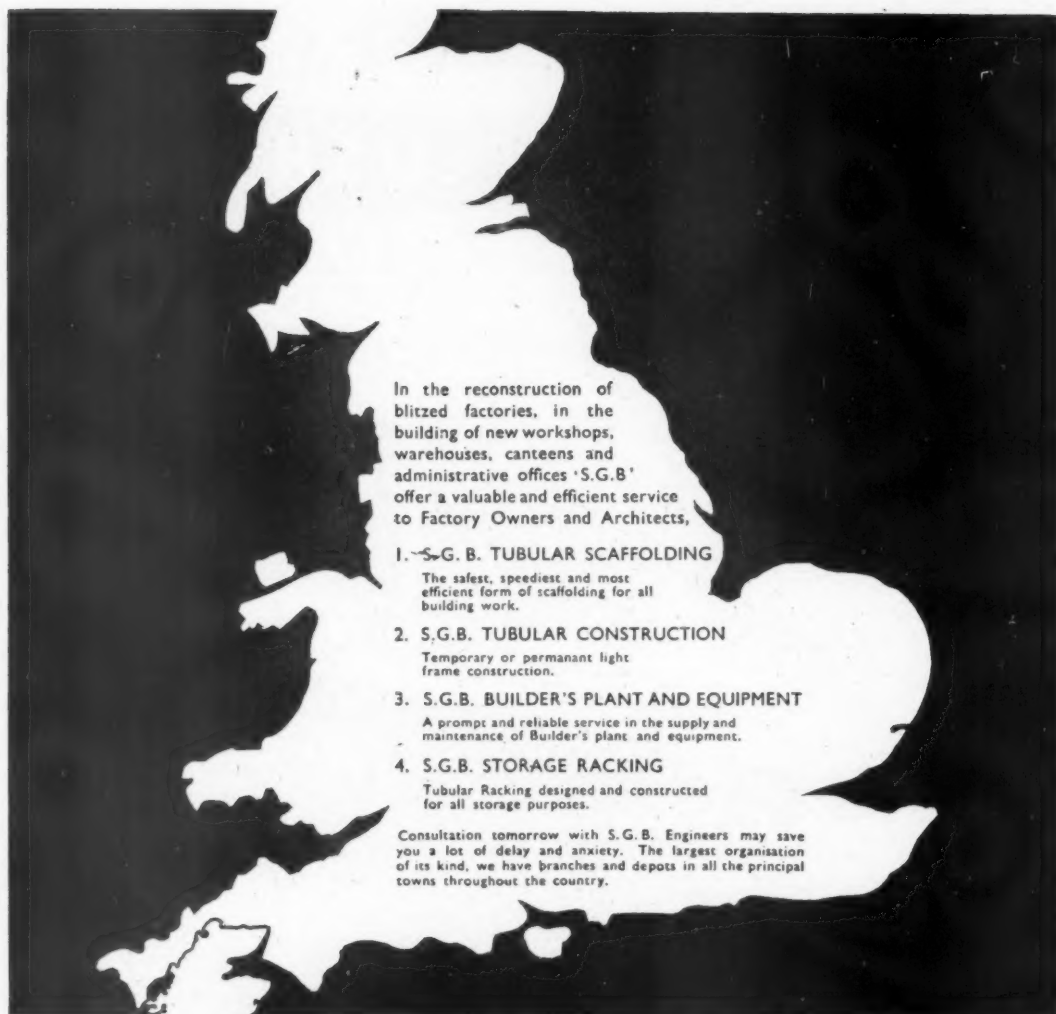
The Ministry of Health have now restricted the amount of timber per house to 1.6 standards. The use of Flush Doors, which require only $\frac{1}{2}$ cube of timber against $1\frac{1}{2}$ cubes for any other door, leaves a much larger share of the ration for use in other parts of the house.

Britain's Best Flush Doors

HEAD OFFICE : TROWELL, NOTTINGHAM

Sole Distributors, Midlands and the South : THE ADAMITE CO. LTD., Manfield House, Strand, W.C.2

Scotland and the North : ARCHIE ARMSTRONG, LTD., Northumbria House, Portland Terrace, Jesmond Newcastle-on-Tyne, 2



In the reconstruction of blitzed factories, in the building of new workshops, warehouses, canteens and administrative offices 'S.G.B.' offer a valuable and efficient service to Factory Owners and Architects,

1. S.G.B. TUBULAR SCAFFOLDING

The safest, speediest and most efficient form of scaffolding for all building work.

2. S.G.B. TUBULAR CONSTRUCTION

Temporary or permanent light frame construction.

3. S.G.B. BUILDER'S PLANT AND EQUIPMENT

A prompt and reliable service in the supply and maintenance of Builder's plant and equipment.

4. S.G.B. STORAGE RACKING

Tubular Racking designed and constructed for all storage purposes.

Consultation tomorrow with S.G.B. Engineers may save you a lot of delay and anxiety. The largest organisation of its kind, we have branches and depots in all the principal towns throughout the country.



Registered Office & Works:
PLOUGH LANE
LONDON S.W.17
Telephone: WIMBLEDON 6201/5

Factory:
SAUNDERTON, BUCKINGHAMSHIRE
Tel: PRINCES RISBORO 480/4

BRANCHES AT:— ABERDEEN • BRIGHTON • BIRMINGHAM • BRISTOL • CARDIFF • DUNDEE
EDINBURGH • EXETER • GLASGOW • HIGH WYCOMBE • HULL • LEEDS • LIVERPOOL • LONDON
MANCHESTER • NOTTINGHAM • NEWCASTLE • PLYMOUTH • PORTSMOUTH • SOUTHAMPTON

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. od. 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 material 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.

BIRMINGHAM: *Light Alloys (Structural, Engineering, Decorative).* At Birmetals, Ltd., Woodgate Works, Birmingham 22. The object of this exhibition is to show, under one roof, every use to which Birmabright and contemporary light metals can be put in the building industry. (Sponsors: Birmetals, Ltd., in co-operation with designers and fabricators of the items exhibited.) JUNE

LEICESTER. *Building Science Exhibition.* At the City Museum and Art Gallery. (Sponsors, Department of Scientific and Industrial Research.) JULY 7-19

LONDON. *The Rotar Service Hatch and Pantry Unit.* At the Building Centre, 9, Conduit Street, London, W.1. (Sponsors, The Tetbury Furniture Company.) JUNE

Children in Stone. An exhibition of sculpture. At 26, Conduit Street, W.1. (Sponsored by RBS.) UNTIL JUNE 20

Town and Country Planning Association Swedish Tour. Visiting Gothenburg, Copenhagen, Stockholm, Uppsala, Sigtuna, Sandviken, Gavle. (Sponsor, TCPA.) JUNE 21-JULY 5

Czechoslovak Architecture. At 66, Portland Place, W.1. An exhibition of historical, pre-war and current Czechoslovak architecture. (Sponsor, RIBA.) UNTIL JUNE 24

London Brewers' Association Planning Exhibition. Planning and distribution of public houses. At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, London Brewers Association.) UNTIL JULY 5

Town Planning Institute General Meeting. At Livingstone Hall, Broadway, Westminster. S.W.1. Address by Lewis Silkin, M.P., Minister of Town and Country Planning. (Sponsor, TPI.) 6 p.m. JUNE 19

Margaret Leona, National Union of Townswomen's Guilds. *Flashlights of Hull—Amateur Drama and Town Planning.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsors, HC.) Buffet lunch 12.45 p.m. Talk 1.15 p.m. JUNE 24

Whole-Day Summer Symposium on Sound Absorption and Reverberation. The meetings are to be opened by Professor P. V. Brueel, of Copenhagen, who is speaking on Panel Absorbents, and J. Moir, of this country, who will discuss some other new aspects of reverberation. At the RIBA, 66, Portland Place, W.1. (Sponsors, Physical Society.) 10 a.m. Buffet lunch and tea. JUNE 26

H. C. Harris, Technical Adviser to the Lead Industries Development Council. *Plumbing and Frost Protection.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) Buffet lunch 12.45 p.m. Talk 1.15 p.m. JULY 1

Christopher Tunnard, Professor of City Planning, Yale University. *Town and Country Landscape, USA.* At the RIBA, 66, Portland Place, W.1. (Sponsor, ILA.) 5.30 p.m. JULY 1

P. L. Leigh-Breese and Fred Griffiths. *A Taxi Driver and Landlord Discuss Tenants Problems.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) Buffet lunch 12.45 p.m., 2s. 6d. Talk, 1.15 p.m., 6d. JULY 8

Eleventh Public Works Roads and Transport Congress. At Olympia, London. JULY 21 to 25

Alexander Block. *Sociology of Housing.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) Buffet lunch 12.45 p.m., 2s. 6d. Talk 1.15 p.m., 6d. JULY 22

MANCHESTER. *Building Science Exhibition.* At the Gas Showrooms. (Sponsor, Department of Scientific and Industrial Research.) UNTIL JUNE 28

READING. *Town and Country Planning Summer School.* At Reading University. (Sponsor, Town Planning Institute.) JULY 16-23

THE HAGUE. *Fuel Economy Conference.* Particulars from the British National Committee World Power Conference, 201-2, Grand Buildings, Trafalgar Square, London, W.C.2. SEPT. 2-9

TUNBRIDGE WELLS. *Ideas on Design in the Home Exhibition.* At the Municipal Museum. (Sponsor, Arts Council.) UNTIL JULY 5

NEWS

THURSDAY, June 19, 1947
No. 2732 Vol. 105

News	513
At the Dublin Conference ..	514
This Week's Leading Article ..	515
Astragal's Notes and Topics ..	516
Letters from Readers	517
Road House into Testing Station	518
Physical Planning Supplement: Reconstruction in France. The Organization and Planning Control	519
The RIBA Conference at Dublin	522
Scientific Instruments Exhibition. Designed by Peter Moro and Robin Day	527
Technical Section:	
Information Centre	528

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 unstarned 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.

★
Fifty-four members of the Town and Country Planning Association are leaving on June 21 for a FOURTEEN DAY PLANNING TOUR of Sweden and Denmark.

The party is going to Scandinavia to examine the developments of the last few years in Danish and Swedish town planning and housing. The tour will be under the leadership of Mr. F. J. Osborn, Chairman of the Association's Executive Committee. A two-day stay in Copenhagen will be occupied by lectures and exhibitions and visits to the most interesting new housing and planning developments. At Stockholm, where the party is spending four days, a similar programme has been arranged, and in addition it is hoped there will be visits to the famous open-air theatre and a boat tour of the Archipelago. After two days spent in touring Sandviken, Sigtuna, Gavle and the ancient capital of Gamla Uppsala, the party will return to Gothenburg.

HOPE'S

"ONE PIECE"

DOOR FRAMES

in pressed steel



Send for List No. 231

HENRY HOPE & SONS LTD., Smethwick, Birmingham
London Office & Showrooms: 17 Berners Street, W.1

From AN ARCHITECT'S Commonplace Book

A CASTLE ON THE GROUND. [*From Tooting Corner, by Eric Bligh*]. To the left of the Merton Road you saw first the Board School, of which nothing architecturally could be said except perhaps the word beastly. Then followed half a dozen cottages, at one of whose gates a red-faced fat woman stood most of the day to get children to run to the off-licence for her. Now came, in a leisurely way, six old houses, of which the first two were outwardly alike, but inwardly quite different, with entirely dissimilar gardens. The other four were all of a chance and random design. The fourth of the six was the doctor's house. It had no name or number. "Dr. Bligh, Merton Road": that was enough. Here was my happiness, my pride, my warm retreat. I loved the place, and liked to be seen turning into it. Portuguese laurels and little fir-trees grew in both pieces of front garden. To the left of the front door were the three windows of the dining-room. To the immediate right of the front door was a separate entrance to the surgery, and then came its single window. Beyond that were the stable gates. To reach the house you passed under a short covered way. Here my mother's taste began. This overhead shade caused the hall to be very dark, but she liked a subdued light, and would never allow it to be removed. Along the paving stones on the right-hand side of the covered way was a long garden-box from which sprang a creeper with dry and gnarled roots like the paws of tabby cats. This grew up, and in summer covered the top of the iron shade with a small white flower. An abundant virginia creeper, dark-red in autumn, screened the whole front of the house with its mature prodigality. The walls were of good old brick. All this has been changed since our time. My father's successor disembowelled the whole interior, so that I could hardly find my way about. He removed the shade, built in its place a mean annex, tore down the creeper, repointed the bricks to a bright yellow, and made the place thoroughly efficient for business. We did not really live in such a rectangular dolls' house as that.

★
Applications are invited by the COUNCIL OF INDUSTRIAL DESIGN for the post of Director which has just fallen vacant.

Salary up to £2,500, according to experience and qualifications, with a contributory Superannuation Scheme. Qualifications required are a knowledge of some branches of industry, administrative capacity, experience in posts of wide responsibility and a general understanding of the problems of industrial design. A form of application may be obtained from the Establishment Officer, the Council of Industrial Design, Tilbury House, Petty France, London, S.W.1.

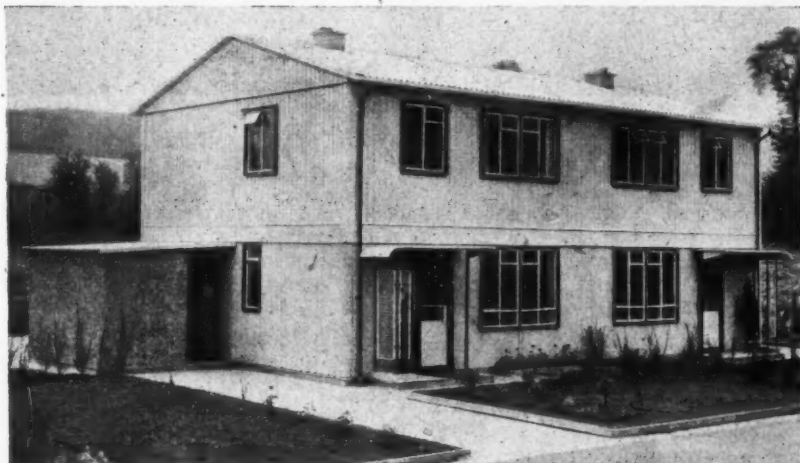
sider and keep under review the costs of housebuilding and to make recommendations." Chairman: John Graham Girdwood, C.B.E. (Controller of Canteens, Ministry of Supply, during the war, director of William Beardmore & Co., Ltd.); D. N. Chester (Nuffield College, Oxford); D. H. Daines (Secretary to London Labour Party); C. H. James, R.A., F.R.I.B.A. (London); W. K. M. Slimmings (Chartered Accountant, London). Secretary: E. J. S. Clarke, Ministry of Health. *Secretary of State for Scotland's Committee*: "To consider and keep under review the costs of housebuilding in Scotland and to make recommendations." Chairman: G. P. Laidlaw, O.B.E. (Petroleum Board, formerly of Shell Mex, Chairman, Scottish Housing Advisory Committee); Robert Adam, O.B.E. (Town Clerk of Perth; served as member of Barr Committee on Scottish Building Costs in 1939); L. W. Hutson, O.B.E.,

F.R.I.B.A. (Hamilton: Convenor of Practice Committee of Royal Incorporation of Architects in Scotland); James McInnes, M.B.E. (Glasgow Housing Convenor); Alexander McKellar (Chartered Accountant, Glasgow); Eric Maxwell, F.S.A.A. (Burgh Chamberlain of Kirkcaldy); John S. Pater-son (Director, Scottish Co-operative Wholesale Society). Secretary: J. Hogarth, Department of Health for Scotland. *Minister of Work's Committee*: "To consider and keep under review the price of building materials and to make recommendations." Chairman: Sir William Palmer (formerly Principal Industrial Adviser, Board of Trade); John Ryan (Director of Metal Box Co., Ltd.); Luke Fawcett (General Secretary, Amalgamated Union of Building Trade Workers); P. F. Carpenter (Chartered Accountant); Professor Arnold Plant (London School of Economics). Secretary: D. F. Mann, Ministry of Works.

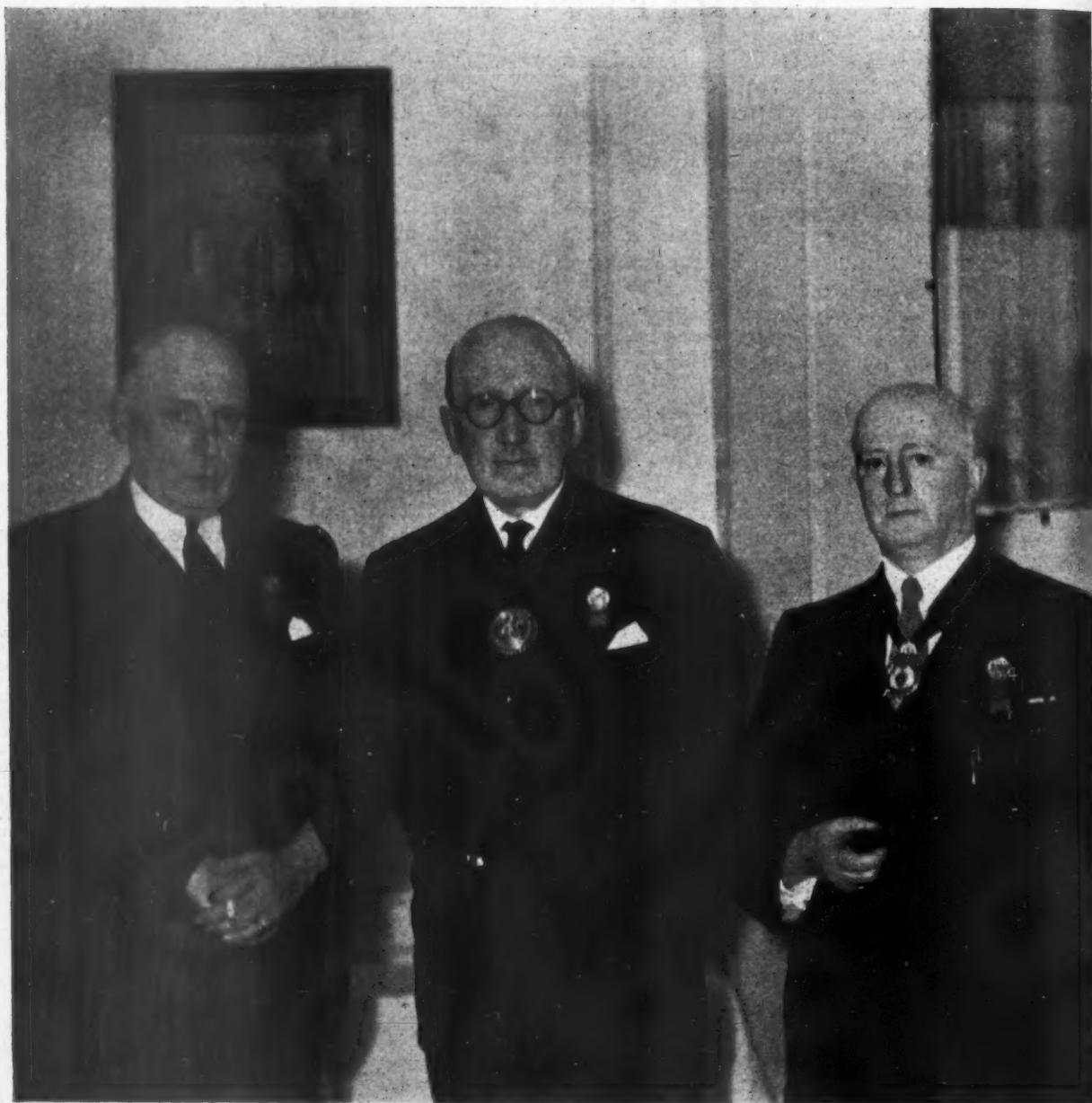
★★
In THE KING'S BIRTHDAY HONOURS, Knights Bachelor: Charles Johns Mole, Director-General of Works, Ministry of Works; CMG: F. W. Smith, for services as Director General of Building Materials, Ministry of Works. OBE: H. M. Fairweather, for services to building construction; W. T. Fraser, Assistant Chief Architect, Ministry of Works.

House building costs and PRICES of building materials are to be specially reviewed, it has been announced in reply to Parliamentary questions.

In a series of written answers, details were given of three Committees which have been appointed by the Minister of Health, Mr. Aneurin Bevan; the Secretary of State for Scotland, Mr. Joseph Westwood; and the Minister of Works, Mr. Charles Key. Terms of reference and membership are: Minister of Health's Committee: "To con-



The Alcrete House, architects Messrs. A. F. Hare and Partners, construction designed by Structural and Mechanical Development Engineers Ltd., and constructed by the Bristol Aeroplane Company (Housing) Ltd. The house is built round a semi-load bearing service unit. The wall units, consisting of an outer aggregate skin bonded to an infill of cellular concrete with an inner lining of plaster, are cast in an alloy frame. Those above floor level have an additional metal outer-skin.



At The Dublin Conference

An informal group of the three Presidents taken at the reception at the Royal Hibernian Hotel. From left to right : Mr. R. H. Gibson, F.R.I.B.A., F.R.I.A.I., President, Royal Society of Ulster Architects ; Sir Lancelot Keay, K.B.E., M.Arch. (Lpl.) President, R.I.B.A. ; Mr. Stephen S. Kelly, F.R.I.B.A., F.R.I.A.I., President, Royal Institute of the Architects of Ireland. Further photographs and a report of the Conference appear on pages 522 to 526.

In response to a plea by the citizens, the Section on City Planning of Yale University Department of Architecture is preparing a TOWN PLANNING SCHEME FOR WESTPORT, Connecticut.

Preliminary sketches have been presented to the Citizens' Planning Association. In addition to extensive visual research maps, the Yale group will present proposals to preserve the rural character of the town and insure against future growth of an

undesirable nature. Proposals are also made for a new shopping centre, a community and civic centre, together with zoning, and industry and recreational facilities. The Section of City Planning at Yale is taking the Westport problem as a term project, with more than 50 undergraduate professional students and five graduate students collaborating on research and in submitting the plan. The work is under the direct supervision of Professor Christopher Tunnard, Chairman of the Section of City Planning. Not only is this a pooling of efforts by the Department of Architecture and its Section on City Planning, but it also includes work by graduate

students in the Law School and in the Department of Sociology. The law students are investigating legal problems involved in the workings of the plan; while the Sociology students are supervising a sociological survey of the town the purpose of which is to answer shopping and transport queries by direct canvassing. This canvassing is being conducted by six architecture students. Both town officials of Westport and the Citizens' Planning Association are co-operating extensively with the students in the research work and in guiding the preparation of the final plan which it is expected will be submitted to the town officials during the next few weeks.

The S
for R
appro
and C
a se
COU
Coun
will
The e
showed
fresher
student
abreast
field.
courses
ing pro
discuss
professi
permit
the ins
courses
Author
of their
have
senior
are n
The f
of ter
nition
may be

★
Mr.
appoin
MET
Mr. G
F.S.I.,
politica
March
J. Inne
Mr. T
Octobe
large a
prising
magist
pleting
pool
Minis
Works
tant o
Buildi
Assista
Mainte
veyor,
ary H
Assista
at No

Mr.
been
Polic

The School of Planning and Research for Regional Development, with the approval of the Ministry of Town and Country Planning, has designed a series of REFRESHER COURSES in Town and Country Planning which will start in September next.

The experiences of war training have showed the very great value of short refresher courses designed not for young students, but to help qualified men to keep abreast of the latest developments in their field. The Ministry considers that these courses will meet a definite need in assisting professional planners to consider and to discuss the recent developments in their profession, and it is prepared both to permit Officers of the Ministry to assist in the instruction of those taking part in the courses, and to encourage Local Planning Authorities to facilitate the participation of their officers in the courses. The courses have been designed particularly for senior members of planning staffs, and are not suitable for unqualified men. The fees, which will be at the rate of ten guineas a week, will include tuition and any maps and papers that may be issued with the course.

★
Mr. J. Innes Elliott has been appointed ARCHITECT TO THE METROPOLITAN POLICE.

