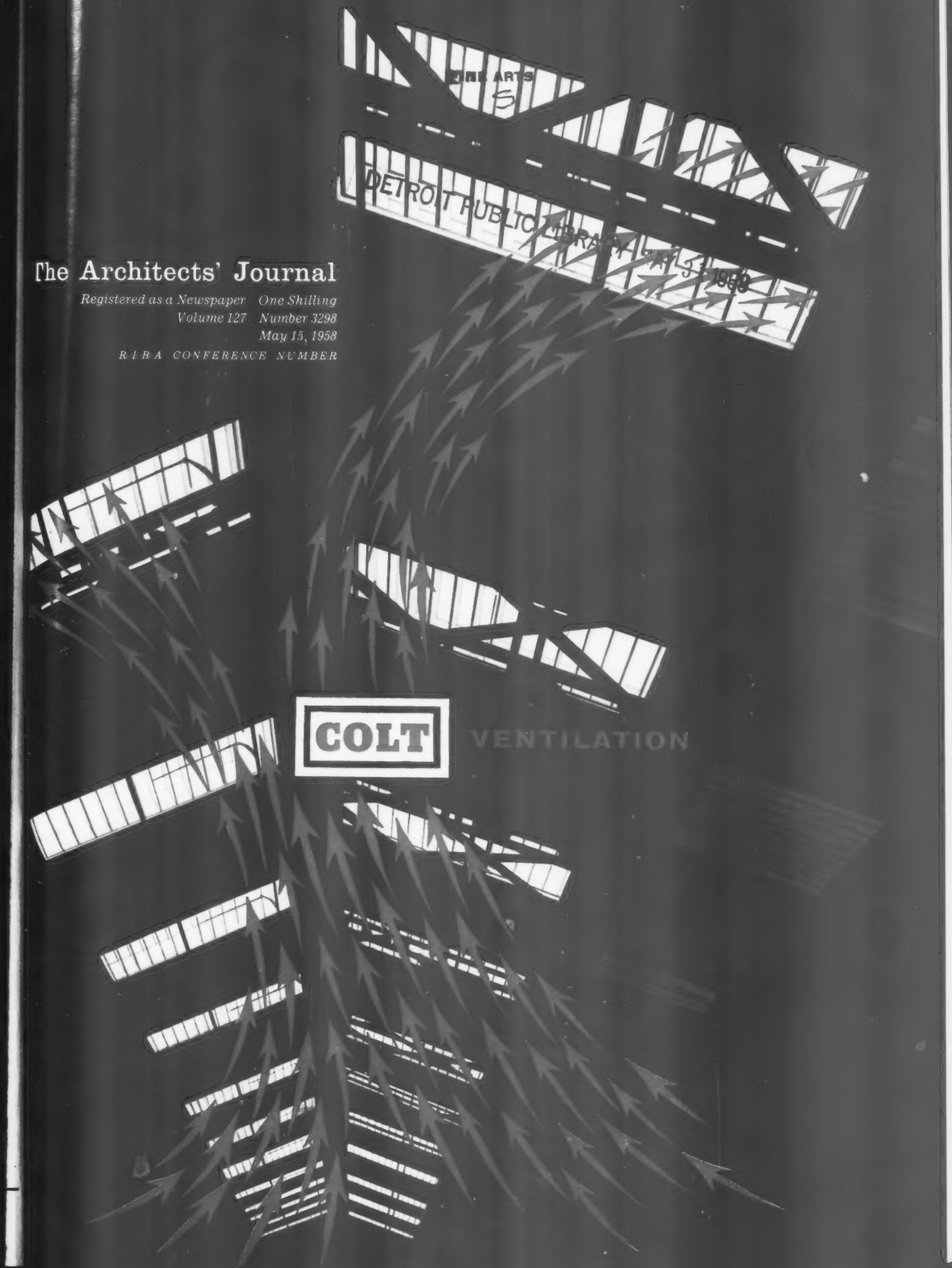
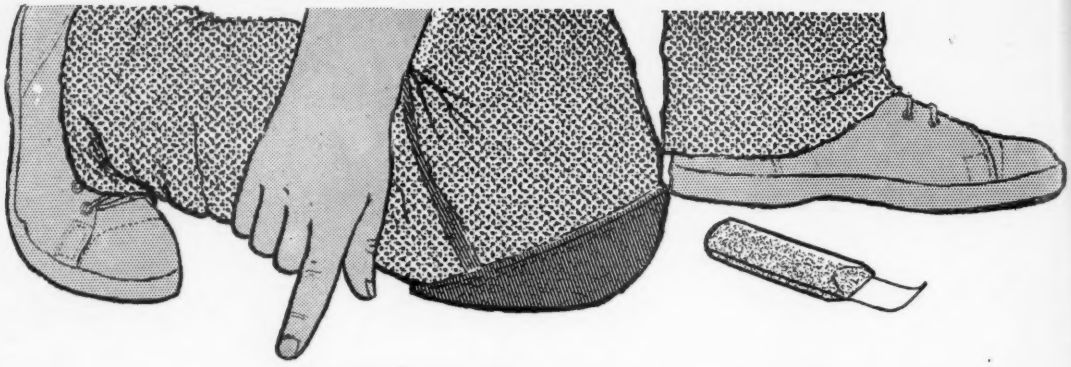
Printed in Great Britain for the Proprietors of "THE ARCHITECTS' JOURNAL" (The Architectural Press Ltd.), 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, by HARRISON & SONS LTD., by Appointment to Her Majesty The Queen, Printers, London, Hayes (Middx.), and High Wycombe. Editorial illustrations engraved by THE ENGRAVERS' GUILD LTD., Windsor House, 23/26, Cursitor Street, London, E.C.4.

3298

The Architects' Journal

Registered as a Newspaper *One Shilling*
Volume 127 *Number 3298*
May 15, 1958
RIBA CONFERENCE NUMBER





When you get down to the floor

Architects are saving much of their valuable time for creative work by calling in the specialists, HASKEL ROBERTSON, to handle the flooring specification.

For HASKEL ROBERTSON not only supply and lay flooring of all kinds, but can offer expert advice on the basis of their extensive experience.

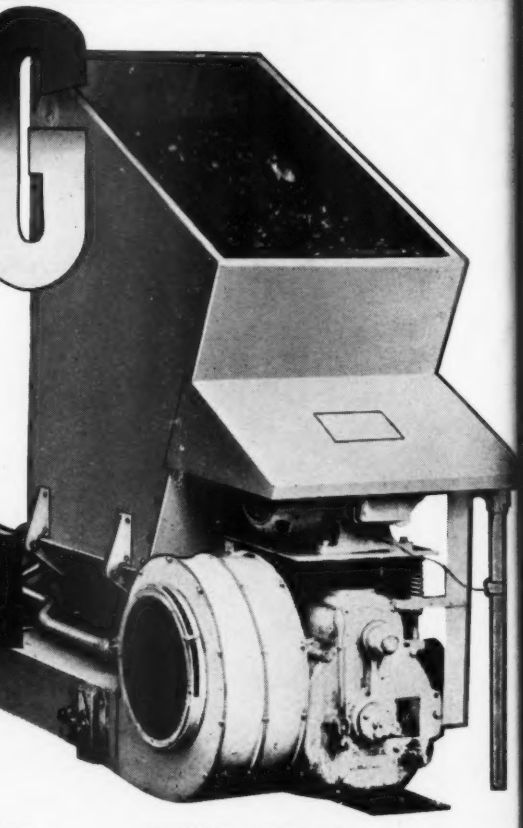
Call in the **specialists . . .**

Thermoplastic tiles	Linoleum
Synthanite screed	Cork
Stair nosings	Rubber
Vinyl/Asbestos tiles	Duromit
Crestaline (PVC)	Asphalte
Latex/cement screeds	PVC tiles
Resinoid	Bulgomme

Haskel Robertson

HASKEL ROBERTSON LTD
Specialist Flooring Consultants and Contractors
19 Queen Street, Mayfair W.1 Telephone: GROsvenor 8764

HEATING



BE CERTAIN of your fuel supplies

BE CERTAIN of fuel economy

BE CERTAIN of smokeless combustion

BE CERTAIN to choose Iron Fireman — FIRST AND FOREMOST *Automatic* Coal Stokers

It is wise to choose coal-firing for your heating installation. Coal is our national asset—readily available, and not subject to influences beyond our control.
Coal, automatically fired by Iron Fireman is not only convenient but economical as well, giving maximum efficiency with smokeless combustion. Our experts will give you full technical advice without obligation.

ASHWELL & NESBIT LTD.
BARKBY ROAD LEICESTER

BY APPOINTMENT HEATING ENGINEERS STOKER MAKERS

LONDON: 12 Gt. James St., W.C.1
MANCHESTER: 184 Oxford Rd. 13
GLASGOW: 15 Fitzroy Place, Sauchiehall St. C.3
BIRMINGHAM: 12 Whittal St. 4
LEEDS: 32 Headingley Lane 6
BELFAST: 14 Corporation St.

or

Seal and Caulk

- ✳ Reduces costs — time — labour
- ✳ For new constructions, repairs or maintenance on all types of buildings and houses
- ✳ Completely weatherproof and withstands extreme heat or cold without cracking

with **EVOMASTIC**

GAP AND JOINT SEALING COMPOUNDS

Oil bound, Bituminous, Aqueous and Synthetic Rubber for weatherproof protection

AN ASSOCIATE COMPANY OF EVODE OF STAFFORD

✳ **SEND FOR LITERATURE** EVOMASTICS LTD., STAFFORD. Telephone: 2241

London Office: 1 VICTORIA STREET, S.W.1. Telephone: ABBey 4622

M-W.61

INSULATION

Aluminium foil insulation gives the greatest advantages

High efficiency

Whilst aluminium foil is a poor radiator, it is a very good reflector of heat. When an airspace (itself a good thermal insulator) of not less than 0.75 inches across is faced with aluminium foil it becomes three times as effective. In hot weather radiation of solar heat is greatly reduced, and in cold weather, heat losses are brought to a minimum.

Permanence

Tests over periods of up to 10 years have shown no appreciable deterioration in the thermal insulation properties of aluminium. If protected from prolonged exposure to moisture, foil insulation can be expected to last indefinitely.

Low costs

Foil used for thermal insulation is usually between .00035 and .00078 in gauge, and because of its light weight makes for most economical thermal insulation productions.

FISHER'S FOILS

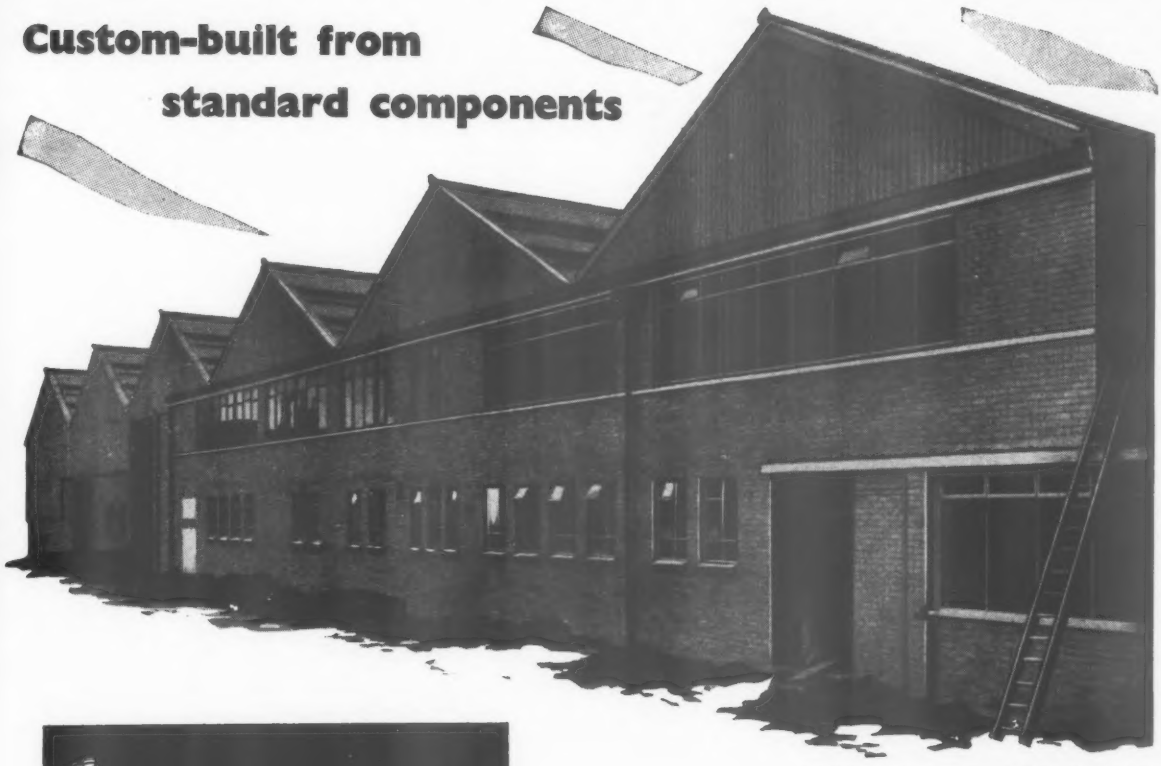
specialise in the production of aluminium foil for thermal insulation

By courtesy of ARDOR INSULATION CO. LTD.

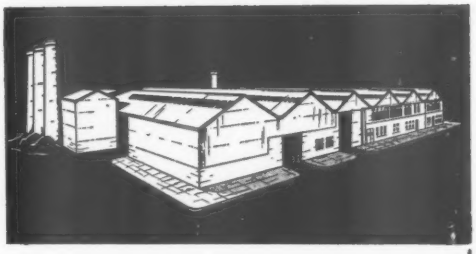
FISHER'S ALUMINIUM FOILS

FISHER'S FOILS LIMITED, *Sales Research Dept.*, **EXHIBITION GROUNDS, WEMBLEY, MIDDLESEX**
TELEPHONE: WEMBLEY 6011 CABLES AND GRAMS: LIOFNIT, WEMBLEY (ABC CODE 6TH EDITION)

Custom-built from standard components



Architects : Harry Bloomer & Son, Birmingham



use this tubular steel building technique to cut costs and prevent delays.

We illustrate a multi-span industrial building erected for Shotton Bros. Ltd., incorporating clear spans 105ft. and 75ft. without intermediate pillars to obstruct plant layout.

This Sherbourne Tubular Steel building technique brings you all the advantages of unit construction without any of its drawbacks. You get quicker delivery and erection at lower cost than for traditional forms of construction and at the same time achieve complete freedom in cladding, glazing, access, interior layout and exterior design. Formed of pre-engineered units based on mass-produced components, the standard unobstructed spans range from 105ft. to 15ft. Any number of spans may be erected side by side or end to end as required. Over 100 prominent architects, surveyors and consulting engineers have specified these buildings for use as factories, foundries, tool rooms, administration buildings, canteens, warehouses, showrooms, assembly buildings, garages, service stations, etc.
We gladly place the facilities of our Planning Department at the disposal of architects and will arrange deferred terms if desired. Write for illustrated brochure.

herbourne ngineering td.

TUBULAR STEEL BUILDINGS FOR INDUSTRY

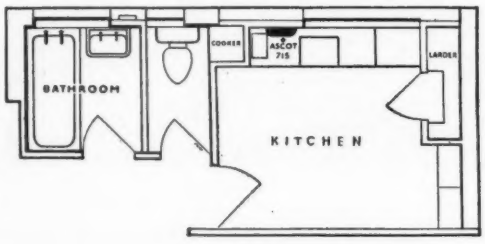
SHERBOURNE ENGINEERING LTD. · **Sherbourne Road** · **Acocks Green** · **Birmingham 27.** Tel: Acccks Green 0683 (12 lines)
London Office: 33 Manor Farm Road, Alperton, Wembley, Tel: Wembley 8671 (5 lines).

Tower Court Flats, Clapton Common

ASCOT IN NEW HOUSING (7)

Tower Court Flats, Hackney, is one of a number of schemes designed by different architects around the perimeter of Clapton Common for the Hackney Borough Council. Tower Court consists of 2 blocks of flats: a four-storey block containing 16 two and three-bedroom maisonettes, and a nine-storey block containing 51 flats of bed-sitting room, one-bedroom and two-bedroom design.

To provide an instantaneous hot water service throughout all the flats at Tower Court, Ascot 'balanced flue' multipoints were installed in the kitchens.



PLAN OF KITCHEN AND BATHROOM IN A TYPICAL TOWER COURT FLAT SHOWING POSITION OF ASCOT 715

RESPONSIBLE AUTHORITIES

Director of Housing Development: Geo. L Downing, O.B.E., M.I.C.E., M.I.Mun.E., A.M.I.Mech.E.

Architect: Harry Moncrieff, F.R.I.B.A., A.M.T.P.I. of Co-operative Planning Ltd.

REGD. TRADE MARK
ASCOT

ASCOT GAS WATER HEATERS LTD · 255 NORTH CIRCULAR ROAD · LONDON · N.W.10

WHG/A3a8

A member of the PARNALL Group of Companies.

ROBERTSON
PROTECTED METAL SHEETING

● *The Ford Motor Company used R.P.M. when they built their Dagenham Works in 1929. More than 25 years later their choice was still R.P.M. for their new Parts Depot at Aveley.*

ROBERTSON PROTECTED METAL
is used by the Leaders of Industry the world over

The Fire test at Uxbridge demonstrated a well-established truth. Bitumen can be ignited if its temperature is raised above 550°F ***but it does not support its own combustion*** *— it must be fed by heat from sources outside itself if it is to remain alight.*

Robertson Protected Metal Sheets have a 35 years record of outstanding service in Britain. Their durability has been proved in every kind of industry.

Three specifications are now available—R.P.M.; Galbestos and Galbestos coated-one-side and these three specifications cater effectively for varying corrosion and fire hazards.

Robertson Protected Metals have a Certificate from the Fire Research Organisation which rates them as having negligible flame spread in external exposure and more than two hours resistance to fire penetration.

Recommendations on the use of Robertson Protected Metals are given in the Robertson Thain Code of Practice—Part 1.

Have you received YOUR copy?

ROBERTSON THAIN LIMITED

ELLESMERE PORT · WIRRAL · CHESHIRE

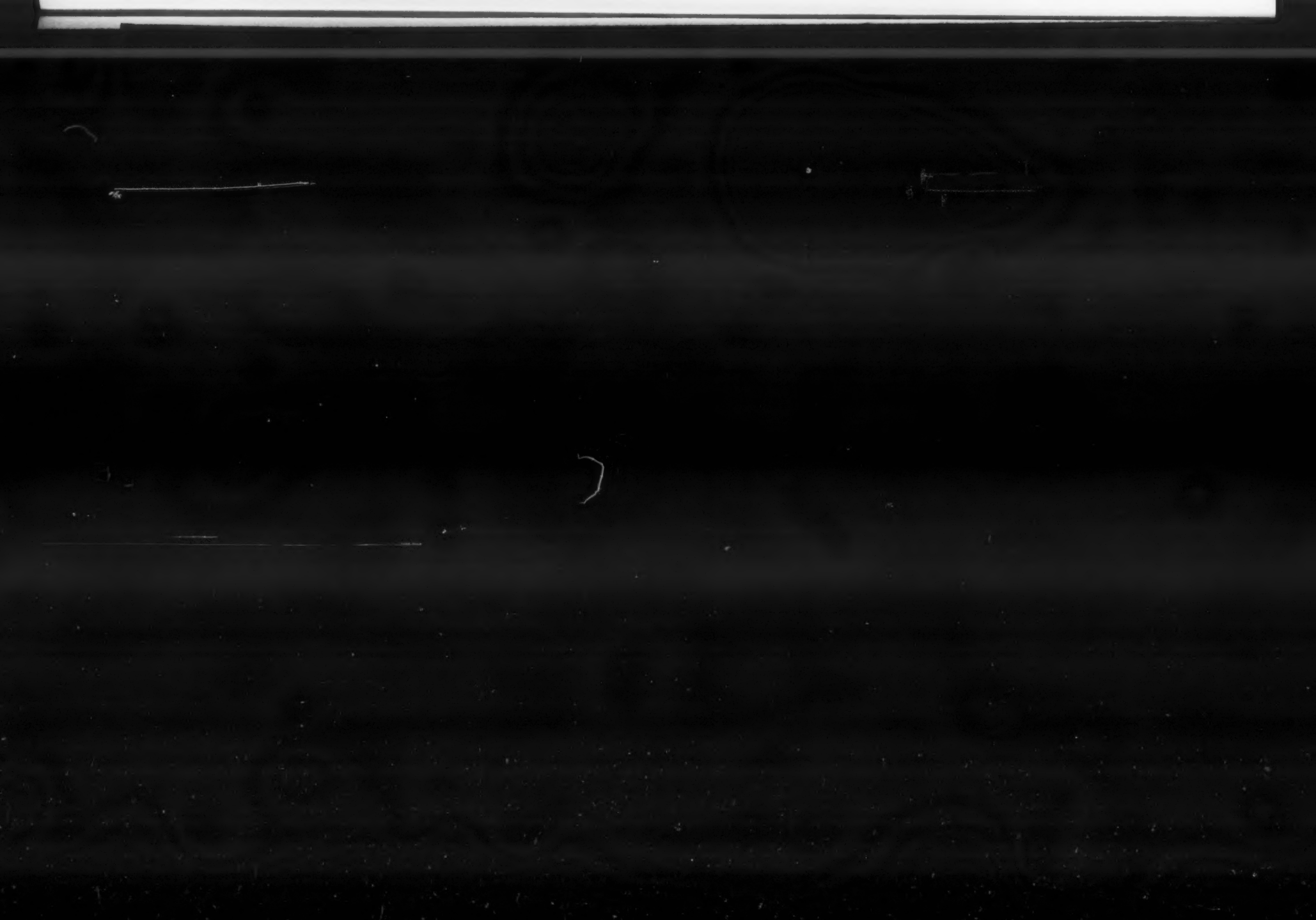
Telephone : Ellesmere Port 3622-9 Telegrams : "Robertroof"

Sales Offices : BELFAST · BIRMINGHAM · CARDIFF · EXMOUTH · GLASGOW · LIVERPOOL · LONDON · MANCHESTER · NEWCASTLE · SHEFFIELD

Associated Companies or Agents in most countries throughout the world

PM 7

am,
081)



THE DOUBLE ANSWER IS
"Insulight" Double Glazing Units

¼" Polished Plate Units in private residence of A. H. T. Broderick Esq., Woking, Surrey. Architect: Leslie Gooday Esq., A.R.I.B.A., M.S.I.A.

Double glazing is the recognised answer to many problems of heat insulation and condensation. And Pilkington's "INSULIGHT" Double Glazing Units are the answer to the problem of providing large areas of window with thermal insulation. These soundly constructed hermetically sealed window units, composed of two panes of glass, separated by a metal spacer and a cell of dehydrated air, are available in sizes up to 120" x 72". For further particulars write to the manufacturers:—

PILKINGTON BROTHERS LIMITED

ST. HELENS, LANCS (TEL: ST. HELENS 4001) OR SELWYN HOUSE, CLEVELAND ROW, ST. JAMES'S, LONDON, S.W.1 (TEL: WHITEHALL 5672-6)

Supplies are available through the normal trade channels. 'INSULIGHT' *is a registered trade mark of Pilkington Brothers Limited.*

Structural Steel at our fingertips

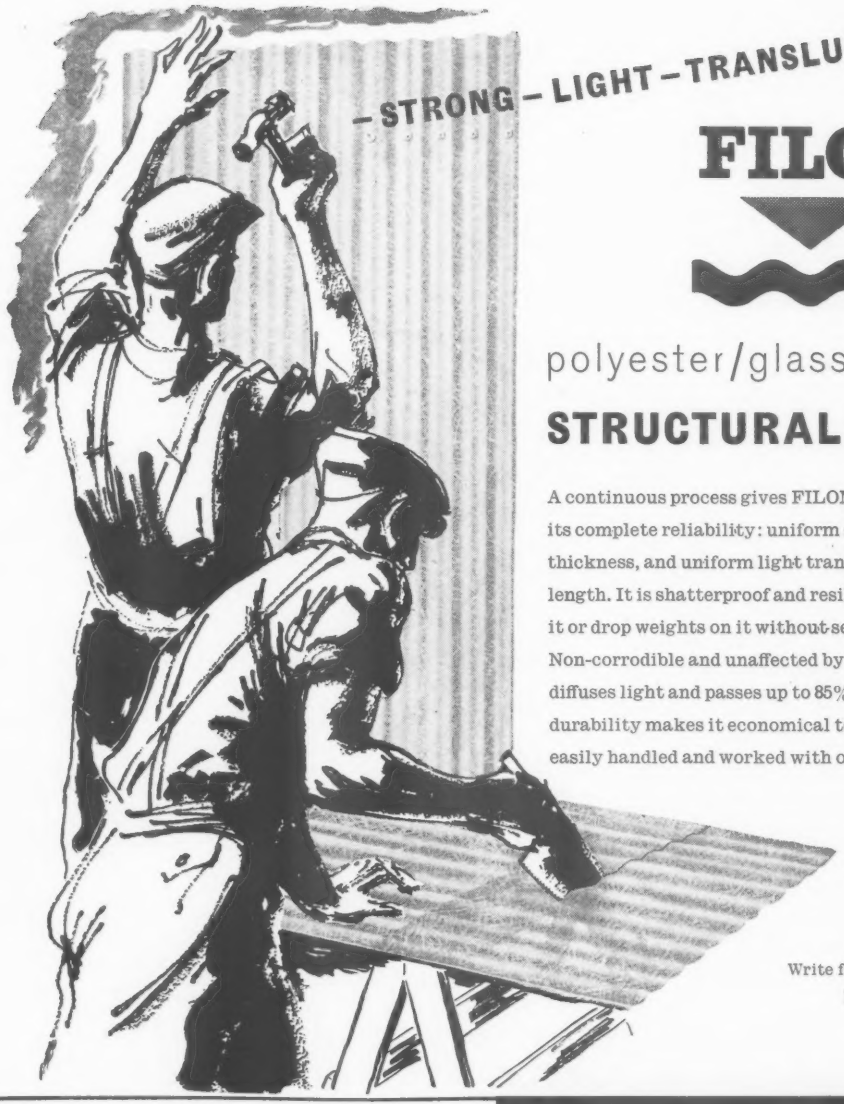
The operator literally pushes a button to fabricate steel girders in our plant at Norwich. To-day batches of bars flow evenly and quickly on the conveyors to be worked to fine limits by the high speed cold saws and multiple drills — all by the touch of a finger.

fabricators and erectors of structural steelwork

BOULTON AND PAUL

BOULTON AND PAUL LIMITED NORWICH LONDON BIRMINGHAM

AP/CE30



– STRONG – LIGHT – TRANSLUCENT

FILON

polyester/glass fibre/nylon

STRUCTURAL SHEETING

A continuous process gives FILON structural sheeting its complete reliability: uniform strength, uniform thickness, and uniform light transmission throughout every length. It is shatterproof and resilient . . . you can walk on it or drop weights on it without serious damage.
Non-corrodible and unaffected by climatic extremes FILON diffuses light and passes up to 85% of visible rays. Its durability makes it economical to install whilst it is light, easily handled and worked with ordinary carpenter's tools.

Write for descriptive leaflet and prices

FILON properties

Acid and chemical resistance · Admits 85% of light
Available in any length · Easy handling
Shadow-free lighting · Standard profiles
Held by standard fastenings
Low transport and storage costs
Needs only light supporting framework
No maintenance or replacement costs after installation

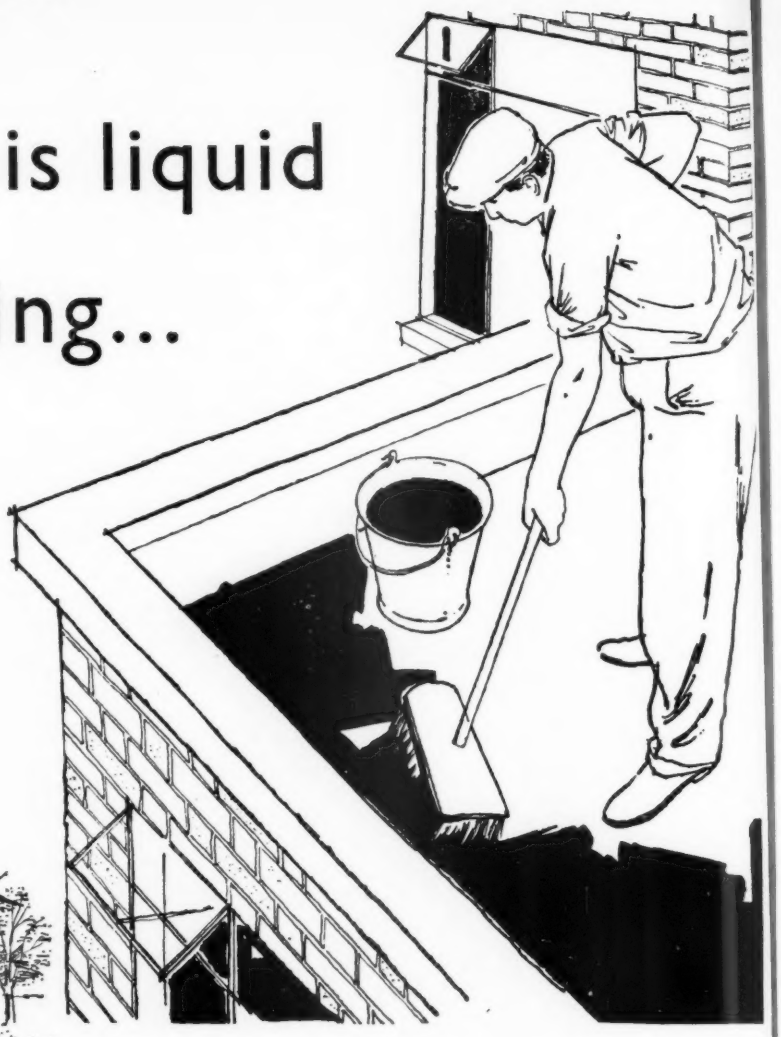
FILON applications
(Indoor and outdoor)
Roof sheeting · Wall cladding · Partitions · Garages
Sheds · Workshops · Shower or bath enclosures · Barns
Greenhouses · Horticultural sheds
Concrete shuttering · Fencing · Glazing
Diffused ceiling and wall lighting · Shopfitting
Exhibition stand construction

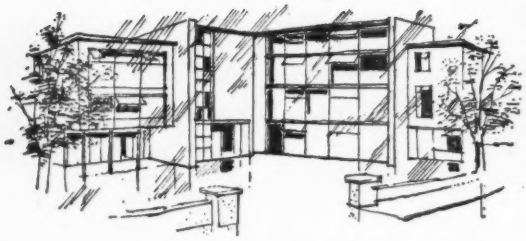
FILON *for light with lightness and strength with economy*

STRUCTURAL SHEETING

B.I.P. Reinforced Products Ltd., Streetly Works, Sutton Coldfield **Telephone: Streetly 2411**

Brush on this liquid waterproofing... and roofs are safe for years





ARCHITECTS, BUILDERS AND CONTRACTORS are often on the look-out for an economical, durable material that protects roofs from the worst that the weather can do. They will find Synthaprufe ideal for this purpose.

Synthaprufe is a liquid waterproofing that protects roofs completely from moisture and requires no maintenance. It does not decay, even after years of exposure.

Synthaprufe is extremely easy to handle—you simply brush it on and allow it to set. And because it spreads so well and lasts so long, it gives great savings in man-hours and money.

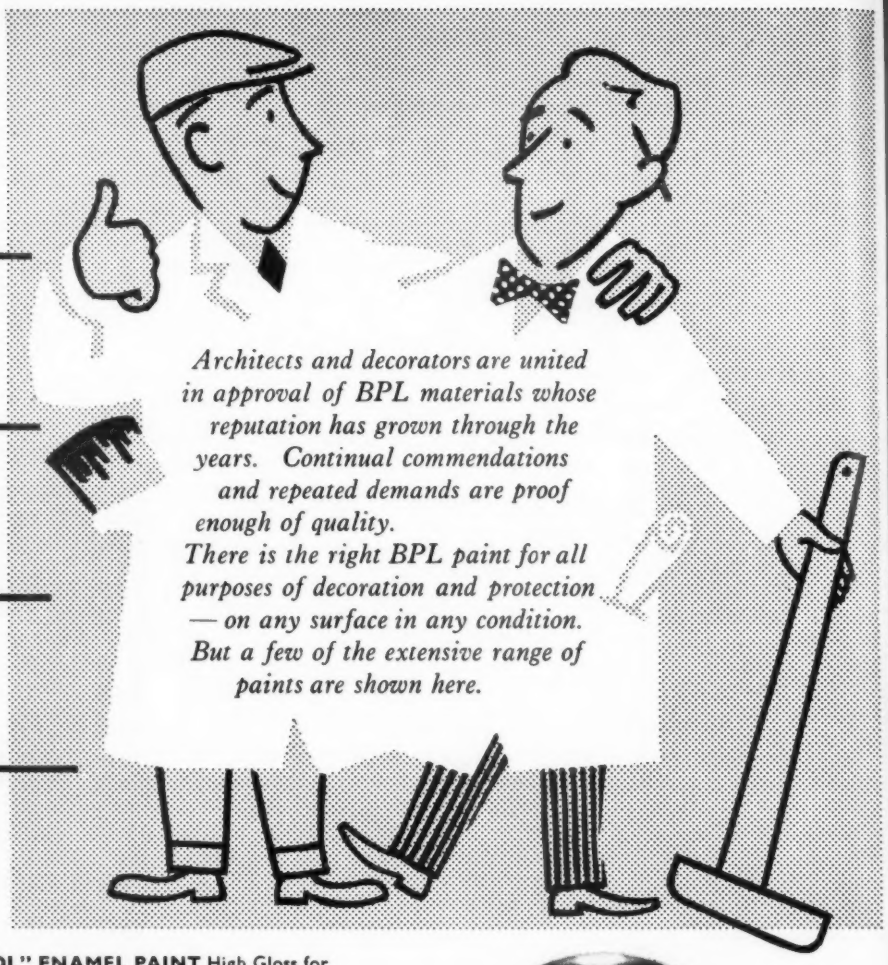
Synthaprufe can be confidently recommended as a reliable material that gives great economy and is suitable for every type of roofing job.

Synthaprufe

MANUFACTURED BY THE **NATIONAL COAL BOARD**

By-Products, National Provincial Bank Buildings, Docks, Cardiff

They are in full accord



Architects and decorators are united in approval of BPL materials whose reputation has grown through the years. Continual commendations and repeated demands are proof enough of quality.
There is the right BPL paint for all purposes of decoration and protection — on any surface in any condition. But a few of the extensive range of paints are shown here.

"LUXOL" ENAMEL PAINT High Gloss for interior and exterior. One coat covers any colour.

"SUPERLATIVE" A modern Alkyd Enamel of very high quality.

"UNIVERSAL" UNDERCOAT Outstanding hiding power, brushes easily.

"LUXOL" WATER PAINT (Ready Mixed) For ceilings and walls. One coat covers any colour

"LUXOL" FLAT WALL PAINT Low degree sheen for interior use. One coat covers any colour.

"MURISAN" Latex Emulsion Paint—odourless, can be second coated in 1 hour.

"HOYFLAT" A high quality interior matt oil finish.

"JOHN SMITH'S VARNISHES" Noted for brilliant and hardwearing finish.

PAINTING ADVISORY SERVICE: For expert advice on correct coatings for surfaces and conditions involved, do not hesitate to consult our Painting Advisory Service.

BRITISH PAINTS LIMITED

BY APPOINTMENT TO HER MAJESTY QUEEN ELIZABETH II MANUFACTURERS OF PAINT

PORTLAND RD., NEWCASTLE UPON TYNE, 2 · CREWE HOUSE, CURZON ST., LONDON, W.1.
31, WAPPING, LIVERPOOL, 1.

Belfast, Birmingham, Bristol, Cardiff, Glasgow, Leeds, Manchester, Norwich, Plymouth, Sheffield, Southampton, Swansea and all principal towns. BPL/D. 78

Prefabricated components make PLYMAX cubicles

simple to specify

easy to erect

W.C. Compartments · Showers · Cubicles in

PLYMAX

THE VENESTA METAL FACED PLYWOOD

...and a specialised PLYMAX *for a specialised job*

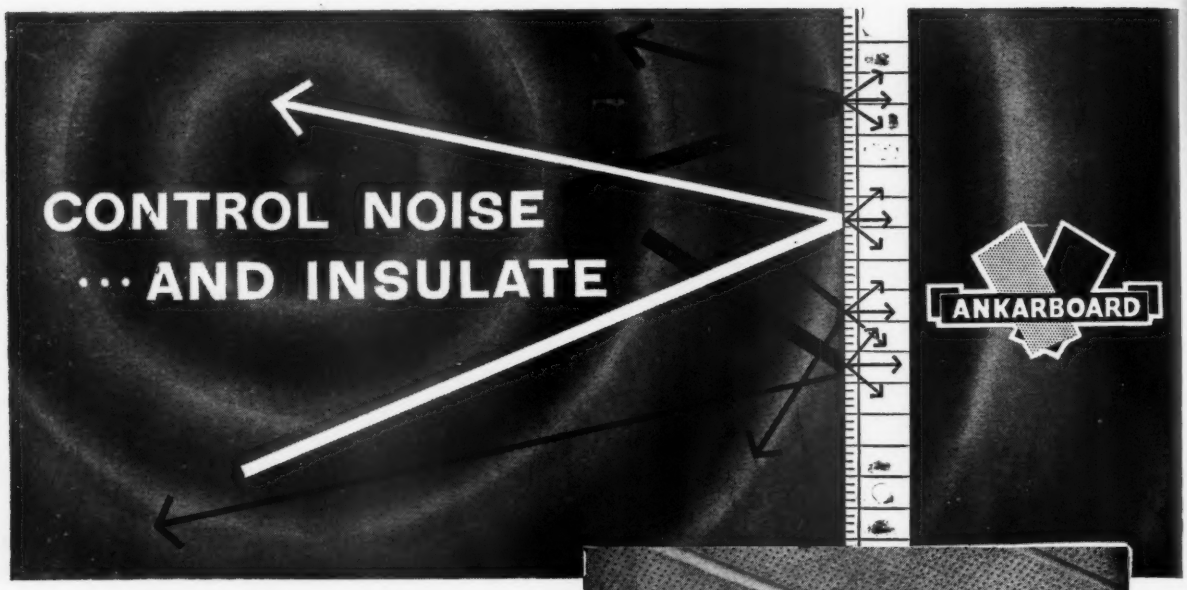
LEAD PLYMAX for X-Ray protection

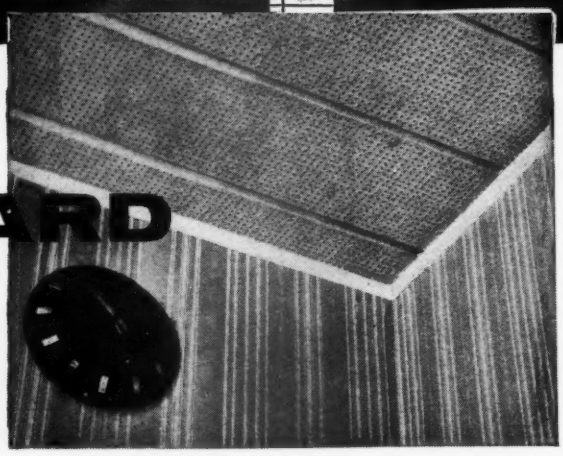
High quality lead sheet cemented between plywood — Lead Plymax — offers an easy method of providing X-Ray protection. This particular form of PLYMAX is fully detailed in a booklet available on request.

The architect who decides on PLYMAX cubicles does more than save himself needless work on the drawing board; he saves time and labour on the site. They arrive prefabricated, ready for immediate erection. They are rigid and light in weight and easy to handle. They are simple to clean and offer a good surface for paint or cellulose. Samples of PLYMAX, together with full details, will be sent on request.

VENESTA LIMITED

Plywood Division, Vintry House,
Queen Street Place, London EC4 Tel: Central 3040





WITH ANKARBOARD ACOUSTIC BOARDS AND TILES

In the factory, the office or the home, ANKARBOARD baffles noise, improves acoustics—and enhances appearances. The perforated boards are specially prepared with grooved and ship-lapped joints for easy fixing. Can be supplied with a coating of fire retardant Albi-R. for *extra* safety.

ACOUSTIC BOARDS ½″ or ¾″ thick, are available in 12″ or 16″ widths and in lengths up to approx. 16′. (Also available, unperforated, as insulating "longboards").

ACOUSTIC TILES ½″ or ¾″ thick in sizes 12″ x 12″, 16″ x 16″, 24″ x 24″, 12″ x 24″ or 16″ x 32″. Tiles are bevelled on all four edges.

PERFORATIONS FOR BOARDS AND TILES 4 m.m. holes at 15 m.m. centres. Depth of holes is arranged for maximum acoustic effect whilst corner holes are bored to half thickness only to ensure a good grip when tiles are screwed or nailed to fixing grounds.

ALSO producers of

KRAMFORS CROWNBOARD

"ANKARBOARD"

AND

IVORY-FACED HARDBOARDS

KRAMFORS BOARD

MANUFACTURED BY

THE SWEDISH CELLULOSE CO.

SUNDSVALL · SWEDEN

MAIN DISTRIBUTORS

John Bland and Co. Ltd., Cardiff. *Cardiff 24241.*
Walter S. Fry Ltd., London, S.E.1. *Hop. 3511.*
J. Holt and Son (Plywood) Ltd., Manchester 12. *Ardwick 5551.*
Rudders and Paynes Ltd., Aston, Birmingham 6. *Aston Cross 3071.*
The Scottish Speedwell Co. Ltd., Glasgow. *Bridgeton 1143.*
J. and W. Wilson and Sons, Sunderland. *Sunderland 5-8244.*
Dawber Townsley and Co. Ltd., Hull. *Hull 42234.*
James P. Cory and Co. Ltd., Prince's Dock, Belfast, Northern Ireland.
T. and C. Martin Ltd., D'Olier House, Dublin, C.5.

For further particulars apply to:—Sole Selling Agents for U.K. and Eire

MARTIN OLSSON & SONS LTD. MELBOURNE HOUSE · ALDWYCH · LONDON, W.C.2

BOR

amingo" Fotexurprint — one of Tibor's
ast hand screen printed curtain fabrics in
quality mercerized cotton. It is available
five colourways, and obtainable at all the
ding stores. Designed by Tibor Reich,
.I.A., produced by Tibor Ltd., Stratford-
-Avon.

VESPER

Manston high-back Chair model 221, designed by N. K. Hislop, with Tibor's "Campeche" deep texture upholstery fabric. This Chair has loose sprung cushion on tension sprung base, showwood arms polished any shade. Produced by Gimson and Slater Ltd., Walton Street, Long Eaton.

stockwell

"Tunis" A new Fotexur design created by Tibor Reich, F.S.I.A., for the Equerry (reg'd.) range of Wilton filling. All-woollen pile. Mitin-processed; guaranteed mothproof for life. A product of S. J. Stockwell & Co. (Carpets) Ltd., 16 Grafton St., London, W.1.

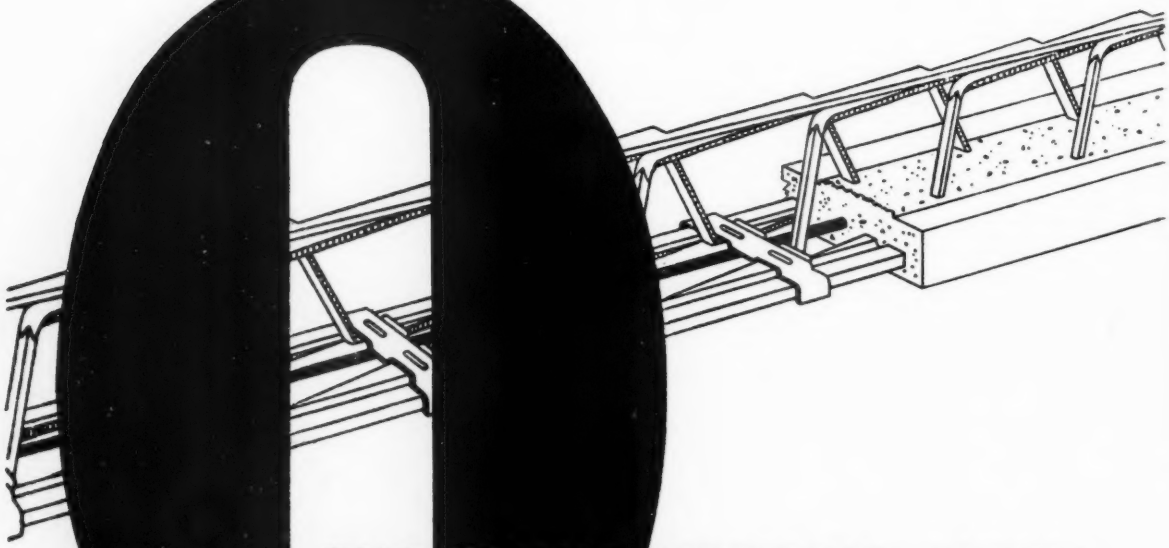
where

both hygiene and
low maintenance
costs matter,
architects who demand
the ideal sanitary equipment

take care to specify
reliable

ceramic glazed fireclay

CLAY PRODUCTS TECHNICAL BUREAU DRAYTON HOUSE GORDON STREET LONDON W.C.1



THE OMNIA PRECAST FLOOR

combines precast and *in situ* methods of construction and appeals particularly to the Architect because it spans economically to over 30 feet and gives a level and unbroken soffit without camber or bowing.

In addition it has the following advantages

Highly competitive
Monolithic yet flexible
Very low selfweight
Easily manhandled
Cheaply transported
Quickly erected
Requires no shuttering
Adaptable for services
Available everywhere

all are important points to us, especially these

OMNIA CONSTRUCTIONS LIMITED
121 London Wall, London, E.C.2. MONarch 2272/6

OMNIA

Please address your enquiries to your nearest Omnia Licensee

THE ATLAS STONE CO. LTD., LONDON
THE BLOKCRETE CO. LTD., SOUTHAMPTON
F. BRADFORD & CO. LTD., EDMONTON
EDWIN H. BRADLEY & SONS LTD., SWINDON
BRADLEYS (CONCRETE) LTD., DARLASTON
G. W. BRUCE LTD., ABERDEEN
T. C. CAMPBELL LTD., NOTTINGHAM
DERWENT CAST STONE CO. LTD., PICKERING
DUNBRIK (YORKS) LTD., LEEDS
HYDRAULIC PRECASTS LTD., NORWICH
LANCASHIRE CONCRETE PRODUCTS LTD., CHORLEY
JAMES K. MILLAR LTD., FALKIRK
JOHN NICHOLSON & COMPANY, ANNAN
ST. IVES SAND & GRAVEL CO. LTD., HUNTS.
SAMUEL TYZACK & CO. LTD., SUNDERLAND
SPEEDIFORM STRUCTURES LTD., SHIFNAL, SALOP

Bergermaster

complete range of B.S. colours

101 in GLOSS FINISH

67 in EGGSHELL LUSTRE FINISH

54 in FLAT FINISH

Now you can choose Bergermaster paints in the complete B.S. range of colours as well as in the standard range. This means 101 B.S. gloss colours, 67 Eggshell Lustre and 54 Flat colours.

Lower price means still better value

The recent price reduction on Bergermaster Gloss and Eggshell means you pay no more for these superlative paints than for ordinary paints. Bergermaster paints have the extra quality to give very long life. They are based on Alkyd resin the finest of all man-made resins for paint manufacture.

Merchants ! Order your supplies now

There's sure to be a heavy demand for Bergermaster in the B.S. range. So order your supplies of finishing and undercoats now.

Berger Paints

Quality Famous since 1760

Post this coupon to receive regular mailings of information on Berger products.

To LEWIS BERGER (Gt. Britain) LTD.

Berger House, Berkeley Square, London, W.1.

NAME.....

ADDRESS.....

H.3

TOMO DOUBLE GLAZED WINDOWS and the B.R.S. TESTS

Horizontal-pivot-hung TOMO WINDOWS are incorporated in the attractive and economical curtain-wall at the Bishop Simpson Secondary School.

Architect: Charles H. Pike, F.R.I.B.A.

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 which, with TOMO pleated blinds down, 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.

In addition to their excellent thermal-efficiency values, TOMO double-glazed WINDOWS have remarkable sound-reduction properties and are specially recommended for offices, schools, flats, etc., in busy streets or near to airports. The amount of reduction in sound level depends on the thickness of glass and the space between panes—thirty-two ounce glass spaced at 1⅞ in. gives a reduction of approximately 40 decibels.

These high-quality windows afford all 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.

FOR UTMOST EFFICIENCY IN THERMAL INSULATION AND SOUND REDUCTION —*SPECIFY*

TOMO WINDOWS

—purpose-made in finest timbers to Architect's own design and finish

HAVE YOU HAD YOUR FREE COPY OF THE NEW EDITION OF THIS HELPFUL BROCHURE?

Fully illustrated and packed with information, this 24-page brochure shows many examples of TOMO WINDOWS in use throughout the country. Please complete and post this coupon for your copy.

To: TOMO TRADING CO. LTD., COWLEY PEACHEY, UXBRIDGE, MIDDLESEX (Tel: West Drayton 3751)

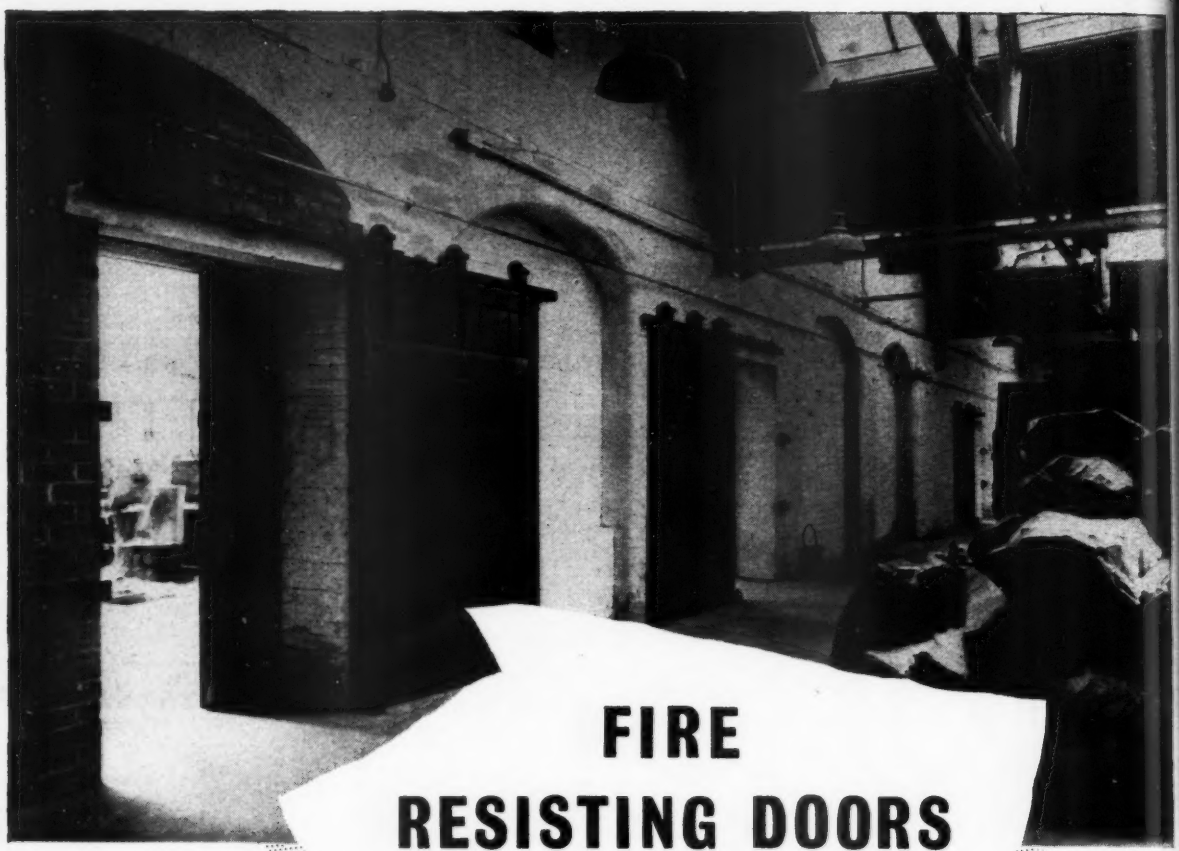
Please send me a copy of your revised TOMO WINDOWS brochure

Name.....

Address.....

.....

For the attention of..... A.J.-E



FIRE RESISTING DOORS

armoured or composite types

Three pairs of non-automatic armoured sliding fire doors.

Mather and Platt Armoured Fire Doors are constructed from three or four layers of thoroughly seasoned tongued and grooved pine boards, each board being sterilized and treated with special preservative against dry rot. The boards are fastened with iron nails driven flush and clinched. This wooden core is encased in terne or tinned steel sheets in such a way that, though the door is free to expand when subjected to the heat from a fire, air is excluded from the core and the sheets will not become detached. The laminated construction prevents warping.

For use in elaborately decorated buildings the Mather and Platt Composite Fire Door has been developed. It combines fire-resisting qualities with an appearance suitable for any decorative scheme. Mather & Platt composite fire doors are constructed of steel and asbestos and, like the armoured fire doors, form a real fire check. Both types of doors can be sliding, hinged or folding to suit requirements. Automatic or non-automatic doors can be supplied as required.

