ARCHITECT IRNA



★ 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 Ig one week, Ih to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

tandard

contents

AA AAI

ABS

ABT

BAE

BC BCC

BATC

BCCF BCIRA

BDA BEDA

BIA

BID BINC

BOT

CCA

CDA

COID

CPRE CUC

CVE DGW

ACGB

ADA ARCUK

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

and COMMENT NEWS

Astragal's Notes and Topics etters

News Diary

ocieties and Institutions

SECTION TECHNICAL

nformation Sheets nformation Centre Current Technique Working Details

Duestions and Answers

rices

The Industry

CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

inishes and Costs

Buildings in the News uilding Costs Analysed

rchitectural Appointments Vanted Vacant and

0.3218] [Vol. 124 ARCHITECTURAL 11 and 13, Queen Anne's Gate, Westminster, 'Phone: Whitehall 0611

> Price 1s. od. Registered as a Newspaper.

Architectura Association, 34/6, Bedford Square, W.C.1. Museum 0974
Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley,"
Castle Hill Avenue, Berkhampstead, Herts.

Architects' Benevolent Society. 66, Portland Place, W.1. Langham 5721 Association of Building Technicians. 1, Ashley Place, S.W.I.
Arts Council of Great Britain. 4, St. James' Square, S.W.I.
Aluminium Development Association. 33, Grosvenor Street, W.I.
Architects' Registration Council. 78, Wimpole Street, W.I.
Board of Architectural Education. 66, Portland Place, W.I. Victoria 0447-8 Whitehall 9737 Mayfair 7501/8 Welbeck 2915 Langham 5721

Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.
Reliance 7611, Ext. 1706
Building Centre. 26, Store Street, Tottenham Court Road, W.C.1. Museum 5400 Building Centre. 26, Store Street, Tottenham Court Road, W.C.1. British Colour Council. 13, Portman Square, W.1. Welbeck 4185 British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5. Ealing 9621
British Cast Iron Research Association. Alvechurch, Birmingham. Redditch 716
British Door Association. 10, The Boltons, S.W.10. Fremantle 8494
British Electrical Development Association. 2, Savoy Hill, W.C.2. Temple Bar 9434 British Ironfounders' Association. 145, Vincent Street, Glasgow, C2.

Glasgow Central 2891 Building Industries Distributors. 52, High Holborn, W.C.1. Chancery Building Industries National Council. 11, Weymouth Street, W.1. Langham Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1. Chancery 7772 Langham 2785

Trafalgar 8855 BRS Building Research Station. Bucknalls Lane, Watford. Garston 2246 Building Societies Association. 14, Park Street, W.1. Mayfair 0515 BSA BSI British Standards Institution. British Standards House, 2, Park St., W.1. Mayfair 9000 Building Trades Exhibition. 32, Millbank, S.W.1. Tate Gallery 8134 CABAS

City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A.,

Civic Centre, Newport, Mon. Newport 65491

County Architects' Society. C/o F. R. Steele, F.R.I.B.A., CAS

County Hall, Chichester. Chichester 3001 Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1. Sloane 5255 Council for Codes of Practice. Lambeth Bridge House, S.E.1. Reliance 7611 Ext. 1284 Copper Development Association. Kendals Hall, Radlett, Herts. Radlett 5616 Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland. Council of Industrial Design. 28, Haymarket, S.W.1. Trafalgar 8000 Council for the Preservation of Rural England. 4, Hobart Place, S.W.1. Sloane 4280 Coal Utilization Council. 3, Upper Belgrave Street, S.W.1. Sloane 9116 Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1. Reading 72255 CIAM Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.

Reliance 7611 Whitehall 0540 DIA Design and Industries Association. 13, Suffolk Street, S.W.1. Whi Department of Overseas Trade. Horseguards Avenue, Whitehall, S.W.1. DPT Trafalgar 8855

English Joinery Manufacturers' Association (Incorporated). Sackville House,
40, Piccadilly, W.1. Regent 4448 **EJMA** EPNS

English Place-Name Society. 7, Selwyn Gardens, Cambridge.
Faculty of Architects and Surveyors. 68, Gloucester Place, W.1. Welbeck 9966
Federation of Association of Specialists and Sub-Contractors,
Artillery House, Artillery Row, S.W.1. Abbey 7232
Fibre Building Board Development Organization, Ltd. (Fidor), 47, Princes Gate, FAS FASS **FBBDO**

Kensington, S.W.7. Kensington 4577
Federation of British Industries. 21, Tothill Street, S.W.1. Whitehall 6711
Forestry Commission. 25, Savile Row, W.1. Regent 0221
Federation of Coated Macadam industries. 37, Chester Square, S.W.1. Sloane 1002
The Flush Door Manufacturers Association Ltd., Trowell, Nottingham. Ilkeston 623
Friends of the Lake District. Pennington House on Ulweston Language Control of the Lake District. FBI FC FCMI **FDMA** FID Friends of the Lake District. Pennington House, nr. Ulverston, Lancs. Ulverston 201 FMB

Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1. Chancery 7583 The Federation of Painting Contractors, St. Stephen's House, S.W.1. Whitehall 3902 FRHB Federation of Registered House Builders. 82, New Cavendish Street, W.1.

Langham 4341 Gypsum Building Products Association, 11, Ironmonger Lane, E.C.2. Monarch 8888
Gas Council. 1, Grosvenor Place, S.W.1. Sloane 4554
Georgian Group. 2, Chester Street, S.W.1. Belgravia 3081
Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1. Whitehall 2881 **GBPA** LAAS Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.

Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1. Grosvenor 6186
Institution of Civil Engineers. 1, Great George Street, S.W.1. Whitehall 4577
Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.
Temple Bar 7676 ICA ICE IEE .

Abbey 5215

Illuminating Engineering Society. 32, Victoria Street, S.W.1. Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.



YOU'VE GOT TO HAND IT TO

MILLS SCAFFOLD CO. LTD., (A Subsidiary of Guest, Keen & Nettlefolds Ltd.)
Head Office: TRUSSLEY WORKS, HAMMERSMITH GROVE, LONDON W. 6 · RIVERSIDE 3011 (TEN LINES)

Agents & Depots: BELFAST · BIRMINGHAM · BOURNEMOUTH · BRADFORD · BRIGHTON · BRISTOL · CANTERBURY · CARDIFF

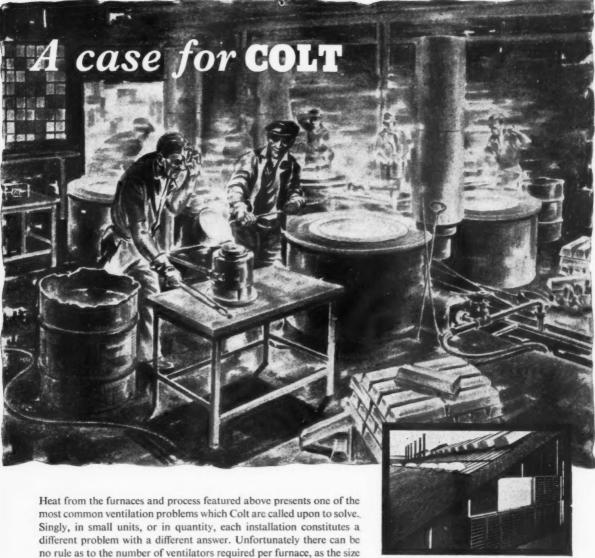
Agents & Depots: BELFAST · BIRMINGHAM · BOURNEMOUTH · BRADFORD · BRIGHTON · BRISTOL · CANTERBURY · CARDIFF COVENTRY · CROYDON · DUBLIN · GLASGOW · HULL · ILFORD · LIVERPOOL · LOWESTOFT · MANCHESTER · MIDDLESBROUGH NEWCASTLE · NORWICH · PLYMOUTH · PORTSMOUTH · PRESTON · READING · SHIPLEY · SOUTHAMPTON · SWANSEA · YARMOUTH





Problem No. 5

Intense process heat



At the Light Production Co., Slough, excessive temperatures (90 F. at head height, 125 F. at roof apex) were caused by heat from furnaces and metal and core ovens. Colt were consulted and they advised a combined installation of SR 3080 extractor ventilators, CO ventilators and Colt Inflow units—the majority of this installation being installed and working within 14 days. This new system gives 100 air changes per hour instead of 20 and working conditions are now completely satisfactory. of the building, total heat load and existing ventilation must all be taken into account before a satisfactory answer to the problem of excessive heat can be found. In our work for over 9000 major industrial and commercial concerns we have planned and installed many systems to

satisfactory.

cater for just this problem. Whatever your problem, be it heat, fumes, smoke or condensation, Colt can cure it.



Send for Free Manual on Colt Ventilation to Dept: L.5/11

ENTILATIO

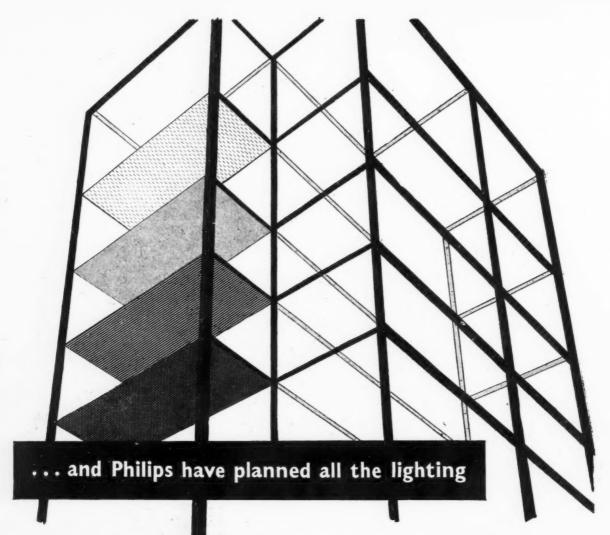


COLT VENTILATION LTD · SURBITON · SURREY TELEPHONE: ELMBRIDGE 6511 (10 lines)

U.S.A. Subsidiary: Colt Ventilation of America Inc., Los Angeles.

Branches at: Birmingham, Bradford, Bridgend (Glam.), Bristol, Coventry, Dublin, Edinburgh, Glasgow, Liverpool, London, Manchester, Newcastle-upon-Tyne, Sheffield, and Warwick.

Agents in: Australia, Belgian Congo, Canada, Cyprus, India, Indonesia, Madagascar, Malaya, Mauritius, New Zealand, Pakistan, Portugal, North and South Rhodesia, and South Africa.



If you prefer to telephone your enquiries to the Philips Lighting Design Service the number is COVent Garden 3371

Whenever you come to consider lighting, call in the Philips Lighting Design Service. For this unique service places the skill and experience of expert lighting engineers at your disposal without charge or obligation. Working in close collaboration with architects, consultants and contractors, Philips have produced a number of the more imaginative lighting schemes of recent years. The Philips Lighting Design Service operates on a nation-wide scale. The skilled lighting engineers in every Philips branch area can call in a qualified architect who has made a special study of light and colour, and the whole service is backed by the vast accumulation of knowledge and resources gained by Philips' more than sixty year's leadership in the lighting field. So bear in mind that Philips will be happy to design for you—without charge!



PHILIPS ELECTRICAL LIMITED

Lighting Division • Century House • Shaftesbury Avenue • London WC2

TUNGSTEN, FLUORESCENT, BLENDED AND DISCHARGE LAMPS AND LIGHTING EQUIPMENT - RADIO & TELEVISION RECEIVERS - RADIOGRAMS & RECORD PLAYERS

GRAMOPHONE RECORDS - 'PHOTOFLUX' FLASHBULBS - 'PHILISHAVE' ELECTRIC DRY SHAVERS - TAPE RECORDERS - SOUND AMPLIFYING INSTALLATIONS, ETC.

(LD1025)

In advertisements for some odd reason they mostly seem to depict architects somewhat sombre chaps draped dejectedly over drawing boards.

I know. But you've seen the new Evo-Stik advertising I expect. What do you think of that?

Not bad makes us look human anyway

That's what I thought. Incidentally that Evo-Stik Impact Adhesive 528 really is remarkable stuff. Do you know I worked out the other day that its ability to bond laminated panels and acoustical tiles on contact is saving us over £100 in time and labour costs on a job we have up north



are you making full use of EVO-STIK?

We shall be glad to send you literature describing the many applications of Evo-Stik Impact Adhesives and the great economies their use makes possible. Write today to:

EVODE LIMITED (INDUSTRIAL ADHESIVES DIVISION) · STAFFORD · ENGLAND

PHONE: 1590/1/2 LONDON OFFICE: 1 VICTORIA STREET, S.W.1 PHONE: ABBey 4622/3



'Impact' Adhesive 528 — joining in modern construction (Regd. Trade Mark)





A "Superlative" change

Long known as "The Best Gloss Paint in the World"; "Superlative" has been still further improved in quality. As a successful result of prolonged research it has now been found possible to provide Improved drying time without sacrificing any other quality to do so.

Superior heat resistance. Even better gloss retention. Increased durability. Freedom from 'bloom' or haze.
"LUXOL 1" Discontinued.

In view of these advances it has been decided to discon-

tinue production of "LUXOL 1" which has attained such an excellent reputation amongst professional decorators. The new "Superlative" combines all the best qualities of "LUXOL 1" with its own distinctive characteristics.

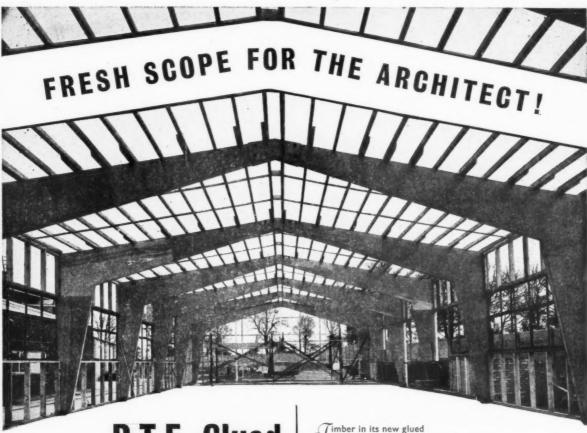
Costs Less.

The new "Superlative" will cost less than "LUXOL 1" and by specifying the new "Superlative", "LUXOL 1" users may be confident of obtaining an even superior product at a more economical price.

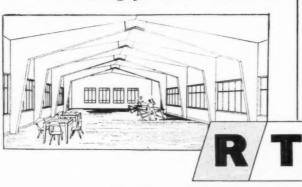
BRITISH PAINTS LIMITED

PORTLAND ROAD, NEWCASTLE UPON TYNE, 2. CREWE HOUSE, CURZON STREET, LONDON, W.1.





R.T.E. Glued Laminated Timber is light, strong, cheap, versatile



uch

ors.

es of

1" rior

DRK L/DS8 Jimber in its new glued laminated form, as produced by Rainham

Timber Engineering, jumps to the forefront as a first-class engineering material with many advantages over its competitors. Maintaining all the best qualities of solid timber, it can be built up to any section and length, curved or shaped, at the same time providing better strength to weight ratio than either steel or concrete. What is more, it is competitive in price and reduces site labour and installation costs.

The photograph shows a new canteen under construction designed by Messrs. Douglas White and Furniss, A/A.R.I.B.A., for A. H. Hunt (Capacitors) Ltd., of New Addington, Croydon (Contractors: R. W. Bowman Ltd.). The rigid frames are three-pin Tudor Arch design in stressed skin plywood and glued laminated timber construction. The canteen is 37 ft. wide x 100 ft. long

with arches at 16 ft. 8 in. centres. Full technical information on R.T.E. Timber is available on request.

RAINHAM TIMBER ENGINEERING COMPANY LIMITED

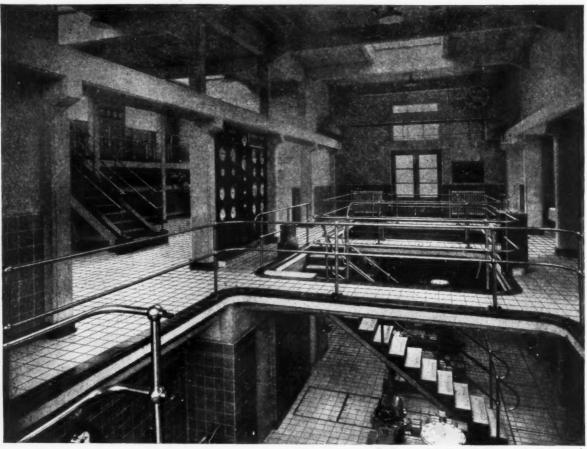
(Member of The Phoenix Timber Group)

FERRY LANE, RAINHAM, ESSEX

Telephone: Rainham 3311

Glued Laminated Timber, Bowstring Trusses, Bolted and Connectored Timber Trusses

-TIB.9.



By Courtesy of the North West Sussex Joint Water Board.

CERAMIC TILES THE OBVIOUS CHOICE

FOR PUMPING STATIONS

Ceramic Tiles are in *national* service . . . playing a vital part in the supplying of pure fresh water to the homes and industries of Britain. This proved and tested surface was the obvious choice for the walls and floors of the fine modern Pumping Station at Pulborough, Sussex. Only genuine Ceramic Tiles conform to the highest standards of cleanliness and hygiene, the surface that serves so well the exacting demands of progress.

Ceramic











Hey Prestik!

YOUR SEALING AND JOINTING better DONE - IN HALF THE TIME!

The new White PRESTIK Builders Sealing Strip transforms the whole business of Sealing, jointing and bedding. It's so much quicker—so much simpler and cleaner to use! You merely wind off the ready-made Strip and press it into place. No special tools. No making-ready. No fumbling delay. And the result is a permanent, waterproof, paintable seal or joint that withstands all conditions outdoor or indoors.

YOUR BUILDERS' MERCHANT HAS IT



white

PRESTIK

Builders' Sealing Strip

Use PRESTIK for:

MASONRY—Jointing gutter sections and coping stones. Bedding and jointing concrete blocks and panels.

PRE-FABRICATION — Bedding and Jointing roof sections. Sealing joints in sectional buildings.

FLOORS — Sealing cable duct covers. Sealing skirting board joints.

walls and CEILINGS — Sealing wallboard joints (with cover strips). Sealing glass bricks to door and window

DOORS and WINDOWS — Sealing door and window frames to brickwork. Bedding window frames and window boards.

SANITARY WARE — Sealing baths, washbasins, etc., to walls.

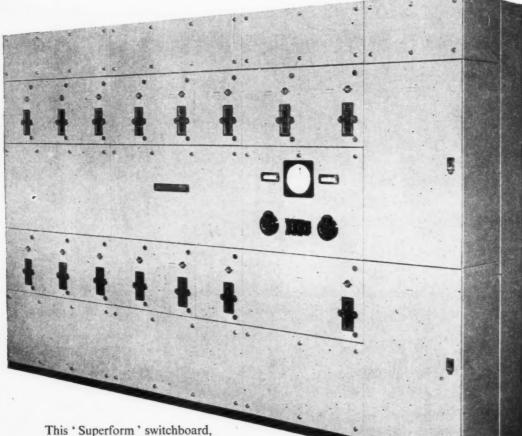


made by the Bostik people

BOSTIK and PRESTIK are registered trademarks of:

B.B. CHEMICAL CO. LTD., ULVERSCROFT ROAD, LEICESTER.

Not made to Hide and Seek



This 'Superform' switchboard,
with its clean lines, is designed to be in keeping with
the modern buildings. There is no urge to hide it away. Its pleasant
appearance invites installation in whatever position is desirable for
convenience and accessibility. The smooth contour enables it to be kept clean easily.

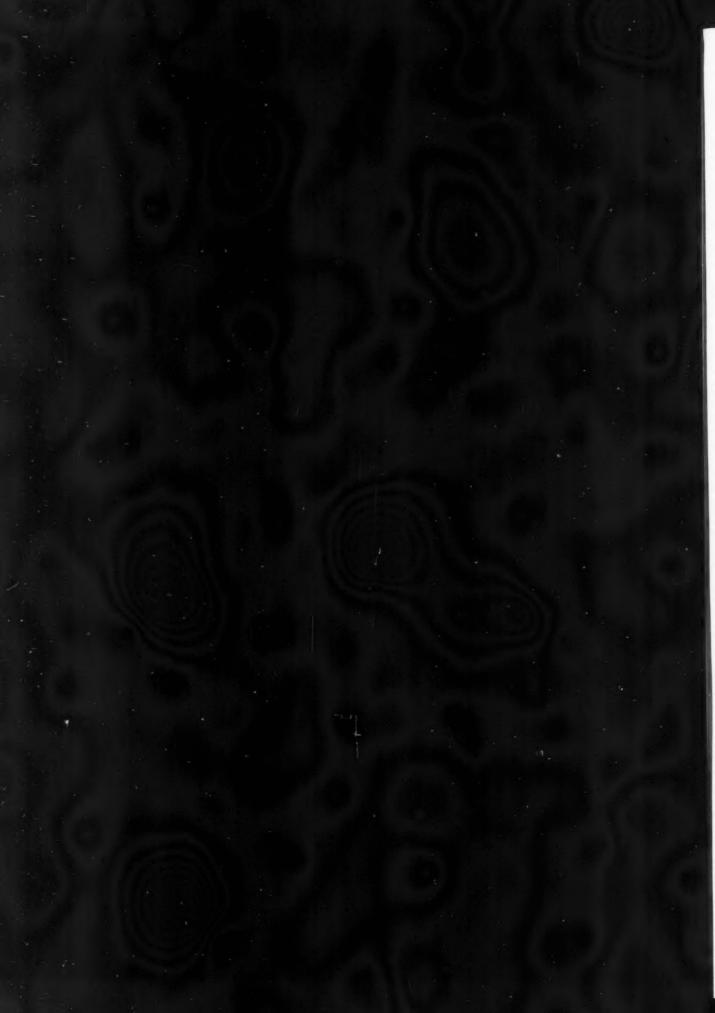
'ENGLISH ELECTRIC' fusegear

THE ENGLISH ELECTRIC COMPANY LIMITED, QUEENS HOUSE, KINGSWAY, LONDON, W.C.2

Fusegear Division, East Lancashire Road, Liverpool, 10

WORKS: STAFFORD · PRESTON · RUGBY · BRADFORD · LIVERPOOL · ACCRINGTON







BOULTON AND PAUL LTD . NORWICH . LONDON . BIRMINGHAM

Fabricators and Erectors of Structural Steelwork



Durever Vinyl (Plastic) Flooring adds distinction to this already imposing entrance hall of the I.C.I. offices at Gloucester House, Park Lane, W.1. This hard-wearing, resilient flooring is available in a wide range of colours, in tiles or sheets and is suitable for laying on most types of sub-floors.

LIMITED

Serial to 2419

BRITISHE

GOOD HOUSEKEEPING INSTITUTE

GUARTANTEES

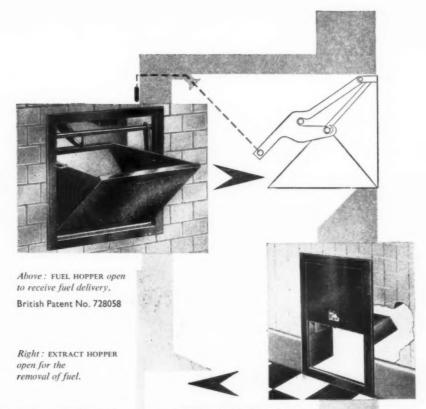
REUDO IN MOTO OR REPAINMENT HOU IN CONCOMINT ON HIS IN

Write for details and colour charts to :-

BRITISH MOULDEX LTD., Mouldex House, 27/19 Fitzroy Street, London W.I. Tel: LANgham 4211

WORKS AT: Wellingborough, Northants.





THE FINCH FUEL INTAKE AND EXTRACT HOPPERS

Designed to eliminate certain disadvantages found in ordinary fuel hoppers, the Finch Fuel Intake and Extract Hoppers are the ideal type for domestic use.

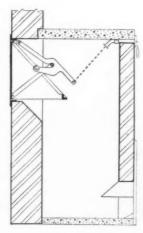
The fuel hopper has no projecting handles or locks, cannot be opened from the outside when closed, and cannot be fouled or obstructed during deliveries.

The extract hopper completes the operation by allowing the tenant to obtain the fuel from inside the building and at a point convenient for

the fire or boiler.

Both Finch Fuel Hoppers are being increasingly specified for domestic use throughout the country.

Please write for full details to the address below.

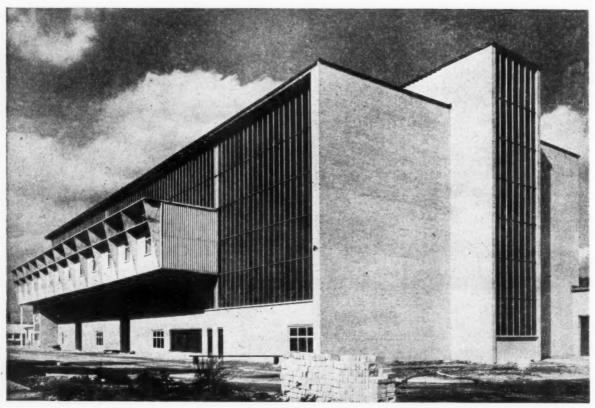




C. FINCH & CO. LTD. Head Office & Works: BELVEDERE WORKS, BARKINGSIDE, ESSEX. VALentine 8888 (30 lines)

Showrooms: FINCH CORNER, 679/687 EASTERN AVENUE, ILFORD, ESSEX

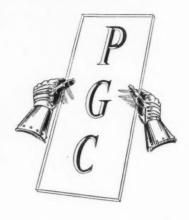
PATENT GLAZING SPECIFICATIONS



Consulting Engineers: Ove Arup & Partners. Contractors: Gee, Walker & Slater Ltd.

A STRIKING EXAMPLE OF VERTICAL PATENT GLAZING AT AERO RESEARCH LIMITED, DUXFORD, CAMBS.

The Aero Research building at Duxford demonstrates dramatically how effectively Vertical Patent Glazing can be used in conjunction with modern building techniques. One of the main problems the engineers were faced with was the provision of maximum daylighting. Vertical Patent Glazing not only achieved this to the highest degree, but met the requirements at a minimum cost.



ISSUED BY THE PATENT GLAZING CONFERENCE, BURWOOD HOUSE, CAXTON STREET, LONDON, S.W. I



You can always tell a good lift by the absence of "traffic jams" at rush hours. Much depends upon the right kind of control system-carswitch, automatic, or dual control -and for advice on this subject you can't do better than consult E.C.M. Whatever the conditions E.C.M. can supply a lift which is simple to operate, easy to maintain and blending harmoniously with modern interiors.

Illustrated on the right is a dual control indicator. This lift is operated by an attendant at busy periods and automatically at other times. The system required can be selected by a key switch inside the car.





In the country's best known buildings its LIFTS by E.C.M.



ETCHELLS, CONGDON & MUIR LTD., 25 Mill Street. Ancoats, Manchester

Tel.: ARDwick 4111 LONDON: 31 High Street, Merton, S.W.19 Also at Edinburgh

Liverpool and Sheffield

ECM. 50



Telephone: Stalybridge 3353. Telegrams: Cylinders, Stalybridge.

COPPER



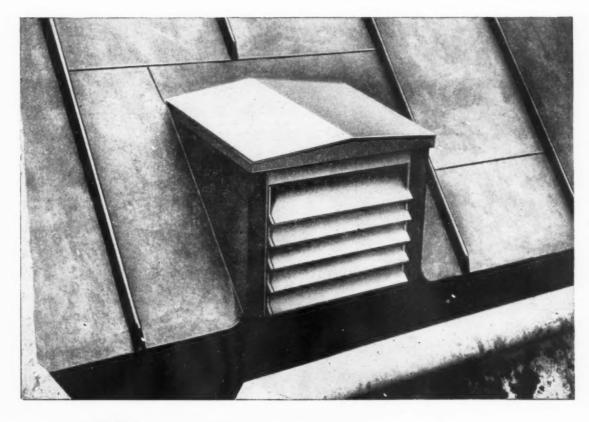
West front, Chichester Cathedral

makes a good job better

Roofings, flashings, damp-proof courses, gutters, and all pipe installations, are more durable and more attractive when made in copper.

The phenomenal length of life and the ease with which copper can be worked have long established its value as a building material. Copper roofing is not liable to creep; is light in weight, neat and highly resistant to fire; and the death watch beetle does not thrive under copper.

The attractive patina which forms on copper enhances the appearance of a building.





COPPER DEVELOPMENT ASSOCIATION

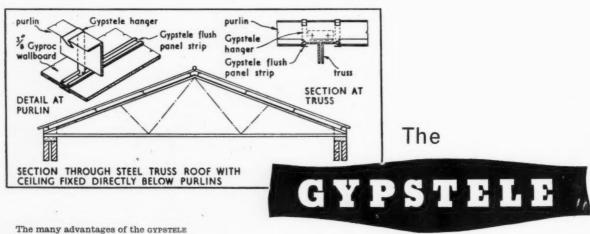
KENDALS HALL · RADLETT · HERTS · RADLETT 5616



for erecting suspended ceilings

and wall linings that is

simple and adaptable



The many advantages of the GYPSTELE
System can be summarised in six main
features. 1. Lightweight "dry"
construction. 2. Simplicity of erection.
3. Fire protection. Class 1, flame spread.
4. Improved thermal insulation.
5. Increased light reflection.
6. Completely adaptable to in ividual
requirements. The system is worth
studying in all its aspects, particularly
for use in factories, offices, schools
and hospitals.

Write for Information Sheets A22.E1 and A22.E2 for full information.

GYPROC PRODUCTS LIMITED

Head Office: Singlewell Road, Gravesend, Kent. Gravesend 4251/4
Glasgow, Office: Gyproc Wharf, Shieldhall, Glasgow, S.W.I. G van 2141/3
Midiand Sales Office: 11 Musters Road, West Bridgford, Nottingham. N. ttingham 82101
London Office: Bath House, 82 Piccadilly, London, W.I. Grosvenor 4617/9

system

GS.I



...say

...say

...say Metal Windows

-Rustproofed



ISSUED BY THE METAL WINDOW ASSOCIATION, BURWOOD HOUSE, CAXTON STREET, LONDON, S.W.1

The

BIDDLE GROUP

(Pioneers of Heating Equipment for 25 years)

Have pleasure in introducing
THEIR NEWEST MEMBER

WATERBURY LTD.

Manufacturers of WARM AIR HEATING FURNACES



Waterbury

WATERBURY LTD

WATERBURY MEANS WARM AIR

Waterbury oil-fired warm air furnaces offer very many advantages in heating factories, offices, schools, churches, houses and similar buildings. Handsome in appearance, automatic in operation and simple to install. Waterbury furnaces provide filtered, gently moving warm air heating without the use of hot water or steam. They offer the following advantages:—

Automatic control Positive ventilation Quick warming from cold No frost risk and no stoking.

They need only fuel supply, exhaust gas flue, and sometimes distributive duct work to complete an installation.

Ask your Heating Engineer for details, or write to us direct.

WATERBURY MEANS WARM AIR



Waterbury Warm Air Heating

WATERBURY LTD., 16, UPPER GROSVENOR STREET, LONDON, W.I. Tel: Hyde Park 0532-9

THE BIDDLE GROUP

F. H, BIDDLE LTD., AND SUBSIDIARIES
BRITISH TRANE CO., LTD. AIR DUCTS LTD.
BENNIE LIFTS LTD., AND SUBSIDIARIES
WATERBURY LTD. SUNDSTRAND OIL BURNERS LTD.





AN EYE FOR COLOUR

Wall renderings in attractive pastel shades and concrete floors in strong bright colours can be formed by mixing only 3 lb to 6 lb of FEBTONE with each one cwt. of cement

Febtone Super Permanent Colours for Cement also

Plasticise • Waterproof • Floor Harden and Rapid Harden cement and concrete work

Write now for the Febtone Shade Card

FEB

(GREAT BRITAIN) LTD.

ALBANY ROAD, CHORLTON-CUM-HARDY, MANCHESTER, 12 CHO 1063

102 KENSINGTON HIGH STREET, LONDON, W.8 Western 0444



REVOLUTIONISE SCAFFOLDING

WITH THE VEW 4-100K

SCAFFOLDING SYSTEM



Never before has there been such a radical advance in scaffolding erection. Compare each remarkable feature of Mills Self-Lock Scaffolding with those of any other scaffolding system, and see for yourself the advantages to be gained.

With the basic 5' x 2' frame, Mills Self-Lock Scaffolding saves time, money and labour on every scaffolding job — large or small.

HAVE YOU HAD A DEMONSTRATION YET? Ask your Mills representative to call and demonstrate this amazing scaffolding system with a scale model on your own desk.

ical ach ling and

ock on

Pazin



NO NUTS! NO BOLTS! NO PINS! NO CLI AND NO TOOLS NEEDED

There are no fastenings of any kind to get lost or damaged. Mills Self-Lock frames slot into each other: no tools are needed - just a pair of hands

FASTEST IN THE WORLD

The time taken to erect any structure is amazingly short. An 18 ft. tower 5 ft. square, for instance, can be erected in $2\frac{1}{2}$ minutes — approximately 4 frames per minute, per man.

LOWEST-EVER LABOUR COSTS

Even the biggest job needs only a two-man team: one to handle the frames and one to put them into position. Frames are made of high-grade, lightweight steel tube (the standard 5' x 2' frame weighs only $24\frac{1}{2}$ lb.) and are easy to handle.

ENORMOUS SAVINGS

The scaffolding is self-aligning, affording additional economies to the basic savings in time and labour.

SAFEST STRUCTURES

There are no loose fastening devices which can I lost, nothing that can be overlooked. The structure remains rigid under extreme strain. All load is taken on the upright members.

RIGHT FOR EVERY JOB

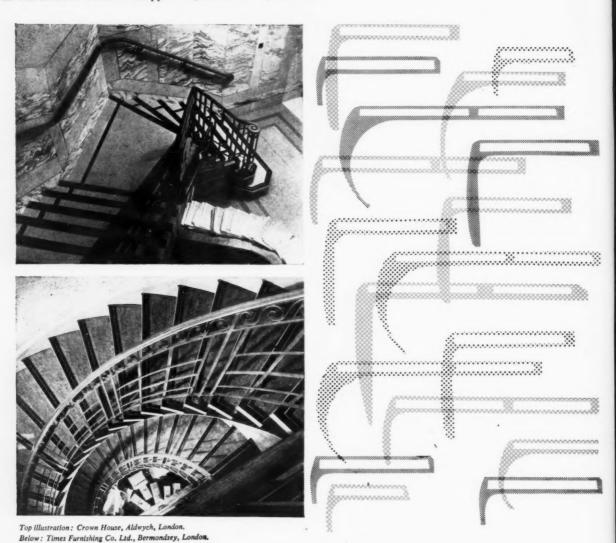
Structures are made up of a series of towers joined by tie bars. There are innumerable combinations for erecting the frames and the scaffolding can be adapted for construction, maintenance and shoring

ACCURATE ESTIMATING

As the number of towers can be easily ascertained, calculating the quantity of standard sized frames and tie bars takes only a few minutes.

EASY TO STORE AND TRANSPORT

Mills Self-Lock Scaffolding is easy to transport and stacks in compact piles on site and in storage.



Design in harmony

Ferodo Stairtreads combine safety and protection with handsome appearance. They have been proved by constant use over many years in public buildings of all kinds.

Available in seven colours—red, white, blue, green, black, brown and grey. Channelled in aluminium, or in the recently introduced silver bronze, or manganese bronze nosings.

A range of 31 types and sizes of tread, adaptable to every shape of stair.

Supplied in any length, cut to fit each stair. Curved or straight as required.

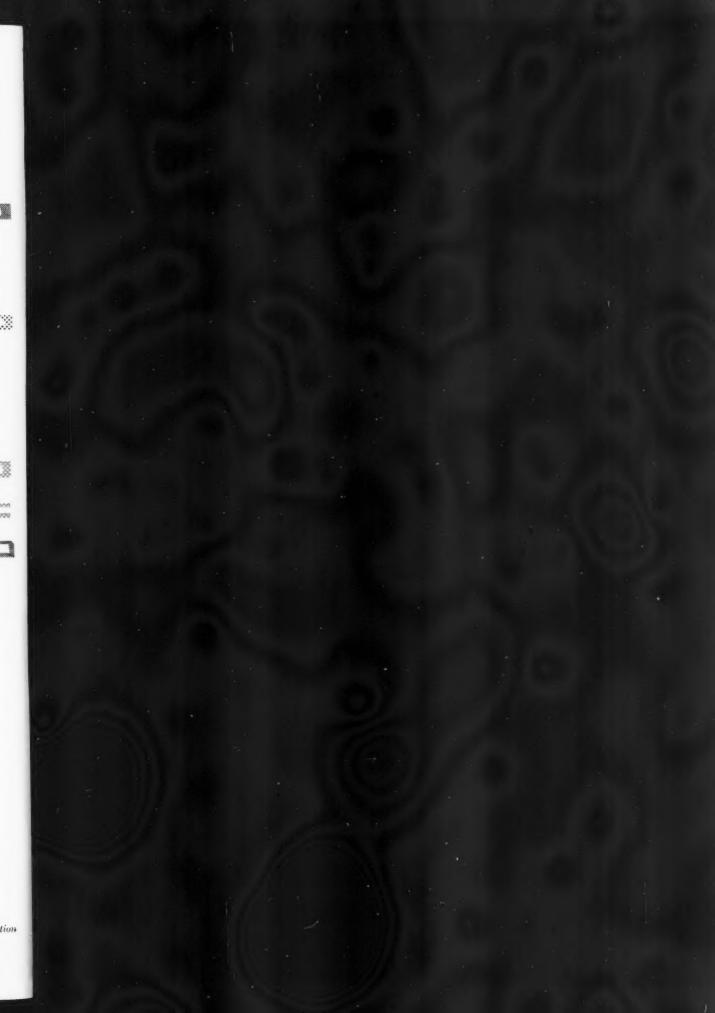
Simply and easily fitted to any basic material—wood, stone, concrete, etc.—by concealed screws through ready-drilled holes.





Illustrated Catalogue in full colour, will be sent on request to Stairtreads Dept., Ferodo Ltd., Chapel-en-le-Frith, Derbyshire.

FERODO LIMITED . CHAPEL-EN-LE-FRITH . DERBYSHIRE . A Member of the Turner and Newall Organisation





ELECTRICITY IN SCHOOLS

ELECTRIC LIGHTING

School lighting must provide really good seeing conditions for children and staff for the minimum possible cost, while conforming to current authoritative codes of practice; the lowest permitted levels of lighting (which are mandatory) are specified in the Standards for School Premises Regulations 1954, of the Ministry of Education.

Lighting Requirements

There are two dominant aspects of electric lighting which are controlled by the Standards for School Premises Regulations and which are also the subject of recommendations by the Code of the Illuminating Engineering Society (the I.E.S. Code). These are, the level of illumination to be provided and the maximum permissible brightness of any part of a lighting fitting, or its reflected image that may come within the normal field of view: the former is given in Table 1, the latter is as follows:

"In all teaching accommodation no luminous part of any lighting unit, or mirrored image thereof, having a maximum brightness greater than 1,500 footlamberts or an average brightness greater than 1,000 foot-lamberts, shall be visible to any occupant in a normal position within an angle at the eye of 135° from the perpendicular from the eye to the floor."

The 1948 British Standard Code of Practice on school lighting being in process of revision, architects should base their plans for lighting on the I.E.S. Code wherever possible. It must be pointed out, however, that this Code is in conflict with the Ministry of Education requirements on maximum permissible brightness. A strict reading of the latter would seem to rule out the use of open shades for filament lamps when liable to give rise to mirrored images, and to eliminate fluorescent lamps unless mounted in a fitting which conforms with the M.O.E. requirements.

Selection of Lamps

Their high efficiency, low brightness and freedom from hard shadows, put fluorescent lamps technically in the forefront for school lighting, but where capital outlay is severely controlled; as is so often the case in this class of building, their use must be justified on cost as well as on performance. The new Warm White fluorescent lamps, which are the most efficient, give three times the lighting service for the same cost of electricity as equivalent filament lamps, and lamp renewal cost is almost identical since their light output is maintained at its standard level for five times as long.

Running Costs

The saving in running cost (i.e. of electricity consumed and lamps replaced) of a fluorescent lamp over a filament lamp providing the same light output, approximates very closely to that given by the formula:

Annual saving in pence =
$$\frac{W_f \times H \times C}{500}$$

where

 $W_{\mathbf{f}} = Fluorescent lamp wattage$ (including gear losses) H = Hours of use per annum

H = Hours of use per annumC = Cost of electricity per unit in pence.

TABLE 1 ILLUMINATION REQUIREMENTS M.O.E. minimum standards Dressing rooms, 7 lm./sq. ft. Assembly and Dining halls, Theatres, Gymnasia, Libraries 10 ,, Classrooms, Laboratories,

20 ,,

Follow

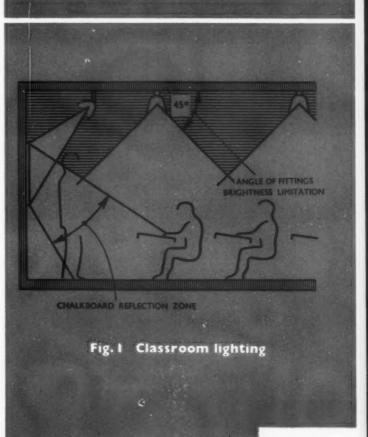
Kitchens, Staff rooms

Manual Training rooms

Art, Craft, and

and Workshops

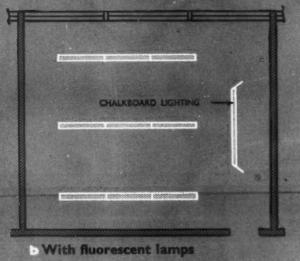
Sewing rooms



O O O

CHALKBOARD LIGHTING
O O O

With incandescent lamps



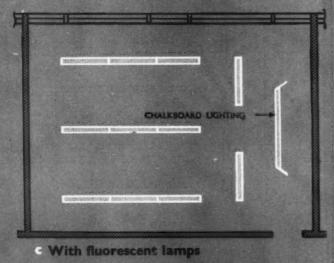


Fig. 2 Typical lighting layouts for classrooms of different areas and proportions

For example, one 80 wattfluorescent lamp (consuming 100 watts with gear losses) with electricity at 2d. per unit and 500 hours annual use, will save

$$\frac{100 \times 500 \times 2}{500}$$
 = 16s. 8d. per annum, or £1.13.4d.

per annum for 1,000 hours' use, the saving being directly proportional to the annual hours of use and the unit cost of electricity. This saving should be set against the additional capital cost due to each fluorescent fitting, or against its annual amortization charge.