Mr. G. Mackenzie Trench, O.B.E., F.R.I.B.A., F.S.I., Architect and Surveyor to the Metropolitan Police District, who retired on March 31 last, has been succeeded by Mr. J. Innes Elliott, B.A.R.C. (Liverpool), A.R.I.B.A. Mr. Trench, who held the position since October, 1920, has been responsible for a large amount of architectural work comprising new police stations, section houses, magistrates courts. Mr. Elliott, after completing the five years' course at the Liverpool School of Architecture, joined the Ministry of Works—then HM Office of Works. He served as Architectural Assistant on Ancient Monuments and Historic Buildings, and New Works Services; as Assistant Surveyor and District Surveyor, Maintenance Division at Birmingham; Surveyor, Maintenance Division and Temporary Housing Programme at Exeter, and Assistant Regional Director, Works Services at Nottingham.



Mr. J. Innes Elliott who has recently been appointed Architect to the Metropolitan Police. See News Item.

PROOF OF THE PUDDING

TEMPORARILY—in a road house now retired from the business is housed one of the more recent activities of the Ministry of Works: a field testing station. Here the Ministry has established as a logical extension of its studies in housing, design, construction and erection, an organisation for the practical testing of mechanical equipment for the builders' yard or the site, building methods and products.

An establishment of this kind has long been needed, both to assist manufacturers in developing and perfecting their products and to enable the performance of new products and equipment to be observed at first hand under properly organised conditions. For too long builders have had to rely on the unsupported evidence of a manufacturer's brochure, and have been without expert and disinterested advice on the proper management and use of equipment. An independent station for field trials can supply this need.

To be of value, however, such a station must fulfil two conditions: first, it must be widely enough used by the manufacturers and, second, it must produce its results rapidly and they must be couched in unambiguous terms. Unless the work is comprehensive and covers a large variety of equipment, the builder will still be in doubt as to whether untested products may not be more satisfactory. Government research bodies are apt to work on perfectionist principles and are chary of issuing reports until the last "i" has been dotted and the last "t" crossed. Such a procedure, however praiseworthy from the standpoint of scientific integrity, results in long delays, and the contractor cannot wait a year or even six months before deciding whether or not to order a particular piece of equipment. Nor will manufacturers submit their products if they have to wait months before a report is forthcoming. This is not an argument for shoddy work, but an indication of the practical need which must be met if a field testing station is to serve its purpose. Reports should be issued rapidly and where extended tests are needed, interim reports—if necessary with reservations expressed—should be published.

The average contractor has no great organisation behind him, and does not require highly specialised equipment, but rather adaptable machines that will help him to do the ordinary job more quickly and economically. There is a danger that the scientist and to a less extent the manufacturer, in a search for perfection will so limit the field of application that the resulting perfect piece of equipment will be useless. The work of the station and comments of builders and other visitors should considerably minimise this danger.

It is presumed that the work of the station is carefully co-ordinated with that of other bodies such as the BRS, the Forest Products Research Laboratory and the Road Research Laboratory, but field testing should not be confused with fundamental scientific research. One of the primary objectives of this station should be that of organising efficient time

studies, an inherently important question in the development of new ideas and to carry out this and other work a considerable number of scientists, technicians and skilled craftsmen are obviously required. It is to be hoped that adequate labour will be allocated to do the job quickly and efficiently. Adequate staffing at the testing station should, if the work is effective, pay a handsome dividend in labour economy at the contracting end. The ideas behind the Ministry's first official field test unit are undoubtedly sound and it is to be hoped that similar activities may be established in the provinces for the examination of local techniques, materials and products and to enable provincial builders to obtain advice on the use of equipment and to see it in action.



The Architects' Journal

9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1

Phone: Whitehall 0611

N O T E S & T O P I C S

DUBLIN JOTTINGS

The RIBA Conference is over, and Havana cigars, Irish whisky and Porterhouse steaks are recollections.

One of the most pleasant memories will be for many the meetings with Irish architects. Somehow, though licensing rules there as with us, and materials are difficult to get and there is many a month's delay between design and construction, architects have not lost heart. This eagerness—particularly among those who are seriously struggling with the problems of a contemporary architecture—is reminiscent of the early days of the Mars group and the first contacts with European architects of the late twenties and early thirties.

Of these architects, Michael Scott is perhaps the doyen. He will be remembered as the architect of the Irish Pavi-

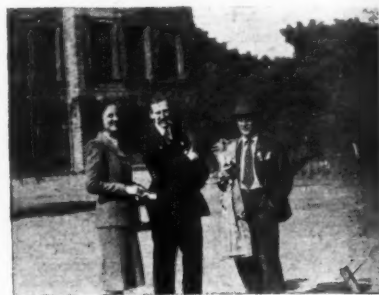
lion at the New York World's Fair. An evening with him is a tonic for any distressed English architect. He has an endless flow of stories of Irish life and character and for the benefit of those who did not make the journey I will pass one, showing the impact of planning in rural communities, on to my readers, though I am afraid the accent will have to be imagined.

It appears that an English traveller arrived by train at the railway station of a small town, and approached the stationmaster - ticket collector - porter and inquired whether a taxi was available to transport him to the town which appeared to be at a little distance from the station. He was informed there was no car. He then asked for some alternative means of transport and it was suggested there might be a possibility of getting a waggon eventually. "This is terrible," said the traveller, "how far is the town from here?" "Four miles," replied the stationmaster, "a grand walk on a lovely morning like this." "Terrible," replied the traveller getting a little irate, "why the devil couldn't the station be somewhat nearer the town." "Ah, we like to have the station somewhere near the trains."

The Garden Party in the grounds of Trinity College was noteworthy for the fact that the sun was shining brilliantly and the weather was delightful. My photo shows Mrs. Arup, wife of Ove Arup, who, like other consultants, has work in Ireland to give them a justification for more regular contacts with Dublin's food, laughter and friendliness. Incidentally, the library of Trinity College is a most im-

pressive building. According to the Conference handbook it was completed in 1732 and houses among other volumes the *Book of Kells*. The architect was Thomas Burgh, who I am sure would never have approved of the hideous brown paint with which the external sashes are coated.

It is cheering to see that the Dublin Corporation is aware of the merits of



At the Garden Party, left to right, Mrs. Ove Arup, Mr. F. Gibberd and Mr. R. Townsend.

the City's Georgian buildings and is endeavouring to preserve them even when the houses themselves have become uninhabitable. Some of the reconstructions have been illustrated in this journal. In view of this interest it is all the more unfortunate that the remodelling has entirely destroyed the character of the houses. Dublin Georgian scale is very bold, at times almost brutal, but the whole effect is extraordinarily satisfying, due to the detailing. The colour, the iron railings and occasional balconies, all these are now lost. All that is left is a series of cliff-like fronts in a particularly aggressive red brick, with the original doors and door cases and the window frames. The iron railings have given way to unpleasant little concrete walls, the balconies have gone, the rendered window reveals have gone, and the colours of the paintwork appeared to me ill-chosen. In short, almost everything that made the houses a delight when well maintained and worth preserving when in decay has been lost. I hope that with experience the Corporation's architects will avoid the mistakes of the first groups.

There are more ways of killing a cat than drowning it, and it now appears there are more ways of catching pike than spinning for them. The lake in Phoenix Park used to house trout until

the p
elim
drain
not b
The t
I hop
have

DUBLIN
The l
the h
thoug
sioned
book
with
photog
printed
another
the sel
pared
wanted
handso
A sou

CABBAG
The r
largely
nuts su
roller s
metal
backgro
the fell
are nov
the rea

There
which



An Exe
Station.

the pike got in, so in order to eliminate the pike the lake was drained and such of the fish as could not be eaten was used as fertilizer. The trout now have a fresh start, and I hope the President of Ireland will have good sport with them.

DUBLIN SOUVENIR

The love of a souvenir is endemic in the human heart. Perhaps the RIBA thought as much when it commissioned the excellent, expensive handbook to the Conference. Complete with potted history, architectural photographs and a map of Dublin, printed on glossy art paper from another publisher's decade than this, the select committee of four who prepared the volume knew what was wanted. A handbook worth keeping, handsome enough for the bookshelf. A souvenir.

CABBAGES AND KINGS

The romance of the radio studio has largely departed. No longer do cocoanuts substitute for galloping horses, or roller skates for an express train, sheet metal no longer provides a stormy background as the villain perpetrates the fell deed. All these sound effects are now, I am assured, recorded from the real thing.

*

There are some sounds, however, which even the autocrats of Portland

Place are unable to record for the delight of listeners. Real heads do not, they tell me, roll when the executioner makes his stroke. How this is done can be seen in the illustration which comes from a Danish broadcasting studio. The homely cabbage is perhaps not always inappropriate. One would almost find pleasure in losing one's head to so genial an executioner.

THIS WAY TO THE RUINS

The Lost Treasures of London by William Kent (Phoenix House) is a companion to lovers of bomb damage in their peregrinations through London. Designed, the author says, "to satisfy the curiosity of anyone who wants to know what has happened to some well-known building," it will do this. It may disappoint anyone who wants much more. Of any bombed monument here are the guide-book facts together with details of damage and "incidents," culled, I think would be the word, from the most authoritative sources and set down in delightful journalese. There are many interesting and some very fine photographs.

*

All this information in the form of a series of Walks through the City and Central London. The author hopes you will carry his book as a guide. If a building has been bombed out of existence you are told all about it; in those untouched from plinth to pinnacle you are not expected to show much interest. This would upset me a lot. But you are not intended to look very long at anything. "It is estimated that each (walk) will not occupy more than two hours, at a normal pace." I would accept the author's wager to cover the distance in the time, but no stopping to admire, mind you, just a quick flick of the eye right and left as the monuments wheel past.

*

To the "Lover of London" avid for miscellaneous instruction, details of these lost treasures may be treasure trove. Others may regret that such labour and erudition have not produced something either definitive as chronicle or more discriminating as guide. "This book should be a welcome supplement to my *London for Everyman* and *Encyclopædia of London*," says the author. If you possess those works you will no doubt agree with him.

ASTRAGAL



LETTERS

R. Carton Tickell,
Dip.Arch., (Lppl), A.R.I.B.A.

R. K. Swindell

Salaries

SIR,—One cannot but agree with your correspondent, Mr. John H. Jones, that the salaries offered to architects and other technicians in many cases bear but scant relation to either the period of training undergone or the responsibilities involved.

However, it is not fair to blame the RIBA whose primary duty is to maintain the status of the profession through close supervision of educational standards, granting of prizes and studentships, overseas hospitality, etc. If the RIBA were to prosecute a vigorous policy aimed at raising the salary scales of architectural assistants it could only do so in many cases at the expense of its own senior membership. One should not expect them to consciously adopt a policy of a "house divided."

The main drive for decent salaries must come from the salaried members themselves and in this respect the Association of Building Technicians, whose membership includes a high percentage of architects, has a record second to none. It is a truism to point out that the success of any such demand will vary directly with the number of individuals concerned. I would earnestly invite Mr. Jones, and the many who feel the same about salaries, to join those already engaged in the struggle and hasten victory by strengthening our numbers.

Details of the ABT, its salary scales and other information can be obtained from the General Secretary, 5, Ashley Place, London, S.W.1.

R. CARTON TICKELL

Hesswall Hills, Cheshire.

SIR,—The view expressed by Mr. J. H. Jones re salaries are doubtless shared by many other architectural assistants and technicians, not necessarily all of whom are employed by local authorities.

To Mr. Jones and all architects, architectural assistants, and technicians who desire better salaries and conditions, etc., I would suggest membership of the Association of Building Technicians.

As Mr. Jones mentioned local authorities, it may be interesting to note that at the present time the ABT are engaged on a special recruitment drive amongst all technicians employed in these particular offices.

Successful negotiation for improved salaries and conditions can be effected if all technicians solidly unite. Active membership of the ABT is the solution.

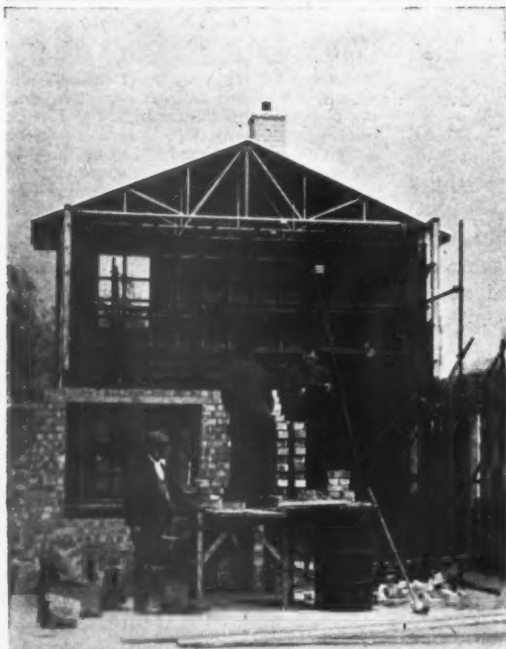
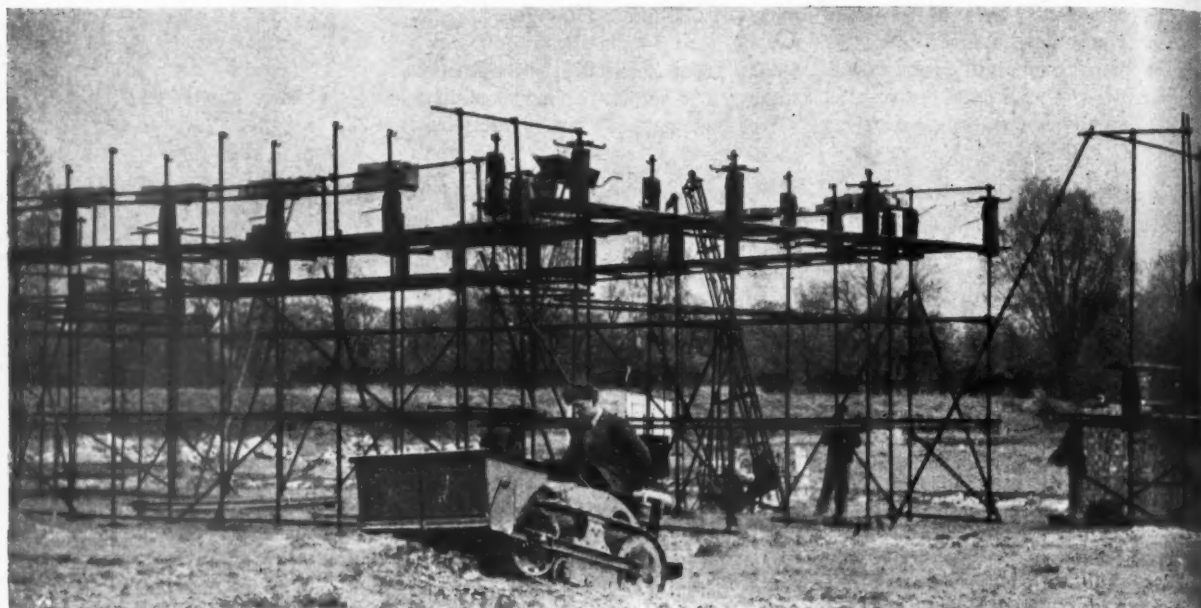
It may be interesting to note that I myself became a member through a "letter to the editor of a technical publication."

R. K. SWINDELL



An Execution in a Danish Broadcasting Station. See Astragal's note above.

ROAD HOUSE INTO TESTING STATION



The Thatched Barn externally, if not internally will have been familiar to many motorists travelling north from London. From a road house, it has been transformed by the Ministry of Works into a Field Testing Unit for building products, techniques and equipment. The station is controlled by the Chief Scientific Adviser, Sir Reginald Stradling, and carries out scientifically controlled practical field tests on new materials and building methods, as well as new types of building equipment. Development work is also carried out. The illustrations show, top: a new type of jack for raising the footways on tubular scaffolding. The footways can be raised to the most convenient working height as the work proceeds. In the foreground is a machine for transporting material on the site. Centre left. The erection of a conventional 11 in. cavity wall is time and motion studied. This wall is the standard against which other types of walling are tested. In background part of an Airey house with experimental roof. Left, bottom, various types of putty undergoing tests for reaction to weathering. Centre, a group of test walls of different materials, and a mechanical excavator. Right, various synthetic materials prepared as substitutes for conventional waste pipes are tested: on the left is a plastic waste trap, on the right the normal lead waste, shown disconnected.

RE

THE

The scale of the villages of necessity of rebuilding to summary Ministry and is of with the examples France a trated; the Moser Above, B destructi

scope

In the towns mu certain damaged termed a inhabitant constitut the plan The foll are expan character a plan.

reconst

At pres centred i damaged means. commen towns su suffered For each architect tion, with submitte cipal co represen bodies a less than struction of a co

PHYSICAL PLANNING SUPPLEMENT**RECONSTRUCTION IN FRANCE****THE ORGANIZATION AND PLANNING CONTROL**

The scale of destruction to the towns and villages of France during the war years has necessitated new legislation for the control of rebuilding, and the setting up of an organization to deal with the problem quickly. A summary of the methods adopted by the Ministry of Reconstruction is given below, and is of particular interest for comparison with the position in this country. Two examples of reconstruction schemes in France are also briefly described and illustrated: Saint Avold in the Department of the Moselle, and Marckolsheim in Alsace. Above, Bezange-la-Petite, a typical scene of destruction from the areas ravaged by war.

scope

In the terms of legislation in force, certain categories of towns must have a building plan; others may have one under certain conditions. A compulsory plan applies to all damaged towns of whatever importance (the plan is here termed a Reconstruction Project); all towns of over 10,000 inhabitants; towns classed as spas or watering places; towns constituting a planning group. For the last three categories, the plan is to be known as a Plan of Organisation.

The following may have a Plan of Organization; towns which are expanding, or possess a picturesque, artistic, or historical character; and towns which make an application for such a plan.

reconstruction projects

At present, efforts regarding planning are almost wholly centred in the working out of reconstruction schemes in war-damaged towns. The task is great, and absorbs all available means. The following figures are more explanatory than any comment; 550 towns suffered war damage in 1940; 50 towns suffered war damage between 1940-44; 1,200 towns suffered war damage between 1944-45.

For each war damaged town, a planner (in most cases an architect) will be designated by the Minister for Reconstruction, with the approval of the Mayor. His proposals will be submitted at the stage of a draft scheme to the elected municipal council; to a departmental commission consisting of representatives of public administration and services, of public bodies and of war victims; and to the Prefect for towns of less than 10,000 inhabitants, or to the Minister for Reconstruction for towns of over 10,000 inhabitants. At the stage of a completed project, plans will be submitted to the

population of the town by public inquiry, to the Municipal Council, to the Chambers of Commerce, Agriculture and Industries, to the technical services of the different administrations concerned, and to the Prefect, or to the Minister. The project will then have to be approved and declared to be one of public utility. The plan then becomes capable of being carried into effect. In order to begin reconstruction work without waiting for definite ratification, it will be possible to declare certain partial operations to be of public urgency and utility, so long as no objections have been raised by public organisations and services. Schemes already considered number 1,087, and 323 of these have already been approved.

plans of organization

These were undertaken in the most urgent cases, and are much less numerous. They are, for the most part, still in the first stages. The procedure is the same as that governing the Reconstruction Plans, except that the planner is designated by the Mayor and approved by the Minister, and that approval in this case is given by decree of the Council of State. 170 non-damaged towns have at present an Organization Plan in course of examination.

town planning groups

Adjoining towns which have common interests may form a planning group at the request of the Municipal Councils, or after consultation with them. An organization project for each group may be framed by an architect-planner appointed by the Reconstruction and Planning Minister. The project must justify the group as an organic entity. Plans of the various towns constituting the group will be made to harmonize with each other. The towns, administrative departments and technical services concerned will be consulted prior to the approval by decree of the Council of State. 90 planning groups have been constituted in this way.

organization

The Ministry of Reconstruction has set up an organization to deal with the vast programme of replanning. A Territorial Service or research department, for example, is responsible for planning issues of a national character, and the organization of the planning programme. Chief Architects are appointed specifically to deal with determined areas, and they are responsible for the issue of licences, and the control of costs.

Marckolsheim

The existing plan of Marckolsheim (situated in the plain of Alsace) shows the extent of damage caused during the war. This small town has 1,800 inhabitants, who rely on the local agriculture and forests of the Rhine for their work. After the early damage sustained in June, 1940, the Germans planned certain reconstruction work, comprising a redistribution of land and the suppression of certain farms. The farmers were classified into three groups, according to the size of their undertakings. New farms of large size, of a type inspired by those of Germany, were constructed around the north-west of the town. In the new Plan, by M. Albert Horn, these German farmsteads are incorporated, and the public buildings have been grouped together in the centre, the road pattern in the centre has been altered, and the church moved a little way from its original position. It is not considered that the traffic on the north-south through road is sufficient to justify a by-pass, but the shopping and commercial premises which will front on this road have their own service road separated by a row of trees.

Three main zones of development are proposed. First, where damaged buildings may be rebuilt; second, a zone of

compensation for those buildings which cannot be rebuilt on their original sites; and third, an area to the south-west of the town for expansion.

All that remains of the buildings in Marckolsheim can be seen in black on the plan. A small number of buildings, shown hatched, is repairable.



— EXISTING

▼ PROPOSED

- 1 CASE TRAMWAYS ET ROUTIERE
- 2 P.T.T., PERCEPTION
- 3 EGLISE ET DEPENDANCES
- 4 GROPE SCOLAIRE
- 5 FOYER COMMUNAL
- 6 LES COMMERCEANTS
- 7 HOPITAL
- 8 SYNAGOGUE
- 9 LES SPORTS
- 10 ABATTOIR

LEGENDE



The main features of the proposals for the rebuilding of Marckolsheim are the new centre shown in grey, and the incorporation of the farmsteads in the north east, which were built under German influence. Areas hatched on the plan may have the original buildings rebuilt. Areas cross hatched are compensatory zones. The broken hatching signifies an area for expansion.

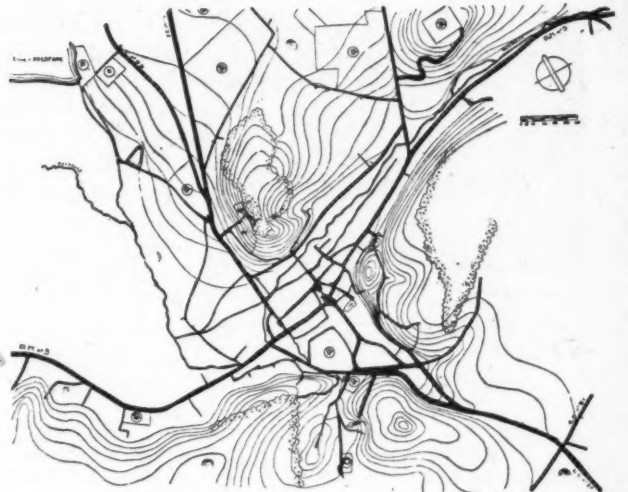
MARCKOLSHEIM

Saint-Avold

The Department of the Moselle, in which the town of Saint-Avold lies, was separated from the rest of France during the war, being liberated during the winter of 1944. It was one of the areas of France sustaining the greatest damage in the war. Saint-Avold, like many French towns, was founded on a site remarkable for the beauty and peace of the countryside, with a good water supply and fertile land. The four hills dominating the site ensured the defence of the town in mediæval times, and give interest to the landscape. Many tourists visit the town, which is on the RN.3 Paris-Mayence route, 40 kms. from Metz.

The new Plan, by M. Max Prebay, provides a new route for the busy traffic road RN.3 through the town. An existing road is partly used for this purpose, and provides a more direct route than the old road—very much in contrast to the usual by-pass around towns. The railway is about 2 kms. from the town, and it would be very difficult to bring this nearer. The bus station, sited on the new through road, is therefore of primary importance. An important project now in progress, which it is recommended should be developed in conjunction with the new Plan, is the American military cemetery.

All the administrative buildings of Saint-Avold were destroyed, with the exception of the Tribunal. A new civic centre with open space around is sited near to the new through road, and the Salle des Fêtes associated with this group. The sites suggested for other important buildings can be identified from the illustrations.