Mather & Platt LIMITED

PARK WORKS, MANCHESTER 10

Telephone : COLlyhurst 2321

Telegrams : Sprinkler, Manchester

789

THE ARCHITECTS' JOURNAL (Supplement) May 15, 1958

# of course mason's add something extra to their paint

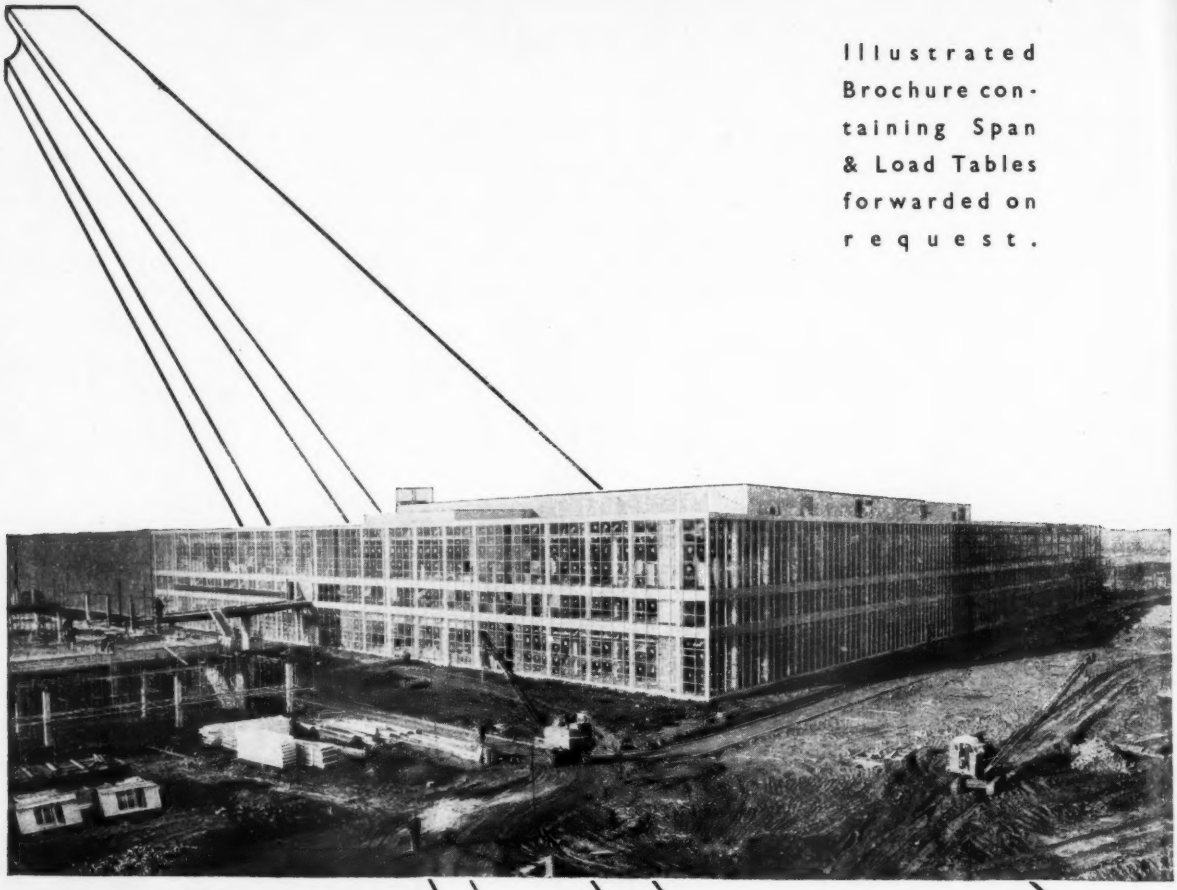
... and that extra something is the enthusiastic co-operation of Joseph Mason's Technical Staff, who cheerfully and efficiently assist with initial planning, advice on site, building inspection, special shades and recommended specifications.

Practising architects are invited to write for this helpful book—"Joseph Mason Painting Specifications"

joseph mason paints

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

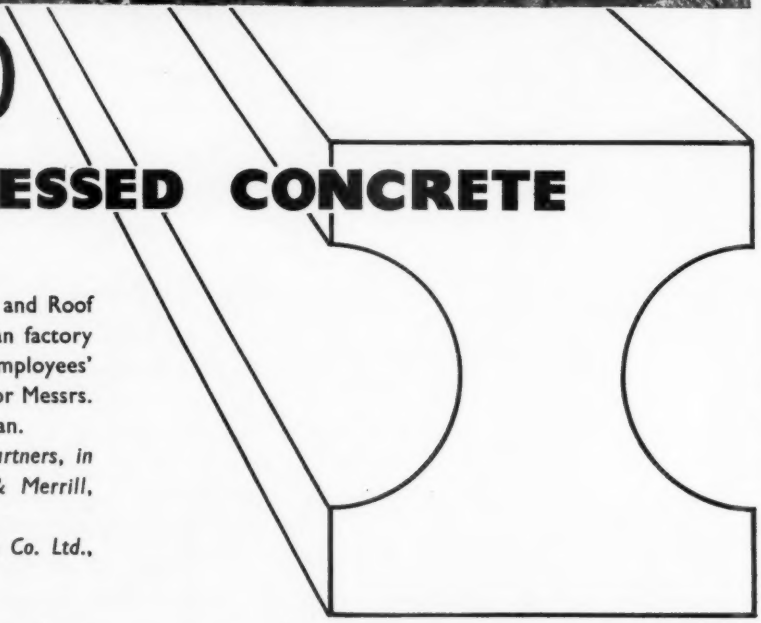
MANUFACTURERS OF VERY GOOD PAINTS SINCE 1800



Illustrated Brochure containing Span & Load Tables forwarded on request.

PIERHEAD

PRESTRESSED CONCRETE



26,000 square yards of Pierhead Floor and Roof construction were supplied to the Can factory Main Production building and Employees' Services building at the new factory for Messrs. H. J. Heinz Co. Ltd., Kitt Green, Wigan.
Architects: J. Douglass Mathews & Partners, in conjunction with Skidmore, Owings & Merrill, New York, U.S.A.
Main Contractors : Messrs. A. Monk & Co. Ltd., Padgate, Warrington.

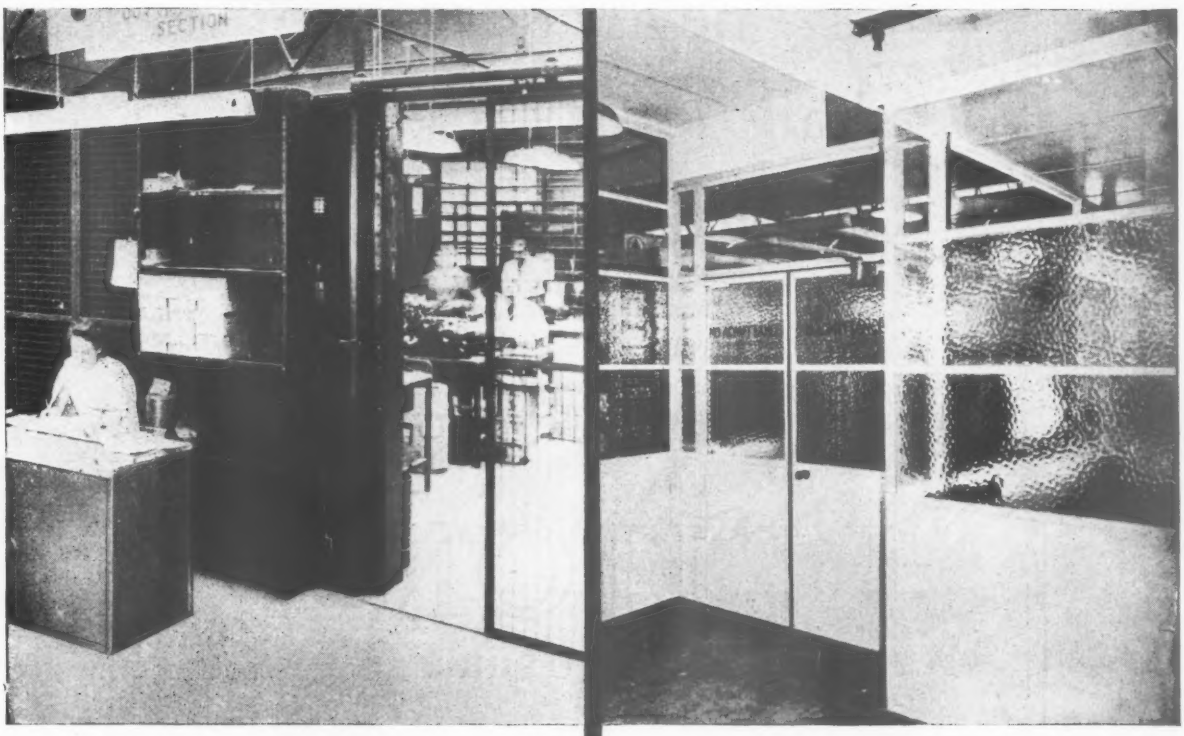
THE HOVERINGHAM CONCRETE COMPANY LIMITED
HOVERINGHAM · NOTTS
Telephone : BLEASBY 381

PIERHEAD LIMITED
SPEKE BOULEVARD LIVERPOOL 19
Telephone: Hunts Cross 1311

LONDON FACTORY FAGGS LANE FELTHAM, MIDDX.
Telephone: Feltham 3031

Steelbrac partitioning is different

it's better! because its sections are tailored individually to fit any ceiling line.



STEELBRAC sectional steel partitioning is not confined to standard fixed-size units. Its sections, although available in standard widths, can be 'made-to-measure' to fit any given ceiling line, whether irregular or sloping; or roofed over at any height to form separate cubicles. Even pipes and joists present no problems.

This means that any space can be economically enclosed—for the cost of STEELBRAC individual construction is often less than that of standard sections! Easily erected or dismantled by unskilled labour, any partition can be as permanent or as temporary as the situation demands. STEELBRAC partitioning offers wide freedom of choice as to glazing and panelling, including double skin construction providing a high degree of sound and thermal insulation is desirable, and can be finished to match any colour scheme at no extra cost.

Write for Booklet B7 today.

STEELBRAC

SECTIONAL STEEL PARTITIONING

STEELBRAC LIMITED · WILLOW LANE · MITCHAM · SURREY · TEL: MITCHAM 4072-3-4

Manchester Office: 2 Sussex Street, Manchester, 2. Tel: Blackfriars 9975

". . . never never shall be slaves"

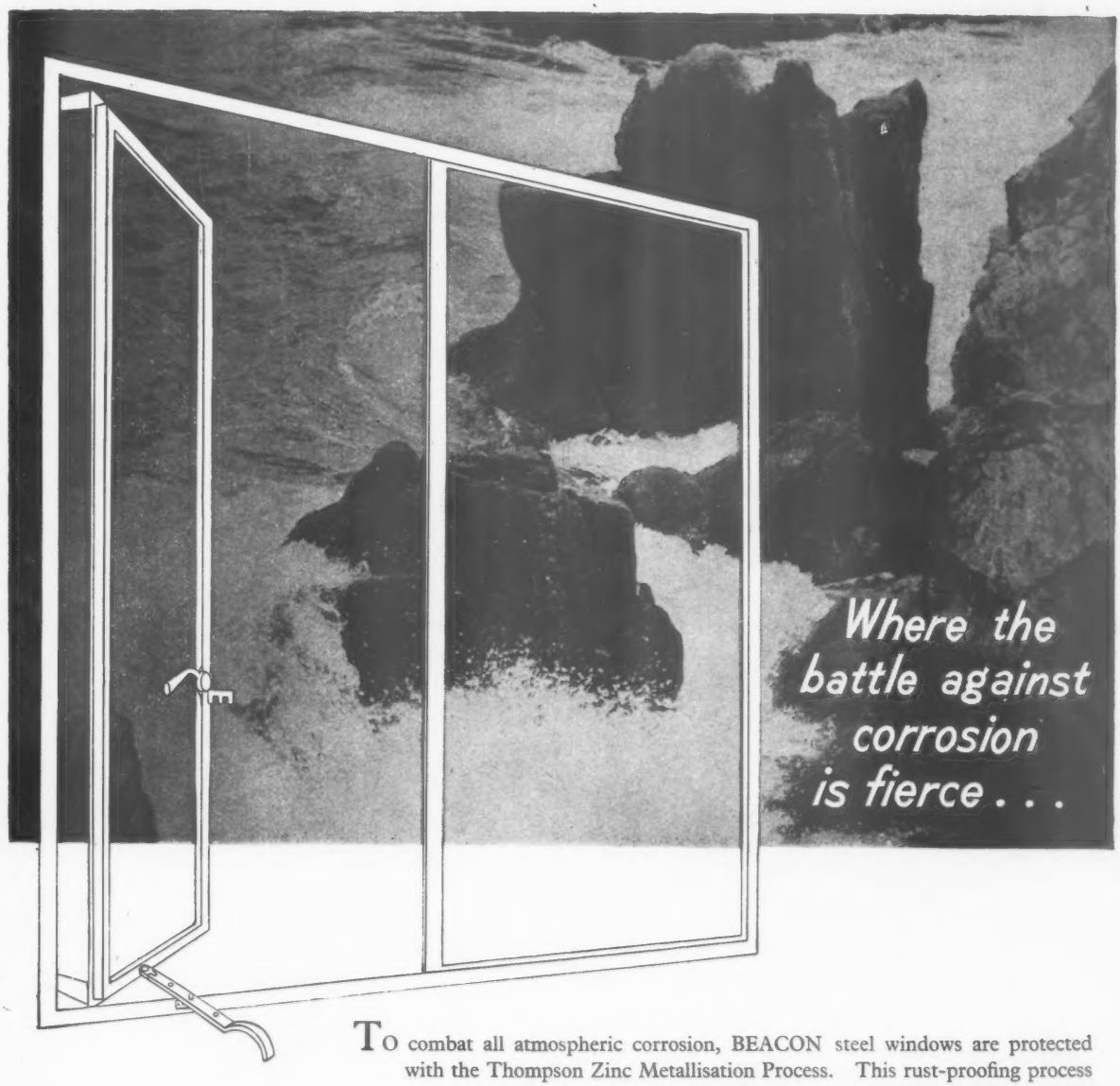
Why be a slave to your door? The " Briton " door closer will shut it for you. Headaches and colds caused through banging doors or draughts are things of the past. The " Briton " closes doors efficiently and silently—it will fit either right or left hand doors without alteration, and the spring can be regulated to six different strengths by finger and thumb control. The whole unit is guaranteed for ten years. Make sure of your " Colours "—specify genuine " Briton " door closers and never be a slave.

'BRITON'

DOOR CLOSER

Exhibited at the Building Centre
26 Store Street, London, W.C.1

William Newman & Sons Ltd. HOSPITAL STREET · BIRMINGHAM 19

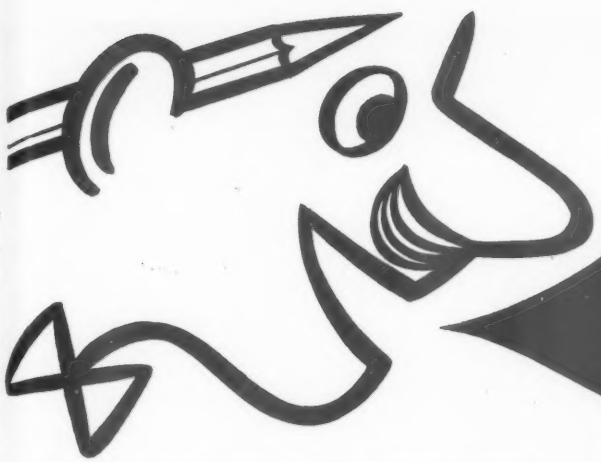


TO combat all atmospheric corrosion, BEACON steel windows are protected with the Thompson Zinc Metallisation Process. This rust-proofing process involves shot-blasting each assembled window to remove all scale, grease and dirt. The molten zinc is bonded on to the steel by means of an oxypropane flame gun, and finally to give extra protection, each window is dipped in zinc chromated priming paint and stoved at a controlled temperature. This double protection is your guarantee for longer durability. Detailed literature gladly supplied on request.

BEACON
METAL WINDOWS

Member of the Metal Window Association

JOHN THOMPSON BEACON WINDOWS LTD · WOLVERHAMPTON



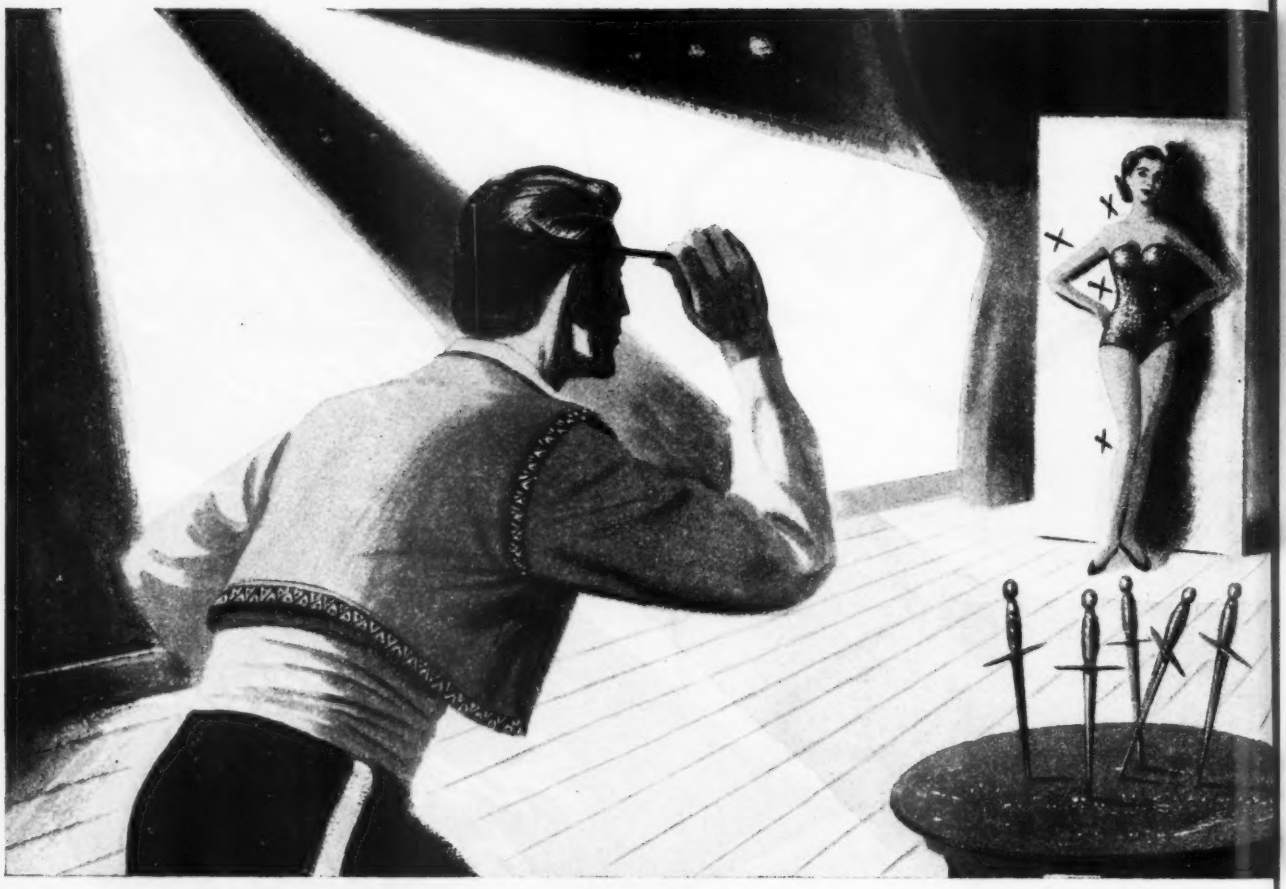
Ozalid Intensifying Paper

Cuts down tracing— Speeds up printing

Ozalid Intensifying Paper is a highly efficient and economical sub-master material. The weakest pencil lines are greatly intensified, giving extremely clear prints from any type of translucent original. The reverse side is lacquered for extreme transparency, giving high printing speeds. The working surface is ideal for pencil and ink amendments and will stand up to repeated corrections. Details on request.

OZALID

OZALID COMPANY LIMITED, 62, LONDON WALL, LONDON E.C.2. Telephone NATional 0551



CONFIDENCE...

MONTGOMERIE'S
FINISHES FOR ALL DECORATIVE AND INDUSTRIAL PURPOSES

manufacturers of :-

Purovar Enamel.

Artesco Emulsion Coating.

Rustration Calcium Plumbate Anti-Corrosive Primer.

Emeskote Chemical Resisting Enamel—Air Drying Epikote Resin Based Coating.

Petrifoid 'S' Water Repellent—Solution Based on 'Dri-sil' Silicone.

PROTECTION DECORATION

the basis of the artists superb performance . . . the essential when you are specifying materials or PAINT for that new important assignment.

If it's PAINT, and if it's produced by montgomerie stobo—then you can have all the confidence in the world in recommending it for quality, durability, colour fastness and 'rightness for the job'—nothing is left to chance in its manufacture, which probably accounts for the number of new projects on which it is being used to-day!

★ Technical Advisory Service for specifications and colour schemes.

★ All shades to B.S.S. 2660. 1955 Colour Classification.

★ On Site Technical Service available to architect and builder.

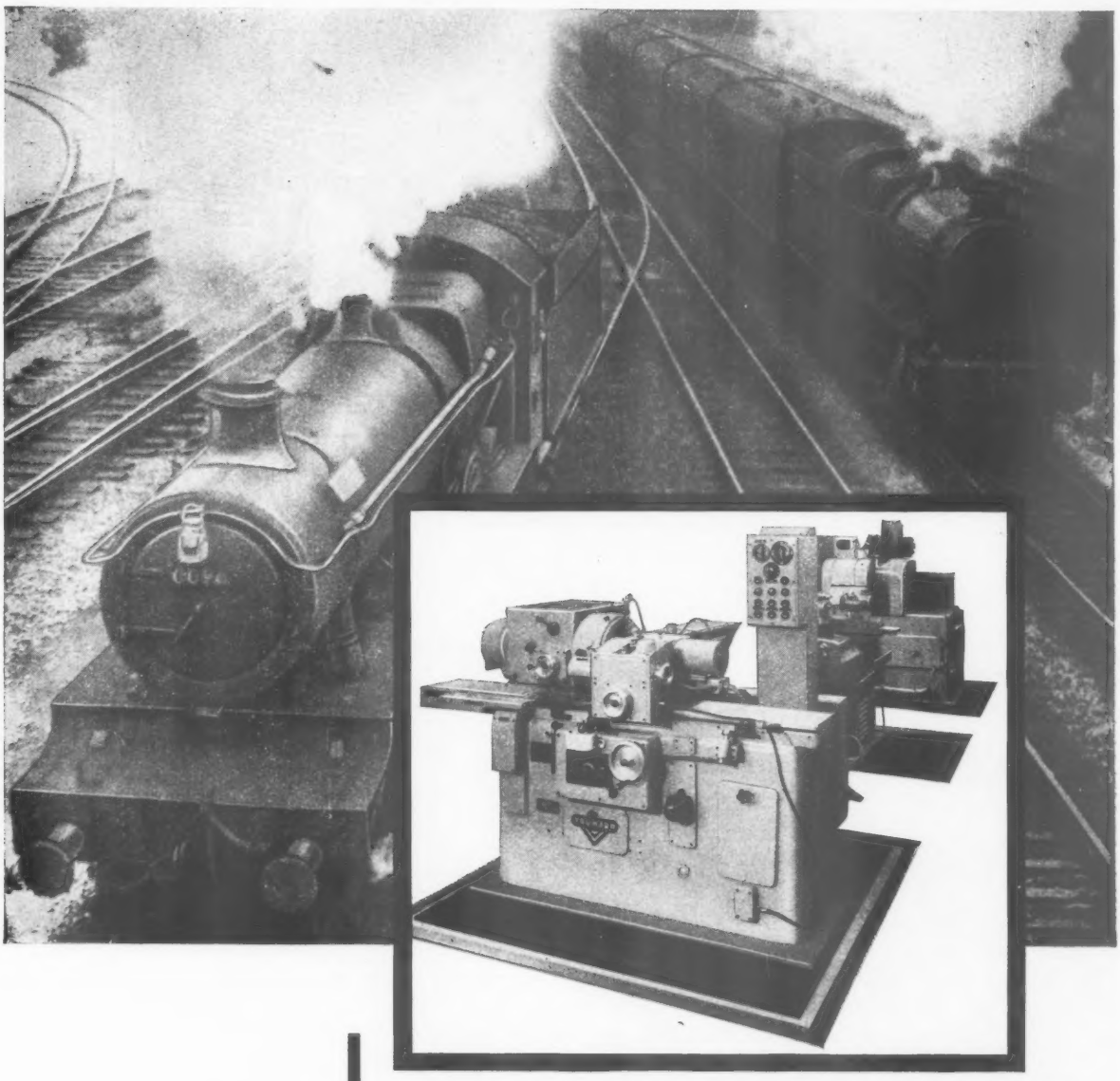
montgomerie, stobo & CO LTD

Deeside, Saltney, Nr. Chester.
Telephone Chester 23128 (3 lines)
Telegrams 'Turpentine' Chester.

136/154 Stranmills Road, Belfast.
Telephone Belfast 67978.
Telegrams 'Turpentine' Belfast.

52-72 Rogart Street, Glasgow, S.
Telephone Bridgeton 1005/6/7.
Telegrams 'Turpentine' Glasgow.

Also at Slough



PRECISION GRINDING

to Six-Millionths near a main-line railway

Within a few yards of the railway at Colchester, Roller Bearings are being ground to micron-precision tolerances, on machines isolated from vibration on the Dunlop 'Foundation Mounting' principle. Messrs. Gamet Products Ltd. say "the limits of accuracy and the quality of production are exceptional".

Behind this modest comment lies the fact that each roller must be circular to within six-millionths of an inch, and the surface finish has to be maintained between 1.5—2.0 micro-inches.

The inner and outer rings (of some 8" diameter) must not deviate from circularity more than 0.0000197".

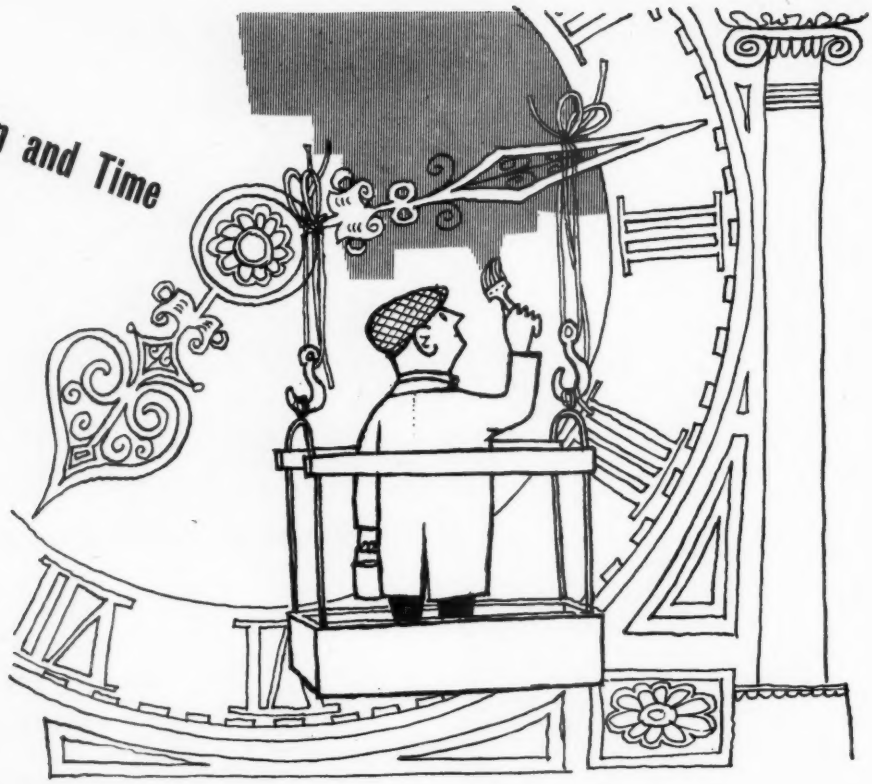
For advice on vibration problems of any kind and on any scale, consult:

DUNLOP

Engineering Components Division
DUNLOP RUBBER CO. LIMITED
Fort Dunlop, Birmingham 24.
Tel: Erdington 2121

7SPC/PC9

Study in Motion and Time



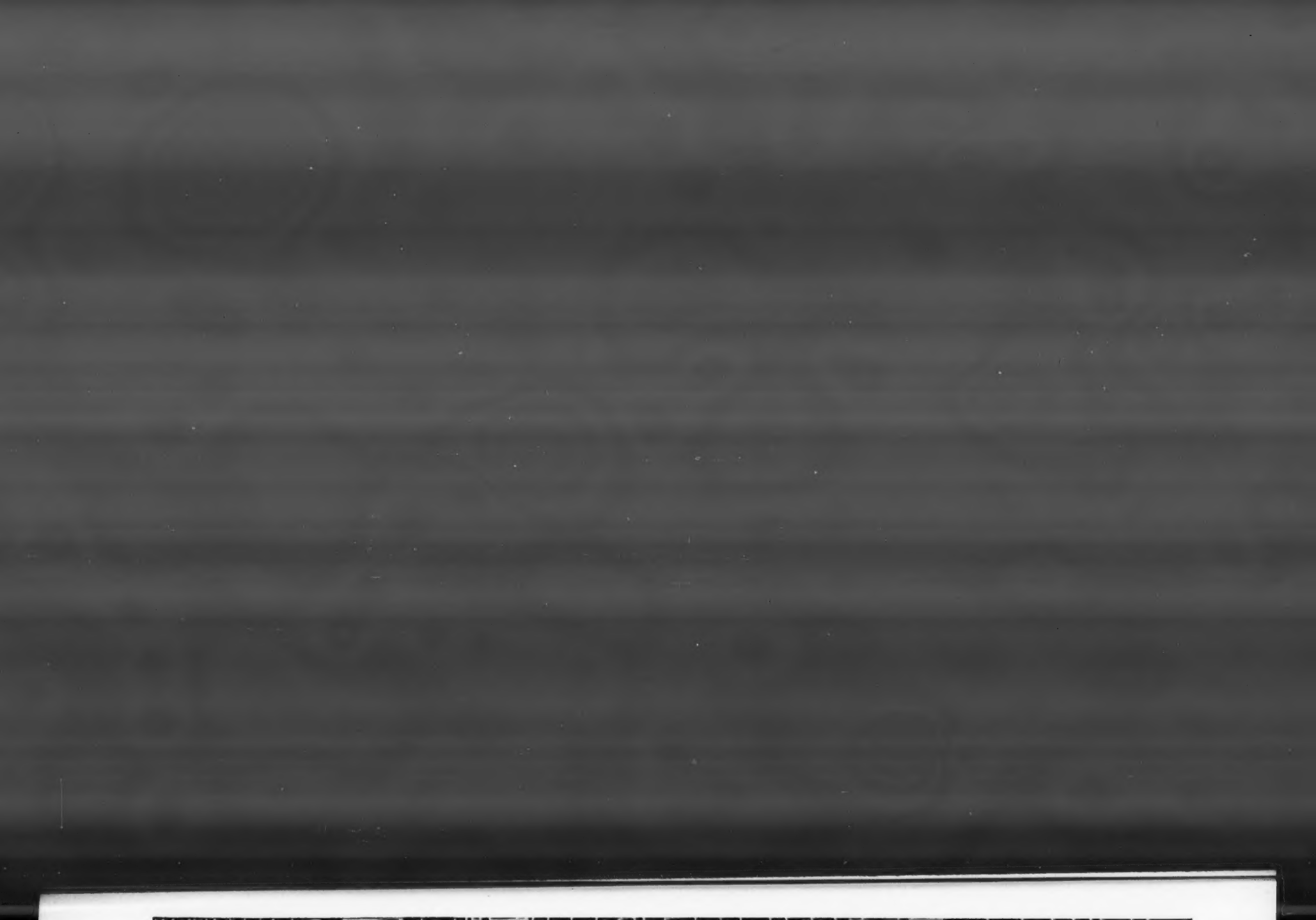
Each of the ten escalators installed for Messrs. Lewis in the Haymarket has a speed on incline of 90 f.p.m. and a carrying capacity of 8,000 persons per hour. To this picture of cold efficiency must be added the dignified yet charming air created by the soft-glow, dove-grey matt finish of the Formica panels and the polished aluminium-alloy deckings and mouldings.

J. & E. HALL LIMITED

ESCALATOR, LIFT & REFRIGERATION ENGINEERS

DARTFORD · KENT Tel: DARTFORD 3456

AP93



REDFYRE BACBOILER

We started with an

Open fire—economical slow-burning.

advertisement 400 words long

Abundant hot water for

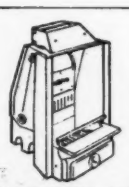
and our technical people cut the

domestic use and radiators

padding. They say architects

or radiators only

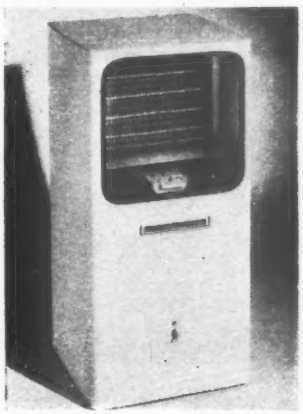
only care about FACTS.



REDFYRE REG'D
BACBOILER

Full details from:
NEWTON CHAMBERS AND COMPANY LTD.
Redfyre Products, Thorncliffe, Sheffield

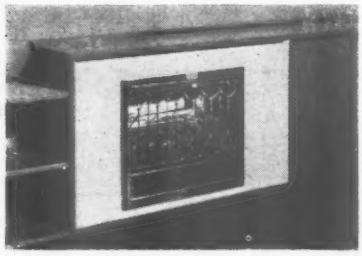
CAN YOU AFFORD NOT TO BUILD THESE HOUSES?



ABOVE: These are some of the all-electric houses on an estate under development at Woking.

LEFT: The Ferranti Fridge-Heater provides constant hot water and a refrigerated larder.

BELOW: Ferranti Panel Fires provide an attractive focal point-of-interest.



They cost less to build less to sell & less to run

These are houses of the future. They will be up-to-date in 1980. Why? Take a look at the roofs—there are no chimneys. These are all-electric houses on an estate which is being developed in Woking. They have a domestic heat pump installed for providing constant hot water and a refrigerated larder. Central heating is provided either by built-in convector heaters or by heating cables buried in solid floors. This latter type of heating gives an evenly spread heat throughout the house and the power may be taken at night when special off-peak rates are available. The absence of chimney breasts and flues means no more draughts and additional space.

The latest types of insulating materials are used in the construction of these houses, for example, lightweight concrete blocks are used for the inner walls and insulation round the edges of the floors prevent loss of heat through the walls. Roof insulation is also provided which cuts down one of the greatest sources of heat loss in any house. And the cost? The capital and running costs are actually less for this type of house than for a conventional one. The all-electric house is here to stay. Look at the tables below: the savings shown are taken from actual figures in the all-electric houses at Woking.

CAPITAL COSTS

All-Electric House	£	s.	d.
Fridge-heater	159	12	7
Floor warming cable installation	90	0	0
Living room, radiant fire	18	17	8
Bathroom, radiant fire	5	5	0
Bedroom, radiant fires (three)	20	15	3
Extra wiring and labour	15	0	0
	£309	10	6

Conventional House	£	s.	d.
Refrigerator, 4 cu. ft.	80	0	0
Two chimneys and coal bunker	136	0	0
Flashing, chimney soakers	10	0	0
Tiler and carpenter ...	7	0	0
Ducts in floor ...	1	10	0
Slow burning grate and surround	50	0	0
Five radiators and valves	21	5	0
Towel rail	10	0	0
Boiler and pipes ...	50	0	0
Tubing and plumber's labour	70	0	0
Decorators	3	0	0
	£438	15	0

SAVING BY ELECTRIC METHOD

£129 4s. 6d.

The All-Electric House

NEEDS—NO FUEL STORAGE, NO CHIMNEYS, NO FLASHINGS
CUTS BRICKLAYING COSTS, CUTS CARPENTRY COSTS, CUTS TILING COSTS, AND COSTS LESS TO BUILD, LESS TO SELL, LESS TO RUN

Average total running costs for a 3-bedroomed house (water heating, space heating, lighting, cooking and accessories) average between £50 to £60 p.a.

Write for details to:

Ferranti Ltd. *Domestic Appliance Dept., Moston, Manchester, 10*

FERRANTI

The question, "What are little girls made of?" is simpler to answer than "How does one first-class paint differ from another?" Like many other manufacturers we make good paints and we advertise the fact; but we are bored with paint advertisementsshowing building exteriors and lists of users. The photograph you see here by Ann-Marie Gripman has nothing to do with paint, or with building. We hope you like it. And could you remember, please, that while we are tired of a certain type of paint advertising we are not tired of paint sales. If you would like a copy of the photograph, by the way, write to:

SILEXINE PAINTS LTD • 142 SLOANE ST • LONDON, S.W.1 • Tel: SLOane 9218

C

CRABTREE MINIATURE CIRCUIT BREAKERS

FOR TAMPERPROOF PROTECTION

The mechanism of the Crabtree Type F-60 unit is contained in a separate chamber which is completely sealed after works calibration and testing. This means that the close and accurate protection given by a Crabtree miniature circuit breaker cannot be varied by irresponsible tampering.
Full details of this interesting new range are given in Publication No. 1191. Have you had your copy?

WHY THE USER PREFERS CIRCUIT BREAKER PROTECTION

"I'm no longer worried by fire or shock risk from over-fusing."

CRABTREE TYPE F 60

A CIRCUIT BREAKER OF UNEQUALLED PERFORMANCE

J. A. Crabtree & Co. Ltd., Lincoln Works, Walsall, Staffs.

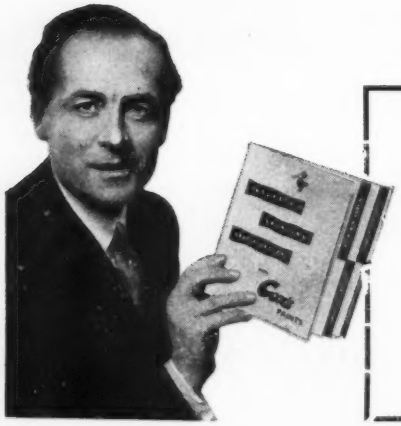
C. 774

Architects!

May we remind you that as part of our service we submit colour schemes on request, and our Laboratory and Technical Advisory Service is available to you at any time.

Our new 1958 booklet, offered as an outline of suggested Paint Treatments is available by simply completing the coupon below

Cox's PAINTS



Please complete this Coupon for your copy of "Cox's Suggested Painting Specifications."

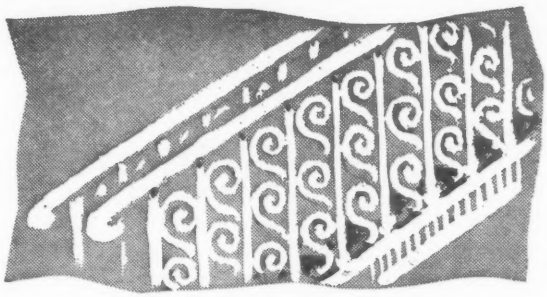
NAME .....

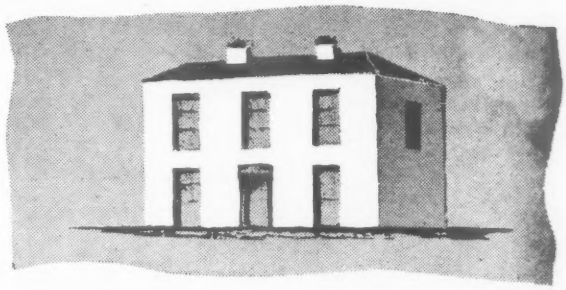
ADDRESS .....

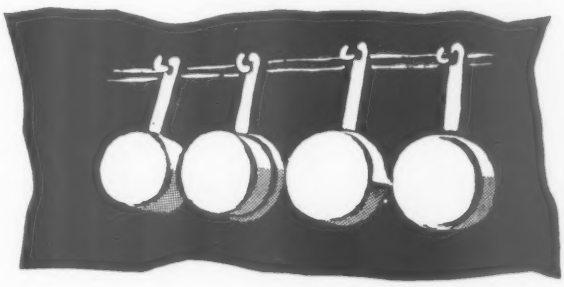
.....

COX BROTHERS & CO. (DERBY) LTD.
Normanton Road, Derby. Established 1781
(AND AT: NOTTINGHAM & BELFAST)
Telephone: **DERBY 45484-5-6**

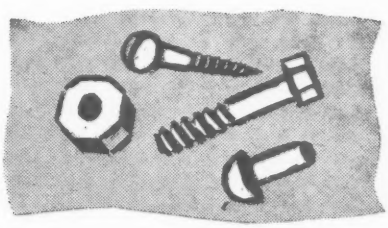
Freehold or leasehold—you'll find

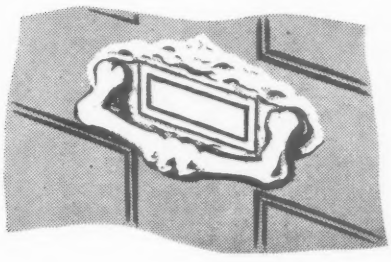


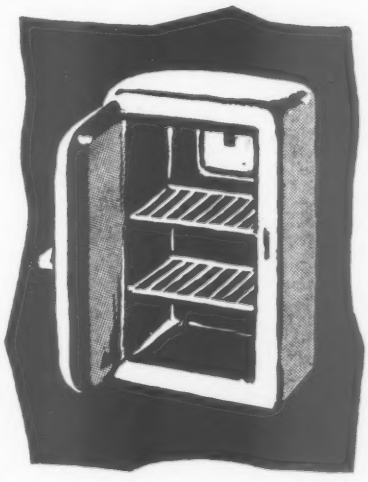




a need for copper and brass







Every building—and its fittings—needs its quota of copper and brass semis. Every builder and contractor needs a reliable supply of sheet, strip, rod or wire in these dependable and versatile metals.

That is one good reason for our existence. We have been associated with the building and allied trades for over a century. We have a wealth of practical experience to back the output of our modern and efficient plant. That's why, when it's a question of copper and brass, the answer is—

ICI METALS DIVISION

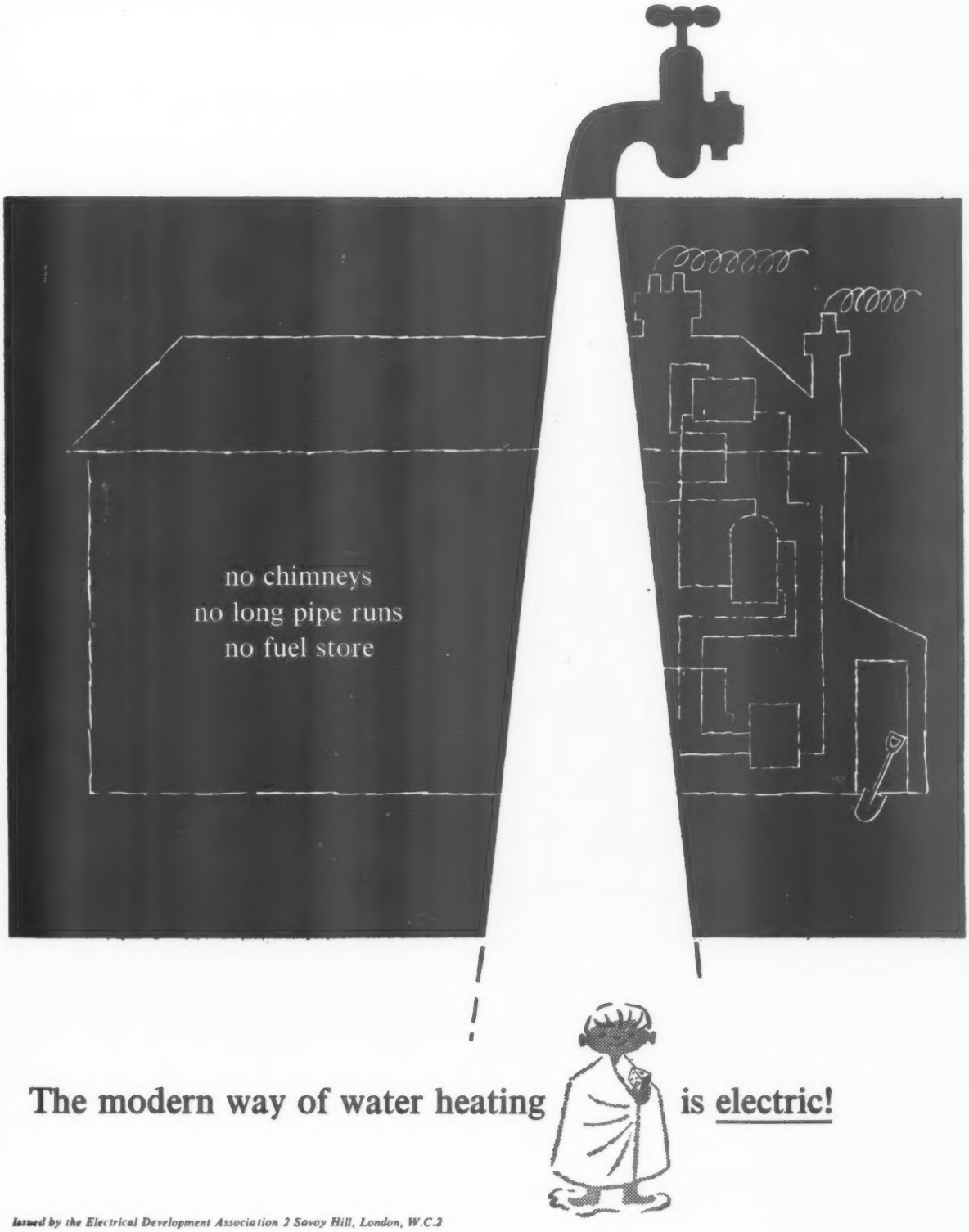
I.C.I. METALS DIVISION

The Commonwealth's largest producer of wrought copper and brass

IMPERIAL CHEMICAL INDUSTRIES LIMITED, LONDON, S.W.1.

C 10.

Electric Water Heating cuts building costs



The modern way of water heating is electric!

Issued by the Electrical Development Association 2 Savoy Hill, London, W.C.2

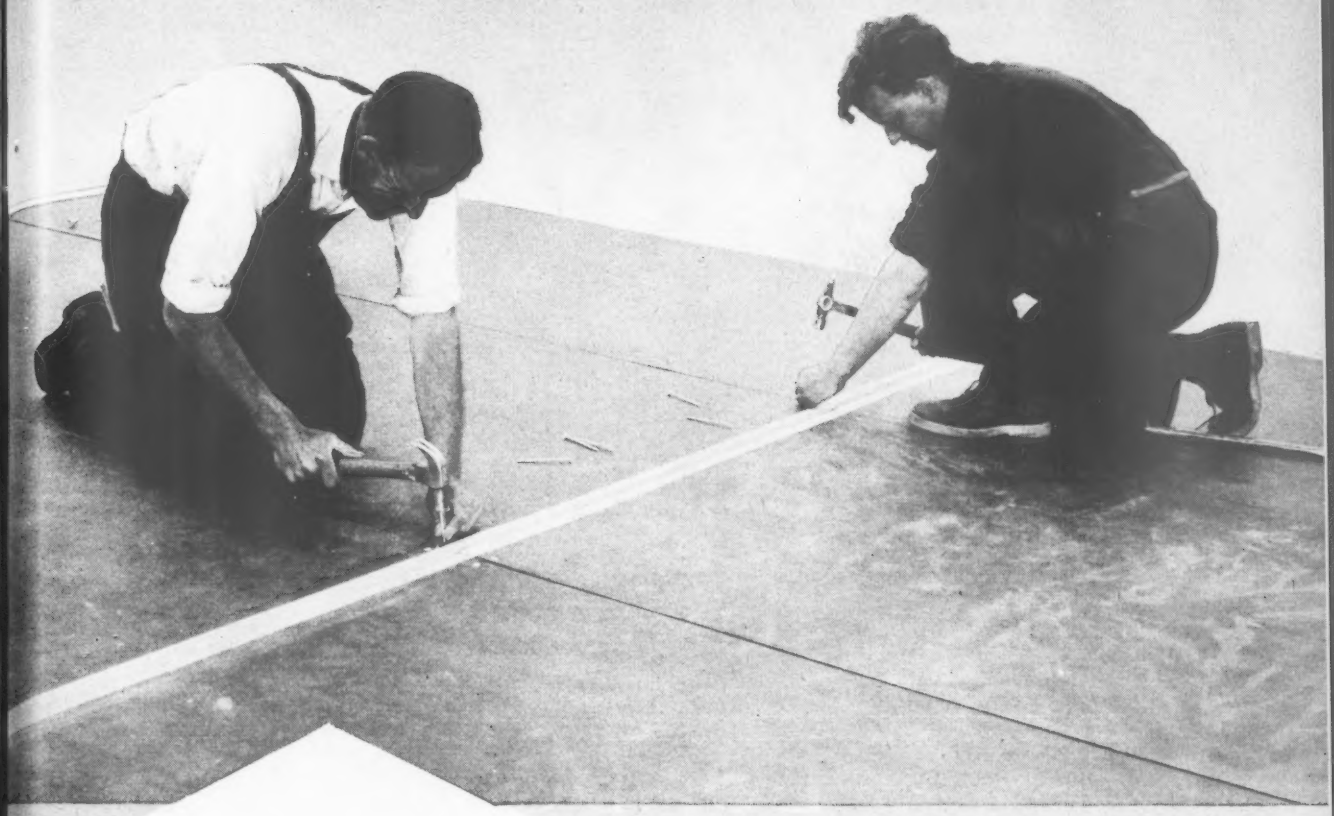
the new toughened wall coating

Give those outside walls a new look with Ruccomat Toughened Wall Coating —a new protective paint based on a most durable synthetic resin to give maximum protection for all kinds of exterior masonry, even glazed brickwork. The abnormally tough qualities of the resin make Ruccomat much more resistant to extremes of weather or atmosphere—it has greater adhesion and lasts longer. Easy to apply, it dries quickly with a beautiful flat finish that has excellent dirt resistant qualities. Available in a wide range of fashionable shades. Write or phone for special leaflet giving the full Ruccomat story.

Ruccomat WILL LAST FOR YEARS

PILCHERS LIMITED · FAMOUS FOR PAINTS SINCE 1770

6 CHESTERFIELD GARDENS, CURZON STREET, LONDON, W.1. TELEPHONE GROSVENOR 1603/5



STRAMIT roof-decking *cuts costs*

Yes, indeed! That roof-decking they're laying is Stramit—and Stramit is unique as a *low-cost*, dry-construction material. Stramit has immense strength and rigidity. And it has exceptional powers of thermal insulation for instance, the U-value achieved by Stramit as roof-decking is 0·23, or better, depending on the type of weathering chosen. And Stramit positively defies fire. Official tests prove it—reports are available on request.

Stramit slabs are doing fine service all over the country as roof-decking, wall linings, ceilings and partitions. A special low-density grade is also available for non-load-bearing thermal insulation.

A felted Stramit roof costs from only 27/6 to 30/- per square yard, supplied and fixed. Why not use Stramit next time?

What is Stramit?

Stramit is made from scientifically-compressed straw. It is available in three grades (Roofing, Standard and Low-density) and three facings (hardboard, fabric, and a special asbestos facing which gives a Class 1 rating for spread of flame).

Stock sizes: 4ft. wide by 6, 8, 9, 10 and 12ft. long. Special sizes made to order.

FILL THIS IN AND POST IT NOW!

PLEASE SEND ME WITHOUT OBLIGATION FULL DETAILS

of Stramit slabs for use as roof-decking/wall-linings/ ceilings/partitions/thermal insulation*

*delete where applicable

Name of firm.....

Address .....

.....

For the attention of..... A.J./5

STRAMIT

— THE TWO-INCH THICK

BUILDING SLABS

STRAMIT BOARDS LTD., COWLEY PEACHEY, UXBRIDGE, MIDDLESEX **Telephone: West Drayton 3751**

HIGGS AND HILL
LIMITED

LONDON

LEEDS COVENTRY

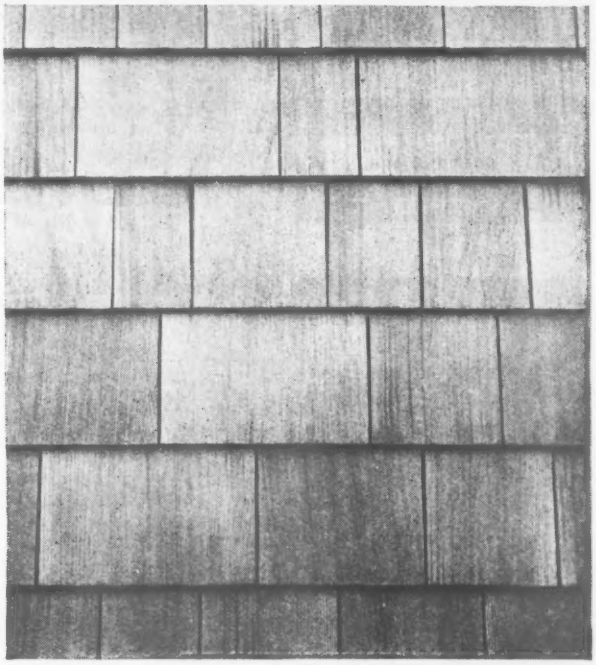
JAMAICA

COLT *Canadian Cedar Wood* SHINGLES

Houses for the Guildford Corporation at Merrow.

NEW STYLE WALLS with an old and well tried method. Weathering to a pleasant silver grey, Shingles are a most attractive method of providing a distinctive elevation. Nailed to battens on brick, breeze or timber studding, the contruction is most economical and is completely weatherproof.

The high thermal insulation of Western Red Cedar makes Shingles a valuable addition to the Architect's vocabulary of modern cladding materials.



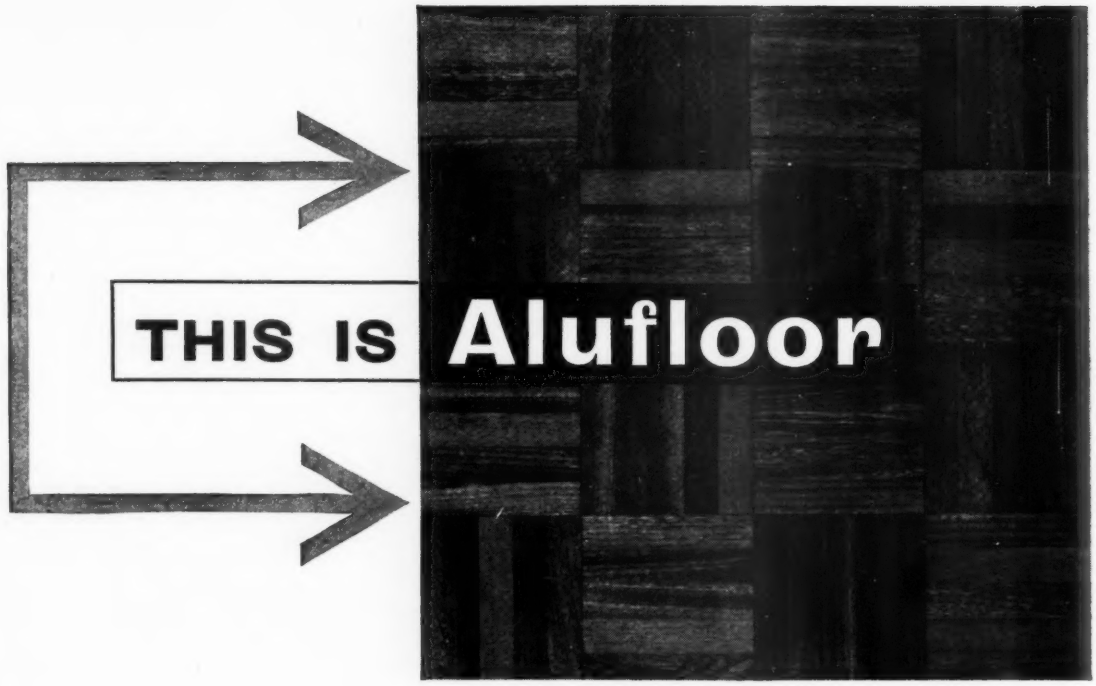
Fixing can also be undertaken if required.