From the above it will be clear that the use of fluorescent lamps is particularly economical in those parts of the building used beyond normal day school hours: in other cases their technical advantages may well outweigh their higher capital cost, e.g. in kitchens, art and craft rooms, and workshops where their superior lighting characteristics are particularly desirable.

Classroom Lighting

Since an even distribution of light is required over the whole of the working area, the lighting arrangement for classrooms tends to follow a symmetrical pattern with slight modifications necessitated by different shapes and areas of room. Owing to the general tendency towards lower ceilings in order to reduce cost, nine lighting fittings are necessary over the desk area in a normal classroom in place of the six formerly used at a greater mounting height. In a classroom of 400 sq. ft. this layout (Fig. 2a) will provide the bare M.O.E. minimum of 10 lumens/sq. ft. if 100 watt lamps are used: it is, however, preferable to use 150 watt lamps when the illumination obtained will be of the order of 15 lumens/sq. ft. which is the recommended value in the I.E.S. Code.

Nine 150 watt filament lamps will also satisfy the minimum requirements for a 480 sq. ft. classroom, but if a higher level of illumination is required it will be necessary to add another row of fittings since even distribution of light is essential, and more powerful filament lamps are unsuitable.

The efficiency of fluorescent lamps has now been improved to the stage when a 4 ft., 40 watt lamp gives slightly more light than a 150 watt filament lamp, in consequence of which, 40 watt fluorescent lamps may be used with advantage instead of filament lamps.

The arrangement shown in Fig. 2b makes a very simple and inexpensive installation since only one ceiling outlet is required for each row of lamps, the wiring being looped to the remaining fittings. For larger rooms the arrangement shown in Fig. 2c is recommended.

Chalkboard Lighting

All chalkboards should be separately lighted by carefully placed angle fittings mounted to avoid reflections at any part of the desk area (Fig. 1). Fluorescent lighting is preferable for this purpose even if filament lamps are used elsewhere, and sufficient 40 watt 4 ft. lamps should be used in a suitable fitting to cover the full length of the chalkboard.

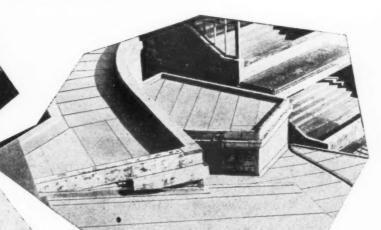
For further information on the use of electricity apply to:

LS.1 British Electrical Development Association

Unusual in shape



Factory for Macfarlane Lang & Co. Ltd. at Osterley. Architect: James M. Monro & Son.



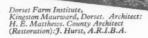
Grandstand and subsidiary buildings, Rowley Mile Racecourse.

but in good shape

Imagine a roof that is flat, pitched and domed, with intricate convex and concave curves thrown in for good measure. A nightmare conception perhaps, but even a roof like this could be weatherproofed for good by The Ruberoid Company Ltd., whose accumulated skill and experience are a match for roofs of any shape and size.

The pliability of Ruberoid enables it closely to follow almost any contour, and expert laying by Ruberoid's specialists ensures that the job is carried out quickly, thoroughly and economically. By calling in Ruberoid at the planning stage the specification agreed upon will be exactly right for the job. For low-cost permanent roofing, giving complete satisfaction for decade after decade, specify Ruberoid materials and workmanship.

THE BEST POSSIBLE MATERIALS
LAID IN THE BEST POSSIBLE WAY



Special Features of The Ruberoid Roof

- Built-up roofing undertaken on buildings of any shape or size—anywhere in Britain.
- Specifications include roof decks of steel, aluminium and asbestos cement, all these being insulated externally and weatherproofed with Ruberoid Roofing.
- Representatives and Branches throughout the country will give immediate attention to plans and estimates.
- Comprehensive service includes consultation, inspection and maintenance.
 Call in Ruberoid at an early stage.



RUBEROID

"Ruberoid specifications are listed in detail in Publication No. 326"

THE RUBEROID COMPANY LTD.

343 Commonwealth House • 1-19 New Oxford St. · London · W.C.1

FGA.C189

ARCHITECTURAL **SCHEMES**

A New Lighting Approach



INTENSIVE · CONCENTRATING · OFFSET

A new lighting approach to Architectural schemes has been made possible by the development of a range of Holophane 'LENTILITE' (REGD.) Circular In-Bilt units which give Intensive, Concentrating and Offset light distributions.

The range includes Flush and Semi-recessed units for recessment into the ceiling, and Close-Ceiling units for use where recessment is not possible.

'Lentilite' units give the Architect wide scope for integral design while affording a high standard of light control combined with pleasing appearance. Full details and technical information available on request.

Ask for Publication 55/1.





HOLOPHANE LIMITED

SCIENTIFIC ILLUMINATING ENGINEERS

ELVERTON STREET, WESTMINSTER, LONDON, S.W.1. Phone: VICtoria 8062. Grams: Holophane Sowest London

Centres of support as much as 22 feet — structural framework reduced to the very minimum — building rate accelerated by elimination of intermediate supports — full weatherproofing and all the advantages of standard Q-Deck — those are some of the reasons why you should specify

ROBERTSON Long-Span Q-Deck

You must know more about
Long-Span Q-Deck.
Complete and post the coupon
below today — NOW
for descriptive literature.

ЯP

Robertson Long-Span Q-Deck units are 2 ft. wide and made from combinations of 16-20 B.G. steel, in sections and lengths to meet span|load requirements.

FEET WITH

THREE SECTIONS ARE AVAILABLE

Section	MAXIMUM CLEAR SPAN Loading 15 lbs. per sq. ft.	MAXIMUM CLEAR SPAN Loading 30 lbs. per sq. ft.
LSD 150	13 ft. 6 ins.	10 ft. 9 ins.
LSD 300	22 ft.	17 ft. 6 ins.
LSD 450	_	22 ft.

Post Coupon today: ROBERTSON THAIN LTD., Ellesmere Port, Wirral, Cheshire Telephone: Ellesmere Port 2341. Telegrams: "Robertroof"

Please send literature describing Long-Span Q-Deck.

Lienze zena mar

Name Address

QD 19





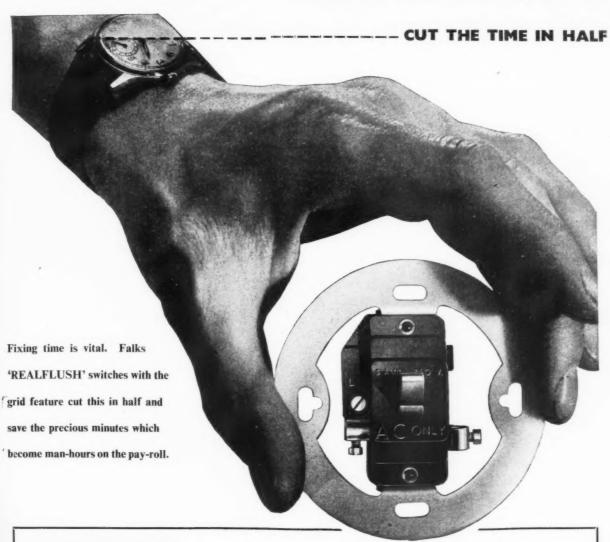
Maximum size 100 in. x 48 in.

PILKINGTON BROTHERS LIMITED

For further information on the use of glass in building consult the Technical Sales and Service Department, St. Helens, Lancs. (Telephone: St. Helens 4001), or Selwyn House, Cleveland Row, St. James's, London, S.W.I. (Telephone: Whitehall 5672-6)











THE 'REALFLUSH' SWITCH

This original and immensely popular switch is designed to keep installation cost at an absolute minimum as well as giving a pleasing appearance with every decorative scheme. With B S.1299 centres and alternative wood screw fixing holes, it is suitable for true plaster depth or deeper fixings. Steel or wood boxes are available. The 2-gang version in the normal sized box gives sensible cable accommodation.

Write for our Catalogue No. 802 54, "Electrical Accessories & Control Units":

FALK, STADELMANN & CO. LTD.,

91 Farringdon Road, London, E.C.1

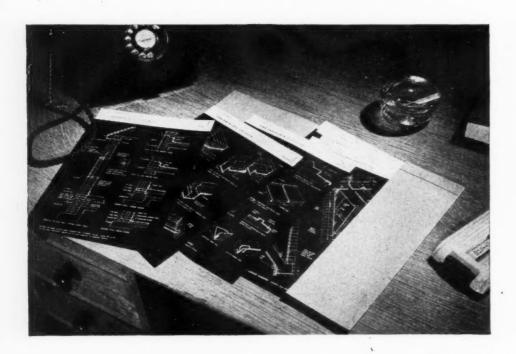
Tel: HOL 7654

Showrooms; 20/22 Mount Street, LONDON, W.I

Tel: MAY 5671

Branches at : MANCHESTER . BIRMINGHAM NEWCASTLE-ON-TYNE . DUBLIN . CARDIFF LEEDS . LIVERPOOL . SWANSEA . BRADFORD GLASGOW · NOTTINGHAM · NEWCASTLE-UNDER-LYME · BRIGHTON · SOUTHAMPTON · EDINBURGH . BELFAST BRISTOL

Is your file of LEAD INFORMATION SHEETS complete?



LEAD LASTS

LEAD SHEET AND PIPE COUNCIL

in association with LEAD DEVELOPMENT ASSOCIATION EAGLE HOUSE . JERMYN STREET . LONDON S.W.I

Grams: Ukleadman Piccy, London Phone: Whitehall 4175

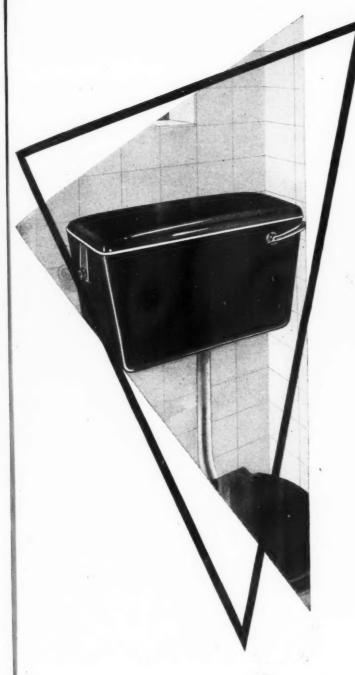
THE FOLLOWING IS A LIST OF THE 29

INFORMATION SHEETS IN CURRENT USE Ref. Ref. Title Title Lead Flashing to Chimney on Slate or Tile Roofs Sheet Lead Coverings for Flat Roofs 10.G1 Fixing Lead Soil, Waste, Ventilating and Rainwater 33.C7 Lead Flashing to Chimney on Pantile Roofs 10.G2 Pipes 10.G3 Lead Covering to Valley Gutters Lead Flashings: Steel Roof Construction: Glazed Panel & Northlight 10.G20 Details of Lead D.P.C.'s and Cloaks to 11" Cavity Walls 26.A1 Sheet Leadwork for Dor-mer Windows Lead Plumbing to ranges of Lavatory Basins Lead Flashings to Asphalt & Built-up Bituminous Sheet Roof Coverings 33.C1 10.G13 Laying and fixing Lead Service and Distribution Pipes 33.C10 Installation of Lead Soil, Waste and Ventilating Pipes Lead Plumbing to Ranges of W.C.'s 33.C2 33.C9 Lead Plumbing to Urinals Lead Flashings: Lead Slate and Ridge Saddles 10.G4 Lead Plumbing for Labor-33.C11 Sheet Lead Weatherings to Sheet Lead Coverings for Pitched Roofs 10.G10 10.G12 Projections and Canon Lead Plumbing: Soil and Waste Pipes for Small Houses Lead Flashing to Timber Framed Skylights 33.C3 Drawn Lead Traps: Standard Sizes & Applications to Domestic Appliances 33.C12 Lead Soakers to Mitred Tiled or Slated Hips and 10.G5 Valleys Lead Flashings to Mansard Roofs & Coverings to Hip & Ridge Rolls 33.C4 Joints for Lead Pipes: Characteristics Joints for Lead Soil and Waste Pipes: Character-istics 33.C5 10.G14 Lead-Lined Box and Taper-ed Gutters 10.G15 Lead Damp-Proof Courses to Chimney Stacks

10.F1

33.C6

Leadburned Joints for Lead Soil & Waste Pipes:



The most fitting fitting

In contemporary building, with its trend towards functional design and streamlined efficiency, a most fitting fitting for the toilet is the Lawley 'Britannia' plastic flushing cistern.

Smoothly silent in action, unobtrusively pleasing in appearance, this new plastic cistern is ultra-modern, ultra-hygienic, ultra-efficient. A touch of the hand is sufficient for smooth, silent action — first time and every time.

Seventy-five years' specialised experience backs every Lawley cistern — when you specify Lawley, you know it's as good as it looks!

Our illustrated folder gives details of four Lawley models in plastic, to suit all water regulations. We shall be pleased to forward copies on request.

Lawley

BRITANNIA



als

heet

137







One of the oldest and largest cistern makers in the world.

W. & J. LAWLEY LTD., BRITANNIA WORKS, SAMS LANE, WEST BROMWICH

M-MM.

CLAY TILES — for eight centuries England's roof...

As Agricultural Britain changed to a land of industry, new materials, new methods supplanted the old and traditional crafts began to give way to the first stirrings of mass production. A new, blacker, busier country was born, ruled by the new masters of coal and iron. The revolution had begun. Amongst the few unaffected members of the materials aristocracy was the clay roofing tile, for nothing-since the days of the Normans-has been found to take its place . . . for the simple reason that there's no roof like a clay tiled roof.

CLAY lasts

ACME clay roofing tiles combine the traditions and experience of centuries with modern manufacture and service. They are made from Staffordshire Etruria marls—acknowledged to be the best clay in the world for tile manufacture. Their colour, burnt in at high temperatures is absolutely permanent. Their superior strength saves on site breakage and maintenance. ACME tiles are available, with immediate delivery from stock, in a wide range of colours with fittings to match. Ask for the ACME catalogue, containing much valuable techr.cal information.



Private Residence at Heswall.

ACME clay roofing tiles

DOWNING'S range of roofing tiles includes:—

ACME M.M. ROOFING TILES
ACME SANDSTORM ROOFING TILES
ACME HAND-MADE SANDFACED & ACME REDFLOOR QUARRIES.

G. H. DOWNING & Co. Ltd. (Dept. C1), Box No. 3, BRAMPTON HILL, NEWCASTLE-UNDER-LYME, Staffs.

Telephone: Newcastle-under-Lyme 65381





LOG CUTTING FOR -





MADE IN SWEDEN

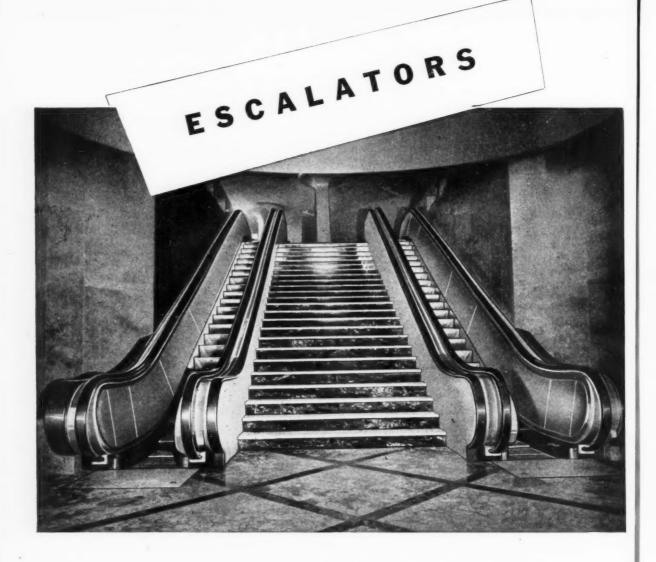
THE
OUTSTANDING
ALL WOOD FIRRE
HARDBOARD

* ROYAL *

* RMML*

RMML

SOFTWOODS FOR
JOINERY AND BUILDING



for Banks
Commercial
Buildings
Restaurants

In modern buildings, the use of ground floors for shops and showrooms is general, because of the considerably higher rentals thus obtained. Many planning authorities are insisting that banks, restaurants and office accommodation shall occupy upper floors only. The only method by which the upper floors can be made fully accessible to considerable numbers of persons is by the use of escalators.

J. & E. Hall Limited have been responsible for numerous escalator installations which are noted for silent running, absence of vibration and economy of space. These have been supplied for use in Great Britain, Australia, Belgium, Canada, Ecuador, Gold Coast, New Zealand, Spain and Switzerland.

J. & E. HALL

LIMITED

DARTFORD · KENT



.. The SADIA UDB/BT can suit you best!

A central boiler system may mean higher rents because running costs have to be passed on to the tenant. But by installing an individual Sadia Water Heater in each flat the tenant can regulate his expenditure according to his needs. For this purpose we suggest the Sadia type UDB/BT. It supplies all the hot water taps in each flat and is fully adequate for the needs of the average small household. Very simple and economical to install, this model incorporates its own ball tank and needs no vent pipe to the roof. The cold water down service pipe supplies the Sadia Water Heater and the cold water taps in the flats as well—resulting in a considerable saving in plumbing costs. Like all Sadia Water Heaters, it is made of the finest materials and to the highest standards of construction.

P14 1569

Sadia Water Heaters are the most likely to meet your requirements

We shall be very happy to answer all enquiries regarding any contracts you may have under consideration.



AIDAS ELECTRIC LTD · SADIA WORKS ROWDELL ROAD · NORTHOLT · MIDDX. WAXLOW 2355

SPECIALISTS IN HOT WATER BY ELECTRICITY SINCE 1923



speeds construction ... strong and split-proof

N.	R. M. Morison, Esq.,
1 -	3 Regent Street,
Lor	ndon S. W. 1, England.
Ple	ase send me a free copy of the Seaboard Plywood Handbook
(1.	11) describing your full range of Douglas fir plywoods.

NAME.....

(Please print plainly) UK-56-13-1



CONTRACTORS' HUTS



ROOF DECKING

Plywood Sheathing

for roof decking, box beams, floors, shuttering and scores of outdoor uses

Produced with a full phenolic bond . . . waterproof, weatherproof and boil-tested . . . Seaboard Douglas fir plywood is now available in two sheathing grades at prices which open up an entirely new field of use for plywood

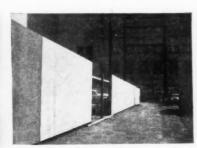
Known as SHEATHING and UNDERLAY SHEATHING, these grades have all the structural qualities of smooth, top quality grades. Each panel covers 32 square feet, greatly reducing time and labour costs; it is split-proof and draft-proof . . . requires fewer and smaller nails; it builds into the structure the extra strength and rigidity of a material pound for pound stronger than steel.

Uses for sheathing and underlay are almost unlimited — roof decking, sarking, laminated trusses, gussets, contractors' huts, farm structures and solid bases for other materials are just a few.

Investigate Seaboard fir plywood sheathing grades. If your supplier does not stock them he can order them for you.



Seaboard Lumber Sales Co. Limited, Seaboard House, Vancouver 1, Canada



HOARDINGS

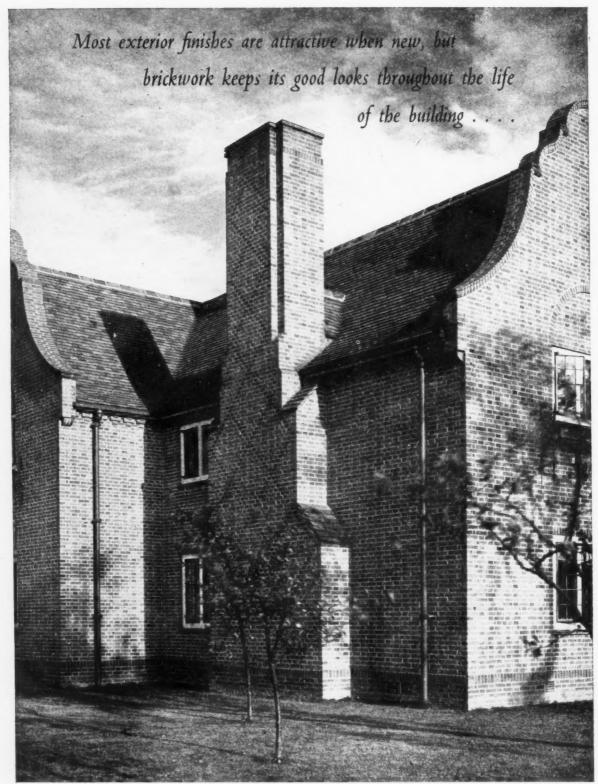
NG



PACKING CASES



FLOOR UNDERLAYMENT



FAIRHOLME ESTATE, BEDFONT, MIDDLESEX. Architect: T. Cecil Howitt, D.S.O., O.B.E., F.R.LB.A

For freedom from Maintenance BUILD IN BRICK

Issued by the National Federation of Clay Industries, Drayton House, London, W.C.1.





- **NEW BARNS ESTATE** Cementone NUMBER SEVEN Universal Decorative Finish.
- MARKS AND SPENCERS Cementone No. 9 Waterproof Stoneface Composition.
- 3. WINTER GARDENS Cementone No. I Permanent Colours for cement.

PLEASURE BEACH Exelaero Wall Flat, Emulsion Paint.

- LEADER FASHION SHOP Exelaero Wall Flat.
- **NEW FLATS AND SHOPS** Cementone No. 9.
- ROSE HILL ESTATE
- **ELECTRIC SUB-STATION** Cementone No. 1.
- 8. AINSDALE LIDO Cementone NUMBER SEVEN. FLORAL HALL Cementone NUMBER SEVEN.
- CLOVER ROAD SCHOOL Cementone NUMBER SEVEN.
- MARKS AND SPENCERS 10.
- SPOTLAND SCHOOL Cementone No. 1 amd Cementone No. 8 Liquid Concrete Hardener.
- HOUSING ESTATE
- 13. ST. BEDES SCHOOL UNIVERSITY EXTENSION Cementone NUMBER SEVEN.
- 14. DUNLOP LTD Cementone NUMBER SEVEN.
- BEECHAMS LTD. Cementone No. 1
- BRITISH ALUMINIUM CO.
- CHESTER ROAD FLATS
- WHITE CITY Cementone No. 1.
- POST OFFICE PICCADILLY Cementone No. 9.

BELLE VUE

HIPPODROME Cementone No. 6 Waterproof Flat Finish.

ORDSALL LANE MILL Exelaero Wall Flat.

WERNETH ESTATE 20.





ementon again!

There is a saying that what Lancashire thinks today, the rest of the world will think tomorrow-and Lancashire has long since proved that you can depend on Cementone, as the above selection of contracts

Full details of all the Cementone products will be found in the Cementone Handbook, sent free on request.

JOSEPH FREEMAN. SONS CO. & CEMENTONE WORKS : WANDSWORTH : LONDON : S.W.18

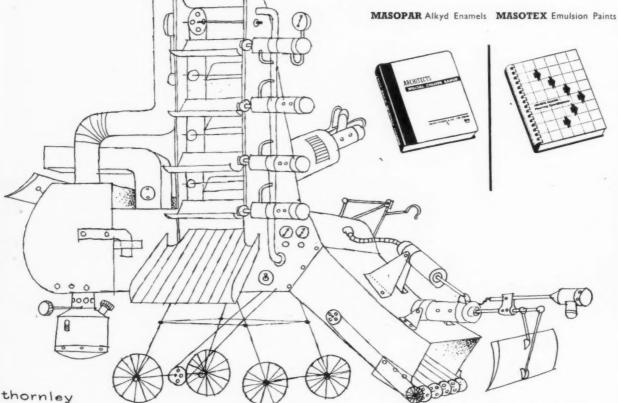
Telephone: VANdyke 2432 (10 lines)

Telegrams:
CEMENTONE, WESPHONE, LONDON

Combined office tidier and sample sorter

+ service

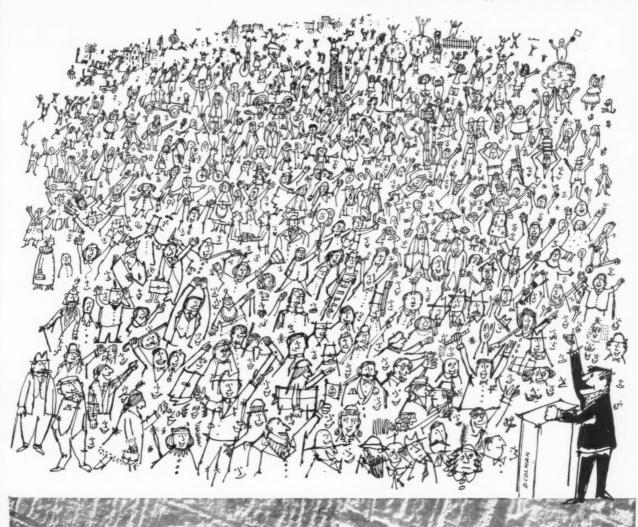
TOOLS , FOR ARCHITECTS To watch this device plunge into the chaos of a busy office and within minutes turn it into a place of neatly ordered samples and finely shredded (and bagged) waste is at once a joy and an education. When plugged into the Electronic Brain, the Sorter will work without supervision. Scooping piles of samples, files and drawings into its intake, the machine delivers desirable items from the conveyor at the side and ejects waste (and any untidy draughtsmen) into the hopper at the rear. Two books it will treat with tender care are Joseph Mason Painting Specifications and The Architects' Special Colour Range, which indicate many aspects of our Technical Service to Architects.



joseph mason p

Established architects are invited to apply on their official letter-headings for either of the above books.

JOSEPH MASON AND COMPANY LIMITED, DERBY. TELEPHONE: 40691-2-3



Five thousand years we've waited .

for CABLITE pre-mixed plaster

Aha! A revolution in plaster and about time too. Five thousand years is a lot of 44-hour weeks, but it is roughly the number of years that Man has been plastering with heavy sanded plasters. The first advance of basic importance in all this time is Carlite.

Carlite is a pre-mixed plaster, and in it sand is replaced by a lightweight aggregate of Perlite, which is premixed with gypsum in the factory.

The advantages of Carlite are many. Already it has won the calculating (but human) hearts of architects and builders, who are using it on scores of their biggest contracts. If you are still unaware of just what these advantages are, full technical information is available. Send us your name and address today.



ints

s for

ooks.

691-2-3

The Gotham Company Limited, Gotham, Nottingham.
The Carlisle Plaster & Cement Co., Cocklakes, Nr. Carlisle.
Thomas McGhie & Sons Ltd., Kirkby Thore, Westmorland.

43



Because they *stay* level under the heaviest traffic, Stelcon Floors will keep production flowing smoothly. Use them in factory, shop or on loading bays — they will pay for themselves by saving costly repairs. In fact, Stelcon Floors can't be beaten, they're dustless, hygienic and perfect for modern mechanical handling methods. Full details sent on request.

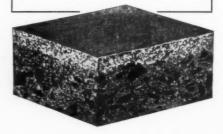
You'll find

Stelcon

FLOORS

in every industry-everywhere

Stelcon Floors are tough and hardwearing. They'll stand up to the severest tests and take the heaviest traffic year after year. That's why so many users of modern mechanical handling equipment are plumping for Stelcon Floors.



STELCON (INDUSTRIAL FLOORS) LTD. CLIFFORDS INN, LONDON, E.C.4 TELEPHONE: CHAncery 9541



G R E E N W O O D 'S A N D A I R Y A C V E N T I L A T I N G C O M P A N Y L T D
Patentees, Designers and Manufacturers of Ventilating Equipment and Electrical Conduit Systems.

BEACON HOUSE, KINGSWAY, LONDON, W.C.2. CHAncery 8135/6/7 'Airvac,' London

To Architects about to plan Roofs

BRIGGS ADVISORY SERVICE

Every Architect in the country should know about Briggs Advisory Service—we believe it is the most comprehensive in the Roofing Industry.

It offers:-

- The services of a highly organised Drawing Office ready to prepare, in collaboration with yourselves, complete working drawings.
- The assistance of experienced Roofing Technicians to advise on every detail of modern roof construction.
- The results of constant research in roof design and construction, and the accumulated knowledge of a large nation-wide roofing organisation

Our nearest Area Office can give you further details of this Service, which is, of course, entirely free and without obligation.



F. HILLS AND SONS LIMITED

announce...

...that their well-known

PLASTIC-SURFACED PLYWOODS

"DURETTE" (linen surfaced)

and "DURAMEL" (natural grain)

will in future both be known as



Serial No., 2467

REPRETENSES

GOOD HOUSEKEEPING INSTITUTE

GOUTH REPRESENTED IN CONTINUE TO REPUTE STREAMS

HEURO THE STREAMS

HEURO THE STREAMS

HEURO THE STREAMS

Ideal surfacing material YOU WORK IT LIKE WOOD

- ALREADY BONDED, NO ADHESIVE NECESSARY DURABLE, WATERPROOF
- DECORATIVE—5 PASTEL SHADES HYGIENIC—WIPES CLEAN WITH A DAMP CLOTH
- STANDARD SIZED PANELS, IN 3 THICKNESSES 1/4", 1/2", 3/4".

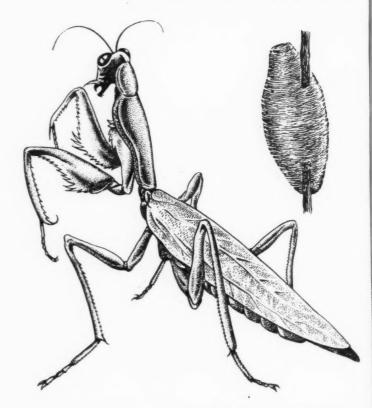
AVAILABLE THROUGH THE USUAL TRADE CHANNELS

HILLS & SONS LTD., NORTON ROAD, STOCKTON-ON-TEES, TELEPHONE: STOCKTON 67141

Praying

BITMAKK

is the



.... but hardly its nature—it is an

assassin, nevertheless to preserve its young it constructs a very strong fibrous cocoon, a form of protection which we humans have come to recognise as most effective as witness the successful use of the tough, non-stretch SISAL FIBRE in SISALKRAFT. Not only is this renowned building paper unequalled in toughness, but it is clean, pliable and water-resisting For sarking, wall and floor lining, etc SISALKRAFT is the ideal material SISALATION Reflective Insulation has all the virtues of SISALKRAFT plus bright aluminium foil on one or both sides, providing highly effective THERMAL insulation.



The Supreme BUILDING PAPER

ESTABLISHED 1857

J.H.SANKEY & SON.LT.P.

Sole Distributors for British Sisalkraft Ltd.

ALDWYCH HOUSE, ALDWYCH, LONDON, W.C.2.

Phone: HOLborn 6949 (20 lines)

Grams: Brickwork, Estrand London.

THE RESULT OF 50 YEARS EXPERIENCE BRITISH MADE IN EXCESS OF NEW BRITISH STANDARD PRODUCT OF THE REED PAPER **GROUP** THE HIGH QUALITY PITCH FIBRE DRAINPIPE MAIN DISTRIBUTORS: A. D. Foulkes Ltd., Birmingham, 3.
Tel.: CENTRAL 7474 The Iron & Marble Company, Ltd., Bristol, I.
Tel.: BRISTOL 27471 B. Finch & Company, Barkingside, Essex.
Tel.: VALENTINE 8888 Tel.: EASTBOURNE 4047 Barflo Ltd., Eastbourne. Samuel Gratrix Ltd., Manchester.
Tel.: TRAFFORD PARK 0414 A. R. & W. Cleaver Ltd., Northampton. Tel.: NORTHAMPTON 1432 J. M. & J. Bartlett Ltd., Newcastle-on-Tyne, I. Tel.: NEWCASTLE 24011 William Dibben & Sons Ltd., Southampton.
Tel.: SOUTHAMPTON 23800 Available only through Builders Merchants

SA

ous

as

etch

ing ing rial FT

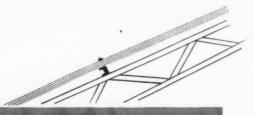
ER

C.2.

ndon.

DHB/2663

KEY ENGINEERING Co., Ltd., 4 Newgate St., London, E.C.!. Telephones: CITy I 185/6/7 & Trafford Park, Manchester 2056 7



maximum strength....minimum obstruction

Yes, Coseley Standard Steel Framed Buildings give you just that—plus many other unique features.

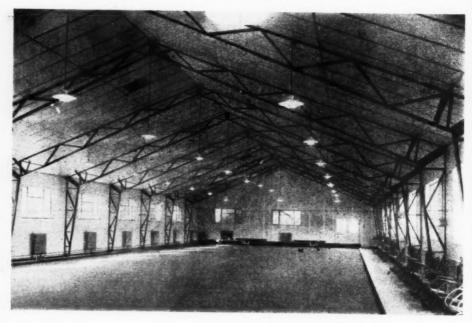


Photo: Bowls Pavilion, Bexhill-on-Sea. Architect: Kenneth G. Higgs. A.R.I.B.A Bexhill-on-Sea.

ADAPTABLE DURABLE ECONOMICAL EXTENDABLE

The illustration shows just one of the countless applications of Coseley Buildings. Designed in clear spans of from 30ft. to 75ft. with caves heights of from 8ft. to 20ft., there is an answer to any problem of accommodation within this range, which is readily and economically available.

Building and Civil Engineering work can be undertaken by our associate companies.

Why not send for detail drawings and full information—or ask for a representative to call?

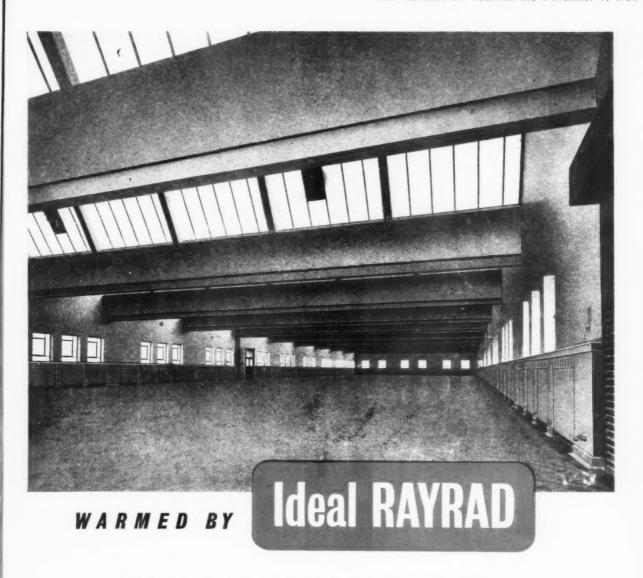
LONDON OFFICE: 41/46 PICCADILLY, W.I. TEL: REG 4924/5/6

COSELEY

ENGINEERING CO. LTD.

LANESFIELD - WOLVERHAMPTON · ENGLAND

TELEPHONE BILSTON 41927 (6 lines)



Ideal Rayrads were chosen to warm the recently opened pharmaceutical laboratories of the Wellcome Foundation Limited, at Dartford, Kent. A total of 2,541 No. 44 Rayrads has been installed and in the above illustration of one of these laboratories, the Rayrads can be seen in position along the walls.

Ideal Rayrads constitute an unobtrusive, hygienic and most economical form of heating by low temperature radiation. They are available in a variety of patterns and can be adapted for fitting into a wide range of installations, in every type of building.

IDEAL-Standard

Foremost for heating and sanitary equipment



IDEAL BOILERS & RADIATORS LIMITED . IDEAL WORKS . HULL



TESTED AND PROVED

THE TIME

Recently

THE PLACE

The Fire Research Station, Boreham Wood

THE MATERIAL

A ceiling of ½ inch thick asbestolux precision-cut ceiling panels

Following the exceptional results of this test, an amended Modulux ceiling design was produced which gives 4 hours fire protection to steel floor joists . . . the first suspended panel ceiling proved to do so. From now on there can be a new impetus in the construction of high buildings.

With these ceilings, such buildings can have economical fire protection without additional weight, and can be used safely for more purposes than ever before.

Full details of this test are contained in the official report Reference F.R.O. S.1. 653.

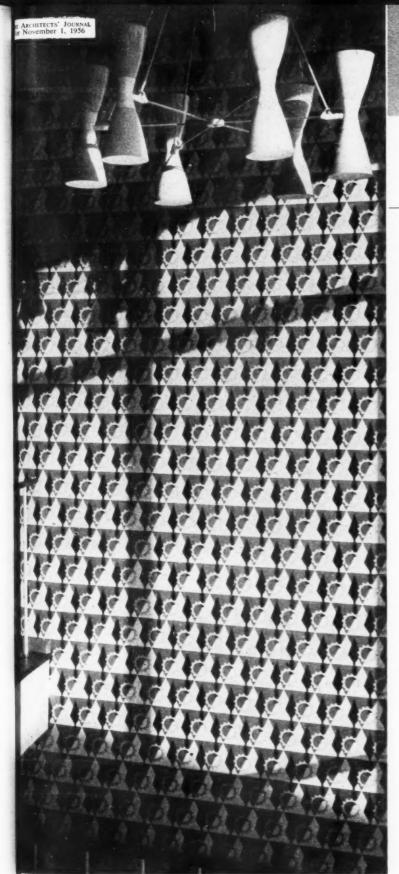
ASBESTOLUX REGD.

PRECISION-CUT CEILING PANELS



CAPE BUILDING PRODUCTS LIMITED . COWLEY BRIDGE WORKS . UXBRIDGE . MIDDX . UXBRIDGE 4313

and at MANCHESTER: National Buildings, St. Mary's Parsonage, Manchester 3. Tel: Blackfriars 7757 GLASGO W:217 Bothwell Street, Glasgow, Cg. Tel: Central 2175: BIRMINGHAM: 11 Waterlaw Street, Birmingham 2. Tel: Midland 6767-6-7.



SKILL

Hand-Printed Tiling by CARTER

Cogwheel and trowel design by Essex County Architect's Departme
in deep yellow, dark grey and black

THURROCK TECHNICAL COLLEGE,
GRAYS, ESSEX.
ARCHITECT: H. CONOLLY, F.R.I.B.A.
CONTRACTORS: RICHARD COSTAIN LTD.

CARTER



Carter & Co. Ltd. Poole, Dorset. Telephone: Poole 125
Carter & Co. London Ltd. 29 Albert Embankment, SE11. Telephone: Reliance 1471
Manchester Office: 27 Brazennose Street, Manchester 2. Telephone: Blackfriars 2098
Art Pavements & Decorations Ltd. St. Paul's Crescent, Camden Town, NW1. Telephone: Gulliver 2226
J. H. Barratt & Co. (1927) Ltd. Boothen Tile Works, Stoke-on-Trent. Telephone: Stoke-on-Trent 44717
The Marbolith Flooring Co. Ltd. 29 Albert Embankment, SE11. Telephone: Reliance 2062
Commercial Marble & Tiles Ltd. Selborne Gardens, Newcastle-upon-Tyne 2. Telephone: Newcastle 811173
R. Campbell & Sons, 13 Steads Place, Edinburgh 6. Telephone: Leith 39188

313

IAM.



Put colour into the wood with COLRON

Colron is Ronuk's penetrating wood dye. It sinks deep down into the grain of the wood, imparting a rich, lasting finish.

More and more Public bodies and private clients alike are specifying modern, natural wood effects for their floors, doors, panelling and other woodwork. With Colron this is now possible at a fraction of former costs. Labour charges are reduced because Colron is easily and quickly applied. And it dries ready for finishing in less than six hours.

EXAMPLE OF AN ACTUAL QUOTATION

Rubbing down with Panda steel wool, tinting to an approved shade with Colron wood dye... thoroughly dressing with Ronuk Wax and polishing 75 or more flush plywood doors, two sides, measuring 6'6" x 2'6" at 3/9 per sq. yd. 13/6½ per door.

Let the Ronuk Polishing Contract Department give you a quotation. When your polishing and dyeing is carried out by Ronuk experts you can be sure of a job well done with the highest quality products.

Write for colour guide and information leaflet

RONUK LTD., DEPT. 61, PORTSLADE, SUSSEX

London Office and Showroom:

16 South Molton St., W.I. GROsvenor 5011 MAYfair 0222

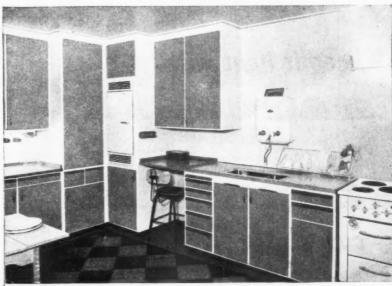


By Appointment Sanitar Polish Manufacturers to the late King George V

20 years hard-wearing service

AND GOOD FOR MANY MORE!

20 years ago Perstorp Panels were fitted in the refreshment room of Stockholm's main railway station. They remain in perfect condition today! Here is a tough, super-hard plastic laminate that is ideal on all surfaces where the need is for durability and beauty. Now available in a wider colour range than ever before, with an exquisite finish half-way between matt and gloss, Perstorp Panels offer splendid scope for imaginative decorating schemes. Yet they cost no more than any other comparable product. Readily cut and trimmed on site, Perstorp Panels are fitted with ease and speed. For domestic, commercial and industrial building, versatile Perstorp Panels are being specified by an evergrowing number of architects.



