

THE ARCHITECTS' JOURNAL



standard contents

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

NEWS and COMMENT

Astragal's Notes and Topics

Letters

News

Diary

Criticism

TECHNICAL SECTION

Information Sheets

Information Centre

Current Technique

Working Details

Questions and Answers

Prices

The Industry

CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

Architectural Appointments

Wanted and Vacant

No. 3437]

[Vol. 133

THE ARCHITECTURAL PRESS

9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1. Telephone: Whitehall 0611

Price 1s. 0d.

Registered as a Newspaper

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

ILA	Institute of Landscape Architects. 1, Park Crescent, W.1.	Museum 3473
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1.	Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 68, Gloucester Place, W.1.	Hunter 1945
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
JFRO	Joint Fire Research Organisation (DSIR & Fire Offices' Committee).	
LDA	Lead Development Association. 18, Adam Street, W.C.2.	Elstree 1341/1797
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Whitehall 4175
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1.	Museum 3891
MOE	Ministry of Education. Curzon Street House, W.1.	Trafalgar 7711
MOH	Ministry of Health. 23, Savile Row, W.1.	Hyde Park 7070
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Regent 8411
MOLNS	Ministry of Labour and National Service, 8, St. James's Square, S.W.1.	Whitehall 4300
MOS	Ministry of Supply. Shell-Mex House, W.C.2.	Whitehall 6200
MOT	Ministry of Transport, Berkeley Square House, W.1.	Gerrard 6933
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Mayfair 9494
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council.	Reliance 7611
NAS	National Association of Shopfitters. 2, Caxton Street, S.W.1.	Victoria 1600 & 6477
NBR	National Buildings Record. 31, Chester Terrace, N.W.1.	Abbey 4813
NCBMP	National Council of Building Material Producers. 10, Storey's Gate, S.W.1.	Welbeck 0619
NEFMAI	National Employers Federation of the Mastic Asphalt Industry.	Abbey 5111
NFBTE	National Federation of Building Trades Employers.	21, John Adam Street, Adelphi, W.C.2. Trafalgar 3927
NFBTO	National Federation of Building Trades Operatives.	82 New Cavendish Street, W.1. Langham 4041/4054
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1.	Federal House, Cedars Road, Clapham, S.W.4. Macaulay 4459
NHBR	National House Builders Registration Council. 58, Portland Place, W.1.	Whitehall 1631
NPL	National Physical Laboratory. Head Office, Teddington.	Langham 0064/5
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Teddington Lock 3222
NSAS	National Smoke Abatement Society. Palace Chambers,	Mansion House 9383
NT	National Trust. 42, Queen Anne's Gate, S.W.1.	Bridge Street, S.W.1. Trafalgar 6838
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 0211
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 7245
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Abbey 4504
RIB	Rural Industries Bureau. 35, Camp Road, S.W.19.	Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Wimbledon 5101
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1.	Langham 5533
RFAC	Royal Fine Art Commission. 5, Old Palace Yard, S.W.1.	Whitehall 5322/9245
RS	Royal Society. Burlington House, Piccadilly, W.1.	Whitehall 3935
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Regent 3335
RSH	Royal Society of Health. 90, Buckingham Palace Road, S.W.1.	Trafalgar 2366
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House,	Sloane 5134
SE	Society of Engineers. Abbey House, Victoria Street, S.W.1.	Grosvenor Gardens, S.W.1. Victoria 2186
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, E.C.3.	Abbey 7244
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Mansion House 3921
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 1984/5
SNHTPC	Scottish National Housing. Town Planning Council.	Langham 7616
SPAB	Society for the Protection of Ancient Buildings.	Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.
TCPA	Town and Country Planning Association.	55, Great Ormond Street, W.C.1. Holborn 2646
TDA	Timber Development Association. 21, College Hill, E.C.4.	28, King Street, Covent Garden, W.C.2. Temple Bar 5006
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	City 4771
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	Victoria 8815
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	City 5040
ZDA	Zinc Development Association. 34, Berkeley Square, W.1.	Whitehall 4341
		Grosvenor 6636

ACME

— FLOORING SPECIALISTS FOR 100 YEARS

IMMOVABLE-ACME HARDWOOD FLOORS

ACMEPAVING FACTORY FLOORS

ACMETYLE SOLID P.V.C. TILES AND SHEET

ACMELYNO LINOLEUM

ACMECORK CORK TILES

ACMETRED RUBBER FLOORING

ACMEPYLE FITTED CARPETS

ACME FLOOR RENOVATION SERVICE

Technical Brochures gladly sent on request.

ACME

**FLOORING & PAVING
CO. (1904) LIMITED**

RIVER ROAD, BARKING, ESSEX. RIPPleway 2771 (P.B.X.)



TYPE H. T.
RIVETED BEAM

Our Beam system gives a maximum of standardization to obtain economy and yet at the same time allows complete freedom to architectural planning.

SOMMERFELDS

LTD.

LATTICE BEAMS

AND OF COURSE STANCHIONS

These beams are widely used in the modern planning of factories, school classrooms, offices, canteens, etc., where spans of 20ft. to 40ft. are encountered. They are most economic for all light roofing, combine well with the many prefabricated slabs which span directly between supporting joists.



4ft TYPE T. W. WELDED BEAM

Our Structural Design Office are pleased to advise and quote for
THE COMPLETE STEELWORK OF ANY PROJECT.
Please write for full details and data sheets.

Head Office: WELLINGTON SHROPSHIRE ENGLAND Tel: Wellington 1000
London Office: 167 VICTORIA ST LONDON S.W.1. Tel: Vic 8843 & 1000



They do! For Colt have a ventilator, natural or powered, to meet every kind of problem—including a range of high powered ventilators such as the Upward Discharge unit shown here. Let the Colt Ventilation Service advise you. Powered or natural, or a combination of both—the Colt engineer will tell you which system is best and most economical for you. Send for a free manual to Dept. 37.



**The power behind
natural ventilation and naturally
behind powered ventilation too!**

COLT VENTILATION LIMITED · SURBITON · SURREY · Telephone: ELMbridge 0161



ACME

— FLOORING SPECIALISTS FOR 100 YEARS

IMMOVABLE-ACME HARDWOOD FLOORS

ACMEPAVING FACTORY FLOORS

ACMETYLE SOLID P.V.C. TILES AND SHEET

ACMELYNO LINOLEUM

ACMECORK CORK TILES

ACMETRED RUBBER FLOORING

ACMEPYLE FITTED CARPETS

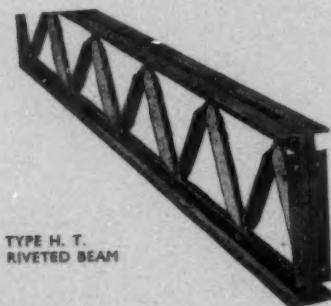
ACME FLOOR RENOVATION SERVICE

Technical Brochures gladly sent on request.

ACME

**FLOORING & PAVING
CO.(1904) LIMITED**

RIVER ROAD, BARKING, ESSEX. R1Ppleway 2771 (P.B.X.)



TYPE H. T.
RIVETED BEAM

Our Beam system gives a maximum of standardization to obtain economy and yet at the same time allows complete freedom to architectural planning.

SOMMERFELDS

LTD.

LATTICE BEAMS

AND OF COURSE STANCHIONS

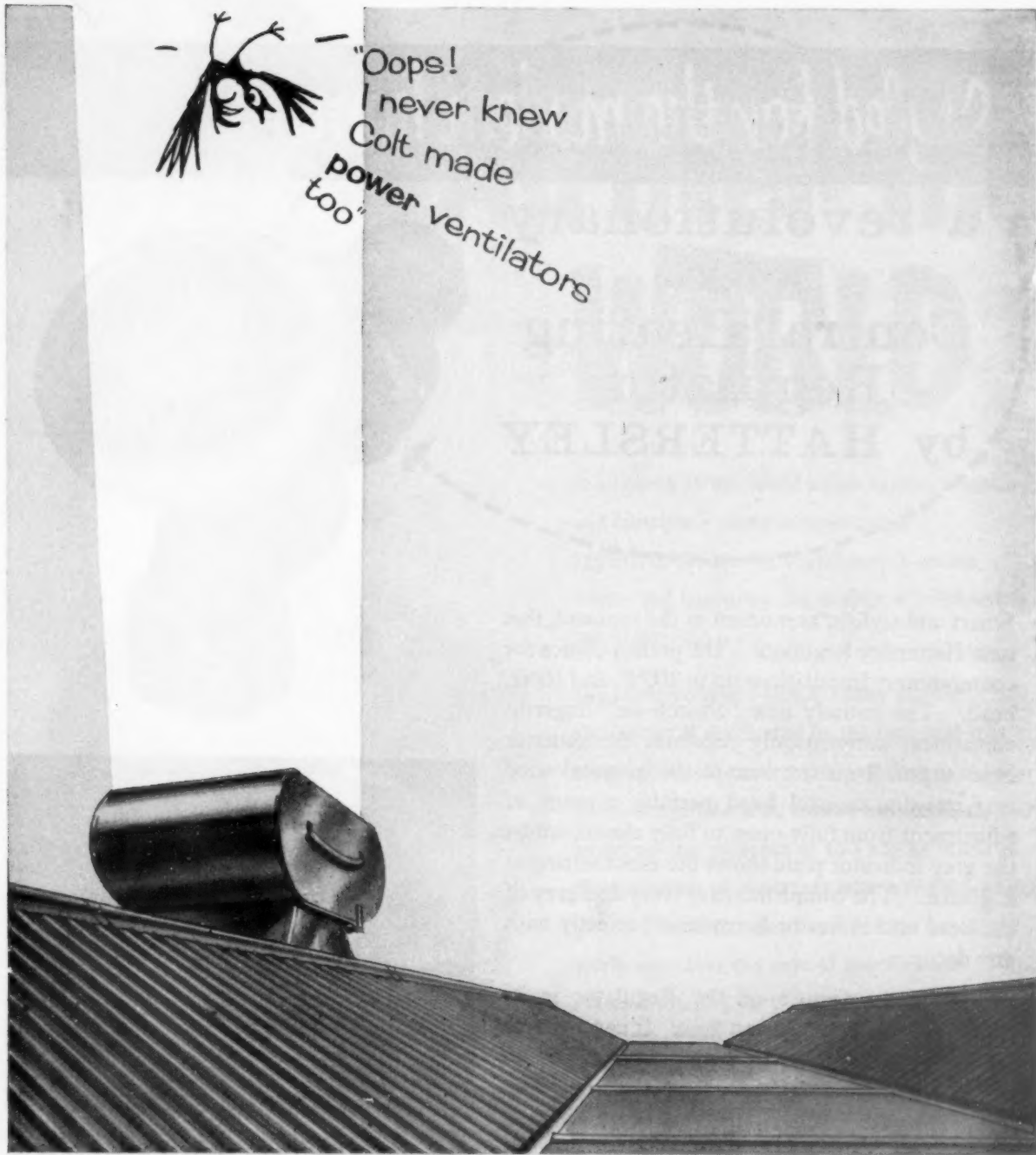
These beams are widely used in the modern planning of factories, school classrooms, offices, canteens, etc., where spans of 20ft. to 40ft. are encountered. They are most economic for all light roofing, combine well with the many prefabricated slabs which span directly between supporting joists.



4ft TYPE T. W. WELDED BEAM

Our Structural Design Office are pleased to advise and quote for
THE COMPLETE STEELWORK OF ANY PROJECT.
Please write for full details and data sheets.

Head Office: WELLINGTON SHROPSHIRE ENGLAND Tel: Wellington 1000
London Office: 167 VICTORIA ST LONDON S.W.1. Tel: Vic 8843 & 1000



They do! For Colt have a ventilator, natural or powered, to meet every kind of problem—including a range of high powered ventilators such as the Upward Discharge unit shown here. Let the Colt Ventilation Service advise you. Powered or natural, or a combination of both—the Colt engineer will tell you which system is best and most economical for you. Send for a free manual to Dept. 37.



**The power behind
natural ventilation and naturally
behind powered ventilation too!**

COLT VENTILATION LIMITED · SURBITON · SURREY · Telephone: ELMbridge 0161



Styled for the modern home

a revolutionary

NEW

**Central Heating
Regulator
by HATTERSLEY**



Smart and stylish, as modern as the moment, this new Hattersley Regulator is the perfect choice for contemporary installations up to 200°F. and 100ft. head. The entirely new "Switch-on" fingertip adjustment automatically regulates the radiator heat output. A quarter turn of the ivory coloured heat-resisting control head permits a range of adjustment from fully open to fully closed, whilst the grey indicator plate shows the exact setting at a glance. The complementary ivory and grey of the head and indicator harmonise perfectly with any decor.

An important feature of the Regulator is its extremely low resistance to flow. It can be used on any part of a domestic heating system and no other type of control valve is necessary. The Regulator is precision engineered with a cast gun metal body. Wheel and Lockshield patterns in Standard and Chromium Plated finish are available with connections for either Iron or Copper Pipes.



**Fingertip control for
at-a-glance setting**

AN ATTRACTIVE VALVE AT AN ATTRACTIVE PRICE

Please write for details to the sole manufacturers.

HATTERSLEY
ESTABLISHED 1897



the name for good valves

**HATTERSLEY (ORMSKIRK) LIMITED • ORMSKIRK • LANCASHIRE
and at HALIFAX and LONDON**

E. 20



All over the WORLD

In all parts of the world under arctic, tropical and temperate climatic conditions, FEBMIX ADMIX Mortar Plasticiser is saving money and improving the quality of bricklaying and plastering work.

The superiority of FEBMIX ADMIX Mortar Plasticiser is illustrated by the fact that it is the largest selling mortar plasticiser in the world. Such recognition is no chance happening—it must be earned and evidence of this can be found on the thousands of contracts where FEBMIX ADMIX Mortar Plasticiser has improved the quality of work, increased the rate of erection and reduced building cost.



FEBMIX ADMIX

MORTAR PLASTICISER

FEB

(Gt. Britain) LTD

102 Kensington High Street, London, W.8.
Telephone : WES 0444

Albany Road, Chorlton-cum-Hardy, Manchester, 21.
Telephone : CHO 1063.



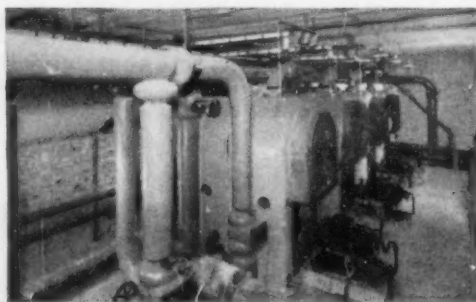
STEELS ADD AN AIR OF LUXURY



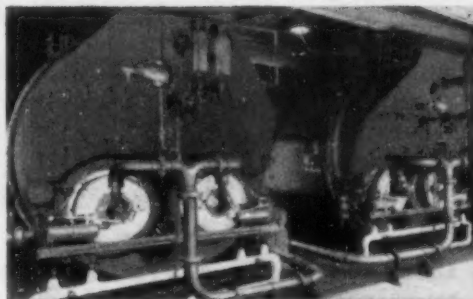
with modern space-
heating techniques



Battery of fully
automatic oil fired
boilers. Cleveland
Technical College.



Oil firing equipment
to economic boilers
Cochran's Foundry
— Middlesbrough.



Specialists in creating the 'right atmosphere' for healthy living. Steels aim to combine **efficiency** with **attractiveness** in systems designed to keep the temperature right inside whatever the conditions out.

SEI activities include: Low, Medium and High Pressure Hot Water Heating; Domestic Hot and Cold Water Supplies; Gas Installations; Ventilation and Air Conditioning (land and marine); Dust Extraction; Boiler House Plant; Kitchen and Laundry Installations; Electrical Heating; Combustion Installations for Solid Fuel, Gas and Oil and Pipelines for Industrial Purposes.

STEELS ENGINEERING INSTALLATIONS LIMITED

SUNDERLAND

BIRMINGHAM

715

THE PINT THAT IS GOOD FOR CEMENT



Febproof Integral Liquid Waterproofer makes good cement better for when mixed with the gauging water at the rate of 1 pint of Febproof per cwt. of cement used, it makes concrete and cement mortars 100% waterproof. In addition, it increases strength and

improves plasticity to the degree that concrete can be placed and compacted at a faster rate while cement mortar spreads so easily that labour cost in application is reduced. Use Febproof, the good waterproofer that costs less.

FEBPROOF

INTEGRAL LIQUID WATERPROOFER
for CEMENT AND CONCRETE WORK



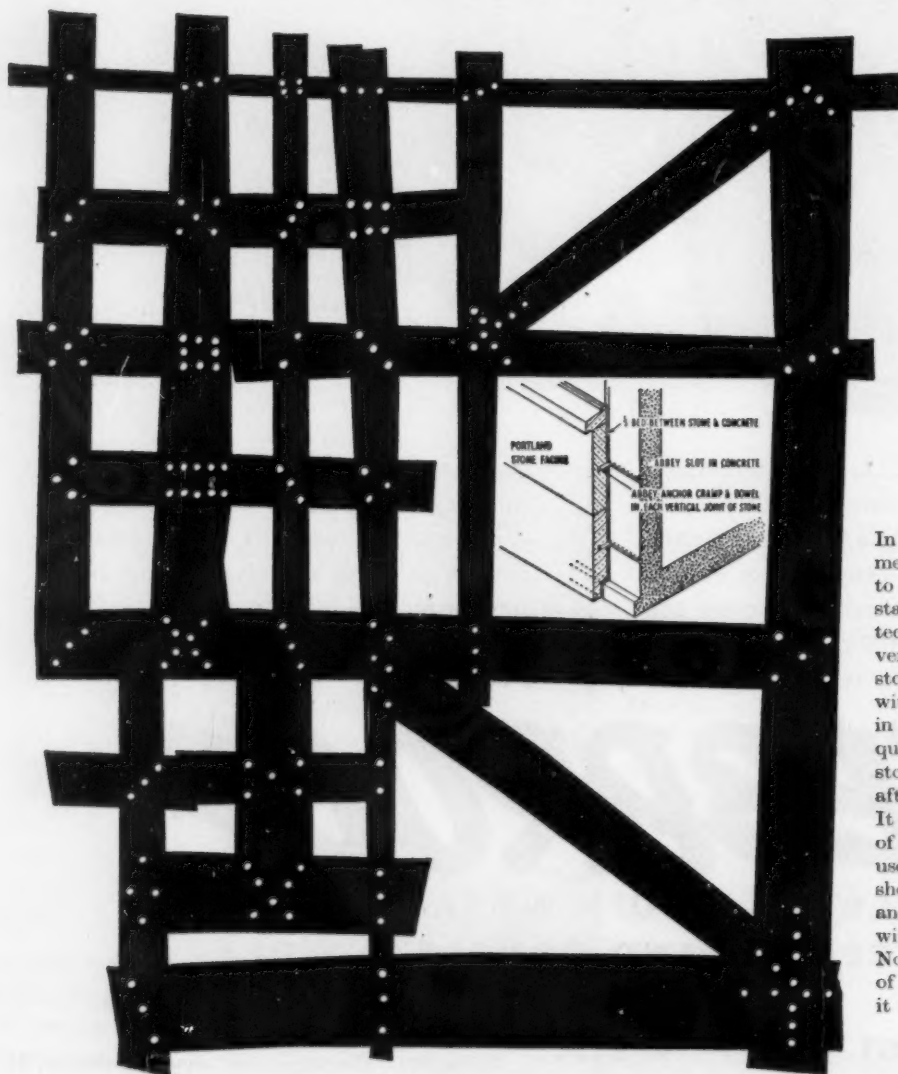
(GT. BRITAIN) LTD.

DHB 6929

102 Kensington High Street, London, W.8.
Phone: WES 0444

Albany Road, Chorlton-cum-Hardy, Manchester, 21.
Phone: CHO 1063

STONE AND THE ARCHITECT



In fact the Company's Development Drawing Offices exist only to assist the architect. They are staffed by experienced senior technicians who are fully conversant with all aspects of stonework and in close touch with the latest developments in fixing techniques. They are qualified to assist and discuss stonework at project stage and after.

It is part of the normal service, of which many architects make use, to prepare detail drawings showing specialist fixing details, and these can be made available within a specified time.

No charge is made for any part of this service and, of course, it involves no obligation.

THE BATH AND PORTLAND STONE FIRMS, LIMITED

BATH, SOMERSET. Bath 3248 London VIC 9182

Manchester, Central 6602 Portland 2276 Leeds 25972

PORTLAND
BATH
DOULTING
BEER
CLIPSHAM



*There
is no
better
way of*
**WATER-
PROOFING
CONCRETE**

foundations
basements
floors or tanks
than by adding

EVODE

MELLITOL

ONLY 1% per 100 lb.
of cement.
NO PRE-MIXING

A PRODUCT OF **EVODE** OF STAFFORD

ROOF WATERPROOFING · CONCRETE ADMIXTURES AND HARDENERS · PROTECTIVE PAINTS AND
BITUMINOUS COATINGS · GAP AND JOINT SEALING MASTICS AND GUNS · INDUSTRIAL ADHESIVES

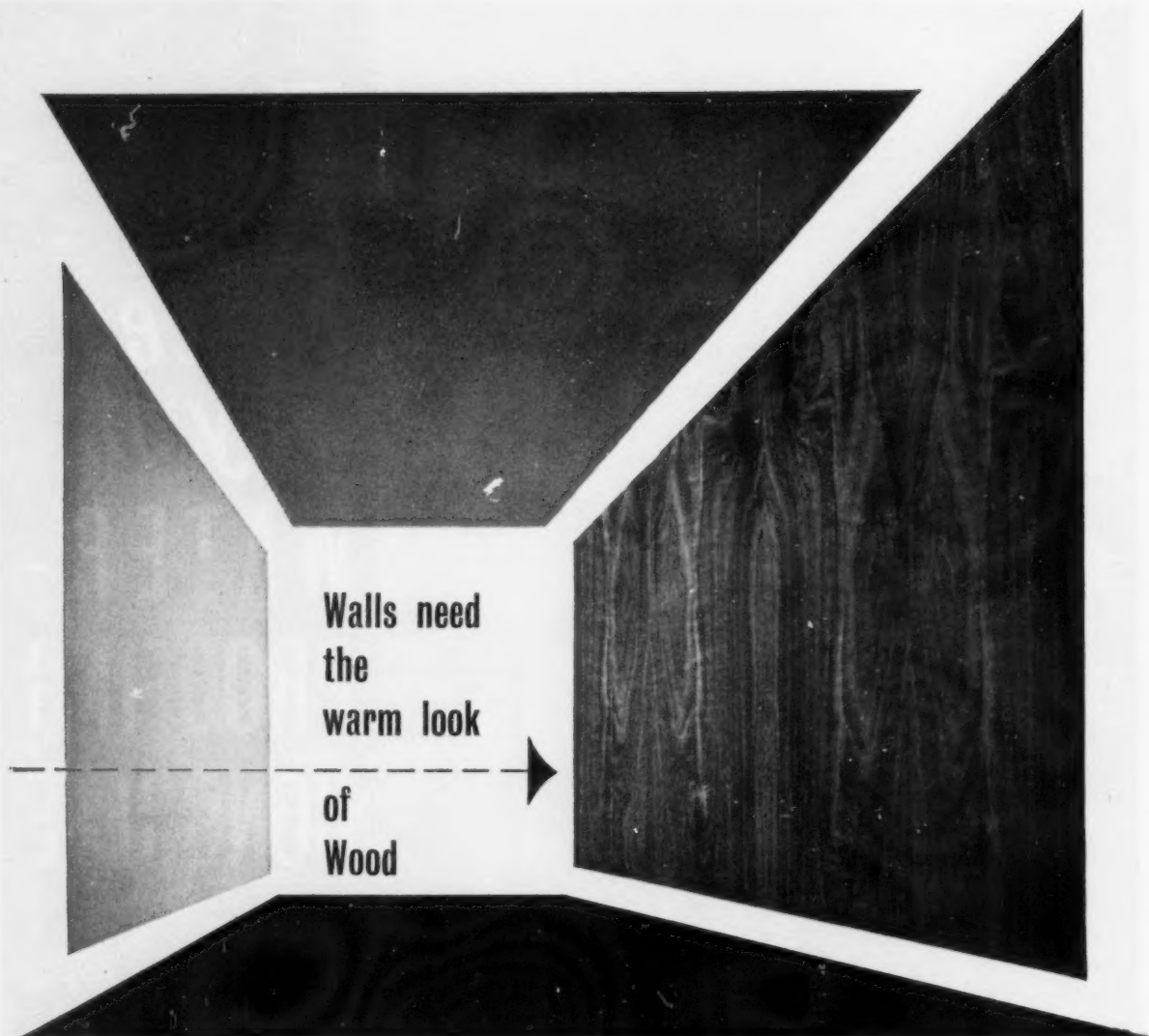
* Are YOU using the EVODE PERSONAL SERVICE TO DESIGNERS? Write or phone for details

SEND FOR LITERATURE EVODE LTD., (BUILDING CHEMICALS DIVISION) STAFFORD. Phone: 2241 (8 lines)

London Office: 82 VICTORIA STREET, S.W.1.

Telephone: ABBey 4622 (3 lines)

PH-97, 1960



Walls need
the
warm look
of
Wood

With Venesta Veneered Plywood any surface can be made to delight the eye and give a warm, natural, friendly look. From the calm dignity of complete panelling, to the dramatic effect of a single wall—wood veneer is one of our most versatile decorative materials.

Its colour, grain and figure can be used to great effect in almost every type of interior and nowhere can you find a wider choice and more consistent high quality than in the Venesta range of Veneered Plywoods.

... the practical good looks of **Venesta**
veneered
plywood

and the perfect complement

VENESTA FLUSH DOORS

These are available either veneered or suitable for painting—to fit any scheme of decoration. They're built for hard wear too, solid core, lipped edges, flat and sound resistant.

For full details please write for leaflet (L.13)



VENESTA PLYWOOD LIMITED

Vintry House, Queen Street Place, London, E.C.4. CENTral 3040

WWW
GREEN
WINCILATE

BOW SLATE & ENAMEL CO LTD THE TOWN HALL BOW

ROAD LONDON E3 QUARRIES ABERLLEFENI NORTH WALES

“INSU double glazing

Pilkingtons' "INSULIGHT" Double Glazing Units—the modern way of installing window insulation—practically halve heat losses of single windows and so cut the cost of heating both by reducing expenditure on plant and on fuel consumption. In addition to the calculable benefits there are many more in double glazing with its freedom from down draughts and elimination of condensation.



'U' value of single windows 1.00 B.t.u./sq. ft. h deg F




LIGHT

THE ARCHITECTS' JOURNAL (Supplement) March 2, 1964

halves heat losses halves heat losses

Pilkingtons' "INSULIGHT" Double Glazing Units—backed by a five year warranty—are subjected to rigorous individual tests. These tests ensure that every unit leaving the factory is sound and will give years of trouble-free service when properly glazed in suitable frames.

'U' value of 'Insulight' Double Glazed Unit— $\frac{1}{4}$ " space 0.58 B.t.u./sq. ft.  h deg F



Pilkingtons' 'Insulight' Double Glazing Units—carry a five years' warranty

"Insulight" is a registered trade mark of Pilkington Brothers Ltd. For further information write to the Technical Sales and Service Department Pilkington Brothers Limited, St. Helens,

Lancashire (Tel: St. Helens 4001), or London Office, Selwyn House, Cleveland Row, St. James's, S.W.1. (Tel: Whitehall 5672-6). Supplies available through the usual trade channels.



A
fine
roofing
job?

You should see ours!



INDUSTRIAL ENGINEERING

The roof specialists

As specialists for over forty years in the construction, reconstruction, maintenance and water proofing of industrial roofs, we are able to offer the architect a complete service designed to relieve him of every worry.

- * The complete roofing contract can be placed with us, eliminating the need for dealing with several sub-contractors
- * A number of highly specialised technical departments are always at your disposal for consultation and advice.
- * Operational staff readily available to deal with emergencies, however limited in scope, at short notice.
- * Complete surveys can be carried out and estimates submitted without cost or obligation.

Branch offices throughout the country

INDUSTRIAL ENGINEERING LIMITED, VOGUE HOUSE, HANOVER SQUARE, LONDON, W.1. HYDe Park 1411 (7 lines)

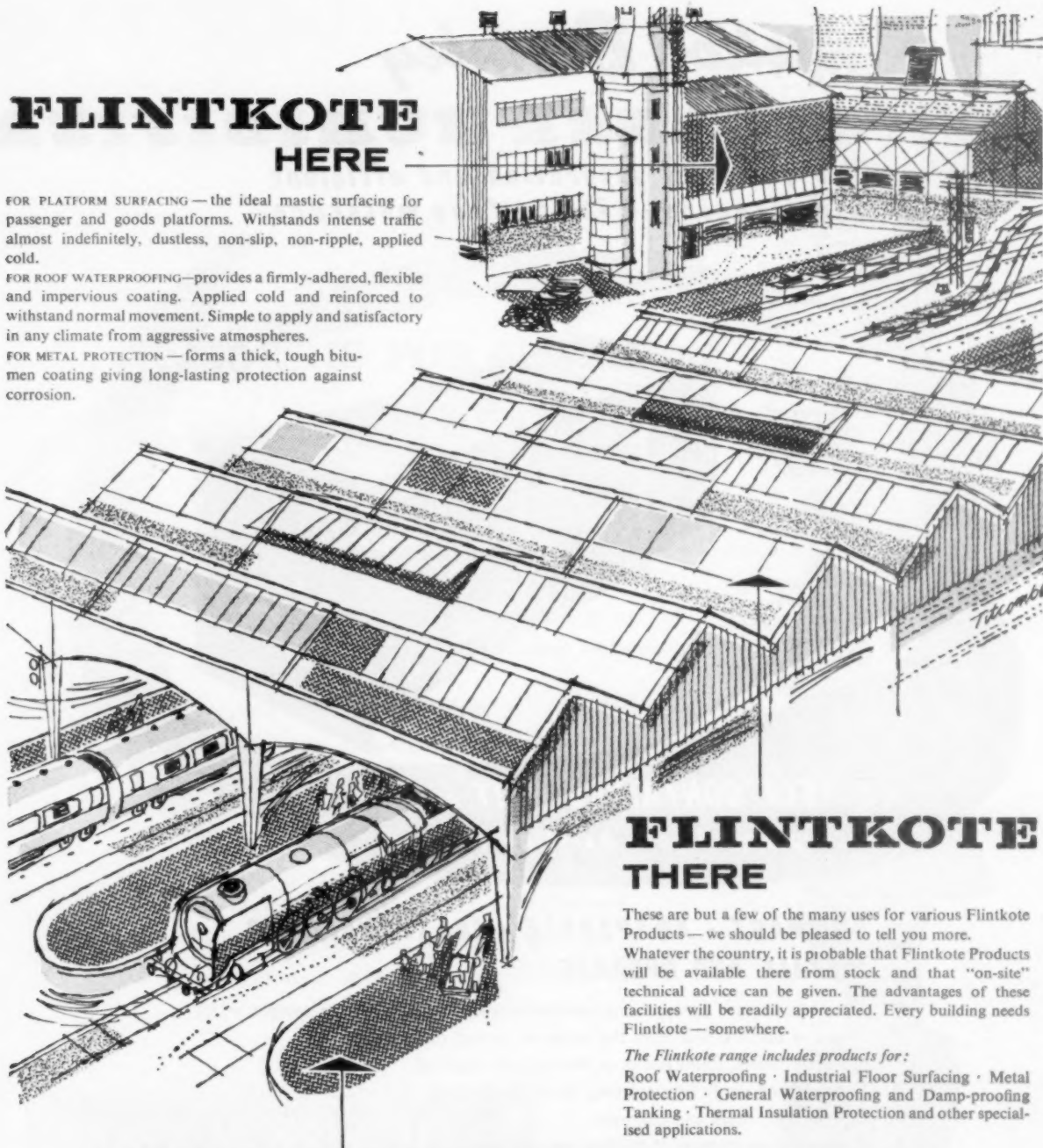
Consult your local telephone directory for emergency requirements.

FLINTKOTE HERE

FOR PLATFORM SURFACING—the ideal mastic surfacing for passenger and goods platforms. Withstands intense traffic almost indefinitely, dustless, non-slip, non-ripple, applied cold.

FOR ROOF WATERPROOFING—provides a firmly-adhered, flexible and impervious coating. Applied cold and reinforced to withstand normal movement. Simple to apply and satisfactory in any climate from aggressive atmospheres.

FOR METAL PROTECTION—forms a thick, tough bitumen coating giving long-lasting protection against corrosion.



FLINTKOTE THERE

These are but a few of the many uses for various Flintkote Products—we should be pleased to tell you more.

Whatever the country, it is probable that Flintkote Products will be available there from stock and that "on-site" technical advice can be given. The advantages of these facilities will be readily appreciated. Every building needs Flintkote—somewhere.

The Flintkote range includes products for:

Roof Waterproofing · Industrial Floor Surfacing · Metal Protection · General Waterproofing and Damp-proofing · Tanking · Thermal Insulation Protection and other specialised applications.

... FLINTKOTE Regd.

ALMOST EVERYWHERE



GARE DE MULHOUSE—FRANCE (S.N.C.F.) Flintkote flooring in busy goods depot subjected to heavy traffic.



THE FLINTKOTE COMPANY LIMITED

Adam House · One Fitzroy Square · London W.1

Telephone: EUSTon 7224.

Mellor Bromley

AIR CLEANER HUMIDIFIER

*for complete saturation and efficient
air cleaning—with no free moisture*

DATA

as illustrated

WEIGHT

approx. 2 cwts.

DIMENSIONS

1'9" x 1'9" x 5'0"

CAPACITY

800-1200 c.f.m.

1/7th H.P. MOTOR

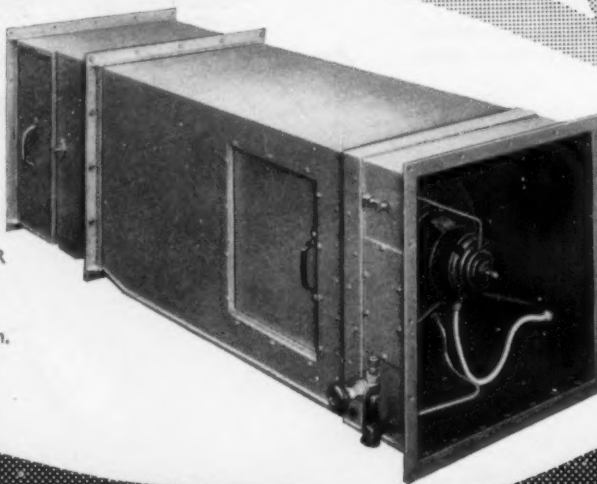
Made in a variety

of sizes up to:-

10,000-15,000 c.f.m.

absorbing a total

of 1.75 H.P.



A SELF CONTAINED UNIT easily
incorporated into existing ducting

COMPACT - ADAPTABLE - INEXPENSIVE TO INSTALL AND OPERATE

- Does not require pumps, water strainers or similar ancillary equipment.
- Water is taken direct from the mains at normal pressure.
- No plant house, foundations or floor space required.
- Incorporated easily into existing discharge ducting.
- Lightweight, small and compact.
- Range of sizes to meet individual requirements.
- Automatic control by either dew-point or humidistat.
- Can incorporate own fan, humidifier, air cleaner humidifier.
- Low capital and running costs.
- Can be duplicated in branch mains for individual room control.
- No tank or dirty water load necessary-operates continually with fresh water, thus avoiding possible build-up of bacteria.
- Supplied to hospital authorities.
- Eliminates maintenance of spray nozzles, tanks etc.

Member of the Bentley Group

MELLOR BROMLEY (AIR CONDITIONING) LTD - St. Saviours Road, Leicester

Telephone: Leicester 38161. Telegrams: CONDITION LEICESTER

MORRIS FOR IROKO and AFRORMOSIA

These two African hardwoods are no longer newcomers: you see them everywhere in joinery of all sorts, often superseding traditional timbers.

Very stable, durable and pleasing to the eye, both are available in a wide range of lengths and widths, uniformly graded, free of sap and knots, and far below the price of Teak and joinery Oak.

We always hold large stocks of air seasoned sizes from 1" to 4", and ready kiln dried up to 2". Economical selection for users' cutting sizes is part of our service.



Ravensdale Wharf, Stamford Hill, London, N.16. Tel: STAMFORD HILL 0611

reliable hardwoods:

MAHOGANY, TEAK

IROKO, AFRORMOSIA



YOU CAN REDUCE HEAT LOSSES BY
60%-70%
WITH THE THERMALON
PLASTIC FOAM INSULATION SYSTEM

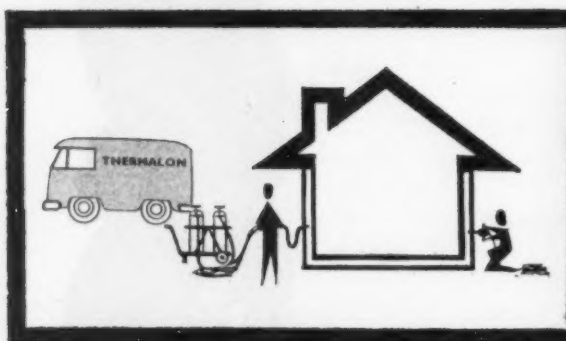
JUST BY FILLING THE CAVITY . . .

THERMALON offers Architects, Builders and Heating Engineers a unique plastic foam insulation system for either existing dwellings or new buildings under construction.

THERMALON achieves unprecedented heat savings because the insulating qualities of the external structure are increased by over 300%. With over 40,000 buildings already completed we are now able to place our unrivalled experience at your disposal for 1961 contracts.

EVERY **THERMALON** INSTALLATION CARRIES A WRITTEN

2 YEAR GUARANTEE



THERMALON LTD. (Dept. AJ2) 75 Grosvenor St., London, W.1

*Please send full details of Thermalon
Plastic Foam Insulation to:—*

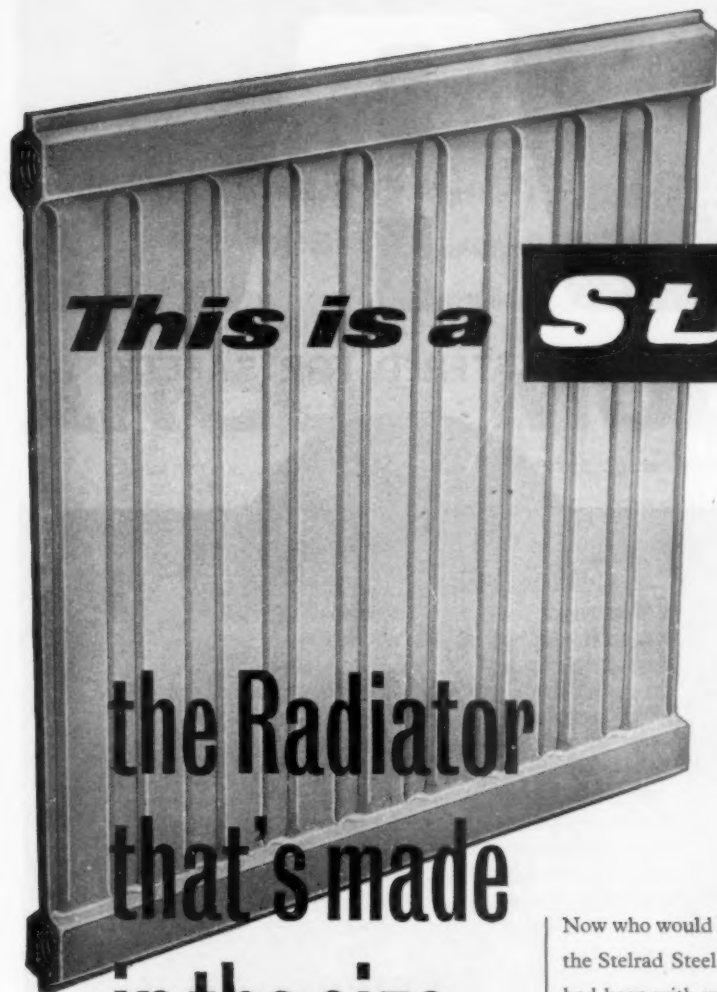
NAME _____

ADDRESS _____

THERMALON LIMITED • 75 GROSVENOR STREET • LONDON W1

TEL. NO: HYDE PARK 9261 (8 LINES)

BRANCHES AT: BRIGHTON • HULL • LIVERPOOL • MANCHESTER • MOTHERWELL • NEWCASTLE • NOTTINGHAM



This is a Stelrad

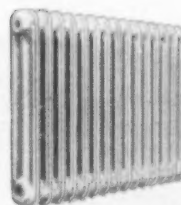
**the Radiator
that's made
in the size
you want,
and in the
shape your
client likes**



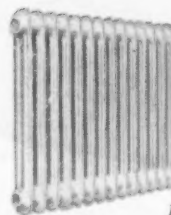
Double Wall



Angle-Wall



3-Column

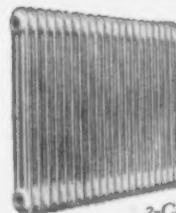


Easy Clean

Now who would have thought the Stelrad Steel Radiator had been with us for nigh on twenty-five years? Why, you can probably remember people telling about it at the time.

***Stelrad* PATENTED PROCESS RADIATORS**

Some were doubters, holding forth about steel and how the only Radiator to use was one that was not only heavy to handle but ungainly to behold. But where is the Stelrad today? In buildings large and small throughout the length and breadth of the land, and in a range so wide there is not a single nook a Stelrad cannot heat.



2-Column



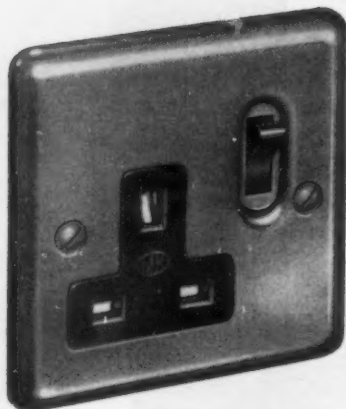
Window seat type

STEEL RADIATORS LIMITED

BRIDGE ROAD, SOUTHALL, MIDDLESEX • Telephone: SOUThall 2603

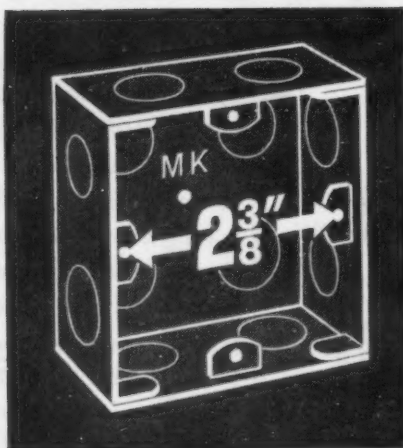
STYLED...

STANDARDISED...



...AND SHUTTERED FOR SAFETY

MK socket and switchsocket-outlets are distinctively styled within the limitations imposed by standardised dimensions. Plates whether moulded or of metal have smooth surfaces devoid of dust collecting ridges or other ornamentation whilst edges and corners are smoothly rounded. All socket contacts are shuttered for safety. Switches when embodied are of the efficient A.C. type with dollies styled to fit the fingers for silent and positive control of the solid silver contacts. All MK-socket and switchsocket-outlets are made with standardised plates $3\frac{3}{8}$ " square and two fixing holes on $2\frac{3}{8}$ " centres to suit flush boxes to BS 1299/1363.



**THE NAME FOR
ELECTRIC WIRING
ACCESSORIES**

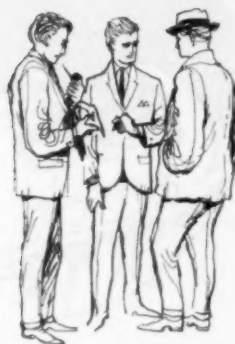
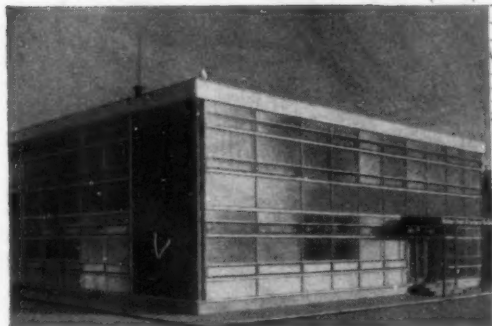
MK 202

M.K. ELECTRIC LIMITED · SHRUBBERY ROAD · EDMONTON · LONDON N.9 · EDMONTON 5151

**A SIGNIFICANT
ADVANCE
IN NEW BUILDING
TECHNIQUES**

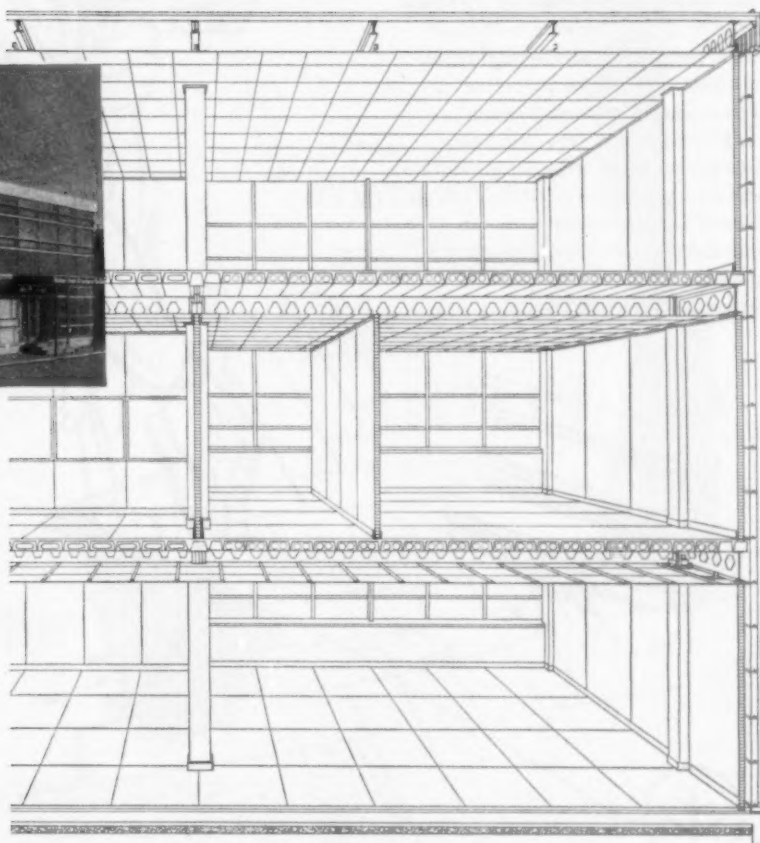
The ARCON MULTIFORM is the latest addition to a wide range of simplified methods of construction using standardized components. This type of building, with planning grid of 4' 0" is designed for buildings up to four storeys high and is suitable for flats, schools, office-blocks, hospitals and hotels. Full specification brochure available on request.

ARCON MULTIFORM



THE OWNER
THE ARCHITECT
THE BUILDER

ALL AGREE . . .



SIMPLIFIES BUILDING

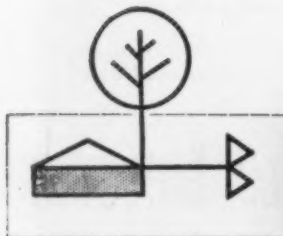
TAYLOR WOODROW (ARCON) LIMITED
41 WELBECK STREET · W1 · TEL: HUN 6666



*The sponsor companies forming the Arcon Group are: IMPERIAL CHEMICAL INDUSTRIES LTD · STEWARTS AND LLOYDS LTD
THE UNITED STEEL COMPANIES LTD · THE CRITTALL MANUFACTURING CO. LTD · TAYLOR WOODROW (ARCON) LTD*

FLAWLESS FLOORS

As Flooring Manufacturers and as Floorlaying Contractors of long experience, we can advise the best wood for the traffic and the situation. Our vans, with their crews of craftsmen, operate throughout South-East England, for the laying and maintenance of Beves Block or Strip Floors in every type of building—from private house to public institution. Where floor tiles of Cork, Vinyl, Rubber or Lino are required, we can supply and lay them too. We welcome enquiries and will, on request, send an expert to inspect and quote.



BEVES & CO. (FLOORS) LTD.

Members of the BEVES GROUP of companies

BEVES & COMPANY (FLOORS) LTD · BEVES & COMPANY (STRUCTURES) LTD
BEVES & COMPANY (JOINERY) LTD · BEVES & COMPANY (LONDON) LTD
BEVES & COMPANY LTD., TIMBER IMPORTERS



Head Office: Kingston Wharf, Shoreham-by-Sea, Sussex. Telephone: Southwick 2285
London Office: 110, Cannon St., London, E.C.4. Telephone: Mincing Lane 9161

GYPLITE ready-mixed Plasters

... light in weight, crack resisting,
fire-protective ...



... worthy of the
hands of the craftsman

GYPROC

products include:

GYPROC WALLBOARD—LATH—PLANK
GYPROC PLASTERS
GYPSTELE ROOF AND WALL LININGS—SUSPENDED CEILINGS
PLAXSTELE SUSPENDED CEILINGS
GYPUNIT PANELS
GYPTONE ACOUSTIC TILES
GYPLITE READY-MIXED LIGHTWEIGHT AGGREGATE PLASTERS
GYPKLITH WOOD WOOL SLABS

Free technical literature will be sent on request

GYPROC PRODUCTS LIMITED

Head Office: Singlewell Road, Gravesend, Kent. Gravesend 4251/4 • Glasgow: Gyproc Wharf, Shieldhall, Glasgow, S.W.1. Geva 2147/3

Midlands: 11 Musters Road, West Bridgford, Nottingham. Nottingham 82101 • London: Ferguson House, 15/17 Marylebone Road, N.W.1. Hunter 4031/4

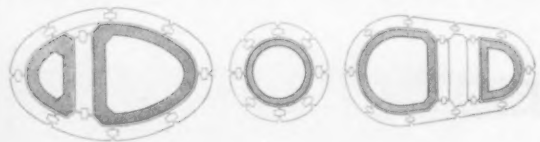
GYP. 3



from top to bottom... ...it's Elliscraft

When appearances count and clients are pressing, that's the time to specify Ellis Precast Concrete Chimneys. Available with almost any reconstructed stone finish and in three different cross sections, they can add much to the architectural merits of a building.

Chimneys go up faster and need less maintenance when they are precast by Ellis.



*T. A. Collins Esq., F.R.I.B.A., County Architect
Enderby Secondary Modern School, Leicestershire*

ELLISCRAFT... FOR LEADERSHIP IN CONCRETE

JOHN ELLIS & SONS LIMITED, 21 NEW WALK, LEICESTER. TEL: LEICESTER 56682



ALWAYS POPULAR



**THE
'NEW VESPER'
HOUSE WARMER**

A heart warming open fire with a special wide front and a totally enclosed stove are the advantages of the 'New Vesper'. When closed it glows economically behind mica panels. Opened, it blazes cheerfully, providing the traditional open fire.

The 'New Vesper' by Carron can easily be fitted to hearths, and it has numerous advantages—

- Easy to clean
- Dust free
- Low fuel consumption
- Continuous burning

This wonder fire is available with or without boiler, in superb finishes—Carol Cream and Cafe au Lait; Bronze, Pewter and Gun Black lustres.

CARRON

CARRON COMPANY • CARRON • FALKIRK • SCOTLAND



SUSPENDED CEILINGS

If you want to know about Suspended Ceilings you should know about Paramount Insulating Plasterboard. How to use it...what it does...what it offers — and the modern refinements such as plastic facing for coloured, brighter ceilings. In fact, there's some interesting literature on the subject. Send for your copy NOW!

THE BRITISH PLASTER BOARD (MANUFACTURING) LIMITED
Ferguson House, 15-17 Marylebone Road, London, N.W.1 Telephone: HUNter 4021

AP221

For utmost efficiency in Thermal Insulation and Sound Reduction



**...PURPOSE-MADE IN FINEST TIMBERS TO
ARCHITECT'S SIZE, STYLE AND FINISH**

BUILDING RESEARCH

STATION TESTS

When a standard-production TOMO WINDOW WALL-Unit (8 ft. x 8 ft.) was tested at the Building Research Station, Garston, the mean thermal transmittance of the complete unit was found to be 0.31 B.Th.U./sq. ft./h.[°]F. This is equal to the thermal transmittance of a traditional 11-in. cavity brick wall! This impressive result was further improved to 0.29 when the TOMO Pleated Blinds, fitted between the panes, were lowered.

The U-value of the window-area only was found to be 0.38: with TOMO pleated blinds down, it became 0.35. At 0.38, TOMO double-glazed WINDOWS are substantially (29%) better than the U-value of 0.47 quoted for conventional double windows in the I.H.V.E. Guide to Current Practice, 1955.

The excellent thermal-efficiency achievement of TOMO double-glazing (amply demonstrated in the report of recent B.R.S. Tests, quoted on left) is one of many good reasons why architects specify these superb windows.

Another is the ever-increasing need for maximum sound reduction. In this respect, TOMO WINDOWS afford a reduction in sound level of approximately 40—50 decibels.

The marked success of TOMO double-glazed WINDOWS is due to the fact that two panes of ordinary glass are carried in separate sashes which, in turn, are coupled together in such a manner that air filtration can take place between the panes. This time-honoured method of coupling, which is used extensively throughout Scandinavia, not only prevents condensation forming between the panes but allows the sashes to be opened for the purpose of cleaning the insides of the two panes and for gaining access to TOMO pleated blinds that can be housed between them.

TOMO double-glazed WINDOWS also offer the advantages of finely-controlled ventilation, and total indoor window-cleaning. They are suitable for inward or outward opening and can be top-hung, bottom-hung, side-hung or pivot-hung.

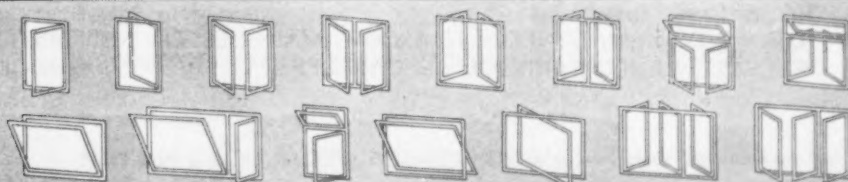
Full information forwarded on request:

TOMO TRADING CO. LTD., COWLEY PEACHEY, UXBRIDGE, MIDD.

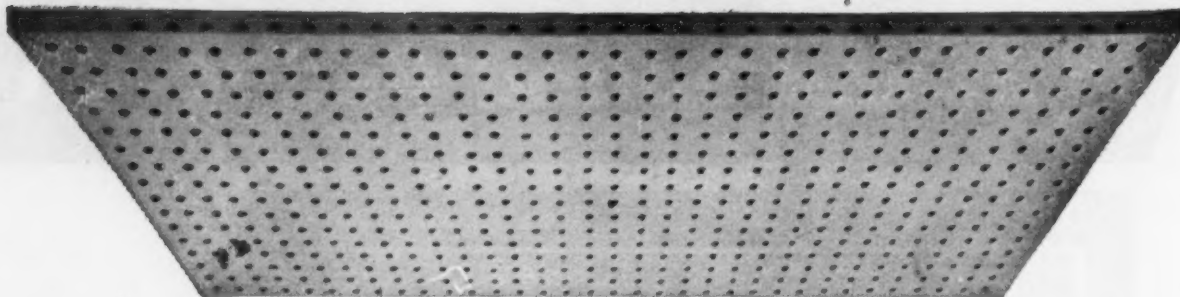
Telephone: West Drayton 3751 (10 lines)

ONE OF THE TOMO GROUP OF COMPANIES

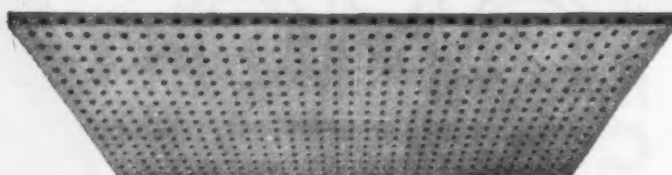
**WIDE RANGE
OF STYLES!**



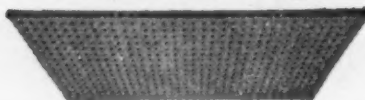
PAXBOARD



reduces noise to an



undisturbing



level



Newalls (Reg'd Brand) PAXBOARD presents the architect with a first-class medium for large-area acoustic insulation.

The modern tendency to use large rooms in office blocks results in an artificially increased noise level due to numbers of people working together, and makes acoustic treatment more essential than it would otherwise be. Similarly in factories, the provision of a sound-absorbent ceiling which reduces noise, and simultaneously insulates heat more effectively than any building board, is an attractive proposition, particularly in view of the reasonable cost for an all-asbestos product.

PAXBOARD has been produced especially for this class of work.

It is $\frac{1}{2}$ " in thickness and available in sizes up to 6' 0" x 3' 0", has a very good efficiency (50% absorption coefficient at 500 c.p.s.—75% at 2,000 c.p.s.), is not affected by repeated decoration and, being composed entirely of asbestos, is absolutely *fire-proof* and is rot-proof and vermin-proof.

PAXBOARD weighs less than 1-lb./sq. ft. and the larger than normal acoustic board size renders erection cheaper and more convenient.

With all these practical attributes it is small wonder that PAXBOARD is firmly established as the architect's first choice for large-area acoustic insulation.

Full technical information available on request.

Newalls **PAXBOARD**

NEWALLS INSULATION CO. LTD.

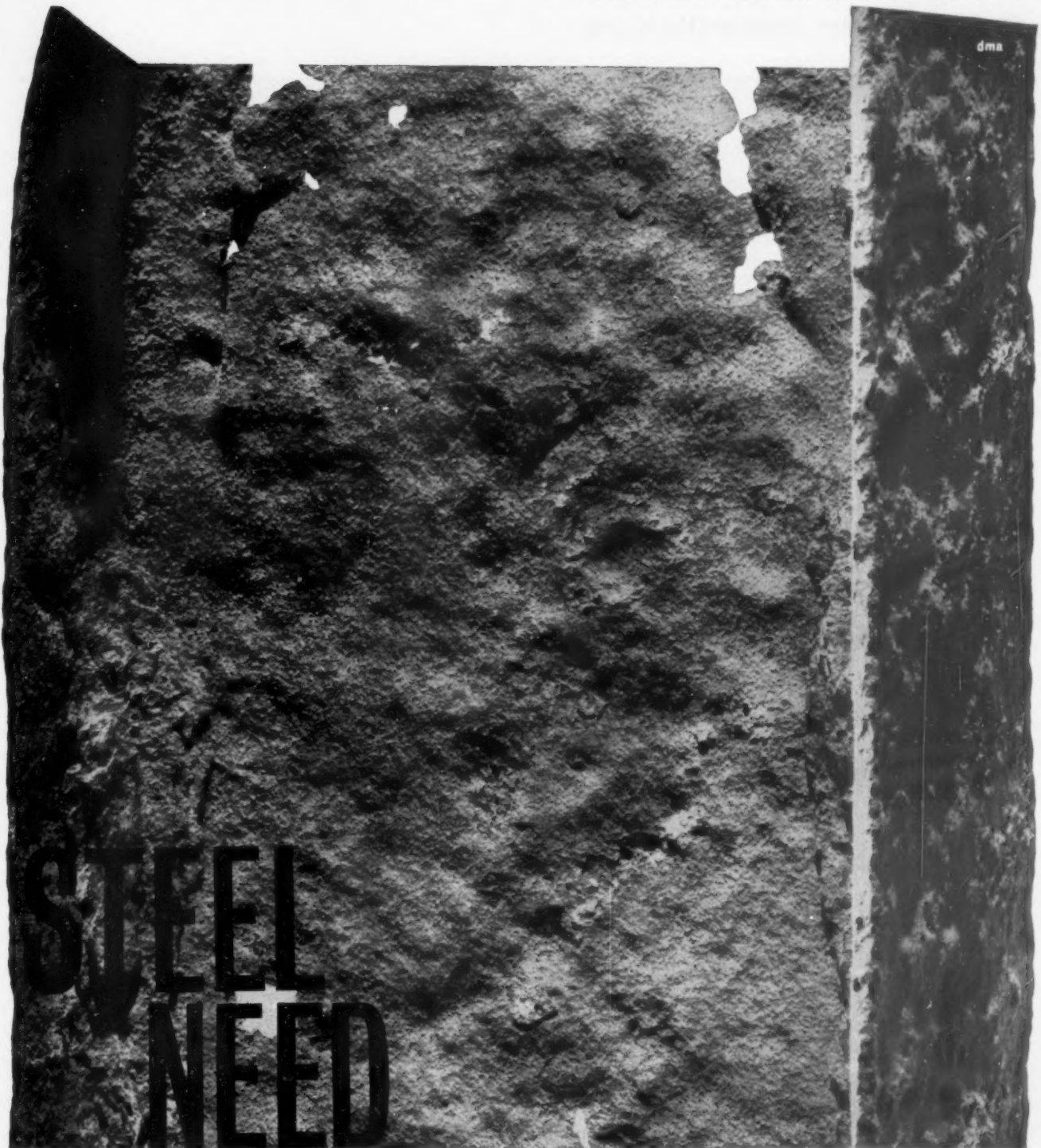
Head Office: WASHINGTON, CO. DURHAM

A member of the Turner & Newall Organisation

Offices & Depots at: LONDON, GLASGOW, MANCHESTER, NEWCASTLE UPON TYNE, BIRMINGHAM, BELFAST, DUBLIN, BRISTOL and CARDIFF

Agents and vendors in most markets abroad

54



NOT RUST

Everyone knows about rust . . . but not everyone knows that hot dip galvanizing is the best way to stop rust.

Galvanizing would have stopped this R.S.J. rusting. The heavy zinc coating alloyed to the steel gives long trouble-free life and costs little. Iron and steel of all shapes and sizes can be protected by hot dip galvanizing

For information and publications write to the

HOT DIP GALVANIZERS ASSOCIATION 34 Berkeley Square London W1



WILLIAMS & WILLIAMS

aluminium windows laugh at corrosion

In any building exposed to corrosive atmospheres, natural or industrial, Williams & Williams Aluminium Windows recoup their original cost quickly and pay for themselves many times during a long, trouble-free life.



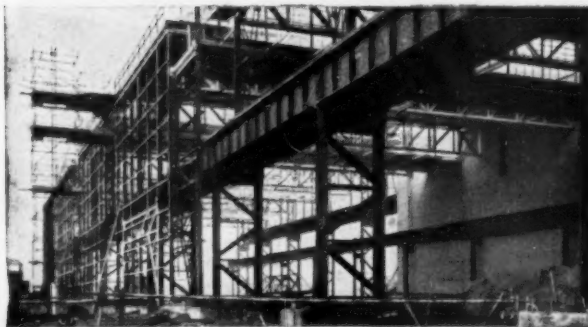
Williams & Williams Aluminium products have played an important part in the massive development programme carried out by the Steel Company of Wales since the war. The first part of this scheme, costing £73,000,000, included the building of the great new Abbey Works adjoining Port Talbot. For this vast new plant, Williams & Williams Aluminium Windows and Aluminex Patent Glazing were chosen to combat the corrosive atmosphere of a coastal and industrial site. Quick to install—a very important point where building and production schedules must be closely co-ordinated—and requiring the minimum of attention, these products have already given years of service—and their useful life has only just begun. Now, once again, Williams & Williams Aluminium Windows and Aluminex Glazing have been specified for the next stage in development at present under construction.

WILLIAMS & WILLIAMS at The Steel Company of Wales



Abbey Works houses every process in the manufacture of sheet steel from the Ingot Stripping Bay to Dispatch. Williams and Williams Aluminex Patent Sidewall Glazing was used throughout this building. Much of it has now been installed for many years—and shows no sign of deterioration.

Williams & Williams vertical centre pivoted aluminium windows were installed in the Converter Bay on the west side of Abbey Works in 1958. Requiring no painting and no cleaning, they are giving reliable, trouble-free service with great savings in maintenance costs.



Development continues at Abbey Works. This new extension to the cold mill and dispatch building is going up fast—and Aluminex, chosen again for this part of the programme, will keep pace. In the roof, Williams and Williams Aluminium continuous opening lights operated by hydraulic gear are now being installed.

Consulting Architects: Sir Percy Thomas & Son, Cardiff
Engineers: W. S. Atkins & Partners

WILLIAMS & WILLIAMS *forward looking building products*

Williams & Williams make RELIANCE steel windows of every description, ALOMEGA and other aluminium windows, ROFTEN movable steel partitioning, ALUMINEX patent glazing, WALLSPAN curtain walling and many other products, all of which can be seen at our permanent exhibition at 36, High Holborn, W.C.1.

WILLIAMS & WILLIAMS, RELIANCE WORKS, CHESTER · WILLIAMS HOUSE, 37-39 HIGH HOLBORN, W.C.1

**TO MEET THE EVER-INCREASING PROBLEMS
OF TRAFFIC AND PASSENGER CONGESTION..**



For further information on
PASSENGER CONVEYORS
consult

**SANDVIK STEEL BAND
CONVEYORS LIMITED**

SELY OAK, BIRMINGHAM 29
Tel: SELLY OAK 1113-4-5.
Grams: "Simplicity, Birmingham"



Sandvik

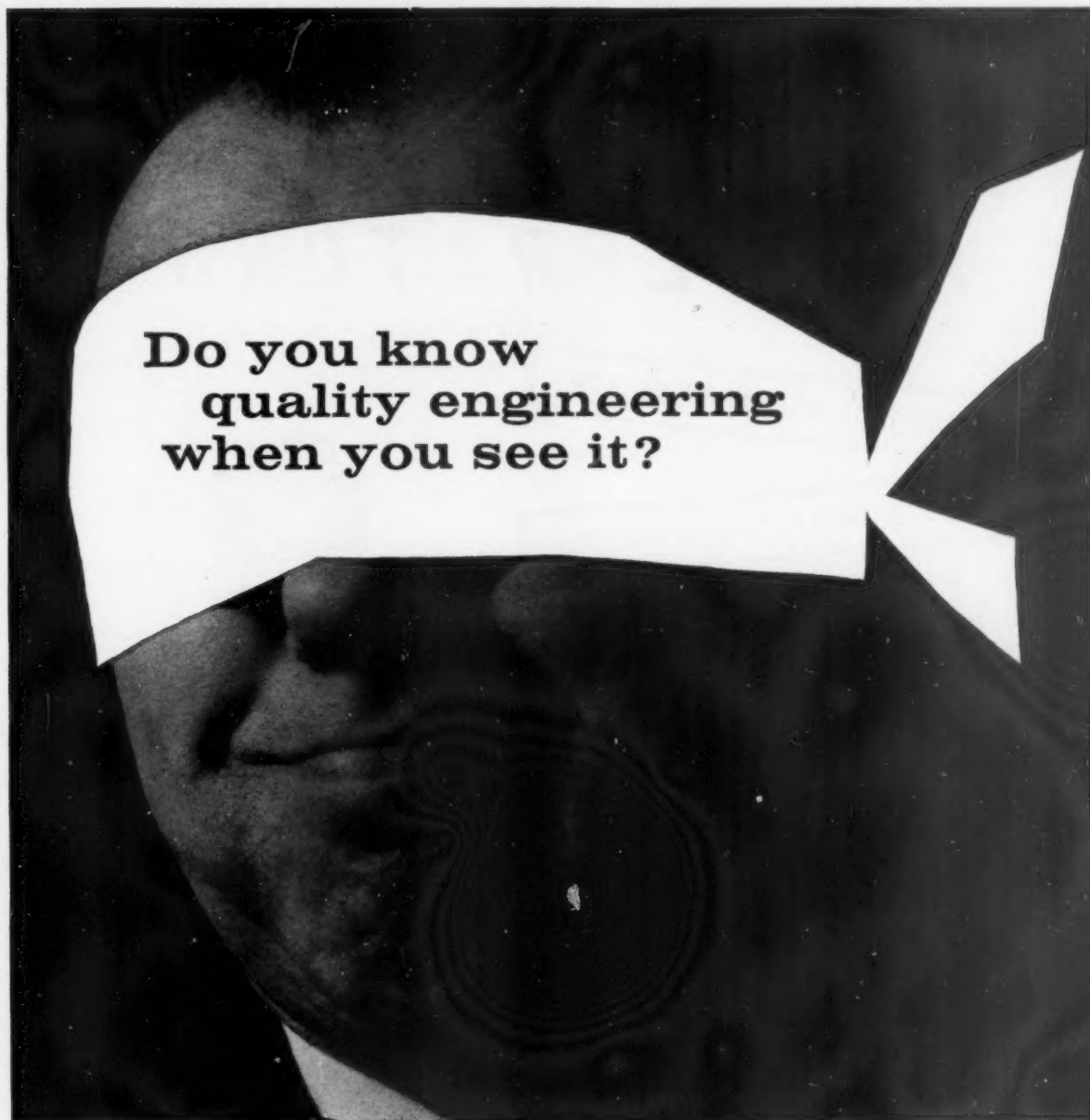
introduces the **PASSENGER CONVEYOR**

With a continually growing population and a tremendous expansion of motor traffic in cities and built-up areas, the crowded situation in thoroughfares becomes still more difficult to master. With these problems in mind, the world-famous SANDVIK organisation of Sweden has developed a new and improved Passenger Conveyor, using a rubber-covered steel band which offers a smart and practical solution to many traffic problems particularly where the heavy growth of foot-passenger traffic causes congestions or disturbances of various kinds.



FIELDS OF APPLICATION

for this type of passenger conveyance are manifold and important: in tunnels to and from railway stations, between different levels at subway stations, between passenger lounges and planes at airports, between Customs controls and boats, at sports arenas, at traffic crossings, from parking lots to shopping centres, and at industrial enterprises as a connecting link between main buildings, etc.



**Do you know
quality engineering
when you see it?**

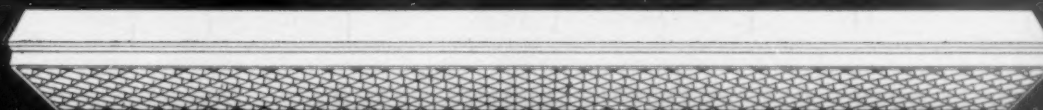
WHEN IT COMES to specifying fluorescent fittings, are you plumping every time for AEI Series 2? It's the enlightened thing to do. Ask any fellow Architect who's looked into the matter. He'll

readily testify that a fitting from the AEI Series 2 range is not only pleasing to look at but is without equal for the quality of engineering. This is not a claim—it's a *fact*.



Lamp and Lighting Co Ltd

If you have a Barbour index, see No. 160 for full range of catalogues



**Series 2 Family of Fittings
—the best value in fluorescent lighting**

A.E.I. LAMP & LIGHTING CO. LTD., HEAD OFFICE: MELTON ROAD, LEICESTER

4997

FLO-MEL

ACCELERATORS

ALL BRITISH DESIGN & MANUFACTURE

HIGHLY COMPETITIVE PRICES

SILENT RUNNING

The introduction of Flo-mel Accelerators is a natural development of the specialised work which has been carried out by the Mel Engineering Company calling for original designs and a high degree of engineering skill.

The FLO-MEL units have been produced to meet the requirements of the Heating Engineer, for efficient, dependable, and quality accelerators of 100% British design and manufacture. The range covers requirements from small bore to 4" bore and 1—140 G.P.M. with heads of 1—20 ft. Flo-mel accelerators are designed to give the required duties for industrial and domestic heating systems.

Illustrated booklet giving full details and duty curves, available on request.



THE MEL ENGINEERING CO.,

A SUBSIDIARY OF

T. EADINGTON & SONS LTD.,

ONE OF THE **COCKSHOOT** GROUP OF COMPANIES

DEAN ROAD • HANDFORTH • WILMSLOW • CHESHIRE TEL: WILMSLOW 4863 & 4061



OLYMPUS LIGHTING FITTINGS BY FALKS

91 Farringdon Road, London, E.C.1. HOLborn 7654. London Showrooms: 20/22 Mount Street, Park Lane, W.1. MAYfair 5671/2

Stelvetite—plastic bonded to steel—has put a new face on Selfridges Counters



Plastic
bonded
to
Steel

*Accepted by the
Council of
Industrial Design for
"Design Index".

The first thing to remember about Stelvetite is that it eliminates the expensive production process of surface finishing. Stelvetite is sheet steel permanently coated on one side with vinyl, available in a very wide selection of colours and textures. Stelvetite can be worked as steel . . . deep drawn, welded, shaped, folded, cut and bent. It is competitively priced and available by the sheet or coil. It is being used by more and more large manufacturers, saving them time and space. If you are interested in progress write to us for further particulars. The result may save you a small fortune.

*All enquiries about this installation at Selfridges should be made to:
Courtney, Pope Limited, Amhurst Park Works, Tottenham, London, N.15.*

STELVETITE*—made in co-operation with BX Plastics Ltd.
by John Summers & Sons Ltd.
who produce over 52,000 miles of sheet steel every year.
Write to us at Dept. AJ, Shotton, Chester, for full information.

See how the FLYOVER 'DELTA'



is track free silent and smooth

Stands to reason doesn't it?
Flyover 'Delta' is bound to be silent
and sure to be smooth. Nothing
to shake, rattle or roll up. Makes
installation so simple too.