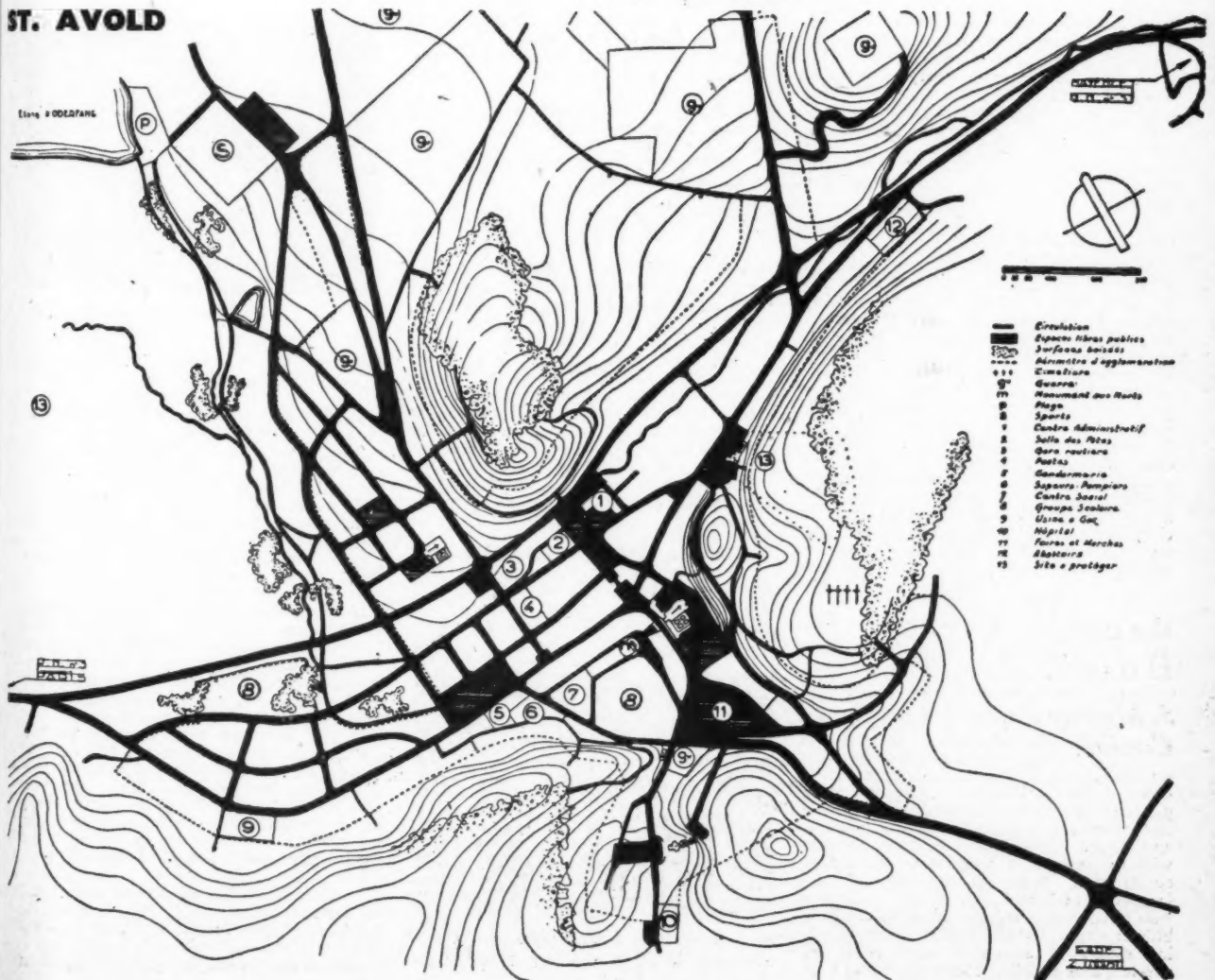


▲ EXISTING

The proposals for the rebuilding of Saint Avold will include some necessary improvements. For example, the new route for the busy RN.3 road through the town. A new administrative centre will also be formed in the position of figures 1 and 2 on the plan showing the proposals.

▼ PROPOSED

ST. AVOLD





Mr. R. H. Gibson (Ulster President) talking to Lady Keay at the Informal Reception at the Royal Hibernian Hotel.

The RIBA Conference at Dublin began on Wednesday, June 11, with an informal reception at the Royal Hibernian Hotel, when members were the guests of the Royal Institute of the Architects of Ireland. On Thursday morning the inaugural meeting was opened in the Mansion House by a reception and an address of welcome by the Lord Mayor, an address by Sir Lancelot Keay, K.B.E., President of the RIBA, followed by a paper on Recent Trends in Hospital Design by J. Murray Easton, F.R.I.B.A., and S. E. T. Cusdin, A.R.I.B.A. A garden party in the afternoon was held at Trinity College, and in the evening a banquet at the Gresham Hotel. On Friday, a paper was read by R. S. Wilshire, F.R.I.B.A., at the Royal Institute of the Architects of Ireland on Modern School Buildings, and there were whole and half day tours, and a conference dance at the Gresham Hotel. The conference concluded on Saturday, June 14, with a visit to Guinness's Brewery. Extracts from two of the speeches and from the papers read are published below.

RIBA CONFERENCE AT DUBLIN

Alderman McCann: In extending a welcome to the members, Alderman McCann, the Lord Mayor of Dublin, said:

To-day, when the false philosophy of utilitarianism is sweeping the world, we should reflect on beauties left by past generations, and strive to produce beautiful things for posterity. We have, in my opinion, as good architects as there are to be found the world over, and to the younger architects I look to produce even finer things. In Dublin we have a tradition of beauty. There are remnants of Danish and Norman architecture and the finest specimens of Georgian architecture. Every generation should provide its own masters and its own masterpieces. I believe that you from England and we from Ireland have offered the world much and will again do so. The closer we work in harmony the better for the two peoples and the better, perhaps, for the world.

Sir Lancelot Keay: President, R.I.B.A., thanked the Royal Institute of the Architects of Ireland for inviting the conference for the third time to Dublin. In the building of schools and hospitals there is great scope for skill and much to be done, for we live in an age which decrees that advantages, once the monopoly of a few, must be brought within the reach of all. There is a danger that many architects will become merely agents for the erection of standardised prefabricated dwellings constructed by methods quite alien to traditional and accepted practice. Some of us, having gazed long at the blueprints of standardised buildings and are a little troubled by the setting aside of tradition, are glad to come to Dublin and stand in the squares built in the golden period of architecture.

Recent Trends In Hospital Design

J. Murray Easton and S. E. T. Cusdin: The urgency of the need to make up our minds on what we should aim at arises primarily from the now almost universal recognition of a national duty to provide the best preventive and curative treatment for all who need it, and directly from recent health legislation with its consequent programme of hospital construction. Some of our medical colleagues have hinted that if only architects would reduce the expectation of life of their buildings from 100 to 25 years, a corresponding saving in structural costs could be effected, thus enabling bigger and better hospitals to be built sooner and cheaper, and

rebuilt oftener. If there is a flaw in this reasoning it may be up to architects to ask the medical and nursing professions to consider whether their entirely laudable desire for perfection may not have the result of postponing the achievement of all-round adequacy.

To such consideration there is no better approach than an examination of what has been done in other countries and what theories have been put forward by foreign practitioners. So we propose briefly to discuss three continental hospitals which we have seen, contrast them with others (most of which we have examined only on paper) and finally try to draw some conclusions from these investigations.

The three hospitals referred to are:—The Hospital Beaujon at Clichy, Paris, by Jean Walter; the Louis Pasteur at Colmar, Alsace, by M. Wetter; the New Burgerspital at Basle, Switzerland, by Vischer, Baur and Durig. They have been chosen because all are of recent date and because each, while of comparable size, illustrates a different type of plan.

Beaujon consists of a spine on an east-west axis from which projects four long wards on north-south axes. On the south side of the spine block are single-bed wards; on the other side of the connecting corridor are placed the ward ancillary rooms. At Colmar the same long spine exists, but here on the other hand the ward ancillary rooms project in wings facing north, while the wards themselves are ranged in a practically unbroken line on the south side of the corridor. At Basle both wards and ancillaries are contained within the long rectangular spine; thus the south or ward side resembles Colmar, and the north or ancillary side resembles Beaujon.

It is obvious that in ward blocks like Beaujon and Basle, where the ancillary rooms are ranged in a single line on the north side of the corridor, their extent must be strictly regulated by the spread of the wards on the

south side or, to put it in another way, the spread of the wards must be so adjusted as to provide sufficient ancillaries. At Basle the great spread of the wards permits of ample ancillary rooms plus a spacious lighting and ventilating bay in the middle of each ward unit, but at Beaujon with its more concentrated wards the ancillaries take up all the space and the corridor is lit only at the ends and not even so in the lower floors where other buildings abut.



Sir Lancelot Keay (right) greeting Mr. Sidney Loweth on his arrival at the Royal Hibernian Hotel, Dublin, for the Informal Reception.

In all three hospitals the horizontal circulation on upper floors consists of a long straight corridor quite uninterrupted in the case of Beaujon, divided only by doors from the central hall in the case of Basle, but, at Colmar, cut into sections by partitions on some floors. Entrances and horizontal circulation are very different in each case. Complete centralisation is achieved at Beaujon. Entrances are at different levels, but at the same plan point and all lifts (except service lifts) are concentrated there. At Basle there is also a central entrance and main lift hall, but there are two subsidiary lift halls which serve other entrances. At Colmar there are no less than six entrances, each with its own lift and staircase to serve the horizontally, as well as vertically, divided sections.

Finally, there are in each example radical differences in the relationship between the various departments which comprise a hospital. At Beaujon and Basle the out-patients' department forms a separate group more or less linked to the main ward block, while at Colmar these are provided on the ground floor and basement of the main ward block.

The main kitchen is outside the ward block at Basle and Colmar; in the basement at Beaujon. Administration is widely separated at Colmar, housed in the main ward block at Beaujon, and in the out-patients' block at Basle.



Sir Lancelot Keay, Mrs. McCann, Alderman McCann, and Lady Keay at the Garden Party, Trinity College.

THE HOSPITAL BEAUJON AT CLICHY, PARIS

Beaujon, though it represents only the "tadpole" stage of M. Walter's ideal, is interesting because it exemplifies his theories of centralisation combined with separation of services and circulation. The total number of in-patient beds is 1,100.

To the north of the main hospital block lies the out-patients' department, consisting of two wings—one on either side of the main entrance. Each consists of a rectangular block parallel to the main block and separated from it by a courtyard about 78 feet wide. Each of these rectangular blocks has three projecting wings.

The projecting wing housing lifts and staircases which connects the in-patient and out-patient blocks is an ingenious piece of planning. Entrance is at two levels—at ground floor level by a double ascending ramp for patients in ambulances or walking; at basement level by an easy flight of steps for visitors, and by a double descending ramp for wheeled traffic—doctors' cars, and kitchen and stores delivery. At ground floor level patients enter a large hall which leads to the staircase and lift hall. On the right and left are placed the admission and administrative departments, also entrances to the two wings of the O.P. departments and to almoner's quarters. The battery of lifts consists of six bed and two passenger lifts. Concentrated in this way they provide a most satisfactory service far more effective than an equal number of lifts in scattered positions. Each floor, with one or two exceptions, is a complete nursing unit controlled by one head sister, whose office is placed in the centre opposite to the entrance corridor. She is equipped with an external telephone, a private automatic exchange telephone (dialling) and direct push-button telephone to each ward.

Owing to the size of the ward unit it has been possible to include a very complete range of ancillary rooms. There are four sets of sink, bath and lavatory rooms and four day rooms, but only one kitchen. Each floor has its doctor's room with laboratories adjacent, and also an X-ray Department.

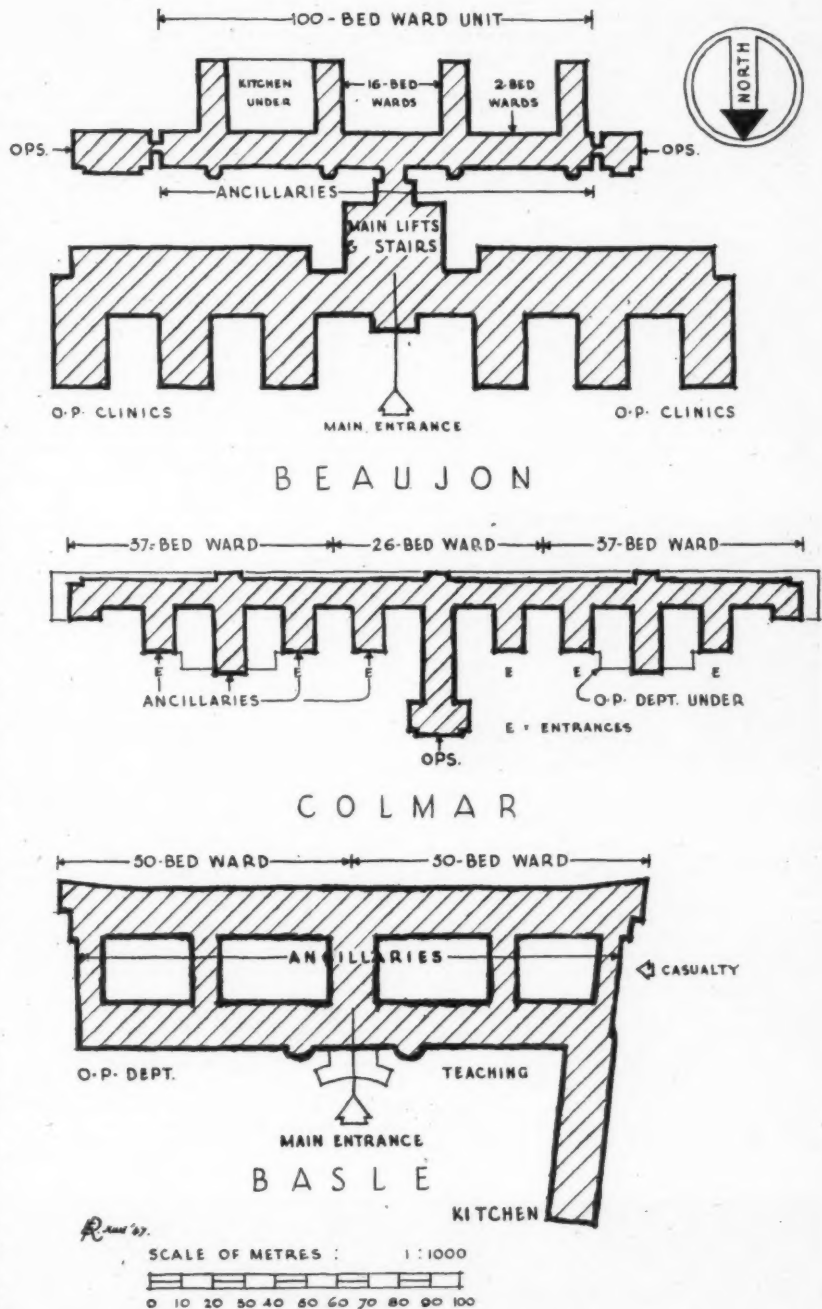
THE HOSPITAL LOUIS PASTEUR AT COLMAR, ALSACE

The site is ample (about 37 acres), and the total number of beds provided is 732. Each successive storey is set back from south to north, creating on the south side a series of terraces in front of the wards, and on the north a corresponding series of overhung storeys. This overhang is rendered possible by the projecting wings which act as buttresses and take the ends of the beams which, without other vertical support, carry the corridors. The distance between the wings is some 35 feet. The wings become slightly shortened as they rise by the advancing corridors, and the ancillary rooms are consequently reduced, but this gives some degree of flexibility and seems to work well enough. With the exception of their small departments in- and out-patients are all located in the central building, and all the sections related to personnel are linked together and form a band round the north, north-east and north-west sides of the site. This band is pierced on the centre line of the main hospital block to provide a very dignified entrance to a fine forecourt.

The arrangement of the ancillaries in separate blocks has much to commend it, and those at Colmar are well-planned and adequate. Two sanitary groups are provided in each ward unit, consisting of lavatory, bath and sink rooms. The main kitchen forms part of the outer group of buildings, but is connected by a sunk corridor to the basement of the hospital proper.

THE NEW BURGERSPITAL AT BASLE, SWITZERLAND

Unlike the two hospitals previously described, the new hospital at Basle is an ex-



Plans of the three hospitals referred to in the paper by J. Murray Easton and S. E. T. Cusdin.

tension to the older buildings of an ancient foundation. But it is to so large an extent a separate and complete hospital that it is fully comparable to the others. The new hospital block, a little over 500 feet in length, faces south over a garden which, though still in process of being laid out, promises to be excellent. To the north, facing the street, is a parallel but comparatively low block connected with the main structure by wings which at lower ground floor level are carried over the intervening courtyard as bridges. The north block with its connecting wings houses the out-patients' departments, administration, operating suites, teaching, etc. Other wings at the west end contain respectively kitchen and domestic staff and infectious diseases.

Visitors arrive at the main entrance from a semi-circular drive leading from the Spitalstrasse. On the right-hand (north

block) is found the administrative department. A spacious entrance hall enlivened by green and flowering plants extends right through to the main ward block, at which point there is a staircase and lift hall (six lifts) giving on to the garden. The previously-mentioned north-south wings act as connections between the main block and the north block. The latter contains, on the first floor, laboratories, medical and surgical directors' departments and pharmacology, and on the second floor, operating theatres, teaching and more laboratories. The basement corridor acts as general circulation for food, supplies, removal of the dead, etc.

The typical ward arrangement on each side of the central hall is as follows:—The 50 beds which it comprises are divided into three units of 16 beds plus a special two-bed ward. Each of those units has two six-bed and two two-bed wards with pass

doors between them, as well as doors from the corridor. As nursing units they are separate, but all the 50 beds are served by one group of ancillaries.

These rooms are just over 25 feet in depth, and to ensure good daylight at such a depth, balconies are dispensed with. Natural light—at least in summer—is very good, and on the back wall of the rooms are placed lavatory basins, cupboards, etc. Most of the wall surfaces, including corridors, are covered with Salubra washable wallpaper in light colours, and the effect is most cheerful and somewhat less hard than the usual glossy oil paint or distemper.

Ancillaries cover an area of about 170 feet by 19 feet exclusive of lighting bays and two north-facing isolation wards. Besides the usual kitchen, bath, lavatory and sink room accommodation there is a large treatment room, a sister's office, and a nurses' dining room. Lockers for patients' clothes are recessed into the north wall of the corridor.



Left, Mr. Eric L. Bird; centre, Mr. Vincent Kelly, Mrs. J. L. Griffith; extreme right, Mr. J. L. Griffith; at the Informal Reception, Royal Hibernian Hotel, Dublin.

The kitchen department is spacious and well lit, in level intermediate between ground floor and lower ground floor. It is connected to the circulating corridors in the basement by a fairly steep ramp. The loaded food trolleys are coupled up like the carriages of a train to an electric tractor which takes them with alarming speed to the ward kitchen lifts. One electrically heated and insulated trolley contains the food for one unit of 50 beds. Smaller trolleys take the food containers to the wards—one trolley to each 16-bed unit.

The Teaching Department occupies the centre part of the north block and includes the two curiously projected circular bays which at second-floor level flank the main entrance. These provide the extra depth necessary for two large lecture rooms—medical and surgical. Both have tiered seating with projection, patients' preparation rooms, etc. Between them lies a large students' hall provided with chairs and tables. This is flanked on the north side by a smaller lecture room and two study rooms.

Reinforced concrete is used for walls, columns, floors and roofs, but the raw appearance and the cracking and crazing so frequently associated with that medium have been avoided. Most of the surfaces are rendered in various light tones and with a perfection of craftsmanship which we must envy. By these variations in colour and by the use of other materials—stone, marble, terrazzo, etc.—the exterior has been made as gay and attractive as its somewhat monotonous form permits.

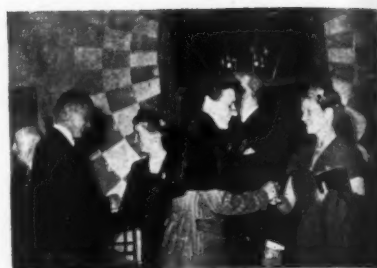
CONCLUSIONS

It is clear that the broadly rectangular form of main ward block illustrated in the three examples cannot be applied to very large hospitals without risk of producing buildings which are intimidating in their effect. At Basle, it has taken all the resources of architectural skill and perfect craftsmanship to avoid it. Colmar is definitely too long, and Beaulieu is overwhelming. In a city of skyscrapers like New York great height may offset some of these drawbacks, but brings others in its train.

In recent hospital design, with the exception of Beaulieu, the large open ward, with its 20 or more beds at right angles to the window walls, no longer survives. The bed parallel to the window has won, and the larger wards have either four or six bays separated by glass screens, each containing four beds.

What is not so well established is the additional accommodation required for the nursing, diagnostic, and treatment facilities in the ward unit. The Nursing Council of Great Britain has published a full and concise description of what, in its opinion, the unit should consist of both as to the number of beds and the ancillaries. Twenty-five beds is the maximum recommended, and for this there is a list of ancillaries formidable in size and number.

Aspect, especially in regard to wards, has



Lady Keay (right) shaking hands with Mrs. C. J. Burnett, at the Informal Reception.

always taken a predominant part in the disposition of hospital buildings. Many hospitals have been rendered inconvenient by the insistence on having all wards facing south and all operating theatres facing north, but we cannot believe that in a climate like ours it is reasonable to discard the opportunity, when it exists, of getting sunshine into wards. But other factors such as general convenience, good views, etc., should be given equal consideration with that of south aspect; and an open horizon, be it north, south, east or west, is preferable to one which is seriously obstructed by intervening buildings.

In the examples shown there has been a full acceptance of the principle of vertical planning of the large hospital blocks, and in general of putting like over like. Thus ward units may be superimposed to any reasonable extent, as may nurses' and staff bedrooms. Two or three or more storeys of operating theatre suites present no difficulties, but the out-patients' departments are generally more easily handled on one floor. Similarly, kitchen, boiler house, laundry, etc., are in many ways more satisfactory as separate blocks; but here we come up against the contrary principle—concentration and the principle of the centralisation of vertical circulation for the main hospital and service traffic.

Bound up in this is the vital aspect of the detailed planning and size of the ward unit, the amount of site available for the hospital as a whole, and particularly nowadays, that of economy. The choice between these solutions must inevitably arise from a judgment based on knowledge of the conditions of the site, size, and proposed organisation of the hospital.



The RIBA Conference photograph taken in the grounds of Trinity College, Dublin, immediately before the Garden Party was held.

Modern School Buildings

R. S. Wilshere : I would suggest that the problem of designing a building for educational purposes involves the welding into one unit, three distinct and often very conflicting requirements—education, health and architecture. The balancing of these requirements is by no means an easy one.

At the beginning of the 19th century the standard type plan for a school building was known as The Lancastrian School. It comprised a large room or hall with a raised platform at one end for the schoolmaster. Desks were placed in the centre and space left all round the desks for children to stand in groups whilst under instruction.



Mr. Maynard Lyndon, representing The American Institute of Architects, and Mrs. Lyndon, at the Banquet at the Gresham Hotel.

A schoolmaster would have control of anything up to 1,000 pupils, his duties really being mostly supervision, the educational theory of those days being largely self instruction by the pupils themselves under monitors.

About 1826 teachers were introduced to assist the Principal, and a new type of plan appears, usually called the Stowe System. This school provided a long gallery at one end of the room, with desks arranged in groups at the sides. The central space was left clear and there were one or more small classrooms with galleries. By 1846—20 years later—the pupil teacher system was introduced and plans changed. Rooms became long and narrow, with desks on one side of the room only, divided by

curtains into groups each with its pupil teacher.

In 1870 the Elementary Education Act was passed in England, and education for all became a public responsibility, and School Boards were created to control education in their own districts. The London School Board at once held a competition for the ideal school building, and the Ben Jonson school erected in Stepney in 1872 was the result of this competition.

This plan was the famous Central Hall type, and comprised a large central assembly hall, with separate classrooms grouped round this hall and generally opening direct from this hall. Three new principles became established by this school; all classrooms had left-hand lighting; each teacher had his own classroom; the central hall became available for special purposes and was no longer used for ordinary class instruction. For nearly 32 years this plan held the field unchallenged; practically every successful competition was based on this plan, and as late as 1902 an eminent authority expressed the opinion that as a plan for school purposes it was unlikely it would be improved upon.