HOMES. Easy-to-clean Perstorp Panels brighten every SHOPS. Hygienic Perstorp Panels make in room. "Locked-in" colours never fade, Complete hygiene in bathroom and kitchen assured.

savings on cleaning and maintenance costs. Will not crack or chip. Keep interiors smart and business-like.



impenetrable front to dirt and germs. Take any amount surfaced with Perstorp Panels. A damp cloth quickly of hard knocks yet remain glass-smooth. Illustrated: erases all stains.

Perstorp Panels at the Town Hall, The Hague.

CANTEENS. Super-hard Perstorp Panels present an BARS. Bar counters and table-tops look at their best



PERSTORP PANELS

Made in Sweden and sold throughout the world by

SKANSKA ATTIKFABRIKEN AB · PERSTORP (SWEDEN)

The leading plastic laminate manufacturers of Scandinavia for over 30 years.

LOOK FOR THIS LABEL! YOUR GUARANTEE OF HIGH QUALITY

WRITE FOR FURTHER INFORMATION .

New colour-illustrated folders describing the use of Perstorp Panels for specific purposes are now available. Please indicate your interest by the identifying reference and address your request to your nearest Perstorp agent.

Em 117 E HOMES AND INTERIORS Em119 E SHOPS AND STORES

Em 118 E CAFES AND RESTAURANTS Em120E MODERN FURNITURE DESIGN C. F. Anderson & Son Ltd · Harris Wharf · Graham Street · London · N.1. Tel: CLErkenwell 4382

Keep it light with SAROPANE and SAROLITE corrugated translucent fibre-glass roofing sheets

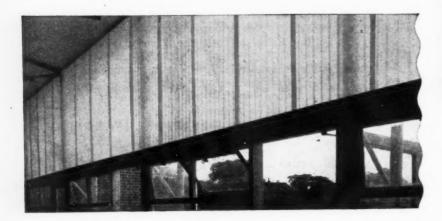
Saropane and Sarolite sheets have exceptional light diffusion, thus throwing an even, shadowless light. This makes Saro sheets the ideal material where a soft restful light is required — either for work or decoration.

Saropane and Sarolite sheets are reinforced with glass fibre and, weight for weight, are stronger than steel. Saro sheets save money because of their durability and low maintenance costs. They can be fitted cheaply and quickly, and are shatterproof. For decorative purposes they can be supplied in colour.

Where appearance is important, the special jointing clip can be used. This is attractive in itself and obviates unsightly overlap — prevents dirt and dust "creeping" between overlapping sheets.

★ Fire Rating: Sarolite F.R.O.S.I. No. 526

Saropane Heavy F.R.O.S.I. No. 530





Please write for technical data, samples and literature to :-

SARO LAMINATED WOOD PRODUCTS LTD . EAST COWES . ISLE OF WIGHT . Tel: Cowes 704.

for the fraction of a COPPER













the Executive can now contact his staff INSTANTLY, without leaving his desk, thus avoiding long journeys from office to office, saving valuable time (and isn't time money?)

The B.H.O.T. Loudspeaker Master, pictured at left, is the answer to ALL Intercommunication problems. All that's needed is to flick a lever, and connection with any member of the staff is effected in an instant.

Conference and priority, as well as other numerous facilities are available. B.H.O.T., with 66 years' experience in electronic engineering, offer you a service of unrivalled efficiency. Please write or 'phone for illustrated brochure.

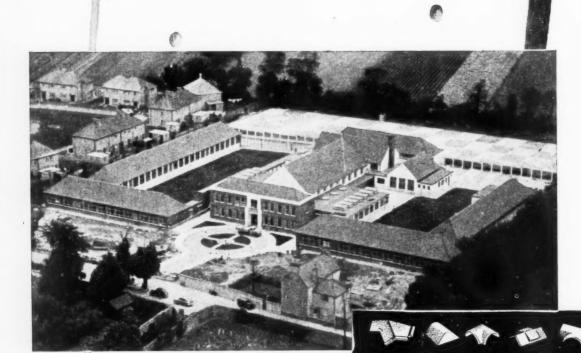
The British

HOME & OFFICE TELEPHONE

Co., Ltd.

73 GREAT PETER STREET, LONDON, S.W.I. TELEPHONE: ABBey 4242 (P.B.X.) ESTABLISHED 1890

HARMONY SUSTAINED



Designers: States Engineers Dept., Jersey. States Engineer: G.C. Law Esq., A.M.I.C.E., M.I.Mun.E. Contractors: Messrs. C. W. Construction Ltd. Photograph by courtesy of the Jersey Evening Post.

Demands for further education facilities in the Channel Isles have resulted in the Hautlieu School, Jersey — a building of exceptional design in a natural setting. Dignus Sandstorm Clay Roofing Tiles were selected to harmonise with this building and its surroundings.

May we send you further details of our tiles?

BEST QUALITY TILES ARE GUARANTEED FOR FIFTY YEARS

DIGNUS

11 x 7 SANDSTORM CLAY ROOFING

11 x 7 SANDSTORM CLAY ROOFING

Group of special fittings.

dm. DG.20

* Maximum output maintained - continuity of supplies guaranteed.

DIGNUS LIMITED : KEELE : NEWCASTLE : STAFFS.



ANOTHER

ings.

LONDON AIRPORT Entrance Hall to the Queen's Building

UNITEX

ACOUSTILE INSTALLATION

The Merchant Trading Company Ltd. supplied the Acoustical Tiles for this wonderful new building.

MERCO SERVICE is available for complete schemes and designs from the preliminary work to the finished job.



Stocks consist of: INSULATING AND HARD BOARDS · PERFORATED HARD BOARDS ENAMELLED HARD BOARDS · ACOUSTICAL TILES CHIP BOARDS · COVER STRIPS AND ACCESSORIES

★ Your enquiries and early consultation on your problems are invited

Architect:
Frederick Gibberd Esq.
C.B.E., F.R.I.B.A.
Acoustical Engineers:
John Dale Ltd., London, N.11
(Acoustics Division)

METCO

°WEELAD°

½ in. Insulating Board cut to sizes and edges processed with a "Vee and Lap" or a "Moulding and Lap".

METO METAL FIXING SYSTEMS

We can offer you a technical service including complete proposals for interior layouts utilising the 'Metco' Metal Fixing Systems.

Specialised contractors are available for installations if desired.

The MERCHANT TRADING COMPANY Limited.

EFFINGHAM HOUSE, ARUNDEL STREET, STRAND, LONDON, W.C.2

Telegrams: "Themetraco, Estrand, London," Telephone: TEMple Bar 5303 (8 lines)

100,000 sq. ft. FACTORY for BRITYIC Ltd. CHELMSFORD, ESSEX

Work commenced on site 1st November, 1955. Steelwork erection commenced after six weeks. BRITVIC commenced occupation after 17 weeks. Building handed over complete, including production area, 31st May, 1956.

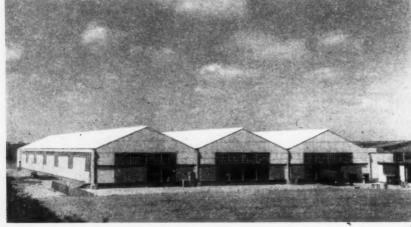
The unique Metsec construction helps you to build faster, save steel, yet pay less.

Metsec

in 17 WEEKS in Mid Winter



2nd WEEK



General Contractors

Messrs. THOMAS BATES & SON Ltd., London and Coventry.

Architects

Stanley Bragg, A.R.I.B.A., A.I.Hsg., and Associated Architect: John Strong, A.R.I.B.A.

Consultants

Quantity Surveyors: Messrs. R. T. Day & Partners, F.R.I.C.S. Structural Engineer: Fredk. J. Brand, M.I.Struct.E. Mechanical Engineers: Messrs. Mackechnie Jarvis and Partners Electrical Engineer: T. Dunwoody, A.I.E.E.



13th WEEK

Janan Manan Ma



17th WEEK

BIRMINGHAM







OLDBURY,



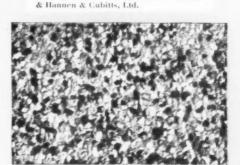




CHEECOLITE Lightweight **Exposed Aggregate Facing and Cladding Slabs**

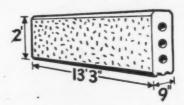
For all buildings requiring high quality natural, coloured finishes, Cheecolite Lightweight Exposed Aggregate Facing and Cladding slabs offer these unique advantages.

- Half the weight of dense concrete therefore easy to handle.
- Excellent thermal insulation-five times better than normal concrete.
- A complete wall unit 6" thick with equivalent thermal insulation to an 11" cavity brick wall.



Mills & Partners, Contractors; Holland

Exposed aggregate finish of Cheecolite units used at Messrs. Hudnut's factory, Eastleigh.



Complete wall unit as used on the above factory.

- Added protection, as Cheecolite aerated concrete is waterproof.
- * Obvious savings in costs, site labour and mechanical handling.

Cheecolite exposed aggregate units are manufactured entirely from Cheecolite aerated concrete. Their uses include (1) as an external skin to a cavity wall construction (2) a complete wall unit which is particularly suitable for schools, factories and similar buildings (3) for giving a new face to old buildings.

CHEECOL PROCESSES LTD. Reading, Berks. Tel: Reading 50821/3

MARLEY

wall tiles

thermoplastic

grease-proof

non-absorbent

interesting in areas of single colour stimulating in patterns of contrast

THE MARLEY TILE COMPANY LTD SEVENOAKS KENT SEVENOAKS 5525







When I take a chair.

I prefer to take an elegant, strong, light, easily handled chair. The same applies when I'm bold enough to take a table. I've met quite a bit of furniture in my time but I've still to find the equal of E.S.A. Pressure die-cast alloy - that's a phrase which always impresses me; it sounds almost as strong as it is. But E.S.A. don't stop there: they cast this alloy into clean, modern shapes; and they provide for incurable furniturethrowers by reducing weight to the minimum.

Pictured below is an E.S.A. light alloy chair

with plywood seat and back - superbly stackable. So is the upholstered version. There are also light

> alloy armchairs, upholstered or not, and tables topped with cigarette-

MANAGON MANAGON

proof Formica.

Find out about the whole range of E.S.A. furniture by writing for brochure to The Educational Supply Association Ltd., Esavian Works, Stevenage, Herts. Stevenage 500; or Esavian Works, Carfin, Lanarks. Tel: Holytown 391.





THE ARCHITECTS' JOURNAL

No. 3218 Vol. 124 November 1, 1956

9.13 Oueen Anne's Gate London S W 1 Tel WHI 0611

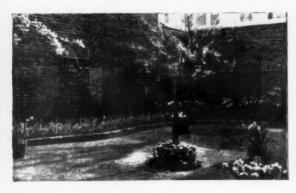
Subscription rates: by post in the U.K. or abroad. £2 10s. 0d. per annum. Single copies, 1s.; post free 1s. 3d. Special numbers are included in Subscriptions; single copies, 2s.; post free, 2s. 3d. Back numbers more than 12 months old (when available), double price. Half-yearly volumes can be bound complete with index in cloth cases for 30s.; carriage, 1s. extra.

NOT OUITE ARCHITECTURE

OUITE CONTRARY

Are gardeners fit to design gardens? By gardeners is meant those green-fingered ones who frequent Wisley, the Royal Horticultural Hall and the Chelsea Flower Show. Their experience and training is so often largely practical, or technical, and their knowledge, therefore, confined to the properties of soils, plant diseases, plant pests, plant growth and plant varieties. Their critical ability is limited to an appreciation of size, strength, degree of colour, and complexity. A gardener's garden is immediately obvious: larger flowers, larger plants, larger vegetables, stronger colours, more colours, more ornamental elaboration, more elaborate blooms than any of his neighbours. The result, however satisfying to the owner, is visually indigestible to the onlooker. Fortunately a profession has been trained which, if the gardener can be persuaded to make use of its services, can tame the gardener's jungle. Two such landscape architects, Lady Allen of Hurtwood, and Susan Jellicoe, have just written a book* which every professional gardener and parks superintendent, and every keen, prize-winning amateur should read. The main lesson it teaches is one of restraint, and the orderly control of lushness. Of course the book is not primarily intended for such superior beings as the gardeners. It has been written for the ordinary person who, moving into another house, feels obliged to take some positive action about the derelict strip of field, shrubbery or yard which lies at the back. (Oddly enough, the book never deals with that rather more intractable problem, the front garden; but perhaps no one can ever solve it very satisfactorily, hence, no doubt, the communal strips of Port Sunlight and the New Towns.) Of the thirty or so clever examples, illus-

^{*} The New Small Garden. The Architectural Press. 15s.







trated by plans and photographs, of laying-out awkwardly-shaped, modest-sized gardens, a considerable proportion of those which are not designed by landscape architects are by either artists or architects. There may, in consequence, be a little weakness as regards variety of plant and performance, but the training in design successfully prevents this being obvious.

Above, left to right, are three examples to show this lead of the designer over the gardener in garden design. The subdesigners of the first two are not named, but the gardens have been selected as good examples of their kind and are included in two new books on gardening written by professionals.* The third example is by a stage designer, Vivienne Kernot, for a backyard 15 ft. by 18 ft., and is from The New Small Garden.

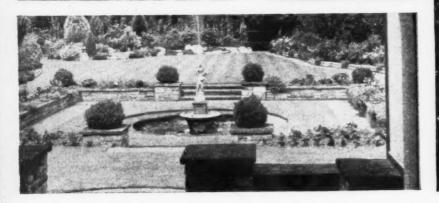
A more common problem, perhaps, is the long narrow garden. Mr. Walkden's

own solution, below right, is simple and leaves plenty of space for giant floral growth, but its visual impact is immediate and not very subtle. There are several answers to the problem illustrated in Lady Allen's and Susan Jellicoe's book, a typical one is shown, below left, by architects Neville and Jean Conder. Measuring 20 ft. by 150 ft., the disproportion is cleverly overcome through the garden being broken up by planting, and by changes of level, into four sections.

For the handling of a few elements:











auth a m bott gare Lan W

and

law

whi tod pra it t ies, are con hov ver car

> gar stai ate the bec boo eas the

> > the

the T tha ha

gai to Th an of on the Th

thi DO sin ho va

> of tin wl

lawn, trees, shrubs and paving, the authors of *The New Small Garden* pick a more imaginative and restrained design, bottom right, than a similar type of garden in Mr. Hellyer's book, bottom left. The former was designed by Eywin Langkilde, a Danish landscape architect.

While Mr. Hellyer's book professes to be no more than a book of samplesand particularly of samples of a scale which only the wealthy could maintain today, Mr. Walkden's book is mainly practical information of the how-to-doit type. Ponds, pergolas, paving, rockeries, fences, gnomes, and god-wotteries are all dealt with, and, in the main, very competently. The Allen-Jellicoe book, however, is a better crib than Mr. Hellyer's briefly captioned picture book. Plans and lists of plants for each garden are carefully provided, and the examples of gardens are often of a much higher standard of design. The authors deliberately do not give detailed information on the selection of plants and their culture because "there are so many excellent books on specialist subjects that can easily be consulted." Unfortunately, for the beginner, they do not list them. Nor do they specify which plant is which in the captions to the illustrations. So again the beginner is heavily handicapped.

al

e-

ге

IS-

w

an

he

ne

by

to

The authors do make clear, however, that while anyone with intelligence and design experience can make a tolerable garden, to make a first-class garden is a task with a planning complexity far greater than the architect ever has to First, and obviously, the gardener's materials-the finishes applied to the largely architectural shaping of the ground, unlike the architect's, are alive. They grow, die down, shed their leaves, and sprout again to an enormous variety of shapes and sizes. They flower, not only at different times of the year, but even at different times of the day or night. The garden must also be designed to please one's sense of smell-a sense the architect rarely attempts to satisfy. The good landscape architect arranges his plants so that they are suited to soil and aspect and correctly related in size and shape, and texture of leaf; and flower to a designed sequence so that a garden, throughout the year, and from all viewpoints, morning or evening, has colour, form and scent. It is a pity that no book has yet been published which gives in simple form, for the ordinary householder, whose unkempt gardens and yards so disfigure our towns and so much of suburbia, a carefully annotated spacetime palette of flowers and shrubs with which to design a garden.

AYDON

EDITORIAL BOARD: (1) Consulting Editor, F. R. Yerbury, O.B.E., Hon. A.R.I.B.A. (2) House Editor, J. M. Richards, A.R.I.B.A. (3) Executive Editor, D. A. C. A. Boyne. (4) Editor Information Sheets, Cotterell Butler, A.R.I.B.A. (5) Editorial Director H. de C. Hastings.

Cotterell Butler, A.R.I.B.A. (5) Editorial Director H. de C. Hastings.

TECHNICAL EDITOR: (6) Lance Wright, A.R.I.B.A.

SPECIALIST EDITORS*: (7) Planning (8) Practice (9) Surveying and Specification (10) Materials (11) General Construction (12) Structural Engineering (13) Sound Insulation and Acoustics (14) Heating and Ventilation (15) Lighting (16) Sanitation (17) Legal.

ASSISTANT EDITORS: (18) Chief Assistant Editor, Kenneth J. Robinson. (19) Assistant Editor (Buildings), L. F. R. Jones. (20) Assistant Editor (Production), W. Slack. (21) Assistant Editor (Information Sheets), V. A. Groom. (22) Assistant Editor (Costs), J. Carter, A.R.I.B.A. (23) Photographic Department, H. de Burgh Galwey, W. J. Toomey. (24) Editorial Secretary, Monica Craig.

* To preserve freedom of criticism these editors, as leaders in their respective fields, remain anonymous

The Editors

EFFICIENT DESIGN FOR BRITISH TRANSPORT

British Railways are planning to spend £1200 million on modernization. With the appointment of a Design Panel to the British Transport Commission to advise on the best means of attaining a high standard of appearance and amenity in the design of equipment, it may happen that British Railways will begin to compete, once again, in appearance and efficiency, with foreign railways. This possibility is strengthened by the fact that two of the members of the Panel are renowned for their work in the cause of good design: Sir Gordon Russell (Director of the COID) and Christian Barman, the present chief publicity officer of the Transport Commission, a past president of the SIA, an architect, a past editor of this Journal and the Architectural Review, and the man responsible for the high design standards of the London Passenger Transport Board's publicity in the 1930's.

In addition, it should be noted that the Commission's Press statement gives their design policy in no uncertain terms. "The new equipment will be modern and highly efficient," they state, "the Commission intend that those qualities should be clearly reflected in form and appearance." Quite rightly, the Commission believes that if this can be achieved on the scale they have in mind one important result will be an increased sense of pride among the staff, and a new confidence in the future of the service on the part of both staff and public.

WHAT RENT CAN A COW PAY?

A manufacturer of building components, when asked at last year's Building Exhibition why he did not take a bigger interest in the agricultural market, replied that farmers seldom seem to know what they want and, even when they think they do, they are quite certain that they could not afford to pay for it. To help the farmer see this problem in a different light, our contemporary, *The Farmers Weekly*, last month organized a three-day conference at Christ Church, Oxford, on "Farm Buildings." The burthen of this conference was that the farming community have, during the last 40 years or so, managed to cut down by a half the amount

of labour needed to grow an acre of corn by the use of up-todate machinery, and that they could do the same again in respect of other branches of farming (notably dairy farming) if they were to use up-to-date buildings. The trouble with old farm buildings, according to Mr. Travers Legge, the Editor of The Farmers Weekly, is first that they need too much labour to run them, and second, that the customary spans of 18-20 ft. are too narrow for handling machinery. What the farmer needs now from his buildings is wider spans—up to 40 ft.—and less height. A second storey, he claims, is always a labour waster, and there is no virtue in carrying your ground floor eaves above the 12 ft. which is the maximum height of storage which can be handled by a fore-end loader. If this much can be said with assurance, all is not yet plain sailing with farm building design. One inherent snag was raised by Richard Llewelyn Davies, who pointed out that though every motive of economy suggested the use of lightweight structures for farm buildings, evidence suggests that for livestock it is important that buildings should have a high thermal capacity to resist sudden temperature change. In fact the volume of research in this country on farm buildings is very meagre. F. G. Sturrock, Head of the Farm Economics Branch of Cambridge University, reported on a work study on dairy housing, but apart from this most of the scientific data quoted came from Denmark and America. Nevertheless, there was enough random evidence to make the British farmer sit up. One farmer (P. Carr from Cheshire) reported that by adopting the loose housing system with yard, parlour and self-feed silage, he reduced the manhours per cow per annum from about 150 to 50 and that he reckoned to pay for his new buildings in six years. If it be accepted that there is, in general terms, a strong case for rebuilding farm property, how can the architect help? First, he must associate himself with the farmer's economic problems: he must know how much rent a cow, a pig, a ton of wheat can pay (the American cow, it seems, can pay 8% of her milk yield for her buildings) and find how to build strictly to that. Second, since the farm rebuilding programme, like any other, can only make sense if industrialized components are used to the full, he must assist the manufacturer to produce the right sort of components.



FILE THIS WEEK

The Industry. Brian Grant writes about a cooker with a "face lift"; some new cooker control units, a range of cabinets to hold electric meters, fuse-boards, etc., and a new gas heater. He also asks why BSI is now demanding a minimum thickness of $1\frac{1}{4}$ in. for slate cills in view of the fact that 1 in. cills have been used for so many years and are, in fact, still being made......page 624

Information Centre. Reviewed here are two TDA booklets on timber gates and fences, and an American article on recommended practice for office lighting.

page 626

Building of the Week. The police headquarters at Wellington, illustrated here, is published for cost comparison with the police headquarters at Manchester, which was illustrated on May 5, 1955.....page 633



ELEMENTAL PASSIONS

Last Wednesday's meeting at the Building Centre-on cost analysis and elemental bills-says my spy, was crammed to the doors. Rumour had promised bloodshed, but tempers remained cool. "I had no idea," said Peter Trench, of Bovis, from the platform, "that passions could be so roused by a dry subject. Before this meeting I was nobbled by quantity surveyors, by architects and even by builders!" He, with F. G. West, LCC deputy architect, and James Nisbet, principal quantity surveyor, MOE, opened the discussion; with Sir Thomas Bennett -statesmanlike-in the chair. It has been patiently explained to ASTRAGAL that an elemental bill is one in which all the trades for each "element"-for instance, roof construction-are put together. So now you know.

The builders had doubts about the elemental bill for tendering—which may take longer—but welcomed it for contract planning and management. Stanley Farrow said that we are all striving for architect-builder collaboration, and the elemental bill can help to bring the q.s. into the team. Peter Trench said the builder must help in defining the elements, and R. O. Whittington (of Wates) called for simplification of the Standard Method.

C. B peter signe those sensit piece with conta

down
for a
are u
serva
more
The
beca

cour bills from in p aske we a F. G

publiture ture anal large

stati

Fa app surv arch figh issu and

will

ther up. of t mitt

eler "ha tere

Tiqua



C. Bernard Brown, who converted Trumpeter's House, Richmond (above), has designed a neighbouring row of almshouses for those who are respectably poor (right). This sensitively-designed and almost-forgivable piece of bogus Georgian, which was built with "old bricks of mellow loveliness," contains five houses. Four of them (one room down and two up, plus bathroom) will sell for about £6,000 "to the sort of people who are used to Georgian houses but can't afford servants." Another £4,000 will buy a little more space, nicely shaded by the portico.

The architects welcomed cost analysis because it "can show the economic consequences of design decisions." K. C. Evans-the new Isle of Ely county architect-described elemental bills as appropriate to our departure from traditional trades, and trade order in putting up buildings. David Medd asked "how can we direct building if we are in the dark about costs? " and F. G. West described quantity surveyors as being "too detached-compilers of statistics." David Nenk spoke for the public client on the discrepancies between estimates and ultimate expenditure, and the closer control that cost analysis gives to those who decide how large sums are to be spent.

the

and

r had

's re-

said

plat-

oused

eeting

eyors,

ers!

eputy

ncipal

d the

ennett

It has

RAGAL

which

'-for

ut to-

it the

h may

r con-

tanley

ng for

nd the

ne q.s.

id the

g the

on (of

of the

Faced on three sides with such approval of the methods, the quantity surveyors, like the staunchly-traditional architects of the thirties, could only fight a rearguard action on minor issues: elemental bills will take longer and require higher fees; cost planning will only work for a programme of similar buildings; . . . "and anyway there is an acute shortage of workersup. . . . " M. H. Thackray, chairman of the RICS Quantity Surveyors Committee, said that the official view must await the findings of the RICS Cost Research Panel and sub-committee on elemental bills. "The latter," he said, "had received a great deal of very interesting evidence."

The next move is clearly with the quantity surveyors. They are the last



troops to be called for the last—but decisive—engagement in the battle of the Modern Movement.

GO AND SEE IT (YOURSELF)

In conditions that made previous ICA crush-sessions look like a desert waste, Sir Anthony Blunt (wearing his new knighthood very lightly) opened the ICA's Picasso, himself exhibition a few nights ago. Just to remind us that he really is England's top art-historian, he opened his remarks with an arthistorical joke so obscure that not even ASTRAGAL could see it (who is/was the Cavaliere d'Arpino, anyway?) and having thus nailed his audience to the floor, he then threw academic caution to the winds and announced that not only is Picasso (himself) the greatest artist of our time and the most universal genius of our time, but has also reflected all the significant emotions of our time-and then smartly declared the exhibition open before anyone could argue. Notably ASTRAGAL (himself) who wanted to ask what buildings, for instance, universal genius Picasso had designed.

Since one couldn't move a hand in the crush, let alone a motion of protest, one had to be content with seeing what one could of the exhibition (itself). It is a by-product of the "official" life of (himself) that is currently being written by Sir Anthony's only serious English rival as an (himself)-scholar, Roland Penrose. From which you may correctly deduce that it is not a show of original

works of art so much as an anthology of documents, souvenirs, girl-friends, holiday snaps and what-have-you: the visual equivalent of the Third Programme's "As - remembered - by - his friends" features, only in this case you don't have to put up with the longwindedness of toothless, microphonehogging veterans, but get the message straight from the documents. The display technique is so suitably dead-pan that it can hardly be called display technique at all, and most visitors will be surprised to find that it is the work of one of the most uninhibited of the This is Tomorrow exhibitionists, John McHale.

UP JENKINS!

One of the men behind the New Brutalism (and a lot of other things as well), Ronald Jenkins, came to the microphone in the Third's Prospect series recently to talk about Plastic Theory and its effect on structural design-a subject which, though it dates back to before the War, hit most people most forcibly in the eye when the Smithsons' Hunstanton School (engineer, Ronald Jenkins) was put up a couple of years ago. It was a quietlyspoken talk, in which the older Elastic theory was examined, and-far from being rejected, as some hot-heads seem to require—given its due for the large number of structural types that it still serves well, and then the peculiar usefulness of Plastic Theory for certain types of frames was demonstrated without any wild claims being made, nor any recourse to mathematics.

Perhaps because of the absence of mathematics it all sounded terribly easy and common-sensical, so that Third Programme listeners (though not architects or engineers) must have wondered "Why didn't they think of all this before?" However, as Reyner Banham has observed, once a certain "state of sophistication has been achieved, and the new concept digested, it suddenly appears so simple that it can be vulgarized without distortion."

ASTRAGAL congratulates Ronald Jenkins for a classic of intelligent vulgarization without distortion, and hopes that the Third will give other abstruse subjects (send your suggestions to them, not me) a similar treatment.

BUILT IN USA

William Allen, speaking recently on the Third Programme about the "Built in USA" exhibition at the BC, found plenty to praise, but he smacked down two buildings quite hard. The first was Aalto's snaking dormitory block for the Massachusetts Institute of Technology, which he found disappointing when he visited it. (It had crude finishes and was "singularly noisy.") The other building, or group of buildings, which he singled out for criticism was, rather surprisingly, Gropius' Harvard Graduate Centre. Mr. Allen was unimpressed by the "dull stone" on a flat, smooth facade, with "disappointing drabness, inside and out, aided by a touch of excessive economy in places," and disappointed by the inadequate landscaping. ASTRAGAL finds such criticism of the work of the leaders by the younger advocates of modern architecture, as apart from the old brigade, a welcome sign that the Modern Movement over here is growing up.

Averaging eighteen seconds to a slide—a coloured slide to boot—Michael Brawne showed three hundred slides of America and American architecture at the AA last week. With a fairly high-pressure commentary accompanying the pictures, it was not surprising that at the end of the evening no questions were forthcoming from a slide-drunk audience. Brawne started with a Bertoia chair, and ended with an Eames chair, each representing the Americans' tremendous technological flair today.

In between he attempted to indicate American climate and topography, the country's abundance of consumer goods and its sudden, surprising lapses in capital equipment. He ran through a potted history of American architecture: ("the heart roots of American architecture can be seen clearly at Chicago") and in a few score slides we saw how small a step it is from Sullivan's Chicago offices to Mies's Lake Shore Drive flats. Michael Brawne visited and photographed most of the modern buildings of note save for Mies's Farnworth house (closed to visiting because of a client-architect quarrel), Wright's Falling Water (hidden by scaffolding), and one or two others, and the results, in colour, made inspiring viewing.

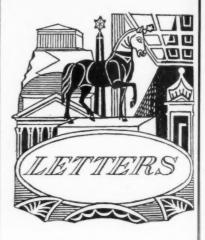
PERHAPS YOU'VE GOT SOME, TOO

Twice recently, on moving aside the pot plants, raising the Venetian blinds and parting the Nottingham lace curtains to look out of the office window. ASTRAGAL has been startled to see kestrels circling over SW1. A pair of them, what's more. Not quite architecture? No, but quite a lot of town planning. The last pair of SW1 kestrels, the famous ones that people used to write to The Times about and so on, nested in the Doulton ruin on Albert Embankment. When that went, the hawks went too, and if they are now back again, then there must still be enough bombed and derelict property in Westminster to provide them with a pied-à-tèrre. Or, dread thought, do they spread in with subtopia, and nest in Cotswold detailing?

TRY THIS ON YOUR FRIENDS

From eleven-plus onwards, ASTRAGAL has been pestered by intelligence tests that demanded "Which of the following is out of place?" Let me pester you with the same question and the following list of speakers at an Ashridge course* on "Modern Architecture and Town Planning ": Professor Sir Albert Richardson, Percy Johnson-Marshall, R. Furneaux Jordan, Frederick Gibberd, Robin Day, Lucienne Day. That's right, all the last five! Go to the top of the class. But seriously, how did he get in, and what on earth can he say, in his introductory address, that won't be flatly contradicted by all the others?

ASTRAGAL.



C. F. J. Thurley, F.R.I.B.A.

Una Knight, A.R.C.A.

Paul Ritter, A.R.I.B.A.

Alan R. Ferguson, A.R.I.B.A.

G. Rattray Taylor

Ian Nairn, Author of "Outrage"

Eugene D. Sternberg Member of A.I.A.

"Four Disturbed Architects"

E. M. Ackery, of the British Electrical Development Association

Articled Pupils

SIR,—Mr. Enthoven is far from accurate when he writes that the articled pupilage system survives only in a few remote places. That the system is open to abuse, it also debatable.

It is incumbent upon every would-be pupil or his parents to ensure that he enters the office of a reputable architect, and that the conditions required by the RIBA are strictly adhered to.

A good practice will not use these entrants as office boys, to which "Articled Pupil—September 1956" refers. They enter the office for the specific purpose of education. They should be put on a drawing board the day they arrive, and learn the profession of architecture for a period of not less than four years in a practical manner, including surveys, visits to sites, and instruction in supervision.

I have two articled pupils, one in each of my offices, and in the absence of schools of architecture in a district like this, there is no other method of affording them practical instruction.

During the time of their articles they attend schools in the evenings, with two afternoons a week. They execute many of the testimonies of study during office hours. At the end of articles they are of intermediate standard or have passed the examination. They have a training second to none Any premium is returnable, and I know of scores of practices who follow the same

procedure.

The one snag, of course, is that a principal may take on more pupils than he can ably educate, but then, enquiry upon entrance should obviate this danger. The resultant assistant will compare favourably with any

who have been turned out by the schools. C. F. J. THURLEY.

Torquay.

[•] November 16-19. Fee £3 15s.

SIR,—The Chairman of the Board of Architectural Education mentions "training for the profession by attendance at a School of Architecture . . . combined with office employment as a composite course."

As a graduate of an allied profession (Industrial Design) who has been following an evening course towards ARIBA at two leading schools of architecture, and working in four private offices and a New Town Development Corporation, I wish to chal-

lenge Mr. Enthoven to justify his claim that a "composite course" really exists. I submit that there is no connection or co-operation between school and office, and architects in charge of the latter do not have their attention drawn to the educational needs of their students. It is not necessary to dislocate office routine for work to be so allocated that a student gains a fairly wide experience of work both in the office and on site. Many architects, of course, do their best in this respect, but no steps are taken by the Board of Architectural Education to draw the attention of less conscientious members of the profession to their responsibilities.

Even with the best intentioned employers, the student can only receive experience of the particular type of work, e.g. domestic, ecclesiastical, industrial, traditional or contemporary, etc., in which that office may specialise, and that may be at a very low level indeed, such as fetching prints, tracing, stencil lettering and no construction or site

work. It is quite wrong that the schools, or the Board of Architectural Education should allow the students training to rely in any degree on such a gamble as is offered by the office in which he is fortunate or unfortunate enough to find a job, and it is the responsibility of the Board to revise its policy on part-time education immediately.

UNA KNIGHT.

W.

4.

4.

of A.I.A.

ectrical

accurate

pupilage

remote

abuse, is

be pupi

nters the

that the

entrants Pupil-

nter the

ducation

oard the

ession of

ess than

including iction i each of

chools of

ere is no

practical

les the vith two many o

ce hours

of inter

examin

to none

know of he same

principal can ably

entrance

resultan

with an

chools. TURLEY. SIR.—Allow me to endorse the basic arguments presented by "Articled Pupil" in his letter in the issue of September 27. I have taught many articled pupils and know how their services are misused in offices, how little architectural experience they accumulate and how they regret having become articled if they feel bound to honour their agreement.

agreement.

The attitude of the RIBA is not just a matter of not caring. At present we support this anachronism in issuing the official "Articles of Pupilage" form, to be filled in as the agreement. On it there is the space for the amount of the premium to be paid to the architect. I have known parents moved by the kindness of the architect who took on five years' free labour from their boy without asking for that premium as well!

Ignorance of provincials, snob value of white collar jobs, and connivance of the RIBA are responsible for recruitment of many unfit students under false pretences: for the fact must be faced, that the articles when completed are of no value at all in obtaining any professional advantage whatever. Nay worse, they do in fact reflect a lack of initiative, or a sad period of bondage, in most cases.

PAUL RITTER.

Nottingham.

SIR,—Whilst there is much sound reasoning in the letter from "Articled Pupil" concerning slave labour in offices and the difficulties to be faced by one who does his training by the part-time method, the writer is surely greatly mistaken when he talks about grants for full-time study.

I personally have yet to hear in recent years of one who, having been accepted by a School of Architecture, could not get a grant of reasonable proportions through their county education authority for the period of their training. These grants are usually not a "living wage," but can be supplemented by vacation work to something like the required amount,

If a prospective architectural student cares

to stay on at school for his advanced cer-tificate of education he can usually obtain a somewhat better grant towards his pro-fessional training, at the same time benefiting from the two extra years at grammar

ALAN R. FERGUSON.

Peterborough.

Patrist And Matrist

SIR,—I was sorry, on reading ASTRAGAL'S comment (AJ: Oct. 18) on my article in the Architects' Year Book, to find that I had completely failed to make my point clear. It was not my object to provide new names for the familiar stylistic categories of "functionalist" and "expressionist" but to show how these categories relate to categories in the fields of religion, politics, child upbringing and so on. The terms these general categories, and were devised before it had even occurred to me that architectural style might represent a further application of them.

I was not concerned with labels, but sought to explore the psychological origins of such patterns, i.e. to explain their occurrence. Moreover, I sought to show why changes take place, so that one style is favoured at one period, and the contrary one at another. I suggested that these changes were closely associated with changes in outlook in religion and other fields, because all these attitudes are associated with certain elements in personality, the balance of which changes from time to time.

from time to time.

Finally, I suggested that, if architects today face certain difficulties, it is because the balance of these patterns in society as a whole is disturbed. In applying these theories, already worked out in other fields, to architecture, I was careful to be tentative, not dogmatic; and I hoped that discussion might be evoked from which I could learn whether the application to architecture was whether the application to architecture was valid or not. I was prepared to be told that I was wrong, but to have the analysis dismissed as an exercise in jargon-juggling I find surprising; it suggests that ASTRAGAL has completely failed to understand the

point.

May I add that if any reader of the Journal who has read the article in question (it is called Psychology, the Architect and the Patron) would care to send me serious comments, I should be extremely interested to have them?

G. RATTRAY TAYLOR.

Surrey.

ASTRAGAL replies: ASTRAGAL replies: I thank Mr. Taylor for his courteous reply, but remain unabashed. The idea that Matrist/Patrist were alternative labels for categories we know already was suggested by the article itself—e.g. "completely categories we know already was suggested by the article itself—e.g. "completely Matrist, or Romantic." As for "I was careful to be tentative, not dogmatic," all one can ask is "What careless person wrote the captions, then?" On page 23 we read of an Italian Gothic cathedral that "the proportions of the facade are wrong" without any qualifications as to the standards of out any qualifications as to the standards of rightness that have been transgressed, and on page 20 we read of one of Gaudi's Lodges in the Parc Guell, Barcelona (which apparently has ceased "to be art"), that it embodies "in extreme form . . . lack of formal balance" and that "we can also see the lack of interest in Function." The building in question happens to have a symmetrical facade, or nearly so, as Mr. Taylor could cal facade, or nearly so, as Mr. Taylor could have seen by carefully scrutinising the photograph he reproduced, and how one can "see" a lack of interest in function from an exterior view, unsupported by a plan, beats me. Hair-splitting? No. These are

the only opportunities Mr. Taylor has afforded his readers to compare his theories with visible architectural facts. ASTRAGAL is quite prepared to admit that he may have missed some concealed point in Mr. Taylor's article, but even after a second reading it still looks like an attempt to apply a thoughtsaving diagram to a thought-needing situ-ation. I may have failed to understand, but perhaps Mr. Taylor has failed to communicate?

Reply To Mr. Senior*

Sir.—Reasoned quantitative criticism? Right. Let's have figures. Who are "all the people whom the planning authorities propose to house"—the sum of the Overspill figures? Do they account for the thousands of private house-builders and the anti-planning of other ministries who build refineries (or married quarters or atomic energy housing estates) outside the planning energy nousing estates) outside the planning system altogether? Can any statement like that take into account the fact that one shocking bungalow in the middle of a bogus smallholding in open country litters something more like a square mile than an acre? Does the calculation include the extra space in sewage works and transformer stations and megalomaniac road making (all outside planning) to give services to the dispersed? In fact, each bit of dispersal uses up far more land than the simple X-to-the-acre

formula for the houses.

The reason for our writing the Outrage issue was to show that there is not one cause for disappearing countryside but dozens which are always argued over separately, thus missing their total effect. So add the unplanned to the planned dispersal and then add to that the services that will be needed for them, then the claims of the electrical authorities, the service departments, the forestry commission (which alone plans to do away with three million more acres by 1993), the public utilities and private industries and the land needed for the roadwidening schemes. Then assume that most of these will be botched and uncamouflaged and will therefore affect many times the area that they occupy: the result, added up, comes to something a lot more startling than

½ per cent, of the open country. Could I put up an alternative proposition Could I put up an alternative proposition for reasoned quantitative comment. Viz.: Overspill estimate from Birmingham = 203,000 persons. Derelict land in West Midlands = 10,000 acres.
Overspill from Liverpool and Manchester = 339,000 persons. Derelict land in Lancs and Cheshire = 15,000 acres.
There's part of the answer to overspill if we had the outs and the intelligence. But

we had the guts and the intelligence. we'd rather gobble up more farmland.

Can I tempt him to another mute journey to illustrate the "futility" of a generalization like "one vast mass of sprawl": Brentwood to Slough, via Eastern Avenue, the North Circular, and the Great West Road. Alternatively, of course, I could say that argument atively, of course, I could say that argument is futile so long as Mr. Senior refers to Greater London in such a superfactual and un-pin-downable generality as an "irremediable mess." Rochampton? Canonbury? Hampton and Richmond? Old Oak Common? Belgravia? Tchk, Tchk! IAN NAIRN

London.

* Letter published on October 25

No Architectural Expression of Medicine

SIR,—In your editorial of August 16. on "Health Centre of Group Practice Clinic," you referred to the book of which I was the co-author. In the course of writing this, I visited England in hopes of finding some examples of the type of medical buildings

with which the book was concerned. I did include the health centre at Corby, but was surprised otherwise to find almost no architectural expression of medicine on the level on which it is most often encountered the general public-office calls to the family physician, to a specialist, to prenatal and postnatal clinics, etc.

There are, of course, many differences in the organization of health services between Britain and the United States. Private physicians and groups of physicians cover a much larger area of health service in the United States than in England. (It should be mentioned that true group practice is only a small segment of private practice in the United States and has been consistently and bitterly opposed by the American Medical Association). A few of the differences in the organization of health services between the two countries has much significance from an architectural point of view.

The conviction expressed in the book was that architecture should be regarded as an integral part of medical treatment. The architect's role should be that of a consulting specialist to the doctor and other personnel who will use the building he designs. I fully support, therefore, the contention that the architect has something essential to contribute to the health centre and the group practice clinic. I am convinced that doctors, once they realize the vastly improved efficiency and comfort that results from practising in gracious buildings specifically designed to further their objective, would not be satisfied to continue working in make-shift huts or remodelled flats. EUGENE D. STERNBERG.

Colorado.

Sweated Labour For Local Government Architects?

SIR,—An architect's fees on a job of £500,000 are not likely to be less than £20,000

According to a recent advertisement, the leader of a schools section of architects, working under the direction of a borough engineer, and likely to be entrusted with such a project, is offered a salary within

the range £795-£970 p.a.