HILLALDAM

E. HILL ALDAM & CO., LTD., BRITANNIC WORKS,
RED LION ROAD, TOLWORTH, SURBITON, SURREY
Telephone: Elmbridge 0090 (6 lines)
Telegrams: "ALDAMILLO" SURBITON

THE SLIDING DOOR PEOPLE





Save stand-by battery space with the new **CHLORIDE** Stationary Cell

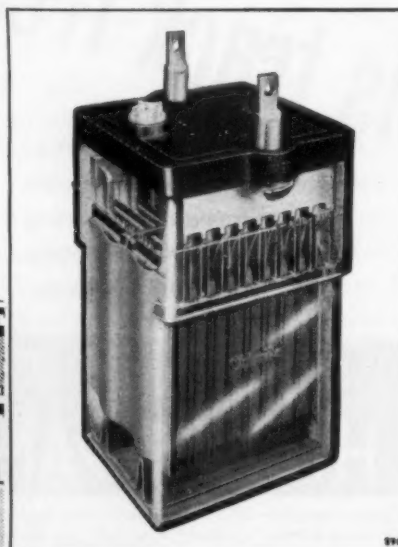
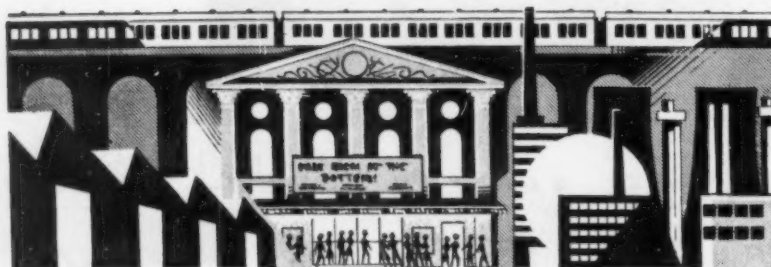
THIS LIGHT, robust cell, with its Planté positive and pasted negative plates, Porvic microporous separators and many other improvements in material and design, saves up to 50% of previously necessary battery space—yet performs its duties with greater efficiency and complete reliability. Specially designed for stand-by duties entailing discharge rates between, say, the 3-hour and the very high rates demanded for switch-closing purposes, it is ideal for trickle-charge operation and has all the remarkable length of life associated with the Planté type of construction.

The field in which the new cell is designed to replace current Planté types is a very wide one. Emergency lighting*, switch operation and emergency supply in hospitals, theatres, cinemas and other public buildings, nuclear and conventional power stations, all rely on trickle-charged batteries. In Great Britain today such batteries occupy millions of cubic feet of valuable space. The new Chloride cell could free almost half of it.

*The new cell will from now onwards be fitted in all Keopalite units—the Chloride Company's automatic emergency lighting system.

A PRODUCT OF CHLORIDE BATTERIES LIMITED
BACKED BY WORLD-WIDE SERVICE

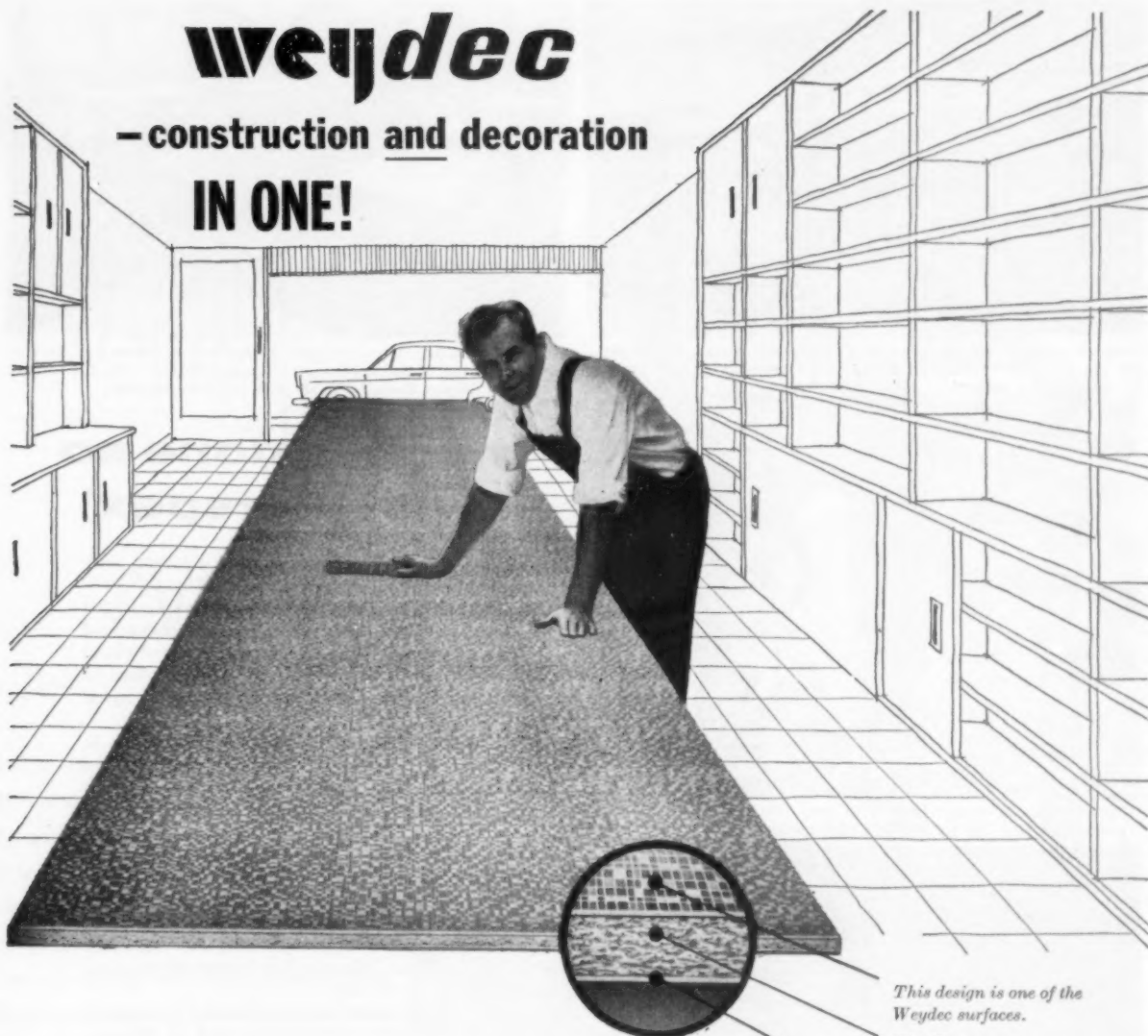
Makers of Exide Batteries



Enquiries to: London Elgar 7991; Bristol 664086; West Bromwich 2361; Leeds 20248; Glasgow, Bridgeton 3734; Manchester Blackfriars 1158; Belfast 27953

weydec

— construction and decoration
IN ONE!



This design is one of the Weydec surfaces.

The Weyroc core ($\frac{1}{2}$ " or $\frac{3}{4}$ " nominal).

Non-decorative plastic balancer on reverse face.

No wonder Architects, Shop-Fitters and Builders are so enthusiastic about using WEYDEC. These cost-cutting boards—with their colourful plastic surface *factory-bonded* to a core of famous Weyroc wood chipboard—are *constructional and decorative at one and the same time!* A ready-bonded plastic-surfaced material like this costs less than buying the board and surface separately, so WEYDEC saves money. And, by doing away with complicated gluing, WEYDEC saves on time and labour, too. Whatever plastic-surfaced unit you want to specify or make in hard-wearing WEYDEC, you'll find the choice of colours and patterns can be considerably varied outside the standard range. Ask your WEYDEC Distributor for full details—*today!*

CUT COSTS WITH

weydec

MELAMINE SURFACED WEYROC

Write for free sample to: THE AIRSCREW COMPANY & JICWOOD LTD • DEPT. A.J.20 • WEYBRIDGE • SURREY
W.P.S.09



Opal, red and grey 'Perspex' in internally illuminated fascia sign, 30ft. 9in. x 3ft. 3in., made for Boots the Chemists by Claudgen Ltd.



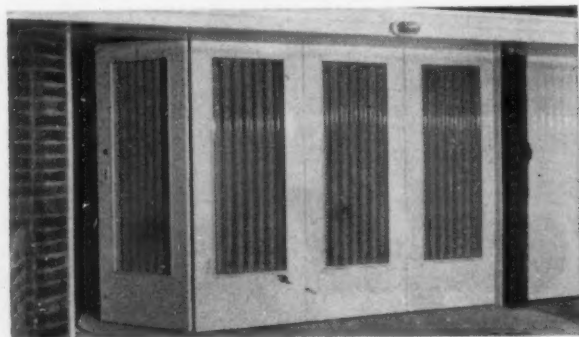
Domelights made from opal 'Perspex' by Henry Hope & Sons Ltd., Smethwick, on the roof of Hadrian County Secondary Modern School, Wallsend. Architects: Messrs. Reavell & Cahill, F./F.R.I.B.A., Alnwick.



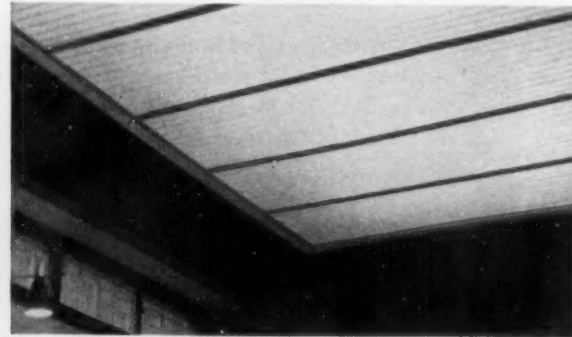
'Crelene' sink and drainer made from green 'Perspex' by Troman Bros. Ltd., Shirley, Solihull, Warwickshire.



'Clent' bath made from pink 'Perspex' acrylic sheet by Henry Robinson (Fibres) Limited, Stewkins Works, Nr. Stourbridge, Worcestershire.



Sheets of opal corrugated 'Perspex' used as panels in the sliding doors of a private garage to give light to the interior, installed by Tallis Bros., Builders, Contractors and Decorators, Liverpool 8.



Opal corrugated 'Perspex' diffuser in a 16ft. x 8ft. 6in. ceiling lighting fitting manufactured by F. H. Pride Ltd., and installed in Scandinavian Airlines System London office.

So much is done so well with 'Perspex'

The versatility of 'Perspex' gives architects a greater freedom in design. This robust, attractive material has a host of applications, both decorative and functional. Simple shapes can be produced in 'Perspex' by inexpensive methods, and more complicated shapes can be produced by experienced manufacturers. On site 'Perspex' can be cut and drilled to suit the job in hand. Technical literature on handling 'Perspex' can be obtained from I.C.I.

'Perspex' is available in a wide variety of thicknesses in transparent, translucent or opaque colours. You can obtain it as an opal sheet or as a clear sheet, which has a very high light transmission factor. For rooflighting and similar applications, use corrugated 'Perspex'.

The wide range of colours and designs available make 'Perspex' ideal for kitchens and bathrooms in the modern home. It makes a really up-to-date display stand, or an attractive, weatherproof exterior sign. A high resistance to corrosion gives 'Perspex' rooflighting a long and useful life in industrial atmospheres. Many other useful applications are being developed day by day.

'Perspex' is an I.C.I. product, backed by the I.C.I. research and technical service—the finest of its kind in Britain. To learn more about the properties and applications of this versatile material, please ask your local I.C.I. sales office.

'PERSPEX'

'Perspex' is the registered trade mark for the acrylic sheet manufactured by I.C.I.

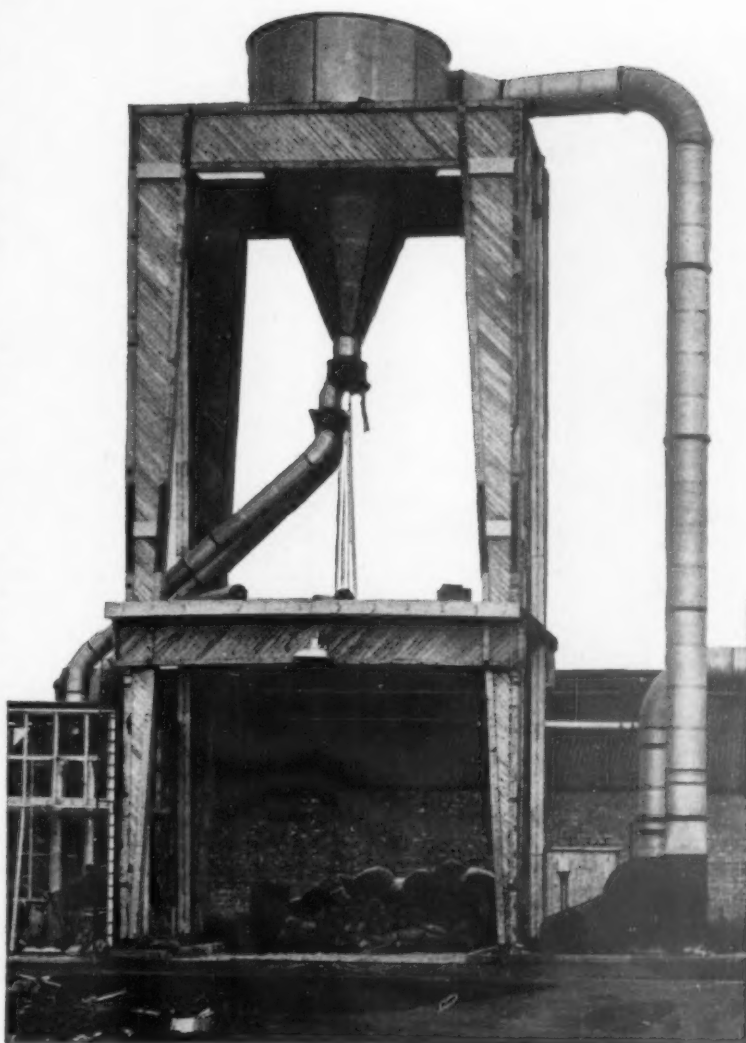


IMPERIAL CHEMICAL INDUSTRIES LIMITED · LONDON · S.W.1 P.820

AERODUX

weathers
the
cyclone

This is the cyclone tower at the new Colwick, Nottingham, works of Ashworth Kirk Ltd. The H.B. portal frames supporting the dust extraction cyclone unit are 53 ft high and glued throughout with Aerodux 185 resorcinol resin glue. Aerodux was used for its unequalled resistance to weather—even in the most exposed conditions—and for its durability, gap-filling properties and resistance to the attacks of insects, fungi, and micro-organisms. Aerodux is tolerant of the moisture content of the wood being bonded and its unique combination of properties is invaluable for all large exterior timber structures. CIBA (A.R.L.) resins, both Aerodux and Aerolite, were used for gluing all structural timber in this new factory at Colwick.



Aerolite

Aerodux

synthetic resin glues for wood

Aerolite and Aerodux are registered trade names

CIBA (A.R.L.) LTD., Duxford, Cambridge. Telephone: Sawston 2121
AP619

TWEENY

WASTE DISPOSAL UNITS



Specify

TWEENY
WASTE DISPOSAL UNITS
FOR PERFORMANCE AND RELIABILITY



The Haigh Engineering Company are the only manufacturers of domestic and commercial disposers in this country ranging from $\frac{1}{4}$ h.p. to 5 h.p.



Domestic disposers for houses, flats and maisonettes.



Commercial disposers for caterers, research laboratories, hotels, ships, factories and many other applications.

CONSULT

THE HAIGH ENGINEERING CO. LIMITED

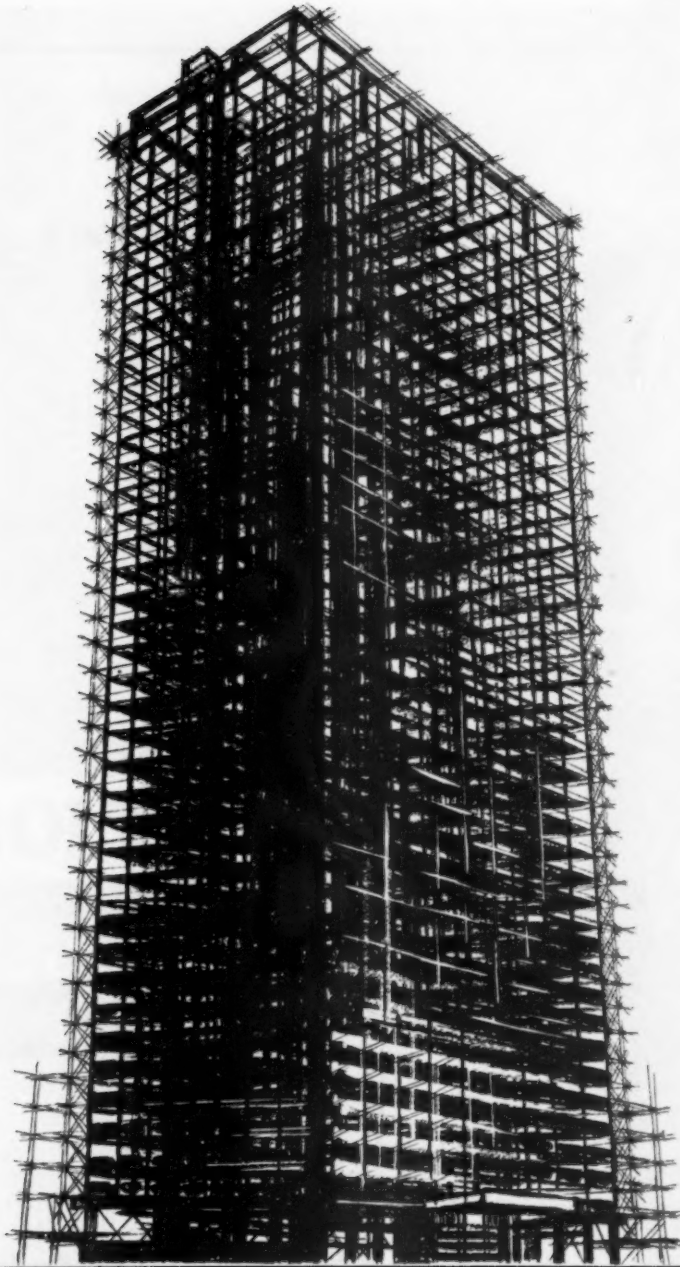
Specialists in domestic and commercial waste disposal

2 SOUTH AUDLEY ST.,
LONDON, W.1
GROSVENOR 7941

Please send details of domestic/commercial disposer to :

.....
.....
..... A.J. 19.1.61

ROSS-ON-WYE,
HEREFORDSHIRE
ROSS-ON-WYE 2358



42 floors
to be sealed
and protected—
specify
Johnson's
floor seals

When you specify Johnson's, you specify the products of the world's largest manufacturer of seals and polishes — Johnson's have the right seal and finish for *all* floor surfaces. It also means that whatever your problem, you can get technical advice free and without obligation, from a large force of trained representatives. They are backed by the largest research organisation in the industry.

JOHNSON'S  **WAX**

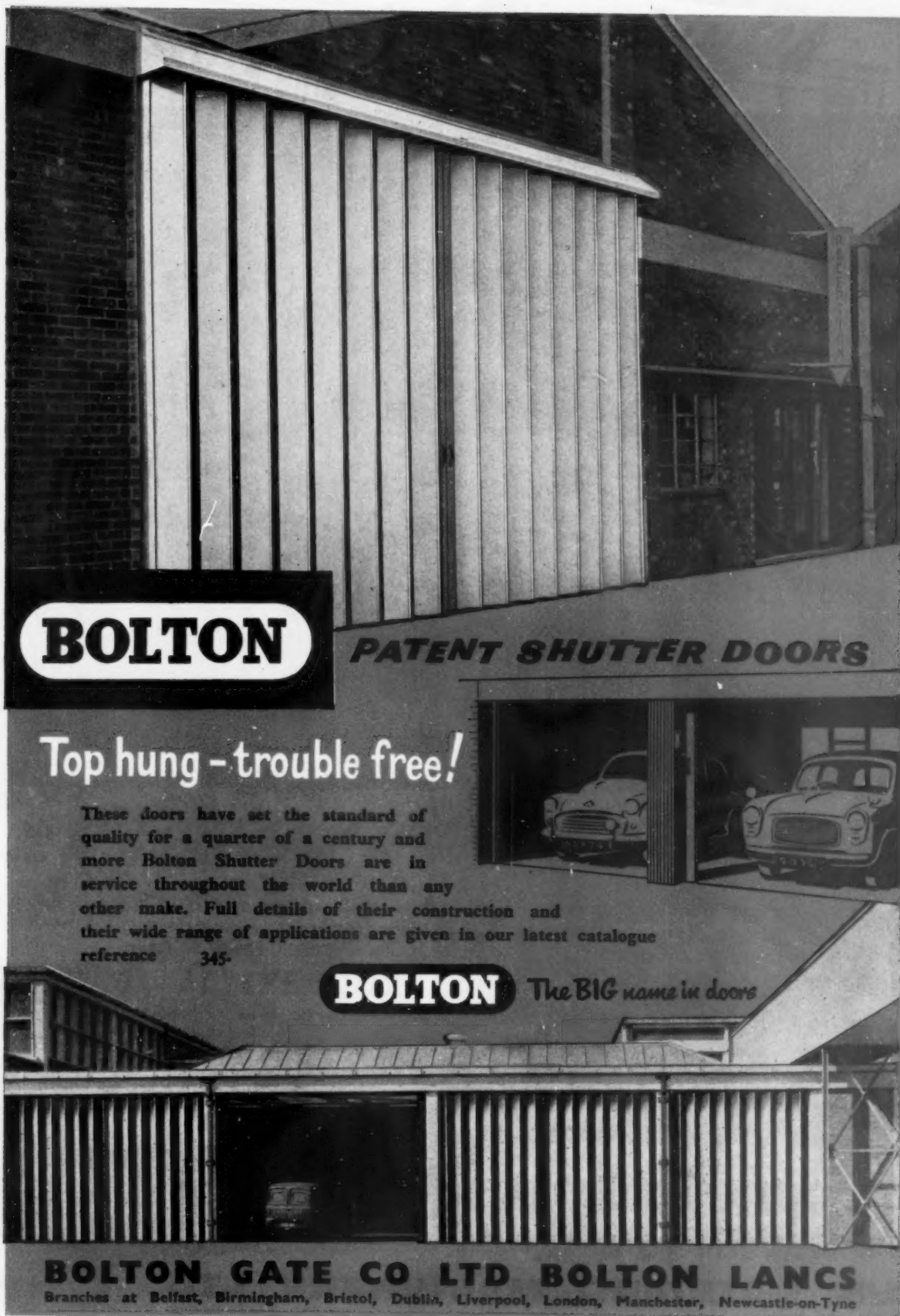
S. C. Johnson & Son, Ltd., Frimley Green, P.O. Box 9,
Camberley, Surrey Telephone: Camberley 3456



*For asphalte work
consult the
biggest man
in the business*

Engert's for Asphalte

ENGERT & ROLFE LTD BARCHESTER STREET LONDON E14 Telephone EAST 1441



BOLTON *PATENT SHUTTER DOORS*

Top hung - trouble free!

These doors have set the standard of quality for a quarter of a century and more Bolton Shutter Doors are in service throughout the world than any other make. Full details of their construction and their wide range of applications are given in our latest catalogue reference 345.

BOLTON *The BIG name in doors*

BOLTON GATE CO LTD BOLTON LANCS
Branches at Belfast, Birmingham, Bristol, Dublin, Liverpool, London, Manchester, Newcastle-on-Tyne

The advertisement features a collage of images. At the top, architectural drawings show a kitchen layout with the word 'KITCHEN' and a gymnasium layout with the word 'GYMNA' and dimensions '30'-0" — 60". A large, dark, torn-paper-style graphic in the center of the kitchen drawing reads 'Leave this to EUK'. Below the drawings is a black and white photograph of a commercial kitchen with stainless steel counters, sinks, and a large range hood. In the foreground, a spiral-bound notebook is open, displaying handwritten text in cursive. The text in the notebook lists services: 'Re Kitchen Planning', 'Survey: - EUK to measure up - note ultimate requirements - suggest best types of catering equipment for our purpose.', 'Planning: - EUK to advise ideal layout for kitchen services.', 'Manufacture: - by EUK to approved specs. & schedule.', 'Install using EUK labour.', followed by 'Agreed!', 'Euk are experts at', 'Kitchen planning - pass them the entire job', and 'Tues. A.M.' signed 'A.D.G.'.

EUK

EUK CATERS FOR THE CATERER

EUK CATERING MACHINERY LTD.

HEAD SALES OFFICE: LATYMER COURT, HAMMERSMITH ROAD, LONDON, W.6.

SCOTTISH OFFICE & SHOWROOM: 4/8, LADY LAWSON STREET, EDINBURGH, 3.

for want of 10 minutes....



.... a factory was lost!

FIRE! the critical few minutes between the alarm and the arrival of the Brigade make all the difference. If only the roof lining had been coated with Trerock the flames would not have spread and another building would have been saved.

AND LOOK AT THE ADVANTAGES OF USING TREROCK

ECONOMY A Trerock coating costs less than a similar coating of ordinary Emulsion paint.

MOISTURE RESISTANT Trerock is fully resistant to moisture on building boards and fully retains its important flame retardant properties with the passage of time.

EASE OF APPLICATION Trerock can be applied with either brush, spray or roller.

CHOICE OF COLOURS Trerock is available in a range of 20 contemporary colours, thereby giving at the same time a full decorative effect.

Send for leaflet which gives full information on Trerock.

TREROCK

PATENTS APPLIED FOR

FLAME RETARDANT PAINT

limits the Fire Hazard

PEARL VARNISH CO. LTD. TREFOREST INDUSTRIAL ESTATE • SOUTH WALES

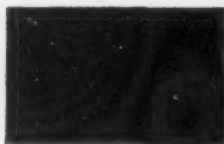
Brymill add beauty to strength



Easily fabricated with standard tools,
Brymill Plastic Coated Steel Strip
is available in a wide range of colours
and textures. Its practical
application ranges from domestic
products to sub-assemblies in
automobiles, shipping and railways.

ENQUIRIES WILL RECEIVE OUR PROMPT ATTENTION

A TEXTURE OR COLOUR TO SUIT ANY PRODUCT

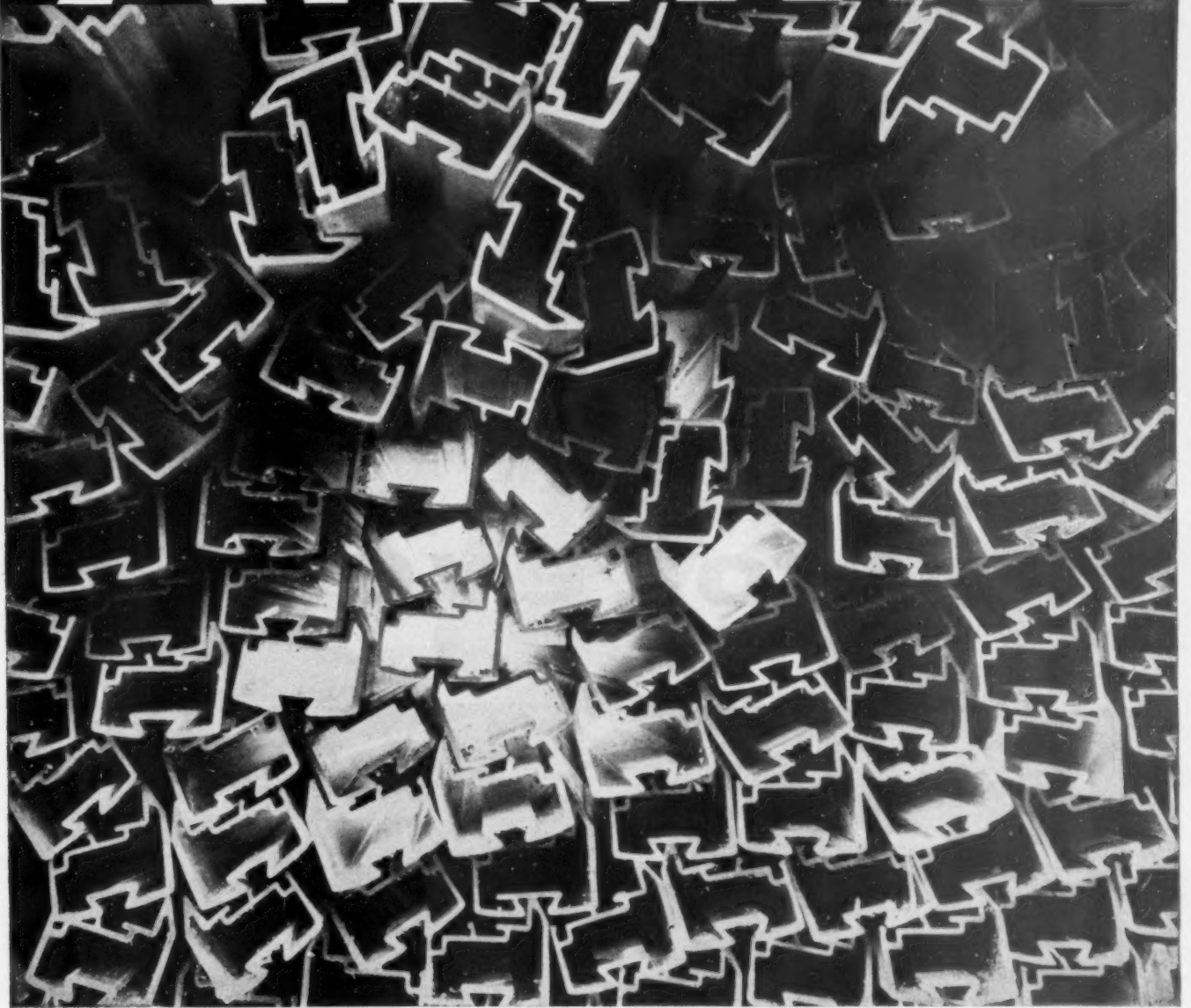


BRITISH ROLLING MILLS LTD.

BRYMILL STEEL WORKS · TIPTON · STAFFS

the WARWICK sash window window

Alumin



Designed to take full advantage of the unique possibilities of extrusions in aluminium, and owing nothing to conventional types, these scientifically efficient windows are rational in conception, design and manufacture, and are better value than any other product in their class on the market today



WARWICK SASH WINDOWS



180° PIVOT WINDOWS



PANORAMIC SLIDING WINDOWS



ALUMIN ROOF LIGHTS

ALUMIN BUILDING COMPONENTS LIMITED

A

Winterstoke Road

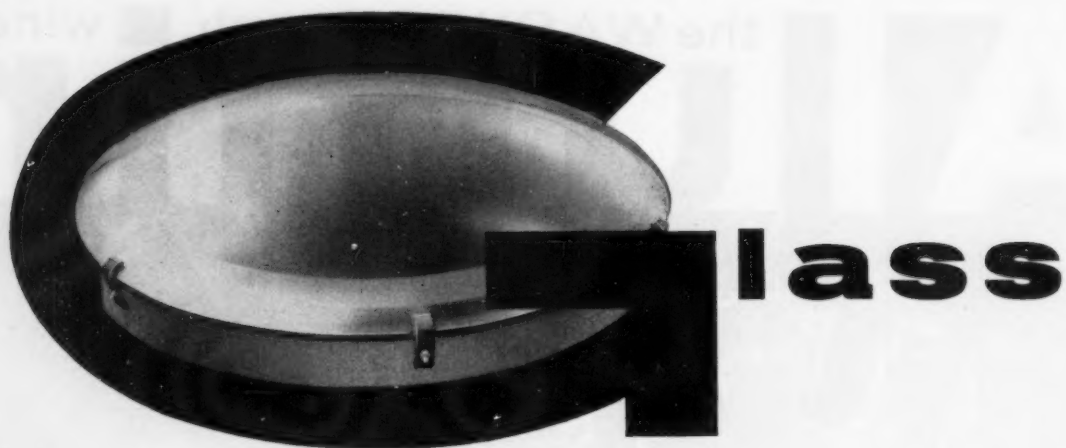
B

WESTON-SUPER-MARE

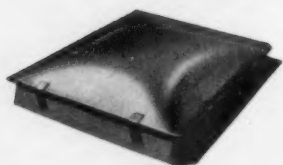
phone 5641

C

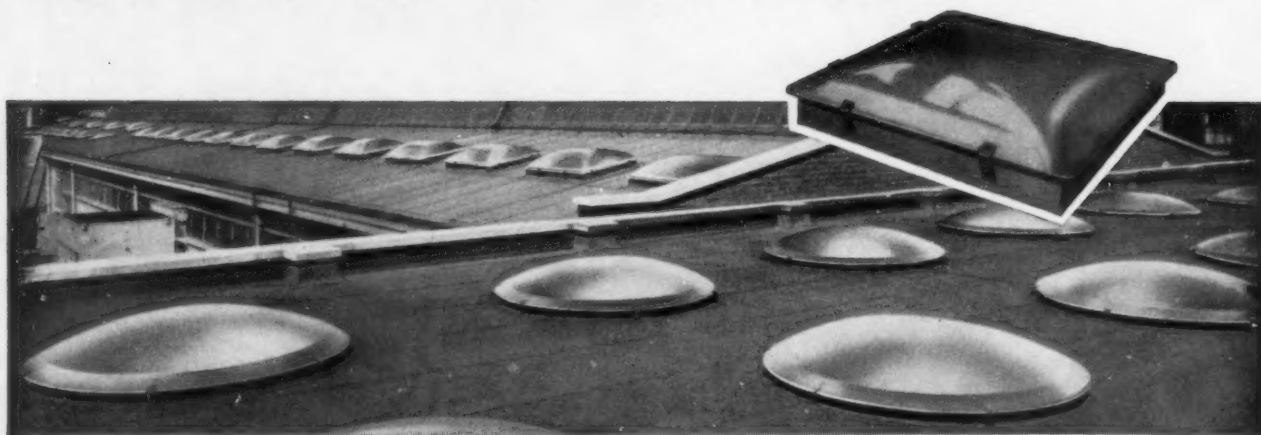
Somerset



roof domes



last for ever!



- **pass ample light**
- **need no maintenance**
- **are fire resistant**
- **never lose their shape**

Glass roof domes have many advantages over other forms of roof lighting . . . they last for ever, pass ample light, and are fire resistant.

Glass roof domes are leak-proof, and easy to fix on metal, wood or concrete curbs; they need no maintenance and *never lose their shape*.

specify **GLASS** roof domes

Think of glass roof domes
for your next building.

Glass Benders Association

6 MOUNT ROW, LONDON, W 1. MAYFAIR 8334



LONGER LIFE—IN HIDUMINIUM

Rainwater fittings in Hiduminium are self protecting. They need no painting since they are highly resistant to corrosion, and no maintenance to ensure their long life. Hiduminium rainwater fittings do not rust nor stain surrounding surfaces and will not crack even in the coldest weather; they are as strong as iron but only one third the weight and so are easy to handle and fit.

Send for our fully illustrated catalogue and price list.

Manufactured by **HIGH DUTY ALLOYS LTD.** Telephone : Slough 24431

**Specify Hiduminium
rainwater goods**

Takes
more,
gives
most!



There's no other word for it. The '61 Victor Estate Car has an *appetite* for luggage. It takes everything a holiday family could want—and there's still room for more. Better yet, it's back-savingly easy to load. You can open the tail-door with one hand, and it stays put. The floor is exactly the right height. And the cases (and the baskets and the dog and the cases) go in without the slightest bother. But there's more to the car than mere luggage-mastery. It not only takes, it *gives*. Gives comfort, with its fabulous road-loving suspension. Gives confidence, with its fingertip steering and fade-resisting brakes. Gives fun, with its vigorous fuel-eking engine . . .

Most of all, this eminent Vauxhall gives you pride on the road.

Victor Estate Car £605 + £253.4.2 PT (£858.4.2)
Seats 4 adults and 2 children with 22 cu. ft. load space
Rear seat folds away, giving 45½ cu. ft. load space
Victor Saloon prices from £510 + £213.12.6 PT (£723.12.6)

Everyone drives better in a **VAUXHALL**

Vauxhall Motors Limited, Luton, Bedfordshire

DRILLED FOUNDATIONS



Architects
Consulting Engineers
Main Contractors

Sir John Burnet, Tait and Partners
Ove Arup and Partners
Trollope and Colls Limited

A modern office block which is being erected
on our drilled foundations at Vauxhall Bridge
Rd. London for Chesterfield Properties Limited

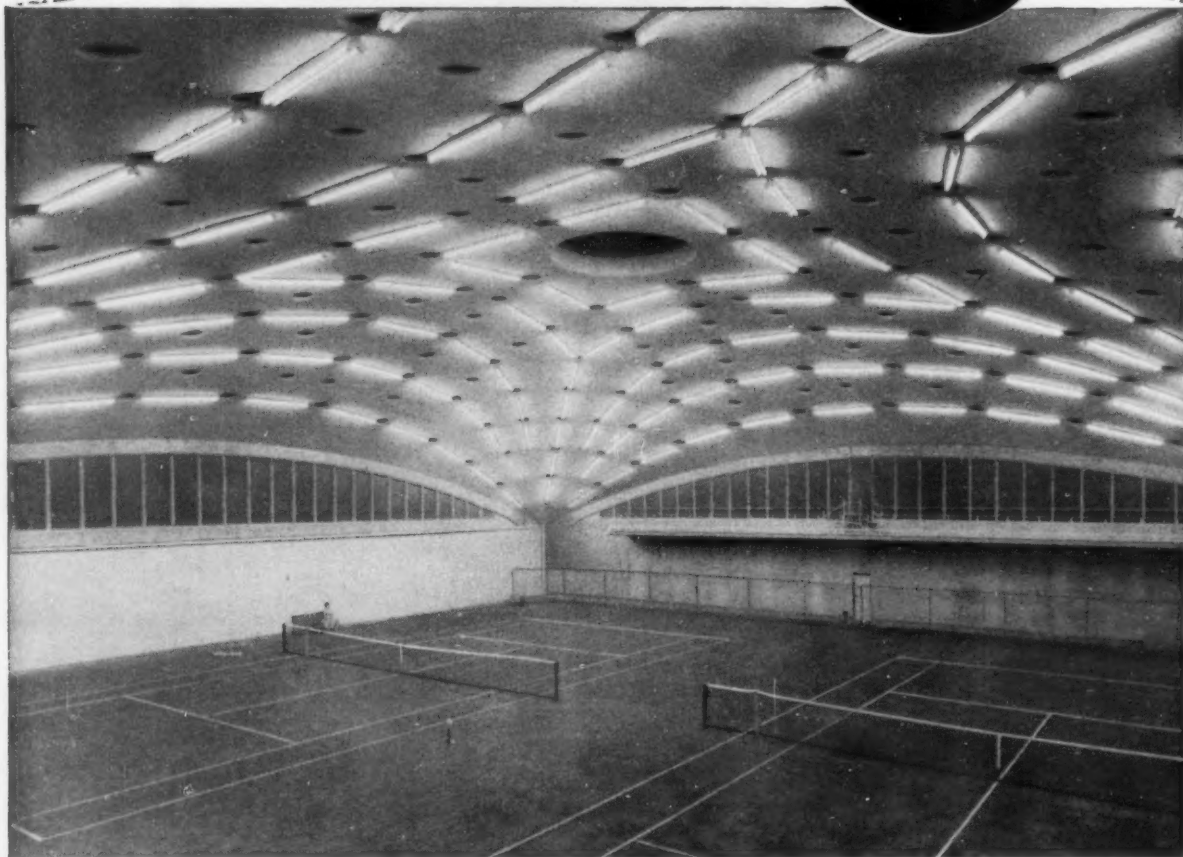
We have modern mobile plants which can
drill foundations of various diameters up to
depths of 100 feet or more Tel: Abbey 7361
or send your enquiries to

PETER LIND

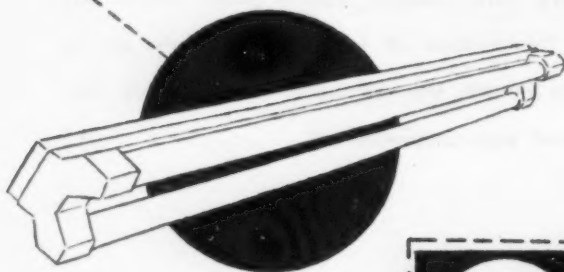
Peter Lind and Company Limited Romney House Tufton Street London SW1

WHATEVER YOUR BUSINESS...

PHILIPS PUT IT IN A BETTER LIGHT



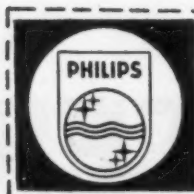
All England Lawn Tennis and Croquet Club, Wimbledon.



Planned lighting is more attractive, easier on the eyes, and far superior when it comes to any form of display.

For the most effective planned lighting, simply get in touch with Philips Lighting Design Service. This famous service offers you the advice of a team of expert lighting engineers and of a fully qualified architect, and can provide you with individual recommendations on the exact lighting for any purpose.

Set the wheels in motion now: post the attached coupon to Philips.



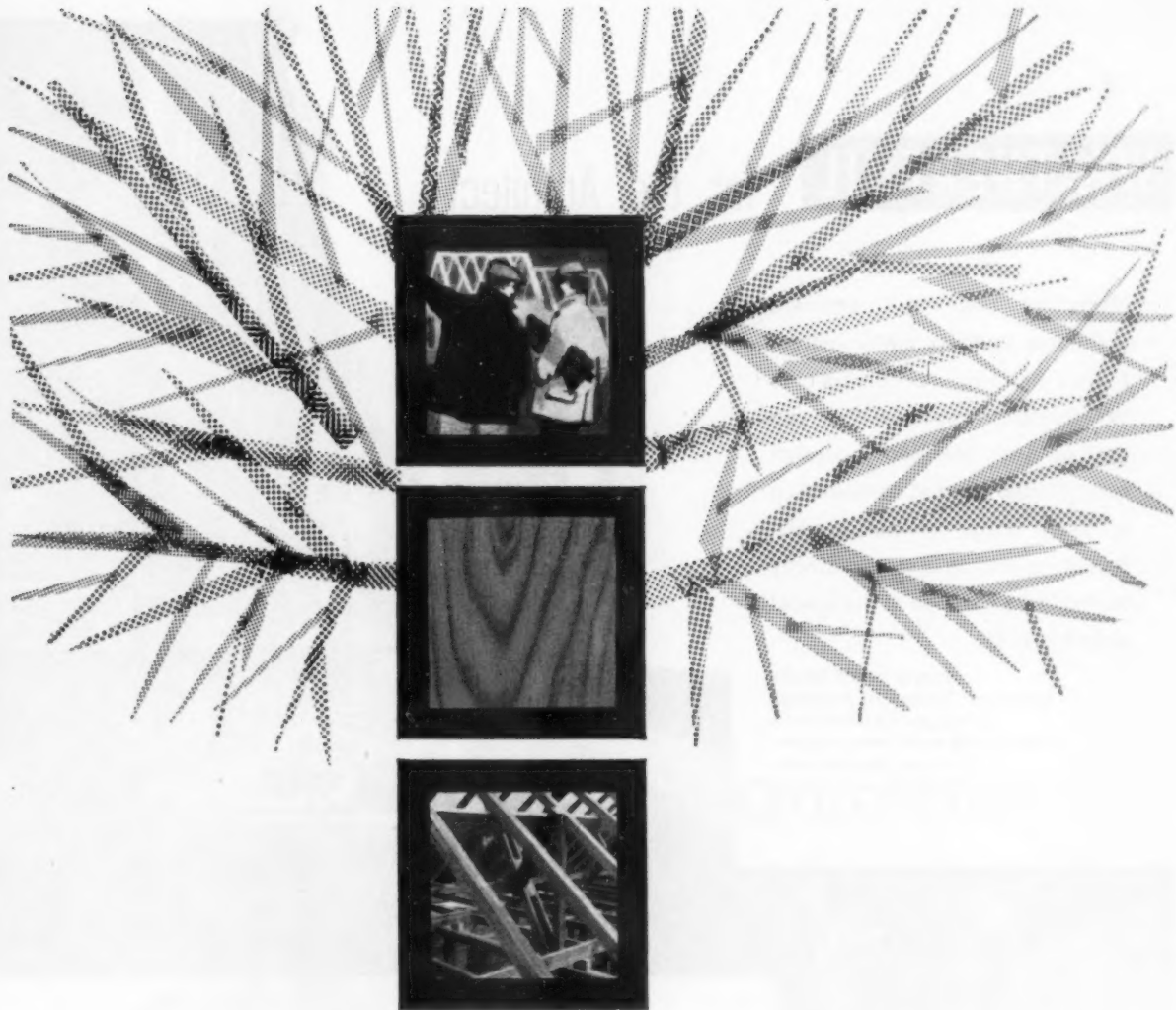
Please send me full details of your
LIGHTING DESIGN SERVICE
Philips Electrical Ltd., Lamp and Lighting Group,
Century House, Shaftesbury Avenue, London, W.C.2

NAME.....

ADDRESS.....

AJ11

PHILIPS LIGHTING DESIGN SERVICE



Thought... Timber... CELCURE!

*For details of the
Celcure Advisory Service
and up-to-date list of plants, apply to :—*

*For England & Wales :
Celcure Limited,
Aldwych House,
Aldwych,
London, W.C.2.
CHAncery 832J.*

*For Scotland :
Celcure & Chemical Co. Ltd.,
300 Bearsden Road,
Glasgow, W.3.
Scotstoun 33511.*

Celcure! A detail in the specification, but one that safeguards your building—at very small additional cost.

Celcure! A detail in the specification that is permanently appreciated by your clients, because it saves them high maintenance costs.

Applied by vacuum and pressure in special plant, Celcure impregnates timber to the heartwood. Fully protects against rot, fungus, woodworm, etc. No wonder Architects and Surveyors have been specifying Celcure for 30 years. It's sound commonsense to say Celcure!

CELCURE



protects wood for good

WEATHERFOIL for the Architect

Many of the most eminent architects in the country entrust their heating problems to Weatherfoil. They know they can rely on the Weatherfoil design team for the closest co-operation at every stage of the project. Result—a heating system perfectly suited to its purpose at the lowest possible cost.

Some of the 555 flats and maisonettes, incorporating Weatherfoil heating at the London County Council housing project, Brandon Estate, Southwark. Architect to the Council, Hubert Bennett, F.R.I.B.A.



Metered Heat

for Multiple Housing

Tenant pays a standing charge included in the rent, which covers capital costs and maintenance, and a measure of background heat. Charge for full heating is registered by a meter, and may be as low as a 1d. per hour. Heater thermostat is set by tenant and can be switched off when not required.

- Low cost installation
- Economical running
- Temperature and on/off control in each dwelling
- Tenant pays by meter

WEATHERFOIL Metered Heat

Write for details to:

WEATHERFOIL LTD., Head Office: 185 BATH ROAD, SLOUGH, BUCKINGHAMSHIRE. TELEPHONE: SLOUGH 25561
BROADGATE HOUSE · COVENTRY · WARWICKSHIRE · TELEPHONE: COVENTRY 40116



Floor Quarries

First Again...

BECAUSE

Floor Quarries are economical... to buy AND to lay... they're resistant to acids, alkalis and grease. They're virtually indestructible... the inherited skills of a traditional craft go into the making of a Floor Quarry—the name for a rectangle of natural clay hardened in fire. Floor Quarries, being dustless, are easily cleaned and maintained and come in a variety of sizes, thicknesses and attractive colour shades. Advice and information is obtainable from Builder's Merchants, Tiling Contractors or direct from the Floor Quarry Association.

THE FLOOR QUARRY ASSOCIATION
FEDERATION HOUSE
STOKE-ON-TRENT STAFFORDSHIRE

when you think of
abundant even light ...
durability ...
safety and economy ...
one thing's clear
GLASS!
... and that's

Plants aren't the only things that flourish under glass. People do. Ideas do. And so does production. It's as clear as daylight that glass roofs and glass walls are good for workers and good for business. But they bring other very practical benefits, too. Glass is the one transparent building material that's non-combustible—approved by *every* governmental and local authority. And once fixed, occasional cleaning is all the maintenance it ever needs. Weather won't affect it. Fumes and heat can't change the diamond-hard composition that outlasts all softer substitutes. Just think of its advantages—abundant, even light; ease of temperature and ventilation control; safety; economical maintenance-free life outlasting even that of the building. Think of them all... one thing's clear—clear as daylight.

And that's GLASS!

THE PATENT GLAZING CONFERENCE is an old-established trade association representing the interests of specialist sub-contractors engaged in the design, manufacture and installation of Patent Glazing for the daylighting of industrial and other buildings. Its name and symbol is a guarantee that glazing will be carried out by highly skilled craftsmen using the finest of materials.



FOR ROOFS AND WALLS

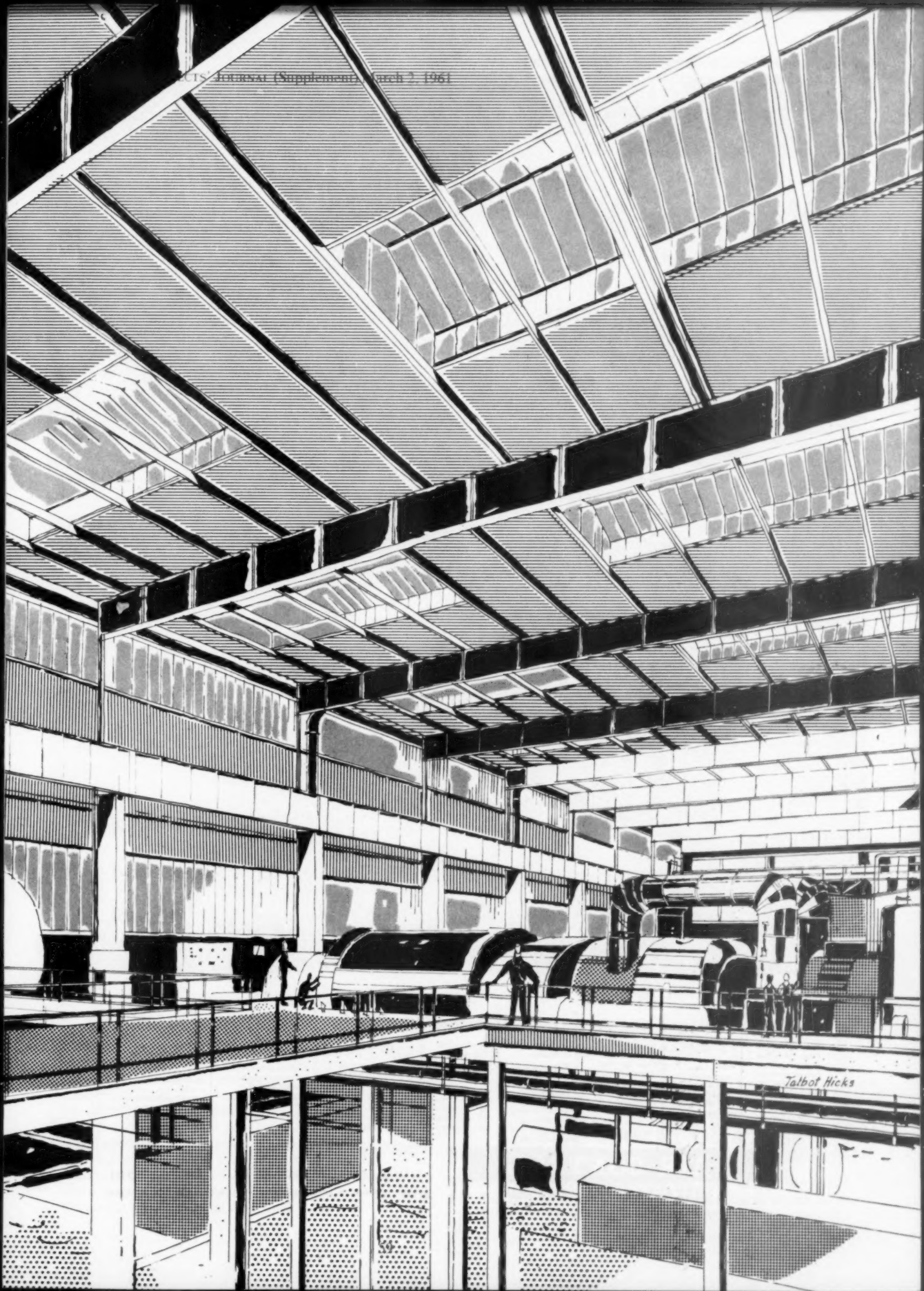
Specify

GLASS
IN PATENT GLAZING

THE PATENT GLAZING CONFERENCE

BURWOOD HOUSE · CAXTON STREET · LONDON · SW1

The British Challenge Glazing Co · Furniss & Co · The Glaslok Patent Roof Glazing Co Ltd · Haywards Ltd
Helliwell & Co Ltd · W. H. Heywood & Co Ltd · Hills (West Bromwich) Ltd · Henry Hope & Sons Ltd
W. G. Kaleyards Ltd · Luxfer Ltd · Mellowes & Co Ltd · Monk Patent Glazing Co Ltd · Paragon Glazing Co Ltd
The Pennycook Patent Glazing & Engineering Co Ltd · The Puttyless Glazing Co · Standard Maclean Ltd
The Standard Patent Glazing Co Ltd · The Universal Glazing Co Ltd
Williams & Williams Ltd · Wottons (Croydon) Ltd



AIR CONDITIONING OF THE FUTURE

—TODAY!



Velovent is manufactured in Great Britain under licence from Svenska Flaktfabriken, Sweden.

- Immediate individual finger-tip control in every room.
- Heating and ventilation combined in one system.
- No moving parts—minimum maintenance.
- Out of sight behind panelling.
- Virtually noiseless in operation.
- Ideal for large office blocks, etc.

Write or telephone for your copy of this eight page coloured brochure.

We also supply air washers and all equipment for central plant installations, for which full particulars can be had on application.

• The following are manufactured under licence from the American Air Filter Co. Inc.



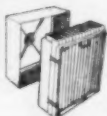
• Multi-duty

Viscous type filter for heavy dust loads and where constant air volume, fully automatic operation, and minimum maintenance is desirable.



• Roll-o-matic

Automatic renewable glass-fibre media filter, for infrequent maintenance.



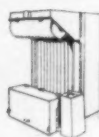
• Electro-pl

Dry type electronic air filter for fine dusts, simpler to maintain than electro-static filters.



• Amer-glas

Replaceable viscous impingement filter with interlaced glass filaments, for efficient, low cost air cleaning.



• Rollotron

Electrostatic filter with automatic renewing media, for applications requiring very high efficiency and infrequent maintenance.



FANS

Out of our very extensive range of centrifugal and axial fans, the LK backward bladed high efficiency fan, which can be supplied in sizes to meet duties up to 25,000 C.F.M. at 6" s.w.g. is particularly suited to central plant applications.



AIR CONDITIONERS Type KD

Air conditioner of unit construction for industrial and commercial applications.



AIR WASHERS

Air washers are manufactured for heavy cooling duties and other applications. Each washer has one or more banks of sprays, and is built with the experience gained over many years.

**AIR CONTROL
INSTALLATIONS LIMITED**

RUISLIP MIDDLESEX Viking 1222
Birmingham • Manchester • Newcastle • Glasgow



Whose glass do millions look through?

John and Robert Stonehouse have their eyes fixed on a magnifying glass—just the thing for their stamp collection . . . and just one of the millions of pieces of optical glass made in the Chance/Pilkington Optical Works at St. Asaph in North Wales. That's where the glass is made for your spectacle lenses, and for specialised lenses of all kinds . . . snapshot cameras and television cameras . . . microscopes and binoculars . . . glass for all these and many other purposes goes from St. Asaph all round the world. As it does for another specialist use—to make windows through which nuclear scientists can watch their experiments safely protected against radiation. So St. Asaph typifies the whole Pilkington Group—supplying today's needs and serving tomorrow's developments in a way which demands a big company, in every sense.

Pilkingtons the greatest name in the world of glass

THE PILKINGTON GROUP manufacturing Pilkington Glass, Chance Glass, Chance/Pilkington Optical Glass and Fibreglass. Factories in Great Britain, Canada, Australia, New Zealand, South Africa, Argentina and Brazil.



...but
bevelled panels
keep you

THAT'S EASILY ANSWERED—simply because Celotex Bevelled Panels provide just about the finest form of interior thermal insulation obtainable today. Insulation for any kind of ceiling in almost any kind of building: insulation against the loss of heat in winter and excessive outside heat in summer: the efficient insulation that only Celotex cane fibre can ensure. Three different types: Natural, Highlight and Flame-resistant surfaces provide a variety of finishes suitable for all applications. Whichever type is preferred, Celotex Bevelled Panels permit dry construction to give a crack-free modern ceiling plus thermal insulation and an attractive textured base for further decoration if desired.

Consult **CELOTEX** at ceiling level

Two important free Celotex services—the Celotex Acoustical Advisory Service and the Celotex Technical Advisory Service—are both at your immediate disposal for discussion and advice at the planning stage. Whatever your ceiling problem, Celotex can solve it. There is, of course, no obligation, simply phone London, Elgar 5717.

Information can also be given regarding the complete and extensive range of Celotex products for every type of building construction. Phone as above or write to Celotex Limited, North Circular Road, Stonebridge Park, London, N.W.10.

CELOTEX* CEILINGS

THE WORLD'S MOST

how can
possibly
warm?



WIDELY USED INSULATION

Other
CELOTEX insulation
products

INSULATING BOARD

Manufactured from long tough sugar cane fibre, Celotex Insulating Board is the perfect material for wall, roof and ceiling linings. Supplied with either Natural or Highlight finish, it can be erected in its original state or given further decorative treatment.

FRIB

Celotex Flame Resistant Insulation Board is manufactured from closely woven sugar cane fibres, faced on both sides with asbestos. This combination provides exceptional thermal insulation qualities and flame resistance. In the BS 476 surface spread of flame test—FRIB (rated class 1) showed no spread of flame whatsoever.

ROOF INSULATION

Permanent insulation for every type of roof decking can be provided by Celotex roof insulation board. Tough, light in weight, this low density cane fibre board cuts fuel and heating plant costs. Its naturally rough-textured surface provides a strong bond with bitumen.

SARKING

With a thermal insulation value *three times greater* than that of wood sarking, this Celotex product is the ideal material for use where complete roof insulation is required. It is produced from closely woven Celotex cane fibres and top-surface treated with a compound with high water repellent qualities.

METAL FIXING SYSTEMS

Celotex has available a metal fixing system for every type of Celotex insulating material. Each system is designed for a specific purpose. Speed, low cost and versatility are the outstanding features.

SERVICE

Installation of Celotex materials is carried out by highly skilled specialist contractors operating throughout the United Kingdom.

* CELOTEX is a registered trade mark



INTERNATIONAL BUSINESS MACHINES (UNITED KINGDOM) LTD., GREENOCK
Boswell, Mitchell & Johnson, Chartered Architects: Glasgow

PLYGLASS

and the
architecture
of
today *

In this building, the Architects required heat insulation, reduced solar penetration and an overall decorative effect. All three were obtained by using Plyglass Double Glazing Units—Clear in the lower rows and Decorated Diffusing in the uppermost. The design by the Architects consists of lozenges and flowing shapes in contrasting pale colours.



***and tomorrow**

The PLYGLASS range of double glazing units is the most comprehensive in the world.

PLYGLASS LIMITED, EDINBURGH WAY, HARLOW, ESSEX Telephone: Harlow 24271. Cables: Plylux Harlow

Reyrolle

*Metalclad
protected-type
weatherproof*

PLUGS AND SOCKETS AND INTERLOCKED SWITCH-PLUGS

Based on B.S.196



Reyrolle

*Ask for
pamphlet
No.1252*

A. Reyrolle & Co. Ltd - Hebburn - County Durham - England

Waterstops?



The New Underpass, Hook Road constructed by William Old Limited for the Surrey County Council

Expandite Limited produce a complete range of efficient Rubber and PVC Waterstops for every type of joint. Made in various designs and lengths, they are accepted as being the most effective and economical method of ensuring watertight structures.

Expandite Waterstops are specified by architects the world over because, unlike metal waterbars, they are not subject to corrosion and will not fracture with movement.

Not content to rest on their laurels, Expandite are constantly introducing new developments. The HYDROFOIL (PVC) revolutionary design combats all seepage, and is suitable for walls, floors, reservoirs, sewage works, ponds, etc. where limited movement may occur.

If you need advice on any problem concerning Waterstops and their most effective use, the Expandite Technical Service Department is always at your service. Please contact us.

**EXPANDITE
LIMITED**

CHASE ROAD, LONDON, N.W.10. Tel: ELGar 4321 (10 lines) Telex 25420
ELGar 1551 (10 lines)

Trafford Park Road, Manchester 17 Telephone: Trafford Park 1285/6

36 Great North Road, Newcastle-upon-Tyne 2 Telephone: Newcastle 23992

Eire: EXPANDITE (IRELAND) LTD., Greenhills Road, Walkinstown, Dublin Telephone: 501512

ASSOCIATES AND DISTRIBUTORS THROUGHOUT THE WORLD

revolutionary new method of air conditioning



***for 1 room or every room
in the building
—at lower cost***

Put one new TEMKON, floor-mounted, room air conditioner, in every room in the building, and the cost will still be 30% to 50% less than a central station plant. Running costs are lower because each conditioner is used individually as and when required, making the installation wholly flexible.

The appearance of the conditioner is attractive. Their slim-line construction and duo-tone finish ensure that they blend with any office decor — and this unit heats as well.

And it's the World's quietest air conditioner

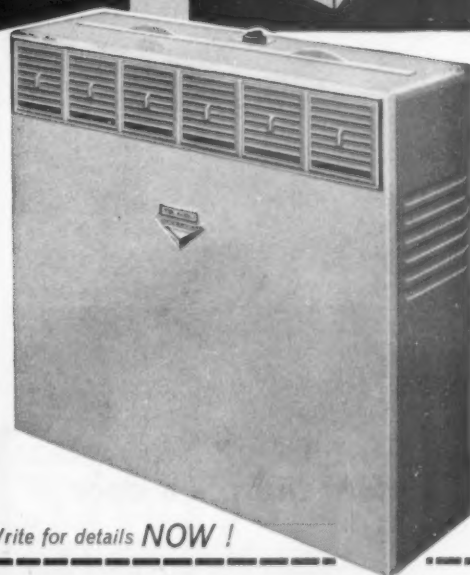
TEMKON

**FLOOR-MOUNTED,
ROOM AIR
CONDITIONER**

TEMPERATURE LIMITED BURLINGTON ROAD, LONDON S.W.6

Phone Renown 5813. Cables: Temtur London

Makers of the World's quietest room air conditioner.



Write for details NOW !

Please send details of the new TEMKON floor-mounted room air conditioner.

NAME _____
POSITION _____
COMPANY _____
ADDRESS _____

P5832/K



**12,000
DIFFERENT
LOCKS**

-ONE MASTER KEY

**MORE SECURITY—MORE FLEXIBILITY
WITH YALE MASTER KEYED SUITES**

There's practically no limit to the number of combinations obtainable with Yale Master Keyed Suites. Yale master keying, which can be arranged to include cylinder, rim and mortice locks, latches, deadlocks, padlocks and cabinet locks, provides a new degree of security and control in office blocks, factories, schools, hospitals, flats, hotels and all other types of public buildings.

MASTER KEYED SUITES

Different locks each operated by its own key, but with a master to open all.

GRAND MASTER KEYED SUITES

Different locks divided into Sub-master Suites. Each Sub-master key operating all the locks in its suite, but not those in other suites. The Grand Master key will open all—up to 12,000 different locks!

LITERATURE

Explanatory leaflets and detailed specifications will gladly be sent on request.

**Where there's a door
—there's a need for**

YALE
REGISTERED TRADE MARK

The YALE & TOWNE Manufacturing Company • Lock and Hardware Division • Dept. A3 • Willenhall Staffs

The AVON



DESIGN REGISTRATION APPLIED FOR

CLEAN LINES

•
GENEROUS
SHELF SURFACE

•
LARGE BOWL WITH
HIGH ANTI-SPLASH
BACK

•
MADE IN
SHANKS SUPERB
VITREOUS CHINA

•
OFFERED IN
7 DELIGHTFUL
COLOURS

The wash basin with
• *unique features*
• *the luxury look*
• *the modest price*

Shanks

WHERE IS THIS STAIRCASE ?



This elegant staircase, with its delicate use of metalwork, is actually on board a ship—the new luxury liner "Windsor Castle".

The designers chose, as do so many today, to edge the stairs with Ferodo stairtreads. For Ferodo stairtreads combine, with long life and non-slip safety, a clean modern look that enables them to blend successfully with contemporary interior design on land or at sea.

- 7 attractive colours.
- Comprehensive range—29 treads with nosings, 3 flat treads.
- Aluminium, silver bronze or manganese bronze channels.
- Special orders can be manufactured

Write to our Stairtread Department for full illustrated literature for your file.

FERODO non-slip stairtreads

FERODO LIMITED
CHAPEL-EN-LE-FRITH
A Member of the
Turner & Newall Organisation

10/9

Have they just been dipped in paint?

Yes, in a way. It's a specially formulated paint and there's a tremendous amount of it in that tank so that we can handle purlins up to 60 ft. in length. These 'Z' type purlins have already been chemically pretreated and are now ready for high temperature stoving—a protection process which guarantees that Metsec products are the finest value for money in the world.

METAL SECTIONS LTD



OLDBURY · BIRMINGHAM

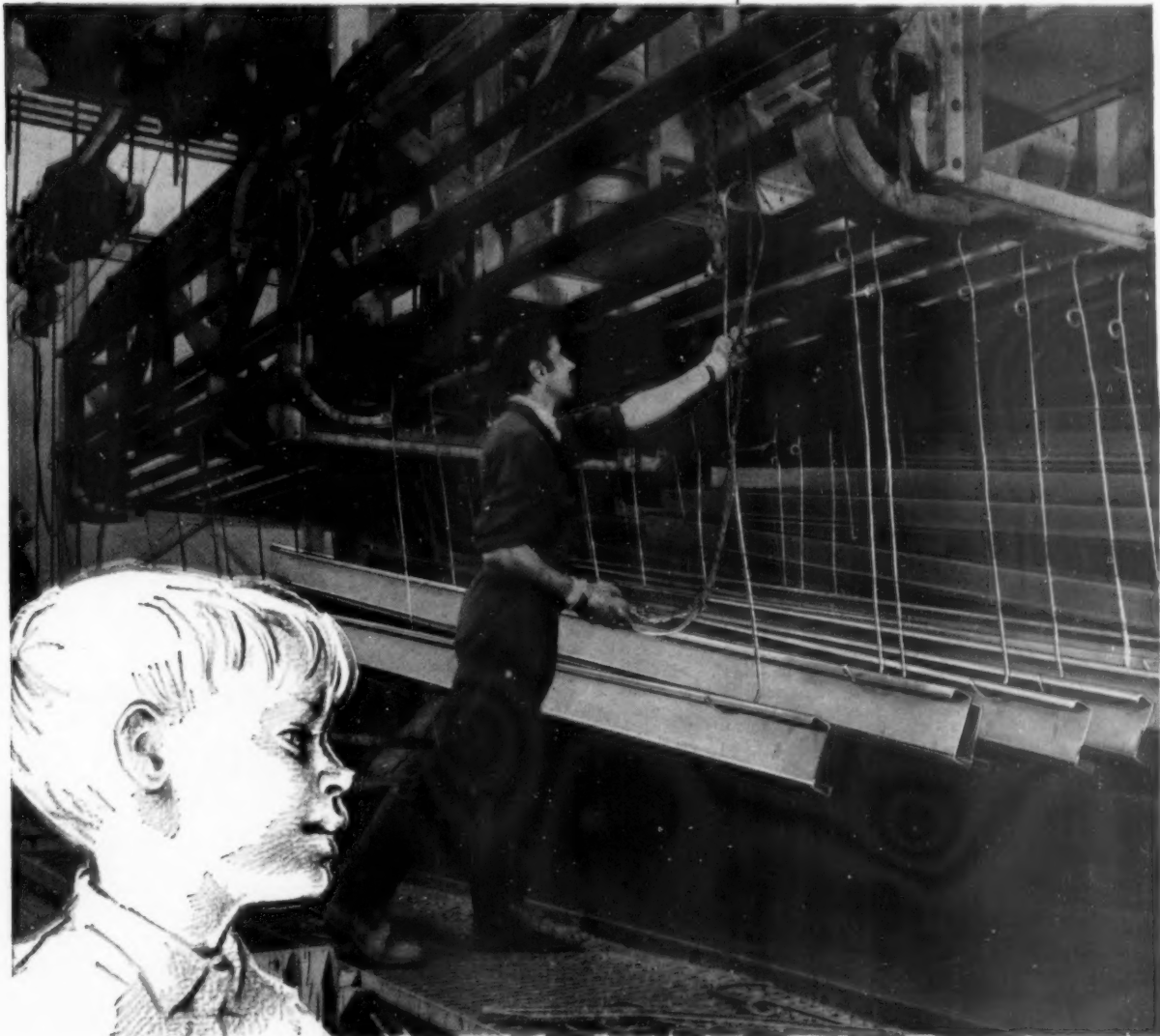
Tel: BRoadwell 1541

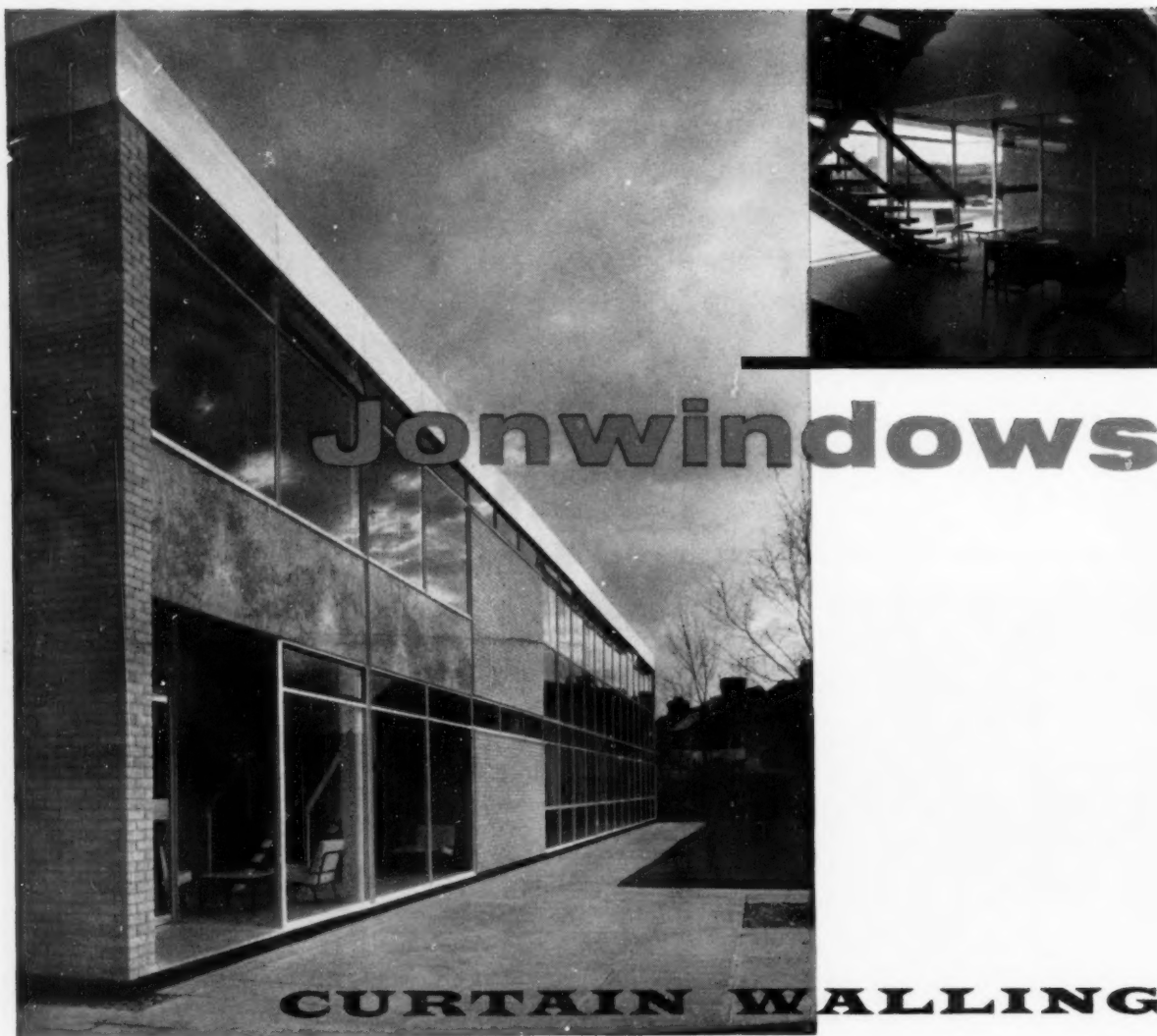
- ☐ Please send me 'Z' Purlins catalogue
☐ I am also interested in your publication on
DIFULITE Cellular Sub-Ceilings.

Name _____

Position _____

Company Address _____





Jonwindows

CURTAIN WALLING

Saunders Valve Company's new office block at Cwmbran, Mon., erected by the Industrial Estates Management Corporation for Wales. Architects: Clifford Tee & Gale, F.R.I.B.A.

Jonwindows Galvanized Steel Curtain Walling

Seen here spanning two storeys, with 4" cruciform supporting ribs at 6' 0" module, bracketed off floor beams. An allowance for vertical expansion is incorporated at the head of the curtain walling and an anodized aluminium fascia forms a capping around the whole perimeter. The grey Armourclad infill panels are secured by aluminium beads.