In 1902 a new Education Act introduced school medical services, and with it the appointment of school medical officers which caused a complete revolution in school design. This was largely due to the energy and enthusiasm of two men—Dr. Reid, the School Medical Officer of Staffordshire, and Mr. Widdows, the Education Architect of Derbyshire. The experiments of Haldane and Sir Leonard Hill had just thrown new light on the problem of ventilation and had demonstrated ventilation was primarily a matter of air movement. Dr. Reid saw that ventilation in the central hall was really little better than the back to back house, and with Mr. Hutchings, the Staffordshire Education Architect, evolved a new type of school called the Pavilion type. It consisted of a row of classrooms connected by an open corridor, but with a definite scientific basis, ventilation of the class rooms by windows opening on both sides of the room, each window having a hopper just above the level of the children's heads. The experiment proved completely successful. The rooms were delightfully fresh and free from stuffiness, and it was found the roof ventilator made no difference at all.

In 1914 Mr. Widdows produced his Wingfield School, which was designed on a definitely scientific basis dealing with aspect, proper natural lighting, cross ventilation,



The Vice-Provost of Trinity College acting in lieu of the Provost, who was temporarily indisposed and unable to attend the Garden Party.

open air conditions, heating. Lighting was by means of 60° continuous glazed north light. Fully glazed doors opened into open verandahs on each side of the classroom. The purpose was to eliminate sunlight with its excessive lighting contrasts and to rely on the even and steady north light. At the same time the glazed doors enabled the sunlight to be seen outside. Cross ventilation was by means of hoppers and heating was solved by under floor heating.

In the past, schools were more or less static, that is, pupils had fixed places in a definite room, and the architect's problem was largely to provide rooms to accommodate a given number of desks arranged in a set pattern, only to be moved when the floors had to be scrubbed. To-day the classroom tends to become a centre of activity and mobility. Fixed furniture is being replaced by light movable furniture, which can be easily moved to provide different grouping and arrangements, or stacked on one side to leave the floor area clear. The



Architects, their wives and friends who attended the conference numbered nearly five hundred.

classroom still remains the hub of the pupils' education, and it is from this centre the pupils' activities radiate, but the increasing use of other rooms and facilities brings the matter of circulation not only by the pupils moving from place to place but also the staff and those in charge.

Those who have seen the newer schools round Paris before the war must have been impressed by the sense of space they suggest, although actually they are relatively compact. This sense of space is largely achieved by the skill of the architect and I would suggest the proper architectural approach is to secure these pleasing conditions of good æsthetic planning and design, as these French architects have done.

BUILDING REGULATIONS—1944

The Ministry of Education's *Draft Building Regulations 1944* and *The Regulations Prescribing Standards for School Premises 1944*, lay down in very full detail the requirements that will have to be met in all the various types of new schools that will be erected.

The greater variety of this accommodation and the varying sizes of classrooms add to the difficulties of planning new school buildings and these difficulties are increased by the adoption of the various functional requirements, which are now being laid down in the Codes of Practice prepared under the authority of the Codes of Practice Committee. The Codes of Functional Requirements of buildings, to which reference will be necessary, cover: daylight, sunlight, ventilation, space and circulation, noise, fire, weather precautions, services, water supply, etc., heating and heat insulation, corrosion, dirt and vermin, acoustics, and these codes will have to be followed where applicable. In the new regulations school meals now become an essential feature of all schools whatever their size. Gymnasium and changing facilities become of more importance.



Mr. David P. Hanly, Miss Deborah Abercrombie and Professor Sir Patrick Abercrombie, at the Garden Party, Trinity College.

DAYLIGHTING

The factor which affects lighting and seeing is not only the amount of illumination but the quality of lighting, whether natural or artificial. The important effects in seeing conditions, both psychological and physiological are glare, diffusion and direction, composition and distribution.

The first practical approach to lighting of classrooms was the introduction of left-hand lighting. The investigations by the N.I. of I.P. carried out in 1931 dealt largely with the influence of lighting conditions on the pupils' work. These investigations showed the rapid diminution of daylight the further the pupil is seated from the window, and that the quantity of light affected the quality of his work. Daylighting in buildings and particularly schools has as a result now received considerable attention and the Post-War Building Studies, *The Lighting of Buildings*, deals extensively with this problem in relation to schools.



Mr. Herbert Jackson, Mr. F. R. S. York, during tea in the Marquee, Trinity College.

It had been generally accepted that the tolerable daylight factor in offices was 0.2%. In 1929 Sir Felix Clay had claimed 1% was the minimum necessary in schools which corresponded to a daylight factor of 0.5%, a figure recommended by Mr. Waldram in 1913. The Board of Education in their regulations of 1936 recognised this standard and laid down this figure as a minimum. The N.I. of I.P. as a result of their investigations in 1931 considered that a daylight factor of 25% was desirable and 1% the lowest permissible figure. The Lighting Committee of the Building Research Board, however, advocate 5% as a minimum, and this figure has been recommended as the standard to be aimed at in the Ministry of Education's new Building Regulations with the higher figure of 10% where rooms are used for drawing, sewing, etc., and at the same time recommends maximum values should not exceed minimum values by more than 1 to 2, but still allow a minimum of 2%. In modern schools with a large expanse of glass on one side, the daylight factor will vary from 15% to 2%. Thus a very difficult problem has been set if the new standard is to be reached and the only solution at present appears to be some form of top lighting.

This very high standard of lighting intensifies the conditions that larger windows have already created, the problem of glare, which it is recognised is not only unpleasant but is also harmful. The Lighting Committee would therefore like more control to regulate daylighting, but any system which is dependent on the teacher cannot be really regarded as satisfactory.

Top lighting has many drawbacks, it calls for more elaborate construction and more or less restricts building to one storey; it creates heating problems, provides a maintenance problem both to keep the glass clean and for repairs. Top lighting in schools is not a new idea and was at one time definitely objected to by the Board of Education. In view of all the complications that arise both in planning and designing a school to provide top lighting, I feel more evidence on this subject is called for.

VENTILATION

The number of air changes in each room has now become a "Statutory Rule and Order" under "The Regulations Prescribing Standards for School Premises" and varies from 6 air changes per hour in Classrooms to 2 air changes per hour in staff-rooms, but we are not told how this is to be achieved. If ventilation was the only problem to be found in planning a school and designing a classroom there is no doubt the principles developed by Dr. Reid in the Staffordshire Pavilion School with the low hopper on each side of the room and the open corridor provide a real solution.

The N.I. of I.P. recommend that the main school windows should have top sashes—pivot hung; centre sashes—side hung; bottom sashes—hopper hung. And with a window opening into the corridor consider air

movement and air change can be satisfactorily controlled. The difficulty, of course, is the operation of this ventilation falls on the teachers and where he or she does not like fresh air the system cannot achieve its object. The N.I. or I.P. appears to be satisfied that with high opening windows directly opposite the main windows satisfactory air movement will be achieved, but point out that in corner rooms it is not enough to ventilate only from the two adjoining outside walls. Of course in theory perfect control could be obtained by mechanical methods, but there is ample experience in the past to realize the superiority of natural ventilation. Natural ventilation reduces the risks of epidemics and respiratory diseases and acts as a stimulus and reduces mental fatigue. Mechanical ventilation tends to slow working output, tends to cause mental fatigue and restlessness, but perhaps the most valuable contribution of natural ventilation is that it teaches children the need to open windows.

ACOUSTICS

I think we should give full credit to Denis Clark Hall for having first focussed attention on the importance of acoustics and sound insulation in relation to school planning.

But whilst I personally do not consider this arrangement of classrooms in his interesting design for the *News Chronicle* School are in fact better arranged as regards sound than the orthodox side by side rooms, he has brought out a point which has perhaps not been fully considered in the past, the relationship between noisy rooms and quiet areas.

I have found the one point on which all teachers seem to agree and have in common, is the desire for quiet conditions in which to work and freedom from external noise interference.

There are three different problems to be met: the acoustic treatment of the rooms themselves; sound proof construction; planning of rooms in relation to each other. It is now, of course, generally accepted that the assembly hall should be properly treated to provide suitable acoustic conditions. We have all experienced the strain of trying to talk or listen against an excessive background of noise—both internal and external and a lack of good conditions in this matter prevent children from concentrating and they become restless and fidgety. Corridors call for special consideration as they can be excellent conveyors and collectors of sound, and in this respect the open corridor at one time so popular provided an excellent solution.

The degree of quietness to be aimed at is that noise in a classroom should not exceed 35 decibels, in assembly hall 30 decibels, other rooms up to 60 decibels. It is well to remember that trees, shrubs and grass all absorb sound and are useful as sound breaks and can assist as a screen between noisy play area and classroom units.

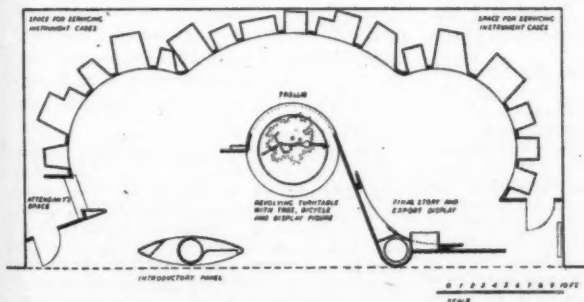


Mr. T. Cecil Howitt and Mrs. John L. Griffith, at the Garden Party, Trinity College.



BRITISH SCIENTIFIC INSTRUMENTS EXHIBITION

DESIGNED BY PETER MORO AND ROBIN DAY



The object of this Ministry of Supply Exhibition, now being held at Charing Cross Underground Station, is to show to the public what part scientific instruments play in the making and testing of everyday things.

The chosen precision instruments are housed in 17 separate show cases, each shaped, lit and decorated to show up the instrument to its best advantage. The show cases are grouped around a central turn-table supporting a display figure holding a bicycle. The bicycle and the food displayed in its basket are typical articles in the manufacture of which scientific precision instruments are employed.

The exhibition was designed by Peter Moro and Robin Day. The poster is by Robin Day.

TECHNICAL SECTION

The function of this feature is to supply a digest of, and commentary on, current information of interest to architects as recorded in technical publications and statements of every kind throughout the world. Items are prepared by specialists of the highest authority who are not on the permanent staff of the Journal, and views expressed are disinterested and objective. Items are printed on one side of the paper only to permit of cutting out and pasting up in classified order in readers' files. The Editors welcome information on all developments from any source.

INFORMATION CENTRE

To enable items to be filed all information is classified under the following headings:

1 SOCIOLOGY. 2 PLANNING: General. 3 PLANNING: Regional and National. 4 PLANNING: Urban and Rural. 5 PLANNING: Public Utilities. 6 PLANNING: Social and Recreational. 7 PRACTICE. 8 SURVEYING, SPECIFICATION. 9 DESIGN: General. 10 DESIGN: Building Types. 11 MATERIALS: General. 12 MATERIALS: Metal. 13 MATERIALS: Timber. 14 MATERIALS: Concrete. 15 MATERIALS: Applied Finishes, Treatments. 16 MATERIALS: Miscellaneous. 17 CONSTRUCTION: General. 18 CONSTRUCTION: Theory. 19 CONSTRUCTION: Details. 20 CONSTRUCTION: Complete Structures. 21 CONSTRUCTION: Miscellaneous. 22 SOUND INSULATION, ACOUSTICS. 23 HEATING, VENTILATION. 24 LIGHTING. 25 WATER SUPPLY, SANITATION. 26 SERVICES, EQUIPMENT: Miscellaneous. 27 FURNITURE, FITTINGS. 28 MISCELLANEOUS.

4.10 planning: urban and rural

NEW TOWN: EAST KILBRIDE

New Town at East Kilbride. Department of Health for Scotland. (HMSO, 1947. 6d.)

Description of proposals to develop new town at East Kilbride, Scotland, under New Towns Act, 1946. Decentralisation of population and industry. Need for green belt reservation. Industrial aspects. Planned policy of dispersal to new towns. Summary and review of principal objections to Draft Order made at public local inquiry. Secretary of State's conclusions on objections and reasons for making New Town (East Kilbride) Designation Order, 1947. Map illustrating designated area of new town. Informative statement on official new town planning procedure.

INFORMATION CENTRE INDEX

An alphabetical index for the first six months 1947, covering items published from January 2 to June 26, inclusive, is being prepared. Readers who wish to have a copy — it is free of charge — should notify the Technical Editor, The Architects' Journal not later than June 30.

6.7 planning: social and recreational HOUSING MANAGEMENT

Housing Management in Scotland: Report by the Scottish Housing Advisory Committee. Department of Health for Scotland. (HMSO, 1946. Cmd. 6901. 9d.)

Scope and functions of housing management. Existing management practice. Some major problems. Miscellaneous aspects. Training for housing management.

The objects of housing management are to create contented tenants and to safeguard the interests of the local authority as landlord. In order to achieve these objects housing management has to fulfil a varied number of functions which can be classified as follows: letting; rent collection; maintenance; welfare and social education; and general administration.

The report gives a detailed list of activities which may fall under each of these five headings, indicating the wide scope of the sphere of housing management, and then goes on to examine representative management systems at present in use by local authorities with particular reference to Scotland. The systems discussed comprise the "functional" system which is based on the principle of responsibility shared according to their functions by different departments of the local authority, and the "centralised" or Octavia Hill system in which all duties are concentrated, as far as practicable, in one person.

A chapter devoted to some major problems of housing management discusses local authorities' methods of allocating houses, the collection of rents and problems arising from rent arrears, questions of repair and maintenance of property and of gardens and public open spaces, and draws particular attention to the important field of welfare and social education. Its object with regard to housing management is to assist the members of a family to readjust themselves to living in a new home in a new community and to raise their standard of living habits. This aspect of housing management has generally received insufficient attention hitherto and the Committee recommends that local authorities should review their arrangements accordingly. Difficult tenants who persist in unsocial conduct should be under special supervision until they have improved. Film displays, lectures and other methods of publicity should be considered as a means of educating people in preserving the amenities of their surroundings generally.

In regard to training for housing management the committee recommends that local authorities should wherever possible grant training facilities to students in order to increase the present scope for practical training in Scotland. Appendix III of the report gives detailed information on various

training facilities as provided by the Society of Women Housing Managers, the Institute of Housing, and the Royal Institution of Chartered Surveyors.

This report is a most instructive and clearly written document especially in view of the importance which housing management is likely to attain in connection with the large scale dispersal of population to new towns.

12.4 materials: metal LEAD ALLOY PIPE

Lead Alloy Pipe: Notes on Silver-Copper-Lead. (Lead Industries Development Council, Bulletin No. 114, April, 1947.)

Detailed summary of properties of silver-copper-lead alloy standardised by B.S. 1085: 1946. Improved properties over ordinary lead include 15 per cent. greater tensile strength and greater creep-resistance, allowing reduced weights of pipe to be used. Appendix tabulates results of comparative tests demonstrating improved properties. Illustrated.

13.9 materials: timber STANDARD NOMENCLATURE

Nomenclature of Commercial Timbers. Including Botanical Names and Sources of Supply. B.S. 881 and 589:1946. (British Standards Institution, 1946. 7s. 6d.)

Revision in single publication of B.S. 589: 1935 and B.S. 881:1939. Gives in tabulated form standard name; botanical species; sources of supply; remarks; other names, commercial or botanical, of all hardwoods and softwoods of economic importance in Great Britain. Appendix I lists additional imported timbers for which Standard names have not yet been selected. Appendix II gives full names of authors of botanical names. Full index and cross reference. pp. 101.

It is not surprising that the great variety of timbers available in normal times and the number of names which are often applied to each species should have given rise to confusion. A tabulated list such as this B.S. comprises is particularly welcome and should help to avoid much misunderstanding. A useful document covering a subject justifiably deserving standardisation.

15.6 materials: applied finishes and treatments CEMENT PAINT

Concrete—Facts and Opinions. J. Singleton-Green, M.Sc., M.I.Struct.E. (Journal of the Incorporated Clerks of Works Association, April, 1947, pp. 35-36.)

Appraisal of the qualities of cement paint: typical defects and measures to avoid them. A short but informative article.

Having stated as his opinion that cement paint is a valuable addition to the range of common building materials, the author lists seven principal types of failure which have occurred in practice. These are: Flaking and blistering, dusting, lack of density, efflorescence, pinholes, non-hardening, sulphate trouble.

Peeling and flaking are attributed to errors in technique of application, particularly the preparation of the background and to too rapid drying.

Dusting is also often the result of too rapid drying, but there are other factors such as using an incorrect quantity of water in mixing.

Lack of density may be due to too much water in mixing, too thin an application or continued presence of moisture in the backing.



AIR CONDITIONING INSTALLED BY

MATTHEW HALL

& CO. LTD.

Estd. 1848

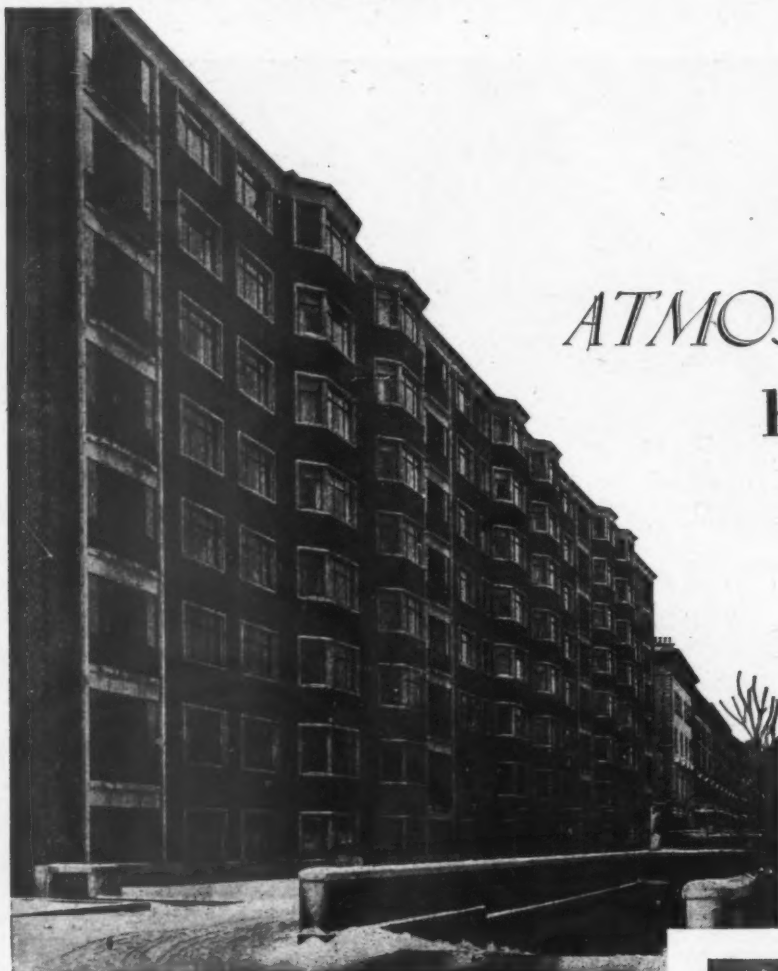


MATTHEW HALL

AIR CONDITIONING · HEATING
BOILER PLANT · OIL FIRING
DISTRICT HEATING
ELECTRIC LIGHTING AND POWER

26-28, DORSET SQUARE, LONDON, N.W.1
PADDINGTON 3488 (20 LINES)

GLASGOW · MANCHESTER · LIVERPOOL · BELFAST · BRISTOL · NEWCASTLE · CARDIFF · COVENTRY · DUBLIN



No ATMOSPHERICS here!

Every flat at Kingston House is wired for Rediffusion

AT Kingston House, Kensington, one of London's most modern blocks of flats, tenants enjoy perfect radio reception laid on by private wire. They are never bothered by atmospherics or fading, or by interference due to lifts and other electrical equipment. Their programmes are crystal-clear from the moment of switching on.

This perfect listening service is the result of close co-operation between architect and radio engineer prior to, and during, the building of Kingston House. It was planned that Rediffusion—the service relaying B.B.C. programmes from the studio to the home by private wire—should be installed in all flats.

With Rediffusion, only a loudspeaker with volume control and switch is required in the home. There is no need for a radio set, aerial, or earth. The architect can include internal wiring in the general construction, and can install loudspeakers that suit his plans for interior decoration. Loudspeakers can be supplied in a wide range of models, such as panels for the wall or ceiling, and special units for installation in built-in furniture.

Architects who are interested in this Rediffusion Service should contact our London Office during the early stages of planning so as to ensure full co-operation.

REDIFFUSION

serves the following towns:

ABERTULLERY, BANGOR (Co. DOWN), BARGOED, BARROW, BEESTON, BLACKPOOL, BRISTOL, BROAD-
STAIRS, CAERPHILLY, CWMARN, DARLINGTON, EXETER, FLEETWOOD, GATESHEAD, GOSFORTH,
HERBURN, HULL, JARROW, KENDAL, LANCASTER, LONDON,* MAIDSTONE, MARGATE, MERTHYR,
MORECAMBE, NEWCASTLE, NEWPORT (MON.), NORTH SHIELDS, NOTTINGHAM, PLYMOUTH, PRESTWICH,
PONTYPOOL, PONTYPRIDD, RAMSGATE, RHONDDA VALLEY, ROCHDALE, ROTHERHAM, ST. HELENS,
SALTASH, SOUTH SHIELDS, STRETTFORD, SUNDERLAND, SWANSEA, WALLASEY, WALLSEND, WHITLEY
BAY, WOLVERHAMPTON. ALSO IN MALTA AND TRINIDAD. * Special service to flats and hotels.



Loudspeakers are fitted as panels in the wall

CARLTON HOUSE, REGENT STREET, LONDON, S.W.1

The
cream
where
order
course
cence
better
by po
the ba
of dan
work,
contain
Pinho
coating
the re
into th
paint
weathe
these
a sing
Sulph
film.
to eli
which

16.1
MAN

Fletton
(The
1947,
Thirt
stages
don
Descri

19.2
UNITS

"Lad
Batten
News,
journa
Mass
erecte

The
like s
and b
at the
placed
nected
are re
to the
carryin
with f
The
will s
width,
betwe
The
one u
counc
steel.
Insu
rafters
vided

All m

The author expresses his opinion that cream or white paints only should be used where efflorescence is likely to occur in order to minimise unsightliness. This is, of course, only an expedient, for the efflorescence may in fact damage the paint film: a better approach is to avoid the efflorescence by postponing painting until such time as the backing has dried out. The elimination of dampness is a prerequisite for successful work, especially if the backing is known to contain sulphates.

Pinholes assume some importance if the coating is acting as a weather protection: the remedy is to work the paint thoroughly into the surface. Pinholes may occur if the paint is applied to damp walls in cold weather, and if painting must be done under these conditions the author suggests using a single application in paste form.

Sulphate attack causes failure of the paint film. It is specially important, therefore, to eliminate moisture from any ground which contains an excess of sulphates.

16.13 materials: miscellaneous

MANUFACTURE OF FLETTON BRICKS

Flettons; Twelve Stages in Their Production. (The Architect and Building News, May 2, 1947, pp. 98-99.)

Thirteen captioned photographs showing stages in the production of Flettons at London Brick Company's Stewartby Works. Descriptive only.

19.20 construction: details

UNITS FOR PITCHED ROOFS

"Ladda" All Metal Roof Rafters and Battens. (The Architect and Building News, March 14, 1947, p. 166, and other journals.)

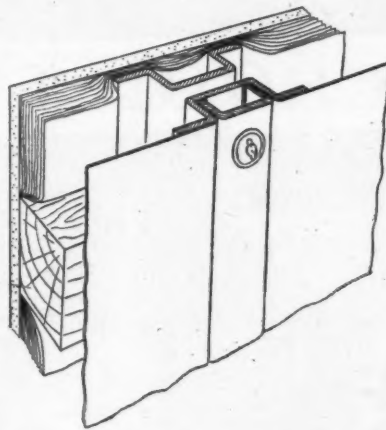
Mass produced steel roof frames easily erected and tiled.