Even after allowing for the borough engineer's and numerous architectural assistants' salaries and administration costs, we feel that the borough council are to be congratulated on the profit they are making on behalf of their clients, the ratepayers.

In industry and private enterprise the erms "exploitation" and "sweated terms "exploitation" and "sweated labour" might be bandied about, but such sacrilegious expressions must not offend the sanctity of Local Government Service.

FOUR DISTURBED ARCHITECTS"

Essex.

The Cost Study Of Domestic Oil Heating

SIR,—The Cost Study of Domestic Oil Heating published in your JOURNAL for September 20 comes as a disappointment after the effort made in the article "Running Cost of Heating Small Houses," published on July 12, to get to grips with the lished on July 12, to get to grips with the problem. The earlier article was genuinely helpful because it showed what it was actually costing Messrs, A. B and C to heat their houses; this later Study merely indicates what it might cost Mr. X to heat his mythical house if certain conditions were complied with; one of these conditions

being that in summer a boiler with a rated output of 80,000 Btu/hour would supply a hot water demand averaging about 1,750 Btu/hour at an efficiency of 70 per cent.

Apart from this, I do not understand why the cost of summer water heating is taken alternatively at 2d. per unit or at 1·1d. per unit plus a proportion of the standing charge. The house in question is a fairly large one and it is more than likely that lighting and radio or T.V. alone would cost less on the two-part tariff than at an average rate of 51d, per unit and in a house of this description it is surely reasonable to expect that a fairly extensive use will be made of other electrical appliances such as refrigerator, electric iron, vacuum cleaner and all the other items that go to lightening the housewife's life. It is also more than likely that quite extensive use of electric fires will be made because no central heating is installed in the bedrooms. This being the case it is surely not reasonable to charge the cost of summer water heating at either 2d, a unit or to debit it with a proportion of the standing charge. The house owner of the standing charge. The house owner would inevitably use the two-part tariff and the standing charge would be paid for by these other services.

Incidentally, is it not rather unusual to assume that the winter heating period is 20 weeks in duration? In my experience 30 weeks is the commonly accepted figure.

E. M. ACKERY.

London

John Eastwick-Field replies-

I am sorry that Mr. Ackery of the British Electrical Development Association is disappointed with the figures which I worked out (as stated in the article, it was for an actual house: not a mythical one).

He is disappointed presumably because electricity seems to be rather expensive, yet he does not refute the figures very con-vincingly. These figures were prepared for client in order to decide upon the kind of fuel to use for heating and hot water in a London house, and took into account all the practical implications which could be foreseen: it was certainly never a "conthat a boiler of large capacity should have to heat a small quantity of water in summer. I wished only to see what it would cost if it were put to the task.

The costs for electrical consumption were those quoted to me for the house in question by the London Electricity Board. Frankly, I fail to see why a part of the standing charge (two-part tariff) should not be added to the rate of 1.1d, per unit for heating in the summer, since the standing charge should be apportioned between all the uses to which electricity is put; water heating accounts, after all, for a large part of the total consumption. Incidentally, in this particular house our clients preferred to have gas fires and a gas cooker to electric ones.

Mr. Ackery suggests that the Study should not have been published because merely an estimate of the costs for different systems; but these estimates are the only means of choosing between one kind of heating and another for particular requirements, if cost is of significance-unless, of course, one accepts advice uncritically from any one of the rival interests, each of whom is naturally able to show by some means or other that his own kind of heating is the cheapest and best,

The main object of publishing the Study was to show the sort of calculations which it seemed to me had to be made in order to make a decision and if there had been unbiased criticisms of the calculations I would have welcomed them.

It is a pity perhaps that the purpose of the calculations was not made clearer but I still hope that the figures may have proved one that the figures may have proved genuinely helpful" to architects if not to Mr. Ackery.



Si

Th

an

ha

see

its

da tra

cal

the

fa

by

H

D

SII

di

A COMPETITION . . .

... Not to Enter

Don't enter for the Chicago competition for a memorial to Enrico Fermi, say the IUA Secretariat. The Secretariat have examined the published conditions of the competition and find them to be not in accordance with the standard regulations for international competitions Kalendar, page 840): (see RIBA

THE CITY DWELLER

Where to Put Him

"Housing the City Dweller" is the subject of a one-day conference to be held at the AA, 36, Bedford Square, W.C.I, on November 30. The speakers will be Lord Silkin and R. Edmonds (chairman of the LCC planning committee). Arthur Ling will be in the chair. Applications, together with a fee of 7s. 6d. (including tea), should be addressed to the organizer, the ABT, 1, Ashley Place, S.W.1.

DO YOU CARE?

Question to 500 Architects

Do you care about your local society? is, in effect, the question which the Essex, Cambs and Herts Society of Architects is putting to its 500 members. The Society which finds that the same small group of members attends most events, wondere if the type of programuse being organized is on type of programme being organized is on the wrong lines. A reply-paid card has been sent to members, who, by "crossing out the words that do not apply," can show what sort of function they prefer to attend. They also show when, where and if they would like to meet regularly. The first statement on the card reads: "I/am not able to/do not wish to/hope to/support the Chapter programme.

GOING DOWN . . .

. . . Under For Move Up

From Paddington to Adelaide—from borough council architect to university professor of architecture—is the move being made this month by R. A. Jensen.

THE DESIGN CENTRE

Six Successful Months

The Design Centre is pleased with itself—and justifiably so, for it's first six months have convinced the COID that the Centre seems so far to have more than justified its existence." Visitors have numbered a daily average of 2,500, and more than 11,000 trade and personal enquiry cards have been filled in (the proportion of trade to personal cards is one in seven). A representative of the COID told the JOURNAL that some manufacturers whose products were not accepted by the Centre immediately made alterations line with the criticisms they had received. He also said that although large firms find it difficult to trace the influence of the Design Centre's approval on increased sales, smaller firms have been astonished at the difference it has made to them. One small firm inceased its business by five hundred per cent. after its product had been shown at the Centre.

AN IDEAL HOME

Crib It Yourself

tion

the

ave the

in

IBA

oject

the

emilkin

LCC 1 be th a be , 1,

ts

? is.

ssex,

ciety.

p of f the

s on

been t the

what They they

first

able

-from

probeing The winning house design in the Daily Mail's architectural competition is "full of ideas to copy." So says the Daily Mail itself. What it does not say is who is supposed to do the copying. Other architects? Spec-builders? The winning design (by David Oliver, as announced in last week's AJ) will not be made public until March. It will then be seen in "live" form at the Ideal Home Exhibition at Olympia.

MEN ONLY

Tickets for the Asking

Men only may apply for tickets for pro-ceedings of the Art Workers Guild, which ceedings of the Art Workers Guild, which holds its meetings at 6, Queen Square, Bloomsbury, W.C.1. Tomorrow the Guild will be addressed by Stephen Bone on "The Likeness Trade: Some Thoughts About Portraits." On November 16, Trenchard Cox will speak on "The Function of a Museum of Art." Applications to attend these meetings (6.30 p.m. for 7 p.m.) must be addressed to the hon. secretary, A. Llewellyn Smith, F.R.I.B.A., 103, Old Brompton Road, S.W.7.

ARCHITECTS AT PLAY

. . . or Listen with Father

"Architects at Play" is a sub-heading in one of the two Christmas lectures for children which G. Grenfell Baines will be giving ren which G. Grenfell Baines will be giving at the RIBA on January 3 and 4 (3 p.m. on each day). Tickets for these lectures—to be given under the general heading of "The Adventure of Architecture"—may be obtained free from the Secretary, RIBA, 66, Portland Place, W.I. (Mark the envelopes "Christmas Holiday Lectures".)

A BRIGHTER BR?

Transport Design Panel

Good design on British Railways may yet be achieved. The British Transport Commission has appointed a panel to advise on the "best means of attaining a high standard of appearance and amenity in the design of their equipment." The chairman of the panel is T. H. Summerson, chairman of the north eastern area board and a member of the Commission. To help the panel

to keep abreast of contemporary ideas in design, the Commission have appointed "two outside members prominently associated with the development of industrial clated with the development of industrial design in this country." They are W. J. Worboys (a director of ICI Ltd. and chairman of the COID) and Sir Gordon Russell (director of the COID). The other members include three officers of the Commission: Major-General Ll. Wansbrough-Jones (secretary general), J. Ratter (technical adviser), and the rection Rayman (chief publicity officers). and Christian Barman (chief publicity offi-cer), with E. W. Arkle (chief commercial manager, London Midland Region of British Railways) and E. C. Ottaway (chief supplies officer, London Transport Executive). plies officer, London Transport Executive). Mr. Barman, who is a past president of the Society of Industrial Artists, has been appointed executive member of the panel. Like Mr. Ottaway, he is a member of the Faculty of Royal Designers for Industry. He will be responsible for the administration of the panel's activities and of special design services associated with it. The panel will keep in close touch with the Comwill keep in close touch with the Com-mission's architect, but it will not itself be concerned with the architectural design of buildings or structures.

ONE-DAY CONFERENCE

Expansion and Densities

What is stopping the rebuilding of congested areas? That is one of the questions that speakers at the national conference of the TCPA will try to answer later this month. Henry Wells will talk about "Redevelop-ment of Centres of Expanded Towns" and H. Myles Wright will lead discussion on this subject, under the chairmanship of the Rt. Hon. Earl of Listowel. Lord Horder will talk about "Green Belts," and discuswill talk about Green Belts," and discussion of the subject will be led by J. D. A. Newhouse, with Sir Patrick Abercrombie in the chair. Apart from a brains trust on "Planning Principles and Problems," there will be one other subject —Housing Densities." The speaker will be Sir Frederick J. Osborn, the chairman R. E. Thomas, and the discussion-opener, Sergei Kadleigh. The brains trust panel will include W. G. Fiske, Gilbert McAllister, C. A. C. Turner and Clough Williams-Ellis. The question-master will be Desmond Heap. The Conference dates are Naverner. Heap. The Conference dates are November 29 and 30. The headquarters will be County Hall, S.E.1.

ARCHITECTS IN USA

" Cost Conscious to a Fault "

The "Construction Surveyors' Institute" of New York have issued a pamphlet putting forward in brisk terms the advantages of a "Quantity Analysis and Purchase Requisition." These devices appear to correspond with our bill of quantities. This pamphlet begins by criticizing the

practice of "soliciting bids... with sections to be added or omitted as separate estimates," and of asking for prices of alternative materials and designs. "Such malpractice . . . is not only criminally wasteful, but also downright ridiculous," says the pamphlet, and goes on to list a number of advantages which sound very like those put forward for the b.q.—although no mention is made of English practice:

"On completion of the drawings and

specifications, it is recommended that a construction quantity analysis, used as a Purchase Requisition, accompany the bidding documents for the basis of bids and con-

tracts.
"If a number of bids are required the Purchase Requisition will eliminate radical

bidding and the necessity of each bidder having to prepare a separate quantity analysis. Such duplication of ettort is extremely wasteful because each analysis is limited to the use of one bidder only. Inasmuch as there are variations and inaccuracies in each bidder's quantity and quality analysis of requirements, the resulting quo-tations are not comparable. This form of tations are not comparable. In storm of competition is unfair and ineffective because it is not limited to price variations only, but rather to differences in quantity and quality.

When a Purchase Requisition with quan-"When a Purchase Requisition with quantity analysis is provided, it is very useful for verifying contractors' payment requisitions and serves as basis for making plus and minus adjustments readily before and after contracts are awarded and projects completed. The cost of construction can be kept under control from the start of design to the completion of the project through co-operation with the surveyor."

The Institute conducted a poll throughout

The Institute conducted a poll throughout the U.S.A. Some of the conclusions quoted were that:

"Nearly all contractors prefer bidding on definitely indicated pre-established quantities of work.

"Contractors and sub-contractors are opposed to preparing or providing preliminary and budget estimates without compensation. Paying directly for reliable and use-

"About 50 per cent, of the architects and contractors were in favour of using a professional quantity analysis as a Purchase Requisition for the basis of bids and contracts.

"All branches of the industry favour the establishment of uniform terminology and methods in the preparation of estimates, quantity analyses, appraisals and Purchase Requisitions.

"Architects, surveyors and contractors favour payment for professional surveys directly by the construction buyer rather than as a part of the architect's or designer's or pro-rating the charge amongst bidders.

"It is generally favoured that quantity or construction surveyors, analysts, estimators, architects, engineers, and others who prepare

architects, engineers, and others who prepare Assays, Quantity Analyses, Appraisals and Purchase Requisitions should publicly register or advertise their professional qualifications and services openly."

The pamphlet concludes with two paragraphs which suggest that there is an increasing demand for professional surveys, that this demand is greatest among architects "which indicates that they are becoming cost conscious to a fault."

DIABY

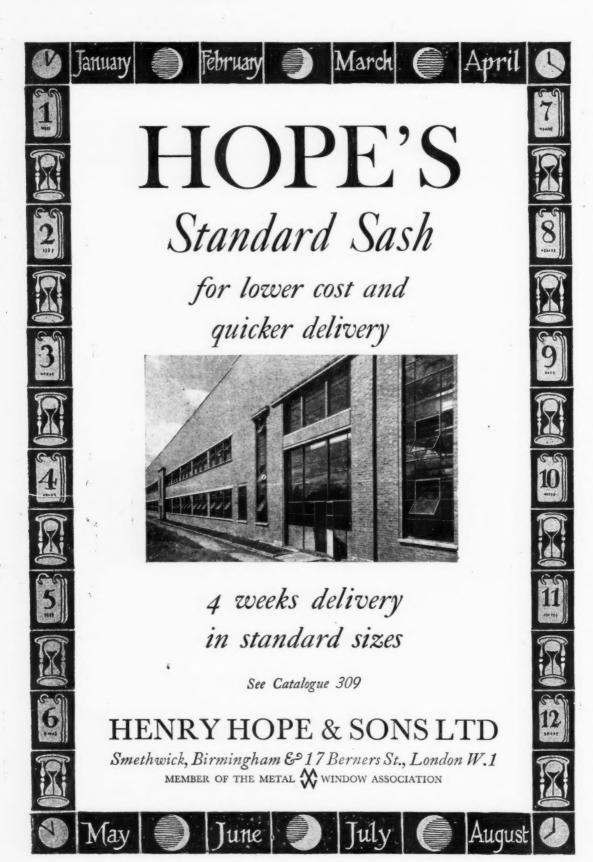
Sanitary Fittings. Building Centre Forum. Denis Clarke Hall, Architect and Alan Adams, manufacturer. Chairman, Gontran Goulden. At the BC, 26, Store Street, W.C.I. NOVEMBER 1

Further Developments in High Flats. Talk by H. J. Whitfield Lewis, Principal Housing Architect, LCC. At the HC, 13, Suffolk Street, S.W.1. 6 p.m, NOVEMBER 6

Inaugural Address. By RIBA president, Kenneth Cross. Also unveiling a portrait of past-president C. H. Aslin. At 66, Portland Place, W.1. 6 p.m.

Shell Roof Design and Construction. Talk by A. Goldstein. At the ISE (London Graduates' and Students' Section), 11, Upper Belgrave Street, S.W.1. 6.30 p.m. NOVEMBER 7

Whither Design? A Layman's View. Inaugural address by R. W. Holland, chairman of the council of the RSA. At the RSA. John Adam Street, W.C.2. 2.30 p.m.
November 7



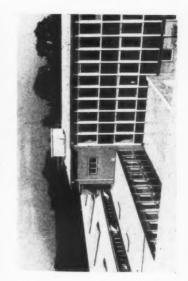




Laboratories at Enfield and Welwyn

Both these laboratory buildings will be fully illustrated in later issues of the JOURNAL. Above, a view from the junction of the Great Cambridge Road and Southbury Road, Enfield, of the first colour television research laboratories in England. This project, which has been jointly sponsored by the Sylvania Corporation of America and Thorn Electrical Industries Ltd., was designed by G. A. Jellicoe and Partners; partner-incharge, A. R. Ballantyne. The consulting engineers were

Ove Arup and Partners and the quantity surveyors, H. J. Venning and Partners. Right, the Technical Services and Development Building for I.C.I. Ltd., Plastics Division, at Welvyn Garden City, Herts, designed by E. D. Jefferiss Mathews of J. Douglass Mathews and Partners (R. S. Poole, associate partner-in-charge), in collaboration with the Engineering Department of I.C.I. Plastics Division. Consulting engineer, A. C. Aston, quantity surveyor, R. E. N. Lowe. This building is the second of a group (for first see AJ: 71.54).





KING'S LYNN POLICE STATION

Designed on clean precise lines the new King's Lynn Police Station will preserve law and order and will itself be preserved by the first class material used in its construction. 'PUDLO' Brand Waterproofer was selected for use in all the subfloors to this building, the pipe ducts and the pit of the police car repair workshop. The lintels and door canopies and the door steps were all waterproofed with 'PUDLO'.

The composition of the 4" thickness of concrete sub-floors in which 'PUDLO' Brand Waterproofer was used was as follows:—4 parts of clean non-porous aggregate to pass \(\frac{5}{8} \)" mesh. 2 parts coarse, washed sand. 1 part of Portland Cement. 2 lbs. 'PUDLO' Brand Powder to each 100 lbs. cement. Only I\(\frac{1}{8} \) lb. of 'PUDLO' brand Waterproofer was used per yard super for this thickness.



Descriptive Booklet sent on request.

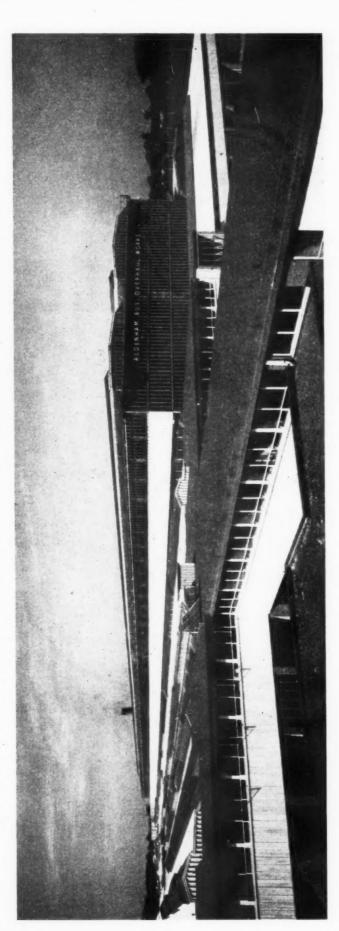
CEMENT WATERPROOFER
Stocked by most Builders' Merchants

The most reliable fire cement is FEUSOL! Have you tried it?

The word 'PUDLO' is the registered Trade Brand of Kerner-Greenwood & Co. Ltd. by whom all articles bearing that Brand are manufactured. Sole Proprietors and Manufacturers:

KERNER-GREENWOOD & CO. LTD., KING'S LYNN, NORFOLK

BUILDINGS IN THE NEWS (continued)





The bus overhaul and repair works on the Watford By-Pass, at Aldenham, believed to be the largest building of its kind in the world, was opened by the Minister of Transport and Civil Aviation, Harold Watkinson, on October 30. The buildings were designed by Thomas Bilbow, architect to the LTE, and K.J. H. Seymour, architect-in-charge; structural engineers, A. V. Bond and A. McBeth. The main works (in the background in the photograph) cover an area of 17 acres. In the foreground are the canteens, administrative offices and hostel.

Bus Station at Canterbury

Left, the St. George's bus station, Canterbury, designed for the East Kent Road Car Co.

Ltd. by H. Campbell Ashenden and John Clark and built by Richard Costain Ltd. The site,
which is bounded by St. George's Lane and the City wall, has a total area of 5000 sq. yds.

The two-storey block on the left in the photograph contains a waiting room, booking hall,
enquiry office and cafeteria on the ground floor. Administrative offices are on the first floor.



DECORATIVE FLOORING STRIPS

of

EMPIRE HARDWOODS

QUEENSLAND BLACKBEAN
AUSTRALIAN LAUREL
AUSTRALIAN WALNUT
TASMANIAN BLACKWOOD

William Mallinson and Sons Ltd.

TIMBER AND VENEER MERCHANTS

MANUFACTURERS OF PLYWOOD, ARMOURPLY, PANELS, COMPOSITE PARTITIONING AND INSULATING BOARDS

Telephone: Shoreditch 7654 (10 lines)

130-150 HACKNEY ROAD
LONDON, E.2

Telegrams: "Almoner," London

THE INDUSTRY

This week Brian Grant reports on a redesigned cooker a new range of cooker control units, two publications on slate cills, electricity supply control units and space heating by gas.

DESIGN IMPROVEMENTS

It must be nearly thirty years since the Aga was first introduced into this country and in those days it set a new standard, not only in performance, but in 'design. Since the end of the war a number of British designed thermal storage cookers have been introduced, most of them quite clean in general appearance, and the Aga has now had a face lift and general tidying up with the results shown in the photograph on the right. (Aga Heat Ltd., 20, North Audley Street, London, W.1.)

COOKER CONTROL UNITS

M. K. Electric Ltd. are now producing a new range of cooker control units which consist of a flush 30 amp. double-pole cooker switch and a separately controlled 15 amp. round pin or a 13 amp. rectangular pin socket to BS.1363. The units are supplied in two types for surface or flush mounting and in both versions the switch unit can be easily removed to simplify wiring, and the flush units have internal adjusting screws so that the switches can be raised or lowered to line up with the plaster finish. Prices, with or without a pair of neon indicator lamps, vary from 26/4 to 43/4 and a conversion unit is made with an adaptor plate so that the new type can be fitted in the older model control boxes. (M. K. Electric Ltd., Wakefield Street, Edmonton, London, N.18.)

SLATE CILL THICKNESSES

Two sets of publications on slate cills, wall facings and window surrounds have recently appeared almost simultaneously.

One deals with Wincilate products, and contains four AJ Information sheets, with some suggestions for further uses of slate, including fireplace surrounds, sinks, skirting boards, and, of course, the traditional larder shelf. (The Bow Slate & Enamel Co., Ltd., BR Bow Depot, Old Ford Road, Bow, London, E.3.)

Westmorland slate slabs are dealt with in a series of leaflets covering the same subjects, and, as one might expect with a material which has been in use for some hundreds of years, the recommendations made by the two producers are very much the same. (The Broughton Moor Green Slate Quarries Ltd., Coniston, Lancs.)

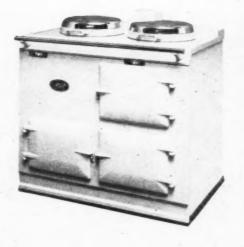
After looking at these two publications I happened to glance at BS 1238, which also deals with slate cills, and found to my surprise that BSI demand a minimum thickness of $1\frac{1}{4}$ in., whereas both Wincilate and Broughton consider 1 in. enough, and Broughton show a weathered coping which tapers from $1\frac{1}{4}$ in. on one edge to $\frac{3}{4}$ in. on the other. So far as I know 1 in. cills have been used for many years, and I wonder why the extra $\frac{1}{4}$ in. has now been added. True, the soffite of the cill has the usual throating, about $\frac{1}{4}$ in. deep, so that the effective thickness is reduced to $\frac{3}{4}$ in. bit

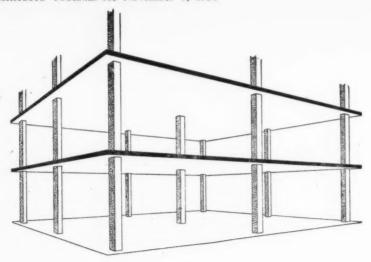
this should not increase the likelihood of breakages, and a far smaller thickness would surely be weatherproof when one bears in mind the thickness of roof slates. It seems to be a rule that BSI drafting committees should contain one or two members of the industry concerned; in fact quite a number of people feel that the industries are too strongly represented. Does this new standard mean that the slate people now have doubts about 1-in. cilis. Could BSI or the slate industry explain?

ELECTRICITY SUPPLY CONTROL UNITS

During the last few years the various manufacturers of electrical gear have produced a series of fuse boxes and other control units which can be mounted neatly on a board and which avoid the usual tangle which was so common in pre-war years. The electricity meter, however, has always remained odd-man-out, but the G.E.C. has now introduced a series of cabinets which contain all the equipment, including meter, switches, fuse boards and cut-outs, all interconnections being protected in metal channels so that the installation is neat and efficient. The units are produced either for flush, semi-recessed or

The redesigned thermal storage cooker, by Aga Heat Ltd.

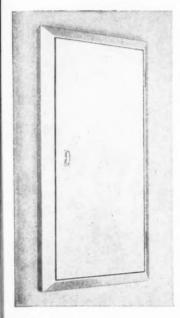




System q.v.

As cheap as possible (quam vilissime) for the client; as satisfying as possible for you, the architect; and clearly satisfactory for everybody when the job is done. All these factors are embodied in the Plate System by Truscon, and should be borne in mind when considering the system you will use for multi-storey buildings. There are no beams, building costs are reduced, and you will be able to offer your clients something really efficient at lower cost. We shall be happy to advise you further on the Plate System by Truscon.

q.e.d. Truscon



G.E.C. electrical supply control unit.

surface mounting and are available in two types, one for houses containing the supply authorities' cut-outs and cable chambers. and another version designed for flats. The wall projection of the flush type is only in. and the projection of the surface type is adjustable from 5% in, to 71 in., depending on the depth of the meter. Installation costs are reduced as all conduits are connected to a common earthed unit and drilling is unnecessary as the top and bottom of the cases are provided with knock-outs. The control panels are designed for singlephase AC supplies up to 60 amperes at 250 volts. Fuses are either cartridge or of the rewirable type. (The General Electric Co. Ltd., Magnet House, Kingsway, London, W.C.2.)

SPACE HEATING BY GAS

Drugasar balanced flue gas heaters were mentioned in the report of last year's Building Exhibition, and to the existing range has now been added a new smaller model (2,500) rated at 31,000 BThU per hour with a gas consumption of 79 cu. ft. Price is £53 for type ORNU with glow plate ignition, or £60 for type WRNU with flint lighter and a flame failure safety device. These figures do not include purchase tax, which is not payable unless the heaters are used for domestic purposes.

A new type of wall liner has also been produced, suitable for both the small and the larger Drugasar heaters: the grille measures only $8\frac{1}{2}$ in. by $11\frac{1}{4}$ in. and is far less conspicuous than the previous models. (F. A. Borchardt, Ltd., 3, Chesterfield Road, Chiswick, London, W.A.)

RESTRESSED INVERTEOMERATE OME AT LITCHFIELD, CONN

inder the supervision of Mario Salvadori. It was built in and is to be used as a shelter. The design is based on a Montevideo. The main problem confronting designers of ensile cable roofs is their tendency to "flutter," and the hell which covers the cables. The Litchfield shelter has a aminated timber edge beam 50 ft. in diameter, supported This structure was designed by students of the Schools of Engineering at Columbia University ystem devised by two Uruguayan engineers, Leonel Viera ables stretch from the edge beam to a central steel ring, ind the spaces between these are filled with wedge-shaped fune this year by the same students at their summer camp, and Luis A. Mondino, for a 300-ft. diameter area colution proposed by Viera and Mondino is to make structure rigid by inducing a compressive stress in. thick, supported m twelve timber columns. Thirty-six 3-in. recast concrete slabs 13 Architecture and



When permanence is important—when specialists in mastic asphalte roofing are required—when a roofing problem demands technical knowledge that comes from years of varied experience—call in Neuchatel.

Sole concessionaires of Natural Rock Asphalte mined in the Val-de-Travers, Neuchatel, Switzerland.

Neuchatel branches cover the country:

Belfast · Birmingham

Cardiff · Edinburgh

Frome · Glasgow

Leeds · Manchester

Newcastle · Offham (Kent)

Plymouth · Portsmouth

CRAFTSMAN-LAID BY NEUCHATEL ROOFING SPECIALISTS



SPECIALISTS FOR 80 YEARS IN ASPHALTE: ROOFING, TANKING, FLOORING AND ROADS. NACOFELT BUILT-UP-ROOFING.

THE NEUCHATEL ASPHALTE COMPANY LTD.

Neuchatel House, Palace St., Westminster, London, S.W.I. Telephone No. of Contracting Departments: RENown 1321

technical section

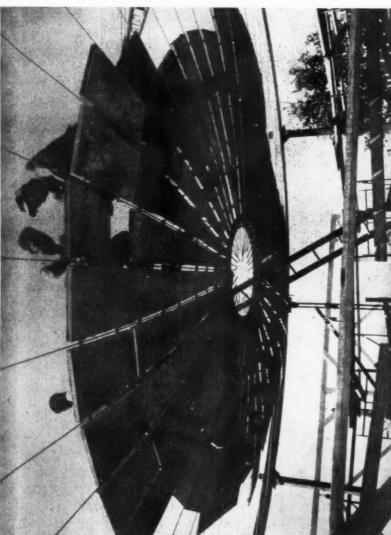
(continued) NVERTED ITCHFIELD 0 S S × 0 Σ 0

the cables over-tensioned "

slaced,



removed, the roof tends to and-bags, and the radial berimeter, and rainwater are encased. concrete into compression. The shelter will remain oints between slabs When the sand-bags again, throwing un-enclosed around then grouted up so the roof cables will drop loading



INFORMATION CENTRE

19.199 construction: details

TIMBER GATES AND FENCES

Timber Fencing and Gates (I) for agricultural and open space purposes; (II) for housing and other buildings. (Obtainable from TDA, free.)

These two booklets give line drawings and specification of the more common of the traditional types of timber gates and fences, adding in the case of the housing volume a few sober variations in the suburban and contemporary manners. The specifications give sizes but in many cases omit reference to joints and in some to ironmongery. Though there is a mention of preservative treatment at the end of each volume this is not discussed usefully and there is nowhere any mention of comparative costs. Though architects will find these useful memorizers, they could have been made much more useful. In particular the agricultural volume does not come up to the high standard set by the Ministry of Agriculture's Farm Fences and Farm Gates, leaflets nos. 6 and 8 respectively, in the series Fixed Equipment on the Farm.

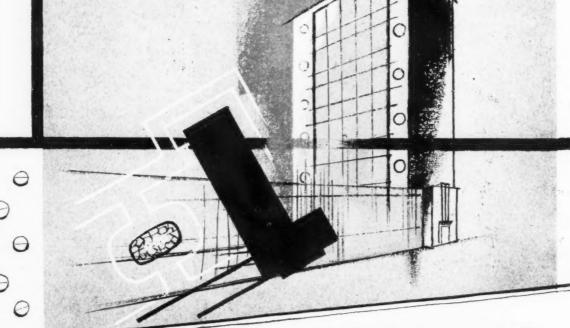
24.200 lighting OFFICE LIGHTING

Recommended Practice for Office Lighting Journal of the Illuminating Engineering Society (USA), June 1956.

The Office Lighting Committee of the American Illuminating Engineering Society have published recently a revision of their Code of Practice for Office Lighting (last published in 1947). This Code is designed tor American lighting practice but the explanations of the factors which affect the visibility of office tasks are of general interest; likewise, the illustrations of actual artificial lighting installations. In contrast to the earlier edition rather more attention is given to colour in the decorations and furniture and less to daylighting, although for the latter, reference is made to the principles embodied in the IES Recommended Practice of Daylighting. It is noteworthy that no attempt is made in this Code to lay down standards for daylighting in offices such as are recommended in Post War Building Study No. 30-The Lighting of Office Buildings (HMSO) and in fact the major part of the Code dealing with lighting systems is devoted to artificial lighting. It is also of interest that no mention is made of the use of artificial light for supplementing daylight. Appendix B to the Code contains a useful check list on the economic factors of artificial lighting. Minor details of interest are the illuminated tracing table and the locally-lit note holders for typists. The values of illumination are in general higher than recommended in Post War Building Study No. 30.

AT THE EARLIEST STAGE

it pays to consider Oil Heating



- No passages or chutes required for fuel delivery.
 Oil bunkering pipes are small: they need not interfere with the layout of the building.
- Instant, automatic and accurate heat control possible, through wide variations to meet fluctuating loads.
- Outstanding cleanliness in use, high burning efficiency and negligible ash content—resulting in reduced handling costs, storage space and ash disposal.

It pays to say (Esso) FUEL OILS

For further information write to: ESSO PETROLEUM COMPANY, LIMITED, FUEL OIL DIVISION, 36 QUEEN ANNE'S GATE, LONDON, S.W.I

technical section

5 PLANNING: PUBLIC UTILITIES

urban motorways conference

At the recent international conference organised by the British Road Federation, most experts seemed agreed that the "urban motorway" could provide a ready solution to our problems of urban congestion. While agreeing that the urban motorway is one element in the solution, our Specialist Editor (7) for Planning, who here reviews the conference, points out that if it is thoughtlessly introduced into our road system the urban motorway could easily choke streets giving access to it; and that what is wanted is a comprehensive study leading up to planned decentralisation.

All road users in Britain today would agree that we need much better roads. Indeed the need for new roads in this country has now become so pressing that we run the risk of accepting any kind of road building programme, so long as it seems to be on a substantial enough scale, without stopping to think too much about what its long-term effects are likely to be in town and countryside, or even how far it can be expected to solve our traffic problems.

The British Road Federation, one of the most powerful groups interested in promoting new roads, at their international conference in London recently, pressed strongly for the immediate construction of a special type of new road—the "urban motorway"—as the most effective means of solving the mounting problem of traffic congestion in large cities. This view was endorsed by a large number of specialists, including a substantial group of experts from Europe and America who have had considerable practical experience in the operation of this type of highway.

An "urban motorway" is a specially-designed highway passing, as its name implies, through a built-up area. Its use is limited to motor vehicles and it consists of two separated carriageways, each wide enough for at least two streams of traffic. Drivers can get on and off it at only a limited number of specially designed junctions. No traffic crosses it; other roads go either over or under it. Such roads are, in effect, an extension of the long-distance inter-city motorways through the heart of the towns themselves. This development of highway planning—which is now becoming standard practice in the United States—has been found to be necessary because of the failure of the "by-pass" as a means of reducing traffic congestion in big cities.

W.I

The underlying reason for this failure was ably demonstrated by Dr. Feuchtinger, a German engineering consultant, in a paper read to the conference. Data collected in America, he informed us, shows that 86 per cent. of all traffic on main highways originates or ends in cities, and that the proportion of through traffic contained in the total inbound traffic of a town is directly related to the town's size, the amount of "by-passable" traffic decreasing as the size of the town increases. There is, as yet, no comparable data in Europe, but sample surveys in Germany and the Netherlands (the only European countries with a comprehensive network of long-distance motorways) confirm these findings.

This means that the larger the town, the less possibility there is of its internal traffic problems being solved by classical methods such as "by-pass" and the "ring-road," which attempt to draw the through traffic round the town in a wide arc. Experience shows that a system of long-distance motorways by-passing urban areas does, in fact, add to the traffic confusion in the major cities, for the feeder roads leading to them—usually existing highways or urban streets—become hopelessly choked with the increased traffic drawn off the motorway into the town.

It is now widely recognised that it is useless to construct long-distance motorways of high capacity unless the link with the big cities (where most of the traffic comes from and goes to) is capable of handling the increased flow. The urban motorway passing through the heart of the town provides a means of doing this. The system is in full operation in the United States, isolated examples are now appearing in some European cities, and plans are being made for many more. In Britain we have neither long-distance nor urban motorways, but it might be clearly recognized when setting out our road-building programme that both types of road will be essential, for neither can function effectively without the other.

Many of the delegates at the conference, both British and foreign, were at pains to point out the very real benefits which such roads will certainly bring, not only to motorists and road users but to the community as a whole, by way of greater safety, ease and convenience of movement and lower transport costs. Some of them were able to back up their statements by actual operating experience from the United States and elsewhere. In spite of the high construction cost per mile of the long-distance routes and the far higher cost of the urban motorway there seems no doubt that a well-designed system can be made to pay for itself in a comparatively short space of time given adequate financial machinery to administer the scheme.

On the basis of the evidence submitted there seems to be an overwhelming case for designing and building a comprehensive scheme of motorways both in the cities and in the country. Indeed, as Lord Rochdale, the president of the National Union of Manufacturers, pointed out in his address to the conference, our ability to compete as a manufacturing nation for the world's markets may very largely depend on the

A ROOFING PROBLEM



The roof garden of Derry & Toms (more than a hundred feet above Kensington High Street, London) constructed in 1936 on mastic asphalte laid by a member company of N.A.M.M.C.

solved by using MASTIC ASPHALTE . . .

- ... the best mastic asphalte. The best can only be ensured by
- specifying British Standards 1162 or 988 which are approved by all the professional and technical organisations concerned.
- (2) specifying that the asphalte is marked with the B.S.I. kite mark and B.S. number.

A new booklet on the application of mastic asphalte in 'ROOFING' is now available on application to:-



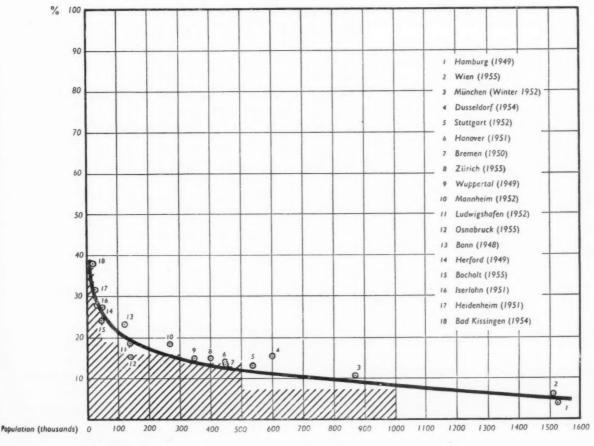
THE NATURAL ASPHALTE MINE-OWNERS & MANUFACTURERS COUNCIL



pas/Na.3 94-98, Petty France, Westmirster, Lordon, S.W.I.

technical section





Typical American data

Source: Highway Research Board "Origin/destination surveys and traffic volume studies," Bibliography nr. 11, Washington D.C., 1951

Fig. 1. This curve, constructed from the researches of American and German traffic engineers, demonstrates how the "by-passable" proportion of the total traffic entering a town varies with its size. The larger the town the less effective a "by-pass" becomes.

efficiency of our internal transport system, which he considered must be counted as a vital part of the nation's industrial equipment.

Most planners would accept the case for motorways as proved. But, while doing so, they would also consider that motorways themselves are no more than a partial answer to traffic congestion. They are not, and can never, be a panacea for the traffic problems of the big city. They do in fact bring with them a whole host of further difficulties, none of which was dealt with at any length by the conference delegates, who were more concerned to press for definite action now than with the long-term effects of their solution.

In the first place, although the urban motorway is a proved means of providing a fast-flowing channel for

essential traffic within the town, experience has shown that it also attracts an ever-increasing volume of non-essential traffic. Although the capacity of the motorway itself may be high enough to deal with this increased flow without difficulty, acute congestion develops once vehicles leave it and pass into the rigid framework of existing streets of a strictly limited capacity. The problem of parking the greater number of vehicles, many of them private cars owned by commuters, becomes even worse, and during peak periods the rush of private cars may be so great that essential traffic is crowded off the very roads intended for its use.

By increasing rather than diminishing the congestion in the heart of the city, the motorway can become an

Mark

W.1.

technical section

active agent contributing to its decay, and could ultimately destroy what it was expected to revive.

Conversely it can be a very powerful factor in promoting urban sprawl. This effect is particularly noticeable in the United States, where the rise of land values in the areas adjacent to an urban motorway is counted as one of the important benefits it provides. Mr. Arthur Hodgkiss from the Triborough Bridge and Tunnel Authority of New York, showed some examples of ribbon development on a gargantuan scale in the wake of some of their newly-built urban motorways.

On high-speed roads commuters' journeys of fifty miles and more can become commonplace. It does not need much imagination to visualize the super-subtopian developments which could result, once the motorway is established in Britain, nor the determination which would be required to enforce a rigid policy of development control wherever a chance of access occurred. Lastly, there is the visual effect which motorways will have on the cities and on the countryside. By its very nature a motorway must be a dominant element in the landscape. A view of any contemporary American

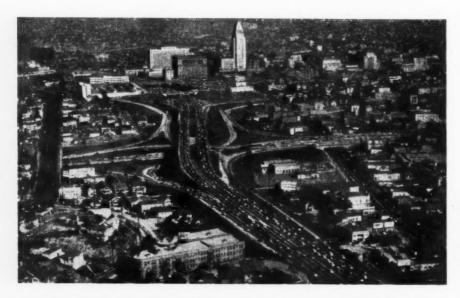


Fig. 2. The shapes we must expect to accommodate in our cities during the next 20 years. Left, urban motorways in Los Angeles city centre. Below left, in Hamburg—the link with the autobahn at Veddel.



technical section SCALE KEY PLAN 3000 YOU Open cutting Tunnel Viaduci ANGEL Surface Main roads OLD STREET MARYLEBONE RD CLERKENWELL RD TOTTENHAN HIGH HOLBORN WHITECHAPEL ALDGATE MONTAGU SO COMMERCIAL RD OXFORD STREET BAYSWATER RE Hyde Park Blockfrian Bridge Reidee EATON SU SOUTHWARK PARK RD OLD KENT RD VAUXHALI KENNINGTON Chelsea Bridg PARK RD

Fig. 3. A proposed motorway for London. The "A" ring road. This limited access highway would have a connection at point D with the new long-distance route to Birmingham and the Midlands. The completed project would cost about £130 million.

city can provide eloquent evidence of its effect on the urban scene. The type of structures involved—elevated or depressed carriageways—wide sweeping curves to the ramps and bridges—flyovers and access points on a vast scale—will introduce a completely new element into our urban landscape. We are reminded that all this has been done before on a minor scale when the new railways cut their way into the hearts of the big Victorian cities. Lord Derwent, chairman of the British Road Federation, citing Euston Station as an example of what the railway builders could get away with, assured the conference that we had nothing to fear from urban motorway designers, but from the examples available it is difficult for planners to share his confidence on this point.