Send for full details to Dept. L.135/5.

W. H. COLT (LONDON) LTD., SURBITON, SURREY

Telephone: ELMbridge 6511 (10 lines)

G.168



JUST WHAT YOU'VE BEEN WAITING FOR!

BECAUSE Alufloor is *not* expensive. It provides a luxury wood block flooring at a real utility price.

BECAUSE Alufloor is a prefabricated die-squared parquet that's manufactured to a precision *unequalled by any other process.*

BECAUSE Alufloor can be laid 50% faster and needs no pinning or experimental positioning.

BECAUSE Alufloor has the same life as 1" conventional wood block flooring.

BECAUSE Alufloor is already factory sanded and requires only light surface sanding when laid.

BECAUSE Alufloor is more flexible, more stable and as quiet as cork flooring.

Each section of Alufloor is 18 inches square and comprised of 80 hardwood fingers.

ALUFLOOR CAN BE PRODUCED FROM ANY HARDWOODS TO ARCHITECT'S SPECIFICATION

LUXURY FLOORING AT A UTILITY PRICE **Alufloor**

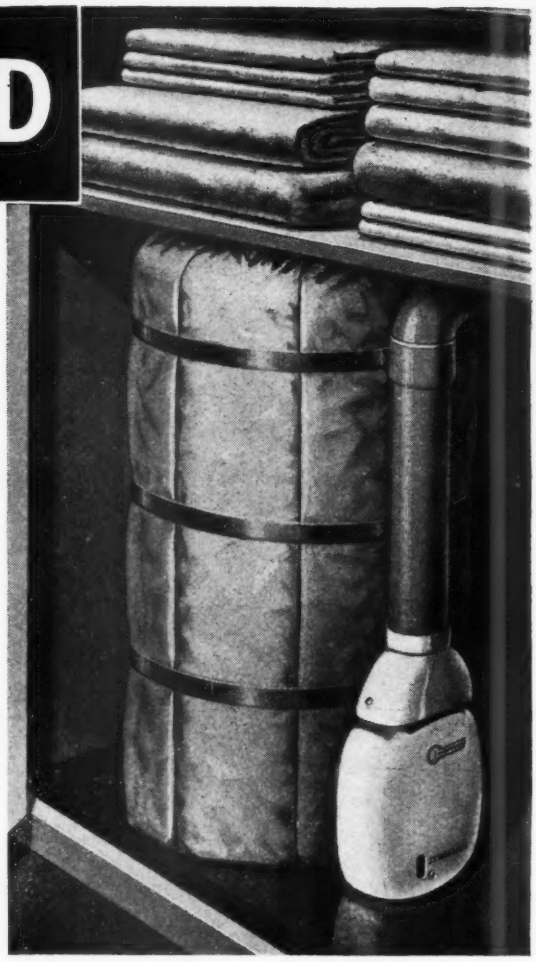
British Patent No. 746791

Write for fully descriptive, illustrated booklet to:

CALDERS LTD Plough Way, Rotherhithe, London, S.E.16. Tel: Bermondsey 3535
Biddick Lane, Washington, Co. Durham. Tel: Washington 2321

FOR NEW BUILDINGS, CONVERSIONS & IMPROVEMENTS

NEW WORLD



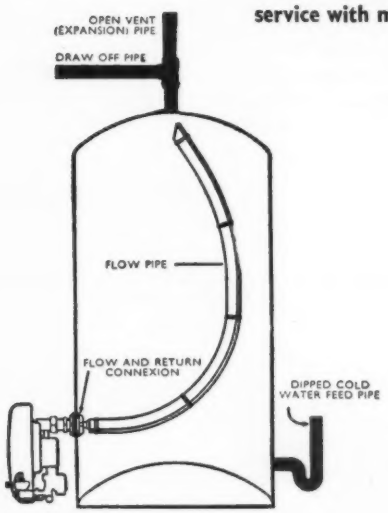
leads the way

with the ***STRATALYN***

INJECTOR

GAS WATER HEATER

The NEW WORLD Stratalyn Injector Heater is inexpensive to buy, economical to run, cheap to fit, and will give maximum service with minimum maintenance



The **NEW WORLD Stratalyn** is a Regulo-controlled gas water heater for attachment to a storage cylinder or tank by means of a single connexion. It is the GAS application of the IMMERSION HEATER.

The flow pipe terminates close to the top of the storage vessel and hot water is injected into the top ready to be drawn off. Mixing is avoided and the highest degree of stratification is attained.

Fit and Forget

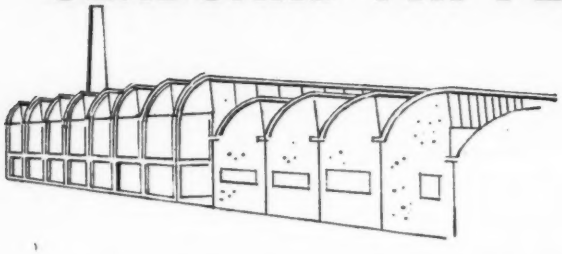
* *Gas Rating*—6,000 B.Th.U./hr.
Output—5½ gallons raised 80°F.
Complete with governor and T.C.O.
Available with flue cap or draught diverter. Finished in white vitreous enamel.

NEW WORLD
PRODUCT OF Radiation Ltd.

Water Heaters

Write for a free copy of the ARCHITECTS' BROCHURE ON **NEW WORLD** WATER HEATERS *to*.
RADIATION GROUP SALES LTD., 7 STRATFORD PLACE, LONDON, W.1

SEABOARD FIR PLYWOOD *in Action*



Shown in the act of being removed is a large, convex form of Canadian fir plywood used to mould the "thin shell" concrete roof at the new Cadbury factory* in Cheshire. Use of the big, 32-square foot, waterproof-bonded panels results in smooth, ridge-free concrete surfaces, with important savings in time and labour . . . one of the many ways British builders are taking advantage of lower cost Canadian fir plywood. Other uses for the strong, split-proof panels are: roof decking, floor underlay, laminated trusses and beams, hoardings and contractors' huts.

Seaboard Canadian fir plywood is readily available throughout the country.

Standard Sizes:—8 x 4 feet (Lengths over 8 feet available on order). Thicknesses (depending on grade):—¼, 5/16, ⅜, ½, ⅝ and ¾ inches.

*Contractors: A. Monk & Co.

PHENOLIC BOND
WATERPROOF
WEATHERPROOF
BOIL TESTED

SEABOARD
CANADIAN DOUGLAS FIR
PLYWOOD

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

N R. M. Morison, Esq.,
1 – 3 Regent Street,
London S. W. 1

Please send me free copy of Seaboard Plywood Handbook (L-11) describing your full selection of Douglas Fir Plywood.

Name.....

Address.....

.....

LR 7-15-18

Regency or ...

A Regency House, Edgbaston, Birmingham.

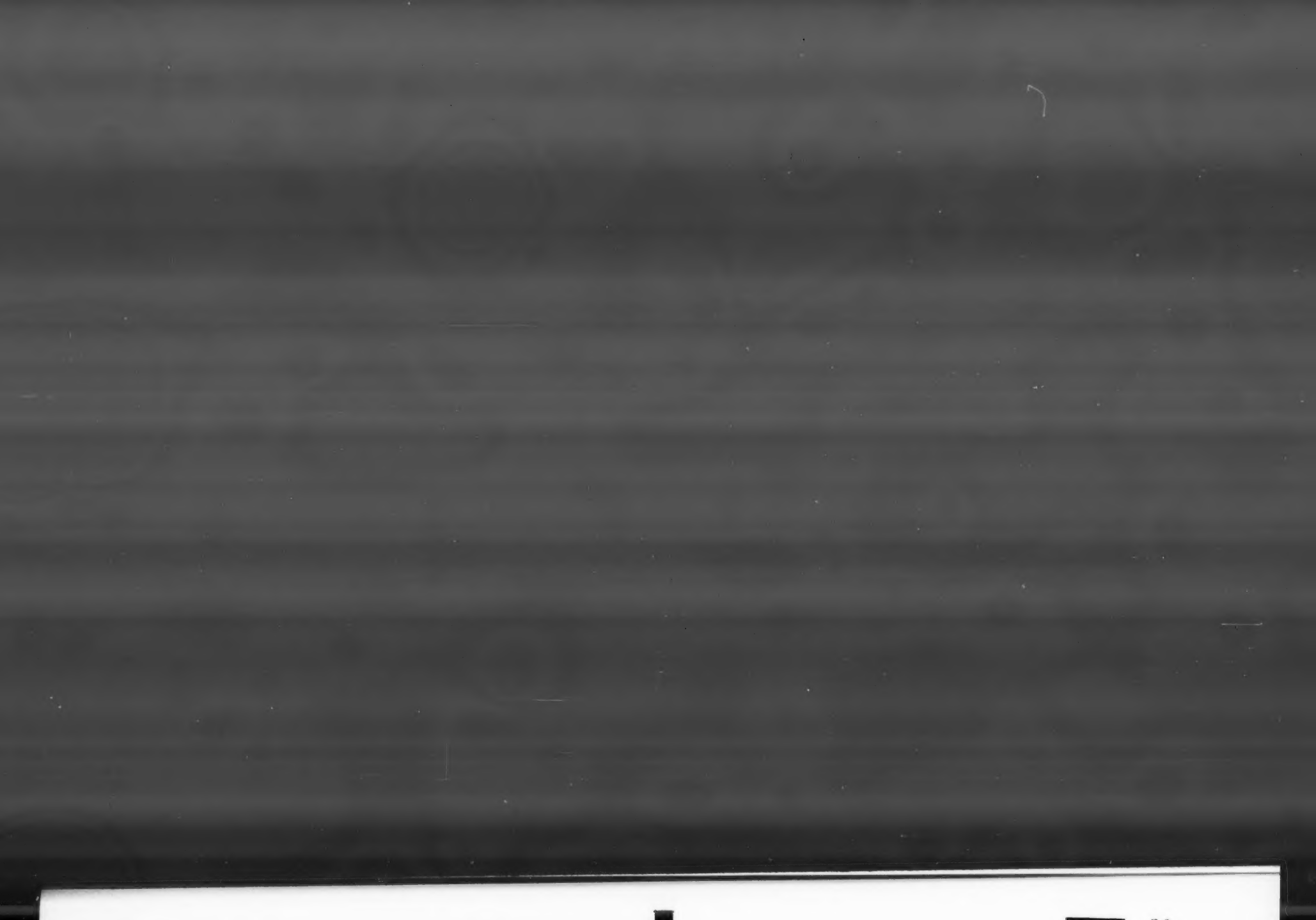
Contemporary ...

Colmers Farm Secondary Modern School, Rubery, Birmingham. Architects: Messrs. Harrison & Cox in association with A. G. Sheppard Fidler, City Architect.

choose Drynamels Paints

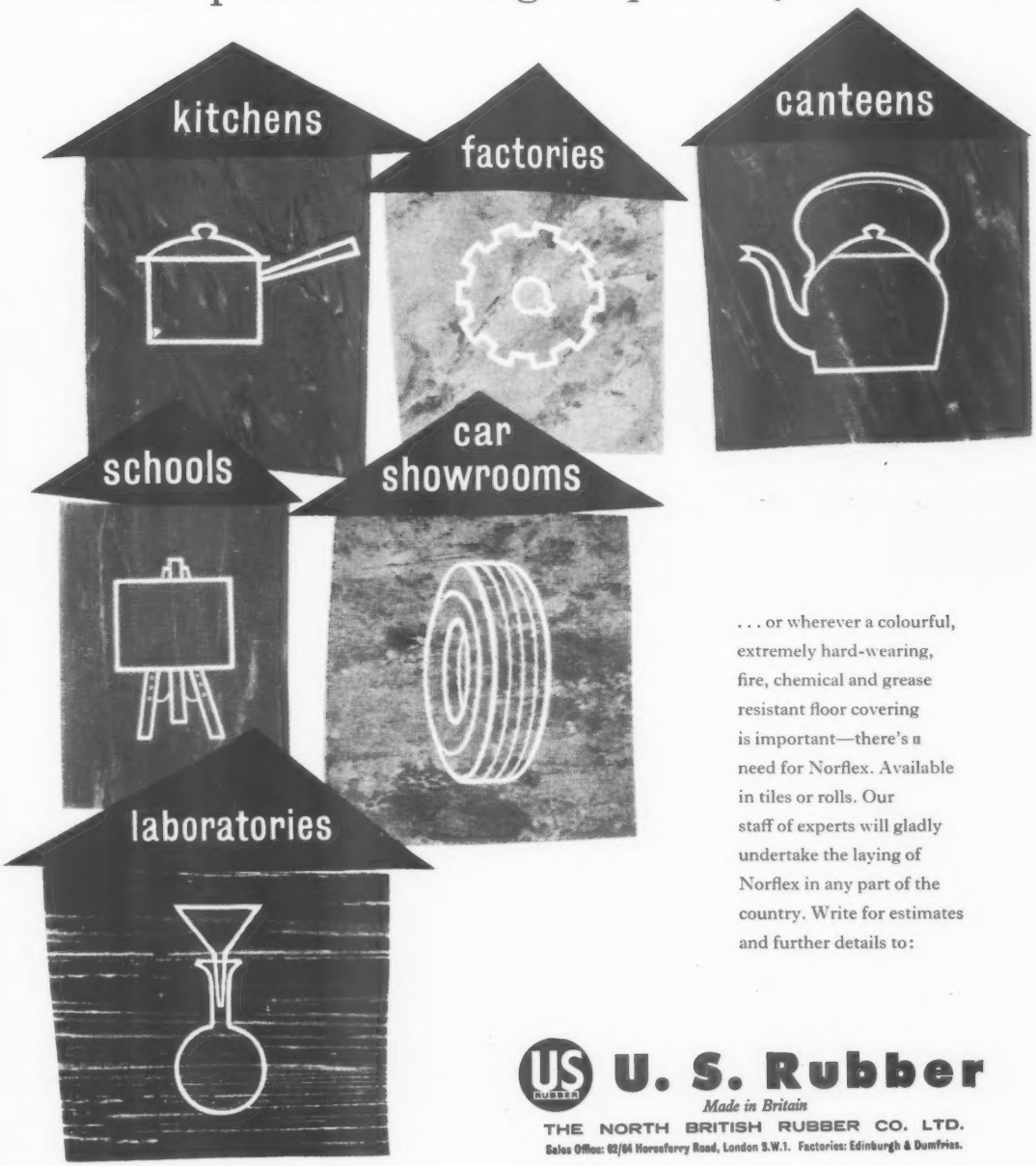
Write for colour cards and brochure to Dept A

DRYNAMELS LIMITED
HALL GREEN · BIRMINGHAM 28



NORFLEX

new plastic flooring is specially made for...



. . . or wherever a colourful, extremely hard-wearing, fire, chemical and grease resistant floor covering is important—there's a need for Norflex. Available in tiles or rolls. Our staff of experts will gladly undertake the laying of Norflex in any part of the country. Write for estimates and further details to:

U. S. Rubber

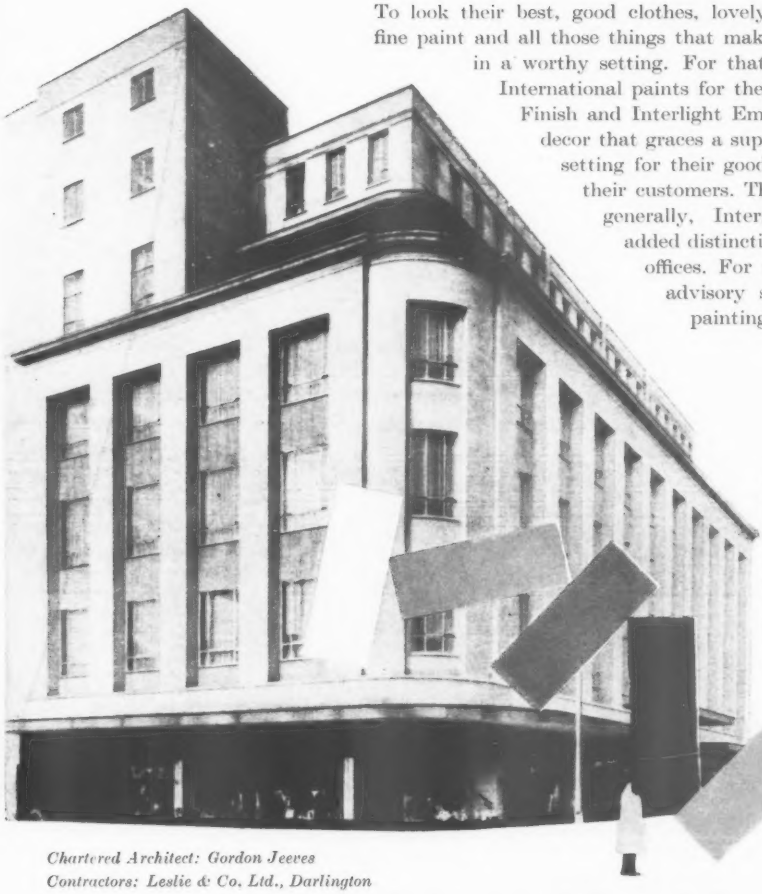
Made in Britain

THE NORTH BRITISH RUBBER CO. LTD.

Sales Office: 62/64 Horseferry Road, London S.W.1. Factories: Edinburgh & Dumfries.

When appearances count...

To look their best, good clothes, lovely jewellery, handsome furnishings, fine paint and all those things that make life more colourful must be seen in a worthy setting. For that reason Binns Ltd. have specified International paints for their new stores. With Interlux Gloss Finish and Interlight Emulsion Paint they have achieved a decor that graces a superb building . . . provides a perfect setting for their goods and offers a gracious welcome to their customers. Throughout commerce and industry generally, International paints are lending an added distinction to many fine stores, factories and offices. For the architect there is a first-class advisory service always ready to assist on painting problems.



Binns' new store at Middlesbrough is painted throughout with Interlux Gloss Finish and Interlight Emulsion Paint—both available in a wide range of colours.

Chartered Architect: Gordon Jeeves
Contractors: Leslie & Co. Ltd., Darlington

International Paints Ltd.

GROSVENOR GARDENS HOUSE, LONDON, S.W.1

TELEPHONE: TATE GALLERY 7070 (15 LINES)

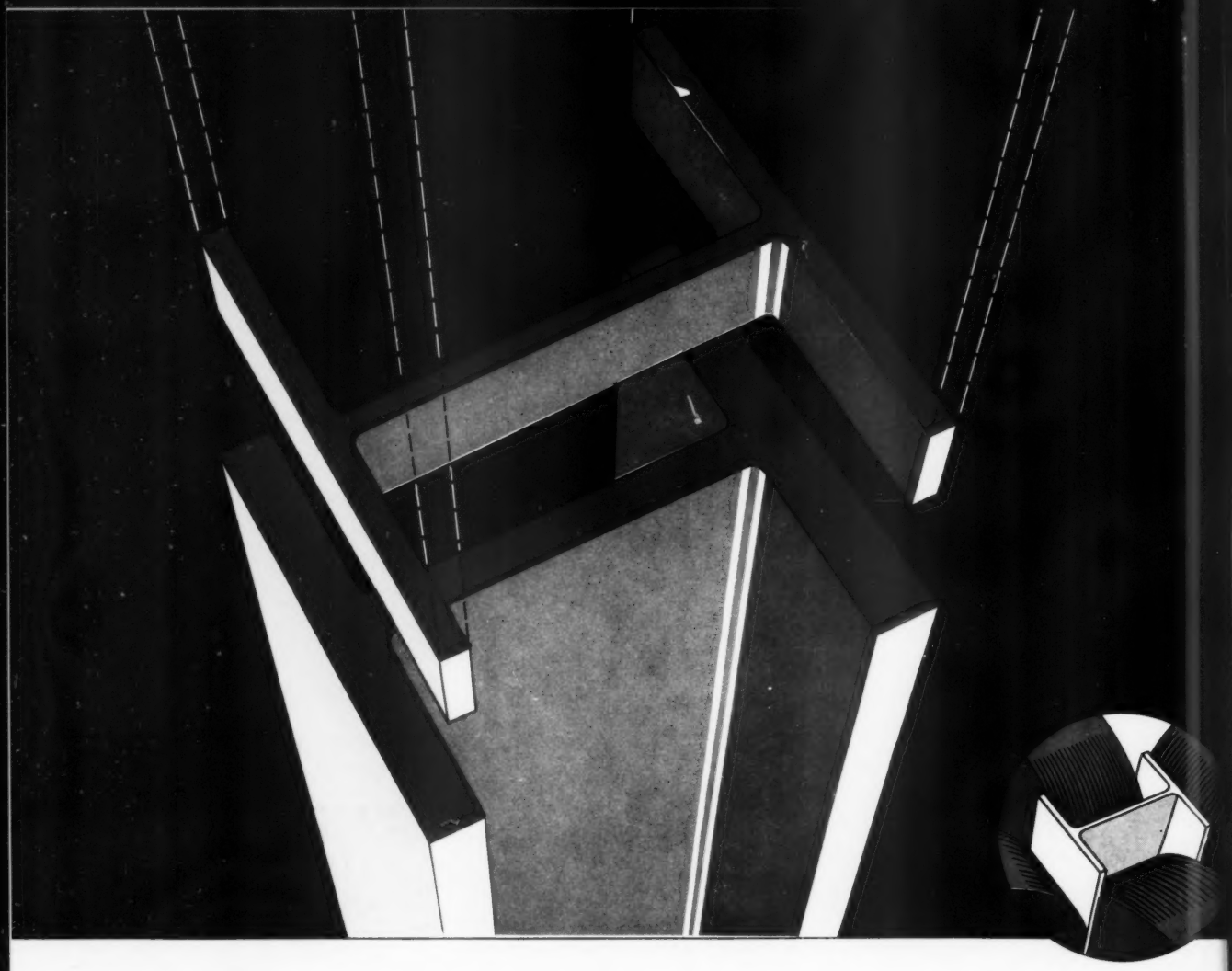
Also: BIRMINGHAM · BELFAST · CARDIFF · GLASGOW
LEEDS · LIVERPOOL · NEWCASTLE · SOUTHAMPTON

REGISTERED TRADE MARK

MAIN FACTORY IN U.K.—FELLING-ON-TYNE

ASSOCIATED FACTORIES IN

AUSTRALIA	MELBOURNE	FRANCE	ROUEN	NEW ZEALAND	AUCKLAND
AUSTRALIA	SYDNEY	GERMANY	HAMBURG	NEW ZEALAND	WELLINGTON
BRAZIL	RIO DE JANEIRO	HOLLAND	ROTTERDAM	SPAIN	BILBAO
CANADA	MONTREAL	ITALY	GENOA	SWEDEN	GOTHENBURG
CANADA	VANCOUVER	ITALY	TRIESTE	U.S.A.	NEW YORK
DENMARK	COPENHAGEN	MEXICO	MEXICO CITY	U.S.A.	SAN FRANCISCO
FRANCE	LE HAVRE	NORWAY	BERGEN	VENEZUELA	MARACAIBO



Each section best for its purpose

Diagram showing the arrangemen of the rolls, which are adjustabl to control the flange and we thickness. Other rolls, no shown, size the edge

Our new Universal Beam Mill will make available a full range of new and important beams and column sections, some having broad flanges.

The new mill makes it possible to produce—without changing the rolls—complete 'families' of related sections such as are advantageous for the columns of multi-storey buildings. The illustration shows two of a range of such sections; the flange thickness can be altered as shown by adjustment of the rolls, while the surfaces shaded in blue remain practically unaltered.

It is believed that many of the new beams and columns will lead to substantial economic and other advantages.

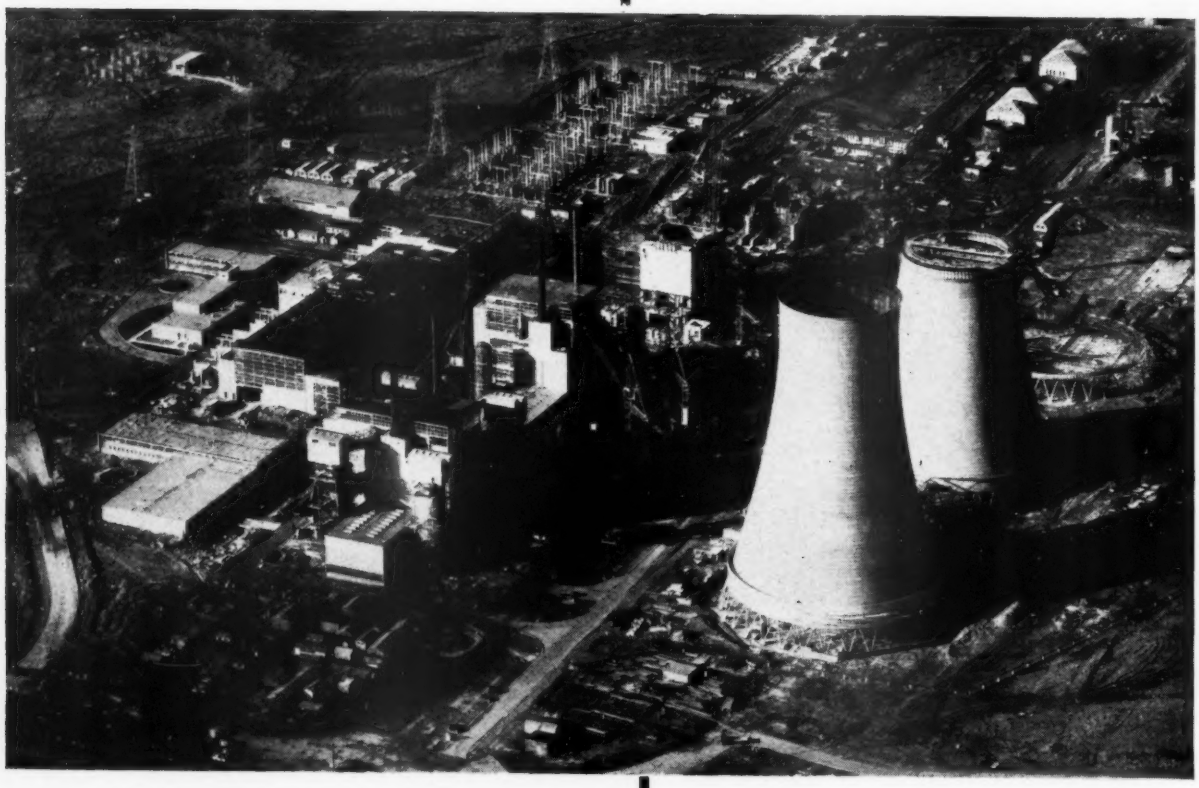
DORMAN LONG

UNITED KINGDOM ATOMIC ENERGY AUTHORITY.
CHAPELCROSS WORKS, ANNAN,
DUMFRIESSHIRE, SCOTLAND.

CONSULTING ENGINEERS
Messrs. Merz & McLellan,
Carliol House, Newcastle-upon-Tyne, 1.

ASSOCIATE ARCHITECTS
Messrs. L. J. Couves & Partners, FF/A.R.I.B.A.
Carliol House, Newcastle-upon-Tyne, 1.

BUILDING CONTRACTORS
The Mitchell Construction Co. Ltd.,
Wharf Works, Peterborough.



ROYAL FLUSH
REGD. TRADE MARK 702503
DOORS
by
SOUTHERNS
LIMITED

"Royal Flush" Doors are installed in the Control Buildings, Reactor Building, Turbine Hall, and Annexe. "Royal Flush" Doors are guaranteed without qualification. Have you got your copy of "Constructional Details"? If not it will be sent on request.

Head Office—BOLD SAW MILLS · WIDNES

Branches at LONDON · GLASGOW · MANCHESTER · DUDLEY · HANLEY · BRISTOL · KETTERING · BIRMINGHAM

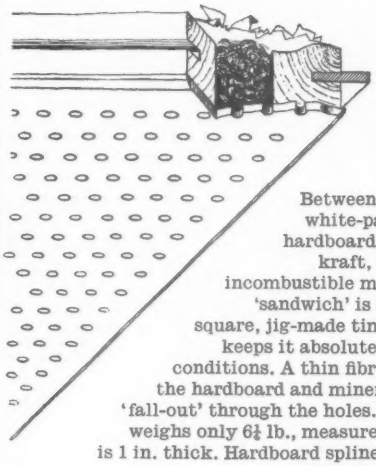
Bowater T/A* Panel

* Thermal/Acoustic

MAKES BUILDING NEWS!

However you look at it—structure, appearance, performance—this new Bowater dual-purpose panel is the greatest development in both thermal and acoustic insulation for years. And we know from experience that it's exactly what many architects and builders have been wanting for a long time. Here's a quick summary of its most important points . . .

IT'S MADE LIKE A SANDWICH



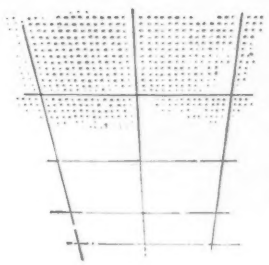
Between a facing sheet of white-painted perforated hardboard and a backing of kraft, there's a layer of incombustible mineral wool. This 'sandwich' is set in a perfectly square, jig-made timber frame which keeps it absolutely rigid under all conditions. A thin fibrous skin between the hardboard and mineral wool prevents 'fall-out' through the holes. The entire panel weighs only 6¼ lb., measures 2 ft. square and is 1 in. thick. Hardboard splines are provided to slot the panels together.

EFFICIENCY?
Here are the Vital Statistics

Sound Frequency (c.p.s.)	250	320	400	500	640	800	1000	1250
Sound Absorption Coefficient	·64	·59	·71	·77	·80	·87	·86	·87

These figures clearly show that, in its *Acoustic* capacity, the new Bowater panel is way ahead. Its performance is particularly good in the lower frequencies where noise in industry and in ordinary daily life is most common—and most dangerous. In *Thermal* insulation, too, the panel sets an exceptionally high standard—the thermal conductance (C value) is as low as 0.22. A dual-purpose panel indeed!

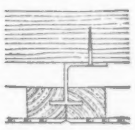
HIGH, WIDE AND HANDSOME



Ceilings of Bowater T/A Panels are a fine sight—walls and partitions, too. A perfectly flat surface is ensured by the rigid construction of every panel and by the hardboard splines which connect them.

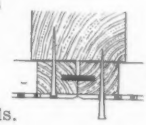
EASE OF FIXING

Fitting up Bowater T/A Panels is simplicity itself. There are three ways of doing it:



1 Special Concealed Securing Clips—screwed to the existing structure—hold the panels secure with an air-gap above which adds to their already outstanding thermal efficiency.

2 For suspended ceilings, specially designed Bowater Metal Fixing Systems are available.



3 Finally, panels can be simply nailed up through the appropriate outer perforations—and thus the frame—using two inch galvanized lost-head nails.

Drop us a line for further information and the name of your nearest distributor.

Bowater T/A Panels

BUILDING BOARDS DIVISION, BOWATERS SALES COMPANY LIMITED,
BOWATER HOUSE, STRATTON STREET, LONDON, W.1. Tel: MAYfair 8080

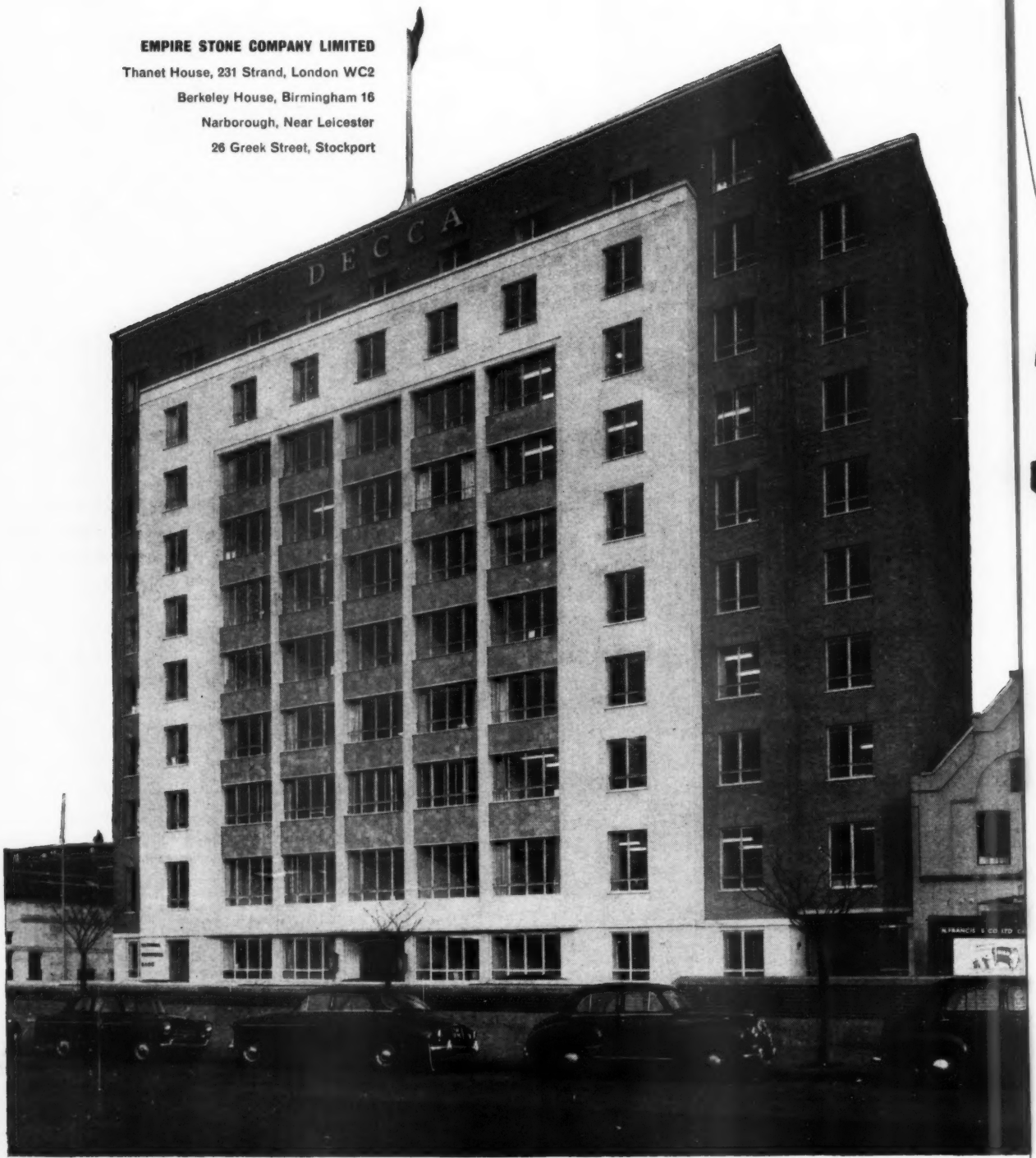
CRC TAE

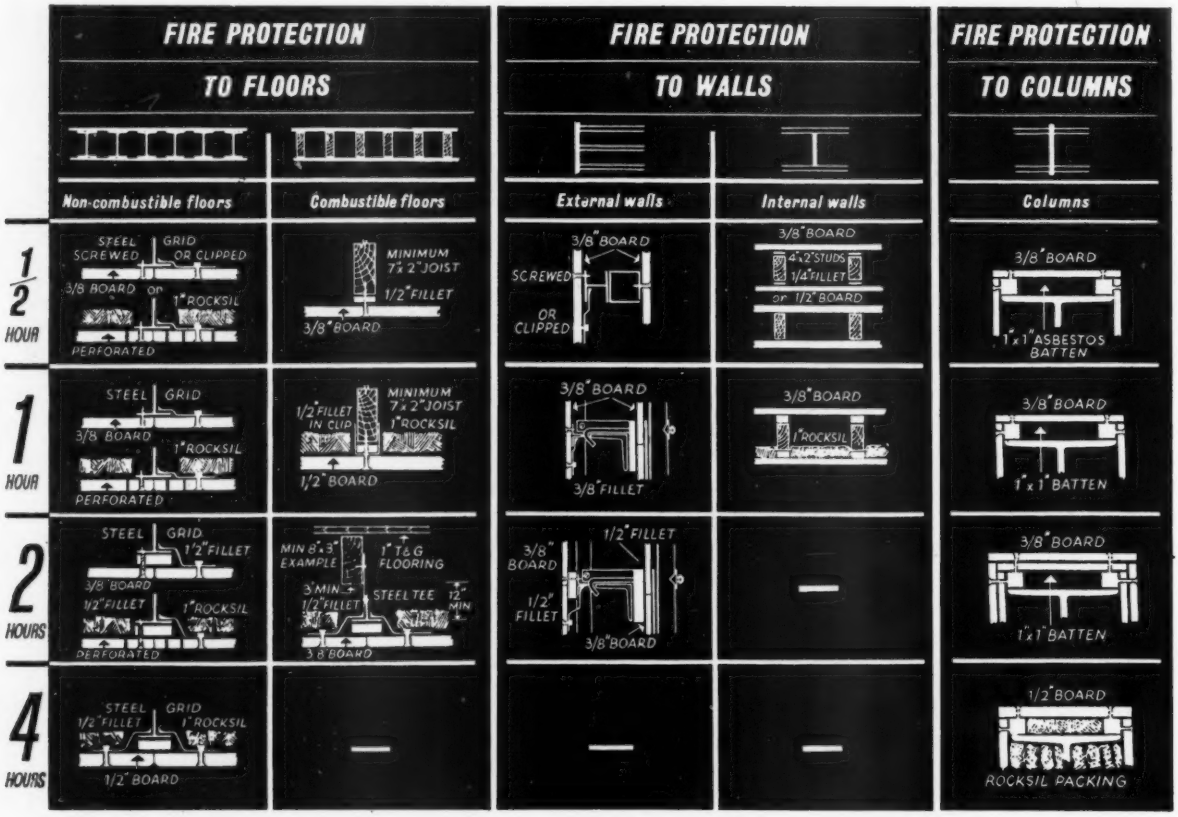
DECCA HOUSE

Albert Embankment, London SE11 Architects: Grace & Farmer F.R.I.B.A.

Stonework executed in EMPIRE STONE

EMPIRE STONE COMPANY LIMITED
Thanet House, 231 Strand, London WC2
Berkeley House, Birmingham 16
Narborough, Near Leicester
26 Greek Street, Stockport





Proven fire protection

By means of extensive full scale tests at the Joint Fire Research Organisation, Cape Building Products Limited have successfully evolved constructional details for the fire protection by Asbestolux of a wide range of structural elements. This range of details will be continually extended by further tests carried out in the course of a long term development programme.

These specifications apply only to Asbestolux and cannot directly refer to any other board material. No other sheet material has been proved to give so great a range of fire protection.

In a public demonstration firing staged by Cape Building Products on 28th May 1957, a full-size 3-bay industrial structure stood up virtually undamaged to temperatures in excess of those reached during a British Standards 6-hour Fire Test. For a full account of this demonstration, write for a free copy of the 'Report and Findings.'

ASBESTOLUX

a unique asbestos insulation board

CAPE

CAPE BUILDING PRODUCTS LIMITED Cowley Bridge Works, Uxbridge, Middlesex. Tel: Uxbridge 4313
Glasgow: Eagle Buildings, 217 Bothwell Street, Glasgow, C.2. Tel: Central 2175
Manchester: Floor D, National Buildings, St. Mary's Parsonage, Manchester 3. Tel: Blackfriars 7757
Birmingham: 11 Waterloo Street, Birmingham 2. Tel: Midland 6565-6-7
Newcastle: 19 & 20 Exchange Buildings, Newcastle upon Tyne. Tel: Newcastle 20488

TA453

The accurate control of colour in any tone or shade!

ROBBIALAC COLORIZER PAINTS offer the Architect a scientifically graduated selection of colours that is the world's widest colour choice. Yet all these fine colours are so simple to mix that your contractor can reproduce any colour scheme, however subtle, with absolute accuracy and repeat it again and again in any quantity. Furthermore, Colorizer Paints impart a quality of finish that gives lasting protection to both inside and outside surfaces.

ANY COLOUR SUPPLIED IN BULK, READY MIXED FOR IMMEDIATE USE ON SITE

* *Our Architectural Bureau will gladly advise on any colour problem, and offers full on-site co-operation to architects and their contractors.*

Emulsion Paint · Super Gloss Enamel · Eggshell Enamel · Suede Finish

JENSON AND NICHOLSON LIMITED · 36, ST. JAMES'S STREET · LONDON, S.W.1 · TELEPHONE: HYDE PARK 6060

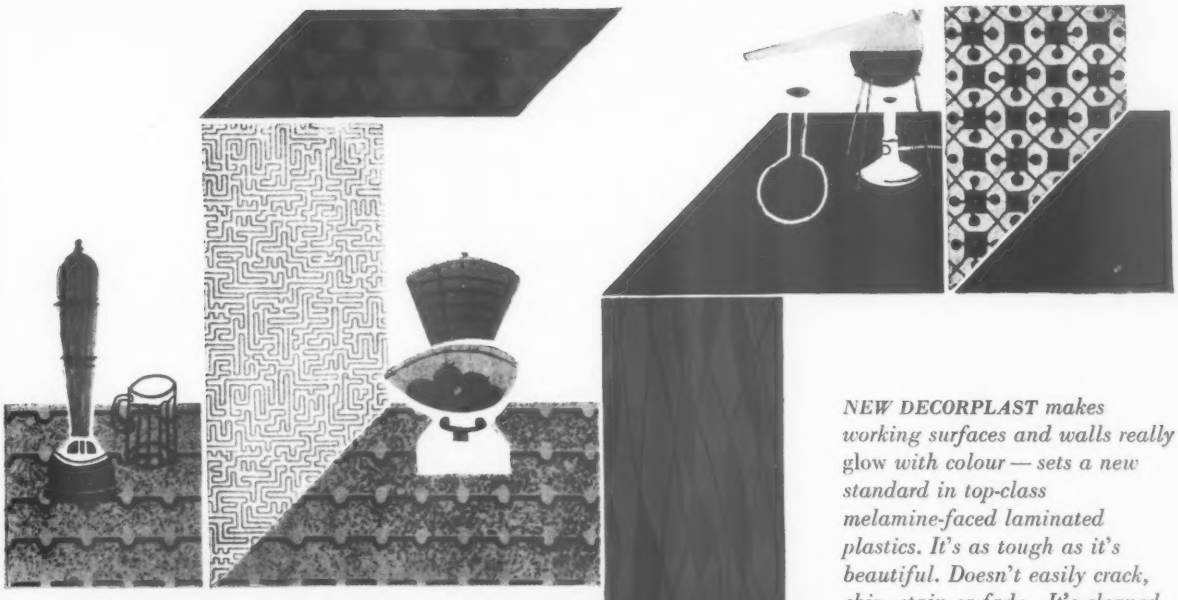
Birkbeck College, Malet Street, London, W.C.1
Architects : Adams, Holden & Pearson, FF.R.I.B.A.

For Dignity and Endurance

The plans for London University are steadily taking shape, and the Brick Industry is proud of its contribution to this important group of buildings. The dignified structures clothed in colourful, durable brickwork will remain a source of pride to generation after generation of staff and students.

Brick can be used to express dignity or gaiety with equal facility, but whatever the mood of the designer, his work will endure—without periodical rejuvenation—in Brick.

Issued by The National Federation of Clay Industries, London, W.C.1



New Decorplast gives you 47 exciting colours and patterns!

NEW DECORPLAST makes working surfaces and walls really glow with colour — sets a new standard in top-class melamine-faced laminated plastics. It's as tough as it's beautiful. Doesn't easily crack, chip, stain or fade. It's cleaned with a damp cloth — because dirt cannot stick. Boiling water, grease, spirits, dilute acids and heat up to 310°F leave new Decorplast bright and colourful as the day it was made.

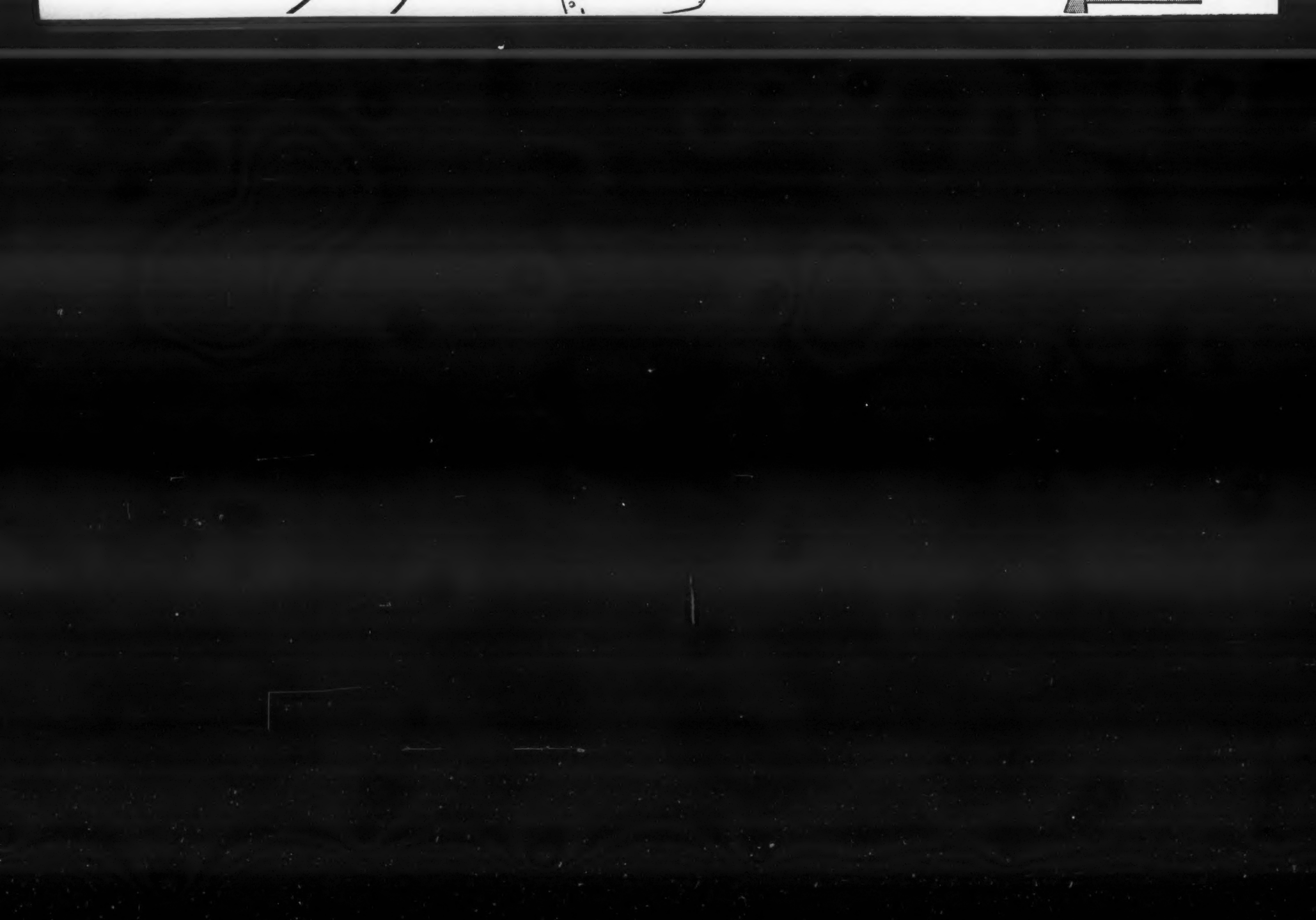
The whole new range, now in sheets 9′ x 4′ as well as 8′ x 4′, thickness $\frac{1}{16}$″, is always available— *in matt and gloss finishes—plus new wood veneers that really do look like wood! Write to the address below and ask for facsimile Colour Chart and list of Distributors.*

Reed PAPER GROUP

Decorplast

LAMINATED PLASTIC

Made by HOLOPLAST LIMITED • SALES OFFICE: 116 VICTORIA STREET • LONDON S.W.1 • TEL: VICTORIA 9354/7 & 9981



AJ

THE ARCHITECTS' JOURNAL

No. 3298 Vol. 127 May 15, 1958

9-13 Queen Anne's Gate, London, S.W. 1. Tel. WHI 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 10s. 0d.; carriage 2s. extra.

CHARACTER IN ARCHITECTURE

Character in the architecture of towns is the subject on which Professor Sir William Holford and Professor Robert H. Matthew are leading the discussion at the British Architects' Conference at Newcastle this week. In this issue of the JOURNAL *an attempt has been made by Elisabeth Beazley to assess the existing character of the buildings on the home ground of the hosts of the Conference, the Northern Architectural Association, including, of course, some of the recent designs by members of the association. Elisabeth Beazley is an architect who has been for some years in the office of Brett, Boyd and Bosanquet, working chiefly on Hatfield New Town. She also worked for a time on Stevenage. She prepared the reports on British University building which were published in the* JOURNALS *of January 2 and January 9, and has carried out a study on the siting of rural buildings in Pembrokeshire.*

A full report of the Annual General Meeting of the RIBA is on page 744, and a report of the Symposium on Design Pays is on page 748.

A STUDY FOR THE BR

in Cumberland, No

INTRODUCTION

To those of you for whom the north starts at Watford (a place of whose real character I know nothing, but which always makes me want to emigrate), I would say go at once to King's Cross, or better still motor north through the night (avoiding A1) and meet the morning where it silhouettes some weird 19th century pithead machinery in a village in County Durham, drive on in and out of the mining valleys over the high farm land with its windswept beech trees and stone-walled fields, or unfenced moor, between. Spend days on the great cathedral rock of Durham (there is no finer setting in all Europe). Explore Newcastle on a Sunday morning when you can stop the car whenever you want to muse on that splendid example of spec. builder/

BRITISH ARCHITECTS' CONFERENCE OF

ARCHITECTURAL CHARACTER

Northumberland and Durham

by ELISABETH BEAZLEY

architect co-operation (Nash was by no means the only forerunner of Span). Then there is all Northumberland before you with the military splendour of its castles, peel-towers, and of course the Wall itself, as the country rolls away to the Scottish border.

If the wind sticks in the east, go and thaw yourself out in the kinder country in Cumberland. The minute you pass the county sign on the military road to the west, you will find warm red earth and boldly painted houses. Apparently that boundary was fixed with the interests of articles on character in mind. Then there is the Lake District and the fells, the coastal strip and the mines . . . but this must stop. The Conference theme is the " Character of Towns," not country.

In past years the JOURNAL has often produced a guide to the area in which the RIBA Conference is to be held. This issue does not attempt that. The area covered by the Northern Architectural Association is vast and

The basic ingredients of the three counties of the north which form the background to this year's British Architects' Conference can be roughly summarised in these four photographs. The two rural extremes are the charm of the farms and cottages in the fells of Cumberland, opposite page, left, and the coarse vitality of the mining cottages grouped in isolation round the pithead, as near Lambton Castle, Co. Durham, below. The urban contrasts are the mercantile vigour of Tyneside and the small-town perfection of Durham.

varied; it is brimming with interest. To do it even meagre justice, one would need ten times the space and time available. Besides I should not know what I was writing about and that can be a drawback. Plenty of good guide-books already exist, but better still the NAA members themselves will doubtless be as helpful in answering your questions, as they were with mine.

A break with tradition has also been made in that we are not publishing those large pictures of architects snapped in their natural habitat with small insets of their buildings, and a " dislikes garlic and vintage motor-cars " type of biography. This is in a way rather sad because you can imagine what a time could be had describing the bearded bow-tie types in their garret offices, or the real frontier characters who do such pioneering work in the distant north, or the civil-servants who take so much finding but are really so helpful when you arrive and who produce such unexpectedly enormous buildings out of files; the long-haired and the groomed; the clerical grey suiting and the tweed. They were all so exceptionally helpful and it would have been much more fun writing up *their* characters, instead of trying to analyse this elusive thing " the character of places *and* the contribution of new work." Although every building that goes up must either reinforce or weaken the character of its surroundings, it may not be suitable to illustrate any particular point. Therefore there are bound to be many good buildings excluded. However, all who attend the Conference will have an opportunity to see the work at the exhibition organised by the NAA. This exhibition is primarily intended for the general public and is but one example, among many, of the work done (in Northumberland particularly) to make the public (our patrons) architecturally conscious.

It was a cheering surprise to come north and find such co-operation between planners and architects. As creation of character in new work is so obviously a mutual responsibility we were particularly glad when J. B. Ross, Chief County Planning Officer to Northumberland agreed to write for this issue. What I found particularly refreshing about his attitude is that he expects architects to know their job, and to get on with it. He discourages aesthetic criticism of architect's work by the unqualified.

Probably the greatest problem in Co. Durham is the development of the mining areas. Therefore J. R. Atkinson, Deputy Planning Officer in Durham, has been asked to give us his views on the creation of character in mining districts, a problem that must extend far beyond the County of Durham.

Last but by no means of less importance we have the speculative builder's attitude to the architect. Mr. Smith has been personally concerned in this as a quantity surveyor so he knows the snags, and the advantages. It was most heartening to see the speculative work designed by architects in the area (and not merely taken to the $\frac{1}{8}$ in. scale stage but fully detailed). Although the semi-d. is one of our greatest stumbling blocks when trying to create character, I am not such an ivory-towerist as not to appreciate the great efforts being made by some builders and many planners, to raise the general standards of design in this field.

And, housing apart, few local authorities have produced shops of more charm and simplicity than those speculative ones at Brunton Park.

THE CHARACTER OF TOWNS

Character: " distinctive mark . . . collective peculiarities, sort, or style." *Oxford Concise Dictionary.*
Character: " the aggregate of peculiar qualities which constitutes personal or national characteristics." *Chambers Dictionary.*

Having checked the definition of character, and realized that the collective peculiarities of a place, once analysed, should be capable of precise description, one must add that their total effect on any individual may well vary from person to person. What is true of people (" strong-minded " and " stubborn " are often descriptions of the same man) is true of places. What charms me, may bore you; what I find robust, you may think bleak. The truth is that this whole business of character is a most personal one, and must, I think, to some extent, be treated subjectively. I shall try to describe things objectively, but their effect on me as an individual is bound to be personal. It would be very dull otherwise. Criticism of character is not necessarily criticism of planning or architecture but it may give a useful clue.