The roof construction is formed by ladder-like steel units which replace wood rafters and battens. The units are bolted together at the apex and supported on metal T-rails placed on the walls. These rails are connected by ties, in a normal house four ties are required. The angle battens are riveted to the rafters and are suitably placed for carrying the tiles. Each ladder is bolted with four bolts to its neighbour.

The standard rafter is 16 ft. in length and will span roofs from 16 ft. to 24 ft. in width, the angle of the pitch varying between 60° and 35°.

The units are easily handled and erected, one unit weighs about 80 lb. A normal council house requires about one ton of steel.

Insulating boards may be fixed to the rafters. At the eaves tilting plates are provided for fixing a fascia board.



Light steel-framed structure developed in USA. See 20.25.

20.25 construction: complete structures

PREFABRICATED HOUSES

The Industrialized House. (The Architectural Forum [USA], January, 1947, pp. 89-100.)

New systems of prefabricated bungalows in USA.

The article describes three new systems of single storey houses now being produced in USA, all of metal construction. The Harman house is a light steel-framed structure with stressed steel panels, site assembled from precisely fabricated and labelled parts. The electrical wiring system and the plumbing are also prefabricated. The wall is ventilated by a continuous air space between its outer steel membrane and the blanket type insulation. Window trim, jamb and mullions are of extruded aluminium. Exterior wall and roof panels are held in tension by interlocking channels in vertical stud. Joints are caulked and entire surface sprayed with oil paint and sand in a single operation.

Production Line structures are particularly light and can be erected by the buyer himself. They consist of a series of regularly spaced rigid frames supporting a modular panel system of windows, doors and solid walls. The roof panels are of plywood, surfaced with gravel and tar after erection.

The Butler house resembles the Harman house on several important counts, but it uses aluminium in the walls instead of steel. The wall is composed of panels, storey high, formed with a special 4 in. flange. The flanges of two adjacent panels lock together, tightly enclosing a wood nailing strip, to form a rigid stud.

22.7 sound insulation and acoustics

BROADCASTING STUDIOS

The Acoustical Planning of Broadcasting Studios. J. McLaren. (BBC Quarterly, January, 1947, p. 194.)

Structural and planning measures for sound insulation; general reverberation theory, panel absorbents, proportional distribution of absorption, room proportions. Useful paper architecturally. Illustrated by plans and graphs.

In the construction of radio studios a very high standard of acoustic design is now invariably attempted. It is, in fact, usually ahead of theoretical work and often results from successive modifications *in situ*; and since it relates chiefly to quality of sound it is of much interest architecturally.

The article discusses sound insulation first.

One item is a partition consisting of a thin wood frame, faced with fibre-board and then plaster-board on each side. No sound reduction values are known but it is said to seem about equal to 4½ in. brickwork. The article does not say in what positions this partition is used. Probably not between studios, for the insulation would be too low, and the one illustration of its fixing suggests that indirect transmission is being neglected. Most of the examples of insulation by planning are from the well-known arrangements of studios with service and storage rooms between them for insulation.

The second part of the note is better. The different reverberation formulae and their uses are discussed, and some electrical circuit analogies are described. More interesting is the passage on panel absorbents. The mechanism of absorption is mentioned, and attention is drawn to the effect which occurs, often in small rooms—when the panels continue to vibrate at their own frequency after the ordinary reverberation has disappeared. A residual tone is observed which is said to give "colouration" to the room. This is one unsolved difficulty about speech studios. Other methods of resonance absorption, e.g. by lino across the front of cavities formed by boxes—are described and apparently are the subject of current studies at the BBC.

The effects of a series of changes made in one large studio at Maida Vale are described in detail with successive reverberation curves for illustration. The effects of board-on-batten floors, wood linings, mineral wool panels, asbestos tiles, and the influence of their position in the studio are shown, and from this and other experience the author suggests that the following treatment will give reasonably uniform and suitable reverberation.

Walls: 4/5 resonant panels; 1/5 mineral wool.

Ceiling: ½ lath and plaster; ½ mineral wool.

Floor: boarded.

Desirable room proportions are discussed. The chief point is the risk of emphatic resonance between all opposite room surfaces. If a cube were used, the resonance between all opposite surfaces would be the same, and presumably very unpleasant. It is noted that Volkman has recommended 3½ : 1 or 3¼ : 1 as the best ratio of height to width and width to length, to spread the resonances. It is not known if the results are necessarily pleasing, but it is thought they would be reasonable.

Finally the author discusses differences between reverberation time and reverberent effect, noting that the former, which has been the basis of acoustic design, is not as important as the latter, which is not yet wholly predictable.

22.8 sound insulation and acoustics

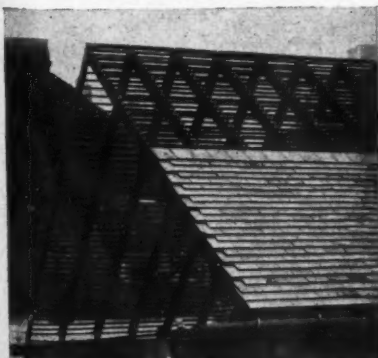
CONTROL OF NOISE

Noise and the New Planning. Hope Bagenal. (RIBA, March, 1947, p. 260.)

Statistical and social data on noise; airfield noise and aero-engine test sheds; traffic and industrial noise; open urban planning. Good architectural reading; illustrated; graphs.

The paper commences with some statistical data from the social survey on the annoyance caused by different types of noise, of which the following item is typical and important. The numbers are expressed as percentages of those hearing the noise.

	Percentage	Percentage
	trouble	sleep disturbed
By domestic animals	37	34
By children playing	30	15
By road traffic	20	19
By rail traffic	17	17



All metal roof rafters and battens. See 19.20.

SCHOOL FURNITURE

New
DESIGN

New
MATERIALS

...AND LICENCE-FREE



Design by James Leonard.

E.S.A. announce an entirely new design in new and *uncontrolled materials*. Light alloy and plastics are used to achieve greater strength, lightness, and a graceful design, which is in keeping with all that is modern in architecture. We believe this new school furniture will meet with the Profession's wholehearted approval, since it combines progress towards better and brighter equipment — with the advantage of improved delivery.

Folder containing full details will be sent on request, or call and inspect this new furniture at our showrooms in London or Glasgow.



THE EDUCATIONAL SUPPLY ASSOCIATION LIMITED

INCORPORATING RELFE BROS.

181, High Holborn, London, W.C.1. Tel.: Holborn 9116

101, Wellington Street, Glasgow, C.2. Tel.: Central 2369

After
annoyan
types of
and the
discusse
as an e
effects fr
involved
noise ar
The diff
de-tuner
marks t
promisin
Traffic
and Mr.
interesti
gret tha
not seen
complai
interpre
Industr
hand by
warning
to allow
to come
industri
that no
premise
and any
some v
ground.
Railwa
ren con
and son
that it
from p
blocks
The p
plantin
plannin
light an
One o
paper
the "n
descrip
22.9
ROOM
An Ac
Correla
J. P. M
Acous.
Qualit
reverbe
present
The d
a "de
and ex
is usua
have h
teristic
matic
reverbe
seems
commo
field is
ing on
and pl
gated.
recent
"livene
sound.
mathem
reprod
also d
what is
showin
ness.
to desi
matica
most a
portan
23.2
VENT
Natur
Factor
Prun

After a short note on the character of annoyance, the author deals with different types of noise. The first was from airfields, and the views of expert committees, etc., are discussed. Heath Row Airport is taken then as an example to illustrate the directional effects from the main runways, the distances involved, and so on. Coupled with airport noise are remarks on aero-engine test sheds. The different types of noise-reducers and de-tuners are described and the author remarks that developments in silencing are promising.

Traffic noise has been extensively studied, and Mr. Bagenal is able to quote useful and interesting data, though one notes with regret that the noise level measurements do not seem to be associated with studies of complaints, which would seem to make interpretation problematical.

Industrial noise used largely to be kept in hand by use-zoning but the author issues a warning that new proposals would appear to allow various kinds of noisy industries to come into trading estates and small island industrial areas. He makes the suggestion that noise surveys be made of domestic premises on the periphery of industrial areas and any new industrial noise be limited to some value suitably related to this background.

Railways are mentioned, but playing children constitute his last major noise source, and some new evidence is quoted to show that it is surprisingly important, especially from paved playgrounds enclosed by large blocks of flats.

The paper concludes with a discussion of planting as an aid to quiet, and of open planning in urban districts to assist both light and quietness.

One of the outstanding features of the paper is the development of the idea of the "noise climate"—a term so accurately descriptive that it seems very likely to stay.

22.9 sound insulation and acoustics

ROOM ACOUSTICS: "LIVELINESS"

An Acoustic Constant of Enclosed Spaces Correlatable With Their Apparent Liveness. J. P. Maxfield and W. J. Albersheim. (J. Acous. Soc. America, January, 1947, p. 71.)

Quality of liveness discussed as a ratio of reverberant to direct sound. Mathematical presentation; illustrated; graphs.

The difference between a "live" room and a "dead" one is apparent to most people, and except for special purposes the former is usually desirable. Architects, however, have had no guidance on how this characteristic is to be obtained. It is not an automatic result of designing for an "optimum" reverberation time, and surprisingly often it seems to be discouraged by some of the common forms of acoustic treatment. The field is an awkward one for research, falling on the border line between psychology and physiology, but it is now being investigated. The present paper describes some recent American work which describes "liveness" as a ratio of reverberant to direct sound. The discussion which is mainly mathematical and chiefly concerns sound reproduction with the quality of liveness, also discusses intelligibility of sounds and what is called listening for aesthetic pleasure, showing that these are associated with liveness. The paper does not relate the findings to design, and this together with its mathematical bias make it unattractive reading to most architects; but the ideas are very important.

23.27 heating and ventilation

VENTILATION OF FACTORIES

Natural Ventilation, Air Movement and Factory Design. N.H. Show, R. W. Prunster and G. Blackburn. (Dept. of

Labour and National Service, Australia, 1946.)

General discussion of natural ventilation and summer comfort conditions in factories in sub-tropical climate. Results of investigations in four varying types of factory.

Although the main part of this bulletin is taken up by a description of the tests made in four factories in a sub-tropical climate the general discussion on comfort conditions is also useful. The detailed information hardly applies in this country but would be valuable to architects concerned with industrial buildings in warmer climates.

23.28 heating and ventilation

ELECTRIC SPACE HEATING

Installation of Domestic Electric Space Heating Equipment. Draft B.S. Code of Practice 3621:1947. (British Standards Institution, 2s.)

Definition of types of heaters. Limited information on choice of appliance and computation of heat requirements. Classification of appliances with ratings. Location and fixing of heaters.

24.26 lighting

FLUORESCENT LIGHTING

Fluorescent Technique. H. M. Barlow. (Electrical Times, May 1, 1947, p. 479.)

Existing hot and cold cathode fluorescent lighting compared; future trends; fittings design. Interesting; illustrated.

After some descriptive notes about hot and cold cathode theory, the author makes a comparison between the two types of source in which the outstanding points are these.

(1) Cold cathode ought to be operated at 2,000 volts to reach a running efficiency equal to hot cathode at 230 volts.

(2) The control gear for cold cathode is much simpler than for hot, and can be applied to a 40 or 50 ft. length of tube instead of 5 ft. only. On these grounds the author asserts that cold cathode should be used for factories, assembly halls and other large areas, because of the lower capital costs.

(3) The life of the cold cathode tube is 15,000-20,000 hours against 3,000 for hot cathode, and starting is instantaneous.

The author is unable to decide which is best and cheapest for office and domestic use, but makes the suggestion for a modified hot cathode tube with cold cathode starting operating on a compromise value of 600 volts.

In respect of fittings he notes a "large body of opinion opposed on aesthetic grounds to the form the present type of fluorescent fitting necessarily takes," and again has a suggestion to make, namely that an uncoated tube should be used inside an enclosed fitting, the windows of which are themselves coated with the fluorescent powder. The fitting can then take any desired shape and will have a lower brightness than the present tube.

The article is interesting and useful, but one doubts whether the author's suggestion for fittings will overcome the present objections. Despite the reduced brightness, the large size might still be an objection whatever the shape. What seems to be required is a more sensitive touch instead of the present heavy hand.

25.19 water supply and sanitation

BOILERS FOR KITCHENS

Electrode Boilers for Kitchens. (Plumber & Journal of Heating, March, 1947, Vol. LXIX, p. 29.)

Brief account of experience with electrode boilers for kitchens serving 9,000 and 2,000 meals per day. Boilers supplied steam for cooking, hot water through calorifiers. With electricity at 0.43d. per unit, operation cost stated as lower than gas at 5.8d. per therm or coal at 50s. per ton. Other advantages found, extreme flexibility in operation, quick starting from cold. Boilers of 350 kW. and 70 kW. rating were used.

26.5 services and equipment: miscellaneous

X-RAY SCREENING

Lead Plymax for X-ray Protection. (Lead Technical Information Bureau and Venesta Ltd.)

Brochure detailing fixing methods for Plymax lead-cored plywood for screening X-ray apparatus. Good isometric details showing methods of obtaining continuity of screen round door openings, angles, etc. Panels consist of lead-sheet from 1 mm. to 4 mm. thick cemented between two layers of ½-in. plywood; lead thickness required depends on power of apparatus. Special doors of ½-in. blockboard available containing lead sandwich. Method of providing necessary screening without specially skilled labour. Eight drawings.

26.6 services and equipment: miscellaneous

ELECTRIC FUSES

Electric Fuses: Low-Voltage and Medium-Voltages. BS. 88:1947. (British Standards Institution, 2s.)

Low and medium voltage fuses for all duties and current ratings, both AC and DC. Detailed requirements and performance. Testing methods. Method of selecting correct fuse.

This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.

QUESTIONS AND ANSWERS

2898 COST INCREASE: JOINERY

Q We wish to find out the percentage increase in the cost of joinery for housing since December, 1945. Can you help us or inform us where we might obtain this information?

A No official information has been published but we would estimate the general increase in the cost of joinery between December, 1945, and April, 1947, to be between 7½ per cent. and 10 per cent.

On the 1st May the price of timber was increased by £20 per standard. Sufficient time has not elapsed for us to be able to judge of the effect of this increase upon prices but we consider that the increase over prices for April of this year will be in the neighbourhood of 30 per cent.

BLUNDELL PAINTS

*for
Quality*

BLUNDELL

It is generally recognised that Blundell's Products are pre-eminent for all decorative purposes. Our Chemists and Technicians are constantly working to ensure their high protective qualities, prolonged durability and exceptional beauty of finish.

Details will gladly be sent upon request—write today. Expert advice also given on any painting problems.

BLUNDELL SPENCE & CO., LTD.

Manufacturers, since 1811, of quality Paints, Colours and Varnishes for all purposes.

HULL and

9 UPPER THAMES ST., LONDON E.C.4.

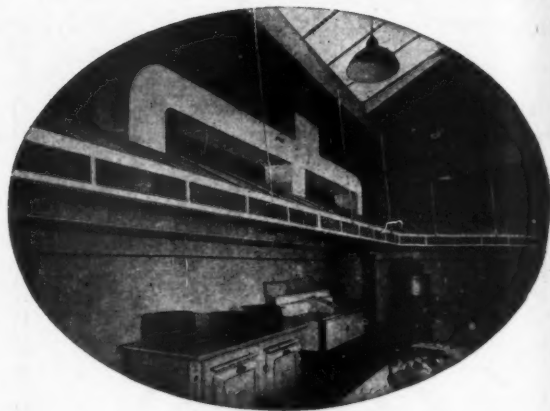
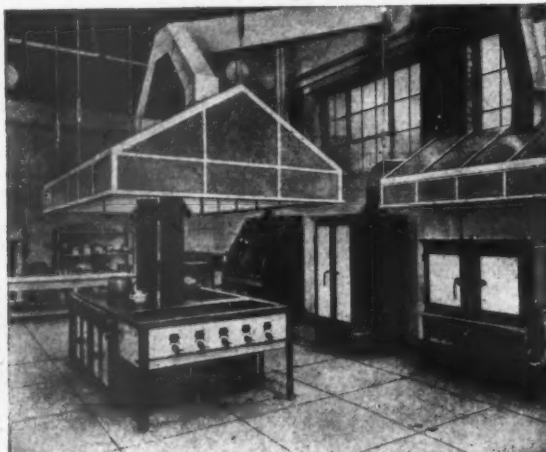


June

The first long days of midsummer bring thoughts of travel. Whether you are beginning to plan your holiday or whether you feel that now would be an appropriate time for that long-deferred business trip, preparations have to be made. The Midland Bank is ready to assist you with the services of experienced specialists in exchange matters, by obtaining your foreign currency and by providing travellers' cheques and letters of credit which are readily encashable abroad. With an unrivalled reputation overseas, this Bank has thousands of agents throughout the world who are at all times ready to assist its customers.

MIDLAND BANK LIMITED

LIGHT *without fumes*



Even the busiest kitchens can be light and fresh. Helliwell Canopies with fume extractors carry off heat and steam, assist ventilation and improve working conditions. Moreover, as the photographs show, the Canopies being glazed do not unduly interfere with the natural daylight.

Designed for Schools, Canteens, Hospitals, Hotels, Restaurants etc., we are always glad to investigate kitchen ventilation problems and advise on suitable installations.

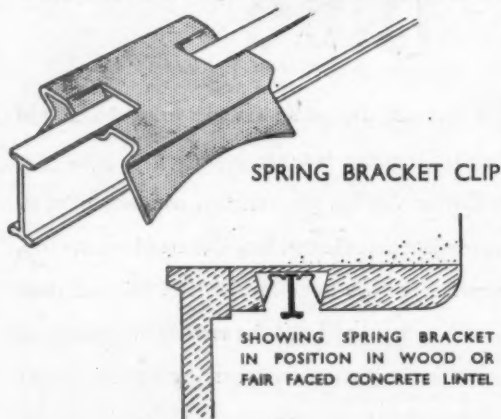
HELLIWELL *Glazed Canopies*

HELLIWELL & CO. LTD., Brighouse, Yorkshire & 68 Victoria St., London, S.W.1
Birmingham · Bristol · Manchester · Sheffield · Hull · Glasgow · Aberdeen · Dublin

(C)

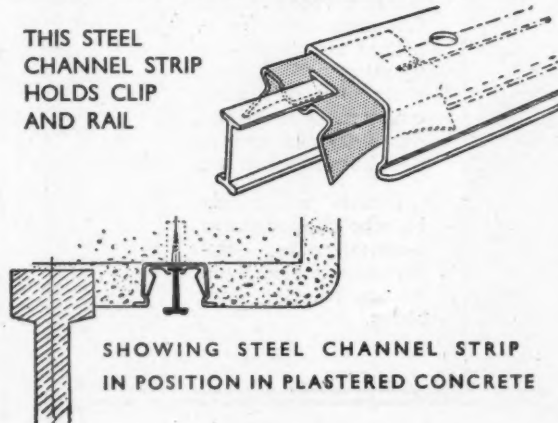
THE 'RUFFLETTE' RECESSED CURTAIN TRACK (BRAND)

1. FOR WOOD OR FAIR FACED CONCRETE



2. FOR PLASTERED CONCRETE LINTELS

THIS STEEL CHANNEL STRIP HOLDS CLIP AND RAIL



★THIS - 'RUFFLETTE' RECESSED CURTAIN TRACK provides an integral and permanent fitting for the modern house.

For full particulars and specification, write:—
THOMAS FRENCH & SONS LTD.
MANCHESTER, 15

Factories Manchester, Wythenshaw & Fall River, Mass., U.S.A.
London Office: 156-162 Oxford Street, W.1.
Also British Empire Building, New York City.



CAGE PATTERN
COIN-OPERATED
TURNSTILE
ENTIRELY AUTOMATIC


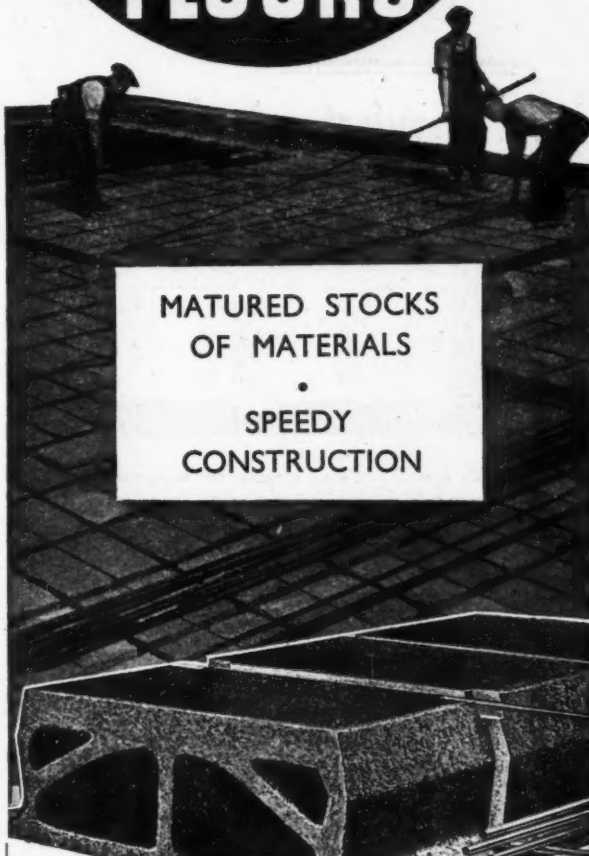
No Levers to manipulate.
Insert the coin and walk
through. Fitted with
Counter if desired.

*Ordinary Turnstiles (Registering
and Non-registering), Remote-
Controlled Turnstiles, Schemes
to suit special requirements, &c.*



On Admiralty, Air Ministry and War Office Lists
SIR W. H. BAILEY & CO. LTD.
PATRICROFT, LANCASHIRE
Tel. ECCLES 3487/8/9. Ext. 1829. Grams: BEACON PATRICROFT

B. 13. 9

MATURED STOCKS
OF MATERIALS
•
SPEEDY
CONSTRUCTION

The SMITH TWO-WAY

reinforced fireproof floor can be employed immediately for any flooring or roofing requirement. It is constructed with standardised pre-cast hollow concrete blocks.

The employment of patent telescopic centers permits the immediate use of the floor with the additional advantage of their removal in the minimum of time.

SMITH'S FIREPROOF FLOORS LTD. (Dept. A)
Ember Court, East Molesey, Surrey. Telephone: Emberbrook 3300 (4 lines)

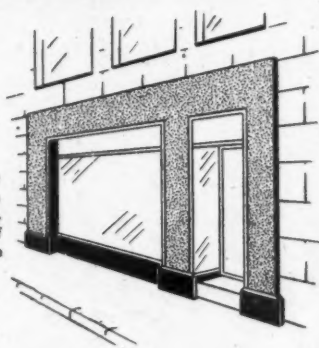
SMITH'S 2-WAY REINFORCED
FIREPROOF FLOORS
employing Unique Telescopic Centering

CORNOGLAZE for Shop Fronts

Cornoglaze can be supplied in the raw state for export purposes and manufactured in any country.

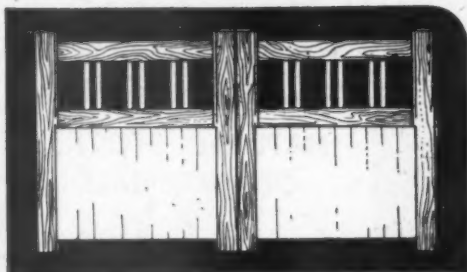
Johnston Brothers
(CONTRACTORS) LTD.

DOSELEY QUARRIES • DAWLEY • SALOP
London Office: IBEX HOUSE • MINORIES • E.C.3.



L.G.B.

Manufactured Joinery



We have a first class organisation equipped to undertake quantity production of joinery for the building and woodworking trades—manufacturing either to BSS specifications or to architects own drawings.

MACHINED TIMBER—MOULDINGS
TIMBER SUPPLIES — SAWMILLING
WALLBOARDS — PLYWOOD



CHESHIRE WOODCRAFT LTD.
PEEL STREET SAWMILLS · MACCLESFIELD

©M17



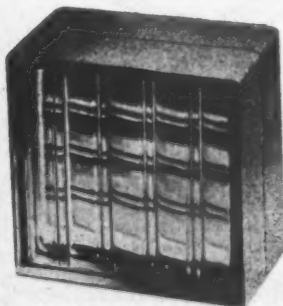
becomes

You'll agree there's nothing like the Washable Distemper you've always known as DEX. So that there shall be nothing like its name either, DEX will in future be known as DEZ.