None of these difficulties, however, diminish the need for British motorways, although they make it clear that it would be foolish to apply the American-style solution indiscriminately to all British cities. No comprehensive plan for a national network of longdistance motorways has ever been worked out; and we still lack the essential data to determine what kind of solutions are likely to be most successful where the congestion is most acute. This delay is inexcusable in the light of the urgency of the problems involved. All the evidence available confirms the view that the motorcar will be the dominant factor in shaping the form of our towns and cities in the next twenty years. We must accept this and adapt our plans accordingly, for the motor vehicle is here to stay and there can be no going back or standing still. This process of adaptation has as yet been only dimly reflected in the "official" plans we are making today. Not many development plans submitted to and approved by the MOHLG show any hint of this kind of approach. How many of them for example make provision for an urban motorway or even suggest that one might be needed? Yet they are supposed to anticipate the needs of the town for the next twenty years.

There is a great deal which can be done towards plan-

miles not opian orway which velop-

velopurred, s will s very in the erican

t expect ring the motorcentre. he link

technical section

ning sensibly for the motor age. Long-distance and urban motorways are an essential part-but no more than a part—of the provision that will have to be made in order to disentangle the traffic congestion that is slowly choking the centres of the big cities. Sir Herbert Manzoni and Arthur Ling, two distinguished contributors to the discussions at the conference, suggested to the delegates the lines along which we ought to be working. We need to study the pattern of traffic flow within our towns much more carefully than ever before (bearing in mind that the most recent researches have shown it to be far more complicated than was formerly supposed) so that the provision of an urban motorway can have the maximum effect in reducing congestion within the existing street network. We must take action whenever we can to decentralize as much as possible of the traffic-generating uses, particularly offices, away from the congested areas, and restrict new building of this type so as to bring the future traffic volume down to the level which the streets can be expected to carry. The city centres themselves will have to be gradually redeveloped with car parks and pedestrian precincts on a lavish scale. This will give the uses that must be retained in the central area (top-level executive offices, entertainments, and high-quality shopping, for example) a reasonable chance to attract clients and operate without congestion. Everything possible must be done to enforce a policy designed to reduce the flow of non-essential traffic, particularly commuters in private cars. This will include positive steps such as the redistribution of central area uses, the provision of better and faster public transport, and negative ones such as the strict limitation of kerbside parking with stiff meter charges for the privilege of even a short stop outside a car park. But above all we must use the increased mobility that the motor vehicle and the motorway can provide to start the process of decentralization in earnest. So far as is known, this seems to be the only effective, long-term answer to the congestion and blight that is affecting the big cities. The motorway can help us to establish self-contained satellite towns at a considerable distance from the parent city and yet preserve a quick and effective link with it for all essential purposes.

This kind of programme, modified to suit the needs of individual cities, can provide a way to satisfy most of our future needs, but very little reference was made to it by the delegates, who preferred to examine technical questions relating to the motorway itself rather than the larger issues involved. To the planner this attitude is unfortunate, although readily understandable, for

the very high cost of an urban motorway demands a high degree of public confidence in it if it is ever to be realized. The proposed "A" ring for Central London, for example, which was discussed at some length by the conference, is estimated to cost £130 million, although it is only just over eleven miles long. Before they can be expected to sanction investment on this scale the public would have to be convinced that it is an essential part of a comprehensive improvement scheme which will benefit everyone concerned—not just a brilliant example of the engineers' skill.

We should be grateful to the British Road Federation for drawing our attention to the importance of the urban motorway and reminding us of the extent to which this country lags behind Europe and America in providing for the needs of the motor age. The short address given by the Minister of Transport did not suggest that this gap is likely to be closed in the near future, for the whole of our national transport system needs modernising and roads must take their turn with railways, docks and airfields in the queue for the limited funds available. This does not mean that we should be satisfied with the share that the roads are getting—on the contrary it is evident that it is grossly inadequate—but it does mean that the best possible use should be made of all the capital allotted.

Transport problems are exceedingly intricate and can be very far-reaching in their effects. The prolonged struggle at Oxford is a good example of the amount of heat that can be generated by even a relatively small-scale proposal. We really know very little about the best ways of dealing with them or how to apply continental and American methods in our own very different environment. Nor can we find out, until several careful experiments have been tried. Planners and road engineers must have an opportunity of experimenting in practice with a number of different solutions—including the urban motorway—before they can act with confidence on a larger scale. The cost of these experiments would be heavy; some of them might be failures; but the knowledge gained not only of technique but of the financial, economic and social problems arising would enable their cost to be saved many times over when the large-scale programmes are started. If, as a result of the conference, the Minister of Transport can be persuaded to sanction the construction of even a single length of urban motorway. so that we can study all its effects in detail in a congested British city, then the British Road Federation will have done its work well.

POLICE HEADQUARTERS

in GLEBE STREET, WELLINGTON, SHROPSHIRE, for the SALOP COUNTY COUNCIL designed by C. H. SIMMONS, county architect; ROGER BOOTH, chief assistant; COLIN HOLT, assistant architect; consultants (structural) OVE ARUP and PARTNERS; (town planning) G. A. JELLICOE; quantity surveyors to SALOP COUNTY COUNCIL, E. J. ROBSON, chief quantity surveyor, and N. I. PENROSE, assistant quantity surveyor.

This divisional police headquarters for the Shropshire Constabulary is the first building to be erected in the scheme for Wellington civic centre. This proposed centre was illustrated in the AJ on October 21, 1954, together with other town-planning proposals (by G. A. Jellicoe) for clearance of the central area of Wellington. The site of the new civic centre in Glebe Street lies towards the Wrekin foothills, and will be the focal point of the new town centre, allowing fine views of the Wrekin to be seen from within the town. This is the second police headquarters to be analysed in the Journal; the first, at Stretford, Manchester, was illustrated on May 5, 1955.

Viewpoint 1: model of the civic centre from the north-east, police headquarters on the right.



to be ondon, ath by illion, Before n this at it is

ement

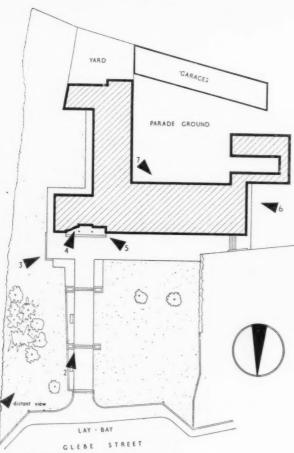
ration of the ent to merica
The ort did

in the insport the their queue mean at the it that at the capital

nd can longed mount atively about apply n very , until anners ity of fferent re they ae cost

f them
of only
l social
saved
nes are
linister
ne con-

orway.
I in a
eration



Key plan showing photographic viewpoints



Viewpoint 2: the public entrance approach and steps and the terrace to the entrance front are paved with special concrete slabs. Brick flower boxes with artificial stone copings are placed either side of the two short flights of steps. On one side of the entrance approach there is cobblestone paving between the flower boxes; inserted in these are plain concrete paving slabs, which carry the wooden seats.



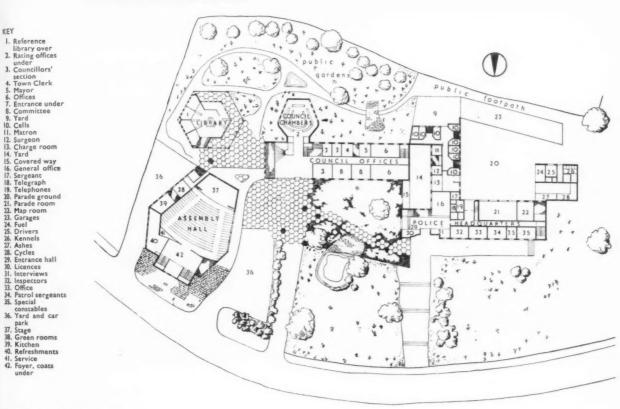


Viewpoint 3 (above left): the entrance elevation has brick facings. Over the main entrance is a panel of natural Portland stone facing. The plinth and portico to the main entrance are in blue Hornton stone, and the entrance steps have brown York stone treads with blue Hornton stone risers. Windows are metal pivot-hung fanlight type in wood frames in the brick facade, the wood frames being omitted from the three windows in the

stone facade. The windows adjoining the main entrance have slate architraves. Viewpoint 4 (above right): the curved wall of the entrance portico is faced with blue Hornton stone. This abuts on to the Portland stone facing slabs to the vestibule jambs. The coat of arms of Salop County Council, consisting of painted wood shield and surrounding frame, is fixed to the stone facing of the wall, with incised lettering beneath.

10. C M. 11. M. 12. S. C M. 12. S. C M. 12. S. C M. 12. S. C M. 13. C M. 14. S. C M. 15. C M. 15. C M. 17. S. C M. 17. S. C M. 18. T. T. 12. M. 18. T. T. 12. M. 18. T. T. 12. M. 18. T. T. 18. T. 18. T. T. 18. T.

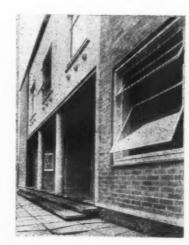
Lay



Layout plan of civic centre

Viewpoint 5 (right): the window is metal, pivot-hung, fanlight type in wood frame, with slate architrave and sill. The plinth is in blue Hornton stone with Portland stone capping, the capping being a continuation of the architrave to the main entrance portico. The pillars to the entrance portico are in Portland stone with blue Hornton stone linings. Viewpoint 6 (below): detail of windows to lavatories and corridor on the west elevation, glazed with slatted glass ply.





POLICE HEADQUARTERS

at WELLINGTON, SHROPSHIRE designed by C. H. SIMMONS county architect

nd the

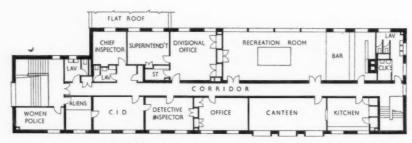
1

KEY

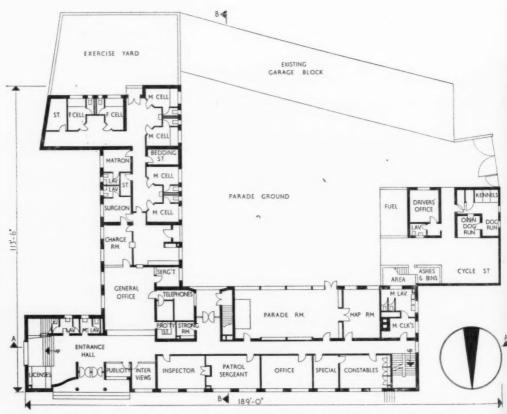
ncrete gs are n one paving ncrete

e have d wall e. This stibule onsistixed to

eneath.



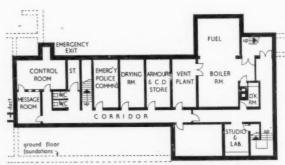
First floor plan



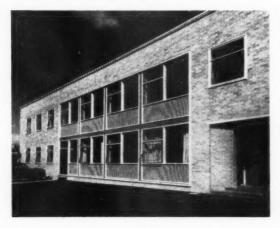
Ground floor plan (see page 641 for sections A-A and B-B). The railing between the general office and the charge room should have been drawn as a solid wall. The railing, in fact lies between the parade ground entrance and the charge room.

POLICE HEADQUARTERS

WELLINGTON, SHROPSHIRE designed by C. H. SIMMONS county architect



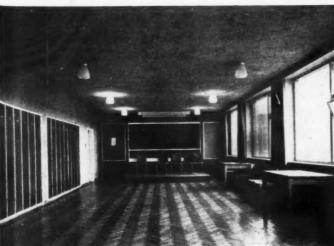
Basement plan [Scale: 18" = 1' 0"]



Viewpoint 7 (above): the south elevation facing the parade ground contains timber glazing units between a reinforced concrete frame to the parade and recreation rooms on ground and first floors. This feature provides a contrast to the brick facings of the remainder of this elevation. The panels under the ground and first floor windows are in horizontal hardwood boarding, backed with felt, with vertical mahogany battens screwed to the boarding. The cladding to this facade will be illustrated as a Working Detail in Nov. 8. Below left: the public enquiry office is an extension of the main entrance hall. The enquiry counter is faced with felt-covered blockboard to which are screwed vertical mahogany battens. There is a sycamore edging all round and a brass-covered foot rail. The top of the counter is covered with laminated plastic sheeting on plywood. On the side of the counter facing the general office there is a range of storage cupboards, drawers and filing cabinets. The rear wall of the enquiry and general offices is treated similarly to the counter front with vertical mahogany slats on coloured felt. This acts as sound insulation to the telephone rocm. Below: the glazed mahogany screen to the interview and publicity rooms. The floor has a terrazzo finish and the ceiling is in coloured vermiculite plaster.







e room

Left: the parade room on the ground floor is contained in the reinforced concrete frame part of the main structure. On the corridor wall is a range of police uniform lockers and at one end is a wooden platform with blackboard and notice boards behind.

Right: the timber glazing units are contained with the reinforced concrete frame and are fitted with pivot-hung metal windows. The radiators are placed underneath the wooden sill board which is carried on an aluminium angle. The wall panel behind the radiators and between the reinforced concrete frame is constructed with timber studding faced, on the outside, with horizontal boarding on felt, to which are screwed vertical mahogany battens. On the inside, and behind the radiators, the wall is faced with asbestos sheeting, with aluminium foil insulation between inner and outer skins. Bottom in the wall between the charge room and general office is a viewing hatch with wired glazing. Below: the charge room in the cell block has a painted steel rail of flat and





tubular sections with handrail and bookshelf in polished mahogany. Finishes: walls plastered, with painted finish ceiling, vermiculite plaster; floor, wood block.



building illustrated



POLICE HEADQUARTERS

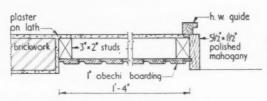
at WELLINGTON, SHROPSHIRE

designed by C. H. SIMMONS

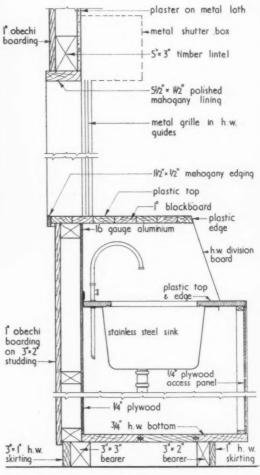
county architect

Left: the main staircase is in reinforced concrete with precast concrete steps. Treads and risers have terrazzo finish with non-slip inserts at nosing. Balusters are of aluminium hollow tube with steel core built into the stair treads. The handrail is polished mahogany. The screen between the main staircase and licences office is formed with tubular brass-covered rails. Staircase window is metal in wood frame. Below left: the recreation room provides police club facilities, and has a bar at one end. The bar counter has a laminated plastic top, and a metal grille can be lowered to close up the bar servery. At the back of the bar servery is the bar fitting, consisting of built-in wooden shelving. A television set is mounted high on the corridor wall of the recreation room.





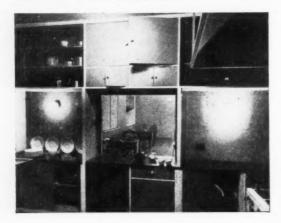
Plan of bar counter, recreation room [Scale: 1'' = 1' 0'']



Section through bar counter, recreation room [Scale: 1" = 1'0"]

6401

building illustrated



The kitchen serving the canteen on the first floor has built-in cupboard and hatch wall units with laminated plastic working tops. The canteen has plaster finish walls, and woodblock floor, and the windows are fitted with slatted venetian blinds

analysis

POLICE HEADQUARTERS

at WELLINGTON, SHROPSHIRE designed by C. H. SIMMONS, county architect

CLIENT'S BRIEF: his stated requirements

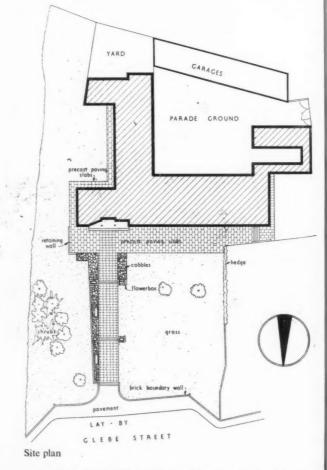
General principles of planning and accommodation laid down by the Home Office Manual for Police Stations. The accommodation to include armoury, police stores, civil defence control, heating and ventilating plant, enquiries, general offices, parade room, map room, charge room, prisoners' cells, drivers' offices, kennels, cycle stores, chief officers' and detectives' offices, women police, recreation room with kitchen and canteen facilities, public and staff lavatory accommodation.

SITE: topography, surroundings, access and planting

The site, which is reasonably level, was once a cultivated orchard and garden, and is about It acres in area. It is in the Wellington urban housing area. Access had to be made from Tan Bank on the west boundary and from Glebe Street on the north boundary. Many existing trees are retained. Grass areas and flower beds were provided for in the building contract.

PLAN: general appreciation and relation of units

The office suites are grouped into two main units; divisional administration on first floor and local policing duties on ground floor. The ground floor accommodation includes general office, enquiries, prisoners' accommodation and patrol police. The administrative offices, recreation and canteen facilities are on the first floor. The civil defence control, police stores, heating and ventilating plant are in the basement. Ground floor: I. Parade room (for patrol briefing) adjacent to parade yard. 2. General office and



enquiries at the "hinge" of the plan. 3. Cell block position as unobtrusive as possible but next to parade yard for access to charge room—all screened from the public. 4. Duty sergeant's office and radio-telephone planned for supervision of public, parade room, parade yard and charge room. First floor: 1. Divisional superintendent and inspector adjacent to CID divisional office, women police and aliens. 2. Recreation room, kitchen and canteen grouped together.

MAIN CONSTRUCTION: general appreciation

The walls are of load-bearing brickwork except in the parade room and recreation room where a reinforced concrete frame is used. Floors and roofs are of in situ reinforced concrete. Internal partitions are of brick or lightweight concrete blocks. Cell division walls are of reinforced concrete.

Reasons and comments

Load bearing brick walls. Thermal insulation

roof construction

5

0

analysis 0 0 HALL CORRIDOR Section A-A [Scale: 12" = 1'0"] OFFICE BASM Section B-B [Scale: 32" = 1'0"] cost per sq. ft. d preliminaries and insurance 5 contingencies 3 STRUCTURAL ELEMENTS Work below ground floor level: foundation type, basement Finish Materials Reasons and comments Location Internal faces of external walls and floor slab rendered with waterproof cement Reinforced concrete floor Basement Engineering brick externally Basement area is generally below water table Rustic facings internally on external walls Load bearing brick walls Other walls fair faced work below ground floor level 10 1 External walls and facings Location Materials Finish Reasons and comments To obtain simple structure elements and to provide adequate insulation 15½ in. brick walls generally with 9 in. common brick, 2 in. cavity, 4½ in. facing brick Generally 2§ in. common bricks Mixed golden brown facings 2f in. handmade sand faced facing bricks Veneer slabs with rubbed surface Natural stone facings on brick backing wall Over main entrance and recreation room 2 in. natural Portland stone, blue Hornton stone Frame or load bearing element Location Materials Beam spans Column grid Reasons and comments Generally g in. common bricks in 1:3 cement sand mortar Load-bearing brick walls Reinforced concrete columns finished smooth externally and painted To provide glazed wall in contrast to brick facings Parade room and 18 ft. (average) 10 ft. Reinforced concrete recreation room Upper floor construction Location Materials Finish Reasons and comments Throughout first floor level Reinforced concrete in situ floor slab 1:2:4 concrete. Mild steel reinforcement Concrete floor prepared to receive floor screeds Load bearing brick wall construction 0 15 external walls and facings, frame or load bearing element, upper floor construction Reasons and comments Location Materials Terrazzo coloured to approved sample with non-slip inserts at nosing to form pattern within the *in situ* work Reinforced concrete Treads and risers prepared Main and secondary As last to receive terrazzo Precast steps Staircases Height: floor to floor 10 ft. staircases 6

n where pors and Internal

inforced

Roof construction

Reinforced concrete in situ roofing slab Location

All roofs

Materials

As last

Finish

Screed (cement/sand).
I in. cork slabs asphalt with limestone chippings

V :

ilt-in

plastic wood-

netian

n 4111				D		
Roof lights Rectangular domed	Location In roof over corridors	Materials Cast glass	Finish	Reasons and comments To provide lighting to		
ights	III IOOI OVEI COIIIAOIS	Cast glass		internal corridors		
				roof lights		2
Vindows	Location	Materials	Finish	Reasons and comments		
Metal windows in wood	Generally	Rustproofed steel	Painted	Pivot hung windows with pivot hung fanlight for		
Metal windows in stone	In stone facade	Rustproofed steel	Painted	adequate ventilation		
Concrete frame/glass	Cell block	Reinforced concrete frame/glass lenses	Fair concrete finish	Unbreakable glass lights to cells		
				windows	3	10
External doors	Location	Materials	Finish	Reasons and comments		
Hardwood glazed	Main entrance	Mahogany/sycamore	Natural polished	Glazed doors to assist		
				natural lighting		
External quality plywood	Drivers' block	Semi-solid core/veneered face	Painted	Flush doors economical. Doorways not exposed		
External quality plywood with metal face	Kennel block	Semi-solid core/veneered face with 20 gauge metal face	Painted	Metal faces for protection of doors		
				external doors		9
Glazing	Location	Materials	Finish	Reasons and comments		
32 oz. glass	Generally			To minimise breakages		
Armourplate	Main doors			and injuries		
Polished plate	Large windows					
Glassply	Lavatory windows	2. *	Venetian slatted glass ply	To provide obscurity to windows on west wall		
				ġlazing		8
PARTITIONING Internal partitions Brick	Location Generally	Materials	Finish ?	Reasons and comments Some walls are load-bearing		
DITCE	Generally		generally except in basemen			
Lightweight concrete Reinforced concrete	Some first floor partitions Cells	3-in. reinforcement	Bed face for wall tiles	Cell walls are required by Home Office to be 3 in. reinforced concrete		
		concrete walls/mild steel		internal partitions	1	9
Screens	Location	Materials	Finish	Reasons and comments		
Glazed wood framing	Entrance hall	Plywood " egg-crate" construction. Reeded glass	Stained and polished	Borrowed lighting to public space in entrance hall		
				screens		2
W.C. doors and partitions	Location	Materials	Finish	Reasons and comments		
Plywood flush doors	Staff and public lavatories	1½-in. skeleton framed	Painted			
Brick or lightweight concrete partitions		acces 2	Plastered (flat oil or emulsion paint)			
	**		cost in	cluded in internal partitions		
Internal doors	Location	Materials	Finish	Reasons and comments		
Plywood flush doors	Generally	As above	Painted generally on room side	Doors selected for polishing on one side. Home Office pattern cell doors. Painted		
Plywood flush doors with glazed strip, metal faced doors	Parade room, corridors and recreation room	Solid core with veneered face	Polished on corridor side			
				internal doors	2	2
Ironmongery to internal doors	Location	Materials	Finish	Reasons and comments		
Lever handles, mortice	Generally	Aluminium, steel, brass	Satin anodized finish	All door locks suited under		
locks and latches	Strong room or	Steel /heree		master key		
Security locks	Strong room, armoury, etc.	Steel/brass		Special multi-lever locks for security purposes		

ironmongery to internal doors

kit lockers

3

analysis

	analysis					
FINISHINGS					s	
Floor finishes	Location	Materials	Finish Cost pe	r Reasons and comments		
Vood block	Main offices	1-in. Jugoslav oak	Polished s. d.			
inoleum	Corridors and offices	4.50 m/m	Polished 26 4			
Terrazzo	Hall and staircases	In situ work	Polished 79 II			
Asphalt	Cell block	3-in. mastic asphalt	13 0			
Quarry tiles	Lavatories	6-in. × 6-in. heather brown tiles	25 10			
Waterproof wearing	Basement	Waterproof cement	Wearing 51 o			
unacc			quanty	floor finishes	3	2
Wall finishes	Location	Materials	Finish	Reasons and comments		
Plaster	Generally	Browning plaster	Flat oil or emulsion paint	General economical considerations		
Glazed wall tiles	Cell block	18-in. × 9-in. × 1-in. tiles	Glazed	Home Office requirement		
Battens on felt	General office	Colours felt. Mahogany slats	Natural hardwood polished	Sound insulation to wireless room		
Wall map	Superintendent's office	a-in. insulation board on battens	Maps hung as wall paper	Large scale map to cover the whole divisional area		
		Dattens		wall finishes	3	8
Ceiling finishes	Location	Materials	Finish	Reasons and comments		
Vermiculite plaster	Generally		Open texture self-coloure			
				ceiling finishes	1	1
Decorations	Location	Paint types	Munsel or other ref.	Colour scheme and comments		
Sealer, 2 coats emulsion	Generally	PVA paint	Colours selected to modified Munsell range	Subdued colour scheme selected in preference to		
Primer, 2 coats flat oils	Kitchen, corridors lavatories	Flat oil stipple finish	but mixing adjustments made on site	pastel and bright colours. Dark colours used, as colour scheme not required to be a		
Primer, 2 coats gloss finish	Joinery (generally)	Gloss paint		stimulant as in schools		
Wax polish or stain and varnish	Special joinery in general office, doors and counter fittings, etc.	Selected stains				
FITTINGS				decorations	1	7
Cloak rooms	Location	Materials	Finish	Reasons and comments		
Metal hat and coat hooks	Lavatories and parade	Aluminium on painted	Satin anodised	Police uniform lockers in		
	room lockers	backboard		parade room		
Portable cloak units	Drying room	Galvanised steel	Painted	Portable racks for drying off police officers' rain cloaks after patrol duties		
				cloak room fittings		1
Other fittings	Location	Materials	Finish	Reasons and comments		
Bar servery fitment and counter	Recreation room	Hardwood fitments	Natural hardwood polish or gloss paint to built-in	ed Bar provided for police club facilities		
Storage cupboards	Offices generally	Formica tops to counters	office cupboards	Storage space in offices for stationery and general		
Office counters	Enquiries			equipment		
Electric clocks				other fittings	2	(
Kitchen equipment	Location	Materials	Finish	Reasons and comments		
Refrigerator, potato peeler,	Kitchen		Stove enamelled	Cooking and canteen facilities		
hot cupboard, cooker		Wandara dan ist ta ta ta ta		for duty police		
Work tops and cupboards		Hardwood with laminated plastic tops	Painted	kitchen equipment		
				Anchen equipment		
Kit lockers	Location	Materials	Finish	Reasons and comments		
Built-in uniform lockers	Parade room	Blackboard doors, hard- wood framing (built within structure)	Varnished doors, painted framing	For capes, helmets, etc. Required for patrol and turn-out inspections		
				kit laskess		

SERVICES

				-		
Plumbing: external	Location	Materials	Finish	Reasons and comments		
No external plumbing service				Design requirement; also frost proof		
Flashings	Generally	Copper	(To window heads, etc.)			
Rain water disposal	Location	Materials	Finish	Reasons and comments		
Internal RWP's in ducts to storm water drainage system	Generally	Asbestos RWP's, GS drains generally, CI drains under building	RWP's in ducts not painted	Jointed specifications stepped up for minimising leaks		
Plumbing, internal: waste disposal	Location	Materials	Finish	Reasons and comments		
Internal soil wastes in ducts	Plumbing ducts provided in structure	Copper, galvanized iron and cast iron	Any exposed pipework painted	To avoid unsightly plumbing work		
Hot water storage	Location	Materials	Capacity	Reasons and comments		
Central domestic hot water system	Plant in boiler room	Copper pipes used for hot and cold water services	100 gallons	Economical provision for hot water supply. Copper used due to high calcium content in mains water		
Cold water storage	Location	Materials	Capacity	Reasons and comments		
Twin tanks	Housed on roof	Galvanized steel	500 gallons each tank	Tanks housed in insulated cladding within parapet level of roof		
	4		plumbing,	external: rain water disposal		8
Plumbing: sanitary fittings	Location	Materials	Finish	Reasons and comments		
Lavatory basins, we suites, sinks	Staff and public lavatories, cells, kirchen, surgeon's room, studio	Fireclay generally but kitchen sinks in stainless steel	White glazed. Stainless steel natural			
		plumbing	internal, hot and cold w	ater storage, sanitary fittings	3	6
Heating installation:		· · · · · · · · · · · · · · · · · · ·	٦			
heat exchanger type	Location	Criteria temperature	Air change rate	Reasons and comments		
Accelerated two-pressure hot water system	Plant in boiler room. Central heating throughout	65°F. main offices. 55°F. corridors, lavatories, etc.	2 per hour			
Boiler type and capacity	Location	Heat load and fuel type	Stoking method	Reasons and comments		
CI. sectional boilers each rated at 380,000 BTU's	Boiler room	600,000 BTU's per hour. Cannock washed peas	Automatic			
Water heater type	Location	Fuel type	Stoking method	Reasons and comments		
CI. domestic boiler	Boiler room	Cannock washed peas	Automatic			
			heating in	stallation, boiler water heater	4	8
Drainage: type of system "One pipe" soil waste system to urban district main sewer. Separate storm water system and	Location	Materials GS generally, CI under buildings	Finish	Reasons and comments		
sewer				drainage:	1	4
Kitchen ventilation	Location	Materials	Finish	Reasons and comments		
Electric fan	Mounted in canopy over cooker	Galvanized steel canopy with outlet vent to roof	Painted	To minimize condensation and steam collection		
				kitchen ventilation		3
Gas installation	Location	Materials	Finish	Reasons and comments		
Mains supply	Kitchen	Copper	Painted where exposed	Supplies to gas cooker and gas tap points in laboratory		
	Studio/laboratory	Galvanized iron	0			
				gas installation		2

ectrical installation: wrce and fitting type	Location	Illumination level	Quality	Reasons and comments	
irect tungsten fittings	Generally	10 f/c average	Standard ma	nufacturers'	
uorescent fittings	Map room		nttings		
firing and switching types	Location	М	Aaterials	Reasons and comments	
RI cables in conduit	Generally	G	alvanized steel conduits	Conduits cast in with in-situ concrete floor and roof slabs	
lush wall switches	Throughout	C	oinage bronze flush plate		
ower supply type	Location	Н	low distributed	Reasons and comments	
5/240 v. a.c., 50 cycles	Throughout	V	RI internal sub-mains		
				electrical installation, wiring and switches	2
pecial equipment		Location		Reasons and comments	
	cialist equipment. Finger- om barrier rail, police map			Internal telephones and GPO telephones to each office	
				special equipment	1
aved areas	Location	A	Materials	Reasons and comments	
errace	North frontage			Paved approach to main entrance	
arade yard	South side			Police parade purposes and car park	
xercise yard	Behind cell block			Prisoners' exercise area (cost included with external works)	

THERMAL INSULATION

Type	Location	U-value	Reasons and comments
I-in. raw cork	Under asphalt roofing	K value 1.5	To prevent expansion of roof slab
White limestone clippings as top dressing	Rolled into asphalt roofing		

SPECIAL ACOUSTICAL TREATMENT

				107144
Sound absorption material	Location	Absorption coefficient	Finish	Reasons and comments
Coloured felt and vertical hardwood cavity battens	General office	Approximately 0.3 at 512 c.p.s.		To reduce possible excess reverberations in general office and public space
Vermiculite plaster ceilings	Generally	As above	Self-coloured (biscuit)	To improve room acoustic and save cost of decoration
Sound insulation	Location	Insulation	on standard	Reasons and comments
Brick or lightweight concrete partitions	Generally	35-45 d most of	.b.—high in relation to her partition materials	Steel was rationed when building was designed and load-bearing an
Timber, fibre and felt sheath	ing Radio/telephone ro	oom		in-situ reinforced concrete system adopted. It avoids sound trans- mission problems of framed structures

FIRE

Structural precautions	Grade of protection apparatus	Sprinklers	Reasons and comments	
Structural precautions	Grade of protection apparatus	Sprinklers	Reasons and comments	
Non-combustible structural materials	Water/gas and foam extinguisher provided in the building	None	Fire protection officers' recommendations	
Planning precautions	Access for fighting	Means of escape	Reasons and comments	
Smoke stop doors to isolate means of escape	Fire appliance access to parade yard from Tan Bank. Hose distance from hydrant in Glebe	Internal staircase	As above	

REFUSE DISPOSAL

Method	Type of refuse	Waste recovery	Materials and installation	Reasons and comments
Urban district council's refuse collection	Boiler ash	None	None	No special facilities or equipment necessary

3

6

TIME SCHEDULE

Drawings	Tender date	Contract signed	Work commenced	Work completed	Type of contract
August 30, 1953	October 30, 1953	January 20, 1954	January 1, 1954	September 25, 1955	RIBA (Quantities)

RATIOS

Area of enclosing walls	1.01	Area of windows (including external doors)		0.132
Total floor area	 I	Total floor area		I
Area of solid wall	0.87	Total roof area		0.512
Total floor area	 I	Total floor area	22	I

COST ANALYSIS

Total ground floor area of superstructure 8,680 sq. ft.	Total floor area (excluding basement) 13,940 sq. ft.	Total floor area of basement 3,200 sq. ft.
Storey heights of basement	Total depth of basement from ground floor level to underside basement floor slab	Tender date
One	I ft.	October 30, 1953
Tender cost of superstructure installations and finishings	Tender cost of foundations and basement	Tender cost of ancillary buildings and external work
£51,935	£8,264	£4,571
Gross total cost	Cost per ft. super of floor (gross)	Area including basement
£64,770	£3 15s. 7d.	17,140 sq. ft.

Cost per ft. cube including basement 5s. 8d.

COST COMMENTS

A cost comparison between this analysis and that on the Divisional Police Headquarters, Manchester (AJ, 5.5.55) is limited, owing to the absence from that analysis of ratios for perimeter walling, roof area, etc. The main elements and comments are grouped below. Note that the contract at Manchester included a new garage block, whereas at Wellington an existing block has been incorporated.

	Manchester	Wellington
Foundations	s. d. 13 o Including basement and poor sub-soil	s. d. 10 I Including basement below water table
Structure	Costs will be affected by floor area ratios s. d. 24 7 Steel frame for whole of 2-storey block. Precast concrete sus- pended floors and roofs	s. d. 30 9 Reinforced concrete frame for small portion only of 2-storey block. In situ suspended floors and roof
Finishings	s. d. 5 9} General wall finish is painted plasterboard. Ceilings appear to have been included with roof and upper floor con- struction	s. d. 9 7 A high standard has been achieved
Furniture and Equipment	s. d. I I	s. d. 2 9 Includes bar fitting
Finishings,	s. d. 13 o	s. d. 13 1 More expensive internal
Services and Special Equip- ment	s. d.	plumbing, less expensive electrical installation s. d.

provided that account is taken of cells and other special equipment.

SITE ORGANIZATION

Site labour and equipment: Gangers, navvy Clerk of Works: R. M. Ingram. General comganger, plasterer's foreman, carpenter's foreman, painter's foreman, for each trade, all responsible to the general foreman. The equipment used was a 10 R.B. digger for basements and approach excavations. The total time worked on this was about 8 weeks. Other equipment was a 10/7 and 5/31 concrete mixer, mortar mill, 10 cwt dumper, brick hoist and a tower hoist, although we disposed of the latter and built scaffold ramps for the dumper to run up in casting the concrete first floor and roof slabs. This equipment was on the job throughout. Sub-letting: the only other work sub-let was glazing which is customary in the building trade and the plumbing which was done for convenience by a local firm. The tarmac surfacing to the parade yard which is considered a specialist job, was also sub-let. Job management: a visiting contracts manager carried out the managing of the job and all liaison between site and head office and was solely responsible. For the most part he visited the job twice weekly and towards the end of the contract three visits a week were made. Progress charts were prepared by the architect and agreed by the general contractor, and the architect held monthly site meetings in which all problems were discussed. A certain amount of incentive was given but as the contract required first-class craftsmanship an output incentive scheme was not applied.

CONTRACTORS

ractors: A. M. Griffiths & Son Ltd. Sub-Contractors: Asphalte, special roofings: Ragusa Asphalte Co. Ltd. Stone slates: W. H. Clegg & Sons. Tiles (cell walls): Shaws Glazed Brick Co. Slates (copings and surrounds): W. H. Clegg & Sons. Wood block flooring: Wm. Thornton & Sons Ltd. Artificial stone: Hilcrete Ltd. Patent flooring (linoleum): A Evans & Son. Waterproofing material: Improved Waterproof Cement Co. Ltd. Central heating: G. H. York & Sons. Gas fitting: West Midland Gas Board, Electric wiring: Cooper & Co. Electric light fixtures: Troughton & Young Ltd. Boilers: Beeston Boiler Co. Ltd. Stairtreads: Jaconello Ltd. Door furniture: Dryad Metal Works Ltd. Telephones: GPO and Communications Systems Ltd. Bells: Cooper & Co. Casements: Williams & Williams Ltd. Roller shutters: Shutter Contractors Ltd. Sanitary fittings: A. D. Foulkes Ltd. Cell doors: James Gibbons Ltd. Cell windows: I. A. Kins & Co. Ltd. Decorative plaster: Dolun Ltd. Stonework: W. H. Clegg & Sons. Marble (terrazzo): Jaconello Ltd. Tiling: Shaws Glazed Brick Co. Textiles: W. H. Sinont & Sons. Garden furniture (seats): Wm. Wood & Sons. Furniture: Furman Ltd., Heals Ltd., S. Hille Ltd. Sun blinds: Danora Ltd. Shrubs and trees: Urban District Council. Office fittings: Sankey-Sheldon Ltd. Clocks: Gent Co. Ltd. Signs: Parco Industries Ltd. Paint: Murray & Jones ct ities)

0.132 0.212

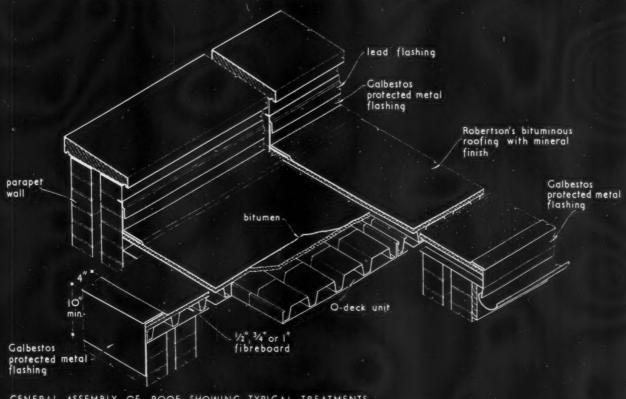
Raguss Clegg & Clegg & rnton & d. Patent reproofing tent Co. & Sons. Electric

fixtures:
on Boiler
or furnilephones:
d. Bells:
Williams
ors Ltd.
Williams
ors Ltd.
A. King
un Ltd.
Marble
s Glazed
& Sons.
& Sons.
S. Hille
and trees:
SankeyL. Signs:
& Jones

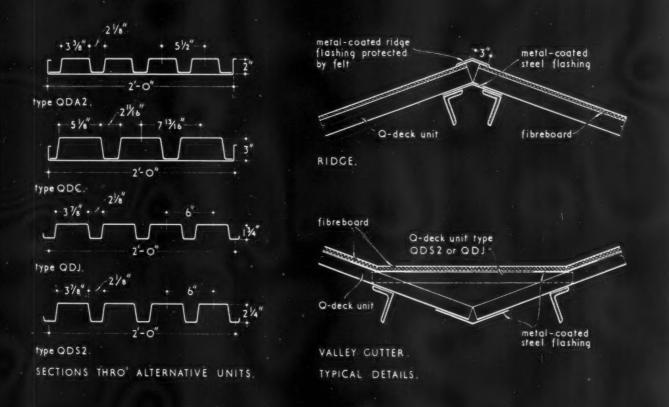


ROOFS COMPOSITE

The Architects' Journal Library of Information Sheets 591. Editor: Cotterell Butler, A.R.I.B.A.



• GENERAL ASSEMBLY OF ROOF SHOWING TYPICAL TREATMENTS AT PARAPET WALL, VERGE AND EAVES.



20.Z8 · Q-DECK· INSULATED STEEL ROOF DECKING

This Sheet describes a composite roof built up from mild steel decking, rigid insulation and Robertson's bituminous roofing: it may be used for flat or pitched constructions. Q-panelling, a similar system applicable to vertical construction, is described on Sheet 21.Z1. The drawings on the face of the Sheet show sections through the four types of deck unit available and the treatment at parapet wall, verge and eaves of a flat roof and the ridge and valley of a pitched roof.

Construction

The deck units are constructed of metal-coated steel. The sides overlap with adjacent units and the ends are joggled to give a smooth, rigid joint. The standard insulation medium is ½-in. fibreboard, except with type QDC, with which ¾-in. fibreboard is normally used. Thicker fibreboard may be used with all types where greater insulation is required. External closures, flashings and trimming pieces for eaves, verges, etc. can be supplied fabricated from Galbestos protected metal; internal flashings are manufactured from metal-coated steel.

Rooflights and ventilators may be incorporated in flat or pitched roofs.

Sizes

Туре	Thick- ness of tray (s.w.g.)	Thick- ness of ribbed section (s.w.g.)	Effective width of unit	Maximum length of unit	Recom- mended maximum spacing of support*
QDA2 QDC	24 24	22 20	2 ft. 0 in. 2 ft. 0 in.	13 ft. 3 in. 22 ft. 0 in.	10 ft. 0 in.
QDJ QDS2	=	22 20	2 ft. 0 in. 2 ft. 0 in.	10 ft. 3 in. 14 ft. 0 in.	8 ft. 0 in

 Allowing for a superimposed load of 30 lb./sq. ft. and a deflection of 1/240th of the span; correspondingly greater spans are possible with a superimposed load of 15 lb.

Weight

Туре	Wt. of unit, (lb./sq. ft.)	Wt. of deck laid with fibreboard and roof- ing, (lb./sq. ft.)		
QDA2	3-18	6.97		
ODJ	3·76 1·96	7·91 5·75		
QDS2	2.79	6.58		

Fixing

The units are fixed to the supporting structure by hammer-drive screws. The lipped side connections of types QDA2 and QDC are bolted at 12-in. centres during erection; the side laps of types QDJ and

QDS2 are also secured by bolts at 12-in. centres. This ensures that in the event of a fire a barrier is maintained, despite buckling, as long as the structural supports remain in position.