Pressed steel closers between walls and curtain walling ensure complete office division where required. The curtain walling rests on a pressed metal cill incorporating a condensation channel fixed to a 4½" skin of brickwork.

The imposing entrance foyer has an aluminium screen and double swing armour-plate entrance doors with stainless steel push plates.



JOHN WILLIAMS OF CARDIFF LTD

METAL WINDOW DIVISION

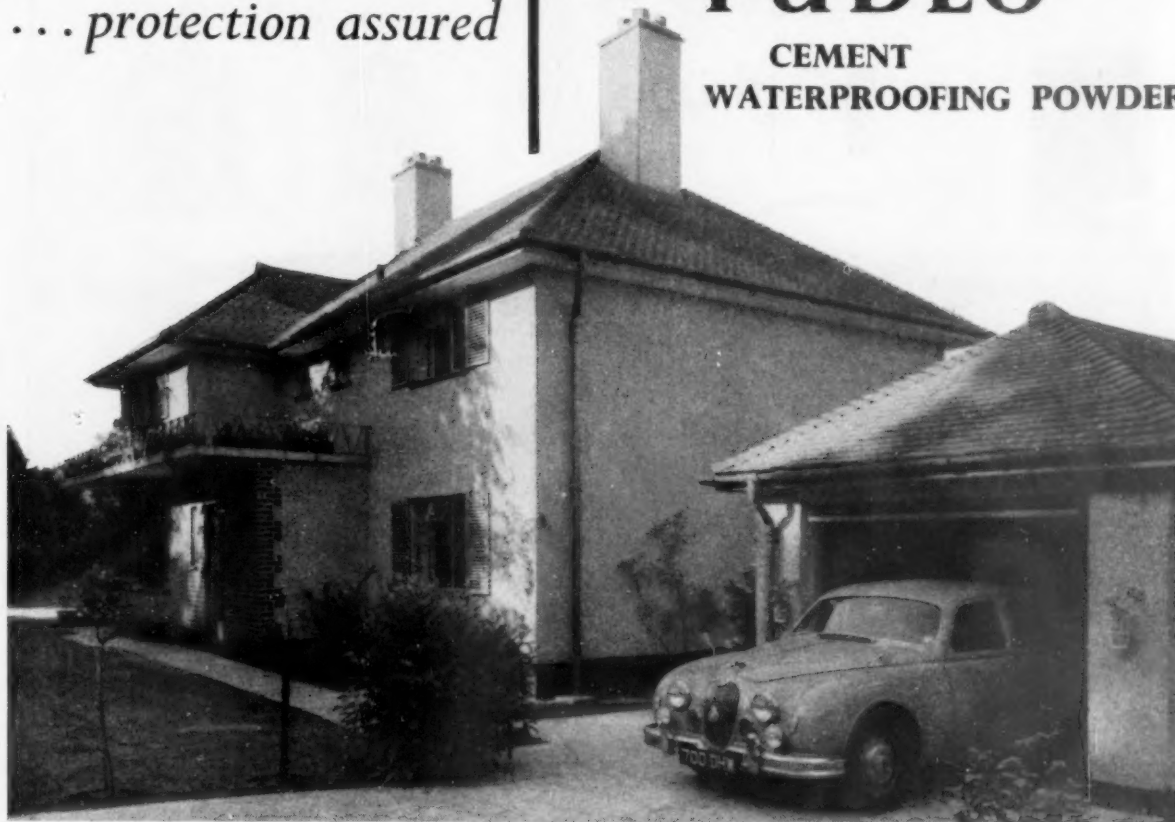
CURRAN ROAD, CARDIFF Tel: 37131 Telex: 49303

**PUTS
TOMORROW
INTO
PERSPECTIVE
TODAY**

'PUDLO' PROVIDES PROOF... No. 2 OF A SERIES

*Appearance enhanced
... protection assured*

WITH **'PUDLO'**
CEMENT
WATERPROOFING POWDER



Owner: A. J. Bingley, Esq., Bristol
Architect: Major G. Raymond Morgan, F.I.A.A., F.I.A.S., etc.

SPECIFICATION

2 parts coarse, washed sand, well graded and perfectly clean, passing a $\frac{1}{4}$ " sieve down to that retained on a 50 x 50 sieve.

1 part Portland cement.

5 lbs. 'Pudlo' cement waterproofer to each 100 lbs. of cement.

The rendering was applied in two coats to a total thickness of $\frac{3}{4}$ " with a final dashing of white spar.

THE simple addition of **'PUDLO'** Cement Waterproofer to the rendering used on this very attractive house has ensured that the exterior will stay bright and clean for years to come. **'PUDLO'** Waterproofer not only stops penetrating damp but also prevents dirt from being drawn into the wall surface.

The word 'PUDLO' is the registered Trade Brand of Kerner-Greenwood & Co. Ltd., by whom all articles bearing the Brand are manufactured.



OTHER 'PUDLO' PRODUCTS INCLUDE:

Waterproof Cement Paints, Cement Paint Primer, Cement Bonder, External Water Repellent, Plaster Fonder, Frost Protector/Rapid Hardener, Mortar Plasticiser, Cement Hardener/Dust Proofer, 'Feusol' Fire Cement, Concrete Plasticiser, Permanent Colours for Cement.

Sole Proprietors and Manufacturers

KERNER-GREENWOOD & CO., LTD. KING'S LYNN, NORFOLK
Telephone: King's Lynn 2293

W.T. 16

NEWS FROM HULL



Vitreous china sanitary ware installed in Shannon Free Airport 'Standard' Kingston wash basins specified

Elegant modern design is the keynote of the new Terminal Building at Shannon Free Airport. In this new building the passengers' introduction to Eire is a pleasant one. Everything possible has been done for his comfort—all the accessories of the building are in keeping with the overall design of the Terminal. In the washroom, for instance, 'Standard' Kingston wash basins, manufactured in vitreous china, have been installed. The wash basins are hung on concealed wall brackets and fitted with mixer taps. 'Standard' Kingston water closets—also in vitreous china—have been used—these are of the double-trap siphonic type with the bowl and cistern close coupled. Both the wash basins and the water closets are beautifully designed, combining luxury with utility. They have a high resistance to harsh treatment and fracture as both are made from vitreous china, recognised by most Public Health Authorities to be more hygienic than other ware. This is because vitreous china is fired at a far higher temperature. As a result it is a dense and non-absorbent material which does not depend upon its glaze to make it watertight. Being non-porous and non-absorbent it is impossible for germs to lodge and breed in it.

New bathroom suite for low cost housing

A new economical bathroom suite has been designed by Ideal-Standard especially for the demands of low cost housing schemes. This suite, called the Trimline, consists of



Clean lines, attractive overall appearance, low cost, vitreous china hygiene and durability are features of the Trimline Wash Basin and W.C. Suite.

a wash basin, which is available on cast-iron wall brackets or a pedestal (as illustrated), and a wash-down closet coupled to a low-level cistern. It is distinguished by a high quality of design unusual in low cost sanitary appliances. Made from the same non-porous vitreous china it is strong and permanently hygienic and has all the advantages of more expensive luxury suites. Many local authorities are already using vitreous china equipment for new dwellings—the Trimline suite has figured prominently in these developments.

639

"That new Steelworks

deserves a
John Smith Crane!"



**Special Service to Architects
and Planning Surveyors**

Architects and Planning Engineers who are
contemplating the incorporation of overhead cranes in
new buildings or extensions are invited to write for our
Table of Clearances, Weights, Wheel Loads, etc., for
Standard E.O.T. Cranes. Advice on all lifting problems
gladly supplied by our technical staff without obligation.

JOHN SMITH (KEIGHLEY) LTD. P.O. BOX 21 THE CRANE WORKS KEIGHLEY YORKS
Telephone: Keighley 5311 (4 lines) Telegrams: Cranes, Keighley



London Office: Buckingham House, 19/21 Palace St, Westminster, London SW1. Southern Counties Office: Brettenham House, Lancaster Place, London WC2

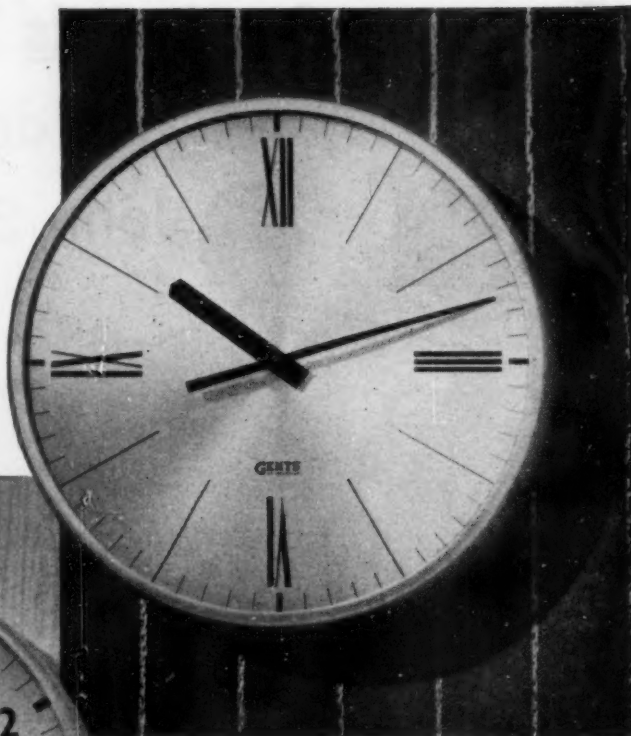


Maximum legibility and good taste are combined in the Gents wall clocks shown here.

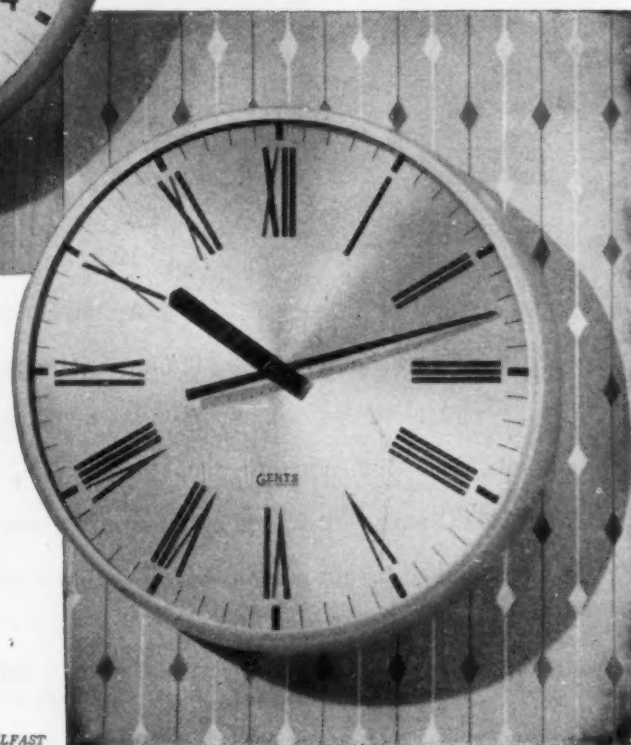
Styled by a leading industrial designer they provide a choice of standard models which fit happily into present-day surroundings and décor.

These and others in the extensive Gents range have been selected by the Council of Industrial Design for inclusion in Design Index.

All are available for operating either on A.C. Mains or as part of a Master Clock System.



In every way... Right!



May we send you literature?

GENTS

OF LEICESTER

ELECTRIC CLOCKS

GENT & COMPANY LIMITED,
Faraday Works, Leicester. Telephone: 36151
London Office & Showroom:
47, Victoria Street, S.W.1. Telephone: ABRey 6888

Also at: BIRMINGHAM, BRISTOL, EDINBURGH, GLASGOW, NEWCASTLE, BELFAST



COMPACTOM KEEP NOISE IN ITS PLACE

Compactom can offer the widest range of materials and methods for dry construction demountable partitions, acoustic ceilings and other methods of acoustical treatment. Remarkable reductions in noise are achieved *between* rooms and *within* rooms by Compactom schemes.

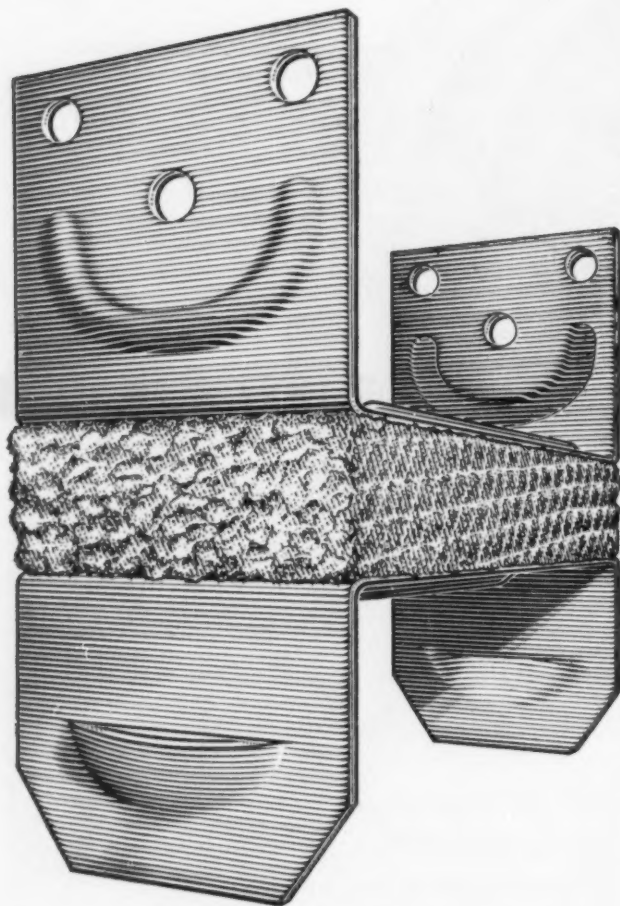
May we send you a copy of the Compactom Planning Guide? It contains just the sort of information you want about

- Dry construction demountable partitions
- Patented Miniwall dwarf partitions
- Acoustic ceilings and treatment
- Fitment work
- Toilet cubicles

COMPACTOM SPECIALISTS IN PARTITIONS AND ACOUSTIC CEILINGS

COMPACTOM LTD., Oxgate Lane • Cricklewood • London, N.W.2.

Telephone: GLAdstone 6633



ADAMITE

make

BULLDOG CLIPS

(Regd.)

and over 20,000,000 Standard and Acoustic types have been specified and used for contracts of varied and unusual requirements. Bull Dog, as the original floor and ceiling clip, has had a longer proving life with consistent and experienced development than any similar fixing system.

There are now fourteen main types and many special variations. Bulletin No. 10 giving full details can be had on request.

THE **ADAMITE**

COMPANY LIMITED



HEAD OFFICE

94-98 PETTY FRANCE - LONDON S.W.1 - Telephone ABBey 5911

LOW COST SMOKELESS

SPACE AND WATER HEATING FOR COUNCIL HOUSES

THE NEW PARKRAY No. 10 BOILER FLUE SET ONLY £7·17·9 RETAIL

A really efficient installation for the really tight budget. The complete appliance consists of the Parkray Clean Air Fire (with ashpan and operating tool) boiler, boiler damper and brick side cheeks—all at a *retail* price of only £7.17.9, gas ignition and chrome steel bottom grate are optional extras. The removable front fret is in a choice of 6 colours—and it can be changed at any time.



PERFORMANCE

Space heating: up to 1,500 cu. ft. (traditional insulation).

Water heating: 10,000 B.t.u./hr (with boiler damper open); 7,500 B.t.u./hr (with boiler damper closed). The hot water output can be used for domestic hot water or for heating up to 35 sq. ft. of radiator surface.

For space heating only, the Parkray Clean Air Fire is available separately from £2.4.6 retail, gas ignition is an optional extra.

Both the Parkray Clean Air Fire and the Parkray No. 10 Boiler Flue Set are approved by the Domestic Appliances Council on behalf of the Minister of Power.

Write for full details to:
Radiation Group Sales Ltd
Solid Fuel Division
255 North Circular Road
London, N.W.10.

Parkray

SPACE AND WATER HEATING

EVERY VEHICLE CAN TURN IN IT'S OWN LENGTH...



A PHOENIX TURNTABLE really makes the most of parking, unloading and garage space

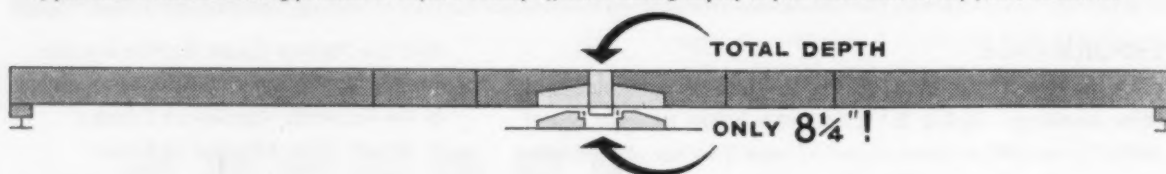
What a headache! Garage and parking space. Round, under or in a building. You may have the space to hold the cars, but how about getting them in and out? How about manoeuvring? How about that "No reversing into road" regulation? The same with transport bays. Loading and unloading. Yard space at a premium. How do you get a quick turn-round—or any turn-round at all? The short and effective answer is built-in "Phoenix" Turntables.

Phoenix "Shallow-pit" Turntables meet these and similar situations. They are made in diameters from 15 to 20 feet for loads up to 5 tons. Other models can be supplied to specification.

All Phoenix "Shallow-pit" Turntables have been designed for ease of operation, reliability, adequate strength and simplicity of installation and maintenance and may be manually or electrically operated as required.

A special feature is the "Shallow-pit" characteristic ensuring the minimum practical depth, often essential in upper floor installations.

If you have a vehicle handling problem or require a really effective moving display in your showroom on any floor, contact us.



PHOENIX "shallow-pit" Turntables



Registered Trade Mark

EAST SUSSEX ENGINEERING CO. LTD.

Head Office & Works:

PHOENIX IRON WORKS, LEWES, SUSSEX. Lewes 3373/4/5/6.

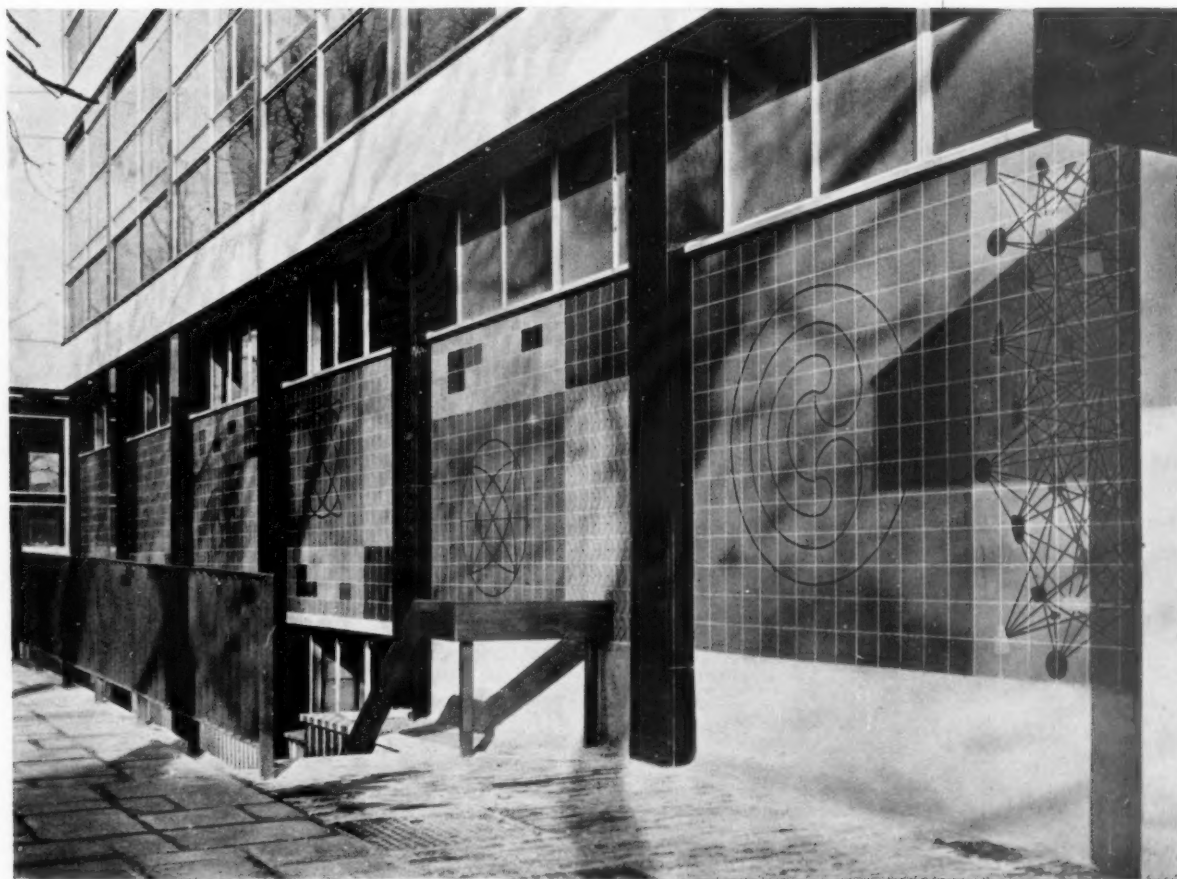
London Office:

270, UPPER TOOTING ROAD, LONDON, S.W.17 Balham 3136.

- IRON & NON-FERROUS FOUNDERS
- CONSTRUCTIONAL & MECHANICAL ENGINEERS
- PLATERS
- FABRICATORS
- GENERAL MACHINISTS

QUEEN MARY COLLEGE, University of London **choose Ceramic Tiles**

Combining aesthetic appeal with academic significance and functional perfection...
... this 6-panel mural in 6" square, frost-resistant Ceramic Tiles, spans the West Elevation of the new Physics Building.



*Architects: Playne & Lacey, F/R.I.B.A. London.
Tiling Contractors: Carter & Co. (London) Ltd., London.
Building and Engineering Contractors: Charles R. Price, London and Doncaster.
Designer: Mr. R. Khosla.*

Write for an informative new Brochure—"CTF" (Thin Bed Fixative and Grout)
INTRODUCING an outstanding advance in Tile-fixing technique.

Visit the Council's display of ceramic tiles at the Building Centre, Store St.,
Tottenham Court Rd., W.C.1. 425/427 Sauchiehall St., Glasgow, C2

British

Ceramic

TILES

British Ceramic Tile Council · Federation House · Stoke-on-Trent

everything points to **FILON**



- 1 Tinted panel with superimposed fret letters hung inside window.
- 2 Fill-in panels to door push plates.
- 3 Illuminated name panel.
- 4 Yellow corrugated soffit to projecting canopy.
- 5 Tinted panel illuminated from behind.
- 6 Abstract wall panel decoration.



Here's an ideal shopfitting material with a new and individual texture all its own. FILON - the strong, light, translucent polyester/glass fibre sheeting. FILON - the sheeting that can be sawn, drilled, filed, using ordinary carpenter's tools. It is *light* - to transport, to handle and to fix on *light* supporting framework. It is made by a continuous process for uniform strength; and you can order any lengths subject only to transport facilities. Available in many attractive colours and tints in standard corrugated, flat sheet (in rolls if required) and decorative profile. Write for full details.

FILON



STRUCTURAL SHEETING

strong light translucent

B.I.P. REINFORCED PRODUCTS LIMITED · STREETLY WORKS · SUTTON COLDFIELD · Phone: Streetly 2411

Now— vinyl floor tiles by Goodyear



No more waxing. No more heavy scrubbing. Goodyear introduces two new ranges of quality vinyl tiles for decorative, durable, economical floors. NO SCRUB is for normal wear; SUPREME a heavier grade for the toughest conditions. They resist all normal flooring hazards—scuffing, grease, dirt, food stains, dilute acids, alcohol—and will not warp, swell or rot. They are cut with ordinary scissors and curved easily to sharp radii. A wet mop keeps them sparkling clean. Available as 9" x 9" tiles in an array of sealed-in terrazzo, wood-grain, Cork and Romance patterns. The cost? Amazingly low.



GOOD YEAR

HAVE YOUR SECRETARY POST THIS COUPON
to: Goodyear Tyre & Rubber Co. (G.B.) Ltd., Wolverhampton

Please send Booklet AJF1 describing
NO SCRUB & SUPREME Vinyl Tiles.

Name

Company

Address

For permanent (perm-proof) flooring HARVEY NICHOLS CHOSE NAIRN VINYL TILES

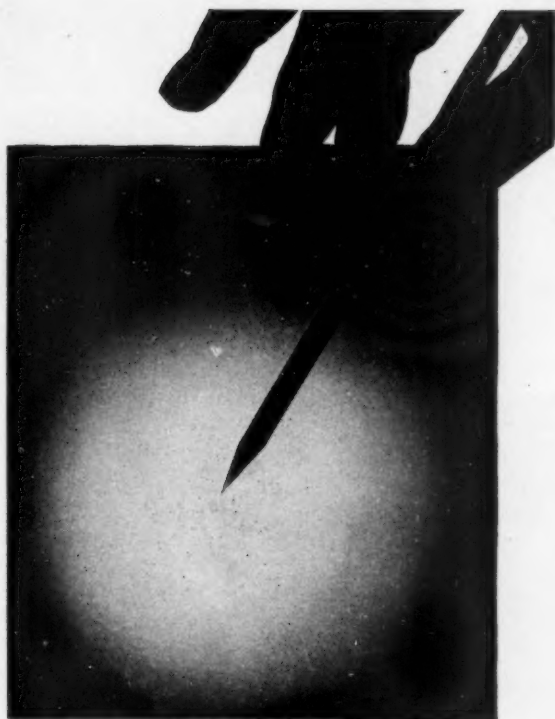
What punishment a women's hairdresser's floor takes! Stiletto heels. Spilt chemicals. Constant traffic. Rigorous cleaning. And yet it must look quietly beautiful, fresh and carefree, blending with the customer's frame of mind. So when Harvey Nichols' hairdressing department needed a new floor, they chose Nairn Vinyl Tiles, with the highly successful result you see here. Nairn Vinyl Tiles are easy to work with, resist marking, staining, and chemical attack, and are simple to maintain. They come in many colours of subtle beauty. Moral: Look first at Nairn for flooring.



MICHAEL NAIRN & CO LTD, P.O. BOX 1
Kirkcaldy, Scotland, Kirkcaldy 2011 (10 lines)
LONDON EC1: 131 Aldersgate Street
Monarch 3211 (8 lines)
BIRMINGHAM 2: 65 Temple Row
Midland 5989 (2 lines)
BRISTOL 4: 349 Bath Road, Bristol 7780
MANCHESTER 1: 4 Canal Street,
Minisul Street, Central 1417 (3 lines)
GLASGOW C5: 113 Centre Street
South 1011 (3 lines)
NEWCASTLE-ON-TYNE: 41 Grainger Street
Newcastle 22807



Architect: Alan C. Parnell ARIBA (consultant architect to the Debenhams group) Contractors: Henry Serventi Ltd Flooring sub-contractors: Lewis Bros (King's Cross) Ltd



*"probably the most potent
instrument in the world"*

For it gives most of man's thoughts and aspirations their first tangible form.

Consider a pencil, What an elegant little shaft it is! Basically simple, yet how indispensable to the most complex design! Notice how comfortably it sits in the fingers; for the polished cedar hexagon of a well-bred pencil with its many coats of gleaming lacquer, never forces itself upon one's consciousness, but, like a good servant, unobtrusively awaits one's bidding. Its smooth dense lead will give perfect reproduction of the finest lines, which nevertheless can easily be erased. The perfect point good humouredly stands heavy pressure and does not break, even when dropped. Pick up any degree from 6H to 2B (easily recognised by the coloured ends), they are true and never vary.

How fortunate is the draughtsman who finds all these attributes embodied in one pencil!

Perhaps that is why Rolls-Royce exclusively specify Koh-i-noor in their drawing offices.



**TO L & C. HARDTMUTH (GREAT BRITAIN) LIMITED
KOH-I-NOOR FACTORY, CHARD, SOMERSET**

Please send free samples of Koh-i-noor Draughtsman pencils for testing.

NAME OF COMPANY

ADDRESS

NAME OF CHIEF DRAUGHTSMAN



The Architects' Journal

No. 3437. Vol. 133. March 2, 1961

9-13 Queen Anne's Gate, London, S.W.1. Whitehall 0611

Subscription rates: post paid, inland £2 15s. 0d. per annum; abroad £3 10s. 0d. per annum. Single copies, 1s.; post paid, 1s. 6d. Special numbers are included in subscriptions; single copies, 2s.; post paid, 2s. 6d. Back numbers more than 12 months old (when available), double price. Half-yearly volumes can be bound complete with index in cloth cases for £1 17s. 6d.; carriage 2s. extra.

NOT QUITE ARCHITECTURE

... and NOW, a letter from Canberra

Australians speak of their capital city rather as if it were an ailing child that has recently and a little to everyone's surprise, suddenly begun to put on weight and even run about with the other children. Of course it will never be quite like the others for it was a Caesarean birth of a child destined for a career in the diplomatic service.

It was born out of the determination of both Sydney and Melbourne never to concede capital status to each other and this lack of a real organic motive is confirmed by its troubled history and manifest in its architectural character. The first move, in 1912, set off on the right lines. An architectural competition was declared, but almost at once encountered the difficulty that no member of the RIBA or its overseas chapters could take part because the assessors were laymen, or I should say, politicians. Nevertheless a good winning entry came in from a pupil of FLW—Burley Griffin, but this proved to be only a momentary respite, for his imaginative scheme came to grief on the committee tables of a Commission appointed to examine ways and means. Instead of doing what they were supposed to do, the Commission cannibalised Griffin's and some of the other entries. This event was (and still is) very characteristically Australian and similar well intentioned political ill chance continued to dog the slow and spasmodic development of the capital right up until the last war. Then Holford was called in, a National Capital Development Commission was set up, with real powers.

I arrived early in the morning—and by train, which is not the most impressive means of entry, for there is a single track, one platform and, so far as I could see a total of two station staff, neither of whom knew



Modernising the Pub

The remodelling of this public house in Brendon Street, W.1 (off the Edgware Road) by J. M. Austin-Smith & Partners, is a convincing demonstration that Victorian eclecticism is not the only way of tackling this difficult problem. The success of the scheme results very largely from a skilful integration of the various new elements introduced, and the immaculate detailing of a limited vocabulary of materials (see page 325).

when the bus left for the city. At a cross-roads a sleek automobile flashed by. "Bob's car," said my driver (he meant the Prime Minister).

The snippets of village green tucked here and there in the layout aided the illusion that I was the guest of some emigrant cousin of Hampstead Garden Suburb. Except that Griffin's plan was in fact very largely drawn with compasses. Repeated bends, which also rise and fall, defeat even the keenest sense of direction.

It is a city of country lanes; one delightful corner after another with deciduous trees, magnolias, frangipanis, jacarandas and desirable residences by the score. Gardens in this brilliant climate of luminous shadows are heady and magnificent, rising to their height in the Embassy area. The embassies themselves, set in plots of ground just like the bungalows but bigger, are an interesting study: American—Queen Anne colonial, but laid on rather thick; Israeli—non-committal contemporary; Belgian—if you can imagine it—contemporary Flemish; German—goose step modern. The Japanese looks promising, but has yet to receive its cladding.

Other high spots of the tour were: a little Gothic revival Church of England church that appeared to have been squashed into the ground. It turned out that this was due to its being built from the stones of a Sydney cemetery railway station.

Next a great sepulchre of a war memorial which stops a main axis and contains a gruesome museum of sectional shells, first war tanks and full size dummies of Anzacs, British subalterns and Turkish n.c.o.'s. The tour was completed by a visit to the Houses of Parliament whose impassively commercial classic façade belied a tortured interior. (Green upholstery for the Representatives and red for the Senators.)

The only really astonishing sight is an immense prestressed bridge being built over perfectly dry land, awaiting the lake that one day will fill the centre of the city. By this time I was longing to halve the widths of all the open spaces and double the height of all the buildings. Two things were clear: (i) The Canberra planners are terrified of heights and dedicated to golden memories of the English village and (ii) the child has not really put on weight, it has simply grown trees—the vulnerable saplings that show in early photographs have only recently succeeded in enclosing space. The nearest thing to a real street that I saw—and I did not see the whole city—was at Civic, and not nearly enough. People praise Griffin's plan because its heavily diluted density does allow for the motor car (one per 3.8 persons in Canberra) but it makes nonsense of any future renaissance of real sociability, when the television, washing machine, and mixmaster, have joined the "white Australia" policy as discarded social ideals.

JOHN CARTER

EDITORIAL BOARD: (1) *Consulting Editor*, F. R. Yerbury, O.B.E., HON. A.R.I.B.A. (2) *House Editor*, J. M. Richards, C.B.E., 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.

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. (18) Electrics. ASSISTANT EDITORS: (19) *Assistant Editor* (News), Sheila Wheeler. (20) *Assistant Editor* (Buildings), Michael Keyte, Dip. Arch., A.R.I.B.A. (21) *Assistant Editor* (Technical), G. C. A. Tanner, A.R.I.B.A., A.S.T.C. (arch). (22) *Assistant Editor* (Production), Colin Brewer. (23) *Assistant Editor* (Information Sheets), V. A. Groom. (24) *Photographic Department*, H. de Burgh Galwey, W. J. Toomey.

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

The Editors

BRAINS IN BEDFORD SQUARE

A FEW years ago the restive younger generation of the architectural profession realised that there were inertia and complacency in 66 Portland Place and some changes were organised. As a result the RIBA today hums with activity. This revolutionary movement had no connection with, or influence from or upon, that one-time centre for such things: the Architectural Association. For years now the AA, both school and Association has been standing still. The retirement of two of its officers, secretary H. J. W. Alexander and Principal Michael Pattrick, now at last allows the Council to introduce a change. As announced on page 312 they have created the new post of Director of the AA (Holder: Edward Carter of RIBA Library fame) whose duties are: "to control all activities so as to bring the curriculum of the school and the activities of the Association as closely as possible together." Under him will be a new secretary, George Wiltshire (formerly the assistant secretary) and a new head of the school, William Allen, now head of the Architects Division of BRS.

The AA Council has shown considerable wisdom in its choice for these appointments. The AA needs vastly greater resources, and to be more soundly established. Edward Carter certainly has the knowledge and personal contacts to help here. In his task of relating the almost unrelatable, that is, linking membership and school he will be ably assisted by William Allen (with whom he has a close intellectual affinity). Allen has been intensely concerned with research, and this lifelong desire for knowledge should be an important factor in finding means of bridging the chasm that now exists between graduate and undergraduate.

However, the main responsibility for the future of the AA still rests with the Council. Deprived of representation on the RIBA Council it has no obvious external outlet for its energies. It will without doubt be tempted to exercise close control over the school and the association. Whatever excuse it may have had in the past it has no excuse for doing so now. Having given its highly competent new officers their orders it should stop interfering and allow them to get on with the job. If after two or three years the new officers have not achieved any great measure of success it should consider

replacing them. Because of its continual changes in membership (another matter for change) the AA Council has found it difficult to pursue a ruthless enough policy.

What then should the power-hungry Council members of the AA do? Rather than worry about details of catering and comfort they might well give some of their time to working, in the studios as well as in committee, on some of the many problems of architectural education and practice.



WINE AND COAL

Good luck this week to the last-ditch defenders of two nearly-lost causes—the Wine Street area of Bristol and the Coal Exchange in Lower Thames Street, London.

The Bristol defenders (Bristol Architects Forum, the Civic Society, the Bristol and Somerset Society of Architects and the Design and Industries Association) started the week with a well-attended public meeting and a petition to the Corporation. The petition—signed by ninety per cent. of the people who were asked for help (a lot of them prominent citizens)—asks that building work in the Wine Street area, due to begin in five weeks, shall be held up until a comprehensive plan has been prepared. And if the corporation wants a comprehensive plan it has been offered help by Sir William Holford on behalf of the RIBA.

The Coal Exchange defenders are members of the Victorian Society, and they have organised a meeting to be held tomorrow (March 3) at 3 p.m. at the Society of Antiquaries, Burlington House, Piccadilly. People invited include members of the City Corporation, the LCC and government departments concerned, as well as representatives of interested societies—including some who might find an immediate use for the building. John Betjeman says that "Sir Mortimer Wheeler has kindly assented to act as our firm and fair chairman"—which is better, presumably, than merely agreeing to take the chair.

At the meeting it is hoped to convince people that the Coal Exchange should be saved by permitting the widening of Lower Thames Street to remove some of the back of D. Laing's yellow-brick Custom House. Because the first is listed as grade three and the second as grade two Sir Keith Joseph, Parliamentary Secretary to the Housing Ministry, automatically assumed in the House the other day that the Exchange must be the one to go.

QUERRY AND PARTNERS?

I suppose everyone knows by now that the hero of Graham Greene's *A Burnt Out Case*, a Mr. Querry, is a world famous Belgian architect with worn-out genius, a client-hatred and a distaste for his job so strong that he prefers to wash lepers' bandages in a Catholic-run colony in the Congo rather than design a new hospital to be built there by patients and priests. Even when he has given in and designed the building, and is attending its opening with a twisted smile, I still feel querulous about Querry. It is not so difficult to believe in *painters* who run out of inspiration and either disappear on private means or repeat themselves until they drop; but architecture is such a mixture of art, science and business that the burnt-out feeling

seems less convincing. Did Querry leave behind a large office full of partners, bright young men and working drawings: and if so, how are they doing without his inspiration?

ARCHITECT ON PROBATION

Last week Independent Television gave us, in "Probation Officer," an architect who was an even frailer victim of circumstance. This young man—the wistful ideal of so many in our profession—had just won a competition (inspired by his young, attractive and still-working wife) and while trying to work at home committed an assault on his noisy neighbours' maddening children. Apart from giving us an embarrassing glimpse of a drawing board, the actor and producer created a fairly accurate image of an architect: a bit weak on law, perhaps, but suitably fussy about his new house interior (though surely there would be no clatter of curtain rings but just a hiss of plastic when the curtains were pulled?) and struggling manfully with his brain-child which presumably needed few working drawings. (No two-tiers on I.T.V.).

You'll be glad to know that although the architect gets put on probation, all ends well as the Noise Prevention League helps to bring the noise-mongers before the court.

SUNDAY ARCHITECT

"Conceptions of architecture are free to anyone, but techniques need training," said Victor Pasmore, the painter and Sunday architect, speaking at the Architectural Association last week. In talking about his work as "chairman" of the architect team (principally P. G. Daniel and F. G. Dixon) which designed Peterlee's newest housing area (illustrated last week) he went out of his way to be provocative and to make wild statements which his audience might have resented if it wasn't clear that architects alone were making an inadequate contribution to Peterlee. Messrs. Daniel, Dixon and Gazzard (the newly appointed Corporation architect) also spoke and gave a fair picture of the venture, though more slides of plans and details would have helped.

Cleeve Barr, chief architect of the Ministry of Housing, proposed the vote



Bunning's Coal Exchange in Lower Thames Street, left, and the back of the Custom House opposite, right. One must be sacrificed to road widening. See "Wine and Coal".

of thanks, criticised some of the details, praised the planning (the patio, he said, made a perfect whippet pen, and the open space a coursing area) and suggested, when the problem of bye-laws was raised, that the AA should carry out a survey of the widely-differing interpretations by two typical local authorities.

*

Several New Town managers in the audience faulted the Peterlee scheme, but only on probable costs of maintenance. Dame Evelyn Sharp, Permanent Secretary of the Ministry of Housing, looked singularly (and rightly) unimpressed by the papers read and the subsequent discussion. There was plenty of participation, chat and pictures, but not nearly enough facts. It was hardly a professional occasion.

RAIL SPECULATIONS

Speculation about the future of railway architecture will have to remain speculative for some months it appears. Those who have been justifiably concerned about the effects of the Stedford Report and any legislation that may stem from it may take some comfort from the fact that it may be two

years or so before any of its recommendations become law, though there is less comfort in the thought that those two years may be largely occupied by arbitrary ministerial interventions of the sort by which "Motor-Mad" Maudling held up London-Crewe electrification for six months and thereby probably wasted as much public money as he was supposed to be saving by "inquiring into" it.

*

The main points at issue seem to be now (a) that steps should be taken, in and out of Parliament, to ensure that architects are up-graded in the new regional set-ups, and no longer subject to their Regional Engineers, as is their present frustrating situation. (Much as one admires what some Regional architects have done, all could do better if they were more strongly placed) and (b) that when the Transport Commission, as such, disappears, the work and experience of Dr. Curtis's office does not disappear with it—the risk is that with the present de-centralising mania, even the limited central authority that he has built up, may be demolished as a matter of "principle."

TOO SMALL A SPAN

At last the LCC has made its position clear about new buildings in the Blackheath area. When I wrote here two weeks ago about what looked like an LCC ban on Span Developments I had been shown a letter, sent by the Council's clerk to the Ministry of Housing, referring to planning applications by Eric Lyons and saying that "further developments of this type might have a serious effect on the character of the area and should be opposed." I took this to mean what it said, but Mr. Fiske, the chairman of the LCC Town Planning Committee, has now written to the JOURNAL (February 23) saying there is no "discrimination of any kind against Mr. Lyons as an architect." He speaks benevolently of the large Span schemes at Blackheath but says that "numerous small scattered developments . . . might do irreparable damage to some of the fine groups of historically interesting buildings with which Blackheath is richly endowed, without making any positive contribution to the town planning of the area." He says, in fact, the same sort of thing in a different way; but it does begin to make sense.

ASTRAGAL

LETTERS

K. W. Grieb, A.R.I.B.A.

J. Innes Elliott, B. Arch., A.R.I.B.A.

*H. L. Waterman, B.Eng., A.M.I.C.E.,
M.I.Struct.E., M.Cons.E.*

Alec Flinders, A.R.I.B.A.

"On the Second Rung"

M. S. H. Wheeler, G. M. Austin,

B. Feldster

G. H. Wigglesworth, A.R.I.B.A.

Casbah Housing

SIR: Your account of Cleeve Barr's talk on patio housing (January 26) suggests that most of the points on this type of development were covered. I wonder if the all-important question of access and servicing was discussed? In high density schemes, roads must be kept to a minimum, but just as the cost of the houses should not be compared to traditional houses but to the flats, etc., they replace, so the approach to the front door along pedestrian ways should be compared to the equivalent distance up flights of stairs and along access balconies. This, in the case of maisonettes, can commonly be 160 ft., without taking into consideration the exertion of going upstairs. As for delivery of household commodities, think of the ingenuity with which retailers have solved self-service shopping; similar, wheeled carriers would soon be adopted. Competition for trade is so great that that side of things would look after itself. Obviously more people are served more

quickly in high than low densities. Think of the distance the milkman and the postman go in suburbia, up and down the garden path to each house (mind you close the gate).

Refuse collection can be a problem, but there are means of solving this. One London borough has agreed to the use of a two-tier trolley for picking up individual bins, a dozen at a time, and there are many other possibilities.

If the usual access for fire-fighting vehicles is required, the fire brigades will surely be acting against their own interests in preventing the use of houses which, if reasonably constructed, must be much safer from the escape point of view, and the spread of fire, than taller blocks. Has anyone considered the use of horizontal dry fire mains in extreme cases?

In high buildings we accept vertical fire mains, along with the complexity and high running costs of the rest of the services, lifts, booster pumps, and ventilation fans, because they are now so commonplace. They were all developed years ago, for office buildings perhaps?

To some people "going home" means being hoisted home in a box on the end of a rope passing over a pulley. No method of servicing horizontally could be so absurd or as fanciful as this—nor so costly. How long will tax payers fork out subsidies on all those tall blocks when word gets round that they don't have to?

Before high density housing can be carried out to any extent in this country, there must be a headlong attack on prejudice and the interpretation of the bye-laws. Slums are often the result of bad building, poor sanitation and the low living standards of the inhabitants (rents are cheap), not necessarily the type of housing.

For some reason, some constructional requirements are not so demanding for flats and maisonettes. A lot of money could be saved by avoiding the use of the term "house" or "dwelling" in favour of say "Casbah Complex"—Allah forbid!

K. W. GRIEB

London, N.W.7

Police housing in Blackheath—see "Wind of Change on the Heath"



Wind of Change on the Heath

SIR: The two photographs which you published in *ASTRAGAL* (AJ, February 16) are excellent examples of the extremes of photographic skill and it has therefore occurred to me that you might like to add to your collection a more informative photograph of the building at 7-8, St. German's Place, Blackheath.

I feel sure that you, together with your more discerning readers, will appreciate that the temporary housing creates its own effect on the character of Blackheath and that the association of the police flats with the prefabs illustrated is quite irrelevant and misleading.

J. INNES ELLIOTT

Chief Architect and Surveyor,
New Scotland Yard, London, S.W.1.

The editors reply: We learn that the prefabs in ASTRAGAL'S photograph have already been removed and regret that an out-of-date picture, produced in good faith, should have appeared, to reinforce a somewhat partial statement on the Blackheath Inquiry.

Load-bearing

SIR: On page 115 of your issue for January 19, there is a short description of an 11-storey block of flats proposed by the Buckinghamshire County Council using calculated load-bearing brickwork.

The maximum stress quoted on internal walls would not appear to justify the use of only a 4,000 lb. per sq. in. brick.

I would also question the estimate of cost of 55s. per sq. ft. in comparison with the figure quoted of 75s. for a framed block, as the total cost of a frame for a similar structure (including floor slabs and foundations) should not exceed 20s. per sq. ft., and a large proportion of this cost is common to both schemes. When one considers the extra-over cost of the load-bearing walls the overall saving is small.

I would have thought that a system employing load-bearing concrete walls would be more economical and show a substantial saving in overall plan area.

H. L. WATERMAN

London, S.W.1

Fred Pooley, Buckinghamshire County Architect, replies: With regard to the first point Mr. Waterman makes in his letter about the maximum stress on the internal walls of the proposed 11-storey flats, it will be remembered that in his paper to the Institution of Structural Engineers in February, 1952, Dr. Thomas suggested that from actual results obtained from testing brickwork the unit stress of 4,000 lb. per sq. in. brick in 1:1½:3 mortar can properly be taken as 300 lb. per sq. in. The reduction factor given in the B.S.S. C.P. 111 (1948) for a 9-in. wall 8 ft. high restrained at top and bottom is 0.70; the permissible compressive stress is therefore 210 lb. per

sq. in. which is suitable. As a matter of interest, the Warnham brick, which it is proposed to use, has a unit strength of 5,000 lb. per sq. in.

So far as the cost of the structure is concerned, the prices which are quoted are based on an offer from a contractor on an approximate Bill of Quantities and enquiries from any architect who has worked on this type of problem will show that 75s. per ft. sup. for a traditional framed building is not an unreasonable figure.

Two Tiers

SIR: Coming on top of the two-tier profession controversy, the article on the Pupilage System occasions me to reflect and be thankful for family circumstances providential for my having the finest training an architect could have.

Having decided that I wanted to spend my working life designing buildings I searched for an opening in an architect's office and was in due course pleased to embark upon my chosen career as a junior, commuting some 20 miles to the City, working a 5½-day week for 25s. "being useful" by fetching coffee, buns, cigarettes, newspapers and prints, making tea and washing up for a staff of 15 and checking builders' daywork sheets for more hours than were spent on a drawing board.

On the credit side was the opportunity to trace drawings, with the thrill, at 16, of seeing all my work issued to the site, surveys with the great men, chaining and levelling, then out on my own measuring up live buildings. Next came being trusted with working drawings, structural calculations and the design of the real thing. With time came salary increases, while I always had the freedom to leave at any time, had I elected to do so.

Like others in a similar situation, to get the best of both worlds I attended a school of architecture three evenings of the week, which coupled with "testimonies" at weekends doubled the working week.

Then, after five long years, the intermediate exams and after two years of National Service, followed by more evening study, thesis, approved portfolio and protracted final examinations—the real ones, in the trying conditions of Portland Place—I became a "legalised" architect, finally let loose to design buildings all on his own!

By this time I had done the usual round of offices, large and small, working on all aspects of the job, but never with the intention of being a technician, or whatever term is coined to describe this second tier, which to my way of thinking does not exist, except in so far as there are, to me, just architects and those on the way to becoming architects.

In part-time teaching, two mornings a week, I am attempting to implant a sense of professional capability and responsibility into some 30 souls, erstwhile shielded from the cruel world of practical experience and down-to-earth building reality.

Now at 31 and glad of my hard apprenticeship of working at pressure, invaluable in coping with the demands of a small prac-

tice, I am looking for an assistant. What am I looking for? Not an ex-full-time student of 22 at high salary wanting to get enough time in an office to sit his professional practice; not an Inter. chap, wanting a break from day school to get some money; not a "technician" who will just make the drains work and keep my buildings out of the ground, nor an arted pupil of affluent parentage but perhaps doubtful suitability, to be tied to my tee square for three years' bondage.

No, I am looking for a lad of 16 with just the will to become a real designer of buildings, to follow in the master's footsteps, given every encouragement, facility for part-time study and day release classes, and an up-to-date starting salary.

Let there be variety of training by all means, and let us not close the shop to the hard-working office boys who will one day be the salt of our profession.

ALEC FLINDERS

Tonbridge, Kent

SIR: It is nowadays a truism that one is not a thinking member of the profession if one does not hold a very strong view indeed on the fashionable topic of the sub-architect. Yet nowhere—whether in conference reports, editorials, or correspondence—does any sufficient appreciation seem to have been put forward of the situation as it exists.

There must, indeed, be many like myself who, having become partly qualified (by the theoretical standards of the Old Lady of Portland Place), and having at that stage in their careers taken on wife, house, family, etc., are nevertheless regarded by our employers as the equals of others of their (willing) slaves who are among the vast majority of qualified architects working as assistants.

The reason for this is, of course, quite simply that the princes of the profession (who are forced to delegate their responsibility for millions of pounds' worth of work) are happy and confident in doing so to any man of the right calibre—whether or not he has been fortunate enough to convince the RIBA and ARCUK of his calibre. The suitable man is trusted because of his obvious capabilities and judgment, irrespective of whether he is GCE (failed) or ARIBA (Dist. TP).

We therefore already have a "two-tier" profession, whether we like it or not: there is the (much-appreciated) upper stratum of qualified architects who are architects within the meaning of the Registration Acts, that is to say that they are in practice as architects; and there is the stratum of the sub-architects, some "registered" as architects but not architects within the meaning of the Acts, some unqualified but doing the same job for the same (and in many cases more) money.

This situation raises the whole question of what is an architect: the registration set-up debars anyone from practising as an architect unless he is entered in the Book of Books, from which we may infer that an

architect is defined as one in practice as such. The system of architectural education, on the other hand, is wholly geared to the conception of an architect as one who has the opportunity and minimum skill to scrape through a series of unrealistic examinations, and the resources thereafter to pay his subs. Hence we are faced in practice with the majority of registered architects not really being architects at all; or alternatively we may say that, of those doing an architect's job in life, at least 50 per cent are not legally able to do so and their employers are risking an interview with the Disciplinary Committee.

It may, of course, be said: "If this is so, there are evening schools, and grants for day school attendance; why don't you go and get qualified?" To which I would answer: "Have you tried doing evening classes with a wife and kids to look after; can you tell me of a grant that will feed all these mouths and pay the rates and the mortgage?"

One may add to this too that there is no advantage in becoming qualified in the present situation, unless you value the privilege of status and the right to pay heavy subscriptions, except to seek the added status of a partnership or to open a practice.

"ON THE SECOND RUNG"

Stations in Train

SIR: We note in ASTRAGAL'S worthy "notes and topics" that reference was made on February 2 to the "little prefabricated stations in the Midlands." We should like to point out that this prefabrication system and these stations were designed in the Architects Office of the Chief Civil Engineer of British Railways, London Midland Region, and not in the Architects Office of the British Transport Commission.

The forming of an independent architectural design approach takes place within the individual region of British Railways and this leads to a healthy growth of ideas and to diversity of character.

M. S. H. WHEELER
G. M. AUSTIN
B. FELDSTER

London, N.W.1

Norfolk Office Block

SIR: In your issue of January 12, in a review of the factory office block in Norfolk by Fry-Drew and Partners, occurs the following passage: "At first sight the building is very characteristic of the work done by the architects in the thirties. It would be wrong, however, to dismiss it because of this as a facile or ill-considered piece of design." It would certainly be utterly wrong. What in fact does this sentence mean? To this reader it seems to imply that the person who wrote it thinks that architecture is a series of changing fashions. I hope this was not his intention.

G. H. WIGGLESWORTH

London, N.1

The editors reply: No, the very reverse.

NEWS

AA

New Appointments

The new Head of the School of Architecture at the AA, in succession to Michael Patrick, is to be William Allen, B. Arch. (Manitoba), A.R.I.B.A.; and a new post of Director of the AA has been created by the Council, and is to be filled by Edward J. Carter, M.A., A.R.I.B.A., A.A. Dipl.

The Council announced last week that Mr. H. J. W. Alexander, who has been on the staff of the AA for 48 years, and Secretary since 1937, is to retire in June, and that since they had to consider the appointment not only of a new Principal but also a new Secretary, it had been decided to rearrange the administration of the Association and the School so as to increase the closeness of the link between them, which has always been a feature of this institution.

It has therefore appointed E. J. Carter as Director of the Association, with control of all activities, so as to bring the curriculum of the School and the activities of the Association together as closely as possible, and has promoted George Wiltshire, well known to members as Assistant Secretary, to the post of Secretary of the Association.

The Council pays a warm tribute to H. J. W. Alexander, to whom the whole membership of the AA owes a considerable debt of gratitude, and says that immediate steps are to be taken to "give members an opportunity to show their appreciation in an appropriate manner."

William Allen was born in Winnipeg in 1914, of Yorkshire and Scottish forbears who went to America early in the seventeenth century and took part in founding Yale University. His father was Professor of Physics at the University of Manitoba.

He was educated at Manitoba, where there is a flourishing School of Architecture, and where he became absorbed in stage activities and found himself hot in University politics as President of the Dramatic Society. He came to England in 1936, and his connection with the AA began within an hour of his arrival in London, where Alexander helped him to get established. A year later, disappointed at the lack of post-graduate facilities for architects in Britain, he turned, at Hope Bagenal's suggestion, to BRS as an alternative, and became responsible under Robert Fitzmaurice for acoustical work there, having been introduced to this subject by his father during his university life.

At BRS his chief interests have been the psycho-physical fields of light, heat and sound as they relate to architecture, and the problems of philosophy and contemporary building design, as presented by the age of science. He was deputy head of the Architectural Physics Division for some years after the war, working on the design of the Festival Hall with Matthew and Martin as an acoustical adviser. He formed a separate Architect's Division at BRS in 1953.

One of the people he met at the AA almost



William Allen, new Head of the AA School, left, and E. J. Carter, the AA's first Director, right

as soon as Alexander was E. J. Carter, and together they got the RIBA seriously interested in the problems of science and architecture. This led eventually to the establishment of the Technical Section of the RIBA. Mr. Allen has served on the Council of the RIBA for seven years.

Edward Carter—known as Bobby Carter to extraordinarily large numbers of people—was himself a student at the AA School from 1923 to 1929, after reading History at Cambridge. On leaving the AA he became assistant to Maxwell Fry for a short time before being appointed Librarian to the RIBA in 1930. He remained there until 1946, when he became head of the Libraries Division of the newly formed Unesco in Paris, where he worked till 1957. Then he joined the firm of Gordon Fraser, where he initiated a programme of publishing admirable postcards of British architecture.

While he was at the AA, Bobby Carter was largely responsible for the transfer of the library from Conduit Street to Portland Place, and the consequent reorganisation, in the course of which he built up the library as a centre for architectural studies, and strengthened its technological and scientific side, as a result of which the library greatly increased its value and prestige, and became a focal point of the RIBA's international relations, particularly with foreign architects.

MOHLG

Housing Design Competition

The closing date for submitting entries for this year's good housing design awards has been postponed to March 31, in response to requests to allow more time for the submission of entries. Entry forms and details are still available from the Secretary, Awards for Good Design Competition 1961, MOHLG, or from the Welsh Office, MOHLG, Cathays Park, Cardiff.

LIVERPOOL

University Teachers Meet

Members of the staffs of every University Department of Architecture spent the week-end of February 18 at Liverpool, at an informal get-together, to discuss the future of architectural education and post-graduate studies in the universities. The meeting reached no conclusions, but was said to have been so useful that it has been agreed to make it an annual event in future.

HOUSING CENTRE

New Towns within Cities

Two Regent Street Polytechnic students illustrated a talk of Walter Bor's on "New Towns within Cities" which he gave to SPUR at the Housing Centre on February 21, with a really brilliant joint presentation of their scheme for the comprehensive redevelopment of Woolwich. While Arnold Linden spoke, Richard Hookway drew, so that words and diagrams developed together in a carefully synchronised mutual explanation.

Walter Bor gave a succinct recapitulation of the arguments for internal decentralisation, and his students illustrated them convincingly with proposals that were imaginative and sympathetic: two long curving slabs, moderate in height, were planned across the contours of Woolwich's fascinating topography. These Bath-like terraces defined the central area, where the existing lie of the land had been exploited to allow a succession of pedestrian decks to serve the shopping and municipal areas during their gradual descent to the river front.

It sounds wildly romantic but appeared to be well-rooted in reality—all the more "solid" property in Powis Street, for instance, being maintained. The scheme derived its individuality from careful preliminary study of one of the most individual

places in London, so that Woolwich would still be very recognisably Woolwich after the surgery was complete. A substantial contribution could be made to the housing of central London's overspill, new work-places could be provided on their doorsteps for the commuters of Eltham, and South-East London could be given a badly needed new heart.

Linden and Hookway estimated that the whole 100 acres could be bought up and redeveloped for £32 million: there were those present who thought that, say, £40 million would be a closer approximation. But there was no one who denied that public opinion, given persistence, could eventually be won round to support concentrated expenditure on this scale. In the "natural" process of piecemeal renewal our money and our national resources in manpower and materials are gradually frittered away: how much better, by the exercise of vision and some necessary toughness, to ensure that plan and resources were co-ordinated to achieve such a splendid and worthwhile result.

In opening the meeting, Walter Bor pointed out that two-fifths of the population of Great Britain lives in seven great conurbations. The pattern of densities of our conurbations is invariably an enormous pyramid, the peak of which is in the congested centre, while densities fall steadily as we move away from the central areas and are very low and wasteful over large suburban areas. There are historic reasons for this, but a determined policy and judicious planning could rectify it. The selection of the new town centres should be based on an analysis of the whole conurbation.

Other equally important considerations for the correct selection of New Towns within Cities he said, were:

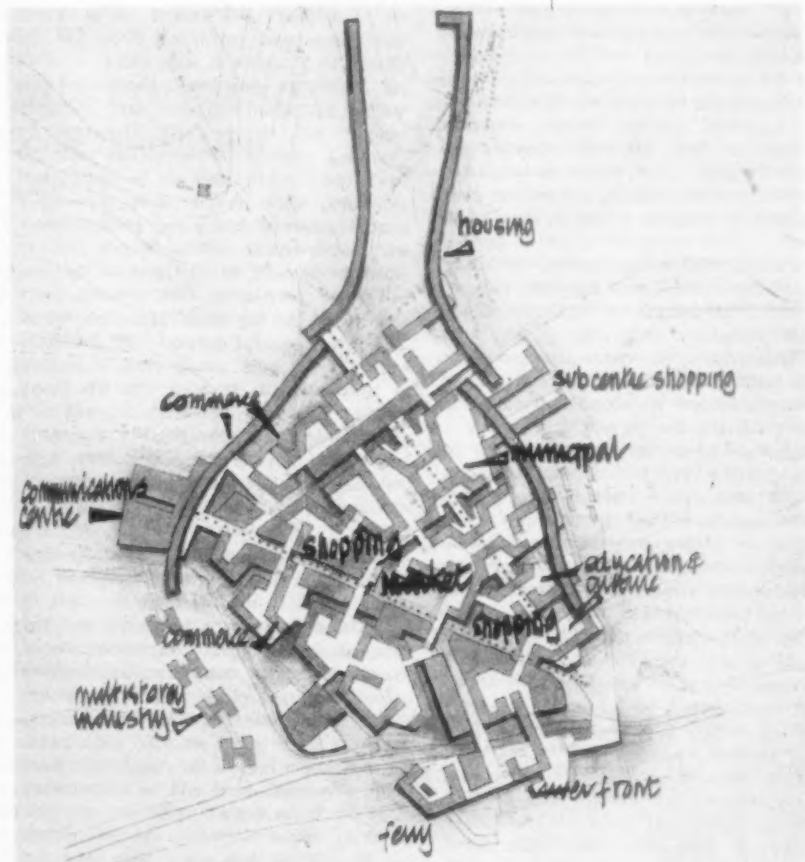
1. Good public transport facilities.
2. The distances between the proposed new centres and the central area must not be too small. The new centres must be well clear of the central area.
3. New Town Centres should be built up, in the first instance, in areas which are under-developed and often declining.
4. Areas should be investigated where residential densities have been increased since the war by large-scale new housing, often poorly served with local employment opportunities, shopping facilities etc. (e.g., Putney/Roehampton).
5. The new centres should be located within areas which are at present badly in need of a centre which would provide employment, shopping and entertainments.

If this policy were consistently applied throughout the conurbations, we would eventually have urban regions consisting of a series of large towns with their own centres and sharing a revitalised and de-congested central area, instead of an amorphous, urban mass with inconvenient, over-built central areas, said Mr. Bor.

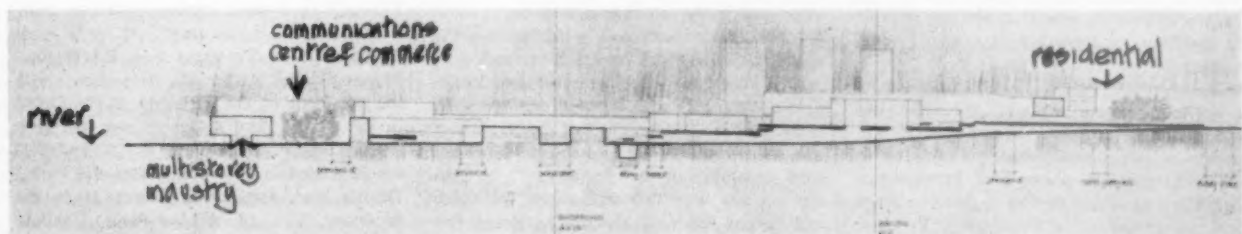
One of the most important ideas thrown up by architects and planners during the last few years is the conviction that the twin problems of sprawl and central area congestion in our big cities can be solved by a policy in which "internal decentralisation, New Towns within Cities," plays a major role. The idea, however, is absolutely use-

less unless it is pressed home with sufficient persistence, imagination and passion to alter the climate of public opinion to such a degree that governments and local authorities are moved to action.

The "Boston Manor" scheme was a tentative first step towards popularising this idea of comprehensive suburban redevelopment. But that was over two years ago and the pressure must be kept up if we really want anything to be done. This SPUR meeting was an indication of the sort of thing that architects and planners should be doing all over the conurbations—preferably with the non-professional audiences to whom their ideas must ultimately be sold.



Above, sketch plan of Richard Hookway and Arnold Linden's comprehensive development plan for Woolwich, and below, in section, showing how the land slopes to the river



TPI

US Urban Renewal and Us

"The Americans, to whom planning is almost a dirty word, are rallying to the renewal of their cities with a sense of urgency." In a long and well-reasoned paper to the TPI on February 1, Dr. Nathaniel Litchfield tried to explain this apparent contradiction.

While American planning legislation and planning controls remained weak and less well developed than ours, Dr. Litchfield thought that the US have edged beyond us in their approach to urban renewal. A big federal housing programme was launched through the 1949 Housing Act and urban renewal has been tacked onto the housing machine, rather than onto planning, as with us. The need to broaden the approach to comprehensive renewal was urged by an important committee in 1953.

The US urban renewal machine has neatly sidestepped the planning machine, and this, Dr. Litchfield thought, in the American context, beneficial for both planning and urban renewal: "In many places urban renewal is a tail wagging a timorous planning dog by dangling dollars in front of its nose."

At federal level urban renewal is the responsibility of the Urban Renewal Administration, a constituent of the Housing and Home Finance Agency. This gives loans and grants for urban renewal projects to a large variety of public local agencies. While the commissioners are normally unpaid they have a salaried director and staff.

A renewal agency, as a rule, combines its own, specific powers with those departments of the municipality which have other powers contributing towards urban renewal, in order to achieve comprehensive city-wide renewal according to a plan. Amongst these are powers to acquire and clear land and buildings (similar to our own CDA powers) but the renewal agency does not itself build; powers of acquisition for spot clearance of buildings, closing of streets and improving local environment, and powers to compel property owners to bring their properties up to modern standards without having to purchase these properties. (Oddly enough, the Americans are much tougher with property owners and owner-occupiers than we are—at least with the small ones.) Finally, deterioration of existing development is controlled under zoning ordinances which can also be used to put a "life" on buildings with no compensation liability.

All these public agencies enlist, wherever possible, the participation of private enterprise, which seems anxious to join in urban renewal, mainly because it can get hold of large central area sites it could not provide by itself and presumably because it's good business.

Renewal planning, Dr. Litchfield claimed, is becoming integrated with the older city planning and a more comprehensive approach is being established, culminating in city-wide renewal plans and programmes which are provided for by legislation since 1959 under the name Community Renewal Programmes.

One of the most fascinating features of the US scene is the active citizen participation which plays a major part in controlling and shaping local government policy: this includes collaboration in preparing and carrying out schemes, often with their own highly qualified staff. In every major city there is a Downtown Association and there are national groups such as ACTION (American Council to Improve our Neighbourhoods) which back urban renewal wherever they can. So much for the "grass roots." Then there is the participation of a select group of top people, like bankers and industrialists who make up the "brass roots." For instance, Sears Roebuck, the national department store, have their own Urban Renewal Division, while the owner of a private utility company commissioned Victor Gruen's Fort Worth project.

Dr. Litchfield's well-argued paper would have been more persuasive if he had not chosen to illustrate it with slides, some of which gave the game away. The hit-and-miss method of "slum clearance" and "rehabilitation" was inadvertently illustrated by charming 2-storey timber houses (with all mod. con.) which were to be demolished as slums, while another slide showed by contrast rows of dreary and gaunt terraces with inconvenient ceiling heights and so close to the next parallel row at the rear as to be practically back-to-back; these were scheduled for rehabilitation! Some of the urban renewal layouts and buildings were of such poor quality and so lacking in imagination as to leave one wondering whether this kind of urban renewal was worth while at all: true, the new was much bigger than the old but was it that much better? (One of the few notable exceptions was the Lafayette Park housing scheme in Detroit by Mies van der Rohe.)

A particularly telling slide showed "prairie planning" as often practised by urban renewal agencies: tens or even hundreds of acres of buildings are bulldozed and the flattened sites, frequently in the middle of towns, are left for many years undeveloped before a solitary block of flats is put up. Finally, there was Dr. Litchfield's accompanying remark which stuck in one's mind; "at best 20 per cent of the people who lived in these renewal areas will be reaccommodated while the remaining 80 per cent are in theory offered alternative accommodation but in practice have more often than not to fend for themselves as best they can by crowding into the surrounding area." No wonder that these renewal schemes are highly unpopular with a great many people in the US, including such authorities as Katherine Bauer.

Desmond Heap, who opened the discussion, had been to the US recently and did not think there was much in the US scene he would like to see here, and proceeded from there to demolish Dr. Litchfield's arguments with wit and candour. Mr. Heap said the "leitmotiv" of the American was the "doctrine of ad-hoc-ery" coupled with an addiction to "projectitis"; he also did not see why two authorities (planning and urban renewal) should be doing the job of one, i.e., of planning, and he cast

some doubts on the democratic nature of some of the US methods. Mr. Heap concluded his attack by saying that there was not much wrong with our planning machinery which in any case was much more perfected than the American one; all we needed was financial aid to carry out urban renewal. The Government grants which were removed from the war-damaged areas should be re-allocated and extended for urban renewal.

Percy Marshall, also recently back from the US, didn't think either that there was much we could learn from the Americans in urban renewal. He was suspicious of separating urban renewal from local government and he thought the prairie planning methods were particularly insensitive and destructive of urban values. But he welcomed citizen participation and wished we could have more of it.

Leslie Lane was impressed with the powers of local authorities to oblige private owners to comply with certain standards without having to resort to purchasing their properties. To his question as to what was being done for the middle-class population to bring them back to live in city centres Dr. Litchfield replied that by writing down the land costs, flats in these urban renewal schemes were within reach of middle-class families and were mostly occupied by them. Some of the speakers who followed took the Desmond Heap line—there isn't much in it for us, while others liked certain aspects such as the sense of urgency. But on balance, the supporters of Dr. Litchfield's main argument that the US can teach us a few things about urban renewal were decisively outnumbered by those who did not think so. Even so, Dr. Litchfield assembled in a masterly fashion all the relevant facts about US urban renewal and helped us by implication to clarify our minds about our own urban renewal problems.

W. G. B.

Annual Conference at Llandudno

The Town Planning Institute will hold its 35th Annual Conference at Llandudno this year, from May 31 to June 2.

The opening paper, "Planning at the Crossroads," will be given by Lewis B. Keeble, Director of Studies, Department of Town Planning, University College, London; other papers include "Housing the Motor Car," by J. L. Womersley, Sheffield City Architect, "The Design of Shopping Centres," by J. Seymour Harris, and a "President's Forum" to discuss current planning questions, with a "brains trust" of Sir William Holford, J. D. Trustram Eve, Sir Herbert Manzoni and Arthur S. Hamilton, with the president of the TPI, Mr. R. Nicholas, in the chair. And delegates can join in a "Study Tour" to explore the "Landscaping Problems in Snowdonia National Park." Details and application forms from the Secretary, TPI, 18, Ashley Place, London, S.W.1.

IUA

London Congress

Her Royal Highness the Princess Margaret has agreed to open the Sixth Congress of the International Union of Architects in London on July 3.

ROSPA

Accident Prevention Course

The Royal Society for the Prevention of Accidents is following up the successful specialised training course held last November with a second course at the Civil Defence Staff College, Sunningdale, from April 23 to 28, as part of the effort to get safety officers appointed by all contractors who employ more than 50 workers, whether all are engaged on the same site or not.

In announcing the course, ROSPA points out that in the last 10 years the number of accidents has risen from 15,576 to 18,285 a year, and the figures for 1960 are expected to be worse. Details of the course are available from the Training Officer, Industrial Safety Division, ROSPA, 75, Victoria Street, London, S.W.1.

E.F.A.

D.P.C. Symposium

Taking up an idea started last year the Electrical Floor Warming Association held a symposium on February 8 at which representatives of several manufacturers of damp-proof membranes, acting as a "brains trust," answered questions put to them by members of the E.F.A. and others who formed the audience.

The sum total of useful information emerging during the evening was disappointingly small. This appeared to result, not so much from unwillingness on the part of d.p.c. manufacturers to give information as from the fact that the effect of questions being asked more or less at random makes it extremely difficult to follow up and consolidate information given in the answer to the previous question. The opportunity for an exchange of views also tends to be lost as members of the "brains trust" have their work cut out to keep up with the volley of questions thrown at them during the evening. On this occasion it was not until towards the end that they had the chance to question their questioners. E.F.A. members were asked what temperatures could be expected within a floor. A few years ago the confident answer was 110-115 degrees F. Now it seems that many have second thoughts and are prepared to quote much higher figures. One difficulty appears to be that floor warming manufacturers do not make it clear what figure they are giving. Is it an average? Is it an absolute maximum? Is it taken when the system has been on for some time?

D.p.c. manufacturers gave, in turn, their ideas on the desirable position of the d.p.c. One manufacturer gave 2 in. below top of screed as the best place. Most manufacturers, however, considered it desirable to have

some sort of separating barrier between floor warming cables and d.p.c. A 1-in. thickness of screed was suggested. On the other hand if a thermal insulation is to be used (manufacturers of d.p.c.'s do not claim great thermal insulating qualities for their products) and allowing for the 2½-in.-thick screed needed to embed most floor warming systems, the d.p.c. would be considerably lower than 2 in. It was suggested by one manufacturer that it is undesirable to use a d.p.c. below ground level unless it is sandwiched between two layers of concrete. In the case of a basement which is tanked this condition, of course, is met. Questioned on the effect of heat on d.p.c.'s one manufacturer pointed out that there was evidence of a certain amount of what was called migration of the plasticiser from p.v.c. cables to the bitumen d.p.c., but after much discussion it seemed to be agreed that this did not present a serious problem.

CONCRETE GROUP

Fourth International Congress

The Prestressed Concrete Development Group has announced that the Fourth International Congress of the Federation Internationale de la Précontrainte will be held in Rome and Naples from May 27 to June 2, 1962. An Italian organising committee has been set up to make the detailed preparations.

The following subjects have been chosen for discussion, and the names of the general reporter on each are given in brackets:

Results of research, with special reference to durability and fatigue (Prof. S. S. Davydov, USSR).

Site considerations (problems and difficulties): remedies and solutions (Prof. B. Vandepitte, Belgium).

Economics of prestressed concrete in relation to regulations, safety, partial prestressing, lightweight concrete, etc. (Dr. H. Bay, Germany).