X into Z still equals a first class Washable Oil Bound Distemper suitable for houses and public buildings alike — an Apac product manufactured by



ALLIED PAINTS & CHEMICALS LTD., TYSELEY, BIRMINGHAM 11



If it's about
'INSULIGHT' HOLLOW
GLASS BLOCKS
consult **CLARKS**



JAMES CLARK & EATON LIMITED
(Amalgamating James Clark & Son, Ltd., and Eaton, Parr & Gibson Ltd.) Scoresby House, London, S.E.1. Phone: WATERLOO 4611 (12 lines). Also at Canterbury, Bournemouth, Eastbourne, Reading.

As specialist fixers of Hollow Glass Blocks, Clarks have mastered the technical problems involved, and will be happy to advise on such matters as reinforcement, expansion joints, etc. A specially trained staff ensures competent fixing. Please ring for information or ask for a technical representative to call.



EDMONDS

CONSTRUCTIONAL
JOINERY AND
METALCRAFT

BIRMINGHAM
Constitution Hill.
Central 8351/3.

GLASGOW CARDIFF

LONDON
8, Gray's Inn Rd.,
W.C.1.
Chancery 7694/5.

"IT'S A PITY
TO SPOIL THE
PLASTER"



When an electric cable fails it means a major repair. Walls have to be opened, floors ripped up. Tempers are frayed. That's one of the reasons why General Cables are made to such a constant high standard. They are made to last and last and last, wherever they are. They won't let you or your customer down.



GOOD CABLES TO-DAY REDUCE TROUBLE TOMORROW

GENERAL CABLES

Specify General
Cables through
your contractor



Telephone
Leatherhead 3021-4
Telegrams: "Isold"
Leatherhead

General Cable Manufacturing Co., Ltd., Leatherhead, Surrey.

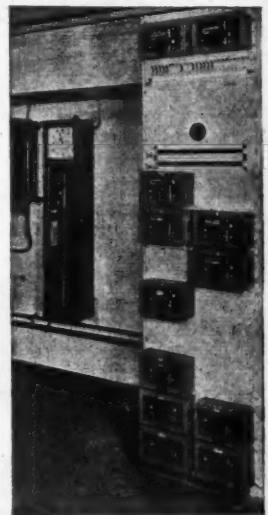


At the B.B.C. . . .

accurate time is distributed throughout Broadcasting House by the Gents' Electric Impulse Master Clock shown on the right. B.B.C. Engineers know that the Electric Impulse Clock system is ideally suited to large establishments where accurate uniform time—Independent of mains variations—is of prime importance.

That is why they use

ELECTRIC



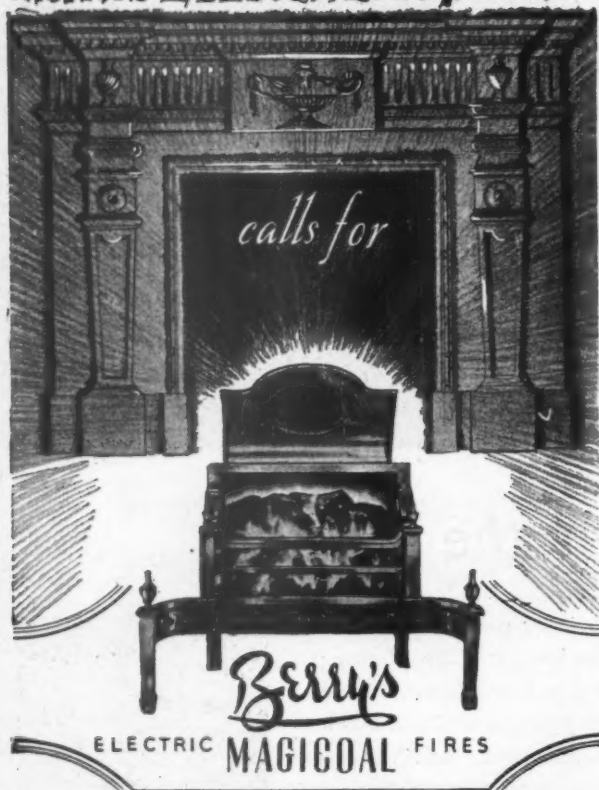
IMPULSE CLOCKS by

**GENTS'
OF LEICESTER**

ESTAB. 1872

GENT & CO. LTD., FARADAY WORKS, LEICESTER
LONDON OFFICE: 47 VICTORIA STREET, S.W.1
Makers of Electric Impulse and Synchronous Clocks, Tower Clocks, Striking and Chiming Mechanisms, Fire and Burglar Alarms, Staff Locators, Telephones and Interphones.

...that Lifeless Fireplace...



"A. B. S." HOUSE PURCHASE LOANS

ALTERNATIVE SCHEMES

1. Normal advance 80% of Valuation. Interest 4% gross. (Borrower pays Survey Fee and Legal Costs totalling 1½% of Loan.)
2. Normal Advance 85% of Valuation. Interest 4½% gross. (Office pays Survey Fee and Own Legal Charges.)

REPAYMENT by means of an Endowment Assurance term not exceeding 25 years under (1) or 30 years under (2).

Particulars from:—

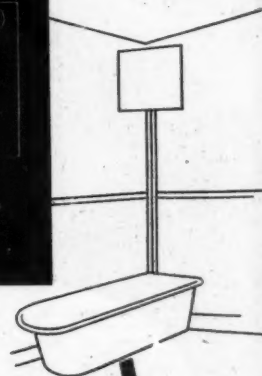
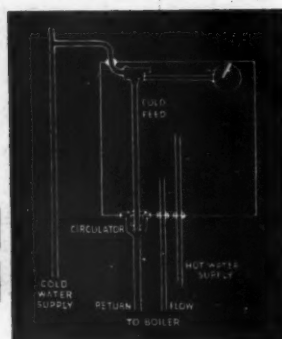
The Secretary,
A.B.S. INSURANCE DEPARTMENT
66, Portland Place, London, W.1.
Tel: WELbeck 5721.

ROLYAT

PATENT DOMESTIC HOT WATER SYSTEM

MODERN—
COMPACT—
EFFICIENT...

Sufficient hot water for five consecutive baths—with half the fuel and installation costs.



THE ROLYAT TANK CO. LTD. CROMWELL RD., YORK

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, 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," at the address given above.

Public and Official Announcements

6 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, RATON PLACE, LONDON, S.W.1. TEL. SLOANE 5615. 991

CORPORATION OF LONDON.

CITY SURVEYOR'S OFFICE.

APPOINTMENT OF TECHNICAL STAFF.

Applications are invited for the following appointments, in the City Surveyor's Office:— ASSISTANT ARCHITECTS AND SURVEYORS. Salary up to £475 p.a. (inclusive of consolidated bonus), according to age, qualification and experience.

Applicants should either have qualified or be about to qualify for Associate Membership of the Royal Institute of British Architects, or Associate Membership of the Royal Institution of Chartered Surveyors (Building Sub-division).

The appointments are for the present on a temporary basis, and will be concerned principally with the reinstatement of war damage to a variety of types of properties. In the event of establishment to the permanent staff, temporary service will count for the purposes of superannuation. Such appointments will be subject to the provisions of Local Government Superannuation, and applicants will be required to pass a medical examination.

Previous experience with a Municipal body is not essential.

Applications, endorsed "Technical Staff," to be made to George Holliday, F.S.I., City Surveyor, 54-61, Moorgate, E.C.2, giving the following particulars:—Service with Armed Forces, age, qualification or intentions in connection therewith, previous training, positions and experience, date when available to commence duties if selected, together with copies of two testimonials. 918

CITY AND COUNTY OF THE CITY OF LINCOLN.

APPOINTMENT OF HOUSING ARCHITECT.

Applications are invited from fully qualified Architects for the above appointment, at a salary of £850 per annum, rising by annual increments of £50 to £1,000 per annum, together with war bonus (at present £59 16s. per annum).

The person appointed will be required to take charge of the Housing Architect's Department, and will be mainly concerned with the erection of new houses for the Corporation.

Full particulars of the appointment, together with forms of application, may be obtained from the undersigned, and applications must be received not later than by the first post on Monday, 30th June, 1947.

J. H. SMITH,

Town Clerk.

Town Clerk's Office, Lincoln.

29th May, 1947. 597

LONDON COUNTY COUNCIL.

COUNTY OF LONDON PLAN-VACANCIES FOR PLANNING STAFF.

Applications are invited for positions in the following grades:— PLANNING OFFICER, Grade III, up to £700 a year.

TECHNICAL ASSISTANT, up to £580 a year. Commencing rate according to qualifications and experience. Opportunities for competing for permanent appointment and promotion. Successful candidates will be superannuable.

The planning work involved includes assistance in the detailed development of Reconstruction Area schemes and the preparation of revised zoning plans.

A knowledge of current town planning legislation is desirable in all cases, and candidates for Grade III positions should possess architectural, surveying or town planning qualifications.

Application forms obtainable from Architect to the Council, County Hall, S.E.1 (enclose stamped addressed envelope, returnable not later than 10 days from this date).

Canvassing disqualifies. (1680) 536

ARCHITECTURAL ASSISTANTS REQUIRED BY MINISTRY OF WORKS.

Applications are invited to fill vacancies for Drawing Office duties in Risleigh, Warrington. The posts are on an unestablished capacity, and the inclusive salary is up to £550 per annum, according to qualifications and experience. Applicants should have had a recognized full period of training and experience, with a practising Architect or Local Authority, etc.

Apply in writing, giving age, details of training and experience, to Chief Architects, W.G.10, Ministry of Works, Abell House, John Islip Street, London, S.W.1. 578

SOUTHAMPTON COUNTY BOROUGH. BOROUGH ARCHITECT'S DEPARTMENT. APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments:— Architectural Assistant (Temporary), Grade II, £360-£405, plus cost-of-living bonus, amounting to £59 16s. per annum.

JUNIOR ARCHITECTURAL ASSISTANT (Temporary), General Division, £65-£300, according to age, plus cost-of-living bonus according to age.

Preference will be given to Probationers or Students of the Royal Institute of British Architects who intend to qualify for Associate Membership and become Registered Architects.

Applications in writing, stating age, qualifications, and experience, and enclosing copies of two recent testimonials, should be sent to Denis Winston, M.A., B.Arch., A.R.I.B.A., M.T.P.I., Civic Centre, Southampton, to arrive not later than 23rd June, 1947. 615

THE COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE. APPOINTMENT OF COUNTY PLANNING OFFICER.

Applications are invited for the appointment of County Planning Officer, at an annual salary of £1,500, rising by annual increments of £50 to £1,750, plus cost-of-living bonus of £59 18s. Applicants must be Corporate Members of the Town Planning Institute, and have had considerable experience in the preparation and administration of planning schemes. Preference will be given to persons who also possess a recognized qualification in architecture, civil engineering, or surveying.

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

Applications in writing, stating age, qualifications and experience, accompanied by copies of three recent testimonials, must be lodged with the undersigned in sealed envelopes marked clearly in the top left-hand corner "County Planning Officer," not later than the 30th day of June, 1947.

BERNARD KENYON,

Clerk of the County Council.

County Hall, Wakefield.

31st May, 1947. 600

THE COUNCIL OF INDUSTRIAL DESIGN invites applications for the post of DIRECTOR, which has just fallen vacant. Salary up to £2,500, according to experience and qualifications, with a contributory Superannuation Scheme. Qualifications required are a knowledge of some branches of industry, administrative capacity, experience in posts of wide responsibility, and a general understanding of the problems of industrial design. A form of application may be obtained from the Establishment Officer. The Council of Industrial Design, Tilbury House, Petty France, London, S.W.1. 656

CITY AND COUNTY OF THE CITY OF LINCOLN.

APPOINTMENT OF BUILDING MANAGER.

Applications are invited for the above appointment from persons experienced in the building trade.

The salary will be in accordance with Grade V of the National A.P.T. Scales of Salaries, i.e., £460-£510, together with war bonus which at present amounts to £59 16s. per annum.

Particulars of duties, together with forms of application, may be obtained from the undersigned. Applications must be received not later than by the first post on Monday, 30th June, 1947.

J. S. SMITH,

Town Clerk.

Town Clerk's Office, Lincoln.

29th May, 1947. 596

EAST SUFFOLK COUNTY COUNCIL.

APPOINTMENT OF ASSISTANT ARCHITECTS.

Applications are invited for the appointment on the permanent staff of the County Architect's Department of Assistant Architects, A.P.T., Grades III-IV, of the National Scheme of Conditions of Service, with a salary range of £390 to £465 per annum, plus bonus, at present amounting to £59 16s. per annum. The commencing salary will be fixed according to qualification and experience.

Applicants must be Registered Architects, preferably members of the Royal Institute of British Architects, with previous experience in the service of a Local Authority. They must be quick and accurate draughtsmen, fully conversant with the preparation of 1/4" scale, half inch, and full size details for Schools or other buildings dealt with by a Local Authority, and have a sound knowledge of design, construction and specifications.

The successful candidates for the appointments will be required to pass a medical examination. Appointments are subject to one month's notice on either side, and are superannuable.

Applications, stating age, full details of previous experience and qualifications, accompanied by copies of two recent testimonials or the names of two referees, must be delivered to E. J. Symcox, F.R.I.B.A., County Architect, County Hall, Ipswich, not later than 7th July, 1947.

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

CECIL OAKES,

Clerk of the Council.

County Hall, Ipswich.

601

CITY OF STOKE-ON-TRENT.

CITY ARCHITECTURAL DEPARTMENT.

Applications are invited for the following appointments on the establishment staff of the City Architectural Department:—

(a) THREE ASSISTANT ARCHITECTS. Salary, A.P.T. Division, Grade V, £460-£510.

(b) TWO ASSISTANT ARCHITECTS. Salary A.P.T. Division, Grade III, £390-£435.

(c) ONE ARCHITECTURAL ASSISTANT. Salary A.P.T. Division, Grade I, £330-£375.

(d) ONE ASSISTANT QUANTITY SURVEYOR. Salary A.P.T. Division, Grade VI, £535-£600.

(e) ONE ASSISTANT QUANTITY SURVEYOR. Salary A.P.T. Division, Grade Misc. II, £315-£360.

All the above appointments carry, in addition, a cost-of-living bonus, at present £59 16s. per annum.

The selected applicants will be required to pass a medical examination, and the appointments will be subject to the following:—

1. One calendar month's notice on either side.
2. The provisions of the Local Government Superannuation Act, 1937.
3. The National Scheme of Conditions of Service for Local Government Officers.

Applicants for (a) should have had experience in the provision of buildings for Education purposes under the Education Act, 1944, or have had experience of Housing work for a Local Authority. Regulations and Standards for School Premises of the Education Act, 1944 and/or experience of Housing work for a Local Authority. One of the appointments will be to assist with the work of the proposed New North Staffordshire Technical College. Preference will be given to members of the Royal Institute of British Architects.

Applicants for (b) should have had experience in the provision of buildings for Education purposes under the Education Act, 1944, or have had experience of Housing work for a Local Authority. Preference to applicants who have reached Intermediate standard of the Royal Institute of British Architects.

Applicants for (c) should have received a sound Architectural training and have a good general experience.

Applicants for (d) must be Members of the Royal Institution of Chartered Surveyors (Quantity), and must be competent in all branches of Quantity Surveying practice.

Applicants for (e) should have had experience in the duties of a quantity surveyor in connection with Housing Schemes.

Applications, giving date of birth, particulars of education and training, qualifications, experience, present and previous appointments, with copies of two recent testimonials and names and addresses of two persons to whom reference may be made, should be received by J. R. Piggett, F.R.I.B.A., Chief Architect, City Architectural Department, Kingsway Chambers, Kingsway, Stoke-on-Trent, endorsed with the title and grade of the appointment applied for, not later than Monday, 30th June, 1947.

HARRY TAYLOR,

Town Clerk.

Town Hall, Stoke-on-Trent.

10th June, 1947. 663

ST. ALBANS CITY COUNCIL.

CITY ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointment in the above Department:—

COSTING CLERK (Permanent). Salary Miscellaneous Division, Grade I, £255-£215-£230, plus current cost-of-living bonus, £59 16s. per annum. Applicants must have had extensive experience in costing, stores and accounts and making up of wages, and be conversant with general office routine. Preference will be given to candidates possessing experience of a Municipal Engineer's Office.

The appointment will be subject to one month's notice on either side, to the successful applicant passing a medical examination, to the provisions of the Local Government Superannuation Act, 1937, and to the Scheme of Conditions of Service of the National Joint Council for Local Authorities, Administrative, Professional, Technical and Clerical Services.

Applications in writing, stating age and experience, together with copies of two recent testimonials, should be received by me not later than Monday, 7th July, 1947.

S. H. E. CRANE,

Town Clerk.

Town Clerk's Office, 38, St. Peter's Street, St. Albans.

664

LONDON COUNTY COUNCIL.

Required at the Brixton School of Building, Ferndale Road, S.W.4 in September, 1947, a HEAD OF THE BUILDING TRADES Department.

The Department provides part-time day and evening courses in the following Building Trades:—Brickwork; Carpentry and Joinery; Mastic-asphalt Work; Masonry; Plastering; Plumbing; Wood-cutting Machinists' Work. Applicants should have a good experience of the industry and of the organization of technical courses in Building. Burnham scale salary for Grade II department, £750-£235, plus £36-£46 London allowance, and an allowance for training. Application forms (stamped addressed foolscap envelope necessary) from the Education Officer (T.1), County Hall, S.E.1, returnable by 12th July, 1947. (1816) 602

ISLE OF ELY COUNTY COUNCIL.
Applications are invited from suitably qualified persons for the following appointments in the County Architect's Department:—
(i) QUANTITY SURVEYOR, Grade V. Salary £460 × £10—£510 per annum.
(ii) ASSISTANT QUANTITY SURVEYOR, Grade III. Salary £390 × £15—£435.
The National Conditions of Service (including cost-of-living bonus) will apply, and the appointments will be subject to the Local Government Officers' Superannuation Act, 1937, the passing of a medical examination, and to one month's notice on either side.
Applications, accompanied by full particulars, and three recent testimonials, must reach the County Architect, County Hall, March, not later than the 11th July, 1947. Canvassing, directly or indirectly, will disqualify.
R. F. G. THURLOW,
Clerk of the County Council.
County Hall, March.
7th June, 1947. 634

LONDON COUNTY COUNCIL.
ARCHITECTURAL ASSISTANTS.
Applications are invited for positions of Architectural Assistants, in the Housing and Valuation Department, at consolidated salaries of up to £580 a year. Commencing salaries will be determined according to qualifications and experience, and qualified candidates will be eligible for appointment to the permanent staff of the department on the occurrence of vacancies. Engagement will involve contribution to the Council's Superannuation and Provident Fund.
Successful candidates will be required to undertake work in connection with the design and development of housing schemes (cottages and multi-storey flats).
Forms of application may be obtained from the Director of Housing and Valuer, The County Hall, Westminster Bridge, S.E.1 (stamped addressed foolscap envelope required).
Canvassing disqualifies. (1050). 741

LONDON COUNTY COUNCIL.
VACANCIES FOR ARCHITECTURAL STAFF IN THE ARCHITECT'S DEPARTMENT.
Applications are invited for a number of positions in the following grades:—
ARCHITECT (Grade III), £550—£700 a year (professional qualifications required).
TECHNICAL ASSISTANT (Section A), £440—£520 a year.
TECHNICAL ASSISTANT (Section B). Up to 167s. 6d. per week.
Commencing rates will be according to qualifications and experience.
Required for work in connection with the design and erection of new schools and other buildings, and structural alterations to existing buildings.
A number of technical assistants also required for the preparation of specifications and estimates for works of cleaning and painting, war damage repairs, and alterations at schools and other buildings.
Successful candidates are required to contribute to the Council's Superannuation and Provident Fund, and will be eligible for permanent appointment and for advancement to higher positions, according to merit.
Other things being equal, ex-Service men and women will receive special consideration.
Application forms may be obtained from the Architect to the Council, County Hall, Westminster Bridge, London, S.E.1, enclosing stamped addressed foolscap envelope.
Canvassing disqualifies. (1405). 891

GLOUCESTERSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the following appointments:—
(a) ASSISTANT ARCHITECTS.
Candidates should be qualified members of the R.I.B.A., with good general experience in design and construction of public buildings, including schools.
A.P. & T., Grade V, and eligible for promotion to A.P. & T., Grade VI, plus cost-of-living bonus.
(b) ARCHITECTURAL ASSISTANTS.
Candidates should have passed the Intermediate Examination of the R.I.B.A., with general experience in design and construction.
A.P. & T., Grade IV, plus cost-of-living bonus.
(c) JUNIOR ARCHITECTURAL ASSISTANTS.
Salary in accordance with experience, A.P. & T., Grades I-III, plus cost-of-living bonus.
Appointments will be subject to the Local Government Superannuation Act, 1937, and candidates, before appointment, will be required to pass a medical examination.
The appointments will be terminable by one month's notice on either side.
Applications, stating (1) name and address, (2) married or single, (3) age, (4) qualifications, (5) present position, salary and date appointed, (6) previous position with dates and salaries, (7) particulars of experience, and accompanied by copies of three recent testimonials, should be sent to S. E. URWIN, F.R.I.B.A., County Architect, Shire Hall, Gloucester, not later than the 12th July, 1947.
GUY H. DAVIS,
Clerk of the County Council.
Shire Hall, Gloucester. 660

CITY OF PORTSMOUTH EDUCATION COMMITTEE.
SOUTHERN COLLEGE OF ART (PORTSMOUTH CENTRE), GUILDHALL SQUARE, PORTSMOUTH.
Principal: W. J. L. GAYDON, A.R.C.A.
SCHOOL OF ARCHITECTURE.
Applications are invited for a Full-time LECTURER AND STUDIO MASTER for Fourth and Fifth Year work, to take up duties in September, 1947.
Applicants must be Associates of the R.I.B.A., and preferably hold a Degree or Diploma of a Recognised School of Architecture. Previous experience in Teaching is desirable, but not essential.
Applications to: The Registrar, College of Art, Guildhall Square, Portsmouth.
E. G. BARNARD, M.A.
Chief Education Officer.
651

COUNTY BOROUGH OF GREAT YARMOUTH.
BOROUGH ENGINEERS' DEPARTMENT.
APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT.
Applications are invited for the appointment of a permanent Senior Architectural Assistant, at a salary in accordance with Grade V of the National Scale of Conditions of Service, commencing at £460 per annum, rising to a maximum of £510 per annum, plus cost-of-living bonus, at present £59 16s.
Applicants for the appointment should be Associates of the Royal Institute of British Architects, and must have had experience in design and construction, particularly in relation to housing, schools and public buildings.
Applications, stating age, qualifications and experience, together with copies of three recent testimonials, should be enclosed in an envelope endorsed "Senior Architectural Assistant," and must reach the undersigned not later than Friday, the 4th July, 1947.
The appointment will be terminable by one month's notice on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination.
Canvassing, directly or indirectly, will be deemed a disqualification, and candidates must disclose in writing whether, to their knowledge, they are related to any member or holder of any senior office under the Council. Candidates who fail to do so will be disqualified and, if appointed, will be liable to dismissal without notice.
FARRA CONWAY,
Town Clerk.
Town Hall, Great Yarmouth.
9th June, 1947. 662

GOVERNMENT OF NORTHERN IRELAND.
MINISTRY OF FINANCE.
(WORKS AND PUBLIC BUILDINGS).
APPOINTMENT OF ARCHITECTURAL ASSISTANTS.
Applications are invited for a number of (temporary) appointments as Architectural Assistants for general drawing office duties in connection with the preparation of working drawings and details. Preference will be given to candidates who have passed the Intermediate examination of the R.I.B.A., or who have pursued a recognized course of training, combined with some experience in an Architect's office.
Remuneration: Successful candidates will be remunerated within the salary range, £300-£540 (inclusive), and the commencing salary within this range will be fixed according to the ability and experience of successful candidates.
Although the appointments will be temporary, it is expected that they will last for at least two years, and that a limited number of permanent appointments will eventually be made on a competitive basis.
Preference will be given to candidates who served with H.M. Forces during the 1914-18 or the 1939-45 war, providing the Ministry is satisfied that such candidates can, or, within a reasonable time, will be able to discharge the duties of the post efficiently.
Closing date for receipt of applications: Applications must reach the Assistant Secretary (Establishments), Ministry of Finance, Stormont, Belfast, on or before the 8th July, 1947. Applicants should state their date of birth and give full particulars of qualifications and experience. They should also enclose copies of two recent testimonials.