Where a prevalently humid atmosphere is anticipated inside the building the joints between the units may be sealed with an adhesive jointing tape to form a vapour-tight seal.

The fibreboard is coated with bitumen on the underside and is secured to the deck units by self-tapping screws driven from above.

Roofing: For slopes of 1 in 40 or more, one layer of 100 lb. (nominal) five-ply roofing felt is bonded to the fibreboard with hot bitumen. This felt has a mineral finish.

For slopes of less than 1 in 40 one layer of 68 lb. threeply roofing felt is used, followed by a dressing of a weatherproofing compound applied hot. To this is applied a mineral finish bonded by a cold adhesive.

Thermal Transmittance

The following table gives the thermal transmittance (U) value for the completed roof deck.

Туре	1/2-in. fibre- board	‡-in. fibre- board	1-in. fibre- board
QDA2	0.33	0.27	0.23
QDC	_	0.27	0.23
QDJ	0.42	0.32	0.26
QDS2	0.42	0.32	0.26
*			

Finish

In heated buildings, free from corrosive conditions, the units may be left undecorated. If the soffit of the finished roof is to be decorated the units can be given an undercoat before despatch. The manufacturer can also supply a special paint, light buff in colour, which provides a finish in one coat.

Further Information

The manufacturer maintains a technical advisory department available to answer questions dealing with this subject generally.

Compiled from information supplied by:

Robertson Thain Limited.

Address: Ellesmere Port, Wirral, Cheshire. Telephone: Ellesmere Port 2341. Telegrams: Robertroof, Ellesmere Port.

Sales Offices: Belfast, Birmingham, Cardiff, Glasgow, Liverpool, London, Manchester, Newcastle, Sheffield.

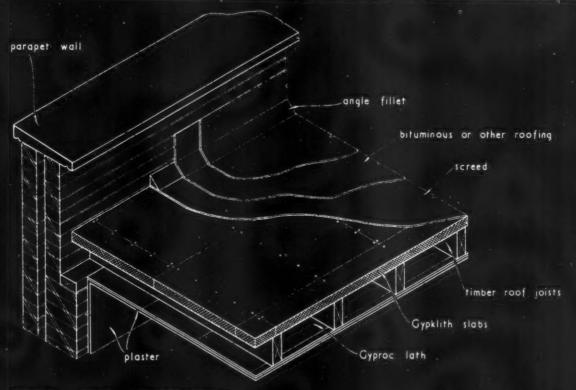
Copyright Reserved.
The Architects' Journal Library of Information Sheets.
Editor: Cotterell Butler, A.R.I.B.A.



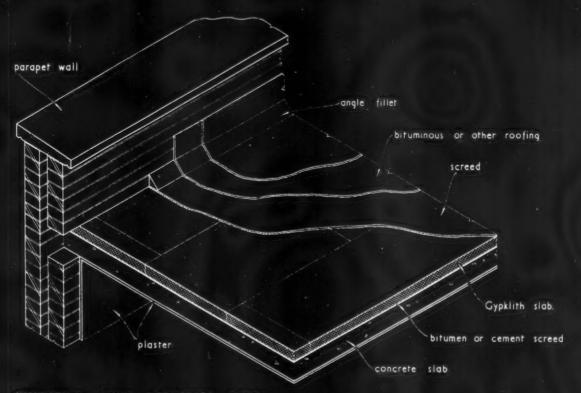


BUILDING SLABS LIGHTWEIGHT MATERIALS APPLICATIONS 14.L14

The Architects' Journal Library of Information Sheets 592. Editor: Cotterell Butler, A.R.I.B.A.



TIMBER JOIST CONSTRUCTION.



INSULATION CONCRETE OVER ROOF.

WOOD - WOOL SLABS APPLICATION

Manufacturer: Gyproc Products Ltd.

14.L14 ·GYPKLITH· WOOD-WOOL SLABS: APPLICATION TO FLAT ROOFS

This Sheet is one of a series on Gypklith wood-wool slabs and describes their application to flat roofs. General data on the characteristics and properties of the material and the sizes in which it is available are given on Sheet 14.K1.

Timber Joist Construction

Thicknesses: The thickness selected depends upon the centres of the joists and the degree of thermal insulation required and may be one of the following: Normal quality slabs: $1\frac{1}{2}$, 2, $2\frac{1}{2}$ or 3 in.

Heavy duty slabs: 2 in.

Timber reinforced slabs: 1½ or 2 in.

Spacing of joists: To ensure that end joints between slabs are located over a support, the maximum spacing of joists for varying thicknesses of Gypklith are as follows:

Type of slab	Normal quality		Hv'y duty	Tim			
Thickness (in.)	11	2	21/2	3	2	11/2	2
Maximum centres of joists (in.)	12	18	24	24	24	36	36

Fixing: The slabs should be laid over the joists with longitudinal edges at right angles to the joists and nailed to each support with five nails across the width of the slabs. Gypklith galvanised nails, of appropriate length for the thickness of slab, should be used but galvanised clout nails or galvanised nails with galvanised washers may be used as alternatives. End joints should be staggered in successive rows and each located over a joist. Slabs should not be butted tightly together.

Insulation over Concrete Roof

Thickness: Normal quality Gypklith slabs in 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, or 3 in. thickness are suitable for this application depending on the degree of thermal insulation required.

Fixing: The slabs are bedded in bitumen or cement mortar. End joints should be staggered in successive rows and slabs should not be butted tightly together. Where the roof has a parapet wall the slabs should be extended into the wall with the concrete slab and damp-proof course.

Screeding

The surface of the Gypklith slabs in flat roof constructions may be screeded to receive bituminous roofing or any other type of roof covering. Where a fire-protecting screed is required Gyproc Metropolitan Stucco is recommended, applied to a thickness of $\frac{1}{2}$ in. minimum.

Gypklith Surface Filler, which consists of gypsum plaster and wood fibre, is specially manufactured for use where an incombustible slurry is required, sufficient only to fill the interstices in the slabs and give a level surface.

Further Information

The manufacturer maintains a technical advisory department which is available to give advice on all aspects of this subject.

Compiled from information supplied by:

Gyproc Products Ltd.

Head Office: Singlewell Road, Gravesend, Kent.

Telephone: Gravesend 4251-4. Telegrams: Gyproc, Gravesend.

Glasgow Office: Gyproc Wha: f, Shieldhall, Glasgow, S.W.1.

Telephone: Govan 2141-3.
Telegrams: Gyproc, Glasgow.

Midland Sales

Office: 11, Musters Road, West Bridgford, Notts.

Telephone: Nottingham 82101

London Office: Bath House, Piccadilly, London, W.1.

Telephone: Grosvenor 4617-9.

Copyright Reserved.
The Architects' Journal Library of Information Sheets.
Editor: Cotterell Butler, A.R.I.B.A.





working detail

WALL FITMENT: OFFICES IN LONDON S.E.1

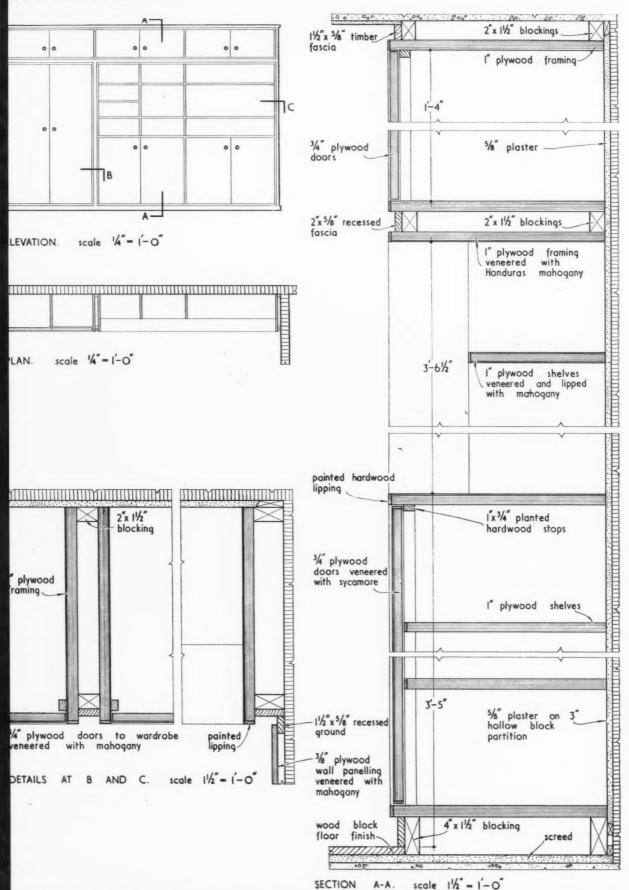
Frederick Gibberd, architect



The chief interest in this detail lies in the use (for aesthetic effect) of recessed black stained wood members to cover the junctions between the most significant elements of the design. The full-height doors on the left are faced with Honduras mahogany, the half-height doors on the right with grey sycamore and the doors at ceiling level are painted a charcoal black. The cupboards are of greater depth (1 ft. 7\frac{3}{2} in.) than is usual in offices owing to the fact that a safe is concealed behind one of them.

VALL FITMENT: OFFICES IN LONDON S.E.1

rederick Gibberd, architect





RUNNYMEDE RUBBER COMPANY LTD . 6 OLD BAILEY . LONDON . E.C.4. . TELEPHONE CITY 2471



Have you considered the advantages gained by using International's advisory service? Time, labour and money saved . . . expert assistance readily available . . . the technical resources of the world's largest paint organisation at your disposal. Whether for new buildings, conversions or alterations, International will prepare paint specifications and colour schemes . . . inspect buildings . . . supervise paint work from start to finish.



International Paints Ltd.

GROSVENOR GARDENS HOUSE, LONDON, S.W.I
TELEPHONE: TATE GALLERY 7070 (15 LINES)

Also: BIRMINGHAM, BELFAST, CARDIFF, GLASGOW, IPSWICH, LIVERPOOL, NEWCASTLE, RIPON, SOUTHAMPTON



MAIN FACTORY IN U.K. FELLING-ON-TYNI
ASSOCIATED FACTORIES IN

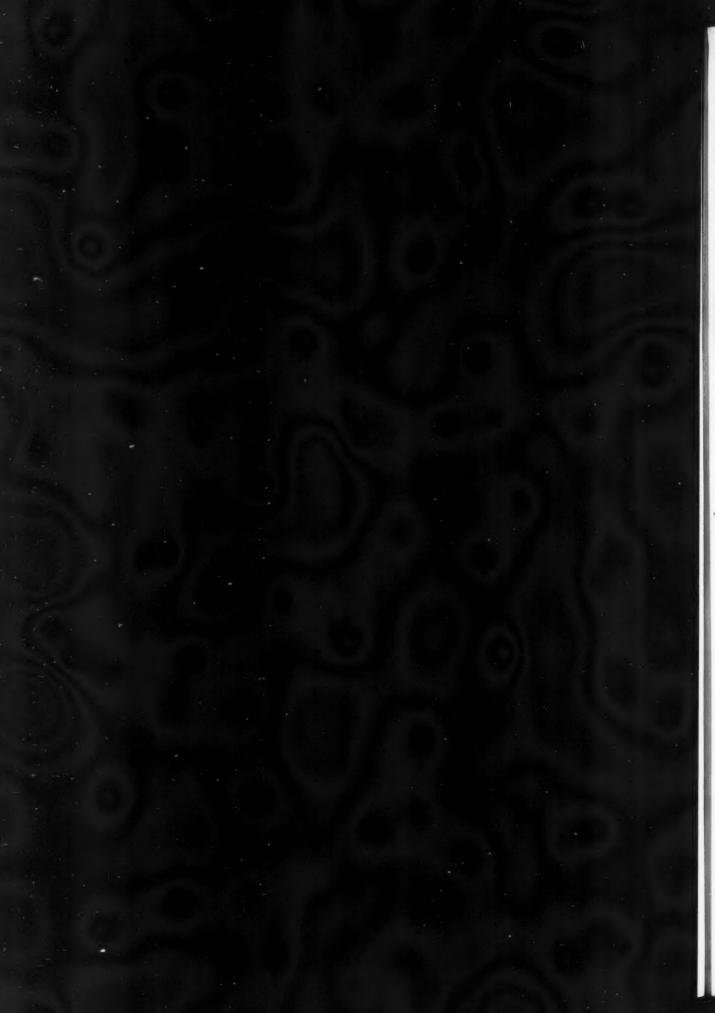
AUSTRALIA SYDNEY
RAZIL RIO DE JANEIRO
CANADA MONTREAL
CANADA VANCOUVER
DENMARK COPENHAGEN
FRANCE LE HAVRE

GERMANY ITALY ITALY JAPAN MEXICO NORWAY

GENO, TRIEST KOB MEXICO CIT BERGER NEW ZEALAND WELLINGTON
SPAIN BILBAO
SWEDEN GOTHENBURG
U.S.A. NEW YORK
U.S.A. SAN FRANCISCO
VENEZUELA MARACAIBO







SHOWROOMS AT SWANSEA GAS





These gas showrooms for the Wales Gas Board, at Swansea, were designed by T. Alwyn Lloyd and Gordon. Apart from the ground floor showroom seen here the building contains (a) basement; stores, workshops, meter rooms and showroom for industrial exhibits: (b) mezzanine floor: demonstration theatre, exhibition balcony and

offices: (c) first floor; display gallery, ante room and offices; and (d) second floor; general purpose room, offices, kitchen and flat. External finishes are portland stone. Light green faience and green Westmorland slate have been used. The slate is "glazed" into metal frames in the same way as the window glass.

Why do so many people choose EZEE Kitchens?

*American designs. The perfec- within the units themselves. tion of American kitchen de- * All EZEE Kitchen cabinets to-date American lines.

able in the 24" depth. This gives choice of colours. a greater working surface area,

signing is recognised all over are made of Zintec steel with the world. Your customers are stove-enamelled finish of the influenced by this fact when highest quality. Sound-insuthey find that EZEE Kitchens lated doors and drawers and are designed on the most up- bright Formica working surfaces add greatly to their at-*24" Deep. A whole range of traction. Built-in refrigerators EZEE Kitchen units is avail- and cookers are available in a

more storage space, and per- * There is also a range of EZEE mitsflush fitting of cookers and Junior Units in 21" depth at refrigerators. It also makes it very competitive prices. Both possible to incorporate such these and the 24" units can be labour-saving equipment as bought separately, so a com-Hoover washing machines, plete kitchen can be built piece dish-washing machines, etc., by piece around the sink unit,

Attractive trade terms are offered to selected distributors. Write for illustrated brochure T.1. and full details.



Kitchens

EZEE KITCHENS LIMITED 341 SAUCHIEHALL STREET, GLASGOW. (TEL: DOUGLAS 0714/5) LONDON SHOWROOM: 46 DAVIES STREET, W.I. (TEL: GROSVENOR 5068)



10.B1, 10.B2, 10.B3, 16.C1, REFERENCE BACK

Readers are asked to note that these Sheets have been revised to conform to the latest (1955) revisions to the relevant British Standards.

24.Z2. REFERENCE BACK

Readers are asked to note the following amendment.

Face of Sheet, heading "Alternative Methods of Fixing Surround to Structure,' lower detail, the fixing now recommended is a 3- or 4-in. stainless steel 12-gauge screw in a white metal plug.

12.N1, 19.FI-3, 19.Z1, 27.Z1, 38.E1. REFERENCE BACK

The Board is now known as The Natural Rubber Development Board. 19.F1-Face of Sheet, heading "Fixing to sub-floors," delete "ground floor" after subheadings to first and second details. Heading "Preformed rubber skirting," substitute "coving" for "skirting" and delete overall dimensions of coving

Reverse of Sheet, add at end of first para-

graph "Rubber flooring should conform to the requirements of British Standard 1711: 1951." Heading "Types and Sizes," subheading "Sheet rubber," end of sentence should read "3 ft. to 6 ft. wide." Subheading "Inlaid tiles," second sentence should read "They are available from 3.75 mm. thickness . . ." Heading " Preparation of Surfaces," subheading "concrete sub-floors," delete last sentence in paragraph and sentence before should read ' should be fixed to a 3:1 sand/cement screed not less than 1 in. thick." Subheading "Other solid floors," delete "e.g. asphalt or pitchmastic." Heading "Skirtings," second sentence, add after rubber units "usually termed rubber coving and available in a range of sizes.'

19.Z1-Face of Sheet, heading "Fixing to sub-floors," delete "if required" after "screed" on first detail.

Reverse of Sheet, heading "Preparation of surfaces," subheading "Concrete subfloors," second sentence should read "The cement/mortar screed on the sub-floor should be not less than 1 in. thick."

Announcements

PROFESSIONAL

T. P. O'Sullivan & Partners, Consulting Engineers, of Georgian House, I. Church Terrace, Richmond, Surrey, have changed their telephone number to Richmond 2241-2.

Norman & Dawbarn of 7, Portland Piace, W.1. (telephone Langham 8011) announce that Frank Rutter, F.R.J.B.A. has resigned from the partnership, and has decided to partnership, and has decided to practice under his own name. Graham Dawbarn, F.R.I.B.A., Alick Low, F.R.I.B.A., and R. F. Lloyd Jones have taken into partnership Herbert Wilson, A.M.I.C.E., Walton H. Lindsay, A.R.I.B.A., A.M.T.P.I., and Greville Rhodes, F.R.I.B.A., all of whom had previously been Associates in the firm.

The County Borough of Tynemouth, Borough Surveyor's Office, announce the following staff changes: M. Blanchard, following staff changes: M. Blanchard, A.R.I.B.A., Chief Assistant Architect, has resigned to take up an appointment with Taylor, Woodrow & Co. Ltd. A. V. Harwood, B.ARCH., A.R.I.B.A., has been promoted to Chief Assistant Architect and D. P. Faulkner, DIP.ARCH., has been appointed Assistant Architect.

H. Munro Cautley, F.S.A., A.R.I.B.A., has retired from practice, and the firm of Cautley & Barefoot is being carried on by his partners Leslie Barefoot, G.C., A.R.I.B.A., and Peter Barefoot, A.A.DIPL., A.R.I.B.A., at the same address: 22. The Thorofare, Inswich telephone Inswigh 2046 Ipswich, telephone Ipswich 2046.

TRADE

Pilkington Brothers announce that Dr. W. L. Patrick, M.A., B.SC., Ph.D., General Manager of Doncaster works, has been appointed a local director of Pilkington Brothers Ltd.

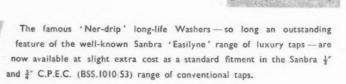
Surrey Concrete Limi 23. Peasmarsh, Guildford, announce that the title of the company will be changed to Marley Concrete Limited as from November 1. The other concrete companies in the Marley Group already bear this name.



5301 ECI/ND

SANBRA: from

taps with 'ner-drip' washers



This is NEWS which will make these taps even more attractive in sales appeal both to the householder and the bulk buyer, for 'Ner-drip' Washers virtually eliminate tap drip and subsequent washer change for many years. Trust SANBRA to be ahead in design detail!

Designers & Manufacturers of a Complete Range of Fine Quality Plumbers' Brassfoundry

SANBRA LTD . BIRMINGHAM · 6 ASTON HALL ROAD

what have peacocks to do with PAINT?

Think of a peacock in full pride—the magnificent colours, the subtle shades, perfectly blended. Then fan out a Manderlac

colour book—and you'll find the same result. With Manderlac enamel you get the widest, most scientifically blended range of colours. And that's not all. You get durability, economy in use, gloss retention. You get a paint that's proved this fact by test. Mander's quality has NO superior.



MANDER'S have the answer



Piace, sounce signed led to raham k.I.B.A., in into k.I.C.E., i., and m had h. mouth, ce the herd as ret with Har-moted D. P.

on by R.I.B.A., B.A., at rofare,

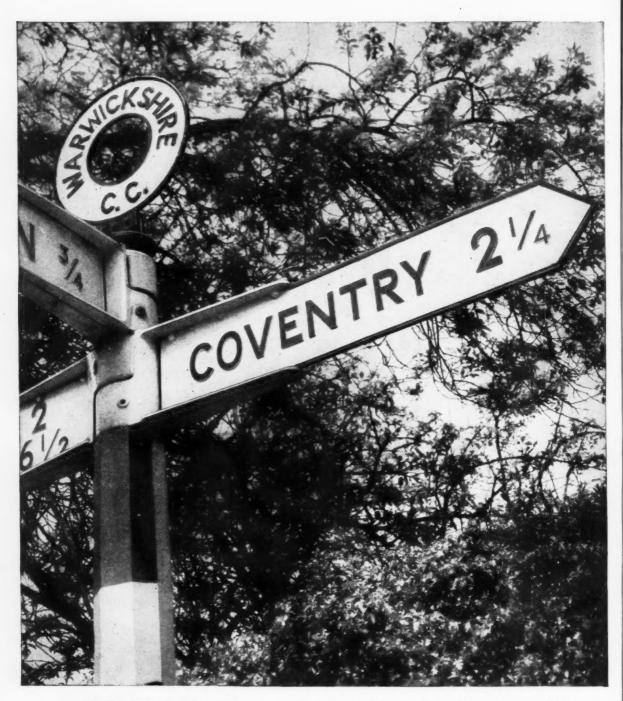
at Dr. General been kington

of the of the y Con-1. The Marley

Mander's Architectural Advisory Service will be glad to supply details, specifications and colour cards of their complete range.

MANDER BROTHERS LIMITED, WOLVERHAMPTON

Tel: 20601



Catesbys laid
that much lino for
Humber Ltd
Coventry

When you want over two and a quarter miles of lino supplied and laid, who do you turn to? Architect Thomas Mitchell B.Sc., A.R.I.B.A. for Humber Ltd, Coventry, got Catesbys on the job. Special skills are needed when laying vast areas of lino—over 4,000 sq. yds. in this case!—but with 60 years' experience behind them you'll find that Catesbys know the answer to most lino problems.

Catesbys Linoleum Contracts

TOTTENHAM COURT ROAD . LONDON W1 . MUSEUM 7777



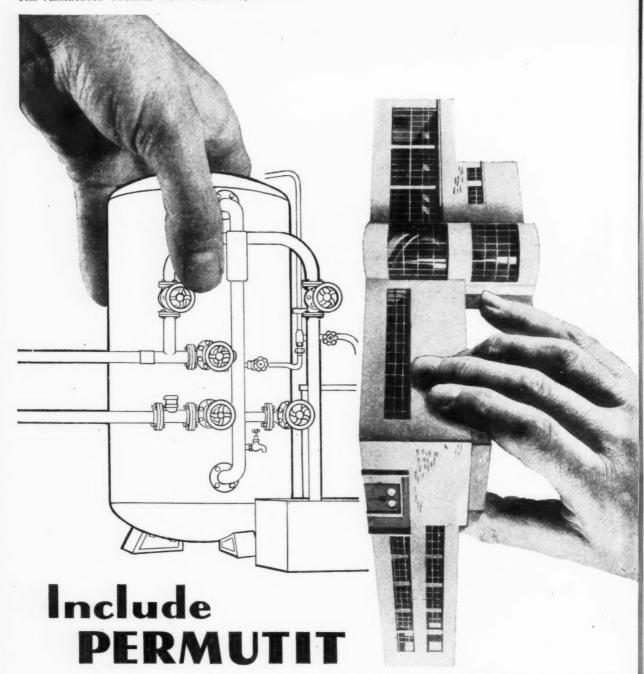
Memorial Laboratory Block, Manor House Hospital Architects: Swannell & Templeman, F/A.R.I.B.A.

Empire Stone is used in the Memorial Laboratory Block

is used in the Memorial Laboratory Block of the Manor House Hospital

Empire Stone Company Limited

Thanet House, 231 Strand, London W.C.2. Berkeley House, Birmingham 16 Narborough, Nr. Leicester 26 Greek Street, Stockport



IN YOUR PLANS FOR SCHOOLS AND BLOCKS OF FLATS

Plan for economy by including a Permutit
Water Softening plant in new buildings—
schools, blocks of flats, canteens, self-service
laundries and other municipal buildings. By
preventing the formation of scale in boilers,

pipes, radiators and valves, a Permutit Water Softener will effect substantial economies in fuel and maintenance. It will also save soap, soda and detergents and simplify cleaning operations and dishwashing.

For further details please write to:

THE PERMUTIT COMPANY LIMITED (Dept. Z.X.226)
Permutit House, Gunnersbury Avenue, London, W.4. Telephone: CHIswick 6431

LIGHACITE



at Andover

FIESTA HALL

Andover, Hants.
Constructed throughout
with Lignacite
Lightweight Concrete
Blocks.

Proprietors:-Messrs, Fiesta Halls Limited.

Designed by:-R. F. Knight, Esq.

Contractor: Messrs. V. G. Brice, Andover, Hants.

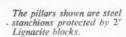


INSULATION VALUE.

Lignacite Blocks provide excellent sound and heat insulation, the latter showing a recurring saving over the years.

FIRE RESISTANCE.

A recent Fire Resistance Test conclusively proved the stability, integrity and insulation value of Lignacite. A non-load-bearing Lignacite wall fulfilled the test requirements of B.S. 476/1953, providing fire resistance of the four-hour grade.



TIME AND LABOUR SAVING.

Vater es in soap, eaning

.226)

6431

Lignacite Blocks can be laid in less than half the time of Brickwork, and can be sawn, chiselled, drilled, channelled or bolted. Lignacite can be screwed and nailed without plugging. Lignacite Blocks are half the weight of concrete, yet load bearing to all domestic requirements.



LIGHTWEIGHT BUILDING BLOCKS

LIGNACITE (North London) Ltd., Meadgate Works, Nazeing, Essex. Telephone: Hoddesdon 2277 LIGNACITE (Home Counties) Ltd., Bracknell, Berkshire. Telephone: Bracknell 666

LIGNACITE (North Eastern) Ltd., Whitley Bridge, Nr. Goole, Yorks. Telephone: Whitley Bridge 354/5 LIGNACITE (South Eastern) Ltd., Ninfield, Sussex. Telephone: Ninfield 345

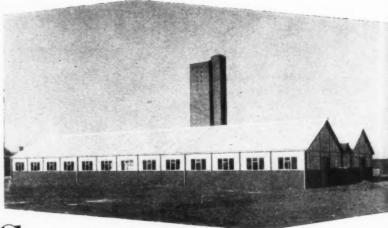
LIGNACITE (Brandon) Ltd., Brandon, Suffolk. Telephone: Brandon 350

LIGNACITE (Fordingbridge) Ltd., Fordingbridge, Hampshire. Telephone: Fordingbridge 2177



HOSPITAL ANNEXE, SIZE 104' x 70'
SUPPLIED TO:—
STOKE MANDEVILLE HOSPITAL, BUCKS.

OTHER TIMBER BUILDINGS 8' 10' 12' 15' 20' 25' & 30' WIDE. FOR INDUSTRY & COMMERCE, SCHOOLS, CANTEENS, SOCIAL ACTIVITIES, SPORTS, provide cover for impatience



THORNS

BUILDINGS provide shelter for in-patients

PLEASE WRITE FOR CATALOGUE AND QUOTATION
GIVING DETAILS OR DRAWING OF BUILDING REQUIRED, TO:—

Quickly!

J. THORN & SONS LTD., (DEPT. 188), BRAMPTON ROAD, BEXLEYHEATH, KENT

The General Opinion is

that "Rosemary" Tiles are the finest of all roofings. What others are made in such a variety of lovely colours and are in such demand? Surely none! Go where you will, in any and every county you will see houses and other buildings roofed with "Rosemary" Tiles.

This fine colouring is a reflex of the QUALITY of these tiles, which are noteworthy for their clean shape, toughness and permanence.

May we look for your inquiries?

G. W. Lewis' Tileries Ltd.

STOCKINGFORD, NUNEATON. Phone: NUNEATON 3125

HAUNCHWOOD BRICK AND TITLE CO. LTD., NUNEATON

Phone: NUNEATON 3419



STEELS ENGINEERING INSTALLATIONS LTD

Announce the opening of their new

LONDON & SOUTHERN AREA OFFICES

at

143, SLOANE ST., LONDON, S.W.I

Telephone: SLOane 6178

Heating, Ventilating, Air Conditioning & Allied Engineering Services for all Sizes & Types of Buildings

Contractors to ADMIRALTY, WAR OFFICE, MINISTRY OF WORKS, Etc.



MEMBERS OF THE INVISIBLE PANEL WARMING ASSOCIATION.

HEAD OFFICE AND EXTENSIVE WORKS: CROWN WORKS, SUNDERLAND.

BRANCH OFFICES: BIRMINGHAM, BRIGHTON AND GLASGOW.

ASSOCIATED COMPANIES: PARIS, TORONTO, SYDNEY AND JOLIET, U.S.A.



for the Worlds Finest Anti-corrosive
Cements, Mastics and Compounds
consult us—



a selection from our comprehensive range

- * Cement Prodor offers protection from corrosion in most acid conditions.
- * Asplit Cement is resistant to oils, solvents, and mixed acids and alkalies.
- * Furacin Cement is resistant to a wide range of acids, and also caustic alkalies.
- \star C.N.S.L. Cement possesses greater resistance to oxidising acids than any other resin cement.

- write for full details of our products to -

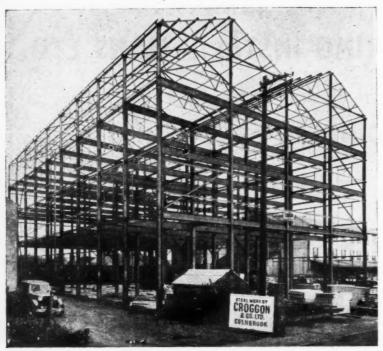
HEAD OFFICE

EAGLE WORKS · WEDNESBURY

TELEPHONE · WED 0284 5 LINES

ARTILLERY HOUSE, ARTILLERY ROW, LONDON, S.W.I TELEPHONE · ABBEY 3816 5 LINES

CUR RANGE OF ANTI-CORROSIVE
PRODUCTS AND A SERVICE OF
DESIGN AND CONSTRUCTION ENABLES
US TO OFFER YOU COMPLETE CONTROL
OF YOUR CORROSION PROBLEMS



STEEL FRAME BUILDINGS

We have a very long experience of problems met with in supplying and erecting steel framed structures of all kinds. Our advice is freely offered upon receipt of general details of your requirements, and your enquiries will be

CROGGON & CO. LTD. ESTABLISHED 1835.

They can be dismantled

and re-erected to suit

any change of plan

<u>Croggon</u>

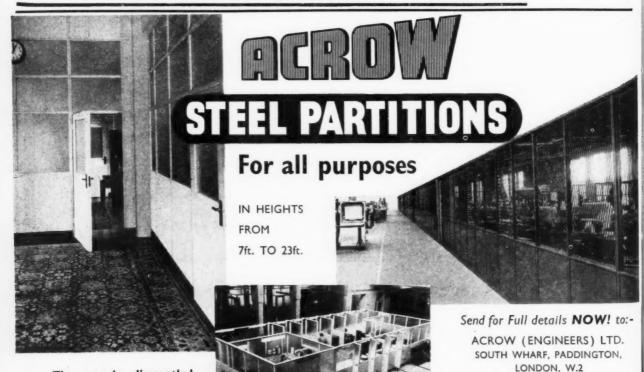
Constructional Engineers. Galvanised Tank and Cistern Makers. Sheetmetal Workers, Woven Wire and Fencing Manufacturers.

Telephone: AMBassador 3456 (20 lines)

Branches at: BIRMINGHAM · LIVERPOOL MANCHESTER · LEEDS · BRISTOL · NEWCASTLE SOUTHAMPTON · SWANSEA · GLASGOW

welcome.

Poyle Steelworks, Colnbrook, Nr. Slough. Colnbrook 99 • 230 Upper Thames St., London, E.C.4. CENtral 4383 • 8 Cornhill, Liverpool. Royal 3868 • 7 John Street, Glasgow. Bell 2983.



ARTOLAC.PRIMO.ARTESCO. BAUMATTE, ROGART.RUSTRATION.DUROLENE.DUROCOL. MONSTO



It is with the highest confidence that our "Paints for every purpose and surface" can be specified.

Please get in touch with us - our laboratories, together with our technical and service departments are at your call to assist in solving your problems when paint specifications are up for discussion. We are continually developing and testing new paint mediums to meet the ever increasing demands for new surfaces and conditions.

MONTGOMERIE, STOBO & CO., LTD

MAKERS OF FINE PAINTS, ENAMELS & VARNISHES

52-72 ROGART ST. GLASGOW S.E.

lems

med reely your

oven

D.

lines)

NCASTLE

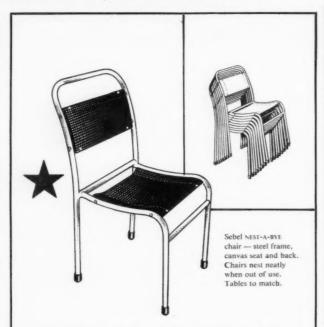
ALSO AT

BELFAST & SLOUGH

DEESIDE, SALTNEY NR. CHESTER



Convector House · Acacia Road · St. John's Wood, N.W.8 Tele: Primrose 7161/2



Sebel steel chairs and tables fold or stack away very quickly into a very small space. They're strongly built, lightweight, comfortable and good-looking, with a wide choice of colours and finishes. Sebel furniture is ideal for halls, cafés, canteens and clubs – wherever there's a seating job to be done efficiently and inexpensively.

Sebel

* Write for free book about the complete range of Sebel
Steel Furniture to Department 16 G, Sebel Products Ltd.,
West Street, Erith, Kent.

The Building Contractors

for the

POLICE HEADQUARTERS WELLINGTON

were

ARTHUR M. GRIFFITHS

& SON LTD.

THOMAS ST., WOLVERHAMPTON

Telephone: 20611 W'ton.

Est. 1899

DI

EM

TIMBER DECAY calls for

prompt diagnosis . . .

Whether caused by prolific insect borers or insidious fungal rot (some species of which have the destructive effect of a slow fire), timber decay should be accurately diagnosed by specialists and arrested before expensive replacement becomes inevitable. The prepared survey staff of Richardson & Starling Ltd. undertake inspections and tender detailed advice on remedial measures.

effective control materials . . .

"This unique insecticide require only one application to effect the total extermination of Death Watch Beetle and other woodborers, and confers complete immunity against further attack.

"FRESKOL" Powerfully toxic to all fungi causing decay

in timber, this special solution of pentachlorphenol can eradicate even the virulent Merulius (Dry Rot). The superiority of these materials has been proved in practice time and time again. They are available to all users.

guaranteed treatment by experts...

Unless the varying characteristics of beetle infestation or fungal rot are fully understood, successful eradication should be ensured by the employment of specialists. In the course of several years' reliable work, the services of Richardson a Starling Limited have been used in hundreds of important and historic buildings, including Cathedrals, Churches, Universities and ancient mansions. The careful treatment carried out by their highly trained team of expert operatives is covered by a ten-year guarantee of efficiency.

If you have a problem of timber decay, write now for full details of Services and prices and materials incorporated in our free technical brochure "The Control of Insect and Funty Destroyers of Timber"

RICHARDSON & STARLING LTD

Members of the British Wood Preserving Association (DEPT. A.J.), HYDE STREET, WINCHESTER Winchester 500/2

London Office: THE TIMBER DECAY ADVICE BUREAU 6 Southampton Place, W.C.I. Tel: HOLborn 3555-6



PLASBESTOS is a thixotropic Bitumen Emulsion which can be used for waterproofing all types of lagging; other grades being manufactured for waterproofing walls and floors, sound deadening or as a base for a variety of industrial purposes. PLASBESTOS is applied by brush, straight from the drum, and has a coverage of approximately 50 super yards/cwt.

for

ngal rot ow fire).

lists and

ble. The

dertake

requires

ttack. ing decay

pentach Rot).

e time and

ts . . .

or fungal nould be

rdson & mportantes, Uni

t carrie

s covered

nd prices t

LTD

UREAL

sures.

gives further proof

PLASPHALT BITITE &
BITROL BITUMEN SOLUTIONS
COLADE BITUMEN EMULSIONS
LACOL RUBBER/BITUMEN
EMULSIONS
WATERPROOFER P.B.7



DUSSEK BITUMEN & TAROLEUM LTD.

EMPRESS WHARF, BROMLEY-BY-BOW, LONDON

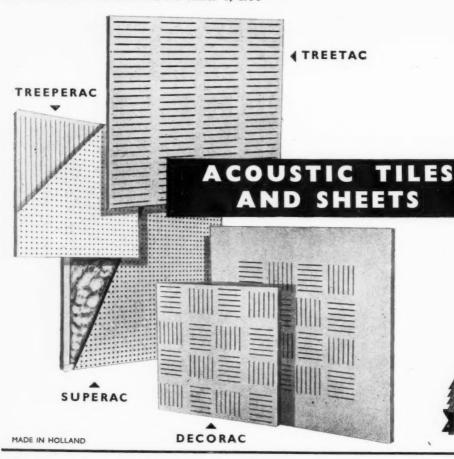
Warrington: Loushers Lane, Wilderspool. Glasgow: Barrhead South Goods Station. Cardiff: 12, Cathedral Road.

Branches: Associated Companies and Agents in Australia, Belgium, British East Africa, Denmark, Malta G.C., New Zealand, Norway, South Africa, Sweden and West Africa.

dm DB.220



85



Here is the range of Treetex Acoustic Tiles and Sheets — providing decorative effects and good sound absorption.

Full details are available from: TREETEX LTD. 47-48 Piccadilly, London, W.I Tel: Regent 1394

treetex

Trinidad

LAKE ASPHALT

FOR PERFECT

DAMP-PROOF

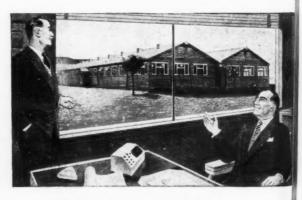
COURSING

LAKE ASPHALT is a valuable component of good mastic on account of its remarkable consistency, and is provided for in BRITISH STANDARDS 1097: 1943 1418: 1947

Further particulars on request from:

PREVITÉ

CAPEL HOUSE, 54 NEW BROAD ST., LONDON, E.C.2. Tel: LONdon Wall 4313



"I left the whole project to Blacknells"...

"They sent a Technical Representative down here, weighed up our problem and submitted plans within a matter of days. The buildings were completely prefabricated—and up in no time. Blacknells know their job all right...saved a lot of bother and considerable expense. You'd be wise to get in touch with them yourself."

> * This Technical Training Centre of 10,500 square feet was designed and erected in 8 weeks for a well-known industrial concern in the Midlands-

BLACKNELLS

PREFABRICATED BUILDING

H. & H. BLACKNELL LTD., DEPT. C12, FARNBOROUGH, HANTS. (TE

BROUGHTON MOOR-Olive Green Stone Slabs

THE WORLD'S FINEST NATURAL EXTERNAL FACING SLABS

of iles

iding

tion.

from:

n, W.I

and

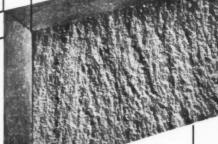
Technical pamphlets illustrating the following uses are available on request



UGHTON MOOR — Green Slate Quarries

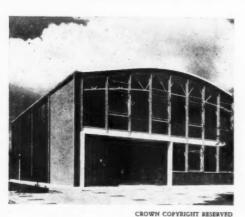
CONISTON - LANCASHIRE.

Telephones: Coniston 225/6



NATURAL RIVEN SLAB

The illustration shows the beautiful texture and character Other finishes include: fine rubbed, sanded, frame sawn.



AIR CONDITIONED

BY

HOPE'S HEATING &

ENGINEERING LTD



A.E.R.E., HARWELL

Lecture Theatre

Ministry of Works: Chief Architects Division

HOPE'S HEATING & ENGINEERING LTD Smethwick, Birmingham & 17 Berners St., London W.1. Branch Offices at Leeds, Cardiff & Hull

ILDIN

down

ildings

You'd

relf."

20 saved 1

THE BARRYWALD

Patents 555062—621085 and Foreign Pats.

- Safety Automatic Incinerator

By the simple depression
of a lever the Barrywald Sanitary
Incinerator automatically destroys
sanitary towels, surgical dressings,

documents, etc.

It solves major and vital welfare and security problems in factories, offices, institutions, etc.

Write or 'phone today for illustrated leaflet or demonstration.



- ★ It is manufactured by the first and leading Sanitary Incinerator Specialists in the World.
- ★ It is guaranteed for one year and backed by a full service organisation.
- ★ It is simple and cheap to install.
- ★ It is the only Incinerator incorporating our patented safety devices.
- ★ It is approved by The Royal Institute of Public Health and Hygiene.
- ★ It is regularly supplied to and approved by all H.M. Government Departments, Local Administrations and Educational Authorities, Hospital Management Committees, General Industry.

ECONOMICAL

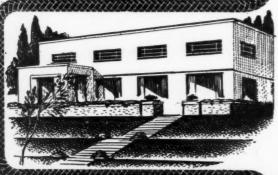
EFFICIENT

FOOLPROOF

INDISPENSABLE

SANIGUARD APPLIANCES LIMITED

62, LONDON WALL, LONDON, E.C. 2 Delephone: NATIONAL 8881 8882 ALLIED METALS LTD.



Whatever the House Large or Small in Sist on ---

CABLES

You can be sure of complete satisfaction from Rists T.R.S. and V.I.R. house wiring cables. Manufacturers of Cables for internal maintenance wiring, electric fans, soldering irons, etc.

All cables are made to the appropriate British Standard Specification.

Write now for further details

BRITAIN'S LARGEST MAKERS OF THERMOPLASTIC CABLES

RISTS WIRES & CABLES LTD.

LOWER MILEHOUSE LANE . NEWCASTLE UNDER LYME . STAFF

The NEW "SQUARE DEAL"

the

In-

ear

rice

to

in-

ted

and

ern-Ad-

onal

ital

ees.