The theme of the 1958 RIBA Conference is " The character of towns." Because the Conference is to be held in Newcastle the NAA area (Cumberland, Durham, and Northumberland) has been chosen to illustrate these notes. Historically one could not wish for better material; in so far as new work is discussed, its effect on the existing character is probably to a large extent typical of what is happening in many other parts of the country. However, architects here have a cleaner sheet to work on than most of us; there is far less subtopia and many miles of unspoilt country. Long may it remain so.

There is obviously no doubt that different parts of the country have quite different characters, and that, in so far as building is concerned, the older work

Architects and planners are almost hardened to comparisons like these on this page, and overleaf, between new and old town layouts, but it is worth looking again at the extreme simplicity of Warkworth's main street, above, and Blanchland's Square, overleaf. Would they pass a planning committee today, or even escape from the drawing board without added "interest." Warkworth is a striking example of character achieved with low density (see also Peterlee's south-west area proposals shown on page 718). All the gardens have been tucked away behind the houses where the owners can most enjoy them, leaving the houses to form a simple setting for the monumental buildings of castle, top, and church, centre. Contributing to the interest is the subtle road layout, and such features as an extremely narrow bridge, above, which, if slightly impracticable for modern cars, contributes enormously to the sense of expectancy when entering the town. How dull, by contrast, even allowing for the effect of designing for soil subsidence, is the layout of Peterlee, left, so typical of modern housing layouts.

Another page of unkind comparisons which nevertheless must be made and profited from if housing layouts are to improve. Left, a layout typical of inter-war and post-war development, this time at Carlisle, show a romantic escape from the byelaw street, but a complete misunderstanding of the need to keep a sense of urbanity in housing layouts, a sense so effortlessly achieved by Blanchland, a model Northumberland village, above, planned in the mid eighteenth century.

reinforces what is there, while that of the 20th century tends, on the whole, to dissipate it and iron out peculiarities. The industrial revolution, blamed so often for the disintegration of character, is not generally the turning point. It may have re-distributed the areas which have character in common, but it did not necessarily make characterless places. It took the 20th century to water down character to such an extent that it became unrecognizable. Or perhaps it would be truer to say that we have thrown so many different herbs into the stock-pot that they have cancelled out each other's peculiar flavours, making the stew unrecognizable. There are, of course, brave exceptions, but it is well to remember that subtopia, though one of the chief deterrents to the sort of character most of us strive to create, is by no means the only enemy.

Why has this happened? Why, in an age when character is sought out by both laymen and professionals, discussed in the architectural schools, lauded by the popular Press, excellently portrayed in scores of those "Beautiful Britain" type calendars which give a picture a week from Land's End to Cape Wrath, do so few of our own efforts either reinforce the existing character, or create a new one in its place?

In the past nobody fussed about character: it just happened. Perhaps our whole preoccupation is phoney. Our ancestors could produce it quite unconsciously; it came as a gratuitous by-product in the places they created.

In order to try and analyse the reasons for their success, the example of small towns has been chosen rather than cities (where the complexity of character is such that the issue is immediately confused, and which are, after all, made up of a collection of places, of different character).

These places are often dominated by a particular building: church, castle, or market-hall. One might reasonably expect it to be this sort of building that is basically responsible for creating the character of the town, but oddly enough it seems to be only of secondary importance. There are, when you think of it, plenty of good places without splendid monuments, and some dull, characterless places with them. The monumental building must act as a foil or focus in a much more universal building type, in the one that gives the "aggregate of peculiar qualities.' It is not the dominant individual but the dominant *type* which really creates the character of a place: the individual can, and generally does, add tremendously to its richness and quality, but it must be seen against a backcloth of established character if it is the place, rather than the lone building that is being considered.

In villages and small towns this back-cloth is, of course, almost always made by the housing (as against the detached house). In order to have a recognisable character the individual houses which comprise the housing must have "collective peculiarities of sort, or style" and these peculiarities must be sufficiently repetitive and obvious for our eyes to register their existence without effort. We, as architects, may like to analyze these peculiarities, but one knows well that places of character are not recognized by specialists alone. The whole essence of places of "great character" is that they have stated the fact so clearly that everyone has noticed it, analytically or otherwise.

Consider Warkworth: it would hardly boast a tea-shop and antique dealer if it had not been plain to the non-architecturally minded tourist as well as the antiquarian that it is a particularly fine town "so full of character." Just exactly what do they mean? They find a miniature Durham, a concentration of grey houses climbing a hill, contained in the loop of a river. They come upon it suddenly by crossing a narrow bridge from a green valley; the main street unfolds dramatically, stopped by the Church at its foot and dominated by the castle at the top. This village clearly has three particularly fine monuments: church, bridge and castle. The houses are of no great merit; they must have been built, repaired and replaced as necessary, by a succession of sensible builders, for several hundred years. Suppose these unpretentious houses were demolished and half a dozen of the best architects one cares to choose were instructed to replace them, what would one expect to see? The variety of possibilities is rather overwhelming. Clearly, although the three dominant buildings of the town remain untouched, the character of the place would be entirely changed. It is the *housing*, the preponderant building type, which has really created Warkworth's character. It has done this by the simplest of layouts, and by the repetitive detailing of the varying houses that form the backcloth. Certain details, common to the majority of houses, and the unbroken wall of their façades, have given something that is easily grasped and recognised; their "collective peculiarities" have formed a character which can be assimilated without effort, leaving the castle, church and bridge, to be the focal points.

If one accepts the idea that it is the housing that is largely responsible for the character of places, it would seem reasonable to expect that a century which has produced such improvements in housing would automatically have produced character too. But even if one disregards the Warkworths of this world, one must remember that many of our most beastly slums have far more character than a model housing estate. It is really most unfair.

Perhaps the reason behind this lies in two inescapable facts. Until about 1920 the detached or semi-detached house was the exception rather than the rule. We must in the last 40 years have built more of these than in our entire history. And this is still going on; the terrace house is not so universal when one gets away from the new towns and architectural magazines. (Planning officers have a hard battle.) We may use the greatest ingenuity linking these detached and semi-detached houses with garden walls, garages, and stores (in itself an indication of what we really feel about them), but the fact remains that we have broken an individual which is not big enough to give character on his own, into small units. Our eyes, instead of reading a continuous façade, have to jump restlessly from block to block. The gaps read as strongly as the unit which is supposed to be giving the character. The whole thing has become too restless and important for the part it should play in contributing to the background

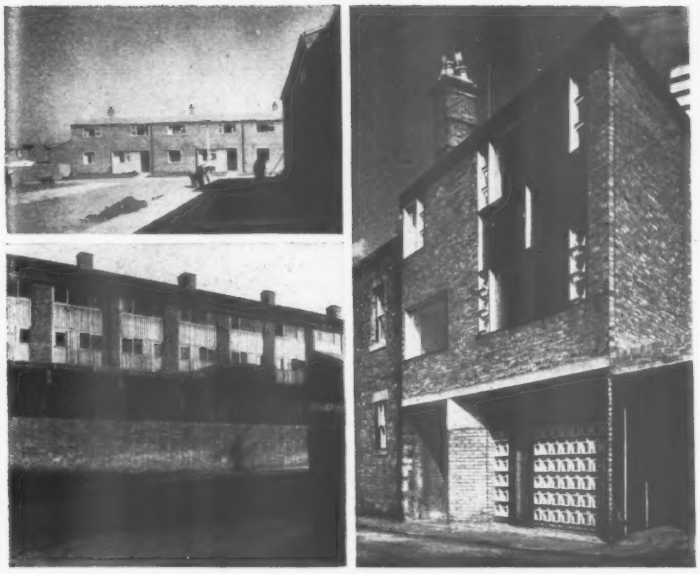
Housing is the backcloth of the town scene, before which the major buildings and features parade. Below are examples of backcloth character in the north of England vernacular. Their collective peculiarities (particularly of eaves detail and the proportion of wall to window) give a stamp of similar character to buildings of widely different date and locality. From left to right, from top, housing at Warkworth, Northumberland; Mellerby, Cumberland; Alnwick, Northumberland; miners' cottages, Co. Durham; Eldon Square, Newcastle; and a brick and stucco street in Durham.

character of the town. Only the most able designers can get away with it, and then as the exception, not the rule. It is absurdly unreasonable to expect our 20th century towns to have character, when so much of them is composed of what must be the most awkward building unit (æsthetically speaking) yet invented. Our eyes find it hard to appreciate "collective peculiarities of sort or style" when they are presented like slow machine-gun fire.

In places of accepted character, it would be fair to say that although there may be great variety in individual design, the majority of buildings have a similar stamp of character caused by an agreement on the general proportion of window to wall area, and on the eaves detail. This is true whether the walls are stone, brick, timber, or rendered, and whether the roof is tiled or slated. Here, it seems, lies our second stumbling block in the creation of back-ground character. If told of some pleasant housing put up since the war, one might hazard a guess at the wall material, but the roof would be far more of a gamble, and one would have to know the designer well to predict what eaves detail would be used. Think of the housing and other small-scale development (shops, clinics, etc.) which has been built by your office since the war, and of how it was roofed; slate, tile (natural or concrete), shingle, asbestos sheet, copper, aluminium, felt . . . and the variety of pitches and eaves details used. Small wonder we have diversity today.

To me the *character* of a house depends first on the proportion of window to wall area; on whether the wall wins over the window or vice versa. If neither wins, the design is characterless. It is commonly accepted today that either solution can be used: *e.g.*, in the same group of houses one might design a panel in-filling where large areas of window were required and contrast it with "hole in the wall" design elsewhere. All well and good, but we are immediately doubling the variety of character one small area of housing may contain. Until recently people tended to go for one or the other (*e.g.*, Jacobeans for glass, Georgians for wall). This seems merely worth noting in passing because it is, I think, a characteristic of modern design, and one we must exploit and accept.

Secondly, what confuses matters in this business of the innumerable different methods of dealing with the junction between wall and roof. One of the most constant characteristics of traditional housing in the north is the clipped look of the eaves, the gutter often being fixed direct to the wall face without any eaves projection. This applies to both slate and tile roofs. This detail may automatically give more wall space between the head of the upper floor window and the eaves, than one in which the eaves project. This, coupled with the design which lets the wall win easily over the window, stamps the elevation with its own definite character, regardless of scale, materials, or colour. Its elegance may be increased by the subtleties of proportion, its richness by the quality of the material, but its basic character is unaltered. It gives a tough, sturdy look which I particularly like. It also has a friendly open expression, quite unlike that generally produced by the 7 in.-9 in. eaves projection. This horrid com-



Examples of 20th century backcloth character, showing how the diversity of design of the small house is one of the chief obstacles when trying to create backcloth character. Left to right, from top, terraces at Newton Aycliffe, by Harry Durell, deputy architect to the Development Corporation; house at Tynemouth by Ryder and Yates; flats and maisonettes, by the Whitley Bay Borough Engineer's Department; houseat Wetheral by Johnson & Wright; houses at Peterlee, and three-storey flats at Peterlee, by W. J. Scott, chief architect; and cottages at Kirkwhelpington, Northumberland, by W. Dixon & Sons.

promise looks mean and undecided; the windows often with a minimum of wall between their heads and the eaves, furtively scowl. It is quite a different matter when the eaves project 12 in. or preferably more; the character changes completely; it seems gayer, more lighthearted, and through association one thinks of the south and the sun. While it is most unlikely that you will agree with these particular reactions, it seems indisputable that the details themselves actively produce character. This character provides a link between buildings that may otherwise vary greatly. The difficulty today is that the "background" buildings in any one place, however admirable they may be as individuals, have such diverse possibilities in these two details alone, that it becomes impossible for them to create a common character.

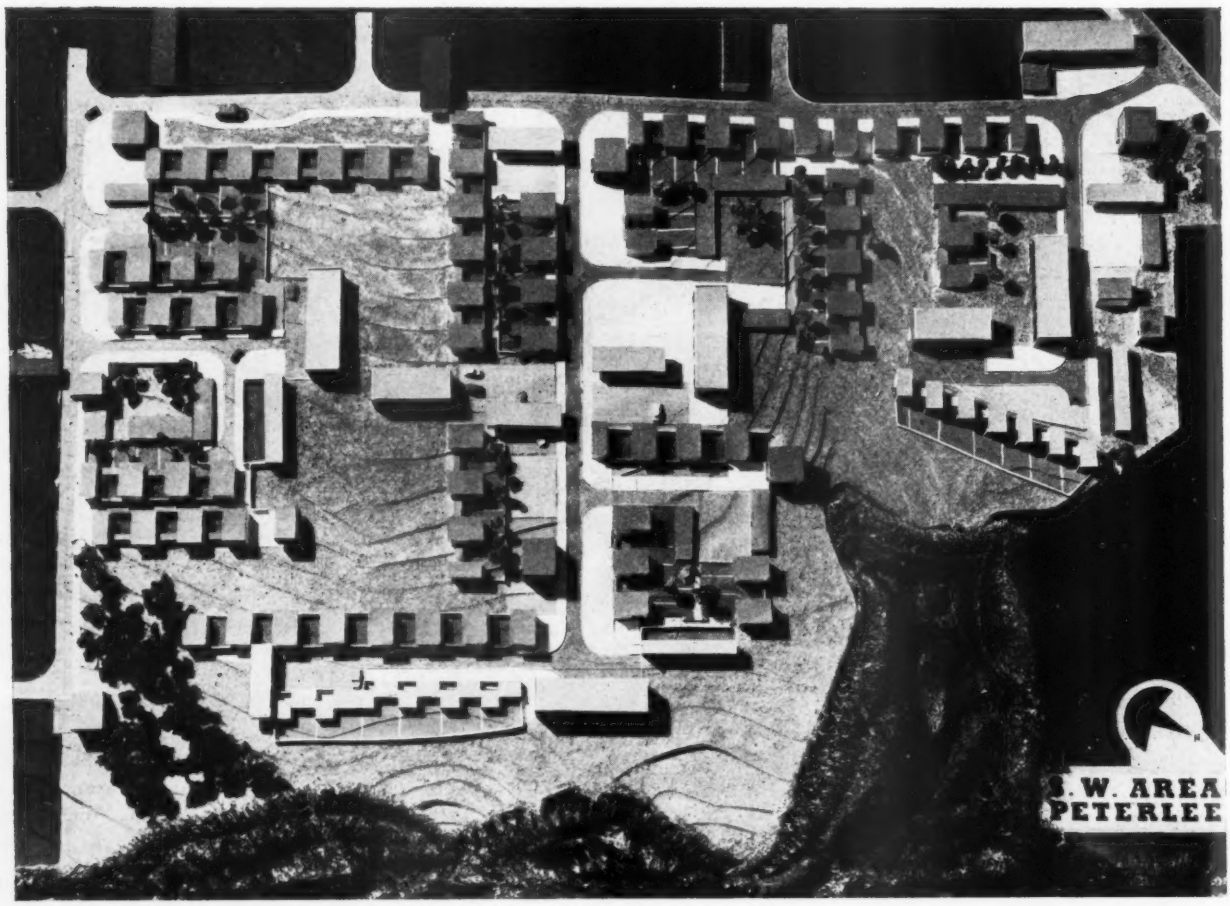
So far the whole emphasis of these notes has been on the creation of background character, because without it a town as a place has no character at all. But given the background one soon gets weary if there are no jewels in the setting; or at any rate semi-precious stones. One must have contrast and I suspect some discord too.

Here we have a somewhat maddening state of affairs. The new towns, the one place where we are able to control character, and where in many cases a background character has been created, have very often missed achieving what we are after, because they provide all background and no contrast. At Newton Aycliffe, Peterlee, where the Development Corporation architects have produced some most pleasant terrace housing, one is driven to despair by the monotony of two-storey development. This is caused by the client's brief, which in its turn is governed by considerations of mining subsidence. But whatever the reasons the resulting character is so even and uninterrupted that to a stranger the only focal points seemed to be the open spaces waiting for more two-storey development. This is not an accurate criticism of planning, "greens," etc., there certainly are, but without contrast of height to give focus, and with so much grass bordering the roads which link them, the open greens have lost their contrast value. And there are no high buildings. The mining villages, for all their faults, had immense character because the lines of murky two-storey cottages were over-shadowed by the giant slag heap and the fantastic pit-head machinery, which in terms of character produced the most dramatic contrasts in mass and form. In ridding our towns of the evils of the past, we are in danger of a mediocrity caused by decently designed housing spreading unrelieved over mile upon mile of country. One thirsts for some contrast in this nicely planned wilderness of well-designed houses with neat grass in front. The grass sown in the name of amenity in our new housing areas is fast becoming as deadening as the lack of it in our slums. What was a welcome contrast has become a monotonous rule.

Consider again Warkworth (or Blanchland, that mecca of both planners and tourists). It is worth noting the extreme simplicity of the plan. If it was put up for approval today to some conscientious committee who had bothered to read the many good housing and plan-

The character of many of our new towns is one of hundreds of little houses anchored in a green grass sea. The sea is sometimes rather choppy. This seems a natural follow-on from the Garden City movement. Nearly 3,000 *new houses have been built in Peterlee and some are shown above. These pictures might have been taken in other new towns or housing areas and show the monotony such layouts have when the pattern is repeated* ad nauseam. *The effect of so much grass*

ning pamphlets published since the war, it seems to me very likely that it might be condemned on *grounds of character* alone. Even after the subtleties of building on a hill had been considered it might be thought to be too austere: "That long straight street just lined with houses, not even any floor-scape to speak of, let alone flower-beds or village green." One of our main difficulties when faced with this problem of creating urban character is not really the cost, but the fact that as a race we are now obsessed with the wish to make things look pretty; few people (including some architects and planners) seem to realize that what they so much admire in our "Beautiful Britain" towns, is a plain, sensible background which makes the setting for the occasional gem. A Frenchwoman, broadcasting recently, said "The trouble with you Englishwomen is that you will try to look pretty." She fairly spat out the last word, and then explained that one could never be chic except in black "All those pastel shades you see in Oxford Street," she lamented. While disagreeing with her solution, one feels that her diagnosis of the symptoms is near the mark. The

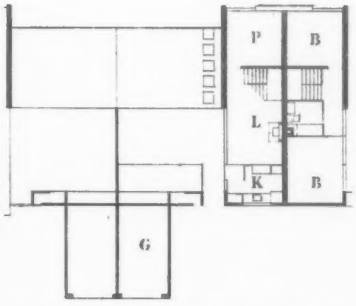


Above and opposite page, two views of the model showing proposals for the development of the south-west area of Peterlee, and, far right, one of the unusual and interesting house plans for this area. Designed by the Architect's Department of the Development Corporation, the specially appointed team responsible were: P. G. Daniel, A.I.L.A., *architect; Frank G. Dixon, architect, and Victor Pasmore, artist. Opposite is a summary of the architect's description of the scheme.*

and open fronts betwwen the " greens " destroys the contrast value of the greens themselves. This is not intended to be a criticism of Peterlee in particular. It is typical of very many post-war layouts. There are isolated signs that people are beginning to think again about this policy and Peterlee themselves have produced a most interesting answer in their south-west area proposals, shown below.

same desire for prettiness is behind many well-meant failures to create urban environment. This applies to buildings and their settings. My own mistakes in this line have been made in the name of " giving interest " to the scheme.

Blanchland, a place whose urban character would be remarkable anywhere, is all the more striking, sited as it is. If you approach from the south over the bleak moors of Co. Durham and suddenly discover this planned 18th century village, the impact of its character is colossal. The buildings enclosing the square give a secure sense of having arrived somewhere man-made and civilized after the endless emptiness of the moor, as well as providing the physical shelter needed in that sort of country. On the wildest day they give some relief from the elements. Perhaps it is the absence of this sheltering character which worries one in the new forestry villages of Stonehaugh Shields and Kielder. Knowledge that they were originally planned with such high ideals makes their realization the more disappointing. But the fact is that whereas Blanchland seemed to



Ground and first floor plan, two bedroom house.

Nearly 3,000 houses have already been built in Peterlee, in the north-east section of the town, but until now no building has taken place in close relationship to the Castle Eden Dene, which is a most remarkable topographical feature, forming a unique and beautiful southern border to the new town. The Development Corporation were therefore particularly anxious that the south-west area of the town should be carefully considered in relation to its natural setting and represent a new and vigorous approach to area planning.

The project when completed will house 8,500 people, but the section illustrated here shows only the first area to be built and comprises 215 houses. Roads and sewers are now being built and house building is scheduled to start in the late summer.

Special site conditions prevail in Peterlee. Construction is phased with the underground workings of the National Coal Board. All houses are built on reinforced concrete rafts and are made up of semi-detached units. In the past, these semi-detached units have sometimes been built as terraces with subsidence breaks between each pair of houses. Peterlee is therefore a town of detached and semi-detached units, which are moreover restricted to two storeys in height with three-storey blocks in specially considered sites.

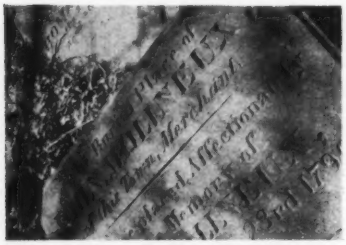
The underlying aesthetic principle of the scheme is that an integrated plan of buildings and space in between, considered as indivisible, creates a new landscape. However beautiful the site is as it exists, the new created landscape must be completely adequate when it is judged on its own merits.

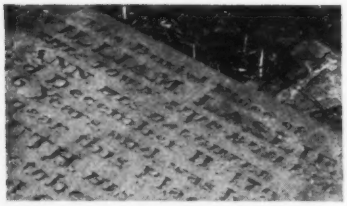
The site slopes gently to a park bordering the dene. The design is based on a principle of housing groups, closely related with small urban spaces to its service street, which joins a collector road linking the other housing groups to the ward centre and the rest of the new town.

These open spaces are planned for easy maintenance by tractor drawn grass cutters and are in themselves in direct contrast to the more urban street, where every attempt has been made to do away with small and useless grass verges and set backs. Not every house is planned with a garden, for experience has shown that many residents of the town consider a garden to be more of an embarrassment than an asset. All houses have however a small enclosed outdoor space for the occupant to do with as he wishes without detriment to the whole street.

In order to counter the monotony inherent in straight street design a special building has been designed. This block of four dwellings is set at right angles to the road, the ground floor being sited at bye-law distance from the curb, but the first floor is built over the pavement to form a visual break along the line of the street.

This first area also contains a three-storey house type, a three-storey flat block grouped to give cohesion to the semi-detached layout, and single-storey houses for old people. This is to serve as a prototype for subsequent development.





The character of an area is ephemeral and constantly changing. The prints above and on the opposite page demonstrate a remarkable conscious introduction of new character which once took place in Newcastle over a period of only fifteen years in the early nineteenth century. The gravestones (left) at All Saints show the type of citizen with whom Grainger and Dobson had to deal

invite one to linger in its square, both Stonehaugh and Kielder were too draughty, both physically and visually. If the ends of the streets were stopped by buildings one would feel very differently. I suspect this was originally intended.

Blanchland relies almost entirely on housing to give it character. And very plain housing it is too with its stone slab roofs and grey stone walls; apart from the castellated gate-house, and the light hearted ogee windows of the Lord Crewe, the L-shaped "square" could hardly be simpler. The large plain surface is interrupted only by Queen Victoria's memorial. Again one wonders how this lay-out would go down if submitted for approval in 1958; and not only how it would be received by a lay committee, but whether it would have escaped from the drawing board in such a simple state. Could everyone concerned have resisted the temptation of dotting in some grass, of "providing some interesting contrast." I suppose it is because the village itself is surrounded by so much grass and heather that one is so thankful for the square as it is. If it was in a man-made wilderness of 19th century slum we should feel differently. I rather suspect that we now subconsciously plan everything with that background in mind, forgetting that the pendulum started swinging back long ago and we are now as often planning within the context of the results of the garden city movement, or in the unspoilt country which we continue to devour.

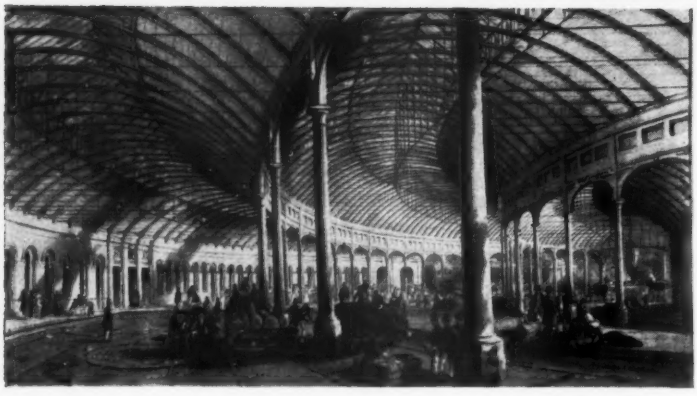
It was thus a disproportionate relief to see the model of Peterlee's South-west Area. Here the architects are creating an urban environment by putting the open space behind the houses instead of in front. In fact by returning to the English town tradition where, whatever the actual density, one gets an impression of urbanity, because the gardens, etc., are tucked away where people can enjoy their privacy behind the houses (see Warkworth again), and the street is treated as a street. This scheme may be an additional triumph because in Peterlee it is not permissible to build terraces (mining subsidence) and to create urbanity with semi-d's is no mean achievement.

It is also an interesting example of the introduction of new character. Today we are inclined to be so busily in sympathy with the existing landscape that we forget that the very presence of our schemes destroys the land we love. In terms of landscape character, the very existence of Peterlee is hard to justify. After motoring through miles of patchy industrial and semi-industrial/suburban landscape one comes upon what appears to be a stretch of genuine agricultural country, only to find it is becoming a new town. It seems sensible now to accept this fact, and in the housing areas at least to introduce a character which will be positively urban and provide a contrast to the character of what agricultural land is left, either for farming or as parkland. This the scheme most certainly should do.

in order to change the city from largely mediaeval romanticism, left, to classic serenity, above. Ravines, which once cut across the city, were filled, involving colossal labour. It is hard to believe that a ravine which once cut Collingwood Street, above left, once also bisected Grainger Street, above. (Illustrations by courtesy of Curator of the Laing Art Gallery.)

The Dobson and Grainger development for the centre of Newcastle is a dramatic example of the introduction of new character. It is difficult now to visualize what a revolution this must have made to the appearance of the town. What now appears a bold, sensible answer had much opposition to overcome. Dobson apparently prepared three schemes which were all rejected (1814, '20, and '24), before he joined forces with Grainger. Grainger, the builder, must have been a remarkable personality combining as he did energy and drive enough to get his schemes accepted, with the foresight to appreciate the value of Dobson's designs. What sort of citizens had he to persuade, and what sort of town did he find? The graves in All Saints' give some clue to the first; merchants, ship-builders, sea-captains and professional men rather than the leisurely aristocrat who in his youth might have made the grand tour. Stephenson's cast-iron bridge was soon to be a symbol of their engineering initiative. The print of the demolition of houses in Collingwood Street gives one some idea of the town as they knew it. It is difficult to visualize

The fine Georgian landscape of the grounds at Gibside (by Capability Brown) give another unexpected facet of the character of County Durham. The grounds contain James Paines' perfect mausoleum for the Bowes family. In few counties is the juxtaposition of heavy industry and open country so marked.



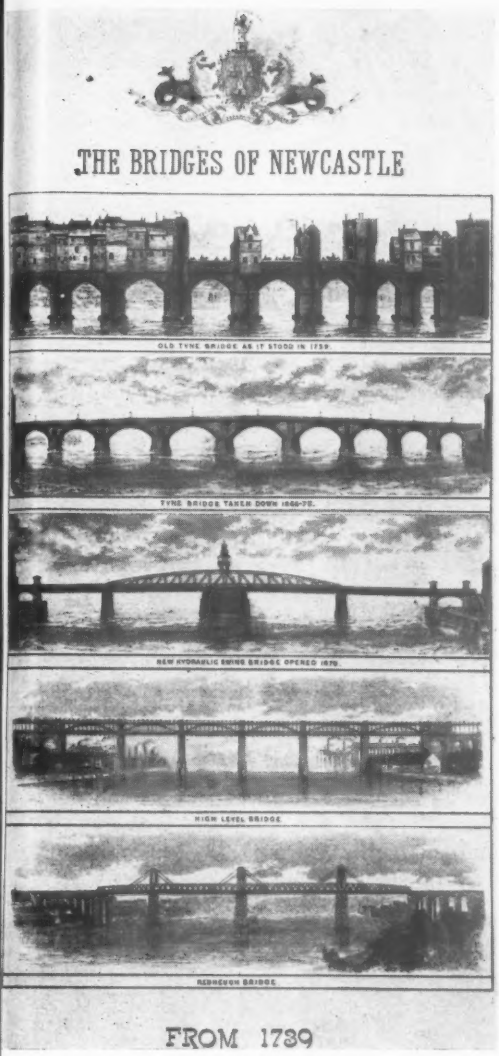
The character of any town is enriched by the surprise of indoor, but still public discoveries, like the magnificent arcades of Newcastle, of which Central Arcade, above left, is typical; or the curving sweep of Central Station, by J. Dobson, left, or the unexpected flight of steps as in Lower Dean Street, above, cutting up to another level.

Background character can be augmented by decently designed street furniture. The bus shelter at Earsdon, below right (designed by T. W. Burgess, Surveyor, Seaton Valley UDC) seems particularly in sympathy with the robust character of the North. The police box has a trim shipshape quality which enlivens the seaside town of Tynemouth. Bottom, a bus shelter at Peterlee.

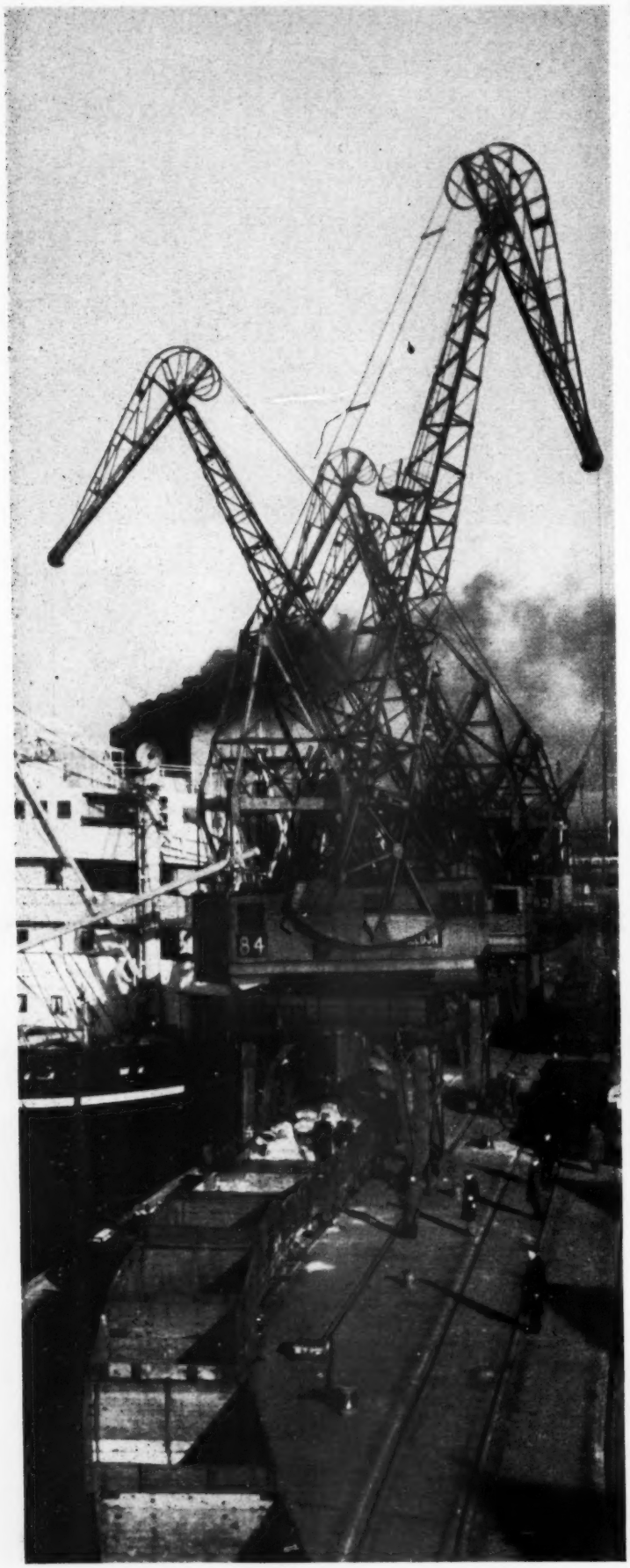
now what a sweeping change was made in less than 15 years. One forgets that the city was cut by deep valleys and ravines. One admires the coherent architectural stamp they gave to Newcastle and forgets the millions of tons of earth that were shifted as the new streets were levelled and paved.

To introduce new character successfully into an existing coherent whole, and one which must already have been acknowledged as one of the masterpieces of its time was probably the achievement of Richard of Farnham (architector novae fabricae) at Durham. One may speculate on the apsidal east end that was demolished, but one can only wonder at the boldness of the plan of the Chapel of Nine Altars which replaced it; and not only at the originality of its design (change of level, axis, etc., as well as architectural detail), but also at the fact that when one enters the cathedral near the west end of the nave, it still appears to be a completely Romanesque building. Durham Cathedral, and the whole group it dominates in the loop of the Wear, is one of the most splendid things in all Europe.

The interest of any individual's character depends to some extent on surprising contradictions. Everyone

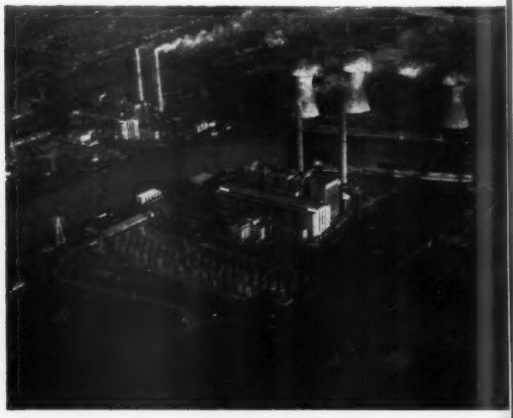


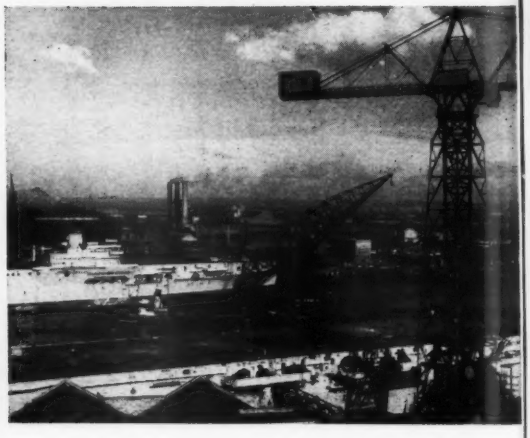
It is not only buildings that give character to places. Any town can gain tremendously from its bridges, and Newcastle is particularly rich in them and has been so for a long time, as the engraving above shows (reproduced by courtesy of the Curator of the Laing Art Gallery). Stephenson's high level bridge is a particularly fascinating example of cast-iron construction, above right, and despite the detailing of the piers, there is magnificence in the sweep of Tyne Bridge, top right, which carries the A1 road clear over river and streets, below and centre, below, and dominates the urban scene, as does the railway bridge, bottom, extreme right, in Newcastle's Lower Dean Street.

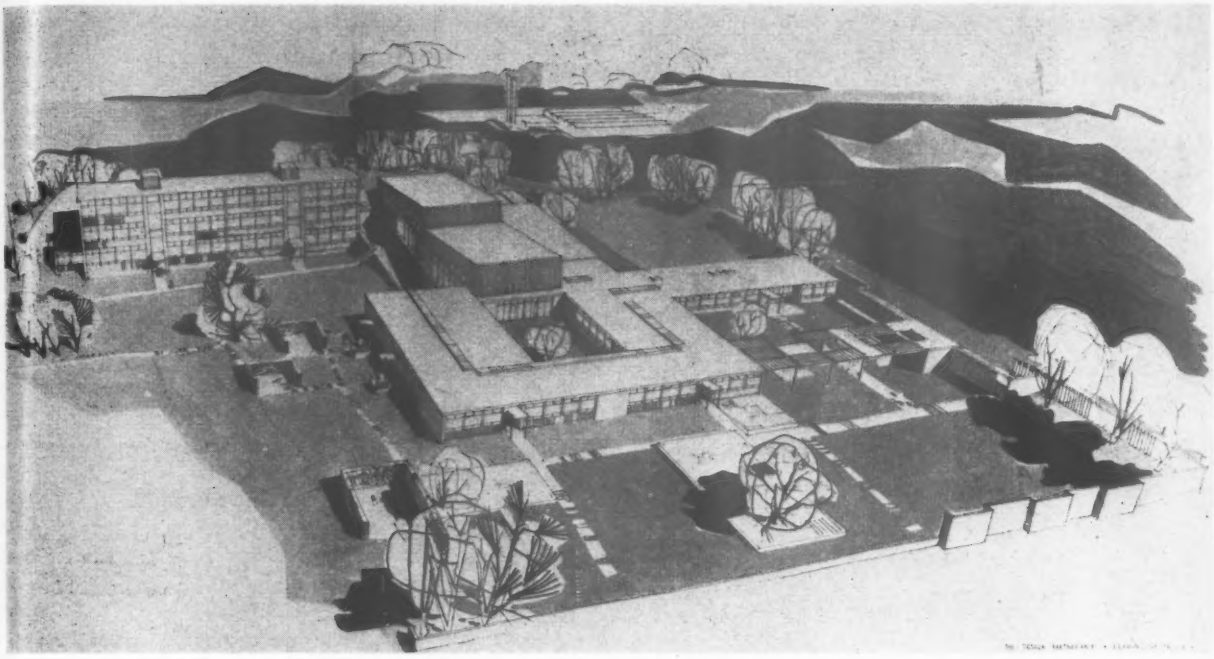


knows this and it only amazes me that it always seems to surprise the biographers. As with people, so with places. One can think of dozens of examples: the sophisticated elegance of Gibside chapel in the rural agricultural country to the south of the Tyne, the Stella Power Station dominating the suburbs, the Royal Arcade (as sadly dilapidated as Gibside is cared for) near the New Tyne Bridge, stone circles in the Cumberland hills above Calder Hall, General Wade's military road getting mixed up in the Roman Wall. These may be rather special examples, but, at the opposite end of the scale, this sort of thing can have practical use as well as quietly adding character. What has happened to the corner shop? Is it forbidden to turn the front parlour in your estate house into that most beneficial of local institutions? Are new pubs never to be part of a terrace of houses as they so often were in the past? Will the professional man be breaking the law if he turns part of his new house into an office or surgery? Have miners stopped keeping pigeon lofts in the back-garden? These things may just not be wanted, but if they are it would be a pity if they were neatly extinguished by zoning.

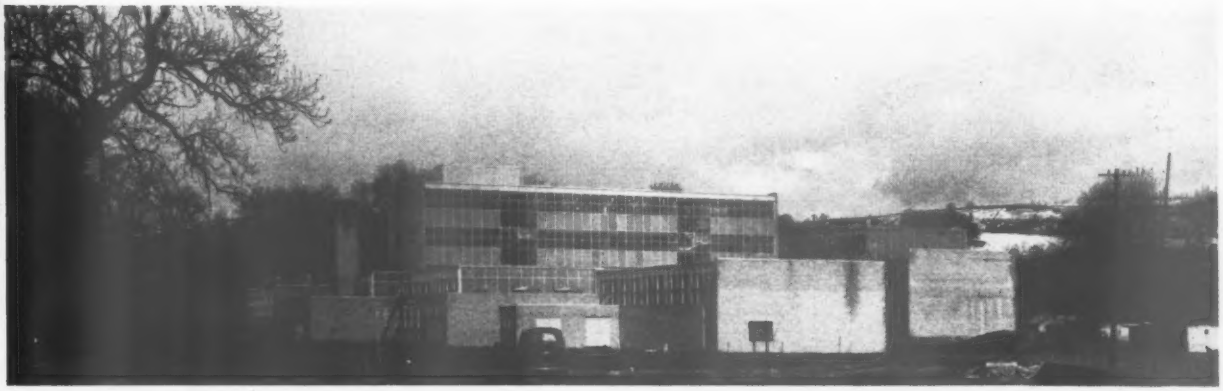
An immense and magic effect on the character of a wide area—even of dreary suburbia—can be made by cranes, cooling towers and factory chimneys and by the smoke and steam the last two emit. Particularly evocative are the nodding, bird-like cranes unloading a ship in a Tyne dock, left, and the ship-building cranes, bottom. Below, generating stations at Stella North and Stella South.





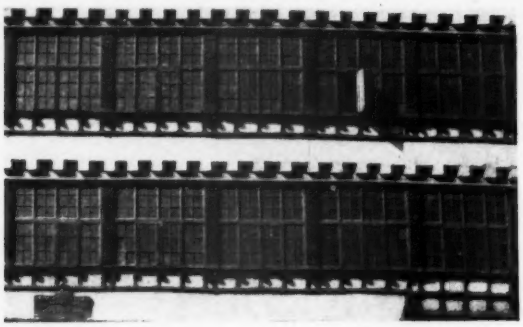


Top, a sketch of a primary school at Kenton, near Newcastle, designed by the Design Partnership, and below, a technical grammar school at Wolsingham, Durham, by G. R. Clayton, county architect. The 3 ft. 4 in. modules of the primary school gives a continuity of rhythm throughout the design, and this building will undoubtedly make its mark on the suburban area it serves. But, by its isolation this most pleasing campus building has less effect on the urban scene than the village school had on the street. Curtain walling, as used at the Wolsingham school, produces a standard character which in its way is comparable with the standard backcloth to the urban stage produced by the domestic Georgian facade. Outside London, however, this neutral walling appears largely on isolated buildings withdrawn from the town, while the backcloth of today's houses staggers the onlooker with its endless diversity. *(For further illustrations of these buildings, see page 736.)*

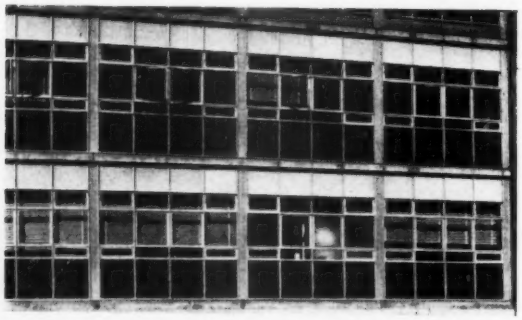


Character is, of course, created by things other than landscape and buildings. Well designed street furniture can do a lot, by value of its repetition, to tie together undistinguished development. Lamp-posts, milestones, bus-shelters, police-boxes, and even advertisement hoardings (the Newcastle Planning Office are enthusiastic about these) can have an effect quite out of proportion to their own importance, because once our minds have registered them, they will recognize them again and they begin to become characteristic of a district. The red and white posts on the forestry roads and the bollards that mark unfenced moorland roads have the same sort of effect.

Conversely the gem in the setting is often not a building. Any town on a river must derive character from its bridges; if it is a ship-building town the skyscape created by cranes will be particularly fascinating: ancient pit-head machinery has already been mentioned; power station chimneys or cooling towers have tremendous possibilities. . . .



Above, timber and glass curtain walling, with plaster panels on a seventeenth century building in Newcastle, for comparison, a steel-framed office block, below, clad with a glass and aluminium curtain wall with timber cover boards over the stanchions: two similar essays in frame and fill resulting in simple backcloth character.

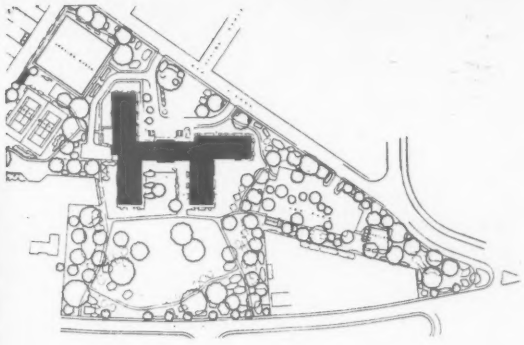


Below: this school at Alston, Cumberland, by the County Architect, is a rare example of an important building going on to a restricted urban site instead of spreading in a field on the town's outskirts. By being sited thus its character has a telling effect on its surroundings.

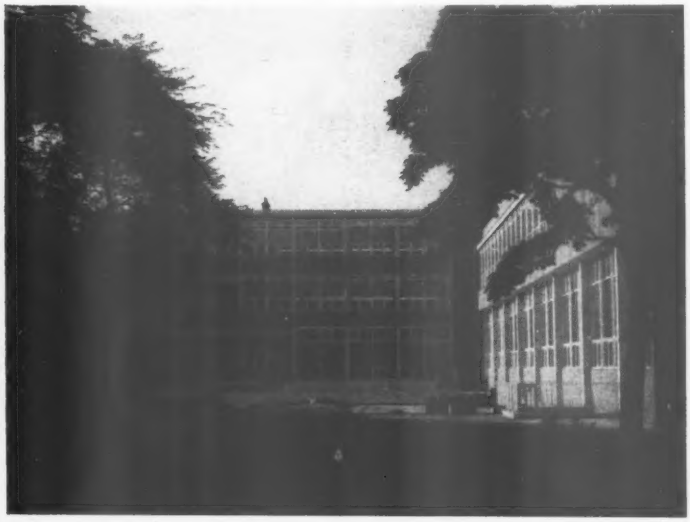
The sight of page upon page of curtain-walling in the Preview edition of the AR tends to make one feel that solid, chunky masonry with small deepset windows is the only thing one can ever design again; I am beginning to realize how absurd my reaction was. The degree of uniformity given to our buildings by well designed curtain-walling may be one way to salvation in an age which produces such diverse answers to the same problem, that it was becoming impossible to recognize common character at all.

In creation of character, 20th century techniques in mass production are on our side. The difficulty is that so far they have been applied more to the larger, isolated building (factory, school, etc.) which by its size and siting can afford to be different, than to the housing and smaller work which so often desperately needs a common thread to make it that invaluable backcloth we need. Curtain-walling, for instance, is seen far more on the campus than on the street façade (outside London).

Many towns are not yet benefiting as they might from the new character that is being created, because so much of the good new work naturally tends to be scattered in the suburbs, and each building is often isolated on its own neat lawn, where its very separateness makes its impact on the character of its surroundings less telling. Street buildings of importance are all too rare. School buildings, which seem to be among the most promising for the introduction of new character, have by their siting much less effect than they might. It is unfortunate, but inevitable, I suppose, that the school is so often on the outskirts of the town, isolated on its green campus. Alston, Cumberland, provides one of the few examples of a new school, built right in the town, on a restricted site, making interesting and economic use of changes of



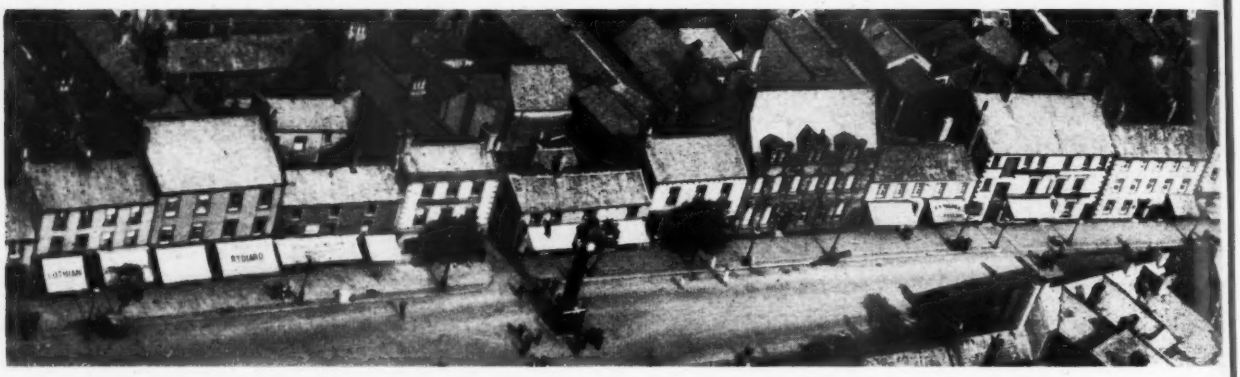
It was part of the client's brief for the above offices that they should fit into the domestic character of the neighbourhood. Sure detailing of the brickwork has given a crispness and precision to the building in character with its function, but its siting—see site plan, above right—its romantic and escapist withdrawal within its grounds, reduces the influence of its character on its neighbourhood. (Head office building for Thomas Hedley & Co., designed by the staff architect, Sidney Burn; consultants, Henning and Chitty.)



Left: an example of heart going back into a city. The Rutherford College of Technology, in Newcastle, designed by the City Architect. Above: even in a village (Malfen, Northumberland) straightforward infilling (probably done without an architect) can do more for the character of a village than new housing on the outskirts.

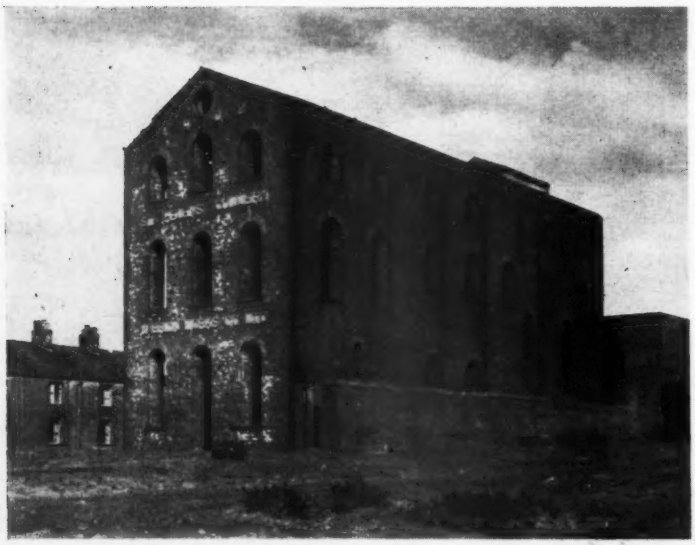
level. The Rutherford Technical College is another example of heart going into a town instead of on to its fringes.

At the same time more new sites on the outskirts of existing towns and villages are daily eating away the country. Infilling houses in existing towns and villages can do more for the character of a place than the most advanced housing scheme on its outskirts.



These shops at Peterlee, top (by W. J. Scott, chief architect to the Development Corporation), suggest a return to the tradition of binding diverse small units together under one roof. Compare with the shops in the main street at Cockermouth, above.

The careful segregation of function in towns, sometimes necessary on amenity grounds, can lead to monotony. The old brickworks at Whitehaven, below, dominating the workers' cottages, may be wrong in terms of zoning, but it produces an effect of drama which modern housing schemes often lack.

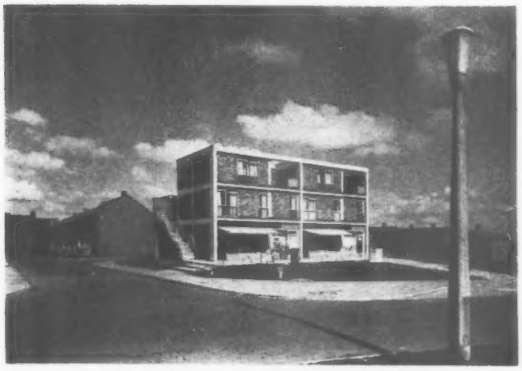


Concentration is one of the surest allies of character. Small units need to be bound together in terraces; shops, offices, pubs, etc., might then take their place again in the back-cloth of terrace houses where they once belonged. This would have the effect both of enriching the quality of the back-cloth by bringing limited variety into a unified design, and of tying together those isolated individuals which by their endless diversity now tend to destroy background character. When these units are brought together under one roof, some of the planning difficulties which stand in the way of three-storey development (which was once the tradition rather than the exception) will be overcome. The widths of our roads, plus their verges, etc., cry out for an average increase in height.

Very few " contrast " making buildings are needed to set off the back-cloth. These few would be far more telling if less withdrawn from their setting. Today, instead of being *in* the setting of the town (*e.g.* the market-hall), they tend to set themselves apart from the core (*e.g.* the small public building withdrawn on its own private lawn).

With a richer but more standardized back-cloth, and fewer but more tellingly sited buildings to give contrast in that setting, we should have more chance of creating that elusive urban character which apparently came as an unsought by-product in the traditional town.

In traditional work the individual building which punctuated the backcloth was important enough to make its point, but not so big that it had to withdraw on to its own grass carpet. Its contrast value was the greater for being part of the scene. Compare the Northumberland Hall, Alnwick, bottom, and the Town Hall, Berwick-on-Tweed, below right, with this small island of shops in Peterlee, by the Chief Architect, W. J. Scott.



On the following six pages are short comments on architectural and landscape problems in the area of the Northern Architectural Association. J. B. Ross, County Planning Officer for Northumberland, in the article below, points out that only 30 per cent. of planning applications in the county are prepared by architects. Then follows a description by James R. Atkinson, the Deputy County Planning Officer for Durham, of attempts to handle the landscape problems of coal mining, and lastly, F. E. Smith, a quantity surveyor, describes spec. building on Tyneside.

J. B. ROSS, *the County Planning Officer of Northumberland, who gives below his views on architectural controls, is a native of the county. He joined the County Council's planning organization on demobilization after the last war and became its first Deputy County Planning Officer. On the resignation of his predecessor he became Planning Officer in '52. His Deputy is an architect and there are 6 qualified architects on his staff. He believes firmly in the benefits of planner/architect co-operation. He also believes that the layman can be interested in the principles of good design; and his success in both fields seems to justify these ideas.*

Architectural control in practice

by J. B. Ross, A.R.I.C.S., *County Planning Officer of Northumberland*

We make no apologies for our architectural control in Northumberland. We consider it both necessary and desirable; even more important, it is producing a generally higher standard of elevational design throughout the County.

Can we justify such claims? I am satisfied we can after 10 years' experience of the working of the 1947 Act.

Northumberland got a late start with her town planning organization but by the end of the war an advisory panel had been set up to consider the design aspects of planning applications. This panel was composed, for the most part, of well known local practising architects with minor representation of the amenity societies. It met weekly and gave most helpful advice, especially on architectural matters.

When the County Council became the local planning authority in 1947 the advisory panel was disbanded, but the Planning Committee decided to co-opt as a full member an architect nominee of the Northern Architectural Association. They also began to build up their own architectural staff.

A delegation agreement was made with the County District Councils but under it the County Council retained the power to determine finally any application. The appropriate County Council committee is the Control of Development Sub-Committee which meets monthly although the Chairman has power to act between meetings in regard to non-controversial items. All matters of architectural control are dealt with by this Sub-Committee.