STAFFORDSHIRE COUNTY COUNCIL.
EDUCATION COMMITTEE.
Applications are invited from qualified men or women for vacancies for ASSISTANT ARCHITECTS and ARCHITECTURAL ASSISTANTS, at salaries according to A.P.T.D. Grades VI, V, III, II and I of the National Scale.
Appointments, subject to confirmation on permanent staff on completion of 6 months' satisfactory probation; also recognized for purposes of Local Government Superannuation Act, 1937.
Applications, accompanied by copies of testimonials, stating age, qualifications and experience, to be addressed to the Architect, County Education Offices, Stafford. Candidates must state grade and post for which they apply.
T. H. EVANS,
Clerk of the County Council.
11th June, 1947. 665

NORTHERN POLYTECHNIC, HOLLOWAY ROAD, LONDON, N.7.
The Governing Body invite immediate applications for the following appointments; to commence in September, 1947.
FULL-TIME STAFF.
STUDIO MASTERS IN ARCHITECTURAL DESIGN.
LECTURERS ON QUANTITY SURVEYING AND ASSOCIATED SUBJECTS.
LECTURERS ON BUILDING CONSTRUCTION AND MATERIALS.
STUDIO MASTER IN INTERIOR DECORATION.
The remuneration attached to the above appointments will be in accordance with the Burnham Scale, the commencing salary being determined according to the training, professional experience, and war service in individual cases. Applicants are expected to have the professional qualification appropriate to the appointment, and some experience in lecturing will be considered an advantage. Members of the full-time staff are permitted to engage in private practice, for which purpose teaching duties are usually adjusted so as to allow a reasonable amount of free time.
Forms of application, together with full particulars, will be forwarded on receipt of a stamped addressed foolscap envelope (state appointment for which application is made).
VISITING STAFF.
STUDIO MASTERS IN ARCHITECTURAL DESIGN IN DAY AND EVENING SCHOOLS.
EVENING LECTURERS ON BUILDING CONSTRUCTION, BUILDING REGULATIONS, AND LAND SURVEYING.
Vacancies will occur for Lecturers in Elementary and Advanced Classes, and for those who desire to gain experience in teaching while acting as Assistant Lecturers.
Applications should be made in writing, giving brief particulars of training and experience, and stating the appointment for which application is made.
R. H. CURRELL,
Clerk. 628

COUNTY BOROUGH OF DERBY.
BOROUGH ARCHITECT'S DEPARTMENT.
Applications are invited for the following appointment on the permanent staff, in accordance with the National Scale of Salaries:—
ONE JUNIOR ARCHITECT, Grade I. Salary £330-£375 per annum, plus cost-of-living bonus, at present £59 16s. (male).
Applicants should have passed the preliminary examinations of the R.I.B.A., and have had experience in general Architectural work.
The appointment will be subject to one month's notice in writing on either side, and to the terms of the National Joint Council's Scheme of Conditions of Service and the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.
Forms of application may be obtained from Thos. W. East, F.R.I.B.A., Borough Architect, The Council House, Corporation Street, Derby, and should be returned when completed, together with copies of two recent testimonials, to arrive not later than Monday, 30th June, 1947.
Canvassing, directly or indirectly, will be a disqualification.
C. ASHTON,
Town Clerk. 629

MIDDLESBROUGH EDUCATION COMMITTEE.
APPOINTMENT OF ASSISTANT ARCHITECTS.
Applications are invited for the following appointments on the established staff of the Architect's Section of the Education Offices:—
(a) Two Assistant Architects, Grade IV (£240-£465).
(b) One Assistant Architect, Grade I to II (£330-£405).
A cost-of-living bonus, at present £60 per annum, will be payable in addition to the basic salary in each case, and the appointments will be subject to the provisions of the Local Government Superannuation Act, 1937.
The selected candidates will work under the immediate direction of the Architect to the Education Committee, Mr. T. Noel Mitchell, B.Arch. (Liverpool), A.R.I.B.A.
Applicants for appointments (a) must have had experience in the design and construction of modern buildings, including schools, and should have reached the standard of the Final Examination of the R.I.B.A. A University degree or diploma in Architecture, and ability to carry out perspective drawing, will be an advantage.
Applicants for appointment (b) must have had a good general experience, and should have reached the standard of the Intermediate Examination of the R.I.B.A.
Applications, stating appointment applied for, giving age, education, professional training and qualifications, experience, previous appointments, present appointment and salary, and service in the Forces (if any), together with copies of two recent testimonials, and the names of two persons to whom reference can be made, should be delivered to the Director of Education, Education Offices, Woodlands Road, Middlesbrough, not later than the first post on Friday, 4th July, 1947.
Canvassing, directly or indirectly, will disqualify.
E. C. PARR,
Town Clerk. 643

**BOROUGH OF SCUNTHORPE.
ARCHITECTURAL ASSISTANT.**

Applications are invited from duly qualified persons for the appointment of Architectural Assistant, at a salary in accordance with Grade III, A.P.T. Division, of the National Scale, plus cost-of-living bonus of £59 16s. per annum.

Preference will be given to associated members of the R.I.B.A. capable of preparing perspective drawings, house drawings, working drawings, specifications, and quantities for L.A. Housing Schemes.

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

Housing accommodation will be made available if necessary.

Applications, endorsed "Architectural Assistant," stating age, qualifications and experience, and accompanied by copies of three recent testimonials, should reach the undersigned not later than the 5th July, 1947.

W. P. ERRINGTON,
Town Clerk.

Municipal Offices, 34 High Street,
Scunthorpe. 636
7th June, 1947.

**BOROUGH OF JARROW.
BOROUGH ENGINEER'S DEPARTMENT.**

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT for Housing Work. Applicants must have an approved Architectural qualification and sound experience, particularly in housing.

The salary will be in accordance with Grade V, A.P.T. Division, £460-£510, plus cost-of-living bonus, at present £59 16s. per annum.

The Council is prepared, if the successful applicant requires it, to let him have the tenancy of one of the Council's houses.

The successful applicant will be required to pass a medical examination by the Council's Medical Officer of Health. Applications in plain envelopes, endorsed "Architectural Assistant," stating age, present and previous appointments and experience, together with the names and addresses of three persons to whom reference as to ability and character can be made, to be received by the undersigned by Saturday, the 12th July, 1947.

Canvassing, directly or indirectly, will disqualify, and applicants must state whether or not they are related to any member of, or the holder of, any senior office under the Council.

CHARLES S. PERKINS,
Town Clerk.

Town Hall, Jarrow. 661
10th June, 1947.

**BOROUGH OF ROWLEY REGIS.
APPOINTMENT OF FIRST ARCHITECTURAL ASSISTANT.**

Applications are invited from suitably qualified Architects for the above appointment in the office of the Borough Engineer and Surveyor.

The appointment is in accordance with the following provisions, and housing accommodation will be provided for the successful applicant (if required) within three months from the date of taking up the appointment—

(a) Salary, A.P.T. Grade VII (£575-£25-£650), plus cost-of-living bonus, at present £59 16s. per annum.

(b) Conditions of Service of the National Joint Council.

(c) Terminable by one month's notice on either side.

(d) The provision of the Local Government Superannuation Act, 1937.

(e) The passing of a medical examination.

(f) Applications, giving details of age, qualifications and experience, together with copies of three recent testimonials, should be addressed to the Borough Engineer and Surveyor, so as to reach him on or before Monday, the 7th July, 1947.

R. HEGAN,
Town Clerk.

Municipal Buildings, Old Hill, Staffs. 653
16th June, 1947.

**COUNTY OF LINCOLN—PARTS OF LINDSEY.
COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointments on the permanent staff, at salaries in accordance with the National Scales.

(a) SENIOR QUANTITY SURVEYOR, Grade VI/VII, £535 per annum, rising to £650, plus bonus.

(b) SENIOR QUANTITY SURVEYOR, Grade VI, £535 per annum, rising to £600, plus bonus. The cost-of-living bonus is at present £59 16s. per annum.

Candidates should be Members of the Chartered Surveyors' Institution.

The appointments will be terminable by one month's notice 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, accompanied by not more than three testimonials, stating age, qualifications, experience, and past and present appointments, should be sent, not later than seven days after the date of this advertisement, to the County Architect, County Offices, Lincoln. Applicants must clearly indicate the post for which their application is made.

ERIC W. SCORER,
Clerk of the County Council.

County Offices, Lincoln. 629

METROPOLITAN BOROUGH OF WOOLWICH.

Applications are invited for the following permanent appointments in the Borough Engineer and Surveyor's Department, at salaries in accordance with the Administrative, Professional, and Technical Division of the National Scales of Salaries:—

(a) TWO ENGINEERING ASSISTANTS, Grade V, Salary £480, rising to £530 per annum.

(b) ONE ARCHITECTURAL ASSISTANT, Grade VI, Salary £555, rising to £620 per annum. Cost-of-living bonus (at present £59 16s. p.a.) is payable in addition.

Applicants for (a) must have a good all-round engineering experience, and possess appropriate qualifications; (b) must have passed the final examination of the R.I.B.A. or have an equivalent qualification, and preferably have had experience in Architectural work, especially housing, undertaken by a Local Authority.

The appointments will be subject to the Council's conditions of service in force from time to time, to the provisions of the Local Government Superannuation Act, 1937, and will be terminable by one month's notice on either side.

The selected candidates will be required to pass a medical examination.

Applications, giving full details of age, qualifications and experience, should be forwarded, together with copies of not more than three recent testimonials, to reach the undersigned by 5th July, 1947.

Candidates must disclose in writing if they are related to any member or senior officer of the Council.

Canvassing members of the Council, either directly or indirectly, will disqualify.

DAVID JENKINS,
Town Clerk.

Town Hall, Woolwich, S.E.18. 632
June, 1947.

**CITY OF SHEFFIELD.
CITY ARCHITECTS' DEPARTMENT.**

APPOINTMENT OF ARCHITECTURAL AND SURVEYING ASSISTANTS.

Applications for the under-mentioned appointments are invited from persons with the requisite qualifications:—

(a) SENIOR ASSISTANT ARCHITECTS, A.P.T., Grade VI, Salary £535 to £600 per annum.

(b) TWO ASSISTANT ARCHITECTS, A.P.T., Grade V, Salary £460 to £510 per annum.

(c) TWO ASSISTANT ARCHITECTS, Education Section, A.P.T., Grades III and IV, Salary £390 to £465 per annum.

(d) TWO ASSISTANT ARCHITECTS, Housing Section, A.P.T., Grade IV, Salary £420 to £465 per annum.

(e) TWO INTERMEDIATE ASSISTANT ARCHITECTS, Housing Section, A.P.T., Grade I, Salary £330, rising to £375 per annum.

(f) ONE SENIOR SURVEYING ASSISTANT, with knowledge of Road and Sewer Works, A.P.T., Grade V, Salary £460 to £510 per annum.

(g) TWO INTERMEDIATE SURVEYING ASSISTANTS, with knowledge of Road and Sewer Works, A.P.T., Grade III, Salary £390, rising to £435 per annum.

Cost-of-living bonus, at present £59 16s. per annum, is payable in addition to the above salaries.

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

Canvassing will disqualify.

Applications, stating age, qualifications, previous and present appointments, and salary, full details of experience, and the earliest possible date when available, together with copies of recent testimonials, should be sent to W. G. Davies, Esq., F.R.I.B.A., City Architect, Town Hall, Sheffield, 1.

(Sgd.) JOHN HEYS,
Town Clerk.

Town Hall, Sheffield, 1. 649
10th June, 1947.

**FIFE COUNTY COUNCIL.
PLANNING AND ARCHITECTURAL DEPARTMENTS.**

Applications are invited for appointment of PLANNING ASSISTANTS in the above Department. Preference will be given to candidates holding the Associate Membership of the Town Planning Institute, and having practical experience in the preparation of Planning Schemes.

Salary £480-£25-£630, plus £60 war bonus per annum.

ARCHITECTURAL DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANTS, in the County Housing Architect's Department. Applicants must be qualified Architects under 45 years of age, with previous experience of Local Authority Schemes, particularly Housing. Salary £480-£25-£630, plus £60 war bonus per annum.

The above appointments are superannuable, and successful candidates will require to undergo a medical examination.

Applications, stating age, qualifications and experience, accompanied by copies of testimonials, and clearly showing the vacancy applied for, must be lodged with the undersigned not later than 3rd July, 1947. Canvassing disqualifies.

J. M. MITCHELL,
County Clerk.

County Buildings, Cupar-Fife. 631
6th June, 1947.

**OXFORDSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.**

APPOINTMENT OF JUNIOR ASSISTANT.

Applications are invited for the appointment of a Junior Assistant, in the County Planning Department of the County Council. The salary will be according to Grade I of the Administrative, Professional and Technical Division of the National Joint Council's Scale of Salaries, £330 per annum, rising by three annual increments to £375 per annum, plus bonus.

Applicants should be neat and expeditious draughtsmen. Preference will be given to those having previous experience in a planning office and who have knowledge of surveying and levelling.

The post will be superannuable, and the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications and details of experience, accompanied by copies of three recent testimonials, should be forwarded to the County Planning Officer, County Hall, Oxford, not later than the first post on the 1st July, 1947.

F. G. SCOTT,
Clerk of the Council.

County Hall, Oxford. 657
9th June, 1947.

**SKIPTON URBAN DISTRICT COUNCIL.
ARCHITECTURAL ASSISTANT.**

Applications are invited for the above appointment, at a salary in accordance with Grade III of the National Scales (£390-£435), plus bonus, at present £59 16s.

Although the appointment is not within the permanent establishment, it is anticipated that its duration will not be less than two years.

Applications, on a form to be obtained from the undersigned, and giving the names and addresses of three persons to whom reference can be made, should be sent, in an envelope endorsed "Architectural Assistant," to the Engineer and Surveyor, Town Hall, Skipton, not later than first post on Monday, 30th June.

K. B. ROBINSON, B.Sc.(Eng.),
A.M.I.Inst.C.E.,
Engineer and Surveyor.

Town Hall, Skipton. 623
7th June, 1947.

CITY AND COUNTY OF KINGSTON-UPON-HULL.

APPOINTMENT OF ASSISTANT ARCHITECT.

Applications are invited for the following permanent appointments:—

(a) ASSISTANT ARCHITECTS (Grade V), £460-£510, by annual increments, two of £15 and one of £20, plus bonus.

(b) ASSISTANT ARCHITECTS (Grade III), £390-£435, by annual increments of £15, plus bonus.

(c) ARCHITECTURAL ASSISTANTS (Grade I), £330-£375, by annual increments of £15, plus bonus.

The above grades are in the National Scale of Salaries, and the cost-of-living bonus is at present £59 16s. 3d. per annum.

Candidates for the appointments as Assistant Architects should be members of the Royal Institute of British Architects, and preferably have had experience in the type of works carried out by Local Authorities, i.e., housing, schools, hospitals, police stations, etc. The Architectural Assistants must at least be student members.

The appointments are in a progressive office with a large programme of modern work; are subject to the Local Government Superannuation Act, 1937, terminable by one month's notice on either side, and to the successful candidate passing a medical examination.

Application forms can be obtained from the undersigned, and should be sent in complete on or before 8th July, 1947.

ANDREW RANKINE, A.R.I.B.A.,
City Architect.

Guildhall, Kingston-upon-Hull. 627
June, 1947.

**WEST SUFFOLK COUNTY COUNCIL.
APPOINTMENT OF ASSISTANT COUNTY ARCHITECT.**

Applications are invited for the above appointment, at a salary within the range of Grades A.P.T., VI-VII, of the National Joint Council salary scale (£535-£650), commencing salary according to qualifications and experience, plus cost-of-living bonus (at present £60 per annum).

Travelling allowance in accordance with County Scale.

Applicants must be Registered Architects, preferably Associate Members of the Royal Institute of British Architects.

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

Forms of application may be obtained from the undersigned, by whom applications, accompanied by three recent testimonials, should be received not later than Monday, 30th June, 1947.

L. G. H. MUNSEY,
Clerk of the County Council.

Shire Hall, Bury St. Edmunds 594
2nd June, 1947.

**METROPOLITAN BOROUGH OF FULHAM.
HOUSING AND PUBLIC BUILDINGS
DEPARTMENT.**

ASSISTANT ARCHITECTS.

Applications are invited from Registered Architects, A.R.I.B.A. or equivalent, for appointment on the established staff as Assistant Architects in the above department. Applicants should have had experience in design and construction of blocks of flats.

Salary will be within Grades IV-V of the A.P.T. Division of the National Scales of Salaries, viz., £440-£530 per annum, according to experience and qualifications, plus cost-of-living bonus of £59 16s. per annum.

Forms of application may be obtained from me and must be returned, together with copies of not more than three recent testimonials, endorsed "Assistant Architect," not later than 30th June, 1947.

CYRIL F. THATCHER,

Town Clerk.

Town Hall, Fulham, S.W.6.
June, 1947.

630

**PEMBROKESHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointments on the permanent staff:—

(a) Two SENIOR ASSISTANT ARCHITECTS, Grade VII (A.P. and T.). Salary £575-£650 per annum, plus cost-of-living bonus, now £59 16s. p.a. Experience in Education and General County work is desirable.

(b) SENIOR ASSISTANT ARCHITECT, Grade VI (A.P. and T.). Salary £535-£600 per annum, plus cost-of-living bonus, now £59 16s. p.a.

(c) ARCHITECTURAL ASSISTANT, Grade V (A.P. and T.). Salary £460-£510 per annum, plus cost-of-living bonus, now £59 16s. p.a.

(d) ARCHITECTURAL ASSISTANT, Grade III (A.P. and T.). Salary £390-£435 per annum, plus cost-of-living bonus, now £59 16s. p.a.

Candidates must be qualified members of the R.I.B.A., with specialized knowledge and experience in contemporary architectural and/or structural design.

(e) CHIEF QUANTITY SURVEYOR, Grade VII (A.P. and T.). Salary £575-£650 per annum, plus bonus as above.

(f) SENIOR ASSISTANT QUANTITY SURVEYOR, Grade VI (A.P. and T.). Salary £535-£600, plus bonus as above.

Preference will be given to Professional Associates of the Surveyors' Institution (Quantity Surveyors' Division).

(g) CLERK OF WORKS. Salary scale—Miscellaneous Division (Grade II), £315-£360 per annum, plus cost-of-living bonus, now £59 16s. p.a. Applicants should have sound knowledge of all building trades, with experience in the upkeep and repair of buildings, and supervision of building works.

All the above appointments will be superannuable and subject to satisfactory medical examination. Canvassing will be a disqualification. Further particulars of these appointments and forms of application may be obtained from Walter Barrett, M.B.E., A.R.I.B.A., County Architect, County Offices, Haverfordwest, and should be completed and returned to him not later than Monday, 7th July, 1947.

W. E. BUFTON,

Clerk of the County Council.

County Offices, Haverfordwest.
10th June, 1947.

673

SLOUGH ESTATES, LTD. require a CHIEF SURVEYOR. A house at Slough (with garage) is included in the emoluments.

Applicant will be responsible—assisted by an adequate staff—for the development of the Company's Estates, involving factory design, land and building surveying.

Advanced knowledge of modern factory and industrial design and construction, including steel-frame and R/C construction, is essential. In addition he must have had some experience in supervising the preparation of Builders' Quantities and preparing approximate estimates of cost of building work.

A qualification in Architecture is desirable.

He must also have had such experience as will enable him to direct theodolite levelling and making surveys, and to supervise the construction and maintenance of buildings, railways and sidings, roads, sewers and similar services.

Age: 35-45 years.

Duties to commence on 1st August, 1947.

Applicants should send full details of experience, qualifications and salary to Messrs. Welch & Lander, F.R.I.B.A., 30, Gloucester Place, Portman Square, W.1, on or before 8th July, 1947.

676

MIDDLESEX COUNTY COUNCIL.

ARCHITECTURAL ASSISTANTS required in A.P.T. Division, Grade II, IV and V, combined, £380-£530 p.a., plus current cost-of-living bonus (now £59 p.a.). Appointments made at commencing salaries in accordance with qualifications and experience. Candidates must state commencing salary required. Established and pensionable subject to medical examination. Applications, giving details, qualifications, age and experience, to County Architect, Middlesex House, 20, Vauxhall Bridge Road, S.W.1 (quoting C.16, A.J.) within 7 days of this advertisement.

637

CUMBERLAND COUNTY COUNCIL.

Applications are invited for the following appointments in the County Architect's Department, in accordance with the grades of the A.P. and T. Division of the National Scales of Salaries, as follows:—

(a) ASSISTANT ARCHITECTS (TWO). Grade V, £460-£510.

(b) ASSISTANT ARCHITECT (ONE). Grade IV, £420-£465.

(c) JUNIOR ASSISTANT ARCHITECT (ONE). Grade III, £390-£435.

(d) ARCHITECTURAL ASSISTANTS (FOUR). Grade II, £360-£405.

Cost-of-living bonus, at present £59 16s. per annum, is payable in addition.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and the persons appointed will be required to pass a medical examination.

Applicants for appointments (a), (b) and (c) must be registered Architects, and preference will be given to those applicants who are Associates of the R.I.B.A., and who have had experience in a Local Authority's Architectural Department.

Applications must be made on a form obtainable from J. H. Haughan, F.R.I.B.A., County Architect, 4, Alfred Street North, Carlisle, and should be returned completed to him, together with copies of not more than three recent testimonials, not later than the 21st July, 1947.

G. N. C. SWIFT,

Clerk of the County Council.

675

HOLLAND JOINT PLANNING COMMITTEE.

Applications are invited for the appointment of a Female CLERK/SHORTHAND TYPIST, at a salary in accordance with the General Division of the National Scale of Salaries, rising to £240 per annum at the age of 30, plus cost-of-living bonus (at present £48 5s.).

Applicants must be fully qualified; experience in a Local Government Office will be an advantage.

The appointment is permanent, and subject to:—

(a) The National Scheme of Conditions of Service.

(b) The Local Government Superannuation Act, 1937.

(c) The successful candidate passing a medical examination.

Applications, stating age, qualifications, and experience, with copies of two recent testimonials, should reach the undersigned not later than 30th June, 1947.

RAYMOND W. HASTINGS,

Clerk.

11, Market Place, Spalding, Lincs.
7th June, 1947.

680

**BUCKS COUNTY EDUCATION COMMITTEE.
WYCOMBE TECHNICAL INSTITUTE.**

Required in September, 1947, a full-time qualified MASTER to teach Mathematics, Building Science, and Building Geometry.

Salary, Burnham Scale.
Applications (no forms issued), stating age, training, qualifications and experience, together with copies of recent testimonials, should be sent to the Principal, Wycombe Technical Institute, Easton Street, High Wycombe, Bucks.

671

Tenders

6 lines or under, 10s.; each additional line, 1s. 6d.
CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

The Cleansing Committee of the Corporation are prepared to receive Tenders for the erection of a Proposed Ladies' Convenience in Northumberland Place, Newcastle-upon-Tyne, 1. Bills of Quantities and Form of Tender may be obtained on application in writing to the City Architect, 18, Cloth Market, Newcastle-upon-Tyne, 1, where Plans and Conditions of Contract may be seen. Sealed Tenders must reach the City Architect not later than 10 a.m. on Tuesday, the 8th July, 1947. No Tender will be received except in the official envelope provided, which must not bear any name or mark indicating the sender. The Committee do not bind themselves to accept the lowest or any Tender.

JOHN ATKINSON,

Town Clerk.

Town Hall, Newcastle-upon-Tyne, 1.
7th June, 1947.