BLE

R.S. and

tandard

ES

INTERLOCKER

will save you valuable production space



Here are a few examples showing various arrangements that can be achieved by INTERLOCKER

Rigidly interlocking by patented device, these sturdy steel cube lockers offer endless possibilities for space saving. Stove enamelled in choice of attractive colours. Firmly closing door, fitted with either chromium plated finger pull and ball catch or English 6 lever lock. Extra parts provide for coat hanging and seating. Made in two sizes 12in. or 15in.







Patent applied for 13611/54



W·B·Bawn

Blackhorse Lane, London, E.17.

Telephone: LARkswood 4411/4

Dentonis DENTOLITE

+ Self-Sterilising + EMULSION PAINT

The only paint of its kind in the world

- ★ The finest PVA Emulsion Paint—plus "Self - Sterilising" properties AT NO ADDITIONAL COST.
- ★ A "one coat" covering paint—one coat over similar colour gives complete obliteration.
- ★ Manufactured by a special process (World Patents applied for) which makes the finish "self-sterilising"—i.e., it destroys disease-producing germs and continues to do so throughout its entire life—a special fungicidal grade is available.
- ★ All claims confirmed by the National Research Association and Scientific Authorities throughout the world copies of their reports and technical literature available on request.
- ★ Non-poisonous, odourless and dries in about 2 hours with a beautiful satin finish.
- ★ Available in thirty washable light-fast attractive shades.

DENTONAMEL



DENTON EDWARDS PAINTS

LIMITED

Paint and Varnish Makers for over 160 years
ABBEY ROAD - BARKING - ESSEX

Telephone: Rippleway 3871 (10 lines) Telegrams: EDLACA, BARKING

J CONCRETE GARAGES FOR EVERY CAR-AND EVERY SITE!

SINGLE GARAGES

Available in widths of 8' 3" or 11'; clear height of 6' 3" or 7'9". Extendible in length.

> FROM £51/104 OR 10/3 WEEKLY





'Up and Over' or hinged doors available.

- · Easily erected.
- · Portable yet permanent.
- · Fireproof and rotproof.
- Non-corrosive aluminium alloy bolts and fittings.
- · With exclusive roof design.

PUBLIC WORKS **EXHIBITION** STAND No. 303

Attractive Deferred Terms FIVE YEARS' FREE FIRE INSURANCE Free Delivery in England and Wales

Send for FREE Illustrated Brochure



building on to the house or existing wall. Width required only 8'. Rear door available FROM £55 OR 114 WEEKLY MULTIPLE GARAGES, One, two or more supplied in a block. Will provide an unequalled investment. FROM £55 OR TERMS



ERNEST BATLEY LIMITED 63 Colledge Road, Holbrooks, Coventry. Tel.: 89245/6

INCREASE HOUSE SPACE 20%

WHY NOT SAVE £600 on a £3,000 JOB?









Write for fully descriptive catalogue (A.J.) and prices of the many different types varying from £15.0.0 upwards. Our Loft Ladders are free of pur-

chase tax. LOFT LADDERS

The first and original inventors of Loft Ladders and Loft Access Stairs

BROADWAY WORKS, BROMLEY, KENT Tel.: RAVensbourne 2624



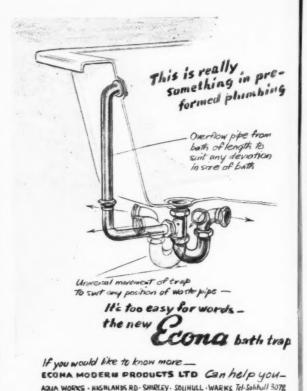
BERNER'S PATENT LOFT ACCESS STAIRS and FIRE EXIT LAD-DERS serve both purposes.

As installed in tens of thousands of homes by wise and satisfied clients, or as insisted upon for escape from FIRE by the L.C.C. and other authorities in blocks of flats in London and throughout Great Britain.



SPACE USED IS MONEY SAVED

INFORMATION SHEETS





Heat your Church with



& INFRA-RED RADIANT HEATERS

CHURCH heating poses problems because the warmth is usually required for short periods. Conventional methods of heating require prior build up of air temperature, which is not only expensive in fuel but also in labour. With infra-red heating the heaters can be switched on just prior to the service and switched off at its cessation. A permanent installation of heating panels, either wall mounted or ceiling suspended, will warm the whole congregation. Pcrtable heaters in decorative wrought iron work will heat small areas for small congregations without the expense of heating the whole church. The infra-red warms the occupants, not the surrounding air, by direct rays downwards from the panels and the radiant intensity is not weakened by passage through the air.

Portable heaters are available for both indoors and outdoors to provide pockets of heat for isolated groups of personnel, i.e., in garages, workshops, transport depots, hangars, club halls, etc. Heating panels wall mounted or ceiling suspended provide permanent installation giving complete heating in large buildings with high roofs such as churches, workshops, etc.

REMEMBER

localised heating is good economy - SEND FOR FULLY ILLUSTRATED LEAFLET TO:



00 119

trap

M-

3078

IN OD LIMITED

CECIL CHAMBERS, 78-86 STRAND, LONDON, W.C.2.

Telephone: COVent Garden 2511 (7 lines)

(Controlled by Shell-Mex and B.P. Ltd.)

structural steelwork

DESIGN FABRICATION ERECTION

The large illustration shows part of the all-welded structure which we designed and supplied to the I.C.I. Deep Lattice Beams and Light Stanchions have been used with nearly 50 per tent, saving in steel requirements, as compared with ordinary R.S.J. Construction. This multi-storey building has a height to eaves of 44ft, and uninterrupted spans of 50ft, on each floor.

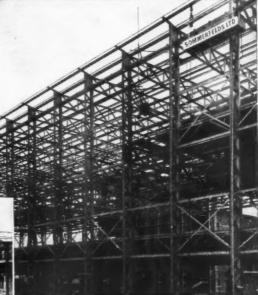
nset: The factory for Standard elephones & Cables Ltd. at

Inset: The factory for Standard Telephones & Cables Ltd. at Harlow.

The contract for the steel work of this building was awarded to us on the design, fabricate and erect basis. Our design emergence of the standard of the design, fabricate and erect basis. Our design end to basis, Our design end to basis, Our design end to be designed to be desig



Architect-Planner: Frederick Gibberd, F.R.I.B.A., M.T.P.I. Executive Architect: Victor Hammett, B.Sc., A.R.I.B.A.



Architect: Messrs. J. Douglas Mathews & Partners.

Jommerfelds

LONDON OFFICE: 167 VICTORIA ST S-W-1 LTD. TEL: VIC. 8843 AND 1000

WELLINGTON . SHROPSHIRE TEL: 1000

THE ACME FLOORING & PAVING COMPANY (1904) LTD

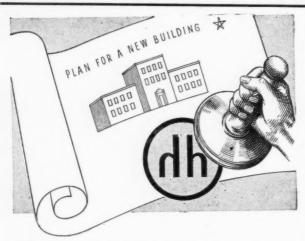
River Road Barking

The Company's latest Technical Brochure

on hardwood block and strip floors and softwood end grain paving will be gladly sent on request.

Telephone: RIPpleway 2771 (7 lines)

Telegrams: Dowelled-Easphone-London



Give it the Stamp of Internal Security.

In planning a new building or reconstructing an old one, the provision of locks and security fittings may be just a detail when set beside the whole undertaking. But it is a very important detail and one that calls for equipment of proved reliability. Such are the anti-burglar locks, safes, strong room doors and security devices for which Hobbs Hart are famed throughout the world. Architects may rest assured that by consulting us on all security problems they will receive the most up-to-date, specialised advice.



HOBBS HART

& COMPANY LIMITED

The Headquarters of Safety and Security

HOBBS HART & CO. LTD (DEPT. F), STAFFA ROAD, LONDON EIO Showrooms: 76 Cheapside, London EC2



photo

AUTOTYPE and illustrated folder from

(established 1869) specialises in their production and can submit subjects to choice.

are the vogue for interior décor of all

buildings-municipal and business, restaurants, clubs, schools, shops, the home, etc. They are hung like wallpaper.

Autotype

AR inv Arc

Staisuh 8.V C for P to han T resi and right schi T the typo Bat Rec A tion sub

published

AUTOTYPE CO. LTD., BROWNLOW ROAD, W.13.

Third edition, revised and enlarged

THE NEW SMALL HOUSE by F.R.S. Yorke F.R.I.B.A. and Penelope Whiting A.R.I.B.A.

MAINLY a collection of photographs and plans of the most interesting small houses built since the war, with brief descriptions of construction, equipment, materials used and, where possible, costs. Size 9½ ins. by 7½ ins. 152 pages including 136 pages of illustrations. 25s. net, postage 1s. 2d. inland.

THE ARCHITECTURAL PRESS 9-13 Queen Anne's Gate S.W.J.



Lady Allen of Hurtwood, F.I.L.A. and Susan Jellicoe

The new small garden

THIS IS A PRACTICAL book in which, with over 130 photographs and plans, the authors illustrate and describe an expertly made selection of successful and charming small gardens. Most of them have been constructed at small cost; all are designed to provide the maximum of peace and relaxation for a minimum of hard work. The plans have been worked out to meet a wide variety of site problems and conditions and the examples include long narrow gardens, children's gardens, a tree garden, a water garden, a roof garden, a scree garden. . . Full details of the materials and plants used in many of the gardens are given; and there is a useful 'How to find out' appendix.

Size 83 in. by 53 in. 128 pages with over 100 half-tones and 25 line blocks. Price 15s. net, postage 1s.

THE ARCHITECTURAL PRESS 9-13 Queen Anne's Gate, Westminster, S.W.1.

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Menager, "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 cars of "The Architects' Journal," at the address given above.

Public and Official Announcements
25s. per inch; each additional line, 2s.

25s. per inch; each additional line, 2s.

COUNTY BOROUGH OF CARLISLE
Applications are invited for the following posts in the City Surveyor's Department:—
(a) CHISF QUANTITY SURVEYOR, A.P.T.
Grade V (£795×£35—£970).
Applicants must be Chartered Quantity Surveyors, and should be able to take charge of a section responsible for preparation of estimates, Bills of Quantities, and the regular measurement of and setting of Final Accounts for Schools, Housing and Municipal Buildings.
(b) SENDR, QUANTITY SURVEYOR, A.P.T.
Grade IV (£710×£35—£885).
Applicante should have passed the Final Examination of the Institute of Chartered Surveyors, and be experienced in such work as is enumerated above.

above.

Housing accommodation will be made available
if required.

Forms from the City Surveyor, 18, Fisher Street,
Carlisle, returnable not later than 10th November.

H. D. A. ROBERTSON, Town Clerk.

BOROUGH OF ASHTON-UNDER-LYNE
Applications are invited for the following appointments in the Borough Engineer and Surveyor's Department within the respective grades according to experience.
(A) SENIOR ASSISTANT (QUANTITIES).
Grade IV (£710—£885). Qualifications: A.R.I.C.S. or equivalent.
(B) SENIOR ARCHITECTURAL ASSISTANT. Special Grade (£690—£2440). Qualifications: Registered Architect with good experience in the design and construction of Municipal houses, flats and public buildings.
There is a full and varied programme of building work and both positions offer opportunities for taking responsibility and supervising work in progress.

of all estaur-

ne, etc. utotype ir pro-

oice. E

691-2-3

JSE ng

e most brief ils used

5s. net,

te S.W.1.

ate P

ils

progress.
Housing accommodation will be provided if

required.
Application forms may be obtained from the Borough Surveyor. Municipal Offices, Ashton-under-Lyne, and should be returned to the undersigned by 19th November, 1956.
G. A. MALONE, Town Clerk.

Town Hall.

Town Hall,
Ashton-under-Lyne.
10th October, 1956.
10th October, 1956.
10th State Sta

Preference will be given to candidates who have passed the Intermediate Examination of the R.I.C.S.

S.V. 649/B. Grade I. Salary £625×£25-£750 (exceptionally to £900).

Candidates should be of R.I.B.A. Intermediate standard and have had not less than 3 years' subsequent practical experience.

S.V. 650/B. Grade II. Salary £520×£20-£615.

Candidates should have passed or be studying for the Intermediate Examination of the R.I.B.A. Pacilities are granted in certain circumstances to Assistants for part-time study at the Nottingham School of Architecture.

The point of entry into the salary scales of the respective grades will depend on the qualifications and experience of the applicant. Superannuation rights under Local Authority and certain other schemes are transferable.

The architectural work of the Department covers the design of Colliery Surface Buildings of all types required in the Division, including Workshops, Stores, Power Plants, Offices, Pithead Baths, Canteens, Medical Centres, Institutes and Recreation Buildings.

Applications, stating age, education, qualifications, present appointment and salary, should be submitted within 14 days to:—

THE STAFP DIRECTOR.

National Coal Board,
East Midlands Division.

Sherwood Lodge, Arnold, Notts.

Envelopes and applications should be marked with the appropriate "S.V." reference number.

Original testimonials should not be sent.

THE CORPORATION OF GLASGOW ARCHITECTURAL AND PLANNING DEPARTMENT ASSISTANT ARCHITECTS PLANNING ASSISTANTS PLANNING ASSISTANTS Vacancies exist for a number of assistants. Minimum qualification, Intermediate Examination of the appropriate professional body. Salary scale £550—£1,100 per annum, with placing according to age, experience and qualifications. Forms of application may be obtained from the Principal Administrative Officer, 20, Trongate, Glasgow, C.1.

City Architect and Planning Officer.

BENTLEY-WITH-ARKSEY URBAN DISTRICT
COUNCIL
APPOINTMENT OF ARCHITECTURAL
ASSISTANT
Applications are invited for the appointment
of an Architectural Assistant in the Department
of the Engineer and Surveyor at a salery in
accordance with A.P.T. Grade IV (2710-2385 per
annum)

accordance with A.P.T. Grade IV (2710—2885 per annum).

Applicants should have considerable experience of Municipal Housing and hold a recognised qualification.

Applications, stating age, qualifications and experience, particulars of present and previous appointments, together with copies of three recent testimonials, and endorsed "Architectural Assistant," must be delivered to the undersigned not later than Saturday, 10th November, 1956.

The successful candidate will be provided, if necessary, with housing accommodation.

The appointment will be subject to (1) the provisions of the Local Government Superannuation Acts, 1937-53; (2) the National Scheme of Conditions of Service; (3) the satisfactory passing of a medical examination; and (4) termination by one month's notice on either side.

W. H. CARLILE, Clerk to the Council.

Council Offices, Cooke Street, Bentley, Nr. Doncaster.

METROPOLITAN BOROUGH OF BATTERSEA Appointment of ARCHITECTURAL ASSISTANT, A.P.T. IV (2710 8-25 to £885 per annum, plus London weighting—£30 per annum at age

plus London weighting—tou per amagin.

26 or over).

Applications are invited for the above-mentioned permanent appointment. Applicants should have had several years' office experience, preferably in housing and other buildings undertaken by a local authority.

Application forms from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date: 12th November.

2245

12th November.

COUNTY BOROUGH OF DERBY
BOROUGH ARCHITECT'S DEPARTMENT
ARCHITECTURAL STAFF:
(a) A.P.T. Grade IV (£710-£885 per annum).
QUANTITY SURVEYING STAFF:
(b) A.P.T. Grade V/VI (£795-£1,080 per annum).
Commencing salary will be according to qualifications and experience.
Permanent superannuable appointments, subject to one month's notice and to medical examination.
National Conditions of Service.
Application forms obtainable from and to be returned to the Borough Architect, The Council House, Corporation Street, Derby, not later than Monday, 5th November, 1956.

G. H. EMLYN JONES,
Town Clerk.

Town Clerk. 13th October, 1956.

SUTHERN ELECTRICITY BOARD QUANTITY SURVEYOR
Sub-area Engineering Department (Civil Engineering Section), No. 1 (Southall) Sub-area, located at Waterloo Road Uxbridge. Salary grade L/10 (£980 58.—£1,016 8s. per annum inclusive of London Allowance). N.J.B. Conditions of Service.
Candidates, who should be members of the Chartered Surveyors' Institution or have equivalent qualifications, must be fully experienced in the writing of Specifications, the working up and preparation of Bills of Quantities. be capable of settling Contractors' Accounts and preparing preliminary estimates for projected schemes.
The successful candidate for the above appointment will be required to contribute to the C.E.A. & Area Boards' (Staff) Superannuation Scheme, if eligible.
Applications on forms obtainable from the Sub-area Secretary, 2/6 Windmill Lane, Southali, Middlesex, and returned to him not later than November 12, 1956.

COUNTY OF LINCOLN

November 12, 1956.

COUNTY OF LINCOLN
PARTS OF KESTEVEN
APPOINTMENT OF SENIOR ASSISTANT
QUANTITY SURVEYORS (Two)
A.P.T. Grade V (£795 × £35-£970)
Full particulars from the County Architect,
County Offices, Sleaford, Lincs.
Previous Local Government experience is not essential.

essential.

Applications from suitably qualified persons (A.R.I.C.S. or A.I.Q.S.), together with the names of two referees, should be received by the undersigned not later than 19th November, 1956.

I. E. BLOW.

County Offices.

County Offices, Sleaford, Lines.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

The Board are engaged on a number of new building projects including a new hospital at Welwyn and the following staff are required to fill new posts on the establishment created to fill new posts on the establishment created to deal with the increased work:—
(a) ASSISTANT ARCHITECTS—good experience of design and construction necessary preferably in hospital work. Salary scale £680 × £25 (3) × £30 (2) × £35 (1) × £35 (3) — £95 (3) × £30 (2) × £35 (1) × £30 (1) × £35 (3) — £95 (3) × £30 (1) × £30 (1) × £25 (2) — £70 (1) × £25 (2) — £70 (1) × £25 (2) — £70 (1) × £

of:-(a) ARCHITECTURAL ASSISTANT. Salary grade A.P.T. II. 2596/2675 n.a. (b) JINNOR ASSISTANT OUANTITY SUR-VEYOR. Salary grade A.P.T. III. £640/£765

VEYOR. Salary grade A.P.T. 111, 2860/2765

D.A.
Candidate for post (a) must have had some experience after bassing the Intermediate Examination of R.I.R.A. and for post (b) experience in a Quantity Surveyor's office, including taking off on miner works, after passing R.I.C.S. Intermediate Examination. Successful candidates will be appointed at present salary if within the incremental scale.

Applications forms and further particulars from Borough Architect, Town Hall. Bournemouth. Completed applications to reach me by 10 a.m. 17th November, 1956.

A. LINDSAY CLEGG.

A. LINDSAY CLEGG. Town Clerk

A. LINDSAV CLFGG.

Town Clerk.

4317

Applications invited for appointment of ARCHIperience. Grade A.P.T. II. commencing salary
within grade according to qualifications and
experience. Post permanent, subject to Local
Government Superannuation Acts. N.J.C. conditions of service and to amplicants having passed
R.I.B.A. Intermediate examination or coulvalent.
Applications with names of two referees to
Borough Architect. P.O. Box 17. Town Hall.
Reading. not later than 14th November. 1956. 4321

LONDON COUNTY COUNCIL.
ARCHITECTS DEPLAYMENT

Vacancy for ARCHITECTURAL ASSISTANT in
Voluntary Schools Section for preparation of
schemes for development of new and existing
school sites and scrutiny of plans and designs
for new primary and secondary schools. Applicants
should be interested in
contemporary school
design. Salary up to £318, with startine point
according to experience Inter. R.I.B.A. desirable.
Application forms, returnable by 21st November,
1956. from The Architect (AR/EK/VS/2), County
Hall, S.B. 1. (2004)

WEST MIDLANDS DIVISION

according to experience. Inter. R.J. A. deshador. Application forms, returnab e by 21st November, 1956. from The Architect (AR/BK/VS/2), County Hall, S. E. 1. (2084)

Hall, S. E. 1. (2084)

NATIONAL COAL BOARD

Vacancies exist for ARCHITECTURAL ASSISTANTS (Srade I in the Divisional Chief Architect's Department at Himley Hall, Nr. Dudley, Worcs. Applicants must have passed Intermediate R.I.B.A. Salary will be within the scale £625 × 625—£759 per annum.

The office is engaged on a large programme of varied and interesting work of industrial and welfare nature and offers scope for applicants with a progressional outlook. Superannuation rights with Local Authority and certain other schemes are transferable.

Write for application forms to Divisional Chief Staff Officer, Himley Hall, Nr. Dudley, Worcs. These must be completed and returned within 14 days of appearance of advertisement.

CITY OF OXFORD
Applications are invited for the post of ARCHITECTURAL ASSISTANT (£690—£840 per annum) in the City Architect and Planning Officers, experiment.

Can ditake must have passed the Final Examination of the Royal Institute of British Architects, be provided by the Council.

The appointment will be to the temporary staff, with a possible transfer to the permanent staff as a vacancy occurs, but otherwise subject to the National Conditions of Service and the Local Government Superannuation.

Forms of application and conditions of appointment Planning Officer, Town Hall, Oxford, to whom completed forms must be returned not later than the 10th November, 1956.

Town Hall, Oxford.

COUNTY BOROUGH OF TYNEMOUTH BOROUGH SURVEYOR'S DEPARTMENT Applications are invited for the follow Applications following posts:-SENIOR ASSISTANT ARCHITECT, A.P.T. V,

£795—£970. ASSISTANT ARCHITECTS, A.P.T. III

4795—4790.

ASSISTANT ARCHITECTS, A.P.T. IAA
ASSISTANT ARCHITECTS, A.P.T. IAA
(Special), £690—£840.

SENIOR TOWN
APPLANNING ASSISTANT,
A.P.T. V, £795—£970.
Application forms together with conditions of appointment should be obtained from D. M.
O'Herlihy, Esq., O.B.E., B.Sc.(Eng.), M.I.C.E.,
16, Northumberland Square, North Shields and returned before 17th November, 1956.
The Corporation may be prepared to assist in the provision of housing accommodation.

F. G. EGNER,
Town Clerk.

4305

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
Applications are invited to fill two senior positions for work in the first instance in the TOWN
PLANNING DIVISION Area Group dealing with
South London.

Applications are invited to fill two senior positions for work in the first instance in the TOWN PLANNING DIVISION Area Group dealing with South London.

(a) Grade I (scale £1,184-£1,353) with allowance of £91 a year, with overall responsibility for Development Control and Development Plan review in South London.

(b) Grade I (scale £1,184-£1,353) responsible for Southwark and Bermondsey, including South Bank, Elephant and Castle and Bermondsey Earney Elephant and Castle and Bermondsey Earney Elephant and Castle and Bermondsey Earney Elephant and Castle and Earnondsey Earney Elephant and Castle and Earnondsey Earney Elephant and Castle and Earnondsey Earney Elephant Ele

R. M. FRANKLIN, Town Clerk.

Finchley, N.3.

COUNTY OF ESSEX

ILFORD COMMITTEE FOR EDUCATION
Applications are invited for the following appointments in the Education Architect's Section of the Borough Engineer's Office.

(a) ONE ASSISTANT ARCHITECT, Grade A.P.T.
II/III (£595—£765 per annum plus the appropriate London weighting).

(b) ONE TECHNICAL ASSISTANT, Grade A.P.T.
II (£595—£675 per annum plus the appropriate London weighting).
Applicants for post (a) must be members of the R.I.B.A. and have a thorough knowledge of architectural works, particularly in regard to the design and development of school buildings. The point of entry within the scale will be fixed having regard to qualifications and experience but not exceeding £675 per annum plus London weighting annum plus for post (h) should have at having regard to qualifications and experience but one exceeding £675 per annum plus London weighting property (h) should have at having regard to qualifications and experience but one exceeding £675 per annum plus London weighting property (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a having regard to post (h) should have each have a ha

not exceeding £675 per annum plus Longon weighing.
Applicants for post (b) should have good knowledge of building construction and experience in dealing with minor alterations and general maintenance of school buildings.

The posts are superannuable and subject to medical examination.

Applications should be made on a form to be obtained from and returned to the Borough Engineer and Surveyor, Town Hall. Ilford, together with copies of not more than three recent testimonials, within 14 days of the appearance of this advertisement.

QODTH EAST METROPOLITAN REGIONAL

NORTH EAST METROPOLITAN REGIONAL HOSPITAL BOARD REGIONAL ARCHITECT'S DEPARTMENT Applications are invited for the following

HOSPITAL BOARD

REGIONAL ARCHITECT'S DEPARTMENT
Applications are invited for the following
appointments:

ASSISTANT ARCHITECTS (£680 × £25 (3) ×
£30 (2) × £35 (1) × £30 (1) × £35 (3) —£985, plus
London weighting £20—£40). Applicants must be
longered Architects, having passed the requisite examination, and must be good designers,
capable of preparing working drawings and
specifications for, and site supervision of all types
of building projects, under limited supervision.

ARCHITECTURAL ASSISTANTS (£510 (at age
21 or over) × £20 (5) × £30 (1) × £20 (1) × £25 (2)
—£710, plus London weighting £20—£30). Applicants must have passed the Intermediate examination of the R.I.B.A. (or equivalent), and be able
to make working drawings of new works, surveys,
and take levels.

Several vacancies available in each grade and
previous hospital experience not essential.

Applications giving age, present salary, qualifications and experience (with dates) together with
the names of two referees, should be sent to the
Secretary, North East Metropolitan Regional
Hospital Board, 11a, Portland Place, W.1, within
14 days.

BOROUGH OF NUNEATON
APPOINTMENT OF ARCHITECTURAL
ASSISTANT A.P.T. Grade IV (£710—£885)
Applications are invited for this post which
offers an excellent opportunity for general experience in a large building programme which
includes multi-storey flats in redevelopment areas
and on housing estates. schools, shops, and civic
buildings in addition to a large number of council
houses.

nouses.

Housing accommodation is available.

Further particulars can be obtained from the
Town Clerk, Council House, Nuneaton, to whom
applications should be submitted not later than
19th November, 1956.

4294

Applications are invited for the following appointments in the County Architect's Depart-

ASSISTANT QUANTITY SURVEYOR, Grade VI. 2890—£1,080 p.a.
ASSISTANT QUANTITY SURVEYOR, Grade III, £640—£765 p.a.
The appointments are superannuable and subject to medical examination.
A weekly allowance of 25s. and return fare home once every two months may be paid for six months to newly appointed married officers of the Council unable to find accommodation.
Applications, on forms to be obtained from F. B. Pooley, County Architect, County Offices, Aylesbury, must be returned by 10th November. 1956.

ASSISTANT. Grade A.P.T. II
Applications are invited for the above appointment in the City Engineer's Department. Applicants must possess a sound knowledge of building construction and be capable of preparing working and detail drawings under supervision. Previous experience on school buildings will be an advantage.

vantage.

Applications stating age, experience, details of qualifications, together with copies of three recent testimonials should be sent in envelopes endorsed "Architectural Assistant" to Mr. L. H. Robjohn, M.B.E., A.M.I.C.E., City Engineer and Surveyor, Town Hall, Peterborough to reach him not later than 15th November, 1956.

Consideration will be given to the provision of Council housing accommodation.

Canvassing, directly or indirectly, will disqualify. Candidates must disclose whether they are related to any member or senior officer of the Council.

C. PETER CLARKE. Town Clerk.

Town Hall, Peterborou October, 1956 ugh.

October, 1956.

MIDDLESEX COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT
SENIOR PLANNING ASSISTANT (A.P.T. IV,
£710—£885 p.a., plus London weighting). Commencing salary according to qualifications and
experience. Established, pensionable, subject to
medical assessment and prescribed conditions,
Application forms from County Planning Officer,
10. Great George Street, S.W.1. returnable by
12th November. (Quote T.875 A.J.). Canvassing
disqualifies.

4299

disqualifies. (Quote T.875 AJ). Canvassing disqualifies. 4299

BOROUGH OF DARTFORD ARCHITECTURAL ASSISTANT Applications are invited for the above appointment. Salary in accordance with Grade A.P.T. IV (£710×£35-£885). A plussage rate of £20 or £30 per annum according to age is also paid. The appointment is subject to the Local Government Superannuation Acts 1937 and 1953 and the successful candidate will be required to pass a medical examination. Housing accommodation will be provided if required. Applications stating age, qualifications and experience of present and previous appointments, and giving the names of three referees, should be forwarded to the undersigned not later than 17th November, 1956.

THOMAS ARMSTRONG, Couacil Offices, THOMAS ARMSTRONG, Town Clerk. Dartford.

Dartford. Kent.

Kent. 4360
CIVIL ENGINEERS FOR DEPARTMENT OF MAIN ROADS. NEW SOUTH WALES,
AUSTRALIA
Applications are invited from graduates (or undergraduates in their final year) in Civil Engineering of a recognised British or Irish University for appointment to the staff of the Department of Main Roads. New South Wales, the State Road Authority for construction of roads and bridges.

Dridges.

On appointment applicants may be engaged at the Department's Head Office, Sydney, on the design of re-inforced concrete and steel bridges or on main road construction and maintenance either in the metropolitan area or the country. Commencing salary according to qualifications and experience will be within the range £A1,072 to £A1,25 per annum, with annual progression, subject to technical competence, to £A1,611 per annum. Appointees will be eligible to contribute to the State Superannuation Fund after six months.

Appointee's full fare from England to

months.

Appointee's full fare from England to Australia will be met by the Department, subject to a three years' service guarantee bond being completed. Appointment will be subject to satisfactory medical examination and preference will be given to applicants not more than 30 years of age.

Applications should be made on forms obtainable from the Agent General for New South Wales, 55, Strand, London, W.C.2.

ANGLESEY COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT Applications are invited for the following post: ASSISTANT ARCHITECT Grade A.P.T. IV

post: ASSISTANT ARCHITECT Grade A.P.T. IF (£110—£285).

The post is superannuable and candidates will be required to undergo a medical examination.

Further particulars may be obtained from the County Architect, Shire Hall, Llangefni. Applications giving names and addresses of two referees to be forwarded to the Clerk of the County Council, Shire Hall, Llangefni, by 15th November, 1956.

County Council, Since November, 1956.

COUNTY BOROUGH OF HALIFAX ASSISTANT ARCHITECT (SCHOOLS)
Applications are invited for the above appointment. Salary Special Grade £590—£840 p.a. The successful candidate will serve in the section of the department which deals with School Building. Applications stating age, education and training, qualifications, present and past appointments (with dates and salaries) and experience, accompanied by copies of two recent testimonials should reach me by 10th November, 1956.

RICHARD DE Z. HALL, Town Clerk.

Halifax.

FEDERATION OF RHODESIA AND NYASALAND
VACANCIES: ASSISTANT QUANTITY
SURVEYORS: FEDERAL DEPARTMENT
Applicants, under 35, must hold A.R.I.C.S. (Quantities) or a qualification accepted by the R.I.C.S. for exemption from their Associateship examinations. Duties include taking off and preparing Bills of Quantities for all types of public buildings, including measurement and valuation of builders' accounts. Starting salary, £900—21,250, depending on qualifications and experience on scale rising to £1,500 p.a. Successful applicants will probably be stationed in Salisbury but are liable to serve anywhere in the Federation. Application forms and further details from the Public Service Attaché, Rhodesia House, 429, Strand, London, W.C.2. Closing date 17th November, 1956, 4515

The East Midlands Electricity Board (Northamp-

The East Midlands Electricity Board (Northamptonshire Sub-Area) invite applications for the position of ARCHITECTURAL ASSISTANT.
Applicants should be experienced draughtsmethic works in connection with Substations, Showrooms and Offices.
The salary will be within Grade 2 of the National Joint Council Agreement for the Electricity Supply Industry (£575-£635 per annum. Applications giving details of age, qualifications, experience and present position should be forwarded to the Manager of the Northamptonshire Sub-Area, 25, Bridge Street. Northampton, within 14 days of this advertisement.

Sub-Area, 25, Bridge Street. Normany 25, 14 days of this advertisement.

PADDINGTON BOROUGH COUNCIL.

SENIOR ASSISTANT ARCHITECT (A.P.T. VI.—1910 to £1,110 p.a.; subject to review). Candidates should have practical experience of building work and in the design and supervision of housing schemes, including multi-storey flats, and be acquainted with local government procedure. Some experience in town planning would also be an advantage. A.R.I.B.A. essential. Starting salary according to experience, applications in writing to the undersigned by 2th November, 1956 (quoting A.310), must state age; qualifications; present and past appointments with dates and salaries; experience; and names and addresses of three referees.

W. H. BENTLEY, Town Clerk.

Town Hall, Paddington Green, W.2

Town Hall,

Paddington Green, W.2

CITY OF BIRMINGHAM PUBLIC WORKS

Applications are invited for the following posts
in the Town Planning Section:

(a) PLANNING ASSISTANT, Salary Grade A.P.T.

III (£640/£765 per annum).

(b) PLANNING ASSISTANT, Salary Grade A.P.T.

II (£655/£659 per annum).

(c) PLANNING ASSISTANT, Salary Grade A.P.T.

II (£655/£659 per annum).

Commencing salary in accordance with qualifications and experience.

Applicants should have passed the Intermediate examination of the Town Planning Institute of hold a Higher National Certificate or equivalent qualifications and preference will be given to applicants with experience in the Planning Office of a Local Authority.

The successful candidate for post (a) will be responsible for the preparation of Surveys and Analyses in connection with the City's Development Plan, for post (b) will be required to assist in the preparation of Surveys and Analyses in connection with the City's Development Plan, for post (b) will be required to assist in the preparation of Surveys and Analyses in connection with the City's Development Plan, for post (b) will be required to assist in the preparation of Surveys and Analyses in connection with searches on the Local Land Charges Register.

The appointments are permanent, superannuable subject to a medical examination and terminable by one month's notice on either side.

Applications endorsed with the heading of the post applied for stating qualifications, age and experience, together with the names of two persons to whom reference may be made should reach the undersigned not later than 24th November, 1956.

Canvassing disqualifies.

HERBERT J. MANZONI.

City Engineer and Surveyst.

Canvassing disqualifies.

Canvassing disqualifies.

City Engineer and Surveyo

Civic Centre, Birmingham, 1.

CITY OF LEEDS
CITY ARCHITECT'S DEPARTMENT
Applications are invited for the following appointments:—

NT llowing P.T. IV

tion. om the sses of the

appoint a. The ction of uilding. raining, ntments

accom-imonials ALL, n Clerk

ND ITY

R.I.C.S. by the ciateship and pre-of public aluation , £900—

pplicants but are 1. Appli-e Public Strand ber, 1956

4313 orthamp-for the NT. ightsmen surveying is, Show-

annum).

be for-ptonshire n, within

Candi-building f housing ure. Some so he an ng salary

signed by nust state ointments nd names

NTLEY, non Clerk. A337

WORKS

ving posts ade A.P.T. ade A.P.T. ade A.P.I. th qualifitermediate equivalent given to ning Office

a) will be arveys and 's Developed to assist alvses and with the the Local

erannuable terminable ling of the

ANZONI. d Surreyor

436

the

appointments:—

Grade Salary Scale
ASSISTANT ARCHITECT
APTV. £795—£970
(a) The successful candidate will be wholly employed assisting in the design of a large new Central Swimming Bath.
ASSISTANT ARCHITECT
APTV. £795—£970
(b) The successful candidate will be wholly employed assisting in the design and re-development of central cleared areas with all types of dwellings including multi-storey flats, shopping centres, etc.
SENIOR ASSISTANT
QUANTITY SURVEYOR APT VI. £880—£1080
The successful candidate will be next in seniority to the Chief Quantity Surveyor.
Duties include the preparation of Bills of Quantities for Schools, Public Buildings and other major works.
CLERK OF WORKS
Candidates should have had experience as Clerk of Works on large-scale building contracts.
The payment of salary increments will be sub-ject to satisfactory contracts.

tracts.

The payment of salary increments will be subject to satisfactory service and will be granted normally with effect from the 1st April following the completion of six months' service.

The appointments are subject to the Local Government Superannuation Acts 1937-1953 and the successful applicants will be required to pass a medical examination.

Government the successful applicants will be required to a medical examination.

Application forms may be obtained from the City Architect. Priestley House. Quarry Hill, Leeds. 9, to whom they should be returned, together with copies of three recent testimonials, by 12 noon on Monday, 19th November, 1956.

Canvassing in any form, either directly or indirectly, will be a disqualification.

R. A. H. LIVETT.

City Architect.

Priestley House, Quarry Hill, Leeds, 9. 24th October, 1956.

AUSTRALIA—UNIVERSITY OF ADELAIDE
Applications are invited for appointment as
LECTURER OR SENIOR LECTURER IN
ARCHITECTURE.
The status and the initial salary attached to
the appointment will be determined in the light
of the successful candidate's qualifications and

Salary Scales:

Lecturer: £A1,200—£80(£70)—£1,750.

Senior Lecturer: £A1,800—£70—£2,150.

Superannuation: On the F.S.S.U. basis.

Terms: General terms of appointment including particulars of the information to be included in applications may be obtained from the Secretary, Association of Universities of the British Commonwealth. 36, Gordon Square, London, W.C.1, or from the undersigned.

Special Note: Potential candidates in the United Kingdom should, if possible, consult Professor R. A. Jensen before he leaves for Australia on November 17th. Professor Jensen's business address is 2. Howley Place, London, W.Z. Applications: Applications should be lodged in duplicate with the undersigned* not later than NOVEMBER 30, 1956.

Further information will gladly be supplied on request to

* V. A. EDGELOE, Registrar, University of Adelaide, Adelaide, South Australia.

BEDFORDSHIRE COUNTY COUNCIL
QUANTITY SURVEYORS:
Grade V (£795-£970).
Grade IV (£710-£885).

Applications invited for above appointments.
Commencing salary will be at point within Scales dependent upon candidates' qualifications and experience; preference given to Members of R.I.C.S. Candidates must have experience in taking off quantities for all types of buildings, measurement of work on site, valuations for interim certificates, etc. Application forms from County Architect, Shire Hall, Bedford, to be returned by 16th November.

SHEFFIELD REGIONAL HOSPITAL BOARD Applications are invited from Registered Architects for the post of ASSISTANT ARCHITECT in the Architectural Division of the Board's headquarters staff. Salary 6690-2965. The appointment is subject to the Whitley Council terms and conditions of service, to the National Health Service (Superannuation) Regulations, and to one month's notice on either side. Applications, together with the names of three referees, should be sent by 10th November. 1956 to the Servetary to the Board, Fulwood House, Old Fulwood Road, Sheffield, 10.

BERKS COUNTY COUNCIL
PLANNING DEPARTMENT
DRAWING OFFICE ASSISTANT, experienced
in map work drawing and colouring. £180 p.a.
minimum at age 15 rising to a maximum of
£20, £500 or £675 p.a. according to qualifications
and capabilities. Salary for females slightly lower
at present but "Equal Pay Scheme" has been
adopted. Applications from trainees considered.
Apply County Planning Officer, 7, Abbot's Walk,
Reading.
4320

BOROUGH OF RICHMOND (SURREY)

(a) BUILDING SURVEYOR (ARCHITECTURAL ASSISTANT—MAINTENANCE) — A.P.T. GRADE IV.V.

(b) JUNIOR ARCHITECTURAL ASSISTANT—A.P.T. GRADE III.

(c) ARCHITECTURAL DRAUGHTSMAN—A.P.T. GRADE III.

Applications are invited for the abovementioned appointments on the established staff of the Borough Engineer and Surveyor.

Applicants for post (a) must have passed the Final Examination of the Royal Institute of Chartered Surveyors. The duties will comprise the maintenance of public buildings and Council-owned estates. Applicants for post (b) should have passed the Intermediate Examination of the Royal Institute of British Architects and applicants for post (c) should be neat and expeditions diving particulars of age, qualifications from the surveyor, Hotham House, Hoon Court. Applications giving particulars of age, qualifications and experience, and the names of two referees, should be addressed to the Borough Engineer and Surveyor, Hotham House, Hoon Court. Richmond, on or before 12th November, 1986. Canvassing will disquality. Relationship, if any to members of the Council or Senior Officers must be stated. No assistance with housing.

CLIFFORD HEYWORTH,

Town Clerk.

Town Hall. Richmond, Surrey.

Town Hall.
Richmond,
Surrey.

BOROUGH OF TOTTENHAM

ASSISTANT ARCHITECT. A.P.T. Grade IV
(2710 p.a. to £885 p.a.). Applicants must hold a
final professional qualification.
ARCHITECTURAL ASSISTANT. A.P.T. Grade
II of I £595 p.a. to £675 p.a. or £530 p.a. to
£610 p.a.). Applicants must have passed R.I.R.A.
Intermediate examination or equivalent. Grading
according to experience.
Commencing salaries within grades according to
experience and ability.
London weighting allowance of £20 p.a. or
£30 p.a. according to age.
Application form and Conditions of Appointment from Borough Engineer (3J). Town Hall.
Tottenham, N.15. Annications must be delivered
by 12th November, 1956.

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies in HISTORIC BUILDINGS SECTION
for either the recording or the restoration and
maintenance of buildings of architectural and
historic interest in the Council's possession.
GRADE III (salary up to £987) and ASSISTANTS
(up to £818), with starting rates according to
qualifications and experience. A.R.I.B.A. or
equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade III, Inter R.I.B.A.
or equivalent preferred for Grade

from City Architect and Planning Officer, Buil Yard, Coventry.

STAFFORDSHIRE COUNTY COUNCIL

BDUCATION ARCHITECT'S DEPARTMENT
APPlications are invited for the above appointment within the salary range A.P.T. III/V (£640-£970 p.a.); commencing salary will be dependent upon qualifications and experience. Applicants should possess Final R.I.C.S. and be experienced in the acquisition of property for local authority purposes. Successful candidate must own a car and will be entitled to appropriate allowance. Lodging allowance of 25s, per week payable for six months where married man maintains a home outside the geographical county.

Forms of application from the County Education Architect, Green Hall, Lichfield Road, Stafford. Closing date 10 days from date of advertisement.

Clerk of the County Council.