Progress in precast factory manufacture and standardisation (Ben C. Gerwick Jr, USA). Outstanding structures in prestressed concrete construction:

(a) bridges, viaducts and elevated roads (Prof. R. Morandi, Italy).

(b) buildings and other structures (Dr. Chr. Ostenfeld, Denmark).

All the papers will be printed in advance in one of the six Congress languages (English, French, German, Italian, Russian or Spanish), with a summary in all six languages.

Details of the Congress programme, costs, etc., are available from P. Gooding, secretary, Prestressed Concrete Development Group, Terminal House, Grosvenor Gardens, London, S.W.1.

NATIONAL PARKS

Review of Ten Years' Work

In their Eleventh Annual Report the National Parks Commission say they had

hoped that their tenth anniversary might have been marked by the introduction of a Government Bill giving effect to the amendments to the National Parks Act which the Commission and the Park Planning Authorities have recommended to the Minister.

As in the case of control of advertising, the Minister, it seems, is still relying on voluntary co-operation rather than legislation to protect the countryside. The Commission had asked that large scale afforestation schemes in National Parks should be brought under planning control: instead the MOHLG invited the Commission to discussions with the Ministry of Agriculture, the Forestry Commission, the Timber Growers' organisation and the Country Landowners' Association, to work out a scheme of voluntary control, which has resulted in the latter organisations agreeing to "advise their members to consult Park Planning Authorities on all proposals for the afforestation of any land in National Parks which has not hitherto been planted." The Commission has agreed to give this effort at self-control a trial.

During 1960 the Minister has confirmed designation orders for "areas of outstanding natural beauty" in the Malvern Hills, Cornwall, and north and south Devon, amounting to nearly 600 square miles.

The Commission had been expected to put before the MOHLG their plans for designating the Sussex Downs—at present in a state of growing spoliation—but apparently have been so swamped with representations from people and organisations anxious to extend the boundaries of the designated area, that their proposals will not be ready to go to the Ministry before April.

While proposing to designate the Downs themselves, the Commission had apparently excluded the valleys of the Ouse and the Adur from consideration, and it is only because of considerable pressure from organisations such as the Society of Sussex Downsmen that the recommended area is likely now to take in the valleys between as well as the heights.

DIARY

Ministry of Works Winter Lectures:

International Carpet, Linoleum and Floor Coverings Trade Fair, Earls Court.

Closes MARCH 3

Corrosion of Metals in Buildings, by R. D. J. Tarleton, of BRS College of Further Education, Nun's Corner, Grimsby, 7.15.

MARCH 7

Nervi Buildings for the 1960 Olympics, by Paulo Sica, at the AA, 6.15. No tickets required.

MARCH 8

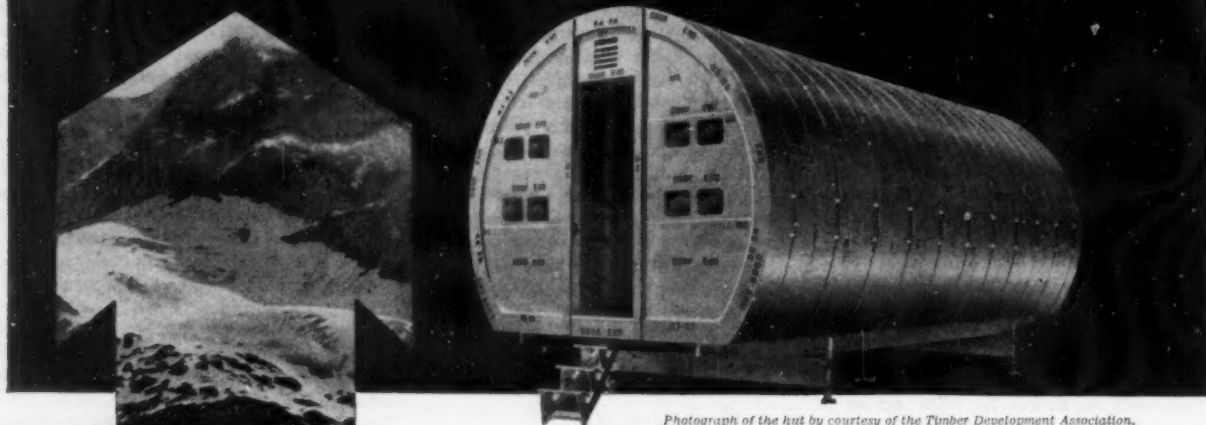
Model Methods, with particular reference to three recent applications in the field of steel, composite and concrete construction, by Prof. S. R. Sparkes and H. C. Chapman at the Institution of Structural Engineers, 6 p.m.

MARCH 9

Building in North America, W. Tompkins, with film. Institute of Builders, 6.30.

MARCH 16

20,000 feet up...



Photograph of the hut by courtesy of the Timber Development Association.

but they slept warm thanks to Marleycel

The organisers of Sir Edmund Hillary's recent Himalayan expedition left nothing to chance.

A portable plywood hut was designed to house the members of the expedition at 20,000 feet. To insulate it against cold even as low as -30°C . they chose Marleycel Expanded Polystyrene, giving it an insulation value six times greater than that of a brick-built house.

Proof enough that not even intense cold can penetrate the featherlight, rot-proof Marleycel, the amazing insulator that is revolutionising building insulation.

* Marleycel can be used for roof, wall and floor insulation * It achieves maximum results at minimum cost * Thermal Conductivity (K) 0.24 B.Th.U./in./Sq. ft./hr. $^{\circ}\text{F}$. (Hot face @ 68°F , Cold face @ 32°F .) * Supplied in snow-white sheets 2ft. wide, various thicknesses and standard lengths of 4, 6, & 8 ft., or to order * Weight: 1 lb. per cubic foot * Self-extinguishing grade is Class I B.S. 476 spread of flame test.

MARLEYcel

EXPANDED POLYSTYRENE INSULATION BOARD

* Marleycel—manufactured by Shell and developed by Marley for the building industry.



SEVENOAKS • KENT • Tel: Sevenoaks 55255
London Showrooms: 251 Tottenham Court Road, W.1.

POST THIS COUPON

Please send me further details of Marleycel Expanded Polystyrene Insulation Board.

Name

Company

Address

THE INDUSTRY

This week Brian Grant describes gymnasium floor finishes, double glazed units, fire retarding paint, sill tiles and an electrical accessory catalogue

Floor Sealers

Two new floor sealers from Johnsons are Gym Finish and Improved Traffic-Cote. Gym Finish is the first product to be made especially for gymnasium floors. It is a complete finish, penetrating and sealing the floor to make it impervious to damp and stains, while at the same time providing a hard surface with good slip retardant properties which needs only sweeping and occasional damp mopping.

Improved Traffic-Cote is a heavy duty oleo resinous penetrating seal designed for use either as a preliminary to normal wax polishing, or as a complete floor finish if a second coat is used. It makes the floor impervious to oil, alcohol, water and other stains and routine maintenance is reduced. Both finishes are recommended for use with all hard or soft woods, cork, wood composition, concrete or terrazzo. Coverage is about 500 sq. ft. per gallon, and the floor is ready for use within six hours. (S. C. Johnson & Son, Ltd., West Drayton, Middlesex.)

Glazing for Insulation

Thermovitrine double- and multi-glazed units, originally developed in Belgium, are now being produced in this country. The air space between the glasses is dehydrated and the spacing is kept uniform by using aluminium tubing right round the perimeter, after which a special mastic is applied. This mastic is claimed to be impervious to attack

by water or oils, and in Belgium the panels are usually set in linseed oil putty. All units are guaranteed for five years and are made with an air space of $\frac{1}{4}$ or $\frac{1}{2}$ in. and with 24 or 32 oz. sheet, or plate glass. (North Western Lead Co., Ltd., Junction Street, Hyde, Cheshire.)

Fire Retardant Paint

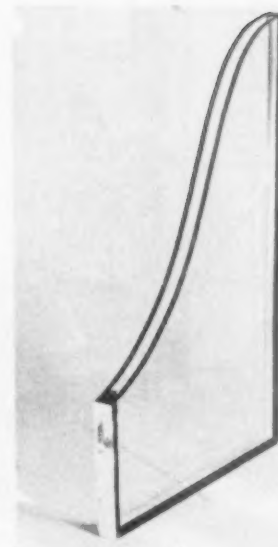
Albisaf Type 1 paint has been tested at the Fire Research Station, and two coats on softwood panels had an effective flame spread on 7.3 in., thus putting it in BS 476, Class 1, surfaces with very low flame spread. The paint is made in white and also in six pastel shades, and can be applied by brush or spray, two coats giving the required coverage of 25 sq. yd. to the gallon. The heat of a fire causes the paint film to swell up into a honeycomb texture blister, somewhat like ordinary paint under a blowlamp, but more so. The honeycomb layer has a considerable degree of thermal insulation, and provides an effective barrier against the spread of flame on combustible surfaces, and also reduces the likelihood of rapid distortion of metalwork. The paint in itself provides a complete decorative finish, but if colours other than those available are required it can be overpainted with not more than two coats of other colours. (Hadfields (Merton) Ltd., Mitcham, Surrey.)

Quarry Sill Tile

A leaflet from Allied Brick & Tile illustrates the range of Windmill quarry sill tiles, which are made in seven sizes with lengths from 4 to 12 inches, and in a standard width of 6 inches with a thickness of $\frac{3}{4}$ in. The standard range is made in several colours and in four new textured patterns. Most of the drawings in the leaflet show the tile used for bridging various common types of cavity wall and junctions with steel or wood casements. (Allied Brick & Tile Works Ltd., 6-7, Queen Street, London, E.C.4.)

Electrical Accessories

A new list from Wandsworth lists all the more usual types of switches, sockets and boxes, and also includes a number of more special types which were previously des-

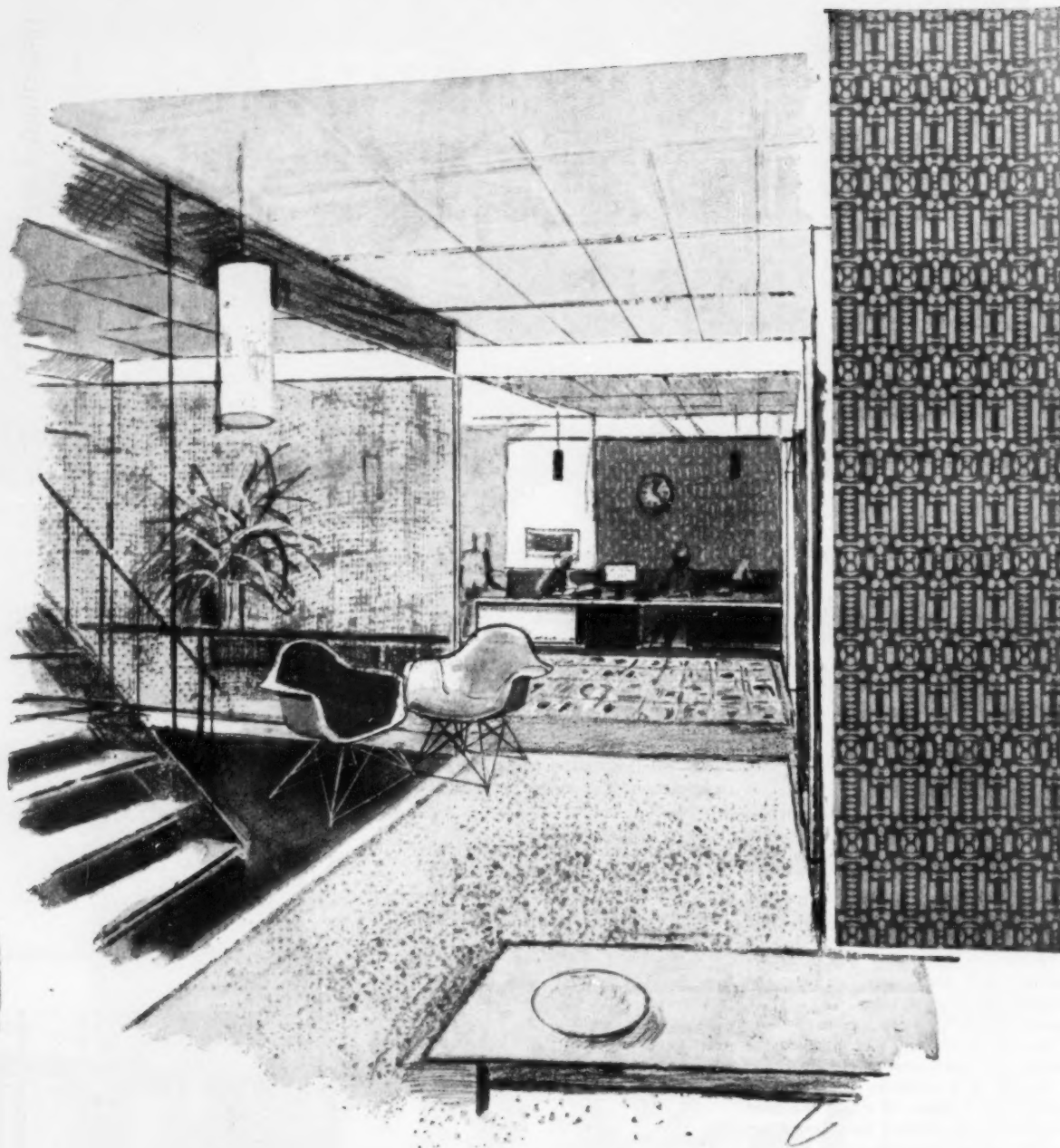


Thermovitrine double-glazed unit

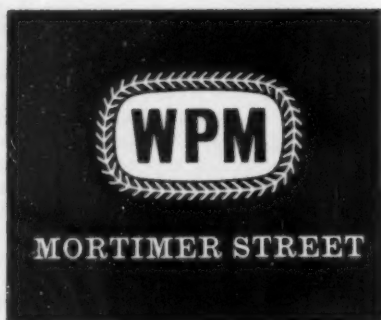
A gymnasium floor sealed with the new Johnson's Gym Finish



cribed in separate leaflets. They include low voltage terminal blocks for school laboratories, bench sockets, switches and sockets with Yale type locks, mercury switches and sockets with protecting shields so that they can be hosed down in operating theatres, sockets with non-standard pin arrangements, in fact almost all the sort of equipment one needs seldom but urgently, and which are generally omitted from standard catalogues. (Wandsworth Electrical Manufacturing Co., Ltd., Albert Drive, Sheerwater, Woking, Surrey.)



Drawing by Eric Thomas



A place for Wallpaper

THE FOLLOWING COLLECTIONS
ARE AVAILABLE FOR ARCHITECTS CONCERNED
WITH THE SPECIFICATION OR DIRECTION
OF DECORATIVE SCHEMES

PALLADIO, HAYWARD, THE ARCHITECTS BOOK, MODUS
AND MAY BE SEEN AT

The Architects' Department The Wall Paper Manufacturers Limited
19/21 Mortimer Street London W 1
or King's House King Street West Manchester 3

INFORMATION CENTRE

A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.

however, the first publication in one volume in a form suitable for laymen. The authors are all eminent bacteriologists who in the first section of their book have endeavoured to survey the prevalence and method of transmission of many different infections within our hospitals.

The respite afforded by the advent of penicillin (a drug which few organisms seemed capable of withstanding), was shortlived, for certain bacterial strains began to develop a resistance to even this antibiotic. The staphylococcus aureus (of which the authors have made a special study) is foremost among these. It is a penicillinase-producing, and therefore penicillin-resistant, variety to which nearly one-third of the section headed "Epidemiology of Hospital Infection" has been devoted.

Whilst the text is clear, concise and dispassionate, the authors are careful not to express firm conclusions unless "the evidence seems to fully justify them." This conservative attitude is quite understandable for, although staphylococcal infection is extremely common and sometimes fatal, present knowledge is still limited. Exactly how the germ transmits itself from one area to another is uncertain, and the most efficient method of controlling its spread has yet to be determined. (Since this book went to the press a penicillinase-resistant penicillin has been introduced, but it is still too early to judge what effect it will have upon the epidemiological scene.)

Written by bacteriologists and therefore likely to be more readily appreciated by those with a knowledge of, or interest in, medicine, this book nevertheless provides fascinating reading for the layman.

It is divided into two halves. The first, dealing with the "Epidemiology of hospital infection," has been outlined above. The second part headed "Control of hospital infection" thoroughly explores the practical aspects in the control of cross-infection. Here are found the recommendations for preventing the spread of infection together with chapters on sterilisation and disinfection, and each is accompanied by relevant photographs and a comprehensive list of references. It is an authoritative work which will become indispensable to every hospital architect, for today the problem of cross-infection is one which occupies not only all who are responsible for the care of patients, but also the design team who create the environment in which they are nursed. At this early planning stage, the relationship of one department to another, the construction of the building, its ventilation, its detailing with regard to cleaning, the distribution of patients, and their isolation facilities, are but a few factors that must be considered when designing a relatively germ-free environment. The authors estimate that, on the average, surgical wound sepsis detains a patient in hospital about a week longer than is necessary. It is, therefore, imperative that all who are responsible for the present and future hospital building programmes should be made fully aware of the inherent infection risks to be found within a hospital. Architects and planners can do no better than to read this most excellent book.

11.44 materials: general

BRICKS

Calcium Silicate Bricks. Booklet free on application from the Sandlime Brick Manufacturers Association, 73/78, High Holborn, London, W.C.1, January, 1961.

The properties of this type of brick are fairly fully described with relevant references to B.S.187 but with additional information on aspects not referred to in the B.S. The latter part of the brochure deals with the use of the bricks and has notes on design for loadbearing. Mortar mixes are described and tabulated. The need for proper care in storage and the use of construction joints are two points worth noting.

Illustrations are given of the special shapes of brick which are standard items.

Nothing new in this, but a useful collection of facts on this particular material. A number of buildings are illustrated by photographs, too general to be of any value and two pages of coloured illustrations are so horrible and obviously colour-wrong that they would be better omitted.

22.99 sound insulation and acoustics

TEST DATA

Sound Absorbing Materials, by E. J. Evans and E. N. Bazley, National Physical Laboratory, HMSO, Price 3s.

The main section of this booklet consists of tables of the absorption coefficients of over 300 materials measured at the National Physical Laboratory. The information contained in these tables covers a far wider range than that to be found in most textbooks on acoustics and is thus very valuable to anyone attempting acoustic design. Two warnings must be given to designers. The first is that the method of mounting a material in a building will influence the absorption coefficients to some extent. This is covered by a generally adequate description of the mounting method used for the test sample and by a discussion on the principles of sound absorption at the beginning of the booklet. The other is that many of the materials tested are proprietary types described by the maker's name and perhaps a few basic details. Some of the tests go back as far as 1932, and it would be optimistic to imagine either that all of these materials are currently available or, if they are, that they are now identical in every way with the samples measured by the N.P.L. It is recommended that manufacturers should be asked to give a categorical statement that the material which will be supplied now is definitely "as tested" and not some variant.

The last table of results includes "a collection of outdoor materials." Although these materials are not used in buildings, the results appear to be of general interest and have a bearing on practical questions. For example, a sound absorbing ground surface may be a useful factor in promoting quiet conditions in surrounded courtyards.

8.66 surveying and specification

FLOOD DAMAGED BUILDINGS

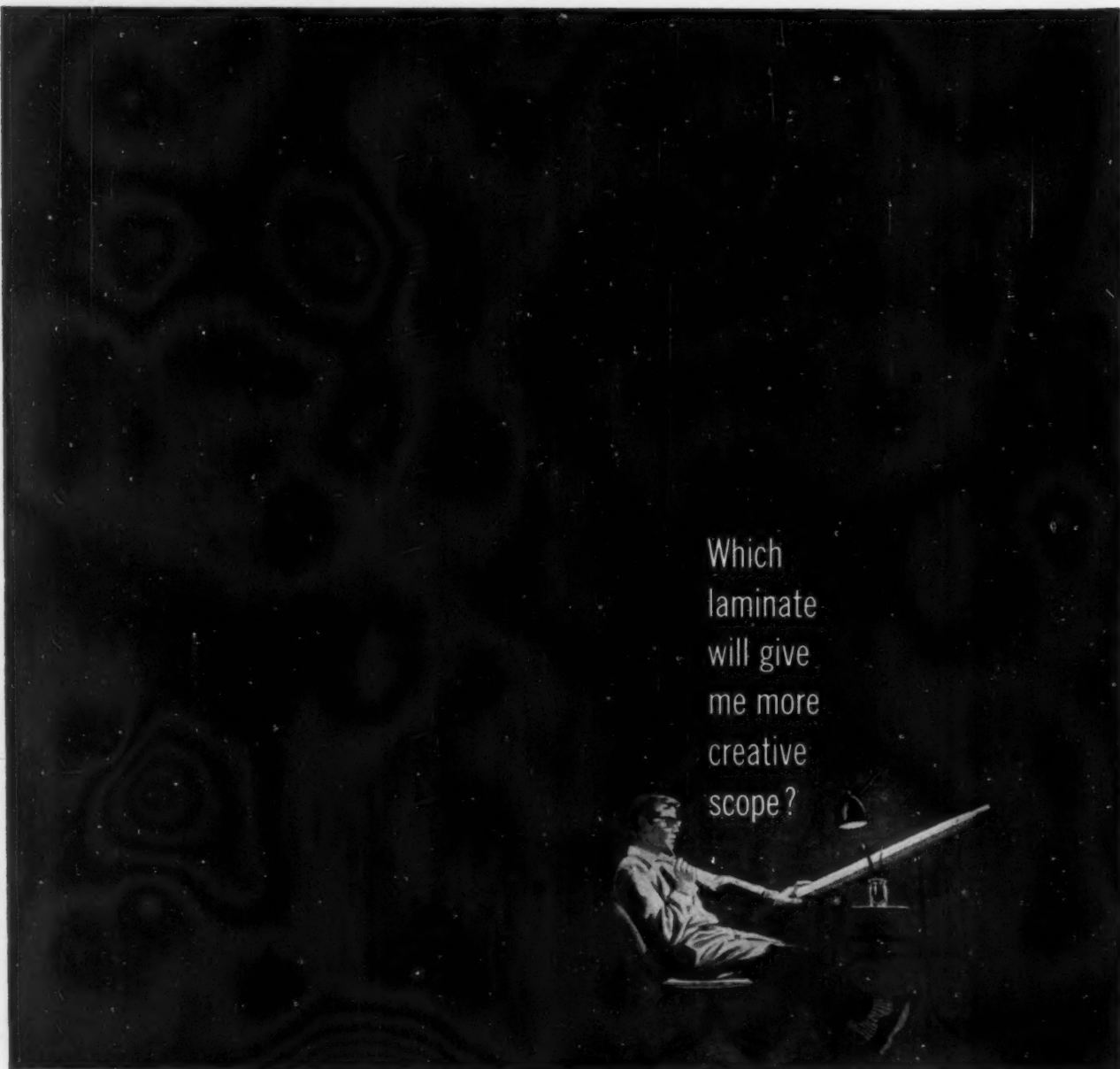
Notes on the Repair and Renovation of Flood-Damaged Buildings. Building Research Station and The Forest Products Research Laboratory, Typescript January, 1961.

This is mainly a reminder about the fairly obvious problems which arise but is useful in emphasising the need for thoroughness of treatment, especially in the case of dampness below floors when an apparent drying of the visible surface of a floor could rather easily encourage too optimistic an outlook. The degree of penetration of mud under floors, for example, might not always be considered. Notes are given about brick, stone, timber, plaster and some other materials. Timber rot may not become visible for some considerable time and inspections up to a year after drying out are advised. The chief points emphasised, however, are the need for speedy and very thorough drying out. Subject to this, the amount of repair needed and method of doing it should not be difficult to judge. The note finishes with some observations about the effect of flooding on builders' materials stored in the yard or on building sites.

10.205 design: building types

CROSS INFECTION IN HOSPITALS

Hospital Infection—Causes and Prevention. By R. E. O. Williams, R. Blowers, L. P. Garrod, R. A. Shooter. Published by Lloyd-Luke (Medical Books) Ltd., 1960. Price 35s. In recent years much research both in Britain and the USA has been undertaken and several reports published, dealing with the different aspects of bacterial cross-infection in hospitals. This book by doctors Williams, Blowers, Garrod, and Shooter is,



Which
laminate
will give
me more
creative
scope?



FABLONITE

THE LIFETIME LAMINATE

FABLONITE is the new *top-quality* laminate that introduces over 70 new and exclusive stylings. There are 13 exceptionally realistic wood grains (their unique long 'repeats' defy detection!) . . . 18 pure plain colours . . . hosts of colourful patterns. The glorious 'Harmony' stylings (combining two or more effects in one distinctive panel) give individuality to built-ins and make interesting focal points. FABLONITE *costs less to use*—list price is only 3/9 per square foot in the standard range (including wood grains). *Planned nationwide distribution* ensures that you get the FABLONITE you want, *where and when you want it*. No costly hold-ups . . . no last-minute changes of plan!

The Fablon Building Division is ready to assist you with technical information. For details of prices, stylings and specifications, post the coupon today, to FABLON LTD., 49 PARK LANE, LONDON, W1.

Fabulous New **Fablonite**

To: FABLON LIMITED · 49 Park Lane · London W1

Please supply details of FABLONITE prices, stylings and specifications. ☐

Please arrange for a FABLONITE consultant to call by appointment. ☐
(TICK WHERE APPLICABLE)

NAME _____

ADDRESS _____

A.J.4

technical section

SIB No.

B

UDC No.

69-003

8. SURVEYING AND SPECIFICATION cost prediction—a guide to design decisions

In this article P. A. Stone, an economist on the staff of the Building Research Station, describes a method of cost prediction which will take account not only of first cost but also of all the contingent costs which arise in the course of a builder's life. The technique he proposes is a rationalisation of the way architects and building owners have attempted always. If, as he points out, it seems difficult and hazardous, this is only because the assumptions implicit in any design decision are often unrecognised and we have not yet assembled the evidence needed to make it easy and sure.

The design of a building determines not only the initial costs of construction but also its running costs, and can influence to some extent the costs of the operations carried on in the building during its life. Good value for money means that all these costs must be considered.

The problems of taking design decisions are in many ways like those of determining the best way of arranging personal expenditure. We often find it difficult to weigh initial and long term costs. A new car is more expensive initially but will last longer, be more reliable and cheaper to run than a second-hand car; it may seem preferable to hire a radio or cooker and go for a holiday, rather than to purchase outright and stay at home.

The building owner has similar problems of weighing up the advantages and disadvantages of additional capital expenditure on his buildings as against on other things. In order to see the effect of alternative choices he must look at initial costs and running costs on a common basis. There are two ways of arriving at a simple cost figure:

1. Costs may be converted to their annual equivalents; that is, the initial and periodic costs are amortised over the life of the building; or
2. Costs may be converted to their equivalent capital sums at the time the building is constructed, that is, the running costs are discounted to their present value.

These methods are alternative ways of presenting the

same information. The first gives a figure that will mean more to the user of a building, and the second gives one that is of more significance to an investor. In this paper the first method is used to express all costs as equal annual payments over a period of years. These "costs in use" include in addition to the first costs, the costs of maintenance, heating, lighting and other service costs.

The application of the "costs in use" technique involves making a number of predictions, and the designer will find that many of the factors singled out for attention seem almost completely unpredictable. Nevertheless, this method can take him in the right direction by reducing the degree of uncertainty. Any design decision involves many predictions, some conscious but many unconscious. The designer already lives with uncertainty, hunch and guesswork. The merit of the technique suggested here is that it formalises the prediction process. By making as many as possible of his predictions explicit, the technique enables him to sort them out and to attach greatest weight to the best substantiated assumptions. On a longer view, awareness of where important knowledge is lacking helps him select information and experience where it is most needed, and to demand the kind of data that will be most valuable in improving his predictive power.

Some of these general ideas may seem rather unfamiliar; a few practical examples will help relate them to common experience.

Example 1

There are a number of possible types of materials which can be used for rainwater goods; three typical ones are asbestos cement, cast iron and vitreous enamelware. Asbestos cement does not need painting for protection, cast iron needs regular painting, vitreous enamelware should remain sound without treatment for a long period unless damaged by impact. Suppose as an example that the asbestos cement product costs £50 a unit and needs replacing every 30 years, that the cast iron product costs £60, will last the expected life of the building, but needs repainting every five years at the cost of £13; and that the vitreous enamelware costs £75, will last the life of the building, and will need no further attention.

The equivalent annual costs of these three materials are given in Table 1. The way to calculate the annual equivalents will be described later.

These predictions of future costs are, of course, subject to errors, but provided the errors of prediction are less than 10 per cent, the asbestos cement would appear to be the cheapest, although, even if a decorative finish is not necessary, vitreous enamel may still be preferred in view of the improved appearance obtained for a small increment of cost. If the life of the asbestos cement product were only 20 years, however, its costs

technical section

would be about equal to those of the vitreous enamel product. Where a decorative surface is necessary vitreous enamel would appear to be preferable under normal conditions on grounds of cost although in an exposed position subject to impact damage, painted cast iron would be preferable.

Example 2

In other cases the decision may lie between design features which provide different standards of service to the users of the building. The choice between different ways of dealing with refuse handling in high blocks of flats is a typical example. The annual "costs in use" of the main alternatives are summarised in Table 2. These figures provide a general assessment of the relative costs of the four systems to the community and are not related to the particular conditions of an actual development for which the costs might differ. It will be seen that, broadly, dustbins on their own cost about 1s. per week, a system of ducts with dustbins something under 1s. 6d. a week, and water-borne refuse disposal over 3s. a week. Against these costs must be set some assessment of the value the users of the buildings are likely to put on the extra amenities provided by the more expensive alternatives. Tenants might feel that it was worth spending an extra sixpence a week to avoid carrying refuse downstairs to outside bins, particularly if they had ashes to dispose of. The time and effort saved by the water-borne method as compared with the ducts and bins method is small and the considerable extra cost of the former has to be set against differences in convenience and cleanliness. While such assessments are perhaps difficult, the problem of decision is simplified once the scale of cost is determined within reasonable limits.

Example 3

As a final example, the prediction technique will be applied to a choice between two different designs of a part of a particular building, in this case the roof of a factory. Both roofs have the same clearance height and spans, but the change from a flat to a pitched roof

affects the frame and the type of roofing, and the use of a pitched roof introduces gable ends. These design changes affect the costs of maintenance and heating, as well as the costs of construction. Later it is proposed to examine the effect of variations in costs in this example on the interpretation of the data, and for this reason the designs and conditions of use assumed have been chosen so as to bring the two costs into equality.

In predicting the "costs in use" (Table 3) the work required by each design was first analysed into its elements: where an element has the same cost for each design it has been eliminated from the cost comparison. Bills of quantities were then prepared for the elements affected by the designs and these were priced on a uniform basis. The expected programme of maintenance was predicted and priced. Estimates of heat lost were made and the price of replacing this estimated.

In order to make the above estimates it is, of course, necessary to predict the costs of carrying out various types of building work at the present time and in the future, and to predict the lives of buildings, the durability of materials, rates of interest, levels of taxation and so on. Consideration must now be given to these problems and to the method of calculating the annual equivalents of sums payable at various dates in the future.

THE PROBLEMS OF PREDICTION

Inevitably prediction is hazardous, but it is implicit in every decision since today's decisions inevitably imply predictions of the future. To limit the uncertainty of predictions we must understand their nature and ensure that we base them on the best evidence available. The main factors to be considered are:

- Interest rates.
- Life of buildings.
- Life of materials and components, and the costs of maintenance, renewals and cleaning.
- Current and future levels of prices for labour, materials and fuel.
- Taxation and insurance.

Table 1, the comparative predicted "costs in use" of rainwater goods

	Asbestos Cement		Cast Iron	Vitreous Enamel
<i>Basic Data</i>				
Initial cost	£50	£50	£60	£75
Assumed life	30 years	30 years	60 years	60 years
Repainting cost	£15	£15	£13	
Repainting cycle		5 years	5 years	
<i>Annual Equivalents</i>				
Initial cost	£3.3	£3.3	£3.2	£4.0
Repainting cost		£3.5	£3.0	
Total:	£3.3	£6.8	£6.2	£4.0

Table 2, estimated annual "costs in use" per dwelling of handling household refuse

Item	Individual dustbins	Collective dustbins	Ducts and collective dustbins	Water-borne refuse disposal
Annual cost of permanent part	—	7s.	25s.	100s.
Annual cost for replaceable part	8s.	10s.	9s.	Unknown
Maintenance and service charge	—	6s.	6s.	6s.
Collection cost	30s.	20s.	20s.	5s.
Disposal cost	10s.	10s.	10s.	
Total annual cost:	48s.	53s.	70s.	170s.

Table 3, estimated annual "costs in use" of two roof structures for a 20,000 sq. ft. factory**†

Type of cost	Element	Design 1	Design 2
		Flat roof. Unglazed. Light steel trusses. Asbestos cement decking. Plasterboard and glass-wool insulation. Felt finish on fibreboard with mineral chippings	Equal pitch. Unglazed. Light steel trusses. Asbestos cement sheets. Plasterboard and glass-wool insulation
Initial costs	Columns and beams	£ 121	£ 141
	Roof trusses and connections	121	125
	Roof covering, including purlins and R.W. goods	236	182
	3 layer felt cover to roof laid on fibreboard and finished with mineral chips	136	—
	Roof insulation	63	175
	Painting to cols. and beams	6	8
	Painting to roof trusses	13	14
	Painting to plasterboard	16	18
	Brickwork to gable ends (painted internally)	—	19
Periodic maintenance cost	Repaint cols. and beams every 7 years	10	15
	Repaint roof trusses etc. every 7 years	24	27
	Replace asbestos cement sheets and R.W. goods every 30 years	2	33
	Replace felt roof every 30 years	32	—
	Repair and repaint plasterboard every 5 years	70	76
Annual cost	Repair and repaint brickwork every 5 years	—	3
	Annual repairs to asbestos sheeting	—	10
	Annual repairs to felt roof	14	—
Cost of replacing heat lost through the fabric† at 1s. 6d. a therm for a heating season of 5,500 hours with an average temperature difference of 10° F.		182	209
TOTAL COST		£1,046	£1,046

* Elements which have the same cost in each design have been omitted, e.g. foundations (assuming normal conditions) and lighting-installation and running costs. It has been assumed that the building will have a life of 60 years and that the rate of interest will be 5 per cent.

† The rate of air change per person is assumed to be constant.

a. Interest rates

The introduction of the effect of interest into cost predictions both allows for the inevitable costs of borrowing money, or of not investing money elsewhere, and at the same time provides a means of "discounting" the future. This has the effect of telescoping periods of time in the future compared with those in the present.

Building owners must either borrow money to finance the building or sacrifice an alternative use for their own money. The rate of interest which is implied is, therefore, either the market rate for money borrowed on the security of the building, or the average return which the building owners can get for money invested in their own business. This rate of interest should be used in conjunction with either the anticipated actual life of the building, or the life over which the future can be reasonably foreseen with an allowance for the residual value. The rate of interest used is of importance since it affects the decision taken. The lower the rate of interest, the more it will appear worthwhile to spend money now in order to reduce future costs. Where rates of interest are high it is more worthwhile to reduce first costs in relation to running costs.

The actual rate of interest to be used for cost prediction purposes will depend on such factors as the average internal return and the credit-worthiness of the building owner, as well as on the predictions of the long term movement of the rates of interest.

b. The life of buildings

The cost predictions for the various components under consideration must be made within the pattern set by the predicted life of the building itself. The period taken should be realistic, and will normally be the period over which the building is expected to earn an

income, for it is during this period that the costs will be recovered, rather than the period for which it is required by the first owner. Buildings are considered to have a substantial life of something of the order of 40 to 80 years. Their possible physical life is often much greater, but frequently they are demolished before the end of this period in order to make way for a more profitable use of the site, or because it is found cheaper to clear and rebuild rather than to adapt the building to a change in requirements. The period over which the building is financed is, of course, quite irrelevant as a basis of cost prediction.

The annual equivalent of the first cost of a building is not very sensitive to changes in the period of life unless the period considered is a short one. Thus errors of five or ten years in the predicted life will not make very much difference to the predicted annual costs when the life is 50 to 60 years, but serious errors in prediction, and hence in design decision, can arise if the life of the building is taken as substantially shorter than conditions warrant (Table 4). Conservatism in this sense increases the error in predicting the "costs in use" and hence increases the probability of reaching wrong decisions.

One of the most common reasons for predicting lives on a very conservative basis is in order to make some allowance for obsolescence. To do this by shortening a predicted life is a crude and misleading method. Obsolescence in buildings often leads to conversion rather than to demolition. The latter solution is usually adopted only on expensive sites where the value of land is high compared with that of the building, or where a large increase in site value can be secured by redevelopment. These conditions are not usually important in the case of most buildings. Conversion is merely a special type of future

technical section

cost within the life of the building. If its incidence is known it should be considered in the cost prediction; if it is unknown, then it ceases to be a factor in the initial "costs in use" prediction but will, of course, be considered in predicting the "costs in use" at the time of decision to convert or rebuild.

c. The life and maintenance costs of materials and components

If choice were limited to traditional materials and building components used in a traditional way, it would be sufficient for predicting their "costs in use" if figures were available giving their probable maintenance costs over their life. Under these circumstances it would not matter if it were impossible to separate out the costs of renewals, periodic and annual maintenance, and repairs. Such data are rare, however, and often the choice is between traditional and new materials and components for which there are no adequate cost data.

Theoretically, the lives of materials and components should be determined on the basis of observed probabilities of failure, but again, such data are rarely available and often it is necessary to predict the life on the basis of a knowledge of the age of early failures. Such information is often incomplete since it does not record the successes or the numbers at risk, and hence suggests a higher rate of failure than really occurs.

A workable convention for building up the costs from the component parts is to attribute the life of the main element of the installation to the installation itself, and treat renewals of minor parts as maintenance. In the absence of such data the only course is to try to visualise what is necessary to keep the installation in good working order, and to cost on this basis. For convenience, repairs and maintenance can be divided into renewals, that is the replacement of particular components at stated intervals of time, and maintenance, including cleaning, which is general work, a certain fixed amount of which is assumed to be necessary each year. Small alterations in the time pattern are not usually of importance. Painting and decorations are usually carried out according to a cycle and can be treated in a similar manner to renewals. The estimates of maintenance costs will, of course, be somewhat uncertain, and the degree of uncertainty must be considered when interpreting the results. The best procedure is to work with an estimate of the likely range of costs as well as with the expected average.

Where one of the alternatives to be compared consists

of a material for which there is no historical information on its performance, estimates can only be made by analogy with other materials of a similar nature. The determination of average lives is difficult, but the errors of prediction may not be important, particularly when the true lives of the materials being compared are considerable. The best procedure would appear to be to prepare a tabulated list of the estimated lives of as many materials and components as possible, this list being kept up to date both as regards additional materials and as regards the estimated lives as new knowledge comes to hand. The use of such a tabulated list would ensure that, in effect, each item will be compared with other relevant items. It is, of course, important to avoid conscious bias either by consistently underestimating, or overestimating the expected life.

d. The current and future level of prices for labour, materials and fuel

In costing any particular item of work, whether the initial installation or its renewal, the programme of work must be set out and costed. It is, of course, difficult to predict exactly what prices will be charged, even for work to be undertaken in the immediate future, and the likely range in the prices must be considered. In the case of renewal work, allowance must be made for stripping out the old components and for making good after replacement. Thus the cost of renewal may be much greater than the cost of initial installation. Finishes and even basic structure may be damaged in removing old components and fitting new ones. Allowances must also be made for possible losses of rent and production, and for the different conditions under which renewal work is carried out as compared with initial construction, such as the difference in scale of the contract and in the available assistance.

Prices of materials and labour vary both from one job to another and from one district to another, so that a design decision which is the best at one time and in one area may not be the most satisfactory in other circumstances. Both building materials and fuels are affected in this way, coal and electricity, for instance, being cheapest in the Midlands where oil is relatively expensive compared with elsewhere.

The long run tendency for prices to rise does not need to be considered in so far as the elements of cost retain the same relationship to one another. However, there is a tendency for the real costs of manufactured goods to fall relatively to labour costs, so that because renewals and maintenance have a higher labour content than initial construction, they are likely to be more expensive relative to initial costs in the future

Table 4, effect of errors in predicting the life of buildings

Assumed life = x years	Annual equivalent* per £100 of first cost for assumed life	Percentage error when life taken as x	
		When actual life = 40 years	When actual life = 60 years
20	£ 8.02	+38	+52
30	6.51	+12	+23
40	5.83	0	+10
50	5.48	-6	+4
60	5.28	-9	0
70	5.17	-11	-2
80	5.10	-13	-3

* Rate of interest 5 per cent.

than they are today. Special consideration must also be given to materials that tend to have a highly individual price pattern, often unrelated to general price trends.

e. Taxation and insurance

From the point of view of the individual or the firm, the incidence of taxation can have quite a large effect on design economics. For instance, with an industrial building, some tax relief can be obtained on the initial cost, partly from depreciation allowances and partly from investment and initial allowances. Amounts spent on maintenance and repairs, heating and lighting, and other running expenses, count, of course, as business expenses and are deductible from profits. Clearly, the exact incidence of taxation varies with the circumstances of the taxpayer. Current regulations and levels of taxation tend to favour alternatives with low construction costs and high running costs, since a typical industrial concern might obtain around £45 tax relief for each £100 spent on running costs and around £25 for each £100 spent as initial costs. If the building is financed by a separate company and rented, the rent counts as a business expense. Tax relief can also be obtained on the interest paid for borrowed money. On the other hand, public authorities and charitable bodies do not pay income tax, and for such bodies, as for the community, it is the actual costs of work which must be considered. The design and layout of buildings can also have some effect on rating valuation and on the premiums payable for fire insurance.

EQUATING OF CURRENT AND FUTURE COSTS

The method of equating current and future costs can now be explained by means of an example showing how some of the figures given in Example 3 for Design 1 (Table 3) were calculated. For example, the initial costs of the columns and beams were estimated to be £2,286. The sums payable annually over given periods, assuming 5 per cent interest, which are equivalent to a single payment of £1 at the beginning of the period are given in Table 5, Column C. For a period of 60 years this is shown as £0.0528. The annual equivalent over 60 years of an initial cost of £2,286 is therefore—

$$£2,286 \times 0.0528 = £120.7 \text{ say } £121$$

The cost of repairing and repainting the plasterboard every five years has been estimated at £393. This work is assumed to be carried out at the end of the first five years, and subsequently every five years until five years before the end of the expected life of the building. If this is taken as 60 years, there will be eleven occasions upon which this work is carried out. The first step to finding the equivalent annual costs of these payments is to find their discounted value at the commencement of the period of cost prediction. Since the first occasion is assumed to occur five years after commencement of the period of cost prediction, the sum must be discounted for five years; the factor for discounting is obtained from Column A, Table 5, as 0.784. The second payment is assumed to occur 10 years after commencement and its discounted factor is 0.614; the discounting factor for the third payment is

0.481 and so on, the discounting factor for the final payment being 0.068. Thus the discounted values of the costs of repairing and repainting the plasterboard are:

$$£393(0.784) + £393(0.614) + £393(0.481) + \dots + £393(0.068) = £1,325.$$

This value can now be treated in the same way as the initial cost; the annual equivalent is therefore found by multiplying the product by 0.0528 which gives a figure of £70.*

The interpretation of the estimates

The "costs in use" comparisons are concerned with three types of factors, factors of design detail, of conditions of use, and of prediction. Clearly, the purpose of the technique is to examine differing design solutions; but even within these, varying assumptions made about the detail of the design can have an effect on the cost comparison. In Example 3, in which two designs for a factory roof were compared, one with a pitched and one with a flat roof, the costs of the roofs would change if glazing were introduced, or the dimensions or materials changed. It might be found, for instance, that the roof shape with the lower costs changed with the type of material. Again, changes in the conditions in which the building is to be used will also tend to alter the costs, and the decision indicated by the figures might not be the same if, for instance, the exposure or heat load were different. Finally the cost estimates are influenced by the predictions made for such factors as rates of interest, the durability of the materials, the costs of maintenance, the future relative prices, taxation, and the expected life of the building.

The conditions under which a building is intended to be used will normally be known by the designer but it is of interest to consider how the results might be changed by changes in the conditions assumed. In the case of the two roof designs the estimated difference between them in the heating costs for providing full heating for one shift is, on the assumptions made, shown to be only £27 (Table 3), and is increased by only 30 per cent if the factory works on a three shift basis. Because of the similarity in heating costs, the comparison is not sensitive to variations in the price per therm of heat. On the other hand, if the amount of process heat were sufficient to heat the building even with an unlined roof, the elimination of the pitched roof's previous cost disadvantage in requiring a greater input of heat, together with the omission of the insulation, would result in the pitched roof being about £150 cheaper in total annual costs than the flat roof. This result is achieved because a change in design becomes possible; while the cost of insulation for the pitched roof is greater than for the flat roof, the cost for the covering for the pitched roof is substantially less than for the flat roof. The dominant use and design features will vary from case

* When the expected life of the building is a multiple of the period of renewal a simple method can be used. For instance, in the above case an annual payment over the whole period of £393 \times 0.231 (Table 5, Column C) is equivalent to payments of £393 every five years from the beginning of the period to five years from its end. The first payment does not arise in calculating the costs of periodic renewal since no renewal is needed until the end of the first period. The deduction for the annual equivalent of the first payment is £393 \times 0.0528 (Table 5, Column C). Therefore the annual equivalent cost of repairing and repainting the plasterboard is: (£393 \times 0.2310) - 393 (£ \times 0.0528) = £70 as above.

technical section

to case.

The first source of prediction errors to be considered is that which results from under- or over-estimating the life of the building itself. However, even large changes in the expected life will normally make little difference to the comparison unless the proportions of the equivalent annual costs for construction to total "costs in use" differ greatly. A more important source of prediction errors is likely to be found in predicting the durabilities of materials and components. The best solution to this problem is to work with an upper and lower limit of durability, and to consider the effect of both limits. If the choice rests on the relative costs alone no doubt will arise if a new material is either less expensive than alternatives when its minimum life is taken, or more expensive when its maximum life is taken. The real difficulty arises when the life at which the alternatives balance in cost lies between the predicted upper and lower limits of durability. The decision to use a particular material then becomes a speculative investment based on the belief that a certain life will be obtained. For example, an alternative component costing £150 would only be preferable to a standard component costing £100 and lasting 10 years, if the alternative lasted 18 years, assuming interest at 5 per cent. If the only information on the alternative was that it would last between 10 and 20 years, the justification of a decision to select it would rest on the faith that its life would be at least 18 years. In the case of the roof example the relative costs of the asbestos cement products are so small that under- or over-estimating their lives by as much as 10 years makes practically no difference to

the cost comparison. Of course, if the true life of a material is 30 years the use of a conservative estimate of 20 years will result in a larger proportional error than if the life had been over-estimated by 10 years. The effect of errors in predicting the costs of renewing materials and components is similar to the effect of errors in predicting durability. For the roof example, if the relative prices of renewing the asbestos cement products and the felt each changed by as much as 50 per cent but in opposite directions, the cost difference between the two designs would be increased to 3 per cent.

Taxation and the rate of interest only affect the relative economy of the designs if their proportions of initial and running costs are markedly different. In the case of the roof designs the running costs account for about half the "costs in use" in both cases and so an allowance for taxation or change in interest rates makes little difference to the cost comparison.

While in the case of the roof example the prediction errors have proved to be of little importance, this will not always be so. Prediction errors are likely to be of importance where the relations between first and running costs are very different as between the designs compared. Where the decision is likely to be affected by the assumptions accepted as to the lives and future prices, it is necessary to examine the predicted levels critically and to decide which assumptions are most likely to prove correct.

Acknowledgement: This paper forms part of the programme of research of the Building Research Station and appears by permission of the Director of Building Research.

TABLE 15. *present value of future single and annual payments and the annual equivalents of single payments assuming a 5 per cent rate of interest*

Number of years	A Present value of £1 payable at the end of the period shown (1)	B Present value of annual payments of £1 payable at the end of each year for the period shown (2)	C Sum payable annually over the period shown, equivalent to a single payment of £1 payable at the beginning of the period (3)
	£	£	£
1	0.952	0.95	1.0500
2	0.907	1.86	0.5378
3	0.864	2.72	0.3672
4	0.823	3.55	0.2820
5	0.784	4.33	0.2310
6	0.746	5.08	0.1970
7	0.711	5.79	0.1728
8	0.677	6.46	0.1547
9	0.645	7.11	0.1407
10	0.614	7.72	0.1295
11	0.585	8.31	0.1204
12	0.557	8.86	0.1128
13	0.530	9.39	0.1065
14	0.505	9.90	0.1010
15	0.481	10.38	0.0963
16	0.458	10.84	0.0923
17	0.436	11.27	0.0887
18	0.416	11.69	0.0855
19	0.396	12.09	0.0827
20	0.377	12.46	0.0802
25	0.295	14.09	0.0710
30	0.231	15.37	0.0651
35	0.181	16.37	0.0611
40	0.142	17.16	0.0583
45	0.111	17.77	0.0563
50	0.087	18.26	0.0548
55	0.068	18.63	0.0537
60	0.054	18.93	0.0528
70	0.033	19.34	0.0517
80	0.020	19.60	0.0510
90	0.012	19.75	0.0506
100	0.008	19.85	0.0504

(1) £0.008 invested to-day = £1 in 100 years' time.

(2) £19.85 invested to-day would provide for an annual payment of £1 for 100 years.

(3) £1 invested would provide for annual payments of £0.0504 for the following 100 years.

Pub Renovation

Brendon Street, London, W.1

by J. Austin-Smith and Partners

Partner in charge, Geoffrey Salmon, assisted by Christopher Keen

The modern architect approaches the problem of renovating a pub at his peril. Clearly, he must not perpetrate an American-style cocktail lounge, with its dark secluded corners and slick sophistication; or a Japanese tea room, with insistent demand for visual appreciation and quiet. At the same time, he can't fall back on harness ornaments, pewter measures, and diamond window panes. If people tend to like old pubs better than new ones, they tend also to like Georgian houses better than contemporary ones, and for the same reason. On the whole, the old ones are better designed.

J. Austin Smith and Partners have renovated the Wargrave Arms, Brendon Street, just off the Edgware Road. For the most part, it is well designed and yet still feels and looks like a pub. By the simple means of cleverly handled colouring and some new lettering, the old tatty exterior has become neat, clean, and almost elegant. The existing fascia and piers are now black, with orange marble edging left unchanged, while the brick panels underneath the windows are painted white which ties in with the bold white lettering mounted on the fascia above.

Inside, there are three architectural features handsome in themselves and particularly suitable for a pub; a dropped wood ceiling, the back wall of the bar, and the lighting used throughout. The ceiling is neatly made of open 6-in. by 1-in. wood slats at about 1 ft. centres, left in a natural finish and running the length and width of the two bars, stopping short of the window to return up to the existing ceiling. This creates a fascia inside the pub visible from the street, on which is set a colourful abstract pattern lighted by means of drop lamps hung from the old ceiling above. The reduced height that results gives the pub a warm and informal look.

The back wall of the bar is painted black with an attractive arrangement of glass shelves, mirrors, dark wood, and indirect lighting. Against this, the glasses and bottles are tidy and decorative. Lastly, the lighting of the bar is adequate and not glaring. The bar lights are fastened to the same brass poles, carried up to the ceiling, that support the bar rail. Fitting nicely into this arrangement are some bar stools which have the same diameter of tubing, topped with contoured wooden seats.

One or two items of the interior are puzzling. It is



strange that the same hand which designed the ceiling, the bar storage wall and the lighting, could also have handled the floor finishes. In particular the linoleum pattern seems too large and noisy for this interior. The architects, however, believe that such strong patterning on the floor is justified for several reasons. One of the most important, which has conditioned the design of the whole interior, has been the attempt to achieve what they call a sense of super-realism, or a slightly "larger than life" impression, especially agreeable after four or five pints of beer. Smaller patterning would in any case, they contend, become lost in a *mêlée* of feet when the pub was crowded. They also feel that strong contrasts in the treatment of the floor are valuable in countering the effects of such things as cigarette ends and stiletto heels.

Another lapse is the design of the partition between the public and saloon bars, which looks as if it were put in as an afterthought. This again the architects defend as being a simple division which might be placed anywhere along the length of the bar, with elements to link the two sides, such as the continuation of the lighting and the use of glass panels. This they regard as a traditional feature of the democracy of the pub, the casual way in which partitions have been slung across a common space centred on the bar.

But whatever you may think of these two features, there is no doubt that everything at eye level, the level that counts during opening hours, has been handled with distinction, setting the key for the whole interior.



The public bar after the renovations

The saloon bar showing the vertical brass poles which support the bar rail and the bar lighting. The brewery's standard tables and chairs (not chosen by the architects) are the one element out of key





Drum series. A range of 25
pendant, wall and ceiling units,
from 5" to 15" in diameter,
available in 6 colours.

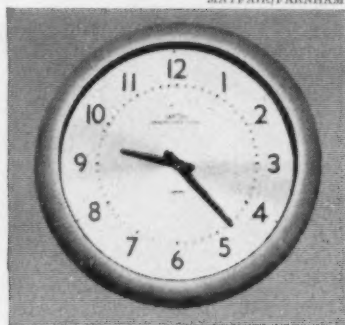
Its salient feature is the translucent
opal precision moulded louvre.
Designed by Paul Boissevain.



Merchant Adventurers Limited

Feltham, Middlesex. Telephone FEL 3686
Full information is given in publication D4

MAYFAIR/FARNHAM

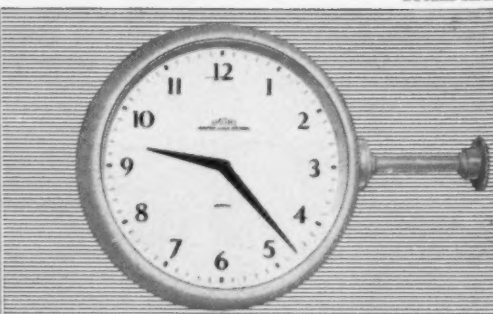


A certain style

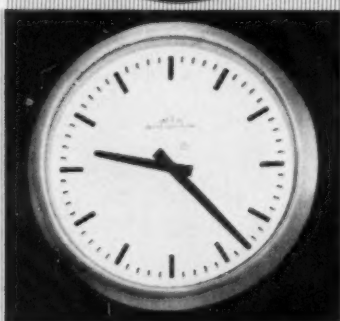
MEDWAY/FIFE



DOUBLE SIDED



FALCON

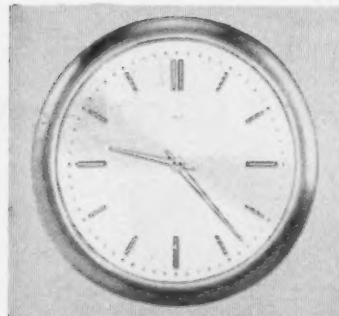


MOSTYN/FIFE



MELTON/FLEET

FULMAR



—a style for every setting in every type of building.

All the interior wall clocks in the wide E.C.S. Range (a selection of which are shown) have been accepted by The Council of Industrial Design for Design Index.

They are made in a number of sizes for operation from A.C. mains or from the E.C.S. Master Clock as part of a controlled time system.

For full details of the complete range write:

English Clock Systems

179-185 GREAT PORTLAND STREET
LONDON W1 TELEPHONE LANGham 7226

Branch Offices:

BIRMINGHAM MANCHESTER LEEDS GLASGOW BELFAST

A branch of the Clock
and Watch Division of

SMITHS

**HIDE PLACE
DEVELOPMENT**

5

(98)
728.2

The fifth of a series of progress reports. The other instalments appeared on June 23, August 18, October 20, 1960, and January 5, 1961

director of	E. J. EDWARDS
Westminster housing	STILLMAN & EASTWICK-
architects	FIELD
associates	R. SMORCZEWSKI
	D. STOLLAR
structural engineers	CHARLES WEISS AND
	PARTNERS
quantity surveyors	HARRY TRINICK AND
	PARTNERS

Hide Place seen from across Vincent Square



progress report

SERVICES (2)

Lifts

Lifts are frequently an arguing point in designing flats; questions arise as to their size and speed, their number in relation to the number of persons in the dwellings and so on. At least at Hide Place there was no question of keeping the number of storeys within the limit at which lifts are not thought necessary at all (under 5 storeys), or within which only 1 lift is required (up to 7 storeys).

There have been a number of devices such as stopping lifts at every other floor; combining large with small lifts, and so on, all designed to reduce the considerable expense incurred in their installation. At Hide Place, however, it was felt that the service given should be of a high standard and that it should be unnecessary to require the tenants, many of whom may be elderly, to walk up or down from the floor on which any lift lands them: so the only concession made to such devices was the exclusion of the club room and laundry floor which has to be approached up one flight of stairs from the floor below. This was not thought to be a sufficient hardship to warrant the additional overrun for the lift motors which would be required if the lifts were taken to roof level, and in any case the Town Planning authorities had objection to lift motor rooms projecting substantially above the roof line.

It was the original intention to have three 8 person lifts of the normal 100 ft. per minute housing type, for the 160 flats, of which one was on the opposite side of the landing to the other two. (The customary requirement has been 1 lift for 15 to 50 flats.) Discussions with lift manufacturers, however, led to the conclusion that two lifts would be adequate if they were of higher speed, e.g. 200 ft. per minute and "interconnected" (the car nearest to the calling point answers the call), but that they should then be side by side and obviously of the same size. It was also agreed that it would be desirable to operate the lifts on the "collective system" without attendant (all calls are registered and, for example, having answered the highest call the car then picks up all down calls in its descent).

There is, of course, little or no experience as yet of lifts in municipally owned blocks of flats of the height of Hide Place and therefore no well-established rule to work to; but the decision made appeared to overcome the problems which arise from breakdowns when lifts serve every other floor; they would avoid walking by elderly people and they would reduce the waiting time. As a further contribution to providing a really good service, however, even

higher speed lifts were pressed for, and it was finally agreed that they should have a speed of 300 ft. per minute, thus further reducing waiting time. Any increase over 200 ft. per minute necessitates "variable voltage" equipment which adds to the cost, but is said also to give a longer life and greater smoothness in operation. It also necessitates the use of direct current motors, with generators to produce this current, the motors being provided with worm gear reduction. Above speeds of about 350 ft. per minute gearless motors are employed, which are much bigger motors coupled directly without gears as the name implies.

With the equipment proposed for installation at Hide Place it was found possible to increase the capacity of the cars from 8 persons to 10 persons, providing car platforms 5 ft. 1 in. wide by 5 ft. 5 in. deep. (In this country it has not been considered necessary to provide lifts big enough for stretchers, in contrast with certain continental practice, where very deep, narrow lifts are standard). One of the lifts is fitted with firemen's control which when operated returns the car to the ground floor for the sole use of the fireman.

The maintenance of the lifts is to be undertaken by the suppliers under contract, and the cost of the maintenance was ascertained at the time of tendering. The greater part of the guides and other items of equipment has been fixed and it has been found possible for the work to proceed with the erection of the structure so as to save time.

The absolute cost of the individual lifts is relatively high, but the cost of the installation is not exceptional in relation to the cost of the whole scheme (3s. 6½d. per sq. ft. or 6.3 per cent of the superstructure, including builder's work). The effectiveness or otherwise of the proposed solution to the problem will be known only after use by the tenants. As far as the finishes are concerned, the walls of the cars are of ribbed aluminium which appears to withstand best the scratching and writing of slogans. The skirtings are of plastic-coated steel designed to avoid erosion of the aluminium when in contact with urine; this is apparently a requirement in municipal flats. In order to discourage misuse of the lifts the lighting in the cars at Hide Place is of a higher intensity (two 40 watt fluorescents) than is customary.

Heating and hot water

Since 1945 it had been the practice of Westminster City Council as landlords to provide a complete heating service (space heating and a constant supply of hot tap water) from a central source, and to spread the capital and running costs amongst tenants of a substantial number of properties (both residential

and commercial), thereby ensuring that the charges are within the means of all tenants.

At Hide Place it was not practicable to connect to a district heating scheme and there seemed to be advantages in departing from a conventional low pressure hot water system and substituting thermostatically controlled electric space heating and local water heaters. After much discussion, and the calculation of capital and running costs, a system of off peak electric floor heating was selected, using embedded plastic-covered cables. The water heating too was to be by electric immersion heaters in well-lagged cylinders, simulating the proprietary electric storage water heaters on the market (see diagram). It is intended that the off-peak current will be taken between 7.00 p.m. and 7.00 a.m. with a midday boost of three hours between 11.0 a.m. and 4.30 p.m.

Arguments continue as to the actual cost of off-peak electric floor heating. But there is now a good deal of evidence to show, on the one hand, that some form of supplementary heating is required for short periods in very cold weather, and on the other, that if the control of the heating (and water heating) is in the hands of the tenant, the overall cost is comparable with, if not even less than, the conventional charge for central heating and hot water. There is no evidence as far as we know that this is because the tenant suffers a cold flat or is unreasonably restrictive in the use of hot water.

However, beyond these factors, there can be no doubt that in the particular circumstances at Hide Place there were enormous aesthetic and practical advantages in being able to dispense with a boiler house and fuel storage. The standard of space heating which was required was laid down as being "with an outside temperature of 30° F.:-

Living rooms 65°, 1 to 1½ air changes.

Halls 65°, 1 to 1½ air changes.

Kitchen and bathroom 55°, 1 to 1½ air changes.

Bedrooms (other than bed-sitting-rooms) unheated." (Linen cupboards either contain the hot water cylinder or an airing cupboard heater controlled by a switch outside the cupboard with an indicator light.)

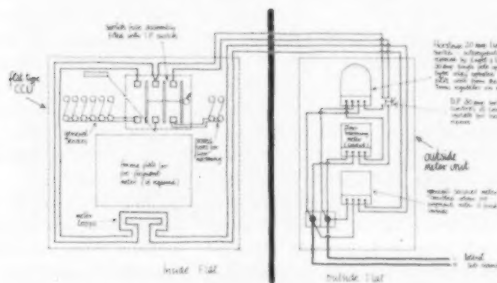
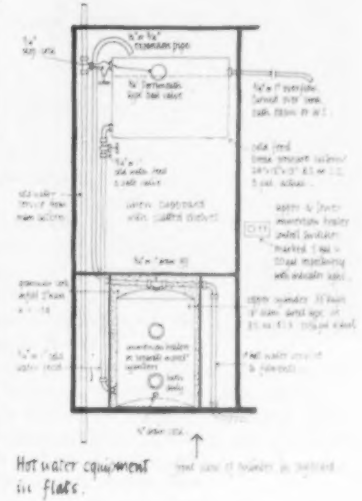
In order that there should always be some heat in the flats, thus reducing the risk of condensation, the thermostats have a minimum reading of 45° F., and the circuit is so arranged that the tenant cannot switch off the heating without also switching off all the electrical services in the flat. This, combined with the need to accommodate a time switch (for the off-peak periods) and a credit meter, both of which should be accessible to the Board without entry to the flat, and a con-



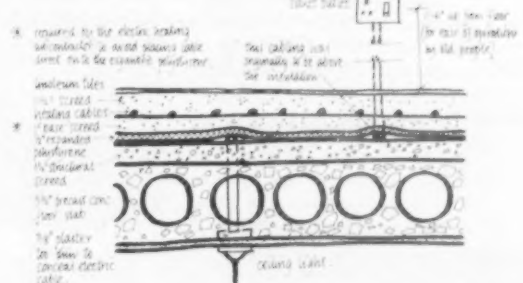
A wall thermostat box at 5 ft. 6 in. above the floor. Thermostats were positioned directly above socket outlets in order to present an ordered appearance. Note the expanded polystyrene taped together and turning 3 in. up the wall dissociating the heated screed from the rest of the structure, above

Specially calibrated thermostat control, right

Mineral insulated metal clad electric cables laid before the thermal insulation. The protection of this type of cable must be given careful consideration



Electrical Control Gear in Typical Flat.



Typical section through floor showing electrical services

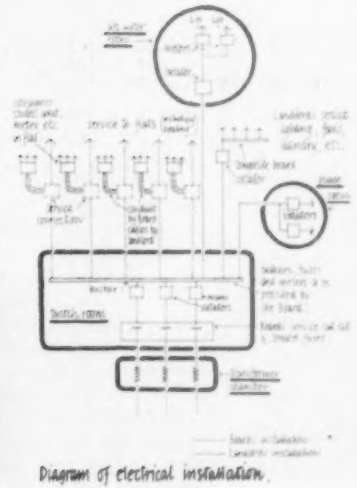
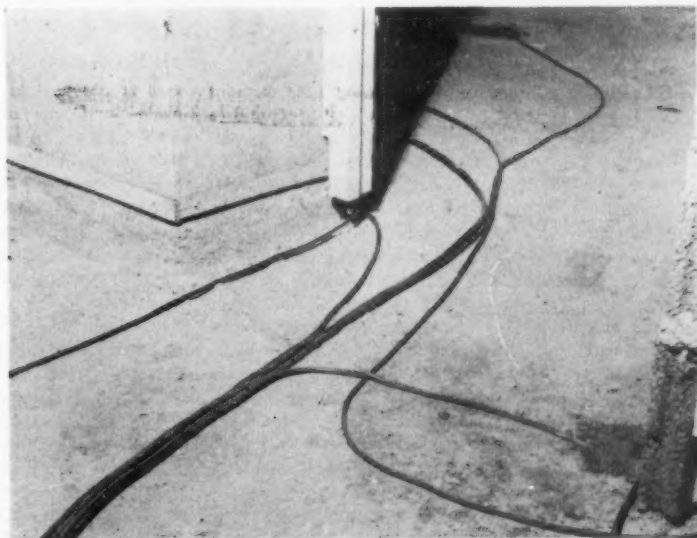


Diagram of electrical installation.

progress report

sumer's control unit (with provision also for a prepayment meter) accessible to the tenant from inside the flat, led to the circuit (see diagram) which is housed in the metal cases illustrated in the photographs.

Each flat has two heating circuits, one serving the living room and the other the bathroom, hall and kitchen: and each circuit is controlled by a thermostat calibrated numerically (but not in degrees), as shown in the drawing. The living room thermostats have all been positioned at a height of 5 ft. 6 in. vertically over socket outlets. The purpose of relating them in this way to the outlets is to free as much of the wall surface as possible for cupboards and other furniture which the tenant may wish to install and to present an orderly appearance.

Since the scheme was first designed it has been modified by the inclusion of a "thermo time" regulator and the substitution of one central time switch operating contactors in each flat instead of individual time switches.

The thermo time regulator prevents waste of electricity by reducing the duration of the charge during the middle part of the night. It has an external temperature control to prevent undercharging during cold weather. It acts in conjunction with a central time switch which saves each tenant the hire charge for an individual time switch in each flat.

Electrical installation

The electrical installation is in two parts, one maintained by the City Council, the other by the London Electricity Board. The clients requested that the former be run in mineral insulated metal clad cable, but the L.E.B. insisted on conduit for the part maintained by them; this extends as far as the individual dwellings and main circulation area circuits.

There are five main cables installed by the L.E.B., each serving four floors of flats. The risers for the circulation area lighting, the lifts, the float switch control for the pumps, the laundry installation and the clubroom are installed by the electrical subcontractors. The cables run in glazed earthenware ducts, from the transformer chamber and switchroom in the outbuilding to below the refuse chamber, where they turn up with a 3 ft. 0 in. radius bend and rise to the switchroom in the first floor duct chute area. From here they rise vertically through the building in a 3 ft. 0 in. by 9 in. duct, each stopping off in turn after serving four floors of flats. A box is installed at every second floor, and from this a lateral cable goes to a box with a floor trap in the main circulation area and there is split into eight to serve the individual flats on that floor.

It was originally intended that the lighting cables should run below the expanded polystyrene directly on the structural screed and that the power cables should lie on top of this thermal insulation, thus separating acoustically the cables of one flat from the vertically adjacent flat. However, the need to protect the easily damaged m.i.m.c. cable outweighed the slight acoustic advantage of this system, and led to the running of all the horizontal cables below the expanded polystyrene (see diagram).

The power supply consists of a ring main serving shuttered socket outlets disposed as follows:—

Living Rooms	3
Bedrooms	2
Kitchens	2

In addition each kitchen has a cooker control unit with a 13 amp. switched socket outlet with a pilotlight. The socket outlets generally have been kept 1 ft. 6 in. from the floor to minimise the amount of bending required of the older tenants.

The switching of the general circulation areas is controlled by time switches programmed as follows:

Entrance Hall:

Four fittings dusk to dawn

Four fittings dusk to 2.00 a.m.

Main Circulation Areas: 24 hrs. lighting (Floors 1-20)

Stairs and Landings: Dusk to 2.00 a.m.

External Roof Terrace: Dusk to 2.00 a.m.

In general the main circulation areas are to be lit by miniature fluorescent fittings which contain only two 6 watt tubes (9 in. long) and therefore consume very little electricity. The ground floor Lift Hall is to be lit by 24 fittings each with three 5 ft. 80 watt fluorescent tubes which are expected to light the terraces under the building through the glazed screens.

Each flat is provided with a front door bell operated through a transformer by mains electricity.

Lightning conductor installation

Although the proposed new code of practice on the protection of structures against lightning will allow internal down conductors under certain conditions, the installation at Hide Place was designed to fulfil the requirements of C.P.326.101 (1948) which is at present in force. For a building of this ground area and perimeter the code requires three down conductors. These were positioned approximately equidistant round the building, two being on the west elevation and one on the east elevation. In order to render them as inconspicuous as possible the copper tapes are sheathed in p.v.c. of a colour near to that of the cladding slabs and the holdfasts are dipped in p.v.c. To refine the appearance, the clips are being specially produced without the manufac-

turer's name on them and with counter-sunk screw fastenings.

Down conductors should run vertically. This meant that it was necessary to run them on the line of the outside columns. At the bottom of each conductor it is necessary to have a test clamp, and brick pits with removable concrete covers to match the paving have been provided, in order to avoid disfiguring the bases of the three columns. From these pits the conductors will be led about 15 ft. from the base of the building and then earthed. Four terminals are being provided on the laundry/tankroom block at the top of the building. The conductors are led from these across the clubroom roof and the precast beams steadying the parapet wall to the perimeter of the building. No tapes will be needed round the parapet of the terrace since it is considered satisfactory to connect the system to the rails provided for the maintenance trolley. Since no part of the system is permitted to provide an upward path for the lightning discharge, holes have been formed through the precast concrete panels at the level of the top of the parapet. The concrete facing slabs, down the face of which a conductor passes, have fixing holes for the holdfasts formed in them at approximately 4 ft. 6 in. centres.

Note. Under the new code of practice it is proposed that internal down conductors will be permitted, subject to the following conditions:—

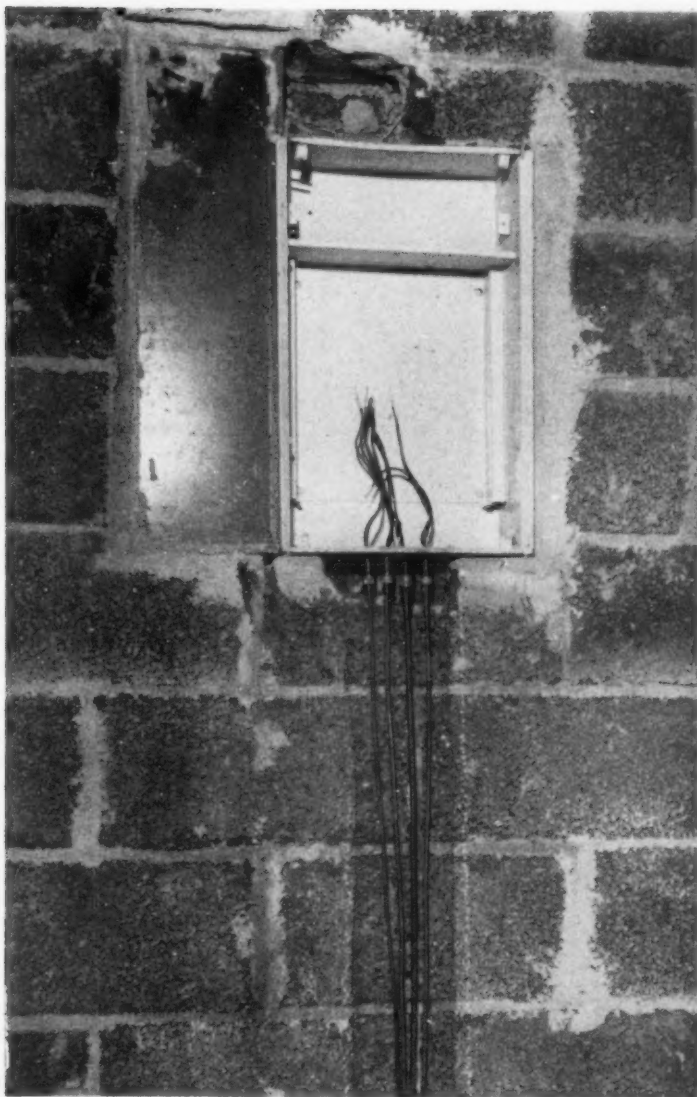
- (a) the conductors are so placed that no one can touch them.
- (b) they must be well clear of any gas or electrical services.
- (c) no vertical metal is allowed to be nearer than 6x in. from the conductor where x is the maintained resistance of the earth connection in inches. Any continuous earthed metal part (e.g. a soil stack) which is near to the conductor should be bonded to it.
- (d) there should be an air space about the down conductor.