635

Architectural Appointments Vacant

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

ARCHITECTURAL ASSISTANT required immediately in busy London office. Working drawings, details, surveys, specifications and supervision of work. State age, qualifications, experience and salary required to Box 564.

SENIOR ASSISTANT QUANTITY SURVEYORS required for service with Contractors in Middle East on 2½ years' contract, at a remuneration inclusive of living allowances of £1,400 per annum; accommodation passage and kit allowance will be provided; facilities cannot be offered for wives and families; candidates should be under 40 years. Letters of application, which should give fullest details of age, state of health and experience, to be addressed to Box 540.

ARCHITECTURAL ASSISTANTS required by London Architects, with large general practice; excellent prospects. Write, stating experience and salary required. Box 967.

CAPABLE ASSISTANT required for general practice in Cumberland, Westmorland, and North Lancashire; able to carry contracts through with very little supervision. C. B. Martindale, A.R.I.B.A., Cathedral Chambers, Castle Street, Carlisle.

INTERNATIONAL Correspondence Schools require for immediate full-time employment **JUNIOR ARCHITECTURAL ASSISTANTS** (either sex) qualified by R.I.B.A. examinations. Write or 'phone (Hol. 3971), stating age, experience, and salary required, to Director of Instruction, International Correspondence Schools, 71, Kingsway, W.C.2.

ARCHITECT requires **JUNIOR ASSISTANT**, West Central district; state age, experience and salary required. Box 591.

ASSISTANT ARCHITECTS required for varied Industrial and Local Authority Housing Work; school training preferred, but not essential; salaries according to qualifications and experience. Apply with full details to Anthony Steel & Owen, A.A.R.I.B.A., Cogan Chambers, Bowl-alley Lane, Kingston-upon-Hull.

FIRST-CLASS SENIOR ARCHITECTURAL ASSISTANT required immediately, preferably school trained; must have had some years of office experience, and have a sound knowledge of construction; permanent progressive post for right man. Apply, giving particulars of training, experience, etc., to Derek Bridgwater, B.Arch. F.R.I.B.A., 42, Bruton Place, Berkeley Square, London, W.1.

JUNIOR ARCHITECTURAL ASSISTANT (Inter. Standard) required for N.E. London Engineers. Box 624.

REQUIRED, in the Architect's Department of a Multiple Retail Organization, with head office in London: (a) **ARCHITECTURAL DRAUGHTSMAN**, capable of preparing drawings from sketch plan stage to complete details; (b) **DRAUGHTSMAN**, with fair knowledge of specifications, dilapidations, accounts, war damage, etc.; starting salary in both cases £350 to £400 per annum, according to qualifications and experience. Box 621.

WANTED—**SENIOR ASSISTANT** for London staff, Architect's Department; one accustomed to commercial and industrial buildings preferred; salary about £520, according to experience and ability to carry through jobs from sketch plan stage to completion; give experience in chronological order. Box 635.

DETAIL DRAUGHTSMEN required, structural and, if possible, pressed steel work, experience and some knowledge of general building construction for work on prefabricated buildings, etc.; A.E.S.D. London rate, minimum and upwards, according to ability; Slough district; applicants should state age, experience, etc. Box 638.

ARCHITECT'S ASSISTANT, Intermediate Standard, required immediately in rapidly developing Architectural Department. State training, qualifications, experience, and salary required, to Marcus Leaver & Co., 46, Brook Street, London, W.1.



IMPERIAL CHEMICAL INDUSTRIES, LTD. require the services of **ARCHITECTURAL ASSISTANTS**, for the development of a large industrial site at Wilton, near Middlesbrough; Applicants should have had experience in the design of offices, laboratories, housing, welfare, and general industrial buildings; successful candidates will be appointed to the established staff. Application forms may be obtained from the Personnel Manager, I.C.I., Ltd., Wilton Works, P.O. Box 54, Middlesbrough, Yorks. 642

SENIOR and JUNIOR ARCHITECT'S ASSISTANTS required; good salaries and prospects. Gutch, Saunders & Surridge, F.A.R.I.B.A., Bank Chambers, Kettering. 641

DRAUGHTSMAN required by expanding Firm of Exhibition Standfitters; capable of detailing from architects' small scale drawings; a good Junior keen to advance himself would suit; salary according to qualifications. Apply in writing to David Esdaile & Co., Ltd., 30, Stannary Street, S.E.11. 650

REQUIRED, in large City Architects' office, **ONE SENIOR ASSISTANT** and **TWO INTERMEDIATE ASSISTANTS**; experienced in large industrial and commercial buildings; the positions offer good prospects to suitable applicants. Apply Ley, Colbeck & Partners, Palmerston House, 51, Bishopsgate, London, E.C.2. Telephone No.: London Wall 2917. 640

SENIOR ASSISTANTS required, with experience of industrial and commercial buildings; state full particulars; salary by arrangement. Cruickshank & Seward, F.R.I.B.A., 16, Princess Street, Manchester, 1. 584

ARCHITECTURAL ASSISTANT or **DRAUGHTSMAN** required for Architect's Department of large Multiple Firm in South-West Scotland (Kilmarnock); experience in store planning and design an advantage; salary from £30 p.a., according to qualifications. Apply, giving details of experience etc., to Box 652.

MICHELIN TYRE CO., LTD., Stoke-on-Trent, have vacancy for **PROPERTY SURVEYOR**, to be based at Stoke and as required, visit the major provincial towns to value and report on property, also arrange for alterations, decorations, etc. Write Labour Office, in confidence, stating qualifications and experience. 654

SENIOR and JUNIOR ARCHITECTURAL ASSISTANT required immediately. Salary according to qualifications and experience. Johns & Slater, F.A.R.I.B.A., 8, Lower Brook Street, Ipswich. 672

SENIOR ARCHITECTURAL ASSISTANT required in busy country office. Able to act on own initiative. Excellent opening for a man with a flair for small domestic design and an interest in farm buildings. A good deal of travelling necessary, preferably in own car. Apply with particulars of age, experience, to Smith-Woolley & Co., Architects, Collingham, Newark, Notts. 669

EXCEPTIONALLY good opening and prospects for qualified Quantity Surveyor. Apply, stating qualifications, experience and salary required. Box 674.

TWO competent SENIOR ASSISTANT ARCHITECTS and SURVEYORS required with all round experience and ability for busy and varied practice. Write or phone, Jennings, Homer & Lynch, 3 & 5, Church Street, Brierley Hill. Phone: Brierley Hill 7545/6. 668

SENIOR ARCHITECTURAL ASSISTANT, age not exceeding 45, required for general architectural practice. Reply, giving experience and salary required, to Thomas Worthington & Sons, 178, Oxford Road, Manchester 13. 678

Other Appointments Wanted

4 lines or under, 2s. 6d.; each additional line, 1s.
SPARE-TIME ASSISTANCE offered by fully responsible qualified Architect; surveys, sketch plans, working drawings, etc.; fees by arrangement. Box 647.

TRACER, architectural training, requires spare-time work. Box 558.

SECRETARY/TYPIST requires post with private Architect; knowledge of shorthand, typing and book-keeping; working as Secretary to an architect at present. Reply to Box 667.

ARCHITECT, with particular experience in housing, shops, and factories, seeks part-time work. London area. Box 670.

For Sale

4 lines or under, 5s.; each additional line, 1s. 6d.
FOR SALE—Architect's Drawing Cabinet (wood), 4 ft. by 3 ft., 21 in. high, 4 drawers; £30, or near offer. View by appointment, Chelsea (FLAxxan 3228). 633

FOR SALE—Surveyor's Starrett Transit Level, with Telescopic Tube, complete with 3 legs; levelling rod target; new condition; price £25. L. B. Mayer, 120, Portland Street, Manchester, 1. 655

ZEISS Level; quick setting type; very compact and accurate instrument; new condition; best offer. Box 666.

Miscellaneous

4 lines or under, 5s.; each additional line, 1s. 6d.
A. J. BINNS, LTD., Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works, 99-107, St. Pauls Road, N.1. Canonbury 2061.

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

WANTED—Complete set of "Typography." Box 487.

NEWER HEAT DISPLAY, Building Centre, Conduit Street, W.1.—New Solid Fuel Appliances, New Heating Methods. New Standards of Home Comfort. 527

WANTED—Copy of "The Architectural Review" for November, 1909. Box 338

DUPLICATING—Specifications, etc., expertly duplicated or typewritten; good service, moderate fees; recommended. Miss Stone, 109, Jermyn Street, S.W.1, Whitehall, 9682. 593

LETTERINGS, Perspectives, Wash Drawings, Models.—For every kind of activity demanding the expert use of pencil, pen and brush. E. Lavery, 44, Aldershot Road, Guildford, Surrey. 944

WANTED—One "A.H." Centrolinead, manufactured by Messrs. W. H. Harling, Ltd.; must be in good condition; kindly state price. Box 643.

PERSPECTIVES—Architectural and Town Planning, any medium; rough sketches free. Write BCM/Perspective, London, W.C.1. 644

CENTRAL HEATING OIL BURNERS—Insist on the British-made Parwinae—no stoking, clean, trouble free; no waiting for coal or coke deliveries; no embargo now. Write at once to Parker, Winder & Achurch, Ltd., Makers, 80, Broad Street, Birmingham, 1.

CONSULT Boulton & Paul, Ltd., Norwich, for special design manufacture and erection of Fencing and Gates. 900

PHOTOGRAPHIC reproduction to any size; Photostat and Micro-filming; expert staff and special equipment provide a high speed service at S. P. Hamill, Ltd., 7/8, Lansdowne Place, Cheltenham. Tel.: Cheltenham 4040. 736

ARCHITECT, reducing his staff, would sub-let (to one firm of architects only) large light Office/Studio, 30 ft. by 22 ft., overlooking pleasant West End square; seven windows, plus top lights; could be partitioned; gas radiators, light fittings, some furniture and drawing equipment; might arrange joint use of private office adjoining; telephone; staff on occasions; present lease to June, 1950, possibility of renewal; £250 p.a. inclusive, or might share *pro rata* basis. Telephone: GERrard 1253. 659

AUTHORS—MSS promptly considered for book publication, particularly poems, children's tales, and book-length stories for boys and girls. Stockwell, Ltd., Elms Court, Ilfracombe. 679

Educational Announcements

4 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 to Studio 115, Gower St., London, W.C.1. (Tel.: Boston 3906).

R.I.B.A. and T.P. INST. EXAMS. Private Courses of Tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, 32, Boston Road, N.W.1. Tel.: BUS 7908.

WHITE FACING BRICKS

(S. P. W. BRAND)

TELEPHONE & TELEGRAMS
BULWELL 78237-8

M. McCARTHY & SONS, LTD
BULWELL NOTTINGHAM

Electrical Contracting

For a complete and

helpful service

RING WEMbley 0194

SERVICE ELECTRIC CO. LTD.

ABBEY MANUFACTURING ESTATE

ALPERTON MIDDXX

GEORGE ELLISON

LIMITED

PERRY BARR BIRMINGHAM 228

Makers of reliable electric switchgear for
main supply and electric motor control

John Broadfoot & Sons, Ltd.

Inchholm Works, Ferryden Street,
Whiteinch, GLASGOW, W. 4.

"Teakoid" Composition Flooring,
Lino, Cork and Rubber in plain
and decorative designs.

STEELWORK BY

R.W. SHARMAN LTD.

SWAN WORKS, HANWORTH, MIDDXX

Phones: Feltham 3007. Sunbury 2367. Grams: "Shorman," Feltham

HAND FORGED WROUGHT IRON WORK

to Architects designs
by highly skilled craftsmen

IMPROVED DESIGNS LTD.
LEAMINGTON SPA

Wm. OLIVER & SONS, Ltd.

(of Bunhill Row), 12/13 Bow Lane, E.C.4
City 3335

HOME GROWN { **HARDWOODS**
SOFTWOODS

Quota Merchants for
NATIONAL STOCK

Architectural Appointments Wanted

EX-SERVICE MAN (24), married, seeks employment in capacity of **IMPROVER** in Architectural Drawing Office or Display Poster Firm; art school education (certificates for geometrical and freehand drawing and lettering); commendable results obtained on courses taken during Army service; 2 years' experience in above type of work; commencing wage, £4 10s. per week; will submit samples of work when interviewed. Box 339.

EX-SERVICE Man, waiting result of R.I.B.A. Inter., seeks progressive employment; home counties preferred; 10 years' experience, all classes of work; age 27; salary by arrangement. Box 342.

ARCHITECTURAL/CIVIL ENGINEERING ASSISTANT, age 35 years, fully experienced (references 20 years), and specialising industrial buildings, seeks permanent position; salary required about £550 p.a. Box 343.

CHARTERED ARCHITECT, with wide experience in England and overseas, desires responsible appointment; administrative ability; competent designer and draughtsman; minimum salary, £14 per week. Box 344.

ARCHITECT'S ASSISTANT (age 24), 1st part Inter., and awaiting results of 2nd part, requires position in progressive Architect's office; 5 years' varied office experience; working drawings, 1 in. and full size details, surveys, etc.; Greater London area. Box 345.

Alphabetical Index to Advertisers

	PAGE		PAGE		PAGE
Acerington Brick & Tile Co., Ltd.	xlvi	Etril Sales Organisation	—	Oliver, Wm., & Sons, Ltd.	xlvi
Allied Paints & Chemicals, Ltd.	xlviii	Ellis (Kensington), Ltd.	—	Paragon Glazing Co., Ltd.	—
Architects' Benevolent Society	—	Ellison, George, Ltd.	liii	Philip Flooring Co., The	—
Arens Controls, Ltd.	—	English Joinery Manufacturers' Assoc.	xiii	Pritchett & Gold and E.P.S. Co., Ltd.	—
Ascot Gas Water Heaters, Ltd.	xxxii	Ferguson, Edwards & Co. (London), Ltd.	xxi	Proderite, Ltd.	xxvi
Austin-Hall Group of Companies	xx	Finch, B. & Co., Ltd.	—	Pyrotenax, Ltd.	—
Automatic Telephone & Electric Co., Ltd.	—	Fisher & Ludlow, Ltd.	—	Rippers, Ltd.	—
Bath Cabinet Makers & Artcrafts, Ltd.	viii	French, Thomas & Sons, Ltd.	xliv	Roneo, Ltd.	—
Banister, Walton & Co., Ltd.	xii	Gaze, W. H., & Sons, Ltd.	ii	Rolyat Tank Co., Ltd., The	xlviii
Bailey, Sir W. H., & Co., Ltd.	xiv	General Cable Mfg. Co., Ltd.	xlvii	Ruberoid Co., Ltd.	—
B.B. Chemical Co., Ltd.	xxvi	Gent & Co., Ltd.	xlvii	Rubery Owen & Co., Ltd.	—
Berry's Magical Electric Fires	xlviii	Gillett & Johnston, Ltd.	—	Ryarrish Brick & Sand Co.	—
Bigwood, Joshua, & Son, Ltd.	—	Greenwoods & Airvac Ventilating Co., Ltd.	—	Sadd, John, & Sons, Ltd.	iv
Birmabright, Ltd.	xxiii	Hall, Matthew & Co., Ltd.	xxxix	Salter, T. E., Ltd.	—
Blackburn, Thomas, & Sons, Ltd.	—	Hammill Brick Co., Ltd.	—	Scaffolding (Great Britain), Ltd.	xxxvi
Blundell, Spence & Co., Ltd.	xliii	Harvey, G. A., & Co. (London), Ltd.	iii	Service Electric Co., Ltd.	liii
Booth, John, & Sons (Bolton), Ltd.	—	Heal's Contracts, Ltd.	xxiv	Sharman, R. W., Ltd.	—
Braithwaite & Co., Engineers, Ltd.	—	Helliwell & Co., Ltd.	xliv	Sharp Bros. & Knight, Ltd.	—
British Electrical Development Assoc.	—	Henderson, P. C., Ltd.	iii	Shires & Co. (London), Ltd.	iv
British Insulated Callendar's Cables, Ltd.	—	Henleys Telegraph Works, W. T., Co., Ltd.	—	Siegmart Fireproof Floor Co., Ltd.	—
British National Electrics, Ltd.	xxx	Holden & Brooke, Ltd.	—	Smith, Henry (Constructional Engineers), Ltd.	—
British Steelwork Assoc., The	—	Holoplast, Ltd.	xviii	Smiths' Fireproof Floors, Ltd.	xiv
British Trane Co., Ltd.	—	Hope, Henry, & Sons, Ltd.	xxxviii	Smith & Rodger, Ltd.	iv
Britmac Electrical Co., Ltd.	—	Hopton-Wood Stone Firms, Ltd.	xxxiv	Southern Lime Assoc., The	—
Broadcast Relay Service, Ltd.	xi	Horseley Bridge & Thomas Piggott, Ltd.	—	Stobart & Son, Ltd.	—
Broadfoot, John, & Sons, Ltd.	liii	Imperial Chemical Industries, Ltd.	xiv	Sundeala Board Co., Ltd.	xxiv
Bromsgrove Guild, Ltd.	—	Improved Designs, Ltd.	liii	Sutcliffe, Speakman & Co., Ltd.	—
Bryant, C., & Son, Ltd.	—	Industrial Engineering, Ltd.	xxii	Tarmac, Ltd.	—
Carlisle Electrical Mfg. Co., Ltd.	xlii	Johnston Bros. (Contractors), Ltd.	xli	Tentest Fibre Board Co., Ltd.	xvii
Carlton Metal Moulding Co., Ltd.	xxviii	Key Engineering Co., Ltd.	—	Thompson Beacon Windows, Ltd., John	xxviii
Cellon, Ltd.	xvi	Lacnoid Products, Ltd.	—	Thornborough & Son (Manchester), Ltd.	iv
Cement Marketing Co., Ltd.	—	Lang, John, & Son, Ltd.	—	Thorp, John B.	—
Checol Processes, Ltd.	xxvii	Langley London, Ltd.	—	Tretol, Ltd.	—
Cheshire Woodcraft, Ltd.	xli	Leaderflush, Ltd.	—	Troughton & Young (Lighting), Ltd.	—
Clark & Eaton, Ltd., James	xli	Lead Industries Development Council	—	Trussed Concrete Steel Co., Ltd.	—
Clifford Aero & Auto, Ltd.	—	Lightfoot Refrigeration Co., Ltd.	—	Turners Asbestos Cement Co., Ltd.	—
Code Designs, Ltd.	iv	Limmer & Trinidad Lake Asphalt Co., Ltd.	—	Twistell Reinforcement, Ltd.	—
Colthurst Symons & Co., Ltd.	—	Lloyds Boards Ltd.	—	United Steel Companies, Ltd.	x
Crittall Manufacturing Co., Ltd.	—	Mallinson, William, & Sons, Ltd.	—	Val de Travers Asphalt Paving Co., Ltd.	—
Crittall, Richard, & Co., Ltd.	xxix	McCarthy, M., & Sons, Ltd.	liii	Versil, Ltd.	—
Croft Granite, Brick & Concrete Co., Ltd.	—	Metropolitan-Vickers Electric Co., Ltd.	—	Vulcan Products, Ltd.	xi
De La Rue Gas Development, Ltd.	—	Midland Bank, Ltd.	xliii	Wadsworth, Wm., & Sons, Ltd.	xxz
Donnelly, Fredk.	liv	Midland Electric Mfg. Co., Ltd.	xix	Walsall Conduits, Ltd.	vii
Doulton & Co., Ltd.	ix	Mills Scaffold Co., Ltd.	lvi	Ware, W. C., & Sons, Ltd.	xxiv
Dow-Mac (Products), Ltd.	—	Morris Singer Co.	xv	Wellington Tube Works, Ltd.	—
Dunlop Rubber Co., Ltd.	—	National Federation of Clay Industries	vi	Westland Engineers, Ltd.	xxviii
Edmonds, A., & Co., Ltd.	xlvii			Wimpey, George, & Co., Ltd.	—
Educational Supply Association, Ltd., The	xii			Winget of Rochester	v

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational, Legal Notices, Miscellaneous Property Land and Sales, see pages xlix, i, ii, lii and liii.

Fredk. Donnelly

*Architectural Woodwork
Joinery
& Plywood Construction*

FACTORY:

Adrian Joinery Works,
Adrian Avenue, Hendon, N.W.

OFFICES:

47, Kendal St.,
Hyde Park, W.

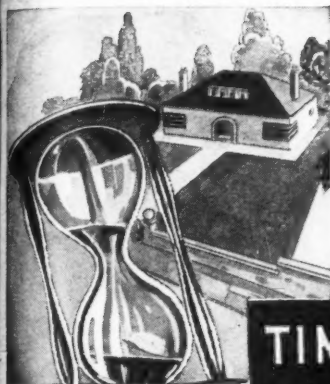
Telephone: Paddington 9373

[illegible]

C
t
C
n
F
o
F
u
D

SM
Tele

S



TIME WILL DECIDE
YOUR REPUTATION !

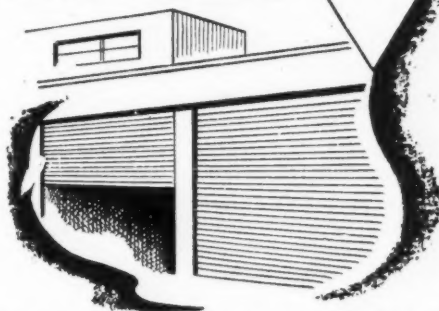
Changing seasons, changing temperatures will test your workmanship. Time will tell whether or not you have used the best possible materials. Use only Smith & Rodger Protective Paints and Time will decide your reputation is of the highest. Products include, "Vitamel" Fine White Enamel, "Vitamel" Hard Gloss Paint, "VITACHARM" Flat paint for both undercoating and finishing, "Waldura" Washable Distemper, "Vitamatt" Flat Finishing Paint.

Certain of our goods are still restricted and this advertisement is intended to keep our name before our customers during a period when many items are still scarce or unobtainable.

**SMITH &
RODGER**
PAINTS • •
VARNISHES

SMITH & RODGER LTD., ELLIOT STREET, GLASGOW.
Telephone : CITY 6341-2. Telegrams : "SMITH RODGER," Glasgow.

REVOLVING SHUTTERS



OFFER MANY ADVANTAGES

No matter how large or how small the opening, THORNBOROUGH Revolving Shutters offer many advantages over hinged doors. They give trouble free service for long periods, cut down loading time, save space and labour. Models are available for operation by pole, handle, or electricity.

We are specialists also in the manufacture of
HAND LIFTS AND SLIDING PARTITIONS
THORNBOROUGH & SON (MANCHESTER) LTD.
59 CHAPEL STREET • MANCHESTER, 1
Tel. : ARDwick 3948. Grams : Thornborough, Ancoats, Manchester
London : Tudor Works, N.W.10. Phone : Willesden 678

T./S.B.3.

The New Star in
SANITARY EQUIPMENT

Shires

A NEW STANDARD OF EFFICIENCY IN
W.C. CISTERNS
including High & Low Level models in
MOULDED PLASTIC

**SHIRES & CO.
(LONDON) LTD.**
Mfrs. of Sanitary Equipment
Norman Bldg., Central St.,
LONDON, E.C.1.
CLERkenwell 6384 (5 lines)

• Literature on request
• Prompt delivery through Plumbers' & Builders' Merchants.

midloc
pegstay



MIDLOC. Single point fastener finished dull nickel plate or A.C.B. Gives smooth and positive closure for light casements.

PEGSTAY. Standard type for casement and vent—holds window closely at two points when shut.

Also in dull nickel plate or A.C.B. finish.
CODE DESIGN. FITTINGS ARE STANDARDISED FOR USE WITH E.J.M.A. CASEMENTS

Send for particulars of Code Designs specialties, including Rodlocs, Hinges, Swivots, etc.



Code Designs Ltd.
OLDFIELD LANE • GREENFORD • MIDDX.

Telephone : WAXLOW 2828

MILLS SCAFFOLD CO LTD
LONDON & BRANCHES

THE HALLMARK ON STEEL SCAFFOLDING

MILLS

ALL OVER THE WORLD

MILLS SCAFFOLD CO. LTD., Head Office: TRUSSLEY WORKS, HAMMERSMITH GROVE, LONDON, W. 6. Tel.: RIVerside 5026/9