County Council.
**County Counc

MONMOUTHSHIRE COUNTY COUNCIL
APPOINTMENT OF ARCHITECTURAL
ASSISTANTS AND QUANTITY SURVEYORS
Applications are invited for the following posts
in the County Architect's Department under the
N.J.C. conditions:

1 SENIOR ARCHITECTURAL ASSISTANT.
Grade A.P.T. V, commencing salary £830 to £970
per annum.

grade A.F.T. v, commencing salary 2500 to 29th per annum.

¶ ARCHITECTURAL ASSISTANTS, Grade A.P.T. IV. commencing salary £815 to £885.

2 ASSISTANT QUANTITY SURVEYORS, Grade A.P.T. III. salary £640 to £765 per annum.

Forms of application, particulars of post and conditions of service can be obtained from the undersigned.

Applications, together with copies of three testimonials must be forwarded to the County Architect, Queen's Hill, Newport, Mon., not later than Saturday, 17th November, 1956.

County Hall, VERNON LAWRENCE.

County Hall, Clerk of the Council.

County Hall, Newport, Mon.

NOTTINGHAMSHIRE COUNTY COUNCIL COUNTY PLANNING DEPARTMENT APPOINTMENT OF ASSISTANT ARCHITECT Applications are invited for the appointment of Assistant Architect. Salary £710—£885 per annum. Applicants must be qualified Architects and membership of the Town Planning Institute would be an advantage. Experience in the design and grouping of buildings, the re-development of built-up areas and the preparation of housing layouts required.

Further particulars from County Director of Planning, Shire Hall, Nottingham, to whom applications must be submitted not later than 16th November, 1956.

A. R. DAVIS,

A. R. DAVIS, Clerk of the County Council

PONTARDAWE RURAL DISTRICT COUNCIL
ENGINEER AND SURVEYOR'S DEPARTMENT
Applications are invited for the appointment of
a GENERAL ASSISTANT, Salary Grade II A.P.
Applicants must be a completed professional
training an use had experience in Local
Authority nousing
The Council will assist in providing housing
accommodation if required.
The appointment is subject to the Local Government Superanuation Act, 1953, and the successful
candidate passing a medical examination.
Applications, stating age, education, previous
experience and qualifications together with the
names of two referees should be submitted to the
undersigned on or before Wednesday, 14th November, 1956.

D. GLYN MEREDITH.

D. GLYN MEREDITH, Clerk to the Council.

4363

D. GLYN MEREDITH.
Clerk to the Council.
Pontardawe.
26th Oct., 1956.

ROYAL BURGH OF ARBROATH
DEPARTMENT OF HOUSING ARCHITECT
Applications are invited for the appointment of
ASSISTANT ARCHITECT in the above Department at a salary of £580—£665 (A.P.T. Grades
II and III) with placing on the scale in accordance with qualifications and experience.
Housing accommodation will be made available
to the successful applicant if required.
Applications together with copies of two recent
testimonials, should be lodged with W. R. Samson,
AR.I.B.A., Housing Architect, 32, Hill Street,
Arbroath, not later than Thursday, 22nd November, 1956.

WILLIAM D. SMITH,

WILLIAM D. SMITH. Town House, Arbroath,

Angus. October, 1956.

October, 1956.

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
Vacancies for ARCHITECTURAL and SURVERYING ASSISTANTS in the THEATRES
SECTION. Salaries up to £818, with starting
rates according to qualifications and experience.
Work involves survey of existing premises and
the consideration of proposals for alterations and

the consideration of proposals for alterations and new construction.

Particulars and application form, returnable by 23rd November, 1956. from The Architect (AR/EK/TH/2), County Hall, S.E.I. (2083) 4372

CITY ARCHITECT'S DEPARTMENT

ARCHITECTURAL ASSISTANT required, permanent staff. Salary A.P.T. Grade I/II, £550-£675 per annum (plus increase of 28°5). Applicants must have passed the R.I.B.A. Intermediate examination or its equivalent. Particulars and form from City Architect, P.O. Box 488, Town Hall, Manchester, 2. Closing date 12th November.

PADDINGTON BOROUGH COUNCIL
ARCHITECTURAL ASSISTANT (A.P.T. III—
670 to 4795 p.a.; subject to review; £10 less if under age 26). Starting salary according to experience. Candidates should be Intermediate A.R.I.B.A. with some practical experience of the design of contemporary multi-storey housing work. Work will also include interesting schemes for other Council departments. Write age, qualifications, and details of past experience and training to the under-signed together with the names and addresses of three referees by 19th November, 1956 (quoting A.311).

W. H. BENTLEY. W. H. BENTLEY, Town Clerk

Town Hall, Paddington Green, W.2.

ANGLESEY EDUCATION COMMITTEE
FULL-TIME CLERK OF WORKS
Applications are invited for appointment as
permanent Clerk of Works to the above Committee. Salary in accordance with N.J.C. Scale
Miscellaneous VI, at present £605—£620 per

Miscellaneous VI, at present £605—£620 per annum.

The post is superannuable and all candidates selected on the short list will be required to pass a medical examination. The person appointed will be responsible, under the direction of the County Architect for supervising the repair and maintenance of all the Education Committee's property and also carry out such other duties in connection therewith as may be assigned to him. A knowledge of Welsh is desirable. Full particulars of the post and application forms may be obtained from the Director of Education, Education Offices, Llangefni, to whom applications must be sent by the 16th November, 1956.

UNIVERSITY OF OXFORD Applications are invited for the following

Applications are invited for the following appointment:

ARCHITECTURAL ASSISTANTS of about Intermediate standard with some knowledge of modern building construction. Salary £530—250. Varied and interesting work. Generous leave. Apply for further particulars, stating age, experience and training, to the Surveyor to the University, 5, South Parks Road, Oxford. 4187

WEST SUSSEX COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT Applications are invited for the following appointment:

ASSISTANT ARCHITECT, Grade HI A.P.T. Division (£690-£340 if Associates R.I.B.A. and £640-£765 if not Associates). These scales are subject to 2½ per cent, increase recently awarded. Commencing salary according to experience.

Further particulars should be obtained from the County Architect, County Hall, Chichester, to whom all detailed applications must be submitted not later than 20th November, 1956.

T. C. HAYWARD.

Clerk of the County Council. Chichester, to County Hall, Chichester,

County Hall, Chichester. 17th October, 1956.

Tenders Invited

6 lines or under, 12s. 6d.; each additional line, 2s.

BOROUGH OF LUTON

BOROUGH OF LUTON

Tenders invited for:—

(a) ERECTION OF TWO PAIRS OF HOUSES in The Pyghthe, Farley Hill Estate.

(b) ALTERATION AND CONVERSION of 63, Brook Street, in five FLATS.

Documents from Borough Architect, Town Hall, Luton, on payment of £2 25. deposit for each contract, returnable on receipt of a bona fide tender not subsequently withdrawn. Cheques payable "Luton Corporation." Tenders to Town Clerk, Town Hall, Luton, by noon on Thursday, 29th November, 1956.

Architectural Appointments Vacant 4 lines or under, 7s. 6d.; each additional line, 2s.

CROYDON.-ARCHITECTURAL required immediately for interesting and varied work. Inter./Final standard; capable of running small contracts.—Write age, experience, and salary required, to George Lowe & Partner, 4, High Street, Croydon, Surrey.

DOSTINTERMEDIATE ASSISTANT requires, in large London Office with widely varied practice. Lewis Solomon, Son & Joseph, 21. Bloomsbury Way, London, W.C.I. Telephone HOLD TREES OF THE PROPERTY OF THE PROPERTY

7082.

CO-OPERATIVE WHOLESALE SOCIETY LTD.
ARCHITECT'S DEPARTMENT, MANCHESTER
HOPFITTING DRAUGHTSMAN required, experienced in shop equipment and modernisation of interiors.

The position calls for the preparation of layouts and perspectives with a modern approach to store fitting problems.

The post is pensionable, subject to medical examination and there is a fixed week in

The post is pensionable, subject to medical examination and there is a five-day week in

operation.
Applications giving age, details of previous experience and salary required to G. S. Hay, A.B.I.B.A., Chief Architect. Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester 3056

RONALD WARD & PARTNERS require an ARCHITECTURAL ASSISTANT, with contemporary outlook and willing to use own initiative. Salary range 2500 to 2500. Interesting and varied work, home and abroad. Congenial working conditions.—Apply 29, Chesham Place, Belgrave Square, S.W.1. Tel. Belgravia 3361.

WEST END Architects require ASSISTANT for preparation of working drawings. Some office experience essential, together with a sound knowledge of building construction. State salary required.—Box 4049.

JUNIOR ARCHITECT, B.I.B.A. Intermediate standard, required at Guildford. Varied work, mainly factory. 5-day week. Salary by arrangement.—Box 4178.

F. W. WOOLWORTH & CO. LTD. Architect's Department, Kensington District Office. Applications are invited for the following appoint-

Applications are interest and the ment:—
ARCHITECTURAL ASSISTANT of Intermediate B.I.B A. standard, capable of carrying out surveys, preparing sketch schemes, working drawings and details.
The appointment is permanent and pensionable. 5-day week. Dining room facilities. Application stating age, experience, qualifications and salary to District Architect, F. W. Woolworth & Co., Ltd., 26/40, Kensington High Street, London, W.S.

A RCHITECTURAL ASSISTANT required with good general training and experience. Interesting work including schools, light industrial work, and housing R.I.A.S. Pension Scheme. Apply with full particulars and salary required to Fairbrother, Hall & Hedges, A/A.R.I.B.A., 27, Rutland Square, Edinburgh, 1. Fountainbridge: 1251/2.

ENULIAND SQUARE, Edinburgh, I. Fountainbridge: 24556

ARCHITECTURAL ASSISTANTS required. State salary, age, experience, etc. Harvey & Scott, 2. Lynedoch Place, Glasgow, C.3. 4278

BRITISH RAILWAYS—EASTERN REGION MODERNISATION PLAN

ESIDENT ARCHITECT required for the office of the Architect, Eastern Region, KING'S CROSS STATION, to supervise contract work in the Peterborough Area. Applicants should preferably be qualified and have experience of site supervision and be prepared to reside in Peterborough. Salary range 2770/2835. Five-day week, concessionary rail travel and permanency after probationary period. Apply in writing, giving full particulars as to age, experience and qualifications to Chief Civil Engineer, British Railways, Eastern Region King's Cross Station, London, N.1.

AJOR Petroleum Company requires, for its

Iondon. N.1.

AJOR Petroleum Company requires, for its London Office, an ARCHITECTURAL DRAUGHTSMAN for work on various commercial projects. Applicants should be quick and accurate draughtsmen and should have a sound knowledge of building construction. Salary according to experience. Position will be permanent and pensionable. Excellent working conditions, staff restaurant, sports club, etc. Apply in writing giving full details of age, qualifications and experience to Box 4255. Replies can only be sent to those selected for interview.

OLIVER LAW & PARTNERS (Chartered Architects), 36, Ebury Street, Wegtminster, require two or three additional ARCHITECTURAL ASSISTANTS (Draughtsmen). Architectural School or Office experience essential. Salaries £600 to £300 per annum. according to experience. Box 4253.

ARCHITECTS
POST OF DEPUTY ARCHITECT
VACANCY occurs for the above post, with
Chartered Architect (Belfast Office),
currently engaged in valuable and good quality
works. The post also offers opportunity to engage
an associated architect. Remuneration by agreement.

Applications for particulars, and information about local attractions and housing facilities should be accompanied by credentials and names of referees; particulars of education; qualifications and experience; age and present salary. Confidential. Box 4234.

JOHN WRIGHT requires an ASSISTANT, chiefly to take charge of the smaller work in his office from beginning to end.—Reply to 35, Thurloe Place, S.W.7.

ARCHITECTS

ARCHITECT, Chartered, has vacancies, Belfast office, for SENIOR and INTERMEDIATE ASSISTANTS seeking experience and advancement on big and good quality works. Good salary. Applications for particulars, and information about local attractions and housing facilities should be accompanied by credentials and names of referees; particulars of education; qualifications and experience; age and present salary. Confidential. Box 4235.

Confidential. Box 4235.

A RCHITECTURAL ASSISTANT required.
Probationer to Intermediate Standard.
Apply in writing stating age, experience and salary required to Johnston & Wright, Chartered Architects, 13, Castle Street, Carlisle.

A RCHITECT'S ASSISTANT with Intermediate R.I.B.A. Able to do working drawings to all scales. Salary by arrangement. Murray Evans, 5, Buckingham Pace, S.W.L.

QUALIFIED ARCHITECTURAL ASSISTANT, preferably with experience of City Architecture and first class finishes required in Kensington office. Salary £800 plus per annum. Box 4214.

A RCHITECTURAL ASSISTANT, Intermediate standard, required immediately for busy general practice. Write stating age, experience and salary required to Deacon & Laing, 9, 8t. Paul's Square, Bedford.

PATRICK GWYNNE requires an ASSISTANT to work with him personally at his house

to work with him personally at his house near Esher, on detailing of new houses, interiors and furniture. Previous office experience essential. The Homewood, Esher, Surrey. ESHer 3310. 4277

A RCHITECTURAL ASSISTANT required in New Year, in small office, for work in Metropolitan Essex. Opportunity for wide experience with varied types of building. 5-day week. Salary by arrangement.—Tingey Associates, 29a, Longbridge Road, Barking, Essex. Ripplews 1313.

R AMSEY, MURRAY, WHITE & WARD require an ASSISTANT ARCHITECT, with minimum two years' experience after qualifying.—Apply 32, Wigmore Street, London, W.1.

A RCHITECTURAL ASSISTANT urgently required. Accurate draughtsmanship, sound
knowledge of building construction and detailing
essential, plus a keen interest in contemporary
design.—Apply in writing, giving full particulars
of experience and salary required, to Robert C.
Carvell, L.R.I.B.A., 20, Marshall Place, Perth.
4550

I

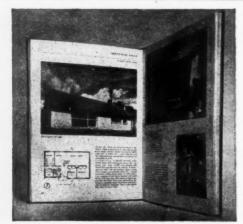
F.

A RCHITECTURAL ASSISTANT required: qualified or Intermediate stage. Must have good experience, and considerable capacity for work.—Write, stating salary required. to David Carr & Stuart Matthew, 14, Lynedoch Place, 4349 Edinburgh.

SOUTH-WEST Office requires ARCHITEC.
TURAL ASSISTANT, Junior/Intermediate grade. Progressive position; medium size, varied practice, with scope for initiative and taking of responsibility; pleasant working conditions; small flat available; car allowance; pension scheme. Salary up to £600 p.a., according to experience.—Apply Box 4339.

Apply Box 4339.

W. H. SMITH & SON require ASSISTANT ANTS in the Drawing Office of their Estate Department. Assistant Architects should be qualified, and preference will be given to those applicants with knowledge of shop fitting work, although not essential. Juniors should be up to Intermediate standard, Positions will be progressive and work is interesting and varied. Salary paid commensurate to age, experience, and qualifications in both cases. 5-day week. Superannuation scheme.—Apply to Chief Architeck, W. H. Smith & Son, Ltd., Strand House, W.C.2.



50 modern bungalows

EDITED BY FELIX WALTER, F.R.I.B.A.

THIS BOOK ILLUSTRATES AND DESCRIBES in detail a selection of examples of the most success ful and interesting recently-built single-storey houses, all of them examples which show the latest developments in small house planning and design. It is edited by a practising architect with considerable experience of small house design. In his introduction and descriptive notes he pays special attention to new heating methods and to the latest ideas in planning, kitches arrangements and so on which these facilitate. Costs are stated for each house illustrated. Size 10 ins. by 71 ins. 112 pages, over 200 illustrations in halftone and line. Price 18s. 6d. net

THE ARCHITECTURAL PRESS, 9 Queen Anne's Gate, S.W.1.

A RCHITECTURAL ASSISTANTS required.

Intermediate R.I.B.A. standard. Salaries according to ability. Superannuation scheme in operation.—Box 4349.

fast ATE nent

fica-

and 4230

rray ANT. rchi-l in num.

diate

ANT house eriors ntial. 4277

d in

e ex-5-day ciates, leway 4352

D re-

with nalify-W.1. 4356

ly re-

sound ailing porary culars ert C. Perth. 4350

uired: t have ty for David Place, 4343

ITEC-

nediate varied ing of small cheme. ence.—

STANT
ASSISEstate
uld be
those work,
up to
pe provaried.
ce, and
Superchitect,
W.C.2.
4348

the

hitect

otes be em d.

A RCHITECTURAL ASSISTANTS, of Intermediate standard and below required to work at St. Albans office on hospital and other large projects, at home and overseas.—Telephone St. Albans 56011, extn. 12.

A RCHITECTURAL DRAUGHTSMAN reProperty Development Company specialising in
choice commercial developments. This is a permanent post, which offers invaluable experience.
Excellent prospects of future advancement and
bighest salary to ambitious and competent man.—
Write Box 4338.

A RCHITECTURAL ASSISTANT, Intermediate standard, required for West End Architects office. 5-day week. Luncheon vouchers. Salary by arrangement.—Scherrer & Hicks, 19, Cavendish Square, W.1.

EXPERIENCED ARCHITECTURAL ASSIS-TANT required for varied practice.—Write or telephone for appointment to Gerald Shenstone & Partners, 34, Bloomsbury Way, W.C.1. Tele-phone Chancery 3444.

phone Chancery 3444.

THE LONDON HOSPITAL, Whitechapel, E.1, requires JUNIOR ARCHITECTURAL ASSISTANT. Salary £440 to £550 p.a., according to experience, plus London weighting. Post superannuable.—Applications, stating age, present salary, and brief particulars of experience, to be sent to the Architect. Accommodation is available in Kensington if successful candidate is a womaan.

4086

woman.

OUIS DE SOISSONS, Peacock, Hodges & Robertson, have vacancies in their London and Welwyn Garden City offices for SENIOR and INTOR ARCHITECTURAL staff. A large amount of varied interesting work on hand.—Write, stating age, salary and experience, to Louis de Soissons, Peacock, Hodges & Robertson, 3, Park Sonnare Mews, Upper Harley Street, London, N.W.1.

SENIOR ASSISTANT, A.R.I.B.A., and JUNIOR ASSISTANT, Intermediate standard, required in Lancaster office. Good salaries for capable and enthusiastic men.—Box

INTER. R.I.B.A. standard ASSISTANT required with office experience for varied practice in Gray's Inn. Chance to see job through from start to finish.—William G. Ingram, Son & Archer. Telephone Chancery 8036.

A RCHITECT'S ASSISTANTS required. Exeter and London offices. Applicants should have passed R.I.B.A. Intermediate Examination or attained that standard. Salary according to qualifications.—Apoly J. Francis Smith. F.R.I.B.A., F.R.I.C.S., 5, Cathedral Close, Exeter.—4287

ARCHITECTURAL ASSISTANTS with magination and initiative, required by Brighton office to London practice. Applicants should have progressive ideas and at least two years' office experience after completion of training. Congenial working conditions: 5-day week; staff pension scheme. Salary by arrangement.—Apply Box 4319.

Apply Box 4319.

A RCHITECTURAL ASSISTANT, of Final or Intermediate R.I.B.A. standard, required by Cadbury Brothers, Ltd, to work on a varied and interesting programme. Experience in industrial and commercial building design desirable. 5-day week, attractive working conditions and amenities, pension scheme. Provision of housing accommodation will be considered for suitable applicants. Salary according to qualifications and experience.—Write, stating age, qualifications and salary required, to Chief Architect, Cadbury Brothers, Ltd., Bournville, Birmingham.

YOUNG, Intermediate standard, ARCHITEC-TURAL DRAUGHTSMEN, with contem-porary outlook, required immediately for Surveys, Working Drawings and Details. Good salary and prospects offered.—Dawe, Carter & Partners, Clarendon Road, Watford. WAT. 7296. 4300

SENIOR and JUNIOR ARCHITECTURAL
ASSISTANTS required by Monro & Partners
for their London and Watford offices.—Apply 32,
Clarendon Road, Watford.
4322

CLIFFORD CULPIN & PARTNER urgently require two additional ASSISTANTS, with office experience. Salary £650-£750 p.a. Programme includes Schools, Housing, Multi-Storey Plats, and a Civic Centre-Kindly apply briefly in writing to 39, Doughty Street, W.C.1. 4288

A RCHITECTS require ASSISTANT; passed R.I.B.A. Intermediate. Large scale commercial work. Good salary to keen assistant.—Watson, Johnson & Stokes, 5, Victoria Square, Birmingham, 2.

A SSISTANTS urgently required, around Inter.
standard, 5-day week and lunch vouchers.—
Write full particulars, Lanchester & Lodge, 10,
Woburn Square, London, W.C.1.

QUALIFIED ARCHITECT for Design in
projects. Prospects of overseas tours. Salary by
arrangement.—Apply Box 4314.

CAT-LOVING JUNIOR ASSISTANT required to work under cramped conditions. Essentially modern practice, small but spirited, and including the usual grim conversions, but all wonderful experience, etc. \$450 p.a. Dennis Berry, Holland Park, W.11. Park 7807. 4261

TREHEARNE & NORMAN, PRESTON & PARTNERS have vacancies for SENIOR AND JUNIOR ASSISTANTS. Salaries according to experience and qualifications.—Apply: 83, Kingsway, W.C.2 (HOL. 4071).

QUALIFIED ASSISTANT ARCHITECT required for varied work. Salary approx. £620 per annum. Pension Scheme available.—T. H. Johnson & Son, F.R.I.B.A., 20, Priory Place.
Doncaster. 4333

ENTHUSIASTIC ASSISTANT wanted for Godsmark. Chartered Architect, 37A. Tubwell Row, Darlington. Tel. Darlington 4932. 4527

A RCHITECTURAL ASSISTANT required by Spicers, Ltd. Intermediate standard R.I.B.A. essential, A.R.I.B.A. desirable. Permanent position, Pension Scheme.—Write, stating salary required, to Personnel Adviser, 19, New Bridge Street, E.C.4.

EXPANDING Architectural practice on South Coast requires ARCHITECTS for work on large projects.—Apply, giving particulars and salary required, to Box 4528.

A SSISTANT ARCHITECT required for varied work. Intermediate standard. Salary approx. 4520 per annum. Pension Scheme available.—T. H. Johnson & Son, F.R.I.B.A., 20, Priory Place, Doncaster. 4534

A SSISTANTS required in medium-sized busy West End office. Applicants should be of R.I.B.A. Finals standard, capable of taking complete charge of contracts under general supervision. General Practice, including Housing Schemes, Office Blocks, Factories, etc.—Apply in writing only, stating age, qualifications, experience and salary required, to Thomas Sibthorp, F.R.I.B.A., A.R.I.C.S., A.M.T.P.I., 10, Manchester Square, W.1

MESSRS. EASTON & ROBERTSON require
ASSISTANTS in Junior and Intermediate
grades.—Apply 53, Bedford Square, W.C.1. 4153

Architectural Appointments Wanted 4 lines or under, 7s. 6d.; each additional line, 2s.

R.I.B.A., Dip. Arch., with 10 years in responsible position, wide experience, desires salaried partnership or similar in South half of country. Highest references. Approx. salary £1,500.—Apply Box 4374.

A.R.I.B.A., 10 years' varied experience, seeks post for 344 days a week, in Surrey or an adjacent area. Box 4260.

A.R.I.B.A., A.M.T.P.I., offers part-time day or evening assistance in London area or Essex. School trained and with 7 years' varied office and site experience. Own car.—Box 4345.

A.R.I.B.A., Dip. Arch. (30), with considerable

A R.I.B.A., Dipl. Arch. (30), with considerable experience in management of awkward contracts in London, requires responsible, busy, senior appointment in small, private, London

QUALIFIED ARCHITECT (35), with commercial experience within the building industry, seeks appointment with large Architectural firm as SENIOR ASSISTANT responsible for progress and administration of contracts.—Box 4303.

A. R.I.B.A. (41), holding senior post with London Brewery (8 years), seeks similar post anywhere outside London area.—Box 4355,

D.Arch., A.I.I.A. (India), recently passed R.I.B.A., with considerable experience, seeks practical experience in designing, specially housing and offices. Preferably near S.E.20. 4295

A. R.I.B.A., A.M.T.P.I., 25 years' London experience, seeks responsible post or partnership in London area—Write 273, Shirland Road,
W.9, or 'phone Ladbroke 1886. 4207

A. R.I.B.A., with 10 years' comprehensive post-of Graduate experience, mainly in senior position with leading Architect, seeks permanent progressive post with private office or commercial firm in the London area.—Box 4330.

A R.I.B.A., experienced, car owner, seeks responsible position.—Box 4370.

Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

BUILDING SURVEYOR required by pro-gressive Manchester Architects and Sur-veyors. Must be good, accurate draughtsman, able to survey and level. State age, qualifica-tions (if any), salary and experience.—Apply Rox 4992. Box 4292.

QUANTITY SURVEYOR required by Rhodesian Chartered Surveyors, near or newly qualified. Single man. Salary £900 per annum initially. Free passage, etc.—Write for details to O.T.S., 5, Welldon Crescent, Harrow, Middlesex, quoting reference OSS.97/4.

TWO QUANTITY SURVEYORS required by RHODESIAN CHARTERED SURVEYORS. Five to six years' experience. Salary £900 per annum initially. Free passages, etc.—Write for details, quoting Reference OSS.97/4, to O.T.S., 5, Welldon Crescent, Harrow, Middlesex. 4326

Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.

NAMEPLATES AND SIGNS, Bronze, Brass and Plastics. Church Metalwork. Quick delivery.—Austin, Luce & Company, 19, College Road, Harrow, Middlesex. Tel.: Harrow 3889,

BILLINGHAM (CI) DIVISION

ASSISTANT ARCHITECT

Applications are invited for the appointment of an Assistant Architect to help in the design of a large scale building programme of Offices, Laboratories, Amenity Buildings, etc. Candidates should be members of the R.I.B.A. with a minimum of two years' experience after qualification. The post is permanent and carries an attractive starting salary and conditions of service. Without commitment, send for Application Form to the Staff Manager, Imperial Chemical Industries, Limited, Billingham Division, Billingham, Co. Durham, quoting reference L/C/8. reference L/C/8.



ASSISTANT QUANTITY **SURVEYORS**

Inere are vacancies at Billingham for two Assistant Quantity Surveyors, preferably under 30 years of age, for permanent positions. They should be experienced in taking off, preparation of Bills of Quantities and settlement of final accounts. Attractive salaries and conditions of service are offered. Without commitment, send for Application Form to the Staff Manager, Imperial Chemical Industries Limited, Billingham Division, Billingham, Co. Durham, quoting reference L/D/8.

A. R.I.B.A. offers part time assistance in any capacity. Car-owner. Box 4371.

A. BCHITECTURAL PHOTOGRAPHY to Monochrome, Natural Colour and 3D. Quotations with pleasure.—Geoffrey Hammonds (Associate of the Institute of British Photographers in Commercial Photography), The Studios, King Street, Hereford. Tel. Hereford

SITE Surveys and Surveys of Buildings pre-pared at short notice anywhere in Britain. MUSeum 8753.

S URVEYS OF BUILDINGS, detailed drawings prepared, also land surveys by chain or theodolite, levelling, etc. LIV. 1839.

A BCHITECTURAL, Beinforced Concrete and Steel Design and Detailing required—only buildings over £10,000. Large staff available. MUSeum 8753.

COOD LETTERING is essential for Comet memorative Wall Tablets, Foundation Stones, etc. Designs prepared and estimates given for the finished work in any suitable material. Renowned as a Centre for Lettering since 1934. Sculptured Memorials, 67, Ebury Street, S.W.1.

MAMEPLATES, PLAQUES, CRESTS, etc., in bronze, brass and plastic, quotations and lay-outs submitted.—Abbey Craftsmen, Ltd., 78, Osnaburgh Street, London, N.W.1. Euston 5722.

STRUCTURAL, Mechanical and Blectrical Concations for all types of Steel and R.C. Buildings, Heating, Boiler Plant, Ventilating, Air Conditioning, Automatic Control Schemes, with associated Electrical installations undertaken by a group of experienced and fully qualified Engineers.

PUNCTUAL typing services offered. Specifications, schedules, reports, and letters for the Architect at reasonable charges. Box 4231.

ARCHITECT'S SHORTHAND TYPIST with own portable is available for week-end work.—Apply Box 4341.

STRUCTURAL Design, Detailing, Scheduling, etc., in steel and reinforced concrete undertaken.—Box 4346.

taken.—Box 4346.

TYPEWRITING/DUPLICATING. — Specifications, etc., undertaken by experts. Reasonable charges.—Stone's Secretarial Services, 446. Strand. Tem. 5984. 4312

THIS WEEK we are available to inspect sites between BERKSHIRE and LONDON.—THE SITE SURVEY COMPANY, BLACK-HEATH, S.E.J. LEE Green 7444-5.

For Sale and Wanted

4 lines or under, 7s. 6d.; each additional line, 2s.

ECTIONAL BUILDINGS, timber, timber and asbestos, 10 ft. to 24 ft. spans. A few secondhand buildings available. Enquiries invited for Site Huts, Temporary Offices, Club Rooms, Church Halls, etc. Free catalogue. Universal Supplies (Belvedere), Ltd., Crabtree Manorway, Belvedere, Kent (Erith 2948).

Beivedere, Kent (EFIIN 2948).

RECONDITIONED Ex-Army Huts and Manufactured Buildings, Timber, Asbestos, Nissen Type, Hall Type, etc. All sizes and prices.—Write, call or telephone: Universal Supplies (Belvedere), Ltd., Crabtree Manorway, Belvedere, Kent. Tel.: Erith 2948.

ARCHITECT'S Practice for Sale Established
25 years, busy town, South Lincolnshire.
Excellent office suite and all equipment.—Box 4369.

Financial

A DVERTISER will be pleased to receive details of shop and office schemes ready and requiring finance anywhere in the United Kingdom. Is also able to give instruction on a number of matters to Architects experienced in these fields of development.—Write Box E7619, Whites, 72/78, Fleet Street, London, E.C.4. 4298

Miscellaneous

4 lines or under, 7s. 6d.; each additional line, 2s. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. Harvest Works %/187, St. Paul's Road, N.l. Canonbury 2061.

Educational Announcements

4 lines or under, 7s. 6d.; each additional line, 2s.

R I.B.A. Inter: and Final EXAMS.

F.R.I.B.A., 115, Gower Street, W.C.1. 1942

108. 3966.

R. I.B.A. and T.P.I. BXAMS.—Stuart Stanley G. A. Crockett, M.A./B.A., F./F.B.I.B.A., M./A.M.T.P.I. (Prof. Sir Patrick Abercrombie in assn.), prepare Students by correspondence, 18, Adelaide Street, Strand, W.C.2. TBM 1603/4.

WELL qualified LECTURER will coach Students in Design. Personal or postal tuition.—Write Box 4036.

COURSES for all R.I.B.A. EXAMS.
Postal tuicion in History, Testimonies, Design, Calculations, Materials, Construction, Structures, Hygiene, Specifications, Professional Practice, etc. Also in general educational subjects.

ELLIS SCHOOL OF ARCHITECTURE Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A. 1638 OLD BROMPTON RD., LONDON, S.W.7 Phone: KEN 4477 and at Worcester

ACADEMY MODELS

or ARCHITECTS AND DESIGNERS

18a Dawson Place W.2. Park 9363

MODELS

John B. THORP BY 98 GRAY'S INN ROAD, TOWN PLANNING PUBLIC BUILDINGS TELEPHONE ESTATES and INTERIORS

HOLBORN IOU



McCutchon Studio, 12, Maclise Rd., London W14

MODELS for architects, planners, designers, civil engineers

Telephone Number: SHEpherd's Bush 5939

MODELS .. DIORAMAS

and Exhibition Display Service

Randall Page 78 Royal Mews Southend Essex Tel: 45145

don't just say mastic specify SECOMASTIC

Secomastic Ltd. Bracknell, Berks. Tel: Bracknell 210

WHITE FACING

(S. P. W. BRAND)

Telephone:
Telephone:
"Maclime", Sulwell,
Nottingham

M. MCCARTHY & SONS, LTD

NOTTINGHAM

THE TYROL MACHINE

Pat. No. 510492



OPEN TEXTURE (ROUGH CAST) **FACINGS**

- UGHT WEIGHT
- RAPID COVERAGE
- SIMPLE TO USE · EASY TO CLEAN

PRICE £9.18.0 each delivered free any part of U.K. TYROL SALES LTD. (Div. H)

54, Park Lane, Croydon, Surrey Telebhone: CROydon 4529

MUST WE BE HEROES?

And fight the Fire Fiend without NU-SWIFT? But why? Even the Royal Navy don't do that. Please send us details of your wonderfully rapid and reliable Fire Extinguishers— BEFORE IT IS TOO LATE!

Post NOW to Nu-Swift Ltd. 25 Piccadilly W.1.

In Every Ship of the Royal Navy

ARCHITECTURAL

contemporary

SIGN etters

> IN A VARIETY OF METALS & FINISHES

ARD AND COMPANY

128 CHELTENHAM ROAD, BRISTOL &

TELEPHONE 21536



from everywhere

to see London's largest display of

office furniture and equipment at OFFICE EQUIPMENT CO.

113 High Holborn, London, W.C.1. CHA 6524 Write, 'phone or call for 54-page catalogue.

98

AJ enquiry service

If you require catalogues and further information on building products and services referred to in the advertisements appearing in this issue of the Architects' Journal please mark with a tick the relevant names given in the index to advertisers overleaf. Then detach this page, write in block letters, or type, your name, profession or trade and address in the space overleaf, fold the page so that the post-paid address is on the outside and despatch. We will ensure that your request reaches the advertisers concerned.

Postage will be paid by Licensee

No Postage Stamp necessary if posted in Great Britain or Northern Ireland

BUSINESS REPLY FOLDER Licence No. S.W. 1761

FOLD HERE

THE ARCHITECTS' JOURNAL 9-13 Queen Anne's Gate London, S.W.1.

FOLD HERE

ell,

D AH

E

E

U.K.

. H)

end even ease fully

W.1.

lavy

ry

Alphabetical index to advertisers

Academy Models	98 98 92 92 37 92, 96 92	Falk, Stadelmann & Co., Ltd. FEB (Great Britain) Ltd. Ferodo, Ltd. Finch, B., & Co., Ltd. Flexwood, Ltd. Freeman, Joseph, Sons & Co., Ltd. Furse, W. J. & Co., Ltd.	PAGE 31	National Federation of Clay Industries, The Natural Asphalte Mine-Owners' & Manufacturers' Council Neuchatel Asphalte Co., Ltd. Nu-Swift, Ltd.	70 C
Batley, Ernest, Ltd. Bawn, W. B., Ltd. B.B. Chemical Co., Ltd. Bendz, Ltd. Blacknell, H. & H., Ltd. Bottogas, Ltd. Boulton & Paul, Ltd. Bowker, S. O., Ltd. Briggs, William & Sons, Ltd.	90	Glazed & Floor Tile Manufacturers' Association, The Greenwood's & Airvac Ventilating Co., Ltd. Griffiths, A. M., & Son, Ltd. Gyproc Products, Ltd.	8	Office Equipment Co	98 [90 [14 [78 [
British Electrical Development Association British Home & Office Telephone Co., Ltd. British Mouldex, Ltd. British Paints, Ltd. British Reinforced Concrete Engineering Co., Ltd. Broughton Moor Green Slate Quarries, Ltd.		Hall, J. & E., Ltd. Hills, F. & Sons, Ltd. Hobbs, Hart & Co., Ltd. Holophane, Ltd. Hope, Henry, & Sons, Ltd. Hope's Heating & Engineering, Ltd.	36	Previte, Ltd. Prodorite, Ltd. Rainham Timber Engineering Co., Ltd. Ranalah Gates, Ltd. Randall Page	7 [101 [98]
Cape Building Products, Ltd. Carlisle Plaster & Cement Co., Ltd. Carter & Co., Ltd. Catesbys Linoleum Contracts Chance Bros., Ltd. Cheecol Processes, Ltd. Colt Ventilation, Ltd. Copper Development Association, Ltd. Coseley Engineering Co., Ltd.	52	Ideal Boilers & Radiators, Ltd. Imperial Chemical Industries, Ltd. International Paints, Ltd. Kerner-Greenwood & Co., Ltd. Key Engineering Co., Ltd., The	51	Range Boilers, Ltd. Richardson & Starling, Ltd. Rists, Wires & Cables, Ltd. Robertson Thain, Ltd. Ronuk, Ltd. Ruberoid Co., Ltd., The Runnymede Rubber Co., Ltd.	16 [84] 88 [29] 54 [27] 71 [
Denton Edwards Paints, Ltd. Dignus, Ltd. Downing, G. H. & Co., Ltd. Dussek Bitumen & Taroleum, Ltd.	89	Lawley, W. & J., Ltd. Lead Sheet & Pipe Council Lewis Tileries, Ltd. Lignacite (N.E.), Ltd. Loft Ladders, Ltd.	33	Saniguard Appliances, Ltd. Sankey, J. H., Ltd. Saro Laminated Wood Products, Ltd. Seaboard Lumber Sales Co., Ltd. Sebel Products, Ltd. Secomastic, Ltd. Skanska Attikfabriken, Ltd. Sommerfelds, Ltd. Spencer, Lock & Co., Ltd. Steel's Engineering Installations, Ltd. Stelcon (Industrial Floors), Ltd.	88 [48] 56 [38-39] 84 [98] 55 [91] 35 [81]
Econa Modern Products, Ltd. Educational Supply Association, Ltd. Ellis School of Architecture Empire Stone Co., Ltd. English Electric Co., Ltd. Esso Petroleum Co., Ltd. Etchells, Congdon & Muir, Ltd. Evode, Ltd. Ezee Kitchens, Ltd.	90	Mason, Joseph, & Co., Ltd. McCarthy, M., & Sons, Ltd. McCutchon Studio Merchant Trading Co., Ltd. Metal Sections, Ltd. Metal Window Association, The Mills Scaffold Co., Ltd. 2,	66	Trussed Concrete Steel Co., Ltd	80 [98] 86] 83] 98]
For Appointments (Wanted or Vacant), (Education, Legal Notices, Miscellaneous Pr	competition operty and	ons Open. Drawings, Tracings, etc.			

Write in block letters, or type, your name, profession and address below, and fold so that the post-paid address is on the outside.

MASAW	
NAME	-9
PROFESSION	
LODNESS	
	2

PAGE

40 D 70 D 68 D 98 D

90 | 14 | 178 | 186 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | 18



OUTSTANDING VALUE ORNAMENTAL IRON

SOLD ONLY TO THE TRADE

Ideal for Estates and Competitive Building.

Special Prices for Contract Order.

Agents throughout the United Kingdom.

Send for catalogue and name 3' 4" opening - £4.5.0 of nearest stockist.

THE PRESTON Overall Height 3' 5"

Retail Prices:

3' opening -- £3.18.6

Double Gate 7' - £10.7.10

Over 70 designs. Prices up to £75.

43 DEVONSHIRE PLACE . BRIGHTON . Telephone: BRIGHTON 22191/2/3



Specify COPPER TRAPS

for obvious reasons

Whether connected to Copper, Lead or Iron piping they will never leak; they are resistant to all climatic conditions; due to the smoothness of the bore they are more sanitary; they are lighter, cheaper, easier to handle

For B.S.S. Copper Tube, use our Copper Traps in conjunction with the "TRAPEZE" patent Slip-in Joint. Simply wet end, push into joint and it is permanently leakproof. Available only to merchants through our distributors, a list of whom we will gladly supply on application.





LISTER STREET BIRMINGHAM, 7, ENGLAND

Telephone: ASTon Cross 3771-2 Telegrams: "TRAPPED, Birmingham 7"

e our exhibit at the Building Centre, 26, Store St., W.C.1.



Fits -always

cuts installation time and costs and automatically ensures correct levelling

No separate adjustment or packing is necessary to bring depth switch assemblies perfectly flush with plaster surfaces-not with the Tenby Pilot 'Plaster Master'. By simply tightening two cover screws, the accessory is automatically raised to the correct level in relation to depth of plaster. Simplifies installation . . . saves time and trouble . . . cuts costs . . . complete rigidity ensured. This ingenious self-adjusting accessory forms an integral part of the base of all Tenby Pilot plaster depth pressed steel boxes, which are available for various types of 5 amp AC/DC wiring-T.R.S. wiring, oval grip and round grip conduit wiring. and 3in, screwed conduit wiring.



76 XI





76 BM









Write on phone for TENBY Plaster Master Publication No:76/1154

S.O. BOWKER (TD.

Tenby WORKS . WARSTONE LANE BIRMINGHAM 18 Telephone CENtral 3701

stephone: MUSeum 649; Menager II. Harding,
Manchierr Office & Storm—18, Morley Storm, Munchester
dephone: CENeral 6031: Menager: H. Atherton
construction of Storm—18, Turkey Storm, Munchester
dephone: Menager Storm—5, Park Plane, Lends 1.

PMUZ (Two Inst), Menager: G. Stormer,
Mell (Two Inst), Menager: G. Stormer,
Property Storm, Menager: G. Stormer,
Stormer, Stormer,
Stormer, Stormer,
Stormer, Stormer,
Stormer, Stormer,
Stormer, Stormer,
Stormer,
Stormer,
Stormer,
Stormer,
Stormer,
Stormer,
Menager,
Stormer,
S chists for Eure -- Nugent & Cooper Ltd., Nuco Hause, Lower Abbey Street blin. Telephone: Dublin 70417



Welded Fabric

the ideal reinforcement for all types of slab construction for roads or floors whether on the ground or suspended. BRC fabric is a welded steel wire mesh supplied in sheets or rolls.

THE BRITISH REINFORCED CONCRETE ENGINEERING CO. LTD., STAFFORD

London, Birmingham, Bristol, Leeds, Leicester, Liverpool, Manchester, Newcastle, Cardiff, Glasgow, Dublin, Belfast

Export Dept., 54 Grosvenor Street, London, W.1

M-W.77