Gas installation

Gas is provided as an alternative to electricity in the kitchens. Eight two-inch branches from a 4 in. main rise through the building and each kitchen is provided with three outlets for a cooker, refrigerator and washing machine. The carcassing of dwellings for gas is being installed by the Board for a standard charge.

Relay wireless

A commercial organisation has been permitted to install a radio and television relay system in the building at their own expense. The cables are brought through the ground beam raft in a 2 in. diameter asbestos duct which then rises, by way of an easy bend, to the first floor where there is a 6 in. x 6 in. x 3 in. junction box in one of the



Outside Meter Unit seen from the general circulation area, above. This box contains apparatus which must be accessible to the Electricity Board (see diagram)

Consumer Control Unit for one flat, left. This box contains the fuses and switchgear for the flat and the prepayment meter, should one be required (see diagram). The floor warming fuses will be sealed, and the general services will be controlled by the same triple switch as the floor warming. Thus the only way in which the floor heating may be turned off is by means of the 30 amp. D.P. switch which is under the control of the caretaker and situated in the Outside Meter Unit, or by switching off the entire electricity supply. Note the large chase necessary to make the connection. Floor heating cables in position, below. The jigs are removed as the screed is laid. The polythene over the windows affords weather protection before glazing



progress report



The state of the building on February 8, 1961. The intermediate beams halfway down the top frames are to form viewing slots through the storey height wall of the roof terrace. The general proportions of the finished building can now be assessed.

vertical ducts provided for other services.

From here the installation splits into eight parts which are taken in 1 in. steel conduits in the first floor screed to positions from which risers may serve all the flats on the lower ten floors and six of the flats on each of the upper ten floors. Two of the cables cross the roof and descend to serve the remaining two flats on each of the upper ten storeys.

These cables are mainly in broom or similar cupboards. In each flat there is a 4 in. x 4 in. x 3 in. junction box for connection should the tenant of the flat require this service.

Telephone installation

The telephone cable is brought by the GPO to a concrete manhole, built by the General Contractor at the edge of the ground floor terrace. From this position a 2 in. diameter asbestos cement conduit is provided through the foundation raft to a 1 ft. 0 in. radius bend below the rear wall of the refuse chamber. From this point the cable ascends vertically through the building in the refuse chute area in a 2 in. diameter galvanised steel conduit. At each floor at least 1 ft. 6 in. run of wall has been provided to take the telephone equipment.

At each floor level 1 in. diameter steel conduit is laid in the screed in the general circulation area to each of the flats and terminates with a cap in a suitable position within the flat (mainly at low level in the entrance halls).

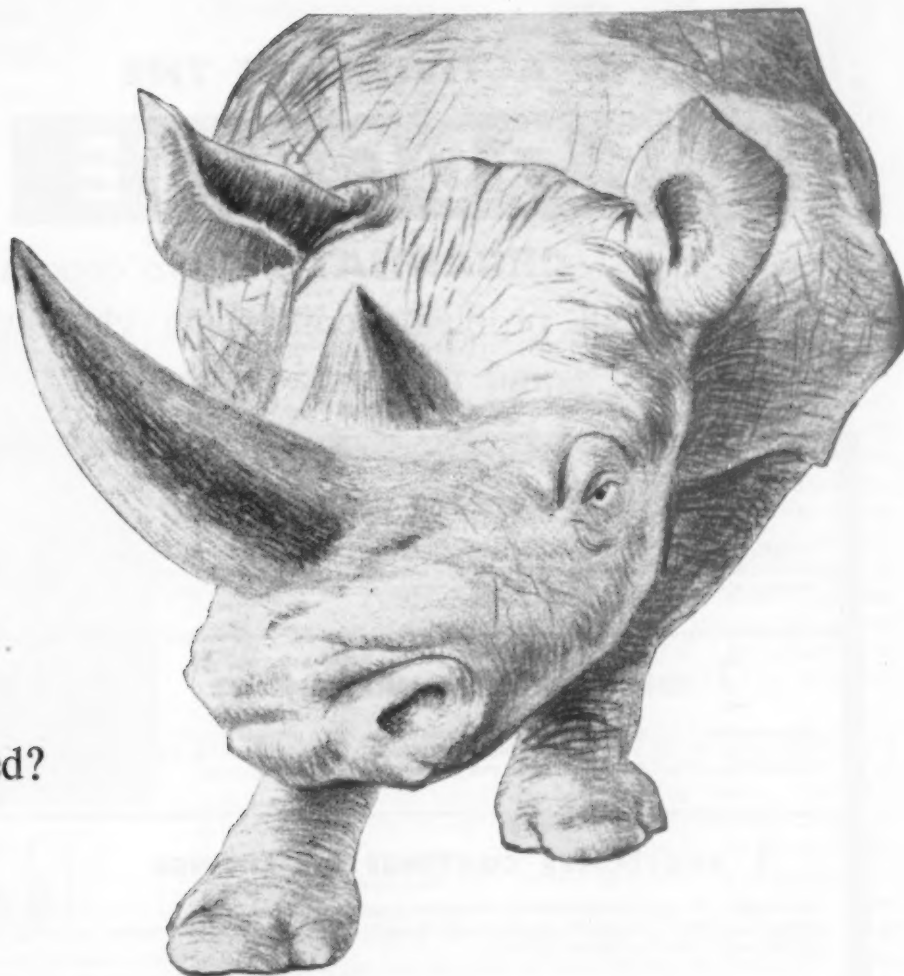
Refuse disposal

In the last report the arrangements for rubbish disposal were referred to, but no comment was made on the number of containers in relation to the number of flats. There are, in fact, eight containers for 160 flats served by four chutes. This provides fewer bins than the normal recommendation of 1 container to 10 flats, but it was thought to be reasonable since many of the flats would be occupied by single persons, so that the use of the chutes would presumably be correspondingly less. Also there would be no ash from solid fuel.

It may be of interest to others concerned with the design of flats to record some figures on the amount of refuse to be disposed of. The figures were obtained as a result of tests conducted by the Director of Public Cleansing (Westminster City Council) in centrally heated flats, and are as follows:—

24 1-room flats, total refuse 1½ cu. yds.
= 2 cwt. per week.
58 2-room flats, total refuse 6½ cu. yds.
= 9½ cwt. per week.
24 4-room flats, total refuse 4½ cu. yds.
= 5½ cwt. per week.

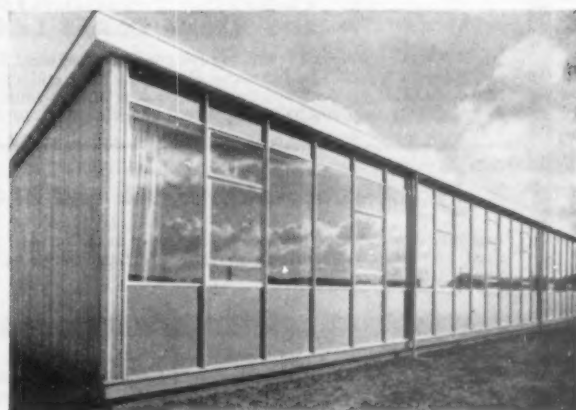
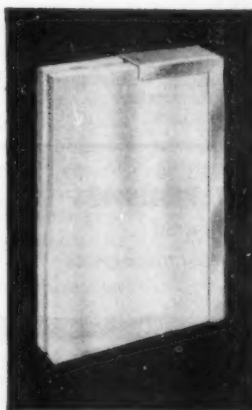
Bearing in mind that typical containers (Paladin) have a capacity of 1½ cu. yds. and that collections are usually made two or three times per week, these figures give a useful guide to the number of containers that may be required.



thick-skinned?

It's one way of guarding against heat loss . . . but a better way is the lighter, 'Hilsulate' double glass clear panels. Effective way of improving thermal insulation they reduce transmittance factor from 1.00 to 0.65—comparable to a $4\frac{1}{2}$ " brick wall.

For full information on the range of 'Hilsulate' panels for window and solid wall areas, please contact our Technical Department.



Standard Triumph International Ltd.

HILLS (WEST BROMWICH) **LIMITED**



ALBION ROAD, WEST BROMWICH, STAFFS.
Telephone: West Bromwich 1811 (15 lines).

London: CHAPONE PLACE, DEAN STREET, W.1.
Telephone: GERard 0526/9.

Branches at: Manchester, Bristol, Newcastle-on-Tyne, Glasgow.

THE ACTIVITIES OF THE **PRODORITE**

ORGANISATION are concentrated
on all problems concerning chemical corrosion
and mechanical wear and tear:—

1 CONTRACT WORK

concerned with chemical engineering; acid proof constructions and industrial finishes; floor laying; complete plant design, installation and maintenance; effluent disposal and drainage schemes, carried out by our own personnel using Prodorite products.



Extensive sub-contracts
in C.E.A. Power Stations

2 CHEMICAL RESISTING CEMENTS

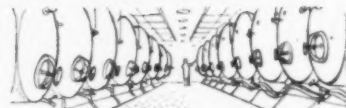
and compounds for all types of industrial application. These cements fall into two basic categories: silicate based and resin based; the two combined ensuring the availability of a suitable cement to fill every anti-corrosive need.



CEMENT PRODOR is used
for these power station chimneys

3 PROTECTIVE COATINGS and LININGS

to storage and transport tanks and pipelines; for industrial processes; and linings to vessels for foodstuffs, beverages and aviation fuels. Available for bonding or spraying on site in a variety of forms.



PRODOR-GLAS lined
cold room tanks

4 PLASTICS FABRICATIONS and RESIN/GLASS LAMINATES

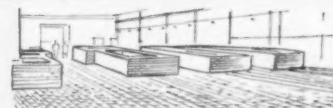
Rigid P.V.C.; plasticised P.V.C.; polythene in welded sheet form for fume ducting, tank linings, fans etc; for chemical, plating, pickling and allied industries. Complete range of ORGLAS laminates having highest possible chemical and temperature resistance. Wide industrial applications, including the food industry.



P.V.C. fabrication scheme
for fume extraction

5 INDUSTRIAL WALL and FLOOR FINISHES

including acid resisting and heavy duty types in the form of paviers, tiles, flags, and insitu, with suitable additives. Also decorative wall and floor treatments for use in flats, hotels, public buildings, etc.



Corrosion resisting floors and walls
in Acid Pickling shop

The products and services of the Prodorite Organisation extend from the manufacture and supply of materials to complete constructions carried out by the Contracting Department to customers' requirements. Prodorite products give complete protection from atmospheric conditions, chemical corrosion and mechanical wear and tear of any sort.



SEND FOR YOUR FREE COPY OF THE PRODORITE BOOKLET

This stiff-cover publication contains 25 pages of invaluable information about the products and services of the Prodorite Organisation. It includes photographs of actual installation and details of the Prodorite research, development and consultation services. Technical information about individual products is also available in leaflet form. Please quote publication reference number : P.101

Write to: **PRODORITE LIMITED** (Chemical Engineers and Consulting Contractors)
EAGLE WORKS, WEDNESBURY, STAFFS., or Telephone Wednesbury 1821 (10 lines).

The BASA Editor
The Building Centre
Store Street
London WC1

Monthly supplement

BASA



HILARY CHAMBERS
an appreciation

One is often tempted to wonder how a small group of students grows in less than four years into an organisation the size of BASA; why the pattern of growth and present reputation of the Association are so different from those of similar student bodies; and, perhaps most of all, how long it can last.

There are, perhaps, two real reasons. Firstly, BASA has from its very inception adhered to definite and *well-defined* aims, and to a carefully-worked-out programme. It aims to weld isolated student groups into a self-conscious whole, and, by tapping the resources so revealed, to ensure for them an education fitting for the life and work to which they aspire. While these aims remain, so will BASA.

But burning ideals and good intentions are not enough. *Someone* must set the programme and *someone* must see that it is followed. The second great strength of BASA has lain in its choice of leaders, and in their ability in turn to draw out the best in others, to delegate authority, and, not least in importance, to seek out their successors; it is interesting that few officers of BASA have been holding executive posts at the time of their election.

Two names stand out above all others: those of Jeremy Mackay-Lewis and Hilary Chambers. Prime movers in the original small group at Liverpool, they became in turn second and third presidents of BASA, following Charles

R.I.B.A.S.?

The RIBA's praiseworthy efforts to think seriously about its own functions in relation to professional activity continue. Sooner or later the Institute's relationship with BASA will have to be examined as well. Some indication of the changing attitude of the RIBA towards us was given by Sir William Holford, P.R.I.B.A., at the prizegiving do on January 24 (the Prizes and Studentships system itself will be discussed in next BASA Supplement). Sir William is with us. Diplomatic as ever, he paid tribute to the stimulating influence of student organisations—the founding of the AA, of architectural magazines, lively student societies, and of course of BASA. Although the enthusiasm of some architectural students has been too much for some schools to cope with (one students society was accused by the tutor of organising a rival syllabus to that of the school!) it is really very encouraging that enthusiasm and initiative are *in* at the Institute.

The President's comments on educational policy tended towards James Gowan's view that a school course should be "damn theoretical," and that organisational gen could only be learned in practice. This loose distinction leads him to the conclusion that "co-operation" between students and the profession is necessary. Just what form this is to take remains to be enunciated. But a realistic framework for a close relationship between schools and the profession might be provided if more schools became centres for research, upon which the profession will increasingly depend as deep-down-functionalism progresses. While the problem that architects should be solving, and students learning how to solve in the future, remains "improving environments," the profession as a whole is having to fight to maintain its functional status.

If the RIBA feels that by helping BASA it is furthering the aims of both organisations—then fine. It is obvious that the RIBA should recruit as much active participation from young members (Students or Associates) as possible—but the fear that any move towards the closer relationship of RIBA and BASA as an organisation will mean some curtailment of BASA's independence may remain, at least until further discussion between the professional and student organisations.

Gastier of Leicester.

Mackay-Lewis by his own personal qualities gave BASA the appearance of maturity before it had actually reached that stage; few chairmen could have salvaged so much from the unwieldy Cambridge Conference ("The Architect's Place in Society"), which illustrated only too plainly the chaos within the profession, but also produced the type-programme which has proved so successful in subsequent conferences.

Under Hilary Chambers the Association actually attained maturity, and the part played by his own clear-sighted vision

and organisational ability cannot be over-emphasised. It was his determination to set a specific starting-point and a definite programme—right or wrong—that gave BASA researches the clear direction which has led through contradictions and cross-considerations to an educational and architectural policy in advance of general thought in this country. The Association owes to his discernment, energy, and powers of concentration a debt which it can only repay by achieving the ideals which he has done so much to formulate.

C.R.M.

This is the first of a series of articles on various schools of architecture in which members of schools, both staff and students, are asked to explain the aims of their course, and the methods by which they hope to achieve these aims. The explanations will be allowed to speak for themselves but it would be impossible for BASA not to make some comment. The first school is the Northern Polytechnic—the largest, numerically, in England. We invited Mr. C. G. Bath, the head of the department, to contribute a Foreword, and students from each year describe their work.

NORTHERN POLYTECHNIC SCHOOL

Foreword

Six hundred students are in training at the School of Architecture of the Northern Polytechnic in North London. Courses are available in the Day School, Part-time Day and Evening School, and the Evening School: these courses enable a student to select the course best suited to his needs. The curriculum is common to each section and all courses have been recognised for exemption from the R.I.B.A. Intermediate and Final Examinations. The Northern Polytechnic Diploma is awarded on the satisfactory completion of the school course and the subsequent passing of the Professional Practice Examination and is accepted by the Architects Registration Council of the United Kingdom as a qualification for registration.

An asset in a school of this size is the availability of a wide range of attainment and personality in the staff and the fertile atmosphere of the competitive spirit among the students.

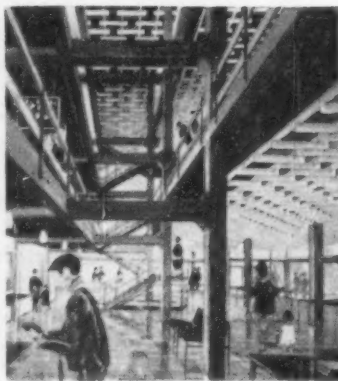
The curriculum is of necessity coupled to a time schedule and consists of a carefully related variety of programmes so that the student may delineate, develop himself and devise. Each new programme, varying in scope and emphasis, is developed from an underlying pattern which is considered to give the widest range of design experience, so that on the successful completion of the course the student will be able with confidence, to make his own contribution to good building.

The tradition of the school since its foundation has been to ensure that not only does a student become aware of his special responsibility to ensure visual pleasure and satisfactory function, but that he is equally responsible for its technological perfection.

C. G. BATH, F.R.I.B.A., A.M.T.P.I.,
Hon.F.I.B.D.
Head of Department.

First Year Course

Whatever the subject the prime requirement of its initial study is to provide the student with a sound basic knowledge to which the results of more advanced investigations can logically be added. Thus, in the first year, programmes are devised to develop design sense and creative ability while at the same time introducing the various techniques of architectural draughtsmanship, programmes generally stipulating the medium to be used in the presentation of the design solution. A full day per week is spent in the Art Studios and work there augments the draughtsmanship introduced in the



A fourth year interior design for a library

Design Studios, and also develops the individual's sense for colour.

Early in the year basic design principles are investigated in the abstract, and proficiency in pen and ink technique is gained; the convention of orthographic projection is introduced coupled with the survey of a building element (a doorway, window or balcony). This two-dimensional expression of three-dimensional form is fully appreciated. The necessity for an architect to think and design in three dimensions is constantly emphasised during the course and a series of weekend sketches are specifically designed to develop this ability. The first is introduced in the first term and consists of an abstract construction in model form using screens of various materials, colours and textures. In the second term an abstract sculpture is designed (to scale) by the individual students and is placed in a courtyard together with one selected tree, paving and grass. The final sketch in this series is an exhibition stand to present to the public a new material (of specified properties)—this design is assessed on structural exploitation of the material, fulfilment of functional requirements and "design appeal."

Throughout the design programmes the student is made aware of constructional limitations. Early in the year the properties and characteristics of a material (stiff paper) are investigated and simple solid geometry studied. From these findings an abstract structure is designed.

Liaison with the Craft Dept. of the college is encouraged and appreciation of actual constructional methods is used in solving the realistic problems set. The first programme of the second

term is the design of a furniture fitment such as is to be used as a partition wall, containing bookshelves, cupboards, drawers, display space with lighting panel and a door. The reality of the scheme is enhanced by the allied weekend sketch in which the designer produces a perspective of the fitment and prepares a colour scheme for the room in which it is to be used, together with actual samples of the materials specified. This programme in the current session—a studio fitment to house equipment, drawings and models—is being treated as a "line project." A prototype of a selection design will be built in the Craft Dept. and subject to a satisfactory trial period all studios will be equipped with them.

In the second half of the second term the major "live project" of the year is commenced and is treated in a very realistic way—surveying of the actual site is undertaken, the client is met and produces a brief, the functional requirements are analysed and finally a design is produced by each student; a scheme is selected by the client and a group of students prepare the working drawings. Eventually the building is erected and used on the site. See AJ/BASA Sup., Feb. 2, '61.

The final term is used for the design of a single-cell building. Students are issued with one of three programmes (e.g. an airport waiting room, an hotel solarium, or a memorial). Students are asked to select their own actual site and to survey it during the Easter vacation. The scheme is taken through a sketch stage, constructional draft, final design stage—at which presentation drawings and a perspective are drawn up—and finally working drawings are produced. This year working drawings of the comparable scheme have been dropped and another design subject of more complexity will be tackled.

Throughout the year there runs a series of sketch designs at the rate of one per term. Last year these were based on a children's zoo, groups of students working out a site layout in model form, individuals designing individual animal houses. Programmes for a café and an entrance—with kiosk—were issued in the second and third terms.

During the course all programmes are made as realistic as possible—clients are found (e.g.: Head of Dept. of Zoology for the zoo project), real sites are used and construction is closely geared to studio work. Lectures are of necessity very basic and stimulate

awareness of first principles and practical limitations (building science and construction), the social and legal requirements of architecture (local government), and an appreciation of general history, as well as that of architecture.

Students are encouraged to think for themselves; references may be given at the beginning of a new programme but it is left to the students to investigate and augment them: sketch books are encouraged and periodically collected for criticism: efforts are made to stimulate awareness of and interest in current developments in architecture and its philosophy: one hour per week is set aside for personal expression and general discussion in a variety of fields. It is hoped that these sessions will have the effect of overcoming self-consciousness in the individual while widening his general knowledge and giving him confidence in verbal expression.

M. HAMMETT.

Second Year

On entering the second year the student has to start thinking seriously about design and function. A single storey house was chosen because the student has intimate contact with domestic design and he knows through experience, the convenient shapes of rooms, the sizes of their contents and the circulation likely to occur. A research booklet depicting examples of houses already designed, and a brief study of aspect and prospect is prepared.

The student is requested to produce a first and second statement and a final "finished" drawing. The schemes are marked and "critted" and the student then knows by the remarks oral and written the faults of his design. At this stage a one day structural analysis is prepared. The student then amends his scheme and develops it, this is checked and the second statement prepared. This is really a rough final and thought should be given to sheet layout, the scheme is finally passed and the student prepares his final drawings which in this exercise were fully rendered.

The student having completed the design from the aesthetic point of view is required to produce $\frac{1}{8}$ in. scale working drawings, $\frac{1}{2}$ in. details and full size details. Rough drafts of these drawings are prepared with constant help from textbooks, and handed in for checking with the tutors, the $\frac{1}{2}$ in. and full size details are then amended and finally handed in. The $\frac{1}{8}$ in. drawings are amended, traced and printed and handed in. In this way the student is introduced to near office practice.

During the first term Art is done one day a week. The Victoria and Albert Museum is visited and the student reproduces a textile in body and water colour—this colour study is continued in the last term.

The next studio exercise is a two storey house, this being chosen for similar reasons to the first and to enable the student to carry on logically in domestic design. This exercise is a design project and excepting a structural analysis no constructional drawings are done. First and second statements are again prepared and checked but the final drawing is an exercise in quick presentation.

By this time the student should feel he is coming to grips with architecture and should be able to arrive at a good solution to a problem fairly quickly. To increase this facility twelve hour sketches are introduced during this term in which the student is required to design and present a scheme in the stated time. The student is encouraged to experiment with techniques.

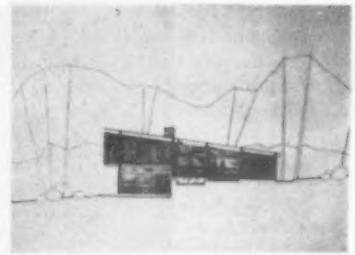
Following on, the student is introduced to multi-cellular planning in the form of a three storey office block and is now confronted with a new problem, i.e. vertical circulation. A lecture is given before the project starts to get the student conversant with staircase design and byelaw requirements.

Running in conjunction with studio work, lectures are given on Construction, Materials, Structures, History and Theory. Many students consider history and theory as being divorced from studio work but I believe this is because the student is not so aware that he is using them. Every time he looks at a building he subconsciously uses his knowledge to assess whether it is good or bad, and why, in the same way it is helping his own sense of design.

The last term is taken up with the major project, town study and precinct planning. The student is first required to make a study of a selected town and is given a site on which the precinct study is based.

The town selected this year is Epping and groups of students make detailed studies of various aspects of town planning. We are then split into groups of three and one student given a library to design, one a community centre and the third a restaurant. These three buildings, while being designed individually by the student, are designed in conjunction with one another so as to retain a similar character and also to facilitate thoughts on the planning of the precinct of which these buildings form the major part. The buildings are large enough to require thoughts on structure. Research is done by the students and existing buildings visited. Each student presents his own building and each group produces an axonometric view of the planned precinct. The three best schemes were chosen and models made of each.

During the last term art recommences. Each student having at this stage completed his reproduction of the tapestry. He is now required to use the tapestry colours in the execution of a modern textile in the same medium. Having done this the student then



A third year two-storey house project. In future it will be undertaken by second year

produces an interior decoration scheme for the living area of his single storey house utilising the same colours.

HOWARD G. KIRBY.

Third Year

The first project involves a large-volume building problem, which is made as realistic as possible—a site within easy reach of the Poly. being chosen. Wherever possible experts on the project type are invited to lecture (Stephen Joseph and Peter Jay on the theatre-in-the-round, for instance).

Working drawings and perspectives or models are prepared in the spring term. The last few weeks of autumn term are occupied with a 2-storey house project, which provides a further exercise in domestic design. Constructional design exercises and 12-hour sketches take up one day a week in the first term. This enables the student to experience problems of planning, form, and expression of a project during one day, which helps to promote the facility to make quick decisions.

During Christmas vacation suitable sites are found by students for their Intermediate Design thesis projects—subjects are chosen in consultation with design staff. Preliminary studies on the site of basic problems involved are made and a series of lectures in the autumn term upon the general approach to design problems forms a basis for study.

Design solutions are prepared in the end of the spring term and finalised in the summer term.

Summer Term

A quarter of school time is spent in lectures—Building Construction, Hygiene, Materials, Theory of Structure. Students are encouraged to apply the principles learnt in lectures to design projects—and problems are discussed with the lecturer concerned.

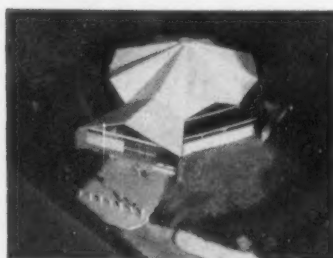
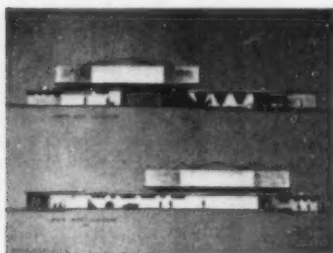
Landscaping lectures are held during the spring term, and there are also architectural history lectures once a week dealing with the 19th and 20th centuries.

Criticism and discussion on completed designs form an important part of the year's work. Architects from outside the school are sometimes invited to give criticisms (Peter Moro reviewed and critted the theatre in the round schemes).

A. N. MORROW.



Models and an elevation of the theatre-in-the-round project by third year students



Fourth Year

The fourth year carries the student—after having successfully acquired in three years the fundamentals of design, yet confused as to what is really architecture—from the simpler to the more complex requirements of buildings. The student must give conscious thought to the limitations imposed by constructional bye-laws, e.g. fire hazard restriction to height in built up areas, etc., and eventually realises that architecture is not the skilful presentation of drawings, nor even the product of the architect alone, but the harmonious interdependence of architect, engineer, builder, district surveyor, planning authorities and client with the architect as designer and co-ordinator.

Fourth year is the year when the student consciously or intuitively begins to form definite views on architecture, views which will naturally be determined by the student as a person and his sense of "true human values," and upon these his architecture must take root and find expression. It is the year of transition and the whole curriculum of the year is geared to this effect.

There are two design schemes in the winter term in the instance under consideration—a multi-storey office block and a conference hall, the design of the office block coming first. The student having a fair knowledge of horizontal circulation in open sites is plunged into the design of multi-storey offices on a very restricted site in a built up area. This is the first full problem on vertical circulation.

In this case it was felt by many that a visit to a recent, well-designed office block and actual discussion of the problems with the architect, for instance, would have proved an invaluable addition to research notes and have brought the problem nearer to reality.

Lectures did not always tie up with studio work, but generally seemed to follow the design problem; this may have its merit in encouraging students to find data for themselves but it limited the time available for further research. The conference hall was a most exciting scheme; semi-formal in character and with a varied range of accommodation, it acted as a foil to the office block. This scheme brought us to the end of the winter term.

The summer term is taken up with an interior investigation in colour for a period of three weeks, the finished work being entered for the "Walpamur Prize." This was followed by a further design involving more complex planning of circulation problems, as well as architectural character in relationship to functional and psychological requirements. For instance, the last subject for this design was a crematorium, the full impact of which was not generally appreciated until after the design stage. Moreover, levels were given only as contours to a small scale—students tended to adapt levels to suit their

scheme instead of vice versa.

A scheme generally embodying restaurant and kitchen planning follows after examination week and brings the term to a close.

A number of students joined us at the beginning of the year to take the final course. This stimulated the year and led to the realisation that our "crits" were perhaps not achieving as much as they might have done.

Students were not encouraged to explain their drawings during "crits," and thereby lost an opportunity not only of gaining experience in presenting ideas in public in a reasonable manner, but also of learning how other students had approached a particular problem. Certain misunderstanding of intention also arose during "crits" for this reason.

Drawings are invariably considered in order of assessment, that is from "mention" to "fail"; this finality understandably restricts critical questions from students, and more benefit would perhaps be gained if the official assessment were placed on drawings after criticisms.

J. d'A. THORNLEY
HARRIS MITCHELL

Fifth Year

Some ex-full time students of the Northern Polytechnic school met recently to discuss their architectural training in the perspective of subsequent experience. The following is an attempt to give coherent, if brief, form to the many ideas expressed.

The substance of architectural education is the provision of technical knowledge, the development of administrative ability, and the cultivation of the student's own capacity to handle all this varied material in design. The former are the data; the latter their application. All are means; actual building the only end.

Technical knowledge consists of building techniques and servicing, economics, sociology and ergonomics. It was considered that a fairly broad grasp of structural technique and services had been obtained, but generally with too much emphasis on "fact cramming," and with too little on their implications. The trees often concealed the wood. A greater amount of shop and site experience would much have increased the value of the instruction given. The vital discipline of economy was much under-stressed, and too frequently ignored altogether during studio programmes. This could be compensated for only by constant emphasis from the first year onwards. A cost-breakdown of techniques and materials before design stage would be of infinitely greater value than a rough cube estimate made afterwards.

Sociology and ergonomics—admittedly rather specialist sciences, though none the less vital—were generally much ignored. An outline appreciation of

these subjects, at least, is essential, for any development beyond the elementary stages.

The developing of administrative ability and contractual technique in the student is largely catered for during the year prior to the Professional Practice Examination. Experience of site and office conditions and methods of procedure, however, would be of value before this stage. Vacational work may in part compensate this lack of experience; but it must be remembered that five years of "nothing but architecture" can hold dangers paralleled in Somerset Maugham's short story, "Episode"!

These aspects of architectural education did not cause great dissension in the discussion: the difficulties of presenting a vast amount of diverse information are readily appreciated. However, whether the examination system itself is viable—in its placing of greater emphasis on the assimilation of facts, than on knowing where and how to find them—needs closer analysis.

The majority of the group's discussion centred on the method of the cultivation of the student's ability to handle these facts in application. In this, the etymological meaning of "education" ("Educare"—to draw out) was supported. Accepting that students are congenitally wilful, the group were convinced that the ability to design can only develop through sympathy, and vigorous and enthusiastic discussion. It cannot be imposed upon a student. The complexities of this problem are legion, and embrace student-staff relationships, and the need to assess the whole function of studio work.

To the student, ways and means are paramount. For him the significance of the design he produces lies in what he has learnt in its development; great emphasis on the success of the end product is unreal. *A mistake from which he has learnt is of far more value than a success from which he has not.* For this reason, it was agreed, adjudication would be more significant if the student were a verbal participant. On the lines of the architect-client discussions which he will encounter in practice, this participation would assure him that the disciplines and methods he had followed (possibly obscured by simply immature ability) could be more readily appreciated and their validity more sympathetically and accurately assessed.

The student's ability to work in a team—the usual office condition—needs fostering in the early stages of his schooling. However, unless strengthened by a common approach within the group, teamwork is likely to be a severe frustration. A group which has formed by its own volition, will, with encouragement, prove far more successful than one selected alphabetically.

Aesthetic theory, being the most subjective of architectural considerations,

is generally the most heatedly argued. The student's distrust of most accepted aesthetic convention is notorious, and yet not unhealthy. An independent and considered aesthetic, however misguided, is surely at school stage of greater value than any conventional dictum accepted without thought. Given time, the wildest views become moderated—or popularly accepted. Above all, sympathetic enthusiasm, vigour and the sense of reality in work are vital. With these, anomalies and difficulties are easily overcome: without them, nothing can succeed.

ROBERT GOODYEAR.

Conclusions

First impressions are not always borne out by prolonged observations, but they often contain more than a grain of truth, and when they are as strong as those left by two short visits to the Northern Polytechnic one is reluctant to dismiss them out of hand. There can hardly, for instance, be any doubt about the enthusiasm and conviction of the first year tutors, and still less of the enormous potentialities of a college containing facilities for virtually any type of training from art to physics and architecture metaphorically, at least, 'under one roof.' Yet there is just as strong an impression that the initial enthusiasm is not carried throughout the school, and that integration between the various "faculties" goes little deeper than occasional use of each other's workshops and studios. One can only sympathise with a college forced to work to such a tight time schedule, and whose facilities are buried amid such a bewildering rabbit-warren of corridors and staircases; but to the casual visitor it was incredible that a major school of architecture should allow itself to exist amid a green cream colour scheme as drearily institutional as that used almost without exception in the studios and corridors—which are individually no better and no worse than the general run of things.

The depressingly institutional nature of the building seems to have left a mark on the school itself, with a resulting formality and lack of drive which could not fail to detract from the many good features. The first-year curriculum, crammed with productive and often imaginative methods of introducing basic techniques of architectural thought and practice, has the full confidence of the students, and could well act as a model to schools which spend these formative months in painful drudgery and interminable lectures; in view of the good beginning the formality in both design and presentation in the later years is all the more disappointing.

This formality seems to spread to the staff-student relationship and the general conduct of instruction. Students have genuine complaints about the ineffectiveness of mass "crits" and the

misunderstandings which inevitably arise from working on drawings models alone, but they seem to have taken little positive action to put things right; again, the reported reluctance of the varied and experienced staff to reveal their undoubted differences of opinion in public will hardly take in perceptive students, even at the "tender" age of 18; nor is the constant, if benevolent, surveillance of studio work by a supervisor (complete with lab desk and raised dais) likely to develop the independence of self-reliance which any university-grade education should give.

Even so a commendable number of the usual pitfalls have been avoided: architectural history, integrated closely in lively lectures with general history, is not the formalistic drudgery it can so easily become; models are used extensively, and sometimes exclusively, and it is almost impossible to hoodwink the staff by sheer "bull"; the approach to the difficult problem of three-dimensional thought begins logically in first year with simple solid geometry of "paper sculptures"; work on live projects in craft and building workshops gives students the feel of actual building, and their colour sense at least is sharpened by hours in the art-studios. But on the debit side the lack of written exercises showed only too clearly in an inability to express coherent thoughts concisely on paper; this problem could perhaps be partly solved and the high percentage of time spent on potted lectures—up to 30 per cent in some cases—simultaneously reduced if students were encouraged to rely more on their own ability to extract the relevant information from the well-stocked library.

Moreover, the dubious value of "competitions" as an educational principle—with its inevitable encouragement of eccentricity of superficial exhibitionism—becomes even more dubious when balanced by so obvious a lack of co-operation of community spirit. There is, for instance, little or no intermingling between the various "years," though heaven knows they are close enough! The Students' Club seems to achieve little more than self-perpetuation; and the integration between the full-time and part-time classes is nebulous to say the least, though this is by no means wholly the fault of the school of architecture.

The potentialities of this school are enormous; one can only wish that the enthusiasm shown in some quarters would spread even so far as a new colour scheme; this at least would show a revival of the spirit and drive which at the moment seem so lacking, and which are so essential if the great physical and organisational difficulties of the school are to be overcome. We wish the new Head, Mr. Bath, all success in a difficult task.

C.R.M.
M.C.

LETTERS

SIR: Dreaming of the white city, that place of mythology described with such relish in CIAM's early sagas. Encouraged by the monthly illustrateds, I travelled south to Casablanca, the name is at least suggestive, to see for myself. The timing was propitious, lining the boulevards in preparation for Nasser's visit with Arabs in their indigenous duffle coats.

As degeneration becomes an ascendant phenomenon of increasing industrialisation, Morocco and osculant regions seem to enjoy dependent, yet interestingly regional, rises and fallings in material and moral cargo. Let our young epicureans decamp for the enjoyment of these subtle flavours of decay, invigorated here and there by the dictates of nationalism, and distinguished by the slowly subsiding colonial shelf.

Precipitated one evening into the airport, I readily appreciated the paradox. Those stallions of law and order, the polizia, standing in the customs, were dressed typically in the pseudo fascist manner: boots and belts, guns and prominent peaked caps, but exuding the enervating smell of cheap toilet water, their expressionless faces rendered anonymous and sleek by dark glasses. To extend the analogy, I once saw one horribly disturbed, in the rush to Nasser, losing his glasses, cap and wig! Thus the architecture. In common with the people, the heroic motive is despoiled by lack of discipline and vigour. Casablanca has no precedent; seemingly white and appetising it rises *prima facie* tall and uncompromised. In the later work it is evident that all the "rules" of the modern movement are known; the de Stijl vocabulary is apparent but with a beat. Certain buildings have a "sex appeal"; their rich tenants casting the odour of opulence about them: swimming pools on the fourteenth floor, restaurants and bars, casinos and night clubs, but in general they are scarred by exotic and sensual motifs, drab coarse construction, displaying the very best sort of bad taste the French colonials are consistently capable of.

Farther afield in the large environs the white villas of the thirties are *nouveau* and dull, punctuated by the more recent "new vogue" structures which vie with one another to have the most complex shapes and construction so that they might display the most functionalism in solving them.

On the other hand, the modern "Arabic" buildings—i.e. contemporary traditional—are very pleasing. These are limited to restaurants and village mud huts, the modest proportions and quiet texture foil the erotic vegetation—banana, orange, cactus, palm.

The restaurant, like the palace, has an exterior appearance that is deceptive, like any other mud hut, but the interior is immensely rich, colourful to the

extreme; the courtyards paved in ceramic tiles, perhaps blue and white; the ceilings carved into extraordinary geometric patterns and painted in vivid enamel; arches of traditional and subtle shape, fretted with fantastic skill; walls of mosaic and floors of glazed tiles; brass arabesques, velvet green cushions, ornate cutlery, carpets, and in all achieving an atmosphere of light simplicity. Next door perhaps, under the neons, alternating from French to Arabic, and cantilevering over the sea, a European restaurant will appear by bad chance over-indulged and self-conscious.

The really interesting buildings lie beyond the "white belt" and are consequently brown of the earth. Mud dwellings, temporary and nomadic, rising and falling with the seasons. Clustered, parasitic and struggling upwards, allowing the odd channel of light to crevice between them. These are the streets and the markets woven and laced into shape over the years and providing the most exciting townscape imaginable, using standard stone and mud and a fairly consistent right angle. Other buildings for the Arabs are scattered in groups; immaculate blocks in white plaster, immensely rectilinear standing starkly in the brown treeless earth. It is difficult to estimate the Arab reaction to their environment, and it is therefore difficult again to estimate the success of the buildings. Some of the natives live in appalling conditions but they appear impassive to their surroundings, having as it were, metabolisms like cold-blooded, creatures, infinitely adaptable, but I did notice one thing missing, and that was the lack of adequate donkey parking facilities on the new estates.

ROGER POLLARD

SIR: As the Belfast school of architecture has not yet been considered worthy of recognition by the RIBA its standards are such that it is incapable of producing good architects. This no doubt will inevitably be reflected in future buildings of the province.

I feel very strongly about this problem, and often wonder if the RIBA are going to continue to evade the issue and let students of architecture drift through this school as they have done in the past. Is either the Ulster Society of Architects or BASA going to attempt to solve this very urgent problem?

It must be made clear that even the recognised schools leave much to be desired and require a radical revision of their whole educational system.

I should also like to point out that in this apparently unknown case of Northern Ireland the school in question not only fails in its objective but also fails to justify its existence. Would it not be better if it were non-existent and those who are at present being subsidised to attend it by their local authorities were given equal financial

aid to attend a recognised English school? If this were so, it is more than likely that the majority of the students at present training in Belfast could take a recognised course of education, qualify as architects, and eventually return to Northern Ireland to practise. To close a school, I admit, would be accepting defeat on the part of the authorities concerned, but would it not be better to do so than to continue as a school which deprives all students who enter the right of an architectural education to which they are entitled and could otherwise be receiving elsewhere.

Perhaps another question which merits consideration is that of the post-graduate. Other than the three-year full-time intermediate course there are absolutely no facilities for either (i) town planning, (ii) landscape architecture, or (iii) post-graduate research. This no doubt lengthens the return of those students whose desire is to study these subjects, and also discourages the more superior graduate from taking up a post in the country because of inadequate facilities for further study.

As I inferred in my last letter and can only reiterate that for those unfortunate students who cannot finance themselves during the early years of their training the question of attending an English school does not arise. Potential architectural talent exists and varies in Northern Ireland as it does elsewhere in Britain, but is it going to continue to be suffocated and prevented from development all because of the stagnant atmosphere in this school and the present environment of the student, who cannot possibly become an architect under such circumstances?

If the product of an architectural education be architecture the present system of architectural education in Northern Ireland requires complete abolition and a new one established based on contemporary requirements.

Yours, etc.,

Hull EDWIN JOHNSTON

DIARY

Liverpool School of Architecture

- March 10 *Romantic Functionalism, or How to Make the Client Suffer*, by Prof. J. Page of Sheffield University
 March 17 *Fantasy or Richness*, by Stefan Buzas
 March 18 Society Dance

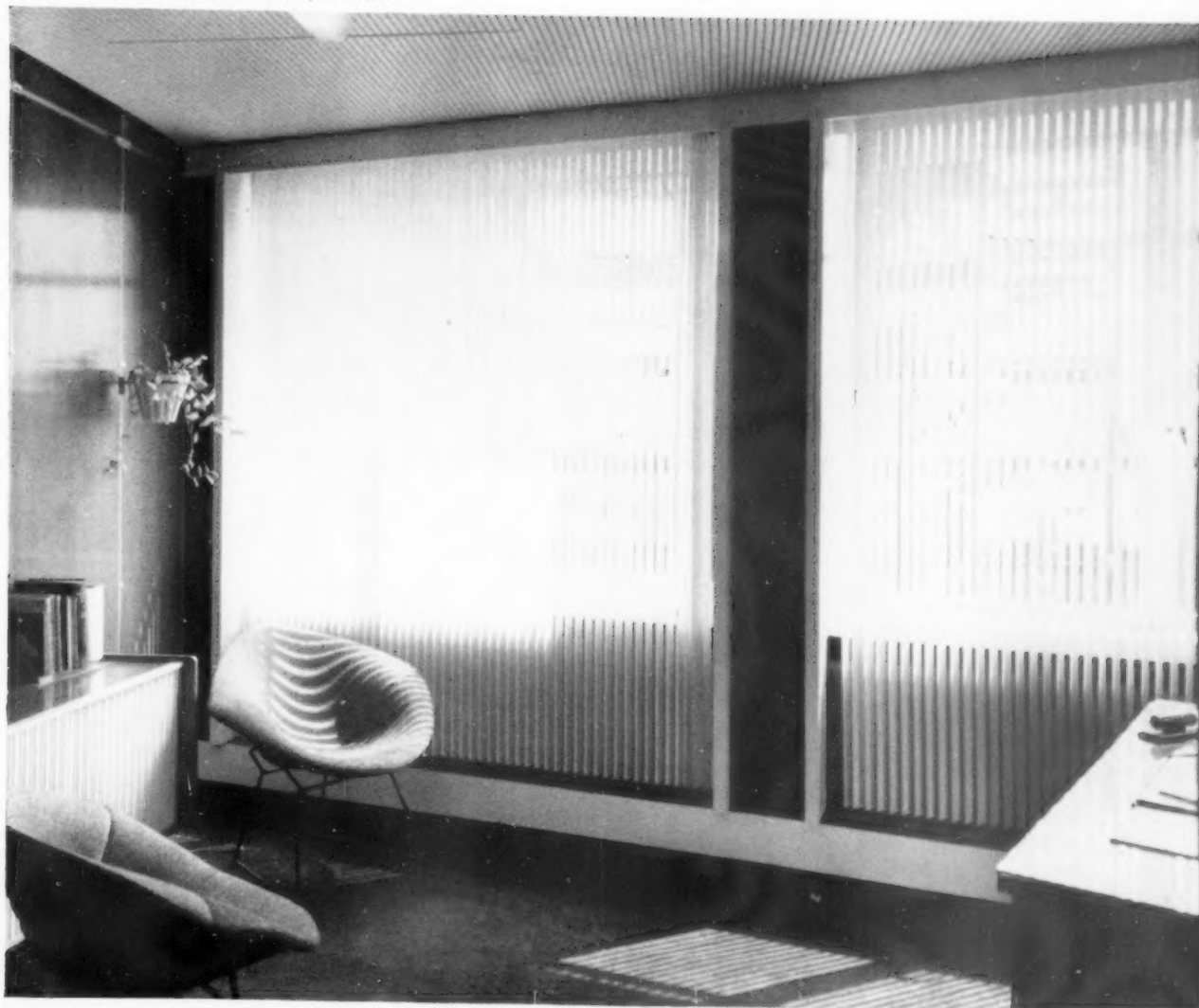
AA

- March 8 *Nervi Buildings for the 1960 Olympics*, Paulo Sica. 6.15
 March 15 *The Work of the Services Consultant and his Association with the Architect*, by Thomas Smith (of Stenson, Varming and Mulcahy). 6.15 Admission by ticket only
 March 22 *Holiday in Greece*, by Lesslie Watson. 6.15

working detail

WINDOW: OFFICES IN LONDON, E.C.4

J. M. Austin-Smith and Partners, architects

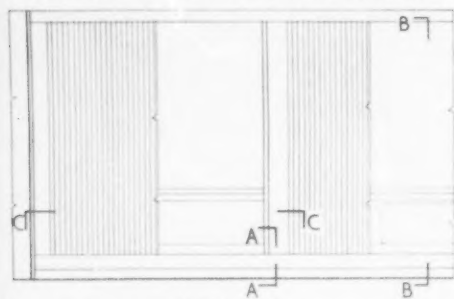


Although this detail does not include the window as such, it is an interesting example of the handling of a number of items associated with a window opening in a modern building. Note, in particular, the association of pelmet and skirting board as top and bottom members of a frame which encloses the vertical blind, and the careful masking of the under-sill radiator.

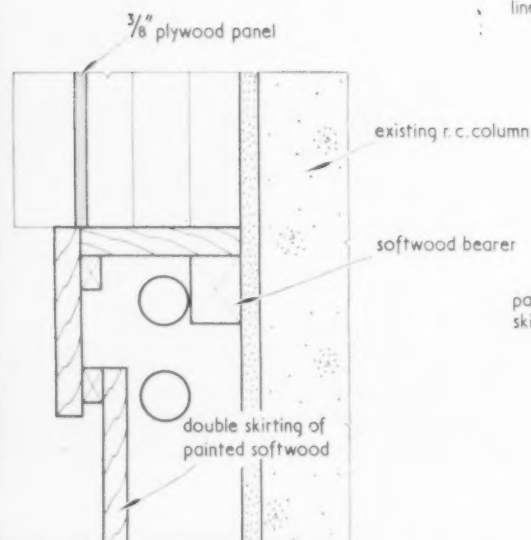
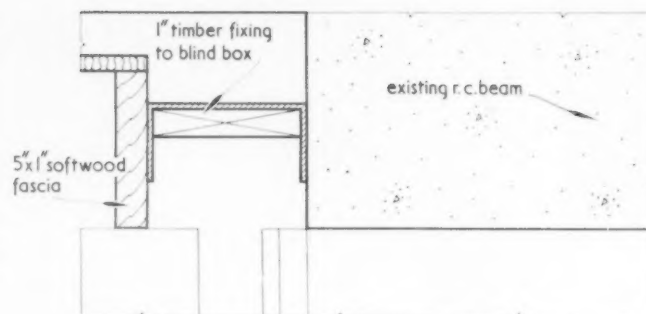
working detail

WINDOW: OFFICES IN LONDON, E.C.4

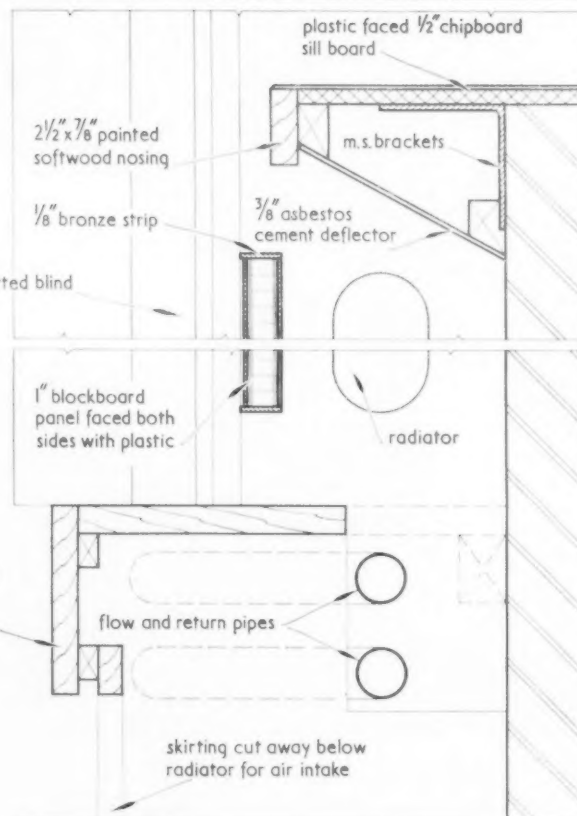
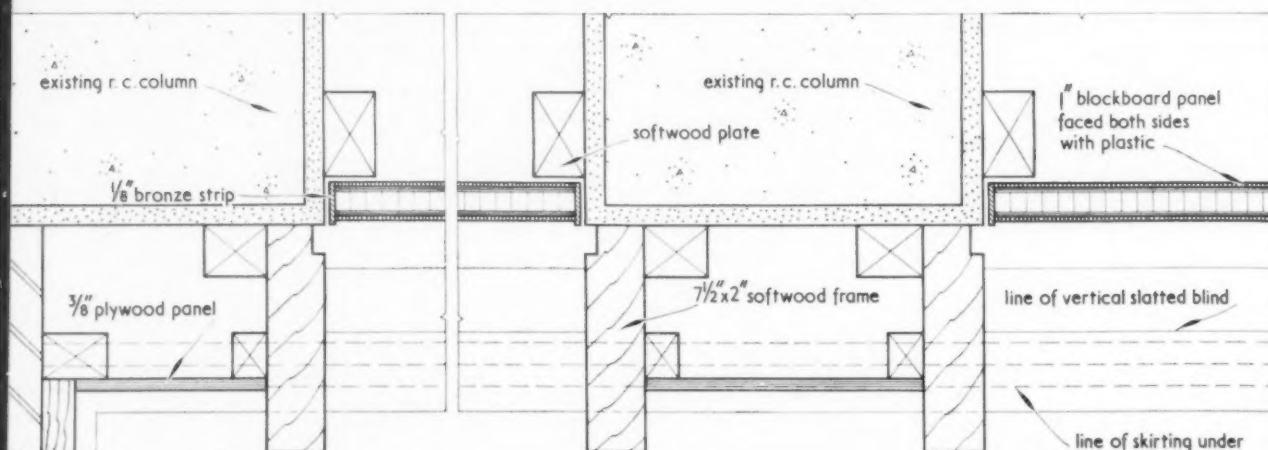
J. M. Austin-Smith and Partners, architects

ELEVATION. scale $\frac{3}{16}'' = 1' - 0''$ PLAN. scale $\frac{3}{16}'' = 1' - 0''$ 

SECTION.

SECTION A-A. scale $\frac{3}{16}$ full size

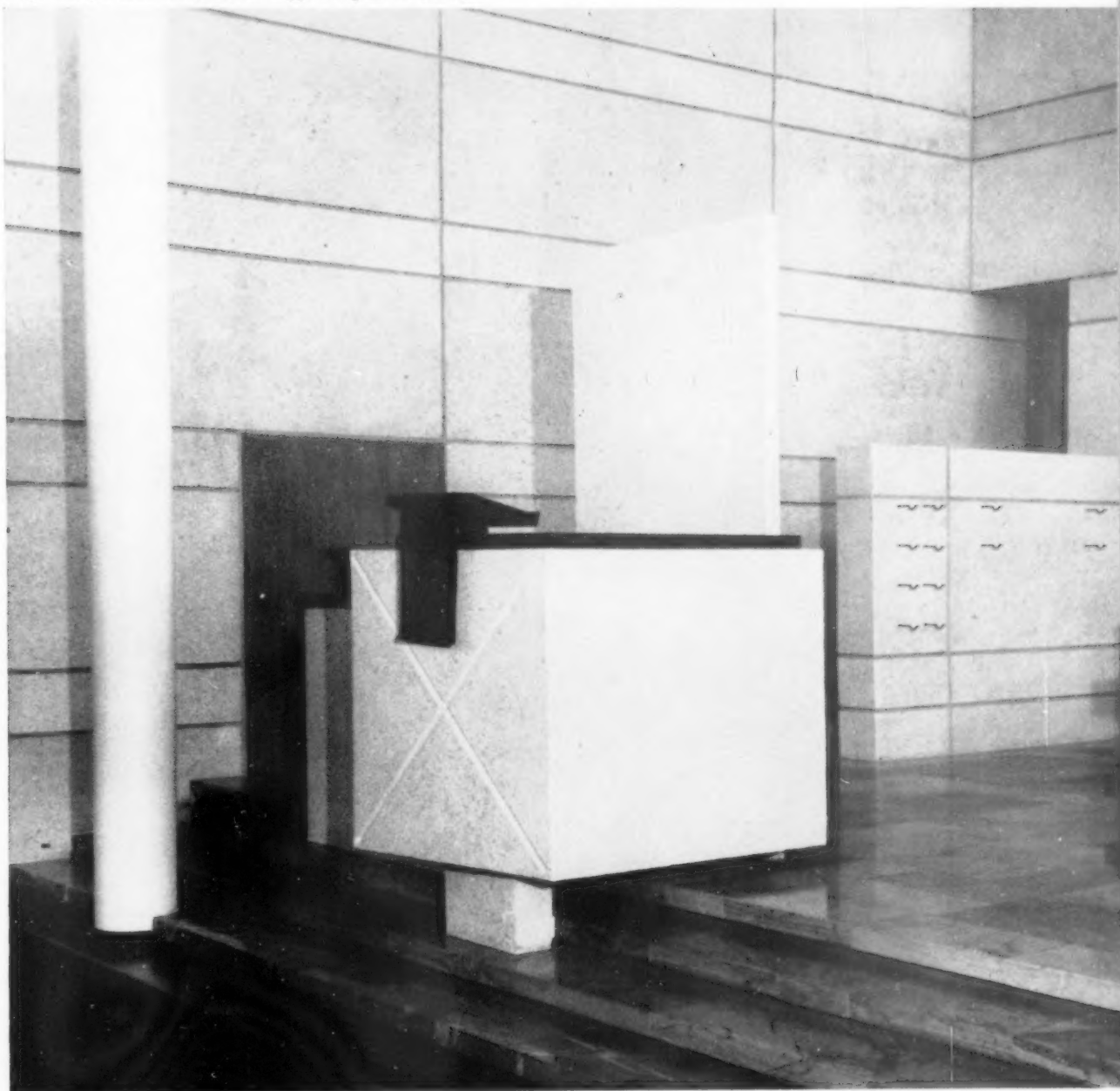
line of vertical slatted blind

SECTION B-B. scale $\frac{3}{16}$ full sizePLAN AT C-C. scale $\frac{3}{16}$ full size

working detail

PULPIT: CHURCH IN LAUTTASAARI, FINLAND

Keijo Petäjä, architect (material supplied by H. S. Sami)

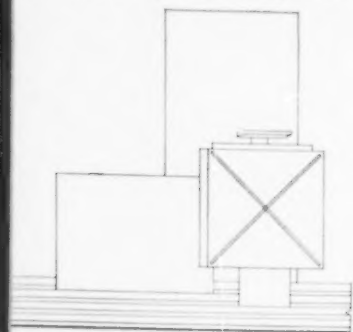


This pulpit is composed of a small number of cast stone units. Note the adjustable lectern held within the thickness of the teak rail, the vertical sounding board and the casting of the electrical wiring within the stone units.

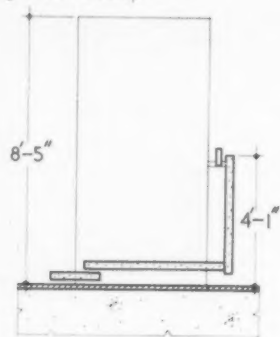
working detail

PULPIT: CHURCH IN LAUTTASAARI, FINLAND

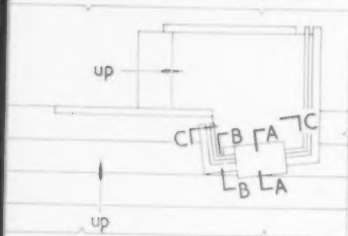
Keijo Petäjä, architect (material supplied by H. S. Sami)



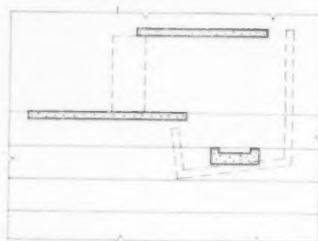
FRONT ELEVATION. scale $\frac{3}{16}''=1'-0''$



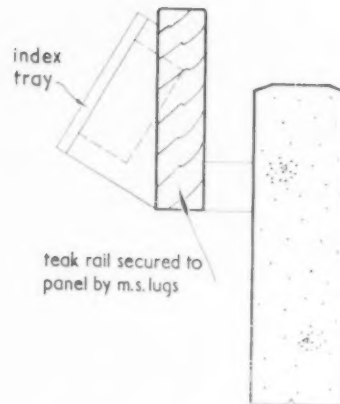
SECTION.



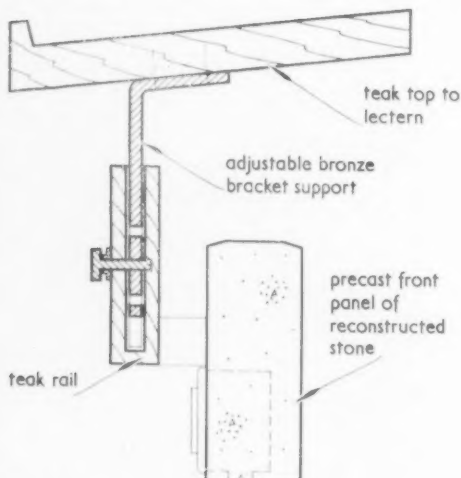
PLAN. scale $\frac{3}{16}''=1'-0''$



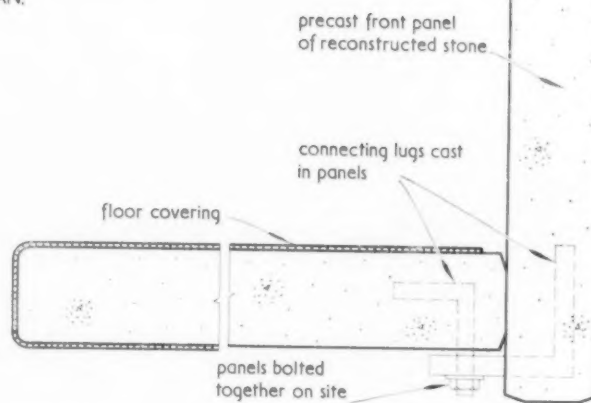
FOUNDATION PLAN.



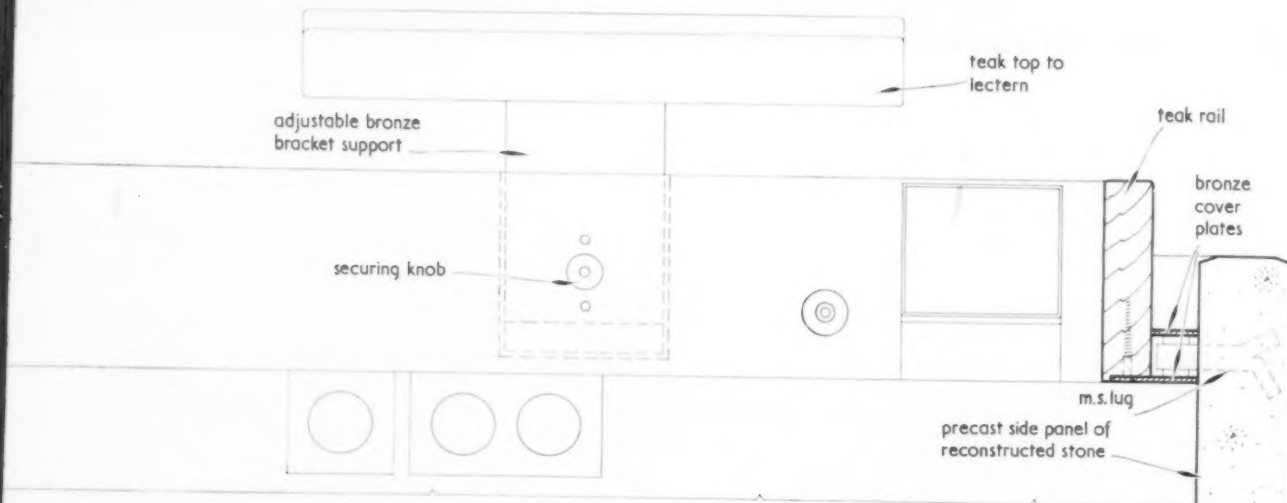
index tray
teak rail secured to panel by m.s. lugs



SECTION A-A.

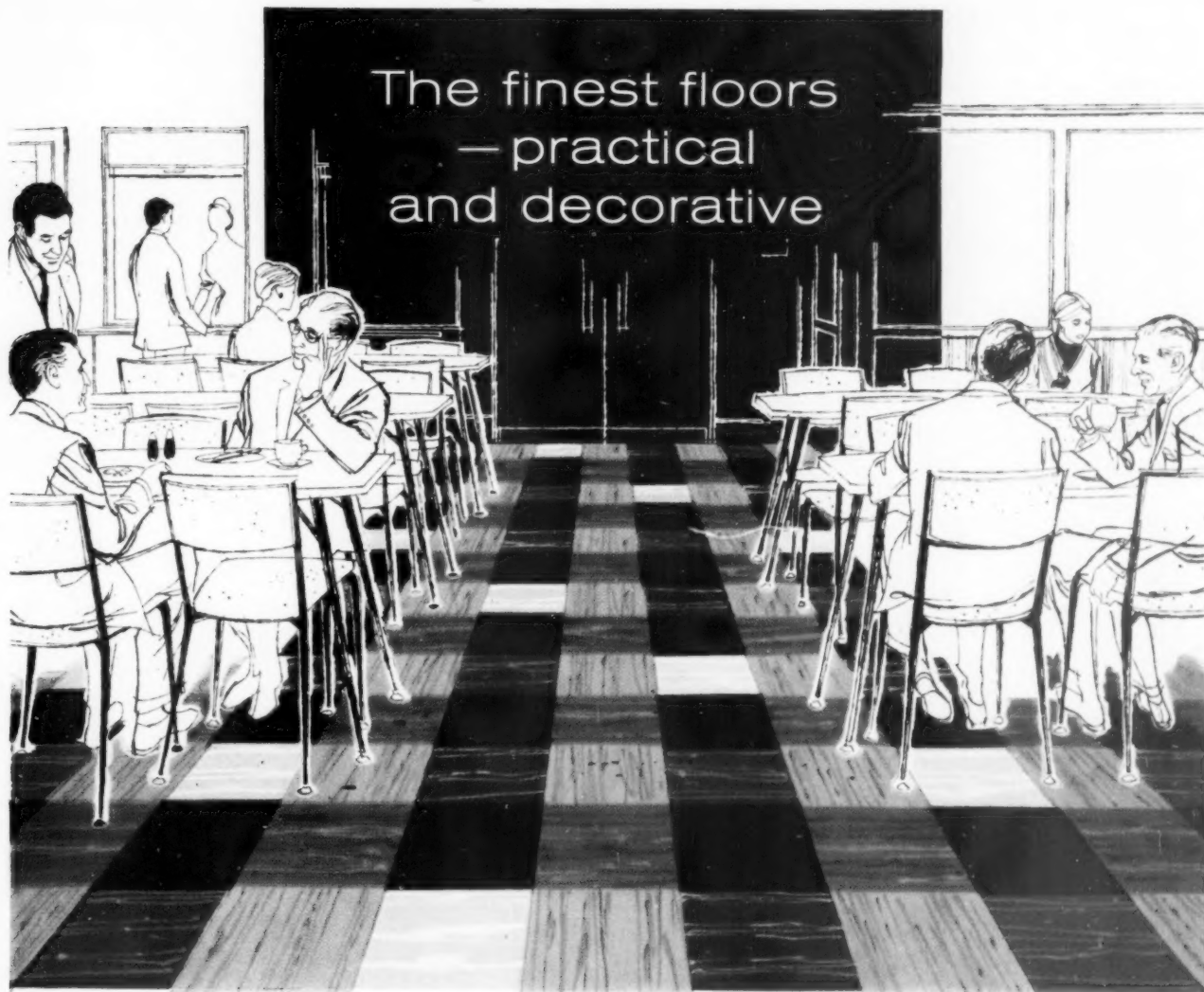


SECTION B-B. scale $\frac{3}{16}$ full size

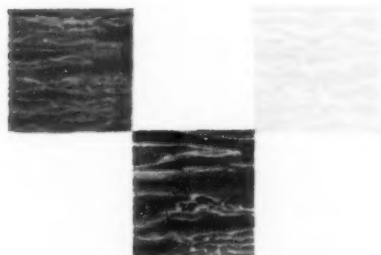


SECTION C-C. scale $\frac{3}{16}$ full size

note: figured dimensions in feet and inches are approximate



SEMFLEX TILES WERE CHOSEN FOR THE STAFF RESTAURANT,
COUNTY FIRE OFFICE LTD., REGENT STREET, W.1.



This is only one of the wide range of Semtex flooring materials, giving unlimited scope for any application.

- * Excellent choice of decorative colours
- * Backed by the vast research facilities of the Semtex Organisation. Expert assistance on pre-treatment and other flooring problems
- * Skilled laying service through Semtex branches or approved contractors throughout the U.K.
- * Contracting facilities also available throughout the world
- * Design consultancy service

For further details please contact Semtex today

IMAGINATIVE MODERN FLOORING



4 SEMTEX HOUSE · 19/20 BERNERS STREET · LONDON W1 · Telephone-LANgham 0401

en/le/s/le/s

extending the range...

Now, to carry the principle of 'building with insulation' a step forward, we offer you...

THERMALITE YTONG

**LARGE SPAN LIGHTWEIGHT ROOFING,
EXTERNAL AND PARTITION WALL UNITS**

Thermalite Load Bearing Insulating Building Blocks have become standard practice throughout Britain. Now, alongside these, a new range of roofing and wall panels have been developed and perfected. To satisfy the demand and ensure good delivery a separate manufacturing unit has commenced production.

Like Thermalite Blocks, these units are manufactured from cement, sand, pulverised fuel ash and steel reinforcement adequately protected. They have a dry density range of 30-40 lbs./cu. ft. and a low 'U' value.

Speedier erection

The units will be delivered and erected by trained Thermalite teams.

"Made to Measure"

Units of correct span and thickness made to specific requirements.

No need for screeding

Superior fire resistance.

Ease of fixing

Units have a smooth surface and can be left undecorated, but should finish be required this can be easily applied.

A **LAING** COMPANY

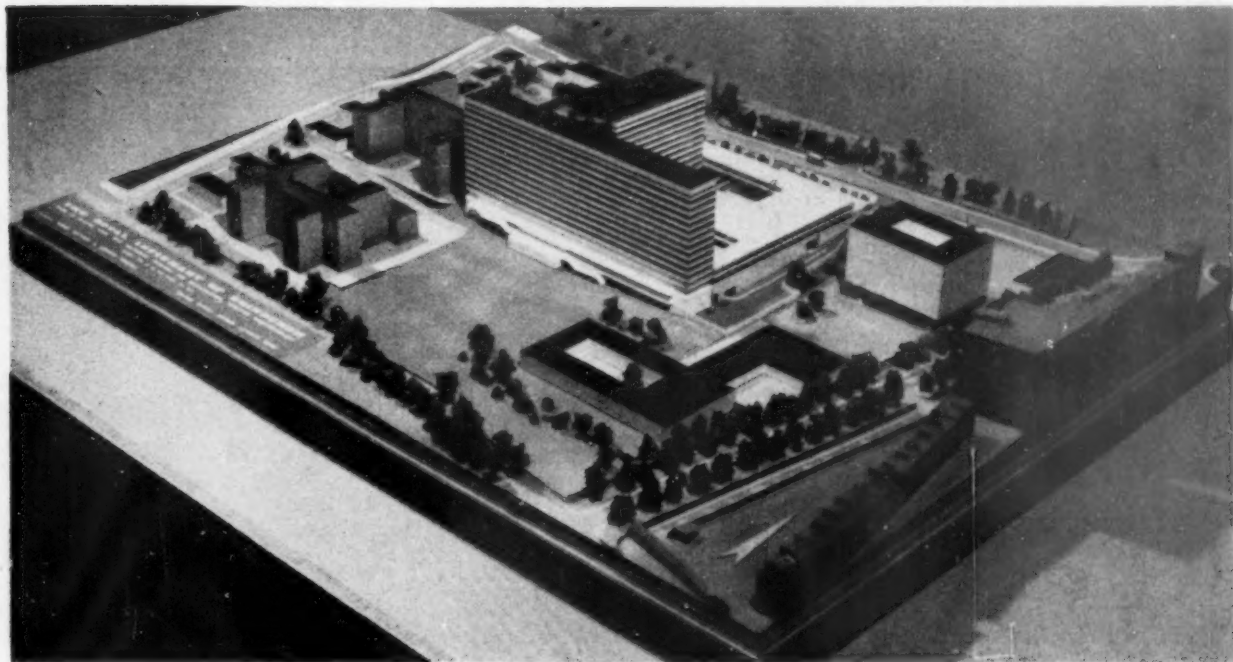
For full technical details please write to:-

THERMALITE YTONG LIMITED

Hams Hall, Lea Marston, Sutton Coldfield, Warwickshire.
Telephone: Coleshill 2081

Reconstruction of the Royal Infirmary, Edinburgh

This is a block model prepared to show the feasibility of re-building the infirmary on its present site. The present intention is to provide for an 800-bed teaching hospital at a cost of between seven and nine million pounds, and over a period of about six years, replacing a number of existing buildings which will be demolished. The architects are Robert Matthew & Johnson-Marshall, with Professor Richard Llewelyn Davies acting as consultant.



In 2061 A.D.

... even in 2161, and again in 2261 a roof covered with Broughton Moor Westmorland Green Slates will still be giving complete protection against the elements and remaining proof against atmospheric and chemical corrosion. Picturesquely hued, rock-hard in consistency and ruggedly surfaced Broughton Moor are the aristocrats of the roofing world. In Light Sea Green, Olive Green and Mixed Shades they are available from stock, immediately.

SPECIFICATION The roof to be covered with Broughton Moor Light Sea Green Best Quality (coarse grained) Westmorland Slates, to be obtained from the Broughton Moor Green Slate Quarries Ltd., Coniston, The Lake District, Lancs., in random sizes about 18" to 9" long, proportionate and random widths, laid to a 3" lap in regularly diminishing courses from eaves to ridge. Each slate to be securely fixed by two stout copper nails and wide slates are to be used on the hips and verges.

ALTERNATIVES: Seconds, Thirds, Special Peggies; Olive Green and Mixed Shades.

RIDGING: "Bromoor" purpose-made of crushed and moulded slate from the same veins is recommended.

Broughton Moor Light Sea Green and Olive Green Slate is eminently suitable for interior or exterior use where great durability and unique appearance are of paramount importance. Architects may specify its use for Facings, Foundation Stones, Paving and Flooring, Steps, Cills, Shop Fronts, Surrounds, Pilasters, Fireplaces, etc. Ask for these Technical Pamphlets: 1. Floorings, 2. Facings, 3. Copings, 4. Cills, 5. Riven Face Slabs.