After some experience the Sub-Committee became concerned at the low standard of elevational design of many planning applications and an analysis was made to ascertain how many of these applications were, in fact, submitted by architects. We found that in a 15 months' period covering parts of the years 1953-1954, of the total number of applications within the administrative county, only 30 per cent had been prepared by architects. Further analysis showed that within boroughs, 50 per cent of the applications were prepared by architects whilst in the urban districts the figure was 35 per cent, and in the rural districts only 20 per cent.

In interpreting these figures, it should be borne in mind that they refer to the total number of planning applications of all descriptions, some of which would not under any circumstances require the services of a professional adviser, and some would be of a kind in respect of which the services of an architect were not essential. Nevertheless, the County Planning Committee made the following comment at their meeting in December 1954 when the above figures were presented: "There is no doubt that those proposals prepared by the architectural profession, possess in general a considerably higher standard of design than the remainder of the applications. Whilst it seems the majority of larger schemes are designed by architects, many of the applications not so prepared comprise substantial proposals such as individual houses, workshops, filling stations, garages and alterations to business and commercial premises necessitating some elevational design. Such proposals may appear to be relatively small in themselves, but they do represent a large proportion of development, and over a period of time can influence to an appreciable extent the town and country scene. Their total effect can be considerable, particularly in rural areas where one new or altered building amongst so few has a much greater influence than in the denser development of urban areas."

The Committee were determined to try and improve the generally low standard of design, but they quickly decided that the appropriate way was not to invoke ruthlessly, the control powers of the 1947 Act but rather to seek improvements by negotiation and discussion with applicants.

This policy has paid excellent dividends for we find that, through discussion, the applicant will usually appreciate why a design is poor and he is usually grateful for the advice and assistance given. Naturally during the course of these discussions applicants are advised to seek proper professional advice and very frequently the result is the engagement of an architect. Our experiences show that many developers have little understanding of good design and they do not always appreciate the advantages of employing an architect not only from the point of view of obtaining a sounder plan and a higher standard of design, but also from the point of view of the economic advantages which may result.

In order to implement the Committee's policy of seeking a higher standard of design it was necessary to strengthen the Planning Department by the appointment of a qualified architectural staff, and to date, seven members of the profession are employed—the Deputy County Planning Officer and two Area Planning Officers being part of that number. We also have two landscape architects on the staff.

Meanwhile the Committee had found the advice of their co-opted architect member so helpful that they decided to co-opt an additional one—thus they invariably have not only the advice of the department's architectural staff but also the independent advice of their own members. This applies to the formulation of policies as well as to the handling of planning applications, for the architectural representatives are full members of the Committee.

The importance of good public relations was fully realized. The Committee decided that steps should be taken to explain the importance of good design to as wide a public as possible. For this purpose a slide projector was purchased and members of the architectural staff have given illustrated talks to local authorities, professional and business groups, local societies, schools, and most of the building trade organizations in the county. This work, of course, continues and is not confined solely to architectural matters. Additionally, we have co-operated with the local Press on a number of special articles explaining the Committee's policies.

As a result of all this positive action, a marked improvement is becoming apparent in the standard of design over the whole county with a much greater public awareness of what is involved and at the same time a very cordial relationship has been established between the architectural profession and the planning authority. The planning committee not unnaturally take the view that if the public are being encouraged to seek proper professional advice on the design of buildings, they are entitled to expect that all designs submitted by the architectural profession should be of a high standard. This, unfortunately, is not always so, although in proportion the number of poor designs is small and generally by discussion improvements can be obtained. Indeed, in only three cases has there been the necessity for a decision to be given by the Minister on appeal. Nevertheless, first class designs are still rare although their number is increasing.

On the question of administration, I should like to mention two important points. Firstly, discussions on matters of architectural design take place whenever possible between architects. Secondly, I always endeavour to have one of the department's senior architects present to advise the Committee on architectural matters quite apart from the co-opted members of the Committee.

The question of architectural design is, of course, only one aspect, although indeed a most important one, of our overall town planning work. Through practical experience we are sure that in our system of architectural control we are proceeding on the right lines and with a definite measure of success. In substance, what is involved is close liaison between the lay committee, the planning department, and the professional advisers of the applicant, with the architectural profession playing a slightly different rôle in each sphere but with the common aim of producing a high standard of development.

JAMES R. ATKINSON *was born at Darlington and started his professional career as an articled pupil in a Municipal Engineer's office. He studied at Rutherford Technical College and King's College, Newcastle, qualified in Municipal Engineering, Town Planning and Landscape Architecture, and then spent two valuable years in Dr. Thomas Sharp's office working on schemes for Oxford, King's Lynn, Chichester, and Crawley. He was later a lecturer in town planning at King's College, Newcastle, leaving in 1949 to take charge of the work of preparing the Development Plan for County Durham where he is now Deputy County Planning Officer. He lives with his wife and two children in an 1840 house in a cobbled street (praised by Pevsner) in Durham. He is interested in interior design, landscape, travel (to sunshine), colour photography—when pressure of work permits. Pet aversions—sloppy thinking and writing; engineers and architects who make sweeping partisan claims for their right to be town planners par excellence.*

Durham villages and landscape

by James R. Atkinson, A.M.I.MUN.E., A.I.L.A.

To many people Durham means coal; they imagine that the county consists entirely of pit villages and pit heaps. It is true that we have these things, but Durham county has many other sides to its character; it has shipbuilding towns, industrial towns, chemical towns, market towns, a University town, large areas of agricultural land with attractive rural villages, and the upland moors in the west—a wide variety of environments and planning problems. Nevertheless it must be admitted that it is the pit villages and pit

An untidy pit village overshadowed by large pit heap with its overhead tipping system. (Trimdon Grange.)

Post-war development in a pleasant landscape. (Esh Winning.)

A colliery embankment at Houghall, planted in 1929, now has considerable scenic value.

Eppleton tip, a flat-topped tip growing grass at one end while tipping continues at the other.

heaps which determine the general character of the northern part of the county and present the town planner with one of his most difficult problems.

The pit villages

The rapid industrialization of the county was based on its iron and coal resources. Scattered throughout the western part of the county are many small pits which were started where the upper seams of coal outcropped or came near to the surface. The population increased rapidly and new villages were built around the pit heads. They were dreary, soulless places, consisting of long parallel monotonous rows, with unmade streets, primitive sanitation, and no social facilities. They were built as rapidly and cheaply as possible and as close to the pit as possible. They were, to use the Hammond's words, "the barracks of an industry." These places are called "villages," but in form, function and character, they are as unlike the traditional English village as it is possible for anything to be!

Many of these places exist today in substantially their original form. Streets, social facilities and the like have been improved, but the original character remains and the pit heap and head gear dominate the scene. In the western part of the county many of the shallow coal seams have been worked out and others are steadily being exhausted. Several pits have been closed and more will have to be closed in the next few years. There has been a steady migration of population away from the area. It is clear that the basic economy of this part of the county is changing and that if the population is to be stabilized we must attract new industry to provide employment for them. Good industrial sites have been selected at strategic points and an attempt is being made to adjust the settlement pattern to the new economy. It is proposed that capital and building resources should be concentrated in building up a limited number of selected towns and villages. Some of the more isolated villages which have outlived their usefulness will be gradually abandoned and others will lose part of their population. For example in one Urban District development is being concentrated in three out of a total of 12 existing villages. The new town of Newton Aycliff is an essential part of this re-grouping policy. It is thought that this re-grouping of population will better serve the needs of new industry and will at the same time provide better living conditions for the people. The new places will be away from the domination of the pit heap; many of them are imaginative in layout and design. As the old villages work out their economic life, steps will have to be taken to tidy up the sites and bring the land back into some productive use wherever possible. This is a big problem for the future.

Existing pit heaps

J. B. Priestley has described the effect of pit heaps on adjoining villages:

"The tip itself towered to the sky and its vast dark bulk, steaming, smoking in various levels, blotted out all the landscape at the back of the village. Its lowest slope was only a few yards from the miserable clutter of houses. One seemed to be looking at a Gibraltar made of coal dust and slag." (*English Journey*, 1934.)

Conical tips in the open countryside are equally ugly and objectionable.

Whatever whimsical or romantic ideas outsiders may have about the value of these heaps as, "punctuations in the landscape" or, "symbols of industrial activity," the people of the county do not like them and are taking active steps to minimize their effect on villages and landscape alike.

In 1929 a disused colliery embankment at Houghall was successfully planted with trees. In the mid 1930's the South West Durham Improvement Association planted four pit heaps as an unemployment relief scheme. In the last three years the Durham County Council has planted a further 20 pit heaps covering about 170 acres; this planting will be continued at the rate of about 50 acres each year. The main aim of this work is to improve the appearance of derelict land, but we expect, in future years, to get some financial return from the timber crop. Trees are planted straight into the shale and generally speaking no attempt is made to re-shape the tips before planting unless there are particularly steep and difficult slopes or great irregularities in profiles.

New pit heaps

Vast amounts of colliery waste continue to be tipped each year. In an attempt to minimize the effect of this tipping certain principles have now been agreed with the National Coal Board. The Board has agreed to abandon the idea of conical tips except in special circumstances. All extensions to existing tips and all new tips will be low, flat-topped and will have gently sloping sides. Soil will be stripped before tipping takes place, and will be re-placed afterwards. This kind of tipping has two advantages. First, the heaps can be more easily assimilated into the landscape. Second, there is no permanent loss of agricultural land. The Board has also agreed to plant trees to screen existing tips and new tips.

Schemes are now being worked out for the various pits in the county and in one or two

places flat-topped tips are already being formed.

This agreement is a most valuable one and as the agreed principles are put into operation we can hope to see a big improvement in the character of the mining villages and the landscape. The pit heap will no longer dominate the village and disrupt the landscape; if it cannot be completely disguised it will at least appear to be under control!

Reclamation

Some of the derelict land near urban areas can be reclaimed for building or other productive uses. The Shildon Boy Scouts have recently reclaimed a sizable area of red shale for use as a playing field.

A scheme has also been prepared for the reclamation of 30 acres of derelict land at Windlestone for use for housing, school, open space, etc.

Conclusions

The original impetus of development in the coal mining industry has produced much village development that is squalid and brutal in character. The uncontrolled tipping of mountains of waste material has overshadowed the villages and dominated the landscape. The social and visual problems are enormous and it would be unrealistic to expect to be able to change these things overnight. But the policies of re-grouping population and village development which have been hammered out and the principles which have been agreed for dealing with the derelict land and waste tipping problems offer hope for a gradual improvement. It will take many years to complete the process, but progress so far is encouraging.

This is one way in which the town planner is contributing to the reformation of character in a mining landscape.

The speculative builder has been making his contribution to architectural character in the north as everywhere else. His problems are discussed in the article below by F. E. Smith, a quantity surveyor who has had considerable experience in this field. Mr. Smith, left, is a Tynesider and was educated at the Newcastle Royal Grammar School. He served articles to become a quantity surveyor, and in 1951 was elected an Associate of the RICS. During his national service he was commissioned in the Royal Engineers where he served as a Q.S.R.E. in London and Kent. Now established in his own practice, he and his wife Roma, an architect, take a very real interest in the problems associated with speculative housing. Weekends find them away from the Newcastle suburbia, in their cottage overlooking the harbour at Seahouses, on the Northumberland coast.

Speculative development on Tyneside

by F. E. Smith, A.R.I.C.S.

In the north-east of England, the greatest activity in speculative building is centred around the development of private housing estates. The factors which influence the mode of development on these estates should be considered. The speculative builder is influenced principally by the type of housing he considers the public will demand on any given estate. To judge their demands correctly will help considerably towards the overall success of his venture.

During the post-war years several builders in their endeavour to attract one hundred per cent of the potential house purchasers, have offered their estates for the development of houses to be built to the requirements of the individual purchaser. Such schemes do not lend themselves to economical planning and execution. The total selling price of a specially designed dwelling is, naturally, higher than the price of a dwelling which is the product of an organized mass-production scheme. In many instances the expectations of the builders have been reversed; they find their development attracts only a small percentage of prospective house purchasers, due to the relatively high selling price. The overall profit returned from their speculation is considerably less than the profit obtainable from similar estates of standard house designs planned for structural economy, high density layout and speed of erection. A speculative estate of special houses is a thing of the past.

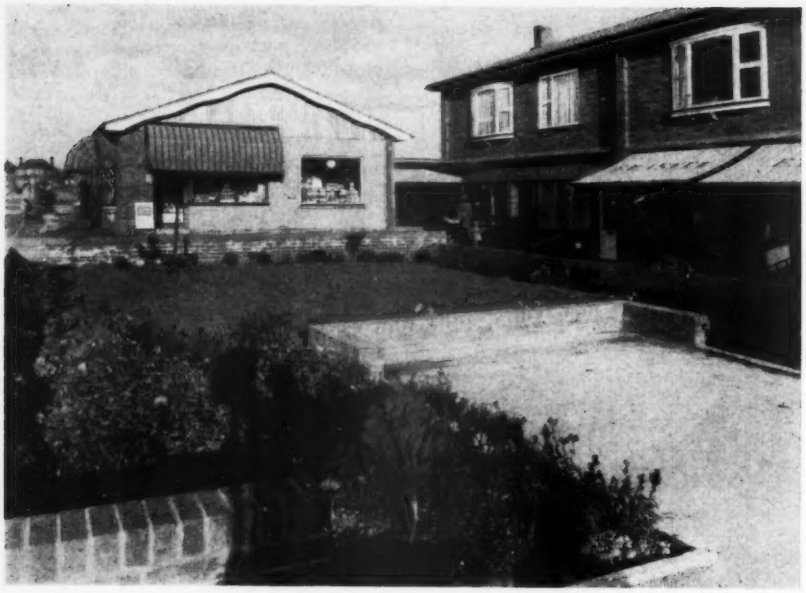
At the other end of the scale are the ever increasing leasehold estates. The houses on these estates are built on sites which are leased to the purchaser for a period of anything from 99 to 999 years at a ground rent of between £5 and £10 per annum. The benefits to the speculator of leasehold sites are twofold. First, he is able to reduce the selling price of his property by excluding the value of the land and secondly, he creates a leasehold interest with a real value often far greater than the original market value. The north east was an area where new low-cost freehold property was easily obtainable pre-war. In the post-war years the housing speculators have taken full advantage of the enormous demand by developing leasehold estates. The average purchaser now accepts a leasehold site as an evil which normally accompanies low-price housing.

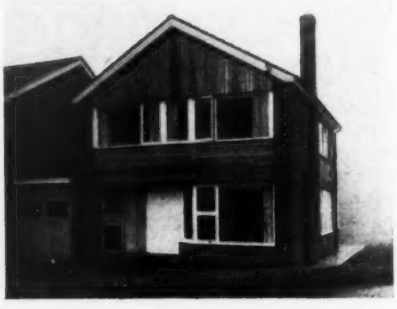
Local estates invariably resolve themselves into a repetitive pattern of two or three standard house types. Builders cater for the average middle class income group by offering their property at prices ranging from £1,650 to £2,750. Estates which develop with property selling at over £2,750 represent about 10 per cent of our total private house production. There are two principal types of dwelling which form the backbone of our new estates. These are two bedroom semi-detached bungalows, and three-bedroom two storey semi-detached houses. Occasionally, detached dwellings are incorporated in an estate to give special corner treatments or where a particular site location will justify a superior and more expensive dwelling. The two bedroom bungalow is usually very compact in its design with the lounge and dining room combined and a floor area of between 670 and 870 square feet. The two storey semi-detached houses have a floor area of between 870 and 1,100 square feet. A separate dining room is provided.

Although the cost per square foot of floor area in bungalow construction is greater than the cost in a two-storey house, the bungalow can be built for a smaller total cost provided its floor area is well below that of the two-storey house.

Two-bedroom bungalows have been designed with floor areas of under 700 sq. ft. which gives a selling price below that of a typical small two-storey dwelling. The bungalow frontages are kept to a minimum and site densities of between 8 and 11 dwellings per acre have been obtained. These low-cost bungalows satisfy the demands of the older generation and young couples who require limited accommodation for a small capital outlay and minimum running costs.

The three-bedroom semi-detached houses with larger floor areas than the bungalows are invariably more expensive to build. They attract the middle range of purchaser who can afford the additional accommodation provided by the third bedroom and dining room. The two types of dwelling which I have described satisfy the accommodation requirements of the majority of





prospective house purchasers. In turn the speculative builder can sell them at favourable prices due to their low constructional costs and high density characteristics.

What has happened to the other forms of house plan on our new estates? Detached three bedroom bungalows at the top, and terrace dwellings at the bottom of the price scale are not represented. The reasons are not hard to find. For example, three bedroom bungalows normally require a separate dining room and excessive corridors to connect the rooms. The resultant floor area is most often in excess of 850 sq. ft. Their large frontages give a lower development density which, when allied to the construction cost, tends to price this type of dwelling out of the middle income market. Terrace houses present a complete reversal of the cost factors. High density development with the terrace house can be achieved quite easily. It can contain most of the accommodation combinations which would be required by purchasers, and the selling price could be lower than any of the other types of dwelling I have considered. I have not seen one example of post-war speculative terrace dwellings in this area. The speculator, no doubt, is tempted by the economic aspects of terrace housing, as indeed is the architect by their aesthetic possibilities. The only person not to favour them is the prospective purchaser! One of the strongest public prejudices against terrace houses lies in their similarity in appearance to council houses. If the individual particularly desires this type of dwelling he can either resort to a true council house or purchase one of the many relatively cheap vintage terrace houses which abound in and around Newcastle. A practical aspect which must be carefully considered is the desire of the householder in the middle income group to possess a garage adjacent to his home. The grouping of garages away from the individual dwellings would certainly have an adverse effect on the sales prospects of the speculator.

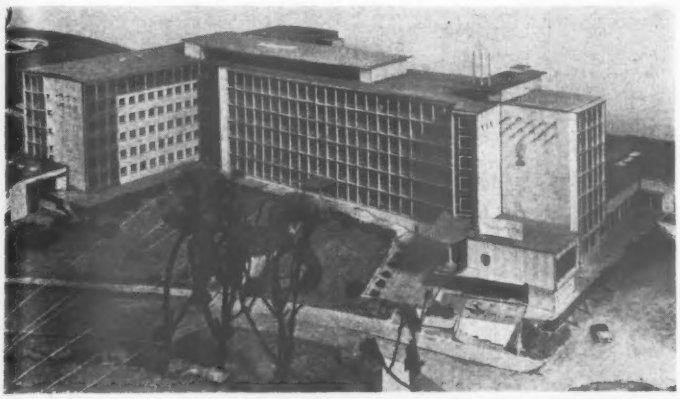
The accompanying illustrations show two of our local estates which portray a marked improvement in aesthetic standards. Improvements of this calibre are long overdue. It is unlikely that existing basic speculative housing plans will vary to any appreciable degree during the next few years. I am convinced that aesthetic development and improvement of the now standardized house types is possible without necessarily increasing the costs beyond reasonable limits. It is in the aesthetic field that the architect can exert his influence over the speculative builder to a greater degree than at present.

Recent examples of speculative housing and shops designed by architects of the NAA. Top left and centre left, the shopping parade, Brunton Park estate, Gosforth, designed by John Garside and supervised by R. W. Graydon, the staff architect to the contractors, John T. Bell & Sons, Ltd. Centre right, and above left, housing at Heddon on the Wall, Northumberland, designed by Thurlev & Williamson and built by G. Bainbridge. Left, housing at Brunton Park by R. W. Graydon, staff architect o John T. Bell & Sons, Ltd., builders.

RECENT WORK BY THE ARCHITECTS OF THE NAA

in Cumberland, Northumberland and Durham

Civic buildings



COUNTY OFFICES

at DURHAM

designed by G. R. CLAYTON, county architect

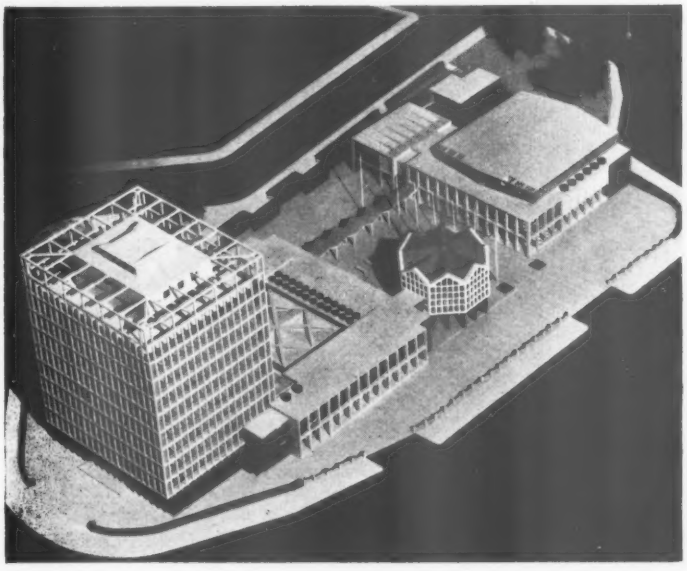
The staff of the County Council at Durham is at present widely dispersed, and it is intended that these new offices, to be built on a site 1½ miles away from the cathedral, should enable all the staff to work in more efficient conditions under one roof. The main office block is a T-shape, with vertical circulation at the junction of the T, with offices placed on either side of central storage and toilet facilities. At one end will be the council chamber and committee rooms and another ancillary block houses the library, weights and measures, and the analyst's and engineer's laboratories.

TOWN HALL

at NEWCASTLE UPON TYNE

designed by GEORGE KENYON, city architect

The town hall is sited at Barras Bridge, in the foreground in the model is St. Thomas' church by John Dobson. Tenders have been received for the foundations to the first stage of this building, and work will commence shortly. The first stage is estimated to cost £710,000. The total cost of the scheme is £2,030,000.



CIVIC CENTRE

at CARLISLE

designed by C. E. PEARSON and G. R. LOVELL of Messrs. CHARLES B. PEARSON and SON

The architects of this design are not, of course, members of the NAA, but it seemed only fair to include the new City and County borough offices for Carlisle and thus complete the trio of new civic buildings proposed in these three counties in the north of England. This design was the winning entry in a two-stage competition recently assessed by Professor W. B. Edwards of Newcastle. There were 194 entries, from whom six were selected to proceed to the final stage.

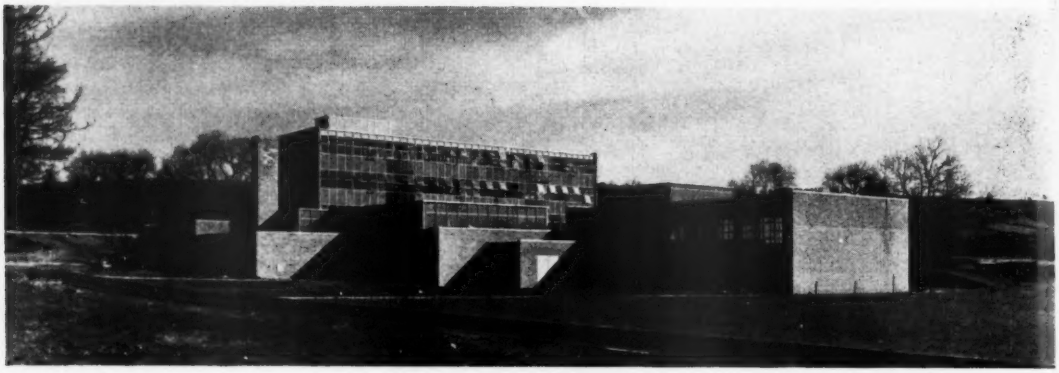
schools

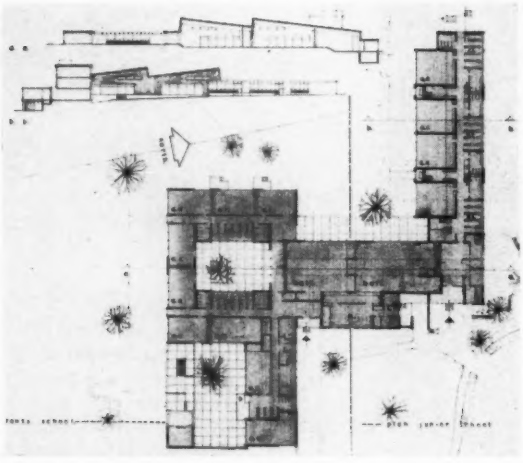
GRAMMAR TECHNICAL SCHOOL

at WOLSINGHAM

designed by G. R. CLAYTON, county architect

This is a three-form entry, mixed grammar technical school for 540 pupils which is later to be enlarged into a four-form entry. Accommodation: thirteen classrooms, four division rooms, six special-purpose rooms, two science labs., biology and physics rooms, library, assembly hall, gym and dining area. Construction: steel frame, brick flank walls, aluminium curtain walling, prestressed precast concrete floors, steel deck with insulation board and bituminous felt roof.





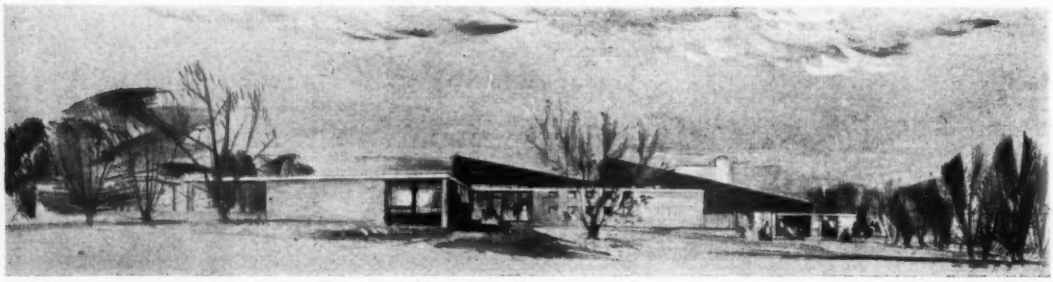
PRIMARY SCHOOL

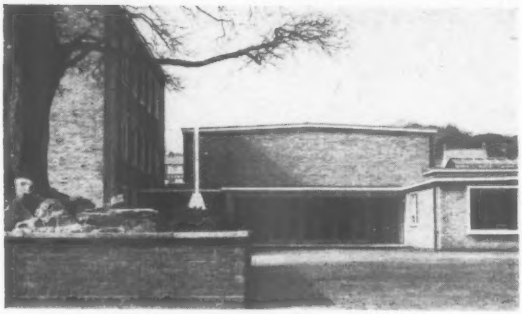
at KENTON, NEWCASTLE UPON TYNE

designed by THE DESIGN PARTNERSHIP

A three stream entry school, with 840 children, this school is planned on a very restricted site because of mining subsidence. The infant and junior halls are formed together and are used for dining, food being served by a common kitchen. Construction: brick cross walls, reinforced concrete suspended floors, copper roof to hall, walls prefabricated in timber on 3 ft. 4 in. module.

Ground floor plan



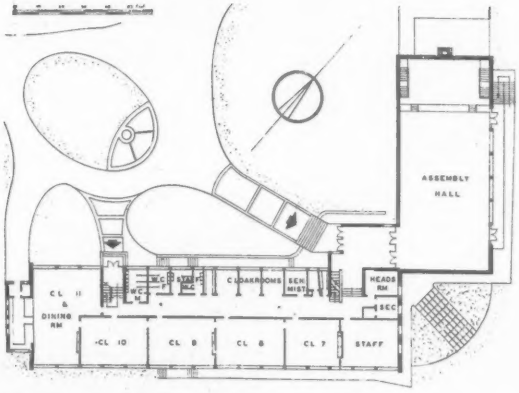


SECONDARY SCHOOL

at ALNWICK

designed by REAVELL and CAHILL

The architects were first commissioned to build a separate two-form entry Secondary Modern (Mixed) School adjacent to the existing school of the same size built in 1937.
After a project study had been made by the architects it became apparent to them that there were serious educational objections to the County Council proposals and they submitted an alternative proposal. Briefly, the alternative proposal was to add to the existing school to form a 4-form entry secondary (mixed) modern school. It was proposed to convert the existing school into practical room, science, art, metal and woodwork and domestic science rooms, and to build a new extension containing all the classrooms, library, staff accommodation, and a dining hall and kitchen. This alternative proposal was approved by the County Council and the Ministry of Education. Work started on the school in June, 1956, and was scheduled to finish in 15 months. So good was the progress the buildings were handed over in mid June 1957, 2½ months ahead of schedule.
The new school is basically composed of three elements: a steel framed assembly hall and kitchen to serve 400 meals; a three-storey classroom block, above left, of reinforced-concrete frame, clad with prefabricated panels faced with Opepe vertical boarding; and a staff wing and the library, above.



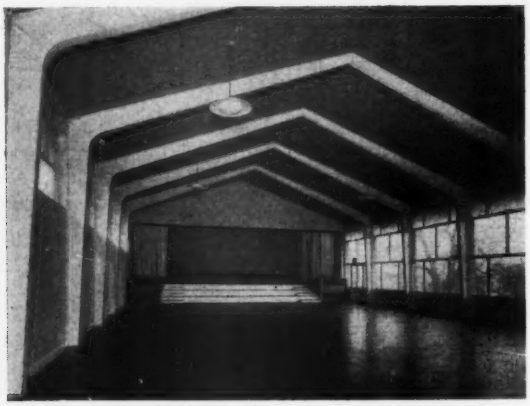
Ground floor plan

SECONDARY SCHOOL

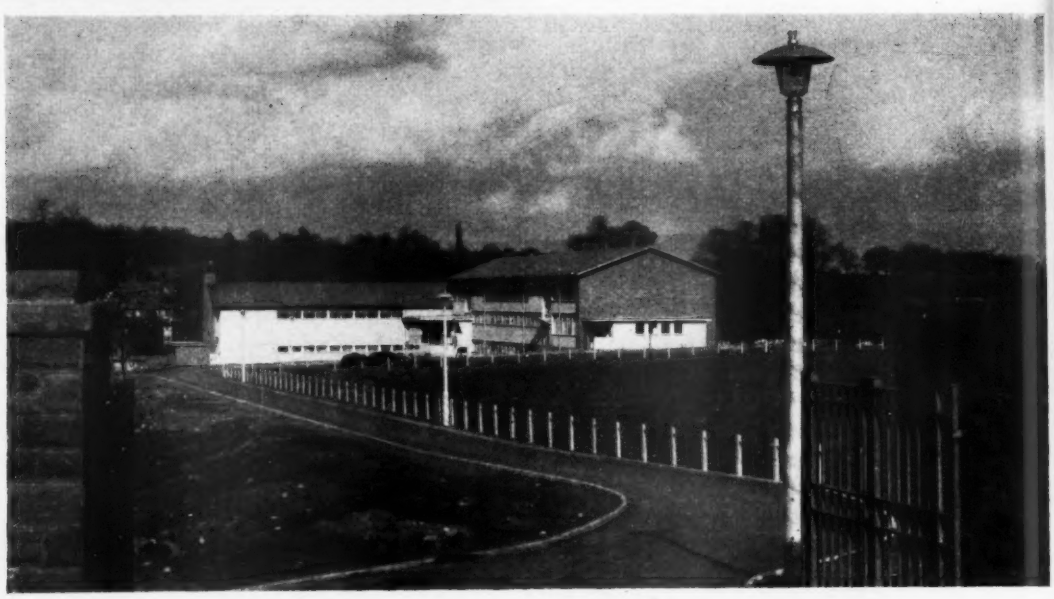
at PENRITH, CUMBERLAND

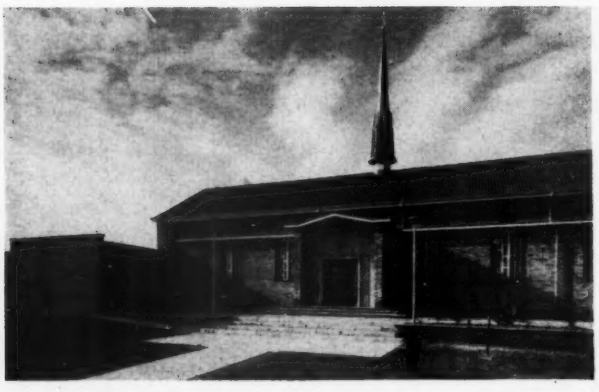
designed by JOHN H. HAUGHAN, county architect

The school is for 240 boys and 240 girls but it will eventually be altered to form a girls' school for 600 pupils, and a second school for 600 boys will be accommodated on the same ten acre site. Construction: mainly steel framed, with stone and brick cavity walls. The plinth, flank walls and chimney are of Lazonby stone and the brickwork has been rendered a pastel colour to harmonize with the stone. The pitched roofs are of aluminium decking covered with insulation board and three layers of felt, and stone chippings to match the colour of Westmorland green slates. Floors:



library, cork; hall, see left, hardwood blocks; classrooms and corridors, thermoplastic tiles. Heating: low pressure hot water feeding convector type warm air blowers. Cost: £88,200. Building commenced: February 1954; completed, November 1955. View from west, below.





CHURCH
at PETERLEE
designed by CORDINGLEY and MCINTYRE

housing

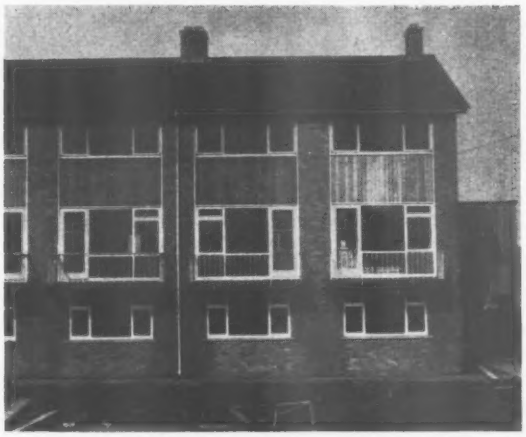
HOUSING

at NEWTON AYCLIFFE

designed by G. A. GOLDSTRAW,

chief architect to the Development Corporation

The photograph above left shows a recent housing scheme using footpath access. Low roof pitches (20 degrees) and close eaves (a box gutter with no overhang) keep the houses close to the vernacular. Above is another proposal for housing based on the Radburn principle with a single loop road, designed to prevent speeding, giving access to culs-de-sac. The use of through-utility rooms enables the terraces to be made very long, and " internal-angle " and " external angle " houses offset to a great extent the longer frontage of through-recess double aspect houses. Density: 14 to the acre. Left is a view of part of the town centre now under construction. These shops are for Ravenseft Properties Ltd. and have been designed by Lionel Fewster and Partners, in collaboration with the chief architect.



HOUSING

at MONKSEATON

designed by W. M. COULSON

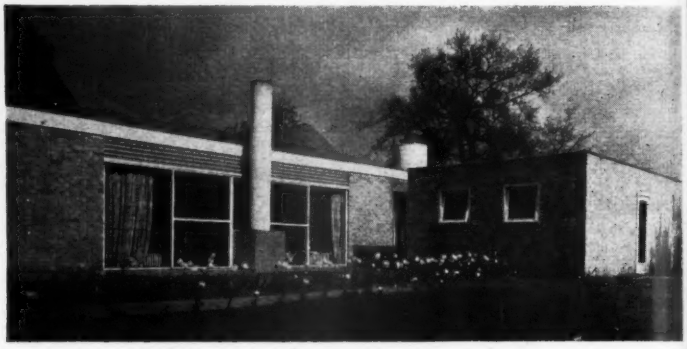
(borough engineer and surveyor, E. ROBERTS)

This housing scheme, known as the Fold Redevelopment Scheme, is for the borough of Whitley Bay. It consists at present of two blocks of flats, but eventually four further blocks will be built, totalling 91 dwellings. There is one 2-storey block, above, containing ten single-bedroom flats, and a 3-storey block, left and above left, containing twelve 2-bedroom maisonettes and six one-bedroom flats on the ground floor. Construction is largely traditional. The distance between party wall centres is 12 ft. 9 in. Each maisonette costs £1,550, and the flats are £1,316 in the 2-storey block and £1,231 in the other.

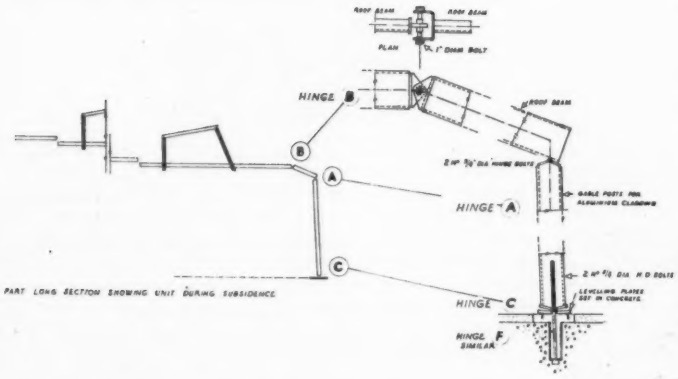
HOUSING and CLUBS

designed by RYDER and YATES

Below and right are sailing clubs at Beadnell and Tynemouth. Bottom, and bottom right, are two houses at Tynemouth and Carlisle, respectively.



industrial buildings



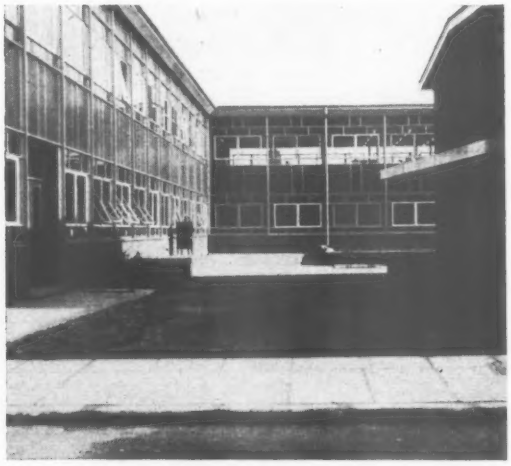
FACTORY

at PETERLEE

designed by J. H NAPPER and PARTNERS

The drawing, left, shows part of a long section through this factory, and demonstrates the flexibility of the construction which enables the effect of ground movement due to mining subsidence to be counteracted. The clients, the North Eastern Trading Estates, Ltd., for Messrs. Alexandre, Ltd., required a floor area of 48,000 sq. ft. It was calculated that through mining subsidence the maximum vertical differential settlement would be 9 in.; and the maximum lateral creep 6 in. in 100 ft. The construction consists of a series of bridges of 120 ft. span,

and 25 ft. wide, designed to hinge at three points, with 2-in. gaps between (see aerial view). This structure would move with the ground, and the flashings would only be broken if the maximum settlement of 2 ft. 9 in. took place at one time within the area of the building. Floor slabs are 15 ft. by 12 ft. 6 in., with 1-in. and 2-in. gaps, and are maintained in alignment with steel dowels slotted into steel tubes, and allowing horizontal movement.

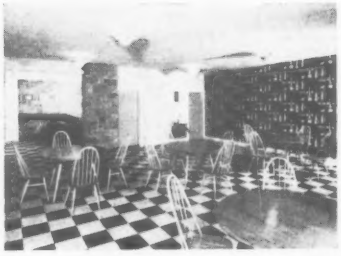


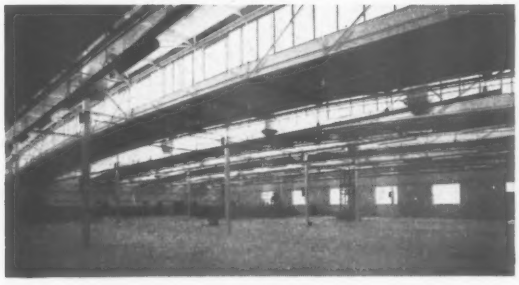
FACTORY

at JARROW

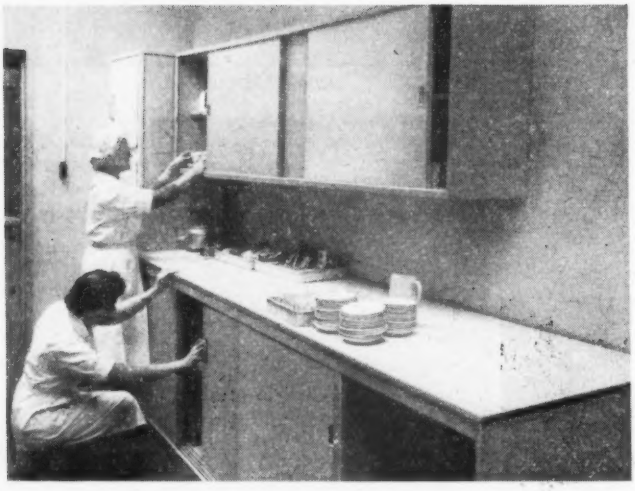
designed by TURLEY and WILLIAMSON

This factory, with offices, laboratories and canteen was designed for the North Eastern Trading Estates, Ltd., and is occupied by Morganite Resistors, Ltd. Left is a view of the main courtyard, with the laboratories on the left, the offices in the background, and the social building on the right. Below, left to right: the entrance foyer to the offices; the executive staff dining room; the main hall. Bottom, left, the factory; right, the factory from the south west, with the laboratory block in the distance on the right.





Secret of the NEW 'Loretto' GEAR



NEW IMPROVED DESIGN

Nylon Wheel · Silver Steel axle
Cadmium plated one-piece body
Rail in alloy or brass

'Loretto' Cabinet Rollers for Cabinets, Wardrobes and Cupboard doors up to 50 lb.

NEW LOW PRICES

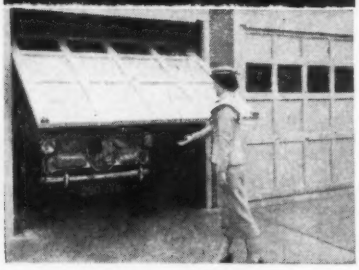
Top Guides : **10d** per pair
Bottom rollers **5/9d** per pair
Top and bottom rails : **1/-** per foot.

THREE NEW STANDARD SETS from 34/-

Request New Leaflet L for prices and terms

'Loretto' Cabinet Rollers were successfully fitted in H.M. Royal Yacht S.S. Britannia

'ULTRA'



The Outstanding Overhead Door Gear—'Ultra' Sets now seen everywhere. From **£10.18.9.** Or with Austin Door— **£18.17.9.**

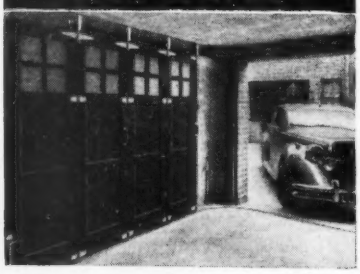
Ask for Leaflets OD and AD.

'MARATHON'

'Marathon' Ball-race Runners for interior doors. Are in thousands of homes—in ships, coaches and buildings everywhere. Sets from **41/-.** 'Lobby' Housing Sets from **32/6.**

Write for Leaflet 'M'.

'TANGENT'



'Tangent' Sliding Gear for Garages. To slide doors smoothly round the corner. Already 350,000 sets in use all over the world. Standard sets from **228/-.** 'Tangent' can be tailored for any opening.

Request Leaflet 'T'.

Henderson **THE FIRST NAME IN SLIDING DOOR GEAR FOR 35 YEARS**

P. C. HENDERSON LTD · HAROLD HILL · ROMFORD · ESSEX · *Telephone: Ingrebourne 4444, London calls dial IL4-4444*

H112

FACTORY, OFFICES and CANTEEN

at WALLSEND ON TYNE

designed by S. W. MILBURN and PARTNERS

These oil-seal works for Messrs. George Angus & Co. were opened in 1956. The view, top, shows the canteen in the foreground, with the office block beyond, and the laboratories in the far distance. Behind the canteen is the main factory area, below, and beyond that again is the boiler house, of which a night view is shown above. Above left is the interior of the barrel vaulted canteen, which accommodates up to 700 people. Left is the main entrance hall. The offices are clad with a modified curtain walling system set forward from the main structure. The factory is laid out on a 60-ft. grid, with provision for expansion in two directions. Walls are of aluminium. The monitor roof lights are supplemented by high-level perimeter glazing.

YORK INSTITUTE

Two Most Valuable Courses

1. Historic Buildings

This course is held annually by the York Institute of Architectural Study under the direction of Dr. William A. Singleton, with John West-Taylor as Secretary.

This course is intended for practising architects, surveyors, clerks of works and builders, and is one of a series devoted to historic buildings.

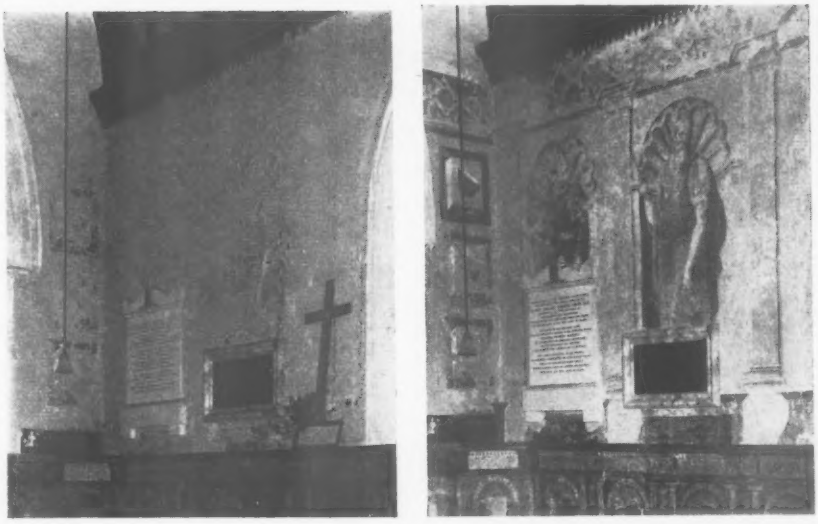
Such is the standing of the course that the Polish Government sent a young architect from its Department for the Preservation of Ancient Buildings, the Irish Office of Public Works sent a senior member of its Department, and the enlightened City of Oxford its chief building inspector. From the Manchester College of Science and Technology came a senior lecturer—since they are considering the possibility of establishing a similar course for building students. A firm of timber merchants interested in insecticides sent their technical consultant, while the Northern Area Agent for the National Trust and a clerk of works from a large estate also attended. Finally, there were some architects in private practice who came at their own expense.

The very diversity of approach of these students, who could pool a wide range of experience, would alone make the course of value. Basically, however, its success depends on a well-conceived syllabus and good lecturers; and they were not lacking. One might criticize certain overlaps in subject matter, but on reflection this gave the subtle difference of approach between, say, architect and stonemason or specialist in timber preservation. The syllabus was comprehensive and, in my opinion, started correctly with a historical resumé of English architecture. This section could have been somewhat improved by more direct relation to examples in York and more emphasis on construction than on style; nevertheless it was a valuable introduction. The lecture on Lesser Traditional Domestic Architecture went some way towards filling this want, and, being based on the original work of Dr. Singleton and the Vernacular Group, was most stimulating. Building Stones and The Mason's Craft were followed by lectures on Structural Failure and Masonry Repairs.

After a lecture on Roof Coverings there was a well-conceived forum, with representatives of the various Development Associations—Zinc, Copper, Lead and Aluminium. Unfortunately, there were only two out of four present owing to casualties, but a most lively discussion was held, and those who were there must be congratulated on being objective and not trying to "sell" their respective materials. Timberwork Repairs, together with the Repair of Plaster Ceilings, was dealt with by Dr. Singleton, who has had considerable practical experience in these fields. Special subjects such as Fire Protection and Heating and Lighting of Historic Buildings were also included in the syllabus, and visits balanced our studies.

Perhaps the most important subjects were dealt with last, that is Building Surveys and Site Organization, Supervision and Costing, for which we had the benefit of the guidance of G. G. Pace, of Llandaff fame. The précis of his lecture referred to "Firms purporting to be Specialists in Restorations." Many specialists are necessary and make a truly valuable contribution to the building team, but there are "specialists" who are riding on the band wagon, notably in the field of death watch beetle extermination and dry rot repairs. One is forced to the conclusion that there is no substitute for site supervision at frequent intervals and that the architect must know enough of specialist work to control the single-minded specialists and co-ordinate their work to produce a result that is aesthetically satisfactory.

A "practical problem" was set, for which the course divided itself into syndicates. We spent a hilarious but instructive evening discussing the repair of a redundant church under Mr. Pace's tactful chairmanship. Repair work should interest a conscientious architect, and if he is prepared to treat it on an entirely different basis from factory buildings, there is no fundamental reason why he should not practice in both fields and let the latter finance the former to some extent, both types of work thereby benefitting from the contrast.



The wall paintings in the church at Passenham were discovered by Lawrence Bond, a Grantham architect, after he had attended one of the York Institute's courses described in the report on this page. Left, the chancel wall before, and right, after a sample section had been uncovered. It is hoped that the Pilgrim Trust will give a grant to deal with the rest.

2. Care of Churches

Following immediately on the course on protection and repair of historic buildings, it is logical and appropriate to have a course on the care of churches. In view of the quinquennial inspection that must now be made to churches throughout the country, the course has particular significance.

Dr. Singleton initiated the subject with excellent advice on the care of churches and the inspection of them. One was left with the realization that however much time one put in to the inspection and report on a church, taking photographs, making drawings, climbing ladders and carefully drafting historic and repair details, it was all very much worth while. One should not "count the cost" with this type of work, but rather treat it as a high calling, a job that must be done for the sake of our British heritage and a privilege to know enough about it to be asked to do it.

That may be putting things on a high plain, but in fact if the job of reporting on churches, let alone supervizing their repair, is to be done properly, the architect in charge must be prepared to give a *great deal of time and trouble to it.*

Church Acoustics and the Organ were subjects ably dealt with by Mr. Creighton and Mr. Clutton. Mr. Pace, who has a number of York churches under his wing, gave us invaluable details regarding church planning and the fittings to go in the church, all very thought provoking.

On the third day came a quite brilliant discourse on stained glass by Mr. L. C. Evetts. If any architect was not enthusiastic about stained glass windows before this lecture he certainly was by the end of it. We were all inspired to want to design exciting modern windows in colour or sparkling clear crown glass. The slide illustrations were excellent and the technical advice on repairs and the making of a stained glass window were most instructive. A visit to the Minster Stained Glass Workshops completed the teaching by practical demonstration.

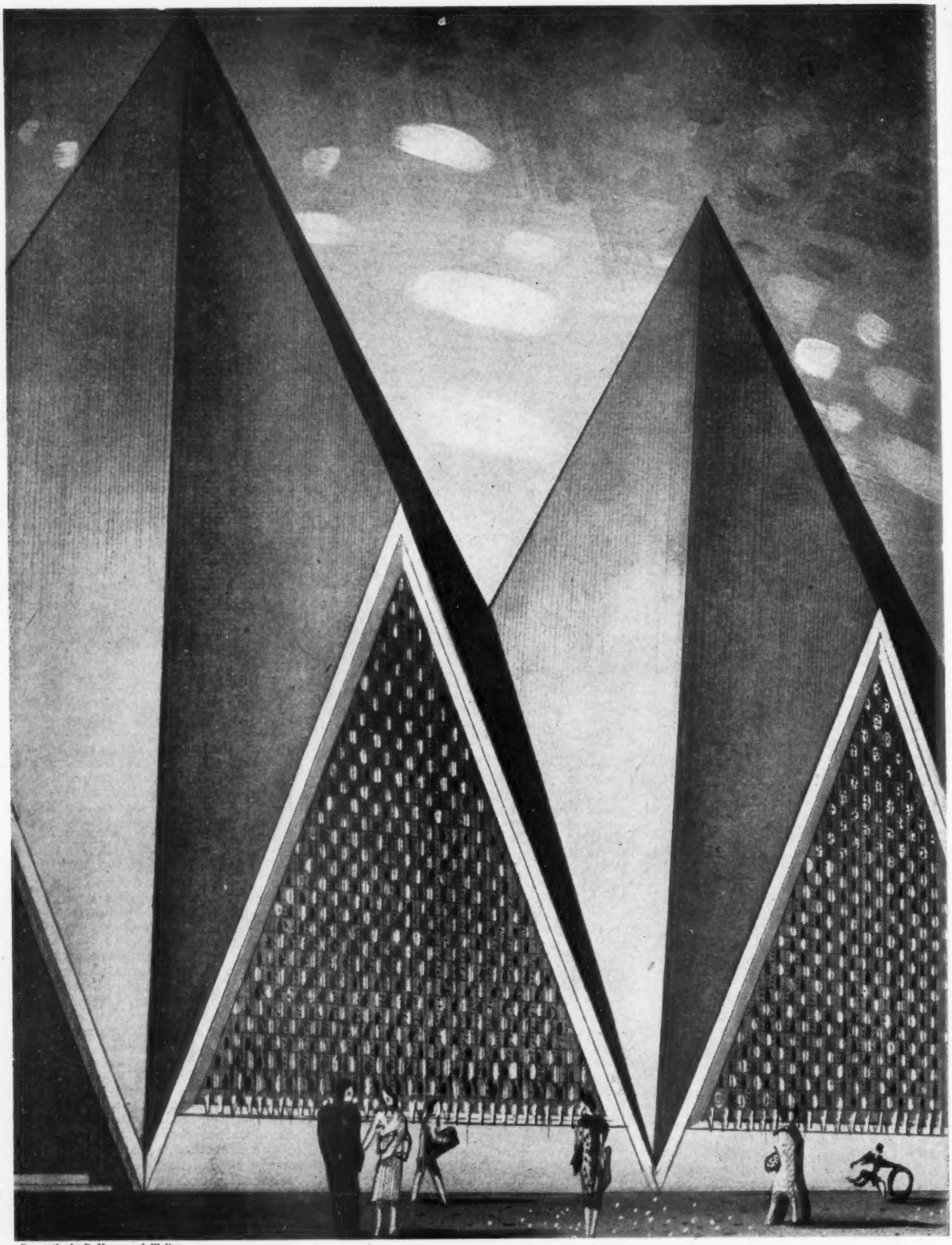
Mr. Clive Rouse covered the field of mural paintings in a masterly fashion, leaving his listeners in no doubt whatsoever about the action they should take to procure the safety and preservation of mural decorations. "Decorations" is in fact the wrong word, as these early paintings were executed for the sole purpose of teaching the illiterate peasant the bible story. They were the medieval edition of our modern cartoon. Mr. Rouse pointed out that at one time or another every single church in the country undoubtedly had murals on its walls. The moral to be drawn from this amazing fact was "never alter, repair or in any way disturb an original church wall without first *testing for murals*, and if found, *calling in the expert.*" Amongst the slides shown there were six or seven instances of mural discoveries made by architects who had been on previous courses. This was a most encouraging piece of information.

Another allied subject dealt with by Mr. Rouse was the Care of Monuments. Last but far from least came Bells and Bell-hanging. Mr. F. Sharpe of international fame gave not only an extremely enlightening talk on a subject little understood by the average architect, but also most ably illustrated it with working models and photographs. It is so necessary that we should know how bells are hung and rung and bell frames constructed if we are to be able to advise and deal with the innumerable problems that are now arising in the hundreds of church towers throughout the land.