By the

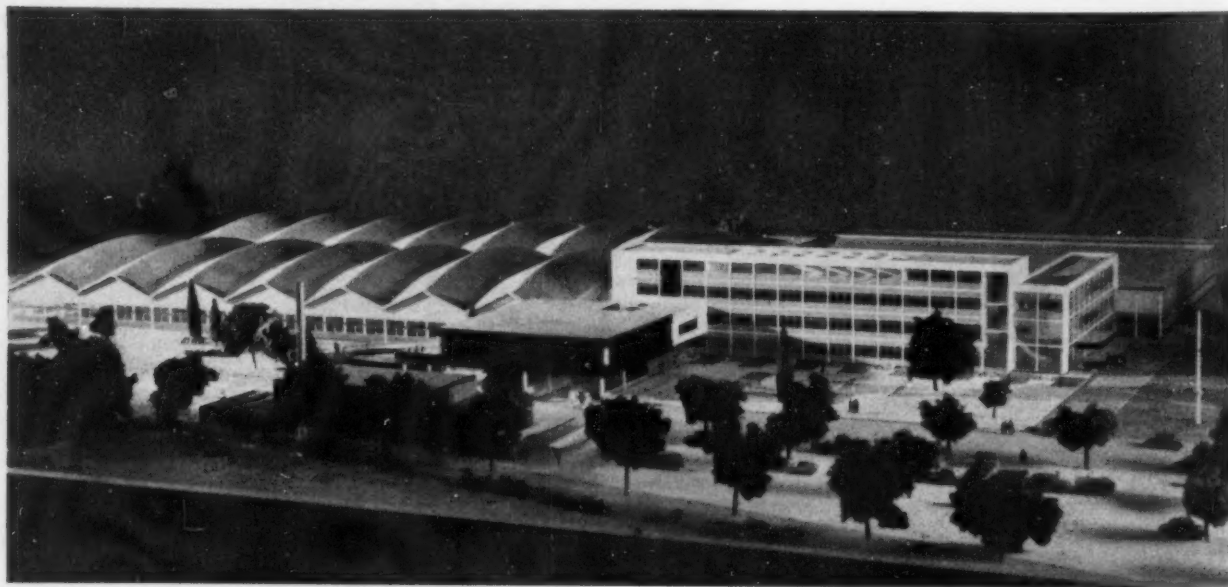
**BROUGHTON MOOR
GREEN SLATE QUARRIES
Coniston • Lancs. LTD.**

TELEPHONE: CONISTON 225/6 TELEGRAMS: CANN, CONISTON

New Printing House at Cambridge

Work will start on site very shortly to provide this new home for the Cambridge University Press. The building will consist of three main elements, an office block for administration and proof-reading, a large production block for printing and storage, with a curved

and folded roof, and a smaller block for typesetting and composing. It will provide a total of 210,000 sq. ft. at a cost of about £1 million. The entire process areas will be air-conditioned and artificially lit to the exclusion of daylight, except for a peripheral view strip. This has been deliberately done to provide constant working conditions. The levels chosen for the permanent artificial lighting range from 30 to 36 lumens per sq. ft., which is somewhat lower than that tentatively suggested by BRS for this type of situation.



NO MATTER HOW

LARGE

OR HOW SMALL

If you have a catering equipment problem Stotts of Oldham are at your service. No matter if your enquiry is for a complete scheme or just a single item, our experienced designing and installation staff will be made immediately available.



For further details of service & equipment please send this form.

NAME

ADDRESS

"Stotts of Oldham"

VERNON WORKS

OLDHAM
LANCS

the most exciting lighting service ever—

rotaflex **lightplan**

'Lightplan' is a light planning service for architects, consultants and contractors.

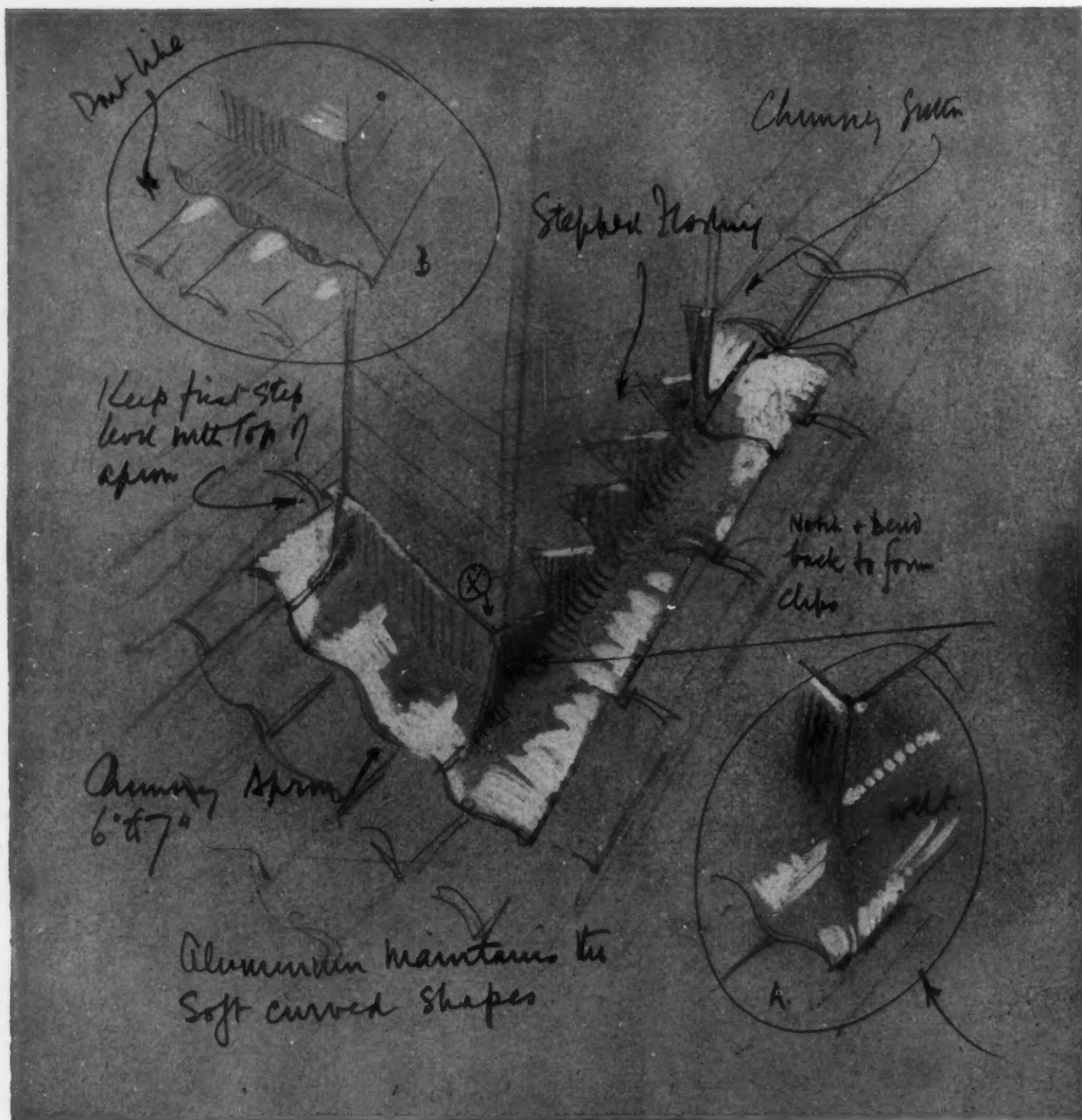
'Lightplan' will plan lighting in all its forms. It has a new sparkling range of incandescent and fluorescent designs by 'Lightolier' of America, now made under licence in this country by Rotaflex in addition to the comprehensive Rotaflex range.

The 'Lightplan' Service is described in a new catalogue, just published, why not write or call Kenneth White at—

ROTAFLEX (GREAT BRITAIN) LIMITED
4 Conduit Street, London, W.1.
MAYfair 5666

◀ the D4 UNIVERSAL
is fully illustrated on Leaflet L5

THIS IS ALUMINIUM



Architect's drawing of flashing with notes

BRITISH ALUMINIUM

British Aluminium Super Purity (99.99%) flashing material is aluminium in its most workable form. And this is only one of its many pleasing attributes. It lasts a building's lifetime and is ... good looking ... light in weight ... low in price and now less glaring! Send for literature on Super Purity.



BRITISH ALUMINIUM COMPANY LTD. Norfolk House, St. James's Square, London, S.W.1 | Trafalgar 8888

For Corrosion proof Flooring



.... such as in this galvanising shop, in this plating shop and in this jam boiling room and for all corrosion proof masonry, plastics for chemical plant, tank linings, acid and alkali resisting paint and ...



for every
industrial application



call in the Specialist
Corrosion Engineers
- in fact ...

I would say..

TANKS & LININGS LTD

Corrosion Engineers

**11 TOWN WHARF
DROITWICH • WORCS**

Phone: Droitwich 2240, 2249, 3306
SM/TL 4667

Grams: Tanks, Droitwich.



NON-STANDARD

AND STANDARD TOO



All high standard
pipe fittings from

KONTITE

Kontite's range of over 22,000 different types and sizes of fittings for copper tube, is the biggest in the business. Many of these can be supplied straight from stock. Specials take only a little longer. That's what makes Kontite service the *best* in the business. First class materials and the proved efficiency of Kontite Gunmetal fittings are your guarantee of complete reliability.



KAY & CO. (ENGINEERS) LTD.
BOLTON BRASS WORKS • BOLTON • LANCs.
TELEPHONE: BOLTON 21041/4

THE STONE— LIKE FINISH

THAT YOU CAN APPLY
AND CONFIDENTLY FORGET

*It Stands
For Years
Without
Further Attention*

DIXON'S ROGGSTONE PAINT SYSTEM

ASK FOR PARTICULARS
AND CARD SHOWING
COLOURS AND TEXTURE

DIXON'S PAINTS LTD

Ajax Works,
Hertford Road,
Barking, Essex

Tel: RlPpleway 3326 (3 lines)

around every
plasterboard

corner

...in
conversions
and new
buildings

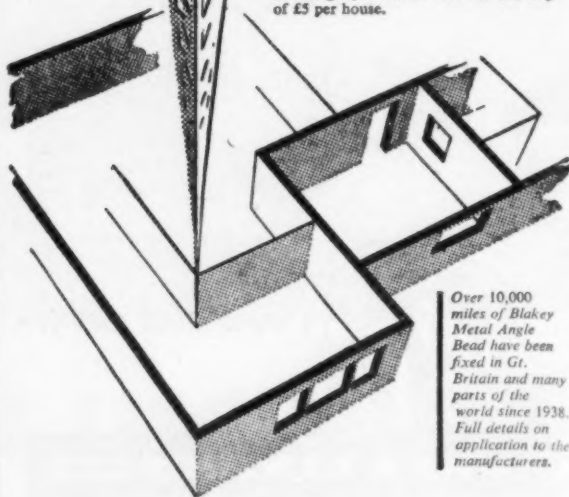
BLAKEY

Patent Galvanized Metal

ANGLE BEAD

PAT NO.
197.987

whether it be brick or plasterboard, Blakey Galvanised Metal Angle Bead will reinforce and protect all external angles against accidental damage. Simply and quickly fixed, it will not shrink, corrode or chip. And the cost... a well-known firm of Plasterers has claimed a saving of 5d. a foot, compared with concrete angles, which showed them a saving of £5 per house.



Over 10,000
miles of Blakey
Metal Angle
Bead have been
fixed in Gt.
Britain and many
parts of the
world since 1938.
Full details on
application to the
manufacturers.

BLAKEY CABINET & METAL WORKS LTD
61 SCOTLAND ROAD · NELSON · LANCs.

Telephone: Nelson 64941.

JACK D. ROSE (Exhibitions) LIMITED

Present the

Southern Counties Building Trades EXHIBITION

Supported by the Southern Counties
Federation of Building Trades Employers

**CORN EXCHANGE
Brighton
March 4th to the 11th**

**OPEN DAILY
11 a.m. to 9 p.m.**

Applied Lettering

Variety of alphabets and
materials for internal or
external use, Illuminated
Letters and Box Signs.
Send for lettering sheets
and brochures.

WARD & CO. (Letters) LTD.
6-12 WILDER ST., BRISTOL 2 TEL. 21536





**EETO
CYLINDER
JACKETS**

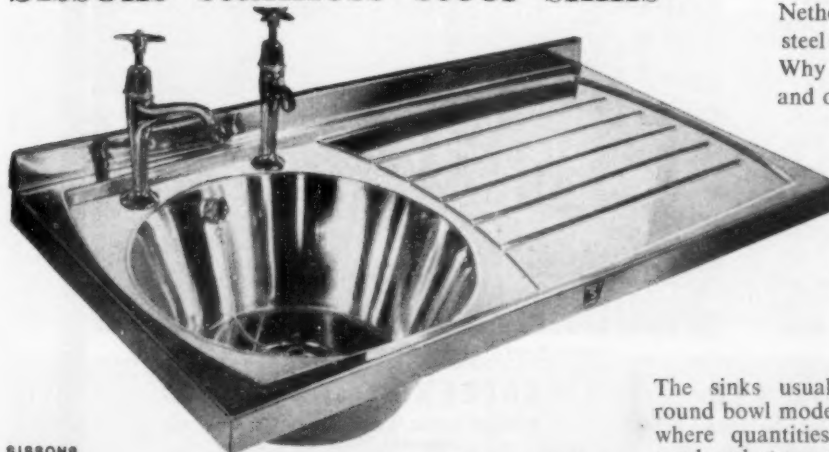
THE ORIGINAL, used
and recommended by
almost every Municipal
Authority in the Kingdom.
Often copied
— NEVER equalled.

EETO INSULATIONS
RIVER STREET · BOLTON · LANC'S

*Photograph of Gleadless Valley
Estate by courtesy of the
Sheffield City Architect, J. L. Womersley
F.R.I.B.A., Dist. T.P., M.T.P.I.*

*Many progressive local
authorities specify*

Sissons stainless steel sinks



SISSONS

W. & G. SISSONS LTD., ST. MARY'S ROAD, SHEFFIELD 2. TEL: 22118 OA/6709



Homes on Sheffield's new, widely acclaimed
council estates at Gleadless Valley, Greenhill,
Netherthorpe and Park Hill have stainless
steel sinks made by Sissons.

Why are these products specified by Sheffield,
and other local authorities too? Because of

- 1. Low initial cost**
see Sissons special housing contract
prices
- 2. Saving in maintenance costs**
no chipping, no cracking, no breaking
- 3. Long life**
heavy gauge (18 S.W.G.) material

The sinks usually specified are "made-in-one-piece"
round bowl models. There are several standard sizes, but
where quantities warrant, non-standard sizes can be
produced at comparable prices.

May we send further details? If preferred, we should be
very pleased to discuss these products with you.

Alufloor

WARNING

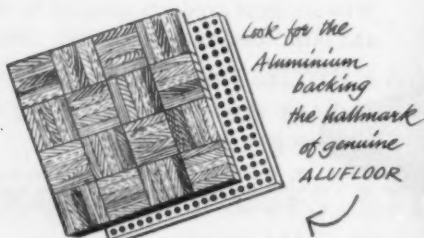
When you specify ALUFLOOR. Look for the aluminium backing, your guarantee of genuine ALUFLOOR.

Triumphs over Underfloor Heating Problems

Over 18 months ago two of the largest post-war buildings — Bowater House and an Office Building for Malkay Investments both in Knightsbridge — were completed. In both cases Alufloor was laid throughout, a total of 61,641 sq. yards. Today it is as good as the day it was laid — positive proof that Alufloor is completely stable.

Alufloor, manufactured by a new, revolutionary technique retains the beauty and durability of hardwoods while incorporating many unique advantages hitherto unassociated with wood flooring. It is the only wood flooring with a perforated aluminium foil backing and is precision prefabricated and factory sanded. It eliminates pinning and experimental positioning and provides a quieter surface.

ALUFLOOR CAN BE PRODUCED FROM ANY HARDWOOD TO ARCHITECT'S SPECIFICATIONS *British Patent No. 746791*



Write for illustrated brochure to Sole Manufacturers for the United Kingdom

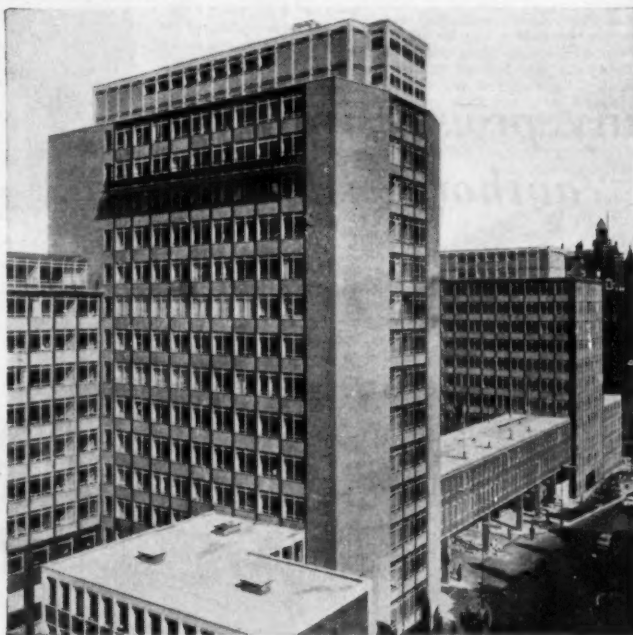
CALDER'S (Southern) LTD
Plough Way, Rotherhithe, London, S.E.16
Telephone: BERMondsey 3535

Members of Calders Group of Companies

CALDER'S (Northern) LTD
Biddick Lane, Washington, Co. Durham
Telephone: Washington 2321

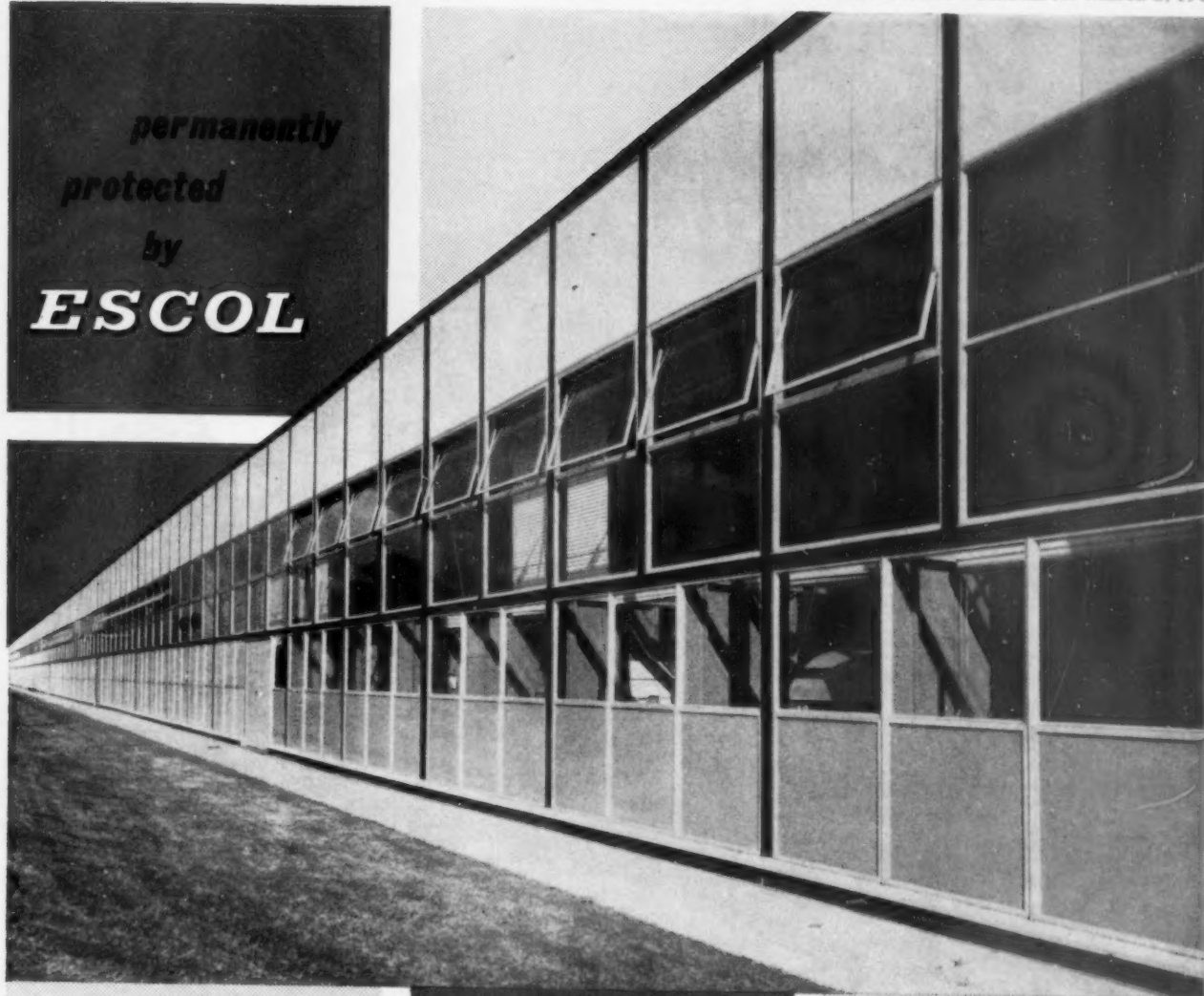


Office Building in Knightsbridge for Malkay Investments Ltd, in which 34,077 sq. yards of Alufloor have been laid. Architect: Guy Morgan F.R.I.B.A., A.I.Struct.E. Main Contractors: Humphreys Ltd.



Bowater House, Knightsbridge, in which 27,564 sq. yards of Alufloor have been laid. Architect: Guy Morgan, F.R.I.B.A., A.I.Struct.E.

*permanently
protected
by*
ESCOL



PORCELAIN

ENAMELLED

PANELS

Escol panels are:

steel surfaced with porcelain enamel giving permanent colourful protection against corrosion and resisting attack by normal atmospheric conditions and sea air. Finished in a wide range of colours and a variety of textures. Provide heat and sound insulation.

New Factory for Ilford Ltd.
Basildon, Essex.
Escol Type 'C' Panel with $\frac{1}{2}$ " Honeycomb core. $\frac{1}{2}$ " Overall thickness. 33,000 sq. ft.
Colour: Yellow & 3 shades of Grey.
Architect: Chief Architect,
Basildon Development Corporation,
Gifford House, Basildon, Essex.
Contractors: Holland & Mennen & Cubitts Ltd.
Framing: Crittall Manufacturing Co. Ltd.

Stewart and Gray Ltd. offer a specialised service in the development, and manufacture, and in all technical applications of porcelain enamelled steel to architecture. It is at the disposal of all architects.

ESCOL PANELS

maintain their integrity; the
finish and colours are

PERMANENT



STEWART & GRAY LIMITED

Swains Road London SW17 Telephone: HIltham 7034 (7 lines)

MEMBER OF THE BRITISH ENAMEL DEVELOPMENT BOARD AND THE PORCELAIN ENAMEL INSTITUTE

PSG/9

*'Charles, I've specified Exoda
...I couldn't take chances'*



"EXODA" makes history. It is a top grade paint at normal price with positively no smell during or after application.

"EXODA" can be applied to any surface, costs no more and is an outstanding, long-life paint available in high-gloss or eggshell finish in a range of attractive colours.

COMPLETELY ODOURLESS

EXODA

The Revolutionary New High Gloss Paint

FREE Sample of EXODA

To the Exoda Division,
BITULAC LIMITED, Collingwood Buildings, Newcastle upon Tyne.
Please send me a free sample of Exoda

White High Gloss ☐ White Eggshell ☐ Tick your choice.

FIRM

ADDRESS

For the attention of Position

McC...

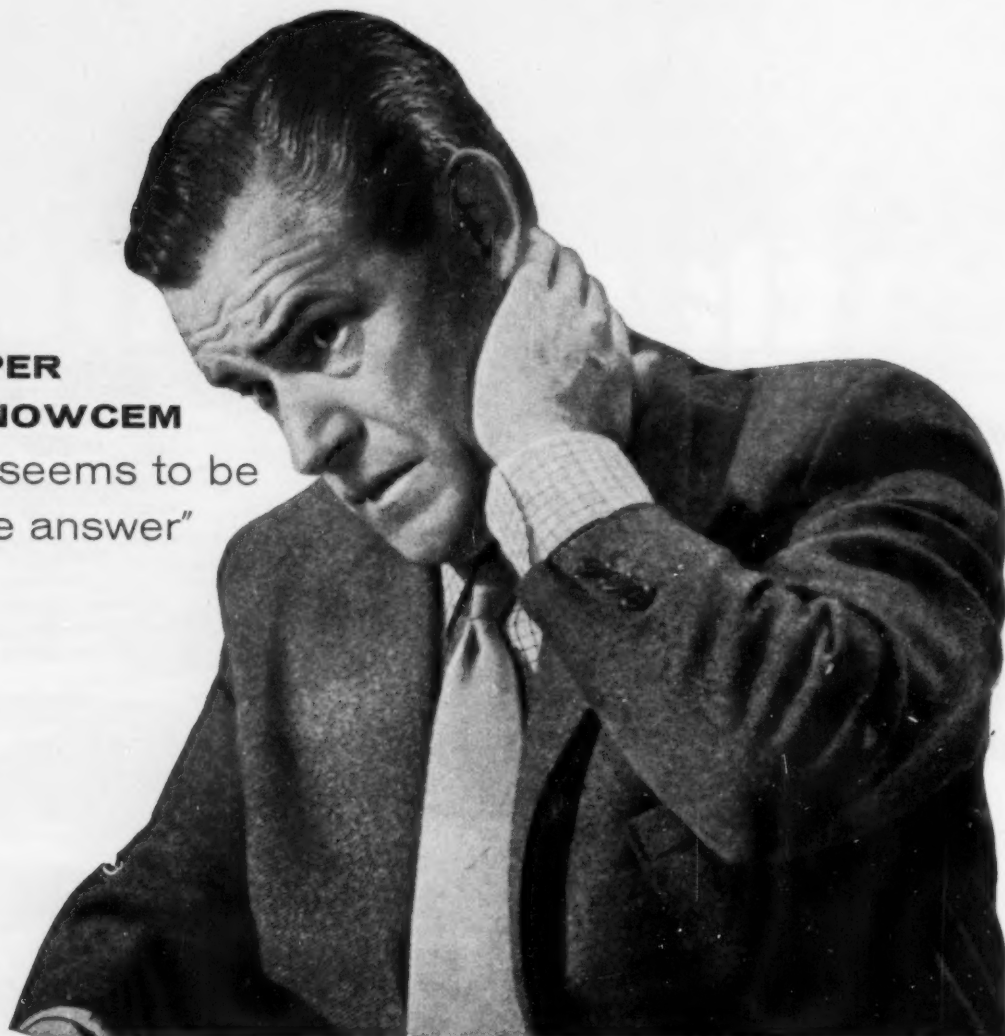
On March 2nd Atlas announce an entirely new version of their
successful Atlantic range of fluorescent fittings.

This range incorporates many new features
in design, finish and ease of installation.
Keep a sharp look-out for ! . .

atlas atlantic 2

Atlas Lighting Limited, Thorn House, Upper St. Martin's Lane, London, W.C.2

"**SUPER
SNOWCEM**
seems to be
the answer"



“It will certainly give the kind of protection we need . . . And the range of colours should please the architect too . . . As far as costing goes, we could never find a similar treatment so economical. Yes, I'm sure Super Snowcem is right for the job. Besides, the Blue Circle people will always help us with any problems.”



SUPER SNOWCEM

is a waterproof cement paint made with a base of Snowcrete, the white Portland Cement. It is supplied in powder form in free containers from 7 lb. to 112 lb. When applied to suitable surfaces it provides a hard durable finish which resists the penetration of damp—will not rub, flake or peel off and may be washed.

Make use of our technical service. For all information please write to:

THE CEMENT MARKETING COMPANY LIMITED, PORTLAND HOUSE,
TOTHILL STREET, LONDON, SW1 • Telephone: TATe Gallery 3456
G. & T. EARLE LIMITED, HULL • Telephone: HULL 26121

Selling Organisations of The Associated Portland Cement Manufacturers Ltd.

See **CMC** about Cement!

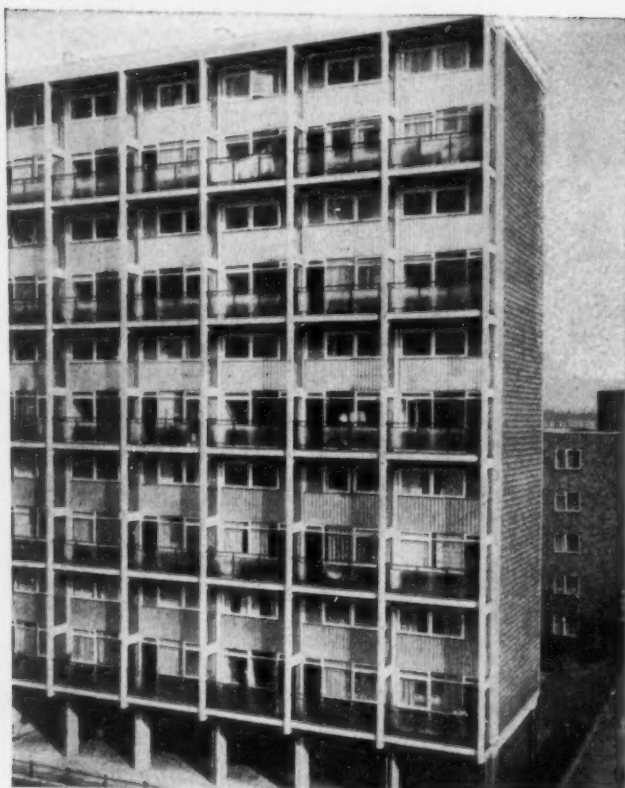


*DOUBLE BAY WAREHOUSE
Each Bay 100 ft. wide
using Portal Trusses
to give maximum headroom*

IS SPACE *Your Problem*

- Single clear spans 40ft. to 150ft. in 5 ft. increments or multispans
- Mass produced for competitive price
- Prices by return
- Guaranteed completion dates
- Send for brochure

WARD BROTHERS (Sherburn) LTD. Allison Works, SHERBURN, MALTON, Yorks.
Telephones and Telegrams Sherburn 355 and 356



Give
PERMANENT
COLOUR
 TO YOUR BUILDINGS
 (both interior and exterior)
by using
STELVETITE
PLASTIC BONDED
STEEL SHEETS

Made in a variety of delightful colours and finishes, and resistant to weather, heat and acids, etc.

FIRE RESISTANT!

Research tests place STELVETITE in Class 1 of British Standard 476—the highest possible resistance

NO REDECORATION EXPENSES

ASK FOR PARTICULARS

LYE TRADING COMPANY LTD

DUDLEY ROAD, LYE, STOURBRIDGE, WORCS.

Tel: Lye 2471 (10 lines). Telex: 33182

LONDON OFFICE:

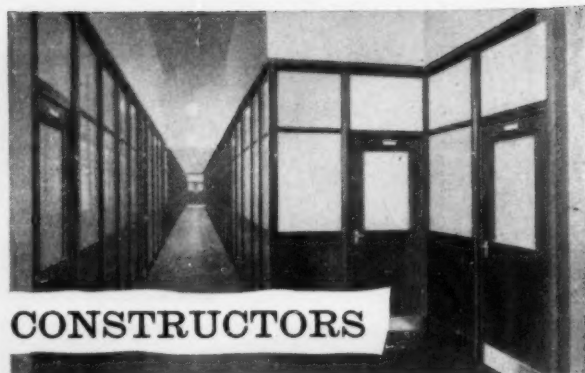
SUFFOLK HOUSE, 5 LAURENCE POUNTNEY HILL, E.C.4

TEL: MINCING LANE 1531-3. TELEX: 25272

LEEDS OFFICE:

11 KING STREET, LEEDS, 1

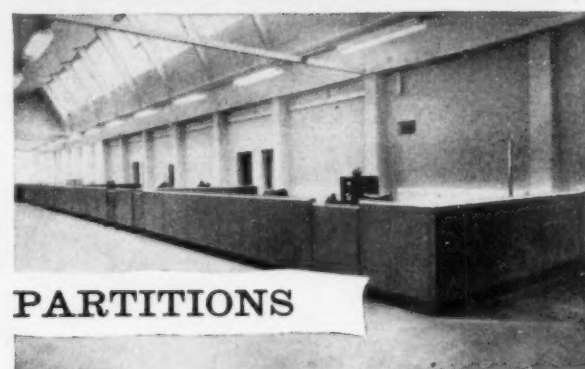
TEL: LEEDS 30384-5. TELEX: 55156



CONSTRUCTORS



METAL



PARTITIONS

Constructors Metal Partitions are not only extremely pleasing to the eye but of great strength, and serviceability. Their freedom from warping, cracks or decay and their resistance to fire and vermin make them the obvious choice for the sub-division of building interiors. They are very adaptable to changing requirements as they can be dismantled easily and quickly for re-siting in new positions in order to use space in the most efficient and economical manner.

GOOD PLANNERS ALWAYS CONSULT

CONSTRUCTORS

THE MANUFACTURERS OF STEEL EQUIPMENT

CONSTRUCTORS LIMITED, Dept. AI

TYBURN ROAD, ERDINGTON, BIRMINGHAM 24

TELEPHONE: ERDington 1616

London Office: 98 Park Lane, W.1. Telephone: MAYfair 2075

Leeds Office: 25 Merriam Street. Telephone: LEEDS 28017

CUPRINOL

WATER REPELLENT WOOD PRESERVERS



CUPRINOL W.R. Clear and W.R. Green combine water repellency with the preservative properties of CUPRINOL, which have been proved in use for nearly fifty years. By stabilizing movement in timber, they minimise the swelling and shrinking of wood under changing moisture conditions.

CUPRINOL W.R. grades also prevent attack by wood-boring beetles and rot; can be painted or varnished over. Easy to apply on site by dipping. Suitable for vertical boarded shop fascias, boarded cladding to buildings, doors, ladders, window frames and all joinery exposed on building sites prior to being built in.

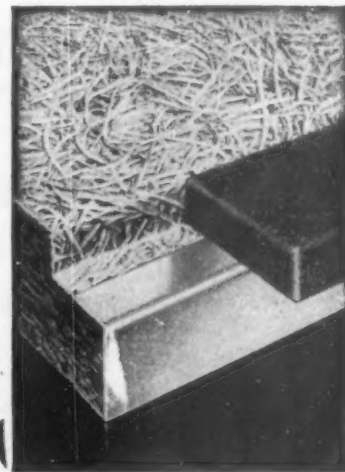
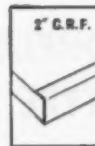
THE CUPRINOL PRESERVATION CENTRE offers technical advice on all preservation problems and can arrange Surveys, Reports and expert treatment of outbreaks of Dry Rot and Woodworm in any part of the country.

**CHECK SWELLING
AND WARPING**

Please write or telephone :-

Dept. 51, CUPRINOL LTD., Terminal House, Victoria, London, S.W.1. Tel: SLOane 9274

Seven symbols of progress



3" Reb.

"3" Reb." is the identification symbol for our 3" Rebated Channel Reinforced Wood Wool Roofing Slab, which is designed for use in conditions of high humidity. A strip of cork or ONAZOTE lies snugly in the recess formed by two adjacent channels when the slabs are butted together, creating a discontinuity and so eliminating the "cold bridge" effect which would otherwise cause condensation along the steel reinforcing strips. Only Thermacoust offers this advantage.

Rated at 0.17 B.T.U., its overall thermal insulation is excellent.

3" Reb. is ideal for roofing kitchens, laundries, weaving sheds, swimming baths or any other buildings whose contents, uses or heating systems create abnormal atmospheric humidity.

Please write for full particulars.

FIRE RESISTANCE. An independent test by the Fire Research Station at Boreham Wood showed that Thermacoust 3" Reb., screeded and felled in the usual way, was able to contain for more than two hours an INTERNAL fire of 1,000°C—another major reason for specifying these slabs in preference to other roofing materials. Copies of the Fire Research Station Report No. F.R.O.S.I. No. 989 will be sent free on request.

THERMACOUST LTD

ROOFING SLABS

20 ALBERT EMBANKMENT LONDON SE11

Telephone Enquiries (Southern)—London: Elmbridge 6773/4/5
Telephone Enquiries (Northern)—Doncaster 54138 Ex. 25

When supported on inverted "T" or Thermacoust purlins no special fixing arrangements are required. Flat-top purlins or R.S.J.'s call for Type 1 site fixing clips.

Slabs may also be provided with any of the exclusive range of Thermacoust Pre-Clips for fixing copper, SNAPRIB aluminium, slates, tiles or false ceilings.



A member of the Cementation Group of Companies

PORTWAYS ANNOUNCE:-

THE FIRST COMPLETE RANGE OF AUTOMATIC,
SLEEVE TYPE BURNER BOILERS.

ALL BLUE FLAME BOILERS NOW AVAILABLE
WITH ELECTRIC IGNITION AS AN
OPTIONAL EXTRA.

*Write for details now of this addition
and for KITS TO CONVERT EXISTING BOILERS to*

CHARLES PORTWAY & SON LTD

**Tortoise Stove Works
HALSTEAD · ESSEX**



RACE

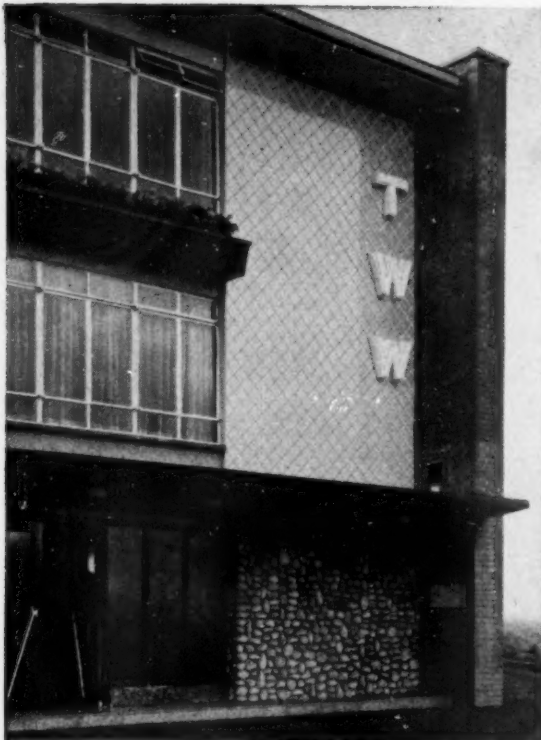
lecture theatre
seating

Rows of any length in this seating can be transported economically and assembled on site. It is adaptable to any step height or for fixing to a flat floor; backrests can be adjusted to accommodate a writing shelf at the correct height for the row behind. Seats have a simple gravity self-tipping action and are covered in a heavy quality P.V.C. coated fabric. Steel uprights stove-enamelled; writing shelves and pre-formed plywood backrests (upholstered if preferred) of lacquered mahogany.

Write or telephone for
further information

Race furniture 22 Union Road Clapham SW4 Macaulay 2215/7

Seating in Glasgow University
Architect: Basil Spence & Partners



Devon Wall Tiles were used for the exterior of this T.W.W. Studio at Bristol

Contractors: Messrs. Griggs & Son Ltd., Ashton Gate, Bristol
Architects: Treadgold and Elsey, F/R.I.B.A., A.A. Dipl.

DEVON WALL TILES

chosen for yet another new building

COLOURS: A wide range—from eggshell to bright finish, from mottled to a variety of screen-printed designs. Nearly all colours are available for exterior use.

STRENGTH: The use of special clays in manufacture gives the Devon Tile greater body strength than most other tiles.

EXTERIOR TILING: The $\frac{3}{4}$ " and $\frac{5}{8}$ " tiles are made with deep under-cut lock backs designed for perfect adhesion. Tests have proved the extremely high frost resistance of Devon Tiles.

MOISTURE EXPANSION: A low moisture expansion is a good guarantee of long and trouble-free life. The Devon Tile has an amazingly low moisture expansion after 20 hours in steam at a pressure of 50 lbs. per sq. in.

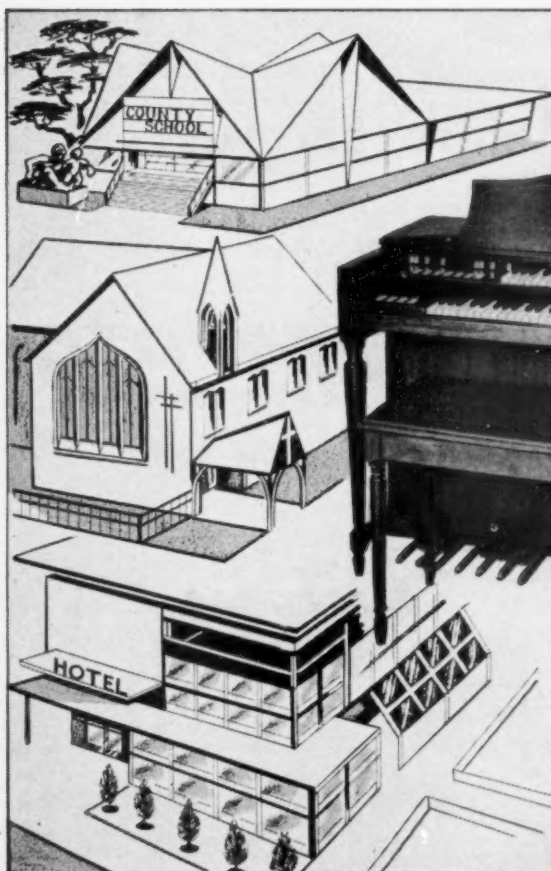
SIZING: Careful control of shrinkage during manufacture results in perfect sizing to a tolerance of less than 0.015".

DEVON WALL TILES

Made by Candy & Company Limited, the sole manufacturers of the Devon Fire

Write for further information and catalogue to:

Department T.2, Candy & Co. Ltd., Newton Abbot, Devon



At the outset . . .
plan to install a

HAMMOND

ORGAN

In Schools, Churches, Hotels . . . in fact in every building where music is required, the installation of a Hammond Organ will prove a sound investment.

The most versatile musical instrument ever, it can be put to every conceivable kind of use. In church it can produce cathedral-like tones, even in the most acoustically "dead" enclosure. For every kind of music, and for every activity the Hammond is the outstanding instrument of the day.

Maintenance costs are low, and the Hammond never requires tuning.

Send the coupon for full details.

To
Boosey
& Hawkes,
Deansbrook Rd.,
Edgware,
Middlesex.
Edgware 5581

Please send illustrated brochure of Hammond Organs.

Name.....

Address

.....

.....AJ 23

**You get all these advantages
when you specify**

MANGERS
plastaweld

1. Plastaweld provides a perfect bond for all gypsum plasters

2. Plastaweld eliminates hacking and raking.

3. Easily and quickly applied by brush, spray or roller.

4. Cuts down time and costly labour.

5. Ideally suitable for such surfaces as brickwork, smooth shuttered concrete, tiles, asbestos and painted and glazed brickwork.

It's sound, good planning to specify Plastaweld. Not only does it ensure a perfect bond for all gypsum plasters, it also eliminates the need for hacking and raking—and consequently saves hours and hours of costly labour. A one-gallon tin of Plastaweld will ensure up to a hundred square yards of perfect plastering—how's that for economy? Plastaweld is a proved material, manufactured under conditions of strict analytical control and widely used on large contracts for Hospitals, Government departments, Local Authorities and Building and Plastering contractors all over the world.

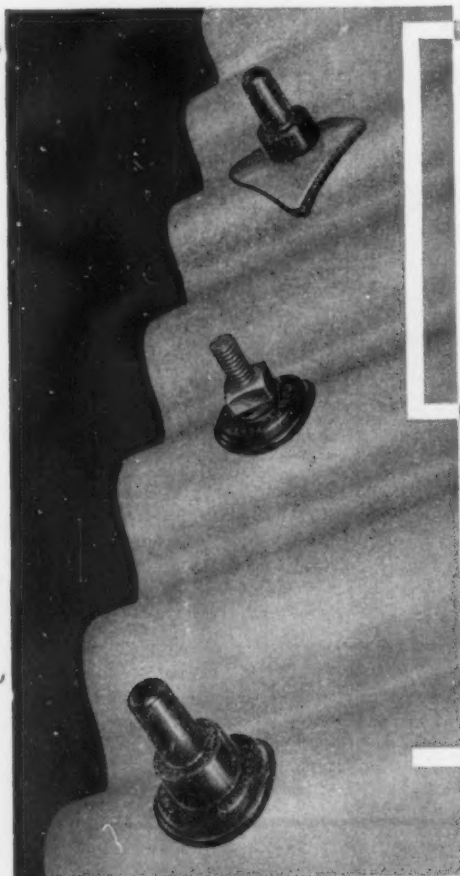


Our Technical department will be very pleased to help you on any Plaster-bonding problem—write or phone

**J. MANGER & SON Dept. A.J.,
KINGSLAND, LONDON, E.8.**

Telephone: CLisseld 8521

AN
Amasal
COMPANY



Insure against corrosion

with **DOWTY**
SPATS AND TOPATS

The original plastic washers for fixing and sealing roof and wall sheeting.

For use with hook bolts, seam bolts, Oakley clips and drive screws.

Sizes available, $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{1}{2}$ ".

Used in conjunction with Spats or traditional diamond washers, Topats protect the bolt-threads from corrosion. They have a simple push-on fixing.

Sizes available, $\frac{1}{4}$ " and $\frac{5}{16}$ ".

DOWTY SEALS LIMITED - ASHCURCH - GLOS.

Telephone: Tewkesbury 2271

Telegrams: "DOWTYS. Tewkesbury. Telex"

Member of the Dowty Group

CONSULTING THE ORACLE



The ancients on consulting the oracle were used to receiving enigmatic answers, and even when interpreted the advice was inclined to be two-edged, it was also expensive . . . Our advisory service, though not as long established as the Sybil's, has two distinct advantages. It is free, and you will not have to employ an expert to decipher our opinion.

We can offer you a complete service from the drawing board to the finished job, backed by all the experience of our 38 years as pioneers in the development of new building techniques. Why not give us a ring?



The **MERCHANT TRADING COMPANY Limited.**

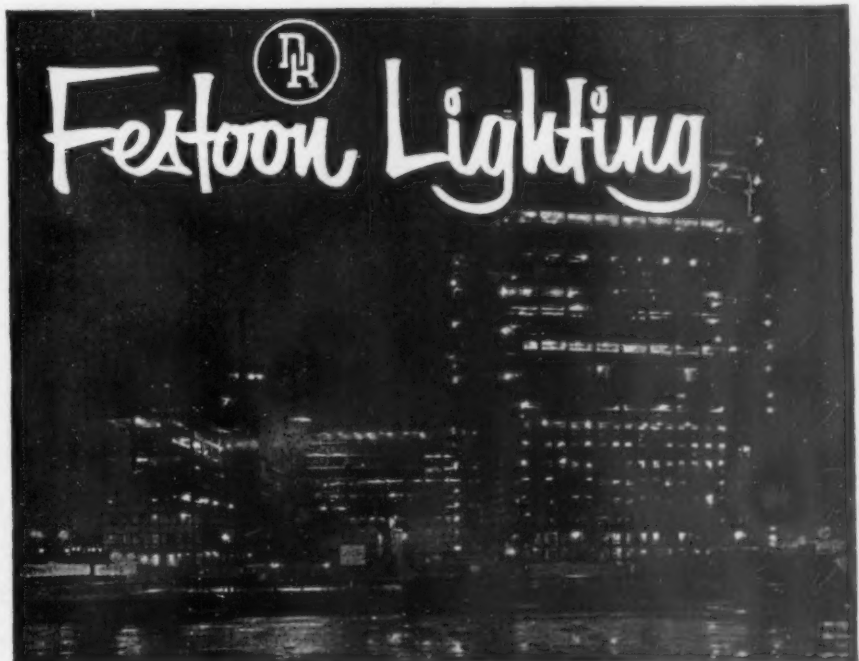
Adrienne Avenue, Southall, Middlesex.
Telephone: WAXlow 6381(7 lines).

SPECIALISTS IN



**Whatever
the
project...**

**...light it
up with**



D. R. ILLUMINATIONS LTD.
WARREN STREET · STOCKPORT · CHESHIRE
Telephone: STockport 7159

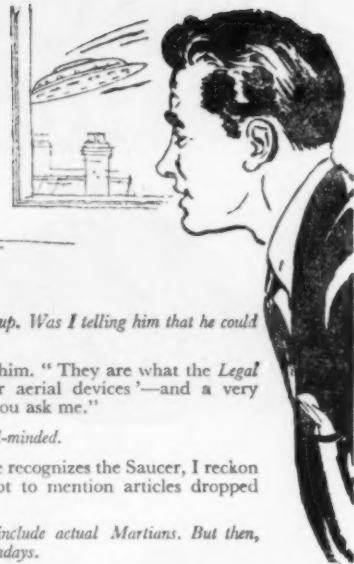
Contractors:
SIR ROBERT McALPINE & SONS LTD.,
Building:
SHELL CENTRE—SOUTH BANK
Architects:
Messrs. EASTON & ROBERTSON,
CUSDEN, PRESTON, AND SMITH

A MEMBER OF THE AERIALITE GROUP

CW7201



*"I'm no alarmist,"
I told my client—*



"but you must admit that life is more hazardous than it was."
He begged me to stick to the point. All he wanted was to insure his house and its contents.

"I believe you have an old house?"

He gave me the date to a year, trying not to look conceited.

"Quite so," I said. "With a great TV mast clamped on the chimney—a thing the Georgian bricklayers probably didn't bargain for."

He asked me what I meant.

"A fine old chimney . . . a fine old gale . . ."

His eyebrows rose.

"Or take saucers," I said.

They rose higher.

"Well, that may be too specific," I admitted. Let's make it artificial satellites. You see, a policy might cover you against damage by aircraft, or articles dropped therefrom—"

He said he should hope so.

"—but aircraft are not the only thing in the sky these days. It would be bad luck to get a couple of gables knocked off by a nose-cap from a long-forgotten sputnik . . ."

Just a minute, he said, sitting up. Was I telling him that he could insure against such contingencies?

"Could and should," I told him. "They are what the *Legal and General* describe as 'other aerial devices'—and a very liberal-minded description, if you ask me."

He wanted to know why liberal-minded.

"Because if and when Science recognizes the Saucer, I reckon that must be covered too. Not to mention articles dropped therefrom."

He asked if the latter would include actual Martians. But then, clients are very hard to please nowadays.

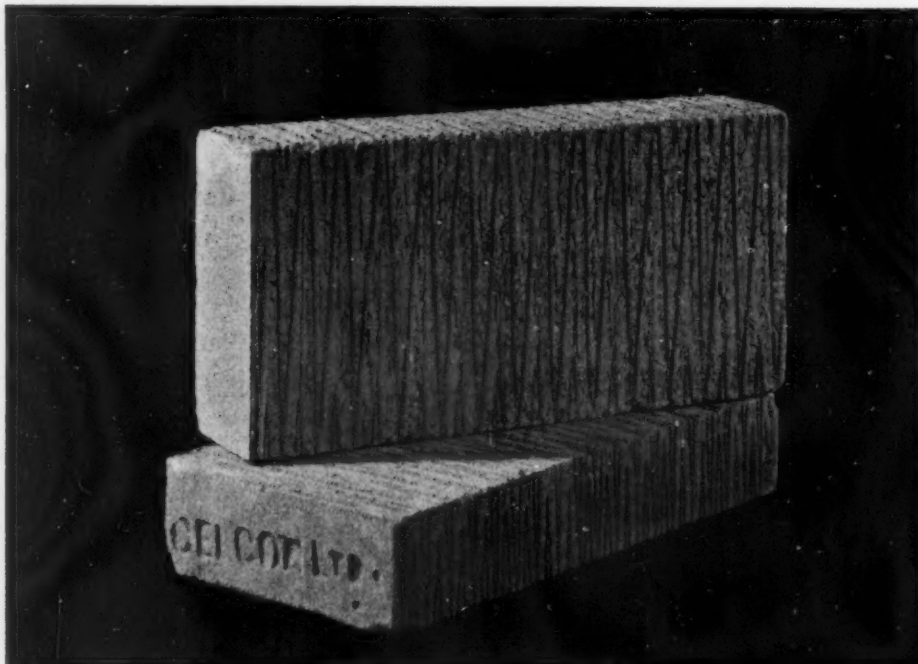
The LEGAL & GENERAL ASSURANCE SOCIETY'S Comprehensive Insurance for Private Houses also offers improved cover under fifteen other headings, with no increase in the present rate of premium. For full details of policies that keep pace with the times, write to:

LEGAL & GENERAL ASSURANCE SOCIETY LIMITED



Fire & Accident Departments:
Aldwych House, London, W.C.2.

Chief Administration: 188 Fleet Street, London E.C.4.



for further information, samples and prices

CELCON LTD.

UNIVERSAL HOUSE,
60 BUCKINGHAM PALACE ROAD,
LONDON, S.W.1. Tel. SLOane 0324/7

BUILD WITHOUT BRICKS

in
LIGHTWEIGHT
LOADBEARING
CELLULAR
CONCRETE
BUILDING
BLOCKS

Density—50 lbs./cu. ft.

Crushing Strength—
600/800 lbs./sq. inch

Thermal Conductivity
'K'—1.2 BTU/sq.
ft./hr./°F./inch

Moisture Movement—.05%

Drying Shrinkage—.05%

Fire Resistance — Satisfies
B.S.476; Part 1 for 4 hours.



Regd. Trade Mark

for FIRE PROTECTION
SOUND ABSORPTION
THERMAL INSULATION
EXTERNAL PROTECTION
COLOUR DECORATION and
ANTI-CONDENSATION TREATMENTS

Pyrok has been used successfully in

**SWIMMING BATHS
BREWERIES
KITCHENS
DAIRIES
SCHOOLS
FACTORIES etc.**

*For further details of the treatment and of the properties
of Pyrok apply to :*

PYROK LIMITED

401-404 Montrose Avenue,
Slough

Tel.: Slough 24601

2-5 Old Bond Street, W.1

Tel.: HYD 1491



**PICK THIS UP
TO STOP
CORROSION!**

To solve your corrosion problems, get in
touch with Plus-Gas the Anti-Corrosion
Specialists: their Technical Advisory
Service covers the whole country.
Plus-Gas Formula 'A' Dismantling Fluid,
(Rust Remover).
Plus-Gas Formula 'B' Protective Fluid.
Used and approved by all
industries for many years.

*Have you heard of
Plus-Gas Formula 'E'
External Metal Treatment
(Tannating Pre-treatment)?*

PLUS-GAS

COMPANY LTD

1/11 Hay Hill,
London, W.1.
Tel: HYDe Park
9566/9



yesterday's craft
tomorrow's design

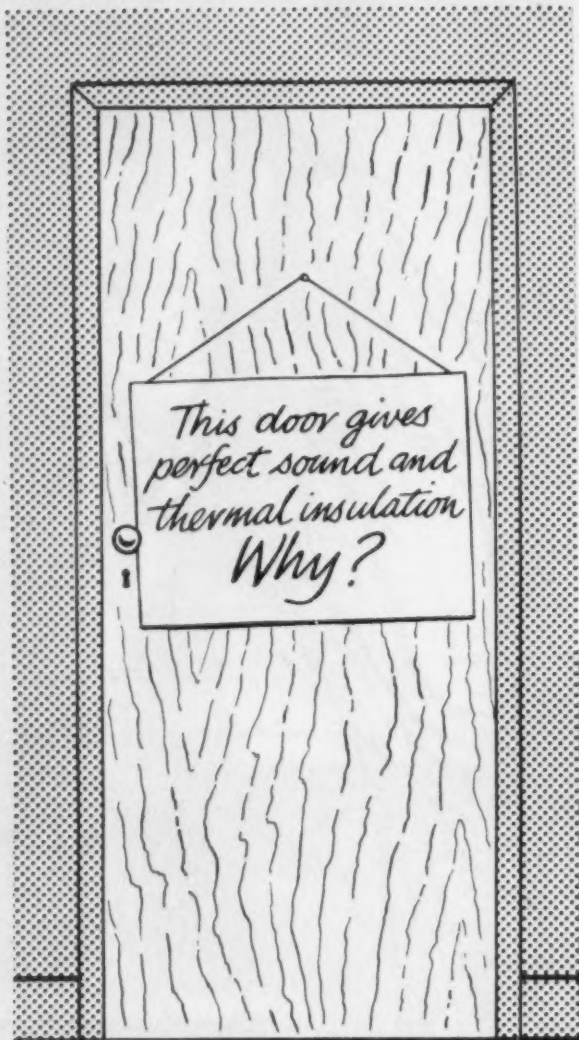
SCULPTURA

THE LILLESALL CO LTD

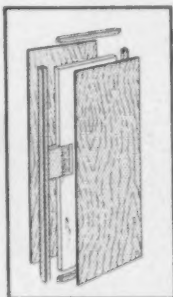
OAKENGATES SHROPSHIRE Oakengates 120
or 121 VICTORIA STREET LONDON SW1
Victoria 9992

Bidet c1950 Marquess of Queensberry MS1A
Fountain of the Innocents c1950 Jean Goujon

JABLO DOORS



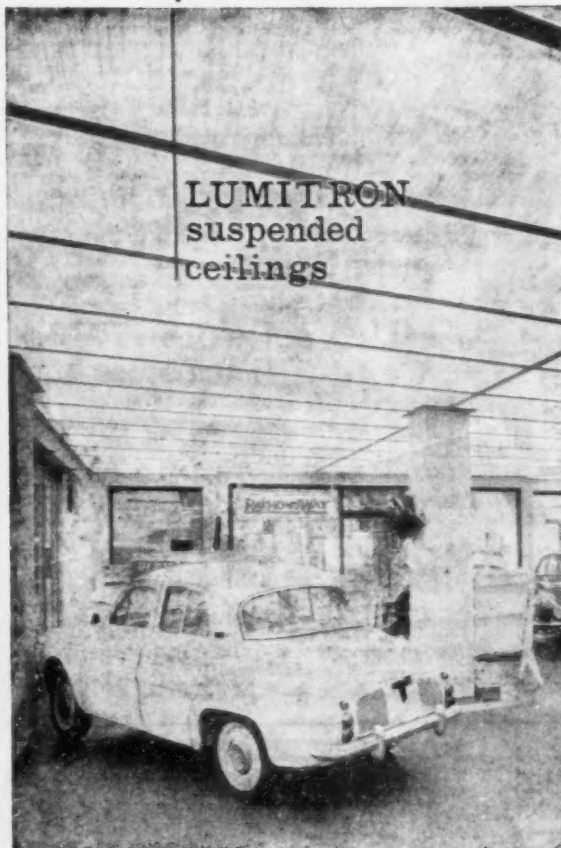
BECAUSE it's the JABLO door with the JABLITE core—and this insulating core provides unequalled thermal and sound insulation. The JABLO door will not warp, and although produced in large quantities—in any design or size required—the quality is consistently and exceptionally high. For this reason, every JABLO door is subject to a 5 year guarantee.



Insert shows JABLO door construction. The 100% glue area between JABLITE core and plywood faces is a guarantee against warping.

JABLO PLASTICS INDUSTRIES LIMITED
JABLO WORKS · WADDON · CROYDON · SURREY
 Telephone Croydon 2201-2-3 & 6922

above all...



for
 economy
 elegance
 increased sales

LUMITRON are already nationally renowned among architects and electrical contractors for their impeccable range of lighting fittings. Now they are introducing their unique pre-fabricated suspended ceilings with which every electrical contractor and shopfitter can carry out his own installations from beginning to end. Designed to give the maximum value at minimum cost. **LUMITRON** suspended ceilings enable contractors to secure the best in this kind of ceiling at manufacturer's cost—so ensuring tremendous economy all round.

Write for detailed brochure today.

LUMITRON multi-purpose suspended ceiling



LUMITRON LTD.
 Manufacturers of Contemporary Lighting Fittings
 Showrooms & Trade Counter
 180 Shaftesbury Avenue,
 London, W.C.2
 CO Vent Garden 0126/7
 Works & Trade Counter
 Hythe Road, Scrubs Lane,
 London, N.W.10
 LADbroke 2262/3

DRAWBRIDGES ARE 'OUT'...



... but every Englishman's home can be his castle — thanks to the Sterdy Porter. Moats and drawbridges served our ancestors well, but they were crude and expensive, requiring an enormous force of villeins, serfs, varlets etc. to ensure that they remained an efficient means of keeping unwanted callers out. The Sterdy Porter is much more subtle in its approach — it is in fact the perfect automatic hall porter. It provides communication between front door and flat and enables tenants to speak to callers and release the electric front door lock without leaving their living room, the Sterdy Porter will give trouble free 24 hour service with the minimum maintenance. Sterdy Porter systems are available for hire or for outright purchase, write for full details to:



STERDY TELEPHONES LTD

(Incorporating W. C. Davey & Co.)

PIONEERS IN SPECIALISED COMMUNICATIONS

Queen's House, 180-182 Tottenham Court Road, London, W.1

Telephone: MUSeum 4414, 4415 and 6385



AP 51

PHOTOMURALS...



... ask AUTOTYPE

ARCHITECTS throughout the country are using AUTOTYPE photomurals with great success in reception halls, offices, showrooms, shops, schools, restaurants, cafés, ballrooms, private houses, etc.

In full colours, or black-and-white, mounted on prefabricated panels for fixing on site, or black-and-white unmounted. Photographs, engravings, originals of all kinds available for selection.

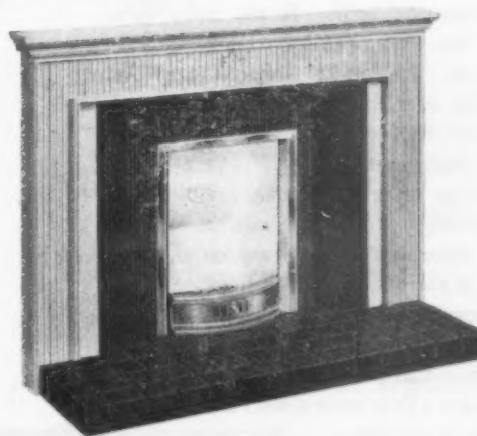
Autotype are acknowledged the leading specialists in this growing development. The benefit of their long experience and advice is yours for the asking. Enquiries welcomed.

See our
photomurals on
permanent exhibition
in the Building
Centres at London,
Bristol and
Glasgow

AUTOTYPE

The Autotype Company Limited
Brownlow Road, West Ealing, London, W.13
Ealing 8861

Distinguished Fireplaces



Surrounds — modern or period — in Marble, Natural Quarried Stone, Old English Red Briquettes, Reeded Iron or Reeded Asbestos, Tiles and Faience—with or without Wood Mantels. Any type of fireparts are available in addition to the famous "WELL" Fire. Catalogue available on application. Your specifications gladly quoted on.

THE WELL FIRE & FOUNDRY CO. LTD.
Royal Victor Place, 234 Old Ford Rd., London, E.3
Tel: ADVance 2642

RAWLINGS BROS

LIMITED

ENQUIRIES INVITED FOR

Conversions. Decorations
Electrical Installations

RAWLINGS BROS LTD. 85 GLOUCESTER ROAD, LONDON, S.W.7. Telephone: FRE 8161

ESTABLISHED 1887

“Oh, why won't they lay PHENCO floors?”

One of the chief virtues of Phenco flooring is the special non-skid surface which prevents those disastrous spills. It has many other virtues too—even a few you'd never have thought of. Spill on it! No need to cry over spilt milk, beer, spirits, household chemicals or hot fat. Phenco can't be stained and is both fire and damp resistant.

Drop things on it! It's tough, resilient and hard wearing. It won't crack or dent, it muffles noise and is very easy on the feet. Phenco is easy to lay, and is supplied in tile (12 in. square) or strip (36 in. wide). You've a choice of twenty colours, plain or marbled. If all this sounds good to you and you'd like to know a little more about Phenco, just write or telephone.



PHENCO

VINYL-PLASTIC FLOORING

PHOENIX RUBBER CO. LTD., TRADING ESTATE, SLOUGH, BUCKS. SLOUGH 22807

OA 2114

WHEN PLANNING FOR
FIRE PROTECTION
SPECIFY—

"ON GUARD"
L&G Autoreel

FULLY AUTOMATIC
HOSE REEL

Essential for use in
INDUSTRY · CINEMAS
SCHOOLS · HOSPITALS
EXHIBITIONS · HOTELS
PUBLIC BUILDINGS
HOMES, ETC.



automatically—the best!

L&G FIRE APPLIANCE
CO. LTD.

Caxton Street North,
London E.16
ALBert Dock
3991/4



SEND FOR
ILLUSTRATED FOLDER
AND FULL DATA

BRANCHES THROUGHOUT GREAT BRITAIN

PEEL'S

sectional buildings
quickest up!
longest up!



- * Extensive range of Standard designs
- * Individually designed if required
- * Free delivery within 200 miles radius
- * Easy to erect
- * New timber throughout

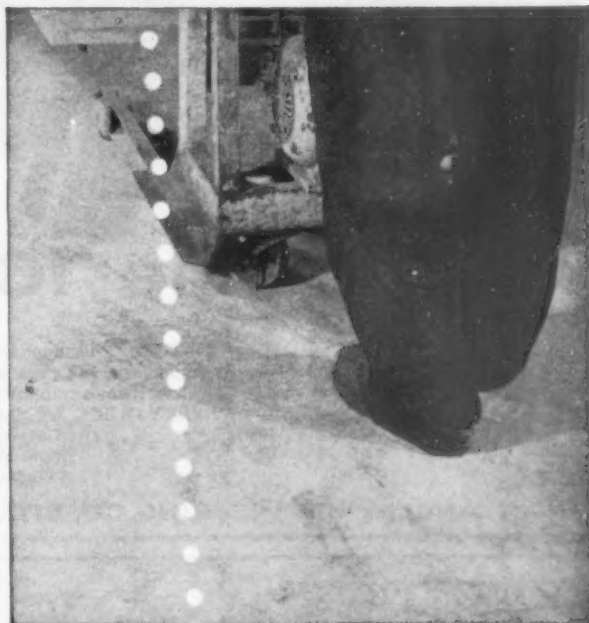
Send for PEEL'S comprehensive catalogue and price list, or ask for representative to call.

H. PEEL LTD.

Dept. AJ Mearclough Works, Wakefield Road,
Sowerby Bridge, Yorkshire. Tel: Halifax 81211

1 2 3 4 5 6

SIX GUIDES
TO THE USE OF
DIAMOND BETONAC



**Why Diamond Betonac
should be used**

Although it is a metallic aggregate, Diamond Betonac will not oxidise or cause unsightly surface stains. It resists wear, especially from steel-wheel traffic, and can be laid with almost engineering precision, ensuring smooth and easy trucking throughout its long life.

A Diamond Betonac surface is virtually anti-slip and non-dusting, is easy to clean and quick to dry.

Diamond Betonac is one of the most widely applicable floor surfacing materials used in the building and structural engineering fields today.

DIAMOND BETONAC DEFIES ABRASION

Q W S

Full particulars obtainable from

QUICKSET WATER SEALERS LTD

MANUFACTURING AND SALES DIVISION
20 Albert Embankment, London, S.E.11
Telephone: Reliance 6731-2-3

A MEMBER OF THE CEMENTATION GROUP OF COMPANIES



Bradford's new Police Transport Headquarters is one of the many fine buildings for which "Kingley" has been specified for hot and cold water services. By courtesy of W. C. Brown, Esq., Dip. Arch.; FRIBA; APTPI, City Architect, City of Bradford.



the 100% efficient joint

"KINGLEY" manipulative joints are used in conjunction with both copper and polythene tubing. These joints are being specified to an ever-increasing extent for major building projects all over the country. They have many advantages over other jointing methods, but the most important are:—(1) 100% SAFETY, (2) VERY QUICK ASSEMBLY AND (3) LOW INSTALLATION COSTS.

The 100% safety is ensured by means of a swage in the ends of the pipes on which the joints are made. This swage (which is made in seconds with a fool-proof tool) makes PULL-OFF impossible in heat or frost.

KINGS LANGLEY ENGINEERING CO. LTD., Kings Langley, Herts. Tel.: Kings Langley 4022



ARCHITECTURAL

Shown above is one of our standard faces:—
ANNONCE GROTESQUE B.9.

THE D&H LETTERING SERVICE

DRAKARD & HUMBLE LTD

175 Gray's Inn Road, London, W.C.1. Terminus 8272/3/4

and at 42 Chapel Walks, South Castle Street, Liverpool 1
Phone: Central 5075



Small Sewage Disposal Plants



THE

'MONOJET'

SELF-DOSER

for

**MAXIMUM
PURITY**

and

**MINIMUM
MAINTENANCE**

The 'MONOJET' Self-doser is the ideal small Sewage Purification plant for outlying properties and rural areas where there is no main drainage. Maintenance is kept to an absolute minimum by provision of the patent non-choking 'MONOJET' nozzles. Completely reliable and trouble free, this unique distributor is the only one of its kind fully recommended and approved by the Ministry of Works. We also make every type of equipment for Sewage Disposal Works—Distributors, Scrapers, Screens, Grit Plants, Penstocks and Valves, etc.

Send for Publication P.2 (AJ)

HARTLEYS (STOKE-ON-TRENT) LTD.

Head Office: Kearsley Chambers, Stoke-on-Trent.

Telephone: Stoke-on-Trent 48627.

London Office: Hastings House, Norfolk Street, Strand, W.C.2.

Telephone: TEMple Bar 5705

RAPID HEATING

is just one of the good reasons why more and more architects have discovered the many technical and practical advantages of the

SUGG "HALCYON" Selective Air Heater

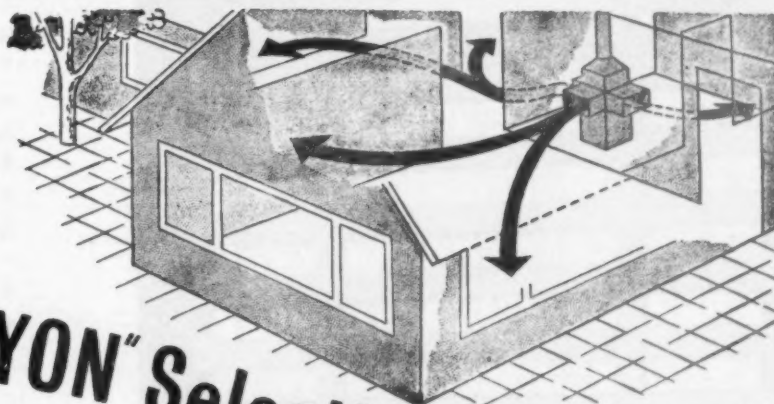


Illustration of Halcyon Model F.45 shown with the ducting removed.

A TEMPERATURE RISE OF UP TO 20°F.

CAN BE SUPPLIED TO AN AVERAGE ROOM IN ABOUT 10 MINUTES.

This "warmth where you want it" equipment presents no difficulties in installation, by simple duct system, suitable for houses, bungalows and flats. It is compact, easy to control and economical to maintain. The "HALCYON" time-switch can be set to operate automatically at any required time.

CAPITAL COST UNDER £80

Choose "HALCYON"—for a new high standard of near-central domestic heating. Thousands already in use.

Literature and full technical details available from

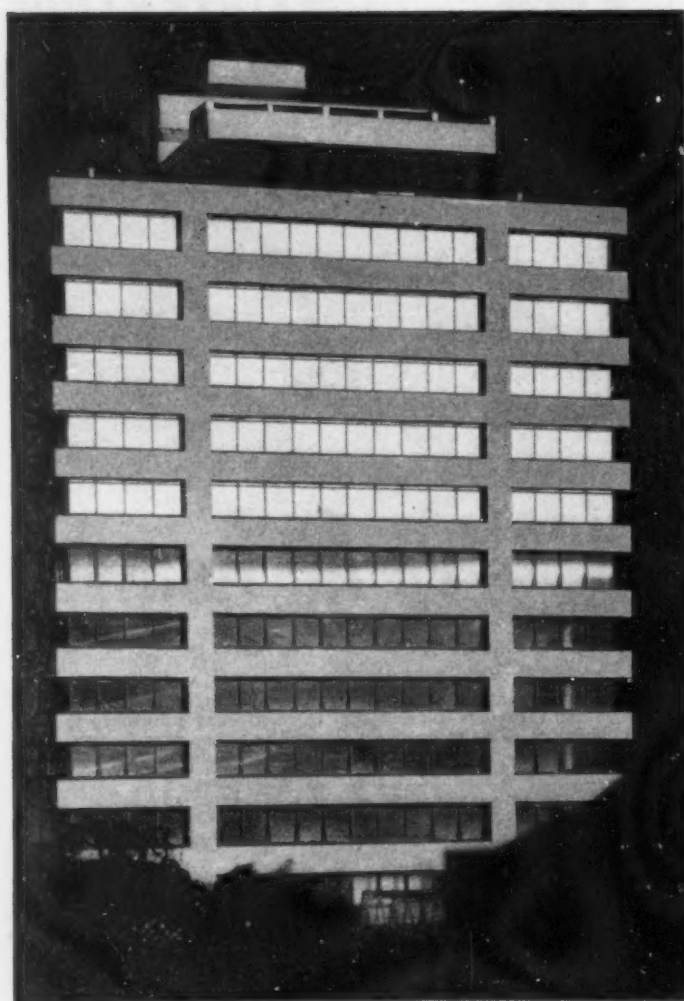
WILLIAM SUGG & CO. LTD. 67-73 REGENCY STREET, LONDON, S.W. 1 Tele: VICToria 3211

designing for London

New houses, flats maisonettes, schools, town development schemes (including houses and factories,) hostels, youth centres, out county housing, club rooms, shops, supply depots, homes for old people, fire stations, drill towers, pumping stations and sewage works, ambulance stations, maternity and child welfare clinics, health hostels, health training centres, children's homes, reception centres, approved schools, road improvements and associated architectural works.

*Adaptations, modernisation,
rehabilitation, improvements.*

have you thought of joining the L.C.C.?



* Unique opportunity to produce buildings for the public service with the highest possible standards of design

* Wide range of buildings enables individuals to be used according to their special abilities

* Contact with the latest developments and techniques through the central materials and development section

* Promotion strictly on merit

* Design opportunities in accordance with ability

* Flexible salary reviews within grades

* Permanency after probationary service

* Recognition grants for good work

Starting salaries for Architects up to £1500 according to quality and experience.

Whatever changes may result from the Royal Commission Report the enormous programme of work will have to be done and service now with the L.C.C. provides the best training ground for opportunities in the future.

And there is room for a few part-time architects.

*Application forms and further particulars from
Hubert Bennett, F.R.I.B.A., Architect to the
London County Council, County Hall, S.E.1.,
quoting reference EK/386/3.*

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the advertisements Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

AIR-MAIL SERVICE available on request. In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J. shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

Public and Official Announcements

36s. per inch; each additional line 3s.

METROPOLITAN POLICE
RECEIVER'S OFFICE

Applications are invited for the following positions in connection with the design and erection of Police Housing, Police Stations, Single Men's Hostels, Cadets' Residential Training Centres and Magistrates' Courts within the Metropolitan Police District.

ASSISTANT ARCHITECTS

Salary: £991 p.a. rising annually to £1,490 p.a. (Maximum salary on entry £1,318 p.a.)

Qualifications: Must be registered Architects.

LEADING ARCHITECTURAL ASSISTANTS

Salary: £1,048 p.a. rising annually to £1,220 p.a.

Qualifications: Intermediate R.I.B.A., H.N.C. or equivalent.

ARCHITECTURAL ASSISTANTS

Salary: £658 p.a. at age 21 rising annually to £1,048 p.a. (Maximum salary on entry £950 p.a. at age 28 or over.)

Qualifications: O.N.C. Intermediate R.I.B.A., or equivalent.

TECHNICAL ASSISTANTS III

Salary: £752 p.a. at age 21 rising annually to £1,043 p.a. (Maximum salary on entry £939 p.a. at age 28 or over.)

Qualifications: Intermediate R.I.B.A./R.I.C.S. (Building) or equivalent.

J. INNES ELLIOTT,
B.Arch., F.R.I.B.A.,
Chief Architect & Surveyor.

Apply to: Chief Clerk, Architect & Surveyor's Department, New Scotland Yard, S.W.1. 5833

CORPORATION OF LONDON

Applications invited for temporary appointment of ASSISTANT ARCHITECT in City Engineer's Office. Salary £1,195 p.a. Approximate duration two years.

Candidates should have had good general experience in preparation of working details and have passed the Intermediate R.I.B.A.

Applications, stating age, appointments held and experience, with names of two referees, to The City Engineer, Guildhall, E.C.2. 5847

BOROUGH OF BASINGSTOKE

BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the position of CLERK OF WORKS in this office, where there is a variety of interesting work. Preference will be given to applicants with good housing experience.

Salary range within Miscellaneous VI, N.J.C. Conditions. Superannuation scheme. Assistance with housing and removal expenses where appropriate.

Details giving qualifications, age, training, experience, etc., with names and addresses of two referees, to be sent to the Borough Architect, Eric Almond, Dipl.Arch., A.R.I.B.A., Municipal Buildings, Basingstoke, Hants., by first post on Tuesday, 14th March, 1961. 6010

METROPOLITAN BOROUGH OF WOOLWICH

SENIOR ASSISTANT ARCHITECT

Applications are invited for the above permanent appointment in the Borough Engineer's Department. Salary within Grade A.P.T. V (£1,310-£1,480) plus London weighting. Superannuation scheme.

Candidates must have passed the final examination of the R.I.B.A.

The Council has an extensive and interesting programme of works.

Applications, stating experience, qualifications and age, and giving names of two referees to Town Clerk, Woolwich, S.E.18, by 14th March, 1961. 5990

LANCASHIRE COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

SENIOR ASSISTANT ARCHITECTS (N.J.C.)

Scale "B" - £1,595-£1,670.

Applications are invited from experienced Registered Architects, required on the permanent staff of the County Architect, to deal with a wide variety of major projects, including large Technical Colleges, Magistrates Courts, Police Training Schools, etc.

Application forms and details of appointment obtainable from the County Architect, P.O. Box 26, County Hall, Preston, returnable by 17th of March, 1961. 6004

SURREY COUNTY COUNCIL

Applications are invited for the following appointments:-

GRADE IV. (£1,140-£1,310 p.a. plus £45 p.a. London Allowance).

Approved removal expenses will be paid to successful candidates in this Grade.

ARCHITECTS. Must be A.R.I.B.A. and have had experience in preparation of drawings and specifications, and be capable of assuming responsibility for medium to large scale contracts.

GRADE II (£815-£960 p.a. plus up to £40 p.a. London Allowance).

ARCHITECTURAL ASSISTANTS. Must be of good general training, preference given those who have passed Inter. R.I.B.A.

Candidates will be appointed at the appropriate point within the scale according to age and ability. Full details, present salary and three copy testimonials, preferably one from present employer, to County Architect, County Hall, Kingston, as soon as possible. 6022

CITY OF CARDIFF

CITY ARCHITECT'S DEPARTMENT

CHIEF ASSISTANT ARCHITECT (HOUSING)

A.P.T. GRADE V

Applications are invited from qualified architects for the appointment of Chief Assistant Architect (Housing), A.P.T. Grade V, £1,310-£1,480 per annum, plus a Motor Car Allowance in accordance with the Corporation Scale.

Applicants should have had a wide experience of all types of housing including multi storey development.

General Conditions of Appointment may be obtained from the Undersigned.

Applications stating age, qualifications and details of experience, together with the names of two persons to whom reference can be made, should be delivered to me not later than the 13th March, 1961.

S. TAPPER-JONES,

Town Clerk.

City Hall,

Cardiff,

February, 1961. 6017

EAST SUSSEX COUNTY COUNCIL

COUNTY PLANNING OFFICE

Applications are invited for the following permanent appointments on the Headquarters Staff at Lewes for duties in connection with surveys for and the preparation of, Town Maps:-

(a) PLANNING ASSISTANT at a salary within N.J.C. Scale A.P.T. III (£960 to £1,140 per annum).

(b) DRAUGHTSMEN (Two) at a salary within N.J.C. Miscellaneous Grade V (£685 to £760 per annum).

Further particulars and application forms from County Planning Officer, County Hall, Lewes, Sussex, to whom applications should be sent not later than the 13th March, 1961. 5978

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited for the following post in the Quantity Surveyors section:-

JUNIOR QUANTITY SURVEYOR

A.P.T. Grade I, salary range £645-£815. Applicants should have passed the R.I.C.S. Intermediate examination (Quantity) or be up to that standard. Duties embrace Housing, Town Centre and Industrial buildings. Superannuation schemes, medical examination. Housing available. Apply by 13th March, 1961, stating age, education and qualifications, experience and appointments held (with dates and salaries), and names of two referees, to General Manager (Q.S.), Bracknell Development Corporation, Farley Hall, Bracknell, Berks. 5977

CAMBRIDGESHIRE COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for appointment as Architectural Assistants on salaries in Grade I of the A.P.T. Scale (£645-£815).

Applicants should have reached or be near Intermediate standard of the R.I.B.A., and should be keen to progress further.

The appointment is subject to the Local Government Superannuation Acts, 1937 to 1958, the National Scheme of Conditions of Service, a satisfactory medical examination and terminable at one month's notice on either side.

Commencing salary will be in accordance with experience.

Applications, stating age, present salary, present and previous appointments, and details of training and experience, together with the names of two referees, should be submitted to the undersigned not later than Monday, 13th March, 1961.

CHARLES PRYTHIAN,

Clerk of the County Council

Shire Hall,

Cambridge.

15th February, 1961. 5968

FULHAM BOROUGH COUNCIL

BOROUGH ARCHITECT'S DEPARTMENT

ASSISTANTS required within the salary scales £645/£1,140 plus £25/£45 London weighting. Minimum requirements two years' continuous office experience and probationer of R.I.B.A.

Commencing salary according to experience and qualification. Assisted training and promotion schemes. Five-day week. Details from Town Clerk, Town Hall, Fulham, S.W.6. Closing date 14th March, 1961. 6128

BOROUGH OF WIMBLEDON

ARCHITECTURAL ASSISTANT Grade A.P.T.

II, £815 to £960 plus London weighting. Form of application from Borough Engineer and Surveyor, Town Hall, Wimbledon, S.W.19. Returnable by 20th March, 1961. Canvassing disqualified. 6124

BOROUGH OF MAIDENHEAD
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT

ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of an Architectural Assistant on Grade A.P.T. III/IV, of the National Scales (£860-£1,310), commencing salary according to qualifications and experience. Preference will be given to applicants holding a recognised qualification.

Housing accommodation is provided and contributions made towards removal expenses in approved cases. The Council is operating a five-day week.

The appointment will be subject to the National Scheme of Conditions of Service, the Local Government Superannuation Acts, the satisfactory passing of a medical examination and termination by one month's notice on either side.

Applications stating age, qualifications, experience, and accompanied by the names of two referees, must be sent to C. T. Read, M.B.E., M.I.C.E., F.R.I.C.S., M.I.Mun.E., 14, Craufurd Rise, Maidenhead, as soon as possible but not later than Thursday, 9th March, 1961.

Canvassing will be a disqualification and candidates must disclose whether to their knowledge they are related to any member or senior official of the Council.

STANLEY PLATT,

Town Clerk.

Guildhall,

MAIDENHEAD.

February, 1961. 5976

BIRMINGHAM REGIONAL HOSPITAL

BOARD

SENIOR ASSISTANT QUANTITY SURVEYORS.

Salary scale £1,030-£1,960 per annum.

Qualification: Corporate Membership R.I.C.S. Superannuable. Five-day week. Apply (quoting Arch. 23) stating qualifications, age, experience, present position and salary and names of two referees to Secretary, Birmingham Regional Hospital Board, 30, Augustus Road, Birmingham, 15, by 20th March, 1961. 6131

BOROUGH OF HESTON AND ISLEWORTH

Applications are invited for the under-mentioned appointments in the Borough Engineer and Surveyor's Department:-

(a) CHIEF PLANNING ASSISTANT. Salary in accordance with A.P.T. Grade V (£1,310-£1,480 per annum, plus London "weighting").

(b) SENIOR PLANNING ASSISTANT. Salary in accordance with A.P.T. Grades II-III (£815-£1,140 per annum plus London "weighting").

(c) PLANNING ASSISTANT. Salary in accordance with A.P.T. Grade I (£645-£815 per annum, plus London "weighting").

Applicants for (a) must be Members or Associate Members of Town Planning Institute and it will be an advantage if they hold additional qualifications. Applicants must have good experience in general planning matters, development control and public inquiry work. A car allowance of £130 p.a. will be paid at the pleasure of the Council if the successful applicant provides a motor car for regular use in carrying out his duties.

Applicants for (b) and (c) should have passed the Intermediate examination of the Town Planning Institute or other equivalent and have had experience in a town planning department of a local authority. Commencing salary to be in accordance with qualifications and experience.

The Council is unable to assist the successful candidates with housing accommodation.

Applications are to be submitted by 20th March, 1961, on forms to be obtained from and returned to the Borough Engineer and Surveyor, 25, Lampton Road, Hounslow.

D. MATHIESON,

Town Clerk

Town Hall,

Hounslow,

Middlesex. 6126

MINISTRY OF WORKS SUPPLIES DIVISION, LONDON

requires an ASSISTANT DESIGN OFFICER for a wide variety of work including domestic and office furniture and equipment. Ability to produce original designs, integrated schemes, and to prepare coloured perspective sketches for furniture and interiors is essential.

Applicants must hold M.S.I.A., Des. R.C.A. N.D.D. or equivalent. Some previous experience is essential. Salary range £1,185-£1,448 p.a. Successful applicant will be engaged for a period of 3-5 years.

Applications, stating age and experience, to Controller of Supplies, Ministry of Works, Southbridge House, Southwark Bridge Road, S.E.1. 6129

SHIPLEY URBAN DISTRICT COUNCIL

APPOINTMENT OF ARCHITECTURAL

ASSISTANTS

Applications are invited from appropriately qualified persons for the above appointments within A.P.T. Grades II/IV (£815-£1,310), commencing salary according to experience and qualifications. The posts are superannuable and housing accommodation will be provided if required.

Applications giving age, details of training, qualifications and experience, with the names and addresses of two referees, to be sent to the Surveyor, Town Hall, Shipley, Yorkshire, by Saturday, 11th March, 1961.

ERNEST PHARR,

Clerk and Solicitor.

6175

LIVERPOOL REGIONAL HOSPITAL BOARD

require

ARCHITECTS

SENIOR ASSISTANT ARCHITECTS ..	£1,300-1,600
ASSISTANT ARCHITECTS	£905-1,310
ARCHITECTURAL ASSISTANTS ..	£625- 900
ARCHITECTURAL DRAUGHTSMEN ..	£475- 685

and

SURVEYORS

SENIOR ASST. QUANTITY SURVEYOR	£1,300-1,600
ASSISTANT QUANTITY SURVEYOR	£905-1,310
ASSISTANT BUILDING SURVEYORS	£905-1,310
BUILDING SURVEYING ASSISTANTS	£625- 900

to assist the Regional Architect, T. Noel Mitchell, B.Arch., F.R.I.B.A., to carry out the expanding Hospital Building Programme. Interesting new building is projected including new General and Specialised Hospitals and the complete replanning of a large number of older Hospitals covering a wide variety of building types.

All posts are superannuable and mileage allowances will be paid to approved car users. Applications to reach me within ten days stating post applied for, age, education, qualifications, experience, present and previous posts and names and addresses of three referees (two technical).

VINCENT COLLINGE,
Secretary to the Board

55, Castle Street,
Liverpool, 2

BASILDON DEVELOPMENT CORPORATION

ARCHITECTS

The Chief Architect/Planner requires Architects for the following appointments.

SENIOR ARCHITECT to lead a Section
Salary between £1,715 and £1,975

GROUP LEADERS
Salaries between £1,305 and £1,670

ARCHITECTS
Salaries between £935 and £1,310

LANDSCAPE ARCHITECTS
Salaries between £815 and £1,190

The Town is less than half-way to its ultimate development as the largest New Town, and Architects of outstanding ability are needed to effect comprehensive development of the Town Centre, the Second Industrial Area, and major housing development and redevelopment

Please apply with full details to:—

*The General Manager,
Gifford House,
Basildon, Essex.*

Liverpool Regional Hospital Board

**ASSISTANT
REGIONAL ARCHITECT**

Salary £1,825 x £75(2) x £100(2)—£2,175

Graduate of a recognised School of Architecture preferred. High status in design essential. Will be expected to provide executive design leadership under the Regional Architect in a Department having an establishment of four Principal Assistants—each responsible for a section of work which includes major projects—these being assisted by a number of Senior and Assistant Architects.

The post is superannuable; car mileage and subsistence allowances payable. The Department is in pleasant modern offices in a central position in the city.

Applications to reach me within ten days, stating age, education, qualifications, experience, present and previous posts and names and addresses of three referees (two technical).

VINCENT COLLINGE,
Secretary to the Board.
55, Castle Street,
Liverpool, 2.

LANCHESTER COLLEGE OF TECHNOLOGY, COVENTRY
(Principal: A. J. RICHMOND, B.Sc. (ENG.), Ph.D., M.I.MECH.E.)

Applications invited for post of **LECTURER IN BUILDING** in Department of Civil Engineering and Building. Candidates should be Associates of Institute of Builders or professional Associates of Royal Institute of Chartered Surveyors, and be competent to teach Quantity Surveying to Building students as well as general Building subjects in advanced courses. The Department offers mainly courses of an advanced standard, i.e. H.N.C., H.N.D. and professional courses. Appropriate industrial experience necessary; previous teaching experience an advantage but not essential. Duties to commence as soon as possible.

Salary—£1,370 × £35 (4) and £40 (1)—£1,550 p.a. In certain circumstances the successful candidate may be paid commencing salary above minimum of scale.

Further particulars and application forms from The Registrar, Lanchester College of Technology, Priory Street, Coventry, to whom completed forms should be returned by 25th April.

W. L. CHINN,
Director of Education. 6133

STAFFORDSHIRE COUNTY COUNCIL, COUNTY ARCHITECT'S DEPARTMENT VACANCIES

ASSISTANT ARCHITECTS:

£1,310—£1,480,
£1,140—£1,310,
£960—£1,140.

ARCHITECTURAL ASSISTANTS: £815—£960.
ARCHITECTURAL DRAUGHTSMEN: Salary according to experience.

ASSISTANT QUANTITY SURVEYORS:

£1,140—£1,310,
£960—£1,140,
£815—£960.

The Council may be able to assist with housing accommodation in cases of need, and also has a scheme for loans to employees wishing to purchase their own houses.

Good working conditions, assistance with removal expenses, lodging allowances, etc.

Forms of application from P. Woodcock, F.R.I.B.A., County Architect, Green Hall, Lichfield Road, Stafford.

Closing date—15th March, 1961.

T. H. EVANS,
Clerk of the County Council. 6120

BOROUGH OF TAUNTON ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments in the Borough Architect's Department.

ASSISTANT ARCHITECTS, Grade A.P.T. III-IV (£960—£1,140—£1,310 p.a.).

The Council have an interesting programme of estate development and re-development schemes including flat accommodation, groups of shops, old persons' accommodation, market offices and other ancillary buildings.

The posts are superannuable, subject to medical examination and to National Conditions of Service. Salary placing according to qualifications and experience. Applications, stating age, present position and salary, qualifications, experience and names of two referees, to be sent to C. Bacon, Esq., F.R.I.B.A., Borough Architect, Flook House, Station Road, Taunton, within 14 days of the appearance of this advertisement.

Housing accommodation will be made available to suitable applicants if required.

R. A. HORNE,
Town Clerk. 6134

CITY OF MANCHESTER

SENIOR ASSISTANT PLANNING OFFICER required in the City Surveyor & Engineer's Department at a salary within J.N.C. Scale 'B' (£1,420/£1,670).

Candidates must be appropriately qualified by examination and must have had considerable experience in the Planning and Development work of a local authority.

This appointment offers practical experience on large scale projects. Housing accommodation and removal expenses.

Applications stating age, education, qualifications and experience with the names of three referees to the Town Clerk, Town Hall, Manchester, 2, not later than 27th March, 1961.

HARLOW DEVELOPMENT CORPORATION
Architect-Planner—Frederick Gibberd, C.B.E., F.R.I.B.A., M.T.P.I.
Executive Architect—Victor Hammett, B.Sc., A.R.I.B.A., Dip. T.P., A.R.I.C.S., A.M.T.P.I.

Architectural Vacancies

Applications are invited for the following posts:

- (a) 1 SENIOR ARCHITECT Grade IX—Salary £1,715—£1,975.
- (b) 1 ARCHITECT Grade VIII—Salary £1,565—£1,825.
- (c) 1 ARCHITECT Grade V—Salary £1,310—£1,480.
- (d) 1 ASSISTANT ARCHITECT Grade IV—Salary £1,140—£1,310.
- (e) 1 ASSISTANT ARCHITECT Grade III—Salary £960—£1,140.
- (f) 1 ARCHITECTURAL ASSISTANT Grade II—Salary £815—£960.

Post (a) requires ability to direct and control a small group of Architects engaged upon industrial work, including factories, laboratories, warehouses, office buildings, etc. Candidates should be experienced in Architect/Client relationships and able to take instructions and present schemes.

Candidates for post (b) should be experienced in industrial projects and will be required to have had considerable experience including design and construction.

Candidates for post (c) should have ability to work on building projects from their inception to completion on smaller scale industrial work and/or commercial buildings. An all-round general architectural experience preferable.

Candidates for post (d) should be able to organize the preparation of working drawings. Experience of the running of building contracts an advantage.

Candidates for posts (e) and (f) should be experienced in the preparation of working drawings and details.

Housing will be made available to rent in appropriate cases.

Applications giving full details of training, qualifications and experience, together with names of two referees, to the General Manager, Terlings, Harlow, Essex, within ten days. 6174

CITY OF WINCHESTER

Applications are invited for JUNIOR ARCHITECTURAL ASSISTANTS in the City Engineer's Department (C. C. Steptoe, A.R.I.B.A., Chief Assistant Architect) within Grades I—II (£645—£960) according to qualifications and experience. The appointments are subject to the terms and conditions laid down by the Southern Provincial Council and to the Local Government Superannuation Act.

Applications stating age, qualifications and experience, together with the names of two referees, addressed to the City Engineer, Guildhall, Winchester, should reach him not later than MONDAY, 13th March, 1961.

The Council will assist in the provision of HOUSING ACCOMMODATION in suitable cases.

R. H. McCALL,
Town Clerk. 6181

NORFOLK COUNTY COUNCIL—PLANNING DEPARTMENT APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited from young men for appointment to the above post within the salary scale £645—£960 p.a. (according to experience and qualifications).

The post, in the design team of the Department, offers scope and opportunity of work of an extremely varied and interesting nature and prospects of promotion. A qualification in architecture would be an advantage, but partially qualified persons will be considered and every encouragement, both financial and otherwise, will be given to any such person appointed towards the attainment of a full qualification.

The National Scheme of Conditions of Service for Local Authorities Professional and Technical Services apply.

Applications (no forms) giving full particulars of education, qualifications and experience, together with the names of two referees, to be submitted to the undersigned (from whom further details may be obtained if desired) by 18th March, 1961.

R. I. MAXWELL,
County Planning Officer.

County Planning Department,
41/43, Thorne Road,
Norwich Norfolk. 6169

WESSEX REGIONAL HOSPITAL BOARD

There are vacancies for the following posts in the Architect's Department to deal with the Board's expanding hospital building programme:

(a) **PRINCIPAL ASSISTANT ARCHITECT, Grade II** (£1,665 × £50 (1) × £75 (2) × £85 (2)—£2,035).

(b) **SENIOR ASSISTANT ARCHITECT** (£1,300 × £60 (5)—£1,600).

(c) **ASSISTANT ARCHITECTS** (£905 × £35 (1) × £45 (2) × £50 (2)—£1,310).

Applicants must be Registered Architects. The work offers excellent opportunity for gaining experience in the whole field of hospital architecture and covers all stages from sketch plans to the supervision of construction. The proposed expansion of the Board's building programme ranges from major adaptation schemes to comprehensive new hospital projects, and includes all types of medical ancillary departments and domestic buildings.

(d) **BUILDING OR QUANTITY SURVEYING ASSISTANT** (£625 × £30 (3) × £35 (1)—£900).

Applicants must have passed the Intermediate Examination of the R.I.C.S. or an examination giving exemption therefrom.

Please apply to the Secretary, Highcroft, Romsey Road, Winchester, for application form which should be returned by 17th March. 6145

CITY OF SHEFFIELD CITY ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited from suitably qualified persons for the following appointments on the staff of the City Engineer and Surveyor and Town Planning Officer:—

HIGHWAYS
(a) **DIVISIONAL ENGINEER—Grade B/C** (£1,480—£1,825 p.a.).

The person appointed to this post will be responsible for the Eastern Division of the City and should have good experience in the control and execution of large direct labour works embracing the maintenance and construction of highways and sewers.

(b) **SENIOR ASSISTANT (Bridges)—Grade A.P.T. V** (£1,310—£1,480 p.a.).

(c) **SENIOR ENGINEERING ASSISTANTS—Grade A.P.T. IV** (£1,140—£1,310 p.a.).

TRAFFIC ENGINEERING
(a) **GRADUATE ASSISTANT—Grade A.P.T. II** (£815—£960 p.a.).

(b) **RECORDS AND STATISTICS ASSISTANT—Grade A.P.T. III** (£960—£1,140 p.a.).

Candidates for post (b) should be experienced statisticians or be keenly interested in statistical work in the traffic engineering field.

The commencing salary for each of the above posts will be in accordance with experience and qualifications.

Consideration will be given if required to assistance with housing accommodation and removal expenses in suitable cases.

Superannuable posts, N.J.C. Conditions of Service, Medical Examination.

Applications stating age, education and training, qualifications, experience, present and past appointments (with dates and salaries) and quoting the names of two referees should be submitted to the undersigned by the 24th March next.

JOHN HEYS,
Town Clerk. 6152

BOROUGH OF MANSFIELD

APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT A.P.T. IV (£1,140—£1,310)

Applications are invited for the above permanent appointment in the Borough Engineer and Surveyor's Department.

Applicants must be Associate Members of the Royal Institute of British Architects and must have had some years' practical experience. A house on service tenancy may be rented if required; it is also the Corporation's wish that the person appointed shall live within the Borough.

Applications stating age, marital state, training, past and present appointments with salary, and experience, together with the names of three referees, should be sent to the Borough Engineer and Surveyor, Carr Bank, Mansfield, Notts., to arrive not later than Friday, 10th March, 1961.

A. C. SHEPHERD,
Town Clerk. 6089

The new aids to
Roof Construction

FULLY GUARANTEED

Patent No. 764973



ARCHITECTS' JOURNAL
INFORMATION SHEET AND
FULLY ILLUSTRATED
BROCHURE AND PRICE LIST
FROM

PARAMOUNT ASPHALTE
(LIMITED)

149 KENNINGTON PARK ROAD,
LONDON, S.E.11.

Tel.: RELiance 2373-2191

ARCHITECTS
required by LONDON TRANSPORT for the following posts:—

ASSISTANT ARCHITECTS: Salary range £1,140 p.a.—£1,320 p.a. Applicants must be fully qualified and capable of supervising staff. (Reference 129/A/1.)

ARCHITECTURAL ASSISTANTS: Salary ranges £1,060 p.a.—£1,140 p.a. £940 p.a.—£1,020 p.a.

Applicants should be qualified to R.I.B.A. Intermediate standard with previous office experience. (Reference 129/B/1.)

Free travel, five-day week; medical examination; contributory superannuation after probation.

Applications quoting reference number of post applied for and stating age, qualifications and full details of experience, to Staff and Welfare Officer, London Transport, 55, Broadway, S.W.1. 6091

HAMMERSMITH BOROUGH COUNCIL
ARCHITECTURAL ASSISTANTS—A.P.T. III (£960/£1,140 p.a.) plus London weighting. Applicants should have passed the Intermediate Examination of the R.I.B.A. or the equivalent at a recognised School of Architecture. Application form, returnable by 14th March, 1961, from Town Clerk, Town Hall, W.6. 6102

MIDDLESEX COUNTY COUNCIL
ARCHITECT'S DEPT.

ASSISTANT ARCHITECTS, A.P.T. V (£1,355—£1,525) and **A.P.T. III/IV** (£1,005—£1,355) required. Established. Commencing salaries according to qualifications and experience. Department is divided into groups and there are good opportunities for architects with special design ability. Prescribed conditions. Application forms from County Architect (s.a.e.), 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, returnable by 13th March. (Quote F615 A.J.) 6103

KIRKBY URBAN DISTRICT COUNCIL
CHIEF ARCHITECTURAL ASSISTANT
Applications are invited for this appointment in the Engineer and Surveyor's Department. The post offers scope for wide experience and is the senior post in the architectural section of the department. Final R.I.B.A. or equivalent qualification required.

Salary—A.P.T. Grade V—commencing at £1,355 per annum. Five-day week. Assistance with housing and removal expenses considered. Casual user car allowance.

Applications, setting out full details of age, experience, qualifications, past and present appointments, salary, etc., and the names of two referees, to me not later than 13th March. Canvassing disqualifies. Relationship to be disclosed.

W. BYRON,
Clerk of the Council
Kirkby Hall,
Hall Lane,
Kirkby. 6110

MANCHESTER REGIONAL HOSPITAL BOARD

Applications are invited for the following appointments in the Architectural Department:—
General Architectural Section

(a) **SENIOR ASSISTANT ARCHITECT,** £1,300—£1,600 p.a.

(b) **ARCHITECTURAL ASSISTANT,** £625—£900 p.a.

(c) **ARCHITECTURAL DRAUGHTSMAN,** £475—£685 p.a.

Lands and Buildings Section

(d) **ASSISTANT SURVEYOR,** £905—£1,310 p.a.

(e) **SURVEYING ASSISTANT,** £625—£900 p.a.

(f) **ARCHITECTURAL DRAUGHTSMAN,** £475—£685 p.a.

Candidates for posts (a) and (d) should possess full professional qualifications and for posts (b) and (e), intermediate qualifications. Draughtsmen should have had at least three years' drawing office experience. All posts superannuable. Application forms and particulars of appointments available from the Secretary, Manchester Regional Hospital Board, Cheetwood Road, Manchester 8, to whom they should be returned by 27th March, 1961. 6195

COUNTY BOROUGH OF BURNLEY
Applications are invited for the appointment of **ASSISTANT ARCHITECT** in the Borough Engineer & Surveyor's Department at a salary in accordance with A.P.T. Grade III/IV (£960—£1,310 per annum), commencing salary to be fixed in accordance with qualification and experience.

Five-day week. Housing accommodation will be provided if required.

Form of application etc., may be obtained from the Borough Engineer, 22/24, Nicholas Street, Burnley, to whom applications must be returned not later than Friday, 17th March, 1961.

C. V. THORNLEY,
Town Clerk. 6167

MINISTRY OF HOUSING AND LOCAL GOVERNMENT: HOUSING AND PLANNING INSPECTORS. At least 23 pensionable posts for men and women: (a) **SENIOR INSPECTORS;** (b) **INSPECTORS.** Age at least 45 for (a) or 35 for (b) on 1.1.61. Candidates must either be Registered Architects or Corporate Members of an appropriate professional institution. Practical experience in housing design and development or town and country planning an advantage. Duties include conducting public local inquiries under Housing and Town and Country Planning Acts; considerable travelling. Men's starting salary (London): (a) £1,840; (b) £1,325 (age 35-37) to £1,480 (at 40 or over). Exceptionally higher starting salary may be recommended. Scale maxima: (a) £2,120; (b) £1,780. Salaries under review. Promotion prospects. Write Civil Service Commission, Burlington Gardens, London, W.1, for application form, quoting 5217/61. Closing date 23rd March, 1961. 6067

THE ROYAL COLLEGE, NAIROBI
Applications are invited for **SENIOR LECTURESHIP IN QUANTITY SURVEYING.** Salary scale: £1,950 x £75—£2,475 p.a., entry point determined by qualifications and experience. Responsibility allowance £100 p.a. for headship of department. F.S.S.U. Child allowance £50 p.a. per child (max. £150 p.a.). Passages for appointee and family (up to four adult passages) on appointment, termination and leave (once every two years). Rent according to quarters provided £50—£114 p.a. Detailed applications (eight copies) naming three referees by 27th March, 1961, to Secretary, Inter-University Council for Higher Education Overseas, 29, Woburn Square, London, W.C.1, from whom further particulars may be obtained. 6047

HAMPSHIRE COUNTY COUNCIL
ASSISTANT ARCHITECT, A.P.T. II (£815—£960) required for pensionable post in County Architect's Department. Candidates should have passed the Intermediate Examination of the R.I.B.A. Separation allowance and assistance with removal expenses in approved cases. Five-day week.

Application forms, returnable by 3rd March, from the Clerk of the County Council, The Castle, Winchester. 6055

NORTH RIDING COUNTY COUNCIL
Applications are invited for the following posts in the Architect's Department.

1. **ASSISTANT ARCHITECTS,** Grade A.P.T. III/IV. Salary £960—£1,310, must be A.R.I.B.A. with at least three years' experience since passing the Examination.

2. **ASSISTANT ARCHITECTS,** Grade A.P.T. II/III. Salary £815—£1,140, must have passed the Intermediate Examination of the R.I.B.A. Could be appointed on Grade A.P.T. III if Final Examination of R.I.B.A. has been passed.

3. **ARCHITECTURAL ASSISTANT,** Grade A.P.T. I. Salary £645—£715. Intermediate R.I.B.A. or equivalent at one of the recognised schools of Architecture.

Conditions of Service and application forms from R. Allport Williams, M.B.E., B.Arch., F.R.I.B.A., County Architect, County Hall, Northallerton, Yorkshire, and applications to be returned to R. A. Wotherspoon, Clerk of the County Council, at the same address, by 10 a.m., 24th March, 1961. 6068

TYRONE COUNTY EDUCATION COMMITTEE
Applications are invited by Tyrone County Education Committee for an appointment in the Department of their Chief Architect, P. M. Bone, Dip.Arch., A.R.I.B.A.

Applicants should be capable of a high standard of contemporary design and may be required to take charge of the design, working drawings and supervision of contracts. Possession of a car is desirable and appropriate travelling expenses will be paid. Removal expenses may be granted to married applicants.

The salary scale, at present under review, is as follows:—

For Registered **ARCHITECTS,** £805 to £1,260; alternatively, for **ARCHITECTURAL ASSISTANTS** with suitable experience, £595 to £905.

Placing on the scales will be according to qualifications and experience.

Applications on forms from Chief Education Officer, Education Offices, Omagh, should be lodged with him by 21st March, 1961. 6046

HUNTINGDONSHIRE
COUNTY ARCHITECT'S DEPARTMENT
SENIOR QUANTITY SURVEYING ASSISTANTS

GRADE A.P.T. IV (£1,140—£1,310)

Applications are invited from Chartered Quantity Surveyors for the above appointments which are additional to the existing staff. Candidates must be experienced in the preparation of bills of quantities, valuation of works in progress and settlement of final accounts.

Further details and application forms may be obtained from the County Architect, County Buildings, Huntingdon. Completed application forms should be returned to the undersigned by Monday, 13th March, 1961.

A. C. AYLWARD,
Clerk of the County Council.
County Buildings,
Huntingdon. 6061

BOROUGH OF ENFIELD
BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT

(Non-County Borough in the County of Middlesex. Population 109,700. Area 12,400 acres)

Applications are invited, from suitably qualified persons, for the post of **ARCHITECTURAL ASSISTANT—GRADE A.P.T. III** (£960—£1,140 per annum, plus appropriate London weighting). The commencing salary will be fixed at a point within the Scale commensurate with qualifications and experience.

The successful applicant will be engaged, *inter alia*, on the preparation of three-dimensional schemes for the redevelopment of the Town Centre as a pedestrian shopping precinct, the design of multi-storey point blocks of flats, and the redevelopment of clearance areas.

Housing accommodation may be made available in appropriate cases. The Council is also prepared to consider 100 per cent. advance, to the successful candidate, for house purchase within the Borough.

Saturday mornings are normally free from duty. Application forms, obtainable from H. D. Peake, M.Sc. (Eng.), Borough Engineer & Surveyor, 7, Little Park Gardens, Enfield, Middx., must be delivered to the undersigned as soon as possible.

CYRIL E. C. R. PLATTEN,
Town Clerk.
Public Offices,
Gentleman's Row,
Enfield, Middx. 6064

HAMPSHIRE COUNTY COUNCIL
CHIEF QUANTITY SURVEYOR, Scale D/E (£1,710—£2,120) to take charge of new and existing staff of an expanding Section in the office of the County Architect (H. Benson Ansell, A.R.I.B.A.). Candidates must be A.R.I.C.S. and have had a wide experience of all branches of quantity surveying, including cost analysis and control, and be first rate administrators. Separation allowance and assistance with removal expenses in approved cases.

Application forms, returnable by 14th March, from the Clerk of the County Council, The Castle, Winchester. 6179

Contracts are safe with

Benbow
OF TORQUAY

shop and barfitters

Head Office Petitor Road Torquay

Telephone 89234/5

REGULAR CONTRACTORS IN DEVON CORNWALL SOMERSET GLOUCESTERSHIRE WILTSHIRE DORSET HAMPSHIRE SOUTH WALES

RADNOR COUNTY COUNCIL
(This is an English speaking County)

ARCHITECTURAL ASSISTANTS

2 A.P.T. III (£960—£1140)

A lodging allowance, proportion of approved removal expenses and rail fare home every three weeks for a limited period will be paid to married men appointed to the above two posts.

ASSISTANT BUILDING INSPECTOR

1 A.P.T. II (£815—£960)

CLERK OF WORKS

For new primary school £20 per week for approximately 12 months.

Further details from: J. A. McRobbie, A.R.I.B.A.,
County Architect,
County Hall,
Llandrindod Wells,
Radnor.

FINE FARE LIMITED

**BRITAIN'S
LEADING
SUPERMARKETS**

The Works Division of the largest operators of Supermarkets in the United Kingdom offer permanent and pensionable appointments in their Planning Department for:

(a) A FIRST CLASS ARCHITECTURAL ASSISTANT

and (b) A SHOP-FITTING DRAUGHTSMAN

to work on a large retail expansion programme of supermarkets and ancillary buildings and modernisation of existing properties.

Excellent opportunities of advancement in a rapidly expanding organisation. Highest salaries will be offered to suitable applicant.

Good working conditions. Opportunities for paid overtime work. Staff Canteen. Five-day week. Assistance with housing and travelling by arrangement.

Apply in first instance to:

B. R. Archer, A.R.I.B.A., A.A.Dip.,
Head of Works Division,
2 Mundells,
Welwyn Garden City,
Hertfordshire.

YOUNG ARCHITECTS

Richard Costain (Construction) Ltd., are building in many parts of Britain. If you are a young architect with progressive ideas you are invited to join us.

The Architects Department handles contracts of every description. Work in progress includes factories, laboratories, amenity buildings, bakeries, super-markets, multi-storey flats and garages.

An Assistant Architect (your official position) gets a thorough grounding in every aspect of design and supervision.

★ You would be responsible to a Group Leader who personally supervises a small team of architectural staff.

★ You would assist in the design of projects allocated to your Group.

★ You would confer and team-up with construction colleagues—estimators, engineers, planning staff and contracts managers—at all stages. Our architects find that this adds considerable interest to their work.

★ Visits to sites during construction are considered an essential part of your work.

Every encouragement is given to all staff to achieve professional qualifications.

*can plan for a
constructive future at*

COSTAIN

**Salaries start from
£900 to £1300**

**according to
experience and
qualifications**

For further details write direct to the Chief Architect, telling him all about yourself: H. STANLEY SMITH, A.R.I.B.A.,
RICHARD COSTAIN LTD., 111 WESTMINSTER BRIDGE ROAD, LONDON, S.E.1

**CITY OF LIVERPOOL
ARCHITECTURAL AND HOUSING
DEPARTMENT**

Applications are invited for the appointment of (a) CHIEF ASSISTANTS, (b) SENIOR ASSISTANTS, (c) ASSISTANTS (ARCHITECTURAL) in the General Architectural, Housing and Redevelopment Sections.

Salaries:—(a) £1,425 to £1,670 p.a. (Scale "B").
(b) £1,310 to £1,565 p.a. (Scale "A").
(c) £1,310 to £1,480 p.a. (Grade A.P.T. V).

Applicants should be Associates of the R.I.B.A. or hold equivalent qualifications and should indicate in their application the grading of the appointment for which they wish to apply. All give wide opportunities for personal initiative. Application forms, returnable by 24th March, 1961, from the City Architect and Director of Housing, Blackburn Chambers, Dale Street, Liverpool, 2.

The appointments are superannuable and subject to the Standing Orders of the City Council. Canvassing disqualifies.

THOMAS ALKER,
Town Clerk.

(J 5672.)

**CITY OF BIRMINGHAM: PARKS
DEPARTMENT**

APPOINTMENT OF TECHNICAL OFFICER

Applications are invited for the above appointment from persons holding a qualification in Surveying, Architecture or Engineering. The post is graded in accordance with A.P.T. Division Grade V (£1,310—£1,480 per annum).

The appointment will be subject to the provisions of the National Scheme of Conditions of Service as adopted by the City Council and varied from time to time, the Local Government Superannuation Acts, 1937-53, and will be terminable by one month's notice. The successful candidate will be required to pass a medical examination.

The person appointed will be required to assist and deputise for, when necessary, the Officer-in-Charge of the Sites and Buildings Section of the Department in connection with all appropriate professional and technical matters arising out of the supervision of all sites under the control of the Parks Committee and the maintenance of ancillary buildings connected therewith. Experience in landscaping will be taken into consideration.

A knowledge of Local Government procedure and organisation is an advantage.

Applications, together with the names of two referees, should be addressed to the General Manager, Parks Department, Civic Centre, Birmingham, 1, to reach him not later than 12 noon on Monday, 20th March, 1961.

SHEFFIELD REGIONAL HOSPITAL BOARD
Applications are invited for the following posts in the Architectural Division of the Board's Headquarters:—

ASSISTANT ARCHITECTS—Candidates must be Registered Architects and have passed the requisite examinations. Salary scale £905—£1,310 per annum. Commencing salary according to age and practical experience.

ARCHITECTURAL ASSISTANT—Applicants must have passed Intermediate Examination of Royal Institute of British Architects. Salary scale £625—£900, commencing salary according to age and experience.

DRAUGHTSMEN for general drawing office duties, including tracing. Candidates (male or female) must have had suitable training, including three years' practical experience in architectural and surveying drawing. Salary scale £475—£685 per annum, commencing salary according to age and experience.

Forms of application and further details obtainable from The Secretary, Sheffield Regional Hospital Board, Old Fulwood Road, Sheffield, 10. Closing date for receipt of completed applications 11th March, 1961.

MIDDLESBROUGH EDUCATION COMMITTEE

CHIEF ASSISTANT ARCHITECT

Applications are invited from qualified Architects for the above appointment in the Education Architect's Office of the Education Dept. Salary scale Grade B (£1,425—£1,670). Candidates should be widely experienced in educational building work, able to control staff and to deputise for the Education Architect. Housing accommodation will be considered for married applicants if required.

Application forms and further details from the Director of Education, Education Offices, Woodlands Road, Middlesbrough. Closing date 13th March.

AIR MINISTRY require SENIOR WORKERS

UP in Quantities Division in London. Must be fully experienced and competent to Work Up entire Bills of Quantities. Candidates must hold O.N.C. or C. & G. (Quantities) or equivalent technical qualifications. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 18 days paid leave a year initially. Salaries on annual incremental basis ranging from £975 (age 30 or over) to £1,115. Commencing salary according to qualifications and experience. Applicants, who must be natural born British subjects, should write stating age, qualifications and experience to Manager (PE 519), Ministry of Labour, Professional & Executive Register, Atlantic House, Farringdon Street, London, E.C.4. No original testimonial should be sent.

BOROUGH OF JARROW

Applications are invited for the appointment of an ASSISTANT ARCHITECT, Salary Grade A.P.T. III (£960—£1,140).

Details and application forms obtainable from the Borough Engineer, Town Hall, Jarrow, Co. Durham.

Completed applications should be returned to me by Friday, 10th March, 1961.

(Signed) M. L. ROTHFIELD,
Town Clerk.

6180

AIR MINISTRY require QUANTITY SURVEYING ASSISTANTS Grade III at R.A.F. and Ministry of Aviation stations throughout the United Kingdom. The work includes abstracting and billing, site measurement and preparation of estimates. Candidates must hold O.N.C. (Building or Builders Quantities) or equiv. and have had good experience under Quantity Surveyor or Building Contractor. Knowledge of W.D. Schedule an advantage.

Commencing salary, which is dependent upon age, quals, and exp., ranges from £776 (age 25) to £961 max. in Grade III. There are pension prospects and also opportunities of advancement to numerous posts in the higher grades, vacancies which as a rule are filled by promotion of existing staff, viz.:

Technical Grade II:	£961—£1098	123 posts
Technical Grade I:	£1098—£1348	42 posts
Technical Grade B:	£1348—£1552	6 posts
Technical Grade A:	£1439—£1697	6 posts

Overseas tours for which special allowances ranging at present up to £1,800 p.a. are payable in addition to a higher salary. Financial assistance and time off allowed for recognised courses of study leading to higher quals. Five-day week with 18 days paid leave a year initially.

Applicants who must be natural born British subjects should write stating age, quals, and exp. to Manager (PE2), Ministry of Labour, Professional & Executive Register, Atlantic House, Farringdon Street, London, E.C.4. Candidates selected will be interviewed in Air Ministry, London, and certain expenses reimbursed. Only applicants selected for interview will be advised.

5349

IRELAND

Vacancies for ASSISTANT ARCHITECTS in the Civil Service (at least seven). Maximum salary (Man) £1,235; commencing salary up to £1,110. Maximum age limit: 40 years with extensions. Application forms, etc., from Secretary, Civil Service Commission, 45, Upper O'Connell Street, Dublin, 7. Latest time for receiving completed application forms: 5 p.m. on 21st March, 1961.

6094

ASSISTANT ARCHITECT

required in the Birmingham Branch Office of National firm.

Salary £1,200-£1,300 per annum according to age and experience.

Applicants must be A.R.I.B.A. with experience in controlling contracts through all stages and must be capable of supervising staff.

5-day week. 3 weeks holiday. Car allowance.

Replies to Box 6088, stating details as to experience and age, quoting 'AAB.2280'.

CAERNARVONSHIRE

Applications are invited for the following appointments:-

ASSISTANT ARCHITECT

APT.V - £1,310/£1,480.

ASSISTANT ARCHITECT

APT.III/IV - £960 £1,310.

ARCHITECTURAL ASSISTANTS

APT.II - £815/£960.

Further particulars and application forms from

Clerk of the County Council, County Offices, Caernarvon.

Closing date, 25th March, 1961

MIDDLESEX COUNTY COUNCIL

ARCHITECT'S DEPT.

OFFICER-IN-CHARGE OF TECHNICAL INFORMATION LIBRARY (A.P.T. IV, £1,385-£1,355) required. Should have had previous experience in this type of work or should be Architects who would be interested in organizing Technical Information Service for large architects' department. Established. Prescribed conditions. Application forms (s.a.e.) from County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, returnable by 13th March. (Quote F 613 A.J.) 6070

AYCLIFFE DEVELOPMENT CORPORATION

(New Town of Newton Aycliffe)

SENIOR ASSISTANT ARCHITECT

Applications are invited for an appointment of Senior Assistant Architect at a salary in accordance with Grades A.P.T. IV or V of the Whitley Council for New Towns Staff Scales of Salaries, i.e. £1,140-£1,310 p.a. or £1,310-£1,480 p.a. The commencing salary and grade will be fixed according to the qualifications and experience of the successful applicant.

Applicants should be associates of the Royal Institute of British Architects. The principal work for the successful applicant will be in connection with the development of the town centre of the new town.

Appointment subject to N.J.C. Conditions, superannuation, medical examination and to one month's notice, in writing, on either side.

Housing accommodation available, if required. Applications stating age, qualifications and experience together with the names of two referees to be sent to the undersigned.

A. V. WILLIAMS,

General Manager.

Churchill House,
Newton Aycliffe,
Nr. Darlington. 5864

CITY OF ST. JOHN'S
NEWFOUNDLAND-CANADA

Applications are invited for the following appointment:-

PLANNING ASSISTANT, at a salary of not less than \$5,000 per annum, depending on experience and qualifications.

Duties will include survey and analysis for completion of a Development Plan, re-zoning and implementation of development control. The appointment offers scope for independent and responsible work for a Metropolitan Area of 100 sq. miles and a population of 80,000.

Applicants must have considerable practical experience, preferably in a local Government Office and should possess professional qualifications. Appointment will be on a contract for two years in the first instance with a view to a permanent appointment for the selected officer. Successful applicant will be expected to commence duties in May or June.

Please reply to the undersigned with details of age, experience, present salary and qualifications together with copies of recent testimonials before 31st March, 1961.

TUDOR JOHN,

City Planning Officer.

City Hall,
St. John's,
Newfoundland. 5496

BOROUGH OF HESTON AND ISLEWORTH

Applications are invited for the appointment of a **DRAUGHTSMAN/TRAINEE** in the Architect's Section of the Borough Engineer and Surveyor's Department. Commencing salary will be in accordance with examination qualifications, ability and experience, but will not be less than £480 per annum at age 23. Maximum £560 or £730 per annum according to examination qualifications.

Applicants should have a good school record and be interested in architectural drawing.

The Council is unable to assist with housing accommodation.

Applications are to be submitted by 20th March, 1961, on forms to be obtained from and returned to Borough Engineer and Surveyor, 88, Lampton Road, Hounslow.

D. MATHIESON,

Town Clerk.

Town Hall,
Hounslow,
Middlesex. 6093

CUMBERLAND COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments to the Architectural Staff. Appointments will be made within the scales shown according to ability and experience. Post pensionable. Subject to medical examination.

(a) **ASSISTANT COUNTY ARCHITECT: J.N.C. Scale A.** £1,435-£1,565. Must be a qualified and experienced architect capable of taking charge of a group of assistants employed on major projects.

(b) **SENIOR ASSISTANT ARCHITECTS: A.P.T. Grade 5.** £1,310-£1,480. Must be A.R.I.B.A. with experience of handling large contracts.

(c) **ASSISTANT ARCHITECTS: A.P.T. Grade 4.** £1,140-£1,310. Must be A.R.I.B.A. preferably with Schools' experience.

Further particulars and forms of application may be obtained from the County Architect, 15, Portland Square, Carlisle, to whom applications should be returned not later than 22nd March, 1961.

G. N. C. SWIFT,

Clerk of the County Council.

The Courts,
Carlisle. 6142
February, 1961.

BURGH OF MOTHERWELL AND WISHAW

ARCHITECTURAL AND HOUSING

DEPARTMENT

Applications invited from suitably qualified persons for the following superannuated appointments:-

SENIOR ARCHITECTURAL ASSISTANTS—A.R.I.B.A. qualification—salaries up to £1,200 per annum.

ARCHITECTURAL ASSISTANTS—Intermediate standard A.R.I.B.A. or approaching this stage—salaries up to £925 per annum.

The Department has many projects in hand including design of multi-storey blocks and an extensive re-development programme, which will give full scope for imaginative design and planning. A five-day week is in operation. Full particulars giving details of age, experience and qualifications should be sent to the Director of Housing, Motherwell House, Motherwell, within 14 days from the date of appearance of this advertisement.

ALEXANDER MCINTOSH,

Town Clerk.

Town Hall,
Motherwell.
21st February, 1961. 6140

COUNTY BOROUGH OF PRESTON
APPOINTMENT OF ARCHITECTURAL

ASSISTANTS

Applications are invited from suitably qualified persons for the following appointments:-

(a) **ARCHITECTURAL ASSISTANTS—A.P.T. IV** (£1,140-£1,310).

(b) **ARCHITECTURAL ASSISTANTS—A.P.T. III/IV** (£960-£1,310).

(c) **ARCHITECTURAL ASSISTANTS—A.P.T. II** (£815-£960).

(d) **ARCHITECTURAL ASSISTANTS—A.P.T. I** (£645-£815).

Applications, stating age, qualifications, present position and salary, previous positions and full details of experience, together with the names and addresses of two referees, and stating clearly which appointment (a, b, c or d) is being applied for, to be received by me not later than Friday, 17th March, 1961.

W. E. E. LOCKLEY,

Town Clerk.

Municipal Building,
Preston. 6071

CITY AND COUNTY OF NEWCASTLE UPON

TYNE

CITY ARCHITECT'S DEPARTMENT

A unique opportunity exists in this office for competent Architects to take part in one of the most ambitious programmes of varied building works in the country, and vacancies in the establishment occur for ARCHITECTS who will be considered on their ability in design, experience, and architectural outlook, in the following grades:-

J.N.C. "C": £1,560-£1,825 per annum.

J.N.C. "B": £1,410-£1,670 per annum.

A.P.T. V: £1,310-£1,480 per annum.

A.P.T. IV: £1,140-£1,310 per annum.

A.P.T. III: £960-£1,140 per annum.

A.P.T. II: £815-£960 per annum.

A.P.T. I: £645-£815 per annum.

The Department is engaged upon a wide and varied programme of major redevelopment schemes embracing multi-storey flats, shopping precincts and associated community buildings, one of which schemes is the Scotswood Road Redevelopment Area to rehouse approximately 5,000 people, and which is expected to cost in the region of £12 million.

Planning work has now commenced on the new Education Precinct in the central area, comprising Colleges of Further Education, Art and Industrial Design, Drama, Commerce and Multi-storey Hostels, which will be the largest development of its kind in the country.

Further projects include: Airport Terminal; Abattoir and Fatstock Market; Vegetable Markets, Central Library; and Divisional Police Headquarters, etc., and a varied programme of normal housing development of a stimulating character.

The department is also engaged on the New Town Hall, where an exceptional opportunity is presented for working on a building of some £4 million in value, and being executed in materials of the highest quality.

Architects wishing to take part in one of Britain's most stimulating programmes should apply immediately for further details and forms of application to George Kenyon, A.R.I.B.A., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle upon Tyne, 1, indicating the grade for which they wish to apply.

JOHN ATKINSON,

Town Clerk.

Town Hall,
Newcastle upon Tyne, 1.
20th February, 1961. 6084

BOROUGH OF LEYTON

Applications invited for appointments of **ASSISTANT ARCHITECTS**. Salary within Grade A.P.T. III £960/£1,140 per annum plus London Weighting. Housing accommodation will be provided. Five-day week. National Joint Council Conditions of Service.

A large and varied programme of capital works in hand or projected offers good opportunities of gaining experience.

Apply with details to Borough Engineer, Town Hall, Leyton, E.10, not later than 16th March, 1961.

D. J. OSBORNE,

Town Clerk.

Town Hall,
Leyton, E.10. 6137

HAMPSHIRE COUNTY COUNCIL

Applications are invited for the following new pensionable posts in the office of the County Architect (H. Benson Ansell, A.R.I.B.A.). Canteen facilities. Five-day week. Separation allowance and assistance with removal expenses in approved cases.

ASSISTANT QUANTITY SURVEYOR, A.P.T. V (£1,310-£1,480). Candidates must have passed the final examination of the R.I.C.S. and have had considerable experience of all branches of quantity surveying.

ASSISTANT QUANTITY SURVEYOR, A.P.T. III/IV (£960-£1,310). Preference given to candidates who possess the final certificate of the R.I.C.S. or I.Q.S., and have had some years' experience in a Quantity Surveyor's office.

QUANTITY SURVEYING ASSISTANT, A.P.T. II/III (£815-£1,140). Candidates should possess the Intermediate certificate of the R.I.C.S. or be otherwise qualified coupled with experience of abstracting and billing and taking off small jobs.

WORKER-UP, Clerical Division II/III (£710-£915). Candidates must have had some experience in a Quantity Surveyor's office and preference will be given to those studying for an appropriate qualification.

Application forms, returnable by 13th March, from the Clerk of the County Council, The Castle, Winchester. 6158

CITY OF SHEFFIELD
APPOINTMENT OF PRINCIPAL ASSISTANT

ARCHITECT (CIVIC CENTRE)

Scale "C" (£1,560-£1,825)

Applications are invited from young men for encouragement, both financial and otherwise, will be permanent staff of the City Architect, Mr. J. L. Womersley.

The City Council have recently designated a spacious and attractive site, including the present Town Hall and Public Library as a Civic Centre. The new buildings which are required will ultimately include a large extension to the Town Hall, new Law Courts, Police Headquarters and an Arts Centre. Following the preparation of a comprehensive scheme for the whole centre, the successful candidate's first task will be to design and execute the new Town Hall Extension which is urgently required.

Commencing salary within the above grade according to qualifications and experience.

Applications stating age, education and training, qualifications, present and past appointments (with dates and salaries), experience and the names of two persons to whom reference may be made, should reach me not later than the 20th March, 1961.

JOHN HEYS,

Town Clerk.

6147

BOROUGH OF POOLE

Applications are invited for the following appointments in the Borough Architect's Department:-

(a) **SENIOR ASSISTANT ARCHITECT, Grade A.P.T. IV** (£1,140-£1,310).

(b) **ASSISTANT ARCHITECT, Grade A.P.T. III** (£960-£1,140).

(c) **ARCHITECTURAL ASSISTANT, Grade A.P.T. II** (£815-£960).

Applicants for Post (a) must be fully qualified and a high standard of design ability is required.

In all cases the successful applicant will be engaged on a variety of projects which include a new Civic Centre and a programme of redevelopment including multi-storey flats.

Application forms from the Borough Architect, Municipal Buildings, Poole, Dorset, to be returned to me by Saturday, 18th March, 1961.

J. G. HILLIER,

Town Clerk.

6136

WARWICKSHIRE COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:-

(a) **DEPUTY GROUP ARCHITECT—Grade "A"** (£1,450-£1,565).

The post is one of responsibility requiring a high degree of initiative and design ability in all forms of construction. The person appointed will have to deputise for the Group Architect and must be a member of the R.I.B.A.

(b) **SENIOR ASSISTANT ARCHITECTS—A.P.T. V** (£1,310-£1,480).

Applicants should be members of the R.I.B.A. and be competent designers with a good knowledge of modern methods of construction. The persons appointed will be responsible for carrying out individual projects from sketch plan stage to completion.

(c) **DEPUTY GROUP QUANTITY SURVEYOR—A.P.T. V** (£1,310-£1,480).

Applicants should be chartered quantity surveyors capable of dealing with all types of building work. The group teams are responsible for all stages from the preparation of the estimates to the settlement of the final account.

The commencing salary can be within the grades according to ability and experience. Five-day week worked. The Council have schemes for the payment of removal expenses and a lodging allowance to married officers. Application forms and full conditions applicable to the appointments can be obtained from ERIC DAVIES, F.R.I.B.A., A.M.T.P.I., County Architect, Shire Hall, Warwick.

L. EDGAR STEPHENS,

Clerk of the Council.

Shire Hall,
Warwick.
February, 1961. 6158

COUNTY BOROUGH OF IPSWICH
BOROUGH ENGINEER & SURVEYOR'S
DEPARTMENT
APPOINTMENT OF ARCHITECTURAL
ASSISTANT—Grades A.P.T. III-IV (£960-£1,310)
Applications are invited for the above superannuated post at a commencing salary to be fixed in accordance with qualifications and experience.
Applicants should preferably have had Local Government experience and should be a registered architect.
Applications stating age, experience, etc., together with names of two referees must be received by the Borough Engineer & Surveyor, 19 Tower Street, Ipswich, by Monday, 20th March, 1961. Canvassing will disqualify.

J. C. NELSON,
Town Clerk.
6135

WARWICKSHIRE COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT
Applications are invited for the following appointments:—
(1) **TWO PLANNING ASSISTANTS—Grade A.P.T. V.**
(2) **THREE PLANNING ASSISTANTS—Grade A.P.T. IV.**
For one of the Grade V posts, experience in the problems of overspill and relocation of industry would be an advantage. For the other post, experience in Development Control is essential as the successful candidate will be mainly engaged on appeal work.

For the Grade IV posts, applicants must have extensive experience of Development Plan work and will be engaged on the Plan review.
Applicants for all posts must be professionally qualified. All planning work is carried out at Headquarters in Warwick.

The commencing salary in each case will be according to experience and qualifications.
The posts are subject to the provisions of the Local Government Superannuation Act and to a medical examination.

Consideration will be given to the granting of financial assistance towards removal expenses.
Applications together with the names and addresses of two referees should be sent to J. J. BROOKS, County Planning Officer, Northgate, Warwick, not later than Saturday, 18th March, 1961.

L. EDGAR STEPHENS,
Clerk of the Council.

Shire Hall,
Warwick. 6139

HAMPSTEAD BOROUGH COUNCIL
ARCHITECTS are wanted to form a New Group in the Housing Architect's Department of Hampstead Borough Council.

The Housing Architect's Office is in a house in Haverstock Hill, close to tube, buses and the Heath. The office has recently been reorganised on a group basis and currently has £12 million of work in hand including high blocks of flats and a multi-storey garage. A new group on the permanent staff is to be set up to handle a larger redevelopment area of housing and civic building, with members of the group also having individual responsibility for other smaller schemes.

The future projects present problems in urban design on both large and small scales that require a fresh approach by imaginative and able minds. Architects who are interested are invited to telephone C. E. Jacob, A.R.I.B.A. (Hampstead 7171 Extension 205) for fuller details of the opportunities.

The Council is prepared to consider advances for house purchase up to 100 per cent. of valuation in suitable cases.

The Group Leader will be appointed within A.P.T. Grade V (maximum £1,525) and the Assistants within A.P.T. Grade IV (maximum £1,355) (including London weighting).

Applications including the names of two referees to the Town Clerk (AJ), Town Hall, Hampstead, N.W.3, by 10th March, 1961. 5919

CITY AND COUNTY OF BRISTOL
EDUCATION COMMITTEE
BRISTOL TECHNICAL COLLEGE
DEPARTMENT OF BUILDING
The Governors invite applications for two posts as Grade B ASSISTANTS in the General Building Section.
(a) Building Construction and Technology.
(b) Building and Craft Science.
Applicants will be expected to teach principally in O.N.D. and O.N.C. courses, but may be expected to assist in advanced work.
Barnham Technical Scale salary—£700 x £27 10s. and £37 10s. to £1,150, with graduate and training allowances where applicable.
Application forms and particulars from the Registrar, Bristol Technical College, Ashley Down, Bristol, 7. Please quote Ref: BTC 61/2. 6141

BOROUGH OF OLDBURY
Applications are invited for the following appointment on the staff of the Borough Surveyor's Department.
ARCHITECTURAL ASSISTANT.
Salary Grade A.P.T.III (£960-£1,140).

Candidates should be well trained and experienced in the design and preparation of schemes and supervising contracts in connection with general housing including multi-storey flats, public buildings, school buildings, and minor improvements and maintenance works.

The appointment will be superannuable subject to the National Conditions of Service and to the selected candidate passing a medical examination.

Applications giving particulars of age, qualifications, experience, and the names of two referees, should be delivered to the undersigned not later than the 10th March, 1961.

KENNETH PEARCE,
Town Clerk.

Municipal Buildings,
Oldbury. 6038
February, 1961.

TECHNICAL ASSISTANT (ESTATE) required in Surveying Department of London office. Applicants must be members of a recognised professional institute and have experience of management of a large number of scattered properties of all types, but mainly industrial. Sound knowledge of property law, leases, dilapidations, valuations for purchase and rent, rating and office administration is required, with ability to initiate action in such matters and to handle them with limited supervision. Salary range £1,225-£1,340. Applications giving age, experience and qualifications to Divisional Manager (SV.109), British Road Services Limited, 238 City Road, London, E.C.1. 5907

SALOP COUNTY ARCHITECT'S DEPARTMENT
SENIOR ARCHITECT required. Salary up to maximum of A.P.T. IV (£1,310 p.a.). N.J.C. Conditions. Five-day week. A disturbance allowance or weekly separation allowance will be paid to a married man taking up an appointment. Conditions of service and application forms obtainable from Ralph Crowe, A.A.Dipl., A.R.I.B.A., A.M.T.P.I., County Architect, Column House, London Road, Shrewsbury. Closing date 11th March, 1961. 5995

CITY OF ST. ALBANS
CITY ENGINEER AND SURVEYOR'S
DEPARTMENT

APPOINTMENT OF TOWN PLANNING ASSISTANT, GRADE A.P.T. V (£1,310-£1,480)
Applications are invited for the above permanent superannuated post. Candidates must be corporate members of the Town Planning Institute. Considerable experience of development control is essential—experience in preparing Town Maps will be an advantage. Housing accommodation available. Applications, with the names of two referees should be submitted to me by not later than 10th March, 1961.

B. V. ENTWISTLE,
Town Clerk. 5973
38, St. Peter's Street,
St. Albans.

CITY OF NOTTINGHAM
APPOINTMENT OF CITY ARCHITECT
The Corporation invites applications from suitably qualified persons for the post of City Architect. The person appointed will be responsible for the Corporation's Architectural and Building work.
The salary for this post will be £3,760 rising by three annual increments of £125 to £4,135 per annum, and the person appointed will be required to contribute to the Corporation's Superannuation Scheme and to pass a medical examination.
Applications accompanied by the names of three persons to whom reference can be made must be delivered to me not later than the last post on Wednesday, the 29th March, 1961, in an envelope endorsed "City Architect."

T. J. OWEN,
Town Clerk.

The Guildhall,
Nottingham. 5979

NOTTINGHAMSHIRE COUNTY COUNCIL
APPOINTMENT OF ASSISTANT ARCHITECTS
AND ARCHITECTURAL ASSISTANTS
A.P.T. GRADES III/IV and IV/V

Applications are invited from:—

(a) Architects
(b) Students who have passed the Final examination of the R.I.B.A. or the Diploma Examination of a recognised school

to work on the County Council's Major Building Programmes. Consideration will be given to Students who expect to complete their Courses in July next.

The Programmes are handled by four groups of approximately eight Architects per group, under a Group Leader. All the Architects in the group carry out in turn the design, organisation and supervision of projects as Job Architects through all stages of the job from sketch plan to completion. As part of carrying out the County Council's building programme, the office has a policy of continuous development in planning and construction, in which all Architects take part from time to time.

The salary of the A.P.T. III/IV scale ranges from £960 to £1,310 p.a. and that of A.P.T. IV/V scale from £1,140 to £1,480 p.a. The commencing salary to be offered in each case will be in accordance with ability and experience. Starting dates by agreement.

Forms of application may be obtained from the County Architect, County Hall, West Bridgford, Nottingham, to whom they should be returned as soon as possible.

A. R. DAVIS,
Clerk of the County Council. 5999

ASSISTANT REGIONAL ARCHITECT
SALARY £1,775 to £2,075 p.a.

The design of Hospitals is now a complex problem embracing many of the principles of Town Planning and, apart from research, calls for clear thinking, a sense of aesthetic environment and logical planning.

An Assistant Regional Architect is required in Oxford to produce development plans for several of the major hospital groups in the Board's area. Previous hospital experience is not necessary. Further particulars may be obtained from W. J. Jobson, E.R.D., F.R.I.B.A., Regional Architect.

Applications to be received not later than 13th March, 1961, by the Secretary, Oxford Regional Hospital Board, 43, Banbury Road, Oxford. 5972

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

ARCHITECT/PLANNERS required for new Group dealing with redevelopment projects in Central London. Great opportunity for able, creative and enthusiastic architect/planners to work on schemes for such areas as Soho, Covent Garden and areas associated with Piccadilly Circus.

Salaries up to £1,500 subject to experience and quality.

Application form and particulars obtainable from Hubert Bennett, F.R.I.B.A. (EK/A/424/2), Architect to the Council, the County Hall, S.E.1. 5905

recommended for students: two books by SIR HOWARD ROBERTSON A.R.A., PP.R.I.B.A., S.A.D.G.

The Principles of Architectural Composition

Size 8½ x 5½ ins.
180 pages, over
160 line drawings
by the author.
8th Impression.
Price 15s. net.
(Postage 1s.)

This book fills a very real gap in the literature on the theory of architectural design and has been adopted as a standard textbook in many of the leading architectural schools. Architectural composition is an extremely difficult subject to write about; but in his text and in his numerous drawings Sir Howard (who used to lecture on design when he was the Principal of the Architectural Association School of Architecture) has succeeded in explaining his points with the utmost clarity.

Modern Architectural Design

Size 9 x 6 ins.
228 pages thoroughly
illustrated in
half-tone and line.
2nd Impression
of 2nd Edition.
Price 25s. net.
(Postage 1s. 3d.)

This new edition of the companion volume to *Principles of Architectural Composition* has been very largely re-written, entirely reset and newly illustrated. It is a penetrating and constructive analysis of the design problems now confronting architects and students. The author combines theory and practical experience in a lively and stimulating discussion of contemporary problems of planning, structure, materials, lighting and decoration and shows successful architectural design, good building, to be the outcome of logical method supported by certain acknowledged principles.

The Architectural Press 9-13 Queen Anne's Gate Westminster S.W.1.

CITY OF WORCESTER
APPOINTMENT OF ARCHITECTURAL STAFF

Applications are invited to fill new appointments in the Architectural Section of the City Engineer & Surveyor's Department.

SENIOR ASSISTANT ARCHITECT—A.P.T.

Grade IV (Salary £1,140—£1,310).

Applicants must hold the A.R.I.B.A. qualification.

TWO ARCHITECTURAL ASSISTANTS—A.P.T.

Grade I (Salary £645—£815).

The appointments are supernumerary and subject to medical examination.

Housing accommodation will be offered, if necessary, and the Corporation are prepared to make a contribution towards removal expenses.

Casual Users' Car Allowances will be applicable.

Applications stating age, present and previous appointments and experience, together with the names of two referees, are to be sent to the City Engineer & Surveyor, 22, Bridge Street, Worcester, by 6th March, 1961.

BETRAM WEBSTER,

Town Clerk.

Guilddhall, Worcester. 5963

FAREHAM URBAN DISTRICT COUNCIL

The Council invite applications from qualified Architects for the post of CHIEF ARCHITECTURAL ASSISTANT.

Salary A.P.T. IV (£1,140 × £55—£1,310). Essential Car User. Superannuation. Medical examination. National Conditions of Service. Housing accommodation considered.

Apply for further details from the Engineer and Surveyor, Westbury Manor, Fareham, Hants.

Applications, including names and addresses of three referees, returnable to me by 11th March, 1961.

B. W. RANDS,

Clerk to the Council.

"Merton", 5, Grove Road, Fareham, Hants. 5934

Architectural Appointments Vacant

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

BLACKPOOL Pleasure Beach: ARCHITECTURAL ASSISTANT

required to work at Blackpool under general direction of Howard V. Lobb & Partners, London. Minimum two years' office experience. Salary about £800 depending on experience. Interesting design and practical experience, with long-term appointment. 5199

ASSISTANT required, at least Intermediate standard, to start early summer. L. H. Bond & R. W. Read, 44, Castlegate, Grantham, Lincs. 5130

RONALD WARD AND PARTNERS invite applications from ARCHITECTS, Senior and Junior. Long-term prospects. Scope for initiative and responsibility in interesting commercial, industrial and civic projects in British Isles, West Africa and Australia. Salaries commensurate with ability. Non-contributory Pension and Life Insurance schemes. Five-day week. Pleasant offices. Apply 29, Chesham Place, Belgrave Square, London, S.W.1. Tel.: BELGRAVIA 3561. 2960

ROBERT MATTHEW & JOHNSON-MARSHALL have vacancies in their London office for Architects at all levels of experience for a variety of interesting jobs. Apply to Robert Matthew & Johnson-Marshall, 24, Park Square East, N.W.1. 5491

ARCHITECT'S JUNIOR ASSISTANT required. A good draughtsman/draughtswoman, Intermediate standard. Please write, stating age, experience and salary, to: R. Jelinek-Karl, F.R.I.B.A., 6, Buckingham Street, W.C.2. 5714

£950-£1,500. ARCHITECTURAL ASSISTANTS with imagination and designing ability required to assist with large and important new developments in the central London Area. Telephone or write: Trehearne & Norman, Preston & Partners, 83, Kingsway, W.C.2. HOLBORN 4071. 4934

EXPERIENCED and confident ARCHITECTS required to fill positions of responsibility in a growing and varied practice with industrial and commercial work throughout the southern half of the country. Applicants must have initiative as well as architectural ability to carry through contracts up to £100,000, working directly with Principals but with minimum supervision. Apply in writing to Thomas Mitchell & Partners, 20, Bedford Square, London, W.C.1. 5413

TWO SENIOR ASSISTANTS required. Salary in accordance with experience. Please apply to F. G. Frizzell, A.R.I.B.A., 80, Portland Place, W.1. LANCING 1732. 4943

ASSISTANT required for small Office with interesting and varied work. Salary £1,000/£1,200. Green, Lloyd & Son, 5, Pickering Place, St. James's Street, S.W.1. Telephone Whitehall 8926. 5706

£850-£1,600. ARCHITECTURAL ASSISTANTS required. Long term prospects. Non-contributory pension and life assurance schemes. Five-day week. Telephone or write: Ronald Ward & Partners, 29, Chesham Place, Belgrave Square, S.W.1. BELGRAVIA 3561. 6105

WOLVERHAMPTON. Norman & Dawbarn

require an ASSISTANT in their Midlands Office. This position could afford useful experience of small and medium size jobs in a young but expanding office, with possibility of later transfer to London Office or overseas if desired.

Minimum of two years' office experience required if qualified, four years if Intermediate. Excellent working conditions, five-day week, three weeks' annual leave, lunch vouchers. Write or telephone 7, Portland Place, London, W.1 (LANGHAM 8011), or Heanton House, Salop Street, Wolverhampton (Wolverhampton 27387). 5628

PLAYNE & LACEY require experienced and enthusiastic SENIOR ARCHITECTURAL ASSISTANT for work on University project.

Salary range £1,200 to £1,500. Write 19, Queen Anne's Gate, Westminster, S.W.1, or ring WHI 2552 for interview. 5617

ARCHITECTURAL ASSISTANTS required with practical experience. Varied practice including contemporary work. Salary £700—£1,100 (plus L.V.s), according to qualifications and experience. Please write, giving full particulars, to Sir Giles Scott, Son & Partner, 9, Gray's Inn Square, W.C.1. 5601

LIVERPOOL

£900—£1,200

Starting range. Reviewed annually or more frequently if willingness and ability shown.

Five-day week. Interview and removal expenses paid and assistance in solving any accommodation problem. Write full particulars to G. de C. Fraser, Son and Gearey, 27, Dale Street, Liverpool, 2. 5660

INTERMEDIATE and FINAL ASSISTANTS required immediately, salary range £800 to £1,200. Experienced in planning of Flats and Commercial properties essential. Box 5713.

ARCHITECTURAL ASSISTANTS required in busy Bloomsbury office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving particulars of age, qualifications, experience, etc., to Box 918, c/o 7, Coptic Street, W.C.1. 5647

ARCHITECTURAL ASSISTANT required for small busy practice in W.C.1 area. Good all round experience required. Surveys, sketch plans, working drawings, details, etc. Salary £700 to £800. Tel. CHA 7611. 5655

OPPORTUNITY for Intermediate or newly-qualified ASSISTANT with initiative and all-round ability, to join youthful expanding practice in Croydon. Apply to Donald Rowsell & Partners, 11/11a, George Street, Croydon, or telephone CROYDON 4080. 5723

NORTH LONDON—ASSISTANTS required about R.I.B.A. Intermediate standard. Wide variety of interesting work. Five-day week. Facilities for part-time day study. Apply C. E. Owen Ward, L.R.I.B.A., Midland Bank Chambers, Palmers Green, London, N.13. PAL. 1186/7. 5788

ARCHITECTS with extensive general practice (Churches, Hospitals, Schools, Flats, Commercial and Industrial) require experienced ASSISTANTS, post-inter level or recently qualified. Ivor Day & O'Brien, 9, Clare Street, Bristol, 1. 5712

S. T. WALKER AND PARTNERS, 9 Frederick Road, Edgbaston, Birmingham 15, Telephone No. Edgbaston 5066-74. There are vacancies in this office for JUNIOR and INTERMEDIATE ASSISTANTS. Those interested should write to, or telephone, Graham Winteringham, Dipl. Arch., A.R.I.B.A. 5775

INTERMEDIATE standard ASSISTANTS required to work with qualified seniors on a number of interesting jobs in and out of London. Good draughtsmanship, sensitive detailing and some experience are sought and will be paid for. Write stating age and experience to David Stern and Partners, 24 Gloucester Place, London, W.1. 5885

BERTRAM CARTER, F.R.I.B.A., requires ASSISTANTS, 15 Adeline Place, Bedford Square, London, W.C.1. MUS 3536/7. 5849

SENIOR AND JUNIOR ARCHITECTURAL ASSISTANTS and DRAUGHTSMEN required for Multiple concern in London. Five-day week. Dining facilities. Superannuation. Modern office. Salary £500 to £1,500 p.a. according to age, experience, qualification and ability. Apply in writing giving full details to Box 5855.