Indeed, it has become more urgent of late that the architect should know *all* the subjects dealt with in this course on the care of churches. There are all too few of the profession with knowledge of medieval repair work and the course brings out the modern techniques and methods that have developed in the last 20 years and especially since the war.

The course cannot be too highly praised, and it should not be viewed by architects engaged on church inspections as a luxury, but a necessity.

B. M. FIELDEN.



Perspective by R. Myerscough-Walker

THE BRITISH GOVERNMENT PAVILION AT BRUSSELS EXHIBITION

Architects: Howard V. Lobb, C.B.E., F.R.I.B.A.
John Ratcliff, O.B.E., F.R.I.B.A.
Contractors: Costain/Blaton-Aubert Organisation

Marley Floor Tiles were selected by the architects for their quality and perfection of finish. They have been used for the Hall of Technology, the Crystalline Hall and two flights of steps.

MARLEY TILE COMPANY LIMITED · RIVERHEAD · SEVENOAKS · KENT
LONDON SHOWROOMS · 251 TOTTENHAM COURT RD. W.1. **MARLEY**

The Editors write:

The amendment carried by such a crushing majority at the RIBA Annual General Meeting, although proposed and seconded in moderate language and in courteous terms, was unmistakably a vote of censure on the Council. The character of the meeting, the terms of the amendment, and Dr. Ronald Bradbury's extraordinary speech revealed starkly how remote some members, and probably a majority, of the Council have been from the feelings of the membership. The Council will now have to pay serious attention to Anthony Cox's warning that, unless drastic changes are now made in the Council's policy and structure and in the services it renders, large-scale resignations are a serious danger.

But the meeting also showed the existence of a fund of enthusiasm and of goodwill that could, if given an opportunity, be of immense assistance to the work of the RIBA nationally and in the localities. It will be the task of the committee, now set up by the Council to consider its reconstruction, to find ways in which the younger members of the RIBA in particular can play an active part in its work. A democratic system of election, although desirable, would in itself be insufficient to make this possible.

The Council's financial policy has got to be changed. The absurdity of devoting large surpluses for several years to paying off the mortgage, instead of using them to develop the Institute's services to the members and the public, has been fully exposed. The Council should not listen to the advice of "financial experts" who cannot hope to understand the importance of expanding work on education or public relations. The inexplicable loss on the *RIBA Journal* (which, as Cleeve Barr said, should be a gold-mine) calls for the most searching enquiry. The proposal to make the students pay, through increased examination fees, towards the cost of the new building must be rescinded.

The Council will be expected to act quickly, and to report fully to a special general meeting at the end of the year. The Council will be better able to do so if some new blood is injected into it in the elections to be held within the next few days.

Censure motion carried by overwhelming majority at RIBA Annual General Meeting

The following is the resolution moved by Cleeve Barr, seconded by Anthony Cox, and carried almost unanimously (there were only about ten hands raised against it and perhaps 500 *for it) at the AGM of the RIBA.*

That the Annual Report be adopted subject to the following considerations:

This AGM expresses its grave concern at the state of the Institute's affairs, as revealed by the Report, and considers this to reflect not only business inefficiency, but also a failure to appreciate the needs of the profession. It believes it necessary in order to remedy this state of affairs both to revise the financial policy and to reform the Council to make it more representative of the general body of members, and for these purposes requests the Council:

1. To carry out a comprehensive review of the Institute's office organization and business affairs, and also to reconsider its financial policy so that its professional and public activities may be effectively developed.
2. To initiate and prosecute such action as is necessary to ensure that
(*a*) honorary officers (other than the President and Past Presidents who are directly elected) shall be appointed only from elected members of Council;
(*b*) all members of Council who shall be entitled to vote, shall be elected by postal ballot—this being organized in the case of regional representatives locally by the Allied Societies.
3. To call a Special General Meeting to report progress on the foregoing items by December, 1958.

The President, K. M. B. Cross, also accepted a resolution (in the form of an amendment to the motion "that the report be received") moved by Thurston Williams and seconded from the floor:

"That the council be requested to reconsider byelaw 60, to give consideration to the means by which a poll of the members may be taken, and the methods by which a special general meeting may be called."

(*Byelaw* 60 *requires the Council to hold a poll on the request of* 40 *Fellows,* 40 *Associates and* 40 *Licentiates; there is no provision for members requisitioning a special general meeting.*)

'It's a question of confidence'

CLEEVE BARR (Deputy Architect, MOE), moving the resolution, said:

The first point to which I wish to draw attention is that it would be unreal in present circumstances, and extremely misleading, to consider the financial proposals contained in this Report, without at the same time considering the confidence of the membership in the Council itself. One cannot simply raise subscriptions and examination fees all round and expect a proportionate increase in the total income—unless at the same time the value of the service provided by the Royal Institute, in the widest sense, is substantially improved. There is already evidence, from the larger proportion of student members in 1957 and 1958 (p. 4) that many students have postponed becoming Associate members as a result of the subscription increases in 1956. The law of diminishing returns has already begun to operate, and will increase in its effects unless fundamental changes are made in the constitution of the Council. Mr. Cox will develop this point further in seconding the motion.

The second point I wish to make on the narrower financial issues, is that the Committee's Report, coupled with the Financial Statement in February, bears all the evidence of confused thought and violent panic, following earlier complacency and mismanagement.

First, in February we were told that the estimated short fall on the Building Fund was £100,000. In April it is put at £73,121—with no word of adequate explanation for the difference.

Second, great play was made in February of the losses due to falls in the market value of stocks (actual figures were not given). In the balance sheet the depreciation shown is only a few hundred pounds.

Third, no explanatory notes are given in the published budget for 1958 of the statistical basis of the estimates. The three-year budget referred to in the Report is not published at all.

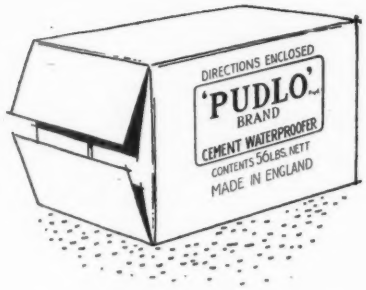
Fourth, the increase from membership subscriptions was said, in the February statement, to fall short of the 1955 estimate by £8,800 per annum. In round figures the

underground tank in concrete

waterproofed with

'Pudlo' brand waterproofer

for **Vauxhall Motors Ltd.** at their Dunstable Works.



Chartered Structural Consulting Engineers,
G. A. Dodd & Partners,
17-18 Railway Approach,
London Bridge, S.E.1.

Contractors,
Building Contractors (Luton) Ltd.,
37 Church Street, Luton, Beds.

The tank is a monolith of reinforced waterproofed concrete having a dividing wall to form 2 sections.
The larger section contains water to a depth of 9 ft, the smaller section houses an electrically powered motor and pump.
Complete protection against seepage of water into the Pump chamber, also against the loss of water which would drain away quickly into the chalk sub-soil, was assured by the inclusion of 4 lbs of 'PUDLO' Brand Waterproofer to each 100 lbs of cement in the 3 : 1½ : 1 mix.

'PUDLO' BRAND

Fully descriptive booklet sent on request.

CEMENT WATERPROOFING POWDER

OTHER 'PUDLO' BRAND PRODUCTS INCLUDE :—
WATERPROOF CEMENT PAINTS, CEMENT PAINT PRIMER, EXTERNAL WATER REPELLENT, CEMENT BONDER, PLASTER BONDER, MORTAR PLASTICISER, LIQUID CEMENT ADDITIVE AND FEUSOL FIRE CEMENT.

The word 'PUDLO' is the registered Trade Brand of Kerner-Greenwood & Co. Ltd., by whom all articles bearing that Brand are manufactured.
Sole Proprietors and Manufacturers :
KERNER-GREENWOOD & CO LTD · KING'S LYNN · NORFOLK

average increase in membership in the boom years 1949-55 was 1,200. The average increase for 1956-58 was 660. No explanation is given as to how that deficiency of £8,800 a year on subscriptions was made up, but the only possible explanation one can deduce from the figures is that the 1955 estimate actually assumed a continued growth in membership equal to the rate of the boom years. An over-estimate at the time of an additional 500 members a year would just about account for the £8,800 deficiency—a fantastic state of affairs in these days of known bulges in the educational world.

Fifth, why should we subsidize publications to the tune of £8,000 a year from subscriptions? Why does the RIBA JOURNAL—a gilt-edged investment for advertisers—have only 75 pages of advertisements, when *Architectural Design* and the *Review*, monthlies with a much smaller circulation, carry 105 and 120 pages respectively? Why should not the Kalendar (like that of the Blackpool Society) and, in fact, every publication (in the present financial circumstances) make a profit?

Sixth. Examination fees. The budget estimate for the holding of examinations and awarding prizes for 1958 is £6,000. Is it really fair that the increase from examination and entrance fees should be £25,000? The cost of holding examinations, since they will be fewer, drops from £7,000 to £6,000, but the students' fees are going up. Is it fair that they should bear the cost of the new building? By all means let us restrict entry to the profession by raising educational standards, but not by raising economic barriers.

Seventh. Cannot economies be made in the HQ administration? Cannot the amount of paper be reduced—particularly papers headed "Confidential" and the servicing of committees be streamlined? How does the AA manage to function so actively with so much lower overheads than Portland Place?

Eighth. How on earth did the Committee fail to allow for increases in the cost of building, for the telephone installation and so on to the extent of £19,700? A week ago, on a conference platform, I was one of several architects who were asked point blank by a contractor: "Is it true that the RIBA has to raise its subscriptions to cover the cost of variations and additions to the contract for its new building?" I am glad to say my colleagues and I did not give the sort of reply we are giving tonight. We covered up.

This brings me to my last point, the most crucial of all—that, in spite of the President's fine words in the covering statement to the Report, the policy of devoting all surpluses from ordinary funds to the reduction of the loan on the new building is going to cripple the professional and public activities of the Institute. I am not one of those who think that lavish and glossy exhibitions at Portland Place are the best way of spending money on public relations. Rather we should concentrate on putting our own profession in order by a series of limited discussions, concentrated training courses and other measures to raise the standard of service we provide to the public. The recent Science symposia and the Oxford educational conference were tiny steps in the right direction, but what is the financial policy we now face?

The sum of £73,000 is being raised on a mortgage. This would result in Annual charges of say £7,500 a year to pay off the cost of the new building over 20 years. But for the next four years, it would appear, the Council budgets to put £5,000 a year to the new premises fund, plus the total surplus for the year which is estimated at £12,000 a year. That is £17,000 a year, or 12 per cent. of our current income, to reducing the mortgage. This is certainly a panic decision, and makes nonsense of any talk about maintaining the activities of the Royal Institute.

Already the Science Committee, of which I am a member, has been told by its secretary that, unless a cut in his clerical staff allowance is restored, he cannot possibly cope with our programme of three symposia and eight lectures in the coming year; and I would remind you that the last Science Symposium made a profit of over £200—all of which presumably is to go to the Building Fund, instead of helping to finance further activities.

No ordinary member would dream of raising the money to build a house for himself by taking out a twenty-year mortgage, and then crippling his daily expenditure by trying to pay it all back in a few years.

The Council's policy that the first call on any surpluses be for the purpose of reducing the building loan, must be rescinded.

In conclusion, I recognize that to some extent we are all guilty of negligence in the conduct of the affairs of the RIBA. We have in the past taken the financial accounts and annual report far too much for granted. But some—and particularly those who accept office—are more guilty than others. Admittedly progressive changes are slowly, very slowly, taking place. Basic changes in the democracy of the Council itself have, however, still to be made to enable these changes to bring the Council once again into contact with the membership. I beg to move the resolution.

The platform at the RIBA General Meeting. Left to right, J. R. Paramour (Chartered Accountant); Basil Spence (Hon. Secretary and President-elect); Sydney Redfern (Solicitor); Kenneth Cross (President); C. D. Spragg (Secretary); E. D. Jefferiss Mathews (Hon. Treasurer); W. R. Ellis (Assistant Secretary).

'Anger and Discontent'

ANTHONY COX (Architects' Co-Partnership), seconding, said:

Cleeve Barr has emphasized that if the Institute is to recover from its perilous financial position it is essential that the membership has confidence in its Council.

Few of us, I think, will argue with his contention that unless such confidence exists the raising of subscriptions may well produce only diminishing returns. I am sure this is no mere debating point, but a very serious possibility.

Since the statement on the Institute's finances appeared in February, most of us, I imagine, have been aware of an ominous undercurrent of anger and discontent, and the Council must realize—unless it is more grossly out of touch with the membership than I can believe possible—that there exists at the moment a climate of opinion in which resignations are dangerously likely.

However we may deplore the negative attitude implied by resignations, we have to face the fact that should such a process once begin it might well accumulate the momentum of a landslide. Should that happen the consequences would be serious indeed.

It is therefore *vitally* important that the Council has the confidence of the membership. I am afraid I doubt very much whether the outgoing Council, whose Report we are here to consider, enjoys such confidence; but quite apart from the present crisis I doubt whether *any* Council appointed in the manner in which ours is, can be said to enjoy such confidence except by some improbable and fortunate coincidence. It is an assembly which by its very nature is remote from the membership. I know that this is a disadvantage under which most governing bodies labour, but in our case there are, I think, particularly strong reasons for it.

Most of us, I suppose, on receiving our annual ballot papers, will have experienced year after year a similar sense of frustration—what real difference can it make, we ask ourselves, if we vote for Jones, Smith or Robinson, when the majority of the Council will arrive at their seats by other routes, without passing through the sieve of a secret ballot?

Now this is an unhealthy atmosphere to have as a background to our affairs, and for years it has been hanging around like the smell of drains. I put it to you, Sir, that in our present situation it is not only unhealthy but seriously dangerous, and that it would be not only proper, but prudent, for the Council to take at once such action as is necessary to ensure that in future *all* members of Council who are entitled to vote at Council meetings are elected to their seats by the same method—by postal ballot; and that the honorary officers are appointed only from Council members who have been elected in this manner.

Without going into detail I would like to remind members of the Composition of the Council as at present laid down in our Bye-Laws. The total membership of the Council is 74. Of this total, only 33, including the President and the two Past-Presidents, *have* to reach their seats by postal ballot. The majority, 41, can get there by other routes. Of this majority, 24 are Presidents of Allied Societies in the United Kingdom. The method of their election to their Presidencies varies: some, I understand, are elected by postal ballot by the members of the Allied Society, but this does not happen in all cases.

This delightful 3-bedroomed house, the property of Mr. F. A. Holder, is centrally heated by an up-to-date oil fired warm air system. Shell-Mex and B.P. Ltd. supply the fuel.

Oil fired heating in a Kentish house

IN THE VILLAGE of Keston, Kent, stands this attractive house, 'Kenwood' built in 1956 for Mr. F. A. Holder.

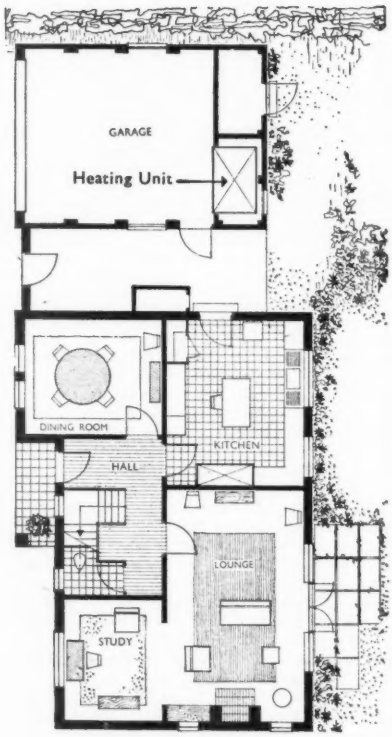
The interior of 'Kenwood' is attractive too, for even in the coldest weather it is kept beautifully warm by its Radiation 'Whole-house' warming system. Thermostatically controlled warm air from the oil fired heating unit is blown gently through underfloor ducts into every room. The oil fired unit also heats the water.

Oil fired central heating means comfort and convenience. And oil fuel, bought in bulk, is surprisingly economical. Automatic controls give you clean, labour-saving central heating and plenty of really hot water whenever you want it. No work is involved; the oil fuel flows directly from the storage tank to the burner.

For small or large houses, for full central heating or for hot water supply only, oil fired heating is ideal. And manufacturers are now producing boiler/burner units specially designed for oil firing.

The two kinds of fuel oil for domestic heating are Shell Domestic Fuel Oil for the large installations and BP Domesticol, the new fuel specially developed for the smaller units with vaporising burners.

If you are designing or modifying almost any kind of public or private building, you will find it well worth while to make provision for this modern, highly efficient and convenient heating method. For further information write to Shell-Mex and B.P. Ltd., Fuel Oil Department D6L, Shell-Mex House, Strand, London, W.C.2.



The automatic heating unit is housed in the garage, with ducts leading into the house. Small, unobtrusive grilles, set in the walls, circulate the warm air throughout the rooms.

I would suggest that it would be far more satisfactory if the position could be regularized, so that all Allied Societies used the postal ballot, and I assume that there should be no difficulty in affairs being rearranged on these lines. I question, however, whether the man best able to perform the duties of Allied Society President is *necessarily* the man best able to give the time to contribute effectively to RIBA Council affairs, although this is obviously something which should be left to local judgment.

The remaining 17 members of Council are there basically by *nomination*, and do not have to be elected *in any way* by the membership. Amongst these are the important posts of the four Vice-Presidents, the Honorary Secretary, and the Honorary Treasurer. This, really, is a quite extraordinary state of affairs. The balance of 11 to make up the 17 are 5 representatives of Overseas Societies, 2 representatives of the Salaried and Official Architects Committee, and representatives of the Board of Architectural Education, the RIBA Registration Committee, the AA and the ABT.

All these representatives have the same voting power on the Council. Now I submit that in the course of time we have strayed too far from the *spirit* of our Charter which states that "there shall always be a Council of the Royal Institute, which Council shall consist of the President, the Vice-Presidents, the one or more Honorary Secretaries, and of other Members TO BE ELECTED at a General Meeting of the Royal Institute in such manner and at such times as Bye-Laws may from time to time prescribe."

Now is the time to see that our Bye-Laws prescribe what the Charter intends.

In such a complicated matter, which must involve discussions with other Societies, it is not possible—or desirable—to be precise or definite in our amendment. What we ask is that the Council should accept the spirit rather than the letter of our proposals, and that they should appoint a working committee to examine ways and means, and report back quickly, and in any case before the end of the year.

Top, Cleeve Barr, on the right, rises to move the critical resolution that was carried almost unanimously. Members can be seen standing in the aisle. Above: it was a tight squeeze, but these members just made it.

IT WAS THE BIGGEST AGM

Our Reporter's account of the meeting

Twenty minutes before the kick-off (as our football reporter might have put it) there was not an empty seat in the stands, there was little standing room on the terrace, and the crowds were still rolling in from places as far away as Nottingham (by special bus), Northampton and Devonshire. It was obviously going to be a big meeting, bigger even than the famous one three years ago when the salaried architects turned up in force and carried the day. The only thing that remained in doubt was which side were they on, though the youthful appearance of the meeting suggested that the Council was in for a rough time.

After the formal welcome to the new Fellows and Associates, the President, K. M. B. Cross, formally moved that the report be received. At this point it must be said that any analogy with a football match must be abandoned, not merely because (as it turned out) the two sides were so unevenly matched, but because the game was played without a referee. The President, flanked on one side by the RIBA's solicitor, Mr. Redfern, and on the other by the Secretary, C. D. Spragg, consulted both of them anxiously whenever any question was raised. He was clearly perplexed about what to do with questions, motions or amendments and never called on anybody to speak. The meeting rolled along a circuitious path by its own momentum, such order as there was being provided by the promptings from the floor of Thurston Williams, Guy Oddie and Hilton Wright. But the President was also anxious to be fair and presided with benign dignity which was rewarded at the end by a sincere vote of thanks.

The President announced his intention to LCC staff association has obviously made take the report page by page, mildly expressing the hope that there would be a full discussion, and that nobody would hesitate to express their views. This tickled nearly everybody's sense of humour, as the meeting had assembled in such perspiring congestion to do just that.

Cleeve Barr rose at once to ask when it would be appropriate for him to move his amendment. There was a moment's silence, and then an outburst of cheers and applause that rolled round the hall, declaring as convincingly as a show of hands that all the 500 were almost to a man behind Cleeve Barr and against the platform. Rumour had it that Cleeve Barr's amendment would be ruled out of order on legal grounds, but the President courteously told him that it could be discussed on the financial section of the report.

Members' rights

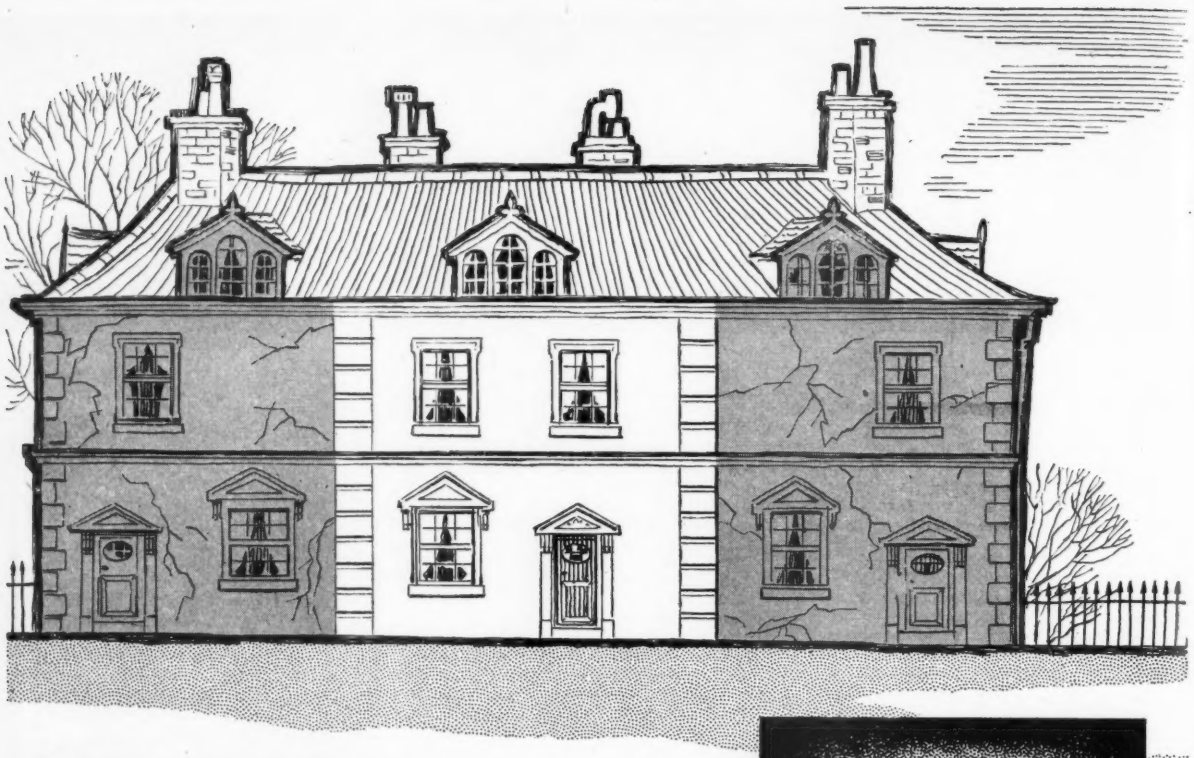
It took a great deal longer than might have been expected to reach that point, however, for, right away, R. D. Butterell raised a question about the byelaws. Byelaw 60, he said, which required that a poll could be requisitioned by 40 Fellows, 40 Associates and 40 Licentiates, no longer corresponded to the membership. The figure corresponding to 40 Associates should be 6 Fellows and 6½ Licentiates. And, as no more Licentiates were being admitted, it would become impossible to act under this byelaw unless something was done about it. The Council, he said, should adjust these figures to make them proportionate to the membership.

Mr. Butterell had a second point, which, to judge by the applause it received, commended itself even more to the meeting. This was that there was no machinery within the Institute for members to call a special general meeting: only the council could do so. So Mr. Butterell made a "formal proposition" that there should be a new or amended byelaw to make some provision for a number of members to call a special general meeting.

The President, after consulting the solicitor, announced that these matters would be considered by the Council. A member, he said, could ask a Council member to get busy and call a special general meeting. But the meeting laughed ironically when he said "the Council is pretty widely representative," and laughed again as he added "it has been recently reconstituted." But Mr. Cross did not put the issue to the meeting. After fierce demands from the floor for something better than "vague assurances," he said he was unable legally to accept the resolution because the byelaws could only be amended by resolutions at two special meetings, and with the consent of the Privy Council.

Guy Oddie and Thurston Williams pointed out that if the meeting could not amend the byelaws it could debate amendments to the motion "that the report be received." An indignant voice from Devon said that he had come all the way specially for the meeting, and in the name of the Devon and Cornwall Society of Architects, demanded another special general meeting in six months to hear what the Council had decided. But the chair remained silent.

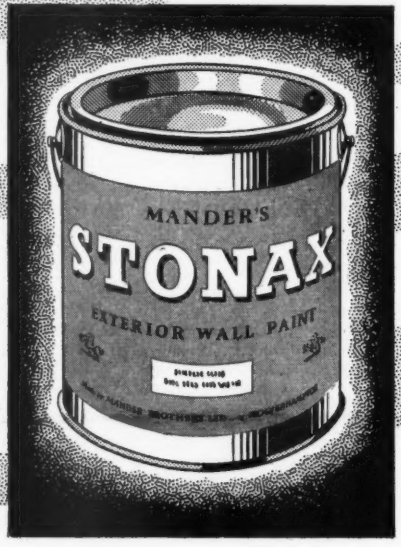
In the end Thurston Williams, whose work as chairman of the staff side of the



Someone's been using

STONAX

EXTERIOR WALL PAINT



. . . and what an outstanding success has been achieved by this new material!

- STONAX is ideal for concrete, brickwork, stucco and other dry wall surfaces in good condition.
- STONAX does NOT require special primers on normal dry surfaces.
- STONAX is easy to apply with a 4in. brush.
- STONAX is oil-based and gives full protection against extreme weather conditions.
- STONAX is an excellent protective finish for woodwork and suitably primed metalwork.
- STONAX is perfect for general purpose factory maintenance and complies with the seven-year clause of the Factory Act.

Available in eight standard shades, STONAX completely transforms the dullest building at an economical cost. STONAX has been used in some of the most exposed sites in this country, including the West Coast of Scotland, with complete success. In several instances, a variety of protective coatings had been tried with only partial SUCCESS until STONAX provided the complete solution.

Full details and the STONAX Colour Range will be sent FREE on request.

MANDER'S *Quality has NO Superior!*

MANDER BROTHERS LTD., DEPT. E.5. WOLVERHAMPTON

Telephone: Wolverhampton 20601

him a master of the procedural game, turned Butterell's proposal into a formal amendment, and Mr. Cross "accepted" it. Basil Spence protested that he could not understand how such an amendment to the report could be accepted, as there was nothing about the bylaws in the report, but Mr. Williams explained that he was amending, not the report, but Mr. Cross's motion that the report be accepted. This effectively floored Mr. Spence.

The meeting then resumed its wayward journey through the report. John Smith strongly criticized the inadequacy of the report by the Board of Architectural Education, and wanted to know whether the Council had formulated a new policy on education, and when it was going to be published. R. Enthoven replied that six definite proposals had emerged from the Oxford conference, had been considered by the Council, were being forwarded to the Board of Architectural Education, and would be published by May 19.

Guy Oddie aroused sharp feelings, and a lot of applause, by asking how many applications were received from clients seeking advice on what architects to employ, who gave the advice, and on what grounds. C. D. Spragg replied that it was the President's duty to advise in the case of important work: if it was in the country he took the advice of the Allied Society. In the case of smaller work the inquirer was referred direct to the Allied Society. He had no statistics, as he did not know the question would come up. The president said, later, that the Council would consider publishing the figures. Michael Brawne asked if in London, where there is no allied society, all questions were referred to the President direct, but got no answer.

Public relations

There were several questions about competitions, Bryan Westwood referred to the widespread feeling that there were too few of them, and asked for an investigation. The President said that this would be done.

Another speaker expressed disgust at the cut in the public relations budget from £10,000 to £1,500—"a miserably inadequate sum: on £1,500 one can do practically nothing" (loud applause). Christopher Gotch declared that public relations was the key to the status of the profession in the eyes of the nation, probably the most important side of the RIBA's work, and asked for a great deal more money for the public relations department (more applause). John Brandon-Jones retorted that the fundamental thing was the production of better architects and better architecture. The one thing that mattered was education, and the best advertisement was to do better work (some applause).

A speaker from the floor said that the average architect was not doing the work for which he was trained, and called for "market research" by the Ad Hoc Committee to find out what the architect was for and what he was doing. Richard Sheppard, chairman of the ad hoc committee, replied that while the results of the committee's inquiry had not yet been fully analysed, he believed that it would emerge from the figures that there were already too many architects. It was said that architects were not being used to the full extent of their capabilities. But he knew of only too many cases where their capabilities had not matched up to their opportunities. They were pretty sure that a great many qualified architects were going to be used to a large extent as draughtsmen, because there were 18,000 architects, a great many more in proportion to the population and the amount of building than in any other European country or America. It was no use standing up and saying it was a shame. They had to get themselves out of it, for no one else could.

After this the meeting drifted back to the cuts in public relations with renewed demands for a public relations officer to speak for the RIBA, and a suggestion from Grenfell Baines that the Allied Societies should help themselves in publicity work as well as looking to the RIBA. Then it went back to the number of architects, a speaker quoting from a Liverpool newspaper that in one month only 64 planning applications out of 439 were architect-designed, and suggesting that if architects were doing 40 or 50 per cent. of the work there would not be enough architects.

When, eventually, the meeting got around to finance, Cleeve Barr's motion was accepted by the chair with the alteration of one word on legal grounds: instead of "instructing" the council, it "requests" the council. The reception given to the speeches by Cleeve Barr and Anthony Cox was overwhelming: attentive silence giving way to an outburst of enthusiasm at the end.

At the end of Mr. Cox's speech the President announced that a committee had already been set up to consider the reconstruction of the Council.

Mathews' reply

E. D. Jefferiss Mathews replied briefly to the points raised by Cleeve Barr: The estimate on the building had been reduced from £100,000 to £73,000 by reducing expenditure on furnishing and redecorating to the minimum. The fall in the value of stocks was not as bad as had at one time been anticipated. The *Journal* was self-supporting, apart from the £1,900 deficit on postage, and its advertisement rates were higher than those of any comparable journal. The Kalendar carried the maximum advertisements obtainable at a reasonable rate.

The policy of the Institute on examination fees, he said, had been for a long while that income from examination fees was devoted in part to the general income of the Institute. This has recently been endorsed by Council, but was subject to reconsideration if that was the wish of members. There were also administrative charges to be set against fees.

Consideration was being given to the mechanization of part of the clerical work.

Only £6,000 was spent on public relations in 1957. In the current year it was down to £1,500, but in subsequent years the budget figure was £3,500. The decision to repay the mortgage was taken on financial advice that it was better to do so. The surplus in 1958 would be £14,000, in 1959 £18,000, in 1960 £15,000, in 1961 only £3,000. If the surpluses were used to pay back the mortgage the interest payments would be reduced, and the surplus would be greater.

G. F. Whitby ran through the differences between the budgets and the final accounts for 1955, 1956 and 1957, to show that the results had been 10 per cent. better than the budget had anticipated. The policy of running the Institute on examination fees was "disgraceful"; when he had asked this question at a previous meeting he had been assured by the holder of the chair that examinations were run at a very great loss. That kind of wooliness was typical of the budgeting for the last few years, and typical, he suggested, of the budgeting for the next three.

Dr. Bradbury

At this point Hilton Wright asked for Cleeve Barr's motion to be put to the vote, but Dr. Ronald Bradbury insisted on saying a few words before the vote was taken. He was, he said, a member of Council elected on a national ballot who was nearing his term of office, and had no axe to grind so far as elections were concerned. It was all very right and proper for members to express interest in the affairs of the Council, and to say or propose what they liked, but they ought to pay some regard to the valuable services many Council members had rendered.

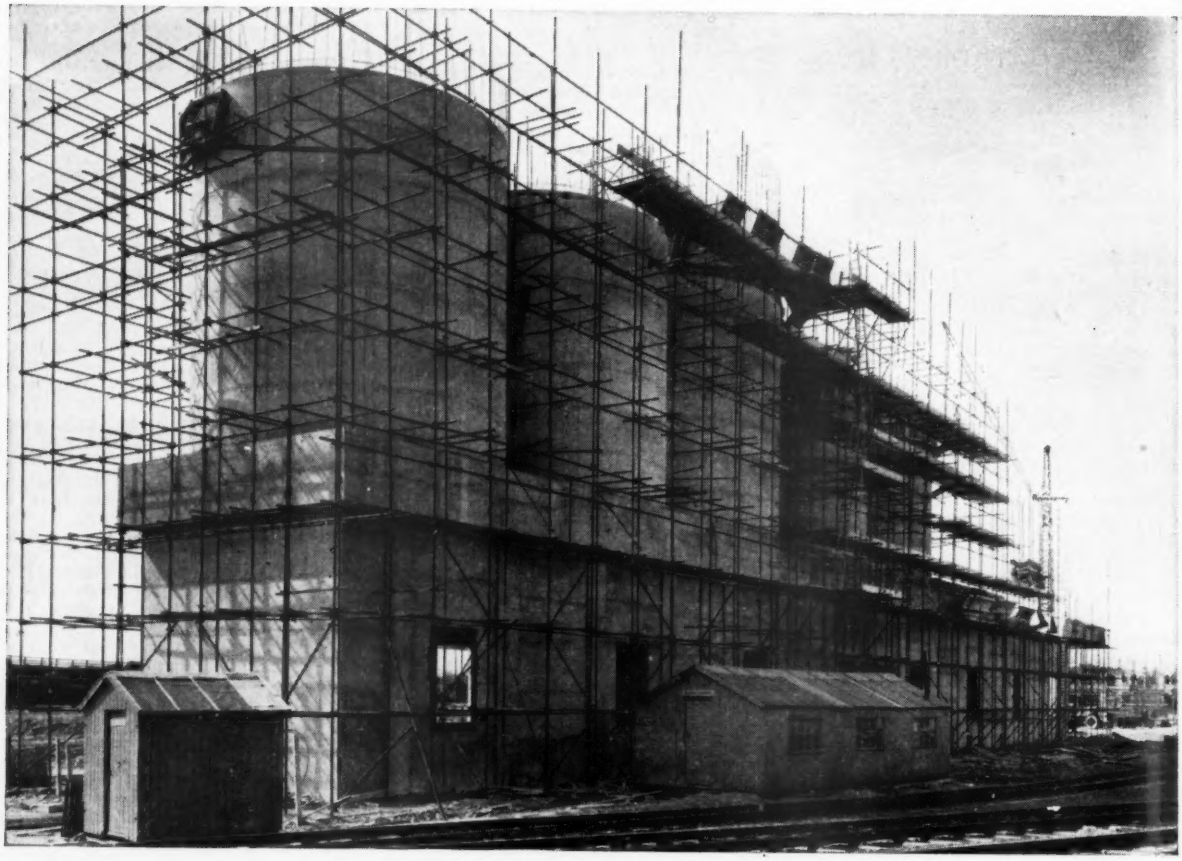
At this point Dr. Bradbury began to put his foot in it. The preponderance of Council members were democratically elected, he said, either by national ballot, or "by the domestic arrangements, which they decide among themselves, of the Allied Societies." The conference interpreted this in its worst sense, and made loud jeering noises, and Mr. Wright thought it a good moment to repeat his request for an immediate vote "before the present speaker continues." On, however, Dr. Bradbury went, slightly flustered but determined. If members didn't like the method of election democratically decided by Allied Societies the remedy was theirs. "Look at the persons whose work you are criticizing," he exclaimed. The audience, lacking his reverence, laughed even more loudly. "Basil Spence, Leslie Martin, Frederick Gibberd, F. R. S. Yorke, Lionel Brett and so on," he explained, "architects of tremendous quality who are entrusted with the handling by their clients of jobs worth millions and millions of pounds" (renewed irreverent laughter). "If you don't believe me, look at the airport" (laughter). "You are suggesting that those people of outstanding ability architecturally and in the field of business are behaving like a bunch of nitwits" ("hear, hear").

If only, said Dr. Bradbury, members could be present at the debates in Council to see the democratic procedure, they would think twice about voting on the resolution. He himself had made proposals that had been voted down by large majorities (loud ironic applause) but he didn't resent that: it was the democratic way. He welcomed the idea behind the motion, but he resented the implication behind it. "I hope the meeting will have the decency to alter the wording of this resolution in so far as it implies that these distinguished members of Council have acted in a false, foolish, insincere and dishonest way." The shouts of "shame" had not died away when Hilton Wright, for the third and last time, demanded a vote. Mr. Cross at last noticed Mr. Wright, and put the question to the meeting, which decided by a large majority to vote forthwith on Cleeve Barr's motion. That was carried, with about 500 in its favour, and 10 or so against.

Cleeve Barr intervened to say: "Dr. Bradbury said the terms of the resolution carried implications of dishonesty and discourtesy against members of the Council who had given their services voluntarily for a long time. I repudiate the suggestion!" The loudest cheer of the meeting suggested that Dr. Bradbury must, by revealing his state of mind, have rallied any doubters to the side of Cleeve Barr's amendment. And Kenneth Campbell, a Council member, completed the isolation of Dr. Bradbury by adding "May I say, for myself and other members of the Council, that we do not feel the resolution carries the implication that Dr. Bradbury said it did" (applause).

After that the meeting was virtually over. There was an exchange of bouquets between Thurston Williams and Richard Sheppard, who promised to do his best to publish the results of the survey of architects' salaries in the RIBA Journal, there were some more obscure exchanges on finance (in which Grenfell Baines argued that it was best to pay off the mortgage quickly because the struggle against inflation might be successful), and a bright suggestion that the election of more Fellows would bump up the revenue. A Bristol representative said the meeting had shown the weakness of centralization, and urged that instead of the RIBA giving rebates to the Allied Societies, the Allied

Construction in progress



Blending Bunkers at Murton Coking Plant of the National Coal Board, Durham Division.
(Photo reproduced by permission of the N.C.B.)
Main Contractors: Woodall-Duckham Construction Co. Ltd.

Societies should collect the money and pay rebates to the RIBA. Far more responsibility, he said, should be given at local level, where there was often a really democratic system.

With a vote of thanks to the President for his courageous chairmanship, the meeting was closed.

DESIGN PAYS

The Private Enterprise House and its Setting

The RIBA organized a symposium on the design of privately built houses on May 2, to which builders, representatives of building societies and estate agents were invited.

The RIBA symposium on "design pays" raised some very important questions, only one of which (the negative attitude of building societies) received the publicity it deserved in the national Press. That was because Hubert Newton, the General Manager of the Leek and Moorlands Building Society, and the representative of the Building Societies Association, provoked what might almost be called a row, in which builders and architects, forgetting their differences, united to belabour a man who did not attempt to conceal his own, or his movement's, hostility to modern design. Nobody, unfortunately, came forward as the candid spec. builder, the man who found that jerry-building, mock Tudor, semi-detachment and all the rest of it paid best. On the contrary, nearly all the builders who spoke came forward to support the view that design paid. One could have wished that, like the architects who spoke on the same theme, they had illustrated their work with slides, so that one would have known exactly what they meant by "design" or by "contemporary."

"Suggestions" to Builders

The symposium was opened by Henry Brooke, the Minister of Housing and Local Government, who first claimed credit for the work done by his department in raising the standards of local authority housing (which made one wonder why his department is now forcing the local authorities to contract, and encouraging the speculative builders to expand), and then went on to declare his own support for good design. In making out a case for aesthetic control he did not attempt, however, to explain either why his Ministry and the planning authorities had approved such a vast mass of sub-standard speculatively built housing, or what they intend to do about it now. Mr. Brooke said that the sensible planning officer, who was often an achitect (how often he did not reveal) could help the average speculative builder by "suggesting" better layouts and other improvement. Whether "suggestions" are adequate to deal with this problem was not further discussed by the conference.

Hugh Casson, who chaired the discussion with his usual mixture of tact and wit, contrasted the improvement in design of consumer goods (brought about by the designer and the manufacturer getting together) with the uninspired shells into which people had to put their furniture and fabrics. This was, indeed, one of the theme songs of the conference, and there was no lack of subsequent warnings to the builders and their publicity men, the estate agents, that they were lagging behind public taste. At the end of the day Paul Reilly of the COID gave some illuminating figures on the growth of public support for good interior design—such as the fact that 1,350,000 people have visited the Design Centre in two years. It did not demand a great stretch of imagination, he said, to assume that there must be an equally good following for well designed houses as a whole; in any reasonably balanced society the two should hang together.

There were three speakers on "The Client's Needs," though only one of them, Miss May Abbott, the editor of the *Women's Sunday Mirror*, stuck to the point. Douglas Calverley, a Leicester builder, described the success that had attended his firm's experiment in building two estates of "contemporary houses," without bay windows or inter-war trimmings. There was now no demand on one estate, and little on the other, for the older type of house. Miss Abbott who said that she was looking for a house herself, had been warned by her friends, that "you must stick out for what you want: be prepared to have a struggle with the architect." She had a suspicion that the architect, like mother and the doctor, knew best. And she clearly suspected, too, that architects put beauty before comfort. Two estates she had explored, whose layout and landscaping she admired, struck her as beautiful to look at, but not to live in, above all because they lacked privacy. She was astonished at the number of architect-designed houses going up with garages and chimney breasts on the southern side; she demanded better insulation, more cupboards for the family paraphernalia, and big kitchen windows.

Building societies

Hubert Newton conceded, on behalf of the building societies that good design was "so far desirable"—provided it was worthwhile. But by sticking to semi-detached his society had only lost £6,000 out of £80 million advanced in 25 years (an argument which suggests that the risks run by building societies are in fact negligible). To support his own view that "contemporary" houses were a bad risk Mr. Newton could think of nothing better than to say that before the war two of them had remained empty in Stoke-on-Trent for two years. While prepared to encourage a "new look" in housing, he would not encourage a radical change—it had to be gradual—and must have regard to the marketability of the property.

When the conference was thrown open for discussion a Wolverhampton builder, Mr. Maclean aroused tremendous applause by declaring that the building societies were the biggest obstacle to better design. And he got a still bigger cheer when he then attributed their attitude to the fact that the societies relied for their ideas on the value of property on the estate agents—the most short-sighted people he had ever met in his life. Mr. Newton tried to defend himself by retorting that Mr. Maclean could not be selling 500 houses a year without building society support. But Mr. Maclean replied that his firm had to prevent their architects from introducing better designs which, they knew, were unacceptable to the building societies. Mr. Williams, a Cheltenham architect, declaring that the building societies must not be allowed to get away with this, also blamed the estate agents, whom he described, to the delight of the conference, as "scrap dealers." Up jumped P. A. Bligh, chairman of a group of companies promoting the "£1,000 house," to tell an even more eloquent story of building society obstruction: his firm got only 10 per cent. of its loans through societies, and then only after a struggle. And he accused the societies of offering 90 per cent. mortgages on valuations that were even below prime cost.

Mr. Newton, encouraged by the chair to have another go, revealed his innermost thoughts. Architects, he hinted darkly, were interested not only in design but in fees. Prime cost had nothing to do with saleability. They had to face the fact that "these things you want to put up" might only be a passing phase. If there was a recession, and he'd bought "one of your houses," the builder would have had the profit, the architect the fees, and the building society would be left to sell them. Mr. Bligh made the effective reply that the houses he sold for £1,950 in 1953 now sold for £2,500, and in the end Mr. Newton was forced to concede that he and his society would regard a house of improved design, such as was shown on slides by Clifford Culpin, as an acceptable security. "Jolly good," observed the chairman, and there the matter had to rest.

Architects' part

Two architects spoke on "What the architect can offer." Clifford Culpin blamed the architects for being more than 50 per cent. responsible for the staggering fact that so many houses were built without specialist guidance, because so many "architect-designed" houses were bad, and because so many architects disdained to soil their hands with speculative housing. To the builder who would say "it cost more to have an architect" he replied, yes, it would if he was just engaged to produce pretty elevations or type-designs. Builder and architect had to get together and think about the whole house, taking advantage of the builders' experience and organisation, planning clear-cut operations and scrupulously investigating costs. Mr. Culpin used slides effectively to illustrate the ways in which design could save money or create extra value, and to show the wasteful methods of the spec builders.

Conditions for success

Tom Mellor dealt less with what the architect had to offer, than with the conditions that had to be created to enable the architect to do any better than he had done up to now. To bring good architects and good builders together there had to be a method of selection, a technique of co-operation, and a scale of fees which would make the work economically sound for the good architect (who would have other work too). It was up to the architects, he thought, to make constructive proposals, and to prove that their full employment would pay both them and the builder. Building, moreover, had to be in groups of houses big enough to give the designer scope, and to have unity and purpose as a group. Such problems as finance and the grouping of small builders had to be solved before the kind of programme could be produced that would give the good architect an adequate chance. And there had to be something comparable to after-sales service with cars, through a maintenance organization that would solve the problems of roads, trees, planting and landscape.

The afternoon session concentrated on architects and builders "getting together," and on some practical experiences of providing and selling better designs. Grenfell

Baines put forward a suggestion that country architects and housebuilders should get together in regional joint committees of architects, builders and quantity surveyors to work out a number of details that could be adopted by the district as the beginnings of a vernacular of modern building. He envisaged architect and builder getting together to study people's needs in space and layout; the architect could then design the basic form of houses and layout, roads and landscape, place the windows and doors, fix the roof form, and with the builder select the materials. Then matters could be left to the builder, who would use good details from the newly created vernacular. This proposal was criticized in the subsequent discussion by a London architect, Mr. Hunt, who said the architect who did the layout and left the details to the builder was not doing his job.

"All or nothing"

Eric Lyons, announcing himself as an "all or nothing man," left no doubt that he considered the conference had so far been very superficial, and made by far the strongest assault on the spec. builders. He went so far as to give a warning that if architects did not make an impression on spec. building the case for prohibiting it would become irresistible. The public, he thought, was not to blame for buying the semi-detached horrors that contaminated the countryside, because the public had had little choice. Now his clients were reaping the reward for satisfying some part of the pent-up demand for housing appropriate to our time. He, too, warned builders that it was of little use to employ an architect merely to give the front elevation a face-lift, or to clean up the dreary old stock plans. The architect's contribution was more fundamental, and should be much more valuable to the builder. He (Eric Lyons) was responsible for building, design, layout, landscape design and building supervision, and was involved in deciding the policy on the type of development. In this way the architect could be expected to justify his participation by creating some enhanced value in the buildings erected.

Mr. Lyons was, incidentally, almost the only person to mention town planning control as an obstacle to modern architecture: but even he seemed to have been mollified by the Minister's statement; he only wished that it was Mr. Brooke and not the local planning authority that dealt with his applications.

Builders' views

The builders' contributions raised some important points. Norman Wates drew some particularly valuable lessons from his firm's experience in the United States, and spoke more bluntly than anybody else to the architects.

From the United States his firm had learnt the importance of landscaping, and now spent increasing amounts on the estate as a whole. Buyers were willing to pay more for this, and to accept restrictions for the general good. He warned that comfort with open planning depended on cheap heat; cheap and satisfactory heating appliances were not available in this country, costing as many pounds as they did dollars in the U.S., and this had to be remedied.

But of what use was his experience to the small builder? How was he to move along the same road? Frankly, the small builder had a very tough job. There were not enough architects of the right calibre interested in spec. building, and that, he thought, was short-sighted. The architect should look on the spec. builder as a prospective customer, and, he added, "nobody should shoot Santa Claus." The potential architects' fees on £200 million a year were ravishing, but to make this step successful the architects must have something of real value to builders, and they must convince builders and the buying public that this was so. The average small builder, he imagined, was pretty frightened of architects as a means of making money for him.

Learning from America

Perhaps architects as well as builders could learn from America. In their American business all architectural services were provided by outside architects: it was an extremely competitive business, and without a first class architect a builder would not have a chance of being successful. An architect would design a house costing £10,000 for around £150, and charge £10 for a repeat house. He must sell the same house to a dozen other builders in various parts of the country. He would expect to know what the costs were, and would tell the builder what other people's costs were. To hold his place he would reckon to be pretty high up in the magazine competitions for the house of the year. He had to be a master of his craft.

The Dormy house had been so successful that Wates had introduced a system of licensing other builders. For a fee they supplied not only constructional drawings, labour and material schedules, but estimate of costs, directions as to where components could be bought, and sales literature. They insisted on the employment of a qualified architect for layout, and the construction had to be approved by the National House Builders Registration Council. He could not see why services almost equivalent to that could not be supplied by architects working, perhaps, in collaboration with quantity surveyors.

The problem presented by the garage attached to the house in spec. builders' layouts was raised by A. M. Edwards, architect and town planner. To get direct access to the garage the house had to front the road, and the consequence was that there could be no sizeable areas of incidental open space, and one was practically forced into the semi-detached house fronting the road. Clifford Culpin's slides having shown grouped garages, Mr. Edwards asked builders to say whether, from a sales point of view, it was more important to have a garage in immediate proximity to the house, or to have an improved landscape. The question went unanswered.

Choosing an architect

The difficulty of choosing an architect was raised more than once. Roger Raymond, a smaller builder, who is now putting up 400 houses a year, said that this was as big a problem for the small builder as it was for the client. He suggested that there should be a design centre where architects' work could be seen by builders and clients. A member of the public (one of the very few present), who asked the same question, said that architects should advertise. The official answer, duly given, that he should contact an allied Society or the RIBA, sounded very dusty and impractical. Grenfell Baines got closer to realities when he said that this problem was hedged around with enormous professional difficulties; but he announced that very soon steps would be taken, by a sympathetic sponsor, that would bring the names of the best designers of houses before the public, and enable the public to get these designs.

Importance of lay-out

The conference as a whole, however, appeared to be convinced that the design of the individual house was not the main problem. Grenfell Baines himself said that a good layout of poor house designs would give a better impression to the landscape than a bad layout of good house designs, however good the individual houses might be. Tom Mellor referred to an area of post-war housing, most of it designed by architects, and the best of it very good, where the general effect was awful. The good designs made the whole mass look worse instead of better, and the worst area of all was one where the planning officer had bulldozed the individual small houses into some degree of uniformity. Miss J. M. Albery, an architect and planner, said that in her experience the control of individual small houses was not worth-while. If the energies of the planning authorities were concentrated on the control of the estate the design of individual houses would suffer very little. And, when Hugh Casson came to sum up, he made the same point: that landscape and layout were more important than the individual house.

A show of hands at the conference seemed to indicate that about three-quarters of those present were architects, and the remainder builders. There was only one building society representative and, it seems, very few estate agents or surveyors.

New Presidents

RIBA

Basil Spence, Hon. Secretary of the RIBA since 1956, is to be the new President for the session 1958/59. He succeeds Mr. Kenneth M. B. Cross, who retires from office on June 30. Although the Council elections for next session have not yet taken place Mr. Spence's nomination to the presidency is unopposed. He has been a member of Council since 1953, and was Vice-President in 1954.

Mr. Spence was born in 1907 and was educated at George Watson's College, Edinburgh, and at the Architectural Schools of Edinburgh and London University.

AA

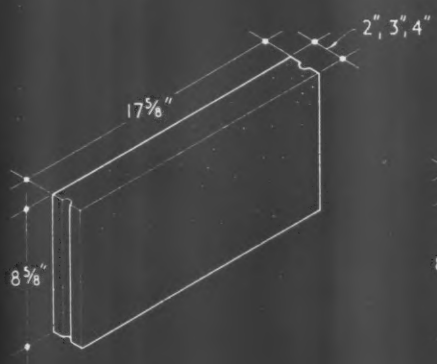
Denis Clarke Hall has been elected President of the Architectural Association for the session 1958-9. He was trained at the AA school, won the *News Chronicle* prize for a secondary school in 1937, and has been in partnership in Lincoln since 1954.

Contractors

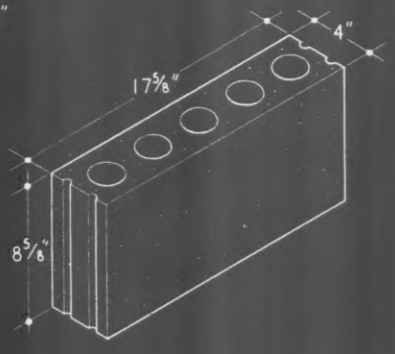
Thomas Hedley & Co. Ltd, Head Office Building, Gosforth (page 727). *Architects:* Sydney Burn, L.R.I.B.A. (Company Architect). *Consultant architect:* A. M. Chitty, F.R.I.B.A. (including interior design and furnishing of the Directors' Wing). *General contractors for foundations, brickwork, carpentry and joinery and plastering:* Stephen Easten Ltd. *Sub-contractors: steelwork:* Redpath, Brown & Co. Ltd. *Pre-cast floors:* The Trussed Concrete Steel Co. Ltd. *Concrete reinforcement:* The Square Grip Reinforcement Co. (Gateshead) Ltd. *Waterproofing:* Sealocrete Products Ltd. *Bricks:* R. Y. Ames Ltd. *Stonework (external):* Jas. H. Harrison Ltd. *Stonework (internal):* Empire Stone Co. Ltd. *Artificial stone:* Northern Cast Stone Co. Ltd. *Fibrous plaster:* Decorative Plaster Co. (Newcastle-upon-Tyne) Ltd. *Acoustic ceilings:* S. T. Taylor & Sons Ltd. *Roofing:* The Ruberoid Co. Ltd. *Windows:* Monk Metal Window Co. Ltd. *Glazing:* David R. Maxwell & Co. Ltd. *Borrowed lights:* Middlesbrough Casements Ltd. *Rooflights:* T. & W. Ide Ltd. and J. A. King & Co. Ltd. *Entrance screen:* Courtney, Pope Ltd. *Steel partitions:* Sankey Sheldon Ltd. *Plumbing:* H. Durham. *Sanitary fittings:* Shanks & Co. Ltd. *Mirrors:* Reed Millican & Co. Ltd. *Wall tiling:* Shaws Glazed Brick Co. Ltd. *Tiling in Director's wing:* W. M. Shaw. *Rubber flooring:* Gordon Russell (Rubber Manufacturers) Ltd. *Terrazzo flooring:* Toffolo Jackson & Co. Ltd. *Wooden flooring in dining room:* A. M. Macdougall & Son Ltd. *Electric contractor:* Drake & Gorham (Contractors) Ltd. *Light fittings (Main offices, corridors, etc.):* Sun Electric Co. Ltd. *Light fittings: (Dining room):* GEC Ltd. *Light fittings (directors' wing):* Thorn Electrical Industries Ltd. *Louvred light fittings:* General Electric Co.,

BUILDING BLOCKS | LIGHTWEIGHT | GENERAL DATA

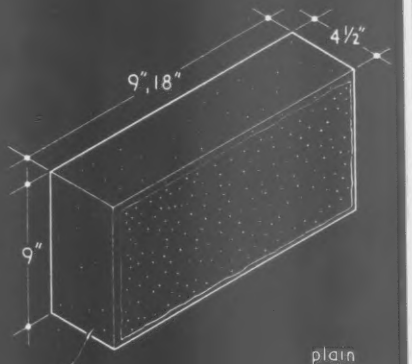
The Architects' Journal Library of Information Sheets 671. Editor: Cotterell Butler, A.R.I.B.A.