EXPERIENCED ARCHITECTURAL ASSISTANT required for old established practice. Please apply with full particulars and salary required. Jackson & Jackson, Chartered Architects, 13 North Street, Ashford, Kent. 5873

QUALIFIED ASSISTANT required at once. Salary according to ability and experience. Leonard Gavins-Taylor, A.R.I.B.A., Central House, Finsbury Square, E.C.2. MONARCH 1742. 5790

SENIOR ASSISTANT required for City office. Attractive salary according to ability. Apply Box 5791.

£1,000-£1,500. Experienced ASSISTANT urgently required. Qualified or Final standard. Particulars to Box 5792.

EXPERIENCED and qualified ASSISTANT required. Excellent prospects for right man. Full particulars to T. Maldwyn Jones, 1, Queen Square, Lancaster, Lancs. 5913

PROGRESSIVE opportunities for ARCHITECT'S ASSISTANTS are offered by Westminster Bank. Commencing salary £850 to £1,500 with good prospects. Modern London drawing office, favourable house mortgage rates, luncheon club, sports club and other social activities, pensions scheme, fare for interview refunded. Write, stating age, experience and salary required to: The Architect, Westminster Bank Limited, Post Office Court, 10, Lombard Street, E.C.3. 5708

OPPORTUNITY FOR FRUSTRATED INTERMEDIATE ASSISTANT WITH INITIATIVE AND IMAGINATION. UNABLE TO FIND POST OFFERING FREEDOM IN DESIGN OR CHANCE TO TAKE CHARGE IN PROJECTS. WRITE OR PHONE: NICHOLSON AND RUSHTON, 2, NEW SQUARE, LINCOLN'S INN, W.C.2. HOLBORN 2095. 5610

OLD ESTABLISHED London Architects require ASSISTANTS capable of carrying out substantial commercial or school projects with some supervision. Telephone Mr. Shail, Mayfair 2549, for appointment, or write Box 5615.

JUNIOR ARCHITECTURAL ASSISTANTS required. Salary range £750—£1,250 p.a. depending upon experience. Write with fullest details of experience. Box 5602.

WE are about to commence planning unusually interesting projects in which a qualified FIRST ASSISTANT and a SECOND ASSISTANT are invited to join us in our new spacious offices. We are close to central transport facilities and within easy reach of London. Appointments to be made so that planning can begin soon after Easter. Anthony R. Dannatt, F.R.I.B.A., A. R. Dannatt & Son, 65A, Duke Street, Chelmsford. Telephone 58121. 6119

IND COOPE ARCHITECTS, National Brewers, require SENIOR ASSISTANT ARCHITECTS at the Company's Head Office at Burton-on-Trent, within the salary range: £1,150—£1,500. The Company has an extensive programme in connection with industrial buildings and hotels giving opportunities for personal initiative and development. Senior Assistants, who must be Associates R.I.B.A., will be expected to take charge of projects, with minimum supervision. The Company operates a Pension Scheme with substantial widows benefits in the event of death before or after retirement. Five-day week. Enquiries (which will be treated in the strictest confidence) specifying the vacancy and giving details of experience, age, present and past employment and stating salary required, should be addressed to the Group Architect, Ind Coope Limited, Burton-on-Trent. 6178

WILLIAM HOLFORD & PARTNERS require a SENIOR ASSISTANT ARCHITECT in their 14, Harley Street office. Salary according to experience, bonus, non-contributory pension scheme and L.V.s. Telephone: MUS 0383. 6156

PETER BAREFOOT requires ASSISTANTS of Intermediate/Final standard, initially for work on projects for Haverhill, and Urban housing schemes. Apply 22, Thoro'fare, Ipswich. 6160

WALTON-ON-THAMES Architect with varied practice requires ASSISTANT (Intermediate or qualified), experience on flats an advantage. Part-time (3 days/week min.) considered. Apply Box 6100.

NEWCASTLE UPON TYNE. ARCHITECTS AND ASSISTANTS required for varied and interesting projects, excellent working conditions, pension scheme, salary according to ability and experience. Write giving details of age, training and experience to W. B. Edwards & Partners, Cathedral Buildings, Dean Street, Newcastle upon Tyne. 6101

ARCHITECTURAL ASSISTANTS required. Recently qualified, Intermediate or equivalent standard. Excellent salaries offered, Pension and Life Assurance Schemes in operation. Five-day week. Please write giving full particulars of experience to Sandon & Harding, A.R.I.B.A., 14, Lower Brook Street, Ipswich. 6104

SENIOR ASSISTANTS required for work on large Hospital programme, excellent opportunities for the right men, salary £1,000—£1,400. Luncheon Vouchers and five-day week. Write giving full particulars to W. H. Watkins, Gray and Partners, 57, Catherine Place, S.W.1. 5633

ARCHITECTURAL ASSISTANT, female, required for central office with varied practice. Five-day week. Salary £850. Write Box 6111.

ASSISTANT ARCHITECT required (male) for busy West End office. Salary £1,000. Write Box 6112.

URGENT. Staff Architect in West End willing to pay up to £1,200 p.a. for newly qualified ARCHITECT to run medium sized Contracts. Some practical knowledge essential. Five-day week. Holidays to be arranged. Please reply to Box 6113.

STAFF ARCHITECT in West End willing to pay up to £1,000 p.a. for ASSISTANT approaching Final standard but with practical working knowledge to help in running medium sized Contracts. Five-day week. Holidays to be arranged. Please reply to Box 6114.

SOUTHAMPTON.—ASSISTANT of Intermediate standard required for interesting contracts in the Southern Counties. Apply with details of any previous office experience and required salary to E. M. Galloway & Partners, F.A.R.I.B.A., 10, Portland Street, Southampton. 4866

ERNO GOLDFINGER requires several qualified ASSISTANTS with at least 2 years' experience to take part in a growing programme of interesting work which includes large office buildings, central developments, Local Authority housing, schools and private houses. Good salaries and scope for men with sound knowledge of construction. Phone HYDE Park 5657. 5084

LEICESTER. SENIOR ARCHITECTS AND ASSISTANTS required for general practice. Appropriate salary paid. Apply by telephone or in writing for an interview to Herbert, Son & Sawday, 18, Friar Lane, Leicester. Tel. 56476. 5307

E. R. COLLISTER & ASSOCIATES require in their Chelmsford office ARCHITECTURAL ASSISTANTS of Intermediate to Final standard. London rates of pay. Applications should be addressed to St. Mary's Lodge, Cottage Place, Chelmsford. 5793

ASSISTANTS of Intermediate standard required in busy provincial office. Contemporary outlook welcomed. Opportunity given to handle contracts from inception to completion. Facilities given for study at London Schools one day per week, if required—fare and fees paid. Salary £750—£900 according to ability. Hare & Pert, A.A.R.I.B.A., 29, Elm Street, Ipswich. 5794

ARCHITECTURAL ASSISTANTS. Intermediate to Final standard, required by firm of south-west of England Architects. Salary range £600—£850. Apply giving full particulars of age and experience to Box 5901.

FIRST CLASS ASSISTANTS. any age, qualified or unqualified, required for Architects' various offices in Caribbean; work mainly resort houses and hotels. Two-year contract, passages, leave, etc. Salary as agreed. Reply: J. C. Walker, Robertson Ward Associates, Sandy Lane, St. James, Barbados, W. Indies. 5900

BIRMINGHAM

LEONARD J. MULTON & PARTNERS require QUALIFIED ARCHITECTS and ASSISTANTS. Five-day week—Private Pension Scheme. Salary up to £1,500 per annum, according to qualifications and experience. Work includes Multi-Storey Flats, Hospital Work and Centre City Development. If you require a progressive position please write to 6, Greenfield Crescent, Edgbaston, or telephone EDGBaston 4188. 5912

£1,000 TO £1,500. Qualified ASSISTANTS required for design and supervision of varied contracts in small London Office. Design ability and good draughtsmanship essential. Elsworth Sykes and Partners, 5, Maddox Street, W.1. (HYDE Park 3128/9.) 5917

VACANCIES for SENIOR and INTERMEDIATE GRADES on varied and interesting work. Good salary in accordance with experience. Five-day week. Fitzroy Robinson & Partners, CHANCERY 2111. Ref.: G.W.J. 5920

ENTHUSIASTIC ARCHITECTURAL ASSISTANTS required for interesting development on offices, laboratories and process rooms. Ability to work on own initiative and have enquiring mind an advantage. Write stating full details. Salary range £700—£1,000. Reply: P. W. Scott, A.R.I.B.A., 50, Eastbourne Terrace, Paddington, London, W.2. 5923

KINGSTON-UPON-THAMES SENIOR and JUNIOR ASSISTANTS required, male or female, for interesting and varied work. Salary range up to £1,150 per annum offered to suitable applicants. Pleasant and congenial office conditions. Five-day week. Applications in writing with essential particulars will be treated in confidence. Donaldson & Co., Architects, 75, London Road, Kingston-upon-Thames. 5925

ARCHITECTURAL ASSISTANT (Intermediate) required in private practice near Chipping Norton, Oxon. Office experience essential, capable of surveys, working drawings, specifications. Car driver an advantage. State experience, status, salary. Accommodation available. Box 5933.

ASSISTANT required in Brewery Architects & Surveyors Dept. for work in connection with industrial and administrative buildings. ARCHITECTURAL ASSISTANT—Salary range £900/£1,155.

Five-day week, pension scheme, luncheon allowance and annual bonus at present in operation. Applicants—age not to exceed 45—to apply in writing, stating past and present appointments and experience, to S. Hutchings, A.R.I.B.A., Brewery Architects & Surveyors, Watney Combe Reid & Co. Ltd., The Brewery, Mortlake, S.W.14. 5926

W. S. HATTRELL & PARTNERS COVENTRY

urgently require ASSISTANTS: SENIORS commencing £1,000—£1,250 JUNIORS commencing £750—£850 to take part in a varied programme of work including Schools, Office Blocks, Pubs, Flats and Central Redevelopment Schemes. Write of telephone 1, Queen's Road, Coventry. (Coventry 26446.)

W. S. HATTRELL & PARTNERS MANCHESTER

require ASSISTANTS: SENIORS commencing £1,000—£1,250 JUNIORS commencing £750—£850 to take part in a varied programme of work including Schools, Office Block, Industrial Buildings and Central Redevelopment Scheme. Write of telephone 15, Piccadilly, Manchester, 1. (Deansgate 8238.) 5994

COLWYN BAY.—Lingard & Associates require ARCHITECTS. Commencing salaries around £1,000. School trained with a few years' office experience, completely contemporary work. 90, Conway Road, Colwyn Bay. 6000

QUALIFIED ARCHITECT and ASSISTANTS required urgently for work on Industrial and Multi-storey buildings. B.S.P. Industries Ltd., Maxwell Road, Boreham Wood, Herts. Tel.: ELStree 3311. 6007

BRIGHTON & HOVE. Experienced ASSISTANTS in all grades required for work along the south coast. H. Hubbard Ford & Associates, 67, Church Road, Hove, 3, Sussex. 6014

PART-TIME Architectural assistance, by day, evenings, or weekends, required in small W.I. office. State approximate number of hours available per week and hourly rate required. Box 6016.

BASIL SPENCE & PARTNERS require qualified and experienced ARCHITECTS to fill positions of responsibility on a major building programme. Write to 1, Fitzroy Square, W.1. stating experience and salary required. 9824

NORTH & PARTNERS, Chartered Architects, Maidenhead, seek Two New ASSISTANTS:—

- (1) Partner's Personal Assistant for general Architectural and administrative duties.
- (2) Experienced Architectural Assistant/Architectural Draughtsman for main Drawing Office.

Five-day week, Pension Scheme, etc. State age, experience and salary required. 5492

ASSISTANT ARCHITECTS required for staffing a new office opening in Southampton for work on interesting projects including University, War Department and Ecclesiastical programmes. Juniors also required. Apply stating age, qualifications, experience and salary required to Robert Potter, F.R.I.B.A., & Richard Hare, B.Arch., A.R.I.B.A., De Vaux House, Salisbury. 3167

£1,000/£2,000 p.a. will be paid to experienced competent ARCHITECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box 9360.

HOWARD V. LOBB & PARTNERS require ASSISTANT ARCHITECTS. Salaries would be between £750 and £1,250 per year. Please write to 20, Gower Street, London, W.C.1. 3649

SENIOR ASSISTANTS required immediately. Salary by arrangement. Theo. H. Birks, 35, Portland Place, London, W.1. LAN 7236. 1486

BOOTH, LEDEBOER AND PINCKHEARD require ASSISTANTS in the salary range £750—£1,250. Apply 17-20, Mason's Yard, Duke Street, St. James's, S.W.1. Tel.: TRAfalgar 1866. 3119

INTERMEDIATE to Final ASSISTANTS required immediately. Salary according to ability and experience. Theo. H. Birks, 35, Portland Place, London, W.1. LAN 7236. 9739

C. H. ELSOM & PARTNERS need experienced ARCHITECTS for a wide range of public and commercial projects. VICTORIA 4304, 10, Lower Grosvenor Place, W.1. 4271

SENIOR ASSISTANT ARCHITECTS required immediately for a wide variety of interesting work. Applicants should be experienced in all aspects of modern building design and construction. Attractive remuneration to right men capable of working on own initiative under ideal conditions for self expression. Preference given to men over 45 years of age although all applications will be considered on merit irrespective of age. Applications should be made in writing to Kenneth F. Masson, Esq., A.R.I.B.A., Chief Architect, S.C.W.S. Ltd., Architectural Division, 76, Mortmain Street, Glasgow, C.5. 4152

ARCHITECTS in Watford and London require capable ASSISTANTS with at least three years' office experience for work on interesting commercial and industrial projects. Salary range £800—£1,200 per annum. Non-contributory pension scheme. Apply Box 5148.

INTERMEDIATE to FINAL STANDARD.

Expanding practice engaged large scale commercial projects requires ARCHITECTURAL ASSISTANTS with design and supervision initiative. Good salaries according to capabilities. Five-day week. L.V.S. Raymond Spratley & Partners, 9, Hertford Street, Park Lane, W.1. GRO 1532. 4306

ARCHITECTURAL ASSISTANTS required for interesting work, including schools and hospitals, in Croydon office. Commencing salaries offered: £900—£1,150 for Associates, £600—£850 for students, according to age and experience. Five-day week and annual bonus. Write to George Lowe & Partner, 79, George Street, Croydon. 5197

ASSISTANTS who have recently qualified are required in busy provincial office. Contemporary outlook welcomed. Salary in accordance with experience, plus bonus scheme. Hare & Pert, A.A.R.I.B.A., 29, Elm Street, Ipswich. 5821

ARCHITECTURAL ASSISTANT required for medium size office in pleasant surroundings for varied work, housing, churches, community buildings, etc. Pension Scheme, canteen facilities, car allowance, housing accommodation available. Salary range £850 to £1,000, according to experience. Apply S. J. Clewer, F.R.I.B.A., Bournville Village Trust, Oak Tree Lane, Birmingham 30. 5827

SMALL PROGRESSIVE AND CONTEMPORARY LONDON OFFICE REQUIRES ASSISTANTS. GOOD OPPORTUNITY FOR PEOPLE WISHING TO GAIN EXPERIENCE IN ALL ASPECTS OF A VARIED PRACTICE. Box 5823.

£1,000-£1,200 P.A. ARCHITECTURAL ASSISTANTS required for the Architect's Office of a large industrial organisation specialising in food production. Intermediate standard with minimum of five years' experience in industrial work. Knowledge of London Buildings Acts essential. 5-day week; Pension Scheme; meal facilities. Sports Club. Apply in writing to Box 6024.

MANCHESTER—Required: ASSISTANTS with progressive outlook for work on a wide range of interesting projects, including schools, houses and flats, churches, youth centres, industrial and hospital work. Pension scheme; bonus scheme; salary up to £1,200 per annum according to experience and ability. Apply in writing to: Taylor, Young & Partners, 195, Oxford Road, Manchester, 13. 5966

cladding

cills

copings

flooring

paving

fireplaces

surrounds

skirtings

stairtreads

shelves

THE BOW SLATE & ENAMEL CO LTD

THE TOWN HALL BOW ROAD E.3

QUARRIES ABERLEIGH NORTH WALES

TODAY'S SLATE AND TOMORROW'S WINGILATE

ASSISTANT ARCHITECTS required immediately in expanding private practice, preferably car driver. Pleasant office and working conditions. Five-day week. Scope for initiative and responsibility on varied and interesting works including domestic, commercial, industrial and ecclesiastical, over wide area of the country. Commencing salary according to experience and ability up to £1,000. Please apply giving fullest details to A. R. Laing, Deacon & Laing, 65 Goldington Road, Bedford. 5816

VACANCIES exist in large provincial practice with offices in Peterborough and Spalding for the following:

- (1) **ARCHITECTURAL ASSISTANT**, Male or Female, qualified, with few years' office experience. Able to work on own initiative and take responsibility. Salary up to £1,150 to suitable applicant.
- (2) **ARCHITECTURAL ASSISTANT**, Male or Female, qualified, having recently left college, office experience not essential. Salary up to £900.
- (3) **JUNIOR ASSISTANTS**, Intermediate/Final standard with 2/3 years' office experience. Salary up to £800.

The work is of a varied and interesting nature, pension scheme in operation. Assistance will be given with accommodation in appropriate cases. Apply in writing with full details to:—

Ruddle & Wilkinson, F/L A.R.I.B.A., Long Causeway Chambers, Peterborough. 6029

FARMER AND DARK

require

ASSISTANT ARCHITECTS

WITH some office experience, initiative and ability. Varied work. Apply Romney House, Tufton Street, S.W.1. Tel.: ABBey 6311. 6027

SENIOR ARCHITECT required for executive position to take charge of architectural department of expanding building company in Bristol area. Work consists mainly of new factories, flats and housing projects. Must be fully qualified and have high standards of design. Good salary and prospects. Box 6033.

FROM £1,000. EXPERIENCED ASSISTANT required to work in progressive office on wide range of interesting jobs from Churches to Pubs, and papermills to approved schools. Offices in pleasant surroundings. 35 hour week ending daily at 4.30. Phone Riley & Glanfield at CHANCERY 7328 or write to 6, Raymond Buildings, Gray's Inn, W.C.1. 6034

OVE ARUP & PARTNERS

ARCHITECTS—A young and expanding group of Architects working in close association with Engineers on a variety of projects including University, Industrial, and Housing work want further **ARCHITECTS** and **ASSISTANTS**. Salary according to experience and ability. Please write to 13 Fitzroy Street, W.1. 6036

ASSISTANT required for Architectural partnership in Norwich to work on interesting and important schemes. A happy office in a fine city. Salary range £800 to £1,200. A. F. Scott and Sons, 23, Tombland, Norwich. 6039

£1,000-£1,350. ASSISTANTS and **ASSISTANT ARCHITECTS** required within this salary range on a variety of projects including schools, universities and T.V. studios. Qualification in landscape architecture an advantage which would affect salary. Large progressive office offering outstanding opportunities for people of ability, both at home and overseas. Excellent working conditions, five-day week, three weeks' annual leave, lunch vouchers, bonus scheme and generous sick pay provision. Write or telephone Norman & Dawbarn, Architects & Consulting Engineers, 7, Portland Place, London, W.1. LANGham 8011. 5627

£1,150-£1,400. Salaries in this range paid to capable and experienced **SENIOR ASSISTANTS**.

£800-£1,100 For Intermediate grade **ASSISTANTS**. Interesting commercial and industrial projects. Luncheon Vouchers. Pension scheme. Five-day week. Apply to Elliott, Cox & Partners, 172, Buckingham Palace Road, London, S.W.1. 5988

MESSRS. JOSEPH MENDELSON & PARTNERS require Intermediate **ASSISTANTS** and qualified **ARCHITECTS** of all grades for work on a wide range of interesting and contemporary projects. Any applicant who is prepared to work hard and show some initiative will be given a unique opportunity for early partnership or Associate status. Salary scales will be of the most generous commensurate with ability. Please apply 71, Wimpole Street, HUN. 0361. 5948

ARCHITECTS IN LONDON require **ARCHITECTURAL ASSISTANTS** of Intermediate standard for interesting and varied projects. Good salaries paid. Five-day week. Luncheon vouchers. Box 5989.

ARCHITECTURAL ASSISTANT of not less than Intermediate standard required for varied work in West Sussex. Salary according to qualifications and experience. Details to E. Verney Tibbitts, A.R.I.B.A., 11, West Pallant, Chichester. 5954

SENIOR ASSISTANT required for busy small West End practice, able to take charge of and control various jobs. Salary and expenses by arrangement. Apply MUSeum 9693. 5962

ARCHITECT required in Oxford Office to work on hospital programme. Five-day week. Write giving full particulars to W. H. Watkins, Gray & Partners, c/o Churchill Hospital, Headington, Oxford. 5964

ARCHITECTURAL ASSISTANTS up to A.R.I.B.A. Intermediate standard required for work on traditional and prefabricated projects. Programme includes Multi-storey Flats, Schools, etc. Day release for attendance at recognised schools. Canteen and Sports Club facilities. Apply, giving full details of experience, salary required, etc., to: Chief Architect, Messrs. W. J. Simms Sons & Cooke Limited, Building & Civil Engineering Contractors, Haydn Road, Sherwood, Nottingham. Telephone: Nottingham 66264. 5965

BOURNEMOUTH

£900 p.a. - £1,250 p.a.

EXPERIENCED ASSISTANT ARCHITECT required for newly opened office. Must be competent designer and administrator. Interesting varied work, five-day week, luncheon vouchers, salary according to experience and ability. Write or telephone Gatch and Partners, 29, Richmond Hill, Bournemouth. Phone: Bournemouth 20337/8. 5984

WE are seeking the services of young ambitious **ARCHITECTURAL ASSISTANTS** in the £1,000 per annum range. This new and expanding organisation offers scope for both advancement and talent which is rewarded by a generous Bonus Scheme. Ability is considered as important as qualifications. Apply for selection to Box 5982.

ARCHITECTURAL ASSISTANTS of all grades, particularly Intermediate standard, required on varied and interesting projects. High salaries will be paid in accordance with skill or experience of applicant. Lewis Solomon, Kaye & Partners, City 8811. 5970

ARCHITECTURAL ASSISTANT required. Qualifications unnecessary but experienced in preparation of sketch plans and working drawings for domestic and commercial projects. Five-day week. Full details, including salary, to P. G. Prewitt, Esq., L.E.I.B.A., 15, Queen Street, Exeter. 5946

EXPERIENCED ARCHITECTS and **ARCHITECTURAL ASSISTANTS** of all grades urgently required for the Architect's Department of a firm of Consultants for their offices in Southern England. Progressive salaries commensurate with experience and qualifications. Please apply in writing, giving details of experience, training, etc., to Box 5909.

G. FORSYTH LAWSON & PARTNERS require an **ARCHITECTURAL ASSISTANT** for Country Practice engaged on new and restoration work to houses, churches, schools, office buildings, etc. Salary range £750 to £1,200. Reply 30, Horse Fair, Banbury, Oxon. 5937

ASSISTANT ARCHITECT (28-36) required to manage branch office of expanding North Wiltshire firm. Excellent opportunity for reliable and conscientious man (with or without capital) to enter established practice in which eventual Partnership promised when results justify this. Applicant must be hardworking, sufficiently experienced to take full control after probationary period, friendly and prepared to settle happily in provincial practice, understand old buildings as well as new, not expect a four figure salary initially. Apply in own handwriting, with photo if possible, giving full particulars of self and experience to Edwards & Webster, 22, St. John Street, Devizes, Wiltshire, marked "Application." Strict confidence. All letters answered. 5911

WILLIAM H. ROBBINS, A.R.I.B.A., requires **JUNIOR** and **SENIOR ARCHITECTURAL ASSISTANTS** of Final and Intermediate standard for interesting work in expanding office.

Applicants should be experienced in design and construction, quick and able to take responsibility.

Excellent opportunity for advancement, salary range Junior Assistants £750 to £900, and Senior Assistants £1,000 to £1,400 per annum, according to experience.

Five-day week. Apply: 77, Wigmore Street, London, W.1. Telephone: WELbeck 0274/5. 5908

FIRST CLASS CHAPS required to join practice in rural village of North Yorkshire, to work mainly on Hospitals and Schools over a large area of the North of England. Offices a converted mansion in large grounds; housing available, rent free in Civic Trust Awarded scheme; Pension scheme; hard tennis court and sporting amenities; low cost of living; salaries by arrangement, all in return for hard and enthusiastic effort. Write to Mortimer Partners, Ainderby Steeple Hall, Northallerton. 6151

EXPERIENCED ARCHITECTURAL ASSISTANT for M/c practice to work directly with Section Leaders on School and Church projects. High salary, three weeks holiday, five-day week. Arthur Farebrother & Partners, TRA 3191. 6146

ARCHITECTURAL ASSISTANT. Excellent in busy for qualified (or near) **ASSISTANT** in busy Sidcup practice. Industrial experience desirable. Footscray 7008. 6127

W. H. SAUNDERS & SON, L./A./R.I.B.A.

THE following vacancies for additional staff exist, due to further expansion of the practice.

LONDON OFFICE

ASSISTANT with several years' office experience for work on interesting projects including commercial developments and multiple shops.

Applications in the first instance to 53, Goodge Street, London, W.1.

MIDLANDS OFFICE

SENIOR ASSISTANT OR ASSISTANT ARCHITECT to take charge of a small section. A large programme of work includes central area redevelopment schemes, new Anglican and Catholic Churches, and a large number of new schools.

Applications in the first instance to 23, Eaton Road, Coventry.

CHANNEL ISLANDS

ASSISTANTS with some office experience required in both the Jersey and Guernsey Offices for work on hotels, shops, flats and good class domestic projects.

Applications in the first instance should be addressed to W. H. Grime, at 4, Library Place, St. Helier, Jersey, C.I.

All these posts are permanent and progressive and offer the opportunity of working on a variety of projects in offices where good modern design is the order, and where the individual is encouraged to use his initiative. 6149

IMMEDIATE vacancies in leading Bristol office for all grades of **ARCHITECTS** and **ARCHITECTURAL ASSISTANTS**. Modern approach to design essential and considerable freedom of expression allowed. Top salaries paid according to ability and experience. Outstandingly good working conditions: 5-day week; annual bonus; contributory pension scheme available; existing holiday commitments honoured. Apply giving particulars of age and experience to W. H. Watkins, Gray and Partners, 8 Colston Avenue, Bristol. Telephone Bristol 292333, reverse charge calls accepted. 6132

DESIGN-CONSCIOUS

DESIGN-CONSCIOUS ASSISTANT of at least Intermediate standard required to play responsible part in large programme of works. Apply Gerald Deighton, A.R.I.B.A., Radio Rentals Ltd., Seymour Mews House, Wigmore Street, London, W.1. WEL 9191. 6150

ARCHITECTURAL ASSISTANT required by Benson & Benson, Chartered Architects, for full, part time or evening work on a variety of interesting jobs. Ability to drive a car an advantage. Write to Benson & Benson, A.R.I.B.A., Walpole House, Chiswick Mall, London, W.4. 6130

SIR JOHN BURNET, TAIT & PARTNERS have vacancies for **ARCHITECTURAL ASSISTANTS** of all grades. Salaries from £1,200 p.a. Luncheon vouchers, superannuation and medical schemes, non-contributory. Apply 10 Bedford Square, W.C.1. 6126

TAUNTON Architect has vacancies for competent **ASSISTANTS** with initiative. Prospects and salary according to ability. Please write to John G. Pearce, Castle Moot Chambers, Bath Place, Taunton, for appointment. 6121

GUILDFORD. SENIOR AND JUNIOR ARCHITECTURAL ASSISTANTS required. Write with details of experience and salary required to Scott, Brownrigg & Turner, 32, London Road, Guildford, Surrey. 6123

ARCHITECTS AND ARCHITECTURAL ASSISTANTS are invited to apply for posts in the Architect's Department at Ericsson Telephones Limited, Beeston, Nottingham. Starting salary will be according to ability, qualifications and previous experience. Only applicants with an enthusiastic approach to new ideas and progressive design, and willing to accept responsibility will be considered. The Department at present works a five-day week. Participation in superannuation fund after qualifying period. Please write stating age and giving full details of training and experience to the Personnel Manager. 6046

TEATHER & HADFIELD, of Mazda Buildings, Campo Lane, Sheffield, require **ASSISTANTS** to partners, General architectural and administrative duties. **ASSISTANT ARCHITECTS**, with at least two years' office experience. **DRAFTSMEN**, experienced in architects' offices, professional qualifications not essential. **ASSISTANT QUANTITY SURVEYOR**, Intermediate R.I.C.S. Industrial, commercial and hospital work. Five-day week. Pension Scheme, etc. Apply by letter. 6044

TORQUAY. Qualified **ASSISTANT** required for progressive practice dealing with industrial, commercial and domestic work wherein initiative and imagination is appreciated. Salary £1,900 p.a. upwards. Please write giving full details of qualifications, experience, age, etc. Edward Narracott & Partner, F/A.R.I.B.A., 48 Torwood Street, Torquay. 6043

NUCLEAR POWER STATIONS. ARCHITECTURAL ASSISTANTS required. A job which will prove interesting and provide excellent experience. Salary according to ability and experience, up to £1,200 p.a. Five-day week. Write giving full details Frederick Gibberd, 8 Percy Street, London, W.1. 6048

RYMAN FURNISHING CONTRACTS LIMITED require **ASSISTANT DESIGNER** to work on new shops for Ryman, other shops, offices, interiors and furniture design. Salary according to experience and ability. Write stating age and experience to 39 Dover Street, W.1. 6057

LIVERPOOL CATHEDRAL. Frederick Gibberd requires experienced ASSISTANT to work on Liverpool Cathedral. Salary up to £1,300 p.a. Apply in writing to 8 Percy Street, London, W.1. 6049

If you want to join a Circus—join us. We have vacancies for jugglers, tight rope walkers, lion tamers, snake charmers and clowns on all grades. Please indicate if salary required to: H. A. Halpern and Associates, 7, Edgware Road, Marble Arch, London, W.2. 6051

Architects with some experience required by expanding City practice. Salaries to £1,400 for right men. Every opportunity for initiative and responsibility. Box 6054.

MORE brilliant ARCHITECTS wanted for the London Office of Grenfell Baines & Hargreaves: intimate office, responsibility, interesting jobs, competitions, profit sharing salaries. Reply: 4 Cavendish Place, W.1. 6056

Architectural ASSISTANT required to work in team on University work, contemporary houses, small blocks of flats, golf clubhouse, etc. Applicants should be about Intermediate standard and interested in construction. Offices in London. Salary according to age and experience. Mondays to Fridays only. Staff dining room. Apply Box G4403, c/o Whites, 72, Fleet Street, London, E.C.4. 6095

CLAYTON, BLACK & PARTNERS require ASSISTANT ARCHITECTS in their London, Brighton and Portsmouth Offices. Salaries between £750 and £1,250 per annum, according to experience. Write to: 10, Prince Albert Street, Brighton. 6097

OPPORTUNITIES for trained ASSISTANTS to gain experience in all aspects of architectural project management in connection with a wide variety of work, including a major urban development. Salary range up to £1,200. Modern office, five-day week, non-contributory pension scheme, bonuses, luncheon vouchers. Elder and Lester, 2, Town Square, Billingham-on-Tees, Co. Durham. 5836

SENIOR ASSISTANT required mainly for University work. Good salary for the right man. Five-day week, three weeks' holiday. Apply in writing, to Thomas Worthington & Sons, 178, Oxford Road, Manchester, 13. 5893

WILLIAM HOLFORD & PARTNERS (City Office) require ARCHITECTURAL ASSISTANT of Intermediate/Final standard, office experience an advantage. Varied programme of work including university buildings. Five-day week, luncheon vouchers and pension scheme in operation. Salary £750 to £1,000 according to ability. Write giving full details to Adelaide House, London Bridge, E.C.4 (tel. MINEing Lane 7387). 5796

Architects with busy practice in Brighton require ASSISTANTS with practical experience for varied work. Salary up to £750 per annum. Five-day week, pension scheme, etc. Box 5848.

EXPANDING practice urgently requires ASSISTANTS up to Intermediate standard. Salary according to ability. Dalling and Partners, Chartered Architects, 14, Bloomsbury Square, London, W.C.1. CHANCERY 4752. 5844

EAST ANGLIA QUALIFIED AND INTERMEDIATE ASSISTANTS required by Ind Coope (East Anglia) Ltd. Sound training and experience together with an interest in interior design essential. Salary range £600-£1,500. The Company operates a Pension Scheme with substantial widows' benefits in the event of death before or after retirement. Five-day week. Write, giving age, salary (at present, or required) and full details of training and experience to the Architect, Ind Coope (East Anglia) Ltd., The Brewery, Romford. 6157

EXPERIENCED ASSISTANTS. Finals or Intermediate standard, required by City Architects to work on comprehensive development schemes consisting of shopping centres, office blocks and multi-storeyed buildings. Salaries £800-£1,250 according to experience and ability. Five-day week. Luncheon vouchers. Ganton & Ganton, Empire House, St. Martin's le Grand, London, E.C.1. 6159

Architects' ASSISTANTS required, both Intermediate R.I.B.A. and Finalist standard, with experience in this country. Good salary offered. Bernard Gold & Partners, 4/6 Savile Row, W.1. Regent 7551. 6170

Architects with offices in ENFIELD, Middx. require SENIOR ASSISTANT and INTERMEDIATE ASSISTANT. Wide and interesting range of work available without the tedium and expense of travelling to Town. Practice established over 25 years. Projects in hand include Hospital, Industrial, Domestic and Commercial schemes. Five-day week. Three weeks annual leave. Write giving full details of training, experience and salary required to:—

E. WILLIAM PALMER & PARTNERS, Chartered Architects, 8 The Town, Enfield, Middx. 6065

Architectural ASSISTANTS of all grades required for offices in Cirencester, Glos. and Wantage, Berks. Applications stating full details of experience, qualifications and salary required to:—

Pyle and Saint, Chartered Architects & Quantity Surveyors, Thomas Street House, Cirencester, Glos. 6079

MOBIL OIL COMPANY LIMITED invites applications for the post of ASSISTANT ARCHITECT in their Birmingham Office. The work is in connection with the design and construction of service stations and applicants must have experience in supervisory work and handling contracts. Applicants must be A.R.I.B.A. Full employee benefits and luncheon vouchers. Details of age, experience and salary required to Employment Adviser, Mobil Oil Company Ltd., Caxton House, Westminster, S.W.1. 6062

AUSTRALIA. ASSISTANT ARCHITECTS, A.R.I.B.A., age preferably 25-35, required by private office carrying out varied work. Commencing salary £A1,450, to suitable experienced applicant, with opportunity for advancement. Assisted passages available to selected and approved applicants (applicant required to pay £10 only). Apply in writing in first instance to Official Secretary, Agent General for Western Australia, Savoy House, The Strand, London, W.C.1, stating present salary and experience, and all particulars. Parry & Rosenthal, Chartered Architects, 14, Mail Street, Perth, Western Australia. 6087

Architectural ASSISTANT required for London Office. Apply G. Langley-Taylor and Partners, 9 King's Bench Walk, Temple, London, E.C.4. Tel. Central 4774. 6073

Architects, Senior and Junior, required urgently. Salary up to £1,300 p.a. Apply Robert J. Wood & Partners, 29, Widmore Road, Bromley, Kent. RAV 9788. 6074

JUNIOR ARCHITECTURAL ASSISTANT required. General knowledge of surveying essential. Required to work mainly alone. Excellent prospects for initiative and drive. State salary. F. J. Edwards, F.V.I., F.A.L.P.A., "Grove House," 100 High Street, Hampton. Molesey 3090. 6075

CITY CHARTERED SURVEYORS about to establish design section require ASSOCIATE to work on shops, offices, flats, etc. Excellent ground floor opportunity. £900-£1,100 plus L.V's. Five-day week, 8.45 a.m.-5 p.m. Apply Box 6076.

INTERMEDIATE to Final standard ASSISTANT required to work on interesting, commercial and industrial projects. Five-day week. Luncheon Vouchers. Salary up to £1,000 p.a. according to experience. Telephone GER 5973. 6077

SENIOR ASSISTANT ARCHITECT, qualified, with good general experience, required in Architect's Office, W.C.2, to take charge, etc. from sketch plan stage on Banks, office and school contracts. Experience in London Building Acts requirements. Salary £1,350 to £1,500. Five-day week. Three weeks annual holiday. Box 6078.

CHARLES PIKE & PARTNERS require ASSISTANTS for a variety of jobs including technical colleges; schools, all types; teachers' training colleges; halls of residence, etc. Write details to 14 Lincoln's Inn Fields, W.C.2 (off Kingsway) or phone HOL 3532 for appointment. 6080

Architectural ASSISTANT AND SECRETARY required by Kensington Architect. First class flat available for couple. Box 6083.

Small Anglo-Danish firm urgently require ASSISTANTS for their Middle Temple office. Applicants must be prepared to work on occasions in Maidstone office with expenses paid. Send particulars, salary required. Box 6085.

Several ASSISTANTS required up to Intermediate and including Intermediate standard in expanding office and with good prospects. Apply H. Newton, Esq., A.R.I.B.A., 307 Finchley Road, N.W.3. Tel. SWI 5152. 6086

Architectural ASSISTANT of Intermediate/Final standard required for interesting general practice; good light offices; holiday arrangements with pay will stand. Salary according to ability and experience. Full details to Bowden Soa & Partners, 3 Adelaide Terrace, N.1. 6066

Oscar GARRY and PARTNERS require three experienced ASSISTANTS to work on large projects at present at design stage. Salaries not less than £1,150. Luncheon vouchers. Apply 66 Gloucester Place, London, W.1, or phone WEL-beck 2509. 6171

SCHERRER AND HICKS require assistants in LONDON AND MANCHESTER

Interesting and varied work 19 Cavendish Square, W.1. Museum 1105. 6172

ENRICO DE PIERRO requires ASSISTANTS of Intermediate standard. Salary by arrangement. Please write to 348 Marylebone High Street, W.1. 6153

Chief ASSISTANT and JUNIOR ASSISTANT with enthusiastic and progressive approach required in small office. Please write giving full details of experience and salary required to Victor J. Hutchings, 30, Hart Street, Henley on Thames, Oxon. 6154

Qualified and Intermediate ASSISTANTS with experience and ability to assume responsibility, required at Charing Cross and Croydon Offices. Wide range of interesting work. Generous salaries, Pension and Life Assurance Scheme. Phone RICHES & BLYTHIN, Whitehall 7926 or CROYdon 1776. 6098

£750/£1000 plus Bonus offered in JERSEY, to keen ARCHITECTURAL ASSISTANT with at least three years' office experience and of intermediate standard. Excellent conditions and immediate vacancy for work on small but interesting projects. Write stating age and salary required to S. H. Longson, A.R.I.B.A., 314 Hill Street, St. Helier, Jersey, C.I. 6099

Architectural ASSISTANT Intermediate stage or above. Write stating age, experience and salary required. Barnard & Partners, Architect, Imperial Square, Cheltenham. 6117

FELCE & GUY, A/R.I.B.A., require experienced ASSISTANT mainly for Hospital Projects, 5 day week, salary by arrangement. Particulars to 60, West Street, Brighton. 6116

SENIOR and JUNIOR ASSISTANTS required immediately for Offices at Leigh and Wigan. Varied and interesting programme including Schools, Churches, Municipal Buildings, Housing, etc. Bonus and Pension schemes in operation. 5 day week. Top salaries paid commensurate with ability and experience. Applications giving full particulars to J. C. PRESTWICH AND SONS, BRADSHAWGATE CHAMBERS, LEIGH, Lancs. 6168

UP TO £1800 for senior experienced ASSISTANTS in well-known London Partnership. Interesting and varied work. Apply Box 6163.

CARLISLE. Senior ARCHITECTURAL ASSISTANTS required for Carlisle office of Ronald Ward & Partners. Salary £1,000 to £1,500. Apply to Ronald Ward & Partners, 29, Chesham Place, London, S.W.1. 6164

SIR WILLIAM HALCROW AND PARTNERS require ARCHITECTS and ASSISTANTS to join design group in London developing a large overseas industrial project. Please write with particulars of qualifications and experience to:—

Sir William Halcrow & Partners, 47, Park Lane, London, W.1. 6162

Architects, Qualified and of Intermediate Standard required in London City Office. Opportunity for ambitious men. Permanent positions with generous salary, L.Vs, 5 day week. Write Box 6161.

£1,250-£1,500. Interesting work and creative opportunities for a qualified ASSISTANT ARCHITECT in profit-sharing co-partnership to work on multi-storey housing, communal buildings and shops. Harry Moncrieff, F.R.I.B.A., A.M.T.P.L., Co-operative Planning Ltd., 73b South Side, S.W.4. TULsee Hill 4871. 6182

Architectural ASSISTANT required for Architects Department of large retail department store group. Starting pay in range £1,000 to £1,250 according to qualifications and experience. Non-contributory pension scheme, four weeks' paid leave and other substantial benefits. Interesting and varied work embracing design of modern Supermarkets, Department Stores, Factories and Private Houses. Apply, giving full details, to Director of Personnel, John Lewis Partnership, Oxford Street, London, W.1. 6176

SENIOR ARCHITECTURAL ASSISTANTS required immediately for responsible positions in the Architects' Department of a large Multiple Retail Company with offices in London. Sound knowledge of building construction and practical experience essential. Five-day week, superannuation scheme, dining facilities. Salary £900-£1,400 p.a., according to age, experience and qualifications.

Write giving full details and salary required to: Box 6166.

NOTTINGHAM:—

The following additional staff are required for major building programme:—

SENIOR ARCHITECTS:— Responsibility for major contracts. Salary £1,050 x £100-£1,500 p.a.

ARCHITECTS:— To assist on major contracts and responsibility for minor contracts. Salary £800 x £50-£1,050 p.a.

ARCHITECTURAL ASSISTANTS:— Salary up to £800 p.a., depending upon experience.

There are a number of appointments available in each grade, and additional office space will be available in the Spring. Salaries are reviewed at six monthly intervals and exceptional performance will be rewarded by double increments. Maxima of each grade constantly under review.

5 day week, Staff Insurance scheme, Staff Pension scheme.

BARTLETT & GRAY, Dip.Arch., F/R.I.B.A., 16, Bridgford Road, West Bridgford, Nottingham. Telephone Nottm. 88711 2 & 3. 6115

ASSISTANT required, Intermediate to Final standard, preferably with London experience. Salary by arrangement. Please apply: Messrs. O. P. Milne & A. Underhill, F/R.I.B.A., Hartley House, 103 South End Road, Hampstead, N.W.3. 6155

Architectural Appointments Wanted

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

ARCHITECT—Presently Co-ordinating Architect largest "High Rise" project North America. Extensive experience in Tropical Architecture. Returns U.K. for holiday March. Wishes to return permanently and join reputable firm with work in U.K. or abroad where experience in administration and specialist design knowledge is of use. Permanent appointment most desirable. Box 6003.

ASSOCIATE (1954), age 36, now in Iran, will be free in March for new appointment M. or N. East, N. Africa or Europe, bilingual English/French. Box 6106

QUALIFIED ASSISTANT requires position at £1,000 p.a. with furnished accommodation for wife and two children at reasonable rent, family to move-in in March. Any area considered. Box 6107.

ASSISTANT, Intermediate standard, would like work, London, three days a week. Box 6059.

SCHOOL TRAINED ARCHITECTURAL ASSISTANT (married), aged 24, requires position with promise of overseas tour in near future. Associateship of R.I.B.A. (prof. practice) to be taken in September. Keen to take an active part in interesting schemes. Box 6122.

YOUNG MAN, school trained, Final standard, seeks consultant or freelance position where he will not be chained to an office. Design ability, working drawings and a specialist in perspectives. Extensive varied experience. F.C.G., 65 Fitzjohn's Avenue, London, N.W.3. 6042

Other Appointments Vacant

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

ARDIN & BROOKES & PARTNERS is a young partnership with progressive ideas and plenty of varied work. There are opportunities for good designers who are not afraid of hard work and capable of running their own jobs. A bonus scheme operates so that the more the firm produces the more the staff benefits. We have spacious offices near the R.I.B.A. and work five days a week. There are also opportunities for countrywide travel. We are prepared to pay up to £1,350 plus bonus to the right men, qualified or nearly, so write or phone 6, Cavendish Place, Cavendish Square, W.1. LAN. 5227. 5663

THE ARCHITECTS' JOURNAL requires a good full time DRAUGHTSMAN for the preparation of Information Sheets and Working Details. Some knowledge of line block reproduction desirable and an interest in the compilation of technical data essential. Write to the Editor (Information Sheets), 9, Queen Anne's Gate, S.W.1, stating age, architectural training and experience. 5949

ARCHITECTURAL DRAUGHTSMAN, able to work on own initiative and carry out design and detailing of small and medium sized works, with scope for own ideas. Pension Scheme and permanency for the right man. Details of experience and salary required to be forwarded to the Chief Engineer, White City Stadium, London, W.12. Telephone: SHEpherd's Bush 5799

ESTIMATING SURVEYOR required. Person must be capable of dealing with an extensive maintenance repairs programme and the preparation of bills of quantities for new building developments. Applications, giving full details of age, experience and qualifications, are to be sent to the Personnel Officer, Birmingham Co-operative Society Ltd., Castle Street (off High Street), Birmingham, 4. 5955

SENIOR LAND SURVEYOR RAPIDLY expanding Firm of Estate Developers urgently require the services of a Senior Land Surveyor with a flair for imaginative Housing Layouts.

Applicants for this progressive position must be fully experienced Land Surveyors with good administrative ability and able to prepare attractive Sketch Layouts for preliminary negotiations with Local Authorities.

The successful applicant must be prepared to carry out work in the field if necessary and to prepare accurate Road and Sewer Calculations. A Staff Pension Scheme is in operation. Transport will be provided and it is customary to pay an Annual Bonus.

COMMENCING SALARY—£900 p.a.

Apply with full details to:

Chief Engineer and Surveyor,
Federated Homes Limited,
69-71, East Street,
Epsom, Surrey. 5947

QUANTITY SURVEYOR, approaching Final standard, capable of carrying out final accounts and all normal Quantity Surveyor's duties, required for West End Office. Salary according to age and experience. Please write giving full particulars to Box 4594.

THE CROFT GRANITE, BRICK & CONCRETE CO. LTD. require an ESTIMATOR for their Precast Concrete Department at their Leicestershire Works. Superannuation, canteen facilities. Applications, giving details of experience, salary, etc., to the Manager, Concrete Department, Croft, Leicestershire. 6052

ARCHITECTS, W.C.1 area, have vacancy for JUNIOR SHORTHAND/TYPEIST to train as Secretary. Five-day week. Tele.: CHA 7611. 5656

LIBRARIAN required in Architect's Office with architectural experience, for information service, principally hospitals. Very interesting work, need not have Librarian's qualifications. Write full particulars Watkins, Gray & Partners, 57 Catherine Place, London, S.W.1. 6050

SALES AND TECHNICAL REPRESENTATIVE, preferably 25-40 years old, required for the four Northern Counties of England and to live near Newcastle. Must have had training in Architecture, Quantity Surveying or Building Construction and be able to sell specialised building materials at highest levels. Position carries salary, car, expenses and commission. Write Box ZN900, Deacon's Advertising, 35 Leadenhall Street, E.C.3. 6063

BUSINESS VACANCIES BUREAU have vacancies for DRAUGHTSMEN, ESTIMATORS, QUANTITY SURVEYORS, etc. Permanent Positions. (No fees.) Call: 28, Victoria Street, Victoria, S.W.1. ABBey 7200. 6099

CIVIL ENGINEER. This appointment, involving work on the design of buildings and quite a wide range of other civil engineering work, is open for application by Corporate Members of the Institution of Civil or Structural Engineers, aged 28-40 years. Candidates should have a very thorough experience in design and construction, preferably in the industrial field using modern materials, and some experience in the construction of roads and drainage will be an advantage. The duties will include also the preparation of estimates and collaboration with Consulting Engineers and Architects. There will be a good starting salary based on actual qualifications and experience. Please apply in writing, quoting reference E/21, to the Personnel Manager, British Nylon Spinners Limited, Pontypool, Mon. 6143

YOUNG enthusiastic DESIGNER (A.R.I.B.A.) with some constructional experience required. Will have opportunity to design and supervise jobs (mainly concerned with shops in all aspects from new shop buildings to fittings) which may be in various parts of the U.K. so some travel is involved. Informal office atmosphere (architectural staff 12). Excellent salary and conditions. Apply Nadine Beddington, A.R.I.B.A., F.R.S.A., M.S.I.A., 301-307 Oxford Street, W.1 (HYD 1037). 6118

BARBICAN REDEVELOPMENT

Site Supervisor or Clerk of Works

SENIOR SITE SUPERVISOR is required on 1st April or earlier for the Barbican Redevelopment scheme shortly to begin in the City of London. The employment could extend over a period of 7 years.

As there will eventually be a small staff of clerks of works it is intended to engage at this time one of the senior staff to work in close collaboration with the architects in order that he may acquire a thorough knowledge of the nature and scope of the work as a whole. Applicants must have a wide experience in large scale building projects and professional qualifications in architecture, engineering or building surveying would be of value.

Applications should be addressed to Chamberlin, Powell & Bon (Barbican) 75-76 Little Britain, E.C.1, stating age, experience, qualifications and salary expected. 6185

Service Offered

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

"DON" ARCHITECTURAL MODEL MAKERS. We offer the highest grade work with speed and reliability.—Please 'Phone Woolwich 1262 or write 6, Felham Crescent, Hastings. 1673

ARCHITECTURAL, Civil Engineering, Land, Building and Quantity Surveying services on fee, lump sum or quantum meruit basis. Tel. SILverthorne 7561. 3862

SURVEYS. Large or small, drawn to large scales, accuracy guaranteed. Structural sewerage, sewage disposal, sanitary plumbing and drainage design. The Site Survey Company, London, S.E.3. Telephone LEE Green 7444. 6088

SURVEY OF SITES or buildings carried out for the Profession. Livingstone 1839. 5071

"NAPIER Models" Specialists in Architectural work. Stanley Studios, S.W.10. FLAXman 2118. 3651

ILLSLEY**DESIGN AND DEVELOPMENTS**

Limited
Architectural Services
Land Surveys—Designing—Layouts
Detailing—Perspectives

Westminster Bank Chambers,

Ashted, Surrey.

Telephone: Ashted 5147. 5938

MODELS AND COLOUR PERSPECTIVES Charles Houthusen offers work of the highest quality. 16, Thames Street, Sanbury-on-Thames, Middlesex. Sanbury 3728. 2339

ARCHITECTURAL MODELS—Thomas K. Bartlett and Partners specialise in this work. 5 King's Ave., W.5. Phone PERivale 6283. 6176

FULLY experienced in all Building and Architectural work, I am available to undertake: Designs, Working Drawings, Details, Surveys, Specifications, Models, etc. Just telephone Wallington 9883 (near Croydon) and I will call anywhere and take your instructions. Box 5648.

COMPLETE design, detailing and bending schedules executed by experienced engineers for all types of prestressed and reinforced concrete structures. Box 6058.

PERSPECTIVE ARTIST now able to undertake further work. Box 6092.

PERSPECTIVES done in pencil or ink or fully rendered quickly and efficiently. Box 6173.

MODELS. Nothing too small. Instructions collected anywhere in the London area. Please write Box 6060.

JOINERY capacity available. High-class purpose-made work, interiors, shop-fitting. C.M.K. Ltd., 40 Ives Street, S.W.3. Knightsbridge 6131. 6177

ELECTRICAL SPECIFICATIONS: prompt assistance at moderate terms by qualified free-lance engineer—Beaumont, 334-6, King Street, London, W.6. 6184

METAL WINDOW MANUFACTURERS can now offer prompt attention to Architects requiring Purpose Made Windows to their own specification. Delivery at present approximately 21 days. Repair, adaptation or renewal of windows or Lantern Lights carried out on site or in our London works. Comprehensive stocks of Crittall Metal Windows and Lanterns available at manufacturers' prices. Please send enquiries to L. R. Hindley, Darvel, The Warren, Radlett, Herts. Radlett 5667. Works Telephone No. Coppermill 5335. 6063

For Sale and Wanted

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

LIFT FOR SALE. Electric four-person passenger lift, equipment and steel structure. £500 o.n.o. Can be inspected at present site serving five floors. Please phone HUNter 1633. 6082

Partnership and Financial

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

ARCHITECTS with thriving overseas practices wish to purchase small practice in or near London or would consider amalgamation with small firm. Replies to G. Barker, Barclays Bank, D.C.O., 1 Cockspur Street, S.W.1. 6041

Premises To Let

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

THREE ROOMS available, one with excellent natural light on 1st floor, near Manchester Square, W.1. To let inclusive rates, light, heating and cleaning. Phone HUNter 9966 day, AMB 6415 evenings. 5919

Miscellaneous

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. — Harvest Works, 96/107, St. Pauls Road, N.1. Canonbury 2061. 2093

HANDMADE CLAY TILES available in many beautiful colours. The perfect roofing material with the longest life. Particulars, samples and brochure from G. Tucker & Son, Ltd., Loughborough, Leicestershire. Phone: Loughborough 2446/7. 1609

CROGGON & CO. LTD.—Chain Link Fencing and all types of Wrought Iron Fencing supplied and erected.—230, Upper Thames Street, London, E.C.4. CENTral 4382. 9429

Educational Announcements

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

R.I.B.A. and T.P.I. EXAMS—Stuart Stanley (Ex Tutor Sch. of Arch. Lon. Univ.) and G. A. Crockett, M.A./D.A., F./F.R.I.B.A., M./A.M.T.P.I., prepare Students by correspondence, 10, Adelaide Street, Strand, W.C.2. TEM 1603/4. 7953

INTERIOR DESIGN AND DECORATION. The Rhodoc School offers a home study course in interior design and decoration. Course 1, for professional use. Course 2, for personal use about your home. Send M. stamp for free booklet to Dent. A.J. BCM/Rhodoc, London, W.C.1. 4999

STUDENT, N.W.W. London area, requires tuition in theory of structures for R.I.B.A. Final. Apply Box 6108.

BROUGHTON MOOR

light sea green,
olive green & blue



SLATE

for Facings, Foundation Stones, Paving
and Flooring, Steps, Cills, Shop Fronts,
Surrounds, Pilasters, Fireplaces and all
architectural work.

Send for technical pamphlets:
1. Flooring 2. Facings 3. Coping
4. Cills 5. River Faced Slabs.

THE
BROUGHTON MOOR
GREEN SLATE QUARRIES LIMITED,
Coniston, Lancashire
Telephone: Coniston 225/6
Telegrams: Cann, Coniston

GUARANTEED EXAMINATION COACHING
for R.I.Ch. Surveyors, R.I.B.A. (Inter.), I. City.
Surveyors, I.Mun.E., I.Struct.E., etc.

FIRST-CLASS INSTRUCTION COURSES

In all aspects of Architecture, Building, Draughts-
manship, Surveying, Civil, Municipal, Structural
and Sanitary Engineering.

Write for FREE prospectus:

INTERNATIONAL CORRESPONDENCE SCHOOLS,
Intertext House, Parkgate Road (Dept. 472),
London, S.W.11.

KIRKSTONE

GREEN SLATE FOR WALL
CLADDING, CILLS,
COPING, FLOORING, PAV-
ING ETC.

The slate from our quarries has
been used for these purposes for
over 50 years. Our accumulated
experience is offered to Architects in
the services of our Technical Staff
and illustrated literature.

Service in Slate
KIRKSTONE GREEN
SLATE QUARRIES Ltd.
Ambleside, Westmorland

Tel.: Amb. 3296-7

FULL OR SUPPLEMENTARY TUITION

Provided by correspondence for R.I.B.A. examina-
tions. Revision Courses also available in any subject.
Descriptive brochure on application

ELLIS SCHOOL OF ARCHITECTURE

Principal: A. B. Waters, F.R.I.B.A., F.I.Arb.
103B, Old Brompton Rd, London, S.W.7
and at Albany House, Worcester.

We don't harass architects...

... but we do welcome their enquiries, and
we have a competent technical staff to
discuss a project anywhere, at any time.

We have many standard designs which
can often be altered to suit a specific
requirement. Any departure from these
designs need not materially increase the
cost, even though the building will eventu-
ally be an individual construction job.

We would like to harass some architects
because we really have much to offer on
timber construction.

GREGORY OF HEDGERLEY HEDGERLEY BUCKS

Telephone: Farnham Common 666

Full details and brochures on request.

HY-RIB

combined shuttering and reinforcement

long span metal lathing

HY-RIB DIVISION, TRUSCON LIMITED
35-41 Lower Marsh, London SE.1. Telephone: WATerloo 6922

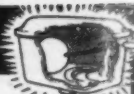


D. & J. TULLIS LTD. CLYDEBANK, SCOTLAND

Tel.: Clydebank 1861/2/3/4/5

Branches also at London, Birmingham
and Manchester

NOISY CISTERNS SILENCED



with the CRAIG "SILENT" BALLCOCK

By introducing the CRAIG SILENT BALLCOCK
in W.C. cisterns and attic supply tanks,
irritating CISTERN NOISE and WATER HAMMER
is effectively removed. So constructed that
back syphonage is impossible, the "CRAIG"
fits any make of cistern and costs as little as
£2.9.0.

INDISPENSABLE IN HOMES, HOSPITALS, HOTELS,
OFFICES, CLUBS, ETC. Write for particulars to



The SILENT BALLCOCK Co Ltd
MONIFETH, DUNDEE, SCOTLAND Phone: Monifeth 1

IT SAVES TIME & MONEY
to specify

FURSE

STAGE EQUIPMENT

A very comprehensive design and
advisory service is available to
Architects for Schools, Public Halls
and the like.

W. J. FURSE & CO. LTD.
TRAFFIC ST, NOTTINGHAM — LONDON, MANCHESTER

SIEBER FOR...

A '7 STAR' LOGICAL CLOAKROOM

- * SAVES SPACE
- * SAVES COST
- * PRESERVES GARMENTS
- * ENSURES HYGIENE
- * AIRS AND DRIES WET CLOTHING
- * REDUCES ABSENTEEISM
- * MEETS NEW FACTORY ACT



Installed in Factories,
Stores, Offices,
Swimming Baths,
etc., throughout the
country.

JAMES SIEBER
Equipment Co. Ltd.

Africa House,

Kingsway, London, W.C.2. Tel: Holborn 4531/5121

MODELS

for Architects & Civil Engineers

by **John B. Thorp**

EST 1883
98 GRAY'S INN ROAD, LONDON
W.C.1 Tel: HOLborn 1011

More and more HATHERNWARE FAIENCE FOR NEW CITY SITES

HATHERNWARE

(Architects: C. Edmund Wilford & Son)

HATHERNWARE LTD · DEPT. AR · LOUGHBOROUGH · LEICS.

Specified for buildings in the City: BOW BELLS HOUSE, Cheap-
side, E.C.4. (Architects: Cotton, Ballard & Blow). TEMPLE
HOUSE, Cannon St., E.C.4. (Architects: Campbell Jones & Sons).
OFFICE BLOCK for ZIDPARK GARAGES,
Queen St. Place, Upper Thames St., E.C.4.

TELEPHONE: HATHERN 273
HL 99

FIRST FOLD HERE

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

FOLD HERE

No Postage Stamp
necessary
if posted
in Great Britain or
Northern Ireland

BUSINESS REPLY FOLDER
Licence No. S.W. 1761

THE ARCHITECTS' JOURNAL

9-13 Queen Anne's Gate

London, S.W.1.

FOLD HERE

TUCK IN THIS FOLD

Alphabetical index to advertisers

	PAGE	CODE
A.E.I. Lamp & Lighting Co. Ltd.	33	0008
Aeme Flooring & Paving Co. (1904) Ltd.	2	0004
Adamite Co., Ltd.	78	0006
Air Control Installations Ltd.	60	0010
Aircrew Company & Jicwood Ltd.	39	0011
Aluminum Building Components, Ltd.	49	0019
Atlas Lighting, Ltd.	105	0038
Autotype Co., Ltd.	117	0043

B.I.P. Reinforced Products, Ltd.	82	0066
Bath & Portland Stone Firms, Ltd.	8	1147
Batley, Ernest, Ltd.	139	0052
Benbow of Torquay	126	1262
Beres & Co. (Joinery) Ltd.	22	0062
Bifalac Ltd.	104	0070
Blakey Cabinet & Metal Works, Ltd.	100	0074
Bolton Gate Co., Ltd.	45	0078
Boosey & Hawkes, Ltd.	111	1263
Bow Slate & Enamel Co., Ltd.	11, 132	0083
British Aluminium Co., Ltd.	98	0090
British Ceramic Tile Council	81	0254
British Plaster Board (Manufacturing), Ltd.	26	0102
British Rolling Mills, Ltd.	48	0098
Broughton Moor Green Slate Quarries, Ltd.	95, 136	0115

C.L.B.A. (A.R.L.), Ltd.	41	0736
Calders Ltd.	102	0127
Candy & Co., Ltd.	111	0990
Carron Co.	25	0132
Celcon Ltd.	114	0908
Celcure, Ltd.	55	0965
Celotex, Ltd.	62, 63	0135
Cement Marketing Co., Ltd.	106	0136
Chloride Batteries, Ltd.	38	0141
Colt Ventilation, Ltd.	3	0152
Compactom, Ltd.	77	0153
Constructors, Ltd.	108	0157
Cuprinol, Ltd.	109	0128

D.R. Illuminations, Ltd.	113	1104
Dixon's Paints, Ltd.	100	0183
Drakard & Humble, Ltd.	130	1228
Dowty Seals, Ltd.	112	1248

E.U.K. Catering Machinery, Ltd.	46	0460
East Sussex Engineering Co., Ltd.	80	1223
Eco Insulations	101	0200
Ellis, John, & Sons, Ltd.	24	0716
Ellis School of Architecture	136	0202
Engert & Rolfe, Ltd.	44	0204
English Clock Systems, Ltd.	90	0205
Evode, Ltd.	9	0876
Expandite, Ltd.	66	0212

F.E.B. (Great Britain), Ltd.	5, 7	0216
Fablon, Ltd.	88	0213
Falk, Stadelmann & Co., Ltd.	35	0214
Ferodo, Ltd.	70	0218

Flinkote Co., Ltd.	15	0229
Floor Quarry Association	57	0230
Furse, W. J., & Co., Ltd.	136	0241
Gent & Co., Ltd.	76	0251
Glass Benders Association	50	1033
Goodyear Tyre & Rubber Co. (G.B.), Ltd.	83	1116
Gregory (Hedgerley), Ltd.	136	1215
Gypcoe Products, Ltd.	23	0266

Haigh Engineering Co., Ltd.	73	0719
Hardtmuth, L. & C. (Great Britain), Ltd.	85	1154
Hartleys (Stoke-on-Trent), Ltd.	121	1085
Hatherware, Ltd.	136	0691
Hattersley (Ormskirk), Ltd.	4	0846
High Duty Alloys, Ltd.	51	0292
Hill Aldam, E., & Co., Ltd.	37	0294
Hills (West Bromwich), Ltd.	91	0297
Hot Dip Galvanizers Association	29	0313
Hy-Rib Division Truscon, Ltd.	136	1038

Ideal Boilers & Radiators, Ltd.	74	1122
Imperial Chemical Industries, Ltd.	40	0319
Industrial Engineering, Ltd.	14	0322
International Correspondence Schools	136	0325

Jablo Plastics Industries Ltd.	116	0328
Johnson, S. C., & Son, Ltd.	43	0776

Kay & Co. (Engineers), Ltd.	99	0715
Kerner-Greenwood & Co., Ltd.	73	0339
Kings Langley Engineering Co., Ltd.	120	0120
Kirkstone Green Slate Quarries, Ltd.	136	0739

L. & G. Fire Appliance Co., Ltd.	119	0932
Laing, John, & Son, Ltd.	140	0345
Legal & General Assurance Soc., Ltd.	114	0349
Lilleshall Co., Ltd.	115	0910
Lind, Peter, Ltd.	53	1253
Lumitron, Ltd.	116	1005
Lye Trading Co., Ltd.	108	1255

M.K. Electric, Ltd.	20	0416
Manger, J., & Son, Ltd.	112	0383
Marley Tile Co., Ltd.	86	0392
Mel Engineering & Co.	34	1264
Mellor Bromley (Air Conditioning), Ltd.	16	0405
Merchant Adventurers Ltd.	89	0407
Merchant Trading Co., Ltd.	113	0408
Metal Sections, Ltd.	71	0403
Morris, M. A., Ltd.	17	0914

Nairn, Michael, & Co., Ltd.	84	0427
Newalls Insulation Co., Ltd.	28	0433

Paramount Asphalte, Ltd.	125	0451
Patent Glazing Conference	58, 59	1069
Pearl Varnish Co., Ltd.	47	0740
Peel, H., Ltd.	119	1160
Peglers, Ltd.	139	0455
Philips Electrical, Ltd.	54	0462
Phoenix Rubber Co., Ltd.	118	0463
Pilkington Brothers, Ltd.	12, 13	0474
Pilkington Brothers, Ltd.	61	1166
Plus-Gas Co., Ltd.	115	0725
Plyglass, Ltd.	64	0479
Portway, Charles, & Son, Ltd.	110	0483
Proderite, Ltd.	92	0489
Pyrok, Ltd.	115	0741

Quicket Water Sealers, Ltd.	119	0795
-----------------------------	-----	------

Race Furniture, Ltd.	110	1127
Radiation Group Sales, Ltd.	78	1258
Rawlings Bros., Ltd.	118	0499
Reyrolle & Co., Ltd.	65	0696
Rose, Jack, Ltd.	101	1261
Rotaflex, Ltd.	97	0743

Sandvik Steel Band Conveyors Ltd.	32	1265
Sentex, Ltd.	93	0548
Shanks & Co., Ltd.	69	1014
Sieber, James, Equipment Co., Ltd.	136	0905
Silent Balcock Co., Ltd.	136	0916
Sissons, W. & G., Ltd.	101	1233
Smith, John (Keighley), Ltd.	75	0917
Sommerfelds, Ltd.	2	0576
Steel Radiators, Ltd.	19	0589
Steels Engineering Installations, Ltd.	6	0591
Sterdy Telephones, Ltd.	117	0763
Stewart & Gray, Ltd.	103	0600
Stotts of Oldham	96	0602
Sugg, William, & Co., Ltd.	121	0605
Summers, John, & Sons, Ltd.	36	0996

Tanks & Linings, Ltd.	99	0616
Taylor Woodrow (Arcon), Ltd.	21	0858
Temperature, Ltd.	67	0746
Thermacon, Ltd.	109	0629
Thermalite Ytong, Ltd.	94	0630
Thermalon, Ltd.	18	1238
Thorp, John B.	136	0633
Tome Trading Co., Ltd.	27	0637
Tullis, D. & J., Ltd.	136	1164

Vauxhall Motors, Ltd.	52	0654
Venesta Plywood, Ltd.	10	0658

Wall Paper Manufacturers, Ltd.	87	0671
Ward Brothers (Sherburn), Ltd.	107	1192
Ward & Co. (Letters), Ltd.	101	0676
Weatherfoil, Ltd.	56	0685
Well Fire & Foundry Co., Ltd.	117	1015
Williams, John, of Cardiff, Ltd.	72	0693
Williams & Williams	30, 31	0694

Yale & Towne Manufacturing Co.	68	0704
--------------------------------	----	------

Write in block letters, or type, your name, profession, and address below, and fold so that the post-paid address is on the outside

NAME _____

PROFESSION _____

ADDRESS _____

IT'S HARDLY SURPRISING...

that more and more Architects
and Builders are specifying the



BATLEY
Suparise
SPRING CONTROLLED

UP & OVER DOOR GEAR

because they know that Suparise is exceptionally robust, reliable and easy to fit. Available for new installations, with a choice of Aluminium Alloy or selected Timber Doors; or for converting existing hinged doors to 'Up & Over' Doors.

PRICE £11.10.0. (Gear only).

Alternatively complete Batley Up & Over Doors can be supplied in ribbed Aluminium Alloy (£20) or exterior grade Mahogany Ply (£19), or Roller Shutter doors in selected timber laths.

Generous Trade Terms available

Brochure from :- **ERNEST BATLEY LTD.**

63g, Colledge Rd, Holbrooks, Coventry Tel : 89245

Have you sent for your copy of the

NEW PRESTEX CATALOGUE ?

IT'S FREE - send for your copy NOW

bigger, better, more comprehensive than ever,
tells you all you want to know about the wide
range of top quality - low price joints and fittings.

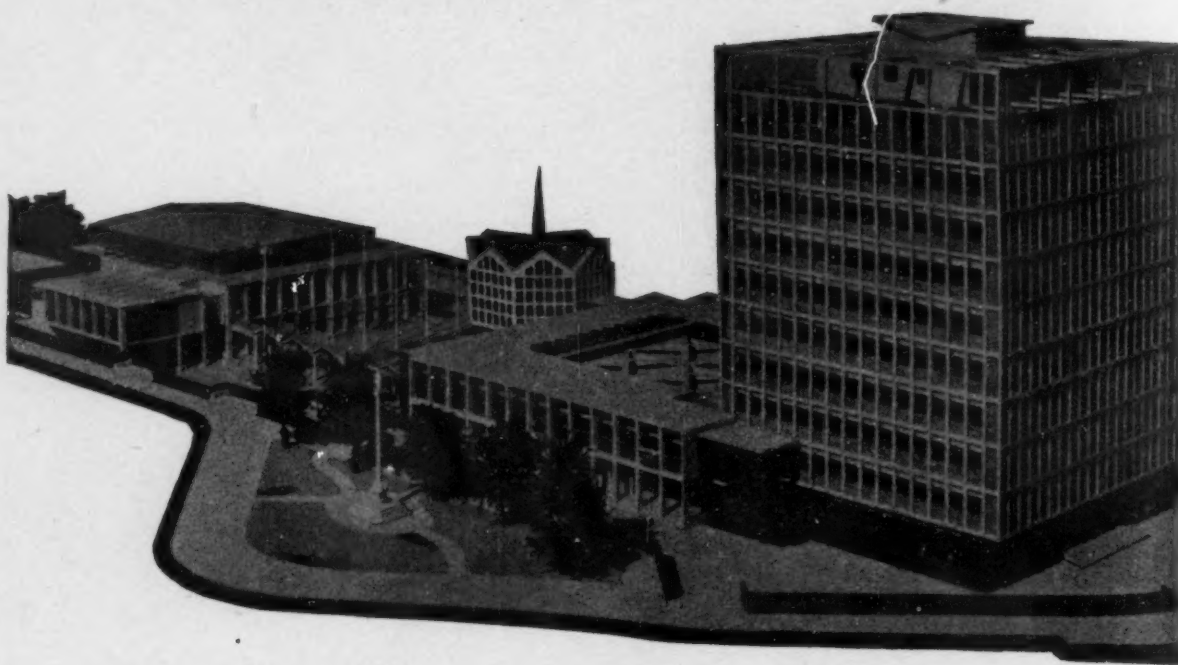


PEGLERS LTD • BELMONT WORKS • DONCASTER
Also at 28 Thorp Street, Birmingham, 5
PRESTEX HOUSE MARSHALSEA ROAD LONDON SE1

To : Peglers Limited, Prestex House, Marshalsea Road, London SE1
Please send a free copy of your 1960 Prestex Catalogue to

NAME _____
ADDRESS _____
_____ AJ

CIVIC CENTRE CIVIC PRIDE in Carlisle



John Laing Construction Limited have commenced work on the first phase of the £670,000 Carlisle Civic Centre project. Due for completion within two years, this phase of the project includes an 11-storey administrative block, an octagonal Council Chamber and the two-storey Civic Suite which links them. The reinforced concrete frame construction used will be mosaic clad and have in-filling of exposed aggregate panels. This imaginative civic development is one with which the Company, with its century-old connections with Carlisle, is proud to be associated.

Architect:
Charles B. Pearson & Son (Manchester)
Consulting Engineers:
Bolton, Hennessey and Partners (Structural)
Donald Smith, Seymour and Rooley
(Mechanical and Electrical)
Quantity Surveyors:
Lay and Partners

for completion on time

LAING

JOHN LAING AND SON LIMITED, GREAT BRITAIN AND OVERSEAS