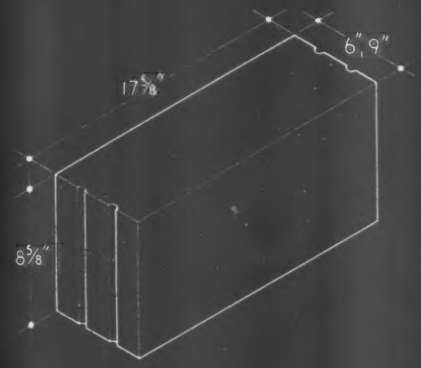


SOLID BLOCKS. (half blocks also available)

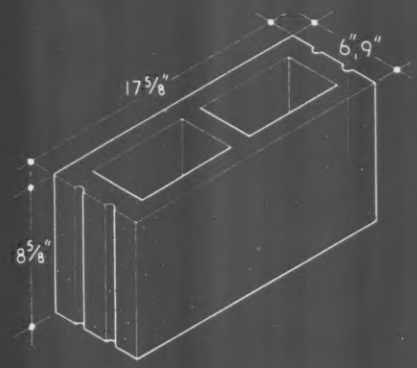


HOLLOW BLOCKS.

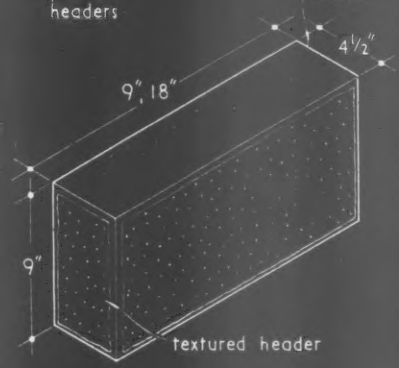




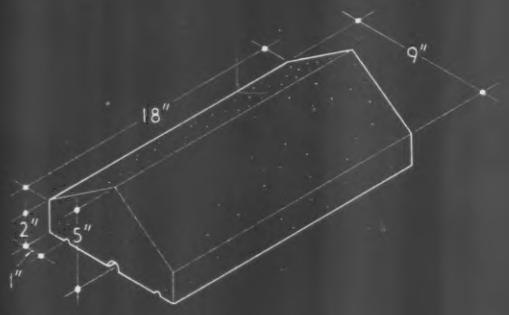
SOLID BLOCKS. (half blocks also available)



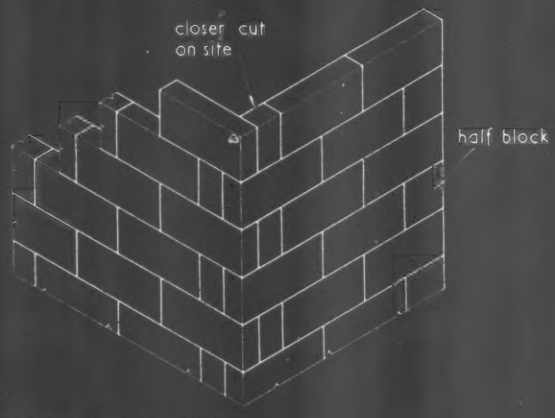
HOLLOW BLOCKS.



ROCK-FACED BLOCKS.



CAPPING BLOCK.



DETAIL OF BONDING

type of block	size (in.)			weight per block approx. (lb.)	yards per ton as laid
	length	height	thickn'ss		
solid, plain-faced	17⅝	8⅝•	2	16	18
	17⅝	8⅝•	3	24	12
	17⅝	8⅝•	4	32	9
	17⅝	8⅝•	6	48	6
	17⅝	8⅝•	9	72	4
hollow, plain-faced	17⅝	8⅝•	4	25	12
	17⅝	8⅝•	6	39	7½
	17⅝	8⅝•	9	48	6
solid, rock-faced (plain headers)	9	9	4½	23	6½
	18	9	4½	45	6½
solid, rock-faced (textured header)	9	9	4½	23	6½
	18	9	4½	45	6½
capping block	18	5	9	30	38 lin yd.

• see 'Sizes and Weights' on reverse of Sheet

TABLE OF SIZES.

·LIGNACITE· LIGHTWEIGHT BUILDING BLOCKS. Manufacturers : The Lignacite Group of Companies.

14.K2 ·LIGNACITE· LIGHTWEIGHT BUILDING BLOCKS

This Sheet describes Lignacite building blocks which, though light in weight, are suitable for loadbearing construction as well as for cladding and lining.

Material and Construction

The blocks, incorporating specialised aggregates, are accurately formed by vibration and hydraulic extrusion. They conform to B.S.2028: 1953 *Precast Concrete Blocks*, Type B, in all respects except with regard to compressive strength which conforms to Type A.

The standard solid block has grooved ends, as shown in the drawings on the face of the Sheet, which form double-grooved joints between blocks. Hollow blocks are available as shown: the cavities are closed at one end to prevent mortar from dropping down them. Rock-faced blocks are also available for exterior work. Ridged capping blocks are available for finishing at tops of walls, the design varying slightly with different companies. Half-blocks and closers are available to special orders.

Sizes and Weights

The table on the face of the Sheet gives the normal range of sizes available together with the weights of the blocks. The sizes manufactured by each company however vary with local demand. The height of blocks given, $8\frac{5}{8}$ in., is in accordance with B.S. 2028: 1953, but the company known as Lignacite (N.E.) Ltd. manufactures blocks $8\frac{7}{8}$ in. high for use in the north of England, the Midlands and North Wales.

Laying

Blocks should be stacked on the site on their laying edges and protected from becoming excessively wet. They should be damped before laying. The mortar should be 1 part cement to 2 parts hydrated lime and 9 parts sand (all by volume). In very wet weather a stronger mix of 1 part cement to 1 part hydrated lime and 6 parts sand is recommended but should be confined to external work. The lime should be made into putty at least 12 hours before use and well mixed with the cement and sand. The grooving of the blocks makes wide joints unnecessary; $\frac{1}{4}$ in. to $\frac{3}{8}$ in. is adequate and $\frac{5}{8}$ in. the absolute maximum recommended. Expanded metal reinforcement should be used every third or fourth course at quoins, door and window openings, lintels, piers, loadbearing joints, and abutments with other materials.

Blocks can be cut cleanly by bolstering evenly and carefully along the cutting mark. Where special shaping or a very even face is required, they can be sawn with a frame saw. Chases can be made with a gouge or mechanical chisel. For fixing to the blocks, plugging is unnecessary, as nails and screws will hold satisfactorily in the material and there is no chemical action.

Plastering: The plaster should be hardwall (gypsum hemi-hydrate) Sirapite, Keene's or gauged coarse plaster. All lime, even dehydrated, should be slaked for about 12 hours before use, and the plaster should not contain more than 10 per cent. of lime. The wall should be set before plastering is begun, all loose particles should be brushed off and the surface wetted (but not soaked) to assist bonding of the plaster. No rendering or floating is required if the blocks have been correctly laid and a skim coat can be applied. It should be laid on with a trowel and floated to a thickness of $\frac{1}{8}$ in. to $\frac{3}{16}$ in. maximum. The joints may be visible for a few days, until the work has dried out.

Characteristics

Density: 85 lb. cu. ft.

Compressive strength: 500 lb. sq. in., conforming to B.S. 2028 : 1953 for Type A blocks.

Drying shrinkage: 0·06 per cent.

Moisture movement: 0·05 per cent.

Thermal insulation: The thermal conductivity (*k*) is 2·08 B.t.u./ft.^{2} h deg. F per in. thickness of the material. The following table gives the U values for solid blocks of various thicknesses, unplastered.

Thickness of Lignacite (in.)	U value
2	0·51
$2\frac{1}{2}$	0·45
3	0·41
4	0·34
$4\frac{1}{4}$	0·33
$4\frac{1}{2}$	0·32
6	0·26
9	0·188

Sound insulation: The sound reduction of a cavity wall constructed of two skins of $4\frac{1}{4}$-in. blocks with a 2-in. cavity is 51 decibels over a frequency range of 100 to 3,200 cycles per second.

Fire resistance: The blocks are incombustible as defined by B.S. 476: Part 1 : 1953 *Fire Tests on Building Materials and Structures*, with a Class I surface spread of flame grading. A wall of $4\frac{1}{4}$-in. thick blocks, skim-plastered on one face, tested in accordance with B.S. 476, showed a fire resistance of 4 hours 7 minutes.

Finish

The surface of the blocks provides an excellent base for plastering and rendering and for paint and distemper: all types of building board can be fixed direct without plugging or battens.

Compiled from information supplied by:

The Lignacite Group of Companies

Lignacite (N.E.) Ltd.
Address: Gravel Hill Works, Whitley Bridge, nr. Goole, Yorks.
Telephone: Whitley Bridge 354/5.

Lignacite (Home Counties) Ltd.
Address: Down Mill Works, Bracknell, Berks.
Telephone: Bracknell 666.

Lignacite (Fordingbridge) Ltd.
Address: West Mills, Fordingbridge, Hants.
Telephone: Fordingbridge 2177.

Lignacite (South-Eastern) Ltd.
Address: Lower Standard Hill, Ninfield, nr. Battle, Sussex.
Telephone: Ninfield 345.

Lignacite (Brandon) Ltd.
Address: Victoria Works, Station Annexe, Brandon, Suffolk.
Telephone: Brandon 350.

Lignacite (North London) Ltd.
Address: Meadgate Works, Nazeing, Essex.
Telephone: Hoddesdon 2277.

·FIBREGLASS· INSULATING MATERIALS

Type	Description	Nominal thickness inches (uncompressed)	Stock sizes or quantities	Nominal density, lb./cu. ft.	Thermal conductivity, B.t.u./ft.² h deg. F per 1 in. thickness	Applications
Bitumen-bonded mat	Glass wool mat lightly bonded with bitumen	1	Rolls: 10 yd. long by 48 in. wide. Also available 33 in., 36 in. and 42 in. wide. Narrow widths (not less than 9 in.) to suit joist spacings can be supplied	3	0·25	For thermal insulation of prefabricated and traditional constructions; for sound-deadening of concrete floating floors
House insulation	Mat of felted glass wool fibres	2	Rolls: 6 yd. long by 12 in., 14 in., 16 in., 18 in., 24 in., 36 in., 42 in. wide	3	0·25	For thermal insulation of houses (laid between joists in attics)
Scottish quilt	Bitumen-bonded mat fixed between kraft and bituminised paper, not stitched, edges enclosed	1	Rolls: 10 yd. long by 48 in. wide (actual width 50 in., edges being thinned down to permit overlapping of adjoining quilts)	3½	0·25	For sound-deadening of timber or concrete floating floors; for thermal insulation of walls and roofs of thin-skinned agricultural buildings, factories, etc.
Bitumen quilt	Bitumen-bonded mat enclosed in bituminised paper, not stitched, edges enclosed	¾	Rolls: 10 yd. long by 36 in. wide	3	0·25	For thermal insulation of walls and roofs of thin-skinned agricultural buildings, factories, etc.
Stitched quilts	light — Glass wool mat stitched between bitumen treated kraft paper, edges enclosed	¾	Rolls: 15 yd. long by 36 in. wide	5	0·24	For sound-deadening of timber or concrete floating floors
	medium	1		5	0·24	
	heavy	1¼	Rolls: 10 yd. long by 36 in. wide	5	0·24	
Cavity wall insulation	Nodulated resin-bonded glass wool	—	Bags: 28 lb.	6 cwt. per 1,000 sq. ft. of 2-in. cavity	0·25	Loose fill as thermal insulation for inclusion during building in the smoothed and cleaned cavity of external walls. Not suitable for cavity walls of completed dwellings or for use as attic-space insulation
Loose wool	Glass fibres in loose form	—	Bags: 14 lb., 28 lb. Bales: about 36 lb.	Approx. 3 lb./cu. ft.	0·25	For packing cavities in internal partitions etc. for thermal insulation. Not suitable for external walls unless these are adequately waterproofed
Ceiling board	Glass wool bonded with resin to form a rigid board	½, ¾, 1, 1½, 2	3 ft. 11½ in. long by 1 ft. 11½ in. wide to suit grid 4 ft. 0 in. by 2 ft. 0 in. In cartons of 80/84 board ft.* supplied in bulk quantities only, delivered direct to site	7½	0·25	A combined thermal-insulating and sound-absorbent lining for factory roofs used with a T-rail fixing system

* This denotes the number of square feet of board at 1 in. thickness. The number of square feet of board per carton varies with the thickness, but it is arranged that each carton contains 50 lb. approx., i.e., 40 sq. ft. of 2-in. board, 80 sq. ft. of 1-in. board, or 160 sq. ft. of ½-in. board.

8.E1 ·FIBREGLASS· INSULATING MATERIALS

Type	Description		Nominal thickness inches (uncompressed)	Stock sizes or quantities	Nominal density, lb./cu. ft.	Thermal conductivity, B.t.u./ft.² h deg. F per 1 in. thickness	Applications
Resin-bonded slabs	Glass wool bonded with resin to form slabs of different densities (the heavier the slab the greater the rigidity)	Type 250	½, ¾ and 1 to 4½ in ½-in. increments	½ in. thick: 18 in. by 18 in. ¾ in. thick: 24 in. by 36 in. 1 in. to 4½ in. thick: 42 in. by 36 in. Cut sizes if required	2½	0·25	For thermal insulation and sound absorption
		Type 425	½, ¾ and 1 to 4 in ½-in. increments	½ in. thick: 24 in. by 36 in. ¾ in. thick and over: 48 in. by 36 in. and 24 in. by 36 in. Cut sizes if required	4¼		
		Type 600	½, ¾ and 1 to 3 in ½-in. increments		6		
		Type 900	½, ¾, 1, 1½ and 2		9		

This Sheet supersedes Sheet 8.E1 published 20.1.55. It describes the general properties of Fibreglass insulating material. The table on the face summarises the primary characteristics of the various forms in which the material is available.

Material

Fibreglass consists of glass drawn into flexible fibres and is entirely inorganic, non-hygroscopic, unaffected by moisture and will not rot or cause corrosion of any surface with which it may come in contact. It offers no sustenance to vermin and is non-inflammable.

Thermal Conductivity

National Physical Laboratory tests have been carried out on this material. The thermal conductivity figures quoted in the table are based on these tests. Copies of the actual reports may be obtained from the manufacturer.

Fire Resistance

Fibreglass has been rated Class I in spread of flame tests carried out in accordance with B.S.476:1953 *Fire Tests on Building Materials and Structures.*

Trade Name

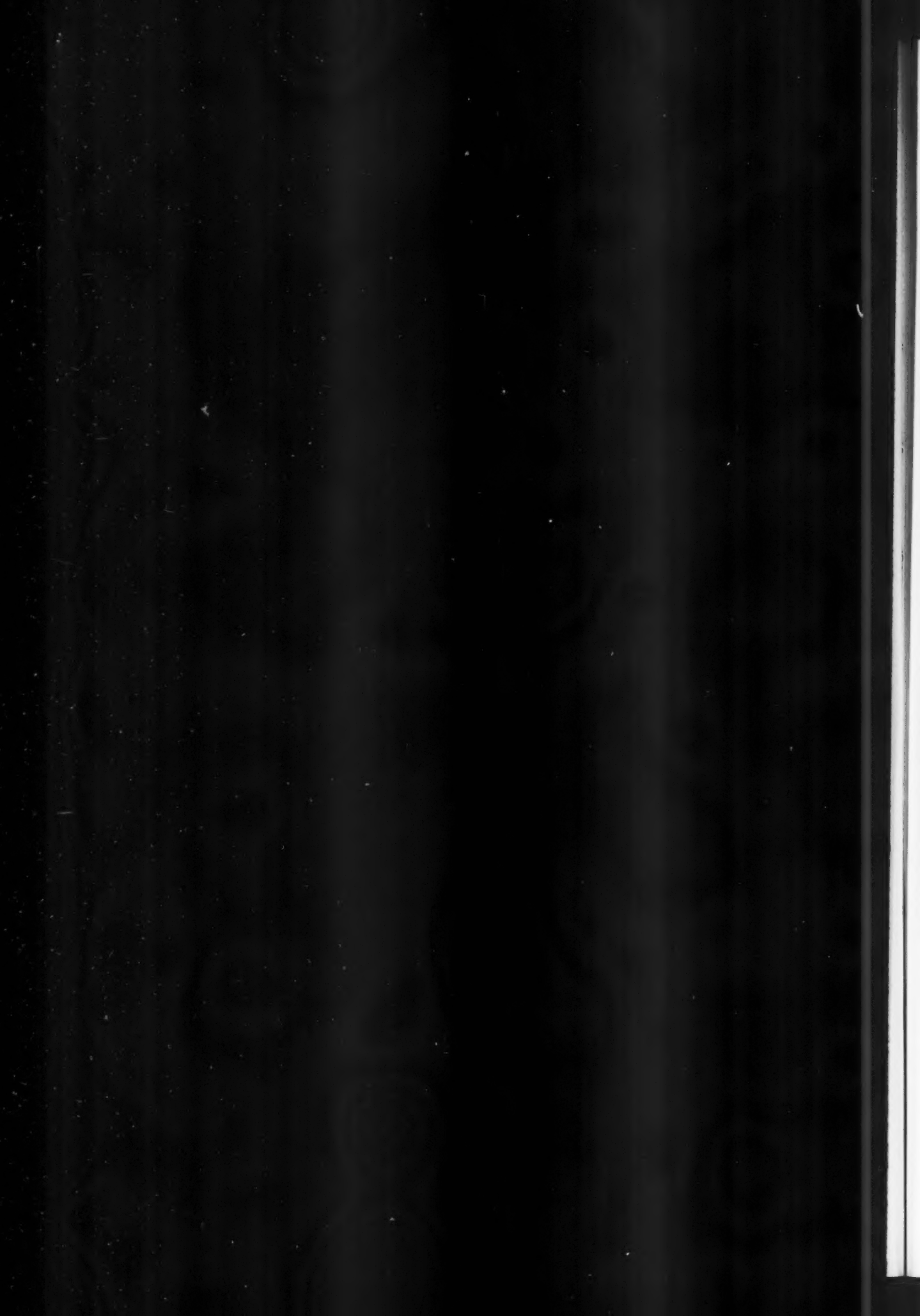
The word ·Fibreglass· is a trade mark.

Further Information

The manufacturer maintains a technical advisory department which is available to answer questions dealing with the applications of Fibreglass.

Compiled from information supplied by:

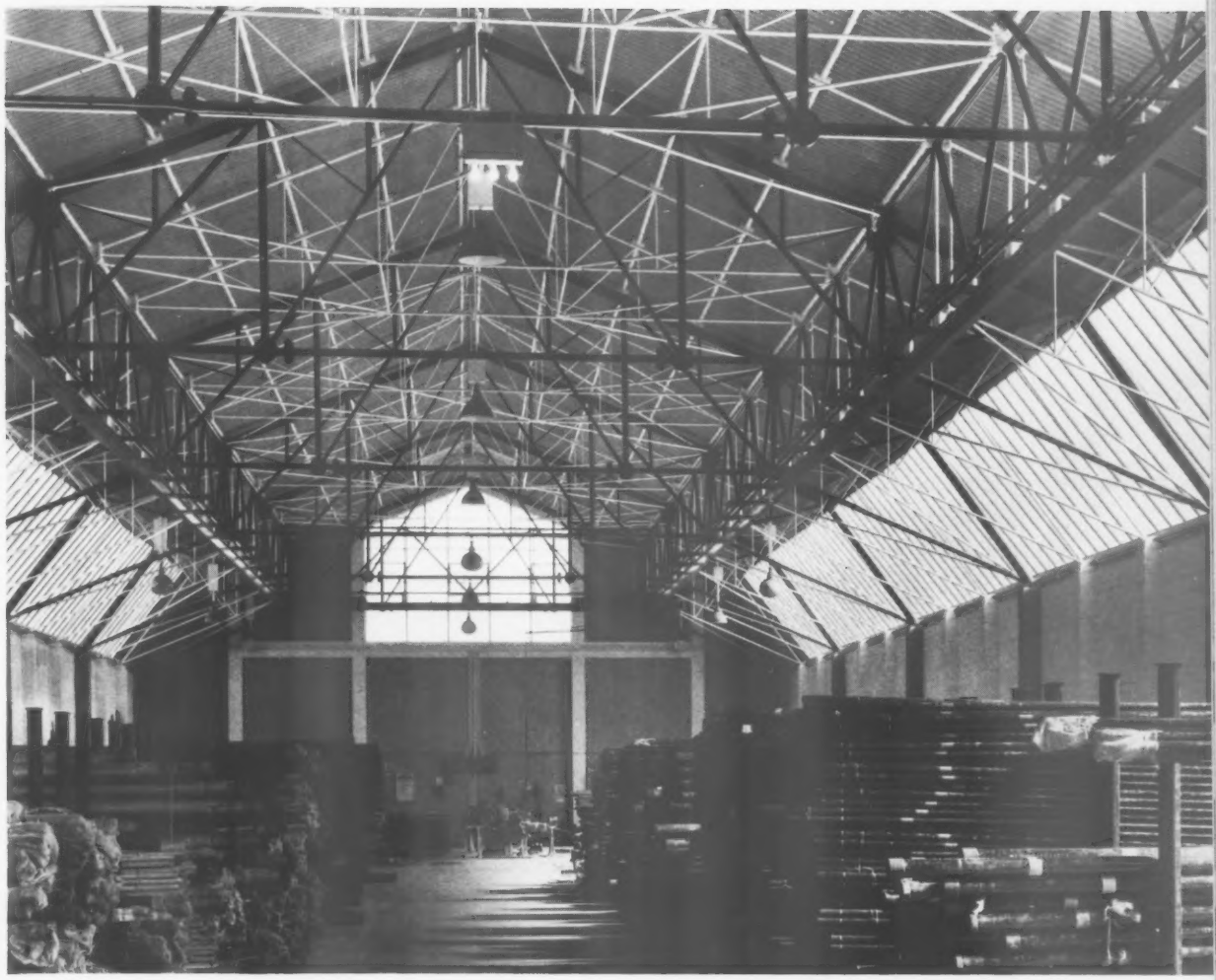
Fibreglass Ltd.
Head Office: Ravenhead, St. Helens, Lancs.
Telephone: St. Helens 4224.
Telegrams: Fibreglass, St. Helens.
London Office: 63-65, Piccadilly, W.1.
Telephone: Hyde Park 1183.
Telegrams: Fibreglass, Piccy, London.
Glasgow Office: 6, Newton Place, Glasgow, C.2.
Telephone: Douglas 2687.
Telegrams: Fibreglass, Glasgow.
Manchester Office: Queens House, Queen Street, Manchester 2.
Telephone: Deansgate 8804.
Birmingham Office: Piccadilly Arcade, New Street, Birmingham, 2.
Telephone: Midland 0464.
Newcastle Office: 16, Dean Street, Newcastle-upon-Tyne.
Telephone: Newcastle 20938.
Dublin Office: 21, Merrion Square North, Dublin.
Telephone: Dublin 67060.



working detail

ROOF: FACTORY IN DUBLIN

Ove Arup and Partners, designers

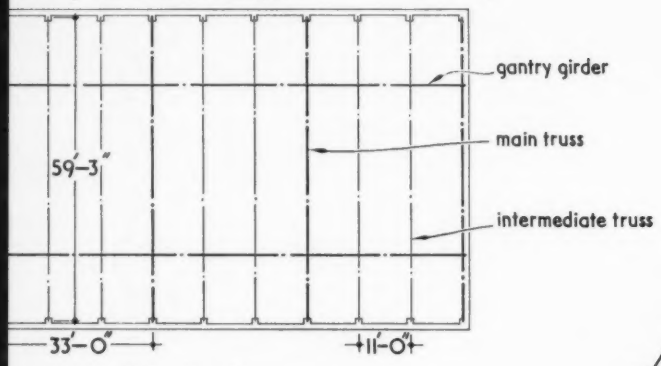


The form of this roof was determined in the first instance by the decision to economise on walling by having a low eaves line while still giving sufficient height for the overhead gantries and in the second instance by the desire for a structure which would be strong enough to take the loads required by the gantries and would give support at sufficiently close centres for the roof purlins while still giving an effect of lightness. This second aim was achieved by combining two systems of trussing into one: heavy trusses (both transverse and lateral) to take the gantry loads, and lighter trusses to take the purlins. The former are painted black and the latter white to clarify the structural pattern.

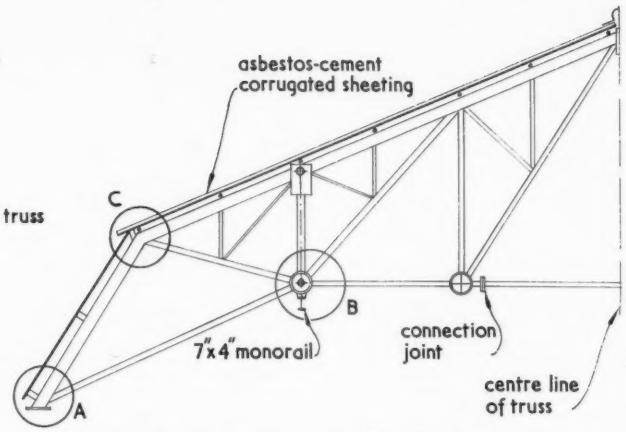
working detail

OOF: FACTORY IN DUBLIN

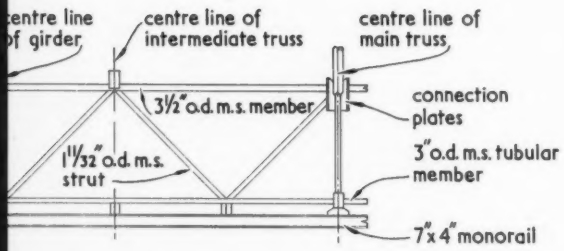
ve Arup and Partners, designers



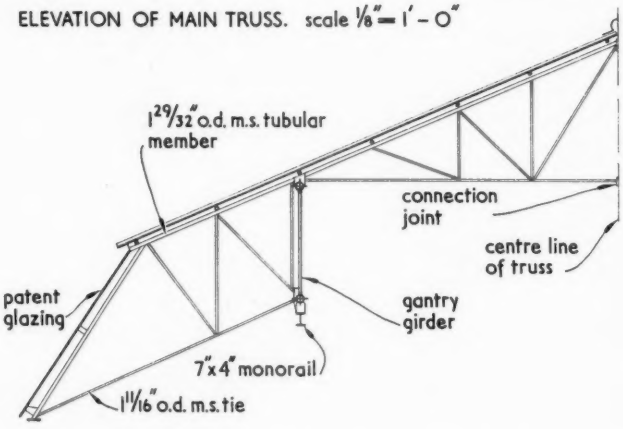
LAN. scale 1/32" = 1' – 0"



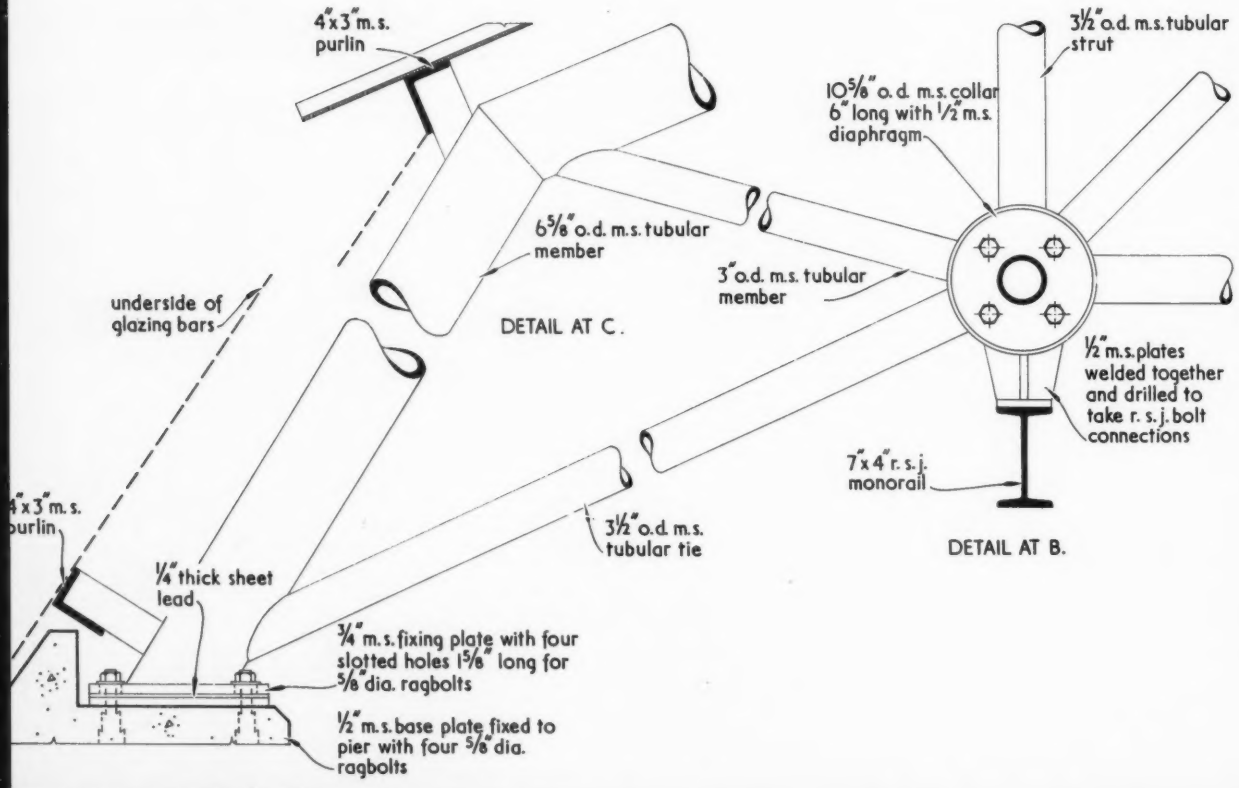
ELEVATION OF MAIN TRUSS. scale 1/8" = 1' – 0"



ELEVATION OF GANTRY GIRDER. scale 1/8" = 1' – 0"



ELEVATION OF INTERMEDIATE TRUSS. scale 1/8" = 1' – 0"



DETAIL AT A. scale 1" = 1' – 0"

- The latest development in Air Conditioning
- Individual temperature control in every room
- A centralised plant silently diffusing clean air, conditioned for winter or summer
- New pressure conduit distribution system minimises duct space requirements
- Equally applicable to new or old constructions

Carrier

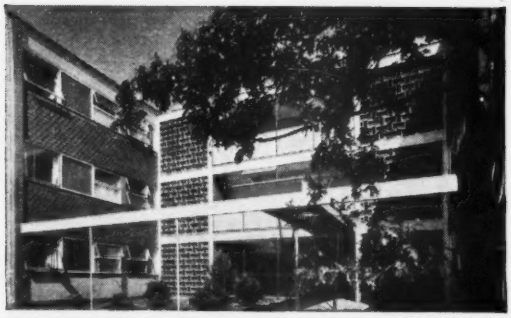
Conduit WEATHERMASTER REGD. **System**

CARRIER ENGINEERING COMPANY LTD. 24 Buckingham Gate, Westminster, S.W.1
Telephone: VICtoria 6858

The Pioneers of Air Conditioning

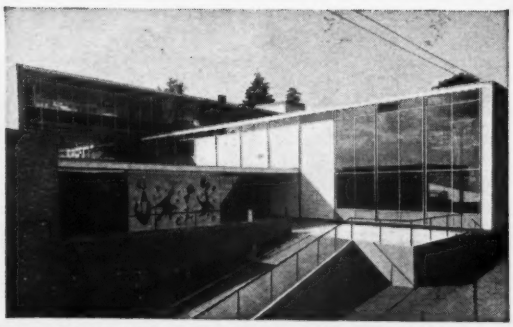
Babcock House, Euston Road, London.
Architects: Waterhouse & Ripley, F.R.I.B.A.
Main Contractors: Holland & Hannen and Cubitts Ltd.

leading



Flats at Parkley's, Ham Common.
Architect: Eric Lyons, F.R.I.B.A.
Main Contractors: Wates Ltd.

architects



Fairlawn Primary School, Lewisham, for the London County Council.
Architect: Peter Moro, F.R.I.B.A.
Main Contractors: E. H. Smith (Croydon) Ltd.

chose

THERMALITE-YTONG

Load bearing insulating building blocks

Thermal insulation · Load bearing
High speed of laying · Light weight
Workability · Direct fixing · Fire resistance
Reduces the risk of condensation

For further details and technical data apply to

THERMALITE LIMITED
Shepherds House Lane, Earley, Reading, Berkshire.
Telephone: Reading 62694.

Contractors continued from page 750

Ltd. through Sun Electrical Co. Ltd. *Hot cathode tubes:* A.S. McHugh & Co. Ltd. *Floor standard lamps:* George Forrest & Sons Ltd., through A. S. McHugh & Co. Ltd. *Outdoor lighting standards:* Stanton Ironworks Co. Ltd. *Main switchgear:* Brush Electrical Engineering Co. Ltd. *Fused panels and isolators:* Parmiter, Hope & Sugden Ltd. *Relays:* Londex Ltd. *Tumbler switches and plugs and sockets:* J. A. Crabtree Ltd.

Alnwick County Secondary School (page 737). *Architects:* Reavell & Cahill, F/F.R.I.B.A. *Quantity surveyors:* J. W. Summers & Partners, F./F.R.I.C.S. *Heating, hot-water and electrical consultants:* Cairns and Byles. *Concrete frame consultants:* L. G. Mouchel & Partners. *General contractor:* Richard Costain Limited. *Sub-contractors: steel frame:* Robert Frazer & Son. *Heating and hot water:* G. S. Akinhead & Company. *Electrical installation:* I. & E. Morton. *Roofing:* The Ruberoid Co. Ltd. *Plumbing:* G. Bilclough. *Plastering:* S. McCullough. *Glazing:* Adam Robertson & Son Ltd. *Painting:* Smith Decorators (Newcastle) Limited. *Floor finishes:* Flortile Ltd., The Terrazo & Tile Co. Ltd., Semtex Ltd., and F. H. Thompson & Sons. Bison floors laid by Concrete Ltd. *Insulated ceilings:* The Darlington Insulation Co. Ltd. *Wrought iron work:* M. Aynsley & Sons Ltd. *Glazed wall finishes:* Quickset Water Sealers Ltd. *Wall tiling:* The Terrazo & Tile Co. Ltd. *Library shelving:* Scott Morton Ltd.

Wolsingham Grammar Technical School, Durham (page 736). *Architect:* G. R. Clayton, F.R.I.B.A., County Architect. *General contractor:* R. C. Williamson (Durham) Ltd. *Sub-contractors: steelwork:* Wright, Anderson & Co. Ltd. *Pre-cast floors:* Concrete Ltd. *Curtain walling:* Williams & Williams Ltd. *Roofing:* D. Anderson & Son Ltd. *Suspended ceilings:* The Darlington Insulation. *Thermoplastic floors:* Marley Tile Co. Ltd. *Hardwood floors:* Rowan & Boden Ltd. *Heating and hot water installations:* Brightside Heating and Engineering Co. Ltd. *Electrical installations:* Williams Bros. (Electric) Ltd. *W. balustrading and gates:* Selbourne Engineering Co. Ltd. *Ironmongery:* A. Brown & Co. *Internal partitions:* "Bellrock" partitions erected by Gypsum Construction (Scotland) Ltd.

Kenton Primary School No. 2 for the City and County of Newcastle-upon-Tyne Education Committee (page 736). *Architects:* The Design Partnership. *Quantity surveyors:* J. W. Summers & Partners. *Structural engineer:* D. W. Cooper, B.SC., A.M.I.STRUCT.E. *Heating and electrical engineers:* Cairns and Byles. *General contractor:* Alex. Anderson (Contractors) Ltd. *Sub-contractors: plywood box beams and columns:* J. W. Lowry Builders and Contractors. *Trofdek roofing:* H. Newsum Sons & Co. Ltd. *Felt covering:* H. R. Vaughan & Co. Ltd. *Copper roof:* Broderick Insulated Structure Ltd. *Roof lights:* W. H. Heywood & Co. Ltd. *Plastic dome lights:* Cordar Roof Lights. *Bricks:* National Coal Board (Northern (N. & B.) Division). *Plumbing and heating:* G. S. Akenhead & Co. Ltd. *Convector heaters:* C. A. Dunham & Co. Ltd. *Underfloor panel heating:* Benham & Sons Ltd. *Copper pipe work:* Yorkshire Copper Works Ltd. *Secondary plumbing:* G. M. Bilclough Ltd. *Electrical work:* J. Robinson (Elect.) Ltd. *Floor finishes:* N. Jack & Co. *Wood block:* Hollis Bros. Ltd. *Vacuum cleaning plant:* British Vacuum Cleaner & Eng. Co. Ltd. *Plywood and cedar boarding:* Thompson, Eyres & Cluny Ltd. *Timber impregnation:* Celcure Ltd. *Timber fireproofing:* The Timber Fireproofing Co. Ltd. *Asphalt, tanking and d.p.c.'s:* Bell's Asphalte Co. *Insulation:* Fibre Glass Ltd. *Sanitary wares:* Adamsez Ltd. *Hardware and iron work:* M. Aynsley & Co .Ltd. *Window control gear:* Aren's Control Ltd. *Artificial stone:* Northern Cast Stone, J. T. Dove Ltd. *Paint:* ICI and Walpamur.

The Fold Redevelopment Scheme, Whitley Bay (page 717). *Borough Engineer and Surveyor,* E. Roberts, A.M.I.C.E., M.I.MUN.E. *General contractors:* F. P. Dodsworth Ltd. *Sub-contractors: Asphalt:* Val de Travers Asphalte Ltd. *Tiling:* Matthew Charlton Ltd. *Electrical work:* The Norie Electrical Construction Co. *Roads and sewers:* Jas. Lumley Ltd. *Layout of forecourts, gardens, etc:* Whitley Bay Borough Council, Parks Department.

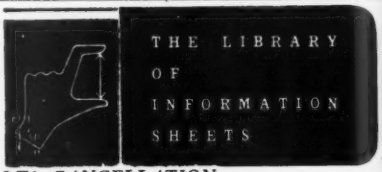
North Eastern Trading Estates Ltd.'s Factory and Social Building for Morganite Resistors Ltd., Bede Trading Estate, Jarrow, Co. Durham (page 741). *Architects:* Turley & Williamson, A./A.R.I.B.A.; *Consulting engineer:* D. W. Cooper, B.SC., A.M.I.STRUCT.E.; *Heating and electrical engineering consultants:* Cairns & Byles, M/M.I.H.V.E. *Landscape architect:* Brian Hackett, M.A., F.I.L.A., F.R.I.B.A., A.M.T.P.I. *Quantity Surveyors:* Hall and Stafford, F./F.R.I.C.S. *Sculpture:* D. Murray McCheyne, D.A., R.B.S. *General Contractor:* Geo. Henderson & Son (Factory and Office Block), Geo. Bainbridge (Builders) Ltd. (Social Building). *Sub-contractors: balustrading:* South Dock Ironworks Co. *Bricks:* The Swarland Brick Co. Ltd. *Artificial stone:* Northern Cast Stone Co. Ltd., and W. Siggens & Sons Ltd. *Asphalt:* Val de Travers Ltd. *Concrete floor units:* Concrete Ltd. *Concrete reinforcement:* Squaregrip Reinforcement Co. Ltd. *Curtain walling:* Holoplast Ltd. *Cloakroom fittings:* Seiber Equipment Co. Ltd. *Decorators:* Smiths Decorators (Newcastle) Ltd., and

Reid Bros. *Electrical work:* Bonham Electrical Co. *Fascia lettering:* Bramley & Co. Ltd., and Taylor Industries Ltd. *Floor finishes:* Harkers of Nelson St. Ltd., and Flortile Ltd., J. Armstrong Todd Ltd., and Langley (London) Ltd. *Furnishings:* Share of Fawcett St. Ltd. *Fireproof doors:* Dreadnought Fireproof Doors Ltd. *Glazing:* Reed Millican & Co. Ltd. *Hardware:* N. F. Ramsay & Co. Ltd. *Heating:* Brightside Heating & Engineering Co. Ltd., and G. S. Akinhead & Co. Ltd. *Kitchen equipment:* Bartlett Catering Equipment. *Lavatory cubicles:* The Crittall Manufacturing Co. Ltd., and Flexo-Plywood Industries Ltd. *Lighting accessories:* Nova Sign Co., and Wandsworth Electrical Manufacturing Co. Ltd. British Thomson Houston. *Light fittings:* A E I Lamp & Lighting Co. Ltd., Benjamin Electrical Co. Ltd., Cryselco Ltd., Courtney Pope (Electrical) Ltd., Falk Stadelmann & Co. Ltd., Geo. Forrest & Co. Ltd., Frederick Thomas & Co. Ltd., and G E C Ltd. *Paints:* British Paints Ltd. *Patent glazing:* Hills (West Bromwich) Ltd. *Patent rendering:* John Ellis & Sons Ltd. *Paving:* Noelite Ltd. *Plastering:* S. McCulloch (Plasterers) Ltd., and Geo. Henderson & Son. *Planting:* Donald Ireland Ltd., and W. M. Potts. *Plumbing:* R. Leech Ltd., and Rowells (1924) Ltd. *Portal frames:* J. & W. Lowry. *Roof construction and cladding to factory:* Robertson Thain & Co. Ltd.

Factory BT/55/2, Peterlee, County Durham (page 740). *Architects:* J. H. Napper, M.A., F.R.I.B.A., A.M.T.P.I.; *Assistant Architect:* John Errington, B.Arch., A.R.I.B.A.; *Structural engineer:* D. W. Cooper, B.Sc., A.M.I.Struct.E.; *Heating and electrical consultant:* R. W. Gregory & Partners. *Quantity surveyors:* Turner & Ing. *General contractors:* Bovis Limited. *Sub-contractors: site excavation:* Dowsett Eng. Const. Ltd. *Structural steelwork:* Palmers Hebburn Co. *Patent glazing:* W. H. Heywood & Co. Ltd. *Steel decking, aluminium wall cladding and steel gutters:* Robertson Thain Ltd. *Metal windows:* Rustproof Metal Window Co. Ltd. *Sliding folding gates:* Bolton Gate Co. Ltd. *Factory floor:* Semtex Ltd., Fleximer flooring. *Heating and hot and cold water installations:* Steels Engineering Installations Ltd. *Electrical installation:* Troughton & Young Ltd. *Glazing:* Faulkner, Greene & Co. Ltd. *Reinforced concrete chimney:* Tileman & Co. Ltd. *Asbestos insulation:* Newalls Insulation Co., Ltd. *Cork flooring:* J. Armstrong Todd (Mundet Cork Co.). *Plumbing:* Elsey & Gibbons Ltd. *False ceilings:* Anderson Construction Co. Ltd. *Chain link fencing:* Penfold Fencing & Eng. Co. Ltd. *Plastering:* W. E. Pickering Ltd. *Decorating (including sign writing):* George W Hutson Ltd. *Road surfacing:* Tarslag Ltd.

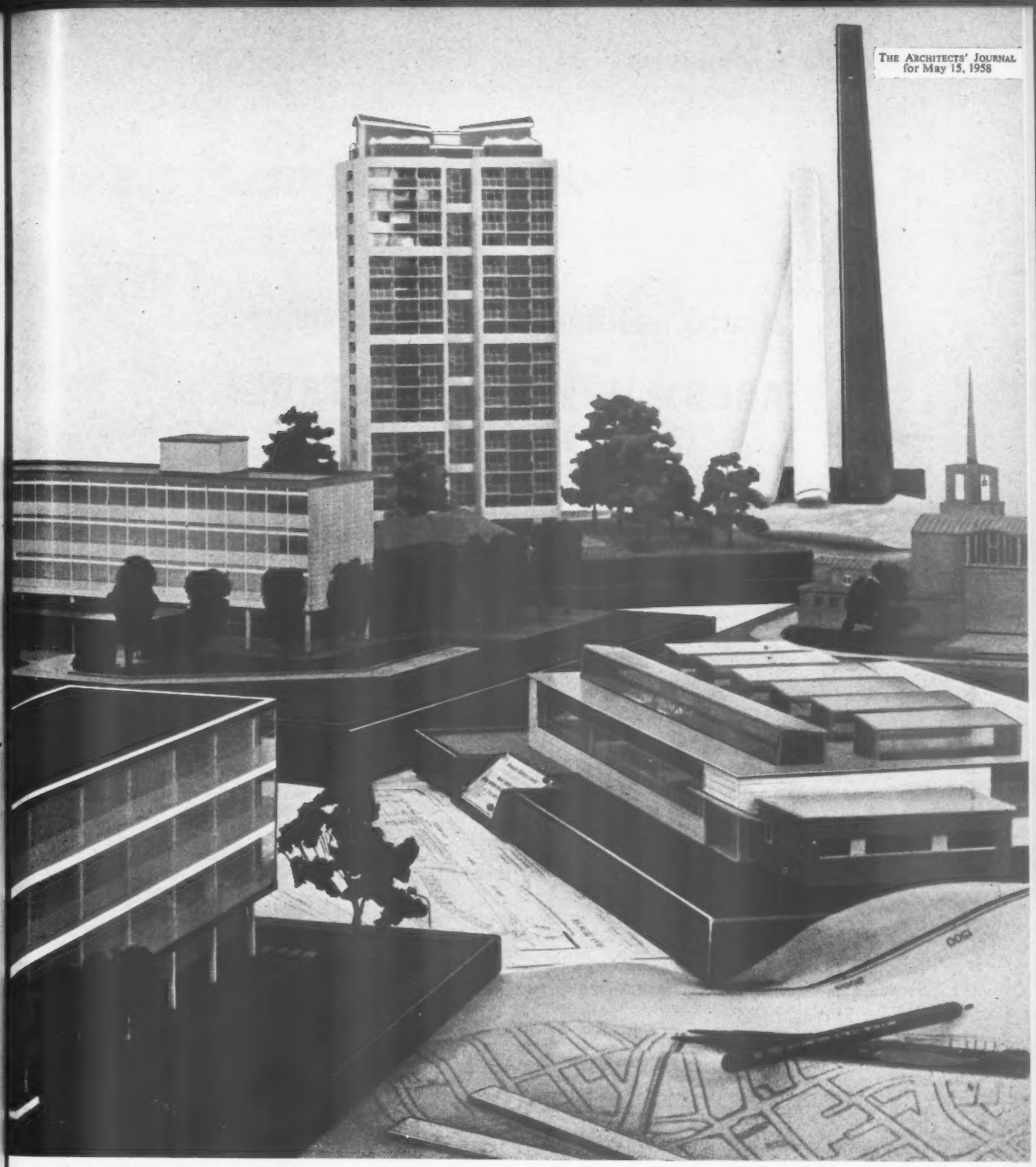
New Factory for the Oil-Seals Division of George Angus & Co. Ltd., Wallsend-on-Tyne (page 742). *Architects:* S. W. Milburn & Partners, F/F.R.I.B.A. *General contractor:* Bovis Ltd. *Sub-contractors: Asphalt roofing:* Asphaltic Roadways Ltd. *Joinery:* Bovis Joinery Works. *Metal windows:* Fred Braby & Co. Ltd. *Factory roofing:* Wm. Briggs & Son Ltd. *Concrete reinforcement:* British Reinforced Concrete Co. Ltd. *Paint:* British Paints Ltd. *Plumbing:* Cairns (Newcastle) Ltd. *Piling:* Cementation Ltd. *Hardwood curtain walling:* Construction Units Ltd. *Prestressed beams:* Concrete Ltd. *Panelling:* Coutts & Findlater Ltd. *Site works:* Dowsett Engineering Construction Ltd. *Structural steel:* J. W. Ellis & Co. Ltd. *Goods and passenger lifts:* Express Lift Co. Ltd. *Flooring:* Granwood Flooring Co., Greengate & Irwell Rubber Co. Ltd. *Linoleum:* W. E. Harker Ltd. *Heating and ventilation:* G. N. Haden & Son Ltd. *Metal w.c. partitions, boiler house windows:* Henry Hope & Son Ltd. *Vinyl flooring:* N. Jack & Co. Ltd. *Steel platform:* Allan Kennedy & Co. Ltd. *Concrete roof lights:* J. A. King & Co. Ltd. *Balustrades, gates and fencing:* Kirkup & Co. Ltd. *Sprinklers:* Mather & Platt Ltd. *Metal rooflights:* Mellowes & Co. Ltd. *Shuttering to shell roof:* Mills Scaffold Co. Ltd. *Name sign:* Nova Sign Co. *Foundation stone:* C. S. Ormerod Ltd. *Granolithic flooring:* Pollock Bros. (London) Ltd. *Roller shutters:* Potter Rax Ltd. *Glazing:* Reed Millican & Co. Ltd. *Vertical cladding (factory):* Robertson Thain Ltd. *False ceilings:* Sundeala Board Co. Ltd. *Wall and floor tiling:* Summer & Co. *Sanitary fittings:* Shanks & Co. Ltd. *Copings, kerbs, flagstones:* S. Tyzack & Co. Ltd. *Road surfacing:* Tarslag Ltd. *R.c. chimney:* Tileman & Co. Ltd. *Ironmongery:* D. A. Thomas & Co. Ltd. *Terrazzo:* Toffolo Jackson Ltd. *Plastering and floor screeds:* Webster Davidson & Co. Ltd. *Curtain walling:* Williams & Williams Ltd.

Brunton Park Shops, Gosforth (page 734). *Architect:* John Garside, A.R.I.B.A. *General contractor:* John T. Bell & Sons Ltd. (staff architect, R. W. Graydon, A.R.I.B.A.). *Sub-contractors: Plumbing:* Selborne Engineering Co. *Electrical work:* Charles Doyle. *Roofing:* J. W. Garnett & Co. Ltd.



8.E1 *CANCELLATION*

Readers are asked to note that Sheet 8.E1 *(published* 20.1.55*) is cancelled and should be withdrawn from collections. It is replaced by* 8.E1 *published in this issue.*



here is a Weatherfoil System for any type of building.

EVERY WEATHERFOIL SYSTEM
–a Model Installation

Designed exclusively for your project . . . planned to suit your programme . . .
priced to your budget . . . engineered to produce a discreet, effective installation.

ACKNOWLEDGMENTS:

L.C.C. Brandon Estate, Southwark. Hubert Bennett, F.R.I.B.A., Architect to the Council.

British Railways, Great Eastern House, Cambridge. H. H. Powell, B.Arch., F.R.I.B.A., Regional Architect (Eastern Region) British Railways.

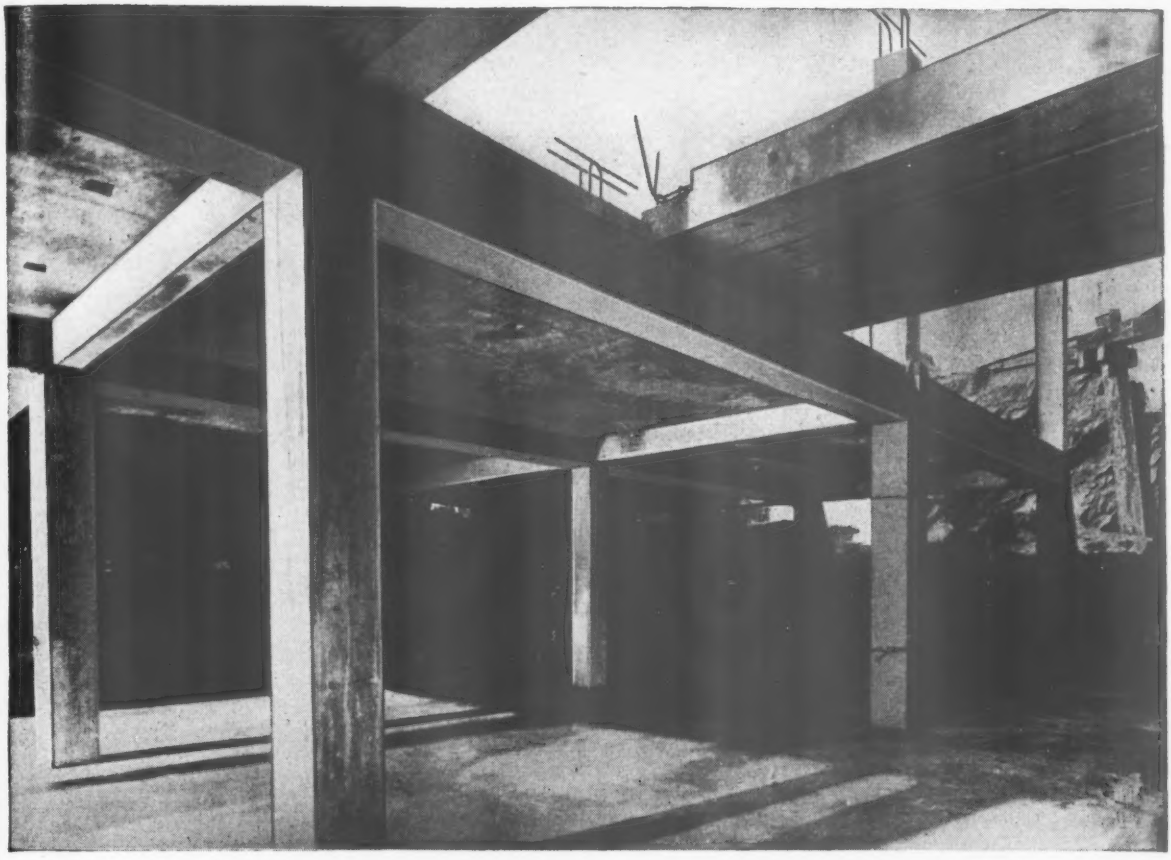
Monsanto Chemicals Limited. Oil additives engine test laboratories, Newport.

St. Aidens Church, Speke, Liverpool. Architect: Bernard A. Miller, B.Arch. F.R.I.B.A.

Office Building. Architect: Richard Sheppard & Partners.

people are beginning to expect warmth and comfort — peace and quiet with FIBREGLASS

FIBREGLASS LTD., ST. HELENS, LANCS · ST. HELENS 4224



weyroc (REGD) shuttering...

offers concrete advantages

large boards — 8' x 4' for quick erection

can be used again and again; easily handled

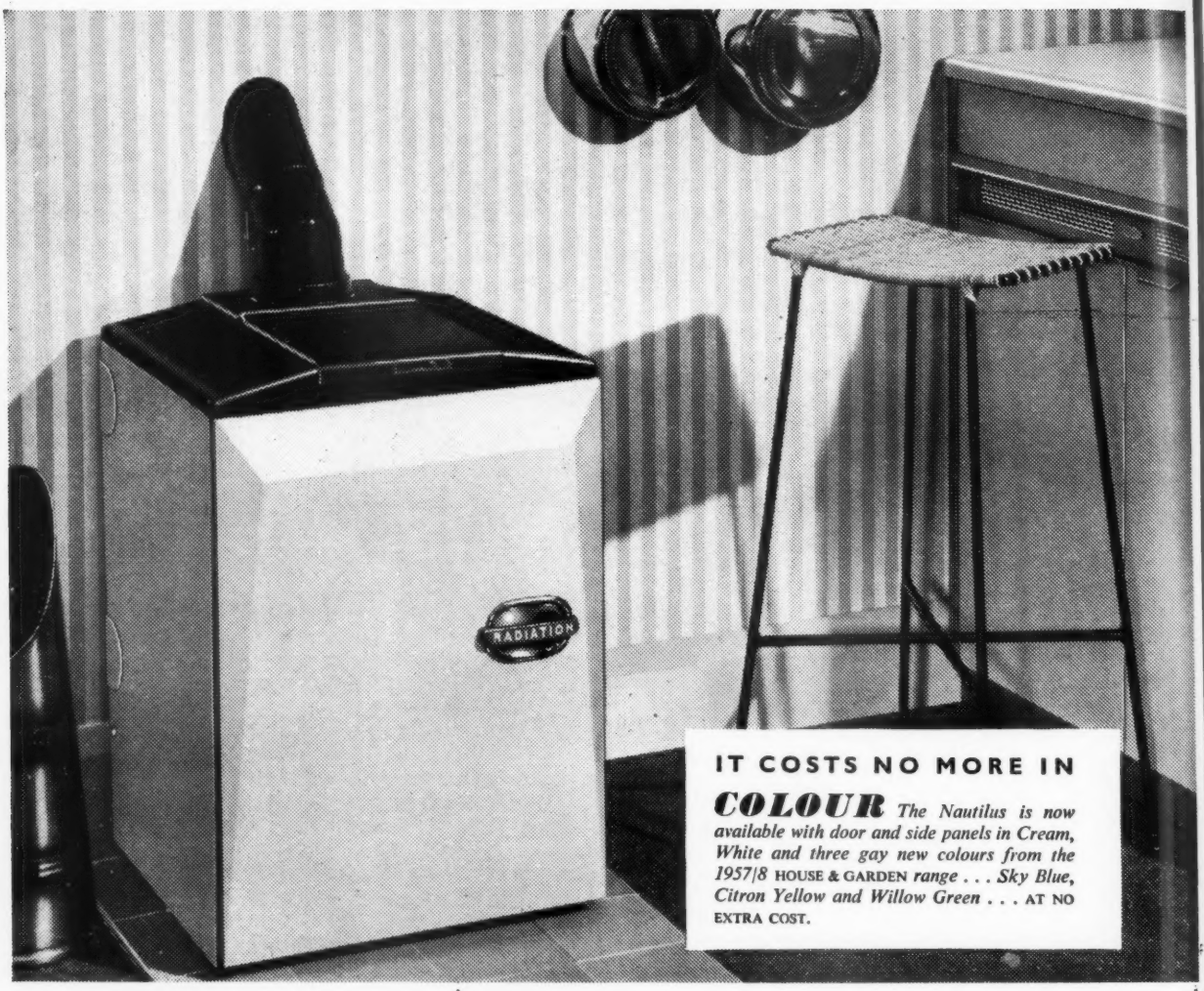
smooth surfaces for best finish

great rigidity with minimum support

For more than ten years Weyroc has been widely used for shuttering. It needs only a simple surface dressing to fit it for repeated use.

weyroc — *one of the world's great man-made materials*

THE AIRSCREW CO. & JICWOOD LTD. WEYBRIDGE, SURREY. Weybridge 2242/7



NAUTILUS the little boiler with the BIG output

THE NAUTILUS stands only 2 ft. 3 ins. high and occupies less than 20 in. square of floor space. But beneath its clean good looks is an engineering job rated at 30,000 B.Th.U./hr. for central heating and hot water.* That means hot water for a much-bigger-than-average household *and* 70 — 80 sq. ft. of radiating surface. Or it will centrally heat the *whole* of a fair-sized house with up to 130 sq. ft. of radiating surface. Other points your clients will like about this automatic boiler include crusher bars (only the Nautilus has them) which grind everything that won't burn down to ash and thus make raking unnecessary . . . and a variable thermostat that watches fuel consumption like a miser. Write for technical information sheets.

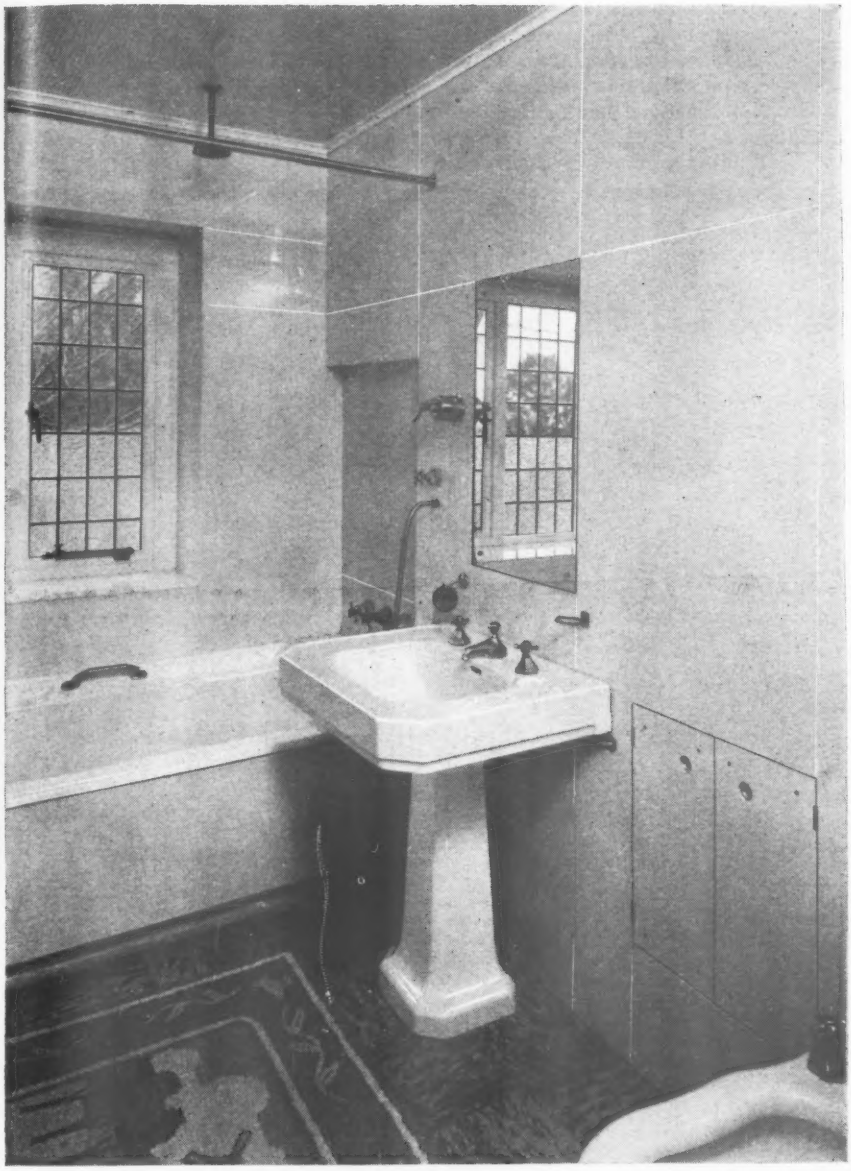
*Top of its class in Section J(ii) of the List of Recommended Domestic Solid Fuel Appliances published by the Coal Utilisation Council and the Smokeless Solid Fuels Federation.

Radiation
NAUTILUS
AUTOMATIC BOILER

PIONEERS OF SMOKE REDUCTION

RADIATION GROUP SALES LTD. PARK FOUNDRY, BELPER, NR. DERBY

GLASS in Domestic Bathrooms



provides an
IMMACULATE
and
PERMANENT
finish

Bathroom in Primrose 'Vitrolite.' Points of interest: built-in cupboard at side of lavatory basin, flush mirror, recess over end of bath, faced reveals to windows. Builders: Messrs. W. E. Wright (Eltham) Ltd.

With walls as lustrous and impervious as bath and basin, a bathroom faced with 'Vitrolite' is not only a joy to the eye; it is an assurance of complete freedom from maintenance.
'Vitrolite' is unaffected by moisture, grease, grime and chemicals, WILL NOT BLISTER OR PEEL, and cannot be defaced with pen or pencil. It is available in White, Black, Green, Green Agate, Ivory, Primrose, Turquoise, Pearl Grey, Eggshell and Cream.
Clark-Eaton offer full technical service in the preparation of schemes, and teams of skilled fixers are available to undertake complete installations.
Please send enquiries or ask for ILLUSTRATED BOOKLET.

See our Exhibit at the **BUILDING CENTRE**

JAMES CLARK & EATON LTD.

GLASS FOR ALL STRUCTURAL AND DECORATIVE PURPOSES

SCORESBY HOUSE, GLASSHILL STREET, BLACKFRIARS, LONDON, S.E.1

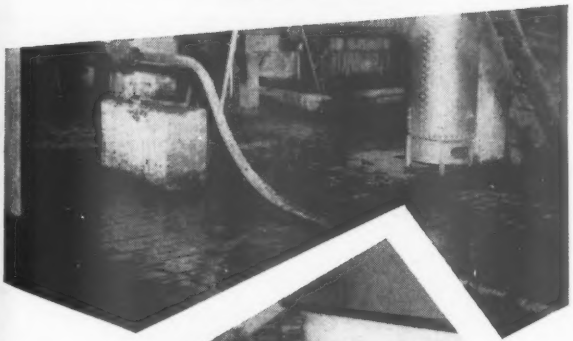
Telephone: WATerloo 8010 (20 lines)

CANTERBURY BOURNEMOUTH, EASTBOURNE, READING, OXFORD (H. Hunter & Co.)

CLARK FOR GLASS

Acid & Alkali Resisting PAVING

We specialise in the design and installation of all types of industrial corrosion proof masonry. Also acid proof plastics for chemical plant, tank linings, etc.; and acid and alkali resisting paint.



Acid and Alkali proof Hard wearing and attractive

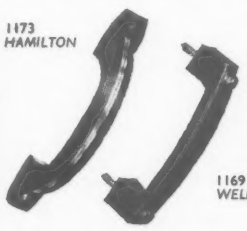
TANKS & LININGS LTD

11, TOWN WHARF · DROITWICH · WORCESTER.

Phone: Droitwich 2249, 2240. Grams: Tanks, Droitwich

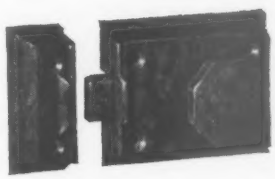
There's quite a difference between completed and "*well-finished*"

Detail is so important—more particularly when the job is really good—and no major fault can be found. It's then that the finer points of finish come in for close scrutiny. When Everite plastics accessories are specified there is a harmony of style throughout for they are designed, tooled and moulded under one roof. Evered's roof where care and precision have come first, for nearly a hundred and fifty years. For a job well done—*and well finished*—the Everite trade mark is your guarantee.



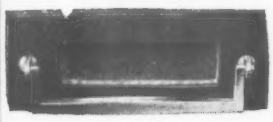
1173 HAMILTON

1169 WELFORD

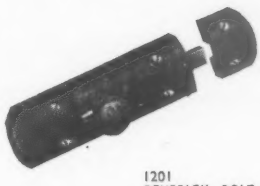


980 SUPA CATCH

Over a century's experience



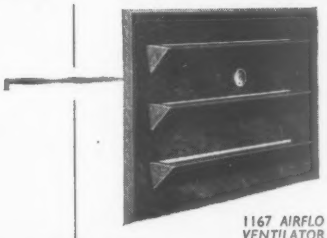
1158 KNIGHTWICK POSTAL KNOCKER



1201 BEVERLEY BOLT

of architects' requirements

1195 HENLEY



1167 AIRFLO VENTILATOR

Everite

EVERITE

makes things better for architects!

Write away—right away!

Very few of a comprehensive range can be shown here. Our catalogue gives full information.

EVERED AND COMPANY LIMITED

SURREY WORKS, SMETHWICK 40, STAFFS. Established 1809

B.O.A.C. *Hangars London Airport. 20,000 sq. yds. of 'TOP' surfaced floor.*

Don't screed that factory floor—TOP IT!

INDUSTRIAL FLOORS can be virtually UNWEARABLE, NON-SLIP and in COLOUR TOO!

by putting a 'TOP' on the concrete floor slab. Applied by the General Contractor when pouring the slab the 'TOP' is *monolithic* and can't come away.

Remember!

The screed you DON'T need
Pays for the 'TOP' you DO need . . .
and look at the TIME you save!

'COLOURTOP' —for general use.

'EMERYTOP' —for the heaviest industrial traffic.

'SNOWTOP' —in pure white.

6/9 Per sq. yd.

'METALTOP' —for impact and vibration loads **10/6** per sq. yd.

'SEALTOP' —*all* your concrete floors against staining—(enough for about 25 sq yds) **5/9** per gallon

'WAXTOP' —will shine your 'TOP' —if that's the way you like it! **4/6** per lb. tin.

Manufactured by **SNOWTOP PRODUCTS LTD.**

Sole distributors:

J. H. SANKEY & SON, LTD.

Established over a century

Dept. A.J.3 Essex Works, Ripple Road, Barking, Essex

Telephone: Rippleway 3855

British Standards

1076 · 1956 · 1410 · 1947 · 1451 · 1956

for FLOORING

provide for the inclusion of

Trinidad LAKE ASPHALT

A valuable component of good mastic, on account of its remarkable consistency.

Further particulars on request from:

PREVITÉ & CO. LTD.

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

NORRIS 'PLYDOR'

A Quality Product guaranteed for 12 months at competitive prices with *quick delivery*.

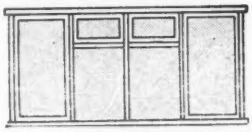
And don't forget we carry large stocks of standard panel doors too. Remember standard doors we can supply immediately, specials take a little longer.

NORRIS 'WEATHERTITE' WINDOWS

Prov. Patent No. 13865/57

IT'S WARM
IT'S WOOD
IT'S WEATHERTITE
IT'S NORRIS

The wood windows designed for positive weatherproofing and to give all types of opening lights within the same framework, giving the architect greater flexibility of design at mass production prices.



MASS PRODUCTION JOINERY SPECIALISTS

A Bungalow or Multi-Story Flats we can supply all your Joinery requirements. We have a special department to assist you in the design stage if required.

C.W. NORRIS LTD.

Catalogue free on request

FARNWORTH, NEAR BOLTON, LANCASHIRE.

CLASSIFIED ADVERTISEMENTS

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Public and Official Announcements

30s. per inch; each additional line, 2s. 6d.

BURGH OF KILMARNOCK
BURGH ARCHITECT'S DEPARTMENT

Applications are invited for appointment of SENIOR ASSISTANT ARCHITECT from qualified Registered Architects. Salary, Grade A. & P. VI (£865—£935). N.J.I.C. Conditions of Service. House available for let if required. Apply, giving details of training and experience, with copies of three references, to Burgh Architect, 64A, Bank Street, Kilmarnock, within 10 days.

W. L. WALKER,
Town Clerk.

Council Chambers, Kilmarnock. 9359

BOROUGH OF OLDBURY
BOROUGH SURVEYOR'S DEPT.—ARCHITECTS' SECTION

Applications are invited for the following appointments in the Architects' Section of the Borough Surveyor's Department:—

(*a*) TWO ARCHITECTURAL ASSISTANTS, A.P.T. Grade I (£575×£30—£725 per annum).
(*b*) ONE ARCHITECTURAL ASSISTANT, A.P.T. Grade II (£725×£30—£845 per annum).

Candidates for appointment (*b*) should preferably have passed the Intermediate Examination of the R.I.B.A. and be capable of preparing working and detail drawings and specifications for work normally undertaken by a Local Authority, mainly housing and education work, and supervising the work on the site.

Candidates for appointment (*a*) should be competent draughtsmen with practical experience, under supervision, in the preparation of working and detail drawings.

The appointments will be superannuable, subject to the National Conditions of Service and to the selected candidates passing a medical examination.

Applications, giving particulars of age, qualifications and experience, and giving the names of two referees, should be delivered to the undersigned not later than Thursday, 22nd May, 1958.

KENNETH PEARCE,
Town Clerk.

Municipal Buildings, Oldbury,
near Birmingham.
28th April, 1958. 9377

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for (1) ARCHITECTS, Grade III, starting salary up to £1,090 a year. (2) ARCHITECTURAL ASSISTANTS, starting salary up to £960.

Full and interesting programme of Houses, Flats, Schools and General Buildings.

Application form and full particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council, The County Hall, S.E.1, quoting Ref. AR/EK/21/58. (799) 9375

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for SURVEYING ASSISTANTS (salary up to £860) for preparation of Specifications and Estimates and supervision of Works in connection with maintenance, alterations and minor improvements of Voluntary Schools.

Application form from Hubert Bennett, F.R.I.B.A., Architect to the Council, The County Hall, S.E.1, quoting Ref. AR/EK/20/58. (797) 9374

METROPOLITAN BOROUGH OF WOOLWICH
BOROUGH ENGINEER'S DEPARTMENT

ASSISTANT ARCHITECT required, Special Grade (£750—£1,030), plus London weighting. A.R.I.B.A. or equivalent essential. Superannuation Scheme. Medical examination.

Applications (stating age, qualifications and experience, and giving two referees) to Town Clerk, Woolwich, S.E.18, by 26th May, 1958.

Canvassing disqualifies. 9395

CITY OF PORTSMOUTH
CITY ARCHITECT'S DEPARTMENT
ASSISTANT QUANTITY SURVEYOR

Applications are invited for the permanent post of Assistant Quantity Surveyor, Special Grade (£750—£1,030).

Commencing salary according to experience.

Applicants must be Associate Members of the R.I.C.S., and be thoroughly experienced in taking off, abstracting and billing of Quantities, measurement of work in progress and settlement of final accounts.

Housing accommodation will be provided if required.

Applications, with full details and names of two referees, must be delivered to the City Architect, 1, Western Parade, Portsmouth, not later than Wednesday, the 4th June, 1958.

Canvassing will disqualify.

V. BLANCHARD,
Town Clerk.

9437

BOROUGH OF SOLIHULL
QUANTITY SURVEYING ASSISTANT, A.P.T. GRADE II (£725—£845)

Applications are invited for the appointment of a Quantity Surveying Assistant, A.P.T. Grade II, on the Architectural staff of the Borough Engineer and Surveyor. Applicants should have passed the R.I.C.S. Intermediate examination or its equivalent.

The appointment is subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service and one month's notice on either side.

Half the reasonable cost of removal expenses will be paid at the end of six months' service and, where applicable, housing accommodation will be provided.

Applications giving the names and addresses of two referees should be forwarded to the Borough Engineer & Surveyor, 90, Station Road, Solihull, Warwickshire, not later than Friday, 23rd May, 1958.

W. MAURICE MELL,
Town Clerk.

The Council House,
Solihull.
29th April, 1958. 9410

BOROUGH OF BILSTON
APPOINTMENT OF ARCHITECTURAL ASSISTANT
A.P.T. GRADE II £725—£845

Applications are invited for the above appointment in the Housing Director's Department.

Applicants should be experienced in housing and the administration of building contracts.

The appointment will be subject to the National Scheme of Conditions of Service, a medical examination and the Local Government Superannuation Acts 1937 and 1953.

Housing accommodation will be made available if required.

Applications, stating age, qualifications and experience, together with the names of two referees, should be sent to the Housing Director, 20, Wellington Road, Bilston, Staffs, not later than Wednesday, 28th May.

A. M. WILLIAMS,
Town Clerk.

Town Hall,
Bilston.
5th May, 1958. 9440

CITY AND COUNTY OF
NEWCASTLE UPON TYNE

Applications are invited for the post of QUANTITY SURVEYING ASSISTANT in the City Architect's Department in the A.P.T. Division Grade I at a salary of £575 per annum, rising by annual increments of £30 to a maximum of £725 per annum.

The appointment is subject to the National Conditions of Service as adopted by the City Council; to the provisions of the Local Government Superannuation Acts 1937-1953, and to one month's notice on either side. The successful candidate will be required to pass a medical examination.

Applications stating age, particulars of training, qualifications, experience, and past and present appointments, together with copies of two recent testimonials or the names and addresses of two persons to whom reference may be made, should be addressed to the City Architect, 18, Cloth Market, Newcastle upon Tyne, 1.

JOHN ATKINSON,
Town Clerk.

Town Hall,
Newcastle upon Tyne, 1.
6th May, 1958. 9439

LANCASHIRE COUNTY COUNCIL

PLANNING ASSISTANTS required at PRESTON and LIVERPOOL. Applicants should be studying for or possess a qualification in planning, architecture, civil engineering or surveying and appropriate experience is desirable. The posts carry a maximum salary on the N.J.C. Special Scale of £1,030 per annum and a qualified candidate will rise to this. Appointments will be made, having regard to qualifications and experience, in accordance with the Scheme of Conditions of Service of the National Joint Council. Candidates who are not yet fully qualified will be appointed on the appropriate grade and subject to satisfactory service will progress to the Special Scale when they obtain the final qualification. Applications stating appointment applied for, giving age, qualifications, present appointment and two referees to County Planning Officer, East Cliff County Offices, Preston, by June 2, 1958. 9453

SENIOR ASSISTANT QUANTITY SURVEYOR

Applications are invited from Corporate Members of the R.I.C.S. (Building Sub-Division) for the appointment of a Senior Assistant Building Surveyor in the Quantities Section of the Architect's Department.

Applicants must have wide general experience and be capable of supervising Surveyors engaged principally on (*a*) schemes of alterations, additions and repairs, including preparation of estimates and settlement of accounts for such work (*b*) invitation of quotations for specialist work involved in major contracts and (*c*) land and building surveys and structural reports. They must also be prepared to share in the duties mentioned as the need arises.

Salary scale: £1,010 × £30 (5) × £35 (1)—£1,195 plus £50 London weighting. Superannuable. Present office near Kingsway, but moving to new offices near Paddington Station later this year.

Apply, stating age, qualifications and experience, with names of two referees, to Secretary, North West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, by 27th May quoting reference 642. 9435

PADDINGTON BOROUGH COUNCIL
ASSISTANT ARCHITECT (£780 to £1,060)

Starting salary according to qualifications and experience of the successful candidate who should preferably be A.I.I.B.A., with experience in the design and supervision of building works of some magnitude and a knowledge of local authority requirements. Applications should state age, qualifications, present and past appointments with dates, names and addresses of three referees. Applications should reach me by 30th May, 1958 (quoting A.375).

W. H. BENTLEY,
Town Clerk.

Town Hall,
Paddington, W.2. 9415

PETERLEE DEVELOPMENT CORPORATION
CHIEF ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(*a*) SENIOR ARCHITECTURAL ASSISTANT—£1,034—£1,273 p.a.
(*b*) JUNIOR ARCHITECTURAL ASSISTANT—£562—£647 p.a.
(*c*) ASSISTANT QUANTITY SURVEYOR—£934—£1,146 p.a.

Applicants for appointment (*a*) should be qualified architects and the successful applicant will be given the opportunity to work with an architect-artist collaboration on new architecture and planning.

Applicants for appointment (*b*) should be of Intermediate R.I.B.A. standard with office experience.

Applicants for appointment (*c*) should be up to the standard of the Final Examination of the R.I.C.S. and be capable of preparing Bills and Final Accounts.

The appointments, which are superannuable, are subject to the Corporation's Conditions of Service and will be terminable by one month's notice on either side. The successful applicants will be required to pass a medical examination.

Housing accommodation will be available if necessary.

Applications, stating age, experience, qualifications and giving the names of two persons to whom reference can be made should reach the undersigned not later than Tuesday, 20th May, 1958.

A. V. WILLIAMS,
General Manager.

Shotton Hall,
Old Shotton,
Peterlee,
Horden,
Co. Durham. 9417

EDUCATION DEPARTMENT OF WESTERN AUSTRALIA
TECHNICAL EDUCATION DIVISION

Applications are invited for the following position:

HEAD OF DEPARTMENT OF ARCHITECTURE, PERTH TECHNICAL COLLEGE.

Applicants must be qualified for Associate Membership of the Royal Australian Institute of Architects or equivalent Institute. Town Planning qualifications will be an advantage.

The College Associateship in Architecture is recognised by the R.I.B.A. as well as the R.A.I.A. as meeting the examination requirements for Associate Membership.

The Head of the Department of Architecture is fully responsible to the Principal of the College for the conduct of his Department.

Salary range £A2,092—£A2,262.

Applications must be made on the prescribed form T.E. 1 which can be obtained from the Agent General for Western Australia, Savoy House, 115, Strand, London, W.C.2 from whom further particulars including those of travel arrangements are also available. All applications must reach the Agent General on or before the 16th June, 1958. 9416

WAR DEPARTMENT
C.R.E. SHOEBURYNESS
DRAUGHTSMAN (M. & E.)

1. Vacancies exist on the establishment of the Commander, Royal Engineers, Shoeburyness, for ONE Draughtsman (Mechanical and Electrical).

2. In addition to the usual draughtsman's qualifications, applicants should be capable of preparing detailed working drawings.

3. Applications are invited from persons between the ages of 21 and 50 years.

4. Annual salary rate £510 at age 21 to £714 at age 28 or over, and then by annual increments to a maximum of £820.

5. Letters of application giving details of age, experience and qualifications should be addressed to: C.R.E. Shoeburyness, Old Ranges, Shoeburyness, Essex. 9454

COUNTY BOROUGH OF WEST BROMWICH

Applications are invited for the appointment of a SENIOR ASSISTANT ARCHITECT. Salary, Special Grade (£750—£1,030).

Housing accommodation will be made available. N.J.C. Conditions of Service.

Applications, naming two referees, to Borough Surveyor, Town Hall, West Bromwich, by 24th May, 1958. 9414

METROPOLITAN BOROUGH OF LEWISHAM
ASSISTANT ARCHITECT

Salary scale A.P.T. I or Special Scale *viz.* £585 × £30—£755 p.a. or £760 × £40—£1,060 p.a. including London weighting. Grade and commencing salary in the grade according to qualifications and experience. Particulars and form of application from Town Clerk (Dept. H), Lewisham Town Hall, Catford, S.E.6. Closing date 27th May. 1958. 9418

UNIVERSITY COLLEGE OF NORTH STAFFORDSHIRE

Applications are invited for the following on staff of Architect and Buildings Officer:

(*a*) SENIOR ASSISTANT ARCHITECT. Scale £1,025 × £50—£1,175 p.a. Applicants should have particular experience in design, be School trained with at least five years' practical experience and be Registered Architects.

(*b*) ASSISTANT ARCHITECT. Scale £750 × £40—£1,030 p.a. Applicants should have particular experience in design and construction with at least four years' practical experience and be Registered Architects.

(*c*) ASSISTANT ARCHITECT. Scale £725 × £30—£815 p.a. Applicants should have passed Intermediate Examination of R.I.B.A. and be studying for Final Examination. Good general experience in design and construction essential.

Duties may include work on buildings for teaching and research, students' hostels, staff residences, general purpose buildings and services. Posts are included in College Superannuation Scheme. Further particulars may be obtained from Architect & Buildings Officer, The College, Keele, Staffs, to whom three copies of application giving full details of age, qualifications, experience, etc., and names of three referees, should be sent within 10 days of publication of this advertisement. 9413

COUNTY BOROUGH OF BLACKBURN

Applications invited for the established posts of ARCHITECTURAL ASSISTANTS (2) within the Special Grade (£750—£1,030). Candidates must have the necessary qualifications and experience relative to the Grade. Applications stating age, qualifications and experience with not less than two testimonials to Borough Engineer, Town Hall, Blackburn, by Monday, June 9th.

FRANK SQUIRES,
Town Clerk.
9460

MANCHESTER CORPORATION
SENIOR ASSISTANT PLANNING OFFICERS
APT IV (£1,025/£1,175)

These appointments offer practical experience on large scale projects, many of which are due to be carried out very shortly. Housing accommodation may be available to successful candidates, if desired, at a reasonable rent. Applications stating age, education, qualifications and experience, with the names of three referees to City Surveyor, Town Hall, Manchester, 2, by Monday, 2nd June, 1958. 9462

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG, SOUTH AFRICA
DEPARTMENT OF ARCHITECTURE AND QUANTITY SURVEYING

Applications are invited for appointment to a vacant post of LECTURER IN ARCHITECTURE. The successful candidate must:—

(*a*) be an Associate or eligible for Associate membership of the Royal Institute of British Architects, and must have adequate architectural experience. Teaching experience will be an added recommendation;

(*b*) be capable of lecturing on aspects of Architectural Design and Construction, as well as conducting practical studio work in design.

Duties are to be assumed on 1st January, 1959, or as soon as possible thereafter.

The salary attached to the appointment will be on the scale £850 × £50—£1,200 p.a. In addition, a married man will receive a cost of living allowance the present rate being £234 per annum.

Membership of the University Institutions Provident Fund is compulsory and involves a contribution at the rate of 7 per cent. of the substantive salary. Membership of the University Staff Medical Aid Fund is compulsory in the case of an officer who is found eligible in accordance with the rules of the Fund.

Intending applicants should obtain a copy of the information sheet relating to the vacancy, from the Secretary, The Association of Universities of the British Commonwealth, 36, Gordon Square, London, W.C.1.

The closing date for the receipt of applications, in South Africa and London, is 30th June, 1958. 9455

CITY OF NOTTINGHAM
ESTATES DEPARTMENT

Applications are invited for the following appointments in the Chief Architect's Section:—

(1) ASSISTANT ARCHITECT at a commencing salary within the Special Scale (£750 × £40—£1,030). Applicants should have passed Parts 1 and 2 of the Final Examination of the R.I.B.A.

(2) ARCHITECTURAL ASSISTANT at a commencing salary within A.P.T. Grades 1 and 2 (£575—£845), according to experience and qualifications. Applicants should have passed the Intermediate Examination of the R.I.B.A.

There is a large programme of interesting and varied work covering redevelopment schemes and estate development, which includes housing, shops, hostels, etc.

The appointments will be subject to the National Joint Council's Scheme of Conditions of Service, and the successful candidates will be required to pass a medical examination.

Applications stating age, qualifications, experience, present appointment and salary, and naming two referees, should be sent to the Estates Surveyor and Valuer, Guildhall, Nottingham, by Friday, 6th June, 1958.

T. J. OWEN,
Town Clerk.

Guildhall,
Nottingham. 9465

BOROUGH OF BEXLEY
ARCHITECTURAL ASSISTANT

Applications are invited for this appointment at a salary within Grade A.P.T. I (£575—£725) plus London weighting.

Preference will be given to candidates who have passed the intermediate examination of the R.I.B.A. and have had experience in housing and other building projects.

Forms of application and conditions of appointment are obtainable from the Borough Engineer, West Lodge, Broadway, Bexleyheath, Kent, to whom completed applications must be returned by 2nd June, 1958. The Council may be prepared to assist in the provision of housing accommodation. Canvassing will disqualify.

ARTHUR GOLDFINCH,
Town Clerk.
9463

NEWCASTLE REGIONAL HOSPITAL BOARD
ASSISTANT ARCHITECT—GRADE £700—£1,015
(P. H. Knighton, M.B.E., A.R.I.B.A., Regional Architect)

In connection with a large new hospital project, the Board invites applications for the above permanent (superannuable) appointment on the Headquarters' Staff of the Regional Architect in Newcastle.

Applicants must be Registered Architects. The commencing salary, within the Grade £700×£25(3)×£30(1)×£35(6)—£1,015, will be fixed by reference to relevant experience and to age.

The post offers opportunity for gaining all-round general, as well as hospital, experience and for doing good-class work in an expanding department.

Applications stating age, qualifications, past and present appointments, present salary and details of experience and training, together with the names of three referees (of whom at least two should be architects) should be forwarded to the Secretary of the Board, Benfield Road, Newcastle upon Tyne, 6, not later than 28th May, 1958. 9459

BOROUGH OF EDMONTON
BOROUGH ARCHITECT'S DEPARTMENT
JUNIOR ARCHITECTURAL ASSISTANT

(temporary) required. Candidates should be about 18-20 years of age and have achieved some progress in their studies for professional qualification. Excellent opportunity of gaining valuable experience in a Borough Architect's drawing office dealing with all aspects of building. Salary on Higher/General grade rising to £560 plus London weighting with opportunities for promotion.

Time off and financial assistance for studies. Alternate Saturdays free.

Applications on forms obtainable from Town Clerk, Town Hall, Edmonton, must be delivered by 23rd May, 1958. 9412

CITY OF MANCHESTER HOUSING DEPARTMENT require:—

1. DIRECTOR OF HOUSING (qualified Architect). Salary £2,445/£2,760 per annum.
2. CHIEF QUANTITY SURVEYOR. Salary £1,210/£1,380 per annum.

Further particulars and application forms (returnable by Monday, 9th June, 1958) from Town Clerk (F), Town Hall, Manchester, 2. 9436

CITY OF CHESTER
CITY ENGINEER'S DEPARTMENT
SENIOR PLANNING ASSISTANT

Applications are invited for this new appointment at a point on the Special Grade. The work will be mainly concerned with re-planning of Re-development areas, and also with some aspects of development control. Applicants should be A.M.T.P.I. and/or hold Architectural or other suitable professional qualification. Housing accommodation will be available for successful candidate, if required. Applications, with two testimonials, should reach City Engineer, 49, Northgate Street, Chester, by Wednesday, 28th May, 1958. 9438

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD
SENIOR ASSISTANT ARCHITECT

Applications are invited from Associate Members of the R.I.B.A. for the post of Senior Assistant Architect. The Board are engaged on a number of new building projects including a new hospital at Welwyn. Applicants must have had considerable experience in design and construction, preferably in hospitals and associated buildings.

Salary scale £1,010 × £30 (5) × £35 (1)—£1,195, plus £50 London weighting.

Apply, giving age, qualifications and experience, together with names of two referees, to Secretary, North West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, by 28th May. 9464

CHISLEHURST & SIDCUP URBAN DISTRICT COUNCIL
Area—8,957 acres; Population—87,790
APPOINTMENT OF ASSISTANT QUANTITY SURVEYOR

Applications invited for above appointment in Quantity Surveyor's Section of Engineer and Surveyor's Department. Salary A.P.T. II. (£725—£845 plus London Weighting.) Housing provided if required.

Preference to approved intermediate examination qualification. Applications with age, full details of experience, past and present employment and names of two referees, to Clerk, Sidcup Place, Sidcup, Kent. Closing date 28th May, 1958. 9461

SURREY COUNTY COUNCIL

Applications invited for appointment of ASSISTANT ARCHITECT, Special Grade, £750—£1,030 p.a., plus £30 p.a. London allowance. Must be A.R.I.B.A.

Full details, present salary, and 3 copy testimonials, to County Architect, County Hall, Kingston, as soon as possible. 9378

COUNTY BOROUGH OF BOOTLE
BOROUGH SURVEYOR'S DEPARTMENT

Applications are invited for the appointment of an ASSISTANT ARCHITECT on Grade A.P.T. III—£845 to £1,025 per annum.

Preference will be given to those having experience in the design and planning of schools.

Application forms, obtainable from the Borough Surveyor, Town Hall, Bootle 20, Lancs., are returnable by Friday, 30th May, 1958.

By order,
HAROLD PARTINGTON,
Town Clerk.
9465

Architectural Appointments Vacant

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. Box Number, including forwarding replies, 2s. extra

JUNIOR and INTERMEDIATE ASSISTANTS required in a young, well established practice in Manchester engaged on varied contemporary work. Keen, cheerful types with initiative and ability. Please write to Box 9383 giving brief particulars and salary required.

ARCHITECTURAL ASSISTANT required for small expanding practice in W.1. State experience and salary required.—Box 9319.

RONALD WARD & PARTNERS require ARCHITECTURAL ASSISTANTS with contemporary outlook, and willing to use own initiative. Salary range £600 to £900. Congenial working conditions. 5-day week.—Apply: 29, Chesham Place, Belgrave Square, S.W.1. Telephone Belgravia 3361. 9112

HARRY S. FAIRHURST & SON have a vacancy for a SENIOR ASSISTANT ARCHITECT in their Manchester office. The work is interesting and varied, including academic, scientific, commercial and domestic buildings, and applicants should be able to take responsibility. Really good presentation draughtsmanship would be an advantage.—Please Write to 55, Brown Street, Manchester. 9331

ARCHITECTURAL ASSISTANT required. Intermediate standard. Busy West-End Architects' office. Commercial work. Good draughtsman essential. 5-day week, vouchers. Good salary, according to ability.—Box 9297.

TREHEARNE & NORMAN, PRESTON & PARTNERS have vacancies for ASSISTANTS. Salary according to experience and qualifications. Apply: 83, Kingsway, W.C.2 (HOL 4071). 9407

ASSISTANT ARCHITECT required to work with Principal in small but busy office. Neat and quick draughtsman. Able to take responsibility. Reply stating details of training, qualifications and experience, together with salary required to H. Geoffrey Round, A.R.I.B.A., 53, Oxford Street, Weston-super-Mare. 9406

LOUIS DE SOISSONS, PEACOCK, HODGES & ROBERTSON, have a vacancy for a SENIOR ASSISTANT, experienced in design and presentation of sketch schemes, perspectives, etc. Write stating age, salary and experience to the above at 3, Park Square Mews, Upper Harley Street, London, N.W.1. 9397

SENIOR ASSISTANT, qualified or near, with good practical experience required by small, busy office. Good style and speedy draughtsmanship; also experience of building and land surveys desirable. Work varied but includes large amount of estate developments. Details of age, experience and salary required please to Field and Shaw, Chartered Architects, 40, Station Road, North Harrow. Tel. Har. 7502. 9400

JUNIOR ARCHITECTURAL ASSISTANT required in Engineer's office of large Midlands Brewery. Sound knowledge of building construction essential.—State age, experience, and salary required, to Box 9281.

ARCHITECTURAL ASSISTANT required approaching or at Intermediate stage, salary by arrangement, one day per week for studies. D. Plaskett Marshall, F.R.I.B.A., 59, Gordon Square, W.C.1. Telephone: MUSeum 7176. 9385

WILLIAM HOLFORD & PARTNERS have vacancies for ASSISTANTS. Salary according to age and experience. Apply to 2, Angel Court, Throgmorton Street, E.C.2. 9360

TAYLOR WOODROW CONSTRUCTION, LTD., require an ASSISTANT ARCHITECT. Should have passed R.I.B.A. Final, and have contemporary outlook. Industrial experience an advantage. Salary commensurate with experience. Pension scheme. Canteen facilities.—Apply Personnel Manager, Ruislip Road, Southall, Middlesex. 9419

ARCHITECTURAL ASSISTANT, of Intermediate standard, required for office in South Kensington. Varied and interesting work.—Box 9426.

INTERMEDIATE standard ASSISTANT required in small country practice on south Devon coast. Starting salary about £400 plus (if required) new unfurnished self-contained flat at nominal rent. Rate of advancement directly proportional to productivity. Prospect of responsible position with share of profits for right type, after probationary period. Conscientiousness essential. Write to Alec H. Joy, A.R.I.B.A., Victoria Place, Kingsbridge. 9381

ARCHITECTURAL DRAUGHTSMAN required by Consulting Engineers. Able to detail cladding and roofing modern industrial buildings. Knowledge of typography and layout advantage. Salary £500—£600 p.a. with Bolton, Hennessey & Partners, 4, Curzon Place, W.1. 9382

ASSISTANT ARCHITECT required by private firm in Nigeria. Single man preferred. Eighteen-month tour in first instance. Passages, living accommodation, and car provided. Salary according to age and experience.—Box 9472.

MAJOR PETROLEUM DISTRIBUTION COMPANY require for their London office a fully qualified and experienced SENIOR ARCHITECTURAL ASSISTANT for work on varied commercial projects, including Service Stations. Salary according to experience. Position will be permanent and pensionable. Excellent working conditions, staff restaurant, sports club, etc.—Apply in writing, giving full details of age, qualifications and experience, to Box 9420. Replies can only be sent to those selected for interview.

SENIOR ARCHITECTURAL ASSISTANT, capable of making site surveys, preparing sketch plans and working drawings and supervising work in progress. Knowledge of shop fitting an advantage.—Applications, stating age, experience, qualifications and salary required, to R. E. Akerman, F.R.I.B.A., Chief Architect, United Dairies, Ltd., 31, St. Petersburgh Place, W.2. 9421

KNAPTON & DEANE have vacancy for ASSISTANTS, at £600 to £1,000, depending upon ability. Congenial work and conditions, with good opportunities for advancement. Mansion House 6282. 9423

ARCHITECTURAL ASSISTANTS or DRAUGHTSMAN required by leading firm of Land Agents and Surveyors in their Chelmsford office. Salary by arrangement. 5-day week.—Apply to E. F. Logan, A.R.I.B.A., Staff Architect, Coval Hall, Chelmsford. Telephone No. 4681/3. 9424

ARCHITECTS required by the National Coal Board in Edinburgh. Salary within the scales £815—£1,125 per annum and £1,125—£1,475 per annum. Applicants must be Associate Members of the R.I.B.A. and, if to be considered for the higher scale, have had considerable experience in the control of staff and handling of large scale contracts.—Applications, stating age, education, qualifications, experience, present post and salary, to Divisional Chief Staff Officer, National Coal Board, Eglinton Crescent, Edinburgh, 12. 9425

ARCHITECTURAL ASSISTANT required in good class West End practice. Neat draughtsman, with knowledge of detailing. Good prospects to gain wider practical experience. 5-day week. State salary required.—Box 9443.

ASSISTANT ARCHITECT with English background, required for Lausanne office for approximately two years, with good experience in hospital planning and building, for work on hospitals in tropics.—Box 9434.

EXPERIENCED SENIOR ASSISTANT required by City firm, preferably with design and perspective ability. Permanency with prospects for suitable applicant. No Saturdays. Applicants to state age, experience, and salary required.—Box 9433.

SENIOR and JUNIOR ASSISTANTS required urgently, Architect's office, Maidstone, Kent. State age, experience, and salary required.—Box 9428.

FOR work on progressive schemes, David Stern & Partners require TWO ASSISTANTS of Intermediate standard, with at least two years' office experience.—24, Gloucester Place, Portman Square, W.1. 9470

MORRISON AND PARTNERS require SENIOR ARCHITECTS and ASSISTANT ARCHITECTS for their Derby and Sheffield offices for interesting and responsible work in various spheres. 5-day week. Salary ranges £750—£950 and £950—£1,150.—Please reply, stating experience, to St. Alkmunds House, 103, Belper Road, Derby, or 15, Northumberland Road, Sheffield, 10. 9471

NORFOLK Architect has vacancy for PUPIL/IMPROVER, with small salary to commence.—Reply with details to Box 9469.

CORNWALL.—SENIOR and JUNIOR ASSISTANTS wanted at St. Austell and Penzance offices.—Write, stating experience and salary required, to Geoffrey Bazeley & Barbary, F./F.R.I.B.A., 15/16, Alverton, Penzance. 9468

WETHERELL, LAMB & PARTNERS, of Darlington and Newcastle, require SENIOR ARCHITECT in Darlington office. Salary range £800—£900. Must have wide experience in all branches. Ability more important than qualifications.—Please write to 42, Victoria Road, Darlington. 9467

ARCHITECTURAL ASSISTANT for extensive re-building work.—Apply, stating experience and salary required, to The Establishments Officer, Zoological Society of London, Regent's Park, N.W.1. 9445

BRIGHTON and Hove. SENIOR and JUNIOR ASSISTANTS required for small expanding office. Box 9355.

ASSISTANT ARCHITECT required in Midlands office of Architects' Department dealing with design of multiple shops. Must be A.R.I.B.A. with practical experience, interested in contemporary design and able to interpret a basic design policy. Good style of presentation and experience of site supervision required. The appointment will necessitate some travelling. Starting salary £850—£900 p.a.—Apply Box 9432.

GEORGE WIMPEY & CO., LTD.

THE ARCHITECTS' DEPARTMENT seek SENIOR and INTERMEDIATE ASSISTANTS, with experience and ability to apply their knowledge to new construction techniques covering multi-storey flats, house, offices and industrial buildings for contracts in the U.K. and Overseas.

Permanent appointments in Head Office; salaries commensurate with qualifications and experience; subject to satisfactory service, there is a pension scheme available; 5-day week.

Applicants should write, giving full particulars, to:—

E. V. COLLINS, A.R.I.B.A.,
Chief Architect,
27, Hammersmith Grove, London, W.6.
9422

THE TIMBER DEVELOPMENT ASSOCIATION, LTD., have a vacancy for an ARCHITECTURAL ASSISTANT for work on development projects. Good draughtsmanship and sound knowledge of building construction, particularly in timber, essential. Commencing salary from £600 per annum, according to qualifications and experience. The successful applicant will be required to join the Staff Pension Scheme if invited to do so.—Applications should be addressed to The Secretary, Timber Development Association, Ltd., 21, College Hill, London, E.C.4. 9427

LANCHESTER & LODGE urgently require ASSISTANTS, around Inter. standard.—Write full particulars, 10, Woburn Square, London, W.C.1. 9442

EXPERIENCED JUNIOR ASSISTANT required by expanding Manchester practice for varied and interesting projects, mainly contemporary, including several large-scale projects.—Please send brief details in confidence to Box 9441.

ASSISTANT, up to Intermediate standard, required immediately in small London office engaged chiefly on Schools.—Reply to Box 9466.

S.W. LONDON. — ARCHITECTURAL ASSISTANT required in small, busy, suburban office—commercial and domestic.—Experience and salary please to Box 9444.

WALLIS, GILBERT & PARTNERS require ARCHITECTURAL DRAUGHTSMEN.—Enquire by letter to 5, Cromwell Road, South Kensington, London, S.W.7. 9458

IAN G. LINDSAY & PARTNERS, Architects, 17, Great Stuart Street, Edinburgh, require SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS.—Please write, giving full details of qualifications, experience, and salary expected. 9457

LONDON Architects, Clifford Tee & Gale, F./F.R.I.B.A., have vacancies for ARCHITECTURAL ASSISTANTS of varying experience to take active part in expanding programme of industrial and laboratory work. 5-day week.—Apply to Mr. S. H. Fisk, A.R.I.B.A., 5, Buckingham Palace Gardens, S.W.1; telephone Sloane 2296. 9456

Architectural Appointments Wanted

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. Box Number, including forwarding replies, 2s. extra

ASSOCIATE (37), school trained, 10 years' varied experience of large contracts, seeks post in London practice, view to Partnership.—Box 9446.

4 EXPERIENCED ASSISTANTS, own transport, used to hard work and impossible conditions, require congenial employer.—Box 9447.

ARCHITECTURAL ASSISTANT (24), Final R.I.B.A. standard, seeks a position in which he can gain experience in approximate estimates, specifications, supervision on sites, negotiations with various authorities, general office routine, and placing and management of contracts.—Box 9448.

STUDENT R.I.B.A. requires vacation job in the Plymouth area.—Box 9431.

Other Appointments Vacant

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. Box Number, including forwarding replies, 2s. extra

SURVEYOR and ESTIMATOR, fully experienced, required by Essex company for administration and supervision of public and private works in hard tennis courts, drives and footpaths. Qualifications not essential. Age 25-35. Apply in writing with full details, in confidence to Box 9398.

SECRETARY/PERSONAL ASSISTANT (male or female) required for Contractors' Architect. Previous experience in Architect's office essential. Scope for self-reliance and initiative; age 30 upwards.—Submit full details of age, experience, and present salary, to Personnel Manager, Wates, Ltd., 1258/60, London Road, Norbury, S.W.16. 9450

EDWARD D. MILLS & PARTNERS require SENIOR SECRETARY. Good shorthand-typing, administrative ability. 5-day week. Interest in modern design appreciated.—Write full details, 15, Carlisle Street, Soho Square, W.1. 9449

Services Offered

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. Box Number, including forwarding replies, 2s. extra

"DON" ARCHITECTURAL MODEL MAKERS. We offer the highest grade work with speed and reliability.—Please 'Phone Brith 3843 or Hastings 1366. 1673

ARCHITECTURAL. Reinforced Concrete and Steel design and detailing work required. Over 30 Assistants available. MUS. 8753. 5145

SITE Surveys and Surveys of Buildings prepared at short notice anywhere in Britain. MUSeum 8753. 3103

THE SITE SURVEY COMPANY
Blackheath, S.E.3. Tel.: LEE Green 7444-5
Fully equipped to undertake urgent Engineering and Architectural surveys in any part of the country and abroad. Specialists in ¼ in. scale detailed surveys for extensive city development areas. 1890

A.R.I.B.A., sixteen years' experience, offers assistance to the profession—London, North and East Kent. Own Office. Box 9408.

ASSOCIATE, with own practice, offers services to the profession. Write Box 9402.

PART-time services offered. SENIOR ASSISTANT (42), own car, will undertake Surveys, Levels, Drawings, Specifications, etc.—Box 9430.

MAILING? 14,553 Architects. Addressing, enclosing, and despatching Literature.—I.M.S., 81, Blackfriars Road, London, S.E.1. 9451

Miscellaneous

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. 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. Paul's Road, N.1. Canonbury 2061.

CANTEEN and Restaurant Kitchens expertly planned and fitted. Reconditioned or new equipment available. Rental facilities if required. Designer will call. Commercial Catering Equipment Co., Ltd., 29, Abingdon Road, Kensington, W.8. Tel. WEStern 0936. 9042

ARCHITECTURAL METALWORK of all types supplied and fitted. Gates, doors, balustrades, staircases, steel structures. Design staff available.—Clayton & Bamber, Ltd., Carters-field Road, Waltham Abbey, Essex. 5823

ACCOMMODATION offered Architect's contemporary house, Dorking. Use office facilities, etc. Would suit married couple, or single man.—Write Box 9334.

ARCHITECTS or Surveyors offices, Bournemouth. 4 Rooms, 1,100 sq. ft., 2nd floor, excellent position. Additional room first floor optional. Good light, rental 6/6d. sq. ft. including central heating and cleaning services. Apply Tyson, 26, St. Peter's Road, Bournemouth. 9411

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

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. 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./B.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.

R.I.B.A. Inter. and Final EXAMS. TUITION, BY POST.—C. W. BOX, F.R.I.B.A., 115, Gower Street, W.C.1. Tel.: EUS 3966. 1042

COURSES for all R.I.B.A. EXAMS.
Postal tuition in History, Testimonies, Design, Calculations, Materials, Construction, Structures, Hygiene, Specifications, Professional Practice, etc. Also in general educational subjects.
ELLIS SCHOOL OF ARCHITECTURE
Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.
103B OLD BROMPTON RD., LONDON, S.W.7
and at Albany House, Worcester

Write today for colour card
JOSEPH FREEMAN SONS & Co. Ltd.
Cementone Works, London. S.W.18

The 'number seven' range also includes Gloss, Interior Flat and Eggshell.

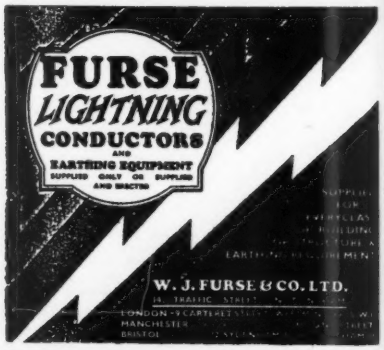
MODELS
for Architects & Civil Engineers
by **John B. Thorp**
EST. 1883
98 GRAY'S INN ROAD, LONDON, W.C.1. Tel.: HOLborn 1011

WHITE FACING
BRICKS
(S. P. W. BRAND)
Telephone: Holywell 27-9237 8 9 • Telegrams "Machine" Bulwell, Nottingham
M. McCARTHY & SONS, LTD
BULWELL • NOTTINGHAM

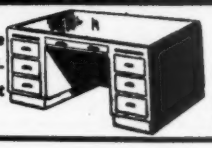
ARCHITECTURAL
— contemporary
APPLIED LETTERS
IN A VARIETY OF METALS & FINISHES
WARD & COMPANY
6-12 WILDER ST., BRISTOL 2
Telephone 21536

INN SIGNS CONVENTIONAL OR CONTEMPORARY
In Seasoned Oak or Thermo Formed 'Perspex'
Executed to your specifications
SIGN SERVICE
9 High Street • Erdington • Birmingham 23

BROAD-ACHESON
BLOCKS for
unvarying quality
SAVE—15" COST
using 3" B.A.—INNER LEAF
BROAD & CO. LTD., PADDINGTON, W.2



EVERYTHING FOR THE OFFICE
If you are looking for the best value in office furniture and equipment contact



Office Equipment Co.,
113 High Holborn, London, W.C.1
Telephone: CHAncery 4477

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.

FOLD HERE

Postage will be paid by Licensee

No Postage Stamp necessary if posted in Great Britain or Northern Ireland

BUSINESS REPLY FOLDER
Licence No. S.W. 1761

THE ARCHITECTS' JOURNAL

9-13 Queen Anne's Gate

London, S.W.1.

FOLD HERE

TUCK IN THIS END

Alphabetical index to advertisers

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Education, Legal Notices, Miscellaneous, Property, Land and Sales, see 131, 132, 133, 134.

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_____

_____

15.5.58

CODE
0972
0888
0993
0433
0438
1001
0815
0446
0454
0666
0458
0645
0468
0473
0479
0481
0484
0492
0493
0496
0501
0502
0506
0701
0509
0511
0525
0650
73
0750
0981
0674
0536
0742
0702
0929
0892
0548
0549
0550
0552
0653
0563
0576
0930
0811
0589
0597
0606
0992
0609
0950

Printed in Great Britain for the Proprietors of "THE ARCHITECTS' JOURNAL" (The Architectural Press Ltd.), 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, by HARRISON & SONS LTD., by Appointment to Her Majesty The Queen, Printers, London, Hayes (Middx.), and High Wycombe.
Editorial illustrations engraved by THE ENGRAVERS' GUILD LTD., Windsor House, 23/26, Cursitor Street, London, E.C.4.